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PATENTS

NOTICES

Classification Order No. 261

The following transfer is hereby ordered to take effect on Tuesday, October 7, 1958:

From Division 31 to Mechanized Examining Division A
Class 260, CHEMISTRY, CARBON COMPOUNDS, Subclasses 93.7, 94.8

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

2,575,685. Adjustable Lengths Pipe Couplings. A. H. Stromeier, 525 Glacierview Drive, Youngstown 9, Ohio.

The following two patents are offered by Contraves A. G., Zurich, Switzerland. Correspondence to: Michael S. Striker, 511 Fifth Ave., New York 17, N. Y.

2,757,050. Suspension of Arrangement for Oscillation About an Axis.

2,763,856. Control Apparatus.

General Electric Company is prepared to grant non-exclusive licenses under the following 23 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 9 patents may be addressed to: Patent Counsel, Construction Materials Division, General Electric Company, 1285 Boston Ave., Bridgeport 2, Conn.

2,275,198. Coated Metal Wire.

2,813,158. Rotary Switch With Quick-Connect Terminals.

2,814,697. Door Jamb Switch.

2,828,250. Method and Apparatus for the Electrolytic Oxidation of Copper Wire.

2,831,050. Crepe Paper Insulation.

2,835,099. Cordset Hanking Machine.

2,841,633. Electrical Cable Structure.

2,841,669. Solenoid-Operated Relay.

2,841,673. Wiring Device With Quick-Connect Terminals.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, Switchgear & Control Division, General Electric Company, 6901 Elmwood Ave., Philadelphia 42, Pa.

2,816,197. Switch.
2,846,620. Electromagnetic Distance Relay With an Offset MHO Operating Characteristic.

Applications for license under the following patent may be addressed to: General Electric Company, Aircraft Gas Turbine Division, Cincinnati 15, Ohio. Attention: Patent Counsel.

2,844,001. Flow Straightening Vanes for Diffuser Passage.

Applications for license under the following 11 patents may be addressed to: General Electric Company, Patent Counsel, Measurements and Industrial Products Division, 920 Western Ave., West Lynn 3, Mass.

2,289,080. Signaling System.
2,309,414. Damping Magnet System.
2,465,115. Traffic Control System.
2,614,139. Volt Ampere Meter.
2,627,571. Choke Joint High Frequency Heater.
2,806,955. Mass Spectrometer.
2,833,347. Timing Mechanism.
2,834,620. Improved Rotative Drive Assembly.
2,834,857. Electrical Switch.
2,836,795. Adjustable Lag Compensator.
2,837,326. Charge Supporting Means for Furnaces.

TITLE 37 (Code of Federal Regulations)—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter I—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

PART 4—FORMS FOR TRADEMARK CASES

MISCELLANEOUS AMENDMENTS

The following amendments are made, to take effect on January 1, 1959, except as otherwise provided.

The text of proposed amendments was published in the Federal Register for April 22, 1958 (23 F. R. 2641–3), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed amendments. The amendments are made after consideration of all the material submitted and statements made.

In addition, certain amendments are made for the purpose of incorporating into the language of the rules of practice in trademark cases the new system of adjudicating inter partes trademark cases, and ex parte appeals from decisions of the Examiner of Trademarks, by a Trademark Trial and Appeal Board, provided for by Public Law 85–609, approved August 8, 1958, 72 Stat. 540, which took effect on August 8, 1958. No advance notice of proposed rules was made as to these changes since they are merely those necessitated by the new statute, and the time and manner of taking effect of the changed wording relating to the Trademark Trial and Appeal Board are necessarily the same as the time of taking effect of the statute. The amendments relating to the Trademark Trial and Appeal Board shall apply to inter partes cases instituted on and after August 8, 1958, and to such cases instituted prior to this date which have not been heard by an Examiner of Interferences; with respect to such cases which have been heard or decided by an Examiner of Interference further

New Applications Received During September 1958

Patents	6,286
Designs	371
Plant Pats	6
Reissues	16
Total	6,679

Issue

Patents	905	No. 2,858,537 to No. 2,859,441, incl.
Designs	50	No. 183,821 to No. 183,870, incl.
Plant Pats	1	No. 1,768
Reissues	1	No. 24,559
Total	957	

proceedings shall be governed by the rules in effect prior to the effective date of these amendments. These amendments shall apply to ex parte appeals in trademark cases taken on and after August 8, 1958, and to such appeals taken prior to this date which have not been heard; with respect to such appeals which have been heard or decided prior to this date further proceedings shall be governed by the rules in effect prior to the effective date of these amendments.

The text of the amendments is as follows:

1. Paragraph (a) of § 2.12 is amended to read as follows:

(a) *Attorneys at law:* Any person who is a member in good standing of the bar of the Supreme Court of the United States or of the highest court of any State, Territory, or the District of Columbia, and is not under any order of any court suspending, enjoining, restraining, disbarring, or otherwise restricting him in the practice of law, may represent others before the Patent Office in trademark cases. No application for recognition to practice in trademark cases by attorneys at law is required.

2. Section 2.15 is amended to read as follows:

§ 2.15 *Signature and certificate of attorney or agent.* (a) Every paper filed by an attorney at law or other person representing an applicant or party to a proceeding in the Patent Office must bear the signature of such attorney at law or other person except those papers which are required to be signed by the applicant or party (such as the application itself and verifications required of applicants, registrants or others). The signature of an attorney at law or such other person to a paper filed by him, or the filing of any paper by him, constitutes a certificate that the paper has been read; that its filing is authorized; that to the best of his knowledge, information, and belief there is good ground to support it; and that it is not interposed for delay.

(b) When an applicant or party is represented by a firm composed of attorneys at law, papers may carry the signature or name of the firm, with the signature of a member or associate of the firm.

(c) When an applicant or party is represented by a firm (registered in accordance with § 1.341 (d) of this chapter) which includes one or more nonlawyers, papers may carry the signature or name of the firm, but in any case, they must carry the signature of an individual member of the firm or of an individual employee of the firm who is registered in the Patent Office and who is authorized to sign on behalf of the firm, and the certification referred to in paragraph (a) of this section shall, in either case, be a certification by and on behalf of the firm and by the individual.

3. Section 2.17 is amended to read as follows:

§ 2.17 *Recognition for representation.* (a) When an attorney at law acting in a representative capacity appears in person or signs a paper in practice before the Patent Office in a trademark case, his personal appearance or signature shall constitute a representation to the Patent Office that under the provisions of these rules and the law he is authorized, and qualified under § 2.12 (a), to represent the particular party in whose behalf he acts. Further proof of authority to act in a representative capacity may be required.

(b) Before any nonlawyer will be allowed to take action of any kind in any application or proceeding, a written authorization from the applicant, party to the proceeding, or other person entitled to prosecute such application or proceeding must be filed therein.

4. Section 2.18 is amended to read as follows:

§ 2.18 *Correspondence held with attorney or agent.* Correspondence will be held with the attorney at law, or other recognized person who shall have filed his written authorization, representing the applicant or party to a proceeding. Double correspondence will not be undertaken, and if more than one attorney at law appears or more than one agent is authorized, correspondence will be held with the one last appearing or appointed, as the case may be, unless otherwise requested.

5. Section 2.19 is amended to read as follows:

§ 2.19 *Revocation of power of attorney or authorization of agent.* Authority to represent an applicant or a party to a proceeding may be revoked at any stage in the proceedings of a case upon notification to the Commissioner; and when it is so revoked, the Office will communicate directly with the applicant or party to the proceeding or with such other qualified person as may be authorized. The Patent Office will notify the person affected of the revocation of his authorization.

6. The last sentence of § 2.24 is amended to read as follows: "Official communications of the Patent Office will be addressed to the domestic representative unless the application is being prosecuted by an attorney at law or other qualified person duly authorized. The mere designation of a domestic representative does not authorize the person designated to prosecute the application unless qualified under § 2.12 (a), or qualified under paragraph (b) or (c) of § 2.12 and authorized under § 2.17 (b)."

7. Section 2.27 is amended by changing the title to read *"Pending application index; access to applications"*; by changing the word "stating" in the first sentence to "including"; and by inserting the words "reproduction or" before "description" in the first sentence.

8. Section 2.37 is amended to read as follows:

§ 2.37 *Authorization for representation; U. S. representative.* The authorization of a qualified person to represent applicant (§ 2.17 (b)) and the appointment of a domestic representative (§ 2.24) may be included as a paragraph or paragraphs in the application.

9. The last sentence of paragraph (a) of § 2.39 is amended to read as follows: "If the certificate is not in the English language, a translation is required."

10. Section 2.41 is amended to read as follows:

§ 2.41 *Proof of distinctiveness under section 2(f).* (a) When registration is sought of a mark which would be unregistrable by reason of section 2 (e) but which is said by applicant to have become distinctive in commerce of the goods set forth in the application, applicant may, in support of registrability, submit with the application, or in response to a request for evidence or to a refusal to register, affidavits, depositions, or other appropriate evidence showing duration, extent and nature of use and advertising expenditures in connection therewith (identifying types of media and attaching typical advertisements), and affidavits, letters or statements from the trade or public, or both, or other appropriate evidence tending to show that the mark distinguishes such goods.

(b) In appropriate cases, ownership of one or more prior registrations on the principal register or under the act of 1905 of the same mark may be accepted as prima facie evidence of distinctiveness. Also, if the mark is said to have become distinctive of applicant's goods by reason of substantially exclusive and continuous use thereof by applicant for the five years next preceding the application filing date, a showing by way of verified statements in the application may, in appropriate cases, be accepted as prima facie evidence of distinctiveness. In each of these situations, however, further evidence may be required.

11. Section 2.53 is amended to read as follows:

§ 2.53 *Transmission of drawings.* Drawings transmitted to the Patent Office, other than those typed in accordance with § 2.51 (d), should be sent flat, protected by a sheet of heavy binder's board, or should be rolled for transmission in a suitable mailing tube to prevent mutilation or folding.

12. Paragraph (b) of § 2.67 is amended to read as follows:

(b) If registration is refused solely on the basis of a prior registration and the applicant files a petition to cancel the reference registration, such action upon notice thereof being placed in the application file by the applicant within the time for reply, shall be taken as a response to the refusal, and further action by the Office shall, at applicant's request, be suspended pending the termination of the cancellation proceeding.

13. Section 2.75 is amended by cancelling the last sentence thereof.

14. Section 2.86 is amended by cancelling the word "description" and substituting the word "identification" therefor.

15. Section 2.95 is amended to read as follows:

§ 2.95 *Decision on motion to dissolve.* Appeal may be taken to the Trademark Trial and Appeal Board in the manner provided in §§ 2.141 and 2.142 from a decision granting a motion to dissolve. No appeal may be had from a decision denying such a motion, but the question may be reviewed by the Trademark Trial and Appeal Board in its final decision in the interference.

16. Section 2.96 is amended to read as follows:

§ 2.96 *Adding party to interference.* If, during the pendency of an interference, another case appears involving substantially the same registrable subject matter, the Examiner

of Trademarks may request the suspension of the interference for the purpose of adding said case. Such suspension will be granted as a matter of course if no testimony has been taken. If, however, any testimony has been, or is about to be, taken the case will not be added except upon approval of a member of the Trademark Trial and Appeal Board. If the case is not so added, the Examiner of Trademarks may suspend action on such case pending termination of the interference proceeding, following which an interference may be instituted between such case and the case of the party prevailing in the first interference.

17. The first sentence of paragraph (b) of § 2.99 is amended to read as follows: "The notices shall be sent to each of the parties, in care of their attorneys or agents, if they have attorneys or agents of record, and if one of the parties is a registrant, a notice shall also be sent to him or his assignee of record."

18. Section 2.105 is amended by changing "Examiner of Interferences," each occurrence, to "Trademark Trial and Appeal Board."

19. Paragraph (a) of § 2.113 is amended to read as follows:

§ 2.113 *Notice of filing petition.* (a) When a petition for cancellation is filed, it shall be transmitted to the Trademark Trial and Appeal Board, which shall make examination thereof to determine if it is formally correct. If the petition is found to be defective as to form, the party filing the same shall be so advised and allowed a reasonable time for correcting the informality.

20. Paragraph (b) of § 2.113 is amended by cancelling the words "by the Examiner of Interferences."

21. Section 2.120 is amended to read as follows:

§ 2.120 *Discovery procedure.* The provisions of the Federal Rules of Civil Procedure relating to discovery are inapplicable in inter partes trademark cases except as specifically set forth in this section.

(a) *Depositions for discovery.* (1) Any party to an opposition, interference, cancellation or concurrent use proceeding may, at any time not later than thirty days prior to the date for taking testimony of any party as set by initial or subsequent Office action, take the deposition of any person, including a party, for the purpose of discovery. Such depositions may be taken upon oral examination in the manner prescribed by §§ 1.273, 1.274 and 1.275 of this chapter, or upon written interrogatories in the manner prescribed by § 2.124.

(2) *Scope of examination.* The deponent may be examined regarding any matter, not privileged, which is relevant to the subject matter involved in the proceeding, whether it relates to the claim or defense of the examining party or to the claim or defense of any other party, including the existence, description, nature, custody, condition and location of any books, documents, or other tangible things and the identity and location of persons having knowledge of relevant facts. It is not ground for objection that the testimony would be inadmissible at the trial if the testimony sought appears reasonably calculated to lead to the discovery of admissible evidence.

(3) *Use of discovery depositions.* Discovery depositions may be used in accordance with Rule 26 (d) (1), (2) and (4) and (f) of the Federal Rules of Civil Procedure, provided the party offering the deposition, or any part thereof, in evidence files the same before the close of his testimony period and also files a notice of reliance thereon. Objections, including any made during the examination, will be considered only if made or renewed at the hearing.

(b) *Request for admission.* (1) Any party to an opposition, interference, cancellation or concurrent use proceeding may, within the time specified for taking depositions for discovery, serve upon any adverse party a written request for admission by the latter of the genuineness of any relevant document described in and attached to the request (a photocopy may be attached provided the original thereof is made available for inspection), or of the truth of any facts which are material and relevant to the issues and which are believed to be within the knowledge of both the parties serving and the parties served. Each matter in respect of which an admission is requested shall be considered as admitted unless, within fifteen days after service thereof, the party to whom the request is directed serves upon the party requesting the admission a sworn statement denying specifically the matter in respect of which admission is requested, or setting forth in detail the reasons why he cannot truthfully either admit or deny the same, or objects thereto.

(2) *Effect of admissions.* No admission shall be considered as part of the record in the case unless a party files, before the close of his testimony period, a notice of reliance thereon and a copy of the admission and request therefor. Any objections noticed will be considered only if made at the hearing.

(c) *Motion to produce documents, etc., for inspection and copying.* Upon motion showing good cause therefor, made prior to the date for taking testimony of any party as set by initial or subsequent Office action, an order may be entered requiring a party to produce and permit the inspection and copying or photographing, by or on behalf of the moving party, of any designated books, documents or other tangible things, not privileged, the existence of which has been pleaded or otherwise asserted, and which constitute or contain material within the scope of inquiries permitted in depositions for discovery and which are in his possession, custody or control. The order shall specify a time for compliance therewith, and may prescribe such terms and conditions as may be just.

(d) *Refusal to make discovery.* If any party fails or refuses to answer proper questions in taking discovery depositions or fails or refuses to comply with an order to produce and permit the inspection and copying or photographing of designated things, the Trademark Trial and Appeal Board may strike out all or any part of any pleading of that party, or dismiss the action or proceeding or any part thereof, or enter a judgment as by default against that party, or take such other action as may be deemed appropriate.

(e) *Examination and cross-examination.* A party may interrogate any unwilling or hostile witness by leading questions. A party may call an adverse party or an officer, director, or managing agent of a public or private corporation or of a partnership or association which is an adverse party, and interrogate him by leading questions and contradict and impeach him in all respects as if he had been called by the adverse party, and the witness thus called may be contradicted and impeached by or on behalf of the adverse party also, and may be cross-examined by the adverse party only upon the subject matter of his examination in chief.

22. Section 2.123 is amended by changing "§ 2.124 and by § 1.284 of this chapter" in paragraph (a) to "§§ 2.124 and 2.124a"; by changing "deposition" to "depositions" in the first sentence of paragraph (b); and by changing the first sentence of paragraph (e) to read as follows: "Printed publications, such as books and periodicals, available to the general public in libraries or of general circulation, and official records, may be introduced as provided in § 1.282 of this chapter."

23. New § 2.124a, to follow § 2.124, is added:

§ 2.124a *Testimony taken in foreign countries.* Upon motion duly made and granted, testimony may be taken in foreign countries, upon complying with the following requirements:

(a) The motion must designate a place for the examination of the witnesses at which an officer duly qualified to take testimony under the laws of the United States in a foreign country shall reside, and it must be accompanied by a statement under oath that the motion is made in good faith, and not for the purposes of delay or of vexing or harassing any party to the case; it must also set forth the names of the witnesses, the particular facts to which it is expected each will testify, and the grounds on which is based the belief that each will so testify.

(b) It must appear that the testimony desired is material and competent, and that it cannot be taken in this country at all, or can not be taken here without hardship and injury to the moving party greatly exceeding that to which the opposite party will be exposed by the taking of such testimony abroad.

(c) Upon the granting of such motion, the Trademark Trial and Appeal Board will execute and forward to the moving party a commission authorizing the appropriate consular or other officer to take the depositions, and a time will be set within which the moving party shall serve in duplicate on each adverse party the interrogatories to be propounded to each witness, and such adverse party may, within a designated time, serve in duplicate, on the moving party cross-interrogatories. Objections to any of the interrogatories may be served with, or prior to service of, cross-interrogatories and objections to any of the cross-interrogatories may be served at any time before the depositions are taken, and

testimony will be taken subject to the objections. Such objections will be considered and determined upon the hearing of the case if renewed at that time.

(d) As soon as the cross-interrogatories are served, the moving party will forward the interrogatories, the cross-interrogatories, the commission, and security for official fees to the proper officer, with the request that he notify the witnesses named to appear before him within a designated time and make answer thereto under oath; and that he reduce their answers to writing and transmit the same, under his official seal and signature to the Commissioner of Patents with the certificate prescribed in § 1.276 of this chapter. The letter of transmittal of the moving party should direct attention of the consular or other officer to the instructions on the reverse side of the commission and should indicate that any insufficiency or excess of the security for official fees should be directed to the attention of the said party; and in view of the requirements of §§ 1.253 and 2.125 of this chapter for filing and serving copies of testimony, the desired number of copies of the testimony should be requested by the moving party.

(e) By stipulation of the parties the requirements of paragraph (c) of this section as to written interrogatories and cross-interrogatories may be dispensed with, and the testimony may be taken before the proper officer upon oral interrogatories by the parties, their attorneys or their agents.

(f) Unless false swearing in the giving of such testimony before the officer taking it shall be punishable as perjury under the laws of the foreign state in which it shall be taken, it will not stand on the same footing in the Patent Office as testimony duly taken in the United States; but its weight in each case will be determined by the tribunal having jurisdiction of such case.

24. Section 2.127 is amended to read as follows:

§ 2.127 *Motions.* (a) Motions shall be made in writing and shall contain a full statement of the grounds therefor. Any brief or memorandum in support of a motion shall accompany or be embodied in the motion. Briefs in opposition to a motion shall be filed within fifteen days from the date of service of the motion unless another time is specified by the Trademark Trial and Appeal Board or the time is extended, on request. Oral hearings will not be held on motions except on order of the Trademark Trial and Appeal Board.

(b) Any petition for reconsideration or modification of a decision must be filed within ten days after the decision or, if the decision is appealable, before the time for appeal expires.

(c) Interlocutory motions, requests, and other matters not finally determinative in the proceeding may be acted upon by a member of the Trademark Trial and Appeal Board.

25. Section 2.128 is amended to read as follows:

§ 2.128 *Final hearing and briefs.* (a) The brief of a party in the position of plaintiff shall be filed not later than sixty days after the closing date set for rebuttal testimony; the brief of a party in the position of defendant not later than thirty days after the due date of the first brief; a reply brief by a party in the position of plaintiff, if filed, shall be due fifteen days after the due date of the brief to which it is a reply. Three copies of all briefs should be filed.

(b) Briefs may be submitted in typewritten or printed form, except that where they are in excess of thirty typewritten pages, they shall be printed in conformity with § 1.254 of this chapter. Typewritten briefs may be written on letter or legal size paper and shall be double-spaced. Each brief shall contain an alphabetical index of cases cited therein.

(c) If a party desires an oral hearing, he shall so state by a separate notice filed not later than his brief, and the time for such hearing will be set in a notice sent to each party by the Office. If no request for oral hearing is made, the case will be decided on the record and briefs.

26. Section 2.129 is amended to read as follows:

§ 2.129 *Oral argument.* (a) Oral arguments will be heard by at least three members of the Trademark Trial and Appeal Board at the time stated in the notice. If any party appears at the specified time, he will be heard. If the Board is prevented from hearing the case at the time specified, a new assignment will be made, or the case will be continued from day to day until heard. Unless otherwise permitted, oral arguments will be limited to one-half hour for each party. Any petition for rehearing, reconsideration, or modification of a decision must be filed within thirty days from the date thereof.

(b) Hearings may be advanced or adjourned, as far as is convenient and proper, to meet the wishes of the parties and their attorneys or agents.

27. Section 2.130 is amended to read as follows:

§ 2.130 *New matter suggested by Examiner of Trademarks.* If, during the pendency of an inter partes case, facts appear which, in the opinion of the Examiner of Trademarks, render the mark of any applicant involved unregistrable, the attention of the Trademark Trial and Appeal Board shall be called thereto. The Board may suspend the proceeding and refer the application to the Examiner of Trademarks for his determination of the question of registrability, following the final determination of which the application shall be returned to the Board for such further inter partes action as may be appropriate. The consideration of such facts by the Examiner of Trademarks shall be ex parte, but a copy of the action of the Examiner will be furnished to the parties to the inter partes proceeding.

28. Section 2.131 is amended to read as follows:

§ 2.131 *Ex parte matter in an inter partes case.* If, in considering an inter partes case involving an application, facts appear which, in the opinion of the Trademark Trial and Appeal Board render the mark of the applicant unregistrable on one or more ex parte grounds, the Board shall in its decision on the inter partes issues in the case recommend that if the applicant finally prevails in the case, registration be withheld pending a reexamination by the Examiner of Trademarks of the application in the light of such facts. If, upon such reexamination following termination of the inter partes case, the Examiner of Trademarks finally refuses registration to applicant, appeal may be taken as provided in §§ 2.141 and 2.142.

29. Section 2.132 is amended by changing "a defendant" to "defendant" in paragraph (a) and by changing "Examiner of Interferences" to "Trademark Trial and Appeal Board" in paragraph (b).

30. Section 2.133 is amended by changing "Examiner of Interferences" to "Trademark Trial and Appeal Board."

31. Section 2.134 is amended to read as follows:

§ 2.134 *Surrender or cancellation of registration.* If a registrant involved in a proceeding applies to surrender or cancel his registration or files a disclaimer in whole of his mark under section 7 (d) of the act, the proceeding may be dismissed.

32. Section 2.135 is amended to read as follows:

§ 2.135 *Abandonment of application, abandonment, concession of priority.* If, in a proceeding an applicant files a written abandonment of the application or of the mark, or a party to an interference files a written concession of priority, judgment shall be entered against such applicant or party.

33. Section 2.141 is amended to read as follows:

§ 2.141 *Ex parte appeals from the Examiner of Trademarks.* Every applicant for the registration of a mark may, upon final refusal by the Examiner of Trademarks, appeal to the Trademark Trial and Appeal Board upon payment of the prescribed fee. A second refusal on the same grounds may be considered as final by the applicant for purpose of appeal.

34. Section 2.142 is amended to read as follows:

§ 2.142 *Time and manner of ex parte appeals.* (a) Such appeal must be taken within sixty days from the date of the final refusal, or, if the refusal was not made final by the Examiner, within the time for response to the Examiner's action. Appeal is taken simply by filing a notice of appeal and payment of the appeal fee.

(b) The appellant's brief shall be filed within sixty days after the date of appeal. If the brief is not filed within the time allowed, the appeal may be dismissed. The Examiner may, within such time as may be directed by the Commissioner, furnish a written statement in answer to appellant's brief, supplying a copy to the appellant. The appellant may file a reply brief within twenty days from the date of such answer.

(c) The appellant shall indicate, not later than at the time of filing his brief, if he desires an oral hearing. If no request for oral hearing has been made, the appeal will be considered on brief. If the appellant has requested an oral hearing, a day of hearing will be set, and due notice thereof given. Hearings will be held as stated in the notice and oral argument will be limited to one-half hour unless otherwise permitted.

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

(d) Applications which have been considered and decided on appeal will not be reopened except by order of the Commissioner, and then only for consideration of matters not already adjudicated, sufficient cause being shown.

35. Section 2.143 is cancelled.

36. The first sentence of § 2.145 is amended to read as follows: "Any applicant for registration or any party to a inter partes proceeding who is dissatisfied with the decision of the Trademark Trial and Appeal Board, or any registrant who has filed an affidavit under section 8 of the act who is dissatisfied with the decision of the Commissioner, may appeal to the United States Court of Customs and Patent Appeals or may proceed under 35 U. S. C. 145 or 146, as in the case of applicants for patents, under the same conditions, rules and procedure as are applicable in the case of patent appeals or proceedings."

37. Section 2.146 is amended by cancelling the words "other than by appeal" in subparagraph (2) of paragraph (a).

38. New § 2.163, reading as follows, is added:

§ 2.163 *Notice to registrant.* If no affidavit is filed within a reasonable time prior to expiration of the sixth year, the registrant may be notified that the registration will be cancelled by the Commissioner at the end of such sixth year unless the owner files in the Patent Office the affidavit of use or excusable nonuse required by section 8. Failure to notify the registrant does not, however, relieve the registrant of the responsibility of filing the affidavit within the period required by statute.

39. Section 2.163 is renumbered as § 2.164.

40. Section 2.164 is renumbered as § 2.165 and paragraph (b) is amended to read as follows:

(b) If the registrant is dissatisfied with the action of the Examiner holding the affidavit insufficient, he may request the Commissioner to review the action under § 2.146. The decision of the Commissioner on such a request constitutes the final action of the Patent Office. If there is no review by the Commissioner, the Commissioner will notify the registrant of the insufficiency of the affidavit after the expiration of the sixth year, which notice will constitute such final action. See § 2.145 for appeal to or review by court.

41. Section 2.165 is renumbered as § 2.166 and is amended to read as follows:

§ 2.166 *Time of cancellation.* If no affidavit is filed within the sixth year following registration or publication under section 12 (c), the registration will be cancelled forthwith by the Commissioner. If the affidavit is filed but is refused, cancellation of the registration will be withheld pending further proceedings.

42. Section 2.173 is amended by inserting "and verified" after "signed" in the second sentence of paragraph (a), and by changing "specification" to "identification" in paragraph (b).

43. Section 2.175 is amended by inserting "and verified" after "signed" in the first sentence of paragraph (b).

44. The second sentence of § 2.176 is amended to read as follows: "If the action of the Examiner of Trademarks is adverse, registrant may request the Commissioner to review the action under § 2.146."

45. The first sentence of paragraph (b) of § 2.184 is amended to read as follows: "If the registrant is dissatisfied with the action of the Examiner considering the application for renewal incomplete or defective, he may request the Commissioner to review the action, under § 2.146."

46. Section 4.19 is amended by changing "Commissioner of Patents" and "Commissioner" to "Trademark Trial and Appeal Board."

47. Section 4.20 is cancelled.

(Sec. 41, 60 Stat. 440; 15 U. S. C. 1123)

ROBERT C. WATSON,
Commissioner of Patents.

Approved: October 6, 1958.

WALTER WILLIAMS,
Acting Secretary of Commerce.

[F. R. Doc. 58-8376; Filed, Oct. 9, 1958; 8:47 a. m.]

Published in 23 F. R. 7847-7850, October 10, 1958.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION | Oldest Application

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of pending applications (excluding Designs)	204, 214
Total number of pending Design applications	6, 982
Total number of applications awaiting action (excluding Designs)	86, 231
Total number of Design applications awaiting action	3, 504
Date of oldest new application	Nov. 1, 1957
Date of oldest amended application	Oct. 15, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 58, 59, 60, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-30-57	2-3-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-2-58	12-26-57
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	4-15-58	4-18-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	1-17-58	1-21-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	12-10-57	12-2-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	2-21-58	2-27-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-29-57	11-18-57
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	3-3-58	2-17-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	2-17-58	1-9-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-25-58	3-11 58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-58	1-21-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-6-58	1-8-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	2-3-58	1-10-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-3-57	12-2-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-9-58	1-2-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	12-30-57	12-24-57
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	1-10-58	1-7-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-16-58	1-2-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	2-3-58	1-14-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-30-58	1-28-58
21. (III) MADER, R. C., Textiles	12-5-57	12-5-57
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-2-58	1-2-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-4-57	10-15-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Step Control	5-1-58	5-1-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	2-27-58	3-3-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	2-21-58	2-25-28
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	12-23-57	12-17-57
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	12-11-57	11-27-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	1-9-58	1-20-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	1-8-58	1-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-7-58	2-20-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-3-58	3-3-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	4-9-58	3-17-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	12-9-57	12-13-57
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet or Web Feeding	3-7-58	3-4-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	11-1-57	11-1-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	1-23-58	2-14-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	4-7-58	4-25-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	2-10-58	2-6-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-3-58	3-3-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	2-3-58	2-3-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	12-3-57	12-3-57
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	1-3-58	1-3-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-10-58	1-6-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	2-10-58	2-3-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	1-20-58	2-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	2-5-58	2-24-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	1-3-58	1-3-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-3-58	2-14-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	1-2-58	1-2-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	2-6-58	2-6-58
52. (V) NEFF, P. R., Supports and Racks	1-13-58	1-2-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	2-17-58	2-10-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	4-16-58	4-16-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	12-16-57	12-4-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	3-7-58	3-13-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	12-11-57	1-6-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part)	4-6-58	4-3-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	1-3-58	1-17-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-13-58	1-3-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-24-58	1-24-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	1-2-58	1-2-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-26-57	1-2-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	1-2-58	1-2-58
66. (V) LISANN, I., Geometric Instruments; Acoustics; Building Structures	12-26-57	12-23-57
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	2-10-58	1-6-58
69. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	3-27-58	3-28-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	3-3-58	3-3-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	2-3-58	2-11-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Selective Punching	2-20-58	1-2-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	6-2-58	3-26-58
CLASS. DIVS. V—ANGEL, C. D., Seafields; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	2-4-58	2-6-58
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	4-30-58	5-1-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	3-3-58	3-31-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	12-9-57	1-27-58

*Established August 23, 1957, by order of the Commissioner—722 O. G. 215.

The following divisions have been abolished: 65 and 68

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during November 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,261,102 to 2,264,267, inclusive
Plant Patents ..... Number 492

DECISIONS IN PATENT AND TRADEMARK CASES

Commissioner's Decision

GLEASON v. CROUCH

Interference No. 86,748. Decided April 7, 1958

INTERFERENCE—PETITION—QUESTION REVIEWABLE AT FINAL HEARING NOT CONSIDERED IN EXERCISE OF SUPERVISORY AUTHORITY—QUESTIONS ANCILLARY TO PRIORITY—TIMELY CLAIMING.

With regard to a patentee's motion to dissolve an interference based on a contention that the party applicant had failed to present claims to the same invention claimed in the patentee until more than one year after the date of the patentee and therefore is barred from making a claim of the patent, *Held* that the question presented is a matter ancillary to priority, and *Held* that the question is reviewable at final hearing, and *Held* that, with review at final hearing available, the question will not be considered in the exercise of supervisory authority.

ON PETITION.

DENIED.

P. L. Young for Gleason.

Hudson & Young for Crouch.

CROCKER, *Assistant Commissioner:*

In a petition for the exercise of supervisory authority Willie W. Crouch asks that the Commissioner "direct the Primary Examiner to dissolve Interference No. 86,748."

In that interference, involving the petitioner's patent and the application of Anthony H. Gleason, the Primary Examiner denied Crouch's motion to dissolve and adhered to this denial upon reconsideration. In this motion to dissolve Crouch contends that Gleason failed to present claims to the same invention claimed in the Crouch patent until more than one year after the date of that patent and therefore is barred from making a claim of that patent.

The question presented by the Crouch motion to dissolve is a matter ancillary to priority. *Emerson* v. *Resch*, 215 F.2d 280, 601 O.G. 170, 108 USPQ 45 (CCPA 1954). Under Rule 258, as shown by this decision, this question is reviewable at final hearing. With such review available, that question will not be considered in the exercise of supervisory authority. *Samuelson* v. *Flanders*, 1911 C. D. 134.

The petition is accordingly denied.

DENIED.

PATENT SUITS

Notices under 35 U. S. C. 290; Patent Act of 1952

2,630,185, J. R. Ballard, Portable room-cooling apparatus; 2,631,889, E. Babcock, Room cooling device, filed Nov. 7, 1950, D. C., N. D. Ill. (Chicago), Doc. 50c1566, *The Hoover Co.* v. *Mitchell Mfg. Co.* Patent held invalid and not infringed; action dismissed on merits Sept. 9, 1958.

2,669,729, J. E. Du Bois, Rye shield; 2,669,998, same; 2,682,504, same, appeal filed Sept. 11, 1958, C. C. A., 8th Cir., Doc. 16084, *Du Bois Plastic Products, Inc. et al.* v. *United States Safety Service Co.*

2,673,094. (See 2,760,081.)

2,681,668. (See 2,760,081.)

2,691,823. (See 2,699,185.)

2,699,998. (See 2,669,729.)

2,681,511, W. A. Lutz, Spreading attachments, filed Sept. 18, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1717, *Seaman-Andwall Corp.* v. *Pitsk Co.*

2,699,594. (See 2,669,729.)

2,686,582, C. J. Johnson, Device for guiding flow of material in magnetic separators, filed Jan. 14, 1955, D. C., E. D. Wis. (Milwaukee), Doc. 55c11, *The Jeffrey Mfg. Co.* v. *Dings Magnetic Separator Co.* Stipulation and order of dismissal Sept. 15, 1958.

2,687,068, M. D. Rechler, Folding chairs, filed Sept. 11, 1958, D. C., S. D. N. Y., Doc. 127/260, *North American Aluminum Corp.* v. *All-Luminum Products.*

2,688,111, C. Jackson, Tie tamping or ballasting machine, suit for Declaratory Judgment filed Sept. 15, 1958, D. C., W. D. Mich. (Grand Rapids), Doc. 3824, *Tamper, Ltd.* v. *Jackson Vibrators, Inc.*

2,818,858, J. T. Krapp, Couplings, filed Sept. 17, 1958, D. C., S. D. N. Y., Doc. 127/260, *John T. Krapp* v. *GPW Corporation.*

2,681,574, G. W. Lang, Machines for making cement roofing tile, filed Sept. 12, 1958, D. C., S. D. Fla. (Miami), Doc. 3810-M, *Geo W. Lang* v. *Quality Roofing Tile, Inc.*

2,807,876, J. G. Kerr, Transfer assemblies, filed July 29, 1957, D. C. N. J. (Newark), Doc. 777/57, *James Gordon Kerr* v. *Port Huron Sulphite & Paper Co.* Stipulation and order of dismissal Sept. 16, 1958.

2,804,011, Dverkovitz and Hawley, Jr., Washing composition; 2,815,266, same, filed Sept. 13, 1958, D. C., N. D. Ill. (Chicago), Doc. 55c1691, *Chas. Pfizer & Co.* v. *The Diversey Corp.*

2,808,626, Venner and Bowser, Apparatus for molding pistons; 2,676,371, same, Piston molding cores; 2,676,372, same; 2,722,030, Peterson and Bowser, Piston molding machine; 2,727,405, W. F. Peterson, Trunk pistons; 2,727,427, W. M. Venner et al., same; 2,771,638, W. M. Wainwright et al., Piston ring groove protector, filed Sept. 22, 1958, D. C., N. D. Ind. (Fort Wayne), Doc. 1082, *Sterling Aluminum Products Inc.* v. *Zollner Corp.*

2,760,081. (See 2,760,081.)

2,807,851, L. K. Jackson, Bedframe and special caster receiving socket construction, filed Sept. 19, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. C/19086, *Harvard Mfg. Co.* v. *M. L. Towbin, Inc.*

2,815,245. (See 2,594,017.)

2,817,862, B. C. Roemer, String mounted bow deflector, filed Aug. 13, 1957, D. C. N. J. (Newark), Doc. 814/57, *Benjamin C. Roemer* v. *Sabre Archery Co.* Order of dismissal Sept. 22, 1958.

2,625,679. (See 2,625,678.)

2,676,371. (See 2,625,678.)

2,676,372. (See 2,582,595.)

2,625,966, T. Loew, Backed fabric belt making machine; 2,625,976, R. W. Winberg, Process and machine for forming belt assemblies, filed Sept. 11, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19007, *Theodore Loew & Ano.* v. *Ragnar W. Winberg & Ano.*

2,629,963, F. W. Fenton, Extensible adjustable dock board, filed Aug. 4, 1958, D. C., E. D. Mo. (St. Louis), Doc. 10822(2), *Benson Production Equipment Corp.* v. *Rotary Lift Co.* Final consent judgment; injunction issued Sept. 17, 1958.

2,781,399, N. S. Florence, Diffuser holding means of lighting fixtures, filed Sept. 16, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1768, *Lightolier, Inc.* v. *Frederick Gordon et al.*

2,714,963, Priadle and Lacy, Laminated thread, filed Mar. 26, 1956, D. C., S. D. N. Y., Doc. 131/196, *Moline Sales Co.*,

Inc. et al. v. *Dow Chemical Co.* Stipulation and order of dismissal Sept. 17, 1958. Same, filed Mar. 25, 1958, D. C., S. D. N. Y., Doc. 131/197, *Facile Corp.* v. *Dow Chemical Co.* Decree as above.

2,737,436. (See 2,588,898.)

2,737,437. (See 2,588,898.)

2,732,614, W. A. Watson, Extruded metal door frame and hinge assembly, filed Sept. 10, 1956, D. C., E. D. N. Y. (Brooklyn), Doc. 19003, *Federal Screen & Bash Co., Inc.* v. *Season Master, Inc.*

2,769,661, W. I. L. Wu, Sweep circuits for panoramic devices; 2,878,696, M. Wallace, Radio altimeter and panoramic reception system; 2,881,968, Wallace and Miller, Method and apparatus for simultaneous aural and panoramic radio reception; 2,890,869, M. Wallace, Variable selectivity panoramic systems, filed July 26, 1957, D. C., E. D. N. Y. (Brooklyn), Doc. 17854, *Panoramic Radio Products, Inc.* v. *Lawrence Barrow et al.* Order of discontinuance Sept. 16, 1958.

2,769,825, Herbert J. Larsen, deceased, and George G. Groome, by Phyllis H. Larsen, administratrix, Process for bonding hydraulic cementitious materials, filed Sept. 19, 1958, D. C. Md. (Baltimore), Doc. 10916, *Larsen Products Corp. et al.* v. *Perfect Paint Products, Inc.*

2,771,329. (See 2,586,898.)

2,769,229. (See 2,586,898.)

2,782,966, A. E. Davis, Non-curling gummed paper, method and composition for making same, filed Sept. 9, 1958, D. C., N. D. Ill. (Chicago), Doc. 58C1865, *Nashua Corp.* v. *Minnesota Mining & Mfg. Co.*

2,801,636, A. R. Moore, Cervical collar, filed Feb. 10, 1958, D. C., E. D. Tex. (Tyler), Doc. 653, *Florida Brace Corp. et al.* v. *The Larkster Co.*

2,802,944, J. Burnbaum, Decorative ornament; Des. 178,886, same, Christmas tree, filed Dec. 23, 1957, D. C., E. D. N. Y. (Brooklyn), Doc. 18319, *Bradford Novelty Co.* v. *Samuel Fippy & Co., Inc.* Order of discontinuance Sept. 19, 1958.

2,802,902. (See Re. 24,370.)

2,802,104, Mastantuono and Vilardi, Grain catcher means, filed Sept. 11, 1958, D. C., S. D. N. Y., Doc. 137/242, *John F. Mastantuono* v. *American Grass Equipment Sales Corp.*

2,840,671, S. L. McNair, Electrical vibrating device in combination with a cushion, filed Sept. 9, 1958, D. C. N. J. (Newark), Doc. 1018/58, *Samuel L. McNair and Morris Strubl, Inc.* v. *Duvega Stores Corp.*

2,844,822, Havens and Magrath, Two-tone hat and method of making same, suit for Declaratory Judgment filed Sept. 17, 1958, D. C., S. D. N. Y., Doc. 128/11, *Frank H. Lee Co.* v. *Hat Corp. of America.*

2,847,780, F. G. Ellerman, Wall display, filed Sept. 9, 1958, D. C., N. D. Ill. (Chicago), Doc. 58C1666, *Welby Corp.* v. *Frank G. Ellerman.*

Re. 24,370, C. Harris, Embroidering mechanism for zigzag sewing machines; 2,832,302, F. Gegauf, Sewing machine, filed Sept. 10, 1956, D. C., W. D. S. C. (Greenville), Doc. 2429, *The Singer Mfg. Co.* v. *Sewing Machine Exchange.*

Des. 178,238. (See 2,803,204.)

Des. 180,624, H. E. Greenberg, Bar stool or similar article, filed Mar. 26, 1958, D. C., S. D. N. Y., Doc. 131/218, *Frank Chrome Products Co., Inc.* v. *Hunter Metal Products, Inc.* Final consent judgment; defendants enjoined Sept. 18, 1958.

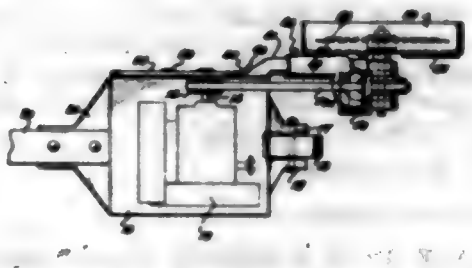
REISSUES

NOVEMBER 4, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,559
LAWN TRIMMER
Ralph O. Hutchens, Compton, Calif.
Original No. 2,719,398, dated October 4, 1955, Serial No. 419,196, March 29, 1954, which is a continuation of Serial No. 168,506, June 16, 1950. Application for reissue April 24, 1958, Serial No. 732,413
19 Claims. (Cl. 56—25.4)

1. A lawn trimmer and edger including a base with supporting wheel journaled thereto approximately on the middle line, an operating handle united to the base extending upwardly and rearwardly, a side plate pivotally united to the base at one side thereof and having a forwardly extending round shaft formed integral therewith, a sleeve adjustable both rotationally and longitudinally mounted upon said shaft having a fork or yoke formed integral therewith at its front end, a shaft journaled in said yoke carrying a front pulley and having one end extending laterally outside of the yoke, a circular cutter blade mounted upon said shaft, a set screw threaded into said sleeve arranged to contact the shaft and hold the sleeve thereon in rotational and longitudinal adjusted position, a prime mover mounted upon the base and having a drive shaft and drive pulley and a belt arranged to be driven by the drive pulley and passing around and arranged to drive the front pulley and the shaft journaled in the yoke with cutter blade attached thereto.



PLANT PATENTS

GRANTED NOVEMBER 4, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,768
ASH TREE
John D. Siebenthaler, Dayton, Ohio, assignor to The Siebenthaler Company, Dayton, Ohio, a corporation of Ohio
Application March 26, 1958, Serial No. 724,217
1 Claim. (Cl. 47—59)

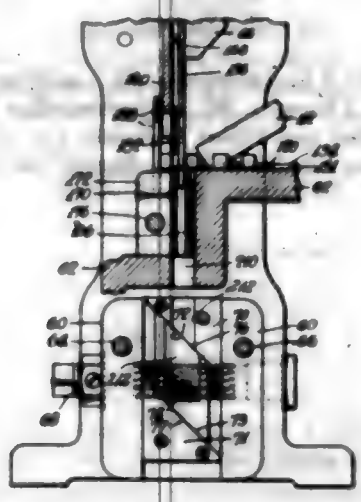
A new and distinct variety of ash tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of medium size at maturity, attractive shape and form when both young and mature, attractive bark and foliage, persistence of the foliage to later in the autumn season than most ash trees, scant seed production, and excellent adaptability to a wide range of soil conditions.

PATENTS

GRANTED NOVEMBER 4, 1958

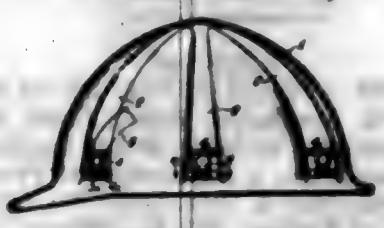
GENERAL AND MECHANICAL

2,858,537
AUTOMATIC TERMINAL APPLYING MACHINE
Harold E. Cootes, Harrisburg, Pa., assignor to AMP Incorporated, a corporation of New Jersey
Original application December 16, 1948, Serial No. 65,645, now Patent No. 2,690,562, dated October 5, 1954. Divided and this application January 13, 1954, Serial No. 403,715
3 Claims. (Cl. 1—177)



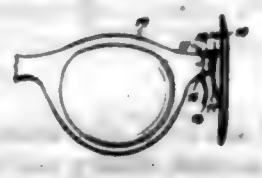
1. A press construction including a ram constrained to reciprocatory movement along a path, means for driving said ram along said path, a bed toward which the ram is moved, a supporting structure in which said ram is constrained and providing supporting portions for said driving means and said bed, a vertically spaced pair of blocks connected to said bed and constrained to vertical sliding movement in said press construction, said blocks having respectively downwardly and upwardly sloping surfaces, a wedge-block disposed between said spaced blocks and presenting respectively upwardly and downwardly sloping surfaces in face-to-face contact with the respective sloping surfaces of said spaced blocks, and means for evenly moving said wedge-block laterally to effect vertical adjustment of said spaced blocks and said bed.

2,858,538
SAFETY HELMET
Jack N. Simpson, Reading, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application October 8, 1956, Serial No. 614,536
2 Claims. (Cl. 2—3)



1. A safety headgear including a rigid crown portion having a plurality of circumferentially spaced, outwardly extending projections forming well portions adjacent the brim thereof, an inwardly projecting fastening element rigidly secured to the center of each projection adjacent said brim and having a radially inwardly extending stud portion terminating in an enlarged head portion which forms a shoulder, the inner terminal surfaces of said head portions being confined within said well portions, a crown suspension including a plurality of spring clips whose upper ends are secured to straps of said suspension and having key hole slots centrally thereof with the narrowest openings at the lower end and having laterally extending ear portions, the terminals of which span substantially the circumferential width of said projections within said well portions, whereby said spring clips may be pushed into said well portions while their terminals are anchored to and slid adjacent the extremities of said well portions until said head portions project beyond the narrowest openings of said keyhole slots so as to maintain said clips under tension and provide a tight and readily detachable, yieldable fit with maximum friction between said shoulders and the contacting portions of the clips.

2,858,539
SHIELD FOR EYEGLASSES
Philip Carlson, Bridgeport, Conn.
Application September 25, 1957, Serial No. 686,240
2 Claims. (Cl. 2—13)



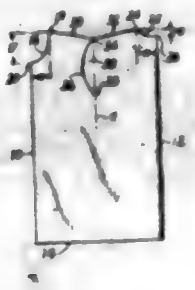
1. An eyeglass side glare shield for attachment to one of the eyeglass temple-bars, comprising a glare shield plate, clip means carried at the inner side of said plate including a top wall portion connected to and extending laterally from the inner side of said plate, a leg portion connected to and extending downwardly from said top wall in spaced relation to said plate and forming with said top wall an inside corner for receiving the temple-bar with its upper side in engagement with said top wall portion and its inner side in engagement with said leg portion, and a leaf spring portion disposed in the space between said plate and said leg portion, said leaf spring portion being connected at its lower end to the inner side of said plate and having its upper free end portion for a substantial part of its length normally pressed toward said leg portion contiguous to said top wall portion and adapted to engage under pressure the outer side of said temple-bar to retain it in said corner.

2,858,540
LIMB AND KNEE PROTECTOR
Harry Morrison, Pittsburgh, Pa.
Application May 21, 1956, Serial No. 586,263
2 Claims. (Cl. 2—24)

1. A knee protector pad for supporting an injured knee joint comprising a resilient outer cover containing a thin uniform resilient pad therein; said outer cover and said pad possessing sufficient resiliency, so that when applied to a joint, they will cooperatively stretch and

resiliently follow the contour of the injured joint, and thus provide a combination of support and freedom of movement while permitting the joint to be bent; a plurality of bands having a resilient central section positioned on said cover, at least one of said bands being positioned on said cover so as to lie above, and at least one of said bands being positioned so as to lie below the injured joint, hook means on one end of said bands and quickly adjustable loop means on the other end of said bands; and said quickly adjustable loop means cooperating with said resilient central section, whereby the amount of supporting tension within the resilient central section and imparted to the supporting protector pad, may be quickly adjusted after the protector pad has been positioned over the injured knee and the ends of the bands have been hooked together.

2,858,541
METHOD OF MAKING SHIRTS
Lawrence L. Mangan, Andrews, S. C., assignor to Oneita Knitting Mills, New York, N. Y.
Application July 17, 1956, Serial No. 598,293
4 Claims. (Cl. 2—113)



1. The method of making a shirt which comprises forming a tubular body section, folding said tubular body section flat, forming the front portion of the neck opening of said shirt by cutting off one of the upper corners of both layers of said flattened body section along a concavely curved line, forming the rear portion of said neck opening by cutting the other upper corner of both layers of said flattened body section along a concavely curved line, forming the armholes of said shirt by cutting both layers of said flattened body section along a single curved line which commences at the upper edge of said flattened body section and which extends generally downwardly along said body section, with the upper and lower ends coinciding approximately with the center line of said flattened body section and which with its intermediate portion bowed away from said center line in the direction of said front portion of said neck, unflattening said body section, folding out the flaps thus formed at the back portion thereof to open said armholes, forming a pair of tubular sleeves, and sewing the inner ends of said sleeves around said armholes, whereby said sleeves are caused to extend from said body section at an angle having a forward directional component of appreciable magnitude.

2,858,542
GOLF GLOVE
William Ogg, Albany, N. Y.
Application September 9, 1955, Serial No. 533,445
4 Claims. (Cl. 2—161)

1. A golfer's glove having a covering for the palm of the hand and a separate stall for each of the fingers of the hand extending at least from the bases of said fingers to zones between first and second joints thereof; the stalls for the second and fourth fingers being secured to the sides of the stall for the third finger from the bases thereof substantially throughout to prevent independent movements of said second, third and fourth fingers; and the stall for the forefinger providing free movement of said forefinger when in said stall, whereby it may be interlocked with the forefinger and second

finger of the other hand when a golf club handle is gripped by a wearer of said glove.

2,858,543
CAP
Julius Litowsky, Lincolnwood, Ill., assignor to S & L Novelty Co., Chicago, Ill., a partnership consisting of Jacob W. Roller and Julius Litowsky
Application March 6, 1956, Serial No. 569,931
3 Claims. (Cl. 2—172)

2. In an out-band cap having a flexible inelastic crown providing continuous front, rear and side edge portions, a visor secured to the front edge portion of said crown, a flexible and inelastic band of substantially uniform width having one of its longitudinal edges secured to the side and rear edge portions of said crown and having its ends terminating adjacent the intersections of the lateral edges of said visor with the front edge portion of said crown, said ends of said band providing front edges extending at substantially right angles to the lower edge portions of said crown, said band being foldable between a raised position against said crown and a lowered position extending downwardly therefrom, and a pair of elastic webs each being triangular in shape and each having one side secured to a front edge of said band, a second side secured to the front edge portion of said crown above said visor, and a third free edge, said webs extending over said visor and being stretchable and contractable along lines parallel with said third free side for drawing said inelastic band upwardly and forwardly against the neck and ears of a wearer when said band is in lowered position and for urging said band forwardly and downwardly against said crown when said band is in raised position.

2,858,544
NOISE ATTENUATING DEVICE
Herman P. Roth, Manhattan Beach, Calif., assignor, by mesne assignments, to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 4, 1956, Serial No. 582,694
7 Claims. (Cl. 2—209)

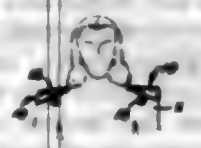
6. A noise attenuating device comprising a substantially circular frame adapted to encircle completely the wearer's head and to be spaced therefrom at all points, the frame consisting of two rigid and substantially inflexible curved side sections hingedly joined at the back of the frame and adjustably connected at the front of the frame, an ear cup rotatably and pivotally mounted on each frame section near the mid-point thereof and ex-

a substantially oval ring-shaped seat with the seat en- zontal position on the other raised edge, and latchable

tending radially inward therefrom, and an ear pad of resilient sound absorbing material supported by each ear

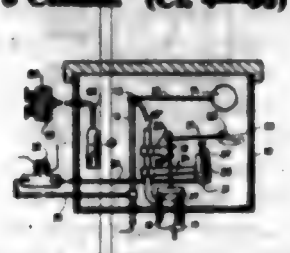
cup, the ear pads alone being adapted to engage the sides of the wearer's head and to support the device thereon.

2,858,545
SHOULDER PAD
Harry I. Silverman, Brooklyn, N. Y.
Substituted for abandoned application Serial No. 656,343, March 22, 1946. This application June 13, 1957, Serial No. 665,402
2 Claims. (Cl. 2—268)



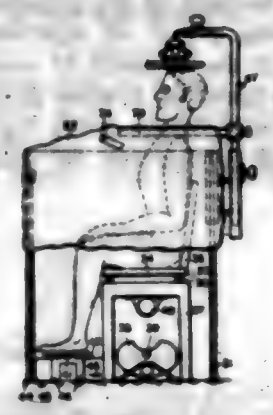
1. A shoulder pad comprising a padding member shaped to add to the contour of a wearer's shoulder and modify said contour, and a reinforcing and securing member removably mounted in an arcuate-shaped groove extending from front to back in the under surface of said padding member, said reinforcing and securing member being flexible and terminating in a pair of arms adapted to pass down in front and behind the wearer's shoulder and press directly and lightly thereagainst, thereby securing said pad on the shoulder of the wearer, said groove being narrow adjacent to the surface and wider within the body of the padding member, whereby the reinforcing and securing member is positively secured therein, said arms having suction cups on their inner surfaces to press against the wearer's shoulder.

2,858,546
ELECTRONIC TOILET FLUSHER
Alexander Benjamin Tekenos, deceased, late of Cornwall, Ontario, Canada, by Ruth Norma Tekenos, administratrix, and Palma Adrien Lefebvre, Cornwall, Ontario, Canada, assignors of one-third to Leonard Leclair, Cornwall, Ontario, Canada
Application December 16, 1956, Serial No. 627,500
8 Claims. (Cl. 4—63)



1. For a two-way control toilet flushing mechanism, a manual operated control member co-acting with the flushing mechanism, an automatic control also co-acting with the said member and having an intruder circuit controller for said mechanism, an antenna therefor, and a capacity sensitive oscillator in said circuit whose frequency is varied by the antenna's capacity to ground, either control being operable independent of and without impairing the other control.

2,858,547
TRANSPORTABLE HOME SUDATORIUM
Ernst Baumann, Basel, Switzerland
Application December 18, 1956, Serial No. 629,129
Claims priority, application Switzerland December 22, 1955
7 Claims. (Cl. 4—168)



1. In combination, in a home sudatorium, a roll-up wall forming an enclosure, a hood of flexible material extending over the enclosure substantially closing the same, an electric heating stove within the enclosure, a trough positioned in heat exchange relationship with said stove so as to be heated by said stove, a liquid container within said enclosure above said trough to supply liquid to said trough, a holder device supported on the wall and including a support member in supporting relation to the hood of flexible material and extending through the hood, said supporting member being provided with holes communicating the exterior of the enclosure with the interior for the venting of vapors from the sudatorium enclosure.

2,858,548
SINK STRIP ASSEMBLY
Harold K. Switzer, Alexandria, Ky.
Application April 5, 1957, Serial No. 651,988
10 Claims. (Cl. 4—187)

1. Means for mounting a flat flange type sink in an opening in a drainboard comprising a frame of generally T-shaped cross section having a horizontal cap overlying the edges of the sink and drainboard and a vertical leg depending into the opening between the sink and drainboard, said vertical leg being bent laterally towards the sink and downwardly to provide an offset portion, a plurality of lugs disposed at spaced points around the opening in the drainboard, said lugs being of generally L-shaped cross section with the upper edges of the vertical legs contacting the underside of the sink and the upper surfaces of the horizontal legs contacting the underside of the drainboard, each of said lugs having a continuous slot formed in a portion of its vertical leg and an adjacent portion of its horizontal leg, the offset portion of the vertical leg of the frame being forcibly bent into locking engagement with edges of the slots in the vertical legs of the lugs.

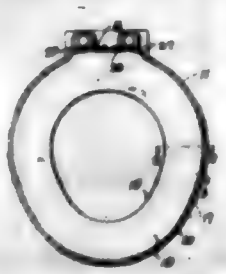
2,858,549
REMOVABLE COVER FOR TOILET SEATS
Susan V. Carson, Bridgeport, Conn.
Application July 6, 1954, Serial No. 441,682
1 Claim. (Cl. 4—242)

A removable cover for toilet seats, said cover being of generally annular and oval shape formed to closely fit

upon axial relative movement of said conical surface spindle, said holder being reversible manually by axial

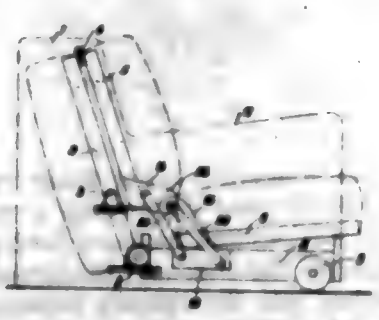
fingers; and the stall for the forefinger providing free each frame section near the mid-point thereof and ex-

a substantially oval ring-shaped seat with the seat enclosed in the cover, the structure of said cover comprising a top member of terry cloth or similar washable material of a width to fit over and cover the top surface of the enclosed seat and extending to the inner and outer side edges thereof, a bottom portion to lie under and cover the under surface of the enclosed seat, said bottom portion comprising a pair of superimposed members of material of which the upper is of washable cotton fabric and the lower a sheet of flexible plastic material, stitching securing the inner edges of the top member and lower members together throughout the inner periphery of the



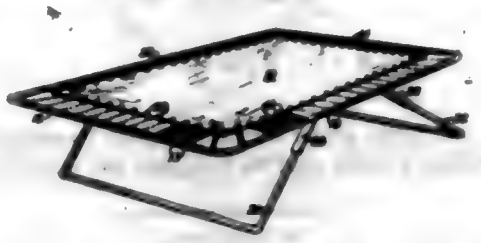
cover, the outer edges of the top and lower members being disconnected for a portion of the outer peripheral edges of the cover for a sufficient distance to form an opening to permit passage of the hinge members connected to the seat, a pair of tapes secured to the top and lower members at substantially the center of said opening to tie said members together after applying the cover to the seat, and detachable means securing the outer edges of the top and lower members together extending from one end of said opening for a sufficient distance that when detached there is provided an opening including the first opening of a size for insertion of the seat into the cover.

2,858,550
BED COUCH
Friedrich Richter, Oberhausen, Rhineland, Germany
Application June 24, 1954, Serial No. 438,930
Claims priority, application Germany June 27, 1953
3 Claims. (Cl. 5—47)



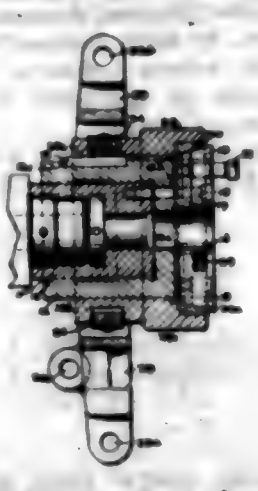
1. In a convertible bed-couch, having a stationary frame, a rolling support movable relative to the frame, and three linked members including a seat member forming in the couch position a seat support and in the bed position a foot support, a backrest member forming in the couch position a backrest and in the bed position the center piece, and a headrest member forming in the bed position the head support and being in the couch position folded back-to-back with said backrest member and being pivotally connected to said frame, the combination of, said rolling support having a raised fixed front edge and a raised fixed rear edge, two tiltable levers pivoted to each side of said rolling support, the free end of one of said levers on each side being connected to said seat member and the free end of the other lever on each side being connected to said backrest member, the points of pivot connection of said levers on said rolling support being so arranged that upon conversion to the bed position the seat member will rest in substantially horizontal position on one of said raised edges of the rolling support and the backrest member will rest in substantially horizontal position on the other raised edge, and latchable linking means operatively disposed between said backrest and seat members.

2,858,551
TRAMPOLINE
Bruce C. Sidlinger, Cedar Rapids, Iowa
Application November 9, 1953, Serial No. 391,063
1 Claim. (Cl. 5—110)



A knock-down trampoline comprising a pair of straight side members, a pair of U-shaped end members removably telescopically joined with said side members to define a rectangular frame, each of said side members being provided with two, fixedly-mounted, symmetrical, spaced, downwardly extending and longitudinally diverging joint members, and as the sole support for said frame a pair of U-shaped legs each removably telescopically joined with two joint members at one end of said frame for supporting said rectangular frame, the diverging angle of said joint members and the length of said legs being proportioned to position the bottom of the U of said legs longitudinally near the ends of said frame to prevent tipping, and said joint members being spaced inwardly from each end of the frame a distance approximately equal to one-third of the length of the frame to avoid sag, and a trampoline bed removably mounted within said frame by a plurality of disconnectable spaced resilient connectors each under tension, the total tension being sufficient to support an acrobat on said bed and to hold said frame in assembled position during the performance of acrobatics on the assembled trampoline, whereby upon disconnecting said connectors, said frame may be knocked down for easy transportability.

2,858,552
BEVEL CLOSING DIE HEAD HAVING REPLACEABLE AND SELECTIVELY POSITIONABLE INSERT WEAR RING
Lad L. Hercik, Lakewood, Ohio
Application May 28, 1954, Serial No. 433,127
8 Claims. (Cl. 10—95)



1. A tool, comprising a body, a plurality of machining slides circumferentially spaced on said body about an axis, each slide being movable in a generally radial direction between workpiece machining and clearance positions for removal from the workpiece, a slide actuator having an insert ring with a tapered frusto-conical surface having one set of surface portions engaging portions of said slides to move them to said machining position

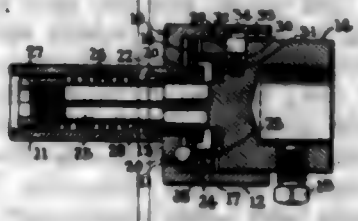
upon axial relative movement of said conical surface and slides in one direction, said insert ring being replaceable when its conical surface has worn excessively, and lock means on said body, said ring and said slide actuator independent of said slides for orienting said insert ring relative to said slides to bring another set of surface portions on said conical surface into engagement with said slides, said actuator having a cylindrical bore surface, an insert ring being a hard and accurate bearing race ring having a cylindrical peripheral locating surface frictionally engaged in said slide actuator cylindrical bore surface with said peripheral surface coaxial with said frusto-conical surface.

2,858,553

RELEASABLE THREAD CUTTING TOOL HOLDER WITH REVERSIBLE CLUTCH MEANS FOR OPPOSITE HAND THREAD CUTTING

John A. Bearhalter, North Wales, Pa.

Application August 24, 1955, Serial No. 530,377
2 Claims. (Cl. 10—129)



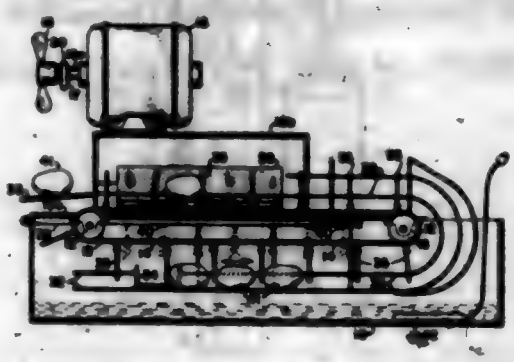
1. A tap holder of the reversible type convertible to a non-releasing tap holder without disassembly of the holder to cut right or left hand threads comprising a shell having a lathe turret supported hollow shank portion and a cup-like body portion with a closed end at the connection thereof with the said shank portion, said body having hemispherical recesses in the bottom thereof, an axial groove formed in an interior wall of said body adjacent the open end thereof opposite to said shank end, a threaded socket formed in the said closed end of said body concentrically aligned with the axis of the base of said hollow shank, an annular shoulder formed in the shank adjacent the end of said threaded bore, a clutch, said clutch having a ring formed with rectangular teeth on one side and hemispherical respective recesses on the opposite side adjacent said body recesses, movable balls in said recesses, a spindle with a tool socket, said spindle having a stem concentrically formed therefrom and extending into said hollow shank, an adjustable nut on said stem, a spring coiled around said spindle housed in said shank between said nut and said annular shoulder in the shank, said clutch also including clutch teeth encircling the said spindle around the base of the said stem, a clutch return spring coiled around the base of said stem, a washer superimposed on said spring, said clutch ring and said spindle teeth forming the positive drive engageable elements of said clutch, clutch returning means having an elongated threaded exterior portion engageable with the said clutch ring to thereby limit the movement thereof, said exterior threaded portion of the retaining means being threadedly mounted in said threaded socket of said cup-like body, said rectangular clutch ring teeth and said spindle carried clutch teeth being engageable in response to torque imparted by the rotating work to said spindle and transmitted by the spindle to slightly turn the clutch ring and partially displace said balls in their respective recesses, said clutch teeth being separated by said return spring when torque is discontinued on the said spindle, whereby said spindle revolves freely with the rotating work, pawl means carried by said spindle and engageable in said axial groove formed in the wall of said body locking said spindle against rotation when the pawl engages the groove while permitting axial sliding clutch controlling movement of the spindle, said holder being reversible manually by axial movement of said pawl means against the action of said spindle spring to release said pawl from said axial groove in the wall of the body and subsequent rotation of said pawl to thereby reverse the direction of operational engagement of the pawl means in said groove.

2,858,554

EGG WASHING APPARATUS

Vern C. Beck, Logansboro, Pa.

Application December 7, 1954, Serial No. 473,656
4 Claims. (Cl. 15—3.13)



1. An egg washing apparatus including a washing compartment; a wiping mechanism located above said compartment; a conveyor mechanism for moving eggs through said compartment and into engagement with and beyond said wiping mechanism, said conveyor mechanism including a U-shaped guideway with one leg thereof located within and extending through said compartment and the other leg located above said compartment and extending in the direction of the lower leg, a chain conveyor cooperating with both legs of said guideway in moving eggs along said guideway, through said compartment and into operative engagement with said wiping mechanism; said wiping mechanism consisting of an elongated flexible stationary member extending along the upper leg of said chain conveyor on one side thereof and in engaging relationship with eggs moving with such leg of said conveyor, and an elongated rotatable member opposite to said stationary member and extending along the upper leg of said conveyor chain substantially parallel to such leg and said stationary member and opposite to said stationary member, and a motor for actuating said chain and for rotating said rotatable member.

2,858,555

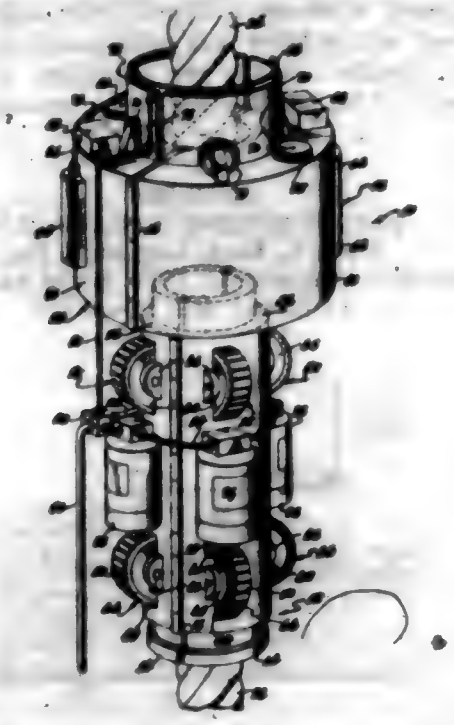
SELF-PROPELLED CLEANING OR PAINTING DEVICE

George Madovick, Los Angeles, Calif.

Application June 9, 1955, Serial No. 514,347
3 Claims. (Cl. 15—88)

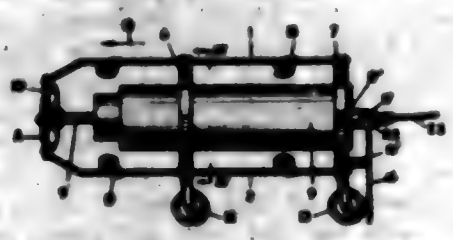
1. In a self-propelled device for use in treatment of vertically disposed elongated members which are supported at their extremities, such as bridge suspension cables, the combination of; a housing unit comprising at least two sections for encircling a portion of a vertically disposed elongated member, said housing unit including resilient clamps for joining said sections about the member; a plurality of wheels carried in said sections of said housing unit, the axes of rotation of said wheels lying in horizontal planes, with said wheels projecting inward from said sections and with said resilient clamps urging said wheels into engagement with the encircled member; electric motor means carried on said housing unit; means coupling said motor means to said wheels in driving relationship for propelling the device up and down the member; a treating unit for encircling a portion of the member above said housing unit, said treating unit being mounted on and driven by said housing unit; a control for reversing said motor means to change the direction

of motion of the device from upward to downward and for simultaneously energizing said treating unit; and a



control actuating lever projecting above said treating unit for actuating said control when the device reaches the upper limit of its travel.

2,858,556
SELF-PROPELLED SEWER PIPE CLEANING APPARATUS
Johannes Hubertus Hendrikus van der Lans, Sassenheim, Netherlands
Application November 2, 1956, Serial No. 620,115
2 Claims. (Cl. 15—104.3)



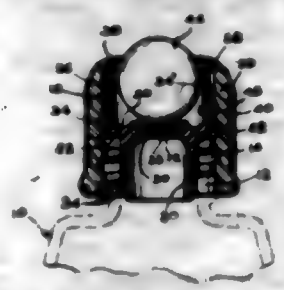
1. A sewer pipe cleaning apparatus comprising a skeleton frame comprising peripherally spaced longitudinally extending rods and spaced annular rings joined to said rods, support means connected with said frame for engagement with the bottom wall of a sewer, an electric motor carried by said frame centrally thereof, a propeller operatively connected with said motor and disposed in a plane substantially transverse to the longitudinal axis of said frame, means attached to said frame for pulling said frame back through a sewer pipe after propulsion therethrough by said motor and propeller, and a cleaning flap pivoted to said frame about a transverse axis, said flap being free to swing rearwardly upon advance of the frame but bearing against a stop portion of the frame upon withdrawal of the frame so as to be perpendicular to the longitudinal axis of the frame.

2,858,557
BUTTERFLY-TYPE SQUEEZE SPONGE MOP
Frank Zottola, Port Chester, N. Y., assignor to Empire Brushes, Inc., Port Chester, N. Y., a corporation of New York
Application March 1, 1954, Serial No. 413,295
6 Claims. (Cl. 15—119)

1. A mop comprising a head, a pair of wings hinged thereto and swingable downwardly from a horizontal position, a squeezable sponge mop element attached to the under sides of said wings, whereby said sponge element is squeezed when the wings are swung downwardly toward each other, posts fixed to the wings and extending upwardly, rearwardly and inwardly toward each other when said wings are in horizontally-aligned position, a handle fixed at its lower end to said head and being inclined upwardly and rearwardly from said head, a sleeve slidable on said handle, a lever pivoted to the handle at a point between the head and the sleeve and extending upwardly from the pivotal point, a link interconnecting

the lever with said sleeve whereby said lever is swung downwardly and away from the handle when said sleeve is slidably moved down on the handle toward said head, and a pair of links pivoted to said lever between the points where the lever is connected to said handle and to said link, said pair of links having downwardly and outwardly diverging portions connected to said posts whereby to swing said wings downwardly toward each other when said lever is swung downwardly.

2,858,558
COMBINATION BOTTLE CLOSURE AND BALL APPLICATOR
Steve Sudbouz, New York, N. Y.
Application October 22, 1956, Serial No. 617,388
11 Claims. (Cl. 15—133.7)



1. A combined cap and dispenser for a perfume bottle having an externally threaded neck, comprising a flexible ball retainer engageable in said neck and having a cupped portion formed at its bottom with a dispensing opening and at its top with an inwardly extending lip, a tubular cap body threaded for engagement with the threads of the neck and enclosing the ball retainer, and a ball rotatably seated in said cupped portion and projecting out of the cap body for applying the contents of the bottle responsive to rolling of the ball upon a selected surface, said cap body including an inwardly directed circumferential flange disposed to press against the lip whereby the ball is pressed upon threading of the cap body onto the neck to a predetermined extent, said ball when pressed by the lip being held against rotation in the cupped portion in position to seal the dispensing opening.

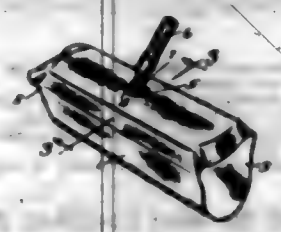
2,858,559
DUSTING MOP FOR USE OVER FLOOR BRUSH
Lawrence A. Carlson, Sr., Minneapolis, Minn.
Application March 16, 1953, Serial No. 342,683
3 Claims. (Cl. 15—247)

1. In a cleaning or dusting tool comprising a head having a handle connected thereto and projecting therefrom, said head comprising a rigid backing having a

kerfs of each attaching portion being in the upper wall

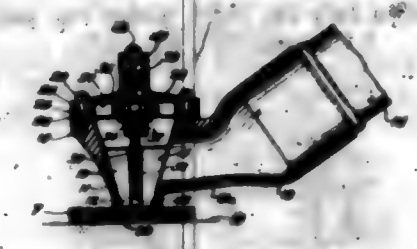
2,858,565

yieldable facing on the underside thereof providing the tool with a relatively deflectable working facing, said backing and its yieldable facing extending an appreciable distance on opposite sides of said handle connection with the head, the improvement comprising in combination with the head and its yieldable working facing, a reversible cylindrical tube open at both ends and composed of flexible material of substantially uniform diameter from end to end and having similar inner and outer work surface engaging portions, said tube encompassing the head and its yieldable working facing and having an opening intermediate the ends thereof of sufficient size to freely



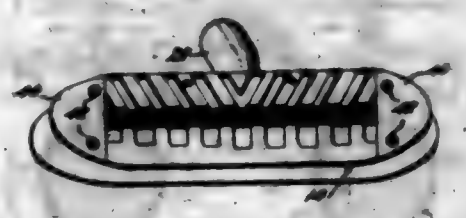
receive said handle and through which the handle projects, said cylindrical tube having a length and diameter materially greater than the maximum length and width respectively of the rigid backing and its yieldable working facing so as to extend therebeyond in end and side folds, the diameter of said tube being considerably less than the length of said handle, whereby the end and side folded portions of said tube will spread loosely over a surface being cleaned for a substantially greater area than that of the yieldable working facing of the head being brought into pressure contact by the handle with different circumferential areas of the tube during such cleaning and dusting operations.

2,858,560
PULSATING SUCTION CLEANER WITH OSCILLATING BEATER
Albert G. Bodine, Jr., Van Nuys, Calif.
Application July 30, 1953, Serial No. 371,245
4 Claims. (Cl. 15—382)



1. In a suction cleaner the combination of: a hollow nozzle formed with a suction orifice defined by a peripheral rug engaging seat presented downwardly to the rug to be cleaned, means engageable with the rug in a predetermined plane for supporting said seat at a slight elevation thereabove, a vibratory diaphragm stretched across said hollow nozzle so as to form a suction chamber open at the bottom through said suction orifice, a suction line communicating with said chamber, whereby to develop suction at said orifice and adjacent the suction chamber side of said diaphragm, the opposite side of said diaphragm being isolated from said suction and exposed to substantially atmospheric pressure, and a rug beater in said nozzle operatively connected to said vibratory diaphragm and vibratable thereby against said rug at points in relatively close proximity to at least a portion of said suction orifice seat, means supporting and spring-biasing said diaphragm and beater to assume normally a first position of a rapidly repetitive cycle with said beater elevated sufficiently to permit elevation of the rug into contact with the orifice seat by virtue of suction initially developed in said chamber, said diaphragm and beater being subsequently movable, upon development of further suction in said chamber such that a pressure differential is created across said diaphragm sufficient to overcome said spring bias, in a direction to strike said rug at said points in relatively close proximity to said orifice seat, so as to slightly separate said rug from said seat and thereby admit atmospheric air past said seat to said suction chamber, said admitted atmospheric air reducing the pressure differential across the diaphragm sufficiently for return movement of said spring biased diaphragm and beater to said elevated position to complete said repetitive cycle.

2,858,561
RUG NOZZLE
Fred W. Kappenstein, Bloomington, Ill., assignor to Eureka Williams Corporation, a corporation of New York
Application June 24, 1955, Serial No. 517,758
10 Claims. (Cl. 15—382)



8. A suction cleaning device comprising a hollow body having an air inlet mouth adapted for presentation to a surface to be cleaned, said body and mouth being constructed so that the application of suction to the interior of said body will effect the unidirectional flow of air through said mouth into said body, yieldable closed coil spring means disposed in and completely across said mouth in the path of flow of air into said body through said mouth and substantially obstructing the flow of air into said body through said mouth and so that such spring means must be displaced from their at rest position to permit substantial flow of air through said mouth into said body during operation of said nozzle, said spring means being constructed and arranged to be vigorously agitated directly and solely by and in response to the flow of air through said mouth into said body and being positioned in said mouth so as to function as an agitating means for beating a surface presented to said mouth, and means for continuously creating suction in said body so as to induce the unidirectional flow of air inwardly through said mouth thereby to actuate said agitating means.

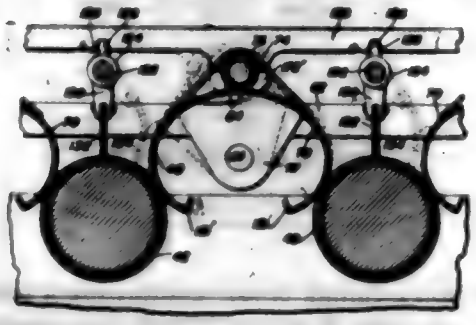
2,858,562
HEAT-INSULATED HANDLE STRUCTURE FOR COFFEE POTS AND THE LIKE
Warren J. Packer, Meriden, Conn.
Application August 4, 1955, Serial No. 526,409
1 Claim. (Cl. 16—119)

For use with a receptacle having a potlike metal body with a side wall, a hollow metal handle having an intermediate grasping portion and provided at opposite ends with integral hollow attaching portions extending from said grasping portion and adapted to be secured to said side wall, said handle throughout the aforesaid portions having relatively wide upper and lower walls and relatively short side walls, each of said attaching portions having kerfs located adjacent each other but at different distances from the corresponding extremity of the handle, said kerfs extending continuously throughout the width of the handle in a transverse direction, one of the

2,858,567

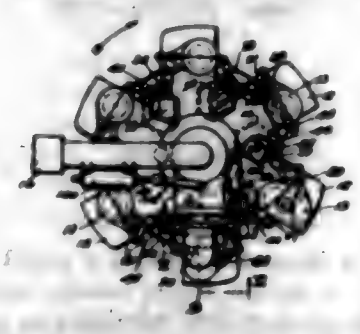
kerfs of each attaching portion being in the upper wall of the handle and the other being in the lower wall, said kerfs of each attaching portion being open throughout their length to the external and internal surfaces of the handle, said kerfs blocking heat transfer in the metal of the handle wall from the attaching portions toward said grasping portion except for limited portions of the side walls of the handle, and fillers of thermal insulating material in said kerfs serving to seal off the handle interior.

2,858,563
SEAFOOD PROCESSING MACHINES
Antoine Rodi Rodriguez, New Orleans, La.
Application August 12, 1954, Serial No. 449,373
34 Claims. (Cl. 17—2)



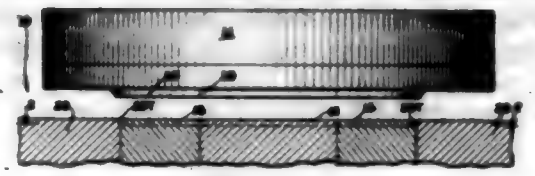
1. A seafood cleaning machine comprising a support frame, a pair of roller members, means on said support frame supporting said roller members for rotation in a plane in side-by-side relation, means operatively connected to said roller members and imparting rotary oscillation thereto about their axes, a peeling member disposed between said pair of roller members, means on said support frame mounting said peeling member for oscillatory rocking movement about an axis which is disposed in side-by-side relation with and between those of said roller members, said peeling member having flexible surfaces, portions of which lie at different distances from the axis of rotary oscillation of said peeling member and in operative engagement with both of said roller members whereby oscillations of the latter will impart a rocking movement to the former.

2,858,564
METHOD AND APPARATUS FOR MAKING PLASTIC ARTICLES
Orville B. Sherman and Leonard D. Soubier, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Application August 18, 1954, Serial No. 450,604
7 Claims. (Cl. 18—5)



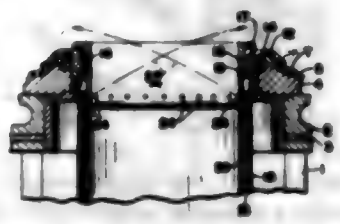
3. In an apparatus for making hollow, plastic articles, the combination comprising: an extrusion nozzle adapted to continuously extrude plastic material vertically downward in tubular form, an annular series of forming molds mounted on a horizontal table, means to rotate said table to move said molds in a closed path, and means operable intermittently to move said nozzle through a portion of said mold path.

2,858,565
METHOD AND APPARATUS FOR PRESSING POWDERED METAL
Francis J. Lowey, Rocky River, Ohio, assignor to American Brake Shoe Company, New York, N. Y., a corporation of Delaware
Application June 23, 1955, Serial No. 517,519
5 Claims. (Cl. 18—16.5)



1. In a press of the kind described for applying compressive forces to powdered metal to produce a powdered metal briquette, means affording a side wall of a mold cavity for receiving the powdered metal to be compressed, said mold cavity having a predetermined width, a pressure plate for compressing powdered metal in said mold cavity, said pressure plate having a predetermined width greater than the width of said mold cavity, means to produce relative movement between said plate and wall means, means to produce relative stripping movement between a completed briquette and said side wall, and said side wall including a substantially true vertical portion merging in to an outwardly tapered portion terminating at the end edge of the mold cavity where a briquette subjected to stripping action as aforesaid first emerges from the mold cavity.

2,858,566
TIRE CURING PRESS
James W. Brundage, Akron, Ohio, assignor to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio
Application July 16, 1954, Serial No. 443,917
9 Claims. (Cl. 18—17)

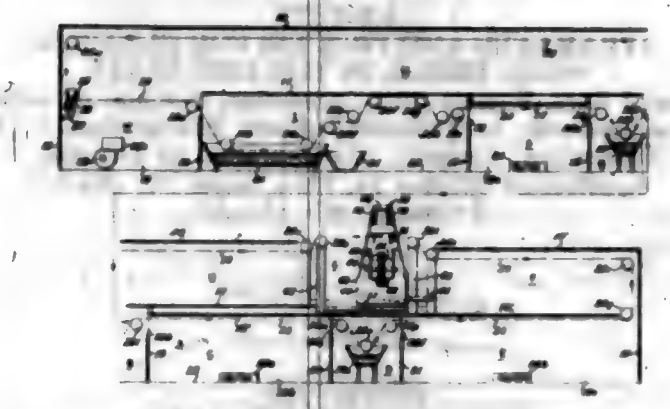


1. A tire curing press comprising a base, a pair of complementary mold sections which are relatively movably mounted on said base into mating engagement whereat they define a tire-shaped cavity therebetween having spaced apart tire bead portions and to spaced apart position for insertion of an uncured tire carcass and for withdrawal of a cured tire carcass, a diaphragm adapted to be seated in said cavity, a member having a flange adapted to cooperate with a portion of said base and grip the bead portion of said diaphragm therebetween, and a series of circularly arranged, non-radial passages in said member that have axes tangent to a circle inside such bead portions for supplying temperature-modifying medium directly into said diaphragm, when seated in such cavity, from between said bead portions to thereby subject the interior wall of a tire carcass in such cavity to the heating or cooling influence of such medium, said circle being concentric to said bead portions and of sufficient diameter to induce circumferential swirling motion of the medium in such cavity along the inner circumference thereof.

2,858,567
DIP-FORMING APPARATUS

Wallace H. Shapero, Pacific Palisades, Calif., assignor to Wallace Container Company, Santa Ana, Calif., a corporation of California

Application February 15, 1956, Serial No. 565,719
10 Claims. (Cl. 18—24)

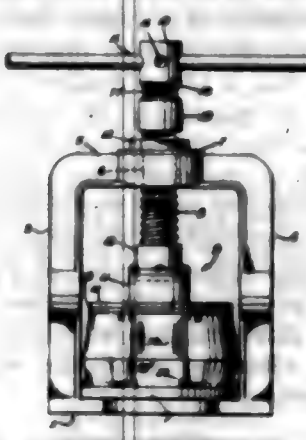


1. Dip-forming apparatus comprising: a mandrel conveyor movable in a predetermined path; a carriage; means supporting said carriage for reciprocating movements in a path paralleling said conveyor path and beneath the same; a first reversible actuator for moving said carriage in said path; a coating liquid containing tank mounted on said carriage for vertical movement; a second reversible actuator for raising and lowering said tank; a control device triggered by said conveyor for starting the operations of both of said actuators at the point of arrival of a mandrel over said tank, whereby to cause said tank to travel forwardly with the mandrel and to simultaneously move upwardly to immerse the mandrel in said coating liquid; a control device actuated by said carriage as it approaches its forward limit of travel, to effect reverse operation of said second actuator for the return of said tank to a lowered position; and a control device, actuated by said tank during said return to lowered position, to effect reverse operation of said first actuator for the return of said carriage to its starting position.

2,858,568
MEANS FOR PROCESSING DENTURES

Simon Myerson, Wabun, Mass.

Application October 27, 1953, Serial No. 388,494
1 Claim. (Cl. 18—33)

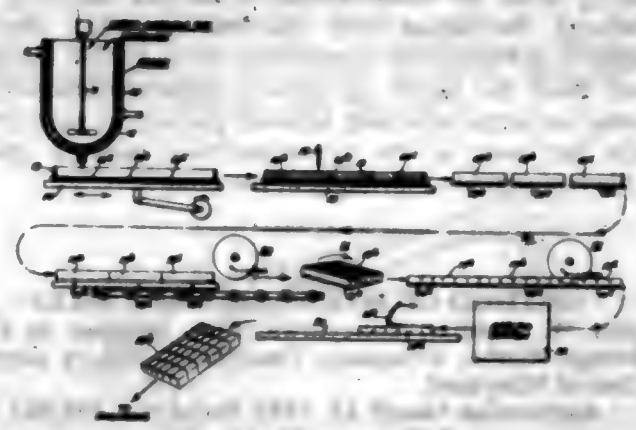


A press for closing a dental flask comprising a base, a bridge member arching over and supported from said base, said bridge member having a threaded hole therethrough, a screw threaded through said hole and extending downwardly toward said base, a plate supported on the lower end of the screw for closing a flask supported on the base, a nut threaded on the screw above the bridge member and having a recess formed on its upper surface, a cylinder threaded on the screw above the nut and adapted to move in and out of the recess when the nut and cylinder are moved relative to one another on the screw, said nut and cylinder each being movable on the screw, and calibrations formed on the adjacent portions of the nut and the cylinder indicating relative positions of the nut and cylinder and the condition of the flask.

2,858,569
METHOD OF PRODUCING SYNTHETIC DETERGENT CAKES

Charles F. J. Dupuy, Allendale, N. J.

Application July 1, 1955, Serial No. 519,357
6 Claims. (Cl. 18—47.5)

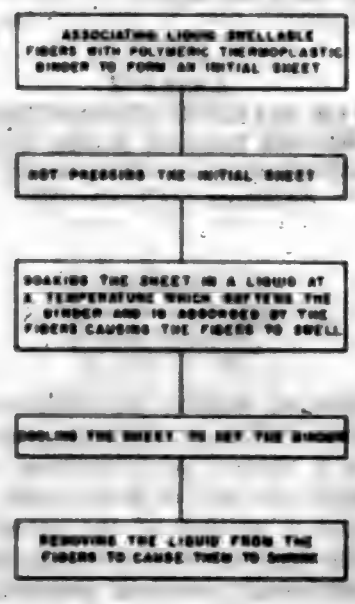


4. In a method of producing synthetic detergent cakes, the steps comprising forming a fluid mixture composed principally of a water-insoluble wax and a normally-solid synthetic detergent, flowing said mixture into a mold having collapsible sides and a plurality of flexible pallets in the bottom thereof, solidifying said mixture within said mold, then collapsing the sides of said mold, cutting the molded body into separate sections along the junction lines between said flexible pallets, separating said sections on paid pallets, and thereafter inverting said solidified sections with said pallets attached thereto and stripping said pallets free from said solidified sections.

2,858,570
PROCESS FOR THE MANUFACTURE OF A SYNTHETIC LEATHER

John C. Richards, Williamsville, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 20, 1956, Serial No. 560,283
1 Claim. (Cl. 18—47.5)



The process of preparing a flexible synthetic leather which comprises the steps, in sequence, of associating liquid-swellable structural fibers at least about 0.5 inch in length and a thermoplastic polymeric binder to form an initial sheet, said thermoplastic binder having a softening temperature at least 50° F. below that temperature at which the fibers might soften, said fibers representing 20% to 70% of the total volume of said initial sheet,

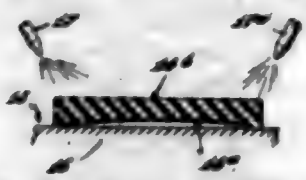
hot pressing said initial sheet at a temperature above the softening temperature of the binder and below the softening temperature of the fiber to form a substantially water vapor impermeable sheet, soaking the sheet in a liquid at a temperature above the softening temperature of the binder and below the softening temperature of the fiber to swell the fibers and deform the fibers in the direction of swelling the fibers, said liquid being absorbable by the fibers and having no deleterious effect on the binder, substantially completely setting the binder by cooling while the fibers remain in swelled condition, and removing the liquid from the swelled fibers after the binder is substantially completely set to shrink the fibers away from the binder to form a vapor-permeable sheet having an interconnecting network pattern of pores essentially the same as the interconnecting network pattern of fibers distributed throughout the binder.

2,858,571

METHOD OF MAKING RUBBER SOLES

Ernest W. Dunbar, Taneytown, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland

Application March 22, 1955, Serial No. 495,961
2 Claims. (Cl. 18—53)



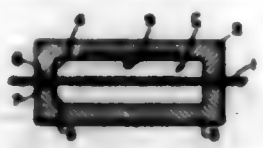
1. That method of making a rubber sole for use in footwear which comprises placing in a mold cavity a measured quantity of doughy rubber compound which, throughout, contains the same proportion of curing agent and accelerator, subjecting the entire body of rubber compound in the mold cavity to heat and pressure such as to conform it to the mold cavity and to cure the entire body of compound only sufficiently to make it coherent when removed from the mold cavity, removing the embryo sole thus formed from the mold cavity and while it still consists of doughy rubber compound, protecting that surface of the embryo sole which is to contact the shoe, and wetting the other exposed surfaces of the sole with a rubber accelerator such as to vulcanize said surfaces and make them non-tacky.

2,858,572

METHOD OF MAKING ADVERTISING SIGNS

Richard Burdick, Dallas, Tex.

Application September 23, 1954, Serial No. 457,861
2 Claims. (Cl. 18—59)



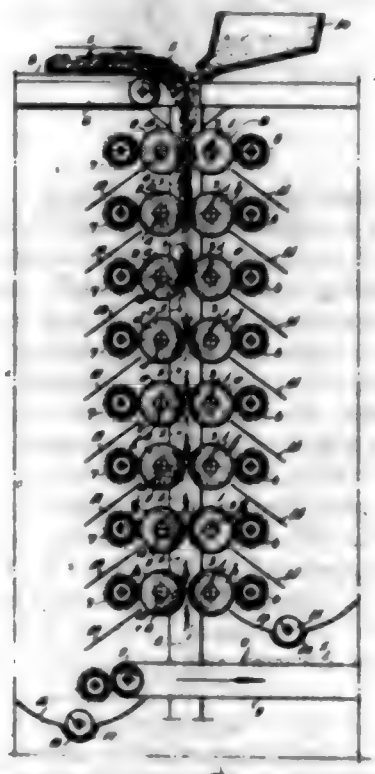
2. The method of making an advertising sign, which method comprises enclosing a discrete portion of a woven screen wire in a vented cavity-forming two-part mold, the parts of which are held in place under relatively light pressure, so that a portion of the screen wire extends outwardly of the mold around the entire periphery thereof and the peripherally enclosed portions of the woven screen wire are not deformed, said mold parts having contacting edges which are contoured throughout their entire interfaces to match the contour of the woven screen wires therebetween, said interfaces meeting through the interstices of the screen wire to provide sealing contact throughout said interfaces and form a mold cavity on both sides of the portion of the screen enclosed within the mold, completely filling the mold cavity with a foamed liquid vinyl resin plastisol which passes freely through the interstices of the screen wire within the mold, heat curing the plastisol to form a solid sponge-like mass having the screen wire molded in situ, and thereafter removing the sign thus formed from the mold.

2,858,573

APPARATUS AND PROCESS FOR CLEANING WOOL FIBERS IN THE DRY STATE

Arpad Boer, Buenos Aires, Argentina, assignor, by mesne assignments, to Bancroft-Brillotex International S. A., Montevideo, Uruguay, a corporation of Uruguay

Application October 14, 1954, Serial No. 462,323
7 Claims. (Cl. 19—67)



1. Apparatus for cleaning wool fibres in the dry state, comprising a series of pairs of calendar rolls each pair of which is composed of two smooth cylindrical rolls of elastic material arranged with their axes parallel to each other and their surfaces as tangents, said pairs of calender rolls being arranged at a minimum distance from each other so that the fibres can pass from one pair of calender rolls to the next, each succeeding pair of calender rolls being rotated at a higher speed than the preceding pair of calender rolls so that the series of pairs of calender rolls has a speed gradient from low to high in the direction of movement of the fibres, the difference in speed between the rolls of one pair of calendar rolls with relation to the next being sufficient to produce drawing and drafting of the fibres in their passage from each pair of calender rolls to the next and, adjacent the entrance end of the series of pairs of calender rolls, the apparatus being provided with a feeder for wool fibres and a feeder for detergent powder which intermingle and effect frictional cleaning when the wool fibres pass through the apparatus.

2,858,574

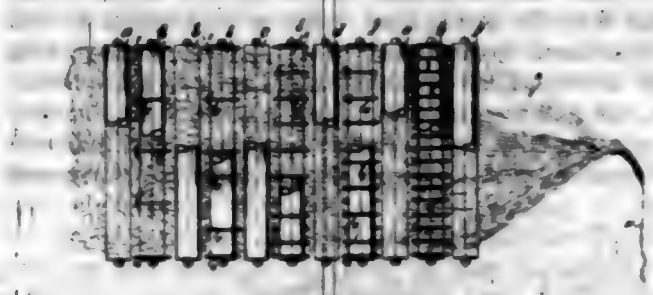
MACHINE AND PROCESS FOR CONDITIONING A WEB OF WOOL AND OTHER FIBERS

Arpad Boer, Buenos Aires, Argentina, assignor, by mesne assignments, to Bancroft-Brillotex International S. A., Montevideo, Uruguay, a corporation of Uruguay

Application November 29, 1954, Serial No. 471,854
6 Claims. (Cl. 19—130)

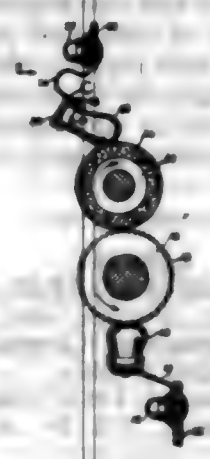
1. A process for conditioning a web of wool and other textile fibers comprising dividing a band-type web of such fibers into a number of strips, drafting the strips while maintaining the fibers parallel to the direction of feed,

subdividing such strips into strips of smaller cross-section, drafting the sub-divided strips while maintaining the fibers in parallel orientation, again sub-dividing the sub-



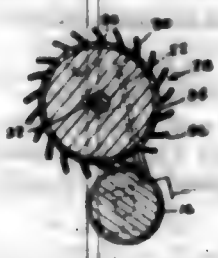
divided strips successively alternating with their drafting so that the entire material is subdivided into a multiplicity of strips whose fibers remain parallel to the direction of feed.

2,858,575
DRAWING ROLL CLEARER
John S. Dudley, Douglas, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Application February 21, 1957, Serial No. 641,675
2 Claims. (Cl. 19—139)



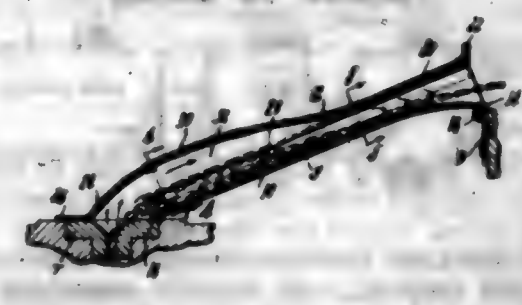
1. A clearer adapted to press against a rotated roll which comprises a flexible elongated tubular member, a rigid support for said member and means acting through said support to press said member against said roll and in which the rigid support comprises inner and outer tube-clamping elements and in which the inner element has an offset and longitudinally-extended wide flange which positions and axially aligns said tubular member.

2,858,576
TOP CLEARER ROLL CONSTRUCTION
Eddie F. Rees, Malden, N. C.
Application July 9, 1952, Serial No. 747,447
11 Claims. (Cl. 19—140)



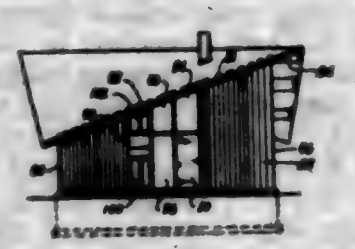
1. A textile clearer roll adapted for cleaning loose fiber and broken ends from drawing rolls during the process of fiber preparation, said roll comprising at least one body member of relatively hard material, a shaft on which said member is mounted, the shaft being of substantially smaller diameter than the diameter of said body member, a cover circumposed on and covering said body member and said cover having outwardly projecting flexible wiping ribs, said ribs projecting outwardly from the cover a sufficient distance and being of such resilience as to bend upon contact with the drawing rolls but capable of springing back to their normal positions when released so as to flick the fibers and lint from the drawing rolls.

2,858,577
DRAWING FRAME SLIVER CONTROLLING ENCLOSURE
Paul B. West, Kennebunk, Maine, assignor to Saco-Lowell Shops, Boston, Mass., a corporation of Maine
Application November 7, 1957, Serial No. 695,118
3 Claims. (Cl. 19—157)



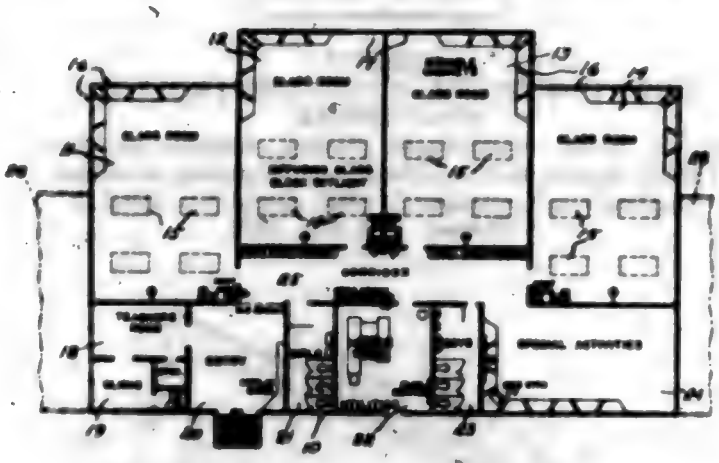
1. In combination with a drawing frame having a pair of drafting element output rolls followed by a pair of calender rolls having an input trumpet for feeding drafted sliver to a take-up package, a sliver controlling enclosure for a web of sliver extending from adjacent the nip of said output rolls to adjacent said trumpet, said enclosure being in the shape of a horn having a narrow generally rectangular mouth opening of greater width than height positioned closely adjacent the nip of said output rolls and a throat opening positioned closely adjacent and above said trumpet, the bottom of said horn extending continuously from adjacent said output roll nip to said trumpet and the top of said horn being joined with said bottom to provide enclosed sides along the length of said horn, with the top of said horn in the region of said throat being bulged upwardly for a substantial distance but of decreasing height toward said mouth opening to provide a substantially flat top adjacent said mouth opening, whereby air expressed from said sliver by said trumpet moves along said bulge toward said mouth opening for reabsorption into the sliver as it expands beyond the nip of said output rolls.

2,858,578
RESIDENTIAL BUILDING CONSTRUCTION
Robert William Ferguson, Ann Arbor, Mich.
Application January 24, 1957, Serial No. 636,019
4 Claims. (Cl. 20—1.1)



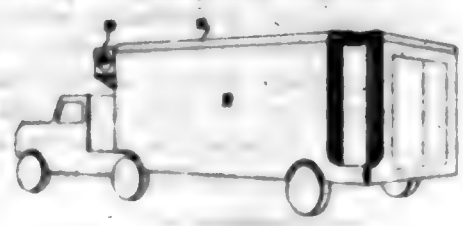
1. A building structure comprising four vertical walls interconnected together to form a building substantially square in plan; each of said walls taking the shape of a trapezoid, with the two two parallel edges thereof extending in vertical directions; adjacent ones of the walls having their longer vertical edges secured together; a horizontal ridge pole extending between said longer vertical edges; and triangular roof sections extending outwardly and downwardly from said ridge pole so as to cover the building structure.

2,858,579
BUILDING UNIT STRUCTURES
Carl M. Koelb, Weston, Mass., assignor to Structa Schools Corporation, Boston, Mass., a corporation of Delaware
Application September 27, 1955, Serial No. 536,919
7 Claims. (Cl. 20—2)



1. A building unit structure designed for single use and for multiple assembly, said structure comprising a first group of rooms having substantially the same degree of front-to-back measurements and arranged to provide a central portion and two wing rooms set back with reference to said central portion, and a second group of rooms, certain of the rooms of each group including partitions in common with certain of the rooms of the other group, and the proximate partitions of the other rooms of the two groups defining a corridor between the opposite wing rooms.

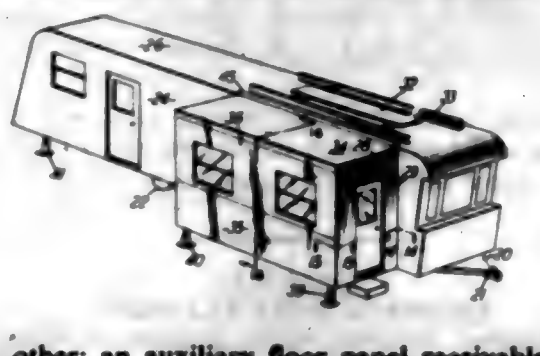
2,858,580
THERMALLY INSULATING TRUCK VAN WALLS
Robert E. S. Thompson, Owings Mills, and Edwin V. Bishop, Sparks, Md., assignors to Thompson Trailer Corporation, Pikesville, Md., a corporation of Virginia
Application February 2, 1956, Serial No. 563,063
4 Claims. (Cl. 20—3)



1. An insulated wall which comprises a rigid outer sheet member which is relatively impervious to water vapor, a rigid inner sheet member which is pervious to water vapor, spaced apart struts extending between and connected to each of said inner and outer sheet members, said struts being constructed of material of low heat conductivity at the ends connected to said inner sheet member, a cored insulation member intimately bound to said inner and outer sheet members and said struts and formed of a core of flexible material of low heat conductivity having a K factor not greater than about 0.3 and entirely surrounded by a foamed organic resin which is relatively impermeable to water vapor, said foamed organic resin serving to provide the intimate bond by virtue of the resin being cured while in contact with said inner and outer sheet members and said struts.

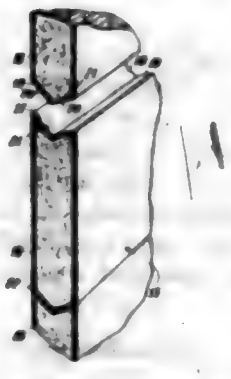
2,858,581
EXPANDABLE VEHICLE TRAILER
Clarence F. Deane, Belmont, Mich.
Application March 29, 1956, Serial No. 574,693
4 Claims. (Cl. 20—2)

3. An expandable trailer vehicle having living quarters therein, and including a floor, sidewalls, and a roof, said trailer comprising: displaceable wall panels forming a substantially continuous section of one of said sidewalls, two of said displaceable panels being hinged to fixed portions of said sidewalls and shorter in the front-to-rear direction than the inside floor width of said trailer at said sidewall section; two auxiliary wall sections, each having a length substantially equal to the length of said sidewall section, the height of said auxiliary wall sections together being substantially equal to the height of said sidewall section with one of said auxiliary sections superimposed



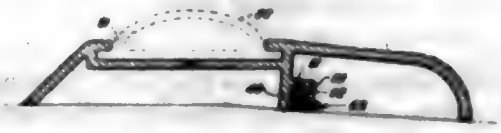
on the other; an auxiliary floor panel receivable on the exposed floor area within said trailer opposite said sidewall section, said floor panel having a length equal to that of said sidewall section and having a width equal to the length of each of said two displaceable wall panels at the respective ends of said floor panel; an auxiliary roof panel having a length equal to that of said sidewall section and a width equal to the length of each of said displaceable wall panels at the respective ends of said roof panel; and detachable fastening means uniting said panels.

2,858,582
BUILDING MATERIAL
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application December 1, 1953, Serial No. 395,465
3 Claims. (Cl. 20—4)



2. A building unit comprising a glass fiber panel, a surface coat on one face of said panel, a groove on one edge of said panel, a ridge complementary to said groove on another edge of said panel, and an adhesive coat on the other face of said panel and on said groove and ridge.

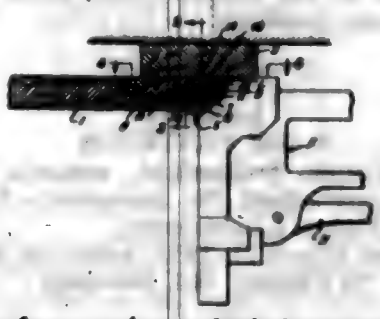
2,858,583
THRESHOLDS
Alfred P. McEvoy and Tym F. Seay, Dallas, Tex.
Application January 13, 1956, Serial No. 558,950
5 Claims. (Cl. 20—44)



1. A combination threshold member and weather strip including: an elongate body having an upper surface formed with longitudinal marginal edge portions sloping upwardly and inwardly from said edges toward the central

portion of the body and having groove means formed in its upper surface with a planar surface defining the edge portions of said groove means, said groove means including a planar bottom surface spaced below the upper surface of the body member and having a portion underlying each of the inner edge portions of the planar upper surface defining the marginal edges of the groove means and substantially rectangular openings underlying a portion of the planar upper surface of the body member adjacent the groove means, said openings being defined along their lower sides by the planar bottom surface of the groove; and a resilient sealing member having an elongate substantially flat base portion removably positioned in said groove means, said base portion having substantially rectangular longitudinally extending outwardly projecting retaining flanges disposed in the openings at each side of the groove means, the width of said base being substantially equal to the width of the planar bottom surface of the groove means; said sealing member being formed with an integral upwardly arched flexible sealing section between said flanges, said flexible sealing section projecting substantially vertically upwardly from the base portion of said sealing member to a point substantially in the plane of the planar upper surface of the body member then curving convexly inwardly above and overlying the central portion of the base portion of the sealing strip at an elevation above said planar upper surface, the outer sides of said substantially vertical portions of said flexible sealing section being disposed to engage the inner longitudinal edges of the upper surface of the body defining the groove means to be supported thereby against lateral displacement.

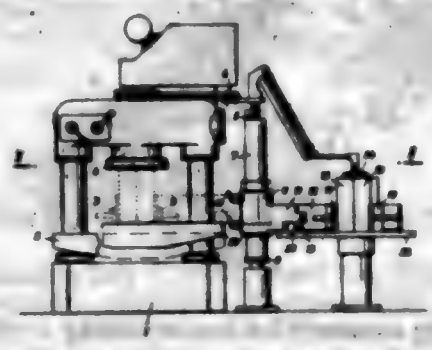
2,858,584
SPLINE FOR HANGING TILE
Eugene F. Gaines, Joplin, Mo.
Application November 3, 1954, Serial No. 466,635
2 Claims. (Cl. 20—92)



1. A spline for securing a single-kerfed tile to an overlying structure by means of a conventional staple fastener, comprising an elongate strip of thin, resilient nailable metal, the gauge of which is such as to permit puncture by a conventional staple, the margins of said strip being infolded to form open hems, the infolded edges of the hems being widely spaced from one another so as to leave a single-ply open gap in the center portion through which the fastener may be driven, said open gap being of a width at least as great as the hem width, said open hems flaring outwardly in the inward direction to have a spring gripping action when inserted in the kerf of a tile.

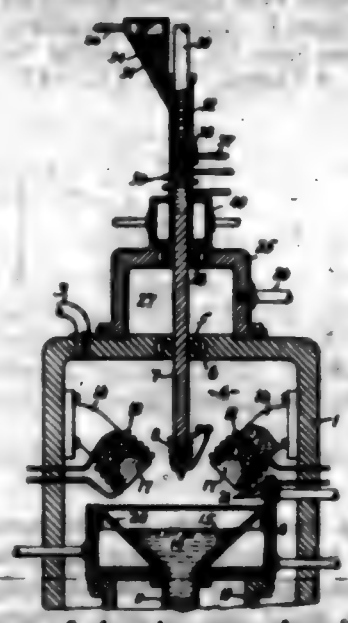
2,858,585
DEVICE FOR OPERATING CORE SHOOTING MACHINES
Ernst Urbanke, Solbad Hall in Tirol, Austria, and Kurt Bauer, Berlin-Spandau, Germany, assignors to Tiroler Röhren- und Metallwerke Aktiengesellschaft, Tirol, Austria
Application March 19, 1957, Serial No. 647,039
Claims priority, application Austria March 22, 1956
22 Claims. (Cl. 22—10)

4. In a device for operating core shooting machines for forming cores which are to be subjected to an after-treatment, such as carbon dioxide hardening, having a core shooting head and a vertically adjustable table, the combination comprising a core box to be inserted between said head and table, said core box being vertically divided into two sections, a stationary vertical axle, a pivoted arm mounted on said vertical axle freely pivotally movable around and vertically adjustable on said vertical axle, movably mounted holding means on said pivoted



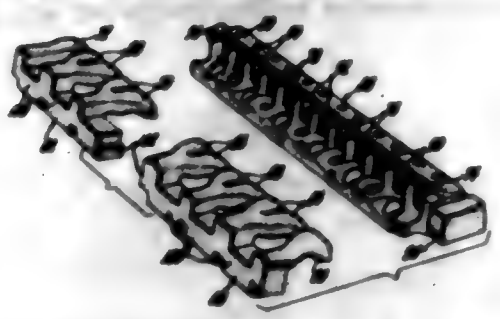
arm, each of said holding means carrying one of said core box sections, said holding means together with said core box sections being movable toward and from each other and drive means to effect said movement of said holding means toward and from each other in order to close and open said core box, a vertically adjustable rest table arranged within each of said pivoted arm and means for after-treatment of said core arranged adjacent to said rest table.

2,858,586
SMELTING APPARATUS AND METHOD
Joseph B. Brennan, Cleveland, Ohio
Application January 28, 1954, Serial No. 406,889
7 Claims. (Cl. 22—57.2)



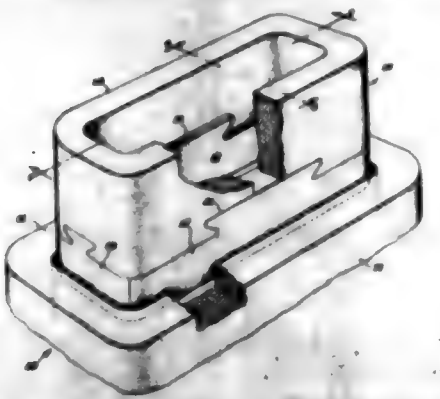
5. In apparatus of the character described, the combination of an enclosure, means for introducing metal into said enclosure, high frequency means for initially melting such metal in said enclosure, a crucible in said enclosure for collecting a pool of melted metal, means for maintaining the pool-supporting wall of said crucible at a temperature less than the freezing point of such metal whereby to form a skull of solidified metal against such wall, high frequency reflector-type heating means focusing heat rays onto the portion of the pool within such skull for solely maintaining the metal molten for casting without contamination thereof, a chilled mold in said enclosure and beneath said crucible through which the molten metal from within such skull is continuously cast for emergency in shape-retaining form, another enclosure through which the casting passes, and means for applying a protective layer of another molten metal to the casting before it emerges from said another enclosure.

2,858,987
CYLINDER HEAD CORING FOR OVERHEAD VALVE ENGINES
Clayton B. Leach, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 20, 1954, Serial No. 476,434
8 Claims. (Cl. 22—131)



1. A coring assembly for use in casting a cylinder head of an overhead valve engine, said assembly comprising an elongated water jacket core having a generally flat base portion and an integral upper portion extending laterally over only a portion of said base portion, said upper portion having a longitudinally extending, generally vertical inner wall provided with a plurality of openings which extend downwardly through said base portion, and a combination intake and exhaust port core provided with a plurality of generally lateral extensions for forming intake and exhaust ports, said extensions fitting into said openings and being spatially separated from the wall of the water jacket core defining said openings.

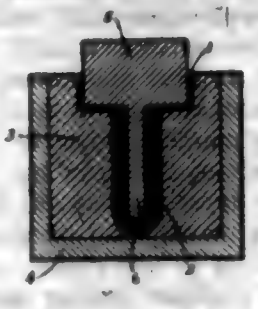
2,858,588
HOT TOP CONSTRUCTION
William E. Hoffman, Reading, Pa.
Application June 14, 1957, Serial No. 665,716
9 Claims. (Cl. 22—147)



1. A hot top for use with a mold having an opening into which the hot top is inserted, comprising an annular body of the same general peripheral configuration as the opening in the mold and of such dimensions to be inserted within the mold with clearance between its side walls and those of the mold opening, and slide members outwardly movable relative to the side walls of the annular body and adapted to engage the opening of the mold, said slides being effective to close the space between the annular body and the side walls of the opening.

2,858,589
DUCTILE IRON CASTINGS AND METHODS OF MAKING SAME
Xarifa L. Bean, Yellow Springs, Ohio, assignor to Morris Bean & Company, Yellow Springs, Ohio
Application September 29, 1955, Serial No. 537,547
11 Claims. (Cl. 22—216.5)

2. Method of casting ductile iron for producing a cast article having a thin section that is ductile as cast which comprises casting the iron against a mold member having a coherent and permeable layer of hollow, refractory glass spherules having a particle size ranging between about 150 and about 850 microns in heat trans-

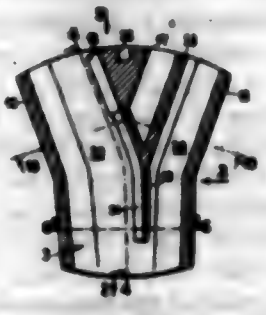


fer impeding relation to the surface-forming portion of the mold member.

2,858,590
TUBING DEVICE
Robert B. Koch, Reading, Pa., assignor to The Polymer Corporation, a corporation of Pennsylvania
Application February 18, 1957, Serial No. 640,845
7 Claims. (Cl. 24—81)

1. A quick detachable clip device adapted for maintaining a bend in a resilient elongated body, comprising a channel portion including a channel facing radially outwardly with respect to the radius of curvature of the desired bend, end portions positioned at the respective ends of said channel portion, each of said end portions including an overlying ear for at least partially embracing the radially outermost portion of the resilient body when bent and positioned in said channel, said clip device having an opening extending for the entire length thereof along said channel portion and said end portions, said opening having a minimum dimension sufficient to permit radial insertion of the resilient body when the resilient body is in a bent condition.

2,858,991
SLIDE FASTENER
Simon Frey, Zurich, Switzerland, assignor to Dr. Ing. Sim. Frey Gesellschaft für Industrielle Forschungen, Reg. Trust., Vaduz, Liechtenstein
Application March 21, 1955, Serial No. 495,743
10 Claims. (Cl. 24—201)



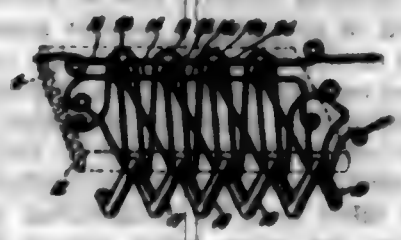
1. A slide fastener comprising a pair of continuous strips of flexible material mounted along the edges of goods to be separably joined by said fastener, one strip being provided with a longitudinal dovetail-profiled groove confined by flexible walls and the other strip being provided with a longitudinal dovetail-profiled rib adapted to be nested in said groove, and a slider adapted to bring said strips in nested interlocked relationship when slid thereon in one direction and to release and separate the strips from each other when slid thereon in the opposite direction, said slider comprising a pair of channel members and a wedge-shaped spacing member rigidly connected at one end of said channel members and adapted to hold said channel members in spaced opposed symmetrical relationship, inwardly extending

size to loosely receive said roller, whereby upon rotation of said roller said socket forming member is radially and

plurality of said objects in a predetermined pattern or design and each of said objects in a predetermined posi-

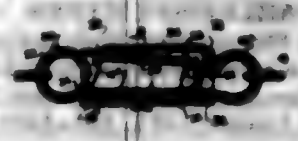
flanges on each side edge of said channel members arranged in pairs in opposed relation said channel members and said spacing member forming a V-shaped guiding channel for said strips, said guiding channel being laterally confined by the side flanges of said channel members, one pair of side flanges serving to guide said one strip and the other pair of side flanges serving to guide said other strip, said spacing member being provided on its side opposed to one of said pair of side flanges with a wedge-shaped portion adapted to engage said groove and to spread apart said walls a distance corresponding substantially to the thickness of said dovetail-profiled rib, said channel members being provided with interior ribs arranged in spaced registering relationship and extending from said spacing member substantially parallel to one of said pair of side flanges, said interior ribs being provided with angular flanges extending outwardly in the direction of the side flanges of said channel members and forming ledges constituting continuations of the sides of said wedge-shaped portion and adapted to guide said spread-apart walls in said dovetailed grooved strip, said last named flanges converging at their ends remote from said spacing member to thereby guide said walls into and out of the interlocking relationship with respect to and across said dovetail-profiled rib.

2,839,992
METHOD OF MAKING SLIDE FASTENERS AND THE RESULTING PRODUCT
Lawrence Schwartz, Bronx, N. Y., assignor, by mesne assignments, to Cue Fasteners, Inc., a corporation of New York
Application April 2, 1953, Serial No. 346,380
14 Claims. (Cl. 24—205.16)



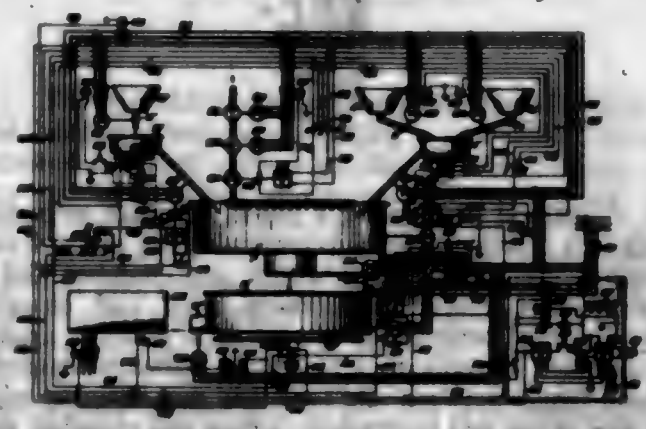
8. A slide fastener comprising a strip of flexible material having a stringer of fastener elements secured thereto by loops of thread extending around said stringer to opposite sides of said strip alternately, said loops of thread being secured to the strip by other loops of another thread passing through said strip and through the loops of thread passing around said stringer, at least one thread passing around said stringer between each pair of fastener elements thereon, said other loops being outside of and spaced laterally from said stringer.

2,839,993
JEWELRY CLASP
Ralph Irizarry, Bronx, N. Y., assignor to Mercedes Irizarry, Bronx, N. Y.
Application August 6, 1956, Serial No. 602,189
3 Claims. (Cl. 24—230)



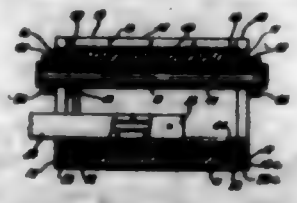
1. A jewelry clasp comprising a sleeve having a notch forming an abutment, means at one end of the sleeve for attaching one end of a piece of jewelry thereto, and a clasp element adapted for connection to the other end of said piece and formed with a depressible spring finger tensioned to engage against the abutment within the notch in the inserted position of the clasp element, said means comprising an eye formed from a length of spring material, said eye being arcuately shaped and projecting beyond one end of the sleeve for connection to said piece of jewelry, the eye being connected at one end fixedly within the sleeve, the other end of the eye being integrally formed with an elongated, straight leg extending generally parallel to the length of the sleeve and having a free end overlying the spring finger in the abutment-engaged position of the finger, for movement of the finger out of engagement with the abutment responsive to depression of the spring leg.

2,839,994
MIXING PLANT
Wilhelm Eirich and Gustav Eirich, Hardheim, Nordbaden, Germany
Application July 9, 1956, Serial No. 596,661
Claims priority, application Germany July 9, 1955
11 Claims. (Cl. 25—3)



1. In a plant comprising a mixer, an intermediate bin and consuming mechanism, means to discharge material from the mixer to the bin, means to transfer material from the bin to the consuming mechanism, means responsive to the filling of the bin to prevent operation of said discharge means of the mixer thereto, and means responsive to the emptying of the bin to render said consuming mechanism inoperative.

2,839,995
FORMING ATTACHMENTS FOR CONCRETE MOLDING MACHINES
Wayne F. Wilson, Council Bluffs, Iowa, assignor to Wilson Concrete Company, Red Oak, Iowa, a corporation of Iowa
Application July 16, 1953, Serial No. 368,344
3 Claims. (Cl. 25—30)



1. A machine for forming members of a moldable material comprising, a tubular rotary mold for the material including a pair of axially spaced annular bearing means, a rotatable roller extended longitudinally through the mold in a spaced relation with the periphery of said mold and eccentrically located relative to the axis of said mold, said roller engaging said bearing means whereby to support said mold and whereby to frictionally rotate said mold about its axis upon rotation of said roller to thus compress material within the mold between the roller and the periphery of the mold, and a ring-like socket forming member mounted on one end of said roller within said mold and adapted to contact one of said bearing means, said socket forming member having an outer peripheral surface spaced from the inner periphery of said mold and having a central mounting opening of a

edge, each lateral cutting edge comprising an outer por- to said threaded device portion while said threaded

ber having a coherent and permeable layer of hollow, opposed symmetrical relationship, inwardly extending

size to loosely receive said roller, whereby upon rotation of said roller said socket forming member is radially and axially movable relative said roller.

2,858,596

CRUCIBLE LINING METHOD

Walter H. Bone, Pine Lawn, and Walter W. Schmidt, St. Louis County, Mo., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application December 11, 1945, Serial No. 634,313
5 Claims. (Cl. 25—155.5)

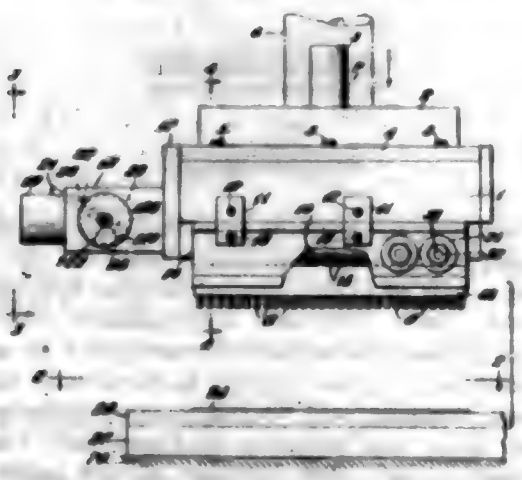
1. A method of forming a dense, compact refractory lining in a reaction chamber comprising the steps of supporting a preliminary form within said chamber and in predetermined spaced relationship with said chamber walls by radial protrusions of said form abutting against the chamber, introducing a powdered refractory material without binder between said form and said chamber walls to a level below said protrusions, jolting said chamber, preliminary form and material until a compact partial lining of said material is produced, replacing said preliminary form with a final form without disturbing said partial lining, introducing additional powdered refractory material without binder between said final form and said chamber walls, and jolting said chamber, final form and material until a compact complete lining is produced.

2,858,597

METHODS AND APPARATUS FOR MANUFACTURING ORNAMENTAL ARTICLES

Julius H. Kraemer, Pawtucket, R. I., assignor, by mesne assignments, to Dyer Corporation, Providence, R. I., a corporation of Rhode Island

Application November 14, 1952, Serial No. 320,586
22 Claims. (Cl. 29—10)



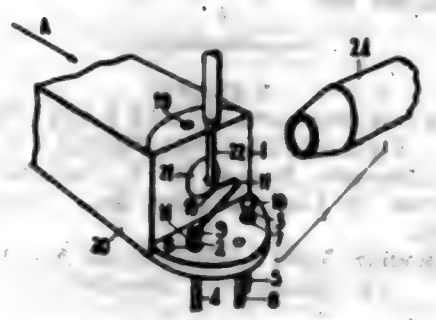
1. Apparatus for semi-automatically and simultaneously depositing a plurality of small ornamental objects in a plurality of receptacles arranged in a predetermined design without the necessity of handling each individual ornamental object separately, comprising means for simultaneously and releasably picking up and holding a plurality of said objects in a predetermined pattern or design and each of said objects in a predetermined position without handling each individual object separately, means for simultaneously holding a plurality of receptacles for said objects in the same predetermined pattern of design, means for moving said objects, while being held by said pick-up and holding means, and said receptacles, while being held by said receptacle holding means toward each other to cause said plurality of objects held in said predetermined design by said ornamental object pick-up and holding means to be simultaneously deposited in said plurality of receptacles held by said receptacle holding means and means for releasing said objects from said ornamental object pick-up and holding means.

2,858,598

MANUFACTURE OF CRYSTAL CONTACT DEVICES

Ronald Gordon Power, Crawley Green, and George Mayes Wells, Bedford Park, London, England, assignors to The General Electric Company Limited, London, England

Application April 7, 1954, Serial No. 421,574
Claims priority, application Great Britain April 14, 1953
4 Claims. (Cl. 29—25.3)



1. A method of preparing a contact assembly for a crystal contact device, the contact assembly comprising a support member on which is mounted a plurality of metallic members electrically insulated from each other, and a plurality of contact members each in the form of a wire having a straight portion which is pointed at one end and a portion offset from the longitudinal axis of said straight portion, the wires being secured to different ones of said metallic members in positions such that the straight portions of all the wires extend in substantially the same direction with their pointed ends in close proximity, the method including the following operations in respect of each wire: bringing the wire into a position in which its straight portion is disposed in the desired spatial relationship with the support member and its offset portion is in contact with the appropriate metallic member with the only reaction exerted upon the wire by the metallic member directed along a line perpendicular to, but not intersecting, the longitudinal axis of the straight portion, holding the wire in said position with the wire relatively free for rotation about said axis, and securing the offset portion of the wire to the metallic member while holding the wire in this manner.

2,858,599

MILLING CUTTER

Robert F. Brecon, Morristown, N. J., assignor to Austenal, Inc., a corporation of New York

Application January 18, 1956, Serial No. 560,022
3 Claims. (Cl. 29—103)

1. In a rotary staggered-tooth side milling cutter in which each tooth comprises a continuous lateral cutting

assembled in and exactly located by locating recesses formed

razor blades and a receptacle for used blades, the used

edge, each lateral cutting edge comprising an outer portion which extends outwardly of the root of the tooth to the periphery of the cutter and an inner portion which extends inwardly of the root of the tooth toward the central portion of the cutter, the outer portion of said cutting edge being defined by the intersection of two planes which make an acute dihedral angle with each other, the improvement which comprises the provision of a configuration for said inner portion of said lateral cutting edge such that it is defined by the intersection of two planes which make a dihedral angle of at least 90 degrees with each other, one of said planes being a plane which is substantially normal to the rotational axis of said cutter and which is extended outwardly of the root of the tooth toward the periphery of said cutter, said one plane constituting one of said two planes which define said outer portion of said lateral cutting edge.

2,858,600

SURFACE HARDENING OF TITANIUM

Charles W. Vigor, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Application February 19, 1954
Serial No. 411,561
15 Claims. (Cl. 29—198)

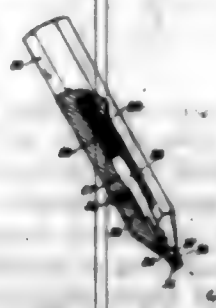
1. A method of forming a surface layer on a titanium member which comprises applying thereto a thin layer of at least one metal powder selected from the group consisting of nickel, manganese and chromium and alloys thereof, and thereafter heating the titanium member and metal powder to a temperature below the melting point of titanium and the powdered metal and below any eutectic temperature of titanium and the powdered metal for a time sufficient to cause diffusion of the metal powder into the surface of said titanium member.

2,858,601

TOOL FOR INSTALLING A THREADED FASTENING ELEMENT AND LOCKING MEMBER

Louis A. Cammaro, Bronxville, N. Y., assignor to Phillips Screw Company, New York, N. Y., a corporation of Delaware

Application March 14, 1955, Serial No. 494,137
8 Claims. (Cl. 29—240)



1. A tool for installing a threaded device of the type having an externally threaded portion adapted to engage in a counterbored, tapped aperture in a parent body and for thereafter driving home a locking member including a ring portion receivable in said counterbore and keys extending from the ring portion adapted to be driven into longitudinal grooves formed through the external threads of said threaded device, and simultaneously to cut keyways through the threads of said parent body, said tool comprising a pair of bodies including an inner driving body having means for engaging said threaded device to mount the same on said inner body for threading of the device into said aperture, and an outer, locking member driving body arranged annularly of said inner body for sliding movement axially thereof, holding means on one of said bodies releasably to engage said locking member ring portion and hold the same in coaxial alignment with said threaded device and in spaced relation to said threaded device portion while said threaded device is installed, said outer body having a driving surface for engaging said ring portion to drive the same from the aforementioned holding means and home into locking engagement with said device after threading of the device into said parent body.

2,858,602

METHOD OF MANUFACTURING A COMBINED BEARING AND OPERATIVE MEMBER

Milton E. Johnson, Jamestown, N. Y., assignor to Falconer Metal Specialties Co., Inc., Jamestown, N. Y., a corporation of New York

Application September 1, 1954, Serial No. 453,654
2 Claims. (Cl. 29—413)

1. The method of producing a combined holding clip and bearing consisting in casting a sleeve-like operative member provided with a holding portion integral with one end of a hollow mounting post, the integral connection between said sleeve and post being of the nature of a thin annular flange, applying axial compression to said post and said member whereby to sever said flange and produce overlapped rims on the interior of said member and the exterior of said post, telescoping said post with said member to an extent that the rim of said post extends beyond said sleeve and mounting said post to enable rotation of said sleeve thereabout by projecting a headed member through said post with the head of said member in abutment with the rim of said post.

2,858,603

METHOD OF MAKING REFLECTORS FOR LIGHT SOURCES

John F. Herrmann, Lynnfield, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application April 22, 1954, Serial No. 424,936
1 Claim. (Cl. 29—534)

The method of making a reflector having a specularly reflective surface thereon for use with a light source of an optical projector or the like, said method comprising the steps of subjecting a piece of ductile sheet metal to a blanking operation so as to produce a blank of predetermined contour having a relatively large central portion and a plurality of relatively smaller attachment portions integral therewith, and located so as to have their center lines extending radially outwardly with respect to the center of said central portion and equidistantly spaced peripherally relatively to one another, and each attachment portion having an attachment opening accurately formed therein with respect to said center lines and said center during said blanking operation, positioning said blank between the convexly curved and concavely curved mating surfaces respectively of a pair of forming dies, the convexly curved die surface thereof being highly polished and of exact predetermined shape complimental to that desired in the finished specularly reflecting surface of said reflector, and with said attachment portions as-

extending in the direction of length of said sleeve and to said lower member between said lower jaw and said

sembled in and exactly located by locating recesses formed in the forming die provided with said convex surface, said assembled attachment portions and recesses being such as to locate said center of said central portion in exact alignment with the centers of said convexly curved and concavely curved surfaces on said forming dies, and rapidly forcing with pressure said convexly curved die against said blank so as to drive said central portion into said concavely curved die with a force sufficient to concavely shape said central portion and coin thereon a highly specularly reflecting optical surface of concave shape which has its optical center substantially exactly equally spaced from each of said attachment openings.

2,858,684
MAGNETIC CAN OPENER
Denis Farandatos, New York, N. Y.
Application December 6, 1955, Serial No. 551,385
8 Claims. (Cl. 30—6.4)

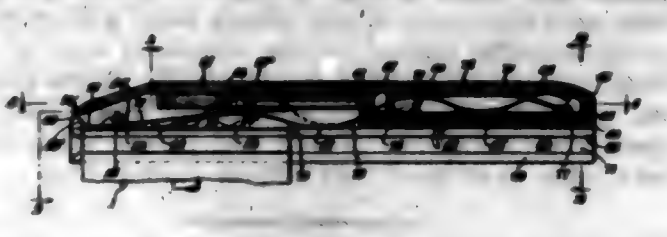
1. A can opener having a removable knife adapted to engage the can near its periphery, magnetizable means engaging said knife to hold it in operating position, magnetic means having one pole in magnetizing relation to said magnetizable means, and support means holding said magnetic means in such position that the other pole thereof may have magnetically attractive proximity to the can at a point spaced from said knife.

2,858,605
CITRUS FRUIT PEELING DEVICE
Ernst F. Engstrom, Maywood, Ill.
Application July 9, 1957, Serial No. 671,118
11 Claims. (Cl. 30—24)

1. In a citrus fruit peeling device, a dome-shaped portion accommodating the palm of a manipulating hand for applying manual pressure on the dome, a manipulating handle projecting from the side of the dome and extending transversely to the axis thereof, and a peel slitting cutter member having means pivotally attaching the same to said handle and having a distal end portion cutting element projecting from one side thereof, said cutting member being pivotally movable into operating position extended away from said dome and with said cutting element projecting away from the handle for peel slitting operation, and being pivotally movable into position toward said dome and into the hollow interior thereof with said cutting element disposed entirely within the hollow of the dome while said slitting cutter is in said inactive position within the dome.

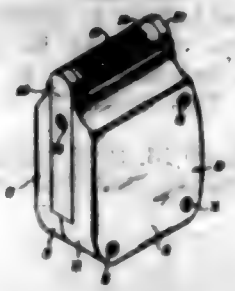
2,858,606
RAZOR AND MAGAZINE THEREFOR
Justin J. Wetzler, Evanston, Ill.
Application December 28, 1953, Serial No. 400,405
14 Claims. (Cl. 30—49)

5. In a razor blade magazine, the combination of a hollow casing forming a receptacle for a stack of new razor blades and a receptacle for used blades, the used blade receptacle being positioned longitudinally forward of the new blade receptacle, said magazine having a channel in the bottom thereof, opening on the new and used blade receptacles to and exposing the bottom of a stack of new blades carried therein, said magazine having an opening in the forward end thereof through which a used blade may pass, longitudinally extending guide means positioned in said channel at each longitudinal side thereof adapted to cooperate with means carried by a razor whereby the magazine may be operatively



engaged with the razor by relative longitudinal movement therebetween to operatively position the bottom blade on the razor, cam means on said magazine adjacent the forward end thereof adapted to engage a used blade on such a razor and guide the same into the used blade receptacle during initial engaging movement between the magazine and a razor, said magazine having an opening in the rear end thereof longitudinally aligned with one end of the bottom new blade of the stack through which such blade may be withdrawn from the magazine by further relative longitudinal movement in the same direction of the magazine with respect to such a razor.

2,858,607
ELECTRIC RAZOR WITH ROTARY OPERATED DOUBLE EDGED BLADES
Edward Kane, New York, N. Y.
Application April 18, 1955, Serial No. 501,849
3 Claims. (Cl. 30—43)

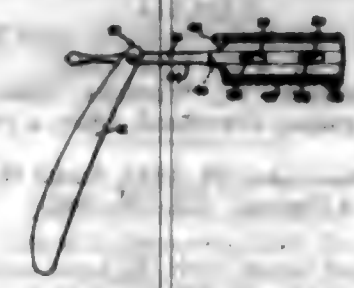


1. A mechanical razor comprising a casing having a recess at the upper face thereof and extending across the entire width thereof, a cylindrical sleeve having a through bore removably positioned within said recess with said recess and said sleeve extending in the same direction, said sleeve having a plurality of slots in the peripheral wall thereof above said recess, the respective end portions of the bore of said sleeve being screw-threaded, a pair of sleeve bearings, said bearings being externally screw-threaded and being removably screwed into the respective end portions of said sleeve, a shaft removably positioned within said sleeve with the ends of said shaft extending turnably into said bearings, one end of said shaft protruding beyond the outer face of one of said sleeve bearings, said shaft extending coaxially relative to said sleeve, drive means for the externally protruding portion of said shaft for rotating same, and a blade holder removably and non-rotatably mounted upon said shaft within said sleeve, said blade holder having at least one blade seat for receiving a double edged razor blade which has side cutting edges, said seat extending in the direction of length of said sleeve and also extending chordally thereto, said blade holder being adapted to receive said blade with one face of the blade opposing the seat and with said blade

2,858,613
tively connected to said sleeve for holding said sleeve

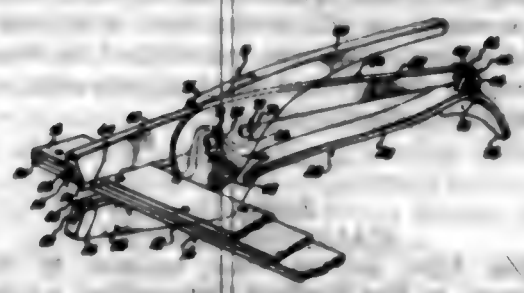
extending in the direction of length of said sleeve and with the cutting edges of said blade frictionally and slidably abutting the inner wall of said sleeve.

2,858,608
SAFETY RAZOR
Oscar F. Wilhelm, New London, Conn., assignor to Durham-Enders Razor Corporation, a corporation of New York
Application July 20, 1955, Serial No. 523,278
2 Claims. (Cl. 30—55)



1. In a device for holding a razor blade, a backing member, a lock plate member, said lock plate member and said backing member each having means for sliding engagement between said members to support a razor blade therebetween, the surface of one of said members facing the other of said members having an indentation formed therein, a bent stud on the other of said members engageable with said indentation when said members are slidably engaged, said stud being resiliently urged into said indentation and disengaged therefrom by movement away from said one of said members to permit sliding disengagement of said members.

2,858,609
CUTTER
Harvey J. Hill, Monterey Park, Calif., assignor to Roberts Manufacturing Co., Los Angeles, Calif., a corporation of California
Application January 25, 1957, Serial No. 636,430
6 Claims. (Cl. 30—173)

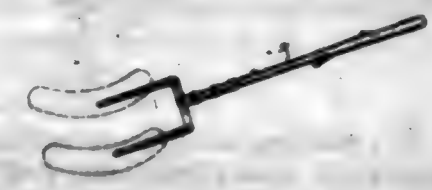


1. A cutter for cutting an article, including: an elongated lower member including a lower jaw having an upwardly facing lower surface and including a lower handle extending longitudinally from said lower jaw and terminating in an outer end; an elongated upper member substantially paralleling and located above said lower member, said upper member including an upper jaw disposed in opposing relation to said lower jaw and having a downwardly facing upper surface, said upper member further including an arm extending longitudinally from said upper jaw and terminating in an outer end positioned adjacent said outer end of said lower handle; first connecting means pivotally connecting said outer end of said arm to said outer end of said lower handle and providing for longitudinal movement of said upper member relative to said lower member so as to provide for longitudinal movement of said upper jaw relative to said lower jaw; an upper handle disposed generally above said upper member and crossing said upper and lower members between said upper and lower jaws and said outer ends of said arm and said lower handle; second connecting means pivotally connecting said upper handle to said lower member between said lower jaw and said outer end of said lower handle; third connecting means pivotally connecting said upper handle to said upper member between said upper jaw and said outer end of said arm; and opposed upper and lower blades on said upper and lower jaws, respectively, and disposed in a common plane, said upper and lower blades projecting from said upper and lower surfaces, respectively, of said upper and lower jaws distances less than one-half the thickness of the article to be cut thereby.

2,858,610
PARING AND SLICING KNIVES
Earl A. Glatting, Detroit, Mich.
Application July 1, 1957, Serial No. 669,105
1 Claim. (Cl. 30—279)

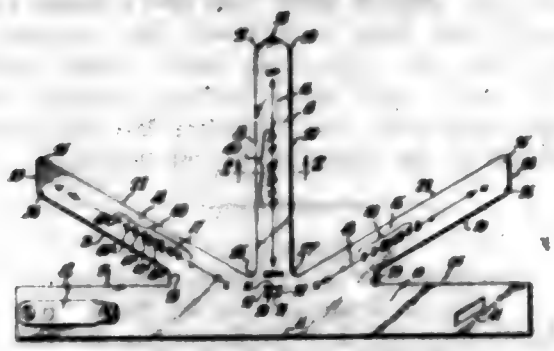
A peeling and slicing knife comprising an attenuated blade provided along one margin with a cutting edge terminating at one end in a point, a handle attached to the other end of said blade, said blade being provided with a slot extending longitudinally thereof and having opposed parallel edges, an enlarged wedge-shaped projection on said blade extending from the cutting edge and offset to one side of the plane thereof to provide a slice removing and guiding surface extending and terminating below said slot, a longitudinally extending rib on the other side of said blade projecting outwardly from one edge of said slot and over said slot with its free edge in offset spaced relation to the other edge of said slot, the outer end of said rib being sharpened to provide a cutting edge, and the inner surface of said rib forming a continuation with a surface of said wedge-shaped projection and merging therewith to provide a slice removing surface.

2,858,611
PICNIC FORK
Walter M. Arneberg, Minneapolis, Minn.
Application September 7, 1956, Serial No. 608,577
1 Claim. (Cl. 30—322)



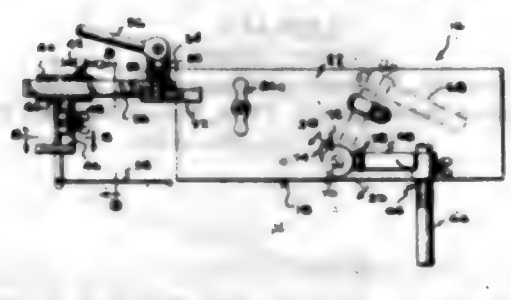
A fork formed of a unitary sheet of metallic material, said fork having a laterally extending connector portion, a pair of laterally spaced tines extending longitudinally forwardly from the connector portion and disposed in generally parallel relation to each other, a ferrule forming portion extending longitudinally rearwardly from said connector portion and disposed in longitudinally spaced relation to the tines, said ferrule forming portion including a longitudinally extending elongated shank portion disposed intermediate of longitudinally rearward extensions of each tine and generally parallel thereto, a plurality of longitudinally spaced pairs of opposed wings projecting laterally from opposite sides of the shank portion, a reinforcing rib section of generally U-shape in cross section extending substantially the full length of said tines, connector portion and shank portion intermediate their respective edge portions, and said rib sections of the tines and connector portion being joined to define a continuous rib with the rib section of the shank portion joining and terminating at the approximate center of the rib section of the connector portion.

2,858,612
ISOMETRIC PIPING TEMPLATE RULE
Wallace A. Verrett, New Castle, Del.
Application September 25, 1956, Serial No. 611,995
4 Claims. (Cl. 33—75)



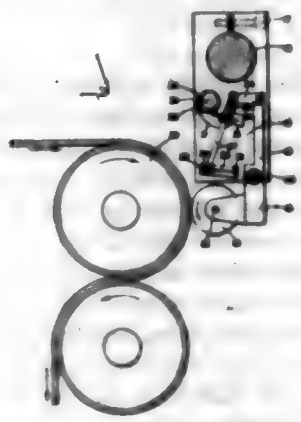
1. Isometric piping template rule comprising a transparent integral sheet member shaped to provide a base plate having a lower straight edge adapted to engage a T-square and an upper straight edge parallel thereto and a trio of arms of uniform width extending from the upper edge of said base plate having their medial longitudinal lines radiating from a common point and being in part inscribed upon said arms, one of said arms being perpendicular to said base plate and the others divergent therefrom on opposite sides at equal angles, the opposite side edges of said arms constituting straight edges which extend continuously to the outer ends of the arms, the ends of said divergent arms being formed with straight edges parallel to said perpendicular arm whereby the upper sides of said divergent arms make angles with said end straight edges equal to the angles between said upper sides and the sides of said perpendicular arm, the apical ends of all said angles being arcuately closed.

2,858,613
MASONRY WALL AND CORNER GUIDE
Harry W. Best, Arnold, Pa.
Application July 26, 1957, Serial No. 674,419
1 Claim. (Cl. 33—85)



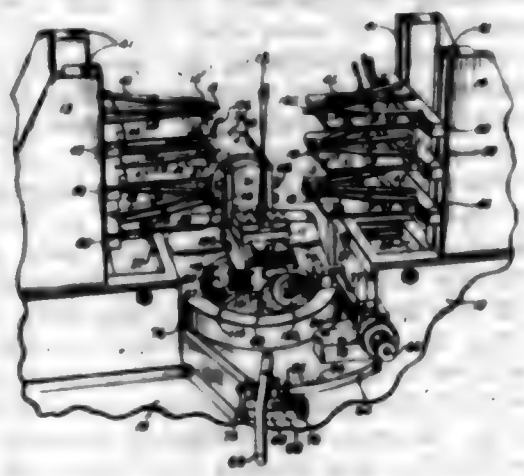
For use with a building substructure including a first upstanding wall and a second upstanding wall positioned perpendicularly with respect to said first wall and having one end joined to one end of said first wall, a masonry wall and corner guide comprising an angle member disposed in an upright position with the joinder of said angle member exteriorly of and in abutting engagement with the junction of said first and second walls and with the two legs thereof abutting and extending along said walls from the junction thereof, means for detachably securing said angle member in position on said walls, a horizontally disposed arm positioned exteriorly of said angle member and having one end connected to the joinder of said angle member for limited swinging movement about a vertical axis, releasable means operatively connected to said arm for holding the latter in any selected position of its swinging movement, and a line attaching means carried by said arm adjacent the other end thereof for supporting a horizontally disposed mason's line when arranged to extend in parallel spaced relation along one of said walls, said attaching means embodying a sleeve mounted on said arm for sliding movement toward and away from said angle member, releasable means operatively connected to said sleeve for holding said sleeve in any selected position of its sliding movement, a vertically disposed rod dependingly carried by said sleeve, a tubular element circumposed about said rod and connected to the latter for upward and downward sliding movement, and releasable means operatively connected to said element for holding the latter in any selected position of its sliding movement, said element being provided with a notch adapted to receive therein a looped portion of a mason's line.

2,858,614
APPARATUS FOR MEASURING THICKNESS OF LAP AND THE LIKE
Paul G. Schaeuemann, Jr., Westlake, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Application November 29, 1954, Serial No. 471,680
4 Claims. (Cl. 33—148)



1. In thickness sensing apparatus: a base plate; a feeler lever and a contact lever individually mounted thereon for limited pivotal movement, a link connecting said feeler lever and said contact lever; an anti-friction bearing mounted adjacent said contact lever; a flat spiral spring mounted around said bearing and having its free end adjustably attached to the contact lever in such manner that the radius of curvature of a portion of said spring can be varied; a resistance element; an electrical contact mounted on said contact lever in slidable contact with said resistance element and adapted to develop as a signal voltage the value of which is dependent upon the positioning of the feeler lever.

2,858,615
GAUGING DEVICE
Willis Fay Aller, Dayton, Ohio, assignor, by mesne assignments, to The Sheffield Corporation, a corporation of Delaware
Application April 20, 1953, Serial No. 349,655
24 Claims. (Cl. 33—174)



16. A gauging apparatus comprising a pair of oppositely directed gauging plungers, work contactors at the

outer ends thereof, means supporting said plungers for axial sliding to relative positions as determined by engagement of the work contactors with opposite sides of a common workpiece, means adjacent the inner end of each of said plungers providing a fluid leakage orifice, means positioned by work controlled movements of one of said plungers for reducing fluid leakage through the associated orifice with inward plunger movements, means positioned by work controlled movements of the other of said plungers for increasing fluid leakage through the associated orifice with inward plunger movements, means connected to each of said orifices and adapted for connection to a source of fluid under pressure and indicating means responsive to the fluid leakage through the leakage orifices and the actuation of the gauging plungers.

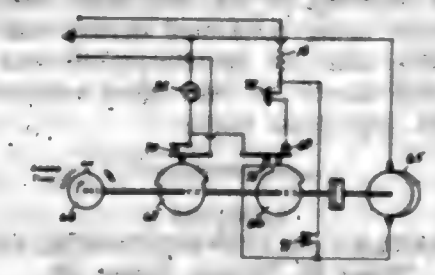
2,858,616
INSPECTION DEVICE
Oscar L. Swanson, Erie, Pa.
Application June 23, 1953, Serial No. 363,636
5 Claims. (Cl. 33—174)

1. In combination, an inspection table and means for testing and inspecting articles of manufacture thereon comprising a table having an accurately finished top surface and an accurately finished edge, said edge being disposed at substantially a right angle to said top surface and extending downwardly therefrom, a lip attached to said table along said finished edge, said lip having an angularly disposed surface on the side thereof remote from said top surface, said angularly disposed surface on said lip extending from said top surface downwardly and toward said accurately finished edge, means to attach testing fixtures to said lip, said means comprising a body member having an accurately finished surface engaging said top surface of said table, a vertically extending flange having a surface engaging said edge of said table, an upwardly and inwardly extending plate, and clamping means attaching said plate to said flange, said plate being held by said clamping means in firm engagement with said lip and holding said means to attach testing fixtures to said lip in firm engagement with said top surface.

2,858,617
LOCK AND STRIKE PLATE LOCATION MARKING MEANS
Ugo P. Marchetti, Van Nuys, Calif.
Application July 18, 1957, Serial No. 672,077
14 Claims. (Cl. 33—194)

1. In a device for marking the positions for installation of a lock on a door and of the complementary strike plate on a jamb with reference to which the door is hingedly mounted in a single operation, a base member comprising a flat resilient strip of metal supporting a means for marking the outline of a strike plate receiving mortise on one face thereof and adjacent to one end thereof, other means adjacent the other end of said base member and at the opposite side thereof for marking the outline of the mortise for the exposed end of a lock on the edge of a door, and means at the ends of said base member engageable, respectively and simultaneously, with a door stop on the jamb and with a side surface of the door effective to position both of said marking means in horizontal directions relative to the door stop and door side so that the bolt of a lock positioned in and located by the mortise in the door will engage the opening in a strike plate mounted in the mortise in the jamb.

2,858,618
AUTOMATIC CONTROL DEVICE FOR LAUNDRY DRIER
Walter L. Kaufman II, Erie, Pa., assignor to Lovell Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Application March 11, 1955, Serial No. 493,738
4 Claims. (Cl. 34—45)

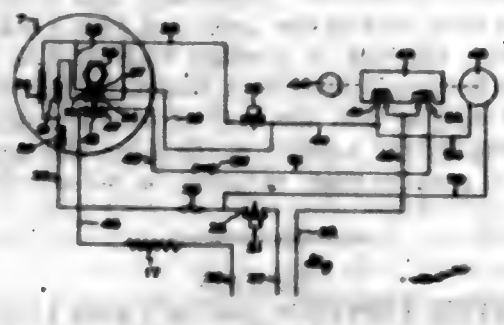


1. In a clothes dryer of the type having a rotatable clothes receiving drum, a heater associated with the drum, a circuit for the heater including contacts, a blower for exhausting air from the drum, and a motor drive for the blower and drum, the combination of a control movable to an "on" position for starting the operation of the dryer by energizing the heater through the said contacts and starting the motor drive for the drum and blower, a timer initially de-energized in the "on" position of the control, said timer having a control for stopping the operation of the dryer by de-energizing the heater by opening said contacts and stopping the motor drive, a circuit for the timer branching from the heater circuit, an operator actuated selecting means for selecting the time interval after which the timer operated control stops the operation of the dryer, and normally open thermostat means in said timer circuit but not in said heater circuit closed in response to the exhaust air temperature for starting the operation of the timer without interrupting the heater when the exhaust air temperature reaches the value corresponding to the damp dry clothes for normal sized loads.

2,858,619
CONTROL SYSTEM FOR CLOTHES DRYERS
Philip G. Hughes, Anchorage, Ky., assignor to General Electric Company, a corporation of New York
Application May 9, 1956, Serial No. 583,756
8 Claims. (Cl. 34—45)

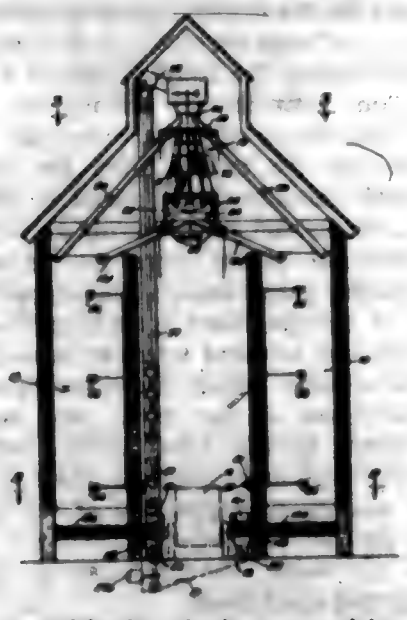
1. In a clothes dryer having clothes tumbling means, a cabinet enclosing said tumbling means and including a door for access to said tumbling means, and a drive motor for driving said tumbling means, a control system for energizing said drive motor from a power supply, comprising a door switch operated by said door, said door switch being opened when said door is open and closed when said door is closed, a speed responsive switch operated by said drive motor, said speed responsive switch being closed when said motor is in operation and

being open when said motor is at rest, a drive motor circuit for energizing said drive motor from said power supply through said door switch and said speed responsive switch, said drive motor circuit being locked out by the opening of said speed responsive switch whenever said motor is de-energized by the opening of said door switch,



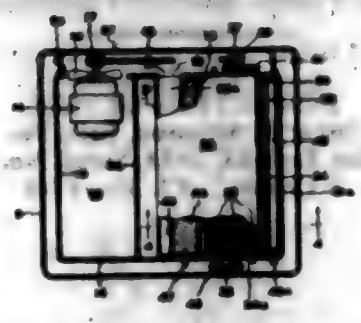
and a manually operable switch for re-energizing said drive motor to continue the drying operation after the opening and reclosing of the said door, said manually operable switch being connected across said speed responsive switch whereby the closing of said manually operable switch shorts out said speed responsive switch and energizes said drive motor.

2,858,630
APPARATUS FOR CONDITIONING GRAIN
Street W. Naylor, Dixon, Ill.
Application January 24, 1955, Serial No. 483,594
10 Claims. (Cl. 34—56)



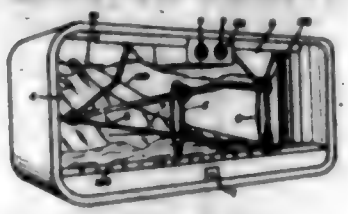
9. A grain conditioning device comprising an upright outer frusto-conical screen tapering uniformly from the top to the bottom thereof, an inner frusto-conical screen tapering uniformly from the top to the bottom thereof and disposed within said outer screen in spaced relation thereto and defining a chamber therebetween, a plate affixed to the upper end of said inner screen, a hopper attached to the upper end of said outer screen and extending upwardly therefrom, an annular bottom plate attached to the lower ends of said inner and outer screens having an enlarged central opening therein located within said inner screen and a plurality of annularly spaced openings located between said inner and outer screens, a cylindrical housing attached to said annular bottom plate around said central opening therein and extending downwardly therefrom, an annular valve plate disposed around said housing and underlying said bottom plate, a rigid support frame attached to said bottom plate and disposed radially outwardly from said valve plate for supporting said grain conditioning device, an annular guide ring attached to said frame and said bottom plate and underlying said valve plate to rotatably support the latter, said valve plate having a plurality of openings therein, and means attached to said valve plate for selectively turning the latter relative to said bottom plate.

2,858,631
CLOTHES DRYER
Stephen L. McMillan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application June 18, 1956, Serial No. 591,983
3 Claims. (Cl. 34—79)



3. In a clothes dryer, a clothes container and a closed air recirculation system for continuously withdrawing moist air from said container and returning warm dry air thereto, said recirculation system including condensing means for condensing moisture from the moist air leaving said container, heating means for subsequently reheating the air before it returns to said chamber, conduit means for guiding the air from said container, through said condensing means and said heating means, and back to said container, and air circulating means for moving the air through said system, said condensing means comprising a liquid reservoir and a plurality of disks arranged for rotation in said reservoir, said disks being mounted on a plurality of parallel shafts and the disks on adjacent shafts being intermeshed, with the lower portions of said disks being arranged to dip into the liquid in said reservoir and with the recirculating air passing over the upper portion of the disks whereby said air is cooled and de-humidified, liquid supply means for admitting fresh liquid to said reservoir, and drain means for draining the used liquid from said reservoir as said fresh liquid is admitted.

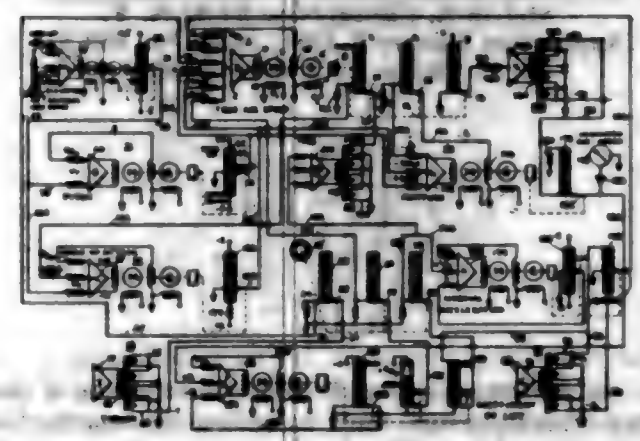
2,858,633
DEMONSTRATOR OF NAVIGATIONAL FLIGHT AND LANDING PROCEDURES
Richard H. Purvis, Silver Spring, and Charles L. Cohen, Radnor Valley, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application July 28, 1953, Serial No. 370,859
1 Claim. (Cl. 35—10.2)



A device to demonstrate the flight of an aircraft comprising a substantially horizontal plastic sheet to represent the localizer radio transmission plane, a vertical plastic sheet that intersects the horizontal plane at right angles to represent the glide path radio transmission plane, a cone that passes through the intersection of the horizontal and vertical planes to represent the middle marker beacon, another cone that passes through the intersection of the

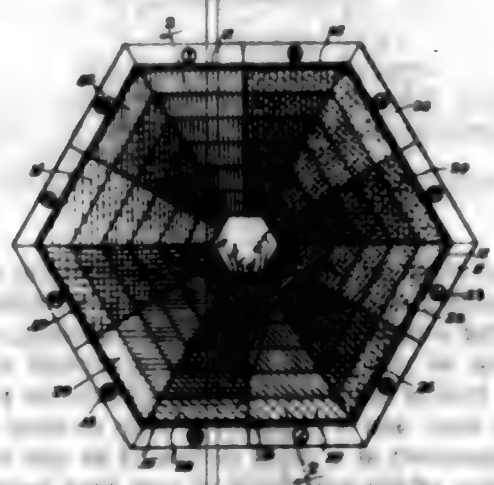
horizontal and vertical planes to represent the outer marker beacon, a plastic ribbon to represent the flight path that approaches and intersects the intersection of the vertical and horizontal plane and a means to generate a moving spot of light on the plastic ribbon to represent the location of an airplane.

2,858,623
FLIGHT COMPUTING SYSTEM
Robert G. Stern, West Caldwell, N. J., and Albert J. Sherman, New York, N. Y., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Application June 14, 1954, Serial No. 436,533
3 Claims. (Cl. 35—12)



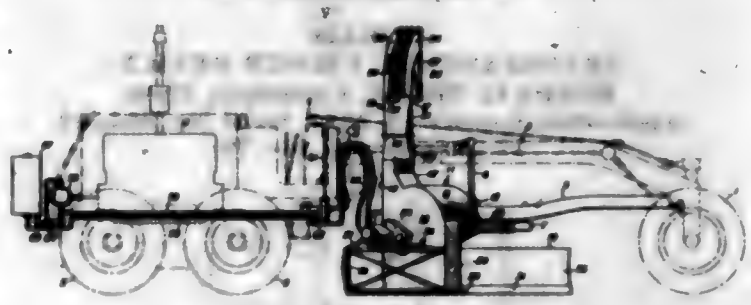
1. In aircraft training apparatus having flight computing means adapted to compute air speed, angle of attack, and sideslip according to the operation of simulated flight controls including a rudder control and a flap control, a system for deriving a signal representing the effect of parasitic drag on air speed, comprising means for computing coefficient of parasitic drag as a function of sideslip, rudder angle, angle of attack, and flap angle, means for computing indicated air speed squared, means for computing aircraft mass, and means for deriving a signal representing the effect of parasitic drag on air speed according to the computed values of coefficient of parasitic drag, indicated air speed squared and aircraft mass.

2,858,624
COLOR SELECTOR
Irwin C. Bowman, Glenview, Ill.
Application August 23, 1955, Serial No. 529,971
1 Claim. (Cl. 35—28.3)



A color selector for displaying selected colors in harmonious combinations, said selector comprising a flat sheet-like base member of hexagonal equi-lateral equiangular configuration, said base member bearing on one face thereof a field of colors, said field being divided into twelve contiguous segments, each segment being in the form of a right angle triangle the hypotenuse of which extends radially from the exact center of the hexagonal base member to the juncture between a pair of adjacent hexagon sides, each segment being divided into a series of at least four stripes of equal width with each stripe extending parallel to the peripheral hexagon edge which forms one boundary of the segment, the stripes of each segment being of equal width, the stripes of three pairs of adjacent segments extending in end-to-end axial alignment in respective pairs, the stripes of three other pairs of adjacent segments extending in end-to-end relationship in respective pairs at angles of 120° each, each stripe thus being in the form of a trapezoid of the 90°, 90°, 60°, 120° variety, the stripes of each segment presenting different gradations of a base solar spectrum color, the base color thus represented by each segment being different from the base color represented by each other segment, said one face of said base member being provided with a hexagonal rib in the peripheral regions thereof enclosing and closely bounding said field of colors, and a plurality of masks adapted to overlie said field of colors interchangeably, said masks each being of hexagonal configuration and conformable in size to the size of said field of colors so that when the masks are in position over said field of colors individually, they are releasably retained in position by said hexagonal rib, each mask being formed with a plurality of window openings therethrough with each opening conforming in shape to the shape of a stripe on the base member with which the opening is adapted to register when the mask is in operative position within the confines of said rib with either face of the mask in contact with said base member, the positional arrangement of the window openings of the various masks differing from one another, each window opening, when in register with a given stripe, exposing substantially the entire area of the stripe.

2,858,625
MATERIAL REMOVAL UNIT FOR SELF-PROPELLED VEHICLE
Theodore Rivinius, Elgin, N. Dak.
Application April 12, 1954, Serial No. 422,984
11 Claims. (Cl. 37—43)

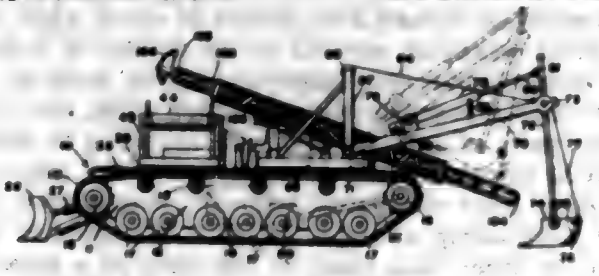


1. The combination with a self-propelled vehicle, of a scraper blade rotatable about a substantially vertical axis relative to said vehicle, a casing connected to said scraper blade toward the discharge end and opening toward the feed end thereof, said casing being rotatable with said scraper blade on rotation thereof, a discharge chute supported on and upstanding from said casing, a rotary impeller in said casing and open to receive material discharged thereinto by said scraper blade and means for rotating said scraper blade through a limited arc and thereby varying the force of discharge of said material from said scraper blade to said impeller.

2,858,626
EXCAVATING APPARATUS
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application November 24, 1954, Serial No. 470,866
12 Claims. (Cl. 37—117.5)

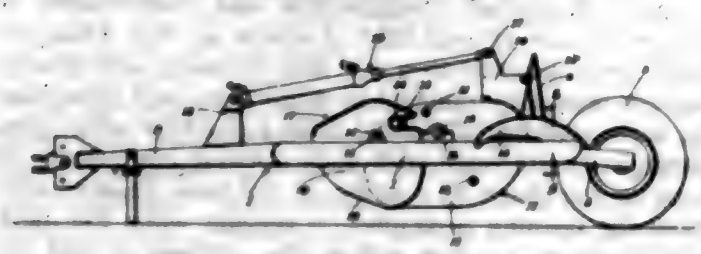
1. In combination, a self-propelled vehicle, a bull-

dozer blade mounted on one end thereof, a pull power shovel mounted on said vehicle on the other end thereof,



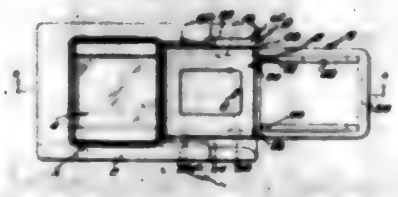
and belt conveyor means on said vehicle cooperating with said power shovel.

2,858,627
SCRAPER
Anthony J. Brown and Joseph B. Silva, Turlock, Calif.
Application August 30, 1956, Serial No. 607,224
7 Claims. (Cl. 37—129)



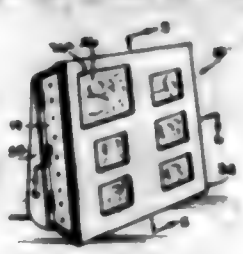
1. In a scraper, a frame adapted at its forward end to be supported at a fixed level relative to the ground, wheels adjacent the rear end of the frame, forwardly projecting wheel supporting arms, a transverse shaft rigid with the forward end of the arms and turnably mounted on the frame, a main bowl pivotally mounted on the frame for swinging movement from a digging to a carrying position, and cooperating means on the bowl and shaft to rotate the latter in a direction to relatively lower the arms at their rear end by reason of and upon the bowl assuming a carrying position.

2,858,628
TRANSPARENCY VIEWER DEVICE
Richard G. Rideout, Cambridge, Mass.
Application January 15, 1954, Serial No. 404,369
17 Claims. (Cl. 40—79)



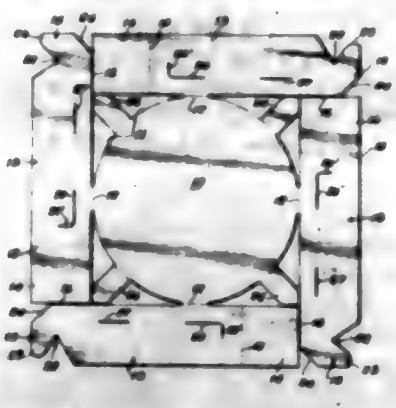
1. A device for viewing photographic slides and the like comprising a normally horizontally disposed base member having a picture viewing aperture formed therein, a translucent window aligned with said aperture, an upwardly extending support carried by said base member, optical viewing means carried by said upwardly extending support so as to be in register with said aperture and window, an elongated pair of spaced photographic slide supporting and directing surfaces on said base member and disposed adjacent opposite sides of said aperture, said base member and said supporting surfaces thereon extending sufficiently laterally of said aperture so as to provide a slide receiving and supporting location to one side of said optical viewing means for accommodating a vertically arranged stack of slides when positioned thereon, horizontally extending guide means on said base member, a slide carrier slidably positioned in said guide means for transverse reciprocating movement, and having a part extending outwardly of said base member for actuation of the device, an abutment surface carried by and in normally fixed relation to said slide carrier for engaging an edge of the lowermost slide of said stack of slides while resting upon said pair of spaced supporting surfaces and for moving said lowermost slide laterally into register with said viewing aperture and said optical viewing means, and fixed means on said slide carrier arranged to elevate the remaining slides as said lowermost slide is being moved away from said stack and until said abutment surface is moved back substantially to its starting position.

2,858,629
ILLUMINATING DISPLAY DEVICE FOR PHOTOGRAPHIC TRANSPARENCIES
Melvin A. Carter, New York, N. Y.
Application January 5, 1956, Serial No. 557,575
12 Claims. (Cl. 40—106.1)



1. An illuminating display device comprising a front picture framing panel, flaps extending rearwardly from a pair of opposite sides of said panel, a cover member comprising a rear wall, and a pair of opposite forwardly extending flaps, means to attach the flaps on the panel with the rear wall of said cover member, and means to attach the flaps on the cover member with said panel, the flaps on the panel being located between the flaps on the cover member thereby forming a chamber between the rear wall of the cover and the panel.

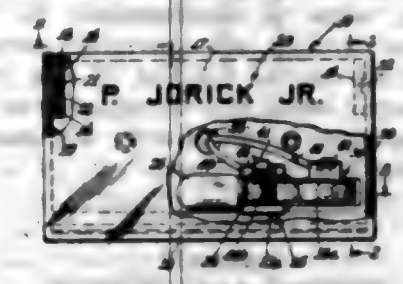
2,858,630
CAKE DUMMY AND BLANK THEREFOR
John E. Gorman, Chicago, Ill.
Application August 27, 1954, Serial No. 452,630
5 Claims. (Cl. 40—126)



1. A flat blank of foldable sheet material cut and slotted for folding and uniting to form a cylinder having a closed end suitable for use as a cake dummy, comprising a piece of the blank having cut arcuate edges arranged in broken sequence forming a circle for providing a cylinder base, and a plurality of strip sections each integrally connected at a small section of its side edge to a small section of the periphery of said base between two of said arcuate edges, said connection being a straight scored folding line forming a portion of the periphery of said base, the said strip sections in the blank all being of the same width and all extending tangentially to the circular base, the said strips having lengths and being arranged for folding on said scored lines to positions perpendicular to said base and to be curved in overlapping relation to provide a cylindrical wall for said base, the overlapping portions of adjacent strips being provided

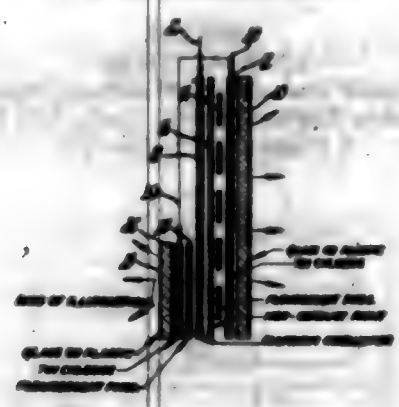
with interlocking means for joining one strip to the other in making said wall continuous, the inner ends of said strips lying inside the wall in the folded dummy being scored perpendicularly to the extent of the strip for folding inwardly of the folded cake form and into a generally radial direction as vertical supports for the face of the base when said base is positioned as a top horizontal end wall of the cylinder.

2,858,631
ILLUMINATING ELECTRICAL INDICATOR
Paul Jorick, Jr., Stamford, Conn., assignor of one-half to Irving Rabinowitz, Stamford, Conn.
Application May 13, 1955, Serial No. 508,143
4 Claims. (Cl. 40—130)



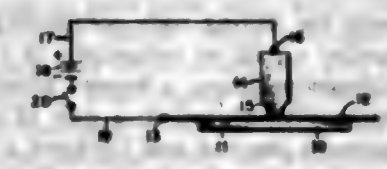
1. A simplified electrical, illuminating indicator adapted to be used in an electrical sound control circuit comprising a base plate adapted to be secured to a supporting structure, a front plate pivoted thereto having top and bottom and side walls projecting rearwardly therefrom, said bottom wall having a flange portion cooperating with said base plate to limit outward pivotal movement of said front plate, said front plate having translucent portions with identifying indicia thereon and forming therewith a housing, socket means disposed between said plates for supporting a lamp, resilient means positioned within the housing and having respective portions thereof engaging said lamp and said front plate, and conductors connecting said means for energizing said lamp to illuminate said indicia, said front plate being pivotally mounted on said ears and forming thereon a pivotal button whereby said resilient portion normally urges said front plate outwardly and away from said base plate for maintaining said lamp energized and whereby pivoting of said front plate inwardly displaces said resilient portion engaging the front plate to short out the lamp and energize the sound circuit.

2,858,632
PANEL ILLUMINATION
Martin J. Cassolo and Henry C. Stoerzl, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 27, 1955, Serial No. 518,918
5 Claims. (Cl. 40—132)



1. In illuminating means, a thin transparent electrically conductive sheet, electro-luminescent phosphor means having a desired configuration secured to one side of said conductive sheet, an electrically insulating layer secured to that side of the sheet and covering the configurations and a second sheet of electrically conductive material secured adjacent the electrically insulating layer to produce a variable field between the two conductive sheets when voltage is applied thereacross to cause the electro-luminescent phosphor means to glow to produce indicating material.

2,858,633
METHOD AND APPARATUS FOR ELECTRICAL PRINTING
Ernest M. Kane, Oxnard, Calif.
Application January 7, 1954, Serial No. 402,833
9 Claims. (Cl. 41—37)
(Granted under Title 35, U. S. Code (1952), sec. 266)

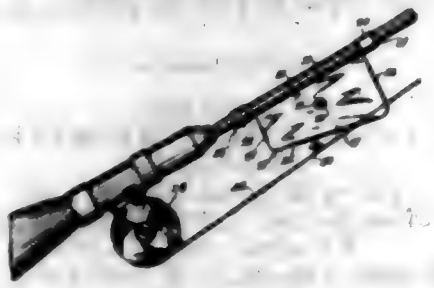


1. A method of electrical printing which comprises positioning a sheet of metal foil adjacent a surface upon which it is desired to print, pressing the face of a type member against said foil and passing an electric current below arcing potential through said type face and said metal foil to heat the latter.

2,858,634
FISH HOOK SETTER
John W. Bremer, Jr., Jacksonville, Fla.
Application August 27, 1956, Serial No. 606,282
4 Claims. (Cl. 43—15)

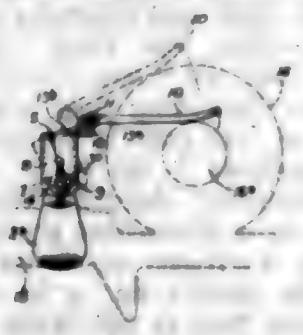
1. A fish hook setting device comprising an elongated frame rod curved from a lower end to an upper end in a gentle arc and having an eye at said upper end for attachment to a line and having an anchoring hook adjacent said upper end, an elongated trigger rod having a fish hook attachment eye at one end and having a guide loop at the other end encircling said frame rod and slideable therealong, said frame rod comprising a guide loop at its said lower end encircling said trigger rod and slideable therealong, said trigger rod being curved between its said ends in a gentle arc at least substantially conforming to the arc of said frame rod and being longitudinally slideable therealong from a side-by-side position to an extended position with respect to said frame rod, said trigger rod having a trigger notch opening toward the concave side of its arc and engageable with said guide loop of said frame rod when said trigger rod is in said extended position, a connecting hook on said trigger rod offset toward the inner side of said arc from said notch and trigger rod, and tension spring means connected at its respective opposite ends to said anchoring hook and to said connecting hook.

2,858,635
SIGNAL ATTACHMENT FOR FISHING RODS AND POLES
Jaro Hacmeier, Union City, N. J.
Application September 28, 1955, Serial No. 537,889
1 Claim. (Cl. 43—17)



A signal device for fishing rods comprising a flat elongated casing having a pair of extensions at an upper side thereof, said extensions being a means whereby the casing may be removably secured to a pair of slip rings on a fishing rod beneath the rod and between a reel and the free end of the rod, said casing having a slotted line opening for a fishing line to extend through the casing, a flat spring signal lever fixed at one end inside the casing and having a free end in the casing aligned with an extending over the line opening in the casing, a horseshoe-shaped spring clamp with closely spaced side portions on the free end of the spring signal lever removably to hold a fishing line extending through the casing line opening, an electrical contact on the spring signal lever, a fixed electrical contact mounted in the casing beneath the spring signal lever and aligned with the electrical contact on said lever, a battery clip having one terminal connected with said fixed electrical contact and a second terminal spaced from said contact, an electrically operated signal means mounted in the casing, connecting means electrically to connect the second terminal of the battery clip and the electrical contact of the spring signal lever with said signal means, an adjustment screw extending through a side of the casing and connected with the spring signal lever between the fixed end of the lever and the free end thereof to adjust the distance between said fixed contact and the contact on the spring signal lever, and an insulated plate mounted in the casing for mounting the signal means and battery clip thereof, said spring signal lever and said fixed contact being so disposed that movement of the contact on the spring signal lever against the fixed contact closes the circuit only when the fishing line is drawn taut by the bite of a fish or by vibrations in the water caused by the immediate proximity of a fish to the hook, said signal means being a socket secured in said casing for mounting an interchangeable lamp and buzzer.

2,858,636
BRAKE ATTACHMENT FOR FISHING REELS
Lester E. Stipe, Portland, Oreg.
Application March 26, 1956, Serial No. 573,889
1 Claim. (Cl. 43—25)

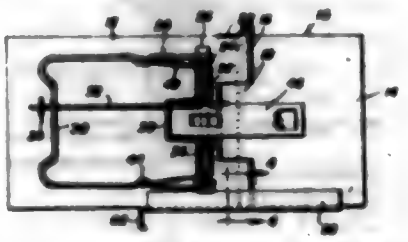


A brake for a fishing reel adapted to exert pressure upon a line wound upon said reel, comprising a base of U-shaped construction terminating in a pair of clamping ends generally complementary to the peripheral surface of a fishing rod, said base being elastic and, when undeformed, being of larger compass than the portion of a fishing rod to be accommodated between said clamping ends, an elongated clamping screw extending through said base and being adjustable to deform said base to move said clamping ends toward each other into gripping relation with a fishing rod, a friction brake pad, a bifurcated mount therefor, one end of said brake pad being pivotally journaled upon said mount, and a spring bias member for depressing said brake pad toward a fishing reel with which it is associated, said mount being pivotally joined to said base on journal connections rotatable about a pivotal axis spaced laterally from said clamping screw, but arranged parallel to the major dimension of said clamping screw, one portion of said bifurcated mount being apertured and extending about said clamping screw to accommodate the passing of said screw therethrough, the apertured portion of said mount permitting relative rotation of said mount upon said base, whereby when said clamping screw is adjusted to deform said base, it will also fix said mount against relative rotation with said base.

2,858,637
FISHING ACCESSORIES
Elmer C. Stark, Vallejo, Calif.
Application March 1, 1956, Serial No. 568,922
1 Claim. (Cl. 43—43.12)

In a fishing device, the combination with a fish line with a hook thereon; of an auxiliary sinker supporting line adapted to be suspended separately from said fish line, a sinker on said sinker line, a connecting device between the sinker line and the fish line near the sinker, said connecting device including a tubular element, loop means in one end of the tubular element engageable with said sinker line, a first rod extended from the other end of said tubular element, resiliently yieldable means to hold said first rod in retracted position in said tubular element, a loop holder rod pivoted on the outer end of said first rod, the free end of said loop holder rod being held in the adjacent end of said tubular member and being of such length that the free end thereof is withdrawn and released from the end of said tubular element when said first rod is pulled outwardly from said tubular element, and a guide loop adapted to slidably surround said fish line and to hang on said loop holder rod to be released therefrom when said releasing element is withdrawn from the tube by the pull exerted upon the hook on the fish line.

2,858,638
ANIMAL TRAP
Samuel Horenstein, Waltham, Mass.
Application August 1, 1957, Serial No. 675,625
6 Claims. (Cl. 43—81)



1. An animal trap comprising a base having a spring actuated pivoted jaw thereon, a platform pivoted to one end of said base, and a sliding member mounted on

one edge of said base and engaging one edge of the platform for retaining the base and platform in aligned coplanar relation.

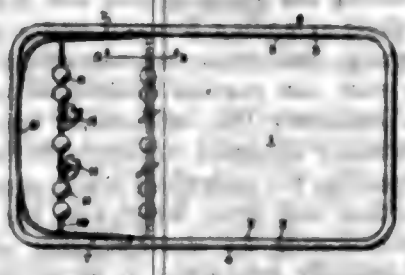
2,858,639
BUBBLE BLOWING DEVICE
Donald K. Lawrence, Chicago, Ill.
Application December 10, 1956, Serial No. 627,348
2 Claims. (Cl. 46—7)

1. A device for blowing soap bubbles comprising a container for liquid soap, a closure for said container, a slot through said closure, said slot forming mutually facing guide means for an associated stem, a flat elongated stem extending through said slot having its opposite edges in snug but slideable engagement with said guide means to permit the movement of said stem to any desired stationary position into and out of said container, said stem having a plurality of openings between its opposite edges and means on the upper end of said stem for actuation thereof.

2,858,640
MULTIPLE-PIECE SPINNING TOP
Stephen J. Drobalewski, Chicago, Ill.
Application September 24, 1954, Serial No. 458,187
3 Claims. (Cl. 46—16)

1. A multiple-piece spinning top comprising in combination, a center spindle having an elongated portion thereof which is of uniform non-circular cross section and a flange at one end, said spindle having an axial hole provided therethrough and a rotatable pin positioned in and extending through said hole, at least one removable body section having an open center portion of uniform non-circular cross section and freely slidable over said elongated spindle to key therewith and rest upon said flange of said spindle whereby the top may be assembled and spun.

2,858,641
INFANT'S DRESSING TABLE TOY
Edward C. Trimble, Rochester, N. Y., assignor to Trimble, Inc., Rochester, N. Y., a corporation of New York
Application May 16, 1957, Serial No. 659,503
2 Claims. (Cl. 46—32)

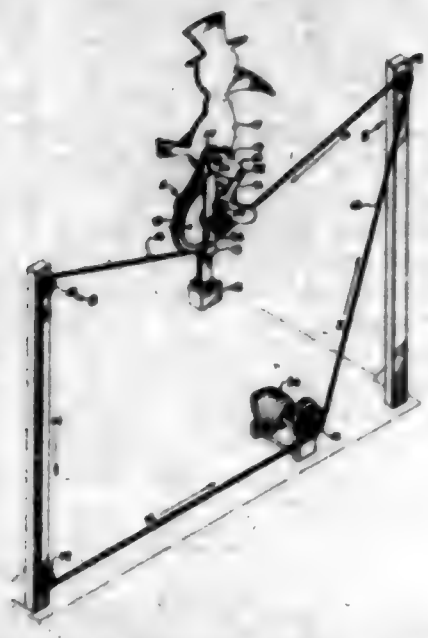


1. In combination with an infant's metal dressing table having an inverted U-shaped marginal portion extending along both sides of the table and comprising spaced inner and outer side walls connected by a curved top wall, a generally U-shaped toy supporting wire frame positionable vertically on the table or horizontally above the table between said inner side walls and including outwardly springing inwardly yieldable side arms terminating in right-angled retaining portions extending endwise of the table and having outwardly bent ends removably engaging said inner side walls, the latter having openings to receive said outwardly bent ends and elongated recesses in proximity to said openings, said retaining portions having means arranged between the pivoted ends and said side arms removably engaging said elongated recesses and acting to retain the U-shaped wire frame in upright position with the pivoted ends engaged in the openings in said inner side walls, the pivoted ends and said retaining means being arranged between said inner and outer side walls when the wire frame is in upright position, the wire frame being located on the table between said marginal portions with said retaining portions in vertical position when the wire frame is collapsed, and toy supporting means suspended between the side arms of the wire frame.

2,858,642
TOY REMOTE CONTROL CRANE
Andrew N. Giardina, Pittsburgh, Pa.
Application February 28, 1955, Serial No. 490,755
2 Claims. (Cl. 46—49)

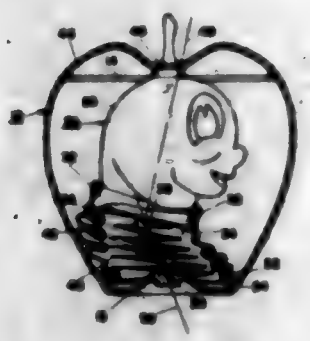
1. A remotely controlled toy article handling vehicle, comprising a boom having a lower end pivotally mounted thereon and having a string-like element extending along said boom and having an end portion suspended from the top end of said boom, a permanent magnet attached to the extremity of said end portion of the string-like element, the other end of said string-like element being wound on a drum, said drum and a direct current reversible electric motor mounted on said vehicle for selectively rotating said drum in opposite directions to wind or unwind said string-like element, a remote control unit electrically connected to said motor through a flexible cable and including a reversing switch for controlling the direction of rotation of said motor, a shovel including pivotally connected shovel elements suspended from a suspending element slidably mounted on an end portion of said string-like element in vertically spaced relationship with said magnet on the upward movement of the shovel, said shovel including an armature adapted to be attracted by said magnet to effect closing of said shovel, said shovel being arranged so that when its armature is not attracted by the magnet the shovel elements are automatically opened by the action of gravity, said shovel including links pivotally connected at their upper ends to said suspending element and at their lower ends, to said shovel elements, said slidable suspending element being engageable with a stop portion underneath the top end of said boom for limiting upward movement of said suspending element but at the same time permitting upward movement of said magnet as said string-like element is pulled upwardly to break the magnetic attraction between said magnet and armature and permit said shovel elements to automatically pivot to the open position to dump the load carried thereby.

2,858,643
ANIMATED DISPLAY DEVICE
Paul H. Stanley, Walnut Grove, Calif.
Application September 19, 1956, Serial No. 610,866
1 Claim. (Cl. 46—100)



In an animated display assembly the combination comprising: an endless wire; means supporting said wire with a small amount of slack for movement in an endless path of travel, said endless wire including a substantially horizontal flight; a peripherally grooved counterbalanced wheel mounted on said horizontal flight causing a sag in said wire commensurate with the amount of slack in said wire; driving means for driving said wire in a constant direction causing said counterbalanced wheel to rotate in fixed position at the point of sag and at a peripheral speed corresponding to the lineal speed at which said wire is driven.

2,858,644
POP-UP TOY
Philip A. Derham, Audubon, Pa., assignor to Wilhelming Manufacturing Company, Philadelphia, Pa., a corporation of Delaware
Application February 1, 1957, Serial No. 637,796
1 Claim. (Cl. 46—146)



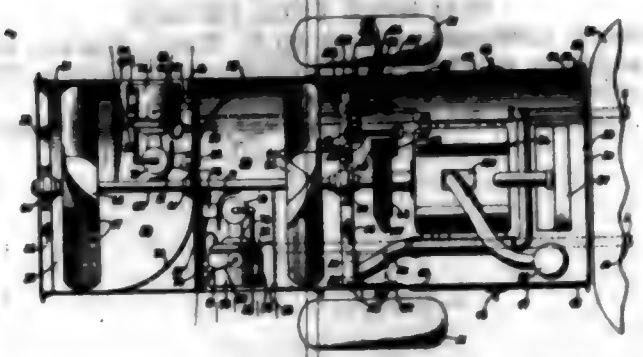
A children's pop-up toy comprising a generally hollow housing formed of somewhat soft and resilient manually deformable non-metallic material, said housing having an upper normally circular mouth which is provided with an inwardly directed annular flange, said mouth flange being provided with a plurality of uniformly circumferentially spaced pairs of diametrically opposed slots, a pop-up element including a compression spring and a head or the like mounted at the upper end of said spring, fastening means for securing the lower end of the spring to the inner bottom of said housing, a lid or cover mounted upon the head and constructed and arranged to fit snugly upon and to cover said mouth, and releasable locking means for causing locking engagement of the rim of said lid with the edge of said mouth at one or more points when said lid is manually forced downward to move the pop-up element from partially upwardly protruding spring-extended position to fully enclosed spring-compressed position within the housing, said locking means comprising a pair of diametrically opposed downwardly protruding elements each having a shoulder constructed and arranged to underlie and engage the juxtaposed portion of the flange when the lid is seated upon said mouth flange, the outer ends of the locking shoulders underlying the inner walls of the flange slots, said locking elements passing through the diametrically opposed slots in the annular flange when moving downwardly to engaging position, the lower outer ends of the locking elements being provided with downwardly and inwardly inclined camming surfaces constructed and arranged to contact and momentarily displace the inner walls of the slots to facilitate engagement of the locking elements, the locking elements being provided with notches extending inwardly from their outer walls generally at the upper ends of the camming surfaces, the notches engaging the flange slots to prevent rotational shifting of the locked lid and pop-up element, squeezing pressure upon the housing at points below the mouth opening and appreciably displaced from the line of the two locking elements causing ovalizing distortion of the mouth sufficient to shift the engaged portions of the flange away from the locking element shoulders so as to effect release of the pop-up element and lid, thereby enabling the pop-up element and lid to jump up suddenly under the pressure of the compressed spring, the plurality of uniformly circumferentially spaced pairs of diametrically opposed slots permitting the lid and pop-up element to be engaged in different rotationally spaced positions relative to the mouth, thereby causing displacement of the compressed spring and subsequent gyration upon release of the pop-up element.

2,858,645
TOY LOCOMOTIVE CAB CONTAINED MOTOR AND RELAY
Raymond E. Smith, Hamden, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Application July 30, 1954, Serial No. 446,820
9 Claims. (Cl. 46—244)

1. The combination of, the cab portion of a toy locomotive having a rearwardly directed opening, a propulsion motor sharing the space in said cab portion having an armature shaft extending forward and aligned axially with said opening, and an electromagnetic relay sharing said space in said cab portion located at said opening, comprising a relatively thin assembled unit having its length and breadth disposed athwart the axis of said shaft for compacting the combined space consuming bulk of said motor and said relay lengthwise the locomotive, said unit incorporating an electromagnet and movable contacts mechanically connected to be shiftable thereby and electrically connected to vary circuits through which said motor is energized.

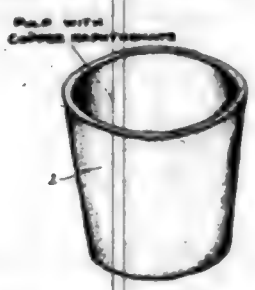
being shiftable relative to the carriage for movement intermediate lower comprising a plurality of spaced

2,858,646
ORCHARD HEATER
Kenneth K. Higgins, Gilroy, Calif., assignor to Air-O-Fan Products Corporation, Gilroy, Calif.
Application November 21, 1955, Serial No. 548,054
7 Claims. (Cl. 47—3)



1. An orchard heater comprising an elongated substantially cylindrical hollow housing having openings in opposite ends thereof, means mounting the housing in substantially horizontal position for earth traversing movement longitudinally of the housing, a drive shaft journaled substantially concentrically in the housing, a pair of fans mounted concentrically on the shaft in spaced relation adapted to impel air axially oppositely of the housing when the shaft is rotated, means for rotating the shaft in a direction causing the fans to draw air inwardly from opposite ends of the housing and to impel it inwardly of the housing, the housing having oppositely laterally disposed discharge openings intermediate the fans, an arcuate air tight partition extended obliquely transversely of the housing and between the discharge openings with the housing defining air passages from each fan to a respective discharge opening, and a source of heat mounted in each air passage between its respective fan and discharge opening.

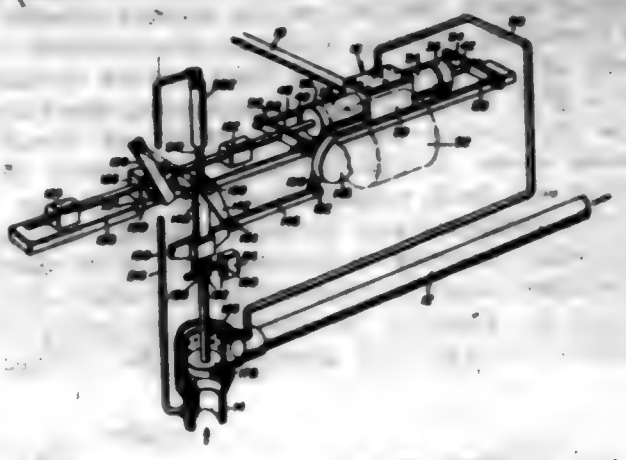
2,858,647
ARTICLE OF MANUFACTURE FOR PLANTING IN PULP CONTAINERS
William J. Cotton, Milwaukee, Wis., assignor to Kolding Paper Products Company, Milwaukee, Wis., a corporation of Wisconsin
Application October 14, 1954, Serial No. 462,176
1 Claim. (Cl. 47—37)



As a new article of manufacture, a planting pot comprising bagasse pulp having individual bagasse fibers coated with wax in which copper naphthenate has been dissolved.

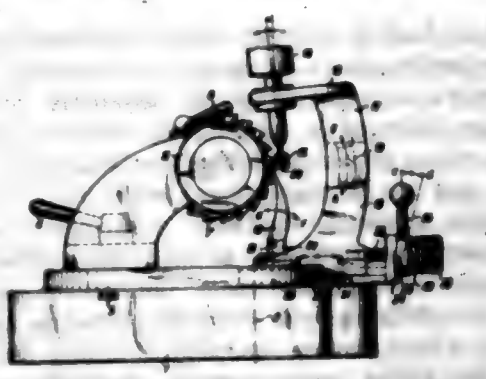
2,858,648
ELECTRIC INJECTOR FOR LIQUID FERTILIZER AND METHOD OF TREATING IRRIGATION WATER THEREWITH
Lewis D. Funk, Whittier, Calif.
Application April 14, 1955, Serial No. 501,335
10 Claims. (Cl. 47—58)

1. An injector for liquid fertilizer for use with an irrigation system having an irrigation conduit, comprising; a variable capacity pump having a constant rate of operation, liquid intake means connected to said pump, means connected to said pump for delivering liquid from said pump into an irrigation conduit, means operatively associated with said conduit and responsive to flow through said conduit and operatively connected to said pump for



controlling the delivery capacity of said pump, and further means operatively associated with said conduit and responsive to flow through said conduit for controlling the duration of the actuation of said pump.

2,858,649
RADIUS-GRINDING APPARATUS
Oskar Scheubeck, Regensburg, Germany
Application August 30, 1955, Serial No. 531,539
5 Claims. (Cl. 51—33)



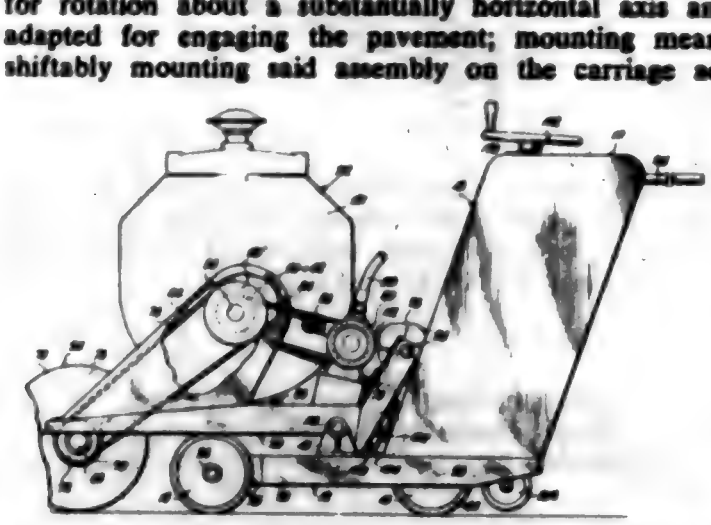
1. In a radius grinding apparatus of the type described, in combination, means for holding a work piece stationary during the grinding operation, rotatable grinding means arranged on a swivelling element and suitable for being pivoted about a pivot axis around the center of curvature of a surface of the work piece which is to be ground, said grinding means including a grinding cylinder and a driving motor connected thereto for driving the same, said cylinder and motor being arranged coaxially with respect to each other, support means for supporting said grinding means on said swivelling element in such a manner that said pivot axis extends substantially parallel to the axis of rotation of said grinding means, and adjustable mounting means for adjustably mounting said grinding means on said swivelling element in such a manner that the angle between the common axis of said cylinder and motor and said pivot axis may be varied to correspond to the clearance angle of the ground surface.

2,858,650
PAVEMENT CUTTER
Robert Janowitz, Kansas City, Mo., assignor to Concrete Saw Company, Kansas City, Mo., a corporation of Missouri
Application November 28, 1955, Serial No. 549,244
12 Claims. (Cl. 51—176)

1. In a machine for cutting concrete pavement or the like; a carriage having front and rear ends; pavement cutting mechanism, including a pavement-engaging tool and a prime mover for operating the latter; structure mounting said mechanism on the carriage, the tool

2,858,654
substantially less than atmospheric pressure, means for

being shiftable relative to the carriage for movement into and out of engagement with the underlying pavement to be cut; a pair of laterally spaced, pavement-engaging wheels mounted on the carriage adjacent one end thereof for rotation about an axis extending transversely of the carriage and fixed relative thereto; at least a third, normally pavement-engaging wheel mounted on the carriage adjacent the other end thereof for rotation about an axis extending transversely of the carriage and fixed relative thereto in parallelism with said first-mentioned axis; a caster assembly, including a caster wheel mounted on the remainder of the assembly for rotation about a substantially horizontal axis and adapted for engaging the pavement; mounting means shiftably mounting said assembly on the carriage ad-



jacent said other end thereof for rotational movement of the assembly about an upright axis and for upward and downward movement of the assembly relative to the carriage between a withdrawn position disposing said caster wheel above the lowermost extremity of said third wheel and out of engagement with the pavement and an operative position disposing said caster wheel below the lowermost extremity of said third wheel and in engagement with the pavement; control means on the carriage for shifting said assembly between said positions, a drive wheel; means operably coupling the drive wheel with the prime mover; means shiftably mounting the drive wheel on the carriage for movement into and out of operative engagement with said third wheel; and manually controllable means for shifting the drive wheel to and away from said third wheel.

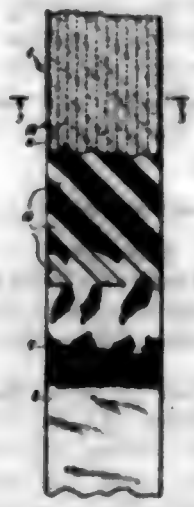
2,858,651

POLISHING BELTS

Ralph H. Shaw and Ralph H. Shaw II, Middletown, Conn., assignors to The Shaw Belting Company, Middletown, Conn., a corporation of Connecticut

Application August 8, 1957, Serial No. 677,062

6 Claims. (Cl. 51—188)



2. A polishing belt comprising a plurality of mutually fastened layers, including a continuous back layer, an intermediate layer comprising a plurality of spaced parallel felt ribs, and a continuous face layer over the ribs to be used for polishing operation.

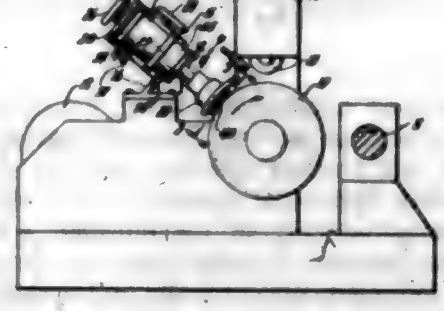
2,858,653

MACHINE TOOL DEVICE

James J. Luthman and Richard N. Roney, Dayton, Ohio, assignors to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware

Application November 13, 1957, Serial No. 696,895

8 Claims. (Cl. 51—267)



1. An apparatus for removing work material from between the abrading grains of a grinding wheel or the like, comprising supply means for flooding at least a portion of the wheel surface with liquid, an operating member in association with said liquid and closely spaced relative to the wheel surface to be treated, and a high frequency drive unit connected to said member for oscillation thereof at high frequencies and minute amplitudes relative to said liquid and to the wheel surface to cause cavitation of the liquid along the wheel surface being treated in the close spacing between member and wheel for removal of work material from the wheel surface.

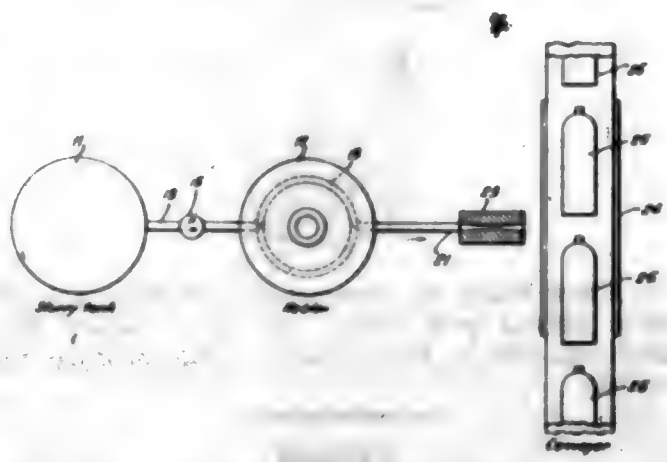
2,858,653

ABRADING OBJECTS

Frank E. Guptill, Jr., Whittier, Calif., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application February 17, 1956, Serial No. 566,128

5 Claims. (Cl. 51—281)



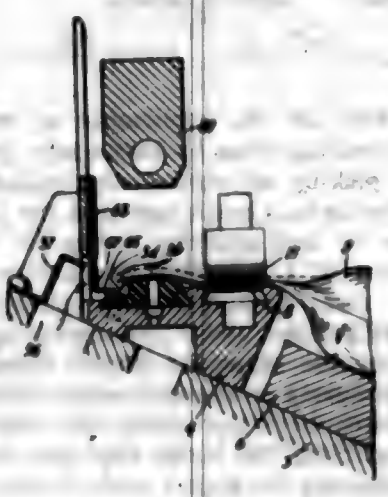
1. A method for abrading an object comprising mixing a vaporizable liquid with particles of an abrasive solid material to form a flowable mixture; passing said flowable mixture through a tubular zone as a confined stream; heating said mixture during passage through said tubular zone to a temperature above the boiling point of said liquid and forming therein a high velocity flowing dispersion of said particles in vapor; and discharging said dispersion at high velocity from said tubular zone into free space, and then against said object.

first position in line with the holder and the downwardly, and cam surfaces at the other end of said

2,858,654
METHOD OF PRODUCING DESICCANT CONTAINER
Edward B. Westlake, Jr., Havertown, Pa.
Application August 5, 1952, Serial No. 302,679
8 Claims. (Cl. 53—14)

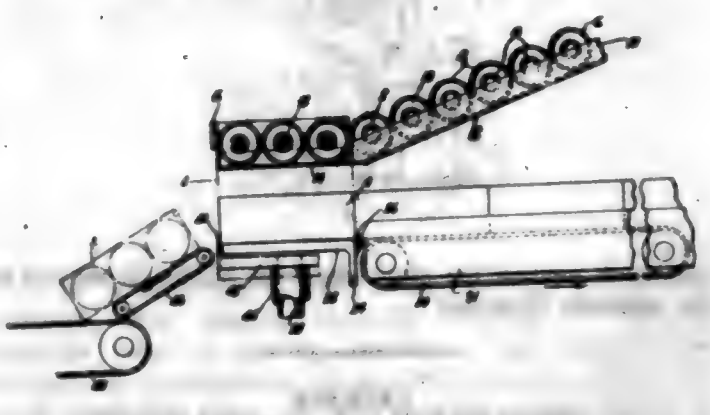
3. The method of making containers and filling the same with a chemical, said method including the steps of molding multiple cavities simultaneously from a sheet of plastic material, placing a chemical in the cavities before severing the cavities from the sheet, said cavities being filled level full, placing a flat cover of plastic material over the multiple cavities after the chemical has been placed in the cavities, sealing the flat cover to the molded sheet so as to seal all of the cavities, placing the multiple cavity molded sheet and the cover sealed thereto into a multiple die, and in one stamping operation stamping out all of the single cavity containers with the chemical therein from the multiple cavity molded sheet and its cover.

2,858,655
MACHINE AND PROCESS FOR EVACUATING, GASSING, AND SEALING FLEXIBLE CONTAINERS
Reid A. Mahaffy, Cedar Grove, William E. Young, Ramsey, and George S. Di Monico, East Paterson, N. J., assignors to Standard Packaging Corporation, New York, N. Y., a corporation of Virginia
Application February 18, 1955, Serial No. 489,216
19 Claims. (Cl. 53—86)



1. A machine for evacuating, gassing and sealing a bag having superimposed flexible walls with interspaced areas containing the atmosphere and having a mouth with the portions of said walls adjacent to said mouth tending to flatten together and said portions being hermetically sealable and said bag being gas-tight when said portions are sealed, said machine including an enclosure for said bag and which opens and closes to permit said bag to be inserted and removed from said enclosure, means within said enclosure for supporting said bag with the said wall portions substantially flat and at least one of said portions free to open from the other of said portions completely in a longitudinal direction for at least a part of its transverse extent, means for sucking the atmosphere from said enclosure to cause the atmosphere in said bag to blow therefrom and force said free wall portion to open while evacuating said enclosure and said bag to a pressure substantially less than atmospheric pressure, means for introducing a gas at a relatively higher pressure than said evacuated pressure into said enclosure while restraining said open bag wall portion from closing until said gas is sucked into said bag and said enclosure, and means within said enclosure for sealing said bag wall portions prior to opening of said enclosure.

2,858,656
SPOOL BOXING MACHINES
Malcolm Curry, Roxbury Township, Morris County, N. J., assignor to The American Thread Company, New York, N. Y., a corporation of New Jersey
Application October 5, 1956, Serial No. 614,176
6 Claims. (Cl. 53—166)

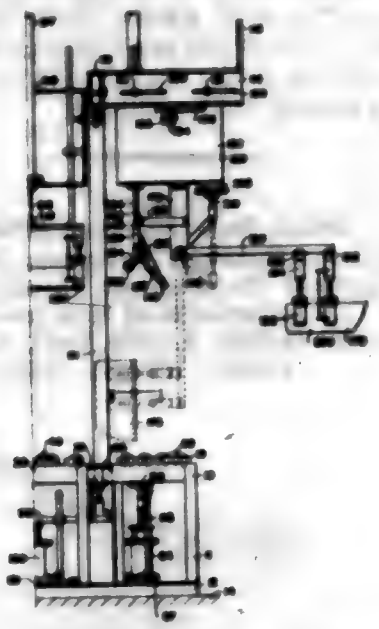


1. In a machine for boxing spools of the class described, the combination of a support for spools, means for successively delivering spools in groups to the support, the spools in each group being of a predetermined number and arranged in axial parallel relation side-by-side, a reciprocable member, pins projecting from said member corresponding in number to the number of spools in each group and being arranged in axial alinement with the bores thereof when each group is on said support, a reciprocable plunger for successively moving the groups of spools axially from said support to place them on said pins, the spools thus placed on each pin being arranged in end-to-end relation, a platform for receiving open boxes, adapted to be raised and lowered to predetermined positions, and means for successively delivering boxes to the platform when the platform is in its lower position whereby, when a predetermined number of groups of spools have been positioned on said pins and the platform is raised to its upper position, the upper portion of a box thereon receives the lower portions of the spools, and the spools are free to drop into the box when the pins are retracted therefrom.

2,858,657
WRAPPER APPLICATING APPARATUS
John Gutlerle, Woodfibre, British Columbia, Canada, assignor to Alaska Pine & Cellulose Limited, Vancouver, British Columbia, Canada, a corporation of British Columbia
Application October 6, 1954, Serial No. 460,686
24 Claims. (Cl. 53—218)

1. In wrapper applicating apparatus, a folder comprising a movably mounted holder, a folding member pivotally mounted at an end thereof on the holder, a finger projecting outwardly from the folding member at the pivot thereof and substantially at right angles thereto, said member and finger normally opening outwardly from the holder in the form of a V, a stop carried by the holder immediately behind the member, and resilient means connected to the folding member and the holder normally retaining the former against the stop in a V-shaped open position, said finger engaging an object when the holder is moved in one direction to swing the folding member about its pivot away from the stop

into a closed position in line with the holder and the resilient means moving the member into the open posi-



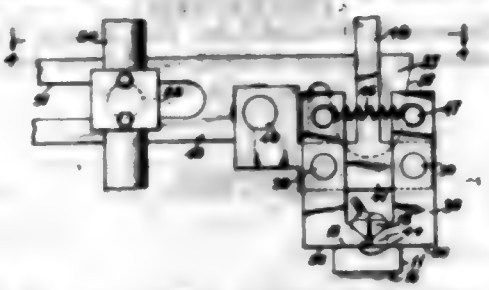
tion back against the stop when the holder is moved in the opposite direction.

2,858,658
COIN HANDLING APPARATUS
Arthur G. Atwell, Newport, R. I.
Application January 24, 1956, Serial No. 560,961
10 Claims. (Cl. 53—254)

1. A coin handling apparatus comprising a coin board adapted to have coins deposited thereon, said board having a track rigid therewith adapted to receive coins thereon in an edge relation, means for rockably mounting said board and track about a horizontal axis whereby said board and track may be moved about said axis to incline said board for coins deposited thereon to move onto said track, said track being at an acute angle to said axis whereby when said board is moved to a generally upright position, said track is inclined for coins lodged thereon to roll axially along said track thereby varying their distance from said axis.

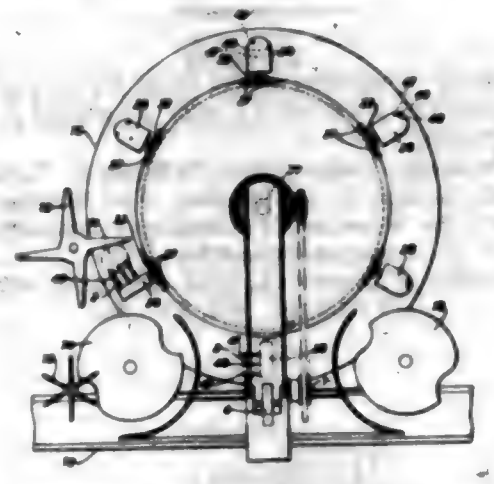
2,858,659
APPARATUS FOR APPLYING CLOSURES TO CONTAINERS
Donald E. West, Michigan City, Ind., assignor to The Rabin Company, Los Angeles, Calif., a corporation of California
Application July 29, 1954, Serial No. 446,463
21 Claims. (Cl. 53—287)

1. A capping machine of a character to press a plastic spout having a depending skirt portion firmly onto the neck of a container comprising a vertically movable pair of normally spread pressing shoes, a rod carrying said shoes, cam means effective to move the rod and shoes downwardly over the spout, a cam lever carried by the rod, stationary means engageable by one end of the cam lever effective to rock said lever when the rod moves downwardly, and cam surfaces at the other end of said lever, said cam surfaces being engageable one with each



shoe to cause said shoes to close around the spout during downward movement of the rod.

2,858,660
MACHINE FOR THE APPLICATION OF REGENERATED CELLULOSE SEALING RINGS TO BOTTLES OR THE LIKE
Reginald H. Browne, Upper Killay, Swansea, Arthur R. Chandler, Sketty, Swansea, and William E. Storer, Uplands, Swansea, Wales, assignors to Viscose Development Co. Limited, London, England
Application January 16, 1956, Serial No. 559,466
5 Claims. (Cl. 53—291)



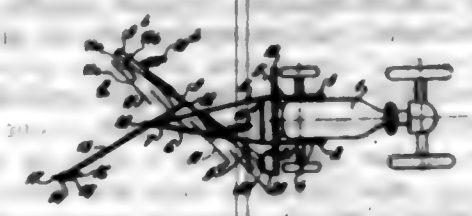
1. In a machine for the application of moist regenerated cellulose sealing rings to bottle tops and the like by successively picking up opened out sealing rings and applying the same to said bottle tops and the like, a combination picking up and applying means for the sealing rings in the form of a pivotable application head unit having at least three parallel fingers capable of occupying a separated position and a position collapsed alongside one another, the separated fingers being adapted, on mechanical lowering of the application head unit, for passage downwards over the bottle top with a sealing ring thereon encircling the bottle top and means being provided for collapsing the fingers while in this position, a path for collapsible fingers from the separated to the collapsed position being provided outside the periphery of the bottle top and the application head unit being adapted for mechanical lifting with the fingers so collapsed, whereby the collapsed fingers are withdrawn from the sealing ring leaving the same in position on the bottle top.

2,858,661
TRACTOR MOUNTED STABLE SIDE DELIVERY RAKE
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N. V. Maasland, Netherlands, a limited company of the Netherlands
Application June 4, 1953, Serial No. 359,463
Claims priority, application Netherlands June 11, 1952
6 Claims. (Cl. 56—377)

1. A raking implement comprising a tractor, a stable ground supported raking device in front of the tractor, a

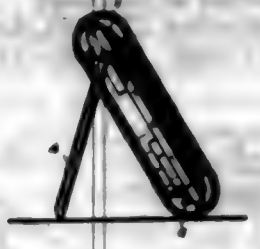
shaft having a pair of tab extensions at each side best rality of alternating lands and grooves transversely dis-

first means on and extending forwardly of the tractor and pivotally connected to said stable raking device, and sec-



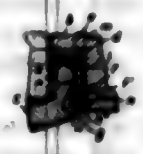
ond means on the tractor and connected with the raking device to limit pivotal movement thereof.

2,858,662
WATCH CASE SUPPORT
Bernard Ditesheim, La Chaux-de-Fonds, Switzerland, assignor to Fabriques Movado, La Chaux-de-Fonds, Switzerland, a Swiss firm
Application April 13, 1956, Serial No. 578,020
Claims priority, application Switzerland September 24, 1955
2 Claims. (Cl. 58—88)



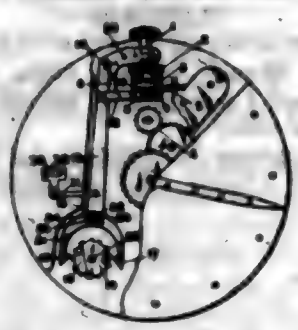
1. A support for a substantially rectangular watch case comprising a stay including two interconnected parallel arms the free ends of which are inwardly rounded and are pivotally secured to spaced points of an edge of the case bottom, said arms being adapted to rest through their opposite ends on the same horizontal surface as the edge of the case opposed to the first-mentioned edge, flat springs extending over the bottom of the case in planes perpendicular to said edges and passing through the piovtal connection of the arms and terminating each near the pivotal connection of the corresponding arm with a short outwardly convex section engaging yieldingly through its outer surface the rounded section of the corresponding arm to urge the stay away from the case bottom.

2,858,663
CLOSURE FOR WRIST-WATCH CASES
Hans Schwarz, Pforzheim, Germany, assignor to Erich Lacher, Pforzheim, Germany, a firm
Application February 14, 1956, Serial No. 565,484
1 Claim. (Cl. 58—90)



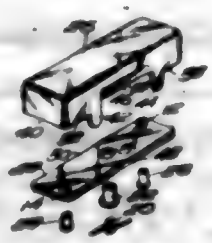
A closure for wrist-watches, comprising in combination with the watch case and the bottom thereof, a polygonal snap ring forming a plurality of segments and interposed between said case and said bottom, the watch case having a downwardly facing flat bearing surface to bear against a packing and a vertical inner peripheral surface provided with a groove for receiving the polygonal snap ring, and the case bottom having on its outer periphery a groove with an upper zone narrowing in downward direction and a lower zone narrowing in upward direction, the upper zone cooperating with middle portions of the segments of the snap ring to press the case bottom strongly in upward direction and clamp the packing between the upwardly facing flat surface of the case bottom and the downwardly facing flat surface of the case, the lower zone of the groove in the case bottom narrowing in upward direction being still at a distance from the middle portions of the segments of the snap ring.

2,858,664
WATCHES AND LIKE HOROLOGICAL INSTRUMENTS
Philip Heimann, Killarney, Johannesburg, Union of South Africa
Application March 25, 1955, Serial No. 496,898
Claims priority, application Union of South Africa May 24, 1954
8 Claims. (Cl. 58—109)



5. In a horological instrument having a rotatable winding stem axially movable between a winding position and a setting position, the combination comprising a regulating mechanism having a control element rotatable about an axis extending transversely to the axis of said stem, driven means fixed coaxially on said element, a lever mounted on said instrument for swinging movement transversely to the rotational axis of said driven means and for bodily movement generally radially to said driven means, drive means carried by said lever on diametrically opposite sides of said driven means and alternately movable with said lever into driving engagement with said driven means and operative respectively to rotate said driven means in opposite directions responsive to said radial bodily movement of the lever, means operatively responsive to rotation of said stem in either direction for swinging said lever to bring one of said drive means into operative engagement with said driven means, and means linking said lever to said winding stem for bodily movement radially to said driven means in response to axial movement of said stem.

2,858,665
ORNAMENTAL SHELL MOUNTING MEANS FOR CHAIN LINKS
Joseph J. Vantuno, East Providence, R. I., assignor to Flex-Let Corporation, East Providence, R. I., a corporation of Rhode Island
Application December 14, 1954, Serial No. 475,164
5 Claims. (Cl. 59—79)



1. An expansible linkage comprising a series of top links and a series of bottom links, means pivotally interconnecting the top links with the bottom links, resilient means operatively connected with said top and bottom links and normally urging said top and bottom links to their retracted position, a shell cooperative with each link of at least one of the series of links so as to provide a covering therefor, each of said shells having depending flanges completely surrounding the periphery of the link with which it cooperates, said depending flanges of each

2,858,669
return valve in said fuel pipe, a passageway connecting

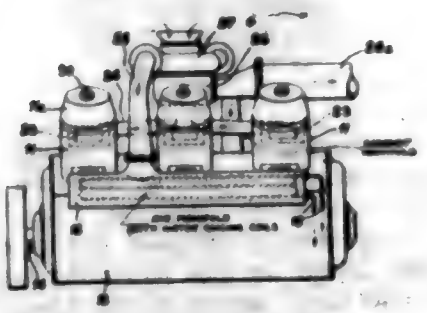
shell having a pair of tab extensions at each side bent inwardly and engaging one surface of the link received therein to retain the same within the shell, said depending flanges of each shell having slit formations in the wall portions aligned with said tab extensions, said slit formations being spaced from said tab extensions by an amount equal to the thickness of the link with which the shell cooperates, the wall portion adjacent each slit formation on the side thereof remote from said tab extensions being inwardly deformed providing a seating for the link which is held thereagainst by said tab extensions.

2,858,666

TURBOCHARGING OF TWO-CYCLE ENGINES

John Fullemann, Mount Vernon, Ohio, assignor to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio

Application January 25, 1954, Serial No. 405,814
15 Claims. (Cl. 60—13)



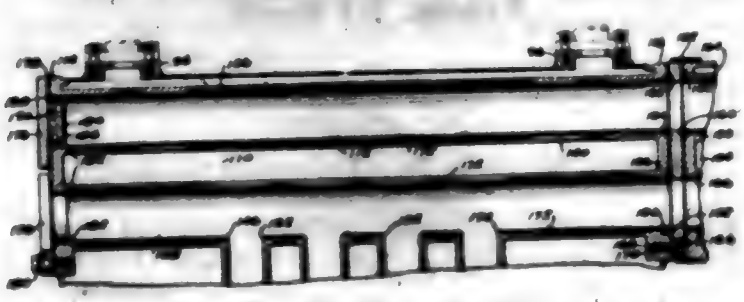
1. In a two-cycle internal combustion engine having combustion cylinders each with ports for exhaust and air inlet, respectively, crank-connected pistons in the cylinders, an exhaust-driven turbine provided with nozzle means for receiving exhaust gases, a compressor driven by the turbine, an air manifold to which air is supplied by the compressor, and air-supply connections between the manifold and the inlet ports, the improvement which comprises an exhaust manifold pipe communicating with the exhaust ports and having a volumetric capacity not in excess of the volumetric capacity of one cylinder and having a length in feet not in excess of K/N, where N is the rated engine speed in R. P. M. and K has a value of 2200, the exhaust manifold pipe being connected to supply the nozzle means of the turbine.

2,858,667

WATER COOLED EXHAUST MANIFOLD

Norman W. Reuhs, Detroit, Mich., assignor to Studebaker-Packard Corporation, a corporation of Michigan

Application January 5, 1954, Serial No. 402,351
13 Claims. (Cl. 60—31)



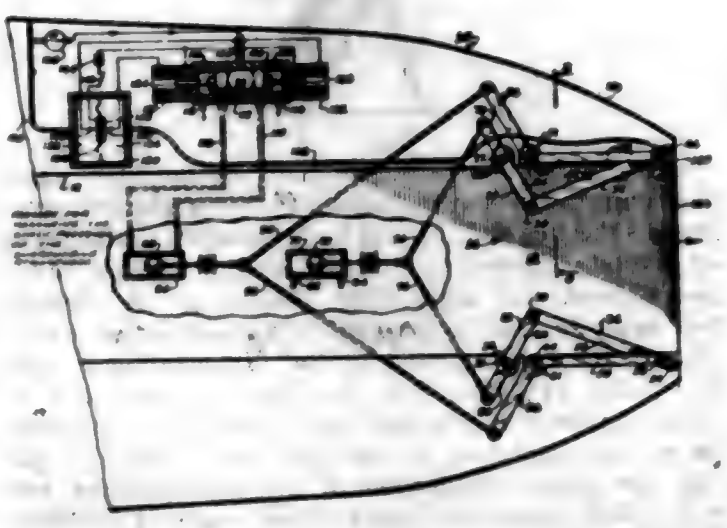
1. An exhaust manifold for a multi-cylinder internal combustion engine comprising a plurality of separate conduits disposed side by side and closed at one end of said manifold and open at the other or discharge end thereof, each of said conduits having a plurality of paired inlet branches of which the two branches of each pair are adapted for connection to a like number of exhaust ports of one of a selected group of dual exhausting cylinders of said engine, each of said conduits further having a plurality of alternating lands and grooves transversely disposed in the sides of the interior thereof, and an individual longitudinally extending liner for each conduit received on the lands thereof and cooperating with the grooves to define a plurality of closed dead air spaces, said conduits and the associated liners having means establishing cooperation therebetween to hold each liner at one end in a position fast against movement in a direction about its axis and in an axial direction, each liner having a plurality of openings in the side thereof at points in the planes of the lands and having a dimension predeterminedly larger than the cross section of the mouths of the adjacent inlet branches and the just noted position of the liner being such that each opening registers with and extends at least slightly laterally beyond the mouth of the adjacent inlet branch at all points thereabout.

2,858,668

CONTROL FOR VARIABLE AREA CONVERGENT-DIVERGENT EXHAUST NOZZLE

George S. Kelley, Ridgewood, and Walter W. Mahnken, Union City, N. J., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Application September 27, 1952, Serial No. 311,918
1 Claim. (Cl. 60—35.6)



In combination with a convergent-divergent variable area nozzle for a jet engine through which the engine exhaust gases discharge for providing the engine with forward propulsive thrust, said nozzle having an upstream portion and a downstream portion pivotally connected together at the nozzle throat with said downstream nozzle portion progressively increasing in cross-sectional area to the nozzle exit end; means pivotally supporting the upstream end of said upstream portion; means operatively connected to said upstream nozzle portion and operable to swing said portion about its pivotal support for varying the throat area of the nozzle; means operatively connected to said downstream nozzle portion and operable to swing said downstream portion about its pivotal connection with and independently of said upstream portion for varying the divergence of said downstream nozzle portion thereby varying the exit area of the nozzle independently of the nozzle throat area; means providing a first signal which is a measure of the exhaust gas static pressure in the downstream nozzle portion adjacent to the nozzle exit; means providing a second signal which is a measure of the static pressure of the surrounding atmosphere; and means automatically operable in response to said first and second signals for controlling the operation of said nozzle exit area varying means for expansion of the engine exhaust gases through the downstream portion of the nozzle at least down to approximately the static pressure of the surrounding atmosphere.

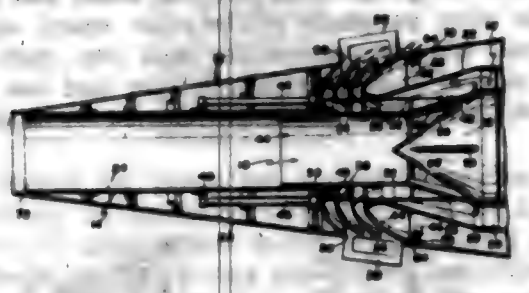
means, means to energize said ignition means for the each other, a rotor wheel fixed in rotation to said driv-

2,858,669

THRUST REVERSING DEVICE FOR JET ENGINES

Stanley P. Compton, San Diego, and Fred W. Musterer, Solana Beach, Calif., assignors to The Ryan Aeronautical Co., San Diego, Calif., a corporation of California

Application September 15, 1953, Serial No. 380,224
4 Claims. (Cl. 60—35.54)



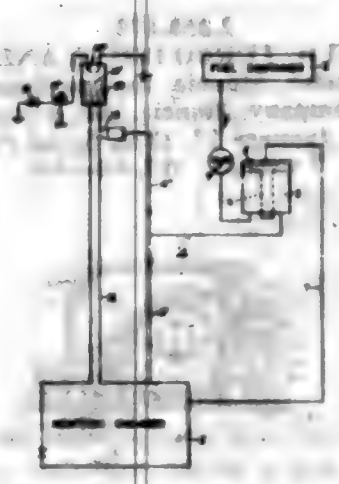
1. In combination, a jet engine having a tail pipe comprising an outer cone, a concentric inner cone and an extension pipe continuing from said outer cone, and a thrust reversing device comprising a diverter cone axially slidable in said tail pipe, said outer cone having lateral openings, a plurality of vanes in each of said openings, said diverter cone seating on said inner cone when in the forward position and effectively blocking said tail pipe, so that exhaust gases are directed through said openings, and said diverter cone covering said openings when in the aft position, said vanes being shaped to direct the gases forwardly therefrom, and hinged doors selectively covering said openings.

2,858,670

IGNITION AND FUEL SUPPLY SYSTEM FOR REACTION CHAMBERS

Alexander Grieve, Rugby, Kenneth Barrington Randall, Coventry, and Michael Miles Hutchinson, Rugby, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company

Application January 16, 1956, Serial No. 559,383
Claims priority, application Great Britain January 26, 1955
2 Claims. (Cl. 60—39.14)



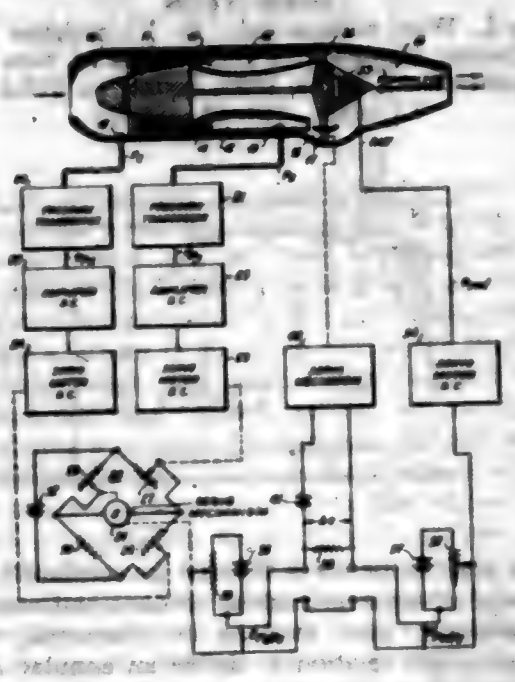
2. Apparatus for producing a supply of gaseous working fluid for operation of a prime mover comprising a reaction chamber in which monofuel is adapted to be decomposed and means for initiating decomposition of monofuel supplied to said reaction chamber comprising a breech containing a deflagrant, conduit means leading from said breech to said reaction chamber, means for igniting and releasing deflagrant from said breech to cause a flow of heated decomposed deflagrant by way of said conduit means into said reaction chamber, a container for monofuel, a differential pressure-producing device, a fuel pipe leading from said container to the high pressure side of said pressure-producing device, a non-return valve in said fuel pipe, a passageway connecting the higher pressure side of said pressure-producing device with a fuel inlet nozzle in said reaction chamber, means connecting the higher pressure side of said pressure-producing device with said reaction chamber whereby pressure produced in said reaction chamber is effective to force fuel into said reaction chamber by way of said passageway, and means connecting said passageway with said conduit means whereby to enable monofuel to be injected into said conduit means to be decomposed therein by heated gaseous products of said deflagrant and thereby to compensate for the pressure drop in said conduit of the heated gaseous products which flow therein.

2,858,671

PRESSURE RATIO CONTROL OF GAS TURBINE BYPASS DURING ACCELERATION OF TURBOJET ENGINE

Homer M. Fox, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application January 5, 1953, Serial No. 329,536
10 Claims. (Cl. 60—39.25)



2. An apparatus for improving acceleration characteristics in a turbojet engine including a compressor, combustor and turbine, which comprises means for bypassing a portion of the combustion gases around said turbine; pressure responsive means adapted to sense the ratio of combustor pressure to compressor inlet pressure operatively connected to said bypassing means so as to open said bypass when said ratio is increased to a value indicating incipient surge conditions at prevailing turbine rotational speed and means for closing said bypass when the rotational speed of the turbine is increased so that a stable separating range is reestablished.

2,858,672

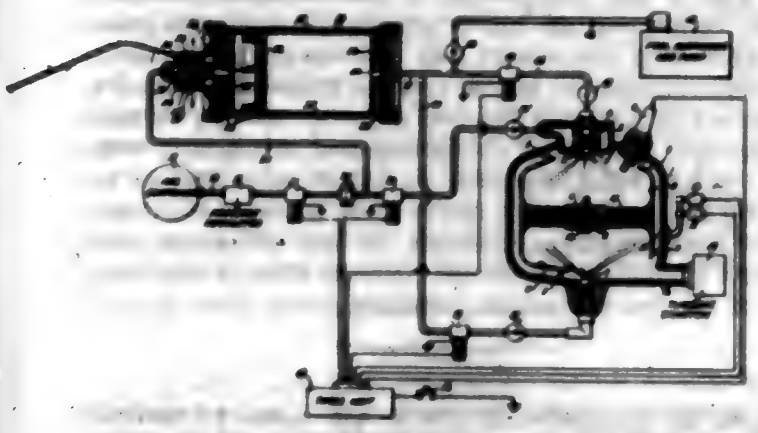
MONOFUEL DECOMPOSITION APPARATUS

Albert G. Clark, Wayne, Pa., assignor to General Electric Company, a corporation of New York

Application October 29, 1954, Serial No. 465,540
10 Claims. (Cl. 60—39.46)

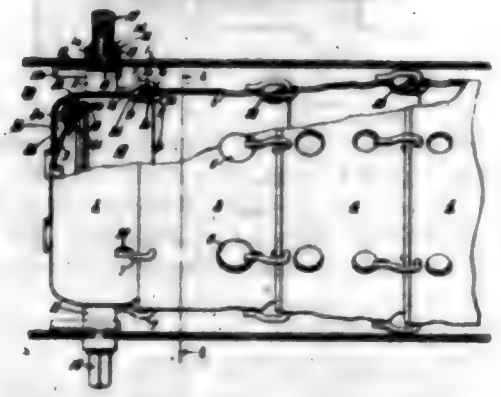
10. Apparatus for producing a working fluid from a monofuel comprising a chamber, air and first monofuel injection and ignition means in one end of said chamber, second fuel injection means in the opposite end of said chamber, a porous heat storing structure between said first and second fuel injection means, working fluid outlet means in said chamber, an air container, a container for monofuel and means to sequentially introduce air to said chamber and monofuel through said first fuel injection

means, means to energize said ignition means for the ignition of the monofuel-air mixture, means to shut off the



flow of air to said chamber and simultaneously introduce monofuel through said second fuel inlet means.

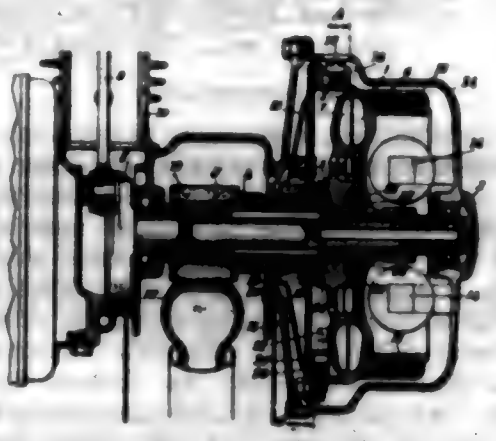
2,858,673
SECTIONAL LINER STRUCTURE FOR COMBUSTOR
Harrison L. Wirt, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application June 24, 1955, Serial No. 518,613
7 Claims. (Cl. 60—39.65)



1. In a combustor for a thermal powerplant having a liner formed of separate annular sections and means supporting adjacent liner sections in concentric, radially spaced, telescopic relation to define an annular air inlet nozzle, said means comprising a series of circumferentially spaced axially extending connectors each having a first end portion secured to the outer surface of one liner section and a second end portion which overlies and is radially spaced from the outer surface of the other liner section, the second end of said connector terminating in a radially extending portion, said other liner section defining an opening adapted to receive said radially extending connector portion with a small peripheral clearance, whereby the radially extending connector portion is slidably disposed relative to the other liner section to permit differential thermal expansion between adjacent liner sections, the connectors having a small thickness in a circumferential direction whereby they present substantially no obstruction to the flow of cooling air into said nozzle and may be bent in a circumferential direction to adjust the nozzle.

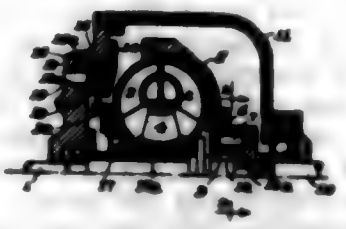
2,858,674
HYDRAULIC COUPLING DEVICES
Marcel Mennesson, Neuilly-sur-Seine, France, assignor to Societe d'Appareils de Controle et d'Equipement des Moteurs S. A. C. E. M., Neuilly-sur-Seine, France, a society of France
Application January 18, 1954, Serial No. 404,555
Claims priority, application France January 29, 1953
1 Claim. (Cl. 60—54)

A hydraulic coupling which comprises, in combination, a driving shaft and a driven shaft coaxially surrounding each other, a rotor wheel fixed in rotation to said driving shaft, a turbine wheel fixed in rotation to said driven shaft opposite said rotor wheel, said two wheels being provided with respective sets of projections facing each other for hydraulic transmission, a casing partly filled with liquid, said casing being constituted by a plurality of elements, said elements being one of said wheels, an annular ring rigid with said one wheel and surrounding the outer periphery of the other wheel, an annular end wall slidably surrounding said two shafts on the other side of said other wheel from said one wheel, a resilient liquid-tight diaphragm carried by said annular



ring and extending between it and said annular end wall, annular packing means between the hub portions of said two wheels, and annular packing means between the inner periphery of said annular end wall and the hub portion of said other wheel, said other wheel being slidable axially with respect to the shaft to which it is fixed in rotation, a plate rigid with said annular ring and extending toward said shafts on the other side of said annular end wall from said wheels, and resilient means between the inner periphery of said plate and the inner periphery of said annular end wall for urging said annular end wall toward said other wheel.

2,858,675
HYDRAULIC TURBO DRIVE AND BRAKE
Adolf G. Schneider, Muncie, Ind., assignor to Schneider Brothers Company, Muncie, Ind., a copartnership
Application January 17, 1956, Serial No. 559,734
7 Claims. (Cl. 60—54)

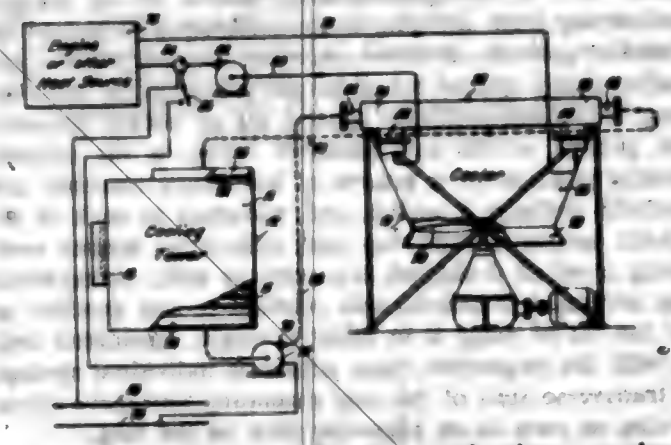


1. A hydraulic turbo drive and brake comprising, in combination, an input shaft, an output shaft, a hydraulic turbo-drive of the closed toroidal circuit type between said shafts and comprising an impeller turning with the input shaft, and a turbine member associated therewith turning in the same direction as the impeller, separate means for connecting the output shaft with the turbine member for fluid drive or connecting the output shaft with the input shaft during braking so that the output shaft drives the impeller, and means for holding said turbine member substantially stationary during braking, whereby the same functions as a hydraulic turbo brake in the rotation of the impeller relative to it.

2,858,676
APPARATUS AND METHOD FOR PRODUCING FOUNDATIONS
Sigmund L. Ross, Pittsburgh, Pa.
Application June 13, 1955, Serial No. 514,958
6 Claims. (Cl. 61—36)

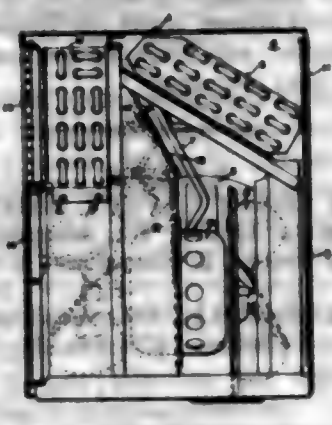
1. Apparatus for producing a rigid foundation in a region having soil material with a high water content comprising in combination means for producing superheated steam, steam injecting pipe means projecting into said region, means connecting said producing means to said pipe means, to inject steam into said region to produce a cavity in said region, first pump means, exhausting pipe means projecting into said region, means connecting said exhausting pipe means to said pump means, said exhausting pipe means being spaced from said injecting pipe means a distance such that said exhausting pipe means extends into said region near the boundary of said cavity whereby said pump means is effective to exhaust steam from said injecting pipe means through said cavity, setting-material injecting pipe means projecting into said region adjacent said steam injecting pipe means so as to extend into said cavity, second pump means, a container for setting material, and means connecting said container to said setting-material injecting pipe means through said second pump means whereby said second pump means may project said setting material into said cavity.

2,858,677
WATER COOLING APPARATUS
Richard J. Stone, Hickman Mills, Mo., assignor to The Marley Company, Kansas City, Mo., a corporation of Delaware
Application April 11, 1955, Serial No. 500,629
1 Claim. (Cl. 62—171)



A cooling unit comprising in combination a cooler including a heat exchanger having a pair of spaced, hollow headers provided with a series of spaced, exteriorly finned tubes interconnecting the same, fan means disposed to force air across the tubes to remove heat from the fins thereof, and a pipe telescoped through each tube respectively; structure including conduit means for circulating a liquid refrigerant into one of said headers, through the tubes, into the other header, and thence into heat exchange relationship to apparatus to be cooled by the refrigerant; a water cooling tower having a fill assembly for gravitational flow of hot water therethrough, means for forcing air through the assembly to cool the gravitating water, and a sump below the assembly for collecting the cool water; means including a pump having an electric prime mover for circulating said cool water from the sump through the pipes and thence to the assembly; and control means for said pump including a thermostat in said conduit means responsive to the temperature of the refrigerant therein, and electric switch means operably coupled with said thermostat and with said prime mover.

2,858,678
ROOM AIR CONDITIONER HAVING VENT CONTROL MEANS
Stanley E. Ross, Lyndon, Ky., assignor to General Electric Company, a corporation of New York
Application October 15, 1956, Serial No. 615,840
14 Claims. (Cl. 62—267)

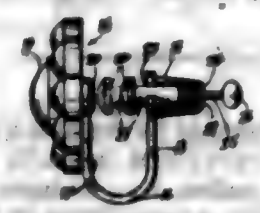


1. An air conditioner for conditioning a room comprising a housing, a barrier dividing said housing into an outer compartment and an inner compartment, a condensing unit in said outer compartment, an evaporator in said inner compartment, a first air moving means for circulating a stream of air from said room through said inner compartment over said evaporator and discharging it back into said room, a second air moving means for circulating a stream of outside air through said outer compartment over said condenser, an aperture in said barrier for permitting flow of air from one compartment to the other, a controlling means in said aperture for controlling the flow of air therethrough, a first operating means for operating said controlling means, said operating means being translationally movable to a plurality of positions to change the position of said controlling means, a second operating means for energizing said air moving means and said condensing unit, said second operating means being movable to a plurality of positions in the plane of translation of said first operating means, an interlock movably mounted between said first and second operating means having camming surfaces and indented portions designed to engage said first and second operating means, said camming surfaces and indented portions causing said interlock to move into interlocking engagement with one of said means during the movement of the other of said means to prevent movement of said one means to predetermined positions when the other means is moved to a certain predetermined position.

2,858,679
EARRING WITH SLIDABLE SPRING-URGED CLAMP
James Moreschi, New York, N. Y., assignor to Rudolph Jaeger, Kings County, and Harry Greiner, Floral Park, N. Y., jointly
Application April 2, 1954, Serial No. 420,493
1 Claim. (Cl. 63—14)

An earring comprising a U-shaped stirrup having two spaced free ends, a housing secured to one of the free ends, said housing having an axially tapering chamber with two open ends the larger open end being disposed across from the other free end of the stirrup, a plunger slidably mounted in the chamber, a finger grip at one end of the plunger larger than the smaller open end of the

chamber and disposed outside the chamber, means at the other end of the plunger slidably to fit in the larger portion of the tapering chamber and to wedge in the smaller portion of the chamber to hold the plunger in a retracted position, a coil spring around the plunger and in the



chamber between said means and the smaller open end of the chamber, said means being an enlarged portion of the plunger, and an ornament secured to the stirrup on the end of the stirrup across from the housing, said spring biasing said plunger and enlarged portion into extended position toward said ornament.

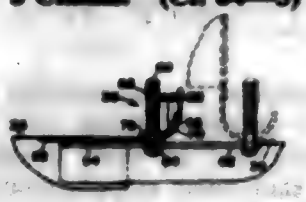
2,858,609

POWER SHAFT SAFETY SHIELDING

Roy E. Harrington, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Application March 13, 1956, Serial No. 571,351

5 Claims. (Cl. 64—3)



1. Protective shielding for a power shaft between front and rear articulately coupled vehicles, comprising: front and rear shields respectively on the vehicles and respectively shielding axially spaced front and rear portions of the power shaft; an intermediate shield in the form of a tunnel having a normal position bridging the front and rear shields and enclosing the intermediate portion of the power shaft from above and at its opposite sides, said intermediate shield having front and rear ends normally proximate respectively to the front and rear shields; front means separably supporting the front end of the intermediate shield on the front shield; and universal hinge means connecting the rear end of the intermediate shield to the rear shield, said universal means including a tail on the intermediate shield and a cooperative upright pivot member on the rear shield, said tail being secured to and projecting rearwardly from the intermediate shield and having a generally horizontal portion normally resting on the rear shield, said tail being thence curved upwardly and rearwardly as a rocker portion terminating in a substantially upright portion, said rocker being adapted to rock on the second shield and when the intermediate shield is separated from the front shield and swung to an upright position, said tail having an aperture therein running through its horizontal, rocker and upright portions and said upright pivot member passing through said aperture and providing a vertical axis for rotation of the intermediate shield through 180° when in its upright position and said rocker portion enabling subsequent lowering of said intermediate shield to a storage position over the rear shield.

2,858,681

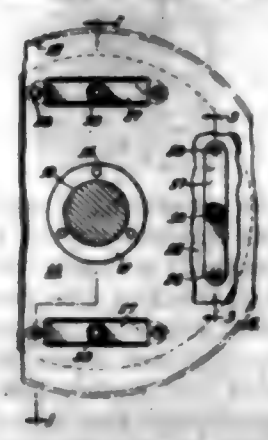
DRIVE MECHANISMS

Richard L. Smirl, La Grange Park, and Lee W. Cook, Chicago, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Application May 20, 1955, Serial No. 509,932

23 Claims. (Cl. 64—15)

20. In a drive mechanism, spaced drive and driven members, each member having an axis of rotation and extending radially thereof, said drive member having elongate openings therein; securing means on said driven member extending into said openings and spaced from the margins of said openings; and flexible drive links between said members, each link having its ends connected to the securing means on said driven member, and an intermediate portion connected to said driven mem-



ber, said links being disposed adjacent said elongate openings in said first member and each adjacent link and opening extending parallel to each other and said opening having a greater width than said link to permit flexing movement of portions of said link into said opening during movement of said members to accommodate axial misalignment of said members.

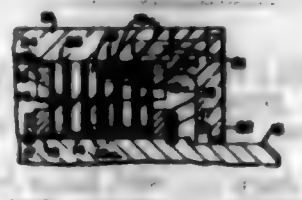
2,858,683

FLEXIBLE SHAFT COUPLING

Thomas Levi Pawick, Cleveland, Ohio

Application December 24, 1957, Serial No. 705,646

2 Claims. (Cl. 64—15)



1. A flexible shaft coupling comprising a hub member formed with a circumferentially spaced set of torque-transmitting teeth defining a circumferentially spaced set of socket grooves, a sleeve member formed with a circumferentially spaced set of torque-transmitting teeth defining a circumferentially spaced set of socket grooves, each groove of the hub member being at the circumferential position of a groove of the sleeve member and therewith defining a socket, and, mounted in each of the sockets, torque-transmitting and cushioning means comprising a set of C-shaped, transversely split, spring-metal rings arranged in side-by-side relation to one another, so that the set of rings is in effect a single, laminated unit, but with the respective rings acting as individual springs, the transverse split of the ring extending obliquely across the ring as seen in an edgewise view of the ring.

2,858,683

TIMING DEVICE FOR FUEL INJECTION PUMP

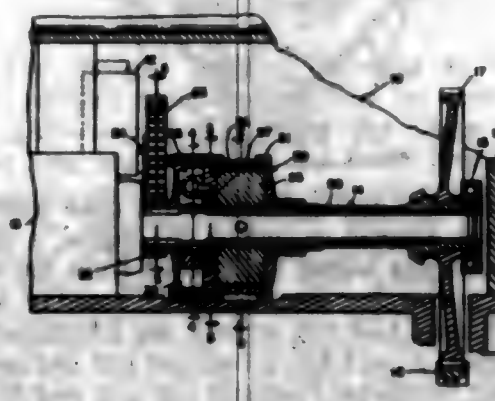
Emil V. Sulaga, Centerline, Mich., assignor, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

Application April 11, 1956, Serial No. 577,591

4 Claims. (Cl. 64—23)

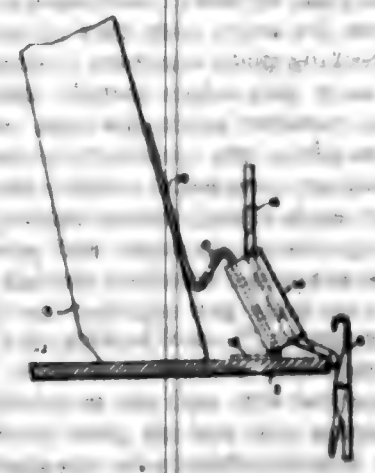
1. A timing device adapted for timing internal combustion engine fuel injection pumps relative to engine speed and comprising a driving shaft, a driven shaft axially aligned with said driving shaft, and a fluid coupling mechanism operatively connecting said driving and driven shafts and operable to selectively angularly adjust the relative positions of said shafts in response to variations of driving shaft speed, said fluid coupling mechanism com-

prising a housing structure secured to said driven shaft and rotatably carried on said driving shaft, said housing structure having a fluid chamber circumferentially disposed with respect to said driving shaft and provided with driven vanes extending radially inwardly in said chamber, said driving shaft provided with driving vanes extending radially outwardly in said chamber and disposed alternately with respect to said driven vanes to divide said fluid chamber into a plurality of separate adjacent arcuate fluid compartments, a control mechanism disposed exteriorly of said chamber and comprising a fluid control valve carried by said housing and a speed re-



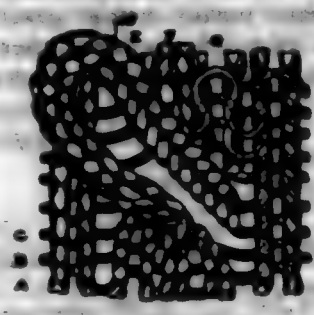
sponsive element carried by said driving shaft, said fluid control valve having a pressure inlet and an exhaust outlet, said housing provided with passages connecting said control valve with said fluid compartments, adjustable means operatively connecting said valve with said speed responsive element and actuated by changes in shaft speed to selectively connect adjacent fluid compartments respectively with said pressure inlet and said exhaust outlet to effect a fluid pressure increase and decrease respectively in adjacent fluid compartments for relatively angularly shifting the positions of said driving and driven vanes.

2,858,684
YARN GUIDE
John J. McDonough, Laconia, N. H., assignor to Scott & Williams, Incorporated, Laconia, N. H., a corporation of Massachusetts
Application May 31, 1955, Serial No. 512,159
4 Claims. (Cl. 66—125)



1. Yarn guiding means comprising a tube, and a wire extending through said tube for loosely supporting the same, said tube having a bore substantially larger than said wire for the passage of a yarn therethrough, and said wire having bends therein beyond the ends of the tube to confine the tube against extensive axial movement thereof.

2,858,685
KNITTED FABRIC
Lyle E. Summers, Appleton, Wis., assignor to Zwicker Knitting Mills, Appleton, Wis., a corporation of Wisconsin
Application March 7, 1957, Serial No. 644,573
7 Claims. (Cl. 66—169)



1. Knitted fabric comprising yarn knitted in a plurality of courses and wales, at least one course of the main fabric having a cord integrally connected thereto by continuous knitting, which cord comprises only a minor number of wales with the feed yarn crossing back of said minor number of wales from one course in said cord to another, each cord including a multiplicity of courses and the last stitch of the last course of each cord being connected back in said first-mentioned course of the fabric proper adjacent the start of said cord whereby an integral loop is provided.

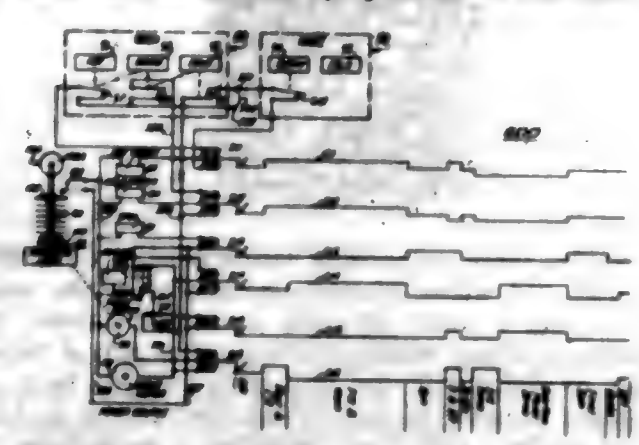
2,858,686
FLASH LAMP
Walter Roth, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application September 21, 1956, Serial No. 611,292
9 Claims. (Cl. 67—31)

1. A photoflash lamp comprising an evacuable light transmissive envelope, a charge of combustible material within said envelope which charge is productive of excited, light emitting gaseous free radicals when ignited, filament means within said envelope for igniting said charge, and a free radical reflecting coating upon the interior surface of said envelope.

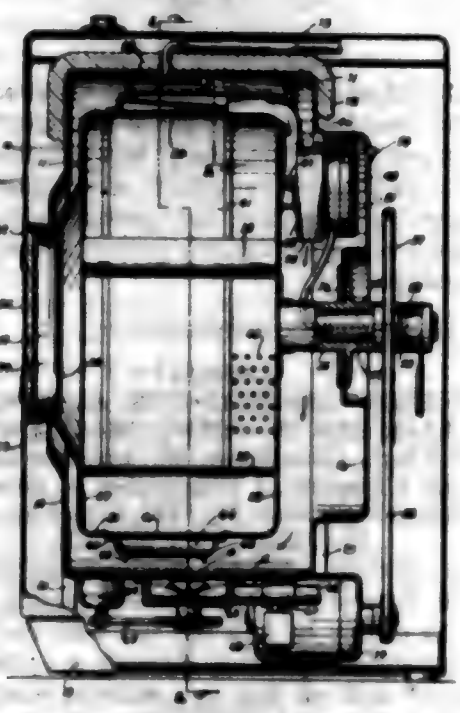
2,858,687
CONTROL CIRCUITS FOR AUTOMATIC CLOTHES WASHING MACHINES
Kendall Clark, Glen Ellyn, Ill., assignor to General Electric Company, a corporation of New York
Application September 20, 1954, Serial No. 457,106
14 Claims. (Cl. 68—12)

1. In a clothes washing machine including a tub adapted to receive clothes, a water system selectively operative to supply to said tub hot and warm and cold water, mechanism operative through a cycle to subject the clothes in said tub first to a washing action and then to a rinsing action, and a program controller for operating said mechanism through its cycle; the control circuit combination comprising a manually operable wash selector having hot and warm and cold positions, a manually operable rinse selector having warm and cold positions, first means controlled by said program controller for operating said water system to supply wash water to said tub for the washing action of said mechanism, said first

means being selectively governed by operation of said wash selector into its hot or warm or cold positions correspondingly to control operation of said water system to supply hot or warm or cold water for the washing action, and second means controlled by said program controller for operating said water system to supply rinse water to said tub for the rinsing action of said mechanism, said second means being governed jointly by operation of said wash selector into either its hot position or its warm position and by operation of said rinse selector into its warm position to control operation of said water system to supply warm water for the rinsing action and governed by operation of said wash selector into its cold position independent of the position of said rinse selector to control operation of said water system to supply cold water for the rinsing action and governed by operation of said rinse selector into its cold position independent of the position of said wash selector also to control operation of said water system to supply cold water for the rinsing action.

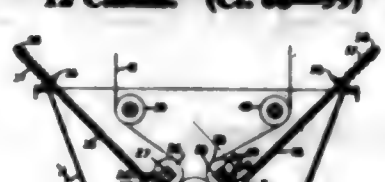


2,858,688
COMBINED CLOTHES WASHING MACHINE AND FLUID EXTRACTOR
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application May 4, 1954, Serial No. 427,533
12 Claims. (Cl. 68—20)



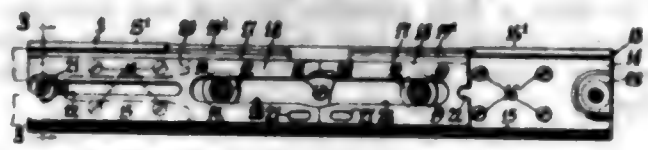
5. Apparatus for removing moisture from wet fabrics comprising, a receptacle including absorbent means for contacting wet fabrics placed within said receptacle, power means for moving said fabrics relative to and into contact with said absorbent means to effect a transfer of moisture from said fabrics to said absorbent means, duct means connected to said receptacle and communicating with said absorbent means, and means for applying a suction to said duct means for removing from said receptacle the moisture absorbed by said absorbent means from said fabrics.

2,858,689
MEANS FOR DYEING FABRICS
Edward W. Smith, Melrose Highlands, Mass., assignor to L. S. Adams Engineering Company, Boston, Mass.
Application March 17, 1954, Serial No. 416,250
12 Claims. (Cl. 68—99)



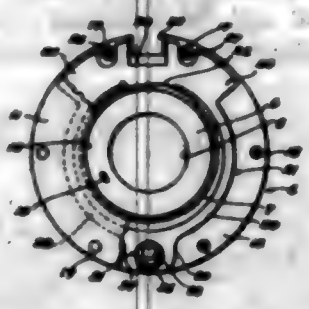
1. A means for dyeing fabric in the open width, comprising a tank adapted to contain dye liquor, a roll horizontally journalled within and spaced from the walls of said tank, means for simultaneously rotating and torsionally vibrating said roll, at least one additional rotatable roll parallel to said first mentioned roll and means for pressing said additional rotatable roll and said first mentioned roll into contact with one another.

2,858,690
OUTBOARD MOTOR MOUNTING CLAMP LOCKING DEVICE
Richard I. Sanderson and Richard G. Trefts, Medina, N. Y.
Application June 26, 1956, Serial No. 593,851
2 Claims. (Cl. 70—58)



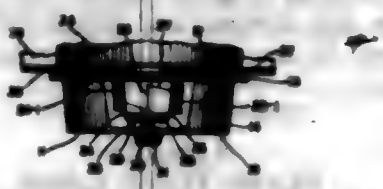
1. A locking device for an outboard motor mounting clamp of the type adapted to engage the sternboard of a boat and having adjustable clamping members including studs carrying pads comprising, an elongated base plate member having a main body part adapted to be secured to a sternboard and to receive such pads thereagainst, said base plate member having flange parts along its opposite side edges to provide guide portions thereat, a pair of opposed locking plate members each having a main body part spaced from the main body part of said base plate member, said locking plate members having flange parts along the opposite side edges thereof interfitting with said base plate member guide portions, whereby said locking plate members are mounted on said base plate member for sliding movement relative thereto toward and away from each other, means defining lengthwise elongated locking slots in the outer end portions of said locking plate members, nut members carried by said base plate member main body part adjacent the opposite ends thereof in alinement with said locking slots, adjustable locking screw members extending through said locking slots into engagement with said nut members and having means for clamping said locking plate members against said base plate member thereby to releasably hold said locking plate members in adjusted position and against movement relative to each other and to said base plate member, and means defining slots extending into the inner end portions of said locking plate main body parts from the inner ends thereof for receiving such studs while confining such pads between said base plate member main body part and the inner end portions of said locking plate member main body parts.

2,858,691
KEY CHANGED TUMBLER CLAMP
Ray L. Hoffman, Highland Heights, Ky., assignor to The Mosler Lock Company, Covington, Ky.
Application September 4, 1956, Serial No. 607,607
3 Claims. (Cl. 70—323)



1. A key changed tumbler including an inner ring having a serrated peripheral portion, an outer ring rotatable on the inner ring, a closed ring clamp carried by the outer ring and encircling the inner ring, a toothed portion on the inner edge of the ring clamp for releasably engaging the serrated peripheral portion of the inner ring, and an eccentric cam journaled in the outer ring and operatively engaging the ring clamp at a position diametrically opposite the toothed portion whereby upon rotation of the cam the movement of the ring clamp will mesh and release the toothed portion with respect to the serrated peripheral portion on the inner ring.

2,858,692
DIAL CONSTRUCTION
Charles U. Deaton, Kirkwood, Mo., and Carl D. Graber, Orrville, Ohio, assignors to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Division of application Serial No. 447,544, August 3, 1954. This application February 21, 1955, Serial No. 489,706
10 Claims. (Cl. 70—332)



10. Dial construction for a combination lock and the like supported on a mounting member having a front face, the dial construction including a lock combination setting shaft adapted to be journaled in the mounting member and having a front end, a dial index housing adapted to be supported at the mounting member front face, the housing including a body portion adapted to extend forwardly from the mounting member front face, the body portion having an opening formed therein, the opening having front edge and laterally spaced side edges and a rear edge, the body portion having an external main index line formed thereon, the main index line indicating in a plane containing the axis of rotation of the shaft and intersecting an edge of the opening, a dial member located within the housing and mounted on the front end of the shaft, the dial member including a rim portion rotatable beneath the opening in the housing body portion, the dial member rim portion having an outer face having a plurality of combination indicating lines formed thereon, the combination indicating lines on the dial member rim portion outer face extending below the main index line on the housing, and each combination indicating line lying in a plane containing the combination setting shaft axis of rotation, and each combination indicating line being alignable with the main index line by rotation of the combination setting shaft, the housing body portion having an outer face, and the outer face of the housing body portion having formed thereon a first set of spaced laterally extending index lines intersecting one of the side edges of the opening, and the outer face of the dial member rim portion having formed thereon a helix turn line extending in a generally circumferential direction on and substantially around the rim portion and having ends, and the ends of the helix turn line being axially off-set providing a helix turn line pitch, at least a pair of said spaced laterally extending index lines being axially spaced a distance equal to the helix turn line pitch, and the helix turn line being positioned so that it will indicate on at least said pair of the laterally extending index lines upon rotation of the combination setting shaft.

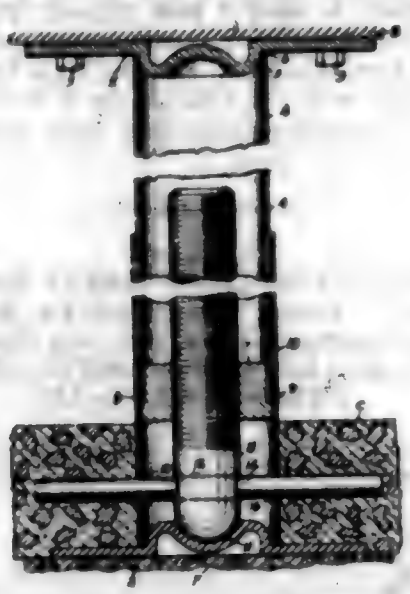
2,858,693
PRE-CAST SECTIONAL CONCRETE STRUCTURE
Raymond C. Levert, New Orleans, La., assignor to Crescent Swimming Pools, Inc., New Orleans, La.
Application July 6, 1955, Serial No. 520,224
2 Claims. (Cl. 72—13)

1. A pre-cast sectional concrete structure comprising a generally flat horizontal central slab having a substantially vertical encompassing peripheral edge surface provided with a plurality of spaced apart horizontally extending sockets therein, a plurality of wall segments positioned side by side with each segment having a substantially vertical lower inner edge surface engaging the peripheral edge surface of said slab with said segments each extending arcuately upwardly and outwardly therefrom, said segments each having substantially vertical opposite side edge surfaces spaced by said lower inner edge surfaces and engaging the side edge surfaces of adjacent segments, a metallic reinforcing net extending centrally through each of said segments, a rod secured to said net and projecting through the lower inner edge surface of each of said segments and detachably engaging a selected one of said sockets, a plurality of axially aligned pipe sections secured to said reinforcing net along each side edge surface of each segment with said pipe sections spaced apart in offset relation on opposite sides of each segment with the pipe sections of adjacent sides of adjacent segments interengaging, and means extending through said interengaging pipe sections to releasably lock said segments together.

2,858,694
ADJUSTABLE POST
Lester F. Ahles and Maurice Patry, Medina, Ohio, assignors to Adjusta Products Company, Medina, Ohio, a corporation of Ohio
Application June 13, 1955, Serial No. 514,918
1 Claim. (Cl. 72—77)

An adjustable post assembly comprising top and bottom load-bearing plates respectively positioned under a beam and on a footing therebelow; a post positioned with its upper end engaged with said top plate and with its lower end portion terminating short of said bottom plate; a jack screw threaded into the lower end portion of said post and bearing against said bottom plate, said jack screw being formed with a transverse opening between said bottom plate and the lower end portion of said post, a rod extending through such transverse opening for rotating said jack screw relative to said post so as to exert lifting force, through said post and top plate,

under such beam; and a tubular sleeve extending upwardly from said bottom plate and freely embracing the outer surface of said end portion in telescopic relation, said sleeve completely surrounding and concealing the portion of the jack screw between the bottom plate and said lower end portion, said sleeve being formed with a



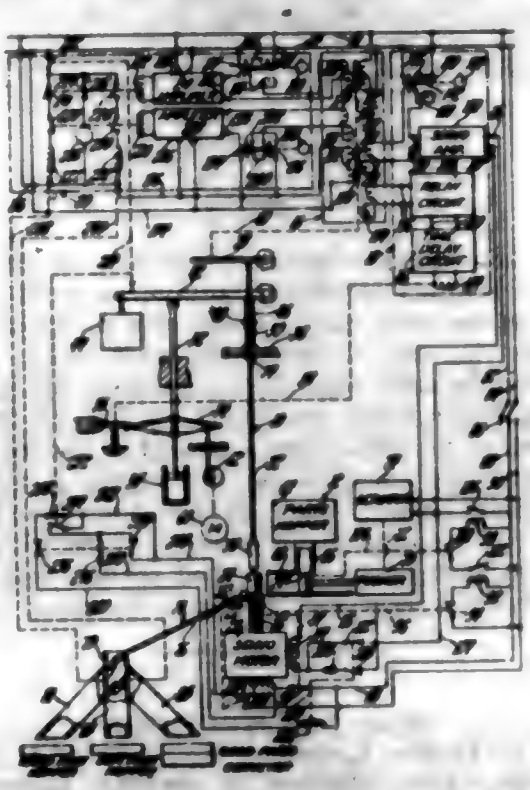
transverse opening through the wall thereof aligned with the jack screw opening, said rod also extending through the transverse opening in said sleeve and being buried in concrete around the lower end portion of said sleeve, to lock said sleeve and jack screw against axial and rotary movements.

2,858,695
SEALING STRIP
Mark Loughborough, Toronto, Ontario, Canada
Application June 28, 1957, Serial No. 668,754
1 Claim. (Cl. 72—106)

A sealing strip for incorporation in adjacent monolithic concrete structures to effect a watertight seal therebetween, comprising, a strip of elastomeric material, the transverse sectional shape of said strip comprising three substantially straight arms of approximately equal length and integrally joined at a common junction, said strip being self-sustaining with said arms in Y-formation, two of said arms subtending an acute angle, the third arm substantially bisecting the angle between said two arms, said material being sufficiently flexible to permit said two arms to be spread apart to lie in a common plane substantially perpendicular to the plane of the third arm whereby to lie against an inner face of a mold with said third arm extending into said mold to be embedded in concrete cast therein, said strip being sufficiently elastic so that said two arms return to said Y-formation upon removal of said mold, each of said arms having integral keying means on the faces thereof for keying said strip in place when embedded in concrete.

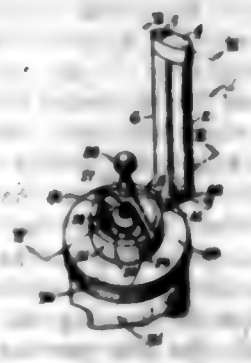
2,858,696
HARDNESS TESTING APPARATUS
Ralph A. Underwood, Stanwood, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 13, 1956, Serial No. 558,881
11 Claims. (Cl. 73—83)

1. Testing apparatus comprising a test element, means for displacing the test element, an electrical displacement converter operatively connected with the test element and having an output circuit for developing a signal voltage having an amplitude indicative of the amount of displacement of the test element, electrical means for developing a reference voltage of predetermined fixed amplitude, circuit means interconnecting the output circuit and the electrical means for combining the signal voltage and reference voltage in an oppos-



ing sense to derive a resultant voltage, a null voltage detector responsive to the resultant voltage and connected with the circuit means, and relay means connected with the detector adapted to respond upon the occurrence of null resultant voltage to signify displacement of the test element and signal voltage amplitude corresponding to the predetermined value of the reference voltage.

2,858,697
FLUID FLOW GAGE
Raymond R. Entwistle, Bell, Calif., assignor to D & R Manufacturing Co., Lynwood, Calif., a firm
Application April 26, 1954, Serial No. 425,578
3 Claims. (Cl. 73—203)



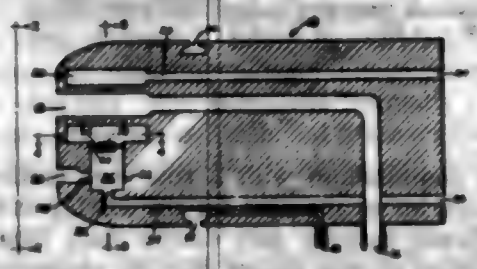
1. A device for studying air flow into an inlet of an internal combustion engine, comprising a body adapted for sealing engagement with such inlet, said body being formed with an opening therethrough defining on its upper side a tapered valve seat, a tapered plug for said seat having a stem extending upwardly from and mounted on said body for adjustment of said plug vertically relative to said seat, said body being further provided with a passageway leading from the lower side of said body within said inlet area and terminating in a socket facing generally at right angles to said stem, a projection having a passageway therein connected to said socket, and a transparent internally tapered tube having a flow respon-

comprising a housing, a motor in said housing, a power

2,858,704

sive piston therein pivotally mounted on said projection in communication with the passageway therein to swing in a plane parallel with said valve stem.

2,858,698
PITOT DEICER
John H. Hickey, Port Washington, N. Y.
Application November 20, 1953, Serial No. 393,525
4 Claims. (Cl. 73—212)
(Granted under Title 35, U. S. Code (1952), sec. 266)

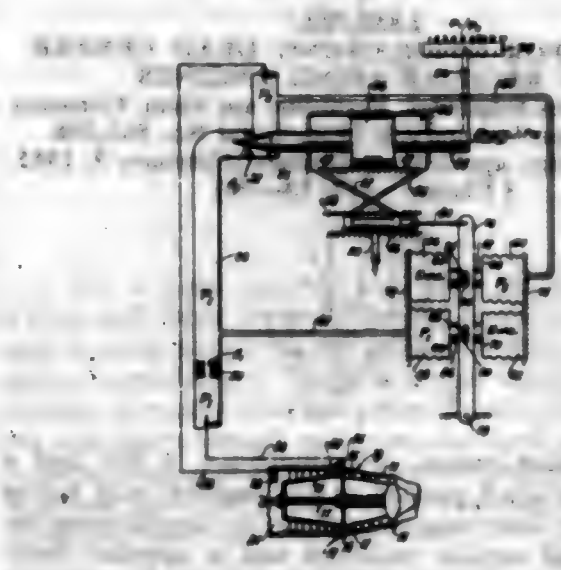


1. A Pitot structure comprising an elongated body, said body being provided with a Pitot passageway having an inlet portion, a first chamber surrounding and substantially coextensive with the length of the inlet portion of said Pitot passageway, a circular vortex chamber mounted in said body and communicating at one end thereof with said first named chamber, a discharge outlet in said vortex chamber and means providing an air inlet passage in said body and tangentially connected to said vortex chamber opposite the end communicating with said first chamber, whereby cold and heated layers of air are obtained and the heated layer enters said first chamber and the cold layer is discharged through said discharge outlet.

2,858,699
COOKING TEMPERATURE MEASURING APPARATUS
Donald W. Scofield, Glenside, and Edwin C. Gulick, Hatboro, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application May 9, 1955, Serial No. 506,922
6 Claims. (Cl. 73—352)

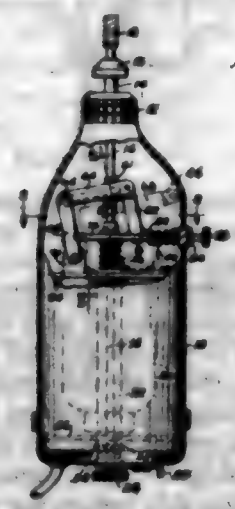
1. A cooking indicator system for a range having an oven, comprising: a source of voltage for said system; a current-responsive, indicator; a probe having a temperature sensitive current-controlling element, said probe being insertable in the food to be cooked; a flexible cable and plug assembly connected to said probe; a plural circuit jack adapted to receive the plug; an average-voltage regulating device interposed in a connection between one side of said source and one terminal of said temperature indicator; a connection between the other side of said source and one contact of a first circuit of said jack; a connection between another terminal of said temperature indicator and a second contact of said first circuit of said jack; and connection from second circuit contacts of said jack to said source and said regulating device, the construction and circuitry being such that insertion of said plug into said jack serves to connect said probe in closed circuit with said source, the regulating terminals of said regulating device and said temperature indicator, and serves also to energize said regulating device.

2,858,700
RATIOMETER
Robert G. Ross, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application October 15, 1953, Serial No. 386,362
8 Claims. (Cl. 73—407)



1. In a pressure control device having a fluid flow passage adapted to be connected between a first source of variable high pressure fluid and a second source of variable low pressure fluid, means disposed in said passage for continuously modulating a fluid pressure in said passage when fluid is flowing therethrough including a first orifice upstream of said modulated pressure, a second orifice downstream of said modulated pressure, a valve member operatively connected to said second orifice and actuated in response to variations in said modulated pressure, said valve member being controlled by said modulated pressure, at any given pressure value at one of said sources, in such a manner that the displacement thereof is a predetermined function of the ratio of the pressures across the first and second sources, and a servo mechanism for positioning said valve member including a null-seeking servo valve.

2,858,701
SINGLE SHAFT PORTABLE POWER TOOL FOR ROTATING AND RECIPROCATING MOTIONS
Frederick P. Wilcox, Old Westbury, N. Y.
Application June 29, 1955, Serial No. 518,809
11 Claims. (Cl. 74—22)



9. A portable motor-driven device for driving a tool selectively in rotational and reciprocating movements,

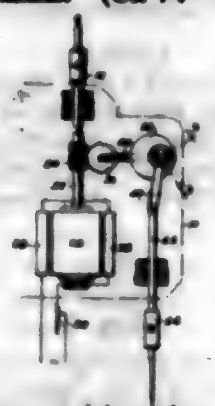
said output shaft comprising a disc fixed to the inner end rollers, the spring biasing of said balls being further oper-

comprising a housing, a motor in said housing, a power output shaft carried by said housing for rotation and axial reciprocation, a linkage permanently connecting said shaft to said motor for reciprocating said output shaft, and manually operable means for selectively connecting said output shaft to said motor for rotating said shaft, said manually operable means being movable between two positions in one of which it connects said output shaft to said motor, and in the other of which it restrains said output shaft against rotation.

2,858,702
SYSTEM FOR OVERCOMING DEAD CENTER IN RECIPROCATING ENGINES
Paul Hermann Schneider, Frankfurt am Main, Germany
Application February 3, 1956, Serial No. 563,356
Claims priority, application Germany February 9, 1955
3 Claims. (Cl. 74—36)

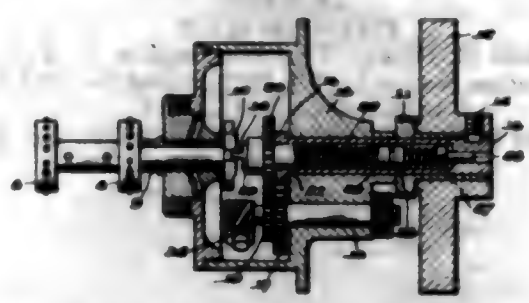
1. In a prime mover, in combination, a first and a second driven shaft parallel to one another, gear means on said shafts interconnecting same for simultaneous rotation at equal angular velocities and in opposite directions, a first and a second crank parallel and diametrically opposite to each other and secured, respectively, to said first and second shafts for rotation therewith, a first and a second pitman having adjacent extremities telescoped together and having free ends with first and second pivot means respectively linking them to said first and second cranks, a cylinder, a driving piston reciprocable within said cylinder, and a rod having one end connected to said piston and having at its other end a cross head connected to the free end of said first pitman at a point beyond said first pivot means.

2,858,703
POWER-DRIVEN HAND UNIT FOR ROTARY AND RECIPROCATING TOOLS
Frederick P. Wilcox, Old Westbury, N. Y.
Application June 29, 1955, Serial No. 518,808
3 Claims. (Cl. 74—44)



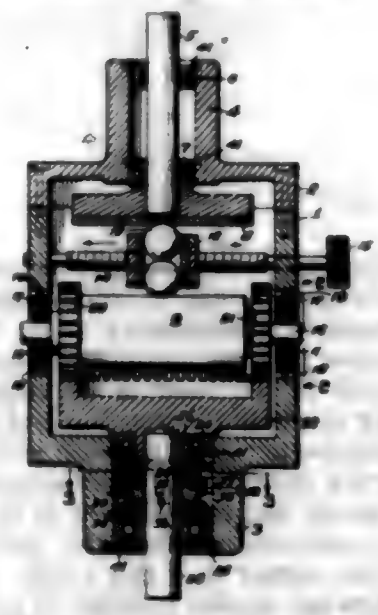
1. A portable tool comprising a housing, a motor in said housing having a rotary power shaft projecting centrally through one end of said housing, a tool chuck mounted on said shaft outside said housing, a reciprocating bar extending through the opposite end of said housing parallel to but offset from said power shaft, and adjacent a lateral housing wall, a tool chuck on the outer end of said bar, a speed reduction transmission means within said casing connecting said shaft and said bar to reciprocate the bar upon rotation of said shaft, said transmission means including manually adjustable means for varying the stroke amplitude of said reciprocating bar, through a continuous range of amplitudes.

2,858,704
ESCAPEMENT DRIVE FOR MOTION PICTURE FILMS
Arvid Jansson, Pittsburgh, Pa.
Application June 25, 1956, Serial No. 593,637
3 Claims. (Cl. 74—84)



1. The combination with a rotatable driving shaft, a driven shaft, an escapement for the driving shaft adapted to periodically restrain said driven shaft from rotation, an escapement driving means drivably connected between said driving shaft and said escapement, a rotatable member mounted on and rotatable with respect to said driven shaft, said rotatable member being drivably connected to said escapement driving means, a driving connection between said rotatable member and the driven shaft that comprises a coil spring which has one end fixed to said rotatable member, a second coil spring which has one end fixed to the driven shaft, clutch rings respectively fixed to the other ends of said coil springs, said clutch rings being in proximity to each other and both rotatable relative to the driving shaft and the driven shaft, and slip clutch means interposed between the clutch rings, the clutch rings being yieldably held in driving engagement with each other by endwise pressure of the springs during rotation of the driving shaft and while rotation of the driven shaft is being restrained by the escapement, the springs being placed under torsional stress that will overcome the clutching action of the clutch rings during rotation of the driving shaft, the clutching force of the clutch rings being sufficient to transmit driving movement from the springs to the driven shaft when the driven shaft is released by the escapement.

2,858,705
VARIABLE SPEED TRANSMISSION
Frank R. Eldridge, Jr., Santa Monica, Calif.
Application August 10, 1956, Serial No. 603,464
3 Claims. (Cl. 74—208)

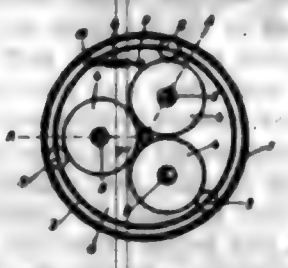


1. In a variable speed transmission including a housing, a cover for said housing, an input shaft journaled for rotation in said cover, an output shaft journaled in said housing, said shafts being in co-axially aligned relation, transmission means between said input shaft and

surfaces of the hub, a plurality of apertures extending lever arm that has said means, and provided at its outer

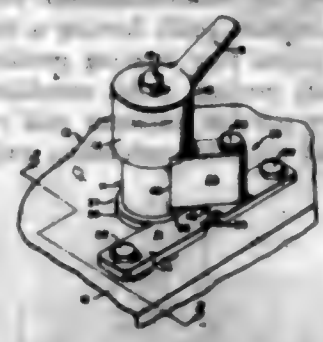
said output shaft comprising a disc fixed to the inner end of said input shaft, a shaft journaled in spaced relation from said disc in a pair of sliding bearings in said housing, said shaft being at right angles to and having its axis intersecting the axis of said input shaft, a roller mounted for rotation about said shaft, a first pinion fixed for rotation with said roller at one end thereof, a second idler pinion mounted on said shaft adjacent the other end of said roller, an adjustable transmission means for varying the speed of said roller disposed between said roller and said disc comprising a threaded shaft journaled for rotation in said housing having its axis parallel to the axis of said roller, a ball cage threadably engaged on said threaded shaft, a pair of axially aligned balls carried by said ball cage, said balls normally contacting said disc and said roller and disposed to travel diametrically of said disc and longitudinally along said roller, transmission means between said roller and said output shaft comprising a crown gear carried by the inner end of said output shaft, said crown gear meshing with said pinions, said crown gear defining an annular collar portion along its outer end thereof, its outer edge being undulated, means for applying ball force upon said balls comprising an annular cam coupler slidably mounted on said output shaft provided with an undulated surface in juxtaposition to said undulations on said collar on said crown gear, spring means biasing said cam coupler towards said collar and means carried by said cam coupler and said collar cooperating to limit rotation of said cam coupler about said collar.

2,858,706
FRICTION GEAR
Harald Valdemar Alexanderson, Lidingo, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Application May 24, 1955, Serial No. 510,637
Claims priority, application Sweden June 22, 1954
5 Claims. (Cl. 74—209)



1. A friction gearing comprising, in combination, a rotatable outer casing including an inwardly facing circular friction surface, a rotatable bearing shaft disposed centrally of and concentrically with said circular friction surface, a first bearing holder including a plurality of equally spaced studs rotatably supported relative to said casing and said shaft, a second bearing holder including a circular race having a plurality of spaced circular ball receiving openings and disposed between and concentric with said shaft and said friction surface, a roller supported for rotation within the plane of said race by each of said studs having a centrally located stud receiving opening of larger diameter than said respective stud for maintaining said roller in an adjustable position thereon, a ball bearing element supported for rotation within each of said circular openings of said race and having a substantially smaller diameter than the diameter of said respective circular openings, said rollers being adapted to be maintained in engagement with said shaft and certain of said balls, and said balls being adapted to be maintained in engagement with said respective rollers and said friction surface in an adjusted position relative thereto and to said enlarged ball receiving openings of said race, and spring means yieldably biasing said balls towards engagement with said friction surface and said rollers, the spring biasing of said balls being further operative to maintain said rollers in yieldable engagement with said shaft.

2,858,707
STOP FOR MULTI SPEED GEAR SHIFT
Thomas Francis Langridge, Santa Clara, and Roscoe Imrie Conn, Los Gatos, Calif.
Application November 28, 1956, Serial No. 623,375
5 Claims. (Cl. 74—473)



1. For a multi position gear shift mechanism having a gear shift lever, the hub of which is slidable on a shaft and turnable about the axis thereof at three different positions therealong, a blockout device comprising a stop member pivotally mounted adjacent said shaft for swinging movement toward and from the same and including a surface engagable by said hub portion when the latter is moved from one of its extreme positions toward an intermediate position along said shaft.

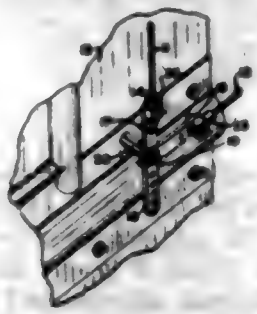
2,858,708
FLEXIBLE CONDUIT
Alan E. Brickman, Williamsville, N. Y., assignor to United States Steel Corporation, a corporation of New Jersey
Application February 16, 1954, Serial No. 410,691
3 Claims. (Cl. 74—501)

1. A flexible conduit for a cable comprising a spirally wound metallic core, a flexible jacket surrounding said metallic core for a portion of its length, one end of said metallic core being uncovered, a fitting integrally secured to the uncovered end of said core with a portion of said uncovered end extending therefrom, a flexible tubular seal secured to said last named portion and extending therefrom away from said fitting, said seal having an outside diameter not exceeding the outside diameter of said fitting whereby the assembly may be threaded through an opening only slightly larger than the outside diameter of said fitting, said seal having an inside diameter greater than the outside diameter of the cable over a portion of its length and a portion at its free end of such diameter as to grip the cable firmly.

2,858,709
BELL CRANK ASSEMBLIES
Alfred N. McGurk, Denver, Colo.
Application August 28, 1954, Serial No. 451,116
1 Claim. (Cl. 74—519)

A bell crank assembly for connecting throttle rods and the like, comprising a flat sided, axially relatively thin hub provided with a central opening extending from one side to the other, countersunk surfaces in the hub sides surrounding said opening, a plurality of relatively thin arms extending radially from the hub between the side

surfaces of the hub, a plurality of apertures extending through each arm, a raceway having a circumferential wall and axially spaced flanges fitted into the hub opening between the countersunk surfaces and disposed in said opening with the flanges of the raceway directed inwardly, a plurality of rollers disposed intermediate the flanges in said raceway in contact with said circumferential wall, with the axes of the rollers parallel to said wall and to the axis of the hub opening, a grease fitting mounted on the hub in communication with the raceway, an integrally formed shaft having a body portion, a reduced smooth round hub bearing portion extending axially from the body portion, a flat shoulder surface on the end of the body portion adjacent said reduced portion, a threaded end member extending axially beyond



the body portion, and a second threaded end member extending axially beyond the reduced portion of the shaft, said shoulder surface covering one of the countersunk side surfaces of the hub and extending radially beyond the margins thereof in contact with the hub, said smooth round reduced portion being in direct contact with said rollers in the raceway, a lock nut on said second threaded end member, a washer between one countersunk surface of the hub and said shaft shoulder, and a washer between the other countersunk surface of the hub and said lock nut on the second threaded end member of the shaft, said shaft body portion serving to space the hub and arms from the support on which the assembly may be mounted for rotation of said hub on the reduced portion of the shaft.

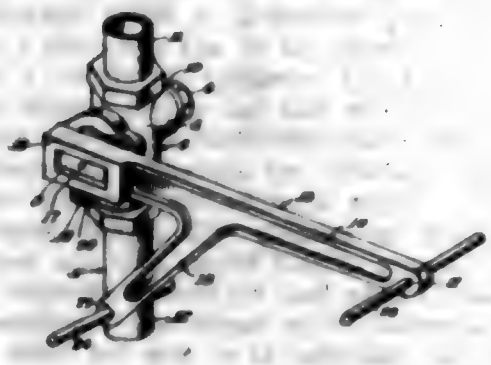
2,858,710

GAS COCK WRENCH

Arthur J. Landwehr, Northbrook, and John D. Cummings, Highland Park, Ill.; said Landwehr assignor to said Cummings

Application October 5, 1953, Serial No. 384,191

2 Claims. (Cl. 74—543)



1. As a new article of manufacture, a wrench adapted for use in turning the plug of a gas cock back and forth between open and closed positions and comprising a one-piece casting consisting of a comparatively long, rigid, substantially straight lever arm having means at one end thereof for attachment to the plug and provided at an appreciable distance from said means with a transverse hole, and a comparatively short, substantially straight, rigid arm connected to the lever arm at a point approximately half-way between the mid-point of the lever arm and said means, extending at approximately a 45° angle with respect to the end portion of the lever arm that has said means, and provided at its outer end with a transversely extending hole in parallel relation with the first mentioned hole, an abutment-forming pin having the central portion thereof extending through, and in fixed relation with, the first mentioned hole, and a second abutment-forming pin having the central portion thereof extending through, and in fixed relation with, the second mentioned hole.

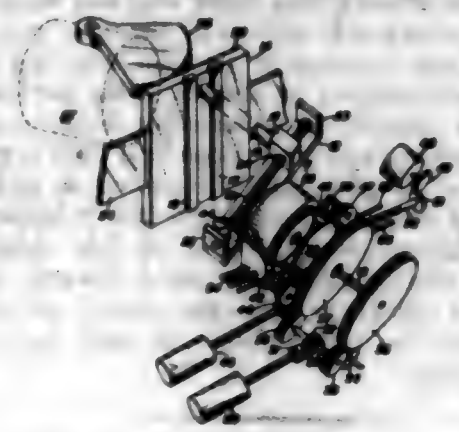
2,858,711

MECHANICAL SCAN DRIVE SYSTEM

Henry Blackstone, Northport, and Joseph T. Conley, Huntington Station, N. Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application December 16, 1954, Serial No. 475,853

6 Claims. (Cl. 74—600)



1. A mechanical scan drive system for a scanning unit comprising a crank, including an arm and a shaft; a lead screw journalled on said arm; a crank pin threadedly mounted on said lead screw and movable lengthwise of the arm in response to rotation of the lead screw; slidable means operatively connected to the crank pin for translating the rotary motion of the pin into reciprocal horizontal motion, said slidable means being adapted to be drivingly connected to the scanning unit; driving means operatively connected to the crank shaft and to the lead screw for driving said crank and lead screw at the same rate with no relative motion therebetween; control means operatively connected to the lead screw drive for varying the rate of rotation thereof, thus adjusting the radius of rotation of the crank pin and the amplitude of scan of the scanning unit, and means connected to said crank to shift said crank laterally whereby the drive system can be moved laterally.

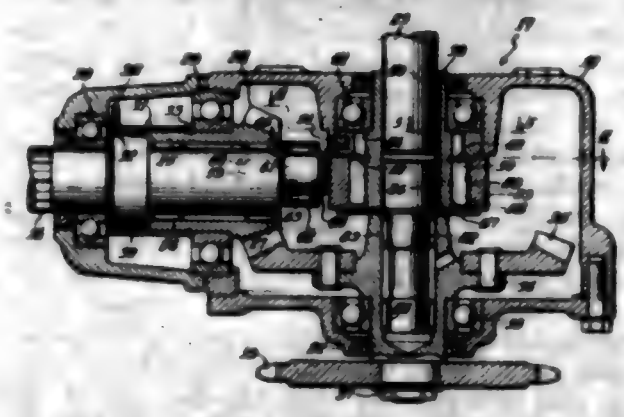
2,858,712

TRANSMISSION

Herbert A. McAninch and Verle M. Thorpe, Auburn, Ind., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Application December 13, 1956, Serial No. 628,825

16 Claims. (Cl. 74—665)



1. A transmission comprising a drive shaft, first and second driven members, means including reduction gear-

2,858,715

tool is adapted to be secured for operating upon work

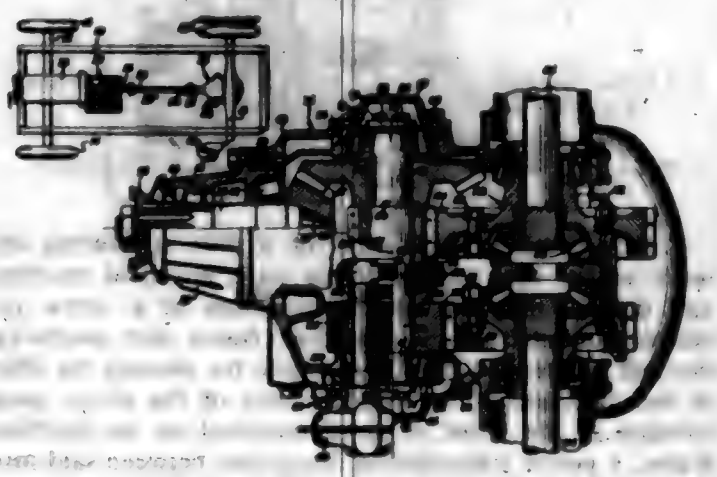
ing drivingly interconnecting said drive shaft and said first driven member, and means drivingly interconnecting said drive shaft and said second driven member, said last-named means comprising a first one-way engaging device operatively interconnected between a stationary part of said transmission and the second driven member for preventing reverse rotation or backlash of the second driven member, a second one-way engaging device drivingly connected with said second driven member, and oscillatable means actuated by said drive shaft for incrementally engaging and driving said second one-way engaging device and, in turn, rotating said second driven member, whereby said first one-way engaging device is effective between each successive incremental engagement of said second one-way engaging device for preventing reverse rotation of the second driven member.

2,858,713

MULTI-SPEED DRIVE TRAIN FOR VEHICLE

Nelson R. Brownyer, Detroit, Mich., assignor to Rockwell Spring and Axle Company, Coraopolis, Pa., a corporation of Pennsylvania

Application April 9, 1954, Serial No. 422,631
17 Claims. (Cl. 74—700)



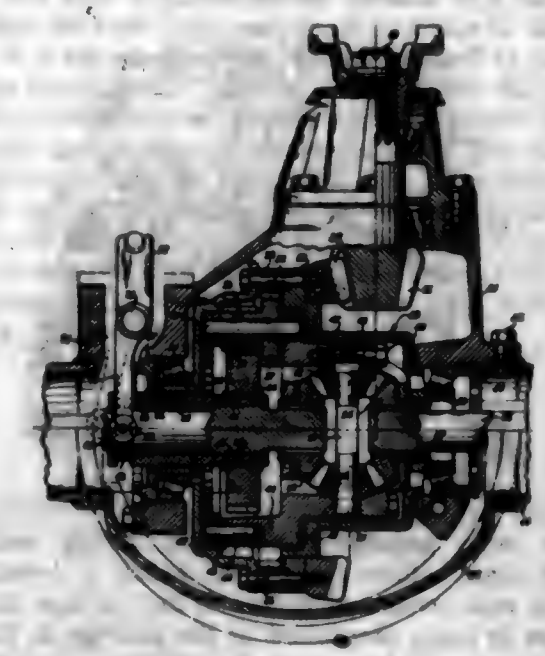
1. A roadway vehicle drive train effective to provide a progressive series of selectable over-all drive train reduction ratios without the necessity of split shifting while minimizing the drive train axle torque input requirements, a variable speed transmission comprising shiftable gearing providing a plurality of speed reduction ratios of predetermined spacing, and a variable speed drive axle operatively connected to said transmission, said drive axle comprising selective gearing providing at least two speed ratio drives of predetermined spacing; the spacing of said axle ratios being such in relation to the spacing of said transmission ratios that by starting with the axle drive selected for its lower speed ratio and shifting through the entire transmission range, then shifting the drive axle to its higher speed ratio and the transmission back to a predetermined speed setting in its range which is at least a plurality of speeds below its highest speed, and then normally shifting only the transmission toward said highest speed, a series of successively increasing short step vehicle drive speed ratios whereby the high (numeric) over-all drive train ratio reductions are all provided by the coaction of said axle lower speed ratio with the ratio reductions of said transmission and the low (numeric) over-all drive train ratio reductions are provided by the coaction of the axle higher speed ratio with the transmission ratio reductions providing said predetermined and higher speeds thereby minimizing the maximum torque input requirements of said axle for the given over-all drive train ratio reduction progressive series is obtained.

2,858,714

MULTI-SPEED DRIVE FOR VEHICLE

James E. Black, Detroit, Mich., assignor to Rockwell Spring and Axle Company, Coraopolis, Pa., a corporation of Pennsylvania

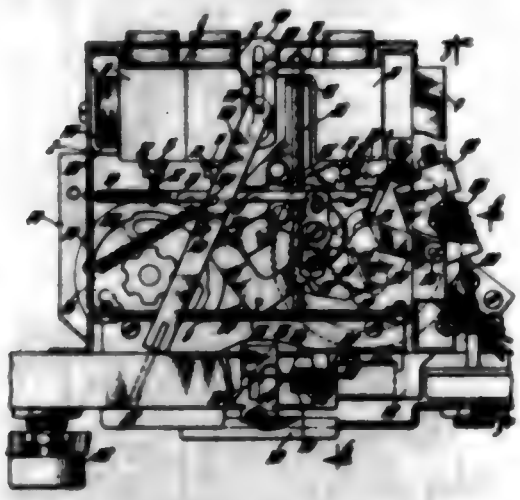
Application November 30, 1954, Serial No. 471,913
6 Claims. (Cl. 74—340)



1. In a vehicle drive train embodying a multiple speed transmission comprising shiftable gearing providing a plurality of ratio reductions of predetermined spacing; a relatively lightweight variable speed planetary drive axle effective in cooperation with such transmission when drive-connected thereto to provide a progressive series of selectable over-all drive train ratio reductions of greater number than said plurality of transmission ratio reductions without the necessity of split shifting and with relatively low axle torque input requirements; said axle embodying selective gearing providing at least two speed ratio drives of predetermined wide spacing and comprising a housing, a differential mechanism within said housing, a planetary gearing assembly in said housing having an input shaft and an output drive connected to said differential mechanism, said planetary gearing comprising a ring gear and a sun gear and a plurality of compound planet gear units each consisting of different sized gears mounted on a rotatable carrier and meshed respectively with the ring gear and the sun gear, and means for selectively connecting said sun gear to said carrier or to said housing to obtain respectively a modified speed drive ratio and a direct drive between said shaft and said differential mechanism; the spacing of said axle ratios being sufficiently great to span a plurality of at least the lowermost (numeric) ratio reductions of such transmission whereby, in a transmission equipped drive train embodying such axle, by starting with the axle drive selected for its lower speed ratio and shifting through the entire transmission range, then shifting the drive axle to its higher speed ratio and the transmission back to the highest of said plurality of at least the lowermost ratio reductions and then normally shifting only the transmission toward its lowest (numeric) ratio reduction, a series of successively decreasing vehicle drive train over-all ratio reductions is obtained and whereby the high (numeric) over-all drive train ratio reductions may be provided by the coaction of the axle lower speed ratio with the transmission ratio reductions and the low (numeric) over-all drive train ratio reductions may be provided by the coaction of the axle higher speed ratio with the plurality of transmission lowermost ratio reductions thereby maintaining the torque input requirements of said axle relatively low.

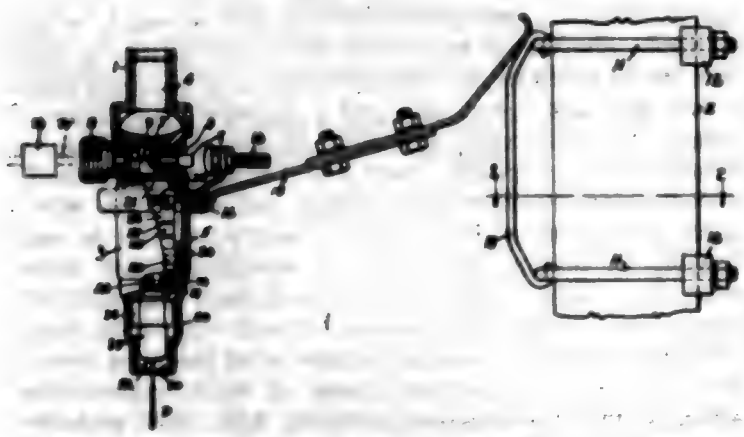
adapted to be abutted and moved by said setting mem- said second gear so as to maintain said gears in mesh; a

2,858,715
SOLENOID DRIVEN TUNER WITH MANUAL DRIVE
William R. Kearney, Bertram A. Schwarz, and Manfred G. Wright, Kokomo, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 2, 1954, Serial No. 402,884
7 Claims. (Cl. 74—10)



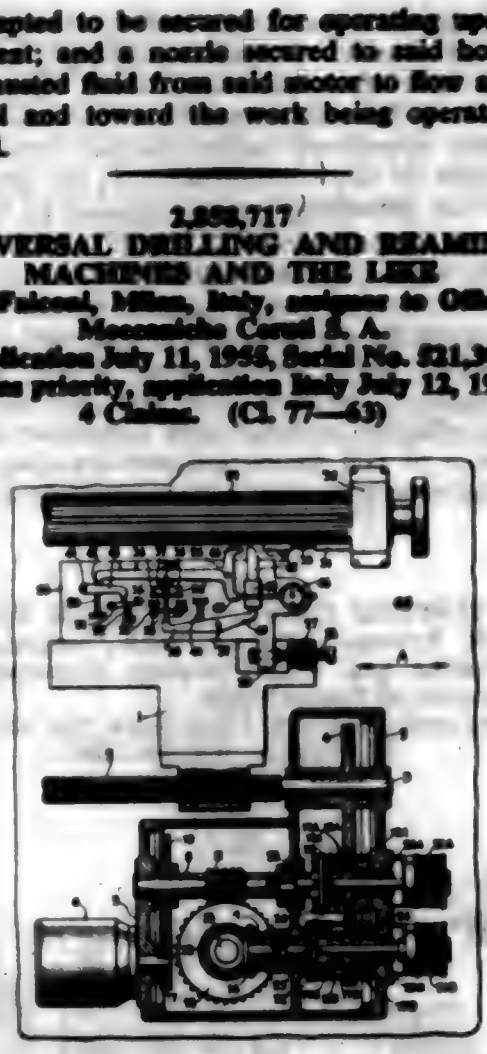
1. In radio apparatus, adjustable tuning means, a carriage upon which the tuning means is mounted, a rotatable cam, means connected to the carriage engaging said cam to cause movement of the carriage as the cam rotates, motor driving means for the cam, a gear train interconnecting the motor drive means and the cam, detent locking means engaging a part of the gear train for indexing, and manually operable means connected to a part of the gear train to independently drive the cam when the train is locked by the indexing means.

2,858,716
AIR-OPERATED DRILL PRESS ATTACHMENT
Roland E. Deeden, Sherwood, Ohio, assignor to Deeden Tool Corp., Sherwood, Ohio, a corporation of Ohio
Application October 5, 1955, Serial No. 538,604
2 Claims. (Cl. 77—33.5)



1. In combination, a drill press of the type having a post and a reciprocable quill; a generally cylindrical housing having one end formed for attachment to said quill, said housing being formed with a transverse bore adjacent such one end, with an inlet port for supplying fluid under pressure into such bore, and with a cylindrical cavity at the other end; a valve mechanism in such bore including a movable valve member adapted to be actuated from seated to unseated position to respectively prevent and permit flow of fluid from said inlet port into said cavity; a valve-actuating lever pivotally connected to said housing; a cam on said post operative, when said quill and housing are moved in one direction, to swing said lever to valve member unseating position; a fluid motor assembly removably fitted into said cavity and having a rotating drive shaft to which a rotary tool is adapted to be secured for operating upon work thereadjacent; and a nozzle secured to said housing to cause exhausted fluid from said motor to flow along the rotary tool and toward the work being operated upon by the tool.

2,858,717
UNIVERSAL DRILLING AND REAMING MACHINES AND THE LIKE
Ugo Falconi, Milan, Italy, assignor to Officine Meccaniche Cerati S. A.
Application July 11, 1955, Serial No. 521,306
Claims priority, application Italy July 12, 1954
4 Claims. (Cl. 77—63)



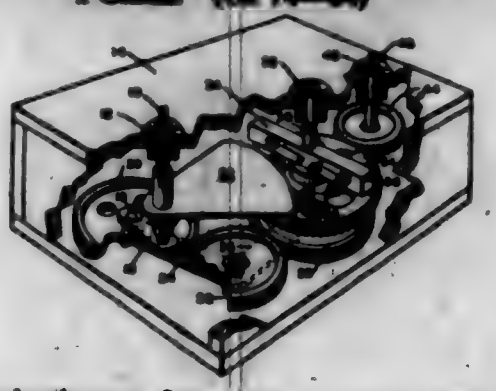
1. In a setting mechanism for a slide supporting the work or the tool on the frame of a universal reaming and drilling machine, the combination of a screw rotatably mounted on the machine frame and extending through a threaded bore in the slide for moving the slide in the direction of the rotation axis of the screw upon rotation of the latter, a motor mounted on the machine frame, a power transmission interposed between said motor and said screw for rotating the latter by said motor, said transmission including a first part for transmitting power at high speed from said motor to said screw and a second part for transmitting power at slow speed from said motor to said screw, a first clutch interposed in said first part, and a second clutch interposed in said second part for selectively transmitting power at high speed or at slow speed from said motor to said screw, springs individually connected with said clutches tending to hold said clutches in disengaged positions, a first solenoid provided with an armature operatively connected with said first clutch for engaging said first clutch against the action of the respective spring upon energization of said first solenoid, a second solenoid provided with an armature operatively connected with said second clutch for engaging said second clutch against the action of the respective spring upon energization of said second solenoid, an electric circuit for each of said solenoids, support means movably connected with said slide to move in the direction of the rotation axis of said screw, means for adjusting and fixing the relative position of said support means and of said slide, a setting member adjustably supported by the machine frame adjacent to said support means, a first switch means mounted on said support means and including two switches individually interposed in the electric circuits of said solenoids, resilient means operatively connected with said switches for normally closing the switch interposed in the circuit of said first solenoid and opening the switch interposed in the circuit of said second solenoid, actuating means mounted on said support means and operatively connected with said first switch means and including a finger

adapted to be abutted and moved by said setting member when the slide moves into a predetermined position for actuating said first switch means against the action of said resilient means for opening the switch interposed in the circuit of said first solenoid and closing the switch interposed in the circuit of said second solenoid, a second switch means mounted on said support means and including a switch interposed in the electric circuit of said second solenoid, resilient means operatively connected with said last mentioned switch for normally closing said last mentioned switch, an actuating member mounted on said support means and operatively connected with said second switch means and having a portion adapted to be abutted by said setting member when the slide moves beyond the position in which said finger was abutted by said setting member, for actuating said second switch means for opening the switch of said second switch means, and a comparator operatively connected with said actuating member and mounted on said support means for indicating the opening position of said second switch means whereby accurate uniform adjustment of the position of any number of work pieces consecutively set up on said slide relatively to said setting member is effected by actuation of said means for adjusting and fixing the relative position of said support means and of said slide according to the indications of said comparator.

2,858,718
COMPOSITE TOOL BITS FOR SUBSTANTIALLY AXIALLY FED PLUNGE TYPE TOOLS
Theodor B. Kahlow, Detroit, Mich.
Application December 19, 1955, Serial No. 553,796
3 Claims. (Cl. 77—70)

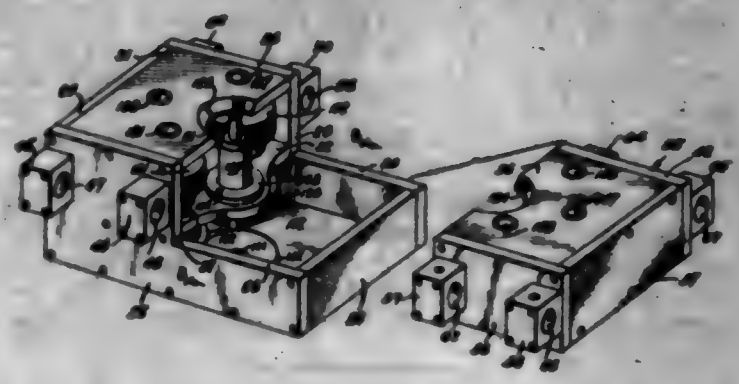
1. A composite plunge type tool bit comprising at least one flat ferrous metal piece and at least one flat carbide metal piece, said pieces bearing against one another and being welded to each other throughout their juxtaposed surfaces, said welded pieces together forming a substantially conical unit having a ferrous metal piece extending across its apex, said unit having cutting edges formed therealong, the weld extremities extending to the cutting edges intermediately of the length of said edges, and the cutting edges continuing uninterruptedly across said pieces and said weld extremities.

2,858,719
INTERMITTENT MOTION MECHANISM
Robert A. Hanton, Oak Park, Mich.
Application September 19, 1956, Serial No. 610,353
1 Claim. (Cl. 74—84)



In a mechanism: a first gear; a second gear; a link rotatably connecting the centers of said first gear and said second gear so as to maintain said gears in mesh; a third gear journaled in a stationary plate so as to constrain its motion to rotation; a second link rotatably connecting the centers of said second gear and said third gear so as to maintain those gears in mesh; a source of rotative power for continuously rotating the center of said first gear in an orbit about a stationary axis, whereby said third gear is intermittently rotated in a first direction and between said periods of rotation is caused to move in a second direction; a plate coupled to said third gear in such manner as to directly receive the rotation of said third gear when said third gear moves in a first direction and to receive the rotation of the said third gear through a spring when said third gear rotates in a second, opposite direction; a cam follower on said plate; and a cam carried by said first gear in such a manner as to be in contact with said cam follower so as to restrain a motion of said plate at such times as said third gear is moving in said second direction.

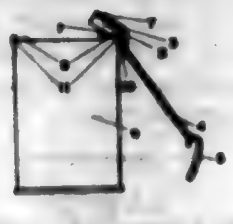
2,858,720
THREAD FORMING APPARATUS
William J. Dodz, Bloomfield, Conn.
Application December 10, 1954, Serial No. 474,463
2 Claims. (Cl. 80—6)



1. A thread forming apparatus comprising a first box-like casing, a first pair of spaced apart thread forming dies rotatably mounted within said first casing, a first gear train mounted within said first casing and operative to rotate said first pair of dies, said first gear train being adapted to be operated continually by a suitable motive power, a recess in the walls of said first casing, a second box-like casing movable between either of two locations within said recess in said first casing, a second pair of spaced apart thread forming dies mounted within said second casing, a second gear train mounted within said second casing and operative to rotate said second pair of dies, said two pairs of thread forming dies being operative collectively to form a thread upon a work piece positioned between them when said second casing is in one of said locations, said two pairs of dies being retracted from said work piece when said second casing is in the other of said locations, one gear of said first gear train and one gear of said second gear train being continually meshed with each other when said second casing is in either of said locations, said first casing and said second casing jointly forming a substantially unitary enclosure for both of said pairs of thread forming dies and for both of said gear trains, a pair of guide bars connected to said second casing, a pair of guide blocks connected to said first casing, each of said guide bars being movable longitudinally relative to a respective guide block, a ring adjustably connected to each of said guide bars, said rings being adapted to abut said guide blocks and limit the displacement of said second casing from said first casing, a spring connected between each of said rings and said first casing, said springs normally urging said second casing apart from said first casing, the position of said rings being determined by the limit of displacement within which the meshing gears of said first and second gear

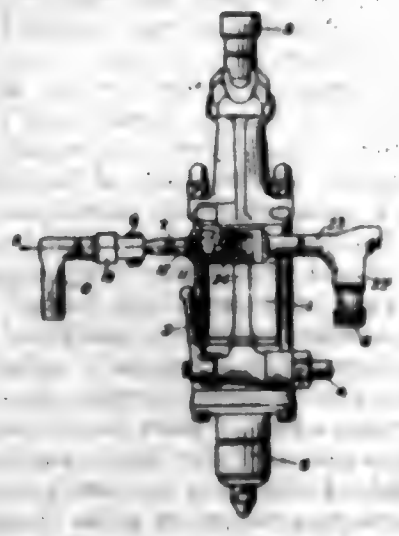
trains continue in operative engagement, a cross bar connected between said guide bars, and a lever connected to said cross bar, said lever being adapted to impinge upon said first casing to cause the movement of said second casing toward said first casing.

2,858,721
METHOD AND MEANS FOR DEPRESSURIZING CONTAINERS
James Q. Horne, Jr., Princeton, N. J.
Application November 3, 1955, Serial No. 544,730
9 Claims. (Cl. 81—3.47)



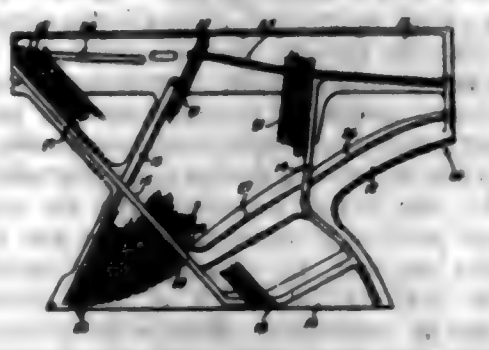
2. A depressuring device for containers, said device comprising a handle, a perforating member mounted upon and projecting laterally from said handle at one end thereof, fulcrum means projecting laterally from said handle and in angular relation to said perforating member and upon the same side thereof with said perforating member and spaced inwardly of the handle from the perforating member for gripping and pivotal engagement with a rim of a container, a resilient sealing member surrounding said perforating member and having a sealing surface surrounding the perforating member and of sufficient size to establish a fluid tight sealing engagement with that portion of the wall of a container which surrounds the puncture made by said perforating member.

2,858,722
BOLT OR NUT RUNNING MACHINES OR STOPERS
Jan August Larcén, Ekterp, Sweden, assignor to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Application October 11, 1955, Serial No. 539,861
4 Claims. (Cl. 81—52.4)



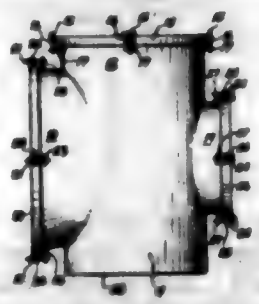
2. A stoper rock drill having a power rotated bolt or nut engaging chuck or socket and having a casing, two arms fixed to said casing and extending transversely to the rotary axis of said chuck or socket from said casing, handles at the free ends of said arms and means between said handles and casing yielding to a predetermined torque reaction from the rotation of the chuck or socket.

2,858,723
PIANO PLATE
Henry G. Wickham, Red Bank, N. J., assignor to The Wickham Piano Plate Company, Springfield, Ohio, a corporation of Ohio
Application August 30, 1955, Serial No. 531,422
3 Claims. (Cl. 84—188)



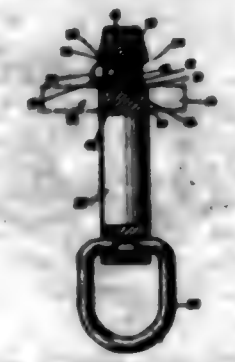
1. An overstrung piano plate having a marginal portion defining an intermediate opening therein and at least one intersecting cross bar joined at its ends to said marginal portion at diagonally opposite positions, and string bearing surfaces extending longitudinally along said marginal portion; characterized by a cut out formation in one edge of said marginal portion adjacent said opening and beneath one end of said cross bar interrupting said bearing surface to either side of said bar and obviating the use of hidden string bearing surfaces.

2,858,724
MULTIPLE-TONE DRUM
Frederick J. Treppe, Joliet, Ill.
Application June 9, 1958, Serial No. 740,870
6 Claims. (Cl. 84—411)



1. A musical drum comprising a vessel containing a resonant cavity, said vessel having three openings each of a different size, a vellum covering each opening, two of said vellums being oppositely disposed with respect to each other and the third vellum being positioned perpendicularly to the other two, whereby three different tonal qualities are produced when said vellums are struck.

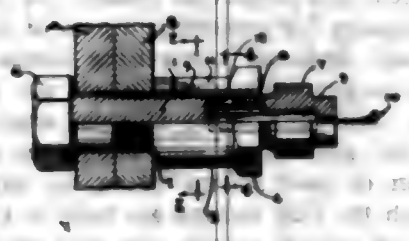
2,858,725
CONNECTING PIN HAVING DEPRESSIBLE ABUTMENT ELEMENT
Theodore F. Thompson, Des Moines, Iowa
Application December 24, 1954, Serial No. 477,452
1 Claim. (Cl. 85—5)



A connecting unit comprising an elongated cylindrical body member having a transversely extended cavity

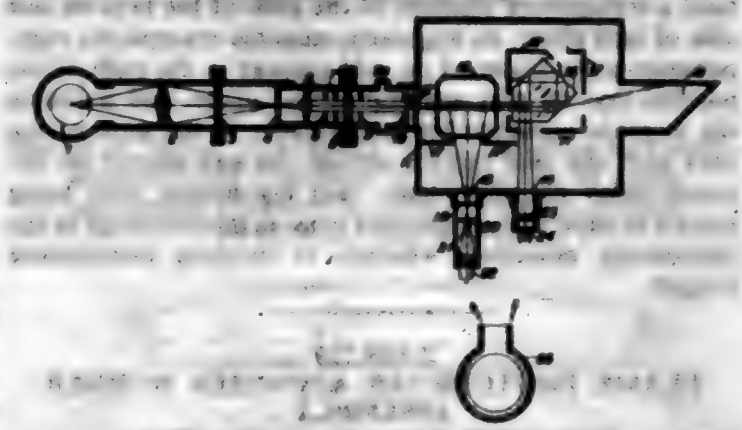
formed therein, with said cavity having a reduced section at one end thereof to form an annular shoulder therebetween, said shoulder extended in a plane normal to the longitudinal axes of said cavity and said section, and a depressible abutment pin in said cavity biased toward said reduced section, said pin having an annular bearing projection in contacting engagement with said shoulder, said bearing projection having a peripheral surface of a narrow width whereby said surface extends parallel to and is spaced slightly from the wall of said cavity, the distance between diagonally opposed peripheral edge portions of said bearing projection being only slightly greater than the diameter of said cavity to permit a slight tilting of said bearing projection prior to a wedging contact by said edge portions with said cavity wall, a head portion extended from one side of said bearing projection through said reduced section and having a semi-spherical portion protruded beyond said body member, the diameter of said head portion being sufficiently less than the inner diameter of said reduced section to allow a relative movement therebetween upon tilting of said bearing projection, the longitudinal radial extent of said head portion being such that upon initial contact of said edge portions with said cavity wall due to the application of a tangential force against said semi-spherical portion, said semi-spherical portion remains protruded beyond said body member thereof though to a lesser extent than prior to the application of said tangential force.

2,858,726
EXPLOSIVELY RELEASABLE NUT HAVING A WEAKENED LINE OF MATERIAL
Douglas A. Robinson, Bellevue, and Alan B. Zimmerschied, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application February 14, 1955, Serial No. 487,988
5 Claims. (Cl. 85—32)



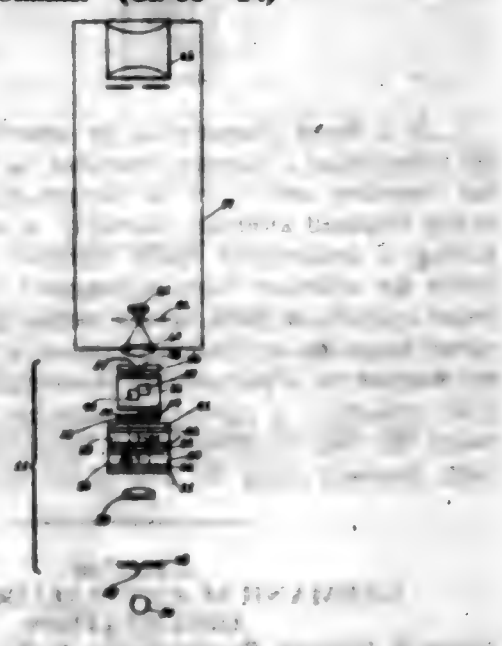
4. A nut for cooperation with a threaded bolt for joining separable elements securely until such time as they are to be separated substantially instantaneously, comprising a sleeve of substantially uniform thickness throughout, internally threaded from end to end, for threaded engagement with the threads of such a bolt, a plug closed at one end, and formed with an externally threaded skirt at its other end, threadedly received within the end of the sleeve, to close the same and to define a closed interior chamber, a spacer of a form which allows direct access of an explosive force to be applied to the interior of the sleeve, disposed intermediate the bolt end and the skirt's end, within such chamber, an explosive charge received within the chamber and detonable from without the same, and upon its detonation applying a bursting force to the interior of the sleeve, at least in that portion exposed by the spacing apart of the sleeve and skirt, said sleeve being formed as one piece of metal of generally uniform resistance to bursting, except for a weakened line of material extending from end to end of the sleeve.

2,858,727
DEVICE FOR THE MEASUREMENT OF ABSOLUTE TURBIDITY
Robert F. Stamm and Peter A. Button, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application June 30, 1954, Serial No. 440,364
5 Claims. (Cl. 88—14)



1. A device for the measurement of absolute turbidity of a liquid which comprises, in combination, a liquid bath, a cell immersed in said liquid bath containing a sample of liquid whose light scattering ability is to be measured, a beam weakener immersed in said liquid bath composed of at least one element for producing reflections at a glass-liquid interface in which the measured beam is partially reflected internally in glass from a glass-liquid interface, serving to weaken the incident beam by a predetermined calculatable amount, such that the intensity of the weakened beam is of the order of magnitude of the sample scattered light, an optical system so positioned as to direct a beam of essentially monochromatic parallel light through said liquid bath and successively through each of said sample cell and said beam weakener, and means for measuring the intensity of the scattered light and the intensity of the weakened beam.

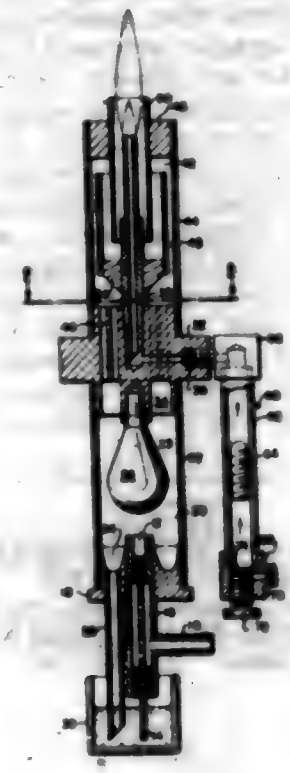
2,858,728
MICROSCOPE INTERFERENTIAL REFRACTOMETER
Raymond Jouvard, Bronx, N. Y.
Application October 28, 1954, Serial No. 465,362
6 Claims. (Cl. 88—14)



1. A refractometer attachment for use with a microscope of the type having a decollimating objective and a stage provided with a central opening located beneath said objective, said attachment comprising a support, a depending tube secured to said support and adapted to extend through said opening, fastening means removably secured on the tube and being cooperable with the stage to clamp

the support and tube thereto with the tube extending through the opening, a diaphragm plate at the lower end of said tube, said plate being formed with a diametral slit, a collimating lens in said tube focussed on said slit, means to illuminate said slit, whereby parallel rays emerge from said lens having a plane of symmetry containing said slit, bracket means on the support formed and arranged to hold a transparent medium in the path of the rays on one side of said plane, an angularly movable transparent compensator plate mounted on said support in the path of the parallel rays on said one side of said plane, and a double slit member mounted on said support in the path of the rays with the slits thereof parallel to and spaced on opposite sides of said plane, said last-named slits being spaced to superimpose the rays passing therethrough in the microscope objective, whereby to produce interference fringes.

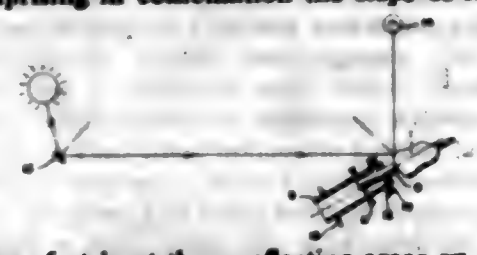
2,858,729
FLAME PHOTOMETER ATOMIZER BURNER ASSEMBLY
Frederick G. Keyes, Cambridge, Mass.
Application May 18, 1955, Serial No. 507,247
4 Claims. (Cl. 88—14)



1. In a flame photometer, an atomizer burner assembly comprising a sample container, a suction tube from the container and a coaxial oxygen tube forming a vertically disposed atomizer assembly, a separation chamber having a streamlined baffle member in line with and above the atomizer tubes surrounded by a coaxially disposed cylindrical shell, return means to the sample container from the separation chamber, a flow reflex chamber formed by a plurality of concentrically disposed vertical cylinders, a connecting member having ports between the two chambers, and burner inlet means vertically disposed along the axis of the flow reflex chamber.

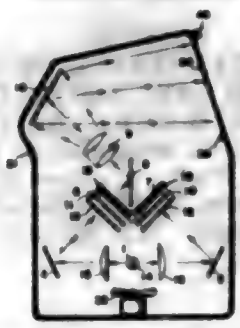
2,858,730
GERMANIUM CRYSTALLOGRAPHIC ORIENTATION
James S. Hanson, Poughkeepsie, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 30, 1955, Serial No. 556,642
8 Claims. (Cl. 88—14)

1. The method of positioning a germanium monocrystalline ingot on an axis of rotation coinciding with either a [100] or a [111] crystallographic axis of said ingot, each said [100] or said [111] axis respectively being intersected at the same angle and at essentially the same point by at least three planes of a group of planes of the crystalline octahedron and said [100] or said [111] axis respectively being normal to a fourth [100] or [111] crystallographic plane not a member of said group comprising in combination the steps of identifying



the location of at least three reflecting areas on said ingot each said area corresponding to a different plane of said group of planes of said octahedron, adjustably mounting said ingot for rotation, directing energy from a single source on said ingot in the vicinity of said areas and adjusting the axis of rotation of said ingot so that energy is reflected to the same position from each of said areas as said ingot is rotated.

2,858,731
THREE DIMENSIONAL PROJECTOR SYSTEMS
Miles P. Rehorn, Toledo, Ohio
Application October 21, 1954, Serial No. 463,763
9 Claims. (Cl. 88—26)

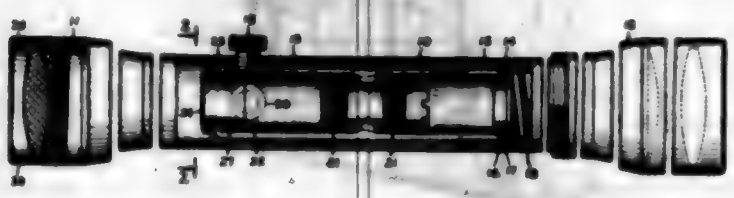


1. In a stereoscopic projection system, the said system including a projector for projecting a pair of stereoscopic images, the said projector comprising image slots for receiving said images while said images are in position for projection, said slots being at right angles to each other, means for positioning said images in said image slots, a portion of said means being an angular slide mount on which the said images are held at right angles to each other, an optical system, the said optical system comprising a single light source for directing light beams in two directions to a pair of reflecting mirrors respectively, one of the said mirrors being positioned so as to direct by reflection the beam of light directed to said mirror through one of the said image slots, the other of said mirrors being positioned so as to direct by reflection the beam of light directed thereto through the other of the said image slots, a polarizing means for polarizing each of the said beams of light and a partly reflecting partly transmitting device positioned within the right angle formed by the said image slots for directing light passing through said slots into a common path thence through a single projection lens.

2,858,733
MECHANISM FOR ELIMINATING PARALLAX FROM TELESCOPIC SIGHTS AND THE LIKE
Ernst O. Kollmorgen, Amherst, and Henry G. Thayer, Northampton, Mass., assignors to Kollmorgen Optical Corporation, Northampton, Mass., a corporation of New York
Application August 28, 1955, Serial No. 536,526
3 Claims. (Cl. 88—32)

1. A mechanism for adjusting a reticle for parallax in an optical instrument having a barrel and lenses, in-

cinding an objective lens mounted therein, comprising threaded means interposed between said objective lens and said barrel for adjusting said objective lens lengthwise of said barrel toward and away from a fixed position in said barrel in which said objective lens is in accurate optical relation to other lenses in said instrument, a reticle support in said barrel, means mounting said support in said barrel, a reticle cell mounted on said reticle mount in spaced relation to said objective lens, threaded means for adjusting said reticle cell lengthwise of said tubular body, said threaded means for adjusting said reticle cell and said threaded means for adjusting said ob-

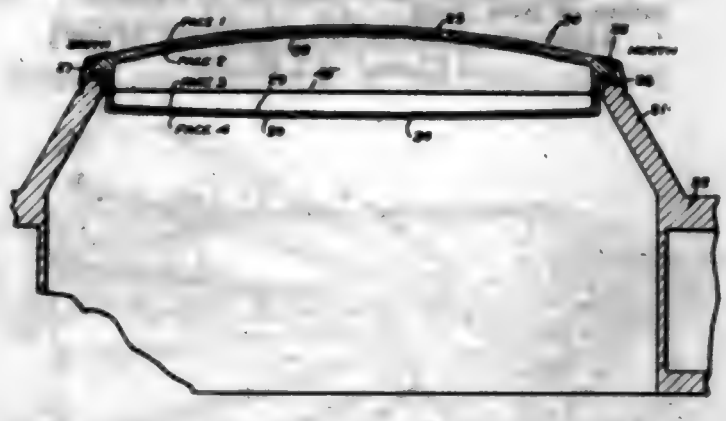


jective lens having predetermined related pitches to enable said objective lens to be moved away from said fixed position and relative to said cell to determine the correct spacing between said objective lens and said reticle cell to eliminate parallax, and to retain correct spacing between said cell and said objective lens when the latter is in said fixed position by rotating said reticle cell a number of turns related to the number of turns required to move said objective lens to said fixed position and means for locking said reticle cell relative to said reticle mount in said correct spacing relative to said objective lens when the latter is in said fixed position.

2,858,733
SPECTACLE RETAINING DEVICE
Madeleine Lodewick and Mildred Lodewick, New York, N. Y.
Application November 21, 1955, Serial No. 548,863
2 Claims. (Cl. 88—51)

1. A device for retaining eyeglasses including reading glasses having temple bars of various shapes and widths, comprising a flexible member long enough to loosely encircle the back of the user's neck and hang down in front of the user's body, an attaching means at each end of said flexible member, a pair of annular elastic rubber rings, each ring being substantially circular in radial cross-section and of sufficient resiliency to retain its shape yet being distortable for threading over the free end of the temple bar and adapted to resiliently grip the temple bar at any point along the length thereof, said each rubber ring having an inside diameter less than the width of the end of the temple bar and of an axial length and radial size such that the rubber ring may be rolled to facilitate the threading of the ring upon the temple bar, and a pair of smooth inelastic rings, each inelastic ring passing loosely through one of said rubber rings and loosely connected to said attaching means, each of said inelastic rings having a substantially larger diameter than the radial cross section of the elastic rings whereby to permit substantially free rolling movement of the rubber ring along the temple bar without appreciable obstruction from the inelastic ring, and flexible member.

2,858,734
SKYLIGHTS
Robert A. Boyd, Ann Arbor, Mich., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application February 8, 1956, Serial No. 564,288
35 Claims. (Cl. 88—89)



23. A structure for controlling daylight comprising a first wall of light-transmitting material, said wall being arcuate in cross section thereby providing a concave surface and a convex surface, said wall being adapted to be mounted in an opening in a ceiling or roof with a concave surface thereof projecting upwardly above said opening, a second wall of light-transmitting material in spaced relationship adjacent the concave surface of said first wall, said first wall being formed with prisms on the concave surface thereof nearest said second wall, said prisms being parallel and extending in planes substantially transverse to the planes in which said first wall is arcuate, said prisms having an included angle ranging from 60 to 98° such that light rays directed against the convex surface of said first wall at small predetermined angles to and on one side of transverse planes normal to a plane tangent to the uppermost prism on said concave surface are substantially totally rejected by total internal reflection and light rays directed against said convex surface at the remaining angles on the same side of said normal transverse planes and light rays directed against said convex surface on the other side of said normal transverse planes are transmitted by refraction through said first wall toward said second wall.

2,858,735
SHUTTER MECHANISM
Merrill E. Ahrendt, Los Angeles, Calif., assignor to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Application April 16, 1954, Serial No. 423,686
8 Claims. (Cl. 88—61)

1. In an apparatus for selectively and periodically attenuating a beam of radiation, the combination of: a ro-

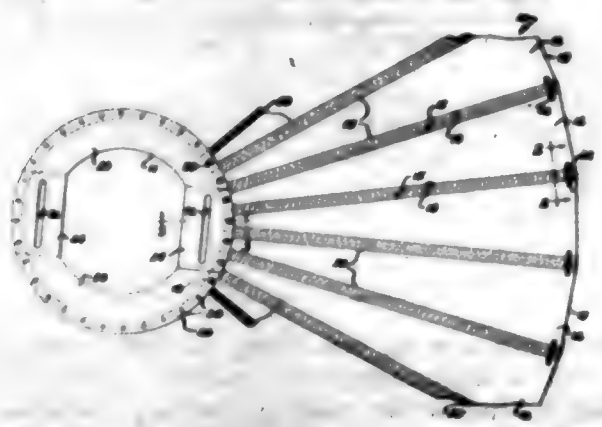
tatable shutter provided with radially spaced shutter zones respectively having different beam attenuating characteristics, said shutter zones being within the perimeter of said shutter and each having at least one portion opaque to the beam of radiation; and means mounting said shutter for movement transversely of the axis of rotation of said shutter and transversely of the direction of the beam of radiation to align a selected one of said shutter zones with the beam of radiation.

2,858,736

GROUND COVER FOR ROCKET LAUNCHING EQUIPMENT

Ray O. Hendrix, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

Application June 30, 1955, Serial No. 519,073
1 Claim. (Cl. 89—1)



A flexible protective ground cover comprising an assemblage of flat individual imperforate fabric-reinforced rubber sector-shaped sections each including a pair of radially diverging side edges extending from an inner narrow end to an outer wide end of each section and having a ground-engaging side and an upper side, the sections fitting together in laterally contiguous relation with their respective radial edges directed toward corresponding edges of adjoining sections and with their respective inner narrow ends disposed adjacent the corresponding inner narrow ends of adjoining sections, the complete assemblage being annular and adapted to surround an extensive area adjacent the base of launching apparatus for rocket-propelled objects, an annular central member, means fastening said central member to the inner end of each said section to secure said sections against displacement from the force of the launching blast of said objects, a rabbet formed in each of said side edges of each section along the margins of the upper side thereof and extending the complete length of said edges from said inner end to said outer end, the rabbeted portions of adjoining sections fitting together to define a channel, flexible resilient rubber connecting strips overlapping the abutting edges of said members and disposed in said channels, means on said connector strips and in said rabbeted portions mutually interlocked to provide a releasable connection between said adjoining sections impervious to the blast of propellent gases from said objects accompanying launching, and means interconnecting the adjoining sections near said outer edges of said sections and anchoring said sections to the ground.

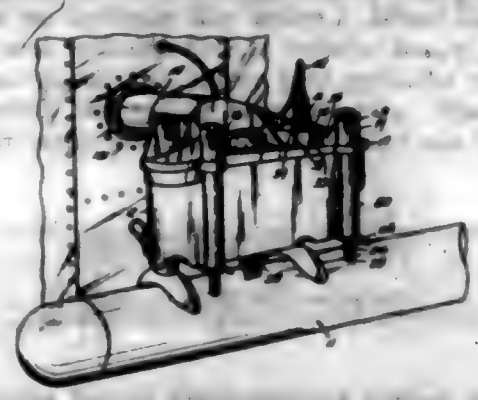
2,858,737

MISSILE OR MINE LAUNCHER

Albert J. Tolomeo, Stratford, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application April 13, 1953, Serial No. 348,170
2 Claims. (Cl. 89—1.5)

1. In a missile launcher for aircraft, a support assembly located interiorly of the aircraft, a main shaft, bearings provided in said assembly for rotatably supporting the main shaft, a worm gear sector fixed to one end of said main shaft, a manually rotatable worm meshing with the worm gear sector and operable to cause rotation of said sector, a brake drum keyed to said main shaft, a brake band cooperating with said brake drum and a manually rotatable cam operatively associated with



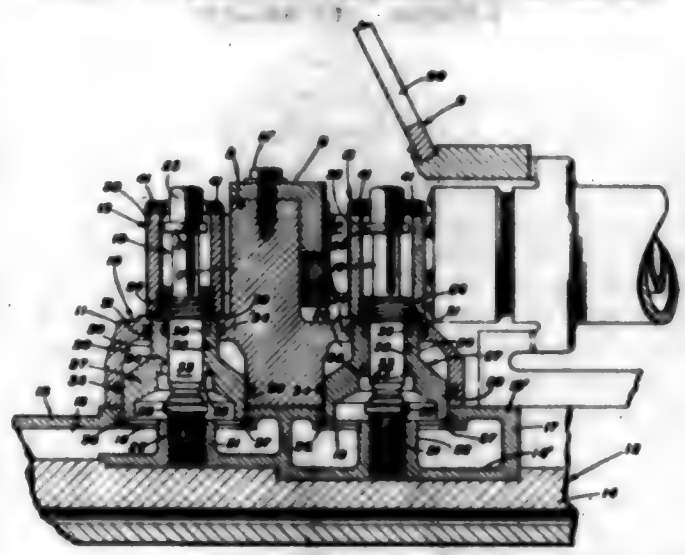
said brake drum and effective to clamp the brake band on the brake drum to prevent rotation of said brake drum and consequently of said main shaft and means for supporting a missile externally of the aircraft, said means including a substantially flat, ribbed plate merging into a cylindrical collar, the other end of said shaft being inserted into said collar and rigidly secured thereto.

2,858,738

GUN BARREL DETACHING AND RETAINING DEVICE

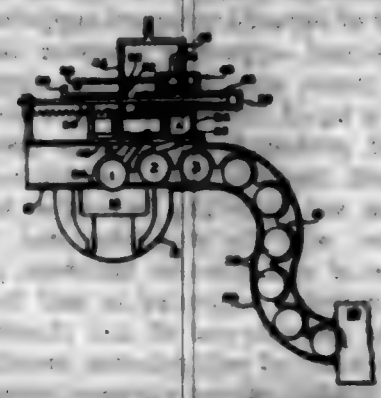
Ralph E. Armbruster, Alexandria, and Charles W. Sherertz, Arlington, Va., assignors to the United States of America as represented by the Secretary of the Navy

Application July 29, 1957, Serial No. 674,987
6 Claims. (Cl. 89—14.1)
(Granted under Title 35, U. S. Code (1952), sec. 266)



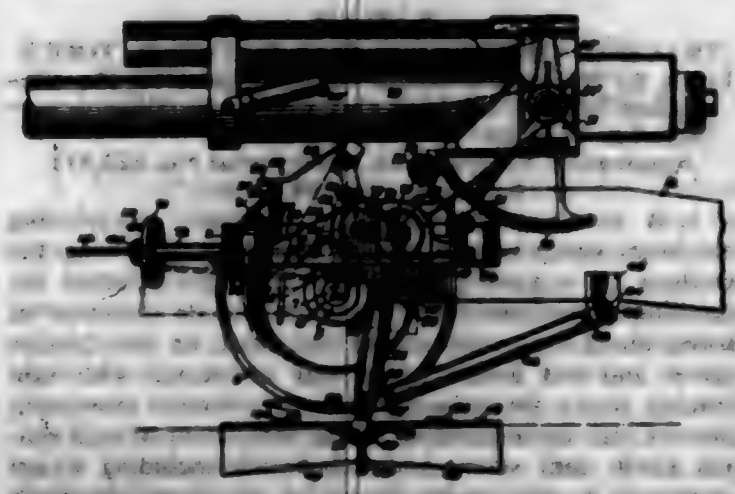
1. The combination with a water transfer fitting connectable to a manifold of a gun barrel water jacket and having passageways disposed within said fitting in communication with said manifold, of detachable means disposed within said passageways and detachably connected to said manifold for securing the fitting thereto, movable means disposed within said passageways and sealed to said fitting and the detachable means, means on said detachable means in engagement with said movable means for moving said movable means an amount sufficiently to provide a positive seal between said fitting and the manifold at said passageways, and means connectable to said fitting and the detachable means when the detachable means are detached from said manifold for elevating and maintaining said detachable means out of the path of travel of a jacket during a gun barrel replacement operation.

2,858,739
HYDRAULIC FEEDING MECHANISM FOR A FIREARM
James O. Evans, Washington, Conn., assignor to the United States of America as represented by the Secretary of the Army
Application August 17, 1956, Serial No. 604,855
4 Claims. (Cl. 89—33)



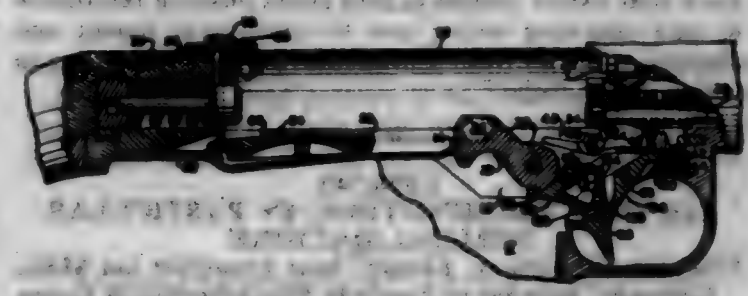
1. For an automatic firearm fed with cartridges from a belt supplied through a chute from a container and having a feed throat for positioning the leading cartridge in the belt for pick up by a bolt and a source of hydraulic fluid under pressure, a mechanism for feeding the belt to the fire arm including a housing connected to the feed end of the chute for passage of the belt to the feed throat and mounted for slidable movement relative to the firearm for establishing a bank of cartridges deliverable to the feed throat without relative movement between the belt and the chute, a pair of pawls operated by hydraulic means for moving the belt into the firearm, a shuttle valve for controlling the flow of the hydraulic fluid to said hydraulic means to actuate said pawls for engagement with successive cartridges in the belt and simultaneously urge the belt to the firearm and said housing away from the feed throat to load the bank, a throttle valve interposed between the source of hydraulic fluid and said shuttle valve and being responsive to the position of said housing respective to the firearm for controlling the rate at which the belt is fed by said pawls to the firearm and for stalling said pawls when said housing is moved to fully load the bank, and spring means for moving said housing to deliver the succeeding cartridge in the belt to the feed throat when the leading cartridge is removed therefrom and initiate the movement of the belt into the firearm by said pawls.

2,858,740
GUN CARRIAGE ROTATABLE THROUGH 360°
Michael G. Herring, Silver Hill, Md., and Nathan S. Glassman, Falls Church, Va.
Application August 1, 1952, Serial No. 301,282
20 Claims. (Cl. 89—40)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A two wheeled gun carriage comprising a first support member forming a lower carriage, an upper carriage supported for limited horizontal rotation on said lower carriage, a firing platform carried by said lower carriage and including spade means affixed to the underside thereof for supporting said carriage on the ground when said carriage is in firing position, a raising and lowering mechanism for said firing platform and means including a universal joint connecting said firing platform to said raising and lowering mechanism, said universal joint providing a cant correction for said gun carriage and permitting 360° rotation of said gun carriage about a vertical axis.

2,858,741
SELECTIVE FIRING CONTROL FOR OPEN AND CLOSED BOLT POSITIONS
Clarence E. Simpson, Williamsburg, Mass.
Application July 11, 1956, Serial No. 597,311
5 Claims. (Cl. 89—147)
(Granted under Title 35, U. S. Code (1952), sec. 266)

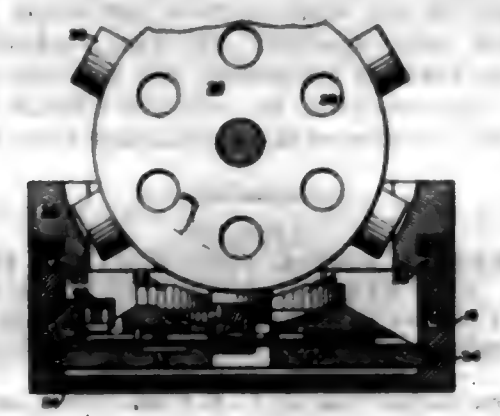


1. For a firearm provided with a receiver with a bolt reciprocable therein between a recoil and a battery position and a firing pin slidingly mounted in the bolt, a firing mechanism including a hammer pivotally mounted to the receiver for actuation from a firing pin engaging position to a cock position by the bolt during movement to the recoil position, a release member pivotally mounted to the receiver for releasably holding said hammer in the cocked position, said release member being actuatable by the bolt to release said hammer for engaging the firing pin to fire the firearm when the bolt reaches battery position, a bolt release member mounted to the rear end of the receiver for selectively engaging the bolt when in the recoil position to fire the firearm automatically from open bolt position, and a pistol grip assembly releasably mounted to the receiver, said pistol grip assembly including trigger actuated means releasably engageable with the front end of the bolt for firing the firearm automatically from open bolt position and with said hammer for selectively firing the firearm semiautomatically or automatically from closed bolt position.

2,858,742
ACTUATOR TONGUE SWITCH FOR AN AUTOMATIC FIREARM
John F. O'Brien, Jr., Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application November 4, 1953, Serial No. 390,744
3 Claims. (Cl. 89—185)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A revolver-type automatic weapon comprising a receiver, a recoil unit provided with a rotatable drum including cartridge chambers and corresponding index rollers, an actuator slidable in rearward and forward strokes with respect to said recoil unit including curved inlet and outlet grooves, a straight groove, and a switch tongue pivoted between inlet and outlet positions for alternately connecting the curved grooves corresponding thereto with said straight grove for engagement with said rollers, a mount including a cam pivoted on said receiver and

biased to a normal position for coplanar relation of said cam with said switch tongue, said switch tongue being biased to said inlet position, and means disposed for engagement with said cam when in said normal position to



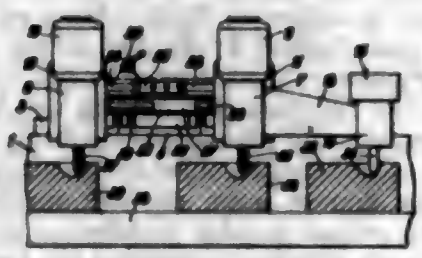
pivot said switch tongue to said outlet position responsive to said rearward stroke and to rotate said mount and displace said cam from said normal position responsive to said forward stroke.

2,858,743

COPYING MACHINE-TOOL, IN PARTICULAR MILLING MACHINE

Friedrich W. Sallwey, Langen, near Frankfurt am Main, Germany, assignor to Naxovia Maschinenfabrik Hannss Fickert G. m. b. H., Langen, near Frankfurt am Main, Germany

Application May 24, 1955, Serial No. 510,715
Claims priority, application Germany June 1, 1954
2 Claims. (Cl. 90—13.1)



1. A copying machine tool, in particular a multi-spindle milling machine for three-dimensional copying comprising in combination, a support; a pair of parallel spaced lateral cross-carriages movably mounted on said support; first and second lateral parallel spaced sliding carriages transversely mounted on said first pair of cross-carriages, each of said transverse carriages provided with a lateral projection directed towards the other carriage; first and second vertically slidable carriages, each of said carriages mounted on one said first and second transverse carriages respectively and provided with a rack; a shaft rotatably mounted on each of the said transverse carriages; a pinion secured to each of said shafts and meshing with its respective rack in the said vertical carriages; a shaft connecting the said shafts; first and second milling heads secured to said first and second vertically slidable carriages respectively; a tracer head secured to said first milling head; a double-armed lateral lever having opposed ends, one of said ends operatively connected with the projection of the first of said transverse carriages, the other of said ends adapted for attachment to the projection of said second carriage, locking means for attaching said other end of the lever with an adjacent projection of said second carriage, whereby when said other lever end is attached to said projection an identical and a mirror-like copy of an original may be produced.

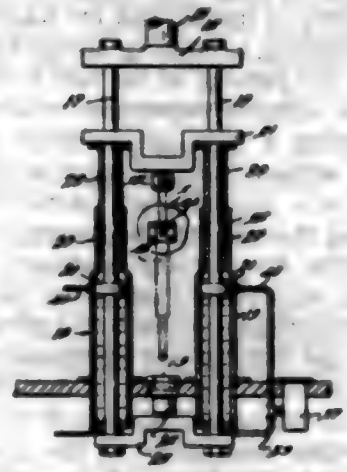
2,858,744

AUTOMATIC BROACH HANDLING MECHANISM

John M. Jachey, Detroit, Mich., assignor to Colonial Broach & Machine Company, Detroit, Mich., a corporation of Delaware

Application October 14, 1955, Serial No. 540,473
4 Claims. (Cl. 90—33)

1. In a work mechanism in which relative movement between two movable members is desired, a supporting structure, a pair of opposed members supported for movement relative to said supporting structure along a predetermined path, means supported by said supporting structure providing a liquid chamber having a bore extending parallel to said predetermined path, a piston movably supported in said chamber bore, a piston rod connected with said piston and projecting beyond at least one end of said chamber with the projecting end thereof connected with one of said movable members, a bore-fitting slide member movably supported in said bore and projecting from the opposite end of said chamber and connected with the other of said movable members, a liquid reservoir, first conduit means communicating said reservoir with said chamber at said one end thereof, and second conduit means connecting said reservoir with said



chamber at a point spaced from the opposite end thereof and in a position to be closed off by said piston before said piston reaches the opposite end of said chamber bore, said reservoir and said chamber being adapted to be filled with liquid at all times so that when said piston reaches a predetermined point in its movement toward said slide member said second conduit means will be closed and liquid pressure will act against said slide member to move the same away from said piston and thereby cause said second movable member to move relative to said first movable member, the area of said slide member against which the liquid pressure acts being different than the area of said piston against which the liquid pressure acts so that said relative movement will occur.

2,858,745

TRACING MECHANISM FOR MACHINE TOOLS

Lewis A. Dever, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Application November 15, 1956, Serial No. 622,311
6 Claims. (Cl. 90—62)

1. A tracer mechanism for automatic reproducing machines comprising a tracing finger for following the contour of a pattern, said finger being supported for rectilinear movement at right angles to its direction of travel along the pattern, an output shaft, an anti-friction screw and nut device operatively connected with said tracing finger for translating the rectilinear movement thereof into corresponding rotary movement of said output shaft, said screw and nut device including a nut connected to said tracing finger for movement therewith and a screw meshing with said nut and supported for

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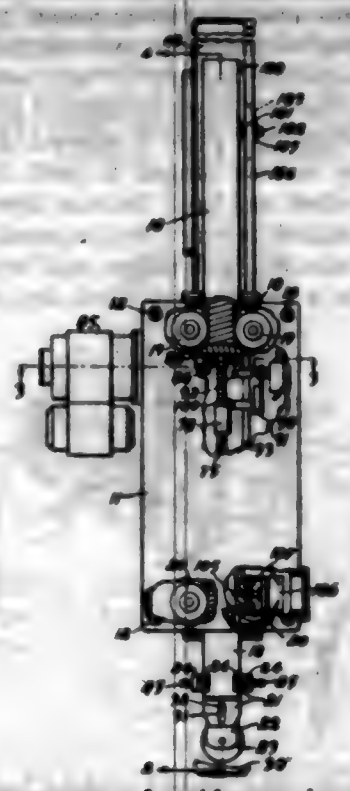
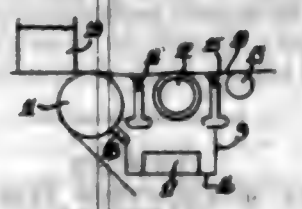
holes in said plate into positions to be embedded in said casting, first and second drive blocks

rotation without translation, and a driving connection between said screw and said output shaft whereby rectilinear displacement of said nut is converted into a corresponding angular displacement of said output shaft.



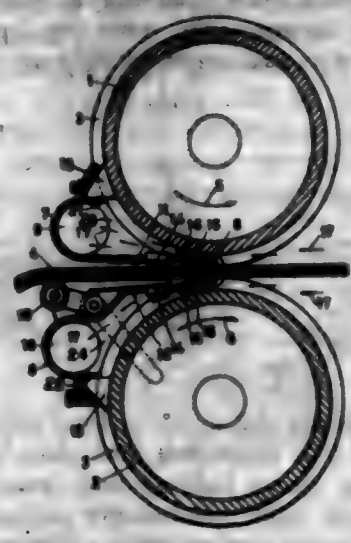
2,858,746
SUCTION FORMING PAPER MACHINE
John E. Goodwillie, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Application February 1, 1955, Serial No. 485,366
11 Claims. (Cl. 92—44)



1. In a web forming machine, a breast roll, a table roll of open-faced construction, a forming wire traveling over said rolls for carrying a paper web, a first deflector disposed intermediate said rolls below said wire, a second deflector positioned behind said table roll in close running relationship with the under side of said wire to form a seal therewith and means cooperating with said breast roll and second deflector to define a suction area along the wire traveling between the breast roll and the second deflector for dewatering said web.

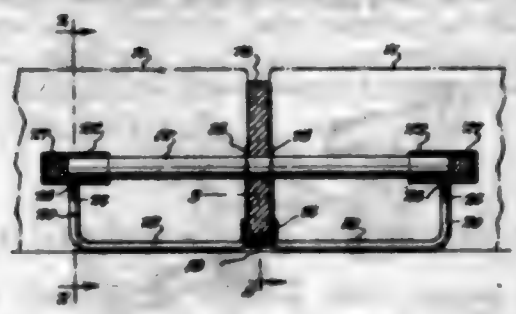
2,858,747
ROTARY PRESSES AND THE LIKE
Rudolf Ernst Wagner, Stockholm, Sweden
Application February 7, 1956, Serial No. 563,968
Claims priority, application Sweden February 7, 1955
4 Claims. (Cl. 92—49)

1. A machine of the character described for pressing out liquid from fibrous materials, comprising two co-operating press rolls adapted to press against a web of material at a pressing region between the rolls, at least one of said rolls being provided with circumferential slots in its surface, a suction device located in front of such slotted roll in the angle formed between its surface and the web of material and adapted to draw off liquid pressed out from the web of material into said angle in front of the roll and into the slots in the roll, said suction device having an edge directed toward the pressing region between said rolls, and teeth provided along said edge of said suction device and projecting into said slots in said roll, said teeth having a thickness substantially equal to the width of said slots in said press roll, and said teeth extending to the pressing region



between the rolls and sealing the slots outwards to form a substantially closed passage in each slot through which liquid pressed out of the web of material in the pressing region is drawn into the interior of the suction device.

2,858,748
LOAD TRANSFER DEVICE FOR HIGHWAY JOINTS
Alfred F. Crane, Williamsville, N. Y.
Application October 23, 1953, Serial No. 387,836
3 Claims. (Cl. 94—6)

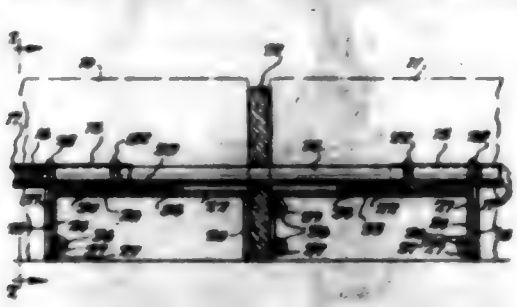


2. A load transfer device for a road joint between two adjacent pavement slabs, comprising a rigid base member extending lengthwise of said device and having webs extending horizontally and vertically to resist bending of said base, an upright member for positioning between pavement slabs and having the lower portion thereof rigidly secured to said base member to reinforce the same against bending and having holes therein spaced at intervals lengthwise thereof, a plurality of dowels extending through said holes in said upright member, a substantially U-shaped support for each dowel extending crosswise of said base member and having the middle portion thereof rigidly secured to the lower face of said base member and having the ends thereof extending upwardly into proximity to the ends of said dowels, tubular caps having a sliding telescoping connection with the ends of said dowels, a lug on each cap, and interfitting portions on each lug and on the upper end of said support for securing said caps on said supports.

2,858,749
HIGHWAY JOINT CONSTRUCTIONS
Alfred F. Crane, Williamsville, N. Y.
Application August 19, 1954, Serial No. 450,955
6 Claims. (Cl. 94—17)

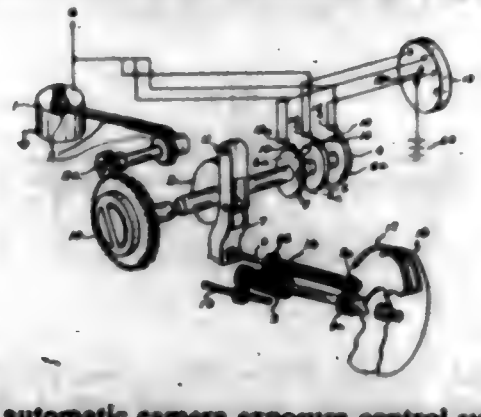
1. A highway contraction joint including an upright plate formed to extend between adjacent ends of adjacent pavement slabs, a plurality of dowels extending through

holes in said plate into positions to be embedded in said slab, supporting means comprising a plurality of units made of bent wire each having a middle portion of U-shape having the upright sides thereof spaced apart and receiving said plate and secured thereto, said units each including downwardly extending legs spaced from said U-shaped part and intermediate parts formed integral



with and connecting the upper ends of said legs with said U-shaped part and extending into close proximity to a dowel, securing means holding said dowel in fixed relation to said unit, said downwardly extending legs being provided with loops, and stringers extending through said loops and connecting said units in parallel spaced relationship.

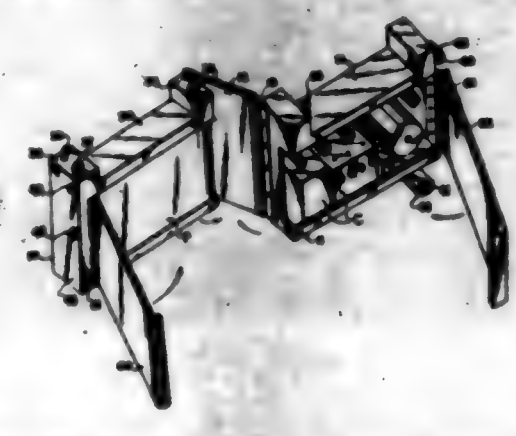
2,858,750
AUTOMATIC EXPOSURE CONTROL SYSTEM FOR AIRCRAFT GUN CAMERA INSTALLATION
Fred A. Farinet, Jr., Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application February 20, 1956, Serial No. 566,739
6 Claims. (Cl. 95—10)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. An automatic camera exposure control system comprising a multi-position electrically operated exposure control mechanism having a plurality of actuating circuits each relating to one position of said control mechanism, a photocell, sensitive relay means in circuit with said photocell and responsive to the output of said photocell for selectively applying electric power to one of said actuating circuits at a time depending upon the output level of said photocell, and means connected between said control mechanism and the preceding means and operative upon application of power to said control mechanism through one of said actuating circuits at a time to maintain the application of power to one of said circuits until a predetermined position of adjustment of said exposure control mechanism has been reached, said first named means comprising a diode connected across one of said actuating circuits acting as a conductor when the output level of said photocell has reached a predetermined minimum.

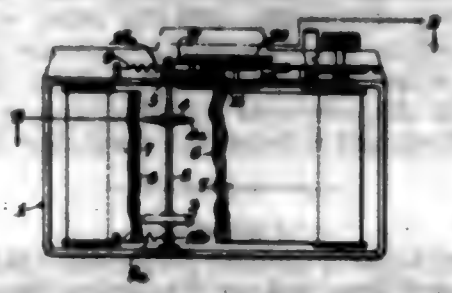
2,858,751
CASE FOR CAMERA
Rene Lopez, New York, N. Y.
Application April 13, 1956, Serial No. 578,040
1 Claim. (Cl. 95—11)

An articulated casing for a camera having a lens and shutter, comprising a first generally rectangular hollow section, front and rear doors hinged to said section, the front door exposing said lens and shutter when the door is opened, the rear door providing access to a compartment for photographic film when said rear door is opened, a cover plate hinged to one end of said section for providing further access to said compartment at said one end of said section when said plate is opened, a second generally rectangular section hinged to said cover plate to overlie said rear door and hold the rear door closed, one side of said first section having a first recessed portion with first rectangular side wall extensions, said extensions providing supports for a film winding knob and release button



for said front door, said second section having another recessed portion in one side with other wall extensions aligned with the extensions in said first recessed portion, spring means disposed within one of the recessed portions, a sighting means for the camera removably held by said spring means in the recessed portions, said sighting means including a flat rectangular body with aligned openings supporting sighting lenses having a line of sight extending substantially parallel to the optic axis of the first-named lens, said body holding said first and second sections in abutment with the second section overlying said rear door, said sections being released for opening the film compartment when said body is removed from the aligned recesses.

2,858,752
SCANNING MECHANISM FOR ROLL-FILM CAMERAS
Alfred Winkler and Willy Kaden, Munich, Germany, assignors to AGFA Aktiengesellschaft
Application February 2, 1954, Serial No. 407,958
Claims priority, application Germany March 6, 1953
7 Claims. (Cl. 95—31)



1. A film control mechanism for roll-film cameras adapted to be charged with film having a paper-leader and a light-sensitive strip; said mechanism comprising a displaceable shaft with means scanning said film for radially displacing said shaft when said light-sensitive strip passes said scanning means, and with rotating means driven by said film; a film measuring device adapted to be driven by said rotating means; and coupling means arranged on said shaft, said coupling means disconnecting said measuring device from said rotating means during winding of said paper-leader and operatively coupling said measuring device with said rotating means when said shaft is displaced during winding of said light-sensitive strip.

2,858,754

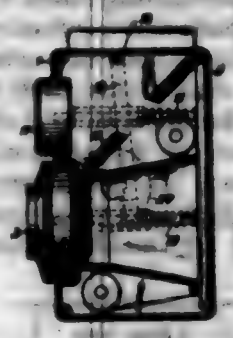
ends of the tubular shaft, annular sealing elements inset

2,858,753

TWIN-LENS PHOTOGRAPHIC REFLEX CAMERA

Willi Reiche, Braunschweig-Gliesmarode, Germany, assignor to Voigtländer-Aktiengesellschaft, Braunschweig, Germany, a corporation of Germany

Application September 1, 1955, Serial No. 531,974
Claims priority, application Germany September 3, 1954
1 Claim. (Cl. 95—44)



A photographic camera comprising a picture-taking chamber, a viewing chamber arranged above said picture-taking chamber, and a picture-taking objective and a finder objective of different focal lengths; the path of displacement for sharp focusing, of the finder objective and the path of displacement for adjusting to the distance of the object, of the picture-taking objective, being different from each other; a first adjustably guided carrier for the picture-taking objective and a second adjustably guided carrier for the finder objective, said picture-taking objective and said finder objective being fastened to said first and second carrier, respectively; a first angle part seated on said first carrier and a second angle part seated on said second carrier, said first and second angle parts being displaceable relative to said first and second carrier, respectively; a first adjusting screw arranged in said first angle part and a second adjusting screw in said second angle part; a rocking lever swingably arranged at one of its ends on a bolt fastened to the camera casing, said first carrier being under the effect of a first spring and said second carrier being under the effect of a second spring, in order to keep the first and second adjusting screw in said first and second carrier, respectively, in permanent contact with the rocking lever, which is arranged on said bolt in such a manner that the adjusting screw arranged on the first carrier is capable of contacting the rocking lever in a predetermined first range spaced from said bolt, while the adjusting screw arranged on the second carrier is capable of contacting the rocking lever in a predetermined second range which is different from said first range and is spaced from said bolt; a rotatable adjusting knob arranged on the camera body, and a cam connected with said rotatable knob, the part located between the points of contact with said adjusting screws, of the rocking lever, lying against said cam which is displaceable by said rotatable knob, in order to cause the rocking lever to swing and to impart to the picture-taking objective and the finder objective adjusting displacements which correspond to the focal lengths of said objectives and are different from each other.

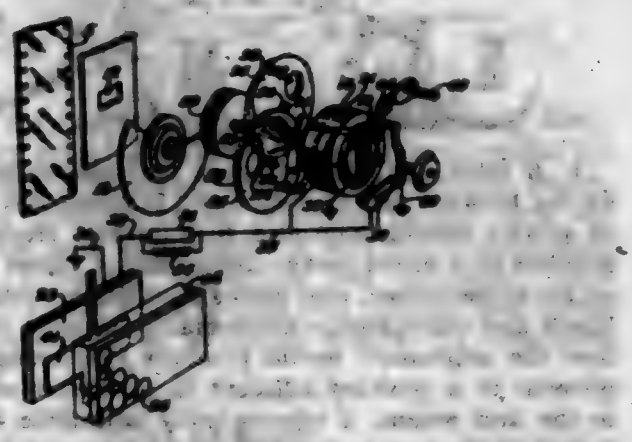
2,858,754

EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERAS

John P. Bagby, Skokie, Stanley R. Frocland, Evanston, and Marvin W. La Rue, Jr., Park Ridge, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Original application August 13, 1957, Serial No. 677,856, now Patent No. 2,841,064, dated July 1, 1958. Divided and this application April 8, 1958, Serial No. 730,741
8 Claims. (Cl. 95—64)

1. In a photographic camera, an exposure aperture, a pair of diaphragm members mounted for anti-friction oscillation on spaced axes normal to the plane of said aperture and spaced laterally of said aperture, said diaphragm members lying in spaced planes generally parallel to each other and the plane of the aperture and having portions thereof overlapping each other and said aperture, a positive gear drive connection between said diaphragm members connecting them in an initially timed relation relative to each other and to oscillate at the same angular velocity, said diaphragm members being provided with arcuate openings therethrough tapering in with and extending angularly of said diaphragm members and arranged to intersect centrally of said exposure aperture with portions of substantially corresponding width to form a diaphragm opening variable with angular displacement of said diaphragm members in said timed relation so that the diaphragm opening is maintained in a constantly substantially centered relation relative to said exposure aperture, said gear drive connection comprising respective gear sections of the same gear radius rigid with said diaphragm members and at least one intermediate gear drivingly interconnected with said respective gears.



2,858,755

MOBILE IMPLEMENT FOR FLAME TREATING SOIL

Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

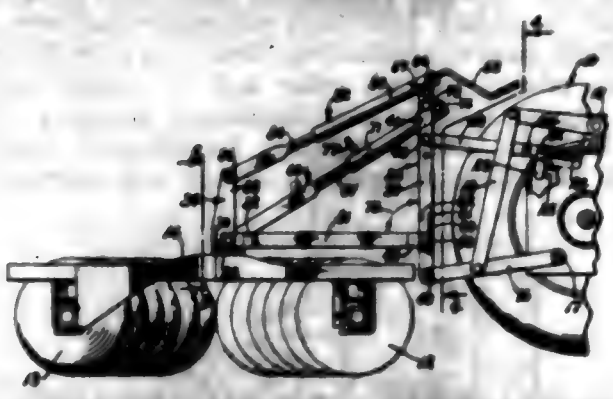
Application February 15, 1955, Serial No. 488,335
8 Claims. (Cl. 97—10)

1. In a mobile agricultural implement for treating the soil, the combination of, a plow, a harrow for breaking up the plowed soil, revolving means for comminuting of the soil broken up by the harrow and throwing the comminuted soil upwardly and rearwardly, an elevating conveyor for receiving the thrown comminuted soil, a chamber having an opening in the top thereof for receiving the soil discharged from said elevating conveyor, means for distributing said soil throughout said chamber, means within said chamber for directing flames at said soil distributed within said chamber to burn out weeds and weed seed therein, and means for discharging the flame treated soil onto the ground.

the ceiling of a room, said cabinet having a pair of ports

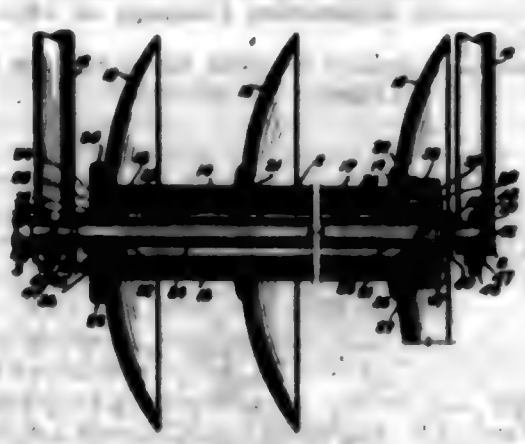
2,858,761

2,858,756
HARROW HITCH
Manich C. Magarian, Fresno, Calif.
Application April 15, 1954, Serial No. 423,319
8 Claims. (Cl. 97—46.07)



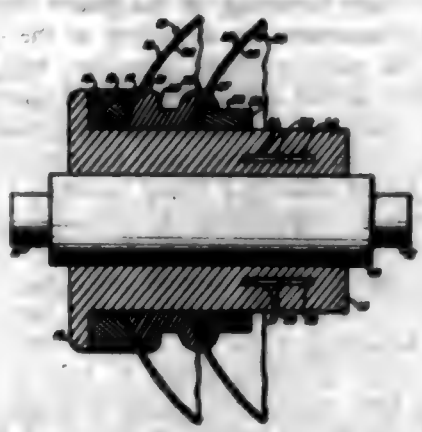
1. A hitch, for connecting an agricultural implement having forward and rearward end portions and a center of gravity intermediate said forward and rearward end portions to a prime mover, comprising a frame mounted on the prime mover, arm means pivotally mounted on the frame and substantially horizontally extended therefrom over the implement, means pivotally connecting the implement at a position adjacent to its center of gravity to the arm means, a telescopically adjustable link connected to the arm means and to the frame at a position in elevationally spaced relation to said arm means whereby contraction and extension of the link elevationally pivots the arms and raises and lowers the implement connected thereto, a bracket rigidly mounted on the implement adjacent to the center of gravity thereof, and a second telescopically adjustable link connected to the bracket and to the frame at a position in elevationally spaced relation to the arm means whereby contraction and extension of the second link adjustably tips the implement on the arm means.

2,858,757
DISK GANG AND MOUNTING THEREFOR
Boyd A. Davies, Pratt, Kans.
Application September 12, 1955, Serial No. 533,811
2 Claims. (Cl. 97—54)



1. In a disk gang plow including a frame, spaced apart arms projecting from the frame, a tubular shaft between said arms and of shorter length than the space between said arms to provide a space therebetween at ends of the tubular shaft, an axle shaft extending coaxially through the tubular shaft and having ends projecting from the ends of the tubular shaft for support by said arms, clamps for securing said ends of the axle shaft to said arms, plow disks on the tubular shaft, said tubular shaft having counterbores in the ends thereof to provide inset annular shoulders, antifraction bearings in said counterbores having outer races abutting said shoulders and having inner races movable axially on said axle shaft, spacers on said axle shaft abutting outer ends of the inner races and extending outwardly to near ends of the tubular shaft, annular sealing elements inset in said bores of the tubular shaft and having peripheral sealing contact with walls of the bores and with the peripheries of said spacers, an annular stop fixed to one projecting end of the axle shaft and having abutment with the outer end of the spacer at that end of the axle shaft, said other projecting end of the axle shaft having a threaded portion thereon extending from the outer end of the spacer and terminating short of the arm at that end of the tubular shaft, and a nut on said threaded portion separate from said clamp and spaced from the arm which supports that end of the shaft to cooperate with the annular stop at the opposite end of the shaft for adjusting the inner races of the antifriction bearings relative to the outer races, said space between the terminal end of the tubular shaft and said arm providing access to said nut for said adjustment without loosening said clamp.

2,858,758
MOUNTING AND SECURING STRUCTURE FOR ROTARY PLOW DISCS
Ryland R. Carter, Wasco, Calif.
Application March 7, 1955, Serial No. 492,340
1 Claim. (Cl. 97—238)



A mounting and securing structure for rotary plow discs, said structure comprising a shaft, journal bearings at opposite ends of said shaft, a cylindrical body mounted on said shaft, an annular outwardly extending flange at one end of said body, an abutment collar slidably disposed on said body, a square end face on said collar engaging said flange, the opposite end face of said collar being concave, a concave convex plow disc disposed on said body with the convex face engaging the concave end face of said collar, a spacing collar slidably disposed on said body, one end face of said spacing collar being convex and engaging the concave face of said disc and the opposite end face being concave, a second concave convex plow disc disposed on said body with the convex face engaging the concave end face of said spacing collar, a locking collar slidably disposed on said body, one end face of said locking collar being convex and engaging the concave face of said second disc and the opposite end face being square, diametrically spaced transverse slots extending through said body, a portion of said slots being disposed axially inwardly of the square end of said locking collar and tapered locking keys disposed in said slots and engaging the square end face on said locking collar to lock said body, collars and plow discs together as a unit.

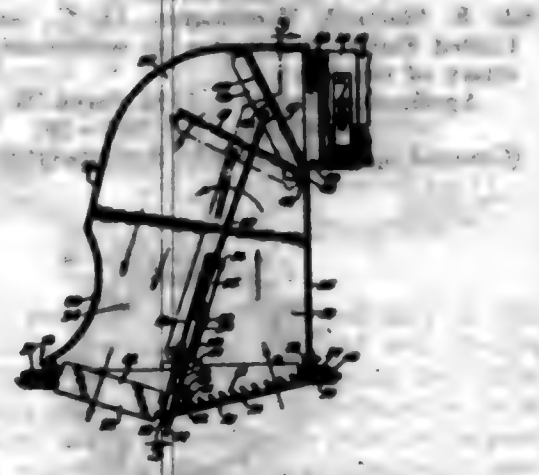
2,858,759
CEILING AIR MIXER CABINET AND METHOD OF HEATING
Jack W. Kies and Charles D. Mattingly, Wichita, Kans., assignors to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Application March 21, 1955, Serial No. 495,397
4 Claims. (Cl. 98—38)

1. In a heating system, a generally rectangular air mixer cabinet adapted to be mounted in an opening in

the conveyor and mounted on an axis spaced from its center of gravity so that said carriage normally extends

sudden decrease in the pressure of the gas at said first outlet port to move said valve means to a second posi-

the ceiling of a room, said cabinet having a pair of ports in the open bottom thereof adapted to be positioned adjacent the ceiling of a room for communication with the room space, said ports being angularly related to each other with adjacent portions of each port being lower than the remote portion, one of said ports providing an inlet for room air and the other an outlet for mixed air, the wall of said cabinet abutting only said inlet port having a heated air inlet opening adjacent the top of said cabinet, the wall of said cabinet abutting only said outlet port diverging at the bottom thereof from the first-mentioned wall and being curved at the top thereof toward said first-mentioned wall to direct incoming air from said

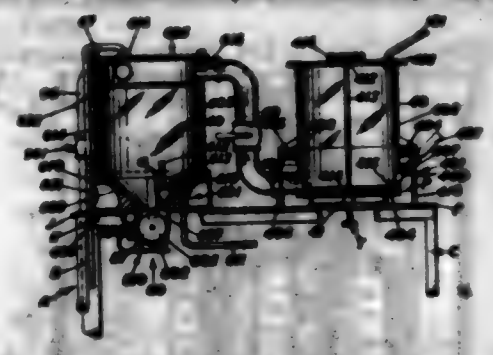


heated air inlet opening toward said outlet, a partition element extending upwardly within said cabinet between said ports to separate the same, said partition element terminating a spaced distance below said heated air inlet opening to provide a channel for flow of air from said inlet port over said partition toward the outlet port under the influence of air entering said heated air inlet opening, said upwardly-extending partition element also diverging at the bottom thereof from said first-mentioned wall, and a damper mounted in said casing and pivotable about the lower edge of said heated air inlet opening for obstructing the same and thereby reducing the quantity of heated air entering said casing and flowing over said partition element toward said outlet port.

2,858,760
DIFFUSER
Harold F. Lafferup, Cedar Rapids, Iowa, assignor to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa
Application November 27, 1956, Serial No. 624,559
4 Claims. (Cl. 98—40)

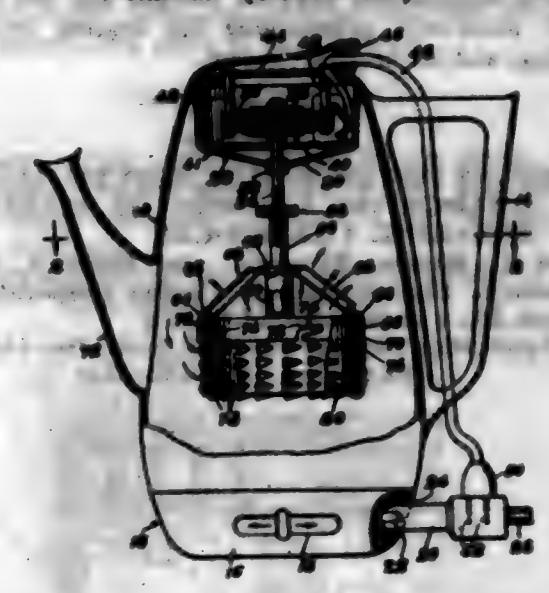
1. In a diffuser for the outlet of an air duct, a casing substantially rectangular in plan open at its lower end and having flat side walls and a top wall, and substantially segmental deflectors cut from said top wall and integrally attached to the central portion thereof at their inner ends, said deflectors terminating short of said side walls and being individually bendable downwardly and inwardly of said casing within the height of the latter and to variable extent for varying the volume and angle of flow of air entering said casing through the openings in said top wall corresponding to said deflectors.

2,858,761
POPCORN MACHINE
Franklin H. Dennies, Stratford, Ontario, Canada
Application April 25, 1955, Serial No. 503,613
1 Claim. (Cl. 99—336.7)



Means for popping corn comprising a popping chamber, a corn kernel area at the bottom thereof, means for heating said corn kernel area, hot air heating means, means for guiding hot air produced thereby into and through the corn kernel area of said pot, a dispensing chamber, a conduit connecting said chambers, valve means for opening and closing said conduit and means for air evacuating to a desired degree the dispensing chamber.

2,858,762
COFFEE MAKER
Maurice Ross Wade, Fort Wayne, Ind.
Application April 29, 1957, Serial No. 655,891
4 Claims. (Cl. 99—287)



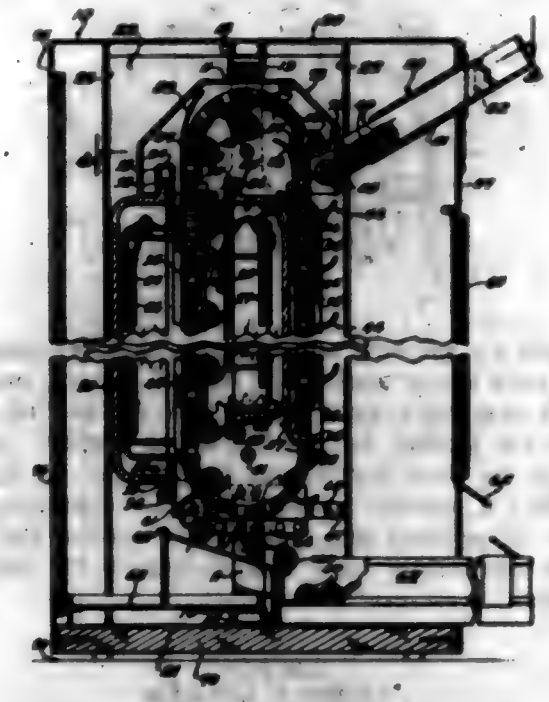
1. A beverage brewing device comprising: a container open at one end, and agitating means removably supported within said open end of the container in condition to agitate the contents thereof, said agitating means including a motor having a shaft extending axially within the interior of said container, a perforated basket cover secured to and rotating with the shaft, a plurality of blades rigid with the shaft and cover and pitched to draw water upwardly through the perforations of the cover responsive to rotation of the cover, shaft, and blades in a common direction, and a perforated basket removably connected to and depending from the cover and adapted to hold a quantity of a flavor-producing material.

2,858,763
ROASTING MACHINE FOR WIENERS
Abe M. Bloom, Van Nuys, Calif.
Application November 13, 1953, Serial No. 391,968
18 Claims. (Cl. 99—427)

1. In apparatus for cooking food: an endless conveyor structure; a heating element along which a portion of the conveyor passes; a food carriage pivotally carried by

bottom of the reservoir a conduit between said reser-

the conveyor and mounted on an axis spaced from its center of gravity so that said carriage normally extends pendantly with respect to its axis of mounting; a guide pin carried by the carriage; and a track cooperable with the guide pin for determining the angular position of said



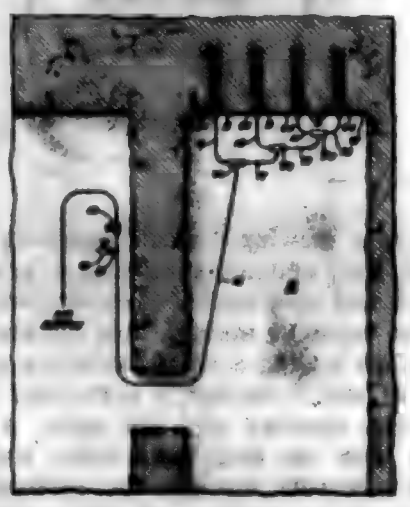
carriage about its pivotal mounting sufficiently away from its normal pendant position that the weight of the carriage ensures engagement between the pin and the track, the guide accurately determining the spacing between the carriage and the heating element.

2,858,764

MEANS FOR EFFECTING SEQUENTIAL DISCHARGE OF A SERIES OF MATERIAL BREAKING CARTRIDGES

James C. Hesson, Riverdale, and James A. Swenson, Chicago, Ill., assignors to Cardox Corporation, Chicago, Ill., a corporation of Illinois

Application October 18, 1956, Serial No. 616,634
18 Claims. (Cl. 102—22)



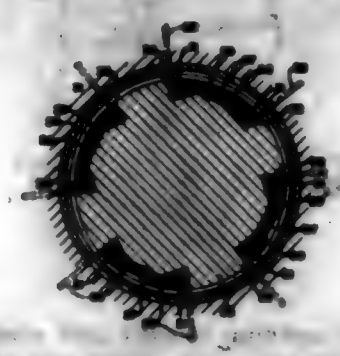
1. Apparatus for blasting down coal in a mine, comprising a source of compressed gas, a gas supply line leading from said source to a point adjacent the coal to be blasted, a valve mounted in said supply line at a point remote from the coal to be blasted for controlling the flow of gas through the supply line, a pressure fluid operated flow directing device having an inlet port connected to said supply line at said point adjacent the coal and having a pair of outlet ports, valve means in said pressure fluid operated device movable to a first position by the admission of compressed gas to said inlet port to permit the free flow of gas from the inlet to a first outlet port and to close the second outlet port, means responsive to a sudden decrease in the pressure of the gas at said first outlet port to move said valve means to a second position to close said first outlet port and to permit the free flow of gas from the inlet to the second outlet port, a blasting cartridge arranged in blasting relationship with the coal for receiving a charge of compressed gas and for releasing said charge when the pressure thereof reaches a predetermined value, and a branch line connecting said first outlet port to said cartridge for introducing said charge to the latter.

2,858,765

SPRING-LOADED, LOCKING HINGE FIN ASSEMBLY

Dale E. Stertzell, Washington, D. C., assignor to the United States of America as represented by the Secretary of the Navy

Application August 7, 1956, Serial No. 602,674
1 Claim. (Cl. 102—50)
(Granted under Title 35, U. S. Code (1952), sec. 266)



A stabilizing fin assembly for an ordnance missile comprising an elongated body having a plurality of pairs of diametrically-disposed longitudinal recesses formed in the periphery thereof, each recess having radially-disposed planar side surfaces and an intermediate planar surface, said intermediate planar surface being disposed generally perpendicular to the radius midway between said side surfaces, a pair of sets of support members disposed in each of said recesses respectively, one set of members of said pair being fixed to said body adjacent one side surface of the respective recess and the other set of members of said pair being fixed to said body adjacent the opposite side surface of said recess, a plurality of hinge shafts, each of said hinge shafts being carried by each set of said sets of members respectively, a plurality of pairs of flat planar fins, each of said pairs of fins being mounted for pivotal movement on the pair of hinge shafts of each recess respectively, one of said pair of fins being normally folded inwardly and in contact with said intermediate planar surface, the other of said pair of fins being normally folded inwardly and in overlapping contact with said one fin, a spring mounted on each of said hinge shafts respectively, each spring being operatively connected to said body and its respective fin and exerting a torsional force tending to pivot the fin outwardly to a position in which the fin is abutting the adjacent side surface and is radially disposed, and means locking said fins in said radially-disposed positions.

2,858,766

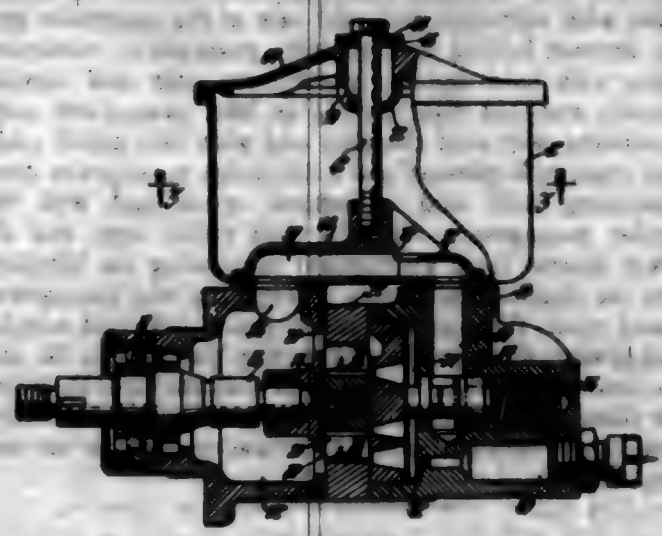
SUPERCHARGING PUMP

Dimitar Teschboff, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 19, 1955, Serial No. 534,956
1 Claim. (Cl. 103—42)

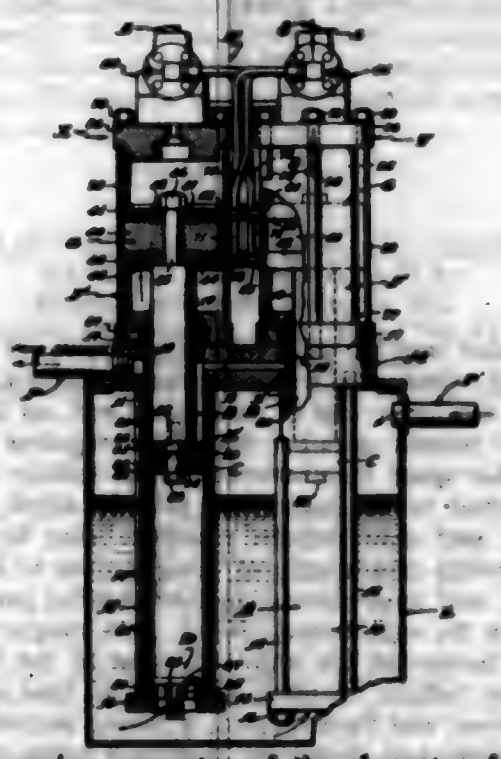
A pump and reservoir assembly in which the reservoir is carried by the pump in superposed relation and has a pair of openings in the bottom thereof and which comprises a member superposed over said openings within the reservoir to provide in conjunction with the

bottom of the reservoir a conduit between said openings, one of said openings being larger than the other and communicating with the suction side of said pump, the other of said openings having communication with the discharge side of said pump through a valve-con-



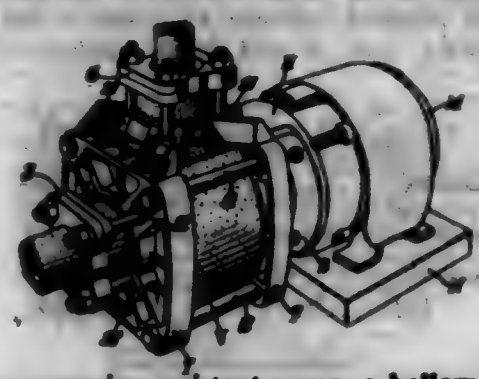
trolled by-pass passage, said conduit including a relatively unrestricted portion overlying said one opening and a relatively restricted portion overlying said other of said openings, said member being apertured so as to open said conduit to said reservoir at a point just beyond said relatively restricted portion and adjacent said unrestricted portion.

2,858,767
PUMPING APPARATUS
Neil V. Smith, Los Angeles, Calif.
Application October 13, 1955, Serial No. 540,225
13 Claims. (Cl. 103—69)



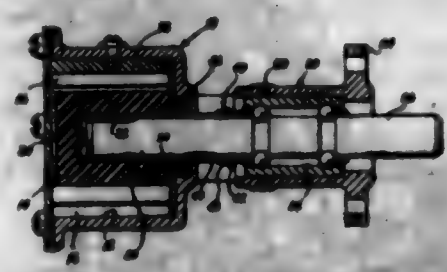
1. A pumping apparatus of the character described, including, an elongate pump barrel, a head closing one end of the barrel, the other end of the barrel being in open communication with a delivery line, a valve admitting fluid to the head end of the barrel, a ram entering the barrel at said other end and movable longitudinally relative thereto, said ram being one-half the effective area of the effective area of the barrel, a piston at the end of the ram and slidably engaged in the barrel, and a valve allowing fluid to pass the piston to be delivered from the head end of the barrel to the said other end thereof, whereby equal amount of fluid is delivered from said line upon reciprocation of the ram in either direction.

2,858,768
CORROSION RESISTANT PUMP
William M. Gaylord, Jr., Cleveland, Henry S. Rauh, Bay Village, and Albert F. Hauch, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Application August 12, 1954, Serial No. 449,389
2 Claims. (Cl. 103—87)



1. In a corrosion resistant pump, a hollow open sided barrel shaped metal casting comprising a volute support flange and a motor engaging flange and integral upper and lower connecting struts therebetween, an impervious graphite casing and cover, a metal cover flange casting, said graphite parts being bolted between said castings, a motor bolted to said motor engaging flange and having a hollow motor shaft with shoulders, an impeller shaft sleeved onto said hollow motor shaft and engaging said shoulders, an impervious graphite impeller cemented onto said impeller shaft, and a tension rod passing through said hollow motor shaft and screwed into said impeller shaft but terminating short of said impeller.

2,858,769
PUMP WITH SEALED IMPELLER HUB
Warren Doble, North Hollywood, Calif., assignor to Jabsco Pump Company, Burbank, Calif., a corporation of California
Application August 22, 1955, Serial No. 529,713
13 Claims. (Cl. 103—117)



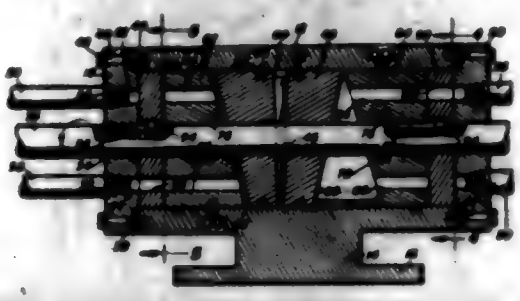
1. In a pump, the combination of: a pump housing providing an impeller chamber; a shaft extending into said impeller chamber; an impeller in said impeller chamber and including an impeller hub encircling said shaft, said impeller being fixed on said hub, said impeller hub loosely fitting said shaft so as to be readily removable therefrom; means for transmitting rotation of said shaft to said impeller hub; a sleeve portion fixed on said impeller hub and projecting from one end of said impeller along and encircling said shaft; and means engaging and providing a fluid-tight seal between said sleeve portion and said shaft.

2,858,770
DUAL CHAMBERED FLUID POWER DEVICE
Stephen G. Reynolds, Terre Haute, Ind., assignor of fifty percent to Tolbert C. Rushing, Waveland, Ind.
Application February 29, 1956, Serial No. 568,990
7 Claims. (Cl. 103—137)

1. A fluid power device comprising a cylindrical housing, end plates forming closures for said housing, a power shaft extending longitudinally through said housing and rotatably and slidably journaled in said end plates, a central cylindrical rotor mounted rigidly on said shaft, a

2,858,771

stator disposed adjacent each end of the rotor and adjacent each end plate, each of said stators and end plates having aligned inlet and outlet bores disposed diametrically opposite each other, said rotor having inclined laterally converging surfaces, said stators having inner inclined surfaces disposed in spaced and substantially parallel relation with the long length of the rotor being generally equal to the distance between the stators, and a disk valve disposed between each stator and an adjacent end plate, each of said valves having an arcuate



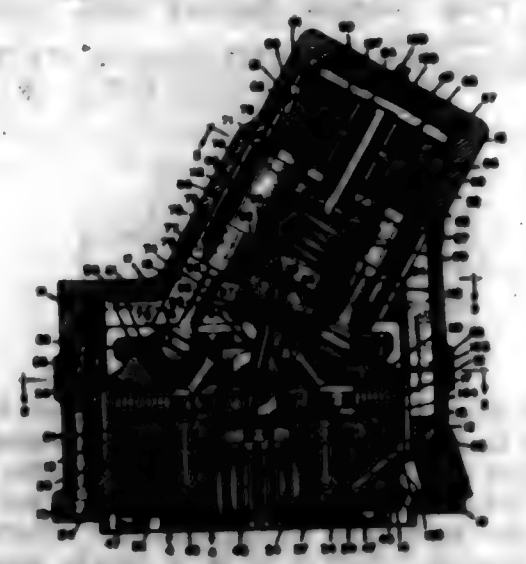
slot for selective alignment with the inlet and outlet bores in the end plates and stators for admitting and discharging fluid between the inclined surface on the stator and adjacent surface on the rotor, rotation of the shaft causing axial movement of the rotor and shaft in relation to the stators and housing, said rotor having the inclined surface thereon selectively positioned in diverging relation to the surface on the stator and in parallel adjacent relation at diametric points of rotation for varying the volume of the space between the rotor and stator.

2,858,771

COOLING SYSTEM FOR HYDRAULIC PUMPS

Richard T. Cornelius, Minneapolis, Minn.

Application October 27, 1955, Serial No. 543,116
3 Claims. (Cl. 103—162)



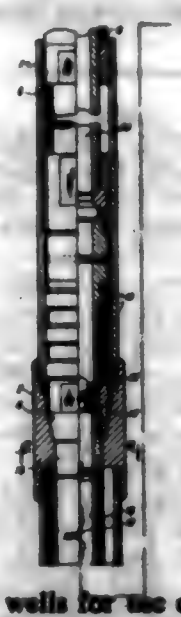
1. In a pump, a case having a base and a dome extending outwardly therefrom, said case being formed with a chamber in the same containing a lubricant, a race in said base having a bore providing a cylindrical surface and a radial surface intersecting the same, a rotor in said base having corresponding cylindrical and radial surfaces spaced from the surfaces of said race to form a cylindrical space and a radial space, said race being spaced from a wall of said base to form an annular passageway communicating with said radial space, a roller bearing cage in said cylindrical space, rollers received within said cage and engaging said cylindrical surfaces, a roller bearing cage in said radial space, rollers received in said cage and engaging said radial surfaces, said cages having apertures therein for conducting the lubricant through said spaces, a cylinder block mounted for rotation in said dome and with its axis at an angle with the axis of said rotor, said cylinder block having a number of bores parallel to the axis of rotation thereof, pistons slidably in said bores, connecting rods acting between said rotor and pistons and procuring reciprocation of said pistons, means for driving said cylinder block from said rotor, said cylinder block being spaced from a wall of said dome to provide an annular channel therebetween communicating with said chamber, said case at the outermost portion thereof having a connecting passageway communicating with said annular passageway and said annular channel, and said rotor having an inlet passageway communicating with said chamber and with said radial space at its innermost portion and a discharge passageway communicating with said cylindrical space and with the annular passageway, whereby said radial cage and the rollers therein form an impeller circulating the lubricant from the chamber in the case through the inlet passageway in said rotor, through said radial space, into said annular passageway, through the connecting passageway in said case, into said annular channel and back into said chamber, and from said annular passageway through said outlet passageway through said cylindrical space and to said radial space.

2,858,772

SAND TRAP FOR INSERT TYPE DEEP WELL PUMP

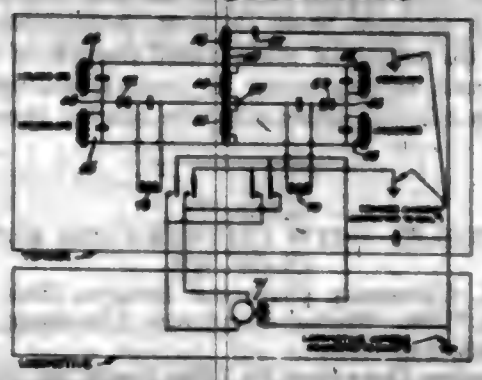
Arlie B. Brooks, Jacksboro, Tex.

Application September 13, 1954, Serial No. 455,411
6 Claims. (Cl. 103—229)



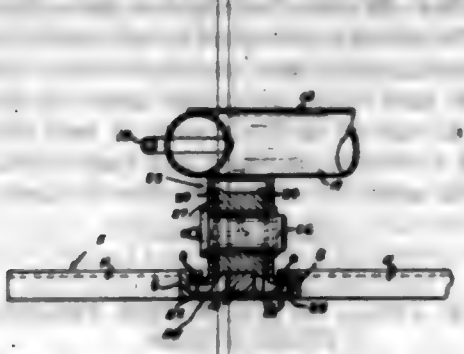
1. A sand trap for wells for use on the lower end of a pump rod, which sand trap comprises a nipple for attachment to the lower end of said pump rod, an inner and an outer tubular member telescoped together to form an annular space therebetween, which tubular members are attached to the lower end of said nipple, a body member, said outer tubular member being imperforate and extending downward and being secured to said body member, said inner tubular member having perforations formed in the wall thereof, which inner tubular member extends downward for only a portion of the length of said outer tubular member and has at least a portion of the lower end thereof open, a tubing secured to said body member and upstanding therefrom within said outer tubular member for a portion of the length thereof, so as to form an annular chamber between the outer diameter of said tubing and the inner diameter of said outer tubular member, said body member having a substantially axial passage formed therein, which passage is in communication with the interior of said upstanding tubing, said upstanding tubing being closed at the upper end thereof, said upstanding tubing having lateral openings formed in the wall thereof near the upper end, and said body member forming a bottom for said chamber formed between said upstanding tubing and said outer tubular member.

2,858,773
FREQUENCY RESPONSIVE CONTROL DEVICE
George C. Eldridge, Jr., Wetumpka, N. J.
Application September 8, 1954, Serial No. 454,746
3 Claims. (Cl. 104—149)

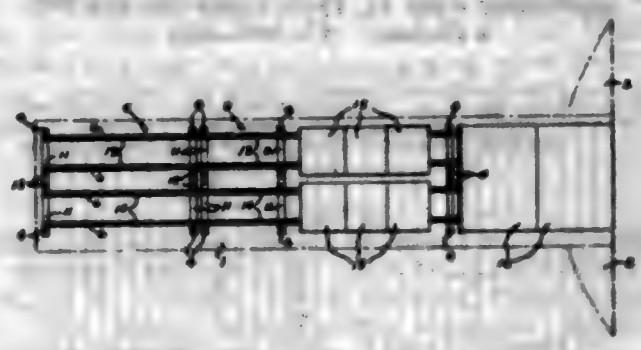


1. In a system for the control of a model electric train having a reversible electric drive motor operated by track voltage, an electrical bridge on the train and comprising a pair of bridge networks having a common input circuit and separate output circuits, said bridge networks being disposed on opposite sides of the bridge and each including a pair of arms having a capacitor and an inductor arranged in parallel therein, each inductor having a magnetostrictive core, the magnetostrictive core in one arm being responsive to oscillations of a different predetermined frequency than that of the magnetostrictive core in the other arm, means for selectively supplying to said common input circuit bridge-unbalancing voltages of different predetermined frequencies corresponding to the different predetermined frequencies of the respective magnetostrictive cores, and means for changing the polarity of the track-voltage supplied to said motor to reverse the direction of rotation thereof including a pair of relays connected to the respective output circuits of said bridge networks, each of said connections between said relays and said output circuits including a series-connected rectifier, whereby the relays are selectively energized from the output circuits of the respective bridge networks when the bridge-unbalancing voltages are applied to said common input circuit.

2,858,774
AIRCRAFT TRACK AND PALLET LOADING SYSTEM AND APPARATUS
Dallas Lee Batten, Bethesda, Md.
Application September 9, 1955, Serial No. 533,534
2 Claims. (Cl. 105—366)
(Granted under Title 35, U. S. Code (1952), sec. 266)

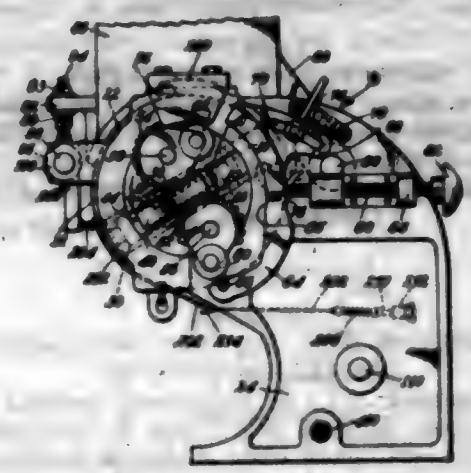


1. A system for the aerial transportation of cargo on preloaded pallets said individual pallets being standardized in form and size for interchangeability, and use in multiples, the provision for use therewith of a cargo aircraft having a fuselage inclosure shell having a delivery opening and an adjacent cargo receiving compartment for receiving said pallets, the compartment includes a cargo supporting floor having cargo tiedown securing means receiving sockets disposed in spaced parallel rows leading away from said cargo receiving opening and through said compartment, and cargo tiedown securing means removably secured in said sockets, a plurality of interchangeable track units, each comprising spaced parallel rails and transverse tie members apertured to receive said cargo tiedown securing means therethrough to secure said track units on said floor in aligned end-to-end relation, said spaced parallel rails each having oppositely extending pallet holddown flanges extending substantially throughout the length of the track units in parallel relation to the rails at opposite sides thereof, said pallets each comprising a cargo supporting platform having means for securing a cargo thereon against displacement, a plurality of pairs of spaced leg members de-



pending from the opposite sides of the platform to straddle said rails, a roller journalled between each pair of said spaced leg members below the pallet platform with the lower edge of its periphery above the lower extremities of said legs to roll on said rails when moving said pallets in said compartment, oppositely extending flange means projecting laterally from the extremities of each pair of said spaced leg members to ride under said oppositely extending flanges at opposite sides of said rails to limit vertical displacement between said rollers and said rails and form supporting feet for said pallets for supporting said pallets when not disposed on said rails with the pallet platform in vertically spaced relation above a supporting surface therefor.

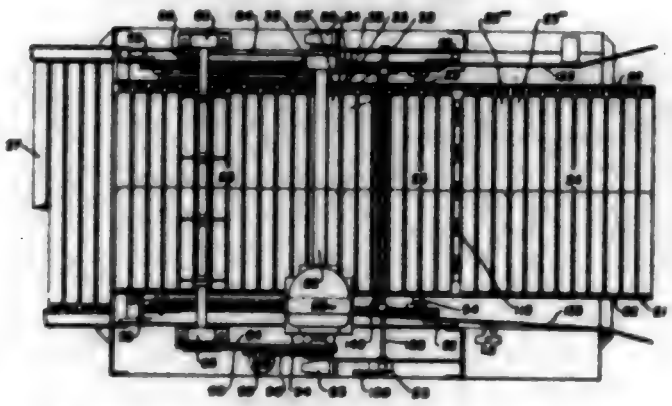
2,858,775
DOUGH HANDLING MACHINE
Fred D. Marasso, Joliet, Ill., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N. Y., a corporation of New Jersey
Application August 11, 1954, Serial No. 449,690
16 Claims. (Cl. 107—15)



8. A dough handling machine with a rotary drum, a scaling piston movable in said drum transversely of the

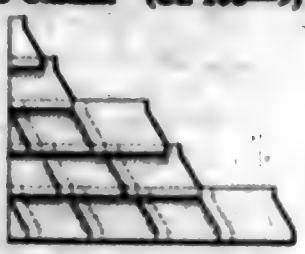
longitudinal axis thereof, means operative to reciprocate said piston, said means including slide means at one end of said drum oriented parallel to the movement of said piston, a gear rack movably mounted in said slide, a gear sector rotatably mounted on said end of said drum to engage said gear rack, a cam follower on said gear sector, and an adjustable stationary cam positioned about said end of said drum to engage said cam follower to rotate said gear sector in a predetermined manner to reciprocate said gear rack and with it said piston during the rotation of said drum.

2,858,776
LOAF SPLITTER
Hiram E. Temple, York, Pa., assignor, by mesne assignments, to Capitol Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania
Application April 12, 1955, Serial No. 500,791
6 Claims. (Cl. 107—22)



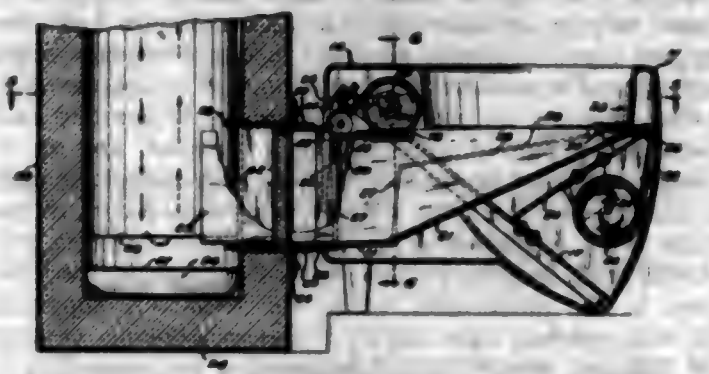
1. In an apparatus for splitting the top portions of dough loaves, the combination of: supporting structure providing a loaf splitting station; a powered roll conveyor carried by said supporting structure for transporting pans of dough through said apparatus; an endless chain conveyor along that portion of said roll conveyor in said loaf splitting station having sweep means to positively engage and propel pans of dough through said loaf splitting station; rotatable cutting discs in said loaf splitting station movable between an extended position wherein they are in position for cutting the top portions of the loaves in said pans and a retracted position wherein they are out of cutting position; means for selectively moving said endless chain conveyor between an extended position wherein said sweep means on the top run thereof is above the conveying level of said powered roll conveyor to convey pans through said loaf splitting station, and to a retracted position wherein said sweep means is below the conveying level of said powered roll conveyor whereby pans of dough are conveyed through said apparatus by said powered roll conveyor when said rotatable cutting discs and said endless conveyor are rendered inoperative.

2,858,777
DUTCH LAP SHINGLING
Clyde C. Schuetz, Prospect Heights, Ill., assignor to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Application December 8, 1955, Serial No. 551,841
5 Claims. (Cl. 108—9)



1. A Dutch-lap shingle application comprising a plurality of offset shingles arranged in a plurality of substantially horizontal parallel overlapping courses; each shingle having a substantially equal effective offset; each course including a plurality of like shingles and a starter piece, all of said shingles in a course being arranged in side-by-side overlapping relation, the side overlap of said pieces and shingles being uniform throughout said application; the length of the exposed portion of the lower edge of each shingle being an integral multiple of the sum of the effective offset and side overlap thereof.

2,858,778
DRY TOILET WITH INCINERATOR PASSAGE CLOSURE
Vernon E. Glenzman, Cleveland Heights, Ohio, assignor to The White Motor Company, Cleveland, Ohio, a corporation of Ohio
Application December 28, 1956, Serial No. 629,583
9 Claims. (Cl. 110—9)

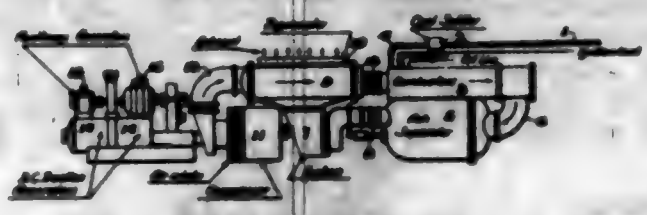


1. Apparatus for the combustion of fecal matter comprising a closet having an opening in the top thereof, a roll of paper in the forward end of said closet, a guide plate extending into the opening in the closet adjacent said roll of paper, upturned side walls adjacent the rearward end of said plate defining a trough under and facing said opening for folding a strand of paper from said roll into a U section for the retention of fecal matter, a pair of vertical rotative rollers at the end of said trough engaged with said folded U section of paper and fecal matter, selectively actuatable means for rotating said rollers and pulling said U section of paper and fecal matter through said trough and flattening the fecal matter, an incinerator having an opening therein coaxially aligned with said trough, a reciprocative shuttle in said incinerator for conveying the said U section of paper and fecal matter into the incinerator, said shuttle having an aperture in the side walls thereof, a sliding door on said incinerator slidable transversely of said shuttle for closing the opening in said incinerator, an arm connected to said roller actuating means for moving said shuttle and the U section of paper and fecal matter into said incinerator, and means connected to said roller actuating means to move said door into and out of said aperture in said shuttle and impinge said U section of paper and fecal matter against the wall of the apparatus when the door is closed.

2,858,779
POWDERED COAL BURNER FOR PRESSURIZED COMBUSTORS
Paul M. Rotzler, Dunkirk, N. Y., assignor to Bituminous Coal Research, Inc., Washington, D. C., a corporation of Delaware
Application November 19, 1951, Serial No. 257,079
4 Claims. (Cl. 110—22)

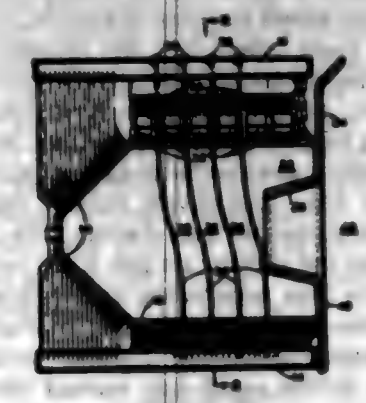
1. A powdered coal burner specially adapted for use pressurized combustion chambers of open-cycle, direct fired, gas turbine power plants, comprising, in combination, an elongated, hollow, double-walled tubular member closed at one end to form an open-ended annular chamber; tangential inlet means at the closed end of the said annular chamber, whereby a combustive air-borne stream of particulate combustible material is delivered

to said chamber in a relatively flat helix; restrictor means incorporated in the annular chamber, intermediate the ends thereof, whereby the air-borne particulate material stream is discharged therefrom, at reduced pressure, and increased velocity, as a whirling spray; pressurized secondary air supply means coaxial with the burner; means



for delivering said pressurized secondary air rectilinearly as a core stream through the burner and as a sheath stream about said burner; and restrictor means for the core stream, whereby the sheath stream envelops the combustive air-borne combustible material and the co-flowing core stream of secondary air, and the flame of the burner is constricted to an axial cone.

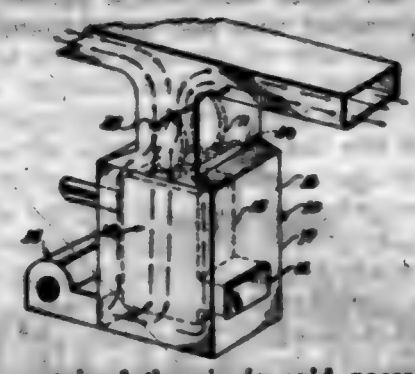
2,858,780
CYCLONE FURNACE
Andreas Sifrin and Hermann Hennecke, Oberhausen, Rhineland, Germany, assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application May 31, 1956, Serial No. 588,483
6 Claims. (Cl. 110—28)



5. A cyclone furnace having walls defining a combustion chamber of substantially circular cross-section, fluid cooling means for said walls, means defining a restricted gas outlet at one end of said chamber, means forming a plurality of ports along the length of said chamber arranged substantially tangentially to the circumferential wall of said chamber for introducing fuel and combustion air thereto, and baffle means separating said ports and arranged to impede gas flow longitudinally of said chamber adjacent to said ports and to direct the fuel and air streams discharging into said chamber in a helical path of travel along the circumferential wall thereof, said baffle means projecting inwardly from the circumferential wall of said chamber and extending circumferentially from said ports to a point spaced angularly therefrom.

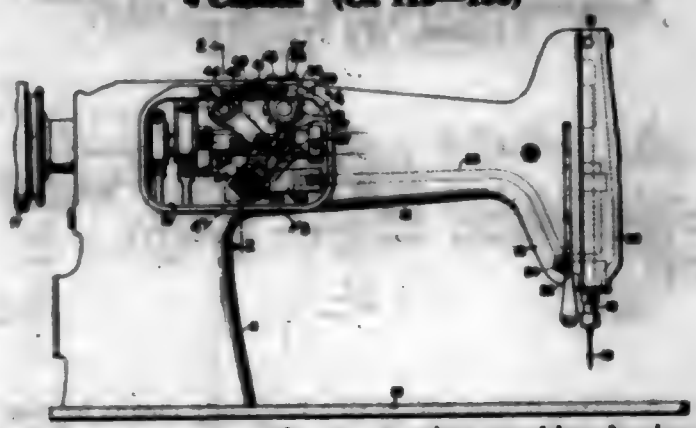
2,858,781
HEAT STORAGE DEVICE
Andrew M. Hezzelt, Morris, Ill.
Application May 28, 1956, Serial No. 587,272
7 Claims. (Cl. 110—97)

6. In a heating system having an enclosed heat generating unit and means for circulating air past said unit and through a passageway to the region to be heated, a heat storage assembly comprising, in combination, a heat retaining device having a pair of sidewall panels of sheet material spaced from each other, said panels being of teardrop outline and connected by a rim section sheet material interposed between said side panels and extending about the periphery thereof to form a closed chamber between said sidewalls, a quantity of heat retaining material substantially filling and being contained by said closed chamber, and means for suspending said device and



the material contained therein in said passage so as to store heat when said heater is operating at high temperatures and to supply heat to the passing air when the heater is not operating at high temperatures, thus tending to stabilize the heat output of the system.

2,858,782
NEEDLE VIBRATION CONTROLLING MECHANISMS FOR ZIGZAG SEWING MACHINES
Anthony F. D'Amico, South Norwalk, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application May 26, 1954, Serial No. 432,423
4 Claims. (Cl. 112—158)

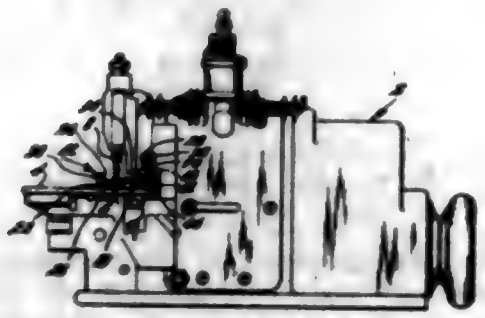


1. In an ornamental seam sewing machine having a hollow bracket-arm, a vibratory needle-bar frame carried by said bracket-arm, a needle-bar journaled for endwise reciprocation in said frame, a rotary pattern cam removably mounted upon said machine, a cam follower element for engaging said cam, a pitman connecting said follower element with said frame for imparting the motions of said pattern cam to said frame, a hollow shaft mounted within said bracket-arm for rocking movements about its longitudinal axis, a guideway fixed upon said hollow shaft for altering the needle-frame vibrating movement produced by said pattern cam in response to movements of said hollow shaft, guide means carried by said pitman and traversing said guideway during the operation of said pattern cam, and manually operable means including a rotative shaft mounted within and lengthwise of said hollow shaft for shifting said guide means relative to said guideway whenever the pattern cam is removed from the machine thereby to vary the position of said needle-bar frame.

2,858,783
TENSIONING DEVICE FOR OVERSEAM SEWING MACHINES
David Lawber, Burlington, N. J.; A. Marian Lawber, executrix of said David Lawber, deceased
Application July 16, 1954, Serial No. 443,751
7 Claims. (Cl. 112—162)

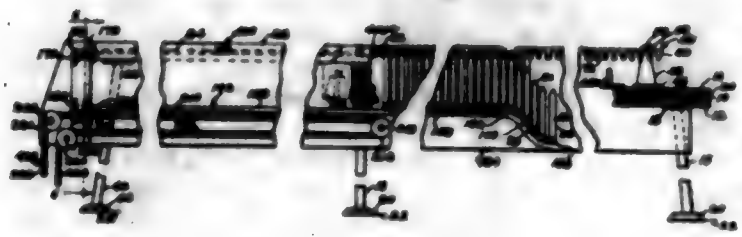
1. A chain tensioning device for overseaming machines having a presser foot, said tensioning device

being adapted for mounting in front of said presser foot in the direction of feed of work and comprising a lower mandible, an upper mandible supported on said lower mandible above said lower mandible, tension means maintaining said upper mandible in parallel and yieldably pressing contact with said lower mandible, means



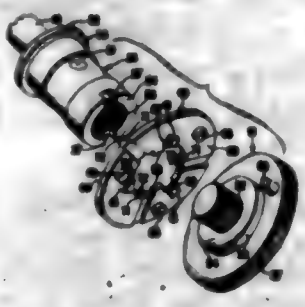
for mounting said device on said presser foot with said mandibles in spaced relation to the front end of the presser foot and in a substantially horizontal plane to be carried by said presser foot, and means for guiding a chain between said mandibles to be yieldably held thereby under tension.

2,858,784
TIE SEWING MACHINE
Andrey W. Orr, New York, N. Y.
Application April 21, 1954, Serial No. 424,657
3 Claims. (Cl. 112—174)



1. A sewing device comprising first body means formed with a plurality of mutually parallel ribs projecting out of one surface thereof and with mutually parallel grooves spacing adjacent ribs, a plurality of crimper elements formed with groove engaging end portions for engaging said mutually parallel grooves intermediate said ribs of said first body means, rail means engaging said crimper elements for supporting the same, cam means carried by said rail means and constructed and arranged for moving said crimper elements into and out of engagement of their groove engaging end portions with said grooves, so as to form undulations in any sheet material disposed therebetween, and needle passage means constructed and arranged in said ribs and said crimper elements for allowing passage of a needle therethrough, and when the needle is threaded to form a stitch therethrough, whereby a plurality of layers of sheet material thus undulated by interengagement of said crimper elements with said grooves, is threaded by said needle upon a single pass of the needle through all the undulations thus formed, a needle carrier frame, a needle having its rearward end engaged in and movable with said frame, said frame being slidable in said machine so as to carry the pointed end of said needle wholly through said needle passageway to advanced position, and to move rearwardly to carry said pointed end of said needle out of said needle passageway to retracted position, motor means, and cable means coupling said motor means to said needle carrier frame and constructed and arranged so as to move said frame both in advancing movement, and in the retracting movement.

2,858,785
CLAMP-WASHERS FOR HAND WHEEL CLUTCHES OF SEWING MACHINES
Ludwig J. Kaiser, Clark Township, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application December 2, 1954, Serial No. 472,583
4 Claims. (Cl. 112—220)

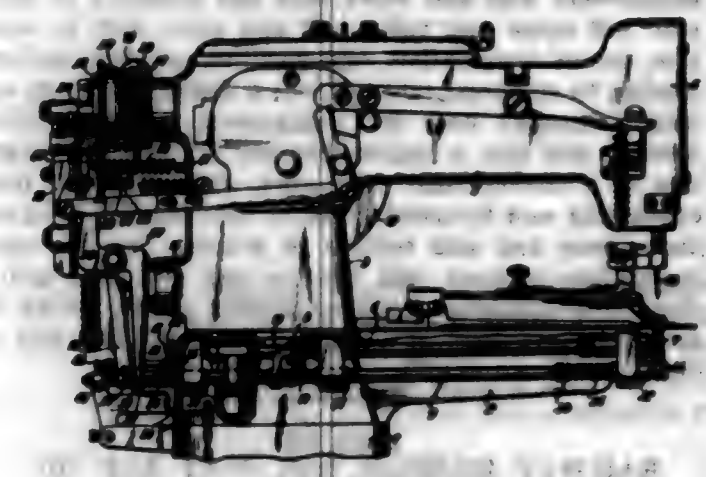


1. A sewing machine comprising a main shaft; a sleeve carried by said shaft and thereby forming a shaft-sleeve combination, one end of said shaft-sleeve combination being provided with a threaded portion and a keying notch; a hand wheel mounted on said shaft-sleeve combination, said hand wheel having on a front portion thereof a surface located in a plane normal to the axis of said shaft; means for driving said hand wheel; a threaded clamp means engaging the threaded portion of said shaft-sleeve combination and having an annular surface located in a plane normal to the axis of said shaft on said threaded clamp means; a stop lug carried by said threaded clamp means; and an annular clamp washer adapted to be interposed between the surface on the front portion of said hand wheel and the annular surface on said threaded clamp means, said clamp washer comprising a front face, a rear face, an inner circumferential surface, a keying tongue extending radially inwardly from said inner circumferential surface and engaging said keying notch, three lugs protruding axially from the rear face of said clamp washer and having infacing surfaces adapted to engage the surface on the front portion of said hand wheel, three lugs protruding axially from the front face of said clamp washer and having outfacing surfaces adapted to be engaged by the annular surface on said threaded clamp means, said last named three lugs extending radially from this inner circumferential surface to a maximum radial distance defined by a circle concentric with said inner circumferential surface, and a plurality of stop-members carried by said clamp-washer and adapted to contact said stop-lug on said threaded clamp means, said stop-member being located radially outside of said last defined circle.

2,858,786
THREAD CUTTING DEVICE FOR SINGLE THREAD CHAIN STITCH SEWING MACHINE
Christiaan Joseph Marinus Benink and Reinhold Dobner, Kaiserslautern (Pfalz), Germany, assignors to G. M. Pfaff A. G., Kaiserslautern (Pfalz), Germany
Application September 30, 1957, Serial No. 687,199
Claims priority, application Germany October 11, 1956
3 Claims. (Cl. 112—252)

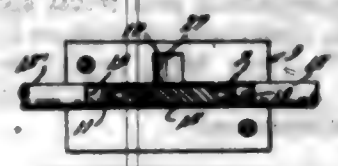
1. Thread cutting device for single thread chain stitch sewing machine of the type comprising a material support plate having a needle aperture, a drive shaft, a guiding disk for controlling the operation of the machine including cam means, a brake disk disposed endwise of said drive shaft having a raised tapering portion and a slot, a double armed switch lever having a lock member at one end of one arm and having the other arm disposed in operative relation to said brake disk, a control lever in operative engagement at one end with said guiding disk and provided at the other end with a member adapted to interlock with said lock member, a looper mounted

below said aperture endwise of a looper shaft disposed in the base of the machine and geared to said drive shaft, an auxiliary looper disposed adjacent said looper in operative relation thereto and mounted for rocking motion endwise of an auxiliary shaft disposed proximate said looper shaft, said auxiliary shaft including a spring biasing said auxiliary shaft in position of normal operation, a cam on said looper shaft and a cam lever on said auxiliary shaft for imparting angular movement to said auxiliary looper, said auxiliary looper extending intermediate said aperture and said looper and presenting a hook on one side of its end and a cutter on the side opposite said



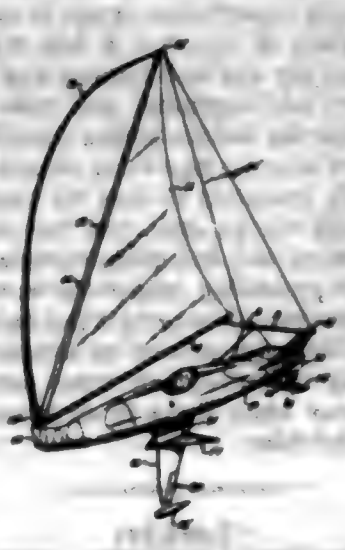
hook, said auxiliary shaft being axially movable against the bias of said spring to shift said auxiliary looper from a normal loop catching position to thread cutting position and a plurality of connected levers including a double armed lever having one arm operatively linked to said switch lever and the other arm disposed endwise of said auxiliary shaft operative under control of said brake disk to move said shaft axially against the bias of said spring in one direction and upon alignment of said end of said switching lever with said slot to permit axial movement of said shaft under the pressure of said spring in the opposite direction.

2,858,787
MEANS FOR PRODUCING PIPE FITTINGS
Walter P. Hill, Detroit, Mich.
Application May 28, 1956, Serial No. 587,674
1 Claim. (Cl. 113—44)



Apparatus for forming a branch fitting such as a T or the like by extruding at least one lateral branch outwardly from a tubular blank which has a greater volume than the finished fitting, including a die having a main passage adapted to receive the tubular blank and a lateral branch passage into which the fitting branch is extruded, the end of said branch passage remote from said main passage being closed by a substantially flat end wall, a solid slug of an incompressible, flowable, low melting point metal disposed in said tubular blank and having its opposite ends spaced from the opposite ends of the tubular blank and substantially filling the interior of the blank throughout the axial extent of the slug, the volume of said slug being greater than the volume of the lateral branch to be formed in the fitting, oppositely acting plungers receivable in the opposite ends of the blank and each having an end engageable with the opposite ends of the slug, each of said plungers having a shoulder spaced from said plunger end which engages one end of the blank after said plungers have engaged said slug and caused the same to firmly engage the wall of the blank, the slug-engaging end of each of said plungers having an opening therein extending inwardly into said plunger, the cross-sectional area of said opening being greater adjacent the slug-engaging end than adjacent the opposite end thereof, the volume of said plunger openings being substantially equal to the difference between the volume of the blank and the volume of the finished fitting, the cross-sectional area of each of said openings adjacent the slug-engaging end thereof being substantially twice the cross-sectional area of each opening adjacent the opposite end thereof, and means for forcibly moving said plungers toward each other so as to simultaneously cause the material of said slug to force the wall of the tubular blank into the die lateral branch while compressing the opposite ends of the blank and thus providing a fitting lateral branch which is closed at its remote end by a substantially flat end wall whereby the branch fitting is completely formed with relief only being provided for said difference between the volume of the blank and the volume of the finished fitting and with no provision being made for pressure relief.

2,858,788
WATER CRAFT
Joseph Lyman, Huntington, N. Y., assignor to Aero-Nautical Boat Shop, Inc., Halesite, N. Y., a corporation of New York
Application May 23, 1955, Serial No. 518,161
6 Claims. (Cl. 114—39)

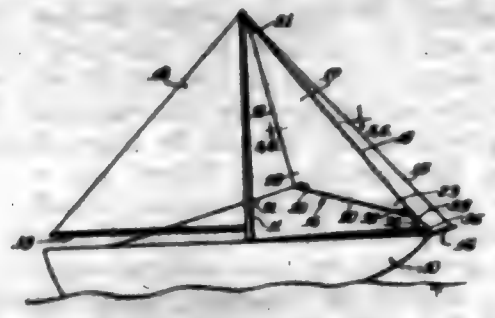


1. In a sailing craft having a hull and sail means for propelling said hull through the water, the combination comprising an elongated keel mounted on said hull at a position thereon substantially adjacent the center of gravity thereof, a hydrofoil means fixed relative to said hull for supporting said hull at least partially out of the water, a first control surface pivoted adjacent the lower trailing edge of said keel for producing anti-rolling couples about a longitudinal craft axis, and a second control surface pivoted adjacent the upper trailing edge of said keel for reducing skidding of said craft when tacking.

2,858,789
JIB SAIL
Richard I. Stearns, Chicago, Ill., assignor to Murphy & Nye, Inc., a corporation of Illinois
Application September 6, 1956, Serial No. 608,311
4 Claims. (Cl. 114—103)

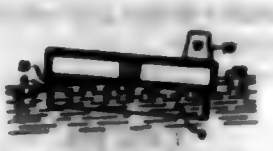
3. A jib comprising: a sail having a luff, a line at least as long as the luff, secured to one end of the luff, means slidably connecting the remainder of the luff to

the line, means secured to the line for adjusting the tension thereof, and other means secured to the other end



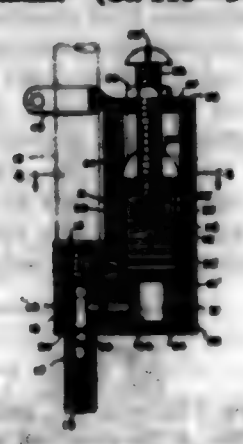
of the luff for adjusting the tension of the luff of the sail independently of the tension of the line.

2,858,790
ANTI-HEEL AND ANTI-MOVEMENT DEVICE FOR FLOATS, BOATS AND CRAFT
Thomas M. Bissell, Jr., Middletown, Conn.
Application August 30, 1954, Serial No. 452,948
1 Claim. (Cl. 114—121)



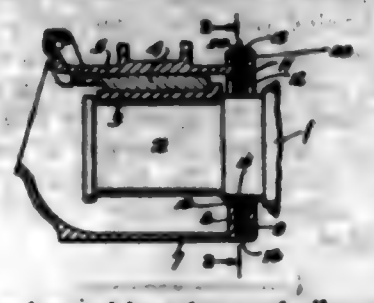
An anti-heel float comprising a rigid platform-forming flat top extending horizontally, a rigid flat bottom adapted to lie flat in a body of water a distance below the top and extending parallel to the latter, an imperforate side-wall structure extending between and joining the top and bottom to form an air chamber therebetween, the top and bottom each being imperforate except in the central region thereof and having an aperture in said region, a tube extending between the top and bottom and forming an air passage between said apertures, said tube serving to vent air trapped below the bottom during launching of the float, the lower end of said passage being closed by water when the float is fully launched so that air cannot seep under the float through the passage, and an imperforate skirt fixed to the bottom and extending completely around the latter, the skirt extending below the bottom a distance of at least approximately one half the height of the side-wall structure, the skirt serving to inhibit tipping of the float by tending to prevent air from seeping under the sides of the float when there is an uneven distribution of weight on the float.

2,858,791
PRESSURE LOSS TIRE SIGNAL
Walter P. Lunsford, Jacksonville, Fla.
Application March 23, 1956, Serial No. 573,393
6 Claims. (Cl. 116—34)



1. A pressure deficiency indicator for application upon the valve stem of a pneumatic tire comprising an elongated hollow body having closed end portions and an intermediate partition with a relatively small transverse opening adjacent one edge of said partition, said body having on one side of said partition an aperture cooperating with said transverse opening whereby an audible sound will be produced upon the passage of air through said opening and aperture, a flexible bellows of insulating material defining a pressure chamber on the side of said partition opposite to said aperture, an elongated member adjustable axially in said partition and extending along the end portion of said hollow body remote from said pressure chamber, a valve seat carried by said pressure chamber and a cooperating valve stem carried by said elongated member so that pressure in said bellows will maintain said valve seat in intimate engagement with said valve stem and reduction of pressure will cause said valve seat and valve stem to separate, means intermediate said partition and said bellows tending to compress said bellows, a fitting having an enlarged threaded bore for engagement with said valve stem of said tire, a second threaded bore for the reception of a conventional valve core, and a reduced bore connecting said threaded bores, a tube between said reduced bore and said bellows to provide constant communication between said bellows and said tire, and a clamp for attaching a remote portion of the device to said tire valve stem at a distance from the free end of the latter.

2,858,792
RAILWAY JOURNAL BOX DUST AND OIL GUARD
Edward P. Wright, Glendale, Calif., assignor to Turco Products, Inc., Los Angeles, Calif.
Application April 28, 1956, Serial No. 579,538
7 Claims. (Cl. 116—106)



1. A railway journal box dust and oil guard comprising a body having an edge contour adapting the member to fit within a journal box dust guard pocket, the body having a through aperture, for receiving an axle journal, and having a recess extending from said aperture to the outer edge of the member, there being a removable normally-closed receptacle in said recess containing material which produces smoke and odor when heated to approximately 180° F., there being a port in said receptacle provided with a closure which is destroyed when subjected to said temperature.

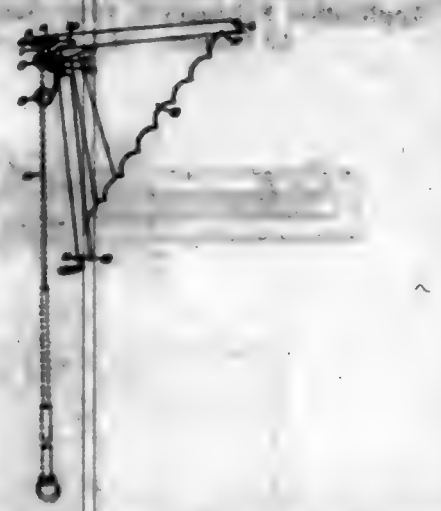
2,858,793
AERIAL IDENTIFICATION FLAG
Charles M. Palmer, Los Angeles, Calif.
Application August 8, 1957, Serial No. 676,895
4 Claims. (Cl. 116—173)

1. An aerial identification flag for an automobile, comprising: an aerial attachment member provided with a longitudinal, horizontally positioned, flag attachment arm and downwardly directed mounting means; said mounting means including spacedly opposed loops cooperable for locking encirclement of an aerial; a hinged flag attachment member having a loop at the upper end thereof which is cooperable for hinged attachment to the uppermost one of said loops on said mounting means; attachment means on said hinged flag attachment member cooperable for lockingly engaging the aerial; a substantially triangular flag having one margin, overlapping itself and encircling said flag attachment arm and secured thereon,

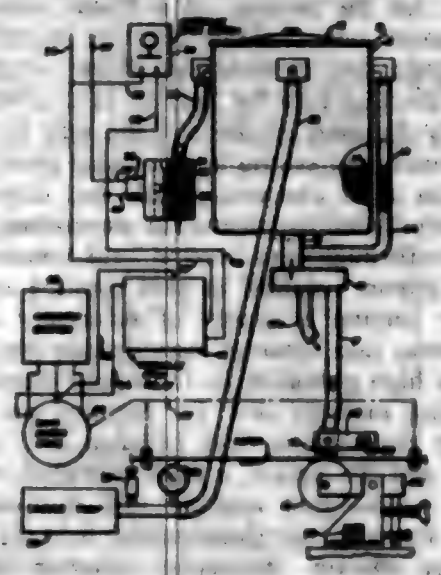
tion, bearing means supporting the shafts for relative movement at right angles to a shaft axis and along a

2,858,796
ELECTROSTATIC COATING APPARATUS UTILIZ-

and having another margin, overlapping itself and encircling said hinged flag attachment member and secured thereon and provided with an upper unfettered edge, said flag having display areas thereon; a strap encircling said mounting means at the upper end thereof and finally attached to the overlapped margin on said flag attachment arm; said hinged flag attachment member being cooperable, when the automobile is in motion, to actuate itself into a substantially horizontal position and being cooperable, when the automobile is at rest, to maintain said flag into an unfurled position.

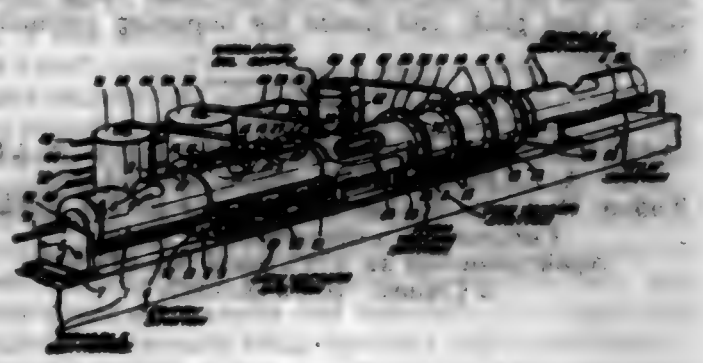


2,858,794
LIQUID DISPENSING DEVICE
Lewis C. Pearce, Berea, Ohio, assignor to Pearce Development Company, a corporation of Ohio
Application March 30, 1956, Serial No. 575,118
10 Claims. (Cl. 118—41)



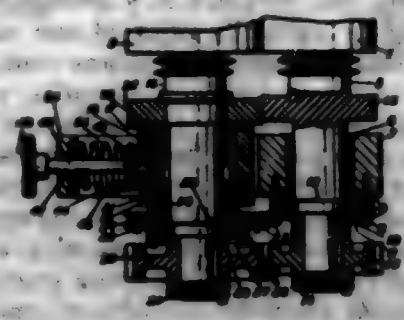
1. Apparatus for dispensing and controlling the flow of a liquid fluid being applied in a bead to a moving strip of stock, comprising in combination a closed container for said fluid, a nozzle for directing the fluid relative to a strip of moving stock, a fluid conduit from said container to said nozzle providing for feed of said fluid by gravity from the container to the nozzle, vacuum-producing means operating continuously during the operation of the apparatus, including the operation of dispensing the liquid through said fluid conduit and nozzle, said vacuum-producing means communicating with said container for reducing below atmospheric pressure the pressure of air in the container above the level of the fluid contained therein, valve means communicating with said container and with atmosphere for admitting air under atmospheric pressure into said container in opposition to said vacuum-producing means, and control means for controlling said valve means, said control means being arranged for automatic responsiveness to movement of said strip of stock through the apparatus, the admission by the valve means of air under atmospheric pressure to the container opposing the reduction of air pressure in the container by the vacuum-producing means and permitting said fluid to flow by gravity from the container through the said fluid conduit, the restriction by the valve means of air under atmospheric pressure from the container permitting the air under reduced pressure in the container to oppose the flow of fluid by gravity from the container through the fluid conduit.

2,858,795
APPARATUS FOR DRYING AND IMPREGNATING SMALL ARTICLES
Herbert Walker, Helsby via Warrington, England, assignor to British Insulated Callender's Cables Limited, London, England, a British company
Application May 18, 1955, Serial No. 509,324
Claims priority, application Great Britain May 24, 1954
8 Claims. (Cl. 118—59)



1. Apparatus for the treatment under vacuum of a large number of small articles, comprising a tubular structure, at least three tubular containers for the articles, within the structure, there being clearances between the containers and the walls of the structure, means for sealing the clearances to provide at least three sealed compartments each being in communication with the interior of a container in that compartment, means for maintaining a vacuum in a central sealed compartment, means for maintaining a lower vacuum in other compartments and means for inserting additional containers, one at a time, into one end of the tubular structure to displace the containers therein and to discharge one of the containers from the other end of the structure.

2,858,796
MEANS FOR ADJUSTING THE SPACING OF SHAFTS, ROLLS OR THE LIKE
Arthur Leslie Stuchbery, Enfield, England, assignor to The Metal Box Company Limited, London, England, a British company
Application June 25, 1954, Serial No. 439,363
Claims priority, application Great Britain June 26, 1953
4 Claims. (Cl. 118—243)



4. In apparatus of the character described, a pair of shafts arranged with their axes in parallel spaced rela-

the latter over the water in said aquarium when said housing is connected to a side wall thereof, another

2,858,801
ANIMAL FEEDING STRUCTURE

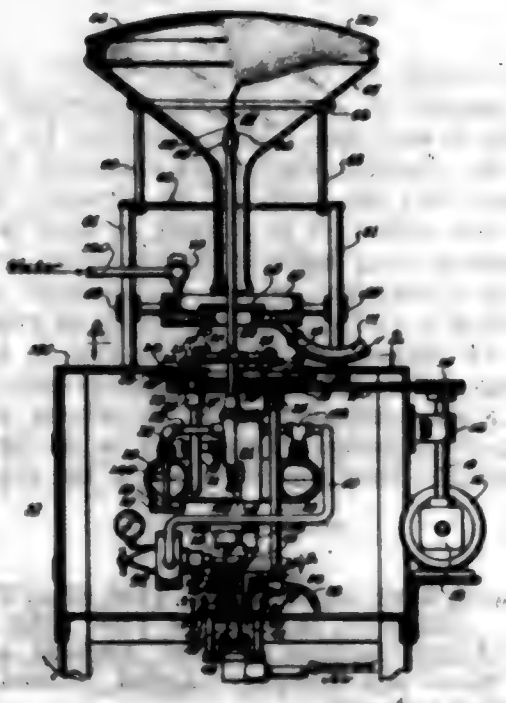
tion, bearing means supporting the shafts for relative movement at right angles to a shaft axis and along a shaft axis, one of said shafts having near each end thereof a co-axial conically tapering surface and the other shaft having near each end thereof a co-axial conically tapering surface of similar but oppositely directed conicity, means resiliently urging said shafts toward each other so as to effect contact between the conically tapering surfaces on one shaft and the oppositely directed conically tapering surfaces on the other shaft, one end of one of said shafts being journalled in a bush, said bush being externally threaded, an internally threaded block in which the bush is threadedly mounted, said bearing means including means supporting the block for movement at right angles to the bush journal axis, means positioned between said bush and the bush mounted shaft for mechanically interconnecting the bush and the bush journalled shaft for axial movement together in both directions along the shaft axis and for relative rotation of the bush about the bush journalled shaft, the threads on said bush being formed with a fine pitch, and means for imparting rotation to the bush.

2,858,797

APPARATUS FOR COATING THE FACE PLATE OF A CATHODE-RAY TUBE ENVELOPE

Nathan D. Levin, Skokie, Ill., assignor to The Rauland Corporation, a corporation of Illinois

Application July 26, 1957, Serial No. 674,363
2 Claims. (Cl. 118—317)



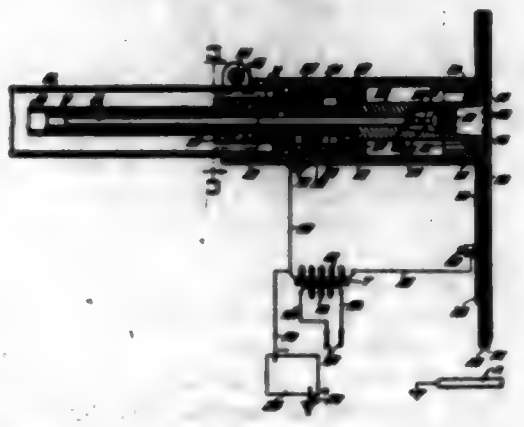
1. Apparatus for applying an organic film to the exposed surface of a luminescent screen affixed to the face plate of a cathode-ray tube envelope comprising: means for supporting said envelope in a fixed position with its axis substantially vertically oriented and said face plate uppermost; solution conveying means comprising a pair of coaxially disposed conduits extending vertically into said envelope from below; a ring-shaped reservoir for containing a supply of film liquid and rotatable with said conduits; a supply of compressed gas coupled to the outer one of said conduits; a nozzle fixed to the upper extremity of said outer conduit and communicating with both said conduits; and means for rotating said reservoir and said conveying means about the axis of said conveying means, for producing a rotating spray of atomized organic film solution within said envelope and directed towards said luminescent screen.

2,858,798

ELECTROSTATIC COATING APPARATUS UTILIZING BOTH DIRECT CURRENT AND ALTERNATING CURRENT TO SUPPLY CURRENT TO SUCCESSIVE DISCS

John J. Sedlacsik, Garfield, N. J.

Application February 6, 1957, Serial No. 638,568
10 Claims. (Cl. 118—621)



1. An electrostatic atomizing apparatus of the class described, comprising discharge electrode means, a rotating metallic disc adapted to be spaced from an article to be coated and which article is of an opposite polarity to that of said means for constituting a collector electrode, a stationary dielectric disc spaced rearwardly of said rotating disc, a stationary metallic disc adjacent and rearward of said dielectric disc and dimensioned to prevent arc-over when high potential is applied between said rotating and stationary metallic discs to form a capacitor, a hollow spindle fixed to said rotating metallic disc and having a conical bore, passages from the bore of said spindle to the rearward face of said rotating metallic disc for the passage of a fluent coating material into the space between said rotating metallic disc and said dielectric disc, a stationary fluent coating material conduit projecting into the bore of said spindle and having radially disposed openings in the wall of said conduit near the small end of the bore of said spindle, a hollow transmission shaft concentric with and disposed around said conduit including means for permitting the passage of air therethrough and around said conduit, a motor, means to impart rotation to said rotating metallic disc, means for forcing a supply of secondary air into the space between said rotating metallic disc and said dielectric disc, a high potential D. C. supply connected across said rotating metallic disc for forming an intense uninterrupted electrostatic field between said rotating metallic disc and the article, a high potential A. C. supply connected across said rotating and stationary metallic discs for forming an electrostatic field of alternating polarity for effecting molecular agitation of the fluent coating material passing through the space between said rotating metallic disc and said dielectric disc for maximizing the charging and atomizing of fluent coating material emerging at the edge of said rotating metallic disc whereby the thus highly charged and atomized fluent coating material is more rapidly repulsed from its source and readily attracted to said article.

2,858,799

AUTOMATIC FISH FEEDER

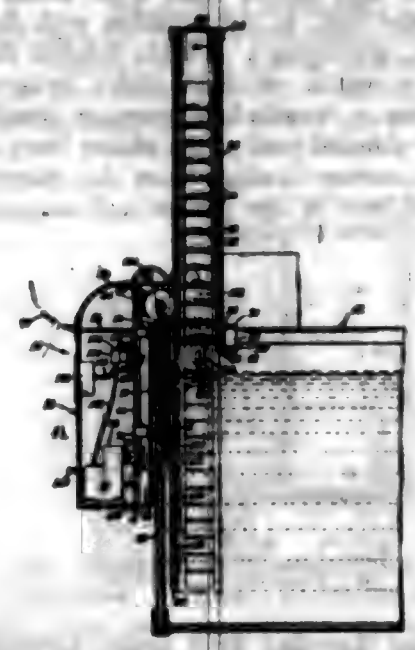
Alexander Krauss and Randolph Krauss, New York, N. Y.

Application January 13, 1956, Serial No. 558,748
4 Claims. (Cl. 119—5)

1. An automatic feeder for fish in an aquarium, comprising a housing adapted to be releasably connected to a side wall of the aquarium, an outer vertically extending tubular members, means carried by said housing and releasably connected to said outer member for holding

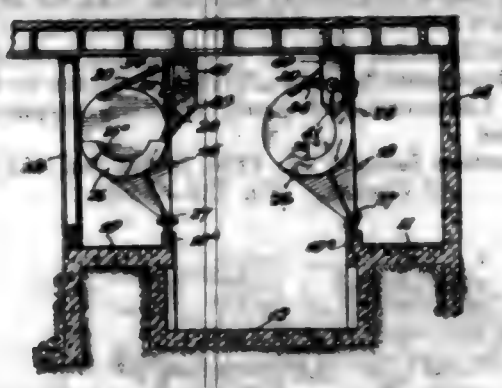
arranged for automatic responsiveness to movement of shafts arranged with their axes in parallel spaced rela-

the latter over the water in said aquarium when said housing is connected to a side wall thereof, another member disposed within said outer member and being longitudinally movable relative thereto, said other member comprising a plurality of substantial horizontal spaced shelves adapted to carry food thereon, motor



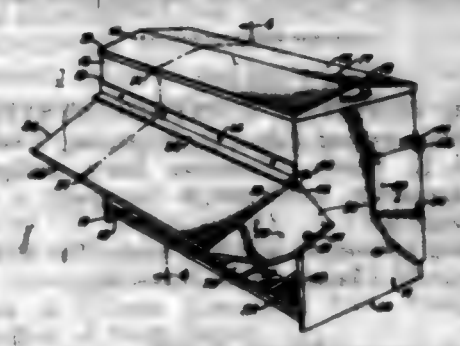
means within said housing, and means operatively connecting said motor means to said other member for moving the latter downwardly relative to said outer member whereby to successively remove said shelves from within said outer member to condition said shelves for depositing food carried thereon into said aquarium to feed the fish therein.

2,858,800
LANE-TYPE STALL
Henry B. Babcock, Chicago, Ill., assignor to Babcock Bros. Co., a corporation of Illinois
Application December 27, 1954, Serial No. 477,692
5 Claims. (Cl. 119—14.03)



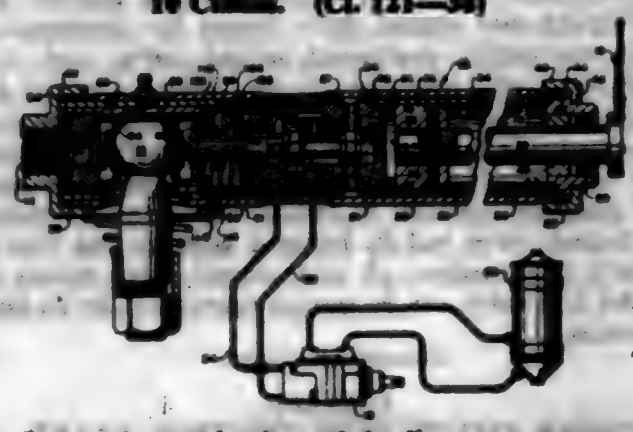
1. In an animal milking parlor, a stall of the character described, comprising: means defining the sides of an enclosure adapted to retain an animal during milking; an end member for closing an end of said enclosure to block the passage of an animal therethrough; means arranged at one side of the enclosure for mounting said end member for pivotal movement about an axis extending substantially longitudinally of the enclosure from a first position closing said end of the enclosure to a second position out of the path of an animal passing through the enclosure, the center of gravity of said end member lying on one side of said axis when the member is in the first position and lying on the other side of said axis when the member is in the second position, and remotely operable means connected to said end member for moving said member from either of said positions toward the other position a distance at least sufficient to carry said center of gravity to and beyond a point vertically above said axis.

2,858,861
ANIMAL FEEDING STRUCTURE
Kenneth E. Chance, Henry, Ill.
Application August 16, 1955, Serial No. 528,706
3 Claims. (Cl. 119—52)



1. A feeder comprising a housing having vertical side and end walls and being provided with a feeding trough therein, at least one of said side walls having a lower edge terminating a spaced distance above said trough to provide an access opening therebelow into said housing, a side awning having a side panel and a pair of end panels hingedly secured to said housing above said access opening and pivotally movable about a horizontal line extending along the upper edge of said awning and along the side wall above the lower edge thereof, said hinged awning being pivotally movable between a lowered position wherein said side panel extends along a vertical plane downwardly over said access opening to close the same and raised positions wherein said side panel slopes downwardly and outwardly away from said housing, said awning being provided with a plurality of selected positioning means and locking means provided by said housing and selectively engageable with said positioning means for securely locking said awning in any of a plurality of selected raised positions, said end panels of said awning lying along spaced vertical planes and overlapping the end walls of the housing, said end panels also having edge portions disposed below the free edge of said side panel when said awning is locked in any of said selected raised positions.

2,858,982
POWER TRANSMISSION
Henry C. Parsons, Grosse Pointe, Leonard A. Dreisbach, Dearborn, and Edward J. Chomzinski, Detroit, Mich., assignors to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Application August 3, 1955, Serial No. 526,102
10 Claims. (Cl. 121—38)



1. In a servo mechanism of the linear movement type having anchor and output connections at opposed ends thereof, a fluid motor and a control valve axially disposed substantially along a line between said connections, the valve including a body and spool, said body being secured to the motor and said spool being actuable to control the motor, and resilient means biasing the spool to a fixed position relative to the valve body, that improvement comprising: means for adjusting said fixed position without disturbing the anchor and output con-

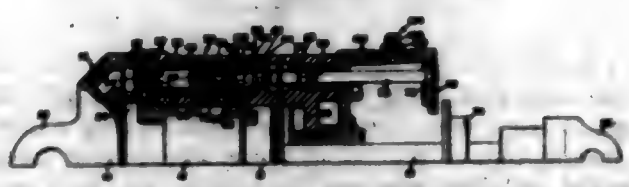
nections, and means including means forming an access hole extending laterally into said mechanism between said connections, an adjustment member actuable through said access hole, and removable locking means engaging said adjustment member and closing said access hole.

2,858,883

FLUID PRESSURE CONTROL SYSTEM

Lloyd D. Ethington and Edgar P. Browning, Cedar Falls, and Lewis E. Davis, Waterloo, Iowa, assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

Application December 6, 1956, Serial No. 626,788
13 Claims. (Cl. 121—38)



1. In a fluid-pressure control system having a fluid-receivable chamber, a passage for the flow of fluid to and from the chamber, and a part movable back and forth in the chamber, the improvement comprising: means affording a valve bore having a forward end leading to the passage; a normally rearwardly positioned first valve advanceable in the bore through a certain distance to a stopped forward position throttling the passage; a normally rearwardly positioned second valve advanceable in the bore through a normally greater distance to a forward position blocking the passage; a control member advanceable from a stopped rear position and having one-way means engageable by the aforesaid part for advancement of said member by said part; first drive means interconnecting the control member and second valve for advance and return thereof in unison; first biasing means for returning the control member and second valve to their respective rearward positions; second drive means releasably interconnecting the rearwardly positioned valves in the aforesaid spaced relation and operative upon initial advance of the second valve and control member to advance the first valve to its forward position and thereupon releasable to enable further advance of the second valve by the control member to its forward position, said second drive means being reconnectible between the valves upon return of the valves and control member to their respective rearward positions; second biasing means acting on the first valve to return said first valve to its rearward position for conditioning said second drive means for reconnection to the rearwardly positioned second valve; and stop means selectively operative on the control member for limiting rearward return thereof to a position short of its stopped rear position and thereby to hold the second valve in a position intermediate its forward and rearward positions whereby to reduce the distance between said second valve and its forward position and also to preclude reconnection of said second drive means so that the first valve can be moved rearwardly by its biasing means.

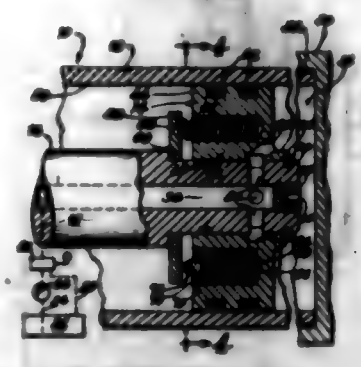
2,858,884

POWER PISTON WITH CONTROL VALVE

Omer H. Rumber, Evanston, Ill., assignor to New Products Corporation, Skokie, Ill., a corporation of Delaware

Application November 19, 1956, Serial No. 623,182
8 Claims. (Cl. 121—46)

1. In a hydraulic control mechanism of the character described, in combination, a cylinder member closed at one end, a piston rod member projecting into said cylinder member in axial alignment therewith, said members being axially movable relative to each other, one of said members being designed for operative connection to a cutting tool or the like whereby movement of the member in one direction relative to the other member will cause the tool to be advanced proportionately, a piston body slidable on said piston rod toward and away from said closed end, said piston body also being slidable within the cylinder and, in combination with the closed end of the latter, providing a variable volume fluid pressure chamber, a source of fluid under pressure, said piston rod having a longitudinal passage therein communicating with a radial port at the piston body and said piston having a passage leading from the chamber to a radially disposed port at the piston rod, manually con-



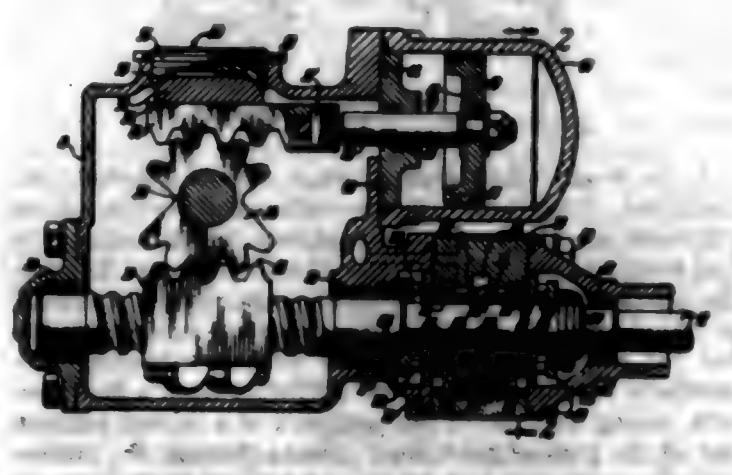
trolled means for directing fluid under pressure from said source to said longitudinal passage in the piston rod, said ports on the piston body and piston rod varying in registry with one another from full registry when the piston body is in its fully retracted position to zero registry when the piston body is in its advanced position to control the admission of fluid under pressure to said chamber, means for exhausting the fluid under pressure from said chamber through said piston rod and piston body passages, and spring means interposed between said piston body and piston rod for yieldingly maintaining said piston body in its fully retracted position on the piston rod.

2,858,885

MEANS FOR REDUCING RELIEF VALVE SQUEAL IN A HYDRAULIC POWER STEERING GEAR

Clovis W. Lincoln, Wayne H. Watling, and William Blair Thompson, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

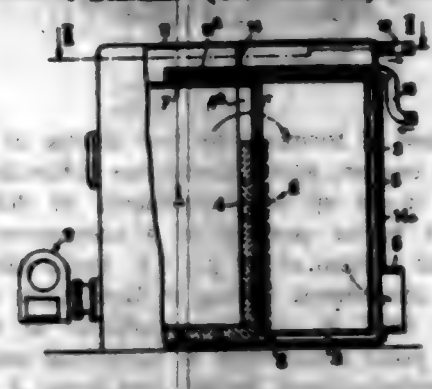
Application January 11, 1954, Serial No. 403,198
5 Claims. (Cl. 121—46.5)



1. In a fluid system including a fluid motor, a control valve for said motor comprising a pair of telescopically related members, the outer of which has a pressure port and an exhaust port therein, and actuating means for moving one of said members relative to the other to energize said motor, the combination of auxiliary valve means associated with said actuating means for actuation thereby, said auxiliary valve means in operation of the control valve being displaced by said actuating means

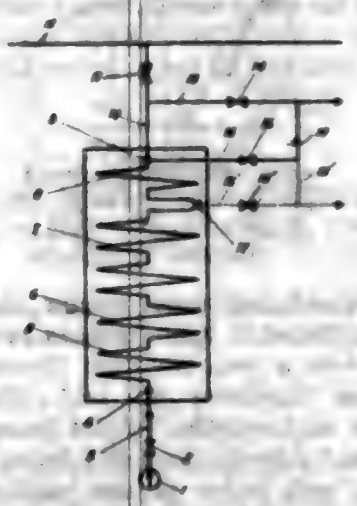
to progressively interconnect the said inlet and exhaust ports as the said one of said members nears its position of maximum displacement.

2,858,806
HEATING BOILERS
Paul Stucklin, Basel, Switzerland, assignor to Stucklin & Cie, a Swiss company
Application May 14, 1956, Serial No. 584,519
Claims priority, application Switzerland March 28, 1956
4 Claims. (Cl. 122—32)



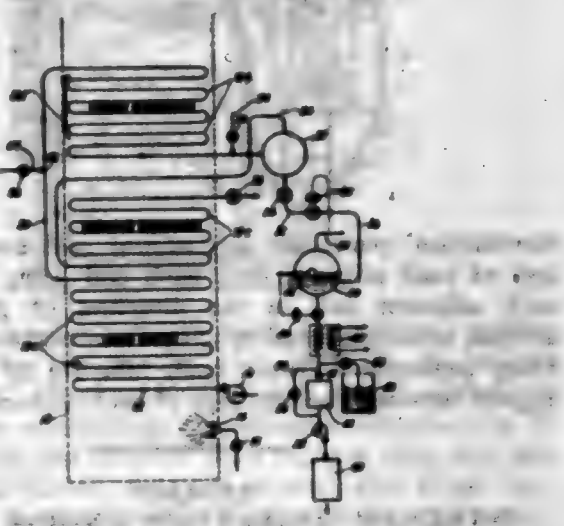
1. A water heating boiler comprising a front combustion chamber, a rear heat exchange chamber having a flue inlet from said combustion chamber and a flue outlet, and a plurality of vertically disposed heat exchange pockets each having a wedge-shaped horizontal cross section and being closed at the bottom ends and connected to the boiler water supply at the tops thereof, said pockets being positioned in said heat exchange chamber with the wide edges of said pockets facing said flue inlet and the narrow edges toward said flue outlet and said pockets being spaced laterally from each other and forming a plurality of passages therebetween the ends of which are closer to each other toward said flue outlet.

2,858,897
ONCE-THROUGH BOILER
Erich Stange, Alt-Garge, Kreis Luneburg, Germany, assignor to Duerrwerke Aktiengesellschaft, Ratingen, Germany, a corporation of Germany
Application December 3, 1953, Serial No. 395,955
1 Claim. (Cl. 122—379)



In combination a once-through vapor generating and superheating unit having a preheater, vaporizer, primary superheater, secondary superheater, and an outlet header connected for the serial flow therethrough of a vaporizable fluid, said secondary superheater located in a low gas temperature convection heating portion of said vapor generator, a vapor outlet conduit receiving vapor from said outlet header and including a stop valve for normally conducting vapor to a point of use, a large flow capacity starting conduit connected to said outlet conduit upstream of said stop valve for discharging large quantities of vapor to a point other than said point of use during the starting-up of said unit, a starting valve in said starting conduit, superheater bypass conduit means of substantially smaller capacity than said starting-up conduit and connected at a position between said primary and secondary superheaters and arranged to bypass said secondary superheater and starting conduit, and said bypass conduit means including a valve for controllably discharging smaller quantities of vapor than said starting valve.

2,858,886
METHOD OF OPERATING A SUPERCRITICAL PRESSURE VAPOR GENERATOR
Will H. Bowen, Short Hills, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application April 8, 1954, Serial No. 421,796
2 Claims. (Cl. 122—379)

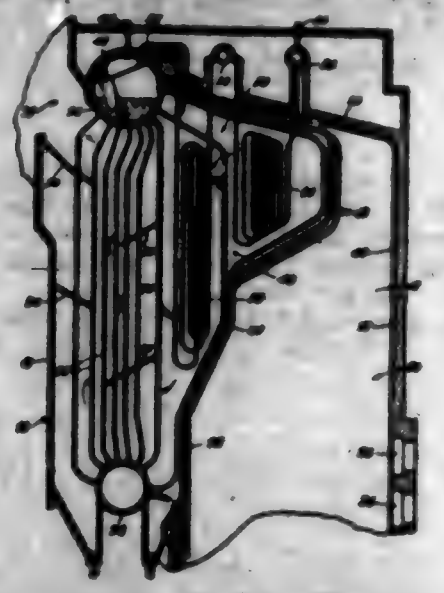


1. In the method of operating a supercritical pressure vapor generator which comprises supplying a vaporizable fluid to a conduit under variable conditions of fluid flow rate and heat input to said fluid, selectively varying at least one of said conditions to cause superheated vapor to issue from said conduit with resultant formation of scale in a portion of said conduit, and delivering said superheated vapor at supercritical pressure to a prime mover, the improvement comprising the steps of periodically reducing the operating pressure of said fluid from a value above the critical pressure to a predetermined value below the critical pressure while maintaining the delivery of superheated vapor to a prime mover, selectively varying at least one of said conditions of heat input and fluid flow to cause a vapor-liquid mixture to flow into said scale forming portion of said conduit during the initial portion of the reduced pressure period, said mixture having a sufficient liquid content to pick up scale therein during said reduced pressure periods, completing the vaporization of said mixture, introducing a relatively pure vaporizable liquid into said vapor during said initial portion of said reduced pressure period to wash any entrained solid from said vapor, and removing said washing liquid from said vapor generator.

2,858,869
SUPERHEATER
Gustav A. Rehm, Springfield, Ill., assignor to Springfield Boiler Company, Springfield, Ill., a corporation of Illinois
Application November 26, 1954, Serial No. 471,313
3 Claims. (Cl. 122—476)

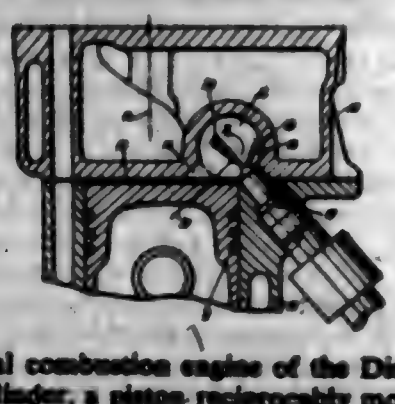
1. In a boiler structure, a housing having a combustion space, a gas passage connecting to the combustion space and leading to a hot gas outlet, and a superheater positioned generally at the junction of the combustion space and gas passage and including at least

one superheater tube, each tube having an inlet and an outlet and a plurality of reversely bent coils between the inlet and outlet made up of a plurality of generally parallel elongated tube legs interconnected by integral return bends, each such coil being elongated in a direction generally transverse to the flow of hot gases from the



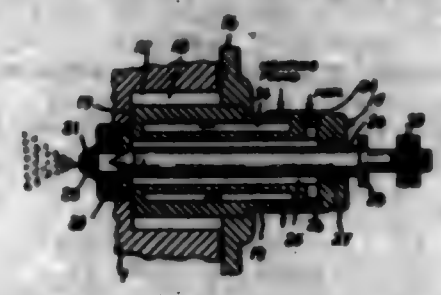
combustion space, the legs of one coil overlapping the legs of each adjacent coil, each coil being spaced from each adjacent coil in the direction of gas flow, the amount of overlap and spacing from one coil to another being generally uniform, each tube leg of a coil being aligned between the tube legs of each adjacent coil.

2,858,810
INTERNAL COMBUSTION ENGINE OF THE DIESEL TYPE
Heinrich Hoffmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application March 22, 1955, Serial No. 496,800
Claims priority, application Germany March 27, 1954
5 Claims. (Cl. 123—32)



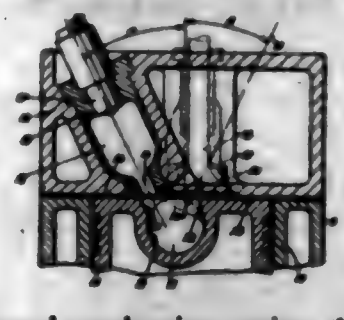
1. Internal combustion engine of the Diesel type comprising a cylinder, a piston reciprocably mounted therein, a cylinder head provided with a spherical chamber disposed substantially tangentially to the bottom surface of said cylinder head and with a passageway establishing a communication between the internal space of said cylinder and said chamber, the axis of said passageway being spaced from the center of said chamber and extending at an acute angle to the axis of said cylinder so as to cause the air entering said chamber through said passageway during the compression stroke of said piston to form a vortex, and a fuel injection nozzle mounted within said cylinder and said cylinder head and projecting into said chamber to issue a jet of fuel from a point located within said chamber between the center and the wall thereof adjacent to said cylinder and to said passageway in a direction away from the latter upon the wall of said chamber at an acute angle thereto, the distance of said point from the center of said chamber being shorter than the radius of said spherical chamber.

2,858,811
FUEL INJECTION
James A. Bode, Cleveland, Ohio
Application February 14, 1956, Serial No. 565,393
1 Claim. (Cl. 123—32)



The method of forming the fuel charge of an internal combustion engine, which comprises subjecting a vaporizable fuel made up of components of different flash point viz, a major portion of a component having a flash point of at least about 220° F. and a minor portion of another component having a flash point not greater than about 140° F. to a temperature at which such lower flash point component is vaporized under normal pressure, confining such heated fuel under a pressure of several hundred pounds per square inch which is sufficient to maintain such lower flash point component in liquid state, and then discharging a measured amount of such heated fuel into the combustion chamber of such engine under the influence of the imposed pressure, whereby such lower flash point component is effective, due to sudden expansion thereof upon discharge of the heated fuel, to break up the higher flash point component into droplet form of which some remains unvaporized to effect spreading out of the ignition period.

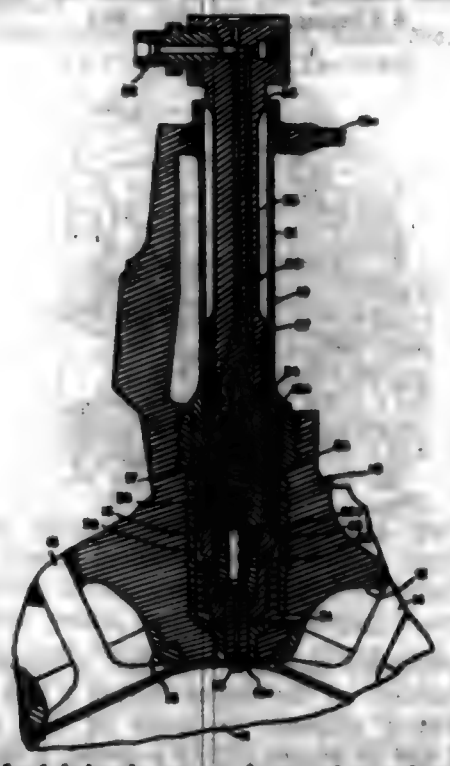
2,858,812
INTERNAL COMBUSTION ENGINE OF THE FUEL INJECTION TYPE
Heinrich Hoffmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application March 2, 1956, Serial No. 569,172
Claims priority, application Germany March 4, 1955
6 Claims. (Cl. 123—32)



1. In an internal combustion engine, the combination comprising a cylinder, a cylinder head mounted thereon and provided with a precombustion chamber and a passageway leading therefrom into said cylinder, a piston reciprocable in said cylinder to and from a position in proximity to said cylinder head and formed with a combustion cavity, said piston in said position confining a compression space with said cylinder head, said compression space including said precombustion chamber and said combustion cavity provided in said piston, said passageway extending substantially tangentially to the walls of said cavity when viewed in a cross-sectional plane passing through said cavity and said passageway in a direction substantially parallel to the walls of said extended passageway and being so disposed as to direct a jet of combustible matter into said cavity, a fuel injecting device mounted in said cylinder head and adapted to issue a jet of fuel into said chamber, an air inlet valve in said cylinder head for the admission of air

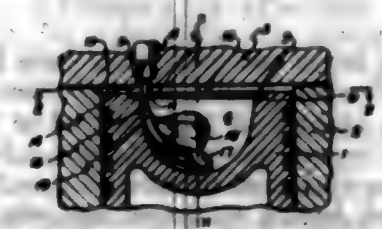
during the suction stroke of said piston, and means effective during the suction stroke of said piston to impart rotary motion to said air about the axis of said cylinder to thereby set up an eddy in said cavity about said axis.

2,858,813
FUEL INJECTION NOZZLE COOLING
Herbert H. Hess, Royal Oak, Mich., assignor, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Application May 18, 1956, Serial No. 585,639
11 Claims. (Cl. 123—32)



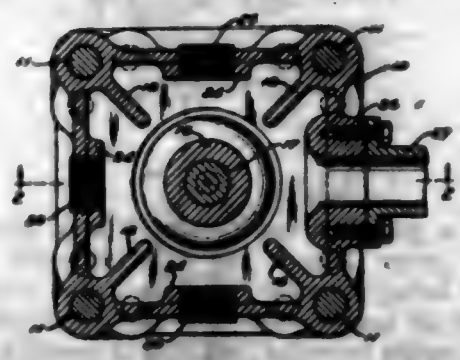
1. In a fuel injection type internal combustion engine having a cylinder head provided with a combustion chamber, said cylinder head having a bore open to said combustion chamber and supporting a fuel injection nozzle assembly, said bore providing an annular chamber around said nozzle assembly, said nozzle assembly having cooling means comprising a spirally finned member disposed in said chamber and contacting the walls thereof to provide a continuous spiral air passage, cooling air inlet means open to one end of said spiral air passage and vent means open to the other end of said passage.

2,858,814
FUEL INJECTION ENGINE
Siegfried Meurer, Nuremberg, Germany, assignor to Maschinenfabrik Augsburg-Nuernberg A. G., Nuremberg, Germany
Application July 29, 1957, Serial No. 674,690
12 Claims. (Cl. 123—32)



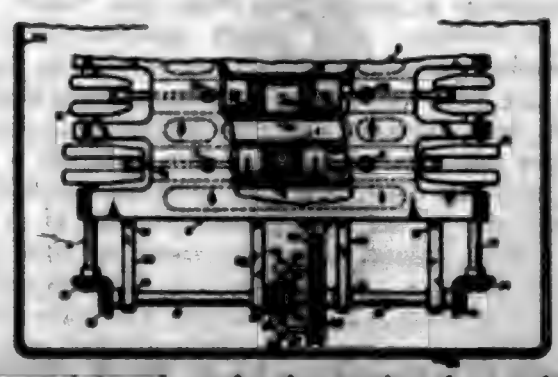
1. In an internal combustion engine having a cylinder, a fuel injection nozzle offset from the axis of said cylinder, a piston in said cylinder having a combustion chamber in the piston head adapted to receive substantially all of the air in said cylinder at the end of the compression stroke, said nozzle having an outlet orifice oriented to direct a fuel jet over a short path tangentially against the wall of said chamber as a film adapted to be vaporized by the air swirling in the chamber, the improvement comprising a combustion chamber having a large opening for receiving the air during the compression stroke, and an enclosed small opening aligned with said injection nozzle through which the fuel is jetted into said chamber while protected from the air being compressed in the cylinder through said large opening adjacent the end of the compression stroke.

2,858,815
CYLINDER HEAD
William F. Burrows and Harvey W. Hemmert, Springfield, Ohio, assignors to The White Motor Company, Cleveland, Ohio, a corporation of Ohio
Application May 14, 1956, Serial No. 584,433
3 Claims. (Cl. 123—41.82)



1. A diesel engine cylinder head comprising a hollow body embodying top, bottom and side walls, the bottom wall having a central spheroidal wall therein defining a concave cavity constituting a combustion chamber, an internal flange in said cylinder head integral with said side walls and superjacent said bottom wall, said flange having a central opening therein, the inner edge thereof being concentric to and spaced from the outer face of the wall of said combustion chamber, a boss in the center of the cylinder head integral with said top wall and the combustion chamber wall, and concentric with said opening in said flange, said bottom wall of the cylinder head having coolant openings therein communicating with the void defined by the outer wall of said combustion chamber, said boss, said top and side walls, and radial ribs in the cylinder head integral with said top, said side walls of the cylinder head, and said flange whereby a coolant entering said openings in said bottom wall will engage the integral walls that define said void within the cylinder head.

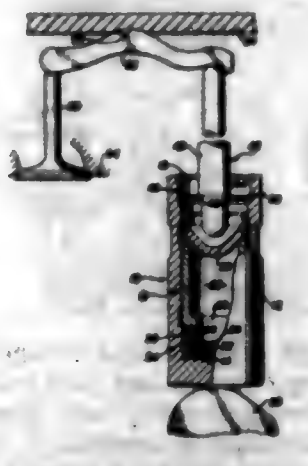
2,858,816
INTERNAL COMBUSTION ENGINES OF THE VARIABLE COMPRESSION TYPE
Leon A. Prunier, Portland, Oreg.
Application October 8, 1957, Serial No. 688,911
3 Claims. (Cl. 123—48)



1. In an internal combustion engine the combination with a cylinder having fuel supply and exhaust ports, two opposed pistons disposed within the cylinder and forming a common compression space therewith, means for supplying fuel to the compression space, separate drive shafts connected to the pistons, two axially aligned

shafts geared at one of their ends to said drive shafts and terminating at their opposite ends in gear components of a bevel-gear train to maintain certain angular relations between the drive shafts and manipulatory means associated with said aligned shafts and operable independent of engine operation for controlling the bevel-gear train to vary the angular relation between the drive shafts and hence the compression ratio between said pistons.

2,858,817
TAPPET MECHANISM
Gerald D. Linn, Royal Oak, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application February 4, 1957, Serial No. 638,815
7 Claims. (Cl. 123—90)



1. A valve actuating mechanism including a pivotal rocker arm, a push rod engageable with one end of said rocker arm, a rotating member imparting reciprocal motion to a tappet mechanism, said tappet mechanism being axially spaced between and in intimate contact with said rotating means and said push rod, said tappet including a body member, a movable piston member therein, and a one-piece spiral spring means fixedly secured to said tappet body, said spring means having its inner periphery of suitable diameter adapted to engage one end of said push rod and so arranged on the tappet body as to maintain said piston from overextending outwardly from said tappet body while simultaneously biasing the push rod axially away from the body member.

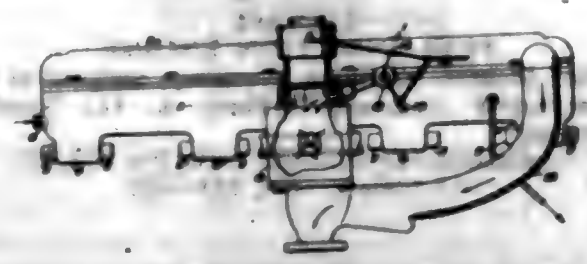
2,858,818
ENGINE VALVE OPERATING CAM
Joseph H. Bailey, Cleveland, Ohio
Application November 7, 1957, Serial No. 694,977
5 Claims. (Cl. 123—90)

1. A cam and cam follower for an internal combustion engine comprising a cam shaft, face cams mounted thereon, each of said face cams having grooves in the opposed side walls thereof, follower yokes straddling said cams, screws threaded in the follower yoke with unthreaded screw ends thereon seated in said cam grooves, a splined valve stem threaded in said follower, a valve head on said stem, a valve seat therefor in the engine, a nut on the top of said follower, and a lock washer keyed to said splines on said valve stem for the retention thereof, said valve being vertically adjusted by loosening the follower, rotating the valve then tightening said lock washer against said nut.

2,858,819
SPEED CONTROL FOR OUTBOARD MOTORS
Howard M. Pollard, St. Paul, Minn., assignor, by mesne assignments, to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Application January 13, 1956, Serial No. 558,876
6 Claims. (Cl. 123—99)

1. In an outboard motor, an engine, a manual speed control mechanism on the engine having a part which is movable between extreme positions of said advanced engine speed and an engine killing position, a stop means mounted on the engine engageable by the part intermediate its extreme positions when moved toward the engine killing position, said stop means being spring held to yield under continued movement of the part toward the engine killing position.

2,858,820
VAPORIZER FOR HEAVY AND SEMI-HEAVY LIQUID FUELS
Carlos Oddera, Buenos Aires, Argentina
Application December 14, 1954, Serial No. 475,069
1 Claim. (Cl. 123—133)



Vaporizer for heavy and semi-heavy fuels for use with an internal combustion engine, said vaporizer comprising an outer casing adapted to be connected to the exhaust of the engine to receive hot exhaust gases, a hollow inner body defining an elongated member disposed inside said outer casing and having elongated opposite walls converging inwardly one toward the other and defining an intermediate relatively restricted passage and upper and lower relatively wider portions constituting a vaporizing chamber into said lower portion whereof the heavy or semi-heavy liquid fuel is introduced, said relatively restricted passage of said chamber being effective in a manner similar to a nozzle and said upper relatively wider portion defining a storage or accumulation space for vaporized fuel gas, whence a tubular conduit, pro-

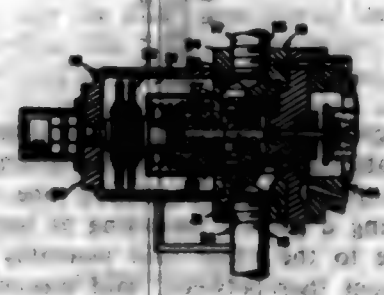
vided with an adjustable feed valve leads to a heated mixing chamber, said mixing chamber being connected to the conventional carburetor for producing the carbureted mixture from said fuel gas with air drawn through said conduit by the engine, the outer surfaces of said walls of said elongated member defining passages for the hot exhaust gases along the interior of the said outer casing.

2,858,811

ALTITUDE COMPENSATOR

Walter P. Irby, Detroit, Mich., assignor to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

Application September 21, 1953, Serial No. 535,693
12 Claims. (Cl. 123—140)



1. In an internal combustion engine having an air induction system including an air intake manifold and a throttle valve associated therewith, a variable delivery fuel injection pump, and a pump control means operable to vary the fuel metering of said pump and comprising a pressure sensitive actuator operable only in response to variations in manifold pressure and an altitude compensator operable in response to variations in pressure differencential between manifold pressure and atmospheric pressure to modify the operation of said actuator, and means operatively connecting said actuator with said altitude compensator, whereby to compensate for decreased sensitivity of said actuator due to an increase in altitude, and means selectively actuated in response to an increase in the aforesaid pressure differential beyond a predetermined valve to increase the modifying effect of said altitude compensator on said actuator for high speed engine throttle operation, said last mentioned means being inoperative when the aforesaid manifold pressure is below said predetermined value.

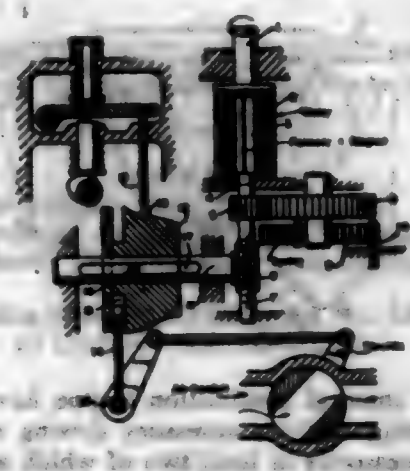
2,858,823

DEVICE FOR INFLUENCING ENGINE FUEL DELIVERY BY TWO MUTUALLY INDEPENDENT OPERATING CONDITIONS

Werner Stoeger, Feuerbach, Wurttemberg, and Otto Hirn, Stuttgart-Moehringen, Germany

Application December 18, 1956, Serial No. 629,067
7 Claims. (Cl. 123—140)

1. A device for influencing the delivery rate of the fuel injection pump of an internal combustion engine as a function of the revolving speed of the engine and of the position of the throttle valve, comprising a cam member the surface of which is shaped in conformity with the technical law found empirically to assure the best operating conditions of said engine in dependence of said function, said cam member being axially mounted on a rotatable shaft so as to follow the rotating movements of said shaft but being free for reciprocation thereon, first means for controlling the angular position of said shaft, said first means including a rotor rotated with a speed proportional to the revolving speed of said internal combustion engine, an armature magnetically coupled to said rotor, energy-storing means connected to said armature, and means responsive to an equilibrium between the torque magnetically imparted to said armature by said rotor and the force exerted by said energy-storing means in opposition to said torque, second means for controlling the axial position of said cam member



on said shaft, said second means including a lever following the movements of said throttle valve, said lever having a free end engaging a circumferential groove of said cam member, and transmission means for influencing the rate of delivery of said fuel injection pump in accordance with the position of said cam member.

2,858,823

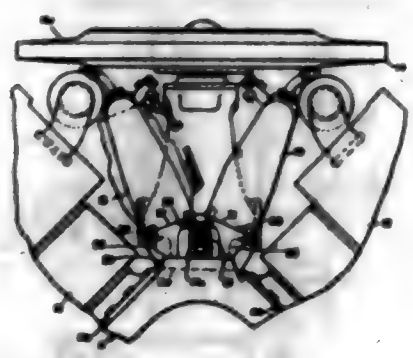
LIQUID HEATING DEVICE FOR WARMING ENGINES AND THE LIKE

Vern V. Kelley, Milaca, Minn.

Application May 7, 1956, Serial No. 583,667
4 Claims. (Cl. 123—142.5)

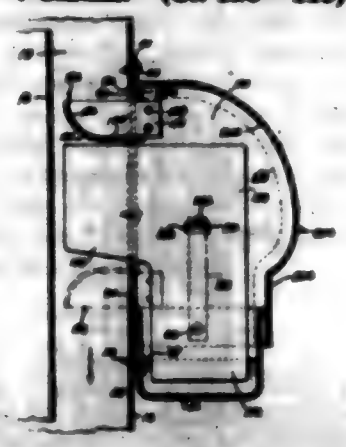
1. In apparatus for heating the cooling liquid of a power engine, said apparatus having in combination a rigid liquid-confining enclosure, a combustion engine mounted on said enclosure and having an exhaust outlet, a heat transfer coil within said enclosure and having an inlet end connected with said exhaust outlet and also having a discharge end opening through said enclosure, a liquid pump drivably connected with said combustion engine to be operated thereby and having one flow connection with the power engine for passing cooling liquid therebetween, said enclosure having a liquid inlet and a liquid outlet, one connected to the pump in fluid communication and the other connected to the power engine for carrying cooling liquid between the power engine and the enclosure, whereby the cooling liquid will be circulated through the enclosure to be warmed by heat transfer from the exhaust passing through the coil and thereby cause the power engine to be heated to facilitate ready and easy starting thereof.

2,858,824
FUEL INJECTION PUMP MOUNTING
Herbert H. Hess, Royal Oak, Mich., assignor, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Application June 18, 1956, Serial No. 591,991
8 Claims. (Cl. 123—195)



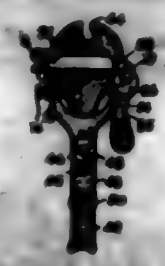
1. In an internal combustion engine having an accessory mounting surface, accessory driving means, a plurality of accessories at least two of which are adapted to be synchronized and each of which has a driven element adapted for engagement with said driving means, and a mounting means for said synchronized accessories and adapted to be removably secured to said mounting surface, and a dowel coacting with said mounting means and said mounting surface to locate and guide said mounting means for accurately aligning said driven elements with respect to said driving means as the assembled mounting means and accessories are being installed on said engine.

2,858,825
HEATING SYSTEM HUMIDIFIER
Roy P. Stanfill, Detroit, Mich.
Application January 7, 1955, Serial No. 480,538
4 Claims. (Cl. 126—113)



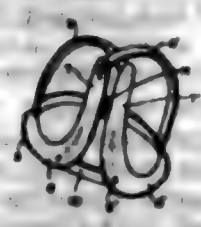
1. A heating system humidifier comprising a mounting structure having an approximately vertical mounting portion with an aperture having upper and lower edges, an elongated humidifier pan secured to one side of said mounting structure and extending horizontally along the lower portion thereof below said aperture with its longitudinal axis disposed approximately parallel to said mounting portion, means for maintaining a body of water in said pan at a predetermined depth therein, a plurality of evaporator plates, an evaporator support disposed adjacent said pan, said plurality of evaporator plates being mounted approximately vertically on said support in spaced approximately parallel relationship and disposed approximately perpendicular to said mounting portion with their lower end portions extending downwardly into said pan beneath the intended water level thereof and with their upper portions disposed adjacent the aperture in said mounting portion, a housing supported on said mounting structure extending above said pan and having an outwardly convex curved wall extending about the axis of said pan from the outer side of said pan to said mounting portion above said opening, and deflecting means arranged to deflect air into the housing adjacent one of said edges and toward said curved wall, said curved wall directing the air out of said housing adjacent the other of said edges of said aperture, whereby air is directed into moisture receiving relation with said plates.

2,858,826
VAGINAL SPECULUM
Edward Kahn, Queens Village, N. Y.
Application January 22, 1957, Serial No. 635,316
10 Claims. (Cl. 128—17)



1. A speculum comprising, in combination, an upper blade assembly and a lower blade assembly defining a longitudinal housing therebetween, one said blade assembly having a pivotal mounting at one end for rotation relative to the other said assembly to effect jaw-like movement therebetween, said mounting comprising a pair of transversely spaced pivots, one of said pivots comprising a fixed universal joint, and the other of said pivots being selectively displaceable to provide access to the interior of said housing transversely throughout the entire length thereof.

2,858,827
ORTHOPAEDIC APPARATUS
Ulysse Anatole Vilpoux, Saint-Hilaire-Saint-Mesmin, France
Application March 13, 1956, Serial No. 571,343
Claims priority, application France March 25, 1955
3 Claims. (Cl. 128—78)



1. Orthopedic apparatus for patients affected with a lesion of the vertebral column in the dorsal region including a bodice made of a fabric and two cushions made of a supple microcellular material fixed inwardly upon said bodies and adapted to be disposed substantially symmetrically on both sides of the vertebral column of a patient, said cushions having a curved shape and adapted to pass around the shoulder blades of a patient along their inner lower edges.

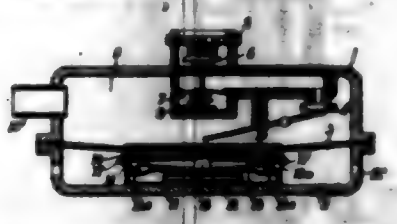
2,858,828
RESPIRATOR
James M. Matheson, West Reading, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application May 18, 1954, Serial No. 430,488
9 Claims. (Cl. 128—141)

1. A respirator mask of molded elastic material of substantially cup shape with a substantially pear shaped mouth portion adapted to form an air tight fit about the nose, cheeks and chin of the wearer, and having an integral snout portion in the form of a tube extending angularly downwardly and outwardly from the plane of the front, central portion of the mask, beginning from

the vicinity of the nose of the wearer, a sleeve at the outer end of said tube onto which an air inlet tube is attachable, and an exhalation valve mounted on the bottom, chin surrounding portion of said mask including a disc shaped, flexible diaphragm rigidly mounted centrally thereof to a valve seat on the outside surface of said mask, a downwardly extending integrally molded

baffle disposed at the top of the junction of said snout and mask and encircling the upper half portion of the integrally attached end of said tube and disposed forwardly of the nose of the wearer in a position so as to deflect exhaled air away from said inlet snout and directly against the chin encircling portion of the respirator into said exhalation valve to effect unseating of the valve and exhaust of said air.

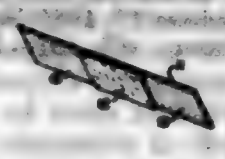
2,858,829
OPEN CIRCUIT RESPIRATORY APPARATUS
Emile Gagnan, Montreal, Quebec, Canada, assignor to La Spirotechnique, Societe Anonyme, Paris, France
Application March 31, 1955, Serial No. 498,367
13 Claims. (Cl. 128—142)



1. In an open circuit breathing apparatus of the type having a pressure regulator including an inner chamber, an inlet valve in said chamber for a breathable gas fed from a pressure source, valve controlling means mounted in said regulator including a flexible diaphragm having an outer face subjected to the pressure of the medium surrounding the regulator, an exhaust valve mounted in said regulator adjacent the exterior surface of said diaphragm, an air intake connection extending from said regulator chamber to a mouthpiece and an exhaust connection extending from said mouthpiece to said exhaust valve, a resilient variable action means mounted in said regulator adjacent to and in operative connection with said diaphragm and exhaust valve adapted to apply a supplemental force to said diaphragm and a closing force to said exhaust valve during movement of said diaphragm in the direction opening said air valve and a quick reverse force to said diaphragm and release of said exhaust valve during movement of said diaphragm in the opposite direction, whereby air is caused to be delivered to the user at a pressure higher than the pressure of the medium acting on said diaphragm and is exhausted through said exhaust valve by the user at a pressure lower than said air delivery pressure.

2,858,830
SURGICAL DRESSING
John S. Robbins, Denver, Colo., assignor to Frank C. Lowe and John S. Robbins, jointly
Application October 1, 1956, Serial No. 613,128
14 Claims. (Cl. 128—156)

1. A surgical dressing substantially as set forth comprising a cover strip and a compressed facing pad formed as a wafer of compressed collulosic, artificial sponge

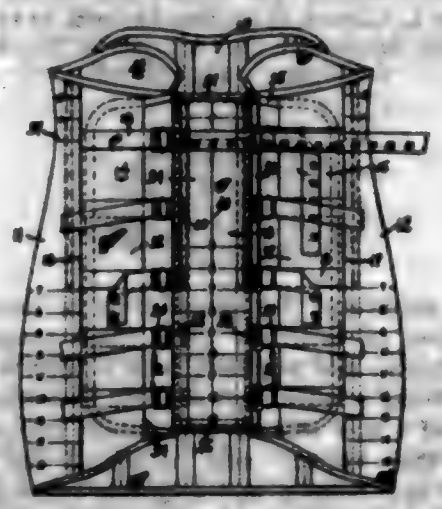


material expansively reactive to moisture and adhesive means attaching the facing pad to the cover strip.

2,858,831
BENDING OBLONG SHAPES
George C. Graham, Jr., Colonia, N. J., assignor to Personal Products Corporation, a corporation of New Jersey
Application March 3, 1953, Serial No. 339,652
12 Claims. (Cl. 128—285)

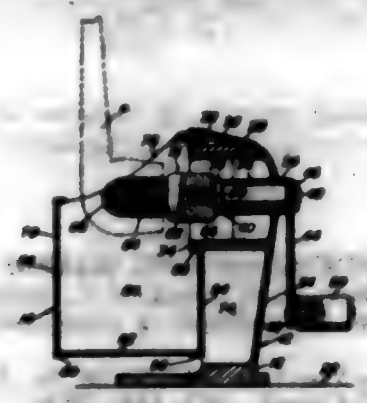
12. A catamenial tampon composed of highly absorbent fibers highly compressed into an oblong cylindrical shape, said tampon having a plurality of parts attached to each other, adjacent parts being movable with respect to each other, said tampon being non-resiliently bendable when a relatively slight force is applied to its ends.

2,858,832
CONTROLLING AND MEASURING GARMENT
Lester H. Leoffel, West Haven, and Emery C. Champagne, Woodbridge, Conn., assignors to The Berger Brothers Company, New Haven, Conn., a corporation of Connecticut
Application September 2, 1955, Serial No. 533,303
10 Claims. (Cl. 128—550)



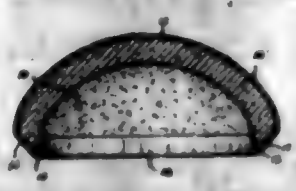
1. A body-encircling controlling garment comprising back, side, and front portions, the latter portions having free edges disposed in spaced relation and a front panel spanning the space between, and adapted to overlie, said edges, said panel consisting of two plies of material to provide a vertically extending pocket open at one side edge thereof, an extension member connected at one of its side edges to the side edge of one of said plies to form a continuation thereof and adapted to be folded over said ply and inserted into said pocket, and means attached to the side edges of the panel and to the garment by which it is adjustably secured to the garment.

2,858,833
PIPE REAMER
Alexander H. Rowell, Pine Bluff, Ark.
Application November 17, 1955, Serial No. 547,436
1 Claim. (Cl. 131—246)



A pipe reamer comprising a base, a vertical rear support on said base having an upper end provided with an annular horizontal housing projecting forwardly therefrom and having a front edge, a surrounding housing on said horizontal housing flaring therefrom toward said front edge and having a front edge terminating in the rear of the front edge of said annular housing, an open top receptacle having a rear vertical plate, means on said plate adapted to suspend said receptacle from said annular housing comprising an annular flange on said rear plate fitting on said annular housing and on the front edge portion of the surrounding housing and defining an opening into which the front edge of the annular housing projects, a bearing sleeve on said support extending into said annular housing in concentric spaced relation thereto, a shaft journaled in said sleeve and provided with a crank on one end having a circumferential end thrust flange on its other end engaging said sleeve and provided with a forwardly extending reduced portion, and a pipe reamer member extending horizontally forwardly from said threaded portion into said receptacle and including a tapped hub portion threaded onto said reduced portion.

2,858,834
MOISTURE RETAINING HELMET FOR THE TREATMENT OF HAIR OR SCALP
Ben L. Givens, West Des Moines, Iowa
Application September 27, 1955, Serial No. 536,872
2 Claims. (Cl. 132—9)



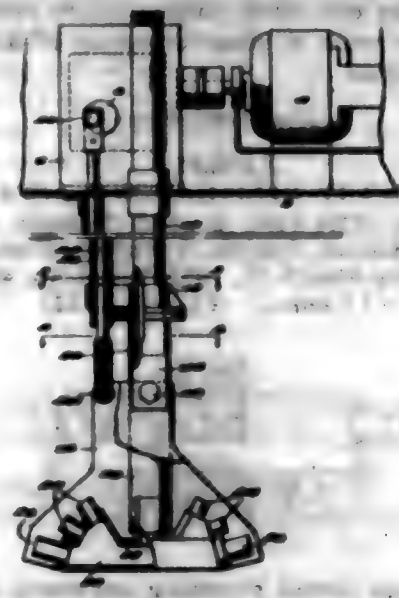
2. In an applicator for introducing a liquid to the head, a helmet of relatively thick foam sponge rubber adapted to receive and normally hold a volume of liquid; said helmet being resilient and adapted to release a liquid to the head of a user when it is manually compressed, an impervious thin rubber skin covering the complete outer side of said helmet, and a flexible resilient continuous stand on the marginal edge of said helmet for tightening the marginal edge of said helmet around the head of the user.

2,858,835
DEVICE FOR TRIMMING HAIR
Jean Parisio, Richmond Hill, N. Y.
Application August 2, 1954, Serial No. 447,885
1 Claim. (Cl. 133—45)

A comb for use in cutting hair, comprising a plurality of teeth extending side by side in spaced relation to each other, said teeth being continuously tapered in depth, in one direction between relatively sharp ends of smallest depth and blunt end of greatest depth and having their end portions of greatest depth free and unattached; and means interconnecting the teeth at points slightly spaced

from the ends of the teeth of smallest depth, said means supporting the teeth in spaced operative position and said ends of smallest depth projecting from said interconnecting means.

2,858,836
TANK CLEANING APPARATUS
Eugene B. Goh, Tenafly, N. J., and Harvey V. McMahon, Floral Park, N. Y., assignors to Oakite Products, Inc., New York, N. Y., a corporation of New York
Application August 14, 1957, Serial No. 678,187
7 Claims. (Cl. 134—167)

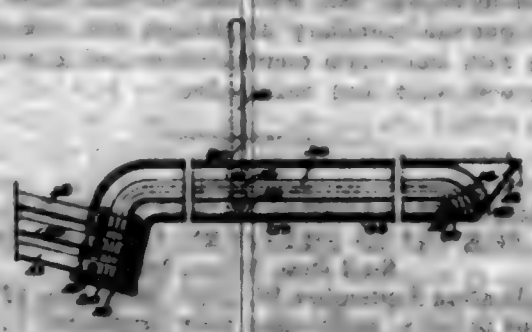


1. Apparatus for cleaning the interior of a tank provided with a manhole, comprising a manhole cover adapted to be attached on the manhole, a pipe extending downwardly through said cover and adapted to be connected to a source of liquid, a hollow member pivoted to the lower end of said pipe about a horizontal axis, a plurality of nozzles mounted in said member, all of said nozzles having their axes located in a plane perpendicular to said axis and being upwardly and angularly directed, a flexible hose connecting said pipe with the interior of said member, a rod pivoted to said member and extending upwardly therefrom, and means operatively connected to said rod to impart to said rod a reciprocation so as to impart a rocking motion to said member.

2,858,837
FOLDABLE PROTECTOR FOR AUTOMOBILES AND THE LIKE
Adam W. Harper, Harrisburg, Pa.
Application May 18, 1956, Serial No. 585,914
5 Claims. (Cl. 135—1)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A protector for automotive vehicle bodies comprising in combination, an assembly including a pair of rollerways adapted to be attached on opposite sides of a vehicle body to the lower edge portions thereof, said rollerways extending longitudinally of said body for the major portion of the distance between the front and rear wheels of said vehicle and having downturned end portions; a plurality of frames each adapted to straddle the vehicle body transversely; a pair of rollers arranged

one above the other on fixed parallel axes adjacent each end of each such frame; dual-function means built into the rollerways providing upper and lower track surfaces for the rollers and also providing means to prevent the rollers from falling out of the rollerways while holding the



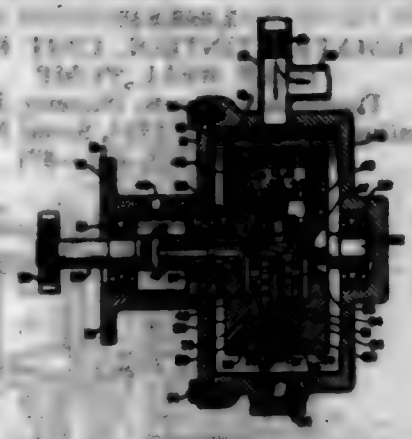
frames in vertical and vehicle-body-embracing positions when put in such positions by an operator, said dual-function means following the contour of the rollerways; and a flexible fabric detachably secured to the outside of the several frames and adapted to substantially cover said body.

2,858,838
DRILL PIPE FLOAT VALVE
Demer Scarmuzzi, Oklahoma City, Okla.
Application November 10, 1955, Serial No. 546,236
10 Claims. (Cl. 137—454.2)

1. A drill pipe float valve assembly comprising, an elongated cage of cylindrical outline and having upper and lower cylindrical rings joined by diametrically opposed vertical members, said upper ring having a downwardly and outwardly tapered valve seat formed in its inner end portion; a valve stem guide member disposed within the cage and having a cylindrical external outline of the same diameter as that of the cage, a central vertical bearing sleeve, spaced arms extending radially from the bearing sleeve, and an inturned cylindrical arcuate segment on the outer ends of each arm, the adjacent ends of said segments being spaced and disposed to receive the respective vertical members of the cage in loose sliding relation; a valve stem having an end portion sliding in the bearing sleeve; a valve member on the other end portion of the valve stem complementally engageable with the valve seat; and spring means on the valve stem acting in opposition between the guide member and the valve member.

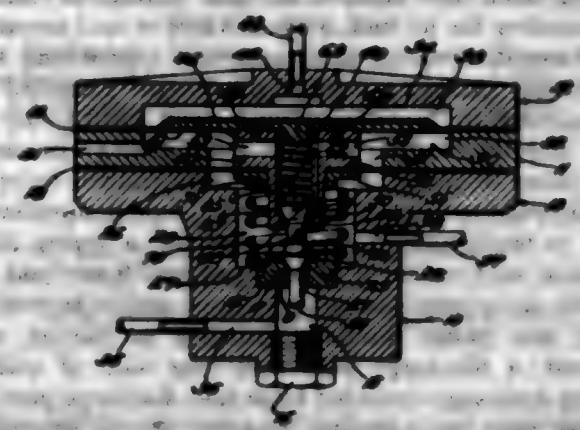
2,858,839
PRECISION PNEUMATIC SPEED SENSING GOVERNOR
John E. Jackson, Los Angeles, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Application November 9, 1953, Serial No. 391,899
21 Claims. (Cl. 137—66)

1. In a speed responsive pneumatic governor, a stationary casing having a fluid inlet, a rotor in said casing, a centrifugally responsive member movably positioned in said rotor, a valve communicating with said inlet and having a pair of valve elements adapted to be in open or closed position, one of said valve elements being carried by said rotor, the other of said valve elements being carried by said member, a vent communicating with said valve and a region of lower pressure than that at said inlet, a diaphragm responsive to fluid pressure in said casing and interconnecting said rotor and said member



in sealed relationship to each other to prevent fluid leakage therebetween, said diaphragm responsive to a differential between fluid pressures in said inlet and said vent and means tending to resist centrifugal response of said member in said rotor and to maintain said valve elements in a predetermined position relative to each other, said valve disposed to change a pressure differential across said diaphragm in response to a speed increase of said rotor, said change in said pressure differential effective in a direction to assist said last mentioned means.

2,858,840
SNAP-ACTING PNEUMATIC RELAYS
Robert C. Wright, Jr., Hingham, Mass., assignor, by mesne assignments, to Worthington Corporation, New York, N. Y., a corporation of Delaware
Application September 12, 1955, Serial No. 533,711
4 Claims. (Cl. 137—82)

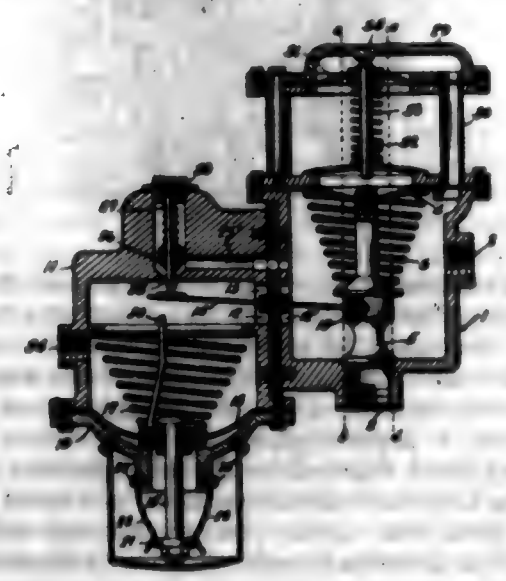


1. In a snap-acting pneumatic relay, the combination of a first member having a selected effective area and responsive to a controlling pressure, a second member having a selected smaller effective area acting in opposition to said first member and responsive to an output pressure, a spacer operatively connecting said members for simultaneous movement having an exhaust port connecting the output pressure with atmosphere, an inlet connection for communication with a supply of fluid operating pressure, a partition downstream of the inlet connection having an inlet port connecting the supply pressure with the output pressure, independent means coacting with the output pressure in opposition to the controlling pressure, a valve member including an exhaust valve cooperating with the exhaust port and an inlet valve cooperating with the inlet port, said valve member being operatively connected to said spacer and actuated by the independent means in opposition to the controlling pressure to

level between the top and the bottom, a movable pipe division wall across said tank dividing the chamber

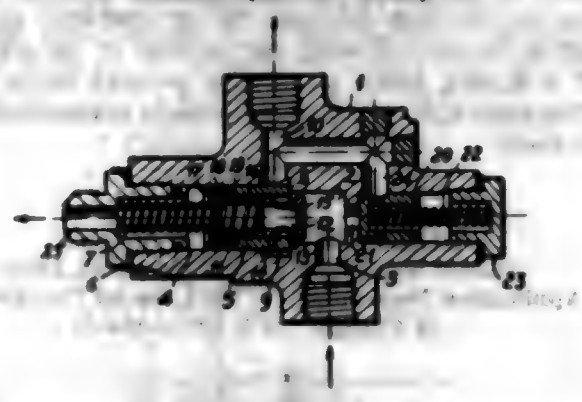
close the exhaust valve and open the inlet valve when said controlling pressure is below a selected minimum value, and when said controlling pressure tends to exceed a selected maximum value said valve member being actuated by said controlling pressure in opposition to the combined effect of said independent means and output pressure to close said inlet valve and open said exhaust valve.

2,858,841
AUTOMATIC CONTROL UNIT FOR JET DEEP WELL PUMP
Thaddeus S. Harris, Waverly, Ill.
Application November 3, 1954, Serial No. 466,603
6 Claims. (Cl. 137—87)



1. In an automatically controlled pumping plant, the combination of a pump, a motor adapted to operate said pump, a storage tank, a jet unit having a venturi disposed at a level below said pump, an intake passage from said jet unit into said pump, a discharge passage from said pump, a pipe extended from said intake passage to the top of the venturi of said jet unit, a second pipe extended from the bottom of said venturi to the water surrounding the jet unit, a check valve in said second pipe; an automatic control unit, said unit comprising a main cylindrical casing, a flexible diaphragm extended across an opening in the top of said main casing, an intake port into the bottom of said main casing connected to said pump discharge passage, a main control valve member disposed to control said port, said valve member being fixed to the center of said diaphragm, a spring disposed to close said valve, a closed passage from said intake port to said pump discharge passage, also a pipe extended from said pump discharge passage to the jet of said jet unit, a discharge port from one side of said main casing, a passage extended from said discharge port to said storage tank, an extended opening in the opposite side of said main casing; an auxiliary cylindrical casing, an extended opening in one side of said auxiliary casing, said auxiliary casing being fixed to said main casing with said openings aligned with each other, but with a flexible membrane held extended across said openings a valve lever passing through and supported by said flexible membrane, one end of said lever engaging said main valve member while the opposite and free end extends into said auxiliary casing, a port from the opposite side of said auxiliary casing, a passage extending from said port to said pump intake passage, a diaphragm supported across one end of said auxiliary casing by a circular cap, an opening through the center of said cap, a center-post fixed to said diaphragm and extended through said cap opening, an adjustable block on said center-post, a pair of flat opposing springs attached to said cap and with rounded ends adapted to engage said block, also a coil spring disposed to move said diaphragm toward said cap, a small port from the opposite end of said auxiliary casing, a passage from said port to the interior of said main casing, a feed back valve disposed to control said port, a spring disposed to normally close said valve, an arm extended from said auxiliary diaphragm, said arm being disposed to engage said free end of said valve lever to thereby put said auxiliary diaphragm into operable connection with said main control valve and also into connection with said feed back valve.

2,858,843
DEVICE FOR AUTOMATICALLY REGULATING THE FLUID DELIVERY OF A PUMP
Saul Reis, Milan, Italy
Application September 19, 1955, Serial No. 535,138
Claims priority, application Italy September 17, 1954
6 Claims. (Cl. 137—100)



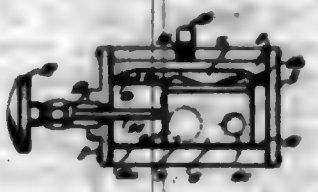
1. A regulator for the rate of fluid flow from a source of fluid under pressure, comprising a housing having a chamber and an inlet port communicating with said chamber for admitting fluid thereto from said source, said housing further having a discharge port connected with said chamber via a first passage and an output port connected with said chamber via a second passage, a first and a second valve element in said first and said second passage respectively, said valve elements being movable independently of each other, spring means acting upon said valve elements against the pressure of said fluid in said chamber, said spring means urging said first valve element into a normal position blocking said first passage and urging said second valve element into a normal position maintaining said second passage wide open, said valve elements being responsive to increasing fluid pressure in said chamber for progressively opening said first passage and for progressively restricting said second passage, respectively, and stop means limiting the displacement of said second valve element from its normal position to an extent preventing complete blocking of said second passage, said second passage extending through said first valve element, said second valve element being displaceably carried on said first valve element, said stop means forming part of said first valve element.

2,858,843
RESERVOIR WITH FLOATING CONDUIT
Jacques Muller, La Garenne-Colombes, France
Application December 16, 1955, Serial No. 553,688
Claims priority, application France December 16, 1954
11 Claims. (Cl. 137—172)

1. A device for introducing and removing liquid into and from a tank by pumping, comprising a stationary pipe entering the tank and ending inside this tank at a

level between the top and the bottom, a movable pipe pivotally connected about a horizontal axis to the end of the stationary pipe inside the tank and adapted to act as a tubular floating arm, float means secured to said tubular floating arm and arranged to hold the free end of this floating arm below and near the surface of the liquid in the tank, a slide valve having connection with one of said pipes, control means connected with one end to said valve and with the other end to the float means, and arranged for closing said valve at the highest position of the tubular floating arm and for closing said valve at the lowest position of the tubular floating arm, said tubular floating arm being provided with a by-pass section communicating with one end of this floating arm, said slide valve being reciprocably mounted in said floating arm between the ends of the by-pass section and arranged to be shifted by the control means to close one end of the by-pass section when the floating arm is in its highest position, and to close the same end of the by-pass section when the floating arm is in its lowest position.

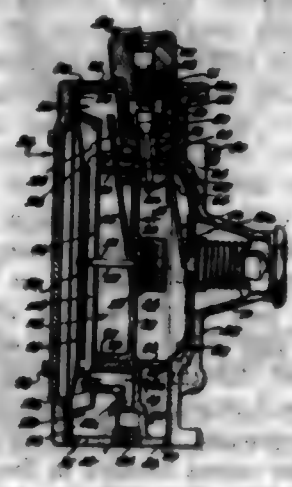
2,858,844
LUBRICATED GATE VALVE
Charles A. Gessner, Pittsburgh, Pa.
Application September 26, 1956, Serial No. 612,237
7 Claims. (Cl. 137—246)



1. A valve comprising a housing having tapered longitudinally and oppositely disposed walls which converge downwardly and inwardly to form a tapered valve body of trapezoidal cross-section and which are provided with registering inlet and outlet openings, a plug therein having opposite walls correspondingly tapered and longitudinally slidable on said housing walls and having a bore adapted to register with said inlet and outlet openings when slid to the on position, means for sliding said plug in opposite directions longitudinally of said housing from the on to the off position, and wedging means for moving said plug in a radial direction so as to force said opposite plug walls into tight engagement with said housing walls as said plug is moved to one of said positions.

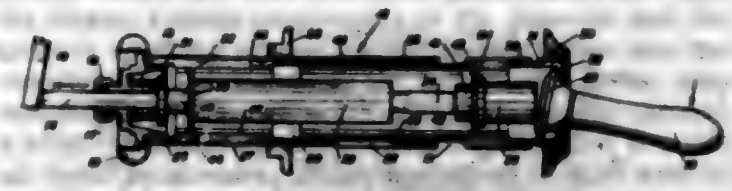
2,858,845
PRESSURE REGULATOR AND HEATER
Ray F. Ensign, San Marino, Calif., assignor to Ensign Carburetor Company, Los Angeles, Calif., a corporation of California
Application June 27, 1955, Serial No. 518,253
18 Claims. (Cl. 137—340)

1. In a pressure regulator and heater of the character described, the combination of a body of integrally cast metal comprising an outer peripheral wall having end edges in spaced planes, a medial division wall integral with the peripheral wall extending across the interior of the peripheral wall in a medial plane, inner walls directly integrated with and projecting from opposite faces of the division wall and peripherally enclosing central chambers at opposite sides of said division wall, each inner wall being annularly spaced from the outer peripheral wall to form annular chambers therebetween, all the body chambers thus formed within the inner walls and between those walls and the outer peripheral wall being open at their ends opposite the division wall, and the two annular chambers being at least in part located directly opposite each other at opposite sides of the division wall; cover plate means closing the otherwise open end of the annular chamber at one side of the division wall, a diaphragm forming a closure for the otherwise open end of the central chamber at that side of the division wall, a fluid inlet passage leading into the central chamber at that side of the division wall, valve means operated by the diaphragm to control said fluid inlet, means for introducing a heating medium to the annular chamber at said side of the division wall; closure means for the otherwise open ends of the annular and



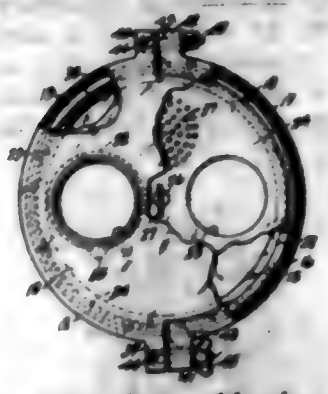
central body chambers at the opposite side of the division wall, said closure means including a second regulator diaphragm exposed to pressure existent in said central chamber, localized communication between the second mentioned annular and central chambers; an outlet passage leading from the first mentioned central chamber and delivering into the second mentioned annular chamber, a valve controlling said delivery and operated by said second diaphragm, and an outlet leading from the second mentioned annular chamber.

2,858,846
ADJUSTABLE HANDLE ASSEMBLY FOR FLUSH VALVES
Wesley R. Parker, Chicago, Ill., assignor to Sloan Valve Company, Chicago, Ill., a corporation of Illinois
Application May 7, 1957, Serial No. 657,669
6 Claims. (Cl. 137—359)



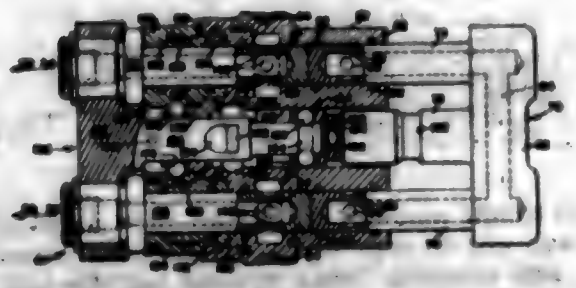
1. In a handle assembly for a flush valve mounted behind a wall and through which said assembly extends, a pair of wall extension tubes threaded together and adjustable lengthwise within one another to accommodate walls of different thicknesses, a wall flange and operating handle mounted on the end of one of said extension tubes, a coupling nut and flush valve operating plunger mounted on the end of said other extension tube clamping means on said last extension tube cooperating with said wall flange for clamping said assembly to a wall, connecting means arranged within said extension tubes between said operating handle and said operating plunger, and means for adjusting the length of said connecting means at the same time said extension tubes are adjusted, said connecting means comprising a pair of elongated members threaded together, the threading on said elongated members and said extension tubes being of the same pitch whereby both are simultaneously adjustable for the same degree of movement.

2,858,847
VALVES
Lowell J. Collins, Oakland, Calif.
Application July 2, 1956, Serial No. 595,261
7 Claims. (Cl. 137—597)



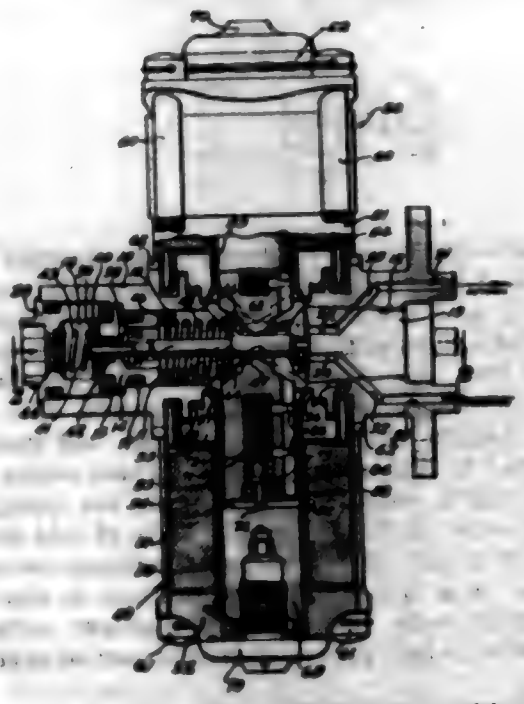
1. A sanitary valve, in combination, a head, a base including a depending discharge housing having a shaft bearing depending therethrough, an intake passage formed through said head, and a discharge passage formed through said base in axial registry with said intake passage and discharging into said dependent discharge housing, said dependent discharge housing having a plurality of dispensing outlets, a valve disc rotatably seated in a circular recess formed in the top of said base with said head cooperative with the top surface of the disc, opposed semicircular clamping means respectively integral with said head and said base and respectively cooperative with the remaining semi-circular portion of each the base and the head for releasably securing said head and said base together through sliding movement of one on the other for rapid assembly and disassembly to expedite cleaning and sterilization, and a valve shaft cooperative with said valve disc and having a handle at its lower end for manual rotative operation of said disc for opening and closing said intake and discharge passages.

2,858,848
FLUID LINE COUPLING FOR HYDRAULIC CONTROL SYSTEMS
Richard A. Wittren, Cedar Falls, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Application June 12, 1956, Serial No. 590,993
23 Claims. (Cl. 137—599.1)



1. A fluid line coupling, comprising: a block having opposite sides, a plug bore and a parallel pilot bore extending therethrough from one side to the other, and a fluid passage intersecting the plug bore; a passage-controlling element at one side of the block and having a plug member and a pilot member axially receivable respectively by the bores and mounted for movement of said element toward and away from the block at said one side respectively between in and out positions, said plug member having an inner portion operative to close and open the block passage respectively in said in and out positions; a carrier at the other side of the block and having a line tube and a finger projecting therefrom toward said other side of the block for receipt respectively by the plug and pilot bores for movement of said carrier toward the block from an uncoupled position to a coupled position, said carrier having abutment means operative upon movement of the carrier to its coupled position to engage the in-positioned element for moving said element to its out position so as to open said block passage, said line tube having adjacent to its terminal end an opening communicable with the opened block passage when the carrier thus attains its coupled position; and lock means cooperative between the carrier finger and element pilot member and effective to interconnect the two as they move in unison to their respective coupled and out positions, said lock means being controlled by the pilot bore to retain the interconnection between said finger and pilot member upon reversal of the carrier so that as the carrier moves to its uncoupled position it draws the element to its in position, said block about said pilot bore being so shaped as to release the lock means substantially as the carrier attains its uncoupled position.

2,858,849
MULTI-POSITIONAL CONTROL VALVE
Leonard F. Griffith, Glendale, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Application February 28, 1955, Serial No. 491,891
3 Claims. (Cl. 137—620)

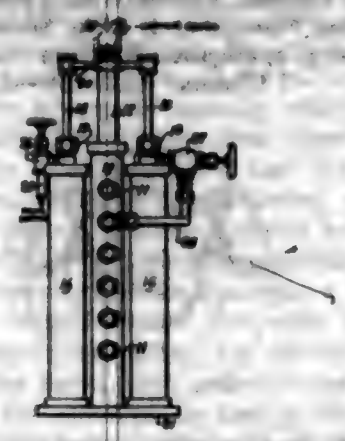


1. In a hydraulic system adapted to position a load: a valve body having a chamber; means forming a port at one end of the chamber; means forming an arcuate surface exposed in the chamber and facing the port; a tubular control member in the chamber having one end projecting beyond said port, and having its other end engaging said arcuate surface; means preventing passage of fluid outwardly of the port along the exterior of said tubular member while permitting angular movement of the tubular member to move its said other end along said arcuate surface; resilient means urging the tubular member against said arcuate surface; selectively operable means for angularly moving the said other end of said tubular member between opposite limits along said arcuate surface from a neutral position; means forming a first passage opening into said arcuate surface and registering with said other end of said tubular member when the tubular member is at one of said limits; means forming a second passage opening into said arcuate surface and registering with said other end of said tubular member when the tubular member is at the other of said limits; the other end of said tubular member being sealed by engagement with said arcuate surface at said neutral position; means continuously establishing a net hydraulic pres-

the third of which positions the pioneer inlet is connected fiberglass having sheets of aluminum foil applied to the

sure differential between said first and second passages; and a reversible hydraulic motor connected between the said one end of said tubular member and said chamber.

2,858,858
CONTROL FOR MULTIPLE OUTLET FLUID DISCHARGE SYSTEM
Edward B. Aronson, Toledo, Ohio
Application October 27, 1954, Serial No. 465,987
1 Claim. (Cl. 137—625.11)

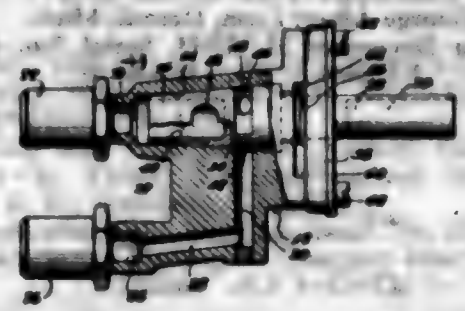


In a fluid pressure distributing system comprising a base plate, a plurality of cylinders mounted thereon in parallel relation, the outside cylinders having pistons therein and being power cylinders, said base having openings therein communicating with the power cylinders, said pistons having connecting rods projecting through the end of the cylinders removed from the base plate, both ends of the connecting rods being attached to a cross-head, the cross-head also being attached to an elongated valve tube projecting into an intermediate cylinder, said intermediate cylinder having aligned equally spaced distributing conduits in the wall thereof, said valve tube being hollow and having at one end a side port communicating in certain positions of the valve tube with each of the aligned equally spaced distributing conduits mounted in the wall of the cylinder in which the valve tube is positioned, a fitting on the end of the hollow valve tube removed from the side port for a fluid pressure source, means for moving in unison the power pistons and the elongated valve tube with its discharge port past the distributing conduits in the wall of the cylinder comprising a manifold interconnecting the tops of the power cylinders above the pistons therein, a first pipe having a first control valve therein interposed between a fluid pressure source and said manifold to admit fluid pressure to move the pistons and the elongated valve in one direction, a second pipe connected between the manifold and one of said distributing conduits, a second control valve in said second pipe whereby said power cylinders can be drained at the end of the power stroke.

2,858,861
PUSH-PULL VALVE
James W. F. Holl, Temple City, Calif.
Application September 16, 1954, Serial No. 456,435
2 Claims. (Cl. 137—625.18)

2. A push-pull valve including a top plate and a bottom plate and a cylinder portion arranged between said plates, detachable means securing the plates to the cylinder portion, a gate slidably mounted in the cylinder portion, one face of the gate engaging the top plate and another face of the gate engaging the bottom plate, said top plate having ports extending therethrough, said bottom plate having ports extending therethrough, and said gate having channels extending therethrough, said channels being variously alignable with the ports in the top and bottom plates, a seal seat positioned in various of said ports, each seal seat being positioned within one of the ports, said top and bottom plates having recesses therein from which said ports extend, each seal seat including a first sealing means bearing against a plate in which it is mounted, and a second sealing means bearing against a flat surface of said gate, the outer surface of the first sealing means being knurled to permit passage of fluid around the outside of the first sealing means, and within the recess and one of said plates having a balance passage therein, said passage extending from one end of the gate to the other end thereof.

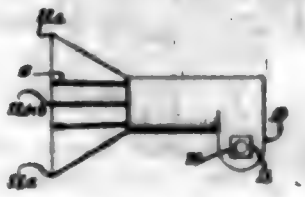
2,858,863
GAS VALVES
Charles C. Lemer, Chicago, Ill., assignor, by mesne assignments, to Harper-Wyman Company, Chicago, Ill., a corporation of Illinois
Continuation of application Serial No. 267,237, January 19, 1952. This application October 4, 1956, Serial No. 613,991
3 Claims. (Cl. 137—625.32)



1. A valve of the character described for supplying gas to the main and simmer sections of a double burner and high and low quantities of gas to only the simmer section of the burner, including a valve body having a valve chamber and transversely extending substantially coplanar simmer burner section outlet and gas inlet passageways opening into said chamber with their axes located about ninety degrees apart, said body having also main burner section gas inlet and outlet passageways of which the former extends transversely of the chamber and the latter is coaxially located relative to and opens into the chamber beyond the plug, an open ended valve plug mounted in said chamber for rotation in sequence through a plurality of angular positions of which a first is a full on position in which gas is supplied at a high rate to both the simmer and main burner outlet passageways, a second provides a carry-over range in which a small predetermined quantity of gas is supplied to the simmer burner section, a third is the full simmer position in which gas is supplied at a high rate to only the simmer burner outlet, and a fourth of which is a low simmer position in which gas is supplied only to the simmer burner outlet as in the second position, means including a first system of control passageways in said plug with portions at the plug surface in the plane of said simmer burner section inlet and outlet passageways for controlling the flow of gas from said simmer inlet passageway to said simmer outlet passageway, said system comprising a slot at the exterior of the plug and an angularly extending passageway connecting said slot to the periphery of said plug at a point generally opposite the slot for supplying high quantities of gas from said inlet to said outlet passageway in the first and third angular positions of the plug, in the first of which positions the slot directly connects the simmer inlet to the simmer outlet and in

the third of which positions the simmer inlet is connected to said angularly extending passageway and the slot is connected to said outlet, and said system including an orificed flow limiting passageway in said plug having an opening at the surface of the plug angularly between said slot and angularly extending passageway and communicating with both said slot and angularly extending passageway and registrable with said simmer inlet passageway in the second angular position of the plug in which the flow limiting passageway is connected to said simmer outlet through said angularly extending passageway and slot, and registrable with said outlet passageway in the fourth angular position of said plug in which the flow limiting passageway is connected to the inlet through said angularly extending passageway for supplying said outlet passageway with a predetermined small quantity of gas in said second and fourth angular positions, said means including a second system of passageways in said rotatable valve plug axially displaced from the first system and comprising the axial open ended portion of the plug open to said chamber and a transverse portion in the plane of the main burner section inlet passageway and communicating with the latter in the first said angular position of said plug, said plug being movable also to an off position in which both inlet passageways are closed.

2,858,853
EXHAUST PIPE EXTENSION
George Albert Lyon, Detroit, Mich.
Application December 31, 1953, Serial No. 401,574
3 Claims. (Cl. 138—46.5)

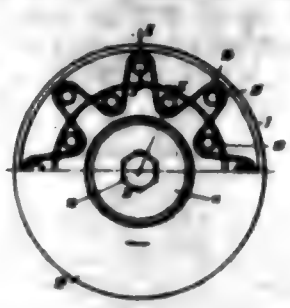


1. As an article of manufacture, an exhaust pipe extension which is substantially tubular throughout its length, said extension having an open ended generally tubular portion for telescoping cooperation with the exhaust pipe of a vehicle, and an enlarged discharge end portion on one end of said tubular portion, said end portion comprised of a series of more than two equidistantly spaced symmetrically positioned generally radially and axially converging peaked flutes, each of said peaked flutes being progressively inclined longitudinally along and radially away from the axis of said extension and being of a progressively increasing cross sectional conformation with the side walls of said flutes diverging rearwardly and with said peaked flutes defining an inwardly facing fluid conducting channel arranged to discharge fluid in a multiple of divergent directions away from the axis of said member.

2,858,854
FLEXIBLE TUBING
Frederick K. Doggett, Pine Orchard, Conn., assignor to The Flexible Tubing Corporation, Guilford, Conn., a corporation of Connecticut
Application November 8, 1954, Serial No. 467,341
8 Claims. (Cl. 138—56)

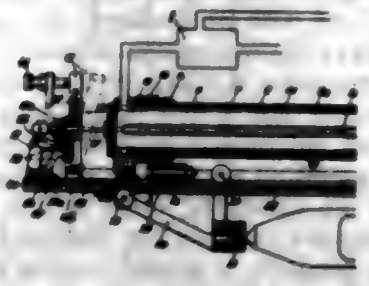
6. A flexible tubing comprising a helix of wire supporting a composite covering consisting of a sheet of woven fiberglass having sheets of aluminum foil applied to the inner and outer faces of the woven fiberglass sheet and adhered thereto over the entire area thereof, the inner aluminum foil sheet being secured against movement relative to the coils of the wire helix axially of the latter.

2,858,855
METHOD AND APPARATUS FOR FACILITATING THE STARTING OF LOOMS WITHOUT CHANGING THE PICK
Jaime Picanol, Zillebeke-lez-Ypres, Belgium
Application November 1, 1956, Serial No. 619,724
Claims priority, application Belgium November 29, 1955
7 Claims. (Cl. 139—1)



1. A method of facilitating the starting of a motor driven loom consisting in mounting an inertia mass on a rotary part of the driving motor and connecting the inertia mass to the said rotary part of the motor by a connection means which, on starting the loom, provides a connection between the said inertia mass and the said rotary part of the loom until such time as the shuttle is thrown, and thereafter enables the said rotary part of the loom to move angularly relatively to said inertia mass to render said inertia mass partly or completely inoperative.

2,858,856
DEVICE ON LOOM
Gustav Kummer, Eriesbach, Switzerland
Application April 11, 1955, Serial No. 500,607
Claims priority, application Switzerland November 26, 1954
3 Claims. (Cl. 139—144)



1. In a pneumatic control for the shuttle of looms, a loom frame, a shuttle, guide cylinders stationarily arranged on the loom frame on both sides of the shed, a source of compressed air in communication with the guide cylinders, a compressed air cylinder axially slidable upon each guide cylinder between two end positions, a stationary plunger at the end of each guide cylinder closing hermetically relative to the compressed air cylinder and serving to divide the compressed air cylinder into outer and inner pressure chambers, the outer chamber functioning to propel the shuttle and the inner chamber to re-set the compressed air cylinder from an operative to an inoperative position, means defining a hollow space within the guide cylinder, port means cooperating with the hollow space and the inner chamber whereby the hollow space and inner chamber are in constant communication, an inlet valve means cooacting with the hollow space and the outer pressure chamber whereby the hollow space can be intermittently connected with the outer pressure chamber, control means

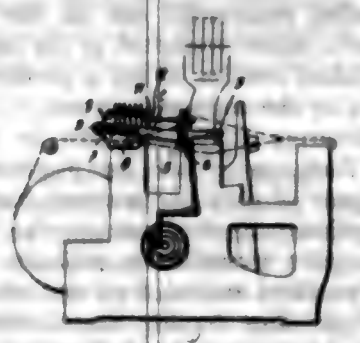
for the inlet valve means including a carriage associated with the compressed air cylinder and serving as a picker and catcher device for the shuttle, an outlet valve which, when the inlet valve means is open, is closed and, which when the inlet valve means is closed, connects the outer pressure chamber with the atmosphere, means for opening the inlet valve, such opening means including a cam fixed to the carriage, a roller disposed into the path of movement of the cam, a toggle lever carrying the roller at one end thereof, a control lever fulcrumed at one end to the loom frame, a connection between the other end of the toggle lever and the control lever, a valve stem carrying the outlet valve body engageable with the other end of the control lever, an air discharge tube arranged coaxially within the guide cylinder through which said valve stem extends coaxially, means for closing the inlet valve and the subsequent opening of the outlet valve, such closing means comprising a further control lever engageable with the valve stem, a slide having a slot therein extending obliquely to the path of movement of the carriage, a fixed pin on the loom frame lodged in the slot with the pin and slot providing supporting means for the slide, a draw-member connecting the further control lever to the slide and a roller on the carriage so that in one end position the slide projects into the path of the roller on the carriage whereby the impingement of the shuttle on the picker and catcher device causes the control lever to swing by the action of the cam and toggle lever thus opening the inlet valve whereby compressed air from the hollow space enters the outer pressure chamber thereby moving the compressed air cylinder axially away from the guide cylinder so that the carriage shoots the shuttle and the roller on the carriage prior to reaching the end position of the compressed air cylinder begins to rise on the slide thereby swinging and displacing the slide and causing the further control lever to swing by virtue of the draw-member to effect closing of the inlet valve and the subsequent opening of the outlet valve so that the pressure of the air in the outer chamber will drop and the air escape to atmosphere while the compressed air in the inner chamber will cause the compressed air cylinder to return to its starting position.

2,858,857

MOUNTING MEANS FOR THE WARP STOP MOTION DEVICE IN WEAVING LOOMS

Jaime Picanol, Zillebeke-lez-Ypres, Belgium

Application November 1, 1956, Serial No. 619,785
Claims priority, application Belgium December 17, 1955
1 Claim. (Cl. 139—369)



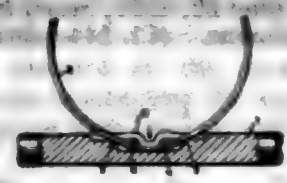
In weaving looms having a warp stop motion device, supporting arms mounting said warp stop motion device, said arms being pivotally mounted, at one of their ends, on pivots fixed on said loom, said arms each having a longitudinally elongated slot formed at the other of its ends and having a transversely elongated arcuate slot intermediate between said pivot and said longitudinal slot, a pin simultaneously engaged in said longitudinal slot and in a curved oblong opening in said warp stop motion device, a pair of studs fixedly mounted on said loom and each engaged in said transverse slot of one of said arms, a set screw for each of said arms, extending transversely through part of said arm and into said transverse slot and having its free end resting on said stud in said slot.

2,858,858

METHOD OF SECURING WIRES TOGETHER

Edwin W. Krueger, River Forest, Ill.

Application October 31, 1956, Serial No. 619,478
3 Claims. (Cl. 140—3)



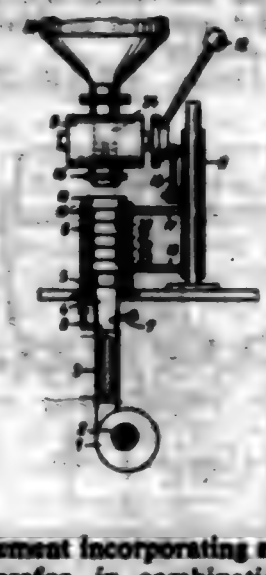
1. A method of securing a smaller wire to a larger wire comprising swaging the larger wire to provide a recess having shoulders adapted to support the smaller wire away from the bottom of the recess before locking, placing a portion of the smaller wire within the recess and upon said shoulders, and crimping the sides of the recess against the smaller wire to hold it against the shoulders and to distort that portion of the smaller wire lying between the shoulders and force it against the bottom of the recess.

2,858,859

HEATING APPARATUS FOR GRANULATED MATERIALS WITH COMBINED REFILLING AND DISPENSING MEANS

Horst Mohr and Willi Leptien, Norderf, Germany, assignors to Telefunken-Decca Schallplatten G. m. b. H., Hamburg, Germany

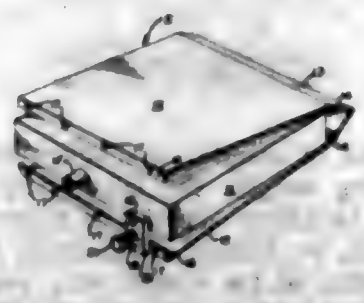
Application June 25, 1957, Serial No. 667,941
Claims priority, application Germany June 25, 1956
8 Claims. (Cl. 141—82)



1. In an arrangement incorporating a heating apparatus and dispenser therefor, in combination, a heating apparatus adapted to receive a series of receptacles each of which is adapted to receive a substance to be heated, said heating apparatus being mounted for movement between two positions in one of which an additional receptacle may be so placed into association with the series of receptacles received by said heating apparatus as to form a continuation of such series and in the other of which positions a receptacle which prior to movement of said heating apparatus into such other position was one of the series of receptacles received thereby but which during movement of said heating apparatus into such other position assumes a position exteriorly of said heating apparatus, is freely accessible; dispensing means for supplying a quantity of the substance to be heated into an additional receptacle placed into association with the series of receptacles received by said heating apparatus

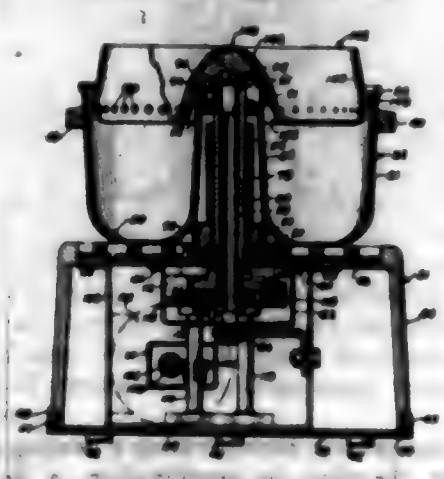
so as to form a continuation of such series; and common operating means connected to said heating apparatus and to said dispensing means for moving said heating apparatus between said positions thereof as well as for operating said dispensing means.

2,858,860
CAUL PLATE ENVELOPE
Jack H. O'Donnell, Seattle, Wash.
Application June 20, 1955, Serial No. 516,547
8 Claims. (Cl. 144—281)



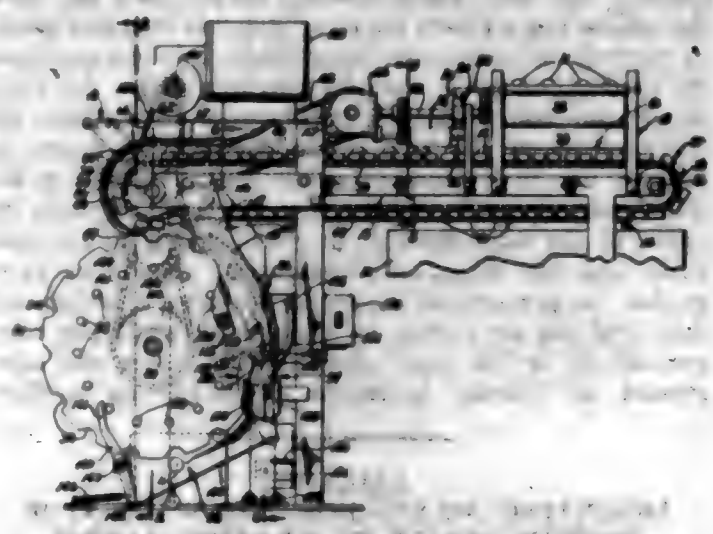
1. In a platen press, a plurality of platen bodies, each body having opposite pressure surfaces, means for supporting said bodies in overlying relationship, a removable envelope supported by and about each of adjacent bodies, each envelope including a pair of spaced apart caul plates engaging said pressure surfaces of such body with one of said caul plates of each envelope carried by the other caul plate of such envelope, and take up means for securing such removable envelope to the body with which it is associated.

2,858,861
FRUIT REAMER AND STRAINER
Arthur I. Appleton, Northbrook, Ill.
Original application November 13, 1951, Serial No. 256,866. Divided and this application November 3, 1954, Serial No. 466,586
2 Claims. (Cl. 146—3)



1. In a juicer of the character set forth and having a bowl centered about a power head and disposed so that the outer wall thereof is in surrounding relation with said power head and about the same level, the combination comprising an annular, open top, rotary drum detachably mounted on and driven and supported by said power head; and a fruit reamer in the center of said drum; said drum including an imperforate bottom wall extending outwardly from the center of said drum to a region of maximum diameter disposed at a level below the peripheral rim of said bowl and a substantially imperforate side wall tapering upwardly from said region of maximum diameter and terminating in an upper edge portion of substantially lesser diameter and at a level above the peripheral rim of said bowl, said region of maximum diameter where the imperforate bottom wall merges into the lower portion of the substantially imperforate side wall constituting an annular pocket defined by portions of said bottom and side walls and having a plurality of generally radial holes extending from the inside to the outside thereof, said side wall being imperforate except for said holes, said pocket being provided for receiving and centrifugally straining juice running off said reamer, centrifugal force when said drum is rotated and the taper of said side wall thereof causing juice to flow from said reamer into said annular pocket and outwardly through the holes thereof, said bowl surrounding said drum and receiving and collecting therein juice discharged through said holes at said level below the peripheral rim of said bowl, each of said holes increasing in diameter from the inside to the outside of the drum to form a tapered hole to minimize splashing and to facilitate cleaning of said holes, the size of the holes at the inside of the drum being relatively small for straining fruit pits and pulp out of the juice as the juice passes through said holes.

2,858,862
APPARATUS FOR RESTUFFING OLIVES
Marshall E. Francisco, San Jose, Calif., assignor to Francisco Machinery and Equipment Company, a corporation of California
Application December 3, 1956, Serial No. 625,762
12 Claims. (Cl. 146—37)

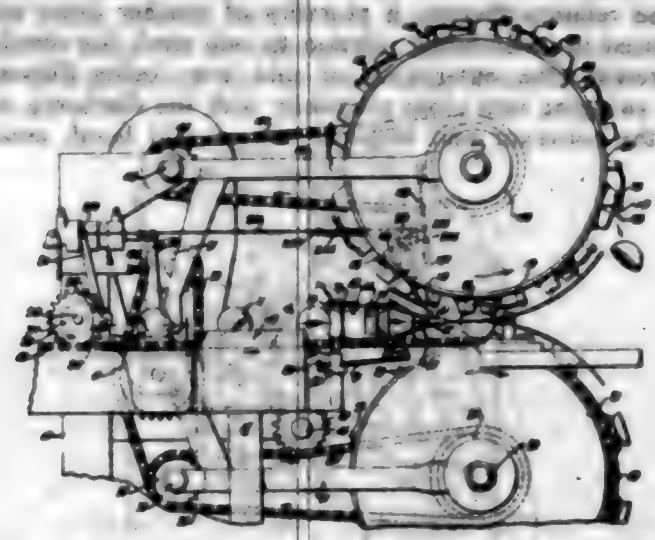


1. An apparatus for processing rollable oblong articles having predetermined substantially uniform lengths and central cores concentric to major axes filled with stuffing material extended endwardly out of the articles comprising a support; means mounted in the support for conveying such stuffed articles along a predetermined path; means mounted in the support adjacent to the conveying means for delivering stuffed articles to the conveying means so that their major axes are disposed transversely of the path; a pair of packing members having resiliently flexible end portions; means mounting the packing members in the support transversely adjacent to said path with their end portions extended on opposite sides of said path, the end portions having inner relaxed positions spaced apart a distance substantially equal to the length of said articles, and being yieldably resiliently movable under pressure outwardly applied theretoagainst to outer positions spaced a greater distance apart; and means mounted on the conveying means engaging the packing members for urging the end portions to said outer positions in advance of movement of an article into a predetermined position between the packing members and subsequently releasing said end portions when an article is located therebetween so that said end portions spring resiliently inwardly and strike the endwardly extended stuffing material to pack it into such article.

2,858,863
FRUIT CUTTING APPARATUS WITH SIZE COMPENSATION

Coley Lewmon, Davis, Calif., assignor to The Regents of the University of California, Berkeley, Calif., a corporation of California

Application September 23, 1955, Serial No. 537,242
25 Claims. (Cl. 146—72)



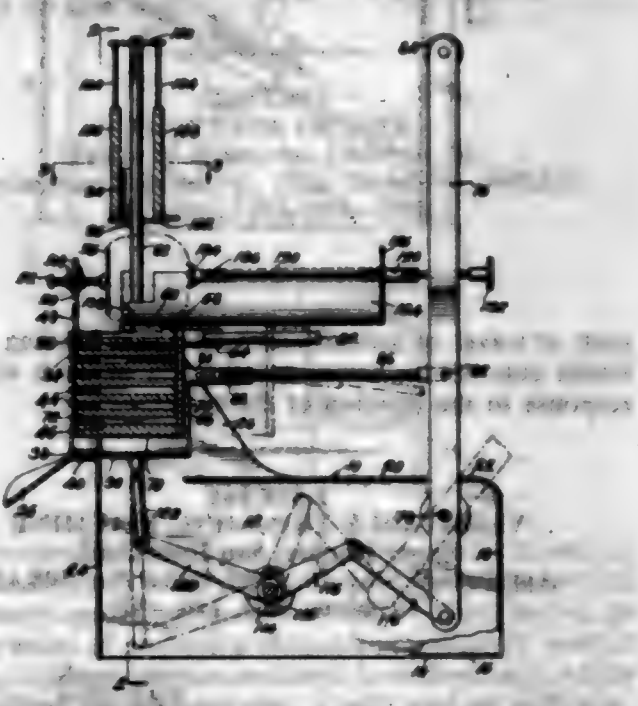
1. Fruit handling apparatus comprising a plurality of fruit locating cups each adapted to be moved relative to a fruit cutting point and each to have one fruit piece located thereby, cutting means adapted for slicing each fruit piece as moved by the fruit locating cups thereby to cut each fruit piece into half at a cutting point, means adjacent to the motional path of the fruit locating cups and also adjacent to and ahead of the slicing point for sensing the size of the fruit component to be cut, a second plurality of fruit locating cups of a form similar to the first plurality of fruit locating cups, means to move the second set of fruit locating cups an inverted relationship relative to the first locating cups and fruit adapted to be located thereby to contact the fruit immediately prior to and during the operation of the slicing means thereby to provide means to hold the individual fruit pieces at two points securely and against rotation, servo apparatus responsive to pressure changes in a portion thereof for adjusting the spacing of the cups of the first and second plurality proportional to the size of instantaneously located fruit pieces within the slicing region so that for larger and smaller size fruit pieces the cups are spaced a greater and lesser distance respectively from each other and each cup is uniformly spaced with respect to the slicing means so that fruit pieces are substantially centered relative thereto, and adjustable means for controlling the operation of the servo apparatus with the adjustment of the sensing means controlled by the individual fruit pieces.

2,858,864
SLICING MACHINE

Herbert C. Bible, Casper, Wyo.

Application May 16, 1957, Serial No. 659,671
30 Claims. (Cl. 146—78)

1. In a slicing machine, a base having side plates and a trough formed therebetween together forming a frame, at least one stationary blade positioned at the forward end of the trough, a plunger mounted within the trough for forward and rearward reciprocal movement relative to the stationary blade, the plunger having at least one slot in the forward end thereof positioned to receive the stationary blade when in forward position, the rear position of the plunger providing a gap between it and the stationary blade, a food chute supported above the trough with its forward end terminating behind the stationary blade, sleeves supported on the frame in spaced parallel relation and extending upwardly therefrom, parallel rods mounted within the sleeves for upward and downward slidable movement, a movable blade mounted between the rods for reciprocal movement therewith across the forward end of the chute, an operating lever mounted between the side plates for forward and rearward pivotal movement about a point located between the ends thereof, link means pivotally interconnecting the lever at a point above the pivot with the plunger, rearward movement of the lever acting through the link to retract the plunger from the stationary blade and forward movement thereof functioning to push the plunger into position to receive the stationary blade, bell crank means journaled for rockable movement between the side plates forward of the operating lever, link means pivotally interconnecting the operating lever at a point below the pivot with the rear end of the bell crank



means, link means pivotally interconnecting the front end of the bell crank means with the movable blade, rearward movement of the operating lever acting through the bell crank means and associated link means to lower the movable blade across the chute and sever a slice from a vegetable projecting therefrom while the plunger is being retracted, and a counterweight carried by said parallel rods for upward and downward relative movement in front of the movable blade, the counterweight being positioned to rest upon the portion of the vegetable projecting beyond the chute and force said portion when severed by the movable blade into the gap between the plunger and the fixed blade, and forward movement of the operating lever acting to raise the movable blade while pushing the plunger and severed slice against the stationary blade to cut the slice into sections.

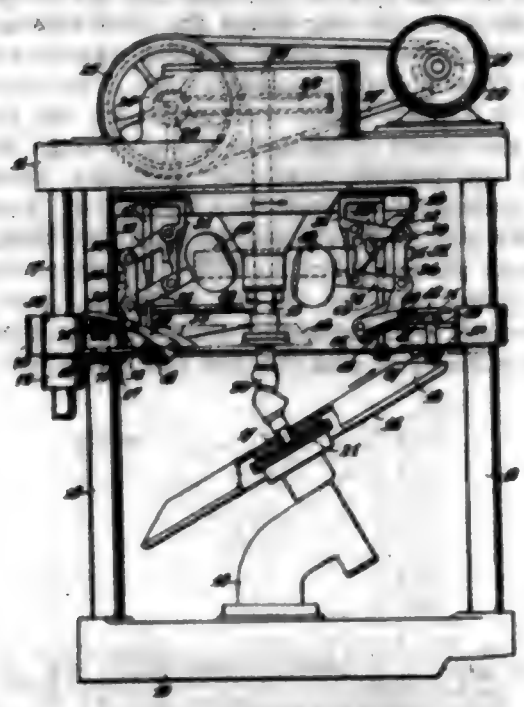
2,858,865
MUSHROOM TRIMMING MACHINE

Raymond E. Fleming, Philadelphia, Edson S. Harris, Jr., Moylan, and Dexter Mead, West Chester, Pa., assignors to Grocery Store Products Co., West Chester, Pa., a corporation of Delaware

Application December 29, 1954, Serial No. 478,136
14 Claims. (Cl. 146—81)

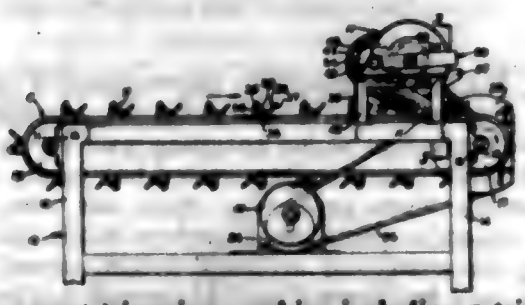
1. In a machine of the character described, the combination of a turret rotatable on a vertical axis, article holding devices for fixedly gripping and holding articles; means mounting said devices on said turret in circumferentially spaced relation for up and down vertical movement, each holding device having limited down movement under the action of gravity, a cam disk rotatable on an inclined axis and disposed below said turret and holding devices, said cam disk acting on the articles respectively held by said devices in succession in response to the rotation of the turret causing each article together

with its holding device to move upwardly into a predetermined raised position, and a stationary knife in the



path of travel of articles carried by said holding devices which cuts off the lower end portion of each article in response to the rotation of the turret.

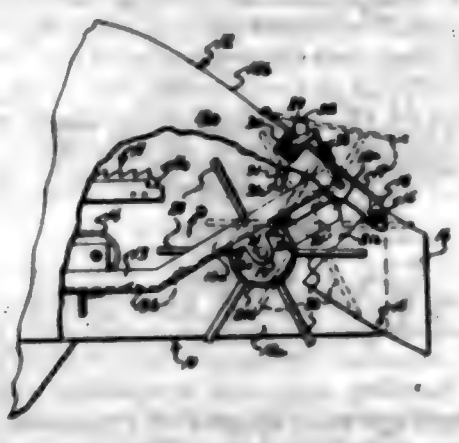
2,858,846
VEGETABLE TRIMMING MACHINE
Elmer Hendry, San Jose, Calif.
Application May 16, 1955, Serial No. 508,435
7 Claims. (Cl. 146—61)



2. In a sprout trimming machine including a trimming knife, a conveyor including a plurality of cups for supporting sprouts with their stalk ends disposed to engage said trimming knife and drive means for said conveyor; means for holding a sprout in said cup during engagement of the stalk of said sprout by said knife comprising a lever pivotally mounted on said machine above said conveyor, a wheel mounted for turning movement adjacent the free end of said lever having its periphery disposed in alignment with the line of travel of said cups, stop means on said machine for limiting downward movement of said lever and wheel for causing the periphery of said wheel to bear upon a sprout only disposed in a cup as it passes said knife, and power transmission means operatively connecting said wheel to said drive means for turning said wheel in synchronism with said conveyor so that no relative movement occurs between the sprouts in said cups and said wheel as the latter holds the sprouts in said cups.

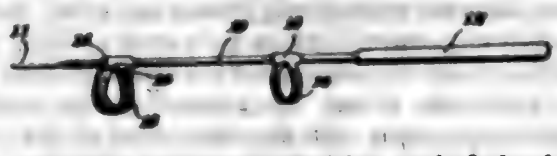
2,858,867
STALK AND STRAW DISINTEGRATING AND SCATTERING MECHANISM
Harry Ehrlow, Grand Forks, N. Dak.
Application July 14, 1954, Serial No. 443,328
5 Claims. (Cl. 146—164)

1. A combine including a straw delivery portion, a straw discharge conveyor carrying straw in an outward direction and having a discharge end; a hood having side walls adjacent to the opposite sides of the conveyor and having a top positioned above the discharge end of the conveyor, said hood defining a discharge passage; a stalk and straw disintegrating mechanism mounted outwardly of and adjacent to the discharge end of said conveyor and comprising a shaft journaled for rotation below the discharge end of said conveyor and extending in transverse relation thereto, a plurality of crusher arms each secured in outstanding relation to said shaft for rotation therewith, the outer ends of said arms being disposed for swinging into close proximity with the discharge end of the conveyor and with the top of said hood, means



driving said shaft to swing said arms in their over-passing arcs of rotation through said discharge passage substantially in the outward direction of travel of the straw discharging from said conveyor and engaging and propelling in substantial continuity of direction of travel the straw discharged by the conveyor, a plurality of knives adjacent the top of the hood and between the arms, and said knives extending downwardly from the hood toward said shaft, and into proximity with the crusher arms to coact therewith in disintegrating the straw propelled thereby, and means mounting said knives on the hood such that the cutting edges of said knives are at substantially the same horizontal level as said discharge end of the conveyor.

2,858,868
GOLF CLUB CARRIER
Alexander C. Wallace, Salt Lake City, Utah
Application March 15, 1955, Serial No. 502,555
4 Claims. (Cl. 150—1.5)

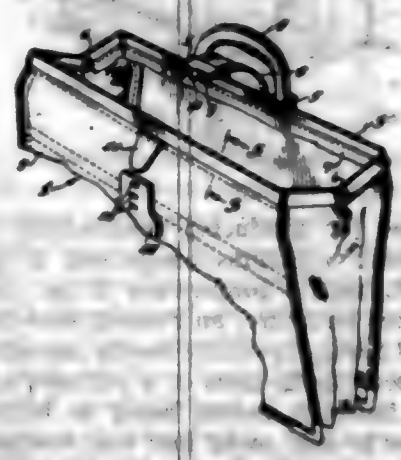


1. A golf club carrier, comprising a shaft having one end pointed for insertion in the ground and the opposite end portion formed as a rectilinear handle; and two rings secured at their peripheries to the shaft in mutually spaced relationship along the length of the shaft and spaced inwardly from the respective ends thereof, one of said rings lying closely adjacent the said pointed end of the shaft and being swingable about the axis of the shaft, and the other ring being rigid and fixed in its position, both of the rings being formed independently of the said handle and being of predetermined loop character.

2,858,869
FRAME FOR BAGS AND THE LIKE
Daniel Solomon, New York, N. Y., assignor to Kwik Mold Plastic Corp., New York, N. Y., a corporation of New Jersey
Application April 23, 1957, Serial No. 654,532
1 Claim. (Cl. 150—1.6)

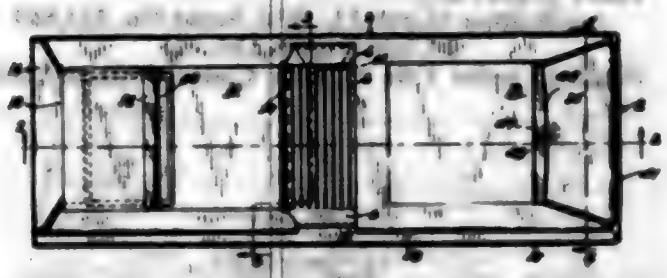
In a foldable bag consisting of a body and a frame comprising a pair of U-shaped frame-sections hinged

together at their ends and adapted to come in sliding contact to close said bag, the improvement which comprises said section being of rectangular cross-section and having parallel faces, one of said faces of one frame section being flat throughout its depth on its outer side, the other of said faces thereof having a protuberance along its lower edge only, forming an opening of key-hole shape in cross-section along the lower edge of said one frame section, one of said faces of the other frame section being flat throughout its depth on its inner side so as to contact the corresponding face of said one



frame section when the bag is closed to form a seal by one of said flat faces sliding over and in contact with said other flat face, the other face of said other frame having a protuberance along the outside of its lower edge only, forming an opening of key-hole shape in cross-section along the lower edge of said other frame section, narrow strips of tape having their upper edges in said openings and clamped by compression of said protuberances, and a bag body secured to said strips adjacent the free edges of said tapes with the upper edge of said bag body in substantial engagement with the lower edges of said frame sections.

2,858,870
WALLETS
Edward S. Vikan, Chicago, Ill.
Application June 11, 1957, Serial No. 664,979
8 Claims. (Cl. 150—35)



1. A wallet comprising an elongated strip of bidden material, an inner layer of such material disposed at one side of the strip and stitched on one end thereof to an end of said strip, another inner layer of such material, separable from the strip and spaced lengthwise of the wallet from the first-mentioned layer and extending at said side of said strip and having a portion extending through a slit in said strip adjacent its other end to overlap the opposite side thereof, a liner attached at one end thereof to the portion of said other layer which overlaps said opposite side of said strip, and an envelope of exterior material surrounding one edge of said strip and having a bottom segment spaced from said layers to define therewith a bill compartment, said envelope having top segments spaced from each other lengthwise of the wallet, one of the top segments surrounding an edge of the strip remote from the first-mentioned edge of said strip and being stitched to said first-mentioned layer, the other top segment surrounding the edge of the strip remote from said first-mentioned edge of said strip and being stitched to the second-mentioned layer, a flap connected to one end of the bottom segment and extending into a slit of the first-mentioned top segment and secured thereto to define a card pocket opening toward the transverse centerline of the wallet, the other top segment having an inner edge attached to the liner and having a free outer edge partly defining a card pocket opening toward one end of the wallet, said liner and said strip defining a card pocket opening toward the other end of the wallet, a layer of said second-mentioned material attached to said strip at the side thereof remote from said layers, and a tongue on the bottom segment extending between the top segments and overlapping said one side of said strip.

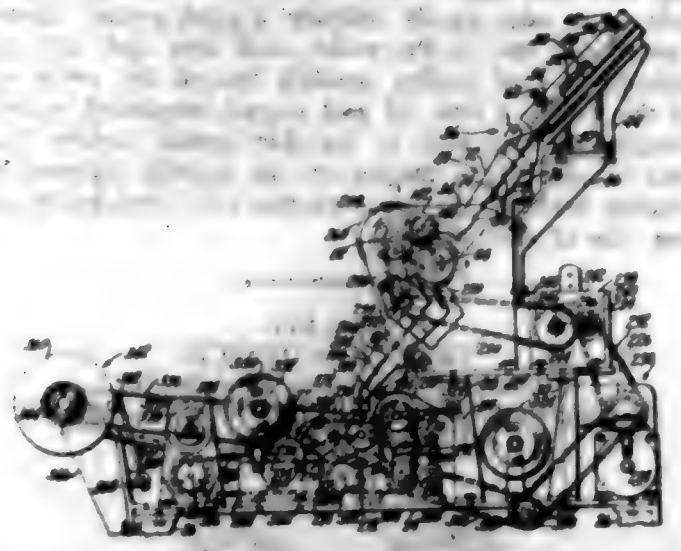
2,858,871
TRACTION DEVICE
Walter F. Klausens, Chicago, Ill.
Application February 5, 1954, Serial No. 408,344
4 Claims. (Cl. 152—230)

1. Traction means for a double-tire wheel assembly, including a spacer band maintaining a pair of tire wheels in properly spaced relation, said spacer band having an annular series of anchoring elements permanently secured thereon, resilient traction members to transversely overlie the treads of the adjacent tires, a yoke part on each traction member to extend inwardly between the adjacent tires in spaced relation thereto, and means to floatingly connect said yoke part to one of said anchoring elements.

2,858,872
MEANS AND METHOD FOR APPLYING TENSION TO SHEET METAL
Everett D. Hougen, Flint, Mich.
Application September 24, 1954, Serial No. 458,197
4 Claims. (Cl. 153—32)

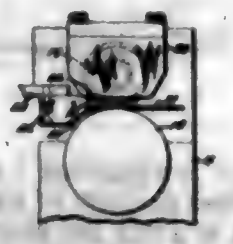
1. The method of straightening a distorted sheet metal panel which comprises the steps of attaching only one end portion of one face of a thin and flexible sheet metal plate to and in coplanar engagement with a surface portion of the panel at an area spaced from the distorted portion thereof, said attachment being effected by soldering said face portion of the plate flatwise to said surface portion of the panel with solder having a melting point substantially lower than the melting point of the panel, detachably securing to the opposite end of the plate one end of a force applying member, anchoring the opposite end of the force applying member relatively to the panel, applying to the soldered joint between the plate and the panel by means of said force applying member a force in shear to straighten the distorted portion of the panel, relieving the joint of said force and then removing said plate from the panel by heating the plate to a temperature above the melting temperature of the solder and below the melting temperature of the panel.

2,856,673
MACHINES FOR STRAIGHTENING AND BUNDLING COMPONENTS
Thomas W. Snow, Melrose, Mass., assignor to United Shoe Machinery Corporation, Flemington, N. J., a corporation of New Jersey
Application August 2, 1956, Serial No. 601,787
13 Claims. (Cl. 153—32)



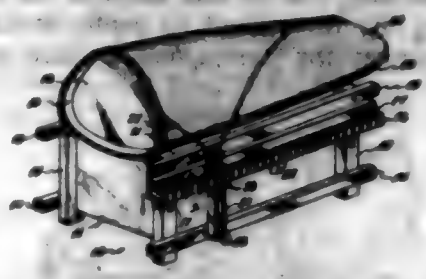
2. In a machine for straightening the leads of electrical components, a pair of straightening rolls respectively having axes substantially parallel to the leads and cooperative cylindrical surfaces which are spaced apart less than the diameter of individual leads to be straightened thereby, means for urging the leads into the bight of the straightening rolls, and means for rotating said rolls in the same direction in engagement with said leads to spin them in the opposite direction, one of said rolls having an axially extending groove in its cylindrical surface arranged to receive a lead when straightened and transfer it from between said rolls.

2,856,674
FORMING ROLLS HAVING A CURVED FORMING SHOE TANGENTIAL TO ONE ROLL ON A LINE CONNECTING THE AXES OF THE ROLLS
Simon Fisher and Harold E. Bush, Bay City, Mich., assignors to National Electric Welding Machines Co., Bay City, Mich., a corporation of Michigan
Application March 26, 1956, Serial No. 573,845
5 Claims. (Cl. 153—64)



1. In a device for forming a strip into a curvilinear article, a pair of parallel rolls closely spaced so as to contact opposite sides of a strip passing between them, one of said rolls having alternating circumferential lands and grooves, a forming shoe having complementary lands and grooves meshed with the lands and grooves of said one roll and a curvilinear forming face on the side thereof opposite the grooved face, said forming shoe having its forming face in cooperating tangential relationship with said one roll at the point thereof nearest the other roll, said forming face of said forming shoe curving in the direction of curvature of said other roll and away from said one roll, so that said one roll and said shoe present a continuous forming surface to a strip passing between them and the other roll.

2,856,675
METHOD AND APPARATUS FOR PRODUCING STRUCTURAL ELEMENTS OF GLASS FIBER REINFORCED PLASTICS
Joseph Lyman, Huntington, N. Y., assignor to Aero-Nautical Boat Shop, Inc., Hicksville, N. Y., a corporation of New York
Application July 6, 1955, Serial No. 520,266
4 Claims. (Cl. 154—1.7)



1. Apparatus for producing substantially rigid glass-reinforced plastic structures comprising a jig having a mold mounted thereon conforming to the desired shape of the completed structure, an element movably mounted on said jig and having fastening means carried thereby for individually securing the ends of a plurality of glass fiber rovings, said fastening means being so located on said jig and relative to said mold that said rovings pass over the surface of said mold from one side to the other thereof and said rovings being impregnated with a thermosetting resin in its fluid state, said resin exhibiting a temperature rise during the conversion thereof from its liquid to its infusible state, means including driving means for displacing said element relative to said mold in a direction and to an amount such as to impart to each of said rovings a first predetermined tensional load, and means responsive to substantially the maximum temperature rise of said resin during said conversion for additionally controlling said driving means to thereby displace said element in said direction and to an amount such as to impart to each of said rovings a second predetermined tensional load.

2,856,676
UNIVERSAL COMMUNICATIONS OPERATOR'S CHAIR
Wesley R. Woodson, Jr., El Cajon, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Application March 23, 1956, Serial No. 573,569
2 Claims. (Cl. 155—2)
(Granted under Title 35, U. S. Code (1952), sec. 266)

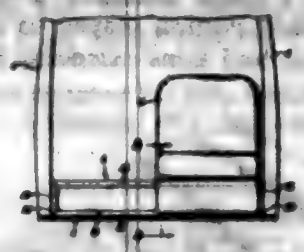
1. In a chair of the class described, means for positioning and supporting an occupant in turbulent motion, said means comprising kidney pads adjustably mounted to the rear of the seat of said chair to fit against the lower region of said occupant's back and thigh clamps adjustably mounted on the sides of said chair to inwardly press against said occupant's thighs, said kidney pads being of wrap-around design and being adjustable in height and lateral position for placement against said occupant's back, said thigh clamps having an upper portion thereof rotatable to press against said occupant's abdomen, said kidney pads and thigh clamps firmly securing said occupant against rearward pitch and side sway, said upper portion of said clamps securing said occupant against forward pitch.

2,858,877

SLIDABLE DRIVER'S SEAT FOR DELIVERY VEHICLES

Reuben J. Krause, Clintonville, Wis.

Application December 21, 1955, Serial No. 554,436
2 Claims. (Cl. 155—14)



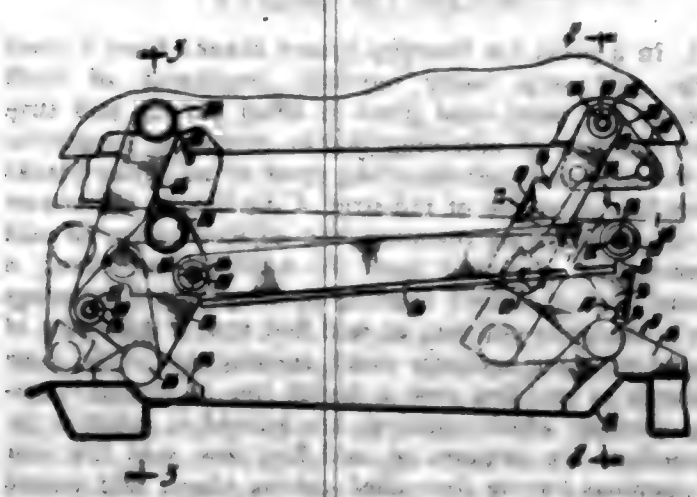
1. In an automobile or other vehicle having a floor and side walls with window openings therein, a rectangular parallelopiped framework formed of four horizontal members extending laterally of the vehicle, four horizontal members extending longitudinally of the vehicle and connecting the ends of the laterally extending members and four vertical members at the corners of the framework, each of the longitudinally and laterally extending members being formed of separate aligned parts, a sleeve member telescopically receiving the adjacent ends of the aligned parts of each of the laterally and longitudinally extending frame members, two elongated members supported by the framework and extending laterally of the vehicle each of which is formed of two aligned parts, a sleeve member telescopically receiving the adjacent ends of the aligned parts of the elongated members, a seat, means for slidably mounting said seat on said elongated members for movement from side to side of the vehicle.

2,858,878

SEAT ADJUSTING MECHANISM

Louis P. Garvey and Claud S. Sonner, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Continuation of application Serial No. 567,639, February 27, 1956. This application May 29, 1957, Serial No. 663,571
8 Claims. (Cl. 155—14)



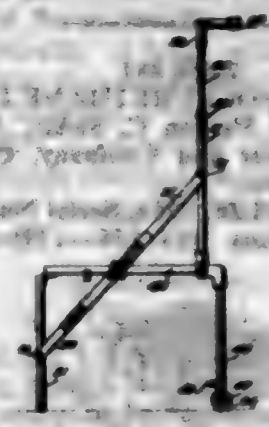
5. In combination with a vehicle seat, a seat adjusting mechanism comprising, a fixed support, toggle linkage means extending between said support and said seat adjacent each side thereof, said linkage means including lower link means pivotally mounted on said fixed support and upper link means pivotally secured to said seat, first means operable to move said toggle link means relative to said support to move said seat to vertical adjusted positions, and second means operable to move said upper link means relative to said lower link means to move said seat to horizontal adjusted positions.

2,858,879

COLLAPSIBLE COT, CHAIR, AND STRETCHER

Paul Brunson, Rockville, Ind.

Application July 3, 1956, Serial No. 595,699
1 Claim. (Cl. 155—67)



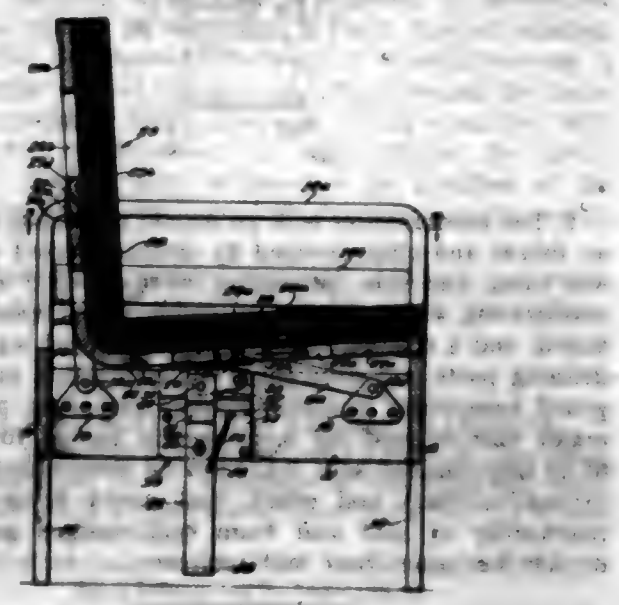
In a device of the character described, a frame, a cover connected to the frame, said frame including a pair of spaced parallel rails having sockets on an end thereof, fittings connected to said sockets, legs connected to said fittings, rollers connected to said legs, a bar connected to said legs, arms pivotally connected to said fittings, a cross piece connected to said arms for selective engagement by said bar, side pieces pivotally connected to said arms, braces connected to said rails and side pieces and to said arms, there being notched portions in said braces, securing elements mounted on said arms connecting said notched portions together, end pieces adjustably connected to said rails, a cross bar connected to said end pieces, and fingers extending from said cross bar and having cups connected thereto.

2,858,880

REVERSIBLE SEAT FOR RAILWAY CARS

Martin Fox, Chicago, Ill., assignor to The Song Company, a corporation of Illinois

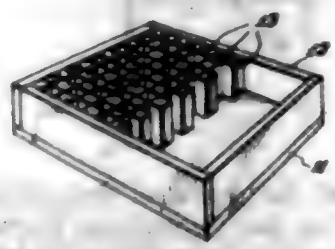
Application July 14, 1955, Serial No. 522,083
3 Claims. (Cl. 155—99)



1. A reversible seat structure for vehicles, comprising: a rectangular base member; a seat member having two angularly disposed fixed seat portions each of which may serve either as the bottom or as the back of a seat, said seat member being swingably supported on said base member for movement between two oppositely facing positions with each of said seat portions serving as the bottom of the seat in one of said two positions; a latch plate on each of said seat portions at a point which is adjacent the center of an end of the frame when said seat portion forms the base of the seat; a bell crank

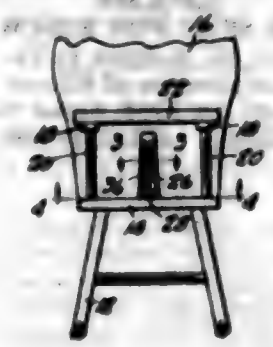
with a latch lug on one arm to selectively engage either latch plate; a vertically slideable, depending latch activating arm secured to the other leg of the bell crank, said arm having a laterally projecting foot piece at its lower end; and spring means urging said arm upwardly.

2,858,861
FABRICATED POLYURETHANE CUSHION
John G. Newall and Vernon C. Sichle, Alliance, Ohio, assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
Application April 26, 1956, Serial No. 580,793
4 Claims. (Cl. 155—179)



1. A fabricated cushion made of resilient polyurethane foam comprising a bottom and top of thin polyurethane foam slabs; sides of polyurethane foam strips connected to said top and bottom to form a hollow box; and a plurality of elongated solid polyurethane foam bodying members arranged within said hollow box in general checkerboard fashion, each connected at its ends with said top and bottom.

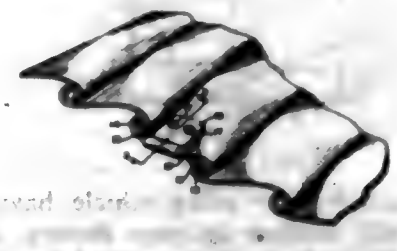
2,858,882
GUARD FOR INFANT'S SEAT
De Alton L. Pennock, Berrien Springs, Mich.
Application September 30, 1955, Serial No. 537,699
6 Claims. (Cl. 155—189)



1. The combination with an article providing a seat for an infant and characterized by interconnected back rest and sides, and side connecting means spaced above and cooperating with said seat to define a leg opening, of a guard, and a retainer carried by one of said leg-opening-defining parts and detachably mounting said guard, said guard comprising a rigid member extending across the major part of said leg opening and slotted for wedged fit on said retainer, said guard having smooth and rounded exposed corners and edges, said guard being shiftable rearwardly of said seat from said wedged position to detach the same from said retainer.

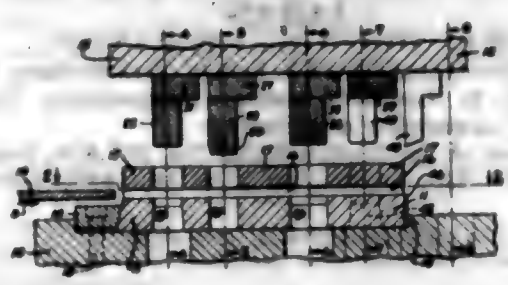
2,858,883
AWNING INTERLOCK DEVICE
John P. Rapin, Albany, N. Y., assignor to Charles P. Rinflo, Albany, N. Y.
Application April 6, 1956, Serial No. 576,705
3 Claims. (Cl. 160—235)

1. The combination with a window awning to be rolled up upon itself and unrolled diagonally to project downwardly from above said window, which awning comprises a plurality of slats of sheet metal each having longitudinal side edges curled in opposite directions, each slat throughout its length being curved between said edges, and connected together by the curled edges of each slat engaging with the oppositely curled edges of adjacent slats to form a fabric flexible in the direction normal to the length of said slats, of means to prevent endwise motion of any slat with respect to adjacent slats, said means comprising a single generally U-shaped rod element having a central portion shaped to lie generally in the curve of the slat and arms extending therefrom with



portions adjacent said central portion offset in opposite directions with respect to said central portion and the remaining end portions of said rod being bent in substantially parallel relation so as to extend into said oppositely curled side edges of alternate slats at each end and interlocking curled portions of adjacent slats, and a sheet metal member of generally rectangular shape folded upon itself to embrace said central portion of said rod and secured to said central slat, said sheet being curved to conform to the curve of the slat.

2,858,884
BLANKING SHEET MATERIAL
Albert J. Duffield, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia
Application May 17, 1955, Serial No. 508,967
5 Claims. (Cl. 164—19)

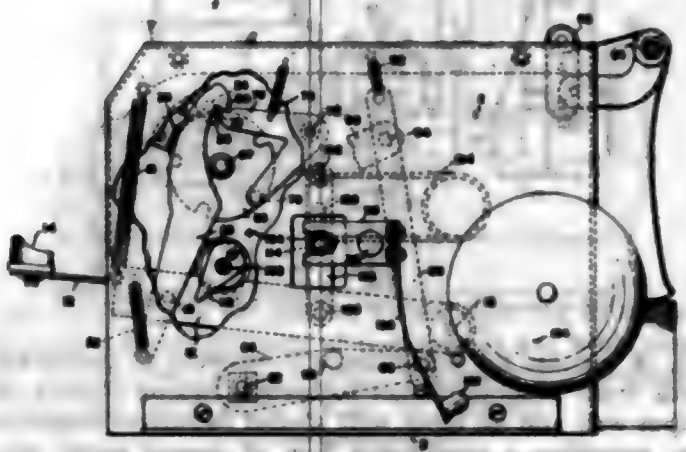


1. In a press for forming square blanks from a sheet strip, said strip being movable lengthwise of itself through the press, said press in effect cutting said strip into columns of adjoining blanks extending lengthwise of the strip and corresponding rows of adjoining blanks extending crosswise of the strip, a die having a first row of spaced blanking openings, the adjacent edges of said openings being spaced apart the width of one blank, a second row of spaced aligning openings which openings are in the same columns as said first row, a third row of spaced blanking openings which openings are in the same columns as said first row, a fourth row of spaced blanking openings which openings are located in columns intermediate the columns of said first row, said first row of openings having four-sided cutting edges, said second row of openings having four-sided aligning edges, said third row of openings being oblong, the long sides extending lengthwise of the sheet and constituting cutting edges, said fourth row of openings being oblong, the long sides extending crosswise of the sheet and constituting cutting edges, the axes of said first and second rows being spaced apart the width of two blanks, the axes of said second and third rows being spaced apart the width of three blanks, the axes of said third and fourth rows being spaced apart the width of two blanks, and a movable head having rows of punches corresponding to and adapted to enter said die openings, the punches

date from said first storage means to said second storage

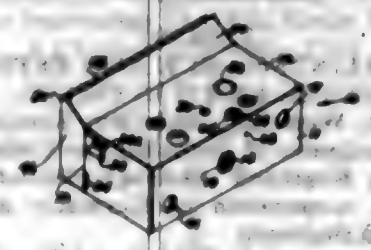
of said second row being longer than the other punchot and having chamfered ends for the purpose of aligning the strip.

2,858,885
TICKET ISSUING AND ACCOUNTING SYSTEM
George A. Loeb, Rye, N. Y., assignor to General Register Corporation, Long Island City, N. Y., a corporation of New York
Application October 8, 1954, Serial No. 461,285
4 Claims. (Cl. 164—48)



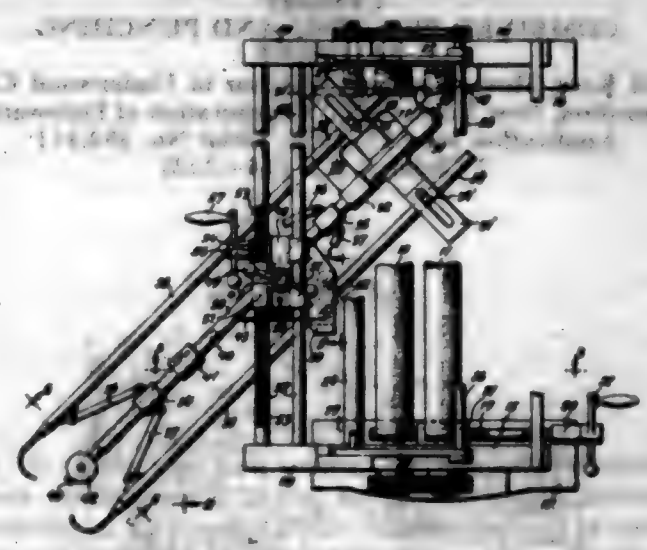
1. A ticket issuing machine comprising means for guiding and feeding a ticket strip, means for severing the ticket strip at a fixed position to form tickets therefrom, means for effecting sequential operations of the feeding and severing means in each cycle of operation, said feeding means comprising a member engaging the strip to impart to the strip an invariable advancing movement in each cycle of operation, and means forming a part of said means for effecting operations of the feeding means for adjusting in discrete steps, less than the strip advancing movement in a single cycle, the phase of the member relative to the severing means existing at the time of operation of the severing means.

2,858,886
DIE ASSEMBLY
Angel R. Rivera, Detroit, Mich.
Application July 25, 1957, Serial No. 674,217
3 Claims. (Cl. 164—58)



1. A die including a stationary block defined by a flat front surface having two oblong grooves disposed horizontally in a spaced parallel relation to each other, each groove being defined by a flat bottom, flat top, and a back wall set obliquely to said front face of the block, one groove having a decreasing depth in one direction of the length of the groove, while the other groove has a decreasing depth in the opposite direction of its length, a wedge shaped rack in each groove, each rack having one side disposed parallel to the front face of the block while its other side bears slidingly against the back wall of the respective groove, the teeth of one rack facing the teeth of the other rack, the block being provided with a bore running at right angle to the front face of the block and terminating with a radially expanded cavity in the front portion thereof, the cavity intersecting both grooves, a shaft disposed within said bore, a pinion mounted on one end of the shaft for rotation therewith, said pinion being located within said cavity and being in mesh with both racks, a worm gear axially mounted on the other end of the shaft, a worm disposed within a vertical bore in the block, and being in engagement with the worm gear, the worm serving as a means for the operation of the pinion, the block being further provided with a plurality of holes extending parallel to the shaft, a flat blade disposed parallel to the front face of the block and including a cutting edge, the blade containing a plurality of transverse, threaded bores, and a bolt passing through each hole in the block and threaded into a respective bore in the blade, to draw the blade towards the block.

2,858,887
BIAS CUTTING MACHINES
Harry Gerstein, Roslyn Heights, N. Y., and Emil Leins, Ridgewood, and Carl Bayer, Paramus, N. J., assignors to Lever Bias Machine Corporation, New York, N. Y., a corporation of New York
Application December 16, 1955, Serial No. 553,654
12 Claims. (Cl. 164—61)



1. In a machine of the class described having an expandable mandrel whose size is adjusted by movement of at least one of its members, a knife support adjacent the mandrel and movable in angular relation thereto, a cutting knife on said support extending towards the mandrel, the invention which comprises means associated with said mandrel member and the knife support for simultaneously moving them whereupon the position of the knife support and the mandrel size are simultaneously adjusted.

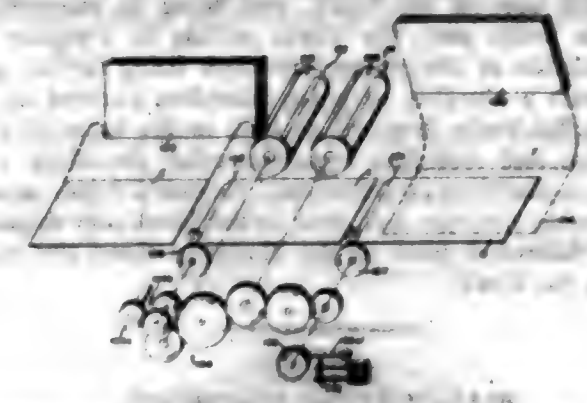
2. A machine as defined in claim 1, including a wind-up device adapted to receive material cut by the knife.

2,858,888
RELAY STORAGE AND READOUT DEVICE
Robert E. McGaffey, Glenham, and Edwin R. Weeding, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application January 26, 1956, Serial No. 561,510
13 Claims. (Cl. 164—113)

1. A recording machine comprising, in combination, a plurality of recording devices arranged as a recording station, means for advancing a columnar record past said station in a column by column manner, first program means including a first columnar program and means for sensing data therein, second program means including a second columnar program and means for sensing data therein, means for synchronizing the sensing of said programs while advancing said record synchronously past said recording station, first data storage means, second data storage means, means operable for storing data in said first storage means, means operable for transferring

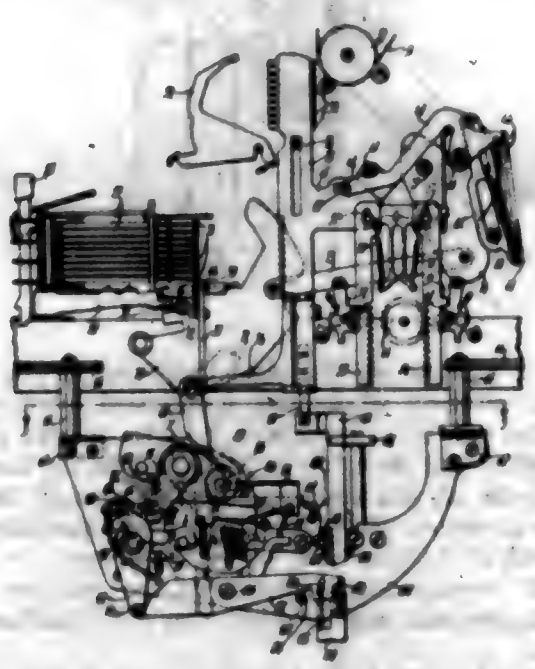
throttling the flow of combustion gas to the surface while against normal movement in a well bore comprising

data from said first storage means to said second storage means, means including said second program means for reading data serially from said second storage means for



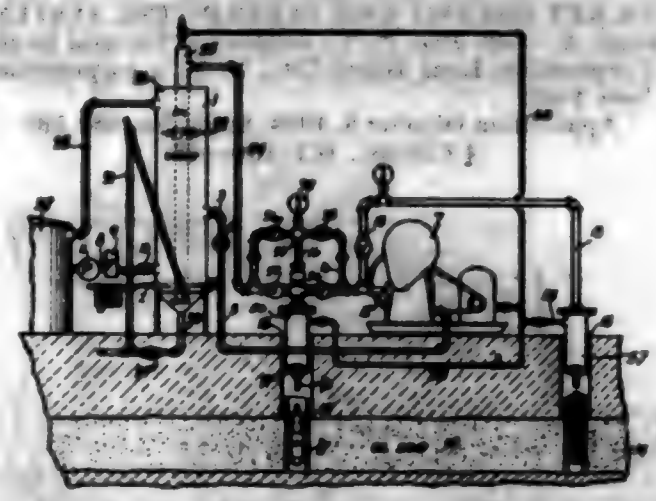
recording said data column by column in said record and means including said first program means for selecting the columns of said record in which said data is recorded.

2,858,889
COMBINED PRINTING AND PUNCHING MACHINE
John Kent, Hove, England, assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware
Application June 21, 1956, Serial No. 592,911
7 Claims. (Cl. 164—113)



1. In a punching mechanism having a general operating means and denominational members settable to represent a multi-denominational value, the combination of a plurality of punches for each denominational member, a punch die having perforations through which the ends of said punches may pass, said punch die also supporting a perforatable tape between the ends of said punches and the perforations in said punch die, resilient means to relatively move said punch die and said denominational members toward each other whereby selected punches will engage said denominational members and be forced through said tape, a latch to hold said resilient means ineffective, a spring, means driven by said spring to bias said resilient means to ineffective position, and connecting members driven from said general operating means to withdraw said spring driven means to then release said latch to effect a punching operation of said punch die by said resilient means, and to thereafter free said spring driven means to restore said resilient means to control by said latch.

2,858,890
METHOD FOR SECONDARY OIL RECOVERY
William Frederick McMahon, Riverside, Calif.
Application March 16, 1955, Serial No. 494,681
8 Claims. (Cl. 166—8)

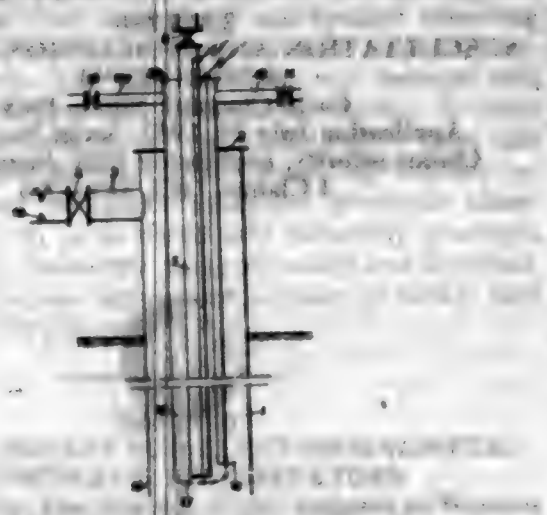


1. A process for the secondary recovery of petroleum fluids from a subterranean formation having therein an output well and an input well spaced therefrom comprising: providing a continuous flow of heated liquid into and out of said output well thereby heating the formation adjacent the output well and the petroleum fluids therein, causing said flowing liquid during its passage from said output well to flow at a linear velocity sufficient to entrain therein and convey therewith petroleum fluids and entraining in said flowing fluid and conveying thereby petroleum fluids from said output well, withdrawing liquid mixed with petroleum fluids from said flowing liquid during the passage of the latter from said output well, introducing additional heated liquid into said flowing liquid during passage of the latter into the output well, introducing into said input well heated liquid at a sufficient rate, temperature and pressure to thereby heat said formation between said wells and the petroleum fluids therein and to drive a volume of said petroleum fluids into said output well, said steps of introducing heated liquid into said input and output wells being performed to jointly cause the flow of petroleum fluids from the formation into said output well.

2,858,991
PRESSURE MAINTENANCE AND REPRESSURING IN OIL AND GAS FIELDS
Bernhard Moll, Wesseling, and Otto Kriegbaum, Furth, Germany, assignors of three-fifths to Union Rheinische Braunkohlen Kraftstoff Aktiengesellschaft, Wesseling, Germany, a corporation of Germany, and two-fifths to said Otto Kriegbaum
Application April 8, 1953, Serial No. 347,499
Claims priority, application Germany May 16, 1952
7 Claims. (Cl. 166—11)

1. A process for maintaining the pressure in hydrocarbon deposits surrounding a well which comprises introducing a stream of cold inert gas under pressure into the well to drive the naturally-occurring hydrocarbon gases to the surface, maintaining the flow of the stream of inert gas until the interior of the well is substantially free of said hydrocarbon gases, thereafter introducing a combustible gas and an oxygen-containing gas into said well and mixing them together, igniting said mixture to form a combustion gas, at least a portion of said combustion gas, while passing to the surface of the well, acting to pre-heat additionally entering oxygen-containing gas, said pre-heated oxygen-containing gas heating the interior of the well and the surrounding deposit formation to the point where ignition of the oil in the formation can take place, then increasing the pressure of the incoming mixture of combustible and oxygen-containing gases by

throttling the flow of combustion gas to the surface while increasing the content of oxygen in the mixture, whereby the heated, oxygen-enriched combustion gas is forced into the surrounding deposits to ignite the oil therein, and

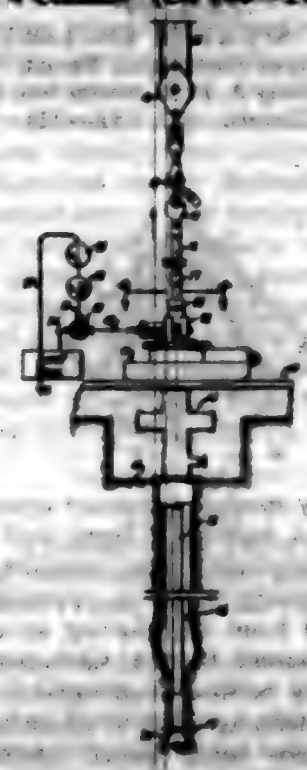


then halting both the flow of combustion gas to the surface and the introduction of combustible gas while maintaining the flow of the oxygen-containing gas to effect a continuous combustion within the deposits.

2,858,892
SEALING POROUS FORMATIONS
Paul G. Carpenter, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Original application October 25, 1949, Serial No. 123,540, now Patent No. 2,735,269, dated February 21, 1956. Divided and this application July 5, 1955, Serial No. 520,118
11 Claims. (Cl. 166—29)

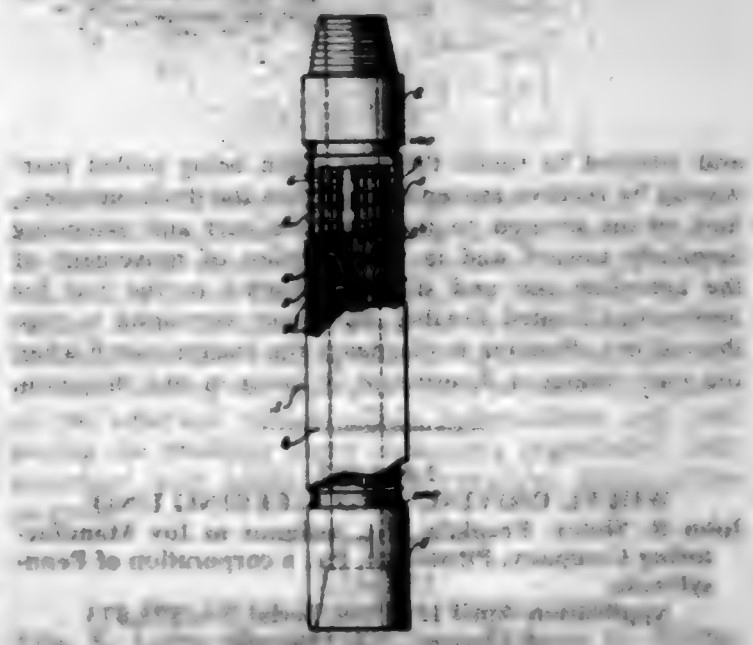
1. The method of sealing a water-bearing, porous formation which comprises introducing into said formation in an amount sufficient to contact all parts of the formation to be sealed, a mixture consisting essentially of an aqueous solution of a water-soluble salt of a water-insoluble organic acid and a material which hydrolyzes to yield a free acid selected from the group consisting of water-insoluble anhydrides and water-soluble alkyl esters of carboxylic acids.

2,858,893
APPARATUS FOR JARRING WELL PIPE
Kenneth E. Waggener, Brea, Calif.
Application September 18, 1956, Serial No. 610,586
4 Claims. (Cl. 166—178)



1. Apparatus for releasing a drill pipe string lodged against normal movement in a well bore comprising means for applying tensioning forces to the upper end of said pipe string to elongate the same, collar means adapted to surround and grip said pipe string, means for supporting said collar means after said pipe string is elongated to enable said tensioning forces to be removed from said pipe string without a contraction thereof, and means for removing said support from its collar-supporting position to allow said pipe string to contract.

2,858,894
SCREEN PIPE
Sven M. Aksyonn, Long Beach, Calif.
Application June 14, 1954, Serial No. 436,494
4 Claims. (Cl. 166—230)



1. A tubular oil well screen, the wall of the tubular screen portion being formed entirely of screen material, consisting of an inner tubular member formed of heavy wire and having large interstices between the strands of wire, a threaded coupling fixedly mounted on the upper end of said inner member, a threaded coupling fixedly mounted on the lower end of said inner member, and a fine wire tubular screen formed of small strands of wire closely spaced and entirely surrounding said inner member and extending between said upper and lower couplings.

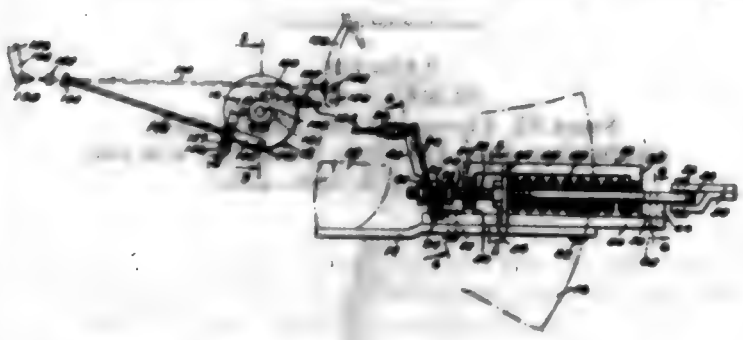
2,858,896
METHODS AND COMPOSITIONS FOR CONTROLLING FIRES
George A. Connell, Los Angeles, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Application March 29, 1957
Serial No. 649,291
14 Claims. (Cl. 169—1)

1. A composition for coating surfaces of fuel in the path of a fire to retard the same, said composition consisting essentially of an aqueous suspension of finely divided solid calcium-containing borate in a concentration between about 3 and about 20 pounds of said borate per gallon of water.

2,858,896
AUTOMATIC CLUTCH THROW-OUT DEVICE
George W. Hirsch and Frank S. Bolak, Ferry, Mich.
Application August 16, 1955, Serial No. 527,445
9 Claims. (Cl. 180—14.6)

1. A clutch throwout device for an agricultural tractor having a clutch and an actuating rod extending longitudinally of the tractor between a clutch pedal and a clutch lever comprising: a pair of relatively movable draft mem-

bers held under spring tension in a determined relative position with the first of the members to be coupled with an implement to be pulled by the tractor and the other member adapted to be coupled with the tractor, a rotatable part mounted on the tractor and including a winding drum portion, a flexible element operably connected at one end to the first of the draft members and wound at the other end upon the drum portion of the rotatable part



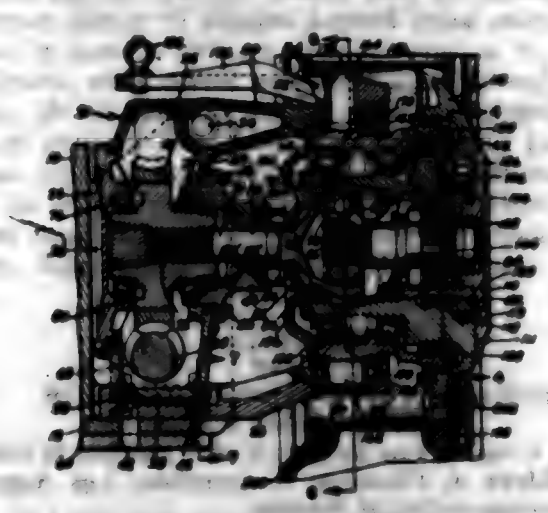
and adapted to rotate the part upon being pulled rearwardly by relative movement between the draft members, and means secured to the rotatable part and extending angularly toward and in the direction of movement of the actuating rod and slidably coupled to the rod for determined limited slidable movement thereupon to urge the rod in a direction to disengage the tractor clutch when the part rotates a determined distance in one direction.

2,858,897

WHEEL DRIVING AND STEERING UNIT

John R. Sibley, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application April 13, 1956, Serial No. 578,873
5 Claims. (Cl. 180—48)



2. In combination, a support, a wheel mounted for turning about a generally vertical axis relative to said support, a planet gear carrier in fixed relation to and coaxial with said wheel, a hollow spindle in fixed relation to and coaxial with said wheel and said planet gear carrier, said spindle projecting inwardly beyond said turning axis, a drive shaft having a universal driving joint therein coplanar with said turning axis and having a sun gear driven thereby, an annular member extending on each side of said axis and surrounding said spindle, a ring gear fixed with respect to said latter member, planet gears journaled on said carrier and meshing with said sun and ring gears and rotatably mounted on axes fixed with respect to said wheel and spindle, means for mounting said spindle for rotation relative to said annular member and ring gear including bearing means comprising a bearing between said annular member and said spindle, said bearing lying inboard of said gears and nearer said turning axis than the outer extremity of said wheel and said axis of turning movement of said wheel lying in a plane disposed between said bearing and said gearing.

2,858,898

AUSCULTATION AND PERCUSSION SOUNDING INSTRUMENT

Carlo Cinquini, Milan, Italy

Application July 29, 1953, Serial No. 371,040
Claims priority, application Italy August 2, 1952
3 Claims. (Cl. 181—24)

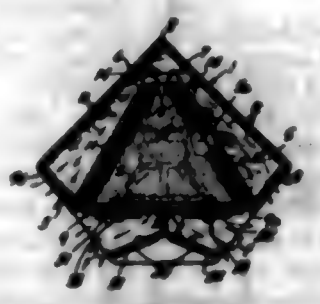
1. A medical sounding instrument comprising a flat, disk-like body provided with an internal cavity and having one of its faces formed with a recess communicating with said cavity, a vibratory diaphragm overlying said recess, said body having a pair of divergent passages extending from said cavity to the periphery of said body, an elongated tubular handle extending radially from said body and having a bore communicating with one of said passages, and an elongated control member extending beyond the periphery of said body within the other of said passages and surrounded beyond said periphery by an integral radial extension of said body, said control member having an extremity projecting beyond said extension for varying the degree of acoustic coupling between said cavity and the surrounding atmosphere by changing the position of said member within said other passage, said body being provided along its periphery with resilient cushioning means traversed by said extension.

2,858,899

HIGH FIDELITY SPEAKER ENCLOSURE SYSTEM

Miguel Lopez-Henriquez, Bronx, N. Y.

Application July 3, 1956, Serial No. 595,742
8 Claims. (Cl. 181—31)



2. A high fidelity speaker enclosure comprising a cabinet having a top, a bottom, a front wall and two side walls extending rearwardly from opposite sides of said front wall and converging in an approximately ninety degree corner, said front wall having an opening to receive a speaker mounted therein, said opening being approximately midway between said opposite sides of said front wall, means defining ports at opposite sides of said front wall, said ports being spaced laterally from said speaker opening, a pair of baffles disposed on opposite

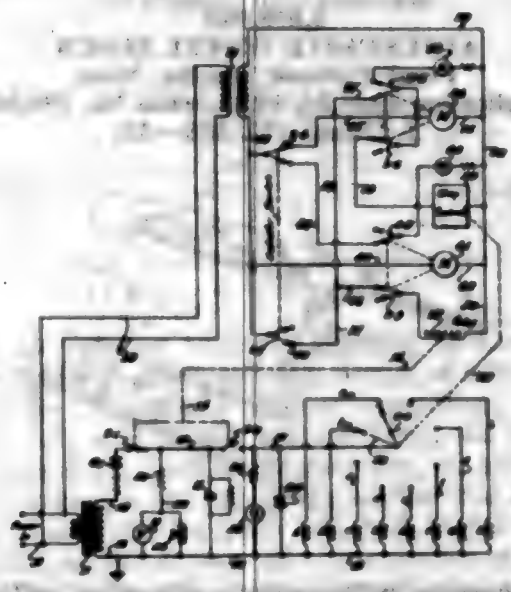
sides of said speaker opening and extending between said top and bottom and rearwardly from said front wall toward said corner, sound waves from the front of said speaker being projected forwardly from said opening and sound projected from the rear of said speaker travelling rearwardly between said baffles and then forwardly between said baffles and side walls and out through said ports and means providing a deflecting surface in front of said speaker opening and spaced outwardly from said front wall, said deflecting surface extending laterally toward said ports to deflect forwardly projected sound waves laterally so as to blend said forwardly projected waves with the rearwardly projected waves and distribute the combined waves throughout a room in which said speaker enclosure is located.

2,858,900

CONTROL CIRCUIT FOR ELECTRO-MAGNETIC RAPPERS FOR PRECIPITATORS

Michael P. Foley, Los Angeles, Calif., assignor to Western Precipitation Corporation, Los Angeles, Calif., a corporation of California

Application November 8, 1954, Serial No. 467,258
7 Claims. (Cl. 183—7)



1. A control circuit for sequentially energizing a plurality of electrically operated rappers associated respectively with a plurality of groups of precipitator electrodes to remove dust layers from said electrodes, said control circuit comprising, in combination: a source of electrical energy; a step contact arm adapted, upon actuation, to be disconnected from one of said electrically operated rappers and connected to another of said electrically operated rappers; circuit means including switch means for applying electrical energy derived from said source to said step contact arm; a first timing control means for operating said switch means at a constant frequency throughout a given period; and second timing control means for rendering said first timing control means operative during said given period and for actuating said step contact arm to place said arm in successive electrical contact with each of said electrically operated rappers throughout said given period.

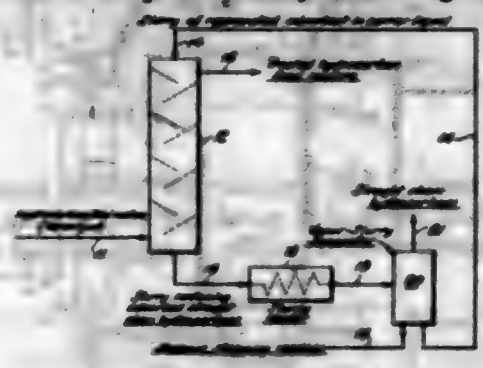
2,858,901

ADSORPTION PROCESS

Ben F. Fort, Jr., Port Arthur, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application July 11, 1955, Serial No. 521,166
2 Claims. (Cl. 183—114.2)

1. A method of fractionating a vaporized hydrocarbon mixture containing straight chain hydrocarbons and non-straight chain hydrocarbons which comprises contacting said vaporized mixture with a slurry comprising a relatively high boiling, inert carrier liquid and a solid, particle form calcium alumino-silicate adsorbent, said carrier liquid having a boiling point higher than the boiling point of the straight chain hydrocarbons to be adsorbed and being a selective solvent for the straight chain hydrocarbons to be adsorbed from the feed mixture undergoing fractionation as well as being substantially unadsorbed by said adsorbent, said calcium alumino-silicate adsorbent preferentially adsorbing the straight



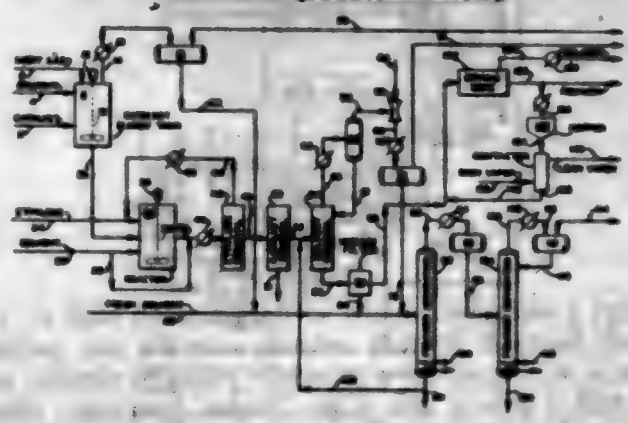
chain hydrocarbons contained in said mixture to the substantial exclusion of the non-straight chain hydrocarbons, said adsorbent being suspended in said carrier liquid as a fluent liquid-solids slurry, separating the resulting slurry containing adsorbed straight chain hydrocarbons from the resulting treated vaporized hydrocarbon mixture, heating the separated slurry to effect desorption of the adsorbed straight chain hydrocarbons and contacting the resulting slurry containing regenerated solid adsorbent with additional said vaporized hydrocarbon mixture.

2,858,902

SOLVENT RECOVERY PROCESS

John E. Cottle, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application August 3, 1956, Serial No. 601,874
14 Claims. (Cl. 183—114.2)



9. A method for adsorbing cyclohexane in the gaseous state which comprises contacting the cyclohexane with a solid ethylene polymer having a density of at least 0.94 and a crystallinity of at least 70 percent at ambient temperatures.

2,858,903

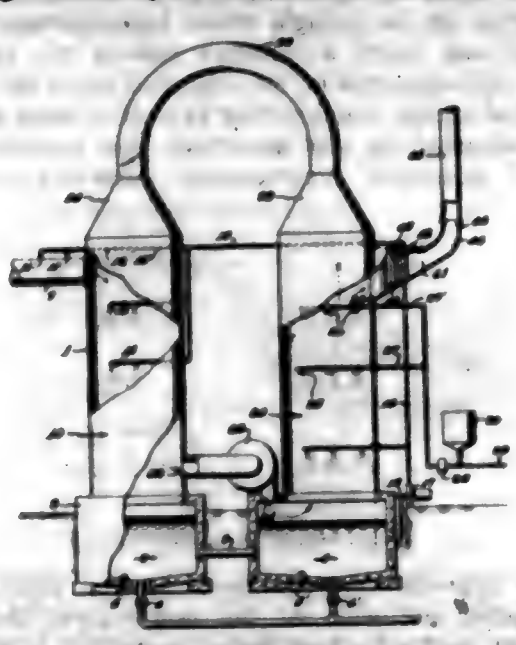
METHODS FOR THE TREATMENT OF INDUSTRIAL AEROSOLS

Alexander Goetz, Altadena, and Horace Edmund Kurtz, Pasadena, Calif., assignors to Madeleine Fulton, Los Angeles, Calif.

Application January 11, 1955, Serial No. 481,396
9 Claims. (Cl. 183—131)

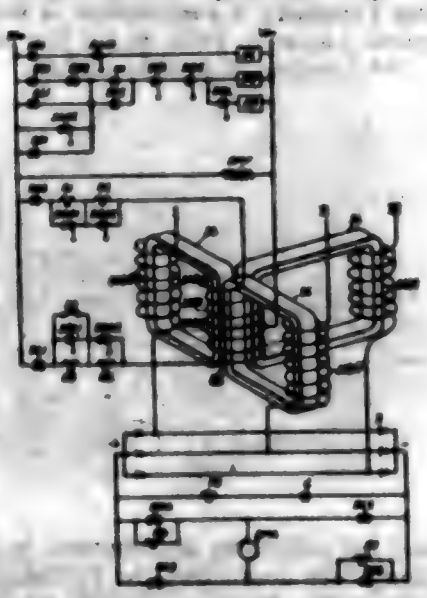
1. In a method of treating industrial gases to remove particulate matter therefrom, the steps of: preforming an emulsion comprising one part of water-immiscible polar liquid and 50 to 120 parts of water; converting said emulsion to a fog of fine droplets by the application of shearing stresses whereby substantially all of the

droplets are dipolar, one pole consisting of a body of water and the other pole consisting of a separate body of polar liquid in contact with said body of water, said poles being electrically and oppositely charged, whereby



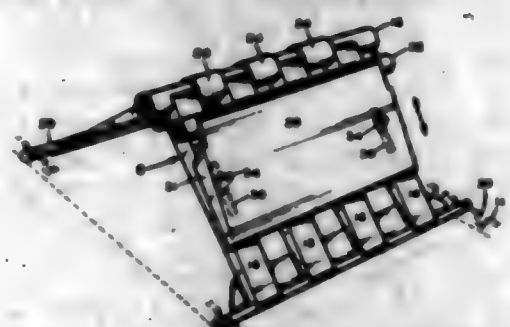
each droplet has enhanced effectiveness in attracting particulate matter; and mixing said fog of charged dipolar droplets with said industrial gas, whereby particulate matter is attracted to and held by said droplets.

2,858,904
CONTROL FOR AN ELEVATOR CLOSURE
Herbert Loeb Heart, Yonkers, N. Y., assignor to Otis Elevator Company, New York, N. Y., a corporation of New Jersey
Application June 17, 1957, Serial No. 666,187
12 Claims. (Cl. 187—29)



8. A control system for a direct current motor for operating an elevator door at a landing served by the elevator car comprising, a source of alternating current for said motor, a saturable reactor having output winding means and control winding means, said output winding means being supplied with current from said source, and said control winding means having two portions, unidirectional current conducting means connected to said output winding means, first switching means operable as the car arrives a predetermined distance from the landing in stopping thereat for connecting said motor to said unidirectional current conducting means for a first polarity of excitation for operation in a direction to open said door and maintaining said motor connected to said conducting means, second switching means operable incident to the starting of the car from the landing for disconnecting said motor from said conducting means and for connecting said motor to said unidirectional current conducting means for a second polarity of excitation for operation in a direction to close said door and for maintaining said motor connected to said conducting means until the door open operation is initiated, safety mechanism operable during closing of said door for disconnecting said motor from said unidirectional current conducting means for said second polarity of excitation, and thereafter re-establishing the connection of said motor to said unidirectional current conducting means for said first polarity of excitation for reversing the operation of said door, a direct current power supply, and third switching means to connect one portion of said control winding to said power supply for controlling the generating of flux in said reactor for the door opening operation, to connect the other portion of said control winding to said power supply for controlling the generating of flux in said reactor for the door closing operation and to disconnect said other portion from said power supply, and thereafter establish the connection of said one portion to said power supply for door reversal operation to cause cancellation of existing flux in said reactor and then reversal of the flux in said reactor to minimize the flow of surge current in said motor.

2,858,905
ADJUSTABLE WHEEL BLOCK
Frank Fahland, Omaha, Nebr.
Application June 29, 1956, Serial No. 594,842
1 Claim. (Cl. 188—32)



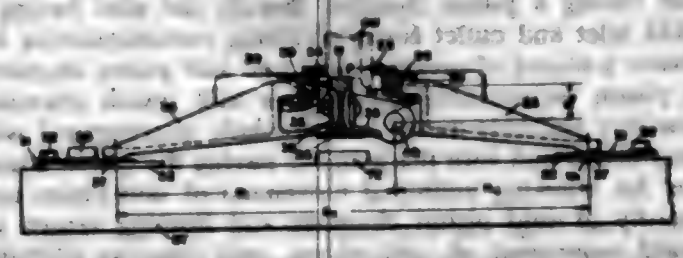
In combination with a vehicle supporting surface having upwardly slotted rails, a wheel block including a substantially flat wheel-engaging surface portion normally inclined about an axis extending transversely of said rails, a brace portion hingedly connected to said wheel-engaging surface portion of an axis extending transversely of said rails, said surface portion and said brace portion including structure selectively engageable with said slotted rails at different positions longitudinally thereof for positioning said wheel block on said vehicle supporting surface and adjusting the inclination of said surface portion from raised operative positions to a horizontal inoperative position, and a gravity-actuated wheel-engaging wedge secured to said surface portion for movement thereon in the direction of inclination whereby to automatically take up slack between said surface portion and said wheel.

2,858,906
CHOCK BLOCK
Edward Mlotok, Stratford, Conn.
Application September 24, 1956, Serial No. 611,611
2 Claims. (Cl. 188—32)

1. In a chock block construction having a pair of oppositely-disposed wedges, a tubular member of non-circular cross-section integrally connected to one side wall of each wedge, the non-circular cross-sectional construction of said members being such that the one is adapted to telescope within the other; a tension spring within said telescoping members and having its opposite

ends connected to separate of said telescoping members; a plurality of axially-spaced holes extending through the inner telescoping member; and a pin adapted to be inserted within any of said holes thereby to cooperate with the one end of the outer tubular member and limit the extent to which said spring moves said wedges toward each other.

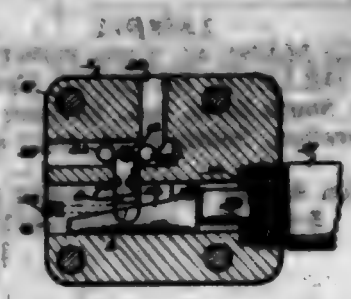
2,858,967
CAR RETARDERS FOR RAILWAY CLASSIFICATION YARDS
Ned C. L. Brown, Scottsville, N. Y., assignor to General Railway Signal Company, Rochester, N. Y.
Application September 15, 1955, Serial No. 534,750
12 Claims. (Cl. 188—62)



1. A car retarder having a plurality of car retarder sections disposed end-to-end in a stretch of railway track, each of the car retarder sections comprising, a section of track rail, shoe beams disposed along the inside and the outside of the track rail respectively, an outside lever operably engaging one end of the outside shoe beam and disposed normal to the track rail, said outside lever being rigidly secured at one end to the outside of the track rail and having its other end supported on a railway tie, and an inside lever engaging one end of the inside shoe beam and disposed normal to the track rail, said inside lever being pivotally connected at one end to the inside of the track rail and having its other end supported on a railway tie, in a rail brace, a journal, and coupling means for interconnecting said inside lever to said rail brace and said journal, said journal being responsive to the weight of a vehicle wheel, said inside lever being articulated elevationally by said journal in response to entrance or exit of a vehicle wheel, whereby braking pressure is applicable to the rims of a railway car wheel in passing through the car retarder in accordance with the weight of the car.

2,858,968
CABLE GRIPPER
Robert Temple, Swissvale, Pa., assignor, by mesne assignments, to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 27, 1953, Serial No. 357,259
8 Claims. (Cl. 188—65.1)

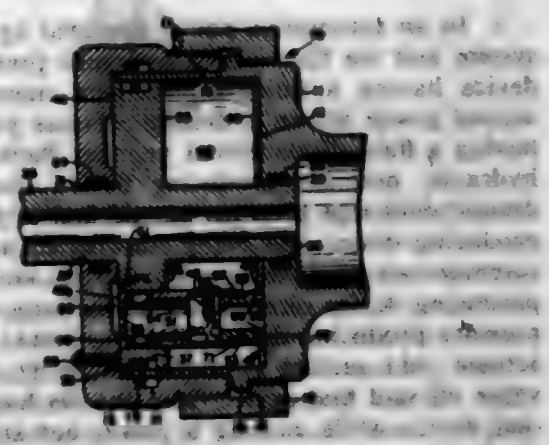
1. A cable gripper comprising a block provided with a cable passage therethrough and with a barrel spaced from one side of the passage, the axes of said passage and barrel lying in substantially parallel planes, the barrel being provided with a slot connecting said adjacent side of the passage with the side of the barrel, a clamp slidably disposed in said slot and having a front end beside said passage and having a rear portion extending part way across said barrel, a wedge slidably mounted in the barrel for engaging said rear portion of the clamp, whereby when the wedge is moved across the clamp it will push the clamp forward into said passage to clamp a cable therein against



the opposite side of the passage, and a shear pin in the block extending into the clamp to hold the clamp in place until the wedge exerts a predetermined pressure against it.

2,858,969
WITHDRAWN

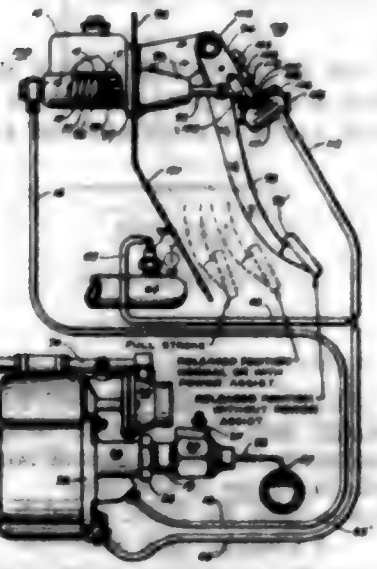
2,858,910
FLUID DAMPING DEVICE
Harold R. Smith, San Pedro, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application June 24, 1955, Serial No. 517,946
6 Claims. (Cl. 188—96)



1. A fluid damping device which comprises a cylinder member and a piston member slidably disposed therein, said cylinder member enclosing a cavity therein, a sleeve fixedly supported in said cavity and having a first bore formed longitudinally through a portion thereof, a second bore formed longitudinally through another portion of said sleeve and communicating with said first bore, said bores being of different diameters and connected by a circumferential shoulder, a shuttle member slidably disposed in said first bore and having a bore formed longitudinally therethrough, one end of said shuttle member being adapted to engage said shoulder and limit longitudinal movement of said shuttle member, the opposite end of said shuttle member having a plurality of openings formed radially therethrough and being in communication with the bore through said shuttle member, a first plurality of apertures formed radially through said sleeve and being in communication with said first bore, a second plurality of apertures formed radially through said sleeve and being in communication with said second bore, an end wall closing the open end of said sleeve adjacent said second plurality of apertures and having an orifice formed therethrough, said cylinder member having a chamber formed therein adjacent said end wall, at least a portion

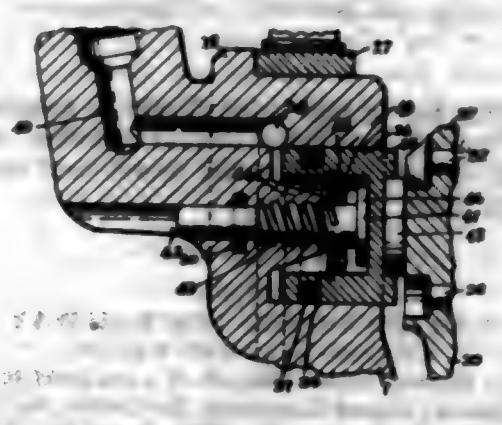
of which chamber extends outward of the outer surface of said sleeve, said orifice providing communication between said second bore and said chamber.

2,858,911
COMBINED MANUAL AND POWER-ASSISTED HYDRAULIC BRAKING SYSTEM
Earl R. Price, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application August 31, 1953, Serial No. 377,540
8 Claims. (Cl. 188—152)



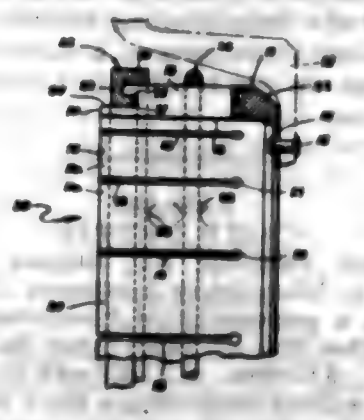
1. In an automotive power operated hydraulic braking system and the like: a first hydraulic pressure producing device having a fluid displacement member therein; a second power driven hydraulic pressure producing device having a fluid displacement member therein; said second hydraulic pressure producing device receiving the hydraulic discharge pressure of said first hydraulic pressure producing device and being constructed and arranged to communicate the pressure fluid from said first pressure producing device directly to the discharge of said second pressure producing device when no power is available to actuate said second pressure producing device, and to valve off said first device from the discharge of said second device while causing a power actuation of its fluid displacement member, which power actuation of the fluid displacement member produces a pressure greater than and generally proportional in intensity to the pressure of fluid received from said first device, said second device requiring a volume of fluid from said first device which is only a fraction of the displacement of the fluid displacement member of the second device during a power actuation of the second device; a lever having a normal retracted high position and a fixed low position; means operatively connecting said lever to said fluid displacement member of said first device in such manner as to provide a generally fixed rate of movement for said fluid displacement member with respect to the rate of movement of said lever between its retracted high position and its low position; and means sensitive to the power supply for said second device for lowering the retracted position of said lever to a position intermediate said high and low positions when power is available without substantially changing the rate of movement of said displacement member with respect to said lever, said means being constructed and arranged to register the intermediate position of said lever to provide a fluid displacement for said first device which is substantially no greater than required to produce a complete power actuation of said second device as established hydraulically by said second device.

2,858,912
COMBINED WHEEL AND DISC BRAKE ASSEMBLY AND ACTUATOR MEANS THEREFOR
Frederick Daniel Griswold, St. Joseph, Mich., assignor, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Original application December 8, 1955, Serial No. 551,799. Divided and this application May 16, 1957, Serial No. 659,699
5 Claims. (Cl. 188—196)



1. A fluid pressure-operated motor comprising a member having a piston chamber therein and also having a fluid inlet and outlet for establishing communication between a source of pressure fluid and said piston chamber, a piston reciprocably disposed in said piston chamber, one-way shiftable means cooperatively intereengaged with said piston and with the member having the piston chamber for allowing unlimited movement of said piston outwardly of said piston chamber and limiting return inward movement of said piston, said one-way shiftable means including a screw, the member having the piston chamber being provided with a complemental screw-threaded opening in which said screw is threadedly mounted, said piston having an opening at its inner end, and said screw projecting into said latter piston opening into abutting contact with said piston to prevent inward movement of said piston, and said screw and piston having cooperative means for effecting rotation and consequent axial movement of said screw along with said piston upon outward movement of said piston.

2,858,913
BRAKE DRUM
Carlos F. Alexander, Troy, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
Application March 8, 1957, Serial No. 644,870
4 Claims. (Cl. 188—218)



1. A brake drum comprising a generally cylindrical braking flange having an internal cylindrical friction braking face, an open end at one edge of said braking flange, a mounting flange at the opposite end of said braking flange, a plurality of slots opening into said braking flange from said edge thereof at said open end and dividing

said braking flange into a plurality of circumferentially-spaced cantilever flange segments, an annular ring circumferentially encircling said braking flange at the margin of said open end radially outward from said braking face, said ring including means concentrically overlapping portions of said flange segments and frictionally engaged with said flange segments to provide for thermal expansion of said segments relative to the ring in a direction circumferentially of the brake drum but resisting radial inward or outward distortion of said segments.

2,855,914

BRAKE SHOE RETAINER KEY

Grant H. Arrasmith, Pearl River, N. Y., assignor to American Brake Shoe Company, New York, N. Y., a corporation of Delaware

Application November 30, 1955, Serial No. 550,882
1 Claim. (Cl. 188—243)

A brake shoe key for coupling a brake head part and a brake shoe part and comprising a relatively flat, elongated shank having at one end a head adapted to be impacted to drive the key forwardly into a keyway afforded by complemental sections on the brake head and the brake shoe, said shank having opposed front and rear faces and relatively narrow opposed side walls disposed in planes generally perpendicular to the planes of said faces, one of said faces including an arcuate portion between the opposite ends thereof adapted to be placed under compression by engagement thereof with one of said sections when the key is in the keyway, the end portion of the key shank adjacent said head being provided along at least one of said walls with a series of indented serrations which extend from the front to the rear face of said key shank at said end portion of said key shank and which are adapted to be selectively engaged by the end of a tool acting as a lever for forcing the key out of the keyway, each such serration including a shoulder extended inwardly of the related side wall from a line generally perpendicular to the planes of said front and rear faces of said shank, and each such shoulder affording a surface disposed in a plane generally perpendicular to the plane of the related side wall of the key shank.

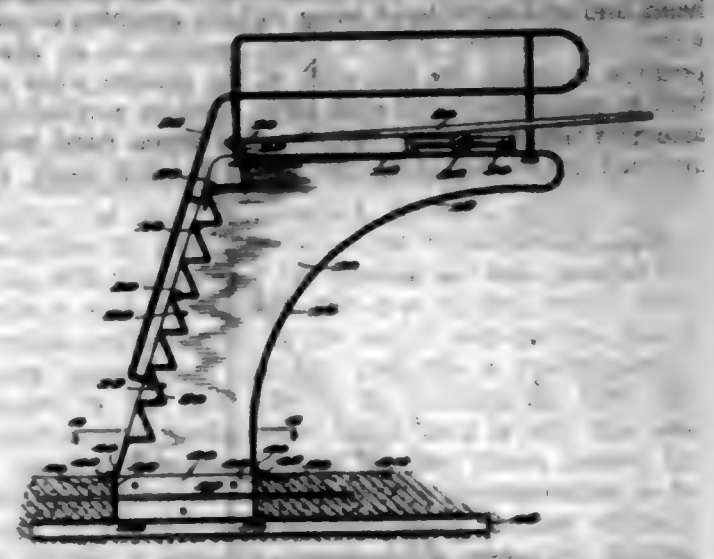
2,858,915

DIVING TOWER

James A. Patterson, Columbus, Ohio

Application November 30, 1954, Serial No. 472,019
6 Claims. (Cl. 189—1)

1. A cantilever diving tower construction to be supported only at its base, comprising two planar sheet metal side members of inverted L-shape formed by a generally vertical leg, and a horizontal leg at the top thereof, steps extending approximately vertically from the base of said vertical legs to the top thereof and joined to said vertical legs to form a spacer and a structural brace for said side members, and sheet metal joined to said side members and extending along the upper surface of said horizontal leg around the end of said leg, along the underside of said leg and down the vertical leg to the bottom thereof to further brace said side members,



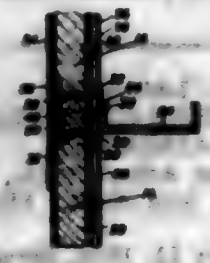
whereby said tower is a unitary structure completely enclosed above the base thereof.

2,858,916

METAL BUILDING CONSTRUCTION

Arthur C. Josephs, Duluth, Minn., assignor to Arrowhead Steel Buildings, Inc., Duluth, Minn., a corporation of Minnesota

Application September 28, 1953, Serial No. 382,630
2 Claims. (Cl. 189—2)



1. In a metal building construction a pair of adjacent panels, each of said panels comprising a pair of spaced channel members each having the inner and outer flanges thereof extending towards the inner and outer flanges of the other of said channel members, spaced nailable members secured to said channel members and extending therebetween, said nailable members engaging against said outer flanges and being spaced from said inner flanges, an upper of said pair of panels being arranged in vertically superimposed relationship relative to the lower of said pair of panels, said lower panel having a nailable member with a portion of substantially U-shape, said upper panel having a nailable member with another portion of inverted substantially U-shape, a locking member received between said U-shaped portions.

2,858,917

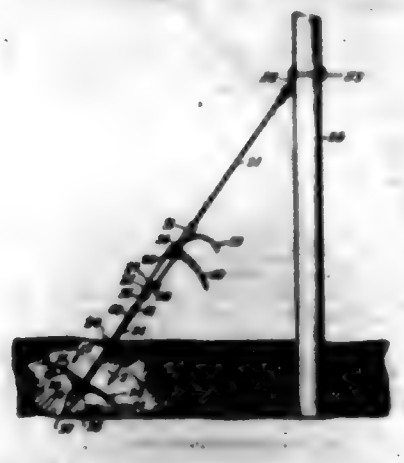
EARTH ANCHORS, TENT STAKES, AND THE LIKE

Robert H. Wendt, Evanston, Ill.

Application October 19, 1953, Serial No. 386,993
4 Claims. (Cl. 189—92)

1. A guy rod and anchor assembly adapted to be driven into the earth, expanded therein, collapsed again, and withdrawn by the same guy rod, comprising a guy rod having an eye at its upper end, and having a pointed head at its lower end, a multiplicity of pointed, resilient, arcuately curved steel wires arranged about said guy rod and welded thereto above said head, forming a roughly cylindrical assembly of wires at the point of welding which is smaller in diameter than said head, the said resilient wires engaging each other edge to edge to cover the adjacent portion of the guy rod and to reinforce each other against bending laterally when confined against each

other and against the guy rod, said wires having a metal band about their lower ends engaging a shoulder on said head, and said metal band being slidably mounted on said wires and movable from a lower position to an upper position in which the free ends of the arcuate wires are held in engagement with each other, forming a cylindrical assembly about the guy rod, the said metal band being attached to an actuating rod for said metal band, for



moving the band from an upper position to a lower position, the said actuating rod having a securing member located to be in registry with the eye of the guy rod when the resilient wires are all collapsed into cylindrical position about the guy rod, and said actuating rod being movable downward after the guy rod has been driven to a suitable depth to release the resilient wires, which move outward into anchoring position when a pull is exerted on the guy rod.

2,858,918
PINION AND IDLER GEAR FOR RATCHET ASSEMBLY

Rudolph Bergsma, Ann Arbor, Mich., assignor to King-Seeley Corporation, Ann Arbor, Mich., a corporation of Michigan

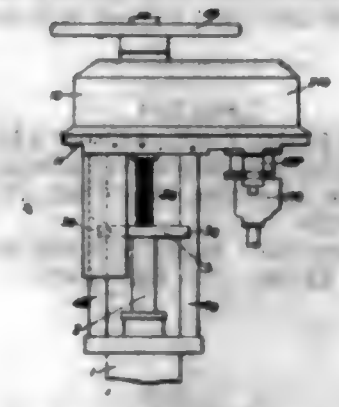
Application January 11, 1956, Serial No. 558,466
1 Claim. (Cl. 192—46)

A ratchet gear assembly comprising a pinion gear having symmetrical teeth adapted to mesh with the teeth of a cooperating gear, said pinion gear having a portion of short axial extent at which the teeth are relieved so that they are of substantially shorter radial extent, a disc gear mounted in concentric relation with said pinion gear for rotation relative thereto and disposed with one face thereof adjacent said portion of said pinion gear, a ratchet spring mounted on said disc gear and having an end portion terminating in an end face adapted to engage one side of said relieved teeth of said pinion gear, said end portion extending generally tangentially of said portion of said pinion gear and being engaged in spaced relation to said end face by said relieved teeth of said pinion gear and moved out of the path of movement of said relieved teeth during rotation of said pinion gear in one direction relative to said disc gear, said end face of said end portion engaging a side of one of said relieved teeth of said pinion gear to prevent rotation of said pinion gear in the opposite direction relative to said disc gear.

2,858,919
TORQUE LIMITING CLUTCHES

Charles Edward Jones, Bradford, England, assignor to Jones, Tate & Co., Ltd., Bradford, England, a British company

Application October 4, 1955, Serial No. 538,467
Claims priority, application Great Britain October 13, 1954
12 Claims. (Cl. 192—85)

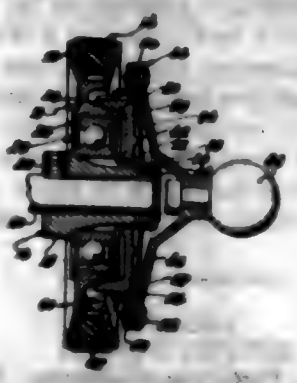


1. A torque limiting clutch comprising a driving member, a driven member, fluid actuated power means, an output rod movable by the power means and coupled to one of the members, the power means being adapted, when energized from a source of fluid under pressure, by movement of the output rod to urge the two members together, and clutch teeth provided on the driving and driven members, arranged to intermesh upon the members being brought together, and having co-acting surfaces so inclined to the direction of transmission of force that as the driving member drives the driven member the reaction between the teeth tends to force the two members apart, the power means being adapted to provide a force which through the output rod urges the two members together and which lessens as the reaction between the teeth forces the driving and driven members apart but remains effective to cause the teeth to re-engage periodically as the driving member continues to move.

2,858,920
SPRING OPERATED CLUTCH

Warren Dobie, North Hollywood, Calif., assignor to Jabsco Pump Company, Burbank, Calif., a corporation of California

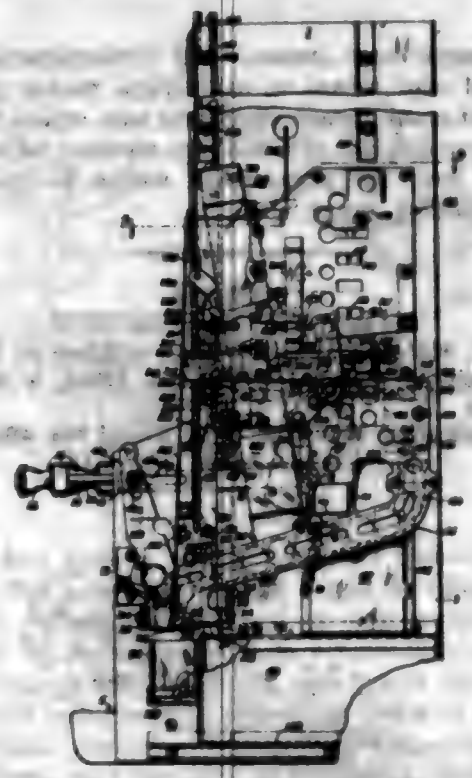
Application October 1, 1956, Serial No. 613,016
11 Claims. (Cl. 192—89)



6. In a clutch, the combination of: driving and driven members rotatable about a common axis and respectively including driving and driven clutch elements, one of said clutch elements being movable axially relative to the corresponding one of said members into and out of torque-transmitting engagement with the other of said clutch elements; annular, conical spring means capable of snapping over center between relatively inverted, clutch-engaging and clutch-disengaging positions through an intermediate, on-center position and engageable with said movable clutch element for biasing said movable clutch element into engagement with said other clutch element when

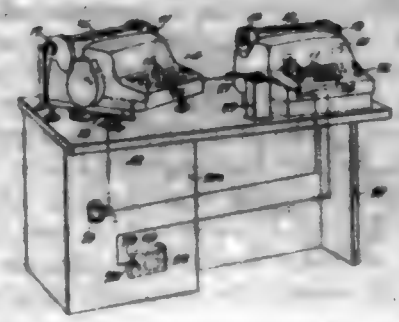
said spring means is in said clutch-engaging position and for biasing said movable clutch element out of engagement with said other clutch element when said spring means is in said clutch disengaging position; fulcrum means on said one member and engaging said spring means; axially movable actuating means, movable in opposite, clutch-engaging and clutch-disengaging directions and engaging said spring means, for flexing said spring means between said clutch-engaging and clutch-disengaging positions about said fulcrum means; and means providing a connection between said actuating means and said movable clutch element for communicating movement of said actuating means in said clutch-disengaging direction to said movable clutch element.

2,858,921
COIN APPARATUS
Benjamin W. Fry, Ladue, Mo., assignor, by mesne assignments, to National Vendors, Inc., a corporation of Missouri
Application October 15, 1953, Serial No. 386,283
8 Claims. (Cl. 194—57)



1. Apparatus for controlling the operation of a vending machine for vending a first class of items upon deposit of a first coin of a first denomination, for vending a second class of items either upon deposit of a second coin of said first denomination in addition to the first coin or upon deposit of a coin of a second denomination having twice the value of the first, and also for vending an item of the first class upon deposit of a coin of the second denomination and issuing a coin of the first denomination in change, said machine having a first selector operable to obtain an item of the first class and a second selector operable to obtain an item of the second class, said apparatus comprising means including a stop movable between a position for holding the selectors against operation to obtain any item and a retracted position, a movable coin receiver having a first chute for coins of the first denomination and a second chute for coins of the second denomination, means for moving the coin receiver away from and back to a retracted position upon operation of either selector, means for holding coins in the chutes in the receiver, a first coin pusher displaceably mounted in the first chute of the receiver and adapted when held against displacement relative to the receiver to push coins of the first denomination along with the receiver, said first coin pusher being adapted for displacement relative to the receiver if there is only one coin of the first denomination in the first chute, but being held against such displacement by a second coin of the first denomination in the first chute, a second coin pusher in the second chute of the receiver for pushing a coin of the second denomination therein along with the receiver, first means engageable by a coin of the first denomination moving along with the receiver for moving the stop to retracted position, second means engageable by a coin of the second denomination moving along with the receiver for moving the stop to retracted position, said first and second stop moving means being operable independently of the second stop-moving means, means including a member shiftable a predetermined amount by the first selector for holding the first coin pusher against displacement when there is only one coin of the first denomination in the first chute, means for holding a supply of coins of the first denomination to be issued in change, said member being further shiftable for issuing a coin in change from said coin holding means, and means for imparting such further shifting movement to said member in response to operation of the first selector and the operation of said second stop-moving means.

2,858,923
TYPING SYSTEM
Henry W. Klold, Glenview, Ill., assignor to American Automatic Typewriter Company, a corporation of Illinois
Application January 5, 1956, Serial No. 557,534
8 Claims. (Cl. 197—5)



1. A typing apparatus, comprising: a master typewriter having a plurality of type operating keys; a slave typewriter having a carriage and a plurality of type operating levers; an electrical circuit; a first switch in said circuit closed by the activation of a key of said master; a solenoid in the portion of said circuit that includes the first switch operably connected to a lever on the slave for typing matter on said slave similar to the matter typed on said master upon activation of said key; means for opening said circuit at a predetermined point in the operation of said slave; and manually operable means for closing said portion of the circuit including said first switch and solenoid and simultaneously moving said slave carriage to a new position relative to the slave typewriter.

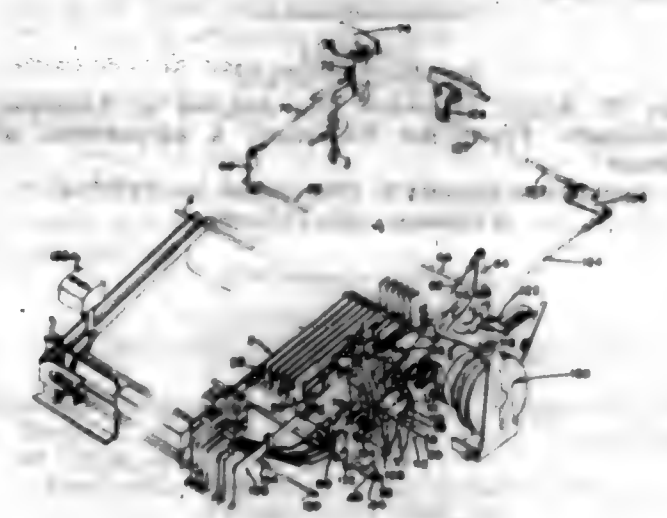
2,858,923
TYPEWRITING AND LIKE MACHINES
Lily Salmon, London, England
Application August 13, 1957, Serial No. 677,867
Claims priority, application Great Britain June 12, 1957
7 Claims. (Cl. 197—6)

1. In a typewriter, having a striker element, a type bar basket and a plurality of typeheads, means for providing step-by-step relative shift motion between said striker element and said type heads, comprising a series of camming elements coupled to said type bar basket such that rotation of the camming elements causes alteration of the relative shift position thereof, and a corresponding number of shift levers coacting each with a camming element for movement of the camming ele-

ment into a predetermined end position, the series of camming elements being arranged such that their end

positions each provide a selectable shift position of said type bar basket.

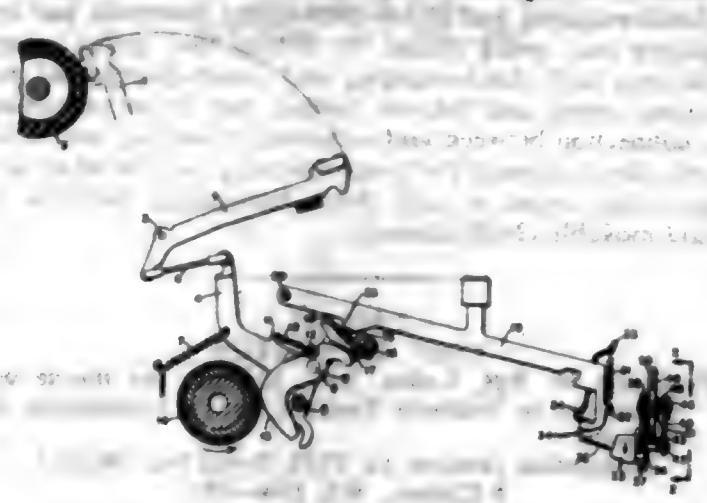
2,858,924
TOLL BILLER CONTROL
Richard J. Young, Poughkeepsie, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 30, 1955, Serial No. 556,515
7 Claims. (Cl. 197—17)



1. An improved typewriter toll biller mechanism for initiating a sequence of operations comprising in combination a type bar drive mechanism operable when triggered to effect a type bar print stroke, key lever means mounted for movement between a rest position and a cocked position, said key lever means having a part operable when in its cocked position to trigger said type bar drive mechanism, a spring driven movable carriage, a tabulation mechanism for releasing said carriage for spring driven movement, means responsive to the movement of said key lever means to its cocked position for operating said tabulation mechanism, and means responsive to the completion of a tabulation operation for operating said part of said key lever means and thereby triggering said type bar drive mechanism.

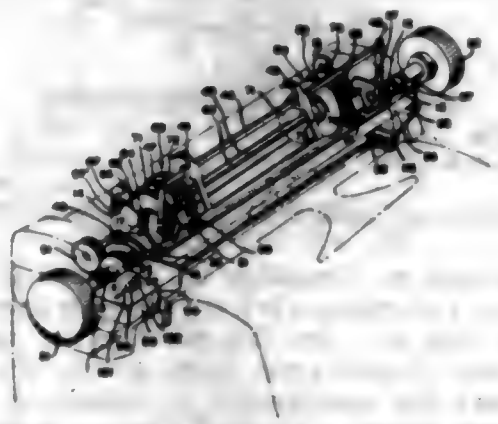
2,858,925
KEYBOARD TOUCH DEVICE
Charles A. Muller, Wappingers Falls, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application May 4, 1956, Serial No. 582,794
7 Claims. (Cl. 197—17)

1. In a typewriter having a type bar, power driving means for driving same to a printing position, and a key lever for initiating a printing stroke movable through an actuating range and beyond it in a non-functioning range, a resilient device comprising, in combination, a resilient member engageable with said key lever in its direction of travel at a predetermined position in its non-functioning range and an adjustable device for varying the point of engagement comprising a frame plate, a slidable mounting member, means slidably connecting said mounting member to said frame plate for movement in a vertical direction, means mounting said resilient member on said slidable member, crank means coupled to said mounting member effective to slide said member, manu-



ally operable cam means, and interconnecting means from said cam means to said crank means effective to rotate said crank means when said cam means is operated and thereby displace said resilient member with respect to said key lever for engagement within its travel in the non-functioning range.

2,858,926
STRIP FEEDING DEVICE
Albert W. Metzner, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Application March 1, 1955, Serial No. 491,339
11 Claims. (Cl. 197—125)

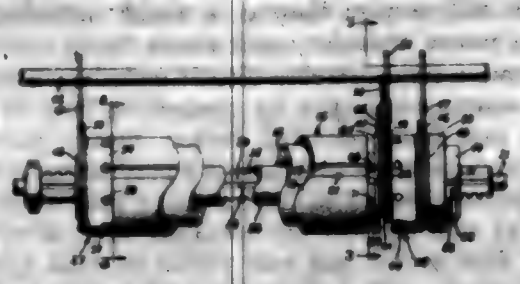


1. In a typewriting or like machine, a platen, pivotally mounted arms carrying said platen, and intermittently operating machine actuated means for moving said arms in a progressive series of increments of motion accomplishing an oscillation thereof in such manner as to present a different surface of the platen for use on each successive increment of oscillatory movement.

2,858,927
PLATEN ROLL
Albert W. Metzner and John T. Davidson, Dayton, Ohio, assignors to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Application June 14, 1956, Serial No. 591,461
16 Claims. (Cl. 197—144)

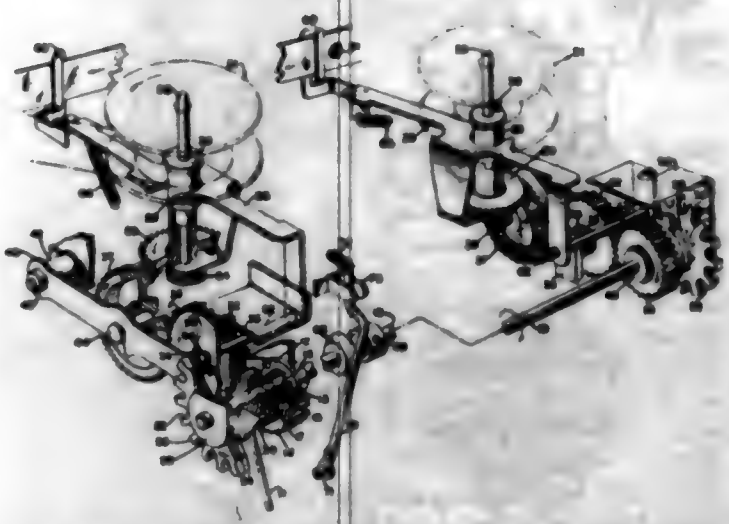
1. In a typewriting or like machine, a rotatable platen shaft, a platen roll rotatable on said platen shaft comprised of a plurality of mating platen segments, and

means responsive to a predetermined extent of rotation of said shaft for oscillating said platen roll once through



an arc approximately corresponding in length to the length of one platen segment.

2,858,928
RIBBON FEEDING MECHANISM
Truman K. Bristoll, Elmsville, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 24, 1956, Serial No. 630,187
3 Claims. (Cl. 197—165)

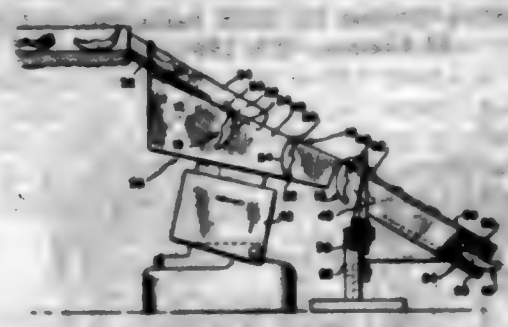


1. A ribbon feeding mechanism for a typewriter comprising, in combination, a frame; a pair of ribbon spools including a ribbon having a pair of stop members, each adjacent to its respective ends; a horizontal drive shaft; means mounting said shaft on said frame for rotation and for axial movement to one or the other of two operating positions; driving means for rotating said shaft; a pair of means, each operable at an end of said shaft for alternately driving said ribbon spools and responsive when actuated by one of said stop members and at least one of said means comprising a rod supported by said frame; a driven gear rotatably coupled to said rod; a vertical spindle rotatably coupled to said rod and attached to said driven gear; means mounting said spool on said spindle for rotation with the latter; an arm; means mounting said arm on said frame for pivotal movement; an annular member rotatably supported on said shaft and having a slot in its periphery and a cam on its face; a lever pivotally mounted and having a slot therein for the passage of the ribbon therethrough and displaceable by engagement therewith of the respective stop member on the ribbon; a pin mounted on said lever and connectible with said slot in said annular member when said arm is pivoted by said stop member; a gear member securely connected to said shaft and coupled to another end of said arm for pivoting the latter, said gear member having a projection on its face and adapted to be engaged with said cam and to be disengaged from the latter when said annular member is engaged by said pin and said shaft is rotated; a driving gear rotatably mounted between the ends of said arm for selective engagement with said driven gear when said arm is pivoted; an idler gear rotatably mounted on said frame and continuously engaged with said driving gear and said gear member; and means effective to normally hold said shaft in one or the other operating position.

2,858,929
BOTTLE DISCHARGER
Michael Vanvalkenburg, Maywood, Ill., assignor, by mesne assignments, to Berry-Wehmiller Machinery Company, St. Louis, Mo.
Application September 23, 1955, Serial No. 536,143
5 Claims. (Cl. 198—35)

1. In a bottle discharger, a guide adapted to have bottles pass therethrough, a platform communicating with said guide for receiving bottles therefrom, said platform being adapted to have bottles moved thereover, means for moving bottles one by one into said guide, a cam having a bottle supporting and lowering section providing a smoothly curved surface for slidably engaging and guiding bottles through said guide and onto said platform as said cam is rotated, said cam having a pusher section for engaging bottles positioned on said platform to move the same thereover, and means for rotating said cam.

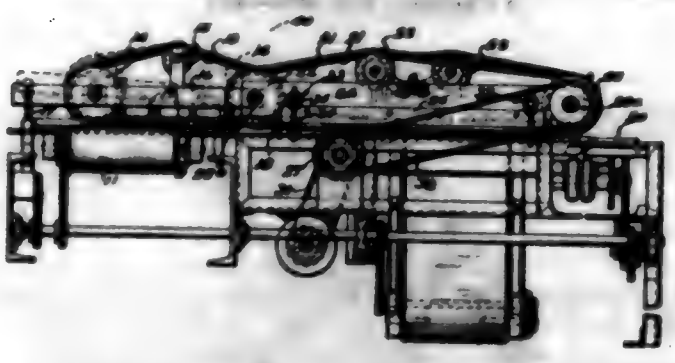
2,858,930
AUTOMATIC FEEDING APPARATUS
Samuel S. Aldin, New York, N. Y.
Application April 28, 1955, Serial No. 504,574
22 Claims. (Cl. 198—33)



1. Automatic feeding apparatus of the character described, comprising a vibratory, bowl-shaped hopper having a marginal spiral track, means at the upper end of said track forming a narrower outlet therefor and adapted to orient articles moved therealong to dispose them on a narrower dimension, an agitatable forwardly sloping conveyor forwardly of said track, in position to receive articles discharged therefrom, said conveyor including a longitudinal, open-ended space of a width less than said track outlet, a second, downwardly sloping chute of a width substantially equal to the width of said track outlet forwardly of said conveyor and sloping downwardly away therefrom, the inner end of said chute spaced from the

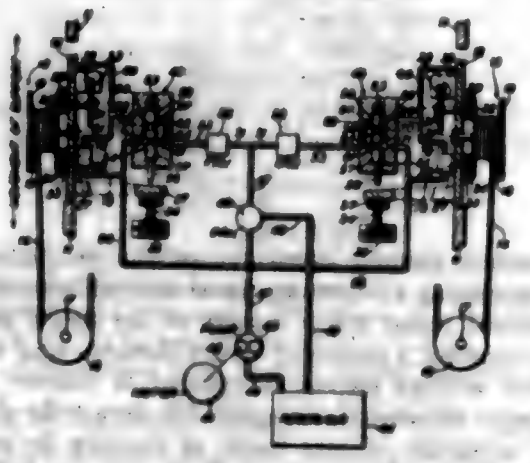
forward end of said conveyor, and a transversely extending arm mounted forwardly of an in elevated relation to the forward end of said conveyor.

2,858,931
BATTERY GRID TRIMMING MACHINE
Herbert C. Winkel, Watervliet, Mich.
Application May 23, 1956, Serial No. 586,482
1 Claims. (Cl. 198—168)



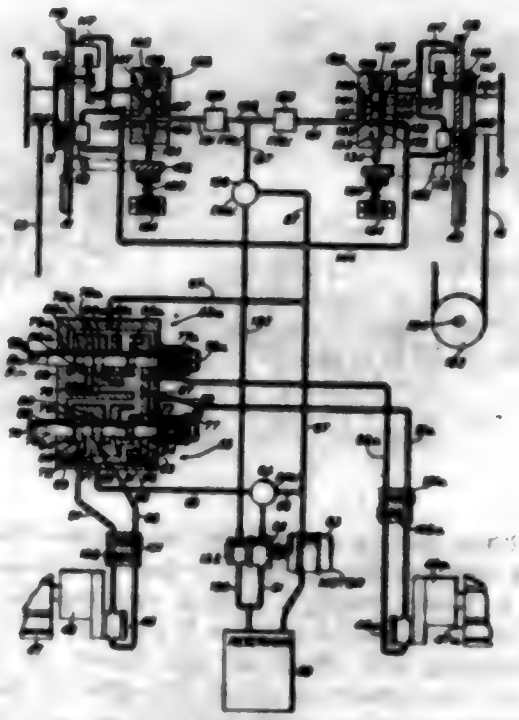
In a battery grid trimming machine having a platform along which untrimmed battery grids may be fed to a work station associated with said platform, continuous flexible belt means arranged immediately above said platform, guide means for maintaining said belt means in such position as to bear down against battery grids on said platform, said belt means having soft outer surface portions capable of firmly gripping the upper broad surface of battery grids lying on said platform, whereby said grids may be held firmly against said platform and slid firmly along said platform by said belt means to such work station, said guide means permitting raising and lowering of one end portion of said belt means while maintaining another portion of said belt means in grid-engaging position with respect to said platform, and means for raising and lowering said one end portion of said belt means whereby said one end portion may readily receive a grid thereunder when raised and may slide said grid to said other portion of said belt means when lowered.

2,858,933
TENSIONING DEVICE FOR FLEXIBLE SUPPORT STRANDS OF AN ENDLESS CONVEYOR
Ralph F. Blanz, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application October 18, 1955, Serial No. 541,184
22 Claims. (Cl. 198—139)



1. In an extensible conveyor of the type having head and tail sections and at least one strand extending therebetween for supporting a conveying reach of an endless belt, the improvement in such conveyor for maintaining proper tension on said strand and for paying same out in accordance with the extension of said conveyor comprising a support mounted on one of said sections and movable with respect thereto, a winch including a fluid operated motor therefor, said winch being connected to said strand, a fluid pressure circuit including a pump and a valve connected therein for controlling flow of pressure fluid to said fluid operated motor, means biasing said support in a direction to maintain a predetermined amount of tension on the strand connected to said winch, means carried by said support for actuating said valve to operate said fluid motor and said winch to wind said strand on said winch, and a brake on said winch including a fluid operator therefor which is actuated for release of said brake when fluid is supplied to said fluid operated motor.

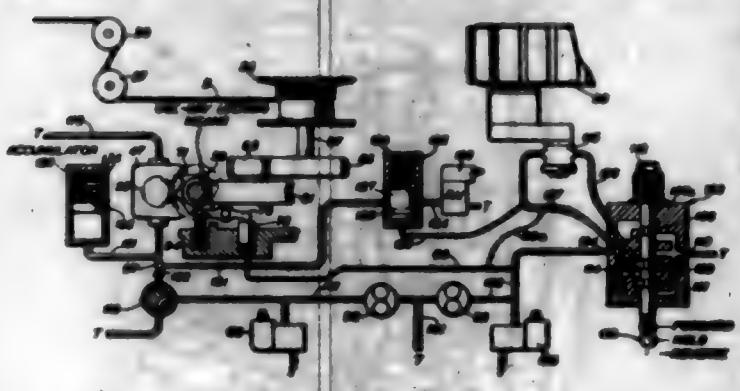
2,858,933
EXTENSIBLE CONVEYOR
James W. Hardy, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application October 18, 1955, Serial No. 541,162
4 Claims. (Cl. 198—139)



1. In a conveyor which is extensible along the ground, a head frame, a tail frame spaced from said head frame and including means for moving the tail frame toward and away from the head frame, an orbitally movable belt trained between said frames in load-carrying and return reaches, drive means at one of said frames effective to move the load-carrying reach from the tail frame to the head frame, take-up and storage means for said belt including at least one idler assembly having a bight of said belt reeved about it, a pair of parallel, elongated guide members located adjacent said head frame and extending toward said tail frame, said idler assembly having guide means on opposed sides thereof engaged respectively with said elongated guide members for movement toward said tail frame to enlarge the bight to increase the belt stored therein on movement of the tail frame for shortening the conveyor, and for movement away from said tail frame to reduce the bight to decrease the belt stored therein on movement of the tail frame for lengthening the conveyor, and strand means having one end connected to said idler assembly and extending therefrom in a direction to move said idler assembly for tensioning the belt when pulled, the improvement comprising: power tensioning means being ground supported independently of the elongated guide members and effectively exerting a

predetermined pull on said strand means to maintain a corresponding predetermined tension in said belt when the tail frame is stationary or moving in either direction, whereby said guide members are rendered free of reaction forces for supporting said power tensioning means.

2,858,934
EXTENSIBLE STRAND SIDEFRAME CONVEYOR
Melvin G. Carlson, Oak Lawn, and Charles T. Ogden, Chicago, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application May 7, 1957, Serial No. 657,549
20 Claims. (Cl. 198—139)



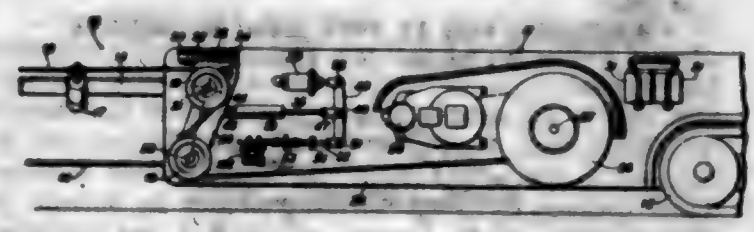
1. In an extensible strand sideframe conveyor having a tail section with belt-supporting strand means extending from said tail section, said strand means being trained along a course and fixed at a location remote from said tail section, said tail section being movable in a direction aligned with said course while varying the length of strand means extending therefrom to change the effective length of the conveyor, the improvement comprising: strand tensioning means carried by said tail section including a fluid motor operably connected with said strand means and effective to tension said strand means by pulling said strand means toward said tail section responsive to pressure applied to said motor, a source of fluid under pressure, a pressure line between said motor and source, an accumulator communicating with said pressure line and chargeable with fluid under pressure by said source and functioning as an alternate pressure source for said motor, one-way locking means acting between the tail section and the strand means locking the strand means against relative movement from the tail section while maintaining the strand means free for relative movement toward the tail section; whereby, when the tail section is stationary, the locking means will maintain belt-supporting tension in the strand means if said source is ineffective to supply fluid to said pressure line; and whereby further, if the tail section is moved backward at a time when said source is ineffective to supply fluid to the pressure line, the accumulator will supply fluid under pressure to the motor to maintain belt-supporting tension in the strand means by pulling the strand means toward the tail section an amount corresponding to said backward movement of the tail section.

2,858,935
EXTENSIBLE CONVEYORS
Roy F. Le Frost, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Serial No. 582,564, May 3, 1956. This application January 15, 1958, Serial No. 709,437
11 Claims. (Cl. 198—139)

1. In an extensible conveyor of the type wherein the conveying reach is supported on a flexible strand, an end section, a power driven sheave around which said strand is reeved so as to provide strand portions at high tension and low tension, means for storing said low tension portion, hydraulic power means for driving said power driven sheave and said storing means, a valve operable to control the pressure of motive fluid to said power driven sheave and said storage means to maintain a desired tension on said strand, and means for varying the tension

in said low tension portion and said high tension portion when the said end section is moved in a conveyor extending direction comprising a valve shiftable to reduce the back pressure against the hydraulic power means for said power driven sheave, and a further valve shiftable to reduce the back pressure against the hydraulic power means for said storage means.

2,858,936
TENSION CONTROL APPARATUS FOR FLEXIBLE SUPPORT STRANDS OF AN EXTENSIBLE CONVEYOR
Charles T. Ogden, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Serial No. 581,198, April 27, 1956. This application January 15, 1958, Serial No. 709,436
14 Claims. (Cl. 198—208)



1. In an extensible strand sideframe conveyor, a tail section, belt-supporting strand means carried by and extending from said tail section and being fixed at a location remote from said tail section, tramming means for moving said tail section to vary the effective length of said conveyor, and strand tensioning means effective to apply a tension in said strand means, the improvement comprising: means for actuating said tramming means to move said tail section; sensing means for sensing the initial value of tension in said strand means at the beginning of actuation of said tramming means; and control means for said strand tensioning means operable in response to said sensing means to maintain the tension at said initial value during actuation of said tramming means.

2,858,937
LIPSTICK REFILLS
Elva Hoffman, Torrance, Calif.
Application March 30, 1956, Serial No. 575,843
3 Claims. (Cl. 206—56)

1. A lipstick carrier adapted for removable seating in a cup-shaped cam follower of a swivel type lipstick holder, comprising an elongated cylindrical body closed at one end by a flat wall and open at the other end, said body having an enlarged portion extending from a point midway of the ends of the body to the open end thereof, said body being longer than the cam follower and said portion having a larger diameter than the cam follower, said portion being corrugated to retain the lipstick therein and to facilitate removal of the body from the cam follower, said body having a plurality of

protuberances extending outwardly from said flat wall for engaging in corresponding holes in the cam follower,

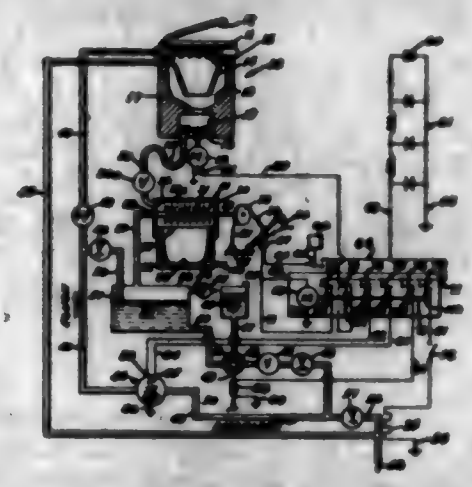
and spring fingers on the outer side of said body for frictionally gripping the inner side of the cam follower.

2,858,936
HARDWARE DISPLAY CARD WITH SELF-LOCKING FASTENER
Reese C. Seyforth, Shelby, Ohio, assignor to The Shelby Metal Products Company, Shelby, Ohio, a corporation of Ohio
Application May 23, 1957, Serial No. 661,243
2 Claims. (Cl. 206—80)

1. A display for hardware of the type having a blind threaded opening comprising a card folded upon itself to provide juxtaposed front and back flaps formed with registering openings therethrough, said front flap additionally being formed with a slot therethrough, a transparent pouch extending through such slot and formed with a flange disposed between said flaps, a wire fastener extending through said registering openings of said flaps formed with a portion overlying said back flap and with a yieldable barb projecting directly through said card and transversely of said front flap, the blind threaded opening of said hardware being pushed over said barb and held thereby against said front flap, and a hardware mounting screw in said pouch, said fastener portion and said hardware serving to hold said flaps together to retain said mounting screw in said pouch, said barb being deformed by forceful pulling of said hardware away from the card for removal of said hardware and for unfolding of said card to provide access to said mounting screw.

2,858,939
SEWAGE DISPOSAL SYSTEM
Robert F. Corfin, Pasadena, Calif., assignor to Wickland Manufacturing Company, Pasadena, Calif., a corporation of California
Application May 10, 1956, Serial No. 584,819
13 Claims. (Cl. 210—136)

1. A sewage treatment system comprising: a grinder for receiving and grinding sewage; a receptacle; slurry conduit means discharging from the grinder into the receptacle; a flushing reservoir; filtrate conduit means discharging from the receptacle into the flushing reservoir; filter means in said filtrate conduit and within said receptacle for filtering out solids, whereby solids are retained in said receptacle; a flushing conduit discharging from the flushing reservoir into the grinder; a reversible pump in said flushing conduit between said flushing reservoir and the grinder for pumping liquid from the reservoir to the grinder in one of its pumping directions; an effluent conduit interconnecting an upper region of the flushing reservoir to the flushing conduit at a point between the grinder and the pump; a discharge conduit discharging from the flushing conduit between the flushing reservoir



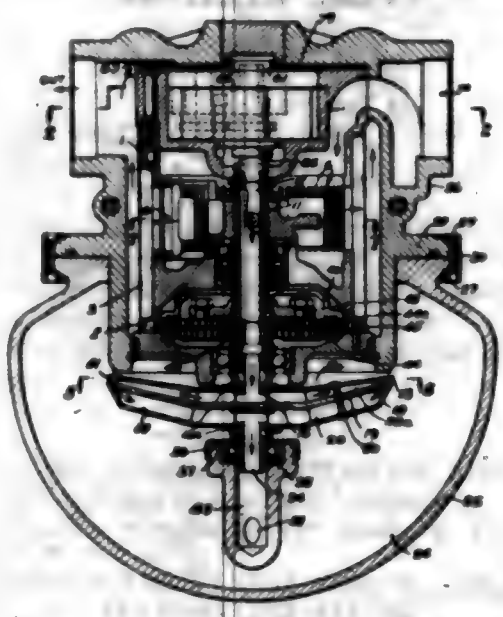
and the pump; a check valve permitting flow in the effluent conduit in the direction away from the flushing reservoir but not the reverse; a check valve in the said discharge conduit permitting flow away from the flushing conduit but not in the other direction; and a check valve in the flushing conduit between the connection of the flushing conduit with the effluent conduit and the grinder permitting flow toward the grinder, but not in the other direction; whereby when the pump is actuated so as to pump fluids toward the grinder, liquid is withdrawn from the reservoir and pumped through the flushing conduit to the grinder and when the pump is reversed, fluid is withdrawn from the upper portion of the reservoir and pumped out the discharge conduit.

2,858,940
DEVICE FOR REMOVING CREAM FROM MILK IN BOTTLES
George W. Calvert, Funsika, Alberta, Canada
Application October 3, 1957, Serial No. 688,033
2 Claims. (Cl. 210—516)

1. A device for removing cream from milk in bottles, comprising in combination an elongated handle, a flexible diaphragm on one end of said handle adapted to be inserted into the associated bottle, and means on said handle co-operating with said diaphragm to expand and contract same radially whereby the perimeters thereof, when expanded, contact the sides of the bottle and follow

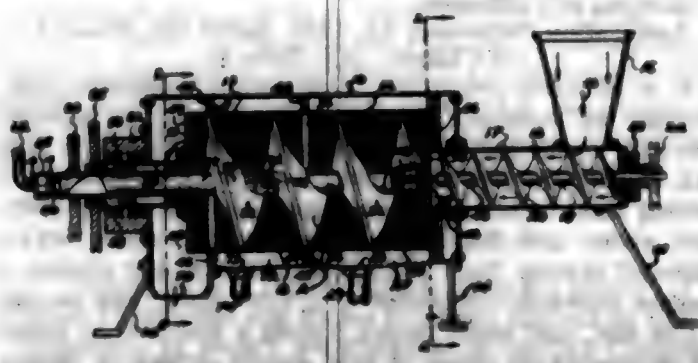
the contour thereof as the device is drawn upwardly therefrom said diaphragm consisting of upper and lower membranes secured to each other around the perimeters thereof.

2,858,941
FUEL FILTER
Rex C. Darnell, Dexter, Mich., assignor to Michigan Wire Cloth Company, Detroit, Mich., a corporation of Michigan
Application October 22, 1953, Serial No. 387,568
11 Claims. (Cl. 210—295)



1. A filter and particle separator for the fuel used in the burners of jet engines having in combination a casing, a centrifugal separator in the casing having a rotating impeller, a cage in the casing of circular cross section having an inside wall, filter media supported by the cage, a rotor on the inside of the cage and filtering media provided with a passageway leading to said separator, and a single power means arranged for slowly rotating the rotor on the inside of the cage to successively connect the portions on the inside of the filtering media with the separator and the low pressure side of the high pressure pump to thereby successively backwash small areas of the filter to disengage the material collected on the filtering media and direct it to the separator and also for rotating the impeller at high speed.

2,858,942
CENTRIFUGAL SEPARATOR
Elwood P. Wenzelberger, Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N. Y., a corporation of New York
Application May 21, 1954, Serial No. 431,359
2 Claims. (Cl. 210—374)



1. A centrifugal apparatus for separating ice crystals from refrigerated juice concentrates, said apparatus comprising an elongated casing, a rotatable bowl, having perforated walls arranged in said casing, said perforated bowl having inlet and outlet means connected thereto, said inlet means comprising an auger for feeding material into said bowl, said perforated bowl comprising screw means arranged therein having screw elements substantially the same diameter as the bowl, concentric means for simultaneously rotating said screw means and said perforated bowl at differential speeds, means comprising a hollow central shaft extending into said perforated bowl, said hollow shaft having perforations on the inner end thereof, means for discharging washing fluid therethrough into said perforated bowl, said casing being divided into two sections by an annular ring secured to the inside of said casing, means for discharging liquid concentrates from said sections independently, and said outlet means arranged to discharge ice crystals from said bowl.

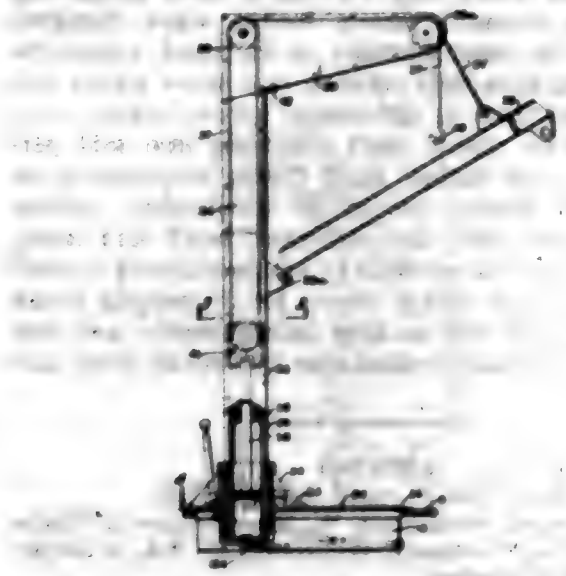
2,858,943
STRAINER FLAME ARRESTOR
Roy H. Richmond, Wellsburg, W. Va., assignor to Eagle Manufacturing Company, Wellsburg, W. Va., a corporation of West Virginia
Application February 4, 1955, Serial No. 486,144
4 Claims. (Cl. 210—474)

1. A strainer for mounting in the filling opening of containers for storing and dispensing inflammable liquids, an open ended wire screen cylinder having a mechanically interlocked folded flange longitudinal seam at one side of the periphery thereof, a ring shaped open ended top member having spaced side walls connected at one end to provide an annular inverted U-shaped opening freely receiving one end of the seamed screen cylinder, said member being assembled on one end of said cylinder and locked in position by displacing an intermediate portion of the side walls and the contained portion of screen laterally relative to the main plane of said side walls, a ring shaped bottom member having spaced side walls connected at one end to provide an annular U-shaped opening freely receiving the bottom end of the seamed screen cylinder, a transverse wall closing the opening formed by the inner wall of the bottom member and disposed within the cylinder, said bottom member being locked in fixed relation on the end of said screen by displacing a portion of the side walls and contained screen laterally of the main plane of said side walls.

2,858,944
AUTOMOTIVE HOIST
Derwood Hutchinson, San Pablo, Calif.
Application September 6, 1955, Serial No. 532,470
1 Claim. (Cl. 212—35)

An automotive hoist comprising a hydraulic cylinder having a lower end portion and an upper end portion, a base housing, a cylindrical journal mounted in fixed position on said housing and encompassing said lower end portion, means forming rotary bearings between said journal and said lower end portion whereby said cylinder can turn, a thrust bearing interrelating said cylinder and said journal to transfer weight from said cylinder to said journal, a vertical mast rectangular in cross-section mounted on and fixed to said upper end portion, tackle vertically movable within said mast including a sheave block, means for constraining said sheave block to turn with

said rectangular mast, a piston and piston rod reciprocable within said cylinder, and means connecting said



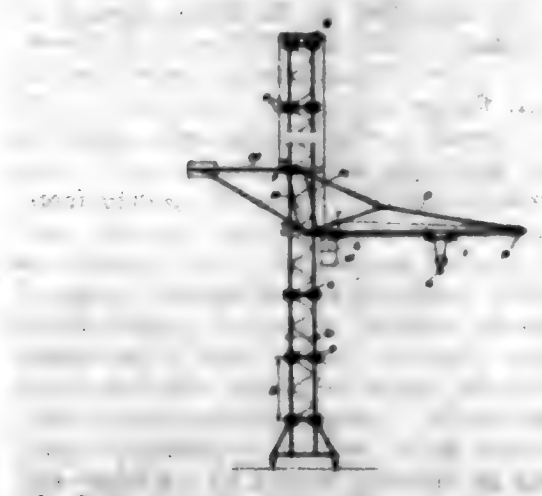
piston rod to said sheave block for reciprocation together and to turn with said cylinder.

2,858,948

PIVOTING AND HOISTING ARRANGEMENT FOR THE DISTRIBUTING ASSEMBLY OF A TOWER CRANE

Pierre Joseph Pingeon, Annecy, France, assignor to Societe M. Tichauer, S. a. r. l., Lyon, France

Application September 22, 1954, Serial No. 457,756
Claims priority, application France September 22, 1953
5 Claims. (Cl. 212—64)



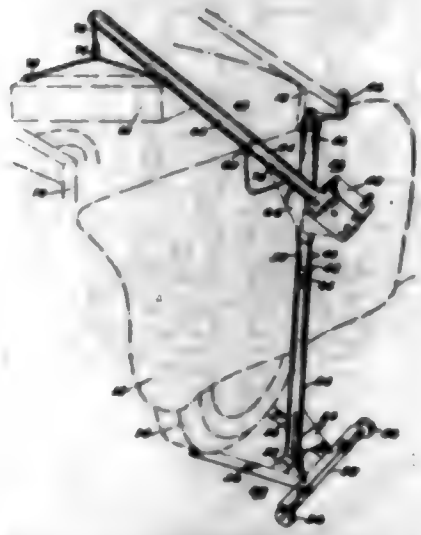
1. A tower crane comprising a mast, a pivot member mounted on top of said mast, an arm, carrying a first pulley at each end, rotatably mounted on said pivot member, an assembly comprising an upper and a lower collar, each of said collars having an inner cylindrical face and means for spacing apart said collars at a predetermined distance, said assembly being movable vertically along said mast, a boom and a counter-boom disposed opposite said boom and rigidly secured to said assembly, said boom and counter-boom moving vertically together with said assembly, a second pulley mounted at the inner end of said boom and a third pulley mounted on the outer end of said boom, a plurality of horizontally disposed braced frames carrying rollers at their periphery for engagement with said inner face of said collars, each pair of adjacent braced frames being spaced apart a distance equal with the distance of said collars, a carriage traversable long said boom and carrying a hook, and a main hoisting winch mounted on said boom, said main hoisting winch carrying a cable, the free end of said cable being secured to the upper of said collars and passing from the latter over the said first pulleys of said arm, over said second pulley, said carriage and said third pulley to said winch, so that upon rotating said winch in one direction said assembly together with said boom and counter-boom will be lifted along said mast and upon rotating said winch in the other direction will be lowered along said mast.

2,858,946

CYLINDER HEAD HOIST

John W. Breed, Jackson, Mich., assignor to Kent-Moore Organization, Inc., Detroit, Mich., a corporation of Michigan

Application April 30, 1956, Serial No. 581,791
1 Claim. (Cl. 212—64)



A cylinder head hoist comprising, in combination, a base consisting of an axle provided at opposite ends with supporting wheels and provided with two feet projecting outwardly away from one side of the axle to have opposite ends of the feet bear directly frictionally upon a floor upon which the wheels rest, said feet being splayed apart as they project away from the axle, a plate extending between the feet in proximity to the axle, an upright vertically extensible standard supported upon the plate, a longitudinally extensible arm swingably mounted upon the standard and adapted to project outwardly therefrom overhanging the feet, hoist mechanism supported upon the standard and including a cable supported to extend lengthwise of the arm and having its free end depending from the outer end of the arm, said feet adapted to be received under a vehicle wheel transversely thereof upon opposite sides of the point of support of the wheel upon the floor and adjacent to the point of support whereby the ends of the feet are held by the wheel directly against the floor.

2,858,947

REMOTE CONTROL MANIPULATING APPARATUS

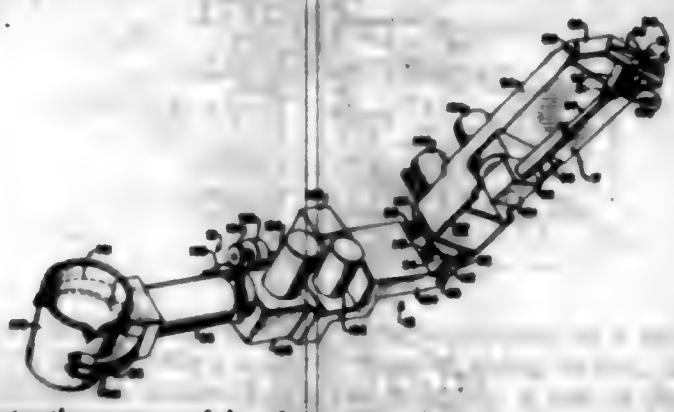
Harvey G. Chapman, Jr., Glendale, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Application November 16, 1953, Serial No. 392,375
14 Claims. (Cl. 214—1)

4. A remotely controlled manipulating apparatus comprising: an arm-like master device having a portion movably connected to a fixed point and having a free end, said master device having a plurality of joints permitting movement in space of said free end by an operator about said fixed point; an arm-like slave device disposed remote from said master device and having a portion movably connected to a fixed point and having a free end, said slave device having a plurality of joints corresponding to those of said master device; a master potentiometer associated with each joint of said master device and including a movable tap operable in unison with movement of its joint; a slave potentiometer associated with each joint of said slave device and includ-

ing draft connection with a tractor vehicle, said folding carrier unit for travel therewith, a motor including a

ing a movable tap; an electric motor associated with each joint of said slave device and arranged to actuate its joint upon energization thereof; means interconnecting each motor with the tap of its associated slave potentiometer to position said tap; and electric circuit means associated with each of said motors and its master



potentiometer and its slave potentiometer for energizing said motor in response to movement of tap of its master potentiometer until the tap of its slave potentiometer reaches a neutral position, whereby said slave device will automatically follow movements of said master device in space.

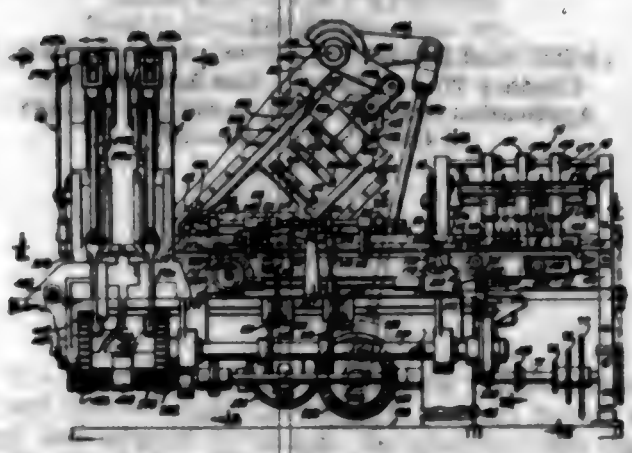
2,858,948

MACHINE FOR OPERATING ON BOOKS

Paul E. Kleinsberg, Easton, Pa., assignor to T. W. & C. B. Sheridan Company, New York, N. Y., a corporation of New York

Application May 10, 1952, Serial No. 287,204

19 Claims. (Cl. 214—6)



1. In a book handling machine of the type having a transfer station for receiving the books singly in succession or in successive stacks, the combination comprising a collecting platform, means for transferring the books singly in succession or in successive stacks from said transfer station to said platform through successive cycles, and for piling the books on said platform, counting means operable in synchronism with the transfer cycles for registering the number of transfer cycles, book sensing means operable automatically upon failure to transfer a book or books during a transfer cycle to render said counting means inoperative for that cycle, whereby said counting mechanism registers only in accordance with actual books transferred, and means for automatically unloading said platform when said counting means registers a predetermined number of transfer cycles.

2,858,949

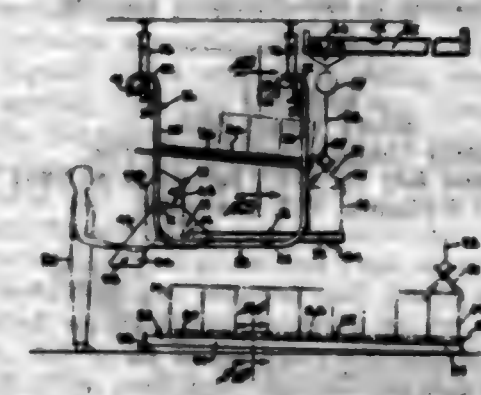
SUSPENDED DISPENSING MECHANISM

Charles W. Doepke and Blaine S. Aston, Cincinnati, Ohio, assignors, by mesne assignments, to Nestler Corporation, Cincinnati, Ohio, a corporation of Ohio

Application February 6, 1957, Serial No. 638,687

9 Claims. (Cl. 214—314)

1. A self-contained parts dispenser adapted to feed parts from an open parts container at an elevation convenient to an operator, said dispenser being suspended from an overhead support, said dispenser comprising, a pair of hangers spaced apart from one another, each of said hangers having a pair of vertical limbs joined by a horizontal connecting section, respective attachment means at the upper end of each of said limbs, said attachment means connected to said support and suspending the hangers with the horizontal connection thereof spaced above a floor level, a roll-over hopper pivotally mounted between said hanger limbs at a forward and thereof said above said horizontal connecting sections, a fixed dispensing chute projecting outwardly of the hangers in a plane below said connecting sections of the hangers, said fixed dispensing chute having a bottom surface which is inclined downwardly from said hangers, said surface leading to an upwardly curved forward section, said hopper confining an open parts container and being selectively pivoted from an upright loading position to an inverted dispensing position, said hopper having an open



spout which resides at the upper end of the hopper when in said upright position, said spout swinging through an arc to a dispensing position, said open spout having a downwardly inclined flow plate overlying the bottom surface of the fixed chute when in said dispensing position, said flow plate forming a continuation of said fixed dispensing chute when in said dispensing position, whereby the parts in the said open container flow by gravity through the open spout of the hopper to the upwardly curved forward section of the dispensing chute, a loading conveyor mounted between said hangers and generally parallel with said connecting sections at the lower portion of the hangers, said loading conveyor having a forward end residing adjacent the roll-over hopper and extending rearwardly thereof, whereby said loading conveyor counter-balances the weight load of the roll-over hopper and stabilizes said suspended dispenser relative to the overhead support, said loading conveyor advancing a loaded parts container into the roll-over hopper when the hopper is pivoted to said upright loading position.

2,858,950

HEAVY DUTY BED RAMP TRAILER

William E. Martin, Kewanee, Ill., assignor, by mesne assignments, to Hyster Company, Portland, Oreg., a corporation of Nevada

Application May 18, 1956, Serial No. 585,863

20 Claims. (Cl. 214—505)

1. In a trailer for hauling load vehicles and the like, the combination of a trailer bed, a folding gooseneck draft attachment at the front of said trailer bed for effect-

2,858,954

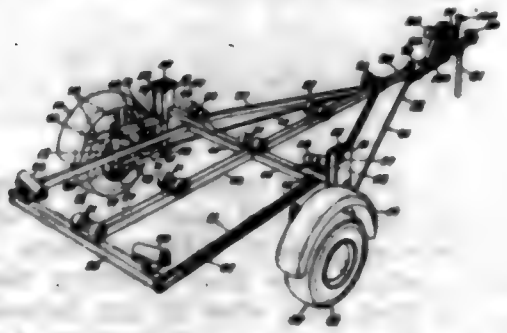
LABEL SECURING ATTACHMENT

2,858,956

ASH TRAY

ing draft connection with a tractor vehicle, said folding gooseneck draft attachment being adapted to be folded out flat in contact with the ground preparatory to having the load vehicle loaded or unloaded over said draft attachment and the front end of the trailer bed, a wheeled truck for supporting the rear end of said trailer bed, said wheeled truck comprising truck wheels and a truck frame tiltably supported for fore and aft tilting movement relatively to said truck wheels, a pivotal connection between the front end of said truck frame and the rear end of said trailer bed comprising pivotal bracket arms extending downwardly from the front end of said truck frame and transverse pivot means joining the lower portions of said pivotal bracket arms with said trailer bed, said pivotal connection permitting said trailer to move from a transport position in which said trailer bed and truck frame lie substantially in parallelism down into a loading position in which said truck frame is tilted downwardly and forwardly and said trailer bed rests on the ground, and hydraulic ram means operative to raise said trailer from said loading position to said transport position.

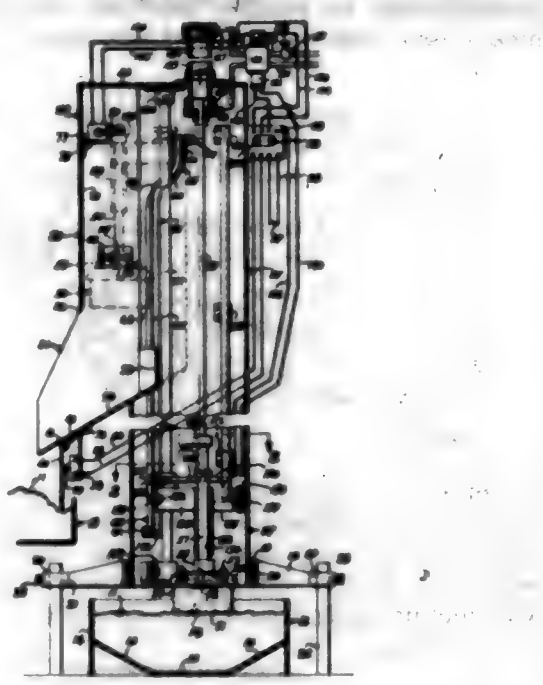
2,858,951
BOAT TRAILERS
Johnny Cabinck, Fort Worth, Tex.
Application July 19, 1957, Serial No. 672,961
5 Claims. (Cl. 214—505)



1. A boat trailer comprising a trailer platform, a tongue, a pair of pedestals supported from said platform and disposed one on each side laterally of said platform and extending upwardly above the platform level, a respective pivot arm pivotally fixed to the upper end portion of a respective pedestal and depending therefrom so as to pivot about a horizontal axis rearwardly from said respective pedestal, a wheel assembly supported from each said pivot arm, a winch supported on said tongue, and means connecting said winch to the lower end of said pivot arm, whereby said platform will be raised when said pivot arms are pulled forward by said winch and connecting means.

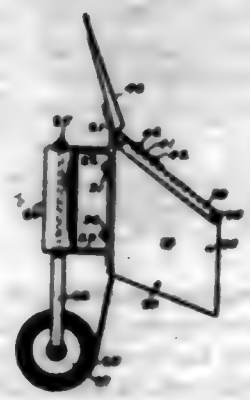
2,858,952
CONVEYOR ELEVATOR
Peter F. Rappe and Alma E. Bodycombe, Grosse Pointe Woods, Mich.
Original application February 26, 1952, Serial No. 273,298, now Patent No. 2,762,519, dated September 11, 1956. Divided and this application September 18, 1956, Serial No. 614,841
2 Claims. (Cl. 214—730)

1. A conveyor elevator for lifting articles from a supply station at a low level to a laterally offset delivery station at a higher level, said conveyor elevator comprising a substantially upright supporting structure positioned above said supply station, an article pickup elevator unit connected to said supporting structure and movable in a substantially vertical path, an article pickup carrier unit connected to said elevator unit and movable upward and downward thereby, said carrier unit being mounted on said elevator unit for lateral movement relatively thereto, an article pickup unit mounted on said carrier unit for travel therewith, a motor including a fluid pressure cylinder element and piston element reciprocable therein, one of said elements being drivingly connected to said elevator unit, and mechanism responsive



to the travel of one of said units to a predetermined height above said supply station for moving said carrier unit laterally relatively to said elevator unit toward said delivery station.

2,858,983
DRY WALL JOINT TAPING APPARATUS
Gladney Warren Harrell, San Antonio, Tex.
Application May 23, 1956, Serial No. 587,849
1 Claim. (Cl. 216—20)



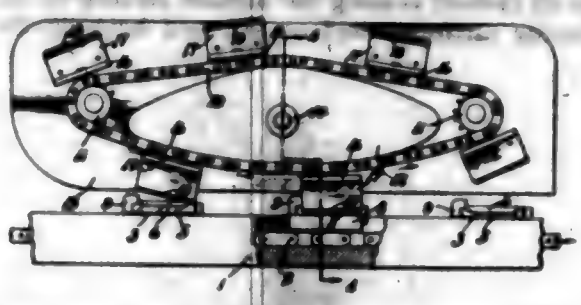
A dry wall tape cementing and applying device comprising: a hopper having spaced parallel side walls connected by a front wall, a back wall arranged in spaced parallel relation to said front wall, and a bottom wall sloping downwardly from said front wall to said back wall; a cover for said hopper hingedly secured to said side walls opposite said bottom wall, said cover terminating in spaced relation to said front wall; a plate secured to said cover for sliding movement thereon toward said front wall; a trowel integrally formed with said front wall and extending at a forwardly sloping angle thereto; upwardly tapering flanges integrally formed on opposite side edges of said trowel; a frame member secured to said front wall; means on said frame member supporting said trowel; spaced parallel handle supports extending integrally forwardly of said frame member; a handle secured between said handle supports in spaced parallel relation to said frame member; said front wall having a transverse slot formed therein adjacent said bottom wall; a yoke mounted on one end of said handle supports; and a tape reel journalled in said yoke.

lunch box, a hooked flange co-extensive with an upper wall in said embossed portion, a spud sleeve secured to

parts from an open parts container at an elevation con-

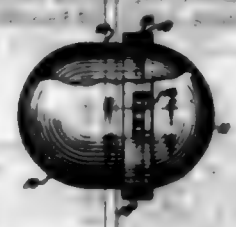
draft attachment at the front of said trailer bed for effect-

2,858,954
LABEL SECURING ATTACHMENT
Howard R. Tuthill, Grand Rapids, Mich., assignor to Oliver Machinery Company, Grand Rapids, Mich., a corporation of Michigan
Application August 26, 1954, Serial No. 454,962
6 Claims. (Cl. 216—57)



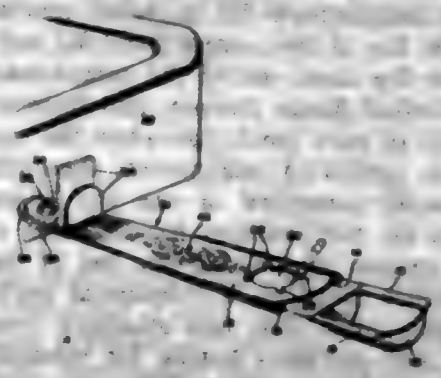
1. In means for completing the attachment of a label to an article having a convex label receiving surface, the combination comprising: a base member; a pair of flexible flaps each having one edge secured to said base member along opposite sides thereof and projecting away from said base member; a thin, stiff plate characterized by resilience, overlying a major portion of each of said flaps and firmly secured to said base member with said flaps between said base member and said plates; a yieldable block seated between said flaps; the face of said block adjacent the free ends of said flaps having a concave trough therein parallel to said flaps; said flaps projecting beyond said face of said block.

2,858,955
MERCHANDISE CAPSULES
Fred P. Kressner, Milwaukee, Wis.
Application December 7, 1955, Serial No. 551,494
5 Claims. (Cl. 220—4)



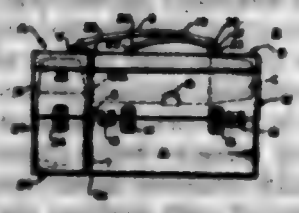
1. In a merchandise capsule including complementary male and female sections formed of material having resiliency and adapted to enclose merchandise, said male section having a circular rim portion with many circumferentially spaced external bosses of short peripheral extent projecting outwardly from the side of said male section adjacent said rim and completely around said section, and said female section having an outwardly offset circular rim of a size to receive the rim portion and all of the projecting bosses of said male section, said last rim having a circular edge and there being an internal circular seat inwardly of said circular edge connecting the offset rim with the female section, and means including laterally spaced locking shoulders, which are few in number compared to the number of bosses, projecting inwardly from the inner side of said offset rim and located to confine some of said bosses between said seat and said locking shoulders while the rim of said male section engages said seat and while the outermost portions of the other bosses frictionally engage portions of the interior of said offset rim of the female section in areas which are devoid of locking shoulders, said locking shoulders projecting inwardly only a limited distance so that said bosses may snap over the shoulders during assembly and said shoulders being adapted to coact with any of the many bosses regardless of how the sections are disposed circumferentially with respect to one another, and said male section being adapted to flex between any pair of bosses.

2,858,956
ASH TRAY
William A. Baker and Fleman R. Beaumont, Kansas City, Kans.
Application June 8, 1956, Serial No. 590,336
1 Claim. (Cl. 220—18)



An ash tray comprising an elongated arm arranged to be suitably and detachably pivoted to the bottom edge of a vertical plane portion of a suitable support for movement between a position extending underneath the suitable support and a position extending beyond the suitable support, said arm having a bolt receiving aperture adjacent the supporting end thereof, a pair of plates having mating openings positioned on opposite sides of said apertured end of said arm, a securing bolt extending through the aperture in said elongated arm and said mating openings in said plates and a nut pivotally mounting said elongated arm between said plates, an upstanding U-shaped spring clamp mounted on the upper of said plates, said spring clamp being arranged to embrace the vertical plane portion of the suitable support, said elongated arm having a pair of downwardly and inwardly disposed reverted rails extending along the opposite edges thereof to the free end of said elongated arm, said elongated arm having an ash receiving hole extending therethrough between said opposite rails, and an ash receiving receptacle of greater dimensions than said ash opening, said receptacle having oppositely extending horizontal flanges arranged to slide in said arm opposite rails and removably support said receptacle beneath said ash opening, said downwardly and inwardly reverted rails converging towards the top of said arm at their inner ends to limit sliding movement of said flanges inwardly and hence locate said ash receptacle beneath said ash receiving hole.

2,858,957
ACCESSORY COMPARTMENT FOR LUNCH BOX
Richard C. Durrah, San Jose, Calif.
Application November 13, 1956, Serial No. 621,611
2 Claims. (Cl. 220—23.4)



2. An accessory compartment for a lunch box having a box-like lower portion and having a domed, bottle receiving lid hingedly connected at its lower rear edge to the upper rear edge of the box-like lower portion, one end of the lid and lower portion being flat and substantially co-planar, the lunch box lid having a handle extending lengthwise thereon and secured at both ends thereto; said accessory compartment comprising a box-like lower portion, a domed lid, means hingedly connecting the lower rear edge of the compartment lid and lower compartment portion, an end of the compartment lid and lower portion being flat and co-planar and adapted to fit in close, abutting relation against an end of such

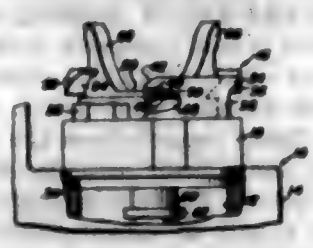
2,858,961
OPENING AND CLOSURE DEVICE
Thomas H. Johnson, Old Saybrook, Conn.
Application December 31, 1956, Serial No. 631,511
3 Claims. (Cl. 220—24)

bears under the influence of gravity, a vertical chute comprising a hollow column open at its upper end, the

relatively thereto, an article pickup unit mounted on said ports; and a tape reel journalled in said yoke.

lunch box, a hooked flange co-extensive with an upper edge of one end of the compartment lower portion and formed for hooked, supported attachment to a flat end wall of such lunch box, said flange being formed and adapted to fit between the closed lid and an end wall of the box-like lower portion of such lunch box, means for securing the compartment lid in closed condition, a clip secured to the top of the compartment lid and extending endwise from the same end of the compartment so that having the hooked flange thereon, and formed to closely overlie the lid of such lunch box when the compartment is in hooked, supported engagement therewith, and an auxiliary handle connected at one end thereof to the compartment lid, the auxiliary handle being of a length sufficient to extend beyond said one end of the compartment a distance equal to a substantial portion of the length of such lunch box, and attaching means on the free end of said auxiliary handle for releasably attaching the latter to the lunch box lid.

2,858,958
QUICK CHANGE COUPLING
Herbert J. Hawthorne and Earl M. Weaver, Houston, Tex.
Application January 26, 1955, Serial No. 484,156
9 Claims. (Cl. 220—46)



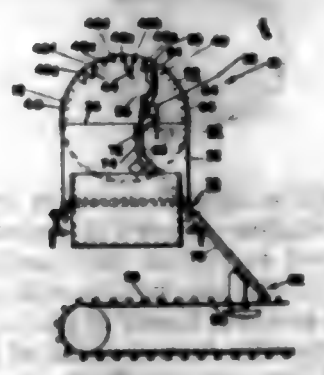
1. In a coupling, a first member having an annular portion provided with a plurality of annularly spaced lugs, a second member having an annular portion provided with a plurality of cooperating lugs arranged to pass axially within the spaces between the lugs of said first member whereby adjacent lugs of each member may be brought into engagement by relative rotation of said members, each pair of engaging lugs having oppositely faced inclined inserting surfaces engageable upon relative rotation of said members in one direction to move the same axially toward each other and oppositely faced locking surfaces extending at an angle from said inserting surfaces engageable upon further relative rotation of said members to hold the same axially together, the lugs of one of said members having inclined removing surfaces facing in a direction opposite to their associated inserting surfaces, the other of said members including a second plurality of annularly spaced lugs spaced axially from the first plurality of lugs thereof and displaced radially with respect thereto, said second plurality of lugs having inclined removing surfaces thereon facing in a direction opposite to said first mentioned removing surfaces, said removing surfaces being engageable upon relative rotation of said members in the opposite direction after disengagement of said locking surfaces to move said members axially away from each other.

2,858,959
CEMENT LINED TANK AND SPUD OPENING THEREFOR
Harvey M. Bixby, La Porte, Ind., assignor to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Application June 23, 1953, Serial No. 363,617
4 Claims. (Cl. 220—64)

4. A cylindrical tank structure having an outwardly embossed portion defining an outwardly dished area in the cylindrical side wall thereof, an opening through said wall in said embossed portion, a spud sleeve secured to said tank and having a free inner end projecting through the opening in the wall of the tank and into said dished area, a plug removably mounted in said sleeve and having an inner end projecting through the sleeve a selected distance beyond the free inner end of the same, a layer of cement coating the interior surface of the tank and having an inner surface disposed between the free

inner end of said sleeve and the inner end of said plug, said layer adhering to and covering the entire side and end surfaces of the portion of said spud sleeve disposed within said tank, whereby, said plug may be removed from said sleeve to leave an opening through said cement layer between the sleeve and the inner surface of the layer, said opening having a diameter substantially the same as the inner diameter of said sleeve.

2,858,960
HOPPER FOR HOOKS
Joseph M. Mangalio, Thomas L. Ford, Jr., and George Beimesberger, Philadelphia, Pa.
Application September 13, 1955, Serial No. 534,851
3 Claims. (Cl. 221—168)



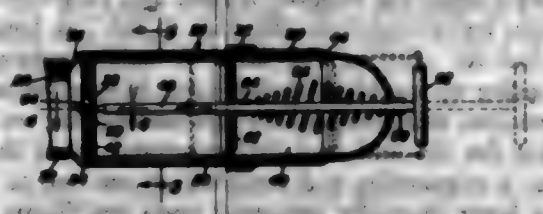
1. A hopper for delivering hooks in aligned position including an open-ended rotating drum, pins projecting inwardly from one wall of said drum, withdrawal means comprising a plurality of blade elements, said withdrawal means extending through the open end of said drum, one of said blade elements being closely proximate to said pins, said one blade element being included with its uppermost end disposed in such apposed relation to said pins that objects carried on said pins will be deflected therefrom and transferred onto the uppermost edge of said element upon rotation of said drum, another of said blade elements being longitudinally spaced by a gap from said first-mentioned blade element, the uppermost edge of said last-mentioned blade element being beneath the uppermost edge of said first-mentioned blade element, and receiving means outside said drum spaced from and beneath the outermost end portion of said withdrawal means, whereby when said receiving means is unable to receive hooks from said withdrawal means, withdrawn hooks from said withdrawal means are discharged without said receiving means.

fit in close, abutting relation against an end of such

2,858,961
OPENING AND CLOSURE DEVICE
Thomas H. Johnson, Old Saybrook, Conn.
Application July 18, 1956, Serial No. 598,578
4 Claims. (Cl. 222—81)

1. An opener and closure member for containers comprising a body portion provided with a knife element being crimped along its edges, a pair of wings extending from opposite sides of said body portion and joined together at the free ends thereof thereby defining a relatively large opening therebetween, the leading edges of said wings forming an acute angle with said body portion, said leading edges being at least substantially crimped, and said body portion being provided with a lip at the end of said body portion remote from said knife element.

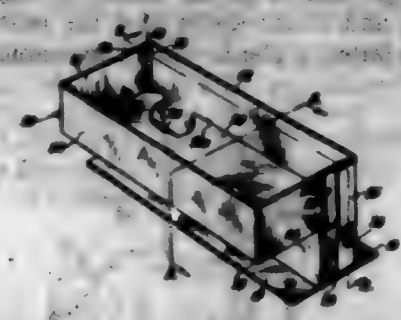
2,858,963
HAND OPERATED GREASE GUN
Stanley Lenton, Unity, Maine
Application June 12, 1956, Serial No. 590,945
5 Claims. (Cl. 222—62)



1. For use with a grease gun valve that has means to attach a body thereto, an attachment comprising a casing in which to accommodate a can of grease, a piston in said casing and operable in the can of grease to urge the grease towards the bottom of the can, a rod in said casing and having a pointed end with barbs extending radially a greater distance than the diameter of said rod with which to pierce the bottom of the can and after rotation to withdraw the can from the casing upon depletion of the supply of grease therein, and resilient means biasing said piston in said casing in one direction.

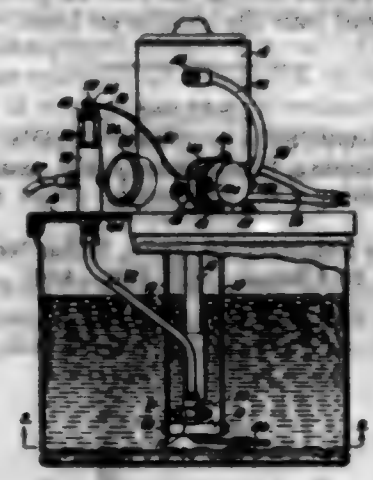
2,858,963
TEST CELL LOADING DEVICE
Frederick W. Stuhr, Atchison, Kans.
Application June 17, 1955, Serial No. 516,196
8 Claims. (Cl. 222—166)

1. In a device of the character described, an open-top hopper having a closed bottom, said hopper being closed on three sides but open on the fourth side, means pivotally supporting said hopper to tilt about a generally horizontal axis, said axis being spaced above the bottom of the hopper and located adjacent to the open side thereof whereby the center of gravity of said hopper is offset laterally from said axis, a stationary abutment against which the open edge of the hopper bottom normally bears under the influence of gravity, a vertical chute comprising a hollow column open at its upper end, the open upper end of said column being positioned directly below, and covered by, said bottom of the hopper when



said edge thereof bears against said abutment, and said abutment comprising a wall contiguous with and forming an upward extension of one side of said column, said wall normally confronting and completely covering the open side of said hopper to close same.

2,858,964
LUBRICATING PUMP ASSEMBLY
Joseph M. North, Arnold, Kans.
Application August 22, 1956, Serial No. 605,578
5 Claims. (Cl. 222—339)

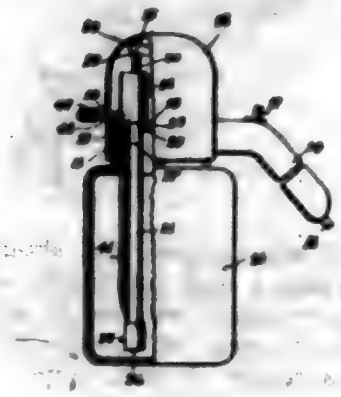


1. In a lubricating pump assembly for use in combination with a lubricant container comprising a substantially horizontal top member for a lubricant container, a prime mover carried by said top member, a bearing block on the other side of said top member from the prime mover and spaced away therefrom, substantially vertical means cooperating between the top member and the bearing block to prevent displacement of the block relative thereto, a substantially vertical drive shaft connected at one end to the prime mover and the other end thereof being journaled in the bearing block, pump means secured to the bearing block and operable by rotation of said drive shaft, said pump means having an inlet port and an outlet port, said inlet port extending downwardly from the pump means, a discharge conduit connected at one end to said outlet port and having its other end outside of said container, the improvement which comprises means fixed to said shaft to rotate therewith extending below the bearing block and outwardly from the axis of said shaft to churn lubricant in a lubricant container upon which the top member is placed.

2,858,965
APPARATUS FOR SPRAYING LIQUIDS
Sterling M. Berman, Fairfield, Conn.
Application April 13, 1954, Serial No. 422,741
5 Claims. (Cl. 222—333)

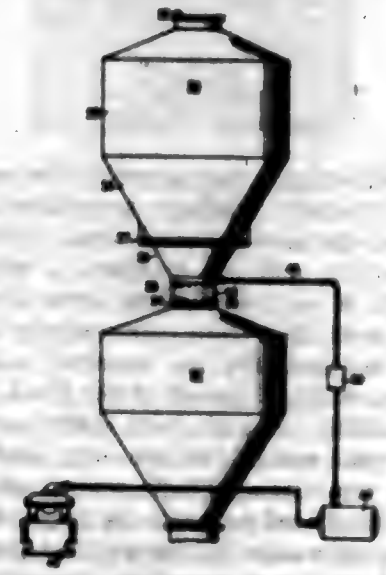
1. An apparatus for spraying liquids comprising a container in which the liquid is to be placed, a discharge tube extending into the container, the lower end of said

tube being closely adjacent the bottom of the container, a cylinder disposed in the container in a vertical position adjacent the bottom, the lower portion of the cylinder having a port and around said port being secured to said discharge tube, a piston closely fitting said cylinder at said port and reciprocable past the port to cover and uncover the latter; a check valve communicating with the



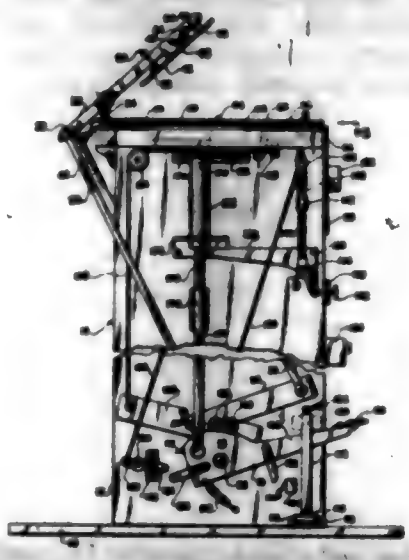
cylinder and arranged to permit ingress of liquid into the cylinder, a magnetic vibrator motor connected to the piston to reciprocate the same, the piston moving upward and downward in the cylinder to uncover and cover respectively the port connected to the discharge tube and said piston during part of its downward stroke forcing the liquid into the discharge tube.

2,858,966
HOPPER CONSTRUCTION
Frederic D. Pfening, Columbus, Ohio, assignor to The Fred D. Pfening Co., Columbus, Ohio, a corporation of Ohio
Application February 10, 1956, Serial No. 564,831
18 Claims. (Cl. 222—504)



1. A hopper for receiving and discharging finely divided particles comprising, in combination, container means including an intake opening in the upper portion thereof, a discharge opening in the lower portion thereof, and an inner wall surface communicating with said discharge opening; closure means for said discharge opening; a vertically extending guide for moveably mounting said closure means relative to said container means, said guide including a cylindrical inner surface, said closure means providing a cover for said discharge opening at a lower limit of movement of said closure means on said guide; a piston slideably carried by said cylindrical inner surface; means connecting said piston with said closure means; a second container means for receiving the contents of said first container means; and means for venting air from said second container means when said contents are discharged from said first container means.

2,858,967
TURNING-IN OR FOLDING MACHINE
George B. Gilbert, Hudson, N. H.
Application March 4, 1957, Serial No. 643,237
8 Claims. (Cl. 223—38)

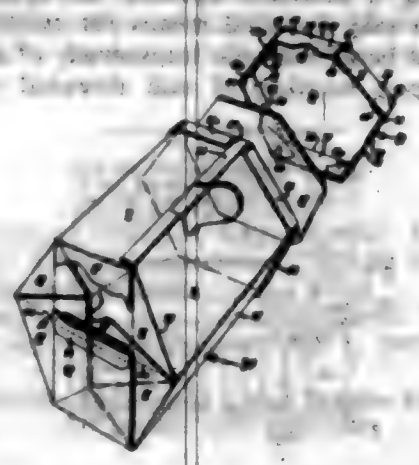


1. A machine for edge-folding a fabric work piece comprising a support frame, a bed adapted for supporting said work piece and mounted for upward movement on the frame to a position in which the bed applies pressure upwardly against the supported work piece, a die mounted on the frame for lowering into a position overlying the work piece for clamping the work piece between the die and bed, folder plates mounted on the frame for movement to a position in which said folder plates fold inwardly the edges of the clamped work piece, and means for shifting the die, bed, and folder plates to said positions thereof, in a predetermined, timed sequence, the movement of the die to said position thereof being first in the sequence, the folder plates moving to said position next in the sequence, and the bed moving to its position last in the sequence, said means including a cam rockably mounted upon the support frame, and cam-operated connections extending from the cam to the die, folder plates, and bed for shifting the same to said positions thereof responsive to rocking of the cam in one direction, the connections extending to the die comprising an arm supporting the die and rockably mounted upon the support frame, a connecting rod attached at one end to said arm, and a lever pivotally mounted upon the frame and connected pivotally to the other end of the rod, said lever including means actuated by the cam responsive to rocking of the cam for swinging the lever to a position effective to move the die to said die position, said connection extending to the folder plates comprising a lever pivotally mounted upon the upright adjacent the first-named lever, cords connected to the second-named lever, and slide blocks carried by the support frame and attached to the folder plates, said slide blocks being connected to the cords for shifting the folder plates to said positions thereof responsive to swinging of the second-named lever by the cam in a direction to exert a pull on said cords.

2,858,968
CARTON CONSTRUCTION
Ernest C. Pollister, Lucasper, Calif., assignor to Fibreboard Paper Products Corporation, a corporation of Delaware
Application April 26, 1954, Serial No. 425,616
3 Claims. (Cl. 229—37)

1. A carton capable of being erected from a collapsed state having six hingedly connected side walls with three walls on each side of the collapsed carton and which in erected state form the cross sectional shape of a regular hexagon; and an automatically foldable bottom structure hingedly connected to said walls comprising a

pair of bottom flaps hingedly connected to a pair of opposite central walls of the collapsed carton, one of said bottom flaps having a hingedly connected end portion secured to the other bottom flap, each of said bottom flaps being of a width throughout not exceeding the width of said opposite parallel side walls, a pair of bottom flaps hingedly connected to each pair of end walls of the collapsed carton, one bottom flap of each of the latter pairs having a portion hingedly connected along an



oblique fold line secured to the other bottom flap of such pair, each of said latter pairs of bottom flaps being unsecured to the bottom flaps connected to said central walls, all of said bottom flaps lying between the sides of the collapsed carton, and the edges of each of said latter pairs of bottom flaps adjacent the central pair of bottom flaps being cut-away to a location adjacent their hinge connections with said end walls of the collapsed carton to provide gaps between such latter flaps and the adjacent edges of the central flaps.

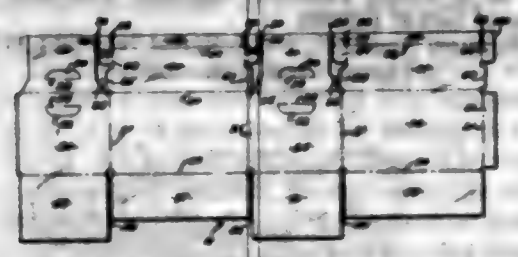
2,858,969

MULTI-TRIP SHIPPING CONTAINER

Benjamin M. Williams, Clayton, Mo., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application March 23, 1956, Serial No. 573,521

1 Claim. (Cl. 229—44)



In a one-piece paperboard shipping container having connected together opposed side and end walls the latter with handholes therein and having free upper ends, half cover members each connected along a fold line to the respective side walls, and a bottom; each cover member having side flanges thereon connected in downward right-angular relationship thereto, depending end flanges on each cover member hinged to an inwardly offset outer portion of the ends of the cover members, all flanges being positioned entirely within the container with the said end cover flanges extending downwardly in engagement with the inner faces of the end wall structure and with free edges of the flanges terminating substantially at the upper boundary of each of the respective handholes, the end cover flanges providing an additional thickness of paperboard to be hand grasped for lifting the container, an inner end portion of each cover member adjacent the fold line thereof with each side wall being offset outwardly beyond the vertical plane of the end cover flanges, the said projecting portions being seated on the free upper ends of the end wall structure for supporting the half covers in horizontal coplanar relation.

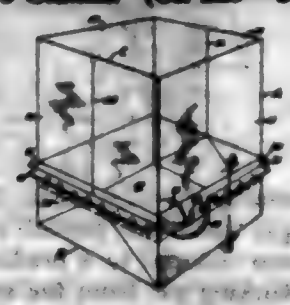
2,858,970

PACKAGING AND COOKING CONTAINER

James F. Barnes, Van Nuys, Calif., and Elmer F. Robbels, St. Louis, Mo., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California

Application December 29, 1954, Serial No. 478,232

5 Claims. (Cl. 229—55)



1. A packaging and cooking container, comprising a bag formed of flexible sheet material and having a bottom adapted to support the body of said bag in an upright position, the bottom and lower portion of said bag being formed of a metal foil laminate composed of two thin sheets of metal foil bonded together with a heat-resistant adhesive material, the upper portion of said bag being formed of a transparent plastic film, said film being relatively non-heat-resistant as compared to said metal foil laminate, and at least one outwardly-extending heat radiation fin integrally connected to the outer sheet of said foil laminate near the top of said lower body portion.

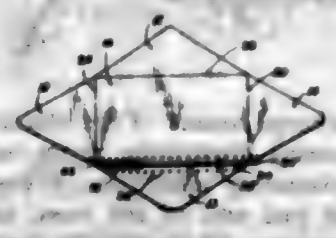
2,858,971

ENVELOPE OPENING MEANS

Stephen C. Sandstrom, Lyndhurst, N. J.

Application June 1, 1956, Serial No. 588,681

1 Claim. (Cl. 229—86)



An envelope comprising a central front rectangular body portion having a plurality of overlying adjoining flaps, said body portion having a row of closely spaced perforations near one long edge thereof, a narrow strip of plastic material in a fold of one flap at said one long edge, a band of cement extending continuously from one end of the strip to an intermediate point therealong, and a plurality of spots of cement at spaced intervals along the remaining portion of the strip, said one flap having a row of closely spaced perforations juxtaposed to the row of perforations in said front body portion, said strip having an end extending outside of the envelope to facilitate initial tearing of the envelope.

2,858,972

IONIC VACUUM PUMP

Anatole M. Gurewitsch, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

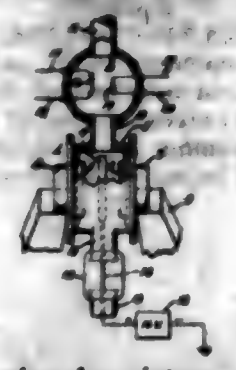
Application March 27, 1956, Serial No. 574,226

2 Claims. (Cl. 230—69)

1. The method of evacuating a system containing inert gases by means of an ionic vacuum pump requiring sufficient gas pressure for the maintenance of an electric discharge for efficient pumping speed, which method comprises the steps of reducing the pressure of the system gases by means of the pump until the pumping speed

thin said annular chamber at a pressure above atmospheric during when the associated wheel stands at "0," means

falls below an optimum value, introducing into the system a working gas which can be gettered chemically to increase the total pressure in the system to a level where an electric discharge within the pump is readily maintained to restore and maintain the pumping speed at an



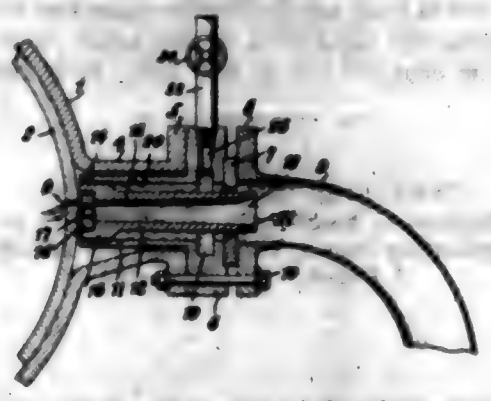
optimum value, pumping the mixture of the system gases and the working gas until the partial pressure of the system gases has been reduced to a predetermined value, and removing the working gas from the system by means of a getter.

2,858,973

STEAM NOZZLE FOR PULP PRODUCING APPARATUS

Hjalmar S. Mening, New York, N. Y., assignor to American Defibrator, Inc., New York, N. Y., a corporation of New York

Application July 16, 1954, Serial No. 443,923
3 Claims. (Cl. 239—93)



1. A steam discharge means of the character described comprising, a housing containing steam under pressure, a tubular boss extending therefrom, a casing having a part fitted against one end of the boss, said casing including a tubular sleeve located within and spaced from the interior of the boss, a nozzle fitted within the sleeve and closing one end of the sleeve, said nozzle having an axial passage having a reduced-diameter end in communication with the interior of the housing and gradually increasing in diameter toward its other end, said last-mentioned end projecting beyond the casing, the nozzle having a substantial portion of its length spaced from the interior of the sleeve to thereby form a fluid chamber between the exterior of the nozzle and the interior of the sleeve, said chamber being open at one end rearwardly of the outlet end of the nozzle, a conduit leading into said chamber from a source of fluid under pressure, and a pipe connected at the outlet end of the nozzle and at the open end of the fluid chamber.

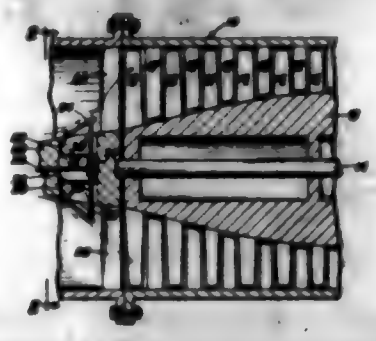
2,858,974

DEVICE FOR ELIMINATING ROTATING STALL IN AXIAL-FLOW COMPRESSORS

Robert O. Bullock, Fairview Park, and Merle C. Huppert, Elyria, Ohio, assignors to the United States of America as represented by the Secretary of the Navy

Application April 13, 1955, Serial No. 501,314
1 Claim. (Cl. 230—115)
(Granted under Title 35, U. S. Code (1952), sec. 266)

In an axial flow compressor having rotor blades, and stator blades and subject to rotating stall, means to avoid and eliminate rotating stall in the compressor blading comprising a baffle upstream of the first row of blades, said baffle comprising a plurality of plates lying concentrically about the periphery of a hub, each plate being pivotally attached to said hub by hinge means connected to the upstream edge of each plate and to said hub, cylindrical threaded means rotatably mounted in a centrally located recess in said hub and located concentrically with the longitudinal axis of said hub, positioning means having a threaded opening therethrough being engaged with said threaded means for relative rotation therewith and being movable transversely of said threaded means upon rotation of said threaded means and



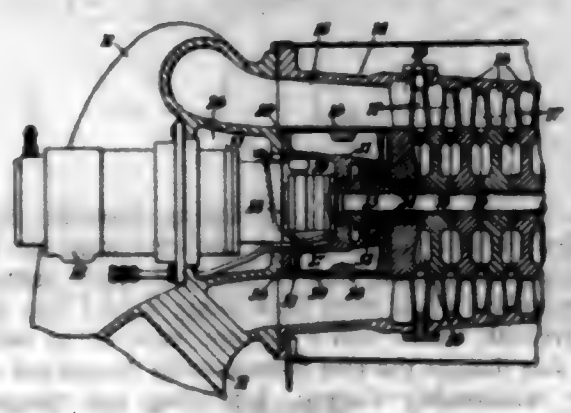
strut means extending between each of said plates and said positioning means through radially directed openings in said hub extending from said recess through the surface of said hub and being pivotally connected to said plates and said positioning means whereby upon rotation of said threaded means in one direction said positioning means will be moved along said threaded means to adjust the angle of said plates through said strut means to move each of said plates about its hinge to cause said plates to move outwardly into the compressor inlet annulus whereby said plates partially block the inlet annulus adjacent said hub and upon rotation of said threaded means in the reverse direction said plates will be caused to move inwardly against said hub.

2,858,975

TURBO-MACHINES

Geoffrey B. R. Feilden, Lincoln, England, assignor to Rustan & Hornsby Limited, Lincoln, England, a corporation of Great Britain

Application April 27, 1955, Serial No. 504,312
1 Claim. (Cl. 230—207)



In an axial flow compressor having a rotor carrying compressor blades which rotor is supported at one end in an oil-lubricated bearing surrounded by an annular air inlet, and in which there is a tendency for leakage oil from said bearing to enter said air inlet, an arrangement for preventing such leakage oil from reaching said air inlet comprising means forming a closed annular chamber surrounding said bearing for receiving said leakage oil, means providing an air passage from a space within the bladed section of said rotor operating at superatmospheric pressure to said annular chamber to main-

this said annular chamber at a pressure above atmosphere, and a stand-pipe having a predetermined length and extending substantially upwardly from a position within the chamber below the bearing into a space in front of said bearing which is maintained at substantially atmospheric pressure, whereby leakage oil accumulating in said annular chamber is forced out of said chamber by super-atmospheric pressure developed in the bladed section of said rotor and a column of oil thus formed in said pipe constitutes a seal between the chamber and said space at substantially atmospheric pressure to maintain a predetermined air pressure in the said chamber.

2,858,976
TAXIMETERS

Wilhelm Haupt, Villingen, Schwarzwald, Germany, assignor to Kienzle Apparate G. m. b. H., Villingen, Schwarzwald, Germany

Original application May 24, 1955, Serial No. 510,662. Divided and this application June 4, 1957, Serial No. 663,494

Claims priority, application Great Britain May 25, 1954

3 Claims. (Cl. 235—47)

1. In a taximeter having a shaft driven in accordance with time and distance, the provision of a pinion drivably connected with said shaft, a projection also drivably connected with said shaft, a rocking member having a stop surface concentric with its rocking axis, a toothed element mounted movably on said rocking member so as to be displaceable out of engagement with said pinion, resilient means urging said element into engagement with said pinion, said element having an abutment surface engagable by said projection, and means for rocking said member into a first position corresponding to the "Hired" and "Stopped" conditions and into a second position corresponding to the "For Hire" condition, said pinion riding over the teeth of the toothed element in the first position and being driven by the toothed element to revolve the said shaft as the rocking member moves from first to second position whereupon the projection moves the toothed element out of mesh with the pinion on reaching the second position.

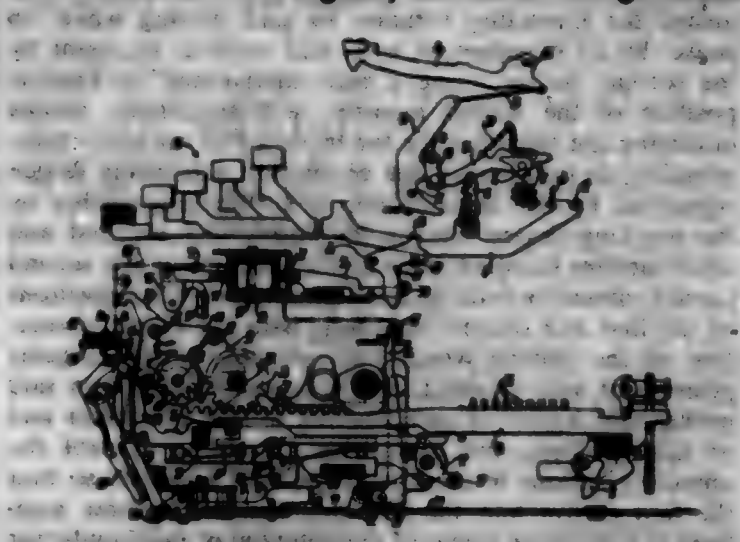
2,858,977
NINES COMPLEMENT TRUE NEGATIVE TOTAL REGISTER WITH CLEAR SYMBOL PRINTING

William Gyllenhammer, Stamford, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware

Application June 1, 1955, Serial No. 512,375

5 Claims. (Cl. 235—60.17)

1. In a machine of the class described, a credit balance totalizer adapted to register negative amounts as the "9's" complement of the true negative amount, said totalizer comprising a plurality of axially aligned wheels, a sensing means for each wheel of said register for detecting when the associated wheel stands at "9," means to add "1" into said register, said means being rendered



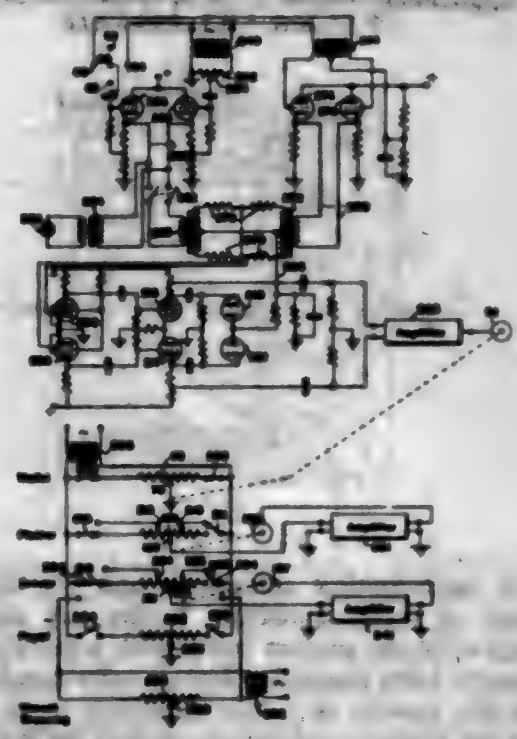
ineffective by any of said sensing means whose associated wheel does not stand at "9."

2,858,978
RESERVOIR ANALYZER

Edward W. Yetter, Chadds Ford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application September 9, 1952, Serial No. 308,583

35 Claims. (Cl. 235—61)



2. In combination, a conductor disposed over an extended area, means providing current flow through the conductor, a first carrier, means mounting said carrier for traversal of the area of the conductor, a first member rotatably supported by the first carrier, an assembly of probes supported by the first carrier and electrically engaging said conductor with at least one of the probes carried by the first member at a position displaced from its axis of rotation and rotatable therewith, said probes providing a signal of the potential of said conductor at the position of the axis of the first member and a signal of a potential gradient in the conductor directed radially with respect to the axis of the first member and variable in angular position with the angular position of the first member, a second carrier, means mounting the second carrier for traversal of an area corresponding to the area of the conductor, a second member rotatably supported by the second carrier, a driving wheel mounted on the second member so that its plane of rotation is angularly posi-

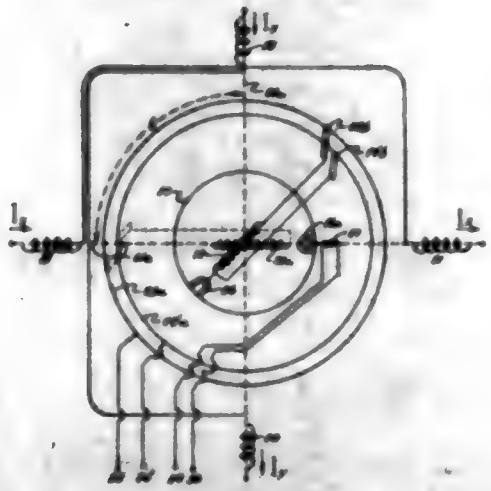
tioned in accordance with the angular position of the second member, a surface engaged by said driving wheel, means for imparting rotation to said driving wheel to cause, by its engagement with said surface, traversal by the second carrier along a path determined by angular position of the second member, a third carrier, means mounting the third carrier for traversal of an area corresponding to the area of the conductor, a marking device supported by the third carrier, a surface engageable by the marking device, means for positioning the first and third carriers to correspond to the position of the second carrier, means providing corresponding angular positions of the first and second members, with the plane of rotation of the driving wheel corresponding to the angular position of said gradient, and means receiving from said probes said signals of the potential of said conductor and of said gradient and responsive thereto to control the angular positions of the first and second members so that the first carirer and the first member will assume positions in which said signal of the potential of said conductor approximates a predetermined value and said signal of the gradient approximates a zero value, with the result that the first carrier approximately follows an equipotential of said conductor.

2,858,979

CIRCUITRY FOR VECTOR SOLUTION IN D. C. ANALOG COMPUTERS

Garrett Grenzer, Ypsilanti, Mich., assignor to the Regents of the University of Michigan, Ann Arbor, Mich., a Michigan constitutional corporation

Application August 3, 1953, Serial No. 371,812
7 Claims. (Cl. 235—61)



7. A mathematical computing unit for combining a plurality of vector quantities having any angular relationship with one another comprising a plurality of magnetomotive force producing devices corresponding in number to the number of vector quantities to be combined, means for aligning said devices so that the magnetic field of each will be aligned to correspond in direction to its associated vector quantity, means for adjusting the intensity of the magnetic field of each device to correspond proportionately to the magnitude of its associated vector, at least one sensing element responsive to the resultant magnetic field of said devices, and means associated with said element for determining the direction of the resultant magnetic field.

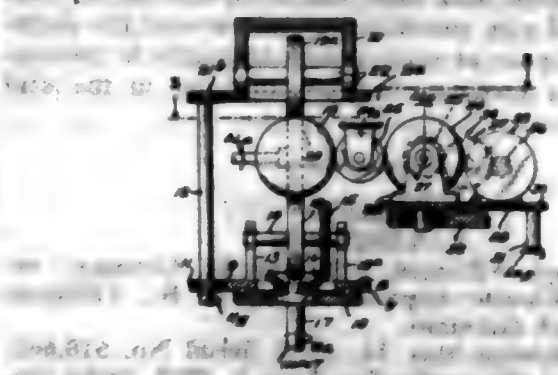
2,858,980

MECHANICAL SECANT MULTIPLIER

Harold H. Bergamm, Groton, Conn., assignor to Sperry-Rand Corporation, Ford Instrument Company Division, Long Island City, N. Y., a corporation of Delaware

Application October 19, 1956, Serial No. 641,449
3 Claims. (Cl. 235—61)

1. A mechanical secant computer comprising a platform, a rotatable table supported on said platform, an input shaft journalled in said platform, a bevel gear affixed to said input shaft, a roller shaft supported by said table, a roller and bevel gear mounted on the roller shaft, said bevel gears being in direct engagement, a second input shaft in driving connection with said table, an input ball engaging said roller, an output ball having a physical axis of rotation, an idler roller having a fixed axis of rotation interposed between said input ball and said output ball, said input ball being



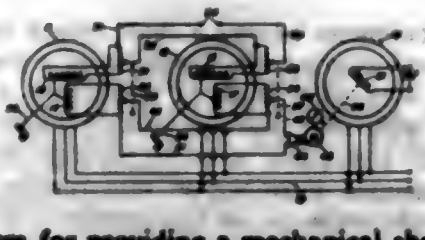
in driving relation to said output ball and means including a third input shaft for orienting the axis of rotation about an axis normal thereto of said output ball, the center of said input ball and the axis of rotation of said output ball and said idler roller being in a plane perpendicular to the axis of rotation of said rotatable table, whereby the velocity of rotation of said output ball is a secant function of the displacement of said third input shaft.

2,858,981

VECTOR SUMMER

David A. Goldman, Yorktown Heights, N. Y.

Original application August 24, 1956, Serial No. 606,173. Divided and this application August 14, 1957, Serial No. 678,254
3 Claims. (Cl. 235—61)
(Granted under Title 35, U. S. Code (1952), sec. 266)

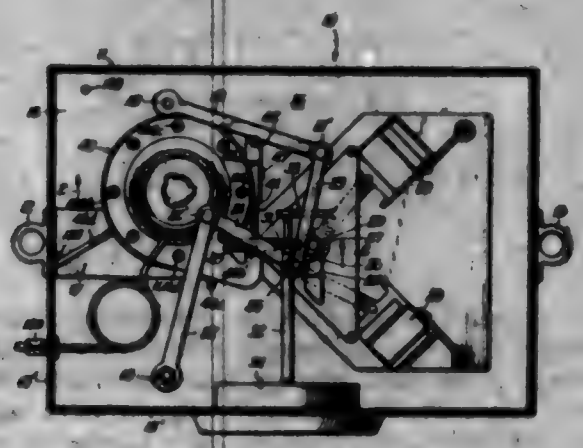


1. A system for providing a mechanical shaft displacement that is equal to the angle of the resultant vector of the sum of a plurality of vectors and for providing a voltage proportional to the magnitude of said resultant vector, said system comprising: a plurality of synchro control resolver receivers each corresponding to one of the vectors that is to be summed, each of said receivers having two rotor windings positioned 90° with respect to each other; a synchro control transmitter; leads interconnecting the stationary windings of said resolver receivers and the stationary windings of said synchro control transmitter; a plurality of potentiometers equal to the number of said rotor windings and each of which is connected across a different rotor winding; a plurality of electrically insulated links a different one of which joins the potentiometer arms of the two potentiometers connected to the rotor windings of each of said synchro control resolver receivers; leads for series connecting one potentiometer from each synchro receiver; a motor having a shaft output joined to the rotor of said synchro control transmitter; an amplifier for amplifying the voltages obtained from said series connected potentiometers; leads for connecting the output of said amplifier to the input of said motor; and leads for connecting the potentiometers associated with said receivers other than said series connected potentiometers in series.

through a like cycle including a like number of angular

2,858,987

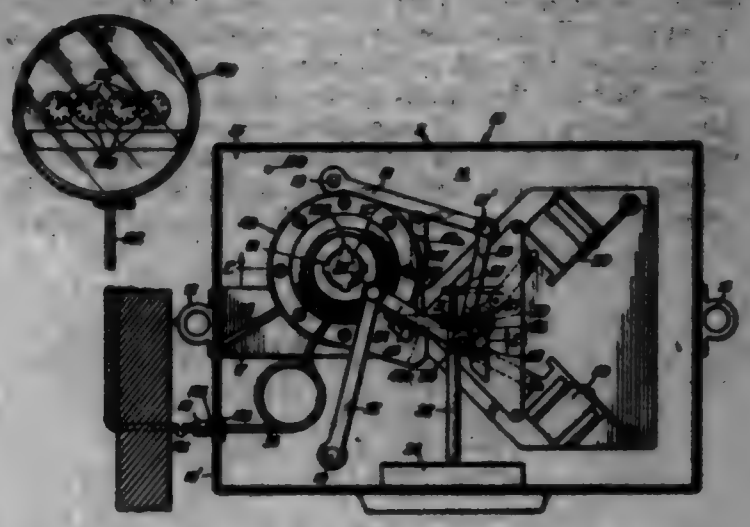
2,858,962
REMOTE INDICATING REGISTER FOR METERS
Earle Greenwood, Frederick C. Holtz, and Elmer L. Meinders, Springfield, Ill., assignors to Sangamo Electric Company, Springfield, Ill., a corporation of Illinois
Application February 3, 1954, Serial No. 407,534
12 Claims. (Cl. 236—91)



1. In a pulse transmitter for transmitting pulses pursuant to the operation of a driven member, the combination of a diaphragm chamber containing a gaseous fluid, a diaphragm mounted therein, a spiral cam connected to be rotated by said driven member, said cam having a gradually sloping cam rise terminating in an abrupt drop-off shoulder, a diaphragm actuating head operatively connected to said diaphragm, a cam following roller on said head having rolling engagement on the peripheral cam rise of said cam, a pair of substantially parallel links having non-swinging ends pivotally mounted on fixed pivot axes and having swinging ends pivotally connected with said diaphragm actuating head on swinging pivot axes, and spring means holding the follower roller of said actuating head pressed against said cam, said spring means having energy stored therein in the outward movement of said diaphragm actuating head pursuant to the slow rotation of said cam, which energy is suddenly released when the follower roller rides off the drop-off shoulder of said cam for giving an abrupt flexure to said diaphragm, such abrupt flexure transmitting an actuating pulse through the gaseous fluid contained in said diaphragm chamber.

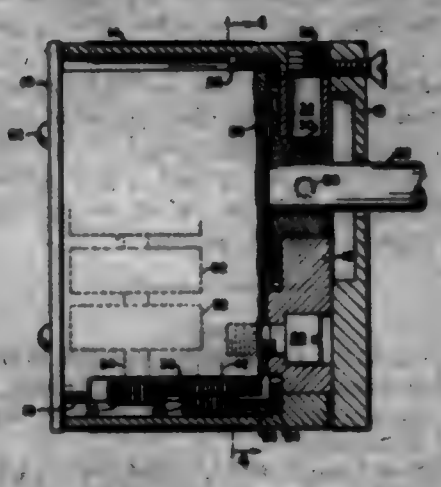
2,858,963
TELEMETER REGISTER FOR METERS
Frederick C. Holtz, Charles H. Lamphier, and Edward A. Leach, Springfield, Ill., assignors to Sangamo Electric Company, Springfield, Ill., a corporation of Illinois
Application September 20, 1954, Serial No. 457,446
4 Claims. (Cl. 236—91)

1. In a telemeter register for a gas meter, the combination of an indicating register adapted to be located relatively remotely from the meter to which it is to respond, a fluid pulse transmitting system between said register and said meter including a fluid pulse transmitter located at the meter and arranged to be actuated thereby for generating rarefaction pulses of sub-atmospheric pressure, a fluid pulse receiver located at said indicating register and arranged to actuate the latter in response to said rarefaction pulses, a fluid containing conduit extending from said transmitter to said receiver, and means for controlling the normal pressure which prevails in said pulse transmitting system between pulses comprising a leak associated with said meter which permits restricted flow of illuminating gas from the meter into and out of said pulse transmitting system, and comprising a second leak associated with said fluid pulse receiver which permits



restricted flow of atmospheric air into and out of said pulse transmitting system.

2,858,964
SHAFT REVOLUTION COUNTER
Owen I. Hazzard, Wenham, Mass., assignor to Amerac, Incorporated, Wenham, Mass., a corporation of Massachusetts
Application December 3, 1956, Serial No. 625,770
12 Claims. (Cl. 236—183)



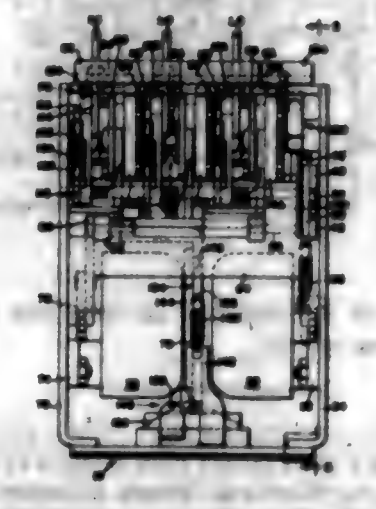
1. A counter dial unit for use with a multi-turn rotatable device, comprising a hollow rotatable knob, a fixed housing within the knob, counter mechanism within the housing and visible from the front thereof, a rotatable output member adapted to be connected to a rotatable device, driving connections between the knob and said output member comprising a ring gear carried by and extending around the inner periphery of the knob, and other driving connections between the knob and the counter mechanism.

2,858,965
PREDETERMINED COUNTER WITH MAGNETIC RESET TO PRESET POSITION
Wilfred A. Bleser, Davenport, Iowa, assignor to Mast Development Co., Davenport, Iowa, a corporation of Iowa
Application December 27, 1956, Serial No. 630,926
6 Claims. (Cl. 235—132)

1. Mechanism of the class described, comprising: a support; a counter wheel carried by the support for rotation through a cycle including a fixed number of angular increments beginning with a zero position; a predetermining wheel carried by the support coaxially adjacent to and movable relative to the counter wheel

annular supporting means at the lower end of said sleeve

through a like cycle including a like number of angular increments beginning with a zero position initially in register with the counter wheel zero position; selector means operative to turn the predetermining wheel relative to the fixed counter wheel so as to establish and fix a new zero position for said predetermining wheel; means operative between the wheels as a yielding driving connection, including a pair of permanent magnets, one on each wheel, and having their opposite poles so related as to initially register the zero positions of the wheels and to ultimately cause the counter wheel to angularly follow

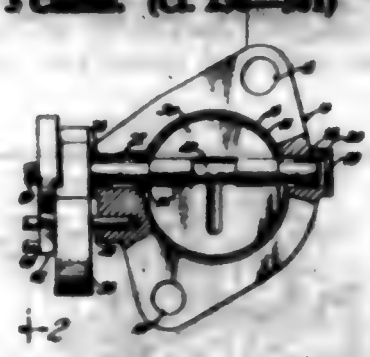


the predetermining wheel to its new zero position, said drive connection being stressable by turning of one wheel relative to the other to condition the wheels to recover said register; disengageable means for turning the counter wheel out of its new zero position relative to the predetermining wheel so as to stress said driving connection; and means for disengaging the disengageable means to release the counter wheel for returning in follow-up relation to the fixed predetermining wheel under action of the stressed driving connection so as to recover register of said new zero positions of the wheels.

2,858,986
RESETTING MEANS FOR NUMBER WHEELS
Walter W. Hoffmann, Waukesha County, Wis., assignor to Durant Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Application June 9, 1956, Serial No. 514,175
4 Claims. (Cl. 235—144)

1. In a number wheel, a hub having a bore, a reset spring cavity in said wheel having an opening to said bore, said cavity having walls forming oppositely facing pockets, a boss in said cavity adjacent a wall thereof, and a reset spring in said cavity having curved sections seated in said pockets and a leg extending through said opening with an end in said bore, a portion of said spring spaced from said end being adjacent the side of said boss opposite said wall, a part of said boss and said wall overlying and engaging said portion to rigidly anchor said spring.

2,858,987
FLOW CONTROL VALVE MEANS
Lockwood Dyson Ellis, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 13, 1955, Serial No. 534,824
3 Claims. (Cl. 236—101)



1. A fluid flow control valve comprising a valve body having a flow passage formed therein, a valve shaft extending across said passage and journaled within opposite side walls of said valve body, a valve secured to said shaft within said passage, and a counterweight member and thermostatic spring member disposed on one end of said shaft, said spring member spaced outermost thereon and engaged with said valve body to bias said shaft end in a direction opposite to the effect of said counterweight member and with a force not less than the effect of said counterweight and sufficient to bias the other end of said valve shaft in the direction of fluid flow through said passage.

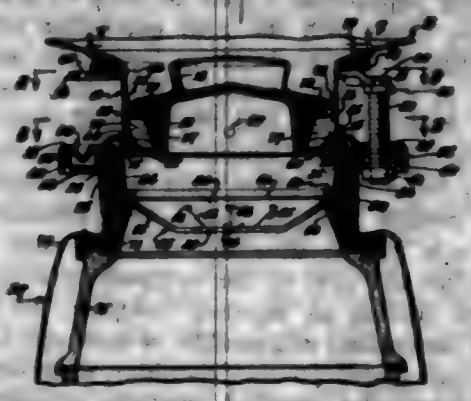
2,858,988
PAD
Stephen G. Luther, Belleville, Ill., assignor to Midwest Rubber Reclaiming Company, East St. Louis, Ill., a corporation of Delaware
Application April 13, 1956, Serial No. 581,132
2 Claims. (Cl. 238—283)

1. In a railroad track having ties, rails, tie plates and spikes for fastening the rails and tie plates to the ties, a pad disposed between a tie plate and a tie, said pad comprising a plurality of cord plies with layers of rubber between the cord plies and at the faces of the pad, said pad being of substantially uniform thickness throughout its entire area, said pad in its unstressed condition being of arched conformation both lengthwise and widthwise, said pad being placed on the tie with its concave face down and being flattened between the tie plate and the tie so that its edges make a tight seal with the tie, thereby to exclude dirt and water from between the pad and the tie.

2,858,989
STAINLESS STEEL SINK DRAINAGE SLEEVE WITH STOPPER AND MOUNTING MEANS
Hans Jordan, Los Angeles, Calif., assignor to Clean Machinery Company, Los Angeles, Calif., a partnership
Application May 14, 1956, Serial No. 585,494
6 Claims. (Cl. 241—168.5)

6. In combination in means for suspending a disposal device from a sink at the drainage opening thereof: a drainage sleeve adapted to be supported in said opening, said sleeve having an inwardly directed annular seat at its lower end for a stopper, and having a plurality of inwardly struck parallel vertical detents extending upwardly from said seat and spaced apart around the periphery thereof, said detents extending into said sleeve; outwardly directed

annular supporting means at the lower end of said sleeve adapted to carry a suspended disposal device; and a stopper having sealing means to engage said seat, said sealing



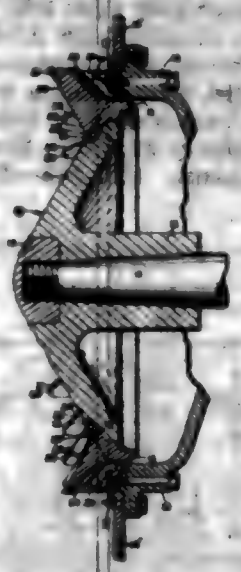
means having an external diameter small enough to pass said detents upon insertion into said sleeve and without engagement therewith.

2,858,990

ROTOR WITH SPACED LARGE SHREDDING BLADES COOPERATING WITH TOOTHED STATOR

Robert B. Honeyman, Portland, Oreg., assignor to Morden Machines Company, Portland, Oreg., a corporation of Oregon

Application July 29, 1957, Serial No. 674,751
4 Claims. (Cl. 241—260)



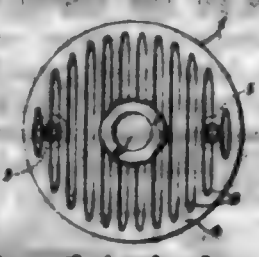
1. In a pulp shredding and treating machine of the character described wherein a rotor is surrounded by a stationary ring having a frusto-conical attritioning surface and a plurality of blades on the rotor extend beyond the periphery of the rotor over the attritioning surface of the stationary ring and the under sides of the blades lie in a frusto-conical surface capable of mating with the attritioning surface of the stationary ring, the improvement in the rotor which includes having a few of said blades made of greater height than the other blades, but with the under sides of said higher blades lying in the same frusto-conical surface as the under sides of said other blades, said higher blades equally spaced from each other, the top edges of said higher blades extending in a frusto-conical surface inclined at an angle with the plane of rotation of the rotor and the top edges of all of said blades beginning on said rotor at points located substantially on a common circle concentric with the rotor axis, whereby with the rotation of said rotor, said higher blades will encounter larger pieces of the material being treated in said machine before said larger pieces reach said other blades on said rotor and thereby reduce the tendency of said larger pieces to impede the proper functioning of the machine.

2,858,991

PULVERIZING PLATE

Ralph G. Welsh, East Bellerville, Ontario, Canada, assignor to Deloro Smelting & Refining Company, Limited, Deloro, Ontario, Canada

Application December 5, 1957, Serial No. 700,777
1 Claim. (Cl. 241—260)



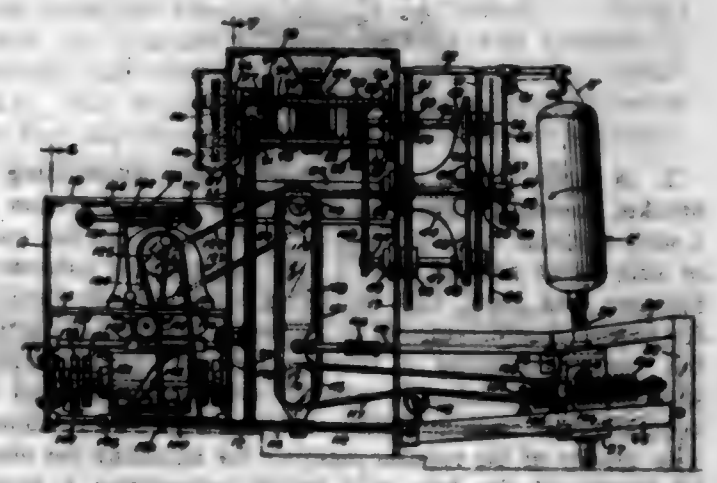
A pulverizing plate of circular form having a grinding face on one side thereof, said grinding face comprising a flat peripheral annular surface of minor extent, said a concave surface occupying the remaining portion of said face, said concave surface having a plurality of parallel grooves and ridges uniformly disposed upon the entire area thereof, each said groove and ridge having its ends terminating at said peripheral surface.

2,858,992

WINDING MACHINE

Edward A. Wentz, Montclair, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey

Application March 4, 1955, Serial No. 492,124
14 Claims. (Cl. 242—7)



1. In a winding machine of the class described, the combination of a support for an object adapted to have yarn wound thereon, means for rotating said support, means for guiding the yarn to be wound on the object, endless flexible conveyor means for moving said yarn guiding means about the object in a continuous path disposed in a given plane and approximating the outline of the object to wind the yarn on the object, means for rocking said support in a plane substantially perpendicular to the plane in which the continuous path is disposed, and means for progressively changing the speed of said support rotating means in synchronism with said support rocking means.

2,858,993

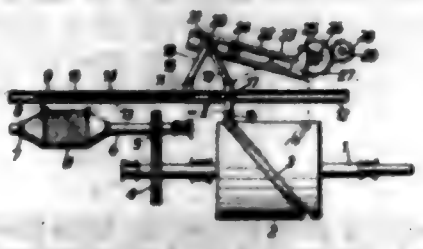
STROKE CONTROL MECHANISM FOR RECIPROCATING THREAD GUIDES OF WINDING MACHINES

Walter Siegenthaler, Erlenbach, Switzerland, assignor to Maschinenfabrik Schaerer, Erlenbach, Switzerland

Application October 28, 1954, Serial No. 465,309
Claims priority, application Switzerland
December 31, 1953
6 Claims. (Cl. 242—43.1)

1. A stroke control mechanism for a reciprocating thread guide of a winding machine comprising a guide

rail for said thread guide, a first slide member and a second slide member movably arranged on said guide rail, rotary cam means engaging said first slide member, said second slide member being operatively connected to said thread guide, a pivotable control rail adjustably arranged with respect to said guide rail, a sliding block movably arranged on said control rail, and two link

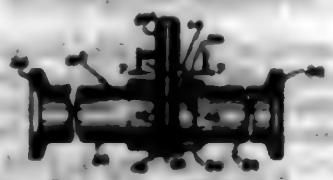


members articulated to said sliding block and connected each to one of said slide members, whereby upon rotation of said cam means a reciprocatory movement of constant stroke length is imparted to said first slide member and a reciprocatory movement of variable stroke length depending on the position of said control rail is imparted to said second slide member.

2,858,994
SNAP-IN BAR FOR TOILET TISSUE ROLLS
Silvio Serra, New York, N. Y.
Application May 4, 1956, Serial No. 583,670
2 Claims. (Cl. 242—55.2)

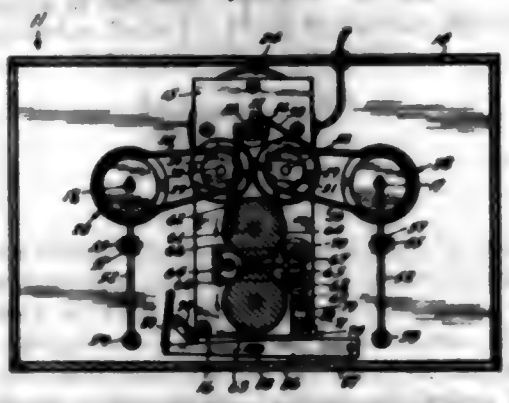
2. A toilet tissue roll support device comprising a bracket having a bight portion adapted for connection to a wall surface, arms projecting forwardly from the ends of said bight portion, and a roll support bar extending between said arms, said bar being longitudinally flexible for insertion and removal of the same between the arms, the bar constituting a tubular member of inherently springable material with a solid side wall tensioned to normally flex to a straight condition, and means adjustable axially of the tubular member for adjusting the overall length of the bar, said means comprising a sleeve threadedly engaged in one end of the tubular member, and ball elements carried by the sleeve and opposite end of the tubular member and projecting beyond the opposite ends of the tubular member, said sleeve being formed with inwardly directed flanges at its outer end limiting movement of the ball element axially of the sleeve in a direction outwardly from the tubular member, the sleeve being internally threaded at its inner end and including a plug threaded to engage the internal threads to limit axial movement of the ball element relative to the sleeve in an opposite direction.

2,858,995
TOILET TISSUE ROLL HOLDER
Silvio Serra, New York, N. Y.
Application April 19, 1956, Serial No. 579,394
1 Claim. (Cl. 242—55.3)



A toilet tissue roll holder comprising: mounting means attachable to a wall surface, a tubular support arm projecting forwardly from said means, a sectional, tubular roll support shaft connected medially between its ends to said arm and extending perpendicularly to the arm for rotatably supporting a pair of rolls of tissue on the ends of the shaft with the arm extending between the rolls to define a stop common to both rolls and limiting movement of the rolls axially of the shaft toward each other, and means on the end of the shaft providing abutments engaging the rolls against movement axially of the shaft away from each other, said shaft comprising telescopically related shaft sections, one extending laterally from the arm in one direction and the other extending laterally from the arm in the opposite direction, one of the sections having an internal shoulder, the other section being removably engageable in said one section and having its end seated on said shoulder, each shaft section having diametrically opposed openings registering to receive said arm, the arm including a removable plug at one providing an abutment limiting movement of the shaft sections axially of the arm in a direction away from the mounting means, said arm including a radial lug closely spaced inwardly from said one end thereof, one of the openings of said one section having a communicating slot receiving the lug, said other section bearing against the lug so as to hold the sections against movement axially of the arm toward the mounting means, said lug holding the shaft sections against rotatable movement about the axis of said arm.

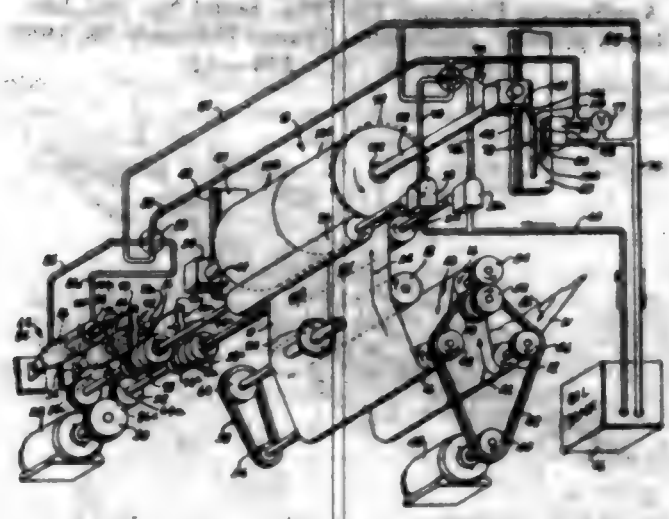
2,858,996
DRIVE MECHANISM FOR RECORDING AND PLAYBACK MACHINES AND THE LIKE
Ralph E. Switzer, Bryan, Ohio, assignor to J. J. Nickelson, as trustee for Mid-West Tooling Service, Inc., Minneapolis, Minn., a corporation of Minnesota
Application January 28, 1955, Serial No. 484,684
4 Claims. (Cl. 242—55.12)



1. In a machine for reeling and unreeling elongated flexible material such as wire or tape, two reel mounting spindles, a pair of reels each mounted on and in driving engagement with a different one of said spindles and each adapted to serve alternately as a supply reel and a take-up reel, a mounting structure, means journalling the spindles in the mounting structure in laterally spaced relationship, a common rotary driving motor for said spindles, separate drive trains from said motor each to a different one of said spindles, said drive trains driving the spindles in opposite directions responsive to a single given direction of rotation of the motor, each said drive train comprising a primary clutch and a secondary clutch interposed therein in parallel drive relationship, the primary clutch of each drive train being a shiftable friction clutch having a fully released non-driving position and a drive position, the secondary clutch of each drive train being a continuously operating two-way acting slippage clutch, manually controlled mechanism for selectively shifting either of the primary clutches from released position to drive position, the primary and secondary clutches of each drive train cooperating to produce positive non-slippage drive when

the primary clutch is set in drive position, the secondary clutch of each drive train tending to drive the spindle of its drive train in a direction opposing the direction of rotation of the spindle of the other drive train when the primary clutch of the other drive train is in drive position; whereby, when the primary clutch of one drive train is in drive position and the primary clutch of the other drive train is in released position, the primary and secondary clutches of said one drive train co-operate to transmit sufficient driving energy to overcome the opposing driving force transmitted by the secondary clutch of the other drive train to produce positive non-slippage drive and the opposing driving force transmitted by the secondary clutch of the other drive train maintains the material passing between the two reels in a taut condition and prevents backlash from said drive train.

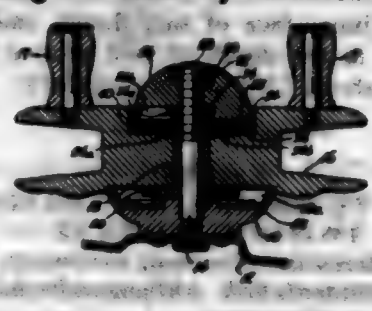
2,858,997
WINDING MACHINE
Leonard Rockstrom, Maplewood, N. J., assignor to Cameron Machine Company, Brooklyn, N. Y., a corporation of New York
Application July 11, 1956, Serial No. 597,289
10 Claims. (Cl. 242—66)



1. In a winding mechanism, the combination comprising a rotatable winding roller adapted to have web material wound thereon, a pair of rotatable drums upon which said winding roller rests with said drums in frictional engagement with web material on said winding roller at spaced circumferential points of the latter, said winding roller being free to ascend as web material accumulates thereon, driving means adapted to drive one of said drums, means for driving the other of said drums, means for braking said other drum, a circuit interconnecting said two latter means and control means in said circuit coacting with said winding roller during the latter's ascent, and through said circuit terminating the driving of said other drum by said latter driving means and initiating the braking of said other drum by said braking means.

2,858,998
FISHING REELS WITH FRICTION BRAKES
Robert E. Nadolskey, Tacoma, Wash.
Application March 1, 1956, Serial No. 568,917
7 Claims. (Cl. 242—84.5)

1. In a fishing reel having a reel base with a reel seat thereon and a spool rotatively mounted on said base, the combination comprising a post rigidly mounted on said base and projecting therefrom through the center of said spool and beyond one face thereof, a brake applying nut threaded on said post for movement thereof toward and from said spool face by rotation of said nut manually, a collar member encircling said post between said nut and said spool, means constraining said collar member against rotation relative to said post while permitting sliding thereof lengthwise of said post, said collar member having a transverse flange on the end thereof adjacent said spool, said spool face having a central recess therein for receiving said flange with said collar member advanced against said spool, cooperating means on said nut and said collar member constraining the same for conjoint movement lengthwise of said post while permitting relative rotation therebetween, and annular frictional contact means surrounding said collar member between the flange thereof and said nut to be pressed into frictional engagement with said spool face surrounding said recess by advancement of said nut



toward said spool for applying braking force to said spool adjustable in amount determined by the rotated position of said nut, and to be lifted positively from frictional engagement with said spool face by said collar member flange by adjustive movement of said nut hence of said collar member away from said spool, said annular frictional contact means comprising a first washer of frictional material slidably and rotatively encircling said collar member adjacent the flange thereof, a second washer of frictional material slidably and rotatatively encircling said collar member between said first washer and said nut, and an annular member interposed between said first and second washers and slidably but non-rotatively encircling said collar member.

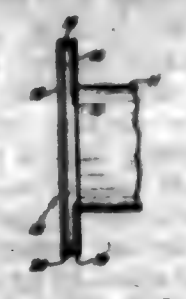
2,858,999
FISHING REEL ARBOR
Robert F. Guenther, Jr., Elmhurst, Ill., assignor, by mesne assignments, to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application March 31, 1955, Serial No. 498,171
4 Claims. (Cl. 242—125.1)

1. A pair of arbor sections shaped to form an arbor about a shaft, each of said sections having an external substantially semi-cylindrical line-supporting wall with longitudinal marginal edges, each wall having on its outer surface a projection adjacent a longitudinal edge and a recess surrounding the same, the top surface of said projection lying substantially in the plane of the outer surface of said wall, said projections when said sections are in assembled relation being continuous and affording means for securing a line to said arbor.

2,859,000
BOBBIN
Kenneth M. McLellan, Cleveland, Ohio, assignor to Industrial Rayon Corporation, Cleveland, Ohio, a corporation of Delaware
Application July 2, 1954, Serial No. 441,849
5 Claims. (Cl. 242—125.3)

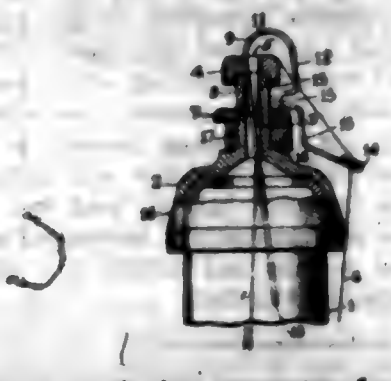
1. In a flanged bobbin adapted to receive, as a transfer tail, on the periphery of one of its flanges a portion

of yarn being initially wound on said bobbin; a peripheral yarn receiving groove in a flange of said bobbin; and a wall encircling said flange separating said



groove and the inner face of said flange, said wall being cut away about to the depth of said groove for between about 60° and about 120° of its periphery.

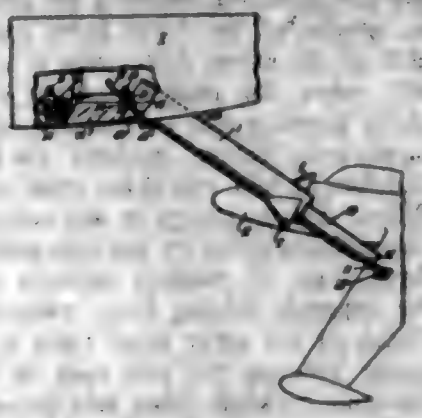
2,859,861
THREAD TENSIONING APPARATUS FOR TWISTING SPINDLES
Walter Lenk, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Application November 8, 1955, Serial No. 545,610
Claims priority, application Germany November 8, 1954
4 Claims. (Cl. 242—147)



4. Thread tensioning apparatus for twisting spindles comprising a longitudinally bored guide member mountable on a bobbin, a hairpin-like tensioning wire rotatably mountable on said guide member, one leg of said wire being rotatable in the bore of said guide member, the remaining leg of said wire being rotatable about said guide member, a thread guide on said remaining leg, and a magnet on said guide member with its pole arranged with said remaining leg for permitting rotation of said wire at operating thread tension and for attracting said remaining leg to the pole and securing it against rotation on reduction of thread tension, said magnet being positioned on said guide member beneath a wire supporting collar thereon constructed of non-magnetic abrasion-resistant material.

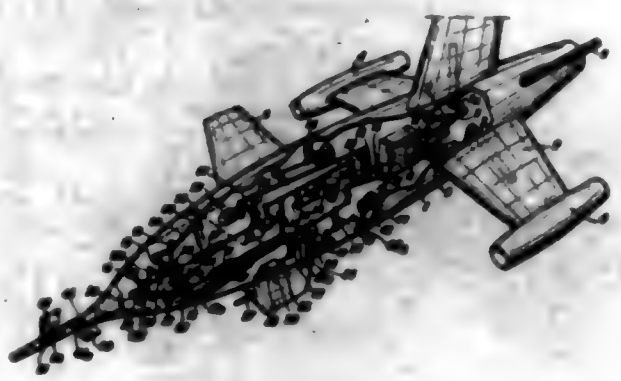
2,859,862
AIRFOIL AIRCRAFT INTERCONNECTING BOOM
Clifford J. Leloy, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application March 8, 1954, Serial No. 414,330
12 Claims. (Cl. 244—3)

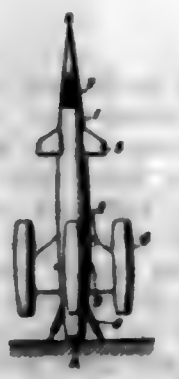
1. Mechanism for interconnecting a supply aircraft and a receiving aircraft in flight, comprising a boom including an outer tubular member and an inner member received in said outer tubular member, said members being relatively slidable lengthwise thereof, at least one of said members being of airfoil cross section disposed with its chord in a generally upright plane, and means swingably supporting such airfoil cross section member from one of such aircraft with the length of such member extending generally fore and aft but disposed at an angle in a vertical plane to the direction of flight of such aircraft and mounting such member for rotation about an axis extending lengthwise of such member to change its angle of attack relative to the direction of flight of such aircraft and thereby produce an aerodynamic force to



swing athwartship the end of said boom remote from the aircraft from which said boom is supported.

2,859,863
AERODYNE
Lucien Servanty, Paris, France, assignor to Societe Nationale de Constructions Aeronautiques du Sud-Ouest, Paris, France, a French company
Application February 13, 1956, Serial No. 565,249
Claims priority, application France February 18, 1955
21 Claims. (Cl. 244—12)





1. An aerodyne comprising an elongated fuselage, at least three adjustable airfoils angularly spaced in star-like configuration around said fuselage and pivotally mounted thereon about radial axes, in the vicinity of one of its ends, a reaction jet fixedly mounted along the tip edge of each one of said airfoils for orientation of its main axis in a plane substantially parallel to said fuselage longitudinal axis, complementary lifting fixed airfoils secured in the vicinity of the other end of said fuselage and piloting means to selectively adjust the angular positions of said adjustable reaction jet carrying airfoils.

2,859,864
CAM ACTUATED SPOILER
Robert C. Lapiccola, Dayton, Ohio
Application September 8, 1956, Serial No. 533,263
3 Claims. (Cl. 244—42)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. An airplane wing having a spoiler plate disposed therein, roller means mounted on the spoiler plate, cam

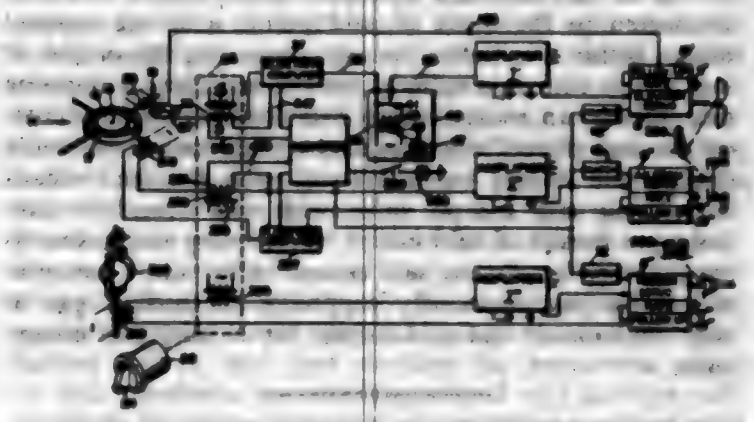
means mounted in the wing to cooperate with the roller means to move the spoiler plate in a vertical direction, and resilient means to urge the plate to return to its position within the wing comprising a plurality of spaced brackets rigidly positioned within the wing adjacent to and intermediate the ends of said spoiler plate each having an apertured portion and a guide pin in rigid

engagement therewith at one end of said guide pin, a plurality of spaced tabs extending from a vertical portion of said spoiler plate each having an aperture in slidable engagement with said guide pin at the other end of said guide pin, and a plurality of springs positioned in surrounding relation to each of said guide pins between said tabs and said brackets.

2,859,065
MONITORING SYSTEM FOR AIRCRAFT AUTO PILOTS

John C. Owen, Palisades Park, and Frank Prapis, Paterson, N. J., assignors to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware

Application November 21, 1952, Serial No. 321,884
10 Claims. (Cl. 244—77)

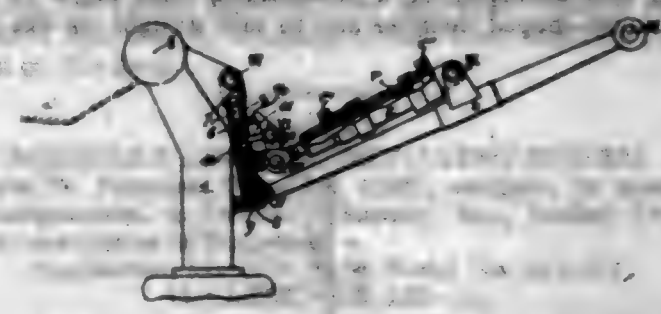


1. For use with an automatic steering system for positioning control surfaces of an aircraft so as to maintain the aircraft in flight at predetermined pitch and roll attitudes, said system including means for developing output control signals corresponding to said predetermined attitudes; a monitoring system comprising input means for receiving the control signals from the output means of the automatic steering system, pitch and roll attitude responsive means for developing signals corresponding to the pitch and roll attitudes of said aircraft in flight, comparator means operatively connecting the attitude responsive means and said input means for comparing the aforesaid control signals with said pitch and roll attitude signals so as to develop a resultant signal corresponding to the difference between the predetermined roll attitude signal and the signal of the roll attitude of the aircraft in flight and another resultant signal corresponding to the difference between the predetermined pitch attitude signal and the signal of the pitch attitude of the aircraft in flight, control means associated with said comparator means and said automatic steering system for receiving said resultant signals, said control means being effective upon any of said resultant signals exceeding a predetermined value to render said automatic steering system ineffective for positioning the control surfaces of the aircraft.

2,859,066
RETRACTABLE AIRCRAFT LANDING GEAR

René Lucien, Paris, France, assignor to Société d'Inventions Aeronautiques et Mecaniques S. I. A. M., Fribourg, Switzerland, a corporation of Switzerland

Application May 5, 1955, Serial No. 505,709
Claims priority, application France January 22, 1953
3 Claims. (Cl. 244—102)

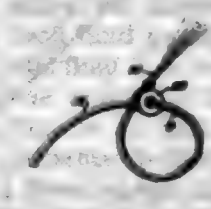


1. Retractable landing gear for aircraft, comprising a landing leg hinged at its upper end to a location of the aircraft, a bracing strut hinged at one end to another location of the aircraft, a tubular crank arm hinged at one end to said landing leg and at the other end to the other end of said bracing strut, a recessed abutment on said landing leg positioned to register with said other end of said crank arm with the landing gear in extended position, a slider positioned inside said tubular crank arm having a notch therein and an end extensible from said crank arm into said recessed abutment, a spring urging said slider outwardly from said crank arm, a lever pivoted on said crank arm, abutments on said crank arm limiting pivotal movement of said lever between two end positions, a finger extending from said lever to engage said slider notch through a longitudinal slot in said crank arm, and at least one jack hinged to said strut and to said lever.

2,859,067
GARDEN HOSE HOLDER

Edison Cooke, St. Catherines, Ontario, Canada

Application November 10, 1955, Serial No. 546,238
3 Claims. (Cl. 248—78)



1. A garden hose holder comprising a circular body member including a hub having a hose receiving opening extending axially therethrough and a disc extending radially from the hub adjacent each end thereof, said discs being concavo-convex with the convex sides thereof facing each other thereby providing a hose receiving annular channel of gradually reduced width from the mouth to the base thereof, and said convex sides of said discs being provided with knobs to provide a frictional grip between the discs and a portion of the garden hose adjacent the end thereof and with the holder disposed upon the hose at a distance from said end.

2,859,068
FIXTURE FOR ATTACHMENT TO PERFORATED BOARD

Paul F. E. Zimmer, Chicago, Ill., assignor, by mesne assignments, to Minnesota Corporation, a corporation of Delaware

Application January 13, 1954, Serial No. 403,890
5 Claims. (Cl. 248—223)

1. A device of the type adapted to be supported by a perforated panel adjacent the outer surface thereof, comprising first a load supporting member having an end portion adapted to be engaged in a panel perforation to sup-

port said member, and a straight leg-like portion extending from said end portion to be disposed in engagement with the outer surface of the panel, and a load supporting portion extending from said leg-like portion; a second member slidably carried by the said leg-like portion, said second member comprising a channel-shaped member slidably receiving said leg, said second member including an arm extending at a substantially right angle to said channel-shaped member and to said straight leg-like por-

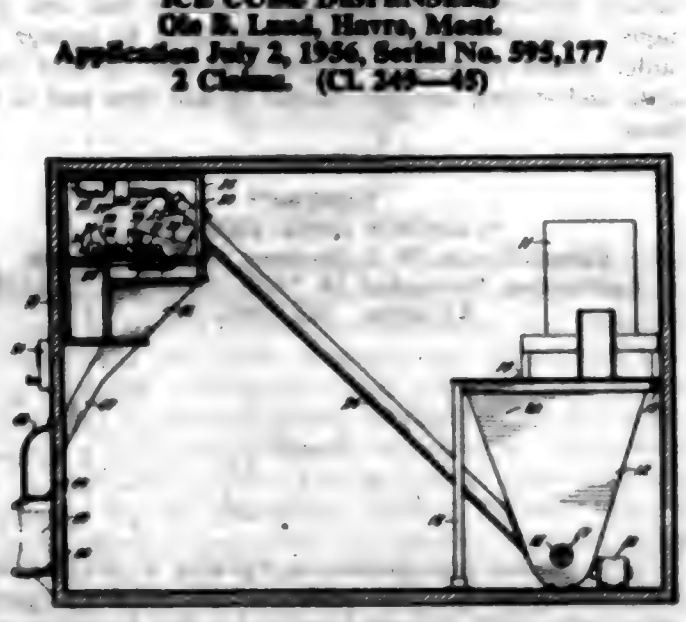
tion of the load supporting member and adapted to be positioned in a perforation other than the first-mentioned perforation, said arm including a rigid normal extending flat-surfaced foot adapted to be passed through the last-mentioned perforation, said foot being disposed in spaced parallel relation to said leg-like portion and adapted to contact the inside surface of the panel upon sliding movement of said second member along said leg portion of the load supporting member.

2,859,069

ICE CUBE DISPENSERS

Ole B. Lund, Havre, Mont.

Application July 2, 1956, Serial No. 595,177
2 Claims. (Cl. 249—45)



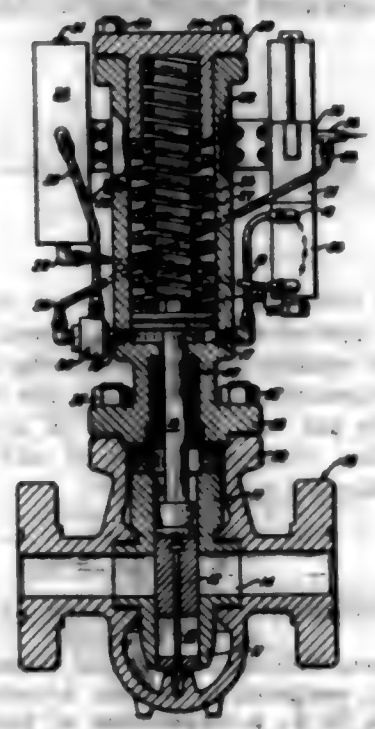
1. In a coin-actuated ice cube dispensing device, means for delivering a preset weight of ice cubes comprising: a supporting frame; a horizontally positioned shaft rotatably mounted in said frame; an ice-cube-receiving scoop eccentrically mounted on said shaft; a latch bar pivotally mounted on said scoop; means on said scoop for limiting the upward movement of the first extremity of said latch bar; spring means resisting the upward movement of the second extremity of said latch bar; a keeper member supported from said frame below and in the path of said second extremity and acting to normally support said scoop in a horizontal cube-receiving position until the weight in said scoop is sufficient to tilt said latch bar against the bias of said spring so as to allow the second extremity to pass said keeper member and allow said scoop to swing downwardly to a dumping position; means for returning said scoop to the cube-receiving position, said keeper member being pivotally supported in a substantially vertical position, with the latch bar resting upon its upper extremity; and means for varying the pivotal position of said keeper member so as to adjust the degree of engagement of said latch bar therewith.

2,859,810

ACTUATOR FOR GATE VALVE

James G. Ferrell, Houston, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Application May 18, 1955, Serial No. 509,138
5 Claims. (Cl. 251—28)



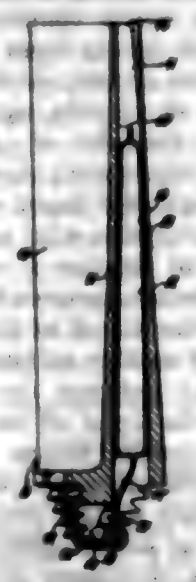
1. A fluid control system comprising a gas pressure-actuated motor, a hydraulic pump connected to and driven by said motor, a hydraulic liquid supply reservoir connected to the input of said pump, a spring-opposed piston within a cylinder, means connecting the output of said pump with said cylinder on the end thereof opposite said spring, an escape valve connected to said cylinder on the end thereof opposite said spring, means yieldably urging said escape valve toward open position, means connecting said escape valve with said reservoir, said yieldable means of said escape valve being responsive to gas pressure for closing said escape valve, and a common means for simultaneously supplying pressurized gas to both said motor and said means for closing said escape valve.

2,859,811

TURBINE BUCKET AND LINER

Donald G. Zimmerman, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

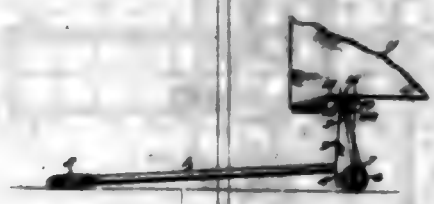
Application July 27, 1953, Serial No. 370,385
4 Claims. (Cl. 253—39.15)



3. In combination, a turbine rotor, a bucket including a blade portion and a root portion mounted on the rotor,

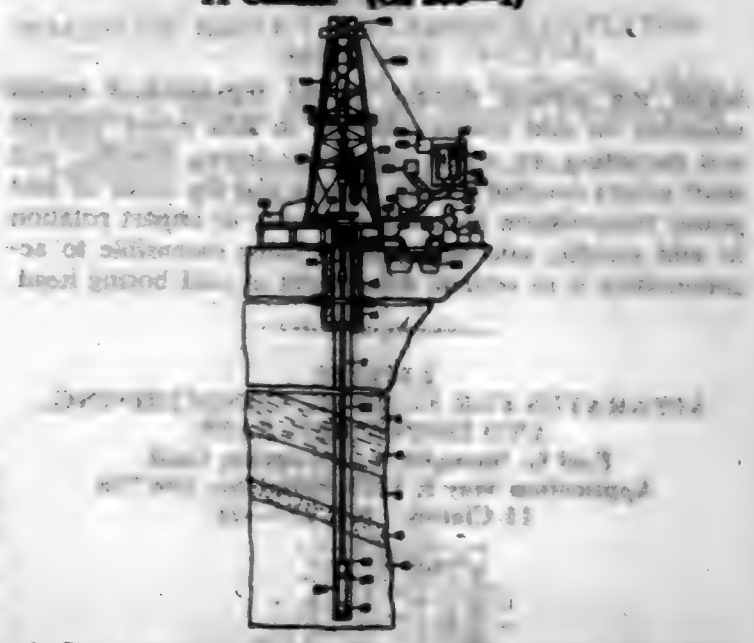
the bucket having a coolant passage extending spanwise thereof, and a blade liner slidably mounted in the said coolant passage to direct the flow of coolant adjacent the walls of the said passage, the liner being provided with ribs engaging the wall of the said passage and extending spanwise of the blade portion to define distinct air flow paths in the passage adjacent each edge of the blade portion and adjacent each face of the blade portion, the liner and passage being so dimensioned that the liner is slidably insertable and removable through the root portion of the bucket, the said liner including a shank with a pin extending from the shank transversely of the span of the blade portion between the end of the root portion and the rotor, the end of the root portion being notched to provide an open seat for the said pin allowing removal of the liner.

2,859,012
LEVERING DEVICE FOR LIFTING AND FOR MOVING FURNITURE
Ole S. Olsen and Donald E. Van Wey, Redwood City, Calif.
Application July 22, 1954, Serial No. 445,002
1 Claim. (Cl. 254—8)



A generally L-shaped levering device for elevating objects such as furniture from a horizontal floor and for supporting objects so elevated for movement over the floor, comprising an elongated foot member having a thin projecting end of such vertical dimension when said member is positioned with its longitudinal axis extending substantially horizontally as to pass freely under a low lying part of an object to be elevated; a pair of horizontally spaced floor wheels journalled on said foot member adjacent to the end thereof remote from said thin projecting end and supporting said foot member for movement over the floor; a substantially flat object engaging plate; means pivotally supporting said plate on said thin projecting end of said foot member for movement about an axis transverse to said longitudinal axis through substantially 90 degrees between two operative positions with respect to said foot member; and an elongated handle connected at its inner end to said foot member and extending generally at a right angle to said foot member, said handle having a floor engaging portion adjacent its outer end spaced from the wheel journal axis a distance several times the length of said foot member, whereby when said levering device is rotated to an object supporting position in which said floor engaging portion on said handle engages the floor the object will be supported in elevated position by said floor engaging portion and said wheels, said floor engaging portion and said wheels being the only parts of said device engageable with the floor when said device is in said object supporting position, said generally L-shaped levering device being movable through an angle of substantially 90 degrees about the wheel journal axis selectively to two stable positions, in one of which positions said foot member extends along the floor with said object engaging plate positioned substantially horizontally and parallel to said foot member and with said device supported by the engagement of said foot member and said wheels with said floor and with said handle projecting upwardly, and in the other of which positions only said floor engaging portion of said handle and said wheels engage the floor, said foot member extends substantially vertically but with said transverse pivot axis within the right angle included between the floor where engaged by said floor engaging portion and a line extending vertically from the journal axis of said wheels, and said object engaging plate is substantially horizontal and at a right angle to said foot member, the greater distance of said floor engaging portion from said wheel journal axis than the length of said foot member providing for the supporting of only a minor fraction of the weight of the object by said floor engaging portion of said handle, so that said wheels are readily movable over said floor without substantial retarding by dragging of said floor engaging portion on the floor.

2,859,013
BOREHOLE LOGGING SIGNALING SYSTEM
Elwin W. Peterson, Pasadena, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application March 1, 1954, Serial No. 413,397
11 Claims. (Cl. 255—1)

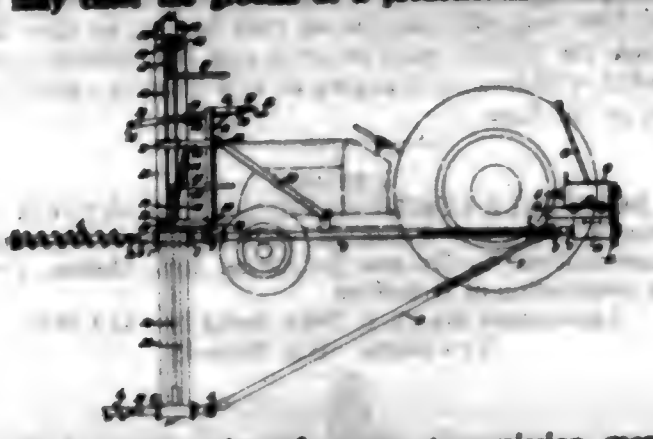


1. In a system adapted for logging boreholes while being drilled by means including a drill string having a fluid filled passage extending longitudinally therethrough and means for forcing the fluid to flow down through said passage in said drill string, the combination comprising: a drill string having such fluid passage; signaling means therein including variable fluid flow resistance means fixed in said drill string in the vicinity of the lower end thereof, actuatable by application of fluid pressure thereto to effect a variation in resistance to flow of said fluid therethrough to produce a flow-change signal in fluid in said passage; sensing means to pick up pressure of said fluid in said passage at a point spaced from said flow resistance means; control means in communication with said sensing means and actuatable to apply said pressure to and to withdraw said pressure from said variable fluid flow resistance means thereby to actuate said fluid flow resistance means to vary the said resistance to flow of said fluid; and means responsive to a physical condition in said borehole to actuate said control means to cause said variable flow resistance means to produce in said fluid a flow-change signal representing said physical condition.

2,859,014
EARTH BORING RIG FOR TRACTORS
Ray Berner, Rock Valley, Iowa
Application August 26, 1955, Serial No. 530,664
8 Claims. (Cl. 255—20)

1. In an earth boring rig for mounting upon a tractor having a power take-off, a boring head provided with a rotatable spindle for carrying a boring tool upon a substantially horizontal axis, means for mounting said boring head upon said tractor in spaced relation to its power take-off, said mounting means including relatively vertically slidable stationary and movable members, said movable member being connected to said boring head and

said stationary member being secured to a mounting structure adapted to be attached to the tractor, means for imparting sliding movement to said movable member thereby to effect a vertical adjustment of said boring head with respect to the ground in order that the boring tool may enter the ground at a predetermined distance



below the surface thereof, power transmission means mounted on said tractor adjacent to said power take-off and including an arbor rotatively driven thereby, and shaft means coupled to said spindle and the arbor of said power transmission means and serving to impart rotation to said spindle, said shaft means being extensible to accommodate it to vertical adjustment of said boring head.

2,859,815
APPARATUS FOR STORING, CONDITIONING, AND DISPENSING FATS
Earl C. Spangler, Los Angeles, Calif.
Application May 9, 1955, Serial No. 506,776
11 Claims. (Cl. 257—3)

1. A unit for holding a liquid at a controlled temperature comprising a tank for containing a body of said liquid, means through which said liquid may be filled into and dispensed from the tank, an outer shell disposed about the tank and spaced therefrom at its top, bottom and sides to define an enclosed air circulation space between the tank and shell within which air flowing along an endless path may circulate about the tank, said path extending across the top of said tank, then downwardly at one side of the tank and across its underside, and then upwardly at the opposite side of the tank for recirculation across its top, a blower operable to produce a circulation of air in said space following said endless path about the tank, a heater disposed along said air path at a location to heat the air flowing along said path to maintain the tank contents at a predetermined temperature, and a thermostat responsive to variations in temperature in said shell and controlling said heater, said shell having a lower portion forming a liquid tight safety basin of a size to hold the entire contents of said tank in the event of leakage therefrom.

2,859,816
HEAT EXCHANGER
Max Ephraim, Jr., Chicago, and John F. Novosak, Riverside, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 4, 1957, Serial No. 694,864
3 Claims. (Cl. 257—237)

1. A heat exchanger comprising an outer container, a radiator including a core and upper and lower headers dividing said container into an inlet area and an outlet area connected together through said core and over said upper header, an inlet baffle in said inlet area and an outlet baffle in said outlet area forming a chamber with said headers which contains said core, pressure relief means in said inlet baffle adapted to connect that portion of the chamber which includes a portion of the inlet area with

the rest of said inlet area and with said outlet area over said upper header, said outlet baffle forming a dam in said outlet area adjacent said core over which fluid may flow into the rest of said outlet area, means for passing heat exchanging medium through said radiator, means to introduce heat exchanging medium to said portion, and means to remove said last-mentioned heat exchanging medium from the said rest of said outlet area.

2,859,817
APPARATUS FOR AIR-FREE MIXING OF FLUID MATERIALS
Donald E. Trumbull, Inglewood, George C. Stevenson, Venice, and Herbert L. Trautmann, San Marino, Calif., assignors to Semco Research, Inc., Inglewood, Calif., a corporation of California
Application October 18, 1956, Serial No. 616,773
20 Claims. (Cl. 259—2)

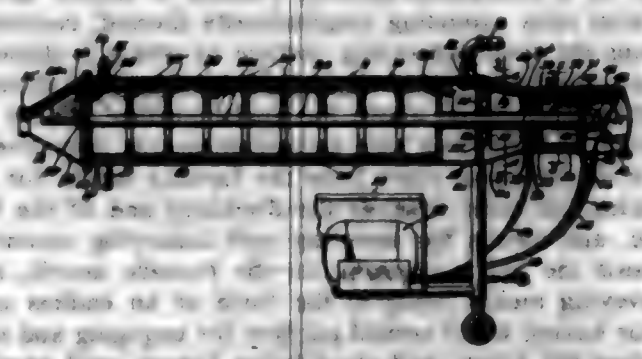
1. In an apparatus for mixing ingredients, the combination of: a container for the ingredients, at least one end of the container being open; a closure for said one end slidingly positioned inside the container; means to cause said closure to press against the ingredients in the container whereby the distance between the closure and the other end of the container varies with the volume of the ingredients; a dasher mounted in said container;

means to cause relative reciprocation between said dasher and the container; a first pair of controls for mutual contact to reverse the relative movement of the dasher towards said other end of the container, one member of said pair being fixed relative to the dasher and the other member being fixed relative to said closure; and a second pair of controls for mutual contact to reverse the relative movement of the dasher towards said closure, one member of said second pair being fixed relative to the dasher, the other member of the second pair being fixed relative to the container.

2,839,018
APPARATUS FOR TREATMENT OF READILY SOLIDIFIABLE LIQUIDS

Alden H. Waltmann, Lakeville, and Don C. Reuben, Fort Atkinson, Wis., assignors to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois

Application March 18, 1954, Serial No. 417,005
4 Claims. (Cl. 259—4)



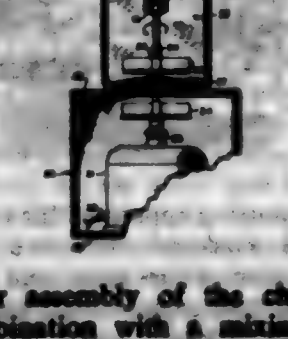
1. An apparatus for treatment of a readily solidifiable liquid during crystallization of the latter, comprising an elongated tubular receiver into which the liquid under pressure is introduced at one end thereof and discharged therefrom at the opposite end thereof, the opposing end portions of said tubular receiver being removable to permit cleaning of the interior of said receiver, a foraminous member mounted in a fixed position within said receiver adjacent the discharge end thereof, and liquid-agitating means mounted for reciprocatory movement within said receiver to prevent build-up of large liquid crystalline masses while the liquid is passing through said receiver; said means including a pair of relatively spaced coaxially arranged perforated plates disposed intermediate the liquid-intake end and said foraminous member, and a plurality of relatively spaced coaxially arranged rings disposed intermediate said perforated plates and having the outer peripheries thereof spaced from the interior surface of said receiver, said plates and rings being interconnected to one another for reciprocatory movement as a unit.

2,839,019
STIRRING DEVICE

John J. O'Neill, Jr., Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Application April 27, 1954, Serial No. 424,134
6 Claims. (Cl. 259—107)

1. In a stirring device the combination of means to contain a liquid, a vertical shaft positioned within said means and rotatable about a longitudinal axis, a buoyant member and a stirring member, means mounting said members on said shaft for longitudinally sliding motion on said shaft and for rotation of said members with said shaft, said stirring member resting in the bottom of said containing means until a predetermined depth of fluid is in said containing means, and means interconnecting said buoyant member and said stirring member to lift said stirring member from the bottom of said containing means and to position said stirring member at a predetermined location with respect to said buoyant member as the depth of the liquid in said containing means increases.



2,839,020
MAGNETIC DRIVEN COLLAPSIBLE AGITATOR ASSEMBLY

William R. Eddy and Vada M. Hart, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application November 10, 1955, Serial No. 546,168
6 Claims. (Cl. 259—108)

1. An agitator assembly of the character described for use in combination with a mixing chamber comprising, in combination, a rotatable shaft, a plurality of normally expanded positioning members adapted to support and centrally dispose said shaft in said mixing chamber, said positioning members adapted to assume a collapsed condition, a magnetically driven member pivotally connected to the lower end of said shaft, and impellers pivotally affixed to said shaft and adapted on rotation to extend from a normal depending position outwardly from said shaft.

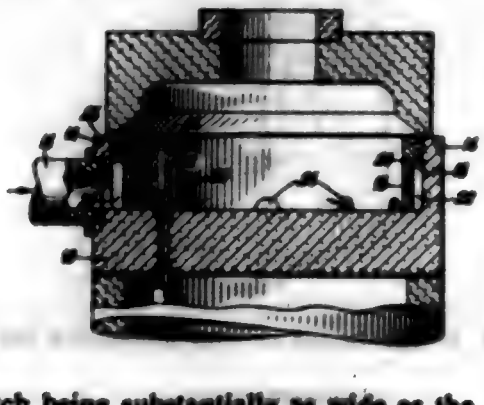
2,839,021
GAS ABSORBER DISTRIBUTION

Samuel H. S. Raub, Joseph F. Rovlock, and Curry E. Ford, Bay Village, Ohio, assignors to Union Carbide Corporation, a corporation of New York

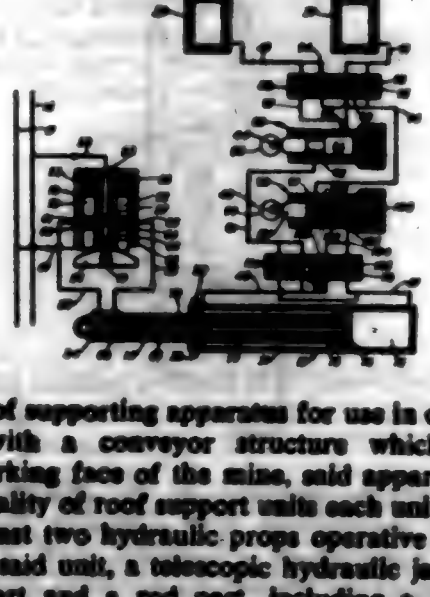
Application March 28, 1956, Serial No. 574,978
5 Claims. (Cl. 261—112)

1. In a gas absorber of the falling film type comprising a distribution section having a horizontal tube plate and a weak solution inlet, a plurality of thick walled upstanding vertical weir tubes in said tube plate, said weir tubes having narrow open topped overflow notches in their upper rims, each notch having one side surface in a vertical plane tangent to the inner surface of its weir tube, each notch having the other side surface

thereof in a plane converging downwardly at a small acute dihedral angle to said vertical plane, the top of each notch being substantially as wide as the wall thickness of its weir tube.

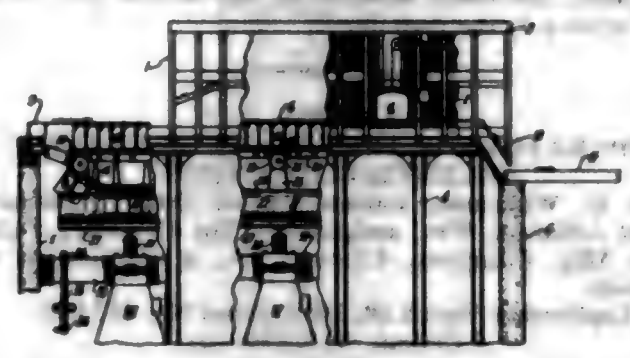


2,859,823
HYDRAULIC ROOF SUPPORTS AND CONVEYOR FEED JACKS
Colin M. Frye, Saint Andrews, Mitton, near Tewkesbury, England, assignor to Dowty Mining Equipment Limited, Tewkesbury, England
Application April 3, 1956, Serial No. 575,828
Claims priority, application Great Britain April 4, 1955
7 Claims. (Cl. 262—1)



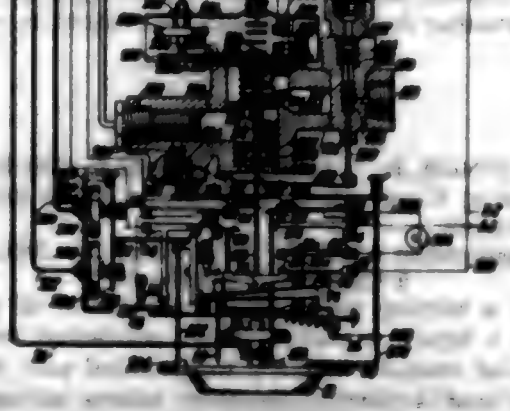
1. Mine roof supporting apparatus for use in connective association with a conveyor structure which extends along the working face of the mine, said apparatus comprising a plurality of roof support units each unit of which includes at least two hydraulic props operative to extend and contract said unit, a telescopic hydraulic jack having a cylinder part and a rod part, including a piston, of which one part is joined to said unit and the other part is adapted for connection to said conveyor structure, hydraulic connections at both ends of the cylinder part opening into the cylinder on opposite sides of the piston, two hydraulic connections adjacent the outer end of the rod part, two longitudinal passages formed in the rod part to extend between the respective hydraulic connections therein and the opposite sides of the piston thus providing direct communication between the hydraulic connections on the rod part and the respective hydraulic connections on the cylinder part, main pressure and return conduits arranged for mounting along the conveyor structure to provide a common service for all the roof support units, and for each said unit a jack control valve interposed between the main pressure and return conduits and the hydraulic connections on the jack part which is adapted for connection to the conveyor structure, and prop control valve means interposed between the hydraulic props and the hydraulic connections on the jack part which is joined to the roof support unit, said prop control valve means including a plurality of valves closing under pressure of which one at least opening from a hydraulic connection on the jack provides a pressure source for extension of the props, and one other at least opening to a hydraulic connection on the jack provides a low pressure return for relief of the props.

2,859,823
CONTINUOUS FURNACES
Robert Bucci, Ambridge, Pa.
Application March 13, 1957, Serial No. 645,799
6 Claims. (Cl. 263—6)



2. In a continuous heating furnace a hearth having parallel slots extending longitudinally thereof, conveying means the load supporting surface of which is disposed below said hearth and being adapted to be raised through said slots to extend above the hearth surface, means for raising and lowering said conveying means operative to raise the billets or slabs from the furnace hearth for advancing the same towards the discharge end of the furnace, and means for lowering said conveying means to deposit the billets or slabs on the furnace hearth, said conveying means being in the form of an endless conveyor having water cooled carriers for engaging and supporting the billets and slabs being heated, said carriers being disposed below the hearth surface when not transporting billets or slabs through the furnace chamber.

2,859,824
CONDITION RESPONSIVE CONTROL FOR CLOTHES DRIERS AND THE LIKE
Victor Weber, Greensburg, William J. Russell, Jeannette, and Carl H. Brinkhoff, Wilkinsburg, Pa., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application July 28, 1955, Serial No. 524,892
23 Claims. (Cl. 263—18)

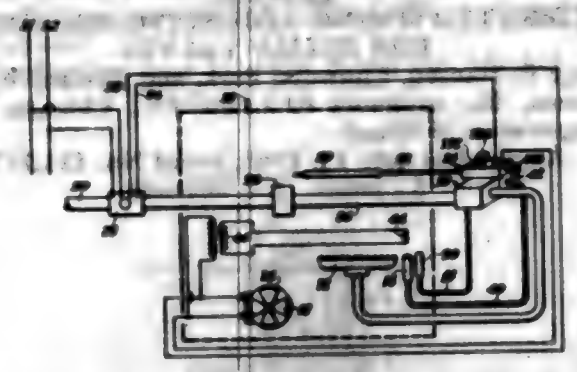


1. In a control device for appliances having a fluid fuel burner for producing heat and electric heat distributing means, the combination of valve means for controlling the rate of supply of fuel to the burner, switching means movable between open and closed positions for controlling said heat distributing means, means for setting said valve means to maintain a first heat output rate of

having one end on the beam, said mechanism compris- the hearth, unconfined means disposed under said plate

the burner, means responsive to a temperature condition to be controlled including a member movable in response to a change in said condition, means operatively associated with said member for setting said valve means to maintain a second heat output rate lower than the first rate upon a change in said temperature condition affecting said temperature responsive means, means operatively associated with said member for setting said valve means to terminate the heat output of the burner upon a further change in said temperature condition affecting said temperature responsive means, and means operatively associated with said member for moving said switching means between said positions upon an additional further change in said temperature condition affecting said temperature responsive means.

2,859,025
CLOTHES DRYING APPARATUS
Charles K. Strobel, Pittsburgh, Pa., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application September 1, 1954, Serial No. 453,633
5 Claims. (Cl. 263—33)



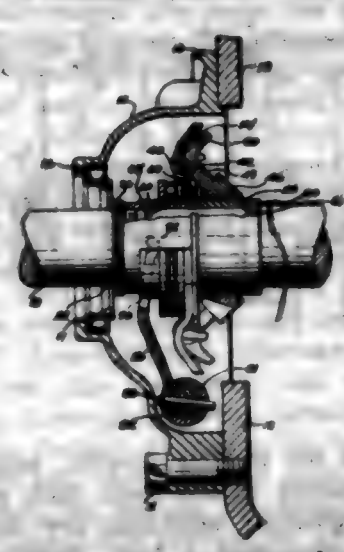
1. A control device for drying apparatus having main and pilot burners and electrical heat distributing means, comprising switch means operable between positions for controlling a supply of electrical energy to the heat distributing means and being biased to a position to prevent said energy supply, a first valve means operable between positions for controlling a supply of fuel to the pilot burner, means for biasing said valve means to prevent said fuel supply, manually operable means for operating said switch means to an energy supplying position and said first valve means to a fuel supplying position, means for latching said switch means and said first valve means in said supplying position, second valve means operable between positions for controlling a supply of fuel to the main burner, means adapted to be responsive to the heat of the pilot burner for actuating said second valve means to a fuel supplying position, and means adapted to be responsive to an ambient temperature condition caused by operation of the main burner for releasing said latching means and causing operation of said switch means and said first valve means to said energy and fuel supply preventing positions respectively.

2,859,616
ACCELERATION RESPONSIVE DEVICE
Arthur P. Adamson and Francis R. Westemeyer, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York
Application December 29, 1954, Serial No. 478,364
7 Claims. (Cl. 264—1)

3. An acceleration responsive device comprising an element mounted for rotation about an axis, an unbalance mass, resilient means mounting said mass on said element a predetermined distance from said axis, signal means responsive to displacement of said mass resulting from acceleration of said element in a direction desired to be measured, and driving means responsive to said signal means for rotating said element in a reverse direction about said axis, said resilient means being constructed and arranged to yield because of the inertia of said mass upon such acceleration thereby to produce

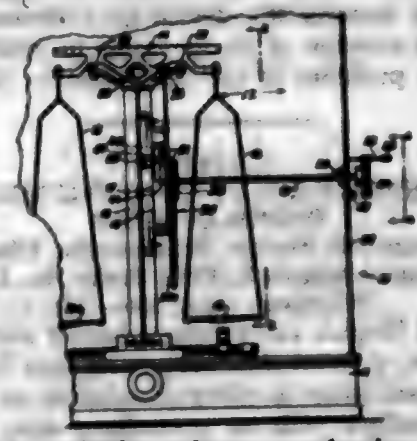
an additional signal for effecting return of said mass to a predetermined angular position about said axis during such acceleration.

2,859,827
MOTOR GOVERNOR
Louis De Marco, East Cleveland, Ohio
Application January 24, 1956, Serial No. 561,095
7 Claims. (Cl. 264—15)



1. A device of the class described including a rotary shaft, support member coupled to said shaft to rotate therewith and extending transversely from said shaft, pivot means carried by said support member, weights pivotally carried by said pivot means, a slidable member slidably journalled on the shaft and having surfaces engaged by said weight means to move said member longitudinally of the shaft and said slidable member having driving lugs extending across the opposite ends of said pivot means which retain said pivot means on the support member and couple the slidable member to the support member for rotation together.

2,859,828
CHAIN WEIGHT ADAPTER MECHANISM FOR BALANCES
Werner Ruefenacht, Salt Lake City, Utah
Application May 31, 1952, Serial No. 290,978
4 Claims. (Cl. 265—60)

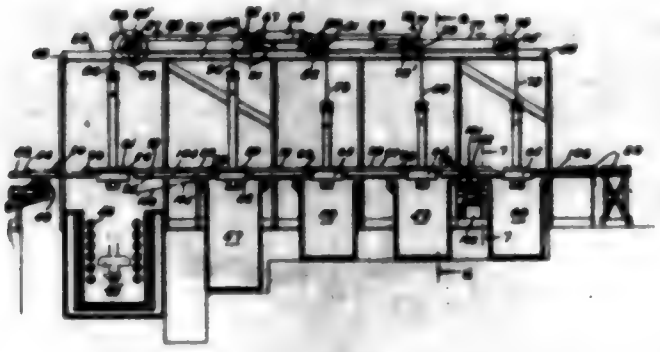


1. A chain weighing adapter mechanism for balances having a column, an oscillating beam, and a chain weight

mounted metal plates between said end plates, resilient mats operated by the vehicle operator, a door operating cir-

having one end on the beam, said mechanism comprising a rotative shaft extending transversely of the column; a housing capsule having a back portion, means securing said back portion to said column, a circumferential flange extending forwardly of the back portion to provide an open face portion, and an indicating disk mounted on said shaft for rotation within the said open face portion and serving as a closure therefor; and a winding drum fixed on the indicating disk for controlling the other end of the chain weight.

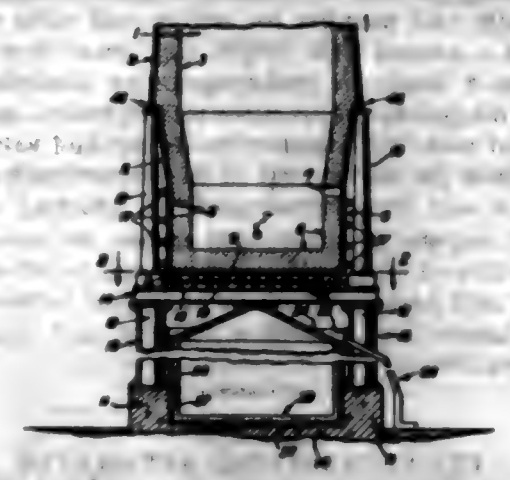
2,889,629
APPARATUS FOR TREATING METAL PARTS
Clarence L. Joy, Detroit, Mich., assignor to Holcroft & Company, Detroit, Mich., a corporation of Michigan
Application June 6, 1956, Serial No. 513,435
4 Claims. (Cl. 266—4)



1. Apparatus for treating articles, comprising a plurality of receptacles spaced from each other in a forwardly and rearwardly extending row and open at the top and each containing a bath, elevators respectively supported for downward and upward movement as a unit into and out of the baths through the open tops of the receptacles and having generally co-planar article supporting surfaces, a support for the articles positioned above the receptacles and having portions between the elevators providing continuations of the article supporting surfaces of the elevators in the raised positions of the elevators, means for moving the articles rearwardly from one elevator to another in succession comprising an article propelling device supported above the support for sliding movement in forward and rearward directions along the row of receptacles, said device having laterally spaced bars extending along the rows of receptacles and longitudinally spaced members connecting said bars respectively positioned at the front sides of the elevators, means for moving the device in a rearward direction along the row of receptacles in the raised positions of the elevators to move articles by said members from said article supporting surfaces in a rearward direction and for moving the device in a forward direction in a lowered position of the elevators to return the members to their positions at the front sides of the elevators.

2,889,630
BLAST FURNACE SPRAY COOLING MEANS WITH DISPOSAL SHED
Ernest B. Snyder, Steubenville, Ohio
Application August 8, 1956, Serial No. 526,946
9 Claims. (Cl. 266—32)

1. A blast furnace comprising a hearth having a lining at the bottom, a metal plate supporting said lining, means supporting said plate in elevated relation to the furnace supporting surface with an unconfined area open to atmosphere below the bottom of said plate for receiving liquid slag and metal in the event of a break out through the hearth, unconfined means disposed under said plate for spraying its undersurface with a cooling fluid, and



a shed below said spray means to catch and direct the cooling fluid away from under said hearth.

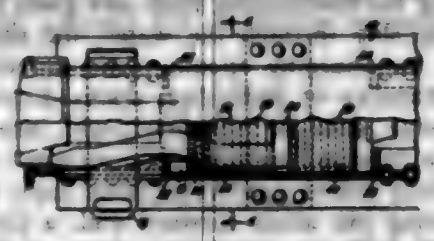
2,889,631
CALIBRATED SPRING ADJUSTING MECHANISM FOR RELIEF VALVES
George E. Hansen, Elmwood Park, and Edward W. Carr, Cicero, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Application July 13, 1955, Serial No. 521,737
5 Claims. (Cl. 267—1)

1. The combination of a spring for use with a relief valve and an adjuster mechanism for said spring comprising a recessed centerpiece for retaining the spring in position, a screw threadedly received in the centerpiece and bearing against the spring, the said screw having on an upper portion thereof an indicating block-like member threadedly attached to the screw and received within the centerpiece recess, a washer fitted snugly over the said block-like member in axially slidable non-rotatable relation thereto, the said screw having an axially extending socket therewithin, a filler stud frictionally engaging a central aperture of said block-like member and having an end projecting shank portion axially slidably and non-rotatably received in the screw socket, the said filler stud having an enlarged upper portion overlying the said aperture of the block-like member, and cap means engaging said centerpiece and said washer and clamping the said washer and said indicating block member in non-rotatable relation to the centerpiece.

2,889,632
SHOCK ABSORBING DEVICE
John A. Johnson, Short Hills, N. J., assignor to ACF Industries, Incorporated, New York, N. Y., a corporation of New Jersey
Application May 18, 1956, Serial No. 585,973
13 Claims. (Cl. 267—1)

1. In a hydraulic shock absorbing cushioning device, end plates, a series of vertically arranged longitudinally

spaced metal plates between said end plates, resilient mats interposed between and bonded to said spaced plates, a plurality of contractable hydraulic fluid containing chambers within said device, an expansible accumulator associated with said device, and passageways connecting said



chambers to permit pumping of fluid under pressure therefrom during compression of said device, at least one of said end plates being formed with means connecting said passageways with said accumulator for passage of fluid pumped from said chambers into said accumulator.

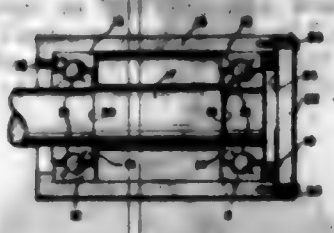
2,859,833

CONSTANT FORCE APPLYING MECHANISM

James D. Rose, Canoga Park, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application June 27, 1956, Serial No. 594,315

7 Claims. (Cl. 267—1)



1. A constant force loading arrangement comprising: a resilient enclosure adapted for application of compressive forces thereto; a non-newtonian substance enclosed within said enclosure; and independent means positioned within said enclosure for permitting volumetric changes of said substance.

2,859,834

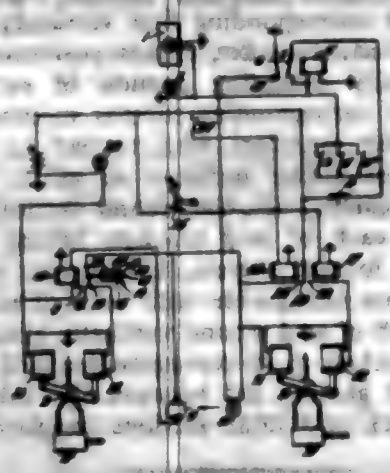
OPENING AND CLOSING DEVICE FOR VEHICLE DOORS

Ernst Georg Skogsberg and Karl Henning Hernell, Oxelösund, Sweden, assignors to Aktiebolaget Hägglund & Söner, Oxelösund, Sweden

Application January 19, 1956, Serial No. 560,347

Claims priority, application Sweden April 12, 1955

2 Claims. (Cl. 268—31)



1. A control system for road and rail passenger vehicles, which vehicles have a door and vehicle brakes arranged for operation by servo-motors, air valves for controlling said motors, respectively, electromagnetic means for controlling said air valves, respectively, a brake circuit including said brake controlling electromagnetic means, switch means in said circuit in position to be operated by the vehicle operator, a door operating circuit including said door operating electromagnetic means, a switch in said door operating circuit located in position to be operated by the vehicle operator, said door operating circuit including a second switch having a movable part, a retardation mechanism connected to said movable part and having means pressing said part in one direction and having means retarding its speed of movement, electromagnetic means attracting said movable switch part in one direction against the pressure of said pressing means when fed with sufficient current, a door controlling circuit including said electromagnetic switch part attracting means, a photoelectric cell connected in said door controlling circuit, an electric light source also connected in said door controlling circuit and located in position to effect the resistance of said photoelectric cell, a signalling circuit including a passenger's signal switch for closing said signalling circuit, said circuit including a signalling device for apprising the operator a passenger desires to leave the vehicle, a relay coil in said signalling circuit, a movable switch arm under the control of said coil for maintaining said signalling circuit closed after release of said passengers signalling switch, a second switch located in position to be operated by said signalling circuit relay coil to be opened when said relay coil is energized, said second switch being connected in the circuit of said light source to extinguish said light source when said signalling circuit relay coil is energized, said second switch, when said relay is not energized, being closed and the light source illuminated to increase the resistance of the said photoelectric cell and prevent energizing of said door-operating electromagnetic means whereby the door does not open, said second switch, when said relay is energized, being opened to extinguish said light source, thereby decreasing the resistance of the photoelectric cell and energizing the door-operating electromagnetic means and moving the second switch in the door-operating circuit into position for opening the door, a third switch in the signalling circuit, means connected with said door for opening said third switch when the door is opened for opening the circuit to said relay coil whereupon the second switch in the signalling circuit is closed, and the light source illuminated, thus increasing the resistance of said photoelectric cell and allowing release of said movable part of said second switch of said door operating circuit to permit said retardation mechanism to press and move said movable part in said one direction for effecting completion of the circuit to said door closing electro-magnetic pneumatic valve control means.

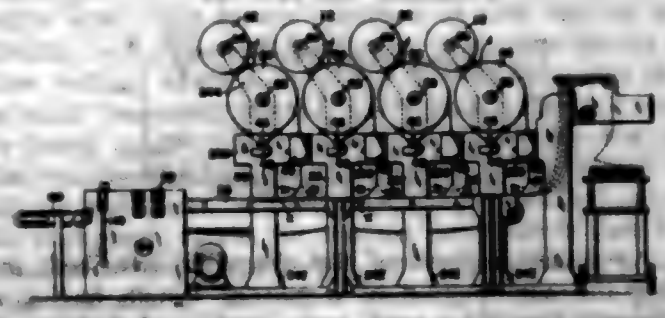
2,859,835

MACHINE FOR MAKING MANIFOLD FORMS

William H. Fennemann, Hamilton, Ohio, assignor to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio

Original application July 11, 1950, Serial No. 173,139, now Patent No. 2,766,984, dated October 16, 1956. Divided and this application October 1, 1954, Serial No. 461,849

4 Claims. (Cl. 271—3.1)



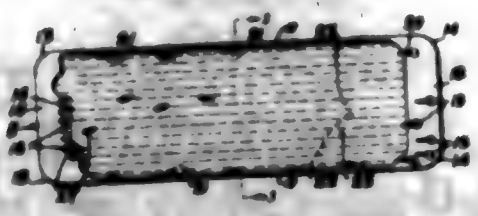
1. A device for selectively interleaving and delivering in one or the other of two directions a plurality of con-

tinuous lengths of strip material having spaced openings along one edge, said device including an elongate horizontal strip support, means including mechanism for engaging said strip material along said one edge for moving interleaved strip material selectively in either direction along said support, a first mechanism disposed at one end of said support for receiving strip material and operating upon the same when said means moves the strip material toward said one end of the support, a second mechanism positioned at the opposite end of said support for receiving said strip of material when said means moves the strip toward said opposite end of the support, whereby dependent upon direction of movement of the strip material along said support, one or the other of the first or second mechanism will operate upon the strip material, a plurality of roll supporting means spaced along and over the strip support for rotatably mounting rolls of continuous lengths of strip material, means feeding the strip material from the respective roll supporting means down onto the means for moving the strip along the support.

2,859,036
BAG APPLYING AND FILLING MACHINE
James C. Petros and James W. Howe, Jr., Durham, N. C., assignors, by mesne assignments, to Sperry Rand Corporation, Wilmington, Del., a corporation of Delaware
Application March 10, 1955, Serial No. 493,505
13 Claims. (Cl. 271—26)

11. In a bag applying machine, a gripper comprising, a suction head for engaging a wall of a bag, an elongated recess of substantial width in a bag-engaging face of said suction head, and passage means in said gripper providing for the application of vacuum to said recess whereby to draw a portion of the bag wall therein and partially fold said wall along a line extending longitudinally of said recess.

2,859,037
GAME APPARATUS SIMULATING AN INVASION
Robert V. Howard, Denver, Colo.
Application August 16, 1956, Serial No. 604,416
8 Claims. (Cl. 273—1)



1. An invasion game of the character described, including the combination of a pan or trough having a continuous bounding wall and capable of holding a quantity of water of predetermined depth, means forming a launching area at one end of the pan and means forming an invasion area at the other end, and at least one ship adapted to float upon the water and travel from the launching area toward the invasion area thereon, said ship having a hollow hull with a closed top formed with a charging opening for a carbonated fluid and a rear discharge opening for discharging fluid and gases rearwardly to drive the ship through the water, the ship having a closure for the charging opening, said launching area including a plurality of individual docks disposed in a series and having sides forming the docks into adjacent ship pockets, a defense weapon in the invasion area capable of propelling pellets against invasion ships, each ship having a piercing pin at its forward end, a plurality of weighted small balloons simulating mines and floating in the water in the pan a distance above the bottom and below the surface of the water in effective position to be punctured by the piercing points of the ships.

2,859,038
GAMING NET FASTENING ARRANGEMENT
John J. Purtha, Baltimore, Md.
Application June 9, 1958, Serial No. 740,974
5 Claims. (Cl. 273—39)

1. A table-net support arrangement, for a table formed of two sections arranged end to end, comprising, a gaming net having opposite ends, a tubular member located at each end of said gaming net, each tubular member having a longitudinal slot formed therein and extending from one end thereof and terminating short of the other end thereof for receiving one end of said net and locking it in position in its corresponding tubular member, means including a pair of brackets each having a first vertically extending portion, a horizontally extending intermediate portion, and a second vertically extending portion and having the vertically extending portions of said brackets offset from each other for supporting each tubular member, each said tubular member being spaced from its corresponding first vertically extending portion of each said bracket, means positioned between the first vertically extending portion of each of said brackets and its corresponding tubular member to position said tubular members with respect to each said first vertically extending portions so as to adjust the tension in said gaming net, the second vertically extending portion of each of said brackets having a pair of spaced notches formed therein, and means on each of said table sections engageable with each of said notches for securing each of said second vertically extending portions of said brackets to its corresponding side of a table to position said gaming net between the sides of said table and to lock said table sections together.

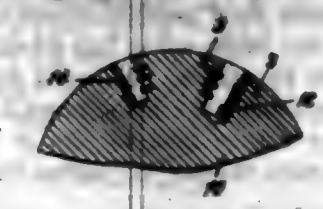
2,859,039
BOWLING BALL
Chester W. Jerome, Detroit, Mich.
Application December 19, 1956, Serial No. 553,948
2 Claims. (Cl. 273—63)

1. A bowling ball having a digit receiving opening provided with a plurality of separate insert strips of com-

move said gripping jaws toward the axis of said chuck to grasp said work to grip the workpiece whereby rotation

movably mounted in each of said guideways; a mounting block secured to each of said carrier members; a work

pressible friction material inset within the wall of the opening in spaced-apart parallelism and extending circumferentially of the opening over that portion thereof adapted to be engaged by the face of the user's digit for an arcuate distance of less than one-half the circumference of the opening, each strip having a dimension axially of the opening not exceeding one-quarter of the

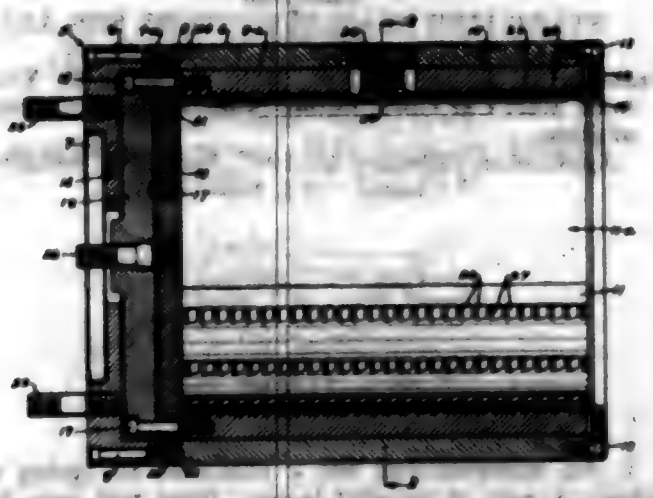


depth of the opening, said plurality of strips being spaced apart axially of the opening by surface areas of the material of which the bowling ball is formed, and that strip which is nearest to the mouth of the opening being spaced from such mouth by a distance sufficient that the digit of the user received within the opening is engaged with the unmodified surface of the opening wall at the instant the ball is released.

2,859,040
FOOTBALL HAVING A SECURELY GRIPPABLE LACELESS SURFACE
Arthur R. Gow, Hamden, and Paul S. Madsen, Bethany, Conn., assignors to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut
Application September 16, 1952, Serial No. 309,818
10 Claims. (Cl. 273—65)

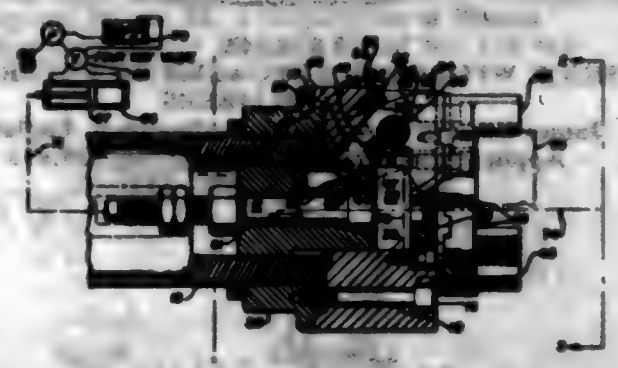
3. An inflatable ellipsoidal football having a laceless cover with longitudinal ribbing and transverse ribbing to enhance the grip of the player's hand upon the ball, the longitudinal ribbing being in a middle zone of substantial width and the transverse ribbing being in end zones of substantial width, the end zones of ribbing being continuations of the middle zone.

2,859,041
COLLET CHUCKS
Harry E. Sloan, Hartford, Conn., assignor to The Cushman Chuck Company, Hartford, Conn., a corporation of Connecticut
Application April 11, 1958, Serial No. 727,864
17 Claims. (Cl. 279—3)



1. In a collet chuck for holding a cylindrical workpiece, a work-gripping member comprising a resilient tubular sleeve having an unbroken cylindrical wall with annular surfaces, one of said surfaces fitting the workpiece closely when the sleeve is in its normal condition, and means for applying radial pressure to the other of said surfaces in the direction of the workpiece to distort said wall and thereby cause gripping of the workpiece.

2,859,042
CHUCK MECHANISM
Alfred E. Drimmer and Robert Duncan, Cleveland, Ohio, assignors to The National Acme Company
Application October 13, 1954, Serial No. 462,833
4 Claims. (Cl. 279—106)



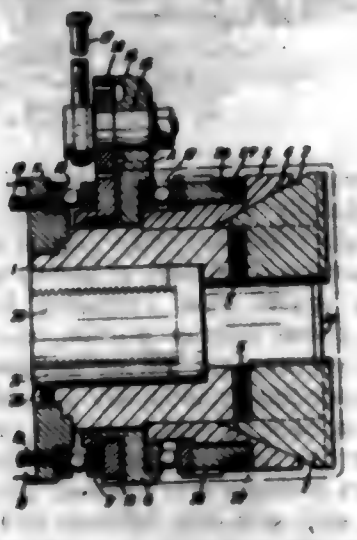
1. In a rotary chuck having a central axis and comprising, a generally cylindrically shaped housing, said housing having a front face and a central interior portion, said housing having a plurality of axially parallel and circumferentially spaced slots extending from said front face to said central interior portion, each of said slots including a pivot member having an axis and mounted therein and extending transversely of said slot, a rocker arm residing in each of said slots and mounted on said pivot member for arcuate movement thereabout, each said rocker arm having a cam follower end and a gripping jaw mounting end, said cam follower end extending into said interior portion and said jaw mounting end extending to said face of said housing, said cam follower end of each of said rocker arms having a roller cam follower thereon, a cam member slidably mounted within said interior portion and adapted for axial movement in first and second directions alternatively to apply a force on said rocker arms tending to move said rocker arms in a first arcuate direction and to release said force on each of said rocker arms thereby allowing said rocker arms to be moved in a second arcuate direction, said cam member having a cam surface for each said roller cam follower, each said cam surface including a plurality of flat surface areas substantially parallel to said axis of said chuck and each spaced a different distance from said axis, each said flat surface areas connected by an interconnecting surface area, a recess within each said rocker arm, spring means carried by each of said rocker arms tending to move said rocker arms in said second arcuate direction, each said spring means comprising a pin residing within said recess and engageable with a portion of said housing adjacent said rocker arm, and a spring urging said pin into engagement with said portion of said housing, a gripping jaw having gripping jaw teeth and mounted on said jaw mounting end of each of said rocker arms, stop means mounted on said face of said housing, said stop means including a member having an outer surface adapted to engage a workpiece and limit the axial movement thereof, said axis of said pivot member being spaced from the axis of said chuck not less than the distance between the gripping jaw teeth and the axis of said chuck when the gripping jaw teeth engage the workpiece, means for moving said cam in said first direction whereby said roller cam followers move away from the axis of said chuck and travel on one of said plurality of flat surface areas to another one thereof by way of said interconnecting surface areas to accurately

beams, parallel bolsters pivoted for vertical movement forward of one of said seats and spaced from a passenger

ing a launching area at one end of the pan and means provided with a plurality of separate insert strips of com-

move said gripping jaws toward the axis of said chuck to cause said jaws to grip the workpiece whereby substantially all of the component of the gripping force is perpendicular to the axis of said chuck and a smaller component of the gripping force is parallel to the axis of said chuck tending to pull the workpiece securely against said stop means, and means for moving said cam in said second direction whereby the force exerted on said gripping jaws is released and said rocker arms are caused to move in said second arcuate direction by said spring means to positively release the gripping jaws from the workpiece and provide clearance for inserting a new workpiece to be gripped.

2,859,043
CHUCK WITH JAWS ACTUATED BY EXTERNAL CONE MEMBERS
James Edward Cosmos, Wolverhampton, England
Application June 7, 1956, Serial No. 589,993
2 Claims. (Cl. 279—122)



1. A chuck for lathes comprising a chuck body, a coned sleeve axially slidable on the chuck body to operate the chuck into the gripping position, a thrust bearing mounted co-axial with said body and located against an abutment on the chuck body, a thrust bearing movable co-axial of said body and located against the coned sleeve, axially expanding means between said thrust bearings for axially moving the coned sleeve for operating the clutch into the gripping position comprising an externally screwed sleeve in which the chuck body rotates, a projection on said latter sleeve slidably anchored in relation to the machine frame to allow axial movement of said latter sleeve but to prevent rotational movement, said latter sleeve bearing against said axially movable thrust bearing, a bracket on said externally screwed sleeve and a toothed gear wheel mounted on the radial projection, an internally screwed ring rotatably mounted about the axis of the chuck body and engaging the said externally screwed sleeve and bearing against said first mentioned thrust bearing so that when said ring is rotated the thrust bearings are axially moved apart, a ring of teeth on said internally screwed sleeve which is in engagement with said toothed wheel, and means for rotating the latter toothed wheel to open and close the chuck.

2,859,044
COMPENSATING CHUCK
Russell E. Buck, Scotts, and Ted D. Kinney, Kalamazoo Township, Kalamazoo County, Mich., assignors to Buck Tool Company, Kalamazoo, Mich., a corporation of Michigan
Application May 7, 1956, Serial No. 583,856
13 Claims. (Cl. 279—123)

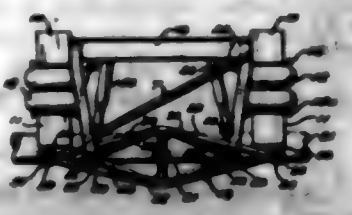
1. A chuck construction, comprising in combination: a chuck body, said chuck body having a plurality of radially directed guideways therein; a carrier member movably mounted in each of said guideways; a mounting block secured to each of said carrier members; a work contacting member pivotally mounted on each of said

mounting blocks, each of said work contacting members having end portions extending outwardly; a radially movable annular ring encircling said work contacting members and adapted to contact the end portions thereof.

2,859,045
VEHICLE SUSPENSION LOCK
John M. Beaufort and Jarvis A. Stirrod, Mercer Island, Wash.
Application December 28, 1956, Serial No. 631,385
2 Claims. (Cl. 280—6)

1. A lockout device for use with a suspended vehicle wheel comprising a bracket having a base, said base being fixed to the vehicle, a bore in said bracket having an axis perpendicular to said base, a support plate attached to said bracket, a bore in said plate having the same axis as said bore in said bracket, a block, a toothed rack fixed in said block, trunnions on said block, said trunnions mounted in said bores so that said block and thereby said rack can pivot about said axis, a rigid lock bar insertable in said block and connected to the axle of said vehicle wheel, a series of teeth on said lock bar located adjacent the stationary teeth of said rack and a rotatable shaft journaled in said block, said shaft having a circular cam portion adapted to engage said lock bar tangentially to hold the teeth of said lock bar in mesh with the teeth of said rack whereby said bar will limit vertical movement of said vehicle wheel.

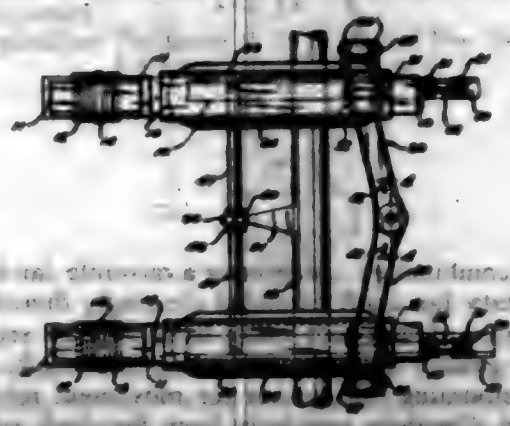
2,859,046
STABILIZER BEAM STRUCTURE FOR AIR CUSHION VEHICLE SUSPENSION
Franklin B. Easton, Salem, Ohio, assignor to Youngstown Steel Car Corporation, Niles, Ohio, a corporation of Ohio
Application February 14, 1957, Serial No. 640,098
7 Claims. (Cl. 280—104)



1. An undercarriage for a vehicular air spring comprising a pair of parallel beams, front and rear frame cross members affixed to and uniting said beams, brackets affixed to and depending from the forward ends of said

beams, parallel bolsters pivoted for vertical movement on said brackets, air cells mounted to said bolsters and engaged with said beams to cushion shocks imposed upon said beams, an axle affixed to said bolsters in transomial relation thereto, vertical hangers affixed to and depending from the rearward ends of said beams and terminating subjacent said bolsters, a pair of parallel transversely disposed levers of the first order each pivoted at one end to the adjacent bolster and at the other end to the opposed hanger, a wrist pin journaled in each of said levers intermediate their ends, and a tracking bar rigidly secured at one end thereof to one of said beams and at its other end to the opposed hanger to restrain lateral movement of said air cells.

2,859,047
STABILIZER ARRANGEMENT FOR PNEUMATIC SUSPENSION
Franklin R. Easton, Salem, Ohio, assignor to Youngstown Steel Car Corporation, Niles, Ohio, a corporation of Ohio
Application February 14, 1957, Serial No. 640,099
6 Claims. (Cl. 280—124)

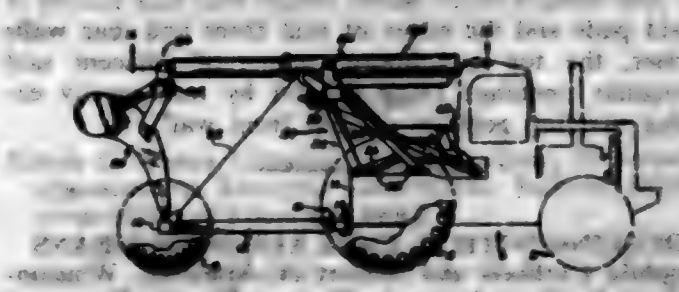


1. An undercarriage for a vehicular air cell supporting structure comprising a rectangular chassis frame, brackets depending from the forward end thereof, rubber clad pins in said brackets, bolsters pivoted on said pins, shock absorbers between the rearward ends of said bolsters and said frame, rubber bushings on said bolsters, a vehicular axle mounted in said bushing, air cells intermediate said bolsters and said frame, a bracket affixed to said axle, brace rods transverse said frame, a bearing block connected to said brace rods in aligned relation with said bracket, a rubber journal bearing in said block supporting the end of said bracket, rubber clad pins supported on the lower face of said bolsters, transversely aligned levers pivoted intermediate their ends on said pins, a yieldable connection between the inner ends of said levers, rubber clad pins carried by said chassis frame and the outer ends of said levers and links pivotally mounted on said pins.

2,859,048
VEHICLE SAFETY EQUIPMENT FOR PASSENGER PROTECTION
Hiram Moore, Ames, Iowa
Application October 7, 1955, Serial No. 539,069
10 Claims. (Cl. 280—150)

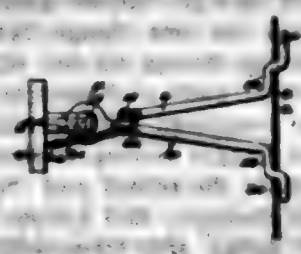
1. In combination with a car having longitudinally-spaced seats, an inflated cushion supported upon said car forward of one of said seats and spaced from a passenger sitting thereon, straps secured to the lower portion of said car and engaging the ends of said cushion to provide diagonal guides extending between the car and the cushion to prevent passengers from being thrown laterally from the seats in the event of a collision, and means for supporting said cushion at an elevated position aligned with the tops of the seats.

2,859,049
WEIGHT TRANSFERRING TOWING HITCH
John H. Hyler, Elmer E. Ingren, and Ernst W. Spannhake, Peoria, Ill., assignors to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Application May 25, 1955, Serial No. 510,964
19 Claims. (Cl. 280—406)



19. A traction-assist device for a tractor and trailer connected by a drawbar, the device comprising cable means connected to the trailer at drawbar level to lift the trailer front end relative to the tractor, means to mount the lifting means on the tractor, and an extensible push-beam independent of the lifting means and connected to the tractor rear end and to the trailer front end, the tractor connection being at a level substantially above drawbar level, and operable to keep the beam under compression.

2,859,050
TRACTOR TOWING HITCH
Creed L. Stonecook, Circleville, and Earl E. Dooley, Columbus, Ohio
Application January 12, 1956, Serial No. 558,814
3 Claims. (Cl. 280—491)
(Granted under Title 35, U. S. Code (1953), sec. 266)

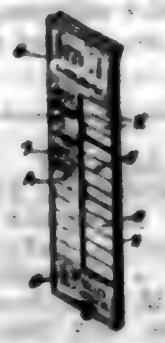


1. A hitch for a tractor provided with a perforated pusher plate on its front end, comprising a pair of separable rods, a laterally extending arm on the rear end of each rod, an extension on each arm, said extension paralleling the arm, and connected thereto by a right angular portion having a length at least as great as the thickness of the pusher plate, said extension adapted to be passed through perforations in the pusher plate and to engage the rear face thereof when the rods are united, means for uniting said rods after their extensions are engaged in the plate, and means on one of said rods for engaging a conventional coupling on the rear end of another tractor.

2,859,051
VEHICLE MAINTENANCE STICKER
Henry B. Simpson, Joliet, Ill.
Application June 22, 1956, Serial No. 592,151
3 Claims. (Cl. 281—16)

1. A vehicle maintenance sticker, comprising a paper rear wall, a paper front wall having a plurality of rectangular openings therein, a paper pad interposed be-

tween said rear and front walls in registry with each of said openings and comprising a plurality of superposed rectangular strips, and means for securing the ends

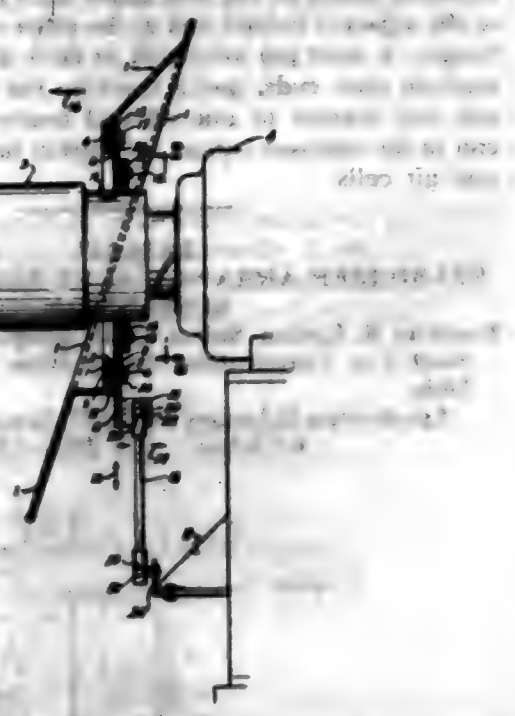


of said pads and the edges of said front and rear walls together, the top and bottom edges of adjacent said rectangular openings being defined by transversely extending dividing portions of said front wall.

2,839,852
COUPLING WITH FLANGE ALIGNING MEANS
Theophile Corbeels and Robert N. Marshall, Winston-Salem, N. C., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application November 17, 1954, Serial No. 469,488
1 Claim. (Cl. 285—18)

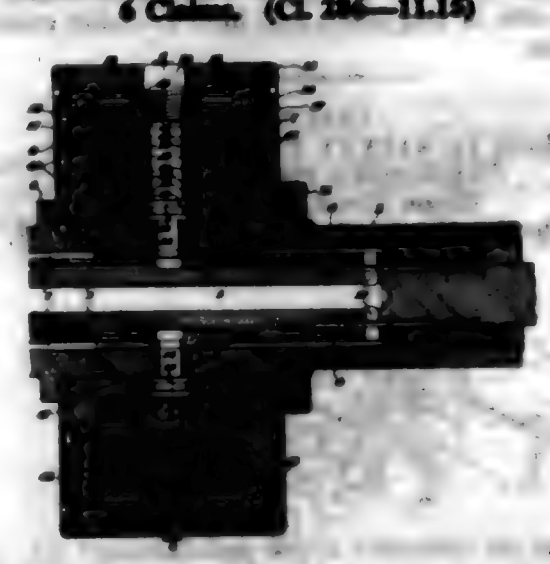
A tubular wave guide coupling comprising a pair of tubular wave guide sections positioned in end to end engagement, a flange secured to each of the sections near the engaging end thereof, each of the flanges having a plurality of spaced bosses near the periphery thereof, said bosses on one flange being in abutting contact with matching bosses on the other flange such that opposed identical pairs of bosses are abutted when the flanges are in assembled predetermined axial alignment, each of the flanges having a plurality of spaced apertures intermediate the bosses and the engaging ends of the wave guide sections, said bosses extending from the face of each flange and terminating in the same plane as the engaging ends of the wave guide sections, the bosses and engaging ends of the wave guide sections and the faces of the flanges defining an annular space when the pairs of bosses of the flanges are positioned in aligned abutting relationship and the ends of the sections are in engagement, a resilient gasket ring located within the annular space and surroundingly sealing the engaging ends of wave guide sections, the gasket ring being of a slightly greater normal thickness than the axial width of the annular space, an annulus positioned within the annular space and surroundingly confining the gasket ring, the annulus being of a thickness slightly less than the axial width of the annular space and having a plurality of apertures therethrough and a plurality of notches, each notch being complementary to and in engagement with opposed identical pairs of bosses, the notches locating each annulus aperture in alignment with each corresponding aligned aperture in each flange and locating opposed identical pairs of bosses in aligned engagement, and fastening means projecting through the aligned apertures in the flanges and annulus to secure the flanges to each other.

2,839,853
SHAFT SEAL
Harold Ray Phelps, Detroit, Mich., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware
Application July 29, 1955, Serial No. 525,266
3 Claims. (Cl. 286—1)



1. The combination comprising a movable fan-housing wall; a rotary fan shaft extended clearingly therethrough with the axis of the shaft being fixed; a shaft seal comprising a gasket sealingly encircling the shaft; means floatably mounting said gasket for movement relative to the wall in directions angularly from the shaft axis, said mounting means comprising a plate in facial engagement with said wall, a fixed supporting structure, and movable support means interconnecting the plate and fixed supporting structure; said supporting means being independent of the wall for supporting the plate in a substantially fixed position with respect to the shaft axis while additionally permitting axial movement of said plate with the wall.

2,839,854
MULTIPLE PASSAGE OVERSHAFT SEAL
Richard B. Will, Norristown, Pa., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Application May 13, 1955, Serial No. 508,184
6 Claims. (Cl. 286—11.15)



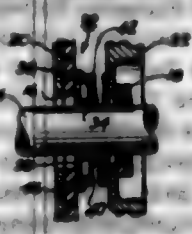
1. An overshaft seal comprising, in combination a stationary annular member having a plurality of circumferentially spaced radial passages, one of said passages

2,839,859
BALL JOINT

the wedge element having a free end engaged in the opening of the bolt in the outwardly shifted position of the

extending entirely through said stationary member for communication with a shaft passage, another of said radial passages extending only partially through said stationary member from the periphery thereof, a rotatable annular member disposed adjacent to one side of the stationary member and being rotatable with the shaft and having a radial passage therein for communication with the shaft, lateral passage means extending from said partial radial passage in the stationary annular member to the radial passage in the rotatable annular member, and a plurality of axially movable annular sealing means disposed between said stationary and rotatable annular members at different radial distances on each side of said lateral passage means to provide a seal on each side thereof and to seal the inner end of the through-passage in the stationary annular member against communication with said lateral passage means.

2,859,055
SEAL FOR A PNEUMATIC SERVO MOTOR
Edward E. Hupp, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application February 6, 1956, Serial No. 563,589
3 Claims. (Cl. 286—19)

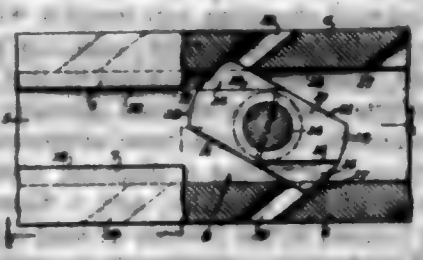


1. In a fluid pressure seal adapted to accommodate angular and lateral movement: a first member having a flat sealing surface with an opening therein; a second member extending through said opening, said opening in said first member being large enough to accommodate lateral and angular movement of said second member; a generally rigid disc shaped member having a hole therein through which said second member extends positioned about said second member in sealing abutment with said flat sealing surface, a ring of elastic material in abutment with said disc shaped member and tightly engaging the surface of said second member, said disc shaped member being made from a non-galling material and its hole being constructed to accommodate angular movement of said second member without said hole being large enough to permit extrusion of said ring into said hole, a retainer member having an opening therein through which said second member extends positioned about said second member against said ring, the opening in said retainer member being constructed to accommodate the angular movement of said second member, and means biasing said retainer member toward said surface of said first member, whereby angular movement of the second member relative to the seal produces a pivotal action with respect to said disc shaped member.

2,859,056
CLAMPING DEVICE
Louis W. Marks, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Application April 9, 1956, Serial No. 577,067
1 Claim. (Cl. 287—20.3)

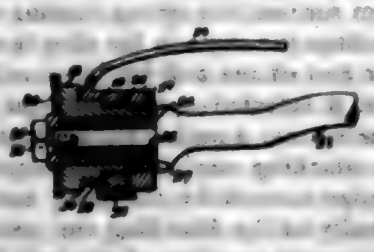
Means for holding a resin bonded fiber glass rod against axial movement toward one end thereof comprising a tapered end portion on the other end of said rod, the diameter of said rod being at least as great as the maximum diameter of said tapered portion, first sleeve means having an internal taper surrounding the tapered portion of said rod, said internal taper extending inwardly toward said one end of said rod, said tapers having substantially the same angle, second sleeve means having a hollow frustoconical shape, said second sleeve means being disposed between and contacting the tapers of said rod and first sleeve means, said second sleeve means comprising a metallic collar having a plurality of deformable fingers extending from one end thereof, and a threaded external portion on said first sleeve means to permit stationary mounting thereof, the minimum internal diameter of said first sleeve means being greater than the maximum diameter of said other end of said rod to permit said first sleeve means to be slipped over said other end.

2,859,057
RAIL
Edwin C. Elmer, Glendale, Calif., assignor, by mesne assignments, to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Application August 20, 1956, Serial No. 604,593
4 Claims. (Cl. 287—20.5)



1. An anchoring rail comprising, a bottom plate and parallel side walls, the side walls having oppositely disposed holes extending obliquely therethrough, an anchor plate having an article supporting post secured thereon, the anchor plate having a length slightly greater than the distance between the walls and positioned between the walls, the anchor plate having arcuate ends and being rotatable to bring opposite alternate corners of the plate into the ends of oppositely disposed holes to lock the plate in the rail.

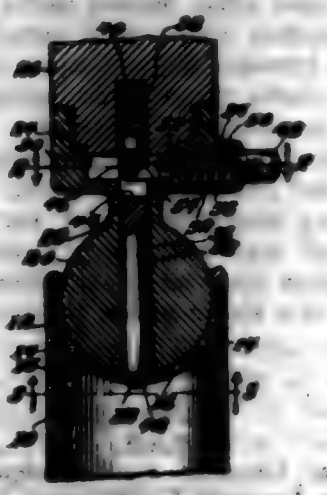
2,859,058
ADJUSTABLE PIVOTAL MOUNTING
Wilfred F. Trangott, West Point, Va.
Application November 8, 1957, Serial No. 695,339
5 Claims. (Cl. 287—53)



1. A bushing comprising a cylindrical body having a bore extended longitudinally therethrough and eccentrically positioned therein, the bushing having a head with flat side surfaces thereon at one end a shoulder spaced from the head and the opposite end of the body being threaded, a sleeve of resilient material extended through the body, a collar having rough side surfaces positioned on the bushing, and a nut on the threaded end of the bushing for clamping the collar against the shoulder spaced from the head of the bushing.

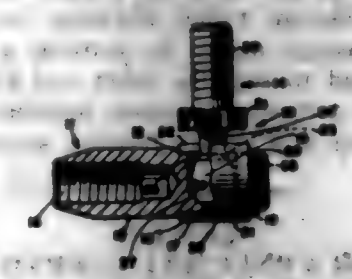
2,859,062

2,859,659
BALL JOINT
Harry D. De Lench, Beaufort, S. C., and Plumer P. Lowe, Belmont, N. C.
Application June 11, 1954, Serial No. 436,186
1 Claim. (Cl. 287—87)



A ball joint comprising a substantially hemispherical socket having a central opening and annular rows of openings concentric with the center opening; a spherical head seated in the socket for universal movement therein; a neck integral with and projecting radially from said head; a cylindrical attaching cup integral with said neck and aligned axially with the neck, said cup being formed with an axial, threaded counterbore at that end thereof remote from the neck, an internal shoulder at the base of the counterbore, an axial bore communicating with the counterbore and having a diameter common to the inner diameter of the shoulder, and a diametrically extending slot formed in the bottom of said axial bore, the head having a diametrical through passage opening at one end into said slot and registrable at its other end with a selected one of said openings responsive to universal movement of the head in the socket to a selected position, said cup being formed with a radial bore aligned longitudinally with the slot and communicating at one end with the slot; an arm element having an axial recess opening upon one end thereof and aligned with the diametrical passage of the head, said one end of the arm element having a reduced threaded portion engaging in the counterbore and having a boss reduced in diameter relative to the threaded portion and engaging in the axial bore to form said slot into an enclosed cavity extending diametrically of the attaching cup, said recess of the arm element opening into the slot; a compression coil spring seated in the recess of the arm element; an elongated bolt slidable in the recess of the arm element and the passage of the head, said bolt having intermediate its ends a transverse opening having an inclined wall at one end forming a cam surface, the spring bearing against one end of the bolt to urge the same in the direction of said socket and the other end of the bolt having a reduced extension engageable in a selected opening of the socket on expansion of the spring; a push button slidable in the radial bore of the attaching cup; a stem carried by the push button; a wedge carried by the stem and sliding in the slot diametrically of the attaching cup, said wedge engaging in the transverse opening of the bolt in camming engagement with the inclined surface, whereby on extension of the push button into the radial bore said bolt will be retracted against the restraint of the spring to free the head for universal movement relative to the socket; and a spring within said radial bore exerting pressure against the push button to urge the same outwardly of the attaching cup, said slot having straight, parallel side walls and said wedge element having straight side surfaces in contact with the side walls to prevent rotatable movement of the wedge element about the axis of the stem, the wedge element having a free end engaged in the opening of the bolt in the outwardly shifted position of the push button.

2,859,660
BALL JOINT
Gilbert E. Davies and Glen L. Gasparini, Fort Wayne, Ind., assignors to Superior Ball Joint Corporation, a corporation of Indiana
Application October 17, 1955, Serial No. 540,881
7 Claims. (Cl. 287—90)



1. A ball joint comprising a socket-forming member having a crosshole therein with said crosshole having a portion of reduced diameter forming a seat; a ball member having a stem, a bearing portion slidably engaging the seat to permit the ball member to pivot thereon, and a neck portion in the form of a section of a sphere positioned intermediate the bearing portion and the stem, said spherical section having its center of curvature coincident with the pivotal axis of the ball member; a retainer mounted on the socket-forming member for rotation relative to said socket-forming member about an axis coincident with the center of curvature of the spherical section, said retainer being provided with means forming an opening, the edges of which engage said neck portion of the ball member, said means resisting movement of the retainer longitudinally of the socket-forming member.

2,859,661
COMPOSITE SEALING RING AND METHOD OF MAKING THE SAME
William P. Reid, Lakewood, Calif.
Application September 17, 1954, Serial No. 456,794
3 Claims. (Cl. 288—2)

3. A composite sealing ring for use between relatively rigid curved surfaces including an annular elastomer core of substantial and elastically compressible cross-section and slight circumferential stretchability and a flexible protective annular covering of channel shape in cross-section for said core, marginal portions of said channel-shaped covering protruding angularly from their point of contact with the core, the marginal portions being bonded to each other to form a lip, the core being substantially unbonded to the cover.

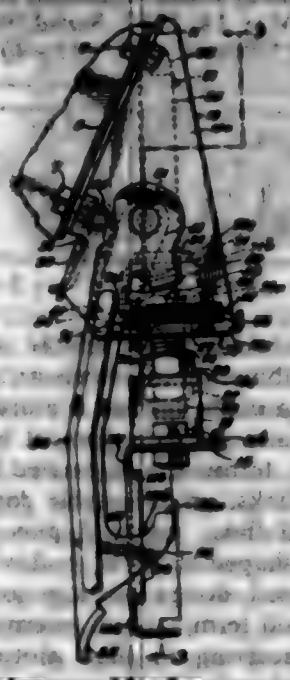
lower plate, and slot and bolt means in said plates for

2,859,062

HOOD LATCH AND OPERATING MEANS THEREFOR

Dilwell P. Hynes, Evanston, Ill., assignor to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware

Application May 26, 1954, Serial No. 432,432
1 Claim. (Cl. 292—11)



In a hood latch assembly for motor vehicles and the like, having a hood member and a closure member, an apertured latch plate secured to one of said members, a keeper adapted to enter said aperture and secured to the other of said members, a latch bolt pivoted to said plate, yielding means secured to said plate and said latch bolt and positioned to urge said latch bolt toward latching engagement with said keeper, a combination latch bolt-operating and safety-latch member, said last named member comprising an elongated, substantially rectilinear lever, pivoted at one end to said plate coaxially with said latch bolt pivot, an integral abutment portion on said lever adjacent its point of pivot and positioned for actuating contact with said latch bolt in response to movement of said lever about its pivot in one direction, an integral safety hook portion on said lever adjacent its opposite end, a manually operable portion at the said opposite end of said lever adjacent to said safety hook portion, an integral flange extending laterally from said lever adjacent said actuating abutment, said safety hook portion, manual handle portion, actuating abutment and flange being positioned on the same side of said lever and a second yielding means secured at one end to said plate and at its opposite end to said flange, said second yielding means extending from said flange and lever on the same side thereof as said safety hook portion, handle portion and actuating abutment portion.

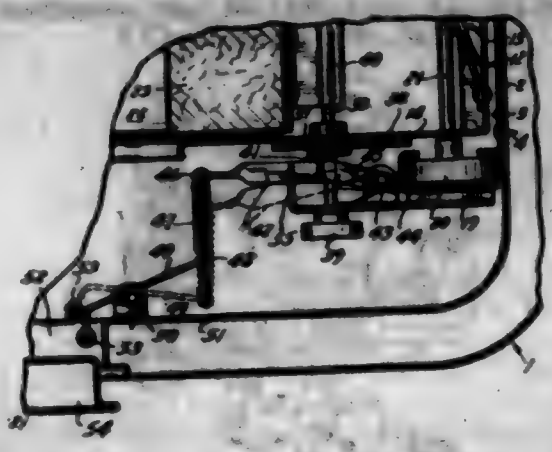
2,859,063

VEHICLE SEAT AND MOUNTING

Kenneth Underland, Owatonna, Minn., assignor of fifty percent to Raymond F. Kramer, Owatonna, Minn.

Application May 20, 1957, Serial No. 660,192
3 Claims. (Cl. 296—65)

1. In a device of the class described, a seat frame, means for mounting and guiding said seat frame in a door equipped cab of a motor vehicle for movements in a substantially vertical plane, yielding means cushioning downward movement of said seat frame, cooperating pawl and ratchet elements one operatively connected to said seat frame for common movements therewith and the other operatively connected to the seat frame mounting means, one of said elements being movable toward and away from the other thereof, second yielding means urging said one of the elements toward engagement with the other thereof, and mechanism including an actuator operatively connected to said one of the elements and engaged by the sub door when the same is closed to move said one of the elements away from engagement with the other thereof against bias of said second yielding



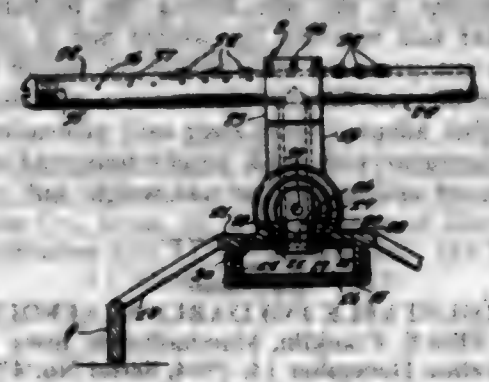
means, said actuator releasing said one of the elements for engagement with the other thereof upon opening movements of said door to positively lock said seat frame in the position the same has been caused to assume by the weight of a given occupant thereon against the bias of said first mentioned yielding means.

2,859,064

ROTARY SQUARE LAWN SPRINKLER

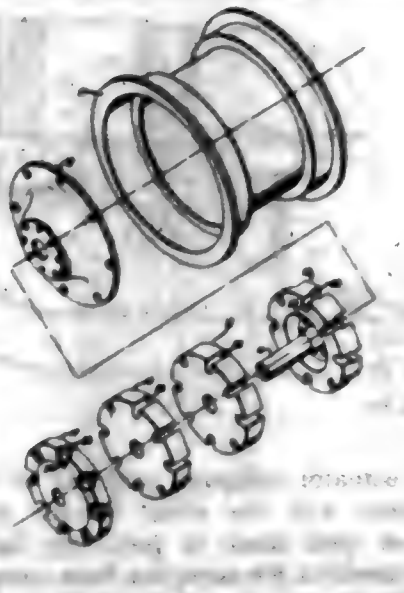
Seddon C. Nelson, Fredericksburg, Va.

Application April 9, 1956, Serial No. 576,981
9 Claims. (Cl. 299—18)



1. A rotary square lawn sprinkler of the character described including a stationary stand forming a base having an internal water chamber with a connection for a hose or water supply pipe communicating with the chamber, an upwardly extending hollow support upon the base and fixedly connected thereto, a rotary sprinkler head rotatably mounted upon the hollow support and receiving water from the water chamber in the interior of said support, means within the latter for supplying the sprinkler head with a constant minimum flow of water, said sprinkler head including a pair of opposite sprinkler arms surmounting a depending tube extending down into the hollow support, said means for supplying said sprinkler head with water including at least one orifice in the side of said depending tube, a cam movable by said tube for varying the water pressure of the water supplied to the tube independently of said orifice, said cam being rigid with the lower end of the depending tube, said base having a lower water chamber with a slot, periodically covered by said cam, interconnecting the lower chamber with the first mentioned water chamber fed by the water connection from the supply by way of a hose or water supply pipe, said cam comprising a rotary plate secured to the lower end of the tube and having four radially projecting leaves or cam sections, the lower water chamber having a thrust equalizing recess above the cam and an externally threaded hub with a cap screwed thereon to form a removable closure therefor.

2,859,666
WHEEL WEIGHTS FOR TRACTORS
Hermond O. Darby, Pampa, Tex.
Application April 29, 1957, Serial No. 655,581
2 Claims. (Cl. 301—41)



1. A detachable wheel weight assembly for use with a tractor having a wheel hub and a ring of bolts on said hub and a wheel assembly supported by said bolts, said weight assembly comprising a circular weight hub and means for attaching said weight hub through holes in the weight hub to said wheel hub bolts in coaxial alignment with said wheel, said weight hub having an outwardly extending center protrusion, said holes being of wider diameter at the side having the protrusion than at the other side whereby the weight hub is self centering as the nut, preceded by a washer the size of the small end of the tapered hole, is tightened, a plurality of circular weights adapted to fit over said protrusion and in coaxial alignment with said weight hub, and means to fixedly mount said weights to said weight hub.

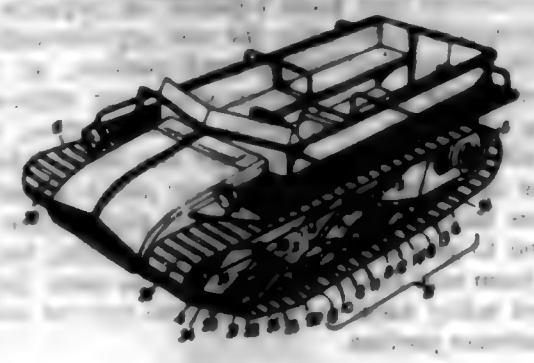
2,859,866
ADJUSTABLE FOLDABLE SCAFFOLD
Milo S. Franklin, Marshalltown, Iowa
Application December 14, 1954, Serial No. 475,892
1 Claim. (Cl. 304—5)

A scaffold comprising a plank, a pair of overlapping upper and lower plates engaging each other and supporting the plank and having confronting channel flanges clampingly engaging opposite side edges of the plank, said plates being slidably adjustable relatively transversely of the plank to adjust said flanges into and from clamping engagement with said side edges of the plank, an inverted U-shaped pair of legs having a bight portion beneath said plates, bearings on the lower plate in which said bight portion is journaled for swinging of said legs into and from supporting relation to the lower plate, and slot and bolt means in said plates for retaining the plates in adjusted position and connecting said plates together for guided sliding adjustment.

2,859,867
TRACTION DEVICES FOR VEHICLE WHEELS
Jacob J. Weier, Chicago, Ill.
Application May 14, 1957, Serial No. 659,870
10 Claims. (Cl. 305—6)

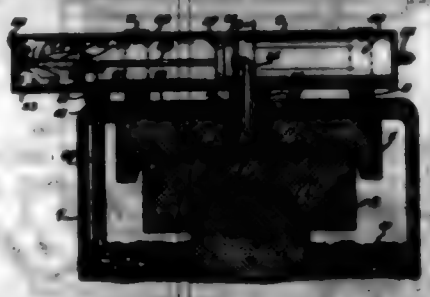
1. In a traction device for vehicle wheels arranged in tandem, the combination of wheels arranged in tandem having dual tires, a chain having a plurality of terminal and intermediate links for arrangement between the dual tires on the wheels, terminal pins carried by said terminal and intermediate links, an adjustable connector link between the terminal links, terminal pins carried by said connector link, C-shaped shoes of hollow body structure formed with opposed slotted portions arranged between adjacent ends of said terminal and intermediate links said C-shaped shoes receiving in their slotted portions the pins of the adjacent ends of said terminal and intermediate links to secure said links in operative relation, cleats carried by said C-shaped shoes and disposed transversely thereof for arrangement upon the dual tires of said wheel, and manually operable means for locking said connector link in adjusted positions.

2,859,868
VEHICLE ENDLESS BELT TENSIONING MEANS
Lars Larsson, Morgongava, Sweden, assignor to Aktiebolaget Westermanmaskiner, Morgongava, Sweden, a corporation of Sweden
Application May 27, 1957, Serial No. 661,946
Claims priority, application Sweden June 1, 1956
5 Claims. (Cl. 305—6)



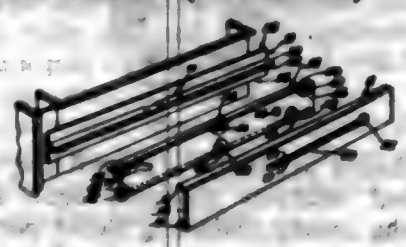
1. A vehicle comprising in combination a vehicle body including a frame, a pair of endless driving belts on opposite sides of the body movable with respect to the body for propelling the vehicle, load carrying wheels on each side of the body for supporting the body with respect to the belts, front and rear guide wheels for the belt, each belt being inclined downwardly and rearwardly between its front guide wheel and the supporting part of the belt, a load carrying roll engaging the belt between the inclined part and the supporting part thereof, a longitudinally extending carrier for said roll, a second roll mounted on the carrier spaced apart from and in front of the first-named roll and engaging the inclined part of the belt, a linkage pivotally connecting the carrier to said frame, and a compression spring acting on the carrier at a place closer to the first roll than to the second roll.

2,859,069
PROTECTIVE APPARATUS FOR HOT BOXES
George W. Acheff, University City, and Charles W. Neff, Ferguson, Mo., assignors to Acheff Railway Supply Company, St. Louis, Mo., a corporation of Missouri
Application March 1, 1957, Serial No. 643,332
9 Claims. (Cl. 308—1)



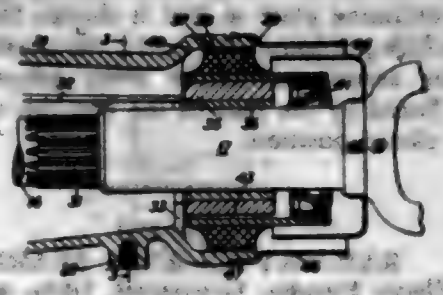
1. In a railroad journal box having a contained bearing, the improvement comprising protective apparatus having a housing, a lubricant chamber formed within said housing, a piston mounted within said lubricant chamber, said lubricant chamber having a discharge port leading from one side of said piston and a pressurized-gas connection to the chamber on the other side of said piston, said housing further including a chamber containing a supply of pressurized gas, and temperature-responsive valve means interposed between said supply of pressurized gas and said gas connection to the lubricant chamber, said temperature-responsive valve means being of a character such as to release gas to the piston in the lubricant chamber when the temperature exceeds a predetermined value.

2,859,070
EXTENSION HANGER FOR CABINET DRAWER
John R. Gomersall, Elgin, Ill., assignor to McGraw-Edison Company, a corporation of Delaware
Application May 21, 1954, Serial No. 431,493
20 Claims. (Cl. 308—3.8)



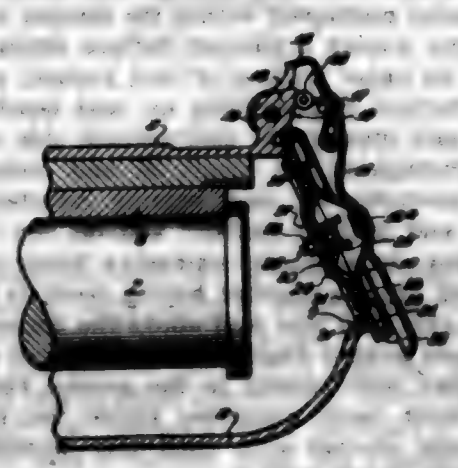
1. In a suspension for drawers and the like adapted to be moved into and out of a cabinet, a stationary cabinet track, and an intermediate drawer supporting member disposed to ride on said track to and from outer and inner positions, said track having an elongated slot of substantially uniform width disposed longitudinally from an outer portion to an inner portion thereof and an enlarged opening communicating with the innermost end of the slot, a pin extending from said intermediate member through said slot and engageable with the outer end of said slot to prevent longitudinal displacement of said intermediate member from said track, said pin having an enlarged head on its free end which head is insertable through said enlarged opening and adapted to engage said stationary track to retain said intermediate member against lateral displacement from said track when the intermediate member is disposed substantially at its outer position and is being moved to and from said outer position, and means for displacing said intermediate member vertically relative to said track when the intermediate member is adjacent its inner position, said enlarged opening and said pin being disposed so that they align with each other when the intermediate member is disposed substantially at its inner position to permit assembly of the pin through the enlarged opening and to permit said vertical displacement of the intermediate member relative to the track.

2,859,071
ROTARY SHAFT SEAL
Wilhelm Riehl, Raunheim am Main, and Heinrich Benz, Kelsterbach am Main, Germany, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 27, 1955, Serial No. 511,539
6 Claims. (Cl. 308—36.1)



1. Power delivery means for the transmissions of automotive vehicles and the like and comprising a casing having an output shaft projecting therefrom, bearing means supporting said output shaft in rotatable and axially movable relation to said casing, seal means disposed outwardly of said bearing means and adapted to seal said shaft against the loss of lubricating oil from said casing, resilient support means disposed in the end of said casing around said bearing means and supporting said bearing means and said shaft within said casing, and means associated with said casing and said bearing means for circulating oil for cooling said bearing and seal means from said casing through said bearing means and to said seal means and from said seal means to said casing through said bearing means.

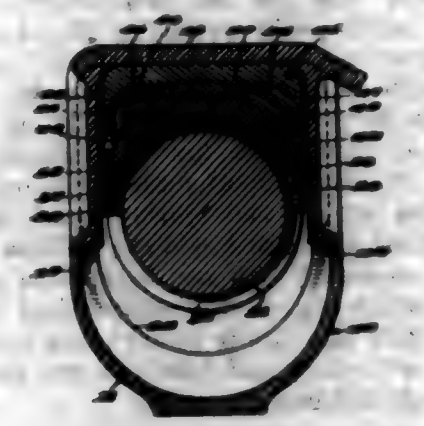
2,859,072
JOURNAL BOXES FOR RAILWAY CAR AXLES
William H. Sale, Scarsdale, Va., assignor to Kloster Hand Brake Co., Joliet, Ill., a corporation of Illinois
Application July 13, 1956, Serial No. 597,702
3 Claims. (Cl. 308—47)



1. The combination with a journal box for a railway axle, provided with an access-opening surrounded by a rim with an outer face, a hinged cover for closing said opening, provided with a marginal outwardly bulged portion defining a marginal recess in confronting relation with the outer face of the rim on the box and terminating in an inturned surrounding flange normally confronting the area surrounding the box-rim, and also provided with a substantially flat face-portion disposed directly inwards of the recess, an inwardly arched bridge fixed centrally on the inside of the cover, and spring-means for urging the cover toward the rim on the box; of an elastic sealing sheet extending across the inner side of the

cover including its flat face-portion, the marginal recess and said surrounding flange, and bulged inwardly by said bridge, a retaining plate having an inwardly bulged portion confronting, and for clamping the central portion of the sheet against, the bridge and a flat portion around said inwardly bulged portion confronting, and for clamping the adjacent portion of the sheet against, said flat face-portion on the cover, and means detachably securing the retaining plate so that it clamps the sheet against said flat face portion of the cover, the portion of the sheet extending across said recess being adapted to be outwardly flexed by the face of the box-rim when the cover is in its closed position.

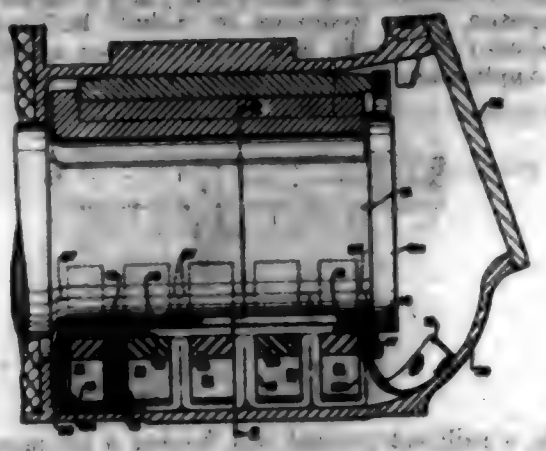
2,859,973
RAILWAY JOURNAL BEARING
Lorne Elwyn Furnas, Groveport, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application November 12, 1954, Serial No. 468,371
2 Claims. (Cl. 308—53)



1. A bearing and journal box assembly for a railway truck comprising, a journal box having a rear wall and a top wall, side walls on said journal box, a brass stop on each side wall presenting substantially parallel vertical inner faces, said rear wall having an arcuate opening therein, an axle extending through said opening and having a journal positioned within the journal box, a bearing member having a concave surface fitting about and engaging an upper portion of said journal, substantially parallel vertical side surfaces on said bearing member abutting said inner faces, said vertical side surfaces extending throughout the length of and constituting the lateral extremities of said bearing member, a wedge between said bearing member and the top wall of the journal box, an upwardly extending flange at an inner end of said bearing member having portions of sufficient height to abut said rear wall above the perimeter of said opening and thereby limit inward movement of the bearing member with respect to the journal box, and said vertical inner faces extending below the level of the axis of said journal with each face terminating in a downwardly facing surface.

2,859,974
JOURNAL LUBRICATORS
Walter Cubbie Dilg, Hewlett, N. Y., assignor to Wrought Equipment Company, New York, N. Y., a corporation of Maine
Application October 22, 1956, Serial No. 617,613
19 Claims. (Cl. 308—88)

1. A journal lubricator, which comprises a jacket of fibrous material having a pad at its top adapted to extend lengthwise of the journal and to engage the lower surface thereof and a plurality of wick sections extending downward from the pad and defining pockets extending transversely of the axis of the journal when the pad is inserted in the box and open at both ends, and a filler of resilient material having a mid-section within each pocket and end sections projecting out of the ends thereof,



the projecting end sections being adapted to contact the side walls of a journal box.

2,859,975
SHEAVE ASSEMBLY SEAL
Phillip A. D. Hobbs and Joseph B. Kennicks, Portland, Oreg., assignors to The Shockless Company, Inc., Portland, Oreg., a corporation of Oregon
Application April 29, 1955, Serial No. 504,712
5 Claims. (Cl. 308—187.1)

1. In a sheave assembly, a central pin, a sheave surrounding and rotatably mounted upon said pin, said sheave having axially extending sleeve portions on each side thereof concentric with and radially spaced from both said pin and the outer peripheral surface of said sheave, an annular member secured against rotation on said pin at each side of said sheave, each annular member having a peripheral portion adjacent the inside of one of said sleeve portions to provide a pair of opposed portions, a cap member secured against rotation on said pin on each side of said sheave, each cap member having a portion adjacent the end portion of one of said sleeve portions to provide another pair of opposed portions and a portion surrounding and adjacent the outer portion of the last-mentioned one of said sleeve portions to provide a further pair of opposed portions, and a sealing member positioned between each of said pairs of opposed surfaces.

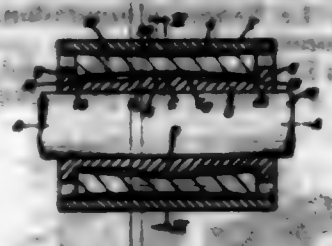
2,859,976
ROLLER BEARING
Edwin T. Lenig, Pittsburgh, Pa.
Application September 27, 1955, Serial No. 536,057
10 Claims. (Cl. 308—202)

1. A roller bearing comprising an inner race, an outer race surrounding said inner race, and a plurality of relatively flexible rotatable rollers arranged between said inner and outer races, said rollers contacting said inner and outer races adjacent their ends, the outer surface of said inner race being so shaped that it forms each roller so that its longitudinal axis is bent with the mid-point of

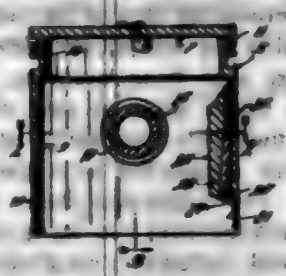
vertical members defining a vertical plane, said framework also including a molding secured to the front edges

2,859,983
TRAY ELEVATING DEVICE

the axis being spaced further from the axis of the inner race than a corresponding point on a straight line extending between the ends of said longitudinal axis, said rollers being free to move with respect to one another.

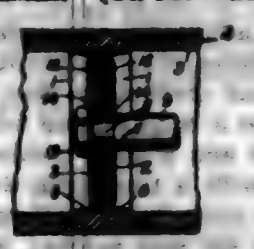


2,859,077
PISTON
Carl W. Stickley, Pontiac, Mich.
Application August 2, 1956, Serial No. 601,893
3 Claims. (Cl. 309—12)



1. In a piston having a head and a substantially tubular skirt depending therefrom, said skirt having a wrist pin opening extending transversely therethrough, means forming a boss within said skirt and on a portion thereof located on a diameter of the skirt arranged at substantially ninety degrees relative to said wrist pin opening, said boss having a tapered opening extended therethrough in a direction longitudinally of said piston and a slot communicating with and extended in opposite directions from said opening, with said slot being positioned to divide said boss into a pair of sections one of which is arranged outwardly of the other in a direction radially of said skirt, and a tapered wedge member progressively insertable into said opening to progressively enlarge said slot and move said one section radially outwardly of said skirt and thereby expand said piston.

2,859,078
CUP PACKING
Arthur W. Jacobi, Berea, Ohio
Application February 12, 1954, Serial No. 409,928
2 Claims. (Cl. 309—23)



1. A cup packing for pistons comprising a cup-shaped member molded of a horny plastic material having approximately the strength, modulus of elasticity, toughness, resilience, and hardness of nylon, said member having a relatively thick and inflexible bottom wall which has a central opening through which a piston rod is adapted to project and a relatively thinner and flexible annular skirt around the periphery of said wall which tapers from said wall to larger diameter at its end for resilient contact of only a portion of the axial length of said skirt within a cylinder bore to provide a low friction sliding seal, said wall, at the margin of such opening, including a short axially extending flexible lip which is of tapered cross-section terminating in a feather edge and which is adapted to be radially contracted to establish a fluid-tight seal around such piston rod.

2,859,079
TRIPLE SEAL PISTON RING
Holly M. Olson, Muskegon, Mich., assignor to Sealed Power Corporation, Muskegon, Mich., a corporation of Michigan
Application March 19, 1956, Serial No. 572,446
7 Claims. (Cl. 309—48)

1. In a piston ring, a circular ring member adapted to be received in a piston ring groove comprising, a plurality of circularly disposed, spaced, flat, horizontal sections, two spaced legs integral with and extending vertically from the inner edge portion of each horizontal section, and integral upper sections connecting the legs of adjacent horizontal sections at the upper ends thereof, each horizontal flat section at its inner edge portion having an integral, generally vertical, spring tongue positioned outwardly beyond adjacent legs between which located, and each upper section having an outwardly extending, generally horizontal, spring tongue, said last mentioned tongues being located over the spaces between said horizontal flat sections and said first mentioned spring tongues extending upwardly beyond said second mentioned spring tongues.

2,859,080
COLLAPSIBLE TABLE HAVING A ROTATING TOP
Irlin Reinelt, Cleveland, Ohio, assignor to The Kreuzer Corporation, Cleveland, Ohio
Application October 31, 1957, Serial No. 693,351
2 Claims. (Cl. 311—83)

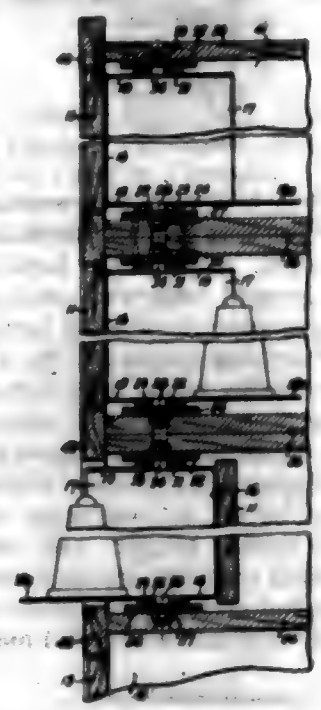
1. A collapsible table having a rotating top, comprising in combination, a plurality of support leg elements arranged in clustered relation within a cylindrical collar positioned intermediate the ends of said legs and adapted to hold said legs in either expanded or collapsed positions, each of said legs having a roller mounted at the upper end thereof, and a circular table top bounded by a peripheral track, engageable by said rollers when the legs are in their expanded position, the so engaged table top being free to rotate on the rollers with the center of the track as its axis of rotation.

2,859,081
DISPLAY CABINET
Robert R. Welch, Portland, Oreg., assignor to Revolva Products, Inc., Portland, Oreg., a corporation of Oregon
Application December 6, 1954, Serial No. 473,239
2 Claims. (Cl. 312—130)

1. In a display cabinet, a framework including a plurality of horizontal and vertical members defining a plurality of recesses, the front edges of said horizontal and

casing of slightly elastic material adapted to telescopingly head on said receptacle spaced upwardly from said upper

vertical members defining a vertical plane, said framework also including a molding secured to the front edges of said horizontal and vertical members to form a planar front wall having openings therein communicating with said recesses, a display unit mounted in each of said recesses, each of said display units comprising a rear wall, horizontal top and bottom walls, and a pair of vertical side walls defining an open-faced display cubical, a front panel mounted on said rear wall, each of said front panels and rear wall having an opening therein, a transparent member mounted in said front panel and closing the opening in said front panel, an opaque three-sided member mounted in the opening in said rear wall

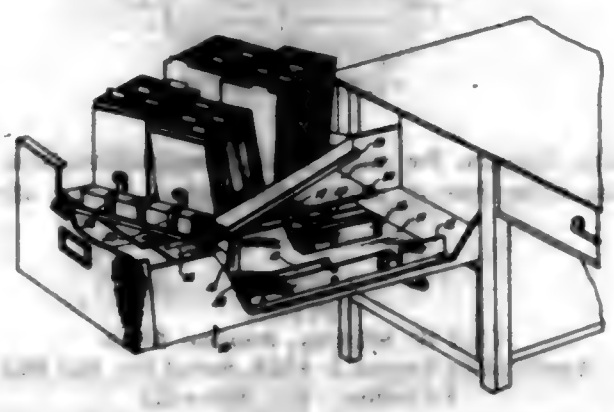


and front panel to the rear of said transparent member, said three-sided member having an open end facing the transparent member so that articles stored within the three-sided member may be viewed through the transparent member, means for pivotally mounting said display units in said recesses upon said horizontal members whereby said display units may be rotated between open and closed positions, in the closed position the front panel mounted on the rear wall of the display unit being flush with the molding forming the front wall of the framework, and in an open position the open face of the display cubical facing the opening communicating with the recess.

2,859,862
TABLES
Ella E. Legue, Fullerton, Calif.
Application August 6, 1954, Serial No. 448,215
1 Claim. (Cl. 312—289)

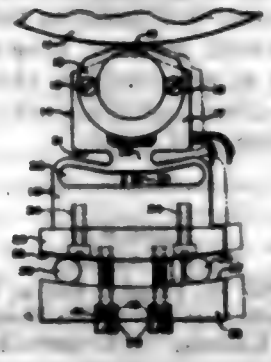
In a table of the class described: an upper frame assembly including a top of sheet metal having an opening adjacent one end and a recess spaced somewhat from said opening and toward the center of said top; a bowl for said opening; an upstanding marginal flange about said top; legs supporting said assembly; and a head rest including a base removably receivable in said recess, a member upstanding from said base, and cushion means for the upper edge of said member.

2,859,063
TRAY ELEVATING DEVICE
Frank K. Devlin and Henry J. Siemon, New York, N. Y., assignors to Le Febure Corporation, Cedar Rapids, Iowa, a corporation of Iowa
Application February 15, 1956, Serial No. 488,351
4 Claims. (Cl. 312—296)



1. In a tray elevating device in combination, a base member a plurality of triangular elevating arms pivotally mounted on said base member, a shelf pivotally mounted on the upper ends of said elevating members, counterbalance members including spring bias linking means operatively connected at a point forwardly and intermediate of the aforesaid base and shelf pivotal mountings to each of said elevating members and said base member and extending rearwardly in the same plane thereof, and a locking means operatively connecting one of said elevating members and said base member.

2,859,084
MOUNTING MEANS FOR MAGNETIC TRANSDUCING HEADS
Franklin M. Raddin, Morristown, N. J., assignor to Monroe Calculating Machine Company, Orange, N. J., a corporation of Delaware
Application February 4, 1955, Serial No. 486,856
16 Claims. (Cl. 346—74)

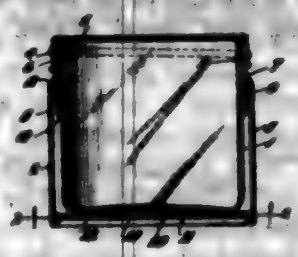


1. Means for adjustably supporting a magnetic transducing head relative to a magnetic recording medium comprising a plate divided by deep notches in the side edges thereof into a head portion adapted to support the transducing head and a body portion, the body portion being provided with a transverse slot adjacent the said notches and the plate being deformed to compress the slot intermediate the said notches, and means for altering the thickness of the compressed portion of the slot to move the head portion of the plate toward and away from the recording medium.

2,859,085
COLD CREAM JARS
Charles Chambers Morrison, Shelter Island, N. Y., assignor to F. N. Burt Company, Inc., Buffalo, N. Y., a corporation of Delaware
Application August 10, 1953, Serial No. 373,379
1 Claim. (Cl. 215—12)

A container including, in combination, an inner receptacle of frangible material; a supporting and protecting

casing of slightly elastic material adapted to telescopingly receive and enclose a major portion of said receptacle and support and protect the same; mating parts on said receptacle and casing cooperating to prevent relative rotation of one with respect to the other; an outwardly pro-



jecting part integral with said receptacle and extending circumferentially therearound, being spaced from the upper and lower extremities thereof, said part having an upper and lower shoulder thereon and an upwardly and outwardly inclined surface extending from the lower shoulder to the upper shoulder; an outwardly directed bead on said receptacle spaced upwardly from said upper shoulder and defining a groove therewith; and an inwardly directed bead at the upper end of said casing, the internal diameter of said casing at said bead being approximately equal to the internal diameter of the receptacle measured at the bottom of said groove and less than the external diameter of the receptacle measured at the extreme upper end of said inclined surface while the internal diameter of the casing throughout the remainder of its height is approximately equal to the external diameter of said receptacle at the upper end of said surface whereby said bead is adapted to seat in said groove when said receptacle and casing are assembled, said inclined surface at points spaced circumferentially around the receptacle being extended upwardly to said bead to divide said groove into a number of segments and said inwardly directed casing bead being cut away at correspondingly spaced points around the casing, said extensions and said cutaway bead portions constituting mating parts cooperating to prevent relative rotation between the casing and receptacle.

CHEMICAL

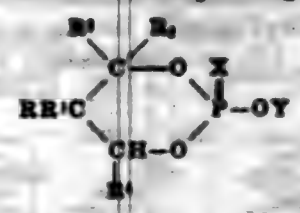
2,859,086

PROCESS UTILIZING PHOSPHORINANYL DERIVATIVES FOR DYEING ARTICLES MADE FROM ACRYLONITRILE-CONTAINING POLYMERS

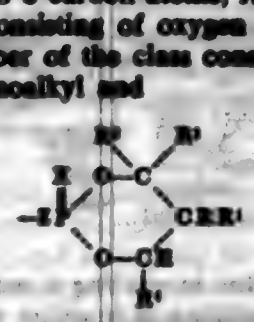
Theophilus A. Feild, Jr., Charleston, and Archie G. Schoonover and John H. Purse, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application September 27, 1954
Serial No. 458,696
17 Claims. (Cl. 8—55)

1. Process for dyeing textile articles made from resinous polyacrylonitriles and polymers of acrylonitrile with at least one other vinyl compound, which comprises treating said article with an aqueous bath containing a phosphorus-containing dyeing assistant and a dispersing agent for said assistant, the said dyeing assistant being a compound having a structure corresponding to the formula:



wherein R, R^1, R^2, R^3, and R^4, respectively, represents a radical of the class consisting of hydrogen and the alkyl groups having 1 to 8 carbon atoms; X represents a radical of the class consisting of oxygen and sulfur; and Y represents a member of the class consisting of the alkyl, phenyl, tolyl, cyanoalkyl and



radicals wherein R, R^1, R^2, R^3, R^4 and X are as aforesaid; and Z represents a divalent radical having two terminal oxy groups and selected from the class consisting of the divalent dioxyalkylene residues of the alkylene glycols and polyalkylene glycols, and corresponding residues of dihydric phenols, biphenols and diphenylolalkanes; and at some stage while the dyeing assistant is present on the article heating the article in an aqueous dyebath containing a dyestuff of the class consisting of the acid-type, the acetate-type, the vat-type and the metallized-type dyestuffs.

2,859,087

PROCESS FOR BLEACHING WEBS OF FIBROUS CELLULOSE MATERIAL WITH HYDROGEN PEROXIDE VAPOR CONTAINING WATER VAPOR

Alfred T. Hawthorne, Hugh G. Hull, and James H. Young, Niagara Falls, N. Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,433
13 Claims. (Cl. 8—106)

1. A bleaching process comprising separately and continuously applying to a moving damp web of a fibrous cellulose material bleachable with hydrogen peroxide (*a*) a liquid, non-volatile, water-soluble conditioning agent effective in enhancing the bleaching action of hydrogen peroxide upon said material, and (*b*) hydrogen peroxide vapor, said damp web containing free water equal to from 5 to 70% of its weight and said vapor being applied by contacting the moving damp web with a mixture of hydrogen peroxide vapor and at least 45% by volume water vapor for a time of from 0.05 to 0.2 second until from 0.01 to 3% hydrogen peroxide based upon the dry weight of said fibrous material is absorbed by said web, and thereafter bleaching said web with the absorbed hydrogen peroxide in the absence of any further amount of hydrogen peroxide.

2,859,088

PROCESS OF MAKING DENTAL PARTS

Paul H. Erdle, Chicago, Ill., and Ray C. Foggin, Montclair, N. J., assignors to Austenal, Inc., a corporation of New York

Application November 15, 1954, Serial No. 468,727
10 Claims. (Cl. 18—47)

1. The process which comprises forming a mold including at least one flexible mold portion composed of

gelled agar material which becomes fluid upon heating, casting in said mold a fluid polymerizable organic material effectively inert to said agar material and which polymerizes at a temperature below that at which said agar material becomes fluid, and polymerizing said organic material at a temperature below the fluidizing temperature of said agar material.

2,859,089

PROCESS OF PRODUCING FILAMENTS OF VINYLIDENE CHLORIDE RESINS CONTAINING A DI-METHYL ESTER

Robert J. Reid, Canal Fulton, William Moyo Smith, Jr., Cuyahoga Falls, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application February 23, 1954
Serial No. 412,076
5 Claims. (Cl. 18—54)

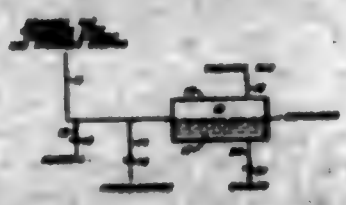
1. In the process of extruding and orienting a resin selected from the group consisting of homopolymers of vinylidene chloride and copolymers thereof with up to 15 percent by weight (based on the weight of said copolymers) of other ethylenically unsaturated monomer copolymerized therewith, the improvement which comprises extruding and orienting by stretching at least 400 percent to produce filament of a gauge of .006 to .015 inch, using as a processing aid in the molten resin from 4 to 10 percent by weight (based on the weight of the resin) of an ester from the group consisting of dimethyl suberate, dimethyl azelate, and dimethyl sebacate whereby a non-exuding extruded, oriented filament is obtained.

2,859,090

TREATMENT OF FLUIDS FOR REMOVAL OF HYDROGEN CYANIDE

Jean H. Karchmer, Houston, and Marjorie T. Walker, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application February 7, 1955, Serial No. 486,357
12 Claims. (Cl. 23—2)



1. A method for removing a major portion of hydrogen cyanide and only a minor portion of hydrogen sulphide from catalytically cracked fluids containing hydrogen cyanide, hydrogen sulphide, ammonia and moisture comprising reacting said fluids with a water soluble aliphatic aldehyde, the mol ratio of the aldehyde ion to the cyanide ion being in the range of about 1:1 to about 6:1 to form a cyanide-aldehyde reaction product, said reaction medium having a pH in the range of about 8 to about 11.

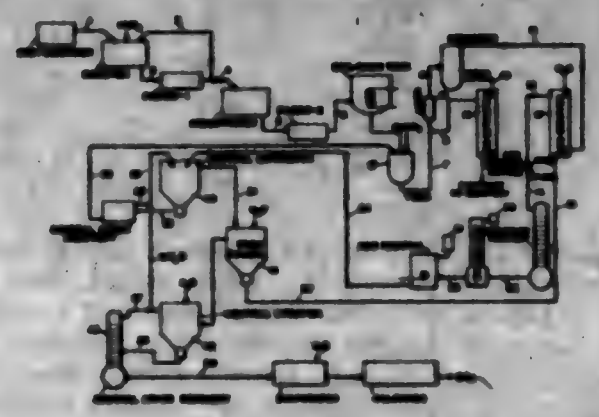
2,859,091

RECOVERY OF URANIUM FROM PITCHBLENDE ORES

Charles E. Winters, Oak Ridge, Tenn.

Application August 8, 1950, Serial No. 178,566
5 Claims. (Cl. 23—14.5)
(Granted under Title 35, U. S. Code (1952), sec. 266)

5. A method of recovering uranium from an aqueous nitric acid solution containing extraneous impurities, a major portion thereof consisting of lead, which comprises adding a soluble sulfate to said solution, separating the resulting precipitate from the resulting supernatant solution, adding an acid-soluble barium salt to the resulting separated supernatant solution, separating the resulting precipitate from the resulting supernatant solution, dissolving a metal nitrate in relatively high concentration in the resulting separated supernatant solution, circulating a stream of a substantially water-immiscible, selective, organic solvent in a closed path, contacting said solvent stream in a portion of its path with the resulting solution containing said metal nitrate to preferentially



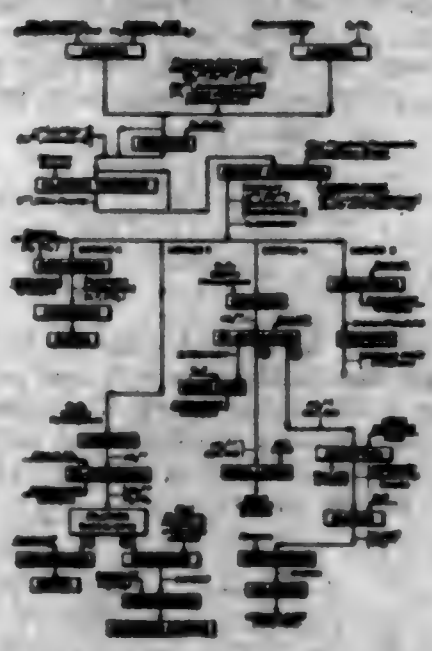
extract the uranium from said solution, stripping the resulting uranium-containing stream of organic solvent with water in another portion of its path to recover the uranium in aqueous solution, and recycling the resulting stripped organic solvent to said first portion of its path for contact with said solution containing said metal nitrate.

2,859,092

SOLVENT EXTRACTION PROCESS FOR THE RECOVERY OF METALS FROM PHOSPHORIC ACID

Richard H. Baker, Walnut Creek, and Roy S. Long, Concord, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application February 5, 1953, Serial No. 335,276
27 Claims. (Cl. 23—14.5)



1. In a process for recovering a metal value selected from the group consisting of uranium and thorium, from a solid material, the steps comprising producing an acidic phosphatic solution of said metal value containing said metal value in at least a trivalent and dipositively charged ionic state, contacting said solution with a solvent extractant phase containing a diluent and a material selected from the group consisting of mono and di alkyl phosphates, alkyl phosphonates and alkyl phosphites, whereby said metal forms a derivative compound with said material and thereby said metal value enters said extractant phase, and recovering the metal value from said extractant.

2,859,093

ZIRCONIUM PHOSPHATE ADSORPTION METHOD

Edwin R. Russell, Chicago, Ill., and Arthur W. Adamson, Jack Schubert, and George E. Boyd, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application August 18, 1944, Serial No. 550,012
7 Claims. (Cl. 23—14.5)

4. A method of separating fission product values from plutonium values present in a maximum valent state of +4 in a mineral acid aqueous solution, which comprises contacting said aqueous solution with a salt the anion of which forms an insoluble compound with said plutonium values whereby said plutonium values and some of said fission product values are adsorbed on said salt, said salt being selected from the group consisting of zirconium orthophosphate and barium iodate, eluting said adsorbed fission product values by contacting said salt with a mixture of nitric and phosphoric acids the total concentration of said acids being between 1.1 and 3.4 N; and then eluting said plutonium values with a mineral acid of a concentration of about 7 N.

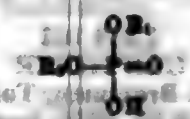
2,859,094

URANIUM EXTRACTION PROCESS USING SYNERGISTIC REAGENTS

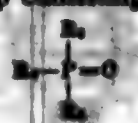
John M. Schmitt, Charles A. Blake, Jr., Keith B. Brown, and Charles F. Coleman, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 7, 1957
Serial No. 638,885
5 Claims. (Cl. 23—14.5)

1. A process for the recovery of uranium values from an aqueous acidic solution containing said values which comprises contacting said solution with an organic mixture comprised of a substantially water-immiscible diluent, a dialkylphosphoric acid having the formula



where R_1 and R_2 represent alkyl radicals, the total number of carbon atoms in said dialkylphosphoric acid being at least ten, and a neutral organophosphorus compound selected from the group consisting of



and

where R_3, R_4, and R_5 are selected from the group consisting of alkyl and alkoxy radicals, and alkyl and alkoxy radicals having at least one substituent selected from the group consisting of hydroxyl and chloro, and R_6, R_7, and R_8 represent alkoxy radicals, the total number of carbon atoms in said neutral organophosphorus compound being at least ten, whereby uranium values are transferred to the organic phase, and separating the resulting uranium-loaded organic phase from the remaining aqueous phase.

2,859,095

PROCESS OF PRODUCING Cm^{244} AND Cm^{242}

Winston M. Manning and Martin H. Studier, Downers Grove, Herbert Diamond, Western Springs, and Paul R. Fields, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application September 27, 1957
Serial No. 686,502
5 Claims. (Cl. 23—14.5)

1. A process of producing Cm^{244} and Cm^{242} comprising bombarding Pu^{239}-containing material with neutrons of thermal energy and a flux of at least 10^{14} neutrons/cm.^{2}/sec. for a time sufficient to obtain an integrated flux of at least 10^{21} neutrons/cm.^{2}, dissolving the bombarded material in hydrochloric acid, oxidizing the plutonium to at least its tetravalent state, flowing the solution through an anion exchange resin whereby said plutonium values are adsorbed while the fission products and transplutonium elements formed remain in the aqueous solution leaving said resin as effluent, contacting said effluent with a cation exchange resin whereby said values of the transplutonium elements are adsorbed while said fission product values remain in the aqueous solution leaving the resin, contacting the cation exchange resin with an aqueous citrate solution whereby said transplutonium elements are eluted in the order of decreasing atomic weight, and collecting said transplutonium-containing citrate eluates fractionally.

2,859,096

PROCESS FOR PRODUCTION OF URANIUM HEXAFLUORIDE

Robert Dudley Fowler, Baltimore, Md., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 24, 1947
Serial No. 730,656
7 Claims. (Cl. 23—14.5)

1. Process for the production of uranium hexafluoride which comprises contacting an oxide of uranium simultaneously with elemental carbon and elemental fluorine at 400° C. to 500° C., and recovering the uranium hexafluoride thereby produced.

2,859,097

PREPARATION OF PLUTONIUM HALIDES

Norman B. Davidson, Sierra Madre, Calif., and Joseph J. Katz, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application June 3, 1947
Serial No. 752,278
3 Claims. (Cl. 23—14.5)

1. A process for the preparation of plutonium trihalides comprising contacting a compound of plutonium selected from the group consisting of plutonium oxides, plutonium peroxides, plutonium hydroxides, plutonium nitrates, and plutonium oxalates with a phosphorus halide at a temperature of between 250 and 300° C. and at superatmospheric pressure.

2,859,098

PROCESS FOR THE SEPARATION OF COLUMBIUM, TANTALUM, AND TITANIUM VALUES

John R. Ruhoff and George L. Martin, Webster Groves, and Charles O. Gerlon, Brentwood, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Application February 15, 1955
Serial No. 488,482
4 Claims. (Cl. 23—23)

1. The method of recovering columbium and tantalum values from a concentrate containing compounds of said elements and an element of group IV B of the periodic table, comprising adding the hydrous oxide of a group IV B element to a solution of said concentrate containing the fluocomplexes of columbium, tantalum and the group IV B element while maintaining the pH at a value between approximately 2–7 to precipitate hydrous oxides of columbium and tantalum.

2,859,099

PROCESS FOR THE SEPARATION OF COLUMBIUM AND TANTALUM VALUES

John R. Ruhoff and George L. Martin, Webster Groves, and Charles O. Gerlan, Brentwood, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Application February 15, 1955
Serial No. 488,493
3 Claims. (Cl. 23—23)

1. The method of recovering tantalum values from a concentrate containing compounds of tantalum and columbium, comprising adding the hydrous oxide of columbium to an aqueous solution of said concentrate containing the fluocomplexes of columbium and tantalum while maintaining the pH at a value between approximately 2–6 to effect precipitation of hydrous tantalum oxide.

2,859,100

PROCESS OF EXTRACTING ALUMINA FROM RAW CALCIUM ALUMINATES

Jean Charles Seailles, Paris, France

No Drawing. Application July 9, 1953
Serial No. 367,100
11 Claims. (Cl. 23—143)

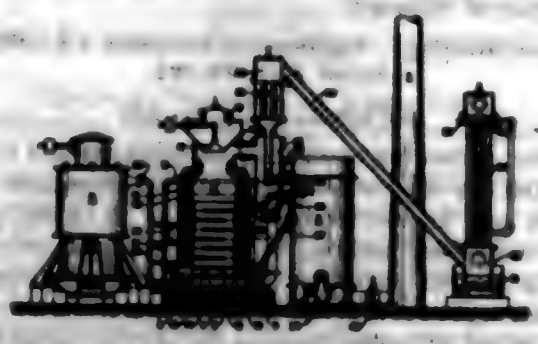
1. A method of producing substantially pure alumina having a low silica content from calcium aluminate containing silica as an impurity, comprising the steps of leaching an anhydrous calcium aluminate selected from the group consisting of $CaO.Al_2O_3$, $3CaO.Al_2O_3$ and $5CaO.3Al_2O_3$ with a dilute aqueous solution of an inorganic alkali metal salt the alkaline cations of which salt react with the Al_2O_3 of said calcium aluminate to form soluble alkaline aluminate and the anions of which salt react with the CaO of said calcium aluminate to form a calcium compound less soluble than said calcium aluminate, said alkaline cations being in said solution in an amount molecularly equivalent to between 3–18.3 grams Na_2O per liter; adjusting the amount of said cations and said anions in said solution with respect to said calcium aluminate to correspond to the equivalent of between 1–1.6 moles of Na_2O per mole of Al_2O_3 of said calcium aluminate and to have present less anions than the amount necessary to react with all of said CaO of said calcium aluminate so as to form an aqueous aluminate solution containing calcium aluminate in solution, said calcium aluminate in solution preventing the dissolution of silica in solution, thereby obtaining an aqueous aluminate solution substantially free of silica; and recovering substantially pure silica-free alumina from said solution.

2,859,101

REACTION FURNACE FOR PRODUCING CARBON DISULPHIDE

Yehota Nobea, Toyohama-cho, Mizuyo-gun, Kagawa-ken, Japan, assignor to Shikoku Kasei Kogyo Company, Limited, Marugame-shi, Kagawa-ken, Japan, a corporation of Japan

Application April 8, 1953, Serial No. 347,553
Claims priority, application Japan May 21, 1952
8 Claims. (Cl. 23—277)



1. A reaction furnace for producing carbon disulphide comprising a rectangular, upstanding housing having an apertured horizontal dividing wall extending therecross spaced from but adjacent the bottom to divide the interior of the housing into a flat rectangular sulphur vaporizing chamber at the bottom of said housing below said wall and a relatively large space in said housing above said wall, means for supplying molten sulphur to said sulphur vaporizing chamber, heating means in the upper part of said chamber for vaporizing the sulphur in the latter, a series of spaced apart, parallel vertical walls extending across said relatively large space to divide the latter into alternately arranged, side-by-side heating chambers and reaction chambers of rectangular cross-section having said vertical walls in common so that heat from said heating chambers can be transferred directly through said vertical walls to the adjacent reaction chambers, means for heating the interiors of said heating chambers, a separate horizontal partition extending between said vertical walls at the bottom of below each heating chamber at a level above that of said horizontal dividing wall to define the bottom of the related heating chamber and the top of a communicating chamber, said horizontal wall having apertures for communicating said sulphur vaporizing chamber with each of said communicating chambers, said vertical walls having passages in the lower portions thereof opening from said communicating chambers into the adjacent reaction chambers to admit sulphur vapor to the latter by way of said sulphur vaporizing chamber and said communicating chambers, said passages being inclined downwardly in the direction from the related communicating chamber to the related reaction chamber, means for feeding carbonaceous materials into each of said reaction chambers at the top of the latter to be heated within the reaction chambers by heat transfer from the adjacent heating chambers, and means for discharging carbon disulphide from the upper portions of said reaction chambers.

2,859,101

GAS MIXER

William S. Brummett, Tulsa, Okla.

Application April 28, 1956, Serial No. 579,653
1 Claim. (Cl. 48—189)

A gas saver and mixer comprising a housing, divided into a pair of sections, each provided with an internally threaded neck for receiving the threaded ends of conduits, a disk having a central aperture, interposed between the sections, said sections being secured together to hold said disks in fixed position, a disk in each of the internally threaded neck portions, the latter two disks being apertured and substantially spaced from the first mentioned disk to provide substantially large mixing chambers.

2,859,103

PROCESS FOR THE PRODUCTION OF SYNTHESIS GAS WITHOUT CATALYSTS

Guido Green, Milan, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Application September 24, 1952, Serial No. 310,510
Claims priority, application Italy September 28, 1954
13 Claims. (Cl. 48—196)

1. The process of producing a gas containing CO and H_2 which is substantially free from gas black and all but a minor amount of residual methane by partial combustion of 95–100% pure methane with substantially pure oxygen in the absence of any catalyst and of any additive

SO_2-gases and SO_3-gas containing vapors relieved from ticles in the pulp, diluting the thus deliberated pulp to

of inert gases and steam and without the supply of outside heat, said process comprising intimately mixing the two gases immediately prior to introduction into a burner reaction zone by impinging upon each other streams of the two gases at kinetic energies whose respective opposite directional components are substantially equal, introducing the premixed gases into the reaction zone and maintaining said reaction zone at a temperature not exceeding 1000° C., said reaction zone being operated at substantially atmospheric pressure and under conditions minimizing turbulence, the molar ratio of oxygen to methane being in the range from 0.5 to 0.8.

2,839,104

ETHYLENEDIAMINE DERIVATIVES AND PREPARATION

Harry Krull, Edgewood, R. I., assignor to Geigy Chemical Corporation, a corporation of Delaware

No Drawing. Application October 2, 1952
Serial No. 312,668
14 Claims. (Cl. 71—1)

1. A member of the class consisting of N,N-dihydroxyethyl N',N'-dicarboxymethyl ethylenediamine, its water-soluble salts with monovalent cations, and its water-soluble chelate complexes with divalent and higher than divalent metals.

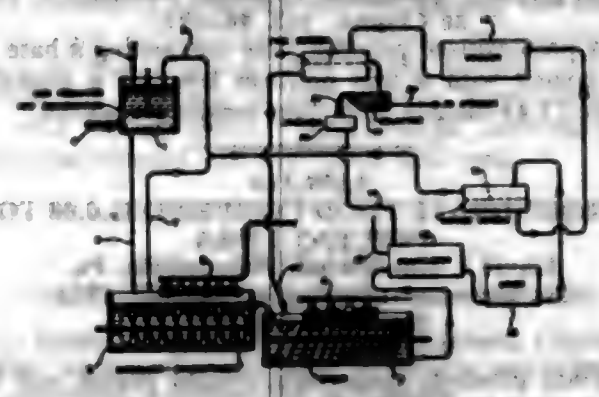
8. The ferric chelate of N,N-dihydroxyethyl N',N'-dicarboxymethyl ethylenediamine.

2,839,105

GRANULAR FERTILIZERS AND PROCESSES FOR MAKING THEM

Jean Meyrand, Chauny, and Bernard Bigot, Rouen, France, assignors to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France

Application July 9, 1952, Serial No. 297,872
Claims priority, application France July 24, 1951
12 Claims. (Cl. 71—64)



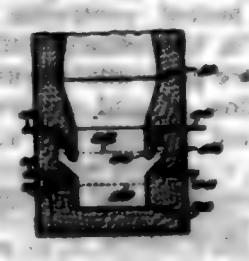
1. A process of making fertilizer from a sludge resulting from the attack by nitric acid on natural phosphate of fertilizer grade from which calcium nitrate has been removed and to which ammoniacal nitrogen has been added and which comprises about 28% water, which comprises mixing ammonia with the sludge, simultaneously adding thereto hot, oversized granules, as hereinafter defined, taken from the fertilizer produced by the process, while maintaining the sludge at about 105 degrees C., removing a part of the product thus produced and adding thereto additional quantities of said hot, oversized granules while maintaining said part at about 90 degrees C., mixing the product with enough cold, undersized particles, as hereinafter defined, taken from the fertilizer produced by the process, to produce a paste, while maintaining the temperature under 70 degrees C., mixing the paste thus formed with disruptive agitation with potassium chloride and with finely divided fertilizer derived from the product produced by the process, drying the product, separating it into parts having dimensions on the order of 2 to 4 millimeters, dimensions over that size and dimensions under that size, and re-cycling the parts having oversized dimensions to the process steps as hereinbefore indicated.

2,839,106

PROCESS AND APPARATUS FOR REMOVING SULFUR FROM IRON

Randolph Antonson, Boston, Mass.

Original application September 17, 1952, Serial No. 310,069. Divided and this application September 15, 1955, Serial No. 534,447
3 Claims. (Cl. 75—59)



1. A process for removing sulfur from the molten iron underlying a layer of slag in a blast furnace, which is characterized by the steps of forming a closed recess above a marginal portion of the slag layer in the furnace, forcing an oxygen-containing gas into the slag in said recess, and withdrawing sulfur oxides from the said recess while the slag therein remains merged with the slag layer in the furnace.

2,839,107

METHOD OF RECOVERING VANADIUM FROM VANADIUM-CONTAINING IRON ORES

Nils H. Brundin, Hoganas, and Gustav Edvard Henry Landberg, Gavle, Sweden, assignors to Hoganas-Billesholms Aktiebolag, Hoganas, Sweden, a company of Sweden

No Drawing. Application October 4, 1954
Serial No. 460,231
3 Claims. (Cl. 75—108)

1. Process for the recovery of vanadium from iron ore containing less than about 2% of vanadium calculated as V_2O_5 and for the simultaneous production of a sinter of the iron ore in lump form suitable for charging into a blast furnace which comprises mixing the iron ore with sodium sulfate in an amount corresponding to from 1 to 1.5 times the stoichiometric ratio with respect to the vanadium content of the ore, sintering the mixture under oxidizing conditions at a temperature within the range from 1000° C. to 1300° C., leaching the resulting sinter with water and precipitating the vanadium from the resulting leach solution.

2,839,108

METHOD FOR PREPARING DIGESTION ACID FOR DIGESTION OF SULPHITE

Curt Fredrik Rosenblad, Princeton, N. J., assignor to Aktiebolaget Rosenblads Patenter, Stockholm, Sweden

Application May 25, 1954, Serial No. 432,242
Claims priority, application Sweden May 27, 1953
5 Claims. (Cl. 92—3)

1. A method of producing highly preheated digestion acid with high SO_2-content in sulphite cellulose digestion processes comprising in combination the steps of passing

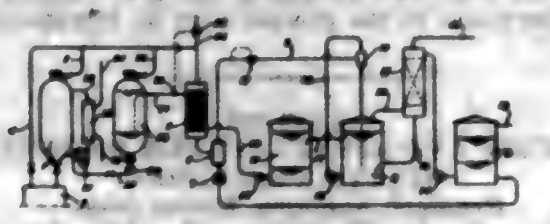
of heavy deepwater having a moisture content of about 45 to about 55 percent, the total moisture of the mixture

flavor residue, esterifying said crude flavor residue in the presence of an alcohol and an esterification catalyst,

comprising a rectangular, upstanding housing having an

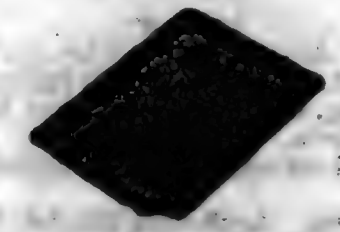
oxygen in the absence of any catalyst and of any additive

SO_3-gases and SO_2-gas containing vapors relieved from a digester at various pressure and temperature to a common surface cooler system in which the vapors are condensed and the gases cooled, passing such cooled gases in contact with raw acid at substantially atmospheric pressure so as to substantially saturate the raw acid with SO_3-gas at said pressure, passing a substantially continuous flow of the said saturated acid at a pressure high enough to maintain the SO_3-gases dissolved in the acid at a desired final temperature as cooling medium through



the aforesaid surface cooler system, where the flow of acid becomes heated in heat exchange with the gases and vapors from the digester, supplying additional heat to the flow of acid thus heated, controling the rate of additional heat supply in accordance with the variations in heat supplied with the gases and vapors from the digester so as to heat the flow of acid uniformly to the desired final temperature and passing said acid heated to said final temperature to a pressure acid accumulator in which is maintained a pressure high enough to maintain the SO_3 gases dissolved in the acid.

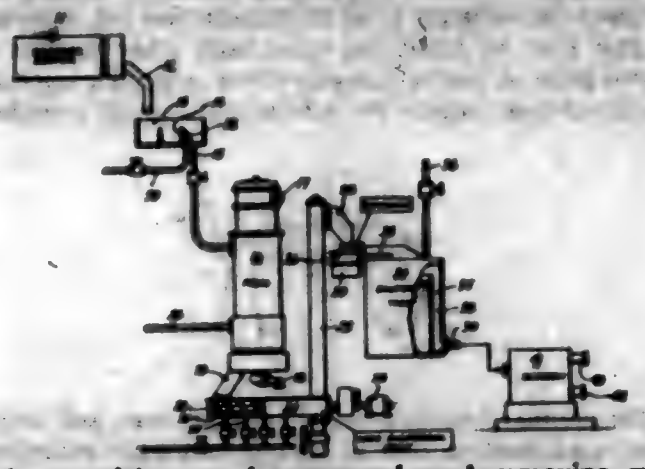
2,839,109
FELTED PRODUCTS CONTAINING GLASS FILAMENTS
Don M. Hawley, Geneva, and John C. Williams, St. Charles, Ill., assignors to Hawley Products Company, St. Charles, Ill., a corporation of Delaware
Application December 31, 1954, Serial No. 479,857
9 Claims. (Cl. 92—3)



1. A felted article consisting essentially of individual cut flexible thread-like bundles of glass filaments ⅛ inch to 8 inches long intermingled with one another and dispersed with hydratable fibers, said bundles each being coated with about 5% to 50% by weight of a water insoluble adherent coating material, the quantity of said hydratable fibers being within the range of 5% to 95% by weight of the total fibers.

2,839,110
METHOD AND APPARATUS FOR TREATMENT OF WASTE PAPER STOCK
Marcus E. Sanford, San Francisco, Calif., assignor to Fibreboard Paper Products Corporation, a corporation of Delaware
Application March 26, 1956, Serial No. 573,981
11 Claims. (Cl. 92—30)

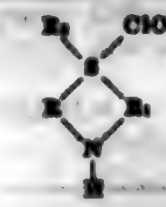
1. The method of treating fiber containing stock for the production of paper which comprises forming a thickened pulp of such stock, heating such thickened pulp at a temperature sufficient to disperse wax therein but below the temperature at which asphalt is melted and dispersed therein, combing the wax dispersed thickened stock to deflbrate the same by friction between the fibers without effecting substantial breaking up of foreign particles in the pulp, diluting the thus deflbrated pulp to provide an aqueous suspension thereof from which said



foreign particles can be removed, and removing such foreign particles from the suspension.

2,839,111
LITHOGRAPHIC PRINTING PLATES INCLUDING SULFONIUM PERCHLORATES
Georg Werner, Wiesbaden-Biebrich, Germany, assignor, by mesne assignments, to Azoplate Corporation, Summit, N. J., a corporation of New Jersey
No Drawing. Application March 10, 1955
Serial No. 493,557
Claims priority, application Germany March 12, 1954
18 Claims. (Cl. 96—33)

1. A presensitized printing plate comprising an aluminum base having a coating thereon comprising a compound having the formula:



in which R and R_1 are arylene radicals and R_2 is an alkyl radical.

2,839,112
QUINOLINE-QUINONE-(3,4) DIAZIDE PLATES
Oskar Süs, Wiesbaden-Biebrich, and Martin Glee, Wiesbaden, Germany, assignors to Azoplate Corporation, Summit, N. J., a corporation of New Jersey
No Drawing. Application January 27, 1955
Serial No. 484,369
Claims priority, application Germany February 6, 1954
26 Claims. (Cl. 96—91)

4. A presensitized printing plate comprising a base material coated with a thin uniform layer of a quinoline-quinone-(3,4)-diazide as a light-sensitive material.

2,839,113
CARBOHYDRATE FOOD COMPRISING 0.08 TO 10 PERCENT UREA
David J. Goodfriend, Philadelphia, Pa.
No Drawing. Application June 23, 1953
Serial No. 363,681
9 Claims. (Cl. 99—1)

6. Food products comprising refined sugars and 0.08 to 10 percent by weight of urea.

2,839,114
DRY STEEPWATER FEED MATERIAL
Stanley A. Watson, La Grange Park, Ill., assignor to Corn Products Refining Company, New York, N. Y., a corporation of New Jersey
No Drawing. Application February 21, 1957
Serial No. 641,497
3 Claims. (Cl. 99—2)

1. A process for making a feed comprising mixing 70 to 40 percent, dry basis, of a carrier with 30 to 60 percent

of heavy deepwater having a moisture content of about 45 to about 55 percent, the total moisture of the mixture being within the range of about 35 to about 42 percent, and drying the mixture, said carrier being selected from the group consisting of spent corn germ flakes and fine fiber fraction from the wet milling of corn, said fraction having a moisture content below 30 percent.

2,839,115

NUTRIENT FOOD PRODUCTS AND PROCESS OF PRODUCING SAME

Eugene Joel Rivesin, Washington, D. C.

No Drawing. Application July 7, 1953
Serial No. 366,637
9 Claims. (Cl. 99—30)

1. A process for preparing a food product comprising the steps of homogeneously dispersing food material in a fluid hydrophilic colloid solution which will set to a water-insoluble, irreversible, advanced gel, setting the resulting solution into said water-insoluble, irreversible advanced gel while said food material is homogeneously dispersed therein so as to entrap said food material throughout the gel structure, then homogeneously suspending small organoleptically perceptible particles of the resulting advanced gel in the edible liquid so that the resulting product is a stable suspension of drink consistency containing said food material within the individual suspended gel particles.

7. A food product of drink consistency produced by the process of claim 1.

2,839,116

TREATMENT OF COFFEE AND OTHER MATERIALS

Ernst Helmbs and Walter Kongre, Braunschweig, Germany, assignors to Helmbs & Sohn, Braunschweig, Germany, a German corporation

Application June 7, 1954, Serial No. 434,862
Claims priority, application Germany June 13, 1953
11 Claims. (Cl. 99—68)

1. Method for the roasting of coffee, coffee substitutes, and cocoa, which comprises establishing a roasting zone, maintaining such a material suspended in said zone by passing a gas substantially free from roasting impurities upwardly through said zone at a velocity sufficient to maintain the material suspended therein, heating the material in said zone to roasting temperature, maintaining the surface of said zone contacted by the material at a temperature not in excess of the roasting temperature and free from energy transfer therethrough, and thereafter discharging roasted material from said zone.

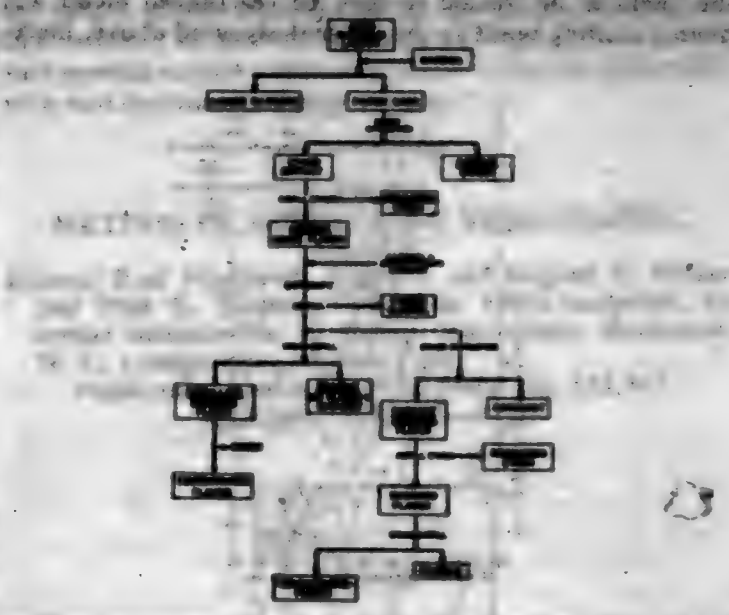
2,839,117

TREATMENT OF ALCOHOLIC LIQUORS

Harry Bruns, Springdale, and Stuart Schott, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, a corporation of Virginia

Application October 26, 1956, Serial No. 618,627
10 Claims. (Cl. 99—78)

1. A process for treating aged distilled alcoholic liquor which comprises contacting said liquor with carbon whereby congeneric and flavor-producing precursor material are adsorbed on said carbon, separating the resulting filter cake from supernatant liquor, extracting the adsorbed material from the filter with a solvent selected from the group consisting of alcohol and ethers, distilling the solvent from said extract, recovering a crude flavor residue, esterifying said crude flavor residue in the presence of an alcohol and an esterification catalyst,



and then distilling said esterified residue to obtain a distillate comprising enriched flavors.

2,839,118

METHOD OF COLD PROCESSING CITRUS FRUIT

George Thomas Lewis, Jacksonville, Fla., assignor of twenty-five percent to D. Byron King, Jacksonville, Fla.

No Drawing. Application March 9, 1953
Serial No. 341,332
3 Claims. (Cl. 99—101)

1. The method of treatment of citrus fruit to retain minerals and vitamins thereof which comprises removing the seeds from the fruit by coring, recovering juice from the cores and coring operation, squeezing the juice from the cored fruit and retaining said recovered and squeezed juice in the absence of air, grinding in the absence of air the fruit skin and pulp remaining from said squeezing operation, hammer milling in the absence of air the ground skin and pulp particles, adding a quantity of sugar substantially equal in weight to one-half of the combined weight of said milled skin and pulp particles and said retained juice and blending by means of high speed agitation in the absence of air all of the milled skin and pulp particles with all of said retained juice and with said added sugar, filling containers with the blended product resulting from said agitation, while maintaining said cored fruit, juice, skin, pulp and product at temperatures below about 150° F., and sealing said containers to exclude air from said product.

2,839,119

REARRANGED BASE STOCK TRIGLYCERIDE PRODUCTS AND PROCESS OF MAKING SAME

Walter M. Cochran, Highland Park, Melvin Leroy Ott, Chicago, and Claude W. Lentz, La Grange, Ill., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

Application May 28, 1953, Serial No. 356,903
6 Claims. (Cl. 99—118)

1. In a process for preparing a randomly-rearranged triglyceride base stock having a Wiley melting point between about 85° F. and 110° F. wherein a non-lauric oil component in amounts corresponding to about 60–90% by weight is blended with a lauric oil component as the remainder, and the resulting blend is catalytically rearranged while continuously maintained in homogeneous liquid phase, the improvement which comprises the steps of: prior to rearrangement, bringing the unsaturation value of the non-lauric component into the iodine value range of about 37.5 to 82 units and concomitantly in

view of the selected iodine value adjusting the proportions between the lauric and non-lauric components of the blend to be treated so that the rearranged blend will have a melting point in the range designated above, there-

by to utilize controlled unsaturation in securing melting characteristics in the rearranged product intermediate between those of non-lauric oils and those of conventional hard butters.

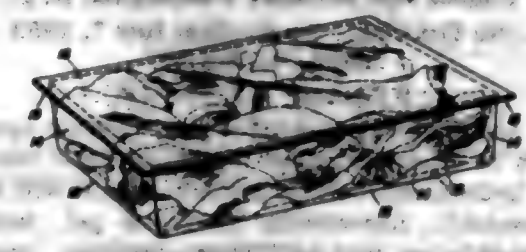
2,859,120
FLAVOR-STABLE REARRANGED FATS FROM DOMESTIC OILS
Walter M. Cochran, Highland Park, Claude W. Lentz, La Grange, and Melvin L. Ott, Park Ridge, Ill., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Application July 12, 1954
Serial No. 443,882
3 Claims. (Cl. 99—118)

1. The process of preparing novel fat products from reverting and non-reverting triglyceride fats, said process comprising the steps of: providing a first component comprising unsaturated triglyceride fat which normally turns rancid and develops unpleasant flavor by reason thereof; partially hydrogenating said first component sufficiently to impart thereto a stability against reversion at least equal to 94° hydrogenated cottonseed oil; blending said hydrogenated first triglyceride component with a second and different fat component composed essentially of triglycerides of the normally non-reverting, non-rancidifying type; and catalytically rearranging said blended components at temperatures below about 250° F. while continuously maintaining them in single-phase condition in contact with a low-temperature rearrangement catalyst under conditions favorable to complete rearrangement and to rearrangement activity on the part of said catalyst; subsequently destroying said catalyst; and converting the so-treated mass of completely rearranged triglycerides to a single fat product in an edible state.

2,859,121
PROCESS OF MANUFACTURING COATED NUTS
Fitzhugh L. Avera, Alameda, Calif., assignor, by mesne assignments, to The Best Foods, Inc., New York, N. Y., a corporation of New Jersey
No Drawing. Application July 19, 1954
Serial No. 444,395
3 Claims. (Cl. 99—126)

1. A process of roasting and coating nuts to render the same highly resistant to browning reaction and resistant to the development of undesirable flavors and odors; said process comprising providing a batch of molten Sorbitol, introducing a quantity of raw nuts into said batch of molten Sorbitol, maintaining the molten Sorbitol containing the raw nuts at a temperature ranging between 200° F. and 400° F. to effect a roasting of the nuts by heat transfer as well as the application of a coating of Sorbitol on each of the nuts, and thereafter removing the roasted nuts from the molten Sorbitol and draining excess Sorbitol therefrom.

2,859,122
MEAT PACKAGE
Vincent F. Mattei, East Meadow, and John Henry Druhan, Huntington, N. Y., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application October 6, 1955, Serial No. 538,843
1 Claim. (Cl. 99—174)



A process for maintaining meat products in a substantially released fluid-free weighed merchandisable condition which comprises filling a plurality of open-top moisture resistant trays of plastic material having a bottom and upstanding sides, integrally formed reinforcing corrugations in the bottom thereof and holes in the bottom of said corrugations, and of uniform tare with a fluid-releasing meat product, sealing moisture resistant transparent covers over said meat product containing trays, said covers having a uniform tare, placing the filled trays on a liquid absorbing material during storage, removing fluids from the trays as they are released by said meat product by absorbing said fluids on said liquid absorbing material, and determining the net weight of the meat products in each tray from time to time by subtracting the uniform tare from the gross weight of the meat product containing tray.

2,859,123
WAX AND SHELLAC POLISHING COMPOSITION
Thomas B. Smith, Chicago, Ill., assignor to Simonds Company, a corporation of Delaware
No Drawing. Application April 17, 1953
Serial No. 349,539
3 Claims. (Cl. 106—6)

1. A polishing composition capable of drying to a high, clear luster, comprising: water; shellac in an amount of about 7.5–10% by weight of the composition having an acid number of at least about 65; borax in an amount substantially only sufficient to solubilize the shellac in the water, this amount being not substantially greater than about 1.7% by weight of the composition and about 12–16% by weight of the shellac; and a water insoluble wax as an essential ingredient dispersed in said water, the composition having a total solids content of about 10–17% by weight of the composition.

2,859,124
MANUFACTURE OF LIGHT COLOURED ALUMINOUS CEMENT
George King, Birmingham, England, assignor, by mesne assignments, to Albright & Wilson (Mfg.) Limited, Oldbury, near Birmingham, England, a British company
No Drawing. Application January 12, 1954
Serial No. 404,773
Claims priority, application Great Britain January 19, 1953
13 Claims. (Cl. 106—104)

1. A process for the production of elemental phosphorus and a high alumina cement consisting of the steps of compounding a phosphorus containing mineral mix-

ture of naturally occurring fluorine containing aluminum phosphate and a naturally occurring calcium phosphate, at least one of which phosphates contains silica which on thermal reduction will produce a slag consisting essentially of alumina and lime with a weight ratio of from 0.50 to 1.85, and fluorine and silica, fluorine up to 3.5% by weight when having silica up to 5% by weight and fluorine up to 2.5% by weight when having silica up to 10% by weight, thermally reducing said mineral mixture in a furnace, withdrawing said slag in a molten state from the furnace during the reduction of said mixture, and cooling the molten slag sufficiently slowly to obtain a non-glassy material suitable for grinding to a high alumina cement.

2,859,125

ASPHALT ROOFING COMPOSITION

Ralph R. Ulrmacher, Fort Worth, Tex., assignor to Panther Oil & Grease Mfg. Company, Fort Worth, Tex., a corporation of Texas

No Drawing. Application May 27, 1957
Serial No. 661,581
3 Claims. (Cl. 106—278)

1. A roofing composition consisting of an asphalt blown in the presence of phosphorus pentoxide and a solvent comprising a mixture of xylene and petroleum naphtha.

2,859,126

COMPOSITION AND METHOD FOR PREVENTING PUTTY STAINS

Roy E. Rose, Detroit, Mich.

No Drawing. Application August 6, 1957
Serial No. 676,492
6 Claims. (Cl. 117—6)

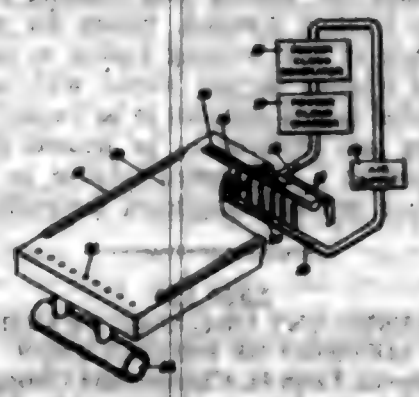
1. A coating composition for protecting glass from putty stains consisting essentially of 16 to 32 parts by weight of liquid animal glue; 1 to 2 parts by weight of a material selected from the group consisting of methyl cellulose and polyethylene glycol; and 48 to 128 parts by weight of water.

2,859,127

PROCESS FOR DEVELOPING ELECTROSTATIC IMAGES

Earnest Paul Matthews, Alliance, Ohio, assignor to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

Application May 13, 1955, Serial No. 508,129
2 Claims. (Cl. 117—17.5)



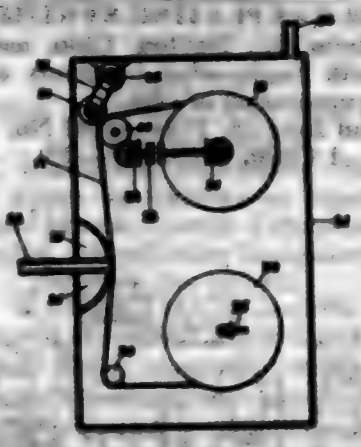
1. A process for developing an electrostatic image on an image-bearing surface, said process comprising drawing the field of forces of said image externally above the image-bearing surface, generating and charging a cloud of powder particles in gas, passing the charged cloud into an entrance chamber roughly the same length as the side of the image lying parallel to the chamber, adding additional air to the powder cloud at a point no closer to the image-bearing surface than the point of addition of the cloud to the chamber, mingling the additional air and the powder cloud to produce a relatively uniform powder cloud along the length of the chamber, and passing the relatively uniform powder cloud on a front approximately the length of the chamber along the image-bearing surface within the field of force in laminar flow whereby said powder particles deposit on said surface in conformity with said electrostatic image.

2,859,128

METHOD OF DEVELOPING XEROGRAPHIC IMAGE

Earnest Paul Matthews, Alliance, and Eugene C. Richer and Paul G. Andrus, Columbus, Ohio, assignors, by mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

Application March 14, 1955, Serial No. 511,363
4 Claims. (Cl. 117—17.5)



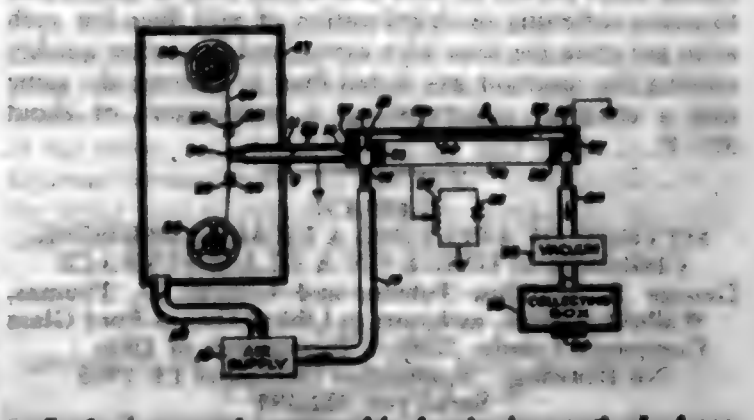
1. A method of developing a xerographic image on an image bearing surface comprising moving a porous material substantially uniformly impregnated and loaded with dry loose and releasable xerographic developer powder particles at a uniform rate of speed through a predetermined path, flowing a uniform and controlled gas flow through successive portions of the material loaded with xerographic developer powder particles as said porous material moves through said predetermined path, said gas being at a sufficient pressure to remove particles from said portions into the gas flow thereby creating an aerosol of xerographic developer powder particles, and flowing the aerosol of xerographic developer powder particles to a development zone for deposition in image formation on the image bearing surface.

2,859,129

PROCESS FOR DEVELOPING ELECTROSTATIC IMAGES AND APPARATUS THEREFOR

Richard E. Hayford, Pittsford, N. Y., assignor to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

Application January 11, 1956, Serial No. 558,459
11 Claims. (Cl. 117—17.5)



5. An improved xerographic developing method wherein a positively charged suspension of finely-divided charcoal powder particles is presented to an electrostatic latent image-bearing surface, said method comprising forming a gas suspension of said finely-divided charcoal, forming

said gas suspension through a capillary turbulence zone at a rate of flow therethrough sufficient to achieve turbulent flow in contradistinction to laminar flow whereby the suspended charcoal particles are deagglomerated and are electrostatically charged to a positive polarity by contact with the walls of the capillary zone, said walls consisting of a mineral selected from the group consisting of soapstone, montmorillonite, halloysite, bentonite, spodumene, red sandstone, serpentine, pyrophyllite, oligoclase, grey sandstone, and quartzose sandstone of the argillaceous type and presenting the suspension of said positively charged charcoal particles from said turbulent zone to the electrostatic latent image-bearing surface.

2,859,130

METHOD FOR GAS PLATING SYNTHETIC FIBERS

Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application June 16, 1954, Serial No. 437,065
1 Claim. (Cl. 117—47)

A method of gas plating to metallize organic fibers or filaments selected from the group consisting of polyamide synthetic fiber, acrylonitrile synthetic fiber and vinylidene chloride polymer synthetic fiber, and which tend to soften under prolonged heating at 350 to 475° F., said method comprising the steps of subjecting said fiber to a pre-warming treatment to 250° F. whereby the fiber is heated to a temperature of near its heat-sensitive temperature, then moving the preheated fiber into a metal plating chamber and bringing a blast of inert carrier gas containing a heat-decomposable metal compound into contact with the pre-warmed fiber, subjecting the fiber to further heating to a temperature between 350 and 475° F. and above the temperature at which said fiber tends to soften with prolonged heating and sufficient to cause thermal decomposition of said heat-decomposable metal compound and deposition of the metal constituent thereof onto said fiber, said fiber being subjected to said heated atmosphere during gaseous metal plating for a predetermined short period of time and which time is insufficient to cause softening or deterioration of said fiber but such as to gas plate the fiber with metal, and thereafter quickly cooling the resultant gas plated fiber by moving the same into a chamber maintained at a temperature of about 32° F.

2,859,131

METHOD OF APPLYING A FILM COMPRISING CHROMIUM OXIDE ON A GLASS SURFACE

George B. Watkins, Toledo, and Lauren D. Thomas, Walbridge, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

No Drawing. Application December 13, 1955
Serial No. 552,691
3 Claims. (Cl. 117—104)

1. In a method of forming a film comprising chromium oxide on a glass surface, the steps of heating the glass surface to a temperature above 800° F. and spraying said heated surface with a solution of CrO_2Cl_2.

2,859,132

GAS PLATING USING NITROUS OXIDE

Leo J. Novak and Howard J. Homer, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

No Drawing. Application May 9, 1956
Serial No. 583,697
16 Claims. (Cl. 117—107)

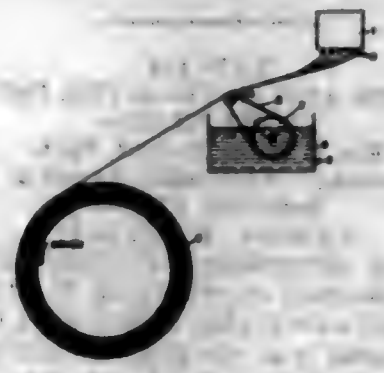
1. The method of gas plating bright, smooth metal coatings which comprises bringing a mixture of metal-bearing vapor and a gaseous brightener compound containing nitrogen into contact with the article to be plated, and heating the gaseous mixture to a temperature sufficient to cause decomposition of the metal bearing vapor and deposition of the metal constituent onto the surface of the article, said nitrogen-containing compound being selected from the group consisting of ammonia, methenamine, nitrous oxide, and ammonium hydroxide.

2,859,133

TREATMENT OF STRAND MATERIALS AND THE LIKE

Robert S. Olcott, Jr., Manor Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Application February 14, 1956, Serial No. 565,338
4 Claims. (Cl. 117—112)



1. In a device for applying an aqueous treating solution to the surface of a material to be treated, the combination of a treating element disposed in a treating station, a treating surface on said element comprising a water-insoluble elastomeric material having substantially uniformly incorporated therein as a permanent active ingredient available at said treating surface 2–70 parts by weight for each 100 parts by weight of said elastomeric material of a water-soluble surface-active material which is at least partially soluble in said elastomeric material, means for wetting said treating surface with said aqueous treating solution, means for moving said treating surface in said treating station to present fresh areas of said treating surface wetted with said aqueous treating solution to said material to be treated, and means for delivering said material to be treated through said treating station at a high speed relative to said wetted treating surface and in engagement therewith.

2,859,134

FLAME RESISTANT ORGANIC TEXTILES AND METHOD OF PRODUCTION

Wilson A. Reeves, Leon H. Chance, and George L. Drake, Jr., New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Original application June 5, 1956, Serial No. 589,563. Divided and this application April 24, 1957, Serial No. 661,588
6 Claims. (Cl. 117—136)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A process of reducing the flammability of a cellulosic textile material which comprises impregnating the material with a solution containing tris(1-aziridinyl) phosphine oxide and urea, drying the impregnated mate-

rial and then heating it to about from 100 to 160° C. for about from 2 to 10 minutes, using the longer time with the lower temperature.

2,859,135

TREATMENT OF TEXTILE FIBERS

Elmer H. Rosin, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application December 1, 1949, Serial No. 130,683, now Patent No. 2,730,790, dated January 17, 1956. Divided and this application June 7, 1956, Serial No. 590,910

6 Claims. (Cl. 117—139.5)

2. A spun textile yarn containing from 0.1 to 3% by weight, based on the weight of fibers in the yarn, of fine, discrete, substantially unagglomerated particles of a hard, non-plasticized, water-insoluble polymerized thermoplastic resin derived from monomeric, unsaturated organic compounds, said resin being substantially free of monomers, said yarn being further characterized in that the fibers therein are not bound together by the resin and are free of resin film.

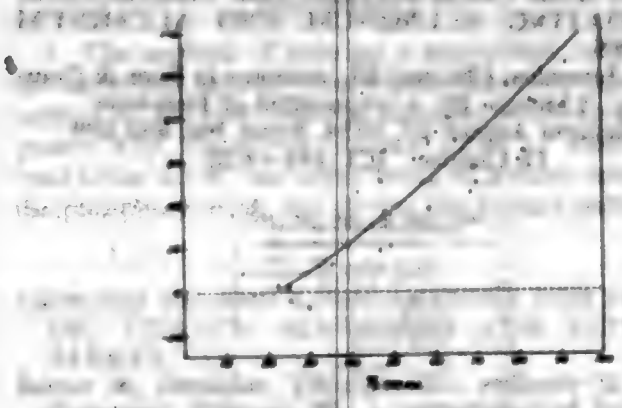
2,859,136

PROCESS FOR THE TREATMENT OF FABRICS WITH RESINOUS CONDENSATION PRODUCTS

John Thompson Marsh, Hale, and Ronald Arthur Bloore, Rainhill, England, assignors to Textile Investment Ltd Company Limited, Manchester, England, a British company

Application August 22, 1955, Serial No. 529,774
Claims priority, application Great Britain July 8, 1950

9 Claims. (Cl. 117—145)



1. A process of giving increased abrasion resistance to a textile fabric containing at least 50% of regenerated cellulose by insolubilising in the fibers thereof, by heating, a resin selected from the group consisting of urea-formaldehyde wherein the molecular ratio of formaldehyde to urea is from 2:1 to 4:1, melamine-formaldehyde wherein the molecular ratio of formaldehyde to melamine is greater than 3:1 and up to 6:1, and a mixture of said urea-formaldehyde melamine-formaldehyde resins, which process comprises the steps of impregnating said fabric with an aqueous solution containing water-soluble ingredients for forming said resin, said solution also containing an acid catalyst for the resin formation, drying the fabric and heating it to produce said water-insoluble resin from said resin-forming ingredients in an atmosphere wherein at least 50% of said atmosphere is superheated steam.

2,859,137

COATING TEXTILES WITH METHYL SILICONE RESIN AND N,N'-DIPHENYL GUANIDINE

Roy E. Ellis, Pasadena, Calif.

No Drawing. Application September 19, 1956
Serial No. 610,724
3 Claims. (Cl. 117—161)

1. A process for preparing and curing silicone resin-coated textile materials which comprises coating said textile materials with a methyl polysiloxane in an organic medium which also contains N,N'-diphenyl guanidine, wherein the ratio of methyl groups to silicon atoms in said polysiloxane is in the range of about 1.4 to 1 and said polysiloxane is present in an amount of about 1 to 20% by weight, said N,N'-diphenyl guanidine is present in an amount of from about 1% to about 10% by weight of said siloxane, and said organic medium consists essentially of a solvent selected from the group consisting of benzene, toluene, xylene, petroleum ether, cyclohexane, diethyl ketone, dibutyl ketone, acetone, ethyl acetate, propyl acetate, ethyl propionate, chloroform, trichloroethylene and ethylene dichloride, and thereafter allowing the coated textile material to dry at a temperature from about room temperature to about 100° C. and curing the polysiloxane coating.

2,859,138

COMPOSITION AND METHOD FOR COATING A CERAMIC BODY

Melbourne K. Blanchard, Milwaukee, Wis., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application September 20, 1955
Serial No. 535,521
6 Claims. (Cl. 117—169)

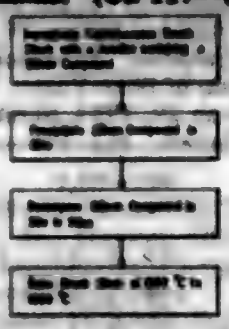
1. An improved method of protecting a beryllium carbide-carbon body which comprises coating said body with a mixture consisting essentially of, by ratio, approximately 0.8 to approximately 2.4 moles of at least one basic oxide component, the major oxide of which is CaO, approximately 0.1 to approximately 0.6 mole of at least one amphoteric oxide component, the major oxide of which is Al_2O_3, and approximately 1.5 to approximately 3.5 moles of at least one acidic oxide component, the major oxide of which is SiO_2, and heating the resulting coated body at a vitrifying temperature.

2,859,139

METHOD OF MAKING A SILICA CONTAINING CARBON BRUSH AND RESULTING ARTICLE

Dimitar Rusnakoff, Boron, Ohio, assignor to Union Carbide Corporation, a corporation of New York

Application December 7, 1954, Serial No. 473,747
6 Claims. (Cl. 117—228)



1. A method of imparting long wearing life to a carbon brush for operation in a silicone-containing atmosphere, comprising incorporating silica in said brush in an amount between 0.3 percent and 1.0 percent by weight of the brush, and thereafter baking said brush at a temperature between 1000° C. and 1600° C. thus converting the silica into a suitable form for imparting increased wear life to said brush in said atmosphere.

2,859,140

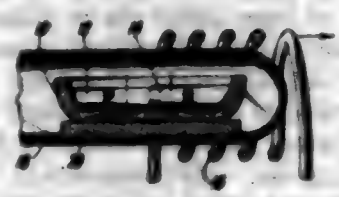
METHOD OF INTRODUCING IMPURITIES INTO A SEMI-CONDUCTOR

Edward N. Clarke, Levittown, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

Application July 16, 1951, Serial No. 237,001
2 Claims. (Cl. 148—1.5)

1. The method of making a semiconductor translator having a rectifying barrier, including the steps of pre-

paring a first body of semiconductor of one characteristic, fusing a body of semiconductor of another characteristic, holding the fused body in contact with said first body and establishing a temperature gradient from



that of the molten state, declining in the direction away from the first body, and thereafter by controlled use of heat gradually shifting the temperature gradient in said direction and thereby permitting gradual cooling of the fused body.

2,859,141

METHOD FOR MAKING A SEMICONDUCTOR JUNCTION

Sumner P. Wolsky, Waltham, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application April 30, 1954, Serial No. 426,835
2 Claims. (Cl. 148—1.5)

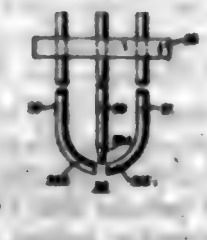
1. A method for making a semiconductor device comprising the steps of applying a small quantity of indium to one side of a body of germanium and heating to a temperature in excess of the melting point of the indium and below the melting point of the germanium body and cooling through the range of recrystallization temperatures in less than thirty seconds.

2,859,142

METHOD OF MANUFACTURING SEMICONDUCTIVE DEVICES

William G. Pfann, Basking Ridge, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application June 29, 1954, Serial No. 440,151
9 Claims. (Cl. 148—1.5)



1. The process of manufacturing a semiconductive device comprising the steps of wetting with molten semiconductive material the faces of at least two electrodes spaced apart so that surface tension forces form a continuous portion of the said molten semiconductive material between the said at least two electrodes, at least one of said electrodes having associated therewith a conductivity type determining impurity for said semiconductive material in amount sufficient to produce a conductivity region of semiconductive material adjacent said electrode, said conductivity region being of the same conductivity type as that of the said impurity, and solidifying the said portion.

2,859,143

FERRITIC ALUMINUM-IRON BASE ALLOYS AND METHOD OF PRODUCING SAME

Joseph F. Nachman and William J. Buehler, Silver Spring, Md., assignors of one-fourth to Edward A. Gaugler, Butler, Pa., and one-fourth to Stephen Girard Lee, Washington, D. C.

No Drawing. Application August 6, 1954
Serial No. 448,396
37 Claims. (Cl. 148—2)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. The method of making a high temperature and magnetic alloy containing from 10 to 18% aluminum, up to 5% of a strengthening element and the remainder iron, which consists of melting the constituents in a suitable melting apparatus to form a molten alloy, forming the molten alloy into an ingot, controlling the solidification rate of the molten alloy to produce an ingot having a fine equiaxed cast grain structure, transferring the ingot from the melting apparatus while red hot to a heating apparatus and heat treating the ingot at a temperature of about 1050° C. for a time sufficient to uniformly heat the ingot, slow cooling the ingot at a rate of about 30° C. per hour until the ingot is substantially at room temperature, removing surface imperfections from the ingot, hot working the ingot into a sheet substantially 0.250 of an inch thick at a temperature of about 1050° C. followed by hot working the sheet at a temperature of 950° C. from a thickness of 0.250 of an inch thick to a thickness of substantially 0.125 of an inch, and thereafter cold working the sheet to a predetermined thickness at a temperature of 575° C.

2,859,144

PROCESS AND COMPOSITION FOR PROTECTIVELY COATING ALUMINUM AND ALUMINUM ALLOYS

Bruno R. Jeremias, Chicago, Ill., assignor to Parr & Company, Chicago, Ill., a corporation of Delaware

Application August 27, 1954, Serial No. 452,699
12 Claims. (Cl. 148—6.2)

3. A coating composition for aluminum and aluminum alloys consisting essentially of sodium dichromate, chromic acid, fluoboric acid and ammonium chloride dissolved in water at a pH within the range of 1.6 to 2.1, the weight ratio of chromium in the dichromate to chromium in the chromic acid being within the range of 10:1 to 1:4, the mol ratio of HBF_4 to CrO_3 being within the range of 1:2 to 1:3, and the quantity of ammonium chloride being within the range of 4% to 32% of the total weight of fluoboric acid and ammonium chloride.

2,859,145

COLD ROLLING OF STEEL

Richard I. Sonnes, Northville, Mich., and Paul L. Petry, Fort Thomas, Ky.; said Sonnes assignor to Parker Rust Proof Company, Detroit, Mich., a corporation of Michigan, and said Petry assignor, by mesne assignments, to Acme-Newport Steel Company, Newport, Ky., a corporation of Illinois

No Drawing. Application January 25, 1956
Serial No. 561,366
10 Claims. (Cl. 148—6.15)

1. A method for treating ferrous strip which comprises the steps of pickling the strip, contacting the cleaned

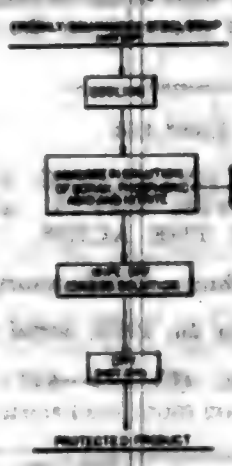
strip while the same is moving with an aqueous acidic zinc phosphate solution comprising as the essential coating producing ingredients in weight percent, 0.18–0.9 zinc, 0.5–2.0 PO_4, and 0.7–2.5 ClO_3, said solution having a total acid in the range of 10–60 points, maintaining said strip in contact with said solution until a phosphate coating is formed on the surface of said strip, said coating having a weight in the range of about 50 mg./per sq. ft. to about 1000 mg./per sq. ft. and varying from the average coating weight prevalent on said strip by not more than about 200 mg./per sq. ft., and thereafter continuously cold rolling the said strip.

2,859,146

METHOD OF TREATING GALVANIZED METAL TO INHIBIT CORROSION

Alvin F. Frost, Warren, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey

Application July 9, 1956, Serial No. 596,423
6 Claims. (Cl. 148—6.15)



1. The method of treating a galvanized metal surface to inhibit wet storage stain which comprises exposing the surface to a dilute aqueous solution of borax and phosphoric acid, containing sodium nitrite in amount of at least about 0.1%, the borax being in greater amount than the phosphoric acid, and drying the treated surface.

2,859,147

PROCESS OF AND COMPOSITIONS FOR PRODUCING COATED ALUMINUM AND ALUMINUM ALLOYS

Bruno R. Jerumbo, Chicago, Ill., assignor to Peer & Company, Chicago, Ill., a corporation of Delaware

No Drawing. Application August 27, 1954
Serial No. 452,700
14 Claims. (Cl. 148—6.16)

7. A coating composition for aluminum and aluminum alloys consisting essentially of chromic acid, phosphorus acid, a complex water soluble salt of acetic acid containing combined but undissociated acetic acid derived by replacing water in an acetate salt with acetic acid, and fluoboric acid dissolved in water, the weight ratio of P to CrO_3 being within the range from 0.44 to about 2.2, the quantity of said complex salt being at least 0.1 gram per liter of solution, and the pH being within the range from 1 to 2.

2,859,148

METHOD OF PRODUCING A BOEHMITE LAYER ON ETCHED ALUMINUM FOILS

Dietrich Altenpohl, Singen, Hohentwiel, Germany, assignor to Aluminium-Walzwerke Singen G. m. b. H., Singen, Hohentwiel, Germany, a company limited of Germany

No Drawing. Application December 13, 1955
Serial No. 553,205
Claims priority, application Germany December 16, 1954
3 Claims. (Cl. 148—6.27)

1. A method of producing a boehmite layer on an etched surface of an aluminum foil intended for use in electrolytic capacitors, said boehmite layer serving to protect the said surface of the foil against corrosion before the formation of a dielectric film on the etched surface, and said boehmite layer also serving to facilitate the formation of the dielectric film by reducing the necessary consumption of electric power in the formation of the dielectric film, said method comprising the steps of washing the foil after etching in at least one bath of distilled water at a temperature below 75° C., subjecting the foil in at least one further bath to the action of distilled water, the pH value of which has been adjusted to a value below 7 and maintained at a value below 7 throughout the treatment, at a temperature within the range of from 75° C. to the boiling point at atmospheric pressure and for a time sufficient to obtain a boehmite layer of a thickness of .02 to .1 micron, and finally drying the boehmite layer at increasing temperature initially not exceeding 120° C. and at no time not exceeding 250° C. until its water content has decreased to 20% or less.

2,859,149

MANUFACTURE OF WATCH SPRINGS UTILIZING WIRE CONVERTED INTO STRIP

Reinhard Straumann, Waldenburg, Switzerland

No Drawing. Application November 16, 1953
Serial No. 392,525
Claims priority, application Switzerland January 14, 1953
16 Claims. (Cl. 148—12.3)

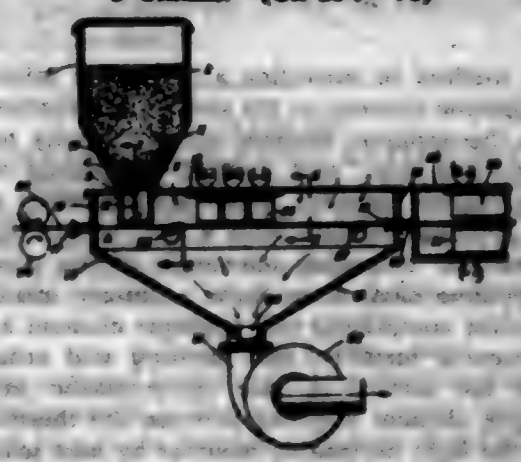
1. A process for the production of flat springs comprising homogenizing a wire of an alloy which is precipitation hardenable, specifically an alloy taken from the group consisting of steel alloys which are precipitation hardenable, iron-nickel-chromium precipitation hardenable alloys, iron-nickel-chromium-cobalt precipitation hardenable alloys, and nickel-chromium-cobalt precipitation hardenable alloys at a high temperature and quenching the said wire to an unhardened condition, drawing the quenched wire to reduce its cross section and, after decreasing the cross-section, rolling the wire to produce a flat strip, the total decrease in cross-sectional area by said rolling and drawing exceeding 80% and the decrease in cross section by drawing being a major part of the 80% decrease, the drawing and rolling being for orienting the direction of the maximum value of the modulus of elasticity essentially in a direction parallel to the direction of rolling, and precipitation hardening the strip at a temperature of from 200° to 600° C. to give it a modulus of elasticity of at least 21,000 kg./mm.^{2}.

2,859,150

METHOD OF MAKING TOWELS

Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application October 18, 1955, Serial No. 541,262
5 Claims. (Cl. 154—76)



1. In a method of cutting tufted paper towels, distributing flock over a perforated paper strip, subjecting

2,859,151 the steps of locating an anode adjacent the center of the

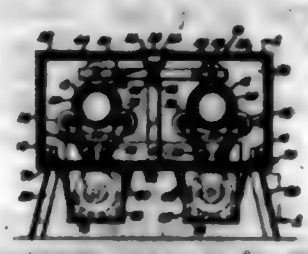
individual lengths of flock to an air stream to insert the flock in the perforations to extend above both faces of the paper, and securing the flock in the strip.

2,859,151

METHOD AND APPARATUS FOR THE CENTRIFUGAL CASTING OF FIBER-REINFORCED PLASTIC PIPE

Ernest M. Uenb and Martin A. Uenb, Gardena, Calif., assignors to Reflin Co., Gardena, Calif., a corporation of California

Application September 3, 1953, Serial No. 378,296
9 Claims. (Cl. 154—83)



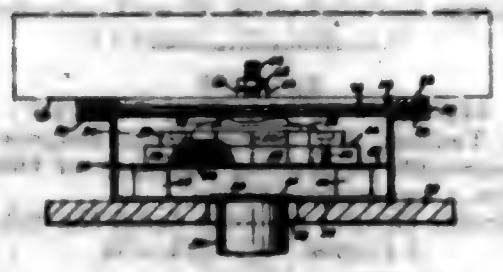
3. Apparatus for casting reinforced plastic pipe including: an elongated casting cylinder; means mounting said cylinder for high speed rotation about its longitudinal axis; means for rotating said cylinder at high speed; a mandrel for wrapping thereon reinforced fabric and insertable as a unit into said casting cylinder for application of the wrapped fabric on the inner wall of said cylinder by reverse rotation, said mandrel having a slot for receiving and releasing an edge of such fabric; means for introducing thermosetting liquid resin into the interior of said cylinder for distribution upon said fabric and said inner wall to yield a tubular form; and means for heating said cylinder and resin to set said resin while rotating the cylinder and the tubular resin shape.

2,859,152

METHOD OF APPLYING APPLIQUES

George Marino, West Orange, N. J., and Martin Siegel, Roslyn, N. Y., assignors to Aristocrat Leather Products, Inc., New York, N. Y., a corporation of New Jersey

Application April 8, 1955, Serial No. 500,164
4 Claims. (Cl. 154—116)



1. The method of providing a decorative inlaid ornamental applique element on the surface of a thermoplastic part with the applique element being normally non-heat sealable to said part, said method comprising molding a light permeable member in surface-to-surface relation with the applique element with a part of the light permeable member extending outwardly of the outer edge of the applique element to form a unitary inlaid ornamental article comprising said applique element and said light permeable member, and securing said ornamental article on the surface of said thermoplastic part with the applique element disposed between the thermoplastic part and the light permeable member by heat sealing the outwardly extending part of the light permeable member outwardly of the outer edge of the applique element.

2,859,153

PROCESS FOR THE HIGH-FREQUENCY WELDING OF CELLULAR BODIES OF THERMOPLASTIC MATERIALS

Conrad Zschi, West-Berlin-Steinstuecken, Germany, assignor to Reinhard Steeger, Kerzis, near Bern, Switzerland

No Drawing. Application June 23, 1955
Serial No. 516,645
Claims priority, application Switzerland July 15, 1954
15 Claims. (Cl. 154—126.5)

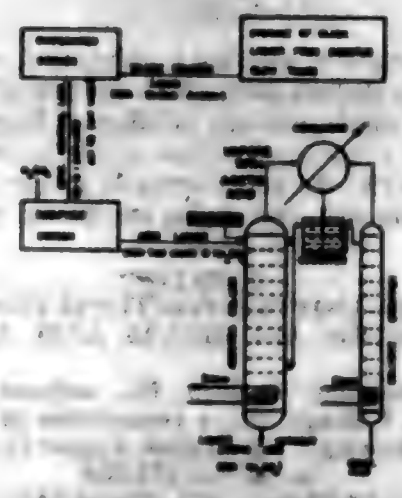
1. The process for the high-frequency welding of cellular bodies of thermoplastic materials, which comprises providing the surfaces to be welded with a thin layer of a non-volatile substance having a high dielectric constant with a dipole moment between 1 and 4, placing the surfaces to be welded one against the other and applying the electrodes along the weld seam on both sides without exerting any substantial pressure on the material being welded.

2,859,154

PROCESS FOR CONCENTRATING ACETIC ACID AND OTHER LOWER FATTY ACIDS USING ENTRAINERS FOR THE ACIDS

Donald F. Othmer, Coudersport, Pa.

Application September 26, 1955, Serial No. 536,727
1 Claim. (Cl. 202—42)



The process of recovering a concentrated aqueous solution of low molecular weight fatty acids from black liquor from the sulfate process of preparing wood pulp comprising evaporating said black liquor to a concentrated black liquor; acidifying with sulfuric acid said concentrated black liquor to a pH of between 1.5 and 2.5; adding to said acid treated and concentrated black liquor an entrainer selected from the group consisting of hydrocarbons and halogenated hydrocarbons having a boiling point of between 65° C. to 165° C. and adapted to form an azeotropic mixture with said acids and also with water; distilling overhead simultaneously said two azeotropic mixtures formed from said acid treated and concentrated black liquors; condensing simultaneously said distilled azeotropic mixtures to form a condensate of two layers, one of which contains the entrainer layer and the other of which is a concentrated aqueous solution of said low molecular weight acids; and separating said concentrated aqueous acid solution from said entrainer containing layer, thereby producing a fatty acid-depleted concentrated black liquor suitable for re-use as a cooking liquor and concentrated aqueous distillate solution containing said low molecular weight fatty acids.

2,859,156

PROCESS FOR VAPORIZING HYDROGEN PEROXIDE BY CONNECTIVE DISTILLATION

Mario T. Cichelli, Wilmington, Del., and Frank A. Gluckert, West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application December 27, 1956, Serial No. 631,411
8 Claims. (Cl. 202—46)

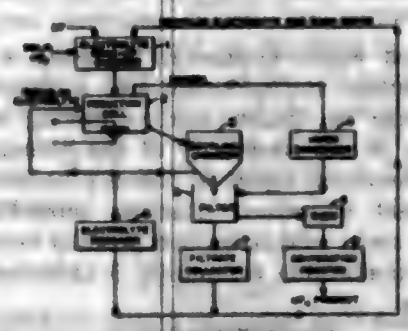
1. A process for the vaporization of hydrogen peroxide which comprises atomizing a stream of liquid hydrogen peroxide by contact with a stream of a hot gas having sufficient heat content to completely vaporize the peroxide, under conditions such that liquid peroxide at boiling point temperature is kept from contact with solid surfaces.

2,859,156

ELECTROLYTIC PREPARATION OF UF_4

Arthur L. Allen, Oak Ridge, and Roger W. Anderson, Knoxville, Tenn., and Edward W. Powell, Paducah, Ky., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application November 14, 1957, Serial No. 696,578
6 Claims. (Cl. 204—1.5)



1. A method of converting hexavalent uranium to UF_4 which comprises subjecting uranyl ions to cathodic reduction at a temperature of at least approximately 90° C. in an electrolytic cell containing as electrolyte an aqueous solution of hydrofluoric acid, separating the resulting $UF_4 \cdot 0.75H_2O$ precipitate from the resultant supernatant liquid and heating said precipitant until substantially complete dehydration to UF_4 is effected.

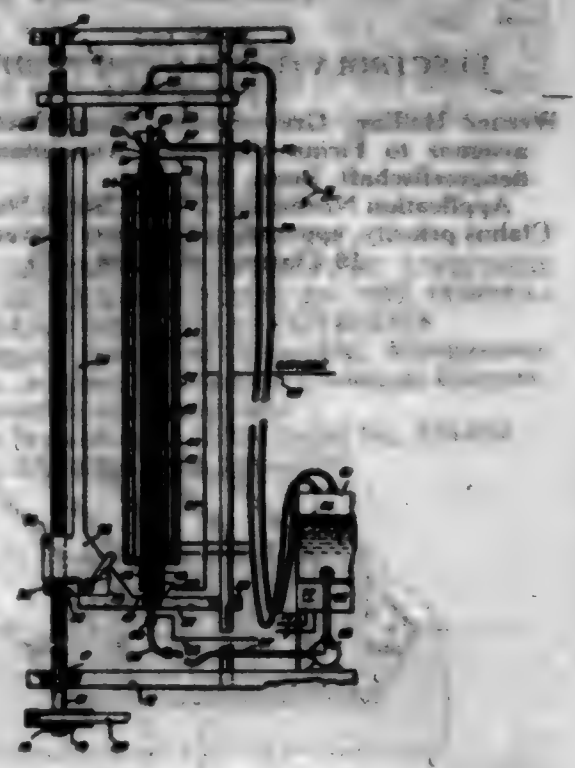
2,859,157

METHOD AND APPARATUS FOR ELECTROPLATING THE INTERIOR SURFACE OF CONDUCTIVE MATERIAL APERTURES

John S. Curtiss, Jr., Belmont, Calif.

Application October 4, 1956, Serial No. 613,869
14 Claims. (Cl. 204—36)

9. A method of electroplating the interior surface of an aperture in a conductive material object comprising the steps of locating an anode adjacent the center of the cross sectional area of the aperture, directing plating current obliquely toward said object from said anode, shielding said interior surface at an area displaced longitudinally from said anode, traversing said anode and said interior surface shield together to maintain a given effective area of surface to be plated while progressively plating the entire interior surface to be plated.



2,859,158

METHOD OF MAKING A NICKEL-CHROMIUM DIFFUSION ALLOY

Glenn R. Schaer, Columbus, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 31, 1957, Serial No. 637,594
2 Claims. (Cl. 204—37)

1. A process for coating molybdenum with a diffusion alloy which consists of depositing sequentially a layer of chromium about .00025 inch thick and a layer of nickel about .00075 inch thick, repeating said sequence of depositions a plurality of times, and then heating the coated molybdenum for 4 hours at a temperature above 980° C. and substantially below the melting point of the eutectic of the metals.

2,859,159

BRIGHT COPPER PLATING BATH CONTAINING MIXTURES OF METAL COMPOUNDS

Christian J. Wernlund, Niagara Falls, N. Y., assignor, by mesne assignments, to Electrex Corp., Jersey City, N. J., a corporation of New Jersey

No Drawing. Application October 9, 1956
Serial No. 614,236
8 Claims. (Cl. 204—44)

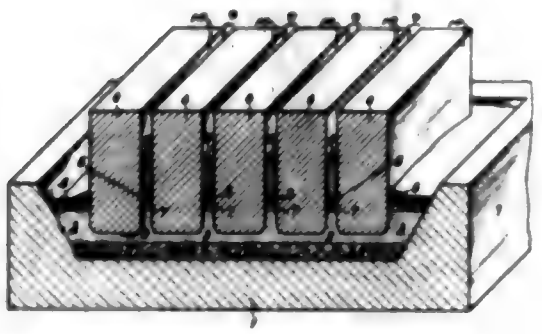
1. An aqueous bath for electrodepositing bright copper containing about 5–20 oz./gal. of copper cyanide, about 0.010–0.20 g./l. of trivalent antimony supplied as a soluble salt thereof, and a metal chosen, in the respective proportions specified, from the group consisting of: 0.056–

2.32 g./l. of zinc, 0.760–7.60 g./l. of arsenic, 0.003–0.32 g./l. of cobalt, 0.068–0.40 g./l. of iron, and 0.007–7.00 g./l. of cadmium.

2,859,160
ELECTROLYTIC CELL FOR PRODUCING ALUMINUM

Werner Helling, Grevenbroich, Niederrhein, Germany, assignor to Firma Vereinigte Aluminium-Werke Aktiengesellschaft, Bonn, Germany

Application November 7, 1955, Serial No. 545,454
Claims priority, application Germany November 5, 1954
10 Claims. (Cl. 204—67)

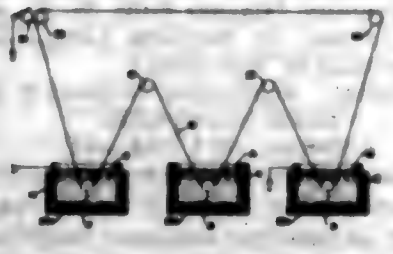


1. In an electrolytic cell for producing aluminum, in combination, a container for holding molten aluminum-producing electrolyte; and a series of continuous baked elongated carbon block anodes of substantially rectangular cross-section and of substantially the same dimensions each having a capacity of 10,000 amperes, a width of between 200 and 700 millimeters and a length of between 1400 and 3000 millimeters, said carbon block being arranged in said container in a row extending in one direction with their lateral elongated faces adjacent and spaced from each other, whereby upon operation of the cell a frozen crust of the electrolyte is formed between adjacent anodes and spaced from the molten electrolyte in the cell, said adjacent anodes being spaced from each other a maximum of 150 millimeters so that the channels defined between adjacent anodes by the upper level of the molten electrolyte and the lower level of the frozen crust are of sufficiently small cross-section to act as discharge passages for rapid withdrawal of gases reaching said channels during operation of the cell.

2,859,161
CONTAMINATING ION REMOVAL

Eugene F. Frekko, Sanford, N. C., assignor to Cornell-Dubilier Electric Corporation, South Plainfield, N. J., a corporation of Delaware

Application June 13, 1957, Serial No. 665,438
2 Claims. (Cl. 204—130)

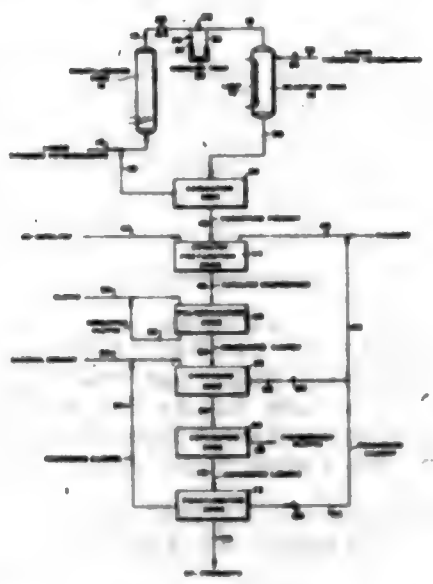


1. A method of removing undesired ionizable chloride impurities from a solvent solution of ethylene glycol containing small concentrations of the same comprising the steps of providing a first bath of said contaminated solvent solution rendered weakly electrolytic by the addition of boric acid thereto, introducing into said bath a portion of a continuously moving endless aluminum belt electrode element, applying a potential difference intermediate said electrode and bath of a polarity to attract ions of said chloride impurity to said moving electrode and to concentrate the same immediately adjacent thereto, and removing said electrode portion and impurity concentrated liquid film adherent thereto from said first bath and passing the same through an electrically isolated second bath containing a solvent solution for said chloride impurities to reduce the concentration of said ionized impurities adjacent thereto.

2,859,162
TITANIUM TETRACHLORIDE REDUCTION PROCESS

Delos E. Bown and Frederick W. Lampe, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application March 4, 1957, Serial No. 643,777
3 Claims. (Cl. 204—157)



1. A method which comprises exposing a mixture of vaporized titanium tetrachloride and a vaporized metal sensitizing agent to radiant energy having a frequency corresponding to the frequency of the resonance line of said metal sensitizing agent to thereby reduce at least a portion of said vaporized titanium tetrachloride to a lower valance state, said reduction product being a brown-colored solid containing essentially 3 chlorine atoms per titanium atom.

2,859,163
CADMIUM-RARE EARTH BORATE GLASS AS REACTOR CONTROL MATERIAL

George L. Ploetz, Scotia, and William E. Ray, Schenectady, N. Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 30, 1957, Serial No. 706,221
1 Claim. (Cl. 204—193.2)

A neutronic reactor control rod fabricated from a material consisting of particles of cadmium-rare earth-borate glass, wherein the rare earth metal oxide is selected from the group consisting of HfO_2, Sm_2O_3, Gd_2O_3, and Eu_2O_3; dispersed in a metal matrix which metal is selected from the group consisting of titanium, stainless steel, zirconium, and aluminum; which control rod is sheathed with a covering of metal selected from the group consisting of titanium, stainless steel, zirconium and aluminum.

2,859,168
FLUID COKING REACTOR

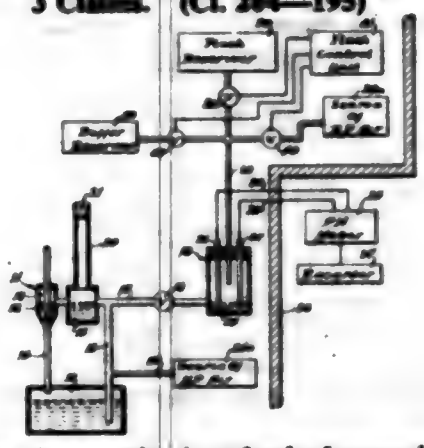
2,859,170
METHOD OF TREATING HYDROCARBON

2,859,164

SAMPLING DEVICE FOR pH MEASUREMENT IN PROCESS STREAMS

Christian E. Michelson and William N. Carson, Jr., Scotia, N. Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application April 10, 1957, Serial No. 652,872
3 Claims. (Cl. 204—195)



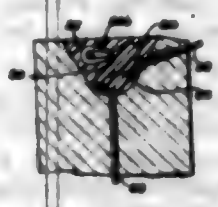
1. A device for monitoring the hydrogen ion concentration of the fluid in a process stream comprising, a pH cell having its bottom end forming a shallow reservoir and adapted to generate an electric current proportional to the pH value of a fluid in the reservoir, a process vessel for containing the process stream, an intake line between the vessel and the pH cell, a jet operated vacuum pump connected to the intake line for causing fluid to flow in the intake line, an air supply connected to the intake line between the vessel and the pump for causing samples of process stream fluid to intermittently flow into and out of the pH cell, a portion of the process stream remaining in the reservior, an inlet to the pH cell, means for introducing air into the pH cell through the inlet to stop the flow of process stream fluid into the pH cell, means for introducing a wash solution fluid of predetermined pH value substantially different from the range of pH values of the process stream into the pH cell through the inlet, cam driven means for controlling the air introducing means and the wash fluid introducing means to replace the process stream fluid in the reservoir therewith at predetermined intervals, and means electrically connected to the pH cell and responsive to the electric current generated therein for continuously measuring and recording the pH of the fluid in the reservoir whereby a constant recording of the pH value of the wash fluid would indicate a failure of the sample introducing means and a constant recording of the pH value of the process stream fluid would indicate a failure of the replacing means.

2,859,165

CATHODIC PROTECTION APPARATUS

Harold A. Robinson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application May 23, 1956, Serial No. 586,238
1 Claim. (Cl. 204—197)



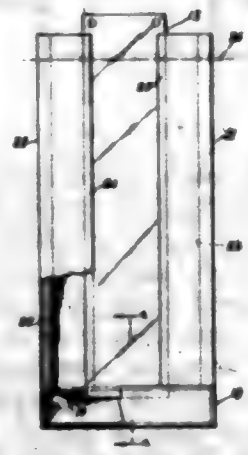
A galvanic anode assembly comprising a galvanic anode body and having a core embedded therein and bonded thereto, said anode body having a depression therein, said depression communicating with said core, a non-linear resistance element, said resistance element having a positive temperature coefficient of resistance and being disposed within an hermetically sealed envelope an anode lead, said non-linear resistance element being electrically connected between said core and said anode lead and disposed in said depression, said anode body having a bore therein which extends through said body and communicates with said depression, said anode lead extending through said bore and being held therein by friction holding means, the remainder of said depression being filled with a fluid-impervious, electrically non-conductive material.

2,859,166

SHIELDING MEANS FOR EFFECTING UNIFORM PLATING OF LEAD DIOXIDE IN THE FORMATION OF LEAD DIOXIDE ELECTRODES

John C. Grigger, Springfield Township, Montgomery County, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

Application September 15, 1955, Serial No. 534,618
5 Claims. (Cl. 204—279)



1. Shielding means for effecting uniform plating of lead dioxide in the formation of a lead dioxide electrode, comprising a rectangular box-like base having a top opening, and inwardly-facing vertical opposed channel members extending upwardly from the top of said box-like base adjacent and aligned with said top opening and partially surrounding said opening, the base being substantially wider than the channel width of said members said shielding means being of insulating material.

2,859,167

PRODUCTION OF BLOWN ASPHALTS IN THE PRESENCE OF A PHOSPHOROUS CONTAINING CATALYST

Joseph W. Van Wyk, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

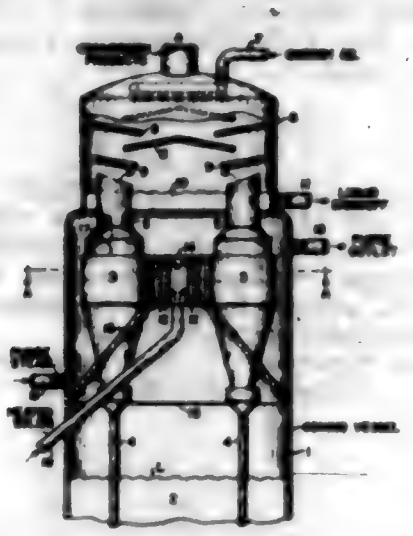
No Drawing. Application February 8, 1954
Serial No. 409,008
13 Claims. (Cl. 208—5)

1. The method of catalytically oxidizing suitable high molecular weight hydrocarbons to produce blown asphalts, which method comprises contacting said high molecular weight petroleum hydrocarbons with substantial quantities of air at a temperature in the range of from about 400° to about 500° F. for a period of at least about one-half hour, subsequently introducing a fluid homogeneous slurry of a phosphorus-containing catalyst selected from the group consisting of phosphorus pentoxide, stable phosphorus sulfides and red phosphorus in a hydrocarbon slurry oil to said high molecular weight petroleum hydrocarbons while at such a temperature, the amount of said phosphorus-containing catalyst being from about 0.1 to about 5.0% based upon the total weight of high molecular weight petroleum hydrocarbons and hydrocarbon slurry oil present, and continuing the introduction of air to the resulting admixture of catalyst, hydrocarbon slurry oil and high molecular weight petroleum hydrocarbons.

substantially below the condensation temperature of said 1100° F. and containing metallic contaminants with said

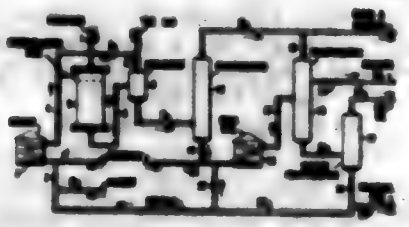
impurities from a solvent solution of ethylene glycol nium, stainless steel, zirconium and aluminum.

2,859,168
FLUID COKING REACTOR
Mason L. Downing, Scotch Plains, and Howard C. North, Westfield, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application May 26, 1955, Serial No. 511,262
6 Claims. (Cl. 208—48)



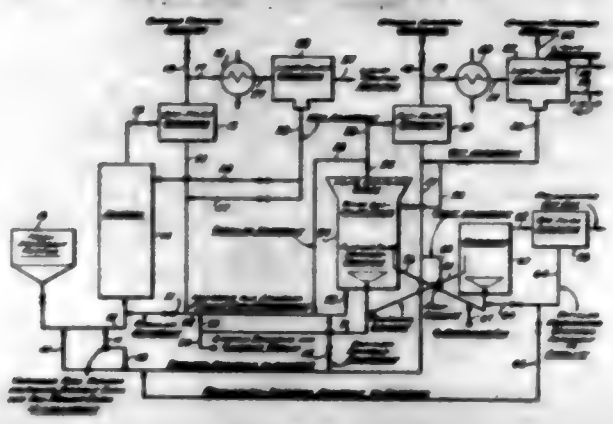
3. In a fluidized solids hydrocarbon conversion process wherein hydrocarbons are converted in a lower portion of a conversion zone by contact with high temperature fluidized solids, vapors therefrom are upwardly removed and entrained solids are separated from said vapors in a cyclone separating zone in the upper portion of said conversion zone, the improvement which comprises maintaining a seal in the upper portion of said conversion zone to prevent access of vapors and solids to stagnant zones in the area of said cyclone separating zone and to reduce vapor residence time, said seal forming an upwardly converging confined passage for said vapors to the inlet of said cyclone separating zone, and introducing an inert gas as a purge into said stagnant zones.

2,859,169
HEAVY OIL CONVERSION PROCESS
Charles Banse Herman, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application January 20, 1955, Serial No. 483,077
3 Claims. (Cl. 208—59)



1. A heavy oil conversion process which comprises forming a mixture of a heavy oil with a diluent oil suitable for being converted to a hydrogen donor diluent and comprising major proportions of aromatic-naphthenes, hydrocracking the mixture in the presence of a hydrogenation catalyst and in the presence of hydrogen under hydrocracking conditions to obtain a 1050° F.— conversion in the range of 30 to 60%, separating the cracked mixture to obtain a fraction boiling above 400° F. containing said diluent oil now partially hydrogenated, admixing the fraction so separated with additional amounts of said heavy oil, thermally treating the resulting mixture under hydrogen donor diluent cracking conditions to obtain a 1050° F.— conversion in the range of 40 to 90%, and separating the thermally treated mixture.

2,859,170
METHOD OF TREATING HYDROCARBONS
Samuel P. Dickens, Port Arthur, Benjamin F. Smith, Grove, and Wiley P. Ballard, Port Arthur, Tex., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
Application March 9, 1955, Serial No. 493,896
9 Claims. (Cl. 208—85)



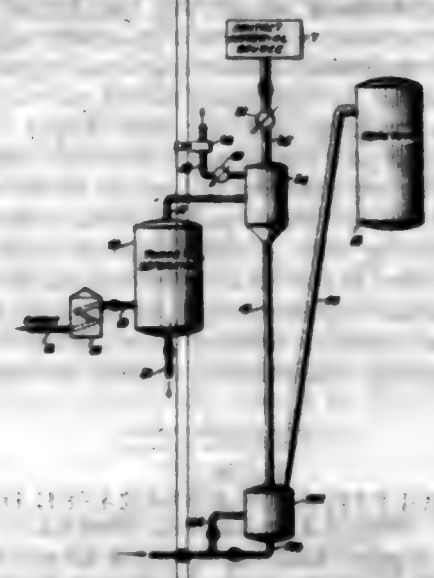
1. A method of treating a hydrocarbon stream containing straight chain hydrocarbons and non-straight chain hydrocarbons which comprises contacting said stream with a solid particle-form selective adsorbent which selectively adsorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons to adsorb straight chain hydrocarbons therefrom, thereby producing a treated effluent having a reduced amount of straight chain hydrocarbons, separating said solid adsorbent, now containing straight chain hydrocarbons adsorbed therein, from said treated effluent, contacting said separated solid adsorbent with a gaseous desorbing medium in the presence of a porous fixed mass of particle-form catalytic material under conditions to effect desorption of said straight chain hydrocarbons from said adsorbent and catalytic conversion of the resulting desorbed straight chain hydrocarbons whereby the resulting regenerated adsorbent together with the converted desorbed straight chain hydrocarbons and gaseous desorbing medium pass through the interstices of said fixed bed of catalyst, recovering from the aforementioned desorption-conversion operation a relatively dilute gas-solids phase comprising converted hydrocarbons, gaseous desorbing medium and said regenerated adsorbent substantially free of said catalyst, and separating said adsorbent from said dilute gas-solids phase.

2,859,171
HYDROCARBON CONVERSION PROCESS
Frank C. Fahnestock, Manhasset, and James P. Shaughnessy, Huntington, N. Y., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Application January 31, 1952, Serial No. 269,193
17 Claims. (Cl. 208—86)

14. A method for catalytic cracking conversion of high boiling liquid hydrocarbon charges containing constituents which undergo pyrolytic cracking and coking at temperatures required to vaporize the same under pressures desirable for catalytic cracking conversion thereof which method comprises, heating the hydrocarbon charge stock to a temperature sufficient to vaporize a portion thereof but insufficient to cause substantial cracking or coking thereof, passing the heated charge into a phase separation zone maintained at a pressure substantially above the desired catalytic conversion pressure and effecting separation of vaporized and non-vaporized fractions of the charge, passing the non-vaporized fraction to a distillation zone maintained under a vacuum so as to effect further vaporization to provide a vacuum distillate vapor stream and a heavy liquid fraction, withdrawing the liquid fraction from the operation, supplying a cracking catalyst in palpable particulate form at a temperature

boiest bed to convert the higher boiling hydrocarbon oil, tween about 1 volume percent and saturation, each

substantially below the condensation temperature of said vacuum distillate into a confined condensing zone, passing the vacuum distillate through a communicating passage from the distillation zone to said condensing zone to become mixed with and condensed on said catalyst, whereby the vacuum is maintained in said distillation zone, flowing the catalyst bearing the condensed liquid hydrocarbons downwardly from said condensing zone as a substantially compact confined column of gravitating catalyst, said leg being of sufficient length to force the cats-



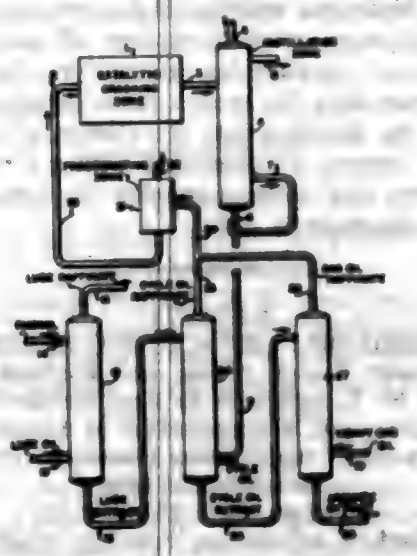
lyst to flow from said condensing zone to a lift feed zone therebelow maintained at a pressure above that in said conversion zone, passing at least a portion of the vaporized fraction from said phase separation zone into said lift feed zone to suspend said catalyst and to carry it into the upper portion of a confined conversion zone, passing the catalyst downwardly through said conversion zone as a substantially compact column and supplying heat to said conversion zone to effect catalytic conversion of the vaporized and liquid hydrocarbons to lower boiling products.

2,859,172

COMBINATION CATALYTIC CRACKING PROCESS

William G. Reymond, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application October 26, 1954, Serial No. 464,768
6 Claims. (Cl. 208—87)



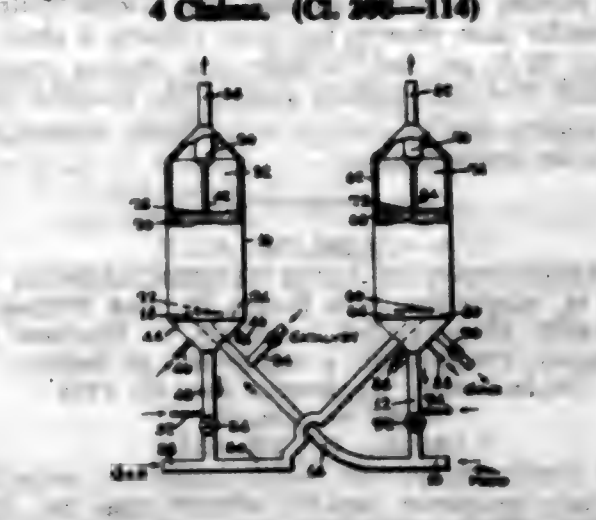
1. An improved extraction process for the preparation of catalytic cracking feed stocks including in combination the steps of: contacting a lubricating oil distillate with a selective solvent for aromatic hydrocarbons, segregating a lubricating oil extract phase, contacting a catalytic cycle oil with said lubricating oil extract phase, segregating a cycle oil extract phase, contacting a virgin gas oil including constituents boiling up to at least about 1100° F. and containing metallic contaminants with said cycle oil extract phase, and segregating a gas oil raffinate phase substantially free of metallic contaminants.

2,859,173

METHOD OF TREATING A PETROLEUM FRACTION WITH MOLECULAR SIEVE ADSORBENTS

Howard V. Hess, Glenham, and Edward R. Christensen, Beacon, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

Application January 25, 1955, Serial No. 483,999
7 Claims. (Cl. 208—92)



1. A method of treating a petroleum fraction having an end point in the range 100–425° F. and containing a substantial amount of C_4 and C_5 hydrocarbons which comprises fractionating said petroleum fraction to remove overhead substantially all of the C_4 and C_5 hydrocarbons, subjecting the remaining petroleum fraction to contact with a molecular sieve alumino-silicate selective adsorbent which selectively adsorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons to adsorb straight chain hydrocarbons from said remaining petroleum fraction, recovering from the aforesaid adsorption operation a treated fraction substantially free of straight chain hydrocarbons and blending with said recovered treated fraction the C_4 and C_5 hydrocarbons separated overhead in the aforesaid fractionation operation.

2,859,174

TREATING HYDROCARBON OILS WITH INERT SOLIDS AND GASEOUS HALOGEN CONTAINING COMPOUNDS

Clark E. Adams and Charles N. Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application April 29, 1952, Serial No. 285,918
4 Claims. (Cl. 208—114)

1. A process for converting higher boiling hydrocarbons to lower boiling hydrocarbons in the absence of a solid catalyst which needs regeneration, which comprises contacting higher boiling hydrocarbon oil with hot catalytically-inert solid particles in a dense dry fluidized turbulent bed maintained at an active cracking temperature above about 700° F. and introducing a gaseous halogen-containing catalyst into said dense fluidized tur-

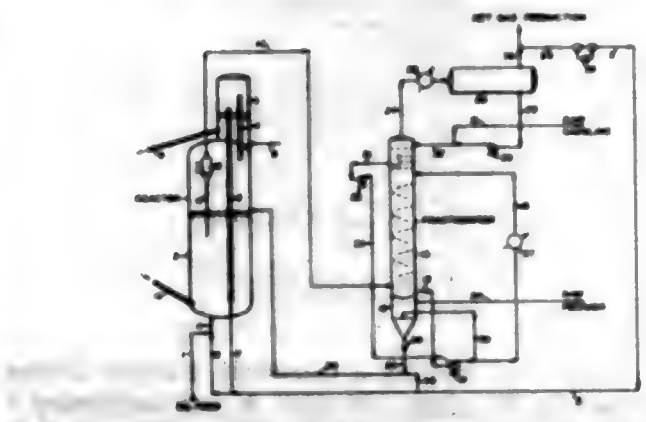
at a temperature of about 300 to 500° F. for about 4 to

2,859,182

HEAVY DUTY LIQUID DETERGENT

bulent bed to convert the higher boiling hydrocarbon oil to lower boiling hydrocarbons and recovering vaporous cracked products overhead.

2,859,175
USE OF PRODUCT GASES IN A FLUIDIZED CONVERSION PROCESS
Martin R. Smith, Glen Ridge, N. J., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware
Application November 16, 1954, Serial No. 469,255
3 Claims. (Cl. 208—136)

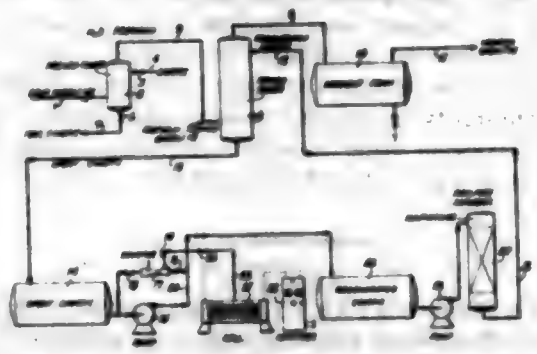


2. A hydroforming process which comprises contacting a vaporized naphtha feed with a dense fluid bed of finely divided catalyst comprising molybdenum trioxide supported on alumina at a pressure of about 50 to about 500 p. s. i. g., a temperature of about 850 to about 950° F., a catalyst to oil ratio of about 0.1 to about 2.0, a weight space velocity of about 0.1 to about 2.5 in the presence of added hydrogen in the amount of about 1000 to about 7500 s. c. f. b., thereby producing a vaporous reaction product containing normally gaseous material, gasoline, polymer and entrained catalyst fines, separating polymer from said reaction product, scrubbing fines from the reaction product with polymer, separating normally gaseous material from the reaction product, separating polymer containing catalyst fines from the bulk of the polymer in a settling zone maintained at a pressure of about 15 to about 35 p. s. i. greater than the pressure maintained in the reaction zone to form a slurry containing about 1.0 to about 2.5 lb. of catalyst per gallon of oil vehicle, injecting a portion of the gaseous material into said slurry of fines in an amount of about 2 to about 5 s. c. f. of the gaseous material per lb. of slurry, passing the slurry of fines and gaseous material to a transfer zone wherein the linear velocity is about 10 to about 50 ft. per sec., recycling the gaseous material and slurry from the transfer zone to the reaction zone, and recycling another portion of normally gaseous material to the reaction zone.

2,859,176
SWEETENING OF SOUR HYDROCARBONS
Garbis H. Megnerian, Park Forest, Ill., and William P. Fairchild, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Application June 27, 1955
Serial No. 518,358
7 Claims. (Cl. 208—234)

1. A sweetening process which comprises contacting (*a*) a sour petroleum naphtha selected from the class consisting of virgin and coke still naphtha with (*b*) between about 10 and 100 volume percent, based on said naphtha, of an aqueous solution consisting of (1) free-alkali metal hydroxide in a concentration between about 5% and saturation, (2) alkylphenol mercaptan solubility promoter in a concentration of between about 1 volume percent and saturation, (3) water-soluble alkylene polyamine mercaptan solubility promoter in an amount between about 1 volume percent and saturation, each alkylene group containing from 2 to 4 carbon atoms, (4) a mercaptan oxidation catalyst consisting of the copper-polyamine complex formed by the reaction of a water-soluble copper salt and an alkylene polyamine wherein the alkylene group is selected from the class consisting of ethylene and propylene, in an amount between about 0.02 and 1 weight percent, calculated as copper, and (5) the remainder essentially water, at a temperature between about 80° F. and 125° F. for a time sufficient to extract essentially all of the mercaptans from said naphtha, separating an essentially sweet naphtha from mercaptan-containing aqueous solution, regenerating said aqueous solution by converting all the mercaptans therein to disulfides, utilizing sufficient free oxygen to carry out said conversion at a temperature between about 80° and 125° F. for a time sufficient to convert all the mercaptans, removing disulfides from said disulfide-containing solution by washing with a liquid hydrocarbon oil in an amount between about 25 and 100 volume percent based on said disulfide-containing solution, separating essentially disulfide-free aqueous solution from disulfide-containing oil and recycling said solution to said mercaptan extraction step.

2,859,177
ELECTROLYTICALLY GENERATED OXYGEN FOR CAUSTIC RECOVERY
Charles W. Ripple, Ashland, Ky., and Howard B. Bishop, Summit, N. J., assignors to H. Berkey Bishop, Morristown, N. J.
Application December 18, 1956, Serial No. 629,191
8 Claims. (Cl. 208—235)



1. The process of treating sour hydrocarbon oils which consists of pretreating the oil with a caustic wash to remove the hydrogen sulfide (H_2S), washing the oil by a continuous countercurrent stream of caustic solution to remove the mercaptides, electrolytically generating oxygen, regenerating the spent caustic solution containing mercaptides by injecting into the stream of spent caustic solution the oxygen as generated within a time element of 10 minutes and without passing the caustic solution through the electrolytic cell.

2,859,178
METHOD OF LUBRICATING BEARINGS
Eric O. Forster, Scotch Plains, and Richard O. Adams, Cranford, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application December 19, 1955
Serial No. 553,688
4 Claims. (Cl. 252—32.7)

1. A method of lubricating bearings which comprises maintaining on said bearings a film of a water resistant and structurally stable lubricating grease composition comprising a lubricating oil and a grease thickening amount within the range of about 22 to 60 wt. percent, based on the total composition, of a grease thickener, said grease thickener being a metal salt of the reaction product of a high molecular weight hydrocarbon reacted with about 10 to 20 wt. percent of a phosphorus sulfide

at a temperature of about 300 to 500° F. for about 4 to 15 hours, said metal being selected from the group consisting of sodium, lithium, calcium, barium, strontium, aluminum and lead.

2,859,179

POLYVALENT METAL MONO AND DICARBOXYLIC ACID SOAP THICKENED LUBRICATING OIL

John H. Lux, Baltimore, Md., and Konrad Parker, Chicago, Ill., assignors to Witco Chemical Company, a corporation of Illinois

No Drawing. Application January 4, 1955
Serial No. 479,844
2 Claims. (Cl. 252—35)

1. A grease comprising a lubricating oil and a grease thickening amount of a polyvalent metal soap, said soap comprising soap molecules co-formed by reaction of polyvalent metal ions with mixed mono and polycarboxylic acids, said polycarboxylic acid in the soap is sebacic acid, the proportion of sebacic acid being from about 0.5% to 25% of the total carboxylic acid by weight, and the monocarboxylic acid being of the class consisting of the fatty acids containing from 8 to 22 carbon atoms.

2,859,180

PROCESS FOR PREPARING ALKALI METAL-LEAD SOAP BASE GREASES

Terence B. Jordan, Fishkill, N. Y., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

No Drawing. Application May 2, 1956
Serial No. 582,068
9 Claims. (Cl. 252—36)

1. A process for preparing a mixed alkali metal-lead soap base grease which comprises forming a lead soap by reaction of lead oxide, PbO, with an excess of soap precursor in a mineral base lubricating oil at a temperature between 300 and 360° F. in the presence of water, cooling the reaction mixture to a temperature between 290 and 330° F., forming an alkali metal soap by reacting alkali metal hydroxide in the presence of water with the unsaponified portion of said soap precursor at a temperature between 190 and 230° F., said lead oxide and alkali metal hydroxide being reacted with said soap precursor in such proportions that there is formed a substantially neutral product in which said alkali metal soap and said lead soap are in a ratio of from 1:1 to 9:1, dehydrating said reaction mixture at a temperature between 300 and 450° F. and adding a lubricating oil to said reaction mixture during cooling to obtain the desired grease grade.

2,859,181

HEAT STABLE LITHIUM-LEAD SOAP COMPOSITION

Terence B. Jordan, Fishkill, N. Y., and Omry P. Puryear, Houston, Tex., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

No Drawing. Application May 2, 1956
Serial No. 582,069
6 Claims. (Cl. 252—42.5)

1. A heat stable composition consisting essentially of a liquid vehicle comprising a highly refined mineral lubricating oil having a V. I. of at least 80 as the major component, 2 to 4 weight percent lithium salt of hydroxy stearic acid, and 0.5 to 2 weight percent of the lead salt of hydroxy stearic acid, the total concentration of said lithium and lead salts being not more than 6 weight percent and not less than 2 weight percent and finely divided iron powder in an amount between 5 and 9 parts by weight of said liquid vehicle.

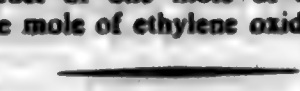
2,859,183

HEAVY DUTY LIQUID DETERGENT COMPOSITION

Frank E. Carroll, Glen Rock, N. J., assignor to Lever Brothers Company, New York, N. Y., a corporation of Maine

No Drawing. Application November 2, 1956
Serial No. 619,930
5 Claims. (Cl. 252—137)

1. A homogeneous heavy duty liquid detergent composition consisting essentially of an aqueous solution of from about 7% to about 16% of a potassium alkylaryl sulfonate having the general formula



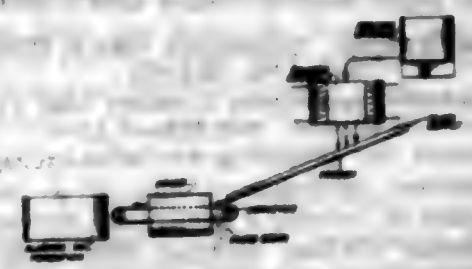
where R is an alkyl group containing from 1 to 15 carbon atoms, at least one R having 8 to 15 carbon atoms, and x is a number from 1 to 5; from about 4% to about 12% total of alkali metal arylsulfonate selected from the group consisting of toluene sulfonate, tetralin sulfonate, ethylbenzene sulfonate, isopropylbenzene sulfonate, orthoxylene sulfonate, meta-xylene sulfonate, a mixture of 80% toluene sulfonate and 20% ethyl benzene sulfonate, a mixture of 61% ortho-xylene sulfonate and 39% isopropylbenzene sulfonate, a mixture of 15% ortho-xylene sulfonate, 70% meta-xylene sulfonate, and 15% para-xylene sulfonate, a mixture of 47% toluene sulfonate plus 53% of a mixture of 15% ortho-xylene sulfonate, 70% meta-xylene sulfonate, and 15% para-xylene sulfonate, a mixture of 22% ortho-xylene sulfonate, 53% meta-xylene sulfonate, 5% paraxylene sulfonate, 18% ethylbenzene sulfonate, and 2% toluene sulfonate, and a mixture of from about 1% to about 10% toluene sulfonate plus from about 99% to about 90% of a mixture of 22% ortho-xylene sulfonate, 53% meta-xylene sulfonate, 5% para-xylene sulfonate, 18% ethylbenzene sulfonate, and 2% toluene sulfonate; from about 27% to about 10% of a potassium polyphosphate selected from the group consisting of tetrapotassium pyrophosphate and pentapotassium tripolyphosphate; and from about 2% to about 15% total of at least one compound selected from the group consisting of lauric isopropanolamide, lauric diethanolamide, coconut monoethanolamide, capric diethanolamide, tallow diethanolamide, the monoethanolamide of a 1:1 mixture of caprylic and capric acids, the condensation product of one mole of lauric monoethanolamide with one mole of ethylene oxide, and the condensation product of one mole of lauric isopropanolamide with one mole of ethylene oxide.

2,859,183

PROCESS OF PREPARING ALUMINA SOLS FROM ALUMINUM PELLETS

Kenneth D. Ashley and Gorge J. Brunl, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application June 3, 1955, Serial No. 513,038
8 Claims. (Cl. 252—313)



1. A process of preparing an alumina sol of high Al_2O_3 solids content and low viscosity which comprises pouring molten aluminum having a temperature of from about 1228 to about 1500° F. through an opening having a diameter of from about $\frac{5}{64}$ to about $\frac{17}{64}$ of an inch under a hydrostatic head of from about 2 to about 10 inches,

impinging the downwardly falling aluminum against a rapidly flowing fluid stream to break up the same and carry it away from the line of downward flight in the form of individual flattened aluminum pellets, and subjecting the aluminum pellets to the action of a weak aqueous lower aliphatic acid in contact with an amalgamating agent comprising mercury whereby the sol is formed.

2,859,184

PROCESS OF MANUFACTURE OF SILICA ALUMINA CATALYST

Kenneth D. Ashley, Stamford, and William E. Sanborn, Rowayton, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application April 3, 1952, Serial No. 280,422
12 Claims. (Cl. 252—453)

1. A method of forming a silica-alumina slurry suitable for conversion into an alkali metal-free adsorbent gel-type catalyst which comprises adding a mineral acid to a dilute aqueous suspension of hydrated silica gel in an amount sufficient to lower the pH to approximately 0.5–3.5, and then adding an alkali metal aluminate and additional mineral acid simultaneously and in such respective amounts that the total quantity of added mineral acid is sufficient to neutralize the alkali metal aluminate to precipitate aluminum hydroxide on the hydrated silica gel and provide a silica-alumina ratio of between 95:5 and 70:30 in the catalyst.

2,859,185

REFORMING CATALYSTS

Charles N. Kimberlin, Jr., and Elroy M. Gladrow, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application July 28, 1953, Serial No. 370,795
14 Claims. (Cl. 252—465)

1. A method of preparing improved catalyst supports which comprises hydrolyzing an aluminum alcoholate in the presence of sulfur dioxide to form amorphous alumina, drying and calcining said amorphous alumina.

6. A method of preparing active reforming catalyst compositions which comprises hydrolyzing an aluminum alcoholate in the presence of sulfur dioxide to form amorphous alumina, heating said amorphous alumina to remove water therefrom, depositing an active reforming catalyst selected from the group consisting of platinum metals and group VI metal compounds on said amorphous alumina and activating the resultant composition.

2,859,186

RESINOUS TRIMETHYLOL PHENOL-PHENOL-POLYAMINE CONDENSATION PRODUCTS WITH ANION EXCHANGING PROPERTIES

Carl Bersch, Leverkusen-Wiesdorf, and Walter Hagge and Mathias Quaedvlieg, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 6, 1955
Serial No. 506,656
Claims priority, application Germany May 17, 1954
6 Claims. (Cl. 260—2.1)

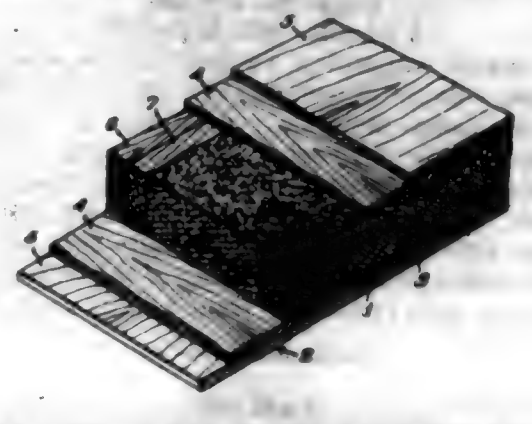
1. A process for preparing an anion-exchange resin which comprises contacting 1 mol of a monohydric phenol capable of forming a trimethylol derivative in an aqueous caustic alkaline solution with about 3.5–4.5 mols of formaldehyde to produce an aqueous solution of the trimethylol derivative of said monohydric phenol, mixing about 1 mol of a monohydric phenol in which at least two of the hydrogen atoms in p- and o-position to the phenolic hydroxyl group are unsubstituted and about 1–5 mols of an alkylene polyamine with said solution, thereafter heating said solution to temperatures of about 50 to 100° C. to convert said solution into a gel and drying said gel to produce a resin with anion exchange properties.

2,859,187

FIREPROOF DOOR CORE OF PHENOL FORMALDEHYDE, WOOD CHIPS AND DIAMMONIUM PHOSPHATE

Leonard A. Repolin, Marshfield, Wis., assignor to Roddis Plywood Corporation, Marshfield, Wis., a corporation of Wisconsin

Application July 6, 1954, Serial No. 441,290
3 Claims. (Cl. 260—17.2)



1. A rigid core for fireproof doors and panels comprising wood chips of ⅛ to ¼ inch mesh having a density between 0.38 and 0.40; a thermosetting phenol formaldehyde condensation product binder amounting to 8% of the weight of the chips; inert mineral filler from the group consisting of clay and bentonite amounting to 15% of the weight of the chips; diammonium phosphate crystals amounting to 15% of the weight of the chips, said core after setting of the binder having a density of 0.70.

2,859,188

HEXAHYDROBENZOGUANAMINE OIL MODIFIED ALKYD COATING COMPOSITIONS

Rudolph L. Helder, Springfield, Mass., and Harry M. Walker, Dickinson, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 26, 1956
Serial No. 624,212
9 Claims. (Cl. 260—31)

1. A coating composition comprising an organic solution of from 50 to 90% by weight of an oil-modified alkyd resin and from 10 to 50% by weight of an etherified hexahydrobenzoguanamine-aldehyde resin; said etherified hexahydrobenzoguanamine-aldehyde resin being prepared by (1) the alkaline condensation of from 3 to 6 molar proportions of a monoalkanol containing 1–4 carbon atoms with 1 molar proportion of hexahydrobenzoguanamine and (2) subsequently reacting the condensation product with from 3 to 10 molar proportions of a monoalkanol containing 1–6 carbon atoms under acid conditions.

2,859,189

TEXTILE SIZE

John R. Fallon and Scott H. Foster, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application October 28, 1954
Serial No. 465,444
5 Claims. (Cl. 260—23)

1. A composition for sizing cellulosic filamentary yarns comprising an aqueous ammonium solution of ammonium salt of a copolymer of vinyl acetate and crotonic acid and from 0.5–3.0% by weight of an ammonium salt of a fatty acid containing from 12–20 carbon atoms based

on the weight of the copolymer, the copolymer containing from 95–99 mol percent of vinyl acetate and 5–1 mol percent of crotonic acid.

2,859,190

WAX-RESIN EMULSION FOR WATER VAPOR PROOFING PAPER AND METHOD OF PRODUCING SAME

Richard H. Cubberley, Morris Township, and M. Benjamin Bell, Morristown, N. J., assignors to The Patent and Licensing Corporation, New York, N. Y., a corporation of Massachusetts

No Drawing. Application August 26, 1953
Serial No. 376,750
3 Claims. (Cl. 260—28.5)

1. An emulsion suitable for water vapor proofing paper comprising water, microcrystalline wax, a solid polymer selected from the group consisting of polyisobutene and polyethylene and mixtures thereof and a copolymer of isobutene and isoprene, the weight of said wax exceeding the weight of said polymer, a clay selected from the group consisting of kaolin and ball clay as an emulsifying agent, and a cationic surface active agent as a promoter for said clay, wherein the ratio of combined wax and polymer is 3 to 10 parts per part of clay.

2,859,191

STABLE AQUEOUS DISPERSIONS OF COPOLYMERS OF VINYL ACETATE WITH SALTS OF ALLYLSULFONIC ACID AND METHALLYLSULFONIC ACID AND PROCESS FOR PREPARING SAME

Norris Turnbull, Grand Island, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 8, 1954
Serial No. 442,190
12 Claims. (Cl. 260—29.6)

8. An aqueous dispersion of a polymer of vinyl acetate, said dispersion being made by polymerizing a monomeric mixture consisting of vinyl acetate and 0.02% to 1% by weight of said vinyl acetate of a member selected from the group consisting of alkali metal salts of allylsulfonic acid and methallylsulfonic acid in an aqueous medium at a temperature between about 60° C. and 95° C. and in the presence of a polymerization catalyst.

2,859,192

COMBINATIONS OF VINYL AQUEOUS EMULSIONS AND RESINOUS ACETONE-FORMALDEHYDE REACTION PRODUCTS

Mortimer T. Harvey, South Orange, and Peter L. Rossmillo, Newark, N. J., assignors to Harvel Research Corporation, Irvington, N. J., a corporation of New Jersey

No Drawing. Application September 22, 1955
Serial No. 536,037
8 Claims. (Cl. 260—29.6)

1. A novel composition of matter comprising (*a*) an aqueous emulsion of a normally solid vinyl resin selected from the group consisting of polyvinyl acetate, polyvinyl chloride and copolymers of vinyl chloride and vinyl acetate and (*b*) resinous reaction product of acetone and formaldehyde produced under alkaline conditions, said resinous reaction product being water soluble and thermosetting, the ratio by weight of said vinyl resin to said resinous reaction product being 4 parts of said resinous reaction product to 1–16 parts of said vinyl resin, the viscosity of said resinous reaction product being such that an aqueous solution thereof measuring 4 parts by weight of said resinous reaction product to 1 part by weight of water is in the range of 600 to 10,000 centipoises at 25° C. said (*b*) being dissolved in the aqueous phase of (*a*).

2,859,193

AQUEOUS DISPERSION COMPRISING CARBOXYL CONTAINING ELASTOMER, VULCANIZING AGENT, AND FORMALDEHYDE

Anthony Andrew Kowalewski, Lorain, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application July 30, 1956
Serial No. 600,717
4 Claims. (Cl. 260—29.7)

1. An aqueous dispersion especially adapted to form elastic crack-free deposits, said dispersion comprising (1) solid particles of a carboxyl-containing elastomeric polymer, said polymer having been prepared by polymerizing in an acidic aqueous medium a mixture of monomeric materials comprising at least about 45% by weight of butadiene-1,3 together with an aliphatically unsaturated carboxylic acid copolymerizable with butadiene-1,3, in an amount sufficient to produce a polymer containing from 0.005 to 0.2 chemical equivalents by weight of combined carboxyl groups per 100 parts by weight of polymer (2) a vulcanizing agent for said carboxyl-containing elastomeric polymer in an amount sufficient to vulcanize said polymer, said vulcanizing agent being selected from the class consisting of divalent metal oxides, alkali metal aluminates and sulfur and (3) from about 0.1 to 5 weight parts of formaldehyde per 100 weight parts of said polymer, said aqueous dispersion being at a pH of from about 9.0 to 11.5.

2,859,194

USE OF DIALKYL OXALATES IN VINYLIDENE RESINS

Robert J. Reid, Canal Fulton, William Mayo Smith, Jr., Cuyahoga Falls, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application February 23, 1954
Serial No. 412,871
9 Claims. (Cl. 260—31.8)

4. A resin composition which includes a crystalline polymeric resin selected from the group consisting of homopolymers of vinylidene chloride and copolymers thereof with up to 15 percent of other ethylenically unsaturated monomer, and as a processing aid a dialkyl oxalate in the range of dipropyl to diheptyl oxalates, the amount of the oxalate being substantial but not in excess of about 10 percent, said percentages referring to percentages by weight of the polymeric resin.

2,859,195

USE OF DIALKYL MALONATES IN VINYLIDENE RESINS

Robert J. Reid, Canal Fulton, William Mayo Smith, Jr., Cuyahoga Falls, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application February 23, 1954
Serial No. 412,872
9 Claims. (Cl. 260—31.8)

4. A resin composition which includes a crystalline polymeric resin selected from the group consisting of homopolymers of vinylidene chloride and copolymers thereof with up to 15 percent of other ethylenically unsaturated monomer, and as a processing aid a dialkyl malonate in the range of dipropyl to dihexyl malonate, the amount of the malonate being substantial but not in excess of about 10 percent, said percentages referring to percentages by weight of the polymeric resin.

2,859,196
USE OF DIALKYL GLUTARATES IN VINYLIDENE RESINS
Robert J. Reid, Canal Fulton, William Mayo Smith, Jr., Cuyahoga Falls, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Application February 23, 1954
Serial No. 412,874
9 Claims. (Cl. 260—31.8)

4. A resin composition which includes a crystalline polymeric resin selected from the group consisting of homopolymers of vinylidene chloride and copolymers thereof with up to 15 percent of other ethylenically unsaturated monomer, and as a processing aid a dialkyl glutarate from the class consisting of the dimethyl, diethyl and dipropyl glutarates, the amount of the glutarate being substantial but not in excess of about 10 percent, said percentages referring to percentages by weight of the polymeric resin.

2,859,197
USE OF DIMETHYL AND DIETHYL ADIPATES IN VINYLIDENE RESINS
Robert J. Reid, Canal Fulton, William Mayo Smith, Jr., Cuyahoga Falls, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Application February 23, 1954
Serial No. 412,875
8 Claims. (Cl. 260—31.8)

5. A resin composition which includes a crystalline polymeric resin selected from the group consisting of homopolymers of vinylidene chloride and copolymers thereof with up to 15 percent by weight of other ethylenically unsaturated monomer, and as a processing aid a dialkyl adipate of the class consisting of dimethyl adipate and diethyl adipate, the amount of the adipate being substantial but not in excess of about 10 percent, said percentages referring to percentages by weight of the polymeric resin.

2,859,198
SURFACE-COATED SILICON-CONTAINING PARTICULATE MATERIAL AND RUBBERY COMPOSITION AND METHOD OF MAKING SAME
Daniel S. Sears, Henrico County, Va., and Edwin B. Newton, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
No Drawing. Application June 12, 1951
Serial No. 231,254
21 Claims. (Cl. 260—37)

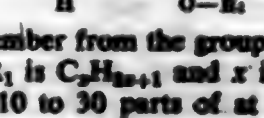
1. An elastomeric composition comprising a rubbery conjugated diene polymer and a finely-divided inorganic solid silicon-containing material coated with an organosiloxane, the weight of the coating being from 0.3 to 20% by weight of the uncoated material.

2,859,199
POLYMERIZABLE MIXTURE OF STYRENE AND A POLYESTER REACTION PRODUCT
Earl E. Parker, Milwaukee, Wis., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
No Drawing. Application April 6, 1953
Serial No. 347,177
3 Claims. (Cl. 260—45.4)

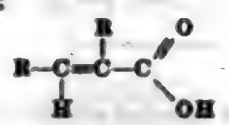
3. A polymerizable mixture of (A) styrene and (B) a reaction product obtained by heating a mixture of (B') a glycidyl polyether formed by reacting, in the presence of alkali, p,p'-isopropylidenediphenol and epichlorohydrin and (B") a material of a class consisting of (I) an esterifiable mixture of a (1) glycol of a class consisting of propylene glycol and diethylene glycol and (2) a mixture of maleic acid and an acid of a class consisting of phthalic acid and adipic acid and (II) the preformed polyester of esterifiable mixture (I).

2,859,200
ROOM TEMPERATURE SETTING ADHESIVE
Risto P. Leppala, Madison, Wis., assignor to Bjorksten Research Laboratories, Inc., Madison, Wis., a corporation of Illinois
No Drawing. Application September 3, 1953
Serial No. 378,425
3 Claims. (Cl. 260—45.5)

1. A composition comprising 80 to 95 parts of at least one monomer selected from the group having the formula:



wherein R is a member from the group consisting of —H and —CH_3 and R_1 is C_xH_{2x+1} and x is a whole number not exceeding 2, 10 to 30 parts of at least one polymer formed from a monomer having said formula and 5 to 20 parts of at least one monomer selected from the group having the formula:



wherein R is a member from the group consisting of —H and —CH_3.

2,859,201
GRAFT-TYPE POLYMER OF CONJUGATED DIENE AND ACRYLIC ACID AND PROCESS OF PREPARATION
Carl A. Uraneck, Phillips, Richard J. Sommerfeld, Berger, and Durward F. Dodgen, Jr., Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application November 9, 1953
Serial No. 391,144
16 Claims. (Cl. 260—45.5)

1. A process for preparing a graft-type polymer comprising treating an unsaturated polymer with a base to form a water-soluble salt thereof, said polymer being prepared from a polymerizable mixture which includes a conjugated diene and an unsaturated carboxy acid, the latter constituting 20–99% by weight of total monomers, and polymerizing said salt with at least one vinylidene compound in an aqueous emulsion system in the presence of a polymerization catalyst, said polymer being the sole emulsifier in the system and constituting at least 1% by weight of the polymerizable constituents therein.

2,859,202
SILOXANE COMPRISING 2,5-DIMETHYL-2,5-DIHYDROPEROXY HEXANE
William J. Bobear, Latham, N. Y., assignor to General Electric Company, a corporation of New York
No Drawing. Application April 10, 1957
Serial No. 651,804
7 Claims. (Cl. 260—46.5)

1. A porous sheet material coated and impregnated with a composition comprising (1) an organopolysiloxane convertible to the cured, solid, elastic state consisting of from about 75 to 99.9 mol percent lower alkyl groups and from about 0.1 to 0.6 mol percent vinyl groups, any other organic groups present in the aforesaid organopolysiloxane being selected from the class consisting of aryl groups, halogenated aryl groups, and mixtures thereof, the total molar concentration of organic groups being equal to 100 percent, all the organic groups being attached to silicon by carbon-silicon linkages, there being present an average of from 1.95 to 2.1 organic groups

per silicon atom (2) a filler and (3) a semi-curing agent for (1) consisting of from 1 to 10 percent of 2,5-dimethyl-2,5-dihydroperoxy hexane based on the weight of (1).

2,859,203
TOUGH, IMPACT-RESISTANT RESINS
Edmond Frank Fiedler, Adams, and Frank Paul Florentine, Jr., Stockbridge, Mass., assignors to General Electric Company, a corporation of New York
No Drawing. Application February 23, 1955
Serial No. 490,124
6 Claims. (Cl. 260—51)

1. The method of preparing fusible, soluble, thermosetting, resinous, reaction products by reacting at a temperature of from about 50 to about 180° C., (1) from about 5 to about 95 percent, by weight of the reaction mixture, of spaced polyphenols, said spaced polyphenols comprising (*a*) the product of heat reacting in the presence of a Friedel-Crafts catalyst, a monohydroxy benzene compound selected from the group consisting of monohydroxy benzene and substituted monohydroxy benzene in which the substitution is selected from the group consisting of alkyl groups, alkoxy groups, and halogen radicals and (*b*) a mixture of long-chain chlorinated hydrocarbons containing from about 12 to 30 carbon atoms per molecule and from about 15 to about 45% of chlorine, by weight of the chlorinated hydrocarbons, the reactants being present in such proportions that the combined chlorine to phenol ratio is from 0.1 atom of chlorine per mol of phenol up to two atoms of chlorine per mol of phenol, (2) from about 5 to about 95 percent by weight of the reaction mixture, of a phenol selected from the class consisting of phenol and substituted monophenols, in which the subetitution is selected from the group consisting of alkyl groups, alkoxy groups and halogen radicals, and (3) a sufficient quantity of hexamethylenetetramine to give a number of methylene groups equivalent to from ½ the total number of free ortho and para positions in the phenol and monohydroxy benzene rings in the spaced polyphenol up to a number of methylene groups equivalent to the total number of available reactive ortho and para positions on the monohydroxy benzene rings present in the spaced polyphenols and the phenol.

2,859,204
METHYLOLATED COMPOSITIONS AND PRODUCTS DERIVED THEREFROM
Frank P. Florentine, Jr., Stockbridge, and Edmond F. Fiedler, Adams, Mass., assignors to General Electric Company, a corporation of New York
No Drawing. Application March 1, 1955
Serial No. 491,534
11 Claims. (Cl. 260—51)

1. The method of preparing resinous condensation products which comprises (1) reacting together, under alkine conditions, (*a*) a mixture of spaced polyphenols, said spaced polyphenols comprising the product of heat reacting in the presence of a Friedel-Crafts catalyst (i) a monohydroxy benzene compound selected from the group consisting of monohydroxy benzene and substituted monohydroxy benzene in which the substitution is selected from the group consisting of alkyl groups, alkoxy groups and halogen radicals and (ii) a mixture of chlorinated hydrocarbons having from about 12 to about 30 carbon atoms per molecule, from about 15 to about 45 percent, by weight of the chlorinated hydrocarbon, of chlorine and having a molecular weight in the range of about 250 to about 600, and in which spaced polyphenols the average degree of substitution of hydrocarbon groups per monohydroxy benzene ring is less than three, with (*b*) a reactive methylene compound selected from the group consisting of formaldehyde and paraformaldehyde, to form a mixture of methylolated spaced polyphenols, the reactive methylene compound being present in sufficient quantity to give a number of methylene groups equivalent to from one-half the total number of free reactive ortho and para positions available on the monohydroxy benzene rings in the spaced polyphenols up to a number of methylene groups equivalent to the total available reactive ortho and para positions in the spaced polyphenols, and (2) thereafter reacting the resulting methylolated products, in the presence of an acid catalyst, with a phenol selected from the group consisting of phenol and substituted monophenols in which the substitution is selected from the group consisting of alkyl groups, alkoxy groups and halogen radicals.

2,859,205
PROCESS OF MAKING STYRENATED PHENOL-FORMALDEHYDE RESINS
Frank Joseph Lection, West Mifflin, Pa., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Original application August 6, 1954, Serial No. 448,378, now Patent No. 2,793,185, dated May 21, 1957. Divided and this application November 26, 1956, Serial No. 624,211
2 Claims. (Cl. 260—51)

1. A process for preparing a permanently fusible resin which comprises reacting one mol of a monohydric phenol taken from the group consisting of phenol, cresols, xylenols and mixtures thereof with 0.1–0.2 mol of a styrene taken from the group consisting of styrene, ring-substituted chlorostyrenes, ring-substituted alkylstyrenes, and mixtures thereof at reflux temperature under acid conditions and immediately after the reaction is completed adding 0.7–0.9 mol of an aqueous solution of formaldehyde to the reaction medium under reflux conditions and then continuing the reaction until substantially all the formaldehyde is chemically combined.

2,859,206
THIOUREA AND UREA-FORMALDEHYDE MIXED RESINS
Raymond Pelansky and William Frank Herbes, Somerville, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application July 11, 1956
Serial No. 597,088
12 Claims. (Cl. 260—70)

1. A process for preparing a hydrophilic potentially thermosetting resinous product which comprises reacting at a temperature above 45° C. and at a pH between 7 and 10 relative proportions of 1 mole of thiourea with between 1.0 and 2.2 moles of formaldehyde in the presence of between 1.0 and 5.0 moles of a saturated monohydric aliphatic alcohol containing 1 to 3 carbon atoms, adjusting the pH of the reaction mixture to between about 5.1 and about 6.0 and reacting said mixture, adding from between 0.05 and 0.38 mole of urea to said reaction mixture, and reacting the mixture, and thereafter adjusting the pH to between 7 and 9 to produce a stable resinous product, said stable resinous product being one which does not become turbid when maintained for four weeks at 25° C. and which does not hydrophobe when diluted with 3 times its volume of water at 25° C.

2,859,207
PROCESS OF PURIFICATION OF POLYVINYL ACETALS
Joseph Dahle, Allentown, Pa., assignor to Columbia Corporation of America, New York, N. Y., a corporation of Delaware
No Drawing. Application May 24, 1955
Serial No. 510,830
11 Claims. (Cl. 260—73)

1. In the process for the production of polyvinyl acetal resins, the steps which comprise adding an aqueous non-

solvent liquid to a solution of an impure polyvinyl acetal resin in a solvent therefor, the amount and temperature of the aqueous non-solvent being such that a gel phase of said resin and a liquor phase, comprising an aqueous mixture of the solvent and non-solvent, are produced, and separating said liquor phase from said gel phase, said gel being characterized by the property of settling on standing to form a lower layer distinct from said liquor, which lower layer may be broken into small particles on vigorous agitation but which is reformed by particle agglomeration when the agitation ceases.

2,859,208

POLYAMIDES FROM N-ALKYL PRIMARY-SECONDARY DIAMINES

William C. Hollyday, Jr., Pinewood, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application October 17, 1955
Serial No. 541,077
8 Claims. (Cl. 260—78)

1. An oil soluble polyamide having a molecular weight in the range of 500 to 50,000, of substantially equimolecular amounts of an amine constituent, selected from the group consisting of diamines having the general formula:

wherein R is an alkyl group containing from about 8 to 18 carbon atoms, and mixtures thereof, and an acid constituent selected from the group consisting of dicarboxylic acids having the formula:

$$HOOC—(CH_2)_xCOOH$$

wherein x is an integer from about 2 to 8, their anhydrides and mixtures thereof.

2,859,209

PROCESS FOR POLYMERIZING VINYL ALKYL ETHERS

Robert R. Dreisbach and John L. Lang, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application December 27, 1955
Serial No. 555,336
3 Claims. (Cl. 260—79.3)

1. A process for producing water-soluble polymers consisting of dispersing in aqueous medium a vinyl beta-haloalkyl ether wherein the alkyl group contains from 2 to 10 carbon atoms together with from 50 to 100 percent by weight based on the weight of said ether of a water-soluble inorganic salt selected from the group consisting of sulfites, bisulfites, meta-bisulfites, and thiosulfates, and subjecting said materials to a temperature of 50° to 250° C. in the presence of catalytic quantities of a water-soluble persulfate until polymerization is substantially complete and the halogens of at least half of the vinyl beta-haloalkyl ethers have been replaced by a sulfonate group.

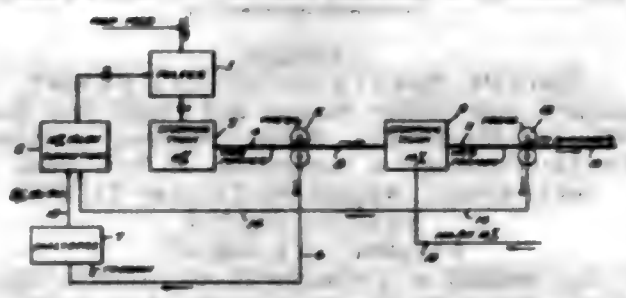
2,859,210

METHOD OF PRODUCING ALKALI CELLULOSE

Stewart E. Seemann, Osprey, Fla., and Stewart L. Seemann, White Plains, N. Y.

Application December 10, 1956, Serial No. 627,388
4 Claims. (Cl. 260—233)

1. The method of producing alkali cellulose having a high degree of polymerization for use in the viscose process comprising first forming a slurry of a chlorinated pulp of high degree of polymerization and substantially free of lignin with a sodium hydroxide solution having an effective alkali concentration of substantially 9½% and maintaining the slurry for substantially 15 minutes at a temperature between 20° and 50° C. and producing a maximum swelling of the fiber, pressing the pulp so treated to a press ratio of between 2 and 3.5 to 1, then forming a slurry of the pressed pulp with a second sodium hydroxide solution of higher concentration and maintaining the slurry for substantially 15 minutes at a temperature between 20 and 50° C. and pressing the product of the



second causticizing to a press ratio of between 2 and 3.5 to 1, the concentration of said second caustic solution being sufficient to produce an alkali cellulose having an alkali content of not substantially less than 15% after pressing.

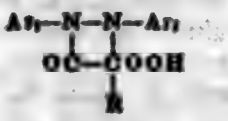
2,859,211

1,2-DIARYL-1,2-DIAZA CYCLOBUTANONE-3-CARBOXYLIC ACID DERIVATIVES

Rudolf Pfister and Franz Hilfiger, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N. Y., a corporation of Delaware

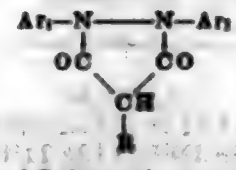
No Drawing. Application July 8, 1957
Serial No. 670,388
Claims priority, application Switzerland August 2, 1956
5 Claims. (Cl. 260—239)

1. Process for the production of diazacyclobutane derivatives corresponding to the formula:



I

wherein each of Ar_1 and Ar_2 represents a member selected from the group consisting of phenyl, p-methoxyphenyl, p-chlorophenyl and p-tolyl, and R represents a member selected from the group consisting of lower alkyl, benzyl, chloro-benzyl, cyclopentyl, cyclohexyl, diethylaminoethyl, phenylmercaptoethyl, phenylsulfinyl, phenylsulfonyl, tetrahydrofurfuryl and γ-pyridyl-ethyl, comprising reacting in aqueous solution a salt of a 1.2-diaryl-3.5-dioxo-pyrazolidine of the general formula:



II

wherein Ar_1, Ar_2 and R have the meanings defined above, with a member selected from the group consisting of a salt of a hypohalous acid and a substance giving off such, and separating the free acid by acidifying.

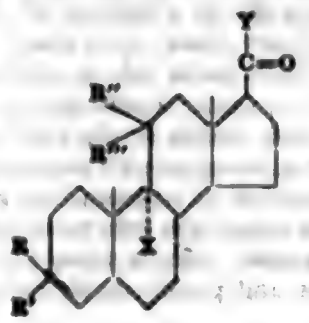
2,859,212

21-ALDO STEROIDS

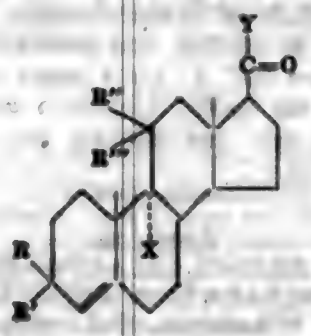
Josef Fried, New Brunswick, N. J., assignor to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application November 12, 1954
Serial No. 468,575
15 Claims. (Cl. 260—239.55)

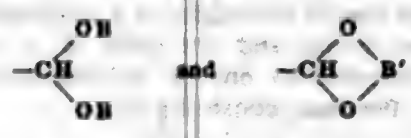
1. A steroid selected from the group consisting of those of the formula



and

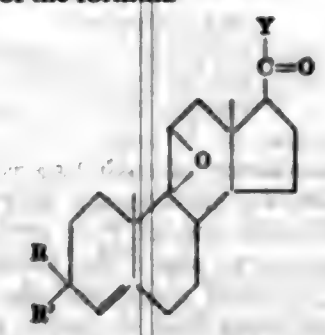


wherein individually R is hydrogen, R′ is hydroxy and together R and R′ is keto, individually R″ is hydrogen, R‴ is β-hydroxy and together R″ and R‴ is keto; X is an α-halogen group; and Y is selected from the class consisting of



wherein B is a radical of the class consisting of lower alkyl, halo-substituted lower alkyl, lower alkoxyalkyl, and phenyl (lower alkyl) and B′ is a saturated divalent aliphatic radical.

7. A steroid of the formula



wherein individually R is hydrogen, R′ is hydroxy and together R and R′ is keto; and Y is selected from the class consisting of

wherein B is a radical of the class consisting of lower alkyl, halo-substituted lower alkyl, lower alkoxy-alkyl and phenyl(lower alkyl), and B′ is a saturated divalent aliphatic radical.

2,859,213

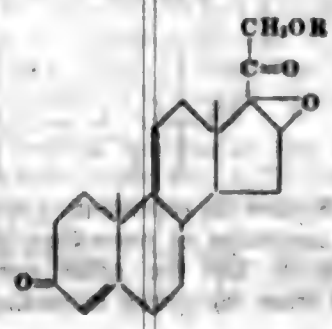
ESTERS FOR SYNTHESIZING STEROIDS

Martin W. Farrar, Webster Groves, Harold Raffelson, St. Louis, and William S. Knowles, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application July 23, 1953, Serial No. 369,944, now Patent No. 2,759,929, dated August 21, 1956. Divided and this application June 21, 1956, Serial No. 592,717

3 Claims. (Cl. 260—239.55)

1. 16,17-oxido-17-(acyloxyacetyl)-cyclopentano-10,13-dimethyl-$\Delta^{4,9(11)}$-decahydrophenanthren-3-one



where R is an acyl radical obtained from a hydrocarbon carboxylic acid of the structure

upon removal of the —OH group from said hydrocarbon carboxylic acid.

2,859,214

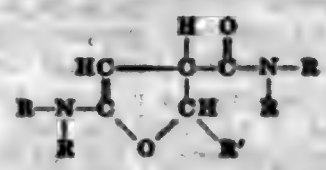
N,N-DISUBSTITUTED-5-DISUBSTITUTED-AMINO-2,3-DIHYDRO-3-FURAMIDES AND THEIR PREPARATION

Benjamin W. Hook, West Chester, Pa., and John C. Sauer, Cranmore, Del., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 20, 1956 Serial No. 605,220

13 Claims. (Cl. 260—247.2)

1. An N,N - disubstituted - 5 - disubstituted - amino-2,3-dihydro-3-furamide having the formula



wherein the R substituents on each nitrogen atom are selected from the class consisting of alkyl of not more than 12 carbon atoms, cyclohexyl, phenyl, benzyl, tolyl, saturated aliphatic hydrocarbon radicals which are directly joined together and form with the nitrogen to which they are bonded an unsubstituted piperidine ring, and saturated aliphatic hydrocarbon radicals which are joined through ether oxygen and form with the nitrogen to which they are bonded an unsubstituted morpholine ring, and R′ is selected from the class consisting of hydrogen and alkyl radicals of not more than 4 carbon atoms.

7. The morpholine amide of 5-(4-morpholino)-2,3-dihydro-3-furoic acid.

8. The process for preparing an N,N-disubstituted-5-disubstituted-amino-2,3-dihydro-3-furamide which comprises reacting, in an inert liquid organic reaction medium at 60° C.–175° C. under a pressure of at least 50 atmospheres and in the presence of a catalytic amount of cobalt carbonyl, at least one mole of carbon monoxide per mole of 3-tertiary-amino-1-alkyne in which one of the acetylenically unsaturated carbon atoms is bonded to hydrogen and the other acetylenically unsaturated carbon atom is bonded to a carbon atom having one of its valences satisfied by hydrogen, another of its valences satisfied by a member selected from the class consisting of hydrogen and alkyl radicals of not more than 4 carbon atoms, and its remaining valence satisfied by radicals selected from the class consisting of the morpholino radical, the piperidino radical, and tertiary-amino nitrogen having two of its valences satisfied by radicals selected from the class consisting of alkyl of not more than 12 carbon atoms, cyclohexyl, phenyl, benzyl and tolyl.

2,859,315

PROCESS FOR PREPARATION OF CYCLONITE

Roland J. Spencer, Clinton, Ind., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application April 19, 1956 Serial No. 579,159

4 Claims. (Cl. 260—248)

1. A process for the preparation of cyclonite which comprises mixing concentrated nitric acid with hexamethylenetetramine in ratios between about 8:1 and about 15:1 by weight while agitating the mixture and maintaining the temperature between about —42° C.

and about —10° C., heating the reaction mixture to a temperature from about 80° C. to about 90° C., immediately adding an excess of cold water to the reaction mixture, and separating the cyclonite which precipitates from the mixture.

2,859,216
PROCESS FOR THE PREPARATION OF PIPERAZINE DERIVATIVES
Dexter B. Pattison, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 26, 1956
Serial No. 593,826
6 Claims. (Cl. 260—268)

1. A process for the preparation of N,N'-bis-(omega-cyano-n-alkyl)-piperazines in which the omega-cyano-n-alkyl groups contain 4 to 8 carbon atoms by reaction of a piperazine, selected from the group consisting of piperazine and C-alkyl substituted piperazines carrying 1 to 2 alkyl groups containing 1 to 2 carbon atoms, with, at least, two molecular proportions of an omega-halogenonitrile of a normal fatty acid containing 4 to 8 carbon atoms in the presence of water and approximately one equivalent of an alkali for each molecular proportion of the halogenonitrile, said alkali being selected from the group consisting of alkali metal hydroxides, alkali metal carbonates and alkaline earth hydroxides.

2,859,217
ACETYLCHOLINE ESTERASE INHIBITORS
Quentin F. Soper, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
No Drawing. Application September 28, 1956
Serial No. 612,575
5 Claims. (Cl. 260—296)

1. 4,4'-oxy-bis-(phenacyl-pyridinium chloride).

2,859,218
PRODUCTION OF GLUTAMIC ACID
Marcus A. Stevens, Niagara Falls, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application August 1, 1955
Serial No. 525,774
6 Claims. (Cl. 260—309.5)

1. The method of producing 5-(β-carboxyethyl) hydantoin comprising photo-chemically oxidizing furfural in a solution of a lower aliphatic alcohol; catalytically hydrogenating the resulting 2-keto-5-alkoxydihydrofuran to obtain the corresponding 2-keto-5-alkoxytetrahydrofuran; and reacting the latter compound, a compound yielding cyanide ions, a compound yielding ammonium ions and a compound yielding carbonate ions to obtain said 5-(β-carboxyethyl) hydantoin.

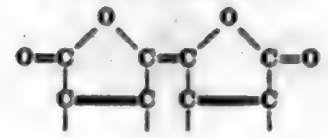
5. The method for producing 5-(β-carboxyethyl) hydantoin comprising reacting in an aqueous medium a 2-keto-5-alkoxytetrahydrofuran, a compound yielding cyanide ions, a compound yielding ammonium ions and a compound yielding carbonate ions.

2,859,219
HYDROCARBON-SOLUBLE PHTHALOCYANINE DYES
David I. Randall, New Vernon, N. J., and Tellis A. Martin, Evansville, Ind., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application February 28, 1956
Serial No. 566,368
6 Claims. (Cl. 260—314.5)

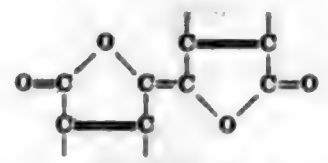
1. A process for preparing a hydrocarbon-soluble phthalocyanine dye comprising the steps of suspending a copper tetra chloro-methyl phthalocyanine in a mixture consisting essentially of dichlorobenzene as inert solvent, stannic chloride as catalyst, and dodecylbenzene, heating the mixture above 100° C. for 4 hours, cooling the mixture, adding to the cooled mixture a non-aqueous non-solvent for the dye, and filtering out the precipitated dyestuff.

2,859,220
ENDO-BRIDGE DILACTONES AND PREPARATION THEREOF
John C. Sauer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application September 4, 1956
Serial No. 607,603
16 Claims. (Cl. 260—343.3)

1. An endo-bridge dilactone which consists of the adduct of from one to two moles of a conjugated diene of 4 to 10 carbon atoms and one mole of an unsaturated dilactone represented by one of the structural formulas selected from the class consisting of



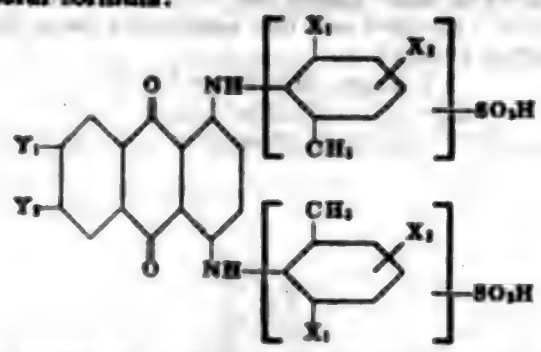
and



wherein one free valence of each ring is satisfied by R and the other free valence of each ring is satisfied by R', said R and R' being selected from the class consisting of hydrogen, alkoxyaryl where the alkoxy group is of not more than 12 carbon atoms and the aryl radical is hydrocarbon of not more than 10 carbon atoms, haloaryl where the aryl radical is hydrocarbon of not more than 10 carbon atoms, and monovalent hydrocarbon radicals, free from non-aromatic unsaturation, of not more than 12 carbon atoms, said endobridge dilactone having the doubly bonded carbon atoms of from one to both of the dilactone rings each joined to one mole of said conjugated diene by 1,4-addition.

2,859,221
ACID ANTHRAQUINONE DYESTUFFS
Peter Hindermann, Batterie, Basel, Peter Trautzl, Basel, and Jean-Pierre Jung, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A. G., Basel, Switzerland, a Swiss firm
No Drawing. Application December 23, 1955
Serial No. 554,917
Claims priority, application Switzerland December 31, 1954
8 Claims. (Cl. 260—373)

1. An acid dyestuff of the anthraquinone series having the general formula:



wherein one of X_1 and X_2 represents a member selected from the group consisting of phenyloxy, phenylthio and naphthyloxy radicals and the other one represents a member selected from the group consisting of hydrogen

2,859,228
having an electrode potential of more than 0.3 volt, and

and the methyl group, Y_1 and Y_2 each represent a member selected from the group consisting of hydrogen and halogen, and wherein X_1 is always different from hydrogen.

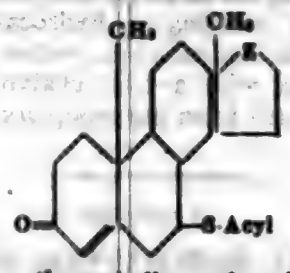
2,859,222

7α-ACYLTHIO SUBSTITUTION PRODUCTS OF 4-ANDROSTEN-3-ONES

Raymond M. Dodson, Park Ridge, and Robert C. Tweit, Wilmette, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application December 31, 1957
Serial No. 706,361
5 Claims. (Cl. 260—397.3)

1. A 7-acylthio-4-androstenone of the formula



wherein acyl is a (lower)alkanoyl radical and Z is selected from the group consisting of carbonyl, hydroxymethylene, (lower)alkanoyloxymethylene and benzoyloxymethylene.

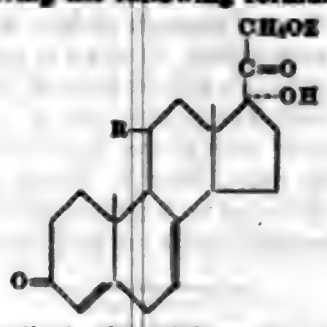
2,859,223

Δ4,7-3,20-DIKETO-17-HYDROXY-11,21-BIS-OXYGENATED PREGNADIENES AND PROCESSES OF PREPARING THE SAME

Lewis H. Sarett, Princeton, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Original application January 25, 1955, Serial No. 483,858. Divided and this application October 31, 1955, Serial No. 544,875
17 Claims. (Cl. 260—397.45)

1. Δ4,7-3,20-diketo-17-hydroxy-11,21-bis-oxygenated-pregnadienes having the following formula:



wherein R is a radical selected from the group which consists of hydroxy and keto radicals, and Z is a substituent selected from the group which consists of hydrogen and lower hydrocarbon carbonyl substituents.

8. The process which comprises reacting an N-bromamide with a 3-lower ketal of Δ4-3,11,20-triketo-17-hydroxy-21-lower hydrocarbon carbonyloxy-pregnene to form the corresponding 7-bromo derivative, and reacting the latter compound with a tertiary amine followed by a mild hydrolyzing agent to produce Δ4,7-3,11,20-triketo-17-hydroxy-21-lower hydrocarbon carbonyloxy-pregnadiene.

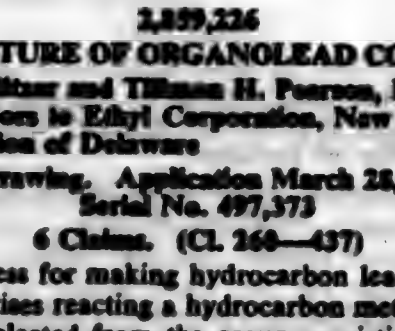
2,859,224

HALOGENATED COMPOUNDS FOR SYNTHESIZING STEROIDS

Martin W. Farrar, Webster Groves, Harold Raffelson, St. Louis, and William S. Knowles, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application July 23, 1953, Serial No. 369,344, now Patent No. 2,759,929, dated August 21, 1956. Divided and this application June 21, 1956, Serial No. 592,729
10 Claims. (Cl. 260—397.45)

1. 16-halo-17-hydroxy-17-(acyloxyacetyl)-cyclopentano-10,13-dimethyl-Δ4(5)-decahydrophenanthren-3-one



where R is an acyl radical obtained from a hydrocarbon monocarboxylic acid.

2,859,225

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 25, 1955
Serial No. 496,919
13 Claims. (Cl. 260—437)

1. A process for making hydrocarbon lead compounds which comprises reacting a lead chalkogen in which the chalkogen is selected from the group consisting of oxygen and sulfur with a stable metallo hydrocarbon compound having up to and including 10 carbon atoms in each hydrocarbon radical and wherein said metal in said metallo hydrocarbon compound is selected from the group consisting of alkali metals, alkaline earth metals, group II–B metals, group III–A metals, wherein the metal is attached to carbon, and combinations of such metals wherein each metal in said combination is only attached to the other metal and to carbon.

2,859,226

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,373
6 Claims. (Cl. 260—437)

1. A process for making hydrocarbon lead compounds which comprises reacting a hydrocarbon metal compound of a metal selected from the group consisting of sodium and potassium wherein the hydrocarbon radical contains up to about 10 carbon atoms inclusive and is selected from the group consisting of alkyl and aryl radicals with a lead halide of a halogen selected from the group consisting of chloride, bromine and iodine.

2,859,227

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,376
6 Claims. (Cl. 260—437)

1. A process for the manufacture of alkyllead compounds selected from the group consisting of tetraethyllead through and including tetraoctyllead which comprises reacting a group III–A alkali metal hydride with an olefin corresponding to said alkyl radical and a lead chalkogen wherein the chalkogen is selected from the group consisting of oxygen and sulfur.

2,859,235

countercurrent to the gaseous ethylene, the improvement which

2,859,228

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,378
7 Claims. (Cl. 260—437)

1. A process for the manufacture of hydrocarbon lead compounds which comprises reacting a hydrocarbon metallic group III–A compound wherein each hydrocarbon radical has up to about 10 carbon atoms inclusive and is selected from the group consisting of alkyl and aryl radicals with a lead halide of a halogen selected from the group consisting of chlorine, bromine and iodine.

2,859,229

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,379
10 Claims. (Cl. 260—437)

1. A process for the manufacture of an hydrocarbon lead compound which comprises reacting a III–A alkali metal compound of the general formula

$$AMR_4$$

wherein A is an alkali metal, M is a group III–A metal, and R is a hydrocarbon radical containing up through 8 carbon atoms and selected from the group consisting of alkyl and aryl radicals, with a lead halide of a halogen selected from the group consisting of chlorine, bromine and iodine to form said hydrocarbon lead compound.

2,859,230

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 28, 1955
Serial No. 497,382
5 Claims. (Cl. 260—437)

1. A process for the manufacture of hydrocarbon lead compounds which comprises reacting a metallic hydrocarbon compound containing only the elements carbon, hydrogen, and an alkaline earth series metal wherein each hydrocarbon radical has up to about 10 carbon atoms inclusive and is selected from the group consisting of alkyl and aryl radicals with a lead halide of a halogen selected from the group consisting of chlorine, bromine and iodine.

2,859,231

MANUFACTURE OF ALKYLLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 29, 1955
Serial No. 556,851
10 Claims. (Cl. 260—437)

1. A process for manufacturing tetraalkyllead compounds which comprises reacting in an inert carrier liquid a lead salt of an organic acid wherein lead is attached to carbon through an intermediate chalkogen atom selected from the group consisting of oxygen and sulfur and wherein said organic acid contains from 1 to 25 carbon atoms inclusive with an alkyl metal compound of a metal having an electrode potential of more than 0.3 volt, and wherein each alkyl group of said alkyl metal compound contains up to 8 carbon atoms inclusive.

2,859,233

MANUFACTURE OF ORGANOLEAD COMPOUNDS

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application March 11, 1958
Serial No. 720,542
6 Claims. (Cl. 260—437)

1. A process for making hydrocarbon lead compounds which comprises reacting a hydrocarbon magnesium halide wherein the hydrocarbon radical has up to about 10 carbon atoms with a lead chalkogen wherein the chalkogen is selected from the group consisting of oxygen and sulfur.

2,859,233

AMINOALKYL SUBSTITUTED DICYCLOPENTADIENYLIRON COMPOUNDS AND THEIR PREPARATION

Peter J. Graham, Wilmington, and Gerald M. Whitman, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 1, 1953
Serial No. 365,563
8 Claims. (Cl. 260—439)

3. A compound selected from the class consisting of aminoalkyl substituted dicyclopentadienyliron compounds and their amine acid salts, wherein iron is directly bonded to nuclear carbon of two separate cyclopentadiene rings, at least one of said cyclopentadiene rings has an aminoalkyl group of 1 to 7 carbon atoms directly bonded to nuclear carbon thereof through carbon of said aminoalkyl group, the sole substituents attached to the nuclear carbon atoms of each of said cyclopentadiene rings are at most one of said aminoalkyl groups and at most one monovalent hydrocarbon radical free from aliphatic unsaturation and of not more than 7 carbon atoms, and the nuclear carbon atoms of each of said cyclopentadiene rings are otherwise bonded solely to said iron and hydrogen.

2,859,234

CHEMICAL COMPOUNDS AND THE PRODUCTION THEREOF

Arthur G. Clem, Des Plaines, Ill., assignor to American Colloid Company, Chicago, Ill., a corporation of South Dakota

No Drawing. Application December 7, 1956
Serial No. 626,826
9 Claims. (Cl. 260—448)

1. A cation-modified organophilic clay, originally exhibiting a base-exchange capacity of at least 25, in which the exchangeable inorganic cation has been exchanged for at least 2 stoichiometric equivalents of an organic ammonium ion wherein the organic radicals are hydrocarbon radicals which contain not more than 9 carbon atoms and at least one such organic radical contains at least 5 carbon atoms, the excess of ammonium ion over the amount of exchangeable inorganic cation being neutralized by the stoichiometric equivalent of an organic anion wherein the organic radical is a hydrocarbon radical containing at least 10 and not more than 30 carbon atoms, said cation-modified clay having the property of swelling in nonpolar organic liquids to at least 10 times its dry volume, thereby forming a stable gel.

at least one lower aliphatic acid having an acyl radical

2,859,246

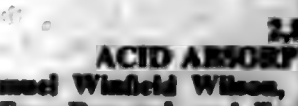
METHOD OF DESULFURIZING A POLYMERIC

2,859,235
PROCESS FOR THE PRODUCTION OF ISOTHIOCYANATES

Erich Schmidt, Munich, Robert Schnegg, Dormagen, Germany, Franz Zeller, deceased, late of Munich, Germany, by Ernil Zeller, administratrix, Munich, and Fritz Meosmüller, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 5, 1955
Serial No. 480,864
Claims priority, application Germany January 26, 1954
8 Claims. (Cl. 260—454)

1. A process for producing an organic isothiocyanate which comprises reacting an ammonium dithiocarbamate of the formula



wherein R is a radical selected from the group consisting of lower alkyl, dialkylaminoalkyl, cyclohexyl, and phenyl, in an organic solvent with an aqueous alkaline solution of an alkali metal hypochlorite.

2,859,236
PROCESS FOR THE PRODUCTION OF ISOTHIOCYANATES

Erich Schmidt, Munich, Germany, Franz Zeller, deceased, late of Munich, Germany, by Erneatine Zeller, administratrix, Erich Kunnert and Dietrich Rose, Munich, and Robert Schnegg, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 17, 1955
Serial No. 509,113
Claims priority, application Germany May 19, 1954
7 Claims. (Cl. 260—454)

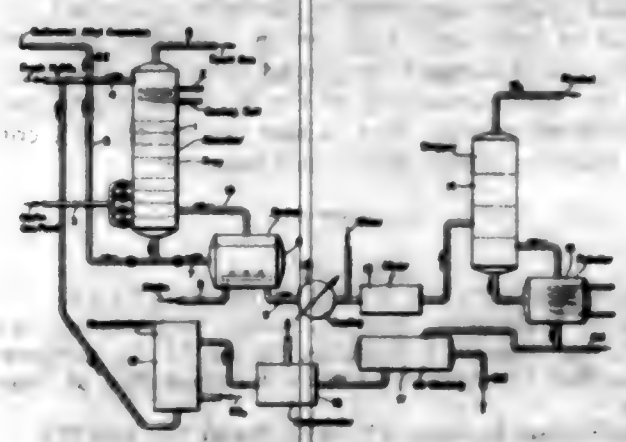
1. A process of producing an organic isothiocyanate which comprises reacting a dithiocarbamate of the formula

wherein Me is selected from the group consisting of an alkali metal and the ammonium ion, and R is a radical selected from the group consisting of lower alkyl, dialkylaminoalkyl, cyclohexyl, phenyl, hydroxyphenyl, alkoxyphenyl, carbalkoxyphenyl, and dialkylaminophenyl, in an organic solvent with an aqueous solution of an alkali metal chlorite at a temperature up to about 25° C.

2,859,237
ACID ABSORPTION OF OLEFINS

Samuel Winfield Wilson, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application April 12, 1957, Serial No. 653,266
4 Claims. (Cl. 260—468)



1. In a process of absorbing gaseous ethylene by a concentrated sulfuric acid of 93 to 99 wt. percent wherein acid extract of the ethylene in feed acid is passed countercurrent to the gaseous ethylene, the improvement which comprises maintaining from 30 to 1500 p. p. m. of an oil-soluble alkyl aromatic sulfonate having a molecular weight of 350 to 480 in said acid extract, and bubbling gaseous ethylene through said acid extract containing said alkyl aromatic hydrocarbon sulfonate.

2,859,238
TRIALKYL PHOSPHITES

Theodor Reetz, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application May 28, 1954
Serial No. 587,478
11 Claims. (Cl. 260—461)

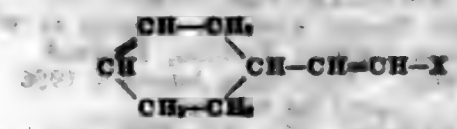
1. The process of making trialkyl phosphites which comprises reacting a phosphorus halide and an aliphatic alcohol in substantially stoichiometric amounts in the presence of ammonium carbamate, the pH of the reaction system being not less than 7.

2,859,239
ACRYLIC ACID COMPOUNDS

Walter B. Trapp and Donald E. Fletcher, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 17, 1956
Serial No. 604,602
4 Claims. (Cl. 260—464)

1. A compound having the structure



wherein X represents a member of the group consisting of cyano, carbalkoxyl containing from 2 to 5 carbon atoms, inclusive, and carbalkenoxyl containing from 4 to 5 carbon atoms, inclusive.

2,859,240
PRODUCTION OF ACRYLATES BY CATALYTIC DEHYDRATION OF LACTIC ACID AND ALKYL LACTATES

Reynold E. Holmen, White Bear Township, Ramsey County, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application January 12, 1956
Serial No. 558,697
4 Claims. (Cl. 260—486)

1. The process of catalytically producing acrylate material from lactate material which comprises the steps of (1) bringing volatile lactate starting material, having the formula $CH_3CHOHCOOR$, where R is selected from the group consisting of hydrogen, NH_4 and alkyl containing 1–4 carbon atoms, into contact with a dehydration catalyst consisting essentially of at least one member of the group consisting of the sulfates and phosphates of metals of groups I and II which are at least as high as cadmium in the electromotive series, at a temperature within the range of 200° C. to 600° C., and (2) separating acrylate material from at least some of the reaction products.

2,859,241
PRODUCTION OF VINYL ESTERS

Arthur W. Schnizer, Corpus Christi, Tex., assignor to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application February 13, 1956
Serial No. 565,552
8 Claims. (Cl. 260—491)

1. Process which comprises reacting acetaldehyde with a mixture of at least one lower alkanoic anhydride and

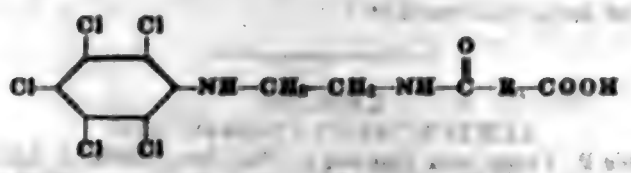
improvement consisting in the steps of passing a vapor mixture of said mercaptans and gas upwardly through a

2,859,253
PROCESS FOR THE CONTINUOUS PREPARA-

at least one lower alkanoic acid having an acyl radical different from said anhydride to produce ethylidene di-esters, and decomposing said ethylidene diesters to obtain a mixture of vinyl esters, one of said vinyl esters having its acyl radical derived from the lower alkanoic anhydride and another of said vinyl esters having its acyl radical derived from the lower alkanoic acid.

2,859,243
N-[2-(PENTACHLOROANILINO)-ETHYL] CARBOXAMIC ACIDS
Clarence L. Mayne, Clare, Mich., and Clifford L. Melsta, Indianola, Iowa, assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application October 4, 1957
Serial No. 688,138
4 Claims. (Cl. 260—518)

1. An N-[2-(pentachloroanilino)ethyl] carboxamic acid corresponding to the formula



wherein R represents a divalent hydrocarbon radical containing from one to four carbon atoms, inclusive.

2,859,243
BIS-MALEAMIC ACID
Ronald A. Reed, Queen, England, assignor to Whitfen and Sons Limited, London, England
No Drawing. Application August 6, 1956
Serial No. 602,428
6 Claims. (Cl. 260—534)

Bis maleamic acid.

2,859,244
RESOLUTION OF DL-LYSINE WITH D-CAMPHORIC ACID
Halbert C. White, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application September 28, 1956
Serial No. 612,972
4 Claims. (Cl. 260—534)

1. A method for recovering L-lysine from DL-lysine which comprises reacting in an aqueous medium proportions between 0.2 and 0.35 mole of D-camphoric acid with one mole of DL-lysine, precipitating di-L-lysine·D-camphorate therefrom with a monohydric alcohol having no more than 3 carbon atoms, separating the di-L-lysine·D-camphorate from the precipitation medium, and decomposing and recovering L-lysine therefrom.

2,859,245
REACTION OF SF_4 WITH ORGANIC COMPOUNDS CONTAINING A CARBONYL RADICAL
William C. Smith, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application November 14, 1956
Serial No. 622,025
11 Claims. (Cl. 260—544)

1. The process for the preparation of organic fluorine compounds which comprises reacting sulfur tetrafluoride under anhydrous conditions with an organic compound containing at least one oxygen doubly bonded to one carbon, any remaining atoms on said carbon being singly bonded to said carbon and at most one of said remaining atoms being monovalent.

2,859,246
METHOD OF DESULFURIZING A POLYMERIC BIS THIURAM DISULFIDE
Luther Martin, Harold R. Chipman, and Charles W. Gates, Elmira, Ontario, Canada, assignors to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application May 9, 1955, Serial No. 507,946
2 Claims. (Cl. 260—567)

1. A method of making an improved fungicide comprising desulfurizing a polymeric bis thiuram disulfide by treating one mole of said disulfide with from one-half to 1.5 moles of an alkali metal cyanide.

2,859,247
PROCESS FOR THE PREPARATION OF BICYCLIC KETONES
Pierre de Radzitzky, Uccle, Bl., and Jean Claude Balaceanu, Paris, France, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Rueil-Malmaison (S. & O.), France
No Drawing. Application November 23, 1954
Serial No. 470,797
13 Claims. (Cl. 260—590)

1. A process for the production of bicyclic ketones wherein the function C=O is in an α-position of an aromatic nucleus, which comprises oxidizing, in the liquid phase with oxygen-containing gas, a binuclear hydrocarbon including an alkylene chain interconnecting two carbon atoms, each of which is part of an aromatic nucleus, at a temperature comprised between about 80° C. and about 200° C. in the presence of a lower alkanoic acid solvent and of an oxidation catalyst, said catalyst being formed by dissolving in the lower alkanoic acid solvent a member selected from the group consisting of a metal, a metal oxide, a metal salt, and a metal soap, whereby the said binuclear hydrocarbon is selectively oxidized to the desired bicyclic ketone and the formation of undesired byproducts is suppressed.

2,859,248
OXIDATION OF ORGANIC SULFIDES
Rector P. Lonham, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application July 11, 1956
Serial No. 597,992
18 Claims. (Cl. 260—607)

1. A method for the production of an organic sulfoxide which comprises the oxidation with an elemental oxygen-containing gas of an organic sulfide having the formula RSR wherein each R contains not more than 20 carbon atoms and the total carbon atoms does not exceed 30 carbon atoms and wherein each R is selected from the group consisting of an alkyl, cycloalkyl, aryl, aralkyl, alkaryl radical, and one of said radicals containing a hydroxy group as a substituent, in the presence of a catalyst system comprising a nitrogen compound consisting of at least one of the group consisting of HNO_3 and NO_2 and a halogen compound consisting of at least one of the group consisting of $CuCl_2$, CuBr, $CuBr_2$, and HBr, with the proviso that, where one of the R's contains a hydroxy group, HBr is not selected.

2,859,249
OXIDATION OF METHYL MERCAPTAN
Jerome N. Holmesley, Ardsley, Joseph T. Bunbour, New York, and Joseph T. Rabedin, Nyack, N. Y., assignors to Stauffer Chemical Company, a corporation of Delaware
Application January 17, 1957, Serial No. 634,791
6 Claims. (Cl. 260—608)

1. In a process for manufacture of lower alkyl disulfides from lower alkyl mercaptans by catalytic oxidation of the disulfides with a gas containing free oxygen, the

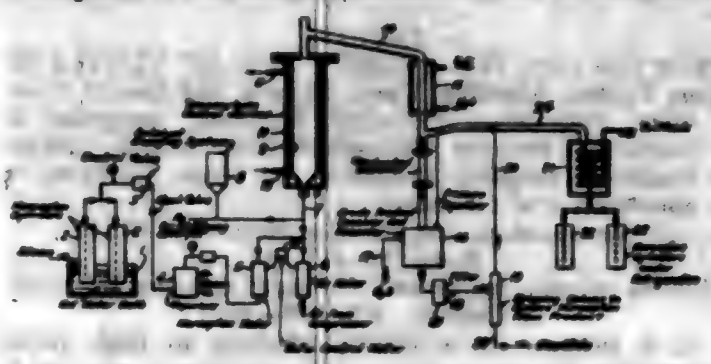
1:15 per mol of said substituted benzene, agitating and circulating the reaction mixture in the zone at a sufficient

said adsorbent, said liquid metal alloy being non-wetting with respect to said adsorbent and being substantially un-

in acid extract of the ethylene in feed acid is passed coun-

a mixture of at least one lower alkanoic anhydride and

improvement consisting in the steps of passing a vapor mixture of said mercaptans and gas upwardly through a mass of finely divided catalyst for the oxidation of said mercaptans to said disulfides and at a rate in relation to



said catalyst mass sufficient to maintain said finely divided catalyst in a fluidized condition in a reaction zone, maintaining said reaction zone at a temperature of from about 170° C. to about 270° C., and withdrawing an exit gas stream containing corresponding disulfides.

2,859,250

SYNTHETIC NON-IONIC DETERGENTS FROM 2,2-BIS (4-HYDROXY-PHENYL) PROPANE

Joseph E. Woodbridge, Rutledge, and Vincent J. Keenan, Ardmore, Pa., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application January 16, 1957
Serial No. 634,402
3 Claims. (Cl. 260—613)

1. The process for the production of synthetic non-ionic detergents which comprises heating 2,2-bis(4-hydroxyphenyl) propane and an alkaline catalyst to from 210° C. to 270° C. and introducing ethylene oxide in an amount such that the mole ratio of ethylene oxide to said 2,2-bis(4-hydroxyphenyl) propane is from about 10:1 to 15:1.

2,859,251

ALKYLATION OF AROMATIC COMPOUNDS

Carl B. Linn, Riverside, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application April 27, 1955
Serial No. 504,376
20 Claims. (Cl. 260—624)

1. A process for the alkylation of an alkylatable aromatic compound with an olefin-acting compound at alkylating conditions in the presence of a catalyst comprising free hydrogen fluoride and a preformed complex of equimolar proportions of boron trihalide and an iron group metal halide.

2,859,252

PRODUCTION OF CHLORINATED POLYPHENYLS

Francis E. Lawlor, Wyndmoor, and Maurice E. Miville, Springfield Township, Montgomery County, Pa., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application April 13, 1954
Serial No. 422,992
7 Claims. (Cl. 260—649)

1. The process for producing chlorinated polyphenyls comprising contacting benzene hexachloride in a reaction zone open for the escape of hydrogen chloride with a compound selected from the group consisting of nuclear halogenated aromatic hydrocarbons having at least two aromatic hydrogens and aromatic hydrocarbons having at least two aromatic hydrogens in the presence of aluminum chloride at a temperature of 130 to 225° C., the said materials being initially present at a weight relationship of about 50 to about 200 parts of the aromatic compounds and from 2 to 30 parts of aluminum chloride per 100 parts of benzene hexachloride.

2,859,253

PROCESS FOR THE CONTINUOUS PREPARATION OF BENZYL CHLORIDE

John E. Snow, Hasbrouck Heights, N. J., assignor to Hayden Newport Chemical Corporation, a corporation of Delaware

No Drawing. Application October 19, 1955
Serial No. 541,523
4 Claims. (Cl. 260—651)

1. In a process for preparing benzyl chloride in high yield, the steps comprising chloromethylating benzene to form benzyl chloride in a reaction vessel by passing gaseous hydrogen chloride into an aqueous reaction mixture containing benzene and substantially methanol-free aqueous formaldehyde in the presence of zinc chloride, the initial molar ratio of water to zinc chloride in the reaction mixture being between 3.5 to 4.5:1, cooling the mixture, removing the upper layer of the mixture containing benzyl chloride while allowing the catalyst-containing aqueous lower layer to remain in the reaction vessel, separating benzyl chloride from the removed upper layer, regenerating the catalyst in the aqueous lower layer remaining in the reaction vessel by adding benzene to the layer followed by substantially completely dehydrating the resultant mixture by azeotropic distillation at atmospheric pressure and at a temperature below 100° C., adding benzene, water and such an aldehyde to the regenerated catalyst in the reaction vessel, the molar ratio of water to zinc chloride in the reaction mixture varying between 3.5 to 4.5:1, and then repeating the chloromethylating step to obtain an additional quantity of benzyl chloride.

2,859,254

DEHYDROCHLORINATION OF TETRACHLOROETHANE

Douglas H. Ehrenfeld, West Barberton, Ohio, assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware

No Drawing. Application November 21, 1955
Serial No. 548,247
3 Claims. (Cl. 260—654)

1. The method of thermally dehydrochlorinating symmetrical tetrachloroethane to trichloroethylene which comprises introducing gaseous symmetrical tetrachloroethane into an elongated tubular reactor whereby to establish a continuously flowing gas stream through said reactor, heating said gas stream to and maintaining it at a dehydrochlorination temperature substantially throughout its passage through said reactor, introducing into the first third length of said reactor from 50 to 85 percent of the total heat supplied to said symmetrical tetrachloroethane while it is at a dehydrochlorination temperature and introducing the balance of said heat into the gas stream during its passage through the latter two-thirds of the length of the reactor by regulating independently controlled heating means for the first third length of said reactor and for the latter two-thirds of the length of said reactor.

2,859,255

PROCESS FOR THE PREPARATION OF DIARYLALKANES

Donald G. Jordan, Stamford, Conn., and Leon Lazare, Westbury, N. Y., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application May 13, 1954
Serial No. 429,705
16 Claims. (Cl. 260—668)

1. A process for producing 1,1-diarylethane which comprises introducing acetylene in the vapor phase, a compound selected from the group consisting of mono- and di-alkyl substituted benzene and a sulfuric acid-mercuric sulfate catalyst into a reaction zone wherein the acetylene is present in a molar ratio of from about 1:2 to about

emulsion as it flows through said diffuser section, and from the settling zone, transferring the hydrocarbon phase

1:15 per mol of said substituted benzene, agitating and circulating the reaction mixture in the zone at a sufficient rate to fully develop turbulence so as to obtain a homogeneous reaction mixture and wherein the circulation rate to feed rate of reactants into said zone is at least 100:1, maintaining the temperature of reaction within the range of from about —20° C. to about 50° C. and removing the reaction product from said bone at a rate equal to the rate of introduction of reactants thereinto.

2,859,256

SEPARATION PROCESS INVOLVING ADSORPTION AND DESORPTION

Howard V. Hess, Gleuhem, and Michael D. Riordan, Fishkill, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

No Drawing. Application January 28, 1955
Serial No. 484,833
5 Claims. (Cl. 260—676)

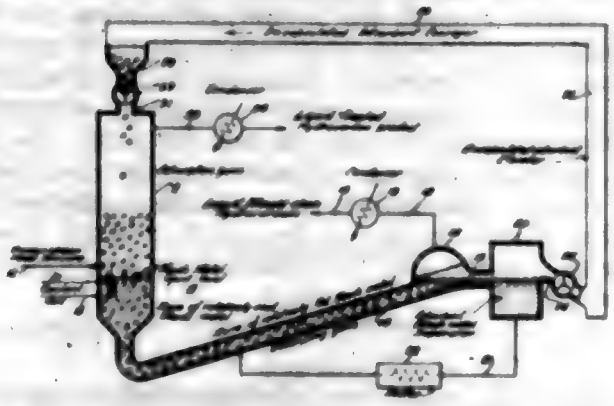
1. A process for separating straight chain hydrocarbons from a mixture containing the same together with non-straight chain hydrocarbons which comprises contacting said mixture in the vapor phase at an elevated temperature and pressure with a selective adsorbent which selectively absorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons to adsorb straight chain hydrocarbons therefrom to yield a gaseous treated effluent having a reduced amount of straight chain hydrocarbons, displacing said gaseous effluent from said solid adsorbent material by means of a displacing medium and subjecting the resulting adsorbent material now substantially free of said effluent to a reduced pressure while contacting said adsorbent material with a gaseous stripping medium at a suitable elevated temperature to desorb the adsorbed straight chain hydrocarbons therefrom and to maintain the desorption operation at substantially the same temperature as the adsorption operation, the resulting desorbed straight chain hydrocarbons being in the gaseous phase.

2,859,257

SPECIAL SOLID ADSORBENT MATERIAL AND PROCESS EMPLOYING THE SAME

Howard V. Hess, Gleuhem, and Edward R. Christensen, Beacon, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

Application May 31, 1955, Serial No. 511,952
11 Claims. (Cl. 260—676)



3. A method of fractionating a hydrocarbon mixture containing straight chain hydrocarbons and non-straight chain hydrocarbons which comprises contacting said mixture with a solid adsorbent which selectively adsorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons to adsorb straight chain hydrocarbons from said mixture and contacting the resulting adsorbent containing straight chain hydrocarbons adsorbed therein with a liquid low-melting point metal alloy at an elevated temperature sufficiently high to effect desorption of said straight chain hydrocarbons from said adsorbent, said liquid metal alloy being non-wetting with respect to said adsorbent and being substantially unadsorbed by said adsorbent.

2,859,258

PROCESS FOR THE PRODUCTION OF ETHYLENE

Kurt Fischer, Altotting, Upper Bavaria, and Gunter Rammert, Burghausen (Salzach), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application October 8, 1954
Serial No. 461,294
Claims priority, application Germany October 10, 1953
6 Claims. (Cl. 260—683)

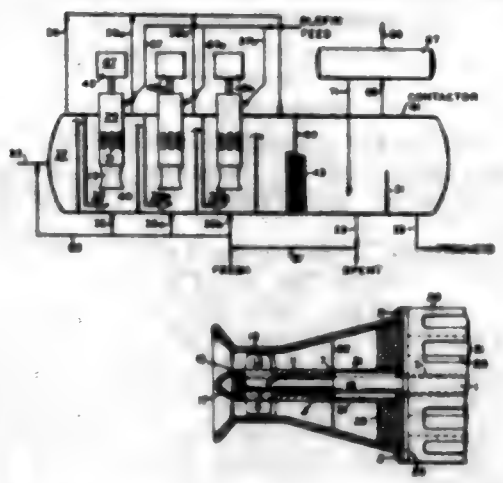
1. A process for obtaining ethylene in high yields comprising the steps of thermally cracking a gas which is at least predominantly methane at a relatively high temperature ranging between about 800° C. and 1100° C. to partly convert said gas to a mixture of ethylene and saturated and unsaturated hydrocarbons, separating said mixture from the unconverted portions of the gas, removing the ethylene from the mixture, and subjecting the remainder of said mixture to a second thermal cracking step at a relatively lower temperature ranging between about 600° C. and 800° C. to convert the said remainder of said mixture at least partially to ethylene.

2,859,259

ALKYLATION OF HYDROCARBONS

Samuel R. Stiles, Crenshill, N. J., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware

Application May 31, 1955, Serial No. 511,987
7 Claims. (Cl. 260—683.58)



1. In an alkylation process in which an alkylatable hydrocarbon is reacted with an olefin in the presence of an acid catalyst, the improvement which comprises emulsifying the acid and alkylatable reactants in a contacting zone under suitable conversion conditions, passing said emulsion through a confined reaction zone at a superficial velocity of from about 0.8 to 15.0 feet per second, introducing olefin reactant into said reaction zone to form a reaction mixture with said emulsion and passing said mixture through a highly permeable wire mat for impingement contact therewith and even dispersal of the olefins throughout said emulsions, the permeability of said mat controlled to provide a pressure drop in said mixture flowing therethrough of from about 0.1 to 1.0 foot of flowing fluid.

3. An apparatus for dispersing an olefin in an alkylation catalyst-hydrocarbon emulsion which comprises a pump having a propeller section and a diffuser section, said pump section adapted to form said emulsion and propel it through said diffuser section at a high superficial velocity, means for introducing the olefin into the

emulsion as it flows through said diffuser section, and impingement means of high permeability and low flow resistance in said diffuser section adjacent to and downstream of the point of introduction of the olefin in said diffuser section, said impingement means disposed for flow of said emulsion and introduced olefin therethrough for dispersal of said olefin uniformly in said emulsion, said impingement means formed of spaced lengths of filament material, said filament of a size and said lengths so spaced apart to provide a pressure drop through said impingement means of from about 0.1 to 1.0 foot of flowing fluid at superficial flow velocities of the emulsion in said diffuser section of from about 0.8 to 15.0 feet per second.

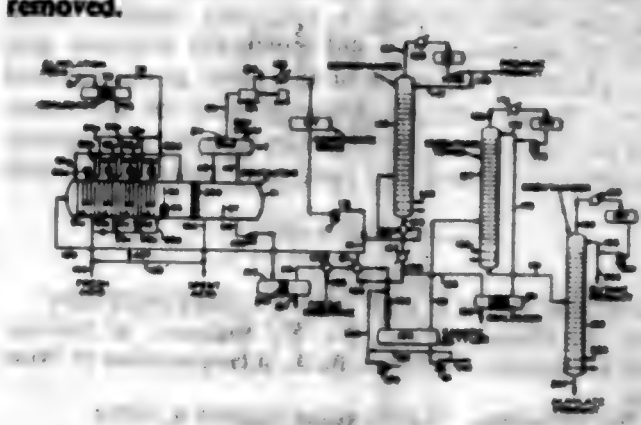
2,859,260

ALKYLATION OF HYDROCARBONS

Samuel R. Stiles, Crestkill, N. J., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware

Application May 31, 1955, Serial No. 511,988
11 Claims. (Cl. 260—683.62)

1. In a process in which an alkylatable hydrocarbon is reacted with an olefin in the presence of a catalyst the method of improving the separation of catalyst and catalyst esters from the reaction zone effluent which comprises introducing the effluent into a settling zone wherein said effluent separates into a hydrocarbon-rich phase and an acid-rich phase, passing the hydrocarbon-rich phase at a low velocity through a first wire coalescing mat whereby catalyst and catalyst ester droplets not normally separated by settling are coalesced and removed, separately withdrawing the acid and hydrocarbon phases from the settling zone, transferring the hydrocarbon phase to a second zone and passing said hydrocarbons through a second wire coalescing mat at a higher velocity whereby additional droplets of catalyst and catalyst esters are removed.



9. A coalescing device suitable for removing immiscible alkylation catalyst and catalyst esters from a hydrocarbon fluid in a flowing stream of said hydrocarbon fluid, said alkylation catalyst and said catalyst esters, which comprises a plurality of mats spaced apart and disposed transversely across the flow path of the stream, the space between said mats occupied by glass wool, each of said mats formed of a plurality of small wire diameter, large mesh wire screens longitudinally spaced apart along said flow path, the wires of said screens non-aligned, the wire of said screens of a diameter between about 0.001 and 0.1 inch, the mesh of said screens from about 5 to about 50 times the diameter of said wire, said screens spaced apart by a distance of from about 3 to about 30 times the diameter of said wire.

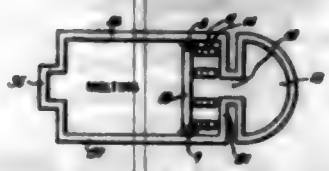
ELECTRICAL

2,859,261

APPARATUS AND METHOD FOR MAKING GLASS

Pierre Arbelt, Paris, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain Chauny & Cirey, Paris, France

Application October 1, 1953, Serial No. 383,636
Claims priority, application France May 16, 1950
21 Claims. (Cl. 13—6)



2. The method of making glass that comprises subjecting it to the passage of Joule effect current of constantly changing area and intensity.

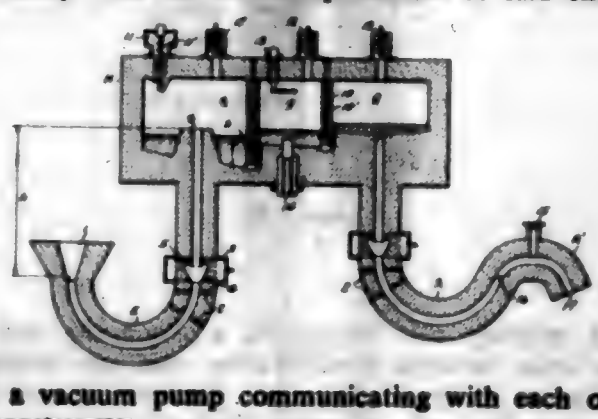
2,859,262

APPARATUS FOR DEGASIFYING LIQUID METAL

Fritz Harders, Post Ergste uber Schwerte (Ruhr), and Helmut Knuppel, Dortmund-Nette, Germany, Otto Christian Winkler, Bolsen, Liechtenstein, and Karl Bretzmann, Dortmund, and Horst Kutscher, Dortmund-Huckarde, Germany, assignors to Dortmund-Horder Huttenunion Aktiengesellschaft, Dortmund, Germany

Application September 4, 1956, Serial No. 607,873
Claims priority, application Germany September 5, 1955
7 Claims. (Cl. 13—31)

1. Apparatus for degasifying liquid metal, comprising a chamber, means for heating said chamber, partition means whereby said chamber is divided into a number of compartments, means for producing a sub-atmospheric pressure in each of said compartments, inlet and outlet pipes each in the form of a siphon communicating respectively with the end compartments of said chamber,



and a vacuum pump communicating with each of said compartments.

2,859,263

PILOT GENERATOR

Richard B. Glickman, Los Angeles, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application July 21, 1955, Serial No. 523,567
6 Claims. (Cl. 136—4)

1. An impingement target for a pilot burner comprising a target portion including a plate and side walls upon

which a jet of burning and unburned, fuel is adapted to impinge, an outer extension of the plate portion of said target portion, and a single downwardly and inwardly inclined side wall at each side of said extension, the inner inclined side walls forming a relatively narrow flame flow slot therebetween and two oppositely disposed side openings which are relatively wide so that at normal fuel pressures a flame will pass through both of the openings and said passage while at lower than normal operating pressures the flame will pass only through the side openings.

2,859,264

THERMOCOUPLE ELEMENT COMPOSITION

Matthew A. Hunter, Troy, N. Y., assignor to Driver-Harris Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application August 6, 1954
Serial No. 448,356
1 Claim. (Cl. 136—5)

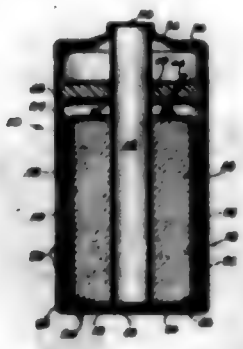
A thermocouple comprising an electropositive element composed of an alloy of approximately 9 percent chromium, substantially 2 percent columbium, balance essentially nickel, and an electronegative leg composed of an alloy of 2 percent to 7 percent silicon and the balance essentially nickel characterized in that the thermocouple has a high E. M. F. at temperatures above 700° F.

2,859,265

PRIMARY CELL

Percy F. George, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application March 15, 1956, Serial No. 571,889
9 Claims. (Cl. 136—100)



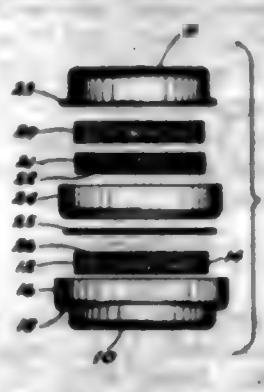
4. A primary cell comprising a composite cup of tubular cross sectional configuration, said cup having a steel bottom which is a terminal electrode of said cell and having side walls of vapor resistant paper, the side wall of said cup being joined to the bottom of the cup by a vapor resistant rolled seal, a hollow, cylindrically shaped magnesium anode of smaller outer diameter than the inner diameter of said side walls disposed within and in loose fitting relationship with the side wall of said cup, a steel strip, said strip being welded to said anode, a part of said strip extending from said anode and being welded to said steel bottom, the lower edge of said anode being disposed at least near to the bottom of said cup, a layer of electrically insulating, vapor resistant material disposed between and adhering to the wall and seal of said cup, a carbon cathode electrode disposed in said cup with one end projecting beyond the anode, the cathode electrode being insulated from the bottom of the cup, a cathode depolarizing mixture comprising manganese dioxide and carbon black moistened with an aqueous electrolyte, the mixture being interposed between the cathode electrode and the anode, and a vapor seal extending between the part of said cathode electrode which extends above the anode and the wall of the cup.

2,859,266

ALKALINE DRY CELL

Bruce J. Garvey, Cleveland, and Charles Schaef, Olmsted Falls, Ohio, assignors, by mesne assignments, to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Application May 31, 1955, Serial No. 511,845
18 Claims. (Cl. 136—111)



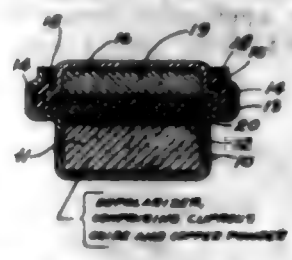
8. An alkaline dry cell comprising a two-part container, one of said parts containing an anode and a separator containing an electrolyte, the other of said parts containing a cathode-depolarizer, one of said parts having an outwardly extending shoulder, said depolarizer and said electrolyte having opposed surfaces, a porous barrier disc interposed between the opposed surfaces of said electrolyte and said depolarizer, said disc having peripheral edge portions extending beyond said surfaces, said disc being cemented to said depolarizer by an adhesive that is permeable to the electrolyte, the edges of said disc overlying said outwardly extending shoulder on one of said parts and being clamped against said shoulder by the other of said parts.

2,859,267

PRIMARY CELL

Bruce J. Garvey, Cleveland, and Charles Schaef, Olmsted Falls, Ohio, assignors, by mesne assignments, to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware

Application February 15, 1955, Serial No. 488,198
8 Claims. (Cl. 136—115)



1. A depolarizer for an alkaline primary cell comprising a mixture of approximately 72 to 88 percent by weight of cuprous oxide, approximately 2 to 8 percent by weight of copper powder and approximately 10 to 20 percent by weight of carbon.

2,859,268

ZINC ELECTRODE FOR PRIMARY BATTERIES

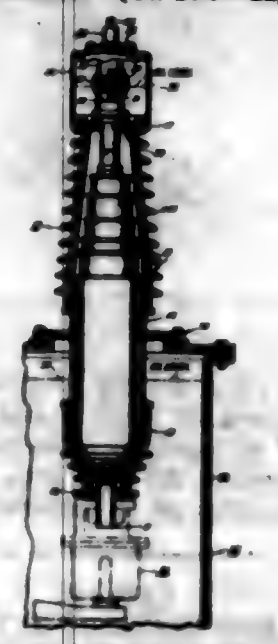
Adolph Fischbach, Elberon, and Achille L. Almerini, West End, N. J., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Application May 4, 1955
Serial No. 506,899
3 Claims. (Cl. 136—126)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. The method of manufacturing zinc electrodes of very high porosity for primary, special purpose batteries capable of being discharged at extremely high discharge rates comprising mixing finely ground zinc oxide powder with a solution of a high polymer selected from the group consisting of polystyrene, polyethylene, polymethylmethacrylate and silicones in an anhydrous volatile or-

ganic solvent to form a paste, pasting said anhydrous paste into a supporting grid, allowing the organic volatile solvent to evaporate and cathodically reducing the dried zinc oxide to metallic zinc by a forming process to obtain a zinc electrode of very high porosity.

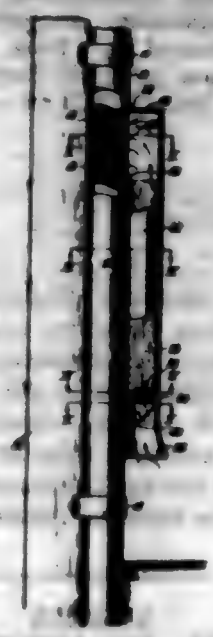
2,859,269
HIGH VOLTAGE BUSHING
Donald L. Johnston and William A. Wooldridge, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Application January 25, 1955, Serial No. 483,977
9 Claims. (Cl. 174—12)



1. In an electrical insulating bushing for high voltage electrical apparatus of the type having a hollow central conductor surrounded at least in part by an insulating shell and having a dielectric fluid filled chamber between said conductor and said shell, an enclosed expansion chamber communicating with said dielectric fluid chamber and positioned axially on the top end of said bushing, said central conductor extending into said expansion chamber, an electric terminal rigidly positioned on said expansion chamber, metallic tubular means having an axially resilient portion and connecting the top of said conductor to said terminal internally to said expansion chamber for preventing the flow of fluids between said expansion chamber and the inside of said conductor and absorbing axial movement of said conductor with respect to said electric terminal, and flexible conductor means connected across the resilient portion of said tubular means, said flexible conductor means and metallic tubular means being electrically connected to said central conductor and said terminal.

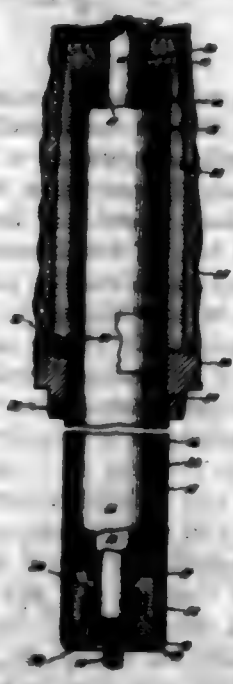
2,859,270
TELEPHONE AND TELEGRAPH CABLE BREATHER
Paul E. Patchin, Kansas City, Kans., assignor of one-twentieth to Mike W. Nicholson and one-twentieth to Carl W. Nicholson, both of Kansas City, Kans.
Application August 19, 1953, Serial No. 373,981
6 Claims. (Cl. 174—16)

1. In electrical cable means, a cable having a tubular sheath and a number of insulated, conductive wires therein; and structure for preventing shorts between said insulated wires due to moisture drawn into said cable through cracks and crevices in said sheath as air pressure in the cable varies in response to temperature and/or barometric changes and creates a suction in the cable, said structure comprising an elongated, tubular body of relatively nominal length compared with the cable having an outlet opening communicating with the interior of said cable sheath and an air inlet opening communicating with the atmosphere, said body being adapted for mounting on the cable for support by the latter intermediate the



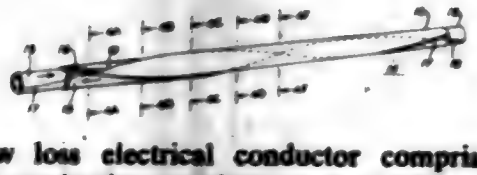
extremities of the cable and in wholly suspended relationship from the latter; and moisture-absorbing means in the body within the path of travel of air drawn through the body and into the cable by the action of said suction.

2,859,271
HIGH VOLTAGE BUSHING
Donald L. Johnston and William A. Wooldridge, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Application April 18, 1955, Serial No. 501,845
9 Claims. (Cl. 174—31)



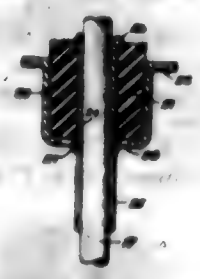
1. In a high voltage bushing for electrical apparatus, an axial central conductor extending through said bushing, a secondary tubular electrode coaxial with said conductor and separated therefrom providing an annular chamber surrounding said conductor, a dielectric fluid impregnated insulating core surrounding at least a portion of said secondary electrode, solid insulating tubular means surrounding said core and defining a lower dielectric fluid filled chamber, ceramic shell means surrounding the upper portion of said tubular insulating means and defining an upper dielectric fluid filled chamber, and means including said annular chamber providing circulation of dielectric fluid between said upper and lower chambers.

2,859,272
ELECTRICAL CONDUCTOR HAVING TRANSPOSED CONDUCTING ELEMENTS
William H. Doherty, Summit, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 30, 1955, Serial No. 519,823
4 Claims. (Cl. 174—34)



1. A low loss electrical conductor comprising first and second conducting members, each of said conducting members having a layer of insulation on its surface and a slit extending throughout its length, said members alternately enclosing one another throughout the length of the conductor, the enclosed member periodically passing through the slit in the enclosing member to the outside thereof, whereby the enclosed member becomes the closing member.

2,859,273
INSULATED MOUNTING
Michael I. Zasick, Greenfield, Wis., assignor to General Electric Company, a corporation of New York
Original application March 13, 1952, Serial No. 276,313, now Patent No. 2,732,510, dated January 24, 1956. Divided and this application June 17, 1953, Serial No. 362,297
3 Claims. (Cl. 174—152)



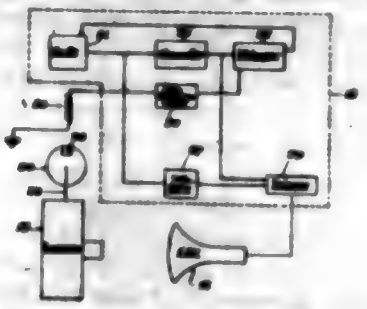
1. An insulating structure for supporting the mounting stem of a cathode filament on a metal base formed with a duct therethrough, comprising a block of insulation formed with a channel opening at the opposite ends of the block, a cup-shaped retaining shell enclosing an end of said block and formed with outwardly extending portions for attachment on the base to hold the block in position with an end of its channel in alinement with the duct of the base, said shell having an opening formed in the bottom thereof in position concentric with respect to the other end of said channel, and a sleeve extending in said channel and having an outwardly peened end in position for engagement with the duct facing end of the block at the duct alined end of said channel, said sleeve being formed with a bead in position engaging the opposite end of the block to secure the sleeve against relative axial movement in said channel, the sleeve having projecting portions extending outwardly of the block beyond said bead and being sized to snugly yet slidingly receive the filament carrying stem, whereby the same may be mounted in accurately determined axially adjusted position in the sleeve.

2,859,274
RADIO ANTENNA
Joseph B. Coffin, Highland Park, N. J., assignor to General Bronze Corporation, Garden City, N. Y., a corporation of New York
Application November 28, 1953, Serial No. 393,331
7 Claims. (Cl. 174—153)

1. An automobile antenna structure including an elongated electrically-conductive signal-receiving member, a mounting sleeve mechanically supporting said signal-receiving member and having at opposite sides flattened faces with a pair of studs formed integrally with said sleeve and projecting perpendicularly from said flat faces, a pair of swingably-mounted arms loosely supported by said studs on said sleeve, arcuate grooves formed in said flat faces concentrically with said studs, and arcuate

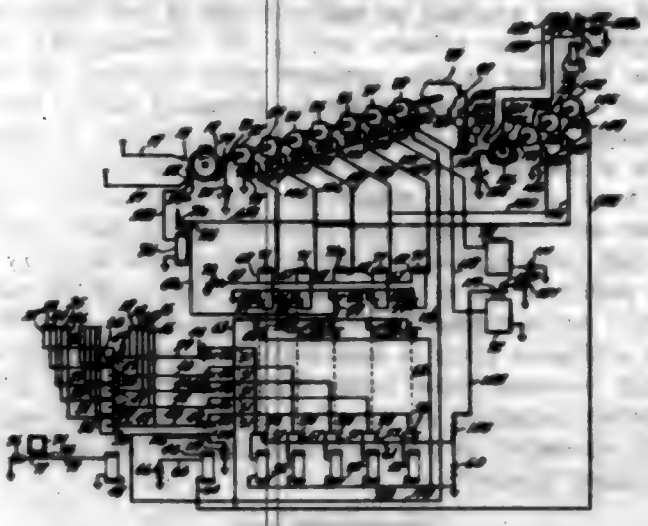
flanges on said arms slidably received in said grooves, said flanges engaging the walls of said grooves when said arms are turned substantially crosswise of said sleeve so as to provide support for said arms when the antenna is clamped in position on an automobile.

2,859,275
SYSTEM FOR RECORDING TELEVISION IMAGES ON FILM
Carl D. Mayer, North Hollywood, Calif., assignor to Paramount Pictures Corporation, New York, N. Y., a corporation of New York
Application April 2, 1951, Serial No. 218,710
12 Claims. (Cl. 178—7.4)



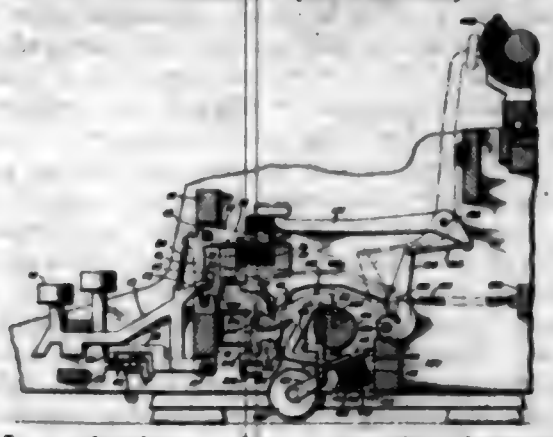
7. Apparatus for recording a television image on to a motion picture film operating at a predetermined frame frequency, comprising a television receiver having a cathode ray tube, a gating circuit connected to said receiver for selecting a portion of the horizontal synchronizing pulses received thereby, a pulse counter circuit connected to said gating circuit for generating a single pulse after a plurality of pulses constituting a television picture frame, a second pulse producing circuit connected to and activated by the television synchronizing pulses passed by said gating circuit for producing pulses at a frequency equal to the frame frequency of said motion picture film, a trigger circuit connected to said tube and also connected to and controlled by said pulse counter circuit and said second pulse producing circuit, said trigger circuit generating pulses for periodically blanking out the image produced by said cathode ray tube, a second trigger circuit connected to and activating said gating circuit, a camera for said film, a third pulse generating circuit activated by said camera and connected to control said second trigger circuit, whereby said counter circuit has a recurrent rate of operation corresponding to the frame frequency of operation of said camera.

2,859,276
APPARATUS FOR KEY OPERATED MECHANISMS
Joseph J. Saykay, Sea Cliff, N. Y.
Application April 26, 1955, Serial No. 504,065
12 Claims. (Cl. 178—17)



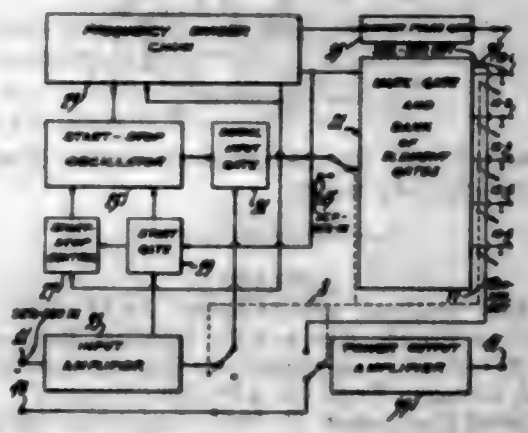
1. In coding apparatus for use with key operated mechanisms containing keys in two character groups, a code strip formed by a plurality of code stacks responsive to energization for producing first code signals, said code stacks being divided into two character groups representative of the two character groups of keys, means for selectively energizing each of said code stacks in response to actuation of an associated key for generating the first code signals, means for generating second code signals in response to the initial energization of one of the code stacks in the first group subsequent to the energization of one of the code stacks in the second group, and means for generating third code signals in response to the initial energization of one of the code stacks in the second group subsequent to the energization of one of the code stacks in the first group.

2,859,277
TELETYPEWRITER
Haraden Pratt, Springdale, Conn., assignor to Dunlex Corporation, Washington, D. C., a corporation of Delaware
Application June 29, 1955, Serial No. 518,774
11 Claims. (Cl. 178—25)



1. In a teleprinter, a key, a plurality of parallel signal permutation bars, a lever extending transversely of said permutation bars and actuated by depression of said key to engage said permutation bars, means biasing each of said bars longitudinally in a first direction, spring means normally overpowering said biasing means and holding said bars against movement in said first direction, said bars having shoulders thereon facing in said first direction toward said lever with the shoulder on at least one of said bars being positioned adjacent said lever and with the shoulders on the remaining bars being spaced from said lever, motor means having an energizing circuit closed by depression of said key and operative to reduce the effect of said spring means on said bars to permit said biasing means to move such remaining bars in said first direction, and switch means responsive to movement of such remaining bars in said first direction to select a code signal.

2,859,278
REVERSIBLE ELECTRONIC TELEGRAPH EXTENSORS
Arthur Eugene Cunfora and Samuel Sharin, Brooklyn, N. Y., assignors to Radio Corporation of America, a corporation of Delaware
Application August 31, 1953, Serial No. 377,618
16 Claims. (Cl. 178—53.1)



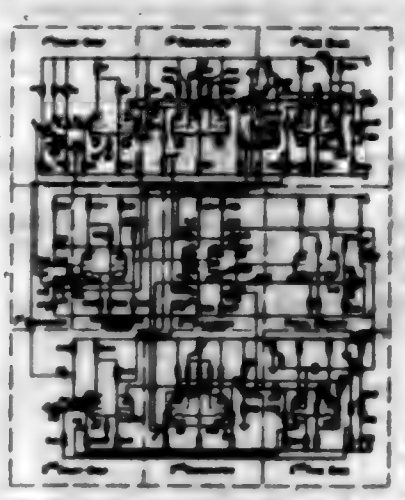
1. A telegraph extensor including a set of single circuit serial input terminals, a plurality of separate circuit output terminals, a start-stop oscillator, a serial input gate connected to said oscillator, a plurality of signal element gates individually coupled to said separate output terminals and connected in common to said serial input gate, a timing wave generator coupled to said start-stop oscillator and to said signal element gates to activate the latter in timed succession in response to excitation by said start-stop oscillator, means coupled between said serial input terminals and said start-stop oscillator to start the latter to oscillate at the first transition of a serial signal element train applied to said serial input terminals, and a connection between said serial input terminals and said serial input gate to operate said serial input gate to pass a pulse from said oscillator to said signal element gate assigned to a signal element under consideration in said train if said signal element under consideration received at said serial input terminals is of a predetermined nature, thereby to provide an output current at the one of said separate output terminals connected to said last-mentioned signal element gate upon said last-mentioned signal element gate being activated by said timing wave generator.

2,859,279
REGENERATIVE REPEATERS COMPRISING A DOUBLE MEMORY FOR SIGNALS IN A START-STOP-CODE
Roelof Maarten Marie Oberman, Voorburg, Netherlands, assignor to Staatsbedrijf der Posterijen, Telegrafie en Telefonie, The Hague, Netherlands
Application February 7, 1955, Serial No. 486,441
Claims priority, application Netherlands
February 11, 1954
37 Claims. (Cl. 178—70)

3. A regenerative repeater for signals in a start-stop code comprising: a receiving circuit, a first time base circuit, a second time base circuit which operates substantially independently of said first time base circuit, an intermediate storing means for one signal element, a first and second scanning means controlled respectively by said first and second time base circuits, and a final storing means for one signal element, whereby said first scanning means successively stores the elements of each signal in said intermediate storing means and then said

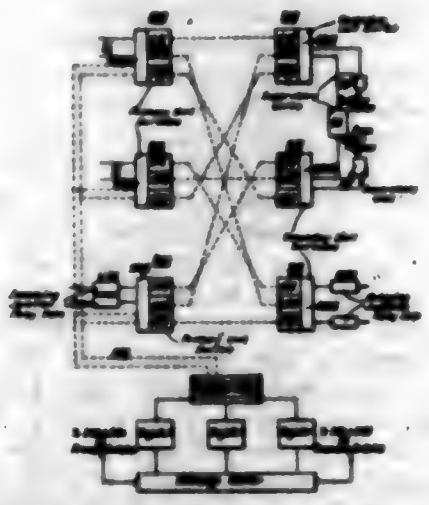
stages, a first semiconductor diode connected between said stages and in parallel with said condenser-gas diode cir- including a capacitor serially connected between said stages, a charging circuit for normally maintaining said

second scanning means successively transfers each element from said intermediate storing means to said final



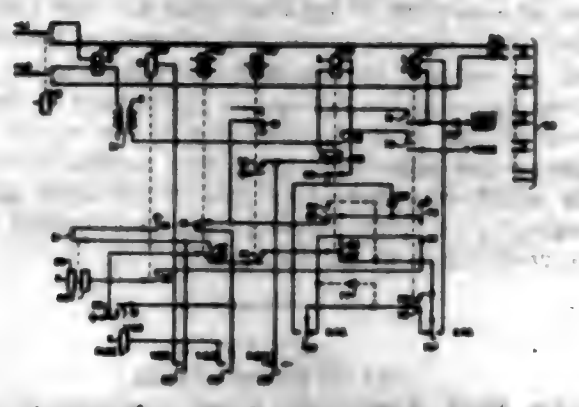
storing means before the next received element is scanned by said first scanning means.

2,859,280
ELECTRICAL SWITCHING SYSTEMS
John Edward Flood, Herne Hill, London, England, assignor, by mesne assignments, to Siemens Edison Swan Limited, London, England, a British company
Application November 29, 1955, Serial No. 549,995
4 Claims. (Cl. 179—15)



1. An automatic telephone system in which connections within an exchange are set up by a time division multiplex system comprising a plurality of electronic selecting switches each having a selector side and a bank side and each comprising a common pulse highway which links the two sides of the switch and serves for all connections set up over the switch and over which transmission in respect of a connection is effected by a recurrent pulse allocated for the connection, said plurality of electronic selecting switches being arranged in two ranks to form a frame having a plurality of said switches on each side of it, a plurality of individual audio frequency lines connected to the selector sides of switches on one side of said frame, a plurality of audio frequency trunks connected to the selector sides of switches on the other side of said frame, a plurality of link pulse highways linking the bank side of each switch on said one side of said frame to the bank side of every switch on said other side of said frame, for each said audio frequency line a modulator and demodulator forming part of the selector side of the particular switch to which the line is connected and serving for coupling the line to the common pulse highway of this switch so far as transmission over this highway by means of an allocated recurrent pulse is concerned, for each said audio frequency trunk a modulator and demodulator forming part of the selector side of the particular switch to which the trunk is connected and serving for coupling the trunk to the common pulse highway of this switch so far as transmission over this highway by means of an allocated recurrent pulse is concerned, for each said link pulse highway two groups of gate circuits one group forming part of the bank side of a switch on said one side of said frame and comprising gate circuits serving for coupling the link pulse highway to the common pulse highway of this switch so far as transmission by means of certain predetermined recurrent pulses in the time division multiplex cycle is concerned and the other group forming part of the bank side of a switch on said other side of said frame and comprising gate circuits serving for coupling the link pulse highway to the common pulse highway of this switch so far as transmission by means of the same certain predetermined recurrent pulses in the time division multiplex cycle is concerned, said certain predetermined recurrent pulses being different for each link pulse highway connected to a switch, and supervisory equipment connected in and individual to each of said audio frequency trunks.

2,859,281
DIGIT ABSORBING SELECTOR CIRCUIT
George B. Quatsoe, Lima, Ohio, assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application April 24, 1956, Serial No. 580,168
7 Claims. (Cl. 179—18)



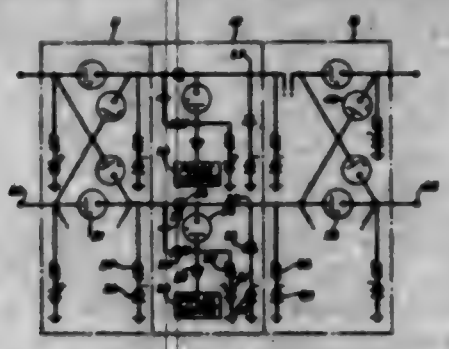
1. In a two-motion step-by-step selector switch comprising means controlled over a calling line for stepping the switch wipers to a desired level in a multilevel terminal bank and means for advancing the wipers on the selected level to hunt for a set of terminals connected to an idle trunk, two sets of normal post springs each independently operable on one or more levels, said two sets of normal springs operated responsive to stepping said wipers to a particular level, a first relay operated responsive to the operation of the first of said normal post springs, a release magnet operated in response to the operation of said first relay for restoring said wipers to normal, a second relay operated in response to the operation of said second normal post spring and the operation of said release magnet, and a circuit closed by the operation of both of said relays for connecting a voice announcing means externally through said selector to said calling line to notify the calling subscriber that the connection cannot be completed.

2,859,282
COMMUNICATION SWITCHING NETWORK
Kermit S. Dunlap, Madison, N. J., and Jeremy P. Taylor, Menlo Park, Calif., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application October 19, 1956, Serial No. 617,869
10 Claims. (Cl. 179—16)

2. A propagator circuit between two stages of a cross-point communications switching network including a condenser and a gas diode connected in series between said

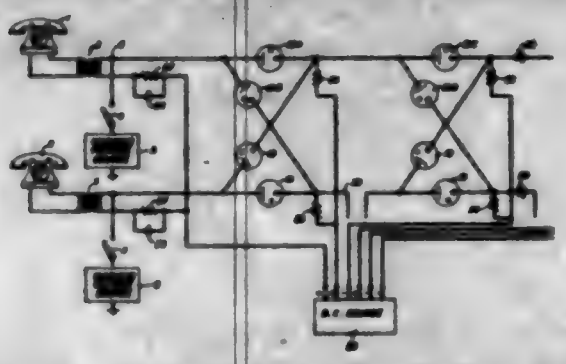
closed by depression of said key and operative to reduce signal in said intermediate storing means and then said

stages, a first semiconductor diode connected between said stages and in parallel with said condenser-gas diode circuit, a source of nonselective propagator marking pulses, a second semiconductor diode connected between said source and said gas diode, means normally maintaining said second semiconductor diode back-biased, means in-



cluding one of said stages for marking said gas diode and means including said source of nonselective pulses for sustaining said gas diode whereby said gas diode generates a new marking signal for one of said stages in response to a marking pulse from another of said stages and a pulse from said pulse source.

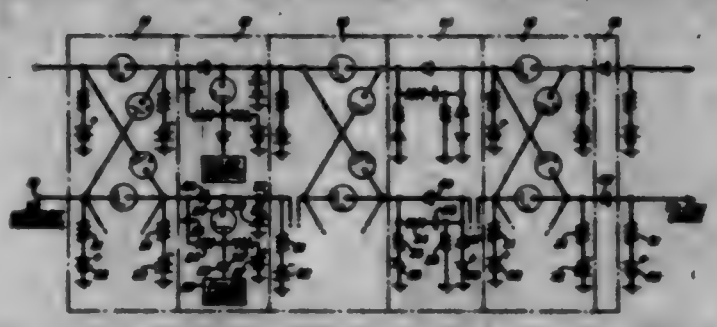
2,859,283
COMMUNICATION SWITCHING NETWORK
Kermit S. Dunlap, Madison, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application October 19, 1956, Serial No. 617,087
11 Claims. (Cl. 179—18)



1. A communication switching network wherein a unitary path is established through the network without application and removal of marking voltages at internal points in the network comprising a plurality of input terminals, a plurality of output terminals, crosspoint devices connected at nodes and arranged in stages interconnecting each of said input and output terminals, means for applying marking voltages to selected input and output terminals, low resistance potential means connected to said terminals, high resistance means connected to each of said nodes, and means permanently maintaining a potential on said high resistance means at points remote from said nodes, whereby on removal of said marking voltages from said selected terminals conduction in crosspoint devices in unselected paths is extinguished in response to the decrease in potential across said devices caused by the potential drop across said high resistance means on flow of current through said low resistance means, said conducting device, and said high resistance means.

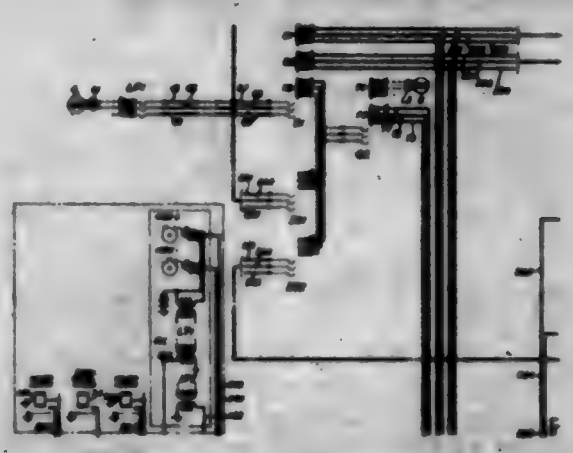
2,859,284
COMMUNICATION SWITCHING SYSTEM
Raymond W. Ketchledge, Whippany, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application October 19, 1956, Serial No. 617,189
13 Claims. (Cl. 179—18)

6. A pulse propagator circuit between successive stages of crosspoint devices in a crosspoint switching network including a capacitor serially connected between said stages, a charging circuit for normally maintaining said capacitor in a charged condition, normally back-biased



diode means connected in parallel with said capacitor, and means including one of said stages for causing said capacitor to discharge into another of said stages thereby delivering a pulse to said another stage.

2,859,285
ALARM SENDING CIRCUIT
Oliver C. Hall, Fair Lawn, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 1, 1954, Serial No. 433,683
4 Claims. (Cl. 179—27)

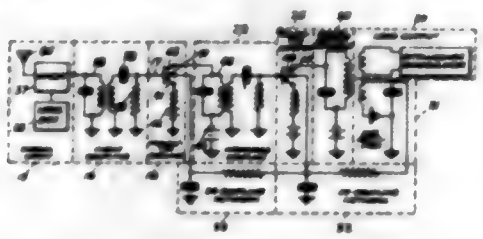


1. In a telephone system, an unattended office, an operator office, trunks for use on calls from said unattended office to said operator office, means in said unattended office to indicate a minor trouble condition, other means in said unattended office to indicate a major trouble condition, means under the control of either of said trouble indicating means for seizing an idle one of said trunks to initiate an alarm call, means operated over the seized trunk responsive to the answer of the call and the subsequent release of the connection by the answering operator in the operator office for releasing the trunk in the unattended office, and means under the control of said major trouble indicating means for repeatedly initiating an alarm call.

2,859,286
VARIABLE GAIN DEVICES
David P. Kennedy, Cambridge, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application November 12, 1953, Serial No. 391,633
3 Claims. (Cl. 179—171)

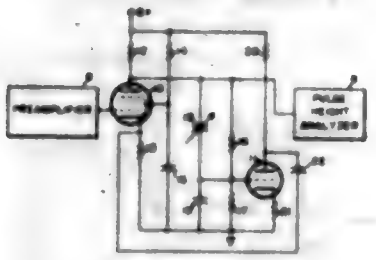
1. An automatic gain control system comprising a body of semiconductive material including areas of opposite conductivity type, means for establishing electrical connections to said areas, said means including an emitter connection to an area of a first conductivity type and first and second collector connections to other separated areas of said first conductivity type, a base connection to an area of second conductivity type, means for biasing said emitter connection, a signal input circuit coupled to said emitter connection, means for biasing said collectors

in the reverse direction, a signal output circuit coupled to one of said collector connections, means for rectifying a portion of the output signal from said one collector connection, and a decoupling network connected directly



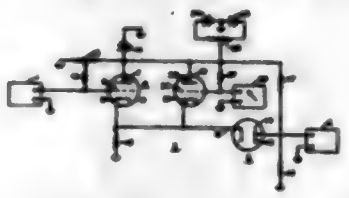
between said rectifying means and the other of said collector connections for applying said rectified portion of said signal directly to said other collector connection whereby the gain of said system may be automatically controlled.

2,859,287
LINEAR AMPLIFIER
Garret F. Ziffer, Wayland, Mass., assignor to Tracerlab, Inc., Boston, Mass., a corporation of Massachusetts
Application April 5, 1954, Serial No. 420,953
1 Claim. (Cl. 179—171)



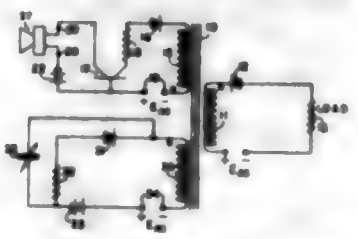
A linear pulse amplifier having wide dynamic range comprising, in combination, a first amplifier including a pentode electron tube having anode, cathode, and control grid electrodes, a source of energizing potential, a resistor connected between the anode of said pentode and said source of energizing potential, a resistor connected between the cathode of said pentode and a point of ground potential, an input circuit connected to the grid of said pentode for applying pulses of widely varying amplitudes thereto whereby the transconductance of said pentode varies with the magnitude of the signal appearing at the anode of said pentode; means for deriving the output of said linear pulse amplifier from said plate of said pentode, and a feedback circuit for said first amplifier for automatically compensating for said changes in transconductance of said pentode and the frequency sensitivity of said first amplifier comprising an attenuating network formed of first and second resistors serially connected between the anode of said pentode and ground potential, first and second capacitors respectively connected in parallel with said first and second resistors, a second amplifier of approximately unity gain including a second electron tube having at least anode, cathode, and control grid electrodes, a connection between the junction of said first and second resistors of said attenuating network and the control grid of said second tube, a resistor connected between the anode of said second tube and said source of energizing potential, a resistor connected between the cathode of said second tube and a point of ground potential, and a connection including a third capacitor between the anode of said second tube and the cathode of said pentode, said first and second resistors and said first and second capacitors having such relative values that said feedback circuit is frequency sensitive in a direction to compensate for the frequency sensitivity of said first amplifier whereby said first amplifier with feedback is frequency insensitive.

2,859,288
AMPLIFIER GAIN CONTROL CIRCUIT
David L. Tobias, Fairport, and Arthur H. Zeffing, Rochester, N. Y., assignors to General Dynamics Corporation, a corporation of Delaware
Application December 7, 1955, Serial No. 551,497
5 Claims. (Cl. 179—171)



1. In a volume control system for controlling the amplification of an intelligence-modulated voltage by a volume-controlling voltage, said system comprising a cathode-follower stage with a cathode load resistor in series with a grid controlled electron discharge device, a rectifier, the rectifier being connected in series between an output circuit and the cathode end of said load resistor, means for variably biasing the anode-cathode voltage of said rectifier to non-conducting state, and a grid-controlled amplifier responsive to said volume-controlling voltage connected to vary the resistance of said cathode load resistor and to vary the gain of said cathode-follower stage.

2,859,289
TRANSISTOR CONTROLLED MAGNETIC AMPLIFIER
Clarence R. House, Arlington, Va.
Application December 22, 1955, Serial No. 554,905
3 Claims. (Cl. 179—171)
(Granted under Title 35, U. S. Code (1952), sec. 266)

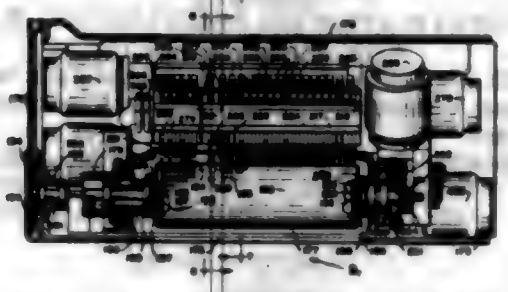


1. A half cycle response time transistor controlled magnetic amplifier comprising, a saturable core, a control winding, a compensating winding, and a load winding thereon, said control winding being oppositely poled to each of said other windings, unilateral impedance means and an alternating energy source connected to each of said windings, said unilateral impedance means being poled to alternate the flow of half cycle current to said load and said other two windings, a transistor amplifier having its output serially connected with the control winding, a control signal input connected to the input circuit of said transistor amplifier, first and second resistors respectively connected in series with said control and compensating windings, the relative values of said resistors being chosen to provide a current in the compensating winding equal and opposite to that in the control winding resulting from the quiescent current of the transistor output circuits, and a variable capacitor connected in parallel with the series connection of said second resistor and the unilateral impedance in the circuit of said compensating winding.

2,859,290
MACHINE TOOL CONTROLLER
Claude M. Grinage, Stratford, Conn., assignor to The Bullard Company, a corporation of Connecticut
Application April 7, 1955, Serial No. 499,921
39 Claims. (Cl. 200—18)

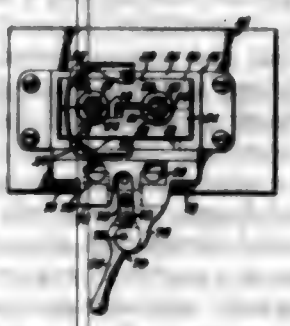
1. In a programming apparatus for a machine capable of producing a large number of functions, comprising in

combination, a function-selecting means having a plurality of portions, each adapted to be pre-set to render effective any of the functions of said machine; means adapted to index said function-selecting means in a step-by-step manner to render effective succeeding of said portions; a reciprocable shuttle member; an actuator for each function of said machine mounted for reciprocation on said



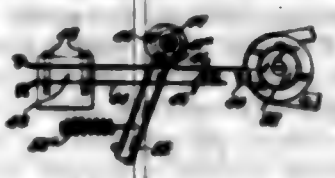
shuttle member; means for moving said shuttle member along its reciprocative path away from said function-selecting means prior to the rendering effective of a succeeding portion of said function-selecting means; and positive acting means for causing relative reciprocation between said shuttle and said actuators during reciprocation of said shuttle.

2,859,291
CLAMP AND SWITCH FOR HIGH POWER INCANDESCENT LAMPS
Robert Jay Brandt, Los Angeles, Calif.
Application April 1, 1957, Serial No. 650,028
9 Claims. (Cl. 200—51)



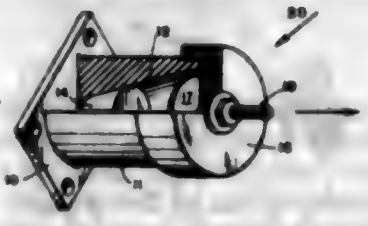
9. A clamp and switch device for a switch operated high power contact incandescent lamp comprising a socket housing, mounting means of dielectric material secured in the housing having prong receiving recesses therein, conforming split prong contacting elements of electrically conducting material in said recesses, a switch in said housing in circuit with one of said split prong contacting elements, and manually actuated socket locking and release means including lever actuated mechanism for resiliently first clamping said conforming split contacting elements on said prongs and thereafter closing said switch but upon release operating to immediately open said switch and thereafter release said clamping elements.

2,859,292
MOTOR SPEED CONTROLLER
Waldemar A. Ayres, Lakewood, Ohio, assignor to White Sewing Machine Corporation, Cleveland, Ohio, a corporation of Delaware
Application June 7, 1954, Serial No. 435,810
24 Claims. (Cl. 200—61.46)



1. A speed controller for a power actuated driving device comprising cooperating control elements adapted to control the energization and deenergization of said power device when moved relative to each other to an energizing position, adjustable means acting on said elements with a pressure correlated to a selected speed of operation of said power device to move said elements relative to each other to the energizing position and to maintain said elements in such position, and a speed responsive device having a rotatable driving portion adapted to be actuated by said power device and a driven portion coaxially carried entirely by said driving portion for rotative movement therewith or relative thereto, one of said portions being provided internally with a space in which the other portion is located to provide adjacent cooperating interiorly located surfaces on said portions, one of said surfaces being provided with an annular groove, material having torque transmitting properties located intermediate said adjacent cooperating surfaces and in said groove and confined therebetween solely by said portions, said material acting to transmit to said driven portion from said driving portion varying torques in proportion to varying angular velocities of said driven portion, said control elements being mounted independently of said driving and driven portions, and means carried by said driven portion and operatively associated with said control elements to move said elements relative to each other to the deenergizing position when the torque transmitted to the driven portion by the driving portion exceeds the pressure exerted on said control elements by said adjustable means.

2,859,293
ACCELERATION RESPONSIVE DEVICE
Stanley J. Marcus, China Lake, Calif.
Application May 7, 1953, Serial No. 353,694
6 Claims. (Cl. 200—61.47)
(Granted under Title 35, U. S. Code (1952), sec. 266)



6. In combination with a missile subject to acceleration and deceleration during flight, an acceleration and deceleration responsive switch comprising a housing having formed therein a closed chamber of frusto-conical shape, said switch being attached to said missile with the base of the cone forward as respects the direction of travel of the missile and with its long axis parallel to the long axis of the missile, at least two two electrodes at one end of said chamber, and mercury in said chamber in an amount to partially fill the chamber, the angle of the wall of said chamber being such that the mercury is subjected to a forward force when the missile is yawing, the force being insufficient to overcome the rearward force to which the mercury is subjected during acceleration.

2,859,294
CENTRIFUGAL SWITCHES
Richard Ernest Hall, Ilford, and Frederick Raymond Jones, Loughton, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Application December 27, 1955, Serial No. 555,729
Claims priority, application Great Britain
December 29, 1954
6 Claims. (Cl. 200—80)

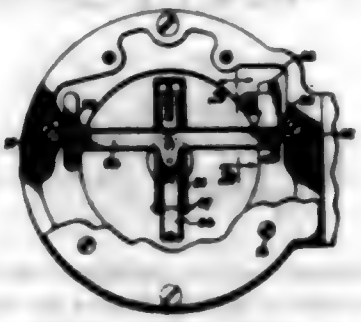
1. A centrifugal switch device comprising a rotary body, a stationary body relative to which the rotary body can rotate, a switch operating element movably mounted on said stationary body for limited to and fro movement transversely of the peripheral direction of rotation of the rotary body, two switch actuating elements, one for each direction of rotation of the rotary body, mounted

open-gap position that any flux level within said core suffi- cuit containing said circuit breaker, a variable loading

for limited pivotal movement on said rotary body under centrifugal force from a position clear of the switch operating element to a position of engagement and respective wedge co-operation with said switch operating element, to move said switch operating element transversely of the peripheral direction of the rotary body, and two

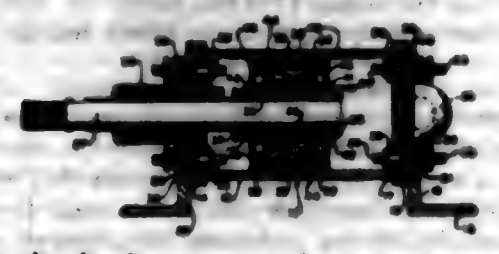
reverse switch actuating elements mounted on said rotary member and adapted for action, similar to the said action of the switch actuating elements, when the centrifugal action is a predetermined amount below that at which the said switch actuating element becomes operative.

2,859,295
ZERO SPEED MECHANISM
Miles Weidig, Cincinnati, Ohio, assignor to The Carlton Machine Tool Company, Cincinnati, Ohio, a corporation of Ohio
Application May 27, 1957, Serial No. 661,729
7 Claims. (Cl. 200—80)



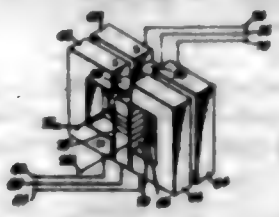
1. A device for determining the time at which the speed of rotation of a shaft in a machine tool approaches zero, comprising a driving shaft, a driven shaft keyed to said driving shaft, a ball guide connected to said driving shaft, a ball movable within said guide, a trigger mechanism pivotally mounted on said ball guide, a tilt bar actuated by said trigger mechanism, a switch connected to said tilt bar which is operated when said ball is moved within said ball guide to operate said trigger mechanism to thereby move said tilt bar.

2,859,296
FLUID CYLINDER WITH CIRCUIT CLOSER
Franklyn R. Nee, Carlstadt, N. J., assignor to Standard Tool and Manufacturing Co., Kearny, N. J., a corporation of New Jersey
Application November 26, 1956, Serial No. 623,396
14 Claims. (Cl. 200—82)



11. A circuit closer comprising a cylinder with electrical contacts in one end, a piston slidable therein and having a hub toward the contact-containing end of the cylinder, an electrical contact means journalled on said hub and formed at its periphery with means whereby upon the admission of actuating fluid to the cylinder, said fluid effects a turning of the contact means so that a different area is exposed for the next engagement with said contacts.

2,859,297
MAGNETICALLY SELF-RETURNING BALL ARMATURE RELAYS
Francis D. Reynolds, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application October 28, 1954, Serial No. 465,259
11 Claims. (Cl. 200—87)



1. Electromechanical relay apparatus comprising a ferromagnetic core structure including serially arranged ferromagnetic elements defining a magnetic flux path of low magnetic retentivity, two of said elements having mutually adjacent end portions spaced apart to form an air gap interposed in said magnetic flux path, a single electrically conductive ferromagnetic relay armature ball loosely received in said air gap, permanent magnet means disposed adjacent said ferromagnetic core structure and having an end portion constituting a permanent magnetic pole positioned immediately adjacent one of said element end portions and passing permanent magnetic flux through said air gap and said latter element as a keeper for said permanent magnet, and thereby normally attracting said armature ball magnetically into normal position directly contacting said permanent magnet end portion and said keeper element end portion simultaneously but displaced thereby out of contact with the other of said element end portions, and relay coil means inductively linked with said core structure and energizable for establishing magnetic flux in said flux path, hence through said air gap between said mutually adjacent end portions for attracting said armature ball into relay-actuated position directly contacting said two mutually adjacent element end portions simultaneously but displaced out of contact with said permanent magnetic end portion, at least two of said three end portions having electrically conductive surfaces contacted by said armature ball and being provided with relay switch terminal connections adapted for connecting the same in an electric circuit opened and closed by magnetically controlled positioning of said armature ball.

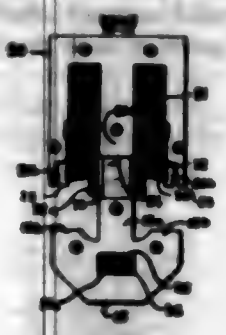
2,859,298
ELECTROMAGNETIC APPARATUS
James R. Burch, Bloomington, Ill., assignor to General Electric Company, a corporation of New York
Application June 1, 1955, Serial No. 512,364
14 Claims. (Cl. 200—87)

1. Electromagnetically operated apparatus comprising a pair of electrical contacts, an electromagnet including a magnetic core having a pair of spaced magnetic poles and an armature movable between open- and closed-gap positions relative to said poles, said armature being mechanically connected to one of said contacts for moving it into tight engagement with the other contact when the armature is in its closed-gap position, and magnetic shunting means extending between said poles with only a small air gap therebetween for diverting sufficient magnetic flux away from said armature when said armature is in said

with an electromagnetic switch unit comprising a switch supporting plate slidable over said base plate and ad-

by said operator, a composite member actuable by said support member, said composite member including an

open-gap position that any flux level within said core sufficient to move said armature is also sufficient to drive



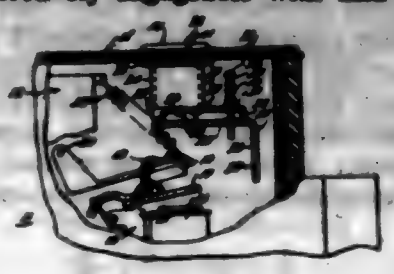
said armature to its closed-gap position against the additional load of said contact engagement.

2,859,299
CHOPPER
Hugh A. Howell, Berwyn, Ill., assignor to Oak Mfg. Co., Cook County, Ill., a corporation of Illinois
Application September 14, 1953, Serial No. 379,986
1 Claim. (Cl. 200—91)

A chopper comprising a frame having a permanent magnet system, a driving winding, a reed armature supported at one end and having the other end free to vibrate, said armature having an enlarged portion for the purpose of controlling the vibration characteristics of the armature, light spring contacts carried by said frame and disposed on opposite sides of said reed armature for alternate make and break during reed vibration, said spring contacts having negligible effect on the reed, and said chopper including a stack in proximity to the free end of the armature, stiff metal arms carried by said stack and extending toward said armature, there being one arm on each side of the armature, each arm carrying a snubber of non-linear compressible material such as nylon, said snubbers being disposed on opposite sides of said enlarged armature portion and being spaced therefrom so that said snubbers will engage said enlarged armature portion on excessive armature amplitude whereby said chopper may operate with its winding supplied with alternating currents at a frequency below the resonant frequency of the armature, said armature system having a high Q and the chopper operating in a stable manner upon the steep side of the resonance curve.

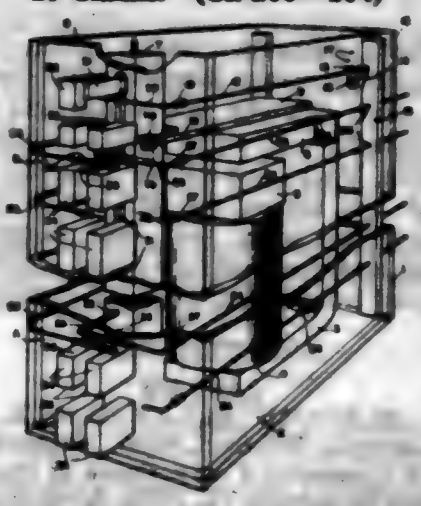
2,859,300
CIRCUIT BREAKER TRIP MECHANISM
Elwood T. Platz, Detroit, and Robert W. Thomas, St. Clair Shores, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application November 24, 1953, Serial No. 393,987
13 Claims. (Cl. 200—95)

1. In a circuit breaker having a control mechanism, a trip bar adjacent said control mechanism for initiating operation thereof to move the circuit breaker to the open circuit position, electroresponsive means including an armature operatively positioned to actuate said trip bar upon occurrence of an overload in the electrical circuit containing said circuit breaker, a variable loading mechanism selectively engageable with said trip bar for



altering the predetermined overload setting of said circuit breaker.

2,859,301
ELECTROMAGNETIC RELAYS
Bengt Ludvig Wilkman, Stockholm, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Application September 7, 1955, Serial No. 532,940
Claims priority, application Sweden September 9, 1954
10 Claims. (Cl. 200—164)



1. In an electromagnetic relay having a reciprocating armature mounted for reciprocatory longitudinal movements between opposite end positions, an operating strip longitudinally displaceable by said armature between two end positions, fixed contact members arranged along the length of said operating strip, and movable contact members for closing and breaking the connection with said fixed contact members in response to a corresponding movement of said operating strip, said fixed contact members each comprising a torsion spring of substantially L-shape and including a contact arm and a fastening arm, each of said fastening arms being secured against rotation at one end and connected to one extremity of the respective contact arm at the opposite end, the opposite extremity of said contact arms extending into association with said movable contact members, said opposite end of each said fastening arm adjacent to the respective contact arm being rotatably journaled relative to said one end so that a rotational movement of each said fastening arm and each said contact arm about the axis of the respective fastening arm is torsionally resisted.

2,859,302
ELECTROMAGNET AND MAGNETIC SWITCH MOUNTING
Harold E. Schleicher, West Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Application June 14, 1956, Serial No. 591,414
9 Claims. (Cl. 200—104)

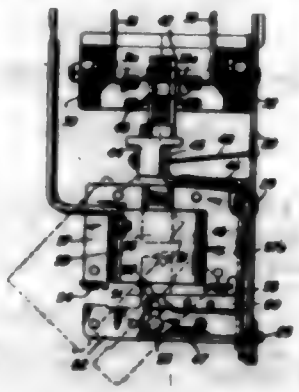
1. A switch-unit mounting comprising a base plate, an insulating terminal block on said plate having slots in one face connecting with contact recesses opening into an opposite face, contact and terminal assemblies mounted on said block in said recesses in combination

said members having an end portion secured to said structure, an intermediate portion extending from said

2,859,303
ELECTRIC FUSES

trical contacts in one end, a piston slidable therein and away from said armature when said armature is in said

with an electromagnetic switch unit comprising a switch supporting plate slidable over said base plate and attachable to and separable from said base plate, an insulating contact supporting block mounted on said switch plate, contact and terminal members mounted on said switch contact block with prong-like terminal portions extending therefrom and engageable through said slots with the contact portions of said contact and terminal assemblies upon sliding of said switch unit toward said



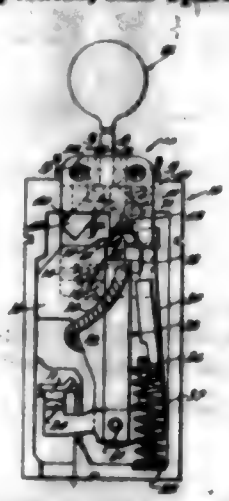
terminal block, movable contact means and electromagnetic actuating means therefor both supported from said switch plate, whereby said switch unit may be slid along said base plate to make a plug-in connection with said mounting block, and means to guide the motion of the switch unit toward the terminal block when said prong-like portions enter said slots, comprising guide slot and stud means on said base and switch supporting plates insulated from said contact and terminal members.

2,859,303
ELECTRIC RELAY DEVICE
John G. Anderson, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Application September 12, 1956, Serial No. 609,485
3 Claims. (Cl. 200—112)

1. An electric relay device comprising, in combination, conduit means having opposite ends and partially filled with a conductive liquid body movable along said conduit means, said conductive liquid body defining said conduit means at said ends chamber means containing a gaseous medium being compressible and expandable in accordance with the movements of said conductive liquid body along said conduit means; means for providing a magnetic flux in said movable conductive liquid body; means for passing an electric current through said conductive liquid body transverse said conduit means and said magnetic flux; and electrical contact means associated with said conduit means adapted to be contacted by said conductive liquid body, said conductive liquid moving along said conduit means for establishing and interrupting a conductive path through said electrical contact means in accordance with the energization of said magnetic flux means and said current passing means.

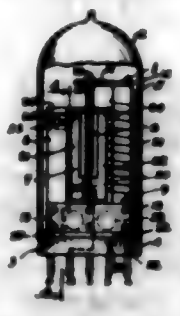
2,859,304
CIRCUIT BREAKER
Donald B. Robinson, Detroit, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application July 9, 1954, Serial No. 442,304
9 Claims. (Cl. 200—116)

1. In a thermal overload circuit breaker having a casing, a fixed contact, an operator slidably disposed in said casing, a mechanism including a support member actuable by said operator, a composite member actuable by said support member, said composite member including an electroresponsive latch element engageable with, and disengageable from, said support member upon successive operation of said operator, said operator including means



engageable with said mechanism for selectively varying the predetermined overload rating of said circuit breaker, said operator comprising mating halves having a chamber to receive said means when disengaged from said mechanism.

2,859,305
THERMAL TIME DELAY SNAP-ACTION RELAY
William Henry Happe, Jr., Nutley, N. J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application September 8, 1955, Serial No. 533,159
6 Claims. (Cl. 200—122)



1. A time delay relay comprising elongated bimetallic actuator and compensator elements; a member that is permanently stationary relative to both said elements and has secured thereto an end of each element, said elements extending from the respective secured ends generally in the same direction relative to said stationary member and substantially in a single common plane and adapted to warp transversely of said plane and in the same direction with reference to, and about the common axis provided by said stationary member responsive to respective temperature changes of like sense; switching means, means connecting said actuator element to said switching means, and separate means connecting said compensator element to said switching means to render said switching means actuatable responsive to temperature difference between said elements; and a heater disposed in proximity to said actuator for heating the latter and actuating said switching means after a time delay.

2,859,306
THERMAL TIME DELAY RELAY
Arthur L. Bastian, Yonkers, N. Y., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application January 18, 1957, Serial No. 633,451
6 Claims. (Cl. 200—122)

1. A thermal time delay relay having a high degree of uniformity in temperature response, comprising a base structure, an actuator bimetallic member and a compensator bimetallic member each of strip form, each of

the contacts of each of said circuit breaker units will be the first of said transmission lines, said connector having

said members having an end portion secured to said structure, an intermediate portion extending from said end portion from a first sharply defined line and laterally and in off-set relation to said end portion, and a major active portion extending from said intermediate portion from a second sharply defined line and in off-set relation to said intermediate portion, the intermediate portion of each member being substantially narrower than the active portion thereof, said end portions being

substantially non-responsive to temperature changes and the first sharply defined line of each bimetallic member defining a uniform fulcrum line for warping of the respective member, said relay further comprising switching means operatively related to said active portions and responsive to temperature difference therebetween, and a heater disposed in proximity to the active portion of said actuator for causing warping thereof about its said fulcrum line and operation of said switching means after a time delay.

2,859,307
FUSE LINK

John W. Enk, St. Louis, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

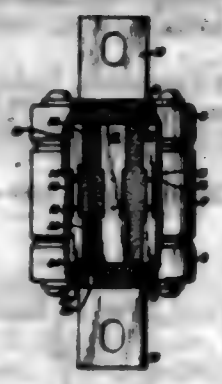
Application March 21, 1957, Serial No. 647,532
5 Claims. (Cl. 200—123)

1. A fuse link comprising electrical conductors at least one of which is adapted to fuse upon substantial overload and at least one of which is adapted to heat upon smaller overloads, a junction block adapted electrically to connect said conductors, said block comprising tubular electrical and heat-conductive members connected to the conductors by flatwise crimping thereof so as to form heat-tempering pads, and a mass of solder joining said pads.

2,859,366
ELECTRIC FUSES

Kurt Dannenberg, London, England, assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Original application September 1, 1953, Serial No. 377,874, now Patent No. 2,800,554, dated July 23, 1957. Divided and this application December 21, 1956, Serial No. 629,886
Claims priority, application Great Britain July 23, 1953
4 Claims. (Cl. 200—131)

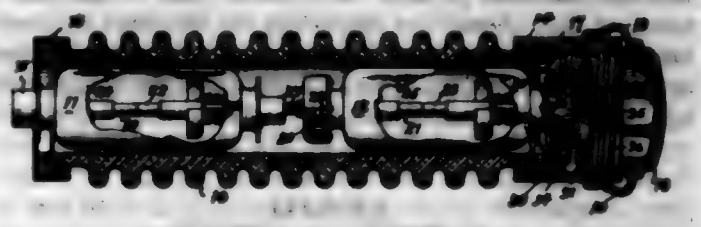


1. A current limiting powder filled fuse comprising a plurality of load-carrying fusible elements connected in parallel with each other, different elements being formed from different metals, a given one of said elements having a lower melting point than another of said elements, the cross-sectional area of said given element being greater than the cross-sectional area of said other element and being proportioned relative thereto substantially to maintain in said elements the same effective resistance to current flow in the several elements.

2,859,389
ARC FREE MULTIPLE BREAK CIRCUIT INTERRUPTING AND ISOLATING MEANS

August C. Schwager, Portland, and Charles E. Kerr, Jr., Hillsboro, Oreg., assignors to Schwager-Wood Corporation, Portland, Oreg., a corporation of Oregon

Application December 4, 1956, Serial No. 626,122
12 Claims. (Cl. 200—145)



1. In a multiple break vacuum insulated circuit breaker assembly for mounting upon a movable circuit controlling conductor, the combination of an elongated cylindrical terminal spacing insulator, a circuit forming terminal secured upon the opposite ends of said insulator, a first circuit breaker unit comprising an evacuated envelope having a stationary and a movable contact enclosed therein and secured in a fixed position with its stationary contact connected to the circuit forming terminal at one end of said terminal spacing insulator and having an operating means extending into said insulator, a second circuit breaker unit having a similar vacuum insulated stationary and movable contact movably mounted within said terminal spacing insulator its stationary contact connected directly to the extending operating means of said first vacuum insulated circuit breaker unit, a movable circuit completing contact mounted upon the line terminal at the other end of said elongated cylindrical terminal spacing insulator, and means forming an operating and current carrying connection between the circuit completing contacts of said second vacuum insulated circuit breaker united adapted and arranged to move said second vacuum insulated circuit breaker unit relative to said first vacuum insulated circuit breaker unit, whereby

ing against the operating plunger of the switch; a cylindri-

and moveable therewith, at least one contact bearing on

the contacts of each of said circuit breaker units will be brought into circuit establishing contact with each other and complete a circuit through said movable circuit controlling conductor when said movable circuit controlling conductor is brought into engagement with a cooperating line terminal contact.

2,809,310

ASSEMBLY OF SIGHT GLASS AND ELECTRODE MEANS FOR MOUNTING ON A LIQUID CONTAINER

Michael J. De Leonardis, Valley Stream, N. Y.

Original application August 13, 1954, Serial No. 449,992. Divided and this application April 27, 1956, Serial No. 581,129

3 Claims. (Cl. 200—121)

1. A sight glass assembly comprising electrically conductive tubular end portions, and a transparent intermediate portion, three electrodes disposed within said sight glass and conductors extending through the wall of said intermediate portion from two of said electrodes, the third of said electrodes extending to the level of one of said two electrodes past the other of said two electrodes to the end of said intermediate portion into contact with one of said end portions.

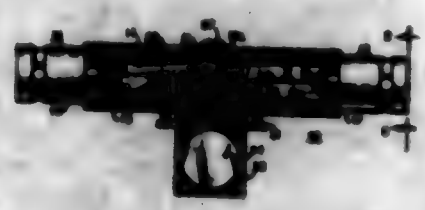
2,809,311

ELECTRICAL SWITCH

Carl W. Cornelissen, Danbury, Conn., assignor, by mesne assignments, to Amphenol Electronics Corporation, Chicago, Ill., a corporation of Illinois

Continuation of application Serial No. 392,237, November 16, 1953. This application October 31, 1956, Serial No. 643,786

4 Claims. (Cl. 200—153)



1. An electrical switch for conductively connecting a first high-frequency wave-signal coaxial transmission line to any one of a plurality of such lines comprising, a switch support having an internal and substantially hollow chamber extending longitudinally between interior conductive end walls, said chamber having a substantially uniform cross-section defined by confronting pairs of parallel and interior conductive walls, a first coaxial connector electrically coupled to said chamber intermediate the end walls thereof and adapted for connection with the first of said transmission lines, said connector having an outer conductor conductively connected to said chamber walls and an inner conductor extending into said chamber and terminating therein wherein the axis of said connector in the region where it effects electrical coupling to said chamber is substantially perpendicular to the longitudinal dimension of said chamber, a coaxial connector electrically coupled to said chamber on each side of said first connector and defining a plurality of connectors for individual connection to respective ones of said plurality of transmission lines, said plurality of connectors each having an outer conductor conductively connected to said chamber walls and an inner conductor terminating in said chamber, a plurality of movable conductive switch arms having a substantially uniform cross-section defined by opposed pairs of parallel surfaces, said arms extending substantially longitudinal-wise in said chamber for movement from one to another of two positions wherein said first connector is alternately connected to and disconnected from respective ones of said plurality of connectors, each arm having one end conductively connected to and supported from a respective one of the inner conductors of said plurality and having a free end adapted for conductive connection with the inner conductor of said first connector, wherein each arm and the confronting chamber walls surrounding same serve as a section of coaxial line coupling said first connector with a respective one of the plurality of connectors when the correlated arm is positioned to effect conductive connection with the inner conductor of said first connector.

2,809,312

ELECTRIC SWITCH MECHANISM

John V. S. Dahlgren, Fairhaven, N. J., assignor to The Wheelabrator Company, Elizabeth, N. J., a corporation of Delaware

Application March 15, 1956, Serial No. 571,634

6 Claims. (Cl. 200—164)

1. An electric switch mechanism comprising a pair of cooperating contact members having cooperating contact surfaces, a support for each of said contact members actuating means for effecting relative movement of the contact supports to bring their contact surfaces into and out of engagement with each other respectively to close and open an electric circuit, means for pivotally mounting at least one of said contact supports, means which in all conditions of the switch mechanism bias said pivoted contact support toward and laterally with respect to the other contact support and means for shifting at least one of said contact supports and its contact member relative to the other contact member immediately after movement of the contact surfaces into engagement by said actuating means.

2,809,313

HERMETIC SEAL FOR ELECTRICAL SWITCHES

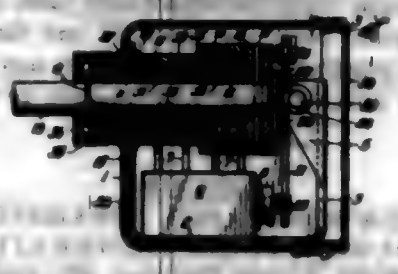
Eugene C. Connolly, Chicago, Ill., assignor to Electro-Snap Switch & Mfg. Co., Chicago, Ill., a corporation of Illinois

Application December 14, 1956, Serial No. 628,432

10 Claims. (Cl. 200—168)

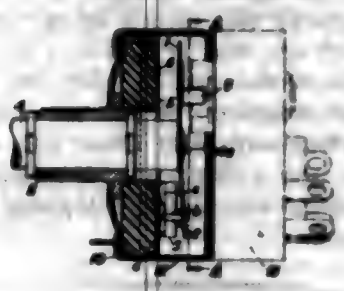
1. A hermetic seal for an electrical switch having an operating plunger comprising: a hermetically sealed casing in which the electrical switch is mounted; an operating lever pivotally mounted within said casing and hav-

ing against the operating plunger of the switch; a cylindrical bushing fixed in a wall of said casing and extending inwardly therefrom; a shaft journaled in said bushing and extending out of said casing; a cup shaped cam fixed upon said shaft and journaled upon the outer surface of



said bushing; dwells upon said cam extending axially of said shaft; spring means urging said operating lever into operating engagement with said cam; and a hermetic seal for said shaft, comprising a sleeve of resilient material encompassing the shaft within the bushing and bonded to the shaft and to the bushing in spaced apart bands.

2,859,314
VARIABLE RESISTORS AND POTENTIOMETERS
Bernard Henry John Quist, Swindon, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Application October 29, 1956, Serial No. 619,876
Claims priority, application Great Britain November 4, 1955
8 Claims. (Cl. 201—55)

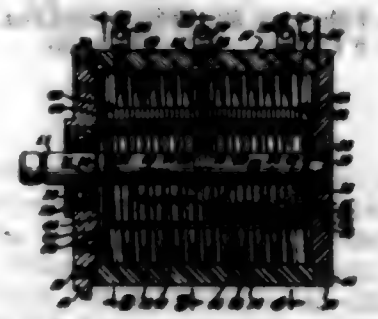


1. A variable resistor including; a body member; a spindle rotatably mounted on said body member; a resilient plate carried by said spindle and constrained to rotate therewith, the plate extending transversely of the spindle; first and second concentric tracks supported by the body member, the tracks being concentrically arranged around the axis of rotation of said spindle; a floating brush member for wiping co-operation with each of the tracks, a member of insulating material which connects the brush member to, and which transmits pressure thereto from, the resilient plate; a stop member on the resilient plate limiting the range of rotation of the spindle; and an abutment on the resilient plate for operating an on and off switch means.

2,859,315
RHEOSTAT
Wilbur A. Journdt, Albuquerque, N. Mex., assignor to the United States of America as represented by the Secretary of the Navy
Original application April 8, 1954, Serial No. 421,991. Divided and this application July 17, 1957, Serial No. 677,174
1 Claim. (Cl. 201—55)

In combination, a shaft, a set of four mutually insulated slip rings mounted subsequently along said shaft and moveable therewith, at least one contact bearing on each slip ring, a like number of contacts symmetrically spaced on and carried by said shaft and diametrically opposite contacts being connected to alternate slip rings, a stationary disc having a substantially flat face at right angles to said shaft, said flat face having a high resistance carbon material coated thereon, said last mentioned contacts bearing against the resistance face of said disc, and arcuate terminals equal in number to said slip rings, said terminals being symmetrically spaced around said stationary disc and electrically connected in diametrically opposite pairs to said resistance material, so that one terminal, one shaft contact, one slip ring and one slip ring contact comprise an independent circuit and any movement of said shaft will introduce an error into each of said circuits.

2,859,316
POTENTIOMETER, MULTIPLE TURN WITH SCREW FED SLIDER
Kenneth R. Miller, Redondo Beach, Calif., assignor to Topp Industries, Inc., Los Angeles, Calif., a corporation of California
Application March 1, 1956, Serial No. 568,852
5 Claims. (Cl. 201—56)

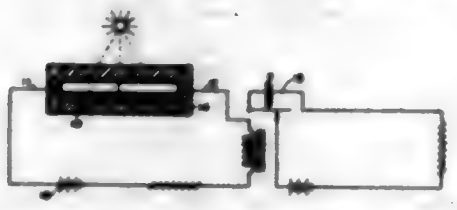


1. In a potentiometer, a case including a cylindrical barrel of insulating material and respective end caps; a hollow multiple turn complex helical resistance coil mounted to the inner wall of said barrel and defining peripherally a cylindrical open space within said case; a slider unit including a carriage, a contact, and a spring arm mounting said contact on said carriage for light yielding engagement of said contact against said resistance coil; an actuator shaft at the axis of said coil journalled in the respective end caps and projecting through and externally of one of them; a slip ring mounted in one of said end caps; a transmission bracket of rectangular yoke form, including parallel side arms mounted on said shaft at right angles thereto and adjacent to the respective end caps, and a web integral with and joining said side arms and extending parallel to said shaft on one side thereof; a mounting block of insulating material mounted on the inner side of said web; a contact brush mounted on said block and electrically connected to said slider spring arm, said brush being of bifurcated form including spring arms straddling the adjacent side arm of said bracket and both engaging said slip ring resiliently and yieldingly; a lead screw journalled on said side arms, eccentric and parallel to said shaft on the opposite side thereof from said web, said shaft being secured to said bracket for transmitting rotation thereto, whereby to swing said lead screw in an orbital path around said coil axis; positive drive means operating between said case and lead screw to effect rotation of said lead screw in said bracket as the result of said orbital movement; said carriage embodying follower nut means meshing with said lead screw to effect axial travel of said carriage; the ratio of lead screw pitch to coil pitch being related to the gear ratio of said drive means so as to translate the combination of orbital movement and axial travel of said carriage into movement of said contact in a helical path following the turns of said resistance coil.

second layers over substantially the entire area of the facing surfaces of said layers; and electric heating means

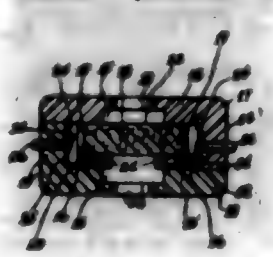
material; and means for urging said tip portion under pressure against said envelope whereby said envelope is

2,859,317
PHOTODETECTORS
Sidney H. Hersh, Washington, D. C.
Application August 26, 1955, Serial No. 530,917
6 Claims. (Cl. 201—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)



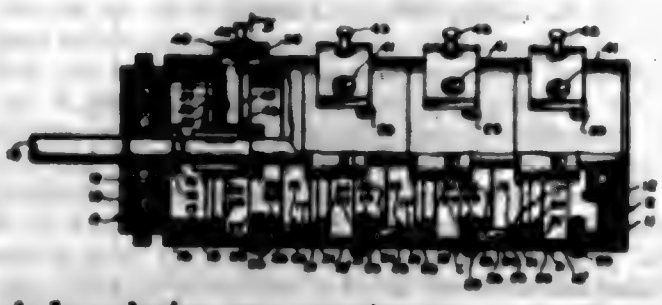
1. A photodetector comprising a substantially non-photosensitive crystalline element, a pair of spaced electrodes on the element, a photosensitive fracture through an entire cross section of the element lying between the electrodes, and means maintaining the faces of the fracture in affronting relation.

2,859,318
ELECTRICAL HUMIDITY-SENSING UNIT
Carlton E. Ohlheiser, Silver Spring, Md., assignor to American Instrument Company, Inc., Silver Spring, Md.
Application February 20, 1956, Serial No. 566,453
9 Claims. (Cl. 201—63)



1. An electrical humidity sensing unit of the resistance type comprising a housing of insulating material formed with opposing parallel internal grooves and being apertured between said grooves, respective conductive spring members disposed in said grooves, respective terminal conductors connected to said spring members and extending outside the housing, and a body of humidity-sensitive resistance material slidably disposed in said housing and being clampingly and conductively engaged at its opposite margins by said spring members.

2,859,319
PHASING SECTIONAL GANG POTENTIOMETER
Fred H. Kurz, Burbank, Calif., assignor to Topp Industries, Inc., Los Angeles, Calif., a corporation of California
Application May 3, 1956, Serial No. 582,373
6 Claims. (Cl. 201—63)

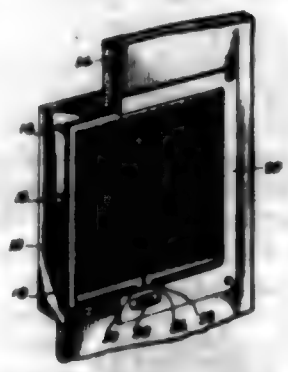


1. In a phasing gang potentiometer: a plurality of annular casing sections, arranged end-to-end, certain of said sections each including a skirt at one end defining a counterbore, an intermediate neck of smaller diameter at the other end, rotatably fitted within the skirt of an adjoining section, and a circumferential array of circumferentially separated flexible coupling jaws formed integrally with and projecting axially from the neck and terminating in radially outwardly projecting lips, the adjoining skirts having internal annular grooves positioned to receive said lips; expansible split actuator rings disposed within the respective arrays of coupling jaws; and actuator means acting between the respective actuator rings and the respective casing sections for expanding said actuator rings to deflect said jaws outwardly to cause said lips to enter said grooves and thereby couple said sections together and lock them in any selected arrangement of phasing adjustment relative to one another.

2,859,320
VARIABLE RESISTANCE APPARATUS FOR MEASURING FLUID TEMPERATURES
Roger A. Severns, Mount Prospect, Ill., assignor to The Powers Regulator Company, Skokie, Ill., a corporation of Illinois
Application July 26, 1956, Serial No. 600,280
4 Claims. (Cl. 201—63)

1. A thermally responsive, variable resistance assembly for use in apparatus for measuring fluid temperatures, comprising a plurality of hollow, elongated members formed of thermally and electrically conducting material, means formed of electrically conductive material for clamping said elongated members in axial alignment, with adjacent ends in juxtaposed relation to form an aligned row of said members, said means being disposed in electrical contact with one end of said row of said members and being insulated electrically from the other end of said row of said members, means for making separate electrical connection with said other end and with said clamping means, and a thermistor disposed between and in electrical contact with said juxtaposed ends of said elongated members.

2,859,321
ELECTRIC RESISTANCE HEATER
Alexander Garaway, Los Angeles, Calif.
Application July 11, 1955, Serial No. 521,248
6 Claims. (Cl. 201—73)



1. A heating device comprising a metallic base plate, a devitrified ceramic enamel coating applied to said plate, and an electrical resistance circuit applied to said enamel surface.

2,859,322
LAMINATED HEATING STRUCTURE
Frederick P. Glazier, River Vale, and Joseph H. Newman, West Orange, N. J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Application July 19, 1956, Serial No. 598,938
4 Claims. (Cl. 201—73)

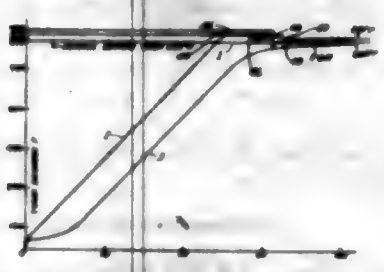
1. A rigid laminated heating structure comprising a first fiber-reinforced rigid plastic layer; a second fiber-reinforced rigid plastic layer; a third layer of rigid foam plastic disposed between and bonded to said first and

ing collar, a transverse bar extending across said collar, with a non-turbulent flow stream of a gas that is ch

second layers over substantially the entire area of the facing surfaces of said layers; and electric heating means

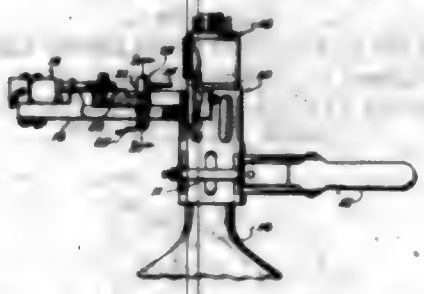
carried by said structure on one side of said foam plastic layer.

2,859,323
DIFFERENTIAL TEMPERATURE MEASUREMENT ON BILLETS
Bruce E. McArthur, Canfield, and Vernon R. Pieron, Youngstown, Ohio, assignors to Magnethermic Corporation, Youngstown, Ohio, a corporation of Ohio
Application October 29, 1956, Serial No. 618,783
9 Claims. (Cl. 219—10.41)



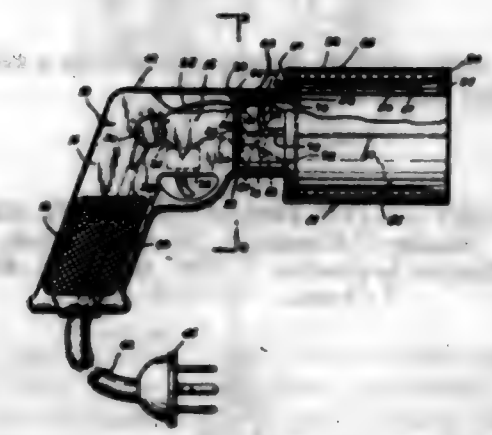
1. The method of heating a billet by induction to substantially uniform temperature throughout its cross section, said method comprising, by induction, intermittently creating and controlling successive increments of heat in the surface stratum of the billet so as to maintain the surface stratum within a safe surface temperature range above the desired average temperature of the billet until the center temperature of the billet has increased to a predetermined temperature below the desired average temperature, and then, by induction, intermittently creating and differently controlling successive increments of heat in the surface stratum so as to maintain the surface at a lower temperature than said safe surface temperature but above said desired average temperature at least until the temperature at the center is substantially the desired average temperature, whereby the billet is heated to the average temperature required uniformly throughout its cross section.

2,859,324
ELECTRON-DISCHARGE DEVICE PROCESSING APPARATUS
Franklin R. Beiott and Frederick O. Manske, Chicago, Ill., assignors to The Raytheon Corporation, a corporation of Illinois
Application December 27, 1957, Serial No. 705,570
4 Claims. (Cl. 219—19)



1. Apparatus for relieving the vacuum in an evacuated envelope of vitrous material such as employed in the construction of cathode-ray tubes and other electron discharge devices comprising: a self-supporting electrically conductive element having a restricted area tip portion adapted to contact said envelope; means for passing electric current through said element to raise its temperature above the fusing temperature of such vitrous material; and means for urging said tip portion under pressure against said envelope whereby said envelope is locally softened at the area of contact with said tip portion, and with continued urging of said tip portion against said contact area, said envelope is pierced by said tip portion to provide gradual access for air from the surrounding atmosphere to the interior of such envelope.

2,859,325
ELECTRICAL ICE CREAM DISPENSING GUN DEVICE
Lawrence N. Lee, Bronx, N. Y.
Application April 1, 1957, Serial No. 649,774
2 Claims. (Cl. 219—21)



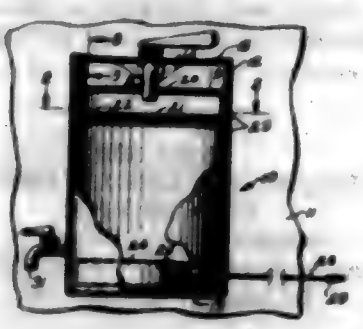
1. An electrically heated dipper for a frozen food comprising an insulating body portion including a casing, a handle on the casing, and a sleeve, a receiver including an insulating hollow cylindrical body open at one end to receive said food, an insulating axial extension on the other end of the body removably engageable in said sleeve, and an electrical heating element in the wall of the body, means for interlockingly engaging the sleeve and extension, contact means on the sleeve and extension respectively engaging in the interlocked portions of the sleeve and extension, an electrical connection between the contact means of the extension and said heating element, and an electrical connection between the contact means of the sleeve and a source of electricity, the contact means of the sleeve and extension comprising concentric, electrically conductive rings, said means for interlocking the sleeve and extension shifting into locking and unlocking positions responsive to relative rotation of the sleeve and extension in respectively opposite directions, said interlocking means comprising diametrically opposed lugs on the extension, and locking slots formed in the sleeve, said slots including longitudinal entrance portions, circumferentially extending cam portions disposed obliquely to a plane normal to the axis of a sleeve and extension, and locking portions lying in said plane.

2,859,326
ELECTRIC PORTABLE HOT WATER HEATER
John Fisher, Jr., Milwaukee, Wis.
Application October 30, 1957, Serial No. 693,423
3 Claims. (Cl. 219—38)

1. An electric portable hot water heater comprising, in combination, a cylindrical container having a closed bottom and an open top, a closure wall closing said open top of said container spaced inwardly from the upper terminal portion thereof, a cut out opening in said closure wall for receiving the spout of a cold water faucet, a water control member spaced beneath said closure wall, a heater unit carried within the bottom of said container, and a discharge faucet in communication with the bottom of said container, said upper terminal portion of said container defining an upwardly extending and upwardly open-

was mounted upon the base, a head slidably mounted within said frame and depending therefrom, a multi-

ing collar, a transverse bar extending across said collar for supporting said container upon a cold water faucet,



and said water control member comprising a substantially flat circular perforated plate.

2,859,327
DEVICE FOR PRODUCING HOT AIR
Stanley J. Kaminsky, Norwood, Mass.
Application September 3, 1957, Serial No. 681,787
8 Claims. (Cl. 219—39)

1. A hot air heating device comprising an elongated electrical heating unit surrounded by two concentric spaced cylinders with the annular space therebetween closed at one end, means for supplying air to the space between said cylinders at the other end thereof, said inner cylinder having a plurality of apertures therethrough so arranged that air is continually flowing between said cylinders toward the said closed end thereof to cool the exterior cylinder and air is continually flowing through said apertures to reach and flow over and along the said heating unit in increasing volume on its way to the discharge end of said cylinders.

2,859,328
GAS SHIELDED ARC WELDING
James S. Sohn, Succasunna, N. J., assignor to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York
Application April 29, 1954, Serial No. 426,397
5 Claims. (Cl. 219—74)

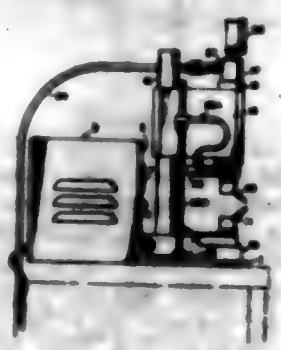
1. A method of gas shielded arc welding which comprises establishing and maintaining an electric welding arc between an electrode and a workpiece, surrounding said arc with a shielding gas stream comprising essentially inert monatomic gas projected as a non-turbulent flow stream, and confining said arc surrounding stream with a non-turbulent flow stream of a gas that is substantially non-reactive with the molten weld metal and

which has a greater density than the inert gas in said arc surrounding stream.

2,859,329
GAS SHIELDED ARC WELDING
Alexander Lesnewich, New Providence, N. J., assignor to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York
Application April 29, 1954, Serial No. 426,398
17 Claims. (Cl. 219—74)

1. A method of gas shielded arc welding which comprises establishing and maintaining an electric welding arc between an electrode and a workpiece, surrounding said arc with an inner shielding gas stream comprising essentially inert monatomic gas and incapable in itself of adequately shielding the terminal portion of said electrode, said arc, and the molten weld metal produced by said arc, and confining said arc surrounding stream with an outer shielding gas stream comprising essentially carbon dioxide projected from a converging nozzle concentrically surrounding said inner shielding gas stream at a point downstream of the discharge orifice of the nozzle projecting said inner shielding gas stream.

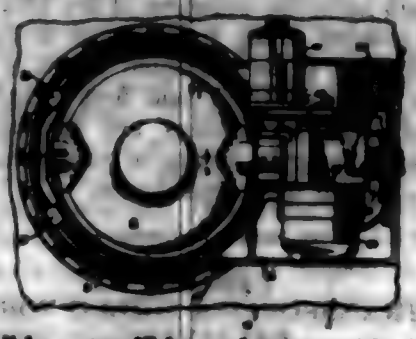
2,859,330
AIR-OPERATED SPOT WELDING DEVICE
Robert G. White, Portland, Oreg.
Application May 28, 1957, Serial No. 662,135
4 Claims. (Cl. 219—89)



1. An electric spot welder and control unit therefor, said spot welder comprising a first base, a vertical col-

tion mounted upon the base, a head slidably mounted upon the column, means carried by the head for locking the head in vertically adjusted positions relative to the column, vertically disposed fluid pressure-responsive means carried by the head, a movable welding electrode provided at the bottom end of the pressure-responsive means, a stabilizing shaft slidable within the head, paralleling the pressure-responsive means and connected thereto at one of its ends, a fixed welding electrode carried by the base and electrically insulated therefrom, said control unit comprising a second base remote from the first, a switch carried by the second base and in circuit with a source of electrical energy and with both of said electrodes, a foot lever pivotally attached to the second base for up and down movement in a vertical plane and adapted on initial downward movement to close said switch and the circuit to said electrodes, a fluid pressure control valve having an inlet side and outlet side carried by the second base and in communication at its inlet side with a source of fluid pressure and at its outlet side with control means carried by the base in communication with the pressure-responsive means and operable by continued downward movement of said foot lever for gradually releasing increasing degrees of pressure from said source to said pressure-responsive means.

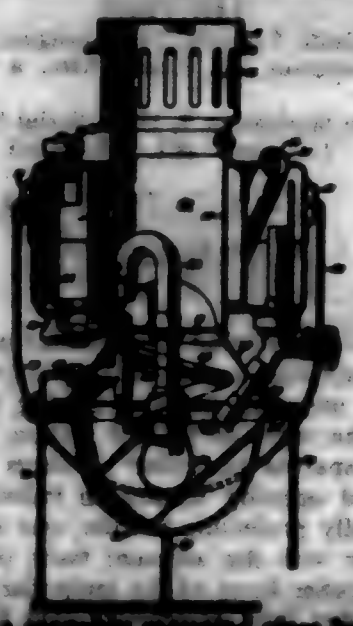
2,859,361
DIRIGIBLE EXTENDIBLE AND RETRACTABLE AIRCRAFT LANDING LIGHT
Warren C. Gotsen, Upham, Ohio
Continuation of application Serial No. 262,698, November 19, 1962. This application November 19, 1956, Serial No. 622,326
9 Claims. (Cl. 240—7.7)



1. A dirigible extendible and retractable landing light for aircraft, comprising in combination, a lamp supporting base mounted adjacent an opening in a surface of the aircraft, a lamp support pivotally mounted on said base, a lamp housing carried by said support for movement into and out of the opening in the aircraft surface and, when in retracted position, closing such opening and being in substantially flush relation with the outer surface of the aircraft, a shaft fixed to said lamp housing and rotatably mounted in said lamp support, first electric motor means drivingly connected to said shaft for rotation of the latter, means for selectively energizing said motor means to rotate said shaft and lamp housing, means in electrical association with said motor means for automatically deenergizing said motor means when said lamp housing is fully retracted into the opening in the aircraft, and second electric motor means for selectively extending and retracting said lamp housing, and means for limiting the travel of said lamp housing in either extending or retracting direction.

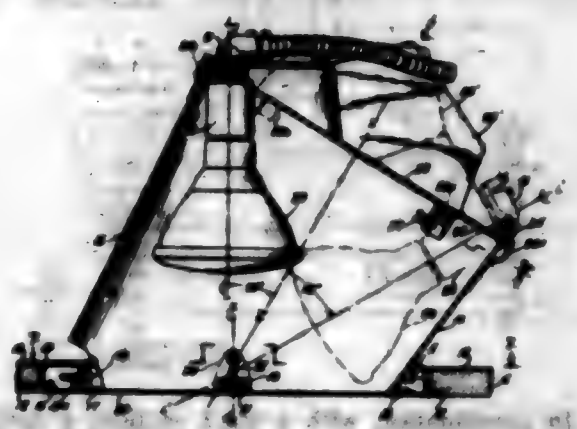
2,859,332
INVERTED LANTERN
Wilbur J. Townsend and Anthony M. Castello, Wichita, Kans., assignors to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Application June 26, 1954, Serial No. 439,313
5 Claims. (Cl. 240—99)

4. An inverted lantern, adapted to burn liquid fuel, comprising a frame, a mixing tube having an open inlet within said frame and depending therefrom, a multi-equipped burner communicating with the lower end of said mixing tube, a generally helical vaporizing coil about said mixing tube and above said burner and containing steel wool disposed uniformly throughout, means for supplying fuel at a predetermined limited pressure to said



vaporizing coil, a normally expanded glass bulb supported from said frame above said burner and mantle, an air chamber communicating with the open inlet of said mixing tube, means for discharging fuel from said vaporizing coil into said air chamber, and a separate conduit leading from a source of fuel for injecting atomized fuel into said mixing tube above said air chamber.

2,859,336
LIGHTING FIXTURES
David Burlen, Huntington, and Edward Bernbach, Harrison, N. Y., assignors to Bernbach Decorating Company, New York, N. Y., a corporation of New York
Application March 7, 1956, Serial No. 570,161
2 Claims. (Cl. 240—78)



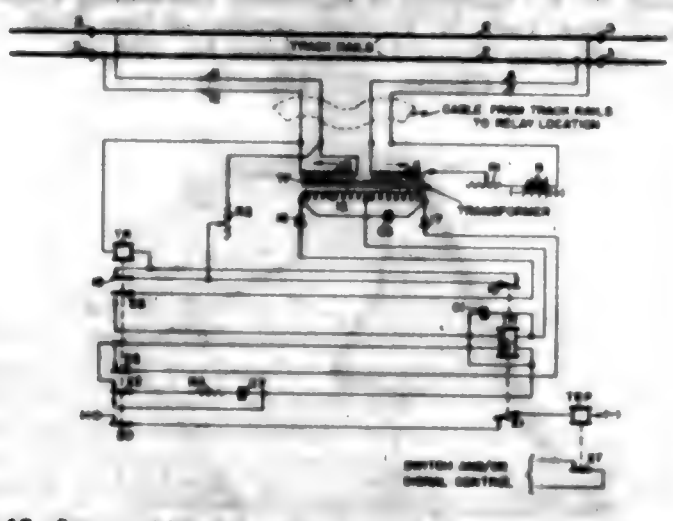
1. A lighting fixture comprising a fixed horizontal supporting ring, an oblique tubular lamp box having a bottom horizontal closure plate with a central aperture and side walls extending up through the ring, means to secure the lamp box to the ring for turning about a vertical axis, an obliquely disposed top plate secured to the lamp box for rotation about an axis extending obliquely upward from a point near the center of the ring, and a projector type lamp bulb carried by the top plate for movement therewith and having the axis thereof disposed at an angle to the axis of rotation of the upper plate equal to the inclination of said axis of rotation of the upper plate whereby the lamp axis, upon turning of the upper plate, may be shifted through a conical path and between angles to the axis from zero to twice the angle of slope of the axis of rotation of the upper plate, and the light beam projected through said aperture at various angles of

tilt and whereby, upon turning of the lamp box about in the ring, the light beam may be projected in various azimuthal directions.

2,859,334
LOUVERS
Frederick E. Guth, Clayton, Mo., assignor to The Edwin F. Guth Company, St. Louis, Mo., a corporation of Missouri
Application September 9, 1954, Serial No. 454,998
1 Claim. (Cl. 240—106)

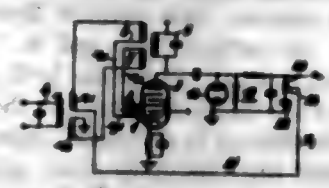
A light diffuser adapted to be mounted beneath ceiling lamps comprising an egg-crate grid formed of translucent plastic material, the grid having generally cubic openings on the order of ¾ inch square, and a series of relatively transparent lenticular elements secured to the grid, each grid opening having an individual lenticular element partially projecting therein, one side of the grid being coplanar with the adjacent faces of the lenticular elements, the other faces of the lenticular elements being shaped to refract light entering at said flat surface in a manner such as to reduce the amount of light incidence against the surfaces of the grid, thereby reducing the brightness of the grid.

2,859,335
TRACK CIRCUIT RESPONSIVE TO VARYING TRAIN SHUNT
Marcian A. Scheg, Rochester, N. Y., assignor to General Railway Signal Company, Rochester, N. Y.
Application September 9, 1954, Serial No. 454,956
13 Claims. (Cl. 246—41)



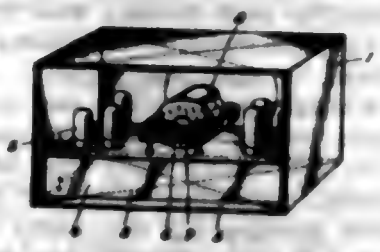
13. In combination with a track section, a source of direct current connected across the track rails at one end of the track section, a track relay connected across the track rails at the other end of the track section and normally energized by the interrail potential, impulse responsive means including an electromagnetic relay and an impulse transformer having two primary windings and a secondary winding, circuit means for connecting said primary windings in opposition with respect to each other and for connecting one of them to be energized dependent upon the interrail potential at the track relay end of the track section and for connecting the other of them to be energized in series with current from said source at the source end of said track section, other circuit means for operatively connecting said electromagnetic relay to said secondary winding, and electroresponsive means jointly controlled in response to the actuation of said track relay and in response to the actuation of said impulse responsive means.

2,859,336
FREQUENCY CONVERSION OF SIGNAL OSCILLATION WITHOUT USE OF AN AUXILIARY LOCAL OSCILLATION
Johannes Meyer Claven, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application October 1, 1952, Serial No. 312,578
Claims priority, application Netherlands October 22, 1951
2 Claims. (Cl. 250—20)



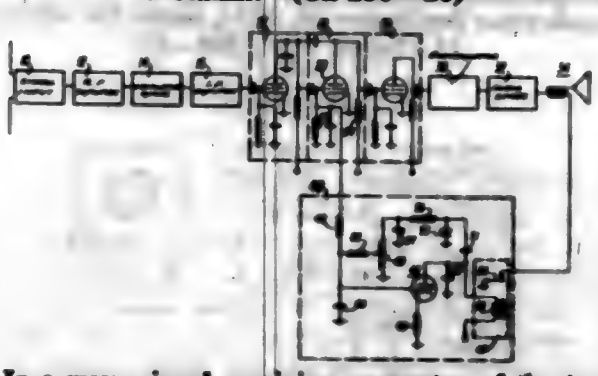
1. A circuit arrangement for amplifying electrical oscillations in a first frequency range by means of a self-oscillating circuit, comprising an electron discharge device having two control grids and an output electrode, means connected to bias said control grids above cut-off, a first inductance connected to receive said electrical oscillations, second and third inductances coupled inductively to said first inductance, bias voltage means connected to one end of each of said second and third inductances, an output resonant circuit comprising a fourth inductance connected to said output electrode, a fifth inductance connected between one of said control grids and the remaining end of said second inductance and coupled inductively to said fourth inductance, and a sixth inductance connected between the other of said control grids and the remaining end of said third inductance and coupled inductively to said fourth inductance in a sense opposite to said inductive coupling of the fifth inductance, said output resonant circuit being tuned to the frequency of local oscillations to be generated within a second frequency range different from said first frequency range, whereby said local oscillations are generated in said second frequency range by means of conversion amplification in said electron discharge device.

2,859,337
POWER TRANSFORMER SHIELD FOR RADIO RECEIVER
Jan Joost Rietveld, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application March 15, 1954, Serial No. 416,055
Claims priority, application Netherlands March 17, 1953
1 Claim. (Cl. 250—20)



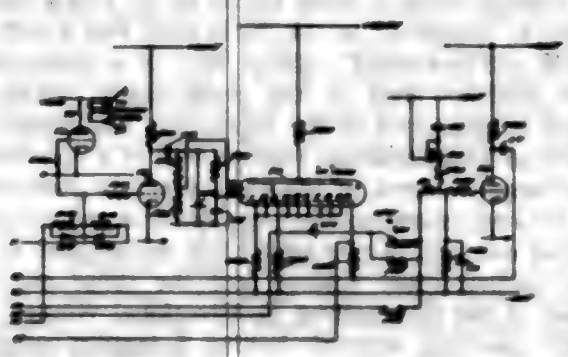
A radio receiver comprising a radio signal processing assembly including an alternating current supply transformer for energizing said signal processing assembly and a frame aerial comprising a plurality of turns of conductive material arranged in a plurality of given planes and structurally united with said assembly and in close proximity thereto, said supply transformer comprising a plurality of windings positioned substantially within said turns and having a common axis and a magnetic shielding member comprising a closed winding of copper tape looped over the windings of said transformer and interposed between the said windings of said transformer and said aerial, said closed winding of tape being arranged with its axis substantially perpendicular to said planes.

2,859,338
SQUELCH SYSTEM FOR FREQUENCY MODULATION RECEIVER
Charles F. Pulsifer, Lombard, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application June 1, 1954, Serial No. 433,555
6 Claims. (Cl. 250—20)

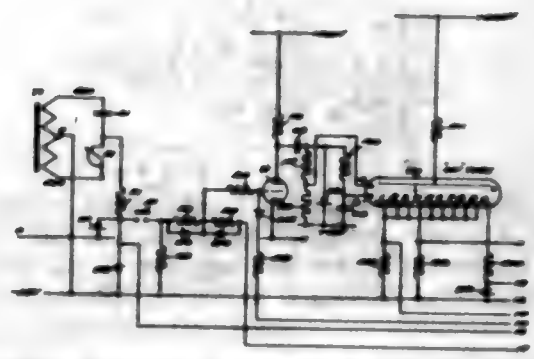


1. In a wave signal receiving apparatus of the type for reception of frequency modulated signals and having a limiter for translating the received signals and removing amplitude variations therefrom, which limiter includes a valve having a grid at which appear noise components and a direct current potential related to the strength of a desired signal, the squelch circuit including in combination, a second electron valve having input and output electrodes, a circuit connecting the grid of the limiter valve to said input electrode of said second valve and providing a direct current connection therebetween for applying the noise components and the direct current potential from the limiter valve to said input electrode of said second valve with the direct current potential providing a first bias for said valve, filter means coupled to said output electrode of said second valve for selecting noise components amplified therein, and rectifier means connected between said filter means and said input electrode of said second valve to provide a second bias therefor of opposite polarity to said first bias and which varies with the amplitude of said noise components, said second electron valve being rendered conductive when said first bias has a predetermined value with respect to said second bias and being rendered non-conductive when said first bias has a lesser value with respect to said second bias, with the conductivity thereof indicating the reception of a desired signal.

2,859,339
CONTROL SYSTEMS FOR RESISTANCE WELDING APPARATUS
Thomas William Brady, Rugby, England, assignor to The British Thomson-Houston Company Limited, a British company
Application April 28, 1953, Serial No. 349,901
Claims priority, application Great Britain May 6, 1952
8 Claims. (Cl. 250—27)

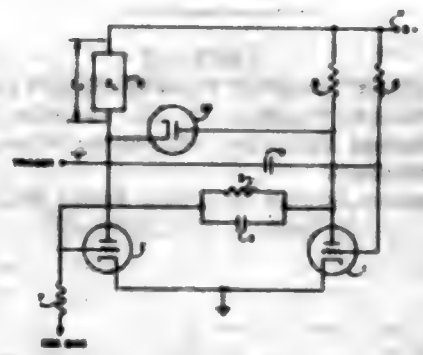


1. An apparatus comprising, in combination, an alternating current supply circuit, a load circuit energizable with current from said supply circuit, control means for controlling the current fed from said supply circuit to said load circuit, a pair of multicathode gas-filled glow discharge tubes, means for deriving electrical impulses from said supply circuit and means for feeding alternate groups of said impulses to a respective one



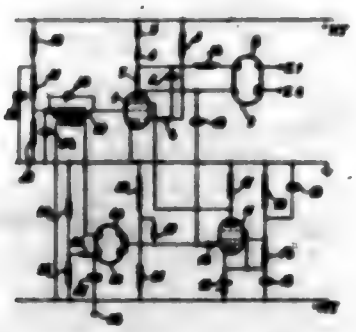
of said pair of multicathode gas-filled glow discharge tubes, the groups counted by one of said tubes rendering said control means operative to allow current from the supply circuit to flow in the load circuit and the groups counted by the other of said tubes determining the duration between the groups counted by said one of said tubes.

2,859,340
MONOSTABLE MULTIVIBRATOR CIRCUIT FOR VARIABLE LOAD IMPEDANCES
Richard M. Dunham, Newton Center, and Carl A. Segerstrom, Winchester, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 2, 1953, Serial No. 389,906
4 Claims. (Cl. 250—27)



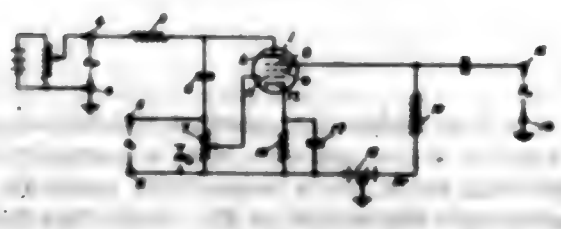
1. In a monostable plate-coupled multivibrator of the type wherein a first electron tube is normally held in a conducting status and a second tube is normally held in a non-conducting status, an RC circuit interconnecting the plate of said first tube and the control grid of said second tube, a diode having its cathode electrically connected to the anode of said second tube and its anode electrically connected to the anode of said first tube, voltage dropping means interconnecting said diode anode and a positive potential source, said diode being adapted to be rendered conducting in response to the institution of conduction in said second tube for establishing with said RC circuit a feedback path between the anode and control grid of said second tube, said feedback path providing current regulation for said second tube, whereby a constant output voltage is maintained across a load impedance connected in the plate circuit of said last-mentioned tube.

2,859,341
SAWTOOTH VOLTAGE GENERATOR
Michael Norton Grenier Goldsmith, Newport Pagnell, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application August 24, 1954, Serial No. 451,734
Claims priority, application Great Britain August 25, 1953
3 Claims. (Cl. 250—37)



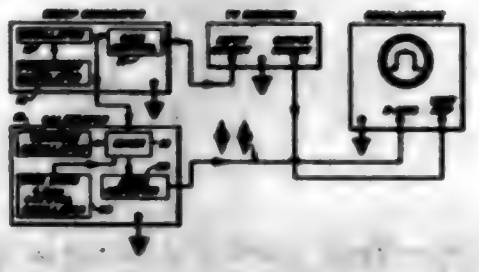
1. A circuit for producing a sawtooth voltage comprising a first electron discharge device having an anode, a cathode, a control grid and a suppressor grid, a source of operating voltage, a load impedance connected between said anode and said source, a source of direct control voltage, means for applying said control voltage to the anode of said first electron discharge device comprising a diode and an impedance means connected in series between said control voltage source and said anode, integrating means connected in the control grid-anode circuit of said first electron discharge device, a second electron discharge device having an anode, a cathode and a control grid, input circuit means connected to the control grid of said second electron discharge device, means for connecting the suppressor grid of said first electron discharge device to the anode of said second electron discharge device, means for connecting the anode of said first electron discharge device to the control grid of said second electron discharge device and means for deriving an output voltage from the anode circuit of said second electron discharge device.

2,859,342
ELECTRONIC PHASE SHIFTER
Victor A. Misek, Nashua, N. H., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application August 24, 1954, Serial No. 451,919
5 Claims. (Cl. 250—37)



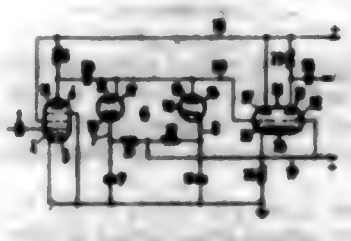
1. An electronic phase-shifting network comprising a thermionic vacuum tube having a plate, a cathode, and at least a control grid and a screen grid interposed in the electron discharge path between said cathode and said plate, a source of alternating voltage connected to said plate and to said control grid, means for applying said alternating voltage to said plate and simultaneously applying a portion of said voltage to said control grid, an output circuit connected to said screen whereby current flows in said screen grid and said output circuit connected thereto, and means adapted to control the effect of said alternating voltage on the flow of screen grid current in said output circuit whereby an output voltage of controlled phase and amplitude is obtained.

2,859,343
METHOD AND APPARATUS FOR TESTING ELECTRONIC CIRCUITS AND COMPONENTS
Robert C. Langford, Elizabeth, and Frederick W. Sippach, Jr., Millburn, N. J., assignors, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey
Application September 20, 1954, Serial No. 457,014
15 Claims. (Cl. 250—37)



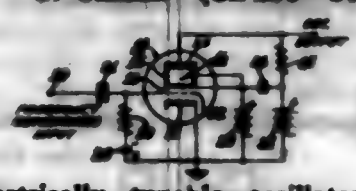
1. In apparatus for testing electronic circuits, in combination, a sweep generator, an oscillator, a marker signal generator comprising a non-linear signal mixer network receiving signals from said generator and said oscillator and producing output signals whose frequencies are the difference frequencies between said two input signals, said sweep generator signal being frequency modulated at a predetermined rate, and the oscillator signal having a known, fixed frequency within the range of the sweep generator signal, and means demodulating the output signals of the mixer network to produce corresponding signals having a selected polarity.

2,859,344
ELECTRICAL PULSE SLICING CIRCUIT
Ronald Charles Imm, Ruislip Manor, England, assignor to The General Electric Company Limited, London, England
Original application June 4, 1952, Serial No. 291,765, now Patent No. 2,802,102, dated August 6, 1957. Divided and this application March 28, 1957, Serial No. 647,389
5 Claims. (Cl. 250—37)



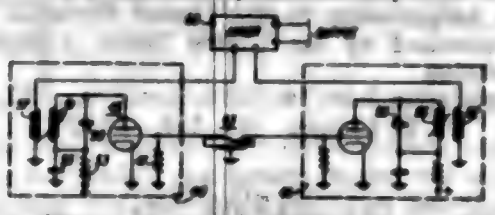
1. An electrical pulse slicing arrangement comprising a voltage slicer, an input path over which is supplied to the voltage slicer a pulse signal to be sliced, first means which is connected to the input path and which supplies a first unidirectional voltage that is a measure of the most positive level of the pulse signal, second means which is connected to the input path and which supplies a second unidirectional voltage that is a measure of the most negative level of the pulse signal, a potential dividing network connected between the first and second means so that one end of the network is maintained at the said first unidirectional voltage and the other end is maintained at the said second unidirectional voltage, said potential dividing network having a tapping point, and a connection between the voltage slicer and the said tapping point to maintain said tapping point at a voltage equal to the level at which the voltage slicer operates so that the most positive and most negative levels of the pulse signal supplied to the voltage slicer lie on opposite sides of the said slicing level.

2,859,345
ELECTRICALLY TUNABLE OSCILLATOR
Karl G. Hernqvist, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 12, 1953, Serial No. 341,991
17 Claims. (Cl. 250—36)



1. An electrically tunable oscillator comprising a vacuum tube including a residual amount of gas and having electrode means cooperating to define an ion trapping enclosure, said electrode means including a collector electrode, means to inject high velocity electrons into and thru said enclosure to said collector electrode, a source of low velocity electrons, means to inject said low velocity electrons into said enclosure, and an output circuit devoid of frequency determining elements connected to said collector electrode.

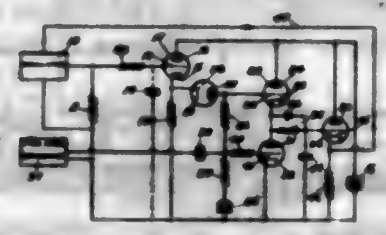
2,859,346
CRYSTAL OSCILLATOR
William L. Firestone, Chicago, Ill., and Thomas L. Lessing, Redwood City, Calif., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application July 28, 1954, Serial No. 446,374
3 Claims. (Cl. 250—36)



1. An oscillator system including in combination, a piezo-electric device including a single crystal supported in shear mode of vibration and having first and second portions, said first and second portions each having an electrode individual thereto and said device having electrode means common to the two portions thereof with said electrodes and said portions forming an assembly with a varied cross-sectional thickness to provide different frequency responses at said individual electrodes of said piezo-electric device, first and second oscillator circuit portions each having an electron discharge device with input and output elements, and a tuned circuit connected to said output elements, said tuned circuits of said first and second oscillator circuit portions being resonant at particular frequencies differing by a selected amount, and means individually connecting said individual electrodes of said first and second portions of said piezo-electric device to said input elements of said discharge devices, said oscillator circuit portions being entirely independent of each other, whereby oscillations of different frequencies controlled by said piezo-electric device are simultaneously produced individually in said oscillator circuit portions, and signal mixing means coupled to said oscillator circuit portions for producing oscillations at the difference frequency between the frequencies of the oscillations in said oscillator circuit portions.

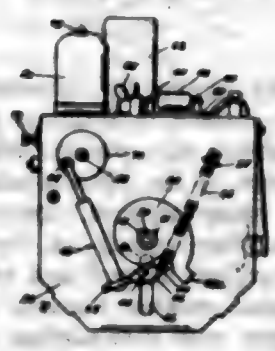
2,859,347
PHASE DISCRIMINATORS
Richard M. Dunham, Wayland, Mass., assignor to Raytheon Manufacturing Company, Newton, Mass., a corporation of Delaware
Continuation of application Serial No. 315,148, October 16, 1952. This application May 16, 1956, Serial No. 585,189
9 Claims. (Cl. 250—36)

1. In a controlled oscillator system, a voltage-sensitive oscillator to be controlled, means to rectify the output of the oscillator, a source of synchronizing pulses, a normally nonconducting cathode follower, means to apply the rectified output of the oscillator to the input of the cathode follower, an electron discharge device having a control grid, said device being arranged to act



as the cathode impedance of the cathode follower, means to couple the synchronizing pulses to the grid of this device, and means to apply the voltage developed across this device to the controlled oscillator in a manner to control its operating frequency.

2,859,348
FREQUENCY SELECTOR
Walter Meyer, Covina, Calif., assignor to Standard Coil Products Co., Inc., Los Angeles, Calif., a corporation of Illinois
Application April 12, 1955, Serial No. 500,816
7 Claims. (Cl. 250—48)

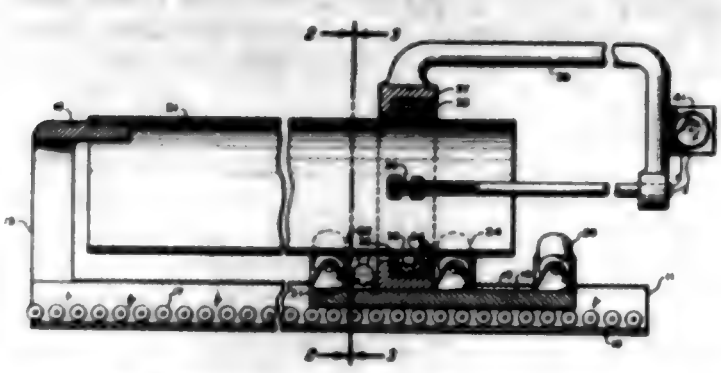


1. A frequency selector comprising a plurality of variable frequency determining elements, a displaceable member suitably coupled with said elements, a tuning shaft, mechanism including a cam secured to said shaft, a vernier tuning shaft, a cam follower coactable with said cam, means secured to said cam follower and connected to said member for displacing said member in correspondence with linear displacement of said cam follower, and linkage means comprising a first portion connected to said vernier shaft, a second portion connected to said cam follower, said first and second portions being slidably coactable whereby angular displacement of said vernier shaft causes predetermined angular displacement of said cam follower affording corresponding displacement of said member effecting vernier tuning of the said elements.

2,859,349
RADIOLOGICAL EXAMINATION OF HOLLOW ARTICLES
Russell G. Bradley and Francis W. Crawford, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Application August 1, 1955, Serial No. 525,521
3 Claims. (Cl. 250—53)

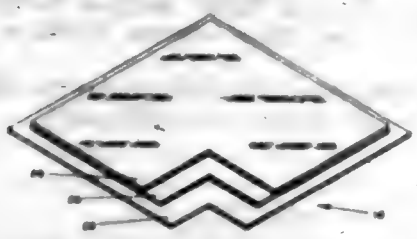
1. Apparatus for determining the characteristics of a hollow cylinder comprising a detector of radiant energy; indicating means connected to said detector; a uniform, annular source of radiant energy completely surrounding said detector, said detector and said source being spaced so that a hollow cylinder passing therebetween will sur-

round said detector and be within said source; and means to provide relative movement of said hollow cylinder and



said source perpendicular to the plane of said source and said detector.

2,859,350
XERORADIOGRAPHY DEVICE
Michael D. Phillips, Columbus, Ohio, assignor, by mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York
Application May 20, 1954, Serial No. 431,132
5 Claims. (Cl. 250—65)

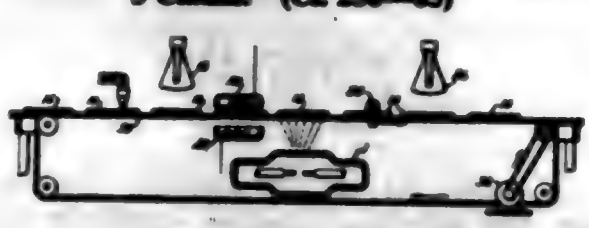


1. An intensifying screen for xeroradiography to be placed with a first surface in intimate physical contact with the charged surface of a photoconductive insulating layer during exposure of the photoconductive insulating layer to an X-ray image pattern, comprising a unitary solid structural member having an insulating surface-layer at said first surface thereof and at least including a layer of high atomic number material spaced no more than 10 microns from said first surface of the intensifying screen.

2,859,351
METHOD OF MAKING PERMANENT FACSIMILE COPIES
Bryce L. Clark, White Bear Lake, and Carl S. Miller, St. Paul, Minn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application October 25, 1954, Serial No. 464,212
4 Claims. (Cl. 250—65)

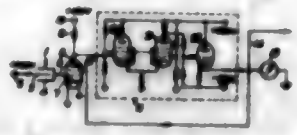
1. The method of making a permanent fascimile copy of a graphic original having graphic representations highly absorptive of infra-red rays on a background relatively non-absorptive of infra-red rays, comprising placing a heat-sensitive copyright-paper, having on a supporting base a visibly opaque heat-transparentizable layer comprising waxy particles fusible to a permanently transparent state and dispersed in a resinous film-forming organic binder infusible at the fusion temperature of said waxy particles, in heat-conductive relationship with said graphic original and then strongly and briefly irradiating the graphic original with infra-red rays, thereby producing at the heat-transparentizable layer a heat pattern corresponding to said graphic representations and of an intensity sufficient to transparentize the corresponding areas of said layer, and without offsetting of fusible material.

2,859,352
ELECTRORADIOGRAPHY
Meyer L. Sugarman, Jr., Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application June 23, 1955, Serial No. 517,476
5 Claims. (Cl. 250—65)



2. A method of electroradiography comprising the steps of: coating at least one side of an object to be electroradiographed with a finely-divided photoconductive material dispersed in an electrically-insulating film-forming vehicle, providing said coating with a blanket electrostatic charge, irradiating the side of said object which is uncoated and opposite said coated side with X-rays whereby the X-ray image of said object which is thereby formed on said coating produces a latent electrostatic image corresponding to said X-ray image, and developing said electrostatic image.

2,859,353
CIRCUITS FOR CURRENT MEASUREMENTS
Raymond John Cox, Wantage, England, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application June 16, 1954, Serial No. 437,210
12 Claims. (Cl. 250—83.1)



1. A circuit arrangement for the measurement on a logarithmic scale of current flowing in a high impedance comprising a thermionic valve having at least a cathode, a control grid and an anode, a high potential source, means for connecting the high impedance between the said source and the control grid whereby the current to be measured flows through the grid/cathode space of the valve, a feed-back loop between the anode and one other electrode tending to stabilise the anode current and means dependent on the voltage in said loop for indicating the value of the grid current.

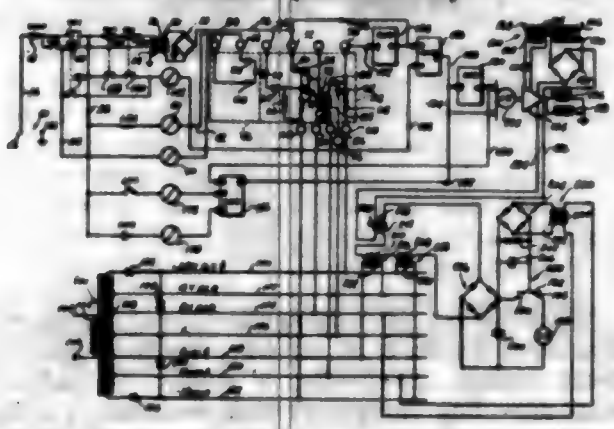
2,859,354
RADIATION METER DEVICE
Hans E. Hollmann, Oxnard, Calif.
Application November 12, 1953, Serial No. 391,773
9 Claims. (Cl. 250—83.6)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A radiation meter device which comprises a hollow housing formed of electrically nonconductive material and having an enclosed chamber formed therein, a thin layer of metallic material disposed on the inner

rent circuit through a rectifier, comprising: a voltage providing charging current to said capacitor comprising

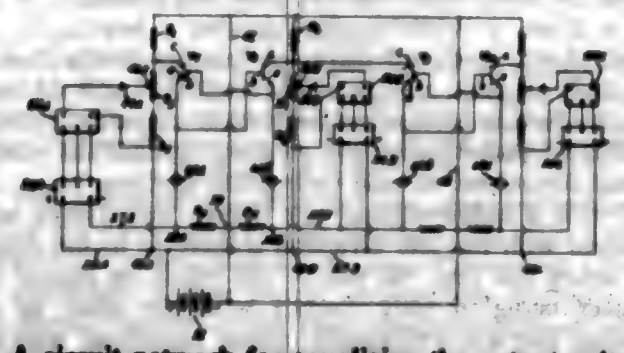
periphery of said housing, said housing being adapted to freely pass radiation, means mounted in said housing for viewing the interior thereof, a first electrode supported within said chamber in fixed relation to said housing, a second electrode movably mounted within said chamber adjacent said first electrode, an electret movably disposed within said chamber whereby said electret may be selectively actuated to create an electric potential between said electrodes, and means for shielding said electret prior to selective actuation thereof from the radiation passing through said housing.

2,859,355
POWER PRESS CONTROL CIRCUIT
Francis E. Helberger, Elmhurst, Ill., assignor to Dunly Machine Specialties, Inc., Chicago, Ill., a corporation of Illinois
Application July 31, 1957, Serial No. 675,329
9 Claims. (Cl. 307—43)



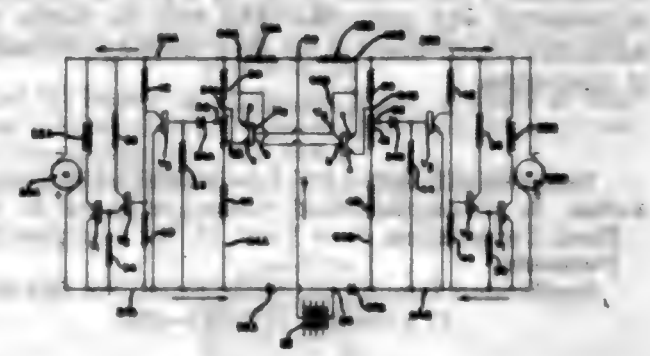
5. A monitoring circuit for a power supply which may fail thereby to produce a decrease in any one of a number of supplied voltages and which may fail thereby to produce an increase in another supplied voltage including in combination a transistor having a base and an emitter and a collector, means for developing a first bias potential from said number of supplied voltages, means for applying said first bias potential to said emitter to bias the emitter positively with respect to said base, means for developing a second bias potential from said other supplied potential, and means for applying said second bias potential to said collector to bias the collector negatively with respect to said base normally to cause a current flow in the transistor emitter circuit, the arrangement being such that said emitter current drops below a predetermined level when said power supply fails thereby either to cause a decrease in one of said number of supplied voltages or to cause an increase in said other supplied voltages.

2,859,356
TRANSISTOR CONTROL CIRCUIT FOR PARALLEL GENERATORS
Charles W. King, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 23, 1956, Serial No. 586,742
15 Claims. (Cl. 307—57)



1. A circuit network for equalizing the output voltages of a pair of variable speed alternators, each having an energizing field and each connected for parallel operation to a direct current circuit through a rectifier, comprising; a voltage regulator means for each alternator including a voltage sensitive diode connected in circuit with the rectifier and field of the alternator which the regulator is to control, and means including a transistor connected in circuit with said diode and the rectifiers of both alternators for increasing and decreasing the voltage drop across said diode in response to a predetermined output difference of said alternators.

2,859,357
CONTROL CIRCUIT FOR PARALLEL GENERATORS
William H. Schmeling, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 23, 1956, Serial No. 586,743
5 Claims. (Cl. 307—57)



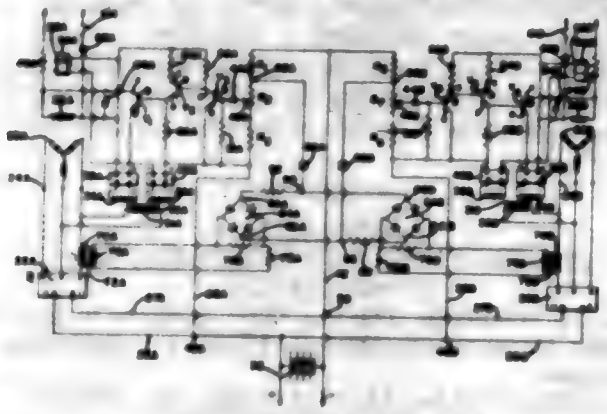
4. A paralleling circuit for first and second direct current generators each having a shunt field winding comprising, first conductor means connecting one side of each of said generators together, second conductor means connecting the opposite sides of said generators together, first and second resistors connected in series with said first conductor means and having a common junction, a load circuit connected between said common junction and said second conductor means, first and second transistors each having base, emitter and collector electrodes, means connecting the emitter electrodes of said first and second transistors respectively with one side of said first and second resistors opposite the junction side thereof, means connecting the base electrode of said first transistor with the side of the second resistor opposite the junction side, means connecting the base electrode of said second transistor with the side of said first resistor opposite the junction side, means connecting the emitter-collector circuits of said transistors in parallel and across said first and second conductor means, a first means connected through an electric circuit with the emitter-collector circuit of said first transistor and with the shunt field winding of said first generator for controlling a current flow through said field winding as a function of emitter-collector circuit conductance of said first transistor, and a second means connected through an electric circuit with the emitter-collector circuit of said second transistor and with the shunt field winding of said second generator for controlling a current flow through said field winding as a function of emitter-collector circuit conductance of said second transistor.

2,859,358
CONTROL CIRCUIT
Charles W. King, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 23, 1956, Serial No. 586,744
11 Claims. (Cl. 307—57)

1. A circuit net work for equalizing the outputs of a pair of variable speed alternators, each having an energizing field winding and each connected having an output circuit connected for parallel operation to a direct cur-

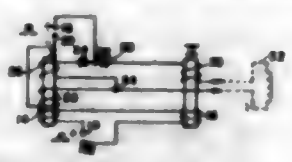
2,859,363
screen, each of said magnets being adapted to provide a

rent circuit through a rectifier, comprising; a voltage regulator means including a voltage sensitive diode connected in circuit with the output of each rectifier and in circuit with a respective field winding which the regulator



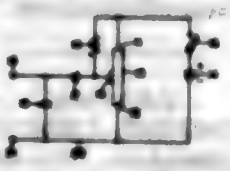
is to control, and means including a pair of rectifiers interconnected with each other and with the diodes of the regulators which control the field windings of said pair of alternators.

2,859,359
MAGNETIC BINARY COUNTING CIRCUIT
Arthur B. Olson, Richfield, Minn., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Application January 31, 1956, Serial No. 562,460
37 Claims. (Cl. 307—88)



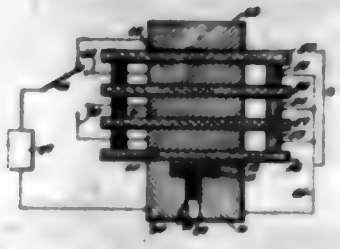
1. In a magnetic core circuit, first and second cores, a circuit including a winding on the first core and a winding on the second core, means for applying a voltage of predetermined amplitude across said circuit, and wherein the winding on the first core has a greater number of turns than the winding on the other core, and the windings are connected in series in the circuit, whereby with both cores initially in such state as to be shiftable into a new remanence state by current through the circuit, the impedance offered to the circuit by both windings will restrict the amount of current flowing to such amount that only the core having the windings of the greater number of turns will be shifted, but when the first mentioned core has shifted the reduced impedance presented to the circuit will increase the current whereby the other core shifts notwithstanding the lesser number of turns of the winding thereon.

2,859,360
WAVE GENERATOR
Jerome J. Suran, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application December 12, 1955, Serial No. 552,641
4 Claims. (Cl. 307—88.5)



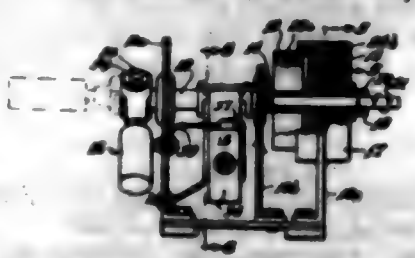
4. In a saw-tooth oscillator, an active multiterminal device having a first, a second and a third electrode, said device exhibiting a negative resistance characteristic over a predetermined potential range across said first and said second electrodes, an electric potential source, a capacitor adapted to be periodically charged from said potential source and discharged through said device, a circuit for providing charging current to said capacitor comprising said capacitor, a semiconductor diode and a resistance coupled in series in the order recited across said potential source, said semiconductor diode being poled in the direction opposed to said charging current and operating in a region of substantially constant current flow while providing said charge current, means coupling said first and second electrodes across the series combination of said semiconductor diode and said capacitor, and means coupling a potential source across said first and third electrodes.

2,859,361
METHOD AND MEANS FOR COLLECTING ELECTRICAL ENERGY OF NUCLEAR REACTIONS
John H. Coleman, Palm Beach, Fla., assignor to Radiation Research Corporation, West Palm Beach, Fla., a corporation of Florida
Application July 5, 1951, Serial No. 235,182
3 Claims. (Cl. 310—3)



1. Apparatus for converting the kinetic energy of the disintegration products of nuclear reactions into useful electrical energy comprising a source of radioactive material providing charged particle emission, a collector electrode disposed adjacent to said source, solid dielectric means for spacing said electrode from said source, a guard member surrounding said electrode and insulated therefrom, means for supporting said source and permitting motion of charged particles emitted by said source toward said electrode, an electrical connection between said guard member and said source, and means for connecting said source and said electrode to a load.

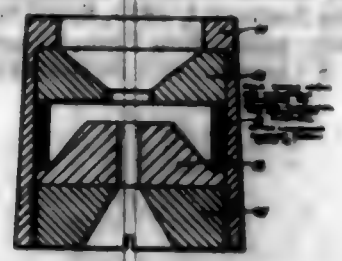
2,859,362
VIBRATORY MOTOR WITH MOTION CONVERSION MECHANISM
Walter P. Nibbick, Middletown, Ohio
Application May 11, 1954, Serial No. 428,900
14 Claims. (Cl. 310—31)



1. A vibration actuated electric motor comprising a frame, a shaft element resiliently but non-rotatably mounted in said frame, said shaft element at one end having an axial bore and carrying non-rotatably at said end a drum, a rotatable shaft having a bearing in said frame at one end and having a bearing in the bore of said shaft element, said rotatable shaft having fixed thereto a cup having an inside substantially cylindrical surface annularly spaced from the external cylindrical surface of said drum, one of said cylindrical surfaces being covered with a unidirectional pile fabric, said fabric being arranged with the pile direction transverse to the axes of said drum and cup, the pile of the fabric on one of said surfaces being in snug contact with the other of said surfaces, and electromagnetic means associated with said shaft element for producing a vibratory oscillation of said shaft element about its axis.

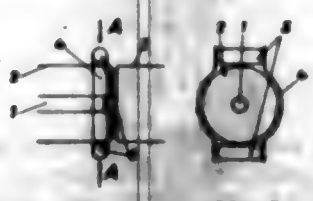
and 1200° C. in an inert atmosphere in contact with bo- said reflector, at least a portion of said envelope being

2,859,363
ELECTRON LENSES
Siegfried Leisegang, Berlin-Zehlendorf, and Otto Wolff, Berlin-Frohnau, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a German corporation
Application September 26, 1954, Serial No. 456,463
Claims priority, application Germany September 24, 1953
7 Claims. (Cl. 313—78)



1. A magnetic electron lens, comprising a magnetic excitation structure having a central opening, a pole-shoe assembly having a shell member disposed in said opening of said structure, a plurality of coaxial and centrally apertured pole shoes mounted in said shell member and mutually spaced in the axial direction, annular spacing means disposed between axially adjacent ones of said pole shoes operative to maintain said adjacent pole shoes spaced by a predetermined fixed amount, said pole shoes being rotationally adjustable relative to each other, and an annular set screw in threaded engagement with said shell member for fixing said pole shoes and spacer means in an adjusted relative position.

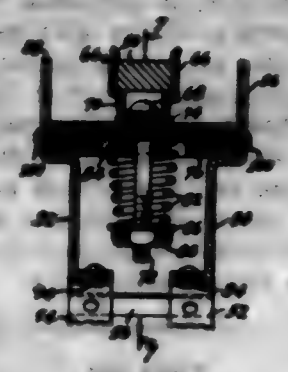
2,859,364
GUN SYSTEM COMPRISING AN ION TRAP
Wolfgang Berthold, Stuttgart-Weil im Dorf, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application May 4, 1956, Serial No. 582,719
Claims priority, application Germany May 26, 1955
4 Claims. (Cl. 313—79)



1. A gun system including a cathode and electron beam forming electrodes, an ion trap in which the electrons of an electron beam are redirected to the tube axis by means of a magnetic field produced by a permanent magnet assembly positioned inside the tube, characterized in that said permanent magnet assembly comprises at least two permanent magnets mounted to produce fields transversely of said beam forming electrodes and further comprising means to position the magnets at said permanent magnet assembly, symmetrically in relation to the electron beam axis.

2,859,365
ELECTRON BEAM CONTROLLING APPARATUS
Albert M. Morrell, East Petersburg, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application September 14, 1954, Serial No. 455,996
4 Claims. (Cl. 313—77)

1. The combination with a color image-reproducing cathode ray tube having a longitudinal axis and a plane of deflection at which electrons are subjected to a scanning deflection in their transit in angularly related paths to a mosaic screen of the type comprising areas of respectively different color characteristics, of a plurality of magnets mounted adjacent to and disposed around said screen, each of said magnets being adapted to provide a magnetic field whose flux lines are generally parallel to

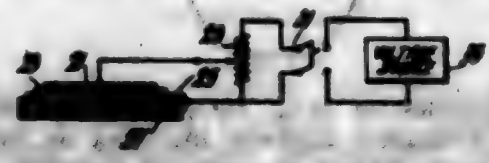


each longitudinal axis of said tube, and pole-forming means located between said magnets and said tube.

2,859,366
SIMPLIFIED CATHODE RAY TUBES AND GUNS THEREFOR
Bertrand W. Squier, Jr., Belmont, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application January 4, 1956, Serial No. 557,498
6 Claims. (Cl. 313—82)

5. An electron gun assembly for a cathode ray device comprising an electrostatic lens disc formed integral with a tubular accelerating electrode, an annular lens ring, insulating means for supporting said lens ring substantially coaxial with said lens disc and extending beyond said lens disc in the desired direction of travel of the electron beam comprising at least one rod of insulating material with its axis parallel to the axis of said lens disc and ring, at least one laterally extending member connecting said lens disc and accelerating electrode to said insulating rod, and an axially extending member connecting said lens ring to said insulating rod.

2,859,367
ELECTROLUMINESCENT DEVICES AND MATERIALS AND METHODS OF PREPARATION THEREOF
Simon Larach, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application August 23, 1955, Serial No. 530,159
10 Claims. (Cl. 313—108)



1. A method for preparing a phosphor comprising reacting an intimate mixture consisting essentially of 100 to 90 mol percent of zinc selenide, up to 10 mol percent of cadmium selenide and about 0.01 to 0.50 weight percent of copper as a salt at a temperature between 800° C.

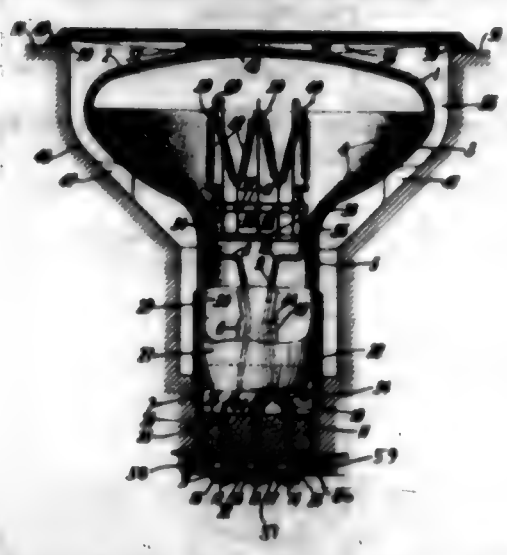
ing the metalized ends of each ceramic ring to the adjacent metal rings, some of said metal rings being end-

out the region occupied by said stream along an interval commencing from a point of maximum electron bunching

and 1200° C. in an inert atmosphere in contact with bromine, said bromine being present as at least one member of the group consisting of elemental bromine, volatile bromides, alkali metal bromides, alkaline earth metal bromides, and bromides of volatile cations.

10. A device comprising a layer of finely-divided electroluminescent phosphor particles consisting essentially of the reaction product formed by the method of claim 1, means for applying an electric field to said layer, and light-transmissive means adjacent one side of said layer for transmitting electroluminescence emission from said layer to a region outside said device.

2,859,368
HEAT LAMP
Orrick H. Biggs, Beverly, and Stuart S. Davis, Lynn, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application October 20, 1951, Serial No. 252,222
9 Claims. (Cl. 313—113)



1. A heat-reflecting incandescent lamp comprising a sealed glass bulb having a portion of its surface in the form of a frustrum of an hyperboloid of revolution having a central opening, a coating of heat-reflecting material on the inner surface thereof, a flat heat-reflector in said central opening, and a series of filaments in front of said flat heat reflector and set in a drum-type pattern around the axis of the hyperbolic reflector, each said filament being substantially offset from the axis of the hyperbola.

2,859,369
INCANDESCENT LIGHT SOURCE
Ford E. Williams and Peter D. Johnson, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York
Application June 15, 1954, Serial No. 436,836
7 Claims. (Cl. 313—113)

1. An incandescent lamp comprising a filament, a transparent evacuable envelope including at least one spherical segment having its center of curvature at said filament, an infrared reflector coating at least a portion of the interior surface of said spherical segment, and a Rayleigh scatterer comprising a thin particulate layer of a substance having irregular surface particles less than 3500 A. U. in dimension coating the interior surface of said reflector, at least a portion of said envelope being uncoated and remaining transparent to permit scattered light to escape from said lamp.

2,859,370
LOW-TENSION SPARKING PLUG FOR INTERNAL COMBUSTION ENGINES
Lucien Pérus, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Application January 2, 1957, Serial No. 632,009
Claims priority, application France January 12, 1956
8 Claims. (Cl. 313—131)

1. In a low tension surface discharged spark plug, a hollow tubular first electrode, a second electrode spaced axially of the first electrode, an insulator core disposed axially in the first electrode and substantially corresponding in diametral dimensions to the bore thereof and extending axially out of one end thereof, the second electrode being adapted to receive the end of the insulator core extending axially from the first electrode, said electrodes having registering slanted, sparking, end surfaces spaced axially of each other and diverging radially of the electrodes in a direction away from the longitudinal axis of the first electrode thereby defining a splayed sparking zone, whereby the insulator maintains the electrodes spaced in a fixed axial relationship.

2,859,371
ELECTRON DISCHARGE DEVICE STRUCTURE
Robert F. Watson, Schenectady, and Newton D. Jones, Scotia, N. Y., assignors to General Electric Company, a corporation of New York
Application April 9, 1954, Serial No. 422,691
8 Claims. (Cl. 313—344)

1. An electrode assembly comprising an insulating tubular member having a metallic layer on the transverse surface at one end thereof, a cathode assembly extending into said tubular member from said one end and including a hollow metallic cathode support sleeve bonded directly to said metallic layer, and an electrode assembly mounted across the other end of said tubular member.

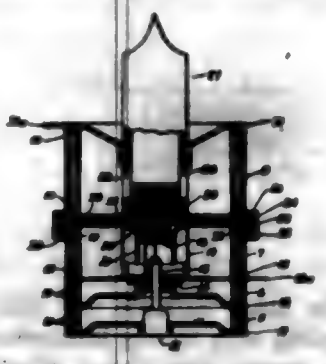
2,859,373
ELECTRON TUBE
Morraine R. Stengl, Mountain View, Calif., assignor to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Application July 10, 1956, Serial No. 597,011
9 Claims. (Cl. 313—230)

1. An electron tube having an envelope comprising a plurality of ceramic rings stacked one above the other and metal rings sandwiched between said ceramic rings, all of said ceramic rings being of substantially equal diameter and metallized on their ends, metallic bonds join-

lytic under bombardment by an electron stream having a

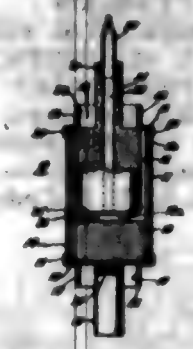
2,859,376

ing the metalized ends of each ceramic ring to the adjacent metal ring, some of said metal rings being sandwiched separately between said ceramic rings, and others of said metal rings being sandwiched in a group, said tube having planar type electrodes comprising a cathode, anode, and grid, said cathode being supported by one of said separate metal rings, said grid being supported by one



of the rings in said group, said group comprising two sealing rings bonded respectively to the ceramic sections adjacent the group, said grid supporting ring being sandwiched between said sealing rings, spacing rings sandwiched between said grid supporting ring and said sealing rings, and a metallic bond joining said sealing rings together in a vacuum-tight seal externally of the tube.

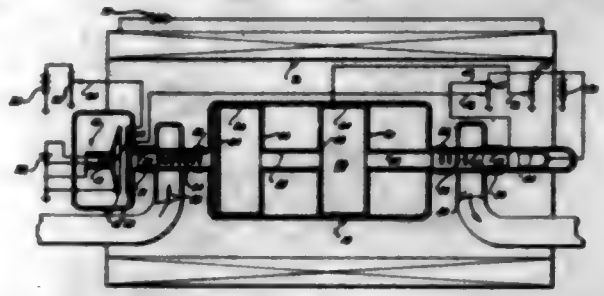
2,839,373
LIGHTNING ARRESTER
William H. Teare, Burnt Hills, N. Y., assignor to General Electric Company, a corporation of New York
Application May 21, 1954, Serial No. 431,366
6 Claims. (Cl. 313—325)



6. A lightning arrester comprising an evacuated hollow sleeve member of refractory insulating material, a first electrode disposed within and spaced from said sleeve member, and a second metallic electrode within said sleeve member contacting the inner surface thereof and spaced from said first electrode a distance considerably less than the width of said first electrode, wherein said electrodes occupy substantially all of the interior of said hollow sleeve member.

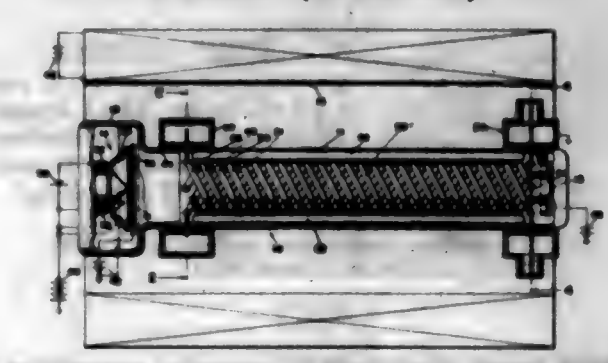
2,839,374
MICROWAVE TUBE
Charles K. Birdsall, Los Angeles, and Donn A. Watkins, Pacific Palisades, Calif., assignors, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Application December 18, 1952, Serial No. 326,632
8 Claims. (Cl. 315—3.6)

1. A space charge wave discharge device comprising means for producing an electron stream, the electrons of said stream having perturbations corresponding to energy within a selected range of frequencies; means for directing said electron stream along a predetermined path whereby said perturbations produce a continual bunching and debunching of the electrons of said stream; first means maintained at a predetermined direct current potential and disposed along a first portion of said path for establishing a predetermined spatial capacitance throughout the region occupied by said stream along an interval commencing from a point of maximum electron bunching and extending in the direction of electron flow to the next succeeding point of minimum electron bunching; and second means effectively isolated from said first means as regards propagation of electro-magnetic waves and maintained also at said predetermined direct current potential and disposed along a second succeeding portion



of said path for establishing a spatial capacitance different from said predetermined spatial capacitance throughout a region occupied by said stream along an interval commencing from a point of minimum electron bunching and extending in the direction of electron flow to the next succeeding point of maximum electron bunching thereby to effect a change in the amplitude of said perturbations of the electrons of said stream.

2,839,375
MULTIFILAR HELIX COUPLING
George R. Brewer, Palos Verdes Estates, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application August 4, 1955, Serial No. 526,377
3 Claims. (Cl. 315—3.6)



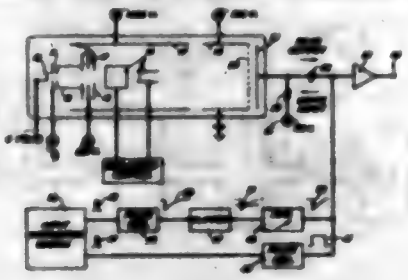
1. A transition apparatus for coupling electromagnetic energy between an N-filar helix and a waveguiding structure, said transition apparatus comprising an N-filar helix wherein N is an integer no less than two and the N helices constituting said N-filar helix are terminated in a common plane normal to the longitudinal axis thereof, N probes extending radially outwards from the respective terminations of each of said N helices constituting said N-filar helix, and a length of waveguide coupled to spaced intervals therealong to respective ones of said N probes and being wound circularly substantially about said helix parallel to said common plane for propagating an electromagnetic wave having a transverse electric field along a path orthogonal to and through a region containing said N probes, the phase difference of said wave along said path between successive probes being $2\pi/N$ radians.

2,839,376
ELECTRON DISCHARGE STORAGE DEVICE
William E. Kirkpatrick, Chatham, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application May 19, 1955, Serial No. 509,534
13 Claims. (Cl. 315—8.5)

1. An electron discharge storage device comprising a target having a dielectric element and a metallic backplate, said dielectric having a current voltage character-

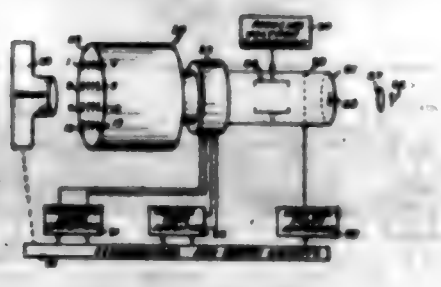
device, the end of each of said delay structures toward a second circuit including a limiter device, a second

istic under bombardment by an electron stream having a maximum absolute value of target current adjacent zero potential, means for projecting a stream of electrons against the surface of said dielectric element, and means for maintaining the target current at said maximum absolute value during charging of said surface by said elec-



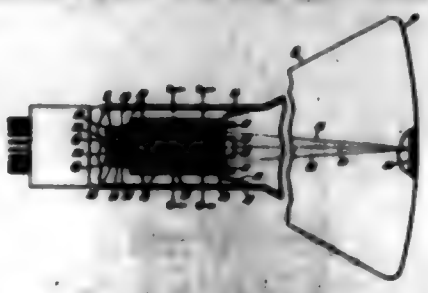
tron stream, said last mentioned means including means for applying a pulse to said backplate having an initially steep front portion and a slowly rising portion, the slope of said rising portion corresponding to the rate of change of charge on said surface of said dielectric element during charging of said surface by said electron stream.

2,859,377
ELECTRONIC HIGH SPEED SHUTTER
John E. Clemens, Xenia, and Ben B. Johnstone, Dayton, Ohio
Application September 21, 1955, Serial No. 535,767
3 Claims. (Cl. 315—10)
(Granted under Title 35, U. S. Code (1952), sec. 266)



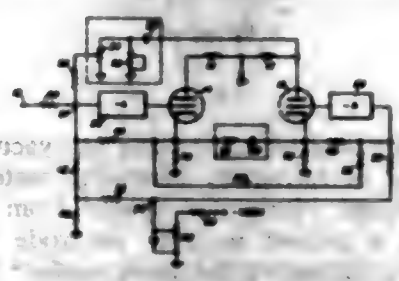
1. High speed photographic apparatus comprising, an elongated evacuated tube having an electron emitting photosensitive cathode at one end thereof and an electron sensitive image reproducing means at the other end thereof, means to cast an optical image of an object to be photographed on said cathode; a mesh grid, electron focusing means, and electron deflecting means positioned between said cathode and said image reproducing means; means to shape and synchronize control voltages, said means comprising, a first source of trigger pulses, a gate to which said trigger pulses are applied, a pulse generator controlled by said gate, means to apply the output of said pulse generator to said grid as a blanking voltage, a plurality of count down circuits connected in tandem with said pulse generator and with each other, each of said circuits having the same count down ratio, a first adder connected to combine the outputs of a first group of said count down circuits, a second adder connected to combine the outputs of a second group of said count down circuits, means to invert the output of said first adder, mixing means to combine the original and the inverted outputs of said first adder, means to apply the output of said mixer to said electron deflecting means as a horizontal drive, means to apply the output of said second adder to said electron deflecting means as a vertical drive, and means controlled by the output of said first and second adder to generate a shut off trigger, said shut off trigger being applied to said gate.

2,859,378
ELECTRODE SYSTEM FOR CATHODE RAY TUBES
Eberhard Gundert, Ulm (Donau), and Gerwig Wilcken, Neu-Ulm-Ludwigsfeld, Germany, assignors to General Electric Company, a corporation of New York
Application May 21, 1956, Serial No. 586,291
17 Claims. (Cl. 315—13)



1. A multiple beam cathode ray tube comprising an envelope, a viewing area having luminescent elements disposed thereon, means directing a plurality of electron beams toward said viewing area, electrostatic lens common to said beams focusing said beams into sharply defined beams, said lens means comprising a plurality of spaced parallel plates mounted transverse to said beams and having apertures therein adapted to provide focusing effects to said beams, beam deflecting means for aligning said beams in co-planar relation and for converging said beams, said deflecting means comprising plates disposed adjacent said beams and energized such as to provide both electrostatic and electromagnetic fields therebetween, said fields deflecting said beams in mutually perpendicular directions.

2,859,379
FEEDBACK NETWORK FOR CORRECTING DISTORTION DUE TO MAGNETIC CHARACTERISTICS OF DEFLECTION YOKES
Wright Ellis, San Diego, Calif.
Application May 16, 1955, Serial No. 508,834
14 Claims. (Cl. 315—27)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A circuit comprising a coil having a magnetic core, means for feeding a fluctuating input energy wave to said coil to produce a magnetic flux which varies in two directions in and about said core, and means for decreasing the relative difference between the rate of change of said flux in both directions and the rate of change of the energy in said coil.

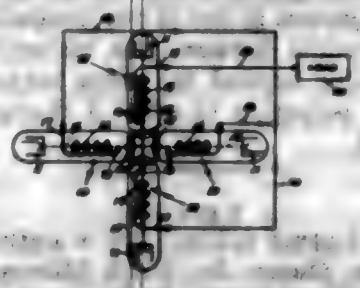
2,859,380
TRAVELING WAVE OSCILLATORS
Edward C. Dench, Needham, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application December 30, 1953, Serial No. 401,340
2 Claims. (Cl. 315—39.3)

1. In combination, a plurality of self-excited oscillating electron discharge devices each comprising a source of electrons, a two-ended, nonresonant delay network structure producing in the region adjacent thereto fields of electromagnetic wave energy being propagated, each device including means for directing electrons from the corresponding source in energy-exchanging relation only with said fields of wave energy in the corresponding

2,859,364

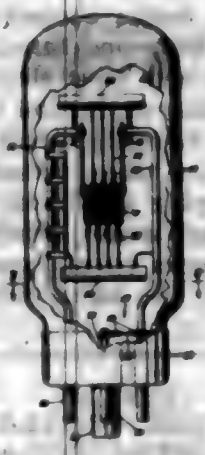
resistance for establishing an operating load line whose

device, the end of each of said delay structures toward which electrons move being provided with electrical attenuating means for substantially preventing reflection of energy therefrom, the end of each of said delay



structures away from which electrons move being provided with output deriving means, an output utilization means, and means for connecting the output coupling means of each of said devices to said output utilization means.

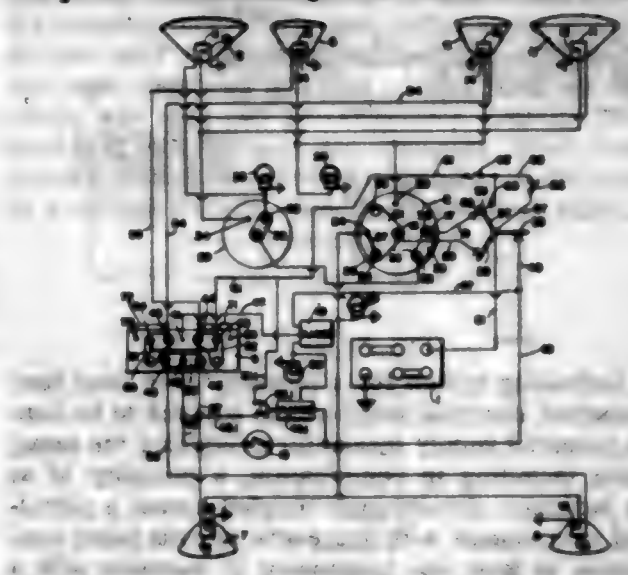
2,859,361
FUSE FOR INCANDESCENT LAMP
Samuel M. Gray, Marblehead, and John O. Fellows and Robert F. Reed, Salem, Mass., assignors to Sylvania Electric Products Incorporated, Salem, Mass., a corporation of Massachusetts
Application March 28, 1956, Serial No. 572,670
2 Claims. (Cl. 315—74)



1. An incandescent lamp for operation at a predetermined voltage, said lamp comprising a glass envelope, a metal filament therein, metal support wires for said filament, each of said support wires being sealed into said envelope and at least one of said wires being sealed through said envelope to act as an external contact, a metal pin sealed through said envelope to act as a second external contact, said pin being spaced from said support wires a distance greater than the maximum arcing distance for said predetermined voltage, and a fuse wire inside said envelope and connected between said pin and one of the support wires for said filament, the other support wire for said filament being one sealed through said envelope to act as an external contact therefor.

2,859,382
EMERGENCY LIGHTING SYSTEM
Gilbert S. Ellithorpe, Watseman, Ill., assignor to Littlefuse, Incorporated, Des Plaines, Ill., a corporation of Illinois
Application March 9, 1954, Serial No. 414,975
8 Claims. (Cl. 315—83)

1. An electric lighting system comprising a primary circuit including a power source, primary lights, a manually operated switch for controlling said circuit, and a circuit breaker, all connected in series, said circuit breaker comprising means responsive to a predetermined current overload condition for operation between two positions to interrupt said primary circuit and to connect an auxiliary circuit with said power source; an auxiliary circuit; a second circuit including a flasher device, a second switch, and a pair of signal lights, all connected in series with said power source independently of said primary circuit, and shiftable contactor means in said second switch having a neutral position and two selectively settable positions for connecting said signal lights individually with said power source through said flasher device; and means



in said second switch normally connecting each of said signal lights with said auxiliary circuit at the neutral position of said contactor means, said contactor means being shiftable to interrupt the connection between said auxiliary circuit and the respective signal light when said contactor means is in either settable position while maintaining connection between said auxiliary circuit and the other signal light.

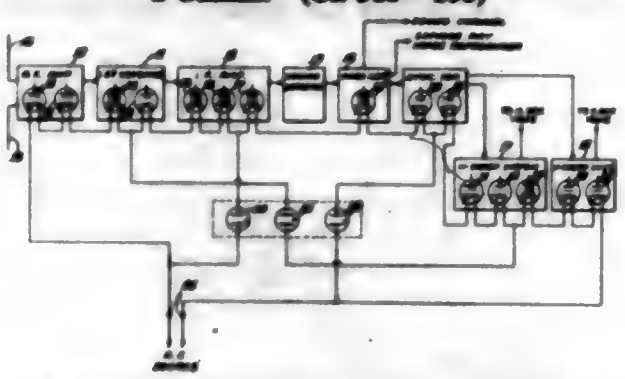
2,859,383
THERMAL CONDUCTING TUBE SHIELD
Leroy R. Woods, Whittier, and James E. Roberts, Long Beach, Calif., assignors, by mesne assignments, to International Electronic Research Corporation, a corporation of California
Application February 17, 1954, Serial No. 413,927
4 Claims. (Cl. 315—85)
(Filed under Rule 47(a) and 35 U. S. C. 116)

1. In combination with an electron tube, a shield comprising a cylindrically shaped heat conducting cylinder enclosing said electron tube, means forming a plurality of heat conducting paths between said tube and said cylinder, said means comprising a plurality of finger rows, each said row extending substantially axially of said tube and said cylinder, each said row including a plurality of resilient heat conducting fingers, said rows being mutually circumferentially spaced along said tube and said cylinder, a plurality of longitudinally extending and circumferentially spaced windows in said cylinder, the number of said windows being equal to the number of said finger rows, means for securing one end of each said finger in each finger row to one edge of a corresponding window, each finger extending from said one end thereof to said tube and circumferentially of said tube and cylinder into resiliently maintained heat conductive contact with said tube, the fingers of each row being engaged with said tube along an axially extending substantially continuous portion thereof.

fier, a single ignition device for both said lamps, said ignition device having an input circuit connected with

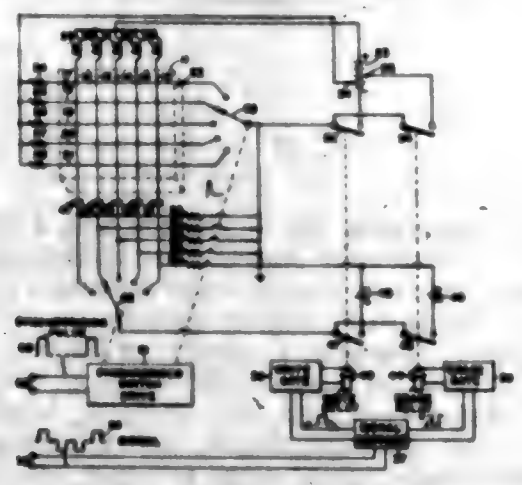
operating winding means; said pair of cooperable contacts being normally disengaged, said operating winding

2,859,384
INDICATOR SYSTEM FOR SERIES CONNECTED ELEMENTS
Richard A. Kraft, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application March 21, 1955, Serial No. 495,445
2 Claims. (Cl. 315—135)



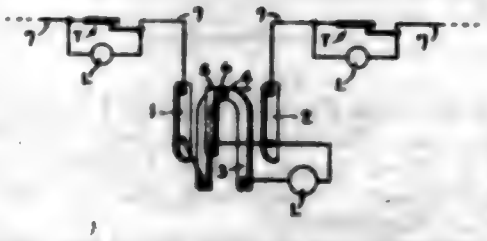
1. An indicating system for a plurality of at least four series-connected electrical components adapted to be connected to potential supply means for energizing the same, said system including in combination, a plurality of at least two indicator circuits each coupled across a plurality of said components with successive circuits being connected across at least one component in common with a preceding indicator circuit and across at least one component exclusively, the number of indicator circuits being less than the number of electrical components by at least two, said indicator circuits being adapted to be energized to an indicating condition by the application thereto of a potential greater than the potential normally applied thereto by the voltage drop across said components, with an open circuit in a component increasing the potential across each indicator circuit connected thereacross through the circuit provided by the other components, said increased potential across an indicator circuit energizing the same to an indicating condition and thereby indicating failure of a component across which such indicator circuit is bridged.

2,859,385
VISUAL DISPLAY APPARATUS
Albert D. Bentley, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application August 28, 1956, Serial No. 605,867
9 Claims. (Cl. 315—169)



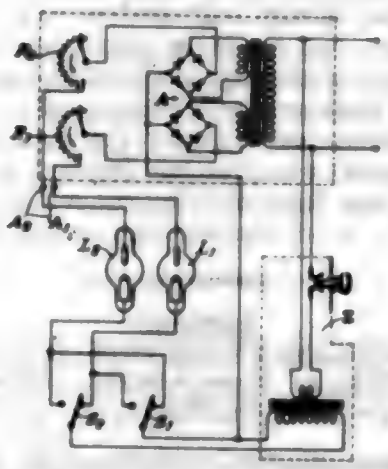
1. In combination, a visual display device comprising a matrix of gas discharge elements of the type exhibiting an N-shaped conduction characteristic having predetermined firing and extinction potentials defining successive positive, negative and positive resistance regions, each element including a pair of electrodes, means for altering the potential between the first and second electrodes of selected elements over a range greater than the difference between the firing and extinction potentials of said elements in accordance with an applied signal, and potential supply means for said elements having a low internal resistance for establishing an operating load line whose slope is small, arranged to intersect both positive resistance regions of said conduction characteristic, and having an average potential approximately mid-way between the firing and extinction potentials of said elements whereby each element remains in one of two conductive conditions unless the potential between the element electrodes is altered to a value beyond the range between said firing and extinction potentials to effect a change in condition of the element.

2,859,386
SERIES SYSTEM OF MERCURY VAPOR LIGHTING
Harold A. Van Dusen, Jr., South Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application November 2, 1956, Serial No. 620,002
6 Claims. (Cl. 315—189)



1. A series system of mercury vapor lighting comprising a plurality of mercury vapor lamps connected in series, a time delay device connected in shunt across each mercury vapor lamp and forming a unit with the lamp which it shunts and being electrically independent of every other time delay device and lamp and each time delay device having normally closed contacts arranged to open when the time delay period has passed, each time delay device having a different period of opening from other time delay devices, whereby the lamps are placed in operative series circuit connection at different intervals of time after the series circuit has been energized.

2,859,387
ARRANGEMENT FOR SIMULTANEOUSLY OR ALTERNATELY OPERATING A PLURALITY OF XENON HIGH PRESSURE LAMPS
Heinz Uffers, Kiel-Wik, Germany, assignor to Zeiss Ikon A. G., Stuttgart, Stuttgart, Germany
Application May 26, 1955, Serial No. 511,369
Claims priority, application Germany July 30, 1953
3 Claims. (Cl. 315—241)



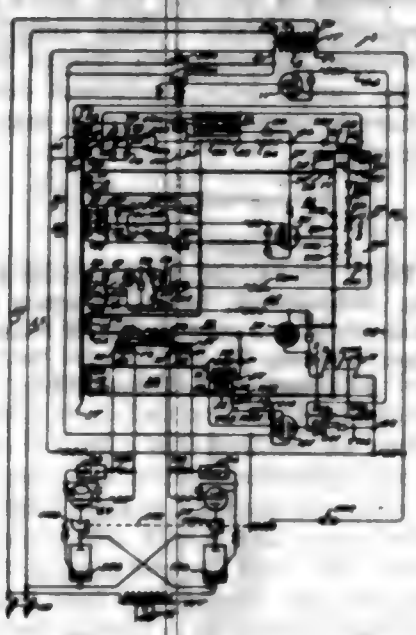
1. In an illuminating system comprising xenon high pressure lamps, an arrangement for selectively simultaneously and alternately operating said two xenon high pressure lamps including a source of alternating current supply, a rectifier having an input circuit connected to said source of alternating current supply and having two output circuits and two output lines connecting said output circuits separately to said two lamps, a common output line for both said output circuits of said recti-

housing cover whereby said arrester electrodes will swing against and yieldingly engage said terminal posts automatically upon the closing of said cover.

interposed between said first member and said second member whereby a definite force is transmitted to said

fier, a single ignition device for both said lamps, said ignition device having an input circuit connected with said source of alternating current supply and having a high voltage output circuit with two output lines, a push button switch in said input circuit of said ignition device for momentarily energizing the latter, said common output line of said two output circuits of said rectifier being connected to one of the two output lines of said high voltage output circuit, two switch devices one in each one of said two output lines of said output circuits of said ignition device, and means respectively connecting said switch devices with said lamps and connecting said switch devices with one another to selectively permit a connection of either output line of said high voltage circuit with either one of said two lamps so that in one position of said switch devices one of said lamps is ignited and the other lamp is connected to its rectifier circuit without being ignited, while upon movement of said switch devices to another position the other lamp is ignited and the lamp previously ignited remains lit.

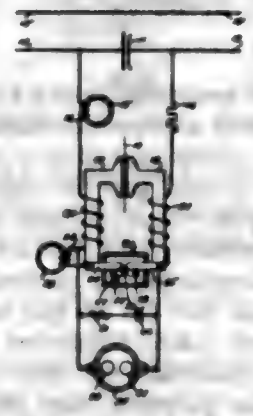
2,859,303
ELECTRIC TIMER
Wilbert A. Chiasson, Walled Lake Township, Oakland County, Mich., assignor to Weltronic Company, a corporation of Michigan
Application June 6, 1956, Serial No. 589,821
13 Claims. (Cl. 315—251)



8. In a controlling network for an electric valve having a pair of main electrodes and a control electrode, a timing network including an energy storage device and a discharge means therefor, a source of bias potential comprising at least three terminals adapted to be energized from a source of alternating potential such that the potential between a first and a second of said terminals is less than the potential between said second and a third of said terminals, means connecting said timing network between said control electrode and said second terminal, and switch means for selectively connecting one of said main electrodes to said first or said third terminals.

2,859,389
PROTECTION FOR SERIES CAPACITOR
Edward John Diebold, Ardmore, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa.
Application August 31, 1953, Serial No. 377,409
1 Claim. (Cl. 317—12)

An automatic by-pass circuit for a series capacitor; said automatic by-pass circuit comprising the combination of an electromagnetic switch, a saturable reactor means and an arc discharge device; said electromagnetic switch comprising a pair of cooperable contacts and an operating winding means; said pair of cooperable contacts being normally disengaged, said operating winding means being positioned to move said pair of cooperable contacts to their disengaged position responsive to energization thereof by some current beyond a predetermined magnitude; said pair of cooperable contacts being connected in a first series connected circuit with said series capacitor, said saturable reactor means and said operating winding means; a second series connected circuit of at least said series capacitor, said arc discharge device, and said operating winding means; said arc discharge device and said pair of cooperable contacts being connected in parallel; said arc discharge device being constructed to conduct current responsive to the appearance of a voltage beyond some predetermined value on said



series capacitor; the conduction of current in said second series circuit including said arc discharge device causing energization of said operating winding means to thereby close said cooperable contacts of said electromagnetic switch; said closed electromagnetic switch contacts forming said by-pass circuit for said series capacitor and for said arc discharge device whereby said arc discharge device is rendered non-conductive; said operating winding means in series with said cooperating contacts being de-energized when the current therethrough reaches a substantially zero value to open said by-pass circuit for said series capacitor for at least a portion of each cycle that said by-pass circuit is operable; said saturable reactor providing a relatively low current step for the opening and closing operation of said pair of cooperable contacts.

2,859,390
STRAND TYPE TERMINAL BOX
John S. Baker, Skokie, Ill., assignor, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Application August 4, 1954, Serial No. 447,753
4 Claims. (Cl. 317—69)

1. A cable terminal comprising a housing having a cover therefor pivotally mounted to swing in a direction normal to the longitudinal dimension of said housing and a chamber therein, terminal posts in said chamber adapted to receive service wires entering said housing, a cable having a plurality of conductors entering said housing and said chamber and being connected in said chamber to said terminal posts, a plurality of arresters, each arrester being provided with a spring-pressed electrode to yieldably press against one of said terminal posts, and a pulrality of pairs of spring fingers carried on the inside of said cover, each for removably receiving and holding one end of each arrester against the inside face of said

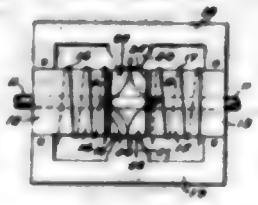
ef, means for shorting the other phase of the auxiliary winding, the last said means including voltage sensitive

the duration and spacing of the energizing intervals, and means comprising a resistance-capacitance time modulat-

tial supply means for said elements having a low internal output line for both said output circuits of said recti-

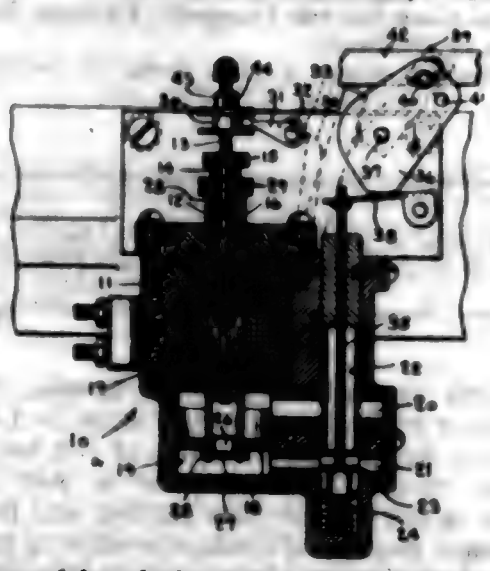
housing cover whereby said arrester electrodes will swing against and yieldingly engage said terminal posts automatically upon the closing of said cover.

2,859,391
FORCE MOTOR
Donald W. Ericson, Oak Park, Mich.
Application June 7, 1955, Serial No. 513,697
17 Claims. (Cl. 317—171)



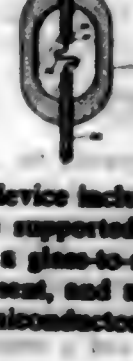
1. A force motor assembly having a field structure and an armature, said field structure including a pair of oppositely disposed pole pieces spaced by a gap, means mounting said armature in said gap for linear movement between said pair of pole pieces, a third pole piece laterally adjacent the gap between said pair of pole pieces, said pole pieces being connected by permeable material in a magnetic circuit such that the air gap between said armature and pair of pole pieces comprises the major portion of the total path reluctance of said circuit, means for applying a quiescent magnetic flux through said armature between said third pole piece and each of said pair of pole pieces, means for producing a difference in flux between said armature and each of said pair of pole pieces whereby a force is applied to said armature in a direction toward one of said pair of pole pieces, and resilient means opposing such force and tending to return said armature to a centered position between said pair of pole pieces whereby armature movement is proportional in direction and magnitude to said force.

2,859,392
TIME DELAY DEVICE
Anthony Van Ryan, Ocean Springs, Miss., and Kazuo Henry Date, South Milwaukee, Wis., assignors to McGraw-Edison Company, a corporation of Delaware
Original application September 25, 1953, Serial No. 382,365, now Patent No. 2,810,038, dated October 15, 1957. Divided and this application November 29, 1954, Serial No. 471,572
2 Claims. (Cl. 317—178)



1. A time delay device for a circuit interrupter comprising a body portion having a cylinder formed therein adapted to contain a fluid, a piston in said cylinder, a piston rod, said device having an escape opening, a magnetic plunger slidable on said rod, a coil surrounding said plunger, a first member removably carried by said plunger, a second member carried by said rod, a spring interposed between said first member and said second member whereby a definite force is transmitted to said piston irrespective of the magnitude of the current flowing through said coil, and means including said first member for selectively locking said plunger to said rod whereby an inverse time current relation is secured, or for releasing said plunger from direct connection to said rod.

2,859,393
ELECTRIC SEMI-CONDUCTOR DEVICES
John Norman Aldington, Preston, England, assignor, by mesne assignments, to Siemens Edison-Swan Limited, a British company
Application December 28, 1954, Serial No. 476,497
2 Claims. (Cl. 317—235)



1. An electric semi-conductor device comprising a semi-conducting body in the form of a lamina of the same thickness over the whole of its area, the thickness of the lamina being not more than five mils, an open-ended hollow metallic cylinder on which the lamina is mounted by being secured conductively to one end thereof to block the opening at said one end, and a plurality of co-axially disposed electrodes making contact with each side of the lamina, the electrodes making contact with one side of the lamina being positioned directly opposite correspondingly disposed electrodes making contact with the other side.

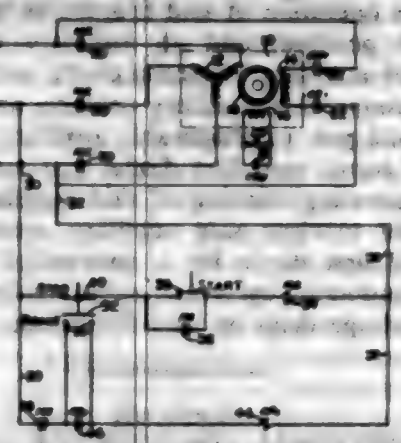
2,859,394
FABRICATION OF SEMICONDUCTOR DEVICES
Irvin Berman, Swampscott, Mass., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application February 27, 1953, Serial No. 339,414
5 Claims. (Cl. 317—236)

1. A semiconductor device including point-contact and semiconductor elements supported within a sealed glass envelope, a support of a glass-to-metal sealing alloy for said semiconductor element, and a brazing layer of antimony bonding said semiconductor element and support together.

2,859,395
MOTOR CONTROL ASSEMBLY
Edwin R. Martin and Arthur G. Wise, Dayton, Ohio, assignors to Louis R. Mahrt and D. Robert Laughlin, as trustees for Standard Dayton Corporation, Dayton, Ohio, a corporation of Ohio
Application February 27, 1956, Serial No. 567,818
13 Claims. (Cl. 318—211)

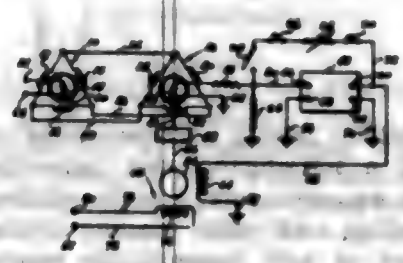
11. In a motor, a rotor, a stator having a main winding arranged to establish a given number of magnetic poles, an auxiliary two-phase winding arranged on said stator so as to establish a number of magnetic poles in excess of said given number, first switch means, the first switch means being connected to the main winding for controlling energization thereof, second switch means, the second switch means being connected to one phase only of said auxiliary winding for controlling energization there-

ef, means for shorting the other phase of the auxiliary winding, the last said means including voltage sensitive means, means for substantially simultaneously opening said first switch means and for closing said second switch



means for braking the rotor, and means operable by said voltage sensitive means for opening the second switch means after the rotor speed has been reduced below a predetermined value.

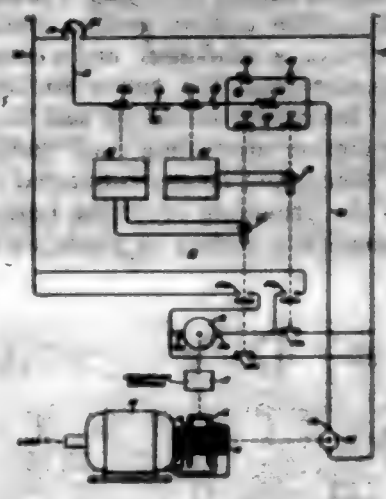
2,859,396
SCANNING SYSTEM
Kenneth L. King, Scarsdale, N. Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application August 31, 1955, Serial No. 531,693
6 Claims. (Cl. 318—282)



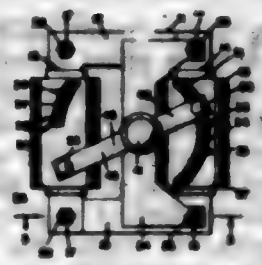
1. In a scanning system having means for producing an error signal as a function of the displacement of a controlled shaft from a null position, an amplifier having an input channel, means for impressing said error signal on said amplifier input channel to produce a control signal, a servomotor for driving said shaft, means for impressing said control signal upon said servomotor to drive said shaft back toward said null, and positive feedback means for feeding a portion of said control signal to said amplifier input channel, said amplifier and feedback means having a loop gain which is greater than unity whereby said servomotor drives said shaft back through said null position until said error signal exceeds said feedback signal.

2,859,397
FEEDBACK TYPE CONTROL SYSTEM
Warren W. Bolander, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application December 28, 1955, Serial No. 555,818
5 Claims. (Cl. 318—448)

1. In a feedback type of control system comprising a main electric motor, a source of reference voltage representative of a desired speed of said motor, means for deriving from said motor a voltage representative of its speed, a voltage-comparison circuit for comparing said reference voltage and speed voltage to provide an error voltage representative of the difference between the speed of said motor and the desired speed, a correcting motor operable upon energization to adjust the speed of said main motor in such a manner as to reduce said error voltage, on-off type controller means for intermittently producing effective energization of said correcting motor to effect corrective action at average rates dependent on the duration and spacing of the energizing intervals, and means comprising a resistance-capacitance time modulating circuit responsive to the magnitude of said error voltage for causing said controller means to produce energizing intervals having a total duration per representative unit of time which generally decreases as the error voltage decreases.



2,859,398
POWER SUPPLY
Clark E. Johnson, Jr., White Bear Lake, Minn., and William O. Pederson, Los Angeles, Calif.
Application May 18, 1955, Serial No. 509,159
5 Claims. (Cl. 321—24)

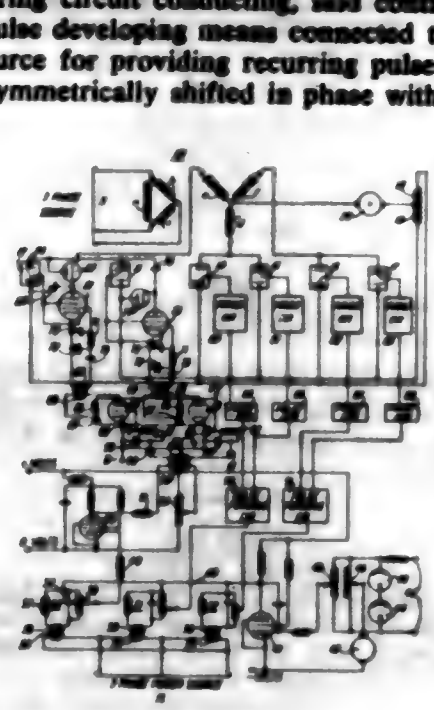


1. A power supply comprising a transformer including a core having first and secondary windings thereon, a first group of contacts connected to certain of the turns of said first winding, a second group of contacts connected to certain of the turns of the second winding, a rectifier connected to a certain end of each of said windings, said rectifiers being further connected to a common terminal, switch means including first and second switch arms movable in unison and connected to another common terminal, the first switch arm being adapted to successively make contact with said first group of contacts and the second switch arm with the second group of contacts to increase the voltage at said terminals as the switch arms are moved in one direction, the contacts of the first winding being arranged to be engaged by the first switch arm before the contacts of the second winding become engaged with the second switch arm.

2,859,399
CONTROL SYSTEM
Marcel R. Sommeria, Palos Heights, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois
Application September 30, 1955, Serial No. 537,667
15 Claims. (Cl. 321—36)

1. A system for producing a controlled direct current voltage from a three phase power source including in combination, rectifier means including a pair of rectifier elements connected to each phase of said source with the elements of each pair being connected in opposite polarities, inductor means connecting said rectifier elements to direct current output means, said rectifier elements including control portions for controlling the conductivity

thereof, and control means connected to said control portions of said rectifier elements to control the current applied through said rectifier elements to said output means, said control means including a firing circuit connected to each rectifier control portion including an electron discharge valve, a condenser, and a circuit for charging said condenser from the power source, and a control circuit for selectively rendering said discharge valves of said firing circuit conducting, said control circuit including pulse developing means connected to each phase of the source for providing recurring pulses of opposite polarity symmetrically shifted in phase with respect to a



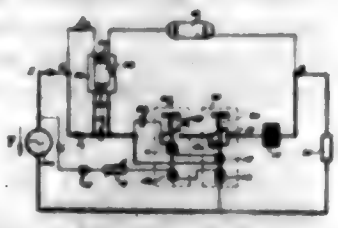
regularly recurring center point, said pulse developing means connected to each phase providing pulses of opposite polarity to the firing circuits of rectifier elements of opposite polarity connected to the associated phase of the source, said pulses controlling the conductivity of said valves of said firing circuits so that said valves and said condensers provide current to said control portions of said rectifier elements to render the same conducting, with the shift in phase of said pulses controlling the time of firing of said rectifier elements and thereby providing instantaneous control of current at said output means.

2,859,400

ALTERNATING CURRENT SWITCHING DEVICE

Fritz Kesselring, Zollikon-Zurich, Switzerland, assignor to FKG Fritz Kesselring Gerätebau A. G., Bachtobel-Weinfelden, Thurgau, Switzerland, a corporation of Switzerland

Application March 18, 1953, Serial No. 343,079
Claims priority, application Switzerland March 22, 1952
1 Claim. (Cl. 321—48)



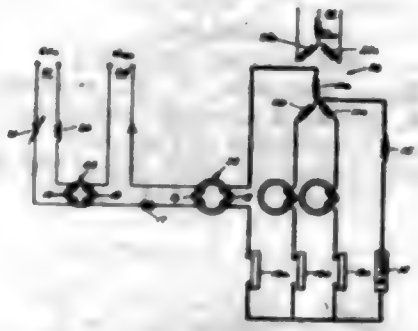
An electromagnetic rectifier circuit comprising an A.-C. source, a D.-C. load, an electromagnetic switch having an operating winding and pair of cooperable contacts movable into and out of engagement with respect to one another, an energizing circuit for said operating winding, and a first diode having a relatively low inverse voltage rating and a relatively high forward current rating; said A.-C. source, electromagnetic switch cooperable contacts, first diode, and D.-C. load forming a closed main load circuit; said energizing circuit being connected to said electromagnetic switch operating winding to operate said pair of contacts to their engaged position at a predetermined time; a voltage path including a second diode and a reactor; said reactor inductively coupling said voltage path and said main circuit to induce load current flow from said main load circuit to said voltage path prior to the operation of said cooperable contacts to their disengaged position; and an auxiliary electromagnetic switch; said auxiliary electromagnetic switch comprising a pair of cooperable auxiliary contacts and an operating winding; said pair of cooperable auxiliary contacts being connected across said first diode; and energizing means for said operating winding of said auxiliary electromagnetic switch to close said auxiliary contacts and short circuit said first diode for a substantial portion of its forward conducting cycle and substantially eliminate the forward voltage drop on said first diode.

2,859,401

FLUX REVERSAL CIRCUITS FOR RECTIFIERS

Erich Roll, Nurnberg, Germany, assignor to Siemens-Schuckertwerke A. G., Berlin, Germany, a corporation of Germany

Application February 4, 1955, Serial No. 486,243
13 Claims. (Cl. 321—48)



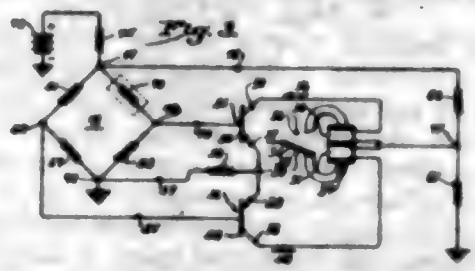
1. In a rectifier having a commutating reactor, main contacts and a transductor; said commutating reactor comprising a magnetic core, a main winding and a flux reversal winding; said main winding linking the entire magnetic core of said commutating reactor and connected in series with said main contacts; said flux reversal winding linking a portion of said magnetic core of said commutating reactor; said transductor comprising a magnetic circuit, a biasing winding and an output winding; said output winding and said biasing winding linking said magnetic circuit; said output winding connected in series with a rectifier and said flux reversal winding; an alternating current source energizing said series combination of said output winding, said rectifier and said flux reversal circuit; a direct current source energizing said biasing winding.

2,859,402

CONDITION RESPONSIVE CONTROL APPARATUS

Donald K. Schoeve, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Application December 15, 1955, Serial No. 553,227
13 Claims. (Cl. 323—65)



1. Condition responsive control apparatus having, in combination, a bridge having input and output terminals and two arms of fixed impedance connected between one input terminal and the respective output terminals, a source of unidirectional voltage connected across said

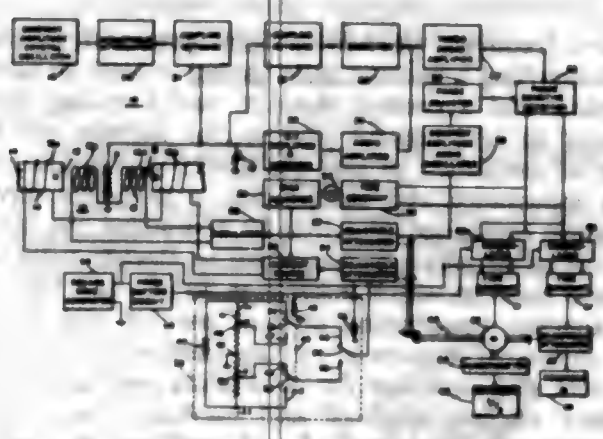
input terminals, one arm of said bridge between the other input terminal and a first output terminal having an impedance variable in accordance with changes in a condition to provide a condition responsive voltage and another arm between the other input terminal and the second output terminal having a fixed impedance to provide a reference voltage, first and second transistors having base electrodes connected to the respective output terminals of said bridge and emitter electrodes connected to each other and through a common resistor to said one input terminal whereby said two arms of fixed resistance constitute a voltage divider for applying the difference between said reference and condition responsive voltages to input circuits of the transistors, each of said transistors having a collector electrode, two load impedance elements connected in series between said collector electrodes and having a common junction, a conductor connecting said common junction to said other bridge input terminal to complete an output circuit for each of said transistors through the associated one of said load elements and to apply said condition responsive voltage directly into the output circuit of said first transistor, said transistors cooperating to establish forward current conditions in said load elements when said condition responsive voltage is less than said reference voltage and above a predetermined low value, and means applying a second reference voltage in said output circuit of said first transistor in opposition to said condition responsive voltage to define said predetermined low value and establish reverse load current conditions when the condition responsive voltage is below such low value.

2,859,403

MAGNETIC RESONANCE APPARATUS

Francois F. Kirchner, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Application September 14, 1956, Serial No. 609,896
13 Claims. (Cl. 324—.5)



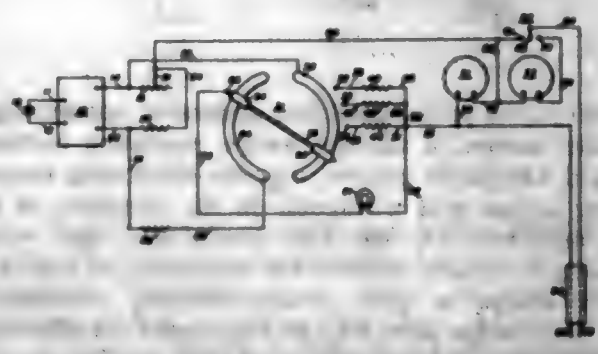
1. In magnetic resonance apparatus, the combination comprising means for generating a unidirectional magnetic field, a tank circuit including a sample receiving coil disposed perpendicularly to said magnetic field and tunable to the resonance precession frequency of particular paramagnetic particles in the sample, adjustable modulating means for stepping the unidirectional magnetic field through first and second increments having a fixed ratio and an alternating polarity, means for passing a substantially constant intensity alternating R. F. current through said coil at substantially the resonable precession freqency, first feedback circuit means responsive to the modulation of the R. F. potential across said coil for centering the modulation of said unidirectional field with respect to the resonance peak of said paramagnetic particles, second feedback circuit means responsive to the modulation of said R. F. potential for adjusting said modulating means inversely to the relaxation time of the paramagnetic particles, and means adjustable by said second feedback circuit means and responsive to modulation of said R. F. potential for producing an indication characteristic of the particular paramagnetic particles.

2,859,404

DEVICE FOR MEASURING STABILITY OF WATER-IN-OIL EMULSION

Bob C. Crittenden, Midland, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N. Y., a corporation of New York

Application May 23, 1955, Serial No. 510,291
6 Claims. (Cl. 324—30)



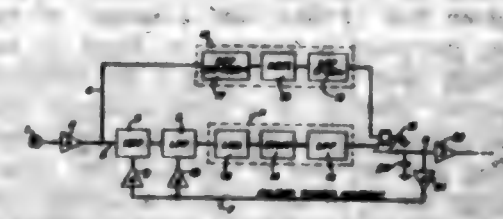
1. Apparatus for measuring the stability of a water-in-oil emulsion comprising in combination an oscillator, means for connecting said oscillator to a source of electrical potential, means comprising a loop connected to said oscillator and containing means for varying the intensity of electrical potential produced by said oscillator, a pair of electrodes, a conductor leading from said loop to one of said electrodes, a second conductor leading from said loop to said other of said electrodes, a plurality of electrical resistors connected in parallel with each other, means for placing singularly each of said resistors in series with one of said pair of electrodes, means connected in parallel with said pair of electrodes for measuring the intensity of electrical potential imposed upon said pair of electrodes, and means for measuring flow between said pair of electrodes of electrical current.

2,859,405

DERIVATION OF VOCODER PITCH SIGNALS

Carl B. H. Feldman, Summit, and Andrew C. Norwine, Short Hills, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application February 17, 1956, Serial No. 566,152
7 Claims. (Cl. 324—77)

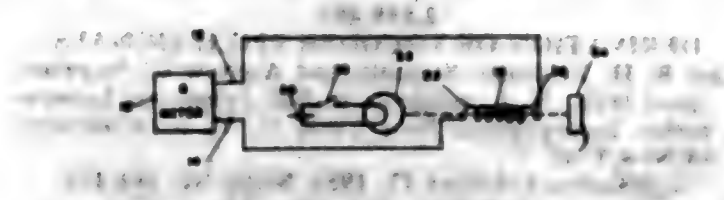


1. Apparatus for tracking the fundamental frequency component of a complex wave of varying frequency in the presence of harmonic components of said wave, which comprises a tunable bandpass filter having an input terminal, an output terminal and a tuning control terminal, means for applying said complex wave to said input terminal, means connected to the output terminal of said filter for deriving a control signal representative of the frequency of wave energy transmitted through said filter, and means for feeding back said control signal to the control terminal of said filter in a sense to shift the midband frequency of said filter on the frequency scale in a less-than-one-to-one relation with said control signal, whereby the major part of the passband of said filter always lies below the frequency of the component momentarily being tracked by said filter.

2,859,406
POWER-INDICATING APPARATUS
David Lawrence Jaffe, Great Neck, N. Y., assignor to Polarad Electronics Corporation, Long Island City, N. Y., a corporation of New York
Application September 6, 1955, Serial No. 533,679
7 Claims. (Cl. 324—95)

5. Microwave power-detecting apparatus comprising a waveguide section, a tapered wedge extending partially along said waveguide section, a power-dissipating resistor extending across said waveguide in the direction of the electric field between one wall thereof and said wedge and having terminals respectively connected to said wall and said wedge in good heat-conducting relationship thereto, said wedge providing an impedance transforming means matching the impedance of said resistor to said waveguide section, said resistor having a relatively low temperature coefficient of resistance and forming a termination for said waveguide section, and a temperature-sensitive resistor mounted on said power-dissipating resistor substantially at the center thereof, said temperature-sensitive resistor being in close heat-conducting and temperature-transferring relationship to said power-dissipating resistor and having a relatively high temperature coefficient of resistance.

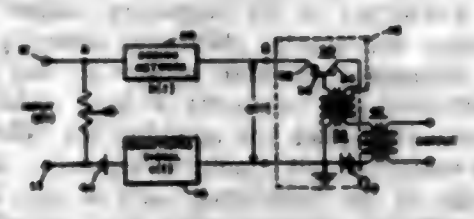
2,859,407
METHOD AND DEVICE FOR MEASURING SEMICONDUCTOR PARAMETERS
Heinz K. Henisch, Flushing, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application March 27, 1956, Serial No. 574,201
2 Claims. (Cl. 324—158)



1. A method for utilizing an electrically energized coil having a given first Q-value and a source of radiation which when energized is adapted to direct its radiation axially through said coil to measure the resistivity and minority carrier lifetime of a semiconductor specimen, said method comprising the steps of placing a portion of said specimen and one end of said coil into close proximity to change the Q of said coil to a second value, the difference between said first and second Q-values being a measure of the resistivity of said semiconductor portion; and energizing said source to illuminate said portion with incident radiation and change the Q of said coil to a third value, the difference between said second and third Q-value being a measure of the minority carrier lifetime.

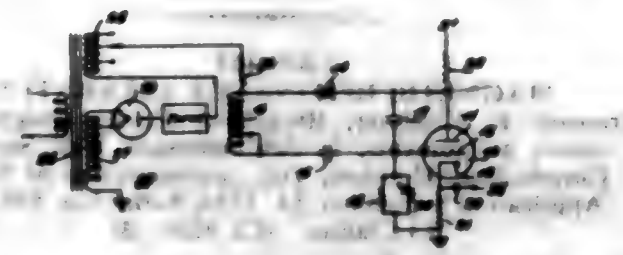
2,859,408
BINARY PULSE MODULATOR
Johann Heiber, Long Branch, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application January 7, 1957, Serial No. 632,950
9 Claims. (Cl. 332—11)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A modulator system comprising, a source of input signal voltage, means for quantizing said input signal voltage in time, a non-linear active device including means for simultaneously generating a voltage pulse at its output circuit and a prescribed current pulse at its input circuit when triggered into conduction by signals of prescribed amplitude, and a passive network responsive to said quantized signal and said generated current pulse



whereby said quantized signal periodically samples the voltage developed on said network by said current pulse, said passive network having a prescribed impulse function such that said prescribed amplitude trigger signals are derived from said sampled voltage at the input to said non-linear active device at a rate which is a function of the amplitude and derivatives of said input signal voltage.

2,859,409
SIGNAL GENERATOR
Walter J. Cerveny and David S. Wise, Cleveland, Ohio, assignors to Cleveland Patents, Incorporated, Cleveland, Ohio, a corporation of Ohio
Application September 14, 1953, Serial No. 379,758
6 Claims. (Cl. 332—30)

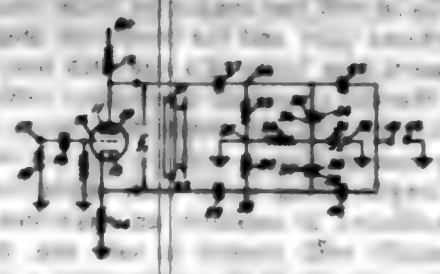


1. In a frequency modulated signal generator, an oscillator comprising a vacuum tube having at least an anode, a cathode, and a control element, and a tuning circuit connected to said control element for defining the frequency of oscillation of said oscillator, said circuit comprising inductance and capacitance, a capacitor having a dielectric comprised of a titanate compound the dielectric constant of which is responsive to electric fields and the Curie point of which is between 40° C. and 100° C., said capacitor constituting at least part of said capacitance, means to impress a varying unidirectional potential across said capacitor for controlling and varying the frequency of oscillation of said oscillator, and means for maintaining the output of said oscillator at a predetermined level comprising a capacitor connected between said tuning circuit and ground for compensating for the change of Q of the titanate capacitor with a change of frequency whereby a constant voltage output is maintained over the sweep width of the oscillator.

2,859,410
BALANCED MODULATORS
Wendell R. Bastow, Natick, Mass., assignor to Raytheon Manufacturing Company, Newton, Mass.
Continuation of abandoned application Serial No. 215,549, March 14, 1951. This application May 2, 1956, Serial No. 582,237
4 Claims. (Cl. 332—47)

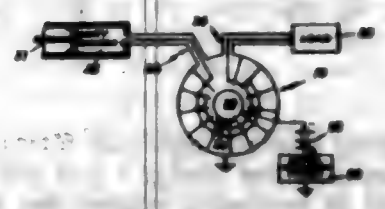
1. Signal-mixing apparatus comprising first and second input terminals, first and second capacitors each connected at one side to one of said terminals, a resistor joining the remaining sides of said capacitors, first and second rectifiers similarly poled connected in series across said

resistor, said capacitors having substantially equal impedances at a first frequency, and means to apply a signal



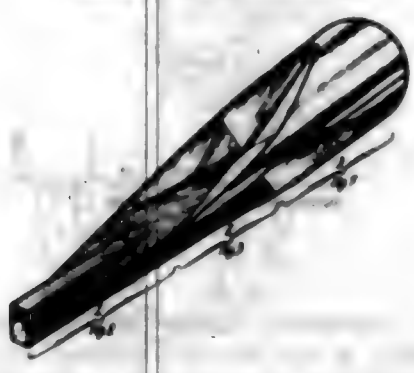
of a second frequency between the junction of said two rectifiers and an intermediate point of said resistor.

2,859,411
MODULATED TRAVELING-WAVE TUBE
William C. Brown, Lincoln, Mass., assignor to Raytheon Manufacturing Company, Newton, Mass., a corporation of Delaware
Application June 19, 1953, Serial No. 362,798
2 Claims. (Cl. 332—58)



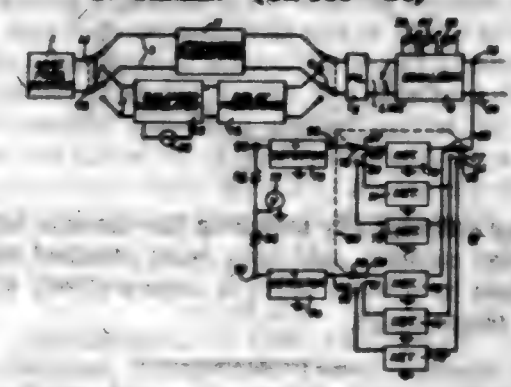
1. A traveling wave electron discharge device system comprising a nonrecentrant signal wave transmission network, a source of electrons, means for directing a recentrant stream of electrons along paths adjacent said network, a load output which absorbs the majority of the output power produced by said device coupled directly to one end of said network, and a frequency-determining structure directly terminating the other end of said network, said structure being resonant substantially at the desired operating frequency of said device.

2,859,412
MODE TRANSFORMING WAVE GUIDE TRANSITION
Georges Robert Pierre Marié, Paris, France
Application November 2, 1956, Serial No. 620,029
Claims priority, application France December 31, 1955
3 Claims. (Cl. 333—21)



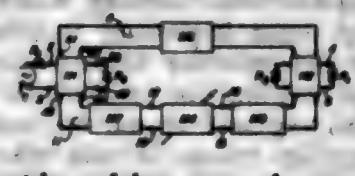
1. In a transition device for guided waves connecting a rectangular input wave guide in which a wave is propagated in accordance with the TE_{01} mode to a cylindrical circular output wave guide in which a wave is propagated in accordance with the TE_{01} mode of said circular guide, a partial transition member transforming the TE_{01} wave of said input guide into a TE_{01} wave in a rectangular intermediate guide consisting of a guide length with a T-shaped cross-section progressively changing from the rectangular cross-section of said input guide to the rectangular cross-section of said intermediate guide.

2,859,413
DISTORTION CORRECTION
Raymond W. Ketchledge, Whippany, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application September 4, 1953, Serial No. 378,530
17 Claims. (Cl. 333—28)



1. In combination, a transmission path having a transmission characteristic which exhibits undesired frequency-dependent distortion over a range of frequencies, an equalizer having an adjustable shape connected in the path, a constant-level, multiple-frequency voltage source covering the range connected to one end of the path, a first network having a transmission characteristic which is constant with frequency connected at one end to the other end of the path, a detector connected to the other end of the first network, an averaging voltmeter connected to the output end of the detector, a second network, and means for substituting the second for the first network, the second network being a weighting network having a transmission characteristic such that the voltmeter reading due to the second network, minus the voltmeter reading due to the first network, indicates the direction and the amount of the adjustment of the equalizer shape required to achieve optimum correction of the distortion.

2,859,414
DELAY NETWORK
Walter R. Landry, Summit, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application February 4, 1954, Serial No. 408,341
9 Claims. (Cl. 333—29)

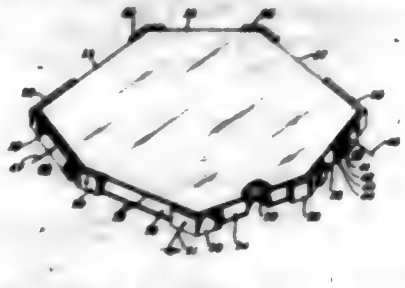


1. A constant-loss delay network comprising a splitting network, a combining network, and two substantially independent transmission paths connected therebetween, the first of the paths including a reactive impedance comprising a plurality of resonant branches connected in parallel and having a transmission loss which varies between a minimum at a first frequency and a maximum large compared to the minimum at a second frequency, the second path having a substantially constant transmission loss approximately six decibels greater than said minimum, and the paths having phase shifts which differ by approximately π radians at the first frequency.

2,859,415
ULTRASONIC ACOUSTIC WAVE TRANSMISSION DELAY LINES
Morton D. Fagen, Summit, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application September 3, 1952, Serial No. 307,690
8 Claims. (Cl. 333—30)

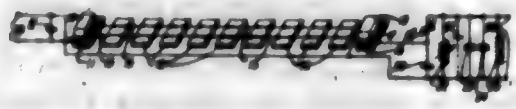
1. The combination in an acoustic delay line of a delay medium, signal input and output means, and a

layer of acoustic absorbing material on a portion of said delay medium, said layer constituting an alloy electroplated in situ at room temperature having an acoustic



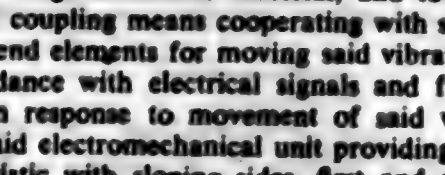
impedance substantially matching the acoustic impedance of the delay medium, said layer being attached to said delay medium by a bond which is comparatively stress free at room temperature.

2,859,416
FILTER
Bernard Niederman, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application July 18, 1955, Serial No. 522,753
2 Claims. (Cl. 333—72)



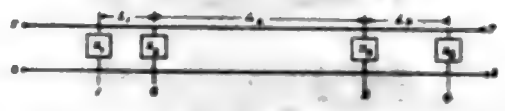
1. A filter unit for selecting electrical signals within a predetermined frequency band including in combination, an electromechanical unit including a plurality of coupled mechanical vibrating elements constructed to respond to frequencies within the band, said elements being connected in cascade with the end elements being made of magnetostrictive material, and low impedance electrical coupling means cooperating with said magnetostrictive end elements for moving said vibrating elements in accordance with electrical signals and for producing signals in response to movement of said vibrating elements, said electromechanical unit providing a band pass characteristic with sloping sides, first and second piezoelectric crystal elements constructed to respond to frequencies at the edges of the passband of said electromechanical unit, and circuit means connecting said crystal elements to said electrical coupling means, said circuit means including tuned impedance transforming means having inductor and capacitor elements and providing a high impedance coupling for said crystal elements for effectively connecting said crystal elements in parallel across said coupling means of said electromechanical unit, said transforming means being adjustable and compensating for the capacitance of said crystal elements, whereby the band pass characteristics of the complete filter unit follows generally the band pass characteristics of the electromechanical unit with the sides of the filter unit characteristic being made steeper by action of the crystal elements.

2,859,417
MICROWAVE FILTERS
Maurice Arditi, Clifton, N. J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Application December 6, 1952, Serial No. 324,545
5 Claims. (Cl. 333—73)



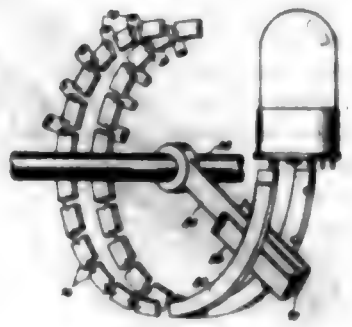
1. A microwave bandpass filter comprising a ribbon-like line conductor, a ribbon-like ground conductor, dielectric means disposing said conductors in spaced substantially parallel relation a small fraction of wavelength apart, said line conductor being divided into distinct lengths, adjacent lengths of said line conductor being spaced apart to form susceptance gaps and the conductor length between certain adjacent gaps being of a size such that the parallel conductors thereof constitute a resonant section, the terminating ends of adjacent conductors being disposed in overlapping spaced relation with the gap between adjacent conductor lengths being small with negligible capacitive effect but sufficient to establish an electromagnetic field bulging laterally with respect to said gap, thereby presenting a discontinuity in the propagation path of microwave energy along said conductors.

2,859,418
HIGH POWER TRANSMISSION LINE FILTERS
Joseph H. Vegelman, Rome, N. Y.
Application June 21, 1956, Serial No. 517,102
8 Claims. (Cl. 333—73)
(Granted under Title 35, U. S. Code (1952), sec. 266)



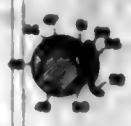
1. A high power handling band pass filter comprising, a uniform transmission line having a first and second section, a plurality of contiguous tapered-line filter sections inserted in said uniform line between said first and second sections, said tapered-line sections producing a plurality of impedance discontinuities, each of said filter sections having a length which is of the same order to magnitude as the operating wavelength at the center of the pass band and having a minimum cross sectional dimension which is at least as great as the minimum cross sectional dimension of said uniform transmission line, said impedance discontinuities being a function of the angles formed by the junctions of said tapered sections.

2,859,419
ALL CHANNEL TELEVISION TUNER
Bernhard E. Keiser, Webster Groves, Mo., assignor, by mesne assignments, to White-Rodgers Company, a corporation of Delaware
Application January 3, 1955, Serial No. 479,325
2 Claims. (Cl. 333—82)



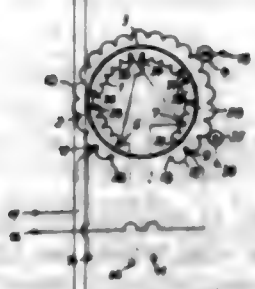
1. An inductance tuning element for high frequency tuning including a variably shorted tuning line comprising a pair of spaced conductors and a U-shaped shorting bar between said conductors and engaging one of said conductors with each of its parallel legs, said shorting bar being mounted for rotation about a fixed center with its parallel legs arranged radially with respect thereto, and said spaced conductors being fixed and having at least coextending portions thereof which are spirally formed with respect to said center, whereby the effective length of said shorting bar is continuously varied as it is moved along said spirally formed portions of said conductors.

2,859,420
TUNING DEVICE
Fred W. Schmidt, Jr., Cedar Grove, and Sylvester A. De Marx, Ridgewood, N. J., assignors to Allen B. Du Mont Laboratories, Inc., Clifton, N. J., a corporation of Delaware
Original application June 20, 1951, Serial No. 232,537, now Patent No. 2,767,381, dated October 16, 1956. Divided and this application February 29, 1956, Serial No. 568,954
1 Claim. (Cl. 336—77)



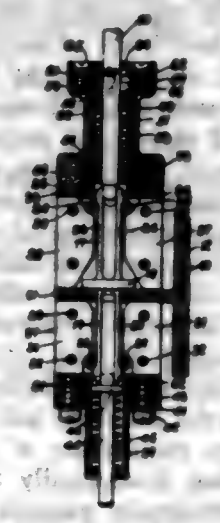
Electrical tuning apparatus comprising an insulative cylinder, a coil of conductive material formed in a spiral shape and positioned adjacent the outer surface of said cylinder, at least one conductive member of ferrous material positioned adjacent the surface and occupying a portion of the periphery of and rotatable with said cylinder in axial alignment with said coil, at least one conductive member of non-ferrous material positioned in axial alignment with the position of said coil and adjacent said coil, said non-ferrous conductive member occupying a portion of said periphery of the cylinder other than the position occupied by said ferrous conductive member, some of said conductive members being radially threaded into said cylinder and having an adjustment means positioned on the outer surface thereof, and said coil having an opening near the center thereof through which an adjustment tool may be temporarily inserted to engage said adjusting means on said threaded members.

2,859,421
ADJUSTABLE TRANSFORMER, PREFERABLY FOR CURRENT SUPPLY OF X-RAY INSTALLATIONS
Ole Lütz Heppermann, Charlottenlund, Denmark, assignor to Holger Andreasen, Copenhagen, Denmark, a Danish firm
Application January 30, 1957, Serial No. 637,212
2 Claims. (Cl. 336—147)



1. An adjustable transformer, preferably for current supply of X-ray installations and for a minimum line voltage, for example 110 volts, and at least one higher line voltage, for example 220, 380, 440 and 480 volts, and with fixed or adjustable taps, partly for means, for example for other transformers which feed the X-ray tube with filament current and high tension, partly for the auxiliary devices of the installation such as relays and oil pump, and of the kind having an inner and an outer winding, both substantially uniformly distributed on an annular iron core, and in which the outer winding is accessible by means of at least one adjustable tap, for example a sliding contact resting against a stripped part of the outer winding, or against a number of taps distributed along this winding, the outer winding being by means of another tap divided into two winding sections, of which the first one has a substantially larger number of windings than the other winding section, characterized in that the other winding section consists of a blindly terminated winding projecting from the other tap, the inner winding having a number $p+1$ winding sections the ends of which lead to outer terminals and of which at least the p winding sections each have a number n of turns equal to the number of turns in the first winding section of the outer winding, whereas a winding section No. $p+1$ is located at one end of the inner winding and has a number of turns equal to n times the ratio between the difference of the two highest line voltages and the lowest line voltage.

2,859,422
DISCONNECTS FOR AIRCRAFT
John V. Olivera, Greenwich, Conn., assignor to The Aerotec Corporation, Greenwich, Conn., a corporation of Connecticut
Application May 7, 1957, Serial No. 657,550
14 Claims. (Cl. 339—16)

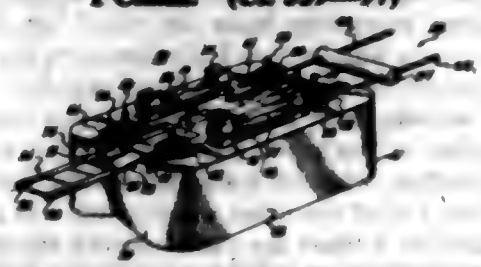


1. A disconnect for the electric connections and oxygen supply to aircraft personnel which comprises an upper disconnect block to be seated on a horizontal plate and having a transverse slot extending upwardly from its lower surface and a vertical bore extending downwardly to said slot, a pair of horizontally spaced detent holding elements in said slot, a lower disconnect block to be held to the under surface of a horizontal plate and having a transverse slot extending downwardly from its upper surface and a bore extending upwardly to said slot, a pair of horizontally spaced detent holding elements in said slot, a detent element comprising a flat plate having a widened mid portion to rest on a horizontal plate and bifurcated above and below said widened portion to form a pair of spaced, upwardly extending legs to enter the slot of said upper block and a pair of spaced, downwardly extending, legs to enter the slot of the lower block, the upper and lower ends, respectively, of said upper and lower legs being widened sidewise outwardly so that they may pass between the detent holding elements of their respective blocks upon inward springing of the legs and be engaged by said elements upon passing said detent holding elements, an upper detent locking and release rod vertically slidable in the bore of said upper disconnect block and spring pressed to enter between the upper legs of said detent when said upper ends are above said detent holding elements and a lower detent locking and release rod vertically slidable in the bore of the lower disconnect block and spring pressed to enter between the ends of the lower detent legs when said ends are below the detent holding element of the lower disconnect block.

power amplifier for passing only those signals of said for rendering said positive bias source ineffective and

2,859,423
ELECTRICAL CONNECTOR FOR TWIN LEAD-IN LINE

Abraham Hyman, New York, N. Y.
Application April 6, 1954, Serial No. 421,371
1 Claim. (Cl. 339—97)



A terminal block for twin lead in lines comprising, an electrical non-conducting body, parallelepiped in shape, having an end-face-to-end-face longitudinal axis, said body having a top surface equipped with a raceway at each end thereof, a pair of terminal posts mounted on said body in the region of each raceway, and a washer engaged to each terminal and having a rim of downwardly projecting saw-tooth, each of said raceways having a curvilinear recess, a pair of ledges, a pair of washer undercuts, and a pair of grooves, said recess projecting downwardly from said top surface and extending longitudinally along said axis from an end face of said body to a terminating wall, said wall lying in a plane perpendicular to said axis, each ledge of said pair being at an opposite ledge of said recess and projecting downwardly from said top surface to effect a step shape in cross-section, said ledges extending longitudinally from the end face of said body and terminating at said wall, one pair of posts being located intermediate said end face and said wall with each post of said pair adjacent a correlated ledge, each washer undercut surrounding a correlated post and being adapted to seat the washer engaged thereon, said undercut communicating with the ledge adjacent thereto whereby the inner side of the washer rim is able to project onto the surface of the adjacent ledge, said grooves projecting downwardly from said top surface and being longitudinally parallel to said axis from said end face to a point beyond said posts, each of said grooves extending along the outer side of a correlated post and communicating with the undercut thereat whereby the outer side of the saw-tooth rim of the washer engaged by said correlated post projects onto the bottom surface of said groove, whereby said washers co-operate with the surrounding raceway to effect electrical connection with and clamping of a twin-lead line inserted into said raceway.

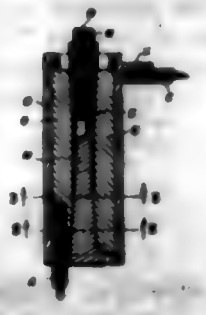
2,859,424
CONNECTOR FOR STRANDED CABLES

Arthur A. Berndt, Chicago, Ill., assignor to Electroline Company, Chicago, Ill., a corporation of Illinois
Application February 7, 1956, Serial No. 564,009
6 Claims. (Cl. 339—248)

1. A clamp for stranded wire cable, comprising a casing having a tapered end portion, a cage within the tapered end portion of wedge shape in longitudinal section, said cage thereby providing sloping exterior surfaces complementary to the taper of the end portion, and gripping jaws within the said cage movable relative to the cage, the gripping jaws being constructed and arranged to grip and hold the center wire of the cable, and said cage functioning as a gripping member and being operative to grip the outer wires between the same and the tapered walls of the end portion.

2,859,425
ELECTRICAL CONNECTION WITH TAPERED PLUG

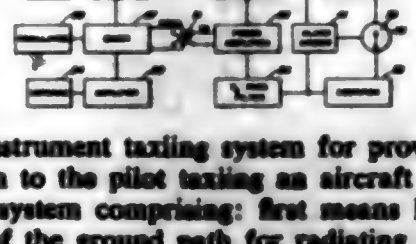
Thomas Alfred Felton, Newton, Porthcawl, Wales, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
Application December 21, 1955, Serial No. 554,447
Claims priority, application Great Britain January 8, 1955
10 Claims. (Cl. 339—278)



1. An electrical connector for connecting two conductors at least one of which is a flexible composite cable conductor which comprises a contact sleeve, means forming part of said contact sleeve for attaching said sleeve to one of the conductors, a contact plug fitting closely inside the contact sleeve, the contact plug having an unthreaded longitudinal bore which tapers from each end to a minimum cross-section substantially in the center of the length of the plug and being split longitudinally into at least two segments, each segment having means forming a part thereof for attaching the segment to part of the other conductor which is a composite flexible conductor, a tapered member shaped to fit the taper at one end of the bore, a second tapered member shaped to fit the taper at the other end of the bore, and means for forcing the two tapered members towards each other when in position in the bore whereby the segments of the contact plug are forced outwards against the inner surface of the contact sleeve, thereby making the electrical connection.

2,859,426
INSTRUMENT TAXIING SYSTEM

James E. Davis, Arcadia, Calif.
Application April 18, 1956, Serial No. 579,120
6 Claims. (Cl. 340—32)
(Granted under Title 35, U. S. Code (1952), sec. 266)



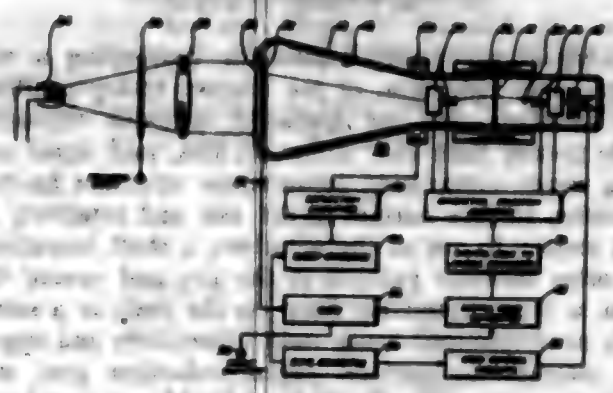
3. An instrument taxiing system for providing taxiing information to the pilot taxiing an aircraft on a ground path, said system comprising: first means located along one edge of the ground path for radiating a signal of a first frequency, second means located along an opposite edge of said ground path for radiating a signal of a second frequency, a first antenna located near one width extremity of the taxiing aircraft, a second antenna located near the other width extremity of the taxiing aircraft, a dual channel power amplifier, switch means having two switch positions and when in one switch position for connection the output of said first antenna to one channel of said power amplifier and for connecting the output of said second antenna to the other channel of said power amplifier and when in the other switch position for reversing these connections, a first filter connected to the output of one channel of said power amplifier for passing only those signals of said first frequency, a second filter connected to the other channel of said

of cells on the record is maintained as data is recorded

2,859,432

power amplifier for passing only those signals of said second frequency, indicator means connected between the outputs of said first filter and said second filter for providing an indication of the difference in magnitude between the outputs of the respective filters, and an alarm circuit connected between the outputs of said filters for providing an alarm when either of the outputs from said filters is zero when the airplane is taxiing.

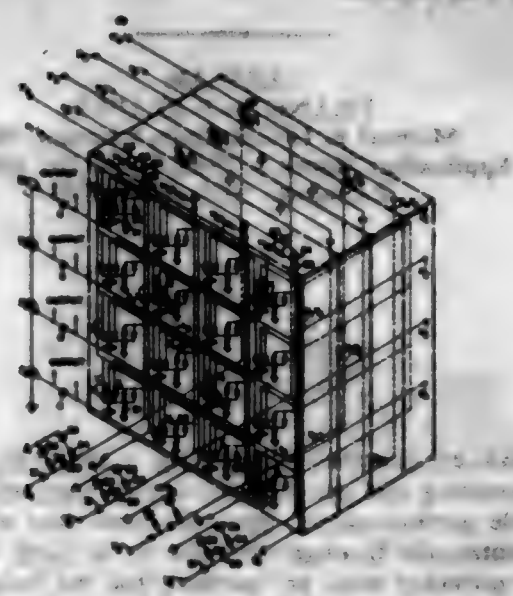
2,859,427
IMAGE-TO-CODE TRANSLATION SYSTEM
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware
Application June 11, 1957, Serial No. 664,945
6 Claims. (Cl. 340—149)



6. A system for converting predetermined images into coded information comprising in combination, a cathode ray tube capable of generating and displaying a plurality of predetermined images upon a target, the tube including the target, the target in turn comprises an optically transparent electrically conducting layer disposed upon the tube and a light radiation responsive layer disposed upon the conducting layer, the responsive layer intercepting the images, means adapted to optically project at least one of the predetermined images from a source, projecting the image through the conducting layer onto the responsive layer, means adapted to actuate the tube and effect generation and display of the predetermined images, which actuating means includes a code generator, and means connected with the target and the code generator, which last stated means is adapted to cause coded information output of the generator therethrough upon establishment of coincidence of the images upon the target, whereby the coinciding images are converted into coded information.

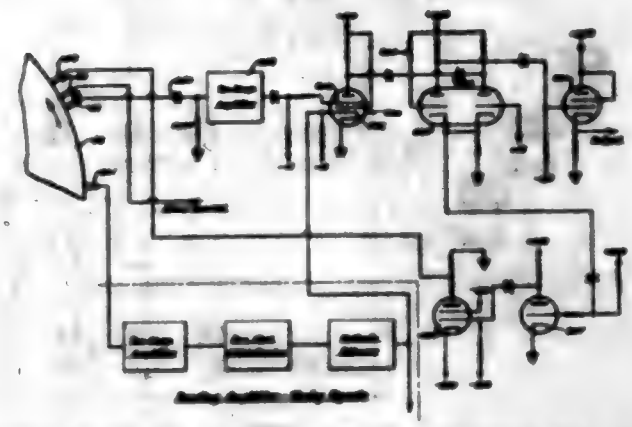
2,859,428
STORAGE SYSTEM USING FERROELECTRIC CONDENSER
Donald R. Young, Poughkeepsie, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application February 24, 1954, Serial No. 412,267
9 Claims. (Cl. 340—173)

2. A two dimensional ferroelectric storage matrix comprising a first set of input busses, a second set of overlapping input busses, and And circuit comprising a pair of diodes individually connected at one terminal to the busses of said first and second set at each bus intersection, a ferroelectric capacitor connected at one terminal to the other terminal of said diodes, a positive bias source connected to said one terminal, a negative bias source connected to said one terminal, a standard condenser coupled to the opposite terminal of said ferroelectric capacitor, read in means for selectively pulsing individual ones of said sets of busses and rendering said And circuit inoperative so that said one terminal of the ferroelectric capacitor is subjected to a positive voltage excursion from said positive bias source, readout means for rendering said positive bias source ineffective and subjecting said one terminal of the ferroelectric capacitor



to a negative voltage excursion from said negative bias source, and output circuit means connected across said standard condenser.

2,859,429
DATA STORAGE APPARATUS CONTROLS
John M. Coombe, St. Paul, Minn., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Original application May 2, 1949, Serial No. 90,941. Divided and this application January 23, 1952, Serial No. 267,737
4 Claims. (Cl. 340—174)

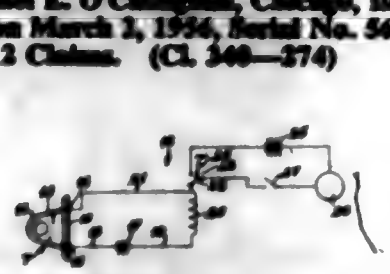


1. In recording apparatus, a movable record member, and at least two transducers, means for mounting the transducers in operative relation to the record member, means for moving the record member in a predetermined path relative to the transducers so that the transducers sweep out tracks of the record member, one of the transducers being mounted for reading data in cells spaced apart a distance *d* along the tracks while the record is moving at a predetermined relative speed, the second transducer being mounted along the track swept thereby at a location which with respect to the effective location of the first transducer in the track of the second transducer is zero times or an integral multiple 1 or greater of said spacing *d* plus a fraction thereof, and means interconnecting the first and second transducers for energizing the second transducer for digital recording in response to reading in the first transducer, said fractional spacing being selected to relate the speed of record movement to the delay of said means interconnecting the first and second transducers so that said constant cellular spacing *d* is maintained and the location

ing system, second means providing a voltage representa- output voltage of said voltage amplifier to be applied

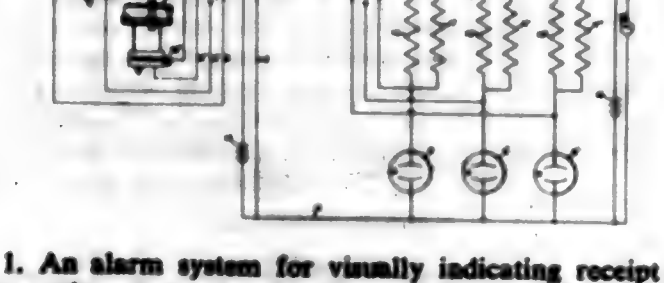
of cells on the record is maintained as data is recorded in cells in response to reading from cells while the record is in motion.

2,859,430
FRANGIBLE STAPLE
Michael E. O'Callaghan, Chicago, Ill.
Application March 2, 1956, Serial No. 569,851
2 Claims. (Cl. 340—274)



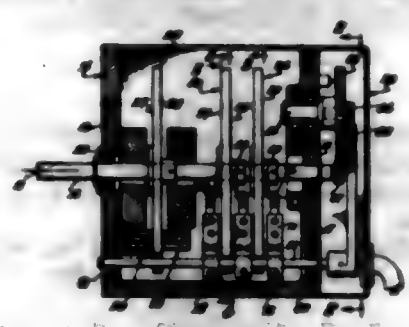
2. An eye-member comprising a relatively flat plate for mounting said eye-member upon a supporting surface, a staple portion carried upon the front face of said plate for protrusion through the slot in a hasp, said staple being provided with an aperture for the reception of a padlock, said staple being constructed of an electrical insulating material which is frangible and relatively weak with respect to impact, torsion and bending stresses and relatively strong with respect to tensional stress, an electric wire embedded in said staple and looped around said aperture, the opposite ends of said wire being exposed at the rear face of said plate.

2,859,431
VISUAL ALARM SYSTEM
Jean M. Morris, Wilmington, Del., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application December 10, 1956, Serial No. 627,519
5 Claims. (Cl. 340—324)



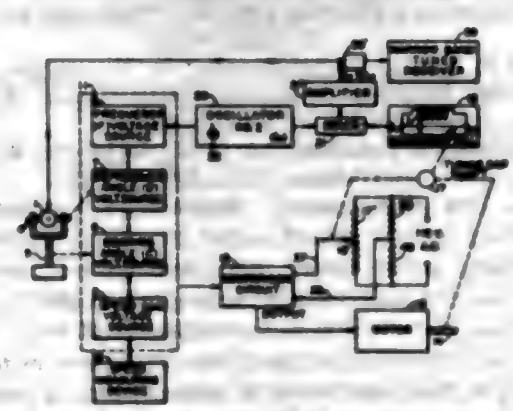
1. An alarm system for visually indicating receipt of any major alarm signal and, separately, receipt of any minor alarm signal in the absence then of a major alarm signal, which comprises a gas-filled diode glow tube characteristically admitting, upon impression of sufficient potential, of electrical conduction in either direction between its electrodes attended by a visible gas glow induced only at that electrode then serving as the cathode, means responsive to each received significant major alarm signal by activating the impression of an alternating-current potential across said bulb sufficient to produce bi-directional conduction therethrough, thereby inducing gas glow at both electrodes of said bulb and thus producing a relatively bright light constituting the major alarm indication, and means responsive to each received significant minor alarm signal by activating the impression-current potential across said bulb sufficient to produce unidirectional conduction therethrough, thereby inducing gas glow at only one of said electrodes and thus producing a relatively dim light, discernible in the absence of a major alarm indication on said bulb, constituting the minor alarm indication.

2,859,432
CODE GENERATING DEVICE
Carl P. Spaulding, San Marino, Calif., assignor, by mesne assignments, to Datex Corporation, Monrovia, Calif., a corporation of California
Application June 10, 1955, Serial No. 514,470
4 Claims. (Cl. 340—347)



1. Signal generating means for developing a binary digital code indication of the relative rotary position of two members that are mutually rotatable through an angle greater than 360° about an axis, said signal generating means comprising commutator structure having its operating surface normal to the axis and rotatively fixed with respect to one of the members, a shaft journaled on the other member parallel to the axis and spaced therefrom, a brush rotatively fixed on the shaft at a substantially predetermined brush radius therefrom and engaging the commutator surface, speed reduction gear means drivingly connecting the shaft and said one member and acting to rock the shaft through a predetermined acute angle in response to relative rotation of the members through the said angle greater than 360°, thereby causing the brush to describe a spiral path on said commutator surface that extends without overlapping through the said angle greater than 360°, the commutator surface comprising a series of alternating conductive and non-conductive commutator segments extending along the said path, the boundaries between adjacent segments of the series lying substantially on circular arcs having a common radius of curvature equal to said brush radius and having respective centers angularly distributed about said axis at a common radial distance equal to said spacing between the shaft and the axis.

2,859,433
OWN DOPPLER NULLIFIER
Harold L. Saxton and Sanford P. Thompson, Washington, D. C.
Application December 29, 1950, Serial No. 203,462
4 Claims. (Cl. 343—8)
(Granted under Title 35, U. S. Code (1952), sec. 266)



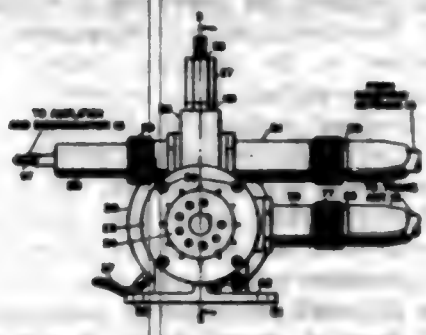
1. In an echo ranging system including a transmitter and a receiver adapted to be moved relative to a given object thereby giving rise to a Doppler frequency shift in the received energy, an apparatus for cancelling the Doppler frequency shift in the received energy due to movement of the ranging system comprising first means providing a voltage representative of and proportionate to the original propagated frequency in said echo rang-

heading and said drift angle to obtain the direction of

2,859,434

ing system, second means providing a voltage representative of and proportionate to the direction in space of the reflecting surface from said transmitter, third means operable to provide a voltage representative of and proportionate to the velocity of the transmitter, voltage combining means connected to said first, second and third means providing a voltage representative of and proportionate to the product of said first, second and third means, frequency correcting means responsive to the output of said voltage combining means and adapted to compensate for the relative motion of said transmitter with respect to said given object.

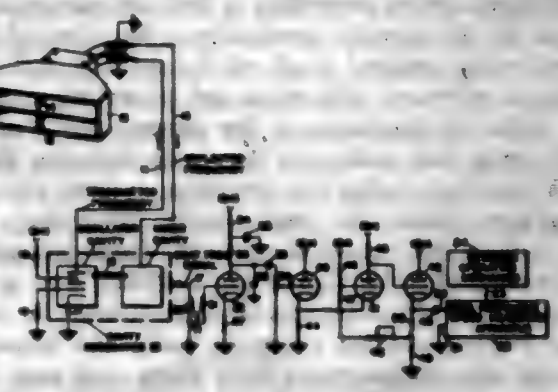
2,859,434
SPEED MEASURING APPARATUS FOR RAILROAD CLASSIFICATION YARDS
John H. Auer, Jr., and Hugh C. Kendall, Rochester, N. Y., assignors to General Railway Signal Company, Rochester, N. Y.
Application November 8, 1955, Serial No. 545,785
2 Claims. (Cl. 343—8)



2. In a cavity resonator for use in a Doppler type speed measuring system, a cylindrical shell, an electron tube for generating high frequency oscillations in said shell, means for transmitting said oscillations towards moving vehicles and for receiving a portion of the signal reflected from said vehicles, an injection probe comprising a rod perpendicular to the axis of said shell and being axially adjustable to permit variation of its insertion into said shell, a mixer comprising a coaxial line lying transverse to and in close proximity to said injection probe and having said reflected signal applied thereto, a crystal rectifier connected in series with the inner conductor of said coaxial line and having the alternating current frequency appearing on said coaxial line applied to its one terminal, a choke contacting the other end of said crystal rectifier and comprising an inner rod and encircling cylinder connected together at the end contacting said rectifier, said choke being in length approximately equal to one quarter of the wave length of said frequency to thereby provide a low impedance to the rectified high frequency signals appearing at said opposite end of said rectifier, whereby an audio signal having its frequency proportional to the speed of said vehicles is provided at the opposite end of said choke.

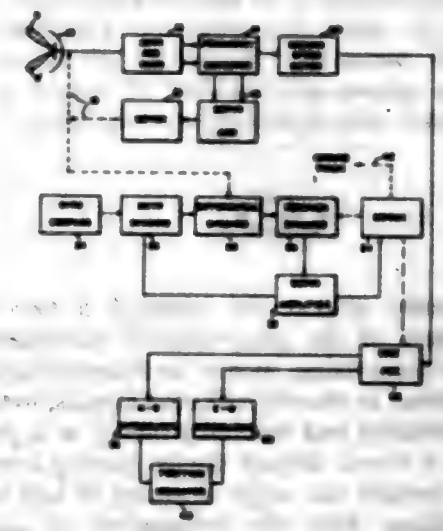
2,859,435
SPEED MEASURING SYSTEM
John H. Auer, Jr., and Hugh C. Kendall, Rochester, N. Y., assignors to General Railway Signal Company, Rochester, N. Y.
Application November 8, 1955, Serial No. 545,786
4 Claims. (Cl. 343—8)

1. In a speed measuring system for a railroad car classification yard, circuit means for providing a signal voltage having its frequency proportional to the velocity of a moving car, said voltage at times varying rapidly over a large range of amplitude, amplifying circuit means for said signal voltage comprising a voltage amplifier electron tube having said signal voltage applied to its control grid-cathode circuit, an output tube having the output voltage of said voltage amplifier to be applied directly to its control grid, biasing circuit means for said voltage amplifier tube providing a bias level to cause clipping of said signal voltage when of large amplitude to occur at voltage levels substantially equi-distant above and below the average value of said voltage, said biasing



circuit means being governed by the output voltage of said output tube to decrease the negative grid-cathode bias voltage of said voltage amplifier tube in response to an increase in output of said voltage amplifier tube to thereby maintain said base line of voltage substantially constant in response to variations in operating conditions of said tubes.

2,859,436
SELF-CONTAINED RADIO NAVIGATION SYSTEM
William J. Tull, White Plains, N. Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of War
Application March 4, 1946, Serial No. 651,925
3 Claims. (Cl. 343—9)



1. A self-contained radio navigation system for use in an aircraft comprising a positionable antenna having two directional beams symmetrically disposed with respect to the axis of orientation for illuminating the earth beneath the aircraft to be navigated by said system, radio means associated with said antenna for transmitting exploratory pulses and receiving ground returned echoes, means for measuring the frequency of the amplitude modulation of said ground returned echoes for each said beam, means associated with said frequency measuring means for positioning said antenna in response to the output of said frequency measuring means until the frequencies of modulation for the beams are equal, means associated with said frequency measuring means for determining the ground speed of the aircraft, means for establishing a fixed azimuth reference direction, means for determining the heading of said aircraft with respect to said reference direction, means associated with said antenna and said positioning means for determining the drift angle of said aircraft, means for combining said

placement of said antenna for phase shifting said sine pulses being characteristic of said airport, and the time

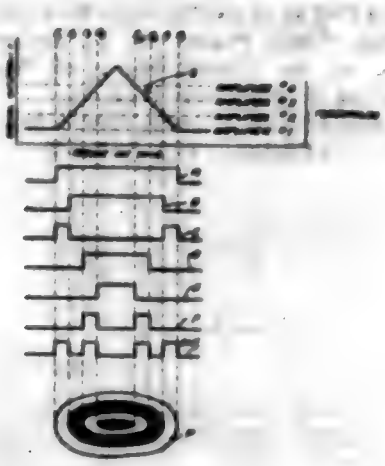
heading and said drift angle to obtain the direction of the ground track of said aircraft, signal proportioning means, means for positioning said proportioning means in response to the output of said combining means in accordance with said determined ground track, means for applying a signal to said proportioning means that is proportional to the ground speed of said aircraft, said proportioning means providing a first output signal proportional to the ground speed times the sine of the angle between the ground track of the aircraft and said fixed azimuth reference directions and providing a second output signal proportional to the ground speed of said aircraft times the cosine of the angle between the ground track and said reference direction, a first and a second integrator circuit for individually integrating said first and said second signal respectively from said proportioning means whereby signals are obtained that are proportional to the displacement of said aircraft in two directions from a selected reference point and means for displaying the displacement data from said two integrator circuits on a suitable indicator.

2,859,437

RADAR CONTOUR MAPPING DEVICE

David Atlas, Newton Center, Mass.

Application October 12, 1954, Serial No. 461,944
12 Claims. (Cl. 343—11)
(Granted under Title 35, U. S. Code (1952), sec. 266)



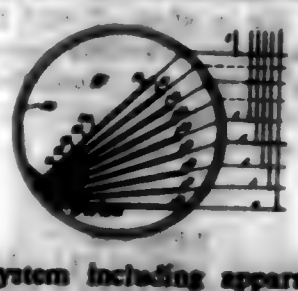
1. A radar system for plotting a two dimensional contour map of the geographical distribution of storm intensities comprising, means to transmit electromagnetic signals, means to receive reflected signals, means to orient said transmitting and receiving means in a predetermined direction, a visual display device having a writing beam, means to control the angle of sweep of said writing beam in accordance with the orientation of said receiving means, and input terminal connected to means for controlling the intensity of said writing beam in accordance with signal intensity, an amplifier-limiter channel connected between said receiving means and the input to said beam intensity controlling means, first means independent of said amplifier-limiter channel for generating a control voltage, means applying said control voltage to a portion of said amplifier-limiter channel as a bias so as to cause said channel to pass signal to said visual display means in response only to input signals within one boundary of a two-boundary predetermined class of signal intensity levels, second means to cause said amplifier-limiter channel to pass signal to the input terminal of said visual display means in response only to input signals within the second boundary of said two-boundary class, said visual display device including means to display said signal applied to said intensity control input terminal in the form of isoecho intensity contour lines corresponding to the two boundaries of said predetermined class of signal intensity levels.

2,859,438

RANGE-HEIGHT PARALLEL-TYPE RADAR SYSTEM

Richard H. Reed, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application January 31, 1956, Serial No. 494,964
7 Claims. (Cl. 343—11)



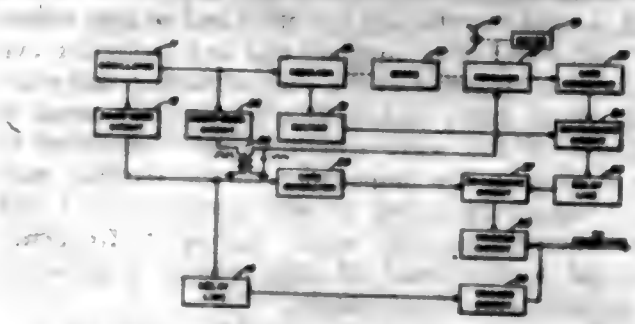
1. A radar system including apparatus for radiating an exploratory microwave pulse over a broad angle; a plurality of receiving channels for receiving and amplifying reflected energy within predetermined portions of said broad angle in response to the exploratory pulse; an indicator tube having a viewing screen including a transparent member for providing a support surface, a number of fluorescent strips corresponding, respectively, to the number of the receiving channels and disposed on said support surface in a manner to correspond to the predetermined portions of the broad angle, and a non-fluorescent conductive layer disposed over the remaining portion of said support surface; means for producing a sheet electron beam; means for deflecting said sheet electron beam over said fluorescent strips in synchronism with the exploratory pulse; and a plurality of longitudinal conductors disposed coextensively along said fluorescent strips and coupled, respectively, to the corresponding receiving channel for simultaneously directing the electrons of said beam towards each fluorescent strip in numbers representative of the magnitude of the respective output signal from the corresponding receiving channel.

2,859,439

BEARING SYNCHRONIZER

George V. Rodgers, California, Md., assignor to the United States of America as represented by the Secretary of the Navy

Application June 26, 1956, Serial No. 594,069
6 Claims. (Cl. 343—106)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a transmitting system having a rotating antenna and modulator, a pulsing circuit for providing an input train of pulses to the modulator, said circuit comprising: means for producing an oscillating wave; means responsive to said oscillating wave for producing reference pulse groups at a rate which is a sub-multiple of the frequency of said oscillating wave; means responsive to the rotation of said antenna and said oscillating wave for producing basic bearing pulses at the frequency of said oscillating wave which are phase shifted from said oscillating wave by a multiple of the degrees of the angular displacement of said antenna from a preselected reference line; means for producing a sine wave at a frequency which is a sub-multiple of the frequency of said oscillating wave, this sub-multiple being the inverse of said multiple; means controlled by the angular dis-

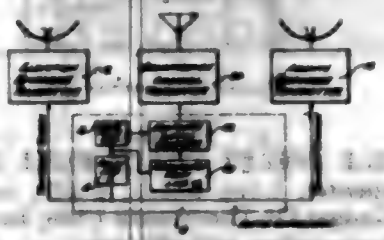
placement of said antenna for phase shifting said sine wave by the same number of degrees that said antenna is displaced from said preselected reference line; means for generating a short gate when said phase-shifted sine wave is at a preselected point in its cycle, the length of each short gate being no longer than the period between said basic bearing pulses; means responsive to said basic bearing pulses and said short gates for producing an output of the single basic bearing pulses that are coincident with the short gates; means energized by said single basic bearing pulses for producing a group of bearing pulses for each single basic bearing pulse; means for gating only two groups of bearing pulses after each group of reference pulses; and means for combining said gated groups of gearing pulses with said groups of reference pulses.

2,859,440

IDENTIFICATION SYSTEM FOR AIRPORTS

Nicholas A. Begovich and Peter J. Kahrilas, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application March 2, 1956, Serial No. 569,852
4 Claims. (Cl. 343—108)



1. In an instrument approach and landing system including apparatus for radiating a sequence of electromagnetic intelligence pulses throughout a selected approach volume to an airport runway whereby an aircraft can determine its position with respect to the runway from the characteristics of the pulses incident thereon, said apparatus having means for producing first and second coding pulses prior to each one of said intelligence pulses, the time interval, τ_3, between said first and second coding pulses being characteristic of said airport, and the time interval $(\tau_1-\tau_2)$, between the last of said coding pulses and the next succeeding intelligence pulse being the same for each airport in a particular vicinity, and means for transmitting said coding pulses to said aircraft, a device disposed on board said aircraft comprising: receiving apparatus for receiving said sequence of electromagnetic intelligence pulses, a delayed gate circuit responsive to a coding trigger coupled to said receiving apparatus for gating the output signal therefrom, said gated output commencing at a time substantially equal to $(\tau_1-\tau_2)$ after each coding trigger, means for receiving said first and second coding pulses, and means responsive to said coding pulses for producing said coding trigger at the time of occurrence of said second coding pulse when the time interval between said first and second coding pulses is equal to τ_3.

2,859,441

AUTOMOBILE RADIO ANTENNA

Jacob Rosenbaum, Spring Valley, N. Y.

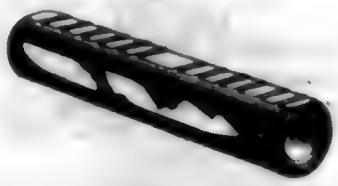
Application June 21, 1957, Serial No. 667,184
4 Claims. (Cl. 343—712)

1. In combination with an automobile having a body including a trunk, an antenna comprising: a metallic lid for said trunk, latching means and hinge means mechanically connecting the lid to the automobile body, means for completely insulating said trunk lid from the body, said means for insulating said trunk lid including insulating means in the latching means and hinge means, and a lead wire connected to the trunk lid.

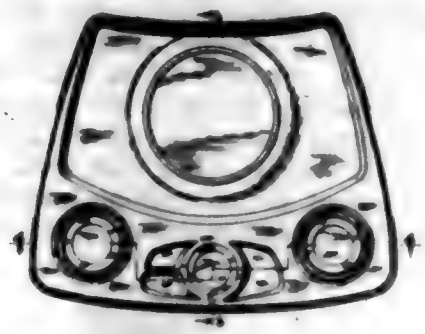
DESIGNS

NOVEMBER 4, 1958

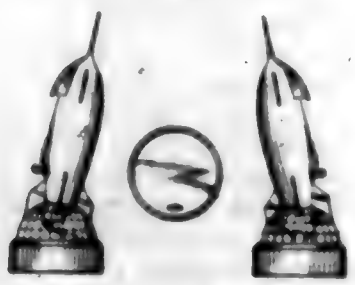
183,821
CABLE SPLICING COMPRESSION SLEEVE
Carroll A. Badeau, Westfield, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application December 2, 1957, Serial No. 48,749
Term of patent 14 years
(Cl. D26—1)



183,822
TRAY OR SIMILAR ARTICLE
A Baker Bernhart, New York, N. Y., assignor to The Lucent Corporation, New York, N. Y.
Application May 26, 1958, Serial No. 51,061
Term of patent 14 years
(Cl. D44—10)



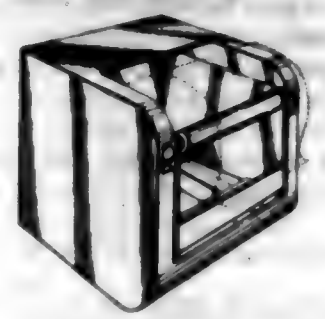
183,823
TOY SAVINGS BANK
John Berzac, St. Clair Shores, Mich.
Application November 18, 1957, Serial No. 48,522
Term of patent 14 years
(Cl. D34—11)



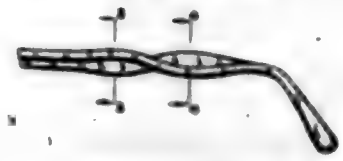
183,824
TENSIONING STRAP FOR A TRAMPOLINE OR SIMILAR ARTICLE
Joseph H. Bohrer, Sr., Erie, Pa.
Application July 31, 1957, Serial No. 47,172
Term of patent 14 years
(Cl. D34—5)

183,825
BUILDING
Robert Browne, Miami, Fla., assignor to Ar-Tik Systems, Incorporated, Miami, Fla., a corporation of Indiana
Application August 23, 1957, Serial No. 47,482
Term of patent 14 years
(Cl. D13—1)

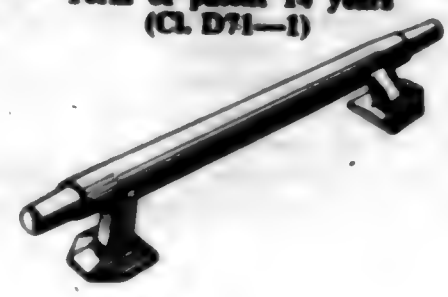
183,826
DOUBLE TOILET TISSUE ROLL HOLDER
Sydney Carpenter, Long Beach, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application October 13, 1955, Serial No. 38,348
Term of patent 14 years
(Cl. D4—3)



183,827
EYEGLASS TEMPLE
Avis Jean Coval, Dayton, Ohio, assignor to The Univis Lens Company, Dayton, Ohio, a corporation of Ohio
Application June 13, 1957, Serial No. 46,578
Term of patent 14 years
(Cl. D57—1)

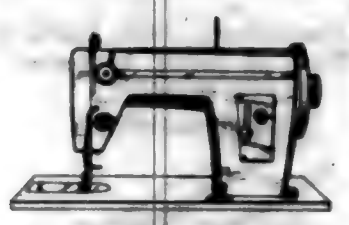


183,828
MARINE STERN HANDLE
Jack De Young, Grand Haven, Mich., assignor to Aqua Flair Marine Equipment Company, Grand Rapids, Mich., a corporation of Michigan
Application August 28, 1957, Serial No. 47,461
Term of patent 14 years
(Cl. D71—1)



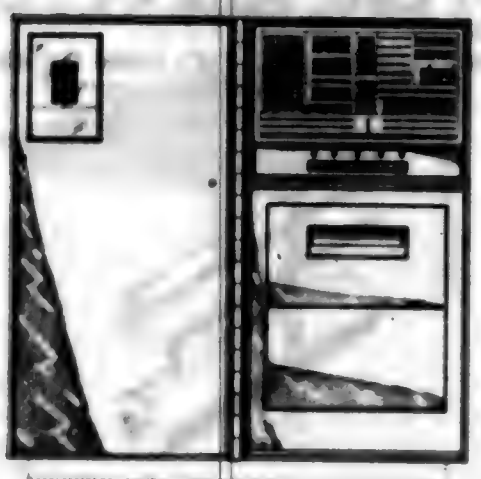
183,829
DESK SET BASE
Donald W. Deenen, Janesville, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Application September 16, 1957, Serial No. 47,743
Term of patent 14 years
(Cl. D74—1)

183,830
SEWING MACHINE
Philip S. Egan, Glenview, Ill., assignor to Sears, Roebuck and Company, Chicago, Ill., a corporation of New York
Application September 23, 1957, Serial No. 47,817
Term of patent 14 years
(Cl. D70—1)

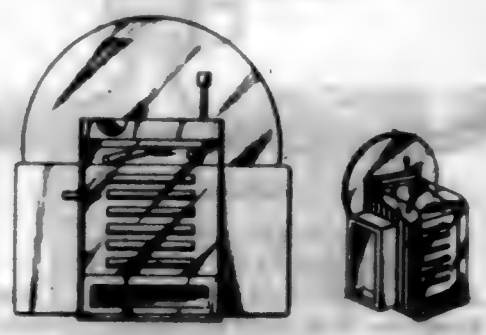


183,831
FENDER FOR AN AUTOMOBILE
Virgil M. Exner, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application July 29, 1957, Serial No. 47,110
Term of patent 7 years
(Cl. D14—6)

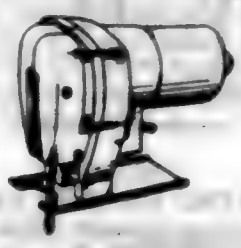
183,832
CALCULATOR CONSOLE
Richard W. Figgins, Birmingham, Mich., and Charles J. Jaworski, Wappingers Falls, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application November 29, 1956, Serial No. 43,995
Term of patent 14 years
(Cl. D16—5)



183,833
PERFUME CAPSULE VENDING MACHINE
Milton C. Fitch, San Carlos, Calif., assignor of one-half to Emily R. Goldsmith, Redwood City, Calif.
Application August 16, 1957, Serial No. 47,464
Term of patent 14 years
(Cl. D52—2)

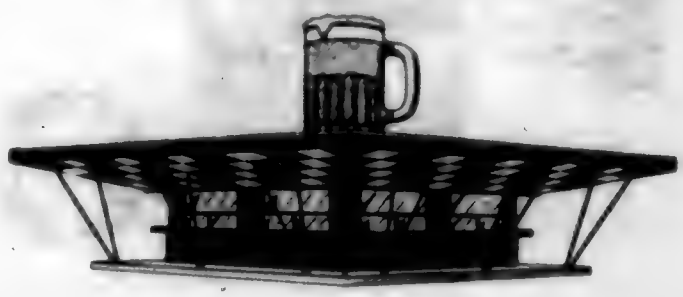


183,834
PORTABLE POWER DRIVEN RECIPROCATING HAND SAW
Harold S. Forsberg, Stratford, Conn., assignor of one-third to Lillian Virginia Velo, Orange, one-third to Natalie Anne Forsberg, and one-third to Bernice Hildegarde Streff, Stratford, Conn.
Application December 9, 1957, Serial No. 48,842
Term of patent 7 years
(Cl. D93—3)



183,835
SPACE MISSILE
Zola Fox, Verona, N. J., assignor, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware
Application April 23, 1957, Serial No. 45,836
Term of patent 14 years
(Cl. D30—1)

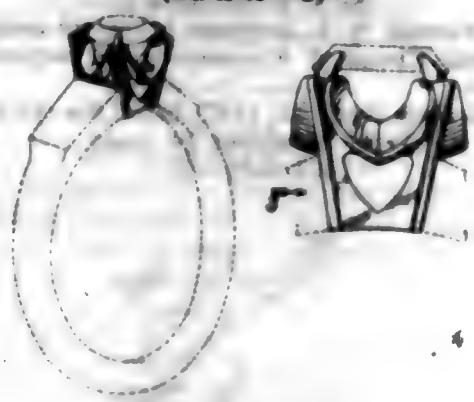
183,836
COMBINED BEVERAGE AND FOOD VENDING BUILDING
Thurman W. Gamm, New Orleans, La.
Application July 15, 1957, Serial No. 46,953
Term of patent 14 years
(Cl. D13—1)



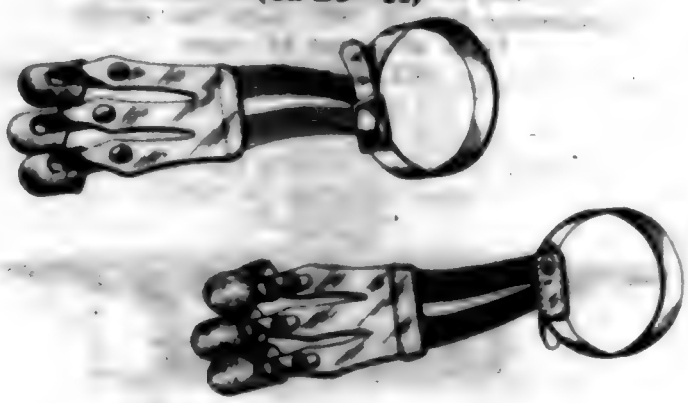
183,837
WATER SLED OR THE LIKE
Lauren E. Hammond, Janesville, Mich.
Application February 3, 1958, Serial No. 49,477
Term of patent 14 years
(Cl. D71—1)

183,838
STADIUM SEAT UNIT
Alfred C. Hoven and Walter E. Nordmark, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application December 9, 1957, Serial No. 48,829
Term of patent 14 years
(Cl. D15—8)

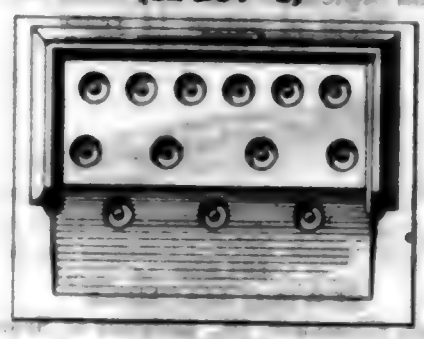
183,839
GEM SETTING OR SIMILAR ARTICLE
John L. Hudson, Detroit, Mich., assignor to David I. Babitch, Detroit, Mich.
Application September 9, 1957, Serial No. 47,657
Term of patent 14 years
(Cl. D45—1)



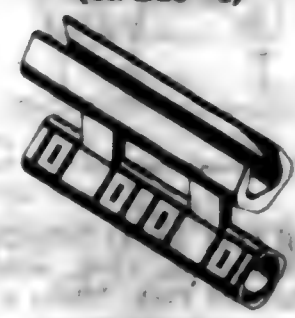
183,840
ARCHER'S GLOVE
Hicks Jones, Centerline, Mich.
Application October 28, 1957, Serial No. 48,252
Term of patent 14 years
(Cl. D3—11)



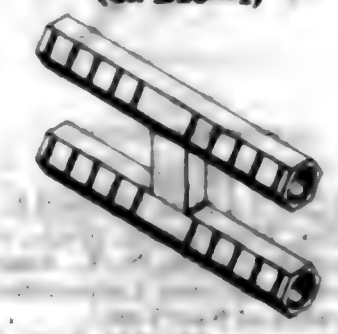
183,841
GAME BOARD
Charles B. Kenin, Fairfield, Conn.
Application April 23, 1958, Serial No. 50,592
Term of patent 14 years
(Cl. D34—5)



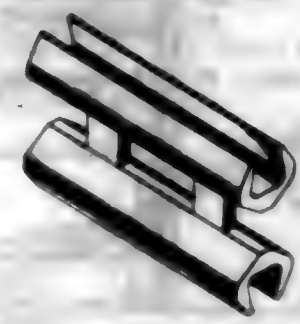
183,842
PARALLEL COMPRESSION TAP
John J. Klosin, New Brunswick, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application December 2, 1957, Serial No. 48,733
Term of patent 14 years
(Cl. D26—1)



183,843
MULTIPLE COMPRESSION CONNECTOR
John J. Klosin, New Brunswick, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application December 2, 1957, Serial No. 48,734
Term of patent 14 years
(Cl. D26—1)



183,844
PARALLEL COMPRESSION TAP
John J. Klosin, New Brunswick, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application December 2, 1957, Serial No. 48,735
Term of patent 14 years
(Cl. D26—1)

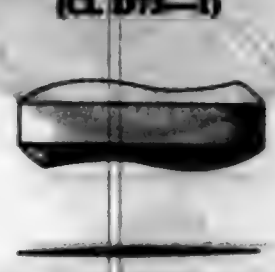


183,852
ELECTRICALLY-POWERED GOLF BAG CART

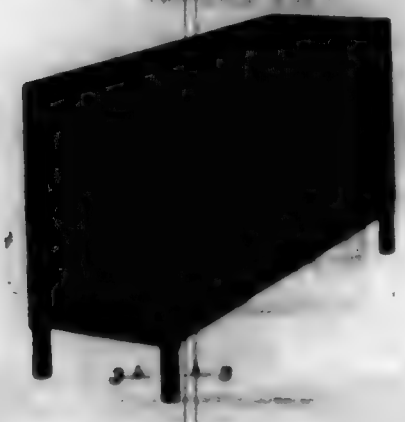
183,855
FAN OR SIMILAR ARTICLE

183,845
EYE PROTECTIVE INDUSTRIAL SPECTACLE FRAME FRONT
John N. Linstead, Chicago, Ill., assignor to Fendall Company, Chicago, Ill., a corporation of Illinois
Application October 15, 1957, Serial No. 48,101
Term of patent 14 years
(Cl. D57—1)

183,846
SOAP CAKE
Ralph E. Lippert, Cincinnati, Ohio, assignor to The Andrew Jergens Company, Cincinnati, Ohio, a corporation of Ohio
Application May 24, 1957, Serial No. 46,340
Term of patent 14 years
(Cl. D72—1)



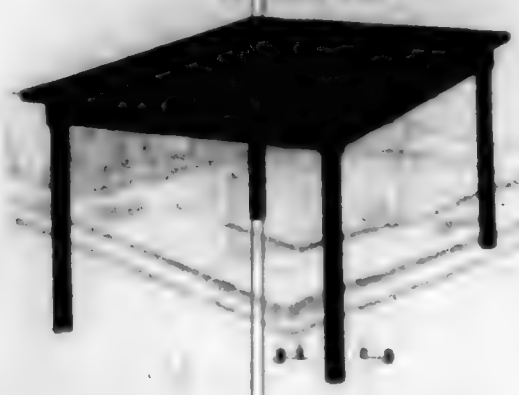
183,847
BUFFET
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N. C., a corporation of North Carolina
Application July 11, 1957, Serial No. 46,983
Term of patent 7 years
(Cl. D33—19)



183,849
TRIPLE DRESSER
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N. C., a corporation of North Carolina
Application July 11, 1957, Serial No. 46,985
Term of patent 7 years
(Cl. D33—6)

183,850
TRIPLE DRESSER
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N. C., a corporation of North Carolina
Application July 11, 1957, Serial No. 46,986
Term of patent 7 years
(Cl. D33—6)

183,845
TABLE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N. C., a corporation of North Carolina
Application July 11, 1957, Serial No. 46,984
Term of patent 7 years
(Cl. D33—14)

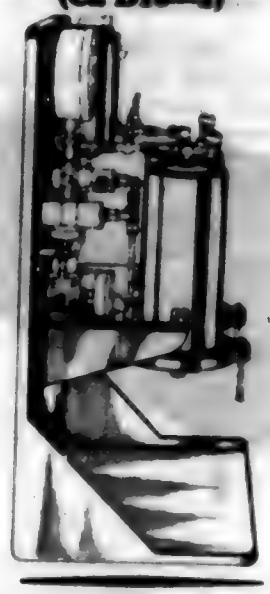


183,851
RELIGIOUS PLAQUE
Louis F. Mancini, Baltimore, Md.
Application August 15, 1957, Serial No. 47,355
Term of patent 14 years
(Cl. D29—23)

183,858
183,861

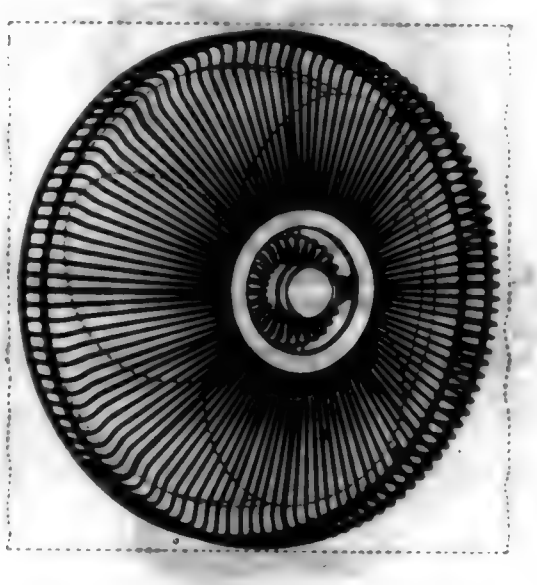
183,852
ELECTRICALLY-POWERED GOLF BAG CART
Samuel M. Marcus, Denver, Colo.
Application February 15, 1957, Serial No. 44,976
Term of patent 14 years
(Cl. D14—3)

183,853
URINALYSIS FILTER UNIT
George A. Mast and John F. Lang, Milwaukee, Wis., assignors to Spincraft, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application August 28, 1957, Serial No. 47,525
Term of patent 14 years
(Cl. D16—2)

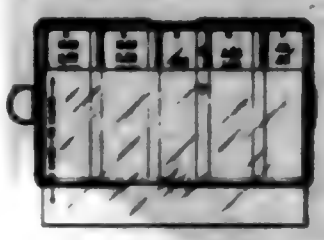


183,854
MILK CARTON HOLDER
Arthur B. Moody, Pasadena, Tex.
Application November 26, 1956, Serial No. 43,950
Term of patent 7 years
(Cl. D68—24)

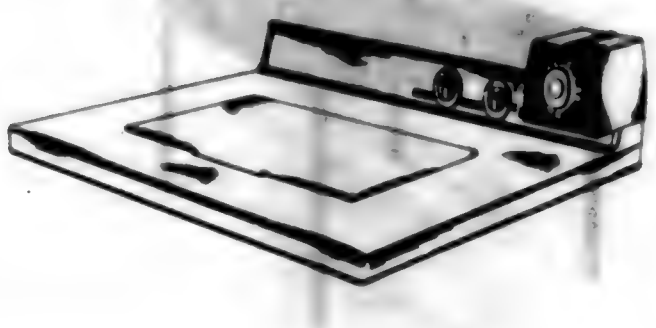
183,855
FAN OR SIMILAR ARTICLE
Walter E. Moore, Trumbull, and Robert J. Reading, Stratford, Conn., assignors to General Electric Company, a corporation of New York
Application July 22, 1957, Serial No. 47,831
Term of patent 14 years
(Cl. D26—7)



183,856
COMBINED COIN HOLDER AND BILL CONTAINER
Jesse H. Moses, Chicago, Ill., assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio, a corporation of Ohio
Application December 2, 1957, Serial No. 48,742
Term of patent 14 years
(Cl. D52—4)

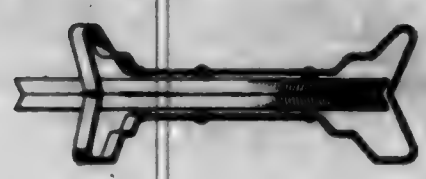


183,857
COMBINED TOP AND REAR CONTROL PANEL FOR A WASHING MACHINE OR SIMILAR ARTICLE
Stuart G. Mundt, North Syracuse, N. Y., assignor to The Murray Corporation of America, Syracuse, N. Y., a corporation of Delaware
Application June 12, 1957, Serial No. 46,564
Term of patent 3½ years
(Cl. D69—1)

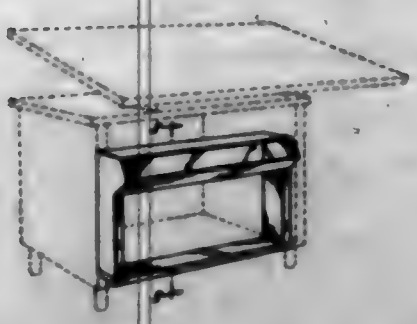


183,858
COMBINED FISH SCALER AND HOOK DISLODGER
Earl B. Newman, Toledo, Ohio
Application May 13, 1957, Serial No. 46,138
Term of patent 14 years
(Cl. D31—6)

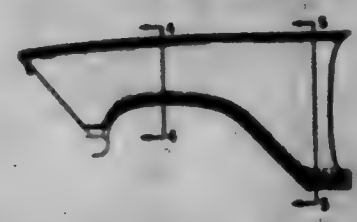
183,859
TRIVET
Joseph Palma, Jr., River Forest, and Maurice Schrueger, Chicago, Ill., assignors to Flavor-Seal Corporation, Chicago, Ill., a corporation of Illinois
Application August 27, 1957, Serial No. 47,521
Term of patent 14 years
(Cl. D44—16)



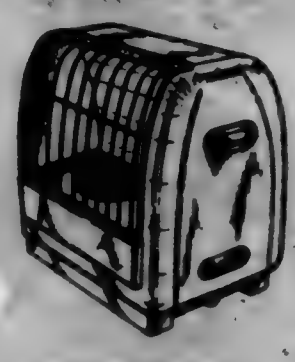
183,860
COMBINED FOOT REST AND STORAGE COMPARTMENT FOR A DRAFTING TABLE
Paul L. Paulsen and Claude G. Kannelberger, Two Rivers, Wis., assignors to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Application October 7, 1957, Serial No. 47,991
Term of patent 14 years
(Cl. D33—14)



183,861
FENDER FOR AN AUTOMOBILE
Harold W. Pilkey, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application July 29, 1957, Serial No. 47,113
Term of patent 7 years
(Cl. D14—6)



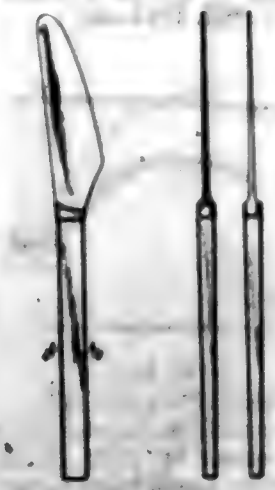
183,862
HEATING STOVE
George William Francis Richards, Chigwell, England
Application December 18, 1956, Serial No. 44,249
Claims priority, application Great Britain October 23, 1956
Term of patent 14 years
(Cl. D61—10)



183,863
PAIR OF TOY SPECTACLES HAVING REAR VISION MIRRORS
Emil H. Rittenmeier, Des Plaines, Ill.
Application August 6, 1957, Serial No. 47,348
Term of patent 7 years
(Cl. D34—15)

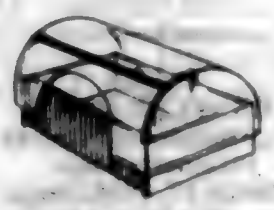
183,864
DRAPERY HOOK
Sidney Schwartz, Detroit, and Harold E. Goomber, Plymouth, Mich.
Application March 17, 1958, Serial No. 59,854
Term of patent 14 years
(Cl. D17—12)

183,865
TABLE KNIFE
Magnus L. Stephensen, Copenhagen, Denmark
Application February 4, 1957, Serial No. 44,743
Term of patent 14 years
(Cl. D22—3)

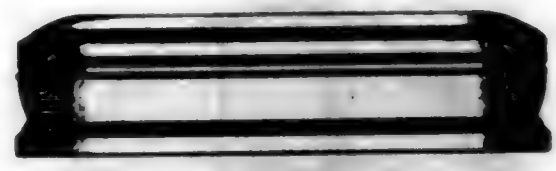


183,866
PLATE OR SIMILAR ARTICLE
Shuzo Terano, Minato-ku, Nagoya, Japan
Application May 24, 1957, Serial No. 46,334
Term of patent 7 years
(Cl. D44—15)

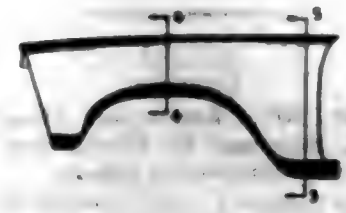
183,867
ROLL STAMP DISPENSER OR SIMILAR ARTICLE
Walter J. Wagner, Wyckoff, N. J.
Application January 7, 1957, Serial No. 44,413
Term of patent 14 years
(Cl. D52—2)



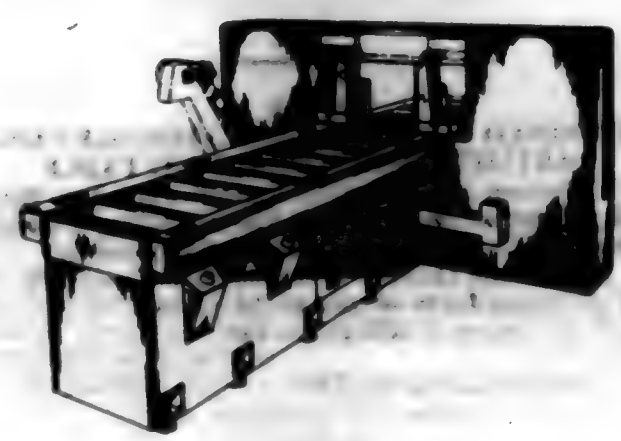
183,868
CASKET
Walter E. Wallace, Richmond, Ind., assignor to Wallace Metal Products, Inc., Richmond, Ind., a corporation of Indiana
Application December 2, 1957, Serial No. 48,736
Term of patent 14 years
(Cl. D19—1)



183,869
FENDER FOR AN AUTOMOBILE
Herbert F. Weisinger, Franklin Village, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application July 29, 1957, Serial No. 47,128
Term of patent 7 years
(Cl. D14—6)



183,870
BAND TYPE CUTOFF SAW UNIT
Charles H. Whitmore and John N. Polivka, Minneapolis, and George Scharfenberg, Glen Lake, Minn., assignors to Continental Machines, Inc., Savage, Minn., a corporation of Minnesota
Application November 14, 1957, Serial No. 48,453
Term of patent 14 years
(Cl. D93—3)



LIST OF DESIGN PATENTEES

Richards, George W. F. Heating stove. 183,862, 11–4–58, Cl. D61—10.
Rittmueller, Emil H. Pair of toy spectacles having rear
Thomas & Betts Co., The: *See*—
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Klosin, John J. 183,842.

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NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Hutcheson, Ralph O. Lawn trimmer. Re. 24,550, 11-4-58, Cl. 56—55.4.

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Barabart, A Baker, to The Lucent Corp. Tray or similar article. 183,822, 11-4-58, Cl. D44—10.
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Bohrer, Joseph H., Sr. Tensioning strap for a trampoline or similar article. 183,824, 11-4-58, Cl. D34—5.
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Pilkey, Harold W. 183,861.
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Doman, Donald W., to The Parker Pen Co. Desk set base. 183,829, 11-4-58, Cl. D74—1.
Egan, Philip S., to Sears, Roebuck and Co. Sewing machine. 183,830, 11-4-58, Cl. D70—1.
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Hudson, John L., to D. I. Babitch. Gem setting or similar article. 183,839, 11-4-58, Cl. D48—1.
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Figgins, Richard W., and Jaworski. 183,832.
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Figgins, Richard W., and Jaworski. 183,832.
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Jones, Hicks. Archer's glove. 183,840, 11-4-58, Cl. D3—11.
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Moody, Arthur B. Milk carton holder. 183,854, 11-4-58, Cl. D58—24.
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Klosin, John J. 183,843.
Klosin, John J. 183,844.
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Lubberts, John J., and Mulder. 183,849.
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Wallace, Walter E., to Wallace Metal Products, Inc. Casket. 183,868, 11–4–58, Cl. D19—1.
Weissinger, Herbert F., to Chrysler Corp. Fender for an automobile. 183,869, 11–4–58, Cl. D14—6.
Whitmore, Charles H., J. N. Polivka, and G. Scharfenberg, to Continental Machines Inc. Band type cutoff saw unit. 183,870, 11–4–58, Cl. D93—3.

Reijnk, Christiaan J. M., and R. Dolmer, to G. M. Pfaff, A. G.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF NOVEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

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Johnson, John A. 2,859,032.
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AMP Inc.: *See*—
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Achuff, George W., and C. W. Neff, to Achuff Railway Supply Co. Protective apparatus for hot boxes. 2,859,069, 11-4-58, Cl. 308—1.
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Adams, Clark E., and C. N. Kimberlin, Jr., to Esso Research and Engineering Co. Treating hydrocarbon oils with inert solids and gaseous halogen containing compounds. 2,859,174, 11-4-58, Cl. 208—114.
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Ahrendt, Merrill E., to Beckman Instruments, Inc. Shutter mechanism. 2,858,735, 11-4-58, Cl. 88—61.
Aldlin, Samuel S. Automatic feeding apparatus. 2,858,980, 11-4-58, Cl. 198—33.
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Alexandersson, Harald V., to Telefonaktiebolaget L. M. Ericsson. Friction gear. 2,858,706, 11-4-58, Cl. 74—209.
Allen, Arthur L., R. W. Anderson, and E. W. Powell, to United States of America, Atomic Energy Commission. Electrolytic preparation of UF. 2,859,156, 11-4-58, Cl. 204—1.5.
Aller, Willis F., to The Sheffield Corp. Gauging device. 2,858,615, 11-4-58, Cl. 33—174.
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Arenson, Edward B. Control for multiple outlet fluid discharge system. 2,858,850, 11-4-58, Cl. 137—625.11.
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Ashley, Kenneth D., and W. E. Sanbera, to American Cyanamid Co. Process of manufacture of silica alumina catalyst. 2,859,184, 11-4-58, Cl. 252—463.
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Bagby, John P., S. R. Freeland, and M. W. La Rue, Jr., to Bell & Howell Co. Exposure control for photographic cameras. 2,858,754, 11-4-58, Cl. 95—64.

Bailes, Richard H., and R. S. Long, to United States of America, Atomic Energy Commission. Solvent extraction process for the recovery of metals from phosphoric acid. 2,859,092, 11-4-58, Cl. 23—14.5.

Bailey, Joseph H. Engine valve operating cam. 2,858,818, 11-4-58, Cl. 123—90.

Baker, John S., to Cook Electric Co. Strand type terminal box. 2,859,290, 11-4-58, Cl. 317—99.

Baker, William A., and F. R. Beaumont. Ash tray. 2,858,956, 11-4-58, Cl. 220—18.

Balaceanu, Jean C.: *See*—
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Fried, Josef, to Olin Mathieson Chemical Corp. 21-aldo steroids. 2,859,212, 11–4–58, Cl. 260—239.55.
Fry, Benjamin W., to National Vendors, Inc. Coin apparatus. 2,858,921, 11–4–58, Cl. 194—57.
Frye, Colin M., to Dowty Mining Equipment Ltd. Hydraulic roof supports and conveyor feed jacks. 2,859,022, 11–4–58, Cl. 262—1.
Fullemann, John, to The Cooper-Bessemer Corp. Turbocharging of two-cycle engines. 2,858,666, 11–4–58, Cl. 60—13.
Funk, Lewis D. Electric injector for liquid fertilizer and method of treating irrigation water therewith. 2,858,648, 11–4–58, Cl. 47—58.
Furniss, Loree E., to The Buckeye Steel Castings Co. Railway journal bearing. 2,859,073, 11–4–58, Cl. 308—53.
Gagan, Emile, to La Spirotechnique, Societe Anonyme. Open circuit respiratory apparatus. 2,858,829, 11–4–58, Cl. 128—142.
Gaines, Eugene F. Spline for hanging tile. 2,858,584, 11–4–58, Cl. 20—92.
Garaway, Alexander. Electric resistance heater. 2,859,321, 11–4–58, Cl. 201—78.
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Chapman, Harvey G., Jr. 2,858,947.
Jackson, John K. 2,858,839.
Garvey, Bruce J., and C. Schaef, to P. R. Mallory & Co. Inc. Alkaline dry cell. 2,859,266, 11–4–58, Cl. 136—111.
Garvey, Bruce J., and C. Schaef, to P. R. Mallory & Co. Inc. Primary cell. 2,859,267, 11–4–58, Cl. 136—111.
Garvey, Louis P., and C. S. Semar, to General Motors Corp. Seat adjusting mechanism. 2,858,878, 11–4–58, Cl. 155—14.
Gasparini, Gino L.: *See—*
Davies, Gilbert E., and Gasparini. 2,859,069.
Gates, Charles W.: *See—*
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Gaugler, Edward A.: *See—*
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Gaylord, William M., Jr., H. S. Raub, and A. F. Hauch, to Union Carbide Corp. Corrosion resistant pump. 2,858,768, 11–4–58, Cl. 103—87.
Geh, Eugene H., and H. V. McMahon, to Oakite Products, Inc. Tank cleaning apparatus. 2,858,838, 11–4–58, Cl. 134—167.
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Pfister, Rudolf, and Häfliger. 2,859,211.
Geigy, J. R., A. G.: *See—*
Hindermann, Peter, Trautal, and Jung. 2,859,221.
Gemma, Charles A. Lubricated gate valve. 2,858,844, 11–4–58, Cl. 137—246.
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Randall, David I., and Martin. 2,859,219.
General Bronze Corp.: *See—*
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General Controls Co.: *See—*
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General Dynamics Corp.: *See—*
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Tobias, David L., and Sefting. 2,859,288.

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Florentine, Frank P., Jr., and Fiedler. 2,859,304.
Gundert, Eberhard, and Vibrans. 2,859,379.
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Johnston, Donald L., and Wooldridge. 2,859,271.
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Ellis, Lockwood E. 2,858,987.
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Garvey, Louis P., and Semar. 2,858,878.
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Underwood, Ralph A. 2,858,696.
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Auer, John H., Jr., and Kendall. 2,859,435.
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Ruhoff, John R., Martin, and Gerfen. 2,859,099.

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Gilbert, George B. Turning-in or folding machine. 2,858,967, 11-4-58, Cl. 223—38.

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Glassman, Vernon E., to The White Motor Co. Dry toilet with incinerator passage closure. 2,859,778, 11-4-58, Cl. 110—9.

Glickman, Richard B., to Minneapolis-Honeywell Regulator Co. Pilot generator. 2,859,263, 11-4-58, Cl. 136—4.

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Cochran, Walter M., Ott, and Lantz. 2,859,119.

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Gluckert, Frank A.: See—
Ciebelli, Mario T., and Gluckert. 2,858,155.

Glutting, Earl A. Paring and slicing knives. 2,858,610, 11-4-58, Cl. 30—279.

Goetz, Alexander, and H. E. Karig, to Dr. M. Fallco. Methods for the treatment of industrial aerosols. 2,858,902, 11-4-58, Cl. 183—121.

Goldman, David A. Vector summer. 2,858,981, 11-4-58, Cl. 235—61.

Goldsmith, Michael N. G., to North American Philips Co., Inc. Sawtooth voltage generator. 2,859,341, 11-4-58, Cl. 250—27.

Gomersall, John R., to McGraw-Edison Co. Extension hanger for cabinet drawer. 2,859,070, 11-4-58, Cl. 308—3.8.

Goodfriend, David J. Carbohydrate food comprising 0.66 to 10 percent urea. 2,859,113, 11-4-58, Cl. 99—1.

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Gorman, John E. Cake dummy and blank therefor. 2,858,630, 11-4-58, Cl. 40—126.

Gow, Arthur E., and P. S. Madsen, to The Seamless Rubber Co. Football having a securely grippable laceless surface. 2,859,040, 11-4-58, Cl. 273—65.

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Graham, George C., Jr., to Personal Products Corp. Bending oblong shapes. 2,858,831, 11-4-58, Cl. 128—285.

Graham, Peter J., and G. M. Whitman, to E. I. du Pont de Nemours and Co. Aminoalkyl substituted dicyclopentadienyliron compounds and their preparation. 2,859,233, 11-4-58, Cl. 260—429.

Gray, Samuel M., J. O. Fellows, and R. F. Reed, to Sylvania Electric Products Inc. Fuse for incandescent lamp. 2,859,281, 11-4-58, Cl. 218—74.

Greco, Guido, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process for the production of synthesis gas without catalysts. 2,859,102, 11-4-58, Cl. 48—196.

Greenwood, Earle, F. C. Heitz, and E. L. Meinders, to Sangamo Electric Co. Remote indicating register for meters. 2,858,982, 11-4-58, Cl. 235—91.

Greiner, Harry: See—
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Grieve, Alexander, K. B. Randall, and M. M. Hutchinson, to The British Thomson-Houston Co. Ltd. Ignition and fuel supply system for reaction chambers. 2,858,670, 11-4-58, Cl. 60—39.14.

Griffith, Leonard F., to General Controls Co. Multi-positional control valve. 2,858,849, 11-4-58, Cl. 137—620.

Grigger, John C., to Pennsalt Chemicals Corp. Shielding means for effecting uniform plating of lead dioxide in the formation of lead dioxide electrodes. 2,859,166, 11-4-58, Cl. 204—279.

Grimes, Warren G. Dirigible extendible and retractable aircraft landing light. 2,859,331, 11-4-58, Cl. 240—7.7.

Grisage, Claude M., to The Ballard Co. Machine tool controller. 2,859,290, 11-4-58, Cl. 200—18.

Griswold, Frederick D., to Lambert Brake Corp. Combined wheel and disc brake assembly and actuator means therefor. 2,858,912, 11-4-58, Cl. 188—196.

Grocery Store Products Co.: See—
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Gruner, Garrett, to The Regents of the University of Michigan. Circuitry for vector solution in D.-C. analog computers. 2,858,979, 11-4-58, Cl. 235—61.

Guenther, Robert F., Jr., to Sears, Roebuck and Co. Fishing reel arbor. 2,858,999, 11-4-58, Cl. 242—125.1.

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Guptill, Frank E., Jr., to The Texas Co. Abrading objects. 2,858,653, 11-4-58, Cl. 51—282.

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Guth, Frederick E., to The Edwin F. Guth Co. Louvers. 2,859,324, 11-4-58, Cl. 240—106.

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Haas, Herbert H., to Continental Motors Corp. Fuel injection nozzle cooling. 2,858,813, 11-4-58, Cl. 123—32.

Haas, Herbert H., to Continental Motors Corp. Fuel injecting pump mounting. 2,858,824, 11-4-58, Cl. 123—198.

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Hall, Oliver C., to Bell Telephone Laboratories, Inc. Alarm sending circuit. 2,859,295, 11-4-58, Cl. 179—27.

Hall, Richard E., and F. E. Jones, to The Plessey Co. Ltd. Centrifugal switches. 2,859,294, 11-4-58, Cl. 200—80.

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Matthews, Earnest P. 2,859,127.
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Hamilton Tool Co., The: See—
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Jordan, Terence B., and O. P. Puryear, to The Texas Co. Heat stable lithium-lead soap composition. 2,859,181,

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Happe, William H., Jr., to Curtiss-Wright Corp. Thermal time delay snap-action relay. 2,856,205, 11-4-58, Cl. 200—122.

Harders, Fritz, H. Knuppel, O. C. Winkler, K. Brotzmann, and H. Kutscher, to Dortmund-Hoerder Huttenunion Akt. Apparatus for degasifying liquid metal. 2,859,262, 11-4-58, Cl. 13—31.

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Harrell, Gladney W. Dry wall joint taping apparatus. 2,856,963, 11-4-58, Cl. 216—20.

Harring, Michael G., and N. S. Glassman. Gun carriage rotatable through 360°. 2,858,740, 11-4-58, Cl. 89—40.

Harrington, Roy E., to Deere & Co. Power shaft safety shielding. 2,856,690, 11-4-58, Cl. 64—3.

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Harris, George W., and F. S. Bolek. Automatic clutch throwout device. 2,858,896, 11-4-58, Cl. 180—14.5.

Harris, Theddeus S. Automatic control unit for jet deep well pump. 2,858,841, 11-4-58, Cl. 137—57.

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Haupt, Wilhelm, to Kienzle Apparate G. m. b. H. Taximeters. 2,858,978, 11-4-58, Cl. 235—47.

Hautau, Robert A. Intermittent motion mechanism. 2,858,719, 11-4-58, Cl. 74—84.

Hawkinson, Alfred T., H. G. Hull, and J. H. Young, to E. I. du Pont de Nemours and Co. Process for bleaching webs of fibrous cellulose material with hydrogen peroxide vapor containing water vapor. 2,859,087, 11-4-58, Cl. 8—104.

Hawley, Don M., and J. C. Williams, to Hawley Products Co. Felted products containing glass filaments. 2,859,109, 11-4-58, Cl. 92—3.

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Hawthorne, Herbert J., and E. M. Weaver. Quick change coupling. 2,858,958, 11-4-58, Cl. 220—40.

Hayford, Richard E., to Haloid Xerox Inc. Process for developing electrostatic images and apparatus therefor. 2,858,129, 11-4-58, Cl. 117—17.5.

Heart, Herbert L., to Otis Elevator Co. Control for an elevator closure. 2,858,904, 11-4-58, Cl. 187—29.

Heiberger, Francis E., to Danly Machine Specialties, Inc. Power press control circuit. 2,859,355, 11-4-58, Cl. 307—43.

Heider, Rudolph L., and H. M. Walker, to Monsanto Chemical Co. Hexahydrobenzoguanamine oil modified alkyd coating compositions. 2,859,188, 11-4-58, Cl. 260—21.

Heimann, Philip. Watches and like horological instruments. 2,858,664, 11-4-58, Cl. 58—109.

Heimbs, Ernst, and W. Kangro, to Heimbs & Sohn. Treatment of coffee and other materials. 2,859,116, 11-4-58, Cl. 99—68.

Heimbs & Sohn: See—
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Heiling, Werner, to Firma Vereinigte Aluminium-Werke Akt. Electrolytic cell for producing aluminum. 2,859,160, 11-4-58, Cl. 204—67.

Hendrix, Ray O., to The B. F. Goodrich Co. Ground cover for rocket launching equipment. 2,858,730, 11-4-58, Cl. 89—1.

Hendry, Elmer. Vegetable trimming machine. 2,858,866, 11-4-58, Cl. 146—81.

Henish, Heinz K., to Sylvania Electric Products Inc. Method and device for measuring semiconductor parameters 2,859,407, 11-4-58, Cl. 324—158.

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Herbes, William F.: See—
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Hercik, Lad L. Bevel closing die head having replaceable and selectively positionable insert wear ring. 2,858,552, 11-4-58, Cl. 10—86.

Herman, Charles B., to Esso Research and Engineering Co. Heavy oil conversion process. 2,859,160, 11-4-58, Cl. 208—59.

Herrqvist, Karl G., to Radio Corp. of America. Electrically tunable oscillator. 2,859,345, 11-4-58, Cl. 250—36.

Herrmann, John F., to American Optical Co. Method of making reflectors for light sources. 2,858,603, 11-4-58, Cl. 29—534.

Hersh, Sidney H. Photodetectors. 2,859,317, 11-4-58, Cl. 301—62.

Hess, Howard V., and E. R. Christensen, to The Texas Co. Method of treating a petroleum fraction with molecular sieve adsorbents. 2,859,173, 11-4-58, Cl. 208—92.

Hess, Howard V., and M. D. Riordan, to The Texas Co. Separation process involving adsorption and desorption. 2,859,256, 11-4-58, Cl. 260—676.

Hess, Howard V., and E. R. Christensen, to The Texas Co. Special solid adsorbent material and process employing the same. 2,859,257, 11-4-58 Cl. 260—676.

Hesson, James C., and J. A. Swanson, to Cardox Corp. Means for effecting sequential discharge of a series of material breaking cartridges. 2,858,764, 11-4-58, Cl. 102—22.

Hexdall Andrew M. Heat storage device. 2,858,781, 11-4-58, Cl. 110—97.

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Hickey, John H. Pitot deicer. 2,858,698, 11-4-58, Cl. 73—212.

Higgins, Kenneth K., to Air-O-Fan Products Corp. Orchard heater. 2,858,648, 11-4-58, Cl. 47—2.

Hill, Harvey J., to Roberts Mfg. Co. Cutter. 2,858,609, 11-4-58, Cl. 30—173.

Hill, Walter P. Means for producing pipe fittings. 2,858,787, 11-4-58, Cl. 113—44.

Hindermann, Peter, P. Trautal, and J.-P. Jung, to J. R. Geigy A. G. Acid anthraquinone dyestuffs. 2,859,221, 11-4-58, Cl. 260—373.

Hobbs, Phillip A. D. and J. B. Koeneke, to The Skookum Co., Inc. Sheave assembly seal. 2,859,075, 11-4-58, Cl. 308—187.1.

Hoffman, Kiva. Lipstick refills. 2,858,937, 11-4-58, Cl. 206—56.

Hoffman, Ray L., to The Mosler Lock Co. Key changed tumbler clamp. 858,691, 11-4-58, Cl. 70—323.

Hoffman, William E. Hot top construction. 2,858,868, 11-4-58, Cl. 22—147.

Hoffmann, Heinrich, to Daimler-Benz Akt. Internal combustion engine of the diesel type. 2,858,810, 11-4-58, Cl. 123—32.

Hoffmann Heinrich, to Daimler-Benz Akt. Internal combustion engine of the fuel injection type. 2,858,812, 11-4-58, Cl. 123—32.

Hoffmann, Walter W., to Durant Mfg. Co. Resetting means for number wheels. 2,858,966, 11-4-58, Cl. 235—144.

Höganäs-Billesholms Aktiebolag: See—
Brundin, Nils H., and Landberg. 2,859,107.

Holcroft & Co.: See—
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Holl, James W F. Push-pull valve. 2,858,851, 11-4-58, Cl. 137—625.18.

Hollmann, Hans E. Radiation meter device. 2,859,354, 11-4-58, Cl. 250—83.6.

Holliday, William C., Jr., to Esso Research and Engineering Co. Polyamides from N-alkyl primary-secondary diamines. 2,859,206, 11-4-58, Cl. 260—78.

Holmen, Reynold E., to Minnesota Mining & Mfg. Co. Production of acrylates by catalytic dehydration of lactic acid and alkyl lactates. 2,859,240, 11-4-58, Cl. 260—488.

Holtz, Frederick C.: See—
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Holtz, Frederick C., C. H. Lanphier, and E. A. Leach, to Sangamo Electric Co. Telemeter register for meters. 2,858,963, 11-4-58, Cl. 235—91.

Holser, Johann, to United States of America, Army. Binary pulse modulator. 2,859,406, 11-4-58, Cl. 332—11.

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Honeyman, Robert B., to Morden Machines Co. Rotor with spaced large shredding blades cooperating with toothed stator. 2,858,990, 11-4-58, Cl. 241—260.

Hoppermann, Ole L., to H. Andreasen. Adjustable transformer, preferably for current supply of X-ray installations. 2,859,421, 11-4-58, Cl. 336—147.

Horenstein, Samuel. Animal trap. 2,858,638, 11-4-58, Cl. 43—81.

Horne, James Q., Jr. Method and means for depressurising containers. 2,858,721, 11-4-58, Cl. 81—3.47.

Hougen, Everett D. Means and method for applying tension to sheet metal. 2,858,872, 11-4-58, Cl. 153—32.

House, Clarence E. Transistor controlled magnetic amplifier. 2,859,280, 11-4-58, Cl. 179—171.

Howard, Robert V. Game apparatus simulating an invasion. 2,859,037, 11-4-58, Cl. 273—1.

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Howell, Hugh A., to Oak Mfg. Co. Chopper. 2,859,296, 11-4-58, Cl. 200—81.

Howk, Benjamin W., and J. C. Sauer, to E. I. du Pont de Nemours & Co. N,N-disubstituted-3-disubstituted-amino-2,3-dihydro-3-furamides and their preparation. 2,859,214, 11-4-58, Cl. 260—247.2.

Hughes Aircraft Co.: See—
Begovich, Nicholas A., and Kahrilas. 2,859,440.
Birdsall, Charles K., and Watkins. 2,858,374.
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Hughes, Philip G., to General Electric Co. Control system for clothes dryers. 2,858,619, 11-4-58, Cl. 34—45.

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Hawkinson, Alfred T., Hull, and Young. 2,859,087.

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Hupp, Edward E., to Bendix Aviation Corp. Seal for a pneumatic servo motor. 2,858,058, 11-4-58, Cl. 236—15.

Huppert, Merle C.: See—
Bullock, Robert O., and Huppert. 2,858,974.

Hutchinson, Durwood. Automotive hoist. 2,858,944, 11-4-58, Cl. 212—58.

Hutchinson, Michael M.: *See*—
Grieve, Alexander, Randall, and Hutchinson. 2,858,670.
Hyler, John H., E. E. Ingres, and E. W. Spannhake, to Le-Tourneau-Westinghouse Co. Weight transferring towing hitch. 2,859,049, 11–4–58, Cl. 280—406.
Hyman, Abraham. Electrical connector for twin lead-in line. 2,859,423, 11–4–58, Cl. 339—97.
Hynes, Dibrell P., to Chicago Forging and Mfg. Co. Hood latch and operating means therefor. 2,859,062, 11–4–58, Cl. 292—11.
Hyster Co.: *See*—
Martin, William E. 2,858,950.
I-T-E Circuit Breaker Co.: *See*—
Dannenberg, Kurt. 2,859,308.
Diebold, Edward J. 2,859,389.
Plata, Elwood T., and Thomas. 2,859,300.
Robinson, Donald R. 2,859,304.
Imm, Ronald C., to The General Electric Co. Ltd. Electrical pulse slicing circuit. 2,859,344, 11–4–58, Cl. 250—27.
Industrial Rayon Corp.: *See*—
McLellan, Kenneth M. 2,859,000.
Institut Francais du Petrole des Carburants et Lubrifiants: *See*—
De Radzitzky, Pierre, and Balaceanu. 2,859,247.
International Business Machines Corp.: *See*—
Bristoll, Truman K. 2,858,928.
Hanson, James S. 2,858,730.
McGaybey, Robert E., and Wooding. 2,858,888.
Muller, Charles A. 2,858,925.
Young, Donald R. 2,859,428.
Young, Richard J. 2,858,924.
International Electronic Research Corp.: *See*—
Woods, Leroy R., and Roberts. 2,859,383.
International Standard Electric Corp.: *See*—
Berthold, Wolfgang. 2,859,264.
International Telephone and Telegraph Corp.: *See*—
Arditi, Maurice. 2,859,417.
Irizarry, Mercedes: *See*—
Irizarry, Ralph. 2,858,393.
Irizarry, Ralph, to M. Irizarry. Jewelry clasp. 2,858,593, 11–4–58, Cl. 24—230.
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Hyler, John H., Isgren, and Spannhake. 2,859,049.
Isley, Walter F., to Continental Motors Corp. Altitude compensator. 2,858,821, 11–4–58, Cl. 123—140.
Jabsco Pump Co.: *See*—
Doble, Warren. 2,858,769.
Doble, Warren. 2,858,920.
Jackson, John K., to The Garrett Corp. Precision pneumatic speed sensing governor. 2,858,839, 11–4–58, Cl. 137—56.
Jacksy, John M., to Colonial Broach & Machine Co. Automatic broach handling mechanism. 2,858,744, 11–4–58, Cl. 90—33.
Jacobs, Arthur W. Cup packing. 2,859,078, 11–4–58, Cl. 309—23.
Jaffe, David L., to Polaroid Electronics Corp. Power-indicating apparatus. 2,859,406, 11–4–58, Cl. 324—95.
Janowitz, Robert, to Concrete Saw Co. Pavement cutter. 2,858,650, 11–4–58, Cl. 51—176.
Jansson, Arvid. Escapement drive for motion picture films. 2,858,704, 11–4–58, Cl. 74—84.
Jeremias, Bruno R., to Poor & Co. Process and composition for protectively coating aluminum and aluminum alloys. 2,859,144, 11–4–58, Cl. 148—6.2.
Jeremias, Bruno R., to Poor & Co. Process of and compositions for producing coated aluminum and aluminum alloys. 2,859,147, 11–4–58, Cl. 148—6.16.
Jerome, Chester W. Bowling ball. 2,859,039, 11–4–58, Cl. 273—63.
Joerndt, Wilbur A., to United States of America, Navy. Rheostat. 2,859,315, 11–4–58, Cl. 201—55.
Johnson, Clark E., Jr., and W. O. Pederson. Power supply. 2,859,398, 11–4–58, Cl. 321—24.
Johnson, John A., to ACF Industries, Inc. Shock absorbing device. 2,859,032, 11–4–58, Cl. 267—1.
Johnson, Milton E., to Falconer Metal Specialties Co., Inc. Method of manufacturing a combined bearing and operative member. 2,858,602, 11–4–58, Cl. 29—413.
Johnson, Peter D.: *See*—
Williams, Ferd E., and Johnson. 2,859,369.
Johnson, Thomas H. Opening and closure device. 2,858,961, 11–4–58, Cl. 222—81.
Johnston, Donald L., and W. A. Wooldridge, to General Electric Co. High voltage bushing. 2,859,269, 11–4–58, Cl. 174—12.
Jonnston, Donald L., and W. A. Wooldridge, to General Electric Co. High voltage bushing. 2,859,271, 11–4–58, Cl. 174—31.
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Clemens, John E., and Johnstone. 2,859,377.
Jones, Charles E., to Jones, Tate & Co., Ltd. Torque limiting clutches. 2,858,919, 11–4–58, Cl. 192—85.
Jones, Frederick E.: *See*—
Hall, Richard E., and Jones. 2,859,284.
Jones, Newton D.: *See*—
Watson, Robert P., and Jones. 2,859,371.
Jones, Tate & Co., Ltd.: *See*—
Jones, Charles E. 2,858,919.
Jossard, Raymond. Microscope interferential refractometer. 2,858,725, 11–4–58, Cl. 88—14.
Jordan, Donald G., and L. Lazare, to American Cyanamid Co. Process for the preparation of diarylalkanes. 2,859,255, 11–4–58, Cl. 260—668.
Jordan, Hans, to Given Machinery Co. Stainless steel sink drainage sleeve with stopper and mounting means. 2,858,969, 11–4–58, Cl. 241—100.5.
Jordan, Terence B., to The Texas Co. Process for preparing alkali metal-lead soap base greases. 2,859,180, 11–4–58, Cl. 252—36.
Jordan, Terence B., and O. P. Puryear, to The Texas Co. Heat stable lithium-lead soap composition. 2,859,181, 11–4–58, Cl. 252—62.5.
Jorick, Paul, Jr., ½ to I. Robinowitz. Illuminating electrical indicator. 2,858,631, 11–4–58, Cl. 40—130.
Josephs, Arthur C., to Arrowhead Steel Buildings, Inc. Metal building construction. 2,858,916, 11–4–58, Cl. 189—2.
Joy, Clarence L., to Holcroft & Co. Apparatus for treating metal parts. 2,859,029, 11–4–58, Cl. 266—4.
Joy Mfg. Co.: *See*—
Sibley, John R. 2,858,897.
Jung, Jean-Pierre: *See*—
Hindermann, Peter, Trautal, and Jung. 2,859,221.
Junsch, Rudolph: *See*—
Moreschi, James. 2,858,679.
Kaden, Willy: *See*—
Winkler, Alfred, and Kaden. 2,858,752.
Kahn, Edward. Vaginal speculum. 2,858,826, 11–4–58, Cl. 128—17.
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Begovich, Nicholas A., and Kahrilas. 2,859,440.
Kaminsky, Stanley J. Device for producing hot air. 2,859,327, 11–4–58, Cl. 219—39.
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Schmidt, Erich, Zeller, Kammerl, Roos, and Schnegg. 2,859,236.
Kane, Edward. Electric razor with rotary operated double edged blades. 2,858,607, 11–4–58, Cl. 30—43.
Kane, Ernest M. Method and apparatus for electrical printing. 2,858,633, 11–4–58, Cl. 41—37.
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Helmbs, Ernst, and Kangro. 2,859,116.
Karchmer, Jean H., and M. T. Walker, to Esso Research and Engineering Co. Treatment of fluids for removal of hydrogen cyanide. 2,859,090, 11–4–58, Cl. 23—2.
Karg, Fred H., to Topp Industries, Inc. Phasing sectional gang potentiometer. 2,859,319, 11–4–58, Cl. 201—63.
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Goetz, Alexander, and Karig. 2,858,903.
Katz, Joseph J.: *See*—
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Kauffman, Walter L., to Lowell Mfg. Co. Automatic control device for laundry drier. 2,858,618, 11–4–58, Cl. 34—45.
Kearney, William E., B. A. Schwarz, and M. G. Wright, to General Motors Corp. Solenoid driven tuner with manual drive. 2,858,715, 11–4–58, Cl. 74—10.
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Woodbridge, Joseph E., and Keenan. 2,859,250.
Kelding Paper Products Co.: *See*—
Cotton, William J. 2,858,647.
Keiser, Bernhard E., to White-Rodgers Co. All channel television tuner. 2,859,419, 11–4–58, Cl. 333—82.
Kelley, George S., and W. W. Mahnken, to Curtiss-Wright Corp. Control for variable area convergent-divergent exhaust nozzle. 2,858,668, 11–4–58, Cl. 60—35.6.
Kelley, Vera V. Liquid heating device for warming engines and the like. 2,858,823, 11–4–58, Cl. 123—142.5.
Kellogg, M. W., Co., The: *See*—
Smith, Martin R. 2,859,175.
Stiles, Samuel R. 2,859,259.
Stiles, Samuel R. 2,859,260.
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Auer, John H., Jr., and Kendall. 2,859,434.
Auer, John H., Jr., and Kendall. 2,859,435.
Kennedy, David P., to Raytheon Mfg. Co. Variable gain devices. 2,859,286, 11–4–58, Cl. 179—171.
Kent, John, to Underwood Corp. Combined printing and punching machine. 2,858,889, 11–4–58, Cl. 164—113.
Kent-Moore Organization, Inc.: *See*—
Breed, John W. 2,858,946.
Kerr, Charles E., Jr.: *See*—
Schwager, August C., and Kerr. 2,859,309.
Kesselring, Fritz, to FKG Fritz Kesselring Gerateban A. G. Alternating current switching device. 2,859,400, 11–4–58, Cl. 321—48.
Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Communication switching system. 2,859,284, 11–4–58, Cl. 179—18.
Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Distortion correction. 2,859,413, 11–4–58, Cl. 333—28.
Keyes, Frederick G. Flame photometer atomizer burner assembly. 2,858,729, 11–4–58, Cl. 88—14.
Kice, Jack W., and C. D. Mattingly, to The Coleman Co., Inc. Ceiling air mixer cabinet and method of heating. 2,858,750, 11–4–58, Cl. 98—38.
Kienzle Apparate G. m. b. H.: *See*—
Haupt, Wilhelm. 2,858,976.
Kimberlin, Charles N., Jr.: *See*—
Adams, Clark E., and Kimberlin. 2,859,174.
Kimberlin, Charles N., Jr., and E. M. Gladrow, to Esso Research and Engineering Co. Reforming catalysts 2,859,185, 11–4–58, Cl. 252—465.
King, Charles W., to General Motors Corp. Transistor control circuit for parallel generators. 2,859,356, 11–4–58, Cl. 307—57.
King, Charles W., to General Motors Corp. Control circuit. 2,859,358, 11–4–58, Cl. 307—57.
King, D. Byron: *See*—
Lewis, George T. 2,859,118.
King, George, to Albright & Wilson (MFG) Ltd. Manufacture of light coloured aluminous cement. 2,859,124, 11–4–58, Cl. 106—104.
King, Kenneth L., to United Aircraft Corp. Scanning system. 2,859,396, 11–4–58, Cl. 318—282.
King-Seeley Corp.: *See*—
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Buck, Russell E., and Kinney. 2,859,044.

Kinnucan, Walter F. Traction device. 2,858,871, 11–4–58, Cl. 152—220.

Kirchner, Francois F., to Schlumberger Well Surveying Corp. Magnetic resonance apparatus. 2,859,403, 11–4–58, Cl. 324—.5.

Kirkpatrick, William E., to Bell Telephone Laboratories, Inc. Electron discharge storage device. 2,859,376, 11–4–58, Cl. 315—8.5.

Klasing Hand Brake Co.: *See*—
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Kleinsberg, Paul E., to T. W. & C. B. Sheridan Co. Machine for operating on books. 2,858,948, 11–4–58, Cl. 214—6.

Kloid, Henry W., to American Automatic Typewriter Co. Typing system. 2,858,922, 11–4–58, Cl. 197—6.

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Knuppel, Helmut: *See*—
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Koch, Robert B., to The Polymer Corp. Tubing device. 2,858,580, 11–4–58, Cl. 24—81.

Koelb, Carl M., to Structo Schools Corp. Building unit structures. 2,858,579, 11–4–58, Cl. 20—2.

Koenecke, Joseph B.: *See*—
Hobbs, Phillip A. D., and Koenecke. 2,859,075.

Kohler, Theodor B. Composite tool bits for substantially axially fed plunge type tools. 2,858,718, 11–4–58, Cl. 77—70.

Kollmorgen, Ernst O., and H. G. Theuer, to Kollmorgen Optical Corp. Mechanism for eliminating parallax from telescopic sights and the like. 2,858,732, 11–4–58, Cl. 88—32.

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Kollmorgen, Ernst O., and Theuer. 2,858,732.

Kowalewski, Anthony A., to The B. F. Goodrich Co. Aqueous dispersion comprising carboxyl containing elastomer vulcanizing agent and formaldehyde. 2,859,193, 11–4–58, Cl. 260—29.7.

Kraemer, Julius H., to Dyer Corp. Methods and apparatus for manufacturing ornamental articles. 2,858,597, 11–4–58, Cl. 29—10.

Kraft, Richard A., to Motorola, Inc. Indicator system for series connected elements. 2,859,384, 11–4–58, Cl. 315—135.

Kramer, Raynold F.: *See*—
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Krause, Reuben J. Slidable driver's seat for delivery vehicles. 2,858,877, 11–4–58, Cl. 155—14.

Krauss, Alexander, and R. Automatic fish feeder. 2,858,799, 11–4–58, Cl. 119—5.

Krauss, Randolph: *See*—
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Kroenert, Fred P. Merchandise capsules. 2,858,955, 11–4–58, Cl. 220—4.

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Krueger, Edwin W. Method of securing wires together. 2,858,858, 11–4–58, Cl. 140—3.

Kuhar, Ludwig J., to The Singer Mfg. Co. Clamp-washers for hand wheel clutches of sewing machines. 2,858,785, 11–4–58, Cl. 112—220.

Kummer, Gustav. Device on loom. 2,858,856, 11–4–58, Cl. 139—144.

Kuppersmith, Fred W., to Eureka Williams Corp. Rug nozzle. 2,858,561, 11–4–58, Cl. 15—382.

Kutscher, Horst: *See*—
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Kwik Mold Plastic Corp.: *See*—
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Lamar, Charles C., to Harper-Wyman Co. Gas valves. 2,858,852, 11–4–58, Cl. 137—625.32.

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Landwehr, Arthur J., and J. D. Cummings; said Landwehr assor. to said Cummings. Gas cock wrench. 2,858,710, 11–4–58, Cl. 74—543.

Lang, John L.: *See*—
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Langford, Robert C., and F. W. Sippach, Jr., to Daystrom, Inc. Method and apparatus for testing electronic circuits and components. 2,859,343, 11–4–58, Cl. 250—27.

Langridge, Thomas F., and R. I. Conn. Stop for multi-speed gear shift. 2,859,707, 11–4–58, Cl. 74—472.

Lanphier, Charles H.: *See*—
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Cochran, Walter M., Lantz, and Ott. 2,859,120.
Cochran, Walter M., Ott, and Lantz. 2,859,119.

Lappala, Risto P., to Bjorksten Research Laboratories, Inc. Room temperature setting adhesive. 2,859,200, 11–4–58, Cl. 260—42.8.

Larach, Simon, to Radio Corp. of America. Electroluminescent devices and materials and methods of preparation thereof. 2,859,367, 11–4–58, Cl. 313—108.

Larcén, Jan A., to Atlas Copco Aktiebolag. Bolt or nut running machines or stopers. 2,858,725, 11–4–58, Cl. 81—52.4.

Larsson, Lars, to Aktiebolaget Westerasmaskiner. Vehicle endless belt tensioning means. 2,859,068, 11–4–58, Cl. 305—9.

La Rue, Mervin W., Jr.: *See*—
Bagy, John P., Freeland, Stanley, and La Rue. 2,858,754.

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Lathrop, Harold F., to Amana Refrigeration, Inc. Diffuser. 2,858,760, 11–4–58, Cl. 98—40.

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Martin, Edwin R., and Wise. 2,859,895.

Lawber, A. Marian: *See*—
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Lawber, David, deceased; A. M. Lawber, executrix. Tensioning device for overseam sewing machines. 2,858,782, 11–4–58, Cl. 112—162.

Lawlor, Francis E., and M. E. Miville, to Pennsalt Chemicals Corp. Production of chlorinated polyphenyls. 2,859,252, 11–4–58, Cl. 260—649.

Lawrence, Donald K. Bubble blowing device. 2,858,639, 11–4–58, Cl. 46—7.

Lax, Stephen G.: *See*—
Nachman, Joseph F., and Buehler. 2,859,143.

Lazare, Leon: *See*—
Jordan, Donald G., and Lazare. 2,859,255.

Lee, Lawrence N. Electrical ice cream dispensing gun device. 2,859,325, 11–4–58, Cl. 219—21.

Leach, Clayton B., to General Motors Corp. Cylinder head coring for overhead valve engines. 2,858,587, 11–4–58, Cl. 22—131.

Leach, Edward A.: *See*—
Holtz, Frederick C., Lanphier, and Leach. 2,858,962.

Leclair, Leonard: *See*—
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Lection, Frank J., to Monsanto Chemical Co. Process of making styrenated phenol-formaldehyde resins. 2,859,205, 11–4–58, Cl. 260—51.

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Devlin, Frank K., and Siemon. 2,859,063.

Lefebvre, Palma A.: *See*—
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Leisegang, Siegfried, and O. Wolff, to Siemens & Halske Akt. Electron lenses. 2,859,363, 11–4–58, Cl. 313—75.

Leiss, Emil: *See*—
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Leisy, Clifford J., to Boeing Airplane Co. Airfoil aircraft interconnecting boom. 2,859,002, 11–4–58, Cl. 244—2.

Leming, Thomas L.: *See*—
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Lenk, Walter, to Barmer Maschinenfabrik Akt. Thread tensioning apparatus for twisting spindles. 2,859,001, 11–4–58, Cl. 242—147.

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Lesnewich, Alexander, to Air Reduction Co., Inc. Gas shielded arc welding. 2,859,329, 11–4–58, Cl. 219—74.

LeTourneau-Westinghouse Co.: *See*—
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Gerstein, Harry, Leiss, and Bayer. 2,858,887.

Lever Brothers Co.: *See*—
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Levert, Raymond C., to Crescent Swimming Pools, Inc. Pre-cast sectional concrete structure. 2,858,098, 11–4–58, Cl. 72—13.

Levin, Nathan D., to The Rauland Corp. Apparatus for coating the face plate of a cathode-ray tube envelope. 2,858,797, 11–4–58, Cl. 118—317.

Lewis, George T., 25% to D. B. King. Method of cold processing citrus fruit. 2,859,118, 11–4–58, Cl. 99—101.

Libbey-Owens-Ford Glass Co.: *See*—
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Lilly, Eli, and Co.: *See*—
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Lincoln, Clovis W., W. H. Watling, and W. B. Thompson, to General Motors Corp. Means for reducing relief valve squeal in a hydraulic power steering gear. 2,858,805, 11–4–58, Cl. 121—46.5.

Line, Gerald D., to Eaton Mfg. Co. Tappet mechanism. 2,858,817, 11–4–58, Cl. 123—90.

Linn, Carl B., to Universal Oil Products Co. Alkylation of aromatic compounds. 2,859,251, 11–4–58, Cl. 260—624.

Litowsky, Julius, to S & L Novelty Co. Cap. 2,858,843, 11–4–58, Cl. 2—172.

Littlefuse, Inc.: *See*—
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Lodewick, Madeleine and Mildred. Spectacle retaining device. 2,858,733, 11–4–58, Cl. 88—51.

Lodewick, Mildred: *See*—
Lodewick, Madeleine and Mildred. 2,858,733.

Loeb, George A., to General Register Corp. Ticket issuing and accounting system. 2,858,885, 11–4–58, Cl. 164—68.

Loeffel, Lester H., and E. C. Champagne, to The Berger Brothers Co. Controlling and measuring garment. 2,858,832, 11–4–58, Cl. 128—350.

Logue, Ella E. Tables. 2,859,062, 11–4–58, Cl. 313—309.

Long, Ray S.: *See*—
Bailes, Richard H., and Long. 2,859,092.

Lopez, Rene. Case for camera. 2,858,751, 11–4–58, Cl. 95—11.

Lopez-Henriquez, Miguel. High fidelity speaker enclosure system. 2,858,899, 11–4–58, Cl. 181—31.

Lopiccolo, Robert C. Cam actuated speller. 2,859,004, 11–4–58, Cl. 244—42.

Lo Presti, Roy F., to Goodman Mfg. Co. Extensible conveyors. 2,858,935, 11–4–58, Cl. 198—138.

Lorensen, Coby, to The Regents of the University of California. Fruit cutting apparatus with size compensation. 2,858,863, 11-4-58, Cl. 146—72.
Lerig, Edwin T. Roller bearing. 2,859,076, 11-4-58, Cl. 308—202.
Loughborough, Mark. Sealing strip. 2,858,685, 11-4-58, Cl. 73—106.
Louthan, Rector P., to Phillips Petroleum Co. Oxidation of organic sulfides. 2,859,248, 11-4-58, Cl. 260—607.
Lowe, Frank C.: *See*—
Robins, John S., and Lowe. 2,858,880.
Lowe, Plumer P.: *See*—
De Loach, Harry D., and Lowe. 2,859,068.
Lowell Mfg. Co.: *See*—
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Lowey, Francis J., to American Brake Shoe Co. Method and apparatus for pressing powdered metal. 2,858,545, 11-4-58, Cl. 18—16.5.
Lucien, René, to Societe d'Inventions Aeronautiques et Mecaniques S. I. A. M. Retractable aircraft landing gear. 2,859,006, 11-4-58, Cl. 244—102.
Lucien, Stanley. Hand operated grease gun. 2,858,942, 11-4-58, Cl. 222—82.
Lund, Ole E. Ice cube dispensers. 2,859,009, 11-4-58, Cl. 249—46.
Landry, Walter R., to Bell Telephone Laboratories, Inc. Delay network. 2,859,414, 11-4-58, Cl. 333—29.
Lunsford, Walter P. Pressure loss tire signal. 2,858,791, 11-4-58, Cl. 116—34.
Luther, Stephen G., to Midwest Rubber Reclaiming Co. Pad. 2,858,968, 11-4-58, Cl. 226—282.
Luthman, James J., and R. N. Roney, to The Sheffield Corp. Machine tool device. 2,858,682, 11-4-58, Cl. 51—287.
Lux, John H., and E. Parker, to Witco Chemical Co. Polyvalent metal mono and dicarboxylic acid soap thickened lubricating oil. 2,859,178, 11-4-58, Cl. 252—35.
Lyman, Joseph, to Aero-Nautical Boat Shop, Inc. Water craft. 2,858,782, 11-4-58, Cl. 114—39.
Lyman, Joseph, to Aero-Nautical Boat Shop, Inc. Method and apparatus for producing structural elements of glass fiber reinforced plastics. 2,858,875, 11-4-58, Cl. 154—1.7.
Lyon, George A. Exhaust pipe extension. 2,858,883, 11-4-58, Cl. 138—46.5.
Madsen, Paul S.: *See*—
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Magarian, Masick C. Harrow hitch. 2,858,786, 11-4-58, Cl. 97—46.07.
Magnethermic Corp.: *See*—
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Mahaffy, Reid A., W. E. Young, and G. S. Di Monico, to Standard Packaging Corp. Machine and process for evacuating, gassing and sealing flexible containers. 2,859,655, 11-4-58, Cl. 53—86.
Mahnken, Walter W.: *See*—
Kelley, George S., and Mahnken. 2,858,668.
Mahrt, Louis R.: *See*—
Martin, Edwin R., and Wise. 2,859,395.
Mallinckrodt Chemical Works: *See*—
Rubof, John R., Martin, and Gerfen. 2,859,098.
Rubof, John R., Martin, and Gerfen. 2,859,099.
Mallory, P. R., & Co, Inc.: *See*—
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Marsh, John T., and R. A. Blease, to Tootal Broadhurst Lee Co. Ltd. Process for the treatment of fabrics with resinous condensation products. 2,859,136, 11-4-58, Cl. 117—145.
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Mid-West Tooling Service, Inc.: *See*—
Switzer, Ralph E. 2,858,996.
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Morrison, Harry. Limb and knee protector. 2,858,540, 11–4–58, Cl. 2—24.

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Moyle, Clarence L., and C. L. Maints, to The Dow Chemical Co. N-[2-(pentachloroanilino)-ethyl]carboxamic acids. 2,859,241, 11–4–58, Cl. 260—518.

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Muller, Charles A., to International Business Machines Corp. Keyboard touch device. 2,858,925, 11–4–58, Cl. 197—17.

Muller, Jacques. Reservoir with floating conduit. 2,858,843, 11–4–58, Cl. 137—172.

Munn, Hiram. Vehicle safety equipment for passenger protection. 2,859,048, 11–4–58, Cl. 280—150.

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Myerson, Simon. Means for processing dentures. 2,858,568, 11–4–58, Cl. 18—33.

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Nadolsky, Robert E. Fishing reels with friction brakes. 2,858,998, 11–4–58, Cl. 242—84.5.

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National Vendors, Inc.: *See*—
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Naylor, Straut W. Apparatus for conditioning grain. 2,858,620, 11–4–58, Cl. 34—86.

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Neu, Franklyn R., to Standard Tool and Mfg. Co. Fluid cylinder with circuit closer. 2,859,206, 11–4–58, Cl. 200—82.

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Nicholson, Mike W.: *See*—
Patchin, Paul E. 2,859,270.

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North, Joseph M. Lubricating pump assembly. 2,858,964, 11–4–58, Cl. 222—239.

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Novak, Leo J., and H. J. Homer, to The Commonwealth Engineering Co. of Ohio. Gas plating using nitrous oxide. 2,859,132, 11–4–58, Cl. 117—107.

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O'Brien, John F., Jr., to United States of America, Army. Actuator tongue switch for an automatic firearm. 2,858,742, 11–4–58, Cl. 89—155.

O'Callaghan, Michael E. Frangible staple. 2,859,430, 11–4–58, Cl. 340—274.

Odders, Carlos. Vaporizer for heavy and semi-heavy liquid fuels. 2,858,820, 11–4–58, Cl. 123—133.

O'Donnell, Jack H. Caul plate envelope. 2,858,860, 11–4–58, Cl. 144—281.

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Ogden, Charles T., to Goodman Mfg. Co. Tension control apparatus for flexible support strands of an extensible conveyor. 2,858,936, 11–4–58, Cl. 198—208.

Ogg, William. Golf glove. 2,858,542, 11–4–58, Cl. 2—161.

Ohlheiser, Carlton E., to American Instrument Co., Inc. Electrical humidity-sensing unit. 2,859,318, 11–4–58, Cl. 201—63.

Olcott, Robert S., Jr., to Armstrong Cork Co. Treatment of strand materials and the like. 2,859,133, 11–4–58, Cl. 117—112.

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Olson, Arthur B., to Sperry Rand Corp. Magnetic binary counting circuit. 2,859,369, 11–4–58, Cl. 307—88.

Olson, Holly M., to Sealed Power Corp. Triple seal piston ring. 2,859,079, 11–4–58, Cl. 309—43.

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Otis Elevator Co.: *See*—
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Ott, Melvin L.: *See*—
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Cochran, Walter M., Ott, and Lantz. 2,859,119.

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Packer, Warren J. Heat-insulated handle structure for coffee pots and the like. 2,858,562, 11–4–58, Cl. 16—119.

Palmer, Charles M. Aerial identification flag. 2,858,793, 11–4–58, Cl. 116—173.

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Paramount Pictures Corp.: *See*—
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Parker, Earl E., to Pittsburgh Plate Glass Co. Polymerizable mixture of styrene and a polyester reaction product. 2,859,199, 11–4–58, Cl. 260—45.4.
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Lux, John H., and Parker. 2,859,179.
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Parker, Wesley R., to Sloan Valve Co. Adjustable handle assembly for flush valves. 2,858,846, 11–4–58, Cl. 137—359.
Parsons, Henry C., L. A. Dreisbach, and R. J. Chondzinski, to Vickers Inc. Power transmission. 2,858,902, 11–4–58, Cl. 121—38.
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Parziale, Jean. Device for trimming hair. 2,858,635, 11–4–58, Cl. 132—45.
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Personett, De Alton L. Guard for infant's seat. 2,858,882, 11–4–58, Cl. 155—180.
Peterson, Elwin W., to Dresser Industries, Inc. Borehole logging signaling system. 2,859,013, 11–4–58, Cl. 255—1.
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Pfening, Frederic D., to The Fred D. Pfening Co. Hopper construction. 2,858,966, 11–4–58, Cl. 221—304.
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Eddy, William R., and Hart. 2,859,020.
Fox, Homer M. 2,858,671.
Leathan, Rector F. 2,859,248.
Uranock, Carl A., Sommerfeld, and Dodgen. 2,859,201.
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Pollari, Howard M., to McCulloch Corp. Speed control for outboard motors. 2,858,819, 11–4–58, Cl. 123—99.
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Jeremias, Bruno R. 2,859,147.
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Simonis Co.: *See*—
Smith, Thomas B. 2,858,128.
Simpson, Clarence E. Selective firing control for open and closed bolt positions. 2,858,741, 11-4-58, Cl. 89—149.
Simpson, Henry B. Vehicle maintenance sticker. 2,859,061, 11-4-58, Cl. 281—16.
Simpson, Jack N., to The Electric Storage Battery Co. Safety helmet. 2,858,538, 11-4-58, Cl. 2—3.
Singer Mfg. Co., The: *See*—
D'Amico, Anthony F. 2,858,782.
Kuhar, Ludwig J. 2,858,786.
Sippach, Frederick W., Jr.: *See*—
Langford, Robert C., and Sippach. 2,859,242.
Sherritt, Ray P. Heating system humidifier. 2,858,885, 11-4-58, Cl. 126—113.
Skoglberg, Ernst G., and K. H. Harnell, to Aktiebolaget Higglund & Soner. Opening and closing device for vehicle doors. 2,859,034, 11-4-58, Cl. 268—31.
Slaughter Co., Inc., The: *See*—
Hobbs, Phillip A. D., and Koeneke. 2,859,075.
Sloan, Harry E., to The Cushman Chuck Co. Collet chucks. 2,859,041, 11-4-58, Cl. 279—2.
Sloan Valve Co.: *See*—
Parker, Wesley R. 2,858,846.
Smirl, Richard L., and L. W. Coet, to Borg-Warner Corp. Drive mechanisms. 2,858,681, 11-4-58, Cl. 64—15.
Smith, Benjamin F.: *See*—
Dickens, Samuel P., Smith, and Ballard. 2,859,170.
Smith, Edward W., to L. S. Adams Engineering Co. Means for dyeing fabrics. 2,858,689, 11-4-58, Cl. 68—20.

Smith, Harold E., to United States of America, Navy. Fluid damping device. 2,858,910, 11-4-58, Cl. 188—96.

Smith, Martin E., to The M. W. Kellogg Co. Use of product gases in a fluidized conversion process. 2,859,175, 11-4-58, Cl. 208—156.

Smith, Neil V. Pumping apparatus. 2,858,767, 11-4-58, Cl. 103—49.

Smith, Raymond E., to The A. C. Gilbert Co. Toy locomotive cab contained motor and relay. 2,858,645, 11-4-58, Cl. 46—244.

Smith, Thomas B., to Simonis Co. Wax and shellac polishing composition. 2,859,123, 11-4-58, Cl. 106—6.

Smith, Thomas E., to The Maytag Co. Combined clothes washing machine and fluid extractor. 2,858,698, 11-4-58, Cl. 68—20.

Smith, William C., to E. I. du Pont de Nemours and Co. Reaction of SF$_4$ with organic compounds containing a carbonyl radical. 2,859,245, 11-4-58, Cl. 260—544.

Smith, William M., Jr.: *See*—
Reid, Robert J., Smith, and Werner. 2,859,089.
Reid, Robert J., Smith, and Werner. 2,859,194.
Reid, Robert J., Smith, and Werner. 2,859,195.
Reid, Robert J., Smith, and Werner. 2,859,196.
Reid, Robert J., Smith, and Werner. 2,859,197.

Snow, John E., to Hayden Newport Chemical Corp. Process for the continuous preparation of benzyl chloride. 2,859,252, 11-4-58, Cl. 260—651.

Snow, Thomas W., to United Shoe Machinery Corp. Machines for straightening and handling components. 2,858,872, 11-4-58, Cl. 153—52.

Snyder, Ernest B. Blast furnace spray cooling means with disposal shed. 2,859,090, 11-4-58, Cl. 266—32.

Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain Chauny & Cirey: *See*—
Arbeit, Pierre. 2,859,261.
Moyrand, Jean, and Bigot. 2,858,105.

Societe d'Appareils de Controle et d'Equipement des Moteurs S. A. C. E. M.: *See*—
Mennesson, Marcel. 2,858,674.

Societe d'Inventions Aeronautiques et Mecaniques S. I. A. M.: *See*—
Lecien, Rene. 2,859,008.

Societe M. Tschauner, S. a. r. l.: *See*—
Pingon, Pierre J. 2,858,945.

Societe Nationale de Constructions Aeronautiques du Sud-Ouest: *See*—
Servanty, Lucien. 2,859,003.

Socony Mobil Oil Co., Inc.: *See*—
Crittenden, Bob C. 2,859,404.
Fahnestock, Frank C., and Shambaugh. 2,859,171.

Sohn, Jesse S., to Air Reduction Co., Inc. Gas shielded arc welding. 2,859,328, 11-4-58, Cl. 219—74.

Solomon, Daniel, to Kwik Mold Plastic Corp. Frame for bags and the like. 2,858,869, 11-4-58, Cl. 150—1.6.

Somers, Richard L., and P. L. Petry; said Somers assgr. to Parker Rust Proof Co., and said Petry assgr. to Acme-Newport Steel Co. Cold rolling of steel. 2,859,145, 11-4-58, Cl. 148—6.15.

Sommeria, Marcel R., to Welding Research, Inc. Control system. 2,859,389, 11-4-58, Cl. 321—38.

Sommers, Lyle E., to Zwicker Knitting Mills. Knitted fabric. 2,858,695, 11-4-58, Cl. 66—169.

Sonnenfeld, Richard J.: *See*—
Urbanek, Carl A., Sonnenfeld, and Dodgen. 2,859,201.

Soper, Quentin F., to Eli Lilly and Co. Acetycholine esterase inhibitors. 2,859,217, 11-4-58, Cl. 260—296.

Spangler, Earl G. Apparatus for storing, conditioning and dispensing fats. 2,859,015, 11-4-58, Cl. 257—2.

Spannhake, Ernst W.: *See*—
Hyler, John H., Ingren, and Spannhake. 2,859,049.

Spaulding, Carl P., to Datex Corp. Code generating device. 2,859,432, 11-4-58, Cl. 340—347.

Specialties Development Corp.: *See*—
Wentz, Edward A. 2,858,992.

Sperry Rand Corp.: *See*—
Coombs, John M. 2,859,429.
Olsen, Arthur B. 2,859,359.
Petrea, James C., and Howe. 2,859,086.

Sperry-Rand Corp., Ford Instrument Co. Division: *See*—
Bargmann, Harold H. 2,858,980.

Spencer, Roland J., to Olin Mathieson Chemical Corp. Process for preparation of cycloalts. 2,859,215, 11-4-58, Cl. 260—348.

Springfield Boiler Co.: *See*—
Rehm, Gustav A. 2,858,809.

Squier, Bertrand W., Jr., to Raytheon Mfg. Co. Simplified cathode ray tubes and guns therefor. 2,859,366, 11-4-58, Cl. 313—82.

Staatsbedrijf Der Posterijen, Telegrafie en Telefonie: *See*—
Oberman, Roelof M. M. 2,859,279.

Steege, Werner, and O. Harr. Device for influencing engine fuel delivery by two mutually independent operating conditions. 2,858,822, 11-4-58, Cl. 123—140.

Steeper, Reinhard: *See*—
Bucht, Conrad. 2,859,153.

Stamm, Robert F., and P. A. Button, to American Cyanamid Co. Device for the measurement of absolute turbidity. 2,858,727, 11-4-58, Cl. 88—14.

Standard Coil Products Co. Inc.: *See*—
Meyer, Walter. 2,859,148.

Standard Dayton Corp.: *See*—
Martin, Edwin R., and Wise. 2,859,295.

Standard Oil Co. (Indiana): *See*—
Meguerian, Gerbis H., and Fairchild. 2,859,176.
Van Wyk, Joseph W. 2,859,167.

Standard Packaging Corp.: *See*—
Mahaffy, Reid A., Young, and Di Monico. 2,858,655.

Standard Register Co., The: *See*—
Metzner, Albert W. 2,858,926.
Metzner, Albert W., and Davidson. 2,858,927.

Standard Tool and Mfg. Co.: *See*—
Neu, Franklyn R. 2,859,296.

Stange, Erich, to Durrwerke Akt. Once-through boiler. 2,858,207, 11-4-58, Cl. 122—379.

Stangl, Morraine R., to Eitel-McCullough, Inc. Electron tube. 2,859,372, 11-4-58, Cl. 313—250.

Stanley, Paul H. Animated display device. 2,858,643, 11-4-58, Cl. 46—100.

Stark, Elmer C. Fishing accessories. 2,858,637, 11-4-58, Cl. 43—43.12.

Startsell, Dale E., to United States of America, Navy. Spring-loaded, locking hinge fin assembly. 2,858,765, 11-4-58, Cl. 102—50.

Stauffer Chemical Co.: *See*—
Haimsohn, Jerome N., Basbour, and Rabatin. 2,859,249.

Stearns, Richard I., to Murphy & Nye, Inc. Jib sail. 2,858,789, 11-4-58, Cl. 114—103.

Stein, Frederick W. Test cell loading device. 2,858,963, 11-4-58, Cl. 222—166.

Stern, Robert G., and A. J. Sherman, to Curtiss-Wright Corp. Flight computing system. 2,858,623, 11-4-58, Cl. 35—12.

Stevens, Marcus A., to E. I. du Pont de Nemours and Co. Production of glutamic acid. 2,859,218, 11-4-58, Cl. 260—309.5.

Stevenson, George G.: *See*—
Trumbull, Donald E., Stevenson, and Trautmann. 2,859,017.

Stickley, Carl W. Piston. 2,859,077, 11-4-58, Cl. 309—12.

Stiles, Samuel R., to The M. W. Kellogg Co. Alkylation of hydrocarbons. 2,859,259, 11-4-58, Cl. 260—683.58.

Stiles, Samuel R., to The M. W. Kellogg Co. Alkylation of hydrocarbons. 2,859,260, 11-4-58, Cl. 260—683.62.

Stipe, Lester E. Brake attachment for fishing reels. 2,858,636, 11-4-58, Cl. 42—25.

Stixrood, Jarvis A.: *See*—
Beaufort, John M., and Stixrood. 2,859,045.

Stone, Richard J., to The Marley Co. Water cooling apparatus. 2,858,677, 11-4-58, Cl. 62—171.

Stonerock, Creed I., and E. E. Dooley. Tractor towing hitch. 2,859,030, 11-4-58, Cl. 280—491.

Storer, William E.: *See*—
Browne, Reginald H., Chandler, and Storer. 2,858,660.

Straumann, Reinhard. Manufacture of watch springs utilizing wire converted into strip. 2,859,140, 11-4-58, Cl. 148—12.3.

Structo Schools Corp.: *See*—
Koelb, Carl M. 2,858,579.

Stuchbery, Arthur L., to The Metal Box Co. Ltd. Means for adjusting the spacing of shafts, rolls or the like. 2,858,796, 11-4-58, Cl. 118—262.

Stucklin & Cie: *See*—
Stucklin, Paul. 2,858,806.

Stucklin, Paul, to Stucklin & Cie. Heating boilers. 2,858,806, 11-4-58, Cl. 122—82.

Studebaker-Packard Corp.: *See*—
Reske, Norman W. 2,858,667.

Studler, Martin H.: *See*—
Manning, Winston M., Studler, Diamond, and Fields. 2,859,096.

Stuesel, Henry C.: *See*—
Caserio, Martin J., and Stuesel. 2,858,632.

Sudbeau, Steve. Combination bottle closure and ball applicator. 2,858,558, 11-4-58, Cl. 15—132.7.

Sugarman, Meyer L., Jr., to Radio Corp. of America. Electroradiography. 2,859,352, 11-4-58, Cl. 250—65.

Sun Oil Co.: *See*—
Yetter, Edward W. 2,858,978.

Superior Ball Joint Corp.: *See*—
Davies, Gilbert E., and Gasparini. 2,859,060.

Suran, Jerome J., to General Electric Co. Wave generator. 2,859,360, 11-4-58, Cl. 307—88.5.

Sus, Oskar, and M. Glos, to Asoplate Corp. Quinoline-quinone-(3,4) diazide plates. 2,859,112, 11-4-58, Cl. 96—91.

Swanson, James A.: *See*—
Hesson, James C., and Swanson. 2,858,764.

Swanson, Oscar L. Inspection device. 2,858,616, 11-4-58, Cl. 33—174.

Switzer, Harold K. Sink strip assembly. 2,858,848, 11-4-58, Cl. 4—187.

Switzer, Ralph E., to J. J. Mickelson, as trustee for Mid-West Tooling Service, Inc. Drive mechanism for recording and playback machines and the like. 2,858,996, 11-4-58, Cl. 242—55.12.

Sylvania Electric Products Inc.: *See*—
Berman, Irvin. 2,859,304.
Biggs, Orrick H., and Davis. 2,859,368.
Clarke, Edward N. 2,859,140.
Heniech, Heins K. 2,859,407.
Gray, Samuel M., Fellows, and Reed. 2,859,381.

Szlaga, Emil V., to Continental Motors Corp. Timing device for fuel injection pump. 2,858,683, 11-4-58, Cl. 84—28.

Taylor, Jeremy P.: *See*—
Dunlap, Kermit B., and Taylor. 2,859,282.

Teare, William H., to General Electric Co. Lightning arrester. 2,859,373, 11-4-58, Cl. 313—328.

Tekenos, Ruth N.: *See*—
Tekenos, Alexander B., and Lefebvre. 2,858,546.

Tekenos, Alexander B., deceased; R. N. Tekenos, administratrix, and P. A. Lefebvre, ½ to L. Leclair. Electronic toilet flusher. 2,858,546, 11-4-58, Cl. 4—67.

Telefunken-Decca Schallplatten G. m. b. H.: *See*—
Mehr, Horst, and Leptien. 2,858,859.

Van Wyk, Joseph W., to Standard Oil Co. Production of
Wetzler, Justin J. Razor and magazine therefor. 2,858,606,

Telefonaktiebolaget L M Ericsson: *See*—
Alexandersson, Harald V. 2,858,706.
Wijkman, Bengt L. 2,859,201.

Temple, Hiram R., to Capital Products Corp. Loaf splitter. 2,858,776, 11–4–58, Cl. 107—22.

Temple, Robert, to Mine Safety Appliances Co. Cable gripper. 2,858,908, 11–4–58, Cl. 188—65.1.

Texas Co., The: *See*—
Dickens, Samuel P., Smith, and Ballard. 2,859,170.
Fort, Ben F., Jr. 2,858,901.
Guptill, Frank E., Jr. 2,858,653.
Hess, Howard V., and Christensen. 2,859,173.
Hess, Howard V., and Christensen. 2,859,257.
Hess, Howard V., and Riordan. 2,859,250.
Jordan, Terence B. 2,859,180.
Jordan, Terence B., and Puryear. 2,859,181.

Tharpe, Verle M.: *See*—
McAninch, Herbert A., and Tharpe. 2,858,712.

Theuer, Henry G.: *See*—
Kollmorgen, Ernst O., and Theuer. 2,858,732.

Thomas, Lazarus D.: *See*—
Watkins, George B., and Thomas. 2,859,131.

Thomas, Robert W.: *See*—
Platz, Elwood T., and Thomas. 2,859,300.

Thompson, Robert E. S., and E. V. Bishop, to Thompson Trailer Corp. Thermally insulating truck van walls. 2,858,590, 11–4–58, Cl. 20—2.

Thompson, Sanford P.: *See*—
Saxton, Harold L., and Thompson. 2,859,432.

Thompson, Theodore F. Connecting pin having depressible abutment element. 2,858,725, 11–4–58, Cl. 85—5.

Thompson Trailer Corp.: *See*—
Thompson, Robert E. S., and Bishop. 2,858,580.

Thompson, William B.: *See*—
Lincoln, Clovis W., Watling, and Thompson. 2,858,806.

Tiroler Rohren-und Metallwerke Akt.: *See*—
Urbanke, Ernst, and Bauer. 2,858,585.

Tobias, David L., and A. H. Zefting, to General Dynamics Corp. Amplifier gain control circuit. 2,859,288, 11–4–58, Cl. 179—171.

Tolomeo, Albert J., to United States of America, Navy. Missile or mine launcher. 2,858,737, 11–4–58, Cl. 89—1.5.

Tootal Broadhurst Lee Co. Ltd.: *See*—
Marsh, John T., and Blease. 2,859,136.

Topp Industries, Inc.: *See*—
Karg, Fred H. 2,859,319.
Miller, Kenneth R. 2,859,316.

Toschkoff, Dimitar, to General Motors Corp. Supercharging pump. 2,858,766, 11–4–58, Cl. 103—42.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Building material. 2,858,582, 11–4–58, Cl. 20—4.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Excavating apparatus. 2,858,626, 11–4–58, Cl. 37—117.5.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Mobile implement for flame treating soil. 2,858,755, 11–4–58, Cl. 97—10.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Method for gas plating synthetic fibers. 2,859,130, 11–4–58, Cl. 117—47.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Method of making towels. 2,859,150, 11–4–58, Cl. 154—76.

Townsend, Wilbur J., and A. M. Castello, to The Coleman Co., Inc. Inverted lantern. 2,859,332, 11–4–58, Cl. 240—38.

Tracerlab, Inc.: *See*—
Ziffer, Garret F. 2,859,287.

Trapp, Walter B., to D. E. Pletcher, to The Dow Chemical Co. Acrylic acid compounds. 2,859,239, 11–4–58, Cl. 260—464.

Traugott, Wilfred F. Adjustable pivotal mounting. 2,859,058, 11–4–58, Cl. 287—53.

Trautmann, Herbert L.: *See*—
Trumbull, Donald E., Stevenson, and Trautmann. 2,859,017.

Trautzl, Peter: *See*—
Hindermann, Peter, Trautzl, and Jung. 2,859,221.

Trefts, Richard G.: *See*—
Sanderson, Richard L., and Trefts. 2,858,690.

Trimble, Edward C., to Trimble, Inc. Infant's dressing table toy. 2,858,641, 11–4–58, Cl. 46—32.

Trimble, Inc.: *See*—
Trimble, Edward C. 2,858,641.

Troppe, Frederick J. Multiple-tone drum. 2,858,724, 11–4–58, Cl. 84—411.

Trumbull, Donald E., G. G. Stevenson, and H. L. Trautmann, to Semco Research, Inc. Apparatus for air-free mixing of fluid materials. 2,859,017, 11–4–58, Cl. 259—2.

Tull, William J., to United States of America, War. Self-contained radio navigation system. 2,859,436, 11–4–58, Cl. 343—9.

Turco Products, Inc.: *See*—
Wright, Edward P. 2,858,792.

Turnbull, Norris, to E. I. du Pont de Nemours and Co. Stable aqueous dispersions of copolymers of vinyl acetate with salts of allylsulfonic acid and methallylsulfonic acid and process for preparing same. 2,859,191, 11–4–58, Cl. 260—29.6.

Tuthill, Howard E., to Oliver Machinery Co. Label securing attachment. 2,858,954, 11–4–58, Cl. 216—57.

Twelt, Robert C.: *See*—
Dodson, Raymond M., and Twelt. 2,859,222.

Uhrmacher, Ralph R., to Panther Oil & Grease Mfg. Co. Asphalt roofing composition. 2,859,125, 11–4–58, Cl. 106—278.

Ulffers, Heinz, to Heinz Ihos A. G. Arrangement for simultaneously or alternately operating a plurality of xenon high pressure lamps. 2,859,387, 11–4–58, Cl. 315—291.

Underland, Kenneth, 50% to R. F. Kramer. Vehicle seat and mounting. 2,859,062, 11–4–58, Cl. 296—65.

Underwood Corp.: *See*—
Gyllenhammar, William. 2,858,977.
Kent, John. 2,858,889.

Underwood, Ralph A., to General Motors Corp. Hardness testing apparatus. 2,858,696, 11–4–58, Cl. 73—82.

Union Carbide Corp.: *See*—
Feild, Theophilus A., Jr., Scheenover, and Purse. 2,859,068.
Gaylord, William M., Jr., Raub, and Hauch. 2,858,768.
Ramadanoff, Dimiter. 2,859,139.
Raub, Samuel H. S., Revilock, and Ford. 2,859,021.
Wenzelberger, Elwood P. 2,858,942.

Union Rheinische Braunkohlen Kraftstoff Akt.: *See*—
Moll, Bernhard, and Kriegbaum. 2,858,891.

United Aircraft Corp.: *See*—
King, Kenneth L. 2,859,266.

United Shoe Machinery Corp.: *See*—
Snow, Thomas W. 2,858,573.

United States Gypsum Co.: *See*—
Schuetz, Clyde C. 2,858,777.

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Agriculture: *See*—
Reeves, Wilson A., Chance, and Drake. 2,859,134.
Air Force: *See*—
Farinet, Fred A., Jr. 2,858,750.
Army: *See*—
Eames, James O. 2,858,739.
O'Brien, John F., Jr. 2,858,742.
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Fischbach, Adolph, and Almerini. 2,859,268.
Atomic Enery Commission: *See*—
Allen, Arthur L., Anderson, and Powell. 2,859,156.
Balbes, Richard H., and Long. 2,859,092.
Blanchard, Melbourne K. 2,859,138.
Bone, Walter H., and Schmidt. 2,858,396.
Cox, Raymond J. 2,859,253.
Davidson, Norman R., and Katz. 2,859,097.
Fowler, Robert D. 2,859,096.
Manning, Winston M., Studier, Diamond, and Fields. 2,859,095.
Michelson, Christian E., and Carson. 2,859,164.
Morris, Jean M. 2,859,431.
Ploetz, George L., and Ray. 2,859,163.
Russell, Edwin R., Adamson, Schubert, and Boyd. 2,859,093.
Schmitt, John M., Blake, Brown, and Coleman. 2,859,094.
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Armbruster, Ralph E., and Shererts. 2,858,738.
Blackstone, Henry, and Conley. 2,858,711.
Bullock, Robert O., and Huppert. 2,858,974.
Dunham, Richard M., and Segerstrom. 2,859,340.
Joerndt, Wilbur A. 2,859,315.
Parvin, Richard H., and Cohen. 2,858,622.
Rodgers, George V. 2,859,439.
Schaer, Glenn R. 2,859,158.
Smith, Harold R. 2,858,910.
Startzell, Dale E. 2,858,765.
Tolomeo, Albert J. 2,858,737.
Woodson, Wesley E., Jr. 2,858,876.
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Tull, William J. 2,859,436.

United States Rubber Co.: *See*—
Martin, Lothar, Chipman, and Gates. 2,859,246.

United States Steel Corp.: *See*—
Brickman, Alan E. 2,858,706.

Universal Oil Products Co.: *See*—
Linn, Carl B. 2,859,251.

University of California, The Regents of the: *See*—
Lorenzen, Coby. 2,858,863.

University of Michigan, The Regents of the: *See*—
Gruner, Garrett. 2,858,979.

Uraneck, Carl A., R. J. Sonnenfeld, and D. F. Dodgen, Jr., to Phillips Petroleum Co. Graft-type polymer of conjugated diene and acrylic acid and process of preparation. 2,859,201, 11–4–58, Cl. 260—45.5.

Urbanke, Ernst, and K. Bauer, to Tiroler Rohren-und Metallwerke Akt. Device for operating core shooting machines. 2,858,583, 11–4–58, Cl. 22—10.

Usab, Ernest M. and M. A. to Reflin Co. Method and apparatus for the centrifugal casting of fiber-reinforced plastic pipe. 2,859,151, 11–4–58, Cl. 154—83.

Usab, Martin A.: *See*—
Usab, Ernest M. and M. A. 2,859,151.

Vamvakas, Michael, to Barry-Wehmiller Machinery Co. Bottle discharger. 2,858,920, 11–4–58, Cl. 198—35.

Van der Lans, Johannes H. H. Self-propelled sewer pipe cleaning apparatus. 2,859,558, 11–4–58, Cl. 15—104.5.

Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 2,858,661.

Van der Lely, C., N. V.: *See*—
Van der Lely, Cornelis and A. 2,858,661.

Van der Lely, Cornelis and A., to C. van der Lely, N. V. Tractor mounted stable side delivery rake. 2,858,661, 11–4–58, Cl. 56—377.

Van Dusen, Harold A., Jr., to McGraw-Edison Co. Series system of mercury vapor lighting. 2,859,286, 11–4–58, Cl. 315—189.

Van Ryan, Anthony, and K. H. Date, to McGraw-Edison Co. Time delay device. 2,859,292, 11–4–58, Cl. 317—178.

Van Wey, Donald E.: *See*—
Oleson, Ole E., and Van Wey. 2,859,012.

Young, James H.: *See*—
Martinson, Alfred T., Hull, and Young. 2,859,027.

Zefting, Arthur H.: *See*—
Tobias, David L., and Zefting. 2,859,288.

Van Wyk, Joseph W., to Standard Oil Co. Production of blown asphalts in the presence of a phosphorous containing catalyst. 2,859,167, 11-4-58, Cl. 208—3.

Vastano, Joseph J., to Flex-Let Corp. Ornamental shell mounting means for chain links. 2,858,663, 11-4-58, Cl. 59—79.

Verrett, Wallace A. Isometric piping template rule. 2,858,612, 11-4-58, Cl. 33—75.

Vibrana, Gerwig: *See*—
Gundert, Eberhard, and Vibrana. 2,859,378.

Vickers Inc.: *See*—
Parsons, Henry C., Dreisbach, and Chondzinski. 2,858,902.

Vigor, Charles W., to General Motors Corp. Surface hardening of titanium. 2,858,600, 11-4-58, Cl. 29—198.

Vihon, Edward S. Wallets. 2,858,870, 11-4-58, Cl. 150—35.

Vilpon, Ulysse A. Orthopaedic apparatus. 2,858,827, 11-4-58, Cl. 128—78.

Viscose Development Co. Ltd.: *See*—
Browne, Reginald H., Chandler, and Stover. 2,858,660.

Vogelman, Joseph H. High power transmission line filters. 2,859,418, 11-4-58, Cl. 333—73.

Voigtlander-Akt.: *See*—
Reiche, Willi. 2,858,753.

Wade, Maurice R. Coffee maker. 2,858,762, 11-4-58, Cl. 99—287.

Waggener, Kenneth E. Apparatus for jarring well pipe. 2,858,943, 11-4-58, Cl. 166—178.

Wagner, Rudolf R. Rotary presses and the like. 2,858,747, 11-4-58, Cl. 92—49.3.

Waheman, Alden H., and D. C. Roshon, to The Creamery Package Mfg. Co. Apparatus for treatment of readily solidifiable liquids. 2,859,018, 11-4-58, Cl. 259—4.

Walker, Harry M.: *See*—
Heider, Rudolph L., and Walker. 2,859,183.

Walker, Herbert, to British Insulated Callender's Cables Ltd. Apparatus for drying and impregnating small articles. 2,858,796, 11-4-58, Cl. 118—50.

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White, Robert G. Air-operated spot welding device. 2,859,330, 11-4-58, Cl. 219—86.

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ISSUED NOVEMBER 4, 1958

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Classification of Designs

D 8—11: Des. 183,840
D 4— 3: Des. 183,836
D12— 1: Des. 183,835
Des. 183,836
D14— 2: Des. 183,833
6: Des. 183,831
Des. 183,831
Des. 183,860
D16— 2: Des. 183,838
D16— 2: Des. 183,852
D17—12: Des. 183,854
D19— 1: Des. 183,856
D20— 3: Des. 183,855
D26— 1: Des. 183,831
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D29— 7: Des. 183,856
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D79— 1: Des. 183,830
D71— 1: Des. 183,838
Des. 183,837
D72— 1: Des. 183,840
D74— 1: Des. 183,839
D81—10: Des. 183,852
D82— 3: Des. 183,834
Des. 183,870

further proceedings shall be governed by the rules in effect cute the application unless qualified under § 2.12 (a), or qual-

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
November 4, 1958 Volume 736 Number 1

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the post office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Ivor Rich, New York, N. Y., Reg. No. 469,300, Canc. No. 7120.

Weyl-Zuckerman & Co., Stockton, Calif., Reg. No. 290,254, Canc. No. 7136.

Peter Pan Manufacturing Co., Boston, Mass., Reg. No. 424,992, Canc. No. 7140.

Texas Brags-World's Finest Foods, Inc., Dallas, Tex. Reg. No. 606,789, Canc. No. 7150.

Eader Textile Corporation, Highfield, Md. Reg. No. 384,179, Canc. No. 7153.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

TITLE 37 (Code of Federal Regulations)—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter I—Patent Office, Department of Commerce

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

PART 4—FORMS FOR TRADEMARK CASES

MISCELLANEOUS AMENDMENTS

The following amendments are made, to take effect on January 1, 1959, except as otherwise provided.

The text of proposed amendments was published in the Federal Register for April 22, 1958 (23 F. R. 2641–3), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed amendments. The amendments are made after consideration of all the material submitted and statements made.

In addition, certain amendments are made for the purpose of incorporating into the language of the rules of practice in trademark cases the new system of adjudicating inter partes trademark cases, and ex parte appeals from decisions of the Examiner of Trademarks, by a Trademark Trial and Appeal Board, provided for by Public Law 85–609, approved August 8, 1958, 72 Stat. 540, which took effect on August 8, 1958. No advance notice of proposed rules was made as to these changes since they are merely those necessitated by the new statute, and the time and manner of taking effect of the changed wording relating to the Trademark Trial and Appeal Board are necessarily the same as the time of taking effect of the statute. The amendments relating to the Trademark Trial and Appeal Board shall apply to inter partes cases instituted on and after August 8, 1958, and to such cases instituted prior to this date which have not been heard by an Examiner of Interferences; with respect to such cases which have been heard or decided by an Examiner of Interferences further proceedings shall be governed by the rules in effect prior to the effective date of these amendments. These amendments shall apply to ex parte appeals in trademark cases taken on and after August 8, 1958, and to such appeals taken prior to this date which have not been heard; with respect to such appeals which have been heard or decided prior to this date

CONDITION OF TRADEMARK APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,285
Date of oldest new application	Feb. 27, 1958
Date of oldest amended application	May 19, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 28, 31, 32, 34, 35, 38, 50	5-10-58	6-3-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 29, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	5-10-58	7-3-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	5-27-58	5-19-58
Renewals (All Classes)	9-15-58	9-26-58
Sec. 12 (c) Publications (All Classes)	9-8-58	9-26-58

Applications Filed During the Month of September 1958—1,735

Registrations Issued	316—No. 669,127 to No. 669,442
Renewals Issued	64

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

not so added, the Examiner of Trademarks may suspend

(c) *Motion to produce documents, etc., for inspection and copying.* Upon motion showing good cause therefor, made

further proceedings shall be governed by the rules in effect prior to the effective date of these amendments.

The text of the amendments is as follows:

1. Paragraph (a) of § 2.12 is amended to read as follows:

(a) Attorneys at law: Any person who is a member in good standing of the bar of the Supreme Court of the United States or of the highest court of any State, Territory, or the District of Columbia, and is not under any order of any court suspending, enjoining, restraining, disbarring, or otherwise restricting him in the practice of law, may represent others before the Patent Office in trademark cases. No application for recognition to practice in trademark cases by attorneys at law is required.

2. Section 2.15 is amended to read as follows:

§ 2.15 *Signature and certificate of attorney or agent.* (a) Every paper filed by an attorney at law or other person representing an applicant or party to a proceeding in the Patent Office must bear the signature of such attorney at law or other person except those papers which are required to be signed by the applicant or party (such as the application itself and verifications required of applicants, registrants or others). The signature of an attorney at law or such other person to a paper filed by him, or the filing of any paper by him, constitutes a certificate that the paper has been read; that its filing is authorized; that to the best of his knowledge, information, and belief there is good ground to support it; and that it is not interposed for delay.

(b) When an applicant or party is represented by a firm composed of attorneys at law, papers may carry the signature or name of the firm, with the signature of a member or associate of the firm.

(c) When an applicant or party is represented by a firm (registered in accordance with § 1.341 (d) of this chapter) which includes one or more nonlawyers, papers may carry the signature or name of the firm, but in any case, they must carry the signature of an individual member of the firm or of an individual employee of the firm who is registered in the Patent Office and who is authorized to sign on behalf of the firm, and the certification referred to in paragraph (a) of this section shall, in either case, be a certification by and on behalf of the firm and by the individual.

3. Section 2.17 is amended to read as follows:

§ 2.17 *Recognition for representation.* (a) When an attorney at law acting in a representative capacity appears in person or signs a paper in practice before the Patent Office in a trademark case, his personal appearance or signature shall constitute a representation to the Patent Office that under the provisions of these rules and the law he is authorized, and qualified under § 2.12 (a), to represent the particular party in whose behalf he acts. Further proof of authority to act in a representative capacity may be required.

(b) Before any nonlawyer will be allowed to take action of any kind in any application or proceeding, a written authorization from the applicant, party to the proceeding, or other person entitled to prosecute such application or proceeding must be filed therein.

4. Section 2.18 is amended to read as follows:

§ 2.18 *Correspondence held with attorney or agent.* Correspondence will be held with the attorney at law, or other recognized person who shall have filed his written authorization, representing the applicant or party to a proceeding. Double correspondence will not be undertaken, and if more than one attorney at law appears or more than one agent is authorized, correspondence will be held with the one last appearing or appointed, as the case may be, unless otherwise requested.

5. Section 2.19 is amended to read as follows:

§ 2.19 *Revocation of power of attorney or authorization of agent.* Authority to represent an applicant or a party to a proceeding may be revoked at any stage in the proceedings of a case upon notification to the Commissioner; and when it is so revoked, the Office will communicate directly with the applicant or party to the proceeding or with such other qualified person as may be authorized. The Patent Office will notify the person affected of the revocation of his authorization.

6. The last sentence of § 2.24 is amended to read as follows: "Official communications of the Patent Office will be addressed to the domestic representative unless the application is being prosecuted by an attorney at law or other qualified person duly authorized. The mere designation of a domestic representative does not authorize the person designated to prosecute the application unless qualified under § 2.12 (a), or qualified under paragraph (b) or (c) of § 2.12 and authorized under § 2.17 (b)."

7. Section 2.27 is amended by changing the title to read "*Pending application index; access to applications*"; by changing the word "stating" in the first sentence to "including"; and by inserting the words "reproduction or" before "description" in the first sentence.

8. Section 2.37 is amended to read as follows:

§ 2.37 *Authorization for representation; U. S. representative.* The authorization of a qualified person to represent applicant (§ 2.17 (b)) and the appointment of a domestic representative (§ 2.24) may be included as a paragraph or paragraphs in the application.

9. The last sentence of paragraph (a) of § 2.39 is amended to read as follows: "If the certificate is not in the English language, a translation is required."

10. Section 2.41 is amended to read as follows:

§ 2.41 *Proof of distinctiveness under section 2(f).* (a) When registration is sought of a mark which would be unregistrable by reason of section 2 (e) but which is said by applicant to have become distinctive in commerce of the goods set forth in the application, applicant may, in support of registrability, submit with the application, or in response to a request for evidence or to a refusal to register, affidavits, depositions, or other appropriate evidence showing duration, extent and nature of use and advertising expenditures in connection therewith (identifying types of media and attaching typical advertisements), and affidavits, letters or statements from the trade or public, or both, or other appropriate evidence tending to show that the mark distinguishes such goods.

(b) In appropriate cases, ownership of one or more prior registrations on the principal register or under the act of 1905 of the same mark may be accepted as prima facie evidence of distinctiveness. Also, if the mark is said to have become distinctive of applicant's goods by reason of substantially exclusive and continuous use thereof by applicant for the five years next preceding the application filing date, a showing by way of verified statements in the application may, in appropriate cases, be accepted as prima facie evidence of distinctiveness. In each of these situations, however, further evidence may be required.

11. Section 2.53 is amended to read as follows:

§ 2.53 *Transmission of drawings.* Drawings transmitted to the Patent Office, other than those typed in accordance with § 2.51 (d), should be sent flat, protected by a sheet of heavy binder's board, or should be rolled for transmission in a suitable mailing tube to prevent mutilation or folding.

12. Paragraph (b) of § 2.67 is amended to read as follows:

(b) If registration is refused solely on the basis of a prior registration and the applicant files a petition to cancel the reference registration, such action upon notice thereof being placed in the application file by the applicant within the time for reply, shall be taken as a response to the refusal, and further action by the Office shall, at applicant's request, be suspended pending the termination of the cancellation proceeding.

13. Section 2.75 is amended by cancelling the last sentence thereof.

14. Section 2.86 is amended by cancelling the word "description" and substituting the word "identification" therefor.

15. Section 2.95 is amended to read as follows:

§ 2.95 *Decision on motion to dissolve.* Appeal may be taken to the Trademark Trial and Appeal Board in the manner provided in §§ 2.141 and 2.142 from a decision granting a motion to dissolve. No appeal may be had from a decision denying such a motion, but the question may be reviewed by the Trademark Trial and Appeal Board in its final decision in the interference.

16. Section 2.98 is amended to read as follows:

§ 2.98 *Adding party to interference.* If, during the pendency of an interference, another case appears involving substantially the same registrable subject matter, the Examiner of Trademarks may request the suspension of the interference for the purpose of adding said case. Such suspension will be granted as a matter of course if no testimony has been taken. If, however, any testimony has been, or is about to be, taken the case will not be added except upon approval of a member of the Trademark Trial and Appeal Board. If the case is

the proper officer, with the request that he notify the witnesses named to appear before him within a designated time

which, in the opinion of the Examiner of Trademarks, render the mark of any applicant involved unregistrable, the atten-

not so added, the Examiner of Trademarks may suspend action on such case pending termination of the interference proceeding, following which an interference may be instituted between such case and the case of the party prevailing in the first interference.

17. The first sentence of paragraph (b) of § 2.99 is amended to read as follows: "The notices shall be sent to each of the parties, in care of their attorneys or agents, if they have attorneys or agents of record, and if one of the parties is a registrant, a notice shall also be sent to him or his assignee of record."

18. Section 2.105 is amended by changing "Examiner of Interferences," each occurrence, to "Trademark Trial and Appeal Board."

19. Paragraph (a) of § 2.113 is amended to read as follows:

§ 2.113 *Notice of filing petition.* (a) When a petition for cancellation is filed, it shall be transmitted to the Trademark Trial and Appeal Board, which shall make examination thereof to determine if it is formally correct. If the petition is found to be defective as to form, the party filing the same shall be so advised and allowed a reasonable time for correcting the informality.

20. Paragraph (b) of § 2.113 is amended by cancelling the words "by the Examiner of Interferences."

21. Section 2.120 is amended to read as follows:

§ 2.120 *Discovery procedure.* The provisions of the Federal Rules of Civil Procedure relating to discovery are inapplicable in inter partes trademark cases except as specifically set forth in this section.

(a) *Depositions for discovery.* (1) Any party to an opposition, interference, cancellation or concurrent use proceeding may, at any time not later than thirty days prior to the date for taking testimony of any party as set by initial or subsequent Office action, take the deposition of any person, including a party, for the purpose of discovery. Such depositions may be taken upon oral examination in the manner prescribed by §§ 1.273, 1.274 and 1.275 of this chapter, or upon written interrogatories in the manner prescribed by § 2.124.

(2) *Scope of examination.* The deponent may be examined regarding any matter, not privileged, which is relevant to the subject matter involved in the proceeding, whether it relates to the claim or defense of the examining party or to the claim or defense of any other party, including the existence, description, nature, custody, condition and location of any books, documents, or other tangible things and the identity and location of persons having knowledge of relevant facts. It is not ground for objection that the testimony would be inadmissible at the trial if the testimony sought appears reasonably calculated to lead to the discovery of admissible evidence.

(3) *Use of discovery depositions.* Discovery depositions may be used in accordance with Rule 26 (d) (1), (2) and (4) and (f) of the Federal Rules of Civil Procedure, provided the party offering the deposition, or any part thereof, in evidence files the same before the close of his testimony period and also files a notice of reliance thereon. Objections, including any made during the examination, will be considered only if made or renewed at the hearing.

(b) *Request for admission.* (1) Any party to an opposition, interference, cancellation or concurrent use proceeding may, within the time specified for taking depositions for discovery, serve upon any adverse party a written request for admission by the latter of the genuineness of any relevant document described in and attached to the request (a photocopy may be attached provided the original thereof is made available for inspection), or of the truth of any facts which are material and relevant to the issues and which are believed to be within the knowledge of both the parties serving and the parties served. Each matter in respect of which an admission is requested shall be considered as admitted unless, within fifteen days after service thereof, the party to whom the request is directed serves upon the party requesting the admission a sworn statement denying specifically the matter in respect of which admission is requested, or setting forth in detail the reasons why he cannot truthfully either admit or deny the same, or objects thereto.

(2) *Effect of admissions.* No admission shall be considered as part of the record in the case unless a party files, before the close of his testimony period, a notice of reliance thereon and a copy of the admission and request therefor. Any objections noticed will be considered only if made at the hearing.

(c) *Motion to produce documents, etc., for inspection and copying.* Upon motion showing good cause therefor, made prior to the date for taking testimony of any party as set by initial or subsequent Office action, an order may be entered requiring a party to produce and permit the inspection and copying or photographing, by or on behalf of the moving party, of any designated books, documents or other tangible things, not privileged, the existence of which has been pleaded or otherwise asserted, and which constitute or contain material within the scope of inquiries permitted in depositions for discovery and which are in his possession, custody or control. The order shall specify a time for compliance therewith, and may prescribe such terms and conditions as may be just.

(d) *Refusal to make discovery.* If any party fails or refuses to answer proper questions in taking discovery depositions or fails or refuses to comply with an order to produce and permit the inspection and copying or photographing of designated things, the Trademark Trial and Appeal Board may strike out all or any part of any pleading of that party, or dismiss the action or proceeding or any part thereof, or enter a judgment as by default against that party, or take such other action as may be deemed appropriate.

(e) *Examination and cross-examination.* A party may interrogate any unwilling or hostile witness by leading questions. A party may call an adverse party or an officer, director, or managing agent of a public or private corporation or of a partnership or association which is an adverse party, and interrogate him by leading questions and contradict and impeach him in all respects as if he had been called by the adverse party, and the witness thus called may be contradicted and impeached by or on behalf of the adverse party also, and may be cross-examined by the adverse party only upon the subject matter of his examination in chief.

22. Section 2.123 is amended by changing "§ 2.124 and by § 1.284 of this chapter" in paragraph (a) to "§§ 2.124 and 2.124a"; by changing "deposition" to "depositions" in the first sentence of paragraph (b); and by changing the first sentence of paragraph (e) to read as follows: "Printed publications, such as books and periodicals, available to the general public in libraries or of general circulation, and official records, may be introduced as provided in § 1.282 of this chapter."

23. New § 2.124a, to follow § 2.124, is added:

§ 2.124a *Testimony taken in foreign countries.* Upon motion duly made and granted, testimony may be taken in foreign countries, upon complying with the following requirements:

(a) The motion must designate a place for the examination of the witnesses at which an officer duly qualified to take testimony under the laws of the United States in a foreign country shall reside, and it must be accompanied by a statement under oath that the motion is made in good faith, and not for the purposes of delay or of vexing or harassing any party to the case; it must also set forth the names of the witnesses, the particular facts to which it is expected each will testify, and the grounds on which is based the belief that each will so testify.

(b) It must appear that the testimony desired is material and competent, and that it cannot be taken in this country at all, or can not be taken here without hardship and injury to the moving party greatly exceeding that to which the opposite party will be exposed by the taking of such testimony abroad.

(c) Upon the granting of such motion, the Trademark Trial and Appeal Board will execute and forward to the moving party a commission authorizing the appropriate consular or other officer to take the depositions, and a time will be set within which the moving party shall serve in duplicate on each adverse party the interrogatories to be propounded to each witness, and such adverse party may, within a designated time, serve in duplicate, on the moving party cross-interrogatories. Objections to any of the interrogatories may be served with, or prior to service of, cross-interrogatories and objections to any of the cross-interrogatories may be served at any time before the depositions are taken, and testimony will be taken subject to the objections. Such objections will be considered and determined upon the hearing of the case if renewed at that time.

(d) As soon as the cross-interrogatories are served, the moving party will forward the interrogatories, the cross-interrogatories, the commission, and security for official fees to

follows: "Any applicant for registration or any party to a

§ 2.166 *Time of cancellation.* If no affidavit is filed within

the proper officer, with the request that he notify the witnesses named to appear before him within a designated time and make answer thereto under oath; and that he reduce their answers to writing and transmit the same, under his official seal and signature to the Commissioner of Patents with the certificate prescribed in § 1.276 of this chapter. The letter of transmittal of the moving party should direct attention of the consular or other officer to the instructions on the reverse side of the commission and should indicate that any insufficiency or excess of the security for official fees should be directed to the attention of the said party; and in view of the requirements of §§ 1.253 and 2.125 of this chapter for filing and serving copies of testimony, the desired number of copies of the testimony should be requested by the moving party.

(e) By stipulation of the parties the requirements of paragraph (c) of this section as to written interrogatories and cross-interrogatories may be dispensed with, and the testimony may be taken before the proper officer upon oral interrogatories by the parties, their attorneys or their agents.

(f) Unless false swearing in the giving of such testimony before the officer taking it shall be punishable as perjury under the laws of the foreign state in which it shall be taken, it will not stand on the same footing in the Patent Office as testimony duly taken in the United States; but its weight in each case will be determined by the tribunal having jurisdiction of such case.

24. Section 2.127 is amended to read as follows:

§ 2.127 *Motions.* (a) Motions shall be made in writing and shall contain a full statement of the grounds therefor. Any brief or memorandum in support of a motion shall accompany or be embodied in the motion. Briefs in opposition to a motion shall be filed within fifteen days from the date of service of the motion unless another time is specified by the Trademark Trial and Appeal Board or the time is extended on request. Oral hearings will not be held on motions except on order of the Trademark Trial and Appeal Board.

(b) Any petition for reconsideration or modification of a decision must be filed within ten days after the decision or, if the decision is appealable, before the time for appeal expires.

(c) Interlocutory motions, requests, and other matters not finally determinative in the proceeding may be acted upon by a member of the Trademark Trial and Appeal Board.

25. Section 2.128 is amended to read as follows:

§ 2.128 *Final hearing and briefs.* (a) The brief of a party in the position of plaintiff shall be filed not later than sixty days after the closing date set for rebuttal testimony; the brief of a party in the position of defendant not later than thirty days after the due date of the first brief; a reply brief by a party in the position of plaintiff, if filed, shall be due fifteen days after the due date of the brief to which it is a reply. Three copies of all briefs should be filed.

(b) Briefs may be submitted in typewritten or printed form, except that where they are in excess of thirty typewritten pages, they shall be printed in conformity with § 1.254 of this chapter. Typewritten briefs may be written on letter or legal size paper and shall be double-spaced. Each brief shall contain an alphabetical index of cases cited therein.

(c) If a party desires an oral hearing, he shall so state by a separate notice filed not later than his brief, and the time for such hearing will be set in a notice sent to each party by the Office. If no request for oral hearing is made, the case will be decided on the record and briefs.

26. Section 2.129 is amended to read as follows:

§ 2.129 *Oral argument.* (a) Oral arguments will be heard by at least three members of the Trademark Trial and Appeal Board at the time stated in the notice. If any party appears at the specified time, he will be heard. If the Board is prevented from hearing the case at the time specified, a new assignment will be made, or the case will be continued from day to day until heard. Unless otherwise permitted, oral arguments will be limited to one-half hour for each party. Any petition for rehearing, reconsideration, or modification of a decision must be filed within thirty days from the date thereof.

(b) Hearings may be advanced or adjourned, as far as is convenient and proper, to meet the wishes of the parties and their attorneys or agents.

27. Section 2.130 is amended to read as follows:

§ 2.130 *New matter suggested by Examiner of Trademarks.* If, during the pendency of an inter partes case, facts appear which, in the opinion of the Examiner of Trademarks, render the mark of any applicant involved unregistrable, the attention of the Trademark Trial and Appeal Board shall be called thereto. The Board may suspend the proceeding and refer the application to the Examiner of Trademarks for his determination of the question of registrability, following the final determination of which the application shall be returned to the Board for such further inter partes action as may be appropriate. The consideration of such facts by the Examiner of Trademarks shall be ex parte, but a copy of the action of the Examiner will be furnished to the parties to the inter partes proceeding.

28. Section 2.131 is amended to read as follows:

§ 2.131 *Ex parte matter in an inter partes case.* If, in considering an inter partes case involving an application, facts appear which, in the opinion of the Trademark Trial and Appeal Board render the mark of the applicant unregistrable on one or more ex parte grounds, the Board shall in its decision on the inter partes issues in the case recommend that if the applicant finally prevails in the case, registration be withheld pending a reexamination by the Examiner of Trademarks of the application in the light of such facts. If, upon such reexamination following termination of the inter partes case, the Examiner of Trademarks finally refuses registration to applicant, appeal may be taken as provided in §§ 2.141 and 2.142.

29. Section 2.132 is amended by changing "a defendant" to "defendant" in paragraph (a) and by changing "Examiner of Interferences" to "Trademark Trial and Appeal Board" in paragraph (b).

30. Section 2.133 is amended by changing "Examiner of Interferences" to "Trademark Trial and Appeal Board."

31. Section 2.134 is amended to read as follows:

§ 2.134 *Surrender or cancellation of registration.* If a registrant involved in a proceeding applies to surrender or cancel his registration or files a disclaimer in whole of his mark under section 7 (d) of the act, the proceeding may be dismissed.

32. Section 2.135 is amended to read as follows:

§ 2.135 *Abandonment of application, abandonment, concession of priority.* If, in a proceeding an applicant files a written abandonment of the application or of the mark, or a party to an interference files a written concession of priority, judgment shall be entered against such applicant or party.

33. Section 2.141 is amended to read as follows:

§ 2.141 *Ex parte appeals from the Examiner of Trademarks.* Every applicant for the registration of a mark may, upon final refusal by the Examiner of Trademarks, appeal to the Trademark Trial and Appeal Board upon payment of the prescribed fee. A second refusal on the same grounds may be considered as final by the applicant for purpose of appeal.

34. Section 2.142 is amended to read as follows:

§ 2.142 *Time and manner of ex parte appeals.* (a) Such appeal must be taken within sixty days from the date of the final refusal, or, if the refusal was not made final by the Examiner, within the time for response to the Examiner's action. Appeal is taken simply by filing a notice of appeal and payment of the appeal fee.

(b) The appellant's brief shall be filed within sixty days after the date of appeal. If the brief is not filed within the time allowed, the appeal may be dismissed. The Examiner may, within such time as may be directed by the Commissioner, furnish a written statement in answer to appellant's brief, supplying a copy to the appellant. The appellant may file a reply brief within twenty days from the date of such answer.

(c) The appellant shall indicate, not later than at the time of filing his brief, if he desires an oral hearing. If no request for oral hearing has been made, the appeal will be considered on brief. If the appellant has requested an oral hearing, a day of hearing will be set, and due notice thereof given. Hearings will be held as stated in the notice and oral argument will be limited to one-half hour unless otherwise permitted.

(d) Applications which have been considered and decided on appeal will not be reopened except by order of the Commissioner, and then only for consideration of matters not already adjudicated, sufficient cause being shown.

35. Section 2.143 is cancelled.

36. The first sentence of § 2.145 is amended to read as

follows: "Any applicant for registration or any party to a inter partes proceeding who is dissatisfied with the decision of the Trademark Trial and Appeal Board, or any registrant who has filed an affidavit under section 8 of the act who is dissatisfied with the decision of the Commissioner, may appeal to the United States Court of Customs and Patent Appeals or may proceed under 35 U. S. C. 145 or 146, as in the case of applicants for patents, under the same conditions, rules and procedure as are applicable in the case of patent appeals or proceedings."

37. Section 2.146 is amended by cancelling the words "other than by appeal" in subparagraph (2) of paragraph (a).

38. *New* § 2.163, reading as follows, is added:

§ 2.163 *Notice to registrant.* If no affidavit is filed within a reasonable time prior to expiration of the sixth year, the registrant may be notified that the registration will be cancelled by the Commissioner at the end of such sixth year unless the owner files in the Patent Office the affidavit of use or excusable nonuse required by section 8. Failure to notify the registrant does not, however, relieve the registrant of the responsibility of filing the affidavit within the period required by statute.

39. Section 2.163 is renumbered as § 2.164.

40. Section 2.164 is renumbered as § 2.165 and paragraph (b) is amended to read as follows:

(b) If the registrant is dissatisfied with the action of the Examiner holding the affidavit insufficient, he may request the Commissioner to review the action under § 2.146. The decision of the Commissioner on such a request constitutes the final action of the Patent Office. If there is no review by the Commissioner, the Commissioner will notify the registrant of the insufficiency of the affidavit after the expiration of the sixth year, which notice will constitute such final action. See § 2.145 for appeal to or review by court.

41. Section 2.165 is renumbered as § 2.166 and is amended to read as follows:

§ 2.166 *Time of cancellation.* If no affidavit is filed within the sixth year following registration or publication under section 12 (c), the registration will be cancelled forthwith by the Commissioner. If the affidavit is filed but is refused, cancellation of the registration will be withheld pending further proceedings.

42. Section 2.173 is amended by inserting "and verified" after "signed" in the second sentence of paragraph (a), and by changing "specification" to "identification" in paragraph (b).

43. Section 2.175 is amended by inserting "and verified" after "signed" in the first sentence of paragraph (b).

44. The second sentence of § 2.176 is amended to read as follows: "If the action of the Examiner of Trademarks is adverse, registrant may request the Commissioner to review the action under § 2.146."

45. The first sentence of paragraph (b) of § 2.184 is amended to read as follows: "If the registrant is dissatisfied with the action of the Examiner considering the application for renewal incomplete or defective, he may request the Commissioner to review the action, under § 2.146."

46. Section 4.19 is amended by changing "Commissioner of Patents" and "Commissioner" to "Trademark Trial and Appeal Board."

47. Section 4.20 is cancelled.

(Sec. 41, 60 Stat. 440; 15 U. S. C. 1123)

ROBERT C. WATSON,
Commissioner of Patents.

Approved: October 6, 1958.

WALTER WILLIAMS,
Acting Secretary of Commerce.

[F. R. Doc. 58-8376; Filed, Oct. 9, 1958; 8:47 a. m.]

Published in 23 F. R. 7847-7850, October 10, 1958.

SN 46,656. Simpson Timber Company, Seattle, Wash. Filed Feb. 26, 1958. Sec. 2(f).

SN 46,623. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Feb. 26, 1958.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 15,787. Reinhold Hummel, Stuttgart-Weil im Dorf, Germany. Filed Sept. 17, 1956.

SONJANA

Priority claimed under Sec. 44(d) on German application filed Mar. 23, 1956; Reg. No. 691,070, dated May 24, 1956.

For Strawberry-Seeds and Strawberry-Plants.

SN 22,676. Hatheway Floral Company, Etowah, N. C., assignee of Curtis R. Hatheway, Jr., Etowah, N. C. Filed Jan. 16, 1957.

HEAVEN SCENT

For Cut Flowers.

First use in May 1952.

SN 29,720. The Greening Nursery Company, Monroe, Mich. Filed May 9, 1957.

VIGOR-SEALED

For Bag With a Plant, the Latter Having Its Roots Embedded in Material Within the Bag.

First use approximately Mar. 1, 1941.

SN 30,702. Fouke Fur Company, St. Louis, Mo. Filed May 27, 1957.

KITOVI

For Seal Skins.

First use Mar. 12, 1957.

SN 32,477. Dynamit-Actien-Gesellschaft vormals Alfred Nobel & Co., Troisdorf, Germany. Filed June 24, 1957.

ASTRALON

For Synthetic Plastics in the Form of Sheets, Tubes, and Rods.

First use November 1950; in commerce November 1950.

SN 36,044. Archer-Daniels-Midland Company, Minneapolis, Minn. Filed Aug. 23, 1957.

ADCOL

For Grain Sorghum Flour for Use in Adhesives and Colloids.

First use Sept. 7, 1956.

SN 39,144. International Minerals & Chemical Corporation, Chicago, Ill. Filed Oct. 18, 1957.

BLUE MOUNTAIN

For Nepheline Syenite Products, i. e., a Feldspar Rock for the Ceramic Industry.

First use Mar. 1, 1955.

SN 39,803. A. L. Gebhardt Co., Milwaukee, Wis. Filed Oct. 30, 1957.

THERMALEATHER

For Tanned Leather Hides.

First use Feb. 6, 1957.

TM 6

SN 40,194. Titanium and Zirconium Industries Proprietary Limited, Melbourne, Australia. Filed Nov. 6, 1957.

TAZI

For Minerals in Raw or Partly Prepared State—Namely, Rutile, Zircon, Monazite, and Ilmenite.

First use Apr. 8, 1952; in commerce Sept. 30, 1952.

SN 42,044. McLeod Leather and Belting Company, Greensboro, N. C. Filed Dec. 9, 1957.

BROOKSBANK

For Hairon Leather in Strip Form in General Use in the Industrial Arts.

First use 1926.

SN 42,987. Menefee Turkey Ranch, Inc., Yamhill, Oreg. Filed Dec. 24, 1957. Sec. 2(f).

MENEFEE

For Live Turkeys for Breeding and Turkey Eggs for Hatching.

First use 1938.

SN 43,622. John Masek, d. b. a. John's, Apopka, Fla. Filed Jan. 8, 1958.

DewKist

Owner of Reg. No. 437,550.

For Flowering Plants, Succulent Plants, Cacti, Foliage Plants, and Evergreen Shrubs.

First use Jan. 7, 1952.

SN 46,473. Monsanto Chemical Company, St. Louis, Mo. Filed Feb. 24, 1958.

Monsanto

The drawing is lined for red, but color is not claimed as a feature of the mark. Owner of Reg. Nos. 569,183, 647,498, and others.

For Resin and Plastic Materials, Whether of Natural or Synthetic Origin, in the Form of Sheets, Films, Tubes, Rods, Powders, Granules, Dispersions, Emulsions, and Solutions, for Use in the Industrial Arts and Further Manufacture.

First use at least as early as Dec. 11, 1957; in January 1940 in a substantially identical form.

SN 27,814. Paleo Chemical Corp., Charlestown, Mass. Filed Apr. 9, 1957.

Class 6—Chemicals and Chemical Com-

SN 46,656. Simpson Timber Company, Seattle, Wash. Filed Feb. 26, 1958. Sec. 2(f).

TREE WOOL

Owner of Reg. No. 615,505.
For Defibrated Wood Fibers, a Product Formed by Mechanical Separation of Wood Fibers Wherein the Wood Is Generally Douglas Fir or Hemlock and Which Product Is Sold for General Industrial Use.
First use Feb. 5, 1952.

Class 2—Receptacles

SN 12,705. Buckeye Molding Company, Miamisburg, Ohio. Filed July 24, 1956.

Flexeel

For Containers for Packaging Articles Such as Food, Precision Electro-Mechanical Parts, and Fishing Tackle; and Flexible Closures for Said Containers.
First use June 23, 1949.

SN 25,417. Leo Fremont, d. b. a. Fremont Bags, Brighton, Mass. Filed Mar. 4, 1957.

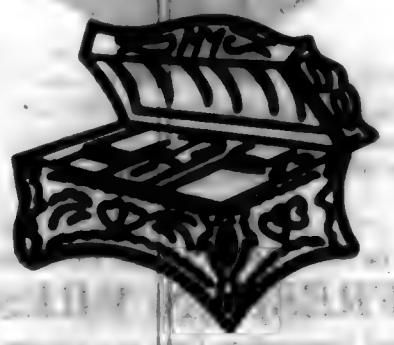
STEEL-STRAIN

For Shopping, Laundry, and Lingerie Bags Made of Cotton, Taffeta, and Rayon.
First use Jan. 7, 1957.

SN 46,390. Hilding A. Johnson, d. b. a. Sargent-Morse Co., Rockford, Ill. Filed Jan. 22, 1958.

For Grocery Bags, Notions Bags, Waterproof Bags, Garment Bags, Garbage Bags, Oiled Bags, Waxed Bags, Cellophane Bags, Plastic Bags, Cloth Bags, Corrugated Boxes, Paper Boxes, Fibre Boxes, Chip Board Boxes, Cups, and Mailing Tubes.
First use Nov. 12, 1957.

SN 46,621. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Feb. 26, 1958.



For Plastic Dinnerware.
First use Mar. 22, 1957.

SN 46,623. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Feb. 26, 1958.

HOPE CHEST

Owner of Reg. No. 625,202.
For Plastic Dinnerware.
First use Mar. 22, 1957.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 46,767. I. Smallman & Sons Co., New York, N. Y. Filed Feb. 27, 1958.

DEBBY

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses, and Pocket Secretaries.
First use December 1957.

SN 46,769. I. Smallman & Sons Co., New York, N. Y. Filed Feb. 27, 1958.

DATE BAIT

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses, and Pocket Secretaries.
First use December 1957.

SN 46,770. I. Smallman & Sons Co., New York, N. Y. Filed Feb. 27, 1958.

SALEM

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses, and Pocket Secretaries.
First use December 1957.

SN 49,526. A. J. Siris Products Corp., New York, N. Y. Filed Apr. 11, 1958.

HEART THROB

For Handbags, Wallets, and Change Purses.
First use Apr. 4, 1958.

SN 49,902. Bond Street Ltd., New York, N. Y. Filed Apr. 18, 1958.

Bond Street

Owner of Reg. No. 358,465.
For Wallets, Cosmetic and Change Purses, Passport Cases, Key Cases, and Cigarette Lighter Cases.
First use Jan. 3, 1956.

Class 4—Abrasives and Polishing Materials

SN 600,507. Knomark Manufacturing Co., Inc., Brooklyn, N. Y. Filed Dec. 6, 1955.

ESQUIRE CUSTOM FINISH

The words "Custom Finish" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 409,211 and 434,768.
For Shoe Dressing.
First use Feb. 10, 1955.

SN 38,552. Mid-South Chemical Corporation, Memphis, Tenn. Filed Oct. 8, 1957.

Class 12—Construction Materials

SN 27,814. Palco Chemical Corp., Charlestown, Mass. Filed Apr. 9, 1957.

PALCO SPRAY SHINE

The words "Spray Shine" are disclaimed apart from the mark. Owner of Reg. No. 653,615.
For Leather Finishing, Polishing, and Protecting Spray.
First use Nov. 25, 1952.

SN 48,840. International Steel Wool Corporation, Springfield, Ohio. Filed Apr. 1, 1958.

ELEPHANT

Owner of Reg. Nos. 198,746 and 203,047.
For Metal Wool Such as Steel Wool, Stainless Steel Wool, and Aluminum Wool for Rubbing, Cleansing, Polishing, Scouring, Filtering, Cushioning, Insulation, Etc.
First use Nov. 10, 1924.

SN 49,094. Carl E. Sykes, Sr., d. b. a. The Tops Chemical Mfg. Co., Norfolk, Va. Filed Apr. 4, 1958.

Car-Silk

For Automobile Polish and Wax.
First use in February 1958.

SN 50,026. Consultant Sales Service, Inc., Denver, Colo. Filed Apr. 21, 1958.

silsmith

For Silver Polish.
First use on or about Nov. 1, 1957.

SN 50,451. Bay Chemical Corporation, Port Washington, N. Y. Filed Apr. 28, 1958.

SWAB

For Cleaner and Polish.
First use June 1, 1958.

SN 50,627. Janitors Supply and Chemical Company, Inc., Greenville, S. C. Filed Apr. 29, 1958.

GUIDE

For Floor Wax.
First use Feb. 15, 1958.

Class 6—Chemicals and Chemical Compositions

SN 672,965. Silver Seal Products Co., Detroit, Mich., by change of name from The Linco Chemical Company, Detroit, Mich. Filed Sept. 9, 1954.

SILVER SEAL PRODUCTS

The use of the word "Products" in the mark is disclaimed. The drawing is lined for black.
For Rust Inhibitor and Radiator Leak Sealing Compound.
First use Dec. 1, 1952.

SN 33,190. Baltimore Biological Laboratory, Inc., Baltimore, Md. Filed July 5, 1957.

BBL

For Biological Materials and Preparations for Laboratory Testing.
First use on or about June 1955.

SN 37,198. Swift & Company, Chicago, Ill. Filed Sept. 13, 1957.

LAREX

For Triglyceride Oil Derived From Tallow or Grease by Fractionation, Commonly Known as Lard Oil, Which Has Uses as a Defoamer and a Cutting Oil and as an Ingredient in Cutting Oils, Wool Oil, and Other Lubricants.
First use Jan. 13, 1949.

SN 37,468. Union Carbide Corporation, New York, N. Y. Filed Sept. 18, 1957.

NIAX

Owner of Reg. Nos. 358,631, 648,463, and others.
For Polyol Polyethers for Use in the Manufacture of Urethane Products.
First use Aug. 5, 1957.

SN 37,892. Mid-South Chemical Corporation, Memphis, Tenn. Filed Sept. 26, 1957.

MIC

Owner of Reg. No. 640,566.
For Ammonium Nitrate.
First use on or about Aug. 10, 1957.

SN 38,546. La Bora, Inc., Chicago, Ill. Filed Oct. 8, 1957.

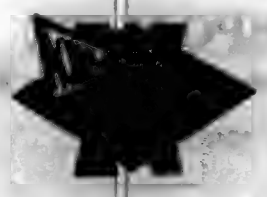
FRESH 'N DRESS

For Chemical Preparation Used as a Clothes Deodorant and a Garment Freshener.
First use July 31, 1957.

SN 47,777. Orangeburg Manufacturing Co., Inc., Orangeburg,

SN 50,425. Washington Steel Products, Inc., Tacoma, Wash. Filed Apr. 25, 1958.

SN 38,552. Mid-South Chemical Corporation, Memphis, Tenn. Filed Oct. 8, 1957.



The word "Aqua" is disclaimed apart from the mark as shown. Owner of Reg. No. 640,546.
For Aqua Ammonia.
First use on or about Aug. 19, 1957.

SN 42,862. Gerald W. Goldstone, d. b. a. A-C Carbon Co., Los Angeles, Calif. Filed Dec. 23, 1957.

ACTRON

For Ingredient of Powdered Carbon.
First use Oct. 16, 1957.

Class 7 — Cordage

SN 45,266. Midwest Cordage Co., Inc., Fayette, Mo. Filed Feb. 4, 1958.

UNIVERSAL

For Wrapping, Binder, and Baler Twine; and Rope.
First use Dec. 8, 1957.

SN 30,735. Dan H. Shield Cordage Company, Chicago, Ill. Filed Apr. 30, 1958.

BLACK SHIELD

For Baler and Binder Twine and Rope.
First use July 8, 1957.

Class 11 — Inks and Inking Materials

SN 44,251. Bourges Color Corporation, New York, N. Y. Filed Jan. 20, 1958. Sec. 2(f).

bourges

Owner of Reg. Nos. 625,028 and 628,904.
For Art Materials—Namely, Ink Coated Transparent and Translucent Overlay Sheets, and Liquid Inks.
First use at least as early as 1939.

SN 48,417. Interchemical Corporation, New York, N. Y. Filed Mar. 25, 1958.

AURAVIN

For Printing Inks.
First use Feb. 28, 1958.

Class 12 — Construction Materials

SN 26,056. Bethlehem Steel Company, Bethlehem, Pa. Filed Mar. 13, 1957.

Owner of Reg. Nos. 284,576, 641,071, and others.
For Steel Bars for Concrete Reinforcement.
First use Jan. 21, 1957.

SN 30,848. The Standard Motor Company Limited, Coventry, England. Filed May 27, 1957.

STANPART

Owner of British Reg. No. 751,306, dated Feb. 25, 1956.
For Mastic Compound for Motor Vehicle Jointings.

SN 36,195. Jamison Cold Storage Door Company, Hagerstown, Md. Filed Aug. 26, 1957.

flexidor

The drawing is lined for brown but no claim is made to color.
For Rubber Batten Doors for Industrial Use.
First use Aug. 15, 1957.

SN 47,745. The Eagle-Picher Company, Cincinnati, Ohio. Filed Mar. 14, 1958.

SUPERGLAS

For Glass Wool Insulation Sold in Bulk and in Rolls and Bats and as Pipe Covering.
First use Feb. 5, 1958.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 34,697. H & L Tooth Company, Montebello, Calif. Filed July 31, 1957.

FLEXPIN

For Fasteners for Retaining Parts of Excavating Equipment.
First use on or about Aug. 21, 1946.

SN 47,770. Orangeburg Manufacturing Co., Inc., Orangeburg, N. Y. Filed Mar. 14, 1958.

SP

For Plastic Pipe.
First use May 5, 1957.

SN 35,124. Beovill Manufacturing Company, Waterbury, Conn. Filed Aug. 7, 1957. Sec. 2(f) as to "Beovill."

SN 46,974. Motor Magic Corporation, Memphis, Tenn. Filed Mar. 3, 1958.

SN 47,777. Orangeburg Manufacturing Co., Inc., Orangeburg, N. Y. Filed Mar. 14, 1958.

ORANGEBURG SP

For Plastic Pipe.
First use May 5, 1937.

SN 48,144. Cleveland-Detroit Corporation, Cleveland, Ohio. Filed Mar. 21, 1958.

SEWER-GUARD

For Flood Control Equipment for Basements of Buildings.
First use Jan. 31, 1958.

SN 48,508. Scully Signal Company, Melrose, Mass. Filed Mar. 26, 1958.

SCULFIL

For Fluid Tight Conduit Connectors for Adaptation to Fill-Pipes of Various Sizes.
First use Feb. 27, 1958.

SN 49,266. Grinnell Corporation, Providence, R. I. Filed Apr. 9, 1958.

Owner of Reg. Nos. 243,479 and 243,955.
For Pipe Fittings, Valves, Automatic Sprinkler Systems, Sprinklers and Accessories Therefor, Dry-Valve Accelerators, Pressure Alarm Signal Devices, Flow Alarm Signal Devices, By-Pass Connections, Sight Drip Connections, Mercury Gauges, Indicator Posts, Retards, Retarding Chambers, Water Motors, Spray Pipes, Hose Caps, Quartzoid Bulb Links, Pipe Hangers and Supports.
First use 1911 on valves.

SN 50,071. Ladish Co., Cudahy, Wis. Filed Apr. 21, 1958.

LADISH

For Metal Pipe Flanges; Tubular Metal Fittings Including T's, Crosses, Laterals, Elbows, Reducers, Caps, Y's; Metal Plugs; Metal Pipe Couplings; Metal Bushings; Valves; and Tubular Necks.
First use in July 1943.

SN 50,234. Knape and Vogt Manufacturing Company, Grand Rapids, Mich. Filed Apr. 23, 1958.

KV

For Store Fixture and Builders' Hardware Including: Drawer Equipment Such as: Tracks, Slides, Rollers and Pulls, Sliding Door Tracks and Fixtures; Miscellaneous Racks Such as for Shirts, Pants, Hats, Ties, Shoes, Belts, Purses, Dishes, Towels, and Store Displays; Closet and Showcase Fixtures Such as Rods, Clothing Carriers, Hang Rod Flanges, Shelf Standards and Brackets; Shelving Structures Such as Standards, Brackets, Supports, Shelves; Glass and Mirror Fittings and Hangers Such as Clips, Clamps, Corner Brackets, and Channels; Ticket and Label Holders; Counter and Shelf Dividers; Hinges, Locks, and Latches for Doors and Gates; Drawer Locks.
First use January 1955.

SN 50,425. Washington Steel Products, Inc., Tacoma, Wash. Filed Apr. 25, 1958.

SPOTLITE

For Cabinet Hardware—Namely, Door Knobs and Drawer Knobs.
First use November 1945.

SN 50,455. D. & S. Stamping Co., Utica, Mich. Filed Apr. 28, 1958.

"CERTISEAL"

For Flush Valve Guide.
First use Mar. 1, 1958.

SN 50,768. Bonney Forge & Tool Works, Allentown, Pa. Filed May 1, 1958.

HANGOLET

Owner of Reg. Nos. 283,140, 654,004, and others.
For Hanger Fittings for Pipes.
First use Apr. 14, 1956.

SN 50,943. Thayer, Inc., Gardner, Mass. Filed May 2, 1958.

Wee-Trainer

For Child's Training Seat.
First use Mar. 19, 1958.

Class 14—Metals and Metal Castings and Forgings

SN 33,502. Raybestos-Manhattan, Inc., Passaic, N. J. Filed July 10, 1957.

FERRAFUSE

For Finished Metal Castings Made of Sintered Powdered Metals.
First use June 20, 1957.

SN 35,117. Penetred Corporation, Marshfield, Wis. Filed Aug. 7, 1957.

For Wire Skid-Control Coils for Use in the Tire Industry.
First use Apr. 15, 1957.

SN 47,766. Imperial Tobacco Company of Canada, Limited,

SN 50,259. Brooks, Tyler & Co., Inc., Miami, Fla. Filed

SN 35,124. Scovill Manufacturing Company, Waterbury, Conn. Filed Aug. 7, 1957. Sec. 2(f) as to "Scovill."

The drawing is lined to indicate black, brass, aluminum, and bronze colors. Owner of Reg. Nos. 294,266 and 588,939.

For Aluminum, Brass, Bronze, Copper, and Nickel Silver Mill Products Such as Sheet and Strip Stock, Either Flat or Coiled, Tubing, Rod, Wire, and Special-Shaped Drawn Products.

First use April 1954; November 1929 as to "Scovill."

SN 35,742. A. M. Byers Company, Pittsburgh, Pa. Filed Aug. 19, 1957.

For Wrought Iron Plate, Wrought Iron Bars, Wrought Iron Blooms, Wrought Iron Skelp, Wrought Iron Shapes, Wrought Iron Sheets, Wrought Iron Heads for Containers, and Wrought Iron Bands.

First use in July 1927.

SN 37,336. Armco Steel Corporation, Middletown, Ohio. Filed Sept. 17, 1957.

ORTHONIK

For Electrical Steel.

First use on or about July 22, 1953.

Class 15—Oils and Greases

SN 41,533. Franklin Research Company, Philadelphia, Pa. Filed Nov. 29, 1957.

F-7-L

For Mold Lubricant Releasing Agents.

First use Mar. 21, 1957.

SN 46,754. Petroleum Reactor Laboratories, Inc., Denver, Colo. Filed Feb. 27, 1958.

PETRELAB

For Liquid Additives for Gasoline, Diesel Fuel, Fuel Oil, and Lubricating Oils.

First use on or about Oct. 1, 1956.

SN 48,974. Motor Magic Corporation, Memphis, Tenn. Filed Mar. 3, 1958.

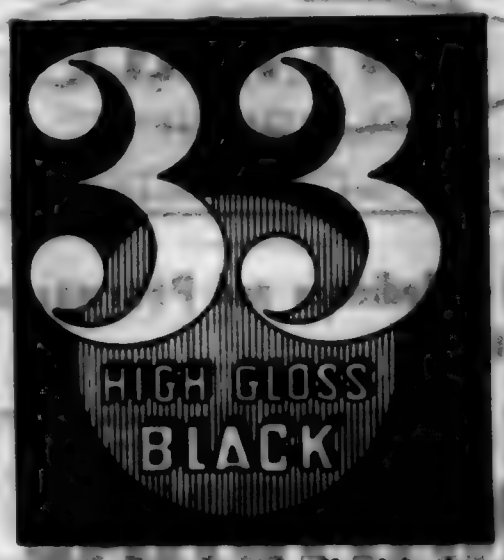
MOTOR MAGIC

For Oil Additive.

First use Aug. 22, 1957.

Class 16—Protective and Decorative Coatings

SN 41,836. Rogers Paint Products, Inc., Detroit, Mich. Filed Dec. 5, 1957.



The drawing is lined for red. No claim is made to the words "High Gloss Black" apart from the mark as shown.

For Enamel.

First use during the year 1933.

SN 54,920. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 7, 1958.

HEDRAL

For Stabilized Emulsion Composition for Coating the Walls of Paint Spray Booths.

First use during 1949.

SN 55,365. American Paint Corporation, Duluth, Minn. Filed July 16, 1958.

KABINITE

For Paints, Varnishes, Enamels, and Stains.

First use on or about May 1, 1927.

SN 55,510. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed July 17, 1958.

PLASTOX

For Liquid Enamels for Drying and/or Baking on Metal Products.

First use May 7, 1958; Dec. 7, 1940, in a different form.

Class 17—Tobacco Products

SN 47,515. Philip Morris Incorporated, New York, N. Y. Filed Mar. 11, 1958.

ALPINE

For Cigarettes.

First use Mar. 7, 1958.

Class 21—Electrical Apparatus, Machines

SN 45,888. Rochester Products Corporation, New Haven,

SN 47,766. Imperial Tobacco Company of Canada, Limited, Montreal, Quebec, Canada. Filed Mar. 14, 1958.

CHEVRON

Owner of Canadian Reg. No. 106,388, dated Apr. 18, 1957.
For Cigarettes.

SN 49,379. Philip Morris Incorporated, New York, N. Y. Filed Apr. 9, 1958.

PEYTON

For Cigarettes.
First use Apr. 4, 1958.

SN 49,635. Turmac Tabak Maatschappij (Turmac Tobacco Company), Amsterdam, Netherlands. Filed Apr. 14, 1958.

turmac

For Cigarettes.
First use Apr. 1, 1948; in commerce Apr. 1, 1948.

Class 18—Medicines and Pharmaceutical Preparations

SN 700,638. National Lecithin, Inc., Chicago, Ill. Filed Dec. 27, 1955.

NATIONAL

Les-i-Thin

Owner of Reg. No. 627,648.
For Natural Food Product Containing 95% of Pure Soya Lecithin and 5% of Inert Material To Supplement Any Deficiency of Lecithin in the Daily Diet.
First use Oct. 4, 1955.

SN 38,765. The Purdue Frederick Company, New York, N. Y. Filed Oct. 11, 1957.

SOMATOZYME

For Multivitamin Pharmaceutical Preparation.
First use Oct. 2, 1957.

SN 44,274. Otis E. Glidden & Co., Inc., Waukesha, Wis. Filed Jan. 20, 1958.

GLIDDAMINS

For Vitamin Tablets.
First use Jan. 6, 1958.

SN 44,519. The Mentholatum Company, Buffalo, N. Y., assignee of Berjon Company, Memphis, Tenn. Filed Jan. 23, 1958.

KOL-BAN

For Medicinal Preparation for the Relief of Colds.
First use Oct. 10, 1957.

SN 49,180. Walter A. Petersen, d. b. a. Peerless Pharmacal Company, Grand Rapids, Mich. Filed Apr. 7, 1958.

PEERLESS

For Preparation for the Treatment of Human Feet.
First use Mar. 3, 1958.

SN 50,259. Brooks, Tyler & Co., Inc., Miami, Fla. Filed Apr. 23, 1958.

9X

For Antiseptic for Wounds, Cuts, Abrasions, Infections, Dermatoses, Etc.
First use June 10, 1957.

SN 51,277. Barth Levitt Products, Lynbrook, N. Y. Filed May 8, 1958.

ALL-DAY-C

For Dietary Supplements, Including Vitamin C.
First use Feb. 18, 1958.

SN 51,852. Bristol Laboratories Inc., Syracuse, N. Y. Filed May 19, 1958.

KANAMIZE

For Antibiotic Pharmaceutical Preparation.
First use Jan. 27, 1958.

Class 19—Vehicles

SN 24,963. Heilite Trailers, Inc., Lodi, Calif., assignee of Heilite Trailers, Lodi, Calif. Filed Feb. 25, 1957.

HEILITE

For Tent-Type Camping Trailers and Car-Top Sleepers.
First use May 10, 1951.

SN 40,100. W. C. Manufacturing Co., Inc., West Columbia, S. C. Filed Nov. 4, 1957.

WESCO

For Boat Trailers.
First use Aug. 1, 1956.

SN 41,595. Vauxhall Motors Limited, Luton, England. Filed Nov. 29, 1957.

VICTOR

For Automobiles and Parts Thereof.
First use Feb. 7, 1957; in commerce Mar. 1, 1957.

SN 47,385. International Harvester Company, Chicago, Ill. Filed Mar. 10, 1958.

PAY

Owner of Reg. Nos. 442,767, 633,520, and others.
For Motor Trucks and Wagons and Parts Thereof.
First use Apr. 18, 1955.

SN 49,693. Hedstrom Union Company, Fitchburg, Mass. Filed Apr. 15, 1958.

Totliner

For Baby Carriages and Strollers.
First use Dec. 24, 1957.

SN 47,136. The Wm. C. O'Brien Co., Baltimore, Md. Filed

SN 49,745. Diamond Wire & Cable Company, Sycamore, Ill.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 34,537. The C. O. Jelliff Mfg. Corporation, Southport, Conn. Filed July 29, 1957.

REDISOL

For Electrical Resistance Wire.
First use June 28, 1956.

SN 40,089. Steber Manufacturing Co., Broadview, Ill. Filed Nov. 4, 1957.

ORBLITES

For Electric Lighting Fixtures.
First use Oct. 11, 1957.

SN 40,965. Muntz TV, Inc., Evanston, Ill. Filed Nov. 18, 1957.

MUNTZ

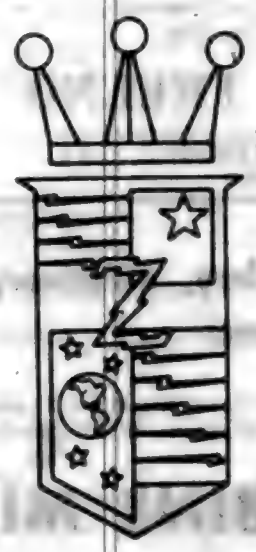
For Television Sets and Parts Thereof and Record Players and Radios and Parts Thereof.
First use Nov. 1, 1948.

SN 42,510. McGraw-Edison Company, Chicago, Ill. Filed Dec. 16, 1957.

LIFEBELT

For Electric Heating Elements.
First use about 1949.

SN 45,233. Zenith Radio Corporation (Delaware corporation), Chicago, Ill., by merger from Zenith Radio Corporation (Illinois corporation), Chicago, Ill. Filed Feb. 3, 1958.



Owner of Reg. Nos. 537,855, 653,479, and others.
For Radio Receivers, Television Receivers and Parts Thereof.
First use at least as early as Jan. 8, 1949.

SN 45,688. Rockbestos Products Corporation, New Haven, Conn. Filed Feb. 13, 1958.

RESILOK

For Insulated Electrical Conductors.
First use on or about Feb. 5, 1940.

SN 46,301. The Electric Auto-Lite Company, Toledo, Ohio. Filed Feb. 21, 1958.

IsALite

For Electrical Conductors—Namely, Insulated Wire and Cable.
First use Feb. 14, 1957.

SN 46,572. John H. Shaver, Jr., d. b. a. Shaver Floodlight Service, Akron, Ohio. Filed Feb. 25, 1958.

COLORGLO

For Lamp and Electric Bulb Shades.
First use Jan. 23, 1958.

SN 46,608. The Dill Manufacturing Company, Cleveland, Ohio. Filed Feb. 26, 1958.

TUFFER-BUFFER

For Electrical Buffing Tools for Buffing Rubber Articles Such as Tires.
First use on or about Dec. 20, 1957.

SN 46,635. Merriman Bros., Inc., Boston, Mass. Filed Feb. 26, 1958.

NAUTALITE

For Remote Controlled Movable Light Unit.
First use Jan. 29, 1958.

SN 46,820. Fox Products Company, Philadelphia, Pa. Filed Feb. 28, 1958.

MAGNECHARGER

For Battery Charge.
First use Feb. 14, 1957.

SN 47,020. Ti-Tal Inc., Berkeley, Calif. Filed Mar. 3, 1958.

TI-TAL

For Electrolytic Capacitors.
First use May 28, 1957.

SN 47,021. Ti-Tal Inc., Berkeley, Calif. Filed Mar. 3, 1958.

For Electrolytic Capacitors.
First use May 28, 1957.

SN 42,885. Kimco Auto Products, Inc., Memphis, Tenn.

SN 47,136. The Wm. C. O'Brien Co., Baltimore, Md. Filed Mar. 5, 1958.

ORIOLE

For Base and Light for Telephones.
First use Feb. 12, 1958.

SN 48,188. The Electric Auto-Lite Company, Toledo, Ohio. Filed Mar. 21, 1958.

DacrALite

For Electrical Conductors—Namely, Insulated Wire and Cable.
First use Oct. 25, 1957.

SN 49,257. Diamond Wire and Cable Company, Sycamore, Ill. Filed Apr. 8, 1958.

DIAMOND

Owner of Reg. Nos. 228,662, 616,479, and others.
For Electrical Plugs, Electrical Cord Sets, Electrical Terminals, Electrical Wire Harnesses, Electrical Wire, Electrical Cable, and Insulation Therefor.
First use on or about Sept. 15, 1923.

SN 49,258. Diamond Wire & Cable Company, Sycamore, Ill. Filed Apr. 8, 1958.

DIAMOND DUF

Owner of Reg. Nos. 228,662, 616,479, and others.
For Electrical Wire and Cable.
First use on or about Oct. 1, 1955.

SN 49,377. Micro-Test, Inc., Los Angeles, Calif. Filed Apr. 9, 1958.

ROLLECTRODE

For Motor Driven Roller-Type Welding Electrodes and Component Parts Therefor.
First use Dec. 14, 1957.

SN 49,409. Belden Manufacturing Company, Chicago, Ill. Filed Apr. 10, 1958.

CELLULINE

For Electrical Wire.
First use Nov. 1, 1953.

SN 49,428. Essex Wire Corporation, Fort Wayne, Ind. Filed Apr. 10, 1958.

THERMALEX F

For Electrical Wire and Cable and Insulation Therefor.
First use on or about Feb. 4, 1958.

SN 49,705. Paragon Creations, Inc., New York, N. Y. Filed Apr. 15, 1958.

CON-SEAL

For Plastic Strips for Covering Lengths of Electrical Wire in the Home.
First use Mar. 31, 1958.

SN 49,745. Diamond Wire & Cable Company, Sycamore, Ill. Filed Apr. 16, 1958.

BLACK DIAMOND

Owner of Reg. Nos. 228,662, 616,479, and others.
For Electrical Wire and Cable, and Insulation Therefor.
First use on or about Apr. 7, 1958.

SN 49,798. Industrial Heater Co., Inc., New York, N. Y. Filed Apr. 16, 1958.

VOLTRAP

For Insulating Covers for Electric Contact Screws.
First use late in 1955.

Class 22—Games, Toys, and Sporting Goods

SN 17,751. Pez-Hass Incorporated, New York, N. Y. Filed Oct. 18, 1956.

PEZ SPACE SIREN

The word "Siren" is disclaimed apart from the mark shown in the drawing.
For Toy Whistles and Toy Sirens.
First use May 16, 1956.

SN 48,802. Star Glide, Topeka, Kans. Filed Mar. 31, 1958.

For Fiberglass Water Skis.
First use Dec. 5, 1957.

SN 48,816. Stanley A. Nisetich, d. b. a. Sanco, Sacramento, Calif. Filed Mar. 31, 1958.

FREENO

For Printed Game Blanks.
First use Jan. 9, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 19,432. The De Laval Separator Company, Poughkeepsie, N. Y. Filed Nov. 19, 1956. Sec. 2(f).

COMBINE MILKER

The use of "Milker," apart from the mark as shown in the accompanying drawing, is hereby disclaimed. Owner of Reg. No. 607,449.
For Milking Machines.
First use on or about July 1, 1947.

SN 54,995. Fargo Mfg. Company, Inc., Poughkeepsie, N. Y.

SN 55,460. The Dayton Rubber Company, Dayton, Ohio.

SN 28,340. Ekco Products Company, Chicago, Ill. Filed Apr. 17, 1957.

SHORE CRAFT

Owner of Reg. No. 436,820.
For Knives, Grill Scrapers, Garlic Presses, Peelers, Parers, Cap Lifters, Ice Picks, Fruit Ballers, Food Handling Tongs, Icecream Spades, Spatulas, Turners, Forks, Spoons, Vegetable Mashers, Ladles, and Wrapping Material Cutters.
First use on or about Apr. 1, 1956.

SN 34,906. International Basic Economy Corporation, New York, N. Y., assignee of The Bellows Co., Akron, Ohio.

BELLOWS AIR MOTOR

Filed Aug. 5, 1957. Sec. 2(f).
The words "Air Motor" are disclaimed apart from the mark as shown.
For Air Cylinder With Integral Valve and Speed Controls.
First use July 15, 1957.

SN 37,849. The Ashe-Houston Company Inc., Glenbrook, Conn. Filed Sept. 26, 1957.

nordholm Stainless

The word "Stainless" and the representation of the goods are disclaimed.
For Stainless Steel Cutlery Consisting of Knives, Forks, Spoons, and Carving Sets.
First use Oct. 10, 1955.

SN 38,727. Beaver Pipe Tools, Inc., Warren, Ohio. Filed Oct. 11, 1957.

BEAVER

Owner of Reg. Nos. 383,739 and 505,329.
For Die Stocks for Threading Pipe and Bolts, Pipe Cutters, Pipe Rests and Supports, Pipe and Bolt Machines, Power Drives for Operating Hand Tools, Vises, Reamers, Nipple Chucks, Abrasive Cut-Off Machines, and Parts of the Foregoing Tools and Machines.
First use about March 1907 on die stocks and parts thereof, and on pipe cutters and parts thereof.

SN 39,271. Walter Ratner, d. b. a. The Grant Company, Chicago, Ill. Filed Oct. 21, 1957.

DEXTER

For Hand Sewing Machine.
First use July 2, 1956.

SN 42,741. Swingline, Inc., Long Island City, N. Y. Filed Dec. 19, 1957.

Swingline

Owner of Reg. Nos. 641,731, 858,506, and others.
For Electric Stapling Machines.
First use Jan. 2, 1957.

SN 42,885. Kimco Auto Products, Inc., Memphis, Tenn. Filed Dec. 23, 1957.

ADMIRAL

For Rebuilt Automobile, Truck, and Tractor Engine Parts—Namely, Carburetors, Clutch Discs, Clutch Pressure Assemblies, Fuel Pumps, Water Pumps, and Shock Absorbers.
First use Feb. 25, 1957.

SN 47,384. International Harvester Company, Chicago, Ill. Filed Mar. 10, 1958.

PAY

Owner of Reg. Nos. 443,767, 633,520, and others.
For Tractors and Power Operated Material Handling Appliances—Including Tractor Loaders, Shovels, Rotary Pickup Sweeping Brooms, Rippers, Backfiller Leveler and Digger Blades, Crane Hooks, Fork Lifts, Scarifiers, Snow Blowers, Snow Plows, Backhoes for Trenching, Loading and Back-Filling; Material Handling Vehicles for Scraping, Loading, and Transporting or Dumping; Automatic Transmissions and Parts Thereof.
First use Dec. 3, 1940.

SN 50,307. Sears, Roebuck and Co., Chicago, Ill. Filed Apr. 25, 1958.

db DAVID BRADLEY

Owner of Reg. No. 528,632.
For Farm Tools, Implements, and Machinery; Dairy Equipment; Mills, Mowers, Conveyors, Loaders, Saws, and Hoists.
First use in or about 1832.

SN 51,071. Southern States Cooperative Incorporated, Richmond, Va. Filed May 5, 1958.

STATESMAN

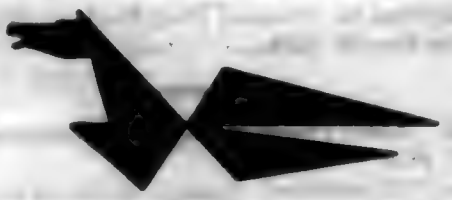
For Lawn Mowers.
First use Apr. 11, 1958.

SN 51,098. Ace Fastener Corporation, Chicago, Ill. Filed May 5, 1958.

PREFECT

For Stapling Machines.
First use 1946.

SN 52,237. Outboard Marine Corporation, Waukegan, Ill. Filed May 23, 1958.



Owner of Reg. No. 250,154.
For Outboard Motors and Repair Parts Therefor.
First use Apr. 17, 1958.

SN 54,951. The Landis Machine Company, Waynesboro, Pa. Filed July 8, 1958.

LANDMACO

For Threading Machines.
First use June 1931.

Class 26—Measuring and Scientific

SN 47,928. N. V. Optische Industrie "De Oude Delft," Delft,

SN 54,995. Fargo Mfg. Company, Inc., Poughkeepsie, N. Y. Filed July 9, 1958.

FARGO

For Connector Wrenches and Tools.
First use on or about Sept. 27, 1947.

SN 55,011. Lilliston Implement Company, Albany, Ga. Filed July 9, 1958.

GROVER

For Rotary Cutters.
First use on or about Oct. 1, 1957.

SN 55,134. Den-Nap Electric Mold Company, Macon, Ga. Filed July 11, 1958.

UNI-MAT

For Tire Retreading Matrices.
First use Feb. 28, 1957.

SN 55,135. Den-Nap Electric Mold Company, Macon, Ga. Filed July 11, 1958.

UNI-MATIC

For Tire Leading Devices for Tire Retreading Matrices.
First use June 7, 1958.

SN 55,136. Den-Nap Electric Mold Company, Macon, Ga. Filed July 11, 1958.

UNI-RAK

For Tire Retreading Matrix Holders.
First use June 28, 1957.

SN 55,144. The Hobart Manufacturing Company, Troy, Ohio. Filed July 11, 1958.

KitchenAid

Owner of Reg. Nos. 234,988, 236,150, and 618,605.
For Serving Scrapers With Blades of Rubber-Like Material.
First use at least as early as 1920.

SN 55,425. Sperry Rand Corporation, Wilmington, Del. Filed July 16, 1958.

WRIGHTROVAC

For Machines for Cleaning Food Products With Jets of Air.
First use Jan. 30, 1958.

SN 55,439. Ansul Chemical Company, Marinette, Wis. Filed July 17, 1958.

For Fire-Extinguisher Equipment.
First use June 4, 1958.

SN 55,460. The Dayton Rubber Company, Dayton, Ohio. Filed July 17, 1958.

DAYTON

Owner of Reg. Nos. 354,410, 623,795, and others.
For Belt Drives and Pulleys.
First use on or about 1929.

SN 55,495. McDonough Co., d. b. a. O. Ames Co., Parkersburg, W. Va. Filed July 17, 1958.

DRIVE-EZY

For Wooden Handles for Spades, Shovels, and Scoops.
First use June 3, 1958.

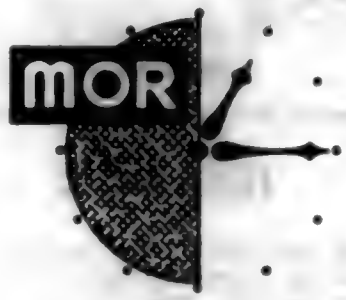
Class 24 — Laundry Appliances and Machines

SN 36,773. Borg-Warner Corporation, Chicago, Ill. Filed Sept. 6, 1957.

DIAL-A-HEAT

For Heat Control on a Clothes Dryer and Parts Thereof for Replacement and Repair.
First use June 12, 1957.

SN 44,551. Moore's Time-Saving Equipment, Inc., Elkhart, Ind. Filed Jan. 23, 1958.



The drawing is lined for orange. The right half of the circle is white.
For Rug Cleaning Equipment—Namely, Rug Washing Machines, Rug Conveying Machines, Rug Drying Machines, Rug Beating Machines, Rug Weights or Stretching Bars, and Rug Sizing Machines, and Parts Thereof.
First use June 1, 1956.

SN 47,405. Dennis Mitchell Industries, Philadelphia, Pa. Filed Mar. 10, 1958.

DRY-A-TEER

For Collapsible Indoor Clothes Dryer.
First use Feb. 15, 1957.

Class 25 — Locks and Safes

SN 47,437. A. Ritzia & Company, Wilkes-Barre, Pa. Filed Mar. 10, 1958.

ARCOLOCK

For Locks for Night Depository Bags.
First use in 1956.

SN 50,140. Advance Pattern Co., Inc., New York, N. Y. SN 40,643. Anson Incorporated, Providence, R. I. Filed

Class 26—Measuring and Scientific Appliances

SN 29,948. Reeves Equipment Corp., New York, N. Y. Filed May 12, 1957.

RE

For Projectors, Picture and Sound Recording Machines, Motion Picture Cameras and Parts Thereof, Film Splicers, Film Rewinding Devices, and Sound Control and Testing Equipment for Film and Sound Projectors—Namely, Microphones, Sound Pickups and Parts Thereof.
First use in 1949.

SN 34,640. Standard Instrument Corporation, Division of Heat Timer Corporation, New York, N. Y. Filed July 30, 1957.

TALLY PRINT

For Tape Recorder That Totals and Prints Either Elapsed Time or Number of Units Produced, on a Chronologically Marked Tape, at Predetermined Intervals.
First use Oct. 24, 1956.

SN 34,641. Standard Instrument Corporation, Division of Heat Timer Corporation, New York, N. Y. Filed July 30, 1957.

TALLY COUNT

For Tape Recorder That Totals and Prints Either Elapsed Time or Number of Units Produced, on a Chronologically Marked Tape, at Predetermined Intervals.
First use Oct. 24, 1956.

SN 37,069. Wilkins Instrument and Research, Inc., Berkeley, Calif. Filed Sept. 11, 1957.

AEROGRAPH

For Measuring Instruments, and More Particularly, Measuring Instruments in the Gas Chromatography Field.
First use July 10, 1956.

SN 38,988. Burton R. Garrett, d. b. a. U. S. Engineering Company, Long Island City, N. Y. Filed Oct. 16, 1957.

HOPPERMATIC

For Machines for Packaging, Orientating, Feeding, Counting, and/or Measuring Articles.
First use Apr. 4, 1957.

SN 43,682. General Controls Co., Glendale, Calif. Filed Jan. 9, 1958.

PERF X RAY

For Flame Detecting Safety Devices for Use in Conjunction With Motor Operated Oil Burners.
First use in October 1952.

SN 47,925. N. V. Optische Industrie "De Oude Delft," Delft, Netherlands. Filed Mar. 3, 1958.

ELECTRODELCA

Owner of Dutch Reg. No. 122,521, dated July 25, 1957.
For Optical Instruments, Cameras for Radiographic Purposes, Aerial Cameras, Television Cameras, Photographic and Cinematographic Cameras, Cameras Provided With Mirror Objectives, Telescopes, Cameras and Telescopes Provided With Image Brightness Intensifiers, Electronic Brightness Intensifier Tubes, Parts and Accessories for Cameras and Telescopes.

SN 47,976. Scully Signal Company, Melrose, Mass. Filed Mar. 18, 1958.

VENTALARM GAUGE

The word "Gauge" is disclaimed apart from the mark shown. Owner of Reg. No. 288,437.
For Indicating Device for Use With Liquid Containing Tanks and Comprising an Audible Signaling Mechanism for Indicating When the Liquid Level Has Risen to a Predetermined Point and a Visual Gauging Mechanism for Indicating the Level of Liquid in the Tank.
First use July 1, 1949.

SN 49,355. Da-Lite Screen Company, Inc., Warsaw, Ind. Filed Apr. 9, 1958.

SUBURBAN

For Portable Picture Screens.
First use Apr. 1, 1958.

SN 49,356. Da-Lite Screen Company, Inc., Warsaw, Ind. Filed Apr. 9, 1958.

VIDIOMASTER

For Portable Picture Screens.
First use Apr. 1, 1958.

SN 49,601. Louis H. Nicolaus Optical Co., Sacramento, Calif. Filed Apr. 14, 1958.

HERCULENSES

For Ground Prescription Optical Lenses.
First use Feb. 17, 1958.

SN 49,700. Leeds and Northrup Company, Philadelphia, Pa. Filed Apr. 15, 1958.

CHROMOMAX

For Apparatus for Fluid Analysis by the Vapor Fractometry Method.
First use in September 1957.

SN 49,838. The A. H. Emery Company, New Canaan, Conn. Filed Apr. 17, 1958.

WAY-PAC

For Packaged Weighing Systems, Including Hydraulic Load Cells and Weight Measuring and Indicating Apparatus.
First use Feb. 28, 1958.

SN 49,992. Unitronics, Inc., St. Louis, Mo. Filed Apr. 18, 1958.

ESSARETTE

Owner of Reg. No. 608,592.
For Electronic Light Integrating Timers.
First use July 15, 1957.

SN 55,442. Atlas Supply Company, Newark, N. J. Filed

SN 50,140. Advance Pattern Co., Inc., New York, N. Y. Filed Apr. 22, 1958.

PRESTO

For Paper Dress Patterns.
First use Apr. 8, 1958.

SN 50,559. Titmus Optical Company, Inc., Petersburg, Va. Filed Apr. 28, 1958. Sec. 2(f).

TITMUS

For Lenses and Rye Glass Frames.
First use June 1908 on lenses.

SN 50,744. The Univis Lens Company, Dayton, Ohio. Filed Apr. 30, 1958.

GAY LITE

For Eyeglass Frames and Parts Thereof.
First use Apr. 18, 1958.

Class 27—Horological Instruments

SN 15,410. Sperry Rand Corporation, New York, N. Y. Filed Sept. 10, 1956. Sec. 2(f).

REMINGTON RAND

Owner of Reg. Nos. 15,375, 416,818, and others.
For Horological Instruments—Namely, Watches.
First use about January 1951.

SN 39,058. Simon Golub & Sons, Inc., Seattle, Wash. Filed Oct. 17, 1957.

OMICHRON

For Watches.
First use Aug. 23, 1957.

SN 44,417. Louis Schein Company, d. b. a. Banner Watch Company, New York, N. Y. Filed Jan. 21, 1958.

BANNER

Owner of Reg. No. 216,633.
For Watches.
First use Jan. 19, 1926.

Class 28—Jewelry and Precious-Metal Ware

SN 25,971. Coro, Inc., New York, N. Y. Filed Mar. 12, 1957.

Fashion Flair

For Necklaces, Bracelets, Earrings, Brooches, Charms, Jewelry Clips, Lockets, Chatelaines, Fobs, Hair Barrettes, Beads, Pins and Jewelry Initials, and Pearl Necklaces, Pearl Bracelets, Pearl Earrings, Pearl Brooches, and Pearl Charms.
First use Feb. 1, 1957.

SN 40,642. Anson Incorporated, Providence, R. I. Filed Nov. 14, 1957. Sec. 2(f).

ANSON

Owner of Reg. No. 424,667.
For Men's Jewelry—Namely, Tie Holders, Collar Holders, Tie Pins, Cuff Links, Watch Chains, Key Chains, Key Rings, Watch Bands, Brief Clips, Money Clips, Tie Chains, Studs, Buckles, Identification Bracelets, Tie Slides, Collar Pins, and Finger Rings.
First use July 1, 1945.

SN 44,549. Carol Westlake Molitor, d. b. a. Carol Westlake Originals, St. Augustine, Fla. Filed Jan. 23, 1958.

CAROL WESTLAKE

The name shown is applicant's maiden name.
For Costume Jewelry.
First use Feb. 2, 1954.

SN 45,584. Litwin and Sons, Inc., Cincinnati, Ohio. Filed Feb. 10, 1958.

The expression "Maison d'Or" is French, and translated means "House of Gold."
For Jewelry.
First use on or about Jan. 27, 1958.

Class 29—Brooms, Brushes, and Dusters

SN 41,699. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Dec. 3, 1957.

DORIX

Owner of German Reg. No. 643,342, dated Aug. 29, 1953.
For Brushes of All Kinds.

SN 42,878. Industries for the Blind, Inc., Milwaukee, Wis. Filed Dec. 23, 1957.

GRILL-BRITE

For Combination Brush and Scraper.
First use Sept. 5, 1957.

SN 43,794. Art & Sign Brush Mfg. Corp., Long Island City, N. Y. Filed Jan. 13, 1958.

SUPER GREYHOUND

For Sign Painters' One Stroke Brushes Made With Grey Squirrel Hair and Oxhair Mixtures.
First use June 1, 1952.

SN 45,260. Lowndes Products, Inc., Philadelphia, Pa. Filed Feb. 4, 1958.

KEMI-KLEEN

For Surface Sweeper Including Cleaning Cloth Therefor.
First use Nov. 4, 1957.

SN 41,545. The Drackett Company, Inc., Chicago, Ill. SN 41,421. American Hydronics Corporation, Brooklyn, N. Y.

SN 47,952. A. G. Jacobus' Sons Inc., Verona, N. J. Filed Mar. 18, 1958.

MIRACLE

For Painter Roller Covers.
First use Feb. 11, 1957.

Class 31 — Filters and Refrigerators

SN 51,705. Eskimo Pie Corporation, Richmond, Va. Filed May 15, 1958.

ESKIMO

Owner of Reg. No. 282,785.
For Freezer Apparatus for Foodstuffs.
First use Feb. 20, 1957.

SN 54,972. Westinghouse Air Brake Company, Wilmerding, Pa. Filed July 8, 1958.

VAPOLEX

For Adsorbers and Filter Units.
First use May 16, 1958, on filter units.

SN 55,031. Sparkler Mfg. Co., Mundelein, Ill. Filed July 9, 1958.

For Water Filter.
First use Apr. 30, 1957.

SN 55,032. Sparkler Mfg. Co., Mundelein, Ill. Filed July 9, 1958.

POOL PAL

For Water Filter.
First use Apr. 30, 1957.

SN 55,037. Tyler Refrigeration Corporation, Niles, Mich. Filed July 9, 1958.

For Refrigerated Cabinets.
First use June 1, 1958.

SN 55,442. Atlas Supply Company, Newark, N. J. Filed July 17, 1958.

ATLAS

Owner of Reg. Nos. 292,693 and 652,408.
For Fuel Filters and Crankcase Vent Filters.
First use July 7, 1958.

Class 32 — Furniture and Upholstery

SN 33,992. No-Sag Spring Company, Detroit, Mich. Filed July 18, 1957.

FLOTA-LOOP

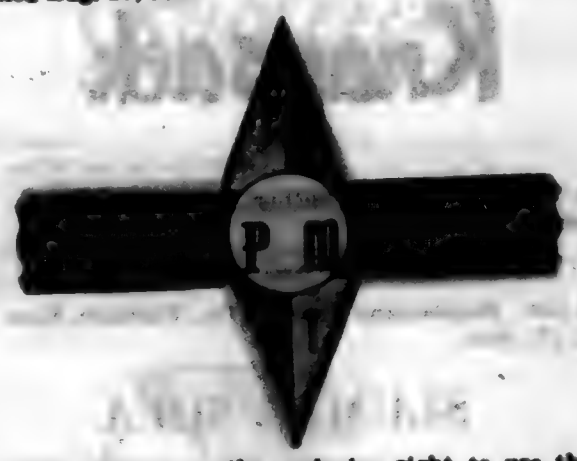
For Sinuous Spring Strips for Use in Furniture, Mattresses and the Like.
First use Dec. 27, 1956.

SN 33,993. No-Sag Spring Company, Detroit, Mich. Filed July 18, 1957.

SUPR-LOOP

For Sinuous Spring Strip Units for Use in Furniture, Mattresses and the Like.
First use Sept. 4, 1956.

SN 36,087. LaBerne Manufacturing Co., Inc., Columbia, S. C. Filed Aug. 23, 1957.



No claim is made to the exclusive right to use the word "Equipment" or the representation of the caduceus apart from the mark as shown.
For Tables and Mirrors.
First use May 1, 1957.

SN 48,742. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Mar. 31, 1958.

PORTA CHECK FILE

The word "File" is disclaimed apart from the mark as shown. Owner of Reg. No. 594,471.
For Cabinet for Filing Checks.
First use Feb. 18, 1958.

SN 58,512. The Kenmar Manufacturing Company, East Palestine, Ohio. Filed June 13, 1958.

Kenmar designs

No claim is made to the word "Designs" apart from the mark as shown. Owner of Reg. Nos. 271,295, 505,560, and 617,847.
For Upholstered Furniture—Namely, Reclining Chairs.
First use May 15, 1958.

THE DUNCAN MANUFACTURING COMPANY, Middletown, ... Class 37 — Paper and Stationery

SN 54,748. The Englander Company, Inc., Chicago, Ill. Filed July 3, 1958.

tendertrap

For Mattresses and Box Springs.
First use May 5, 1958.

SN 54,749. The Englander Company, Inc., Chicago, Ill. Filed July 3, 1958.

Napsack

For Mattresses and Box Springs.
First use May 5, 1958.

SN 54,750. The Englander Company, Inc., Chicago, Ill. Filed July 3, 1958.

Knapsack

For Mattresses and Box Springs.
First use May 5, 1958.

SN 55,533. Slumberland Products Co., Waltham, Mass. Filed July 17, 1958.

SLUMBA-SOFA

Owner of Reg. Nos. 578,054, 601,345, and 656,144.
For Sofa Beds.
First use in December 1957.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 33,709. C. L. Hayes, Inc., Cranston, R. I. Filed July 15, 1957.

MOLECU DRYER

Applicant disclaims the word "Dryer" apart from the mark as shown.
For Drying Apparatus for Atmospheres Used in the Heat Treatment of Materials.
First use on or about July 5, 1957.

SN 37,280. May Research, Inc., Minneapolis, Minn. Filed Sept. 16, 1957.

CHAR-START

For Device for Starting the Ignition of Charcoal in a Brazier or Fireplace.
First use July 31, 1957.

SN 41,481. American Hydronics Corporation, Brooklyn, N. Y. Filed Nov. 27, 1957.

For Air-Conditioning Units, Heating Units, Cooling Tower, Condenser Coils, Evaporator Coils, Water Chillers, Heating Pumps, Connector-Type Radiation, Heating and Cooling Surface.
First use Nov. 2, 1957.

SN 44,069. The Creamery Package Mfg. Company, Chicago, Ill. Filed Jan. 16, 1958.

SWEPT SURFACE

For Heat Transfer Apparatus for Continuous Heating or Cooling Liquid or Semi-Solid Products.
First use Apr. 11, 1957.

SN 50,003. The Associated Merchandising Corporation, New York, N. Y. Filed Apr. 21, 1958.

AMC HI-FLO

For Air Conditioners.
First use in February 1958.

SN 50,310. National Gas Equipment Company, Inc., Denison, Tex. Filed Apr. 24, 1958.

SNOWCREST

For Evaporative Coolers and Air Conditioners.
First use on or about Apr. 19, 1957.

SN 50,500. Marc Manufacturing Corp., Chicago, Ill. Filed Apr. 28, 1958.

THE CHARCOAL PIT

For Disposable Grilling Devices.
First use Mar. 12, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 41,307. Robbins Tire & Rubber Company, Inc., Tuscumbia, Ala. Filed Nov. 25, 1957.

The lines on the drawing are for shading. Owner of Reg. No. 557,371.
For Tread Rubber (Camelback), and for Extruded, Laminated, and Molded Sheets of Rubber, Synthetic Rubber, and of Synthetic Elastomers Used for the Repair of Tires.
First use Dec. 21, 1950.

SN 47,231. Bergstrom Paper Company, Neenah, Wis. Filed Mar. 10, 1958.

SN 42,206. Paisano Press, Balboa Island, Calif. Filed Dec. 30, 1957.

SN 46,760. The Russell Manufacturing Company, Middletown, Conn. Filed Feb. 27, 1958.

POSI-DRIVE

The gears and the belt are disclaimed apart from the mark as shown.

For Power Transmission Belts.

First use October 1957.

SN 46,938. Selberling Rubber Company, Barberton, Ohio. Filed Apr. 2, 1958.

PORTAGE

For Pneumatic Tires.

First use February 1910.

Class 36—Musical Instruments and Supplies

SN 30,854. Benson-Lehner Corporation, West Los Angeles, Calif. Filed May 22, 1957.

DIGITAPE

For Recording Tape on Which Information Is Recorded by Suitable Apparatus and From Which Such Information Is Extracted by the Same or Other Apparatus and Employed To Control or Operate Equipment or Organisms.

First use Apr. 16, 1957.

SN 49,169. London Records, Inc., New York, N. Y. Filed Apr. 7, 1958.

Felsted

For Grooved Phonograph Records.

First use Jan. 31, 1958; on or about Nov. 7, 1957, as to "Felsted."

SN 49,387. Rose Records, Inc., Stillwater, Okla. Filed Apr. 9, 1958.

For Phonograph Records.

First use Aug. 3, 1952.

SN 49,741. Coin Records, Inc., Chicago, Ill. Filed Apr. 16, 1958.

coin

For Phonograph Records.

First use on or about Apr. 4, 1958.

Class 37—Paper and Stationery

SN 21,692. The Robert Howard Company, Palo Alto, Calif. Filed Dec. 27, 1956.

PATCH ERASE

For Self-Adhesive Paper Patches for Correcting Errors on Direct Process and Gelatin Type Master Printing Sheets.

First use Jan. 9, 1950.

SN 36,019. Piggly Wiggly Operators' Warehouse, Inc., Shreveport, La. Filed Aug. 22, 1957.

Neet-Wrap

For Waxed Paper.

First use June 17, 1957.

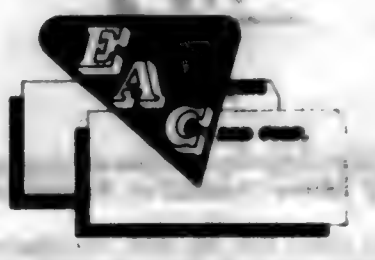
SN 36,504. Eberhard Faber Pencil Company, Wilkes-Barre, Pa. Filed Aug. 30, 1957. Sec. 2(f).

RubKleen

For Erasers.

First use in the fall of 1935.

SN 36,700. Electronic Accounting Card Corporation, High Point, N. C. Filed Sept. 5, 1957.



For Accounting Cards.

First use Apr. 15, 1957.

SN 38,343. The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Oct. 4, 1957.

CASHMERE

For Printing Paper.

First use on or about May 9, 1956.

SN 39,430. United Whelan Corporation, Brooklyn, N. Y. Filed Oct. 28, 1957.

BARBARA LANE

Owner of Reg. No. 385,417.

For Cleansing Tissues.

First use Dec. 29, 1939.

SN 38,058. Cotillion Inc., New York, N. Y. Filed Aug. 23, 1957.

SN 38,814. The Lovable Brassiere Co., Atlanta, Ga. Filed Oct. 30, 1957.

First use July 31, 1957.

First use Dec. 21, 1950.

SN 47,331. Bergstrom Paper Company, Neenah, Wis. Filed Mar. 10, 1958.

For Book Papers.
First use Dec. 31, 1931.

SN 47,921. Clupak, Inc., New York, N. Y. Filed Mar. 19, 1958.

CLUPAK

For Stretchable Paper.
First use Jan. 22, 1958.

SN 48,248. Cory Corporation, Chicago, Ill. Filed Mar. 24, 1958.

CARGO-PEN

For Writing Instruments—Namely, Pens.
First use Jan. 14, 1958.

SN 49,597. Milprint, Inc., Milwaukee, Wis. Filed Apr. 14, 1958.

For Printed and Unprinted Commodity Wrappers, Liners, Overwraps, and Labels Formed of Diverse, Flexible Sheet Materials.
First use on or about Feb. 28, 1958, on commodity wrappers.

Class 38—Prints and Publications

SN 33,813. The General Conference of the Church of God (Seventh Day), d. b. a. Trurock Publishers, Denver, Colo. Filed June 28, 1957.

SEARCHLIGHT BIBLE COURSE

For Religious Publications—Namely, Pamphlets, Books, and Brochures and the Like.
First use March 1956.

SN 39,001. Merck & Co., Inc., Rahway, N. J. Filed Oct. 16, 1957. Sec. 2(f).

COMPENDIO MEDICO

For Periodical Devoted to Pharmacy and Medicine.
First use Jan. 2, 1941.

SN 43,206. Paisano Press, Balboa Island, Calif. Filed Dec. 30, 1957.

For Books.
First use on or about Oct. 14, 1957.

SN 43,817. Consumers Union of United States, Inc., Mount Vernon, N. Y. Filed Jan. 13, 1958. Sec. 2(f).

CONSUMER REPORTS

For Periodic Publication.
First use on or about June 1, 1942.

SN 45,456. Crystal Transparent Corporation, Englewood, N. J. Filed Feb. 7, 1958.

Crystal-Mark

For Printed Plastic Bookmarks.
First use Dec. 16, 1957.

SN 45,611. Recording & Statistical Corporation, New York, N. Y. Filed Feb. 10, 1958.

ENTRE´

For Periodical.
First use Jan. 16, 1958.

SN 47,009. Shamie Publishing Co., Inc., Detroit, Mich. Filed Mar. 3, 1958.

YANKEE GROCER

For Monthly Newspaper Devoted to Food Merchandising.
First use Sept. 5, 1955.

Class 39—Clothing

SN 26,808. Singer Glove Manufacturing Company, Chicago, Ill. Filed Apr. 24, 1957.

For Workmen's Protective Apparel Including Aprons, Jackets, Gloves and Heat Protective Curtain-Like Shields.
First use Aug. 30, 1950.

SN 26,809. Singer Glove Manufacturing Company, Chicago, Ill. Filed Apr. 24, 1957.

SINGER

For Workmen's Protective Apparel Including Aprons, Jackets, Gloves and Heat-Protective Curtain-Like Shields.
First use Aug. 30, 1950.

SN 44,439. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Jan. 22, 1958.

SN 48,589. Little's Shoe Store, Pittsburgh, Pa. Filed Mar. 27, 1958.

First use on or about Apr. 4, 1958.

First use Dec. 20, 1939.

SN 36,056. Cotillion Inc., New York, N. Y. Filed Aug. 23, 1957.

COTILLION

Owner of Reg. No. 469,556.
For Gloves and Belts.
First use January 1941 on gloves.
Subj. to Intf. with Reg. No. 654,484.

SN 36,459. R. Lowenbaum Manufacturing Company, St. Louis, Mo. Filed Aug. 29, 1957.

MARJI LOW

Owner of Reg. Nos. 313,790 and 602,437.
For Women's Wash Frocks.
First use May 15, 1957; Apr. 1, 1952, in display shown in claimed registrations.

SN 36,965. The League of Champions, Inc., New York, N. Y. Filed Sept. 10, 1957.

The lining in the drawing represents the colors red, blue, and gold. Owner of Reg. No. 629,139.
For Men's, Ladies', and Children's Hosiery, Underwear, Dungarees, Pants, Shirts, Pajamas, Jackets, Sweaters, and Gloves.
First use June 29, 1957.

SN 37,205. A/S Lillestrom Trikotagefabrik, Lillestrom, Norway. Filed Sept. 16, 1957.

DOVRE

For Knitted Underwear for Men and Boys.
First use 1955; in commerce on or about Apr. 24, 1957.

SN 37,480. Good Luck Glove Company, Carbondale, Ill. Filed Sept. 18, 1957.

BROWN BULL

For Work Gloves Made of Leather and Fabric.
First use Apr. 25, 1952.

SN 39,528. Hollywood Rambler, Los Angeles, Calif. Filed Oct. 25, 1957.

mr. longfellow

The drawing is lined for yellow.
For Men's Sport Shirts.
First use in January 1949.

SN 38,814. The Lovable Brassiere Co., Atlanta, Ga. Filed Oct. 30, 1957.

Lovable
"VELVET GLOVE"

Owner of Reg. No. 378,181, 636,849, and others.
For Brassieres.
First use July 25, 1957.

SN 41,901. Exquisite Form Brassiere, Inc., New York, N. Y. Filed Dec. 6, 1957.

X-posé

For Brassieres.
First use Apr. 11, 1957.

SN 42,178. Wilkes-Barre Hosiery Mills, Inc., Philadelphia, Pa. Filed Dec. 10, 1957.

AQUA-SHEER

For Women's and Misses' Hosiery.
First use May 2, 1949.

SN 42,306. Premier Knitting Co. Inc., New York, N. Y. Filed Dec. 12, 1957.

KORLANE Rex

For Ladies', Misses', and Girls' Sweaters.
First use Oct. 1, 1957.

SN 42,743. S. K. Tate Furs, Bradford, Pa. Filed Dec. 19, 1957.

Crown Royal
FUR
by S. K. TATE Furs

For Finished Furs—Namely, Coats, Scarves, Capes, and Stoles.
First use Jan. 20, 1957.

SN 44,170. Jacob Finkelstein & Sons Inc., Woonsocket, R. I. Filed Jan. 17, 1958.

Brindleigh
CLOTHES

Applicant claims no exclusive rights in "Clothes" as the name of the goods identified.
For Sportswear and Tailored Clothing—Namely, Men's and Boys' Suits, Sportcoats, Overcoats, Topcoats, and Suburban Coats.
First use Dec. 1, 1957.

SN 40,328. Weber and Heilbroner, Inc., New York, N. Y. Filed Apr. 8, 1958.

Class 42—Knitted, Netted, and Textile

SN 44,439. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Jan. 22, 1958.

CRADDOCK-TERRY
Dependable Shoemakers
Since 1888
SHOE CORPORATION

Owner of Reg. Nos. 625,490, 372,005, and others.
For Shoes.
First use Jan. 3, 1958.

SN 45,290. Valmeline Imports, Ltd., New York, N. Y. Filed Feb. 4, 1958.

Continental Traveller

For Ladies' and Men's Rain- and Sport Coats.
First use Aug. 1, 1955.

SN 45,297. John Yeargain, Inc., New York, N. Y. Filed Feb. 4, 1958.

Dri-gard

For Cotton Flannel Lined Plastic Pants for Use by Incontinent Men, Women, and Children.
First use Nov. 1, 1957.

SN 45,971. Robert Hall Clothes, Inc., New York, N. Y. Filed Feb. 17, 1958.

DEBBIE HALL

For Girls' Coats, Suits, Dresses, Skirts, Blouses, Sweaters, and Slacks.
First use on or about Jan. 22, 1958.

SN 46,603. Cole of California, Inc., Los Angeles, Calif. Filed Feb. 26, 1958.

POWER PROFILE

For Brassieres Sold Only in Finished Swim Suits.
First use Aug. 21, 1957.

SN 46,740. Lady Marlene Brassiere Corp., New York, N. Y. Filed Feb. 27, 1958.

DRAMATIQUE

For Brassieres.
First use Feb. 17, 1958.

SN 48,589. Little's Shoe Store, Pittsburgh, Pa. Filed Mar. 27, 1958.

Lilimode

For Women's Shoes.
First use Aug. 20, 1957.

SN 49,061. Sidney Gilbert, d. b. a. The Gilbert Manufacturing Co., Hialeah, Fla. Filed Apr. 4, 1958.

Stori-Step

For Disposable Paper Slippers.
First use Mar. 3, 1958.

SN 49,073. Morton Karten, Inc., New York, N. Y. Filed Apr. 4, 1958.

TOW-COATS

For Girls' and Boys' Coats.
First use Apr. 1, 1958.

SN 49,089. I. Spiewak & Sons, Inc., Jersey City, N. J. Filed Apr. 4, 1958.

EXCALIBUR

For Jackets.
First use on or about Mar. 15, 1958.

SN 49,170. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed Apr. 7, 1958.

DARLENE

Owner of Reg. Nos. 242,234, 610,440, and others.
For Swimsuits.
First use Feb. 18, 1958.

SN 49,172. Aaron Minken, d. b. a. California Swimwear Company, Los Angeles, Calif. Filed Apr. 7, 1958.

Makapoo Surfhuggers

For Swimwear in Short, Intermediate, Knee, and Calf Lengths.
First use Mar. 11, 1958.

SN 49,304. Saiant & Saiant, Inc., New York, N. Y. Filed Apr. 8, 1958.

KOLESPORT

Owner of Reg. Nos. 87,487, 644,792, and others.
For Men's and Boys' Sport Shirts.
First use Mar. 25, 1958.

SN 50,099. Pelton Corporation, New York, N. Y. Filed Apr.

SN 46,634. Miracle Massage Corporation, d. b. a. Miracle

SN 49,323. Weber and Heilbronner, Inc., New York, N. Y. Filed Apr. 8, 1958.

HARROGATE

For Men's and Boys' Suits, Overcoats, and Sport Suits Consisting of Coat, Long Trousers, Vest, and Knickers.
First use Apr. 10, 1929.

SN 49,564. Federated Department Stores, Inc., New York, N. Y. Filed Apr. 14, 1958.

BRIOLETTES

For Men's, Women's, and Children's Shoes.
First use Feb. 3, 1958.

SN 49,616. Rudin & Roth, New York, N. Y. Filed Apr. 14, 1958.

WELLSLEY

For Hosiery.
First use Dec. 4, 1957.

SN 49,790. The Shirtcraft Company, Inc., Hazleton, Pa. Filed Apr. 16, 1958.

EXPLORER

For Outerwear—Namely, Jackets.
First use Apr. 1, 1958.

SN 50,053. P. H. Hanes Knitting Company, Winston-Salem, N. C. Filed Apr. 21, 1958.

INSUL KNIT

For Underwear.
First use Apr. 1, 1958.

SN 50,082. J. M. Lynch & Bro., Louisville, Ky. Filed Apr. 21, 1958.

Lord Daniel

For Hosiery.
First use Nov. 25, 1957.

SN 50,394. Robert L. Schumacher, d. b. a. Robb Enterprises, Chicago, Ill. Filed Apr. 25, 1958.

Scotties

For Children's Cloth Slippers.
First use Sept. 17, 1957.

SN 50,639. Plymouth Undergarment Co., New York, N. Y. Filed Apr. 29, 1958.

JAX

For Ladies' Panties.
First use Jan. 3, 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 35,165. Columbus Coated Fabrics Corporation, Columbus, Ohio. Filed Aug. 8, 1957.

SATINESQUE

Owner of Reg. No. 271,688.
For Vinyl-Coated Woven and Non-Woven Fabric for Use as Upholstery Fabrics, Table and Wall Covering, and the Like.
First use July 19, 1957.

SN 36,443. The Joseph & Feiss Company, Cleveland, Ohio. Filed Aug. 29, 1957.

RIMAL WEAVES

The word "Weaves" is disclaimed apart from the mark.
For Fabric Sold Only in Finished Apparel—Namely, Men's Suits, Coats, and Slacks.
First use Aug. 13, 1957.

SN 41,589. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Nov. 29, 1957.

COMPLEMATE

For Piece Goods of Cotton, Wool, Silk, Synthetic Fibers, and/or Combinations Thereof, Adapted for Use as Upholstery and Drapery Fabrics.
First use on or about Oct. 14, 1957.

SN 41,591. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Nov. 29, 1957.

COMPLEMATES

For Piece Goods of Cotton, Wool, Silk, Synthetic Fibers, and/or Combinations Thereof, Adapted for Use as Upholstery and Drapery Fabrics.
First use on or about Oct. 14, 1957.

SN 45,765. United States Rubber Company, New York, N. Y. Filed Feb. 12, 1958.

SKYLINER

For Rug Underlay.
First use Aug. 15, 1956.

SN 45,766. United States Rubber Company, New York, N. Y. Filed Feb. 12, 1958.

AIRLANE

For Rug Underlay.
First use Sept. 28, 1956.

SN 46,147. Michaelian & Kohlberg, Inc., d. b. a. Spinning Wheel Rugs, New York, N. Y. Filed Feb. 19, 1958.

NEW YORKER

For Textile Rugs.
First use Dec. 29, 1953.

SN 49,859. M. Lowenstein & Sons, Inc., New York, N. Y. Filed Apr. 17, 1958.

FRESH 'N READY

For Piece Goods, Made of Cotton and/or Synthetic Fibres.
First use Mar. 31, 1958.

SN 49,918. Dubin-Haskell-Jacobson, Inc., New York, N. Y. Filed Apr. 18, 1958.

PERMADALE

For Collar Canvas.
First use Feb. 12, 1956.

SN 32,290. Food Town, Inc., Washington, D. C. Filed Jan.

SN 32,680. Paul John Gundlach, d. b. a. The Vita-Mart,

SN 50,099. Pellon Corporation, New York, N. Y. Filed Apr. 21, 1958.

THE CHEMOTEXTILE

For Interlining Fabrics of Bonded Non-Woven Fibers.
First use Nov. 29, 1957.

SN 50,196. John Wolf Textiles, Inc., New York, N. Y. Filed Apr. 22, 1958.

TURNA-MAGIC

For Draperies of Textile Fabrics.
First use Mar. 31, 1958.

SN 50,221. Dubin-Haskell-Jacobson, Inc., New York, N. Y. Filed Apr. 23, 1958.

MELLOSAN

For Cotton Interlining for Garments.
First use Mar. 10, 1958.

SN 50,445. The Calico Printers' Association Limited, Manchester, England. Filed Apr. 28, 1958.

CHLOREPEL

Owner of British Reg. No. 766,634, dated Aug. 23, 1957.
For Piece Goods of Cotton or of Synthetic Fibres or Mixtures of These Materials.

SN 50,813. Lydia Cotton Mills, Clinton, S. C. Filed May 1, 1958.

BON-SEAM

For Carded Cotton Grey Goods.
First use Apr. 17, 1958.

SN 50,849. M. & W. Thomas Corp., New York, N. Y. Filed May 1, 1958. Sec. 2(f).

PANAMA

For Silk, Rayon, Woolen, Cotton, and Linen Piece Goods.
First use Sept. 28, 1937.

Class 44—Dental, Medical, and Surgical Appliances

SN 36,976. Omega Precision Medical Instrument Co., Inc., Passaic, N. J. Filed Sept. 10, 1957.

DISPACK

For Disposable Needles, Syringes, and Surgeons' Gloves.
First use in June 1957.

SN 44,368. The W. E. Bassett Company, Derby, Conn. Filed Jan. 21, 1958.

HEIRLOOM

For Manicure and Like Cutlery Instruments, Sold in a Case.
First use Oct. 1, 1957.

SN 46,495. Ronson Corporation, Newark, N. J. Filed Feb. 24, 1958.

RONSON

Owner of Reg. Nos. 160,272, 500,497, and 604,190.
For Electric Hair Dryers.
First use Dec. 17, 1957.

SN 46,634. Miracle Massage Corporation, d. b. a. Miracle Massage Corp., Ormond Beach, Fla. Filed Feb. 26, 1958.

TRIMATREAT

For Portable Electrically Operated Vibrating Appliance for Massaging the Human Body.
First use Jan. 17, 1958.

SN 47,163. The Wilson Rubber Company, Canton, Ohio. Filed Mar. 5, 1958.

RAPAK

For Surgeons' Gloves.
First use on or about Jan. 1, 1958.

SN 47,354. Deseret Pharmaceutical Company, Inc., Salt Lake City, Utah. Filed Mar. 10, 1958.

INTRACATH

For Intravenous Catheters, Intravenous Catheter Placement Instruments, and Devices for the Administration of Anesthetics.
First use Jan. 10, 1958.

SN 47,868. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 17, 1958.

KIMLON

For Non-Woven Fibrous Material Constituting a Component of Sanitary Napkins.
First use Mar. 6, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 22,103. Filler Products, Inc., Atlanta, Ga. Filed Jan. 4, 1957.

JUNGLE BREW

No claim is made to the word "Brew" apart from the mark as shown.
For Maltless Soft Drink.
First use Dec. 19, 1956.

SN 45,204. Rock Creek Ginger Ale Co., Inc., Washington, D. C. Filed Feb. 3, 1958.

Rock Creek

Owner of Reg. No. 237,138.
For Carbonated Beverages Sold as Soft Drinks and for Use as Mixers.
First use in or about June 1922.

Class 46—Foods and Ingredients of Foods

SN 11,873. Pic-A-Snak Corporation, San Francisco, Calif. Filed July 10, 1956.

PIC-A-SNAK

For Package Containing a Combination of Luncheon Meats.
First use June 21, 1956.

SN 45,210. Safeway Stores, Incorporated, Oakland, Calif. Filed Feb. 3, 1958. Sec. 2(f).

SN 48,501. Schenley Distillers, Inc., New York, N. Y. Filed Mar. 26, 1958.

SN 33,200. Food Town, Inc., Washington, D. C. Filed Jan. 29, 1957.

For Canned Dog Food.
First use Sept. 3, 1956.

SN 26,371. Howard W. Messeroll and Stella K. Messeroll, d. b. a. Soilless Garden, Delray Beach, Fla. Filed Mar. 18, 1957.

Soilless Garden

For Hydroponic Tomatoes.
First use in November 1949.

SN 31,440. Vita Food Products, Incorporated, New York, N. Y. Filed June 5, 1957.

VITA

Owner of Reg. Nos. 96,369, 601,423, and others.
For Pickles; Sauerkraut; Piccalilli; Horseradish; Pickled Onions, Peppers, Tomatoes, and Cauliflower; Spring Salad; Tomato Salad; Borscht; Pickled Watermelon Rind; Cherries and Food Relishes.
First use 1938.

SN 32,295. Kenneth H. Dunham, Portland, Conn. Filed June 20, 1957.

"THE UNIVERSAL FRUIT"

Applicant disclaims the words "The Fruit."
For Bananas.
First use May 1956.

SN 32,413. Quality Dairy Company, St. Louis, Mo. Filed June 21, 1957.

Owner of Reg. No. 568,240.
For Packaged Ice Cream, Butter, Fresh Cream, Fresh Milk, Fresh Buttermilk, Oleomargarine, Salad Dressing, Sour Cream Dressing, Cheese, Fluid Chocolate Milk, and Reconstituted Orange Juice in Fluid Form.
First use in 1949.

SN 22,680. Paul John Gundlach, d. b. a. The Vita-Mart, Cleveland, Ohio. Filed June 26, 1957.

Applicant disclaims any exclusive right to the word "Brand" shown on the drawing.
For Sun Dried Fruits, Breakfast Cereals, Grains, Tea, Flours, Soya Bean Oil, Plain Food Gelatin, Shredded Cocoanut, Dried Skim Milk, Cider Vinegar, Dulse, Vegetised Salt for Seasoning Food, Hulled Sunflower Seeds, Sesame Seeds, Honey, Papaya Syrup, Vegetable Broth, Sea Kelp for Seasoning Food, Candied Ginger, Dextrose for Sweetening Purposes, Candy, and Fenugreek Tea.
First use June 6, 1957.

SN 33,557. Malt-o-Meal Company, Minneapolis, Minn. Filed July 11, 1957.

For Uncooked Breakfast Cereal.
First use December 1956.

SN 36,018. Pierce Packing Company, Billings, Mont. Filed Aug. 22, 1957.

No claim of exclusive right is made to "Ham" as used on ham. Owner of Reg. No. 159,601.
For Cooked Ham.
First use July 22, 1957; Aug. 1, 1916, as to "Old Faithful."

SN 42,369. M. J. B. Co., San Francisco, Calif. Filed Dec. 13, 1957.

Applicant disclaims the individual words "Quick" and "Brown." Owner of Reg. Nos. 412,455 and 562,677.
For Quick Cooking Brown Rice.
First use Oct. 1, 1957.

Class 51 — Cosmetics and Toilet Preparations

SN 33,491. Golden Peacock Co., Inc., Paris, Tenn. Filed July 10, 1957.

SN 45,210. Safeway Stores, Incorporated, Oakland, Calif. Filed Feb. 3, 1958. Sec. 2(f).

LAC-MIX

Owner of Reg. No. 569,338.
For Nonfat Dry Milk Solids.
First use July 28, 1951.

SN 48,882. Texsun Corporation, Weslaco, Tex. Filed Apr. 1, 1958.

TEXSUN

Owner of Reg. Nos. 217,124, 358,242, and 661,984.
For Fresh Citrus Fruits, Canned Citrus Juices for Food Purposes, Canned Grapefruit Segments, and Dried Citrus Pulp.
First use Nov. 20, 1925.

SN 52,334. Bernard S. Pincus Co., Philadelphia, Pa. Filed May 26, 1958.

BARBE-CUTIES

For Frankfurters.
First use Apr. 15, 1958.

SN 53,207. Sunshine Biscuits, Inc., Long Island City, N. Y. Filed June 9, 1958.

HYDROX

Owner of Reg. No. 91,099.
For Cookies.
First use July 11, 1950.

Class 49—Distilled Alcoholic Liquors

SN 35,309. A. Alexander & Company Limited, Leith, Edinburgh, Scotland. Filed Aug. 12, 1957.

ALEXANDER'S DANDIE DINMONT

Owner of Reg. No. 429,677.
For Scotch Whisky.
First use Dec. 20, 1951; in commerce Jan. 1, 1952.

SN 36,550. A. Alexander & Company Limited, Leith, Edinburgh, Scotland. Filed Sept. 3, 1957.

ALEXANDER'S

For Scotch Whisky.
First use Dec. 20, 1951; in commerce Jan. 1, 1952.

SN 48,209. Schenley Distillers, Inc., d. b. a. Number One Distilling Company, New York, N. Y. Filed Mar. 21, 1958.

AMERICAN GENTLEMAN

For Whiskey.
First use Mar. 6, 1958.

SN 48,501. Schenley Distillers, Inc., New York, N. Y. Filed Mar. 26, 1958.

MR. LONDONER

For Gin.
First use Mar. 7, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 28,481. Charlotte M. Baron, d. b. a. Professional Products Company, Toledo, Ohio. Filed Apr. 19, 1957.

HY-SYNS

For Kit in the Nature of a Signaling System Comprising Signal Flags and Equipment for Mounting the Same.
First use Oct. 12, 1956.

SN 33,949. Chicago Printed String Co., Chicago, Ill. Filed July 18, 1957.

THREAD-A-FOIL

For Embossed Foil Ornaments for Gift Boxes.
First use in or about June 1957.

SN 37,237. Robert L. Dickerson, d. b. a. Roll-A-Fold Scaffold Company, Seattle, Wash. Filed Sept. 16, 1957.

ROLL-A-FOLD

For Portable Folding Scaffold.
First use Mar. 15, 1957.

SN 43,262. Dennis Mitchell Industries, Philadelphia, Pa. Filed Dec. 31, 1957.

IRONING VALET

For Clothes Rack.
First use July 15, 1957.

SN 47,128. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 5, 1958.

CHROMELITE

For Reflective Tape.
First use Apr. 16, 1957.

SN 47,671. Needl-Pak Company, Hathaway Pines, Calif. Filed Mar. 13, 1958.

WET-A-PAK

For Floral Piece Foundation.
Filed Mar. 13, 1958.

SN 47,682. Sani-Pic, Inc., Portland, Oreg. Filed Mar. 13, 1958.

SANI-PIC

For Toothpick Dispensers.
First use July 25, 1957.

Class 51 — Cosmetics and Toilet Preparations

SN 690,186. Lydia O'Leary, New York, N. Y., assignee of Lydia O'Leary, Inc., New York, N. Y. Filed June 24, 1955.

Genii

Owner of Reg. Nos. 345,872 and 355,021.
For Cosmetic Lotion To Eliminate Skin Oiliness and Nose Shine.
First use May 11, 1955.

SN 12,476. Ludwig Schork, Inc., Brooklyn, N. Y. Filed July 12, 1956.

renaissance

For Rouge, Perfume, Toilet Water, Cologne, Bath Powder, Talcum Powder, Face Powder, Brilliantine, and Sachet Powder.
First use in 1939.

SN 17,778. Macnil Inc., Philadelphia, Pa. Filed Oct. 18, 1956.

BALSAN

For Medicated Baby Cream.
First use Oct. 15, 1956.

SN 26,291. Graeff Miller, d. b. a. Margaret Lane, New York, N. Y. Filed Mar. 15, 1957.

BENE-FACIAL

The word "Facial" is disclaimed apart from the mark as shown.
For Facial Creams.
First use Sept. 3, 1930.

SN 31,370. The Wybrant System Products Corporation, New York, N. Y. Filed June 4, 1957. Sec. 2(f).

THE WYBRANT SYSTEM

For Hair and Scalp Conditioning Lotions.
First use in September 1947.

SN 32,907. Carew Products, Inc., Floral Park, N. Y. Filed July 1, 1957.

Helene Carew
ROYAL CREAM
COURT FORMULA

"Helene Carew" is the name of a living individual whose consent is of record. No claim is made to the words "Cream" and "Formula" per se apart from the mark.
For Night Nourishment Facial Cream.
First use Sept. 1, 1950.

SN 33,491. Golden Peacock Co., Inc., Paris, Tenn. Filed July 10, 1957.

LE SECRET DE LA NATURE

The mark is translated as "Nature's Secret."
For Skin Lotion.
First use Mar. 25, 1957.

SN 36,672. Park & Tilford, New York, N. Y. Filed Sept. 4, 1957.

Tilford

Owner of Reg. Nos. 423,356 and 329,606.
For Cosmetics and Toilet Preparations—Namely, Perfumes, Colognes, Dusting Powders, Hair Sprays, Lipsticks.
First use May 20, 1957; 1915 as to "Park & Tilford."

SN 37,978. Parfums Ciro, Inc., New York, N. Y. Filed Sept. 27, 1957.

LITTLE DANCER

For Perfume.
First use Sept. 17, 1957.

SN 42,018. Foster-Milburn Company, Buffalo, N. Y. Filed Dec. 9, 1957.

KERI

For Water Dispersible Bath Oil.
First use Nov. 21, 1957.

SN 42,716. Para Laboratories, New York, N. Y. Filed Dec. 19, 1957.

GIFT OF LIFE

For Cosmetic Skin Cream Containing Placental Substance and Skin Nutritives.
First use Oct. 30, 1957.

SN 43,452. John W. Hanlon, Inc., Grand Island, N. Y. Filed Jan. 6, 1958.

MARTHA GRETCHEN

The name "Martha Gretchen" is that of the daughter of applicant's president, who is presently a minor.
For Cosmetic Skin Lotions and Emollient.
First use Oct. 9, 1957.

SN 44,403. Mem Company, Inc., New York, N. Y. Filed Jan. 21, 1958.

English Leather

For Toilet Preparations—Namely, Lotion Used as After Shave Lotion or Eau de Cologne or Toilet Water or Aftebath Rub; Deodorant Lotion, Talcum Powder, and Sets Containing at Least Two of the Foregoing.
First use Apr. 14, 1949.

SN 48,299. McKesson & Robbins, Incorporated, New York, N. Y. Filed Mar. 24, 1958.

TARTAN 21

Owner of Reg. No. 423,947.
For Suntan Preparation.
First use Jan. 20, 1958.

Class 52 — Detergents and Soaps

SN 39,883. Augustus Mierson, d. b. a. Bulan Company, San Francisco, Calif. Filed Oct. 28, 1957.

Bulan

For Liquid Hand Soap.
First use July 17, 1957.

SN 46,222. Living Beauty, Inc., Memphis, Tenn. Filed Feb. 20, 1958.

Living Beauty

For Shampoo.
First use Dec. 5, 1957.

SN 46,224. Living Beauty, Inc., Memphis, Tenn. Filed Feb. 20, 1958.

CREST OF BEAUTY

For Shampoo.
First use Dec. 5, 1957.

SN 46,225. Living Beauty, Inc., Memphis, Tenn. Filed Feb. 20, 1958.

Beauty Creations

For Shampoo.
First use Dec. 5, 1957.

SN 48,588. Societe Francaise des Cosmetiques Biologiques, Nice, France. Filed Mar. 27, 1958.

CRENUM

Owner of French Reg. No. 5,981, dated Nov. 9, 1956 (Nice); Natl. Inst. No. 81,542.
For Toilet Soaps.

SERVICE MARKS

Class 100 — Miscellaneous

SN 8,670. Kiwanis International, Chicago, Ill. Filed May 21, 1956. COLLECTIVE MARK.

KIWANIS

Owner of Reg. Nos. 141,995, 632,426, and others.
For Sponsoring Civic Projects, Underprivileged Child and Youth Welfare Work; Building Individual and Civic Character; Promoting Educational, Medical, and Recreational Facilities and Programs for Children, Students, and Individuals; Fostering Patriotism, Fellowship, National and International Good Will and Higher Business, Social, and Professional Standards; Improving Community Life and Furthering the Civic and Educational Objectives and Ideals of the Club.
First use 1914.

SN 24,743. Airtone Chemical Company, Baltimore, Md. Filed Feb. 20, 1957.

AIRTONE

For Smoke Odor and Deodorizer Services, Sanitary Cleaning and Disinfecting Services, and Servicing Odor Masking Conditioner Units for Industrial Organizations and Individual Home Owners.
First use May 5, 1952.

SN 27,021. Electro-Chek Corporation of America, Ogden, Utah. Filed Mar. 27, 1957.

Electro-Chek

For Building Security Services by Means of Motor Patrols and Recording Devices.
First use June 1, 1956.

SN 27,494. Santa J. Crisali, Ridgefield Park, N. J. Filed Apr. 4, 1957.

de Cris

For Hair Styling.
First use in May 1952.

SN 40,200. The Union Central Life Insurance Company, Cincinnati, Ohio. Filed Nov. 8, 1957.

Class 104 — Communication

SN 31,355. Sports Car Club of America, Incorporated, Westport, Conn. Filed June 8, 1957. Sec. 2(f).

For Encouraging the Ownership and Operation of Sports Cars, Disseminating Information Concerning Sports Cars and Sports Car Activities, Organizing and Regulating Events and Exhibitions for Sports Car Enthusiasts and Promoting Public Interest in Sports Cars and Sports Car Racing Throughout the United States and in Foreign Countries.
First use February 1944.

SN 35,486. Grossman & Sons, Inc., d. b. a. The School Enterprises, Columbus, Ohio. Filed Aug. 2, 1957.

For Helping Schools To Obtain Funds by Operating Campaigns To Gather Waste Rags.
First use on or about Sept. 1, 1954.

SN 40,885. Silk Hat, Inc., Tuxedo Rental Service, Arlington, Va. Filed Nov. 18, 1957.

The words "Tuxedo Rental Service" are disclaimed.
For Formal Clothes Rental.
First use Oct. 12, 1957.

SN 47,297. Vogue Thermographer's, Inc., Brooklyn, N. Y. Filed Mar. 7, 1958.

VOGUE

For Printing of Announcement Cards, Greeting Cards, and Invitation Cards.
First use Feb. 26, 1958.

Class 101—Advertising and Business

SN 693,734. Cinderella Homes, Inc., South Gate, Calif. Filed Aug. 26, 1958.

Cinderella

For Extending Integrated Technical Assistance to Real Estate Firms, Said Assistance Embracing the Supplying of Complete Home Plans, Stock Numbers of All Parts Called for by Said Plans, Cost Breakdowns, and Miscellaneous Information Related to the Above-Stated Phase of Building.
First use Apr. 1, 1954.

SN 34,622. A. C. Nielsen Company, Chicago, Ill. Filed July 30, 1957.

NCCH

For Services in Connection With Processing and Redeeming Merchandise Coupons Issued and Collected by Others.
First use June 24, 1957.

SN 41,608. American Continental Shoppers Association, Inc., New York, N. Y. Filed Dec. 2, 1957.

ACSA

For Extension of Credit to Customers Who Purchase at Subscribing Retail Establishments and Making Collections Through a Central Billing System.
First use Nov. 14, 1957.

SN 44,235. Wilmotte Research Tabulating, Inc., Chicago, Ill. Filed Jan. 17, 1958.

For Market and Media Research Tabulating Service.
First use in September 1957.

Class 102—Insurance and Financial

SN 19,858. American Hardware Mutual Insurance Company, Minneapolis, Minn. Filed Nov. 26, 1956.

Applicant disclaims the exclusive use of the words "We Pay Claims Within 3 Hours After Proof of Loss."
For Underwriting Fire, Lightning, Smoke and Smudge, Windstorm, Tornado, Cyclone and Hail, Explosion, Riot and Civil Commotion, Sprinkler Leakage, Earthquake and Motor Vehicle, Inland Marine and Casualty Insurance.
First use June 8, 1956.

SN 32,471. Combined Insurance Company of America, Chicago, Ill. Filed June 24, 1957.

LITTLE GIANT

For Underwriting of All Forms of Accident and Health Insurance.
First use Apr. 15, 1940.

First use May 5, 1953.

First use in May 1952.

SN 40,209. The Union Central Life Insurance Company, Cincinnati, Ohio. Filed Nov. 8, 1957.

FLEXIPLAN

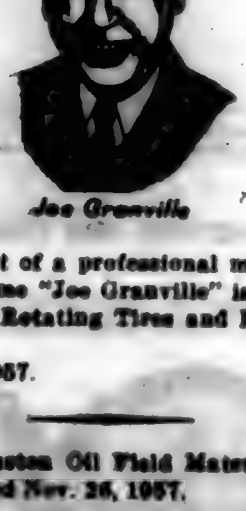
For Underwriting Group Annuities.
First use June 11, 1957.

SN 45,374. The Cleveland Trust Company, Cleveland, Ohio. Filed Feb. 6, 1958.

For General Banking Services—Namely, Savings, Checking, Loan, Trust, Safe Deposit, Branch Banking, and Foreign Exchange Services.
First use Jan. 2, 1957.

Class 103—Construction and Repair

SN 38,478. Market Tire Company of Maryland, Inc., Bethesda, Md. Filed Oct. 7, 1957.



Joe Granville

The portrait is that of a professional model whose consent is of record. The name "Joe Granville" is fictitious.
For Mounting and Rotating Tires and Repairing Tires and Tubes.
First use Apr. 2, 1957.

SN 41,387. The Houston Oil Field Material Company, Inc., Houston, Tex. Filed Nov. 26, 1957.

HOMCO

Owner of Reg. Nos. 423,094 and 422,221.
For Oil Field Drilling Services Such as Directional Drilling, Well Surveying, Fishing Tool Services, and Electrical Well Servicing.
First use October 1928 on fishing tool services.

SN 43,355. Graco Metal Products, Inc., Huntingdon Valley, Pa. Filed Mar. 27, 1958.

GRACO

For Contract Manufacturing of Sheet Metal Products, Including Stampings and Sub-Assemblies.
First use March 1953.

Class 104—Communication

SN 42,301. Mobile Radio Engineering, Inc., Minneapolis, Minn. Filed Dec. 12, 1957.

MOBILE MIKE

For Two-Way Radio Installation and Service.
First use June 1, 1957.

Class 105—Transportation and Storage

SN 32,759. Icelandic Airlines, Inc., New York, N. Y. Filed June 27, 1957.

IAL

For Air Transportation of Passengers and Freight.
First use Jan. 15, 1954.

SN 33,826. National Auto Leasing Corporation, Detroit, Mich. Filed July 16, 1957.

NALCO

For Renting and Leasing of Automobiles.
First use May 17, 1954.

SN 34,207. Allstates Trailer Rental, Inc., Baltimore, Md. Filed July 23, 1957.

ALLSTATES

For Leasing of Vehicular Trailers.
First use on or about Jan. 1, 1955.

Class 106—Material Treatment

SN 47,404. Midcontinent Map Company, d. b. a. X P Service Co., Tulsa, Okla. Filed Mar. 10, 1958.

XP

For Electro Printing Reproduction Service.
First use Nov. 5, 1957.

Class 107—Education and Entertainment

SN 28,525. Paul Klemtner & Company, Inc., Newark, N. J. Filed Apr. 19, 1957.

MCI

For Planning, Production and Promotion of Medical Television, Medical Motion Pictures, and Audio-Visual Sales Training Aids.
First use Oct. 1, 1955.

SN 44,087. Gertrude Augusta Moran Hand, d. b. a. Gussie Moran, New York, N. Y. Filed Jan. 16, 1958.

GUSSIE'S CORNER

For Title of a Television Program—Namely, Sports Commentary and Interviews.
First use June 17, 1957.

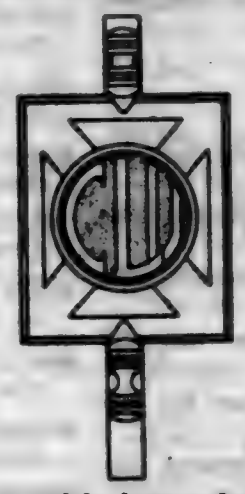
First use Apr. 1, 1954.

First use Apr. 15, 1940.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 680,992. The American College of Life Underwriters, Philadelphia, Pa. Filed Feb. 3, 1955.



The mark is used on watch charms, diplomas, certificates, and stationery.

For Indicating Membership in the Applicant Association.

First use May 21, 1930.

CERTIFICATION MARKS

Class A—Goods

SN 38,126. The British Cycle & Motor Cycle Industries Association Limited, Coventry, England. Filed Oct. 1, 1957.

The mark certifies that the goods are wholly made in the United Kingdom of Great Britain and Northern Ireland.

For Cycles of Lightweight Construction Manufactured Wholly in the United Kingdom of Great Britain and Northern Ireland.

First use Nov. 5, 1956, in commerce Nov. 5, 1956.

SN 48,461. California Redwood Association, San Francisco, Calif. Filed Mar. 26, 1958.

The mark certifies that the goods meet standards of quality established by applicant.

For Lumber.

First use Nov. 14, 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

669,127. FIBERCHEM AND DESIGN. Fiberglass & Chemical Services, Inc. SN 7,781. Pub. 8–19–58. Filed 5–7–56.

669,128. HICKORY DICKORY. Hickory Dickory Bar-B-Q Chips Co. SN 40,946. Pub. 8–19–58. Filed 11–19–57.

Class 2—Receptacles

669,129. JAK-ET-PAK. Continental Can Company, Inc. SN 23,220. Pub. 8–13–57. Filed 1–25–57.

669,130. LITTEREX. Litterex Company. SN 31,669. Pub. 1–28–58. Filed 6–10–57.

669,131. LITTER TAINER. Wallace Silversmiths, Inc. SN 33,589. Pub. 8–19–58. Filed 7–11–57.

669,132. KUP-TAINER. Wallace Silversmiths, Inc. SN 33,591. Pub. 8–19–58. Filed 7–11–57.

669,133. MONARCH WHITE. Wilbert W. Haase Co. SN 37,498. Pub. 8–19–58. Filed 9–19–57.

669,134. GAIRVENEER. Continental Can Company, Inc. SN 38,902. Pub. 8–19–58. Filed 10–15–57.

669,135. TUCKER PRODUCTS. Tucker Products Corporation. SN 40,159. Pub. 8–19–58. Filed 11–5–57.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

669,136. SALES CHARGER. Delmar G. Spatz, d. b. a. D M A. SN 44,932. Pub. 8–19–58. Filed 1–29–58.

669,137. "7–11." Carol B. Sullivan. SN 44,938. Pub. 8–19–58. Filed 1–29–58.

Class 4—Abrasives and Polishing Materials

669,138. LOOKING GLASS SHINE. Knomark Manufacturing Co., Inc. SN 36,521. Pub. 8–19–58. Filed 8–30–57.

669,139. POLY-ON. Arrow Chemical Products, Inc. SN 37,620. Pub. 8–19–58. Filed 9–23–57.

669,140. LINK DURAGOLD AND DESIGN. Leonard W. Link, d. b. a. Link Glass Machinery Company. SN 39,235. Pub. 8–11–58. Filed 10–21–57.

669,141. DAN-DEE. Twin City Shellac Co., Inc. SN 53,916. Pub. 8–19–58. Filed 6–17–58.

Class 5—Adhesives

669,142. ANCHOR AND DESIGN. Continental Tapes, Inc., assignee of Continental Tapes. SN 697,966. Pub. 2–19–57. Filed 11–9–55.

669,143. HUVINAC. Huhtill Chemical Corporation. SN 30,242. Pub. 5–6–58. Filed 5–20–57.

669,144. UNARCO. Jules S. Rosen, d. b. a. United Artist Materials Co. SN 40,619. Pub. 8–19–58. Filed 11–13–57.

669,145. ELEPHANT. Sanford Ink Company. SN 45,831. Pub. 8–19–58. Filed 2–13–58.

669,146. SQUEEZ-A-STITCH. Household Research Corporation. SN 45,879. Pub. 8–19–58. Filed 2–14–58.

669,147. CHEMLOK. Lord Manufacturing Company. SN 45,890. Pub. 8–19–58. Filed 2–14–58.

669,148. SPECTRA-BOND. Organic Development Corporation. SN 45,997. Pub. 8–19–58. Filed 2–17–58.

Class 6—Chemicals and Chemical Compositions

669,149. FIBERLUBE. United Aniline Co. SN 12,058. Pub. 8–19–58. Filed 7–12–56.

669,150. LYSOL AND DESIGN. Lehn & Fink Products Corporation. SN 20,635. Pub. 8–19–58. Filed 12–7–56.

669,151. ORKIN-AIRE. Orkin Exterminating Company, Inc. SN 30,106. Pub. 8–19–58. Filed 5–15–57.

669,152. OXYDIAMINE. General Aniline & Film Corporation. SN 35,573. Pub. 8–19–58. Filed 8–15–57.

669,153. FAST BOND. General Aniline & Film Corporation. SN 35,577. Pub. 8–19–58. Filed 8–15–57.

669,154. ZAMBESI. General Aniline & Film Corporation. SN 35,580. Pub. 8–19–58. Filed 8–15–57.

669,155. FIRE CRACKER. Hayes-Sammons Chemical Company. SN 36,515. Pub. 8–19–58. Filed 8–30–57.

669,156. TEMPRON. Chapman Chemical Company. SN 40,742. Pub. 8–19–58. Filed 11–15–57.

669,157. SPICYMIST. Acme Chemical Company. SN 42,260. Pub. 8–19–58. Filed 12–12–57.

669,158. ANO. General Aniline & Film Corporation. SN 43,384. Pub. 8–19–58. Filed 1–3–58.

669,159. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 43,638. Pub. 8–19–58. Filed 1–8–58.

Class 7—Cordage

669,160. BLACKHAWK AND DESIGN. Sam Atkinson, d. b. a. McLeansboro Twine Company. SN 35,025. Pub. 8–19–58. Filed 8–6–57.

669,161. TOP KNOT. International Harvester Company. SN 42,481. Pub. 8–19–58. Filed 12–16–57.

Class 9—Explosives, Firearms, Equipments, and Projectiles

669,162. SOURDOUGH. Redfield Gunsight Co. SN 32,534. Pub. 8–19–58. Filed 6–24–57.

669,163. SUPER SPITFIRE. V. J. Tovatt Co. SN 40,098. Pub. 8–19–58. Filed 11–4–57.

Class 10—Fertilizers

669,164. PLANTSTIM. Plant Products Corporation. SN 33,568. Pub. 8–19–58. Filed 7–11–57.

669,165. GARDEN-GREEN. Price's Producers, Inc. SN 49,079. Pub. 8–19–58. Filed 4–4–58.

Class 11—Inks and Inking Materials

669,166. COLOMASTER. Columbia Ribbon & Carbon Manufacturing Company, Inc. SN 41,006. Pub. 8–19–58. Filed 11–20–57.

669,167. WL AND DESIGN. Will Laboratories, Inc. SN 42,681. Pub. 8–19–58. Filed 12–18–57.

Class 22—Games, Toys, and Sporting Goods

669,245. PEEL-O-MATIC. All Channel Products Corpora-

Class 12—Construction Materials

669,168. Z-STONE. Vermiculite Manufacturing Co. SN 32,561. Pub. 8-19-58. Filed 6-24-57.

669,169. FUTUREWALL. Oskar R. Ludwig and Anthony Pesone. SN 34,245. Pub. 8-19-58. Filed 7-23-57.

669,170. GRIDKORE BELCOBALSA AND DESIGN. Balsa Ecuador Lumber Corporation. SN 27,548. Pub. 8-19-58. Filed 9-20-57.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

669,171. KITCHEN KWEEN. Stephen A. Young Corporation. SN 7,143. Pub. 8-19-58. Filed 4-25-56.

669,172. PROBE AND DROGUE AND DESIGN. Flight Refueling, Incorporated. SN 12,019. Pub. 8-19-58. Filed 7-12-56.

669,173. SECURITY. Fetherwate Pipe & Tube Co., d. b. a. Security Industrial Supply Co. SN 38,814. Pub. 8-19-58. Filed 10-14-57.

669,174. CUPL-O. Philip Israel, d. b. a. Southwest Equipment Company. SN 41,821. Pub. 8-19-58. Filed 12-5-57.

669,175. VAPOR AND DESIGN. Vapor Heating Corporation. SN 43,407. Pub. 8-19-58. Filed 1-3-58.

669,176. "5 IN 1." Chicago Specialty Manufacturing Co. SN 44,066. Pub. 8-19-58. Filed 1-16-58.

669,177. QUIK-FLEX. International Basic Economy Corporation. SN 44,895. Pub. 8-19-58. Filed 1-21-58.

669,178. PIGGYBAK. The Pollak Steel Company. SN 44,538. Pub. 8-19-58. Filed 1-28-58.

669,179. FLAVORITE. Regal Ware, Inc. SN 44,922. Pub. 8-19-58. Filed 1-29-58.

669,180. DESIGN OF THICE POINTED STAR IN CIRCLE. Daimler-Benz Aktiengesellschaft. SN 45,024. Pub. 8-19-58. Filed 1-31-58.

669,181. EVER-HANDY. The Eagle Lock and Screw Company. SN 45,039. Pub. 8-19-58. Filed 1-31-58.

669,182. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,134. Pub. 8-19-58. Filed 2-3-58.

Class 14—Metals and Metal Castings and Forgings

669,183. H AND DESIGN. The Hartford Electric Steel Corporation. SN 27,796. Pub. 8-19-58. Filed 4-8-57.

669,184. VAR. Crucible Steel Company of America. SN 43,077. Pub. 8-19-58. Filed 12-27-57.

Class 15—Oils and Greases

669,185. HO-4. Esso Standard Oil Company. SN 41,084. Pub. 8-19-58. Filed 11-21-57.

Class 16—Protective and Decorative Coatings

669,186. PERMATONE. Grand Rapids Varnish Corporation. SN 4,634. Pub. 8-19-58. Filed 3-15-56.

669,187. GUARDSMAN. Grand Rapids Varnish Corporation. SN 4,635. Pub. 8-19-58. Filed 3-15-56.

669,188. INSULCOTE. Carlton L. Rydstrom, d. b. a. The Norcote Company. SN 11,296. Pub. 8-19-58. Filed 6-29-56.

669,189. MAGIC. Camel Color & Paint Corp., assignee of Camel Lead Color & Chemical Products Mfg. Corp. SN 12,154. Pub. 2-19-57. Filed 7-16-56.

669,190. GRIPEX. The P. D. George Company. SN 30,484. Pub. 8-19-58. Filed 5-22-57.

669,191. SCHWALL'S BOOK SEAL. Victor A. Schwall. SN 45,491. Pub. 8-19-58. Filed 2-24-58.

669,192. POLY-AQUA. D. J. Peterson, d. b. a. D. J. Peterson Company. SN 48,326. Pub. 8-19-58. Filed 3-24-58.

Class 18—Medicines and Pharmaceutical Preparations

669,193. ALVAGEL. Collins Chemical Corporation. SN 39,933. Pub. 8-19-58. Filed 9-17-57.

669,194. CARDIOGRAFIN. Olin Mathieson Chemical Corporation. SN 40,598. Pub. 8-19-58. Filed 11-13-57.

669,195. OLIPRELON. Ciba Limited. SN 41,618. Pub. 8-19-58. Filed 12-2-57.

669,196. VECTILONE. American Cyanamid Company. SN 42,191. Pub. 8-19-58. Filed 12-11-57.

669,197. SINA-KARE. Drugmaster, Inc. SN 42,208. Pub. 8-19-58. Filed 12-11-57.

669,198. CYANAMID AND DESIGN. American Cyanamid Company. SN 42,261. Pub. 8-19-58. Filed 12-12-57.

669,199. TERCINE. American Cyanamid Company. SN 42,620. Pub. 8-19-58. Filed 12-18-57.

669,200. SOPRINTIN. Knoll A.-G. Chemische Fabriken. SN 45,396. Pub. 8-19-58. Filed 2-6-58.

669,201. REL-KA-SOL AND DESIGN. Rel-Ka-Sol Chemical Company. SN 45,412. Pub. 8-19-58. Filed 2-6-58.

669,202. NUTRATE. United Laboratories, Ltd. SN 45,429. Pub. 8-19-58. Filed 2-6-58.

Class 19—Vehicles

669,203. SPARCRAFT. Spartan Aircraft Company. SN 38,641. Pub. 8-19-58. Filed 10-9-57.

669,204. ALBRIGHT AND DESIGN. Albright Boat & Marine Co., Inc. SN 39,851. Pub. 8-19-58. Filed 10-31-57.

669,205. FLEXIFLOAT. Robishaw Engineering, Inc. SN 42,663. Pub. 8-19-58. Filed 12-18-57.

669,206. KIDDIE AUTO RIDE. Joseph Duner, d. b. a. Appen Co. SN 46,117. Pub. 8-19-58. Filed 2-19-58.

Class 21—Electrical Apparatus, Machines, and Supplies

669,207. IT BEATS—AS IT SWEEPS—AS IT CLEANS. The Hoover Company. SN 15,599. Pub. 8-19-58. Filed 9-13-56.

669,208. RW AND DESIGN. The Ramo-Wooldridge Corporation. SN 16,144. Pub. 8-19-58. Filed 9-21-56.

669,209. DESIGN OF LINKED DIAMONDS. The Ramo-Wooldridge Corporation. SN 16,145. Pub. 8-19-58. Filed 9-21-56.

669,210. WINSTON. Waring Products Corporation. SN 27,406. Pub. 8-19-58. Filed 4-2-57.

669,211. BIFF-BURGER. Arrow Engineering Company, Inc. SN 28,014. Pub. 8-19-58. Filed 4-12-57.

669,212. RICO. Reeves Instrument Corporation. SN 29,286. Pub. 8-19-58. Filed 5-1-57.

669,213. RAFI AND DESIGN. "Rafi" Raimund Finsterhölzl Elektrotechnische Spezialfabrik O. H. G. SN 33,171. Pub. 8-19-58. Filed 7-3-57.

669,214. DUMONT. Allen B. Du Mont Laboratories, Inc. SN 42,852. Pub. 8-19-58. Filed 12-23-57.

Class 28—Jewelry and Precious-Metal Ware

669,294. SAFARI. The Esterbrook Pen Company. SN 38,813. Pub. 8-19-58. Filed 10-14-57.

Class 22—Games, Toys, and Sporting Goods

669,215. DESIGN OF STAR AND CIRCLE. North Star Industries, Inc. SN 22,062. Pub. 8–19–58. Filed 1–3–57.

669,216. FLORASTIK. Andrew C. Watson, d. b. a. Bathurst Products. SN 22,480. Pub. 8–19–58. Filed 1–11–57.

669,217. MARK II. Burke Golf Equipment Corporation. SN 28,429. Pub. 8–19–58. Filed 4–18–57.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

669,218. PROBE AND DROGUE AND DESIGN. Flight Refueling, Incorporated. SN 12,805. Pub. 8–19–58. Filed 7–25–56.

669,219. HYDRA-NITE ETC. AND DESIGN. The Green Mfg. Co. SN 25,171. Pub. 8–19–58. Filed 2–27–57.

669,220. WHITIN BI-COIL ETC. AND DESIGN. Whitin Machine Works. SN 25,214. Pub. 8–19–58. Filed 2–27–57.

669,221. ECLIPSE. Buffalo-Eclipse Corporation, d. b. a. The Eclipse Lawn Mower Co. SN 27,274. Pub. 7–8–58. Filed 4[illegible]–57.

669,222. UNIPASS. The Beloit Tool Corporation. SN 38,203. Pub. 8–19–58. Filed 7–5–57.

669,223. TANAQUIL. Frederik Lunning Inc. SN 35,108. Pub. 8–19–58. Filed 8–7–57.

669,224. OBELISK. Frederik Lunning Inc. SN 35,109. Pub. 8–19–58. Filed 8–7–57.

669,225. IT'S A KING. King Oil Tools. SN 35,267. Pub. 8–19–58. Filed 8–9–57.

669,226. STA-COL. Columbia Beauty and Barber Supply Company, d. b. a. State and Columbia Beauty and Barbers Supply Company. SN 36,956. Pub. 8–19–58. Filed 9–10–57.

669,227. ADONIS AND DESIGN. Gerhard Jahn. SN 38,695. Pub. 8–19–58. Filed 10–10–57.

669,228. EVEREADY. Eveready Flood Control, Inc., assignee of Deno Delvecchio, d. b. a. United Pre-Cast Concrete Co. SN 40,033. Pub. 8–19–58. Filed 11–4–57.

669,229. NAUTA-BLAST. Aluminum Marine Hardware Co. Inc. SN 41,130. Pub. 8–19–58. Filed 11–22–57.

669,230. ESCOMATIC. Esco, Societe Anonyme. SN 41,261. Pub. 8–19–58. Filed 11–25–57.

669,231. REEL-A-WAY. Beaver Cable Dolly Corporation. SN 41,741. Pub. 8–19–58. Filed 12–4–57.

669,232. GUILBERT. Guilbert, Incorporated. SN 42,700. Pub. 8–19–58. Filed 12–19–57.

669,233. TOT 50. Swingline, Inc. SN 43,502. Pub. 8–19–58. Filed 12–30–57.

669,234. WHITE. White Sewing Machine Corporation. SN 43,902. Pub. 8–19–58. Filed 1–13–58.

669,235. DOMESTIC. White Sewing Machine Corporation. SN 43,903. Pub. 8–19–58. Filed 1–13–58.

669,236. HAUGHTON. Toledo Scale Corporation. SN 44,280. Pub. 8–19–58. Filed 1–20–58.

669,237. SMITH. Ardell Razor Blade Corp., d. b. a. Ardell R. B. Corp. SN 44,516. Pub. 8–19–58. Filed 1–23–58.

669,238. PULL-DOZER. Blackhawk Mfg. Co. SN 45,368. Pub. 8–19–58. Filed 2–6–58.

669,239. M AND DESIGN. Mondiale S. A. de Constructions Mecaniques. SN 45,402. Pub. 8–19–58. Filed 2–6–58.

669,240. MICROPOINT. De Vlieg Machine Company. SN 45,541. Pub. 8–19–58. Filed 2–10–58.

669,241. EXPAND-O-MATIC. Salsbury Corporation. SN 45,616. Pub. 8–19–58. Filed 2–10–58.

669,242. PNEU-RECLAIM. Pettibone Mulliken Corporation. SN 45,666. Pub. 8–19–58. Filed 2–4–58.

669,243. TRANSMATIC. Stuart Absock. SN 46,031. Pub. 8–19–58. Filed 2–17–58.

669,244. GATOR TWISTOOTH. Shenk Manufacturing Company. SN 46,764. Pub. 8–19–58. Filed 3–27–58.

669,245. PEEL-O-MATIC. All Channel Products Corporation. SN 47,167. Pub. 8–19–58. Filed 8–6–58.

669,246. "MOTOMAGNETIC." Martin Engineering Company. SN 48,423. Pub. 8–19–58. Filed 3–25–58.

669,247. BIG BOY AND DESIGN. The Dalton Foundries, Inc. SN 48,465. Pub. 8–19–58. Filed 3–26–58.

Class 24—Laundry Appliances and Machines

669,248. CASCADEX. The American Laundry Machinery Company. SN 27,268. Pub. 8–19–58. Filed 4–1–57.

669,249. WONDER PEG. The Vogel Manufacturing Company. SN 42,327. Pub. 8–12–58. Filed 12–12–57.

Class 26—Measuring and Scientific Appliances

669,250. PHOTO-CRYSTALS. Photo-Crystals, Inc. SN 1[illegible],502. Pub. 8–19–58. Filed 11–19–56.

669,251. DENS-O-LITH. David Z. Roth, d. b. a. David Z. Roth & Co. SN 26,641. Pub. 8–19–58. Filed 3–21–57.

669,252. DESIGN OF JAPANESE CHARACTERS. Seiko Denki Kogyo Kabushiki Kaisha. SN 27,744. Pub. 8–19–58. Filed 4–8–57.

669,253. SCOPIX. Gevaert Photo-Producten N. V. SN 30,652. Pub. 8–19–58. Filed 5–24–57.

669,254. HV AND DESIGN. High Voltage Engineering Corporation. SN 31,214. Pub. 8–19–58. Filed 6–3–57.

669,255. SEABLUE. Paddock of Texas, Inc. SN 31,247. Pub. 8–19–58. Filed 6–3–57.

669,256. CRONAFLEX. E. I. du Pont de Nemours and Company. SN 35,033. Pub. 8–19–58. Filed 8–6–57.

669,257. SONOSCOPE AND DESIGN. Tubescope Company. SN 38,243. Pub. 8–19–58. Filed 10–2–57.

669,258. SENTINEL. Sentinel Products Corporation. SN 41,578. Pub. 8–19–58. Filed 11–20–57.

669,259. TEMPRUF. John Chatillon & Sons. SN 41,797. Pub. 8–19–58. Filed 12–5–57.

669,260. I AND DESIGN OF HUMAN EYE. Oscar S. Wexler, d. b. a. I Glass Optical Company. SN 42,957. Pub. 8–19–58. Filed 12–23–57.

669,261. PICKETT. Pickett & Eckel, Inc. SN 43,208. Pub. 8–19–58. Filed 12–30–57.

669,262. MOBILAB. David A. Willey. SN 44,781. Pub. 8–19–58. Filed 1–27–58.

669,263. RITE-TIMER. Precision Products, Inc., d. b. a. Precision Products. SN 45,276. Pub. 8–19–58. Filed 2–4–58.

669,264. CLASSIC. The Brearley Company. SN 45,673. Pub. 8–19–58. Filed 2–11–58.

669,265. OROFILM. Ideax Corporation. SN 45,979. Pub. 8–19–58. Filed 2–17–58.

669,266. STEAK-CHEF. Scott Thermo-Meter Corporation. SN 46,022. Pub. 8–19–58. Filed 2–17–58.

669,267. LADY MADISON. F. W. Woolworth Co. SN 46,177. Pub. 8–19–58. Filed 2–19–58.

669,268. JUNIOR MADISON. F. W. Woolworth Co. SN 46,178. Pub. 8–19–58. Filed 2–19–58.

669,269. LORD MADISON. F. W. Woolworth Co. SN 46,179. Pub. 8–19–58. Filed 2–19–58.

669,270. BLEND-O-MATIC. Symington-Wayne Corporation, assignee of The Wayne Pump Company. SN 46,384. Pub. 8–19–58. Filed 2–21–58.

669,271. MINIBIT. Speco, Incorporated. SN 46,431. Pub. 8–19–58. Filed 2–24–58.

669,272. PRINTACHROME. General Aniline & Film Corporation. SN 46,438. Pub. 8–19–58. Filed 2–24–58.

669,273. "MICRO-GUIDE." Millers Falls Company. SN 46,633. Pub. 8–19–58. Filed 2–26–58.

669,324. SPORT MASTER. Sport-Wear Hosiery Mills, Inc.

Class 45—Soft Drinks and Carbonated

Class 28—Jewelry and Precious-Metal Ware

669,274. STYLIST. Ripley and Gowen Company Incorporated. SN 26,297. Pub. 8–19–58. Filed 3–15–57.

669,275. BLACKINTON. W. H. Blackinton & Co., Inc. SN 38,012. Pub. 8–19–58. Filed 9–30–57.

669,276. EMERALD FIRE. Feature Ring Co., Inc. SN 41,086. Pub. 8–19–58. Filed 11–21–57.

Class 29—Brooms, Brushes, and Dusters

669,277. STA-COL. Columbia Beauty and Barber Supply Company, d. b. a. State and Columbia Beauty and Barbers Supply Company. SN 36,954. Pub. 8–19–58. Filed 9–10–57.

669,278. BATH BLOTTER. Roll Dippers, Inc. SN 40,618. Pub. 8–19–58. Filed 11–13–57.

669,279. A–M AND DESIGN. American-Marietta Company, O'Cedar Division. SN 42,802. Pub. 8–19–58. Filed 12–23–57.

Class 31—Filters and Refrigerators

669,280. CREDA. Simplex Electric Company Limited. SN 44,338. Pub. 8–19–58. Filed 1–20–58.

Class 34—Heating, Lighting, and Ventilating Apparatus

669,281. MILWAUKEE THERMOFLO AND DESIGN. Metager Machine & Engineering Co. SN 29,161. Pub. 8–19–58. Filed 4–30–57.

669,282. SUNNYAIRE AND DESIGN. Crane Co. SN 30,692. Pub. 8–19–58. Filed 5–28–57.

669,283. BEAVER WELDING SUPPLY COMPANY AND DESIGN. Leslie P. Beaver, Jr., d. b. a. Beaver Welding Supply Company. SN 42,755. Pub. 8–19–58. Filed 12–20–57.

669,284. DRI-COR. Henry Valve Company. SN 44,621. Pub. 8–19–58. Filed 1–24–58.

669,285. NORTHWIND. The Emerson Electric Manufacturing Company. SN 44,890. Pub. 8–19–58. Filed 1–29–58.

669,286. TRANSITONE. Philco Corporation. SN 44,917. Pub. 8–19–58. Filed 1–29–58.

669,287. RHEEM. Rheem Manufacturing Company. SN 44,983. Pub. 8–19–58. Filed 1–30–58.

669,288. HARRIS AND DESIGN. The Harris Calorific Company. SN 48,917. Pub. 8–19–58. Filed 4–2–58.

Class 36—Musical Instruments and Supplies

669,289. EDSEL. Del Fi Records, Inc., assignee of Foster M. Hagmann, d. b. a. Edsel Records. SN 44,278. Pub. 7–22–58. Filed 1–20–58.

Class 37—Paper and Stationery

669,290. LAMINENE. Keuffel & Esser Company. SN 19,463. Pub. 8–19–58. Filed 11–19–56.

669,291. CURTIS TEXT. Curtis Paper Company. SN 22,305. Pub. 8–19–58. Filed 1–9–57.

669,292. ABC. Keuffel & Esser Company. SN 27,700. Pub. 8–19–58. Filed 4–8–57.

669,293. GOLDEN FLEECE. Golden Fleece Tissue Mills, Inc. SN 36,797. Pub. 8–19–58. Filed 9–6–57.

669,294. SAFARI. The Esterbrook Pen Company. SN 38,813. Pub. 8–19–58. Filed 10–14–57.

669,295. WING-DING. Eberhard Faber Pencil Company. SN 41,445. Pub. 8–19–58. Filed 11–27–57.

669,296. PALEFACE. Continental Can Company, Inc. SN 44,379. Pub. 8–19–58. Filed 1–21–58.

669,297. DN AND DESIGN. The Demp-Nock Company. SN 44,523. Pub. 8–19–58. Filed 1–23–58.

669,298. AQUAPHIL. Graham Paper Company. SN 44,538. Pub. 8–19–58. Filed 1–23–58.

669,299. YEWBO. Graham Paper Company. SN 44,540. Pub. 8–19–58. Filed 1–23–58.

Class 38—Prints and Publications

669,300. AMERICAN JEWELRY MANUFACTURER. Manufacturing Jewelers and Silversmiths of America Inc. SN 27,216. Pub. 8–19–58. Filed 3–29–57.

669,301. BUILDING BUSINESS. F. W. Dodge Corporation. SN 31,888. Pub. 8–19–58. Filed 6–5–57.

669,302. SANTA-CHROMES. The Fox Company. SN 32,175. Pub. 8–19–58. Filed 6–18–57.

669,303. CORROSIONOMICS. Fansteel Metallurgical Corporation. SN 32,745. Pub. 8–19–58. Filed 6–27–57.

669,304. RECAP. Fansteel Metallurgical Corporation. SN 32,766. Pub. 8–19–58. Filed 6–27–57.

669,305. JANE STERLING. Doris E. Hilton. SN 33,347. Pub. 8–19–58. Filed 7–8–57.

669,306. MANAGEMENT METHODS. Management Magazines, Inc. SN 40,582. Pub. 8–19–58. Filed 11–13–57.

669,307. THE SPRINGBOARD AND DESIGN. Swimquip, Inc. SN 41,327. Pub. 8–19–58. Filed 11–25–57.

669,308. EXHAUST AND DESIGN. Exhaust Publishing Co. SN 41,900. Pub. 8–19–58. Filed 12–6–57.

669,309. THE SCINTILLATOR. Bendix Aviation Corporation. SN 42,341. Pub. 8–19–58. Filed 12–13–57.

669,310. FORGET-ME-NOT. American Greetings Corporation. SN 42,686. Pub. 8–19–58. Filed 12–19–57.

669,311. THE FAMILY PHYSICIAN. Illinois Academy of General Practice. SN 45,322. Pub. 8–19–58. Filed 2–5–58.

669,312. SYLLABUS. Betti Yerxa Ogden. SN 45,520. Pub. 8–19–58. Filed 2–10–58.

Class 39—Clothing

669,313. PICKWICK 20TH CENTURY. Makegood Mfg. Co. Inc. SN 18,646. Pub. 8–19–58. Filed 11–2–56.

669,314. NORAK. Norwegian-American Knitting Mills, Inc. SN 29,470. Pub. 8–19–58. Filed 5–6–57.

669,315. SKORT. Boreva Sportswear Company. SN 29,863. Pub. 8–19–58. Filed 5–13–57.

669,316. GALLENKAMP'S STRAPPER. Gallenkamp Stores Co. SN 29,898. Pub. 8–19–58. Filed 5–13–57.

669,317. CHIFFONILLE. Modern Globe, Inc. SN 30,803. Pub. 8–19–58. Filed 5–27–57.

669,318. WEE MODERN. Wee Moderns, Inc. SN 35,018. Pub. 8–19–58. Filed 8–5–57.

669,319. ALGOTEX. Lamont International Corporation. SN 37,069. Pub. 8–19–58. Filed 9–12–57.

669,320. ROBERT DALE. Claymore, Incorporated. SN 37,779. Pub. 8–19–58. Filed 9–25–57.

669,321. CE-BO AND DESIGN. Svit, Narodni Podnik. SN 37,929. Pub. 8–19–58. Filed 9–4–57.

669,322. INSERT-A-PAD. Robert E. Allen. SN 39,173. Pub. 8–19–58. Filed 10–21–57.

669,323. MAGIC WALKER. Lester Pincus Shoe Corporation. SN 39,694. Pub. 8–19–58. Filed 10–31–57.

669,376. SPARKLET AND DESIGN. Knapp-Monarch Company. SN 40,466. Pub. 8–19–58. Filed 11–12–57.

669,405. PULIA. Puhl & Co. SN 34,082. Pub. 8–19–58. Filed 7–19–57.

669,324. SPORT MASTER. Sport-Wear Hosiery Mills, Inc. SN 40,388. Pub. 7-1-58. Filed 11-6-57.

669,325. HOLO HOLO. Nagasawa Slipper Factory. SN 41,391. Pub. 8-19-58. Filed 11-26-57.

669,326. LYNMAR. Hymar, Inc. SN 41,642. Pub. 8-19-58. Filed 12-2-57.

669,327. KAY-BEE. Kuensel Brothers. SN 43,319. Pub. 8-19-58. Filed 1-2-58.

669,328. LITTLE DAVID. Kalamazoo Pant Company. SN 43,542. Pub. 8-19-58. Filed 1-7-58.

669,329. SHOWER 'N SHAVE. Edward H. Behrman, d. b. a. Pelican Products. SN 43,723. Pub. 8-19-58. Filed 1-10-58.

669,330. TUF-NUT. Little Rock Tent and Awning Company. SN 43,860. Pub. 8-19-58. Filed 1-13-58.

669,331. JOHN PALMER. Alexander Shirt Co., Inc. SN 43,914. Pub. 8-19-58. Filed 1-14-58.

669,332. KALI-STEN-IKS PRE-PAIRS AND DESIGN. The Gilbert Shoe Co. SN 44,016. Pub. 8-19-58. Filed 1-15-58.

669,333. RAPTURE AND DESIGN. Wm. G. Leininger Knitting Co., Inc. SN 44,030. Pub. 8-19-58. Filed 1-15-58.

669,334. PATINOS. Gustinettes, Inc. SN 44,391. Pub. 8-19-58. Filed 1-21-58.

669,335. GRANVILLE. Craddock-Terry Shoe Corporation. SN 44,440. Pub. 8-19-58. Filed 1-22-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

669,336. TUB-TEX. Susan Thomas. SN 3,477. Pub. 11-27-56. Filed 2-27-56.

669,337. TRI-PLEAT. National Curtain Corp. SN 30,183. Pub. 8-19-58. Filed 5-16-57.

669,338. SATINTONE. Fashion Park, Inc. SN 33,066. Pub. 8-19-58. Filed 7-2-57.

669,339. RETENTO FINISH. Cone Mills Inc. SN 33,535. Pub. 8-19-58. Filed 7-11-57.

669,340. PLASTI-KRAFT. Patchogue-Plymouth Corporation. SN 42,304. Pub. 8-19-58. Filed 12-12-57.

669,341. FACILON. Facile Corporation. SN 43,253. Pub. 8-19-58. Filed 12-31-57.

669,342. COLOR-LURE. E. T. Barwick Mills, Inc. SN 44,151. Pub. 8-19-58. Filed 1-17-58.

669,343. SEAFOAM. Joseph A. Kaplan & Sons, Inc. SN 44,397. Pub. 8-19-58. Filed 1-21-58.

669,344. WASH-N-WALK. Joseph A. Kaplan & Sons, Inc. SN 44,398. Pub. 8-19-58. Filed 1-21-58.

669,345. CUDDLE GLO. Lady Carlton Coat Co., Inc. SN 44,545. Pub. 8-19-58. Filed 1-23-58.

669,346. TRILOK. United States Rubber Company. SN 44,666. Pub. 8-19-58. Filed 1-24-58.

Class 43—Thread and Yarn

669,347. MARA. Gutermann & Co. A. G. SN 44,277. Pub. 8-19-58. Filed 1-20-58.

Class 44—Dental, Medical, and Surgical Appliances

669,348. CARDIALYZER. Kay Electric Company. SN 36,177. Pub. 8-19-58. Filed 3-14-57.

669,349. DESIGN OF KNIGHT ON HORSE. Ritter Company, Inc. SN 39,539. Pub. 8-19-58. Filed 10-30-57.

669,350. AERO-TURBEX. Fairfax Manufacturing Company, Inc. SN 43,747. Pub. 8-19-58. Filed 1-10-58.

Class 45—Soft Drinks and Carbonated Waters

669,351. DESIGN OF OLD MAN. The Frostie Company. SN 10,768. Pub. 8-19-58. Filed 6-22-56.

Class 46—Feeds and Ingredients of Feeds

669,352. LIQUID-ENE. The Pitchers. SN 5,225. Pub. 8-19-58. Filed 3-26-56.

669,353. BABER'S VIS-VITA AND DESIGN. Alva Baber, d. b. a. Baber's Vis-Vita Sales and as Baber's Supply Company. SN 8,048. Pub. 8-19-58. Filed 5-10-56.

669,354. MORROW'S NUT HOUSE. Howard B. Morrow. SN 13,596. Pub. 8-19-58. Filed 8-8-56.

669,355. DORMAN. Dorman & Company. SN 15,025. Pub. 8-19-58. Filed 9-4-56.

669,356. FOLGER'S AND DESIGN. J. A. Folger & Company. SN 21,060. Pub. 8-19-58. Filed 12-14-56.

669,357. PRIDE OF THE VALLEY ETC. AND DESIGN. Burnett Produce Company. SN 25,520. Pub. 8-19-58. Filed 3-5-57.

669,358. CANDY JAR. Russell Stover Candies of Kansas City, Russell Stover Candies of Lincoln, Russell Stover Candies of Denver. SN 30,117. Pub. 8-19-58. Filed 5-15-57.

669,359. MELISSA. A. Sahadi & Company, Inc. SN 33,760. Pub. 8-19-58. Filed 7-15-57.

669,360. SAHADI'S. A. Sahadi & Company, Inc. SN 33,761. Pub. 8-19-58. Filed 7-15-57.

669,361. GEORGIANNA AND DESIGN. W. B. Camp & Sons, Inc. SN 33,947. Pub. 8-19-58. Filed 7-18-57.

669,362. DESIGN OF BOY AND PIG. N. V. Export-Centrale "Boxtel." SN 36,013. Pub. 8-19-58. Filed 8-22-57.

669,363. DAVIS OLD FASHIONED ETC. AND DESIGN. Blackstone Canning Co., Inc. SN 38,782. Pub. 8-19-58. Filed 10-2-57.

669,364. KAESNER. H. & M. Traenkle, d. b. a. H. & M. Traenkle Food Co. SN 39,297. Pub. 8-19-58. Filed 10-21-57.

669,365. TIMBER TRAIL AND DESIGN. Food Foundation, Inc. SN 41,868. Pub. 8-19-58. Filed 11-26-57.

669,366. DAVIES PERFECTION BRAND AND DESIGN. William Davies Co., Inc. SN 41,894. Pub. 8-19-58. Filed 12-6-57.

669,367. FRY SPRED. Consumers Foodcraft Corp. SN 42,361. Pub. 8-19-58. Filed 12-13-57.

669,368. SEA BRITE. National Food Marketers, Inc. SN 42,781. Pub. 8-19-58. Filed 12-20-57.

669,369. DUTCH MAID AND DESIGN. Dutch Maid Food Packing Co., Inc. SN 43,251. Pub. 8-19-58. Filed 12-31-57.

669,370. SPRING LAKE. Orchard Park Foods, Inc. SN 44,506. Pub. 8-19-58. Filed 12-23-57.

669,371. MAPLETTE. Pratt-Low Preserving Corporation. SN 45,275. Pub. 8-19-58. Filed 2-4-58.

669,372. REDDI-WIP. Reddi-Wip, Inc. SN 47,433. Pub. 8-19-58. Filed 3-10-58.

Class 50—Merchandise Not Otherwise Classified

669,373. N AND DESIGN. F. H. Noble and Company. SN 29,164. Pub. 8-19-58. Filed 4-30-57.

669,374. COLD SEAL AND DESIGN. Seattle Tent & Awning Co. SN 31,795. Pub. 8-19-58. Filed 6-11-57.

669,375. NOBLE. F. H. Noble and Company. SN 35,447. Pub. 8-19-58. Filed 8-13-57.

669,376. SPARKLET AND DESIGN. Knapp-Monarch Company. SN 40,468. Pub. 8-19-58. Filed 11-12-57.

669,377. THIRD HAND. Clarence A. Beihl, d. b. a. Beihl Products. SN 41,689. Pub. 8-19-58. Filed 12-3-57.

669,378. HERKY. The Kendall Company. SN 42,289. Pub. 8-19-58. Filed 12-13-57.

669,379. C & D. Ogilvy Norton Company. SN 42,786. Pub. 8-19-58. Filed 12-20-57.

Class 51—Cosmetics and Toilet Preparations

669,380. FLUID GOLD. John Robert Powers Products Co. Inc. SN 2,308. Pub. 8-19-58. Filed 2-8-56.

669,381. SHY. George A. Duffy, trustee for Barbara Gowen Duffy, d. b. a. Rossi Laboratories, Limited. SN 16,188. Pub. 8-27-57. Filed 9-24-56.

669,382. PINK SATIN. Angelique and Company, Inc. SN 20,235. Pub. 8-19-58. Filed 12-3-56.

669,383. REMBRANDT RUBY. Juliette Margien, Inc. (Delaware corporation), by merger and change of name from Juliette Margien Inc. (California corporation). SN 22,199. Pub. 8-19-58. Filed 1-7-57.

669,384. SEMCO PINK CHAMPAGNE. Standard Merchandising Co., Inc. SN 24,829. Pub. 8-19-58. Filed 2-15-57.

669,385. ICE CAKE. Nylonet Corporation. SN 26,293. Pub. 8-19-58. Filed 3-15-57.

669,386. PENETRATE 4. The Merens Company. SN 27,506. Pub. 6-3-58. Filed 4-4-57.

669,387. BYOXIDE. Bynart-Tintair, Inc. SN 27,845. Pub. 8-19-58. Filed 4-10-57.

669,388. SOFT BRILLIANCE. Helene Curtis Industries, Inc. SN 29,706. Pub. 8-19-58. Filed 5-9-57.

669,389. TRESOXIDE. Godefroy Manufacturing Company. SN 31,924. Pub. 8-19-58. Filed 6-13-57.

669,390. WINTER CARNIVAL. Aloe Creme Laboratories, Inc., d. b. a. Alo-Creme. SN 32,068. Pub. 8-19-58. Filed 6-17-57.

669,391. WOODY GLEN. Park & Tilford. SN 33,904. Pub. 8-19-58. Filed 7-17-57.

669,392. MY DESIRE. Park & Tilford. SN 33,905. Pub. 8-19-58. Filed 7-17-57.

669,393. NINA AND DESIGN. Produits Nina, Inc. SN 34,487. Pub. 8-19-58. Filed 7-19-57.

669,394. TRICORN. Carwell-Massey Co., Ltd. SN 34,063. Pub. 8-19-58. Filed 7-31-57.

669,395. GRAVEL. Michael B. Knudsen, d. b. a. Gravel. SN 36,196. Pub. 8-19-58. Filed 8-26-57.

669,396. LOVING CARE. Clairol Incorporated. SN 36,569. Pub. 8-19-58. Filed 9-3-57.

669,397. SUPERSOFT. Lenel Perfumes, d. b. a. Lenel. SN 36,663. Pub. 8-19-58. Filed 9-4-57.

669,398. ANGEL CURL. Chesebrough-Pond's Inc. SN 37,417. Pub. 8-19-58. Filed 9-18-57.

669,399. TIULAK. Pierre Pellisard. SN 38,380. Pub. 8-19-58. Filed 10-4-57.

669,400. CLARA HODGES. Clara M. Hodges, d. b. a. Clara Hodges. SN 38,611. Pub. 8-19-58. Filed 10-9-57.

669,401. Q. E. D. Ar. Winarick, Inc. SN 38,780. Pub. 8-19-58. Filed 10-11-57.

669,402. REPRESENTATION OF THREE FEMALE FIGURES. Yardley & Company Limited. SN 38,959. Pub. 8-19-58. Filed 10-15-57.

669,403. NO FUSS. Guy Thomas Amodeo, d. b. a. Guytom Laboratories. SN 39,573. Pub. 8-19-58. Filed 10-28-57.

669,404. EXIT! Ellen Kaye Laboratories. SN 27,803. Pub. 11-5-57. Filed 4-9-57.

669,405. PULIA. Puhl & Co. SN 34,082. Pub. 8-19-58. Filed 7-19-57.

Class 52—Detergents and Soaps

669,406. I-SEPTIC. James H. Conover, d. b. a. Mi Con Laboratories. SN 40,209. Pub. 8-19-58. Filed 11-7-57.

669,407. MIKRO STAT AND DESIGN. Bonewitz Chemicals, Inc. SN 42,269. Pub. 8-19-58. Filed 12-19-57.

669,408. DIAMON-GLOW. Roy Kenneth Monson, d. b. a. The Diamon Products Company. SN 44,036. Pub. 8-19-58. Filed 1-17-58.

669,409. ANGEL MIST. Chesebrough-Pond's Inc. SN 44,597. Pub. 8-19-58. Filed 1-24-58.

669,410. BRAVO. S. C. Johnson & Son, Inc. SN 45,373. Pub. 8-19-58. Filed 2-10-58.

669,411. DUN-KWIK. Horace M. Dunlap, d. b. a. The Dunlap Company. SN 46,612. Pub. 8-19-58. Filed 2-26-58.

669,412. RUVAT. Wyandotte Chemicals Corporation. SN 50,579. Pub. 8-19-58. Filed 4-28-58.

Service Marks

Class 101—Advertising and Business

669,413. BLUE FLAME KITCHENS AND DESIGN. Joseph H. Schulte, d. b. a. Blue Flame Kitchens. SN 690,048. Pub. 1-7-58. Filed 7-1-55.

669,414. C AND C ETC. AND DESIGN. C and C Thrift Stamp Co., Inc. SN 24,562. Pub. 8-19-58. Filed 2-18-57.

669,415. LUCKY. John E. Respondek, d. b. a. Mercury Stamp Company. SN 26,973. Pub. 8-19-58. Filed 3-26-57.

Class 102—Insurance and Financial

669,416. FARM AND HOME. Farm and Home Life Insurance Company. SN 41,060. Pub. 8-19-58. Filed 11-4-57.

Class 103—Construction and Repair

669,417. LLANO AND DESIGN. Llano Drilling Company. SN 35,870. Pub. 8-19-58. Filed 8-20-57.

669,418. LLANO. Llano Drilling Company. SN 35,871. Pub. 8-19-58. Filed 8-20-57.

Class 105—Transportation and Storage

669,419. SPECTOR MID-STATES AND DESIGN. Spector Freight System, Inc. SN 35,134. Pub. 8-19-58. Filed 8-7-57.

669,420. IMPERIAL. Northwest Airlines, Inc. SN 36,218. Pub. 8-19-58. Filed 8-26-57.

Certification Marks

Class A—Goods

669,421. TILE COUNCIL OF AMERICA, INC. AND DESIGN. Tile Council of America, Inc. SN 34,090. Pub. 8-19-58. Filed 7-19-57.

669,422. UND. LAB. INC. INSP. Underwriters' Laboratories, Inc. SN 47,915. Pub. 8-19-58. Filed 3-17-58.

Class 39—Clothing

669,438. New Process Laboratories, Inc., d. b. a. New Process Inc., Tinley Park, Ill. SN 22,130. Filed P. R. 1-4-57. Am.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

669,425. The Dow Chemical Company, Midland, Mich., assignee of The Dobeckmun Company, Cleveland, Ohio. SN 12,940. Filed P. R. 7-27-56. Am. S. R. 10-8-57.

VERI-KLEER

For Polyethylene Film.
First use Nov. 14, 1955.

Class 2—Receptacles

669,424. Whit-Mor Manufacturing Company, Incorporated, Brooklyn, N. Y. SN 28,472. Filed P. R. 4-18-57. Am. S. R. 4-14-58.

Stafford

For Garment Bags, Shoe Bags, Blanket Bags, Sweater Bags, Pillow Bags, Bags for Dampening Clothes, and Basket Liners.
First use Mar. 18, 1957.

669,423. Carton Associates, Incorporated, Louisville, Ky. SN 29,032. Filed P. R. 4-29-57. Am. S. R. 5-8-58.

SURE LOCK

For Cartons.
First use July 10, 1956.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

669,426. Hartmann Luggage Company, Racine, Wis. SN 18,750. Filed P. R. 11-5-56. Am. S. R. 3-10-58.

CASUAL

For Hand Luggage Including Overnight Cases, Vanity Cases, Toilet Cases, and Train Cases.
First use Oct. 8, 1956.

Class 7—Cordage

669,427. H. P. Smith Company, Inc., Rogers, Ark. SN 35,011. Filed P. R. 8-5-57. Am. S. R. 9-5-58.

BALE KING
BALER TWINE

For Baling or Binder Twine.
First use July 1, 1957.

TM 40

Class 15—Oils and Greases

669,428. "Menorah" Rubinstein Bros., Tel-Aviv, Israel. SN 14,065. Filed P. R. 8-16-56. Am. S. R. 1-27-58.

Owner of Israelian Reg. No. 15,240, dated Apr. 6, 1956.
For Candles.

Class 18—Medicines and Pharmaceutical Preparations

669,429. The Pfeiffer Co., St. Louis, Mo. SN 28,456. Filed P. R. 4-18-57. Am. S. R. 9-8-58.

Babee

For Teething Lotion.
First use Jan. 3, 1956.

669,430. The Nestle-Le Mur Company, New York, N. Y. SN 33,986. Filed P. R. 7-18-57. Am. S. R. 9-9-58.

COOL AND DRY

For Medicated Foot Powder for the Relief of Athlete's Foot and Other Foot Skin Irritations.
First use November 1956.

Class 28—Jewelry and Precious-Metal Ware

669,431. Kushner & Pines, Inc., New York, N. Y. SN 36,298. Filed 8-27-57.

Custom Set

For Finger Rings.
First use Jan. 26, 1956.

Class 37—Paper and Stationery

669,432. Dixie Wax Paper Company, Dallas, Tex. SN 27,020. Filed P. R. 3-27-57. Am. S. R. 8-12-58.

Super Sheen

For Moisture and Moisture Vapor Proof Paper Bags.
First use Feb. 13, 1957.

359,959. B & G KJOBENHAVN AND DESIGN OF THREE TOWERS. Cl. 30. 9-6-38.

362,275. THREE CHEERS. Cl. 30. 11-15-38.

362,418. MUSTANG AND REPRESENTATION OF HORSE.

Class 39 — Clothing

669,433. Peter Pan Foundations, Inc., New York, N. Y. SN 21,082. Filed P. R. 12-14-56. Am. S. R. 1-10-58.

WIRELESS

For Brassieres.
First use Nov. 1, 1956.

669,434. Van Horne-Kaestner Leather Company, Milwaukee, Wis. SN 21,993. Filed P. R. 12-31-56. Am. S. R. 9-12-58.

FITWELL

For Shoe Findings—Namely, Counters, Arches, Toplifts, Wedges, Dutchmen, Horseshoe Bands, Arch Supports, Outsoles, Innersoles, Insole Strips, Shanks, Heels, Heel Pads, and Box Toes.
First use prior to July 1, 1939, as to counters.

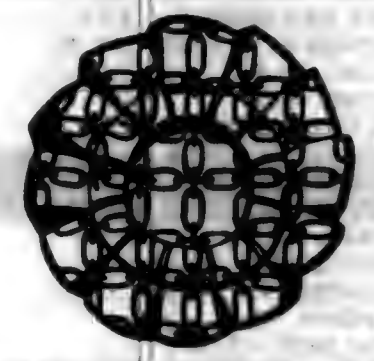
669,435. National Pants Company, New York, N. Y. SN 29,680. Filed P. R. 5-8-57. Am. S. R. 9-9-58.

NOR-WAY

For Men's Slacks and Trousers.
First use Mar. 27, 1957.

Class 46 — Foods and Ingredients of Foods

669,436. Lester T. Sawyer, d. b. a. Hycrest Farms, Sterling, Mass. SN 5,060. Filed P. R. 5-22-56. Am. S. R. 6-17-58.



The feature of the mark consists of a chain mesh design imprinted on a milk bottle cap which is applied to the mouth of a milk bottle.
For Fluid Milk.
First use Jan. 10, 1956.

669,437. Klemsen Company, Chicago, Ill. SN 10,039. Filed P. R. 6-19-56. Am. S. R. 6-27-58.

FISH-PAK

For Condensed, Processed Fish for Animal Feed.
First use on or about Apr. 4, 1958.

669,438. New Process Laboratories, Inc., d. b. a. New Process Inc., Tinley Park, Ill. SN 22,130. Filed P. R. 1-4-57. Am. S. R. 11-21-57.

NO CAL

For Canned Butter Beans.
First use Nov. 15, 1956.

669,439. The Griffith Laboratories, Inc., Chicago, Ill. SN 24,258. Filed P. R. 2-12-57. Am. S. R. 7-25-58.

PROTEINATE

For Composition of Soya Bean Protein and Non-Fat Dry Skim Milk Solids for Use as an Emulsifier in Processed Meat Products.
First use Nov. 6, 1956.

669,440. Young's Candy Company, Williamsport, Pa. SN 23,023. Filed P. R. 7-1-57. Am. S. R. 6-10-58.

PLATE O' BARK

For Candy.
First use Apr. 29, 1957.

Service Marks

Class 101 — Advertising and Business

669,441. Wm. J. Keller, Inc., Buffalo, N. Y. SN 22,012. Filed P. R. 1-2-57. Am. S. R. 7-2-58.

KELLER-KROME

For Printing Service.
First use on or about July 1955.

Class 105 — Transportation and Storage

669,442. Chicago, Burlington & Quincy Railroad Company, Chicago, Ill. SN 25,420. Filed 6-13-57.

Mississippi River Scenic Line

For Railroad Passenger Transportation Services.
First use in August 1906.

TRADEMARK REGISTRATIONS RENEWED

118,500. PHELACTINE. Cl. 6. 9-18-17.
121,434. G AND DESIGN. Cl. 2. 4-30-18.
121,813. "PYRAMID" AND DESIGN. Cl. 42. 5-28-18.
122,746. SOCIETY. Cl. 42. 9-10-18.
123,572. NORTH STAR. Cl. 15. 11-19-18.
123,685. ARLINGTON. Cl. 37. 12-3-18.
124,360. REPUBLIC. Cl. 50. 2-11-19.
357,200. SANDY HOOK AND DESIGN. Cl. 49. 5-31-38.
357,563. GENERAL CAPS AND DESIGN. Cl. 50. 6-7-38.
359,267. LIMITED EDITIONS. Cl. 32. 8-9-38.
359,458. ABBA AND DESIGN. Cl. 46. 8-23-38.
359,467. A FIGURE OF ATLAS. Cl. 4. 8-23-38.
359,576. DESIGN AND REPRESENTATION OF A BEE. Cl. 46. 8-23-38.
359,590. FELPAX. Cl. 35. 8-23-38.
359,665. MERTOL. Cl. 18. 8-30-38.
359,831. FLUFFKNIT. Cl. 42. 8-30-38.
359,876. UNICO. Cl. 35. 8-30-38.
359,885. CRUISE. Cl. 51. 8-30-38.
359,926. NATIONAL HOUSING GUILD AND DESIGN. Cl. 38. 9-6-38.
359,944. STRIDE. Cl. 39. 9-6-38.

564,234. LONG LASTING NEVA RUST. Cl. 12.
564,235. GRID-L-REDI. Cl. 46.
564,244. PAOLA. Cl. 42.
564,247. KROLL KEEP-N-DRAWERS. Cl. 32.

359,959. B & G KJOBENHAVN AND DESIGN OF THREE TOWERS. Cl. 30. 9-6-38.
359,961. MOUNTAIN MAID AND DESIGN. Cl. 43. 9-6-38.
360,028. CHARNALEA AND DESIGN. Cl. 39. 9-6-38.
360,110. PARÁTHRED. Cl. 15. 9-6-38.
360,111. 8 HARNESS AND REPRESENTATION OF A HORSE. Cl. 39. 9-6-38.
360,112. "NATASCO." Cl. 12. 9-6-38.
360,157. WHIRLFLO. Cl. 31. 9-6-38.
360,277. PUREDURE. Cl. 34. 9-13-38.
360,447. DESIGN OF FEMALE INVERTED HEAD. Cl. 52. 9-20-38.
360,665. VICKS A-Q. Cl. 18. 9-20-38.
360,674. EMPLETS. Cl. 18. 9-20-38.
360,879. KOTO-KROME. Cl. 16. 9-27-38.
360,949. FOREMOST ICE CREAM AND LETTER F. Cl. 46. 10-4-38.
361,039. B & G THREE TOWER DESIGN. Cl. 50. 10-4-38.
361,054. PERMATROL. Cl. 23. 10-4-38.
361,275. FORMAT. Cl. 37. 10-11-38.
361,276. GARAMOND. Cl. 37. 10-11-38.
361,277. HY-PLANE. Cl. 37. 10-11-38.
361,278. LEXICON. Cl. 37. 10-11-38.
361,279. WEDGWOOD. Cl. 37. 10-11-38.
361,431. MAC TERRY AND DESIGN. Cl. 39. 10-18-38.
361,682. CRYSTOLEX. Cl. 44. 10-25-38.
361,898. CADTEX. Cl. 14. 11-1-38.
362,275. THREE CHEERS. Cl. 39. 11-15-38.
362,418. MUSTANG AND REPRESENTATION OF HORSE. Cl. 39. 11-15-38.
362,740. SUNOCO A TO Z LUBRICANTS. Cl. 15. 11-29-38.
362,745. CONOMATIC. Cl. 23. 11-29-38.
362,798. EASY STREET. Cl. 39. 11-29-38.
363,061. AVOID "5 O'CLOCK SHADOW" BLADE AND DESIGN. Cl. 23. 12-13-38.
363,174. UNIVERSITY. Cl. 29. 12-13-38.
363,354. STROH'S BOHEMIAN AND DESIGN. Cl. 48. 12-20-38.
363,566. GOLD MEDAL AND DESIGN. Cl. 42. 1-3-39.
363,606. HATHAWAY. Cl. 39. 1-3-39.
363,844. GOLDEN HY-BAKE. Cl. 46. 1-10-39.
363,916. TROPIGAN. Cl. 42. 1-10-39.
363,924. SPORTIGAN. Cl. 42. 1-10-39.
363,928. WOOLIGAN. Cl. 42. 1-10-39.
364,264. THE F. F. F. BRANDS AND DESIGN. Cl. 10. 1-24-39.
364,367. VARSITY. Cl. 4. 1-31-39.
364,543. DOLITE. Cl. 37. 2-7-39.
364,544. QUADRILLE. Cl. 51. 2-7-39.
364,804. LOW BOY. Cl. 39. 2-14-39.
364,851. MULTIFECT. Cl. 37. 2-14-39.
364,855. DUCKWALL & LETS D. B. AND DESIGN. Cl. 46. 2-14-39.

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404,667. L & H IN CIRCULAR DESIGN. Cl. 34. 12-14-43.
430,373. SUPER OVER 5000 AND DESIGN. Cl. 21. 1-10-47.

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563,994. HIS NIBS AND DESIGN. Cl. 39.
563,995. HIS NIBS AND HEAD OF BOY. Cl. 39.
563,996. FORMULA 833 UNEEK. Cl. 16.
563,998. BUROWIN. Cl. 6.
564,009. ONEIDA STERLING. Cl. 28.
564,015. WEISART. Cl. 12.
564,018. "FROM THE MILLS OF MILLER" AND DESIGN. Cl. 12.
564,020. CALIFORNIA CHEMICAL COMPOUNDS INC., ETC. AND DESIGN. Cl. 6.
564,022. SCHRANCKS. Cl. 46.
564,028. GEMELLI. Cl. 46.
564,029. AMPI AND DESIGN. Cl. 12.
564,031. AIR ASSOCIATES INC. AND DESIGN. Cl. 21.
564,032. TELLIVEVISION AND DESIGN. Cl. 21.
564,033. KREISLER CRAFT. Cl. 28.
564,036. INTUBEVAC. Cl. 44.
564,038. METROLOY. Cl. 23.
564,041. COOK-O-FILE. Cl. 32.
564,044. SILVER BROOK. Cl. 1.
564,045. GENERAL AMERICAN AND DESIGN. Cl. 18.
564,052. "SLIDE-TEX." Cl. 23.
564,054. GOLD MEDAL AND DESIGN. Cl. 36.
564,060. BOW-ZOOKA. Cl. 22.
564,062. MAGIC-AID. Cl. 21.
564,065. FLEXICONE. Cl. 21.
564,068. MAXIMILLIAN MIRACLE. Cl. 3.
564,071. TELADAPTER. Cl. 44.
564,075. DONA MARIA AND DESIGN. Cl. 46.
564,078. UNIVERSAL "PACKAGE." Cl. 12.
564,082. BINGO AND DESIGN. Cl. 22.
564,085. PERMA-CHROME. Cl. 4.
564,087. CAPRICE. Cl. 42.
564,092. CAROBE. Cl. 3.
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564,103. MIRACLE CATFISH BAIT AND DESIGN. Cl. 22.
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564,117. SENTRY (AIR THERMAL). Cl. 21.
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564,122. SLIP KNOT AND DESIGN. Cl. 44.
564,123. GEMEX CHARM-BAND. Cl. 28.
564,125. SONATA CHARM-BAND. Cl. 28.
564,126. GLOBE AND DESIGN. Cl. 13.
564,127. WELCOME STRANGER. Cl. 39.
564,128. ALRICH. Cl. 51.
564,134. PYRIUM. Cl. 6.
564,136. FALL GUY. Cl. 22.
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564,157. BASHIRA. Cl. 1.
564,167. SANI-KINS. Cl. 44.
564,168. STAY-PRUF. Cl. 51.
564,173. MOUNT VERNON. Cl. 1.
564,174. STATE PARK. Cl. 1.
564,177. TERANOTONE. Cl. 20.
564,181. SABER AND DESIGN. Cl. 39.
564,182. CRESFIL. Cl. 1.
564,186. VINOFLOR. Cl. 20.
564,190. DELAFLOR. Cl. 20.
564,197. CADENCE. Cl. 20.
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564,199. FLOATING BLANKET AND REPRESENTATION OF A BABY. Cl. 42.
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564,204. VALOR. Cl. 42.
564,206. FIDO. Cl. 42.
564,211. SAILFUL. Cl. 42.
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564,217. BROSIUS. Cl. 100.
564,218. PM PREVENTIVE MAINTENANCE. Cl. 101.
564,219. PM PREVENTIVE MAINTENANCE AND DESIGN. Cl. 101.
564,220. REPRESENTATION OF AN ARCHER. Cl. 101.
564,226. KINDL-LITE. Cl. 34.
564,231. THE AMERICAN LOOK. Cl. 39.

Class 16 Protective and Preservative Coatings

361,783. Nov. 1, 1938. General Cable Corporation, New

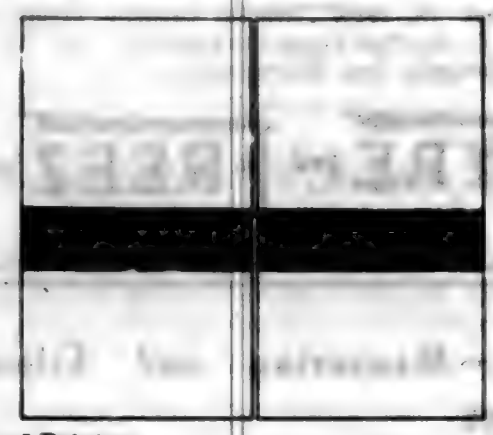
564,234. LONG LASTING NEVA RUST. Cl. 12.
564,235. GRID-L-REDI. Cl. 46.
564,237. FOSTER'S "OLD FASHION" FREEZE. Cl. 46.
564,238. ZINCHROME. Cl. 13.
564,244. PAOLA. Cl. 42.
564,247. KROLL KRIP-N-DRAWERS. Cl. 32.
564,249. BAKRESS AND DESIGN. Cl. 32.
564,251. JAMESTOWN AND DESIGN. Cl. 13.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

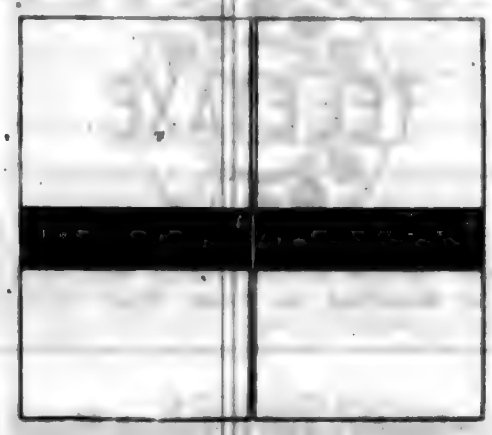
Class 1—Raw or Partly Prepared Materials

357,986. June 21, 1938. Irvine & Cottom, Dillon, Mont. Pub. by Irvine & Cottom Company, Dillon, Mont.



For Seed Potatoes.

357,987. June 21, 1938. Irvine & Cottom, Dillon, Mont. Pub. by Irvine & Cottom Company, Dillon, Mont.



For Seed Potatoes.

362,585. Nov. 22, 1938. Mineral Mining Corporation, New York, N. Y. Pub. by registrant.

MINERALITE

For Ground Cerecitic Ore.

Class 6—Chemicals and Chemical Compositions

358,050. June 28, 1938. Société Chrysa, Fontaines-sur-Saone, France. Pub. by registrant.

CHRYSA

For Chemicals and Pharmaceutical Preparations—Namely, Menthol, Tymol, Geraniol, Citronneiol, Rhodinol, Linalool, Citronellal, and Hydroxyl-Citronella.

363,228. Dec. 18, 1939. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

NALAN

For Chemical Compound, Being in the Nature of a Textile Finish With Water Repellant Characteristics.

Class 7—Cordage

361,853. Nov. 1, 1938. Mundial Corporation, Philadelphia, Pa. Pub. by Frank W. Winne & Son, Inc., Philadelphia, Pa.

For Binder Twine.

Class 9—Explosives, Firearms, Equipments, and Projectiles

65,442. Sept. 24, 1907. Independent Non-Freezing Powder Company, Paulsboro, N. J. Pub. by Trojan Powder Company, Allentown, Pa.

TROJAN

For Explosive Powder.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

359,503. Aug. 23, 1938. Binks Manufacturing Company, Chicago, Ill. Pub. by registrant.

ROTOJET

For Spray Nozzles.

Class 27—Paper and Stationery

414,063. June 18, 1943. Ashton B. Collins, d. b. a. Betty

Class 16—Protective and Decorative Coatings

123,110. Oct. 15, 1918. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

DU-LITE

For Ready-Mixed Paint.

355,934. Apr. 5, 1938. Lacquer Products, Inc., Cleveland, Ohio. Pub. by registrant.

For Ready Mixed Paints, Paint Enamels, Lacquers, Varnishes, Coloring and Tinting Products, Thinners, Reducers, Retarders, Removers, Primers, Sealers, Polychromatic Bases, and Masking Compounds.

Class 18—Medicines and Pharmaceutical Preparations

441,419. Nov. 23, 1948. Dermik Pharmacal Co., Inc., Brooklyn, N. Y. Pub. by registrant.

ZETAR

For Medical Preparation for Dermatological Use, for the Treatment of Exfoliative Dermatitis, Disseminate Neurodermatitis, Contact Dermatitis, Hypostatic Dermatitis, Dermatophytosis, Psoriasis, Seborrheic Dermatitis, and Atopic Eczema.

443,793. Feb. 28, 1950. Geigy Company, Inc., New York, N. Y. Pub. by Geigy Chemical Corporation, Ardsley, N. Y.

MEDOMIN

For Barbiturate-Sedative and Hypnotic.

Class 21—Electrical Apparatus, Machines, and Supplies

304,723. July 18, 1933. International Resistance Company, Philadelphia, Pa. Pub. by registrant.

IRC

For Resistors Such as Used in Radio Apparatus.

312,723. May 8, 1934. International Resistance Company, Philadelphia, Pa. Pub. by registrant.

For Resistors of the Non-Inductive Type Such as Used in Radio Apparatus, for Wire Wound Resistors Such as Used in Radio Apparatus, for Grid Leaks for Radio Apparatus and the Like, for Power Wire Wound Resistors.

361,788. Nov. 1, 1938. General Cable Corporation, New York, N. Y. Pub. by registrant.

SUPER THERMAX

For Insulated Electrical Wires and Cables.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

247,056. Sept. 18, 1928. General Carbonic Company, New York, N. Y., to Fyre Freez Corporation. Pub. by Walter Kidde & Company, Inc., Belleville, N. J.

FYRE-FREEZ

For Portable Hand Fire-Extinguishing Apparatus.

Class 26—Measuring and Scientific Appliances

358,787. July 26, 1938. "Sodeco" Societe des Compteurs de Geneve, Geneva, Switzerland. Pub. by registrant.

For Register for Use in Conjunction With an Individual Telephone for Recording the Taxes When Operating Said Telephone.

Class 28—Jewelry and Precious-Metal Ware

362,252. Nov. 15, 1938. Towle Manufacturing Company, Newburyport, Mass. Pub. by registrant.

ROYAL WINDSOR

For Silver and Silver Mounted Flatware (Implements With a Handle or Finger Hold for Culinary, Feeding, Serving, or Personal Use); and Silver and Silver Mounted Hollow Ware (Vessels, Plates, Platters, Carriers, Covers, and Supports for Storing, Holding, or Covering Foods, Liquids, or Commodities).

Class 34—Heating, Lighting, and Ventilating Apparatus

380,038. Aug. 6, 1940. Rambusch Decorating Company, New York, N. Y. Pub. by registrant.

SHOVEL

For Reflectors for Light Projectors.

Class 49—Fancy Goods, Furnishings, and

259,480. July 30, 1929. Joseph Tetley & Co., Inc., New

Class 37—Paper and Stationery

122,401. July 30, 1918. Wahl Adding Machine Company, Chicago, Ill. Pub. by The Parker Pen Company, Janesville, Wis.

For Fountain Pens, Pen-Points for Fountain Pens, Magazine Lead Pencils, and the Holders and Leads Constituting Such Pencils.

355,411. Mar. 15, 1938. William H. McCullough, d. b. a. Finch & McCullough, Aurora, Ill. Pub. by William L. McCullough, d. b. a. Finch & McCullough, Aurora, Ill.

Memory Masterpieces

For Memo Pads, Memo Pad Holders, Memo Books, Directory Pads, Perpetual Desk Calendars, Wall Calendar Holders, Combination Perpetual Calendars and Ash Trays for Desk, and Combined Calendar, Pencil and Pin Trays.

434,786. Dec. 9, 1947. Copy Papers, Inc., Chicago, Ill. Pub. by Copy Papers Incorporated, Chicago, Ill.

LITHORUN

For Paper of All Kinds—Namely, Book Paper, Bond Paper, Index Paper, Ledger Paper, Writing Paper, Offset Paper, Enamel Book Paper, Coated Bond Paper, Coated Manila Paper, Duplicating Paper, and Paper Used in Duplicating Machines.

Class 38—Prints and Publications

358,845. July 26, 1938. Ideal Publishing Corp., New York, N. Y. Pub. by registrant.

PERSONAL ROMANCES

For Periodical.

410,134. Nov. 7, 1944. Ashton B. Collins, d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, N. Y. Pub. by Reddy Kilowatt, Inc., New York, N. Y.

REDDYTORIAL

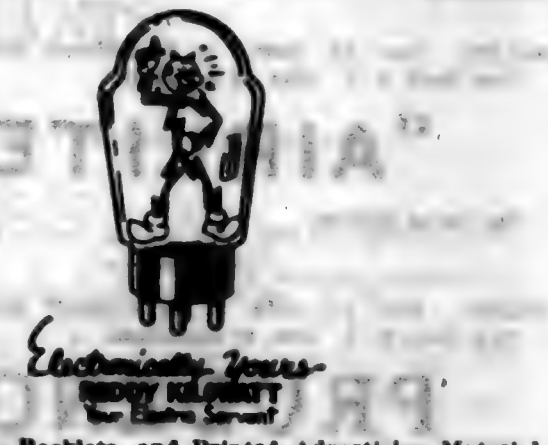
For Contributions to Trade Journals or the Like Published From Time to Time.

412,269. Feb. 27, 1945. Ashton B. Collins, d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, N. Y. Pub. by Reddy Kilowatt, Inc., New York, N. Y.

Reddy

For Magazine Column.

414,662. June 18, 1945. Ashton B. Collins, d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, N. Y. Pub. by Reddy Kilowatt, Inc., New York, N. Y.



For Circulars, Booklets, and Printed Advertising Material Sold as Such to the Electrical Industry.

416,717. Sept. 25, 1945. Ashton B. Collins, d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, N. Y. Pub. by Reddy Kilowatt, Inc., New York, N. Y.

REDDY-TOON

For Cartoons and Comic Strips Published From Time to Time.

Class 39—Clothing

171,241. July 31, 1923. Samuel A. Goldberg, Chicago, Ill. Pub. by A. J. Leff Co., Chicago, Ill.

GOLD-MAID

For Hosiery.

358,768. July 26, 1938. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.

PLAYGIRL

For Women's Hats.

369,879. Aug. 8, 1939. Independent Wholesale Dry Goods Assn. Inc., New York, N. Y. Pub. by Silver Knit Hosiery Mills, Inc., High Point, N. C.

ROYAL GUARD

For Hosiery.

372,402. Oct. 31, 1939. Hack Shoe Company, Detroit, Mich. Pub. by registrant.

For Shoes Made of Leather, Rubber, Fabric, or Any Combinations Thereof, and Insoles Supplied Separately Therefor.

Class 40—Fancy Goods, Furnishings, and Notions

362,208. Nov. 15, 1938. I. B. Kleinert Rubber Company, New York, N. Y. Pub. by registrant.

"AIRLITE"

For Dress Shields.

362,292. Nov. 15, 1938. I. B. Kleinert Rubber Company, New York, N. Y. Pub. by registrant.

PRUDENCE

For Dress Shields.

362,293. Nov. 15, 1938. I. B. Kleinert Rubber Company, New York, N. Y. Pub. by registrant.

MODINE

For Dress Shields.

362,409. Nov. 15, 1938. I. B. Kleinert Rubber Company, New York, N. Y. Pub. by registrant.

BUDGET

For Dress Shields.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

122,750. Sept. 10, 1918. Wm. Simpson, Sons & Co., Inc., New York, N. Y. Pub. by registrant.

LOYALTY

For Cotton Piece Goods and Cotton Dress Goods.

337,559. June 7, 1938. Sears, Roebuck and Co., Chicago, Ill. Pub. by registrant.

BUDGET HOME

For Curtains.

Class 46—Feeds and Ingredients of Feeds

122,009. June 25, 1918. The Cudahy Packing Company (Illinois corporation), Chicago, Ill., and Omaha, Nebr. Pub. by The Cudahy Packing Company (Maine corporation), Omaha, Nebr.

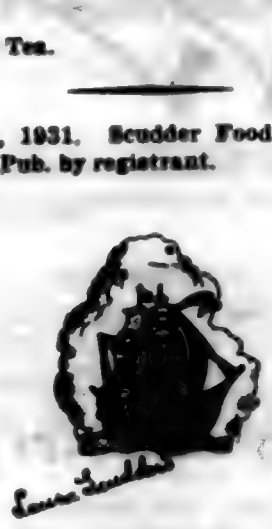
For Sugar-Cured Hams, Boiled Hams, Sugar-Cured Bacon, Canned Mixed Bacon, Lard and Smoked Beef-Tongues.

259,480. July 30, 1929. Joseph Tetley & Co., Inc., New York, N. Y. Pub. by Tetley Tea Co., Inc., New York, N. Y.

TIPLETS

For Packages of Tea.

290,049. Dec. 22, 1931. Scudder Food Products, Inc., Los Angeles, Calif. Pub. by registrant.



For Potato Chips.

362,613. Nov. 22, 1938. H. K. Webster Company, Lawrence, Mass. Pub. by registrant.

For Stock Feed, Horse Feed, Dairy Feed, Cattle Feed, Poultry Feed Laying Mash, Scratch Feed, and Turkey Feed.

378,978. June 25, 1940. F. F. East Co. Inc., Maurice River, N. J. Pub. by Greenwich Oyster Company, Bridgeton, N. J.

For Fresh Shucked Oysters.

Class 51—Cosmetics and Toilet Preparations

444,741. Nov. 25, 1952. Helena Rubinstein, Inc., New York, N. Y. Pub. by registrant.

COMMAND PERFORMANCE

For Complexion and Face Powders, Eau de Parfums and Perfume.

Clairol, Inc., New York, N. Y., to Clairol Inc., Stamford, Dodge, F. W., Corp., New York, N. Y. 669,201, pub. 8-19-58

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NOVEMBER 4, 1958

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A. S. R. Products Corp.: *See*—
American Safety Razor Corp.
Abseck, Stuart, Long Island City, N. Y. 669,243, pub. 8–19–58. Cl. 23.
Acme Chemical Co., Milwaukee, Wis. 669,157, pub. 8–19–58. Cl. 6.
Air Associates, Inc., Teterboro, N. J. 564,031, canc. Cl. 21.
Aktiebolaget Broderna Amsln, Stockholm, Sweden. 350,458, ren. 8–23–58. Cl. 46.
Aktieselskabet Bing & Grondahls Porcellaensfabrik, Copenhagen, Denmark. 359,959, ren. 9–6–58. Cl. 30.
Aktieselskabet Bing & Grondahls Porcellaensfabrik, Copenhagen, Denmark. 361,039, ren. 10–4–58. Cl. 50.
Albright Boat & Marine Co., Inc., Charlotte, N. C. 669,204, pub. 8–19–58. Cl. 19.
Alexander Shirt Co., Inc., Los Angeles, Calif. 669,331, pub. 8–19–58. Cl. 39.
All Channel Products Corp., Woodside, N. Y. 669,245, pub. 8–19–58. Cl. 23.
Allen, Robert E., Des Moines, Iowa. 669,322, pub. 8–19–58. Cl. 39.
Alo-Creme: *See*—
Aloe Creme Laboratories, Inc.
Aloe Creme Laboratories, Inc., d. b. a. Alo-Creme, Fort Lauderdale, Fla. 669,300, pub. 8–19–58. Cl. 51.
Aluminum Industries, Inc., Cincinnati, Ohio. 361,054, ren. 10–4–58. Cl. 23.
Aluminum Marine Hardware Co. Inc., Auburn, N. Y. 669,229, pub. 8–19–58. Cl. 23.
American Cyanamid Co., New York, N. Y. 564,182, canc. Cl. 1.
American Cyanamid Co., New York, N. Y. 669,196, pub. 8–19–58. Cl. 18.
American Cyanamid Co., New York, N. Y. 669,196–9, pub. 8–19–58. Cl. 18.
American Greetings Corp., Cleveland, Ohio. 669,310, pub. 8–19–58. Cl. 38.
American Laundry Machinery Co., The, Cincinnati, Ohio. 669,248, pub. 8–19–58. Cl. 24.
American-Marietta Co., O'Cedar Division, Chicago, Ill. 669,279, pub. 8–19–58. Cl. 29.
American Metalcraft Corp., Detroit, Mich. 564,226, canc. Cl. 34.
American Optical Co., Southbridge, Mass. 564,065, canc. Cl. 21.
American Safety Razor Corp., Brooklyn, to A. S. R. Products Corp., New York, N. Y. 363,081, ren. 12–13–58. Cl. 23.
Amodeo, Guy T., d. b. a. Guytom Laboratories, West Islip, N. Y. 669,408, pub. 8–19–58. Cl. 51.
Anderson, Clayton & Co., Houston, Tex. 564,206, canc. Cl. 42.
Andrew, Lucy B., Jamaica, N. Y. 564,122, canc. Cl. 44.
Andrews, R. P., Paper Co., to R. P. Andrews Paper Co., Washington, D. C. 123,685, ren. 12–3–58. Cl. 37.
Angelique and Co., Inc., Wilton, Conn. 669,382, pub. 8–19–58. Cl. 51.
Annin & Co., New York, N. Y. 124,360, ren. 2–11–59. Cl. 50.
Appen Co.: *See*—
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Archer Productions, Inc., New York, N. Y. 564,220, canc. Cl. 101.
Ardell R. B. Corp.: *See*—
Ardell Razor Blade Corp.
Ardell Razor Blade Corp., d. b. a. Ardell R. B. Corp., Newark, N. J. 669,237, pub. 8–19–58. Cl. 23.
Armstrong Cork Co., Lancaster, Pa. 564,186, canc. Cl. 20.
Arrow Chemical Products, Inc., Detroit, Mich. 669,139, pub. 8–19–58. Cl. 4.
Arrow Engineering Co., Inc., Indianapolis, Ind. 669,211, pub. 8–19–58. Cl. 21.
Associated Distributors, Inc., Chicago, Ill., to Les Parfums de Dana, Inc., New York, N. Y. 359,885, ren. 8–30–58. Cl. 51.
Associated Plywood Mills, Inc., Eugene, Oreg. 564,029, canc. Cl. 12.
Atkinson, Sam, d. b. a. McLeansboro Twine Co., McLeansboro, Ill. 669,160, pub. 8–19–58. Cl. 7.
Atlas Abrasives Corp., Greenwich, Conn. 359,467, ren. 8–23–58. Cl. 4.
Baber, Alva, d. b. a. Baber's Vis-Vita Sales and as Baber's Supply Co., Sioux City, Iowa. 669,353, pub. 8–19–58. Cl. 46.
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Balenciaga Parfums, Inc.: *See*—
Societe Anonyme Les Parfumeries de Gabilla.
Ball Brothers Co., Inc.: *See*—
General Can Co.
Balsa Ecuador Lumber Corp., New York, N. Y. 669,170, pub. 8–19–58. Cl. 12.
Barwick, E. T., Mills, Inc., Chamblee, Ga. 669,342, pub. 8–19–58. Cl. 42.
Bathurst Products: *See*—
Watson, Andrew C.
Beaver Cable Dolly Corp., Miami, Fla. 669,231, pub. 8–19–58. Cl. 23.
Beaver, Leslie P., Jr., d. b. a. Beaver Welding Supply Co., Memphis, Tenn. 669,283, pub. 8–19–58. Cl. 34.
Beaver Welding Supply Co.: *See*—
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Behrman, Edward H., d. b. a. Pelican Products, Miami, Fla. 669,329, pub. 8–19–58. Cl. 39.
Beihl, Clarence A., d. b. a. Beihl Products, Monrovia, Calif. 669,377, pub. 8–19–58. Cl. 50.
Beihl Products: *See*—
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Belmont Clothes, Inc., Baltimore, Md. 564,181, canc. Cl. 39.
Beloit Tool Corp., The, Turtle, Wis. 669,222, pub. 8–19–58. Cl. 23.
Bendix Aviation Corp., Detroit, Mich. 669,300, pub. 8–19–58. Cl. 38.
Binks Mfg. Co., Chicago, Ill. 359,503, 12(c) pub. 11–4–58. Cl. 13.
Blackhawk Mfg. Co., West Allis, Wis. 669,238, pub. 8–19–58. Cl. 23.
Blackinton, V. H., & Co., Inc., North Attleboro, Mass. 669,275, pub. 8–19–58. Cl. 28.
Blackstone Canning Co., Inc., Blackstone, Va. 669,263, pub. 8–19–58. Cl. 46.
Blue Flame Kitchens: *See*—
Schulte, Joseph H.
Blue Ridge Glass Corp., Kingsport, Tenn. 563,988, canc. Cl. 32.
Bonewitz Chemicals, Inc., Burlington, Iowa. 669,407, pub. 8–19–58. Cl. 52.
Boreva Sportswear Co., Chicago, Ill. 669,315, pub. 8–19–58. Cl. 39.
Boyle Leather Goods Co., Inc., New York, N. Y. 564,082, canc. Cl. 3.
Breard, Paul, Nancy (Meurthe and Moselle), France. 564,152, canc. Cl. 44.
Brearley Co., The, Rockford, Ill. 669,264, pub. 8–19–58. Cl. 26.
Brosius, Edgar E., Co. Inc., now by change of name Salem-Brosius, Inc., Pittsburgh, Pa. 564,217, canc. Cl. 100.
Buffalo-Eclipse Corp., d. b. a. The Eclipse Lawn Mower Co., Prophetstown, Ill. 669,221, pub. 7–8–58. Cl. 23.
Burke Golf Equipment Corp., Newark, Ohio. 669,217, pub. 8–19–58. Cl. 22.
Burnett Produce Co., Morristown, Tenn. 669,357, pub. 8–19–58. Cl. 46.
Bymart-Tintair, Inc., New York, N. Y. 669,387, pub. 8–19–58. Cl. 51.
C and C Thrift Stamp Co., Inc., Amarillo, Tex. 669,414, pub. 8–19–58. Cl. 101.
Cadence Lingerie Co.: *See*—
Newark Slip Contracting Co., Inc.
California Chemical Compounds Inc., Los Angeles, Calif. 564,020, canc. Cl. 6.
Camel Color & Paint Corp., Long Island, from Camel Lead Color & Chemical Products Mfg. Corp., Brooklyn, N. Y. 669,190, pub. 2–19–57. Cl. 16.
Camel Lead Color & Chemical Products Mfg. Corp.: *See*—
Camel Color & Paint Corp.
Camp, W. B., & Sons, Inc., Bakersfield, Calif. 669,361, pub. 8–19–58. Cl. 46.
Carton Associates, Inc., Louisville, Ky. 669,425. Cl. 2.
Caswell-Massey Co., Ltd., New York, N. Y. 669,394, pub. 8–19–58. Cl. 51.
Ceazan, J. N., Co., Los Angeles, Calif. 564,062, canc. Cl. 21.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 361,275, ren. 10–11–58. Cl. 37.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 361,276, ren. 10–11–58. Cl. 37.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 361,277, ren. 10–11–58. Cl. 37.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 361,278, ren. 10–11–58. Cl. 37.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 361,279, ren. 10–11–58. Cl. 37.
Chapman Chemical Co., Memphis, Tenn. 669,156, pub. 8–19–58. Cl. 6.
Charak Furniture Co., Boston, Mass. 359,287, ren. 8–9–58. Cl. 32.
Chatillon, John, & Sons, New York, N. Y. 669,350, pub. 8–19–58. Cl. 26.
Cheesebrough-Pond's Inc., New York, N. Y. 669,396, pub. 8–19–58. Cl. 51.
Cheesebrough-Pond's Inc., New York, N. Y. 669,409, pub. 8–19–58. Cl. 52.
Chicago, Burlington & Quincy Railroad Co., Chicago, Ill. 669,442. Cl. 105.
Chicago Specialty Mfg. Co., Chicago, Ill. 669,176, pub. 8–19–58. Cl. 12.
Christy, Inc., Newark, N. Y. 564,110, canc. Cl. 51.
Ciba Ltd., Basel, Switzerland. 669,195, pub. 8–19–58. Cl. 18.
Cities Service Oil Co.: *See*—
Crew Levick Co.

Clairol, Inc., New York, N. Y., to Clairol Inc., Stamford, Conn. 360,447, ren. 9–20–58. Cl. 52.
Clairol Inc., Stamford, Conn. 669,396, pub. 8–19–58. Cl. 51.
Claymore, Inc., Clayton, Mo. 669,320, pub. 8–19–58. Cl. 39.
Clett, Peabody & Co., Inc., New York, N. Y., 359,944, ren. 9–6–58. Cl. 39.
Collins, Ashton B., d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, by Reddy Kilowatt, Inc., New York, N. Y. 410,134, 12(c) pub. 11–4–58. Cl. 38.
Collins, Ashton B., d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, by Reddy Kilowatt, Inc., New York, N. Y. 412,269, 12(c) pub. 11–4–58. Cl. 38.
Collins, Ashton B., d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, by Reddy Kilowatt, Inc., New York, N. Y. 414,663, 12(c) pub. 11–4–58. Cl. 38.
Collins, Ashton B., d. b. a. Reddy Kilowatt, Short Hills, N. J., and New York, by Reddy Kilowatt, Inc., New York, N. Y. 416,717, 12(c) pub. 11–4–58. Cl. 38.
Collins Chemical Corp., North Miami, Fla. 669,193, pub. 8–19–58. Cl. 16.
Columbia Beauty and Barber Supply Co., d. b. a. State and Columbia Beauty and Barbers Supply Co., Columbia, S. C. 669,226, pub. 8–19–58. Cl. 24.
Columbia Beauty and Barber Supply Co., d. b. a. State and Columbia Beauty and Barbers Supply Co., Columbia, S. C. 669,277, pub. 8–19–58. Cl. 29.
Columbia Ribbon & Carbon Mfg. Co., Inc., Glen Cove, N. Y. 669,166, pub. 8–19–58. Cl. 11.
Comfort Pillow & Feather Co., Somerville and Boston, Mass. 564,146, canc. Cl. 32.
Cone Automatic Machine Co. Inc., Windsor, Vt. 362,745, ren. 11–29–58. Cl. 23.
Cone Mills Inc., New York, N. Y. 669,339, pub. 8–19–58. Cl. 42.
Congoleum-Nairn, Inc., Kearny, N. J. 564,190, canc. Cl. 20.
Conover, James H., d. b. a. Mi Con Laboratories, Wauconda Ill. 669,406, pub. 8–19–58. Cl. 52.
Consumers Foodcraft Corp., Brooklyn, N. Y. 669,367, pub. 8–19–58. Cl. 46.
Continental Can Co., Inc., New York, N. Y. 669,129, pub. 8–12–57. Cl. 2.
Continental Can Co., Inc., New York, N. Y. 669,134, pub. 8–19–58. Cl. 2.
Continental Can Co., Inc., New York, N. Y. 669,296, pub. 8–19–58. Cl. 37.
Continental Tapes: *See*—
Continental Tapes, Inc.
Continental Tapes, Inc., from Continental Tapes, Cayce, S. C. 669,142, pub. 2–19–57. Cl. 5.
Copy Papers, Inc., by Copy Papers Inc., Chicago, Ill. 434,786, 12(c) pub. 11–4–58. Cl. 37.
Craddock-Terry Shoe Corp., Lynchburg, Va. 669,335, pub. 8–19–58. Cl. 39.
Crane Co., Chicago, Ill. 669,282, pub. 8–19–58. Cl. 34.
Crew Levick Co., Philadelphia, Pa., to Cities Service Oil Co., Bartlesville, Okla. 123,572, ren. 11–19–58. Cl. 15.
Crompton Co., Crompton, R. I. 564,244, canc. Cl. 42.
Crompton Co., New York, N. Y. 363,916, ren. 1–10–59. Cl. 42.
Crompton Co., New York, N. Y. 363,924, ren. 1–10–59. Cl. 42.
Crompton Co., New York, N. Y. 363,928, ren. 1–10–59. Cl. 42.
Crucible Steel Co. of America, Pittsburgh, Pa. 669,184, pub. 8–19–58. Cl. 14.
Cudahy Packing Co., The, Chicago, Ill., and Omaha, Nebr., by The Cudahy Packing Co., Omaha, Nebr. 122,069, 12(c) pub. 11–4–58. Cl. 46.
Curtis, Helene, Industries, Inc., Chicago, Ill. 669,385, pub. 8–19–58. Cl. 51.
Curtis Paper Co., Newark, Del. 669,291, pub. 8–19–58. Cl. 37.
D M A.: *See*—
Spata, Delmar G.
Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. 669,180, pub. 8–19–58. Cl. 13.
Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. 669,182, pub. 8–19–58. Cl. 13.
Dalton Foundries, Inc., The, Warsaw, Ind. 669,247, pub. 8–19–58. Cl. 23.
D'Alton, William, Paris, France. 564,134, canc. Cl. 8.
Daniels, J. V., to Dearborn Supply Co., Chicago, Ill. 118,500, ren. 9–18–57. Cl. 6.
Davies, William, Co., Inc., Chicago, Ill. 669,366, pub. 8–19–58. Cl. 40.
Dearborn Supply Co.: *See*—
Daniels, J. V.
De Degetau, Maria P. N., d. b. a. Productos Marpe, San Luis Potosi, S. L. P., Mexico. 564,075, canc. Cl. 46.
Del Fi Records, Inc., from F. M. Hagmann, d. b. a. Edsel Records, Studio City, Calif. 669,289, pub. 7–22–58. Cl. 36.
Deup-Nock Co., The, Van Dyke, Mich. 669,297, pub. 8–19–58. Cl. 37.
Deno Delvecchio: *See*—
Eveready Flood Control, Inc.
Dermik Pharmacal Co., Inc., Brooklyn, N. Y. 441,419, 12(c) pub. 11–4–58. Cl. 18.
Detroit Dental Mfg. Co., to Kerr Mfg. Co., Detroit, Mich. 361,682, ren. 10–25–58. Cl. 44.
De Vilbiss Machine Co., Ferndale, Mich. 669,240, pub. 8–19–58. Cl. 23.
Diamon Products Co., The: *See*—
Monson, Roy K.
Dixie Wax Paper Co., Dallas, Tex. 669,432. Cl. 37.
Dobais, Jacques, Inc., New York, N. Y. 564,102, canc. Cl. 51.
Dobeckmun Co., The: *See*—
Dow Chemical Co., The.
Dobeckmun Co., The, Cleveland, Ohio, to The Dow Chemical Co., Midland, Mich. 364,543, ren. 3–7–59. Cl. 37.
Dodge, F. W., Corp., New York, N. Y. 669,301, pub. 8–19–58. Cl. 38.
Dodson, Weston, & Co., Inc., Bethlehem, Pa. 564,044, canc. Cl. 1.
Dorman & Co., Lubbock, Tex. 669,355, pub. 8–19–58. Cl. 46.
Dow Chemical Co., The: *See*—
Dobeckmun Co., The.
Dow Chemical Co., The, Midland, Mich., from The Dobeckmun Co., Cleveland, Ohio. 669,423. Cl. 1.
Drugmaster, Inc., St. Louis, Mo. 669,197, pub. 8–19–58. Cl. 18.
Duart Mfg. Co., Ltd., San Francisco, Calif. 564,147, canc. Cl. 52.
Duckwall Bros., Inc., Hood River, Oreg. 364,855, ren. 2–14–59. Cl. 46.
Duffy, Barbara G.: *See*—
Duffy, George A.
Duffy, George A., trustee for B. G. Duffy, d. b. a. Resal Laboratories, Ltd., Philadelphia, Pa. 669,381, pub. 8–27–57. Cl. 51.
Du Mont, Allen B., Laboratories, Inc., Clifton, N. J. 669,214, pub. 8–19–58. Cl. 21.
Duner, Joseph, d. b. a. Appen Co., Ventura, Calif. 669,206, pub. 8–19–58. Cl. 19.
Dunlap Co., The: *See*—
Dunlap, Horace M.
Dunlap, Horace M., d. b. a. The Dunlap Co., Wenatchee, Wis. 669,411, pub. 8–19–58. Cl. 52.
Du Pont, E. I., de Nemours & Co., Wilmington, Del. 123,110, 12(c) pub. 11–4–58. Cl. 16.
Du Pont, E. I., de Nemours and Co., Wilmington, Del. 363,228, 12(c) pub. 11–4–58. Cl. 6.
Du Pont, E. I., de Nemours and Co., Wilmington, Del. 669,256, pub. 8–19–58. Cl. 26.
Dutch Maid Food Packing Co., Inc., Allentown, Pa. 669,369, pub. 8–19–58. Cl. 46.
Eagle Lock and Screw Co., The, Terryville, Conn. 669,181, pub. 8–19–58. Cl. 13.
East, F. F., Co. Inc., Maurice River, by Greenwich Oyster Co., Bridgeton, N. J. 378,978, 12(c) pub. 11–4–58. Cl. 46.
Eclipse Lawn Mower Co., The: *See*—
Buffalo-Eclipse Corp.
Edsel Records: *See*—
Del Fi Records, Inc.
Elizabeth Arden Sales Corp., New York, N. Y. 564,168, canc. Cl. 51.
Elliott, B. K., Co., Pittsburgh, Pa. 363,174, ren. 12–13–58. Cl. 29.
Emerson Electric Mfg. Co., The, St. Louis, Mo. 669,285, pub. 8–19–58. Cl. 34.
Enro Shirt Co., The, Louisville, Ky., to F. Jacobson & Sons, Inc., New York, N. Y. 364,804, ren. 2–14–59. Cl. 39.
Epsco, Inc., Boston, Mass. 669,271, pub. 8–19–58. Cl. 26.
Esco, Societe Anonyme, Neuchate, Switzerland. 669,230, pub. 8–19–58. Cl. 23.
Esso Standard Oil Co., New York, N. Y. 669,185, pub. 8–19–58. Cl. 15.
Esterbrook Pen Co., The, Camden, N. J. 669,294, pub. 8–19–58. Cl. 37.
Eveready Flood Control, Inc., from D. Delvecchio, d. b. a. United Pre-Cast Concrete Co., Chicago, Ill. 669,228, pub. 8–19–58. Cl. 23.
Exhaust Publishing Co., Los Angeles, Calif. 669,308, pub. 8–19–58. Cl. 38.
Faber, Eberhard, Pencil Co., Wilkes-Barre, Pa. 669,295, pub. 8–19–58. Cl. 37.
Facile Corp., Paterson, N. J. 669,241, pub. 8–19–58. Cl. 42.
Fairfax Mfg. Co., Inc., Falls Church, Va. 669,350, pub. 8–19–58. Cl. 44.
Fairmount Tool & Forging, Inc., Buffalo, N. Y. 564,151, canc. Cl. 23.
Fansteel Metallurgical Corp., North Chicago, Ill. 669,303–4, pub. 8–19–58. Cl. 28.
Farm and Home Life Insurance Co., Phoenix, Ariz. 669,416, pub. 8–19–58. Cl. 102.
Fashion Park, Inc., Rochester, N. Y. 669,388, pub. 8–19–58. Cl. 42.
Feature Ring Co., Inc., New York, N. Y. 669,276, pub. 8–19–58. Cl. 28.
Federated Supply Corp., New York, N. Y. 564,156, canc. Cl. 8.
Fetherwate Pipe & Tube Co., d. b. a. Security Industrial Supply Co., South Gate, Calif. 669,173, pub. 8–19–58. Cl. 13.
Fiberglass & Chemical Services, Inc., Seattle, Wash. 669,127, pub. 8–19–58. Cl. 1.
Finch & McCullough: *See*—
McCullough, William H.
Firman Leather Goods Corp., New York, N. Y. 564,068, canc. Cl. 3.
Fish, Eugene, d. b. a. Perma-Chrome Co., Baltimore, Md. 564,085, canc. Cl. 4.
Flex-O-Glass, Inc.: *See*—
Warp, Harold.
Flex-O-Glass Mfg. Co.: *See*—
Warp, Harold.
Flight Refueling, Inc., Baltimore, Md. 669,172, pub. 8–19–58. Cl. 13.
Flight Refueling, Inc., Baltimore, Md. 669,218, pub. 8–19–58. Cl. 23.
Florida Favorite Fertilizer, Inc.: *See*—
Florida Favorite Fertilizer Co.
Florida Favorite Fertilizer Co., to Florida Favorite Fertilizer, Inc., Lakeland, Fla. 364,264, ren. 1–24–59. Cl. 10.
Folger, J. A., & Co., Kansas City, Mo. 669,356, pub. 8–19–58. Cl. 46.
Food Foundation, Inc., Chicago, Ill. 669,365, pub. 8–19–58. Cl. 46.
Foremost Dairies, Inc.: *See*—
Golden State Co., Ltd.

Foremost Dairies, Inc., Jacksonville, Fla., to Foremost Dairies, Inc., San Francisco, Calif. 360,943, ren. 10–4–58. Cl. 46.
Foster, Edson P., Manitowoc, Wis. 564,060, canc. Cl. 22.
Foster's Freeze National Corp., Beverly Hills, Calif. 564,237, canc. Cl. 46.
Four Guys Products, Inc., New York, N. Y. 564,136, canc. Cl. 22.
Fox Co., The, San Antonio, Tex. 669,302, pub. 8–19–58. Cl. 28.
Frederik Lunning Inc., New York, N. Y. 668,223–4, pub. 8–19–58. Cl. 22.
Frontis Co., The, Baltimore, Md. 669,351, pub. 8–19–58. Cl. 45.
Frye Frees Corp.: *See*—
General Carbonic Co.
Gallenkamp Stores Co., Los Angeles, Calif. 669,316, pub. 8–19–58. Cl. 39.
Garden State Seed Co., Inc., Newark, N. J. 564,172, canc. Cl. 1.
Garden State Seed Co., Inc., Newark, N. J. 564,174, canc. Cl. 1.
Gavaert Photo-Producten N. V., Mortsel, Belgium. 669,283, pub. 8–19–58. Cl. 26.
Geigy Chemical Corp.: *See*—
Geigy Co., Inc.
Geigy Co., Inc., New York, by Geigy Chemical Corp., Ardsley, N. Y. 443,783, 12(c) pub. 11–4–58. Cl. 18.
Gemex Co., Union, N. J. 564,123, canc. Cl. 28.
Gemex Co., Union, N. J. 564,125, canc. Cl. 26.
General American Transportation Corp., Chicago, Ill. 564,045, canc. Cl. 13.
General Aniline & Film Corp., New York, N. Y. 669,152–4, pub. 8–19–58. Cl. 6.
General Aniline & Film Corp., New York, N. Y. 669,158, pub. 8–19–58. Cl. 6.
General Aniline & Film Corp., New York, N. Y. 669,272, pub. 8–19–58. Cl. 26.
General Cable Corp., New York, N. Y. 361,783, 12(c) pub. 11–4–58. Cl. 21.
General Can Co., Chicago, Ill., to Ball Brothers Co., Inc., Muncie, Ind. 121,424, ren. 4–20–58. Cl. 2.
General Can Co., Chicago, Ill., to Ball Brothers Co., Inc., Muncie, Ind. 357,563, ren. 6–7–58. Cl. 50.
General Carbonic Co., to Frye Frees Corp., New York, N. Y., by Walter Kidde & Co., Inc., Belleville, N. J. 247,056, 12(c) pub. 11–4–58. Cl. 23.
General Refractories Co., Philadelphia, Pa., 564,088, canc. Cl. 12.
General Shoe Corp., Nashville, Tenn. 362,708, ren. 11–29–58. Cl. 39.
George, P. D., Co., The, St. Louis, Mo. 669,190, pub. 8–19–58. Cl. 16.
Gilbert Shoe Co., The, Thiensville, Wis. 669,232, pub. 8–19–58. Cl. 39.
Globe-Wernicke Co., The, Cincinnati, Ohio. 564,126, canc. Cl. 18.
Godefroy Mfg. Co., St. Louis, Mo. 669,289, pub. 8–19–58. Cl. 51.
Goldberg, Samuel A., by A. J. Loff Co., Chicago, Ill. 171,241, 12(c) pub. 11–4–58. Cl. 39.
Golden Fleece Tissue Mills, Inc., New York, N. Y. 669,293, pub. 8–19–58. Cl. 37.
Golden Girl Frocks, Inc., New York, N. Y. 564,196, canc. Cl. 39.
Golden State Co., Ltd., to Foremost Dairies, Inc., San Francisco, Calif. 362,844, ren. 1–10–59. Cl. 46.
Graham Paper Co., St. Louis, Mo. 669,298–9, pub. 8–19–58. Cl. 37.
Grand Rapids Varnish Corp., Grand Rapids, Mich. 669,186–7, pub. 8–19–58. Cl. 16.
Gravel: *See*—
Knudsen, Michael B.
Green Mfg. Co., The, Bowling Green, Ohio. 669,219, pub. 8–19–58. Cl. 23.
Green, Samuel, of California, Los Angeles, Calif. 564,127, canc. Cl. 39.
Greenwich Oyster Co.: *See*—
East P. F., Co. Inc.
Grid-L Rich, Inc., Chicago, Ill. 564,225, canc. Cl. 46.
Griffith Laboratories, Inc., The, Chicago, Ill. 669,429. Cl. 46.
Gulbert, Inc., Philadelphia, Pa. 669,232, pub. 8–19–58. Cl. 23.
Gustinettes, Inc., Long Island City, N. Y. 669,234, pub. 8–19–58. Cl. 39.
Gutermann & Co. A. G., Zurich, Switzerland. 669,347, pub. 8–19–58. Cl. 48.
Guyton Laboratories: *See*—
Amodeo, Guy T.
Hack Shoe Co., Detroit, Mich. 372,402, 12(c) pub. 11–4–58. Cl. 39.
Haggar Co.: *See*—
Haggar, Joseph M.
Haggar, Joseph M., to Haggar Co., Dallas, Tex. 362,418, ren. 11–15–58. Cl. 39.
Hagmann, Foster M.: *See*—
Del Fi Records, Inc.
Harris Calorific Co., The, Cleveland, Ohio. 669,288, pub. 8–19–58. Cl. 24.
Hartford Electric Steel Corp., The, Hartford, Conn. 549,182, pub. 8–19–58. Cl. 14.
Hartmann Luggage Co., Racine, Wis. 669,426. Cl. 3.
Harvey Laboratories, Inc., Philadelphia, Pa. 564,119, canc. Cl. 18.
Hathaway, C. F., Co., Waterville, Maine. 362,696, ren. 1–2–59. Cl. 39.
Hayes-Sammons Chemical Co., Mission, Tex. 669,155, pub. 8–19–58. Cl. 6.
Henry Valve Co., Melrose Park, Ill. 669,284, pub. 8–19–58. Cl. 34.
Hickory Dickory Bar-B-Q Chips Co., Miami, Okla. 669,128, pub. 8–19–58. Cl. 1.
High Voltage Engineering Corp., Burlington, Mass. 669,234, pub. 8–19–58. Cl. 26.
Hilton, Doris E., Denver, Colo. 669,305, pub. 8–19–58. Cl. 28.
Hodges, Clara: *See*—
Hodges, Clara M.
Hodges, Clara M., d. b. a. Clara Hodges, St. Louis, Mo. 669,400, pub. 8–19–58. Cl. 51.
Hollywood-Maxwell Co., Los Angeles, Calif. 564,231, canc. Cl. 39.
Holmes, Archibald, & Son, Philadelphia, Pa. 564,200, canc. Cl. 42.
Holmes, Archibald, & Son, Philadelphia, Pa. 564,201, canc. Cl. 42.
Holmes, Archibald, & Son, Philadelphia, Pa. 564,203, canc. Cl. 42.
Holmes, Archibald, & Son, Philadelphia, Pa. 564,204, canc. Cl. 42.
Hoover Co., The, North Canton, Ohio. 669,207, pub. 8–19–58. Cl. 21.
Household Research Corp., Cambridge, Mass. 669,146, pub. 8–19–58. Cl. 5.
Hudnut, Richard, New York, N. Y. 564,106, canc. Cl. 51.
Huldil Chemical Corp., Cleveland, Ohio. 669,143, pub. 5–6–58. Cl. 5.
Hycrest Farms: *See*—
Sawyer, Lester T.
Hymar, Inc., Philadelphia, Pa. 669,326, pub. 8–19–58. Cl. 39.
Ideal Publishing Corp., New York, N. Y. 358,845, 12(c) pub. 11–4–58. Cl. 38.
Ideax Corp., New York, N. Y. 669,265, pub. 8–19–58. Cl. 26.
Illinois Academy of General Practice, Chicago, Ill. 669,311, pub. 8–19–58. Cl. 38.
Independent Non-Freezing Powder Co., Paulsboro, N. J., by Trojan Powder Co., Allentown, Pa. 65,442, 12(c) pub. 11–4–58. Cl. 9.
Independent Wholesale Dry Goods Assn. Inc., New York, N. Y., by Silver Knit Hosiery Mills, Inc., High Point, N. C. 369,879, 12(c) pub. 11–4–58. Cl. 39.
Industrial Starter Corp., New York, N. Y. 564,117, canc. Cl. 21.
Ingham, Richard, & Co. Ltd., Pudsey, England. 359,961, ren. 9–6–58. Cl. 43.
International Basic Economy Corp., Cleveland, Ohio. 669,177, pub. 8–19–58. Cl. 13.
International Harvester Co., Chicago, Ill. 669,161, pub. 8–19–58. Cl. 7.
International Resistance Co., Philadelphia, Pa. 304,723, 12(c) pub. 11–4–58. Cl. 21.
International Resistance Co., Philadelphia, Pa. 312,722, 12(c) pub. 11–4–58. Cl. 21.
Irvine & Cottom, by Irvine & Cottom Co., Dillon, Mont. 357,998, 12(c) pub. 11–4–58. Cl. 1.
Irvine & Cottom, by Irvine & Cottom Co., Dillon, Mont. 357,967, 12(c) pub. 11–4–58. Cl. 1.
Irvine & Cottom Co.: *See*—
Irvine & Cottom.
Israel, Philip, d. b. a. Southwest Equipment Co., Houston, Tex. 669,174, pub. 8–19–58. Cl. 13.
Jackson-Wheeler Metals Service, Inc., Brooklyn, N. Y. 361,898, ren. 11–1–58. Cl. 14.
Jacobson, F., & Sons, Inc.: *See*—
Enro Shirt Co., The.
Jahn, Gerhard, Solingen, Germany. 669,227, pub. 8–19–58. Cl. 23.
Jamestown Metal Products, Inc., Jamestown, N. Y. 564,251, canc. Cl. 13.
Johns-Manville Corp., New York, N. Y. 359,926, ren. 9–6–58. Cl. 28.
Johnson, S. C., & Son, Inc., Racine, Wis. 669,410, pub. 8–19–58. Cl. 52.
Jones, Clarkson, d. b. a. Bakress Mattress Co., Charlotte, N. C. 564,240, canc. Cl. 32.
Jung, L. E., & Wulf Co., Inc.: *See*—
Steinhardt Co., Inc., The.
Kalamazoo Pant Co., Kalamazoo, Mich. 669,228, pub. 8–19–58. Cl. 39.
Kaplan, Joseph A., & Sons, Inc., New York, N. Y. 669,343–4, pub. 8–19–58. Cl. 42.
Kay Electric Co., Pine Brook, N. J. 669,348, pub. 8–19–58. Cl. 44.
Kaye, Ellen, Laboratories, St. Paul, Minn. 669,404, pub. 11–5–57. Cl. 52.
Keller, Wm. J., Inc., Buffalo, N. Y. 669,441. Cl. 101.
Kendall Co., The, Walpole, Mass. 669,278, pub. 8–19–58. Cl. 50.
Kerr Mfg. Co.: *See*—
Detroit Dental Mfg. Co.
Keuffel & Esser Co., Hoboken, N. J. 669,290, pub. 8–19–58. Cl. 37.
Keuffel & Esser Co., Hoboken, N. J. 669,292, pub. 8–19–58. Cl. 37.
Kidde, Walter, & Co., Inc.: *See*—
General Carbonic Co.
Kimberly-Clark Corp., Neenah, Wis. 364,851, ren. 2–14–59. Cl. 37.
King Oil Tools, Houston, Tex. 669,225, pub. 8–19–58. Cl. 23.
Kleinert, I. B., Rubber Co., New York, N. Y. 362,266, 12(c) pub. 11–4–58. Cl. 40.
Kleinert, I. B., Rubber Co., New York, N. Y. 362,282, 12(c) pub. 11–4–58. Cl. 40.
Kleinert, I. B., Rubber Co., New York, N. Y. 362,288, 12(c) pub. 11–4–58. Cl. 40.

Kleinert, I. B., Rubber Co., New York, N. Y. 362,409, 12(c) pub. 11–4–58. Cl. 40.
Klemson Co., Chicago, Ill. 669,427. Cl. 46.
Knapp-Monarch Co., St. Louis, Mo. 669,376, pub. 8–19–58. Cl. 50.
Knoll A.-G. Chemische Fabriken, Ludwigshafen (Rhine), Germany. 669,200, pub. 8–19–58. Cl. 18.
Knomark Mfg. Co., Inc., Brooklyn, N. Y. 669,126, pub. 8–19–58. Cl. 4.
Knudsen, Michael B., d. b. a. Gravel, New York, N. Y. 669,395, pub. 8–19–58. Cl. 51.
Korn, D. L.: *See*—
Tank Seal Products Co.
Kreisler, Jacques, Mfg. Corp., North Bergen, N. J. 564,083, canc. Cl. 28.
Kroll Brothers Co., Chicago, Ill. 564,247, canc. Cl. 32.
Kuensel Brothers, Philadelphia, Pa. 669,327, pub. 8–19–58. Cl. 39.
Kushner & Pines, Inc., New York, N. Y. 669,431. Cl. 28.
Lacquer Products, Inc., Cleveland, Ohio. 355,934, 12(c) pub. 11–4–58. Cl. 16.
Lady Carlton Coat Co., Inc., Stamford, Conn. 669,345, pub. 8–19–58. Cl. 42.
Lamont International Corp., New York, N. Y. 669,319, pub. 8–19–58. Cl. 39.
Lane, E. F., & Son, to E. F. Lane & Son, San Francisco, Calif. 359,576, ren. 8–23–58. Cl. 46.
Lawson Cordial Co., Newtown, Conn. 564,041, canc. Cl. 32.
Leff, A. J., Co.: *See*—
Goldberg, Samuel A.
Lehn & Fink Products Corp., Bloomfield, N. J. 669,150, pub. 8–19–58. Cl. 6.
Leininger, Wm. G., Knitting Co., Inc., Mohnton, Pa. 669,333, pub. 8–19–58. Cl. 39.
Lenel: *See*—
Lenel Perfumes.
Lenel Perfumes, d. b. a. Lenel, Dallas, Tex. 669,397, pub. 8–19–58. Cl. 51.
Leonard's Hardware: *See*—
Sherman, Leonard.
Les Parfums de Dana, Inc.: *See*—
Associated Distributors, Inc.
Liddell, William, and Co. Ltd., Belfast, Northern Ireland. 363,566, ren. 1–3–59. Cl. 42.
Lindemann, A. J., & Hoverson Co., Milwaukee, Wis. 404,667, canc. Cl. 34.
Lindemann, A. J., & Hoverson Co., Milwaukee, Wis. 430,373, canc. Cl. 21.
Link Glass Machinery Co.: *See*—
Link, Leonard W.
Link, Leonard W., d. b. a. Link Glass Machinery Co., Detroit, Mich. 669,140, pub. 8–11–58. Cl. 4.
Litterer Co., Long Beach, Calif. 669,130, pub. 1–28–58. Cl. 2.
Little Rock Tent and Awning Co., Little Rock, Ark. 669,330, pub. 8–19–58. Cl. 39.
Llano Drilling Co., Midland, Tex. 669,417–18, pub. 8–19–58. Cl. 103.
Lord Mfg. Co., Erie, Pa. 669,147, pub. 8–19–58. Cl. 5.
Ludwig, Oskar R., and Anthony Pesone, Middle Village, N. Y. 669,169, pub. 8–19–58. Cl. 12.
Makegood Mfg. Co. Inc., New York, N. Y. 669,313, pub. 8–19–58. Cl. 39.
Management Magazines, Inc., Greenwich, Conn. 669,306, pub. 8–19–58. Cl. 38.
Mfg. Jewelers and Silversmiths of America Inc., Providence, R. I. 669,300, pub. 8–19–58. Cl. 38.
Margien, Juliette, Inc., by merger and change of name from Juliette Margien Inc., Ridgefield, N. J. 669,383, pub. 8–19–58. Cl. 51.
Marian Co., The, Philadelphia, Pa. 563,994, canc. Cl. 39.
Marian Co., The, Philadelphia, Pa. 563,995, canc. Cl. 39.
Marsha Kay Originals, Edinburg, Tex. 564,112, canc. Cl. 39.
Martin Engineering Co., Neponset, Ill. 669,246, pub. 8–19–58. Cl. 23.
McCullough, William H., d. b. a. Finch & McCullough, by W. L. McCullough d. b. a. Finch & McCullough, Aurora, Ill. 358,411, 12(c) pub. 11–4–58. Cl. 37.
McCullough, William L.: *See*—
McCullough, William H.
McDonald, Mary E., Columbus, Ohio. 564,155, canc. Cl. 1.
McKesson & Robbins, Inc., Bridgeport and Fairfield, Conn., to McKesson & Robbins, Inc., New York, N. Y. 359,665, ren. 8–30–58. Cl. 18.
McLeansboro Twine Co.: *See*—
Atkinson, Sam.
"Menorah," Rubinstein Bros., Tel-Aviv, Israel. 669,428. Cl. 15.
Mercury Stamp Co.: *See*—
Respondek, John E.
Merens Co., The, Cleveland, Ohio. 669,386, pub. 6–3–58. Cl. 51.
Metrology Corp., to Metrology Corp., New Rochelle, N. Y. 564,038, canc. Cl. 23.
Metzger Machine & Engineering Co., Milwaukee, Wis. 669,281, pub. 8–19–58. Cl. 34.
Mi Con Laboratories: *See*—
Conover, James H.
Miller Brothers Co., Johnson City, Tenn. 564,018, canc. Cl. 12.
Miller Felpax Co.: *See*—
Miller, Rudolph W.
Miller Felpax Corp.: *See*—
Miller, Rudolph W.
Miller, Rudolph W., d. b. a. Miller Felpax Co., to Miller Felpax Corp., Winona, Minn. 359,590, ren. 8–23–58. Cl. 55.
Millers Falls Co., Greenfield, Mass. 669,273, pub. 8–19–58. Cl. 26.
Mineral Mining Corp., New York, N. Y. 362,585, 12(c) pub. 11–4–58. Cl. 1.
Miracle Bait Co.: *See*—
Stovall, Aubrey M.
Modern Globe, Inc., Pawtucket, R. I. 669,317, pub. 8–19–58. Cl. 39.
Mondiale S. A. de Constructions Mecaniques, Vilvorde, Belgium. 669,239, pub. 8–19–58. Cl. 23.
Monson, Roy K., d. b. a. The Diamon Products Co., Denver, Colo. 669,406, pub. 8–19–58. Cl. 52.
Morrow, Howard E., Rialto, Calif. 669,354, pub. 8–19–58. Cl. 46.
Mundial Corp., to Frank W. Winne & Son, Inc., Philadelphia, Pa. 361,853, 12(c) 11–4–58. Cl. 7.
N. V. Export-Centrale "Boxtel," Boxtel, Netherlands. 669,362, pub. 8–19–58. Cl. 46.
Nagasawa Slipper Factory, Honolulu, Hawaii. 669,325, pub. 8–19–58. Cl. 39.
Nakasheff, P.: *See*—
Nakasheff, Pancho.
Nakasheff, Pantcho: *See*—
Nakasheff, Pancho.
Nakasheff, Pancho, d. b. a. Pantcho Nakasheff, P. Nakasheff, and Pharmacy P. Nakasheff, Monroe, N. Y. 563,998, canc. Cl. 6.
National Curtain Corp., New York, N. Y. 669,337, pub. 8–19–58. Cl. 42.
National Food Marketers, Inc., Blue Anchor, N. J. 669,368, pub. 8–19–58. Cl. 46.
National Musical String Co., New Brunswick, N. J. 564,054, canc. Cl. 36.
National Pants Co., New York, N. Y. 669,435. Cl. 39.
National Steel Construction Co., Seattle, Wash. 360,277, ren. 9–13–58. Cl. 34.
Nestle-LeMur Co., The, New York, N. Y. 669,480. Cl. 18.
New Process Inc.: *See*—
New Process Laboratories, Inc.
New Process Laboratories, Inc., d. b. a. New Process Inc., Tinley Park, Ill. 669,438. Cl. 46.
Newark Slip Contracting Co., Inc., also d. b. a. Cadence Lingerie Co., Newark, N. J. 564,197, canc. Cl. 39.
Noble, F. H., and Co., Chicago, Ill. 669,373, pub. 8–19–58. Cl. 50.
Noble, F. H., and Co., Chicago, Ill. 669,375, pub. 8–19–58. Cl. 50.
Norcote Co., The: *See*—
Rystrom, Carlton L.
North Star Industries, Inc., Hopkins, Minn. 669,215, pub. 8–19–58. Cl. 22.
Northwest Airlines, Inc., St. Paul, Minn. 669,420, pub. 8–19–58. Cl. 108.
Norwegian-American Knitting Mills, Inc., Bennington, Vt. 669,314, pub. 8–19–58. Cl. 39.
Nylonet Corp., Miami, Fla. 669,385, pub. 8–19–58. Cl. 51.
Ogden, Betti Y., Clearwater, Fla. 669,312, pub. 8–19–58. Cl. 38.
Oglebay Norton Co., Cleveland, Ohio. 669,379, pub. 8–19–58. Cl. 50.
O'Hara, Janvier F., Monrovia, Calif. 564,071, canc. Cl. 44.
Olin Mathieson Chemical Corp., New York, N. Y. 669,194, pub. 8–19–58. Cl. 18.
Olive Oil Industry, Inc., New York, N. Y. 564,028, canc. Cl. 46.
1 Glass Optical Co.: *See*—
Wexler, Oscar S.
Oneida Ltd., Sherrill and Oneida, N. Y. 564,009, canc. Cl. 28.
Orchard Park Foods, Inc., Buffalo, N. Y. 669,370, pub. 8–19–58. Cl. 46.
Organic Development Corp., Garden Grove, Calif. 669,148, pub. 8–19–58. Cl. 5.
Orkin Exterminating Co., Inc., Atlanta, Ga. 669,151, pub. 8–19–58. Cl. 6.
Pacific Mills, New York, N. Y. 121,813, ren. 5–26–58. Cl. 42.
Paddock of Texas, Inc., Dallas, Tex. 669,255, pub. 8–19–58. Cl. 26.
Paragon Oil Co., Inc., Long Island City, N. Y. 360,110, ren. 9–6–58. Cl. 15.
Park & Tilford, New York, N. Y. 669,391–2, pub. 8–19–58. Cl. 51.
Parke, Davis & Co., Detroit, Mich. 360,674, ren. 9–20–58. Cl. 18.
Parker Pen Co.: *See*—
Wahl Adding Machine Co.
Patchogue-Plymouth Corp., New York, N. Y. 669,340, pub. 8–19–58. Cl. 42.
Pelican Products: *See*—
Behrman, Edward H.
Pelissard, Pierre, Casablanca, Morocco. 669,339, pub. 8–19–58. Cl. 51.
Pep Boys, Manny, Moe & Jack, The, Philadelphia, Pa. 364,367, ren. 1–31–59. Cl. 4.
Perma-Chrome Co.: *See*—
Fish, Eugene.
Peter Pan Foundations, Inc., New York, N. Y. 669,483. Cl. 39.
Peterson, D. J., d. b. a. D. J. Peterson Co., Sheboygan, Wis. 669,192, pub. 8–19–58. Cl. 16.
Peterson, D. J., Co.: *See*—
Peterson, D. J.
Pettibone Mulliken Corp., Chicago, Ill. 669,242, pub. 8–19–58. Cl. 23.
Pfeiffer Co., The, St. Louis, Mo. 669,429. Cl. 18.
Pharmacy P. Nakasheff: *See*—
Nakasheff, Pancho.
Philco Corp., Philadelphia, Pa. 669,286, pub. 8–19–58. Cl. 34.
Photo-Crystals, Inc., Geneva, Ill. 669,250, pub. 8–19–58. Cl. 21.
Pickett & Eckel, Inc., Alhambra, Calif. 669,261, pub. 8–19–58. Cl. 26.
Pincus, Lester, Shoe Corp., New York, N. Y. 669,323, pub. 8–19–58. Cl. 39.

Tucker Products Corp., Leominster, Mass. 669,135, pub.
Warp Brothers: *See*—

Pitchers, The, Oakland, Calif. 669,252, pub. 8–19–58. Cl. 46.
Plant Products Corp., Blue Point, N. Y. 669,164, pub. 8–19–58. Cl. 10.
Plastikon-Western, Inc., San Francisco, Calif. 563,996, canc. Cl. 16.
Pollak Steel Co., The, Evendale, Cincinnati, Ohio. 669,178, pub. 8–19–58. Cl. 12.
Powers, John Robert, Products Co. Inc., New York, N. Y. 669,380, pub. 8–19–58. Cl. 51.
Pratt-Low Preserving Corp., Santa Clara, Calif. 669,371, pub. 8–19–58. Cl. 46.
Precision Products: *See*—
Precision Products, Inc.
Precision Products, Inc., d. b. a. Precision Products, Tulsa, Okla. 669,263, pub. 8–19–58. Cl. 26.
Price's Producers, Inc., El Paso, Tex. 669,165, pub. 8–19–58. Cl. 10.
Princeton Knitting Mills, Inc., New York, N. Y. 259,881, ren. 8–30–58. Cl. 42.
Productos Marpe: *See*—
De Degetau, Maria P. N.
Produits Nina, Inc., New York, N. Y. 669,202, pub. 8–19–58. Cl. 51.
Puhl & Co., Berlin-Neukolln, Germany. 669,405, pub. 8–19–58. Cl. 52.
R. & A. Kohnstamm (London) Inc., New York, N. Y. 564,157, canc. Cl. 1.
"Raf" Raimund Finsterholzl Elektrotechinsche Spezialfabrik O. H. G., Ravensburg, Germany. 669,213, pub. 8–19–58. Cl. 21.
Rambusch Decorating Co., New York, N. Y. 380,038, 12(c) pub. 11–4–58. Cl. 34.
Ramo-Wooldridge Corp., The, Los Angeles, Calif. 669,208–9, pub. 8–19–58. Cl. 21.
Reddi-Wip, Inc., Los Angeles, Calif. 669,372, pub. 8–19–58. Cl. 46.
Reddy Kilowatt: *See*—
Collins, Ashton B.
Reddy Kilowatt, Inc.: *See*—
Collins, Ashton B.
Redfield Gunsight Co., Denver, Colo. 669,162, pub. 8–19–58. Cl. 9.
Reeves Instrument Corp., Garden City, N. Y. 669,212, pub. 8–19–58. Cl. 21.
Regal Ware, Inc., Kewaskum, Wis. 669,179, pub. 8–19–58. Cl. 13.
Rei-Ka-Sol Chemical Co., Jenkintown, Pa. 669,201, pub. 8–19–58. Cl. 18.
Respondek, John E., d. b. a. Mercury Stamp Co., Detroit, Mich. 669,415, pub. 8–19–58. Cl. 101.
Rheem Mfg. Co., Richmond, Calif. 669,287, pub. 8–19–58. Cl. 34.
Ripley and Gowen Co., Inc., Attleboro, Mass. 669,274, pub. 8–19–58. Cl. 28.
Ritter Co., Inc., Rochester, N. Y. 669,349, pub. 8–19–58. Cl. 44.
Robishaw Engineering, Inc., Houston, Tex. 669,205, pub. 8–19–58. Cl. 19.
Roll Dippers, Inc., Maumee, Ohio. 669,278, pub. 8–19–58. Cl. 29.
Ronley Floating Blanket Co., New York, N. Y. 564,199, canc. Cl. 42.
Rosal Laboratories, Ltd.: *See*—
Duffy, George A.
Roselawn Poultry Farm, Montgomery County, Ohio. 564,154, canc. Cl. 1.
Rosen, Jiles S., d. b. a. United Artist Materials, New York, N. Y. 669,144, pub. 8–19–58. Cl. 5.
Roth, David Z., d. b. a. David Z. Roth & Co., Clifton, N. J. 669,251, pub. 8–19–58. Cl. 26.
Roth, David Z., & Co.: *See*—
Roth, David Z.
Royal Imperial Products Corp., New York, N. Y. 564,128, canc. Cl. 51.
Rubinstein, Helena, Inc., New York, N. Y. 444,741, 12(c) pub. 11–4–58. Cl. 51.
Rydstrom, Carlton L., d. b. a. Norcote Co., St. Petersburg, Fla. 669,188, pub. 8–19–58. Cl. 16.
Sahadi, A., & Co., Inc., New York, N. Y. 669,359–60, pub. 8–19–58. Cl. 46.
Salem-Brosius, Inc.: *See*—
Brosius, Edgar E., Co. Inc.
Salsbury Corp., Los Angeles, Calif. 669,241, pub. 8–19–58. Cl. 23.
Salvato, Charles, & Co., Brooklyn, N. Y. 564,145, canc. Cl. 39.
Sanford Ink Co., Bellwood, Ill. 669,145, pub. 8–19–58. Cl. 5.
Sawyer, Lester T., d. b. a. Hycrest Farms, Sterling, Mass. 669,426. Cl. 46.
Schoeneman, J., Inc., to J. Schoeneman, Inc., Baltimore, Md. 360,111, ren. 9–6–58. Cl. 39.
Schoeneman, J., Inc., to J. Schoeneman, Inc., Baltimore, Md. 361,431, ren. 10–18–58. Cl. 39.
Schranck, H. C., Co., Milwaukee, Wis. 564,022, canc. Cl. 46.
Schueller, Eugene, Paris, France. 564,120, canc. Cl. 52.
Schulte, Joseph H., d. b. a. Blue Flame Kitchens, Los Angeles, Calif. 669,413, pub. 1–7–58. Cl. 101.
Schwall, Victor A., Chicago, Ill. 669,191, pub. 8–19–58. Cl. 16.
Schwarzenbach-Huber Co., The, New York, N. Y. 122,746, ren. 9–10–58. Cl. 42.
Scott Thermo-Meter Corp., Rochester, N. Y. 669,206, pub. 8–19–58. Cl. 26.
Scudder Food Products Inc., by Scudder Food Products, Inc., Los Angeles, Calif. 220,049, 12(c) pub. 11–4–58. Cl. 46.
Sears, Roebuck and Co., Chicago, Ill. 357,559, 12(c) pub. 11–4–58. Cl. 42.
Seattle Tent & Awning Co., Seattle, Wash. 669,374, pub. 8–19–58. Cl. 50.
Security Industrial Supply Co.: *See*—
Fetherwate Pipe & Tube Co.
Seiko Denki Kogyo Kabushiki Kaisha, Toshima-ku, Tokyo, Japan. 669,252, pub. 8–19–58. Cl. 26.
Sentinel Products Corp., Temple, Tex. 669,258, pub. 8–19–58. Cl. 26.
Sherman, Leonard, d. b. a. Leonard's Hardware, Philadelphia, Pa. 564,032, canc. Cl. 21.
Sherwin-Williams Co., The, Cleveland, Ohio. 269,873, ren. 9–27–58. Cl. 16.
Shirley Fabrics Corp., New York, N. Y. 564,211, canc. Cl. 42.
Shirley Fabrics Corp., New York, N. Y. 564,212, canc. Cl. 42.
Shirma Boyswear Mfg. Co., Inc., Mount Vernon, N. Y. 564,202, canc. Cl. 39.
Shunk Mfg. Co., Bucyrus, Ohio. 669,244, pub. 8–19–58. Cl. 23.
Silver Knit Hosiery Mills, Inc.: *See*—
Independent Wholesale Dry Goods Assn. Inc.
Simons Co., Inc., The, New York, N. Y. 262,276, ren. 11–15–58. Cl. 39.
Simplex Electric Co. Ltd., Broadwell, Oldbury, England. 669,280, pub. 8–19–58. Cl. 21.
Simpson, Wm., Sons & Co., Inc., New York, N. Y. 122,780, 12(c) pub. 11–4–58. Cl. 42.
Sloane-Blabon Corp., Trenton, N. J., and Philadelphia, Pa. 564,177, canc. Cl. 20.
Smith, H. P., Co., Inc., Rogers, Ark. 669,427. Cl. 7.
Societe Anonyme Les Parfumeries de Gabilla, Paris, France, to Balenciaga Parfums, Inc., New York, N. Y. 564,544, ren. 2–7–59. Cl. 51.
Societe Citryna, Fontaines-sur-Saone, France. 358,050, 12(c) pub. 11–4–58. Cl. 6.
"Bodeco" Societe des Compteurs de Geneve, Geneva, Switzerland. 358,737, 12(c) pub. 11–4–58. Cl. 26.
Southern States Cooperative, Inc., Richmond, Va. 564,234, canc. Cl. 12.
Southwest Equipment Co.: *See*—
Israel, Philip.
Sovereign Plan, Inc., The, Chicago, Ill. 564,218, canc. Cl. 101.
Sovereign Plan, Inc., The, Chicago, Ill. 564,219, canc. Cl. 101.
Spartan Aircraft Co., Tulsa, Okla. 669,208, pub. 8–19–58. Cl. 19.
Spatz, Delmar G., d. b. a. D M A, Chicago, Ill. 669,158, pub. 8–19–58. Cl. 3.
Spector Freight System, Inc., Chicago, Ill. 669,419, pub. 8–19–58. Cl. 105.
Sport-Wear Hosiery Mills, Inc., Etowah, Tenn. 669,224, pub. 7–1–58. Cl. 39.
Standard Merchandising Co., Inc., Hillside, N. J. 669,334, pub. 8–19–58. Cl. 51.
State and Columbia Beauty and Barbers Supply Co.: *See*—
Columbia Beauty and Barber Supply Co.
Steinhardt Co., Inc., The, to L. E. Jung & Wulff Co., Inc., New York, N. Y. 357,300, ren. 5–31–58. Cl. 49.
Stetson, John B., Co., Philadelphia, Pa. 358,768, 12(c) pub. 11–4–58. Cl. 39.
Stovall, Aubrey M., d. b. a. Miracle Bait Co., Dallas, Tex. 564,103, canc. Cl. 22.
Stover, Russell, Candies of Denver: *See*—
Stover, Russell, Candies of Kansas City.
Stover, Russell, Candies of Kansas City, Kansas City, Mo., to Russell Stover Candies of Lincoln, Lincoln, Nebr., to Russell Stover Candies of Denver, Denver, Colo. 669,338, pub. 8–19–58. Cl. 46.
Stover, Russell, Candies of Lincoln: *See*—
Stover, Russell, Candies of Kansas City.
Stroh Brewery Co., The, Detroit, Mich. 363,254, ren. 12–20–58. Cl. 48.
Sullivan, Carol B., New York, N. Y. 669,137, pub. 8–19–58. Cl. 3.
Sun Oil Co., Philadelphia, Pa. 362,740, ren. 11–23–58. Cl. 15.
Svit, Narodni Podnik, Gottwaldov, Czechoslovakia. 669,321, pub. 8–19–58. Cl. 39.
Swimquip, Inc., El Monte, Calif. 669,307, pub. 8–19–58. Cl. 23.
Swingline, Inc., Long Island City, N. Y. 669,233, pub. 8–19–58. Cl. 22.
Symington-Wayne Corp., from The Wayne Pump Co., Salisbury, Md. 669,270 pub. 8–19–58. Cl. 26.
Tank Seal Products Co., Tulsa, to D. L. Korn, Sapulpa, Okla. 360,112, ren. 9–6–58. Cl. 12.
Teakwood, Inc., Chicago, Ill. 269,787, canc. Cl. 46.
Tetley, Joseph, & Co., Inc., by Tetley Tea Co., Inc., New York, N. Y. 250,480, 12(c) pub. 11–4–58. Cl. 46.
Tetley Tea Co., Inc.: *See*—
Tetley, Joseph, & Co., Inc.
Theiler, H. J., Corp., Whitinsville, Mass. 564,052, canc. Cl. 28.
Thomas Susan, New York, N. Y. 669,336, pub. 11–27–58. Cl. 42.
Tile Council of America, Inc., New York, N. Y. 669,421, pub. 8–19–58. Cl. A.
Toledo Scale Corp., Toledo, Ohio. 669,236, pub. 8–19–58. Cl. 23.
Tovatt, V. J., Co., Lynwood, Calif. 669,163, pub. 8–19–58. Cl. 9.
Towle Mfg. Co., Newburyport, Mass. 362,252, 12(c) pub. 11–4–58. Cl. 28.
Traenkle, H. & M., d. b. a. H. & M. Traenkle Food Co., Philadelphia, Pa. 669,364, pub. 8–19–58. Cl. 46.
Traenkle, H. & M., Food Co.: *See*—
Traenkle, H. & M.
Trago Mfg. Co. Inc., New York, N. Y. 564,167, canc. Cl. 44.
Trenton Shirt Mfg. Co., Trenton, N. J. 564,106, canc. Cl. 39.
Trojan Powder Co.: *See*—
Independent Non-Freezing Powder Co.
Tubescope Co., Houston, Tex. 669,257, pub. 8–19–58. Cl. 26.

Tucker Products Corp., Leominster, Mass. 668,125, pub. 8–19–58. Cl. 2.
Twin City Shellac Co., Inc., Brooklyn, N. Y. 669,141, pub. 8–19–58. Cl. 4.
U. M. A. Inc., New York, N. Y. 564,036, canc. Cl. 44.
Undergarment Mfg. Co., Fort Wayne, Ind. 360,028, ren. 9–6–58. Cl. 39.
Underwriters' Laboratories, Inc., Chicago, Ill. 669,422, pub. 8–19–58. Cl. A.
Union Carbide Corp., New York, N. Y. 669,159, pub. 8–19–58. Cl. 6.
United Aniline Co., Norwood, Mass. 669,149, pub. 8–19–58. Cl. 6.
United Artist Materials: *See*—
Rosen, Jiles S.
United Co-Operatives, Inc., Alliance, Ohio. 359,876, ren. 8–30–58. Cl. 35.
United Laboratories, Ltd., Pasadena, Calif. 669,202, pub. 8–19–58. Cl. 18.
United Pre-Cast Concrete Co.: *See*—
Eveready Flood Control, Inc.
United States Rubber Co., New York, N. Y. 669,346, pub. 8–19–58. Cl. 42.
Universal Concrete Pipe Co., Columbus, Ohio. 564,078, canc. Cl. 12.
Van Horne-Kaestner Leather Co., Milwaukee, Wis. 669,434. Cl. 39.
Vapor Heating Corp., Chicago, Ill. 669,175, pub. 8–19–58. Cl. 13.
Vermiculite Mfg. Co., Seattle, Wash. 669,168, pub. 8–19–58. Cl. 12.
Verney Corp., Manchester, N. H. 564,087, canc. Cl. 42.
Vick Chemical Co., New York, N. Y. 360,065, ren. 9–20–58. Cl. 18.
Vogel Mfg. Co., The, Bridgeport, Conn. 669,249, pub. 8–12–58. Cl. 24.
Wahl Adding Machine Co., Chicago, Ill., by The Parker Pen Co., Janesville, Wis. 122,401, 12(c) pub. 11–4–58. Cl. 37.
Wallace Silversmiths, Inc., Wallingford, Conn. 669,131–3, pub. 8–19–58. Cl. 2.
Waring Products Corp., New York, N. Y. 669,210, pub. 8–19–58. Cl. 21.
Warp Brothers: *See*—
Warp, Harold.
Warp, Harold, d. b. a. Flex-O-Glass Mfg. Co. and as Warp Brothers, to Flex-O-Glass, Inc., Chicago, Ill. 564,238, canc. Cl. 13.
Watson, Andrew C., d. b. a. Bathurst Products, Toronto, Ontario, Canada. 669,216, pub. 8–19–58. Cl. 22.
Wayne Pump Co., The: *See*—
Symington-Wayne Corp.
Webster, H. K., Co., Lawrence, Mass. 362,612, 12(c) pub. 11–4–58. Cl. 46.
Wee Moderne, Inc., New York, N. Y. 669,318, pub. 8–19–58. Cl. 39.
Weis, Henry, Mfg. Co., Elkhart, Ind. 564,015, canc. Cl. 12.
Wexler, Oscar S., d. b. a. 1 Glass Optical Co., Toledo, Ohio. 669,200, pub. 8–19–58. Cl. 26.
Whirlfio Corp., The, Pittsburgh, Pa. 360,157, ren. 9–6–58. Cl. 31.
White Sewing Machine Corp., Lakewood, Ohio. 669,234–5, pub. 8–19–58. Cl. 23.
Whitin Machine Works, Whitinsville, Mass. 669,220, pub. 8–19–58. Cl. 23.
Whit-Mor Mfg. Co., Inc., Brooklyn, N. Y. 669,424. Cl. 2.
Will Laboratories, Inc., Long Island City, N. Y. 669,167, pub. 8–19–58. Cl. 11.
Willey, David A., Mill Valley, Calif. 669,262, pub. 8–19–58. Cl. 26.
Williams, Thomas G., Tampa, Fla. 564,082, canc. Cl. 23.
Winarick, Ar., Inc., New York, N. Y. 669,401, pub. 8–19–58. Cl. 51.
Winne, Frank W., & Son, Inc.: *See*—
Mundial Corp.
Woolworth, F. W., Co., New York, N. Y. 669,267–9, pub. 8–19–58. Cl. 26.
Wyandotte Chemicals Corp., Wyandotte, Mich. 669,412, pub. 8–19–58. Cl. 52.
Yardley & Co., Ltd., London, England. 669,402, pub. 8–19–58. Cl. 51.
Yong, Stephen A., Corp., Flora, Ind. 669,171, pub. 8–19–58. Cl. 13.
Young's Candy Co., Williamsport, Pa. 669,440. Cl. 46.

U. S. GOVERNMENT PRINTING OFFICE: 0——1958

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

November 11, 1958 Volume 736 Number 2

PATENTS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 16, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3715, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Chairman, Committee on Enrollment.

Oct. 15, 1958.

Disclaimer

2,844,712.—*Pedro J. Noiseux*, Buenos Aires, Argentina. AUTOMATIC POWER REDUCER FOR TRANSMITTERS. Patent dated July 22, 1958. Disclaimer filed Oct. 2, 1958, by the assignee, *Radio Corporation of America*.

Hereby enters this disclaimer to the terminal portion of the patent which has been granted.

Patents Available for Licensing or Sale

2,669,146. Adjustable Wrench Having Inner Jaw Actuated by Pivotal Handle (Slide-Action Removable Jaw To Convert to Box-End). Estel E. Florence, Buffalo, Minn.

2,852,824. Hammer Holster. Harold Kilpatrick, 2762 Hogan Road, East Point, Ga.

The following two patents are offered by Kallady Shreedharan, 46 Riverside, Malacca, Malaya:

2,662,825. Exposition Water Colour Process.

2,822,636. Ornamented Laminated Article.

General Electric Company is prepared to grant non-exclusive licenses under the following 15 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Patent Counsel, Appliance & Television Receiver Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,750,750. Sloping Baffle for a Refrigerator.

2,776,547. Oil Cooling Arrangement for Refrigerator System.

2,837,900. Refrigerator Frozen Food Compartment Mounting Structure.

2,838,111. Device for Cutting Spaced Elements.

2,838,245. Waste Disposal Apparatus.

2,839,241. Sealing Device.

2,840,667. Electric Switch and Thermostat Control.

2,843,286. Refrigerator Cabinet Breaker Strip.

2,843,441. Storage Cabinet Drawer Assembly.

2,843,944. Venting Arrangement for Laundry Machines.

2,844,225. Drive Mechanism for Clothes Washers and the Like.

2,844,402. Magnetic Latch.

2,844,702. Broiling Oven.

2,844,703. Electric Range Oven.

2,845,156. Torque Transmission and Automatic Braking Means for Clothes Washers and the Like.

Classification Order No. 262

The following transfers are hereby ordered to take effect on Wednesday, October 15, 1958:

From Classification Division II to Division 51
Class 250, RADIANT ENERGY, subclass 86
From Classification Division V to Division 83
Class 20, WOODEN BUILDINGS, subclass 5
Class 108, ROOFS

The reclassification of these classes has advanced to a stage at which concurrent examination of applications pending therein is no longer advantageous. Reclassification will continue to completion in Classification Divisions II and V, respectively.

M. C. ROSA,
Director, Patent Examining Operation.

Classification Order No. 263

The following class transfer, for concurrent reclassification and examination of applications pending therein, is hereby ordered to take effect on Wednesday, October 15, 1958:

From Division 51 to Classification Division II
Class 250, RADIANT ENERGY, subclasses 21 through 32.

M. C. ROSA,
Director, Patent Examining Operation.

New Applications Received During September 1958

Patents	6,286
Designs	371
Plant Pats	6
Reissues	16
Total	6,679

Issue

Patents	901—No.	2,839,442 to No.	2,840,342, incl.
Designs	36—No.	183,871 to No.	183,906, incl.
Plant Pats	2—No.	1,769 to No.	1,770, incl.
Reissues	7—No.	24,560 to No.	24,566, incl.
Total	946		

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of pending applications (excluding Designs)	204, 214
Total number of pending Design applications	6, 982
Total number of applications awaiting action (excluding Designs)	86, 231
Total number of Design applications awaiting action	3, 504
Date of oldest new application	Nov. 1, 1957
Date of oldest amended application	Oct. 15, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 39, 42, 45, 55, 56, 59, 60, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 36, 37, 41, 42, 44, 46, 51, 54, 60.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 38, 49, 52, 65.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 43, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 40, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Sectioning Unloaders; Harrows and Diggers; Plows.	12-30-57	2-2-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-2-58	12-26-57
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	4-15-58	4-15-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	1-17-58	1-21-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	12-10-57	12-2-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	2-21-58	2-27-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-29-57	11-15-57
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	2-3-58	2-17-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	2-17-58	1-9-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	2-25-58	2-11-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clinching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-58	1-21-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-6-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	2-6-58	1-10-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-2-57	12-2-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-6-58	1-2-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	12-30-57	12-24-57
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	1-10-58	1-7-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-16-58	1-2-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	2-3-58	1-14-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-30-58	1-28-58
21. (III) MADER, R. C., Textiles	12-5-57	12-5-57
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-3-58	1-2-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-4-57	10-15-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	5-1-58	5-1-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	2-27-58	3-5-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	2-21-58	2-26-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	12-23-57	12-17-57
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	12-11-57	11-27-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	1-6-58	1-20-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	1-6-58	1-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
21. (I) DOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation, of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-7-58	3-20-58
22. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-3-58	3-3-58
23. (V) MURRAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	4-9-58	3-17-58
24. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Reins; Line Implements	12-9-57	12-12-57
25. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet or Web Feeding	3-7-58	3-4-58
26. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	11-1-57	11-1-57
27. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	1-20-58	2-14-58
28. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	4-7-58	4-25-58
29. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	3-10-58	3-6-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-3-58	3-3-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	3-3-58	3-3-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	12-3-57	12-3-57
43. (I) KNIGHT, W. B. (WOLK, M. G., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	1-3-58	1-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-10-58	1-6-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	2-10-58	2-3-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	1-20-58	2-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	2-5-58	2-24-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	1-3-58	1-2-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	3-3-58	3-14-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	1-3-58	1-2-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	3-6-58	3-6-58
52. (V) NEFF, P. R., Supports and Racks	1-13-58	1-9-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators	3-17-58	3-10-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	4-18-58	4-16-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	12-16-57	12-4-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Casting or Plastic Compositions; Electrical and Wave Energy Chemistry	3-7-58	3-13-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	12-11-57	1-6-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part)	4-8-58	4-3-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	1-3-58	1-17-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-13-58	1-3-58
61. (III) STRIZAK, J. F., Winding and Reeling; Pushing and Pulling; Heraldry; Railway Mail Delivery; Feeding of Indefinite Lengths	1-20-58	1-24-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	1-3-58	1-3-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-26-57	1-3-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	1-3-58	1-2-58
65. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	12-25-57	12-25-57
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	3-10-58	1-6-58
68. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	3-27-58	3-20-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	3-3-58	3-3-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	3-6-58	3-11-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Selective Punching	3-20-58	1-6-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	6-3-58	3-20-58
CLASS. DIVS. V—ANGEL, C. D., Scaffolds; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed and Jointed Joints; Joint Packings	3-4-58	3-6-58
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	4-20-58	5-1-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	3-3-58	3-21-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	12-6-57	1-27-58

*Established August 28, 1957, by order of the Commissioner—723 O. G. 315.

The following divisions have been abolished: 63 and 66

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during November 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,261,102 to 2,264,267, inclusive
Plant Patents ..... Number 492

2,857,833. (See 2,671,214.)

2,198,968, M. Schneider, Automatic proportional metering, mixing, and dispensing system, filed Sept. 25, 1958, D. C. N. J.

Dispensing; Coin Handling; Refrigeration	1-3-56	1-10-56

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Commissioner's Decision

IN RE APPLICATION FILED APRIL 1, 1957

Decided April 16, 1958

APPLICATION—NEW MATTER—INTRODUCTION OF SUBJECT MATTER FROM PRIOR COPENDING APPLICATION—35 U. S. C. 132—RULE 118.

Held that a proposed introduction into the disclosure of the involved application of subject matter constituting a species of an invention originally disclosed and claimed in a prior copending application, where there was no reference to the prior application in the involved application when filed, would be in violation of the clear prohibition of 35 U. S. C. 132 and Rule 118 regarding the addition of matter to an application.

ON PETITION.

DENIED.

CROCKER, *First Assistant Commissioner:*

This is a petition under Rule 181 from the action of the Primary Examiner refusing to enter an amendment proposed under Rule 312, for the reason that the matter sought to be added, including three claims, has no basis in the original disclosure of this application and that, therefore, it involves new matter.

It appears from petitioner's statement that applicant seeks to transfer into the instant application from a prior copending application * * * subject matter which constitutes a species of the invention originally disclosed and claimed therein, and that the new claims are directed to that species. Petitioner asserts that consolidation of the two disclosures into one application is necessary in order to insure against a holding that but one patentable invention is involved in the two cases.

The statute (35 United States Code, Section 132) specifically provides that no amendment shall introduce new matter into the disclosure of the invention; and Rule 118, based thereon, states that matter not found in either the drawings or specifications of an original application, involving a departure from or an addition to the original disclosure cannot be added to the application. In this case the Examiner stated that the original disclosure is limited * * *. Petitioner concedes that the present application did not name * * *. Also it is noted that there is no indicated relationship between this application and the prior application, since there was no reference thereto at the time this application was filed. Moreover, even if this application were in fact a continuing application, the transfer of subject matter from the prior application would not be proper. It is believed to be evident that, under the circumstances of this case, the proposed introduction into the disclosure of this case of subject matter from the prior case would be in violation of the clear prohibition of the statute and rule. Hence, there was no error on the part of the Examiner refusing entry of the amendment.

The petition is denied.

DENIED.

PATENT SUITS

Notices under 35 U. S. C. 290; Patent Act of 1952

2,301,459, A. J. Sanial, Electric megaphone; 2,411,604, same, Sound amplifying apparatus; 2,428,147, H. C. Dalrymple, Electric megaphone; Des. 144,698, same; Reg. No. 613,511 (AUDIO HAILER), Audio Equipment Co., Inc., Loud speakers, filed Oct. 4, 1957, D. C. N. J. (Trenton), Doc. 1044/57, *Audio Equipment Co., Inc. v. Pye Corp. of America.* Stipulation and order of dismissal Sept. 26, 1958.

2,213,262, M. M. Kistner, Steam hand iron; 2,284,889, same, Steam-electric pressing and ironing device, filed Oct. 1, 1958, D. C., S. D. Fla. (Tampa), Doc. 3523, *Merrill M. Kistner et al. v. Webb's City, Inc. et al.*

2,294,220. (See 2,213,262.)

2,534,575, K. K. Kearby, Dehydrogenation of hydrocarbons, filed Feb. 1, 1951, D. C. Del. (Wilmington), Doc. 1347, *Jasco, Inc. v. Monsanto Chemical Co. et al.* Order of dismissal by stipulation Apr. 3, 1952 (notice received Sept. 26, 1958).

2,411,604. (See 2,301,459.)

2,428,147. (See 2,301,459.)

2,441,718, L. R. Potter, Mechanical, lineal, rotary, flexible, push-pull transmission device, filed Apr. 24, 1957, D. C., S. D. Calif. (Los Angeles), Doc. 502/57-TC, *Southwest Products Co. v. Manning, Maxwell & Moore, Inc.* Order of dismissal by stipulation without prejudice (notice Sept. 25, 1958).

2,818,416, A. W. Haydon, Electric motor, filed Sept. 29, 1958, D. C., S. D. N. Y., Doc. 138/141, *Consolidated Electronics Industries Corp. v. Polk's Model Craft Hobbies, Inc.*

2,818,998, J. T. Krapp, Couplings, filed Sept. 29, 1956, D. C., E. D. Wis. (Milwaukee), Doc. 58c294, *John T. Krapp v. Milwaukee Valve Co.*

2,840,211, O. M. Salati, Electrical connector, filed Jan. 30, 1956, D. C., S. D. Ind. (Indianapolis), Doc. 56c15, *Hoselline Research, Inc. v. Dage Electrical Co., Inc.* Patent held invalid; complaint dismissed Aug. 1, 1956.

2,567,948, Karrer and Du Rietz, Process for drying granular thread and fibrous materials, filed Apr. 10, 1956, D. C., S. D. N. Y., Doc. 108/375, *Firma B. Thies v. Aceeta Iron & Steel Works et al.* Complaint dismissed as to individual defendants June 27, 1956; stipulation and order of discontinuance as to remaining party Sept. 22, 1958.

2,571,344, D. Cutrera, Method of preparing boned turkey, filed Sept. 19, 1956, D. C., N. D. Calif. (San Francisco), Doc. 27,380, *Dominick Cutrera v. Enoch Christofferson et al.*

2,586,795, Drisch and Brepson, Pneumatic tires; 2,586,794, same, Production of viscose rayon; 2,597,577, same, Rayon yarns; 2,600,888, same, Production of viscose rayon, suit for Declaratory Judgment filed Sept. 28, 1956, D. C., Dist. of Col., Doc. 2453/56, *North American Rayon Corp. et al. v. Societe Chimistes.*

2,586,796. (See 2,586,795.)

2,597,577. (See 2,586,795.)

2,646,765, Easley and Swayze, Etching; 2,656,194, Hopkins and Easley, same, filed Sept. 26, 1956, D. C., E. D. Ill. (East St. Louis), Doc. 1654-D, *Dow Chemical Co. v. Pitch Publishers, Inc.*

2,671,214, A. G. Juilfs, Staple drive mechanism for portable pneumatic staplers; 2,697,233, same, Stapling machine, filed Jan. 20, 1955, D. C., N. D. Ill. (Chicago), Doc. 55c109, *Senco Products, Inc. v. Fastener Corp. et al.* Patents held invalid; action dismissed Sept. 28, 1956.

2,687,822. (See 2,671,214.)

2,691,560. (See Re. 24,518.)

2,699,217, Adler and Adler, Folding high chair, filed Oct. 28, 1955, D. C., S. D. Calif. (Los Angeles), Doc. 18825-PH, *Trenton Industries, Inc.* v. *A. E. Peterson Mfg. Co.* Patent held invalid and not infringed (notice Sept. 25, 1958).

2,699,962. (See 2,568,795.)

2,799,566, L. J. Hogan, Jr., Supporting leg construction, filed Aug. 16, 1957, D. C., N. D. Ill. (Chicago), Doc. 57c1393, *Lawrence J. Hogan, Jr.* v. *Triple A Plating Corp.* Dismissed on motion of defendant Sept. 22, 1958.

2,765,216, L. Rabb, Temple hinge construction, filed Sept. 26, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19052, *Merit Mfg. Co., Inc.* v. *Opti-Ray, Inc.*

2,781,244, Jahn and Scott, Fluid separation process, filed Sept. 24, 1958, D. C. N. Mex. (Albuquerque), Doc. 3995, *Petroleum Engineering & Tool Co. of Houston, Inc.* v. *American Tank & Steel Corp.*

2,782,181. (See Des. 174,453.)

2,786,984, M. Schneider, Automatic proportional metering, mixing, and dispensing system, filed Sept. 25, 1958, D. C. N. J. (Newark), Doc. 1101/58, *Industrial Enterprises, Inc. et al.* v. *Automatic Process Control et al.*

2,838,194. (See 2,640,763.)

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Re. 24,518 (of 2,691,560), B. W. Nickerson, Jr., Side wall for tires, filed Sept. 24, 1958, D. C., N. D. Ohio (Cleveland), Doc. 34813, *Bryan W. Nickerson, Jr.* v. *The Bearfoot Sole Co., Inc. et al.*

Des. 184,295. (See 2,301,659.)

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Des. 182,788, B. Berger, Bathroom cabinet, filed Sept. 29, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1772, *National Steel Cabinet Co.* v. *Monarch Metal Products Corp.*

REISSUES

NOVEMBER 11, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

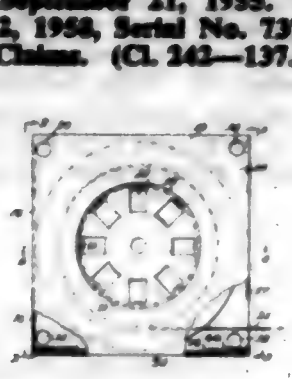
24,560

WIRE PACKAGE

Oscar O. Monibee, Duncan, Okla.

Original No. 2,822,992, dated February 11, 1958, Serial No. 535,627, September 21, 1955. Application for reissue May 22, 1958, Serial No. 737,178

5 Claims. (Cl. 242—137.1)



1. A [wire] package *for wire or other elongated flexible material* comprising a [square paper] box having a base with upwardly extended side and end walls and having a circular opening in one of said side walls and openings in the [end] *side* walls and positioned at the corners of the box, and a [paper] spool having a drum with flanges at the ends freely mounted in said box and having finger receiving openings positioned in registered relation with the circular opening in the side of the box whereby the fingers of a hand may be inserted through the circular opening in the side wall of the box for rotating the spool.

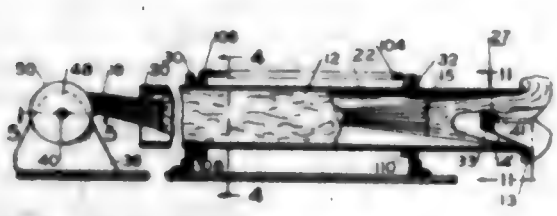
24,561

AERODYNAMIC AIRCRAFT BRAKE

George J. Hand, Sr., Baltimore, Md., assignor, by mesne assignments, to Decelo-Chute Corp.

Original No. 2,729,409, dated January 3, 1956, Serial No. 383,431, October 1, 1953. Application for reissue October 1, 1957, Serial No. 687,834

10 Claims. (Cl. 244—113)



1. A deceleration brake for an aircraft comprising a canopy, shroud lines on said canopy, an automatic pilot chute attached to said canopy, a control line attached to said shroud lines, a storage tube for said canopy, mounting brackets adapted to mount said tube in an aircraft, said tube having limited sliding movement in said brackets whereby the outer end of said tube is movable to a *first* position within or a *second* position outside the body of an aircraft, said control line extending through said tube, a [reel] *drum*-mounted in alignment with said tube, biasing means urging said tube to [distended] *its second* position, means for operating said [reel] *drum* to [retrieve] *retract* said control line to store said canopy in said tube, *means on* said pilot chute engaging said tube whereby said tube is moved to retracted position, *and* controllable [jaws] *means* attaching said control line to said [reel] *drum*.

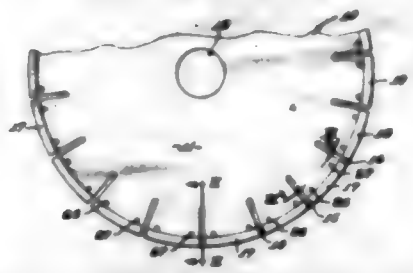
24,562

CONSTRUCTION OF CIRCULAR SAWS

Clyde C. Hughes, Arcadia, Calif., assignor to Hughes Blades, Inc., Pasadena, Calif., a corporation of California

Original No. 2,763,258, dated September 18, 1956, Serial No. 440,634, July 1, 1954. Application for reissue July 3, 1958, Serial No. 747,558

15 Claims. (Cl. 125—15)



1. A circular saw construction including a circular disc-like core of substantially uniform thickness provided with an interrupted edge defined by a plurality of slots extending radially inwardly from said edge; a plurality of cutting segments secured to the edge of the core between said slots and projecting from side surfaces of said core; and means carried by the core adjacent and radially inwardly of each cutting segment for agitating and flushing cut material away from said core, said means comprising circumferentially spaced buttons projecting from said side surfaces of the core for approximately but not greater than the same distance as said cutting segments, said buttons being spaced from said slots.

24,563

BUTADIENE ACRYLONITRILE COPOLYMER SOFTENED WITH LIQUID ALKYLACRYLATE ACRYLONITRILE PREPARED IN THE PRESENCE OF A POLYHALOMETHANE CHAIN TERMINATING AGENT

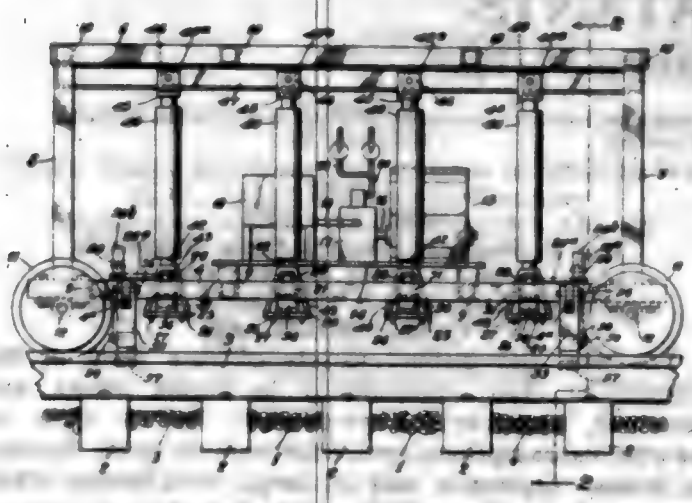
Howard K. Nason, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original No. 2,820,018, dated January 14, 1958, Serial No. 555,227, December 27, 1955. Application for reissue March 3, 1958, Serial No. 718,937.

3 Claims. (Cl. 260—31.8)

1. A vulcanized plasticized rubbery copolymer of butadiene and acrylonitrile characterized by high resistance to hydrocarbon solvents comprising butadiene-1,3-acrylonitrile copolymer rubber in admixture with a liquid plasticizer polymer having a molecular weight within the range of 2,000–10,000 consisting of an addition polymer of one molecule of a copolymer of an alkyl ester of an acid selected from the group consisting of acrylic acid and methacrylic acid with 10 to 50 mole percent of a nitrile selected from the group consisting of acrylonitrile and methacrylonitrile and one molecule of a chain terminating agent consisting of polyhalomethane prepared by copolymerizing one molecular proportion of said ester with [0.1–0.5] *0.11–1.00* molecular proportion of said nitrile in the presence of the said chain terminating agent the moles thereof exceeding the total moles of monomer present, the chain terminating agent containing at least three halogen atoms selected from the group consisting of chlorine and bromine.

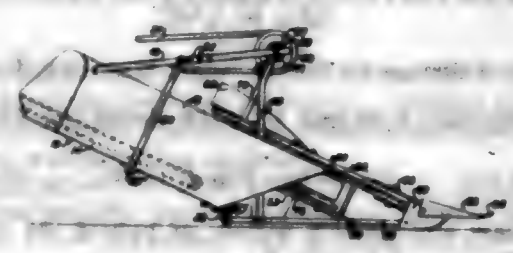
24,564
RAILROAD TRACK LINING MACHINE
Frank J. Herlihy, Watertown, Wis.
Original No. 2,693,769, dated November 9, 1954, Serial No. 265,741, January 10, 1952. Application for reissue May 21, 1956, Serial No. 586,338
13 Claims. (Cl. 104—8)



13. A method of lining track, including rails and ties, on ballast, by the use of a vehicle adapted to be moved along the track; including the steps of releasably interlocking the track and vehicle so that the weight of a localized longitudinal section of track on each side of the vehicle will be added to the weight of the vehicle, directing an upward thrust against the track by interposing a generally vertical force between the vehicle and the ballast, applying the generally vertical force to the ballast in a selected area between the ties, developing the vertical force to a magnitude just sufficient to relieve the combined weight of the vehicle and the localized longitudinal section of track on each side of it from the ballast under the ties and at the same time to transfer their combined weight to the ballast at the selected area between the ties, thereby floating both the vehicle and the localized longitudinal section of track on each side of it relative to the ballast, and at the same time breaking any interlock between the ties and ballast due to the accumulation of foreign matter or otherwise, thereafter separately applying a lateral thrust against the track by interposing a generally horizontal force between the track and the vehicle applied generally at the selected area of application of the vertical force to the ballast between the ties while, at the same time, maintaining the upward thrust so that during the application of the lateral thrust, the combined weight of the vehicle and the localized longitudinal section of track on each side of it will prevent slippage of the upward thrust applied to the ballast at the selected area between the ties, thereby causing the track to be shifted laterally in response to the lateral thrust without affecting the upward thrust appreciably.

24,565
FALLEN PLANT PICK-UP ATTACHMENT FOR COMBINES
Jack H. Wigham, Panhandle, Tex.
Original No. 2,737,770, dated March 13, 1956, Serial No. 313,236, October 6, 1952. Application for reissue March 12, 1958, Serial No. 721,069
2 Claims. (Cl. 56—98)

1. In a plant pickup attachment for combines, including a cutter bar *mounted at the forward end thereof* [and a conveyor behind the cutter bar of the combine]; *said attachment comprising* an angle bar carried by said cutter bar and having a depending flange, a pair of elongate arms spacedly pivoted to said flange for vertical swinging movements and extending forwardly therefrom, a pair of forwardly directed and tapered pickup units, one of said units being supported on each of said arms, a ground engaging shoe *secured to* [at] the forward end of each of said units, a pickup element projecting forwardly from each of said shoes and having vertical pivot connections therewith, means *on each unit engaging the associated pick-up element* for adjusting the height of each of the pickup elements relative to



the ground, an endless belt carried by each of said units and having laterally directed fingers projecting *therefrom* [from the outer side thereof], said units being divergent in the forward direction so as to provide a relatively narrow throat between the rear end portions of the same, a standard rising from each of said arms, a rail extending between and connecting [the upper end portions of] said standards, U-shaped brackets rising from said rail, a bearing carried *by* [at the free end of] each of the arms of said brackets, a shaft journalled in said bearings, power transmitting means *connecting* [between] said shaft and each of said belts, and other means *connected to said shaft* for applying power *thereto* [to said shaft].

24,566
ACOUSTIC APPARATUS
Donald J. Leslie, Pasadena, Calif.
Original No. 2,727,583, dated December 20, 1955, Serial No. 56,630, October 26, 1948. Application for reissue March 18, 1957, Serial No. 646,946
8 Claims. (Cl. 181—27)

1. In apparatus for modifying sound: a horn device having a plurality of generally radial sound cells spaced substantially equiangularly and uniformly about the axis of the device; a sound channel coaxial with and located within said device and having wall means forming an opening, said opening being spaced from the common axis of said device and channel, said opening being registrable with the inner ends of said cells; and rotary means for continuously relatively rotating said horn device and said wall means.

PLANT PATENTS

GRANTED NOVEMBER 11, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,769

NEW AND DISTINCT VARIETY OF ROSA HYBRID TEA PLANT

Edward Burton Le Grice, North Walsham, England

Application February 17, 1958, Serial No. 715,842

1 Claim. (Cl. 47—61)

The new and distinct variety of hybrid tea rose plant herein shown and described.

258

1,770

ROSE PLANTS

Roy E. Shepherd, Medina, Ohio, assignor to Edith C. Bosley, Mentor, Ohio

Application September 5, 1957, Serial No. 682,266

1 Claim. (Cl. 47—61)

The new and distinct variety of rose plant of the Grandiflora class, substantially as herein shown and described, characterized particularly by its vigor of growth; its exceptional productiveness of good blooms; its disease resistance; and its large, well-formed white blossoms borne in candelabra-like clusters.

corner bead flanges, a groove in said angular body designed to accommodate the bead of said corner bead, a

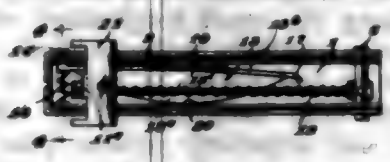
stantially duplicative side-forming panels each defining on said cap upper crown portions and lower head band

PATENTS

GRANTED NOVEMBER 11, 1958

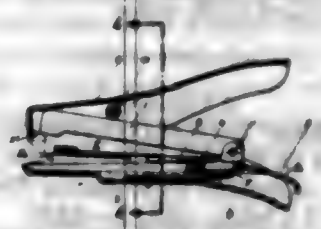
GENERAL AND MECHANICAL

2,859,442
STAPLERS
Walter Jopp, Lahr, Germany, assignor to Ehrebba-Werk K. G., Lahr-Schwarzwald, Germany
Application October 8, 1956, Serial No. 614,485
8 Claims. (Cl. 1—3)



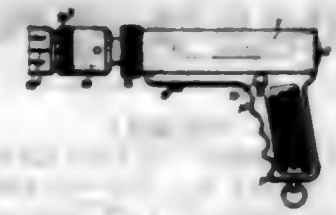
1. A stapler comprising a base, a staple supporting rail for supporting a supply of staples, a spring-pressed staple pusher on said supporting rail for urging the staples toward an ejection position, a hold-down member surrounding the upper portion of said supporting rail and forming therewith a staple magazine, a stapling arm over said hold-down member, a hinge pivotally holding said base, supporting rail, hold-down member and arm together at one end of the stapler, a hinge spring separating said base and supporting rail, a leaf spring separating said hold-down member, arm and supporting rail, a fulcrumed locking rail rockably supported within said supporting rail and having a wedge-shaped locking lug at one end for penetration of aligned slots in said supporting rail and hold-down member, the other end of said locking rail being formed with a cam engageable by said pusher to rock the locking rail and release the said locking lug upon retraction movement of said pusher toward the hinge to permit said leaf spring to move said hold-down member to an open position giving access to the entire staple magazine and upper surface of said supporting rail, and a spring in said supporting rail urging said locking rail to latching position with said locking rail cam in the path of said pusher to prevent forward movement of the pusher from its fully retracted position.

2,859,443
COMBINATION STAPLER TOOLS
Walter Jopp, Lahr, Germany, assignor to Ehrebba-Werk K. G., Lahr-Schwarzwald, Germany
Application October 8, 1956, Serial No. 614,455
4 Claims. (Cl. 1—49)



1. The combination with a desk stapler comprising a base, a magazine and a stapling arm all hinged together at one end of a fastening tool housing having an opening adjacent one end to slidably receive said base longitudinally and house said desk stapler, means in said housing actuated by manual manipulation of said housing for applying pressure to said stapling arm to perform a stapling operation, and means in said housing for releasably holding said base with said desk stapler in operative position relative to said pressure applying means, said holding means including guide means for supporting said base, flanges extending inwardly from the sides of said housing and spaced from said guide means for overlying said base and holding the latter on said guide means, and a spring latch adjacent said opening for engaging the outer end of said base and releasably retaining said stapler in said housing.

2,859,444
EXPLOSIVELY ACTUATED GUN
Michel Reymond, St-Etienne, France, assignor to Société Civile d'Etude de Procédés de Scellement, Saint-Etienne, France, a corporation of France
Application March 26, 1954, Serial No. 418,930
Claims priority, application France April 1, 1953
9 Claims. (Cl. 1—106)



8. An explosively actuated gun comprising in combination: a cylindrical breech casing; an axially bored breech-block movably guided in the rear portion of said casing; a longitudinally bored gun barrel slidingly mounted respectively to said casing and to said breech-block; said barrel having an annular rear seat for receiving fastener-holding cartridges from the rear of said barrel; a spring actuated striker in the bore of said breech-block; a longitudinal guide slot in the upper part of said casing; a peripheral notch in the wall of said casing in open communication with said guide slot; means connected to said breech-block, movable in said guide slot and in said notch, and adapted for urging said breech-block and striker forward in said casing in position to strike and fire said cartridge, for locking them in said position and, after firing, for unlocking them and moving them rearward in said casing to open position, said means coacting with said peripheral notch to hold said breech-block and striker forward in said casing in said striking and firing position; a safety projecting boss on a small portion of the periphery of the front face of the breech-block; a projection in the rear wall of the barrel; a recess above said projection in the upper portion of said rear wall; said boss and said projection cooperating as a safety to prevent the striker from being brought within striking distance of the cartridge when the said means is not fully engaged in said notch and the breech-block is not properly positioned; said boss being adapted to engage said recess to bring the striker within operative distance to the cartridge solely when the breech-block has been properly positioned by full engagement of said means with said notch.

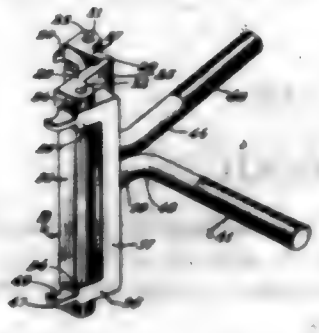
2,859,445
CORNER BEAD APPLYING APPARATUS
Robert C. Larrabee, New Brighton, Minn.
Application March 9, 1955, Serial No. 493,129
6 Claims. (Cl. 1—260)

1. A tool for applying a corner bead to a wall corner, the corner bead having generally right angular flanges and an outwardly projecting connecting bead, the tool including a right angular body designed to overlie the

panel being folded over said back panel and flap to form

cally responsive to swing phase movements of said shank

corner bead flanges, a groove in said angular body designed to accommodate the bead of said corner bead, a pair of clinching levers pivoted to opposite sides of said

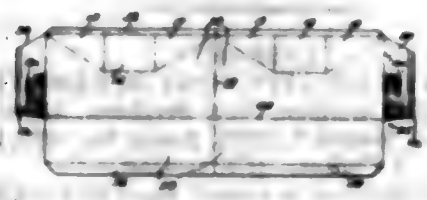


body, and crimping jaws on said levers designed to strike tongues from the flanges of the corner bead and bend them into the wall.

2,859,446
BIB
Lincoln G. Older, Los Altos, Calif., assignor to Paterson Pacific Parchment Company, a corporation of California
Application June 14, 1956, Serial No. 591,471
1 Claim. (Cl. 2—52)

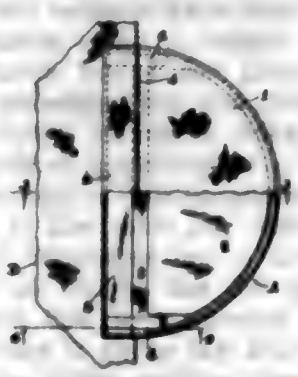
A bib comprising: a generally rectangular sheet of cellulose paper; a pair of tie members of cellulose paper integral with said rectangular sheet of paper spaced along one side of said rectangular sheet, each of said tie members being of sufficient width at the base thereof that the innermost edge of each of said tie members meets the other at a point adjacent said side of said sheet, said inner edges of said tie members being of an arcuate configuration whereby together they provide a generally circular opening to accommodate the head of a wearer, said inner arcuate edges terminating at the upper ends thereof at points substantially removed from the tips of said tie members whereby the end of each of said tie members is of a width at the tip thereof in excess of the width at a point intermediate the tip and the base thereof, the outer edges of said tie members intersecting the longitudinal edges of said generally rectangular sheet and angling inwardly therefrom to pass in close proximity to the inner arcuate edges thereof.

2,859,447
ADJUSTABLE, DISPOSABLE-TYPE CAP CONSTRUCTION
Edmund J. De Villers, Columbus, Ohio, assignor, by mesne assignments, to Paperlynen Company, Columbus, Ohio, a corporation of Ohio
Application April 20, 1955, Serial No. 502,644
3 Claims. (Cl. 2—197)



3. A disposable cap comprising a one piece body of flexible sheet-like material formed with a pair of substantially duplicative side-forming panels each defining on said cap upper crown portions and lower head band portions, said side-forming panels being of generally rectangular form and having upper longitudinal edges and forwardly disposed end edges connected respectively with one another each of said side-forming panels being formed at the end thereof opposite said forwardly disposed end edges with flap extensions each including a plurality of relatively upwardly convergent fold lines defining on said extensions a plurality of triangular pleats, said flap extensions being folded inwardly of said cap at the rearward end edge thereof and each of said extensions having at least a portion of the triangular pleats thereof secured to corresponding pleats on the opposite extension by a pressure separable adhesive, the triangular pleats of said extensions converging upwardly to a point along the upper longitudinal edges of said panels and being relatively widened at the lower head band portions of said panels to permit of relative expansion of the head band portion of said cap upon separation of said adhesively secured pleats.

2,859,448
ARTICLE OF HEADWEAR
Pearl Gaichel, San Francisco, Calif.
Application April 30, 1956, Serial No. 581,737
2 Claims. (Cl. 2—199)



1. In an article of headwear, a stiff and bendable visor having a curved edge and an elongated, substantially straight edge, a pair of opposed elongated stiff and bendable gripping members superimposed one upon the other and flexibly connected together along adjacent longitudinal edges, the gripping members being also connected to the substantially straight edge of the visor along their same adjacent edges, the gripping members extending longitudinally along the substantially straight edge of the visor and arranged for hinge-like movement toward and away from each other, and spring means urging the gripping members toward each other.

2,859,449
PICK-PROOF PARTITIONED POCKET
Charles D. Ellison, Glen Burnie, Md.
Application August 5, 1955, Serial No. 526,795
1 Claim. (Cl. 2—253)
(Granted under Title 35, U. S. Code (1952), sec. 266)

In a body garment formed with a pocket opening having upper and lower edges, the combination with said garment and opening; of a pocket, said pocket comprising a back panel of maximum height, a first side panel of minimum height integral with one side of said back panel, a second side panel of intermediate height integral with the opposite side of said back panel, said back panel having an upper portion, means on said upper portion of said back panel providing a downwardly and forwardly extending flap, said upper portion of said back panel including an upper edge, said upper edge being secured to said garment above said opening, said first side

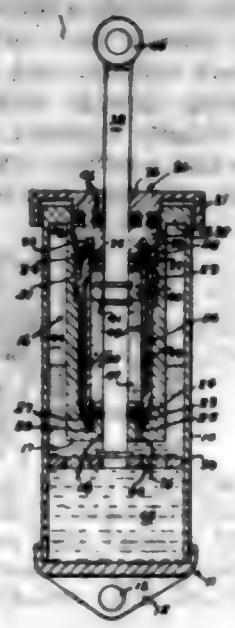
panel being folded over said back panel and flap to form an inner pocket compartment, said side second panel being folded over said back panel and said first side panel to form an outer pocket compartment, said second side panel having an upper edge secured to said garment inwardly thereof and in substantially flush relation with said lower edge of said opening, said first side panel having a free upper edge disposed below said opening, said flap having a free lower edge underlapping said upper edge of said first side panel, said first side panel including an inner surface, separable fastener means readily detachably connecting said free lower edge of said flap to said inner surface of said first side panel, and said side panels each having a side and a lower edge secured to said back panel.

2,859,450
ARTIFICIAL FINGERS AND HAND MECHANISM
Daniel B. Becker, St. Paul, Minn.
Application January 7, 1955, Serial No. 480,386
13 Claims. (Cl. 3—12.7)

11. An independently replaceable finger structure for an artificial hand capable of grasping objects at different pressures in combination with a hand body comprising a flexible and resilient hollow body having flexible tubular walls and a solid closed end provided with a fingernail, and cooperable detachable connecting means on the other end of said hollow body and said hand including a ring and groove means.

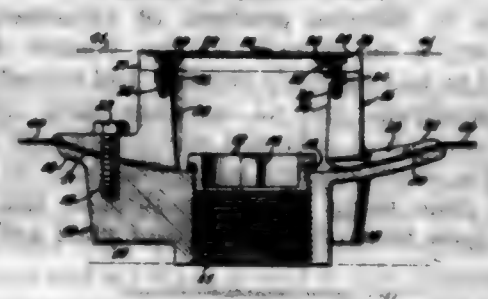
2,859,451
HYDRAULIC SYSTEM
Hans A. Mauch, Dayton, Ohio
Application November 8, 1956, Serial No. 620,417
16 Claims. (Cl. 3—22)

1. An artificial leg comprising a hollow shank, means for mounting said shank in pivotal relation to a thigh, a hydraulic cylinder pivotally connected to said shank internally thereof and having means for connection of said cylinder in pivotal relation to the thigh, said connecting means being axially movable within said cylinder, and control means within said cylinder and operatively connected to said connecting means, automatically responsive to swing phase movements of said shank for imposing a dampening effect on said shank that



varies in a predetermined pattern as movement of the shank progresses through its operating cycle.

2,859,453
SHOWER DRAIN COMBINATION
Benjamin Seewack, Los Angeles, Calif.
Application April 25, 1955, Serial No. 503,632
3 Claims. (Cl. 4—146)

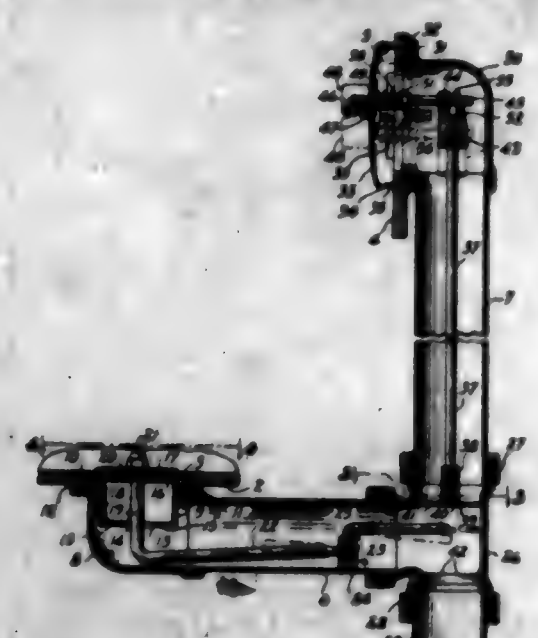


1. A shower drain combination, comprising: a generally cylindrical drain member; an annular ring of corrosion-resistant metal overlying the upper edge of said drain member, said ring and said drain member including vertically aligned inwardly directed boss means, said boss means having aligned bores, the boss means of the drain member being threaded; screw members extending through said bores to secure said ring to said drain member; a strainer of corrosion-resistant material mounted on said ring and overlying said screw members, and securing means independent of said screw members securing said strainer solely to said ring member.

2,859,453
DRAIN CONTROL DEVICE FOR BATH TUBS
Leon Bloch, Cleveland, Ohio
Application April 2, 1956, Serial No. 575,479
2 Claims. (Cl. 4—199)

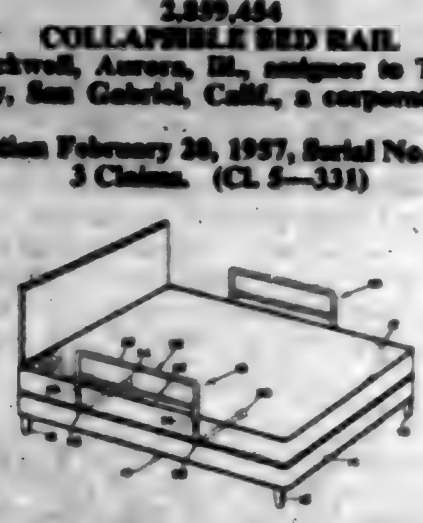
1. In a bath tub having a drain opening in its bottom and an overflow opening in an end wall, a cup-shaped drain fitting in said drain opening having a bottom with a central opening and drain apertures and an open upper end formed to provide an annular valve seat, a cover plate secured to the inner face of said end wall over said overflow opening, said cover plate having openings for flow of water from the tub to said outlet opening and a vertically disposed slot, a drain conduit receiving said drain fitting and extending along the underside of said tub toward said end wall, an overflow conduit connecting said overflow opening to said drain conduit, a valve having a downwardly tapered periphery that fits said valve seat, a stem attached to said valve and slidable

in said central opening, a lever in said drain conduit rigidly connected to said stem and having its outer end beneath said overflow conduit, a fulcrum member carried by said lever and slidably and rockably engaging the bottom of said drain conduit, said lever being removable with said fitting through said drain opening, a handgrip member slidably mounted in said vertical slot and extending into said overflow conduit, spring pressed means for yieldably clamping said handgrip member to



said plate in different positions of adjustment in said vertical slot, a rod in said overflow conduit detachably connected to said handgrip member and extending downwardly therefrom, and an actuating plate attached to said rod above said lever and engageable with said lever to rock the same and lift said valve from its seat, said rod and plate being removable through said overflow opening upon removal of said cover plate and handgrip member.

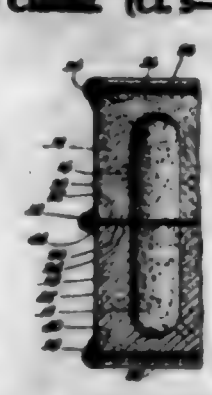
2,859,454
COLLAPSIBLE BED RAIL
George Bockwell, Aurora, Ill., assignor to The Cal-Dak Company, San Gabriel, Calif., a corporation of California
Application February 28, 1957, Serial No. 641,350
3 Claims. (Cl. 5—331)



1. A collapsible bed rail for use with a bed having a mattress and a material-covered support for said mattress, the said bed rail comprising: a frame member to extend only vertically along the side of a bed and of sufficient height to retain a body rolling outwardly of a bed; two legs mounted on said frame member that are rotationably movable about parallel axes in a substantially horizontal plane, said legs having lengths less than half the distance between their rotational axes, said legs being movable to a position perpendicular to the plane of said frame member and being further rotatably movable to a compact position extending towards each other from their respective axes of rotation lengthwise of said frame member and enlarged friction means on the end

of each of said movable legs, to frictionally resist the withdrawal of said legs from the space between said mattress and the said mattress support.

2,859,455
MATTRESS STRUCTURE
Max Koenigsberg, Highland Park, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Application September 30, 1955, Serial No. 537,738
3 Claims. (Cl. 5—345)



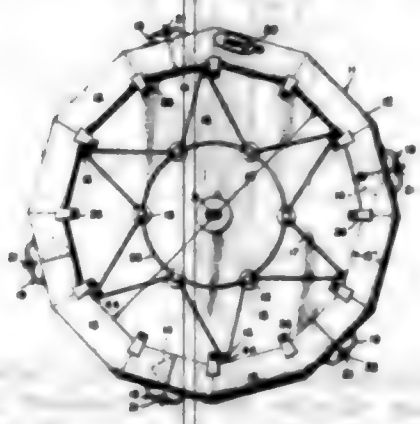
1. A mattress structure comprising a cushion unit including a plurality of superposed pads of foam rubber and the like each having a plurality of air pockets having open ends at a surface thereof facing an adjacent surface of another pad, and a flexible relatively unstretchable fabric sheet disposed between and adhesively secured substantially to entire adjacent surfaces of adjacent pads around the open ends of the air pockets to increase lateral stability of the pads, and cover means including side portions overlying opposite sides of said unit and an edge portion surrounding a peripheral edge of said unit, said fabric sheet having its peripheral edge stitched to said cover means edge portion between said side portions for restraining said edge portion and peripheral edges of said pads against lateral expansion when a load is placed on the mattress, and stitch means connecting adjacent margins of said side portions and said edge portion and also extending through adjacent outer peripheral corner portions of opposite outermost pads for retaining the cover means and the pad in substantially fixed relationship and for further restraining lateral expansion of the pads.

2,859,456
COMBINATION BUSHING REMOVER, SEAT REAMER, AND BUSHING SETTER
Nathan E. Taylor, Lufkin, Tex.
Application November 17, 1955, Serial No. 547,415
2 Claims. (Cl. 7—14.1)

1. In a tool for removing and replacing a pair of bushings from aligned bores in a supporting member, the combination comprising a screw-threaded arbor having enlarged stop means at one end thereof, a pair of mandrels

slidably received on said arbor, nut means disengageably threaded onto said arbor, said nut means having operating means thereon, each of said mandrels having a pilot end portion at one end thereof and corresponding in outer diameter with the inner diameter of the bushings for reception therein, each of said mandrels having a generally cylindrical portion adjacent said pilot portion with a shoulder therebetween engageable with the outer end of one of the bushings for pushing the bushings toward each other and out of the alined bores, said cylindrical portion corresponding generally in outer diameter and length to the outer diameter and length of the bushings, each of said mandrels having cutting means thereon adjacent said cylindrical portion for reaming out the ends of the bores in the supporting member, and means on each of said mandrels for rotating the same and thereby actuating said cutting means.

2,859,457
LIFE RAFTS
Charles E. Manhart, Miami, Fla.
Application July 5, 1955, Serial No. 519,780
2 Claims. (Cl. 9—11)

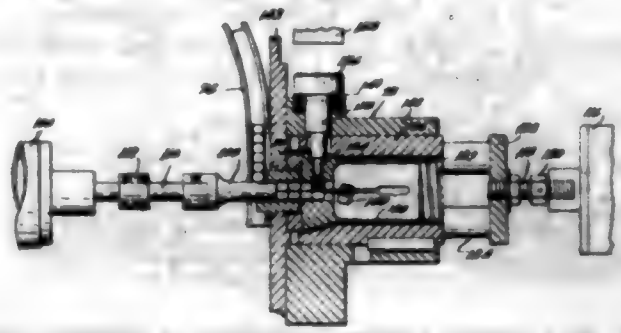


1. A life-raft having an inflatable endless tube, a diaphragmatic deck extending inwardly of the tube at an elevation substantially at the midheight of the tube, an endless life-line extending annularly around the center of the deck and inboard of the tube, an inner ring of looped means for slidably securing the life-line to the deck at a plurality of points, an outer ring of breakable looped strap means disposed at a plurality of points around the periphery of the raft, and a second endless life-line extending alternately and slidably through a looped strap of the outer ring thereof and a loop of the inner ring thereof to present in plan view a circle formed by the inner life-line from which radiates a plurality of angles formed by the outer life-line with the outer looped straps, whereby when an occupant of the life-raft puts an abnormal strain on the second life-line a looped strap of the outer ring thereof will break instead of a loop of the inner ring thereof.

2,859,458
LIFE PRESERVING FLOAT
Carmine Leo Caiazzo, New York, N. Y.
Application May 2, 1956, Serial No. 582,184
1 Claim. (Cl. 9—11)

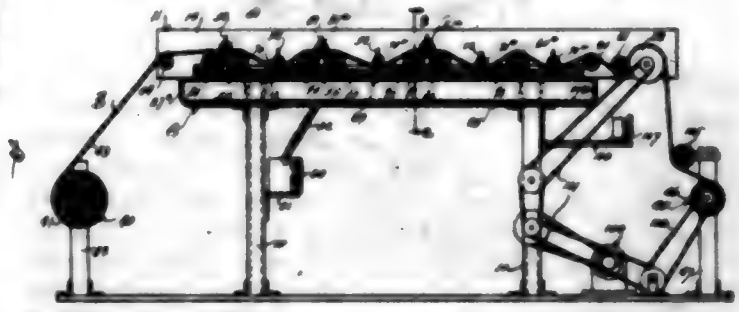
An elongated cylindrical body member of light, buoyant, balsa wood material as a unit to form a life preserving float, said body member having at least one compartment therein for supplies, and a sealing member for said compartment, a hook at each end of said body member whereby a plurality of floats may be joined end-to-end, ball and socket means securing each hook to the respective end of the body member whereby each hook has freedom of angular movement, a pair of link chains encircling the float body and spaced apart longitudinally thereof and intermediate the ends of the body member, a plurality of hooks joined to each link chain at equally spaced intervals thereof, a plurality of handles secured to said cylindrical body, said plurality of handles being disposed in at least three groups spaced longitudinally of said float, each group of handles comprising four handles equally spaced around the periphery of the float and a plurality of hollow water tight compartments in said float body.

2,859,459
SELF-LOCKING NUTS HAVING RADIALLY DEFORMED THREAD PORTIONS
Albert Stoll, Detroit, Mich.
Application December 27, 1954, Serial No. 477,769
10 Claims. (Cl. 10—72)



1. Apparatus for making self-locking nuts and the like comprising, in combination, a supporting structure, self-adjusting means carried by said supporting structure for gripping a nut blank around substantially the entire periphery thereof, extruding punch means actuatable to engage the side walls of a nut blank intermediate the ends thereof when said nut blank is held in said gripping means, and stop means carried by said gripping means and limiting the travel of said extruding punch means independently of the outside dimension of said nut blank.

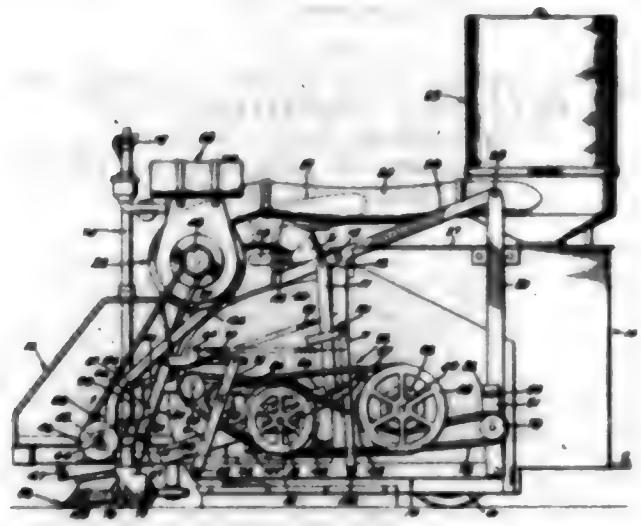
2,859,460
APPARATUS FOR DE-INKING CELLOPHANE, ETC.
Vincenzo Evangelisto, Devon, Pa.
Application November 13, 1951, Serial No. 256,011
7 Claims. (Cl. 15—4)



1. Apparatus for the cleaning of ink and other materials from flexible webbing such as cellophane comprising a supporting frame, a trough mounted upon the frame for containing a solvent bath, means on the frame for supporting a starting roll of webbing to be cleaned, means on the frame for receiving a roll of webbing after cleaning, rollers supported on horizontal axes by the frame over the trough with the lower portions thereof in position for immersion in the liquid within the trough, the upper portions of said rollers being positioned to lie above the liquid level in the trough, means for causing the webbing from the starting roll to contact the upper portions

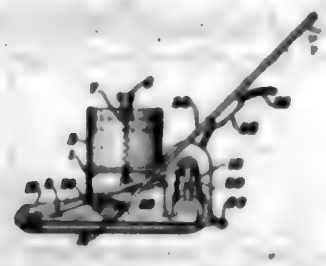
of said rollers for receiving solvent directly from the rollers, and means for causing at least some of said rollers to rotate at a slower rate of speed than the travel of the web whereby to provide a frictional resistance against the under inked side of the webbing.

2,859,461
SWEEPER DRIVE AND ADJUSTMENT CONSTRUCTION
Fred J. Machovec, Pasadena, Calif., assignor, by mesne assignments, to Clarke Sanding Machine Co., a corporation of Michigan
Application February 12, 1954, Serial No. 409,823
21 Claims. (Cl. 15—83)



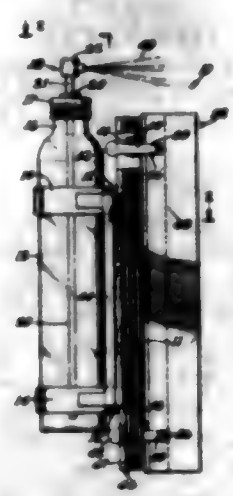
14. In a power sweeper apparatus, a wheeled frame, an engine mounted on said frame, a main sweeper brush and brush shaft journaled on said frame in floating relationship, a drive wheel, flexible drive means for operatively connecting said engine to said main brush shaft and to said drive wheel, means to adjust the elevation of said main brush shaft, a curb brush frame pivotally connected to said main brush shaft, a curb brush having a shaft journaled in said curb brush frame, flexible drive means operatively connecting said main brush shaft to said curb brush shaft, and means to pivot said curb brush frame about said main brush shaft to adjust the elevation to said curb brush.

2,859,462
PASTE SPREADING MACHINE
Marcus Shafer, Pittsburgh, Pa.
Application June 2, 1954, Serial No. 433,993
1 Claim. (Cl. 15—99)



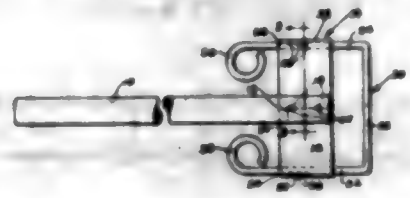
A machine for spreading paste on floors for adhering rubber tile or similar floor covering material thereon, said machine comprising a pair of rollers extending across the entire width of the machine and a belt of corresponding width entrained about said rollers for providing tractor-like propulsion of the machine on the floor surface, an electric motor mounted on said machine and driving said rollers so that the belt will provide tractor-like propulsion of the machine, said machine having mounted thereon a housing which is provided with a circular opening at the top for receiving an open ended can of paste of slightly smaller diameter, means for supporting the lower open end of the can immediately over the upper flight of said belt, means for exerting continuous pressure on the top of the paste, said housing being open at the bottom and spaced above the lower flight of said belt so as to discharge paste along substantially the entire width of said housing and having at the forward portion thereof, with respect to the direction of movement of the machine, a downwardly projecting plate adjacent to said circular opening and the upper flight of said belt and having tooth-like notches in its lower edge for limiting the height and shaping the layer of paste discharged onto the belt.

2,859,463
WINDOW CLEANING IMPLEMENT
Joseph Hirsch, Pacific Palisades, Calif.
Application February 13, 1956, Serial No. 565,896
6 Claims. (Cl. 15—126)



1. A self-contained window cleaning implement comprising, a base member having a resilient pad secured to one face thereof, resilient clip means secured to the opposite face of said base, a squeegee-type resilient glass wiping device extending along one longitudinal edge of said base member, said wiping device being spaced outwardly from the edge of said base member and rearwardly from the exterior surface of said resilient pad, a combined implement handle and liquid cleaning agent container detachably supported in said spring clip means and having an axis spaced from said base member, liquid dispensing means supported in one end of said cleaning agent container and manipulatable by the hand while gripping said cleaning implement therewithin, said resilient pad and said wiping device being selectively engageable with a window surface by tilting said device through a small angle about the axis of said handle.

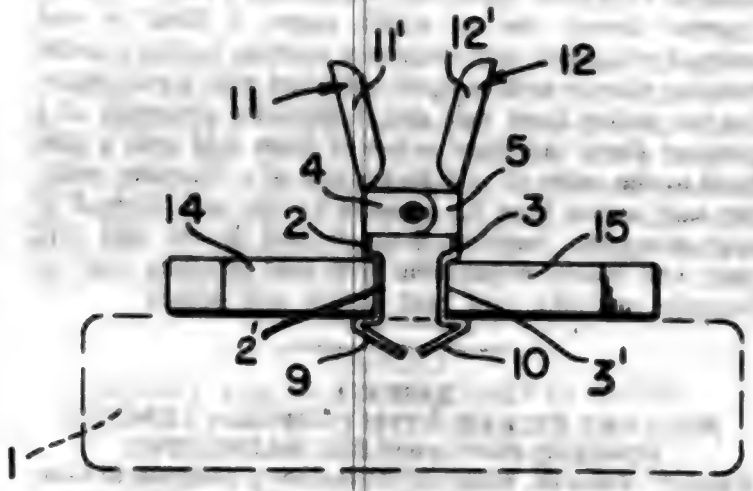
2,859,464
MOP HOLDER HAVING RESILIENT SLIDING CLAMPING JAW
Marco Antonio Colnaghi, Winthrop, Mass., assignor of one-half to Walter Kaplan, Boston, Mass.
Application May 24, 1956, Serial No. 587,164
3 Claims. (Cl. 15—151)



1. A mop device comprising a handle having a slot therein at one end, a guiding sleeve embodying two sides extending into said slot and two loop portions connecting said sides at opposite sides and beyond said slot, said loop portions each having a turned-in end, one said

side being solid and having two holes therethrough, and the other said side having two free ends which terminate adjacent each other in said slot, pin members extending through said handle, sleeve holes and slot that fixedly hold said sleeve to said handle, and an actuating member embodying a front bar portion forwardly of said sleeve, and two resilient leg portions extending from opposite ends of said bar having notches therein which extend inwardly, said turned-in ends normally extending into said notches.

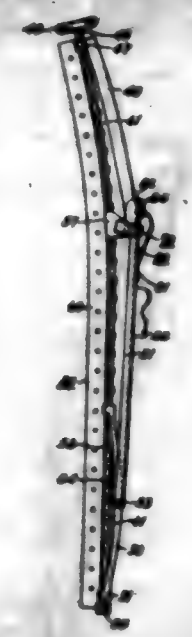
2,859,465
HOLDER FOR A SCOURING PAD
David Golden, Long Beach, N. Y.
Application November 27, 1953, Serial No. 394,714
3 Claims. (Cl. 15—209)



1. A holder for a scouring pad comprising, in combination, a pair of substantially identical rigid jaw plates, each of said jaw plates having a centrally located and laterally outwardly extending ear at each longitudinal end, said ears extending in the same general direction, a pin pivotally connecting said laterally outwardly extending ears of both of said jaw plates together, a straight row of teeth along one longitudinal edge of each of said jaw plates, a tension spring encircling said pin having one end in engagement with one of said plates and the opposite end in engagement with the other one of said plates, said spring normally biasing the teeth of said jaw plates toward each other, a finger piece extending along the opposite longitudinal edge of each of said jaw plates for manually urging said teeth along one edge of said plates apart against the action of said torsion spring, each said jaw plate intermediate said ears and said teeth defining a substantially straight sided longitudinal channel-shaped groove opening laterally outwardly in a direction opposite from said ears, and a resilient shield plate secured within each said groove.

2,859,466
WINDSHIELD WIPER BLADE ASSEMBLY
Grant E. Sanden, Rochester, and Cyril T. Wallis, Brockport, N. Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 10, 1954, Serial No. 428,561
19 Claims. (Cl. 15—245)

1. A windshield cleaner comprising, a holder having an arm attaching part, a yoke movably connected to one end of said holder, a member movably connected to the other end of said holder, resilient means interconnecting spaced points on the member and the holder for normally maintaining a predetermined angular relationship therebetween, and a squeegee unit freely flexible



throughout its length and connected at longitudinally spaced points to said yoke and said member.

2,859,467
WINDSCREEN WIPER BLADES
William Edward O'Shea, London, England
Application January 20, 1955, Serial No. 483,132
4 Claims. (Cl. 15—245)

4. A windscreen wiper blade comprising a squeegee element, grooves extending longitudinally of the squeegee element along opposite sides thereof and adjacent the rear thereof, a backing member extending at least part way along the squeegee element and being constructed for part of its length of rigid channel form with inwardly directed flanges along its free edges which extend into said grooves and for the remaining part of its length by flexible extensions of said flanges, said flexible extensions also extending into said grooves, and a yoke member connecting said flexible extensions to said rigid channel form part of the backing member.

2,859,468
WINDSCREEN WIPER BLADES
William Edward O'Shea, London, England
Application January 20, 1955, Serial No. 483,133
11 Claims. (Cl. 15—245)

1. Windscreen wiper blade comprising a squeegee element, a yoke member extending along the back thereof

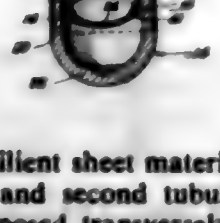
2,859,472

rotatable about a horizontal axis and having axially

and two squeegee support members respectively connected to the yoke members only adjacent opposite ends of the yoke member and respectively extending only inwardly of the ends of the yoke member, said support members

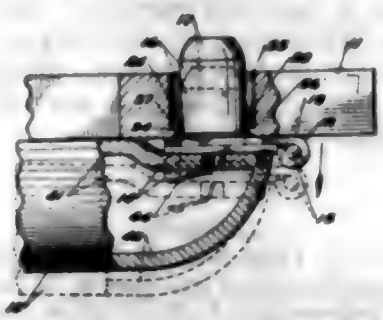
being connected to the squeegee element and restraining flexing of the squeegee element transversely to its median plane whilst being resiliently movable about their ends which are connected to the yoke members in the direction of said median plane and towards the yoke.

2,859,469
ASSEMBLY AND FASTENER THEREFOR
William D. Stockdale, Arlington Heights, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application January 27, 1956, Serial No. 561,794
5 Claims. (Cl. 16—42)



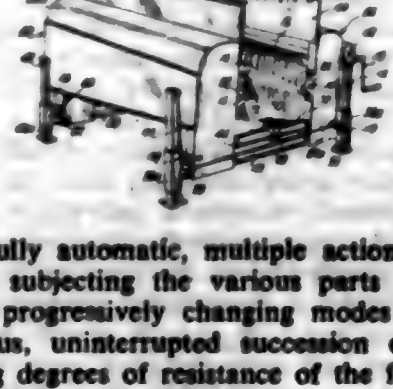
1. A one-piece resilient sheet material fastening device for connecting first and second tubular members comprising a section disposed transversely to a longitudinal axis of said device, means projecting from an end of said section for engaging an interior surface of the first tubular member and restraining axial shifting of said device with respect to said first tubular member toward the second tubular member, a pair of resilient leg means respectively extending from opposite ends of said section generally axially of said device, elements respectively connected to and extending laterally of said leg means for engaging an interior surface of said second tubular member and restraining shifting of said device with respect to said second tubular member toward said first tubular member, and a pair of normally spaced apart means including portions of said leg means adjacent said elements extending toward each other over said section into adjacent relationship, said pair of means being shifted toward each other and into abutting relationship when said elements are engaged with the interior surface of said second tubular member for firmly supporting said elements in engagement with said second tubular member.

2,859,470
RELEASABLE HINGE
Herschel L. McClung, Bloomington, Ind.
Application February 18, 1957, Serial No. 640,688
4 Claims. (Cl. 16—167)



3. The combination of a releasable hinge structure intervening between a relatively stationary member and a member swingable therefrom, comprising a pair of hinged together leaves, one of which leaves is fixed to said swingable member; said stationary member having a socket entering therein with an open outer end with a bore entering the socket from said end; a shoulder presented at a position along said bore removed from said end; a post fixed to the other of said leaves and of a diameter entering said socket bore for support by the wall thereof of said swingable member through said leaves and said post; and means engageable with said shoulder and releasably retaining said post within said socket.

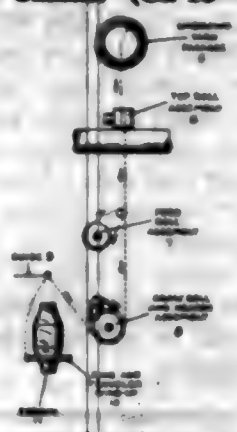
2,859,471
POULTRY PICKER WITH UNIFORM LENGTH FINGERS OF VARIABLE DIAMETERS
Ralph S. Zebarth, Hickman Mills, Mo., assignor to Gordon Johnson Equipment Company, Kansas City, Mo.
Application February 23, 1954, Serial No. 411,750
14 Claims. (Cl. 17—11.1)



1. In a fully automatic, multiple action machine for sequentially subjecting the various parts of a bird to a series of progressively changing modes of treatment in continuous, uninterrupted succession commensurate with varying degrees of resistance of the feathers thereof to picking, while the bird is advanced constantly along a predetermined path of travel, said machine comprising a pair of elongated reels, spaced apart to receive the bird therebetween, and rotatable continuously about their longitudinal axes; a plurality of outwardly-extending, flexible fingers mounted on each reel respectively throughout the length thereof and spaced circumferentially therearound, the fingers being relatively heavy at one end of the reels, becoming gradually and progressively lighter as the opposite end of the reels is approached whereby the picking action thereof uniformly varies in step-by-step fashion and with decreasing force as said opposite end of the reels is approached; and means mounting the reels with said axes thereof disposed at an angle to said path of travel of the bird whereby picking commences at one end of the bird as it enters between the reels and proceeds gradually and progresaively to the opposite end of the bird as it advances along the reels.

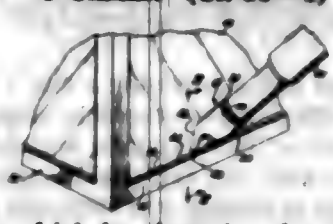
tively in contact with the said inner surfaces of the chan- laterally spaced substantially horizontal rails to carry said

2,859,472
APPARATUS FOR REDUCING SHRINKAGE AND CREEP OF THERMOPLASTIC YARNS
Robert C. Winckhofer, Irvington, N. J., assignor to Allied Chemical Corporation, a corporation of New York
Application October 5, 1955, Serial No. 538,734
3 Claims. (Cl. 18—1)



1. Apparatus for reducing the heat shrinkage and creep of molecularly oriented, thermoplastic filamentary material comprising a filament tensioning apparatus including a draw roll and an associated separator; and a heated solid stationary surface positioned to contact the filament as it moves between draw roll and separator between said draw roll and separator; said draw roll having a bumpy take-off end surface.

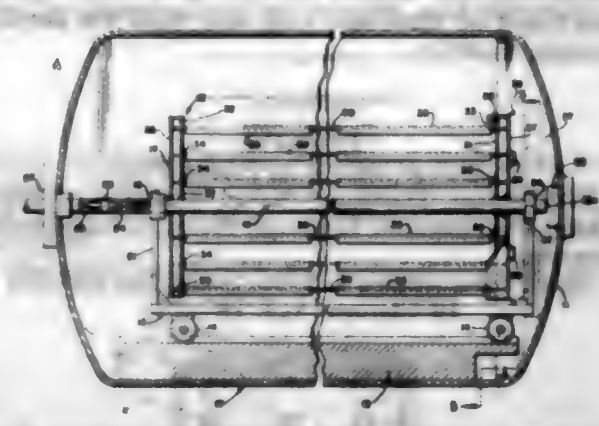
2,859,473
DEVICE FOR SEALING LEAKS IN FLUID CONTAINERS
Paul M. Warren, Montebello, Calif.
Application March 5, 1956, Serial No. 569,344
3 Claims. (Cl. 18—1)



1. A device which is adapted to be employed in sealing leaks in constructions which are adapted to hold a liquid, which constructions have a joint between two water impervious members filled with a thermoplastic compositions forming a seal between said members, said device being adapted to be used in manipulating said thermoplastic composition in said joint, said device comprising: a heat conductive body formed so as to include means adapted to be connected to a heat source so that said body projects from said heat source in a given direction, a tip formed integrally with said body so as to project therefrom at an acute angle to said given direction so that said tip may be manipulated in order to fit closely against a joint between two water impervious members within a construction adapted to hold a fluid, said tip including a bar shaped end provided with a concave cavity facing generally away from said body, said end being adapted to engage a thermoplastic composition and to be used in heating and manipulating said thermoplastic composition.

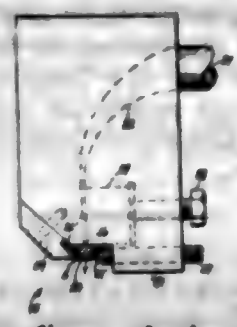
2,859,474
APPARATUS FOR MAKING ELASTIC BANDS
William H. Spencer, Alliance, Ohio
Original application July 18, 1952, Serial No. 299,549, now Patent No. 2,781,556, dated February 19, 1957. Divided and this application August 21, 1956, Serial No. 605,919
7 Claims. (Cl. 18—6)

1. Apparatus for making circular elastic tubing as for making elastic bands, comprising a reel mounted to be rotatable about a horizontal axis and having axially spaced end walls provided with axially aligned circular openings, mandrels of circular cross-section smaller than said circular openings and adapted to be smaller than the internal diameter of the tubing, whereby the latter will be substantially freely suspended from the mandrels to have relatively narrow areas of contact therewith, said mandrels being adapted to be supported between the low-



ermost portions of aligned said circular openings with said tubing thereon, means for rotating said reel with resultant rotation of the mandrels about the axes thereof, and means for vulcanizing said tubing on the mandrels while said reel is rotated, whereby said areas of contact of the tubing with the mandrels will be progressively changed by relative rotation thereof on the mandrels and the tubing will be substantially uniformly vulcanized while the circular shape thereof is maintained.

2,859,475
ADJUSTABLE EXTRUSION DIES
Henning T. Tornberg, Ridgewood, N. J., assignor to Modern Plastic Machinery Corp., Lodi, N. J., a corporation of Delaware
Application August 21, 1956, Serial No. 605,296
1 Claim. (Cl. 18—12)



In a die for extruding a plastic mass of a predetermined cross-section, a body member having an exterior first flat surface, a discharge orifice of such cross-section opening in said surface and a passage to receive and lead plasticized material out of said body member through said orifice, a first member fixed on said body member, positioned to one side of the discharge orifice, presenting a second flat surface in a predetermined acute angular regulation with the first flat surface whereby said flat surfaces are the inner surfaces of the walls of a channel along the orifice, a second member fixed on said body member positioned to the other side of said discharge orifice and opposite said first member, a screw extending through said second member and in threaded engagement therewith; the longitudinal axis of said screw being substantially parallel to said first surface and substantially perpendicular to the line of intersection of the planes of the surfaces of the walls of said channel whereby one end of said screw is between said first and second members; said end of the screw being conical and an orifice-closing member having two exterior flat surfaces in the mentioned angular relation of the surfaces of the walls of the channel, lying within said channel whereby said surfaces of the closing member are respec-

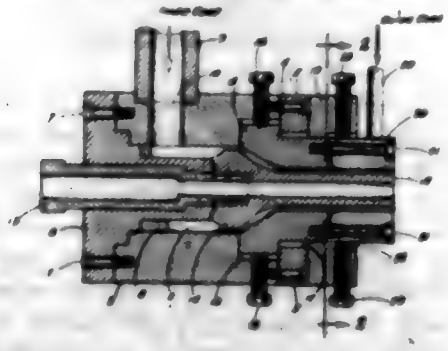
drawn rods toward a forwarding device while contact-

with optimal retention of the heat-sealability characteris-

elements in engagement with said second tubular member. Vances along the reels.

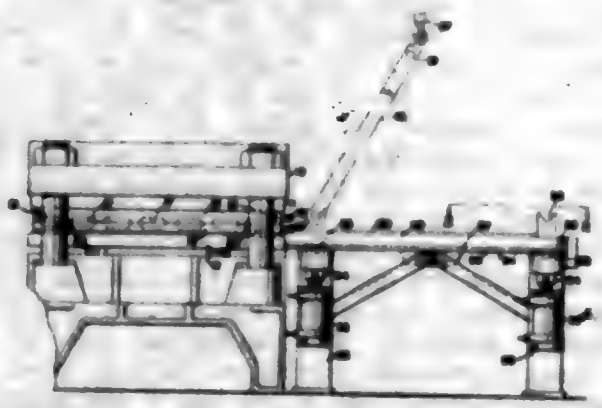
tively in contact with the said inner surfaces of the channel and one of said surfaces of the closing member is across part of said discharge orifice; said closing member having a third flat surface in acute angular relation with its other two mentioned surfaces; said three surfaces of said closing member determining a triangular prismatic form; said screw holding the closing member within said channel; the conical end of said screw being in contact along its slant line with said third flat surface of the closing member.

2,859,476
EXTRUSION APPARATUS
John J. Lainson, Hastings, Nebr., assignor to Western Plastics Corporation, Hastings, Nebr., a corporation of Nebraska
Application August 1, 1955, Serial No. 525,513
10 Claims. (Cl. 18—13)



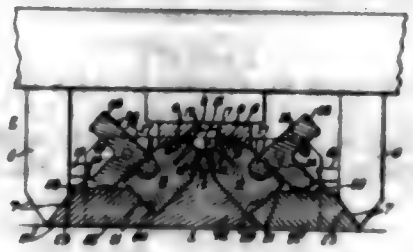
5. A die for extruding a multiple-core tube comprising a casing having a central bore, a pipe positioned within said central bore, a pair of sleeves positioned within said bore and over said pipe in an end to end relation and coupled one to the other, means for supplying a source of material forming an inner core of said tube between one of said sleeves and said pipe and to advance in the direction of the other sleeve, means for supplying a second source of material between said sleeves for forming an outer core adhering to the inner core, means for simultaneously adjusting the position of both of said sleeves with respect to said pipe in a direction transverse to the axis of said pipe, and means for adjusting the relative position of one of said sleeves with respect to the other sleeve and the pipe.

2,859,477
MOLD SEPARATOR DEVICE
Ohio C. Millhoff, Barberton, Ohio, assignor to The Nye Rubber Company, Barberton, Ohio
Application July 28, 1953, Serial No. 370,754
2 Claims. (Cl. 18—42)



1. In combination, a mold couple comprising a top and bottom mold plate matable together to define molding cavity means therebetween, said bottom mold plate having four laterally extending carriage wheels spaced to roll the couple along suitable rail surfaces, said top mold place having four laterally extending lift pins spaced around the periphery thereof, a mold receiving bed having two laterally spaced substantially horizontal rails to carry said carriage wheels, locator means determining an engaged position of said mold couple on said rails, lock plate cover means over the wheels in said engaged position, said rails and lock plate cover means defining opposed longitudinal slots in which said carriage wheels may roll longitudinally and be held against vertical movement, four elevator members including hydraulic rams with vertically slotted contact members spaced below said lift pin members of the top mold plate, said contact members being elevatable to engage said pins and lift said top mold plate off said bottom plate, said slots also serving as pivot sockets in which said pins may pivotally support the top mold while one end thereof is further lifted to open said mold couple, and control means for said elevator members, said control means positioned to be activated by said mold couple in said engaged position, whereby said elevator members can be operated only when the mold couple is properly located.

2,859,478
MOLD STRUCTURE
Roy Acton Glasson, Syke Close, Iver, England, assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N. J., a corporation of New Jersey
Application September 23, 1954, Serial No. 457,930
Claims priority, application Great Britain June 21, 1954
16 Claims. (Cl. 18—42)



16. A moulding tool comprising a die, a die supporting part, a plunger carrying part movable along an operative axis toward and away from said die supporting part, said die comprising at least one retractable component having at least one cavity extending in a direction oblique to the operative axis of the plunger carrying part and an adjacent component with respect to which said retractable component is slideable into and out of operative combination therewith in the direction of said cavity, and means for securely locking the retractable component against displacement during a moulding operation.

2,859,479
NYLON PELLETING PROCESS
Carl R. Eckardt, Morristown, N. J., assignor to Allied Chemical & Dye Corporation, New York, N. Y., a corporation of New York
Application September 27, 1957, Serial No. 686,739
2 Claims. (Cl. 18—47.5)

1. Process for pelleting nylon which comprises extruding molten, filament-forming, molecularly orientable nylon, at a temperature in the melt of at least about the flow temperature, into a water quench bath in the form of a plurality of separate, parallel, generally circular rods of average diameter about 0.02 to about 0.2 inch; withdrawing the rods from said bath when cooled to average temperature not above about the flow temperature less 15° C. and not below about 110° C.; guiding said with-

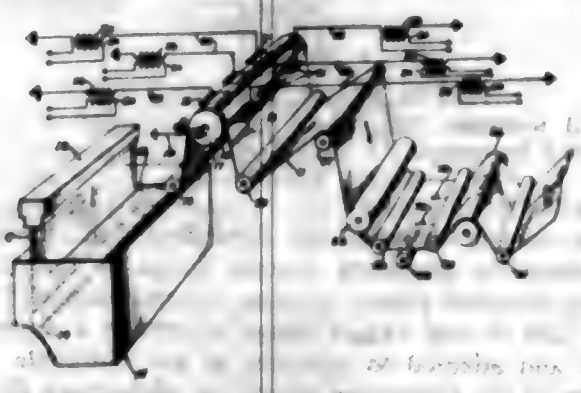
2,859,484 with a plurality of upwardly extending anchor members,

drawn rods toward a forwarding device while contacting the rods with a gaseous drying medium; gathering said rods into side-by-side contact by use of a guide at a point in their travel through the quench bath and up to the forwarding device when their average surface temperature is below the tacky point at which they adhere to the guide and while they remain sufficiently hot to adhere together along lines where mutual contact is maintained forming a ribbon in which the individual identity of the rods is preserved and which when cool is separable into constituent rods by a sharp twist; after the ribbon thus formed is dry on the surface, passing it through the forwarding device under substantially non-orienting tension and at surface temperature of at least about 40° C.; and shearing off in transverse succession the ends of the rods, as the ribbon advances beyond the forwarding device, at average temperature of the resulting pellets not above about 110° C., simultaneously breaking adhesions between the ends of the rods, as they are sheared off, by twisting effect of the cutting stroke on the advancing ribbon; thereby producing generally cylindrical pellets.

2,859,480
METHOD OF TREATING POLYETHYLENE SHEET MATERIAL

George H. Berthold, Guilford, Conn., and Alvin S. Munch, Winchester, Mass., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

Application December 13, 1954, Serial No. 474,904
12 Claims. (Cl. 18—48)

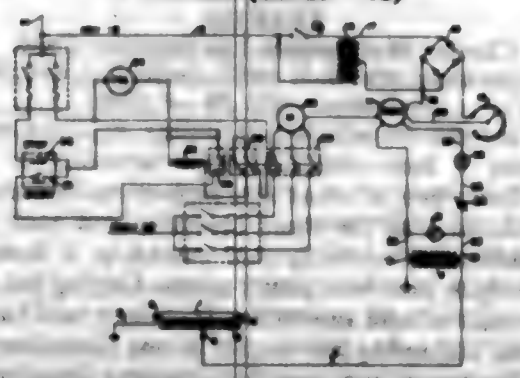


1. The method of producing without substantial structural reformation a polyethylene structure a surface of which is to exhibit superior anchorage characteristics which comprises passing said structure at a temperature of at least 115° F. through an electric glow discharge.

2,859,481
ELECTRICAL DISCHARGE TREATMENT OF POLYETHYLENE

Walter S. Kaghan, Orange, Conn., and Donald F. Stoneback, Brevard, N. C., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

Application October 12, 1955, Serial No. 540,137
1 Claim. (Cl. 18—48)

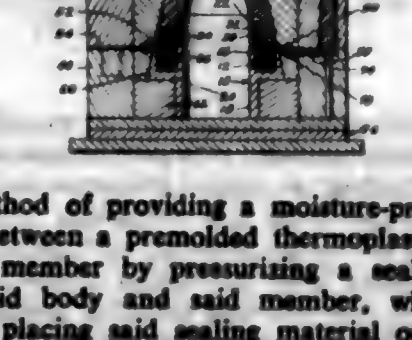


The method of electrically treating a surface of a polyethylene structure to improve its adhesion to printing inks with optimal retention of the heat-sealability characteristics thereof which consists of establishing an alternating current electrical glow discharge between a pair of spaced electrodes, passing a polyethylene structure between said electrodes to subject a surface thereof directly to said discharge, and maintaining the electrical current in said discharge at a value between substantially 5% to 15% below the lowest value at which said discharge is accompanied by electrical arcing through said structure.

2,859,482
BELTING

Fredrick William Warren, Liverpool, and John Douglas Crabbe, Wilmslow, England, assignors to Dunlop Rubber Company Limited, London, England, a British company

Application July 16, 1954, Serial No. 443,958
6 Claims. (Cl. 18—56)



1. A method of manufacturing belting comprising coating at least one ply of textile material with a non-inflammable, thermoplastic composition, passing the coated material through a heating zone to fuse the composition, passing the ply and fused coating between a cooled surface moving in a curved path with said coated ply and a surface moving with said ply and tensioned against said cooled surface in said curved path to cause simultaneous consolidation of said ply and coating and setting of said coating under pressure.

2,859,483
COALESCENCE OF PRE-MOLDED PARTS

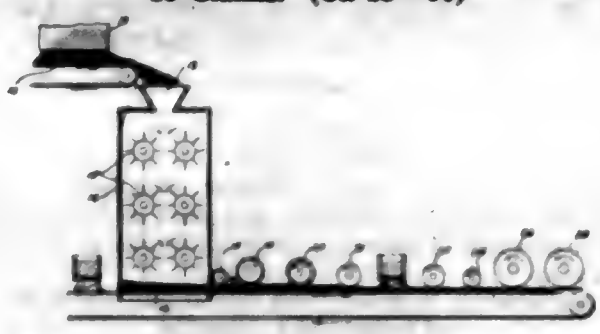
Roy F. High and Morris L. Barfield, Washington, D. C., assignors to the United States of America as represented by the Secretary of the Army

Application January 11, 1957, Serial No. 633,802
4 Claims. (Cl. 18—59)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A method of providing a moisture-proof and air-tight seal between a premolded thermoplastic body and a metallic member by pressurizing a sealing material between said body and said member, which method comprises: placing said sealing material on said member; mounting a thermoplastic filler material of substantially the same material as said body adjacent said sealing material; positioning said body in close proximity to said member and spaced from said filler material; injecting a thermoplastic resin material of substantially the same material as said body between said body and said filler material at a predetermined temperature and pressure, so that said plastics coalesce to form an integral structure and said sealing material becomes pressurized.

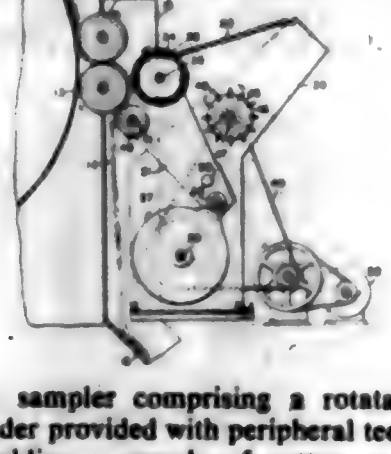
frames for relative pivotal movement in the opposite di- extends from the end of the slat and each connector hav-

2,859,484
METHOD OF MANUFACTURING FIBER-CEMENT SHEETS
Clayton V. French and Elmer R. Ilmo, Somerville, N. J., assignors to Johns-Manville Corporation, New York, N. Y., a corporation of New York
Application May 25, 1954, Serial No. 432,245
15 Claims. (Cl. 18—60)



1. In the method of manufacturing fiber-cement sheets which comprises forming a web upon a felting member from an intimate mixture in air suspension, said web comprising cement particles, staple reinforcing fiber, and water, compressing and densifying said web, and then curing the thus obtained densified web by hardening the cement therein, the improvement which comprises compressing and densifying said web at a plurality of stages wherein the initial stage exerts upon said web approximately 200 to 2000 lbs. per lineal inch and the subsequent stage exerts upon said web approximately 1500 to 6000 lbs. per lineal inch, with the pressure exerted by the subsequent stage being always greater than the pressure exerted by the initial stage.

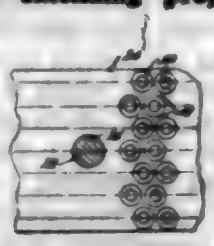
2,859,485
COTTON SAMPLER
Gerald N. Franks, Greenville, Miss.; dedicated to the Public
Application November 26, 1957, Serial No. 699,147
6 Claims. (Cl. 19—156)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A cotton sampler comprising a rotatable sample collecting cylinder provided with peripheral teeth for picking off and holding a sample of cotton as the cotton leaves a condenser drum in a continuous stream, means for oscillating at regular intervals the rotatable cylinder towards and away from the cotton stream so that the peripheral teeth bite into and collect a sample from the stream and pull the same out of the stream with each oscillating interval, and means for doffing the collected samples from the collecting cylinder.

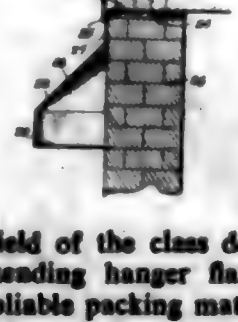
2,859,486
BUILDING SPACER
Denis D. Rovich, Detroit, Mich.
Application August 17, 1953, Serial No. 374,627
1 Claim. (Cl. 20—5)

In a garage wall construction, the combination of, a concrete floor, the outer edge of said floor being provided with a plurality of upwardly extending anchor members, a longitudinally extending corrosion resistant spacer disposed along said outer edge of the floor and having apertures for passage therethrough of said anchor members, the upper face of said spacer being provided with a plurality of upwardly extending projections forming a



plurality of circuitous passageways communicating the exterior of said wall construction with the interior thereof, a sill plate disposed on said projections and provided with apertures for passage therethrough of said anchor members, and fastening means adapted to engage said anchor members to rigidly hold said sill plate and spacer in place on said floor.

2,859,487
TERMITE SHIELD
Vincent F. Tonnen and Willard F. Warne, Corpus Christi, Tex.
Application October 12, 1956, Serial No. 615,657
2 Claims. (Cl. 20—1)



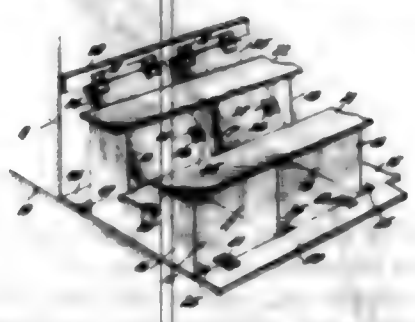
1. A termite shield of the class described comprising a horizontally extending hanger flange, a termite excluding saturated pliable packing material carried by the under face of said hanger flange to contact a supporting means and adapted to conform to and eliminate irregularities in the supporting means for obstructing the passage of termites between said packing material and any irregularities in the supporting means, said horizontally extending hanger flange carrying a depending vertical flange at its outer end adapted to lie flat against the outer face of a support, an outwardly extending skirt carried by the lower end of said depending vertical flange, said depending vertical flange defining means to facilitate the overlapping of the siding of a building thereover and thereby provide means to prevent the penetration of water on top of said horizontally extending flange between the horizontally extending flange and the foundation structure plate of the building.

2,859,488
STANDS
Charles Mackintosh, Los Angeles, Calif.
Application March 7, 1957, Serial No. 644,601
6 Claims. (Cl. 20—1.126)

1. A seating installation including a stand assembly comprising a base panel adapted normally to lie flat upon a floor; two or more flat supporting frames spaced apart widthwise of the stand assembly and each adapted to be positioned vertically and extend in a fore-and-aft direction upon said base panel; means hinging the normally lower ends of said supporting frames to said base panel for pivotal collapsing movement in one direction; at least one flat horizontal seat member disposed above said supporting frames; means hinging said horizontal seat member at intervals to the upper ends of said supporting

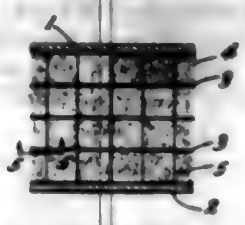
of said other base wall portion, said leg and the inner width of the slot and the slot width being exactly equivalent

frames for relative pivotal movement in the opposite direction from the relative pivotal movement of the base panel and the lower ends of said frames, whereby when the stand assembly is collapsed the base panel, the supporting frame, and the horizontal seat member occupy parallel closely adjacent horizontal planes, and when the stand is opened up for use, the base panel, the horizontal seat member and two adjacent supporting frames define a rectangular enclosure; a rigid locking panel, the width of said locking panel being substantially the same



as the width of said rectangular enclosure; and means for pivotally mounting said panel upon a portion of said installation for swinging movement from an unlocking position entirely exteriorly of said rectangular enclosure to a position within said rectangular enclosure, in which latter position the plane of said locking panel is not parallel with either the planes of said base panel or of said horizontal seat member but at an angle thereto, whereby said locking panel securely blocks said supporting frame from collapsing.

2,859,489
COLLAPSIBLE INSULATION
Willard L. Morrison, Lake Forest, Ill., assignor to The Union Stock Yard and Transit Company of Chicago, Chicago, Ill., a corporation of Illinois
Application February 5, 1957, Serial No. 638,544
8 Claims. (Cl. 20—4)

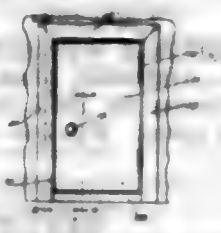


1. Collapsible insulation comprising a pair of spaced relatively stiff generally self-supporting cover plates of non-heat conductive material, a multiplicity of thin, flat, flexible curtains of non-heat conductive material located between the cover plates, compressible fibrous insulation adhering to the opposed sides of curtains and cover plates, flexible tension members of non-heat conductive material generally distributed over the plates and curtains, extending generally transversely thereof adapted to limit separation thereof and maintain them in general parallelism.

2,859,490
FLOORING SECTION
Lucio Cesaratti, Paris, France
Application February 19, 1954, Serial No. 411,492
Claims priority, application France March 13, 1953
1 Claim. (Cl. 20—6)

A flooring section comprising a series of equal length parallel slats positioned in the same plane one beside the other, each of said slats having slots each extending the length of one of the ends thereof with the respective end slots of all of said slats extending in a line, a pair of connectors, each connector being of a relatively flat elongated configuration and positioned in the slots of said slats at one end of the slats, each connector being wider than its respective slot is deep whereby the connector extends from the end of the slat and each connector having a series of tapered projections extending from a side thereof with the altitude of each projection being substantially perpendicular to said connector side and positioned extending into one of said slats longitudinally thereof retaining said slats at a constant spacing relative to one another.

2,859,491
ADJUSTABLE JAMB
Louis Morris, Jr., Rehoboth, Mass., assignor of fifteen percent to John F. Penkala, Warren, and fifteen percent to Arthur Tavares, Bristol, R. I.
Application February 7, 1956, Serial No. 564,819
6 Claims. (Cl. 20—12)



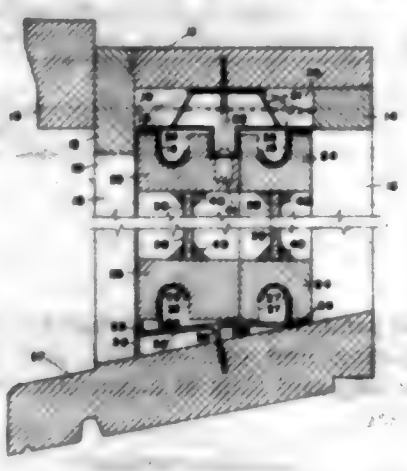
1. In a door frame, a stationary jamb, a movable jamb adjacent thereto having a front face normally disposed in closely spaced relation with respect to the striking edge of a door, means for adjusting said movable jamb for varying the size of the door receiving opening defined thereby, said adjusting means comprising a fixed bracket extending from said stationary jamb in spaced relation to the rear face of said movable jamb, a longitudinally extending groove in said rear face spaced from the opposite longitudinal edges thereof, a flange carried by said bracket extending into said groove, an elongated stud extending through said movable jamb, said stud being freely rotatable with respect to said jamb but fixed thereto for longitudinal movement, said stud adjacent its inner end being threadedly received by said bracket whereby manipulation of the stud causes said movable jamb to move relative to said bracket, and a trim strip fixedly mounted in overlying relation with respect to the free outer side of said movable jamb.

2,859,492
HORIZONTAL SLIDING WINDOW UNIT
Frank S. Nicoll, Jr., Baltimore, Md.
Application April 23, 1954, Serial No. 425,166
4 Claims. (Cl. 20—52.2)

4. A sill plate for horizontally slidably mounting inner and outer sashes in a window frame having a downwardly and outwardly inclined sill, comprising an elongated metal member having inner and outer longitudinally extending, transversely spaced, upwardly projecting guide ribs of approximately like vertical height, inner and outer base wall portions extending in substantially coplanar relationship in opposite directions from the lower edge of said inner guide rib, an intermediate base wall portion extending angularly downwardly from said outer base wall portion to the bottom edge of the adjacent inner side of said outer guide rib, another base wall portion extending laterally from the lower edge of the outside of said outer guide rib, and a leg depending from the outer edge

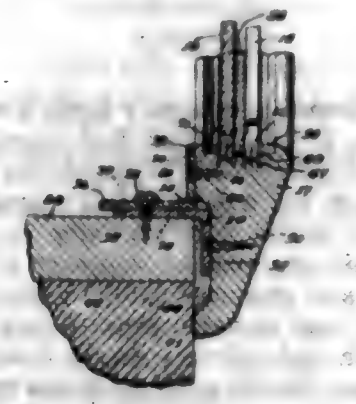
vance portions of the recessed gasket sections of adjacent when in molding position, a sand flask slidably carried by

of said other base wall portion, said leg and the inner edge of said inner base wall portion being adapted to be seated on an inclined sill of the aforesaid character to position said guide ribs with their top surfaces in a plane



which is nearer to a horizontal plane than the top surface of such sill, wherein there is also provided a leg depending from a base wall portion intermediate said guide ribs for seating on the sill of the window frame to additionally support said guide ribs.

2,859,493
STORM WINDOW
Arthur L. Matschke, Mandeleia, Ill.
Application February 10, 1955, Serial No. 487,388
7 Claims. (Cl. 20—55)



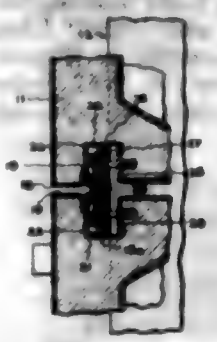
1. In an insulated, enclosed structure having a wall formed with a window opening, the combination with a window frame of metal mounted to said wall to frame said opening and from a sealing joint with portions of said wall adjacent to and surrounding said opening, and a window mounted in said frame and closing said opening; of a storm window comprising glazed window frame means of wood forming a substantially air-tight partition and carried by said structure inwardly of said first-mentioned window, said frame means having a continuous marginal portion overlying and sealing the entire joint between said metal window frame and said wall.

2,859,494
AWNING
Clair I. Hull, Seattle, Wash.
Application March 15, 1955, Serial No. 494,396
2 Claims. (Cl. 20—57.5)

1. In an awning of the type comprising ribs and rib supported slats, the improvement for receiving and holding precurved slats in a concavely upward stressed condition which comprises supporting ribs of channel shaped cross-section with the channel legs upstanding, said channel legs having slat receiving openings consisting of: a hook for receiving one edge of the slat; a slot for receiving the other edge of the slat; and a concave slat support extending from the hook to the slot, the distance between the hook and the bottom of the slot being at least the width of the slat and the slot width being greatly oversized relative to the slat whereby a normally concavely curved slat can be inserted between the slot and the hook when bent to a convex curve and thereafter in resuming its normally concave shape is free to partially withdrawn

from the slot and come to rest with one edge engaged in the slot crosswise contacting the slot side wall, with the other edge engaged by the hook, and with the bottom of the slat resting at least partially against the concave slat support.

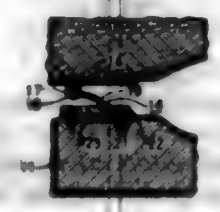
2,859,495
REFRIGERATOR CABINET INCLUDING CLOSURE SEALING MEANS
Edward H. Roberts, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York
Application December 5, 1955, Serial No. 551,872
1 Claim. (Cl. 20—69)



In combination, a cabinet having a face portion defining an access opening to said cabinet, a plurality of closure members for closing said access opening and having shoulders overlying the face portion adjacent said access opening, adjacent closure members having opposed edges spaced from one another and extending across said access opening, opposed recesses in said edges each of said recesses having front and rear side walls with the front walls forming a continuation of said shoulders, a resilient tubular gasket mounted adjacent the periphery of each of said closure members and including sections mounted on said shoulders for contacting said cabinet face portion when said closure members are closed and sections of the same gasket disposed in said recesses and mounted on said front side walls, means for effecting sealing contact of the opposed recessed sections of said gaskets on adjacent closure members when said closure members are closed, said means comprising a gasket deforming member disposed in said recess between said gasket and said rear side wall of said recess and movably supported on said rear wall, means biasing said gasket deforming member toward said rear recess side wall, each of said gasket deforming members having portions extending beyond the ends of said recess for contacting in overlapping relationship said cabinet face portion when said closure member is moved towards a closed position whereby said recessed gasket section is deformed to ad-

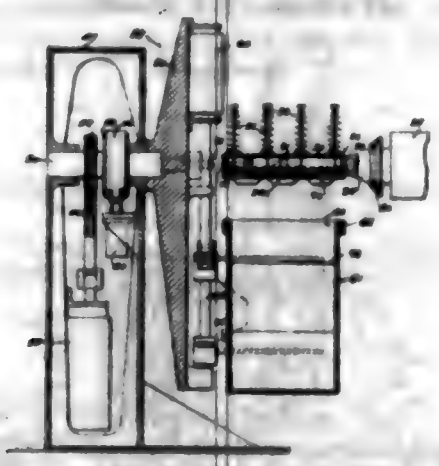
vance portions of the recessed gasket sections of adjacent closure members towards one another and into sealing engagement.

2,859,496
REFRIGERATION APPARATUS
James K. Nelson, Grove City, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 16, 1957, Serial No. 653,137
4 Claims. (Cl. 20—69)



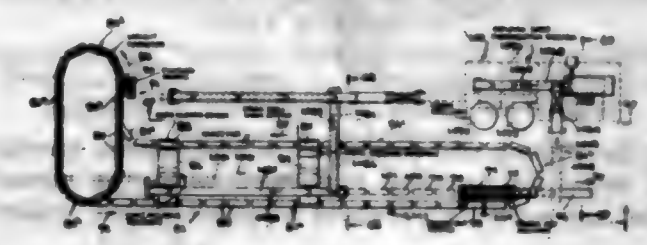
4. A closure seal for a cabinet member having an access opening and a closure member movable with respect to said cabinet member for closing said opening; said closure seal comprising a magnetically attractable seat on one of said members; a gasket mounted on the other of said members adapted to engage said seat in sealing relationship along a line peripheral to said opening, said gasket having an elongated body, means rendering said body magnetically attractable to said seat; and means including a web extending transversely from said body along the length of the body for mounting said gasket on said other member, said web being of non-uniform width so as to couple at least one longitudinal portion of said body more closely to said other member than other longitudinal portions of said body, whereby said gasket body is progressively separated from said seat when said closure member is moved away from said cabinet member, the separation commencing with the closely coupled portion of the gasket body.

2,859,497
SHELL MOLDING MACHINE
Otto W. Winter, Grand Island, N. Y.
Application July 22, 1954, Serial No. 444,977
13 Claims. (Cl. 22—38)



1. A machine for making shell molds, comprising a turret head having its axis in a vertical plane, a reversible pattern assembly rotatably carried by said turret head and being periodically movable thereby in a horizontal plane in sequence to a number of fixed operating stations, a pattern carried by said assembly, said stations being independent of said pattern assembly and being arranged substantially equidistantly about said turret head, said stations consisting of a molding station, a curing station, and a stripping station, a molding device at the molding station, comprising a roll-over yoke independent of said turret head and having a stationary axis of oscillation in the plane of the horizontal path which will be coincident with the pattern assembly axis of rotation when in molding position, a sand flask slidably carried by said yoke and containing a charge of sand mixture, means for moving said flask into sealing contact with the registering pattern assembly when in arrested position, means for periodically rotating said yoke and coacting pattern assembly as a unit when in the arrested molding position to a position to discharge the sand mixture onto said pattern, means to reverse the position of the coacting pattern assembly and sand flask unit to return surplus sand mixture to said flask, a heating device located at said curing station, a stripping device located at said stripping station, and means for moving the turret to bring the pattern assemblies successively to the curing station and stripping station after the operation of said reversing means.

2,859,498
AUTOMATIC METHOD AND APPARATUS FOR MAKING CASTINGS
William G. Reichert, Newark, N. J.
Application August 13, 1954, Serial No. 449,656
72 Claims. (Cl. 22—28)



55. A foundry apparatus comprising a circuitous movable conveyor, stand means extending alongside and adjacent a first portion of the conveyor for movably supporting a series of flask cope and drag sections in end-to-end relation, means for filling a drag section with molding sand and extending from said stand means at a first point thereof to a first station of a second portion of the conveyor opposite said first portion thereof, means for filling a cope section with molding sand and extending from said stand means at a second point thereof forwardly of said first point to a second station of said second conveyor portion forwardly of said first station, said filling means each including means for moving said flask sections from the respective points of said stand means to the respective stations of said second conveyor portion.

58. A foundry apparatus comprising means for conveying a series of flask drag and cope sections in end-to-end relation, a drag elevator means and a cope elevator means located at spaced points along said conveying means for raising flask sections arriving at said points, a pair of molding machines each located adjacent a respective one of said elevator means, and a pair of sand measuring means associated with said molding machines respectively for moving the raised flask sections from their respective elevator means to said molding machines and for filling said flask sections with a predetermined quantity of molding sand.

2,859,499
MOLDING PRESS HEAD CONTROL SYSTEM
Walter L. Flocke, Toledo, Ohio, assignor to Unicast Corporation, Toledo, Ohio, a corporation of Ohio
Application September 5, 1957, Serial No. 682,239
6 Claims. (Cl. 22—42)

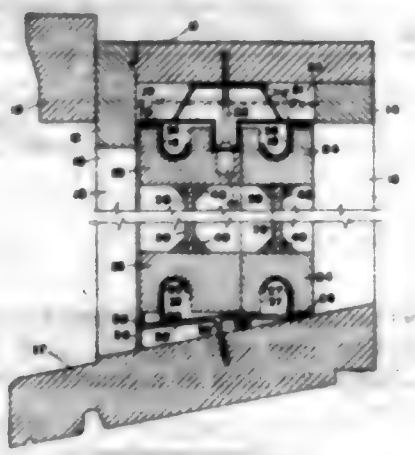
6. In combination with a mold press head having pressure responsive means for compacting sand within a mold flask; a pressure source for moving said pressure responsive means to a sand compacting position and including a first duct means, a constantly driven vacuum pump for retracting said pressure responsive means from said sand compacting position, an inner duct connected to the inlet of said vacuum pump, an outer duct sur-

NOVEMBER 11, 1958 GENERAL AND MECHANICAL 273

vance portions of the recessed gasket sections of adjacent closure members towards one another and into sealing engagement.

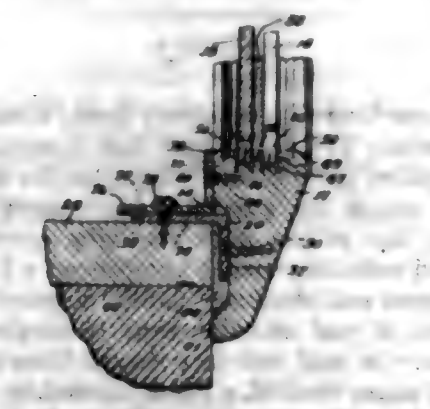
when in molding position, a sand flask slidably carried by said yoke and containing a charge of sand mixture, means

of said other base wall portion, said leg and the inner edge of said inner base wall portion being adapted to be seated on an inclined sill of the aforesaid character to position said guide ribs with their top surfaces in a plane



which is nearer to a horizontal plane than the top surface of such sill, wherein there is also provided a leg depending from a base wall portion intermediate said guide ribs for seating on the sill of the window frame to additionally support said guide ribs.

2,859,493
STORM WINDOW
Arthur L. Matschke, Mundelein, Ill.
Application February 10, 1955, Serial No. 487,308
7 Claims. (Cl. 20—55)



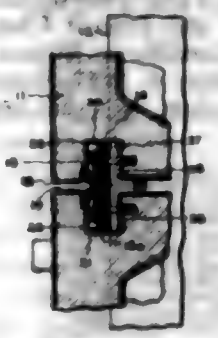
1. In an insulated, enclosed structure having a wall formed with a window opening, the combination with a window frame of metal mounted to said wall to frame said opening and from a sealing joint with portions of said wall adjacent to and surrounding said opening, and a window mounted in said frame and closing said opening; of a storm window comprising glazed window frame means of wood forming a substantially air-tight partition and carried by said structure inwardly of said first-mentioned window, said frame means having a continuous marginal portion overlying and sealing the entire joint between said metal window frame and said wall.

2,859,494
AWNING
Clair L. Hull, Seattle, Wash.
Application March 15, 1955, Serial No. 494,396
2 Claims. (Cl. 20—57.5)

1. In an awning of the type comprising ribs and rib supported slats, the improvement for receiving and holding precurved slats in a concavely upward stressed condition which comprises supporting ribs of channel shaped cross-section with the channel legs upstanding, said channel legs having slat receiving openings consisting of: a hook for receiving one edge of the slat; a slot for receiving the other edge of the slat; and a concave slat support extending from the hook to the slot, the distance between the hook and the bottom of the slot being at least the width of the slat and the slot width being greatly oversized relative to the slat whereby a normally concavely curved slat can be inserted between the slot and the hook when bent to a convex curve and thereafter in reassuming its normally concave shape is free to partially withdrawn

from the slot and come to rest with one edge engaged in the slot crosswise contacting the slot side wall, with the other edge engaged by the hook, and with the bottom of the slat resting at least partially against the concave slat support.

2,859,495
REFRIGERATOR CABINET INCLUDING CLOSURE SEALING MEANS
Edward H. Roberts, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York
Application December 8, 1955, Serial No. 551,072
1 Claim. (Cl. 20—69)



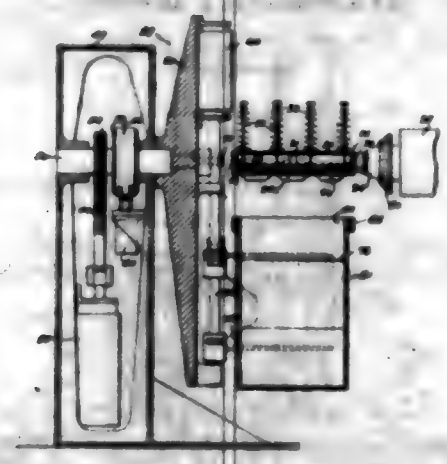
In combination, a cabinet having a face portion defining an access opening to said cabinet, a plurality of closure members for closing said access opening and having shoulders overlying the face portion adjacent said access opening, adjacent closure members having opposed edges spaced from one another and extending across said access opening, opposed recesses in said edges each of said recesses having front and rear side walls with the front walls forming a continuation of said shoulders, a resilient tubular gasket mounted adjacent the periphery of each of said closure members and including sections mounted on said shoulders for contacting said cabinet face portion when said closure members are closed and sections of the same gasket disposed in said recesses and mounted on said front side walls, means for effecting sealing contact of the opposed recessed sections of said gaskets on adjacent closure members when said closure members are closed, said means comprising a gasket deforming member disposed in said recess between said gasket and said rear side wall of said recess and movably supported on said rear wall, means biasing said gasket deforming member toward said rear recess side wall, each of said gasket deforming members having portions extending beyond the ends of said recess for contacting in overlapping relationship said cabinet face portion when said closure member is moved towards a closed position whereby said recessed gasket section is deformed to ad-

vance portions of the received gasket sections of adjacent closure members towards one another and into sealing engagement.

2,859,496
REFRIGERATION APPARATUS
James K. Nelson, Grove City, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 16, 1957, Serial No. 653,137
4 Claims. (Cl. 20—69)

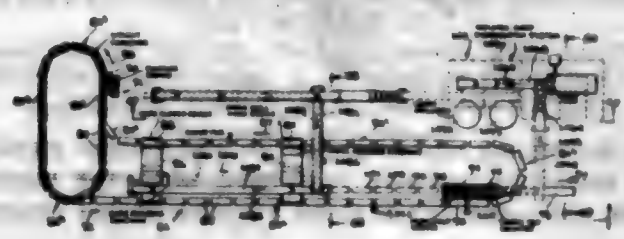
4. A closure seal for a cabinet member having an access opening and a closure member movable with respect to said cabinet member for closing said opening; said closure seal comprising a magnetically attractable seat on one of said members; a gasket mounted on the other of said members adapted to engage said seat in sealing relationship along a line peripheral to said opening, said gasket having an elongated body, means rendering said body magnetically attractable to said seat; and means including a web extending transversely from said body along the length of the body for mounting said gasket on said other member, said web being of non-uniform width so as to couple at least one longitudinal portion of said body more closely to said other member than other longitudinal portions of said body, whereby said gasket body is progressively separated from said seat when said closure member is moved away from said cabinet member, the separation commencing with the closely coupled portion of the gasket body.

2,859,497
SHELL MOLDING MACHINE
Otto W. Winter, Grand Island, N. Y.
Application July 22, 1954, Serial No. 444,977
13 Claims. (Cl. 22—39)



1. A machine for making shell molds, comprising a turret head having its axis in a vertical plane, a reversible pattern assembly rotatably carried by said turret head and being periodically movable thereby in a horizontal plane in sequence to a number of fixed operating stations, a pattern carried by said assembly, said stations being independent of said pattern assembly and being arranged substantially equidistantly about said turret head, said stations consisting of a molding station, a curing station, and a stripping station, a molding device at the molding station, comprising a roll-over yoke independent of said turret head and having a stationary axis of oscillation in the plane of the horizontal path which will be coincident with the pattern assembly axis of rotation when in molding position, a sand flask slidably carried by said yoke and containing a charge of sand mixture, means for moving said flask into sealing contact with the registering pattern assembly when in arrested position, means for periodically rotating said yoke and coacting pattern assembly as a unit when in the arrested molding position to a position to discharge the sand mixture onto said pattern, means to reverse the position of the coacting pattern assembly and sand flask unit to return surplus sand mixture to said flask, a heating device located at said curing station, a stripping device located at said strippping station, and means for moving the turret to bring the pattern assemblies successively to the curing station and stripping station after the operation of said reversing means.

2,859,498
AUTOMATIC METHOD AND APPARATUS FOR MAKING CASTINGS
William G. Reichert, Newark, N. J.
Application August 13, 1954, Serial No. 449,656
72 Claims. (Cl. 22—30)



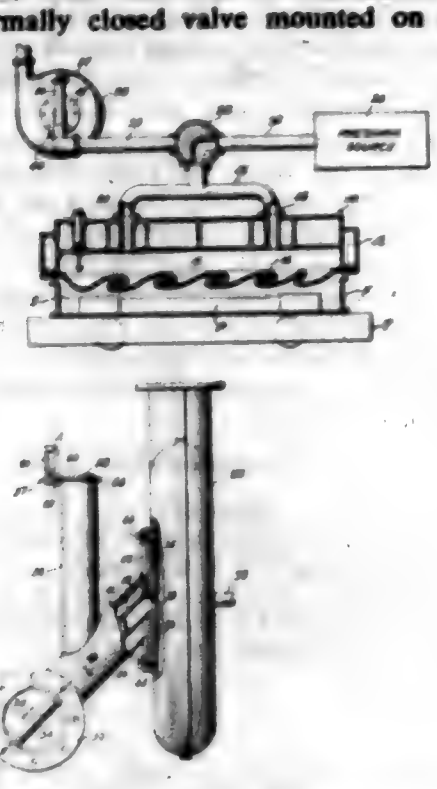
55. A foundry apparatus comprising a circuitous movable conveyor, stand means extending alongside and adjacent a first portion of the conveyor for movably supporting a series of flask cope and drag sections in end-to-end relation, means for filling a drag section with molding sand and extending from said stand means at a first point thereof to a first station of a second portion of the conveyor opposite said first portion thereof, means for filling a cope section with molding sand and extending from said stand means at a second point thereof forwardly of said first point to a second station of said second conveyor portion forwardly of said first station, said filling means each including means for moving said flask sections from the respective points of said stand means to the respective stations of said second conveyor portion.

58. A foundry apparatus comprising means for conveying a series of flask drag and cope sections in end-to-end relation, a drag elevator means and a cope elevator means located at spaced points along said conveying means for raising flask sections arriving at said points, a pair of molding machines each located adjacent a respective one of said elevator means, and a pair of sand measuring means associated with said molding machines respectively for moving the raised flask sections from their respective elevator means to said molding machines and for filling said flask sections with a predetermined quantity of molding sand.

2,859,499
MOLDING PRESS HEAD CONTROL SYSTEM
Walter L. Floeke, Toledo, Ohio, assignor to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio
Application September 5, 1957, Serial No. 682,239
6 Claims. (Cl. 22—42)

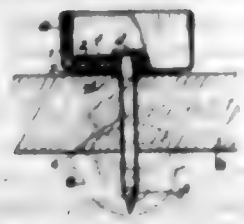
6. In combination with a mold press head having pressure responsive means for compacting sand within a mold flask; a pressure source for moving said pressure responsive means to a sand compacting position and including a first duct means, a constantly driven vacuum pump for retracting said pressure responsive means from said sand compacting position, an inner duct connected to the inlet of said vacuum pump, an outer duct sur-

rounding said inner duct and in communication therewith, a normally closed valve mounted on said outer



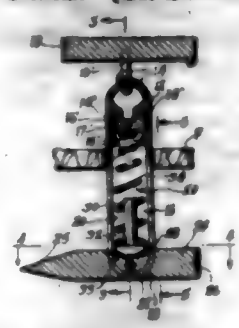
duct for venting said outer duct to atmospheric pressure, and means for opening said valve when the pressure within said outer duct is above a predetermined pressure.

2,859,500
METAL CARRIER FOR BADGES AND MEANS FOR SECURING SAME
Georges Neyret, St. Etienne, France, assignor to Neyret Freres & Cie, Saint-Etienne, France a French joint stock company
Application November 18, 1955, Serial No. 547,818
Claims priority, application France January 12, 1955
4 Claims. (Cl. 24—13)



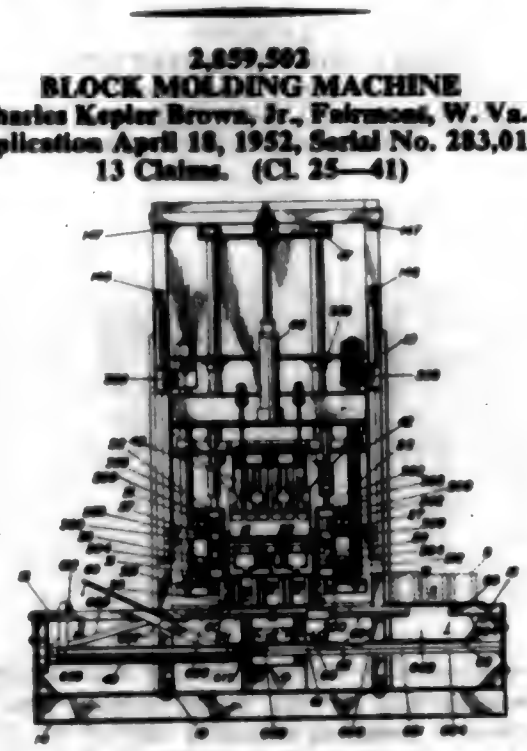
1. A permanent badge carrier assembly comprising in combination: an open-top cup-shaped member having a substantially flat bottom wall and a peripheral side-wall; fabric material covering the inner and outer surfaces of said bottom wall and side-wall; a first and a second fabric retaining means respectively disposed inside and outside said cup-shaped member above said bottom wall and below the part of the fabric covering the outer face of said bottom wall and adapted to clamp said fabric material against the inner and outer surfaces of said bottom wall; resilient means below said outer face of said bottom wall and adapted to be flattened against said second fabric retaining means; said bottom wall, said first and second retaining means, and said resilient means each having a central aperture, said apertures having a common axis; a pin engaged through all said apertures and having a flange at its top end inside said cup-shaped member, the diameter of said flange being greater than that of said apertures, said flange bearing over and against said first fabric retaining means; said pin having a portion protruding beyond said U-shaped member and said resilient means; said resilient means being adapted to be flattened to grip said pin and maintain in contact said bottom wall of said cup-shaped member, said fabric material, and said first and second retaining means, thereby forming said permanent assembly.

2,859,501
INTERCHANGEABLE BUTTON
Gladys Pero, Bronx, N. Y.
Application June 27, 1955, Serial No. 518,062
1 Claim. (Cl. 24—97)



An interchangeable button comprising a button head of disc-shaped form, a closed looped member depending therefrom, an elongated tubular casing detachably connected to said looped member, a locking bar pivotally mounted in the casing to swing between a first, in operative position in which it is aligned longitudinally with the casing, and a second, operative position normal to the length of the casing, and detent means shiftable longitudinally of the casing and releasably engaging the bar in each of the two positions of the bar to hold the same in said positions, said detent means including a detent having a bar-engaging head and a shank extending from the head within the casing, and a spring encircling the shank and held under compression between the detent head and button head, the connection between the casing and looped member including opposed leaf spring prongs integral with the top end of the casing and normally in overlapping relation and extending through the looped member in interlocking relation therewith, a movable spreader member mounted in the casing for spreading said leaf spring prongs apart, and a laterally extending handle on the spreader member for moving the same.

2,859,502
BLOCK MOULDING MACHINE
Charles Kepler Brown, Jr., Fairmont, W. Va.
Application April 18, 1952, Serial No. 283,018
13 Claims. (Cl. 25—41)



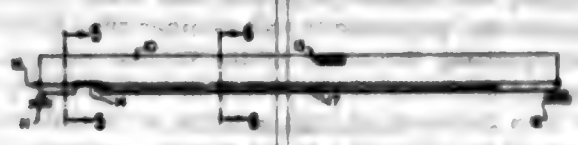
1. A block molding machine including mold boxes at opposite ends of the machine, an aggregate supply hopper located between the mold boxes and at a higher level than the mold boxes, a feed drawer under the supply hopper having a pair of compartments therein and movable forwardly to a position over the mold box at one end of the machine, and movable rearwardly to a position over the mold box at the other end of the machine to transport aggregate from the hopper and drop it alternately from the compartments to the mold boxes, a pallet support under each of the mold boxes, mechanism that

lifts each of the mold boxes from its underlying pallet, stripper mechanism to hold molded blocks down on the pallets during movement of the mold boxes away from the pallets, an automatic means including agitators located in the portions of the feed drawer that move over the mold boxes for controlling the density of said blocks and a device responsive to the pressure of the agitators against the aggregate for initiating operation of the stripper mechanism, said agitators being supported from the feed drawer, and motor means carried by the feed drawer and operably connected to the agitators.

2,859,503
CONCRETE FORM TIE-TENSIONING MEANS
Victor E. O. Hennig, Seattle, Wash.
Application March 16, 1953, Serial No. 342,473
2 Claims. (Cl. 25—131)

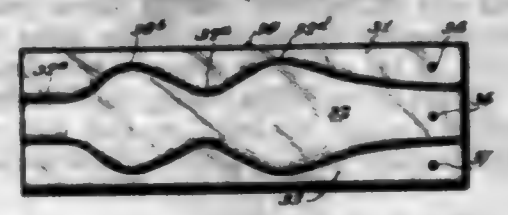
2. In a concrete form incorporating an upright and a wall panel engaging the upright, the combination of a form tie carrying a washer engageable with a wall panel, and a tie-tensioning block engageable with an upright engaged by such a wall panel and including two channel members disposed with their flanges interfitting and apertured to receive an end of said form tie therethrough, pivot means interconnecting corresponding ends of said channel members and guiding said channel members for swinging relatively from contracted relationship into expanded tie-tensioning relationship, and means interengaged between the flanges of said channel members and operable to hold said channel members in such expanded relationship in opposition to a block-contracting force exerted thereon by the tie for securing the wall panel and the upright together.

2,859,504
PROCESS OF MAKING PRESTRESSED CONCRETE STRUCTURES
Francis X. Crowley, Boston, Mass.
Application June 11, 1952, Serial No. 292,877
1 Claim. (Cl. 25—154)



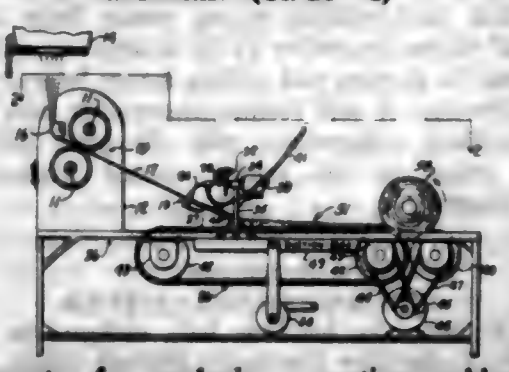
The process of making prestressed concrete structures which is characterized by the steps of casting a concrete structure with long straight reinforcing rods extending from end to end, and shorter rods which have one of their ends anchored in inaccessible locations in the concrete of the structure and their unanchored ends exposed in recesses located in areas subject to compression in flexing of the structure under load, tensioning the shorter rods from their ends which are exposed in said recesses, grouting in said recesses, and then placing the said grouting under compression by tensioning the said long reinforcing rods that extend out through the opposite ends of the structure.

2,859,505
CASKET MATTRESS
Cleo D. Jarvis, Park Ridge, Ill.
Application August 24, 1953, Serial No. 376,881
1 Claim. (Cl. 27—12)



A casket mattress comprising three elongated tubes of plastic material joined together along their edges to form a substantially rectangular mattress with the inner of said sections being shaped to conform substantially to the shape of a body and with the outer sections having their outer edges substantially linear and their inner edges conforming to the edge of the inner section, and valve means on each of said tubes for introducing air thereinto to inflate the tubes.

2,859,506
APPARATUS FOR PRODUCING A FILAMENTARY MAT MATERIAL
Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Application April 21, 1955, Serial No. 502,845
2 Claims. (Cl. 28—1)

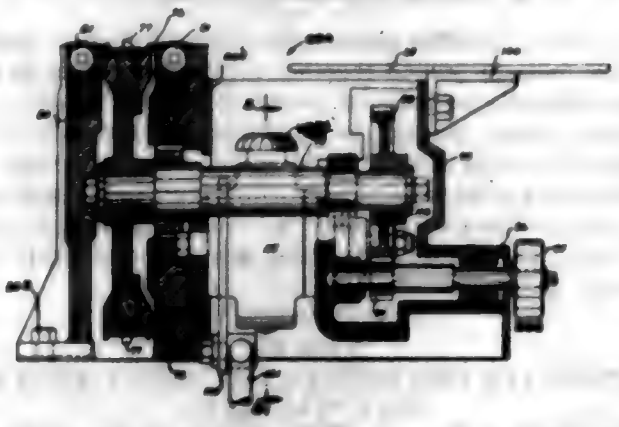


1. Apparatus for producing a continuous blanket-like mass of filamentary material, said apparatus comprising, in combination, high speed rotary pulling means for feeding a multifilament strand from a source and for linearly projecting said strand generally horizontally across an open space and along a first longitudinal path leading away from said pulling means, a collecting conveyor mounted for movement in the direction of projection of said strand along said path and in a plane inclined upwardly relative to said path, said conveyor extending substantially equidistantly on both sides of the path of said strand, an axially bored guide mounted for reciprocation along a horizontal path transverse to and extending completely across said conveyor and intersecting the path of said strand, air jet means in said guide for projecting said strand therebeyond in a second linear path and means for reciprocating said guide whereby the first path of stand strand and said strand moving therealong is angularly traversed between said pulling means and said guide and the second path of said strand and said strand moving therealong is translatably traversed by and beyond said guide.

2,859,507
STEREOTYPE FINISHING MACHINE
Christopher Verne Knell, North Canton, Ohio, assignor, by mesne assignments, to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Original application November 16, 1945, Serial No. 629,122, now Patent No. 2,664,788, dated January 5, 1954. Divided and this application December 30, 1953, Serial No. 401,210
4 Claims. (Cl. 29—21)

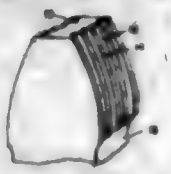
1. A machine for finishing cylindrically curved printing plates, comprising, in combination, plate-supporting

means for holding a plate, tool-supporting means adjacent said plate-supporting means for effective relative linear feeding movement between said plate-supporting and tool-supporting means in a direction parallel to the cylindrical axis of the plate, boring means mounted on said tool-supporting means for rotation about the longitudinal axis of the plate for progressively finishing the interior surface of the plate during said feeding movement, milling means mounted on said tool-supporting means for rotation about an axis perpendicular to the



axis of the plate, a source of motive power, common means on said tool supporting means coupled to said power source for simultaneously rotating said boring means and said milling means about their respective axes, and means operative as an incident to said feeding movement for moving said milling means laterally relative to the direction of said feeding movement into and then out of milling engagement with the plate adjacent its straight edges to cut axially spaced tension lockup pockets therein.

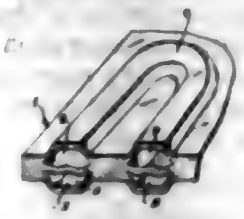
2,859,508
GEAR SHAVING CUTTER
Roland P. Shannon, Muncie, Ind., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Application February 28, 1956, Serial No. 566,635
6 Claims. (Cl. 29—103)



1. A gear shaving cutter for use in diagonal gear shaving comprising a cylindrical gear-like body having teeth extending between opposite ends thereof, the teeth of said cutter having grooves extending from root to top of said teeth leaving ribs therebetween, the intersections between the side surfaces of said grooves and the sides of said teeth forming sharp cutting edges, the sum of the width of an adjacent rib and groove adjacent the central portion of said teeth being greater than the sum of the width of an adjacent rib and groove adjacent the ends of said teeth.

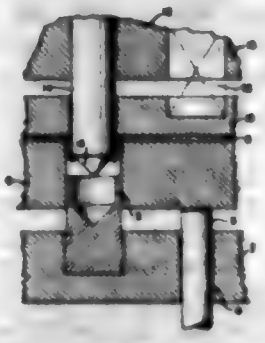
2,859,509
FABRICATION OF HOLLOW ARTICLES
Richard F. Adams, Goshen, Ind., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Application February 24, 1956, Serial No. 567,532
8 Claims. (Cl. 29—157.3)

1. The method of fabricating a hollow metal panel having a plurality of hollow portions arranged in laminar fashion, said method comprising applying a weld-inhibiting material on a portion of faces of a plurality of sheets of ductile metal, positioning said sheets in face-to-face laminar fashion, welding the faces of said sheets together in the areas of said faces not adjacent to said weld-inhibiting material by hot rolling to produce an integral blank having a plurality of partially unjoined layers arranged in laminar fashion; expanding one of said unjoined layers at a time by injecting therein a fluid pressure of sufficient



magnitude to substantially permanently distend said layer, filling said expanded layer except the last with a liquid filler material and solidifying it to retard excessive subsequent deformation of said distended layer upon expansion of another unjoined layer and then similarly expanding said other unjoined layers.

2,859,510
METHOD OF FORMING A BOILER HEAD OR THE LIKE
James F. Baza, St. Clairsville, Ohio, assignor to Wheeling Steel Corporation, Wheeling, W. Va., a corporation of Delaware
Original application January 13, 1955, Serial No. 481,616. Divided and this application July 15, 1955, Serial No. 522,276
4 Claims. (Cl. 29—157.4)



1. A method of forming a boiler head or the like comprising fixedly positioning for hot die-forming a plate-like metal member having an opening therethrough, while maintaining the plate-like metal member thus fixedly positioned hot die-forming the plate-like metal member to enlarge the opening and form a tubular projection integral with the plate-like metal member and projecting generally normal thereto whose inner surface is continuous with the periphery of the opening but with the thickness of the metal forming the tubular projection being at at least a portion of the tubular projection less than the thickness of the metal of the plate-like metal member surrounding the tubular projection and while continuing to maintain the plate-like metal member thus fixedly positioned upsetting the metal of the tubular projection to increase the thickness of the metal thereof at said portion thereof to a thickness at least as great as the thickness of the mteal of the plate-like metal member surrounding the tubular projection.

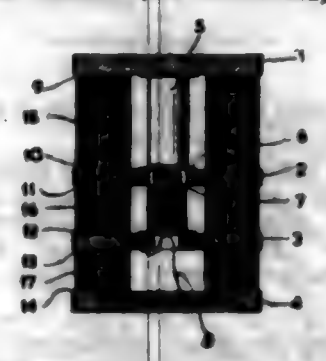
2,859,511
PROCESS OF STAKING A POST TO A MOUNTING
William P. Gallagher, Anthony D. Stolle, and Paul G. Bielik, Chicago, Ill., assignors to International Register Company, Chicago, Ill., a corporation of Illinois
Application July 8, 1953, Serial No. 366,842
8 Claims. (Cl. 29—432)

1. The process of staking a post to a mounting, comprising, forming a flat post with a shank part of less width than the base part and with a stem part of less width than the shank part with pairs of shoulders at the juncture

of the shank and base parts and the shank and stem parts respectively, the pairs of shoulders being spaced apart longitudinally of the stem a distance greater than the thickness of the mounting, forming a rectangular aperture in the mounting of a length less than the width of the shank part of the post but greater than the width of the stem part, placing the post with the stem part in the aperture and the shoulders at the juncture of the

shank and stem parts resting on one face of the mounting, pressing the post transversely of the mounting to cause the shank part to enter the aperture by the shoulders shearing off the mounting at the ends of the aperture and disposing the shoulders beyond the other face of the mounting with the other pair of shoulders resting against the one face of the mounting, and then peening over the edges of the first pair of shoulders to anchor the post to the mounting.

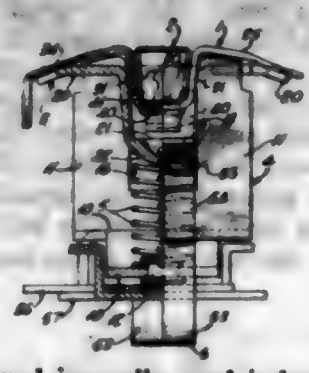
2,859,512
METHOD OF BONDING A TITANIUM MEMBER TO A CERAMIC SURFACE
Popko Reinder Dijksterhuis and Albertus Remko Hovingh, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application April 2, 1956, Serial No. 575,617
Claims priority, application Netherlands April 23, 1955
1 Claim. (Cl. 29—473.1)



A method of securing a metal object to a ceramic surface in a vacuum comprising placing between said metal object constituted of titanium and said ceramic surface a metal layer of a thickness between 5μ and 10μ selected from the group consisting of nickel, iron and cobalt in which titanium is soluble to a small extent, said metal layer abutting both said titanium and ceramic surface, heating the assembly in a vacuum to a constant temperature above the melting point of said metal layer but below the melting point of titanium whereby said metal layer dissolves titanium from the abutting surface thereof to form an intermediate alloy therewith which wets and bonds titanium and the ceramic surface to join the same.

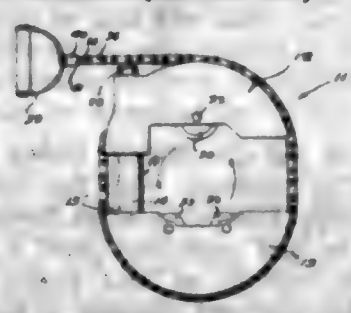
2,859,513
ELECTRIC SHAVER SHEARING HEAD ASSEMBLY
Eric Bylund, Lancaster, Pa., assignor to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
Application June 28, 1956, Serial No. 594,546
2 Claims. (Cl. 30—43)

1. An electric shaver shearing head assembly comprising the combination of a spring yoke including an elongated base with resilient upstanding arms at its ends, an outer cutter overlying and an inner cutter between the yoke arms, said cutters having longitudinally disposed center channel portions telescoped one into the other, bayonet slots formed in the channel portion of the outer cutter, said slots having inwardly and downwardly extending portions, the latter being open at their lower ends and spaced to receive portions of the yoke arms when



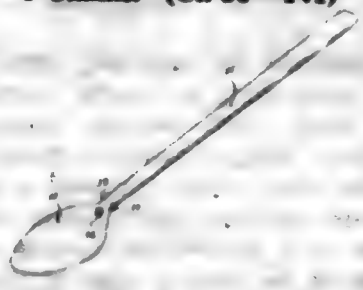
the latter are flexed inwardly, and independently releasable means associated with the inner cutter and yoke arms for retaining the inner cutter against removal.

2,859,514
PIPE AND TUBING CUTTER
Henry J. Molsan, Washington, D. C.
Application June 13, 1958, Serial No. 741,863
3 Claims. (Cl. 30—101)



1. A pipe cutter comprising a pair of coplanar opposing jaw members, means slidably and non-rotatably connecting said jaw members for movement in a common plane toward and away from each other, a screw member rotatably mounted in one of the members adjacent said means and threadedly engaging the other member, a cutter wheel journaled in one of the members and facing the other member, a pair of spaced bearing rollers journaled on said other member opposite said cutter wheel, and a chain member secured to one of the members and extending around the other member, for rotating the jaw members.

2,859,515
DISPOSABLE FEEDING IMPLEMENT
Albert Harold Klaman, Guthrie Center, Iowa
Application March 20, 1956, Serial No. 572,755
6 Claims. (Cl. 30—141)



1. In a disposable eating tool, a handle portion having a longitudinal passageway, a spoon portion secured to said handle portion, said handle portion having a point along its length of weaker construction than the balance of said handle portion.

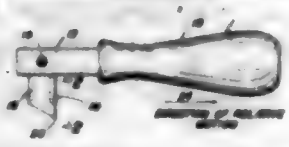
2,859,516
KNIFE AND SHEATH WITH LATCH UNIT
Milton F. McQueary, Delta, Utah
Application July 15, 1957, Serial No. 671,796
3 Claims. (Cl. 30—151)

1. A combination knife, sheath and latch comprising a knife including a handle having an inner end and a

blade extending from said inner handle end, a sheath for receiving said blade and the inner handle end, said sheath having an inner wall, a spring strip having a lower end secured against an outer side of said inner wall, said spring strip extending upwardly from its secured end and having an unsecured upper portion normally spring biased against the outer side of said inner wall, said inner wall being provided with an opening in the part thereof engaged by the unsecured upper portion of the spring strip, said handle having a keeper recess spaced from the inner end of the handle and formed

in a portion of the side thereof facing said inner wall and disposed in alignment with the opening when the knife is in a fully inserted position in the sheath, and a latch carried by and projecting from a part of the unsecured upper portion of said spring strip inwardly through the opening and disposed in the keeper recess, when said upper portion of the spring strip is disposed against the upper portion of the inner wall of the sheath, for latching the knife in the sheath, the upper portion of the sheath being displaceable away from the upper portion of the spring strip for extracting the latch from the keeper recess to release the knife for removal from the sheath.

2,859,517
FORMICA KNIFE
Lewis C. Dixon, Mount Airy, Md.
Application October 31, 1957, Serial No. 693,792
2 Claims. (Cl. 30—317)
(Granted under Title 35, U. S. Code (1952), sec. 266)



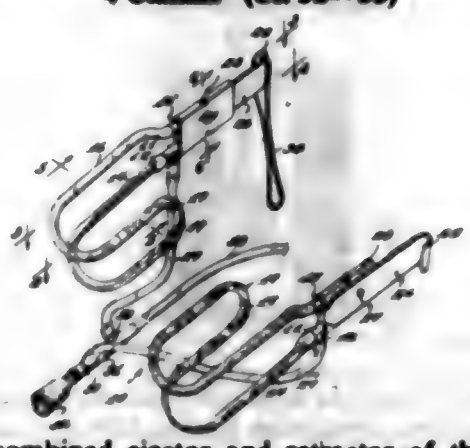
1. A tool designed for manually severing relatively hard material comprising a handle, a removable substantially flat knife blade securely connected to said handle, said blade being disposed to extend at an angle from said handle which blade comprises at least two substantially parallel surfaces intermediate of which, and parallel thereto, is a longitudinal cutting edge disposed along a portion of the leading edge of the blade which edge extends at an angle to and faces said handle, said cutting edge being located remote from the end of the blade, the remote end of the blade being provided with a thickened portion which includes a scraping edge extending the thickness of the blade.

2,859,518
DENTAL SALIVA EJECTOR
Louis A. Cohn, Oosining, N. Y.
Application March 15, 1957, Serial No. 646,387
1 Claim. (Cl. 32—33)

A saliva ejector comprising an elongated rigid tubular body, means detachably connecting said body to a source of vacuum, a pair of tubular reduced end portions integrally formed on one end of said body member and arranged in diverging relation, a malleable rod secured to each of said reduced end portions and extending outwardly therefrom, a plastic tube having one end thereof engaged over each of said reduced end portions with said tube encompassing said malleable rod, said malleable rod having a diameter substantially smaller than the internal

diameter of said tube, means on the end of said tube opposite said body for engagement with the mouth, said tube having a plurality of perforations extending therethrough adjacent the end thereof opposite said body, a chin clamp detachably secured to said body, said chin clamp including a pair of soft chin engaging members, and means normally biasing said members into contact with the chin.

2,859,519
DENTAL RETRACTOR AND SALIVA EJECTOR
Louis A. Cohn, Oosining, N. Y.
Application March 15, 1957, Serial No. 646,388
4 Claims. (Cl. 32—33)



1. A combined ejector and retractor of the class described comprising a malleable rod, a flexible tube encompassing said rod, means supporting the opposite ends of said rod and the opposite ends of said tube, said tube having apertures formed intermediate the opposite ends thereof, said tube and said rod being formed into a pair of integrally connected spaced parallel hooks for retracting engagement with a mouth, means connecting said tube to a source of suction for ejecting saliva from the mouth, and means extending behind the head of a patient for securing said ejector and retractor to the head of a patient with said ejector and retractor in position in the patient's mouth.

2,859,520
APPARATUS FOR MAPPING BY MEANS OF OVERLAPPING AERIAL PHOTOGRAPHS
Hendrik Meijer, Delft, Netherlands, assignor to De Staat der Nederlanden, te dezen Vertegenwoordigd door de Hoofdingenieur-Directeur van de Rijkswaterstaat in de Directie Algemene Dienst en Waterhuishouding, The Hague, Netherlands
Application March 8, 1957, Serial No. 644,900
Claims priority, application Netherlands March 8, 1956
10 Claims. (Cl. 33—1)

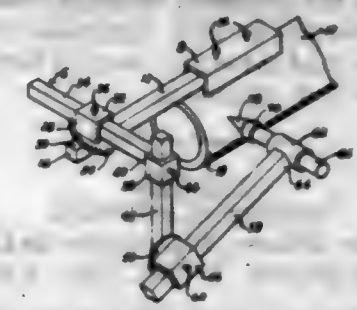
1. A photogrammetric apparatus for determining the position of points on a terrain from air photographs

carriage member having thereon a vertically extending and movable inwardly toward said side to thereby flex

comprising a pair of mechanisms coupled together, each of said mechanisms having a measuring mark, each measuring mark and the image of a terrainpoint on the corresponding photograph being movable with respect to each other for obtaining visual coincidence, each mechanism further including a pair of bars coupled together, said bars being disposed in planes parallel to the plane of the photographs, one of said bars representing the line of intersection of the plane of the photograph and a first plane through the terrainpoint and through the center of the lens of the camera with which the photograph has been made, said first plane being disposed

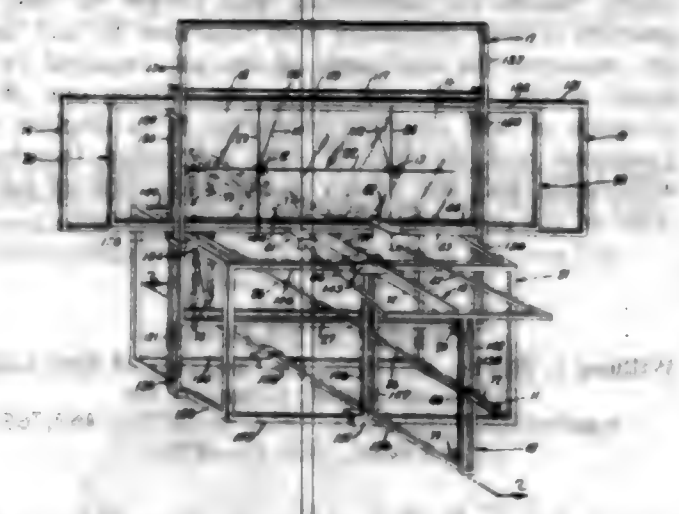
substantially parallel to the line of flight of the photographing aircraft and the other of said bars representing the line of intersection of the plane of the photograph and a plane through said terrain point, the center of the lens of the camera with which the photograph has been made, said last-named plane being substantially transverse to the line of flight of the photographing aircraft, the point of intersection of said bars representing the image of the terrainpoint over which said measuring mark is positioned and means coupled to said bars for measuring the special coordinates of the point in a terrain coordinate system.

2,859,522
PIPE MARKER
Charles M. Thomas, Shawnee, Okla.
Application April 13, 1955, Serial No. 501,074
1 Claim. (Cl. 33—21)



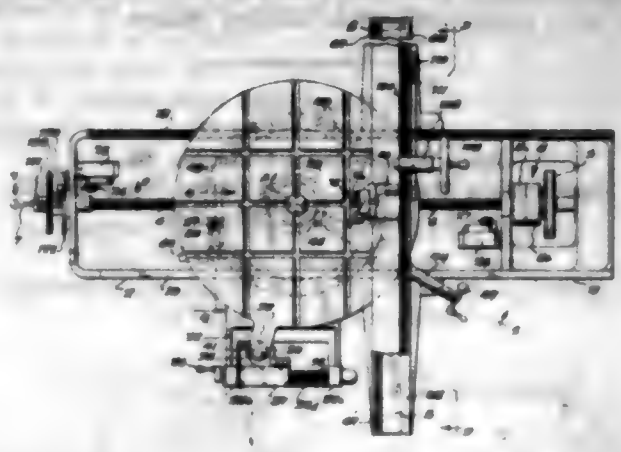
A device for saddle marking a first pipe which is to be welded to a second pipe at an angle, comprising a centering member for straddling the crown of the first pipe, a first arm secured to the centering member in a direction to extend parallel with the longitudinal axis of the first pipe when the centering member straddles the crown of the first pipe, a first sleeve privotally secured on the first arm whereby said sleeve may be positioned parallel with the proposed longitudinal axis of the second pipe, a protractor carried by said first sleeve for adjusting the position of said first sleeve with respect to said first arm, a second arm adjustably secured in said first sleeve to extend parallel with the proposed axis of the second pipe, a second sleeve rigidly secured to said second arm, a third arm adjustably secured in said second sleeve to extend at right angles from said second arm toward the proposed longitudinal axis of the second pipe, a shaft pivotally secured to said third arm on an axis parallel with the second arm for positioning in alignment with the proposed longitudinal axis of the second pipe, a third sleeve secured to said shaft in a direction at right angles to said shaft, a fourth arm adjustably secured in said third sleeve, and a chalk holder slidably secured to said fourth arm to extend parallel with said shaft.

2,859,521
APPARATUS FOR MAKING STEREOSCOPIC DRAWINGS
Algeron W. Cook, Oakland, Calif.
Application August 12, 1953, Serial No. 373,932
8 Claims. (Cl. 33—20)



6. An apparatus for making stereoscopic drawings comprising, a pair of writing members mounted for movement over a pair of drawing surfaces to denote horizontal and vertical dimensions thereon, a manually engageable part mounted for three-dimensional horizontal and vertical and depthwise movement, and means connecting said part and said writing members and effecting: (*a*) at all depthwise positions of said part joint horizontal and vertical displacement of said writing members in direct lineal proportion to the horizontal and vertical components of movement respectively of said part, and (*b*) at all horizontal and vertical positions of said part a change in horizontal spacing between said writing members in direct lineal proportion to the depthwise component of movement of said first member.

2,859,523
ENGRAVING MACHINE
Edward C. Polidor, Rochester, N. Y., assignor to Optical Gaging Products, Inc.
Application December 18, 1953, Serial No. 399,041
13 Claims. (Cl. 33—26)



13. In an engraving machine of the type having a base, a carriage mounted on said base for rectilinear translation in opposite directions, and a work supporting table rotatably mounted on said carriage, the combination for use therewith comprising a bridge carried by said base and extending across the path of travel of said table with said carriage, said bridge having guide ways on its upper face, an auxiliary carriage member resting on the upper face of said bridge and having portions running on and guided by said ways, means on said bridge and cooperating with said member for causing selected adjustment of said member along said bridge, said auxiliary

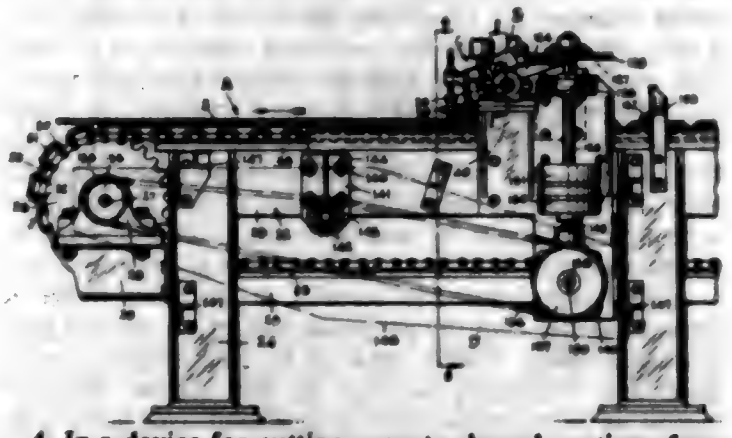
ing said blade in said groove for swinging movement porting and locating contacts engaging the outer part at

body, means detachably connecting said body to a source

position of points on a terrain from air photographs

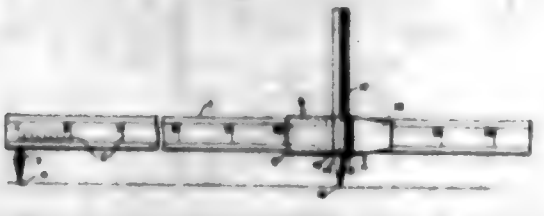
carriage member having thereon a vertically extending guide groove, a cutter slide mounted in said groove for vertical reciprocation therein and at its lower end having means to mount a scribing tool, spring means acting on said cutter slide for resiliently resisting movement of the cutter slide vertically in both directions from an intermediate position, and means for varying the action of said spring means in both directions.

2,859,524
SCRIBING DEVICE
Peter J. Kirkman, Ottawa, Ill., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application November 23, 1953, Serial No. 393,568
4 Claims. (Cl. 33—37)



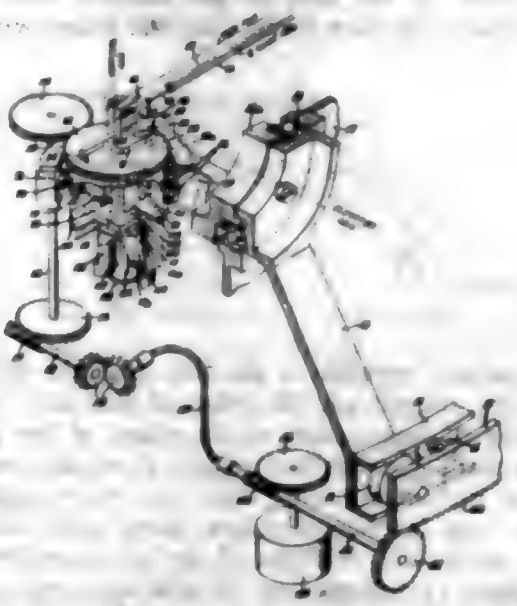
4. In a device for cutting arcuate shaped portions from flat sheet material, a conveyor for moving said sheets, a reciprocating cutter bar mounted transversely above said conveyor, a plurality of cutting means adjustably mounted thereon, means mounted for rotary movement at one end of said cutter bar, connecting means operatively connecting said means mounted for rotating movement and said cutter bar for reciprocating said cutter bar transversely of said conveyor upon rotation of said means mounted for rotary movement, driving means connecting said conveyor and said means mounted for rotary movement, said driving means including a clutch and brake mechanism, and a sheet responsive actuating means for said clutch and brake to release said brake and engage said clutch to move said cutter bar and cutting means across the path of the conveyor and sheets to cut said sheets upon the entry of a sheet under said cutting means.

2,859,525
BEAM COMPASS
John W. Carlson, Chicago, Ill.
Application March 23, 1956, Serial No. 573,495
2 Claims. (Cl. 33—27)



2. A beam compass comprising an elongated beam, a pointed leg mounted on said beam and projecting therefrom for use as a center about which an arc may be scribed, a carriage slidably mounted on said beam for movement longitudinally thereof, an elongated marker disposed transversely to said beam in engagement with one side thereof, and an elongated resilient arm having one end attached to said carriage, said arm projecting from said carriage and having an intermediate portion disposed in overlying relation to said marker, said arm having a free end portion normally extending along said beam in directly outwardly spaced relation to said side and movable inwardly toward said side to thereby flex said arm around said one end into position to retainingly clamp said marker against said side.

2,859,526
SIGHTING MECHANISM
Charles S. Grimshaw, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application January 11, 1943, Serial No. 473,043
12 Claims. (Cl. 33—49)



1. Gun sighting mechanism comprising means for establishing a line of sight, a gyroscope connected to said means so that said line of sight is maintained in known angular relation to the gyroscope's spin axis, a member adapted to be moved with the gun, a coupling between said member and said gyroscope having a pair of coacting elements one on said gyroscope and the other on said member, said elements applying to said gyroscope a precessing torque to cause it to tend to follow said member as it is moved so as to cause said line of sight to track a target, means for controlling said torque so that the position of said gyroscope with reference to said member measures the lead angle of the gun required by the speed of the target, and means for shifting one of the elements of said coupling means so as to displace said gyroscope and the line of sight controlled thereby in accordance with the effects of wind and gravity on the flight of the projectile from the gun to a target.

2,859,527
CARPENTER'S LEVEL
William J. Roche, Scranton, Pa., assignor of fifty percent to Frank Mashil, Scranton, Pa.
Application October 21, 1954, Serial No. 463,765
1 Claim. (Cl. 33—88)

A combination level and carpenter's square comprising an elongated I-shaped member including a web and side flanges, a spirit level in said web, one of said side flanges having a longitudinal groove opening into the free edge thereof, a blade normally disposed in said groove parallel to said member, means swingably attach-

ing a laterally directed end portion disposed in said bore,

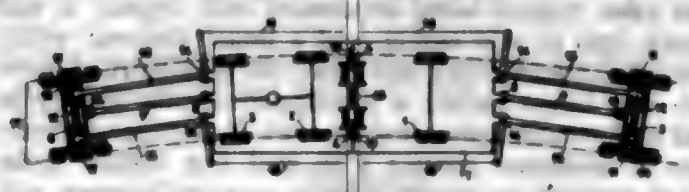
pair of oppositely disposed laterally extending end flanges,

ing said blade in said groove for swinging movement about an axis parallel to said web to a position perpendicular to said member to form a carpenter's square, said means being movable along said groove to position said blade at different positions intermediate the ends of the member at one side thereof for disposing alongside a piece of work when the member is rested on its flanges on top of a piece of work.

2,859,528
DEVICES FOR MEASURING THE HORIZONTAL COORDINATES OF A RAILWAY TRACK

Paul Grossmann, Renens, Switzerland, assignor to Materiel Industriel S. A., Grand Pont, Lausanne, Switzerland, and Constructions Mecaniques S. A., Renens, Switzerland, both corporations of Switzerland

Application March 8, 1954, Serial No. 414,830
Claims priority, application Switzerland March 12, 1953
6 Claims. (Cl. 33—144)

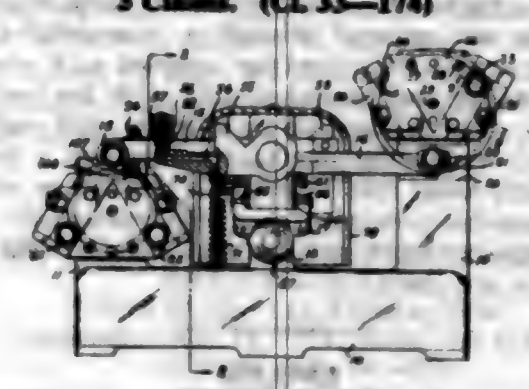


1. A measuring and recording device for determining the horizontal camber of a rail of a track comprising in combination a main rail car, a rail contacting member mounted on said main car, means yieldingly urging said rail contacting member horizontally against said rail; an auxiliary rail car pivotally connected to said main car and disposed adjacent one end thereof, a second rail contacting member mounted on said auxiliary car, second means yieldingly urging said second rail contacting member horizontally against said rail; a second auxiliary rail car pivotally connected to said main car and disposed adjacent the other end thereof, a third rail contacting member mounted on said second auxiliary car, third means yieldingly urging said third rail contacting member horizontally against said rail; and means for measuring and recording the relative horizontal displacements of said first, second and third rail contacting members.

2,859,529
GAUGING DEVICE

Willis Fay Aller and Elwood L. Byrkett, Dayton, Ohio, assignors, by mesne assignments, to The Sheffield Corporation, a corporation of Delaware

Application November 2, 1953, Serial No. 389,727
3 Claims. (Cl. 33—174)

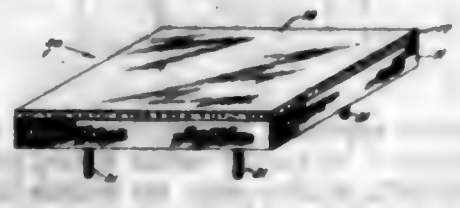


1. Gauging apparatus for gauging a dimensional relationship between a pair of cooperating annular parts which are adapted to cooperate one within the other, comprising a base, a first support for the inner part carried from said base, said first support comprising two spaced supporting and locating contacts engaging the inner part at two points upon its outer surface, carrying the part thereabove, a second support for the outer part carried from said base, spaced laterally from said first support, said second support comprising two spaced supporting and locating contacts engaging the outer part at two points on its inner surface and upon which the outer part is supported by hanging, a first gauge contact means for contacting the outer surface of the inner part at a point equidistant from the supporting and locating contacts, means carrying said first contact means from said base for movement into and out of contact with the inner part by pivoting about an axis intermediate the first and second support means, a second gauge contact means for contacting the inner surface of the outer part, means carrying said second contact means from said base for movement into and out of contact with the outer part at a point equidistant from the associated supporting and locating contacts by pivoting about said intermediate axis, manually operated means carried from said base for moving said gauge contact means into and out of gauging position, and cooperating gauging components on said carrying means at one side of said intermediate axis relatively positioned in accordance with the movement of the gauge contacts and the dimensional relationship of the inner and outer parts.

2,859,530
SURFACE PLATE

Harold E. Renaud, Lansing, Mich., assignor to Res-Ite Plastics, Inc., Lansing, Mich., a corporation of Michigan

Application May 12, 1954, Serial No. 429,147
6 Claims. (Cl. 33—174)

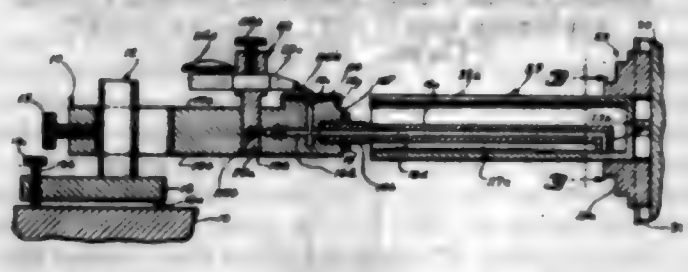


3. A surface plate comprising a base of rigid, nonmetallic and inorganic material characterized by a low coefficient of thermal expansion and high dimensional stability, said base having an upper surface in general conformity with a reference surface to be reproduced, said base having bonded to said surface a coating of an epoxy resin composition comprising an epoxy resin and a hardener having an active hardener agent in the ratio of about 1.0 effective resin-1.0 effective hardener agent, said coating presenting a smooth, hard and abrasion resistant top face which is an accurate reproduction of said reference surface, said epoxy resin comprising a condensation product of a chlorohydrin and a polyphenol under alkaline conditions.

2,859,531
APPARATUS FOR POSITIONING WORK

Aloys N. Mafler, Minneapolis, Minn.

Application December 27, 1954, Serial No. 477,864
3 Claims. (Cl. 33—180)

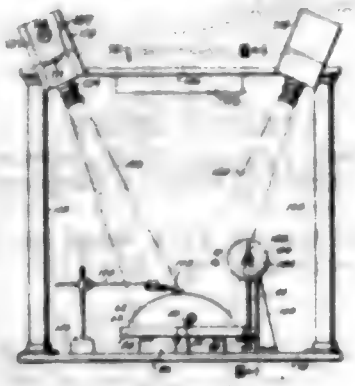


1. A device of the class described in connection with a piece of work having a bore therein, a rotatable support for said piece of work and means for varying the position of said piece of work in said support to bring the central axis of said piece of work into coincidence with the axis of rotation of its bore having in combination, a tube hav-

means for the heated air, and timing means within said same between contacts with the paper, a suction device

ing a laterally directed end portion disposed in said bore, said end portion being adjacent the surface of said bore, a support for said tube, means for moving fluid under pressure through said tube and means carried by said last mentioned support for showing variations in said pressure in said tube in relation to a plurality of points on the surface of said bore, said points defining a plane at right angles to said bore as said piece of work is rotated and positioned in a plurality of positions about said tube to eliminate said variations and thus bring the central axis of said bore into coincidence with the axis of rotation of said piece of work.

2,859,532
METHOD AND APPARATUS FOR LINEUP AND REGISTER OF PRINTING PLATES
Robert E. Fegg, Lexington, Mass.
Application November 19, 1954, Serial No. 469,936
16 Claims. (Cl. 33—184.5)



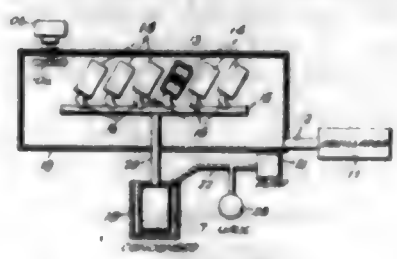
1. A locator apparatus for printing plates comprising support structure, an arcuate saddle having substantially the curvature of a printing plate, the arcuate saddle being longitudinally movable upon the support structure, a pair of projectors attached to the support structure, each of the projectors being positioned for directing rays of light upon one-half of the arcuate saddle, and means for measuring the movement of the arcuate saddle upon the support structure.

16. A method of determining the position of a printing plate upon a holder therefor, comprising (*a*) positioning an indicator card upon a body having a surface similar to the surface of the holder, said indicator card assuming the shape of the surface of the body, (*b*) photographing the indicator card positioned upon the body by a camera positioned in spaced relation from the body, (*c*) projecting an image of the card upon the surface of the body, (*d*) placing a printing plate upon the body, so that the printing plate coincides with the projected image of the indicator card.

2,859,533
COMBINED LEVEL AND INCLINOMETER
Manuel Girona Prades, Hamilton, Ontario, Canada
Application June 7, 1957, Serial No. 664,237
5 Claims. (Cl. 33—206)

1. A combined level and inclinometer comprising an elongated I-shaped member having a pair of oppositely disposed longitudinally extending parallel flanges and a pair of oppositely dirposed laterally extending end flanges, said end flanges, respectively, extending across adjacent pairs of ends of said longitudinally extending flanges at right angles thereto, a boss integrally connected with and extending between said longitudinally extending flanges intermediate the ends thereof, said boss having a centrally disposed opening extending transversely therethrough, an elongated substantially hollow cylindrical casing formed of a transparent material and including an elongated cylindrical wall having a pair of opposed closed ends, said wall being disposed within said opening, means fixedly securing said casing to said boss, each of said closed ends having at least one indicating line thereon, a float comprising a hollow cylindrical member having a pair of opposed open ends, said last named cylindrical member having an inwardly extending annular side at each end thereof, each of said sides having indicia thereon, said float having weight means fixedly secured thereto, said float being disposed within said casing with said sides thereof being juxtaposed with respect to said closed ends of said casing, and a liquid disposed within and substantially filling said first hollow cylindrical member, said liquid having a preselected specific gravity so that said second cylindrical member is suspended therein free of frictional contact with said first hollow cylindrical member to permit relative rotation between said first and second cylindrical members.

2,859,534
METHODS AND APPARATUS FOR RADIO FREQUENCY FREEZE-DRYING
David A. Copson, Waltham, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application October 11, 1956, Serial No. 615,404
7 Claims. (Cl. 34—1)



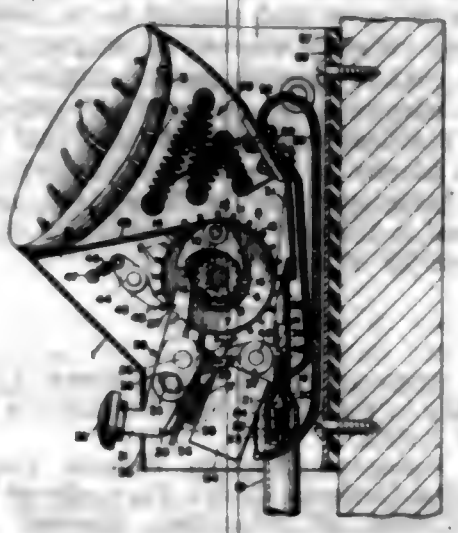
5. A method for removing a vaporizable component substantially by sublimation from material comprising a solid and said vaporizable component comprising the steps of applying propagated electromagnetic microwave energy to said material through a propagated electromagnetic wave guiding structure coupled to a generator of said energy and communicating with the space occupied by said material to concentrate said energy in said space while subjecting said material to a pressure substantially lower than atmospheric pressure to vaporize said vaporizable component, and withdrawing said vaporized component from said space to maintain said lower pressure in said space.

2,859,535
HAND DRYER
John W. Carlson, Chicago, Ill.
Application September 15, 1953, Serial No. 380,198
9 Claims. (Cl. 34—53)

1. A drying apparatus of the class described comprising, a housing, air inlet means adapted to admit air under pressure into said housing, valve means normally closing said air inlet means, manually operable means for opening said valve to permit the flow of air through said inlet means, heating means within said housing for heating the air flowing through said inlet means, outlet

last mentioned gate is closed when the corresponding of electrically conductive members positioned in the

means for the heated air, and timing means within said housing operable by the air flowing through said inlet

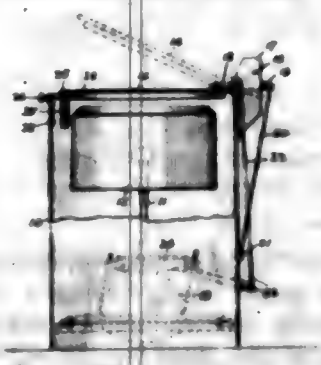


means for closing said valve and stopping the flow of air after a predetermined period of time.

2,859,536
AUTOMATIC LID RELEASE FOR CLOTHES EXTRACTOR

Norman S. McEwen, Fort Lauderdale, Fla., assignor to Helpy Selfy Service Systems, Inc., Atlanta, Ga., a corporation of Florida

Application November 12, 1957, Serial No. 695,957
6 Claims. (Cl. 34—58)

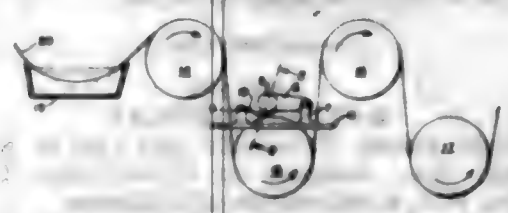


1. In combination with an extractor for wet clothes of that type which comprises a casing containing a rotatable extractor basket open at its upper end, a lid to cover said basket, a spring normally urging said cover to open position, a latch to hold said lid in closed position, and means operable upon opening said lid to stop the movement of the basket; the improvement which comprises a movable trip member engaged with said latch and having a portion thereof disposed in the path of clothes projecting outwardly from the rotating basket, whereby the engagement of said projecting clothes with said trip member moves the latch to lid releasing position.

2,859,537
SUCTION CLEANER FOR DOCTOR BLADES FOR DRYING ROLLERS

Cecil M. Shockey, Urbana, Ohio

Application May 24, 1954, Serial No. 431,759
6 Claims. (Cl. 34—35)

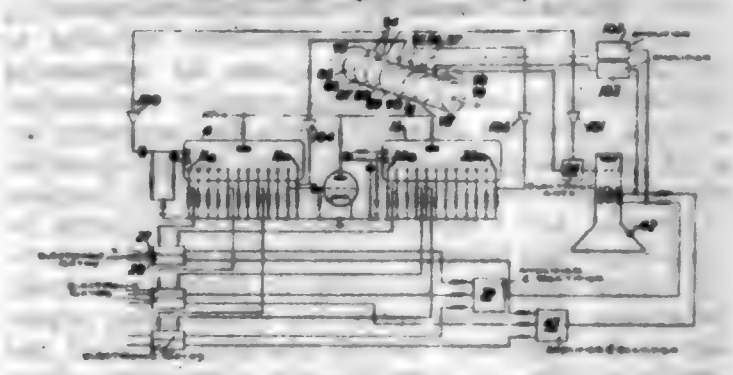


1. In apparatus for processing paper and similar material in which a moving surface contacts the paper and a doctor blade engages the moving surface to clean the same between contacts with the paper, a suction device for removing material collected on the doctor blade which comprises an exterior tube having inlet means extending longitudinally thereof, means mounting said exterior tube with the inlet thereof close to the upper surface of the doctor blade, an inner tube having helically-arranged inlet means extending along its length, the inner tube being rotatably mounted within the exterior tube in sealing relation, means for driving the inner tube for rotation with respect to the exterior tube to progressively bring portions of the helical inlet means of the inner tube into registry with the longitudinally extending inlet means of the exterior tube, and means for inducing a suction within the inner tube for withdrawing material collected on the doctor blade through the registered portions of the inlet means of the exterior and inner tubes as the latter is rotated.

2,859,538
CATHODE RAY TUBE DISPLAY SYSTEMS OR APPARATUS

Albert E. Cutler, Northgate, Crawley, England, assignor to Communications Patents Limited, London, England

Application January 17, 1955, Serial No. 482,055
Claims priority, application Great Britain February 8, 1954
12 Claims. (Cl. 35—10.4)

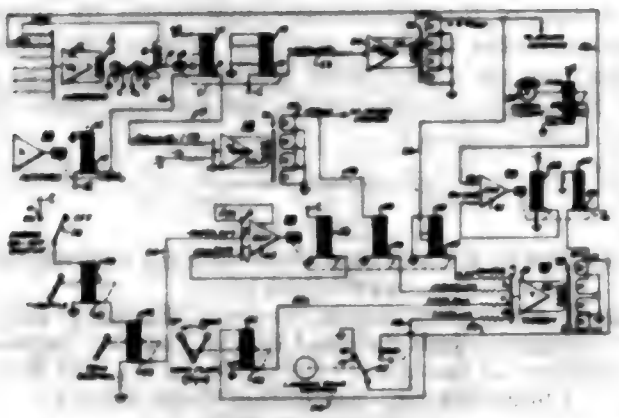


12. Apparatus providing, on the screen of a cathode ray tube having deflection circuits, and a brightness control circuit, a display which represents the positions of a plurality of objects and includes symbols whereby these objects are identified, comprising a plurality of sources of electrical co-ordinate signals, each source corresponding to a particular and different object and the co-ordinate signals from any one source being representative of the position of that particular object, electronic gates established between said sources and the deflection circuits of the cathode ray tube, a pulsing system, a dekatron in said pulsing system, said dekatron having its cathodes connected respectively to the electronic gates to cause said gates to apply in cyclic order to said deflection circuits the co-ordinate signals from said plurality of sources, signal-generating means serving to generate in the same cyclic order video signals representing a corresponding plurality of symbols, each symbol being destined to identify a separate one of the objects, a source of scanning signals corresponding to said video signals, a further electronic gate which serves to apply to the brightness control circuit of the cathode ray tube those video signals which represent the symbol pertaining to the particular object corresponding to the co-ordinate signals which are being applied at that time to the deflection circuits by the appropriate electronic gates, so that, with the aid of said scanning signals, each symbol is displayed on the screen of the tube at a position which is determined by the co-ordinate signals pertaining to the particular object which the symbol identifies, and personally-operable switches, each representing one of said symbols, and so arranged that operation of any one of said personally-operable switches breaks a connection between said further electronic gate and one of the cathodes of the dekatron, whereby the

in said compartments with plates and separators ex- comprising a stationary head frame structure on said

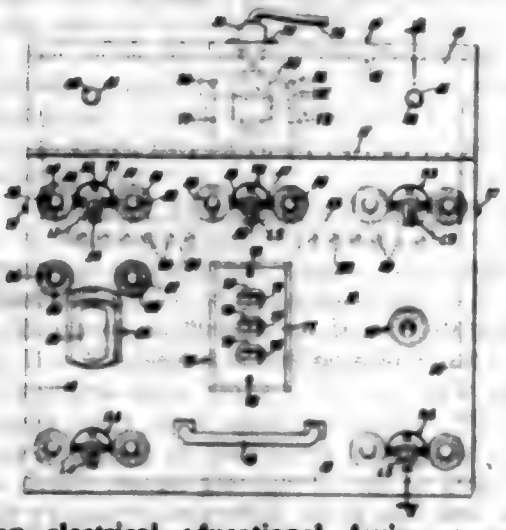
last mentioned gate is closed when the corresponding video signal is applied thereto and the corresponding symbol is prevented from appearing on the screen of the display tube.

2,859,539
SIMULATED AIRCRAFT THRUST COMPUTING SYSTEM
Albert J. Sherman, New York, N. Y., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application June 14, 1954, Serial No. 436,546
8 Claims. (Cl. 35—12)



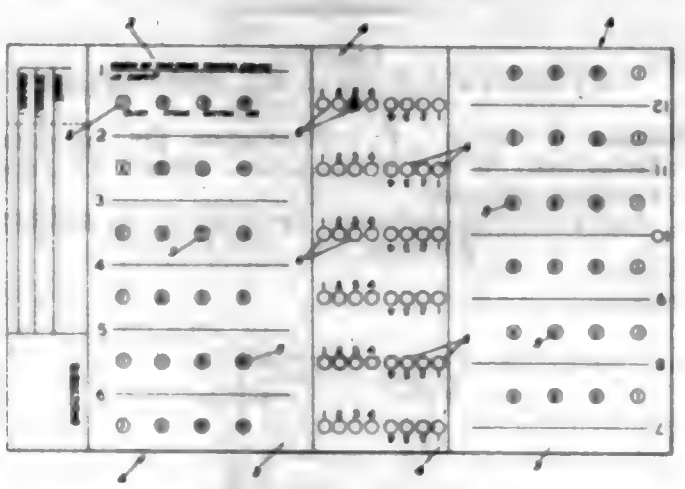
1. In ground-based training apparatus for aircraft personnel, electrical computing means operable according to simulated flight and engine conditions including an individual electrical computing system for representing simulated net thrust of an engine-propeller combination, a second individual electrical system for computing airspeed and having means for deriving control quantities representing a thrust-brake horsepower ratio as functions of airspeed, and a third individual electrical system for computing brake horsepower and having means for deriving control quantities according to functions of brake horsepower, said thrust computing system being responsive to the combined control quantities aforesaid and adapted to produce a control quantity representing a function of thrust for controlling said airspeed computing system.

2,859,540
ELECTRICAL EDUCATIONAL DEVICE
Walter S. Himpsle, Clark Township, N. J.
Application May 28, 1955, Serial No. 509,816
6 Claims. (Cl. 35—19)



1. In an electrical educational device, a casing, a partition dividing the interior of the casing into a first compartment and a second compartment, said casing including a hinged cover permitting access only to the second compartment, electric circuit means comprising transformer means within the first compartment and adapted to be connected to a suitable source of electric energy, said transformer means being adapted to reduce the voltage of the electric energy supplied thereto, a pair of electrically conductive members positioned in the second compartment and connected to the low voltage side of the transformer means, at least one electric unit mounted on the cover and adapted to be connected to the conductive members whereby to complete the circuit means, and electric signaling means comprising a first lamp that is adapted to be energized only when the circuit means has been connected properly and a second lamp that is adapted to be energized only when the circuit means has been connected improperly, said lamps being disposed in the first compartment and inaccessible from the exterior of the casing.

2,859,541
QUESTION AND ANSWER SHEET WITH ANSWERS ON BOTH FACES READABLE THROUGH TRANSLUCENT AREA
Morgan D. Parmenter, Toronto, Ontario, Canada, assignor to The Guidance Centre, University of Toronto, Ontario College of Education, Toronto, Ontario, Canada
Application December 16, 1955, Serial No. 553,659
3 Claims. (Cl. 35—48)



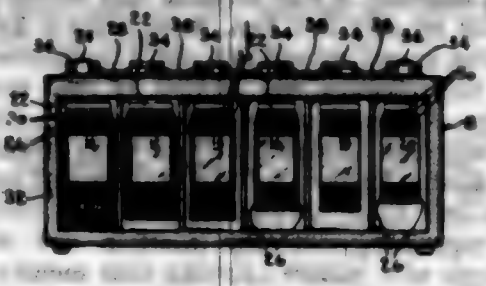
3. Examination material incorporating answer entering material of paper stock having a plurality of surfaces for manually written answer marks visible from the top surface of the sheet by the aid of light passing through said surfaces, said material having on a plurality of the surfaces an answer area, bearing a plurality of correct and incorrect answer spaces choosable at the election of the examinee for the insertion of answer marks, the answer area on one surface being substantially in register with the answer area of another surface thereof the answer spaces on one surface being offset from those of another surface, the answer areas of said surfaces being rendered translucent whereby manually written answer marks on said surfaces are caused to be visible through the uppermost surface of said material when light is projected therethrough from an underlying surface, and an examiner's correction stencil designed to be positioned in correlation to the answer area on the uppermost surface of the material and having areas of light transmitting character registering with the correct answer spaces on each plurality of surfaces of the sheet whereby the correctness of the answers on all surfaces of the material is quickly determined in one examining operation.

2,859,542
BATTERY DISPLAY
Laurence H. Handt, Thiensville, and Carl H. King, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Application September 28, 1954, Serial No. 458,890
2 Claims. (Cl. 35—51)

1. A simulated cut-away storage battery having more than two cell compartments of identical size, cell groups

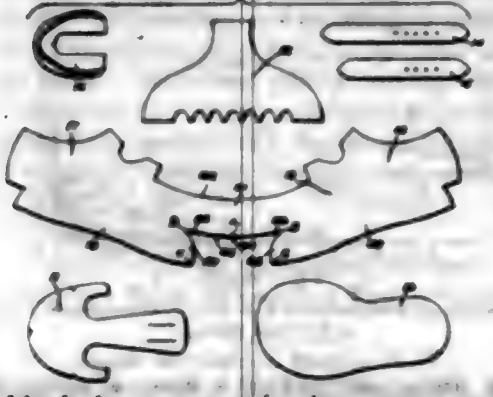
and a legend-bearing display card having one end disposed folded interiorly into the open end of said pocket when

in said compartments with plates and separators exposed to view, the plates and separators of each cell group varying in size and number from the plates and



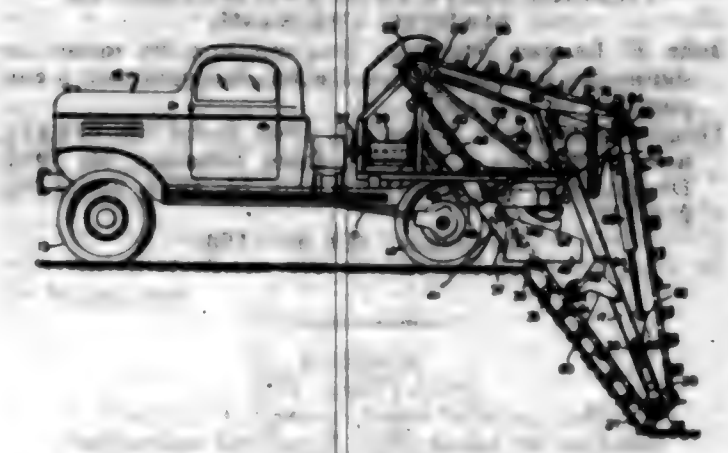
separators of the other cell groups to visibly illustrate by comparison the physical differences between storage batteries of different ratings but same outer dimensions.

2,859,543
BLANK FOR A MOCCASIN SHOE
Richard I. Porvin, Brookline, Mass.
Application March 24, 1955, Serial No. 496,432
3 Claims. (Cl. 36—48)



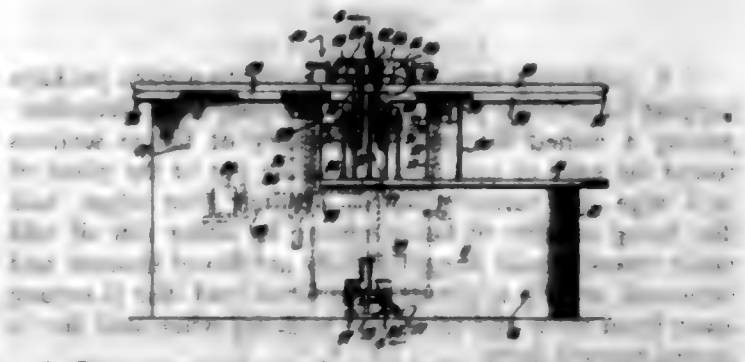
1. A blank for a moccasin shoe upper comprising: a continuous, flat, relatively long and narrow strip disposed substantially on a single arc of large radius extending from end to end of said blank, said strip having a central toe-wall-forming portion and side portions, said toe-wall-forming portion having a forward edge, said side portions having bottom forming portions extending therefrom, said bottom forming portions each having a front edge curved away from said forward edge and adapted to be joined to said forward edge, said forward edge being slightly longer than the combined length of said front edges.

2,859,544
LADDER TYPE DITCHER
Charles E. Evans, Naperville Township, Du Page County, Ill., assignor to Barber-Greene Company, Aurora, Ill., a corporation of Illinois
Application January 18, 1955, Serial No. 482,532
8 Claims. (Cl. 37—98)



1. In a self propelled ladder type ditcher, a truck having a frame, a boom supported on said frame and comprising a stationary head frame structure on said truck frame and boom pivoted to the rear end of stationary head frame structure for movement about a transverse axis, a head shaft on said stationary head frame structure having a drive sprocket thereon, a foot shaft on the free end of said beam having an idler sprocket thereon, an endless bucket line trained about said idler sprocket and driven from said drive sprocket and moving about said boom for the length thereof, cylinder and piston means connected between said beam and said head frame structure for crowding said beam for digging and lifting said beam into an elevated position, and a means connecting said cylinder and piston means with said stationary head frame structure comprising a shifter frame pivoted to said stationary head structure for movement about the axis of pivotal movement of said beam and having said cylinder and piston means connected thereto at a point spaced outwardly from the pivotal axis of said beam, said cylinder and piston means being operative to move said shifter frame into a plurality of selected operating positions, and locking means for selectively locking said shifter frame in its selective operative positions.

2,859,545
TROUSERS PRESSING APPARATUS
Douglas P. Williams, Roanoke Rapids, N. C.
Application June 5, 1956, Serial No. 589,447
6 Claims. (Cl. 38—28)

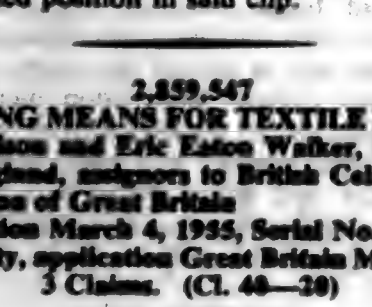


1. In a garment pressing machine having a frame and a head support pivotally mounted on said frame, means for pressing trousers and the like in one lay, comprising a pair of elongated ironing bucks supported on said frame in longitudinal alignment with each other for receiving the legs of the trousers when the trouser legs are spread in opposite directions, the adjacent ends of said pair of ironing bucks being spaced from each other to define a downwardly extending space therebetween for the reception of the trunk portion of the trousers, buck portions depending from the adjacent ends of said ironing bucks forming pressing surfaces for the trouser trunk portion positioned to laterally flank the trouser trunk portion depending between said adjacent ends of said bucks, a pressing buck head mounted on said head support for movement with said head support from a position spaced above said pair of ironing bucks to a position overlying throughout and intimately contacting said pair of ironing bucks, and pleat pressing means coacting with said depending buck portions to press pleats into said trouser trunk portion.

2,859,546
ADVERTISING DISPLAY DEVICE
Thomas Gutterson, Santa Barbara, Calif.
Application November 12, 1954, Serial No. 468,227
15 Claims. (Cl. 40—10)

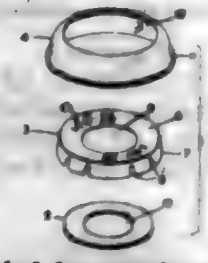
1. In an advertising display device for use in conjunction with a mounting member having oppositely disposed recesses therein, the combination of: a substantially U-shaped clip incorporating movable legs the ends of which are disposable in said recesses and having an elongated slot provided intermediate its ends with retaining means;

and a legend-bearing display card having one end disposed in said slot, said one end having means thereupon engage-



able with said retaining means to maintain said card in a predetermined position in said clip.

2,859,547
IDENTIFYING MEANS FOR TEXTILE MATERIALS
Ronald Davidson and Eric Eaton Walker, Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Application March 4, 1955, Serial No. 492,892
Claims priority, application Great Britain March 18, 1954
3 Claims. (Cl. 40—28)

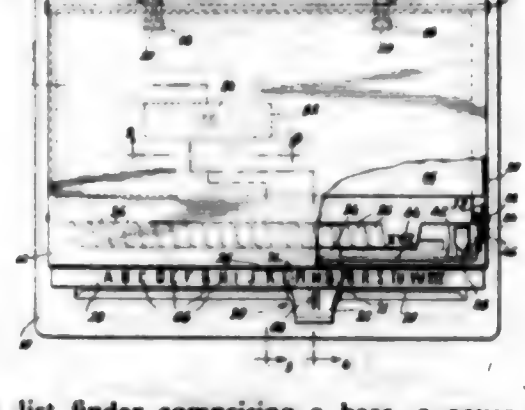


1. A spring cap label for attachment to a yarn package support to identify yarn wound thereon, said label comprising a dished disc and a plurality of flange sections round the edge of said disc projecting out of the plane of said edge and turned inwards at their free edges, said disc being capable of being sprung on either side of said plane whereby said flange sections are flexed inwards and outwards, to grip a circular rim when said disc is sprung away from them and to release said rim when said disc is sprung toward them.

2,859,548
VIEWER
Ronald L. Prunes, Merrill, Wis.
Application March 12, 1957, Serial No. 645,474
2 Claims. (Cl. 40—63)

1. An article of manufacture for use in producing a viewer structure, said structure comprising an open ended collapsible box-like tube having four elongated sections interconnected by fold lines along their abutting longitudinal edges so that said tube may be collapsed into a substantially flattened condition, a first flap foldable inwardly from one end edge of one of said sections and closing one end of said tube, a second flap foldable inwardly from the opposite end edge of said one section and closing the opposite end of said tube, an open ended pocket on the outer face of the section opposite said one section, a tab interconnected by a fold line to the free end edge of each of said flaps, the tabs of said flaps being folded interiorly into the open end of said pocket when said first and second flaps are folded inwardly to close the ends of said tube, said first flap being provided with a viewing aperture, a lens bridging said viewing aperture and carried by said first flap, there being a light admitting opening in said second flap, and a translucent window bridging said opening and carried by said second flap, the sections between said one section and said section opposite said one section being cut away inwardly from the end adjacent said second flap to form with said second flap when said blank has been shifted to its box-like tube position registering slots for insertion and withdrawal therethrough of a picture carrying slide member.

2,859,549
LIST FINDERS
Hildaur L. Nelson, Metuchen, N. J., and Arnold Neustadter, New York, N. Y.
Application May 13, 1955, Serial No. 508,066
4 Claims. (Cl. 40—104)



1. A list finder comprising a base, a cover pivotally movable relatively to said base, a stack of cards, between said base and cover, having separate, serially and marginally arranged tabs, an operating lever slidably associated with said base for sliding movement parallel to the serial disposition of said tabs, said lever having an operating portion and a card-lifting portion adapted to underlie the tab of any selected one of said cards to which said lever may be slid and to partially pivot said selected card with any overlying cards and the cover away from said base, and card-holding means associated with said cover, movable automatically into holding engagement with said selected card's tab only subsequent to the selected card's said partial pivotal movement and adapted to constrain said card to pivot further with any cards overlying it and with said cover to a fully open position in which said card is substantially separated from an adjacent non-lifted card in the stack.

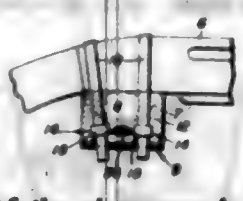
2,859,550
FILM RECORD CARDS AND METHOD OF MAKING THE SAME
John F. Langan, Madison, Ga., assignor, by mesne assignments, to Michle-Goss-Dexter, Incorporated, a corporation of Delaware
Original application August 14, 1945, Serial No. 610,813, now Patent No. 2,587,022, dated February 26, 1952. Divided and this application July 24, 1951, Serial No. 238,331
12 Claims. (Cl. 40—158)

5. A film record card having an aperture therein, a sheet of thermoplastic material extending over the aper-

arated from said surface but secured to said sides and forming with said portion an air passage open at both operative to cause said vibration of said floor surface, whereby said figurette is impelled head first along said

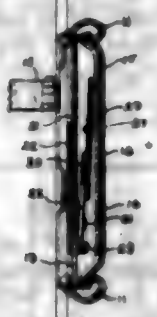
ture and having its marginal portions secured to the marginal portions of the card around said aperture, and a film within said aperture plastic-sealed to said sheet by direct adherence of the material of the film to the material of the sheet.

2,859,551
GUN LOCK FOR TRIGGER GUARD
Edward R. Buchanan, Seattle, Wash.
Application October 17, 1956, Serial No. 616,412
4 Claims. (Cl. 42—1)



1. A gun lock of the character described comprising: a cup engageable beneath the gun and adapted to receive the trigger and the trigger guard thereof, a pair of substantially U-shaped attaching straps straddling the gun and having one end portion anchored to one side of the cup, and means adjustably and detachably connecting the other end portions of said straps to the other side of said cup, said means including plates having slots therein slidably receiving the straps, screws threadedly mounted in the plates and engaged with the straps for securing said plates in adjusted position thereof, and means securing said screws on the cup.

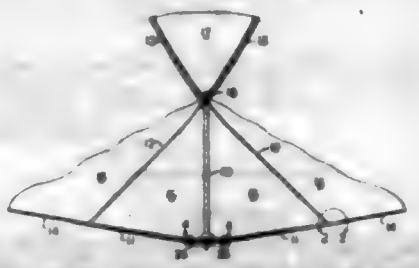
2,859,552
VIBRATING EYES FOR EYEGLASSES, NOVELTIES, AND DOLLS
Isaak Bornstein, Bronx, N. Y.
Application December 10, 1957, Serial No. 701,921
6 Claims. (Cl. 46—1)



1. A pair of toy spectacles comprising a frame structure with lens frames at the ends thereof, temples hingedly connected to the ends of the frame structure, and lenses supported in the lens frames, said lenses each having its surface painted to simulate the eyelids of the human eye, the portion of the surface between the eyelids being transparent, and mechanism behind the transparent portions simulating human eyeballs, said mechanism behind each transparent portion including a plate colored white in simulation of the color of the human eyeball, said plate being clamped in the lens frame to the rear thereof, a thin spring supported at one end by said plate and extending upwardly in front of the plate, a disc secured to the top end of the spring, said disc being colored on its front surface with a color contrasting to the color of the plate, in simulation of the iris of the human eye, said disc having a spot at its center of a color contrasting with the color of the disc in simulation of the pupil of the human eye.

2,859,553
TOY AIRPLANE
Percival H. Spencer, Santa Monica, Calif.
Application October 2, 1956, Serial No. 613,434
1 Claim. (Cl. 46—74)

In an aircraft: an elongated body member; wing spars extending out from said body member, one on each of the opposite sides thereof, said spars being pivotally coupled at the forward end of said body member; a sheet of flexible surface material centrally secured to said body member and having an inner portion of its forward edge fastened along said spars; a pair of braces pivotally connected to the aft end of said body member and extending forwardly and outwardly to, respectively, connect with the outer ends of said wing spars, said braces including integral forward extension portions angled to form spar



extensions from said outer ends, respectively, of said wing spars; said braces further including integral aft extension portions extending beyond the aft end of said body member; a flexible surfacing material secured to said aft extension portions to form a generally horizontal tail surface; and, driving means supported from said body member and coupled to said wing spars for oscillating said spars, whereby said tail surface will move in response to movement of said wing spars.

2,859,554
WALKING DOLL
Walter K. Wahs, Kelly Corners, N. Y.
Application September 20, 1955, Serial No. 535,469
7 Claims. (Cl. 46—120)

1. A doll comprising, in combination, hollow body, a button mounted on said hollow body for pivotal movement with respect thereto, a head mounted on said body for turning movement with respect thereto, a pair of legs pivotally mounted on said body, a vertically extending shaft journalled in said hollow body and rigidly connected to said head, a first crank fixed to said shaft having a pair of relatively angularly extending arms with slots therein, a second crank rotatably journalled on said shaft having a pair of arms with slots therein, the arms of said second crank extending substantially normally with respect to the arms of said first crank in the normal positions of said cranks, means interconnecting said button and said second crank and pins on said legs extending through the slots in said first and second cranks, said first crank movable through a greater angle than said second crank in response to pivotal movement of said legs so as to move said head through a greater angle of turn than the pivotal angle through which said legs move, motion being independent of any walking surface.

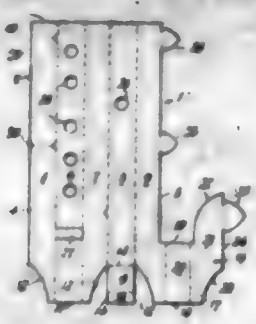
2,859,555
SOUND EMITTING INSTRUMENT
Richard E. Paige, New York, N. Y.
Application July 8, 1955, Serial No. 520,766
1 Claim. (Cl. 46—179)

A sound-producing instrument having a hollow body with top, bottom and sides, a member overlying a portion of the exterior surface of the top at one end, and sep-

2,859,559
MEANS FOR DELIVERING FORMED CHARGES

spherical shape consisting in dropping said irregularly shaped particles through an electric arc wherein said

arated from said surface but secured to said sides and forming with said portion an air passage open at both ends, the top having a transverse opening adjacent the outlet end of said passage, the bottom having a portion bent into engagement with said top at said outlet end and closing the adjacent end of the body, said member being an extension attached to one side and bent over the



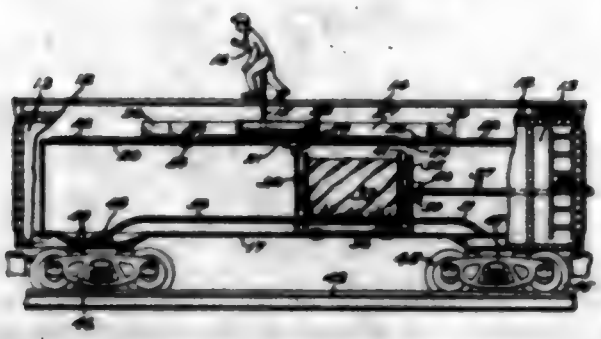
top, and secured against the opposite side, said extension having a tab adjacent said opposite side, and the body having a slit at the junction of said opposite side and bottom, each slit having a protuberance at one edge and a recess matching said protuberance on the opposite edge, the tab being overlaid at said junction by said protuberance.

2,859,556

REVERSING FORWARD TRAVEL IN VIBRATION OPERATED TOY

William R. Smith, Hamden, and Gabriel R. Monnce, New Haven, Conn., assignors to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland

Application July 20, 1956, Serial No. 627,525
12 Claims. (Cl. 46—245)



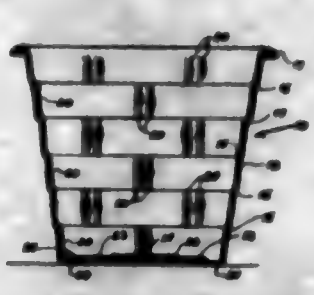
1. An animated toy comprising in combination, toy housing structure including a top deck containing an elongate guide slot of limited length having an operatively closed end, a platform beneath said deck housed by said structure having a vibratory floor surface underlying the closed end of said slot, a mobile base block having a head end a trailing end and a bottom face equipped with slender downward diagonally slanting flexible resilient supporting elements resting endwise on said vibratory floor surface in a manner to urge said base block to advance headwise in intermittent increments of movement in a forward direction with tendency simultaneously to drift sidewise responsively to vibration of said floor surface, a pivotal post upstanding from said base block at a point in the length thereof nearer said head end than said trailing end and extending upward through said slot in a manner to ride lengthwise thereof and be guided therein whereby said tendency of said base block to drift sidewise produces tendency of the block to turn horizontally about said post as a pivot while the post rides along said slot, means to restrict said turning tendency of said block during initial approach of said post toward said closed end of the slot, said means terminating short of the position of said block at the time said post encounters said closed end of the slot thereby then to free said block to turn about said post, a figurette carried by said post above said deck, and vibratile power means beneath said deck operative to cause said vibration of said floor surface, whereby said figurette is impelled head first along said slot and then caused automatically to face about when said post encounters said closed end of the slot.

2,859,587

PLASTIC FLOWER POT

John J. Lattuca, Hempstead, N. Y., assignor to Best Plastics Corporation, Brooklyn, N. Y., a corporation of New York

Application July 9, 1956, Serial No. 596,600
1 Claim. (Cl. 47—34)



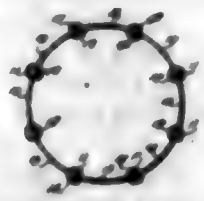
A plastic flower pot consisting of a single sheet of plastic material of a gage within the range of 10 to 40, the flower pot being of generally circular cross section and having a bottom and a side wall that diverges toward its upper end, the sheet material of the side wall being formed with contours providing ridges extending around the circular extent of the flower pot to stiffen the side wall against distortion out of the normal circular cross-sectional shape of the pot and the contours providing said ridges being combined with other contours of the sheet material providing other ridges extending from top to bottom of the side wall to prevent telescoping of the sheet material in the direction of the height of the pot, a flange extending outwardly from the upper end of the wall and at a substantial angle to the side wall, the flange being of the same thickness and same sheet as the rest of the pot, the bottom and side wall of the pot having continuous and imperforate surfaces.

2,859,558

COLLAPSIBLE TRANSPLANTING WALL

Andrew Hallum, Springfield, Mo.

Application July 3, 1956, Serial No. 595,756
1 Claim. (Cl. 47—37)



In a collapsible transplanter, a plurality of similar body plates each having an enlargement on one of its edges and an open socket on its other edge, said plates being arranged so that the sockets receive the enlargements of adjacent plates, a key plate having an enlargement on each edge thereof, a locking plate having a socket on each edge thereof, said body plates, key plate and locking plate being arranged in circular formation so that the enlargements and sockets releasably interfit and engage each other and whereby accidental separation of the plates is prevented, the plates defining a continuous circular form for retaining soil in position around roots of a plant, tree or the like, a horizontally disposed plate member arranged below the form to insure that the soil remains in the form, and a pair of spaced parallel bands surrounding the plates for maintaining the plates in their proper assembled positions.

a hard glass portion, and a molybdenum foil welded to vancing of the table comprising constantly moving driving

extending out from said body member, one on each of

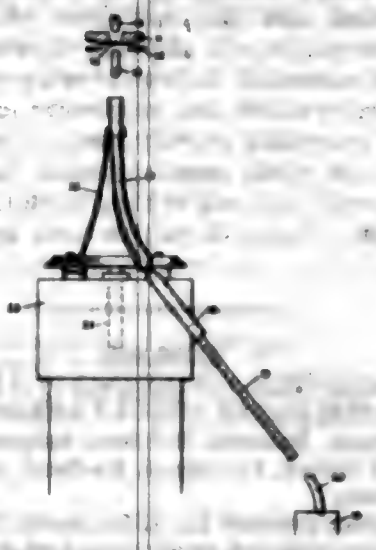
of the exterior surface of the top at one end, and sep-

2,859,559
MEANS FOR DELIVERING FORMED CHARGES OF MOLTEN GLASS TO MOLDS

Eustace H. Mumford, Ottawa Lake, Mich., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Continuation of application Serial No. 458,917, September 28, 1954. This application May 27, 1957, Serial No. 661,755

5 Claims. (Cl. 49—14)



5. Apparatus for forming elongated gobs of molten glass and transferring them by gravity from a forming station to a delivery station positioned below the gob forming station, said apparatus comprising means for suspending and releasing a gob at the forming station, permitting it to drop, a chute mounted for rotation about a vertical axis aligned with the center of said gob suspending and releasing means, means for rotating the chute about said axis, said chute being spaced below the suspended gob and having its upper end portion in vertical register with the suspended gob, the lower portion of the chute being downwardly and outwardly inclined, a stationary chute section mounted below the rotary chute in position for the rotary chute to be brought into register with the stationary chute during its rotation, said stationary chute extending lengthwise in a downwardly and outwardly inclined plane and having a guiding surface curved lengthwise thereof in said inclined plane and by which the gob is directed in a curved path along said plane and its direction of travel changed, a second stationary chute extending in a straight line in said inclined plane and positioned below and in register with said curved stationary chute, said rotary and stationary chutes each being U-shaped in cross section and being spaced and arranged to successively engage different circumferentially spaced surface portions of the gob in progression, said apparatus including a terminal deflector positioned below and in register with said straight inclined chute in position to receive the gob as it is discharged from said straight inclined chute, said deflector having a curved guiding surface positioned to deflect and guide the gob from an inclined direction to a vertical direction at the delivery station, the deflector being of inverted U-shape in transverse cross-section and negatively curved longitudinally to engage a circumferential gob portion not engaged by any one of said chutes.

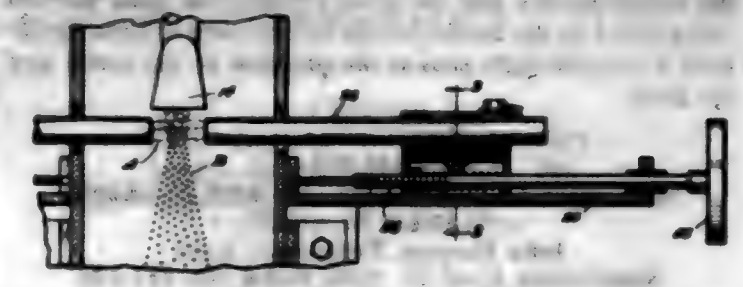
2,859,560
MANUFACTURE OF SPHERICAL PARTICLES

John R. Wald, Jr., Robert G. Corbin, and Robert B. Bagshaw, Huntingdon, Pa., assignors to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania

Application October 2, 1956, Serial No. 613,538

9 Claims. (Cl. 49—58)

1. A process for changing discrete powdered glass particles of irregular shape into glass particles of smooth spherical shape consisting in dropping said irregularly shaped particles through an electric arc wherein said



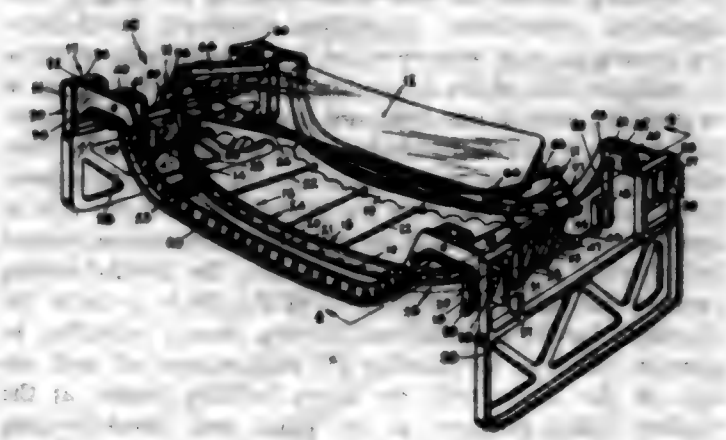
particles become molten, and allowing said molten particles to solidify while continuing to drop through a gaseous atmosphere.

2,859,561
APPARATUS FOR BENDING GLASS SHEETS OR PLATES

Joseph R. Jendrisak, Northville, Mich.

Continuation of application Serial No. 229,178, May 31, 1951. This application November 5, 1953, Serial No. 390,399

12 Claims. (Cl. 49—67)



9. In apparatus for bending a glass sheet or the like, a mold comprising a plurality of movably mounted mold sections having a shaping surface formed on the upper edges thereof, means supporting said movably mounted mold sections for movement from an open to a closed position, sheet locating and supporting means, means mounting said sheet locating and supporting means for movement relative to said mold sections from a first position above the mold shaping surface to a final position below said mold shaping surface, and means operatively connecting said sheet locating and supporting means to a movably mounted mold section whereby said sheet locating and supporting means moves from the first position toward the final position during movement of the movably mounted mold sections from the open to the closed position.

2,859,562
METAL GLASS SEALS AND METHODS OF MAKING SAME

Edward Gerhardus Dorgelo and Antonius Wilhelmus Mathews Michielsen, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application October 12, 1955, Serial No. 540,694

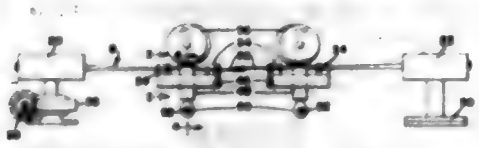
Claims priority, application Netherlands October 15, 1954

1 Claim. (Cl. 49—92.5)

A metal-to-glass seal comprising a metal portion constituted of iron base alloy containing nickel and cobalt,

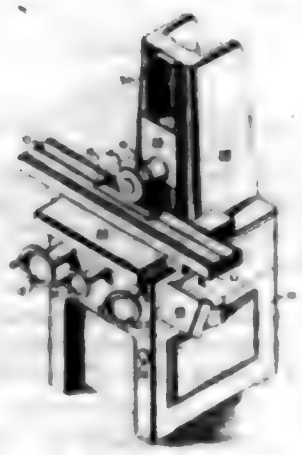
a hard glass portion, and a molybdenum foil welded to and covering the metal portion at the junction between the metal portion and the glass portion, the glass portion being fused to the molybdenum foil portion to form therewith a vacuum-tight seal at the junction of the metal and the glass.

2,859,563
METHOD AND APPARATUS FOR MAKING SLICER BLADES
John Hansen, Bettendorf, Iowa
Application April 27, 1956, Serial No. 581,105
9 Claims. (Cl. 51—38)



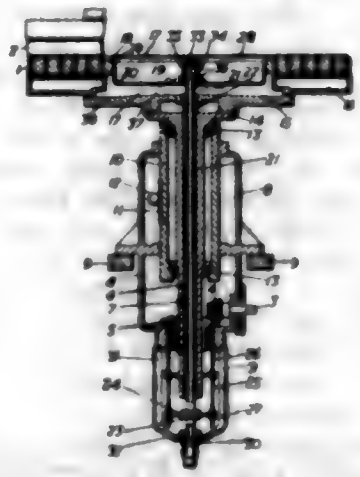
1. Apparatus for beveling at least one side of a cutter blade of the type having a sharpened scalloped cutting edge made up of alternate peaks and valleys which thus render the blade relatively weaker at the valleys and relatively stronger at the peaks as respects resistance thereof to bending about an axis transverse to its length, said apparatus comprising: supporting structure; bevel-forming means on said structure for removing blade material at said one side of the blade and lengthwise thereof so as to produce at said one side and in the blade portion containing the peaks and valleys a lengthwise bevel for thinning out the peaks toward the cutting edge; blade-positioning means for carrying the blade with said one side in constant engagement with the bevel-forming means; means for moving the positioned blade and the bevel-forming means relatively and lengthwise of the blade to incur the aforesaid bevel; and said positioning means including an element effective to increase the engagement of said one side of the blade with the bevel-forming means at the weaker valley portions as the blade and bevel-forming means are moved relatively and lengthwise of the blade so as to remove additional blade material at said side of the blade primarily at the junctions of the peaks with the respective valleys whereby the bevel undulates from valley to peak to valley and presents a convex side surface on each peak at said side of the blade.

2,859,564
MACHINE TOOL
James W. Farmer, Danvers, and Walter P. Ferguani and Albert K. Scriven, Jr., Beverly, Mass., assignors to Reid Brothers Company, Inc., Beverly, Mass., a corporation of Massachusetts
Application March 22, 1955, Serial No. 495,892
3 Claims. (Cl. 51—93)



1. In a machine tool having a table for holding the work piece, means for driving the table back and forth, and cross feed mechanism for advancing the table laterally: a cross feed system for controlling the lateral advancing of the table comprising constantly moving driving means; an electromagnetically actuated clutch for engaging said table advancing means with the driving means; an energizing circuit for said clutch; means responsive to the back and forth motion of the table for producing electrical pulses including a condenser, a D. C. energized charging circuit for charging said condenser and a shunt circuit for discharging said condenser, and switching means alternately connecting said condenser into said charging circuit and into said shunt circuit whereby a pulse is produced in said charging circuit each time said condenser is connected therewith; relay means energized by said charging circuit and responsive to said pulses for closing said energizing circuit; a normally closed holding circuit for said relay; opening means for opening said energizing circuit and said holding circuit; and timer controlled means adapted to actuate said opening means a time interval after said energizing circuit is closed.

2,859,565
APPARATUS FOR GRINDING FLAT GLASS ON BOTH FACES SIMULTANEOUSLY
Gustave Javaux, Brussels, Belgium, assignor to Pilkington Brothers Limited, Liverpool, England, a corporation of Great Britain
Application January 25, 1956, Serial No. 561,299
Claims priority, application Great Britain January 31, 1955
4 Claims. (Cl. 51—112)



1. In an apparatus for grinding both surfaces of a ribbon of glass as it is advanced in a horizontal plane, the combination comprising a rotatable grinding disc on the lower side of the horizontal plane of travel of the ribbon for grinding the lower surface of the ribbon, said disc having a central cavity and defining a series of distribution channels having their inner inlet ends communicating with said cavity and leading to the operating face of the disc, means for blocking off the lower parts of the inner ends of the channels to prevent flow therethrough from said cavity, while leaving the upper parts of the inner ends adjoining the plane of the operating surface of the disc open to serve as inlets, and while leaving the parts of the channels outwardly beyond said inner ends free to receive abrasive fluid to their full depths down to levels below the bottom levels of said inlets, and means for delivering abrasive in fluid suspension to said cavity under such pressure as to maintain said inlets full of the abrasive fluid while said bottom disc is operatively rotating.

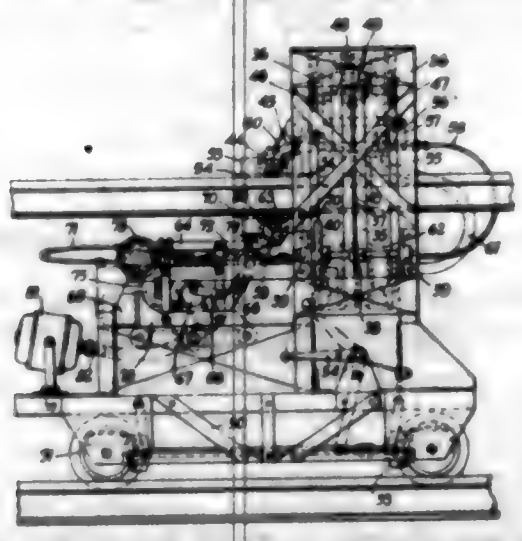
2,859,566
POWER DRIVE FOR RECIPROCATING ABRADING TOOLS
George H. De Lisle, Feeding Hills, Mass.
Application August 25, 1955, Serial No. 530,548
1 Claim. (Cl. 51—170)

In a pneumatic pressure driven tool, a frame, a pair of aligned, oppositely directed power cylinders mounted

on said frame, each having one end closed and the opposite end open, respective power pistons working in said cylinders and providing respective power pressure chambers between said closed ends of the cylinders and their respective pistons, a piston rod connecting said pistons, a tool carrier reciprocably mounted in said frame, an abrasion type tool fixed to said carrier, means connecting the tool carrier to said piston rod to reciprocate the carrier and the tool carried thereby, respective pressure supply ports opening to the power pressure chambers adjacent the closed ends of the cylinders, valve means opening said supply ports of the cylinders when one of the pistons in its corresponding cylinder is adjacent the closed end of said cylinder and at the same time closing the supply port of the opposite cylinder, said valve means comprising a valve cylinder, a valve piston of less

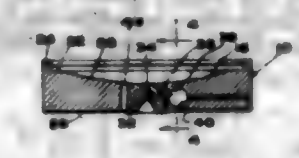
length than the valve cylinder slidably mounted therein, means resiliently limiting the stroke of the valve piston, the ends of the valve cylinder being closed to form pressure chambers at the ends of the valve piston, respective ports and passages in the valve cylinder and valve piston controlling the opening and closing of the pressure supply ports of the power cylinders, ports in the walls of the power cylinders adjacent the open ends thereof and respectively connected to the adjacent end of the valve cylinder and positioned to vent the adjacent end of the valve cylinder during a major portion of the power stroke of the adjacent power piston and to supply pressure to the adjacent end of the valve piston at the end of the power stroke of said adjacent power piston, said closed end of each power cylinder being formed with a small constantly open vent, said vents providing the sole exhaust opening from the said power pressure chambers.

2,859,567
FETTLING MACHINES
Harry Wear Berry, Wokingham, England, assignor to Flextol Engineering Company Limited, London, England
Application June 20, 1957, Serial No. 666,972
Claims priority, application Great Britain June 20, 1956
6 Claims. (Cl. 51—178)



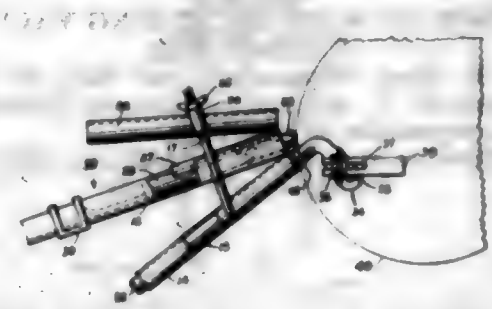
1. A fettling tool comprising a frame, an annular ring rotatable within said frame, a cutting tool mounted within said annular ring, means for mounting a welded profiled rail within the annular ring, means for pressing the cutting tool towards the rail, means for rotating the annular ring to traverse the cutting tool around the weld in the rail and guide means associated with the cutting tool contacting the rail remote from the weld.

2,859,568
LENS BLOCKING APPARATUS
Morris Dantzic, Cumberland, Md.
Application October 4, 1957, Serial No. 688,222
9 Claims. (Cl. 51—216)



1. A lens block having a radial surface adapted to receive a lens blank, said block containing a light source receiving cavity, containing a plurality of aligned openings intersecting said radial surface and having light conducting passages interconnecting said openings and cavity.

2,859,569
JIG FOR HOLDING TWIST DRILLS
Leonard Salmon, St. Catharines, Ontario, Canada
Application November 29, 1957, Serial No. 699,816
3 Claims. (Cl. 51—219)

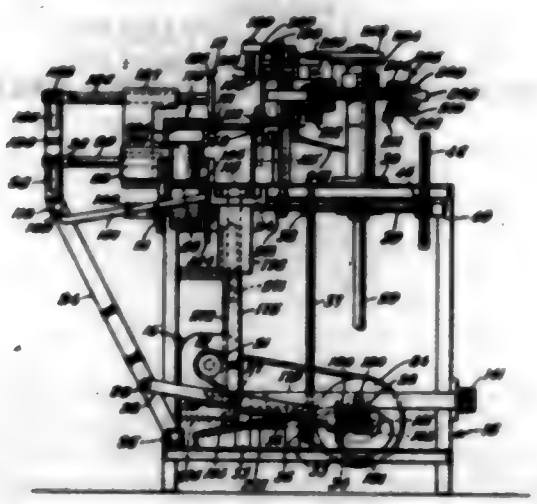


1. A jig for sharpening drill bits comprising, in combination, a V-shaped guide for longitudinally adjustably supporting a drill bit having a plane of symmetry containing the apex thereof, a clamping bracket comprising an inverted V-shaped member supported for adjustable movement in a direction toward and away from said guide and overlying said guide for clamping the drill bit therebetween, a first tubular support member having a longitudinal axis defining an acute angle with one side of said plane and converging with said support member adjacent to one end thereof, a second tubular support member integral with said bracket and having a longitudinal axis defining an acute angle with the opposite side of said plane and converging with said one end of said support, and an adjustable support rod for supported engagement upon a grinding machine for selectively supporting one of said tubular members for limited rotation about its own longitudinal axis.

2,859,578
CARTONING MACHINE
Alexander H. Barnett, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application August 22, 1955, Serial No. 529,796
14 Claims. (Cl. 53—3)

1. The method of folding a carton blank about a unit to be cartoned including the steps of supporting the unit on an area of no greater width than the unit, placing the blank on one side of the unit and approximately centered thereon, pressing the sides of the carton blank in the direction of said unit in the areas immediately to either side of said unit to fold the blank about said one side of the unit and the two adjacent sides, with the remain-

ing portion of the blank extending downwardly from said two adjacent sides, sliding the unit to one side while pressing the leading carton side under the unit, supporting the unit along the outside portion of the carton side

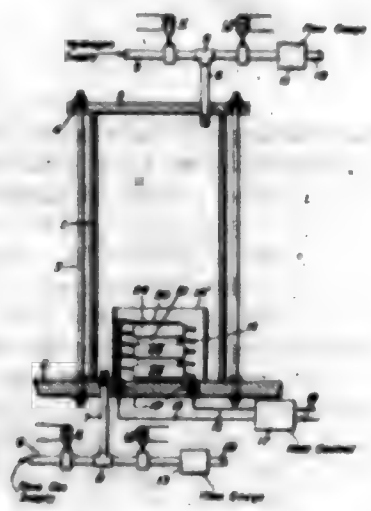


folded under the unit, and folding the other side of the blank under the unit and pressing said other side against the inner portion of the carton side initially folded under the unit.

2,859,571
METHOD OF MANUFACTURING VACUUM ENCLOSURES

Malcolm R. Boyd, Schenectady, and Billy D. McNary, Altamont, N. Y., assignors to General Electric Company, a corporation of New York

Application May 31, 1957, Serial No. 662,932
5 Claims. (Cl. 53—4)



1. The method of evacuating and assembling a vacuum-tight envelope including a stack of insulating and metal members having at least one wall portion thereof consisting of a metal selected from the group consisting of titanium, zirconium, hafnium, thorium, vanadium and palladium which comprises heating said stack while subjected to an atmosphere consisting essentially of hydrogen both inside and out, continuing the heating to a temperature sufficient to effect melting at the junction of the metal and insulating parts and allowing the stack to cool sufficiently to solidify the junctions, flushing the volume surrounding the envelope with a rare gas while maintaining the enclosure at a high temperature but below the melting temperature of the junctions to pass hydrogen within the envelope through said wall portion and allowing the envelope to cool, and sorbing residual hydrogen from within said envelope by said wall portion as the device cools.

2,859,572
PACKAGING

Leslie John Moncrieff, London, England, assignor to British Celanese Limited, a British company

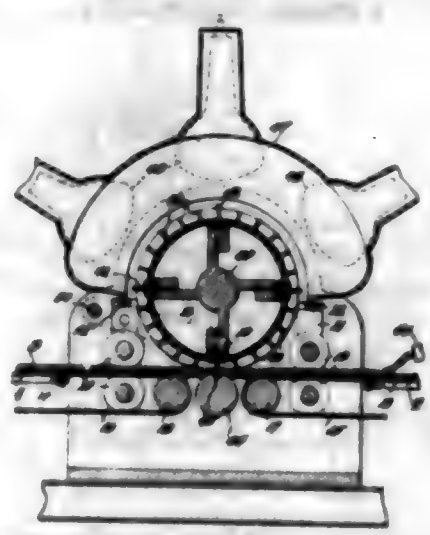
Application July 5, 1956, Serial No. 594,081
Claims priority, application Great Britain July 15, 1955
7 Claims. (Cl. 53—33)

1. Process for enclosing a box-shaped object in a tubular covering of wrapping film as a step in packaging said object, which comprises drawing a predetermined length of film from a spool over the top of said object, cutting off said length and releasing both ends thereof so that it covers the top of the object and hangs down beyond each side to about the same extent, moving the object forward on to and along a temporarily stationary horizontal surface and causing the forward overhang of the film length by said movement to be tucked under the object, moving said surface, while it carries the object, backwards and towards the end of said movement causing the rear overhang of the film length to be nipped between a horizontal rearwardly projecting solvent-applying member that moves with said surface, engaging the forward surface of said rear overhang, and a fixed forwardly projecting surface, and then moving the package further backwards along a fixed horizontal surface so as to draw said rear overhang out of contact with the solvent-applying member, fold it under the layer of film that has already been folded under the object and cement the two film layers together, the total overhang of wrapping film beyond the sides of the object being greater than the width of the object but less than twice said width, and the film being sufficiently wider than the length of the object to project at each end enough to form end flaps for closing the package.

2,859,573
MACHINE FOR FORMING AND HANDLING MARGARINE AND THE LIKE

Claude Shelton, Jr., Atlanta, Ga., assignor to The Mar-Gold Corporation, Atlanta, Ga., a corporation of Georgia

Application January 20, 1955, Serial No. 483,873
16 Claims. (Cl. 53—123)



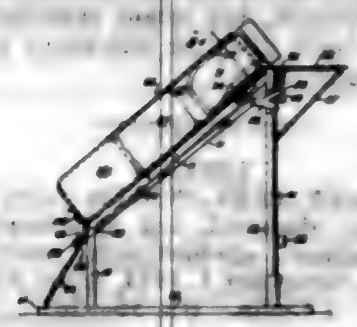
1. In a device of the character described, a support, an incoming conveyor drive roll mounted thereon, an outgoing conveyor drive roll likewise so mounted, a pair of conveyor belts operatively positioned on said rolls, a pair of wrapping material pinch feed rolls mounted on said support in oppositely disposed relationship, a pair

about its axis; a layer of elastoplastic material, selected

2,859,579

of oppositely disposed tension rolls mounted on said support at a point beyond said feed rolls, a cutting roll operatively mounted between said feed rolls and tension rolls, a plurality of cutting blades disposed around the outer peripheral surface of said cutting roll at spaced intervals and parallel to the axis thereof, a plurality of scoring elements disposed around the central peripheral surface of said cutting roll, a billy roll disposed beneath said cutting roll, a longitudinally extending indentation in said billy roll cooperating with the cutting blades of the cutting roll, and means for driving all of said rolls in synchronized relationship whereby a substance carried by the conveyor of the incoming drive roll is scored by the outer segments of the cutting roll, and paper upon which said substance has been deposited, periodically severed by the blades of said roll, tension being concurrently applied to the paper through said tension rolls with each cutting operation.

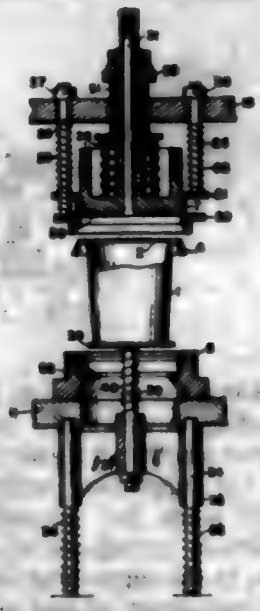
2,859,574
BAG FILLING MACHINE
Ralph K. Olivette, Bakersfield, Calif., assignor to Ames Harris Neville Co., San Francisco, Calif., a corporation of California
Application October 12, 1954, Serial No. 461,821
2 Claims. (Cl. 53—261)



1. A bag filling machine comprising an inclined support, means maintaining said support in inclined position, a first spreader located on one side of said support, a second spreader located on the opposite side of said support, said spreaders being vertically upstanding and located adjacent the upper end of the support, at least one of said spreaders being laterally adjustably movable relative to the other to accommodate bags of different width, and operating means for moving at least one spreader toward or away from the other in a horizontal path to spread open a bag held on said support, a stop gate adjacent the lower end of said support, means for retracting said stop gate, and means connecting said operating means and said means for retracting said stop gate to move said spreaders toward each other to release a bag and retract said stop gate simultaneously and to move said spreaders apart and position said stop gate in operative position simultaneously.

2,859,575
APPARATUS FOR CLOSING AND SEALING CONTAINERS
Henry Lehmann, Puchheim, near Munich, Germany
Application May 22, 1953, Serial No. 356,634
5 Claims. (Cl. 53—341)

1. An apparatus for forming an interlocking, convolute sealing bead between a container casing end flange and a flange of a cover placed over the container casing end, the cover flange surrounding the container casing flange, said apparatus, comprising, in combination: an annular beading tool having an inwardly tapered receiving portion for guiding the cover flange, a shoulder forming an annular recess in said tapered portion, a substantially cylindrical portion adjacent said tapered portion, and an annular rim portion defining an arcuate beading recess between the rim and the cylindrical portion, the diameter of the rim portion being in excess of the largest container casing diameter to leave a clearance between the beading tool rim and the container casing; a counter-die having a substantially flat annular surface coaxial with the beading recess and arranged to engage the beading tool with its surface facing the beading recess so as to form said sealing bead in the recess; guide and centering means for guiding the cover flange into the receiving portion of the beading tool and centering the cover flange and the container casing flange together in relation to the beading recess, said means consisting of an inner and an outer guide ring mounted coaxially with and surrounding the annular surface of the counter-die for longitudinally slidable movement in relation to each other, the edges of the guide rings being inwardly beveled and the beveled edge of the inner guide ring fitting into the annular recess of the tapered portion of the beading tool upon engagement of the counter-die with the beading tool,



independent biasing means for the counter-die, the inner guide ring and the outer guide ring to provide relative sliding movement therebetween; and means for moving the beading tool and the counter-die toward each other for engagement of the counter-die flat surface and the beading recess, said moving means being so correlated that the beveled edge of the outer guide ring first contacts the cover flange thereby centering the container casing and cover assembly in relation to the inner guide ring and counter-die, the inner guide ring then engages the cover flange and the counter-die engages the cover, the outer ring subsequently abuts the beading tool and the inner ring slides into the annular recess of the tapered portion of the beading tool thereby centering the assembly in relation to the beading recess, and the flat surface of the counter-die is finally pressed against the beading recess to form the interlocking, convolute sealing bead.

2,859,576
PACKAGING APPARATUS
Laurence E. Dowd, Park Forest, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application March 22, 1956, Serial No. 573,236
1 Claim. (Cl. 53—370)

The improvement in apparatus for use in entubing objects in closely adhering wrappers and twisting the ends of said wrappers which comprises: a wheel rotatable

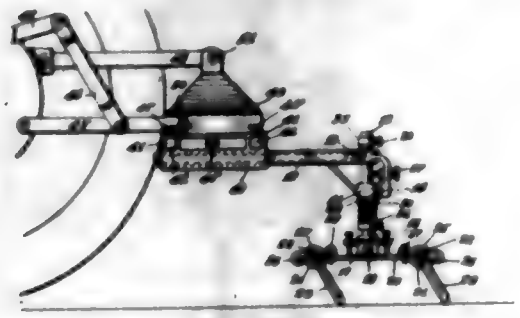
proximity with said reel, said cover plate having a down- of said bar whereby either of the cutting edges of said

as the device cools.

said support in oppositely disposed relationship, a pair

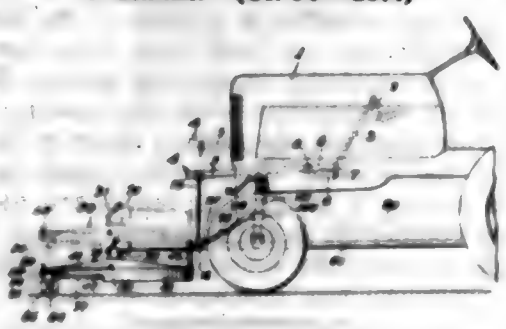
about its axis; a layer of elastoplastic material, selected from the group consisting of polyurethane foam, polyethylene foam, water-softened regenerated cellulose sponge, polyvinyl chloride foam, and foam rubber, secured about the outer periphery of said wheel, said layer being characterized by a generally concave depression across its outer surface; and means to rotate said wheel whereby an object within a loose wrapper when held against the concave surface of said elastoplastic material will be rotated in a direction opposite said wheel to enable the ends of said wrapper to be twisted closed.

2,859,577
HARROW
James L. Preuter, Van Wert, Ohio, assignor to Corson Brothers, Inc., a corporation of Indiana
Application August 25, 1954, Serial No. 452,090
6 Claims. (Cl. 55—86)



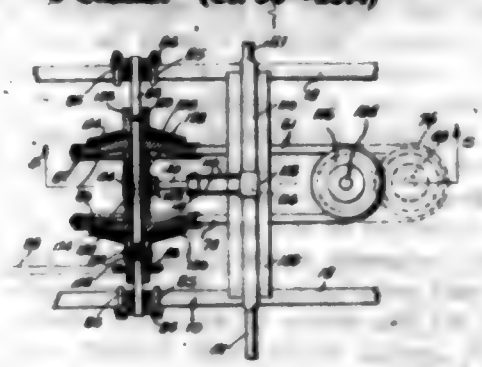
1. In a harrow having a supporting frame structure, a pair of posts extending downwardly from and vertically slidable in said frame structure, a pair of bars each bearing harrow teeth, bar-supporting means secured to the lower ends of said posts for supporting said bars in parallel spaced relation, spring means urging said posts downwardly relative to the supporting structure, means for limiting downward movement of said posts relative to the supporting structure, and releasable means for preventing sliding of said posts in said supporting structure.

2,859,578
POWER MOWER ATTACHMENT
Gilbert A. Hall, Alma, Ga.
Application March 26, 1956, Serial No. 573,728
3 Claims. (Cl. 56—25.4)



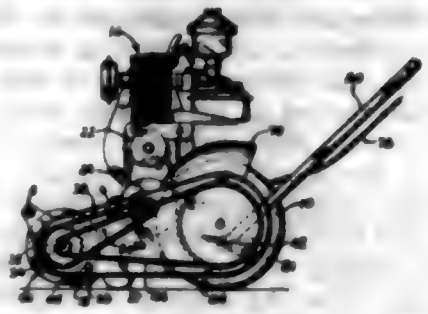
1. In a forward mower attachment for vehicles and the like, a shaft housing and means for flexibly supporting it on a vehicle, said means including an elongated flexible member attached to said shaft housing and to the vehicle at a point above said shaft housing, a mower housing secured to said shaft housing, a mower drive shaft rotatably supported in said shaft housing, cutter means rotatably supported in said mower housing, a drive connection between said shaft and said cutter means and means for adjusting the cutting height of said cutter means above the ground, said last named means including a frame hingedly mounted on said mower housing, ground contacting members rotatably mounted on said frame and an adjustable connection between said frame and said mower housing.

2,859,579
SELF-PROPELLED ROTARY MOWER HAVING IMPROVED DRIVE
Jean R. Peck, Eaton, Ind.
Application November 29, 1957, Serial No. 699,585
3 Claims. (Cl. 56—25.4)



1. In a power mower having a cutter mounted on a vertical shaft, a driven pulley on said vertical shaft, an idler pulley spaced from said driven pulley, a pair of spaced drive clutch discs laterally spaced with respect to said driven and idler pulleys and movably mounted on a single driven shaft, a single belt trained over said driven and idler pulleys and over said drive clutch discs, a driven clutch disc spaced outwardly of and adjacent each of said drive clutch discs and each connected to said driven shaft for rotation therewith, and means operatively connected to said driven clutch discs for alternately engaging each of said drive clutch discs.

2,859,580
ROTARY REEL POWER MOWER
Saad F. Salamy, deceased, late of Amarillo, Tex., by Alice M. Salamy, administratrix, Amarillo, Tex.
Application November 1, 1954, Serial No. 465,831
1 Claim. (Cl. 56—26)



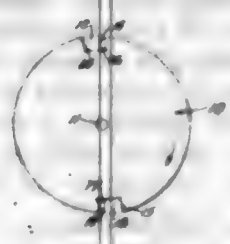
In a lawn mower having a pair of spaced apart, relatively thin side frame plates, at least one of which has a shoulder on the outer portion thereof, an axle shaft extending transversely between said side frame plates near the rear ends of said plates and being journaled therein and having one end of said shaft extending through one of said side plates, a traction wheel mounted on said axle shaft within and adjacent each of said side frame plates, bars extending between said side frame plates and holding said side frame plates a fixed distance apart, a reel shaft extending transversely between said side frame plates and being journaled therein near the forward ends thereof, with one end of said reel shaft extending through the same side plate through which the axle shaft extends, a cutting reel, having blades thereon, mounted on said reel shaft between said side frame plates and extending substantially the entire distance therebetween, the blades of said reel extending forward of said side frame plates, a complementary shear bar mounted between the lower sides of said side frame plates and being adjustably secured thereto near the forward ends thereof, which bar extends substantially the distance between said side frame plates and is in complementary contact relation with the blades of said cutting reel when said reel is rotated, a cover member secured to and extending between said side frame plates, which cover extends forward into close

bottom of the well, said spindle having a journal portion

rotated by one step at each turn of the rotation of the

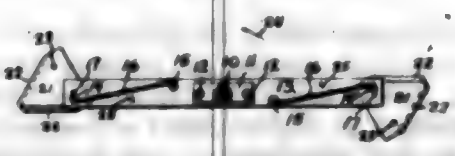
proximity with said reel, said cover plate having a downturned lip portion on the forward end thereof, said cover member extending rearwardly and enclosing at least the top portion of said wheels and forming a power means mounting plate, power means mounted on said cover plate, said power means having a shaft extending outward therefrom, clutch means mounted on said shaft, a counter-shaft adjustably mounted on said cover plate, a V-belt pulley mounted on said clutch of said power means, a V-belt pulley mounted on said counter-shaft in aligned, driving relation with respect thereto, said counter shaft extending through the same side plate through which said axle shaft extends, a sprocket on the outer end of said counter-shaft immediately adjacent said side frame plate, a sprocket of larger diameter than said first mentioned sprocket, fitted on said reel shaft and being secured thereto in aligned, driving relation with said sprocket on said counter-shaft, a third sprocket, which sprocket is mounted on and secured to said reel shaft, a fourth sprocket, which sprocket is mounted on and attached to said axle shaft, and which fourth sprocket is of a larger diameter than said third sprocket on said reel shaft, and being in aligned, driving relation with respect thereto, a transmission chain extending around said first sprocket and said second sprocket in driving relation, a further transmission chain extending around said third sprocket and said fourth sprocket in driving relation, and a cup-shaped cover complementarily fitted on said shoulder and being attachably secured to the outer portion of said side plate adjacent said sprockets so as to enclose said chains.

2,859,581
SAFETY MOWER BLADE
Harley E. Krell, Hopkins, and Don O. Benson, Minneapolis, Minn., assignors to Toro Manufacturing Corporation of Minnesota, Minneapolis, Minn., a corporation of Minnesota
Application July 2, 1954, Serial No. 441,143
12 Claims. (Cl. 56—295)



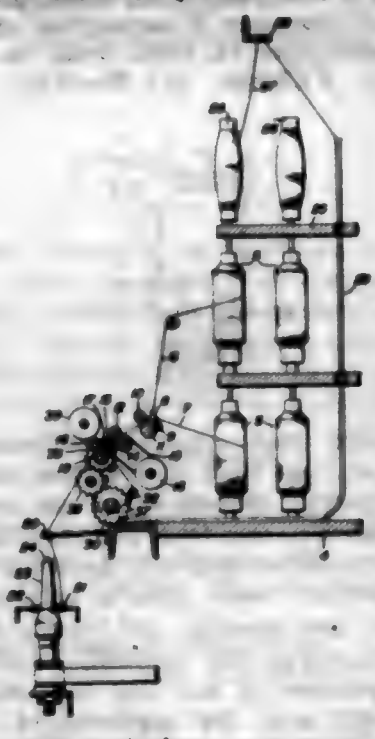
7. A rotary mower blade of generally uniplanar disc-like form, said blade having at least one peripheral opening, said opening having spaced edge portions, one of said edge portions constituting a cutting edge and the other of said edge portions extending out of the plane of said blade to form a fan, said blade having a periphery generally increasing in diameter from a point adjacent a fan to a point adjacent a cutting edge.

2,859,582
ROTARY LAWN MOWER BLADE STRUCTURE
Maurice P. Babcock, Springfield, S. Dak.
Application August 10, 1956, Serial No. 603,377
1 Claim. (Cl. 56—295)



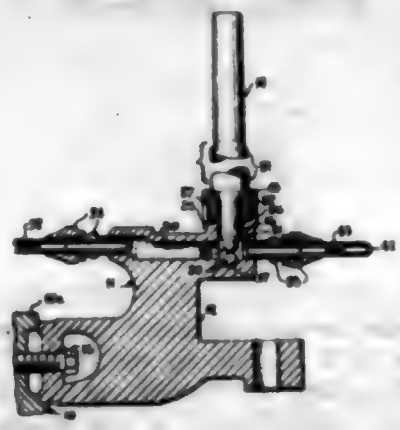
A rotary lawn mower blade structure comprising a horizontally positioned bar, a pair of triangular cutting blades having opposed cutting edges, said cutting blades each having a pair of spaced openings, pins passing through either of said openings and through the ends of said bar whereby either of the cutting edges of said cutting blades will be positioned for cutting action, means for locking said pins within said bar including a pair of spring urged members having extremities received through said pins, said spring-urged members being secured at one end to said bar.

2,859,583
APPARATUS FOR PRODUCING CORE YARNS
Samuel P. Parker, La Grange, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia
Application May 10, 1957, Serial No. 658,412
3 Claims. (Cl. 57—34)



1. Apparatus for producing a core yarn comprising: a ring spinning frame having a roving creel, drawing rolls, a spindle and a ring and traveler; a support for a supply of continuous filament yarn; a yarn feed roll for positively advancing a continuous filament yarn from such supply toward the front drawing rolls; means for driving said yarn feed roll at a surface speed slightly less than the surface speed of said front drawing rolls; and yarn guide means for guiding the continuous filament yarn from said yarn feed roll between said front drawing rolls in longitudinal alignment with the centerline of a ribbon of staple fibers passing between said front drawing rolls.

2,859,584
MOUNTING AND LUBRICATING MEANS FOR VERTICAL SPINDLES
Alexander H. Hamilton, Fayetteville, N. C.
Application January 25, 1956, Serial No. 561,297
8 Claims. (Cl. 57—134)

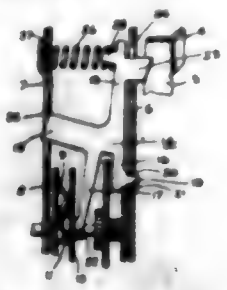


1. A spindle mounting comprising a bracket provided with a well in its upper portion, a ball seated on the

prising a plurality of flame holder elements in the shape of a pair of sparking electrodes, an inner electrical con-

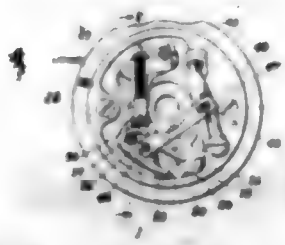
bottom of the well, said spindle having a journal portion thereon loosely fitting in the well for rotation therein, a rounded projection on the lower end of said journal portion resting upon the ball, said bracket having a pair of substantially opposed ports therein communicating with said well, and means for progressively circulating liquid lubricant under pressure through one of said ports, through said well and through the other port for maintaining lubrication of the contacting surfaces of the ball and the rounded projection on the lower end of the spindle.

2,859,585
ALARM CLOCK MOVEMENT
Otto O. Propbet, Wellesley Hills, Mass., assignor to General Electric Company, a corporation of New York
Application April 16, 1956, Serial No. 578,305
5 Claims. (Cl. 58—22)



2. In an alarm clock comprising a timing mechanism, a base plate, a front plate spaced from said base plate and arranged parallel thereto, a first cam member rotatably mounted between said front plate and said base plate, a second cam member rotatably mounted between said front plate and said base plate in coaxial relationship with said first cam member and axially movable with respect thereto, means for manually adjusting the relative angular position of said first cam member, and a resilient vibrator arm, the improvement comprising a lever pivoted to said base plate, spring means being positioned for engagement with said front plate for urging a first portion of said lever into the path of said vibrator arm to prevent vibration of said vibrator arm, and a second portion of said lever being positioned for engagement with said second cam member whereby axial movement of said second cam member away from said first cam member pivots said lever in opposition to said spring means thereby moving said first portion of said lever out of the path of said vibrator arm to permit vibration of said vibrator arm.

2,859,586
AUTOMATIC CONTROL SWITCH FOR THE ELECTRIC MOTOR WINDING UP A CLOCKWORK SPRING
Biagio Franciolini, Rome, Italy
Application March 21, 1955, Serial No. 495,686
Claims priority, application Italy March 31, 1954
9 Claims. (Cl. 58—41)

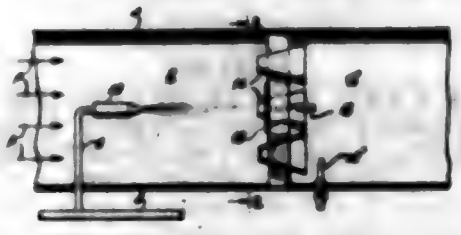


1. In a device for automatically switching an electric winding motor of a clockwork spring "on" and "off," wherein switch contacts are opened and closed by a pivoting fork member controlled by a star wheel adapted to turn intermittently about a pivot which is arranged to rotate together with the spring barrel, said star wheel being rotated by one step at each turn of the rotation of the spring barrel: the improvement which comprises means operatively connected with the star wheel and engaging the fork member for pivoting the fork member into three successive positions, the first one when the spring is fully wound up, the second one towards the end of the first turn of the spring barrel during the unwinding of the spring, and the third position toward the end of the second turn of the spring barrel; one switch contact mounted to permit a limited pivoting movement thereof; a second switch contact mounted for wider pivotal movement; a spring member connected with the second contact arranged to hold the contact in an "off" and "on" position, respectively; means operatively connected with the fork member for pivoting said one switch contact in the second position of the fork member to increase the distance of the one switch contact from the second contact; means operatively connected with the fork member for displacing the second contact in the third position of the fork member instantaneously from the "off" to the "on" position of the switch determined by said spring member, said displacement of the contact being caused by reversal of direction of the action of the spring member acting on the second contact; and a lost motion joint connecting the fork member and the one switch contact to prevent the fork member from acting on either contact when the fork member returns from the third to the second position.

2,859,587
HYPERGOLIC FUEL AND METHOD OF PROPELLING ROCKETS
Cleveland R. Scott, Bartlesville, Okla., and Arnold L. Ayers, Idaho Falls, Idaho, assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application June 8, 1953
Serial No. 360,356
8 Claims. (Cl. 60—35.4)

5. A method for applying immediate thrust to a mass comprising introducing separate streams of an oxidant and fuel component of a bipropellant into contact with each other in a combustion chamber of a reaction motor in such proportions as to produce spontaneous ignition, said fuel component consisting essentially of tert-butyl mercaptan and the ratio of said oxidizer of tert-butyl mercaptan being not more than 1:0.7.

2,859,588
FLAME HOLDER STRUCTURE FOR RAM JET COMBUSTOR
Herman I. Wilson, Beacon, N. Y., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
Application December 16, 1953, Serial No. 398,513
3 Claims. (Cl. 60—35.6)



1. In combination with a jet propulsion device of the ram jet type having a combustion chamber, flame holding and igniting means therefor comprising a flame holder structure mounted in said chamber transverse to the direction of air flow therethrough, and ignition means for igniting combustible fuel-air mixtures positioned adjacent and downstream said flame holder structure, means for providing fuel to said combustion chamber in the direction of air flow therethrough and being located upstream with respect to said flame structure, said structure com-

direction, a pump operatively connected to said transmitter to deliver fluid under pressure upon rotation of

to said source for exerting said second action and to the exhaust, said closing device comprising: a body in

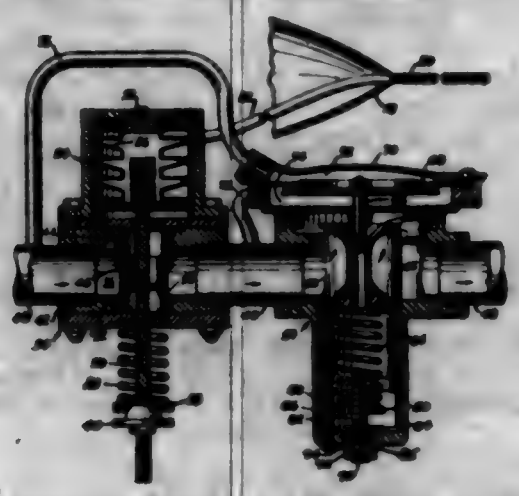
prising a plurality of flame holder elements in the shape of hollow truncated cones with bases open downstream and a splash plate separate from and surrounded by said elements and located with respect to said means for providing fuel for the direct impingement of fuel thereon, whereby said fuel is dispersed over said plate and said elements to provide localized combustible fuel-air mixtures in their downstream vicinities.

2,839,589

FUEL METERING DEVICES FOR RAM JET ENGINES

Daniel W. Gunnerson, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Application June 28, 1955, Serial No. 519,144
1 Claim. (Cl. 60—39.28)



In a supersonic aircraft propelled by a ram jet engine, the combination comprising the ram jet engine having a diffuser on the forward end thereof through which air passes in entering the engine, and an island member mounted generally centrally within said diffuser to project forwardly therefrom, said engine being operable to propel said aircraft at varying speeds throughout a predetermined supersonic speed range defined between a lower supersonic speed at which the major shock wave created by and ahead of the engine assumes a substantially conical form and shifts rearwardly to hug the forward end of the island and an upper supersonic speed at which the cone angle of such rearwardly shifted shock wave has decreased to a point of interference from said diffuser, means for delivering fuel to said engine including regulator means controllable by air pressure to vary the fuel delivery rate substantially in proportion to air pressure applied to said regulator means, and a source of air pressure for control application to said regulator means comprising a pitot tube mounted in forwardly projecting position on the forward end of the island member with the mouth of the pitot tube directed forwardly into the free air stream at a relative location outside any shock waves from the aircraft operating in said predetermined supersonic speed range, and means operatively applying the air pressure developed within said pitot tube to said regulator means for controlling the same thereby independently of static air pressure, whereby an approximately constant ratio of fuel and mass airflow into said engine is maintained throughout said supersonic speed range.

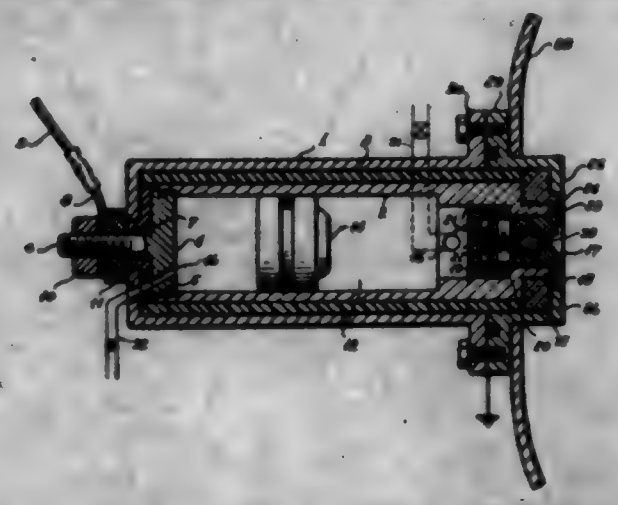
2,839,590

PISTON TYPE IGNITER

Richard J. Mason, Lyndhurst, N. J., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware

Application February 23, 1955, Serial No. 490,831
6 Claims. (Cl. 60—39.82)

1. The combination comprising an outer conductive shell having an annular end face providing one member of a pair of sparking electrodes, an inner electrical conductive shell insulated from said outer shell and having an annular end face providing the second member of the electrodes, said annular end faces being spaced to provide a sparking gap separating the electrodes, a piston slidable in a chamber provided by the inner shell, means connected to said chamber for admitting volatile fuel to the chamber to the inner side of the piston, a nozzle having an exit surrounded by the electrodes, and means connected to said chamber for admitting pressure air to the chamber at the opposite other side of the piston to effect movement of the latter to drive the fuel through he nozzle exit.

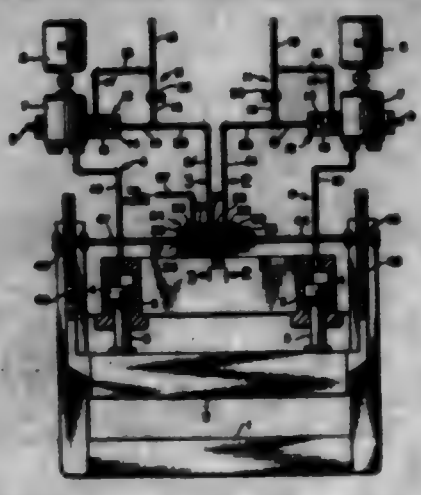


2,839,591

HYDRAULIC SYNCHRONIZER

Louis Zimmermann, Palos Heights, Ill., assignor to U. S. Industries, Inc., Chicago, Ill., a corporation of Delaware

Application July 20, 1955, Serial No. 523,291
10 Claims. (Cl. 60—97)



1. A hydraulic synchronizer adapted for use with a hydraulic metal working press having a reciprocating slide, comprising a plurality of pilot hydraulic circuits, synchronizing valve means common to said circuit, a like plurality of main hydraulic circuits for reciprocating the slide, means to actuate said valve means when one end of the slide moves at a greater rate of speed than the other end thereof, and control means, common to each of said main and pilot circuits operable when said valve means is actuated to control the pressure in the main circuit to which it is connected and retard the speed of movement of said one end of the slide.

2,839,592

HYDRAULIC TRANSMITTER WITH FOLLOW-UP

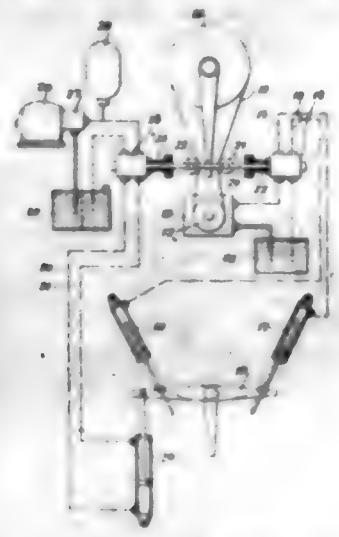
Jean Mercier and Bernard Mercier, New York, N. Y.

Application June 29, 1956, Serial No. 594,997
Claims priority, application France June 30, 1955
41 Claims. (Cl. 60—97)

1. Equipment for remotely controlling a member, said equipment comprising a transmitter rotatable in either

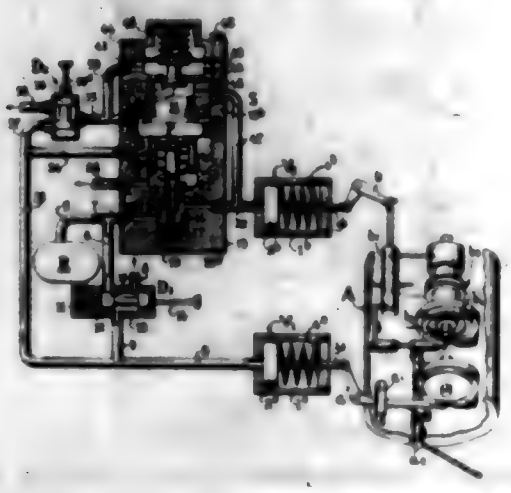
for preventing restarting of said refrigerant liquefying said tank, said jet pump being ported on its lower side

direction, a pump operatively connected to said transmitter to deliver fluid under pressure upon rotation of said pump by said transmitter, hydraulically controlled means to effect actuation of said member in either of



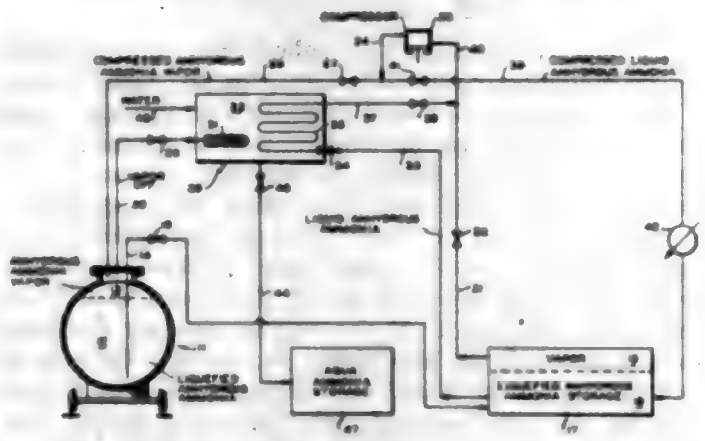
two directions, fluid control valve means operatively connected between the pump and said hydraulically controlled means and means responsive to the reactive forces produced by the resistance to rotation of the pump by the transmitter, to actuate said valve means.

2,859,593
CONTROL MECHANISM AND APPLICATIONS THEREOF PARTICULARLY IN CHANGE-SPEED GEARS
Jean-Paul Brunot, Sens, France, assignor to Compagnie de Pont-A-Mousson, Nancy (Meurthe-et-Moselle), France, a French body corporate
Application July 24, 1957, Serial No. 673,777
Claims priority, application France July 26, 1956
4 Claims. (Cl. 60—97)



1. A mechanism comprising in combination: a first device and a second device to be controlled in such manner that the action exerted on the first of said devices is independent of the action exerted on the second of said devices and that said last-mentioned action is preselected manually and then automatically exerted by manually exerting said first action on the first of said devices; a source of fluid under pressure, a first single-acting fluid motor and a second single-acting fluid motor which have inlet apertures connected in parallel to said sources and pistons respectively connected to said first and second devices for exerting respectively said first and second actions; a manually controlled directional valve disposed between said source and said first fluid motor for selectively connecting the latter to said source for exerting said first action and to the exhaust; a closing device disposed between said source and said second fluid motor and having two positions respectively corresponding to the connection of said second fluid motor to said source for exerting said second action and to the exhaust, said closing device comprising: a body in which is formed a bore which is provided with a shoulder and connects said source to said second fluid motor, a piston valve slidably mounted in said bore, a spring for returning said piston valve to said shoulder forming a valve seating, and a rod provided with a passageway which communicates, at one end, with an exhaust and, at its other end, with the end of said piston valve, whereby said passageway, which is opened when said rod is separated from said piston valve, is closed as soon as said rod exerts pressure on said piston valve and separates the latter from its seating; a servo-control device subjected to the action of said fluid and connected to said rod; and a preselector directional valve for connecting said servo-control device selectively to the inlet aperture of said first fluid motor and to the exhaust, whereby the manual action on said manually controlled directional valve results in an action on said closing device and in consequence on the supply to said second fluid motor through the medium of said servo-control device in accordance with the position of said preselector directional valve.

2,859,594
TRANSFER OF VOLATILE LIQUIDS AND RECOVERY OF VAPORS OF SAME
Alvin W. Peck, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application June 28, 1956, Serial No. 594,600
7 Claims. (Cl. 62—50)



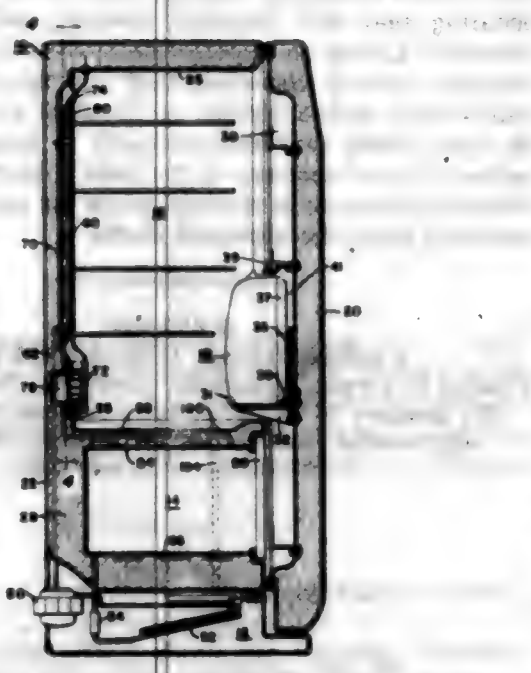
1. A method for removing the contents of a container containing a highly volatile liquid and its vapor, which comprises transferring said liquid from said container to a storage zone by displacing said liquid with a portion of its vapor from said storage zone, transferring the residual vapor remaining in said container to an absorption zone containing a solvent for said vapor, dissolving said residual vapor in said solvent, and cooling said absorption zone by employing the refrigerative capacity of said liquid stored in said storage zone.

2,859,595
TWO TEMPERATURE REFRIGERATOR WITH FORCED AIR CIRCULATION
John M. Murphy and Leonard J. Mann, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 25, 1954, Serial No. 418,668
5 Claims. (Cl. 62—214)

5. In a refrigerator, a cabinet having a compartment for the storage of unfrozen foods, means forming an air flue in one wall of said compartment, an evaporator in said air flue, refrigerant liquefying means connected to said evaporator for supplying liquid refrigerant to said evaporator, control means starting and stopping said refrigerant liquefying means in response to refrigeration requirements, said last named means including means

the latter having a lubricant receiving chamber, a spring connected driving and driven hub members and collar

for preventing restarting of said refrigerant liquefying means until all frost thereon has melted, fan means for circulating air upwardly through said flue, said fan means being offset from the lower end of said evaporator so as to be out of the path of defrost water leaving said evaporator, means for discharging said water from the



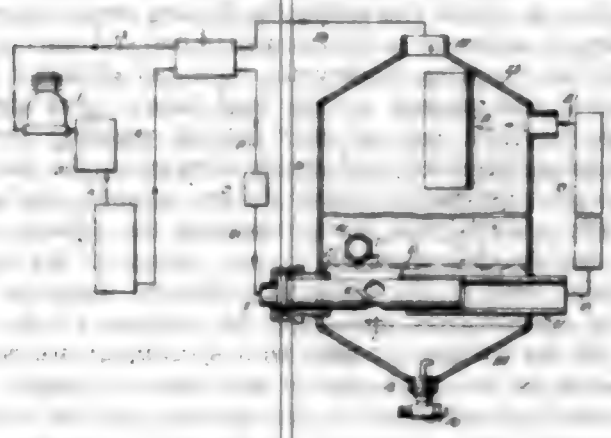
lower end of said air flue onto the bottom wall of said food storage compartment, and means for draining said water from said bottom wall and for discharging the same into thermal exchange relationship with a portion of said refrigerant liquefying means so as to revaporize said water.

2,859,596

REFRIGERATION SYSTEM

Darl L. Evans, Bloomsburg, Pa., assignor to Girton Manufacturing Company, Inc., Millville, Pa., a corporation of Pennsylvania

Application June 1, 1955, Serial No. 512,502
19 Claims. (Cl. 62—471)



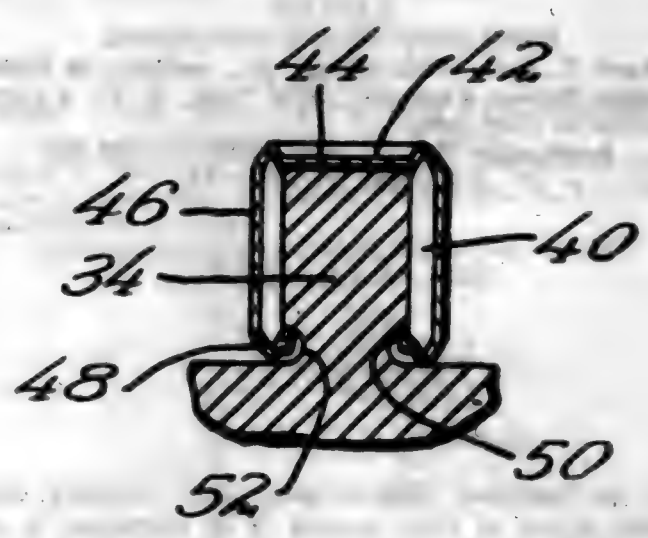
1. In a refrigerating apparatus, the combination of a refrigerant evaporator, a surge tank and refrigerant separator, a jet pump demountably housed in and readily accessible in the lower portion of said tank for delivering refrigerant to said evaporator, baffle means positioned in said tank above said pump for separating entrained liquid refrigerant and oil from gaseous refrigerant discharged into said tank from said evaporator and for directing separated refrigerant and oil into the lower portion of said tank, said jet pump being ported on its lower side and opposite from the portion of said tank housing said baffle means for withdrawing refrigerant stored in said tank, means for supplying refrigerant under pressure to the jet nozzle of said jet pump, pressure control orifice means in said pump positioned at the inlet to said jet nozzle for controlling the pressure and quantity of the refrigerant flowing through said jet nozzle and for controlling the pumping action of said jet pump in the recirculation of refrigerant from the lower portion of said surge tank to said evaporator, and means for withdrawing gaseous refrigerant under reduced pressure from the upper portion of said surge tank.

2,859,597

STEERING DRIVE UNIVERSAL

Charles P. Bolgrassho, Durand, Wis.

Application February 16, 1955, Serial No. 488,547
1 Claim. (Cl. 64—7)



In a drive mechanism, a drive shaft, a hub slidably supported on said drive shaft at one end thereof, a series of projections extending radially outwardly from said hub, said projections having their axes in a common plane normal to the axis of said hub, cylindrically shaped extremities on said projections and coaxial therewith each extremity being provided with an annular groove adjacent its juncture with its associated projection, needle bearings encircling said extremities, cup-shaped means retaining said bearings in extremity encircling position, said cup shaped means including a cup shaped member for each cylindrically shaped extremity provided with an inturned flange engageable in a respective annular groove to releasably retain said cup shaped members in position, an outer member circumjacent said hub and having an inner spherical surface, the center of which coincides with the point of intersection between the drive shaft axis and said common plane, and a series of arcuate grooves in said inner surface, said grooves being centered along radial planes through the axis of said hub and being angularly spaced to accommodate the travel of said cup-shaped means retaining said needle bearings.

2,859,598

LUBRICATING DEVICE FOR THE POWER TRANSMISSION BOLT OF ELASTIC SHAFT COUPLINGS

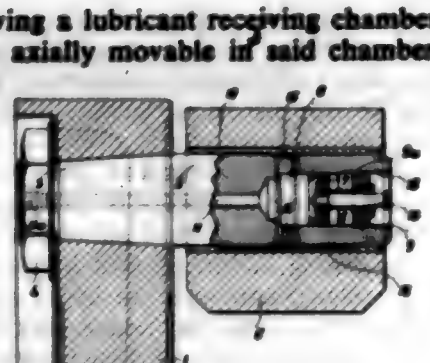
Johann Hochreuter, Ansbach, Mittelfranken, Germany

Application May 21, 1957, Serial No. 660,524
2 Claims. (Cl. 64—10)

1. A lubricating device for the power transmission bolts of elastic shaft couplings comprising two coupling discs, power transmission bolts secured to said coupling discs, a segment rotatably mounted on each of said bolts,

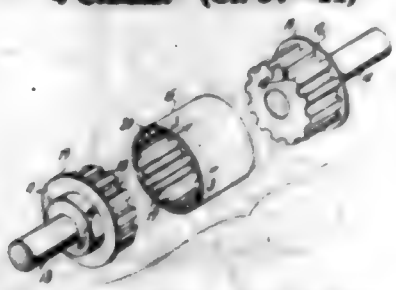
guiding needles having rear end portions mounted on said tally disposed circular bottom wall, the upper end of said

the latter having a lubricant receiving chamber, a spring biased piston axially movable in said chamber for feed-



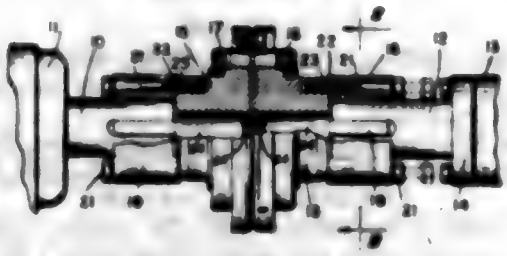
ing said lubricant from said chamber in a direction opposite to the centrifugal force towards the carrying face of said bolts facing an axle of said shaft couplings.

2,859,599
RESILIENT SHAFT COUPLING
Richard Y. Cass, Philadelphia, Pa., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application May 17, 1955, Serial No. 508,903
4 Claims. (Cl. 64—11)



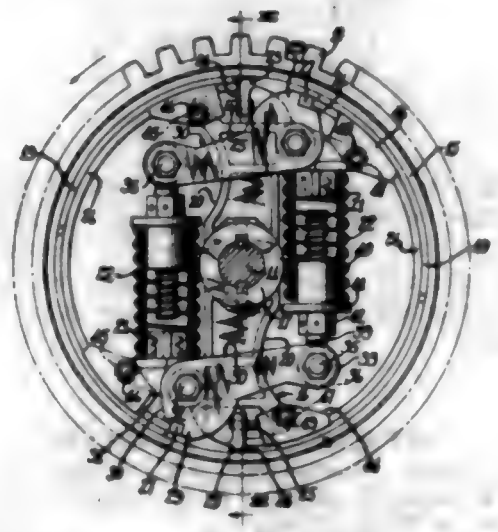
1. An improved flexible silent shaft coupling comprising a pair of hubs adapted to be connected to oppositely disposed shafts, each of said hubs having oppositely disposed end faces and axially extending grooves in their peripheries, each said groove on one hub being aligned with a corresponding groove on the opposite hub, a coupling sleeve snugly fitting over said hubs and having axial flexibility in its circumferential area positioned radially opposite said faces of said hubs, said sleeve comprising a plurality of circumferentially spaced axially extending continuous ribs and a load carrying band united to said ribs, one end of each said rib extending into a groove in one hub and the other end extending into the aligned groove in the opposite hub, said ribs comprising a resilient flexible core and a fabric cover bonded thereto and to said band in the spaces between said ribs, and said band being relatively thin and flexible in its circumferential area opposite said faces of said hubs.

2,859,600
COUPLING
Vic C. Wrightson and Emil F. Stern, Milwaukee, Wis., assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Application March 17, 1955, Serial No. 494,901
1 Claim. (Cl. 64—15)



In a coupling for operation between spaced ends of substantially aligned shafts and including flexibly interconnected driving and driven hub members and collar means for releasably attaching said coupling to and between the shaft ends without axial displacement of the shafts, the combination comprising: a pair of collars respectively mountable on said shaft ends and each having an end portion forming a seat for an adjacent hub member; means extending through said collars for releasably securing said hub members thereto; each of said hub members having an imperforate cross-section; a lubricant retainer housing encircling said hub members in sealing relationship with a portion of the outer peripheries thereof, and joining said hubs unitarily to form with the imperforate cross-sections of the hubs a lubricant chamber, whereby lubricant is retained when the coupling hubs are removed from the aforesaid shafts.

2,859,601
CONTROLLED TORQUE DEVICE
Charles E. Evans, Naperville Township, Du Page County, Ill., assignor to Barber-Greene Company, Aurora, Ill.
Application January 18, 1955, Serial No. 482,531
9 Claims. (Cl. 64—30)



1. In a controlled torque driving device, a driving member and a driven member, a friction drive connection between said driving member and said driven member, and transmitting a torque driving load from the driving member to the driven member comprising a friction member engageable with said driven member and having a tight end taking the driving torque from said driving member to said driven member and an opposite slack end, a spring loading the tight end of said friction member, the torque driving load being taken directly from the tight end of said friction member through said spring whereby said spring determines the measure of torque transmitted to said driven member, said spring initially yielding and accommodating the driving member and friction member to run ahead of the driven member, and as the transmitted torque increases, said spring progressively increasing the pressure on the tight end of the friction member with a resultant decrease in pressure on the slack end of the friction member until a predetermined torque is transmitted and the pressure on the slack end of the friction member is reduced to the extent to allow the friction member to slip.

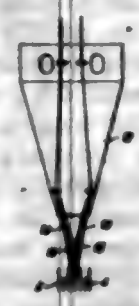
2,859,602
YARN CARRIER
Erich Porsche, Lindau-Zech, Germany, assignor to Jotha Metallwarenfabrik Edgar G. Schob, Baden, Germany, a German firm
Application May 17, 1955, Serial No. 509,063
Claims priority, application Germany May 18, 1954
2 Claims. (Cl. 66—126)

1. In a hosiery knitting machine including sinkers, in combination, a carrier finger means; and a pair of thread

the mutual spacing thereof, said bracket including bend-

contact is displaced for adjustment of the stationary con-

guiding needles having rear end portions mounted on said carrier finger means and arranged at an angle to the central axis of said carrier finger means and with respect to each other, each of said needles having a solid slim straight forward portion having a pointed free end and being formed with a transverse thread eye, said forward



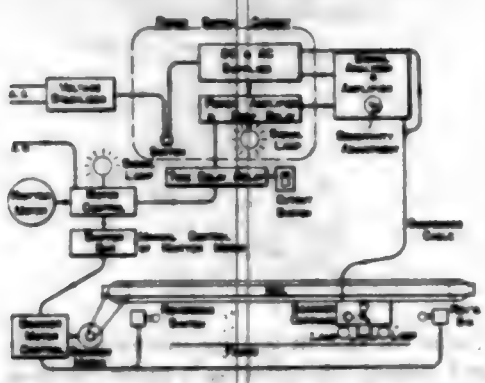
portions of said pair of needles being bent at an angle to said rear portions and extending parallel to each other and to said carrier finger axis, said forward portions of said needles being spaced from each other a distance adapted to be smaller than the spacing between adjacent sinkers.

2,859,603

STOP MOTION DEVICE FOR FABRIC PRODUCING MACHINES

Abraham Edelman, New York, N. Y., and Theodore Lasar, Fort Lee, N. J., assignors to Photobell Company, New York, N. Y., a partnership composed of Abraham Edelman and Johanna Edelman

Application June 12, 1956, Serial No. 590,990
15 Claims. (Cl. 66—166)



1. In a stop motion device of the kind wherein a scanning means travelling across the width of an illuminated fabric inspects the fabric as it emerges from a fabric handling machine and stops the machine upon detection of a defect in the fabric, a scanning means comprising lens means facing the fabric area under inspection, two light receiving means, light deviating means interposed between said lens means and each of said light receiving means, said light deviating means directing a direct beam upon one light receiving means and a second beam upon the other light receiving means, said lens means being focused upon the light receiving means, a mask disposed in front of each of said light receiving means, each of said masks passing light incident from different but immediately adjacent portions of the fabric area under inspection to the respective light receiving means, and control means controlling a stop circuit for the machine and controlled by an unbalance in the light received by said two light receiving means from said adjacent fabric portions.

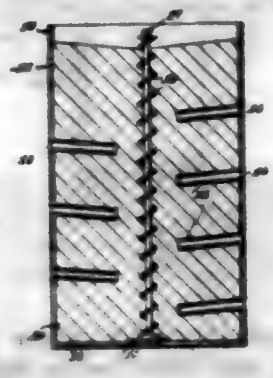
2,859,604

HEATING DEVICE

Andrew Hallum, Springfield, Mo.

Application June 19, 1957, Serial No. 666,576
3 Claims. (Cl. 67—21)

1. In a heating device, a hollow container including a vertically disposed cylindrical side wall, and a horizontally disposed circular bottom wall, the upper end of said container being open, a quantity of fuel positioned in said container, and a plurality of spaced apart open ended tubes extending inwardly from said side wall, said fuel



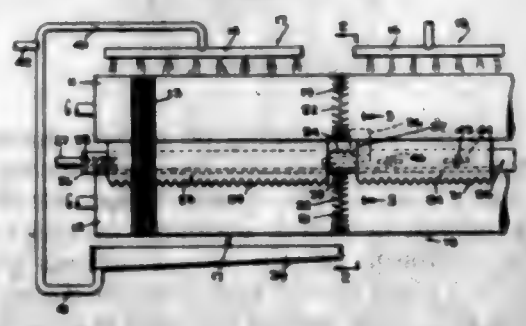
being wax, there being openings in said side wall registering with the outer ends of said tubes, said tubes being arranged in slanting fashion so that the inner ends of the tubes are lower than the outer ends thereof.

2,859,605

REEL TYPE APPARATUS FOR THE LIQUID TREATMENT OF YARN

Edward T. Jones, Jr., Rock Hill, S. C., assignor to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

Application August 31, 1954, Serial No. 453,382
15 Claims. (Cl. 68—205)



1. In an apparatus for treating a material with a liquid, the combination of a plurality of adjacent rotatable rolls extending in the same direction for supporting said material and means for supplying liquid to said material on said rolls, a wiper element having an elongated upper surface resiliently engaging one of said rolls along a line generally parallel to the axis of said roll for wiping liquid from the surface of said engaged roll and having an elongated lower surface engaging another of said rolls along a line generally parallel to the axis of said roll for transferring the liquid wiped from a given portion of said first roll to the surface of a generally corresponding portion of said other roll.

2,859,606

SUPPORTS FOR WALL INSTALLED ACCESSORIES

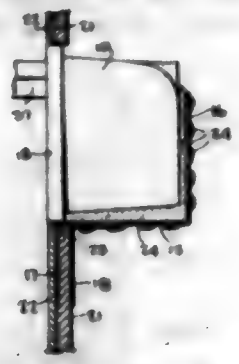
Joseph P. Scardino, Brooklyn, N. Y.

Application September 2, 1955, Serial No. 532,170
1 Claim. (Cl. 72—5)

A support for recessed wall fixtures to be installed in a wall opening, said support comprising a metal bracket having a planar floor and a pair of spaced flanges depending downwardly from one end of said floor and defining a channel having a downwardly directed mouth adapted to embrace the lower lip of the wall opening, an upstanding back formed at the other end of said floor, the top of the channel being closed and co-planar with said floor, said floor flanges and back all being formed with perforations throughout whereby they may receive cement for bonding the fixture thereto, said pair of spaced flanges being fixed in position at said one end of said floor and being bendable inwardly toward each other for adjusting

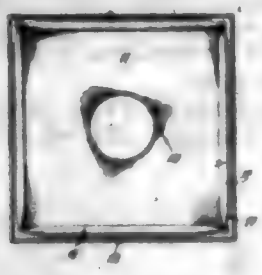
operating circuit, means under control of said contacts, close said upper inlet port, and whereby, upon the closing

the mutual spacing thereof, said bracket including bendable sides which extend along the width of said floor from



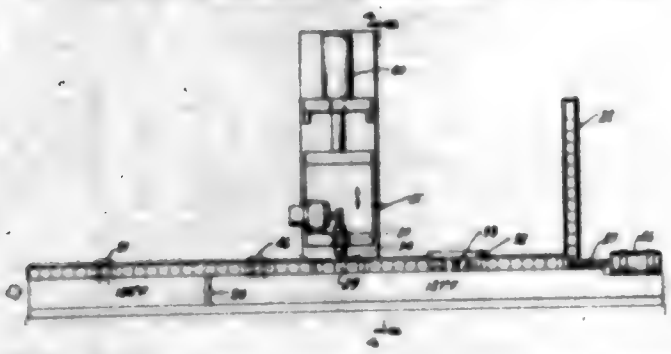
said back to a point forwardly of the rearward one of said spaced flanges, said sides having bottom edges which are free of said floor.

2,859,607
RESILIENT WALL TILE
Paul W. Makray, Chicago, Ill.
Application October 31, 1951, Serial No. 254,144
4 Claims. (Cl. 72—18)



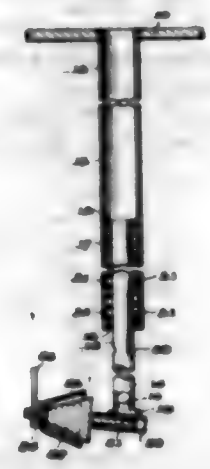
2. A wall tile for mounting on a tacky-mastic-coated wall comprising, a substantially thin body having a front surface and a rear surface, a rigid flange extending continuously around the entire periphery of said body and projecting rearwardly of said body a uniform distance to terminate in a plane spaced from the rear surface of said body, each said front surface and said rear surface over a narrow peripheral portion sloping frontwardly from said flange inwardly, and rigid rib means on said rear surface projecting rearwardly therefrom a uniform distance over the major portion of its length to terminate in a plane parallel to but offset in the direction of said rear surface from said first named plane, said rib means extending along the inner margins of the sloping portion of said rear surface to form, therewith and with said flange a peripheral channel for the trapping of mastic therein.

2,859,688
THERMOSTATIC SWITCH CALIBRATING DEVICE
Herman G. Bear, James L. Kummer, and John D. Zartman, Logansport, Ind., assignors to Essex Wire Corporation
Application April 14, 1955, Serial No. 501,318
5 Claims. (Cl. 73—1)



1. In apparatus for calibrating thermostatic switches wherein a metal member carrying a normally stationary contact is displaced for adjustment of the stationary contact relative to a bimetal-controlled contact; a guideway in which a plurality of switches are aligned in a row for successive delivery to a calibrating position, the guideway comprising a heat insulating portion and a heated member of relatively high heat conductivity in thermal contact with the switches for heating the switches to a calibrating temperature, the guideway having a cut-away portion at the calibrating position; a hammer movable in the cut-away portion of the guide way to engage the metal member of a switch located at the calibrating position for advancing the stationary contact of the switch into switching operation with the bimetal-controlled contact; means for reciprocating the hammer at a high frequency to provide a repetitive high frequency flexing of the metal member while the stationary contact is being advanced; and means responsive to switching operation of the switch contacts to cause the hammer to move away from the metal member.

2,859,689
TIRE TESTING RACK
Joseph A. Tomchak, McKees Rocks, Pa.
Application December 24, 1954, Serial No. 477,515
2 Claims. (Cl. 73—45.5)

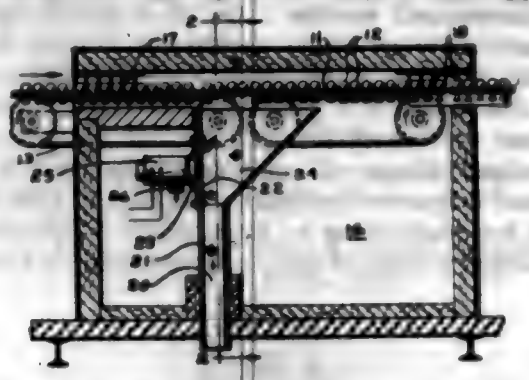


1. Apparatus for use in testing pneumatic tubeless tires mounted on a wheel, comprising a main vertical supporting member, means for suspending the said member, a second vertical supporting member telescopically supported by the first member and having limited vertical movement thereon, and being rotatable about a vertical axis, a laterally-extending tubular bearing sleeve carried by the lower end of the second supporting member, a stub shaft whose inner end extends loosely into the sleeve, and means on the outer end of the shaft for mounting a tire-carrying member for rotation with the shaft, the said sleeve being inclined upwardly from the said second supporting member, at a fixed angle, whereby the shaft and a tire carried thereby will remain in place until the shaft is slid outwardly from the sleeve.

2,859,610
APPARATUS FOR TESTING FRANGIBLE ARTICLES
Clyde W. Dickey, Elmira, N. Y., assignor to Corning Glass Works, Corning, N. Y., a corporation of New York
Application December 16, 1954, Serial No. 475,620
7 Claims. (Cl. 73—69)

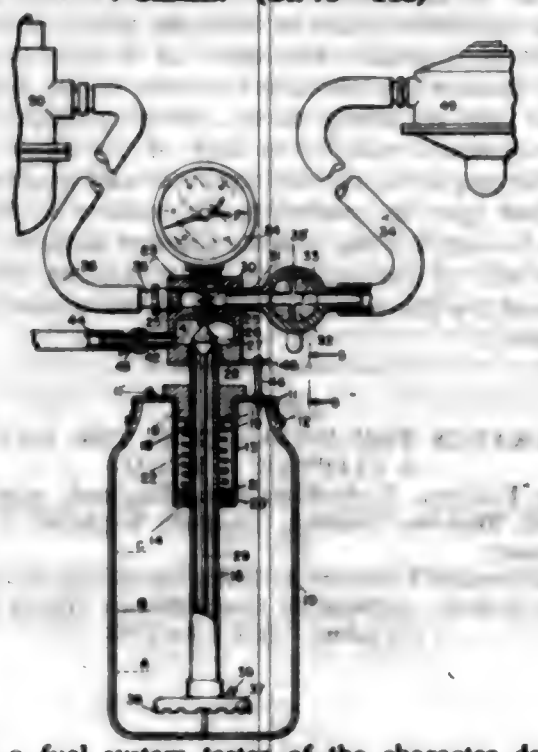
1. In an article testing system, a sound chamber, a conveyor passing through said chamber, an article tray adapted to be supported by said conveyor for passage through said chamber, contacts adapted to be closed by a tray occupying said chamber, a siren within said chamber having low speed and high speed operating circuits, manually operable means for activating said low speed

operating circuit, means under control of said contacts, for activating said high speed circuit, an air supply line



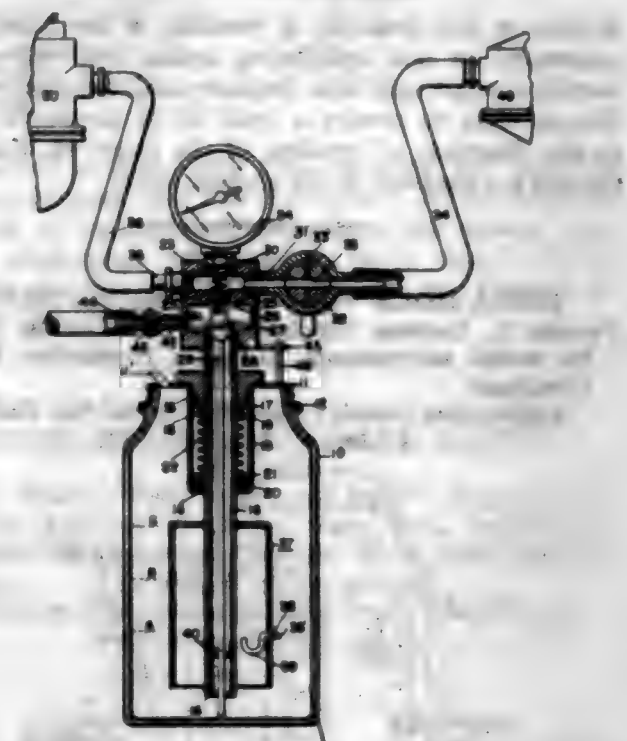
to said siren including a magnetic valve, and an operating circuit for said valve including said contacts.

2,859,611
TESTING MEANS FOR FUEL SYSTEM
Howard H. Morse, Portland, Oreg.
Application August 15, 1955, Serial No. 528,337
7 Claims. (Cl. 73—118)



1. In a fuel system tester of the character described including a fuel-receiving receptacle having a transparent wall and a cap and a tube slidably mounted in the cap extending down into the receptacle and terminating a spaced distance from the receptacle bottom, spring means supporting said tube in normal raised position with respect to said receptacle and cap but permitting said tube to be thrust downwardly a limited distance against the force of said spring means, a housing on said tube above said receptacle, said housing having a chamber, a discharge outlet for said chamber, shut-off means normally closing said outlet, a lower port in said chamber leading into said tube, an upper inlet port in said chamber in vertical alignment with said lower port, a valve member in said chamber, said ports having valve seats for said valve member, said valve member being of such size as to enable said member to close either of said ports or to be in neutral position between them, a valve rod attached to said valve member extending down through said tube and engaging the bottom of said receptacle, spring means urging said valve member and valve rod downwardly, whereby, when said tube and said housing are in normal raised position with respect to said receptacle, said valve will close the lower of said ports and the partial lowering of said tube and housing with respect to said receptacle will bring said valve into relative neutral position between said ports while further lowering will cause said valve to close said upper inlet port, and whereby, upon the closing of said upper inlet port by said valve and the opening of said shut-off means, said receptacle will be connected with said discharge outlet, means for connecting the motor fuel pump with said housing above said upper inlet port, and means for connecting the motor carburetor with said housing above said upper inlet port.

2,859,612
TESTER FOR FUEL DELIVERY SYSTEM
Howard H. Morse, Portland, Oreg.
Application October 1, 1956, Serial No. 613,115
4 Claims. (Cl. 73—118)

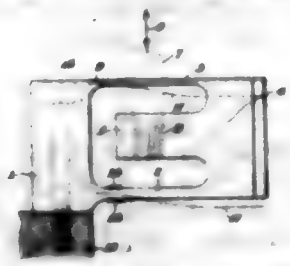


1. In a fuel system tester of the character described, including a fuel-receiving receptacle having a transparent wall, a delivery tube extending substantially vertically down into said receptacle with the bottom end of said tube spaced a short distance from the bottom of said receptacle, and means for delivering fuel through said tube into said receptacle, an air bell surrounding said tube in said receptacle, the bottom of said air bell being open and spaced slightly above the bottom of said receptacle, the remaining portion of said air bell being airtight, an air outlet tube extending outwardly through the wall of said air bell and terminating in said receptacle a short distance from said air bell, said outlet tube being located more than half way between the top and the bottom of said air bell wall whereby, with the delivery of liquid fuel into said receptacle through said delivery tube, air pressure will be built up in the upper portion of said air bell and ultimately the delivery of any air with said fuel will cause air to be discharged from said outlet into the liquid fuel outside of said air bell while vapor in said delivered fuel will be subjected to liquifying pressure in the bottom of said air bell.

2,859,613
MULTIPLE BENDING BEAM FORCE MEASURING DEVICE
Malcolm Green, Waban, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania
Application April 6, 1956, Serial No. 576,619
6 Claims. (Cl. 73—141)

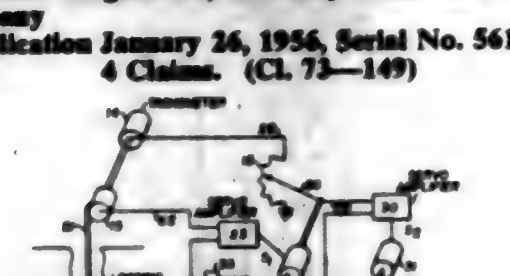
1. A force measuring device comprising, in combination, a bending beam, a base for rigidly supporting one end of the beam while its other end is free to move, a flexure plate also having one end rigidly supported by said base while its other end is free to move, said beam and

flexure plate being disposed substantially parallel to each other, means for rigidly connecting together the movable ends of the beam and flexure plate to maintain the same substantially in parallelism along an S-shaped curve during movement of their free ends, and a member, nou-



flexible in the direction of bending of the beam, rigidly connected to said connecting means and extending inwardly toward said base between said bending beam and flexure plate to receive a load, to be measured, applied in the direction of bending of the beam so that flexure thereof is a measure of the applied force.

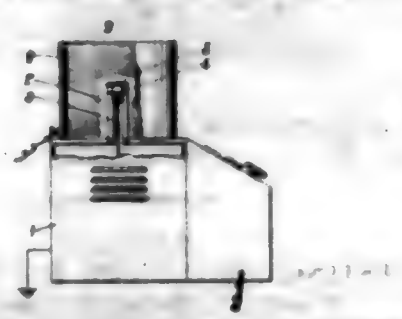
2,859,614
DRILL HOLE VOLUME LOGGING DEVICE
Vernon C. Larson, Calgary, Alberta, Canada, assignor, by mesne assignments, to Jersey Production Research Company
Application January 26, 1956, Serial No. 561,547
4 Claims. (Cl. 73—149)



1. An apparatus for determining the volume of a bore hole which comprises in combination logging means adapted to be moved vertically within a bore hole and to develop a first electrical signal which is proportional to the radius of the bore hole, means for developing a second electrical signal which is proportional to instantaneous rates of change in the distance traveled by the logging means within the bore hole, means for squaring said first signal, means for multiplying said squared signal and said second signal to develop a third signal which is proportional to instantaneous rates of change in the volume of the bore hole, and capacitor means to integrate said third signal and to develop a charge which is proportional to the cumulative volume of the bore hole.

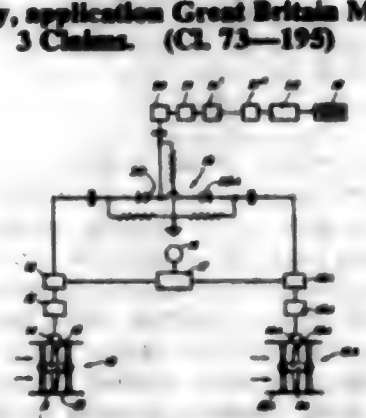
2,859,615
TESTING APPARATUS FOR ELECTROSTATIC COATING MATERIAL
Gobei Osame, Minami-ku, Osaka City, Japan
Application March 9, 1956, Serial No. 570,476
Claims priority, application Japan April 2, 1955
2 Claims. (Cl. 73—156)

1. An electrostatic coating material testing apparatus comprising a cylindrical drum for holding perpendicular a plurality of recording papers around the inner surface of the wall thereof, means for holding vertical said cylindrical drum, a disc having its periphery inclined at an angle of substantially 75 degrees to the horizontal so that the bottom area of said disc is greater than the upper area, said disc having a plurality of grooves radially engraved upon the upper surface area of said disc starting from the center thereof and inclined toward the bottom area of said disc to form sharp-edged fringes with the periphery of the bottom area for holding thereupon in predetermined volume a specimen of the liquid coating material to be tested, means for holding horizontal said disc within said recording paper holding cylindrical drum and spaced at a predetermined equal distance from the inner surface of the wall thereof so that respective sharp-edged fringes of said specimen holding grooves confront respective recording papers, a high potential source for establishing an electrostatic field between said sharp-edged fringes of said specimen holding grooves and



the inner surface of the wall of said recording paper holding cylindrical drum to cause the sprays of atomized particles of respective specimens to be respectively deposited upon a predetermined portion of the surface of each of the recording papers, forming thereupon respective patterns specific to each of the liquid coating materials employed, the uniformity of said patterns being dependent upon the predetermined volume of the specimen to be used and the distance between the inner surface of the wall of the recording paper holding cylindrical drum and the sharp-edged fringes of the specimen holding grooves.

2,859,616
APPARATUS FOR INDICATING THE RATE OF A FLOW OF A FLUID
Horace Fellows, Wolverhampton, England, assignor to H. M. Hobson Limited, London, England, a British company
Application February 1, 1956, Serial No. 562,369
Claims priority, application Great Britain March 7, 1955
3 Claims. (Cl. 73—195)

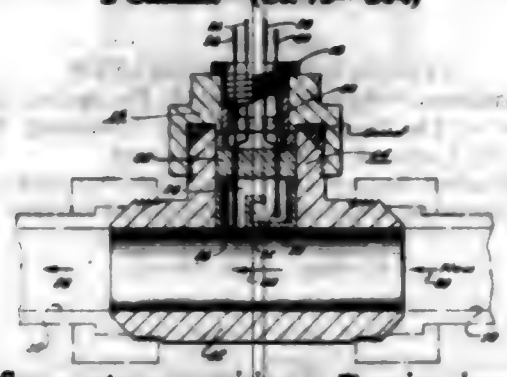


1. The combination, with a plurality of fluid flowmeters each comprising an electrical transmitter arranged to generate electrical pulses at a repetition frequency determined by the instantaneous rate of flow of fluid measured by said flowmeter, of a ratemeter common to all of said flowmeters, said ratemeter comprising a plurality of mono-stable flip flops one connected to each flowmeter, each flip-flop having a normally conducting section and a normally non-conducting section, both sections of each flip-flop having an anode and a control electrode and all of said flip-flops having the same time constant and a mark time less than the reciprocal of the repetition frequency of the pulses generated by any of said flowmeters, means for applying the pulses from each of the flowmeters to the control electrode of the normally non-conducting section of the associated flip-flop and a current measuring device connected in an anode circuit common to the normally non-conducting

sponse to resistance encountered when said control as- of corresponding apertures in the other wall element, said

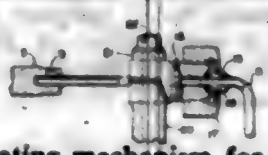
sections of all of the flip flops and responsive to the sum of the currents flowing in all of said normally non-conducting sections.

2,859,617
THERMAL FLOWMETER
William H. Adams, Manhattan Beach, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California
Application October 22, 1954, Serial No. 463,979
2 Claims. (Cl. 73—204)



1. A flow meter comprising a T union inserted into a fluid line; a fluid tight cap screw fitting threaded onto the lateral projection of said union; a fluid tight screw plug in said cap screw; an insulator retained in said lateral projection by said plug; a fluid tight dead end partition in said lateral projection; a pair of themistor bulbs supported by said partition, one of said thermistor bulbs extending into the path of fluid flow; a baffle in said lateral projection that prevents fluid flow from passing about the other of said thermistor bulb; and electrical leads extending from each thermistor bulb outwardly through the insulator and plug; said leads from each bulb being connected to adjacent arms of a Wheatstone bridge.

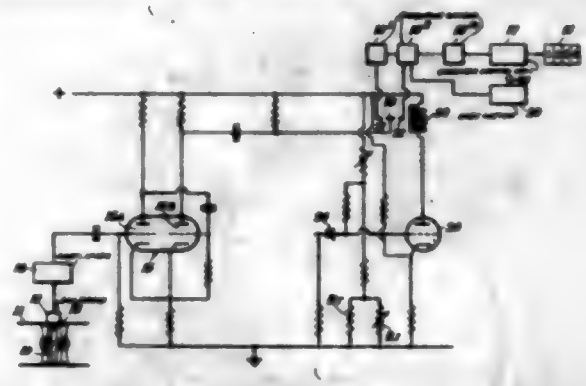
2,859,618
COMPENSATOR FOR QUANTITY MEASURING METER
Harvard H. Gorrie, Cleveland Heights, Ohio, assignor to Bailey Meter Company, a corporation of Delaware
Application October 20, 1955, Serial No. 541,617
5 Claims. (Cl. 73—205)



1. A compensating mechanism for a meter measuring the quantity of a medium including, a casing for the meter into which the medium is introduced, a spindle of the meter rotated around its longitudinal axis through a predetermined angle for a predetermined range of quantity values of the medium at predetermined values of specific weight, a pressure responsive chamber mounted on the spindle, a conduit from the medium in the casing transmitting a pressure representative of the specific weight of the medium to the pressure responsive chamber, a drive arm mounted on the spindle with its effective length varied by the pressure responsive chamber, and manifesting structure for the medium quantity actuated by the variable length of drive arm.

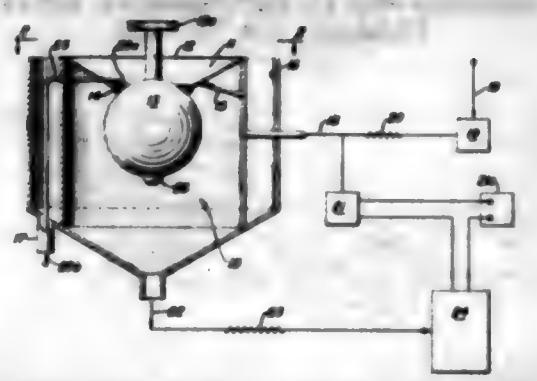
2,859,619
FLOW METERS
Horace Fellows, Wolverhampton, England, assignor to H. M. Hobson Limited, London, England, a company of Great Britain
Application February 21, 1956, Serial No. 566,994
Claims priority, application Great Britain March 14, 1955
6 Claims. (Cl. 73—231)

4. In combination with a counting device, a source of pulses, a chain of electronic frequency dividers connected to said counting device, means connecting said source of pulses to either a first or a second divider link in said chain, a thermionic valve having a control electrode, an oscillator connected to said control electrode and supplying an input signal thereto, a relay in the



anode circuit of said valve and operating said connecting means between said first and second divider links for each cycle of operation of said valve, and means varying the mark-space ratio of the input signal of said valve and thereby the average division per second effected by the chain of dividers.

2,859,620
AUTOMATIC CONSTANT RATE SAMPLE FEEDER
Joseph C. Rhodes, Park Forest, and John P. Segers, Crete, Ill., and Anthony V. Lacko, Gary, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application December 29, 1955, Serial No. 556,177
6 Claims. (Cl. 73—421)



5. A device for metering a sample into an instrument at a constant rate which comprises in combination a sample chamber, a wide mouthed inlet to said sample chamber, a seal about said inlet, a float adapted to close said inlet by contacting said seal, a sample feed line comprising an outlet from said chamber, a flow restricting capillary in said sample feed line, conduit means for introducing displacement fluid into said chamber, a flow restricting capillary in said conduit means, and an overflow means surrounding said inlet for discharging excess sample from the system.

2,859,621
AIRCRAFT CONTROL INSPECTION DEVICE
Milton Knopf, Los Angeles, and Otto J. Borngesser, Hermosa Beach, Calif., assignors to North American Aviation, Inc.
Application April 28, 1955, Serial No. 504,651
9 Claims. (Cl. 73—432)

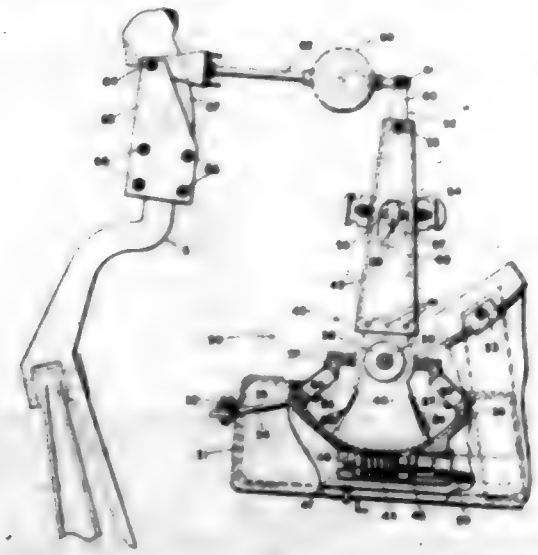
1. An inspection device for an aircraft control assembly reciprocal through a stroke with resistance to such reciprocal movement, and having stop means at either end of said stroke, said device comprising reversible substantially constant speed drive means operatively connected to said assembly for causing movement of the same, said drive means including a reversing means operative in re-

2,859,625
FLEXIBLE CONDUCTIVE MEANS

rest adjustably secured thereto, pneumatic driving means journalled centrally of said block, at least three spindles

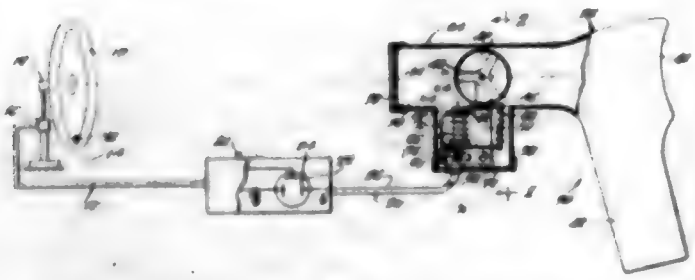
ing from the center thereof and inclined toward the bot- anode circuit common to the normally non-conducting

sponse to resistance encountered when said control assembly engages a stop means to reverse said drive means, thereby reciprocating said assembly, said drive means including a force sensing means for sensing the amount of



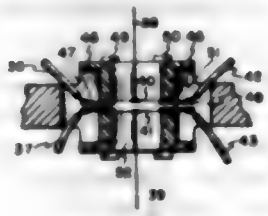
force exerted thereby in effecting such movement of said assembly; position sensing means connected to said assembly for sensing the position thereof; and recording means connected to both of said sensing means for simultaneously recording said force and said position.

2,859,622
MOMENTARY VIEWING APPARATUS
Arthur C. Allen, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application May 17, 1957, Serial No. 659,937
5 Claims. (Cl. 73—466)



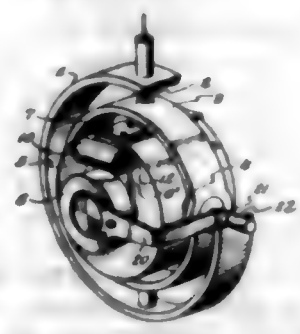
1. For normally eclipsing light continuously reflected from a view of limited scope and making the view momentarily visible only once in response to a single electrical impulse, a momentary viewer comprising, in combination, body means including a hollow barrel having an objective end and a viewing end defining a line of sight through the barrel, a first wall element extending transversely across the interior of said barrel a substantial distance from the viewing end thereof, a second wall element extending transversely across the interior of said barrel between said first wall element and the viewing end of the barrel, a magnetic actuator on one of said wall elements, a spring interconnected between said body means and said one wall element to move the latter with respect to the other wall element in transverse relation to said line of sight to a view eclipsing position, an electromagnet mounted on said body means adjacent said magnetic actuator to attract the latter against the action of said spring to move said one wall element to a viewing position displaced with respect to said other wall element transversely in relation to said line of sight, each of said wall elements being formed to define therein a pattern of apertures similar to the pattern of apertures in the other wall element and to define between the apertures opaque structure having dimensions transverse to said line of sight which are larger than similar dimensions of corresponding apertures in the other wall element, said apertures being dimensioned and located in the respective wall elements to effect when said one wall element is in said viewing position a registration transverse to said line of sight of the apertures in each wall element with the apertures in the other wall element, and the spacing between apertures in each wall element being at least equal to the displacement of said one wall element relative to the other wall element in moving between said view eclipsing position and said viewing position.

2,859,623
GYROSCOPIC APPARATUS
Hugh Brougham Sodgfield, Oakfield, Hampton, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a British company
Application August 16, 1956, Serial No. 604,519
Claims priority, application Great Britain August 25, 1955
7 Claims. (Cl. 74—5)



1. Electrical gyroscopic apparatus having a lead in electrical circuit comprising a follow-up member, a sensitive element pivotally mounted thereon about two mutually perpendicular axes, a flexible diaphragm or membrane forming a part of said circuit secured around its periphery to said element in the vicinity of the intersection of said axes, and a ligament forming a second part of said circuit attached to the center of said diaphragm and extending in a direction perpendicular to and adjacent the point of intersection of said axes to a point of attachment to said member.

2,859,624
VISCOUS DAMPER
Leslie F. Carter, Leonia, N. J., assignor to Sperry Rand Corporation, a corporation of Delaware
Application July 1, 1954, Serial No. 440,586
7 Claims. (Cl. 74—5.5)



1. In a gyro compass, a rotor case, pendulous means pivoted thereon for imparting meridian seeking properties to the compass, a damper between said pendulous means and rotor case for reducing rolling errors while retaining ballistic deflection comprising a member secured to one of said case or pendulous means along its axis of suspension, a hollow container surrounding said member secured to the other of said case or pendulous means having a part mounted in complementary relation to said member, and a viscous liquid filling the container, the materials of said member and part and the liquid being so chosen that the clearance between the two is decreased upon temperature rise in the same ratio as the viscosity of the liquid falls under the same conditions.

different diameters, a pair of sheaves positioned adjacent

2,859,631

pulses, a chain of electronic frequency dividers con-

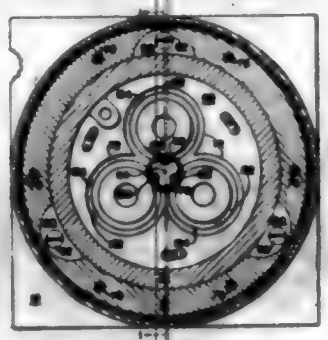
drive means including a reversing means operative in re-

2,859,625

FLEXIBLE CONDUCTIVE MEANS

Charles R. Bennell, Columbia Heights, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application June 6, 1955, Serial No. 513,183
9 Claims. (Cl. 74—5.7)



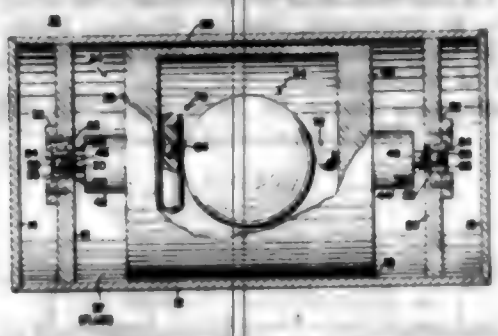
1. Apparatus of the class described comprising a first member, a second member, means pivotally mounting said first member for movement about a pivotal axis, and means for conducting electrical current between said members, said means comprising a plurality of circular conductive members each attached at one point to one of said members and at a diametrically opposite point to said other member, said points lying on a line which intersects said pivotal axis and one of said points being intermediate the other of said points and said pivotal axis.

2,859,626

APPARATUS FOR ADJUSTING THE STATIC BALANCE OF A SENSITIVE INSTRUMENT ABOUT A ROTATIONAL AXIS

Robert O. Maze, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application December 15, 1955, Serial No. 553,340
10 Claims. (Cl. 74—5.7)



6. Apparatus of the class described comprising: a floated gyroscope including a hermetically sealed housing, a gimbal supported in said housing for rotation about an output axis, a spin motor supported on said gimbal for rotation about a spin axis and including windings, and electrical connection means between said housing and said gimbal for energization of said spin motor windings; and means for adjusting the static balance of said gimbal about said gimbal axis comprising a container on said gimbal, a thermoplastic material in said container, means in said container of a different density than the density of said material, resistive means adjacent to said container which when energized serve to heat said container and melt said material, capacitor means, and means connecting said resistive means and said capacitor means to said electrical connection means.

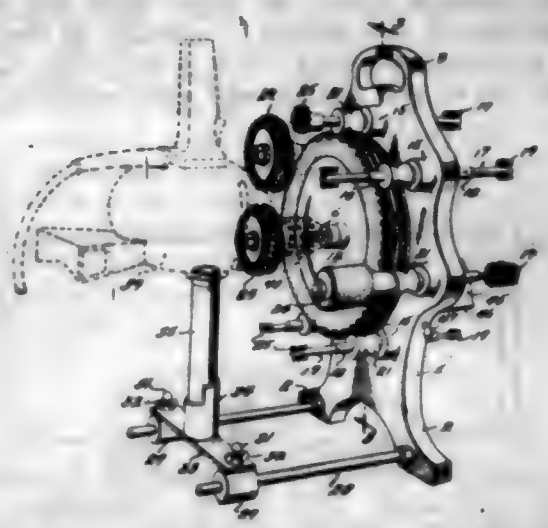
2,859,627

MULTIPLE PURPOSE POWER TOOL

John Calvin Gallup, Jr., Norfolk, Va.

Application February 16, 1954, Serial No. 410,531
8 Claims. (Cl. 74—16)

1. A multiple purpose portable power tool comprising in combination an upright rigid bearing block, a work rest adjustably secured thereto, pneumatic driving means journalled centrally of said block, at least three spindles centrally bearing in the block, said spindles being dis-



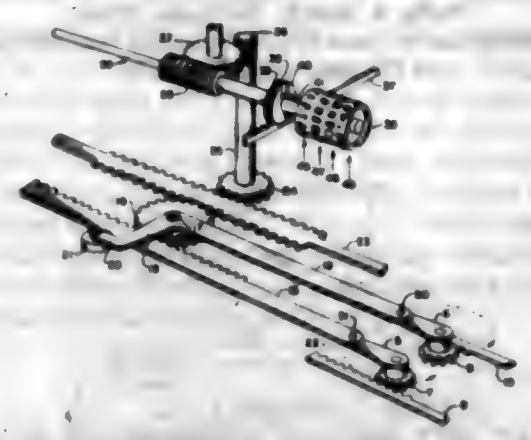
posed radially adjacent the circumferential extremity of the driving means, rotary tools carried by said spindles and a source of rotary power for the driving means.

2,859,628

VARIABLE CLEARANCE RACK AND PINION DEVICE

Robert E. Arko, Mount Prospect, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application April 30, 1957, Serial No. 656,058
9 Claims. (Cl. 74—33)



1. A positioning apparatus comprising a pinion gear, an element connected to said pinion gear to be driven thereby, crank means movable from one extreme position to another, means interconnecting said crank means and said pinion gear for moving said pinion gear bodily when the crank means is moved, means for mounting said pinion gear for rotation on said interconnecting means, a rack meshing with said pinion gear to cause said gear to rotate when said gear is moved bodily, and means mounted on said interconnecting means for wedging said rack into locked engagement with said pinion gear at extreme positions of said crank means and for releasing said pinion gear upon initiation of movement of said crank means out of its extreme positions.

2,859,629

DIFFERENTIAL CABLE DRIVE MECHANISM

Leland L. Parker, Corona, Calif., and Benjamin H. Matteson, Jr., New Paltz, N. Y., assignors to the United States of America as represented by the Secretary of the Navy

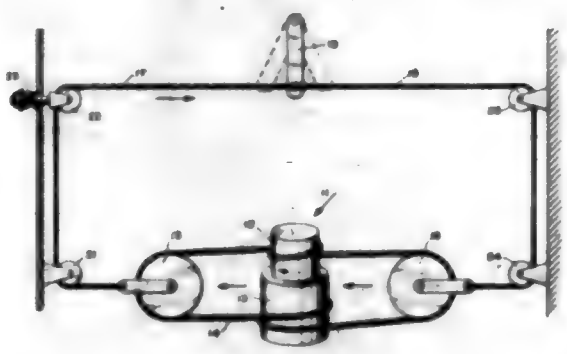
Application April 28, 1955, Serial No. 504,704
1 Claim. (Cl. 74—95)
(Granted under Title 35, U. S. Code (1952), sec. 266)

A differential cable drive comprising an oscillating member, a differential capstan having two drums of two

2,859,633 housing coupled to the after end of the gear case and

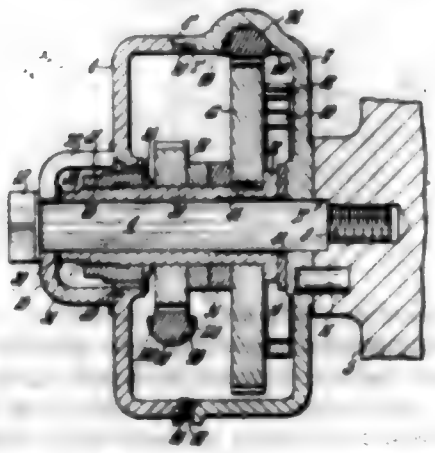
said line of sight which are larger than similar dimensions of the liquid falls under the same conditions.

different diameters, a pair of sheaves positioned adjacent opposite sides of said capstan, an endless cable having a portion wrapped around the smaller drum and another portion wrapped around the larger drum and extending around each of said sheaves, a plurality of fixed pulleys and a resiliently mounted pulley, a first cable means connecting one of said sheaves and said oscillating member



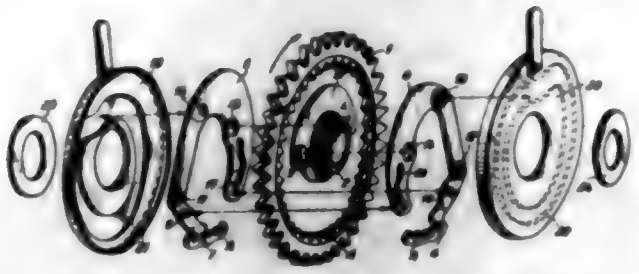
and passing through at least two of said fixed pulleys, and a second cable means connecting said other sheave and said oscillating member and passing through a third one of said fixed pulleys and said resiliently mounted pulley, whereby uniform tension is maintained on said first and second cable means to provide precisely controlled oscillation of said oscillating member in response to rotation of said capstan in opposite directions.

2,859,630
MOTION TRANSMITTING MECHANISM
Philip J. Hatch, Holyoke, Mass.
Application August 27, 1956, Serial No. 606,327
4 Claims. (Cl. 74—110)



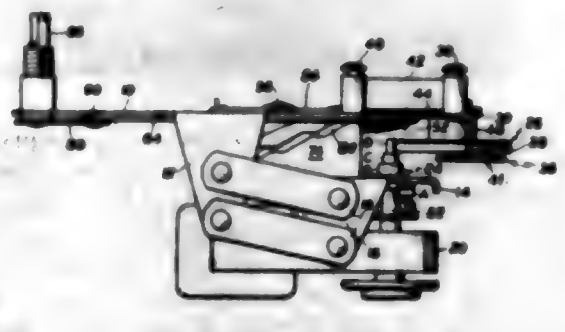
1. Motion transmitting mechanism comprising in combination, a hollow base and a hollow cover therefor arranged and cooperating therewith to form a closed hollow housing, an elongated stud extending through said base and cover for supporting the housing and having an inner end for securing the housing to a support, separate racks reciprocable in opposite directions in said base and cover respectively on longitudinal axes and being disposed transversely to the longitudinal axis of said stud, said base and cover having interfitting portions and said cover being adjustable circumferentially of said base to position said racks in various relative angular positions, means to secure said cover to said base in various positions of adjustment thereon, an elongated sleeve in said housing rotatable on said stud, a first gear fixed to an inner end portion of the sleeve in engagement with the rack reciprocable in said base, a second gear rotatable on said sleeve in engagement with the rack reciprocable in said cover, and means for holding said gears against relative rotation.

2,859,631
ACTUATING MECHANISM
Werner Spahr, Berlin-Wilmersdorf, Germany, assignor to Deutsche Telephonwerke und Kabelindustrie Aktiengesellschaft (De Te We), Berlin, Germany
Application July 7, 1953, Serial No. 366,533
7 Claims. (Cl. 74—112)



1. In apparatus for converting continuous, constant speed rotation to intermittent rotation at speeds varying gradually between zero and the constant speed, the combination with a driving member and a driven member, of motion transmitting means affording a releasable positive coupling between said members, said motion transmitting means comprising cooperating driving and driven coupling elements adapted for positive engagement to couple and release said members, means effecting periodic displacement of said driving coupling element in a direction opposed to the direction of rotation of said driving member, and devices automatically operable by means to engage and disengage said coupling elements only during the period of such displacement, whereby the inertia of the driven member is overcome gradually during coupling and release of said members.

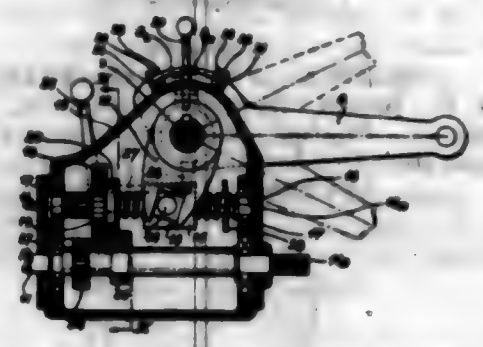
2,859,632
PHONOGRAPH MOTOR DEVICE
James L. D. Morrison, Benton Harbor, Mich., assignor to V-M Corporation, Benton Harbor, Mich., a corporation of Michigan
Application March 29, 1954, Serial No. 419,520
10 Claims. (Cl. 74—199)



1. A phonograph motor assembly comprising a first supporting member, a second supporting member, a motor mounted on said second member, a rotary shaft carried by said motor, first means movably interconnecting said members, said first means comprising pivoted lever elements which retain said shaft in one spatial attitude only, said means further including second means for moving said first and second members relative to each other, a driven member operatively carried by said first member and operatively engageable with said rotary shaft for certain predetermined relative positions of said first and second members, and a variable speed driving element on said shaft having separated different speed portions, each portion selectively being operatively engageable with said driven member upon correspondingly changing the relative positions of said first and second members.

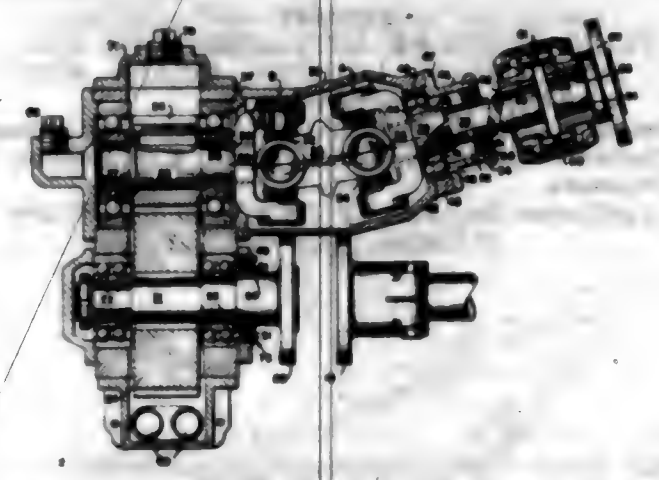
against said biasing surface and rotating said biasing surface at activation of its corresponding push button off-set one from the other such that, upon the semi-

2,859,633
LIFTING MECHANISMS FOR USE WITH AGRICULTURAL TRACTORS
Albert Patinier, Rhone, France
Application June 17, 1954, Serial No. 437,441
Claims priority, application France June 19, 1953
16 Claims. (Cl. 74—319)



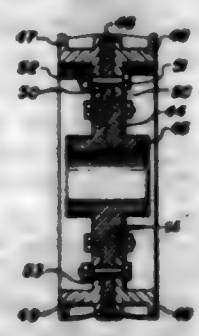
1. A lifting mechanism for agricultural tractors having a power take-off shaft, comprising a forward and reverse gear driven by said shaft; a rotatable screw adapted to be driven in either direction by said forward and reverse gear; a movable threaded member in engagement with said rotatable screw adapted to be driven thereby; a lifting gear driven by said threaded member; a pair of abutments respectively disposed at the ends of the maximum permissible stroke of said threaded member to be actuated thereby, each of said abutments, when so actuated, actuating in turn said forward and reverse gear to disconnect said rotatable screw therefrom; a second pair of abutments adapted to be actuated by said lifting gear respectively for either direction of movement thereof, said second pair of abutments being adjustable with respect to the stroke of said lifting gear to be actuated thereby at any desired point in the stroke thereof for each direction of movement of the lifting gear; and means connecting said second pair of abutments with said forward and reverse gear to disconnect said rotatable screw therefrom when any one of said second pair of abutments is actuated by said lifting gear during the raising or lowering movement thereof.

2,859,634
MARINE V-DRIVE
Gustave Walter, Jersey City, N. J.
Application September 8, 1954, Serial No. 454,675
3 Claims. (Cl. 74—414)



1. For use with a boat having a previously installed inclined propeller shaft and an engine mounted above the propeller shaft with its output shaft facing forwardly, a marine drive comprising a gear case, substantially parallel input and output shafts journalled in said case, parallel gears fixed to said shafts and in intermeshing engagement, means to mount the gear case in a diagonal position in the boat with the output shaft in alignment with the axis of the propeller shaft, means for coupling the output shaft and the propeller shaft, an angled universal housing coupled to the after end of the gear case and communicating with the after end of the input shaft, a pair of close-coupled angularly related universal joints in said housing, the forward universal joint having a forward yoke rotating in a substantially parallel plane with the input shaft and coupled thereto in driving relation by axially movable slip-fit, the after yoke of the after universal rotating in a plane substantially parallel to that of the engine output shaft, a connecting shaft having a forward end in driving relation to said after yoke, a flexible coupling connected to the after end of the connecting shaft, and an adapter connected to the rear portion of said flexible coupling and adapted to be connected to the engine output shaft.

2,859,635
SECTIONAL GEARS
Henry Y. Lee, Honolulu, Territory of Hawaii
Original application April 9, 1953, Serial No. 347,711, now Patent No. 2,748,618. Divided and this application March 14, 1956, Serial No. 571,431
2 Claims. (Cl. 74—439)



1. A sectional gear comprising a hub, a radial flange carried by said hub, the periphery of said flange being provided with gear teeth, a pair of similar and cooperative centrally apertured gear elements which are so disposed that the adjacent ends of their respective teeth closely abut and are in alignment with the gear teeth on the periphery of said radial flange, a flange carried by each of said gear elements and extending radially inward toward said rotatable hub, and screw-threaded means for holding all of said flanges together.

2,859,636
PUSH BUTTON MECHANISM FOR TAPE RECORDER AND PLAY BACK DEVICE
Walter C. Hirsimaus, Charlotte, Mich., assignor to Wilcox Gay Corporation, Charlotte, Mich., a corporation of Michigan
Original application April 24, 1952, Serial No. 284,073, now Patent No. 2,793,039, dated May 21, 1957. Divided and this application January 13, 1954, Serial No. 403,713
1 Claim. (Cl. 74—483)

In a tape recording and play back device for recording and playing back a tape, for fast forward motion and for fast reverse motion of said tape, for stopping said tape, operating means comprising push buttons, latching means secured to said push buttons, said latching means comprising a V-shaped member rigidly secured on one of its legs to each of said push buttons and rotatable around the apex of said V-shaped member, a biasing surface having a protruding portion at one end, said biasing surface being rotatable around its other end, the other leg of said V-shaped member bearing

ber rotatably supported in the cylinder and operatively connected to the piston such that piston movement effects

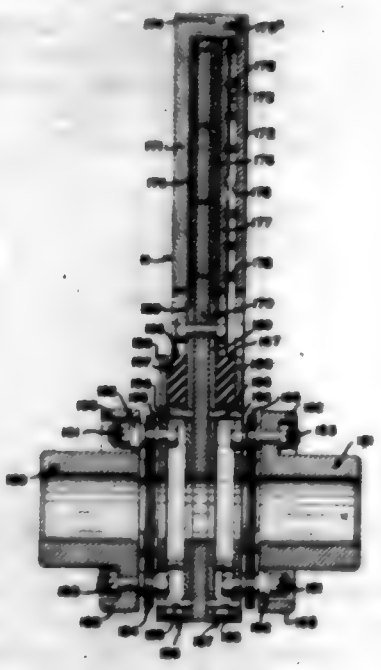
means for limiting upward movement of said chain saw

rotation.

members.

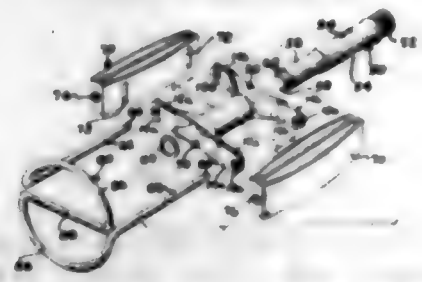
against said biasing surface and rotating said biasing surface at activation of its corresponding push button to release all other V-shaped members and their corresponding push buttons and to be latched at the end of its travel by the end of said protruding portion of said biasing surface.

2,859,637
TORSIONALLY RESILIENT FLEXIBLE FLYWHEEL COUPLINGS
Ernest Hagenlocher, Warren, Pa.
Original application February 11, 1952, Serial No. 271,888, now Patent No. 2,745,267, dated May 15, 1956. Divided and this application March 19, 1956, Serial No. 572,579
6 Claims. (Cl. 74—574)



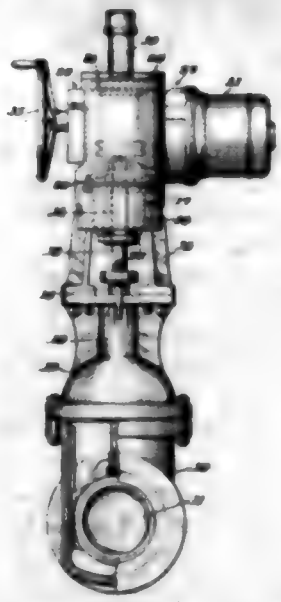
1. In a flywheel coupling construction the combination of a floating flywheel structure including a central heavy rotary flywheel member, attaching coupling parts, means connecting said attaching coupling parts to said central member including laterally flexible steel disc laminations for taking care of misalignment and end float, and rubber means connecting to both said laminations and said central member to take care of torsional deflection in a plane transverse to the axis of the coupling parts.

2,859,638
FOOT PEDAL
Arthur E. Risser, Centerville, Ohio
Application March 29, 1955, Serial No. 497,487
7 Claims. (Cl. 74—594.4)



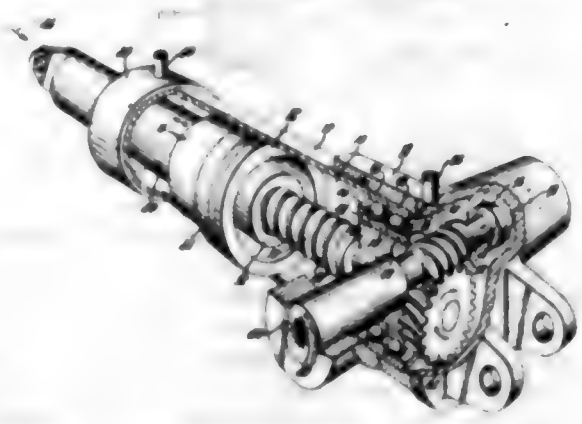
1. In a bicycle pedal, a pair of similar sheet metal frame members, each frame member comprising an elongate semi-cylindrical portion having longitudinal margins defining a first plane, and a pair of legs projecting radially oppositely from each end of said semi-cylindrical portion, each said leg comprising a substantially flat sheet metal portion occupying a plane substantially normal to said first plane and being substantially bisected thereby, the legs at each end of said semi-cylindrical portion being off-set one from the other such that, upon the semi-cylindrical portions of said frame members being superimposed in mating opposing relation to form a cylinder, the legs of one frame member occupy positions adjacent and juxtaposed upon the complementary legs of the other frame member.

2,859,639
MANUAL VALVE ADAPTER
Corwin W. Bryant, Downers Grove, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Application October 21, 1955, Serial No. 541,950
12 Claims. (Cl. 74—625)



1. An adapter structure for conversion of a manually-operated threaded-stem valve having a stem-guiding yoke to operation by a power unit including drive means and having a base for engagement on the valve yoke, comprising stop means securable to the power unit base for engagement with the yoke in non-rotative relation, a unitary drive sleeve structure rotatable by said drive means threadedly engageable with the valve stem having a portion disposed in the power unit and a portion disposable in the yoke, means for securing the sleeve structure against axial movement in the power unit, and means for securing the sleeve structure against axial movement in the yoke.

2,859,640
FLUID PRESSURE ACTUATOR WITH UNIDIRECTIONAL LOCKING MEANS AND MANUAL OVERDRIVE
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 12, 1955, Serial No. 552,409
11 Claims. (Cl. 74—625)



1. A fluid pressure operated actuator including, a cylinder, a reciprocable piston disposed in the cylinder capable of fluid pressure actuation in both directions, a mem-

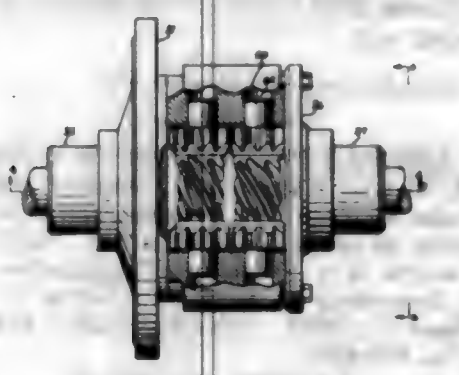
mounted on said input and output shafts and being nor-

between their adjacent peripheral portions, one of said

output shaft and the propeller shaft, an angled universal end, the other leg of said V-shaped member bearing

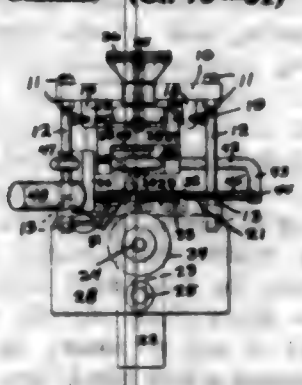
ber rotatably supported in the cylinder and operatively connected to the piston such that piston movement effects and is dependent upon rotation of said member, a rotatable and axially movable element operatively engageable with said member, manual means for engaging said element and said member, and locking means cooperable between said element and said cylinder for locking the element and the member against rotation in one direction to thereby lock said piston against movement in one direction under a load acting in said one direction.

2,859,641
DIFFERENTIAL GEAR MECHANISM
Vernon E. Gleasman, Cleveland Heights, Ohio
Application February 21, 1955, Serial No. 489,373
11 Claims. (Cl. 74—715)



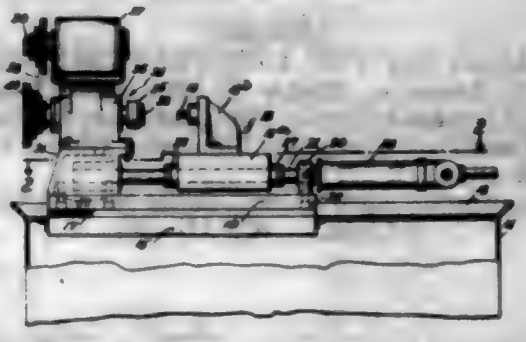
1. A differential gearing comprising a case arranged to be driven from a source of power, a pair of power take-off gears rotatably disposed in said case and arranged for delivering power to different points, a pair of transfer gears having a diameter equal to or smaller than the take-off gears carried by said case and disposed in engagement with said take-off gears and balancing gears connected to each transfer gear and to each other; the power take-off gears being worms and the transfer gears being worm wheels.

2,859,642
DEVICE FOR SHARPENING CHAIN SAW CHAINS
Ralph L. Travis, Sidney, Iowa, assignor of one-half to E. D. Schade and one-half to Donald Moseley, both of Sidney, Iowa
Application May 9, 1956, Serial No. 583,842
3 Claims. (Cl. 76—31)



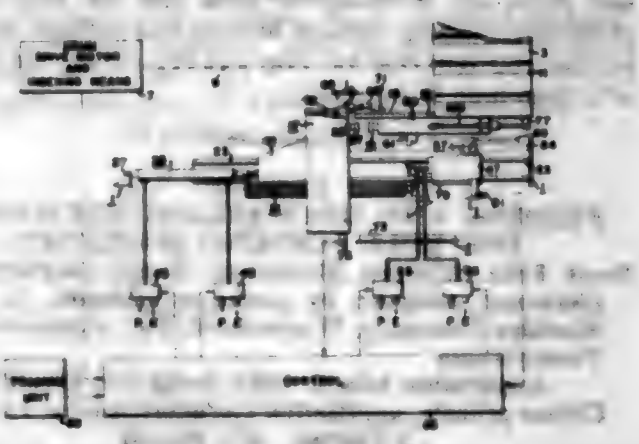
1. A device for sharpening chain saw chains comprising a stationary framework, a pair of spaced plates slidable vertically in said framework, means for tightening said plates together to secure a chain saw chain therebetween, a filing member arranged for slidable movement with respect to said framework for filing the cutting teeth of said chain, said filing member including a carriage for slidably receiving said filing member, means for positioning said carriage at desired angles, means for adjustably positioning said carriage vertically to adjust for various widths of chain saw chains, stop means for limiting upward movement of said chain saw chains, said stop means including horizontally extending prongs between which said filing member is positioned.

2,859,643
MACHINE BED AND WAYS
Clement L. McIver, Wayland, Mass., assignor to Atlantic Instrument Corporation, Norwood, Mass., a corporation of Massachusetts
Application October 20, 1953, Serial No. 387,170
1 Claim. (Cl. 77—3)



A precision machine tool, comprising a casing having an opening in the top wall thereof, a bed comprising an elongated granite slab having a central portion projecting through said opening and having opposite side shoulder portions spaced from said top wall, rubber cushions disposed between said shoulders and said top wall of the casing, a first base member secured to one end of said bed, a second base member secured to the opposite end of said bed, a pair of guide ways disposed above said bed in parallel relation thereto and having corresponding ends thereof secured to said first base member, said second base member having a pair of bores in which the opposite ends of said guide ways are freely supported, a tool support slidably mounted on said guide ways, and a work support mounted on said second base member.

2,859,644
MACHINE TOOL
Reid L. Watts, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application January 2, 1958, Serial No. 706,746
7 Claims. (Cl. 77—25)



1. A machine tool assembly comprising: a carriage assembly; means slidably mounting said carriage for movement along a given path from and to a retracted position; a plurality of tool assemblies; an indexable member having indexing movement substantially laterally of said given path and slidably mounting each tool assembly for movement along a path substantially paralleling said given path; tool drive means on said carriage assembly, having an output shaft; a tool spindle slidably mounted in each tool assembly and having an input shaft operatively indexable with respect to said output shaft by said indexable member; a clutch assembly including a pair of separable clutch members respectively

able within a tubular sleeve member; said sleeve member relative non-rotatability with relative axial shiftability,

mounted on said input and output shafts and being normally separated when said carriage is in retracted position; power means connected to drive said carriage assembly from and to said retracted position; lock means disposed to connect said carriage assembly and said tool assembly after engagement of said clutch members in dependence upon predetermined movement of said carriage assembly from retracted position; power means connected to feed and retract said tool spindle; and control means connected to control both of said power means.

2,859,645

DRILLING BIT FOR CONSTRUCTION WORK

Joseph V. Emmons, Shaker Heights, and Norman A. Smith, Cleveland Heights, Ohio, assignors to The Cleveland Twist Drill Company, Cleveland, Ohio, a corporation of Ohio

Application April 5, 1957, Serial No. 650,905
4 Claims. (Cl. 77—70)

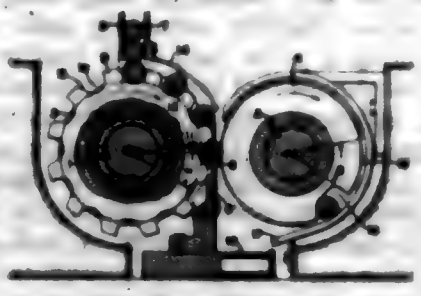
1. A drilling bit adapted for use in the drilling of deep holes in construction materials such as wood and the like and characterized by its low-torque, low-thrust penetration of such work; said bit comprising a back-tapered, helically fluted body that is formed with two helical lands each of width approximately 40 to 50% of the bit diameter and each relieved to leave a margin of width approximately 25 to 50% of the land width, such land relief reducing friction of the bit in use and such margins effectively guiding the bit in use to reduce the tendency of forming a bell-mouthed, oversize, or rough-walled hole in the work; a two-lip point of approximately 75 to 85° included angle, the lips of which each have a lip relief angle of approximately 26 minus 16 times the bit diameter; and two helical flutes of approximately 20 to 30° helix angle to provide with said lips a rake angle that effects moderate pulling in of the bit without "hogging" into the work and that tends to curl the chips for free passage through said flutes, said flutes leaving therebetween a web that is of thickness at the point of approximately the bit diameter plus .22 divided by 12, whereby said flutes are of relatively large size for free flow of chips therethrough without binding and without requiring periodic bit removal for chip clearing during the drilling of a deep hole in the work.

2,859,646

FEEDING AND DISCHARGING MECHANISM FOR ROLL FORMING MACHINES

Ernst Fritz Wilhelm Moeltzner, Berlin-Charlottenburg, Germany, assignor, by mesne assignments, to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania

Application June 8, 1954, Serial No. 435,281
Claims priority, application Germany August 13, 1953
3 Claims. (Cl. 80—6)



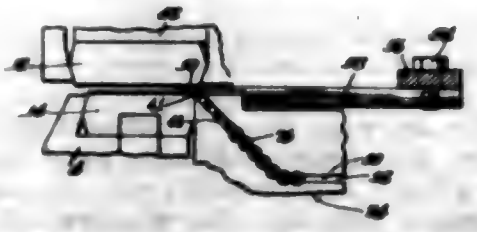
2. Mechanism for roll forming work pieces comprising a pair of forming rolls mounted to form a rolling station between their adjacent peripheral portions, one of said rolls being substantially cylindrical and the other of said rolls having its periphery interrupted by at least one work piece receiving recess, a work rest positioned adjacent said rolling station, a transfer member mounted for rotation coaxially of the cylindrical roll, said member having peripheral work receiving notches adapted to carry a work piece from a feeding magazine to said work rest, means for frictionally driving said transfer member, the rotation of said member being arrested by the work piece contacting the work rest, said notches in said transfer member being arranged to impose a radially outwardly directed pressure on said work piece, and means for rotating said forming rolls to periodically dispose said work piece receiving recess in said other roll opposite said work rest, whereby said notches force said work piece into said work receiving recess and said member rotates by virtue of the frictional drive to deliver the succeeding work piece to said work rest.

2,859,647

ARTICLE FEEDING MECHANISM

Moritz H. Nielsen, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Continuation of application Serial No. 79,837, March 5, 1949, which is a division of application Serial No. 64,844, December 11, 1948, now Patent No. 2,642,592, dated June 23, 1953. This application May 12, 1954, Serial No. 429,428
2 Claims. (Cl. 89—8)



1. In a thread-rolling machine stationary and reciprocable die members, screw blank feeding means including a chute having a portion thereof inclined downwardly to the point of screw blank reception between said die members adjacent the corner of the stationary die member and providing a continuous and uninterrupted passage at all times for maintaining the screw blanks in contiguous position under direct gravity feed directly to the die members, the side of said chute adjacent the side of said stationary die terminating short of the delivery end thereof and the side of said die extending in accordance with said chute and forming a continuation of said terminating side of the chute to its delivery end, the working surface of said die starting at the end of said chute at said corner of said die, a single combined gate and starter member reciprocable across the delivery end of said chute and providing the sole control of movement of screw blanks therefrom, and means for reciprocating said gate and starter member in timed relation to the relative reciprocation of said die members for releasing the lowermost screw blank from the next contiguous screw blank directly at the start of the working surface of said stationary die member and for forcing the released screw blank into thread-rolling position between said die members.

2,859,648

CLAMP TIGHTENER

Henry L. McCarley, Compton, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application March 15, 1955, Serial No. 494,465
7 Claims. (Cl. 81—3)

1. A holding and tightening device comprising: two main members including a tubular plunger member dis-

substantially at said rotation axis, said focusing element frame spaced from said frame a distance less than its

to adjust for various widths of chain saw chains, stop cluding a pair of separable clutch members respectively

able within a tubular sleeve member; said sleeve member having diametrically opposed longitudinal slots cut inwardly on the tubular wall from one end thereof, and the remaining tubular wall sections spaced on opposite sides of said longitudinal slots being terminated in inbent

ends disposed toward the axis of said tubular sleeve member and adapted to engage an object entered through one of said slots; said plunger member being slidable through said sleeve member into endwise contact with an object entered through one of said slots.

2,859,649

HAND TOOL FOR TURNING COUPLING NUTS AND THE LIKE

German R. Nelson, Sioux Falls, S. Dak.

Application April 26, 1956, Serial No. 580,745
6 Claims. (Cl. 81—61)

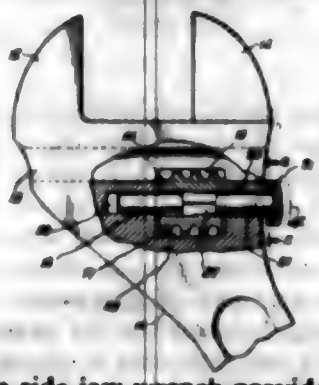
1. In a tool for turning an externally toothed nut, a frame, a rotary driving wheel on the frame and having a plurality of teeth around the periphery thereof for engaging and meshing with the nut teeth, a cradle structure on the frame and cooperatively arranged with the wheel for engaging the nut and maintaining a meshed relation between the teeth of the wheel and nut, and means restricting rotation of the wheel in one direction, whereby to facilitate turning of the nut when the frame is swung.

2,859,650

LOCKING MECHANISM FOR ADJUSTABLE JAW WRENCH

William A. Barnes, Utica, N. Y.

Application October 19, 1956, Serial No. 617,134
6 Claims. (Cl. 81—165)



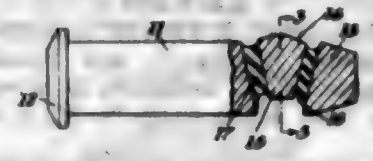
1. In a slidable side jaw wrench provided with a worm and rack form of adjusting means for the slidable jaw, a worm housing port laterally through the body of said wrench, said worm positioned within said port and in gear drive relationship with said side jaw, the improvement of which includes, a multiple portion bore extending in the plane of said wrench across said port to the wrench surface, a worm gear mounting shaft bearinged in said bore for longitudinal shiftability, said shaft extending to the exterior of said wrench, said worm mounted on said shaft within said wrench port, interlocking surface means between said worm and shaft providing relative non-rotatability with relative axial shiftability, a first lock member carried on the end of said shaft exterior of said wrench body, a second lock member carried in fixed relationship to said wrench body, said first lock member shiftable into and out of engagement with said second lock member to establish a like condition of said worm and slidable jaw.

2,859,651

CONNECTING PIN HAVING DEPRESSIBLE LOCKING ELEMENT MOUNTED IN A RUBBER SLEEVE

Marcus Horovitz, Leicester, England, assignor to Metalastik Limited, Leicester, England, a corporation of Great Britain

Application October 19, 1954, Serial No. 463,260
Claims priority, application Great Britain October 30, 1953
5 Claims. (Cl. 85—5)



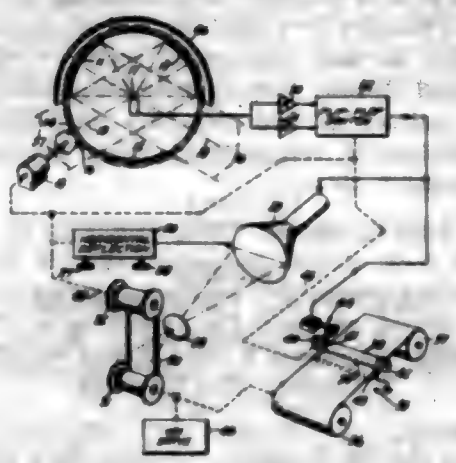
1. A connecting pin having a chamber formed in the shank thereof, the walls of said chamber extending transversely of the pin and having an opening in the side of the pin leading into the chamber, a locking element within the chamber spaced, from the transverse walls thereof to define an annular space between the element and the side walls of the chamber, the element projecting outwardly through the opening, and a rubber-like mounting for said element comprising a rubber sleeve within the annular space, the inner surface of said sleeve being secured to the element and the outer surface thereof being secured to the transverse walls only of the chamber said sleeve being long with respect to its wall thickness and constituting the sole means of support of the element from the pin, and the space within said chamber opposite the inner end of said locking element being free of rubber, whereby when the element is pressed transversely of the pin into the chamber from said opening the rubber mounting is loaded mainly in shear.

2,859,652

WIDE-ANGLE, ENERGY RESPONSIVE SCANNING SYSTEM

Roy C. Hopgood, Glen Ridge, N. J., assignor to Servo Corporation of America, New Hyde Park, N. Y., a corporation of New York

Application June 25, 1953, Serial No. 364,875
21 Claims. (Cl. 88—1)



3. Optical-scanning means, comprising optics including a focusing element mounted for rotation about an axis substantially transverse to the axis of said focusing element, drive means for continuously rotating said element about said axis, relatively fixedly mounted energy-responsive means including two sensitive surfaces inclined less than 180 degrees with respect to each other and located

ever, lagging behind said support by an amount depend- surface, a reference nut cooperating with the other thread,

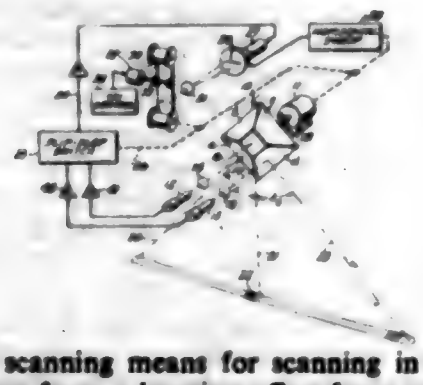
substantially at said rotation axis, said focusing element being focused substantially on said axis and rotatable about said surfaces, whereby for one portion of a rotation of said optics said focusing element may be focused primarily on one of said energy-responsive surfaces and for another portion of the same rotation thereof said focusing means may be focused primarily on the other of said energy-responsive surfaces, there being a region of overlap in response of said energy-responsive surfaces to energy collected by said focusing means, whereby during a single rotation of said focusing element, energy collected by one of said energy-responsive surfaces may substantially continuously reflect the scan of said focusing element over a first angular field and energy collected by said other energy-responsive element may substantially continuously reflect the scan of another angular field.

2,859,653

WIDE-ANGLE PRISM SCANNER

Henry Blackstone, Northport, and Frank G. Willey, Roslyn Heights, N. Y., assignors to Servo Corporation of America, New Hyde Park, N. Y., a corporation of New York

Application February 21, 1955, Serial No. 489,686
9 Claims. (Cl. 88—1)



2. Optical scanning means for scanning in essentially a given surface from a location offset from said surface, comprising two spaced relatively fixedly mounted energy-responsive elements and fixed optical elements associated therewith on similarly spaced substantially parallel axes, optics including a scanning reflecting surface inclined to a plane normal to said parallel axes and inclined to the surface to be scanned, means for rotating said reflecting surface about an axis substantially parallel to said parallel axes but offset therefrom, whereby separate images of said separate energy-responsive elements are developed by said scanning reflecting surface in the surface to be scanned, and whereby, upon rotation of said scanning surface, said images scan a line in said given surface transverse to the axis of rotation, said reflecting surface being sufficiently extensive to cause the full image of each of said elements to scan contiguous segments of a single scan line, and display means including means synchronized with rotation of said reflecting surface and modulated by alternately commutated video outputs of said energy-responsive elements.

2,859,654

VARIFOCAL VIEWFINDERS

Frank G. Back, Glen Cove, N. Y.

Application December 2, 1953, Serial No. 395,809
2 Claims. (Cl. 88—1.5)

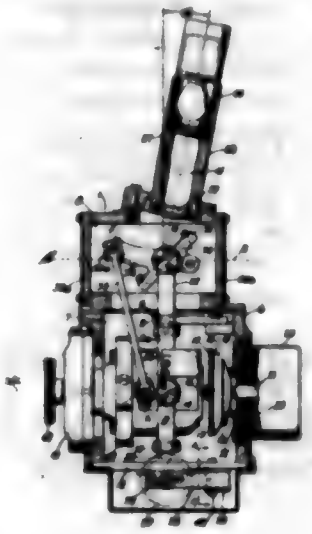
1. A varifocal viewfinder for motion picture cameras and the like comprising, in combination, a fixed front frame, a movable positive lens component behind said frame spaced from said frame a distance less than its focal length and movable toward and away from said frame within said distance, a fixed negative lens component behind the positive lens spaced from said positive lens a distance within the focal length of the positive lens, said negative lens component having a focal length less than that of the positive lens, a fixed positive lens behind the fixed negative lens, whereby the movable positive lens component alone would form an inverted real image of the object and an upright magnified virtual image of the frame, but in conjunction with the negative lens component forms an upright virtual image of the object and an upright reduced virtual image of the frame and whereby movement of the positive lens component produces variable magnification of the object while the magnification of the frame image by the movable positive lens is substantially compensated for by the reduction of said frame image produced by the stationary negative lens component for all positions of the movable lens, and the fixed positive lens images both said virtual images formed by the movable positive lens component in conjunction with the negative lens component being located at a distance within the accommodation range of the human eye.

2,859,655

GUN SIGHTING MECHANISM HAVING GYROSCOPICALLY CONTROLLED TRANSPARENT MIRROR

Frithiof V. Johnson, Scotia, N. Y., assignor to General Electric Company, a corporation of New York

Application April 25, 1944, Serial No. 532,607
3 Claims. (Cl. 88—2.4)



1. Gun sighting means comprising a movable support adapted to follow the movement of a gun as the gun moves about a predetermined axis, means for moving said support with said gun as the gun moves about said axis, a transparent sight reflector on said support mounted for movement with reference to said support on a sight axis corresponding to said axis of movement of said gun, optical means fixed on said support for generating an optical reticle image and for projecting it along an optical axis onto said reflector, said reflector directing it to define a line of sight said line of sight being moved to track a target by the movement of said support as it moves with said gun, a gyroscope on said support mounted for freedom of motion about an axis coincident with said sight axis and connected to said reflector so that the motion of said gyroscope about its said axis is imparted to said reflector, a yieldable coupling between said gyroscope and said support for applying a force to said gyroscope to cause it to precess to cause its spin axis to tend to follow the movement of said support on its axis in keeping said line of sight on a target, said gyroscope spin axis, how-

ever, lagging behind said support by an amount depending about the speed of said support and the magnitude of said force, and said optical axis being positioned at an angle to the common axis of movement of said gyroscope and said reflector and lying in a plane containing a common axis and said spin axis when there is zero lag between said spin axis and said support so that any motion of said gun and hence of said support which changes the amount of said lag changes the position of said line of sight by a predetermined fraction of the amount of said change.

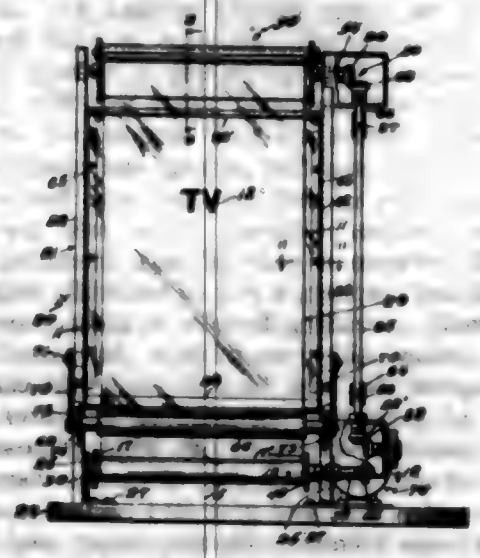
2,859,656

APPARATUS FOR EXPOSING TITLES AND THE LIKE READING MATTER TO A TELEVISION ICONOSCOPE

Frank J. Lemieux, Rumford, R. I., assignor to Progra Master Company, Incorporated, a corporation of Rhode Island

Application April 15, 1953, Serial No. 349,665

5 Claims. (Cl. 88—16)



3. An apparatus for exposing reading matter and the like to a television iconoscope to be photographed thereby simultaneously with other subjects exposed to said iconoscope comprising an open frame, spaced bearings at one end portion of said frame, a delivery roller adapted to have wound thereon a transparent film on which said reading matter appears, said roller having a trunnion at each end thereof for journalling said roller in said bearings, one of said bearings including a spring pressed plunger having a bearing opening for receiving one of said trunnions, said roller having an opening in the end thereof adjacent the said one of said trunnions, a rotatable lock pin carried by said plunger for engaging in said opening for detachably securing said roller to said bearing for rotation therewith and a take-up drum at the other end portion of said frame to which said film is led to be wound thereon as drawn from said roller.

2,859,657

STEREOPTOMETER

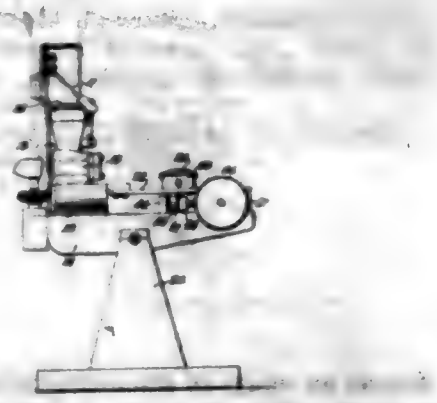
George S. Harker, Valley Station, Ky.

Application August 28, 1956, Serial No. 606,787

8 Claims. (Cl. 88—30)

(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A stereoptometer comprising a base, a pair of reflex sight assemblies rotatably supported on the base, a pair of control arms, each reflex sight assembly having a control arm associated with it, means for measuring the distance between the control arms, a drive screw having a driving end and a driven end, both the driving end and the driven end being rotatably supported by the base, the drive screw having two threads of different pitch, a drive nut cooperating with one thread and fixed against rotation with respect to the base but free to travel across its surface, a reference nut cooperating with the other thread, means for locking the reference nut against rotation with respect to the base, means for holding one control arm



against the drive nut, means for holding the other control arm against the driven end of the drive screw, and means for locking each of the control arms to the base.

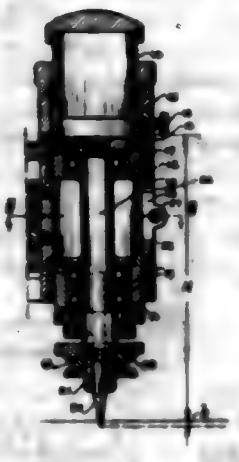
2,859,658

ROSE ENGINE

Wilhelm Brandstätter, Frankfurt am Main, Germany

Application April 2, 1954, Serial No. 420,667

4 Claims. (Cl. 90—16)



1. In a rose engine, in combination, a spindle, a sleeve arranged for rotatably accommodating said spindle, a bushing arranged for the accommodation of said sleeve, said bushing being adapted for support in the engine, an abutment ring adjustably arranged on said sleeve, a bearing surface associated with said bushing, a bearing surface on said abutment ring adapted to engage said bearing surface associated with said bushing, and an engraving tool carried by said spindle, said bushing defining an unimpeded axial opening for said sleeve whereby said sleeve is removable by a simple axial displacement, said tool being operatively associated with said engine and being driven thereby.

2,859,659

DATA PLOTTING AND INDICATING DEVICE

Donald M. Franke, Hermosa Beach, Jack R. Fedrick, Downey, and Robert N. Miller, Hermosa Beach, Calif., assignors to Fenske, Fedrick & Miller, Inc., Los Angeles, Calif., a corporation of California

Application September 12, 1955, Serial No. 533,587

13 Claims. (Cl. 88—24)

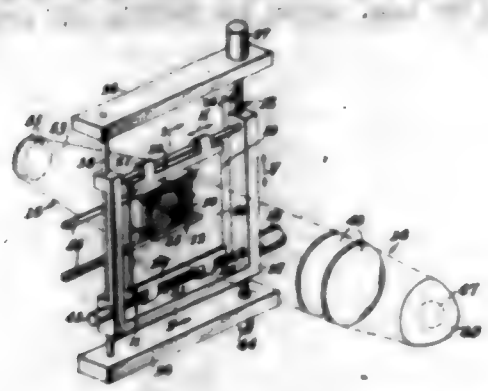
1. Data-plotting and projection-indicating apparatus comprising a plurality of data-plotting and projection-indicating units, each unit comprising a substantially transparent mounting plate, a marking instrument on said plate, an opaque-coated transparent plotting field member engaged with said instrument, means to move said plate and plotting field member relatively to each other to cause the instrument to mark a trace on the coating of the plotting field member, light projector means that directs

of said panel, said tongues, when mounted on the door,

2,859,663

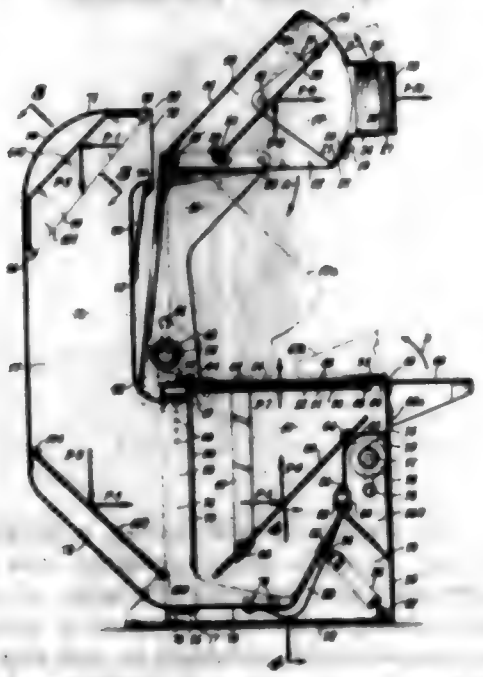
APPARATUS FOR RELIEVING PORTIONS OF THE

its beam through both the transparent plate and the trace on the opaque coating on the plotting field member to



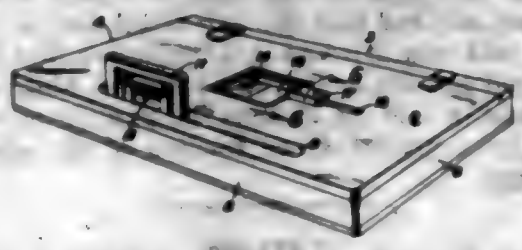
project an image of the mentioned trace of each unit, and a single screen on which the images projected from each unit are shown in superimposed relation.

2,859,660
PROJECTION DEVICE ADAPTED TO RECEIVE PROJECTED IMAGES
James W. Lucas, Pacific Palisades, Calif.
Application November 1, 1955, Serial No. 544,301
13 Claims. (Cl. 88—24)



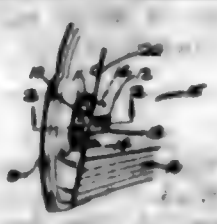
1. In combination, a re-projection device adapted to receive the projected image from the projection beam of a conventional projector upon an established focal plane; and means positioned at said plane for adding pictorial matter to the projected images on said plane, said re-projection device comprising: means for reversing the direction of said projected light beam comprising a generally tubular arm member being longitudinally extended and having elbow sections disposed at each end thereof, the apertures of said elbow sections being disposed in the same direction; a pair of reflecting surfaces adjoined at right angles to each other being fixedly positioned in one of said elbow sections at an angle of 45 degrees to the plane of the aperture thereof; a single reflecting surface fixedly positioned within said elbow section at the other end of said arm member at an angle of 90 degrees to said pair of reflecting surfaces and at an angle of 45 degrees relative to the plane of the elbow aperture adjacent thereto; and means for supporting said arm member forwardly of said projector and perpendicular to the centerline of said light beam, said light beam being projected into said arm member through an elbow aperture thereof upon said pair of right-angularly disposed reflecting surfaces.

2,859,661
PRINTING FRAME
Ellis Robinson, Hampton, Va.
Application March 4, 1953, Serial No. 719,858
5 Claims. (Cl. 88—24)



1. A printing frame comprising a substantially light-tight box having side walls, a bottom wall and a top wall hinged to one of said side walls, a first pair of tracks secured to said bottom wall and extending parallel to a first pair of side walls, a first carriage supported for reciprocating movement along said tracks, said first carriage having an upper surface, a second pair of tracks secured to the upper surface of said first carriage and disposed generally perpendicular to said first pair of tracks, a second carriage having a bottom surface and a top surface and supported above said first carriage for reciprocating motion on said second pair of tracks, a handle secured to said first carriage and extending through an elongated slot in said top wall, said handle having a first cross member disposed above said top wall and supported between a pair of legs extending upwardly from said first carriage, a pair of vertically reciprocatable pins normally extending from a location above said top wall and below said cross member downwardly through said elongated slot and through said first carriage into one pair of a plurality of pairs of apertures in one of said first pair of tracks, said pins being disposed between said legs of said handle, a pair of springs disposed about said pins and urging said pins into said normal position, a second cross member disposed below said first cross member and between said legs of said handle and interconnecting said pins, at least one stud reciprocatably secured to said bottom surface of said second carriage for movement into and out of apertures in at least one of said second pair of tracks, at least one spring engaging said stud for urging said stud into the apertures and means extending through the upper surface of said second carriage for withdrawing said stud from the apertures in said at least one of said second pair of tracks.

2,859,662
REFLECTING MARKER FOR VEHICLE DOORS
Morris Rider, Detroit, Mich.
Application April 27, 1953, Serial No. 351,181
3 Claims. (Cl. 88—81)



1. A reflecting marker for swingably mounted vehicle doors having an inner face and an end face and provided with an upholstery panel covering the inner face thereof comprising: a supporting plate; a reflecting body on one face of said plate; a resilient tongue projecting outwardly from the rear edge of said plate; a resilient supporting tongue projecting outwardly from said edge of said plate; a reflecting marker on one face of said supporting tongue, said first named tongue being adapted to engage between said panel and the inner face of said door, and said second named tongue being adapted to engage with the inner face

tion with respect to the base but free to travel across its plotting field member, light projector means that directs

of said panel, said tongues, when mounted on the door, being flexed out of normal position for frictionally retaining said plate in engagement with the end face of said door for exposing the reflecting bodies thereon upon swinging of said door to open position.

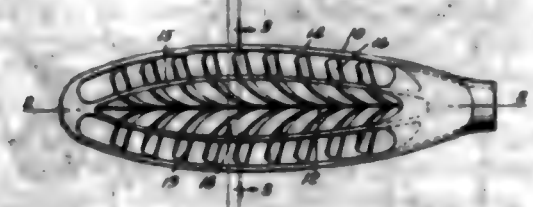
ERRATUM

For Class 90—16 see:
Patent No. 2,859,658

2,859,663
GUN BLAST DEFLECTOR

Karl Irbitis, Montreal, Quebec, Canada, assignor to Canadair Limited, Montreal, Quebec, Canada

Application February 28, 1955, Serial No. 491,155
12 Claims. (Cl. 89—14)

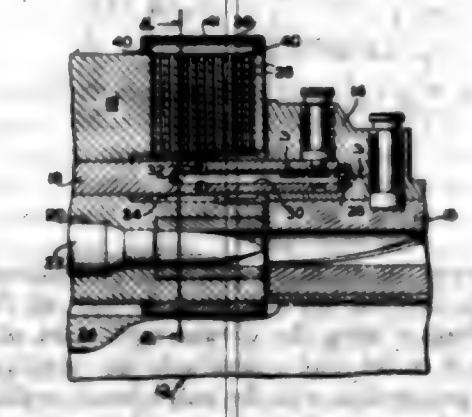


1. In a gun blast deflector, an open-faced member comprising a pair of involute curved bodies joined in a center ridge located parallel with and at a fixed distance from the center line of the gun barrel, the said involute curved bodies being located in a plane which intersects the gun barrel axis, a series of formed blades attached to each of the said involute curved bodies, said blades being projected forwardly and outwardly from the center ridge and then curved back on themselves to receive and deflect the gun gases from the path of the projectile.

2,859,664
DRUM COOLING DEVICE

William P. Murphy, West Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army

Application June 15, 1956, Serial No. 591,771
3 Claims. (Cl. 89—14)
(Granted under Title 35, U. S. Code (1952), sec. 266)

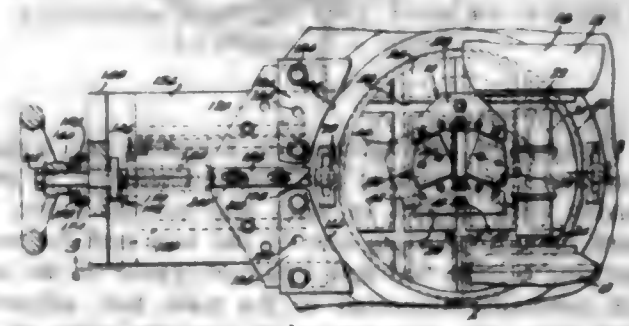


1. An automatic gun comprising a recoil unit, a shaft journaled therein, a drum secured thereto and provided with chambers for cartridges, and an actuator disposed for reciprocation in the recoil unit to rotate said chambers to stations corresponding thereto including a firing station for discharge of the cartridges in the firing station, said drum including conduits radially disposed intermediate said chambers for circulation of coolant to remove heat from said drum, and said shaft and said recoil unit including inlet and outlet passages for conducting the coolant to and from said drum.

2,859,665
APPARATUS FOR RELIEVING PORTIONS OF THE THREAD FLANKS OF DOUBLE ENVELOPING WORM ELEMENTS

Fred E. Birch, Bloomfield Township, Oakland County, and Bernard H. Johnson, Traverse City, Mich., assignors to Michigan Tool Company, Detroit, Mich., a corporation of Delaware

Application December 21, 1956, Serial No. 629,966
4 Claims. (Cl. 90—3)

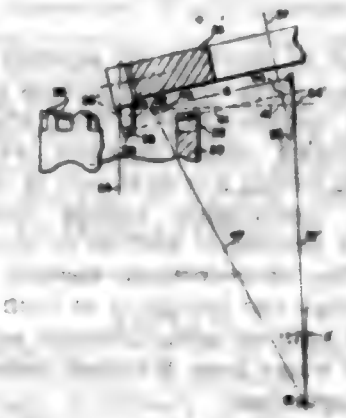


1. Apparatus for relieving the thread flanks of double enveloping worm elements including, in combination, a rotatable support member, a base mounted for pivotal movement relative to said support member, a pair of plunger members carried by said support member and movable in a radial direction relative to the axis of rotation of said support member, a pair of rocker arms pivotally connected to said support member and actuable by said plunger members, means connecting said rocker arms to said base and actuable to effect angular movement of said base from a predetermined position relative to said support member, and means carried by said support member for returning said base to said predetermined position.

2,859,666
SIMULTANEOUSLY CUTTING HELICOIDAL SURFACES ON FACE TOOTHED MEMBERS

Ernest Wildhaber, Brighton, N. Y., assignor to The Gleason Works, Rochester, N. Y., a corporation of New York

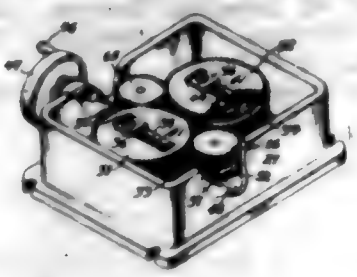
Application April 19, 1954, Serial No. 424,197
11 Claims. (Cl. 90—9.4)



1. The method of simultaneously producing helicoidal surfaces of opposite hand on opposite sides of spaced teeth of a face toothed member, employing a rotating annular cutter which presents a tip edge cutting circle to the work, which method comprises maintaining the cutter axis and the work axis in a common plane and, while holding the work against rotation about its axis, effecting a relative feed in said plane, to cause the cutting circle to traverse both helicoidal surfaces simultaneously, the feed in said plane including a relative angular motion which maintains the cutting circle substantially tangent to the tangent planes of the helicoidal surfaces at midpoints along the length of the teeth.

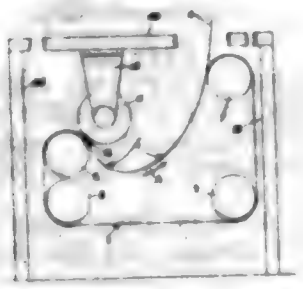
being adapted to move parallel to the path of said travel- and provided with means for lowering the forward up-

2,859,667
MACHINE TOOL TABLE MECHANISM
Edmund E. Teubner, Drexel Hill, Pa.
Application January 8, 1954, Serial No. 402,836
8 Claims. (Cl. 90—18)



8. In machine tool mechanism, a tool having a radius of curvature of a cutting surface, and adapted to move relatively with respect to work and cut the work, and a work table supporting one of the tool and the work, comprising a table bed and a pair of cranks of the same length pivotally connected to the table bed, adjustable to determine the dimensions of opposite sides of the parallelogram, and swingable about crank centers to determine different points of contact between the tool and the work, in which the radius of each of the cranks has a setting which is equal to the radius of desired curvature of a concave contour on the work minus the radius of curvature of the cutting portion of the tool.

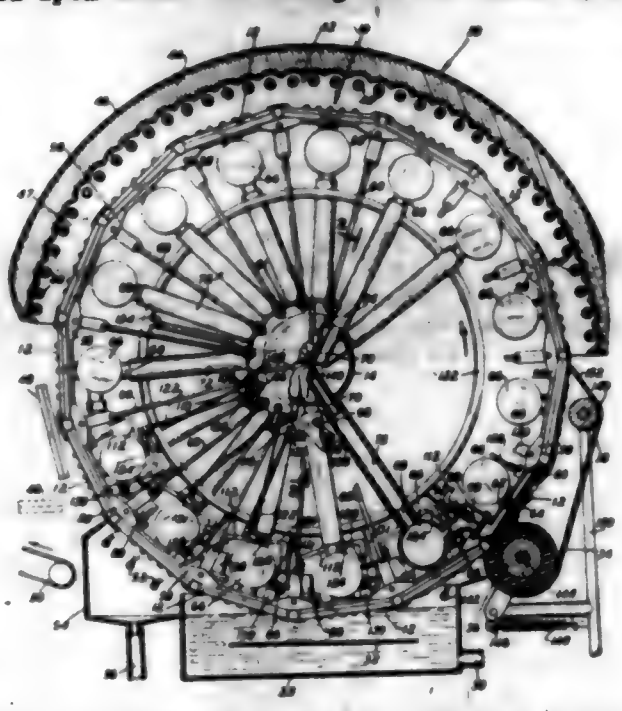
2,859,668
METHOD AND APPARATUS FOR FORMING PULP STOCK INTO A SHEET
Martin J. Berlyn, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada
Application July 2, 1956, Serial No. 595,142
20 Claims. (Cl. 92—44)



1. A method of forming an aqueous suspension of pulp stock into a sheet which comprises establishing and maintaining a substantially tubular whirling mass of stock of controlled radial thickness whirling about a central axis and having a central core of air of controlled diameter and continuously feeding stock tangentially from the outer peripheral portion of the whirling mass onto a travelling sheet-forming element provided with drainage openings and travelling at such a high rate of speed and in a path of such curvature as to effect rapid centrifuging of water from the stock suspension through said drainage openings.

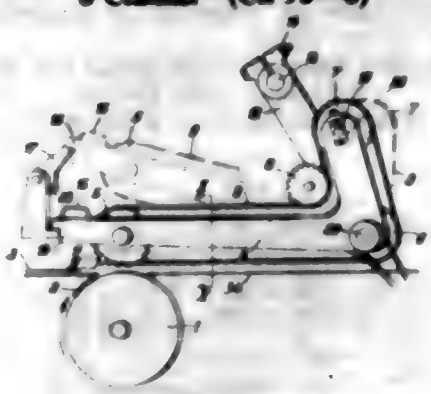
2,859,669
PULP MOLDING APPARATUS
Ammon M. Leitzel, Portland, Oreg., assignor to Pacific Pulp Molding Company, Portland, Oreg., a corporation of Washington
Application November 18, 1955, Serial No. 547,713
5 Claims. (Cl. 92—56)

1. In a machine for forming molded pulp articles including a plurality of suction dies mounted on the periphery of a cylinder, a furnish tank containing a pulp slurry, means for supporting and rotating said cylinder about a horizontal axis to cause said dies to pass through said slurry, and means for producing a vacuum in said dies to form a layer of pulp on said dies and for maintaining said vacuum after said dies leave said slurry; the improvement of means for smoothing and compacting said layer comprising an endless belt of flexible, resilient, stretchable, air-impervious sheet material supported upon rollers and having one run extending along



the periphery of said cylinder in the direction of rotation thereof, one of said rollers being positioned to press said run of said belt against the surface of said layer of pulp so that the vacuum in said dies causes said sheet material of said belt to compact and smooth said layer and another of said rollers being positioned to strip said belt from said surface.

2,859,670
SECURING DEVICE FOR VALVE-BAGS IN VALVE-BAG MANUFACTURING MACHINES
Martin Rawe, Tecklenburg, Germany
Application October 1, 1954, Serial No. 459,596
Claims priority, application Germany November 17, 1953
8 Claims. (Cl. 93—8)



1. A device for securing the correct position of the valve-inserts inserted into the open bottom of the travelling valve bags during the closing operation of the bag bottoms in a valve bag manufacturing machine, comprising in combination with the valve-insert feeding means of the valve bag manufacturing machine, movable position securing means for the valve-insert to the valve bag bottom oppositely disposed to the latter and to said valve-insert feeding means and consisting of a movable endless chain having links, laterally projecting portions at said links, threaded supporting members exchangeably fastened by means of their threads in said projecting portions, and piercing pins rigidly secured in said threaded supporting members adapted to pierce said valve bag bottom and the oppositely inserted valve-insert to secure the correct position of both parts to each other during the closing operation of the bag bottom, said movable endless chain

being adapted to move parallel to the path of said travelling valve bag from the beginning of the insertion of the valve insert in the bag bottom to the end of the closing operation of the latter with a speed synchronized with the speed of the valve bag motion.

2,859,671

METHOD FOR THE MANUFACTURE OF A CIGARETTE PACKAGE ENVELOPE AND PACKAGE ENVELOPE PRODUCED ACCORDING TO THIS METHOD

Ingemar Olsson, Solna, Sweden, assignor to Research Aktiebolag, Solna, Sweden, a corporation of Sweden

Application April 8, 1955, Serial No. 500,230
1 Claim. (Cl. 93—36)

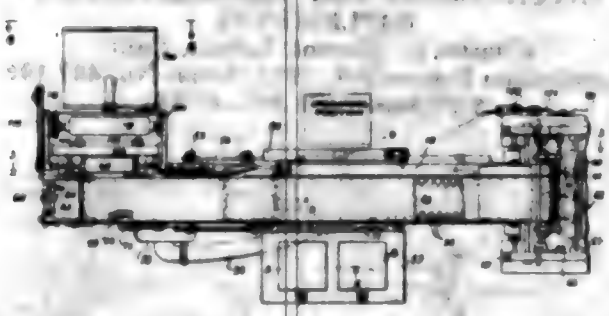
The method of forming a paralletepipedical package comprising two pieces of wrapping material each having a cohesive coating on one entire side thereof, one of said pieces being a strip as wide as the thickness of the completed package and the other of said pieces being slightly wider than the broad side surface of the completed package, said method comprising forming said first named piece into the two end surfaces and two narrow side walls of said package with the cohesive coating facing outwardly, and forming the broad side surfaces of said package of said second sheet with the cohesive coating thereof facing inwardly by causing the cohesive surface of said second piece to contact and form a seal with the cohesive surface of said first sheet on at least one end surface and the two narrow side surfaces.

2,859,672

ENVELOPE MAKING MACHINE

Louis Triolo, Brooklyn, N. Y.

Application May 10, 1956, Serial No. 584,050
4 Claims. (Cl. 93—61)



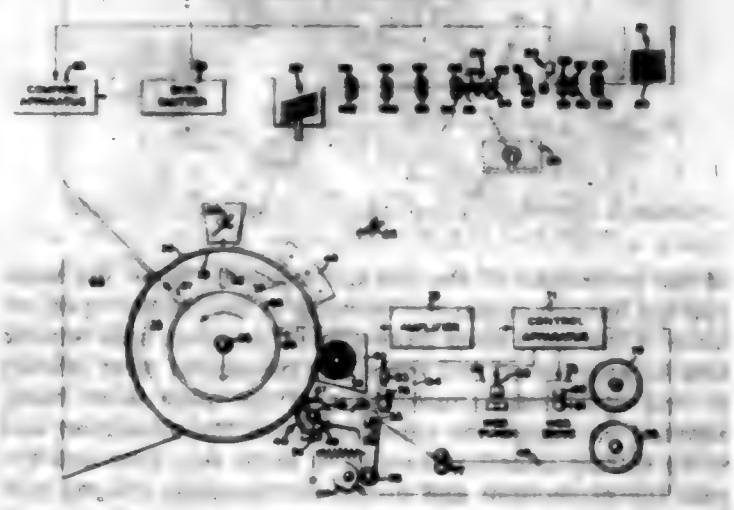
1. A conveyor for a machine for making envelopes comprising a double walled body and a liner with glue flaps enclosing three sides of the body, said conveyor comprising a frame, a first endless perforated conveyor belt of lesser width than the liner, a vacuum chamber below the upper course of the belt to provide suction means for holding the liner blanks, and first and second rollers at opposite ends of the machine supporting said belt, means for applying glue to the liner blanks and depositing them on the belt, a second endless belt and supported at one end at the first roller, and a third roller between the ends of the frame supporting the opposite end of the second belt, the superimposed blanks forming a laminated structure which is supported over substantially its entire width during travel on both belts but leaving an unsupported margin after it leaves the second belt, means for imparting intermittent travel to the belts to permit the body blank to be applied to the liner blank, a pusher bar for correcting misalignment of said structure on first belt, a presser bar for promoting adhesive between the blanks, and means at the second roller for stopping travel of the structure comprising pivoted arms whose forward faces are engaged by the body blank and provided with means for lowering the forward unadhered glue flap, and means for raising said flap before the structure travels away from the belt.

2,859,673

ELECTROPHOTOGRAPHIC PRINTER

Ira M. Hix, Vestal, Martin J. Kelly, Endicott, and Harold L. Reed, Vestal, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application March 29, 1954, Serial No. 419,392
12 Claims. (Cl. 95—1.7)



1. A record card controlled electrophotographic printer comprising record card indicia sensing means, record card printed information scanning means, means for feeding record cards past said sensing means and said scanning means, an electrostatically charged photoconductive member, an optical system for operatively connecting said scanning means and said member so as to impress electrostatic latent images of record card printed information on said member, means for developing the electrostatic latent images by applying a transferable powder thereto, means including a rotatable conductive cylinder for applying an electric force at a printing zone, means for moving said member relative to said cylinder in a timed relation to the feeding of record cards past said sensing means, means for feeding a print receiving material between said member and said cylinder in a timed relation to the movement of said member, whereby said cylinder is caused to rotate, and means controlled by said sensing means for shifting said cylinder relative to said member so that the strength of the electric force at the printing zone is varied from one limit whereat powder images are caused to transfer from said member to said print receiving material, to another limit whereat the powder images are caused to remain on said member.

2,859,674

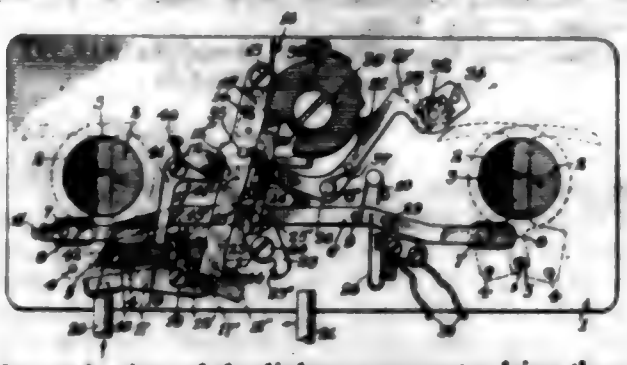
PHOTOGRAPHIC SHUTTER FOR STEREOSCOPIC CAMERAS

Karl F. Reutschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G. m. b. H., Calmbach (Enz), Germany, a corporation of Germany

Application August 19, 1954, Serial No. 451,016
Claims priority, application Germany March 24, 1954
7 Claims. (Cl. 95—11.8)

1. A photographic shutter mechanism for a camera, comprising a base plate; a lens shutter movably mounted on the base plate; linkage means mounted on the base plate for movement between two positions and connected to said shutter, to actuate the same, said linkage means having a projection provided with a driving face by which it is operated, said projection being further provided with a cam surface which is non-parallel to said driving face; a main, spring-charged lever at one end pivotally mounted on the base plate and movable in a path substantially

parallel to the plate between cocked and uncocked positions, the pivotal mounting for the lever restricting loose movement thereof laterally of the plate; a trigger movably mounted on the base plate and cooperable with the said main lever for releasably holding the same in cocked position; an elongate, resilient and flexible arm at one end fixedly secured to the main lever adjacent the pivotal mounting thereof to move therewith, the other end of said flexible arm being engageable with the driving face



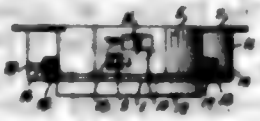
of the projection of the linkage means to drive the same and the linkage means for opening of the shutter upon release of the main lever from cocked position, said flexible arm being adapted to bypass said projection after driving it, and upon return movement of the main lever being adapted to engage the cam surface of the projection and to be shifted laterally thereby so as to ride over and bypass the projection; and means for reversely driving said linkage means by said main lever prior to its said return movement and after said arm bypasses the said projection.

2,839,675

DEVICE FOR REPRESENTING GRADUATIONS FOR EXPOSURE IN A BINOCULAR REFLEX CAMERA

Tetuso Kobayashi, Amagasaki, and Kaichi Ikeda, Nishinomiya, Japan, assignors to Chiyoda Kogaku Seiko Kabushiki Kaisha, Osaka, Japan, a corporation of Japan

Application August 21, 1953, Serial No. 375,704
Claims priority, application Japan November 6, 1952
1 Claim. (Cl. 95—64)



In a twin lens reflex type camera equipped with adjusting elements for the exposure, graduations for which are made visible from above while said camera is being held in the photographing position, the combination comprising a casing with two windows cut through the top portion thereof, said casing being constructed to perfectly fit to the lens cylinders of the camera, two graduated tapes for the iris and shutter timing, a guide ring having two grooves formed in parallel in the periphery thereof along which said tapes are adapted to slide respectively, two operable lever rings and two knobs for actuating said lever rings, one end of each of said graduated tapes being fixed respectively to the operable lever rings, said graduated tapes being adapted to be directly moved along said grooves of the guide ring by merely actuating the operable lever rings by the knobs so that the graduations on said tapes may be viewed through the windows.

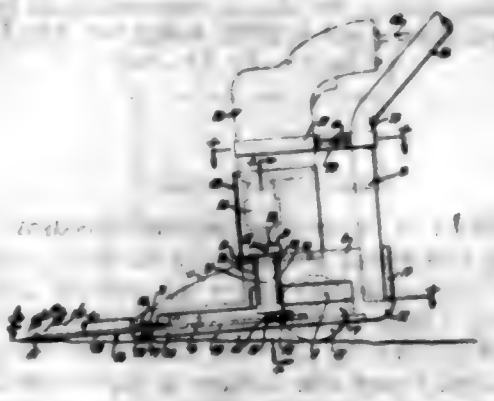
2,839,676

POWER WEEDER

Charles E. Pettel, Oakland, and Robert F. Pettel, Vacaville, Calif.

Application November 10, 1954, Serial No. 467,994
4 Claims. (Cl. 97—44)

1. A power weeder comprising a housing having a bottom recess, wheels on said housing and aligned on a transverse axis for supporting said housing on the ground, a handle projecting from said housing, a drive shaft, means for mounting said drive shaft in said housing with the axis of said shaft normal to said transverse axis and with one end of said shaft terminating above said housing and the other end of said shaft terminating within said recess, means engaging said handle for detachably holding against rotation the casing of a drive motor supported on and having its driving shaft in engagement with said one end of said shaft, a thrust bearing on said



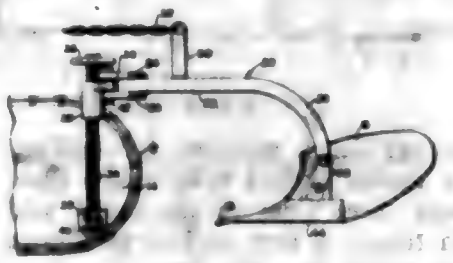
shaft effective to support the weight of said motor, a crank on said other end of said shaft, a cutter plate having sides thereon at right angles to said transverse axis and to the cutting edge thereof, said cutter plate being disposed to have one portion projecting from said housing and to have another portion disposed within said recess, said cutter plate having an aperture encompassing said crank, means on said housing for guiding the sides of said cutter plate, and a bottom plate engaging said housing in abutment with said cutter plate and substantially enclosing said recess.

2,839,677

HITCH-MEANS FOR VEHICLE-DRAWN IMPLEMENTS

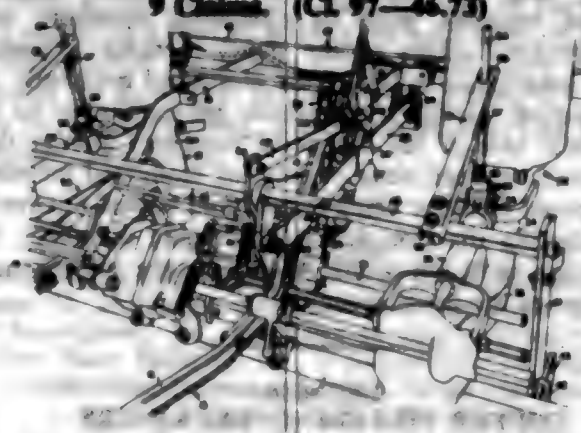
Charles R. Vincent, Salinas, Calif.

Application February 9, 1955, Serial No. 487,106
5 Claims. (Cl. 97—47.54)



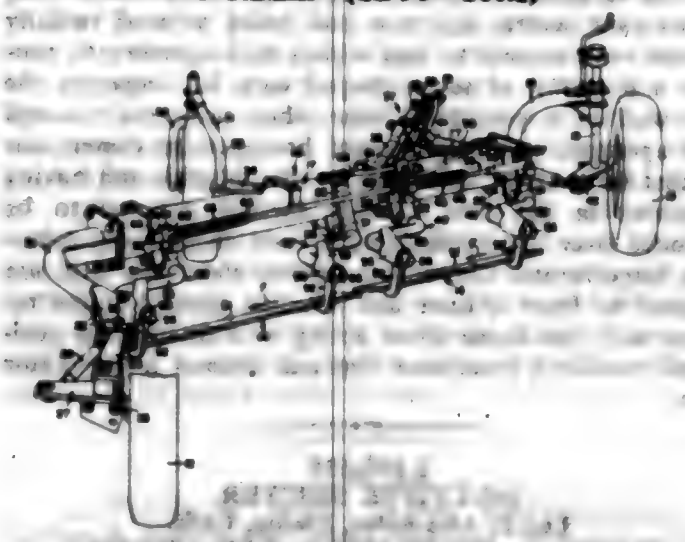
1. A hitch for connecting a plow to a tractor comprising a pair of normally vertically and oppositely disposed spindle members terminating in downwardly directed ball-shaped lower end portions, upward disposed socket means adapted to be carried by a tractor for pivotally attaching the lower end portions of said members to a tractor closely adjacent ground level, a normally horizontally extending drawbar having the ends thereof adjustably secured to said spindle members for upward and downward movement thereon, an arm member connected to said bar in trailing relation therewith, said arm member having a relatively straight forward portion and a downwardly extending rearward portion adapted to be secured to a plow, said spindle members, drawbar and arm member being operatively disposed for free swinging movement with respect to said ball and socket means.

2,859,678
PRESSURE-APPLYING MEANS FOR PLANTERS
Harold V. Hansen, Hillsdale, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Application September 24, 1954, Serial No. 458,174
9 Claims. (Cl. 97—46.73)



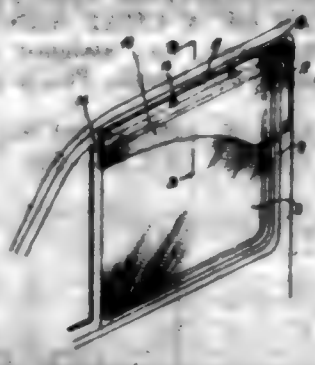
1. The combination with an agricultural implement having a plurality of ground engaging means and a power lift mechanism, including a movable part, for raising and lowering said ground engaging means, of a rockshaft rockably mounted on said implement and extending generally transversely of said plurality of ground engaging means, a plurality of arms fixed to said rockshaft and connected, respectively, to apply down pressure to said plurality of ground engaging means, means including a cam connected to move with said part, and means adapted to receive movement from said cam and to transmit said movement to said rockshaft to move all of said arms.

2,859,679
WEEDER
Robert H. Macfarlane, Welland, Ontario, Canada, assignor to John Deere Plow Company (Limited), Welland, Ontario, Canada, a corporation of Canada
Application April 18, 1955, Serial No. 502,068
5 Claims. (Cl. 97—144.1)



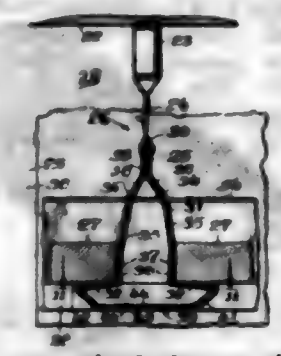
1. In an agricultural implement, the combination with an elongated supporting member, a pair of generally horizontally disposed arms pivoted to and extending generally longitudinally of said supporting member, each of said arms having generally rearwardly extending portions, and means acting between said member and said arms to raise and lower the latter, of an elongated ground engaging weeder blade extending generally longitudinally of said supporting member and disposed below the latter, blade connecting means comprising a pair of generally vertical standards fixed at their lower ends to said blade and each having at its upper portion a sleeve section rockably receiving the associated rearwardly extending arm portion, and a generally forwardly extending part on each sleeve section disposed so as to engage an adjacent portion of the associated arm to limit the movement of said blade in one direction.

2,859,680
VENTILATING DEVICE FOR THE BODIES OF MOTOR CARS AND OTHER PASSENGER CARRYING VEHICLES
William Edward O'Shea, London, England
Application January 25, 1954, Serial No. 405,825
4 Claims. (Cl. 98—3)



2. In a vehicle, ventilating means comprising a window frame fitted with a vertically slidable window, a plate-like member extending along and closed against the top of the window frame but extending only part way down said window frame between its ends, said member being substantially coextensive with and spaced inside the upper part of the window and forming a longitudinally continuous channel between it and the window, said channel being open at its upper edge to the outer air when the window is slightly open, the bottom edge of said plate-like member being spaced away from the internal surface of the window providing an outlet from said channel into said vehicle, closure means comprising the rear upright of the window frame for closing the rear end of said channel thereby forming an area of the rear portion of said plate-like member extending further down said window frame than the front portion of said member and causing the pressure of the air flowing therein to build up whereby the air in said channel is caused to flow downwardly and forwardly into said vehicle.

2,859,681
AIR-FLOW CEILING ARRANGEMENTS
Joel R. Rachlin, Brookfield, Wis.
Application March 28, 1956, Serial No. 574,446
1 Claim. (Cl. 98—40)

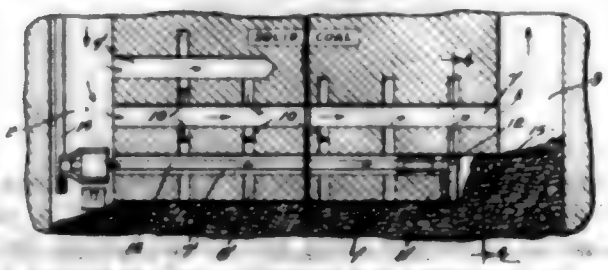


For use with a pressurized plenum air-flow sub-ceiling arrangement of the class described, a combined support beam and air outlet member therefor formed of sheet metal bent upon itself to inverted channel shape to provide a substantially cylindrical bight portion and a pair of depending side portions each flaring laterally outwardly in a first flaring portion and then in a second flaring portion at a different angle to provide jointly a mansard roof-like cross section for the member, longitudinally spaced apart slots in the first flaring portion for admission of air thereinto, the said side portions terminating at their lower ends in laterally outwardly extending flanges for supporting ceiling tiles, said flanges being inclined slightly downwardly, and an overall perforated air distribution panel of flat bottom trough-like cross-section having upwardly flaring edges crimped over the outer edges of said flanges, whereby the perforated area of said distribution panel is wider than the distance between said tiles and

at spaced points therealong, a plurality of food supporting of a wire bale tie extending across said bale case, where-

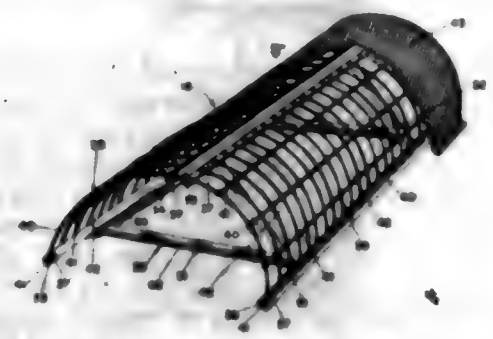
air is distributed throughout said wider area, and the downwardly inclined flanges accommodate the crimped edges of the panel below the tile.

2,859,682
METHOD OF VENTILATING THE PRODUCTIVE AREAS OF A COAL MINE
Joseph F. Joy, Pittsburgh, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application June 30, 1952, Serial No. 296,327
3 Claims. (Cl. 98—50)



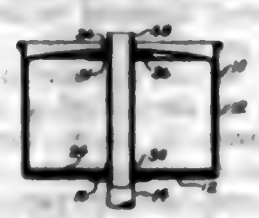
1. A method of ventilating a productive area of a coal mine comprising the formation of parallel horizontal passageways in a coal seam in parallelism with an advance face of a productive area with one passageway in adjacency to and just inside of said face and another passageway more remote from said face, said passageways extending between intake and return airway passages extending at right angles to said face at the opposite ends of the latter, and parallel horizontal cross breakthrough bores extending at right angles to said face and traversing said parallel horizontal passageways, and effecting a flow of ventilating air inwardly from the intake passage through said parallel passageways and said cross bores to said return passage and outwardly through the latter.

2,859,683
VENTILATING TUNNEL
Maynard C. Seim, Nankin Township, Wayne County, Mich., assignor to National Steel Corporation, a corporation of Delaware
Application December 23, 1954, Serial No. 477,215
7 Claims. (Cl. 98—56)



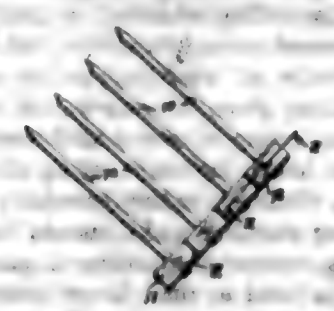
1. A tunnel section of the type adapted to be placed in end-to-end relation with similar tunnel sections to form an elongated tunnel for use in ventilating granular material, comprising a plurality of spaced pairs of longitudinally extending elongated members, each of the elongated members having a central longitudinal axis and a longitudinal slot including a member defining a side wall of the slot, upright rib members forming open portal frames, the rib members being spaced longitudinally of the elongated members and including means for supporting the elongated members with the longitudinal axes of the elongated members defining spaced points of an erect arch-shaped curve and with the longitudinal axes of pairs of elongated members being located at successive points along the arch-shaped curve, the elongated member of one pair being in contiguous relation with an elongated member of an adjacent pair and the pairs of elongated members being positioned with the slot of one member facing the slot of the other member and with the slot side wall defining member of one elongated member extending generally in the direction toward the slot side wall defining member of the other elongated member, and an elongated pervious panel member positioned between pairs of elongated members with the longitudinal edges of the panel member extending into the longitudinal slots of the elongated members, the panel member having a dimension perpendicular to the longitudinal axis of the elongated members greater than the distance between slots of pairs of elongated members and the panel member being curved and bowed outwardly and contacting the slot side wall defining members, the slots having sufficient width to receive the curved marginal edges of the panel member.

2,859,684
COFFEE FILTERING RETAINERS
Anthony C. Polizzi, Rochester, N. Y.
Application February 19, 1951, Serial No. 211,589
1 Claim. (Cl. 99—318)



A disposable coffee filtering retainer adapted for use in a percolator cup having a central percolator tube extending therethrough comprising, a sheet of porous filter tissue, substantially square in shape, a fibrous central circular stiffening disk attached to said tissue on the upper side and centrally thereof, said disk being of a diameter to readily fit within a percolator cup and lie on the bottom thereof, and having a central aperture for the reception of a percolator tube, said tissue lying across said central aperture and being severed radially therein with respect to and within said aperture to provide a plurality of sector-shaped ears for engaging the side wall of a percolator tube when projected through said aperture, said tissue sheet having edge dimensions at least three times the diameter of said disk and having apertures in the four corners thereof adapted to be threaded over a percolator tube, said sheet being otherwise imperforate, whereby the tissue sheet and disk are adapted to form a liner and annular ground coffee retainer with the tissue sheet acting as a filter when positioned within a percolator cup and around a percolator tube.

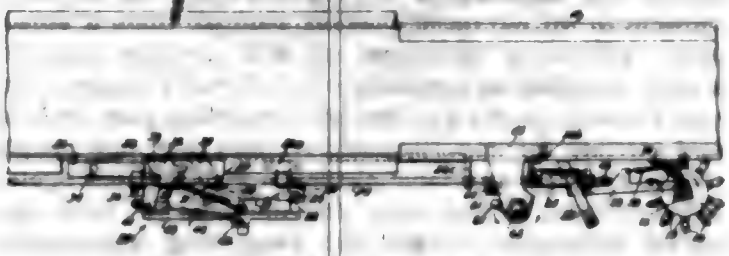
2,859,685
MULTIPLE SKEWER
Leo E. Alexander, Alameo, Calif.
Application July 20, 1956, Serial No. 599,250
1 Claim. (Cl. 99—419)



A skewer assembly for simultaneously grilling and serving individually a plurality of food servings each of which are mounted shish-ke-bab fashion upon a skewer, comprising an elongated skewer supporting member having transverse notches forming weakened breaking points

at spaced points therealong, a plurality of food supporting skewers secured to said supporting member between each of its breaking points and extending in spaced parallel relation in a common plane at one side thereof, said skewers being of rectangular cross-section to prevent turning of articles of food mounted thereupon, whereby the food servings carried by said plurality of skewers may be exposed as a unit to grilling on both sides by a turning of said skewer supporting member and eaten from said skewers as individual servings after grilling by breaking said skewer supporting member at its breaking points to separate the skewers.

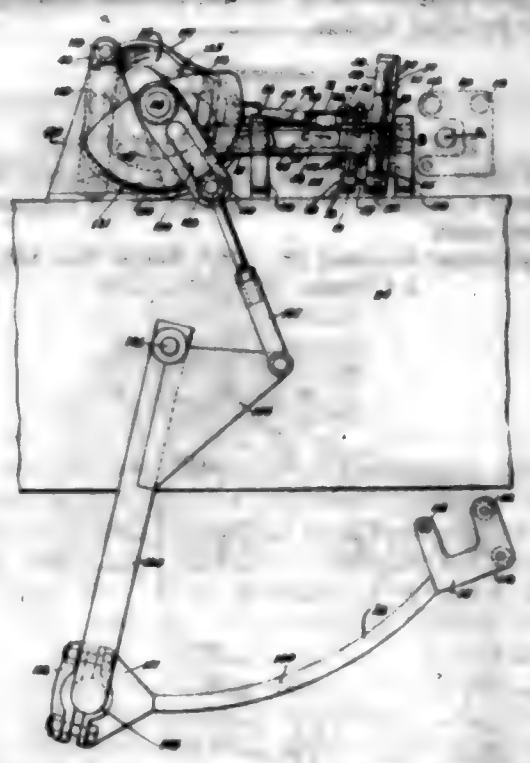
2,859,686
BALE METERING AND TRIPPING MECHANISM
James H. Hollyday, New Holland, and Peter L. Sturla, Churchtown, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application February 9, 1956, Serial No. 564,489
8 Claims. (Cl. 100—4)



4. A bale length measuring and trip mechanism for controlling the operation of a plunger latch and banding means in an automatic baler having a bale case in which a normally reciprocating plunger is held stationary by said latch during a banding cycle, comprising a normally stationary but reciprocably moveable trip rod, a cam on said trip rod, a member slideably mounted on said trip rod and normally spaced from said cam, a constantly reciprocable push rod, a rotatably mounted metering wheel extending into said bale case and rotatable responsive to growth of a bale therein, a link connected to said metering wheel and reciprocated thereby, means for connecting said link to said member upon completion of a bale in said case whereby said member is moved toward said cam, said push rod being operable after said member has been moved toward said cam to force said member against the cam and to push said trip rod and said member to actuate said plunger latch and said banding means, said cam engaging said link when said trip rod is pushed by said push rod to disconnect said link from said member, and means for returning said trip rod and said member to starting position, said return means being controlled by said banding means.

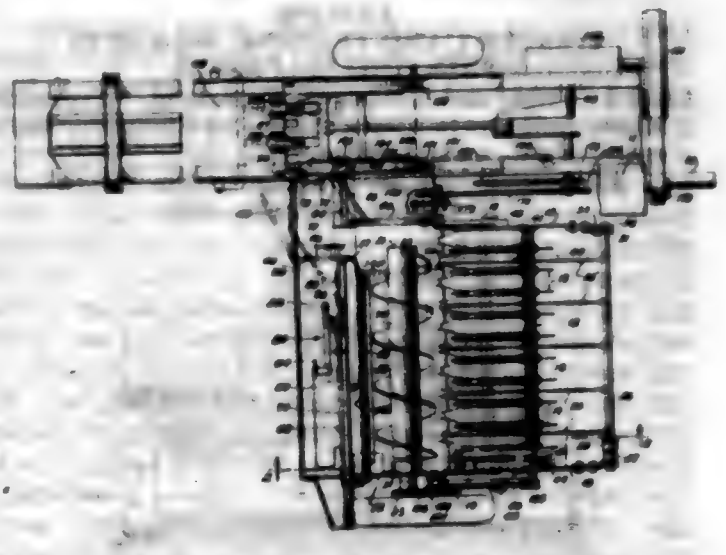
2,859,687
AUTOMATIC WIRE TYING MECHANISM
George R. Hill, Celina, Ohio, assignor, by mesne assignments, to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application April 18, 1954, Serial No. 423,628
16 Claims. (Cl. 100—23)

1. A wire tie mechanism for a baler of the type in which a needle on one side of a bale case projects a loop of wire across the bale case around the rear end of a completed bale for reception in a wire twister on the other side of said bale case, comprising a twister rotatably supported on said other side of said bale case having a wire receiving slot normally opening inwardly toward said bale case, a wire carrier disposed for movement longitudinally of the bale case on the outer side of the twister from the bale case, said wire carrier when at rest being disposed to project longitudinally between said twister and the point of delivery of said needle, releasable clamp means associated with said wire carrier for holding the free end of a wire bale tie extending across said bale case, whereby a bale moving forwardly through the same case will carry said wire bale tie into said twister slot, means operative upon completion of a bale for projecting said needle across the bale case, means coordinated with said needle projecting means for projecting said carrier rearwardly to take the loop of wire from the needle and then retract it to lay one side of the loop in the twister, means for actu-



ating said clamp means to release said free end during said rearward movement and to thereafter operatively engage said loop during its retraction movement, means for cutting said wire between the twister and the clamp means during said retraction movement to leave a new free end of wire in the clamp means, said carrier projecting means returning the carrier to its original position to hold said free end in a position for operative reception in the twister incident to formation of the next succeeding bale.

2,859,688
METHOD OF BALING
Edwin B. Nolt, New Holland, Pa., assignor to New Holland Machine Division of Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Original application October 30, 1951, Serial No. 253,783, now Patent No. 2,757,602, dated August 7, 1956. Divided and this application August 10, 1954, Serial No. 448,853
5 Claims. (Cl. 100—42)



1. A method of automatically baling the hay of a windrow which consists in progressively raising the windrow lengthwise to general horizontal level above

different plane of tangency of the blanket cylinder into means for moving said body along its cylinder mount-

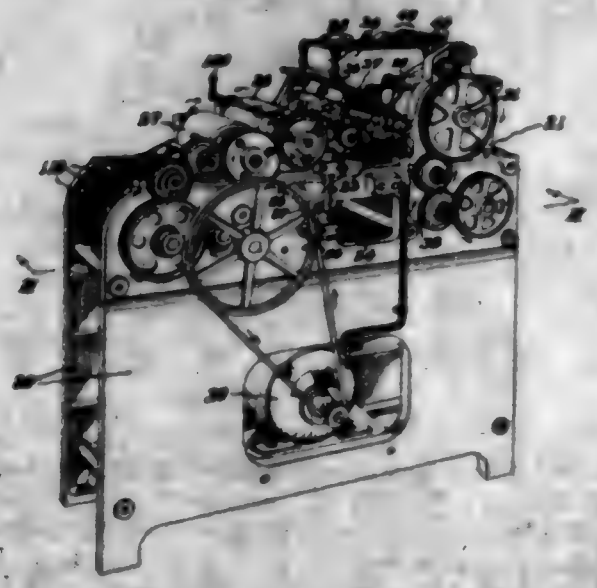
the ground such as to enable it to be transported without ground interference, so transporting it as it is raised, and while it is being so transported, rearwardly conveying it at substantially the same horizontal level to a bale forming region, meanwhile horizontally consolidating the transported windrow to a ribbon like form disposed on edge in a vertical plane, and while maintaining said ribbon like windrow in a vertical attitude, folding it into the bale forming region.

2,859,689

PELLET MARKING MACHINE

Amos Achtry, Haddon Heights, N. J., assignor to R. W. Hartnett Company, Philadelphia, Pa., a corporation of Pennsylvania

Application October 28, 1953, Serial No. 388,891
4 Claims. (Cl. 101—35)



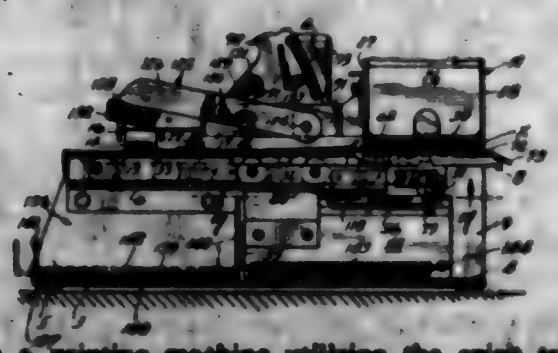
1. In a pellet printing machine the combination comprising a printing roller having a resilient, substantially cylindrical printing surface, means for rotating said printing roller, means for applying printing fluid indicia to said printing surface, a pellet conveyor, means for moving said pellet conveyor below and adjacent the printing surface of said printing roller in timed relation to the movement thereof, a plurality of individual pellet carriers carried by said conveyor with capacity for rectilinear movement up and down relative to said conveyor, means for restraining said pellet carriers against movement other than up and down relative to said conveyor, and means continuously urging said carriers upwardly toward said printing roller.

2,859,690

MASTER CARD FEEDING MEANS IN PRINTING MACHINES

Ansel J. Wright and Gordon T. Rosenlund, Minneapolis, Minn., assignors to Master Addresser Company, Minneapolis, Minn., a partnership

Application May 23, 1955, Serial No. 510,217
15 Claims. (Cl. 101—65)



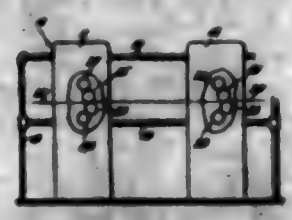
1. In a printing machine utilizing the spirit transfer process and a plurality of cards having material to be reproduced imprinted thereon, a frame structure, a magazine for holding said cards in horizontally disposed vertically stacked relationship, a carriage element mounted in said frame structure for reciprocatory movements between a retracted card-receiving position adjacent said magazine and an advanced printing position spaced therefrom, a table element mounted on said carriage element for common movements therewith, one end of said table underlying said magazine when the carriage element is moved to its retracted position, a primary card-engaging member on one of said elements for moving said card from said magazine to an intermediate position at said one end portion of said table element upon advancing movement of said table element, one way stop means permitting advancing movement of said card and holding said card at its intermediate position against common retracting movement with said table element, whereby said card overlies the other end portion of said table element when the table element is moved to its retracted position, a secondary card-engaging member carried by one of said elements for moving said card with the table element to an advanced printing position upon a subsequent advancing movement of said carriage element, means including an operating lever pivotally mounted on said frame structure and linkage connecting said lever to said carriage for imparting said reciprocatory movements to said carriage and table elements, and a platen operatively coupled to said lever and mounted for lever imparted movements toward and away from engagement with said card in its advanced position on the table element.

2,859,691

WEB PRINTING PRESSES

Franz Heller, Mount Vernon, N. Y., assignor to American Type Founders Co., Inc., Elizabeth, N. J., a corporation of Delaware

Application January 17, 1956, Serial No. 559,567
5 Claims. (Cl. 101—177)



1. In an offset perfecting web printing press or the like, in combination, two spaced printing units each including a pair of blanket cylinders; plate cylinders supported in the press for rolling contact with the respective blanket cylinders for applying inked images thereto; means supporting said blanket cylinders for rolling contact with the respective opposite surfaces of a web passing between them, thus providing an offset perfecting printing couple in which each blanket cylinder acts as an impression cylinder for the other one, as well as an offset printing cylinder; a gap in the periphery of each of said blanket cylinders at where the blanket ends securing means are disposed, the registry of the two blanket cylinders of each unit being such that the two gaps coincide upon opposite sides of the web at one point during each rotation; means for supporting and feeding a web of material to be printed, in a direction approximately perpendicular to a plane containing the axes of both of the plate cylinders of each of said units, the distance between the mutually facing surfaces of said plate cylinders being shorter than the sum of the diameters of the two blanket cylinders, whereby the two blanket cylinders in order to be in rolling contact with each other and in individual rolling contact with their respective plate cylinders must have their centers displaced laterally from the common plane of the axes of the plate cylinders, the amount and direction of displacement of said blanket cylinders being such that the

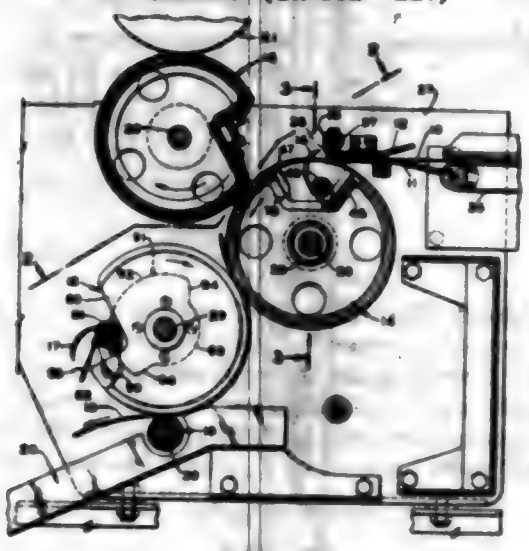
common plane of tangency of the blanket cylinders intersects the axis plane of the plate cylinders at an acute angle, and thus whereby said web is diverted from its normal horizontal path and its area of contact with said blanket cylinders is increased and maintained during the passage of said gaps in said blanket cylinders.

2,859,692

SHEET DELIVERY MEANS FOR ROTARY OFFSET PRINTING PRESSES

Luis Mestre, New York, N. Y., assignor to Lewfor Development Corporation, New York, N. Y., a corporation of New York

Application August 18, 1954, Serial No. 450,567
11 Claims. (Cl. 101—217)



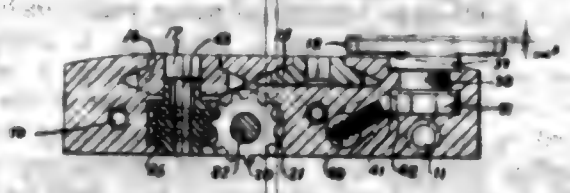
1. In a machine of the class described for making impressions on successive sheets, the combination of an impression cylinder, an impression cylinder shaft, a plate cylinder, a blanket cylinder and a rotary delivery device, means for operating said impression cylinder and said delivery device at the same surface speed, but in opposite directions, gripping means on said impression cylinder comprising spring fingers spaced therealong to grip the leading edge of a sheet at a supply position and to release said leading edge when the same has passed the blanket cylinder, and gripping means on said rotary device for gripping the leading edge of a sheet as it is released from the impression cylinder and releasing said leading edge as the trailing edge of the sheet passes from the blanket cylinder, said rotary device comprising a shaft and disks spaced to receive therebetween said spring fingers of the impression cylinder and receiving the printed faces of printed sheets from the impression cylinder, said disks having bevelled edges to give limited contact with said sheets.

2,859,693

PRINTING PLATE TENSION HOOK

Theodore R. Ziebell, Milwaukee, Wis., assignor to The Cottrell Company, Westerly, R. I., a corporation of Delaware

Application July 20, 1956, Serial No. 599,274
3 Claims. (Cl. 101—378)



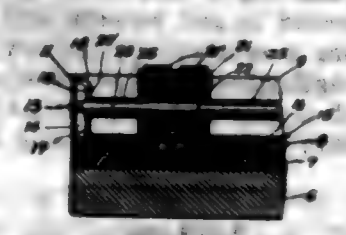
1. In combination, a cylinder having spaced helical grooves, at least one printing plate having undercuts along opposite edges of the plate, and movable plate tension hooks, each comprising a body, means for removably locking the body in a selected cylinder groove, means for moving said body along its cylinder groove, an elongated horizontally turnable plate engaging jaw edge adapted for slight vertical movement in the hook body and spring means in the body for biasing the jaw upwardly and for holding the said jaw in predetermined horizontal positions whereby the plate is held to the cylinder under tension by the coaction of said jaw and plate undercut.

2,859,694

INTERCHANGEABLE TYPE STAMP DEVICE

Whitney K. Munson, Red Bank, N. J.

Application April 3, 1956, Serial No. 575,889
3 Claims. (Cl. 101—330)



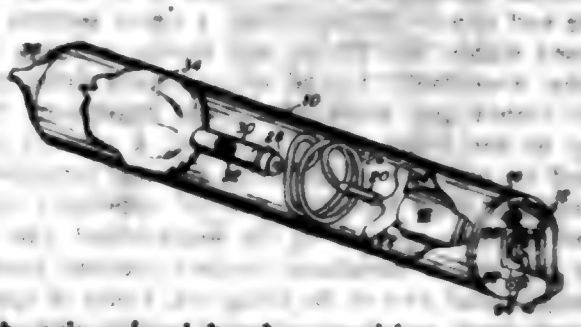
1. A rubber stamp device of the character described, comprising a mounting, a yieldable backing on said mounting, a casing secured to said backing, the casing have side walls and outwardly yieldable end walls defining, within the casing, a chamber, a rod frame arranged in the chamber of the casing, means retaining said frame against displacement from the casing, the frame including spaced rods, type members mounted on said rods and disposed within the chamber of said casing, said type members including outer type characters arranged beyond end limits of the casing, and means, on said rods, for spacing the type members in producing a predetermined characterized stamp within the chamber of said casing.

2,859,695

SUBMARINE SIGNAL BOMB

Edward Rolle, San Diego, Calif.

Application February 6, 1953, Serial No. 335,616
1 Claim. (Cl. 102—7)
(Granted under Title 35, U. S. Code (1952), sec. 266)



A submarine signal bomb comprising an open-ended cylindrical outer casing, a removable end cap hermetically sealed at one end of said casing and adapted to be readily blown off of said end of said casing, a bag of sea-marking dye positioned within said casing adjacent said end cap, a sealing cap having a flange overlying the opposite end of said casing and a reduced neck portion snugly received within said opposite end, a first annular groove on the periphery of said neck portion, second and third annular grooves on the respective inner and outer faces of said sealing cap, first, second and third sealing rings in respective grooves, an integral container having a closed end wall and a flanged open end portion secured to and hermetically sealed against the inner face of said sealing cap and said second ring, said sealing cap having an internally threaded bore, a trigger mechanism having a reduced neck portion threadedly engaged with said threaded bore, said mechanism having a flange portion snugly engaging and hermetically sealed against the outer face of said sealing cap and said third ring whereby said container, sealing cap and mechanism comprise a unitary structure which

may be secured to or detached from said casing as a unit, said trigger mechanism having a bore extending therethrough and communicating with said container and the surrounding water, a frangible disc closing said bore in sealing relation thereto, said trigger mechanism having means for breaking said frangible disc adapted to be actuated by expulsion of said bomb from a submarine, an electric cell positioned within said container, said electric cell being adapted to be actuated by water entering said container for generating an electrical voltage, an electrical exploder mechanism mounted within said casing and operatively connected to said cell for actuation thereby, an explosive charge in said casing for blowing off said end cap and ejecting said bag of dye, an elongated coiled fuse operatively connected to and between said exploder and charge and having a substantially uniform burning rate throughout its length whereby it may be severed to a predetermined length to provide a certain time delay between firing of said bomb and explosion of said charge.

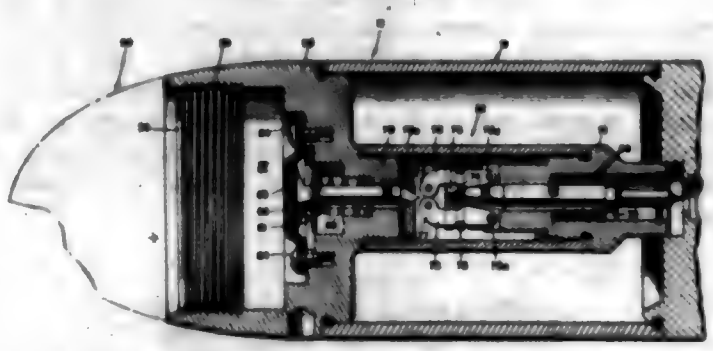
2,859,696

HYDROSTATICALLY OPERATED FIRING DEVICE

Solomon Berg, Kensington Heights, Md.

Original application March 18, 1953, Serial No. 343,288, now Patent No. 2,837,826, dated June 3, 1958. Divided and this application October 27, 1955, Serial No. 543,191

2 Claims. (Cl. 102—7)



1. In a hydrostatically operated firing device for use in a depth charge, the combination of a casing exposed at one end to a hydrostatic head, a sleeve secured to and disposed within said casing and having a fitting carried thereby, a normally locked spring-loaded firing pin disposed within and guided for axial movement by said fitting as the firing pin is released, a tapered portion formed on one end of the firing pin and terminating in an enlarged head having a pair of oppositely disposed planar surfaces normal to the longitudinal axis of the firing pin and a peripheral surface thereon parallel to the longitudinal axis of the firing pin, a pair of oppositely disposed latch members arranged within and pivotally mounted on said fitting, each of said latch members having an inclined portion in engagement with said tapered portion and terminating in a shoulder in engagement with one of said planar surfaces of said head and a straight portion bordering on said shoulder in engagement with the peripheral surface of said head for releasably locking said pin, spring means surrounding said latch members for maintaining said inclined portions in engagement with said tapered portion and said shoulders in engagement with said one planar surface, said spring means also maintaining said straight portions in engagement with said peripheral surface until said latch members are moved laterally to a release position to unlock said pin, an enlarged portion on each of said latch members and normally maintained in abutting engagement with respect to each other by said spring means, a plunger movably arranged within said casing, cam means carried by said plunger and movable thereby into engagement with said enlarged portions for moving said latch members laterally to said release position, and means sealed to said casing in engagement with said plunger and actuated in response to a predetermined hydrostatic pressure for moving said plunger.

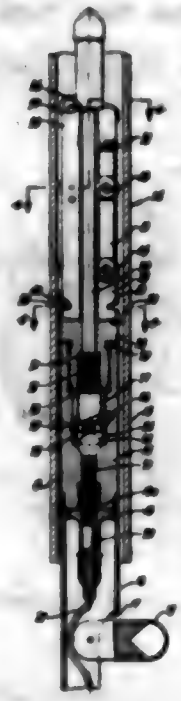
2,859,697

WELL PERFORATING DEVICE

Thomas L. Long, Houston, Tex., assignor, by mesne assignments, to Johnston Testers, Inc., Houston, Tex., a corporation of Texas

Application June 7, 1954, Serial No. 434,856

3 Claims. (Cl. 102—21.6)



1. A firing mechanism for a well perforating device comprising a housing, a cartridge mounted in said housing, a firing pin slidably mounted in said housing above said cartridge and extending upwardly above said housing, said firing pin being adapted to strike said cartridge, means for causing said firing pin to strike said cartridge, latch means for retaining said firing pin inoperative comprising a downwardly facing abutment formed on said firing pin adjacent the upper end thereof, a plurality of latch bars axially confined with their opposite ends in abutting relation with said downwardly facing abutment and the upper end of said housing respectively, a plurality of bars pivotally connected at their mid-points to said latch bars adjacent the mid-portion thereof, and a plurality of rollers rotatably mounted on each of said last-mentioned bars, said rollers being adapted to bear against the inner surface of a well tubing through which the device is to be dropped to retain said latch bars in latching position.

2,859,698

CENTRIFUGAL PUMP

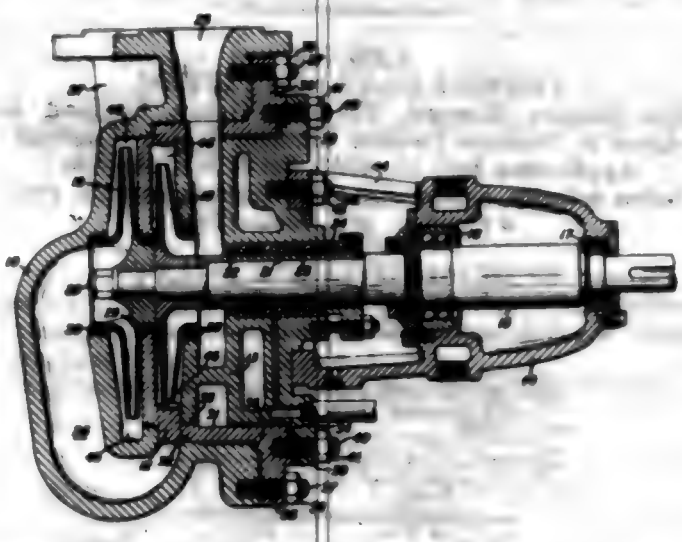
Walter O. Buehler, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Application March 21, 1956, Serial No. 572,868

3 Claims. (Cl. 103—109)

1. In a multi-stage centrifugal pump which includes a casing having a suction and a discharge, a diaphragm member and a stuffing box in said casing, a bearing bracket extending from said casing, a power-driven shaft journaled in said bearing bracket and extending through said stuffing box into said casing and terminating within the casing, and a pair of impellers on said shaft on opposite sides of said diaphragm member, said shaft, bearing bracket, stuffing box, diaphragm member and impellers forming a shaft assembly adapted to be handled as a unit, the combination therewith of a mounting for said shaft assembly in said casing comprising an integral

sleeve on said diaphragm member closely received in said casing and closely receiving said stuffing box, an integral annular flange on said sleeve, and externally accessible removable fasteners attaching said flange directly to the outside of said casing, said stuffing box being attached to the outside of said flange and said bearing bracket to the



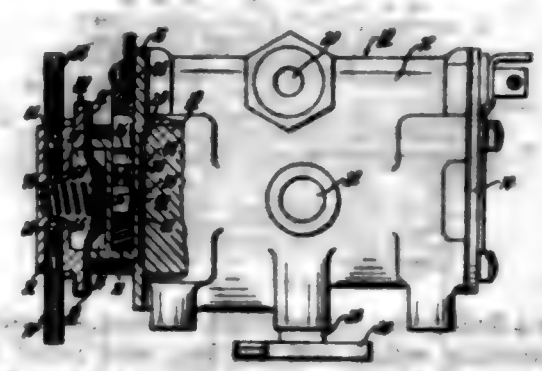
outside of said stuffing box, said shaft assembly being removable from said casing on removal only of said fasteners, said diaphragm member being formed with a first volute opposite one of said impellers, said casing being fromed with a bypass communicating with said first volute and with a second volute opposite said other impeller.

2,859,699
ROTARY POSITIVE DISPLACEMENT DEVICES
Henry Robert Billeter, Deerfield, Ill., assignor, by mesne assignments, to Liquid Controls Corporation, North Chicago, Ill., a corporation of Illinois
Application March 12, 1956, Serial No. 570,993
13 Claims. (Cl. 103—125)

1. A rotary, positive, liquid displacement device comprising a hollow casing having side and end walls defining a chamber and having an inlet and an outlet communicating with said chamber, a shoe fixed in said casing and spaced from said side walls to provide a space communicating freely with said chamber, said shoe having a cylindrically arcuate inner sealing surface defining a displacement cavity, a displacement rotor rotatably mounted in said chamber for movement in sealing relation with said cylindrically arcuate sealing surface, and means for blocking the flow of liquid between said inlet and said outlet through said space between said shoe and said casing.

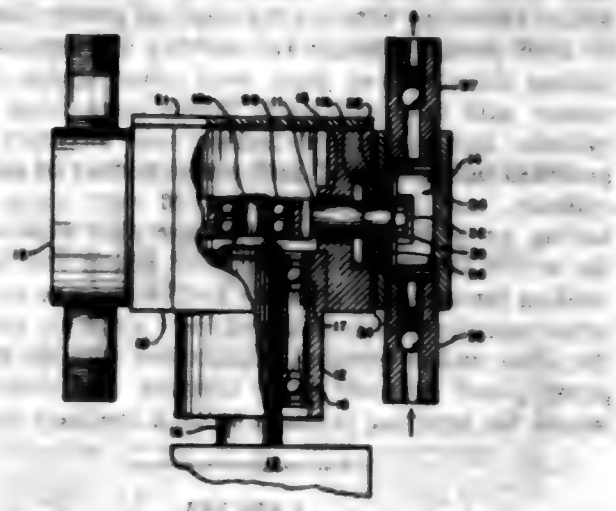
2,859,700
WINDSHIELD WASHER PUMP
Elmer Olson, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 7, 1954, Serial No. 434,902
4 Claims. (Cl. 103—150)

1. Windshield cleaning apparatus comprising in combination, a wiper motor having a cylinder with a reciprocable piston disposed therein capable of fluid pressure actuation in both directions and dividing it into two chambers, a pump having a liquid displacing member with an intake stroke and a delivery stroke, a spring biasing said liquid displacing member to move it throughout one stroke, and passage means interconnecting one chamber of said motor cylinder and said pump whereby



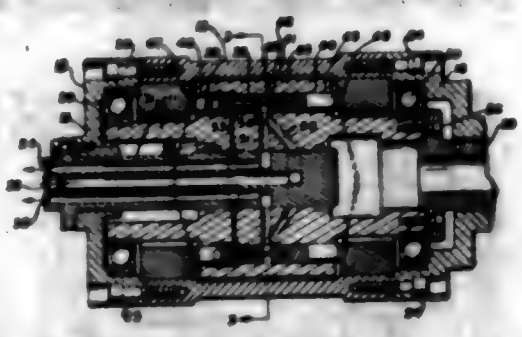
the application of fluid pressure to said one chamber of the motor for effecting movement of said piston in one direction will concurrently effect movement of said fluid displacing member in its other stroke, and when said one chamber is connected to drain during movement of said piston in the other direction said spring is rendered operative to effect said one stroke.

2,859,701
DIAPHRAGM PUMP
Herschel A. Williams, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Application November 25, 1955, Serial No. 548,985
4 Claims. (Cl. 103—150)



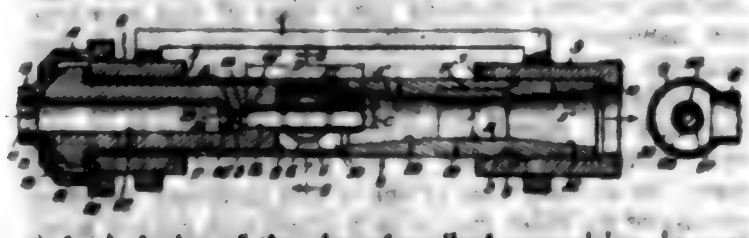
1. A diaphragm pump comprising a casing, a plunger movably mounted within said casing, a pump head affixed to said casing, a flexible diaphragm having its outer edge confined between said casing and said pump head, and a pair of disc-like diaphragm control members mounted on said plunger with the center portion of said diaphragm confined between opposing inner faces of said members, the diameters of said members being only slightly less than the diameters of the respective cylindrical recesses in said casing and said pump head within which said members are contained whereby substantially the entire free, unconfined portion of the diaphragm may be supported by an inner face of one of said members, the outer portion of the inner face of each diaphragm control member being smoothly curved, and that portion of said inner face which lies most closely adjacent to the confined center portion of the diaphragm being tangent to said center portion, and the portion of said inner face which lies most closely adjacent to the confined outer edge of the diaphragm being tangent to said outer edge when the plunger is at one end of its pumping stroke.

2,859,702
FLUID PUMP WITH FLUID RETURNED PISTONS
John C. Cetner, Mount Gilead, Ohio, assignor, by mesne assignments, to Kearney Company, Milwaukee, Wis., a corporation of Wisconsin
Application July 27, 1955, Serial No. 524,688
5 Claims. (Cl. 103—161)



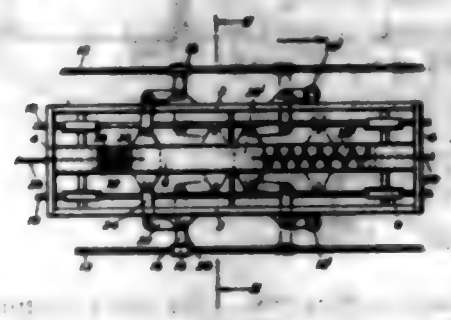
1. In a fluid pump comprising a housing, an insert member extending within said housing, said insert member having inlet and outlet passageways extending therein, a rotor surrounding said insert member and adapted to rotate thereabout, said rotor having a series of axially disposed pump cylinders therein, said pump cylinders each having first and second end portions and an intermediate portion therebetween, first and second opposed pump pistons respectively mounted in the first and second end portions of each pump cylinder, said opposed pump pistons in each pump cylinder having facing ends spaced apart, said facing ends and said intermediate portion of each pump cylinder constituting a variable fluid pump chamber, said intermediate portion of each pump cylinder having port means extending therefrom for alternate communication with said inlet and said outlet passageways, cam means engageable with said opposed pump pistons for moving said opposed pump pistons in each pump cylinder toward each other, fluid extendible means extending between the opposed pump pistons within each pump cylinder for moving the opposed pump pistons therein away from each other against said cam means, said fluid extendible means comprising auxiliary cylinder and piston rod means, said auxiliary cylinder provided within one of said pump pistons of each pump cylinder, said one pump piston of each pump cylinder having an aperture extending from said auxiliary cylinder to the facing end thereof, said piston rod means extending through said aperture and having one end in fluid communication with said auxiliary cylinder and having the other end in pressing engagement with the other said pump piston in each pump cylinder, and fluid pressure means for applying pressure to each auxiliary cylinder.

2,859,703
COMBINED JET PUMP AND REGULATOR
Dart L. Evans, Bloomsburg, Pa., assignor to Girton Manufacturing Company, Inc., Millville, Pa., a corporation of Pennsylvania
Application June 1, 1955, Serial No. 512,387
21 Claims. (Cl. 103—262)



1. A device of the class described comprising, in combination, jet pump support means comprised of spaced and cylindrical and equal diameter lengths of tubing fixed in coaxial arrangement, a jet pump having a cylindrical housing wall and having its opposite ends snugly telescoped into the adjacent ends of said lengths of tubing, a lateral aspiration port in the cylindrical wall of said jet pump intermediate the adjacent ends of said tubing, seal means releasably sealing the respective ends of said jet pump to the associated one of said lengths of tubing, and a unitary locking means releasably engaging one of said lengths of tubing for securing said jet pump to such one of said lengths of tubing.

2,859,704
VEHICLE HAULAGE SYSTEM
Allan Maurice Howard, Tividale, Tipton, England, assignor to Nortons-Tividale Limited, Tipton, England
Application July 17, 1953, Serial No. 368,640
Claims priority, application Great Britain July 25, 1952
4 Claims. (Cl. 104—176)



1. Apparatus for hauling railroad wagons in which the wagon wheels ride on a main track and a narrow guage track is laid between the rails of the main track comprising, a bogie running on the narrow guage track, said bogie including first and second rollers, first linkage means including a first pivoted arm connecting said first roller to said bogie, second linkage means including a second pivoted arm connecting said second roller to said bogie, said first and second linkage means being spaced longitudinally of the bogie and movable independently of one another, said first and second rollers being journaled on said first and second arms respectively and said arms mounted on said bogie for pivotal movement between inner positions wherein the rollers clear the wheels of a wagon and outer positions wherein said first roller engages the periphery of one wheel on one side of the point of engagement of the wheel with the track and said second roller engages the periphery of said wheel on the other side of the point of engagement of the wheel with the track, a first control means connected to said first linkage means for moving said first arm to said outer position, and a second control means connected to said second linkage means for subsequently moving said second arm to said outer position independently of the outward movement of said first arm.

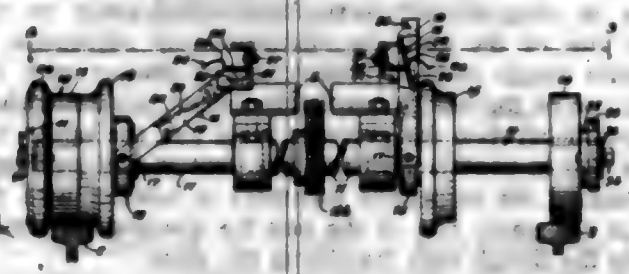
2,859,705
MOTOR TRAIN POWER UNIT, PASSAGEWAY, AND CAB STRUCTURE
Alan R. Cripe, Chagrin Falls, Ohio, assignor to The Chesapeake and Ohio Railway Company, Cleveland, Ohio, a corporation of Virginia
Application April 30, 1956, Serial No. 581,429
6 Claims. (Cl. 105—2)

1. In a motor train power unit, cab and passageway, a power unit having a passageway through the length of said unit, a pair of doors at the front end of said unit,

plunger is at one end of its pumping stroke.

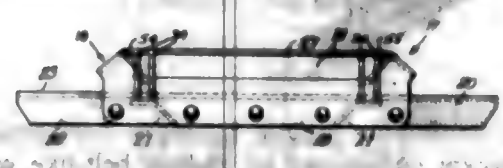
coupling and diaphragm means for connection with another motor train unit to provide a passageway therethrough, a cab in said unit extending across the full width of the motor train power unit, said cab and said passageway intersecting through a substantial portion of the cab, a pair of folding sides of the passageway adapted to project into said cab and to fold down into the passageway whereby a full height passageway may be provided through the cab when multiple motor train unit operation is desired, and a full width cab without a passageway projecting into said cab may be provided during single operation.

2,859,706
TRACK WORKING MACHINE
Henry H. Talboys, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Application September 22, 1955, Serial No. 535,960
11 Claims. (Cl. 105—157)



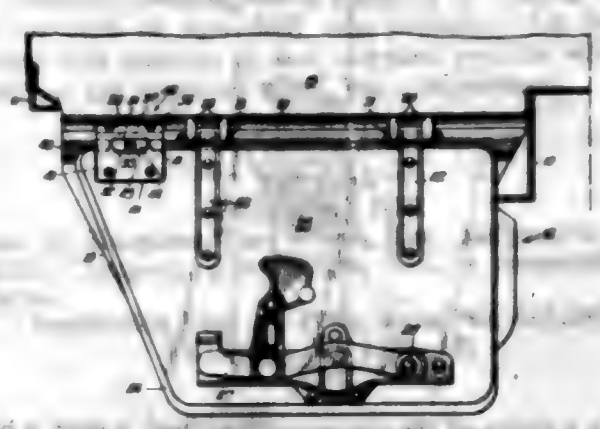
11. In a trackworking machine, a base movable along the rails of a track, supporting wheels for the base, a connection between the base and the wheels, at least one of the wheels including a roller engageable with the head of the rail and having a width less than the width of the rail head, a flange movable into and out of position adjacent the inside of the roller, and means on the base for holding the flange in an extended position adjacent the roller and in a withdrawn position spaced from the roller.

2,859,707
HOPPER DISCHARGE OUTLET FOR RAILWAY CARS
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Application March 26, 1952, Serial No. 278,695
7 Claims. (Cl. 105—253)



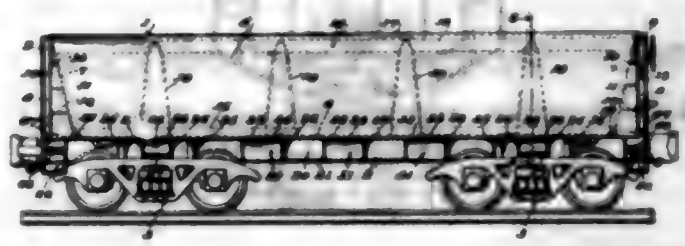
1. A hopper discharge opening closure structure for use in a railroad car having a longitudinally extending center sill and having an opening providing for the downward discharge of lading by gravity and comprising, in combination, a rectangular frame having end walls and depending side walls, rail members parallel to and secured to said depending side walls and parallel to said center sill and extending inwardly of said side walls and uninterruptedly beyond said frame, gate means slidably mounted on said rail members throughout the entire extent of movement thereof and guided at least in part therealong by said side walls, inwardly sloping transverse walls underneath said end walls below said gate between and secured to said rail members and forming therewith a chute beneath said frame, and means for moving said gate means along said rail members between open and closed positions.

2,859,708
MEANS FOR CLOSING A HORIZONTALLY SWINGING DOOR OF A RAILWAY HOPPER CAR
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Application July 21, 1953, Serial No. 369,359
5 Claims. (Cl. 105—286)



1. In a railway car having a hopper with a discharge opening and a door hinged to said hopper adjacent an upper side of said opening and swingable under the effect of gravity to an open position, in combination, a bar receiving member secured to said hopper adjacent said upper side of said opening and having a downwardly facing bar receiving surface, a bar receiving member secured to said door adjacent the hinge axis of said door and having an upwardly facing bar receiving surface in alignment with and spaced outwardly from and below said downwardly facing bar receiving surface, and an operating bar at one end engaging said downwardly facing bar receiving surface and in spaced relation engaging said upwardly facing bar receiving surface and extending outwardly from said bar receiving member on said door.

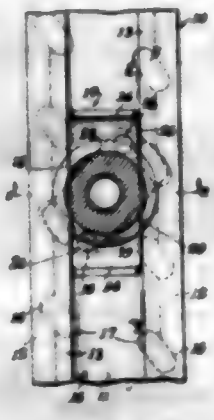
2,859,709
BODY AND UNDERFRAME STRUCTURE FOR MINE CARS
Henry Fort Flowers, Findlay, Ohio
Application July 25, 1951, Serial No. 239,826
1 Claim. (Cl. 105—364)



A rail mine car body and underframe structure comprising a substantially horizontal sheet metal floor plate having a smooth unbroken surface extending from end to end and side to side of said body, sheet metal side plates extending the full length of the floor plate and welded to said floor plate at each side edge thereof, sheet metal end plates welded to the floor plate and the side plates and a center sill including spaced side plates disposed below and extending longitudinally of the floor plate from end to end thereof, said plates being welded at their upper edges to the floor plate, a bottom plate joining the side plates of said center sill, bolsters disposed below and extending transversely of the floor plate from side to side thereof, each bolster including spaced plates welded at their upper edges to said floor plate and at their inner ends to the adjacent plate of the center sill and a bottom plate joining the spaced bolster plates and welded thereto.

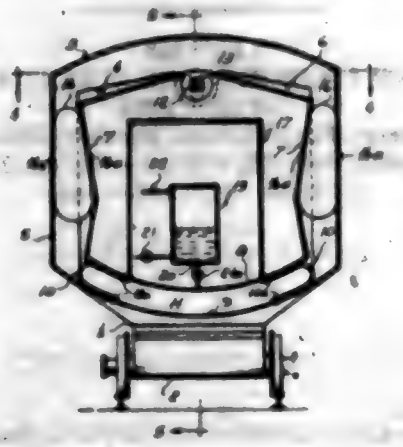
closing and a position retracted from said path, each

2,859,710
RAIL-CONNECTED FITTING
Edwin C. Elmer, Glendale, Calif., assignor, by mesne assignments, to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Application July 12, 1956, Serial No. 597,418
8 Claims. (Cl. 105—369)



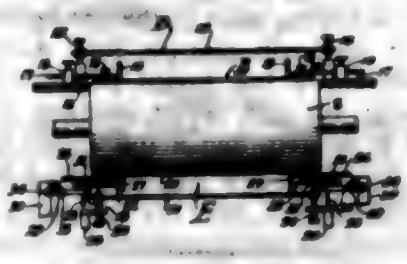
6. In a fitting of the character described, a stud, a body plate and a guide plate superimposed on and slideably connected to the body plate, the body plate and the guide plate being rotatably mounted on the stud obliquely to each other and non-rotatable relative to each other, the body plate being provided with abutment-engaging, diagonally opposite portions, the guide plate being formed to have slideway-engaging side edges, and resilient means biasing the plate toward each other.

2,859,711
FLUID SUSPENSION FOR A LOAD CARRYING BODY
Frank A. Track, Stamford, Conn.
Application May 15, 1956, Serial No. 584,974
26 Claims. (Cl. 105—453)



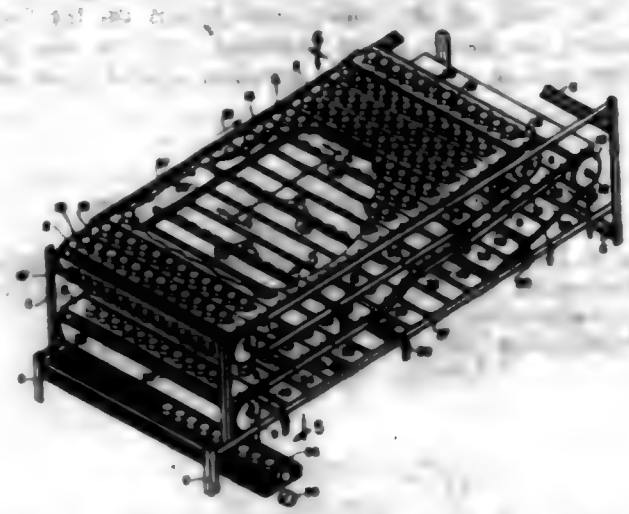
1. A fluid suspension for a vehicle comprising: a supporting base, a housing superimposed upon and rigid with said base, a load carrying body above the base, a buoyancy chamber interposed between the base and load carrying body for supporting and floating said load carrying body on the base, said buoyancy chamber having arcuate upper and lower walls and a flexible peripheral wall with the upper and lower margins of the flexible peripheral wall secured to said upper and lower walls of the buoyancy chamber and the intermediate portion of the flexible peripheral wall being looped outwardly to permit rolling coaction between the looped portion of said flexible wall and the arcuate walls of said buoyancy chamber and to also permit relative up and down movement between said arcuate walls, and means for guiding the upper portion of the load carrying body for up and down and swinging movement relative to the housing about an axis whose center is the center of curvature of the upper wall of the buoyancy chamber.

2,859,712
DOUGH-MOLDING MACHINE
Henry W. Kissinger, Chicago, Ill.
Application March 21, 1956, Serial No. 572,940
3 Claims. (Cl. 107—9)



1. A dough-molding machine comprising, a supporting frame, a conveyor belt traveling between and around horizontally-spaced pulleys with the upper and lower runs of the belt free of support between the pulleys, the pulleys being journaled on the frame on axes fixed against movement relative to each other except for the purpose of tensioning the belt, a pressure plate positioned on the frame in longitudinally-juxtaposed relationship to the under run of the belt and independently adjustable to maintain dough rolls in predetermined contact with the under run of the belt, transversely-spaced guide members interposed between the pressure plate and the under run of the belt in contact with the belt, and means yieldingly maintaining the respective members in contact with the face of the under run of the belt for limiting the extension of the dough rolls traversing the plate.

2,859,713
CONTINUOUS GRIDDLE
Eugene M. Neel, Newton Highlands, Mass.
Application October 21, 1954, Serial No. 463,688
10 Claims. (Cl. 107—57)

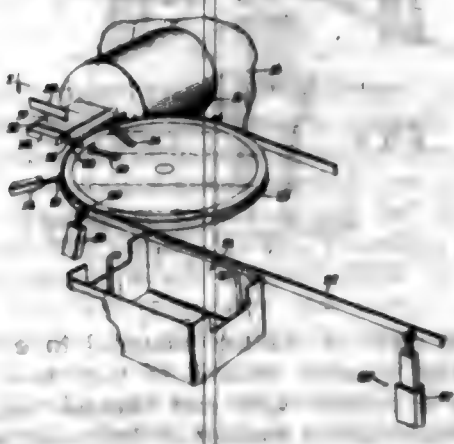


9. In a continuous griddle having a horizontally disposed conveyor comprising an endless belt-like web having top and bottom runs and mounted to travel between forward and rearward sprockets rotating on respective parallel horizontal axes, a conveyor web comprising a plurality of relatively narrow transversely extending flat surfaced sheet metal plates connected serially edge-to-edge, each of said plates having inwardly turned and converging longitudinal margins bordering its inner surface, a plurality of open ended product retaining rings of uniform height detachably mounted side-by-side on the flat outer surface of each of said plates and uniformly spaced along the length thereof, the corresponding rings on all said plates being aligned parallel with the longitudinal travel axis of said conveyor, and a plurality of transversely extending gas burning heaters disposed at intervals along the length of said conveyor directly below the top run thereof, said heaters each having a plurality of burner jets spaced apart transversely of the conveyor on the same centers as and directly below the respective center lines

given value for maintaining substantially constant tension bladder adapted to receive liquid and which is positioned

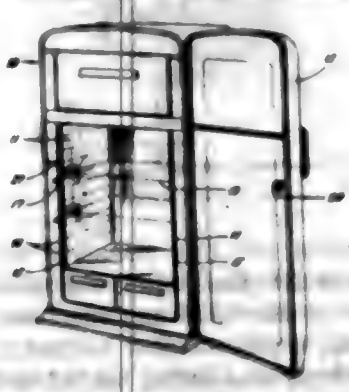
of travel of the rings as they are carried by the conveyor plates, whereby substantially only the area of the said plates occupied by each of said rings is directly contacted by the flame of the respective burner jet of each heater.

2,859,714
METHOD OF MAKING A FROZEN CONFECTION ON A STICK
Thomas N. Cummings, Chicago, Benjamin R. Peterson, Jr., Wheaton, and Thomas B. Sisk, Chicago, Ill., assignors of one-fourth to Nicholas A. Cummings, Chicago, Ill.
Application March 23, 1953, Serial No. 344,051
7 Claims. (Cl. 107—54)



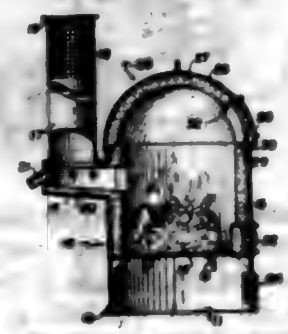
1. The method of making a stick-supported frozen confection, comprising continuously extruding a self-sustaining length of frozen confection of uniform cross-section; moving a stick into position adjacent to said confection with the longitudinal axis of said stick disposed at a right angle to the axis of extrusion of said confection; moving said stick transversely to its length, when adjacent to said confection, in the same general direction as said confection at substantially the same speed; inserting said stick in the direction of its length into said confection while said stick and said confection are moving in the same general direction at substantially the same speed; and severing a portion of said extruded confection containing said stick.

2,859,715
CABINET CONSTRUCTION
Iber C. Courson, Glenside, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application May 12, 1953, Serial No. 354,515
3 Claims. (Cl. 109—63.5)



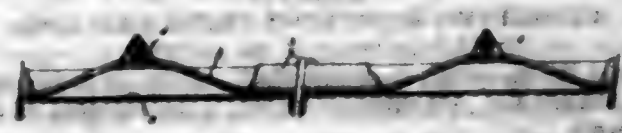
1. A domestic appliance cabinet comprising a case which defines a compartment; a plurality of partitions removably disposed within said compartment, spaced from one another; a door mounted on said case and providing access to said compartment; a plurality of door stop members; a plurality of mounting means on said case for movably attaching said door stop members to said case at locations spaced from one another, each door stop member being movable, when attached, between a position extended into the path of the door when closing and a position retracted from said path, each mounting means including an element rigidly attached to said case in alignment, when the respective door stop member is in said extended position, with the line of force arising during impact of the closing door against the door stop member, to prevent closing of the door, and each door stop member being normally engaged by at least one of said partitions and thereby maintained in the retracted position; and a plurality of biasing means, one for each of said door stop members, for forcibly moving such member to said extended position when the partitions are removed from the compartment.

2,859,716
INCINERATOR
Gibbs M. Slaughter, Fort Worth, Tex., assignor to Acme Brick Company, Fort Worth, Tex., a corporation of Texas
Application May 28, 1954, Serial No. 432,956
3 Claims. (Cl. 110—18)



1. An incinerator comprising a hollow body including a circular open upper end, a horizontal grate within said body and spaced from the bottom thereof, a perforated door within said body above said grate, a cast ceramic liner within said body above said grate, a dome above said body, an inwardly directed flange around the periphery of said dome and in rotatable sliding contact with said body around said circular upper end thereof, a charge door in said dome, a cast ceramic liner in said dome, the lower edge of said liner being supported by said flange, an outwardly extending breech in said body at the upper end thereof, and a smokestack on the extending end of said breech.

2,859,717
SLACK PIPE LOOP LOWERING DEVICE AND METHOD
James D. Cummings, Houston, Tex., assignor of one-half to Aubrey S. Crutcher, Houston, Tex.
Application July 2, 1956, Serial No. 595,216
2 Claims. (Cl. 111—5)



1. The method of installing a buried pipe line, comprising excavating a trench, depositing longitudinally spaced apart relatively long continuous lengths of pipe on the trench bottom with an upwardly arched relatively short connecting length of pipe rising above the trench bottom under initial linear compression between the trench bottomed opposite ends thereof, backfilling the trench over the trench bottomed relatively long lengths of pipe and fastening the arched length of pipe against turning about the longitudinal axis of the trench by connecting the arched length to a variable volume pressure fluid device, setting a pressure responsive valve to relieve fluid pressure within the device in excess of a predetermined constant level for offering resistance to load thereon below a given value and yielding to load above said

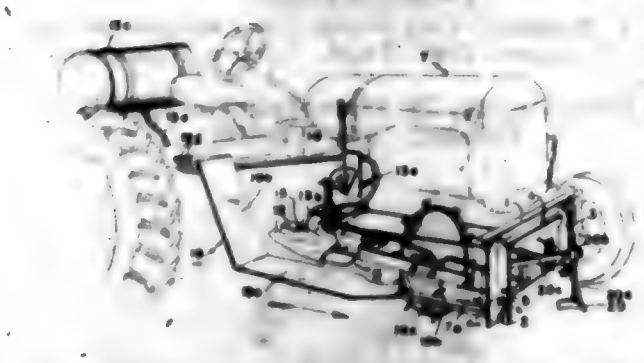
2,859,721
plurality of inclined surfaces to receive and direct gases

curvature of the upper wall of the buoyancy chamber.

centers as and directly below the respective center lines

given value for maintaining substantially constant tension on the arched length of pipe sufficient to maintain the same upright as it is pulled toward the trench bottom under temperature change contraction throughout the pipe line length and finally removing the fastening of said device to the short pipe length after its arch has flattened in compensation for pipe length contraction and thereafter backfilling the remainder of the trench.

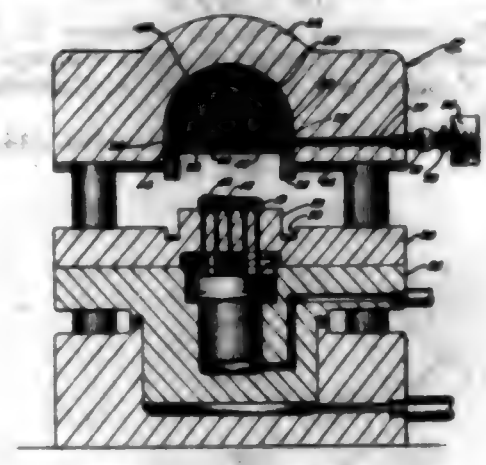
2,859,718
TRANSPLANTING MACHINE
Wiley Z. Barkley, Wilson County, N. C.
Application September 28, 1953, Serial No. 382,557
2 Claims. (Cl. 111—7)



1. In a transplanting machine to be mounted on a vehicle, the combination of a bracket removably mounted on the forward end of the vehicle; a transverse rod adjustably mounted on said bracket; a frame pivotally mounted on said rod; means mounted on the vehicle for rocking said frame about said rod; means on the frame to trench and spread earth to form a furrow to receive plants; and means on said frame to supply measured quantities of water at determined points in said furrow comprising a water conduit having a discharge end and another end to be connected to a source of supply, said conduit being secured to said frame adjacent said discharge end and having a valve therein at said discharge end; a ground-engaging wheel having at least one actuating pin, said wheel being rendered operative and inoperative by rocking of said frame, a bell-crank pivoted on said transverse rod, a biased lever secured to said bell-crank and engaged periodically intermediate its length by said actuating pin to be rocked by said pin, a rod attached to said valve, a cross-head secured to said rod, and a pair of pitmans each attached at one end to said cross-head and at its other end to said bell-crank whereby said valve is opened and water is supplied at determined points when the bell-crank is rocked.

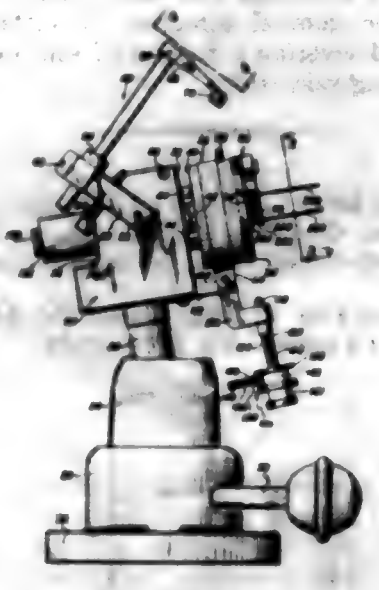
2,859,719
COMBINED RESILIENT PRESS PAD AND EXPANDABLE BLADDER
Daniel W. Kraybill, Downey, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California
Application August 17, 1953, Serial No. 374,516
2 Claims. (Cl. 113—46)

1. Apparatus for executing a forming operation on ductile sheet material comprising: a support structure; a die holding member mounted on said structure for bi-directional movement thereon; said member includes an outer face adapted to receive a die and holding ring; first means mounted on said structure adapted to impart said bi-directional movement to said member; second means mounted on said structure adapted to impart independent bi-directional movement to said die and ring when mounted on said outer face and which movement is also independent of the movement of said member; a body of resilient material located in opposed and aligned relation with respect to said outer face; a disk-like expandable bladder adapted to receive liquid and which is positioned in contact with the surface of said body of resilient material which is most adjacent to said outer face; said first means adapted to move said member from a first to a second position in which said outer face is spaced from and is in contact with said bladder, respectively; means



confining said body of resilient material in a chamber of substantially constant volume at such time as said outer face is in contact with said bladder; and means whereby a predetermined amount of fluid may be placed in said bladder and locked therein throughout a forming operation.

2,859,720
JIG
Michel C. Palmer, Pasadena, Edward W. Johnson, Altadena, and Clarence B. Davis, Arcadia, Calif.
Application August 15, 1956, Serial No. 528,375
3 Claims. (Cl. 113—99)



1. Jig apparatus for facilitating the assembly of the component parts of electrical and mechanical structures comprising a body, a dial member rotatably and slidably connected to the body and spring loaded in the sliding direction toward the body, the dial having a front and back side with the back side facing toward the body, a plurality of adjustable cam followers protruding from the back side of the dial, a cam connected to the body and disposed facing the back side of the dial for engaging the followers as the dial is rotated to provide successively a plurality of distances of separation of the dial from the body, and means disposed on the front side of the dial for supporting component parts of the structure to be assembled.

one face thereof with respect to the remainder of said

2,859,726

door stop member being movable, when attached, between a position extended into the path of the door when

on below a given value and yielding to load above said

2,859,721

STREAMLINE SUBMARINE PASSENGER LINER

William Eugene Endress, Long Beach, Calif.

Application May 13, 1954, Serial No. 429,629
8 Claims. (Cl. 114—16)

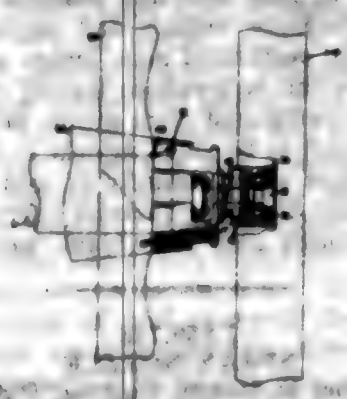
1. A submarine vessel for passenger transportation, said submarine vessel comprising a normally horizontally disposed elongated generally cylindrical streamlined hull, said hull having substantially conical bow and stern portion, the upper outer surface of said hull forming a top deck, a subdeck within said hull extending from bow to stern and parallel to and disposed above the longitudinal axis of said hull, passenger and navigation compartments disposed on said subdeck, said passenger compartments being rearwardly of said navigation compartment and said navigation compartment being disposed at the fore part of said subdeck, said top deck having a hatch disposed therein for entry and exit and opening into said passenger compartment, a hatch cover door normally sealingly closing said hatch, a stairway having a lower landing extending from said hatch down into said passenger compartment, a passageway connecting said lower landing and said navigation compartment, said navigation compartment having watertight windows in the upper forward wall portion thereof adapted for navigational purposes.

2,859,723

TORPEDO HUB NUT

David M. Myers, Bellefonte, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application December 5, 1956, Serial No. 626,561
9 Claims. (Cl. 114—20)



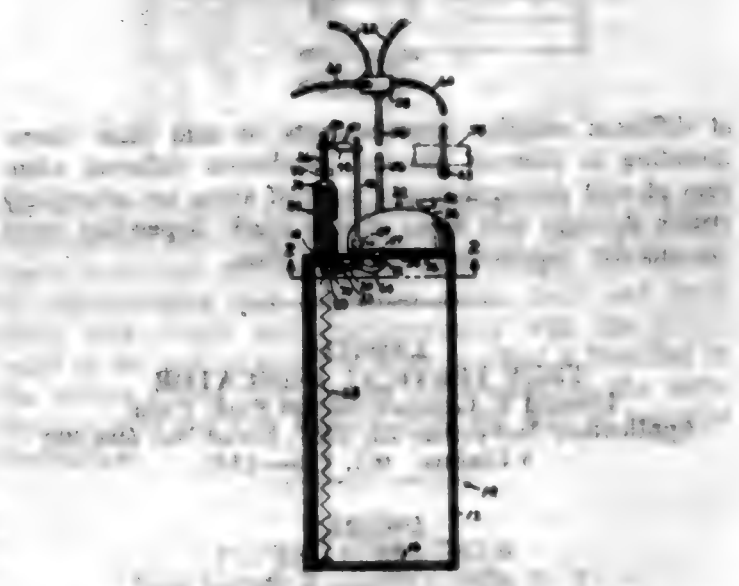
1. A torpedo propeller hub nut adapted for use on steam torpedos and the like comprising: a body element open at one end and provided with an annular side wall having a front portion and a rear portion, said side wall having an annular inner surface, said side wall front portion being adapted for connection to said torpedo; a rear wall closing said side wall rear portion and having a diameter less than said side wall front portion; an inclined surface carried by said rear wall, said inclined surface being axially disposed forwardly of said rear wall, said side wall rear portion being provided with a plurality of individual exhaust ports having oppositely disposed first and second surfaces, said first surfaces being disposed substantially contiguous with said inclined surface whereby said first surfaces and said inclined surface provide a plurality of inclined surfaces to receive and direct gases through said exhaust ports in an outwardly and rearwardly direction; and connecting means carried by said rear wall whereby a rearward force may be applied to the said hub nut.

2,859,723

AUTOMATIC FIRE ALARM

Herbert D. Lane, Oklahoma City, Okla.

Application September 16, 1957, Serial No. 684,308
5 Claims. (Cl. 116—106)



1. A whistle and bell fire alarm, comprising: a casing filled with gas under higher than atmospheric pressure and having an end wall provided with an outlet opening; whistle means connected to said casing around the outlet opening, said whistle means adapted to be operated by the gas escaping from said casing through the outlet opening; a plunger slidably carried by said whistle means and extending beyond the ends thereof, the inwardly disposed end of said plunger projecting into said casing through the outlet opening; a valve connected to the inward end of said plunger for closing the outlet opening, said valve normally held in closed position by the gas pressure within said casing; stop means carried by said plunger for limiting the inward movement of the latter; a spring extending between and connected at its respective ends to said valve and an opposing wall of said casing for unseating said valve and discharging gas through said whistle means and sounding an alarm when the gas pressure in said casing is reduced below a predetermined setting; tubular means connected to the said end wall of said casing in communication with the interior thereof; a fusible element for normally closing the free end of said tubular means; and a link pivotally carried by said casing, said link being connected at one end to said valve and extending between said valve and the end of said tubular means connected with said casing, the free end portion of said link forming a valve member adapted to interrupt communication between the interior of said casing and the bore of said tubular means when said link is pivoted responsive to the unseating movement of said valve connected to said plunger.

2,859,724

GAUGE DIAL

Edward F. Cronin, Lenox, and Joseph Mezrack and Arthur J. Harrington, Jr., Pittsfield, Mass., assignors to General Electric Company, a corporation of New York

Application March 23, 1956, Serial No. 573,389
13 Claims. (Cl. 116—118)

1. An indicating gauge comprising a rotatable plate having a plurality of distinguishingly marked areas on

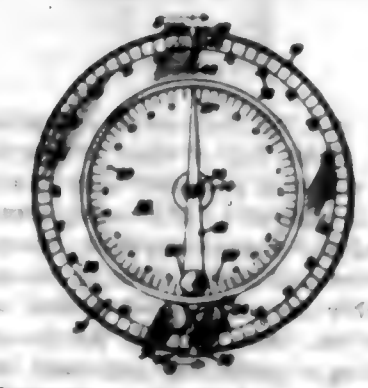
a forward and a rearward end, said body having at least

retainer spaced rearwardly of and adjacent to said blade

one face thereof with respect to the remainder of said face, a fixed mask covering said face and having a plurality of areas through which said face is visible, and means for rotating said plate in response to variable physical conditions, said areas being arranged so that

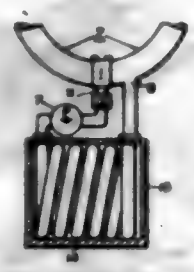
at different angular displacements of said plate corresponding to different physical conditions different numbers of said distinguishingly marked areas are selectively visible through said areas of said mask, depending upon the angular displacement of said plate.

2,859,725
TRUE VERTICAL INDICATOR
Donald B. Genasci, Menlo Park, Calif.
Application November 22, 1957, Serial No. 698,302
3 Claims. (Cl. 116—124)



1. In an indicator, a body member including a circular rim and a circular wall portion, a centrally arranged hub extending outwardly from said wall portion and said hub being provided with a bore therein, a sleeve mounted in said bore, a shaft rotatably arranged in said bore and said shaft being provided with a threaded recess, a cap arranged contiguous to an end of said sleeve, a securing element extending through said cap and engaging the threaded recess in said shaft, a movable pointer connected to said shaft and one end of said pointer being tapered, a ball piece secured at the other end of said pointer, there being a circular recess in the wall portion of said body member, a ring having a portion thereof seated in said recess, said ring having an inner cut-out defining a shoulder, a face plate engaging said shoulder, said face plate having its outer periphery seated in the cut-out in said ring, said face plate having scale markings thereon, there being an annular groove in the inner portion of the rim of said body member, a pair of ball members movably mounted in said groove, a portion of the rim of the body member being tapered and terminating in an annular recess, a dial plate having its outer periphery engaged in said last named annular recess, said dial plate having scale markings thereon, and a pair of diametrically opposed brackets each having a flat section arranged contiguous to the outer surface of the rim of the body member, securing elements extending through the flat sections of said brackets and through said rim and said last named securing elements terminating in inner shanks, said ball members being arranged on opposite sides of a shank, each bracket further including a pointed finger arranged contiguous to the outer surface of said dial plate.

2,859,726
ACOUSTIC-VIBRATION COUPLER
John V. Bouyoucos, Cambridge, and Frederick V. Hunt, Belmont, Mass.
Original application June 24, 1954, Serial No. 439,085, now Patent No. 2,792,804, dated May 21, 1957. Divided and this application May 15, 1957, Serial No. 659,231
20 Claims. (Cl. 116—137)

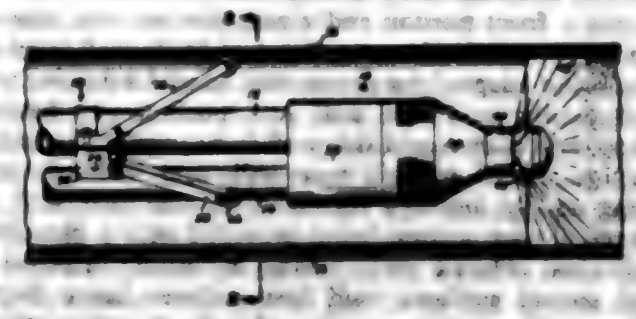


1. In an acoustic generator system in which acoustic vibrations are propagated within a fluid medium, an acoustic-vibration output coupling device comprising a flexible-walled tubular member connected to receive the fluid medium, both ends of the tubular member being open to permit passage therethrough of the fluid medium.

2,859,727
GLUING DEVICE FOR BOX FORMING MACHINES
Sidney R. Plain and Fred Kempler, Toronto, Ontario, Canada
Application July 31, 1953, Serial No. 371,499
2 Claims. (Cl. 118—3)

1. In a carton forming machine or the like, blank feeding means, a gluing unit comprising a sealed container adapted to receive a quantity of glue, a glue applying head having a plurality of discharge passages terminating in discharge orifices, passage means leading from said container to said head, a plurality of spring-loaded balls arranged in said discharge passages and normally closing said discharge orifices and partially projecting therebeyond, and perforated plate means adjacent to said head and having the perforations thereof registering with said balls, said perforated plate means being adapted to guide a blank part to be glued against at least certain of said balls to force same inwardly of said discharge orifices to open their discharge passages effecting a glue discharge therethrough onto such blank part.

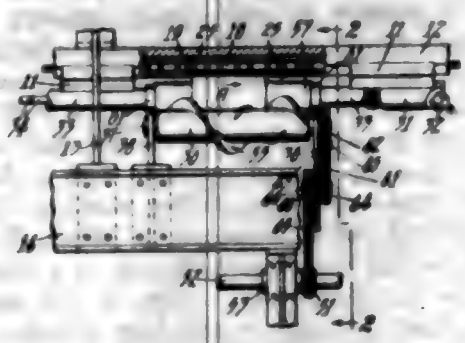
2,859,728
SPRAY NOZZLE
James D. Hobdy, Cushing, Okla.
Application August 29, 1956, Serial No. 606,850
2 Claims. (Cl. 118—306)



1. A nozzle for spray-coating the interior surface of pipe with coal tar, including a cylindrical body having

a forward and a rearward end, said body having at least two relatively large longitudinal bores laterally off-set from its axial center; a reducing sleeve threadedly connected at its larger end to the forward end of said body and extending forwardly therefrom for forming a forwardly converging mixing chamber having a cylindrical forward portion terminating in a forwardly open mouth end; an elongated nozzle head adjustably carried longitudinally by the body within said mixing chamber and projecting axially forward of said open mouth end, said nozzle head having an annular flared surface adjacent said open mouth end for deflecting the coal tar to form an annular spray in co-operation with said open mouth end; and conductors threadedly engaged within the bores at the rearward end of said body for conveying coal tar and air under pressure to the mixing chamber.

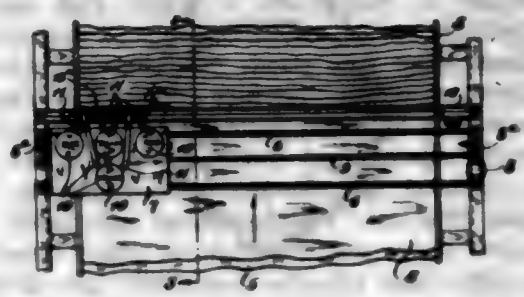
2,859,729
SUPPORT FOR CAN BODY INTERNAL TREATING DEVICES
John E. Socke, Pelham Manor, N. Y., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application July 6, 1956, Serial No. 596,188
4 Claims. (Cl. 118—317)



1. In a machine for treating tubular can bodies on the interior thereof, the combination of a horn for supporting the can bodies, a movable conveyor for advancing the can bodies along said horn, an elongated treating element disposed adjacent said horn in the path of travel of said can bodies so that the bodies pass over and around said element in telescopic relation thereto for interior treatment of said bodies, a freely rotatable sleeve member surrounding said elongated treating element in space relation thereto, a pair of spaced and parallel support screws disposed adjacent the path of travel of said can bodies and having helical threads engaging at their peripheries against said freely rotatable sleeve member for supporting said treating element in a predetermined position, said threads having a pitch greater than the length of said can bodies for accommodation of individual can bodies therebetween, and means for rotating said screws in the same direction in time with the movement of said conveyor for continuously suppporting said treating element without interfering with the advancement of said can bodies along said horn and over and around said treating element.

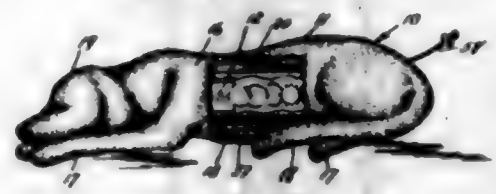
2,859,730
APPARATUS FOR THE APPLICATION OF VARIEGATED COLOR COATING TO SHEET MATERIAL
Ralph D. Wiesnberg, Coshocton, Ohio, assignor to Edmont Manufacturing Company, Coshocton, Ohio, a corporation of Ohio
Application July 25, 1955, Serial No. 523,989
1 Claim. (Cl. 118—415)

A coating apparatus comprising means for moving a web of material continuously in one direction, a stationary blade and bank retainer arranged entirely across and transversely above the path of movement of the web of material and closely adjacent thereto and with said bank retainer spaced rearwardly of and adjacent to said blade so as to provide above the path of movement of the web of material a trough with a narrow slot entirely thereacross for feeding a coating to the web of material therebelow and for gauging the thickness of the coating, a plurality of individual containers for separate colors with individual means arranged above and along said trough and movable transversely above the path of movement of



the web of material and entirely thereacross for depositing multiple individual colors separately and simultaneously from said containers into said trough, and means for reciprocating said depositing means back and forth along said trough and simultaneously with the movement of the web of material so as to effect a blending of the colors within said trough for depositing the same through said slot and directly onto the web of material therebelow.

2,859,731
PUPPY COMFORTER
Vera Sutton, Rockville Centre, N. Y.
Application June 5, 1957, Serial No. 663,641
2 Claims. (Cl. 119—1)



1. In a device for comforting puppies including an animal figure element having a main body portion, said main body portion having a cavity therein, the improvement comprising pulse producing means disposed within said cavity, said pulse producing means having an electric motor capable of maintaining a substantially constant speed, a gear train connected to the output shaft of said motor for reducing the speed thereof, a driving wheel driven by said gear train, said driving wheel having a plurality of radially arranged projections thereon, a bell crank member supported for pivotal motion, and having a driving wheel engaging portion and a striker supporting portion arranged at an angle with respect to said driving wheel engaging portion, a soft resilient striker mounted upon said striker supporting portion, a rubber bumper disposed in the path of motion of said striker, resilient means for urging said bell crank member in a direction toward said bumper, whereby operation of said motor serves to periodically move said bell crank in a first direction against the action of said resilient means and release the same to allow said bell crank to move in an opposite direction to strike said bumper, and transmit a simulated heartbeat to said animal figure.

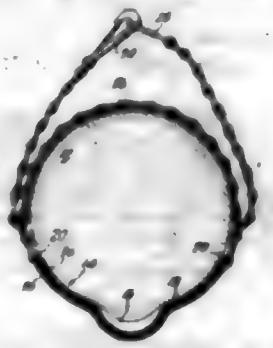
2,859,732
DOG COLLAR
William C. Driscoll, New Rochelle, N. Y.
Application October 25, 1956, Serial No. 618,350
3 Claims. (Cl. 119—106)

1. A safety animal collar comprising a front curved member adapted to engage the neck of an animal and having an inwardly directed recess formed therein adapt-

a chamber in said housing in which said one piston is

nected at its upper end to the lower wall of said flee

ed to register with the wind pipe section of the neck of said animal, said front member being formed of a pliable resilient material, a pair of loop members located on opposite ends of said front member, an elongated



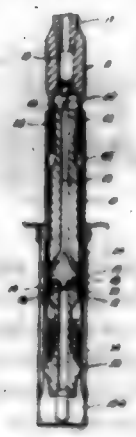
flexible member slidably engaging said loop members and defining the rear collar portion, opposite portions of said flexible member being releasably interengaged and an element carried by said flexible member for the attachment of a leash.

2,859,733

FLUID ACTUATED IMPACT TOOL

Ross Bassinger, San Antonio, and James D. Gardner, Houston, Tex., assignors to Bassinger Tool Company, San Antonio, Tex., a corporation of Texas

Application November 23, 1955, Serial No. 548,582
23 Claims. (Cl. 121—30)



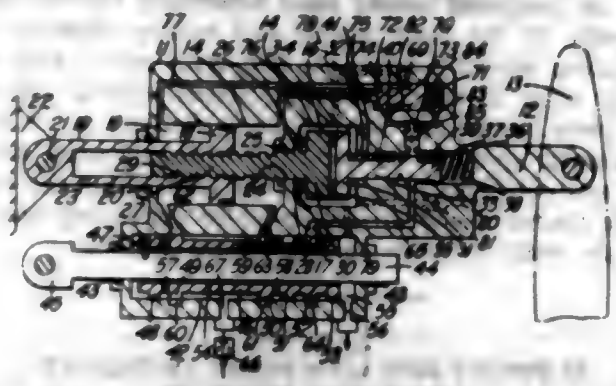
1. An impact tool powered by a compressible fluid which comprises, in combination, anvil means, fluid supply conduit means having a casing portion extending to telescope over the anvil means to enclose therein the striking face of the anvil, a hammer mounted for reciprocation within said casing portion to beat upon the anvil face and having endwise surfaces of different area against which fluid pressure from the conduit means can act to urge the hammer in its power and return strokes, a first fluid passageway in the hammer connecting when open between said surfaces, a second fluid passageway in the anvil means connecting the interior of the casing portion between the anvil and hammer with the exterior of the tool, a valve element and a valve member respectively carried by the conduit means and hammer to open and close said first and second passageways respectively during finite movement of the hammer in its power and return strokes so that fluid pressure from the conduit means is alternately applied to and exhausted from one of said hammer surfaces, and means providing a slidable connection between said anvil means and casing portion to permit relative longitudinal movement between said valve element and said anvil means so as to vary the beating frequency of the hammer.

2,859,734

HYDRAULIC AIRCRAFT-CONTROL ACTUATOR

Arthur Ernest Henry Elmer, Frank Pawling, and George Orloff, Gloucester, England, assignors to British Messier Limited, Gloucester, England, a British company

Application October 3, 1955, Serial No. 536,220
Claims priority, application Great Britain October 7, 1954
8 Claims. (Cl. 121—40)



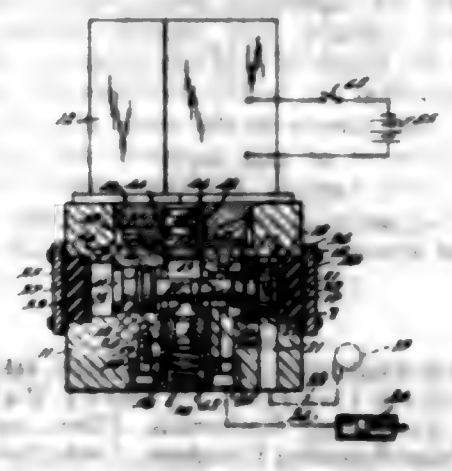
1. An actuator powered by a fluid-pressure-operated jack, wherein there is provided in association with the jack a rotary member, a mechanical transmission between the jack and said rotary member for converting relative reciprocating movement of the jack ram and cylinder into rotary movement of said rotary member, braking means for said rotary member to render the jack irreversible under the conditions of a predetermined maximum reversing load thereon with minimum working fluid pressure in the pressure chamber of the jack opposing said load, a braking control cylinder with a fluid-pressure-actuated brake-operating piston working therein, a servo jack-control valve arranged to admit fluid pressure for off-loading the braking means to a supply line leading to the brake-control cylinder at the same time as it admits fluid pressure to the jack cylinder, a fluid exhaust line from the brake-control cylinder, and a brake-control valve in said exhaust line responsive to variations in fluid pressure in the jack cylinder so as to shut off said exhaust line progressively as the jack cylinder-pressure builds up.

2,859,735

SHIFTABLE MECHANISM WITH MOMENTARILY ACTUATED CONTROL

Domenic A. Di Tirro, Royal Oak, and Raymond D. Ei, Berkley, Mich., assignors to Ross Operating Valve Company, Detroit, Mich., a corporation of Michigan

Application March 18, 1955, Serial No. 495,228
15 Claims. (Cl. 121—46.5)



7. In a device of the class described, a housing, a spool slidable in said housing between two positions, means at the opposite ends of said housing for limiting the movement of said spool, said last-mentioned means comprising bodies of shock absorbing material, a pair of pistons formed at opposite ends of said spool, one of said pistons being of smaller diameter than the other,

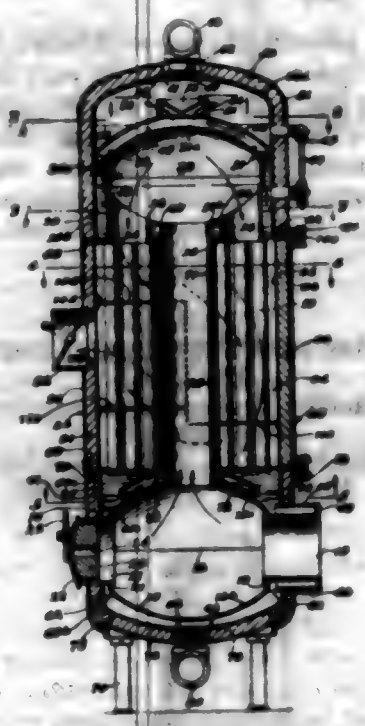
and to bias the outside superheater tube leg portions into

first plurality but toward the cylinder head, a substan-

material and closely adjacent thereto and with said bank having an inwardly directed recess formed therein adapt-

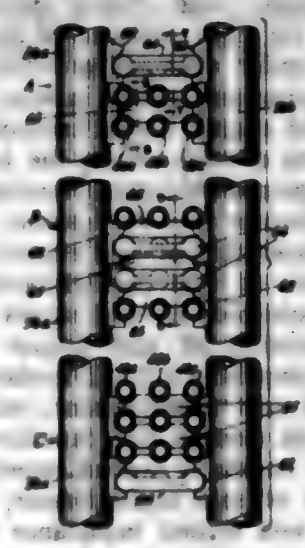
a chamber in said housing in which said one piston is slidably disposed, means for connecting said chamber to a source of compressible fluid pressure, a second chamber in said housing in which said other piston is slidably disposed, a third chamber in said housing between said first two chambers, an exhaust port in said housing between said third chamber and said second chamber, a pair of valves carried by said spool, one of said valves being disposed between said first and third chambers, the other valve being disposed between said third chamber and said exhaust port, shifting of said spool toward said first chamber causing said first valve to close and said second valve to open, shifting of said spool toward said second chamber causing said first valve to open and said second valve to close, a conduit in said housing between said third chamber and said second chamber, a pilot valve in said conduit, a detent for locking said spool in either of its positions, means for simultaneously moving said pilot valve to its closed position and said detent to its retracted position, and means for simultaneously returning said pilot valve to its open position and said detent to its locking position.

2,859,736
BOILER
Charles Anastase Bolton, Buffalo, N. Y.
Application June 1, 1954, Serial No. 433,539
5 Claims. (Cl. 122—118)



1. A boiler, comprising a shell providing a combination chamber having an inlet, a shell providing a flue gas return chamber and arranged directly above said combustion chamber, a relatively long, generally vertical flue gas tube connecting said shells and providing communication between said chambers to conduct the products of combustion from said combustion chamber to said flue gas return chamber, a shell forming a water chamber surrounding said combustion chamber shell, the upper wall of said combustion chamber shell forming a lower horizontal tube sheet, a shell forming a steam chamber substantially completely surrounding said flue gas return shell, the lower wall of said steam chamber shell forming an upper horizontal tube sheet arranged immediately below said flue gas return shell, a water tube surrounding said flue gas tube and connecting said tube sheets and providing communication between said water chamber and steam chamber, a vertical tubular wall extending between the peripheral portions of said tube sheets and enclosing the space therebetween, a plurality of relatively short vertical downtake flues each connected at its upper end to the lower wall of said flue gas return chamber shell and at its lower end to said upper tube sheet to be immersed in the fluid in said steam chamber and providing communication between said flue gas return chamber and the space between said tube sheets and thereby discharge the products of combustion from said flue gas return chamber directly downwardly through said downtake flues into said space between said tube sheets, a multiplicity of vertical water tubes arranged in spaced relation to one another in said space between said tube sheets and each connected at its opposite ends to the said tube sheets to provide communication between said water chamber and steam chamber, an outlet flue extending horizontally through said vertical tubular wall to exhaust the products of combustion from said space between said tube sheets, and a horizontal baffle arranged in said space between said tube sheets and interposed between said outlet flue and said downtake flue, said water tubes extending through apertures in said baffle with certain of said apertures being oversized to permit the passage of said products of combustion therethrough and in intimate contact with the corresponding water tubes.

2,859,737
TUBE SUPPORTING PROVISIONS FOR A VAPOR GENERATING UNIT
John J. Banker, Cranford, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application August 14, 1953, Serial No. 374,301
10 Claims. (Cl. 122—510)



1. A vapor generating and superheating unit comprising walls defining a setting, an upper horizontally extending liquid and vapor drum, a lower horizontally extending liquid drum, a bank of vapor generating tubes connecting said drums, one or more rows of vapor generating screen tubes having their ends connected to said drums and spaced laterally from said tube bank to form a superheater cavity therebetween, a plurality of laterally spaced vertically extending headers at one end of said unit externally of said walls, access means in said walls permitting access to said cavity, a vertical bank of nested looped vapor superheater tubes horizontally arranged in said cavity, said superheater tubes having their opposite ends connected to said headers, a plurality of superheater support tubes arranged in pairs on opposite sides of corresponding superheater tube leg portions, a plurality of brackets attached to the inner side of each pair of said support tubes, said brackets having recessed edge portions arranged to receive said superheater tube leg portions, a support casting shaped to fit into said recessed edge portions of brackets on adjacent pairs of said support tubes, and a bridge casting shaped to fit into corresponding brackets on said support tubes above said support casting

operatively connected to said butterfly-valve for moving shorter from the topmost to the lowermost baffle and

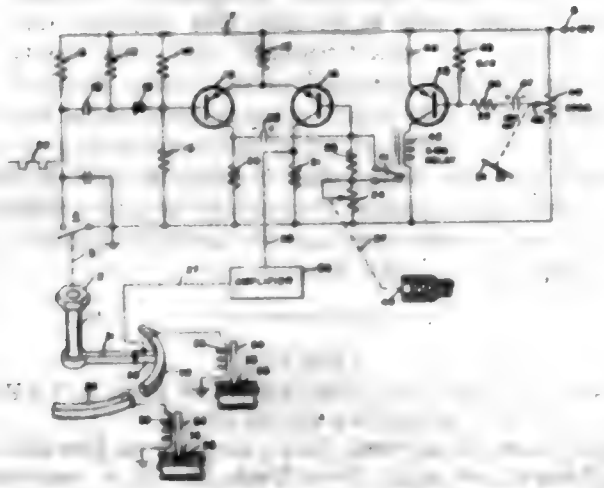
and to bias the outside superheater tube leg portions into said bracket recessed edge portions for support therefrom, and having curved cavities arranged to receive intermediate tube leg portions.

2,859,738

ACCELERATION RESPONSIVE SWITCHING CIRCUIT

Robert Ricardo Campbell, Baltimore, Md., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware

Application September 28, 1956, Serial No. 612,858
5 Claims. (Cl. 123—32)



5. In a system for injecting measured amounts of fuel into the cylinders of an internal combustion engine having an air throttle, said system including a solenoid operated valve for each cylinder of said engine, means applying fuel under constant pressure to said valves, and means opening said valves in synchronism with the operation of said engine; means controlling the duration of the open time of said valves, the last named means comprising: a monostable multivibrator, means triggering said multivibrator into its unstable state in synchronism with the operation of said engine, means applying the output pulses of said multivibrator sequentially to the respective solenoids of said valves and means controlling the duration of said output pulses, the last named means comprising a first impedance element in an input circuit of said multivibrator, means varying the impedance of said element as a function of the manifold vacuum of said engine, a second impedance element in an input circuit of said multivibrator, means normally short-circuiting said second impedance element, the last named means comprising a switch, a relay coil positioned to open said switch when activated, an amplifier circuit having input and output circuits, means connecting said relay coil in said output circuit of said amplifier, an energy storage element in said input circuit of said amplifier, means applying energy to said storage means, operating means for the air throttle of said engine and means varying the operation of said energy applying means in accordance with the movement of said air throttle operating means.

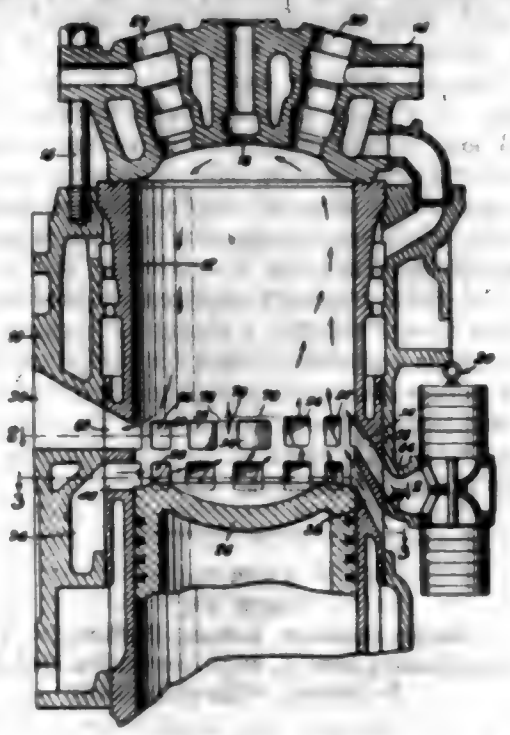
2,859,739

TWO-CYCLE SCAVENGING SYSTEM

Kurt Froehlich, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

Application July 25, 1956, Serial No. 600,094
10 Claims. (Cl. 123—65)

1. In a two-stroke cycle internal combustion engine, a cylinder and cylinder head, a piston in the cylinder, a plurality of annularly arranged scavenging inlet air ports in the cylinder, a second plurality of annularly arranged ports in the cylinder in a plane adjacent the first plurality but toward the cylinder head, a substantial number of the ports in a group on one side of the cylinder in the second plurality being exhaust ports with the remainder on the other side of the cylinder being scavenging inlet air ports, the scavenging inlet air ports in the first and second plurality and the exhaust ports



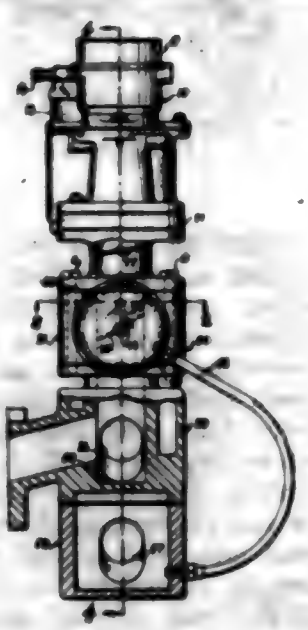
in the second plurality being so directed relative to the axis of the cylinder and relative to each other such that the scavenging air will ascend on the other side of the cylinder axis adjacent the scavenging inlet air ports in the second plurality and will descend on the said one side of the cylinder adjacent the exhaust ports in the second plurality to exit through such exhaust ports.

2,859,740

GOVERNOR FOR INTERNAL COMBUSTION ENGINES

Elmore L. Sandlin, Beulaville, and Maurice M. Smith, Wilmington, N. C.

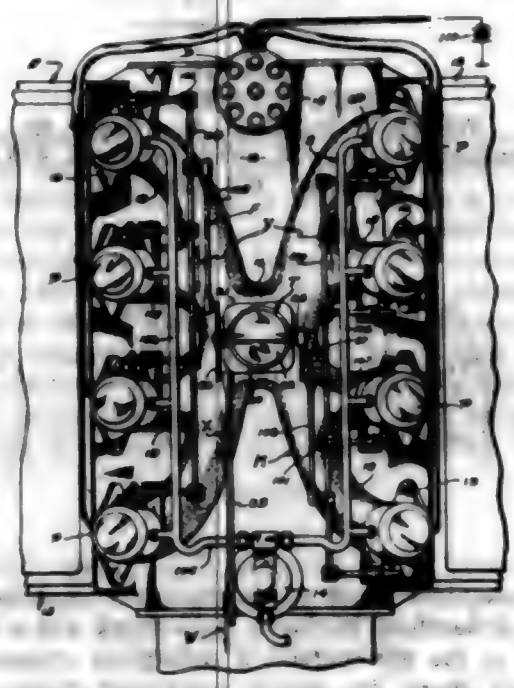
Application March 20, 1956, Serial No. 572,664
16 Claims. (Cl. 123—108)



1. An improved governor for an internal combustion engine having a carburetor, an intake manifold and exhaust manifold; said improved governor being positioned between the carburetor and the intake manifold and comprising a body having a passageway communicating with the carburetor and the intake manifold, a butterfly-valve positioned in said passageway, a heat responsive spring

operatively connected to said butterfly-valve for moving the same to open and closed position, means for conveying heat from the exhaust manifold to the area surrounding said spring, and adjustment means for controlling the retracted and expanded positions of said spring whereby the closed and opened positions of said butterfly-valve may be adjustably predetermined.

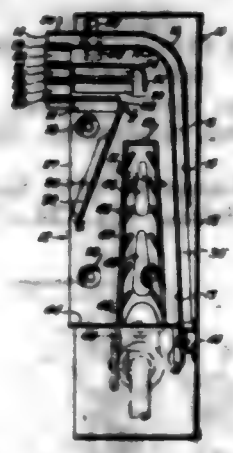
2,859,741
FUEL INJECTING APPARATUS
Edward R. Glenn, Pasadena, Calif.
Application September 20, 1956, Serial No. 611,866
6 Claims. (Cl. 123—119)



1. A fuel injecting apparatus for a gasoline operated internal combustion engine having a cylinder, an intake port for the cylinder and an inlet valve related to the port including, an air inlet manifold related to the cylinder and communicating with the port, a throttle valve related to and controlling the flow of air into the manifold, a fuel injector unit related to the manifold and including, an electrically operated pump means, metering valve means, and a nozzle extending into the manifold and communicating with the inlet port for the cylinder, fuel supply means delivering gasoline to the unit, electric distributing means timed with the engine and adapted to actuate the pump means of the unit each time the inlet valve for the cylinder is opened, and manually operable actuating means extending between the throttle valve and the metering valve means and controlling the volume and ratio of gasoline and air entering the engine.

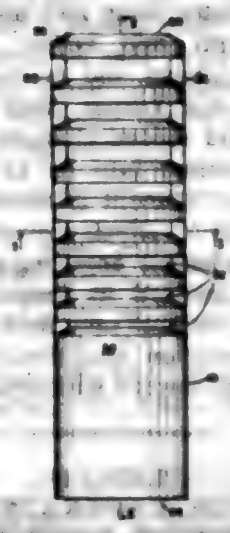
2,859,742
BAFFLE SYSTEM IN SPACE OR WALL HEATER
Charles L. Rohl, Dallas, Tex.
Application May 28, 1956, Serial No. 587,788
3 Claims. (Cl. 126—97)

1. In a space heater, the combination of a shell, a floating casing in the shell comprising inner and outer parallel side plates spaced upwardly from the bottom of the shell and connected in spaced relation to each other, inner and outer parallel rear walls connected to the inner and outer side plates, respectively, in spaced relation to each other, the rear walls being inclined upwardly and forwardly from their lower ends and being curved intermediate their ends to form forwardly extending horizontal portions terminating at the front of the shell and defining a first horizontal flue, a plurality of horizontally extending baffles connected at their ends to the inner side plates in spaced relation to each other and defining horizontal flues below the first flue, the baffles being progressively shorter from the topmost to the lowermost baffle and each having one edge aligned with the forward edges of the first flue, horizontal confronting flanges formed on the lower ends of the inner side plates, a radiant supported on the flanges, an upwardly and rearwardly inclined baffle secured at its ends to the inner side plates



and extending therebetween in front of the radiant, the upper end of the inclined baffle being spaced below the inner end of the lowest of the horizontal baffles to define an opening through which primary air is induced by and into a hot air stream rising from the radiant for release through the horizontal flues.

2,859,743
VERTICAL INCINERATOR GRATE
Clarke H. Brooks, Seattle, Wash.
Application September 21, 1954, Serial No. 457,362
2 Claims. (Cl. 126—163)



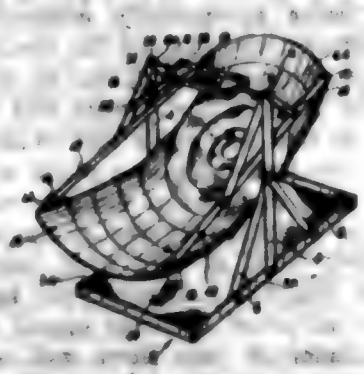
1. A vertical grate for incinerators, comprising: a hollow cast iron body molded as one piece, the front wall of said body being substantially hemi-cylindrical and merging into substantially parallel flat vertical side walls, the body having an open bottom and an open back and the edges of the body at the bottom and back lying in planes normal to said side walls and to each other, the body having a top wall lying in a plane normal to said side walls, the inner surfaces of the side walls flaring to the back edges to facilitate removal of the mold, approximately the lower third of said front wall being solid and of uniform thickness and said body having a series of at least six superposed openings spaced apart up and down the remainder of said front wall, said openings being unobstructed and being horizontally elongated to extend substantially from one side wall to the other side wall, said openings being vertically broader and of increasing effective area from bottom to top of the series, the portions of the front wall separating the openings being in the form of integral webs inwardly extending beyond the interior surface of the lower one-third of

the front wall forming flanges instanding into said hollow body, the inner margins of said flanges forming coaxial rearwardly open recesses having substantially semi-circular contours, the recesses decreasing in horizontal area from bottom to top of the series of recesses.

2,859,744
DOUBLE DOOR CONSTRUCTION AND LATCH MECHANISM
Richard M. Hadley, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Application February 18, 1955, Serial No. 489,039
6 Claims. (Cl. 126—197)

5. In a double door construction for a cabinet comprising an inner door and an outer door both for closing and opening in said cabinet, said doors being hinged to said cabinet adjacent the lower side of said opening and said outer door being biased toward closed position, an improved latch means for connecting said inner door alternatively to said outer door and to said cabinet; a keeper mounted on the inner door, a first element mounted on the outer door and movable into and out of engagement with said keeper, a second element mounted on said cabinet and movable into and out of engagement with said keeper, said first element being engageable with said second element to effect movement of said second element into its keeper releasing position when said first element is moved to its keeper engaging position and to effect movement of said second element toward its keeper engaging position as said first element is moved toward its keeper releasing position and spring means urging said first element toward its keeper engaging position and thereby adapted to urge said second element toward its keeper releasing position.

2,859,745
SOLAR ENERGY OPERATED HEATERS
Luis von Brudersdorff, Buenos Aires, Argentina
Application May 4, 1954, Serial No. 427,579
3 Claims. (Cl. 126—270)

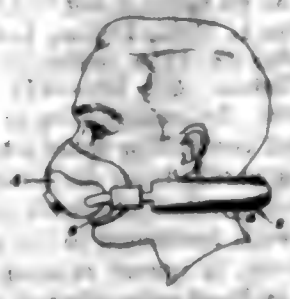


1. In a device for cooking food with solar energy comprising a sun ray reflector having a paraboloidal reflecting surface comprising a plurality of concentric radially plane annular sections, the inner and outer peripheries of said sections being located in the intersections of a paraboloidal body of revolution with concentric cylinders, the common axis of which is the axis of said paraboloidal body, said paraboloidal reflecting surface having a focal area positioned outside of the trough defined by said paraboloidal reflecting surface, a pair of opposed uprights, support means pivotally suspended from said uprights, said support means supporting said reflector for pivotal movement about an axis passing through the focal area to change the angular position of the axis of the paraboloidal body circumscribing said reflecting surface toward the sun, said support means including two triangular supports, one triangular support being suspended at its apex from each upright, means for adjusting said reflector in any of said angular positions, and means for supporting the object to be heated in the focal area.

2,859,746
SHOULDER BRACE
William V. Roberson, East Alton, Ill.
Application March 28, 1956, Serial No. 574,413
6 Claims. (Cl. 128—87)

1. A shoulder brace of the character described, comprising, a stabilizer having a rigid shank and a cushioning pad at the top thereof, a slide-guide adapted to receive said shank for sliding movement therein, means for attaching said guide to the wearer's body in a fixed position below the shoulder to permit close engagement of said pad with the wearer's armpit, the shank being freely longitudinally adjustable in said guide at all times to enable normal free movement of the shoulder, and means for securing said pad to the shoulder under which said guide is positioned to maintain said pad in such engagement with the armpit during all movements of said shoulder.

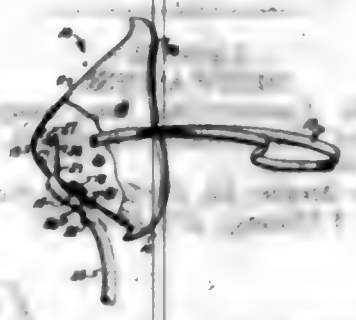
2,859,747
DUST RESPIRATOR
Gerhard K. E. H. Stampe, Lubeck, Germany, assignor to Firma Dragerwerk, Heinr. & Bernh. Drager, Lubeck, Germany
Application February 8, 1954, Serial No. 408,937
Claims priority, application Germany February 9, 1953
11 Claims. (Cl. 128—146)



1. In a dust respirator composed of a face mask and a dust filter unit connected to said mask, said unit having a shape adapted to fit around the neck of a wearer of the respirator, said unit comprising an inner tubular fine dust filter communicating with said mask and spaced from and enclosed within an outer coarse dust filter directly exposed to the atmosphere.

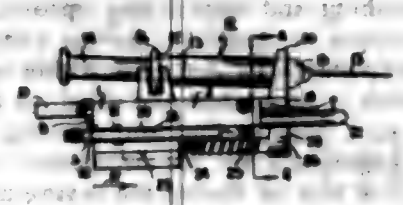
said fingers forming a passageway for guiding a plunger within the hollow portion of said back, the majority of

2,859,748
BREATHING MASK
Charles H. Hudson, Los Angeles, Calif.
Application July 30, 1956, Serial No. 600,997
6 Claims. (Cl. 128—146)



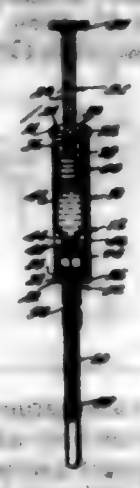
1. A breathing mask, including in combination a self-supporting shell provided with suitable means for exhalation therefrom and with a first opening; a disc supported on the outside of said shell, said disc having a second opening spaced away from said first opening; and a flexible tube having an outside diameter greater than the diameter of said openings but compressible enough to be passed through them, said tube being held therein against movement due to the pinching against its wall, said tube terminating inside said shell with the end cut at an angle to channel gas toward said shell.

2,859,749
HYPODERMIC SYRINGE INJECTOR
Jalmer F. Johnson, Winnipeg, Manitoba, Canada
Application November 7, 1955, Serial No. 545,479
1 Claim. (Cl. 128—218)



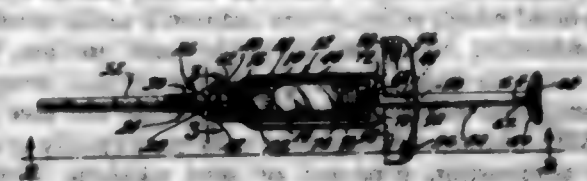
In a device for injecting the needle of a hypodermic syringe into the skin, in which said syringe comprises a barrel, a surrounding flange on said barrel, a plunger reciprocal in said barrel, and an hypodermic needle mounted upon the lower end of said barrel; said device including a body portion, means extending from one end of said body portion adapted to register against the skin of the user, thereby maintaining said body portion in a predetermined spaced relationship therefrom, a syringe carrier reciprocal within said body portion, said body portion including a pair of spaced and parallel guideways, said syringe carrier adapted to move lengthwise in said guideways, means adapted to move said carrier along said body portion, said last-mentioned means including a spring-carrying rod extending rearwardly from front end of said base and spaced below same, a coil spring surrounding said rod and re-acting between said front end and said body portion adapted to normally urge said carrier forwardly with relation to said body portion, trigger means to set and release said carrier, said syringe carrier including a base and means on said base adapted to detachably retain said syringe barrel, said last-mentioned means comprising a pair of legs extending upwardly from said body portion adapted to embrace said syringe barrel, recesses formed in said legs adapted to receive said surrounding flange, and a ring bearing also extending upwardly from said body portion adapted to surround said syringe barrel.

2,859,750
HYPODERMIC SYRINGE
John H. Stroop, New York, N. Y., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
Application February 10, 1956, Serial No. 564,677
2 Claims. (Cl. 128—218)



1. A hypodermic syringe body for operatively receiving a disposable cartridge and needle assembly comprising a trough-shaped receptacle, the wall at one end of said receptacle including a passageway for the needle portion of said assembly, the wall at the other end of said receptacle including a passageway for a plunger rod, said receptacle having a length sufficient to accommodate said cartridge portion of said assembly, finger grips integrally cast with said trough-shaped receptacle, said passageways being disposed in the walls at both ends of said trough-shaped receptacle, said passageways being sufficiently large to interchangeably permit passage therethrough of said needle end of said assembly and said plunger rod, and said passageways being sufficiently large and the thickness of said walls being sufficiently small to cooperatively permit rotation of said cartridge into said receptacle when said needle portion is inserted through one of said passageways.

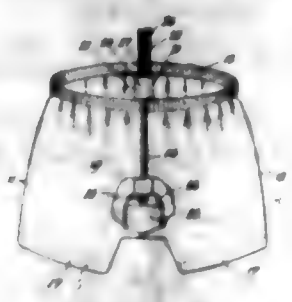
2,859,751
HYPODERMIC SYRINGE
John H. Stroop, New York, N. Y., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
Application February 10, 1956, Serial No. 564,746
2 Claims. (Cl. 128—218)



1. A hypodermic syringe body for operatively receiving a disposable cartridge and needle assembly joined by a needle hub, said body comprising a sheet of malleable material, said sheet being formed to provide a shallow trough-shaped central portion for receiving the cartridge portion of said assembly, one end of said body including curved fingers, each of said fingers being formed in a portion of a circular arc included within a plane disposed perpendicular to the length of said body, said fingers terminating a distance from each other to provide a space between their ends which permits insertion of the needle portion of said assembly through said fingers at an angle allowing the cartridge portion of the assembly to clear the rear of the body and to be pivoted into its operative position within the trough-shaped portion of said body, said fingers being long enough and their ends sufficiently close to each other to anchor said cartridge within said body, and the end of said body remote from

said fingers forming a passageway for guiding a plunger rod and extending to form finger grips for said syringe body.

2,859,752
NAPKIN POSITIONING UNDERGARMENT
Frida Haber, Brooklyn, N. Y.
Application January 27, 1956, Serial No. 561,776
5 Claims. (Cl. 128—288)

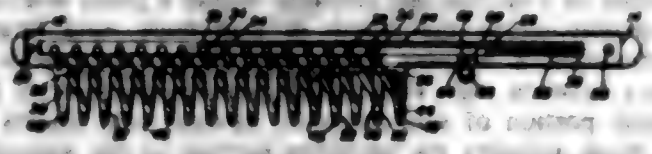


1. In a panty type undergarment having leg sections and a crotch section, joined by seams, and a waist band; a catamenial napkin support and positioning arrangement comprising, in combination, a panel of moisture resistant material substantially overlying the crotch section and secured thereto; securing means on said panel for interchangeable securing catamenial napkins in operative position thereon; and napkin adjusting means comprising an elongated elastic tape secured at one end at the back center of the waist band, extending centrally of the garment between said panel and said crotch section, and adjustably cooperable with fastening means at the front center of the waist band; said tape extending through an elongated pocket formed by a strip of material extending centrally of said garment between said panel and said crotch section, from the back center to the front center of the fixed band and secured to said garment along each side and at its back end.

2,859,753
CIGARETTE WRAPPER MATERIAL AND METHOD FOR PRODUCING SAME
Reuben Hitchcock, Jr., Willoughby, and Samuel Z. Cardon and Earl T. Alverd, Euclid, Ohio, assignors, by mesne assignments, to Rand Development Corporation, Cleveland, Ohio, a corporation of Ohio
No Drawing. Application March 23, 1954
Serial No. 573,337
13 Claims. (Cl. 131—15)

1. A cigarette wrapper material having added thereto a compound which releases free ammonia under smoldering combustion conditions in an amount not less than about 1.2% to about 2.1% by weight of said wrapper, said compound being effective to eliminate not less than about 85% of the 3,4 benzpyrene content normally present in the combustion products of said cigarette wrapper material before addition of said compound.

2,859,754
HAIR COMB WITH MECHANICAL FINGERS
William H. Futterer, Key West, Fla.
Application July 11, 1957, Serial No. 671,294
4 Claims. (Cl. 132—148)



1. For use by barbers, hair dressers, and individuals; a hair comb comprising a body having an elongated back provided with laterally directed longitudinally spaced combing teeth, said body having a sectional hollow back, a spring-returned push-pull rod member reciprocable within the hollow portion of said back, the majority of said teeth being slotted lengthwise and each slotted tooth having the additional function of a sheath, a finger sheathed and pivotally mounted in each tooth, and means operatively connecting the upper ends of said fingers to said rod member for operation in conjunction with said rod member.

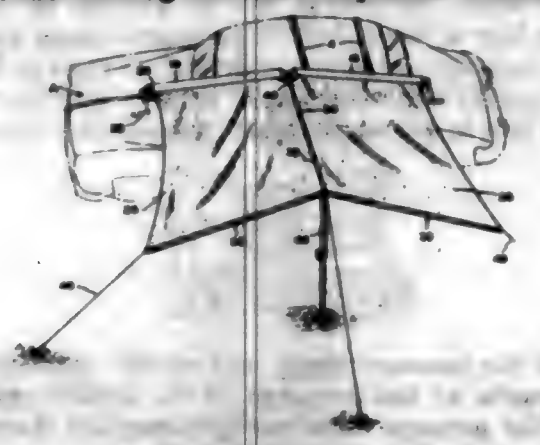
2,859,755
DISHWASHER
Louis L. Burks, Connersville, Ind., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application October 22, 1954, Serial No. 463,845
3 Claims. (Cl. 134—99)

1. A dishwashing and dish drying apparatus comprising, in combination, a closed vat having uninsulated side walls, dish-receiving racks disposed within said vat for supporting dishes to be washed and dried, an access opening for said vat, a door sealing said opening, fluid circulating means within said vat for circulating water during the washing cycle and air during the drying cycle, a heating element disposed within said vat for heating water and air during the time when each such fluid is circulated, a drain at the bottom of the vat for draining water from said vat, and means for sealing said vat during the drying cycle whereby the same air circulated by said fluid circulating means is recirculated to pick up moisture from the wet dishes and condense the same on the relatively cooler interior uninsulated walls of the vat and the condensed moisture drains by gravity into said drain opening.

2,859,756
TENT SHELTER
Hix W. Baran, Dallas, Tex.
Application September 14, 1956, Serial No. 610,019
2 Claims. (Cl. 135—5)

1. In a shelter construction the combination comprising a base, a first mounting means detachably secured to a selected part of the base, a first and a second housing, both carried by said first mounting means when in a stored assembly, each said housing having a lengthwise slot and including a core journaled therein, means for rotating said core, a roll of fabric sheet on each of the cores and fastened thereto at the inner end of each sheet, each said sheet protruding through its respective said slot at its outer end, a longitudinal handle bar for each sheet, said bar having a length greater than the length of its respective said slot and attached to the outer end of its respective sheet, the first and the second housings being pivoted together at one of their ends to permit their

assembly in parallel for storage, means to release the second housing from its assembly in parallel to allow for swinging said second housing into a common axis with the first housing and into an operable assembly with



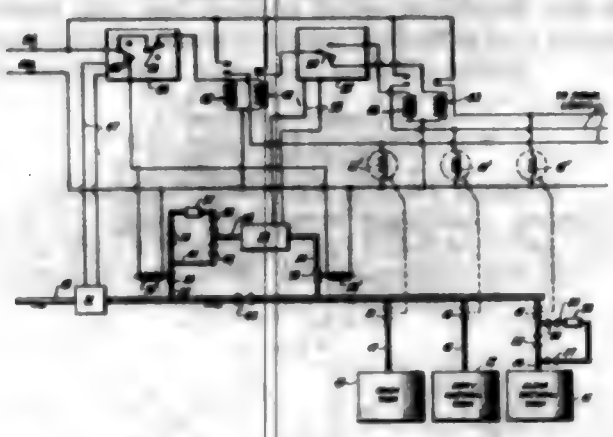
the slots in the housings aligned facing in the same direction, a second mounting means detachably secured to a selected part of the base for the support of said second housing in an operable position.

2,859,757

PIPELINE MONITORING AND CONTROL

James R. Parsons, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 14, 1953, Serial No. 398,021
12 Claims. (Cl. 137—2)



12. In a method of pipeline monitoring and control wherein petroleum liquids of different composition are passed to preselected storage chambers, the improvement which comprises flowing a petroleum liquid into a first storage chamber; measuring the dielectric properties of said flowing liquid; detecting any change in the color of said flowing liquid; diverting the flow of said liquid from said first storage chamber to a second storage chamber in accordance with a predetermined color change; and diverting the flow of said liquid from said second storage chamber to a third storage chamber when said dielectric properties measurement reaches a predetermined value.

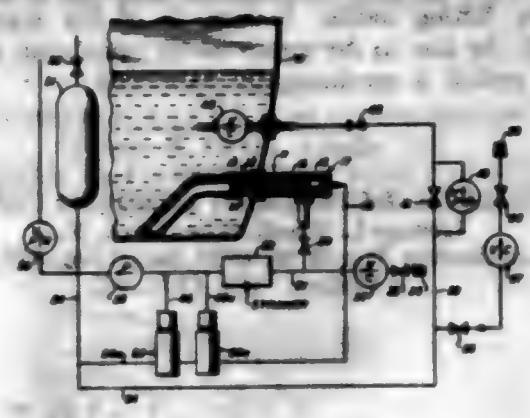
2,859,758

FUSIBLE VALVE IN LIQUEFIED GAS SYSTEM

Peter C. Jura, Berkeley, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware

Application September 10, 1952, Serial No. 308,885
10 Claims. (Cl. 137—73)

4. In a system for dispensing liquefied petroleum gas, in combination, a storage vessel for liquefied petroleum gas, a fluid pressure operated motor valve communicating with said vessel and a discharge line, said valve being normally closed and being moved to open position by fluid pressure applied to the valve motor, a pump, a line connecting the intake of said pump to said discharge line, a dispensing conduit attached to the pump outlet, a line connecting said dispensing conduit with the valve motor, and a fusible valve connecting said line with the intake of said pump, said fusible valve opening responsive to an excessive temperature to reduce the pressure applied



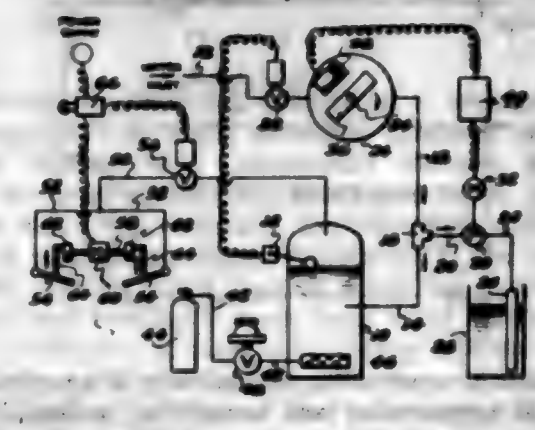
to said motor and thereby cause said motor valve to close.

2,859,759

FLOW PROPORTIONING AND CONTROL SYSTEM

Paul D. Harwitz, Havertown, Pa.

Application October 13, 1955, Serial No. 540,263
3 Claims. (Cl. 137—83)

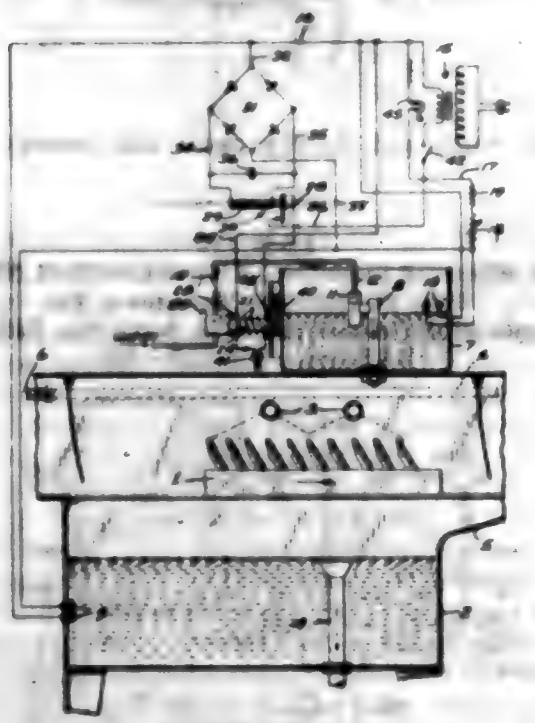


1. A fluid flow proportioning system including a fluid line provided with an on-off valve, switch means for periodically opening and closing said valve, a metering device operatively connected within said line and having a rotating member constructed and arranged to turn responsive to the volume of flow of fluid through said line, a second fluid line leading to the first line and connected therewith at a point beyond the metering device, a pump operatively connected within the second line and constructed and arranged to force fluid therethrough, an electric driving motor operatively connected to said pump, a normally open switch operatively connected to said pump motor, said switch being constructed and arranged to be periodically mechanically closed by the rotating member whereby the motor and pump run intermittently, and electrical control means operatively connected between the switch and the pump motor to insure predetermined running time for said motor and pump regardless of premature or delayed opening of said switch, said electrical control means including a timer having an electric timing motor which is spring-loaded so as mechanically to recycle when deenergized, said timer also having a normally open switch mechanically connected to the timing motor so as to be closed at the end of the preset timing cycle, said electrical control means also including a normally open relay and a second relay having a double throw switch adapted to be moved from a normally closed contact position to another closed contact position when said second relay is energized; closing of the pump motor switch serving to start the timing motor and also locking in the first relay through the normally closed contacts of the second relay, locking in of the first relay closing a circuit to the timing motor which is independent of the pump motor switch, closing of the timer switch at the end of the timing cycle operating to lock in the second relay so as to shift the switch of said second relay to its other

jacent to one side of said diaphragm, a second chamber in its under side; a valve normally held closed against

closed contact position, thereby causing the first relay to drop out so as to de-energize both the pump motor and the timing motor, locking in of the second relay keeping the line to the pump motor open until the pump motor switch is mechanically re-opened.

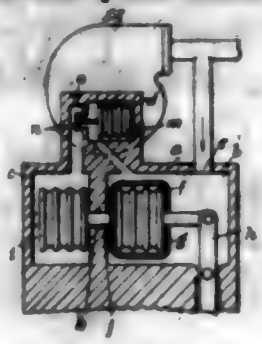
2,859,760
AUTOMATIC DETERGENT FEEDING CONTROL
George L. Borrill, Glen Rock, N. J.
Application March 30, 1955, Serial No. 497,897
8 Claims. (Cl. 137—93)



8. Means for controlling the delivery of a replenishing solution to a processing tank comprising, in combination with a processing tank, a container for replenishing solution, a standpipe in the container discharging into the processing tank and having a lateral orifice, an inlet pipe for the container directed across said lateral orifice adjacent thereto, a central valve for the pipe, a solenoid in control of the valve, an electric supply line, means including a relay winding for connecting the solenoid across the supply line, means including a pair of sensing electrodes in the container disposed above the bottom of said lateral orifice and connected to the supply line in shunt with the relay winding for modifying the voltage delivered from the supply line to the relay winding, and a second set of sensing electrodes disposed in the processing tank and connected to the supply line in shunt with the relay winding.

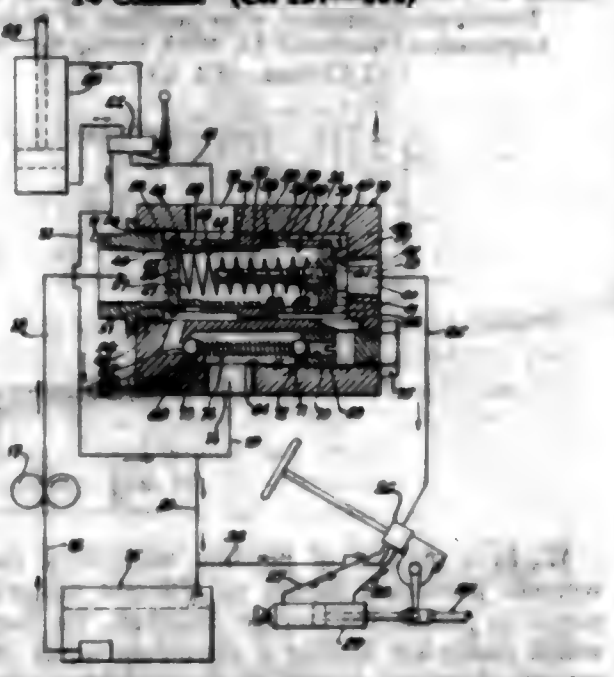
2,859,761
MEANS FOR CONTROLLING THE SUPPLY OF LIQUID FUEL TO ENGINE OR OTHER COMBUSTION CHAMBERS
Charles Herbert Bottoms, Toronto, Ontario, Canada, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Application April 2, 1956, Serial No. 575,423
Claims priority, application Great Britain July 28, 1953
2 Claims. (Cl. 137—98)

1. Means for controlling the supply of liquid fuel to a jet-propulsion engine, gas turbine, or other apparatus to which air is supplied by a blower, comprising in combination a first chamber provided with an entrance for blower-air, a first bellows-like capsule mounted in the first chamber and adapted to respond to blower-air pressure variations in the upper part only of the pressure range, fuel-flow varying means including a control member operatively connected to the first capsule, a second chamber communicating with the first chamber and provided with a restricted air outlet, means responsive to blower-air pressure for interrupting communication between the first and second chambers when the pressure in the first chamber attains a predetermined value, a second elastic bellows-like capsule mounted in the second chamber and adapted to respond to blower-air pressure variations in the lower



part of the pressure range, and means interconnecting the capsules so that response of the second capsule to blower-air pressure variations is transmitted through the first capsule to the said control member.

2,859,762
FLOW DIVIDER VALVE WITH RELIEF VALVE AND VARIABLE ORIFICE
Oscar H. Bunker, Evanston, Ill., assignor to New Products Corporation, Skokie, Ill., a corporation of Delaware
Application November 23, 1956, Serial No. 634,112
14 Claims. (Cl. 137—101)



1. A flow divider valve comprising a valve body having a recess therein, a first outlet opening from the bottom of the recess, a second outlet opening from the side of the recess, a threaded fitting partially closing the recess, a sleeve and a plug therefor in the recess in end-to-end relation with one another and with the fitting, said fitting having a flange abutting on a transverse wall on the valve body, a slidable valve in the sleeve and in one extreme position abutting on the fitting, said sleeve having an opening establishing communication between the interior of the sleeve and the exterior thereof, and said valve being slidable across said opening from a position blocking said opening to a position uncovering said opening, and deformable means between the sleeve and fitting for holding the sleeve against the plug and the plug against the valve body.

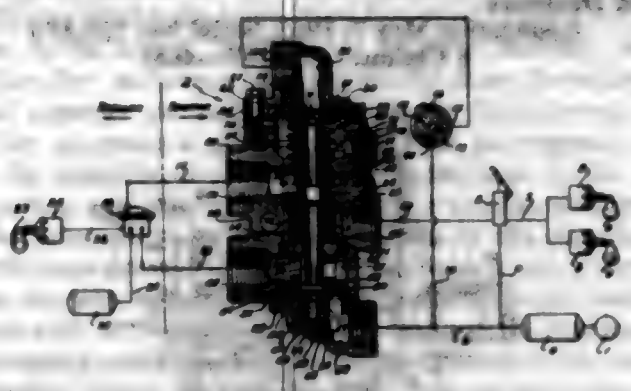
2,859,763
TRACTOR PROTECTOR VALVE
Cyril B. Fiser, St. Johns, Mo., assignor to Wagner Electric Corporation, St. Louis County, Mo., a corporation of Delaware
Application February 20, 1957, Serial No. 645,017
9 Claims. (Cl. 137—102)

1. In a tractor protector valve, the combination of a housing having a diaphragm therein, a first chamber ad-

predetermining the flow rate therethrough, said unit also engagement on said valve seat mounting and subsequent

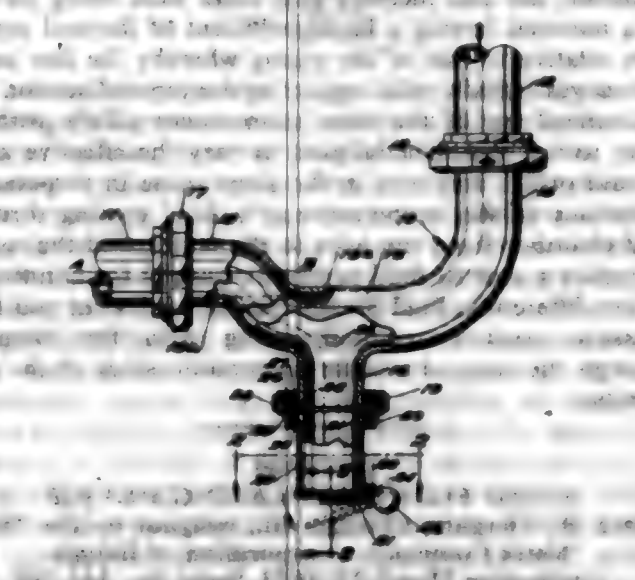
and a fusible valve connecting said line with the intake as to shift the switch of said second relay to its other

jacent to one side of said diaphragm, a second chamber adjacent to the opposite side of said diaphragm, an exhaust valve movable in said second chamber, said exhaust valve being biased into contacting relation with said diaphragm, an opening in said housing in communication with said second chamber, a check valve in said opening adapted to open to atmosphere when the pressure in said second chamber reaches a predetermined value, a third chamber in said housing, the lower portion of said exhaust



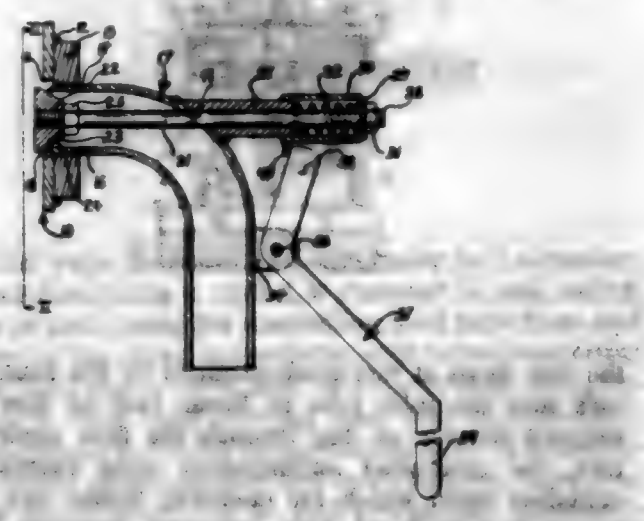
valve being movable in said third chamber, said third chamber having an outlet for receiving an emergency line, another chamber in said housing, an emergency valve movable in said last-mentioned chamber in said housing, said emergency valve being allowed to move upon movement of said diaphragm and said exhaust valve, an inlet in said last mentioned chamber for receiving a tractor emergency line, and resilient means associated with said emergency valve normally urging said valve in a direction toward said exhaust valve and said diaphragm.

2,859,764
NON-CHURNING MILK LINE ELBOW
Donavon E. Golay, Cambridge City, Ind., assignor to Farmer Feeder Company, Inc., Cambridge City, Ind.
Application June 17, 1957, Serial No. 666,390
2 Claims. (Cl. 137—264)



2. The combination with a generally horizontally milk flow line and a vertical flow line, of an elbow interconnecting said two lines at the lower end of the vertical flow line and comprising a generally U-shaped tubular member having one leg extending upwardly into connection with the vertical line, and the other leg turned horizontally into connection with the horizontal milk flow line; said tubular part between said legs extending below said horizontal line wherein the upper side of the tubular part is substantially below the underside of said horizontal line, said horizontal tubular part being substantially filled with milk between said vertical flow line and said horizontal line when said horizontal line may be empty; said tubular part having an opening in its under side; a valve normally held closed against that opening; and said outlet being located off the vertical center of said member toward said other leg.

2,859,765
SAMPLING VALVE FOR SUSPENSIONS
William R. Streed, Attalla, Ala.
Application November 18, 1955, Serial No. 547,692
1 Claim. (Cl. 137—242)



A valve for removing samples of a suspension from a receptacle, a vertically extending L-shaped sample discharge conduit of a substantially uniform outer and inner diameter adapted for attachment at its upper end of the side of a receptacle for selectively allowing the flow of sample suspensions therethrough, the upper end of said conduit being tapered from the outer surface thereof and forming a sharp inner edge on the conduit for a valve seat, a valve plug having tapered side portions for selectively engaging the valve seat in a fluid tight fit with a portion of the valve being disposed in seated position within the conduit and another adjoining portion being disposed outwardly of the conduit and adapted for extending within a receptacle, an actuating rod connected at its inner end to said valve, there being an opening in said conduit through which said rod projects, a bearing sleeve secured to the outer surface of said conduit and surrounding said rod, a spring abutment axially spaced from the bearing sleeve and adjustably connected to said rod adjacent the outer end thereof, a compression spring surrounding said rod between said abutment and the bearing sleeve for urging the rod outwardly and seating the plug on said valve seat, a slidable sleeve like member surrounding the spring and secured at one end to said spring abutment, the other end of said sleeve like member extending around said bearing sleeve and being in sliding contact therewith, an operating handle pivotally connected on said conduit below the actuating rod and operatively connected to said sleeve like member for moving said actuating rod and said spring abutment inwardly against the compression spring and thereby opening the valve and allowing the flow of a sample suspension downwardly through the conduit from a receptacle.

2,859,766
UNIT FOR CHECKING CORROSION, SLIME, AND SCALE IN WATER RE-CIRCULATING INSTALLATIONS
Henry L. Shaddock, Scarsdale, N. Y., assignor to Water Service Laboratories, Inc., a corporation of New York
Application November 23, 1955, Serial No. 548,480
8 Claims. (Cl. 137—268)

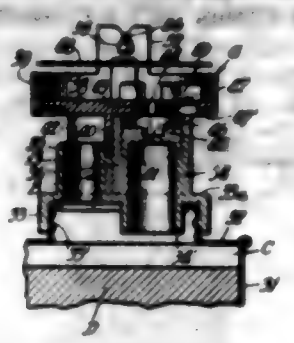
1. For an air conditioning system, a portable chemical feeder unit comprising a rate-of-flow control means including a liquid collecting tray at the upper part of the feeder unit and a flow control aperture therefrom for

locity reaction of fluid flowing through the port and a re-

2,859,770

pressure for interrupting communication between the first housing having a diaphragm therein, a first chamber ad-

predetermining the flow rate therethrough, said unit also including an impingement control and discharge system comprising an inlet tube spaced from and directly below said control aperture and also including an outlet tube, the discharge end of which is below the upper end of the inlet tube, both said inlet and said outlet tube being of bore diameter much larger than that of the flow control aperture, whereby a head of liquid maintained in



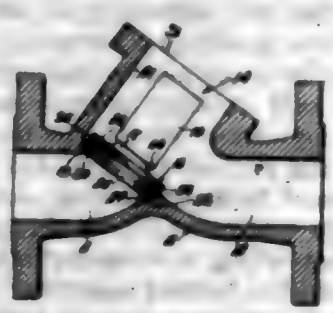
the tray flows at rate predetermined by the control aperture into the inlet tube at linear rate of flow greatly reduced relative to that through the flow control aperture, for controlled impingement upon chemical in a container upon which the chemical feeder unit may be mounted, and liquid with entrained chemical is channelled by the discharge system determined by the inlet and the outlet tube for delivery from the chemical feeder.

2,859,767

VALVE SEAT AND HOUSING

Traugott Tschudi, Flushing, and Alfred F. Knapp, Jackson Heights, N. Y., assignors to Knapp Mills Incorporated, Long Island City, N. Y., a corporation of New York

Application April 13, 1953, Serial No. 348,529
2 Claims. (Cl. 137—315)



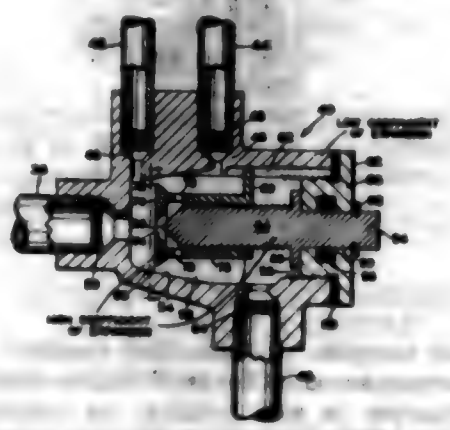
1. A valve housing having a lengthwise elongated valve chamber with an opening at one end and a valve seat insert member seated on a valve seat mounting at the other end and the height of said insert member as compared to the distance of the upper face of said insert member from the opening in said elongated valve chamber being such that unaided insertion of said valve seat insert member to full engagement with said seat mounting is unlikely, and means comprising opposed flat guide ribs mounted within said valve chamber, elongated in the direction of the length of the chamber, and substantially coextensive with said length and terminating short of said valve seat mounting to provide shoulders forming locking surfaces therebeneath, and said valve seat insert member having a height greater than the distance of the top of said guide ribs from said opening in said valve chamber, opposed flat guide surfaces spaced complementarily to said elongated flat guide ribs, said valve seat member having opposed locking surfaces between said flat guide surfaces, said locking surfaces extending outwardly a distance greater than the distance between said flat guide ribs whereby said insert member is adapted to fit in said chamber only with said guide surfaces engaged with said guide ribs for sliding movement into seating engagement on said valve seat mounting and subsequent rotation to position said locking surfaces in locking engagement beneath said shoulders.

2,859,768

VALVE FOR FLUID PUMPING SYSTEM AND REGULATION MEANS THEREFOR

Walter D. Teague, Jr., Alpine, N. J., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware

Application May 7, 1953, Serial No. 353,496
6 Claims. (Cl. 137—468)



5. For use with a differential fluid pressure sensitive device; valve mechanism comprising a casing providing a chamber having an inlet, an outlet and a tapered section between the inlet and outlet, a disc member adjustably mounted in the chamber and disposed normal to the tapered section to define therewith an annular orifice controlling flow between the inlet and outlet, the disc member having a conical axial port also communicating the inlet with the outlet, an elongated valve stem adjustably disposed axially of the chamber with respect to the axial port and having a conical end cooperable with the conical axial port to vary the effective area of the latter, said disc member supported on the valve stem in said chamber, the disc member and valve stem being formed of a material having a high coefficient of thermal expansion relative to that of the casing whereby the disc member moves radially with respect to the tapered section and the conical end of the valve stem moves axially with respect to the conical axial port to vary the effective areas of said orifice and port in the same sense in response to variations in the temperature of a fluid passing through said chamber from the inlet to the outlet, and the casing including a pair of fluid pressure conduits for connection to the differential fluid pressure sensitive device, said fluid pressure conduits communicating with the chamber through the tapered section to opposite sides of the disc member.

2,859,769

FLUID FLOW REGULATING DEVICE

Alfred H. Viergutz, Chicago, Ill., assignor to The W. A. Kates Company, a corporation of Illinois

Application March 25, 1953, Serial No. 344,488
22 Claims. (Cl. 137—504)

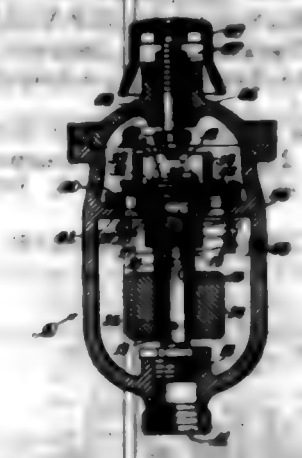
1. A fluid flow regulating device comprising a casing having an inlet and an outlet, means in the casing forming an orifice through which at least a portion of fluid entering the inlet is directed, an impeller mounted in the orifice for movement parallel to the flow therethrough, said impeller partially obstructing the flow through the orifice to create a pressure differential on opposite sides of the impeller, a port between the inlet and the outlet, a valve controlling the port, means connecting the valve to the impeller for movement therewith in one direction in response to increasing pressure differential on opposite sides of the impeller, means biasing the valve in the other direction, said valve having a portion subject to the ve-

2,859,772

the gate of the slide gate valve must have sealing surfaces

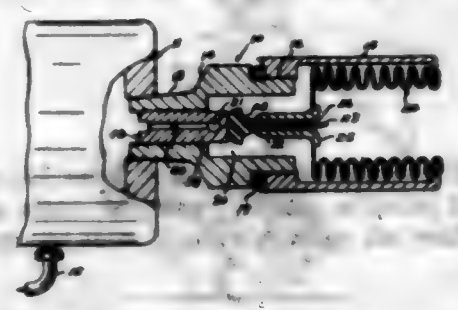
locity reaction of fluid flowing through the port and a reaction equalizing member connected to the valve and positioned to receive a velocity reaction from fluid flowing through the port substantially opposite to the reaction on said portion.

5. A fluid flow regulating device comprising a casing having an inlet, an outlet chamber in the casing having an outlet opening therein, an inlet chamber in the casing, means in the casing forming an orifice interconnecting the chambers, means in the outlet chamber surrounding the orifice to shield the same from the velocity effect of fluid flow in the outlet chamber, an impeller mounted in the orifice for movement parallel to the flow therethrough, said impeller partially obstructing the flow through the orifice to create a pressure differential on opposite sides of the impeller, a port connecting the inlet to the inlet chamber, said inlet chamber having a volume sufficient to cause absorption by the fluid present in the chamber of turbulence present in the incoming fluid, a valve controlling the port and connected to the impeller and movable therewith in a direction closing the port in response to increasing pressure differential on opposite sides of the impeller, means biasing the valve toward open position, said valve having a portion subject to the velocity reaction of fluid flowing through the port and a reaction equalizing member connected to the valve and positioned to receive a velocity reaction from fluid flowing through the port substantially opposite to the reaction on said portion.



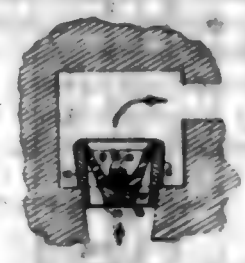
14. A fluid flow regulating device comprising a casing having an inlet, an outlet chamber in the casing having an outlet opening therein, an inlet chamber in the casing, means in the casing forming an orifice interconnecting the chambers, a wall in the outlet chamber surrounding the orifice to shield the same from the velocity effect of fluid flow in the outlet chamber, a tube member in the casing having its interior connected to the inlet and having a first plurality of openings therein, a second plurality of openings in the tube member angularly and longitudinally spaced from the first plurality of openings, a sleeve member slidably surrounding the tube member and having a plurality of ports radially aligned with the first openings, all of said ports opening into the inlet chamber, means preventing relative rotation between said members, a plurality of annular grooves in one of said members inter-connecting said second openings, an impeller secured to the sleeve member and positioned in the orifice, said impeller partially obstructing the orifice to create a pressure differential on opposite sides thereof and being movable parallel to the flow through the orifice in response to increasing pressure differential to slide the sleeve member on the tube member in one direction from a first position wherein the ports are aligned with the first openings in the tube member toward a second position wherein said ports are out of alignment with all of the openings and communication is established between the ports and the second plurality of openings through the annular grooves, and means biasing the sleeve member in the other direction.

2,859,770
LOW PRESSURE RELIEF VALVE
George M. Bulvid, Moorestown, N. J., assignor to the United States of America as represented by the Secretary of the Air Force
Application November 30, 1956, Serial No. 625,571
1 Claim. (Cl. 137—508)



A relief valve assembly unit attachable to a container, said unit comprising a casing, a chamber in said casing, a valve in said casing for controlling fluid flow from said chamber to the outer atmosphere, said valve comprising a valve head and a valve seat, said valve head being secured on a valve head carrying plug, said plug having a passage therein to permit uninterrupted fluid communication between said container and said chamber, a bellows secured at the outer end of said casing, and forming a closing wall for said casing, an elongated valve seat mounted on the interior end of said bellows for supplying communication between said chamber and the outer atmosphere, and movable, responsive to pressure differential between said chamber and the outer atmosphere to open and close said valve, an elongated spear shaped member extending from said valve head for entering said elongated valve seat to center said bellows member and insure proper contact of valve head and valve seat.

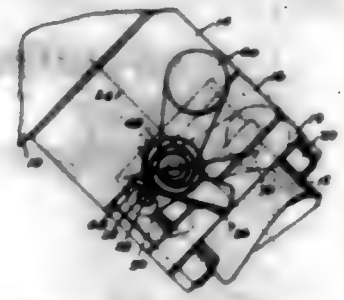
2,859,771
VALVE
Leon Biggs, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application June 28, 1954, Serial No. 439,837
8 Claims. (Cl. 137—512.15)



1. A valve adapted for use in mud pumps and the like comprising a housing having a conically configured interior surface being formed to provide a plurality of spaced apart ports, an internally reinforced deformable cup-shaped sealing member arranged on said interior surface and being provided with a sealing lip surface on its outermost periphery adapted to engage with and disengage from said housing, spaced apart rigid means inset in the outer surface of said sealing member adapted to close said ports and releasable means connecting said sealing member to said housing adapted to maintain said sealing member in said housing, said lip surface being short relative to the remaining portion of said sealing member and flexing to disengage from said housing to permit fluid flow through said housing when fluid pressure is directed toward the exterior of said sealing member and sealingly engaging with said housing to prevent fluid flow through said housing when fluid pressure is directed toward the interior of said sealing member.

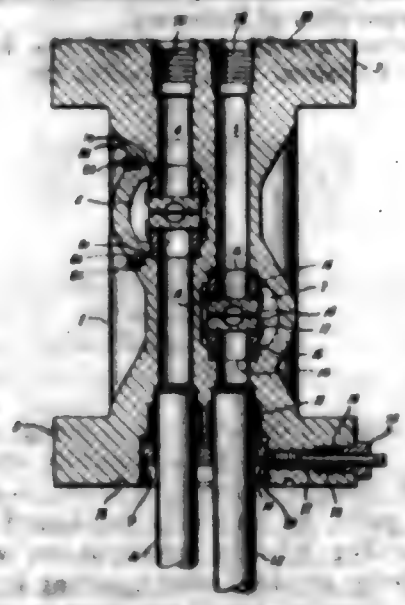
form of a coil of wire having spaced turns and encased in a plane parallel to the first mentioned plane, thereby

2,859,772
HEAT CONTROL VALVE
Erwin A. Weiss, Detroit, Mich., assignor to Studebaker-Packard Corporation, Detroit, Mich., a corporation of Michigan
Application December 7, 1954, Serial No. 473,678
9 Claims. (Cl. 137—527.8)



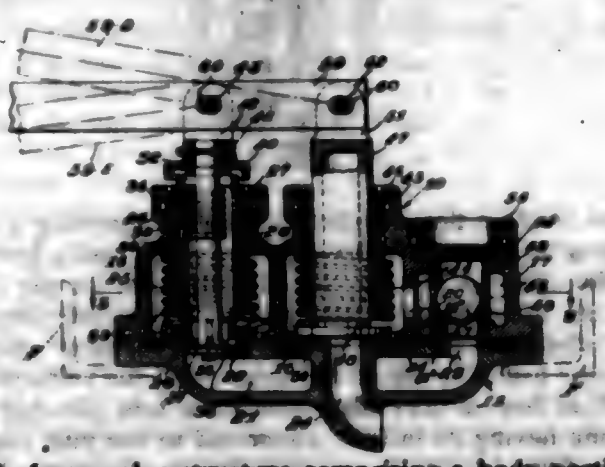
9. In combination, a butterfly valve, a shaft for supporting said valve and oscillatable therewith about the shaft axis and capable of limited movement along said axis, a pivotally moveable inertia weight fastened to said shaft having an arm formed with successive planar portions whose planes are mutually obtuse to one another and independently acute to the shaft axis, a position-limiting flat bumper spring secured to the inertia weight in permanent contact with one of said successive portions at an angle with respect to said axis, and a fixed stop in the path of movement of the bumper spring, said angle being of sufficient size so that said spring is engageable with an edge of said spring during a substantial part of the movement of said weight after said spring contacts said stop to deflect one portion of said spring into intermittent bottoming engagement with the other of said successive portions on the weight arm.

2,859,773
DUAL BORE VALVE
James L. Wallace, Houston, Tex., assignor to George A. Butler, Houston, Tex.
Application September 16, 1955, Serial No. 534,842
4 Claims. (Cl. 137—594)



1. In a dual parallel bore valve for use with a pair of parallel tubings in a well comprising a body having a pair of parallel longitudinally disposed bores of predetermined size the axes of which are required to be spaced apart a predetermined distance, wherein there is a single continuous wall separating the bores in the valve body which wall must be of minimum predetermined thickness to withstand the maximum pressure to which the bores are to be subjected, and wherein there is in each of the bores a slide gate valve having a minimum predetermined width relative the size of the bore because the flow port through the gate of the slide gate valve must be equal in size with the bore which the slide gate valve closes and because the gate of the slide gate valve must have sealing surfaces of minimum predetermined width around the gate flow port and because the slide gate valves each have gate guides at the side of the gate toward the other bore of the pair of bores, such minimum predetermined slide gate valve width being such that when the bore axes are spaced apart by said predetermined distance the two slide gate valves when disposed side-by-side each in one of the bores would be longitudinally superposed and the said single continuous wall between the bores would be reduced in thickness below said minimum predetermined thickness thereof; the improved dual parallel bore valve structure comprising, a valve body, a pair of parallel straight longitudinally disposed bores of predetermined size through said valve body having their axes spaced apart by a predetermined distance relative the sizes of the bores, a single continuous wall of predetermined minimum thickness relative the sizes of the bores separating said bores, and a slide gate valve of the type described in each bore; said gate valves being spaced longitudinally of one another in said bores; and each said slide gate valve in one of the bores having parts thereof adjacent the opposite bore disposed to partially surround the single continuous wall and the opposite bore whereby the thickness of the single continuous wall is not reduced below said minimum predetermined thickness thereof.

2,859,774
RAILWAY CAR DUMP VALVE
Elnar O. Lunde, Wyckoff, N. J., assignor to Magor Car Corporation, New York, N. Y., a corporation of Delaware
Original application February 21, 1949, Serial No. 77,655, now Patent No. 2,647,471, dated August 4, 1953. Divided and this application May 8, 1953, Serial No. 353,833
9 Claims. (Cl. 137—620)

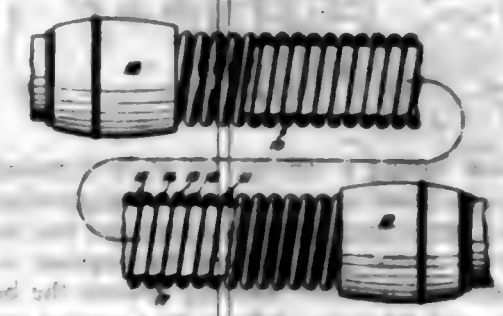


1. A dump valve structure comprising a body portion, an air chamber in said body portion provided with an air inlet, a second air chamber in said body portion provided with an air outlet, a third air chamber in said body portion, a communicating opening between said third air chamber and each of said first and second air chambers, a valve controlling each of said openings, a fourth air chamber in said body portion intermediate said first and second air chambers, an intercommunicating opening between said second and fourth air chambers, an exhaust port communicating with said fourth air chamber, and a valve in said fourth air chamber for controlling said exhaust port.

2,859,775
FLEXIBLE HOSE
Jack E. Duff, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application February 3, 1955, Serial No. 485,674
2 Claims. (Cl. 138—56)

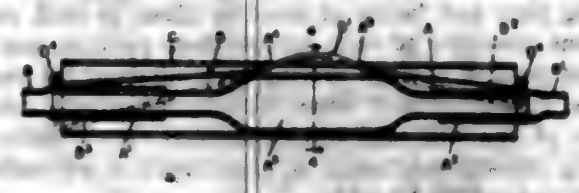
1. A flexible, extensible and contractable hose consisting of a cylindrical coiled reinforcing element in the

form of a coil of wire having spaced turns and encased in a sheath of thermoplastic material; the turns of said coil having freedom of movement relative to said sheath, and a sprayed coating of thermoplastic material bonded to the turns of said coil and forming an impervious wall connecting them and integrally united with the coating over the turns of said coil; said coil being prestressed so that the turns thereof tend to move toward each other when free to do so and being held separated by the impervious wall of thermoplastic material between them; said wall being in the form of an inward-



ly extending spiral corrugation between the turns of said coil and being held in that position by the tendency of the turns of said coil to move toward each other when the hose is in its natural state of repose; said hose being extensible from its natural state of repose by straightening out the material of said wall which forms said corrugation and being contractable from its natural state of repose by bringing the turns of said coil closer together to compress the wall connecting said turns so as to form a deeper inwardly extending spiral corrugation.

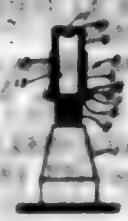
2,859,776
SAFETY GUARD
Ronald J. McKenzie, Detroit, and Charles H. Bruner, East Detroit, Mich.
Application August 6, 1956, Serial No. 602,375
3 Claims. (Cl. 128—63)



1. In apparatus including a hollow member of glass which is subjected to heat treatment, said member having a central portion of larger diameter than the end portions thereof, a protective shield formed of a length of metallic tubing open at both ends and sleeved over said hollow member to completely surround the same and to retain the fragments thereof in case of breakage, and a resilient clamp for retaining said tubing and said hollow member from relative displacement, said clamp being bowed to embrace the central portion of said hollow member and bear upon said end portions.

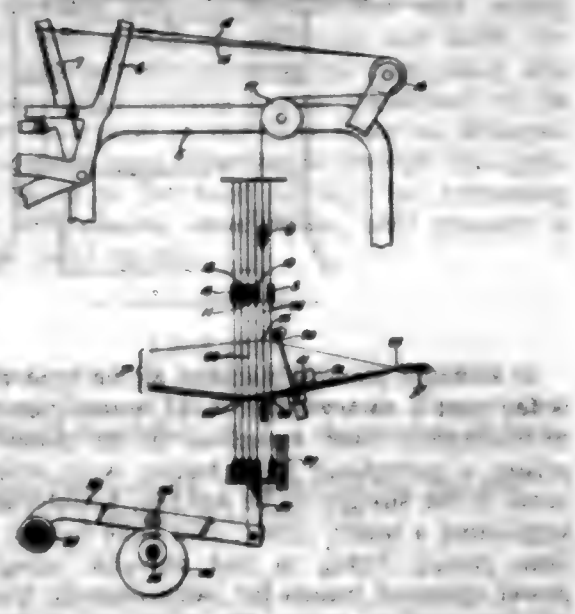
2,859,777
LEAK PREVENTING CAP FOR PNEUMATIC VALVE STEMS
Phillip J. Brewington, Austin, Tex.
Application February 14, 1958, Serial No. 715,316
2 Claims. (Cl. 138—89.2)

2. The combination of a rubber bag with a metal member to secure the rubber bag to an externally threaded pneumatic valve stem, said member comprising a cylindrical sleeve outwardly flared at one end to form a skirt and having its other end in a plane at right angles to the axis of the cylinder, said sleeve having in the wall thereof proximate said other end a plurality of openings, the margins of each of which nearest the said other end are in a plane parallel to the first mentioned plane, thereby to resist thinning of the bag wall proximate the valve stem, the rubber bag being secured to the skirt only and



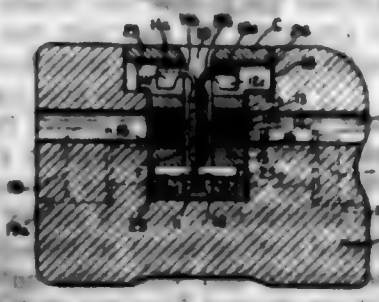
free to move away from the cylindrical wall portion of the sleeve when the bottom of the inverted bag is pulled away from the skirt, thereby making the wall of the bag thinner.

2,859,778
CARPET LOOM ATTACHMENT
Thomas T. Janney, Lafayette Hills, Pa., and George Y. Jess, Clearwater, Fla., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Application August 29, 1957, Serial No. 680,995
6 Claims. (Cl. 139—39)



6. In a velvet pile fabric loom having a head motion for selectively raising and lowering a plurality of pile yarn harnesses, the improvement which comprises means for holding at least some of said harnesses in a mid position when the reed is retracted, and means for inserting a weft shot below the pile yarns carried by all of said harnesses.

2,859,779
SELF-LOCKING ADJUSTING SCREW ASSEMBLY FOR YARN TENSIONING DEVICE
Robert F. Parks, Greenville, S. C., assignor to Steel Heddle Manufacturing Company, Paris, S. C., a corporation of Pennsylvania
Application September 13, 1956, Serial No. 609,748
8 Claims. (Cl. 139—217)



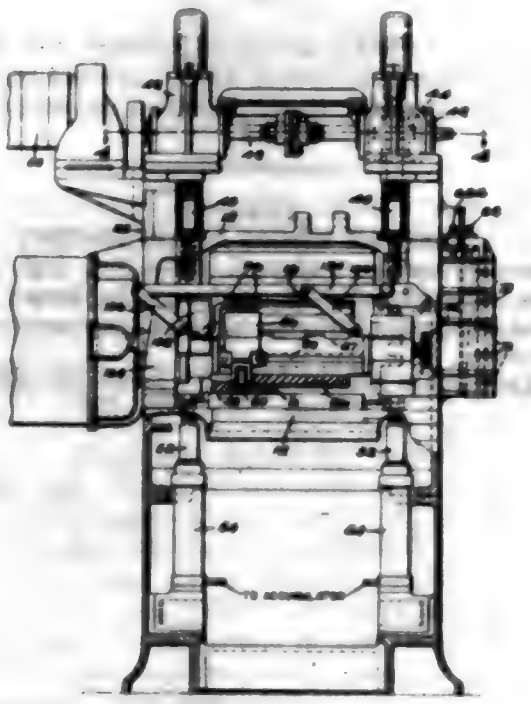
6. A threading block having a bore therein, the bore having right and left hand threads, a bushing constructed of a synthetic polymeric material substantially conforming to said threads, and a screw carried by said bushing

2,859,780

WOOD PLANING MACHINE HAVING MEANS RESPONSIVE TO THICKNESS VARIATIONS IN WORK PIECES FOR AUTOMATICALLY ADJUSTING A CUTTERHEAD

Lewis B. Carlson, Milton, Mass., assignor to S. A. Woods Machine Company, Boston, Mass., a corporation of Massachusetts

Application March 11, 1957, Serial No. 645,194
9 Claims. (Cl. 144—130)



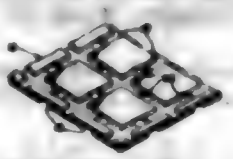
5. A wood planing machine of the type wherein work is fed past a rotary cutter head automatically adjustable to maintain a fixed dimension in the planed piece comprising a cutterhead stand having ways extending transverse to the surface to be worked, a cutterhead yoke for supporting a rotary cutter, said yoke having guiding portions closely fitting to and movable along said ways, power operated means for isochronously translating said guiding portions along the ways, a sensing device responsive to the dimension of the work as it leaves the cutterhead and means governed thereby for energizing said power means to move the yoke to compensate for variations of the dimension.

2,859,781

PROCESS FOR CUTTING WOOD

Harold A. Edmondson, Los Angeles, Calif.

Application December 3, 1954, Serial No. 472,940
6 Claims. (Cl. 144—309)



1. The process of fabricating a panel from plywood having light and sound wave absorption characteristics consisting of the steps of cutting the plywood panel on its face in parallel channels with a rotary cutter operated at a peripheral cutting speed of between 5,000 and 15,000 feet per minute and where the cutter teeth are formed to chisel the channel from the plies of said panel at an angle of attack of approximately 15° and where the cuttings are severed from the edges of the channel by the sharpened edges of the cutter resulting from an applied positive side rake on said cutter.

2,859,782

HY-TORQUE DRIVE TOOL

Louis A. Cannaro, Bronxville, N. Y., assignor to Phillips Screw Company, New York, N. Y., a corporation of Delaware

Application July 1, 1955, Serial No. 519,507
2 Claims. (Cl. 145—50)

1. A tool having a driving bit at its forward end of generally cruciform cross sectional configuration for engaging in a preformed recess in a fastener, the recess having generally radial slots defined by opposed side walls and an end wall inclined inwardly toward the bottom of the recess, said bit being defined by a central core and a plurality of alternate vanes protruding from the core and concave flutes having a base portion lying along the periphery of the core adjacent the free end of the bit, each of said vanes having an outer end wall, a driving face and a removal face opposite said driving face, each of said vanes projecting generally radially outwardly from the core, the end wall of each vane diverging from said core in the direction away from the free end of the bit so that the height of the vane at a point spaced from the free end of the bit is greater than at said free end, a major portion of each vane projecting from said core by a distance not substantially less than the radius of the core, each of said vanes being asymmetrical with respect to radii medially intersecting the end wall thereof, each of said vanes being of greater thickness between said radii and said removal face than between said radii and said driving face, an intermediate portion of each driving face lying closer to said radii than does the edge of such driving face and being at least as close to such radii as portions inwardly of such intermediate portion, any point on that portion of each driving face adjacent the end wall of the corresponding vane lying substantially along a radius of the bit, said last-mentioned face portion converging toward said radii in the direction extending inwardly toward the bit axis.

2,859,783

FRUIT PITTER HAVING SPIRAL KNIFE AND PIT RETAINING MEMBER

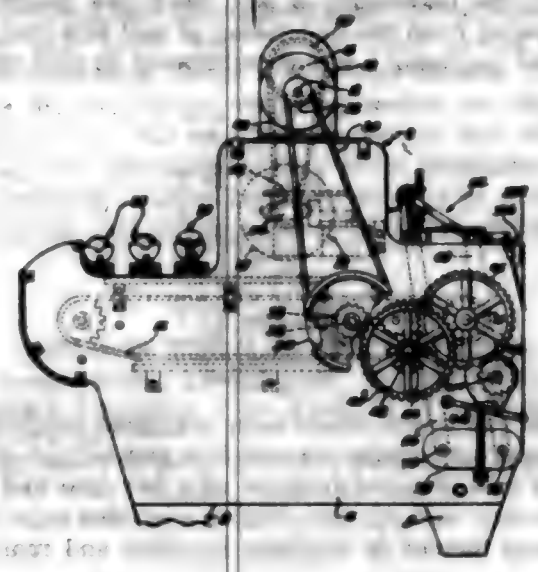
Henry A. Skog, Olympia, Wash., assignor, by mesne assignments, to Canning Equipment Co., Olympia, Wash., a corporation of Washington

Application December 22, 1954, Serial No. 477,072
11 Claims. (Cl. 146—23)

1. In a fruit treating machine including a machine frame, means on the frame for feeding a pair of fruit halves with the cut faces exposed at a continuous uniform rate along a predetermined path, a traveling pitter mounted on the frame for movement to and fro parallel to said path, means for moving said pitter forwardly in synchronism with said feeding means, said traveling pitter comprising a traveling support, a pair of fruit engaging plate members secured to said support in spaced relation simultaneously to engage the exposed faces of the fruit halves in said feeding means, each of said pair of plate members having an opening therein, a pair of pitter knives mounted for movement to and fro with said support and rotatably relative thereto through the holes in the plates for movement about the seed containing sections of the fruit halves to pit the same, a driven chain movable at a continuous uniform rate in one direction, a sprocket engaging said chain and rotatably mounted

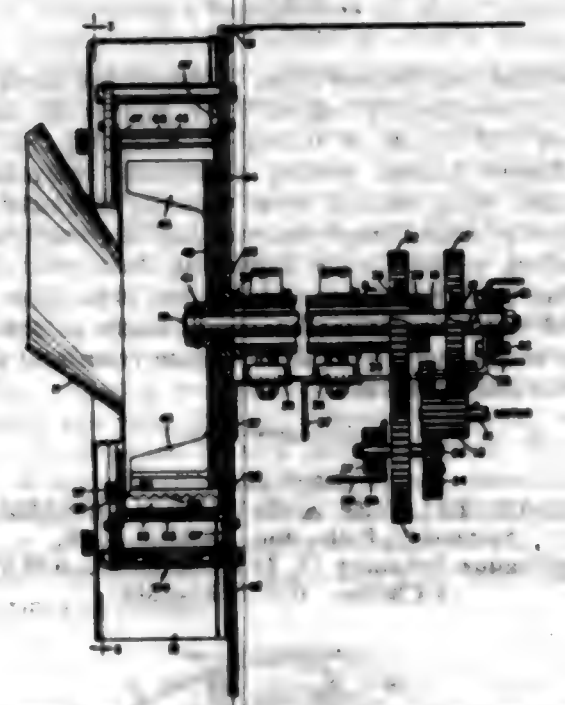
interconnecting said rear and front sections, a locking versely across said aperture on the opposite side of said

upon said traveling support and operatively connected to said pitter knives to rotate said knives about the seed containing sections of the fruit halves upon forward



movement of the traveling pitter and holding the knives against rotation during the reverse movement of the traveling pitter.

2,859,784
POTATO SLICING MACHINE
Bernard Woodward, Jr., Rochester, and Winslow E. Thomson, Pittsford, N. Y., assignors to F. E. Pease Company, Rochester, N. Y., a corporation of New York
Application October 23, 1956, Serial No. 617,842
5 Claims. (Cl. 146—78)



1. A machine for slicing potatoes comprising, in combination, a rotatable casing into which whole peeled potatoes are discharged, said casing having a wall against which the potatoes are propelled, the potatoes being held in engagement with the wall by centrifugal force, means for propelling said potatoes, means for rotating said propelling means about an axis of rotation, said wall having a gap through which sliced slabs of potatoes may be discharged from the casing, a knife for slicing said potatoes fixed to said wall, a multiplicity of stationary knives arranged around the exterior of said wall in essentially radial relation to said axis of rotation, means for rotating said wall about said axis of rotation in a direction opposite to the direction of rotation of said propelling means, means for projecting the cut slabs against said radial knives to slice the slabs into frying size pieces and means for discharging the slices outwardly of said axis of rotation between said knives, said radial knives extending substantially completely around the outer periphery of said rotating wall whereby the slabs of potatoes are being substantially continuously sliced as said wall and said propelling means are rotated in opposite directions.

2,859,785
FOOD SLICER HAVING SAFETY SWITCH
Henry J. Stolbach, White Plains, N. Y., assignor to National Food Slicing Machine Co., Inc., White Plains, N. Y.
Application March 18, 1954, Serial No. 417,067
6 Claims. (Cl. 146—102)

1. A food slicer comprising a base, a cutting head including a driven blade secured to said base, a food carrier secured to said base for slideable movement to carry food mounted on said carrier past said cutting head, electric drive means for operating said blade, deformable resilient means supporting said food slicer, and normally open safety switch means positioned to be closed by the movement of the food slicer on deformation of the resilient supporting means through the application of pressure to the food carriage for preventing operation of said electric drive means until pressure is applied to the food carrier.

2,859,786
COUPLING MEANS FOR TUBULAR VESSELS
Earl S. Tupper, Esmond, R. I., assignor to Tupper Corporation, North Smithfield, R. I., a corporation of Delaware
Application February 21, 1956, Serial No. 566,846
7 Claims. (Cl. 150—.5)

1. In combination, a pair of open-mouthed relatively stiff engageable hollow members, one of said members at the mouth having a peripheral edge and the other of said members at the mouth having a peripheral rim to removably and frictionally engage said edge, the member with the peripheral rim having the bearing surface area intermediate said edge and rim integrally formed of low-pressure polyethylene to provide an effective gasketing means between said edge and rim.

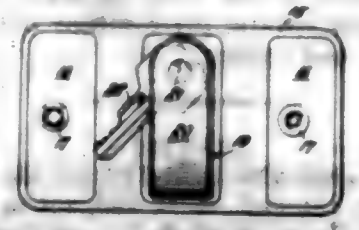
2,859,787
LOCKING FLAP FOR BRIEF CASES
Samuel Perlin, Roslyn Heights, N. Y., assignor to Savoy Leather Mfg. Corp., New York, N. Y., a corporation of New York
Application May 24, 1957, Serial No. 660,119
4 Claims. (Cl. 150—1.6)

1. A brief case comprising a rear section and a front section, a frame comprising relatively pivotal elements

interconnecting said rear and front sections, a locking section mounted on said front section, a pair of upstanding posts mounted at the upper end of said rear section, U-shaped channel means pivotally connected to said posts, a flexible locking flap mounted upon said rear section, said flexible locking flap having one end thereof

secured within the open forward extremity of said U-shaped channel means with the other end of said flap being adapted to engage said locking section whereby said locking flap may be pivoted away from the region directly over the opened case to facilitate insertion and withdrawal of the contents thereof.

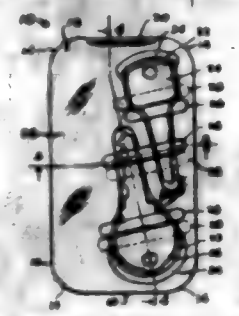
2,859,788
KEY HOLDERS
Martin Ferber, Newark, and John P. Gannon, Bayside, N. J.
Application February 27, 1957, Serial No. 642,893
3 Claims. (Cl. 150—40)



1. A holder element of the character described comprising a unitary length of flat, resilient metal bent into the form of a U with the flat ends of the arms opposing each other, a single post disposed transversely across the top portion of the U, said post being formed on the inside, upper end portion of one arm and extending toward and having its extreme outer end face normally abutting with spring pressure against the inside, upper end portion of the other arm, said upper end portion of the other arm thereby serving as a backstop receiving the force of said spring pressure, said post being integral with and bent from the material of said one arm, leaving a cut-out in said one arm, said post having its free end normally resting directly against the flat metal surface of said inside, upper end portion of the other arm, a flexible case in which the holder element is retained, said case covering said one arm and having an upper opening formed therethrough through which said post protrudes so as to connect said one arm to the case, and side wings on said case and having complementary clasps whereby said U-shaped length of metal may be embraced by the case in the closed position of the article.

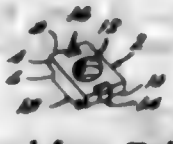
2,859,789
KEY-HOLDER
Arthur C. W. Duckett, Evanston, Ill.
Application May 24, 1957, Serial No. 661,320
4 Claims. (Cl. 150—48)

1. A key-holder comprising a thin flat resilient plate having an elongated aperture therethrough in the general shape of a key, first and second straps formed integrally with said plate and extending transversely across said aperture on one side of said plate at spaced intermediate points along the length thereof, and third and fourth straps formed integrally with said plate and extending transversely across said aperture on the opposite side of said plate at spaced intermediate points along the length thereof, said straps being narrow relative to the length of said aperture, the undersides of said third and fourth straps being spaced from the undersides of said first and second straps for confining a key therebetween in said aperture,



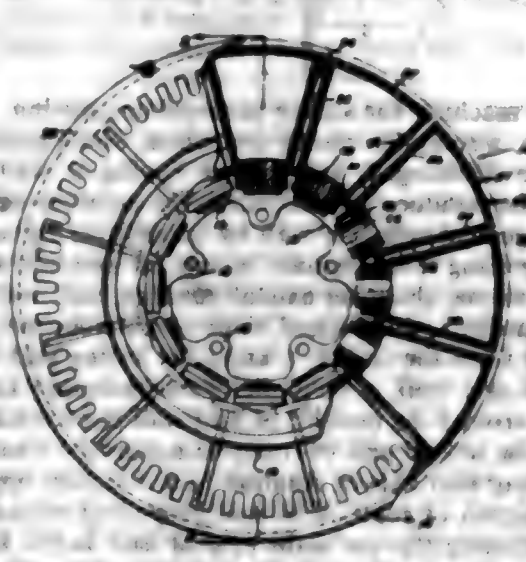
said third and fourth straps being staggered longitudinally of said aperture relative to said first and second straps to facilitate insertion and removal of a key into and out of said aperture, said aperture having a beveled edge portion at one end thereof to facilitate insertion and removal of the key.

2,859,790
WELDING NUT WITH PILOT PORTION DEFINED BY FLANGES AND HAVING WELDING PROJECTIONS ON SAID FLANGES
Gabriel M. Sirin, Detroit, Mich., assignor to Carrick Products, Royal Oak, Mich., a corporation of Michigan
Application December 28, 1956, Serial No. 631,229
1 Claim. (Cl. 151—41.7)



A welding nut formed from T-shaped bar stock comprising a substantially square body portion of uniform thickness and a pair of outwardly extending flat transverse flanges having welding projections thereon, said projections being formed from material displaced from the edges of said flanges intermediate the ends thereof, the portion of said body projecting from said flanges providing a pilot portion, said welding projections being disposed on the same side of said flanges as said pilot portion and extending a lesser distance from said flanges than said pilot portion.

2,859,791
SEGMENTAL TIRE AND WHEEL ASSEMBLY
Samuel C. Pellegrino, Buffalo, N. Y.
Application February 15, 1957, Serial No. 640,511
4 Claims. (Cl. 152—334)



1. In a tire and wheel assembly, a concave wheel rim, a tire on the rim comprising a plurality of resilient seg-

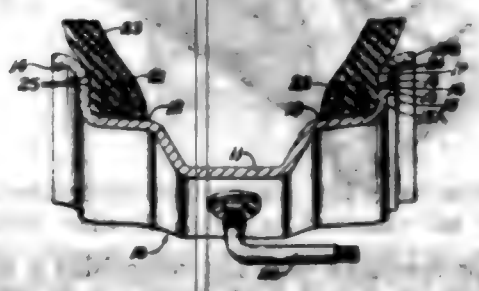
mental cells having outer walls, inner walls, and radially inwardly converging end walls, the adjacent end walls of adjacent cells being spaced from each other, said rim being provided with circumferentially spaced holes therethrough, said inner walls of the cells having thereon resilient mounting stems extending radially inwardly through the rim holes, retaining means on the stems inwardly of the rim and bearing against the rim, relatively narrow transverse spacing strips positioned in the spaces between adjacent cells and secured to related end walls thereof, and inflating valves in the mounting stems.

2,859,792

RIM FOR TUBELESS TRUCK TIRES

Oneil Joseph Patin, Akron, Ohio, assignor to The F. H. Goodrich Company, New York, N. Y., a corporation of New York

Application October 26, 1955, Serial No. 542,958
15 Claims. (Cl. 152—406)



1. A rim adapted to support a tubeless pneumatic tire and cooperate therewith to provide an air chamber, the said rim comprising a base portion air impervious except for an opening adapted to receive a valve in sealing relationship, said base portion having surfaces on either side of a circumferentially extending recess for receiving and supporting the radial inner surfaces of the tire beads, and generally radially extending side flange portions rising from said base portion adapted to engage the sides of the bead portions of the tire, at least one of said side flanges being circumferentially divided to provide a portion integral with said base portion and a removable portion, said flange portions including radially offset axially extending surfaces joined by generally radially extending shoulders engaging in axial abutting relationship, thereby releasably retaining the said removable portion in position as an extension of said integral portion, the radial extent of said integral flange portion not exceeding one-half of the total radial extent of the flange but being sufficient to provide air-sealing engagement with the side surface of the bead region of a tubeless tire when mounted on the rim and inflated.

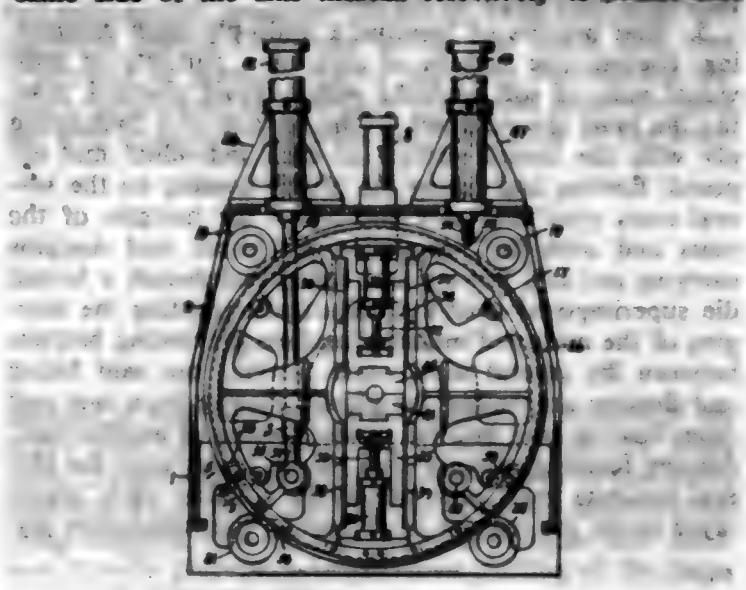
2,859,793

PIVOTALLY MOUNTED LATERALLY SPACED FLUID PRESSURE MEANS FOR TWISTING CRANKSHAFTS

John L. F. Ross, South Euclid, Ohio, assignor to The Ajax Manufacturing Company, Euclid, Ohio, a corporation of Ohio

Application February 8, 1955, Serial No. 486,890
3 Claims. (Cl. 153—78)

1. In a machine for twisting a work-piece having a stationary supporting frame, clamping means on said frame for firmly clamping a portion of such work-piece against rotation, a rotatable frame mounted for rotation about the axis of such work-piece thus clamped, and clamping means on said rotatable frame for rigidly clamping a portion of such work-piece for rotation therewith; two fluid pressure piston-cylinder assemblies mounted on said stationary frame substantially laterally spaced apart, and means selectively pivotally connecting a said respective assembly to said rotatable frame on the same side of the axis thereof selectively to rotate said



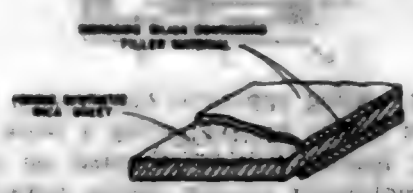
rotatable frame in opposite directions through tension in such connections.

2,859,794

SYNTHETIC MICA PRODUCT

Francis A. Barz, Merrick, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

Application November 30, 1955, Serial No. 550,236
4 Claims. (Cl. 154—2.6)



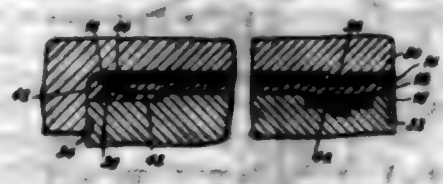
1. A mica structure comprising a porous sheet of a fluoride-mineralized, recrystallized, hot pressed, synthetic mica, the surface pores of said sheet being sealed with an inorganic, electrically non-conductive, silica-containing filler material, the interior pores of said sheet being free from said material.

2,859,795

LAMINATED TRIM SHEET AND METHOD OF MAKING SAME

James W. Greig, Grosse Pointe Park, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan

Application December 27, 1955, Serial No. 555,459
5 Claims. (Cl. 154—110)



1. A laminated decorative trim sheet comprising, in combination, a foundation ply, a plurality of cushiony mats superposed upon separate spaced apart areas of one surface of the foundation ply, an outer finish layer of cast plastic for each mat, each of said outer finish plastic layers having a cast self-supporting dished shape comprising a planar bottom portion and a marginal flange portion, each of said finish layers being cast in situ over its mat with the bottom portion overlying the face of the mat and the marginal portion encircling the margin of the mat, said plastic layer being adhesively bonded to the surface of the mat but not appreciably impregnating the interior of the mat, said marginal flange portion of the

plastic layer being adhesively bonded to the foundation ply about the margin of the mat.

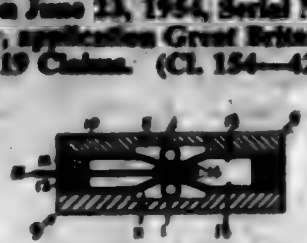
5. That process of forming a multi-ply sheet comprising, coating one surface of each of a plurality of individual mats of soft wadding with a liquid plastisol, placing the mats spaced apart on the surface of a foundation ply with the coated surface of each individual mat exposed, flowing and fusing the plastic coating on the several mats over the mats and about the margins of the mats and onto the foundation ply about said margins carrying out said flowing and fusing underneath a heated die superimposed over the mats and encircling the margins of the mats and maintaining flow preventing barriers between the several mats while carrying out said fusing and flowing preventing the plastic coating from one mat from flowing over into the plastic coating of another mat, thereby forming separate cast plastic layers over the several separate mats and adhesively bonding each plastic layer about the margin of its mat to the foundation ply.

2,859,796

MEANS FOR SEALING MATERIALS BY HEAT

Gerald Taunton, Wells, Somerset, England, assignor to Wills United Dairies Limited, Trowbridge, England, a British company

Application June 23, 1954, Serial No. 438,819
Claims priority, application Great Britain June 30, 1953
19 Claims. (Cl. 154—42)



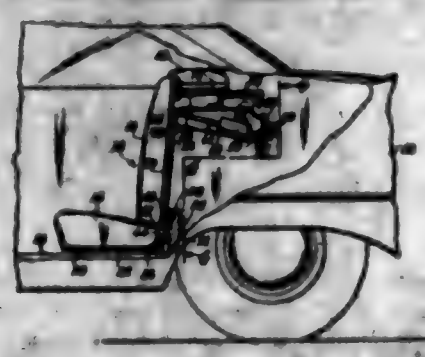
1. A heat sealing apparatus comprising, in combination, support means for supporting a work piece to be heat sealed; heating means mounted on said support means for movement relative thereto toward and away from a work piece supported thereby; and moving means for moving said heating means relative to said support means, said moving means including an inflatable member capable of assuming an inflated and a deflated position and connected to said heating means so as to move the same toward and away from the work piece when said member is inflated and deflated, respectively.

2,859,797

ADJUSTABLE RECLINING CHAIR AND HEADREST THEREFOR

James W. Mitchelson, Taylorville, Ill.

Application December 31, 1957, Serial No. 706,484
8 Claims. (Cl. 155—5)



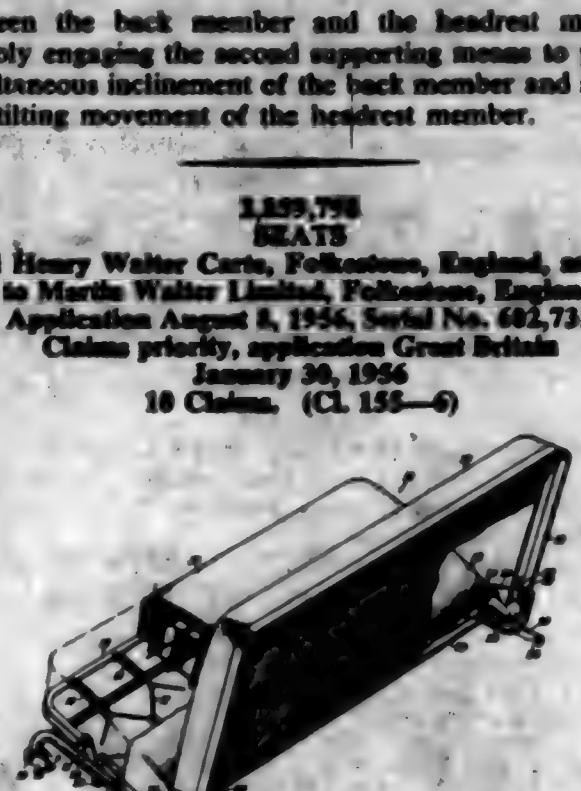
1. In an adjustable reclining chair structure, a guide means, a seat member slidably mounted on said guide means for rearward and forward movement of the seat member, a first supporting means, a back member pivoted to said first supporting means, connecting means between the seat member and the back member to permit simultaneous movement of the seat member and back member in generally opposite directions, a second supporting means fixed relative to and rearward of said back member, a headrest member, and connecting means between the back member and the headrest member slidably engaging the second supporting means to permit simultaneous inclinement of the back member and sliding and tilting movement of the headrest member.

2,859,798

SEATS

Cecil Henry Walter Carta, Folkestone, England, assignor to Martin Walter Limited, Folkestone, England

Application August 8, 1956, Serial No. 602,731
Claims priority, application Great Britain January 30, 1956
10 Claims. (Cl. 155—6)



1. A non-reversible seat unit comprising a base structure, separate seat and back frames each of which is adapted to support a squab, hinge means near the adjacent edges of the frames constituting the sole direct connection between said frames and permitting the back frame to be folded on to the seat frame, means supporting said frames on said base structure and permitting support of said frames on said base structure in two alternative positions, one of said positions being a seating position in which said frames cooperate to form a seat affording a back support and the other position being a flat position in which said frames are aligned to form a bed, and a manually operable locking device for cooperation with one of said frames to lock it to the base structure in each of its alternative positions.

2,859,799

FUNCTIONAL POSTURE CONTROLLER FOR CHAIRS

Edwin R. Meere, New York, N. Y.

Application May 2, 1956, Serial No. 583,399
2 Claims. (Cl. 155—77)

1. In a chair of the character described, the combination of a pedestal, a threaded post extending upwardly from said pedestal, a swivel frame having a pair of angular portions joined to each other by cross portions one of which is secured to said post, a seat frame having a pair of parallel portions pivoted to the outer ends of the angular portions of said swivel frame and provided with registering longitudinal slots, a chair seat carried by said seat frame, a chair back, an angular member having two branch portions to the first of which said chair back is secured while

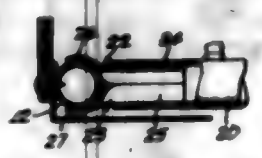
the second is extended between the parallel portions of said seat frame, a fulcrum rod extending through the slots in said seat frame and through the second branch portion of said angular member, a first pair of link members pivotably connecting said fulcrum rod to the angular portions of said swivel frame to which said seat frame is secured, a second pair of link members pivotably connecting the angular portions of said swivel frame to the outer end of the said branch portion of said angular member, resilient means interposed between said swivel frame and said fulcrum rod tending to hold said chair back upright and said seat in a horizontal position, and adjustable means for limiting the expansion movement of said resilient means.

2,859,800

SLIDING CONNECTION BETWEEN SEAT RAILS AND LEGS OF COLLAPSIBLE WHEEL CHAIRS

Harry C. Jennings, Jr., Los Angeles, Calif.

Application November 5, 1956, Serial No. 620,391
2 Claims. (Cl. 155—140)



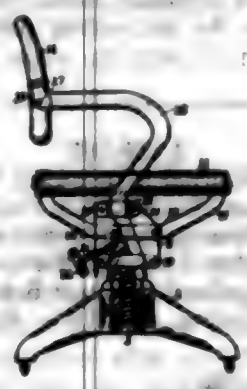
2. In a collapsible chair, a leg, a tubular seat bar, and a connection between the seat bar and the leg comprising two opposed parts having opposed portions in partially encircling captive relation to the leg and slidably engaging therewith, said parts having opposed shank portions rotatably fitting within the end of the seat bar.

2,859,801

GEOMETRIC CONTROLLER FOR CHAIRS

Edwin R. Moore, New York, N. Y.

Application September 17, 1956, Serial No. 610,313
5 Claims. (Cl. 155—157)



1. A geometric controller for chairs comprising a horizontal base member, two pairs of upright levers having their lower ends hinged to opposite end portions of said base member, link members pivoted to the upper ends of said levers, a seat supporting member hinged to said levers intermediate the upper and lower ends thereof, chair back supporting members being extended from said link members, and resilient means interposed between said seat supporting member and the end portions of a pair of said levers; said levers constituting an H-shaped formation with said seat-supporting member, and forming angularly variable parallelograms with said link members and said base member.

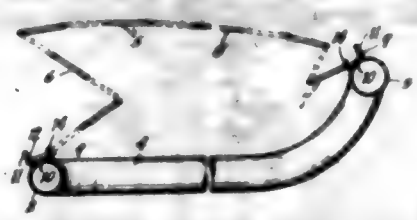
2,859,802

SPRING CUSHION STRUCTURE

Vito Azzaro, Detroit, Mich., assignor to L. A. Young Spring & Wire Corporation, Detroit, Mich.

Application November 10, 1955, Serial No. 546,241
4 Claims. (Cl. 155—179)

1. In a spring structure, an elongated supporting bar having an upwardly projecting flange at its outer edge, the flange having an inwardly facing longitudinally extending channel like outer seat, said bar having a series of longitudinally spaced upwardly projecting hook-like inner seat members spaced from and facing said outer seat, and a plurality of laterally spaced sinuously bent spring elements terminating in U-shaped springable loops disposed flat wise upon said bar with the outer arms of the loops



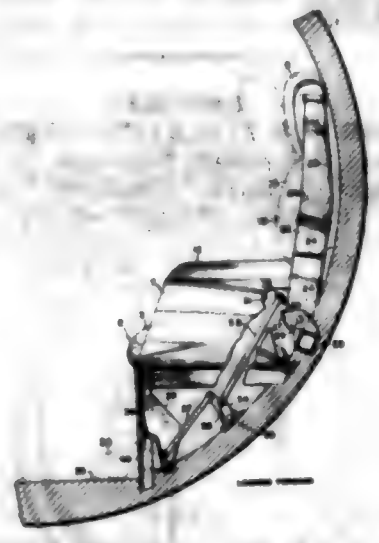
engaged in said outer seat and the inner arms thereof engaged with opposed inner seat member with the loops under compressed spring tension, the reaches of the spring elements from which the inner arms of the loops extend being disposed between adjacent pairs of inner seat members thereby preventing longitudinal shifting of the loops upon said supporting bar.

2,859,803

SAFETY SEATING ARRANGEMENT FOR A HIGH SPEED CONVEYANCE

Howard H. McCallister, Parkville, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland

Application May 28, 1956, Serial No. 587,688
10 Claims. (Cl. 155—189)



1. A passenger conveyance adapted for traveling at high speed comprising a seat extending longitudinally of the conveyance so that a passenger seated thereon sits facing athwartwise of the conveyance, the seat comprising a seat portion and a back portion, and a body safety guard or barrier positioned at the longitudinally-forward side of the seat and extending upwardly sufficient to be opposite the upper portion of the body of a passenger seated on the seat portion, said safety guard or barrier being pivoted for selectively swinging to a position wherein it is aligned with the back portion of the seat, and to a position wherein it extends for a limited distance transversely-forwardly of the back portion.

2,859,804

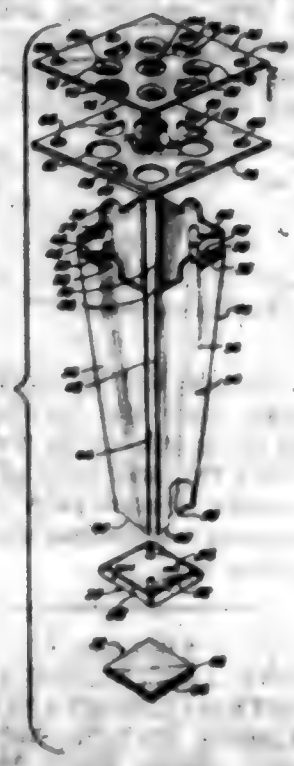
FURNITURE LEG

Elton F. Healy, Miami, Fla.

Application March 3, 1955, Serial No. 491,877
7 Claims. (Cl. 155—191)

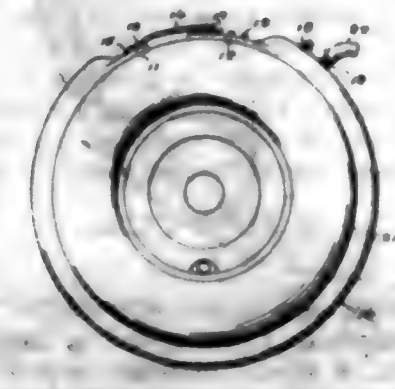
1. A furniture leg comprising a plurality of body sections, a rigidifying flange formed on each of the longitudinal edges of said body sections and disposed at an acute angle therewith, tab means formed on one end of said body sections, a plate having apertures therein receiving said tab means, said tab means being bent over to

engage said plate and to hold said body sections in assembled relationship with the flanges on adjacent body sections engaging and extending inwardly toward the



center of the hollow leg body so formed, means on said plate for attaching said plate and associated body sections to a furniture member, and a glide attached to the lower end of said leg body.

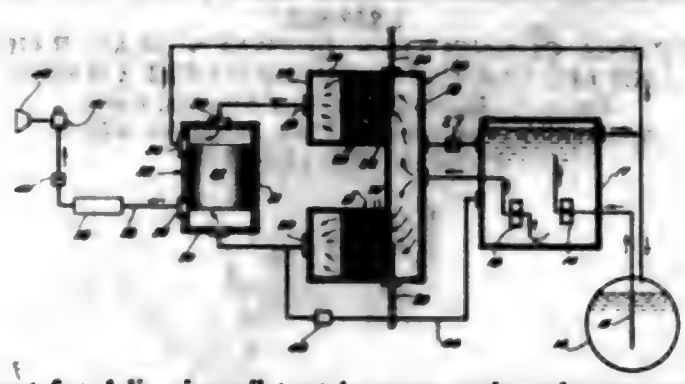
2,859,885
COMPRESSOR FOR INFLATING TUBELESS TIRES
David H. Bordetta, Bellwood, W. Va.
Application March 16, 1956, Serial No. 572,008
1 Claim. (Cl. 157—1.21)



In a mounting device for shoes of tubeless tires, the combination which comprises a flexible tubular member having sealed and flattened ends, said tubular member being adapted to be positioned around the outer surface of a motor vehicle tire, lugs mounted on the outer surface of one flattened end of the tube, a pawl mounted on the opposite flattened end of the tubular member and positioned to engage one of the lugs for securing the tubular member in position upon the tire casing, an inflating valve mounted in the tubular member and a relief valve also mounted in the tubular member.

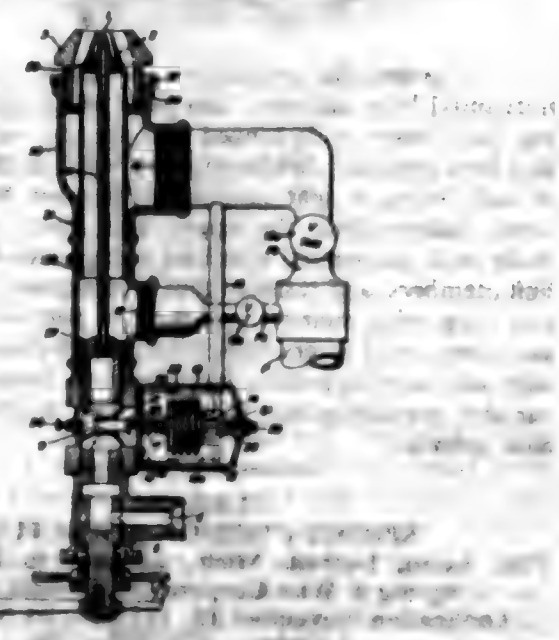
2,859,886
LIQUID FLOW CONTROL REGULATOR
Harry E. Lake, Bethel, Conn., and Bowman K. Breed, Chicago, Ill., assignors to Preferred Utilities Manufacturing Corporation, New York, N. Y., a corporation of Delaware
Application December 3, 1953, Serial No. 395,728
1 Claim. (Cl. 158—36.3)

In an oil burner supply system, the combination of means including an adjustable proportioning device to provide a constant flow of oil regardless of changes in viscosity or pressures upstream of said device, said device having a common inlet supplied with oil by a pump, a feed outlet and a return outlet, each outlet being connected to said inlet by a viscosity sensitive restrictor, each restrictor having means for regulating the restriction; an equalizing valve for equalizing the back pressures at said feed outlet and said return outlet, said equalizing valve having a cylinder, said cylinder having a return end and a feed end, a return line connecting said return outlet to said return end, a feed line connecting said feed outlet to said feed end, a return port in said cylinder adjacent said return end, a feed port in said cylinder adjacent said feed end, a compensating piston freely positioned within said cylinder, a burner nozzle feed line connected to said feed



port for delivering oil to a burner nozzle, a heater positioned in said burner nozzle feed line upstream of the burner nozzle for heating the oil to a predetermined temperature suitable for most efficient ignition and burning, a back pressure valve positioned in said burner nozzle feed line between said nozzle and said heater for preventing vaporization of the heated oil in the burner nozzle feed line from the heater to insure safe and efficient operation, a shut-off valve positioned in said burner nozzle feed line between said burner nozzle and said heater back pressure valve, a relief line connected to said first mentioned feed line, and a relief valve positioned in said relief line having a pressure sensitivity higher than the back pressure valve for preventing pressure at said shut-off valve sufficient to render the same inoperative.

2,859,887
PRESSURE-FED OIL FUEL BURNER
Leslie William Newman and Ronnald Dine, Birmingham, England
Application May 23, 1956, Serial No. 586,276
Claims priority, application Great Britain May 27, 1954
3 Claims. (Cl. 158—42.2)



1. A pressure-fed oil fuel burner system comprising in combination a fuel nozzle, a maintenance-air nozzle con-

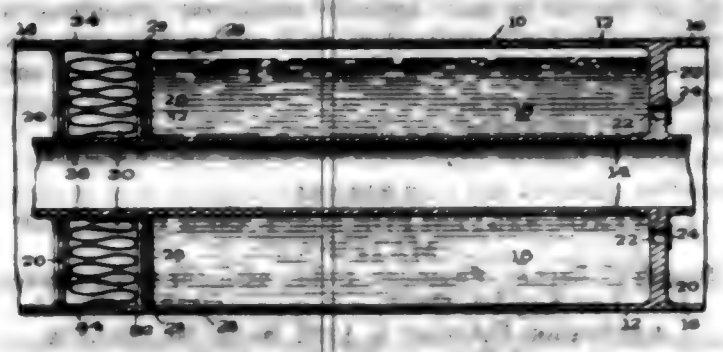
centrically surrounding the fuel nozzle, a booster-air nozzle concentrically surrounding and outwardly spaced from said maintenance air nozzle throughout its entire axial length and providing therewith a fixed, constant discharge area, an air-supply conduit connected to said maintenance nozzle, means in said conduit for restricting the air supplied to said maintenance nozzle to an amount sufficient only to maintain a flame at the minimum heating condition of the burner, a second air-supply conduit supplying air to said booster nozzle, a control valve remote from said nozzle embodied in said second air-supply conduit and being responsive to the temperature of a medium heated by said burner for controlling the amount of air supplied to said booster nozzle inversely with variations in temperature, a fuel-supply connection to said fuel nozzle, a fuel control valve embodied in said fuel-supply connection, pressure-operated means for actuating said fuel control valve, and a conduit connection to said pressure-operated means from said second air-supply conduit adjacent said booster nozzle for controlling said pressure-operated means and thereby operating said fuel control valve to increase the amount of fuel supplied to said fuel nozzle with increase in air-pressure in said booster nozzle.

2,859,905

FUEL TANK WITH EXPELLENT BAG

Robertson Youngquist and De Lacy F. Ferris, Morristown, and Harold S. Bell, Jr., Whippany, N. J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

Application January 21, 1955, Serial No. 483,285
6 Claims. (Cl. 158—50.1)



1. An apparatus for discharging a liquid fuel under pressure comprising a tank having a discharge port including a burst disc thereover adjacent one end wall, a diffuser plate for admitting pressurizing gas forming the other end wall of said tank, a burst membrane adjacent said plate but spaced therefrom and defining a fixed-volume fuel compartment with said first mentioned end wall, and an inflatable bag in said tank between said membrane and said plate and having its mouth bonded to said tank adjacent to said plate, said bag having walls folded forwardly and rearwardly a plurality of times and adapted under the influence of pressurizing gas to inflate and expand past said membrane into said compartment to a point adjacent said first mentioned wall and expel fuel contained in said compartment through said discharge port and burst disc.

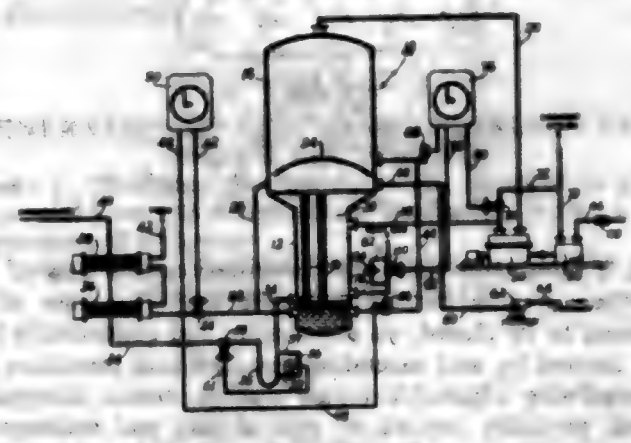
2,859,869

COMPRESSION EVAPORATOR CONTROL AND METHOD THEREFOR

Henry O. Ehrlumeyer, Sharon, Mass., assignor to Bowen Corporation, Cambridge, Mass., a corporation of Massachusetts

Application February 2, 1955, Serial No. 485,697
5 Claims. (Cl. 159—44)

1. In a compression evaporator of the type wherein water vapor is withdrawn from the vapor space of the evaporator, compressed by a compressor, and returned to the evaporator steam chest, apparatus for maintaining the pressure in said vapor space substantially constant, comprising, in combination, an auxiliary steam conduit connected to supply steam to said steam chest, a first regulating valve in said auxiliary steam conduit, a vent conduit connected to said steam chest for venting steam therefrom, a second regulating valve in said vent conduit, and control means responsive to the pressure in said vapor space and connected to operate said first and



second regulating valves, said control means operating said first regulating valve to close said valve with increasing pressure in said vapor space and vice versa and operating said second regulating valve to open said valve with increasing pressure in said vapor space and vice versa, said control means conjointly operating said two valves to maintain the pressure in said vapor space substantially constant.

2,859,810

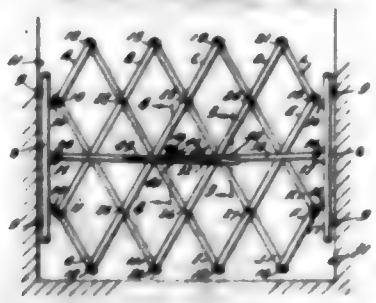
DRAPERY PROTECTORS

Florence F. Sachs, Chicago, Ill.

Application December 22, 1954, Serial No. 476,897
3 Claims. (Cl. 160—124)

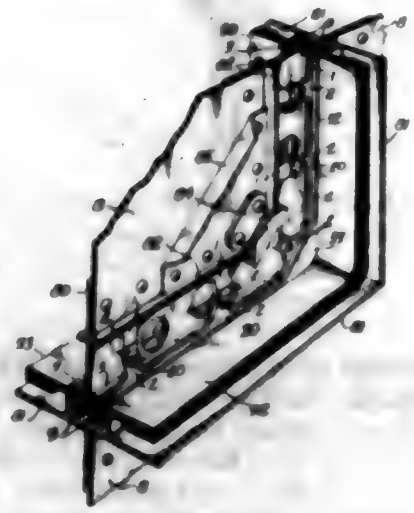
2. A protector for a drapery adapted to hang on movable drape hooks, said protector comprising a rectangular moistureproof panel made of resinous plastic film and adapted to fit over the rear side of the drapery, a hanging strip secured to said panel along the top edge thereof and having end loops at opposite ends thereof for receiving the endmost drape hooks, said strip being secured to said panel at spaced points to define a plurality of additional hook receiving loops formed therealong to receive intermediate drape hooks, said protector being adapted to be hung on the hooks in addition to and immediately behind said drapery, first fastener means secured to said panel along one side edge thereof, and second fastener means disengageably mating with said first fastener means and adapted to be secured to one vertical edge of the drapery, said fastener means retaining said panel behind the drapery in alinement therewith.

2,859,811
REMOVABLE GATE
William H. Rusch, Milwaukee, Wis., assignor to Worlds-best Industries, Inc., Cudahy, Wis., a corporation of Wisconsin
Application August 10, 1956, Serial No. 603,265
1 Claim. (Cl. 160—136)



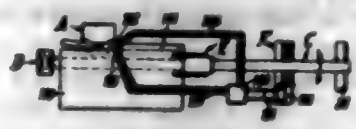
In a removable gate, the combination of a pair of end members having parts engageable with the sides of an opening to be closed, an expandible and contractible barrier carried by and extending between said members and a lengthwise adjustable toggle linkage means comprising a link pivotally carried by one of said end members, a link pivotally carried by the other of said end members and a clamping means including a base member freely pivotally connected intermediate its ends to one of said links and having a hooked lower end to receive and engage the lower side of the other link and having an angled upper end, a threaded clamping bolt mounted in said angled end, a clamping head mounted on said bolt and engageable with the upper side of said link, and a nut mounted on said bolt and engageable with said head to clamp the hook engaged link between said hooked end and said head independently of said pivoted connection of said base member.

2,859,812
FUEL CELL BEAD RETAINERS
Wallace R. Swanson, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application May 28, 1954, Serial No. 433,060
6 Claims. (Cl. 160—368)



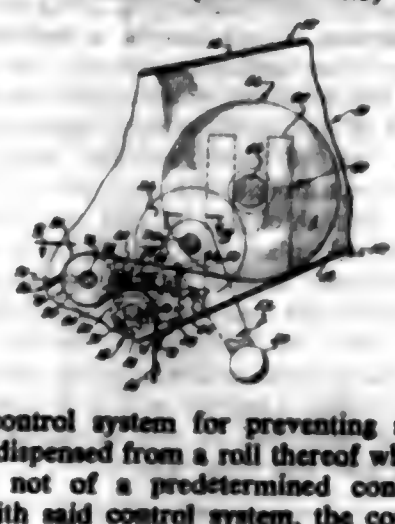
1. For use in securing and sealing a filler bar urging a resiliently deformable bead along the edge of a pliant sheet, such as an internal wing fuel section, within a groove of a support structure such as the wing bulkhead structure of an airplane, by reaction from a reaction flange carried by said bulkhead structure and paralleling but spaced from the groove: retaining means comprising a toggle device including a flange-engaging plate and a separate filler-bar-engaging plate hingedly interengaged along a line parallel to the bar and flange, one such plate being grooved along its hinged edge and the other such plate being complementally rounded along its hinged edge, such grooved and rounded edges constituting the hinged interengagement, and the plates being conjointly of a length to press the filler bar into its groove when the plates are relatively hingedly moved slightly past coplanar relationship.

2,859,813
SHEET CUTTING APPARATUS
Wilhelm Klotz, Stuttgart, Germany
Application November 21, 1955, Serial No. 548,387
Claims priority, application Germany December 11, 1954
24 Claims. (Cl. 164—62)



1. A sheet cutting apparatus comprising, in combination, cutting and transporting means for cutting and transporting a sheet in one direction; sheet holding means for holding a sheet cut and transported by said cutting and transporting means; an elongated guide means extending substantially in said one direction supporting said sheet holding means and guiding the same for movement in said one direction so that said cutting and transporting means move said sheet holding means along said elongated guide means when cutting and transporting a sheet held by said sheet holding means; supporting means supporting said elongated guide means for movement in opposite directions transverse to said one direction; and operating means for selectively moving said elongated guide means in said opposite transverse directions to compensate for deviations of said cutting and transporting means from a cutting line on a sheet held by said sheet holding means.

2,859,814
CONTROL SYSTEM FOR DISPENSER FOR STRIP MATERIAL
Joseph C. Berney, Pasadena, Calif., assignor to Towbaver, Inc., Los Angeles, Calif., a corporation of California
Application February 6, 1956, Serial No. 563,510
4 Claims. (Cl. 164—84.5)



1. In a control system for preventing sheet material from being dispensed from a roll thereof where said sheet material is not of a predetermined configuration cooperative with said control system, the combination of: a housing having receptacle means therein for the reception of said roll; dispensing mechanism secured in said housing for withdrawing said sheet material from said roll and discharging it from said housing; detecting means in said housing engageable with said sheet material to determine whether said sheet material is of said predetermined configuration, said detecting means having means thereupon for altering the condition of said sheet material should it not be of said predetermined configuration; and means in said housing engageable with the altered portion of said sheet material to prevent further dispensing of said sheet material from said housing.

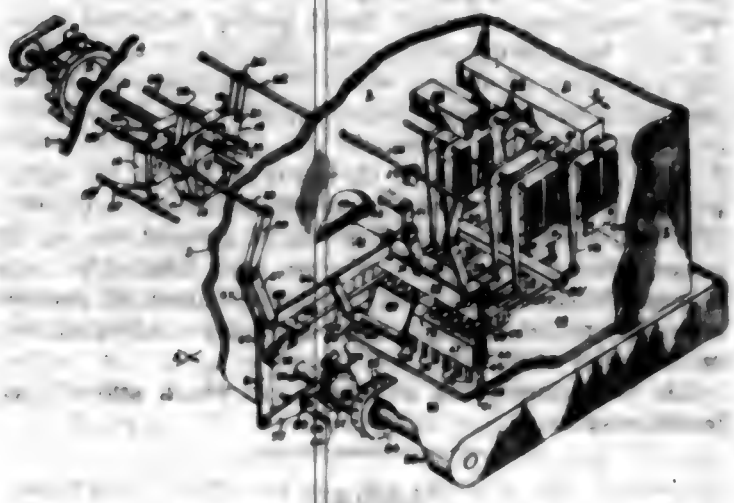
least one formation fracture extending from at least one

ducing into said well a pumpable mixture of a water-

2,859,815
LOCK LIP SIDE FEED PUNCH
Carl Alfred Smith, Atlanta, Ga.
Application December 29, 1954, Serial No. 478,365
4 Claims. (Cl. 164—109)

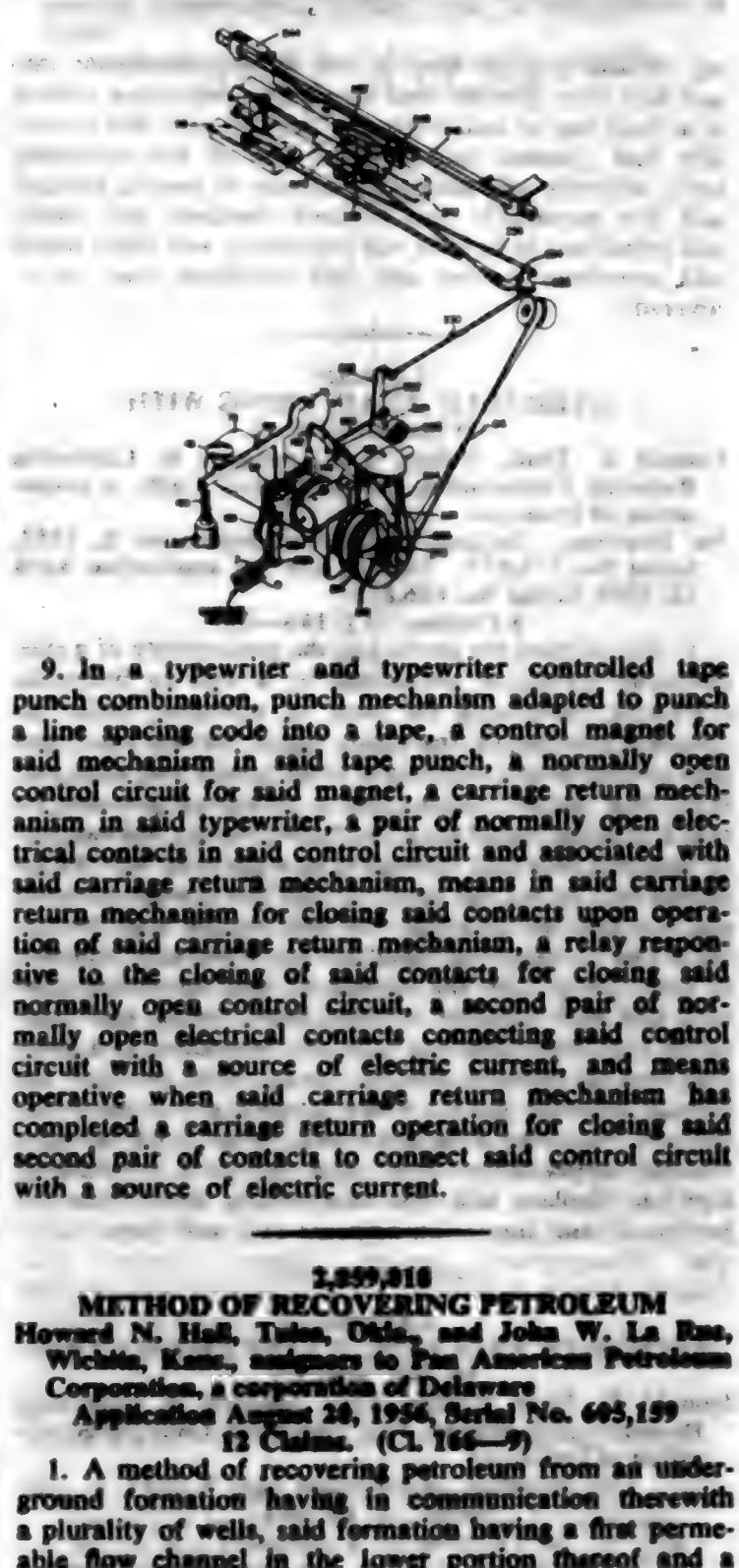
1. A punch joining tool comprising, a base holder, a side feed material receiving slot formed in said holder for receiving overlapping plates therein, a punch mounted for movement on said holder to travel therethrough and into said slot to engage plates confined therein, a planar punching surface on the end of said punch, means on said holder for moving said punch in substantially a straight line a limited amount and for returning said punch to initial position, a die member mounted adjacent said slot on a side opposite said punch member, a tab forming surface on said die, an open hinge line forming area in conjunction with said tab forming surface for forming a hinge line of less width than the opening immediately adjacent thereto, said die being discontinuous about a portion thereof adjacent said hinge line forming an open space through which said die is removable from said hinged tabs, and a tab travel area formed in said die leading in a straight line from said tab forming surface.

2,859,816
HIGH SPEED PUNCH DEVICE
John H. MacNeill, Melbourne, Fla., assignor to Soroban Engineering, Inc., Melbourne, Fla., a corporation of Florida
Application March 19, 1956, Serial No. 572,508
38 Claims. (Cl. 164—111)



8. In a punch device having a punch bail for effecting a punch operation and a feed bail for effecting a feed operation and having means for driving said bails in isochronism, said means comprising a rotatable shaft, constant-diameter, three-sided triangular cam means secured to said shaft, the axis of said shaft extending through the center of curvature of one of said sides of said cam means, a first and a second cam follower each having opposed cam means engaging surfaces contacting opposed points on said cam means, said cam followers being reciprocated in at least one plane perpendicular to said shaft upon rotation of said shaft, means for driving said bails including a mechanical coupling between each of said bails and a distinct cam follower, and means for disposing said cam means engaging surfaces of said cam followers at such an angle with respect to one another and said cam means that each of said bails is ineffective to effect its respective operation when the other of said bails is effecting its operation.

2,859,817
GENERATION OF LINE FEED SIGNALS IN TAPE PUNCH EQUIPMENT
Henry L. Tholstrup, Rochester, N. Y., assignor to Commercial Controls Corporation, Rochester, N. Y., a corporation of Delaware
Application April 30, 1956, Serial No. 581,590
10 Claims. (Cl. 164—113)



9. In a typewriter and typewriter controlled tape punch combination, punch mechanism adapted to punch a line spacing code into a tape, a control magnet for said mechanism in said tape punch, a normally open control circuit for said magnet, a carriage return mechanism in said typewriter, a pair of normally open electrical contacts in said control circuit and associated with said carriage return mechanism, means in said carriage return mechanism for closing said contacts upon operation of said carriage return mechanism, a relay responsive to the closing of said contacts for closing said normally open control circuit, a second pair of normally open electrical contacts connecting said control circuit with a source of electric current, and means operative when said carriage return mechanism has completed a carriage return operation for closing said second pair of contacts to connect said control circuit with a source of electric current.

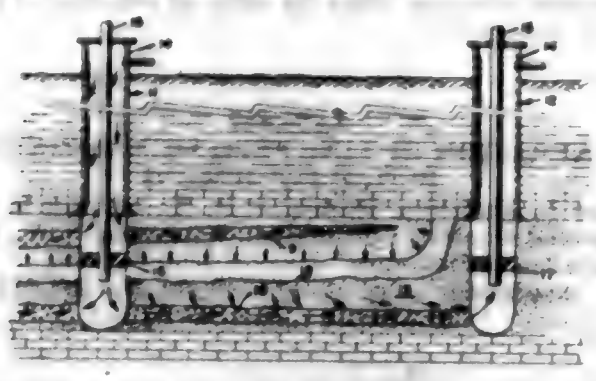
2,859,818
METHOD OF RECOVERING PETROLEUM
Howard N. Hall, Tulsa, Okla., and John W. La Rue, Wichita, Kans., assignors to Pan American Petroleum Corporation, a corporation of Delaware
Application August 28, 1956, Serial No. 605,159
12 Claims. (Cl. 166—9)

1. A method of recovering petroleum from an underground formation having in communication therewith a plurality of wells, said formation having a first permeable flow channel in the lower portion thereof and a second permeable flow channel in the upper portion thereof, said first permeable flow channel including at

fining an opening in the side wall of the casing for a pres- a bar arranged externally of the casing and positioned to

being grooved along its hinged edge and the other such of said sheet material from said housing.

least one formation fracture extending from at least one of said wells substantially parallel to the bottom of said formation toward at least one of the remaining wells, which comprises injecting a petroleum solvent into at least one of said wells, and into said second permeable flow channel whereby said solvent contacts said formation below said second flow channel diluting residual petroleum therein, preventing flow of said solvent through said second flow channel directly to another well, allowing vertical gravity flow of the diluted petroleum into said first flow channel, and injecting a petroleum solvent in at least one of said wells and through said first permeable flow channel into at least one of the remaining wells, whereby said petroleum solvent in passing through said first permeable flow channel dissolves and carries said petroleum to at least one remaining well from which said petroleum solvent and said petroleum may be recovered.



2,859,819
HYDRAULIC FRACTURING WITH OVERFLUSHING

Donald E. Trott, Dallas, Tex., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Original application September 8, 1953, Serial No. 379,077. Divided and this application April 25, 1957, Serial No. 655,018
3 Claims. (Cl. 166—33)

1. The method for increasing the productivity of a subterranean formation penetrated by a well by hydraulic fracturing comprising the steps of pumping, under increasing pressure, a fracturing liquid having sand suspended therein into a confined zone in said well until said fracturing occurs, maintaining a decreased pressure on said fracturing liquid after fracturing occurs, subsequently injecting into said formation at a pressure and an injection rate no greater than one-half the average pressure and the average injection rate used during said fracturing a first overflushing liquid having a viscosity sufficient to carry away from the portion of said formation adjacent said well particles abraded loose during said fracturing, and then injecting into said formation at a pressure and an injection rate no greater than one-half the average pressure and the average injection rate used during said fracturing a second overflushing liquid having a viscosity appreciably lower than said first overflushing liquid to displace said first overflushing liquid from the portion of said formation adjacent said well bore.

2,859,820
METHOD OF REDUCING WATER PRODUCTION IN OIL WELLS

Donald E. Trott, Dallas, Tex., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application May 7, 1957
Serial No. 657,481
6 Claims. (Cl. 166—22)

1. The method of reducing the flow of water into a well penetrating an earth formation having zones producing both oil and water which comprises the steps of introducing into said well a pumpable mixture of a water-insoluble, oil-soluble particulate material and a non-hydrocarbon soluble fluid carrier, pumping said mixture into contact with said formation under sufficient pressure to stop fluid flow from both said oil and water zones of said formation into said well, continuing said pumping of said mixture under pressure into said formation until said particulate material is displaced into said formation to seal off both said oil and water producing zones, then permitting oil in said oil producing zone to dissolve said particulate material from said oil producing zone, then injecting a hydraulic fracturing liquid into said well and increasing the pressure on said fracturing liquid to preferentially fracture said oil producing zone relative to said water producing zone.

2,859,821
METHOD OF INCREASING PERMEABILITY OF SUBTERRANEAN FORMATIONS BY HYDRAULIC FRACTURING

Donald E. Trott, Gainesville, Tex., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application September 8, 1953
Serial No. 379,077
4 Claims. (Cl. 166—42)

1. The method for increasing the productivity of a subterranean formation penetrated by a well by hydraulic fracturing comprising the steps of pumping a fracturing liquid having sand suspended therein into a confined zone in said well and progressively increasing the concentration of said sand in said liquid per unit volume of said liquid during said pumping, and continuing said pumping until said fracturing occurs, the concentration of said sand in said liquid varying from substantially one-quarter pound of sand per gallon of liquid to substantially five pounds of sand per gallon of liquid during said pumping.

2,859,822
COMPOSITION FOR SEALING PERMEABLE FORMATIONS

James M. Wright, Pittsburgh, Pa., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Application April 25, 1957
Serial No. 655,017
14 Claims. (Cl. 166—42)

1. A composition suitable for temporarily sealing flow channels in an oil-producing formation penetrated by a well comprising a carrier liquid having dispersed therein solid hexachlorocyclohexane, said carrier liquid having a viscosity of at least about 30 centipoises to support said solid hexachlorocyclohexane, and said hexachlorocyclohexane having a particle size distribution in which 0 to about 75 percent of the particles are in the range passing a number 4 sieve and retainable on a number 10 sieve, from about 15 to about 90 percent are in the range passing a number 10 sieve and retainable on a number 40 sieve, and from about 10 to about 80 percent are in the range passing a number 40 sieve and retainable on a number 100 sieve.

13. The composition of claim 1 in which said carrier liquid is water.

2,859,823
WELL ADAPTER

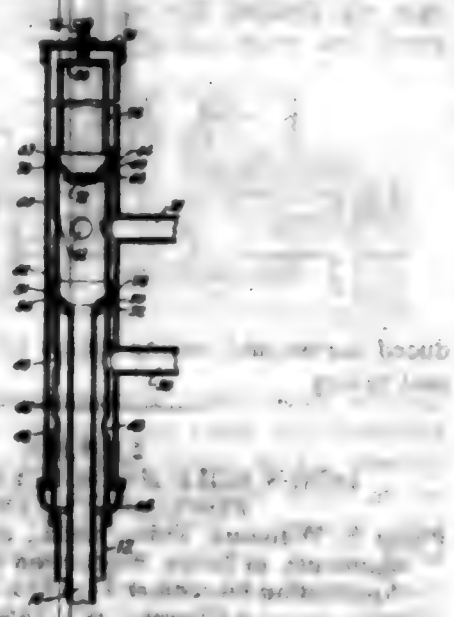
Gerald F. Bauer, Westville, Ind.

Application March 8, 1956, Serial No. 570,255
13 Claims. (Cl. 166—88)

1. An adapter for a well having a vertically disposed suction pipe therein, comprising a tubular casing, a lower end member joined to said casing and having a hole longitudinally therethrough, means defining an opening in the side wall of the casing for a suction pipe, means de-

end of the casing and provided with a first annular recess agent has been substantially completely discharged from

fining an opening in the side wall of the casing for a pressure pipe disposed between said first opening and said end member, a perforated sleeve resting on said member and extending to a point between said openings, an annular seal in said casing between said openings supported by said sleeve, a tapered member having a passage therethrough and adapted to seat on said seal and to support the vertical suction pipe in the well, a perforated sleeve resting on the upper end of said tapered member, a seal



in said casing between said suction opening and the upper end of said casing supported by said last mentioned sleeve, a tapered member adapted to seat on said last mentioned seal, a cap for said casing, a member interposed between said cap and said last mentioned tapered member for urging said tapered member against said last mentioned seal, and a screw in said cap for varying the pressure applied by said interposed member on said tapered member.

2,859,824

PIPE CARRYING ASSEMBLY FOR SEALING ASSOCIATION WITH A WATER WELL CASING

Julius G. Fischer, East Aurora, N. Y.

Application March 25, 1957, Serial No. 648,221
6 Claims. (Cl. 166—88)

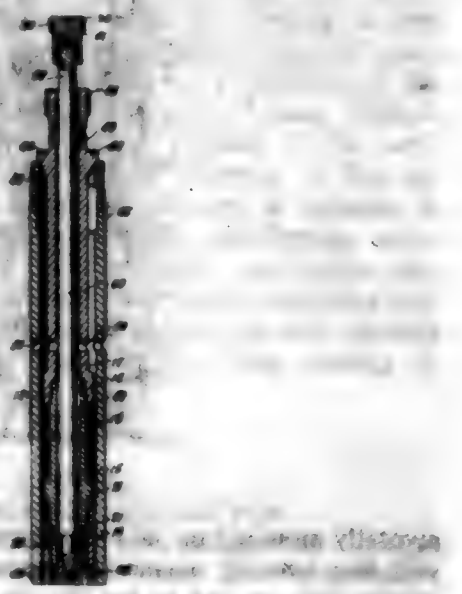
1. For use with a water well casing having an opening to accommodate a connection between an internal pipe and an external pipe, an assembly for sealing the casing against seepage through the opening which comprises, in combination: a plate of resilient metal for arrangement within the casing in confronting relation to the opening and having a normal curvature about a radius longer than the radius of curvature of the casing and also having vertical and horizontal dimensions greater than the corresponding dimensions of the opening, the connection between the pipes including an elbow from which the internal pipe is suspended and which has a horizontal arm, the plate having an opening through which the arm extends to project forward beyond the plate and the arm being secured to the plate in sealed relation adjacent the wall of the opening in the plate, a sheet of flexible resilient sealing material substantially co-extensive in area with the plate and fitted upon its convex face, the sheet having an opening through which the arm extends, a bar arranged externally of the casing and positioned to extend across the opening in the casing and to bear upon the casing at opposite sides of its opening, the plate being initially positioned to overlie the casing above, below and laterally beyond its opening and with its vertical edges impinging upon the inner face of the casing, the plate thereby initially delimiting a clearance space through which it may be sprung, and means manually actuated externally of the casing, reacting against the bar and connected to the plate for causing the springing of the plate as initially positioned into a curvature conformable to the curvature of the casing and for camming the casing and the plate as so sprung to cooperate in applying sealing pressure clamp-wise to the sheet throughout the areas in which the plate overlies the casing.

2,859,825

WELL CONTROL AND ANCHORING DEVICE

Lowell M. Wilhelt, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Application April 20, 1953, Serial No. 349,771
27 Claims. (Cl. 166—133)



23. A well device including: an elongate body having an upper non-expansible section and a lower section; said sections having communicating flow passages, said lower section having a lower outwardly expansible resilient locking portion, said upper section having an outwardly extending external flange adjacent the upper end thereof and integral therewith providing a downwardly facing stop shoulder which is adapted to engage an upwardly facing internal stop shoulder within the bore of a well string through which said body may be lowered to limit downward movement of said body; and an elongate member extending through and slidable longitudinally of said upper and lower sections and having a downwardly and outwardly extending annular shoulder adapted to enter into the lower end of said lower section to expand said resilient locking portion upon upward movement of said elongate member relative to said sections; said body and said elongate member having co-engageable stop shoulders for limiting upward movement of said elongate member relative to said body.

2,859,836

CEMENTING COLLAR FOR DRILLING WITH CASING

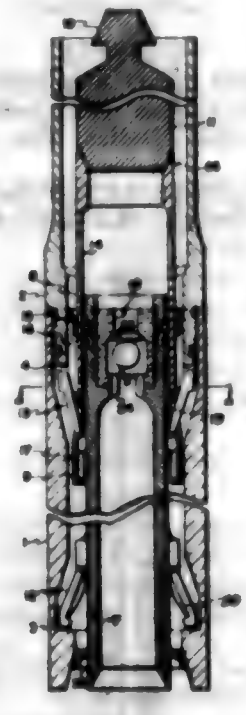
John E. Eckel, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company

Application October 11, 1954, Serial No. 461,310
2 Claims. (Cl. 166—136)

1. An apparatus for cementing casing in a bore hole which comprises a collar member attachable to the lower

the flange on the drive shaft, a cylindrical wall co- air, a moisture detraining assembly including a stack above

end of the casing and provided with a first annular recess presenting a downward facing shoulder and having a downward and inward taper below said shoulder, said collar member also provided with a second annular recess spaced vertically below said recess presenting an upward facing shoulder and having an upward and inward taper above said upward facing shoulder, a sleeve member adapted to move within said casing and said collar member, a barrel member slidably fitted within said sleeve member, first extensible latching means pivotally mounted to said barrel member and adapted to engage said downward facing shoulder through ports provided within said sleeve member, second extensible latching means



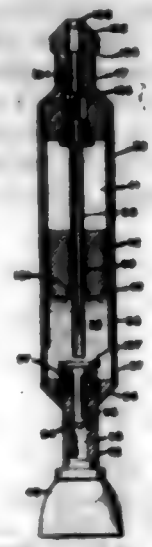
pivotally mounted on said barrel member vertically below said first latching means and said sleeve and adapted to engage said upward facing shoulder, resilient means urging each of said latching means into said recesses, a packer on the exterior of said barrel member to seal the annular space between said barrel and said collar, a second packer positioned exterior of said sleeve to seal the annular space between said sleeve and said casing, means attached to said sleeve to retract said first latching means from said first recess upon upward movement of said sleeve relative to said collar, and check valve means positioned interior of said barrel adapted to enable fluid to flow selectively downward therethrough.

2,859,827
APPARATUS FOR TREATING WELLS

Lloyd E. Elkins and Benic P. Vincent, Tulsa, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware

Application December 18, 1953, Serial No. 397,322
8 Claims. (Cl. 166—165)

2. An apparatus for dispensing a treating agent in the well fluids flowing up a tubing in a well comprising a container which forms a chamber for said treating agent, a restricted discharge port in said container to permit said treating agent to flow into said well fluids, displacing means in said container for forcing said treating agent through said port into said well fluids, an expansible flexible sealing means mounted on said container, and means actuated by said displacing means when said treating agent has been substantially completely discharged from said chamber to produce expansion of said sealing means against the inner wall of said tubing when said treating agent has been substantially completely discharged from said chamber, whereby a pressure differential is pro-

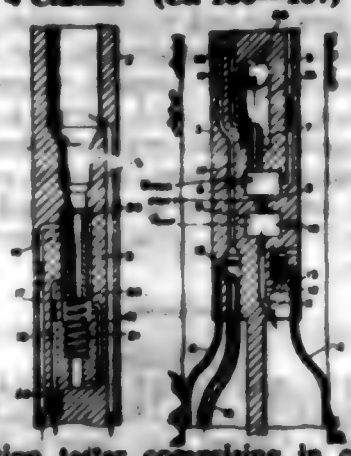


duced across said sealing means to lift said container up said tubing.

2,859,828
DOWN HOLE HYDRAULIC PUMP FOR FORMATION TESTING

Phillip S. Williams, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company

Application December 14, 1953, Serial No. 398,010
4 Claims. (Cl. 166—187)



1. A formation tester comprising in combination: a tubular support extending downwardly into a bore hole when in use, an inflatable packer fixed to the lower end portion of said support, a first conduit extending from the exterior surface of the packer through the inflatable packer to the interior of said support, a second conduit extending from the interior of said support through a cavity in said support to the exterior surface of said support, a pump supported by said support, an inflation conduit means extending from the exterior of said support through said pump to the interior of said packer, a hydraulic motor supported by said support and adapted for driving said pump, an inlet conduit extending from the bore of said support to said motor, an exhaust conduit extending from said motor through a jet nozzle to said cavity operative to produce an aspirating effect at said nozzle to force a stream of fluid inwardly through said first and second conduits when driving fluid is passing through said motor.

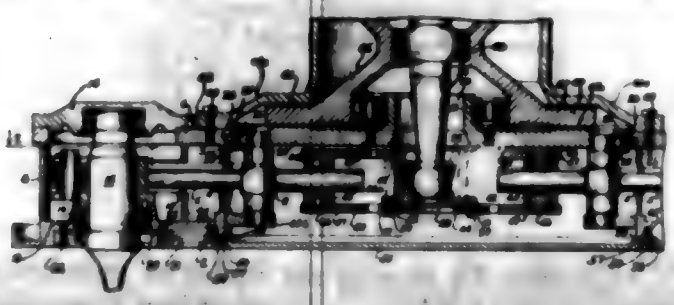
2,859,829
VERTICAL AXIS CYCLOIDAL PROPELLERS

Hans F. Mueller, Playa Del Rey, Calif., assignor to Vertical Axis Propellers, Inc., Renton, Wash.

Application March 2, 1956, Serial No. 569,393
3 Claims. (Cl. 170—147)

1. A vertical axis propeller assembly comprising a vertical drive shaft having a large central opening therethrough and a flanged lower portion, upper and lower ring plates, the upper ring plate being secured to

the flange on the drive shaft, a cylindrical wall connecting the upper and lower ring plates, the cylindrical wall having a plurality of arcuate openings, propeller shafts supported on the plates, the propeller shafts carrying propellers, propeller adjusting rods extending through the arcuate openings in the cylindrical wall and connected to the propellers for controlling the pitch of the propellers, a supporting plate mounted on the upper ring plate, a closure plate mounted on the lower ring plate, a steering ring supported beneath the supporting plate, the steering ring having upper and lower



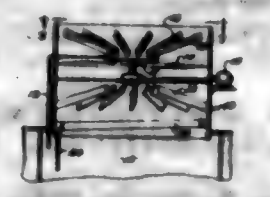
plates removably secured together, cross head bearings mounted between the steering ring plates and receiving the inner ends of the said rods, means in the steering ring for reciprocating the rods, the upper plate of the steering ring having a bearing therein, a control lever extending vertically through the opening in the drive shaft and having its end in the said last named bearing, means for removably securing the upper steering ring plate to the said supporting plate, whereby the closure plate and the lower of the steering ring plates may be removed to provide access to the interior of the steering ring for inspection or repair.

2,859,830
VIBRATORY FLEXIBLE SILENCERS
Henry S. Heller, Sidney, British Columbia, Canada
Application July 22, 1955, Serial No. 523,834
6 Claims. (Cl. 181—49)

1. An internal combustion engine exhaust gas silencer comprising a pipe for flow of pulsating gas therethrough, and a hollow body connected to said pipe and including a damper wall of pliable resilient elastomer material spaced from said pipe, disposed generally transversely of the direction of flow of gas through said hollow body for impingement thereagainst of gas flowing through said hollow body, and slit over a length substantially greater than the maximum width of said pipe to define thin deflectable straight opposite edge portions flutterable by passage of such pulsating gas past them through said damper wall to reduce the noise of such gas.

2,859,831
COOLING TOWER MIST ELIMINATOR
Robert L. Schaick, Whittier, and William D. Lanier, Garden Grove, Calif., assignors to The Fluor Corporation, Ltd., Los Angeles, Calif., a corporation of California
Application January 9, 1956, Serial No. 557,918
9 Claims. (Cl. 183—22)

1. In an induced draft water cooling tower having a vertically extending cooling chamber within which water is passed downwardly in contact with upwardly displaced air, a moisture detraining assembly including a stack above said chamber having a vertical axis, a fan within the stack having blades extending radially from said axis and rotating to displace air from said chamber in a high velocity course of flow upwardly into the stack and circularly spaced baffles underlying the blades and projecting lengthwise within the stack inwardly toward the axis thereof into the flow presenting thereto an extended surface acting to deflect the flow in a spiral course whereby entrained water particles are caused to impinge upon said surface and separate from the flow, the major lengthwise extents of each fan blade and baffle underlying said blade during fan rotation having chordwise extending cross sections substantially normal to the lengthwise ex-



tents of the blades and baffles respectively, said sections being angled in the same angular direction with respect to vertical lines therethrough, said fan rotating so that each blade lower edge passes in sequence over the upper and lower edges of each baffle whereby spiraling of the flow is substantially reduced, the stack having reduced horizontal cross sectional area in relation to the horizontal cross sectional area of said chamber so that air flow in the stack has increased velocity in relation to air velocity in said chamber, means distributing water into the air within said chamber below said baffles, and means above said water distribution means receiving separated water and conducting it down into said cooling chamber out of contact with the air stream flowing up through the stack.

2,859,832
ENTRAINMENT SEPARATOR
Henry G. Lenhemm, Clifton, N. J., assignor to Chicago Bridge and Iron Company, Chicago, Ill., a corporation of Illinois
Application April 27, 1954, Serial No. 425,911
5 Claims. (Cl. 183—79)

5. A vapor-liquid entrainment separator comprising a pair of concentric cylindrical inner and outer walls defining a central chamber and an annular chamber between said walls, a pair of spaced flanges interconnecting said inner and outer walls and providing top and bottom closures for said annular chamber, a closure secured to the top of said inner wall to close the top of said central chamber, the bottom of said central chamber forming an inlet opening through which vapors containing entrained liquid can enter said separator, a radial partition extending through said annular chamber from said inner wall to said outer wall, said inner wall being provided with a vertically elongated opening, one side of which is located adjacent to one side of said partition, and said outer wall being provided with a discharge connection adjacent to the other side of said partition, whereby vapors entering said central chamber flow through said inner wall opening, circumferentially around said annular chamber and out said discharge connection, said outer wall also being provided with a liquid drain connection located below said vapor

discharge connection and communicating with said annular chamber, a planar radial baffle secured to the vertical side of said opening opposite said partition and extending radially into said annular chamber, whereby vapors flowing from said central chamber through said opening are forced against said outer wall to promote separation of entrained liquor therefrom, a liquid-diverting baffle secured to the inner surface of said outer wall adjacent to and upstream of said discharge connection, said last-named baffle being of channel-shaped cross-section with the open side of said channel confronting the bottom of said annular chamber and sloping downwardly in the direction of vapor flow between said vapor connection and said drain connection to divert separated liquid toward said drain connection.

2,859,833

RECOVERY OF ACETYLENE FROM GASES, AND ACETYLENE-N-SUBSTITUTED PYRROLE COMPOSITIONS

William T. Nelson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application August 23, 1954
Serial No. 451,710
10 Claims. (Cl. 183—115)

1. A solution of an acetylene in a compound of the formula

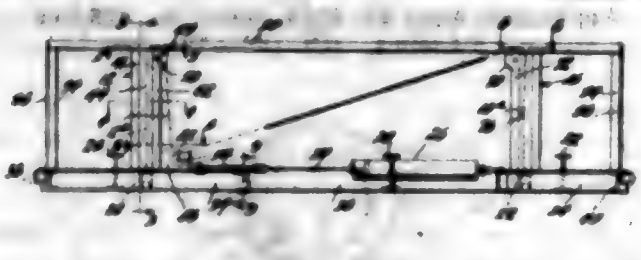
wherein R is selected from the group consisting of alkyl groups and the acetyl group.

2,859,834

APPARATUS FOR HANDLING AND STORING PIPE

Willis L. Cotton, Hebbronville, Tex., assignor to W. L. Cotton, Inc., Hebbronville, Tex., a corporation of Texas

Application March 25, 1954, Serial No. 418,598
2 Claims. (Cl. 187—26)



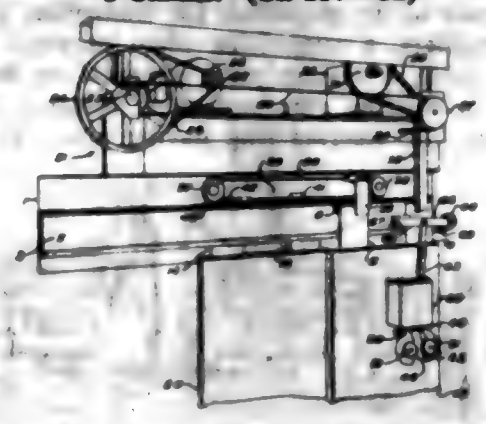
1. An elongated rigid foundation, relatively horizontally spaced pairs of uprights supported on and extending vertically upwardly from said foundation, the uprights of each of said pairs being disposed on opposite sides of said foundation, a pulley carried adjacent the upper end of each upright, a cradle transom extending between each of said pairs of uprights and arranged for vertical movement with respect thereto, and means associated with said uprights for raising and lowering said cradle transoms in unison, said means having flexible strands fixed, respectively, at one end to each end of each transom, and thence being guided over the respective pulleys, a cross head slidably supported on said foundation for horizontal movement, pulley means fixedly rotatably supported on said foundation in substantial alignment with the movement of said cross head, the said strands respectively being guided around said pulley means and anchored to said cross head, whereby horizontal movement of the cross head will produce relatively equal vertical movement of the opposite ends of the respective transoms, and power means connected to said cross head for horizontally moving the cross head.

2,859,835

MECHANISM FOR OPENING AND CLOSING ELEVATOR CABS AND HATCHWAYS

Joseph H. Bordas, Toledo, Ohio, assignor to Toledo Scale Corporation, a corporation of Ohio

Application February 24, 1955, Serial No. 490,188
8 Claims. (Cl. 187—52)



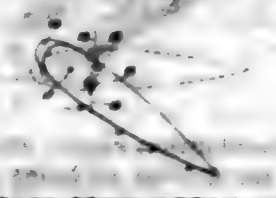
7. Mechanism for opening and closing an elevator cab and an elevator hatchway, said mechanism comprising, in combination, a reversible motor mounted upon said cab, a cab door moved in one direction when said motor is turning clockwise and in the opposite direction when said motor is turning counterclockwise, a hatchway door corresponding to said cab door, a vertically extending vane carried by the hatchway door, a pair of rollers which embrace said vane without touching said vane when said cab door is completely closed, and means for causing said pair of rollers to grip said vane upon initial opening movement of said cab door, said means including an incline fixed upon said cab, a straight lever having a fulcrum movable with said cab door, a cam roller movable up said incline, and a bell crank lever carrying one of said pair of rollers and linked to said straight lever to move the roller carried thereby toward the other roller of the pair as said cam rollers ascends said incline.

2,859,836

VIBRATION DAMPER FOR TOWED CABLES, PERISCOPES AND THE LIKE

Bernard A. Wiener, Washington, D. C.

Application February 28, 1955, Serial No. 491,231
6 Claims. (Cl. 188—1)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In combination with an object subject to vibration when moving through a fluid medium, a vibration damper for said object, and means mounting said damper on said object for free rotational movement thereon, said damper comprising a streamlined fairing having a blunt forward end and a tapering rearward end, the point of attachment to said mounting being rearward of the center of gravity of said fairing, the contour of the fairing being such that upon a movement of said object transverse to the moving fluid, the movement of the object is dampened.

2,859,837

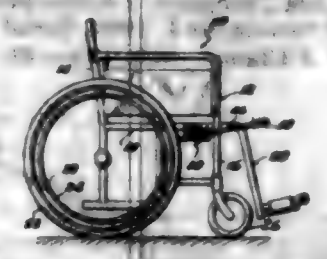
BRAKE FOR WHEEL CHAIR

William E. Mize, Ladoga, Ind., assignor, by mesne assignments, to Institutional Industries, Inc., a corporation of Ohio

Application June 13, 1956, Serial No. 591,108
14 Claims. (Cl. 188—2)

9. In a wheel chair provided with a pair of vertical side frames each rotatably mounting a drive wheel carry-

ing a resilient tire and at least one side frame having a horizontal, tubular cross-bar secured intermediate the ends of the frame; a brake mechanism comprising an integral bracket having a curved seat at the upper end thereof for complemental engagement with said cross-bar and fastening members for securing said seat flush with the cross-bar, said bracket including a horizontally arranged channel-shaped plate spaced below said seat and opening downwardly, an elongate bar slidably mounted on said plate below the connecting web thereof for linear



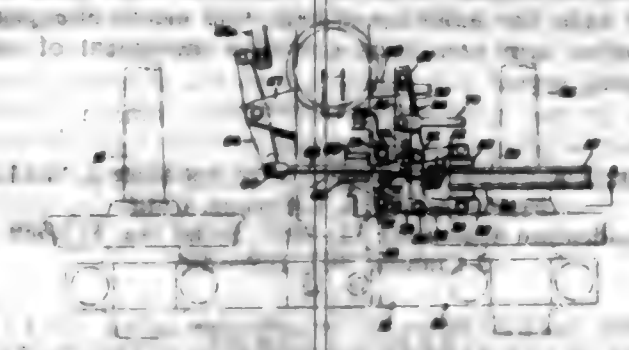
reciprocable movement relative to the adjacent drive wheel, a brake shoe secured to the bar between the drive wheel and said bracket, a manually operable lever, and a toggle linkage interconnected between said lever and bar, said lever being pivotally mounted on the bracket and movable between a first position spacing the brake shoe from the tire to a second position wherein said shoe is depressed into the periphery of said resilient tire, the resiliency of said tire acting through said bar and said toggle linkage to lock said lever in said second position.

2,859,836

ROTOR BRAKE ACTUATING MECHANISM

Carl E. Tack, Chicago, and Fred E. Bachman and George W. Crabtree, Granite City, Ill., assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application June 16, 1953, Serial No. 362,049
9 Claims. (Cl. 188—59)



1. In a brake arrangement for a railway car truck having spaced wheel and axle assemblies, side frames supported therefrom and a bolster supported from the frames; the combination of at least one rotor connected to each assembly and rotatable therewith, pairs of brake shoes disposed on opposite sides of and engageable with the rotors of the respective assemblies, a pair of bell cranks associated with each pair of brake shoes, each of said cranks including a brake arm connected to a related brake shoe, the brake arm of one of said cranks being rigidly connected to its related shoe, the arm of the other crank being pivotally connected to its related shoe, each of said cranks having an actuator arm angularly related to its brake arm, a pair of links having corresponding ends pivoted to the bolster and having opposite corresponding ends pivoted to opposite ends of the actuator arm of said one crank to form a linkage parallelogram between the bolster, links, and last mentioned actuator arm, wherein the last mentioned actuator arm is movable along a line parallel to the rotational axis of the related rotor, the actuator arm of the other crank being pivoted at one end to the actuator arm of said one crank and to one of said links by a common pivot, a live lever pivoted to the other end of the actuator arm of said other crank, a dead lever connected to a corresponding end of the corresponding crank in the other pair of cranks associated with the rotor of the other assembly, a rod interconnecting the live and dead levers, and actuating means connected to the live lever and operable to urge each linkage parallelogram to move its related brake shoes into engagement with its related rotor.

2,859,839

COMBINATION HYDRAULIC AND MECHANICAL BRAKE

Maurice A. Thorne, Detroit, and Lothrop M. Forbush, Ferndale, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 21, 1953, Serial No. 399,524
3 Claims. (Cl. 188—78)

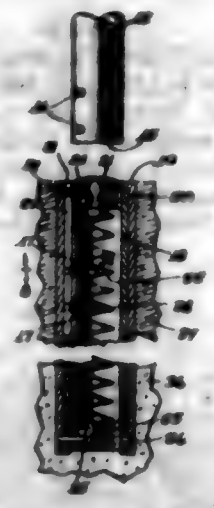
1. In a motor vehicle brake mechanism, the combination of, a non-rotatable axle, a wheel rotatably supported on said axle, a brake drum carried on said wheel coaxial thereof, a brake shoe and cylinder support member having a hydraulic actuating cylinder with brake shoe actuating piston means therein and a support leg projecting substantially radially from one side of the cylinder and an anchor pin carrying boss projecting substantially radially from the opposite side of the cylinder, a slot in said boss parallel with and radial of the axis of said cylinder to receive adjacent ends of brake shoes, an anchor pin in said boss projecting through said slot, a pair of brake shoes within said drum for frictionally engaging said drum each having a substantially radially disposed web with each of adjacent ends of the webs of the shoes at one end thereof in said slot and engaging said anchor pin the portion thereof in said slot and provided with retraction spring means to effect operative connection between the said shoes and said pin and having opposite adjacent ends engaging an adjusting device, a shoe support member on said shoe and cylinder support member substantially in the plane of said leg and projecting from each side of the leg at substantially a right angle thereto forming thereby a substantially T-shaped structure and provided with shoe supporting legs at each end of said guide member extending axially of said axle and having their ends in a common plane extending substantially through the plane of the outboard vertical side of said slot in said boss and engaged by the webs of said shoes to dispose said webs in said common plane normal to said axle and maintain the said shoes positioned to frictionally engage said drum, and spring urged link means between said cooperating shoe supporting legs at each end of said shoe support member with the link means extending between said shoe support member and the shoe web engaged by the said shoe supporting legs to

flange at its top which projects toward the wall, said top flange having an upstanding weather flange supported

drum extending laterally therefrom; a friction clutch

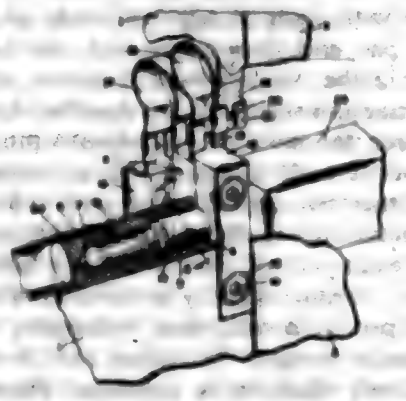
retain the shoe webs in engagement with the said shoe supporting legs to maintain the aforesaid structural alignment.

2,859,840
POST AND SUPPORT
Karl S. Fiedler, Fort Dodge, Iowa
Application January 27, 1953, Serial No. 333,495
3 Claims. (Cl. 189—28)



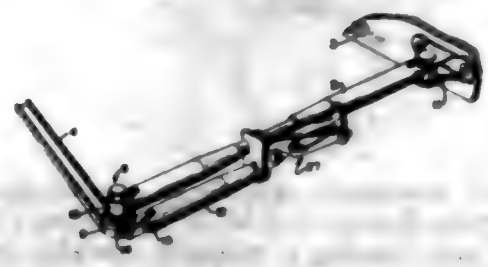
1. A display apparatus comprising a socket having an upper end opening, said socket being adapted to be carried in a fixed support; a detachably securable post in said opening in positive interengagement therein, said socket having a closure moveable in said socket to close said opening when said post is detached; bias means for moving said closure to a closing position; stop means for limiting movement of said closure, said post and socket having mutually engageable pin and slot means which interengage and positively lock said post in a longitudinal position relative to said socket when said post is inserted in said socket and rotated therein, said closure being operable from closing position to idle position when said post is inserted in said socket and means common to said socket and closure for limiting movement of said closure to idle position whereby to locate said pin and slot means in position for engagement.

2,859,841
QUICK DISCONNECT STRUCTURAL FASTENER
David A. Reed, Jr., Anaheim, and Donald E. Keith, Fullerton, Calif., assignors to North American Aviation, Inc.
Application January 3, 1956, Serial No. 556,990
6 Claims. (Cl. 189—36)



1. A structural fastener comprising first and second bolts each having a shank portion and an extending tapered head portion, said shank portions each being provided with a threaded portion adapted to be threaded into a structural member, the tapered head portions of said bolts being in opposed juxtaposed position, first and second detachable clamp elements extending at right angles to said bolts on either side of said head portions, clamping ridges on the juxtaposed internal surfaces of said clamp elements contacting said tapered head portions, and bolt means engaging said elements at right angles to said bolts and said elements clamping said elements and the juxtaposed head portions of said bolts into operative engagement.

2,859,842
HEAT RELEASABLE DEVICE FOR HOLD OPEN DOOR CLOSERS
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Application November 1, 1954, Serial No. 466,020
4 Claims. (Cl. 189—49)



2. A heat releasable device for use with a door closer having a pair of operating arms, and a free pivot connecting said operating arms, comprising an auxiliary arm mounted for swinging about the axis of said pivot, said auxiliary arm and one of said operating arms having frictionally engageable surfaces for preventing relative movement therebetween when said surfaces are so engaged, a fixed lever secured to said auxiliary arm at a point spaced from said pivot, a movable lever centrally pivoted to said fixed lever, arm engaging means at one end of said levers operable by pivoting said movable lever in one direction for connecting said auxiliary arm to the other of said operating arms, a link, yieldable at a predetermined temperature, connecting the other ends of said levers for preventing pivoting of said movable lever in the other direction, and a spring urging said movable lever in said other direction, whereby, when said link yields under the influence of heat, said means disengages said other arm permitting operative movement of said operating arms.

2,859,843
SURFACE-COVERING STRUCTURE FOR A WALL
Francis E. Allen, Lafayette, Calif.
Application September 12, 1955, Serial No. 533,689
3 Claims. (Cl. 189—88)

1. In a surface covering structure for a wall, in combination, a pair of architectural panels arranged one above the other in front of a wall, the lower panel having a front face provided with a rearwardly extending top

said links by a common pivot, a live lever pivoted to the

the shoe web engaged by the said shoe supporting legs to

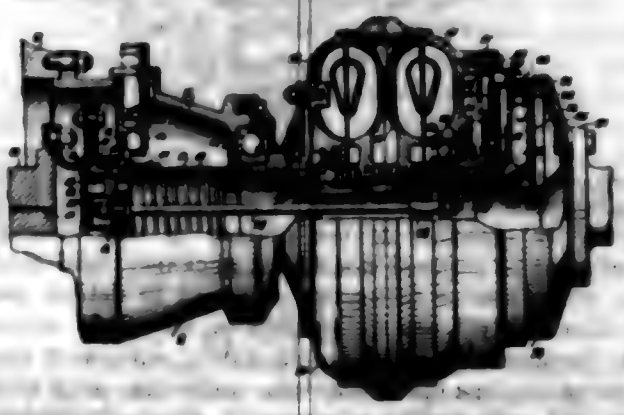
flange at its top which projects toward the wall, said top flange having an opstanding weather flange connected thereto and projecting upwardly therefrom adjacent to the wall, the upper panel defining a front face fashioned with a rearwardly extending bottom flange at its bottom, said bottom flange projecting toward the wall, said bottom flange of the upper panel being disposed adjacent to said top flange of the lower panel and having a slot formed therein, a mounting clip anchoring the panels to the wall, said clip having an upright main body portion secured to the wall, said clip having side finger portions extending downwardly from said main body portion in spaced relation to each other, said side finger portions each having a side finger for supporting a panel, said side fingers being spaced from each other and being formed at the ends of the side finger portions, a central panel positioning finger connected to said main body portion and positioned intermediate said side fingers, said central finger being disposed at a higher elevation on the clip than said side fingers, said side fingers extending forwardly from said finger portions and engaging with an under surface of said top flange of said lower panel to support the latter panel, said finger portions contacting with a rear face of the weather flange of said lower panel so as to prevent the latter flange from moving toward the wall, said central finger having a forwardly and downwardly inclined portion overlying the top of said weather flange, said central finger having a hook-shaped portion comprising a back, bottom and front extending downwardly from said inclined portion and in spaced relation to said side finger portions, the rear surface of said back contacting with an adjacent front face of said weather flange and holding this flange from moving away from said side finger portions and the wall, the bottom of said hook-shaped portion contacting the upper surface of said top flange of said lower panel above said fingers and cooperating with said fingers in gripping this flange and supporting said lower panel against vertical movement, the front of said hook portion extending upwardly through said slot in said bottom flange of said upper panel, a rear surface of the front of said hook contacting with a rearmost side of said slot in said bottom flange to thereby restrain said bottom flange from moving away from the wall, said back of said hook having a forward surface contacting a rear edge of the latter bottom flange to hold this flange from moving toward the wall.

2,859,844

FLUID AND MECHANICAL COUPLING WITH CENTRIFUGAL AND FRICTIONAL CLUTCHES

Clinton E. Hooper, New Fairfield, and Jacob A. North, Norwalk, Conn., assignors to Dorman Helicopters, Inc., Danbury, Conn., a corporation of Delaware

Application May 14, 1953, Serial No. 355,688
13 Claims. (Cl. 192—3.2)



1. A fluid and mechanical coupling comprising a fluid coupling having a driving element and a fluid driven element; a driven mechanism including a flange rotatably mounted relatively to the driving element, and a clutch

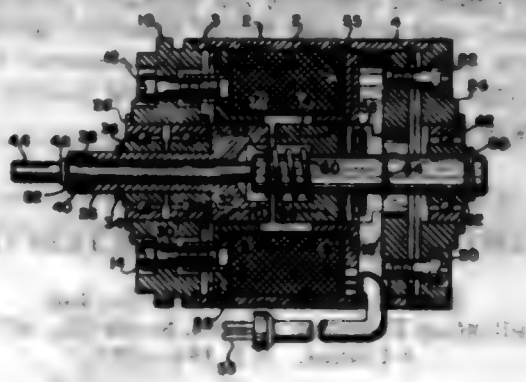
drum extending laterally therefrom; a friction clutch connecting the fluid driven element with the clutch drum of the driven mechanism, means to operate the friction clutch, and a centrifugally operated clutch for connecting the driven mechanism and the driving element including locking means mounted for radial movement upon the flange under the influence of centrifugal force, spring means propelling the locking means inwardly, and a notched means carried by the driving element for engagement by the locking means; and the driven mechanism including means connected with the clutch drum for axial movement relatively thereto for thrust elimination.

2,859,845

ELECTROMAGNETIC CLUTCH

Rudolph Bachman, Babylon, N. Y., assignor to Sterling Precision Instrument Corporation, Flushing, N. Y.

Application March 3, 1955, Serial No. 491,888
4 Claims. (Cl. 192—18)



1. A low torque precision electromagnetic clutch apparatus comprising a tubular casing; a first end member enclosing one end of said casing; a second end member enclosing the other end of said casing; a first shaft extending through said first end member; means to prevent axial movement of said first shaft; a first magnetizable member extending radially from said first shaft and rotatable therewith; a first clutch face carried by said first magnetizable member; a second shaft coaxial with said first shaft extending through said first end member; means to prevent axial displacement of said second shaft; a magnetizable armature member movable axially with respect to said second shaft and rotatable therewith; a second clutch face carried by said armature member, in confronting relationship to said first clutch face; resilient means biasing said armature apart from said first magnetizable member so as to prevent engagement of said clutch faces; and electromagnetic flux generating means for overcoming the biasing effect of said resilient means and axially moving said armature member so as to cause engagement of said clutch faces.

2,859,846

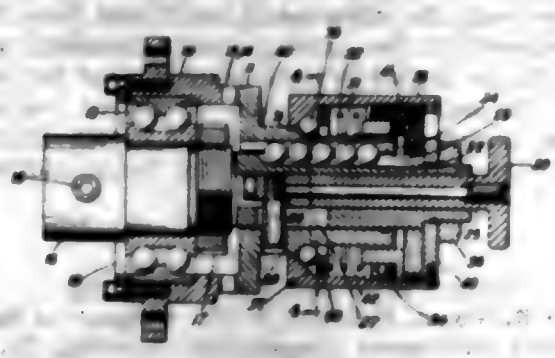
OVERLOAD RELIEF MECHANISM

Stanley Sheppell, West Boxford, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

Application September 2, 1955, Serial No. 532,276
3 Claims. (Cl. 192—56)

1. A torque responsive overload relief mechanism comprising a shaft; driver and driven members, one of the said members being rotatable on the said shaft and the other said member slidable axially between an engaged and a disengaged position, the slidable member being provided with a minor diameter, a major diameter and an angular abutment connecting said minor diameter to said major diameter; teeth on the said members forming a driving connection transmitting a torque load when the said slidable member is in the said engaged position; and releasable biasing means for urging the said slidable member into engagement with the said rotatable member,

said biasing means including a plurality of spherical elements normally disposed on said minor diameter and spring means urging the said spherical elements radially inwardly and against the said abutment until a predetermined torque limit is reached; the said teeth translating the said torque load into an axial force component

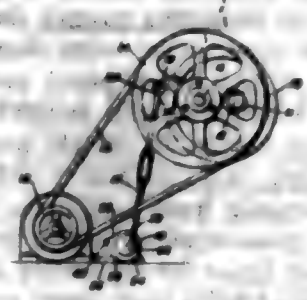


opposite in direction to the said urging means whereby the said spherical elements are displaced outwardly out of contact with the said minor diameter and the said abutment and onto the said major diameter when the torque limit is reached allowing the said slidable member to move to its disengaged position.

2,859,847
CENTRIFUGALLY ENGAGED FRICTION CLUTCH MECHANISM
Paul C. Keeler, Kendallville, Ind.
Application February 1, 1954, Serial No. 407,534
4 Claims. (Cl. 192—105)

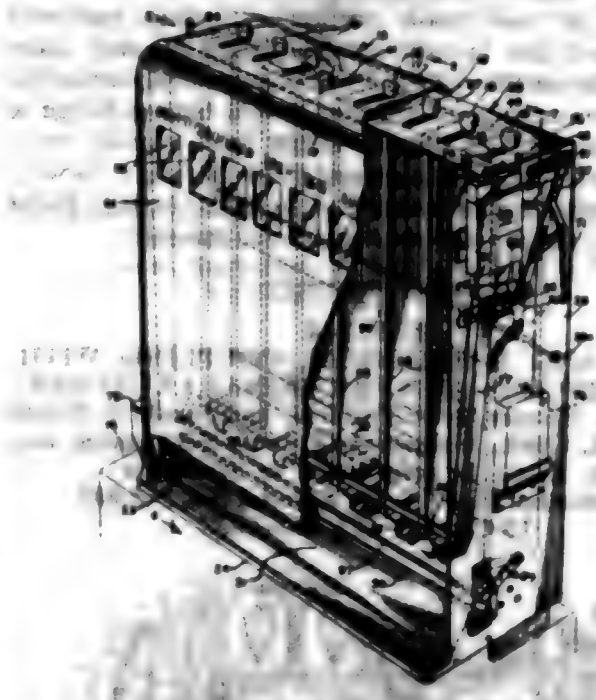
1. A clutch mechanism adapted for use with a rotating shaft, comprising: a drive head fixedly mounted on said shaft; a hub projecting centrally outwardly from one side of said drive head and fixedly mounted on said drive shaft; plurality of spaced arms radiating outwardly from said drive head, each of said spaced arms having a radial slot formed therein between the sides thereof and extending inwardly from the periphery thereof; a stud projecting through each of said arms and spanning the slot therein; a clutch plate, each of said studs being connected at one end to said clutch plate and movable axially of said drive head and rotating in unison therewith for rotating said clutch plate in unison with said drive shaft; a spring on each of said studs normally resisting axial movement of said clutch plate in one direction; a clutch housing rotatably mounted on said hub; a clutch plate in said housing engageable with said first mentioned clutch plate upon movement of said first mentioned clutch plate in one direction a predetermined distance against the tension of said spring and rotating said clutch housing in unison with said shaft; a swing lever mounted on each of said arms and swingable in one direction in response to centrifugal action; a cam surface formed on each of said studs intermediate its ends at the location of said slot for reception of one end of a swing lever upon swinging of the same in response to centrifugal action and moving said first named clutch plate axially of said head into engagement with said second named clutch plate, said cam surface lying in a plane inclined to the longitudinal axis and to a transverse axis of the stud on which formed.

2,859,848
OVERLOAD RELEASE MECHANISM
Alfred G. Bede, Wauwatosa, Wis.
Application September 24, 1954, Serial No. 458,944
3 Claims. (Cl. 192—150)



1. In combination with a housed gear set having a torque transmitting shaft and a housing urged to rotate about said shaft by reaction of the transmitted torque, a link pivotally secured to said housing in spaced relation to said torque transmitting shaft to create a housing crank arm between said shaft and pivot; a crank disc supported for rotation and a pivotal connection between said link and said crank disc, said last mentioned pivot being spaced from the rotation axis of the crank disc to create a crank disc crank arm; detent means normally supporting said crank disc in a position wherein the crank disc crank arm is substantially parallel to the housing crank arm; and torque responsive means operable to release said detent means in response to torque in excess of a predetermined maximum.

2,859,849
COIN CONTROLLED VENDING APPARATUS
Dan Neidig, Chicago, Ill., assignor to Superior Mfg. Co., Evanston, Ill., a corporation of Illinois
Application November 29, 1951, Serial No. 258,847
5 Claims. (Cl. 194—58)

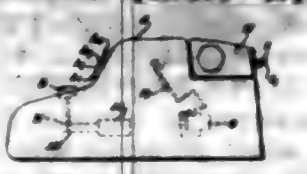


4. In a vending machine a vertically disposed magazine adapted to contain a stack of packages, ejector means reciprocably movable at the bottom of said magazine and adapted to support a stack of packages, said ejector means when moved forwardly arranged to deliver packages successively from the bottom of the stack, actuator means mounted for reciprocable sliding movement above said magazine, means operatively connecting said ejector means and said actuator means to effect simultaneous movement thereof, locking means for said actuator means comprising a member disposed forwardly of said actuator and arranged for movement in a horizontal plane, said member when in locked position preventing forward move-

base member and loading shovel, and an inclined con- ing means arranged to receive said articles in groups

ment of said actuator means, coin controlled latching means, linkage connecting said latching means to said member whereby upon release of said latching means said member is released for movement to permit actuation of said actuator means, an auxiliary magazine adapted to contain a stack of different packages, a reciprocably movable auxiliary ejector below said auxiliary magazine and arranged when moved forwardly to deliver packages successively from the bottom of the stack, a fulcrumed lever having one end pivotally connected to said member and having the other end engageable with said auxiliary ejector to move the same rearwardly to a position so that when actuated it is caused to impinge on the lowermost package, means for locking such auxiliary ejector in such impinging position, means for selectively releasing said locking means to permit said ejector to deliver a package, and spring means for urging said auxiliary ejector in a forward direction to impinge on the bottom package to deliver the same.

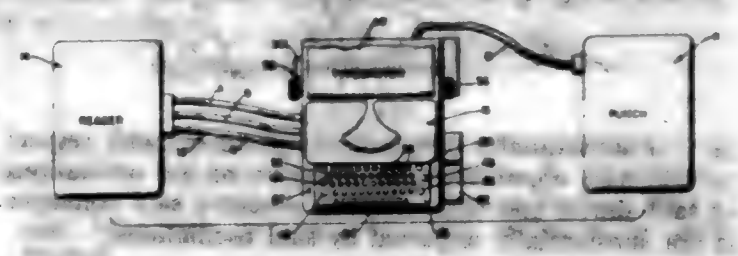
2,859,850
BUSINESS MACHINE IMPROVEMENT
Herbert Reß, Furth, Bavaria, Germany, assignor to Triumph Werke Nurnberg A. G., Nurnberg, Germany
Application May 15, 1956, Serial No. 585,037
Claims priority, application Germany May 17, 1955
8 Claims. (Cl. 197—19)



1. In an electrically operated business machine having printing members, in combination, a movable carriage member mounted on the business machine and adapted to have a paper mounted therein for printing purposes; a plurality of electrically energizable actuating members for respectively actuating the printing members upon energization thereof; energizing means connected in circuit with each of said actuating members for energizing the same whenever an energizing circuit therefor is completed; a plurality of first switching means connected in circuit between said energizing means and each of said actuating members, each of said first switching means being respectively movable between a plurality of circuit-closing and circuit-opening positions; a plurality of second switching means connected in circuit between said energizing means and said plurality of first switching means, each of said second switching means being respectively movable between a circuit-closing position for each of said first switching means, respectively, and a circuit-opening position therefor; operating means for sequentially moving said second switching means through each of said circuit-closing positions whereby when one of said first switching means and one of said second switching means are simultaneously in circuit-closing position, an energizing circuit for one of said actuating members is completed and said one actuating member is energized to actuate at least one printing member; and third switching means cooperating with said carriage member and adapted to be moved by the same between circuit-opening and circuit-closing positions for initiating the action of said operating means at a predetermined position of said carriage member.

2,859,851
SHIFT FUNCTIONS CIRCUITS
Henry L. Tholstrup, Rochester, N. Y., and John A. Skinner, Bethesda, Md.; said Tholstrup assignor to Commercial Controls Corporation, Rochester, N. Y., a corporation of Delaware
Application April 30, 1956, Serial No. 581,632
10 Claims. (Cl. 197—20)

1. In a power operated typewriter having case shift mechanism and a carriage spacing mechanism, a plurality of solenoids for controlling typewriter functions including a case shift solenoid for controlling said case shift mechanism and a spacing solenoid for controlling said carriage spacing mechanism, a source of control signals for selectively energizing said solenoids, a normally closed case shift circuit for a control signal from said signal source to said case shift solenoid, a normally open circuit to said spacing solenoid, and means operative upon energization of said case shift solenoid to open said normally closed case shift circuit and to close said normally open spacing solenoid circuit.



2,859,852
MOULDED ELEMENT PORTABLE TYPEWRITER
Fernand Albert Sulé, Meudon, France
Application July 1, 1954, Serial No. 440,656
Claims priority, application France July 3, 1953
4 Claims. (Cl. 197—22)

1. A toy type writing machine of synthetic moulded material comprising an outer casing having lateral flanges and upper panels delimiting an opening of large area, parallelly disposed axles axially carried by said flanges of the casing, type bar control levers and spacing bar supporting levers pivotally mounted on said axles, said levers having a lower portion extended beneath said axles, a slidably mounted frame located under said axles and carried by said lateral flanges of the casing, said frame having cross pieces engaged by said lower portion of the levers to control the movement of said frame when said levers are operated, controlling members integral with the rear end and the lateral sides of said frame, a slidably and pivotally mounted pawl, controlled by said member integral with the rear end of said frame, a spring urging said pawl for the return stroke of said pawl, frame and levers, a spring urged carriage and a pivotally mounted inking ribbon supporting lever controlled by said pawl, two spools rotatably supported by said lateral flanges of the casing and selectively actuated by said controlling members integral with the lateral sides of the frame during the return stroke of the latter, an arcuate axle located beneath said frame at the rear portion thereof, type bars pivotally mounted on said arcuate axle, and connecting rods connecting said type bars and said type bar control levers.

2,859,853
LOADING DEVICE
Julius Herrmann, Lemgo, Germany
Application May 25, 1955, Serial No. 510,989
7 Claims. (Cl. 198—18)

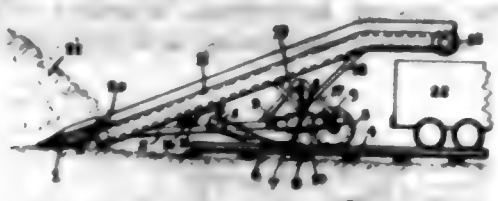
1. Loading device comprising a base member, a loading shovel connected to the forward end of said base member, means for imparting lineal oscillations to said

ed upon said orienting member so that substantially the volutions of said helicoid comprising resilient finger

and to a transverse axis of the stud on which formed.

member when in locked position preventing forward move-

base member and loading shovel, and an inclined conveyor positioned behind said loading shovel defining an upwardly inclined path of travel for material from said shovel, said conveyor being mounted on said base mem-



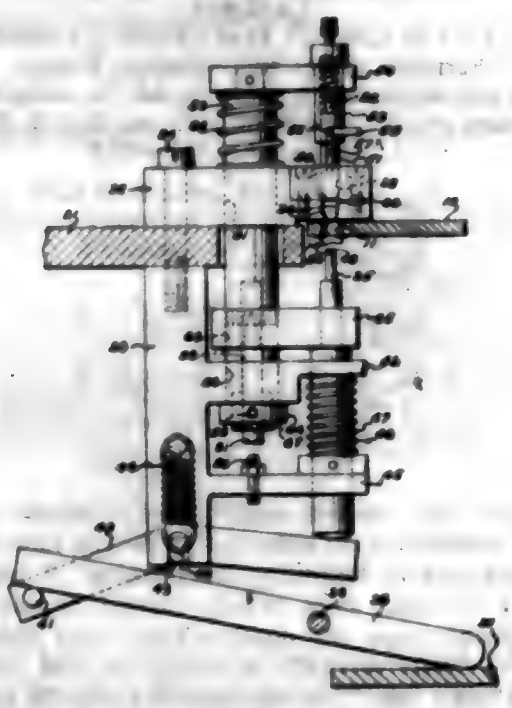
ber for substantially free limited movement with respect to said base member in the direction of the oscillations of said shovel and base member, whereby said conveyor is not substantially imparted by said oscillations.

2,859,254

ARTICLE-LOADING APPARATUS

Warren O. Simpson and Frederick L. Serafin, Indianapolis, Ind., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application June 29, 1955, Serial No. 518,784
10 Claims. (Cl. 198—26)



1. An article-loading apparatus, which comprises a carrier having a hole therethrough, a pair of gripping elements positioned on opposite sides of the carrier, means for actuating the carrier to move the hole into alignment with said gripping elements, means for moving one of said gripping elements through the hole to grip an article with the other gripping element, means operated by the moving gripping elements for locking the gripping elements together, means for moving the locked gripping elements toward the hole to move the article into the hole, and means for unlocking the gripping elements upon movement of the article into the hole.

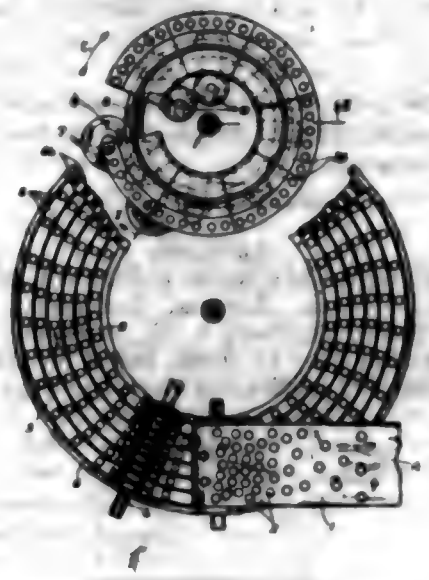
2,859,855

FEEDING ARRANGEMENT FOR FEEDING MASS PRODUCED ARTICLES TO SINGLE CONVEYING ROWS

Alfred Grillenbolt, Viersen, Germany, assignor to Hauselle-Werke Albert Henkel Aktiengesellschaft, Viersen, Germany

Application January 18, 1956, Serial No. 560,037
Claims priority, application Germany January 22, 1955
7 Claims. (Cl. 198—32)

1. In an arrangement for feeding mass produced articles to be wrapped individually, especially candies, to a wrapping machine, the combination of: allocating means adapted to receive said articles arranged in groups, feeding means arranged to receive said articles in groups from said allocating means at a transfer station, means arranged to unload the articles received from said feeding means at a discharge station spaced from said transfer station, said feeding means comprising a plurality of segments mounted for movement along an endless path leading by said transfer station and said discharge station, first driving means drivingly engaging that respective segment which in the direction of movement of said segments follows said transfer station for uniformly moving the majority of said segments at a certain speed, and second driving means arranged adjacent said transfer sta-



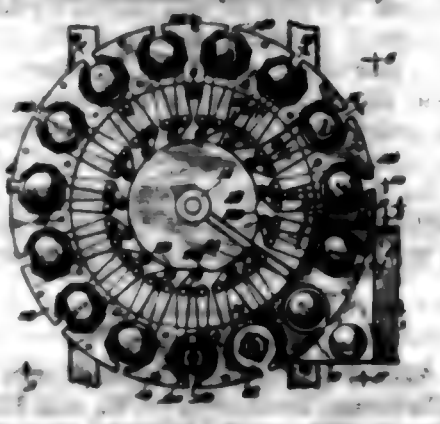
tion for moving that respective segment which is the next one to reach said transfer station to the latter in a stepwise manner at a second speed higher than said first speed to thereby move said last mentioned segment temporarily away from the respective succeeding segment and to give it a subsequent temporary rest period, said second driving means drivingly disengaging the segment last engaged thereby in response to the segment last engaged by said second driving means reaching said transfer station, said second driving means engaging the respective next succeeding segment a certain time after the disengagement from the segment last engaged thereby for repeating the cycle.

2,859,856

FRUIT ORIENTING MACHINE

Richard D. Fox, Richmond, Calif., and Henry A. Sheg, Olympia, Wash., assignors, by mesne assignments, to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Application September 2, 1948, Serial No. 47,464
24 Claims. (Cl. 198—33)



1. In a device for orienting indented fruit, a rotatable orienting member adapted to support and rotate a fruit resting thereon, said member being shaped to enter the stem indent of said fruit when in registration with said indent, means arranged to maintain a whole fruit support-

1. In a power operated typewriter having case shift

member, means for imparting lineal oscillations to said

ed upon said orienting member so that substantially the entire weight of said fruit is imposed on said orienting member, said means resisting displacement of the fruit from said member upon rotation of said member, means for rotating said orienting member to rotate the fruit and means for causing said maintaining means to grip the fruit after the orienting member has entered the stem indent of the fruit and while the fruit is supported wholly on said orienting member.

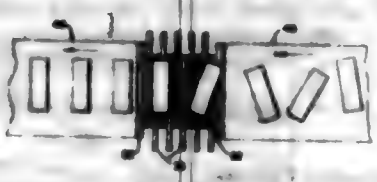
volutions of said helicoid comprising resilient finger means, and means engaging the containers in the spaces between convolutions tending to retard the movement of any container spaced ahead of a convolution until engaged by said convolution, whereby said containers are maintained in upright position and in accurately spaced relationship by said helicoid while being supported and moved by said conveyor.

2,859,857

LOAF STRAIGHTENER

Arthur B. Cady, York, Pa., assignor, by mesne assignments, to Capital Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania

Application June 20, 1956, Serial No. 592,631
6 Claims. (Cl. 198—33)



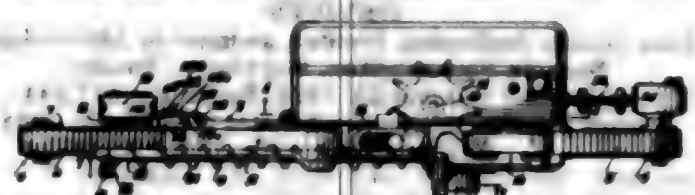
1. In an apparatus for arranging bread loaves in parallelism with respect to their long dimension, the combination of a plurality of parallel loaf supporting rollers disposed in a common plane and across which bread loaves are adapted to pass in a direction transversely of the axes of said rollers, a supporting frame for each of said rollers, a supporting frame structure for supporting said roller supporting frames, said supporting frame structure having spacer members for retaining said roller supporting frames in mutually parallel spaced relation, said supporting frame structure and spacer members restricting said roller supporting frames to movement in the axial direction of said rollers, a shaft carried by said supporting frame structure below the plane of said rollers, means for rotating said shaft, said shaft having cam means operatively associated with said roller supporting frames for reciprocating one set of alternate frames and rollers supported thereby in a direction opposite that of the other set of alternate frames and rollers supported thereby.

2,859,858

SEALING MACHINE

Harry E. Stover, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Original application September 20, 1946, Serial No. 698,124, now Patent No. 2,618,425, dated November 18, 1952. Divided and this application January 15, 1952, Serial No. 266,535
3 Claims. (Cl. 198—34)



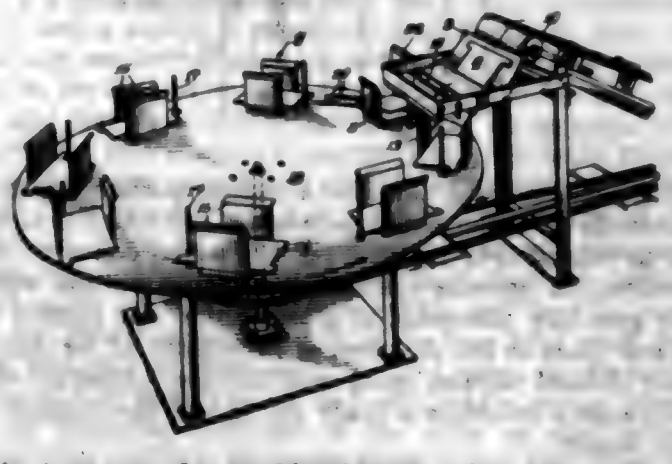
1. In a machine of the class described, an endless belt conveyor having a straight horizontal run for moving filled containers in upright position, means for spacing said containers uniformly apart on said conveyor run comprising a helicoid disposed above the level of the conveyor and extending parallel therewith and having a helical fin overlying one side margin only of the conveyor for engaging successive convolutions of said fin with successive containers on said conveyor, drive means for said conveyor and said helicoid moving them in synchronism, a device for directing each container generally laterally across said conveyor into a space between successive con-

2,859,859

BATTERY GRID STACKING APPARATUS

Herbert C. Winkel, Watervliet, Charles H. McAlpine, Coloma, and Harry H. Meschke, Benton Harbor, Mich.; said McAlpine and said Meschke assignors to said Winkel

Application March 28, 1957, Serial No. 649,093
7 Claims. (Cl. 198—35)



1. Apparatus for stacking battery grids delivered seriatim thereto, said apparatus comprising a pair of spaced-apart elongated supports for receiving successive grids, said supports including vertical walls for limiting horizontal movement of a grid in two opposed directions and horizontal ledges for supporting two opposed edge portions of a grid, a plurality of grid receptacles having two opposed walls spaced to receive grids therebetween, a rotating table for carrying said receptacles under and past said supports in a direction generally parallel to said walls and to said supports, and a plurality of upright members associated one each with said receptacles and carried by said table adjacent the trailing end of said receptacles, said upright members when carried past said supports by said table extending upwardly beyond the horizontal ledges of said supports whereby said members may engage an unsupported edge of a grid and drive such grid off said supports and into the associated one of said receptacles, one of said supports extending beyond the other of said supports in the direction of movement of said receptacles a distance greater than the corresponding dimension of the grids handled by said apparatus, whereby each grid is supported by said supports until one of said upright members advances the trailing edge of said grid beyond said other support.

2,859,860

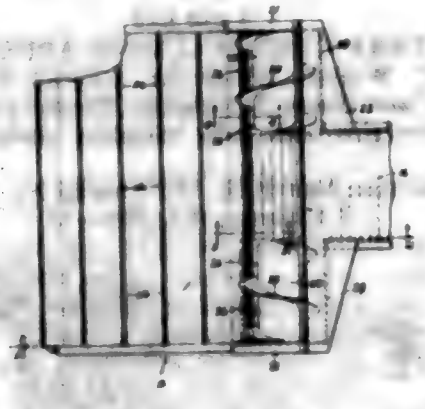
INFEED MECHANISM

James R. West, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Application May 3, 1956, Serial No. 582,546
3 Claims. (Cl. 198—104)

1. An improvement in a mechanism for feeding crop material into a housing through a feed opening therein, wherein there is provided a feed apron of greater width than said opening extending laterally on opposite sides thereof and inclined downwardly therefrom, the apron having a discharge end spaced forwardly from said opening, a relatively narrower generally horizontal infeed conveyor bridging said space and moving rearwardly

from said apron and into said opening, a pair of augers on opposite sides of said infeed conveyor and extending transverse to the direction of movement of said apron and infeed conveyor, the augers being rotatable in the same direction as the direction of movement of said apron and having flights adapted to laterally consolidate the material delivered by said apron toward said infeed conveyor, and a plurality of spaced parallel transverse slats on said apron, the improvement residing in said



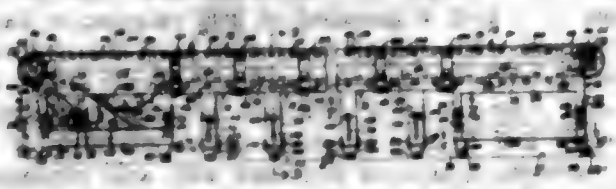
slats, wherein each slat has a central portion which is generally rectangular in cross section and which is adapted to deposit crop material on said infeed conveyor and portions on opposite sides of said central portion which are generally triangular in cross section and present inclined faces in the direction of movement of the apron, said inclined surfaces being such that they cooperate with said augers to obtain a ready transfer of the material to the augers.

2,859,861

ARTICULATED BELT CONVEYOR

Robert Thomas Sheehan, Livonia, Mich.

Application March 21, 1955, Serial No. 495,650
1 Claim. (Cl. 198—189)



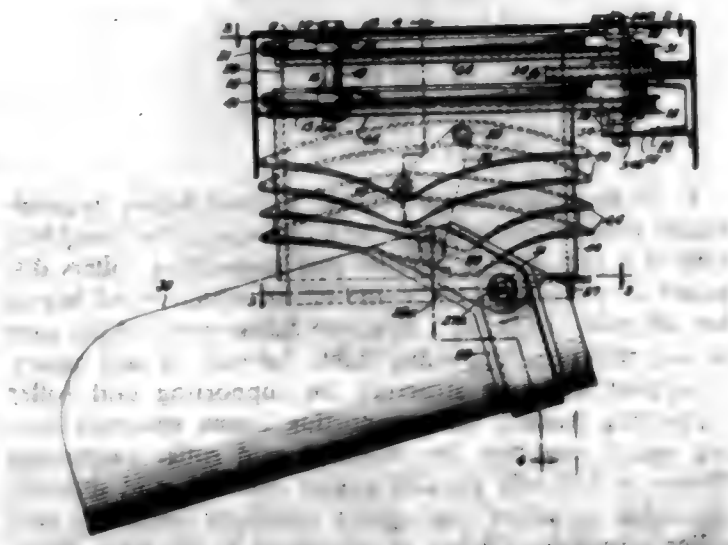
An articulated laterally-yieldable belt conveyor comprising a wheeled driving terminal car unit having a frame, a conveyor driving wheel rotatably mounted in said frame, and a prime mover drivingly connected to said driving wheel; a wheeled driven terminal car unit spaced apart from said driving terminal car unit and having a frame and a conveyor driven wheel rotatably mounted thereon; and a plurality of wheeled intermediate car units disposed between said driving and driven car units in flexibly-coupled relationship therewith and with each other, each intermediate car unit having a frame and a conveyor supporting wheel rotatably mounted thereon; and a laterally-yieldable endless wire mesh belt trained over each supporting wheel and around said driving and driven wheels in driving engagement with said driving wheel, said conveyor belt being composed of elongated multiple-looped links disposed substantially parallel to one another with the loops of adjacent links loosely and pivotally connected to one another for relative shifting out of parallelism with one another while remaining in a substantially common plane in response to their traversing a lateral bend in the path of the conveyor belt, said car units having laterally-spaced parallel guide tracks mounted therein in alignment with one another, elongated guide roller axle supports secured to the inner sides of certain of said links in longitudinally-spaced parallel relationship transversely of said belt along the entire length thereof, guide roller axles secured in pairs to said axle supports and extending perpendicularly thereto into the space between said guide tracks, and pairs of conveyor belt guide rollers rotatably mounted on said axles and guidedly engageable with said guide tracks, the spacing of said guide roller axle supports along said belt being such that at any instant at least one pair of said guide rollers is guidedly engageable with the guide tracks on each car unit, said car units being movable laterally relatively to one another so that their median lines will approximate an arc.

2,859,862

HAY DISTRIBUTOR

Albert M. Best, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Application February 9, 1956, Serial No. 564,406
6 Claims. (Cl. 198—128)



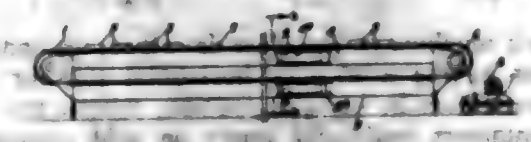
1. A device for distributing chopped hay or the like, comprising an inner sleeve, an outer sleeve surrounding said inner sleeve, means supporting said sleeves for rotation about a common generally vertical axis, a deflector pivotally connected to said inner sleeve, a cam track carried on said outer sleeve, a cam follower connected to said deflector, said cam follower engaging said cam track, means for rotating said inner sleeve and said deflector in one direction and at one speed, and means for rotating said outer sleeve in the same direction and at a different speed whereby there is a relative rotary movement between said inner and outer sleeves and said cam follower moves over said cam track, said cam track and cam follower being cooperative to oscillate said deflector at a constant frequency and amplitude as it rotates.

2,859,863

CONTROL APPARATUS FOR TRANSPORTING DEVICES

Sven Wallin, Jonkoping, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden

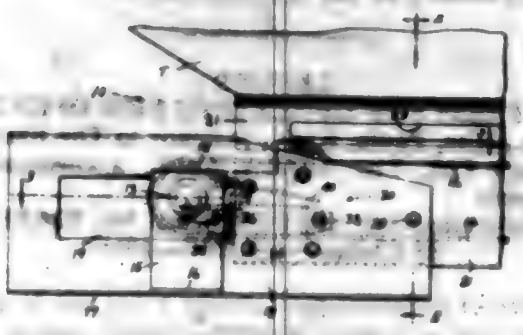
Application October 22, 1954, Serial No. 617,544
Claims priority, application Sweden October 22, 1953
3 Claims. (Cl. 198—135)



1. In a transporting device comprising an endless belt conveyor, driving means intermittently operable to drive said conveyor for transporting piece-like goods between loading and unloading points, a medium distributing box positioned directly under at least the carrying run of the conveyor, and having a perforated upper wall underlying said conveyor run, blower means operatively connected to said distributing box and including control means oper-

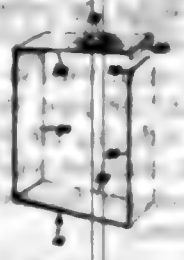
able in a first position to direct gaseous medium into said box and outwardly through said upper wall to form a film of said medium supporting the conveyor in its travel, and operable in a second position to withdraw gaseous medium from said box and inwardly through said perforated wall to withdraw said film and effect engagement of said conveyor against said upper wall, and regulating means actuating said control means to its first position during the operation of said drive means and actuating said control means to its second position during the loading and unloading intervals between said operation of the drive means.

2,859,864
CONVEYOR CLEANING DEVICE
Harry C. Hough, Honey Brook, and James R. West, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application May 16, 1956, Serial No. 585,322
5 Claims. (Cl. 198—229)



1. A device for cleaning material from between the upper and lower reaches of an endless belt and from a roll over which the belt is trained, comprising, in combination, a belt scraper disposed on and extending completely across said lower reach, and a roll scraper engaging the periphery of the roll and extending outwardly and downwardly therefrom, said roll scraper having an end remote from said roll which extends beyond said belt scraper whereby material scraped from said roll may slide down the roll scraper and be deposited on the side of said belt scraper remote from the roll.

2,859,865
CIGARETTE RETAINING MEANS
Barney B. Williams, Albany, Ga.
Application July 5, 1957, Serial No. 670,833
7 Claims. (Cl. 206—41)



1. A retaining and protective member for cigarette packages, said member being in the form of an elongated strip formed of a relatively rigid and resilient material, said strip being generally rectangular in outline and including a base and upstanding sides integrally connected to said base at opposite ends thereof, a top integrally connected to one of said sides at the upper end thereof, the opposite end of said top terminating adjacent the upper end of the other of said sides, said top including an upwardly directed bulge intermediate the ends thereof, said bulge extending substantially entirely across said top whereby, when said bulge is depressed, said opposite end of said top bows upwardly away from said other side.

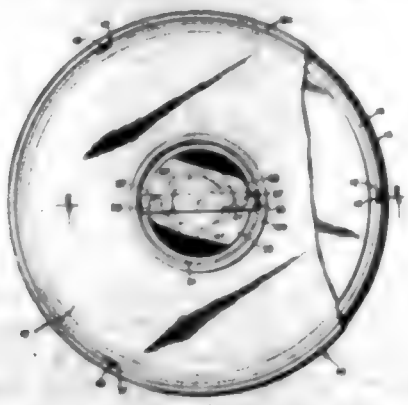
2,859,866
PACKAGE CONSTRUCTION
Gustav A. Altenbern and Jay C. Bruce, Memphis, Tenn., assignors to Gem, Incorporated, Byhalia, Miss., a corporation of Mississippi
Application March 9, 1956, Serial No. 570,519
1 Claim. (Cl. 206—45.31)

In a package for a mop that has a dust accumulating part and a socket, a blank which is folded to form the package on the mop, said blank having a first panel which forms the bottom of the package, a strip along one edge of said first panel and having fold lines on opposite sides thereof, a second panel of approximately the same dimension and shape as said first panel joined along one of said fold lines to said strip and constituting the top of the package, strips on three edges of said second panel and constituting three sides of the package, flaps on each of said strips on said three sides which overlie edge parts of said dust accumulating part of the mop head when they are arranged at right angles to said strips on the three sides of said second panel, and interlocking means operatively connected with one of the strips on said second panel and said first panel for holding said first panel attached with said second panel and in enclosing relationship to the mop dust accumulating part, flaps on opposite sides of said first panel, the last mentioned flaps being arranged parallel to said first panel and adapted to overlie two of said panels on the strips of said second panel a window opening in said second panel, a transparent panel over said window opening for vision into the interior of the package, and an aperture in said second panel through which the socket projects.

2,859,867
REFILLABLE LIPSTICK CONTAINERS
Harold F. Shotton, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application January 17, 1955, Serial No. 482,176
1 Claim. (Cl. 206—56)

A combination holder and lipstick container of the swivel type, which container has an outer casing and an exposed operating head at its lower end of cylindrical shape and of large diameter than said casing, said holder comprising a tubular portion adapted to surround the lower part of the container so that the upper part of the container may be grasped by the fingers, said holder having a hollow operating knob integral with and larger than said tubular portion, a series of equally spaced axially arranged ribs formed inwardly for a portion of the length of said tubular portion adjacent said knob, said ribs having a crest diameter slightly less than the diameter of the operating head to frictionally embrace the same sufficiently to rotate said head relative to said container by the manipulation of said holder, and stop means in the form of lugs extending radially inwardly from the lower end of the inwardly formed ribs and serving to locate said container with reference to said holder.

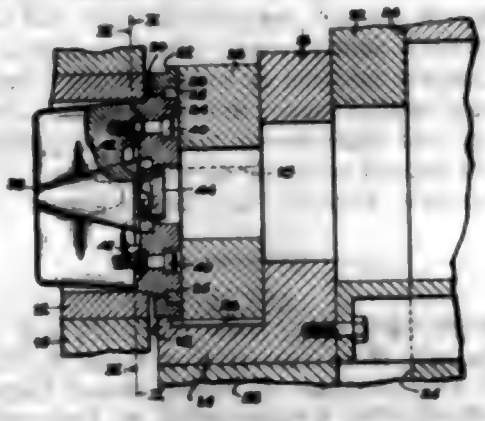
2,859,868
TAPE REEL PACKAGE
Charles J. Jaworski, Wappingers Falls, and James J. La Due, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application May 23, 1956, Serial No. 586,706
4 Claims. (Cl. 206—59)



1. A storage device for elongated material such as tape, wire, film and the like, said device comprising, in combination, a reel having spaced side wall members and a hub having an aperture therethrough, container means for said reel comprising a container body having an extending flange section, and a lid having an extending flange section interfittable with the flange section on said container body to form a container, said container body and lid each being capable of limited flexure at a predetermined area thereof, said body and lid each including at said predetermined area, an inwardly extending member adapted to engage a related area of said reel hub when the reel is enclosed in said container, said extending members maintaining said reel with the side walls and the edges thereof free of engagement with any inner surfaces of said container, a locking device carried by said container lid and including a lock member having an extended surface which engages said predetermined area thereof on the outer surface of said lid, said lock member including a handle secured thereto, an axial member secured at one end to said lock member and extending laterally therefrom through a suitable opening in said lid, said axial member also extending through said reel hub aperture when the reel is arranged in said container, a latch lock member secured to the other end of said axial member and including a plurality of spaced members each having an inclined surface, said container body including spaced openings through which said spaced members pass as the reel is enclosed in said container, the inclined surfaces of said spaced members upon a rotation of said handle after said lid and body are interfitted, having succeeding inclined portions thereof engaged with adjacent areas of said container body predetermined area with the said predetermined areas of the container body and lid and their associated extending members being deflected towards each other, the extending members accordingly rigidly gripping said reel at the hub thereof to prevent axial or lateral motion thereof within said container.

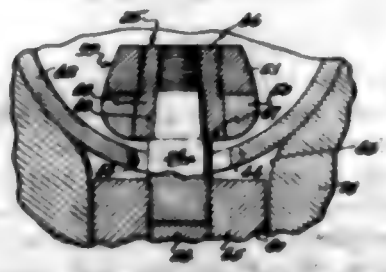
2,859,869
SPIRAL EXTRUSION
Clement A. Nolf, New Kensington, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Application August 31, 1955, Serial No. 531,662
1 Claim. (Cl. 207—5)

An extrusion die comprising a die block having an aperture therethrough defining the extrusion opening, said aperture defined by a bore of the cross-sectional shape of the extrusion desired and a counterbore on the entrance side of said die defining an annular ledge medially of said aperture, said counterbore being non-uniform in its extent in the direction of the aperture axis to create a plurality of uniform major ledge sections each sloping



from the entrance side of said aperture to the exit side thereof and said sections being joined by minor ledge sections extending in the opposite direction.

2,859,870
PULL PRESS FOR UP-SETTING PIPE OPENINGS
Gifford L. Hitz, Paola, Kans., assignor to The Floor Corporation, Ltd., Los Angeles, Calif., a corporation of California
Application July 25, 1956, Serial No. 524,011
5 Claims. (Cl. 207—19)

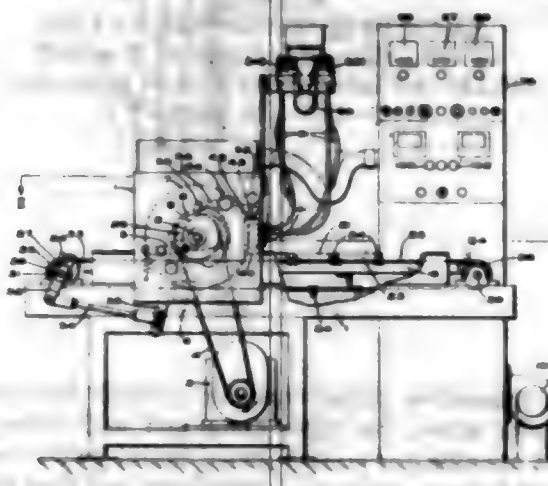


1. An improved movable mandrel, comprising an assembly including a rod adapted to extend axially within a die through opening and into a recess sunk in the die and a punch removably connected to the free end of said rod, said punch including a tapered sleeve in threaded interengagement with the end portion of the rod, a hardened ring seated on said sleeve and a nut threaded on the sleeve and tightened against the ring, said ring having a convex periphery for facing a convex forming portion of the die surface and being sized for travel toward and into said die opening in diminishing spaced relation to said forming portion and for interfering contact with the inside of a pipe wall received in the die recess during punch travel into said hole to bend the pipe wall into engagement with said die forming portion and thereafter extrude the pipe wall metal in the direction of punch travel reducing the wall thickness and cold working the metal throughout said reduced thickness as the flange is progressively formed between said punch and die forming portion.

2,859,871
APPARATUS FOR TESTING AND ASSORTING ARTICLES
Ernest L. Harlow, Alton, Ill., Harry E. Frech, Jr., University City, Mo., and John C. Blaine, Roxana, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Application July 28, 1955, Serial No. 524,929
12 Claims. (Cl. 209—81)

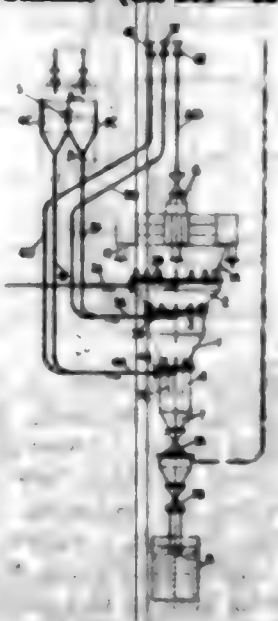
1. An apparatus for testing and assorting electroconductive articles of the type described comprising indexing means for positioning articles to be tested, means for supporting a group of articles to be tested, a test station in line with the path of travel of said articles carried by

said support means, movable means for engaging with said articles on said support means said movable means having orifices communicating with the points of engagement of said movable means with said group of articles for applying suction to said articles of a group selectively, probe means carried by said movable means into electroconductive engagement with all of said group of articles, a test circuit including said probe means for detecting variations in the electroconductivity of each of said articles from an acceptable range, a series of valve means for controlling the suction applied to said orifices individually, means responsive to said test circuit when a given article is detected as acceptable for controlling the



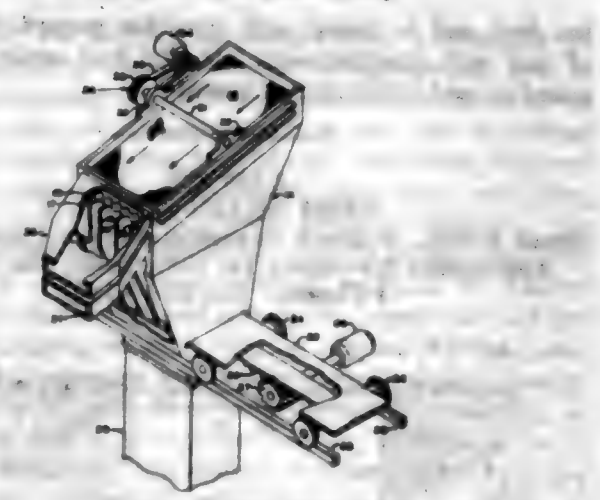
opening of the valve means corresponding to said article of said group thereby applying suction to the acceptable primer sensed by the test circuit, means for mobilizing said movable means and the probe means toward and away from said support means at said test station and at an accept station, means for translating said movable means back and forth between said test station and accept station, and means responsive to the position of said movable means when poised over said accept station and moved into slightly spaced juxtaposition therewith for causing said valve means to cut off suction at all of said orifices, thereby depositing all of the groups of articles found acceptable at said accept station.

2,859,872
APPARATUS FOR CLEANING COAL OR OTHER GRANULAR MATERIAL
Arthur A. Hirst, Bramhall, England, assignor to Coal Industry (Patents) Limited, London, England
Application August 27, 1954, Serial No. 452,487
Claims priority, application Great Britain September 1, 1953
11 Claims. (Cl. 209—158)



1. In an apparatus for cleaning granular material such as coal, the combination comprising a separating vessel, a conduit admitting liquid at the bottom of said separating vessel, an overflow for liquid and solids from said separating vessel, a further conduit for admitting to said separating vessel liquid at an intermediate level between the bottom of said separating vessel and said overflow, means for feeding granular material into said separating vessel tangentially at a level higher than the said intermediate level, and diversion means whereby, when the pressure head of the liquid admitted to the bottom of said separating vessel exceeds a predetermined value, at least some of this liquid is diverted and admitted to said separating vessel at the said intermediate level.

2,859,873
EQUIPMENT FOR MANUFACTURING MIXED FERTILIZERS
Dick F. Bresse, St. Louis, Mo., assignor to Phillips Petroleum Company, a corporation of Delaware
Application January 2, 1952, Serial No. 766,867
8 Claims. (Cl. 209—259)



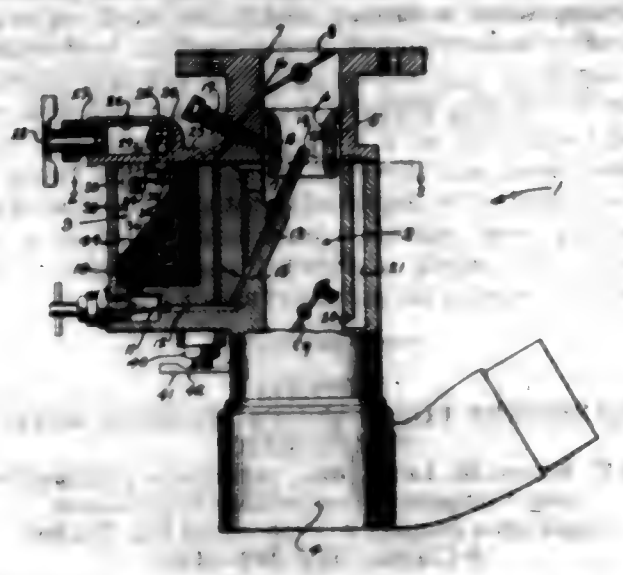
6. A combination classifier-mixer hopper, comprising inclined screen classifying means mounted in the top of said hopper and adapted to receive and classify material discharge across the top of the upper end thereof, a plurality of partitions mounted in said hopper beneath said classifying means, said partitions being vertically spaced and oriented in a direction parallel to the flow of said discharge on said classifying means, said partitions defining a plurality of compartments in said hopper, gate means slidably mounted in the lower end of said hopper immediately beneath said partitions and adapted to sequentially open the bottoms of said compartments to permit the discharge thereof, means to vibrate said hopper and a discharge chute connected to said hopper beneath said gate means.

2,859,874
CARBURETOR FLOAT CHAMBER SCREEN AND SEDIMENT TRAP
Harry C. Stearns, Glen Ellyn, Ill.
Application June 11, 1954, Serial No. 436,810
3 Claims. (Cl. 210—166)

1. In a carburetor having a fuel containing float chamber with a float, a fuel inlet opening into said chamber a fuel inlet valve for said chamber closed and opened in response to position of said float, and a fuel outlet the combination of a screen with an inclined area that is beneath said fuel inlet and which is beneath the fuel level maintained by said float and inlet valve, said screen extending between side wall portions of said chamber to separate the same into a sediment collecting inlet compartment and an outlet compartment whereby fuel passes from said inlet compartment to said outlet compartment by flowage through said screen, said fuel inlet opening upon said inlet compartment in a position above the fuel level such that fuel discharged from said inlet moves toward said screen at an oblique angle thereto and across

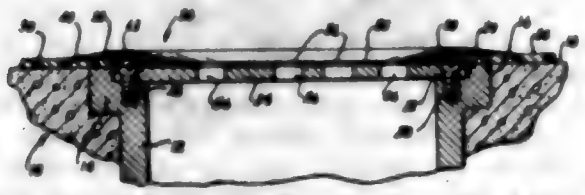
member extending transversely across the bottom portion of the vertical rear leg thereby providing a large open

said inclined area of said screen at a level beneath the surface of the fuel to wash the area free of particles in



the fuel and to move such particles toward the bottom of said inlet compartment, and said fuel outlet being disposed in said outlet compartment.

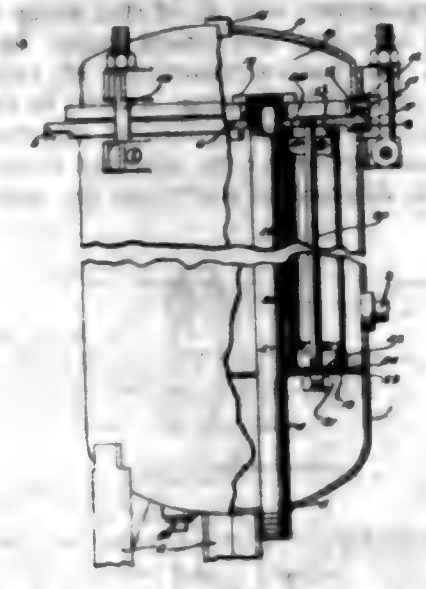
2,859,875
TRIM DRAIN COVER
James Wilkie, Redford Township, Wayne County, Mich.
Application November 14, 1955, Serial No. 546,513
3 Claims. (Cl. 210—163)



1. In combination, a floor having a drain opening, a perforated drain cap covering said opening with the top surface of said drain cap substantially flush with the top surface of said floor, a layer of floor tile laid over the top surface of said floor and cut to provide an opening closely surrounding said drain cap, a trim drain cover comprising a relatively thin plate having a flat central portion formed with perforations, said central portion overlying said drain cap in surface-to-surface contact with the top surface of said drain cap and with the perforations in said central portion registering with the perforations in said drain cap, said central portion being completely surrounded by the opening in said floor tile, said plate having an annular portion surrounding and integrally connecting into the margin of said central portion, said annular portion being of downwardly opening concavo-convex configuration and extending over the edge of the floor tile defining the opening therein and having its outer edge embedded in said floor tile with the top surface of said annular portion at its outer edge substantially flush with the top surface of said floor tile.

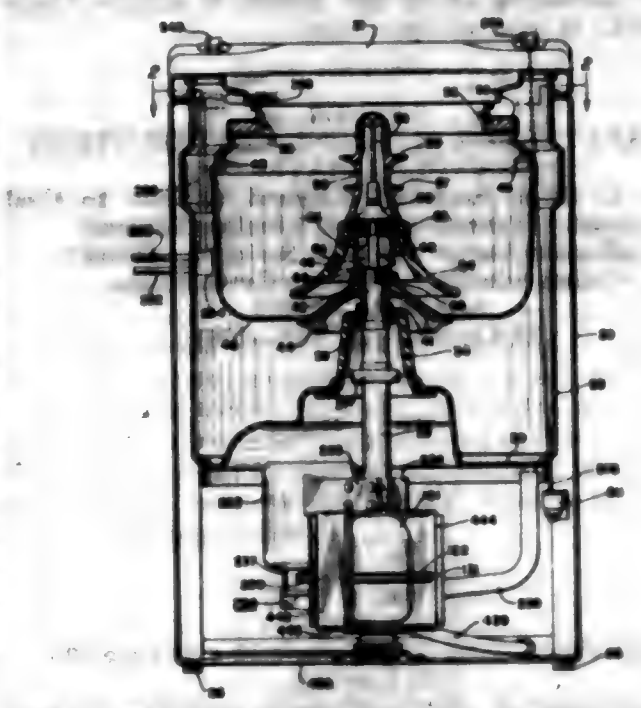
2,859,876
FILTER
Alan D. Brundage, Birmingham, Mich., assignor to Indiana Commercial Filters Corporation, a corporation of Indiana
Application September 13, 1955, Serial No. 533,968
4 Claims. (Cl. 210—323)

1. In a filter unit, an open-topped casing, a flanged upper plate seated on the top of said casing, a cover seated on said plate adjacent the rim thereof, a plurality of elongated supporting members suspended from said plate, a lower plate carried by said members above the casing bottom, a tubular filter element between said plates around each supporting member, said upper plate having an opening therein adjacent each said supporting member and within the circumference of the respective filter element, a filtrate pipe extending through said plates and the casing bottom, said pipe being secured to the casing bot-



tom, a removable collar type unit around the upper end of the pipe above the upper plate, and said casing having an inlet opening for contaminated liquid below the upper plate, said plates, supporting members and filter elements being removable from the casing as a unit and separable outside said casing to replace filter elements.

2,859,877
SUSPENSION SYSTEM FOR SPINNER TYPE WASHING MACHINE
Kenneth O. Simon, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 30, 1954, Serial No. 452,772
1 Claim. (Cl. 210—365)



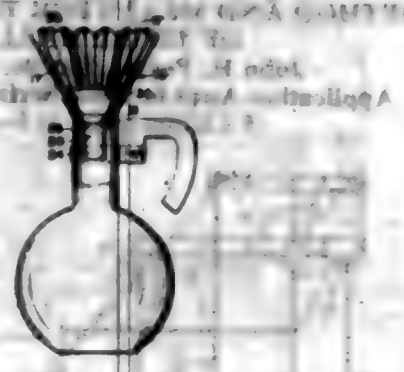
A washing machine including a tubular supporting means, a centrifuging tub rotatably mounted upon one end of the supporting means, a rotatable housing enclosing a rotatable mechanism rotatably mounted at the opposite end of said supporting means having means connected to the tub for rotating the tub, a second supporting means connected to the tubular supporting means and extending around said rotatable housing to a point in alignment with the axis of said tubular supporting means, a cabinet surrounding said tub and housing and supporting means, a

and said one foot whereby a portion of the weight of said

zontally spaced nose portions connecting front ends of said yoke straps having the entire area therebetween un-

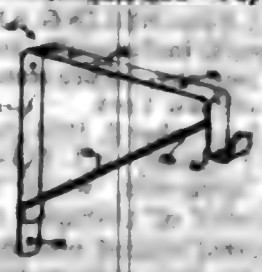
member extending transversely across the bottom portion of said cabinet beneath said point, and a member having one portion in the form of a ring of resilient material with its periphery held by said member and a second portion in the form of a projection extending loosely into the interior of said ring but normally spaced a substantial distance from said ring and connected to said second supporting means, said second supporting means being provided with a friction contact surface, said member being provided with a friction contact surface in contact with the friction contact surface of said second supporting means.

2,859,578
FILTER-SUPPORTING FUNNEL
Phillip P. Spielmann, Brooklyn, N. Y.
Application June 6, 1957, Serial No. 663,993
3 Claims. (Cl. 210—541)



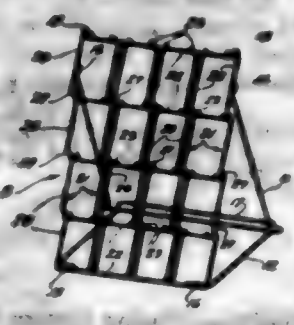
1. Apparatus adapted to receive a porous filter cone comprising a flexible frustrum formed from a thin metal sheet by means of a series of downwardly converging internal ribs disposed in angular relation to each other and a series of external ribs connected thereto and also converging downwardly to a small opening so as to provide internal liquid flow passages and external air venting passages when the apparatus is inserted in a receiving vessel neck and a removable tubular neck portion, adapted for insertion into said smaller opening, provided with a tapered tubular portion of a diameter slightly smaller than said opening, and an annular recess slightly larger in diameter than the normal size of said opening so that when the portion of the frustrum surrounding said opening is seated in the said groove said frustrum opening is expanded.

2,859,579
SHELF AND POLE BRACKET
Delmar R. Rogers and Eleanor L. Rogers, Minneapolis, Minn.
Application October 12, 1953, Serial No. 539,965
1 Claim. (Cl. 211—90)



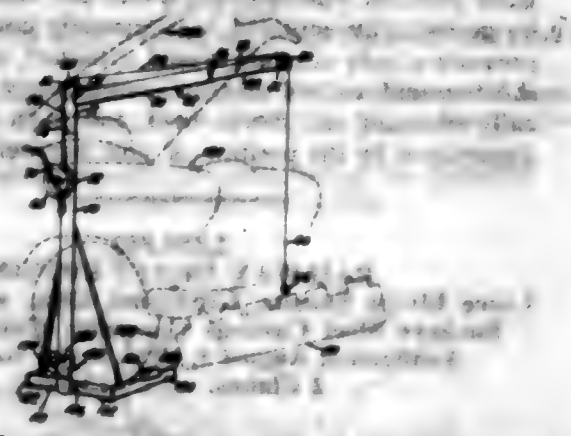
In a shelf and pole bracket comprising a vertical rear bar for attachment to a vertical support, a horizontal bar being substantially the same length as the vertical rear bar extending outwardly from the upper end of the vertical rear bar for supporting a shelf, a depending portion formed on the outer end of the horizontal bar, an outwardly and upwardly extending portion formed on the lower end of the depending portion thereby forming a hook for supporting a pole, an oblique bar connected between the upper portion of the rear side of the depending portion and adjacent the lower portion of the vertical rear bar thereby providing a brace means for the horizontal bar and for the hook, the said hook being spaced below the portion of the depending portion to which the said oblique bar is connected.

2,859,580
DISPLAY RACK
Edward D. Barnes, Milwaukee, Wis.
Application August 2, 1951, Serial No. 239,997
1 Claim. (Cl. 211—186)



In a rack for displaying merchandise, a plurality of upright members rigidly secured by means of ties in spaced relationship to form a framework, a plurality of horizontal rows of pegs mounted on said ties to extend outwardly therefrom, the pegs of each row being disposed in spaced relationship, said upright members comprising a plurality of inclined bearing surfaces disposed one above the other and a connector secured to the lower end of each of said inclined bearing surfaces to extend backwardly therefrom and attach the upper end of the succeeding lower inclined bearing surface of the same upright member, said connectors being located directly above a row of said pegs, whereby said connectors in cooperation with said inclined bearing surfaces serve as a barrier to prevent the resting of thick articles on top of said pegs but do not preclude suspending articles on said framework from said pegs.

2,859,581
AUTOMOBILE CYLINDER HEAD HOIST
William C. Coryell, Wayne, Nebr.
Application February 2, 1954, Serial No. 407,458
4 Claims. (Cl. 212—64)



1. In a hoist for use in conjunction with wheeled vehicles, an upright mast, a boom means secured to and extending outwardly from said upright mast, a base portion attached to the bottom of said upright mast having two spaced apart feet horizontally outwardly protruding, whereby an open space exists between said feet, said feet being spaced apart sufficiently for the reception of a wheel of said vehicle between said feet, whereby at times when said vehicle is supported by a substantially horizontal surface, the base of said hoist while supported by said surface can be pushed under said wheel with one of said feet on a forward side and one on a rearward side of said wheel, and means disposed between at least one of said feet and said wheel releasably pressing against said wheel

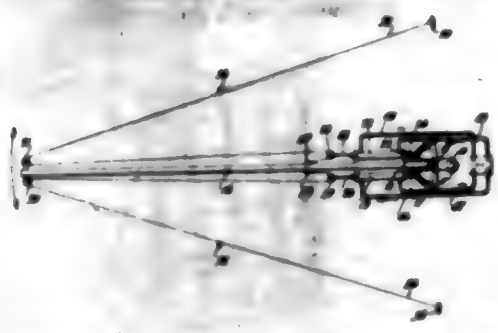
close the plates, a second pair of escapement plates member toward said gripping member against the in-

of elongated supporting members suspended from said plate, a lower plate carried by said members above the

the axis of said tubular supporting means, a casing surrounding said tub and housing and supporting means, a

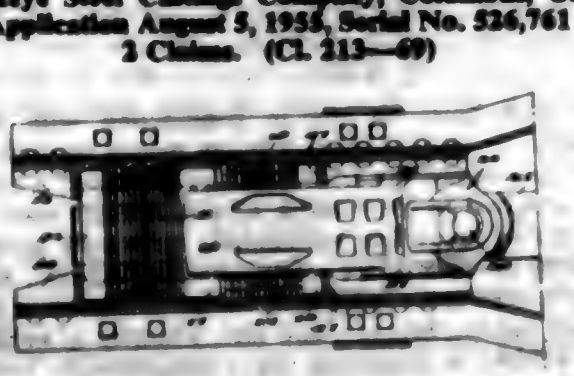
and said one foot whereby a portion of the weight of said car is caused to exert a force downwardly against said feet for providing the base of said hoist with stability.

2,859,882
OSCILLATING SYSTEM FOR DERRICK BOOMS
Mario J. Purstic, Torrance, Calif.
Application July 2, 1957, Serial No. 669,620
10 Claims. (Cl. 212—66)



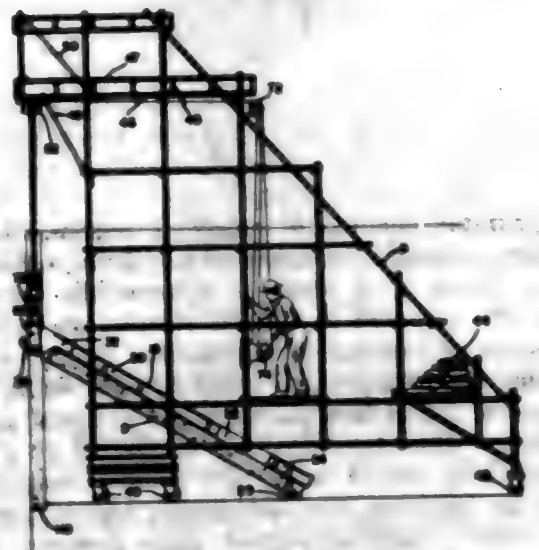
10. An automatic oscillating system for derrick booms, said system comprising a king pin mounted for pivotal movement about a vertical axis, a boom connected at the lower end to said king pin, a pair of double acting fluid pressure cylinders mounted on said boom adjacent the lower end, a ram projecting from the upper end of each cylinder, a pulley on the upper end of each ram, a pair of head pulleys secured to said boom, a pair of cables trained over said head pulleys and around the pulleys on said rams with the adjacent ends of said cables fixed to said boom, the opposite ends of said cables being fixed at transversely spaced points on opposite sides of said boom, a reversing control valve for each cylinder, conduits connecting said cylinders and said valves, a fluid pressure supply conduit and a fluid pressure discharge conduit connected to said valves, an actuating lever on each valve, a plate fixed to said king pin for movement therewith, an arcuate slot in said plate, an opening in said plate through which said actuating levers project, opposed actuating lever shifting members disposed on opposite sides of said actuating levers, said members being mounted at one end for free pivotal movement on said king pin and clamp means on each member extending through said slot for fixing each member in adjusted angular position whereby said levers and control valves will be periodically actuated to alternately connect said fluid pressure supply conduit to said cylinders, to lengthen and shorten said cables thereby continuously and automatically swinging said boom back and forth through an arc determined by the position of said members on said plate.

2,859,883
RAILWAY DRAFT RIGGING
Lorse Elwyn Furnius, Groveport, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application August 5, 1955, Serial No. 526,761
2 Claims. (Cl. 213—69)



1. In a draft rigging for an interlocking railway coupler, a yoke having a butt end member with yoke straps extending forwardly therefrom, front draft lugs, a resilient draft gear between said straps with a rear end engaging said butt end member, vertically extending horizontally spaced nose portions connecting front ends of said yoke straps having the entire area therebetween unobstructed, a front follower having portions for engaging said front draft lugs and a rear face engaging a forward end of the draft gear, a connecting member having a rear portion and a front portion integral therewith, said rear portion extending through said unobstructed area and having a butt end in flat bearing engagement with a front face of said front follower, a horizontally disposed yoke pin connecting said nose portions of the yoke with said connecting member, a coupler stem, a vertically disposed pin connecting the stem with said forward portion of said connecting member, rear draft lugs and a rear follower, and a second resilient draft gear between said butt end member and the rear follower.

2,859,884
METHOD AND MEANS FOR THE ERECTION OF TIP UP WALLS
John H. Pearce, Seattle, Wash.
Application April 6, 1953, Serial No. 346,986
5 Claims. (Cl. 214—1)



4. The method of raising a concrete, tip-up wall slab to its position in the plane of a wall, comprising: casting a concrete slab face-down on the floor; lifting the edge of the slab nearest to the wall plane and slowly raising and moving said nearest edge to a position near the level of the top of the wall in the plane of the wall and trailing the edge of the slab farthest from said wall plane along the floor toward said wall plane until the slab lies completely in the plane of the wall with said nearest edge uppermost.

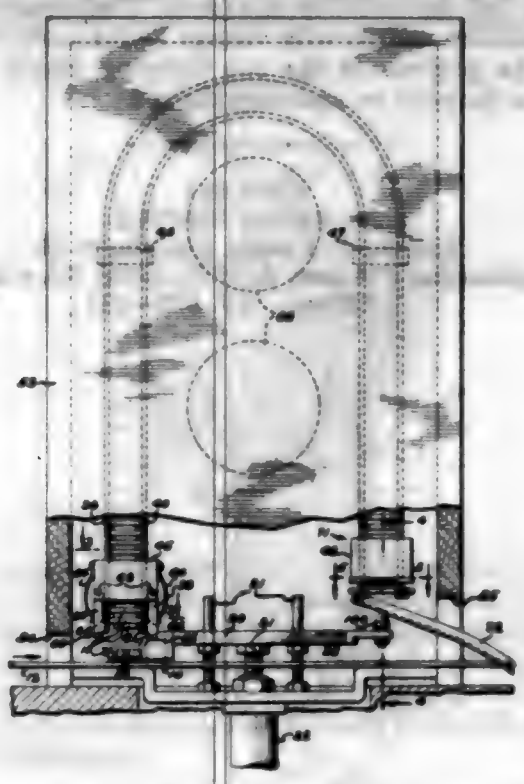
2,859,885
ARTICLE-HANDLING APPARATUS
Warren O. Simpson, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application September 8, 1954, Serial No. 454,697
7 Claims. (Cl. 214—18)

1. A drying apparatus, which comprises a heated chamber, a plurality of U-shaped rods mounted in the chamber in inverted spaced positions to form a guideway extending along a U-shaped path, said guideway having an entrance end and an exit end, latching means at the entrance end of the guideway for permitting disc-shaped articles to be pushed into the guideway and preventing the articles from coming out of the guideway, a fork for moving an article from a position below the latching means past the latching means, means for reciprocating the fork, a first pair of escapement plates mounted pivotally at the exit end of the guideway normally urged to open positions permitting articles to move therepast and having actuating portions extending to one side of the guideway operable when actuated to

ings, and a pair of longitudinally aligned spaced supports

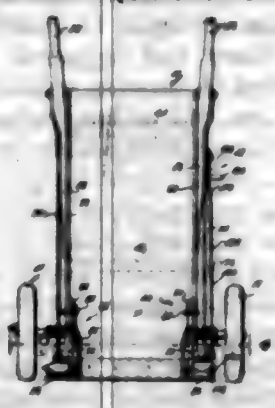
chassis for driving said wheel and operating the mast and

close the plates, a second pair of escapement plates mounted pivotally in positions below the first pair of escapement plates and normally urged to a closed position preventing passage of the articles therepast and having actuating portions extending laterally to the side of the guideway opposite to that at which the actuating



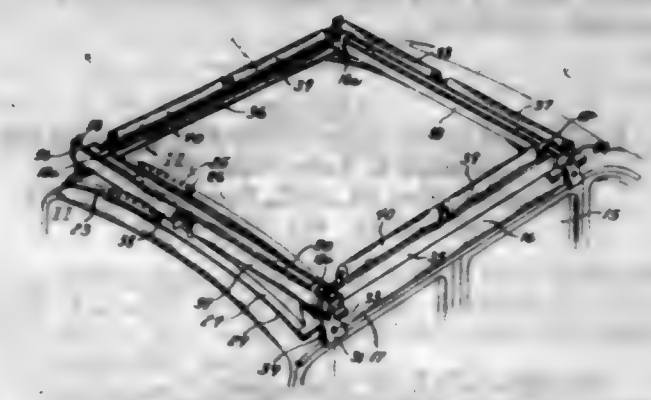
portions of the first pair of plates are positioned operable when actuated to open the second pair of plates to permit articles to pass therebetween, means operable by the fork-reciprocating means for actuating the first pair of plates, and means operable by the fork-reciprocating means for actuating the second pair of plates.

2,859,836
WHEELED VEHICLE
Milton A. Parsons, Nashville, Tenn.
Application September 16, 1954, Serial No. 456,410
6 Claims. (Cl. 214—377)



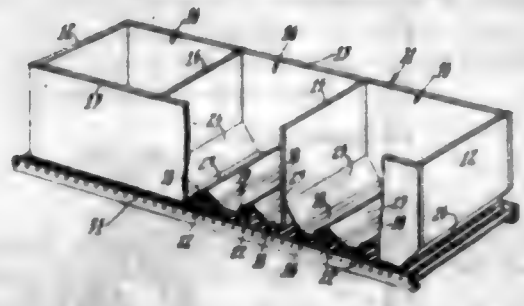
1. A hand truck comprising a frame; a pair of spaced parallel legs attached to said frame; a pair of ground engaging wheels mounted on said frame adjacent said legs for rotation about an axis perpendicular to said legs; a gripping member on the inner surface of one of said legs; means selectively operable to move said gripping means toward and away from the other leg; an adjustment member on the inner surface of said other leg directly opposite said gripping member; and means selectively operable to move said adjustment member toward and away from said gripping member and independently thereof; said last named means comprising means resiliently biasing said adjustment member away from said gripping member; at least one cam mounted on said frame for pivotal movement to and from a first position in which it positively moves said adjustment member toward said gripping member against the influence of said biasing means and a second position in which it allows said biasing means to move said adjustment member away from said gripping member; and an over-center toggle action mechanism operatively connected to said cam and manually operable to move said cam to and from said first and second position.

2,859,887
LOAD HANDLING ATTACHMENT FOR AUTOMOBILES
Galen Haight, Detroit, Mich.
Application November 4, 1955, Serial No. 546,924
6 Claims. (Cl. 214—450)



1. A load handling attachment for use with a vehicle having a body provided with a top having a drip molding thereon, comprising: a supporting member extending transversely of said vehicle body in elevated relation thereto; a pair of laterally spaced resilient spring bars extending lengthwise of said supporting member toward the opposite ends thereof; a pair of rigid plates for connecting the adjacent ends of said pair of resilient spring bars together; a resilient spring arm connected to each of said plates and connected to said supporting member adjacent to the opposite ends thereof for retaining said supporting member in spaced relation to the top of the vehicle body; and, a clamping mechanism connected to each of said plates for clamping engagement with the drip molding for retaining said spring bars in engagement with the upper surface of said body top.

2,859,888
APPARATUS FOR STORING AND TRANSPORTING ARTICLES
William J. Fairbairn, Orlando, Fla., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application January 19, 1956, Serial No. 560,165
5 Claims. (Cl. 214—311)



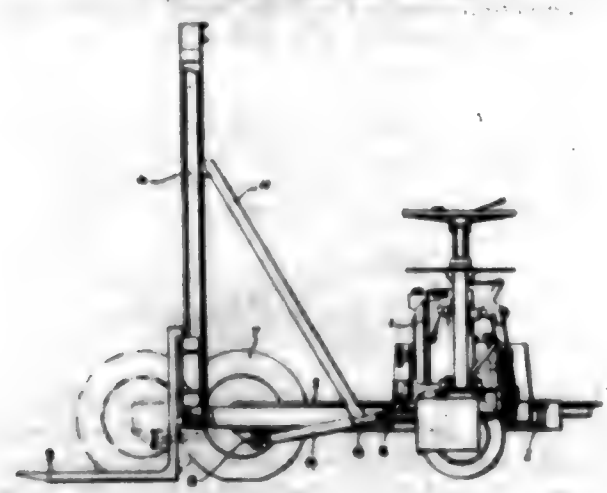
1. Apparatus for storing and transporting articles such as sheet metal containers, comprising a substantially rectangular carrier having a bottom in part composed of spaced parallel transverse upstanding deflector members setting off therebetween a plurality of transverse discharge openings in the carrier, said upstanding deflector members each defining a recess closed at its upper end for housing a fully opened door, a plurality of doors respectively hinged at one side to the adjacent sides of said deflector members for closing said delivery open-

ings, and a pair of longitudinally aligned spaced supports for said carrier, one of said supports holding said doors in horizontal closed position to prevent discharge of articles from the carrier, whereby relative longitudinal movement between said supports and said carrier progressively clears said doors from said one support to permit the doors to swing open by gravity to depending position to discharge articles from the carrier on opposite sides of said upstanding deflector members and between said supports, continuance of said relative movement serving to progressively dispose said carrier on the second of said longitudinally spaced supports to further successively swing said doors to fully open position through a complete arc of substantially 180° to dispose said fully opened doors within said door recesses defined by said deflector members.

2,859,889
EASY LOADING SHIFTING AXLE TRAILER
Richard R. Love, Buhl, Idaho
Application May 15, 1957, Serial No. 659,321
20 Claims. (Cl. 214—505)

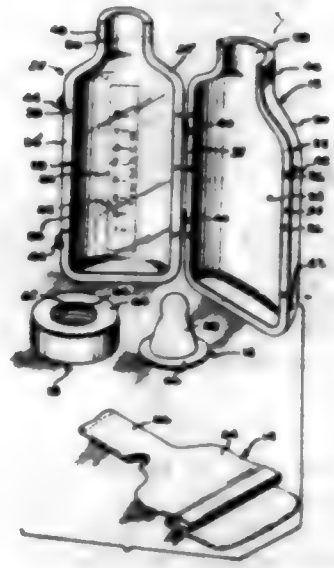
1. A trailer comprising a bed, an axle, a pair of wheels connected to said axle, said bed having wheel wells in which said wheels are received in a normal position, a pair of platforms connected to said bed and positioned adjacent said wells, said platforms extending longitudinally of said trailer and laterally of said axle, said platforms being positioned in a longitudinal plane spaced above said axle a distance less than the radius of said wheels when said wheels are in said wells, said axle being movable longitudinally of said trailer to engage said wheels with said platforms for supporting relationship between said wheels and said trailer bed.

2,859,896
MOBILE MECHANICAL HANDLING DEVICE
Joffre Robert Renard, Paris, France, assignor to Societe Th. Perrin & Fils, Montreuil-Sous-Bois, France, a corporation of the French Republic
Application April 22, 1954, Serial No. 424,974
Claims priority, application France April 29, 1953
2 Claims. (Cl. 214—670)



1. A self-propelled lifting truck comprising a main chassis, a driving and steering wheel carried by the forward portion of the said main chassis, a mast with a vertically sliding platform carried by the rear portion of said main chassis, an engine group supported on said main chassis for driving said wheel and operating the mast and platform, an auxiliary chassis comprising elongated U-shaped channel members, load supporting wheels carried at one end of said auxiliary chassis, anti-friction means carried by the main chassis and slidable in said channel members, and power means interposed between the main chassis and the auxiliary chassis for telescopically sliding the auxiliary chassis with respect to the main chassis to vary the position of the two carrying wheels with respect to the mast on each side thereof.

2,859,891
NURSING BOTTLE
Gordon V. Carlin, Lincoln, N. H.
Application February 8, 1957, Serial No. 638,954
2 Claims. (Cl. 215—11)



1. In a nursing bottle, a flask comprising a pair of substantially similar hollow registrable sections, having side walls terminating at opposite sides of the sections in flat coplanar outer and inner edges arranged to engage when the sections are closed and registered, hinge means on the section side walls along the inner edges of the sections hinging the sections together, pins projecting from the edges of one of said sections and sockets in the edges of the other section arranged to receive said pins when the sections are closed and registered, said section side walls being extended to provide reduced semi-cylindrical neck portions on one end of the sections, said neck portions having partial external screw threads thereon arranged to define a single screw thread when the sections are closed and said neck portions define a flask neck, and an internally screw threaded clamping collar arranged to be threaded on said continuous thread on the flask neck, said clamping collar having an upper end provided with an inwardly directed annular flange having a central opening therein, said bottle further comprising a thin flexible container having a body portion conforming to the interior of the flask including a neck portion.

2,859,892
SPHERICAL CONTAINER
Horace S. Daley, Clifton, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey
Application February 9, 1954, Serial No. 409,653
2 Claims. (Cl. 220—3)

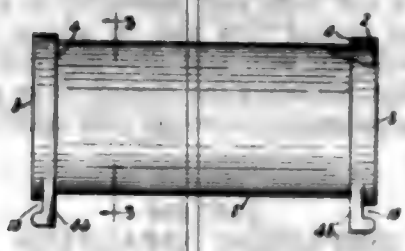
1. A spherical high pressure gas container comprising a pair of substantially hemispherical shells drawn from a high tensile steel blank of uniform thickness and deformed in the drawing process to reduce the thickness thereof about 10% at the crown and to increase the thickness thereof about 10% at the edge with the thickness decreasing progressively from the edge to the crown, each of

off said open ends of the container to retain the material toward said bottom of the carton to function as a re-

said shells having an imperforate crown region, said region including all portions of said shell wherein the radii of said shell are disposed at an angle of greater than sixty degrees with respect to the plane in which the edge is located, and one of said shells being formed with an opening having an axis passing through its center which is disposed at between ten and thirty degrees with respect

to the plane in which the edge is located; a weld joining the edges of said shells in a gas tight manner; and an outlet fitting welded to said shell at said opening and formed with a passageway therethrough, whereby any stress concentrations caused by said opening are within a portion of said shell having between a normal and an increased thickness.

2,859,893
TRANSPARENT RECEPTACLE
Murray Zachary Reed, Syosset, N. Y.
Application June 27, 1955, Serial No. 518,113
1 Claim. (Cl. 220—4)



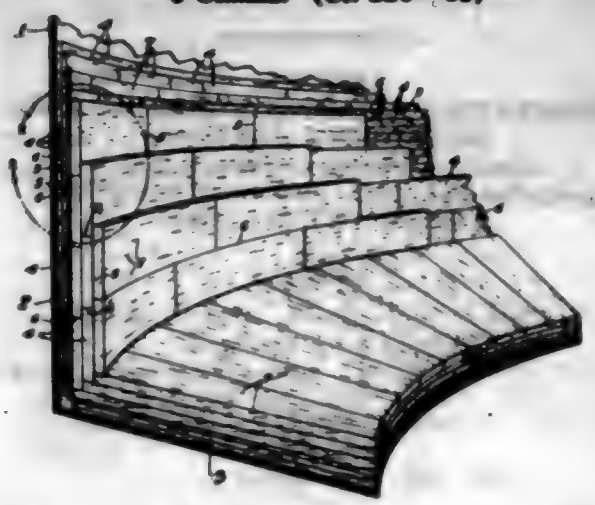
A receptacle having a transparent tubular body with open ends, a removable closure having a peripheral rim fitting each end, each closure having a pair of extensions with alined bottom edges projecting in opposite directions and forming a continuous supporting foot at each end of said receptacle, said extensions being integral with each other and hollow on their opposing inner faces, said rims being integral with the adjacent tops of the extensions, said closures each having a web of the same outline as the ends of the body, the rims extending around said web, said closures each comprising a connecting portion offset from the plane of each adjacent web, the parts of said rims adjacent to said extensions being relatively narrow, each closure having an external rib extending along the entire lower edge of the foot thereon and an outwardly opening groove between the rib and the narrow part of said rim.

2,859,894
CONTAINER CLOSURE
Milton B. Brenner, Oak Park, Ill.
Application January 30, 1957, Serial No. 637,174
2 Claims. (Cl. 220—24)

1. An attachment for reclosing a dispensing triangular aperture in the flat end of a cylindrical receptacle, which aperture is positioned adjacent the rim and has one apex of the triangle directed toward the center of the receptacle, comprising a body of resilient material having a slightly concave bottom surface of greater area than the aperture when positioned contiguous to the flat end of said receptacle and covering said aperture and an arcuate face having the same radius as the said rim substantially normal to said bottom surface for frictional engagement with said rim, a rigid member polygonal in cross section,

extending perpendicularly downwardly from said bottom surface, with two sides thereof defining an apex directed away from said arcuate face, said sides having serrations providing upwardly directed teeth for interlocking with the sides of the aperture, the arcuate surface of said body being in frictional engagement with the rim of said receptacle when said attachment is positioned in said aperture.

2,859,895
INSULATING TANK FOR COLD BOILING LIQUIDS
Sterling Beckwith, Lake Forest, Ill., assignor, by mesne assignments, to Comstock Liquid Methane Corporation, a corporation of Delaware
Application April 6, 1955, Serial No. 499,578
6 Claims. (Cl. 220—65)



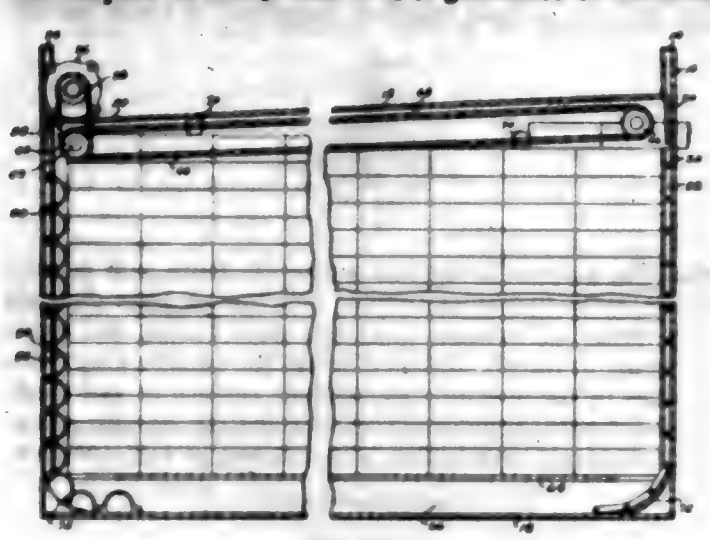
1. A tank for storage at low pressure of cold boiling liquids which includes a shell impervious to liquid and gas, a porous, liquid and gas permeable insulating lining interposed as a lining between the shell and the liquid and directly in contact with the liquid, the lining being more permeable along horizontal lines parallel with the shell than it is along horizontal lines perpendicular thereto so as to provide greater resistance to the flow of liquid and vapors endwise through the lining from the liquid to the shell than to the flow of liquid and vapors through the lining parallel to the shell.

2,859,896
CHAFF DISPENSER
Francis M. Johnson, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application July 28, 1956, Serial No. 599,280
4 Claims. (Cl. 221—112)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. An apparatus of the class described comprising a container having opposed open ends adapted to receive material to be dispensed, guide ways on said container, a dispensing mechanism positioned to rest on the material to be dispensed, portions of said dispensing mechanism riding in said guide ways, flexible end walls movably mounted in said container and having portions riding in said guide ways, said flexible end walls adapted to close

2,859,900
ends of said bars for supporting said bars from a support

off said open ends of the container to retain the material in the container, spacing means on at least one of said flexible end walls to position the material in said container, said end walls engaging said dispensing mechanism and adapted to move with it as it gravitates downwardly



in the container as the material is being dispensed, said container having a space adapted to receive said flexible end walls, means in said container to cause said flexible end walls to enter said space as the ends walls and the dispensing mechanism gravitate downwardly in the container.

2,859,897

COMBINATION PACKING, SHIPPING, AND DISPENSING CARTON

Harold E. Hartman, Verona, N. J.

Application January 3, 1956, Serial No. 557,075
5 Claims. (Cl. 221—305)

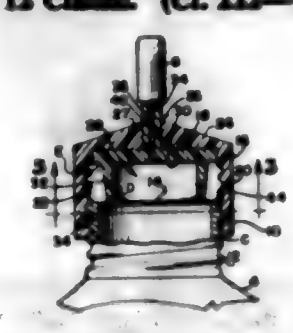
5. A combination folding carton and dispensing device comprising a cardboard blank, cut, scored and folded to form a tubular body with four side walls articulated with respect to one another, and top and bottom closure structures at opposite ends of said body, the bottom structure including a multiple-edged flap foldably attached to the bottom end of one of said side walls along one edge, an adjacent edge of said flap having an extension scored transversely to form a body portion and a narrow flap foldably connected to one end of said body portion and extending transversely of the extension, said narrow flap being adhesively attached to a second side wall adjacent the first-named wall, and the aggregate length of said extension and said narrow flap being substantially less than the length of said second wall, the remaining edges of said flap being unattached, said flap having a diagonal score line thereacross to facilitate folding thereof outwardly from the bottom ends of said side walls, there being provision for separation of said diagonally scored portion from said extension along a line having angularly related portions and said extension being scored transversely to provide a tab at the edge of said extension opposite said narrow flap after separation of said extension from said diagonally scored position, the wall to which said narrow flap is attached having a portion weakened to provide a slot to receive said tab after such separation of said extension from the diagonally scored portion to hold the body of said extension in a position spaced inwardly from the inner surface of said wall and inclined toward said bottom of the carton to function as a retention element, and two other flaps each foldably attached to the bottom end of one of the other side walls and positioned in juxtaposed relationship to said scored flap.

2,859,898

CONTAINER AND A CAP THEREFOR, BY MEANS OF WHICH A USER CAN PREPARE A FRESH SOLUTION OR SUSPENSION AND CAN READILY DISPENSE THE SAME

Ivan L. Mendenhall, St. Joseph, Mo., assignor to Research Laboratories, Inc., St. Joseph, Mo., a corporation of Missouri

Application October 3, 1956, Serial No. 613,675
12 Claims. (Cl. 222—1)



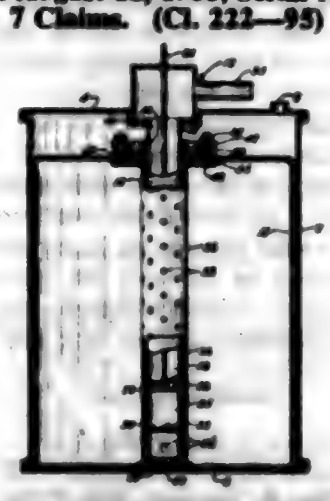
4. A method of storing, mixing and dispensing a plurality of material in a container having an outlet with a sealing film thereacross and a cap with an opening and a closure for the opening and thereafter dispensing the admixture, said method comprising placing a first material in said container, inserting a second material in said cap while the cap is in an inverted position, engaging said cap in the inverted position with said container until the cap is in sealing relationship with said sealing film so that the container and cap can be stored without admixture of the contents thereof; thereafter further engaging said cap with said container in a manner to puncture said sealing film and to admix said second material in the cap with said first material in the container and then removing the closure from said cap and dispensing the admixture through said opening.

2,859,899

DISPENSING APPARATUS

William E. Kramer, Shaler Township, Allegheny County, and Nicholas Marusov, Penn Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application August 11, 1955, Serial No. 527,848
7 Claims. (Cl. 222—95)

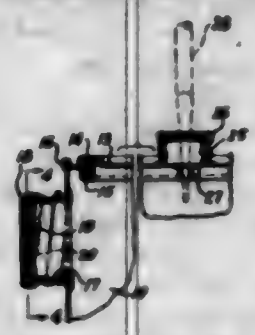


1. In combination, a closed receptacle provided with an opening in a wall thereof, a collapsible bag having an opening disposed in said receptacle, suction means communicating from the exterior of said receptacle through said opening of said bag and into the interior of said bag, and means sealing said opening of said bag to said suction means.

2,859,958
MEASURING DEVICE
Paul C. Klyuna, Wahiawa, Oahu, Territory of Hawaii
Application July 31, 1957, Serial No. 675,498
8 Claims. (Cl. 222—434)

1. A measuring device comprising, means defining a closed chamber and provided with means defining an inlet port and means defining an outlet port in a side wall of said chamber, means for mounting said device on a tiltable container with said inlet port in communication with the interior of said container, said chamber having a resilient side wall opposite said outlet port, a valve member secured to said resilient wall and extending toward but normally spaced from said outlet port, said valve member having a closure portion slidably overlying and normally closing said inlet port whereby said resilient wall may be flexed inwardly to move said valve member into closing relation to said outlet port while opening said inlet port.

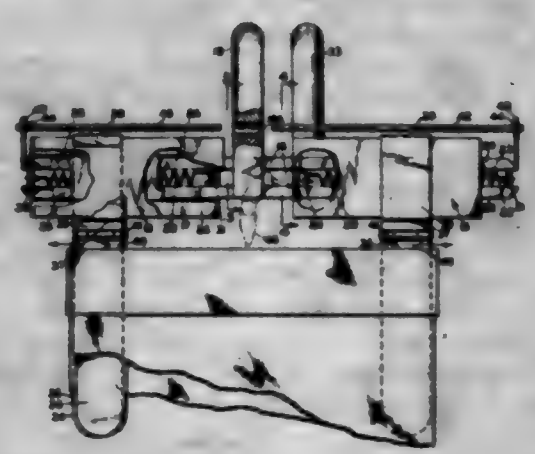
2,859,961
RECEPTACLE AND SPOUT THEREFOR
Victor Ardito, Haverstraw, N. Y.
Application September 11, 1957, Serial No. 683,299
1 Claim. (Cl. 222—482)



In a receptacle for fluids, a removable lid for said receptacle, a screw threaded pouring spout on the side of said receptacle, a correspondingly threaded cap for said spout, a frangible diaphragm closing said spout underlying said cap, a tongue integral with said frangible diaphragm, a screw threaded air vent spout on the lid of said receptacle, a correspondingly threaded cap for said air vent, a puncturable diaphragm comprising a portion of said lid underlying said air vent spout underlying said last mentioned threaded cap, and a key secured to said lid adapted to engage said tongue for separating the associated diaphragm.

2,859,962
GARMENT HANGERS
John Jordan, Portland, Oreg.
Application February 2, 1956, Serial No. 563,317
8 Claims. (Cl. 223—63)

1. A garment hanger attachment comprising a pair of spaced horizontal parallel frame bars, means on opposite ends of said bars for suspending said bars from a garment hanger, a handle secured to said frame bars and extending upwardly therefrom, a body member slidably carried by one end portion of said frame bars, means resiliently urging said body member outwardly toward the end of said frame bars carrying said body member, a handle secured to said member and extending upwardly therefrom in substantially parallel adjacent relation to said first named handle, a second body member slidably carried by



the opposite end portion of said frame bars, means resiliently urging said second body member away from said first body member, a third body member fixed to said frame bars at the ends thereof carrying said second frame bars, a garment engaging member depending from each of said second and third body members, and a pair of garment engaging members depending from said first body member to respectively cooperate with the garment engaging members on said second and third body members.

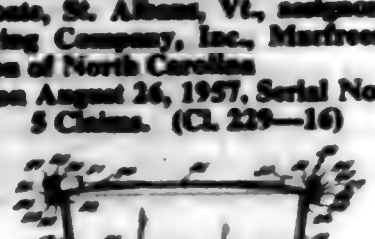
2,859,963
PANTS GUARD
William F. Tufts, Atlanta, Ga., assignor to L. M. Leathers Sons, Athens, Ga.
Original application June 24, 1950, Serial No. 170,115, now Patent No. 2,739,745, dated March 27, 1956. Divided and this application June 23, 1955, Serial No. 517,445
1 Claim. (Cl. 223—98)

A trouser guard adapted to be supported by the horizontal member of a substantially triangular garment hanger, said trouser guard comprising a substantially straight, narrow, longitudinal body of thin, flexible sheet material formed with an upper surface downwardly and outwardly diverging from a central crest to form a leg at each side of said crest, a first adhesive mass on the upper surface of said sheet material, a second adhesive mass on the bottom surface of said sheet material on each of said legs, said adhesive masses having the characteristics of adhering only to like masses, said second adhesive masses being of substantially equal area and positioned to adhesively register with each other to secure said trouser guard about said horizontal member when the undersurfaces of said legs are brought together in contacting apposition to each other, said first adhesive mass on said upper surface of said sheet material being located in an area which does not coincide with the adhesive-coated area on the bottom surface of said sheet material so that when said trouser guard is nested with similar guards, the adhesive-coated areas on said trouser guard do not contact any adhesive-coated areas of adjacent guards.

2,859,904
CAR TOP ROD CARRIER
Donald Earl Bliley, Hawarden, Iowa
Application August 10, 1955, Serial No. 527,568
2 Claims. (Cl. 224—42.1)

1. A holder having upper and lower sides and comprising an elongated body, safety-pin means on said upper side, a hook formed on one end of said body, said hook having an extended lip extending upwards above the upper side of said body, a second hook formed on said body on the end opposite said first named hook, said second hook having a shortened lip terminating below said upper side of said body, elastic band means engaging said first named hook, said body being adapted to have articles placed against the lower side thereof and said band means being adapted to be stretched beneath said articles and releasably engaged with said second hook to hold said articles releasably to said body.

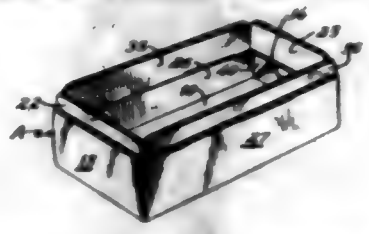
2,859,905
COMBINATION PAPERBOARD BERRY BOX AND SNAP LID THEREFOR
James R. Choate, St. Albans, Vt., assignor to Riverside Manufacturing Company, Inc., Murfreesboro, N. C., a corporation of North Carolina
Application August 26, 1957, Serial No. 680,237
5 Claims. (Cl. 229—16)



1. A combined paperboard box and snap lid therefor comprising a rectangular bottom wall, a plurality of side walls having their bottom edges integrally joined to the side edges of said bottom wall, said side walls each having upwardly and outwardly flaring side edges, means on one of said side edges of each of said side walls for connecting said one side edge to the adjacent other side edge of the adjacent side wall, a horizontally extending flange projecting outwardly from the upper edge of each of said side walls, a vertically extending panel projecting upwardly from the outer edge of each of said horizontal flanges, a second vertically extending panel integrally joined to the upper edge of said first vertically extending panel and secured thereto inwardly thereof in spaced relation to said horizontal flange, a corner connector extending between adjacent end edges of said side walls, and a resilient cover having its side edges engaged between said horizontally extending flanges and said second vertically extending panel.

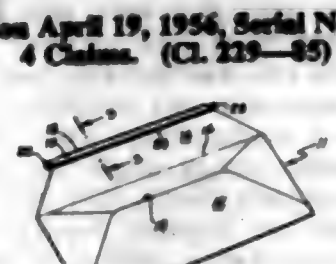
2,859,906
TELESCOPING CARTON
Reynolds Gayer, White Bear Lake, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Application March 7, 1955, Serial No. 492,412
4 Claims. (Cl. 229—31)

1. A telescoping carton including two sections having side walls of substantially similar peripheries, said sections being designed to extend in edge abutting relation, one section having two opposed side walls each having a lining flange foldably connected to the upper edge thereof and secured in surface contact to the upper portion of the inner surface thereof, and telescope flanges secured to the lower edges of the lining flanges and secured in surface contact therewith to project above the side walls, said one section having two opposed end walls, lining flanges hingedly secured to the upper edges thereof, and telescope flanges foldably connected to said lining flanges and secured in surface contact therewith, said last named lining



flanges extending above the level of said end walls and corner flaps secured to said side walls and being sandwiched between said lining flanges on said end walls and said end walls, the telescope flanges being designed to extend into the other section to hold said sections in edge abutting relation.

2,859,907
ENVELOPE CONSTRUCTION
Gerald B. McFarland, McFarland, Calif., assignor to M. B. McFarland & Sons, McFarland, Calif., a partnership
Application April 19, 1956, Serial No. 579,282
4 Claims. (Cl. 229—85)



3. In a paper envelope or the like having a body and a closure flap hingedly connected thereto which is adapted to be folded over said body and sealed to a face thereof, said flap having a straight edge opposite its hinge connection and which extends across the width of the flap, a dual sealing and flap opening structure integrally united to said flap comprising an elongated tape extending crosswise of said flap with one side thereof adjacent to and substantially parallel to said flap edge and having its inside face adhesively bonded to the inside face of said flap, said tape providing along the length thereof a multiply thickness, the flap having a line of weakness extending crosswise thereof adjacent to and substantially parallel to the opposite side of said tape, the outside face of said tape being coated with pressure sensitive adhesive to provide means adapted to be sealed against said body upon application of pressure, a protective strip over said outside face of said tape and removably adhered to said pressure sensitive coating to preclude blocking when said closure flap is unsealed, said protective strip having an accessible pull portion adjacent an end thereof to enable removal thereof from said pressure sensitive adhesive coating while allowing said tape to remain intact on said closure flap when the flap is to be sealed, and said tape also having adjacent an end thereof an accessible pull portion to enable the tape to be grasped when said closure flap is sealed and torn through said closure flap along said line of weakness for opening the same.

2,859,908
ASPIRATING DEVICE
Joseph A. Neigut, Glen Rock, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey
Application May 16, 1955, Serial No. 507,340
9 Claims. (Cl. 230—95)

1. An aspirating device comprising a Venturi tube having a converging inlet section and a diverging outlet

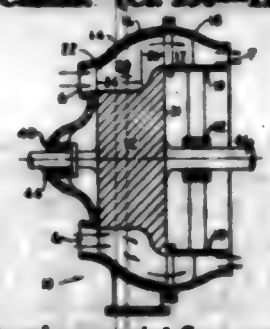
some of the longitudinally disposed radial perforations while closing others of said longitudinally disposed per-

2,859,914
ELECTRICAL NETWORK SYSTEM OR SIMULATOR

section providing a passageway, and having a throat formed with a seat surrounding the same and facing said outlet section; a substantially impervious closure adapted to abut said seat to seal said inlet section from said outlet section; means for pivotally mounting said closure

adjacent said seat; means supported by said tube for moving said closure to close and unclose said throat; and nozzle means in said inlet section having an orifice facing said throat for directing gaseous medium under pressure through said tube.

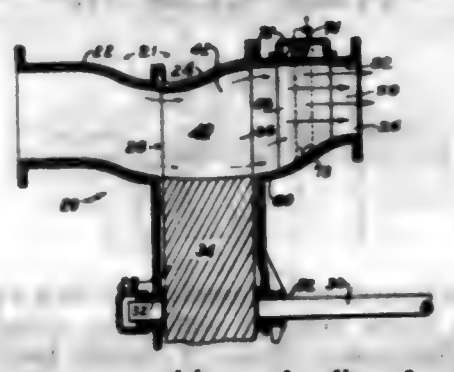
2,859,909
RADIAL DIFFUSION COMPRESSORS HAVING REDUCED ROTOR EXITS
Edward A. Stalker, Bay City, Mich.
Application January 31, 1952, Serial No. 269,239
5 Claims. (Cl. 230—128)



1. In combination in an axial flow compressor, a bladed rotor comprising a rotatable hub structure and a plurality of axial flow blades carried thereon spaced peripherally thereabout defining a plurality of axial flow passages between said blades with inlets and exists respectively at the front and rear ends of said structure, said hub structure being substantially coextensive in axial length with said blades and having a substantial diameter in relation to the radial extent of said blades, each said flow passage including a forward portion succeeded by a rearward portion, each said blade being set at a positive angle of incidence and having the rear portion thereof curved along the general axial direction to impart a whirl to the fluid resulting in additional pressure, the passages having substantially uniform widths over the forward portions thereof and having increasing widths over said curved rearward portions thereof, and a case enclosing said rotor and fitting closely to the tips of said blades and bounding said passages, forward portions of said case and said hub structure diverging one relative to the other and in cooperation with said blades providing said flow passages with cross sectional areas which increase rearward therealong to expand the flow in said forward portions, the rearward portions of said case and said hub converging one relative to the other in the rearward direction such as to offset the effect of said curved rear portions of said blades and to avoid increase in the cross sectional areas of said flow passages in the rearward portions thereof.

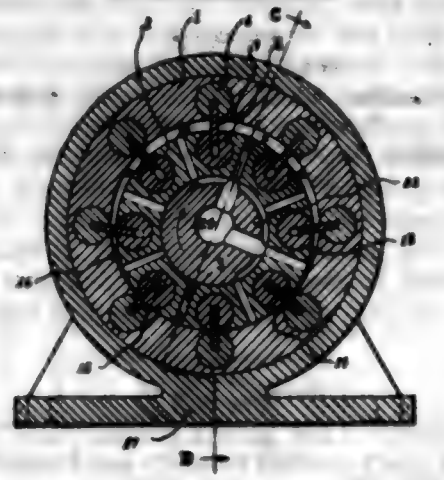
2,859,918
STATORS FOR AXIAL FLOW COMPRESSORS
Edward A. Stalker, Bay City, Mich.
Application March 29, 1954, Serial No. 419,434
5 Claims. (Cl. 230—128)

1. In combination in an axial flow compressor for increasing the pressure of an elastic fluid, a case means, a rotor hub mounted in said means for rotation about an axis, a plurality of axial flow rotor blades mounted on said hub in peripherally spaced relation with rotor flow passages therebetween, a stator positioned in said case means on the downstream side of said rotor hub in planes normal to said axis, said case means and said hub diverging and said rotor passages increasing in cross sectional area in the downstream direction providing a diffusion ratio greater than 1.3 establishing a small approach angle for pumped fluid relative to a said plane of said



stator, said stator comprising a plurality of curved stator blades spaced peripherally with stator passages therebetween to receive said fluid from said rotor passages, each said stator blade having an induction slot in the convex side thereof leading into the interior thereof and positioned ahead of the mid chord point of said blade and ahead of the point on said blade transversely across the intervening stator passage from the leading edge of the stator blade adjacent said convex side, and means to induce flows of said fluid into said slots.

2,859,911
ROTARY COMPRESSOR
Teodoro Reitter, Buenos Aires, Argentina
Application September 8, 1953, Serial No. 378,976
5 Claims. (Cl. 230—147)



1. A rotative compressor, comprising the combination of a casing in which is housed an exterior ring having a cylindrical inner annular wall and an interior ring of an outside diameter substantially less than that of the annular wall of the exterior ring to provide a main chamber between said rings, eccentric means connecting with the two rings for dividing the main chamber into a plurality of independent chambers, oppositely disposed discs for cooperating with said rings for enclosing the main chamber formed between them, a rotary shaft provided with an inlet and outlet on which said interior ring is journaled, means on the shaft for separating the inlet and outlet, radial perforations extending through the interior ring and being longitudinally disposed for connecting each of the independent chambers with recesses formed in the shaft leading to the inlet and outlet therein for providing a communicating passage from the inlet and outlet to said independent chambers, and means on said shaft for causing planetary movement of the interior ring and opening

one of said variables; means for relatively displacing said

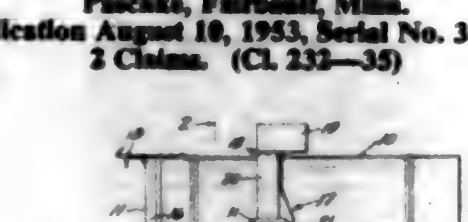
2,859,918
WINDING MACHINE

inner surface thereof, and telescope flanges secured to the

ing a converging inlet section and a diverging outlet

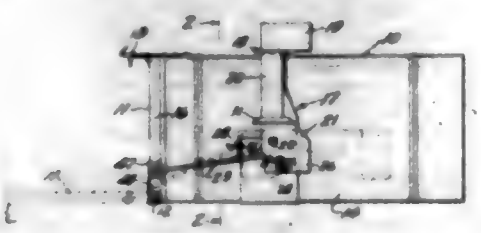
some of the longitudinally disposed radial perforations while closing others of said longitudinally disposed perforations.

2,859,912
CRESCENT SHAPED REED VALVE
Richard H. Swart, Syracuse, and Robert W. Ayling, Utica, N. Y., assignors to Carrier Corporation, Syracuse, N. Y., a corporation of Delaware
Application April 23, 1953, Serial No. 350,571
6 Claims. (Cl. 230—172)



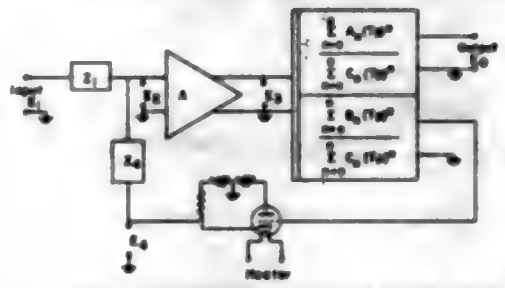
1. In a reciprocating compressor including a compressor cylinder; a piston mounted within the cylinder for reciprocating movement therein; a cylinder head, including a suction chamber and a discharge chamber disposed above the cylinder; a valve plate interposed between said head and cylinder, said plate including a plurality of arcuately disposed discharge passages permitting communication between the discharge chamber in the head and the cylinder, and a plurality of suction passages permitting communication between the suction chamber in the head and the cylinder; a valve comprising substantially a crescent-shaped reed overlying said discharge passages, said reed being secured at its extremities to the upper surface of the valve plate; and means secured to the underside of the valve plate adapted to permit flow of gas into the cylinder as the piston is retracted from the valve plate and to prevent the flow of gas into the cylinder when the piston is moved toward the valve plate, said last mentioned means including a second crescent-shaped reed.

2,859,913
MAIL BOX FLAG
Henry A. Paschke, China Lake, Calif., and William C. Paschke, Fairbault, Minn.
Application August 10, 1953, Serial No. 373,347
2 Claims. (Cl. 232—35)



1. A mail box signal attachment for a conventional mail box having a housing with a doorway at one end and a cover swingable outwardly therefrom, said signal attachment comprising a mounting attachable to the box, a flag structure pivotally connected to the mounting and having a flag member projecting generally radially therefrom, said structure having a linkage-shielding and receiving bifurcated lower end below the pivot, a link having one end swingably connected to the box cover and having in the other end, which extends into the bifurcated lower end of the structure, an elongated slot, an abutment within the bifurcated lower end of said structure and rigid therewith and projecting through the slot in the link, said structure also having a link-engaging detent radially disposed from the abutment and releasably holding the structure and link in substantially non-swingable relation to each other whereby to hold the flag member in a predetermined position until the abutment is swung about the pivot by longitudinal movement of the link.

2,859,914
ELECTRICAL NETWORK SYSTEM OR SIMULATOR
Benjamin P. Blasingame, Palos Verdes Estates, Calif.
Application April 9, 1953, Serial No. 347,789
15 Claims. (Cl. 235—61)



BLOCK DIAGRAM
UNIVERSAL NETWORK SYSTEM

1. In a single network system having means for producing any transfer function of the form:

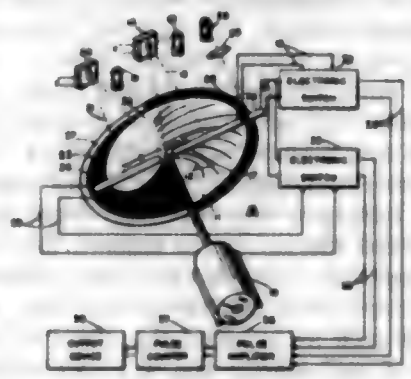
$$\frac{A_0+A_1(Tp)+A_2(Tp)^2+\ldots+A_n(Tp)^n}{B_0+B_1(Tp)+B_2(Tp)^2+\ldots+B_n(Tp)^n}$$

wherein: the coefficients of A_0, A_1, . . . A_n and B_0, B_1, . . . B_n may be set arbitrarily and independently, T is a characteristic time constant fixed by the design of the network system, p is the complex frequency $(a+j\omega)$ of the Laplace transform or operational calculus notation for the operator

$$\frac{d}{dt}$$

n is any positive integer, said system including an amplifier connected to networks thus providing a plurality of voltages differing in phase and amplitude, means for providing series of voltages of adjustable relative amplitudes from said plurality of voltages, means for adding one of these series of adjustable voltages the relative amplitudes of which correspond to the coefficients A_0, A_1, . . . A_n to form an output voltage, and means for adding another of these series of voltages the relative amplitudes of which correspond to the coefficients B_0, B_1, . . . B_n with the resulting voltage fed back to the input of the amplifier.

2,859,915
FUNCTION GENERATOR OF TWO INDEPENDENT VARIABLES
Henri-Georges Doll, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application June 2, 1953, Serial No. 359,195
12 Claims. (Cl. 235—61)



1. Automatic computing apparatus comprising: a screen including first and second sections having indicia, said indicia of each of said sections representing a preselected function of at least one of a pair of independent variables in terms of a modifying effect on incident radiant energy, and said sections being distributed along a path in a predetermined alternating order; means for projecting radiant energy toward said screen in a pair of beams spaced along said path and individually positionable according to the instantaneous value of a respective

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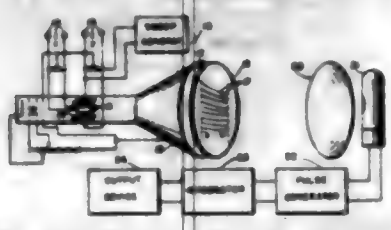
2,859,914

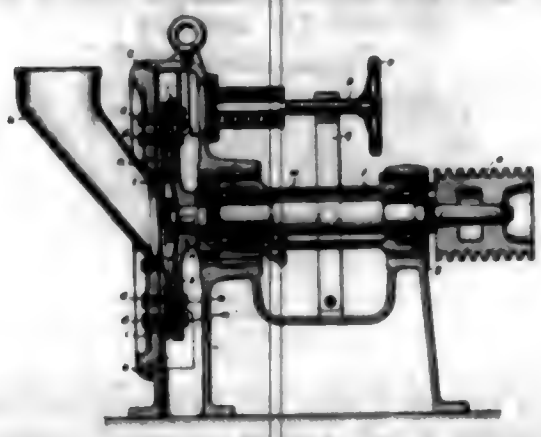
one of said variables; means for relatively displacing said screen and said beams in a direction parallel to said path to effect modulation of said beams; and means for intercepting radiant energy after said modulation and for deriving an output signal during operating intervals wherein said first section modulates one of said beams and said second section simultaneously modulates the other of said beams.

2,859,916
AUTOMATIC COMPUTING APPARATUS
Henri-Georges Doll, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application June 2, 1953, Serial No. 359,197
15 Claims. (Cl. 235—61)



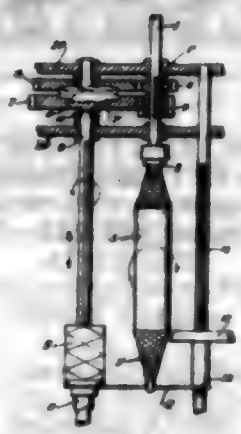
1. An automatic computer comprising: a screen including a general background area and a plurality of curves, said area and said curves having different effects on incident radiant energy; means for projecting radiant energy in a beam toward said screen; means for relatively and recurrently displacing said screen and said beam in a substantially fixed angular direction to scan a path along said screen and effect modulation of said beam; means for positioning said screen and said path with respect to one another in each of two directions according to the instantaneous values of respective ones of two variable quantities and thereby control said modulation of said beam; and means for deriving an electrical signal having a characteristic representing said modulation.

2,859,917
PROCESS FOR RE-WETTING WATER-WETTED SOLID PARTICLES
Wilhelm Reerink, Essen-Bredeney, Walter Mitschenborn, Essen, and Erich Nötzold, Essen-Haarzopf, Germany
Application August 23, 1955, Serial No. 530,144
Claims priority, application Germany August 25, 1954
2 Claims. (Cl. 241—18)



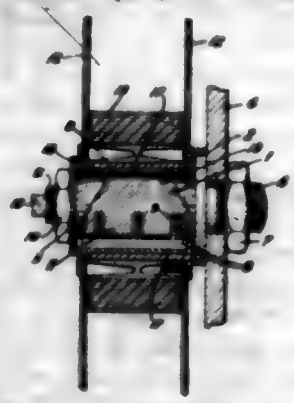
1. In a process for replacing with an oil film the water film of water-wetted, ultra-fine solid particles, wherein a mixture of said particles, water and oil is subjected to shearing and frictional forces, the improvement which comprises continuously forcing a very thin liquid film of the mixture through a zig-zag, labyrinth path provided between profiled surfaces rotating relatively one to the other, thus to subject the film to great shearing and frictional forces every time the flowing film changes direction in the path.

2,859,918
WINDING MACHINE
Stefan Fürst, M. Gladbach, Rhineland, Germany, assignor to Walter Reiners, M. Gladbach, Rhineland, Germany
Application September 20, 1954, Serial No. 457,128
Claims priority, application Germany September 21, 1953
4 Claims. (Cl. 242—27)



1. A winding machine for building up a body of thread in axial direction of a bobbin, comprising, in combination, a rotary bobbin support for rotating a bobbin about an axis of rotation; a thread guide means for guiding a thread in an oscillating movement to a bobbin supported on said rotary bobbin support so as to build up one end of a body of thread on the bobbin; reciprocating means reciprocating parallel to said axis of rotation and tending to reciprocate said thread guide means parallel to said axis of rotation; a rotary sensing means adapted to engage said one built-up end of the body of thread and to be rotated by the same; and threaded means extending parallel to the axis of rotation of said rotary bobbin support and including a stationary threaded member and a movable threaded member, said movable threaded member being connected to said rotary sensing means for rotation therewith so as to be screwed on said stationary threaded member in one axial direction as the body of thread is built up whereby said sensing disc moves along with said built-up end of said body of thread in axial direction of said spindle member, said movable threaded member being located in the path of said thread guide means and being engaged by the same during the reciprocating stroke of the same in a direction opposite to said one direction whereby said thread guide means is blocked by said movable threaded member from further movement in said opposite direction and continues to build up said one end of said body of thread during the consecutive reciprocating stroke in said one direction.

2,859,919
FRICTION DEVICE FOR FILM SPOOLS
André Victor Léon Clément Debrie, Paris, France
Application April 25, 1955, Serial No. 503,482
Claims priority, application France June 9, 1954
4 Claims. (Cl. 242—55.11)



1. An adjustable friction supporting device for pay-off film spools, comprising in combination: a support, a horizontal stationary supporting shaft carried by said

some of the longitudinally disposed radial perforations while closing others of said longitudinally disposed perforations.

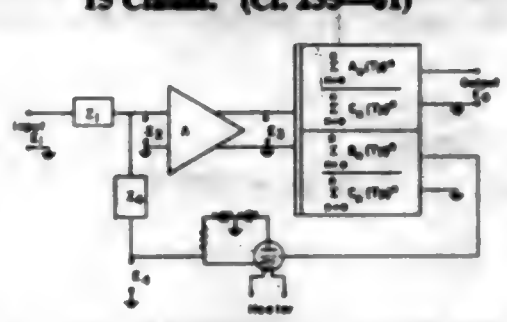
2,859,912
CRESCENT SHAPED REED VALVE
Richard H. Swart, Syracuse, and Robert W. Ayling, Utica, N. Y., assignors to Carrier Corporation, Syracuse, N. Y., a corporation of Delaware
Application April 23, 1953, Serial No. 350,571
6 Claims. (Cl. 230—172)

1. In a reciprocating compressor including a compressor cylinder; a piston mounted within the cylinder for reciprocating movement therein; a cylinder head, including a suction chamber and a discharge chamber disposed above the cylinder; a valve plate interposed between said head and cylinder, said plate including a plurality of arcuately disposed discharge passages permitting communication between the discharge chamber in the head and the cylinder, and a plurality of suction passages permitting communication between the suction chamber in the head and the cylinder; a valve comprising substantially a crescent-shaped reed overlying said discharge passages, said reed being secured at its extremities to the upper surface of the valve plate; and means secured to the underside of the valve plate adapted to permit flow of gas into the cylinder as the piston is retracted from the valve plate and to prevent the flow of gas into the cylinder when the piston is moved toward the valve plate, said last mentioned means including a second crescent-shaped reed.

2,859,913
MAIL BOX FLAG
Henry A. Paschke, China Lake, Calif., and William C. Paschke, Fairbault, Minn.
Application August 10, 1953, Serial No. 373,347
2 Claims. (Cl. 232—35)

1. A mail box signal attachment for a conventional mail box having a housing with a doorway at one end and a cover swingable outwardly therefrom, said signal attachment comprising a mounting attachable to the box, a flag structure pivotally connected to the mounting and having a flag member projecting generally radially therefrom, said structure having a linkage-shielding and receiving bifurcated lower end below the pivot, a link having one end swingably connected to the box cover and having in the other end, which extends into the bifurcated lower end of the structure, an elongated slot, an abutment within the bifurcated lower end of said structure and rigid therewith and projecting through the slot in the link, said structure also having a link-engaging detent radially disposed from the abutment and releasably holding the structure and link in substantially non-swingable relation to each other whereby to hold the flag member in a predetermined position until the abutment is swung about the pivot by longitudinal movement of the link.

2,859,914
ELECTRICAL NETWORK SYSTEM OR SIMULATOR
Benjamin P. Blasingame, Palos Verdes Estates, Calif.
Application April 9, 1953, Serial No. 347,789
15 Claims. (Cl. 235—61)



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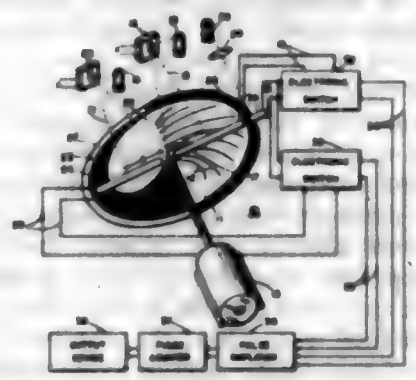
wherein: the coefficients of A_0, A_1, . . . A_n and B_0, B_1, . . . B_n may be set arbitrarily and independently, T is a characteristic time constant fixed by the design of the network system, p is the complex frequency $(\sigma+j\omega)$ of the Laplace transform or operational calculus notation for the operator

$$\frac{d}{dt}$$

n is any positive integer, said system including an amplifier connected to networks thus providing a plurality of voltages differing in phase and amplitude, means for providing series of voltages of adjustable relative amplitudes from said plurality of voltages, means for adding one of these series of adjustable voltages the relative amplitudes of which correspond to the coefficients A_0, A_1, . . . A_n to form an output voltage, and means for adding another of these series of voltages the relative amplitudes of which correspond to the coefficients B_0, B_1, . . . B_n with the resulting voltage fed back to the input of the amplifier.

2,859,915
FUNCTION GENERATOR OF TWO INDEPENDENT VARIABLES
Henri-Georges Doll, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application June 2, 1953, Serial No. 359,195
12 Claims. (Cl. 235—61)

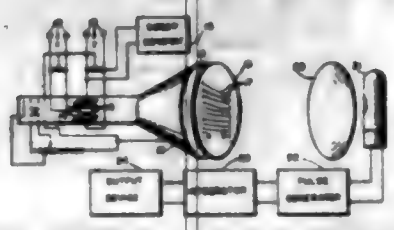


1. Automatic computing apparatus comprising: a screen including first and second sections having indicia, said indicia of each of said sections representing a preselected function of at least one of a pair of independent variables in terms of a modifying effect on incident radiant energy, and said sections being distributed along a path in a predetermined alternating order; means for projecting radiant energy toward said screen in a pair of beams spaced along said path and individually positionable according to the instantaneous value of a respective

support, means for angularly adjusting the shaft about

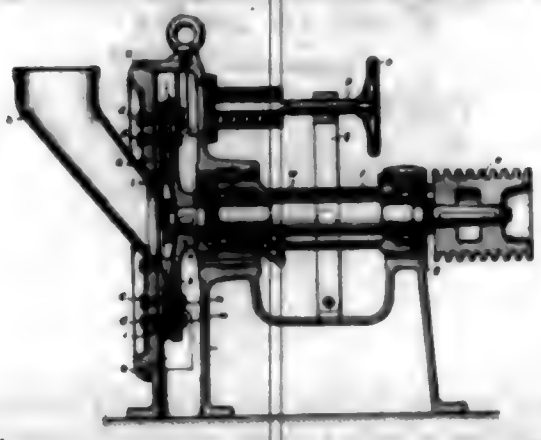
one of said variables; means for relatively displacing said screen and said beams in a direction parallel to said path to effect modulation of said beams; and means for intercepting radiant energy after said modulation and for deriving an output signal during operating intervals wherein said first section modulates one of said beams and said second section simultaneously modulates the other of said beams.

2,859,916
AUTOMATIC COMPUTING APPARATUS
Henri-Georges Doll, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application June 2, 1953, Serial No. 359,197
15 Claims. (Cl. 235—61)



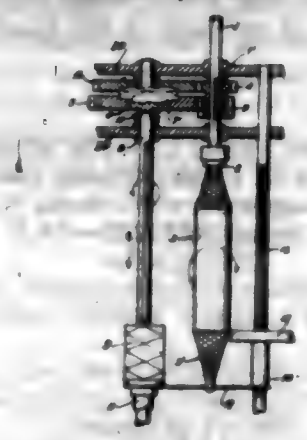
1. An automatic computer comprising: a screen including a general background area and a plurality of curves, said area and said curves having different effects on incident radiant energy; means for projecting radiant energy in a beam toward said screen; means for relatively and recurrently displacing said screen and said beam in a substantially fixed angular direction to scan a path along said screen and effect modulation of said beam; means for positioning said screen and said path with respect to one another in each of two directions according to the instantaneous values of respective ones of two variable quantities and thereby control said modulation of said beam; and means for deriving an electrical signal having a characteristic representing said modulation.

2,859,917
PROCESS FOR RE-WETTING WATER-WETTED SOLID PARTICLES
Wilhelm Reerink, Essen-Bredeney, Walter Münchenborn, Essen, and Erich Nötzold, Essen-Haarzopf, Germany
Application August 23, 1955, Serial No. 530,144
Claims priority, application Germany August 25, 1954
2 Claims. (Cl. 241—19)



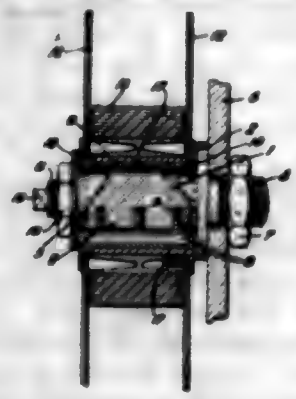
1. In a process for replacing with an oil film the water film of water-wetted, ultra-fine solid particles, wherein a mixture of said particles, water and oil is subjected to shearing and frictional forces, the improvement which comprises continuously forcing a very thin liquid film of the mixture through a zig-zag, labyrinth path provided between profiled surfaces rotating relatively one to the other, thus to subject the film to great shearing and frictional forces every time the flowing film changes direction in the path.

2,859,918
WINDING MACHINE
Stefan Fürst, M. Gladbach, Rhineland, Germany, assignor to Walter Reiners, M. Gladbach, Rhineland, Germany
Application September 20, 1954, Serial No. 457,128
Claims priority, application Germany September 21, 1953
4 Claims. (Cl. 242—27)



1. A winding machine for building up a body of thread in axial direction of a bobbin, comprising, in combination, a rotary bobbin support for rotating a bobbin about an axis of rotation; a thread guide means for guiding a thread in an oscillating movement to a bobbin supported on said rotary bobbin support so as to build up one end of a body of thread on the bobbin; reciprocating means reciprocating parallel to said axis of rotation and tending to reciprocate said thread guide means parallel to said axis of rotation; a rotary sensing means adapted to engage said one built-up end of the body of thread and to be rotated by the same; and threaded means extending parallel to the axis of rotation of said rotary bobbin support and including a stationary threaded member and a movable threaded member, said movable threaded member being connected to said rotary sensing means for rotation therewith so as to be screwed on said stationary threaded member in one axial direction as the body of thread is built up whereby said sensing disc moves along with said built-up end of said body of thread in axial direction of said spindle member, said movable threaded member being located in the path of said thread guide means and being engaged by the same during the reciprocating stroke of the same in a direction opposite to said one direction whereby said thread guide means is blocked by said movable threaded member from further movement in said opposite direction and continues to build up said one end of said body of thread during the consecutive reciprocating stroke in said one direction.

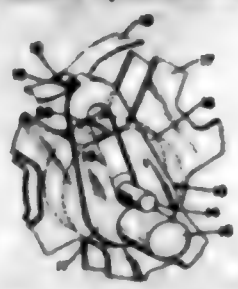
2,859,919
FRICTION DEVICE FOR FILM SPOOLS
André Victor Léon Clément Debrie, Paris, France
Application April 25, 1955, Serial No. 503,482
Claims priority, application France June 9, 1954
4 Claims. (Cl. 242—55.11)



1. An adjustable friction supporting device for pay-off film spools, comprising in combination: a support, a horizontal stationary supporting shaft carried by said

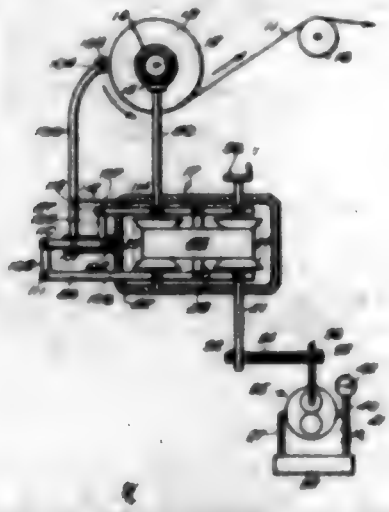
support, means for angularly adjusting the shaft about its axis with respect to said support, and a flexible thin sleeve having an inner diameter somewhat larger than the diameter of said supporting shaft and through which said shaft extends, said sleeve being secured to said shaft along a common generatrix of said shaft and sleeve, the outer diameter of said sleeve being somewhat smaller than the diameter of the bore of the spool hub.

2,859,920
TAPE ATTACHING DEVICE FOR REELS
James G. Fisher, Parma, Ohio
Application August 31, 1954, Serial No. 453,253
4 Claims. (Cl. 242—74.1)



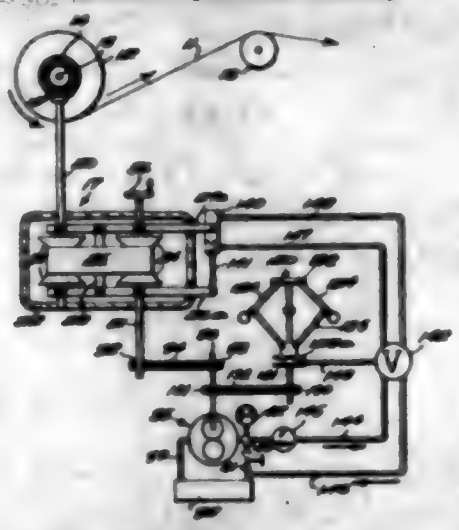
1. A threader for engaging tape ends with a reel adapted to receive the tape rotatably mounted on a spindle, said threader comprising a body member having a prong formed at one end thereof and arranged to traverse the path of travel of the tape on the reel, said prong adapted to engage and hold the leading end of the tape against the core of the reel, said body portion having an elongated slot for mounting said member on the spindle for radial movement with respect to the reel and a handle member mounted on said body portion at the other end thereof for manually rotating the reel until the end of the tape is secured to the core of the reel.

2,859,921
CONSTANT TENSION UNWINDING MECHANISM
Richard Le Baron Bowen, Jr., Barrington, R. I.
Original application March 25, 1953, Serial No. 344,528, now Patent No. 2,781,178, dated February 12, 1957. Divided and this application November 16, 1956, Serial No. 622,653
3 Claims. (Cl. 242—75.45)



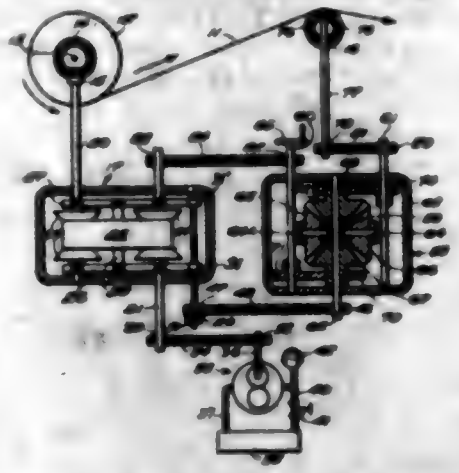
1. In a constant tension unwinding mechanism, a beam carrying a web, said web travelling at a constant linear speed, a variable speed transmission provided with a first shaft, a second shaft, and a speed changing mechanism, said first shaft being arranged for driving engagement with said beam, a hydraulic circuit including a gear pump and a throttling restriction, said second shaft being arranged for direct driving engagement with said gear pump, a follower roller engaging said beam, and means connecting said speed changing mechanism with said follower roller.

2,859,922
CONSTANT TENSION UNWINDING MECHANISM
Richard Le Baron Bowen, Jr., Barrington, R. I.
Original application March 25, 1953, Serial No. 344,528, now Patent No. 2,781,178, dated February 12, 1957. Divided and this application November 16, 1956, Serial No. 622,651
3 Claims. (Cl. 242—75.47)



1. In a constant tension unwinding mechanism, an axle, a beam carrying web on said axle, said web being unwound from said beam at a constant linear speed, a variable speed transmission provided with a first shaft, a second shaft, and speed changing mechanism including a hydraulic motor, said first shaft being arranged for driving engagement with said axle, a gear pump, said second shaft being arranged for driving engagement with said gear pump, a suction line and a discharge line with a throttling valve for said pump, a hydraulic valve for controlling the action of said hydraulic motor, and means responsive to the speed of rotation of said pump for controlling said valve.

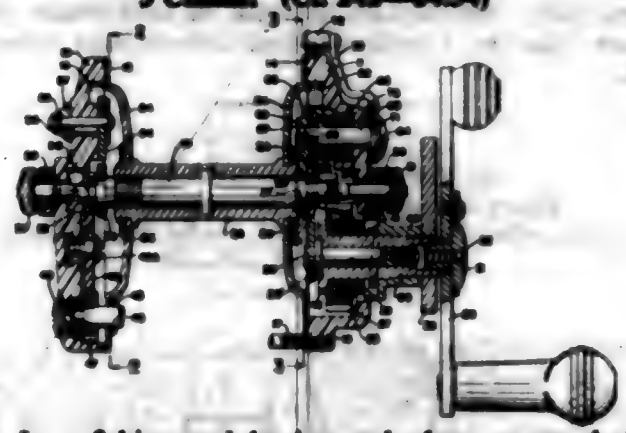
2,859,923
CONSTANT TENSION UNWINDING MECHANISM
Richard Le Baron Bowen, Jr., Barrington, R. I.
Original application March 25, 1953, Serial No. 344,528, now Patent No. 2,781,178, dated February 12, 1957. Divided and this application November 16, 1956, Serial No. 622,652
3 Claims. (Cl. 242—75.47)



1. In a constant tension web unwinding mechanism, a beam carrying a web, a drum operatively connected to said web and over which the web travels at a constant linear speed, a variable speed transmission provided with a first shaft, a second shaft, and speed changing mechanism, said first shaft being arranged for driving engagement with said beam, a gear pump with a suction and discharge line, a throttling valve in said discharge line, said second shaft being arranged for direct engagement with said gear pump, a differential gear train with three power transmitting elements, the first of said elements being arranged for driving engagement with said speed changing

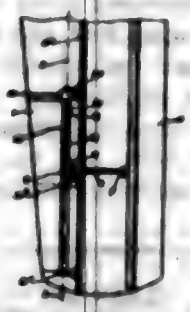
mechanism, the second of said elements being arranged for driving engagement with said second shaft, and the third of said elements being arranged for driving engagement with said drum.

2,859,924
FREE SPOOL FISHING REEL
Thomas F. Surah, Akron, Ohio, assignor to The Enterprise Manufacturing Company, Akron, Ohio, a corporation of Ohio
Application September 30, 1955, Serial No. 537,619
3 Claims. (Cl. 242—84.54)



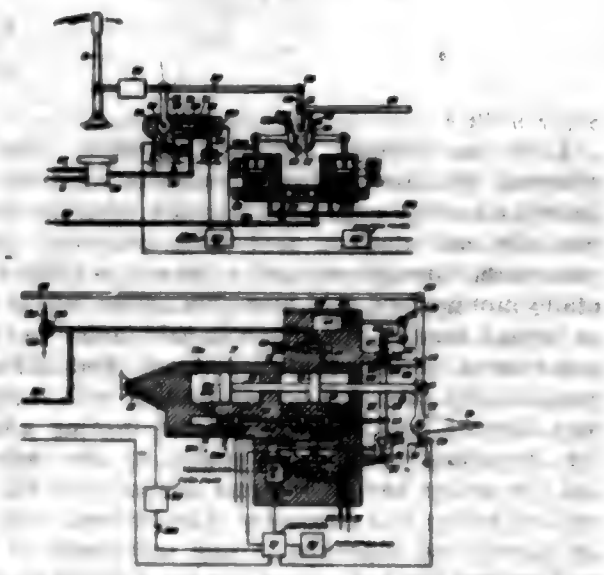
1. In a fishing reel having end plates, a spool shaft journaled at its ends in said end plates, and a driving pinion in one end plate slidable on said shaft into and out of driving engagement with said shaft, clutch mechanism in said one plate including a yoke plate engaging said pinion, means for shifting said yoke plate axially of the shaft to engage and disengage the pinion from the shaft, said means including a bolt journaled in said one end plate, a lever for rotating the bolt, a transverse pin in the end of said bolt, a cam bushing axially slidable on said bolt and having a shoulder abutting said yoke plate, a spring around the bolt urging the yoke plate against said shoulder in a direction toward said pin, a second spring within the first urging said bushing against said pin, and a transverse cam slot in the end of said bushing for receiving the pin when the pinion is engaged with the spool shaft.

2,859,925
AUTOMATIC BALANCING ARRANGEMENT FOR AIRCRAFT CONTROL
Jacques Jean-Marie Jules Gérin, Boulogne-sur-Seine, France
Application September 14, 1954, Serial No. 456,047
Claims priority, application France September 17, 1953
5 Claims. (Cl. 244—75)



3. An automatic balancing device for an aircraft control-surface pivotally connected to an element of said aircraft, comprising in combination an arm integral with said control-surface and extending into said element, said arm being arranged and adapted to remain continually within the interior of said element, a shaft mounted on said arm and disposed within the confines of said element, at least one balancing lever mounted intermediate its ends on said shaft and pivotally attached thereto, said shaft dividing the said lever into two arms of unequal length, the longer arm of said lever being directed toward the front of said element and the shorter arm of said lever being directed toward the rear of said element, a counter-weight carried by said longer arm at the free extremity of the latter, motion transmission means connected to said shorter arm at the free extremity of the latter, and actuating means interconnected between said control-surface and said transmission means for operating the latter to vary the position of said lever and said weight in response to variation in the position of said control-surface relative to said element, whereby to each angular position of said control-surface there corresponds a position of said balancing lever which is always comprised within the limits of said element inside which said lever is housed.

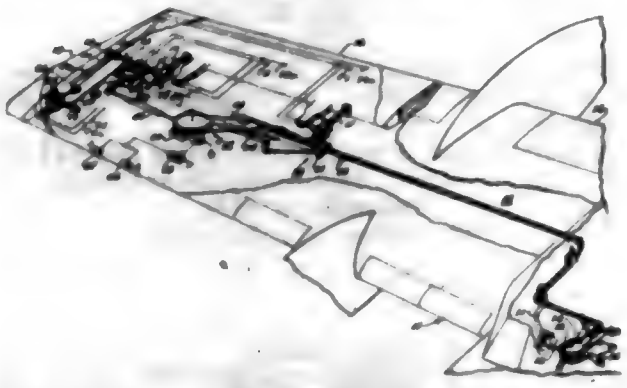
2,859,926
AIRCRAFT
Roy Westbury, Bridgnorth, Salop, England, assignor to H. M. Hobson Limited, London, England, a British company
Application November 29, 1955, Serial No. 549,737
Claims priority, application Great Britain December 3, 1954
10 Claims. (Cl. 244—76)



1. A power operated flying control system for aircraft comprising a pilot's control member, a control surface, a hydraulic servo motor comprising an input member and an output member, said output member being coupled to said control surface, an electro-hydraulic actuator having an input member and an output member, means for connecting the output member of the electro-hydraulic actuator to the input member of the hydraulic servo motor, an electrical signalling system operable by said control member to impart movement to the input member of said actuator and thereby to move the control surface to positions selected by the control member, means for switching the electrical signalling system into and out of operation, a mechanical linkage for actuating the input member of said servo motor, a lock for coupling said linkage to said control member, lock controlling means controlled by said switching means for engaging said lock when said electrical signalling system is out of operation and disengaging said lock when said electrical signalling system is in operation, a first electrical switch mechanism comprising a pair of switches which are arranged to be selectively operated by relative movement in opposite directions of said control member and said linkage, a second electrical switch mechanism comprising a pair of switches which are arranged to be selectively operated by movement in opposite directions of the output member of the electro-hydraulic actuator, and changeover mechanism operable by said switch mechanisms when said electrical signalling system is in operation and in the event of runaway of said actuator and to disable said electrical signalling system and thereby cause said lock controlling

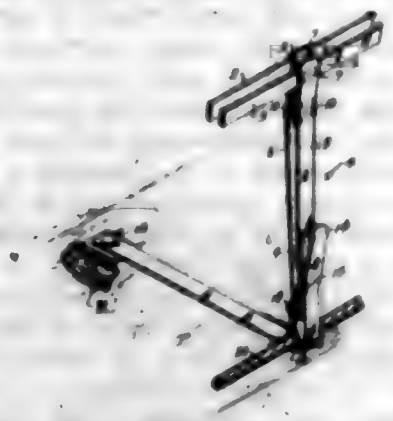
means to engage said lock, said change over mechanism being unresponsive to actuation of said switch mechanisms as the result of insufficient movement of the control surface in the direction selected by the control member.

2,859,927
AILERON CONTROL SYSTEM
John E. Glenn, Hawthorne, and Herbert L. Hubbard, Inglewood, Calif., assignors to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California
Application July 6, 1954, Serial No. 441,341
4 Claims. (Cl. 244—90)



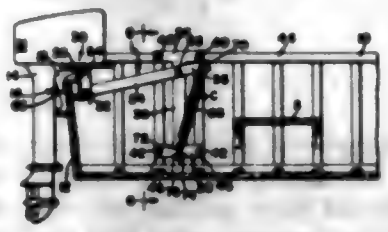
1. In an airplane having a movable pilot's control element, the combination comprising: a wing assembly having a trailing edge aileron and a wing tip aileron each pivotally mounted on said wing assembly for angular movement through respective ranges; a cable pulley pivotally mounted on said assembly; cable means connected to impart angular movement to said pulley in response to movements of said control element; first linkage means eccentrically mounted on said pulley with respect to the axis thereof and attached to said trailing edge aileron for imparting pivotal movement to the latter; second linkage means having one end thereof pivotally mounted on said pulley and extending therebetween and said wing tip aileron for imparting pivotal movement to the latter; said second linkage means having a centered and a plurality of non-centered positions in which the pivotal axis of said one end of said second linkage means respectively coincides with and is positioned eccentrically with respect to the pivotal axis of said pulley; and means for moving said second linkage means between said centered and non-centered positions.

2,859,928
LIFTER STRAP FOR AIRCRAFT BARRIERS
John E. Snow, Fairborn, Ohio, assignor to Acme Precision Products, Inc., Dayton, Ohio, a corporation of Ohio
Application December 19, 1955, Serial No. 553,817
5 Claims. (Cl. 244—110)



1. A lifter strap for aircraft barriers, said lifter strap releasably attached to an aircraft runway and normally connecting a pair of stretched actuator straps to an arresting cable, said actuator straps adapted to be engaged by the forward part of a moving aircraft, said lifter strap including releasable means connecting said actuator straps with said arresting cable and releasable upon a predetermined pull on said lifter strap by said actuator straps being engaged by the forward part of a moving aircraft, said releasable means comprising at least two pieces of flexible material of unequal lengths, each piece attached at one of its ends of a separate one of said actuator straps, the longer of said pieces being releasably attached at its other end to said aircraft runway, and the shorter piece being severably attached adjacent its other end to said longer piece intermediate the ends of said longer piece forming thereby a severable loop around said arresting cable.

2,859,929
OUTBOARD MOTOR LIFT
Harry Woods Shontz, Davenport, Iowa
Application February 1, 1956, Serial No. 562,812
17 Claims. (Cl. 248—4)

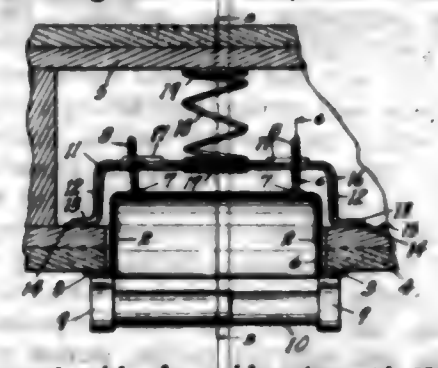


1. In a boat having at its rear end an outboard motor releasably mounted for upward removal from a normal operating position, the combination therewith of motor lift mechanism for moving the motor between said normal position and a forwardly disposed storage position within the boat, comprising support structure having means for the affixation thereof to the boat intermediate the front and rear ends thereof; a lift bail having a transverse bight and a pair of fore-and-aft legs extending from the bight to free end portions respectively proximate to the support structure, said legs being of such length as to dispose the bight adjacent to the normally positioned motor; pivot means on a transverse axis mounting the lift bail on the support structure for fore-and-aft swinging in an arc above said axis between a rearwardly extending position and a forwardly extending position; and motor-carrying means on the bight releasably connectible to the motor for sustaining the motor on and depending from the bight when the motor is released from the rear end of the boat to swing the motor with the bail between said normal and storage positions, said motor-carrying means including a transverse pivot about which the dependant motor may swing fore and aft when said motor is released from the rear end of the boat, and the length and pivotal mounting of said legs and said last-named pivot enabling the released and dependent motor to clear the rear end of the boat and to swing between said normal and storage positions without inversion of said motor.

2,859,930
RECESSED WALL FIXTURE MOUNTING
Ralph Brunsting and Clarence M. Casselman, Kalamazoo, Mich.
Application July 18, 1956, Serial No. 598,696
6 Claims. (Cl. 248—27)

1. The combination with a wall fixture having a recessed portion adapted to be inserted in an opening in the front wall of a double wall and having an outwardly turned peripheral flange adapted to seat against the surface of said front wall with a holder of U-shaped formation adapted to embrace said recessed portion and having laterally outwardly turned feet opposed to said flange and adapted to engage the inner surface of said outer wall in opposition to said flange, wall engaging teeth on

said feet, a rearwardly curved reinforcing rib formed longitudinally along said holder, longitudinally spaced slits formed in the base of said rib at longitudinally spaced positions along the base of the U-shaped holder, rearwardly projecting and converging flanges along the sides of said slits, countersink screw holes formed in the back of said recessed portion and adapted to register with said slits, sheet metal screws passed through said screw holes and threadingly engaged through said slits with the flanges along side the slits, and a helically coiled

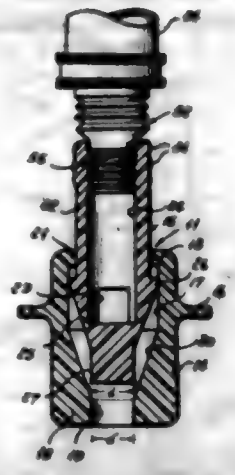


spring engaged with the mid-section of said U-shaped holder and adapted to be compressed against the rear wall of said double wall when said holder is inserted between the walls, said spring having closely turned adjacent coils at each end arranged perpendicular to the axis of the coil with the adjacent coils at one end of the spring adapted to have the holder slide transversely therebetween, and means including spindle bearing ears on the front of said fixture adapted to retain articles within the recess of the fixture.

2,859,931
VALVE AND ACTUATOR THEREFOR
Adolph J. Hilgert, Milwaukee, Wis., assignor to Baso Inc., a corporation of Wisconsin
Application April 20, 1954, Serial No. 424,854
3 Claims. (Cl. 251—86)

1. A valve and actuator therefor comprising, in combination, a valve disk having a circumferential rib on one side, a resilient ring mounted within said rib, an inwardly extending circumferential flange on the valve disk extending into position within the plane of said ring, a freely stretchable and imperforate membrane stretched over the outer sides of said valve disk and said ring and secured at its outer periphery and outwardly of the outer periphery of said resilient ring to said valve disk, said flange having an axial seat formed with an opening, an actuator pin connected to said valve disk and having a generally conical head seated for swiveling on said axial seat and within the plane of said resilient ring, said conical head being formed with an extended portion positioned within said opening in said flange, said pin having an abutment thereon, and a hub on said valve disk provided with an annular shoulder cooperating with said abutment to hold the conical head of said actuator pin in operative relation with the seat on said flange, positioning of said extended portion within said opening in said flange preventing substantial lateral movement between said pin and said valve disk while permitting said swiveling movement to afford self accommodation of the valve disk to a valve seat with a minimum of lateral wiping of said membrane on said valve seat as said disk is moved with said pin toward said valve seat.

2,859,932
VALVE
Henry H. Mackal, Paramus, N. J.
Application October 15, 1954, Serial No. 462,562
9 Claims. (Cl. 251—347)

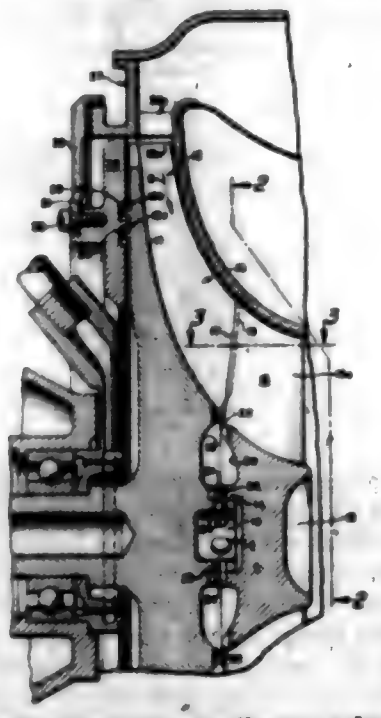


1. A two-piece valve comprising: an outer hollow valve body having a central opening longitudinally therethrough, a centrally-open relatively thin radially inwardly extending first flange on the outer end of the valve body, a centrally-open relatively thick radially inwardly extending second flange on the inner end of the valve body, the diameter of the opening in the first flange somewhat exceeding that of the opening in the second flange, an inner valve element mounted to reciprocate in the valve body longitudinally thereof between an outer, valve-open position and an inner, valve-closed position, the valve body and the valve element being molded of elastic plastic material, the element having an outer cylindrical stem with a longitudinal passage therein, the stem projecting outwardly through the first flange and having sealing sliding contact therewith, the opening in the valve body having an inwardly converging frusto-conical seat at its forward end and a circular cylindrical portion rearwardly thereof, the inner, smaller end of the seat merging with the opening in the second flange, an inwardly converging frusto-conical intermediate portion shaped similarly to the seat on the stem inwardly of the valve body, the larger end of the intermediate portion having a diameter materially exceeding that of the stem and slidingly and substantially sealingly engaging the circular cylindrical portion of the opening in the valve body, a cylindrical plug on the inner end of the element beyond the smaller end of the intermediate portion selectively entering and closing the opening in the second flange, the plug having a relaxed diameter somewhat exceeding the relaxed diameter in the opening in the second flange, and a second, transverse passage in the element through an intermediate portion of the frusto-conical intermediate portion thereof connecting the passage in the stem with the opening in the valve body when the element is in valve-open position, the body and element being so constructed that when the plug is fully engaged in the opening in the second flange the intermediate portion on the element is engaged with the seat in the body.

2,859,933
TURBINE WHEEL EXDUCER STRUCTURE
William D. Whitaker, Manhattan Beach, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Application September 11, 1953, Serial No. 379,561
2 Claims. (Cl. 253—39)

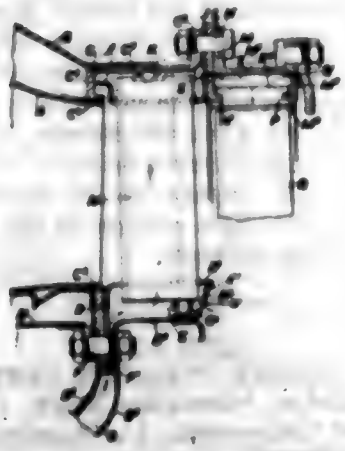
1. A wheel adapted to be mounted for rotation about an axis for operation with elastic fluid comprising first

and second hub portions rigidly connected in axially aligned relation to form the hub of said wheel, each of said hub portions having angularly spaced and generally radially extending blade sections providing guide surfaces with which the elastic fluid coacts on rotation of said wheel, corresponding blade sections on said hub portions cooperating at their adjacent edges to form individual rotor blades on said wheel, said cooperating adjacent edges of said blade sections directly engaging



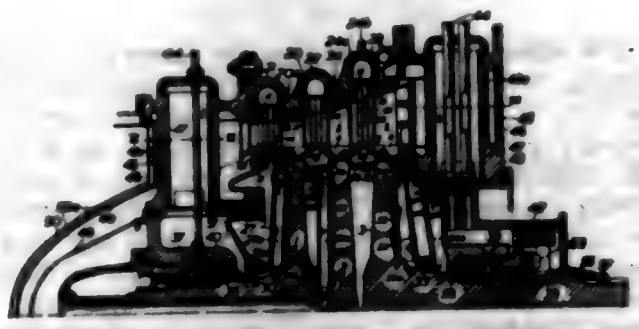
each other, said cooperating adjacent edges being disposed in the plane of said blade sections adjacent their engaging edges and axially overlapping one another with the cooperating engaging edges of the blade sections of said first hub portion underlying the guide surfaces at the cooperating edges on the blade sections of said second hub portion whereby forces applied to such guide surfaces of the blade sections of said second hub portion upon rotation of said wheel act to firmly engage said cooperating adjacent edges to damp vibrations therebetween.

2,859,934
GAS TURBINES
Frank Bernard Halford, Edgware, and Arnold Royden Bennett Gay, Stanmore, England, assignors to The De Havilland Engine Company Limited, Leavesden, England, a British company
Application July 16, 1954, Serial No. 443,943
Claims priority, application Great Britain July 29, 1953
8 Claims. (Cl. 253—39.1)



1. An axial flow turbine having an enclosing turbine casing, and including a nozzle blade ring assembly comprising inner and outer annular supporting ring assemblies, each of said annular assemblies including inner and outer circumferential walls connected by annular end walls and enclosing between them an annular cooling air chamber, the inner circumferential wall of the outer supporting ring assembly and the outer circumferential wall of the inner supporting ring assembly having apertures therein, tubular guide blades or vanes having lengthwise passages therethrough constituting a ring of nozzle blades the inner and outer ends of which pass respectively through the outer circumferential wall of the inner supporting ring assembly and the inner circumferential wall of the outer supporting ring assembly, the passages through said guide blades or vanes communicating at their ends respectively with the inner and outer annular cooling-air chambers, said turbine also having a ring of rotor blades onto which the working fluid is directed by the ring of nozzle blades, a turbine shroud immediately surrounding the ring of rotor blades and spaced within and freely mounted for relative movement with respect to an adjacent part of the enclosing turbine casing between a plurality of annular end walls each of which is supported by said casing, and which end walls cooperate with the turbine casing and with the turbine shroud to form an annular shroud cooling-air chamber surrounding the shroud, means for delivering cooling air to the inner annular nozzle blade ring cooling-air chamber whence it flows through said tubular guide blades or vanes into the outer annular nozzle blade ring cooling-air chamber, at least one passage extending through an annular end wall between said outer annular nozzle blade ring cooling-air chamber and said annular shroud cooling-air chamber, at least one air escape vent extending through one of the end walls of said annular shroud cooling-air chamber permitting flow of air therefrom into the working gas stream leaving the blades of the rotor blade ring, and at least one escape passage extending through a wall of said inner nozzle blade ring cooling-air chamber adjacent to said rotor blade ring to divert a portion of the cooling air in the inner nozzle blade ring cooling-air chamber in the direction of the said rotor blade ring.

2,859,935
COOLING OF TURBINES
Georges Henry Roesch, London, England, assignor to Power Jets (Research and Development) Limited, London, England, a company of Great Britain
Application February 14, 1952, Serial No. 271,681
Claims priority, application Great Britain February 15, 1951
8 Claims. (Cl. 253—39.15)

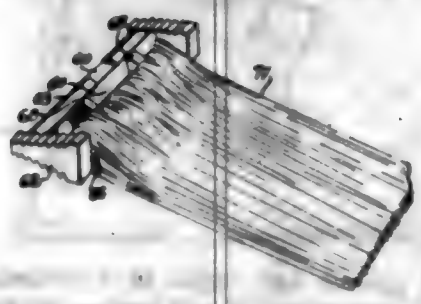


1. A multi-stage axial-flow gas turbine including a stator, a rotor, a plurality of rings of stator blades on said stator, a plurality of rings of rotor blades around said rotor the interior of which rotor is divided into chambers, with inlets between each ring of rotor blades and a separate one of said chambers for supplying coolant to the blades, partitions in said rotor partly bounding said chambers, boundary walls around said blades defining an annular hot-gas path through said turbine between said rotor and said stator and between adjacent blades, wall means defining a plurality of coolant-supply ducts extending across said hot-gas path, heat-insulating sheathing around said wall means, and boundary walls in said rotor includ-

said groove, a pair of flanges carried by said bushing, ing means having a grooved and inclined upper surface,

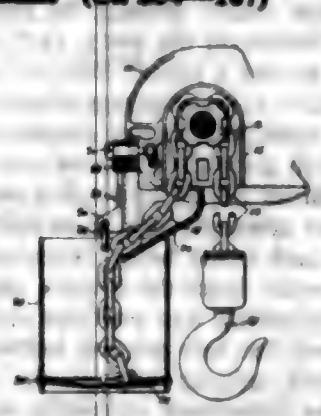
ing said partitions defining a separate cooling path from each of said ducts through one of said chambers and in fluid communication with one of said inlets.

2,859,936
COMPRESSOR BLADE AND METHOD OF FORMING SAME
Elmer P. Warnken, Cincinnati, Ohio, assignor to Cincinnati Testing & Research Laboratories, Cincinnati, Ohio, a partnership
Application March 3, 1954, Serial No. 413,743
10 Claims. (Cl. 253—77)



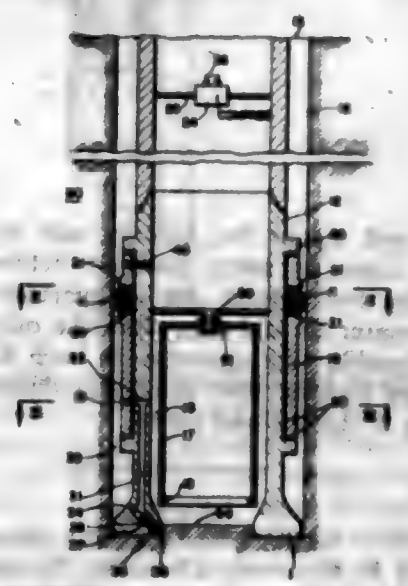
1. A prestressed airfoil rotor blade which comprises a rigid key and pin member comprising an outer portion of key shape, a pin spaced from and substantially parallel to the outer portion, and bridging members holding the key-shaped portion and the pin in spaced relation, a plurality of prestressed elongated rovings of doublet form, each doublet having a loop at one end thereof mounted on said pin, and a cured resin impregnating the rovings to hold the rovings in tension, the blade at the doublet loops of the rovings being of key shape, the portion of the rovings remote from the pin being of airfoil configuration.

2,859,937
HOIST CHAIN CONTAINER
Erford E. Robins, North Tonawanda, and Loren W. Lerch, Buffalo, N. Y., assignors to Columbus McKinnon Chain Corporation, Tonawanda, N. Y.
Application December 13, 1955, Serial No. 552,933
2 Claims. (Cl. 254—167)



2. In a chain hoist mechanism comprising a frame, a load lift wheel rotatably mounted in said frame and a load lift chain training over said load lift wheel and having its loose end discharging therefrom downwardly through an opening in the chain hoist frame, the improvement comprising in combination a chain loose end guide and reservoir device including a bracket member mounted upon said hoist frame and having a guide portion formed integrally with said bracket member and reaching underneath the region of discharge of the chain loose end from said load lift wheel, said guide portion having a sloping bottom portion inclined downwardly for free sliding of the chain loose end thereover, and a chain reservoir suspended from said bracket member by means of swing connection means whereby said reservoir is swingable below said bracket responsive to varying load conditions, a top edge portion of said reservoir being disposed beneath said sloping bottom of said guide portion, said bracket member and said reservoir being so dimensioned and arranged that said guide portion discharges said chain loose end and following run to fall substantially into the center of said reservoir and to descend along the vertical center line thereof while being free to reverse-lap fold as it runs into said reservoir.

2,859,938
ORIENTATION OF SUBSURFACE EARTH CORES
Frank G. Boucher, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Application January 3, 1955, Serial No. 479,637
6 Claims. (Cl. 255—1.4)



1. In a rotary-type coring apparatus including a rotatable drill string, a coring bit attached to the lower end of the drill string, and a stationary core-receiving barrel disposed within the lower end of the drill string to receive a core after it is formed by the bit, means for orienting the core which comprises retractable scribing means mounted adjacent the bit and adapted when extended to inscribe a mark on the sidewall surface of the core as the core is cut, said scribing means contacting the core when in an extended position, a member supported exterior of said drill string and supported by the drill string in a rotatable relation therewith, gripping means attached to said member and adapted to engage the sidewall of a borehole so as to maintain said member in a fixed position rotationally relative to the drill string and the bit, actuating means associated with said drill string and cooperable with said member to extend and retract the scribing means during a predetermined portion of each revolution of the drill bit and drill string, a compass including a lubber's line supported within and by the drill string above the core-receiving barrel, means to maintain said member in a predetermined azimuthal relation with respect to the lubber's line of the compass and said actuating means prior to the rotation of the drill bit, and means to lock the compass prior to rotation of the drill bit.

2,859,939
ROTARY DRIVE BUSHING
Wilfred M. Pyfrell, Embarrass, Minn., assignor to Reserve Mining Company, Silver Bay, Minn., a corporation of Minnesota
Application March 6, 1957, Serial No. 644,391
5 Claims. (Cl. 255—23)

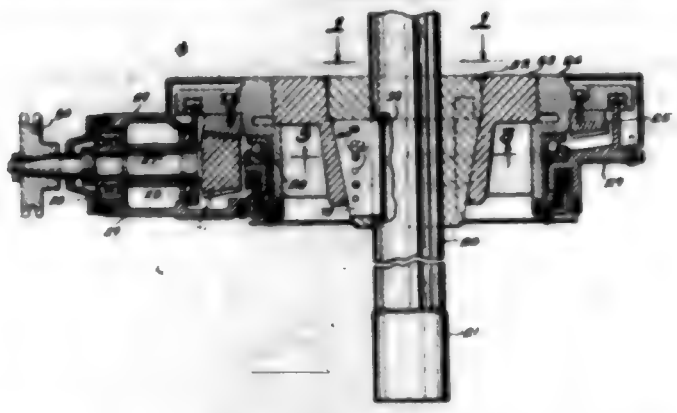
1. Apparatus for earth boring comprising, in combination, a drive bushing, means for rotating said bushing, an elongated boring tool vertically slidable within said bushing, a key groove extending longitudinally in the surface of said tool, a slot in said bushing alignable with

said cylinder to raise said mandrel in opposition to said

2,859,945

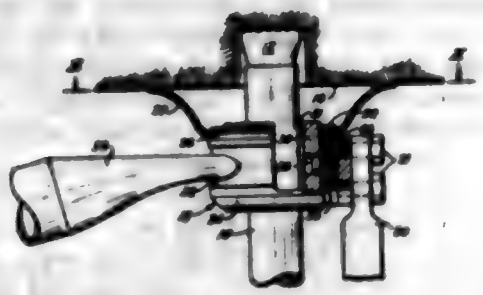
blies, each of said annular assemblies including inner and ... said wall means, and boundary walls at ...

said groove, a pair of flanges carried by said bushing, one flange extending along each edge of said slot, each said flange having a row of apertures, each aperture in axial alignment with one on the other flange, a key block slidably insertible between said flanges with an inner edge thereof extending through said slot into said



groove, and means for holding said block in either a radially inner or outer position between said flanges comprising two spaced sets of apertures in said block, one set nearer to said edge than the other set, either set being alignable with apertures in both flanges, and cross connecting locking pins insertable through thus aligned apertures in flanges and block.

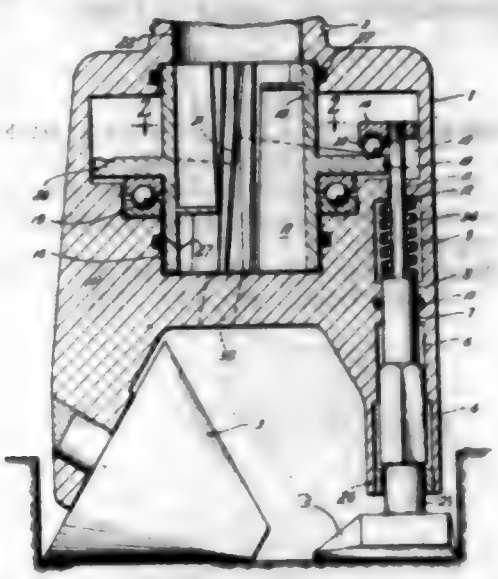
2,859,940
DUST COLLECTOR HEAD
Raymond E. Brochetti, Churchill, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application March 12, 1956, Serial No. 571,887
4 Claims. (Cl. 255—58)



4. A dust collector swivel head comprising a stationary bracket adapted to be connected to a support, a sleeve rotatably disposed axially in the bracket and adapted to loosely receive a drill stem, and a ring detachably secured around the sleeve and supported by the bracket, said sleeve and ring being provided with registering radial openings for connection to a suction line.

2,859,941
COMBINATION ROTARY AND IMPACT DRILL
Martin B. Carroll, Pasadena, Tex., and Lester Courville, Kretz Springs, La.
Application February 6, 1956, Serial No. 563,572
2 Claims. (Cl. 255—61)

1. In a bit, a bit housing, rotating drilling cones mounted in said housing and a drilling mud passageway through said housing, reciprocal cutting blades mounted in said housing between said cones, actuating means actuated by drilling mud passing through said drilling mud passageway for reciprocating said cutting blades, said actuating means having a series of vanes vertically mounted therein and positioned to cause a rotating movement of said actuating means as fluid pressure bears against said vanes, and a lateral extension on said actuating means having a grooved and inclined upper surface, said inclined surface terminating in a shoulder, a ball



riding in said groove and caged in a retaining means mounted on the upper end of said cutting blades.

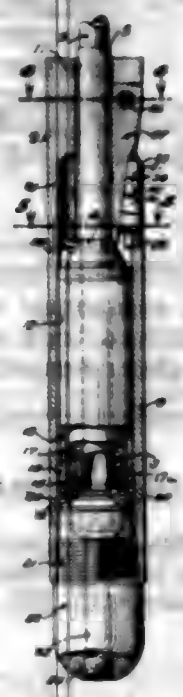
2,859,942
DETACHABLE BLADE BIT
Herbert J. Hawthorne, Houston, Tex., assignor of one-fourth to Earl M. Weaver
Continuation of Serial No. 332,060, January 19, 1953, which is a division of application Serial No. 794,239, December 29, 1947, now Patent No. 2,666,622, dated January 19, 1954. This application May 15, 1957, Serial No. 659,423
1 Claim. (Cl. 255—61)

A drag type rotary drilling bit comprising a body, a plurality of blades on the body, each blade having a cutting portion having a planar front or cutting surface, each cutting portion having cutting fingers extending downwardly therefrom, the cutting surface of the fingers being substantially in a continuation of said planar surface, the lower extremities of the respective fingers on each blade being stepped upwardly and outwardly of the bit center, the rear of each blade being characterized by ridges extending upwardly from the fingers, the cutting portion of each blade including web portions extending between the fingers thereof, the web portion between each pair of fingers beginning substantially at the radially outer side thereof at the lowermost extremity of the radially outermost finger of the pair for providing support to the cutting fingers, said webs having lesser cutting ability than the fingers.

2,859,943
EXPANSIBLE MILL FOR WELL CASINGS
Jack Chadderdon, Palos Verdes Estates, Calif.
Application January 7, 1957, Serial No. 632,931
1 Claim. (Cl. 255—76)

A well casing milling tool, comprising: a tubular body structure adapted to enter a casing to be milled and having an open but restricted fluid outlet at its lower end and internally enlarged above said outlet to form a cylinder; a tubular mandrel slidably mounted in said body structure, having an enlarged piston at its lower end fitting said cylinder; a spring urging said mandrel downwardly relative to said body structure, said piston and cylinder operable on application of fluid pressure in

said cylinder to raise said mandrel in opposition to said spring; said body structure having cutter arm recesses formed in the side walls thereof above said cylinder; cutter supporting arms pivotally mounted on said tubular body within said recesses and movable between radially retracted and radially extended positions, wholly confined within the external surfaces of said body structure; stop means on said tubular body adjacent said recess and engageable with portions of said arms to limit outward movement of said arms and thereby confine those arms



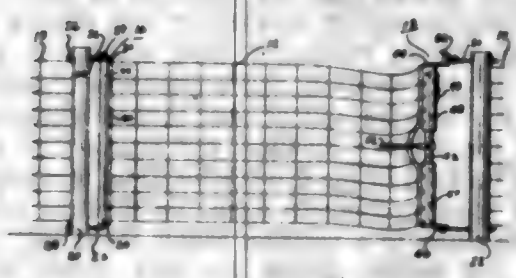
within said body; cam means on said mandrel for expanding said arms; sets of attritionable cutter core blades replaceably mounted on said arms, extending longitudinally of said body structure, and movable to radially outer positions, protruding from said body structure, for engagement with a casing in which said body structure is inserted; and a plurality of cutting elements supported on said blades and progressively exposed for cutting action on said casing, as said blades are progressively destroyed by attrition.

2,859,944

WIRE TENSIONING AND LOCKING DEVICE

James M. Clancy, Walkerton, Ind.

Application July 2, 1956, Serial No. 595,189
3 Claims. (Cl. 256—37)



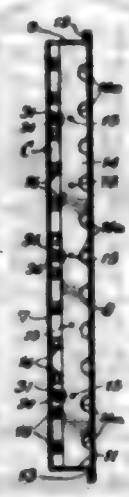
1. A wire fence insert, comprising a section of wire fencing, a pair of fixtures adapted to be mounted in spaced relation on a support and having aligned holes forming bearing openings therein, one of said fixtures having a pivoted section carrying its bearing opening, stems adapted to seat in said bearing openings, a shaft, off-set means connecting the shaft to the inner ends of the stems, a pair of elongated spaced sleeves rotatably mounted on said shaft between said means, a rigid means attached to said sleeves for supporting one end of the section of wire fencing, an operating arm connected to said shaft between said sleeves, and means fixedly supporting the other end of said fencing.

2,859,945

ASSEMBLY FOR HEATING AND COOLING TRUCKS

Herman W. Kleist, Hollywood, Ill., assignor to Dole Refrigerating Company, Chicago, Ill., a corporation of Illinois

Application October 25, 1955, Serial No. 543,684
2 Claims. (Cl. 257—9)



1. For use in delivery trucks and the like having storage containers which may be subjected to extreme variations in ambient temperature, a combination refrigeration and heating element for maintaining the temperature of the storage space within a preselected range through the extreme variations of ambient temperature, including a plate having substantially parallel exposed spaced side walls and edge walls connecting said side walls in direct heat exchange relation with the air in the space and having therein a substantial body of liquid, an evaporator coil in the plate between the side walls and including a plurality of generally parallel somewhat equally spaced rectilinear lengths of tubing interconnected by integral return bends, the lengths extending longitudinally along and in contact with one side wall, a plurality of spacer elements disposed transversely of the lengths in the space between the other side wall and the coil and abutting both the other side wall and the coil whereby the coil is in contact at all times with said one side wall, one of the edge walls having a plurality of spaced apertures disposed in the plane of the evaporator coil, and a plurality of individual rectilinear electrical resistance heating elements, each being positioned in the general plane of the coil and interposed between and generally parallel to adjacent tube lengths of the coil, the inner end of each heating element being disposed toward a return bend of the coil remote from said apertures, and the other end of each heating element being disposed and secured in an aperture in the said one edge wall, the heating elements being generally parallel to each other and generally equally spaced as to each other as well as between adjacent tube lengths.

2,859,946

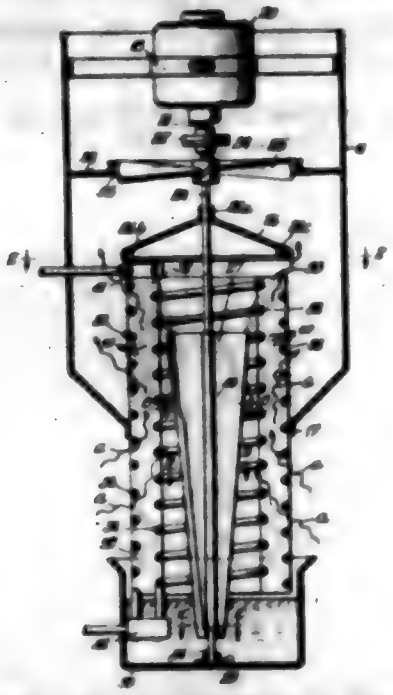
HEAT EXCHANGE DEVICE

John R. Boyle and John R. Boyle, Jr., Chicago, Ill.

Application January 31, 1955, Serial No. 484,952
11 Claims. (Cl. 257—37)

11. In a heat exchange device, the combination of a cooling coil, a water tank below said coil, a motor driven shaft extending downwardly through said cooling coil into said tank, a fan on the upper portion of said shaft for inducing an upward flow of air through said coil, a spinner in the lower portion of said shaft comprising vanes operative to lift the water centrifugally from said tank and to spray it on said coil, and a combined air baffle and hydraulic balancing device on said shaft between the upper end of said coil and said fan, said device

comprising an air deflecting member operative to deflect the upward flow of air outwardly through the upper



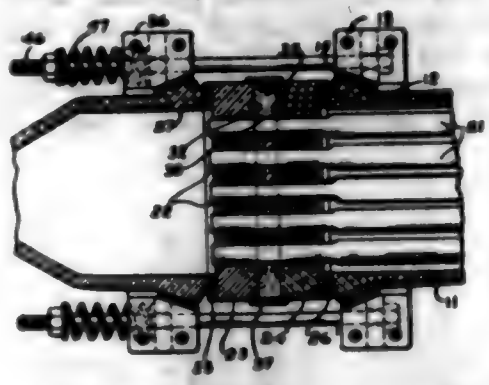
portion of said coil, and including a flange adapted to hold a dynamically balancing ring of water.

2,859,947
RADIATORS
Eric Sigfrid Persson, Riberslus, Malmo, Sweden
Application September 14, 1956, Serial No. 609,874
Claims priority, application Sweden September 19, 1955
4 Claims. (Cl. 257—136)

1. A radiator comprising a heating element and a radiating front member suspended from the heating element by supplementary holding bars thrust endwise into front slots in the front member and provided with a portion embracing portions of the heating element to conduct heat from said element to the radiating member.

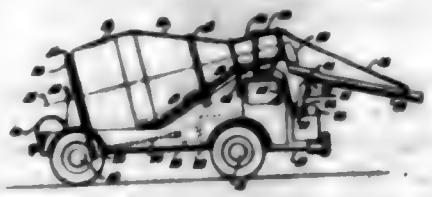
2,859,948
HEAT EXCHANGER
Robert L. Callard, Painted Post, N. Y., assignor to Corning Glass Works, Corning, N. Y., a corporation of New York
Application August 26, 1954, Serial No. 452,415
2 Claims. (Cl. 257—136)

1. An assembly which includes a tubular shell having a tubular body passing therethrough, a fluid tight closure for the shell end surrounding the tubular body, said closure including a pair of similar spaced rigid plates extending transversely of an end of the shell and having aligned passages through which an end region of said tubular body freely passes, rubbery sealing discs of high durometer material each having a tubular portion occupying the space between said rigid plates and whose passage is closely confined about said tubular body and occupies the space between said plates and whose disc portions bridge the spaces around the rigid plate passages through which the tubular body is passed, an endless band bridging the outer confines of the space between such plates, a body of relatively low durometer material occupying the remainder of the space between said plates, and a single means for urging said plates toward one another and toward the adjacent shell end



whereby the body of low durometer material displaces the relatively high durometer material members into intimate fluid sealing engagement with the surrounded wall portions of the tubular body and with the engaged surfaces of said rigid plates respectively.

2,859,949
FORWARD DISCHARGING TRANSIT CONCRETE MIXER
J. Jack Willard, Lynwood, Calif.
Application July 18, 1955, Serial No. 522,680
12 Claims. (Cl. 259—161)

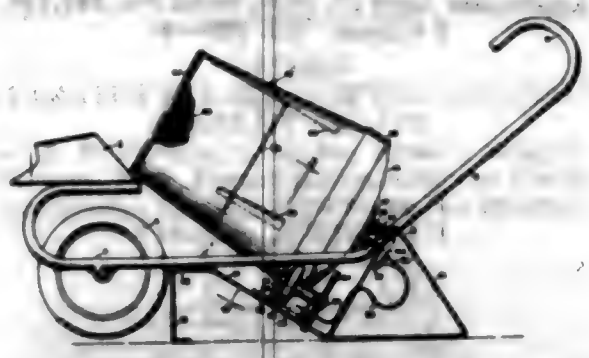


1. In a transit concrete mixer of the type comprised of a transporting truck and a rotatable drum mounted on said truck with a fixed tilted axis of rotation and internal helical blades adapted to either mix concrete within said drum or discharge it from said drum depending upon the direction of rotation, the combination of: a driver's location suspended forward of the front axle of said truck; the mixer drum as described having its axis of rotation longitudinal with respect to said truck and tilted upwardly towards the forward end, said mixer drum being supported in fixed bearings in said truck and being comprised of a mixing section of enlarged transverse cross section located near the rear axle of said truck, a conical discharge section forward of said mixing section and diminishing in transverse cross section to a point near said driver's location, and a discharge conduit leading from the forward end of said conical discharge section over the driver's location and opening at a point above and forward of the driver's location; movable chute means for passing concrete from the forward discharge end of said drum to a location visible from said driver's location; and engine means for said transit concrete mixer supported in the bed of said truck and located at least in major part under said conical discharge section.

2,859,950
COMBINATION CONCRETE MIXER AND PORTABLE DISPENSER
Clinton L. Graybill, Superior, Mont.
Application October 18, 1956, Serial No. 615,969
7 Claims. (Cl. 259—177)

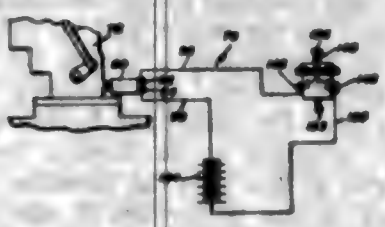
1. A combination mixer and portable dispenser, comprising a base, an endless belt entrained over power driven pulleys rotatably mounted upon the base, a chassis provided at one of its ends with a single supporting wheel

and adapted to be selectively supported in its entirety upon the base independent of said supporting wheel, a mixing



hopper rotatably carried by said chassis and adapted to bear against one run of said belt and to be rotated thereby when the chassis is supported upon the base.

2,859,951
IDLING NEEDLE WITH VACUUM ATTACHMENT
Robert D. Wren, Jr., Compton, Calif.
Application July 27, 1956, Serial No. 600,487
1 Claim. (Cl. 261—41)

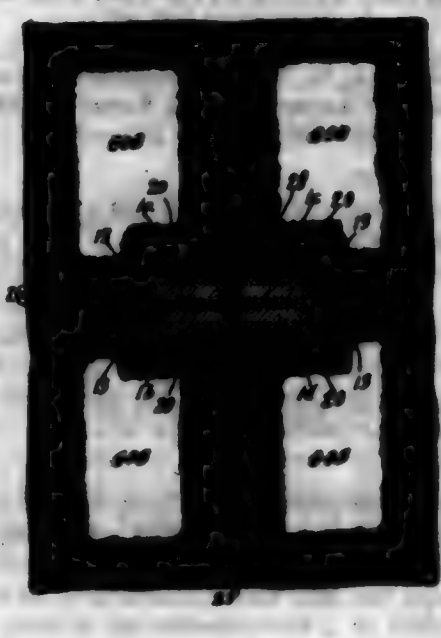


In combination with a carburetor including a carburetor housing, the carburetor housing having an internally threaded bore opening through the exterior thereof, the bore normally receiving a fuel idling needle valve, an idling needle valve assembly, said idling needle valve assembly comprising a mounting fitting threadedly engaged in said opening, said mounting fitting having a bore therethrough, a needle valve member extending through said mounting fitting for relative sliding movement, a body member carried by said mounting fitting, an electromagnetic device mounted in said body member, said electromagnetic device including a movable core, said movable core being directly secured to said needle valve member and forming an enlarged central portion thereof, said needle valve member having one end in the form of a conical needle valve element and the other end in the form of a stop, a spring member carried by said body member engaging said needle valve member stop and urging said needle valve member to an open position, and a vacuum actuated control switch for said electromagnetic device, said vacuum actuated control switch including a sealed housing, a diaphragm mounted in said housing, spaced contacts carried by said housing, a contact bridging member for engaging said spaced contacts to complete an electrical circuit to said electromagnetic device, a spacer secured to said diaphragm and said contact bridging member mounting said contact bridging member on said diaphragm, said sealed housing having a vacuum line fitting for attachment to an intake manifold of an internal combustion engine, and adjustable tension means carried by said sealed housing and connected to said diaphragm for controlling the vacuum required to move said diaphragm, said adjustable tension means including a headed fastener extending through said housing and said diaphragm and having a screw threaded connection with said spacer, a tension spring carried by said fastener intermediate said head and said housing normally urging said diaphragm and said contact bridging member away from said contacts.

2,859,953
MINING OF TACONITE ORES USING HIGH FREQUENCY MAGNETIC ENERGY
Harry La Tour and Howard Day Wren, Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Application September 8, 1951, Serial No. 245,683
12 Claims. (Cl. 262—1)

8. The method of fracturing Taconite ores wherein particles of magnetic iron oxide are distributed throughout the matrix, which includes the steps of subjecting said magnetic iron oxide selectively to a field of high frequency magnetic energy to cause volumetric changes resulting in portions thereof being subjected to tensile strains beyond the fracture strain thereof, and thereafter mechanically breaking said rock into small pieces.

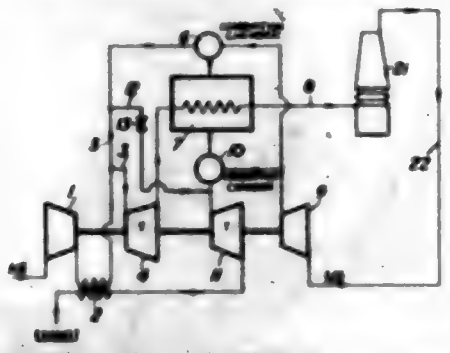
2,859,953
METHOD OF MINING INVOLVING FOUR ISOLATED SECTIONS
Joseph F. Jay, Pittsburgh, Pa., assignor to Jay Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application February 25, 1955, Serial No. 490,657
9 Claims. (Cl. 262—1)



1. A method of mining coal comprising laying out a coal field in four equal sections, forming passages in the coal to provide division pillars, one extending centrally longitudinally of the field and the other extending centrally transversely of the field, with the pillars extending unbroken from the central portion of the field to the remote boundaries of the four sections for substantially isolating the four sections from each other, dividing each section into a series of panels, and progressively removing the panels from the outer boundaries of the field in directions toward the transverse division pillar.

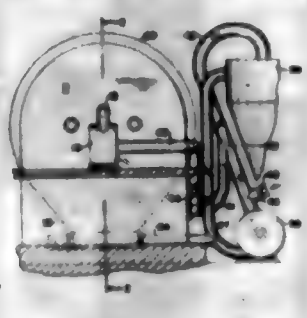
pendently mounted sections carrying such bars can be second of two switching positions, a capacitor in series

2,859,954
GAS TURBINE PLANT FOR PROVIDING A CONTINUOUS SUPPLY OF HOT COMPRESSED AIR
John Constantine Grey, Isleworth, England, assignor to Power Jets (Research & Development) Limited, London, England, a company of Great Britain
Application May 26, 1952, Serial No. 290,839
Claims priority, application Great Britain June 8, 1951
14 Claims. (Cl. 263—19)



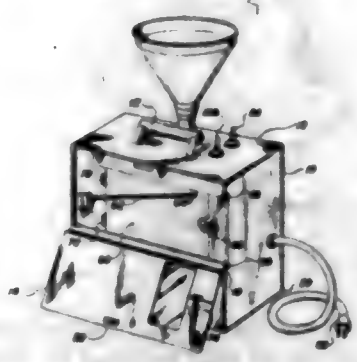
4. A gas turbine plant providing a continuous supply of hot compressed air comprising rotary air compressor means, air turbine means, a continuously operable indirect air heater, first duct means interconnecting in series said compressor means, said air turbine means and said air heater, a delivery duct connected to said air heater for delivering said supply of hot compressed air, a first combustion chamber constituting a heat source for the air heater, gas turbine means, second duct means connected to said first duct means upstream of said air turbine means and to said first combustion chamber, said air heater and said gas turbine means in series, a second combustion chamber, third duct means connecting said second combustion chamber between said second duct means upstream of said first combustion chamber and said second duct means between the air heater and said gas turbine means, and shaft means drivingly connecting said gas turbine means and said air compressor means.

2,859,955
COOLING APPARATUS FOR USE WITH ROTARY KILNS
Louis Petersen, Rye, N. Y., assignor to F. L. Smidth & Co., New York, N. Y., a corporation of New Jersey
Application August 7, 1956, Serial No. 602,552
10 Claims. (Cl. 263—32)



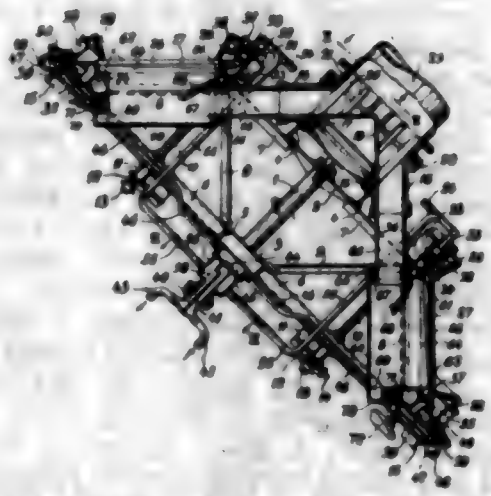
1. A method of producing a finely divided cooled product burned in a rotary kiln, which comprises burning a raw material in the kiln by passing the material downward through the kiln countercurrent to gases produced by combustion of a fuel-primary air mixture in the kiln in the presence of secondary air, initially cooling the burned material issuing from the kiln by advancing the material in the form of a traveling bed, while passing air through the bed, separating the initially cooled material into fine and coarse fractions, crushing the coarse fraction, combining the fine fraction with the crushed product, introducing the combined material into a stream of air to be carried along therein and to give up heat thereto, separating the material from the heated air, conducting at least part of the heated air into the lower end of the kiln for use in combustion of the fuel, and adding any residual heated air to the air stream.

2,859,956
LIQUID FLOW RECORDER
Charles Meriam, San Marino, Calif.
Application April 27, 1956, Serial No. 581,116
5 Claims. (Cl. 265—8)



1. In apparatus for recording liquid flow, the combination which comprises weight sensitive means for supporting a container which receives the liquid and providing a changing mechanical deflection in accordance with the increasing amount of liquid received in the container, means for driving a chart on which the liquid flow is to be recorded, said driving means including an electric driving motor and an electrical circuit coupled to the motor, said electrical circuit including a circuit for conveying power to the motor and an actuating circuit, the power circuit including a switch for opening and closing the power circuit, the actuating circuit being operably coupled to the switch and having a pair of separated contacts arranged to be shorted together by the fluid as it begins to flow into the container thereby closing the switch in the power circuit and actuating the driving motor, and writing means responsive to the deflection provided by the weight sensitive means for recording liquid flow on the chart.

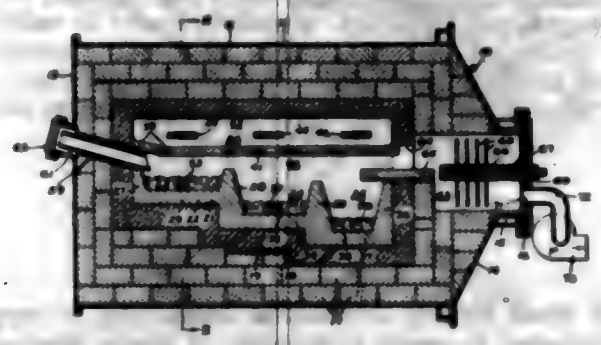
2,859,957
SINTERING APPARATUS
Ole Rolfsen, Oslo, and Per Rolfsen, Rjukan, Norway
Application October 4, 1955, Serial No. 538,472
Claims priority, application Sweden October 13, 1954
12 Claims. (Cl. 266—31)



1. A draught sintering apparatus comprising a conical grate having an inclined axis and mounted for rotation about said axis, said grate comprising a plurality of independently mounted sections each provided with an upper and a lower water chamber respectively provided with a water outlet and a water inlet, each of said sections including a plurality of hollow grate bars each communicating with said upper and lower water chambers, said sintering apparatus further including common water supply and discharge means to which the water inlet and outlet of each of said sections is connected during rotation of said grate, whereby when replacement of some of said hollow grate bars becomes necessary the inde-

pendently mounted sections carrying such bars can be wholly removed without dismantling of the entire apparatus due to the independent mounting of said sections.

2,859,958
APPARATUS FOR SEPARATING ALUMINUM FROM ITS ALLOYS
René A. P. Perieres, Grenoble, France, assignor to Pechiney, Paris, France, a corporation of France
Application June 21, 1956, Serial No. 592,965
7 Claims. (Cl. 266—37)



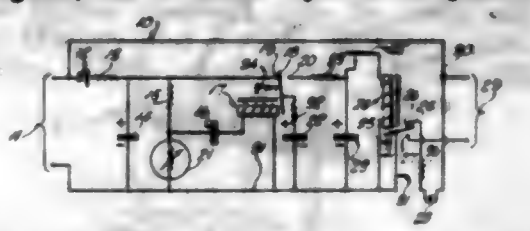
2. Apparatus for separating aluminum from its alloys comprising a basin member formed of a substance selected from the class consisting of aluminum nitride and aluminum carbide, a roof member formed of graphite, the basin member and the roof member defining a horizontally-elongated chamber, a charging entrance at one end of the chamber, a cooling means at the other end of the chamber, an evacuating means connected to the chamber at the said other end for subjecting the chamber to a high vacuum, dividing walls extending transversely across the chamber and extending vertically upwardly from the basin member to define a plurality of basins, and a heating element overlying each basin and located over the roof member.

2,859,959
SHOCK ISOLATOR
James E. Harding, Washington, D. C.
Application January 31, 1955, Serial No. 484,969
10 Claims. (Cl. 267—1)

9. A shock isolator comprising two spaced plate members, and a flexible sheet enclosing the space between said plate members, said sheet having a plurality of openings therein, the effective areas of said openings being variable and increasing progressively to a maximum as the spacing between said plate members is decreased, and then decreasing from said maximum as the spacing between said plate members is further decreased.

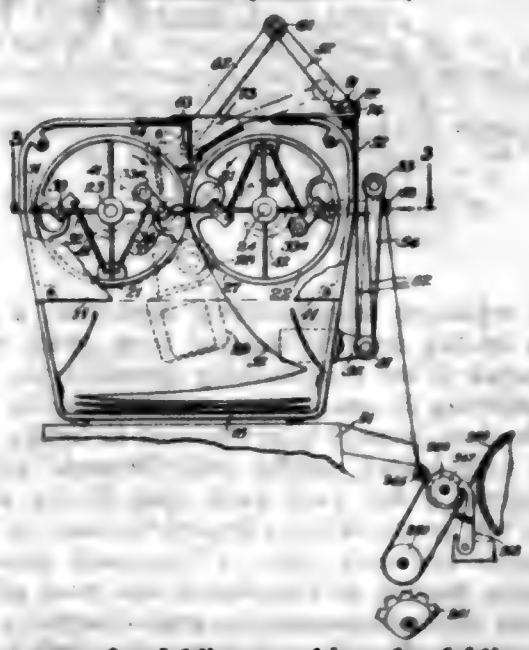
2,859,960
ELECTRICAL CONTROL RESPONSIVE TO SUCCESSIVE CIRCUIT INTERRUPTIONS
Leo de Magondeaux, Paris, France, assignor to Frederick A. Purdy, Scarsdale, N. Y.
Application June 7, 1956, Serial No. 589,952
6 Claims. (Cl. 268—1)

1. A relay circuit for controlling remotely electrical responsive load apparatus comprising, a source of direct current, a relay having a relay coil and a switching armature, said switching armature being responsive to current flow through said coil by movement from a first to a second of two switching positions, a capacitor in series electrical relationship with said relay coil and being coupled to said source, signal responsive means in shunt electrical relationship across said capacitor and said relay coil, said means being electrically conductive when energized by signals, and a second capacitor coupled to said



armature and being normally connected to said source and charged thereby for the first of the two switching positions, said second capacitor being alternately disconnected from and connected to said source by movement of said switching armature in response to short duration and intermittent electrical conduction of said responsive means.

2,859,961
FAN-FOLDING MACHINES
Philip H. Allen, Orinda, Calif., assignor, by mesne assignments, to Harper Allen, Los Gatos, Calif.
Application June 18, 1951, Serial No. 232,189
4 Claims. (Cl. 270—73)



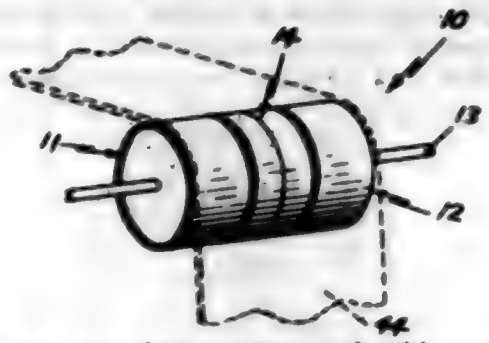
1. In a tape fan-folding machine, fan-folding means for receiving tape, a motor for driving said fan-folding means, a spring-urged arm carrying a roll over which the tape is fed to the fan-folding means, said arm being urged by said spring to a first position and being responsive to increased tension of the tape to move against the urge of the spring toward a second position, a switch controlled by said arm and controlling said motor, said switch being conditioned to interrupt operation of the motor when said arm is in said second position and being conditioned to cause operation of said motor when said arm is in said first position, and a lost motion connection between said arm and said switch.

2,859,962
CAPSTAN FOR ELECTROSTATIC TAPE DRIVES
Harold N. Beveridge, Kenilworth, Ill., and Raymond P. Mork, Needham Heights, Mass., assignors, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Application April 15, 1953, Serial No. 581,683
7 Claims. (Cl. 271—2.3)

1. In combination, a first member and a second member each responsive to electrostatic forces, said first member comprising a conductive member bonded to a high K ceramic material having a dielectric constant

of said conveyor to provide work discharging zone therein, having mating annular edges secured together to form

of one-thousand or more, said second member comprising an elongated flexible tape, and means for frictional-



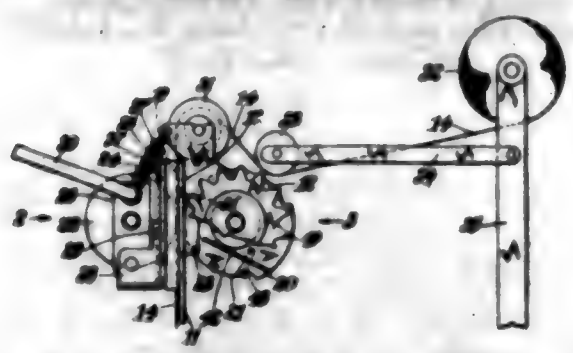
ly engaging said first member and said second member with each other by electrostatic force.

2,859,963

APPARATUS FOR THE MANUFACTURE OF BOTTLE CAPS FROM STRIP METAL

David Evans, London, England, assignor to David Evans (Dairy Engineers) Limited, London, England, a British company

Application May 2, 1955, Serial No. 505,436
3 Claims. (Cl. 271—2.4)



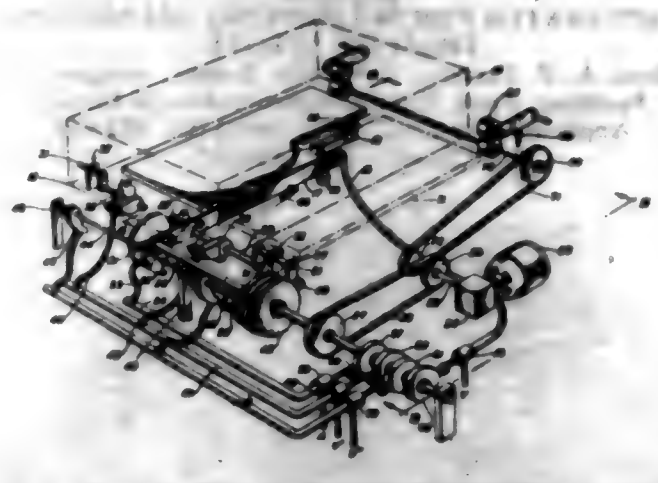
1. In bottle-cap manufacturing apparatus, a vertical feed for feeding the strip material from which the caps are punched to the cap-punching assembly, the vertical feed comprising in combination two downwardly extending guide plates secured to one another to form a vertical channel with spaced parallel walls between which the strip material is fed, each guide plate having an aperture, the two apertures being located opposite the strip in the channel and each other, a horizontal guide roller mounted at the top of the channel and over which the strip is led before its passage down the channel, a mounting for a stock roll of the strip material secured at a position spaced laterally from said guide roller, a horizontal feed shaft mounted alongside one of the guide plates on a level with the aperture therein, a rotary feed wheel carried by said shaft opposite the aperture, said feed wheel having a dwell portion and at least one feeding segment of greater radius than the dwell portion which segment projects through said aperture into driving contact with the strip during part of each revolution of the feed wheel, a pivoted carrier mounted on the opposite side of the guide plates to the feed wheel and an idler wheel borne by the carrier opposite the feed wheel and the apertures in the guide plates, said carrier being spring-loaded to urge the idler wheel periphery through the aperture in the adjacent guide plate into contact with the strip so that the strip is gripped between the idler wheel and the feed wheel each time the feeding segment comes into contact with the strip, a stop for limiting movement of the idler wheel toward the feed wheel so that the idler does not urge the strip into contact with the dwell portion of the feed wheel, the idler wheel and feeding segment having peripheral surfaces such as to afford non-slip engagement with the strip, adjusting means on the feed wheel for adjusting the increments by which the strip is fed, and driving connections for continuously rotating the feed shaft.

2,859,964

SHEET FEEDING MECHANISM

Theodore F. Aronson, Glen Cove, and Floyd A. Lyon, Brookville, N. Y.

Application February 19, 1957, Serial No. 641,091
11 Claims. (Cl. 271—39)



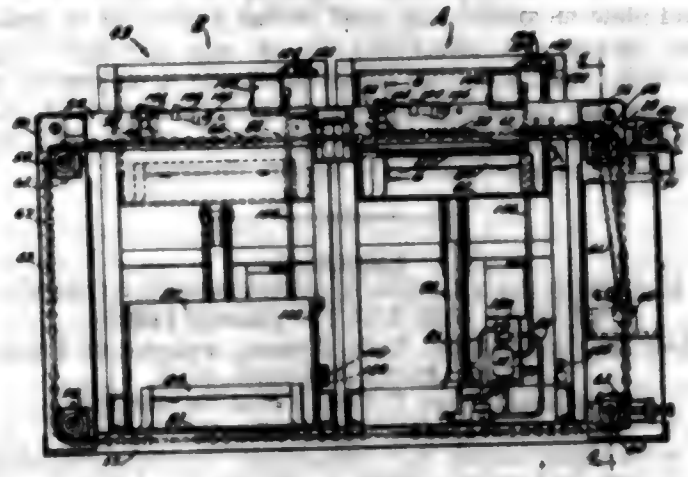
1. A sheet feeding mechanism comprising, a support table adapted to carry a plurality of sheets thereon, a bored, sheet grasping member swingably mounted adjacent one end of the table, a source of vacuum connected to the bore in the grasping member, means to bring the grasping member into contact with one of the outermost sheets and grip said sheet, a reciprocating arm adjacent the said outermost sheet, a bored sheet advancing structure on said arm, vacuum means connected to the sheet advancing structure, a bored sheet retaining member adjacent the grasping member end of the table, a source of vacuum attached to the retaining member, means to alternately swing the retaining member into contact with and away from the sheets to positively engage the sheet adjacent the grasped outermost sheet, a sheet separating air blast nozzle, movable with the sheet retaining member and directed at the edge of the sheets, a source of compressed air connected to the nozzle, valve means between the vacuum and compressed air sources on the respective sheet grasping, advancing, retaining and separating members and a source of rotary power coupled to the feeding mechanism for regulating the valves, swinging the grasping and retaining members and reciprocably moving the advancing arm in a sequential cycle.

2,859,965

STACKERS AND WORK DELIVERY APPARATUS

Edwin L. Pabst and Harry Vanderbout, Milwaukee, Wis., assignors to Allis Machine Company, Inc., Milwaukee, Wis., a corporation of Wisconsin

Application August 1, 1956, Serial No. 601,544
12 Claims. (Cl. 271—68)



1. In a device of the character described, work delivery means comprising a conveyor having sets of multiple supports for said work, said sets being spaced longitudinally

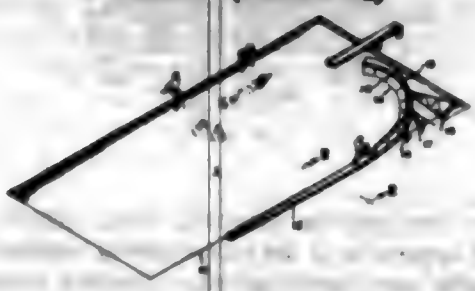
shaft for limited axial movement thereon; a blade piv- its front-to-back and heel-to-toe cross-sections, the top

of said conveyor to provide work discharging gaps therebetween, means for arresting movement of said work while said conveyor supports continue to move therebeneath and the work is discharged by gravity through said work discharging gaps, the means for arresting movement of the work comprising a retractable stop in the path of work advance.

2,859,964
INTERMEDIATE STACKING DEVICE FOR SHEETS DELIVERED BY A PRINTING MACHINE
Robert Reinertz and Fritz Rapp, Augsburg, Germany, assignors to Maschinenfabrik Augsburg-Nürnberg A. G., Augsburg, Germany, a corporation of Germany
Application October 26, 1955, Serial No. 542,595
Claims priority, application Germany November 20, 1954
6 Claims. (Cl. 271—86)

1. An intermediate stacking means for sheets coming from a printing press comprising a flexible slatted table, means for winding said table into a roll adjacent one end of a stacking table, spring means mounted adjacent the opposite end of the stacking table and adapted to be pretensioned, and strap means joining said roll and said spring means for unwinding said roll upon release of said spring means.

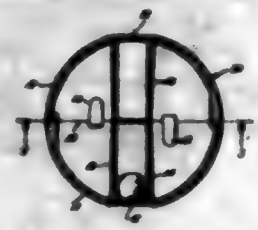
2,859,967
EXERCISING EQUIPMENT
Charles E. Planck, Arlington, Va.
Application August 14, 1956, Serial No. 603,920
6 Claims. (Cl. 272—1)



1. Exercise equipment comprising a body of water adapted to accommodate persons for swimming and diving, a runway adjacent the body of water of sufficient width for the passage of a person and including an approach runway portion in which speed can be attained by a person, a laterally curved runway portion extending from the approach runway portion over the body of water, said laterally curved runway portion having a downward transverse slope toward the body of water progressively increasing from the approach runway portion toward the far end of the runway whereby a person may progress along the approach runway portion into the curved runway portion and will finally drop from the curved runway portion into the body of water, and means to support the curved runway portion over the body of water in a manner to preclude danger of injury to a person dropping from the curved runway portion.

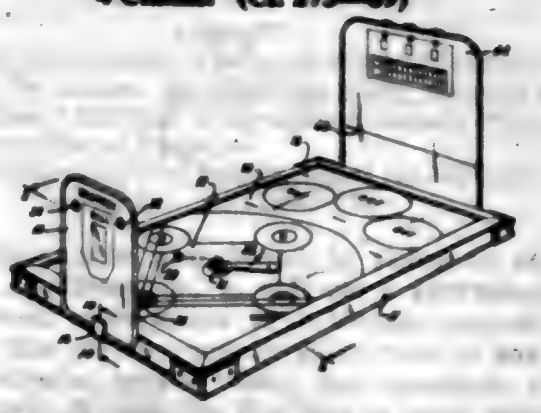
2,859,968
ROLLABLE PLAYING PIECE FOR A GAME
Joseph Medica, Jr., Garden City South, N. Y., assignor to Tudor Metal Products Corporation, Brooklyn, N. Y., a corporation of New York
Application February 20, 1957, Serial No. 641,308
1 Claim. (Cl. 273—58)

A playing piece for a game, comprising a hollow sphere made up of a pair of hollow hemispherical sections having mating annular edges secured together to form the sphere, a tube formed integrally with each hemispherical section, each tube being coaxial with the annular edges of its hemispherical section and with the other tube, the tubes terminating inwardly in open inner ends disposed contiguous to each other, the tubes having closed outer ends formed integrally with the tubes and with the hollow hemispherical sections, the closed outer ends of the tubes having diametrically opposed flattened



circular outer surfaces coaxial with the tubes, and a weighted spherical element disposed for rolling movement in the tubes longitudinally thereof to and from the closed outer ends of the tubes so that the spherical element rests against a closed end of a tube and the weight of the spherical element augments the weight of the sphere when the sphere is resting on a portion of the outside of the sphere adjacent that closed end of the tube on which the weighted spherical element rests.

2,859,969
BASEBALL GAME
Joseph Medica, Jr., Garden City South, N. Y., assignor to Tudor Metal Products Corporation, Brooklyn, N. Y., a corporation of New York
Application April 26, 1956, Serial No. 580,751
4 Claims. (Cl. 273—69)



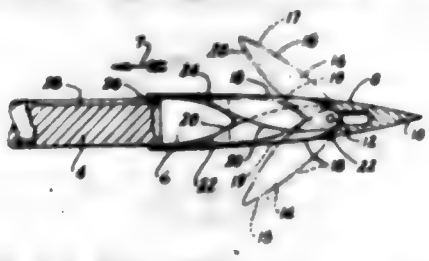
1. In a game device for playing a game simulating baseball, a base having a panel marked to provide a baseball in-field and out-field, a magnetically attractable metal panel affixed in upright relation to the base forming a back stop, said upright panel being correspondingly marked on the outer and inner faces thereof to provide a strike zone, a ball zone surrounding the strike zone and a wild pitch zone surrounding the ball zone, a metal figure representing a batter, means carried by said upright panel supporting said metal figure thereon at one side of said strike zone, a playing piece of magnetized metal having a plurality of surfaces whereby said playing piece will adhere to said upright panel and to said figure when striking the same to thereby constitute a strike, a ball or a wild pitch when said playing piece adheres to said areas respectively and to constitute a hit batter when adhering to said figure, and said playing piece being adapted to be projected from said upright panel by a blow against the upright panel adjacent the place where the playing piece adheres to the inner faces thereof.

2,859,970
ARROWHEAD CONSTRUCTION
William Deeann, Ypsilanti, Mich.
Application June 8, 1956, Serial No. 590,240
5 Claims. (Cl. 273—106.5)

1. An arrow construction comprising a shaft; a head slidably positioned on the forward end portion of the

wise one upon the other and said wing section will have between said wheels and said frame, a rear stabilizer bar

shaft for limited axial movement thereon; a blade pivotally carried by said head for movement from a retracted position within said head to a position extended therefrom; the pivot for said blade being located adjacent the forward limit of the blade, and said blade being configured as a substantially flat member with its lateral edges converging together in a rearward direction; the forward end of said shaft being positioned in registry with



the innermost of the blade's lateral edges; and said head being at its forwardmost position relative to the shaft when said blade is in its retracted position; whereby when the arrow construction is fired with the blade in a retracted position, engagement of the head with the game causes the shaft to move forward relative to the head and cammingly engage against the blade's innermost lateral edge, thereby moving said blade to its extended position.

2,859,971
PUZZLE RING
Joseph W. Grant, Lynnfield, Mass., and Clarence P. Grant, Okiawaha, Fla.
Application March 18, 1955, Serial No. 495,163
5 Claims. (Cl. 273—158)

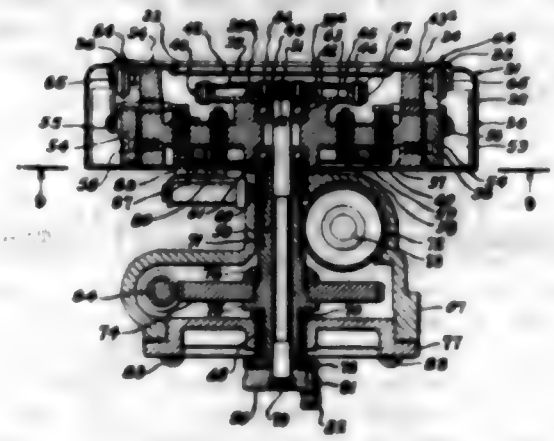
1. As an article of manufacture, a composite finger ring comprising a plurality of inter-associated, separate ring elements adapted to be assembled in close engagement and in interlocking relation whereby said elements cannot disengage each other without relative angular movement about an axis, said axis being the line of intersection between a plane tangent to the crest of said ring and a second plane perpendicular to said first plane, perpendicular to the axis of said ring, and bisecting said crest of said ring, at least two of said ring elements acting as locking means for the remaining elements and having opposed, inwardly curved generally U-shaped upper frontal segments, the medial portions of said U-shaped portions lying closely adjacent when the ring is assembled, and at least two other ring elements having opposed, inwardly curved generally U-shaped frontal segments, each extending over the frontal segment of one of said first two elements and under the frontal segment of the other of said first two segments.

2,859,972
GOLF CLUB
Milton B. Reach, Springfield, Mass.
Application June 26, 1957, Serial No. 668,121
3 Claims. (Cl. 273—164)

1. In a golf club, a head of the wood play type having a substantially flat bottom surface substantially perpendicular to the vertical axis of the head, a front face, and a top surface which slopes continuously downwardly and rearwardly from said front face such that a projection of the top surface beyond the back of the head would meet a similar projection of the bottom surface in an acute angle, said top surface being slightly concave in its front-to-back and heel-to-toe cross-sections, the top surface having varying elemental slopes between its periphery and central region, whereby lines projecting perpendicularly from said slopes would intersect an axis

from said head to the eyes of the user of the club at different heights, creating an impression of uplifting flight of the ball and adding confidence to the swing of the user.

2,859,973
TURNTABLE CHANGING MECHANISM FOR MAGNETIC RECORDER
Frank E. Range, Branford, Conn., assignor to The Soundscriber Corporation, New Haven, Conn., a corporation of Connecticut
Application July 20, 1953, Serial No. 368,851
7 Claims. (Cl. 274—4)

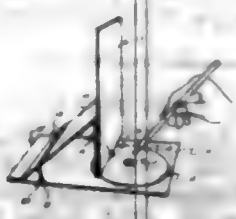


1. In a long playing magnetic tape recording and reproducing apparatus of the type wherein successive arcuate sound tracks are traced across a moving magnetic tape by means of rotating transducer heads, the combination comprising a turntable having a plurality of spaced apart electromagnetic transducer heads located below the path of said tape, resilient means above said tape to press it into contact with said heads while said sound tracks are being traced, a vertical spindle for driving said turntable threadedly connected at its upper end to said turntable, a rotatable sleeve member surrounding the lower end of said spindle, a horizontal gear mounted on said sleeve, a horizontal motor-driven worm meshing with said horizontal gear for rotating said sleeve, and releasable means interconnecting said sleeve and said shaft for simultaneous rotation thereof, said releasable means being operative to allow downward vertical withdrawal of said spindle with respect to said sleeve.

2,859,974
POCKET SPEAKING DEVICES
Jean Jauquet, Mexico City, Mexico
Application August 18, 1953, Serial No. 374,884
4 Claims. (Cl. 274—16)

1. In a foldable phonographic device comprising a card member having a flat base section, a flat angular section hinged at an end portion to an end portion of the base section, and a flat wing section hingedly secured intermediate its ends to the free end portion of the angular section so that said sections will normally lie flat-

wise one upon the other and said wing section will have a swinging movement relative to the base section and a rocking movement on the angular section and may be operatively stood in an angular position with respect to each of said other sections, a phonograph needle fas-



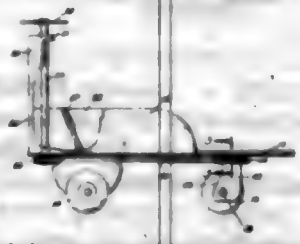
tened in the lower edge portion of the wing section, a phonograph record disc having a circular sound track rotatably mounted on the base section, and manual means for rotating the record with the needle engaged in the sound track to thereby vibrate the wing section for the production of audible sound waves.

2,859,975

CHILD'S VEHICLE

Maybelle C. Weaver and Raymond W. Larson, Long Beach, Calif.

Application January 23, 1956, Serial No. 560,501
1 Claim. (Cl. 280—47.11)



A child's vehicle, comprising: a flat bottom bed for supporting the weight of a rider; upstanding side walls extending from the intermediate portion of said bed to the rear thereof for retaining a rider against sideward movement on said bed; a back-rest extending between intermediate portions of said side walls; a rear wall rigidly interconnecting the rear ends of said side walls; a pair of upstanding push posts at the rear of said bed, said push posts being integral upward extensions of said side walls; a cross-bar rigidly interconnecting the upper ends of said push posts; a pair of non-steerable rear wheels disposed below the rear portion of said bed but ahead of said rear wall; a front wheel; front wheel support means including a fork having bifurcations encompassing said front wheel, an axle extending between the lower ends of said bifurcations, a front steering pulley formed above said fork and a vertically extending pivot pin connecting said fork and pulley to the front mid-portion of said bed, the axis of rotation of said axle being spaced rearwardly from the axis of said pivot pin; a generaly vertically extending steering post, the upper portion of said post being supported by the intermediate portion of said cross-bar and the lower portion thereof being supported at the rear mid-portion of said bed; a rear steering pulley keyed to the lower end of said steering post; and an endless V-type belt interconnecting said steering pulleys whereby an operator may grasp said cross-bar with one hand and said steering wheel with the other.

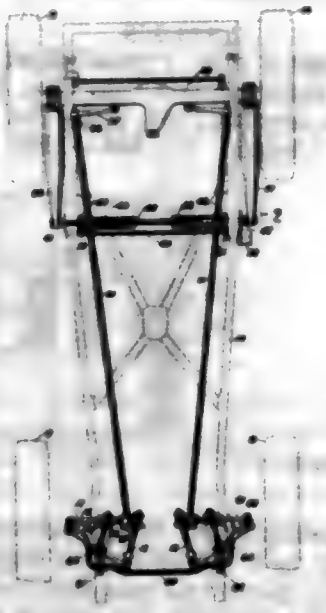
2,859,976

ANTI-ROLL AND LEVELER UNIT FOR VEHICLE SUSPENSIONS

Forest R. McFarland, Huntington Woods, Mich., assignor to Studebaker-Packard Corporation, Detroit, Mich., a corporation of Michigan

Application August 13, 1956, Serial No. 603,492
6 Claims. (Cl. 280—104)

5. In a suspension for a vehicle having a frame and front and rear wheels, resilient means operably disposed between said wheels and said frame, a rear stabilizer bar operably disposed between said rear wheels, two tubular members surrounding opposite sides of said rear stabilizer bar with each tubular member being connected to a middle portion of the rear stabilizer bar, and means en-



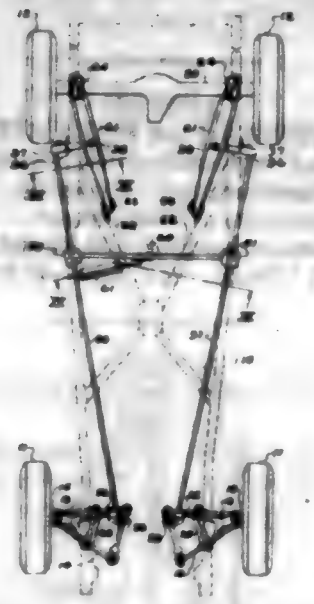
gaging the outer ends of said tubular members for twisting said rear stabilizer bar in a tightening direction and in a loosening direction relative to said frame to respectively raise and lower the rear of said frame relative to said rear wheels.

2,859,977

SPRING SUSPENSION FOR MOTOR VEHICLES

John Z. De Lorean, Birmingham, Mich., assignor to Studebaker-Packard Corporation, Detroit, Mich., a corporation of Michigan

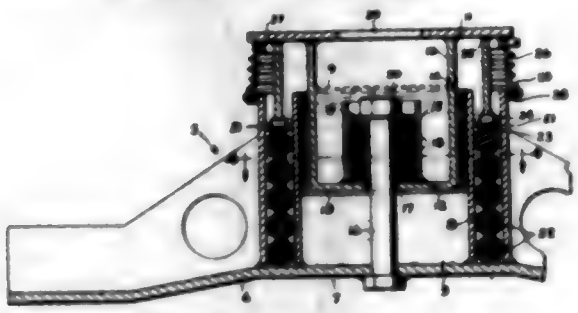
Application August 13, 1956, Serial No. 603,527
1 Claim. (Cl. 280—104)



A vehicle suspension system comprising a load carrying frame, front and rear longitudinally spaced wheels, front and rear lever means connecting said wheels to said frame, torsion bar means operably connected to said levers including first and second torsion bar spring means respectively connecting the lever means on each side of said frame, crank arm means connected to said first and second torsion bar spring means longitudinally between the midportions thereof and the levers at one end of said frame, said crank arm means extending diametrically in the same directions, resilient crank arm mounting means disposed between said crank arm means and said first and second torsion bar spring means, a bar con-

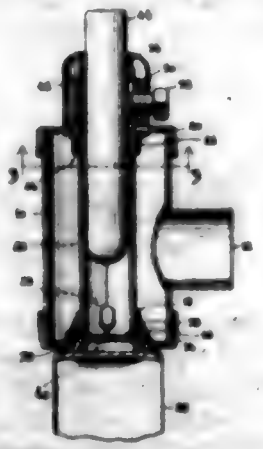
necting said crank arm means, a piston and cylinder device operably connected between said bar and said frame, accumulator means at each end of said cylinder for resiliently resisting relative movement between the piston and cylinder in either direction.

2,859,978
SHOCK ASSEMBLY FOR VEHICLE SUSPENSIONS
Ray S. Brimhall, Salt Lake City, Utah
Application July 21, 1955, Serial No. 523,566
4 Claims. (Cl. 280—136)



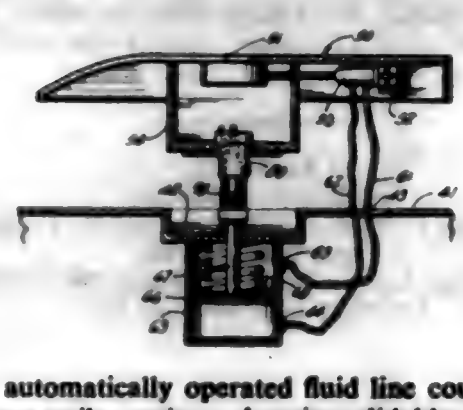
2. In a shock assembly for vehicles comprising a frame member securable to a turnable front trailer axle, a first cylinder carried by said frame member, a mounting member adapted to be secured to the vehicle body, a second cylinder depending from said mounting plate, said second cylinder being received in said first cylinder, a fastener retaining said second cylinder in said first cylinder and limiting vertical movement of said second cylinder, resilient shock means disposed between said frame member and said mounting plate and cushioning downward shock of said mounting plate, said resilient shock means being mounted within a third cylinder surrounding said first cylinder, and an elongated stabilizing bearing of flexible material disposed between the first cylinder and the second cylinder, said bearing being bonded to said second cylinder and being of a length substantially greater than one-half the length of said second cylinder to absorb shock induced by relative lateral movement of said second cylinder and first cylinder.

2,859,979
BEARINGS FOR FORK STEMS
John M. Himes, Milwaukee, Wis., assignor to E. R. Wagner Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Application December 23, 1954, Serial No. 477,259
2 Claims. (Cl. 280—279)



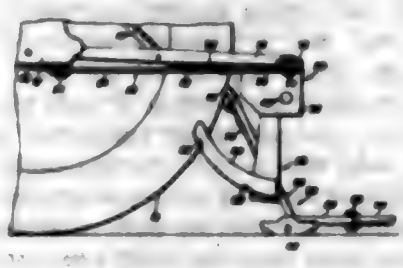
1. A bearing including a head tube having upper and lower caps with central fork stem receiving openings, a sleeve type bushing rigidly held in the opening of said upper cap, a fork having a fork stem with a lower end, a hollow conical shaped ring type bushing at said lower end having an opening fitted over said fork stem, said bushing having a lower annular shoulder resting on said fork to hold said bushing with the interior of its conical wall out of contact with said fork and fork stem and the juncture therebetween, inter-engaging parts on said stem and conical shaped bushing to restrain relative rotation therebetween, and a concave seat on said lower head cap, said stem being positioned in said head tube with said conical bearing resting in said concave seat and said sleeve-type bushing surrounding said tube.

2,859,980
AUTOMATIC FLUID LINE SERVICE COUPLING FOR TRACTOR-TRAILER VEHICLES
Oswald A. Holland, Hammonton, N. J.
Application April 28, 1954, Serial No. 426,313
7 Claims. (Cl. 280—421)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In automatically operated fluid line coupling means for tractor-trailer units a housing slidably mounted on the tractor fifth wheel structure; said housing having a centrally located counterbore formed therein; a second counterbore eccentrically formed in said housing; said housing having a passage extending from the bottom of each of said counterbores to an outer surface of said housing; fluid flow control means mounted in said counterbores; a portion of the tractor-trailer coupling means mounted on the trailer being provided with a pair of fluid flow passages which extend through said coupling means portion; and means responsive when the trailer is mechanically locked onto the tractor for slidably moving the housing into fluid sealed engagement with a peripheral portion of the tractor-trailer coupling means such that the passages of the coupling means are in alignment and fluid communication with the counterbores and passages of the housing.

2,859,981
CONNECTION FACILITATING TRAILER HITCH
Carter L. Sarver, Princeton, Ill.
Application April 18, 1955, Serial No. 501,854
2 Claims. (Cl. 280—477)



2. A tractor hitch comprising a mounting plate adapted to be secured to a hitch bar of a tractor, a track assembly hingedly secured to said mounting plate in depending relation, cooperating latch means on said mounting plate and said track assembly for retaining said track assembly in a raised position, a tow bar, a tow pin carried by said tow bar and slidably retained in said track assembly whereby said tow bar may be lowered adjacent the ground for connection to a tow pole of a farm implement, said tow bar being formed in hinged sections, means carried by one of said sections for automatically locking said sections into a rigid unit when said tow bar is raised.

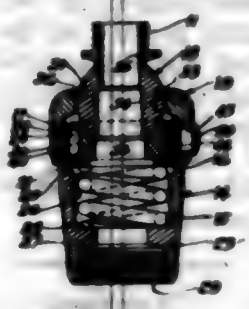
2,859,983
TRAILER HITCH

John B. Covi, Mount Bethel, N. J.
Application April 20, 1956, Serial No. 579,500
5 Claims. (Cl. 280—502)

1. In a tow bar attachment for a motor vehicle bumper, a clamp comprising a support that has a seat which bears against the rear surface of the bumper, a lower plate extending below the lower edge of said bumper, an upstanding wall connected to said plate, a jack, a frame secured to said wall, said frame and said wall having aligned apertures therein, said jack including a rod which is slidable in said aligned apertures in order to bear against the front surface of the bumper, a pad of yielding material on said rod which is adapted to contact the front surface of the bumper, bushings secured to said wall and said frame respectively through which said rod passes in order to guide said rod, said wall having a channel therein, said channel being provided with a slot in order to accommodate an enlargement, a flexible member having the enlargement at the end thereof, and means carried by the same bumper and having said flexible member connected with it in order to aid in firmly engaging said clamp to the bumper.

2,859,983
SWIVEL TYPE LAMP SOCKET SUPPORT

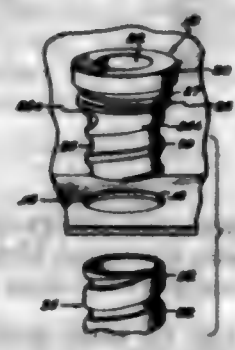
Frank J. May, McHenry, Ill., assignor to Rembrandt Lamp Corporation, Chicago, Ill., a corporation of Illinois
Application April 30, 1954, Serial No. 426,761
2 Claims. (Cl. 285—90)



2. A support for a lamp socket or the like comprising a tubular housing threaded at one end, a threaded closure member engaging the threads of the housing, an abutment within the housing, a ball extending through the closure member, said ball and member having complementary frusto-spherical surfaces, a ring within the housing on the side of the ball away from the closure member, resilient means compressed between the abutment and ring and urging the ring and ball against the closure member, the force of the spring being varied by advancing or retracting the closure member along the threads of the housing, means for locking the member to the housing at a location on the housing corresponding to a predetermined spring force, and interfitting means on the ball and ring limiting relative movement therebetween to movement in a plane disposed lengthwise of the axis of the ring, said ring having a groove extending circumferentially of the ring for less than 360°, and said member locking means extending into the groove and serving to limit movement of the ball and ring around the axis of the ring relative to the housing to less than 360°.

2,859,984
THREADED CONNECTOR FOR ATTACHING ARMORED CABLE TO A JUNCTION BOX WALL

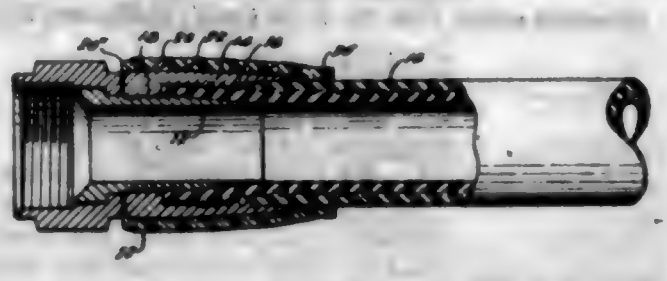
Michael Thomas, Los Angeles, Calif.
Application June 16, 1955, Serial No. 515,834
2 Claims. (Cl. 285—159)



1. A one-piece connector adapted to be locked to a junction box having a wall provided with an unthreaded circular aperture therein and then adapted to lockingly receive a flexible, helically wound armored cable conduit for attachment to the box, comprising: a substantially cylindrical elongated member having a smooth axial passageway therethrough; a radially extending stop flange carried on one end of said member for locking engagement with the wall of said box; external threads formed on the surface of the other end of said elongated member, said threads being coarse and having a pitch approximately the pitch of the inside winding of the armored cable conduit and being provided with a concave rounded root; second external fine threads of modified square form provided on the surface of the elongated member adjacent said stop flange and with at least the threads toward said coarse threads being spaced apart axially a distance at least slightly greater than the thickness of the junction box wall, the root diameter of said second threads being less than the diameter of said aperture by an amount not exceeding the depth of a fine thread, the root of said fine threads forming an axially outwardly expanding spiral merging into said stop flange; the major diameter of said first threads being smaller than the diameter of the opening in the junction box and the major diameter of said second threads; one of said threads being right-handed and the other left-handed; whereby said connector can be locked to the wall of the junction box without the use of any tools and the cable conduit can then be screwed onto the connector and attached to the junction box without the connector being held by any additional means.

2,859,985
FIRE PROTECTIVE SLEEVE FOR HOSE END FITTINGS

John Smidse, Jackson, Mich., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Application December 22, 1952, Serial No. 327,283
1 Claim. (Cl. 285—247)



In combination with a coupling for flexible hose having relatively low fire resisting properties wherein the hose is securely clamped between a socket and nipple constituting the coupling, of means for reducing fire hazards due to overheating of the metal of the coupling comprising a sleeve of rubber-like material having open wire

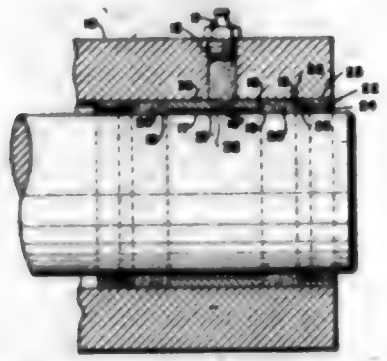
braid reinforcement embedded therein completely surrounding and tightly fitting the metal portion of the coupling, the ends of said sleeve being contracted over the ends of the coupling to completely enclose the metal of the coupling and the braids of said reinforcement being spaced sufficiently to permit the sleeve to be expanded over said coupling, said wire braid reinforcement being located within the exterior and interior surfaces of said sleeve and holding the sleeve intact against the effects of vibration even if the rubber-like material of the sleeve has become charred due to overheating.

2,859,986

FLUID PRESSURE RESPONSIVE SEAL

Robert H. Josephson, Cleveland Heights, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Application July 27, 1954, Serial No. 445,949
3 Claims. (Cl. 286—7)



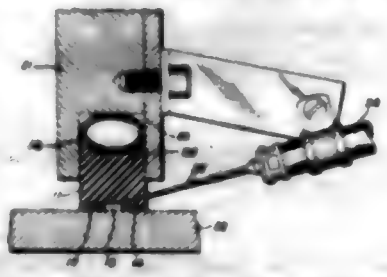
1. An axial seal between two right cylindrically shaped surfaces that rotate with respect to one another, said surfaces having a fluid medium under pressure axially on one side of the seal and under a lesser pressure on the other side, said cylindrical surfaces being in close proximity to one another and spaced apart by a distance less than ⅛" in thickness, said seal being of cylindrical shape of uniform thickness throughout substantially its entire length and having an internal and external diametral surface and comprising a thin layer of resilient material stationary with respect to one of said cylindrical surfaces and in rubbing friction contact with the other cylindrical surface to provide a sealing surface, said seal having on the sealing surface a chamfer on one side of the axial surface of the seal adjacent the fluid under pressure, thereby permitting said fluid to get behind the chamfer and seat the resilient layer of the seal against the other cylindrical surface.

2,859,987

INFLATABLE SEAL FOR RELATIVELY SLIDING SURFACES

Warren E. Emley, Jr., Berea, Ohio, assignor to the United States of America as represented by the Secretary of the Navy

Application February 21, 1957, Serial No. 641,785
3 Claims. (Cl. 286—26)
(Granted under Title 35, U. S. Code (1952), sec. 266)



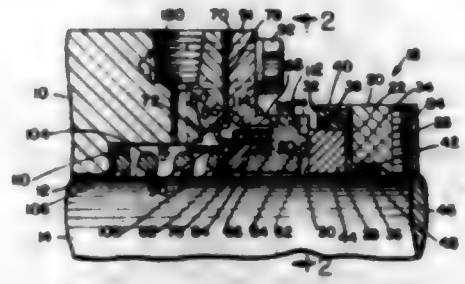
1. A pressure sealing device for sealing the joint between relatively movable walls comprising, a seal groove in one of said walls, a flexible hose substantially elliptical in cross-section mounted innermost within said seal groove, a labyrinth seal mounted within said seal groove and having a plurality of grooves therein, said labyrinth seal being in engaging contact with one of said walls thereby forming a plurality of passageways, fluid means for expanding said flexible hose, and means for supplying air under pressure to said passageways.

2,859,988

ROTARY MECHANICAL SEAL

Frank E. Payne, Glencoe, Ill., assignor to Crane Packing Company, Chicago, Ill., a corporation of Illinois

Application June 20, 1955, Serial No. 516,449
3 Claims. (Cl. 286—11.14)



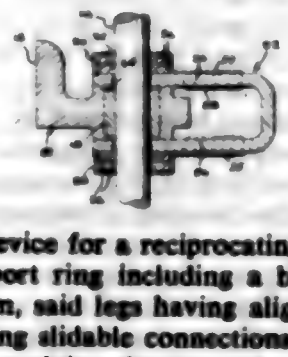
1. In a seal assembly for a shaft and a housing surrounding the same, an annular sealing washer adapted to be telescopically received over the shaft, said washer being formed of a rigid noncompressible material and having a forwardly facing radially disposed running sealing surface adapted to frictionally bear against a radial surface substantially normal to the shaft and movable with the latter, said washer being formed with an annular recess providing a rearwardly facing radially disposed shoulder and a substantially cylindrical surface rearwardly of said shoulder, a flexible sealing sleeve having a body portion and a forwardly extending cylindrical portion, means for sealing said body portion to said housing, said sleeve being telescopically received over said sealing washer with said forwardly extending portion surrounding said cylindrical surface, there being a circumferential rearwardly extending continuous slit formed in the forward edge of the cylindrical portion of said sleeve, a rigid clamping ring telescopically received over said cylindrical portion of the sleeve and serving to preload said latter portion on the cylindrical surface of said washer, and resilient expansion means disposed within said slit and extending continuously therearound and serving to spread the walls of said slit outwardly against said rigid clamping ring and inwardly against the cylindrical surface of the washer to assist said ring in its preloading function.

2,859,989

ROD WIPING DEVICE FOR TEXTILE SPINNING FRAMES

Walter Keat Crawford, Sr., South Boston, Va.

Application March 23, 1956, Serial No. 573,453
4 Claims. (Cl. 286—18)

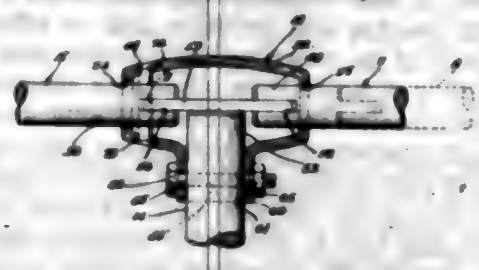


2. A wiping device for a reciprocating rod comprising: a C-shaped support ring including a bight and legs extending therefrom, said legs having aligned openings; retainer rings having slidable connections to the respective legs, said rings overlying the respective plates and being slidable off the plates when shifted in one direction upon the plates; and a flat washer of a soft material engaged between each ring and the leg which it overlies in con-

sion hook against rotation of the longitudinal axis of axis, said trunnions projecting laterally beyond the other

centric relation to the ring in one position to which the ring is shifted on the leg, said washers and rings registering with the openings of the legs in said one position of the rings, the washers being freely removable from the rings on sliding of the rings off the legs.

2,859,990
RAILING STRUCTURE
George J. Derrig, Park Forest, Ill., assignor to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Application February 19, 1954, Serial No. 411,473
5 Claims. (Cl. 287—54)



1. In a guard rail assembly, a hollow coupling member, a pair of hand rails in end-to-end relation with the opposed ends thereof in said coupling member, each of said opposed ends providing a slot therein, a spacer element having its ends freely received in the slots of the opposed rail ends within the coupling member and disposing said rail ends in spaced apart relation therein, a rail standard having one end in frictional abutment with said spacer element, and attachement means securing said coupling member to said one end of the standard.

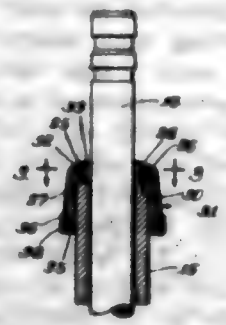
2,859,991
SELF-LOCKING TURNBUCKLE
Wadsworth W. Mount, Chatham, N. J.
Application April 4, 1956, Serial No. 576,166
3 Claims. (Cl. 287—48)

1. A turnbuckle comprising a body having a pair of side walls in spaced-apart opposing relation to each other, and a pair of end walls each connecting a pair of corresponding ends of said side walls; at least one threaded takeup member passing freely through one of said end walls into the space between said side walls, the end wall through which said takeup member passes having a curved bearing portion; a self-locking nut disposed in said space and threadedly engaging said takeup member; and, a similarly curved bearing member slidably positioned on such takeup member between said self-locking nut and said curved wall bearing portion, said nut being of a configuration and radial dimension to be confined against rotation by and between said side walls, and said nut under load from said takeup member serving to impart said load to said body.

2,859,992
SCREW JOINT
Samuel L. Levy, Decatur, Ill.
Application July 15, 1957, Serial No. 671,882
1 Claim. (Cl. 287—125)

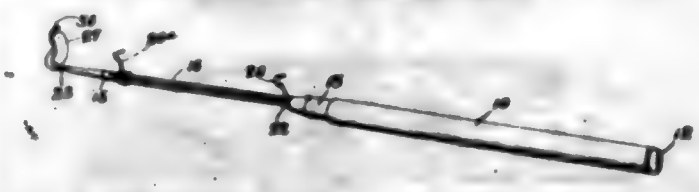
In a joint of the kind described, a pair of sections of equal external diameters throughout, one of said sections having a cylindrical channel formed in its end, said channel providing a centrally disposed threaded core and an outer wall concentric to and of equal length to said core, the ends of the core and wall being in the same plane transverse the section, the other section having a reduced end of equal external diameter equal to the internal diameter of the wall, said reduced end being internally threaded and engageable on said core, the reduced end providing a shoulder seating on the end of said wall.

2,859,993
VALVE STEM SEAL
Melvin E. Estey, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Application October 10, 1956, Serial No. 615,179
5 Claims. (Cl. 288—9)



1. A valve stem seal adapted to be mounted on a valve stem guide, comprising a resiliently contracting collar having a generally cylindrical portion adapted to embrace and hug the valve stem and having a flange at its inner end, and a resilient cup-shaped member having its transverse wall perforated and embracing said cylindrical portion and its side wall adapted to resiliently embrace the end portion of the guide, said transverse wall overlying said flange to hold the collar against movement with the valve stem longitudinally thereof.

2,859,994
WHIP FINISHER
Melvin E. Whitlinger, Seattle, Wash.
Application February 6, 1957, Serial No. 638,590
3 Claims. (Cl. 289—17)



1. A whip finisher tool for completing a knot forming a head of a manually tied artificial fishing lure comprising, in combination, a main body portion, a shank extending outwardly from one forward end of said main portion, a thread tension hook adjustably supported upon said shank, a hackle guard secured to the outer extremity of said shank, a winding hook secured to a side of said hackle guard, said shank including a longitudinally extending groove, said tension hook including a rod slidably supported within said groove, and having a portion extending radially outwardly therefrom securing said ten-

2,859,998

tween a latched position and a released position; a bolt

groove, a labyrinth seal mounted within said seal groove between each ring and the leg which it overlies in con-

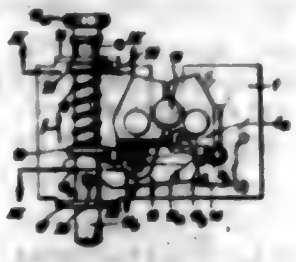
sion hook against rotation of the longitudinal axis of said shank, and a tension spring within said main body portion connected at one end to said hook and at the opposite end to the opposite rear end of said main body portion normally biasing said tension hook rearwardly in a direction away from said winding hook.

2,859,995

LOCKING DEVICE

Maurice Rigaud, Paris, France, assignor to Societe des Agrafes Francaises & d'Articles Metalliques (Société Anonyme), Paris, France, a French company

Application February 23, 1955, Serial No. 489,998
Claims priority, application France March 9, 1954
16 Claims. (Cl. 292—53)



1. A locking device for use in cooperation with a stud with which it is adapted to come into locking engagement, said device comprising, in combination, a supporting base member; a pair of oppositely disposed jaw elements pivotally mounted on said base member, and having opposed locking arms adapted to move toward each other to lock such a stud therebetween, and opposed non-locking arms arranged to move apart as said locking arms move toward each other: spring means operatively connected with said jaw elements for urging the non-locking arms thereof together and the locking arms apart, and thus to stud-freeing position; a lever pivotally mounted on the non-locking arm of one of said jaw elements and adapted to extend in a direction generally transversely to the direction of extent of said jaw elements; said lever having a blocking portion thereon which is movable to a blocking position in which said blocking portion extends between said non-locking arms and into wedging engagement directly with an inner side portion of the non-locking arm of the other of said jaw elements thus urging the non-locking arms apart and the locking arms into firm engagement with the stud; and means resiliently urging said lever toward its wedging position.

2,859,996

DRAWBOLT ASSEMBLY

Wallace E. Atkinson, Petersburg, Va., assignor to Long Manufacturing Company, Inc., Petersburg, Va., a corporation of Virginia

Application April 18, 1957, Serial No. 653,689
3 Claims. (Cl. 292—114)

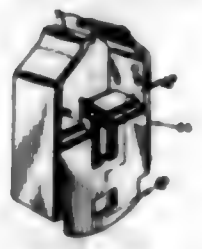
1. A drawbolt assembly for fastening cooperating edge portions of separable parts of receptacles comprising a keeper adapted to be mounted on one of said parts, a mounting bracket adapted to be affixed to the other of said parts, a swinging link of sheet metal, means pivotally mounting said swinging link on said mounting bracket for movement about a first transverse axis, said swinging link having a pair of transversely aligned integral trunnions projecting from opposite edges thereof along a second axis spaced from and paralleling said first axis, said trunnions projecting laterally beyond the other parts of said mounting bracket and swinging link, a sheet metal drawbolt member formed into a downwardly opening shell having an integral top and depending sides, catch means on said drawbolt member to interlock said drawbolt member with said keeper, said sides having transversely aligned apertures therein to receive and pivotally support said trunnions when said swinging link is centered transversely of said drawbolt member and pivotally intercouple said drawbolt member with said swinging link about said second axis, the spacing between said sides being intermediate the spacing between the outermost ends of said trunnions and said other parts of said mounting bracket and swinging link to afford sufficient lateral play of the swinging link between said sides when a trunnion is disposed in its associated aperture to permit the other trunnion to be disposed wholly inwardly of its associated drawbolt side, a leaf spring interposed between an edge of said swinging link and said drawbolt top forming the means for holding said drawbolt member and said swinging link in assembled relation with said trunnions seated in the apertures therefor, means on said swinging link coacting with said leaf spring to restrain said leaf spring and said swinging link against relative lateral displacement, and said drawbolt top including means for restraining said leaf spring in laterally centered position transversely of said drawbolt member against said drawbolt top and in substantially longitudinal alignment with the centered medial longitudinal axis of said drawbolt top to restrain said drawbolt member and swinging link against relative lateral displacement which would decouple them.

2,859,997

LOCK RETRACTOR MECHANISM

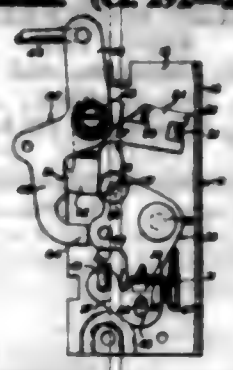
Armin H. Green, San Mateo, Calif., assignor to Schlage Lock Company, a corporation

Application July 12, 1954, Serial No. 442,473
2 Claims. (Cl. 292—169)



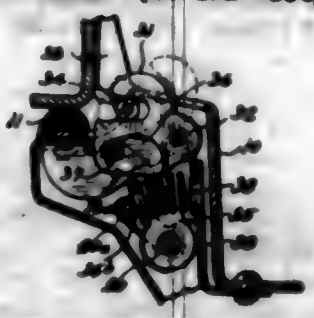
1. In a lock having inner and outer knob spindles provided with rollbacks, a retractor connected with the bolt of said lock and slidably supported for translation from an outer position with said bolt projected, to an inner position with said bolt retracted, spring means urging said retractor to said outer position and into engagement with said rollbacks at all times, said retractor including lost motion means yieldably urged into engagement with the rollbacks of one of said spindles to permit limited rotation of said one spindle while said retractor is stationary, said retractor being formed to provide a pair of surfaces adapted to be engaged by the rollbacks of said outer spindle, each of said surfaces comprising a first portion in a plane at right angles to the path of travel of said retractor and a second surface in continuation of said first surface and slantingly disposed relative to said path, said portions being relatively positioned whereby initial rotation of the adjacent rollback from a neutral position engages said first portion for retracting said retractor and continued rotation of said adjacent rollback engages said slanting portion for augmenting the translatory movement of said retractor for a given angular movement of the associated spindle.

2,859,998
DOOR LOCK
Jack E. Martens, Detroit, and Donald C. Beyer, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application January 18, 1956, Serial No. 558,216
8 Claims. (Cl. 292—336)



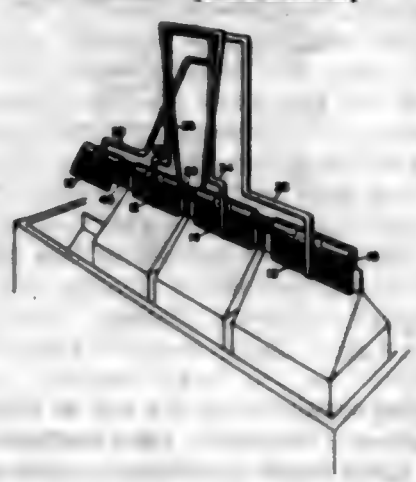
1. In a latch mechanism for a motor vehicle door, an L-shaped support mounted upon said door adjacent an edge thereof, a toothed rotor rotatably mounted upon one flange of said support on one side thereof, a toothed ratchet on the opposite side of said support from said rotor and mounted for rotation with said rotor as a unit, a pawl mounted on said support on the same side as said ratchet and adapted to engage one of the teeth of said ratchet to hold said ratchet and rotor against rotation in one direction, a manually operable release lever pivotally mounted upon said support and having a part engageable with said pawl to swing the latter out of engagement with said ratchet upon actuation of said lever, a locking lever pivotally mounted upon the other flange of said L-shaped support and having a blocking portion engageable in one position of said locking lever with said release lever to prevent actuation of said release lever in a direction to release said pawl from said ratchet, a manually operable lever pivotally mounted upon said last mentioned flange, an intermediate lever pivotally mounted upon said other flange coaxially with said manually operable lever, said intermediate lever having a first portion engageable with said pawl and a second portion in abutting relationship with a part of said manually operable lever to be rotated thereby in a direction to release said pawl from said ratchet, means for rotating said pivotally mounted locking lever between blocking and unblocking positions of said locking lever with respect to said manually operable release lever, and additional means on said locking lever in the path of movement of the second portion of said intermediate lever to rotate said locking lever from blocking to unblocking position upon rotation of said intermediate lever in pawl releasing direction, said additional means being removable to permit movement of said intermediate lever independently of said locking lever.

2,859,999
LATCH MECHANISM
Lloyd L. Anderson, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Application March 16, 1956, Serial No. 572,133
9 Claims. (Cl. 292—336)



1. In a latch mechanism having a housing and a bolt member mounted on said housing for movement between a latched position and a released position: a bolt actuator pivotally mounted on said housing for controlling the position of said bolt member, said bolt actuator being spring-biased to urge said bolt member toward latched position, an operating member for causing pivotal movement of said bolt actuator in a direction to release said bolt member, said operating member comprising a portion mounted for pivotal movement about an axis common with the pivotal axis of said bolt actuator and another portion arranged to bear against said bolt actuator.

2,860,000
CARTON LIFTER
Ruth E. Marchenki, Detroit, Mich.
Application April 8, 1955, Serial No. 500,197
5 Claims. (Cl. 294—38)



5. Apparatus for lifting and carrying one or more gable top cartons, including, a first plate, a plurality of second plates pivotably mounted on the first plate in spaced relationship with respect to one another, means on each second plate to maintain the angular displacement between each second plate and the first plate within predetermined limits, non-skid material disposed on the inner surface of the first plate and on the inner surfaces of the second plates to firmly grip the tops of cartons upon a pivotal movement of the second plates against the first plate, a handle on the first plate, and a lever on each one of the second plates, the levers being normally maintained at a particular angular distance from the handle in accordance with the predetermined limit of displacement between the second plates and the first plate, each lever being individually movable relative to the handle to pivot its associated second plate against the first plate for gripping a carton top between the plates.

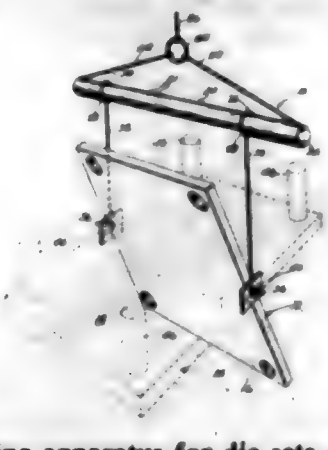
2,860,001
WEED REMOVING TOOLS
Anna Garland, Detroit, Mich.
Application October 17, 1956, Serial No. 616,521
2 Claims. (Cl. 294—50.6)

1. A weed-removing tool comprising a straight shaft which, when viewed in a vertical position, includes, at the lower end, two adjoining elements in a diametrically-

a bar member connected at one end to said pivotal

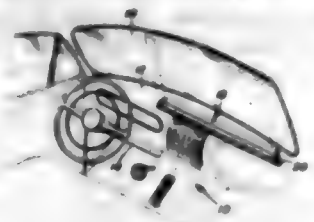
opposed relation to each other, one of the elements forming a loop disposed in a vertical plane and being open at the top, said loop having a pointed lower portion, the other element forming a substantially horizontally-disposed blade, two hooks radially extending from the shaft in a spaced relation to the lower end thereof, each hook including a loop flaring outwardly in a horizontal plane, and a handle at the opposite end of the shaft.

2,860,862
HOISTING APPARATUS
Walter Joseph Herbst, Chicago, Ill.
Application April 3, 1956, Serial No. 575,843
1 Claim. (Cl. 294—81)



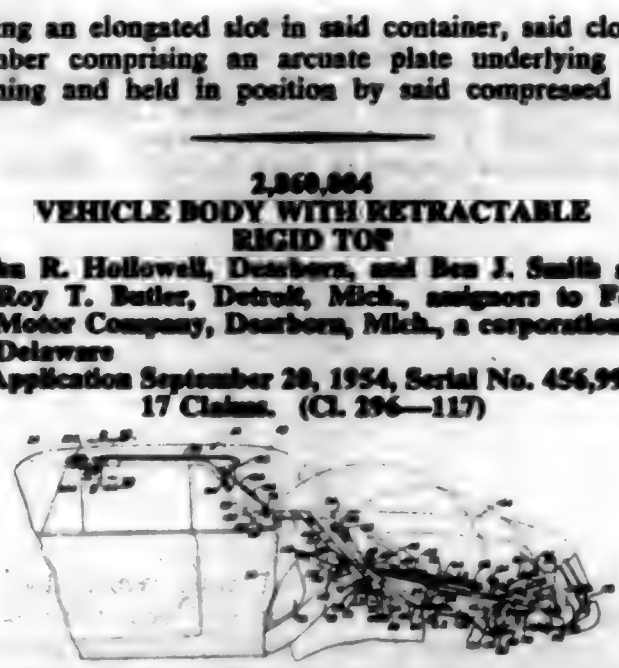
In a hoisting apparatus for die sets or the like, a horizontally disposed, elongated, rigid supporting member, two flexible cable members affixed to opposed end limits of said supporting member, a pair of cable-engaging means operatively connected to said cable members and mounted on said supporting member for independent, longitudinal movement with respect thereto to predetermined positions of adjustment on said supporting member, the lengths of the portions of said cable members depending from said supporting member being dependent upon the predetermined positions of adjustment of said cable-engaging means on said supporting member, and locking means cooperating with each of said cable-engaging means and said supporting member to retain said cable-engaging means in selected positions of adjustment.

2,860,883
INFLATABLE CRASH PROTECTOR FOR VEHICLES
Robert H. Hodges, Columbia, S. C.
Original application June 8, 1953, Serial No. 360,122, now Patent No. 2,755,125, dated July 17, 1956. Divided and this application July 10, 1956, Serial No. 597,025
3 Claims. (Cl. 296—84)



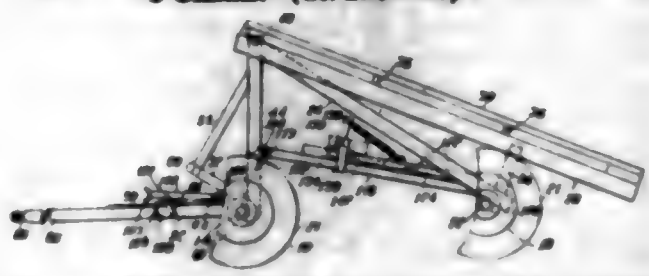
1. An inertia actuated crash protector for vehicles comprising a hollow frame, a resilient inflatable covering on said frame, the edges of said covering being sealed to said frame, a container of compressed gas in said frame, an opening in said container, a closure member in alignment with said opening, and inertia responsive means connected to said closure member for removing said closure member from alignment with said opening to permit said compressed gas to inflate said covering, said container being cylindrical in shape, said opening comprising an elongated slot in said container, said closure member comprising an arcuate plate underlying said opening and held in position by said compressed gas.

2,860,904
VEHICLE BODY WITH RETRACTABLE RIGID TOP
John R. Hollowell, Dearborn, and Ben J. Smith and Roy T. Butler, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application September 28, 1954, Serial No. 456,994
17 Claims. (Cl. 296—117)



1. In a motor vehicle body having a generally horizontally extending rear deck lid pivotally connected to the body at its rearward end and providing a storage space therebeneath, a vehicle roof having a main rigid metal roof section and a smaller forward rigid metal roof section forming a continuation of the main roof section in the raised position of the roof, a bell crank lever pivotally connected at one end to the forward roof section and intermediate its ends to the main roof section adjacent the forward end of the lever, said bell crank lever having an integral arm extending on the opposite side of its pivotal connection to said main roof section from the body portion of the bell crank lever, an idler link having its opposite ends pivotally connected to said main roof section and to said forward roof section adjacent their interconnection, a link pivotally connected at its forward end to the projecting arm of said bell crank lever and extending longitudinally along the main roof section, a second bell crank lever pivotally connected to said main roof section intermediate its ends and having one arm thereof pivotally connected to the rearward end of said link, a pair of roof supporting arms at each side of the vehicle having their upper ends pivotally connected to said main roof section and their lower ends pivotally supported upon said vehicle, one of the roof supporting arms at each side of the vehicle having an offset portion formed adjacent its pivotal connection to the main roof section, and another link having its opposite ends pivotally connected to the second arm of said second bell crank lever and to the offset portion of said roof supporting arm to effect a pivotal movement of said forward roof section relative to said main roof section as the main roof section is lowered into the space beneath said rear deck lid to shorten the over-all length of said vehicle roof in the stored or lowered position thereof.

2,860,905
LATCH CONTROL MEANS FOR A DUMP TRAILER
Arthur H. Webster, Flatwoods, Tenn.
Application June 30, 1953, Serial No. 365,031
8 Claims. (Cl. 298—20)



8. In a vehicle, a load bearing frame, a link member pivotally engaged to the frame near one end thereof,

said body having a diametrically opposed axial aligned thin material and an elongated relatively narrow strip

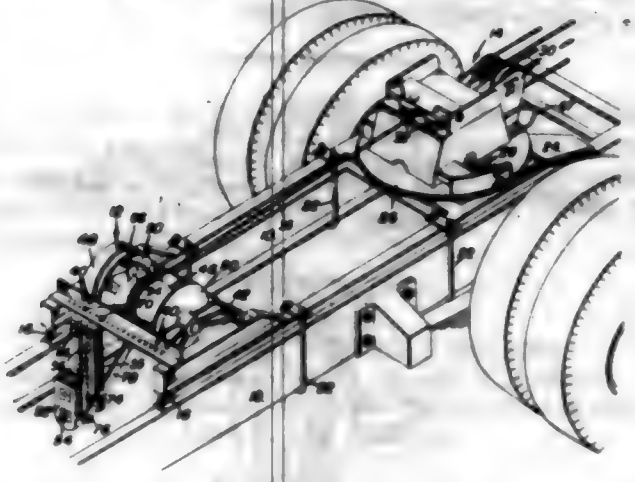
a bar member connected at one end to said pivotal connection, spaced pivot means, said members engaging said pivot means at their opposite ends, means fixedly connecting the other end of said frame to the other end of said bar member, means to adjustably hold the pivot means in spaced relation comprising interengaged ratchet and latch means connected to said pivot means.

2,860,906

TILTING DUMP TRAILERS FOR DETACHABLE FIFTH WHEEL AND WINCH MOUNTING ASSEMBLY

Edwin A. Schoenrock, San Angelo, Tex.

Application February 23, 1954, Serial No. 411,893
12 Claims. (Cl. 298—20)



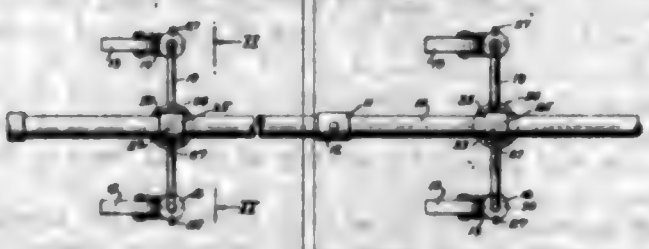
1. In a tractor and cable dump trailer assembly, a tractor having a frame, a sub-assembly frame, means detachably mounting the sub-assembly frame upon the rear portion of said tractor frame, a fifth wheel assembly lower plate fixedly mounted upon the rear portion of said sub-assembly frame, a fifth wheel assembly upper plate detachably pivoted upon said lower plate, a winch assembly mounted upon the front end of said sub-assembly frame, means connecting said winch assembly to a source of power, a set of actuating pulleys and a set of guide pulleys rotatably journaled upon said upper plate, a cable connected to said winch assembly and reeved through said guide pulleys and through said actuating pulleys for connection to said trailer unit.

2,860,907

WHEEL SUPPORTED MOVABLE PIPE LINE

Gail Cornelius, Portland, Oreg., assignor to R. M. Wade & Co., Portland, Oreg., a corporation of Oregon

Application February 16, 1956, Serial No. 565,899
3 Claims. (Cl. 299—67)



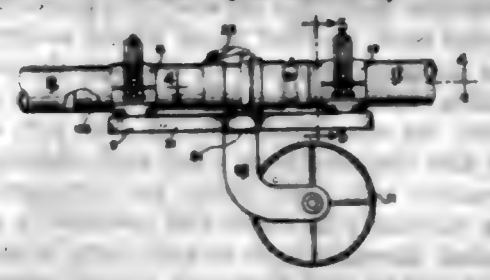
1. A mobile sprinkler pipe line or the like having spaced supporting means therealong, a spreader arm adjustably pivotally connected to each of said supporting means, interengaging locking means and a limit stop means between said supporting means and said spreader arms and a caster wheel adjustably pivoted to an end portion of each of said spreader arms at substantially equal distances from said first mentioned adjustable pivotal connection, whereby either one or both of the wheels pivoted to each of said spreader bars may be locked in an adjusted position.

2,860,908

PORTABLE IRRIGATION APPARATUS

Harry D. Jacoby, Portland, Oreg., assignor to Irrigation Equipment Co., Inc., Eugene, Oreg., a corporation of Oregon

Application February 23, 1954, Serial No. 411,766
1 Claim. (Cl. 299—47)



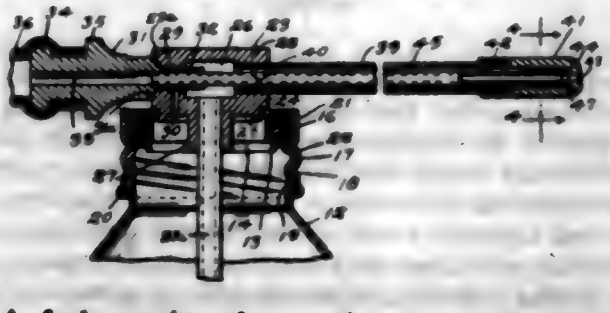
An irrigation apparatus of the class described, comprising a pair of coaxially arranged thin walled pipe sections having adjacent end portions, said pipe sections being of the same diameter, one pipe section having a liner extending into the mentioned end thereof and projecting therefrom, the projecting end portion of said liner telescopically receiving the mentioned end portion of the other pipe section, a gasket between the telescoped end portions of said liner and other pipe section providing a liquid tight seal therebetween, a wheeled dolly supporting said pipe sections at said telescoped end portions, a pair of spaced coaxially arranged clamps fixed to the dolly and being disposed axially outwardly of said telescoped end portions and being rigidly clamped about the pipe sections to prevent longitudinal slipping of the pipe sections relative to the dolly under the influence of an end load, and a reinforcing liner fitting snugly within said other pipe section, said liners extending coextensively with the associated clamps, operable to prevent collapse of the thin walls of the pipe sections against the pressure of the clamps, each liner extending in both directions axially beyond the associated clamp to be operable to resist flexure of the associated pipe section at the clamp to thus decrease the amount of flexure thereof occurring at the outer axial edges of the clamp to preclude crushing of the thin walls of the pipe section on such edges during lateral flexing of the pipe section.

2,860,909

FUEL ATOMIZING SPRAY DEVICE

Charles Phillips Orr, Camden, N. J., assignor to Spray Products Corporation, Camden, N. J., a corporation of New Jersey

Application July 15, 1955, Serial No. 522,199
3 Claims. (Cl. 299—88)



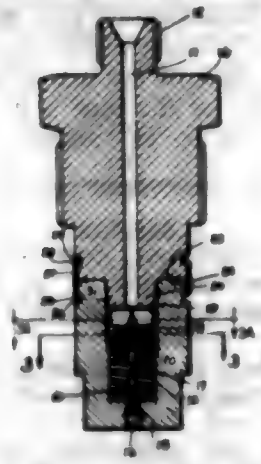
1. A fuel atomizer for starting internal combustion engines comprising a fuel reservoir, a threaded tubular neck formed on the upper end of said reservoir, an internally threaded sleeve detachably engaged with said threaded neck, a cylindrical body, said body having an internal central hollow area constituting a fuel storage chamber and an axial bore extending from said chamber to the lower end of said body, said body having an annular recess formed in its lower edge portion, a radial flange on said sleeve engaging in said annular recess, a tube mounted in said axial bore and extending into said reservoir, said body having a threaded bore extending from said chamber radially outwardly through said body,

be placed about a tool; means for securing each half to

container being cylindrical in shape, said opening com- pivotally engaged to the frame near one end thereof.

said body having a diametrically opposed axial aligned second threaded bore extending from said chamber through said body, a port extending from said first threaded bore through the lower end of said body in spaced relation and parallel to said axial bore, an adapter fitting having an axial bore provided with an externally threaded tubular extension detachably engageable in said first threaded bore, resilient pump means secured to said fitting and adapted to pump air through the axial bore in said fitting, said threaded tubular extension cooperating to close the open upper end of said port extending from said first threaded bore when said adapter fitting is fully advanced into said body, an elongated conduit having an externally threaded end detachably supported in the second threaded bore in said body, a nozzle carried by the end of said elongated conduit opposite said threaded end, a valve seat formed internally of said nozzle, and a second conduit having one end thereof mounted in the axial bore in said fitting and having a valve face formed on its opposite end cooperating with the valve seat in said nozzle with said second conduit concentrically positioned with relation to said elongated conduit, the tube which extends into said reservoir from said chamber and the port which is uncovered by the externally threaded tubular extension providing a recycling path for fluid through said chamber into said reservoir while maintaining said chamber filled with fluid and subject to pressured discharge through said nozzle in an atomized spray.

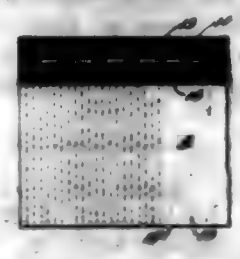
2,860,010
FUEL INJECTION NOZZLE
Harold R. Sennstrom, Longmeadow, and Albert A. Marchetti, Springfield, Mass., assignors to American Bosch Arma Corporation, a corporation of New York
Application September 26, 1955, Serial No. 536,542
7 Claims. (Cl. 299—107.6)



7. In a device of the character described, a body portion having a fuel passage therethrough, a separate nozzle portion in aligned relation with said body portion and having a spring chamber and a fuel discharge passage communicating therewith, a valve in said discharge passage and a spring in said spring chamber operatively connected to said valve, said body portion and nozzle portion having comating adjoining ends in pressed relation to retain said portions in assembled relation and external groove means on said body portion and nozzle portion adjacent said comating ends and means engaging said groove means.

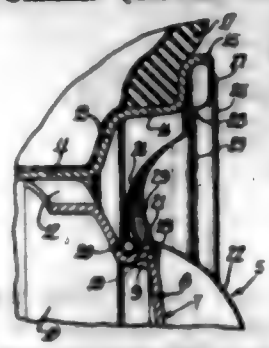
2,860,011
METHOD OF MAKING DISPOSABLE TOOTHBRUSHES
James F. Dunn, Chicago, Ill.
Application March 25, 1953, Serial No. 344,623
2 Claims. (Cl. 300—21)

1. A method for making a plurality of disposable sanitary toothbrushes from a sheet of relatively stiff and thin material and an elongated relatively narrow strip of resilient and absorbent material which consists in, bringing the strip into engagement with one surface of the sheet marginally thereof, sealing the engaging sur-



faces between the strip and sheet surface, cutting at longitudinally spaced narrow intervals transversely through the strip and at the same time partially into the exposed surface of said sheet across the width thereof to produce easily severable lines.

2,860,012
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application October 7, 1954, Serial No. 460,885
3 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim and a disk-spider wheel body having an annular intermediate nose bulge provided at the radially outer side thereof with generally radially outwardly projecting cover retaining bumps affording generally axially inwardly and radially outwardly directed shoulders, a cover for disposition at the outer side of the wheel including a central hub cap cover member with a side wall provided with a resilient turned terminal edge structure engageable resiliently in press-on, pry-off relation with said bump shoulders, said hub cap side wall including a portion adjacent to said terminal structure facing generally axially inwardly and radially outwardly, and an annular cover member for substantially overlying the tire rim and the portion of the wheel body intervening between said bumps and the tire rim, said annular cover member having an axially inwardly dished radially inner portion directed radially inwardly and axially outwardly toward and being in thrusting engagement with said hub cap side wall portion, said annular cover member being of substantially rigid construction and being engageable by a pry-off tool levered against the tire rim for exertion of pry-off force against the annular cover member transmitted by said thrusting dished inner portion of the annular cover member to said hub cap side wall portion for exertion of pry-off force to dislodge said turned retaining terminal structure from the retaining bumps, said dished inner portion of the annular cover member having transversely thereacross reinforcing ribs which shoulder at their ends against said hub cap side wall portion for enhancing the pry-off thrust of said dished portion.

2,860,013
TOOL JOINT PROTECTOR
James F. Mallaris, Ventura, Calif.
Application February 29, 1956, Serial No. 568,674
6 Claims. (Cl. 308—4)

1. A tool joint protector comprising: a sleeve member adapted to be separated into two halves to enable it to

wall of a substantially cylindrical housing enclosing the, having a cylindrical external surface and coaxially dis-

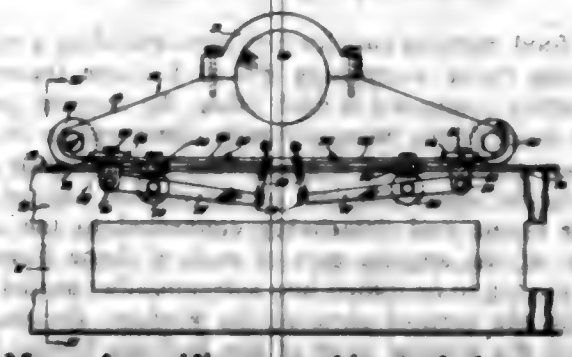
locked in an adjusted position.

from said chamber radially outwardly through said body,

be placed about a tool; means for securing each half to said tool; end flanges on said sleeve member; a flexible protecting collar having a lateral split to enable it to be placed about said sleeve between said end flanges, said

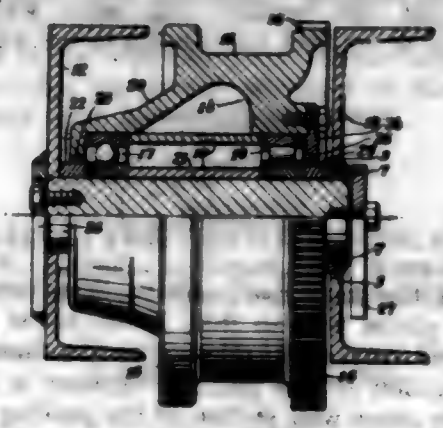
collar having an inside diameter greater than the outside diameter of said sleeve member and a series of longitudinally extending lateral V-grooves cut in its outside surface to pass circulating mud; and resilient band means for securing said lateral split in said collar.

2,860,014
MACHINE TOOL GUIDING MEANS
Richard Percy Jasper Short, Bogota, Colombia
Application November 15, 1954, Serial No. 468,882
4 Claims. (Cl. 308—6)



1. Means for guiding a machine tool along a straight path, comprising a carrier adapted for a machine tool to be mounted thereon, a track member having first and third planar surfaces and second and fourth surfaces, a first set of rollers rotatably mounted on said carrier on parallel axes which are fixed relatively to the said carrier, all of said rollers being adapted to roll on said first planar surface, a first set of bearing members resiliently mounted on said carrier and providing axes which are parallel with and resiliently urged towards the axes of said first set of rollers, a second set of rollers rotatably mounted on the axes provided by said first set of bearing members, one roller to each bearing member, the rollers of said second set being adapted to roll on said second surface of said track member which is immovable relatively to and substantially parallel with said first planar surface, a third set of rollers rotatably mounted on said carrier on parallel axes which are fixed relatively to the said carrier, the axes of said third set of rollers being perpendicular to the axes of said first set of rollers, said third set of rollers being adapted to roll on said third planar surface on the said track member which is perpendicular to said first planar surface, a second set of bearing members resiliently mounted on said carrier and providing axes which are parallel with and resiliently urged towards the axes of said third set of rollers, and a fourth set of rollers rotatably mounted on said second set of bearing members, one roller to each bearing member, the rollers of said fourth set being adapted to roll on said fourth surface of said track member which is immovable relatively to and substantially parallel with said third planar surface.

2,860,015
ADJUSTABLE MOUNTINGS FOR SHAFTS, AXLES, AND OTHER ELEMENTS
Peter Dunsforth Matterson, Rochdale, England, assignor to Doty Cranes Limited, Manchester, England, a company of Great Britain
Application April 8, 1957, Serial No. 651,285
4 Claims. (Cl. 308—42)



1. Adjustable mounting apparatus comprising a pair of spaced relatively fixed frame members, a shaft having one end portion thereof fixedly supported by one of said frame members, a double eccentric mounting supported by the other of said frame members and including an outer eccentric ring and an inner eccentric ring, said outer eccentric ring being journalled in said other frame member and said inner eccentric ring being journalled in said outer eccentric ring, said inner eccentric ring having a bore therein, the opposite end portion of said shaft being disposed and supported within said bore, means for permanently securing said inner and outer rings in fixed position relative to said other frame member, and a wheel member rotatably journalled on said shaft.

2,860,016
LUBRICATION MEANS
Richard H. Swart, Sr., Syracuse, N. Y., assignor to Carrier Corporation, Syracuse, N. Y., a corporation of Delaware
Application June 1, 1956, Serial No. 588,816
11 Claims. (Cl. 309—19)

1. In combination a piston; a connecting rod having a bore extending therethrough and terminating in opposed sides thereof; a pin assembled in said bore; means associated with the piston for supporting portions of said pin to afford a connection between the piston and the rod, and a substantially U-shaped lubricant distributing member comprising opposed sides disposed adjacent the sides of the connecting rod, said sides having apertures therein and a cap portion connecting the sides, at least one of said sides being provided with a lubricant guiding channel extending to the aperture.

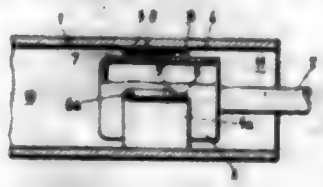
2,860,017
PACKING FOR A PISTON LONGITUDINALLY DISPLACEABLE IN A HOUSING
Willy Hasenauer, Zurich, Switzerland, assignor of one-half to Albert Linn, Zurich, Switzerland
Application July 24, 1956, Serial No. 599,729
Claims priority, application Switzerland July 26, 1955
5 Claims. (Cl. 309—23)

1. In a packing assembly for the annular space between a longitudinally displaceable piston and the inner

the uncovered compartment opening; a tray element posi- culation holes, a narrow flat-faced elongated strip mem-

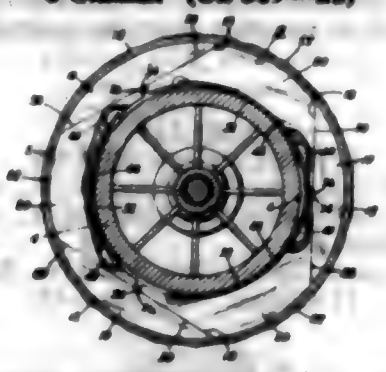
sanitary toothbrushes from a sheet of relatively stiff and adapted to be separated into two halves to enable it to

wall of a substantially cylindrical housing enclosing the said piston; comprising a sleeve-shaped packing member of flexible material which forms an outer wall section, an inner wall section, and at least one end bent over forming a bead interconnecting said outer wall section with said inner wall section, said packing member being arranged within the annular space between said piston and said housing, said outer wall section being attached in air-tight relationship to the wall of said



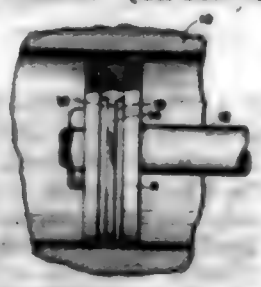
housing, and the inner wall section being attached to the adjacent piston wall so that, if the piston performs a longitudinal movement relative to the housing, the inner wall section of the packing member is displaced relative to the outer wall section of the packing member, so that said bead rolls off in the direction of the piston movement within the annular space, and at least one cage-shaped covering resting on the outer and inner faces of said packing member, said cage being formed of a flexible but non-elastic material.

2,860,018
PISTON ASSEMBLY
Eugene J. Doperalski and Esper Kodra, Michigan City, Ind., assignors to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application January 10, 1957, Serial No. 633,431
6 Claims. (Cl. 309—23)



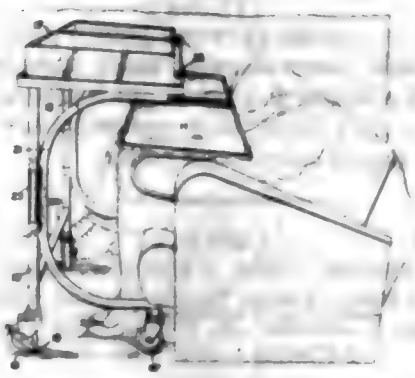
1. An assembly comprising, a first member, a second member having a portion thereof engaging a portion of said first member, said portion of one of said members comprising an anodized aluminum alloy, said portion of the other of said members comprising a carbonaceous material and said other member having a surface spaced outwardly from said one member which is adapted to engage a surface located outwardly adjacent thereto with said one member being located in spaced relationship to said last mentioned surface.

2,860,019
PACKING OR SEALING STRUCTURE
Charles W. Ozanne, Port Huron, Mich.
Application June 11, 1957, Serial No. 665,093
11 Claims. (Cl. 309—29)



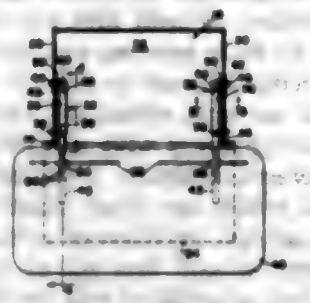
1. A structure for slidably sealing a first member having an internal cylindrical surface to a second member having a cylindrical external surface and coaxially disposed relative to the first member for relative reciprocation, the combination of one of said members having in its cylindrical surface a circumferential groove, split elastic metallic ring means in said groove self-urged into sliding circumferential sealing engagement with the cylindrical surface of the other member, and a pair of O rings disposed on axially opposite sides of said metallic ring means for sealing said means with respect to groove surfaces of the said one member.

2,860,020
FOOD CARRYING CART FOR AIRPLANES
George Nicklin, Los Angeles, and Richard P. Ensign, Woodland Hills, Calif., assignors to Western Airlines, Inc., Los Angeles, Calif., a corporation of Delaware
Application February 21, 1957, Serial No. 641,702
3 Claims. (Cl. 311—17)



2. A food carrying cart for airplanes including a mobile supporting frame comprising spaced K-shape frames intermediately connected to each other, the angular part of each K-shape frame being pivotally connected to the vertical part thereof, and a supporting top hingedly connected to the upper terminal of the vertical part of each K-shape frame and detachably connected to the upper terminal of the angular part of each K-shape frame, to permit the top to be folded into substantially parallel relation with the vertical parts of the K-shape frames, and to permit the angular parts of the K-shape frames to be folded inwardly to a point substantially within the confines of the vertical parts.

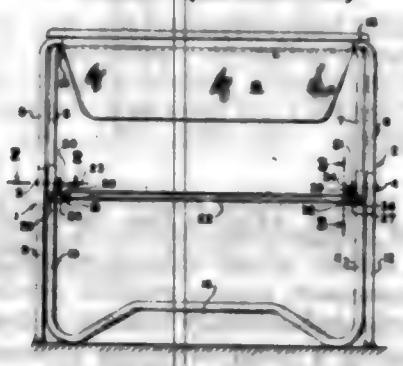
2,860,021
TRAY ATTACHMENT FOR AUTOMOBILES AND THE LIKE
Ray N. Steele, Cedar Rapids, Iowa
Application October 18, 1957, Serial No. 691,086
4 Claims. (Cl. 311—21)



1. For use in a vehicle having a driver's seat and a transverse instrument panel having a glove compartment defined in part by a pair of laterally spaced apart upright walls extending forwardly respectively from opposite sides of an access opening that is selectively covered and uncovered by a hinged door: an attachment comprising a pair of fore-and-aft elongated guide channels respectively having means for the affixation thereof respectively to the compartment wall generally in horizontal transverse alinement and located wholly within the compartment so as to be rearwardly exposed through

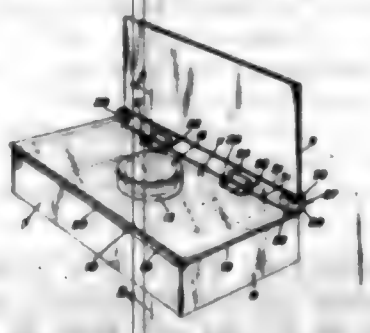
the uncovered compartment opening; a tray element positionable horizontally at the driver's seat side of the instrument panel and normally outside the compartment with the compartment door open; a pair of supports spaced laterally apart generally on the order of the lateral spacing of the guide channels and extending forwardly from the tray element and respectively slidably receivable forwardly in said channels to mount the tray element in cantilever fashion and slidably separable rearwardly from said channels to dismount the tray element; and a pair of means mounting the supports on the tray element for lateral adjustment relative to the tray and relative to each other, at least one of said means further including provision for enabling one support to lie selectively parallel to or non-parallel with the other support to respectively accommodate parallel or non-parallel conditions of the walls of the glove compartment.

2,860,822
SUPPORTING STRUCTURE FOR INFANT'S BATHING DEVICE
Dewey M. Kennedy, Rochester, N. Y.
Application March 27, 1956, Serial No. 574,310
1 Claim. (Cl. 311—83)



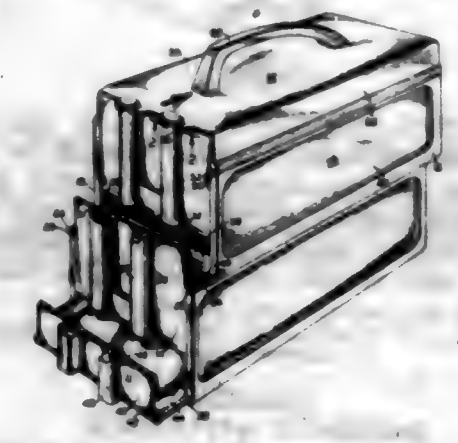
An improved infant's bathing device having a tubular supporting frame including two pairs of cross-legs being pivotally connected together, the upper parts of the legs being removable from and telescopically connected to the lower parts of the legs at a place above the pivotal connections, longitudinal rails for supporting a flexible tub connected to the upper parts of the legs, said lower parts of the cross-legs having two front leg parts and a lower rail integral with and connecting the two front leg parts together, means for detachably securing the upper and lower parts of the legs together, and means at the pivot connection for the cross-legs for holding the lower parts of the cross-legs together when the upper parts are removed.

2,860,823
CIGAR BOX HUMIDIFIER
James W. Herdlitchka, Pierce, Nebr.
Application September 19, 1955, Serial No. 535,113
1 Claim. (Cl. 312—31.1)



A cigar box attachment comprising a transparent cover adapted to serve as a cover for the receptacle portion of a cigar box when the regular lid carried by said box is swung up to an open vertical position, a median portion of said cover having a group of moisture circulating holes, a cup for a moistened sponge attached to the top surface of said cover and completely enclosing said circulation holes, a narrow flat-faced elongated strip member constituting an adapter and having U-shaped attaching clips at its opposite ends which may be connected with the ends of the lid of the cigar box, the lower longitudinal edge portion of said strip abutting a cooperating longitudinal marginal edge of said cover and being flush at its bottom with the bottom surface of said cover and being provided with depending pointed anchoring pins adapted to be forcibly pressed into the upper edge of the rear wall of the cigar box, and hinges hingedly joining the lower edge portion of said strip to the cooperating longitudinal edge portion of said cover.

2,860,824
CABINET FOR PHOTOGRAPHIC SLIDES
Joseph W. Kappel, Lynbrook, Sol Kappel and Louis Kappel, West Hempstead, and Martin Feiger, Rosedale, N. Y.
Application December 31, 1954, Serial No. 479,052
1 Claim. (Cl. 312—209)

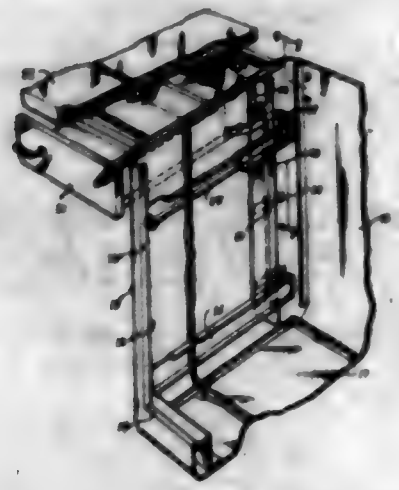


A cabinet comprising a plurality of superimposed sections mounted for horizontal sliding movement relative to each other and provided with complemental trackways to allow such sliding movement, said cabinet including at least one open-top tray section, a base section and a cover section carried by the tray section and being slidably removable therefrom, said tray section having side walls and a front wall extending above the side walls and terminating at its lower end between the upper and lower edges of the side walls, male and female locking means between said sliding members, said means comprising a pair of opposed forwardly extending projections on the front wall of said tray section and which are substantially L-shaped in horizontal section and which are bendable towards each other, the upper end of each projection forming a male locking portion and the lower end having a recess to receive said male locking portion, said recesses having projections at the entrance thereof which the male locking portions may clear by said bending action, the base and the cover sections having complemental locking means to cooperate with said male portions and recesses.

2,860,825
DRAWER AND FILE LOCKING DEVICE
Howard E. Hutzelman, Corry, Pa., assignor to Corry-Jamestown Manufacturing Corporation, Corry, Pa., a corporation of New York
Application August 31, 1956, Serial No. 607,489
3 Claims. (Cl. 312—221)

2. A locking mechanism for securing the drawers of a desk pedestal in closed position by the closing of a drawer adjacent said pedestal, said mechanism comprising a vertically disposed bar, a bracket secured to the inner wall of said pedestal having a number of vertical slots, hooks on one edge of said bar engageable with said slots and providing for horizontal swinging of said bar, locking hooks extending from said bar edge, strips mounting said drawers for movement out of and

into said pedestal, keepers on the rearwardly extending ends of said strips, said keepers being engageable with said locking hooks in a given position of said bar, a spring on said bar normally urging said bar into another position, an arm extending from said bar beyond the



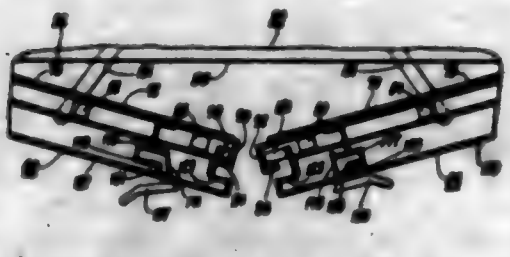
confines of said pedestal, said arm being in the path of travel of said adjacent drawer and operable, upon the closing of said adjacent drawer, to swing said bar and cause said locking hooks to occupy a position to be engaged by said keepers when any of the drawers of said pedestal are moved into closed position.

2,860,926

DOMESTIC APPLIANCE

George B. Long, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 8, 1956, Serial No. 570,317
7 Claims. (Cl. 312—296)



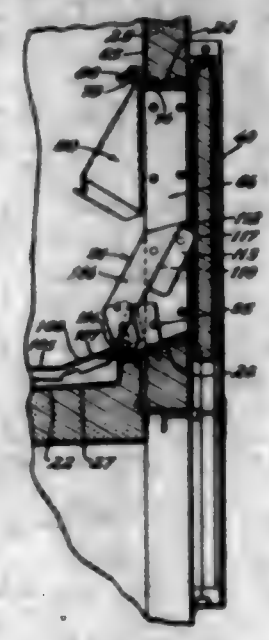
7. In combination, walls enclosing a compartment, said walls having an opening therein providing access to said compartment, a set of doors having common meeting edges for closing said opening, pivotal connections pivotally connecting said doors adjacent the edges opposite said meeting edges to said walls, said doors each having inner movable panels and spring means for resiliently urging said panels into contact with said walls around said opening, one of said doors being provided with a lateral slideway for slidably supporting its panel, said panels having common meeting edges, said one door having spring means for resiliently urging its panel toward the meeting edge of the panel of the adjacent door, a handle for opening one of the doors, and means operated by said handle for moving the panel of one of the doors away from the common meeting edge, a laterally extending projection connected to and movable with said panel, a second projection located in the lateral path of movement of said laterally extending projection at the termination of the movement of the panel by the handle, said second projection having a recess for disengaging said projections when the panel is deflected upon engaging the portion of the walls surrounding the door opening.

2,860,927

STORAGE BIN FOR ICE CUBE MAKING MACHINE

Donald F. Swanson and Edmund J. Buskirk, St. Paul, Minn., assignors, by mesne assignments, to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware

Application October 7, 1953, Serial No. 539,053
9 Claims. (Cl. 312—312)



1. An ice cube machine including an ice cube compartment, said compartment having an opening in a side wall thereof, a door, means slidably supporting said door for vertical movement from a position closing said opening to a position substantially beneath said opening, and a baffle including a panel extending transversely of the door opening, and means pivotally supporting the lower edge of said panel along a substantially horizontal axis, the upper edge of said panel including means engageable with the inner surface of said door, said panel swinging over the top of the door when the top of the door is moved beneath the level of said means engaging the door panel.

2,860,928

PEN MOUNTINGS FOR RECORDING INSTRUMENTS

John Arthur Henry Taylor, Luton, and John Arthur Munford Grout, Leagrave, Luton, England, assignors to George Kent Limited, London, England, a company of Great Britain

Application June 25, 1954, Serial No. 439,364
Claims priority, application Great Britain June 29, 1953
6 Claims. (Cl. 346—139)

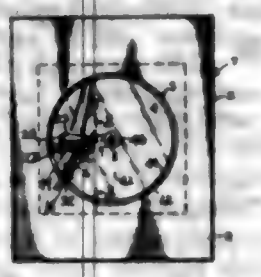
1. A mounting for the pen arm blade of a pen of a chart recording instrument including a pen mounting stub, means for locating said blade on said stub longitudinally of the latter and for fixing said blade against lateral movement relative to said stub, and a shroud attached to said stub and including a flat strip parallel to and spaced from said stub so as to leave a passage between said stub and said flat strip for the insertion and guiding of said blade on to said locating and fixing means.

2,860,629

MOVABLE BLOTTER AND MEANS FOR SUPPORTING THE BLOTTER IN ENGAGEMENT WITH A MOVABLE METER CHART

Maurice W. Jones, Baytown, Tex.

Application October 7, 1955, Serial No. 539,194
2 Claims. (Cl. 346—146)



1. A rotatable blotter for a meter chart comprising a cone shaped member, a blotting surface over the entire outer periphery thereof, a projection extending from each end of said cone, a bracket including spaced arms for engaging each of said projections whereby said cone member may be rotatably supported in said bracket, an arm depending from said bracket at the rear thereof, said arm being inclined in the plane of said bracket and towards said arm which holds the larger end of said cone member, a second arm pivotally engaged in the end of said first mentioned arm, said second arm having its end portion bent out of the longitudinal plane of said second arm and there being an opening in said portion for receiving a screw whereby said second arm may be positioned to hold said bracket and cone shaped member therein adjacent the meter chart, and spring means connected between said bracket and said second arm for urging said arms and bracket and said cone shaped member towards the meter chart whereby the blotting surface on said cone member may engage the meter chart to blot it.

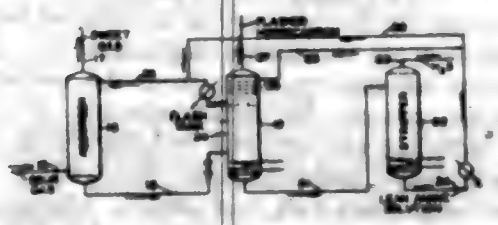
CHEMICAL

2,860,630

RECOVERY OF HYDROGEN SULFIDE AND/OR CARBON DIOXIDE SUBSTANTIALLY FREE FROM HYDROCARBONS AND SUBSTANTIALLY PURE HYDROCARBONS BY CHEMICAL TREATMENT OF AN IMPURE HYDROCARBON STREAM

Walter A. Goldtrap and Bradley Skinner, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application December 17, 1954, Serial No. 475,962
19 Claims. (Cl. 23—3)



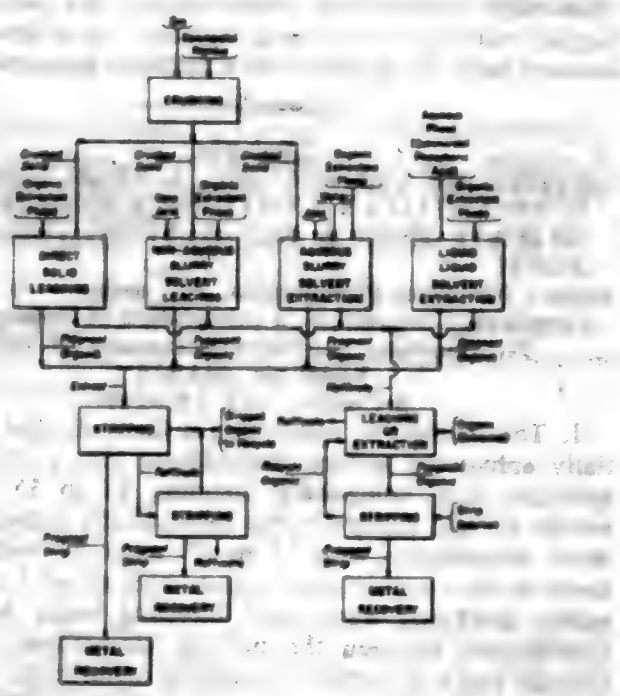
19. A method for removing contaminant gases consisting essentially of carbon dioxide and hydrogen sulfide from a hydrocarbon stream which comprises in an absorber zone contacting said stream with a sufficient amount of a liquid, chemically active reagent adapted to chemically react with and to absorb thus to remove therefrom all of said contaminant gases thereby unavoidably absorbing also some of the hydrocarbon from said hydrocarbon stream obtaining a rich reagent containing all of said contaminant gases and said unavoidably absorbed hydrocarbon and a substantially contaminant-free hydrocarbon stream which is removed from the operation; flashing all of said unavoidably absorbed hydrocarbon from said rich reagent thereby obtaining vapors containing said hydrocarbons which were unavoidably absorbed together with contaminant gases unavoidably released from said reagent; stripping said flashed reagent of its still contained contaminant gases to obtain a lean reagent and contacting at least a portion of said lean reagent with said vapors containing hydrocarbons which were unavoidably absorbed to remove therefrom the unavoidably released contaminant gases; and recovering hydrocarbons free from contaminant gases as a further product of the method and contaminant gases substantially free from hydrocarbons as another product of the method.

2,860,631

PROCESS FOR UTILIZING ORGANIC ORTHOPHOSPHATE EXTRACTANTS

Robert R. Grinstead, Concord, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application June 29, 1956, Serial No. 595,034
11 Claims. (Cl. 23—14.5)



1. In a process for extracting a uranium metal value from a solid material, the steps comprising leaching the metal value from said material with an aqueous solvent selected from the group consisting of water, sulfuric, nitric, hydrochloric, and phosphoric acids, to produce a solution thereof in which said metal exists in at least a trivalent oxidation state, extracting said metal value from said aqueous acid leach solution with a phase including a solvent-diluent and mono- and di-alkyl orthophosphoric acid esters having 9 to 17 carbon atoms in the alkyl substituent and an organic-phosphorus linking oxygen bond situated inward of the terminal carbon atoms of the alkyl chains, and recovering the metal value from the extract phase.

2,860,032

WET METHOD OF PREPARING PLUTONIUM TRIBROMIDE

Norman R. Davidson, Sierra Madre, Calif., and Earl K. Hyde, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 31, 1947
Serial No. 795,136
6 Claims. (Cl. 23—14.5)

1. A process for the preparation of anhydrous plutonium tribromide from an aqueous acid solution of plutonium tetrabromide which comprises incorporating therein a water-soluble volatile bromide to provide additional bromide ions in sufficient excess to furnish an oxidation-reduction potential substantially more positive than —0.966 volt, evaporating the resultant plutonium tribromide to dryness in the presence of hydrogen bromide, and dehydrating the residue at an elevated temperature in the presence of hydrogen bromide.

2,860,033

METHOD OF MAKING GRANULAR SODIUM METASILICATE

Isadore Mockrin, Philadelphia, Ford R. Lowdermilk, Gwynedd Valley, and Clair Warren Graver, Chestnut Hill, Pa., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application January 28, 1955
Serial No. 484,814
1 Claim. (Cl. 23—110)

The method of making a granular sodium metasilicate product comprising adding water, at a rate of at least 0.03 part of water per part of anhydrous sodium metasilicate per minute, to finely-divided anhydrous sodium metasilicate while blending until the mixture acquires a translucent appearance, discontinuing the addition of further water and continuing blending for at least twelve minutes until the product has a uniform appearance.

2,860,034

METHOD OF CONVERTING A FINELY-DIVIDED SUBSTANTIALLY ANHYDROUS SODIUM METASILICATE INTO A NON-DUSTING GRANULAR FORM

Isadore Mockrin, Philadelphia, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application January 28, 1955
Serial No. 484,815
5 Claims. (Cl. 23—110)

1. The method of converting a finely-divided substantially anhydrous sodium metasilicate into a non-dusting granular form comprising blending 85 to 55 parts by weight of said finely-divided substantially anhydrous sodium metasilicate with 15 to 45 parts by weight of a finely-divided sodium metasilicate hydrate of 5 to 6 molecules combined water, said blending being done at a temperature between the melting temperatures of said hydrate and said anhydrous sodium metasilicate and continuing said blending until a substantially, uniform granular product is obtained.

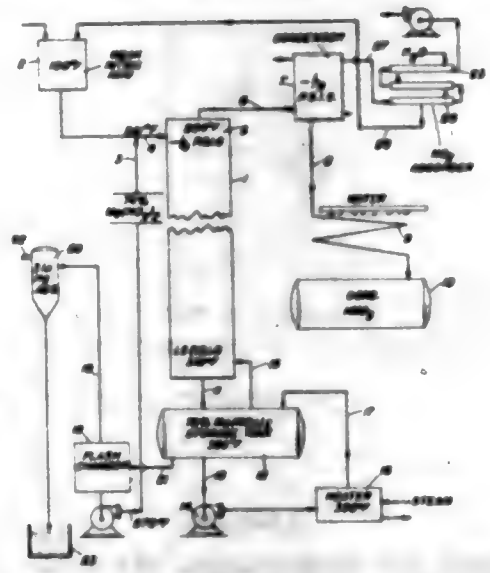
2,860,035

PRODUCTION OF HIGHLY CONCENTRATED NITRIC ACID

Bernard G. Mandeltk, Pleasantville, N. Y., assignor to Chemical Construction Corporation, New York, N. Y., a corporation of Delaware

Application March 28, 1956, Serial No. 574,491
4 Claims. (Cl. 23—168)

1. A method of producing highly concentrated nitric acid from a dilute nitric acid of about 55–67% HNO_3 content while avoiding extensive decomposition thereof to oxides of nitrogen which comprises preparing a preheated mixture of said dilute acid with aqueous magnesium nitrate solution of about 73–76% $MgNO_3$ content having a temperature of about 260°–280° F. in proportions such as to produce therein a weight ratio of magnesium nitrate to water of about 70:30, flash distilling said preheated mixture by discharging it into the



upper part of a distillation zone maintained at the boiling point of a 95–99% nitric acid and thereby forming vaporized nitric acid having a low content of water vapor, and drawing off and condensing said vaporized nitric acid.

2,860,036

PURIFICATION OF ANTHRAQUINONE SOLUTIONS

Raymond Lait, St. Albans, England, assignor to Laporte Chemicals Limited, Luton, England, a British company

No Drawing. Application April 22, 1954
Serial No. 425,044
Claims priority, application Great Britain May 4, 1953
14 Claims. (Cl. 23—207)

1. A process for the removal of substituted tetrahydroanthraquinols from substituted anthraquinones in an organic solvent solution resulting from the oxidation step of the cyclic process for the production of hydrogen peroxide including the alternate reduction and oxidation of said substituted anthraquinone dissolved in said solvent comprising contacting said organic solution with an aqueous solution of a water-soluble metal hydroxide to form a water-soluble salt of said tetrahydro-anthraquinol, separating said solutions from one another, oxidizing said tetrahydro-anthraquinol salt in said separated aqueous solution to precipitate a compound selected from the group consisting of a substituted tetrahydro-anthraquinone and a substituted anthraquinone, and separating said compound from said aqueous solution.

2,860,037

PROCESS FOR PRODUCTION OF CALCIUM CARBIDE AND PHOSPHORUS

Jonas Kamlet, Easton, Conn.

No Drawing. Application December 4, 1952
Serial No. 324,143
11 Claims. (Cl. 23—208)

1. A process for the joint manufacture of elemental phosphorus and calcium carbide which comprises reacting a calcium-phosphate-containing mineral with a carbonaceous material in a single reaction zone in the electric furnace to produce simultaneously a phosphorus-containing gas and a calcium carbide product containing calcium phosphide, recovering elemental phosphorus from said phosphorus-containing gas evolved from said zone and thereafter introducing nitrogen gas into the calcium carbide product containing calcium phosphide in said single reaction zone for a period of time sufficient

reducing the resulting ore at a temperature sufficient to and amount of material that the partial pressure of

to decompose said calcium phosphide but insufficient to react further with said calcium carbide to form calcium cyanamide.

2,860,038
PROCESS FOR SEPARATING ZINC CHLORIDE FROM ZINC SULFATE
Leo Garwin, Oklahoma City, Okla., and James M. Winterbottom, Midland, Mich., assignors of ten percent to James D. Wolfe, Edmond, Okla.
No Drawing. Application June 9, 1955
Serial No. 514,368
16 Claims. (Cl. 23—299)

1. A process for obtaining substantially pure zinc sulfate monohydrate comprising obtaining a highly concentrated aqueous solution of zinc sulfate containing chloride impurities, extracting said solution with furfural to remove said zinc chloride impurities, and seeding the raffinate with zinc sulfate monohydrate crystals at a temperature above 49° C. to effect crystallization of the zinc sulfate as the monohydrate.

2. A process for separating zinc chloride from an aqueous zinc solution containing zinc chloride and an appreciable concentration of zinc sulfate comprising contacting the aqueous zinc solution with sufficient furfural to give a second liquid phase and separating the phases to obtain an extract rich in zinc chloride and a raffinate lean in zinc chloride.

2,860,039
GRAINING ZINC OFFSET PLATES
Paul H. Margulies, Eggertsville, and Henry E. Winters, Jr., Buffalo, N. Y., assignors to Food Machinery and Chemical Corporation, San Jose, Calif.
No Drawing. Application April 4, 1955
Serial No. 499,249
2 Claims. (Cl. 41—42)

1. A process of chemically graining cold rolled alloy zinc offset plates which comprises treating the plate with an aqueous solution comprising 1 to 5% sulfuric acid and 1 to 10% hydrogen peroxide by weight.

2,860,040
PETROLEUM DISTILLATE FUELS
Fred B. Fischl, Springfield, and George A. Weisgerber, Iselin, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application May 25, 1955
Serial No. 511,102
9 Claims. (Cl. 44—72)

1. An improved fuel composition comprising a major proportion of distillate petroleum hydrocarbons and a minor but sediment-stabilizing and rust-inhibiting proportion of an oil-soluble complex formed by reacting a water-soluble salt of nitrous acid with an oil-soluble ammonium sulfonate, the cationic portion of said nitrite being selected from the class consisting of the ammonium radical, sodium, lithium and potassium, the sulfonate being selected from the class consisting of the ammonium salts of the alkyl mono- and bi-cyclic aryl sulfonic acids, said complex being formed by conducting said reaction at a temperature and for a period of time sufficient to remove all of the water from the reaction mixture.

2,860,041
BLASTING EXPLOSIVES
George L. Griffith, Jr., Coopersburg, and David G. Samuel, Jr., Quakertown, Pa., assignors to Trojan Powder Company, a corporation of New York
No Drawing. Application November 17, 1955
Serial No. 547,549
6 Claims. (Cl. 52—11)

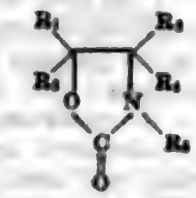
1. In making an explosive composition of reduced hazard during manufacture and of substantially full sensitiveness to detonation at the time of use, the process which comprises mixing nitrostarch in water wet condition, the water content being 15–35 parts by weight for 100 of the nitrostarch on the dry basis, with a solid, finely divided, non-hygroscopic water absorbent selected from the group consisting of locust bean gum extract, gum karaya, and an alkali metal salt of carboxymethylcellulose, the absorbent being in the proportion of about 7–80 parts by weight for 100 of water in the explosive, serving as a water absorbing latent sensitizer of the composition and, in absorbing water, forming first a viscous swollen surface layer over the particles of the absorbent and this viscous layer delaying subsequent absorption so that water is not absorbed from the nitrostarch in amount to sensitize the explosive until the manufacturing operation is completed.

2,860,042
EXPLOSIVES
Thomas F. McDonnell, Collinsville, Ill., and Ralph E. Coffee, Berkeley, Mo., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
No Drawing. Application December 2, 1955
Serial No. 550,758
5 Claims. (Cl. 52—20)

1. A method of transferring tacky substance from the surface of propellent powder grains to a solid adsorptive material selected from the group consisting of diatomaceous earth, celite, precipitated chalk, alumina, magnesium carbonate, activated charcoal, carbon black, and silica and being sufficiently fine to pass through a 200 mesh screen which comprises suspending the powder grains and at least 1 percent of the adsorptive material in an agitated aqueous medium, maintaining the agitation of the aqueous medium to keep the powder grains in suspension and subsequently decanting and washing the powder grains.

2,860,043
METHOD OF REGULATING PLANT GROWTH
Henry Blaestone, Cleveland Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application December 6, 1954
Serial No. 473,437
5 Claims. (Cl. 71—2.5)

1. A method of treating plants which comprises contacting said plants with a plant growth regulating amount of a compound having the formula:



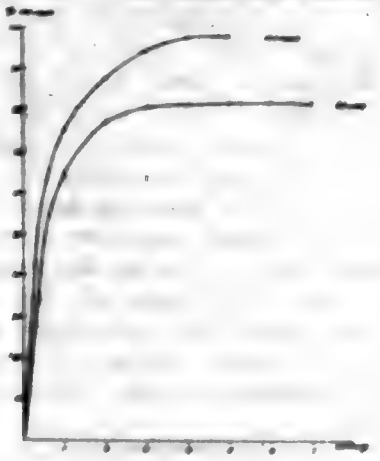
wherein R_1, R_2, R_3, R_4, and R_5 are selected from the group consisting of hydrogen, acetyl, benzoyl, alkyl radicals containing from 1 to 19 carbon atoms, aryl, alkaryl, aralkyl radicals and a carrier, wherein said alkaryl and aralkyl radicals contain from 1 to 4 carbon atoms in the alkyl substituent.

2,860,044
METHOD IN THE PRODUCTION OF IRON POWDER OF DESIRED GRAIN SIZE
Nils H. Brundin, Hoganas, Sweden, assignor to Hoganas-Billesholms Aktiebolag, Hoganas, Sweden, a corporation of Sweden
Application February 20, 1951, Serial No. 211,982
3 Claims. (Cl. 75—.5)

3. A method for the production of iron powder of about 100 mesh and suitable for powder metallurgy which comprises mechanically reducing iron ore of greater particle size to not greater than about 100 mesh, chemically

the gaseous phase above the suspension is free of chlorine; from the group consisting of milk and soya proteins, 1–10

reducing the resulting ore at a temperature sufficient to produce sponge iron in the form of a hard, sintered cake



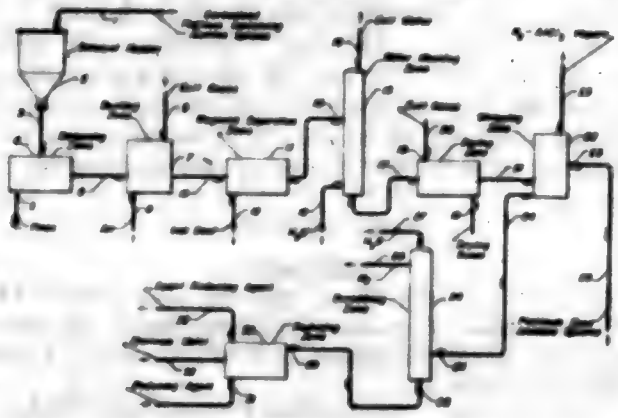
and cooling and disintegrating said sponge iron cake to about 100 mesh.

2,860,845

METHOD OF REMOVING PLATINUM FROM A COMPOSITE CONTAINING PLATINUM AND ALUMINA

William G. Nixon, Westchester, Edward J. Bicek, La Grange, and Maurice J. Murray, Palatine, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application July 25, 1955, Serial No. 524,038
5 Claims. (Cl. 75—83)



1. A method of recovering platinum from an alumina-platinum composite containing carbonaceous deposits which comprises calcining said composite in the presence of air at a temperature within the range of from about 700° F. to about 1600° F. to burn off said carbonaceous deposits, treating the resultant composite with gaseous aluminum chloride at a temperature within the range of from about 200° F. to about 1600° F. thereby removing a substantial portion of the platinum therefrom without dissolving alumina to a substantial extent, separating the gases from the alumina and scrubbing the separated gases with water to form an aqueous solution of a platinum compound and aluminum chloride, adding a reducing agent to said solution to precipitate platinum metal therefrom and recovering the precipitated platinum metal.

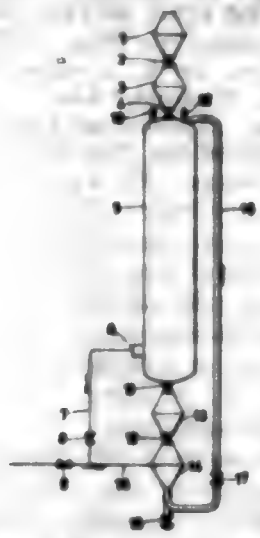
2,860,846

METHOD OF EXOTHERMICALLY REDUCING OXIDIC ORES

John Olof Edström, Enshede, and Ulf Örjan Helgesson Wiberg, Vesteras, Sweden

Application May 1, 1957, Serial No. 656,291
Claims priority, application Sweden May 4, 1956
13 Claims. (Cl. 75—91)

1. A method of reducing metal oxidic ores, which comprises treating a mixture of the metal oxidic ore and an oxide, which forms a difficultly dissociated hydroxide, with hydrogen as the reducing gas under such conditions of reduction pressure, reduction temperature and amount of material that the partial pressure of steam in the gas atmosphere formed during the reduction at equilibrium between ore oxide and hydrogen gas steam positively exceeds the dissociation pressure of the difficultly dissociated hydroxide at the reduction temperature, and that the latter is kept within the range



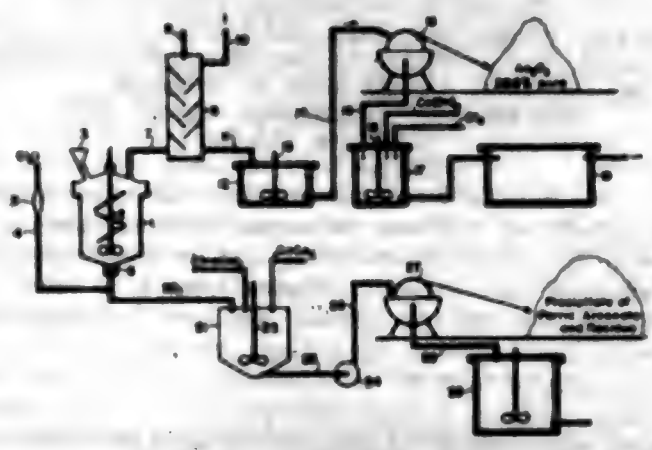
covering 400° to 700° centigrade, preferably at a temperature of about 550° centigrade, and that the said oxide making part of the charge reacts with nearly all the steam formed during the reduction, hydroxide being formed during simultaneous generation of so much heat that the total reaction becomes exothermic.

2,860,847

PROCESS OF REMOVING ARSENIC FROM HYDROCHLORIC ACID SUSPENSIONS OF ARSENIDE AND SULPHARSENIDE ORES UTILIZING GASEOUS CHLORIDE

Francis Reynaud, Guy Gravey, and André Roth, Pomblière, France, assignors to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France

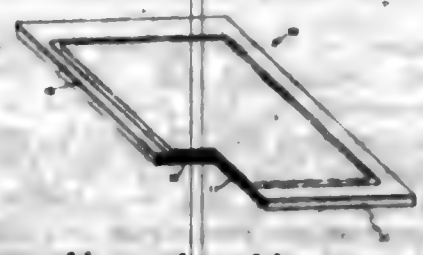
Application April 19, 1956, Serial No. 579,174
Claims priority, application France April 28, 1955
1 Claim. (Cl. 75—112)



A process of removing large quantities of arsenic from hydrochloric acid suspensions of raw arsenide and sulpharsenide ores containing at least one metal from the group consisting of cobalt, nickel and iron, the weight ratio of arsenic to iron in said ores being substantially greater than 1, which comprises forming a hydrochloric acid suspension of said ore, diffusing chlorine gas into said suspension to convert large quantities of arsenic into arsenous chloride, the remainder of the arsenic into arsenic acid and the metals of the group into chlorides, maintaining the suspension at a temperature between about 90–115° C. to evolve the arsenous chloride out of the suspension while leaving said metal chlorides and said arsenic acid in solution; the rate of chlorine diffusion being such that substantially all of the chlorine is absorbed by the suspension and

the gaseous phase above the suspension is free of chlorine; removing the evolved arsenous chloride to change the weight ratio of arsenic to iron to about 1 in said suspension; continuing the chlorine diffusion into the suspension to insure complete conversion of the metal of the group into chlorides and the remaining arsenic into arsenic acid; and then eliminating the arsenic acid and iron from the suspension by precipitating basic ferric arsenate.

2,860,048
XEROGRAPHIC PLATE
Russell L. Deubner, Columbus, Ohio, assignor, by mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York
Application June 13, 1955, Serial No. 515,013
3 Claims. (Cl. 96—1)



1. A xerographic member of improved characteristics comprising a conductive backing member, a photoconductive insulating layer thereon, and a thin, protective coating about 1 micron thick over the photoconductive insulating layer composed of a resinous polyvinyl acetal selected from the group consisting of polyvinyl formal and polyvinyl acetal, the member being capable of receiving an electrical charge on a photoconductive insulating layer and selectively dissipating said charge on exposure to a light image.

2,860,049
METHOD AND COMPOSITION FOR INCREASING ANIMAL GROWTH RATE
Karl Schröder, Kundl, Austria
No Drawing. Application December 2, 1955
Serial No. 550,795
Claims priority, application Austria December 14, 1954
8 Claims. (Cl. 99—2)

1. The method of stimulating meat-source animal growth which comprises adding to the animal's feed ration in a quantity sufficient to provide an amount of about one to about fifty milligrams daily per 100 pounds of animal weight, a member of the group consisting of a penilloic acid, a penicilloic acid and nontoxic salts thereof.

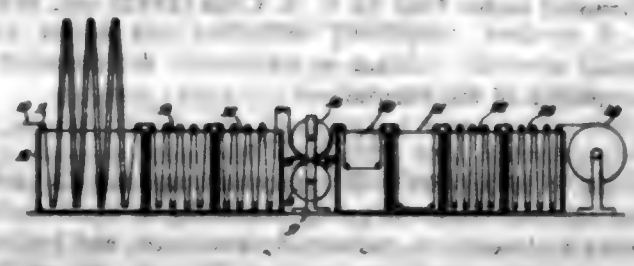
2,860,050
FEEDING OF POULTRY
Jesse W. Huff, Lansdale, and David K. Bosshardt, Broomall, Pa., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey
No Drawing. Application April 3, 1956
Serial No. 575,702
4 Claims. (Cl. 99—4)

1. A process for improving the poultry growth promoting ability of a poultry feed which comprises adding thereto a compound serving as a source of bromide ion, the amount of such compound added being of the order which adds from about 4 to about 30 parts of bromide ion to a million parts of the feed.

2,860,051
FOOD COMPOSITION
Willard A. Krehl, New Haven, Conn., and Blake Snyder, Caldwell, N. J., assignors to Howard B. Bishop
No Drawing. Application April 21, 1954
Serial No. 424,769
1 Claim. (Cl. 99—54)

A food composition consisting essentially of an intimate mixture of 50–70 parts by weight of a protein selected from the group consisting of milk and soya proteins, 1–10 parts of a finely divided water-insoluble non-toxic calcium compound, and 6–10 parts of a dry yeast of nucleic acid content at least 5%.

2,860,052
MANUFACTURING SKINLESS FRANKFURTERS AND CASING THEREFOR
John W. Firth and Ernest C. Fitter, Chicago, Ill., assignors to Tee-Pak, Inc., Chicago, Ill., a corporation of Illinois
Application April 7, 1955, Serial No. 499,846
7 Claims. (Cl. 99—189)



1. In the process of manufacturing skinless frankfurters which includes the steps of stuffing meat emulsion into a length of regenerated cellulose tubular casing, linking the stuffed casing at regular intervals to form the same into sections of preselected lengths, smoking and cooking said encased meat emulsion, peeling the casing from the sections of smoked and cooked meat emulsion and packing the sections into containers, the improvement which consists in, prior to the step of stuffing meat emulsion into the tubular casing, marking about the exterior of said casing at selected intervals equal to less than the intervals at which the stuffed casing is subsequently linked, said marking being with an indelible dyestuff formed by the interaction of a Naphthol AS and a stabilized tetrazotized salt of dianisidine, which dyestuff is smoke permeable, capable of withstanding heat and moisture accompanying the cooking of the encased meat emulsion and has a readily and distinctively visible color which contrasts with that of the peeled sections of smoked and cooked meat emulsions whereby those sections which are missed in the peeling step can be identified by the constrasting color of the dyestuff on the regenerated cellulose encasing sections which still encases said unpeeled sections of smoked and cooked meat emulsion.

2,860,053
NUT PRODUCTS
Fitzhugh L. Avera, Alameda, Calif., assignor, by mesne assignments, to The Best Foods, Inc., New York, N. Y., a corporation of New Jersey
No Drawing. Application June 28, 1954
Serial No. 439,856
2 Claims. (Cl. 99—126)

1. A nut product comprising a roasted nut, and a peripheral coating of Sorbitol thereon.

2,860,054
LIQUID PEPPER SOLUTION AND PROCESS OF PRODUCING THE SAME
Nicholas S. Yanick, Chicago, Ill., assignor to National Dairy Products Corporation, a corporation of Delaware
No Drawing. Application October 29, 1956
Serial No. 618,677
12 Claims. (Cl. 99—140)

1. A process of producing a homogeneous, substantially anhydrous liquid pepper solution which comprises adding to, and mixing with, an oleoresin of pepper, containing piperine, resin, fixed oil and volatile oil, an acetate providing compound, an anhydrous organic acid and alcohol, and adjusting the relative amount of alcohol, acid, and ace-

tate providing compound to provide a final concentration of acid of not more than about 15 percent and to solubilize the oleoresin.

2,860,055

PROCESS FOR INHIBITING ENZYME ACTIVITY IN PLANT TISSUE

Eugene F. Jansen, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application August 20, 1957
Serial No. 679,325
9 Claims. (Cl. 99—154)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A method comprising subjecting raw edible plant material normally subject to enzymatic deterioration to a compound of the formula—

HS—R—X

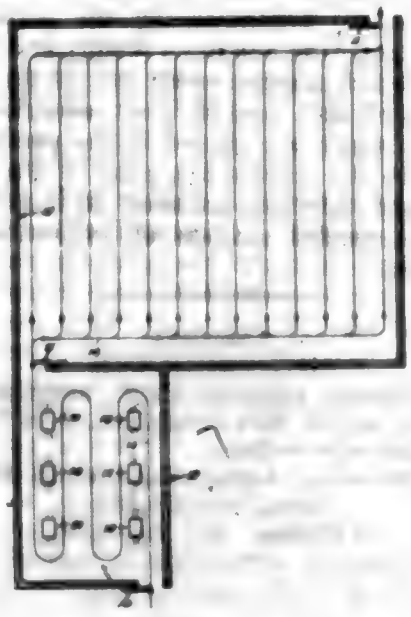
wherein R is an aliphatic radical of at least 3 carbon atoms selected from the group consisting of hydrocarbon, hydroxy-hydrocarbon, carboxy-hydrocarbon, and hydroxy-carboxy-hydrocarbon, the radical HS— is on one carbon atom of the aliphatic radical, the radical X is on a different carbon atom of the aliphatic radical, the two said carbon atoms being in adjacent to alternate position relative to one another, and X is a member of the group consisting of —OH and —SH, the said compound being applied in a concentration of about from 0.01 to 5%, whereby to inhibit the enzymatic deterioration.

2,860,056

METHOD OF CHILLING CARCASS MEAT

Purdy Bradford, Palos Park, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

Application April 8, 1955, Serial No. 500,089
4 Claims. (Cl. 99—194)



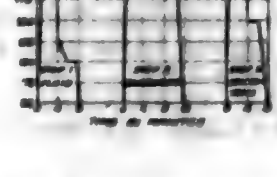
1. A method of chilling carcass meat to substantially reduce the shrinkage loss attributable to the moisture evaporation from freshly killed carcasses to maintain the bloom of the meat, which comprises forming a spray of water, impinging the spray upon a surface to remove the larger water drops therefrom to produce a fog having discrete water particles, circulating the fog in a first zone held at a refrigeration temperature within the range of about 30–35° F. to create an atmosphere having an elevated dew point within the range of 45°–50° F., holding a carcass in said zone until its surface temperature approaches the dew point of the atmosphere, and then removing the carcass to a second zone maintained at a normal chilling room temperature without excess moisture to complete the chilling of the carcass.

2,860,057

PROCESS OF PREPARING EVAPORATED MILK

Donald F. Wilcox, Mill Valley, Calif., assignor to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York

Application September 29, 1955, Serial No. 537,402
10 Claims. (Cl. 99—212)



1. The process of producing high-temperature-short-time sterilized concentrated milk which comprises the steps of forewarming the fluid milk prior to concentration, concentrating said milk to a solids content of between approximately 16% and 35% total solids, subjecting the said concentrated milk to a preheat treatment within the temperature time range of approximately 180° F. for a period of approximately ten minutes to approximately 250° F. for a period of approximately one minute, then cooling the thus heated concentrate to a temperature of below approximately 150° F., and sterilizing the concentrate thus produced by heating the same for a period of time of at least approximately one minute and not more than three minutes and at a temperature productive of an F_0 value of at least substantially 5.

2,860,058

PRODUCTION OF SEMI-CERAMIC MATERIALS

Cyril Aubrey Redfarn, London, England, assignor to Walker Extract and Chemical Company Limited, Bolton, England, a British company

No Drawing. Application July 11, 1955
Serial No. 521,497
Claims priority, application Great Britain July 14, 1954
10 Claims. (Cl. 106—39)

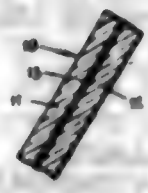
1. A process for the production of heat-resistant materials which comprises heating an admixture of a polyphosphonitrilic chloride with a naturally-occurring silicate of the class consisting of the calcium and magnesium silicates in discrete form for about half-an-hour to about three hours at a temperature in the range of about 300° C. to about 350° C. in the proportions of from about 1:5 to about 5:1, thereby effecting substantial chemical combination of said polyphosphonitrilic chloride with said silicate.

2,860,059

ULTRA-VIOLET LIGHT ABSORBING GLASS

Richard C. Molter and Howard R. Swift, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application September 3, 1953, Serial No. 378,374
3 Claims. (Cl. 106—52)



1. A clear substantially colorless transparent soda-lime silica glass having high ultra-violet ray absorbing qualities and high visible light transmittance qualities including as essential ingredients from 0.05% to 0.50% CeO_2, 0.19% to 1.90% TiO_2, and 0.20% to 0.60% Fe_2O_3.

2,860,060
HYDRAULIC CEMENT ADDITIVES AND CEMENT COMPOSITIONS CONTAINING SAME
Stephen W. Benedict, Cleveland Heights, Thomas M. Kelly, Chagrin Falls, and Paul B. Jacox, Newburgh Heights, Ohio, assignors to American-Marietta Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application March 6, 1956
Serial No. 569,678
16 Claims. (Cl. 106—90)

1. An additive for hydraulic cement mixes consisting essentially of from 5 to 50 parts by weight of waste sulfite liquor solids, from 1 to 15 parts by weight of a member of the class consisting of water-soluble aromatic carboxylic acids and their water-soluble salts and esters, from ½ to 40 parts by weight of a water-soluble chloride accelerator, and from ½ to 10 parts by weight of a water-soluble non-carboxylic amine selected from the group consisting of primary, secondary, and tertiary alkyl and alkylol amines.

2,860,061
COMPOSITION AND PROCESS FOR MANUFACTURING CEMENT
Thorbjorn Hellmann, Copenhagen, Denmark, assignor to F. L. Smidth & Co., New York, N. Y., a corporation of New Jersey
No Drawing. Application December 7, 1955
Serial No. 551,524
Claims priority, application Great Britain December 7, 1954
4 Claims. (Cl. 106—100)

1. A composition for use in the formation of strong nodules of a material convertible by burning into a hydraulic cement of the class typified by Portland cement, which comprises a hydraulic cement raw material mix, to which has been added from ½% to 4% by weight of the mix of a mineral substance containing a substantial proportion of montmorillonite and having the property of swelling when moistened and shrinking on subsequent drying.

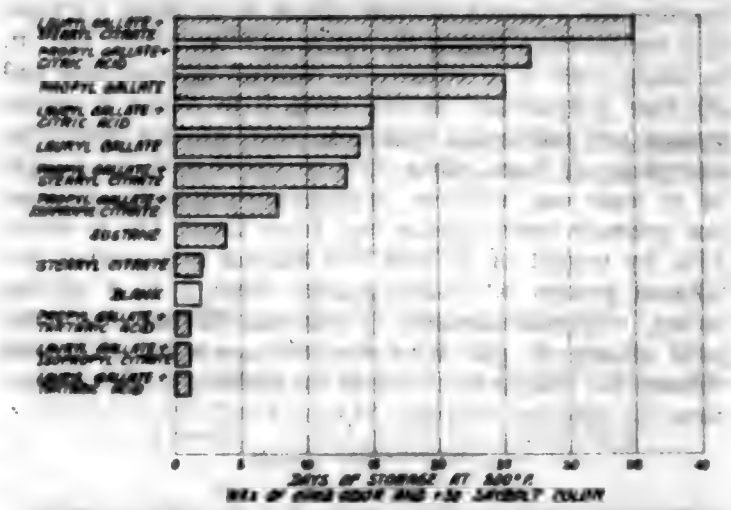
2,860,062
MODIFIED PROTEIN PREPARATION
Harold K. Salzberg and Walter B. Kinney, Bainbridge, N. Y., assignors to The Borden Company, New York, N. Y., a corporation of New Jersey
No Drawing. Application January 11, 1954
Serial No. 403,426
2 Claims. (Cl. 106—146)

1. In increasing the viscosity and solubility of a protein in water, the process which comprises moistening a protein selected from the group consisting of casein and soy protein with water in the proportion of about 3.5–50 parts by weight of water for 100 of the protein, the amount of water within this range converting the protein to dampened non-slurried condition, mixing formaldehyde with the protein in the proportion of about 0.37–1.8 parts by weight of formaldehyde on the anhydrous basis for 100 of protein, subjecting the resulting mixture to milling at 100°–230° F. between differential speed rollers, continuing the milling until the milled material assumes a horny appearance, then discontinuing the milling, and pulverizing the resulting product.

2,860,063
COMPOSITION FOR APPLYING ORGANIC FILM TO PHOSPHOR LAYER
Miriam G. Groner, New Britain, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Original application October 31, 1951, Serial No. 254,195, now Patent No. 2,749,252, dated June 5, 1956. Divided and this application January 17, 1956, Serial No. 559,544
10 Claims. (Cl. 106—188)

1. A film-forming composition for application to the surface of the aqueous phosphor-suspending medium on the glass substrate in the cathode ray tube bulb in the preparation of an organic film on the phosphor layer of a cathode ray tube bulb, consisting essentially of between about 3.5% and about 5%, by weight, of nitrocellulose having a viscosity from about ½ to about 1,000 seconds, a water-insoluble plasticizer therefor and between about 5% and about 25%, by weight, octyl acetate dissolved in a mixture consisting essentially of a water-soluble alcohol selected from the group consisting of a propyl alcohol and a butyl alcohol and a volatile ester selected from the group consisting of a propyl acetate and a butyl acetate the said volatile ester being the major constituent in said composition.

2,860,064
STABILIZED HYDROCARBON WAXES
Charles F. Duchacek, Long Island City, N. Y., assignor to Socony Mobil Oil Company, Inc., a corporation of
Application January 26, 1955, Serial No. 484,154
4 Claims. (Cl. 106—268)



3. Hydrocarbon wax containing from about 0.00005 to about 0.1 percent by weight of each of the following: (*a*) an alkyl ester of gallic acid wherein the esterifying group is a straight chain saturated hydrocarbon solubilizing group containing at least about eight carbon atoms, and (*b*) an alkyl ester of citric acid containing at least one straight chain saturated hydrocarbon solubilizing group of not less than about twelve carbon atoms.

2,860,065
STABILIZED PETROLEUM WAX
Charles F. Duchacek, Long Island City, N. Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Application January 26, 1955, Serial No. 484,155
4 Claims. (Cl. 106—270)

1. Hydrocarbon wax containing from about 0.00005 to about 0.1 percent by weight of an hydroxyanisole containing a saturated alkyl group of at least four carbon atoms, and from about 0.00005 to about 0.1 percent by weight of an alkyl ester of citric acid containing at least one straight chain saturated alkyl group containing at least about twelve carbon atoms.

2,860,066
STABILIZED PARAFFIN WAX RESISTANT TO DISCOLORATION BY LIGHT
Robert W. Provine, Lawrence T. Mehlhorn, Warren L. Thompson, and John Vernon Lawson, Tulsa, Okla., assignors to D-X Sunray Oil Company, Tulsa, Okla., a corporation of Delaware
No Drawing. Application June 6, 1955
Serial No. 513,611
10 Claims. (Cl. 106—270)

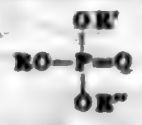
1. A paraffin wax composition stabilized against color change incident to exposure to light having added thereto

taining the bath water-free, thereby removing from the wood a free portion of the water content thereof, then with a cyclic tertiary amine salt of an ethylenically un-

excess moisture to complete the chilling of the carcass.

CeO_2, 0.19% to 1.90% TiO_2, and 0.20% to 0.60% Fe_2O_3.

from about 0.01 percent to 1.0 percent of an ester of phosphoric acid having the general structural formula



wherein R, R' and R'' are each radicals selected from the group consisting of alkyl, phenyl, biphenyl and alkyl-substituted phenyl.

2,860,067

ROADWAY CONSTRUCTION MATERIAL AND AN ADDITIVE THEREFOR

Lowell T. Crews, Homewood, and Mathew L. Kalinowski, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application August 9, 1954
Serial No. 448,774
8 Claims. (Cl. 106—273)

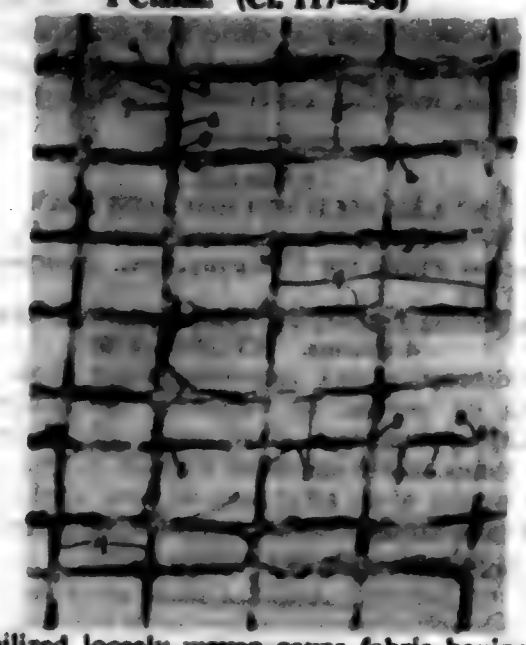
1. An additive practically free of amido groups suitable for use in bitumen coating material, prepared by reacting for a period of from about ¼ to about 1.0 hour at a temperature within the range of from about 180° F. to about 240° F. a mixture of alkanol monoamines and alkylene polyamines having from 2 to about 6 amino groups per polyamine molecule, said mixture consisting essentially of from about 75% to about 95% by weight of at least one alkylene polyamine containing at least one primary amino group and from about 5% to about 25% by weight of at least one alkanol monoamine, the alkanol groups of which contain from 2 to 4 carbon atoms, with substantially dehydrated "Ebony Fat," the total of amines plus alkylolamines contacted with said "Ebony Fat" being in excess of the stoichiometric requirement for reaction with said "Ebony Fat."

2,860,068

STABILIZED LOOSELY WOVEN GAUZE FABRIC

Hector W. Griswold, Longmeadow, Mass., assignor to Chicopee Manufacturing Corporation, a corporation of Massachusetts

Application September 3, 1954, Serial No. 454,151
1 Claim. (Cl. 117—38)



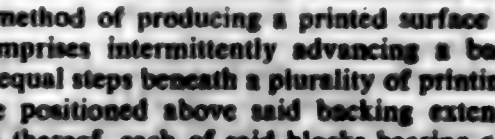
A stabilized loosely woven gauze fabric having a soft hand and which comprises intersecting warp and weft yarns which in the absence of a binder may be moved easily with respect to one another, and an adhesive binder distributed in a regular pattern throughout the fabric in relatively small longitudinally and transversely spaced portions of the yarns thereof, each of said binder portions generally being shorter than the yarn segments extending between adjacent yarn intersections, the binder in said portions covering no more than about 50 percent of the fabric surface and bonding at least about one out of every five adjacent yarn intersections in the warp and in the weft direction of the fabric, thereby stabilizing the fabric against the aforesaid movement of the warp and weft yarns, said pattern being partly out of register with the general arrangement of said yarn intersections and said longitudinally and transversely spaced binder portions extending over a good deal more of the surface of the fabric than would be necessary to bond only the minimum of yarn intersections if said pattern was in register with the arrangement of yarn intersections, said fabric possessing the high degree of softness necessary for use adjacent the wearing surface of a sanitary napkin.

2,860,069

MASH BLOCK TRANSFER PRINT PROCESS

Emil Albert Petrecca, Trenton, N. J., assignor to Congoleum-Nairn Inc., Kearny, N. J., a corporation of New York

Application December 20, 1957, Serial No. 704,186
12 Claims. (Cl. 117—38)



11. A method of producing a printed surface covering which comprises intermittently advancing a backing in sucessive equal steps beneath a plurality of printing blocks which are positioned above said backing extending the full width thereof, each of said blocks bearing a printing surface conforming to the portion of the printed pattern to be applied in a particular color, the space between said blocks and the length of said blocks in a direction parallel to the length of said backing being equal to the length of each of said steps, applying a paint composition to said printing surfaces, vertically reciprocating said printing blocks after applying said paint composition to the printing surfaces thereof while said backing is at rest after every second step to deposit a film of paint from said printing surfaces upon said backing thereby forming a plurality of evenly placed printed stripes in a decorative design extending the full width of said backing separated from each other by equal sized unprinted stripes, advancing said backing beneath a plurality of transfer blocks which are positioned above said web extending the full width thereof, the space between said transfer blocks and their length in a direction parallel to the length of said web being equal to the length of said steps, vertically reciprocating said transfer blocks onto said web while said web is at rest after each step, thereby removing successive portions of said printed film totalling approximately one-half its thickness and transferring said removed portions successively to said unprinted stripes duplicating said design thereon.

2,860,070

METHOD OF DRYING AND IMPREGNATING WOOD

Dan McDonald, Aurora, Ill., assignor, by mesne assignments, to Barber-Greene Company, Aurora, Ill., a corporation of Illinois

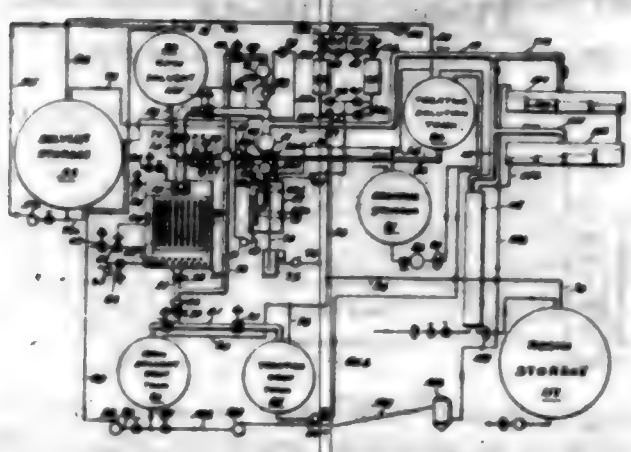
Application June 4, 1954, Serial No. 434,390
4 Claims. (Cl. 117—59)

2. A wood treatment process which comprises submerging the wood in a liquid bath in a container closed to the atmosphere, said bath containing as the essential drying agent a halogenated hydrocarbon solvent which is immiscible with and heavier than water, a solvent for resins, non-flammable, and has a constant water-solvent azeotrope boiling point, the bath being at a temperature range between the solvent boiling point and the boiling point of the azeotrope of the solvent with water, and while maintaining the bath within the said temperature range continuously drawing off from the bath the evolved azeotropic vapor with its water content effective for main-

2,860,075

tion of the axis of the workpiece, to thereby flex the work-

taining the bath water-free, thereby removing from the wood a first portion of the water content thereof, thereafter effecting the condensation of the vapors within the wood and thereby causing the bath solvent to penetrate the wood, subsequently resuming vaporization of moisture from the wood to remove a second portion of the water content therefrom while drawing off the evolved vapor with its water content, subjecting the thus treated wood to sub-atmospheric pressure while removing solvent therefrom, then submerging the wood in a liquid bath composed of a similar solvent containing a wood pre-



servative of a character not to form ternary azeotropes with water and the solvent, increasing the pressure to which the treated wood is being subjected to atmospheric pressure, heating the liquid bath containing the submerged wood while removing water therefrom, separating the thus treated wood from the liquid bath, subjecting the thus treated food to sub-atmospheric pressure to remove some solvent therefrom, raising the temperature of the thus treated wood, and again subjecting the wood to sub-atmospheric pressure while removing additional residual solvent therefrom.

2,860,071

FELT BASE FLOOR COVERING AND METHOD OF MAKING THE SAME

Samuel A. Cohen, Auburn, and Ernest R. Mower, Winthrop, Maine, assignors to Bonafide Mills, Inc., Lisbon, Maine, a corporation of Maine

Application October 21, 1953, Serial No. 387,506
11 Claims. (Cl. 117—72)

1. The method of making a printed felt base sheet comprising the steps of applying to a felt sheet at least one seal coat, then applying to the seal coat a print paint coating composition containing from 5% to 50% by weight of a vinyl resin solution including a vinyl chloride-vinylidene chloride copolymer having a vinylidene chloride content of at least 20%, and then subjecting the product to moderate heat substantially below 300° F. without fusing the vinyl resin.

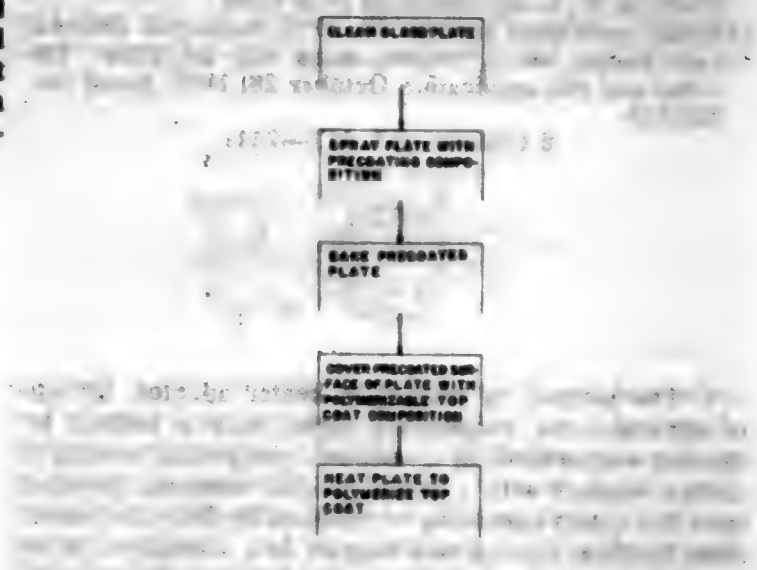
2,860,072

COATED SOLID MATERIALS AND METHOD FOR PRODUCING SAME

Günther Nischk and Eugen Bock, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Application May 14, 1954, Serial No. 429,900
Claims priority, application Germany May 19, 1953
7 Claims. (Cl. 117—72)

1. A process of bonding a glass article to a synthetic resin which comprises (1) precoating the glass surface with a cyclic tertiary amine salt of an ethylenically unsaturated linear polyester containing free carboxyl groups, and (2) copolymerizing said precoating with an ethyleni-



cally unsaturated linear polyester and a vinyl monomer, whereby the aforesaid synthetic resin is formed in situ on the precoated glass surface.

2,860,073

METHOD OF COATING PAPER

Leroy W. Hoel and Dexter L. Wolfe, Appleton, Wis., assignors to Kimberly-Clark Corporation, a corporation of Delaware

No Drawing. Application August 8, 1956
Serial No. 602,921
10 Claims. (Cl. 117—76)

1. A method of insolubilizing a protein adhesive in a coating on a paper web which comprises applying a first coating mixture to said web which includes an insolubilizing agent for a protein adhesive, a mineral pigment and a non-proteinaceous adhesive, drying said first coating, subsequently applying a second coating mixture to the coated paper web which includes a mineral pigment and a protein adhesive, and holding the coated web until said protein adhesive is insolubilized by said insolubilizing agent.

2,860,074

VINYL RESIN-ACRYLIC ESTER-ORGANOPOLYSILOXANE COATING COMPOSITIONS AND METHOD OF COATING WITH SAME

Robert C. Hedlund, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application November 3, 1954
Serial No. 466,669
6 Claims. (Cl. 117—132)

1. A composition of matter consisting essentially of: (*a*) 10 to 55 percent by weight of a film-forming vinyl resin selected from the group consisting of homopolymers of vinyl alcohol and vinyl esters, copolymers of any of these vinyl compounds with each other, copolymers of any of the aforesaid vinyl compounds with vinylidene chloride and mixtures of said homopolymers and copolymers; (*b*) 40 to 85 percent by weight of an alkyl ester of an organic acid selected from the group consisting of methacrylic acid and acrylic acid wherein the alkyl groups contain less than 5 carbon atoms; and (*c*) 5 to 50 percent by weight of an alkyl-aryl polysiloxane having an average of from 1 to 1.8 organic radicals per silicon atom in the molecule, wherein not more than 90 percent of said organic radicals are alkyl groups.

alpha phase in equilibrium with beta phase to form with- shanks and polygonal heads, said heads being provided

2,860,075

METHOD OF MAKING A HEATER FOR VACUUM DEPOSITION

Paul Alexander, Bloomfield, N. J., and Alexander Samuel Baxter and Malcolm Edward Boston, Cambridge, England, assignors to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Original application January 27, 1951, Serial No. 208,162, now Patent No. 2,756,166, dated July 24, 1956. Divided and this application October 28, 1955, Serial No. 549,219

8 Claims. (Cl. 117—221)

1. The method of making a heater adapted for use in apparatus for evaporating metal onto a surface by thermal evaporation in a vacuum, comprising coating a carbon support with a finely divided substance selected from the group consisting of titanium hydride and vanadium hydride, heating said support in a vacuum so as to decompose said hydride into metal and hydrogen gas, and repeating said coating and heating steps at least once.

2,860,076

DYNAMOELECTRIC BRUSH

Paul Smisko, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania

No Drawing. Application January 28, 1957
Serial No. 636,500
4 Claims. (Cl. 117—224)

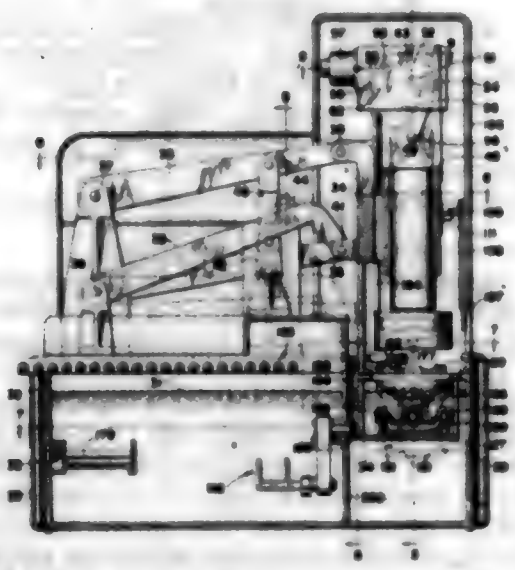
1. A dynamoelectric brush comprising a body of electrically-conductive carbonaceous material having, by weight, from about 0.5 to 15 percent of silver iodide and about 0.5 to 20 percent of lithium carbonate distributed in the body.

2,860,077

QUENCH HARDENING METHOD AND MACHINE

Robert V. Adair, Rochester, N. Y., and Earl D. Dammert, Penfield, N. J., assignors to The Gleason Works, Rochester, N. Y., a corporation of New York

Application December 22, 1955, Serial No. 554,857
22 Claims. (Cl. 148—12.4)



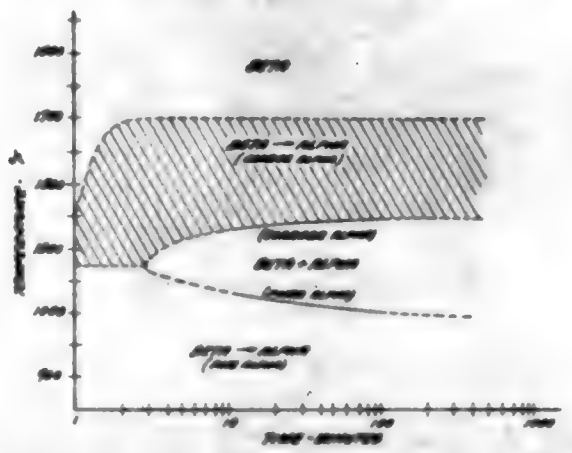
1. The method of treating a substantially ring-shaped quench-hardenable workpiece comprising clamping it while hot between dies, actuating the dies to cause relative back and forth motion between the inner and the outer peripheral portions of the workpiece in the direction of the axis of the workpiece, to thereby flex the workpiece toroidally back and forth about a neutral circle to opposite sides of a neutral position.

2,860,078

HEAT TREATMENT FOR TITANIUM BASE ALLOY, CIRCA 4% Mn, AND 4% Al

Donald John West and Richard Augustus Baughman, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York

Application May 25, 1955, Serial No. 511,114
6 Claims. (Cl. 148—13)



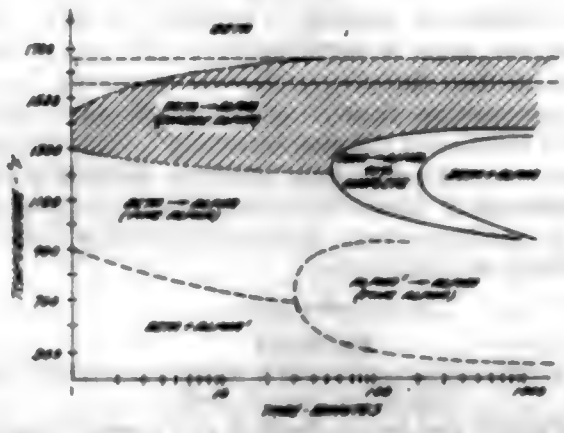
2. In a heat treating process for a titanium alloy including about 4% manganese and about 4% aluminum comprising heating the alloy to a temperature in the beta range for a sufficient length of time until the material becomes betatized, cooling to a temperature in the range in which only coarse alpha will form and holding this temperature for a sufficient amount of time to permit coarse alpha to form, cooling to a first temperature in the alpha plus beta range and stabilizing the material for a period of time to prevent age hardening, slowly furnace cooling from the first temperature in the alpha plus beta range to a second temperature in the alpha plus beta range to prevent fine alpha from forming, and air cooling this material from the second temperature in the alpha plus beta range to room temperature.

2,860,079

HEAT TREATING PROCESS FOR A 2% Fe 2% Cr 2% Mo TITANIUM BASE ALLOY

Donald John West and Richard Augustus Baughman, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York

Application May 25, 1955, Serial No. 511,115
4 Claims. (Cl. 148—13)



1. The process of heat treating a titanium alloy including about 2% iron, about 2% chromium and about 2% molybdenum comprising heating to approximately 1650° F. to form the beta phase, maintaining this temperature until such time as the material becomes stabilized, furnace cooling to 1325° F. and maintaining this temperature for approximately 13 hours permitting coarse

a pH of less than 9 and containing iodine and a nitrogen glycoside, the pH of which is at that point in the range

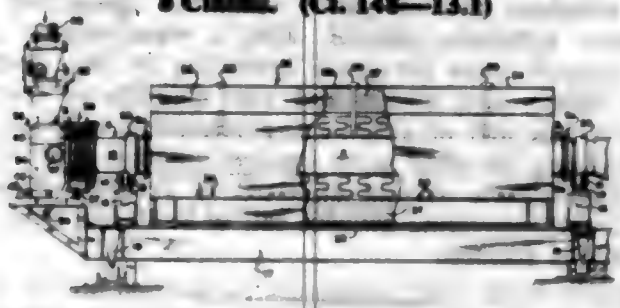
alpha phase in equilibrium with beta phase to form without permitting fine alpha to form, cooling to 1200° F. and maintaining this temperature for 24 hours to prevent fine alpha from forming, and air cooling to room temperature.

2,860,038

METHOD FOR CONTINUOUSLY PRODUCING THERMALLY-STABLE NITRIDED MANGANESE

Elmer M. Wanamaker and Duncan D. Forbes, Knoxville, Tenn., assignors to Foote Mineral Company, Philadelphia, Pa., a corporation of Pennsylvania

Application June 6, 1956, Serial No. 589,769
8 Claims. (Cl. 148—13.1)



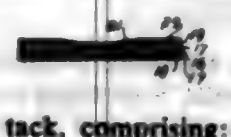
1. The process for continuously producing thermally-stable nitrided manganese containing up to about 6% by weight of nitrogen which comprises feeding subdivided solid manganese in metallic form into a rotary nitriding vessel, introducing and maintaining a stream of gaseous nitrogen flowing through said vessel at a slightly superatmospheric pressure, continuously rotating said vessel and thereby agitating and advancing the manganese through the vessel in contact with the flowing gaseous nitrogen, heating the manganese advancing through the vessel in contact with the gaseous nitrogen to 1750° to 1950° F. for a period sufficiently long to effect substantially uniform nitriding of the manganese to thermally-stable nitrided form containing up to about 6% by weight of nitrogen, cooling the nitrided manganese advancing through the vessel in contact with the gaseous nitrogen to substantially room temperature, and withdrawing the cooled nitrided manganese form the vessel.

2,860,681

TROUSER CUFF TACK

Bert M. Eiken, Chicago, Ill.

Application November 22, 1954, Serial No. 470,310
6 Claims. (Cl. 154—53.5)



1. A trouser cuff tack, comprising: a web coated on each side with pressure-sensitive adhesive material; thermoplastic material affixed to a first side of said web by the said pressure-sensitive adhesive material thereon, said thermoplastic material completely covering said first side; and a second layer of thermoplastic material affixed to the other side of said web by said pressure-sensitive adhesive material, the said second layer of thermoplastic material covering only a portion of the said pressure-sensitive adhesive material thereon.

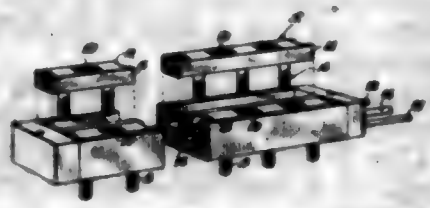
2,860,082

METHOD OF EMBEDDING AND SEALING A PLURALITY OF BOLT HEADS IN A PROTECTIVE BODY

Forrest L. Murdock, Sr., Herbert D. Boggs, and Clement T. Benson, Tulsa, Okla., assignors to Plastic Products Corporation, Tulsa, Okla., a corporation

Application June 15, 1953, Serial No. 361,556
3 Claims. (Cl. 154—110)

1. The method of making a structural member, said member including a plurality of bolts having elongated shanks and polygonal heads, said heads being provided with a first and a second pair of opposed sides, said method including the steps of inserting the shanks of the bolts in the perforations of an elongated, perforated strip of fibrous, reinforcing material to bring said shanks into engagement with the strip; folding said strip along said first pair of opposed sides of the heads; encasing the heads and simultaneously impregnating the fibers of



the strip with a binding material capable of hardening and adapted to secure said fibers together when hardened; placing a second strip of fibrous, reinforcing material on the heads in opposed relationship to said shanks; and compressing the strips and said binding material tightly against said heads and simultaneously folding the second strip along said second pair of opposed sides of the heads, while the binding material sets, to distribute said binding material throughout the strips.

2,860,083

SILICONE RUBBER ADHESIVE

Siegfried Nitzsche and Manfred Wick, Burghausen, Germany, assignors to Wacker-Chemie G. m. b. H., Munich, Bavaria, Germany

No Drawing. Application December 24, 1956
Serial No. 630,863
Claims priority, application Germany January 7, 1956
4 Claims. (Cl. 154—139)

3. A method for bonding silicone rubber to a solid base member consisting essentially of cleaning the base member to remove foreign matter, contaminants and grease, applying to the cleaned surface a composition of matter consisting essentially of (*a*) 30 to 70 percent by weight of a diorganopolysiloxane which is soluble in benzene and having a viscosity of between 10,000 and 20,000,000 cs. at 25° C., the organic groups in said siloxane being selected from the group consisting of alkyl radicals, aryl radicals and alkenyl radicals, (*b*) 2 to 20 percent by weight of an organopolysiloxane resin of the formula

$$R_nSiO_{\frac{4-n}{2}}$$

where *n* has an average value of from 0.9 to 1.8 and R is a radical selected from the group consisting of alkyl radicals, aryl radicals and alkenyl radicals, (*c*) 10 to 65 percent by weight of calcium carbonate having a particle size of less than 100 microns, and (*d*) 2 to 4 percent by weight of an organic peroxide, applying a layer of silicone rubber on the coated surface and heating to obtain a permanent bond between the silicone rubber and the solid base member.

2,860,084

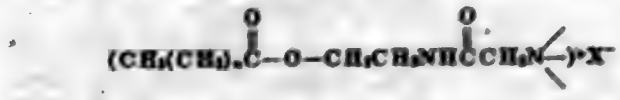
GERMICIDAL COMPOSITION COMPRISING IODINE AND A N-ACYL COLAMINO FORMYL METHYL QUATERNARY AMMONIUM SALT

Clyde Robert Jackson, Portland, Oreg., assignor to Rusoa Laboratories, Inc., Portland, Oreg., a corporation of Oregon

No Drawing. Application August 2, 1954
Serial No. 447,404
12 Claims. (Cl. 167—33)

1. A germicidal composition comprising a paste having

a pH of less than 9 and containing iodine and a nitrogen compound of the formula



wherein *n* is any number between 4 to 20 inclusive, wherein the three indicated valence bonds attached to nitrogen are satisfied by members of a heterocyclic ring of which the nitrogen is a member, and wherein X is an anion, in relative proportions of from a trace to 25 parts by weight iodine and from a trace to 50 parts by weight nitrogen compound.

12. A germicidal composition comprising an aqueous solution having a pH of less than 7 and containing from a trace to 25% by weight iodine and from a trace to 50% by weight of N myristoyl colamino formyl methyl pyridinium bromide.

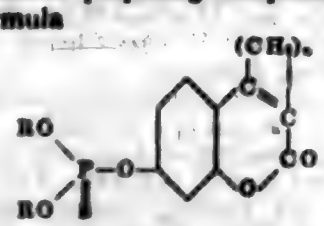
2,860,085

PROCESS FOR PREPARING PHOSPHORIC ESTERS OF SUBSTITUTED UMBELLIFERONE, AND PESTICIDAL COMPOSITIONS OBTAINED THEREBY

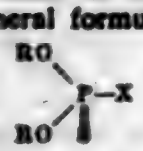
Raffaello Fusco, Giuseppe Losco, and Cesare Augusto Perl, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica

No Drawing. Application April 10, 1956
Serial No. 577,204
Claims priority, application Italy April 14, 1955
9 Claims. (Cl. 167—33)

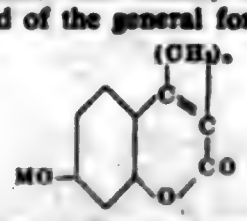
1. The method of preparing thiophosphoric esters of the general formula



wherein R represents a lower alkyl and *n* represents the integers 3 and 4, said method comprising introducing the finely powdered halide of an O,O-dialkylthiophosphoric acid of the general formula



wherein X is a halogen taken from the group consisting of chlorine, bromine and iodine, and a heterocyclic phenolic compound of the general formula



wherein M represents sodium and potassium, into a solvent for at least one of said compounds, reacting said compounds at a temperature ranging from 10° to 150° C., adding an excess of water and separating and washing precipitated solids.

2,860,086

STABLE SOLUTIONS OF PURE CARDIOACTIVE GLYCOSIDES

Arthur Stoll, Arlesheim, Basel Land, and Emil Anglker, Frank Barfuss, and Walter Kaumann, Basel, Switzerland, assignors, by mesne assignments, to Sanl & Co., Newark, N. J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust

No Drawing. Application February 2, 1956
Serial No. 562,946
Claims priority, application Switzerland February 4, 1955
6 Claims. (Cl. 167—65)

1. A stable aqueous solution of a pure cardioactive glycoside, the pH of which is at that point in the range between 5.5 and 6.5 which corresponds to maximum stability of the said glycoside.

2,860,087

RECOVERY OF KALLIKREIN

Heinrich Kraut and Willy Kerbel, Dortmund, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Bayerwerk, Germany, a corporation of Germany

No Drawing. Application August 24, 1953
Serial No. 381,146
Claims priority, application Germany August 25, 1952
11 Claims. (Cl. 167—74)

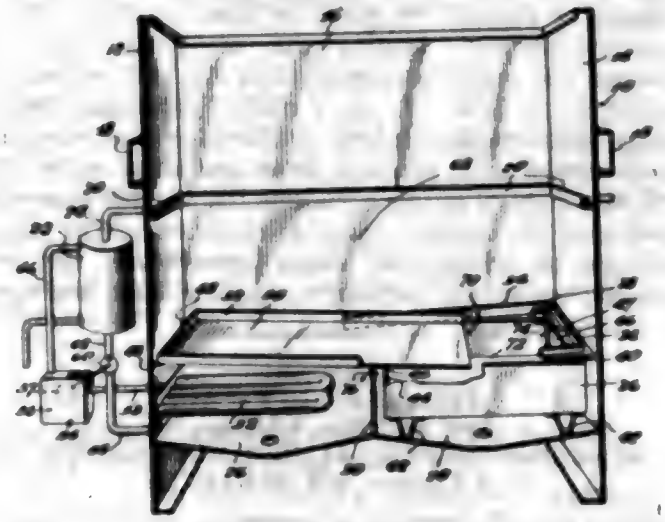
1. Method for the separation of kallikrein from aqueous solutions thereof which comprises contacting an aqueous kallikrein solution with a water-soluble zinc salt selected from the group consisting of zinc acetate, zinc sulfate, zinc nitrate and zinc chloride to thereby form a zinc salt of kallikrein, precipitating said salt by maintaining the same in an aqueous solution of a water-miscible organic solvent at a pH of between about 4 and 7 and recovering the zinc salt of kallikrein from the precipitate formed.

2,860,088

VAPOR DEGREASER

Louis Edward Plassmeyer, Chicago, Ill., assignor to Phillips Manufacturing Co., Chicago, Ill., a corporation of Illinois

Application August 24, 1953, Serial No. 375,969
12 Claims. (Cl. 202—170)



1. A degreasing apparatus comprising a tank having a bottom and side walls, a partition positioned between the side walls in the lower portion of said tank and dividing said lower portion into two, liquid-tight sumps called respectively a vaporizing sump and a settling sump whereby the latter sump may overflow the partition into the vaporizing sump, a heating element in the vaporizing sump, and an imperforate and removable drain plate positioned over the vaporizing sump and draining into the settling sump whereby solvent dripping from the work will collect in the settling sump.

2,860,089

METHOD OF ELECTRO DEPOSITING ZINC

Joseph L. Jackson, Westlake, Ohio, assignor, by mesne assignments, to R. O. Hull & Company, Inc., Rocky River, Ohio, a corporation of Ohio

No Drawing. Application August 9, 1956
Serial No. 603,171
2 Claims. (Cl. 204—55)

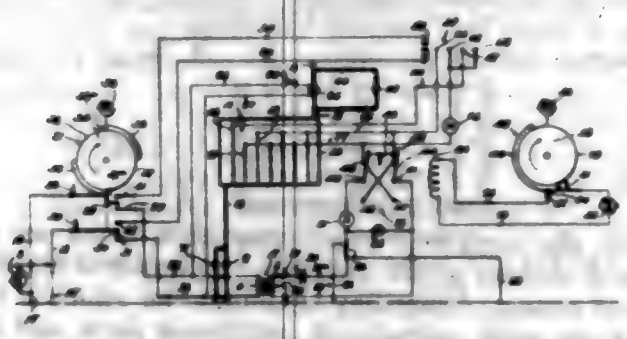
2. In the process of electroplating zinc, the step of depositing zinc from an aqueous cyanide zinc bath containing an addition agent comprising 0.04 to 0.4 gram per liter of polyvinyl alcohol and from 0.1 to 1.0 gram

and hydrogen in admixture with minute particles of a sub-

aromatic hydrocarbons and the substituted alkyl and halo

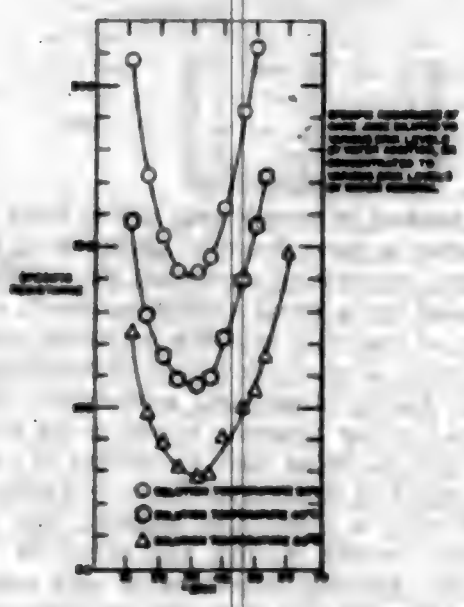
per liter of a bath soluble polyepoxyamine resulting from the condensation reaction of epichlorhydrin with a primary amine.

2,860,090
ELECTROLYTIC GENERATION OF METAL HYDROXIDE
Paul S. Roller, Washington, D. C.
Application February 29, 1952, Serial No. 274,120
16 Claims. (Cl. 204—96)



1. In the method of generating from metal electrodes insoluble metal hydroxide in an aqueous liquid non-solvent thereto, the steps comprising passing an electrolytic current through an electrolytic circuit in one direction across the electrodes of the metal, opening the electrolytic circuit, closing a polarization discharge circuit across the electrodes and discharging the polarization of the electrodes during the interval of open electrolytic circuit to at least about 90% of its initial value after opening the electrolytic circuit, and thereafter passing an electrolytic current in reverse direction across the electrodes.

2,860,091
TREATMENT OF POLYHYDRIC SOLUTIONS
Norman W. Rosenberg, Newton Center, Mass., assignor to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts
Application September 23, 1955, Serial No. 535,804
7 Claims. (Cl. 204—130)

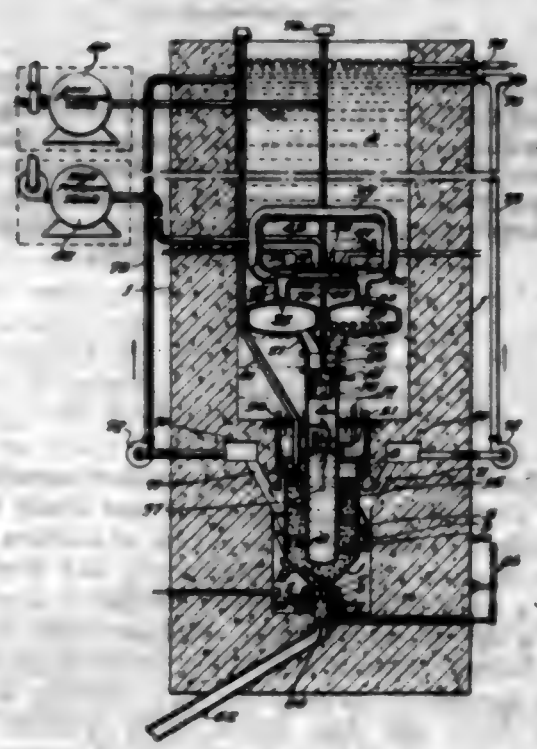


1. In the demineralization of saccharíferous solutions in a multi-chamber electrodialysis unit wherein the chambers thereof are separated by permselective ion-exchange membranes, said solutions having minor components of electrolytes to be removed therefrom, the steps of adjusting said solutions to a concentration in the range of about 20° to about 40° Brix and to a temperature below about 60° C., passing said solutions at a velocity in excess of 5 centimeters per second through the diluting chambers of said multichamber electrodialysis unit, and passing a direct electric current through said unit.

2,860,092
ELECTROPICKLING PROCESS
Arthur L. Hart, Cary, and Gilbert G. Kamm, Barrington, Ill., assignors to American Can Company, New York, N. Y., a corporation of New Jersey
No Drawing. Application December 31, 1957
Serial No. 706,291
4 Claims. (Cl. 204—143)

4. A method of high speed cleaning and deoxidizing the marginal edge portion of a ferrous can body blank, comprising passing said portion between induction heating coils having an induction frequency of from 100 to 500 kilocycles, heating said portion to a temperature of about 525° F. in about 0.4 second by means of said coils, immersing the thus heated portion in an aqueous HCl solution for about 3 seconds, said solution containing about 18% by weight HCl and being maintained at a temperature of about 120° F., making said can body blank one electrode in an electrochemical circuit, and passing an alternating current having a current density of about 1500 amperes per square foot through said solution whereby said portion is cleaned and deoxidized by an electropickling action.

2,860,093
ISOTOPE CONVERSION DEVICE AND METHOD
Eugene P. Wigner, Princeton, N. J., and Leo A. Ohlinger, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application November 13, 1945, Serial No. 628,323
17 Claims. (Cl. 204—154.2)



1. The method of cooling the fluid reactive composition of a neutronic reactor which comprises cyclically oscillating the reactive composition through a chain reaction zone while maintaining a sufficient amount of the reactive material in the reaction zone to maintain the chain reaction.

2,860,094
PROCESS FOR THE RECOVERY OF METALLIC TITANIUM
Kojiro Ishizuka, Ashiya City, Japan
Application March 18, 1954, Serial No. 417,108
1 Claim. (Cl. 204—164)

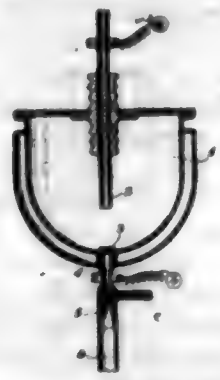
Electric discharge process of producing metallic titanium by the vapor phase reaction of titanium tetrachloride and hydrogen, which consists in forming a mixture consisting of a mixed gas of titanium tetrachloride

the group consisting of steel, molybdenum and copper, comprising the steps of electrophoretically depositing par-

of the diaphragm into pervious spaces which are progressively smaller from the top to the bottom of the diaphragm

1. A stable aqueous solution of a pure cardioactive per liter of polyvinyl alcohol and from 0.1 to 1.0 gram

and hydrogen in admixture with minute particles of a substance of high electrical conductivity and which will not affect the purity of the metallic titanium to be produced, injecting said mixture into a bowl-shaped electric discharge reaction chamber through a nozzle-shaped electrode which extends into said reaction chamber, effecting the reaction between titanium tetrachloride and hydrogen to produce metallic titanium by subjecting said mixture to an electric discharge established between said



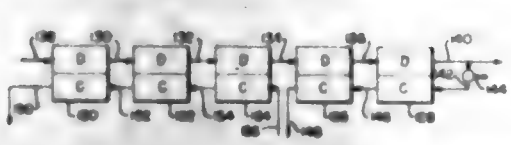
nozzle-shaped electrode and a hollow receiving electrode which extends into said reaction chamber at the end opposite to said nozzle-shaped electrode and removing the metallic titanium produced together with the remaining reaction products from the reaction chamber through said hollow receiving electrode by means of injector means provided in said receiving electrode, and rapidly cooling the reaction products by cold hydrogen injected by said injector means.

2,860,095

SEPARATION OF ELECTROLYTIC SOLUTIONS INTO CONCENTRATED AND DILUTE STREAMS

William E. Katz, Cambridge, and Norman W. Rosenberg, Newton, Mass., assignors to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Application July 22, 1952, Serial No. 300,302
19 Claims. (Cl. 204—180)



1. The method of separating a solution containing dissolved electrolyte into concentrated and dilute fractions comprising (1) passing a first stream of solution through one set of chambers of a concentrating and diluting unit having a set of diluting chambers alternately disposed between a set of concentrating chambers, said chambers being defined between alternating anion permeable and cation permeable membranes, (2) dividing a second stream from the first stream after passage thereof through said unit, (3) passing the second stream through the other set of chambers of said unit and (4) passing a direct electric current in series across the alternating chambers and membranes, thereby to effect concentration and dilution of the streams in said unit.

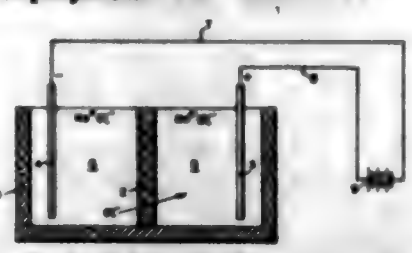
2,860,096

POLYELECTROLYTES AND THE METHOD OF MAKING THE SAME

Walter Juda, Lexington, and Allen H. Hamerschlag, Boston, Mass., assignors to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Application June 15, 1955, Serial No. 515,732
15 Claims. (Cl. 204—180)

1. A polymeric electrolyte comprising a copolymer of a vinyl N-alkylated vinyl pyridine compound of the class consisting of monovinyl pyridine and the alkyl substituted monovinyl pyridines, and polymerizable vinyl aromatic hydrocarbons and the substituted alkyl and halo derivatives thereof, said aromatic hydrocarbons having bound to the aromatic nucleus a quaternary amine group of the formula $C_nH_{2n}NR_3X$, where n is no greater than 4, R is an aliphatic radical containing no greater than 4 C atoms, and X is an anion, said N-alkylated vinyl pyridine compound being present in amount between 15 and 70 mol percent of the copolymer, and said quaternary amine group being present in amount exceeding 0.3 meq. per gram of copolymer.



15. The method of transferring anions from one solution to another to the substantial exclusion of the transfer of cations, comprising separating the solutions by at least one solid, unfractured, continuous sheet, said sheet comprising: an insoluble, infusible, polymeric matrix containing polyvinyl aromatic hydrocarbons and vinyl N-alkylated vinyl pyridine compounds and having dissociable quaternary ammonium groups bound to the aromatic nuclei in gel relationship with about 20% to about 70% by volume of an aqueous solvating liquid as a continuous phase, said matrix having imbedded therein a reinforcing material, and passing a direct electric current through said solutions and sheet in series, thus effecting migration of said anions from one solution through said sheet into the other solution.

2,860,097

SYNTHETIC ORGANIC CATIONIC POLYELECTROLYTES AND METHOD OF MAKING THE SAME

Walter Juda, Lexington, and Allen H. Hamerschlag, Boston, Mass., assignors to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Application June 15, 1955, Serial No. 515,748
16 Claims. (Cl. 204—180)

16. The method of transferring anions from one solution to another to the substantial exclusion of the transfer of cations, comprising separating the solutions by at least one solid unfractured continuous sheet, said sheet comprising: an insoluble, infusible polymeric matrix containing polyvinyl aromatic and vinyl N-heterocyclic compounds and having dissociable quaternary ammonium groups bound to the aromatic nuclei in gel relationship with about 20% to about 70% by volume of an aqueous solvating liquid as a continuous phase, said matrix having imbedded therein a reinforcing material, and passing a direct electric current through said solutions and sheet in series, thus effecting migration of said anions from one solution through said sheet into the other solution.

2,860,098

METAL COATING

Frederick Fahnoe, Morristown, and James J. Shyne, Arlington, N. J., assignors to Vitro Corporation of America, Verona, N. J.

No Drawing. Application March 31, 1954
Serial No. 426,260
9 Claims. (Cl. 204—181)

1. The method of applying and bonding a metal coating to a selected surface of a metallic base member of

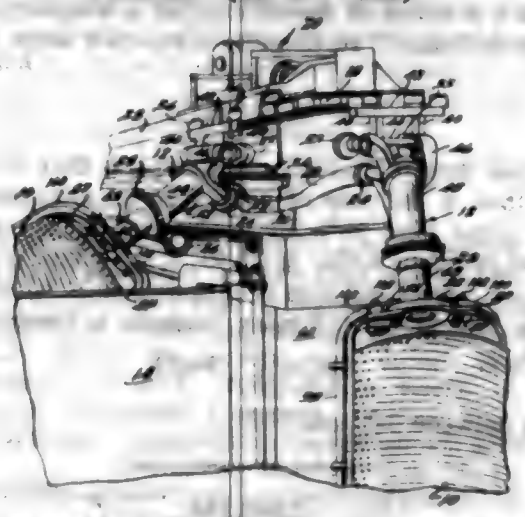
catalyst in a reaction zone under suitable reforming condi- consisting of amorphous inorganic colloids predominating

direct electric current through said unit.

chloride and hydrogen, which consists in forming a mixture consisting of a mixed gas of titanium tetrachloride

the group consisting of steel, molybdenum and copper, comprising the steps of electrophoretically depositing particles of a metallic compound of the group consisting of the oxides of chromium, nickel, iron, silver and copper, chromium fluoride and zirconium hydride out of liquid media onto said surface, the selected coating material being capable of being converted to the metal and sintered at temperatures below the melting temperature of the selected base member, and heating said coated member at a temperature high enough and in an atmosphere to convert said particles of metallic compound to metal and to sinter said metal and to bond said metal to said member by metal-member codiffusion at their common interface.

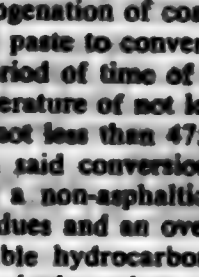
2,859,999
LIFT ARM ASSEMBLY
James Barlow, Detroit, Mich., assignor to F. B. Stevens, Inc. (Michigan)
Application January 28, 1955, Serial No. 484,741
5 Claims. (Cl. 294—213)



1. A lift arm assembly for a plating machine having a conveyor means and guide rails for moving said assembly from station to station, a cam rail for lifting and lowering said assembly into and out of the treating solutions, a drive screw for rotating the said arm assembly and a cathode rail opposite those stations requiring electric current, said assembly comprising a housing portion having a supporting wheel adapted to contact said cam rail, a plurality of support rollers mounted near the upper end of said housing portion and positioned to engage said guide rails, a first electrical contact shoe mounted on said housing portion so as to engage said cathode rail, said contact shoe being insulated from its support and said housing, a tubular drive shaft rotatably mounted in said housing, a worm gear secured to said drive shaft and positioned to engage said drive screw, a conductor shaft mounted inside said drive shaft and separated therefrom by an insulating bushing, a collector ring secured to the upper end of said conductor shaft, a second contact shoe in contact with said collector ring and electrically connected to said first contact shoe and connector means on the bottom end of said conductor shaft and connected to said drive shaft by insulating means.

2,860,100
DIAPHRAGM CELLS
Leszek Jan Konrad Krzyzanowski, Wyandotte, Mich., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
Application May 18, 1954, Serial No. 428,721
5 Claims. (Cl. 204—252)

1. In an electrolytic diaphragm cell comprising an anode, a cathode, an anolyte chamber and a catholyte chamber, a preformed pervious diaphragm arranged substantially vertically between the anode and the cathode and having a series of impervious lines dividing the area of the diaphragm into pervious spaces which are progressively smaller from the top to the bottom of the diaphragm

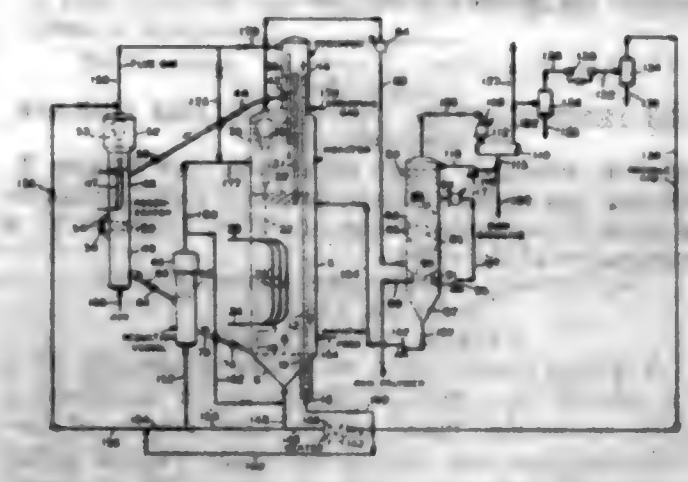


to produce a uniform percolation rate throughout the area of the diaphragm.

2,860,101
BALANCED HYDROGENATION OF COAL
Michail G. Pelipetz, Venetia, Pa., assignor to the United States of America as represented by the Secretary of the Interior
No Drawing. Application April 20, 1953
Serial No. 349,988
5 Claims. (Cl. 208—10)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A process for the production of motor fuel of high aromatic content substantially free of asphaltic fraction by the direct hydrogenation of coal in a single stage which comprises the steps of pulverizing the coal, impregnating the pulverized coal with a hydrogenation catalyst selected from the group consisting of ammonium molybdate, nickelous chloride, and stannous chloride, mixing the impregnated coal with an asphalt-free distillate fraction of oil from the hydrogenation of coal, to form a coal-oil paste, subjecting said paste to conversion in the presence of hydrogen for a period of time of about 15 seconds to 15 minutes at a temperature of not less than 500° C. and under a pressure of not less than 475 atmospheres, passing the effluent from said conversion through a cooling zone to separate out a non-asphaltic liquid fraction admixed with solid residues and an overhead fraction comprising non-condensable hydrocarbon gases, introducing said non-condensable hydrocarbon gases into a reforming zone, reacting the said gases with steam and oxygen to produce hydrogen, conducting the hydrogen to the conversion step of the process, distilling from said liquid fraction an aromatic gasoline boiling below 200° C., separating from the residual oil the solid residues and recycling the major portion of said residual oil for admixture with fresh impregnated coal supplied to the process.

2,860,102
REFORMING PROCESS
Marvin F. Nathan, New York, N. Y., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware
Application December 31, 1952, Serial No. 328,990
14 Claims. (Cl. 208—140)



1. A process which comprises contacting a light hydrocarbon oil with a fluidized mass of finely divided platinum

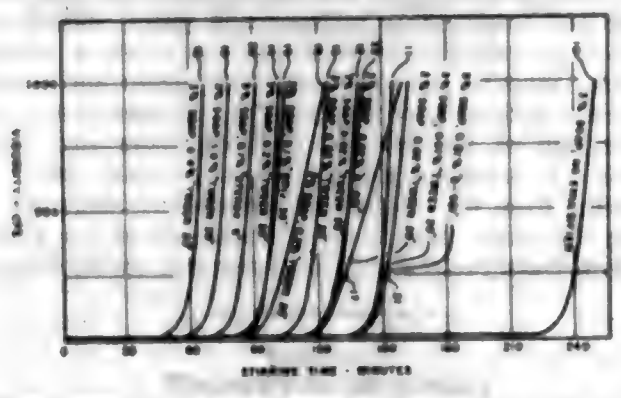
catalyst in a reaction zone under suitable reforming conditions such that a vaporous reaction product including gasoline, hydrogen and a relatively higher boiling hydrocarbon material than gasoline is produced and the catalyst becomes contaminated with carbonaceous material, separating the vaporous reaction product from the mass of platinum catalyst such that only a relatively small quantity of catalyst remains entrained therewith, withdrawing at least a portion of the contaminated catalyst from the reaction zone and passing the same to a regeneration zone wherein it is contacted with an oxygen containing gas in a fluidized state under conditions suitable for the substantial removal of carbonaceous material therefrom and thus producing a flue gas product, separating the flue gas product from the regenerated catalyst such that only a relatively small quantity of catalyst remains entrained therewith, combining the separated flue gas product and the separated vaporous reaction product, subjecting the combined product streams to a separation treatment whereby a condensate of the high boiling hydrocarbon material having included therein substantially all of the catalyst fines is obtained and a gasoline fraction as well as a normally gaseous product including the hydrogen are recovered, recycling a portion of the relatively high boiling liquid condensate including the catalyst fines to the reaction zone, and recycling at least a portion of the normally gaseous product to the reaction zone, the relative quantities of hydrogen produced and of flue gas product being such that flue gas contamination of the recycle gas does not have a significant adverse effect upon the reforming reaction.

2,860,103

MAKING GELLED HYDROCARBONS

Donnell M. Buchanan and Paul L. Menuni, Tulsa, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware

Application October 12, 1954, Serial No. 461,888
4 Claims. (Cl. 252—8.55)



1. A temporary gel prepared by adding to a hydrocarbon liquid between about 2 and 10 percent by weight of a napalm soap, between about ½ and 3 percent by volume of water, and sufficient nonionic emulsifier to accelerate the gelation of said gel.

2,860,104

HIGH TEMPERATURE INORGANIC GEL GREASE COMPOSITIONS

Walter H. Petersen, Point Richmond, and Stanley T. Abrams and Fred H. Stross, Berkeley, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application August 29, 1955
Serial No. 531,266
7 Claims. (Cl. 252—28)

1. A grease composition consisting essentially of a major amount of a mineral lubricating oil containing 1 to 25% by weight, based on the total grease, of carbocyclic hydrocarbons having molecular weights within the range of from about 300 to about 750, a grease-forming proportion of a grease-forming gel of the group consisting of amorphous inorganic colloids predominating in silica, hectorite and bentonite clays having adsorbed on the surface thereof a hydrophobing proportion of a cationic hydrophobic surface active agent, and anion hectorite and bentonite clays, and between about 0.5% and about 20% by weight of a compound selected from the group consisting of zinc oxide, zinc hydroxide, zinc borate and zinc carbonate.

2,860,105

METHOD OF MANUFACTURING FERROMAGNETIC CORES

Evert Willem Gorter and Cornelis Jacobus Ruyaldt, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application December 20, 1954, Serial No. 476,531
Claims priority, application Netherlands December 21, 1953
2 Claims. (Cl. 252—62.5)

1. In a method of manufacturing a magnet core having a substantially rectangular hysteresis loop in which

$$\frac{B_r}{B_{st}}$$

is not less than 0.70, $(R_s)_{max}$ is not less than 0.6 and H_s is less than 4, the step of heating in an atmosphere containing more than 50% by volume of oxygen at a temperature of about 1375° to 1450° C., a mixture of oxides of copper, nickel and iron in proportions at which a composition having the following formula is formed:

$$Cu_xNi_{(1-x)}Fe_2O_4$$

x being between 0.01 and 0.05.

2,860,106

UREA-PHOSPHORIC ACID CLEANING COMPOSITION

Lawrence L. Little and Gilmore Chen, Morris Plains, N. J., assignors to E. F. Drew & Co., Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application October 1, 1952
Serial No. 312,654
11 Claims. (Cl. 252—136)

1. An acid cleaning composition comprising a mixture of the crystalline addition product of urea and phosphoric acid, said product having a pH below 4.7, the ratio of urea to concentrated phosphoric acid by weight being about 1 to 2, with a wetting agent taken from the class consisting of quaternary ammonium cationic wetting agents and polyglycol ether non-ionic wetting agents having 10 to 100 glycol radicals.

2,860,107

CONTROLLED SUDSING HEAVY DUTY LIQUID DETERGENT

Vincent Lamberti, Hackensack, and Arthur O. Gray, Jr., River Edge, N. J., assignors to Lever Brothers Company, New York, N. Y., a corporation of Maine

No Drawing. Application July 25, 1957
Serial No. 674,048
4 Claims. (Cl. 252—137)

1. A controlled sudsing heavy duty liquid detergent composition which has phase stability on storage and suds stability in usage consisting essentially of an aqueous suspension of from about 2% to about 3% of potassium dodecylbenzene sulfonate, from about 3.5% to about 5% of sodium tallow methyl taurate, from about 2% to about 3% of an alkali metal xylene sulfonate, about 1% of coconut oil fatty acids, about 1% of the condensation product of one mole of lauric monoethanolamide with one mole of ethylene oxide, about 1% of triethanolamine, about 0.3% of sodium carboxy-

methylcellulose, about 0.7% of methylcellulose, and from about 22.5% to about 25% of tetrapotassium pyrophosphate.

2,860,108
POLYMERIC SULFONAMIDO ALKYL VINYL DERIVATIVES
Sidney Melamed, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application December 8, 1954
Serial No. 474,002
5 Claims. (Cl. 260—2.1)

5. As a composition of matter, an addition polymer which comprises recurring structural units of the formula

$$-CH_2-\underset{\underset{OANRSO_2R^1}{|}}{CH}-$$

wherein A is an alkylene group of 2 to 3 carbon atoms of which at least two separate the adjoining O and N atoms, R is selected from the group consisting of hydrogen and methyl, and R^1 is selected from the group consisting of cyclohexyl, alkyl groups having 1 to 6 carbon atoms, phenyl, and phenyl groups substituted by a member selected from the group consisting of chlorine and methyl, nitro, and hydroxyl groups.

2,860,109
CROSS-LINKED ACRYLIC ANHYDRIDE TERPOLYMER CATION EXCHANGER
Gerhard Abel, deceased, late of Darmstadt, Germany, by Margarete Abel, widow and heir and guardian or trustee of minor heirs, Darmstadt, and Adolf Wehnhas, Weiterstadt, Germany, assignors to Rohm & Haas G. m. b. H., Darmstadt, Germany
No Drawing. Application September 12, 1955
Serial No. 544,578
Claims priority, application Germany September 13, 1954
3 Claims. (Cl. 260—2.2)

1. Process for preparing an ion exchange resin in the form of substantially spherical beads having diameters ranging between about 0.3 to 1.0 mm. which comprises heating to a temperature of the order of about 75 to 80° C., in a 20% sodium chloride solution and in the presence of about 0.01 to 0.1% starch and about 0.1 to 1% dibenzoyl peroxide, a mixture of about 80 parts by weight methylacrylate, 10 parts by weight divinylbenzene and 10 parts by weight methacrylic anhydride, and thereupon subjecting the terpolymer thus obtained to alkaline saponification.

2,860,110
COATING COMPOSITION COMPRISING A METHYL METHACRYLATE POLYMER AND A CELLULOSE ESTER AND PROCESS FOR PREPARING SAME
Henry W. Godshalk, Swarthmore, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 4, 1954
Serial No. 434,662
15 Claims. (Cl. 260—17)

1. A pigmented coating composition, which produces a dry coating characterized by uniform pigment dispersion and by the absence of pigment flooding and mottling, comprising a polymer of methyl methacrylate as the preponderant film-forming material, volatile solvent therefor, plasticizer therefor, pigment and about 0.1–10%, by weight, based on the total weight of non-volatile constituents in said coating composition, of a cellulose ester selected from the group consisting of cellulose nitrate, cellulose propionate, cellulose butyrate, cellulose acetate butyrate, cellulose acetate propionate, and mixtures thereof, said polymer of methyl methacrylate being at least one material of the group consisting of homopolymers of methyl methacrylate and copolymers of methyl methacrylate with from 2 to 25% by weight of a member of the group consisting of acrylic acid, methacrylic acid, a 1 to 4 carbon alkyl ester of acrylic acid, a 2 to 4 carbon alkyl ester of methacrylic acid, vinyl acetate, acrylonitrile and styrene; and said polymer of methyl methacrylate being further characterized by having a relative viscosity of about 1.117 to 1.196, said relative viscosity being the quotient obtained by dividing the efflux time of a solution of 0.25 gram of said methyl methacrylate component in 50 cc. of ethylene dichloride by the efflux time of ethylene dichloride, said efflux times being measured in accordance with the procedure of ASTM D-445-46T, Method B, at 25° C. using a modified Ostwald viscosimeter, series 50.

2,860,111
THERMOSETTING POLYESTER COMPOSITION CONTAINING MOLYBDENUM DISULFIDE AND METHOD OF MAKING BEARINGS THEREFROM
Edward Wesley Reile, San Diego, Calif.
No Drawing. Application April 16, 1953
Serial No. 349,332
3 Claims. (Cl. 260—22)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A thermosetting resinous composition comprising a mixture of about 50 to about 90 percent by volume of a rapidly polymerizing liquid thermosetting resin consisting of about 85 to 95 percent by weight of an unsaturated polyester liquid resin formed by reacting polybasic acids and anhydrides thereof selected from the group consisting of succinic, phthalic, adipic, sebacic and maleic acids and anhydrides thereof with at least one polyhydric alcohol from the group consisting of ethylene glycol, diethylene glycol, triethylene glycol, glycerol, sorbitol and other higher glycols, and monomeric styrene, minor proportions of less than about 3 percent by weight of a partially hydrogenated polyphenyl mixture containing a predominant amount of hydrogenated isomeric terphenyls, of less than about 3 percent by weight of benzyl alcohol, of less than about 2 percent by weight of beta naphthol, of less than about 3 percent by weight of a monobasic acid selected from the group consiting of oleic acid and dodecanoic acid, and less than about 4 percent by weight of at least one organic peroxide selected from the group consisting of benzoyl peroxide, acetal peroxide, ditertiary butyl peroxide, and methyl ethyl ketone peroxide; and about 10 to about 50 percent by volume of molybdenum disulfide thoroughly and uniformly dispersed in said thermosetting resin.

2,860,112
ALKYD RESINS PRODUCED FROM TRICARBOXYLIC ACIDS AND DIBASIC ALCOHOLS
Robert F. Leary, Cranford, Lewis W. Bowman, Westfield, and Roger S. Hawley, Cranford, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application October 31, 1955
Serial No. 544,841
18 Claims. (Cl. 260—22)

1. A resinous composition which comprises the esterification product of a first reactant consisting of a mixture of an adduct of a C_{12} to C_{18} dicyclopentadiene dicarboxylic acid and a dienophilic dicarboxylic compound selected from the group consisting of C_2 to C_4 unsaturated aliphatic dicarboxylic acids and anhydrides with a minor proportion of an unsaturated aliphatic monocarboxylic acid and a second reactant consisting of a glycol of at least 3 carbon atoms selected from the group consisting of glycols containing two adjacent hydroxyl radicals, ethylene glycol ethers, and mixtures thereof; the amount of acid equivalents of said first reactant being no greater than the base equivalents of said second reactant.

2,860,113

RESIN DERIVED FROM POLYHYDRIC ALCOHOL, FATTY OIL, BENZENE TRIBASIC ACID AND DIAMINODURENE

Benjamin A. Bolton, Hammond, and Richard E. Van Strien, Griffith, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application December 16, 1955
Serial No. 553,406
8 Claims. (Cl. 260—22)

1. An oil-modified resin consisting of the product made by (I) reacting in an inert atmosphere and in the presence of an alcoholysis catalyst, a polyhydric alcohol and a member of the class consisting of vegetable oil, fish oil and fatty acids containing at least 10 carbon atoms in relative amounts such that essentially only one hydroxyl group in said alcohol remains unreacted, at a temperature between about 300° F. and 500° F. for a time such that the desired methanol compatibility is reached, (II) reacting in essentially equi-molar amounts the product of (I) and an acidic material selected from the class consisting of trimesic acid, hemimellitic acid, trimellitic acid and trimellitic anhydride to form a product containing essentially two unreacted carboxyl groups on said acid molecule, at a temperature between about 400° F. and 500° F. until a single phase homogeneous solution is obtained and (III) reacting the product of (II) with tetramethyldiaminobenzene, said amine being charged in an amount from about 5 to about 20 mole percent in excess of the stoichiometric requirement, at a temperature between about 400° F. and 500° F. for the time necessary to obtain the desired viscosity and desired acid number product.

2,860,114

OIL-MODIFIED AMINE TYPE ALKYD RESIN PROVIDING THIXOTROPIC PROPERTIES TO HYDROCARBON SOLUTIONS THEREOF

Benjamin A. Bolton, Hammond, and Richard E. Van Strien, Griffith, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application December 16, 1955
Serial No. 553,407
4 Claims. (Cl. 260—22)

1. An alkyd resin prepared by (I) reacting in an inert atmosphere and in the presence of an alcoholysis catalyst glycerol and soya fatty acids in relative amounts such that essentially only one hydroxyl group in said glycerol is unreacted at a temperature between about 300° F. and 500° F. until the desired methanol compatibility is obtained, (II) reacting in essentially equi-molar amounts the product of (I) and tirmellitic acid to form a second product containing essentially two unreacted carboxy groups on the acid molecule at a temperature between about 400° F. and 500° F. until a single phase homogneous solution is obtained and (III) reacting the product of (II) with ethylene diamine wherein said diamine is charged in an amount from about 5 to about 20 mol percent in excess of stoichiometric requirement at a temperature between about 400° F. and 500° F. until the desired viscosity and acid number is obtained.

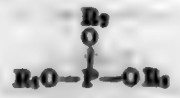
2,860,115

COMPOSITION COMPRISING POLYETHYLENE PLASTIC AND ORGANIC PHOSPHITE AND METHOD FOR MAKING SAME

Arthur C. Hecker, Richmond Hill, and William E. Leistner, Brooklyn, N. Y., assignors to Argus Chemical Corporation, a corporation of New York

No Drawing. Application June 6, 1955
Serial No. 513,598
7 Claims. (Cl. 260—23)

1. A plastic composition comprising solid polyethylene and admixed therein an organic phosphite that is soluble in the polyethylene at the elevated temperature of softening thereof and at temperatures down to —60° F., the phosphite serving as an anti-tack agent and a stabilizer and having the formula:



in which R_1, R_2 and R_3 are each individually selected from the group consisting of alkyl, aryl, alkaryl and aralkyl groups.

2,860,116

PROCESS FOR PEPTIZING DIENE HYDROCARBON ELASTOMERS AND PRODUCT THEREOF

Josef Pikl, Glassboro, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 29, 1954
Serial No. 446,453
9 Claims. (Cl. 260—30.2)

1. Process for peptizing a diene hydrocarbon elastomer of the group consisting of natural rubber and butadiene-styrene polymers, which comprises intimately incorporating into the elastomer from 0.0005% to 0.5% of a compound of the class consisting of iron phthalocyanine and its chloro and nitro derivatives.

2,860,117

EPOXY COMPOUNDS AS PLASTICIZERS FOR QUATERNIZED POLYMERS

James E. Pritchard and Peter J. Canterino, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application July 23, 1954
Serial No. 445,456
10 Claims. (Cl. 260—30.4)

1. As a composition of matter, a quaternized polymer of a heterocyclic nitrogen base containing at least one $CH_2{=}C<$ group and, as a plasticizer therefor, an epoxy compound containing the

group having a molecular weight of at least 90, said epoxy compound having been added at a time subsequent to the polymerization and at a time not prior to the quaternization.

2,860,118

CORROSION PREVENTING COATING COMPOSITIONS FOR METALS COMPRISING A CHLORINE CONTAINING ORGANIC POLYMER AS FILM FORMER, A COPPER COMPOUND AND A TERTIARY ORGANIC HETEROCYCLIC BASE

Rudolf Nagelschmidt, Hanau (Main), and Anton Rudolph, Gross Zimmern, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Application September 22, 1955
Serial No. 536,010
Claims priority, application Germany September 24, 1954
7 Claims. (Cl. 260—41)

1. A corrosion preventing coating composition for metals comprising a chlorine containing organic polymer selected from the group consisting of chlorinated rubber, polychloroprene, chlorosulfonated polyethylene and copolymers of vinyl chloride and vinyl acetate as a film former, a copper compound selected from the group consisting of copper oxide and its hydrate and a tertiary organic heterocyclic base containing a six membered nitrogen containing heterocyclic ring selected from the group consisting of pyridine, picoline and quinoline.

2,860,119

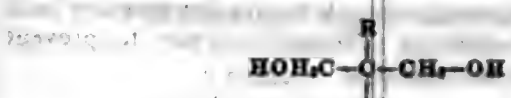
ALKYD RESINS, THEIR PREPARATION, AND COMPOSITIONS THEREOF WITH AMINOPLAST RESINS

John C. Petropoulos, South Norwalk, and Leonard E. Cadwell, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application November 17, 1953
Serial No. 392,748

19 Claims. (Cl. 260—45.3)

13. A composition of matter comprising a mixture of from 70 to 30 parts of (1) an alkyd resin comprising the heat reaction product of a member selected from the group consisting of phthalic acid and phthalic anhydride with a polyhydric alcohol having the formula:



wherein R is a member of the group consisting of a $-CH_2OH$ group, an alkyl group and an aryl group, R′ is a member of the group consisting of alkyl and aryl groups, wherein the number of carbon atoms in R and R′ totals at least 6, and correspondingly from 30 to 70 parts of (2) a thermosetting aminoplast resin.

2,860,120

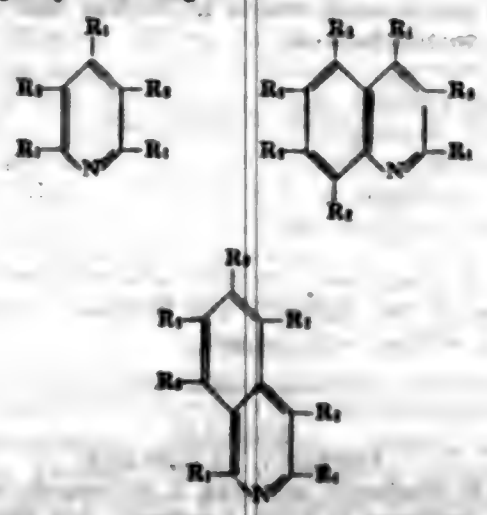
RESINS OF EPOXY COMPOUNDS AND POLYMERS OF ALKYL SUBSTITUTED VINYLPYRIDINES AND THE LIKE

James E. Pritchard and Peter J. Canterino, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application July 23, 1954
Serial No. 445,457

8 Claims. (Cl. 260—45.5)

1. A thermosetting resin comprising the reaction product of an epoxy compound wherein an oxygen atom bridges adjacent carbon atoms, said carbon atoms, being joined by a single valence bond, said epoxy compound containing atoms selected from the group consisting of carbon, hydrogen, oxygen, and halogen in which oxygen atoms are present exclusively in radicals selected from the group consisting of hydroxyl and ether linkages, and a polymer of a compound having a structure selected from the group consisting of



wherein at least one and not more than two of R_1 and R_2 are selected from the group consisting of vinyl and alpha-methylvinyl and at least one R_1 being alkyl containing not over 8 carbon atoms and having at least one hydrogen atom on an alpha carbon atom, R_1 and R_2 not otherwise substituted being hydrogen.

2,860,121

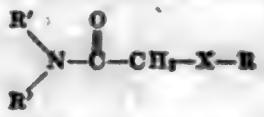
STABILIZED COMPOSITIONS COMPRISED OF POLYMERS AND COPOLYMERS OF ACRYLONITRILE AND METHOD FOR THEIR PREPARATION

George W. Stanton and Forrest A. Ehlers, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application December 19, 1955
Serial No. 553,702

12 Claims. (Cl. 260—45.9)

1. A solid composition which is resistant to becoming discolored and embrittled upon closure to light and heat which comprises polymers and copolymers of acrylonitrile which contain at least about 60 percent by weight of acrylonitrile in the polymer molecule, any balance being another monoethylenically unsaturated compound copolymerized with acrylonitrile, and between about 1 and 20 percent by weight based on the weight of the polymer, of a stabilizing compound having the general formula:



wherein X is selected from the group consisting of oxygen and sulfur; R is selected from the group consisting of methyl and ethyl radicals; and R′ is selected from the group consisting of methyl and ethyl radicals excepting that when X is oxygen and R is a methyl radical, not more than a single R′ can be a methyl radical.

2,860,122

PREPARATION OF POLYVINYL BUTYRAL

Frank Berardinelli, South Orange, Richard E. Davies, Ridgewood, and Blanche B. White, Summit, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application December 9, 1954
Serial No. 474,286

8 Claims. (Cl. 260—73)

1. In the process for the production of a polyvinyl acetal in which an aldehyde is reacted in the presence of sulfuric acid with a polyvinyl resin selected from the group consisting of polyvinyl alcohols and polyvinyl esters which is reactive with said aldehyde to produce a polyvinyl acetal and in which as a result of said reaction an acidic solution of the polyvinyl acetal is produced, the improvement which comprises neutralizing said solution with magnesium acetate.

2,860,123

ALKENYL SULFURIC ACID AND VINYL-PYRIDINE RUBBER COMPOUNDED THEREWITH

Rufus V. Jones, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application February 25, 1954
Serial No. 412,643

16 Claims. (Cl. 260—79.5)

10. A rubber product made by compounding a conjugated diene-vinyl pyridine rubbery copolymer with an alkene sulfuric acid having not more than 20 carbons in the alkene and heating the compounded material.

2,860,124

PROCESS FOR PREPARING HIGHLY VISCOUS SOLUBLE POLYVINYLALCOHOLS

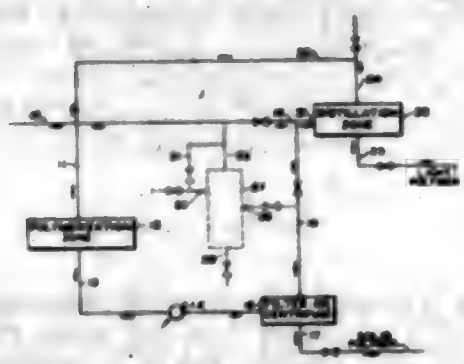
Werner Starck, Hofheim (Taunus), and Hans Starck, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt, Germany, a corporation of Germany

No Drawing. Application November 15, 1955
Serial No. 547,822
Claims priority, application Germany November 26, 1954
7 Claims. (Cl. 260—91.3)

1. The process for the production of a water-soluble polyvinyl alcohol which in an aqueous solution of 4%

strength and at a temperature of 20° C. has a viscosity of more than 140 centipoises, which comprises polymerizing vinyl acetate in the presence of 0.8 to 8.0% of oleic acid peronide calculated upon the weight of the vinyl acetate, and saponifying the resulting polyvinyl acetate to yield a water-soluble saponification product.

2,860,125
PROCESS OF SEPARATING OLEFIN POLYMERS
William C. Lanning, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 28, 1953, Serial No. 400,520
12 Claims. (Cl. 260—93.7)



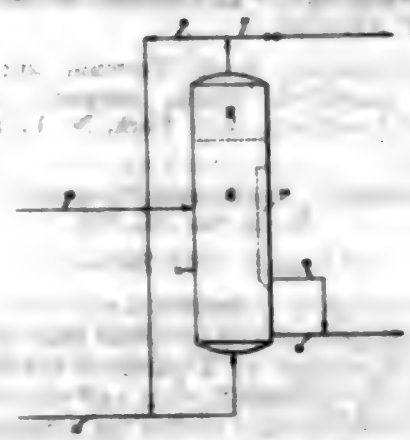
1. A process for polymerizing a feed comprising at least one 1-olefin having a maximum monomer chain length of 8 carbon atoms and no branching nearer the double bond than the 4-position which comprises contacting said feed with a catalyst comprising chromium oxide and at least one member of the group consisting of silica and alumina under polymerizing conditions so as to form liquid and tacky semi-solid to solid polymer, whereby the catalyst becomes at least partially coated with said polymer; separating solid polymer from the effluent from said contacting as a product of the process so as to leave a fraction comprising liquid polymer; and recycling at least a portion of said liquid polymer to said contacting so as to minimize the coating of polymer on said catalyst.

2,860,126
POLYMERIZATION PROCESS
Martin R. Cines, Bartlesville, Okla, assignor to Phillips Petroleum Company, a corporation of Delaware
Application July 9, 1954, Serial No. 442,331
16 Claims. (Cl. 260—94.9)

1. In a process in which ethylene, in solution in a hydrocarbon solvent, is contacted, at polymerization conditions of pressure and temperature, with a chromium oxide catalyst which catalyzes the conversion of olefins to solid polymers and the activity of which is adversely affected by the presence of impurities in said solvent, which impurities have lower boiling points than said solvent an effluent is treated to remove a normally gaseous fraction therefrom, the thus treated effluent is fractionally distilled in a distillation zone to obtain a fraction lower-boiling than said solvent, a solvent fraction which is recycled to the contacting step, and a fraction higher boiling than said solvent, and fresh solvent is added to the system, the improvement which comprises adding said fresh solvent to the mixture passing to said distillation zone.

2,860,127
START-UP OF A POLYMERIZATION PROCESS
Robert L. Banks, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application February 6, 1957, Serial No. 638,682
9 Claims. (Cl. 260—94.9)

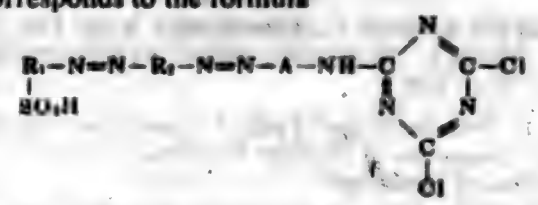
1. In a process for polymerizing ethylene in fluidized catalyst system with a chromium oxide supported catalyst having a high initial activity, the method of modifying such initial activity which comprises contacting said catalyst at a temperature below the melting point of the polymer being formed with ethylene at a pressure not



greater than 0.8 the optimum polymerization pressure until said catalyst accumulates sufficient polymer to prevent agglomeration of said catalyst.

2,860,128
TRIAZINE DISAZO-DYESTUFFS
Raymond Genet, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Application July 1, 1957
Serial No. 668,917
Claims priority, application Switzerland July 3, 1956
8 Claims. (Cl. 260—153)

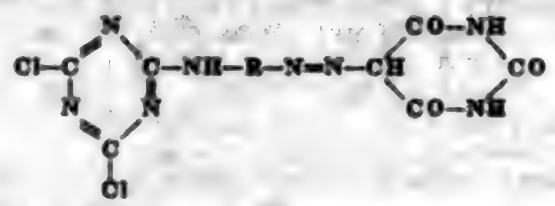
1. A water soluble disazo dyestuff which in its free acid state corresponds to the formula



wherein R_1 and R_2 each represents a member selected from the group consisting of a benzene and a naphthalene radical and A represents a benzene radical bound to the azo linkage in p-position relatively to the NH-group.

2,860,129
DICHLOROTRIAZINE MONOAZODYESTUFFS
Raymond Genet, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Application July 22, 1957
Serial No. 673,140
Claims priority, application Switzerland August 3, 1956
5 Claims. (Cl. 260—153)

1. An azo dyestuff which in its free acid state corresponds to the formula



in which R represents a member selected from the group consisting of the diphenyl and benzene radicals which contain a sulfonic acid group.

2,860,130
METHYL ALGINATE
William H. McNeely and John J. O'Connell, San Diego, Calif., assignors to Kelco Company, San Diego, Calif., a corporation of Delaware
No Drawing. Application November 1, 1954
Serial No. 466,334
7 Claims. (Cl. 260—209.6)

1. A method of producing methyl alginate comprising reacting a water-soluble salt of alginic acid with di-

methyl sulphate in the presence of a non-aqueous liquid reaction medium which is only slightly miscible with water, such reaction being carried out at a relatively low temperature and in the presence of a buffering agent and a small amount of water.

7. Methyl alginate having not less than about 35% of the carboxyl groups methylated, said methyl alginate being substantially in an undegraded state, and the remaining carboxyl groups being present substantially as water-soluble salt groups.

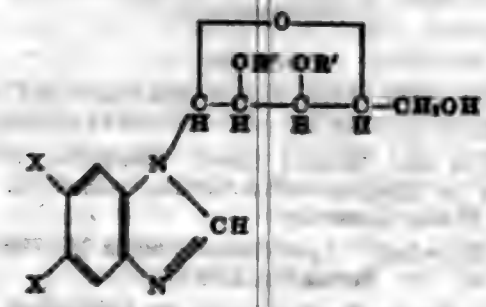
2,868,131

BENZIMIDAZOLE DERIVATIVES

Karl Folkers, Plainfield, and Clifford Shunk, Westfield, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application May 5, 1953
Serial No. 353,224
7 Claims. (Cl. 260—211.5)

1. A compound of the formula



and acid salts thereof, wherein X is halogen and R' is selected from the group consisting of hydrogen and a lower acyl radical.

2,868,132

PRODUCTION OF ORGANIC ESTERS OF CELLULOSE BY HETEROGENEOUS ESTERIFICATION

Blanche B. White, New Providence, and Charles L. Smart, Millington, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application November 1, 1955
Serial No. 544,355
6 Claims. (Cl. 260—227)

1. Process for the production of organic acid esters of cellulose of an organic acid containing at most four carbon atoms by heterogeneous esterification, which comprises esterifying a cellulosic material with an esterification medium containing an organic acid anhydride of an organic acid containing at most four carbon atoms, an acid esterification catalyst and a non-aqueous, non-solvent diluent in an amount sufficient to prevent solution of the organic acid ester of cellulose, washing the organic acid ester of cellulose with a non-aqueous non-solvent for the organic acid ester of cellulose, washing the organic acid ester of cellulose with an aqueous solution of an alkaline-reacting material, and washing the organic acid ester of cellulose with water.

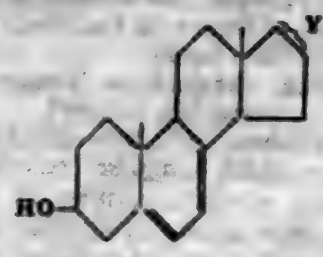
2,868,133

PROCESS OF REDUCING 3-ENOL SAPOGENIN ACYLATES WITH SODIUM BOROHYDRIDE

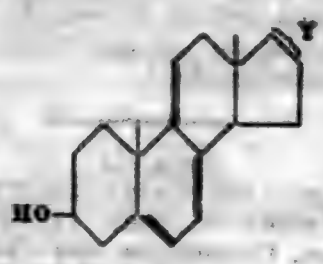
George Rosenkranz, Mexico City, Mexico, and Carl Djerassi, Detroit, Mich., assignors to Syntex S. A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application March 28, 1952
Serial No. 277,715
Claims priority, application Mexico August 2, 1951
7 Claims. (Cl. 260—239.55)

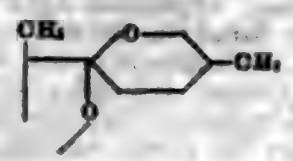
1. A process for the production of compounds selected from the group consisting respectively of $\Delta^{5,7}$-spirostadiene-3β-ol and $\Delta^{5,7,9(11)}$-spirostatriene-3β-ol having the following formula:



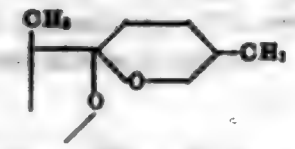
and



wherein Y is selected from the group consisting of radicals of the following formula:



and



which comprises reducing the corresponding lower fatty acid esters of a compound selected from a group consisting respectively of $\Delta^{5,7}$-spirostatriene-3β-ol and $\Delta^{5,7,9(11)}$-spirostatetraene-3β-ol with sodium borohydride.

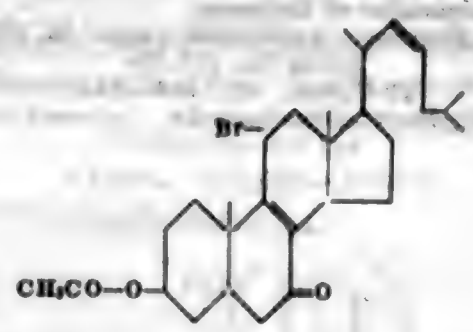
2,868,134

$\Delta^{8(9)}$-7-KETO-11-BROMO-STEROIDS AND THE PROCESSES OF PREPARING THEM

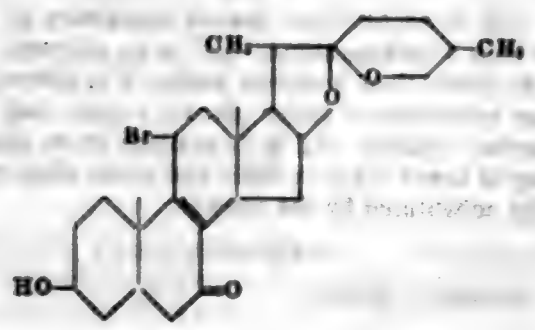
John M. Chemerda, Metuchen, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application October 5, 1953
Serial No. 384,319
13 Claims. (Cl. 260—239.55)

8. $\Delta^{8(9),22}$ - 3 - acetoxy - 7 - keto - 11 - bromo - ergostadiene having the following formula:



10. $\Delta^{8(9)}$ - 7 - keto - 11 - bromo - dehydrotigogenin having the following formula:



2,860,135

PREPARATION OF ARYLSULPHONYL THIAZOLES

Ralph H. Beutel, Newark, and Robert E. Currie, Roselle, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application January 7, 1957
Serial No. 632,649
3 Claims. (Cl. 260—239.95)

1. The process which comprises reacting a compound selected from the group consisting of acetyl-sulfanilyl cyanamide and alkali metal and alkaline earth metal salts thereof with 2,5-dihydroxy-1,4-dithiane, maintaining the pH of the reaction mixture between 0.1 and 4 and the temperature between 50° C. and reflux temperature to form N^4-acetylsulfathiazole.

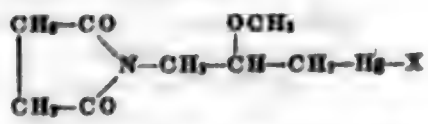
2,860,136

3-MERCURIC-2-METHOXY-1-SUCCINIMIDO-PROPANE DERIVATIVES

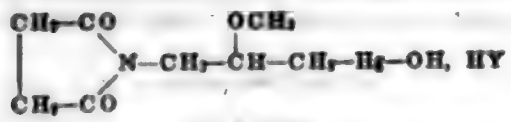
Kai Arne Jensen, Copenhagen, and Carl Lund Jensen, Holte, Denmark, assignors to Aktieselskabet Ferrosan, Copenhagen, Denmark, a firm

No Drawing. Application April 27, 1956
Serial No. 580,985
Claims priority, application Denmark August 22, 1955
5 Claims. (Cl. 260—242)

1. 3-mercuric-2-methoxy-1-succinimidopropane derivatives selected from the group consisting of compounds of the formulae:



wherein X denotes an acid residue selected from the group consisting of chlorine and acetoxy, and



wherein HY denotes a purine compound selected from the group consisting of theophylline, caffeine, and theobromine.

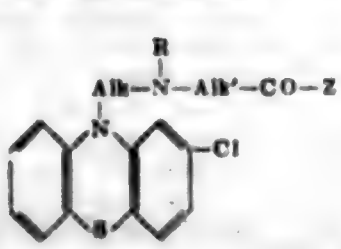
2,860,137

HALOGENATED 10-PHENOTHIAZINYLALKYL-AMINOALKANOIC ACID ESTERS AND AMIDES

John W. Cusic, Skokie, and Harmon S. Lowrie, Northbrook, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application August 16, 1956
Serial No. 604,309
10 Claims. (Cl. 260—243)

1. A compound of the formula



wherein Alk is an alkylene radical containing at least 2 and less than 4 carbon atoms; Alk' is an alkylene radical containing fewer than 3 carbon atoms; Z is selected from the group consisting of lower alkoxy, amino, and (lower alkyl) amino radicals; and R is selected from the group consisting of lower alkyl radicals and lower alkyl radicals terminally substituted by the radical

—CO—Z

Z being defined as before.

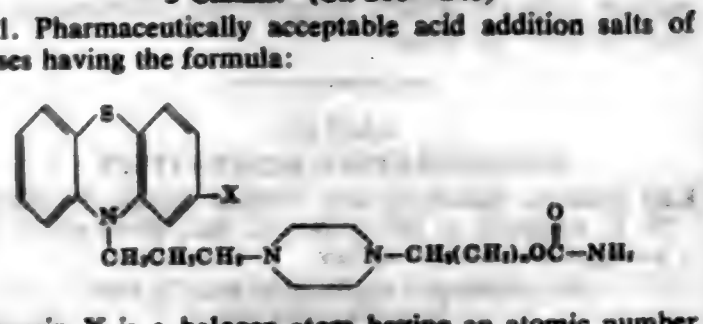
2,860,138

CARBAMATE ESTERS OF HYDROXYALKYL PIPERAZINO ALKYL PHENOTHIAZINES

Margaret H. Sherlock, Bloomfield, and Nathan Sperber, North Caldwell, N. J., assignors to Schering Corporation, Bloomfield, N. J., a corporation of New Jersey

No Drawing. Application November 21, 1956
Serial No. 623,547
5 Claims. (Cl. 260—243)

1. Pharmaceutically acceptable acid addition salts of bases having the formula:



wherein X is a halogen atom having an atomic number greater than 9 but less than 53, and *n* is a natural number less than 3.

2,860,139

PROCESS FOR THE PREPARATION OF ISO-CYANURIC ACID MONOVINYLESTER

Helmut Meis and Hubert Sauer, Letmathe, Germany, assignors to Rütgerswerke-Aktiengesellschaft, Frankfurt am Main, Germany

No Drawing. Application August 26, 1955
Serial No. 530,908
Claims priority, application Germany September 1, 1954
5 Claims. (Cl. 260—248)

1. A process for preparing isocyanuric acid monovinylester from triallyl cyanurate, comprising heating triallyl cyanurate in a boiling aromatic liquid hydrocarbon solvent, in the presence of an alkylation catalyst selected from the group consisting of boron trifluoride diacetic acid and surface-active bleaching earth catalysts and in the presence of 3 to 5 mols of a phenolic compound, selected from the group consisting of phenol (C_6H_5OH), chlorinated phenols, cresols and xylenols, for each mol of the triallyl cyanurate, until said monovinylester is formed.

2,860,140

STABILIZATION OF 2-METHYL-5-VINYLPYRIDINE

Clyde W. Mertz, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application June 15, 1953
Serial No. 361,872
12 Claims. (Cl. 260—290)

12. A composition containing 2-methyl-5-vinylpyridine stabilized against proliferous polymer formation having incorporated therein 0.01–5 weight percent based on said compound of at least one compound selected from the group consisting of azobenzene, phenylhydrazine, phenylhydrazine hydrochloride, butyrylhydrazine, and azoxybenzene.

2,860,141

INTERMEDIATE FOR PYRIDOXINE AND PROCESS

Clifford E. Larrabee, New London, Conn., assignor to Chas. Pfizer & Co., Brooklyn, N. Y., a corporation of Delaware

No Drawing. Application May 15, 1957
Serial No. 659,314
7 Claims. (Cl. 260—295.5)

5. A compound chosen from the group consisting of 2-methyl-3-amino-6-chloropyridine-4,5-dicarboxylic acid and the salts thereof.

2,868,142

MANUFACTURE OF SULFENAMIDES

James C. Conly, Naugatuck, Conn., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application April 2, 1957
Serial No. 650,866
4 Claims. (Cl. 260—306.6)

1. A process of making bis(sulfen)amides which comprises reacting an N-substituted monosulfenamide with a member selected from the class consisting of acetic, propionic, and butyric anhydrides.

2,868,143

WETTING AGENTS AND THEIR PREPARATION

William E. Thompson, Wallingford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application March 2, 1956
Serial No. 568,982
7 Claims. (Cl. 260—389.6)

1. Method for preparing wetting agents which comprises: partially oxidizing by means of oxygen-containing gas a charge stock containing a major proportion of a material selected from the group consisting of alkyl-substituted cyclic sulfonic acids, alkali metal salts thereof, and alkaline earth metal salts thereof, until carboxyl acidity has been produced requiring for neutralization 0.1 to 1.0 mole of sodium hydroxide per mole of the original sulfonic acids; and admixing the oxidation product containing carboxyl groups with a nitrogen base, thereby to neutralize carboxyl groups with said nitrogen base.

2,868,144

PREPARATION OF PEROXY-SULFONATES

Herbert Wirth, Duesseldorf-Holthausen, Germany, assignor to Henkel & Cie, G. m. b. H., Duesseldorf-Holthausen, Germany, a German corporation

No Drawing. Application December 19, 1955
Serial No. 553,707
Claims priority, application Germany December 23, 1954
8 Claims. (Cl. 260—345.1)

1. Process for the preparation of peroxy-sulfonates, which comprises contacting a hydroperoxide salt containing a member selected from the group consisting of alkali and alkaline earth metal cations with a sultone containing 3 to 4 carbon atoms, and recovering the peroxy-sulfonate formed.

2,868,145

PREPARATION OF DICHLOROMALEIC ACID AND DICHLOROMALEIC ANHYDRIDE

George B. Kelly, Jr., and Charles H. Braithwaite, Jr., South Charleston, W. Va., and Dwight Williams, Needham Heights, Mass., assignors to Food Machinery and Chemical Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application June 2, 1955
Serial No. 512,864
16 Claims. (Cl. 260—346.8)

11. The method of claim 8, wherein unreacted nitric acid is separated by reducing the nitric acid to volatile products with a low boiling readily oxidizable organic compound, and distilling off said low boiling organic compound and volatile products.

2,868,146

MANUFACTURE OF EPIHALOHYDRINS

Kenneth E. Furman, Richmond, Harry de V. Finch, Berkeley, and George W. Hearne, Lafayette, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application April 14, 1955
Serial No. 501,454
11 Claims. (Cl. 260—348.6)

1. A process for producing epichlorohydrin which comprises contacting acrolein with chlorine in a mole ratio of about 0.9:1 to about 1.1:1 at about −20° C. to about 30° C. whereby addition of the chlorine to the double bond with formation of alpha,beta-dichloropropionaldehyde takes place, reacting the alpha,beta-dichloropropionaldehye with a secondary alcohol containing from 4 to 12 carbon atoms and of the class consisting of the secondary unsubstituted alkanols and unsubstituted cycloalkanols and an aluminum alcoholate of a secondary alcohol containing from 4 to 12 carbon atoms and of the class consisting of the secondary unsubstituted alkanols and cycloalkanols, to effect transfer of hydrogen from said alcohol to said dichloropropionaldehyde and form glycerol 1,2-dichlorohydrin together with the ketone corresponding to said alcohol reactant, and dehydrochlorinating the glycerol 1,2-dichlorohydrin by reaction with at least 10% excess of a base of the class consisting of the oxides, hydroxides, carbonates and bicarbonates of alkali metals and of alkaline earth metals to form epichlorohydrin.

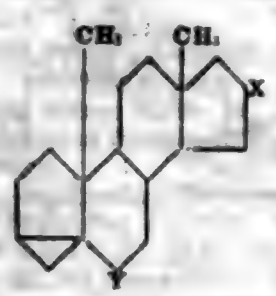
2,868,147

3,5-CYCLO STEROIDS AND THE PRODUCTION THEREOF

Max N. Huffman, Oklahoma City, Okla., assignor to Lasdon Foundation, Inc., Yonkers, N. Y., a corporation of Delaware

Application December 10, 1956, Serial No. 627,988
22 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein X is a member of the group consisting of hydroxyl, oxo, —OR and —OOCR radicals and Y is a member of the group consisting of hydroxyl, —OR and —OOCR radicals, wherein R is a hydrocarbon having from one to seventeen carbon atoms.

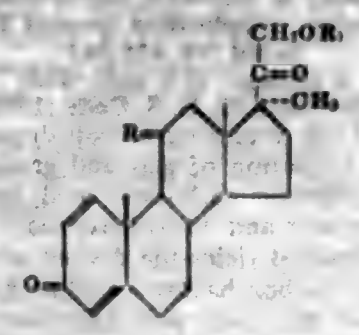
2,868,148

17α-METHYL-Δ[1,4]-PREGNADIENE COMPOUNDS

Emanuel B. Hershberg, West Orange, N. J.

No Drawing. Application March 22, 1955
Serial No. 496,065
9 Claims. (Cl. 260—397.45)

1. Steroids of the formula



wherein R is a member of the group consisting of H, H; H, α—OH; H, β—OH; and O, and R_1 is a member of the group consisting of H and lower alkanoyl.

2,868,155

PHOSPHINATES AND METHODS OF PREPARING

(A) compounds of the etiocholane series having the formula

2,860,149
PROCESS FOR THE SAPONIFICATION OF 21-ESTERS OF 20-KETO PREGNANES

Bjarte Lofen and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S. A., Mexico City, Mexico, a corporation of Mexico

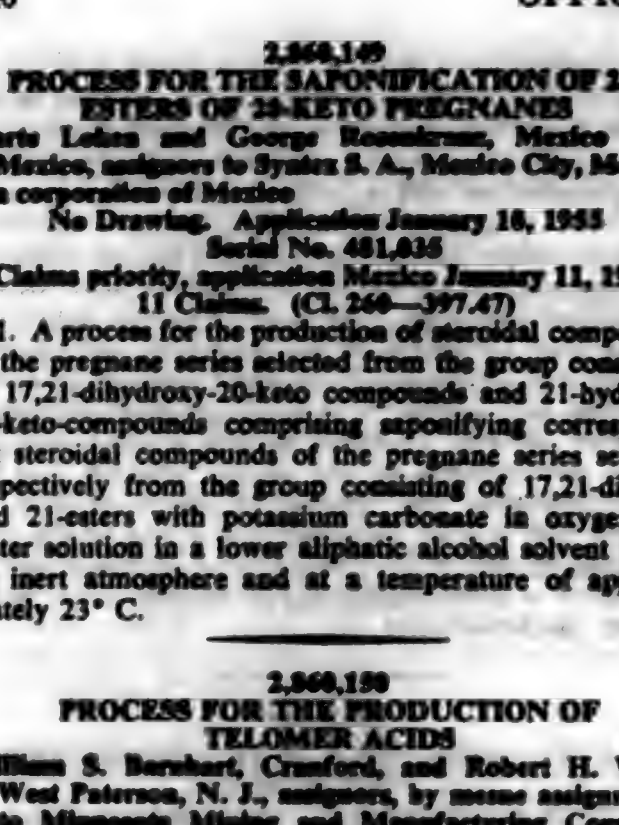
No Drawing. Application January 18, 1955
Serial No. 481,835
Claims priority, application Mexico January 11, 1954
11 Claims. (Cl. 260—397.47)

1. A process for the production of steroidal compounds of the pregnane series selected from the group consisting of 17,21-dihydroxy-20-keto compounds and 21-hydroxy-20-keto-compounds comprising saponifying corresponding steroidal compounds of the pregnane series selected respectively from the group consisting of 17,21-diesters and 21-esters with potassium carbonate in oxygen-free water solution in a lower aliphatic alcohol solvent under an inert atmosphere and at a temperature of approximately 23° C.

2,860,150
PROCESS FOR THE PRODUCTION OF TELOMER ACIDS

William S. Bernhart, Cranford, and Robert H. Wade, West Paterson, N. J., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application October 18, 1955, Serial No. 541,212
7 Claims. (Cl. 260—408)



1. A process which comprises hydrolyzing a perfluorochlorinated telomer with oleum in a reaction zone at an elevated temperature and pressure to produce a hydrolysis product, said elevated temperature being below the decomposition temperature of said telomer and said hydrolysis product but not substantially below 200° C., cooling the reaction mixture below reaction temperature and diluting the reaction mixture with water to effect the separation of a product layer and a sulfuric acid layer, separating the products in the product layer, and recovering a telomer acid as a product of the process.

2,860,151
METHOD FOR THE MANUFACTURE OF SOAP

Edward Robert Lamson, Sewell, N. J., and Theodore A. Renshaw, Glenolden, Pa.

No Drawing. Application January 20, 1954
Serial No. 405,263
6 Claims. (Cl. 260—413)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A method for preparing a soap displaying unusual activity in the formation of gels and greases comprising dissolving an alphatic carboxylic acid from the group consisting of stearic and 12-hydroxystearic acids, which acid when neutralized yields the desired soap constituent, in a liquid hydrocarbon having a boiling point below the melting point of the soap, said hydrocarbon being one from the group consisting of naphtha, light petroleum distillates, terpenes and aromatic hydrocarbon; neutralizing said acid with a metal base from the group consisting of the oxides, hydroxides and carbonates of lithium, calcium, sodium, barium and zinc causing precipitation of the soap form in the liquid hydrocarbon; and evaporating the hydrocarbon.

2,860,152
METHOD OF PRODUCING CYCLIC DIORGANOSILOXANES

Herbert J. Fletcher, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application April 26, 1956
Serial No. 580,708
1 Claim. (Cl. 260—448.2)

The method of producing cyclic diorganosiloxanes having a composition different from the starting siloxane and a boiling point below that of the starting siloxane which comprises heating together (*a*) a diorganosiloxane in which the organic radicals are selected from the group consisting of aliphatic monovalent hydrocarbon radicals of less than 6 carbon atoms, aliphatic monovalent halogenohydrocarbon radicals of less than 6 carbon atoms, monocyclic aryl radicals and monocyclic halogenoaryl radicals and in which there is at least one of said aliphatic radicals per silicon atom and (*b*) an inert solvent boiling above 250° C., said solvent being present in amount of at least 20 percent by weight based on the weight of the siloxane, in the presence of a catalyst selected from the group consisting of alkali metal hydroxides and alkali metal salts of silanols, under conditions of temperature and pressure insufficient to cause distillation of the solvent, while simultaneously removing the desired cyclic siloxanes from the reaction zone.

2,860,153
METHOD OF PREPARING β-CYANOETHYLTRICHLOROSILANE

John C. Saam, Roseville, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application April 25, 1957
Serial No. 655,015
2 Claims. (Cl. 260—448.2)

1. A method of preparing β-cyanoethyltrichlorosilane which comprises heating at a temperature of less than 150° C. a mixture of acrylonitrile, trichlorosilane and a a catalytic amount of an amide selected from the group consisting of $RCONR'_2$ and $ArNHOCR''$ where R is selected from the group consisting of hydrogen, saturated aliphatic hydrocarbon radicals and aromatic hydrocarbon radicals, R' is a lower alkyl radical, Ar is an aryl hydrocarbon radical and R'' is selected from the group consisting of hydrogen and alkyl radicals.

2,860,154
FLUORINATED ORGANIC ISOCYANATES AND THEIR PREPARATION

James Charles Kauer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 28, 1956
Serial No. 612,872
10 Claims. (Cl. 260—453)

1. A compound having the formula:

$$R—O—CF_2—NCO$$

where R is an organic radical of the group consisting of hydrocarbon and monohalohydrocarbon radicals having not more than 8 carbon atoms and in which the halogen is a member of the group consisting of fluorine, chlorine and bromine.

1. A process for producing epichlorohydrin which comprises contacting acrolein with chlorine in a mole

H, α—OH; H, β—OH; and O, and R_1 is a member of the group consisting of H and lower alkanoyl.

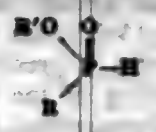
2,860,135

PHOSPHINATES AND METHODS OF PREPARING SAME

Edward N. Walsh, Chicago Heights, Ill., assignor to Victor Chemical Works, a corporation of Illinois

No Drawing. Application April 30, 1956
Serial No. 581,388
10 Claims. (Cl. 260—461)

1. A method for making phosphinates of the formula



wherein R is a member of the class consisting of alkyl, haloalkyl, alkenyl, aryl, and substituted aryl radicals and R' is a member of the class consisting of alkyl, alkenyl, aryl, and chloroalkyl radicals, which comprises reacting a phosphonite of the formula

$$R-P(OR')_2$$

with a phosphinic acid of the formula

wherein R and R' are defined as above.

2,860,156

PENTAERYTHRITOL TRINITRATE HALF ESTERS OF DICARBOXYLIC ACIDS

William N. Cannon, Greenwood, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Application April 4, 1955
Serial No. 499,318
4 Claims. (Cl. 260—467)

1. The mono pentaerythritol trinitrate ester of a saturated lower aliphatic dicarboxylic acid selected from the class consisting of succinic and glutaric acids and lower alkyl substituted succinic and glutaric acids, said acid having a total of not more than 9 carbon atoms.

2,860,157

MAKING TRANS N-CARBAMYLAMIC ESTERS

Charles H. Stiteler, Hillsdale, N. J., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application October 10, 1956
Serial No. 615,697
8 Claims. (Cl. 260—482)

1. In a process of making esters of trans N-carbamylamic unsaturated acids and non-tertiary alcohols by cis-trans isomerization of the same ester of the corresponding cis N-carbamylamic unsaturated acids, the improvement which consists in the step of isomerizing the ester of the said cis acid in the presence of water and a tertiary amine having a pH value in water not in excess of about 10.

2,860,158

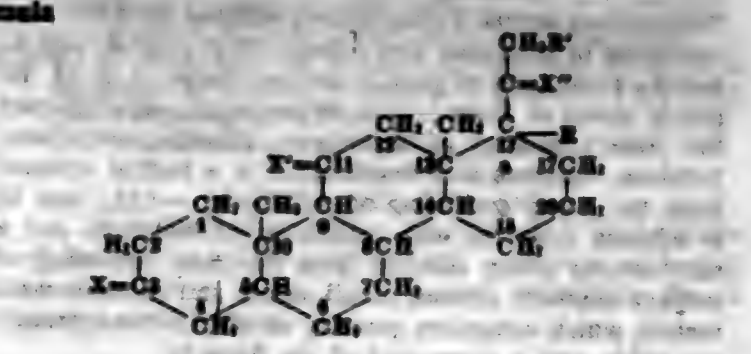
COMPOUNDS OF THE PERHYDROCHRYSENE SERIES AND PREPARATION THEREOF

Raymond O. Clinton, North Greenbush Township, Rensselaer County, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application October 18, 1954
Serial No. 463,055
16 Claims. (Cl. 260—488)

1. A compound selected from the group consisting of:

(A) compounds of the etiocholane series having the formula



wherein X=, X'= and X'' are selected from the class consisting of

R is selected from the class consisting of H, OH and OAcyl, and R' is selected from the class consisting of H, OH, OAcyl, chlorine, bromine and iodine, Acyl in all cases being selected from the group consisting of lower-alkanoyl, carboxy-lower-alkanoyl and monocarbocyclic aroyl groups; (B) compounds of the etiocholane series of the above formula in which a hydrogen atom at position 17 and the group R at position 17a are eliminated thus having a double bond in the 17,17a-position; and (C) compounds of the etiocholane series of the above formula having a halogen atom selected from the group consisting of chlorine, bromine and iodine in place of one of the hydrogen atoms at position 4, X being O.

2,860,159

PROCESS FOR PREPARATION OF VINYL MONOESTERS

Shelby P. Sharp and Alfred Steitz, Jr., Tulsa, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware

No Drawing. Application December 28, 1956
Serial No. 631,075
11 Claims. (Cl. 260—491)

1. In a process for the preparation of a vinyl monoester from the corresponding alkylidene diester of a carboxylic acid having from 2 to 18 carbon atoms, the improvement which comprises effecting the decomposition of said diester in a reaction zone in the presence of not more than about 1 weight percent of sulfuric acid, based on said diester, subjecting this mixture to a temperature above the boiling point of said vinyl monoester and the acid generated in the decomposition of said diester but below the boiling point of the latter, whereby said monoester and said acid are immediately removed from said zone as formed to avoid contact with the sulfuric acid in said zone, and recovering said monoester.

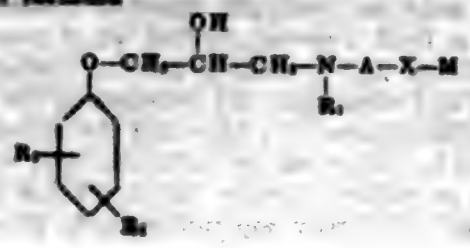
2,860,160

PREPARATION OF AMINOALKYL ACIDS AND DERIVATIVES THEREOF

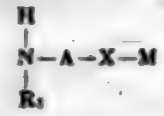
Robert L. Sundberg, Plainfield, N. J., and Max E. Chiddix, Easton, and Earl P. Williams, Pen Argyl, Pa., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application November 19, 1956
Serial No. 622,735
17 Claims. (Cl. 260—501)

1. Process for the preparation of compounds having the general formula

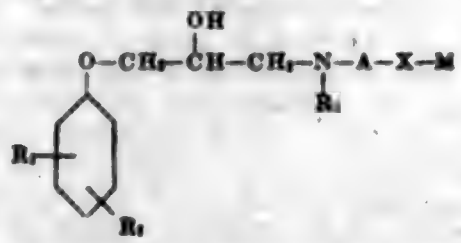


wherein R_1 represents an alkyl radical having at least three carbon atoms, R_2 and R_3 are selected from the class consisting of hydrogen and a lower alkyl radical, and R_1 and R_2 must total at least 6 carbon atoms, A is an aliphatic group of from 1 to 6 carbon atoms selected from the class consisting of methylene, ethylene, propylene, butylene, amylene and hexylene, X is a radical selected from the group consisting of $—SO_3$ and $—CO_2$, and M is selected from the class consisting of hydrogen and a salt-forming group selected from the class consisting of tertiary aliphatic amines, alkali metals and alkaline earth metals, which comprises reacting an alkylphenoxypropylene oxide with a compound of the formula



wherein R_3, A, X and M are as above.

13. A compound of the general formula



wherein R_1 represents an alkyl radical having at least three carbon atoms, R_2 and R_3 are selected from the class consisting of hydrogen and a lower alkyl radical, and R_1 and R_2 must total at least 6 carbon atoms, A is an aliphatic group of from 1 to 6 carbon atoms selected from the class consisting of methylene, ethylene, propylene, butylene, amylene and hexylene, X is a radical selected from the group consisting of $—SO_3$ and $—CO_2$, and M is selected from the class consisting of hydrogen and a salt-forming group selected from the class consisting of tertiary aliphatic amines, alkali metals and alkaline earth metals.

2,860,161

HEXACHLOROBICYCLOHEPTENYL BENZENESULFONIC ACID

Louis Schmerling and John P. Luvisi, Riverside, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application September 28, 1955
Serial No. 537,289
2 Claims. (Cl. 260—505)

1. An insecticidal composition comprising an aqueous solution of p-(1,4,5,6,7,7-hexachlorobicyclo[2.2.1]-5-hepten-2-yl)benzenesulfonic acid.

2,860,162

PROCESS OF OXIDATION

Bo Thuresson af Ekenstam, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

No Drawing. Application June 2, 1951
Serial No. 229,655
Claims priority, application Sweden June 12, 1950
15 Claims. (Cl. 260—507)

1. Method of oxidizing a hydrophilic cyclic compound having at least one nuclearly attached carbon containing group to form a carboxylic acid which comprises the following steps: (*a*) forming a solution comprising said compound and nitric acid, (*b*) maintaining the said solution in a closed zone, (*c*) elevating the temperature of the solution to initiate the oxidation reaction, and (*d*) allowing the oxidation to proceed to completion at (i) high velocity and (ii) under superatmospheric pressure.

2,860,163

PRODUCTION OF ASPARAGINE

Harold L. Fike, Chicago, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application December 29, 1955
Serial No. 556,063
4 Claims. (Cl. 260—527)

1. A process for recovering asparagine from potato starch waste water containing nitrogenous and other impurities which comprises initially concentrating said waste water to at least about 15% solids content, admixing with the concentrated solution a precipitating agent selected from the group consisting of the tannins and the alkali lignins, separating the precipitate from the liquid phase, further concentrating the purified concentrated waste water to the point of supersaturation with respect to asparagine when the waste water so concentrated is at a temperature in the range between about 30° C. and the freezing point thereof, and crystallizing asparagine from said concentrated waste water while maintaining the temperature thereof within said range.

2,860,164

CARBOXYMETHYLATION OF PRIMARY AND SECONDARY AMINES

Harry Kroll, Warwick, R. I., and Florence P. Butler, Amherst, Mass., assignors to Geigy Chemical Corporation, Ardsley, N. Y., a corporation of Delaware

No Drawing. Application August 7, 1957
Serial No. 676,717
5 Claims. (Cl. 260—534)

1. A method of carboxymethylating an aliphatic amine having at least one replaceable hydrogen atom attached directly to an amino nitrogen atom, which comprises continuously adding an aqueous solution of glycolonitrile to an aqueous solution of the said amine containing ab initio sufficient strong base to maintain a pH of at least 12 throughout the reaction, and maintaining the reaction mixture at said pH and at a temperature within the range from about 85° C. to the boiling point of the mixture.

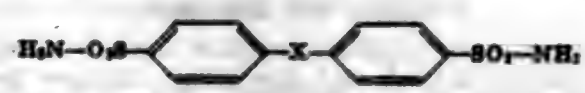
2,860,165

DIARYL DISULFONAMIDES AND PROCESSES FOR THEIR PRODUCTION

Ernst Schraufstätter, Wuppertal-Elberfeld, Germany, assignor to Schenley Industries, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application January 19, 1955
Serial No. 482,885
Claims priority, application Germany January 25, 1954
5 Claims. (Cl. 260—556)

1. As a chemical compound, a diaryl disulfonamide having the general formula:



in which X is a member selected from the group consisting of carbonyl, dicarbonyl and lower divalent alkyl radicals having from 1 to 5 carbon atoms.

2,860,166

N-CHLORO CHLOROBENZAMIDE

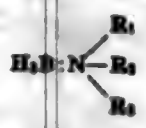
Jack S. Newcomer, Wilson, Keith J. Smith, Lockport, and Jerome Linder, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application January 21, 1955
Serial No. 483,436
1 Claim. (Cl. 260—558)

A process for the production of N-chloro-m-chlorobenzamide which comprises chlorination of m-chlorobenzamide with chlorine in the presence of an inorganic weak base.

2,860,167
BORINE TRIALKYL AMINES
Herbert C. Brown, West Lafayette, Ind., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application October 7, 1953
Serial No. 384,759
8 Claims. (Cl. 260—583)

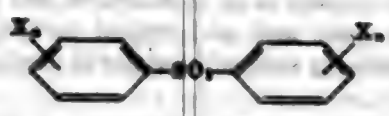
7. An addition compound wherein one molecule of borine is bonded to one molecule of a trialkyl amine corresponding to the general formula



wherein R_1, R_2 and R_3 represent alkyl groups and wherein the total number of carbon atoms in the three alkyl groups varies from 4 to 12.

2,860,168
PREPARATION OF DIARYL SULFONES
Arthur E. Erickson, Cranford, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey
No Drawing. Application January 30, 1957
Serial No. 637,975
3 Claims. (Cl. 260—607)

1. A process for producing halogenated diphenyl sulfones having the general formula



where X is a halogen and n is a positive integer between 1 and 2 inclusive, which comprises combining chlorosulfonic acid with a halobenzene compound selected from the group consisting of the monohalobenzenes, o-dihalobenzenes, and m-dihalobenzenes in the molar ratio of about 2:1, maintaining the temperature below 10° C. during reaction, thereafter adding a further quantity of halobenzene compound such that the molar ratio of chlorosulfonic acid to total halobenzene compound is approximately 1:1, heating the reaction mixture to a temperature in the range of 40° to 60° C., and recovering the resulting halo-substituted diaryl sulfone.

2,860,169
PROCESS FOR PRODUCING 1,2,3-TRIALKYLBENZENES BY ALKYL TRANSFER REACTIONS
Maurice J. Schlatter, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Application March 25, 1953
Serial No. 344,655
3 Claims. (Cl. 260—672)

1. A process for producing 1,2,3-trialkyl benzenes which comprises contacting a trialkyl benzene of the group consisting of 1,2-dialkyl-4-tertiary-butyl benzenes and 1,3-dialkyl-5-tertiary-butyl benzenes in which the alkyl groups in the 1, 2 and 3 positions contain from 1 to 3 carbon atoms with nontertiary alkylating agent containing 6 to 20 carbon atoms in the presence of an alkylation catalyst under alkylating conditions to selectively replace the nuclear hydrogen atom furthest removed from the tertiary-butyl group with the alkylating agent, contacting the resultant 1,2,3-trialkyl-5-tertiary-butyl benzene with a benzene hydrocarbon of the group consisting of benzene, toluene, ortho-xylene and meta-xylene in the presence of a liquid alkylation catalyst under alkylating conditions and temperatures in the range of −10 to +100° C. to remove the tertiary-butyl group from the 1,2,3-trialkyl-5-tertiary-butyl benzene and recovering a 1,2,3-trialkyl benzene from the reaction product.

2,860,170
PREPARATION OF DIMETHYL ETHER FROM ALKALI METAL METHYL CARBONATES
John M. Criscione and William H. Bernauer, Butler, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application April 29, 1957
Serial No. 655,524
5 Claims. (Cl. 260—614)

1. A method of preparing dimethyl ether that consists of heating an alkali metal methyl carbonate at a temperature above about 225° C., and recovering the dimethyl ether formed.

2,860,171
PRODUCTION OF 1,1 DIALKOXYALKANES FROM ALCOHOLS
Arthur C. Whitaker, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Application August 15, 1955
Serial No. 528,569
9 Claims. (Cl. 260—615)

1. A process for converting at least one aliphatic primary monofunctional alcohol to a product comprising 1,1-dialkoxyalkanes which comprises refluxing said alcohol at a temperature of about 120° to about 285° C. in the presence of a strong dehydrogenation catalyst for about 5 to about 12 hours while permitting hydrogen and water formed during the reaction to escape from the reaction zone.

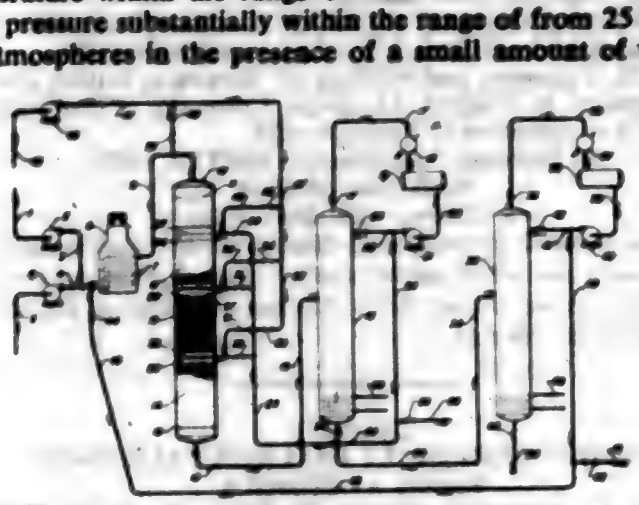
2,860,172
MANUFACTURE OF FLUORINATED ORGANIC COMPOUNDS
Cyril Woolf, Long Island City, N. Y., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Application February 17, 1954
Serial No. 411,015
4 Claims. (Cl. 260—653.7)

1. The process for fluorinating an organic compound which comprises introducting a gas-phase mixture of substantially anhydrous HF and a substantially anhydrous saturated aliphatic perhalogenated organic carbon compound—containing not more than two carbon atoms, not more than two fluorine atoms, at least two chlorine atoms attached to the same carbon atom, and wherein all halogens are of the group consisting of chlorine and fluorine—into a reaction zone containing substantially anhydrous zirconium fluoride catalyst having crystallite size not substantially greater than about 400 Angstrom units radius and having been derived by reaction of substantially anhydrous $ZrCl_4$ and substantially anhydrous HF, heating said mixture in said zone in contact with said catalyst at fluorination temperature in the approximate range of 200–300° C. to effect fluorination of a substantial amount of said compound to form gaseous reaction product comprising organic fluorinated compound, withdrawing said product from said zone and recovering said fluorinated compound from said product.

2,860,173
MANUFACTURE OF ISOPROPYL BENZENE BY ALKYLATION
Edwin K. Jones, Evanston, and Delmar D. Dettner, Des Plaines, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Application January 31, 1955, Serial No. 485,022
8 Claims. (Cl. 260—671)

1. A process for producing mono-isopropyl benzene, which comprises contacting a reactant stream comprising benzene and propylene in a molal proportion substantially within the range of from 3:1 to 8:1 with a mass of solid phosphoric acid alkylation catalyst in the form of at least two successive separate catalyst beds at a tem-

perature within the range of from 204° to 260° C. and a pressure substantially within the range of from 25 to 60 atmospheres in the presence of a small amount of water



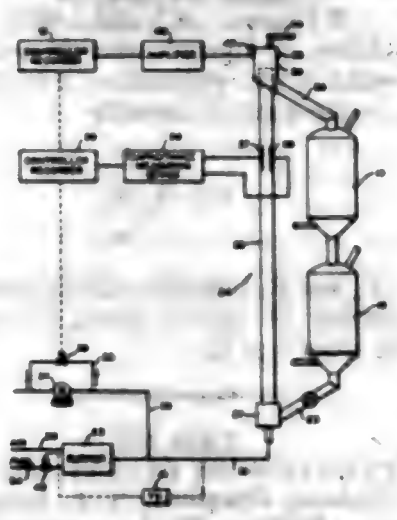
sufficient to maintain the catalyst in a state of hydration, and so proportioning the volumes of catalyst contained in said successive beds that the temperature rise through each catalyst bed does not exceed 25° C.

2,860,174
PNEUMATIC TRANSPORTATION OF SOLID MATERIALS

John W. Begley and Robert L. McIntire, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application February 8, 1954, Serial No. 408,724
19 Claims. (Cl. 260—679)

1. A method of operating a gas lift elevator which comprises supplying particulate solid material to the lower portion of a gas lift conduit, passing a stream of lift gas into the lower portion of said conduit; entrapping solid material in said stream of lift gas, thereby raising said solid material to the upper end of said conduit; continuously measuring a first variable proportional to the amount of solid material flowing in said conduit per unit time; supplying lift gas to the lower portion of said con-



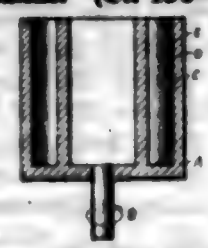
duit at a rate sufficient to maintain said first variable at a fixed value; measuring a second variable proportional to the linear velocity of said solid material in the upper end of said conduit; changing the fixed value of said first variable in accordance with said measured second variable; regulating the supply of said lift gas to the lower portion of said conduit so as to maintain said first variable at its changed value and said second variable at a fixed value; and separating said solid material from said stream of lift gas.

ELECTRICAL

2,860,175
HOMEOPOROUS GAS-DIFFUSION ELECTRODE FOR GALVANIC CELLS

Eduard Justi, Braunschweig, Germany, assignor to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, and Steinkohlen-Elektrizitat Aktiengesellschaft, Essen, Germany

Application September 5, 1956, Serial No. 608,071
Claims priority, application Germany September 5, 1955
7 Claims. (Cl. 136—120)



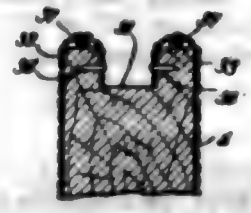
2. Process for the production of homeoporous sintered bodies such as gas-diffusion electrodes for fuel cells, which comprises forming a shaped body of finely divided particles selected from the group consisting of graphite, carbon and metal by distributing said particles around piles of a pile fabric having an average thickness between 1–25μ, 90% of which do not diverge direction by more than 45° from the shortest path between opposed surfaces of the body, converting the particles into solid form by at least one of compression and sintering and thereafter eliminating said pile fabric.

2,860,176
SCREEN ROOMS

Erik A. Lindgren, Chicago, Ill.

Application November 26, 1953, Serial No. 393,372
12 Claims. (Cl. 174—35)

1. A space isolating sectional shield for preventing the passage of high frequency waves therethrough comprising a rectangular panel having a sheet of metallic shielding material covering each face, at least one edge of said panel having margins of predetermined width forming lands extending inwardly from the respective panel faces, a resilient fillet disposed on and extending lengthwise of



each of said lands, and the margins of each shielding sheet adjacent said one panel edge being turned over the adjacent land and the fillet thereon and then inset edgewise into the panel below the plane of said lands, the margins of said shielding sheets being spaced and electrically isolated from each other.

2,860,177
TELEGRAPH SYSTEM

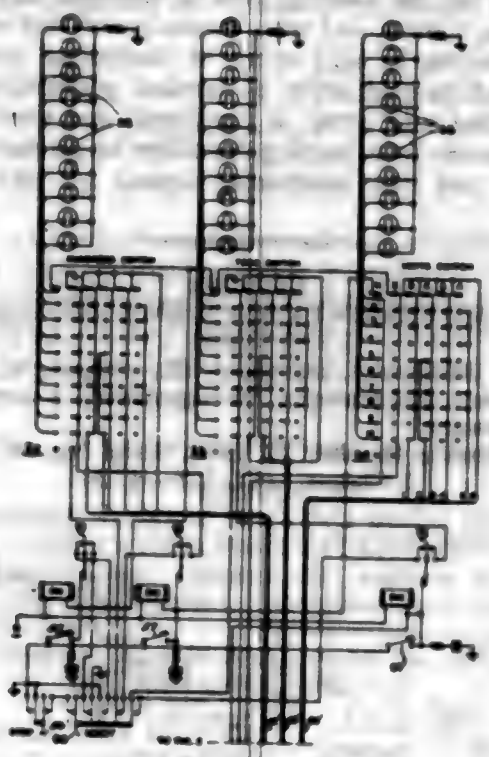
Theodore S. Peengno, West Nyack, and William B. Blanton, Rockville Center, N. Y., and Bruce V. Magee, Middletown, N. J., assignors to The Western Union Telegraph Company, New York, N. Y., a corporation of New York

Application March 31, 1955, Serial No. 498,378
7 Claims. (Cl. 178—2)

1. In a multistation telegraph system, a central office, a plurality of other stations, a line connecting said other stations to said central office, means for transmitting messages from said central office to said line, means for automatically preceding each message transmitted to said line by a sequence of a predetermined number of signals including nonselecting code signals one for each of said

level in the recorder including means for rendering the ... rontal positioning means and to said array of vertical

other stations, and means manually operable prior to the transmission of a message for conditioning said station nonselecting code signal transmitting means to selectively

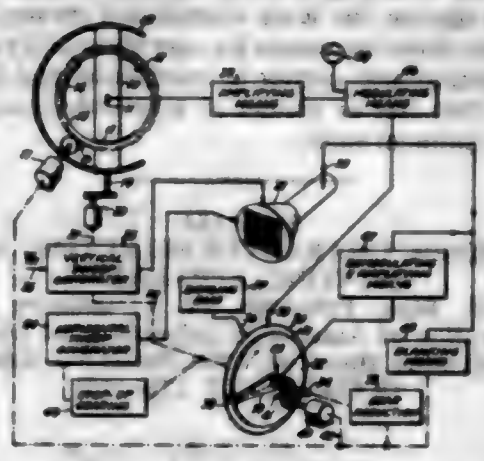


change one or more of the nonselecting code signals to station code signals whereby station selecting code signals representative of selected ones of said other stations which are to receive the following message are transmitted.

2,860,178
MULTIPLEX TRANSMISSION OF INTELLIGENCE
Benjamin Wolfe, Baltimore, Md.
Application August 10, 1956, Serial No. 603,430
6 Claims. (Cl. 178—5.8)

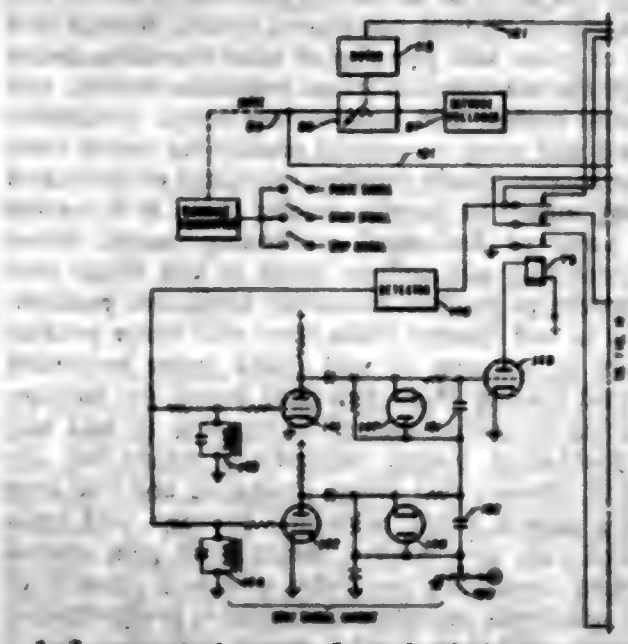
1. A system for television transmission of audio and video intelligence, comprising means for producing a first signal of a first frequency, amplitude modulated with video intelligence, means for producing a second signal, frequency modulated with audio intelligence about a frequency 4.5 mc. higher than said first frequency, means for heterodyning said two signals, means for detecting the video intelligence modulation envelope and the difference frequency of said two signals, said detected difference frequency being a frequency modulation of said audio intelligence about a frequency of 4.5 mc., and means for modulating a carrier with said detected video intelligence modulation envelope and said difference frequency, to provide an output at the frequency of said carrier amplitude modulated with said video intelligence, and an audio intelligence frequency modulated upper sideband of said carrier having a frequency of said carrier frequency plus 4.5 mc.

2,860,179
VIDEO-DISPLAY DEVICES
Henry Blachstein, Eaton's Neck, Northport, N. Y., assignor to Servo Corporation of America, Hyde Park, N. Y., a corporation of New York
Application November 25, 1953, Serial No. 394,346
22 Claims. (Cl. 178—6.6)



1. In a scanning mechanism of the character indicated, line-scanning means producing a video output signal, frame-storing means comprising a continuously rotated ring of magnetizable material synchronized with the line-scanning frequency and driven at a reduced rate relatively to the line frequency, recording-head means responsive to said signal and in recording relation with said material, whereby a plurality of successive scanned lines of said video signal may be stored by said material, pick-up head means mounted for rotation about the axis of said ring, means driving said pick-up head means at a rate substantially faster than said reduced rate, and display means having a recycling period synchronized with the rate of rotation of said pick-up head means and including intensity-modulation means responsive to the output of said pick-up head means.

2,860,180
REMOTE CONTROL SYSTEM FOR CONTINUOUS FACSIMILE RECORDER
Kenneth R. McConnell, Monmouth County, N. J., and Peter R. Marran, New York, N. Y., assignors to Times Facsimile Corporation, New York, N. Y., a corporation of New York
Application April 27, 1953, Serial No. 351,184
15 Claims. (Cl. 178—6.6)



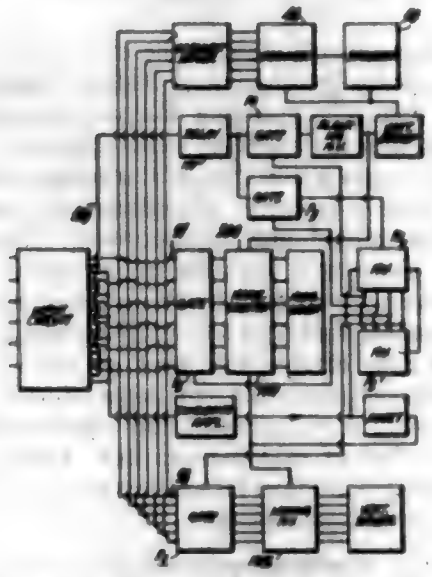
1. In a control system for a facsimile recorder responsive to control signals consisting of modulated and interrupted carrier current transmitted from the transmitting station, in combination, means for controlling the signal

ducer means connected to said output connections of said amplifier means, and feedback means connecting said out-

nals are conveyed by frequency modulating a carrier

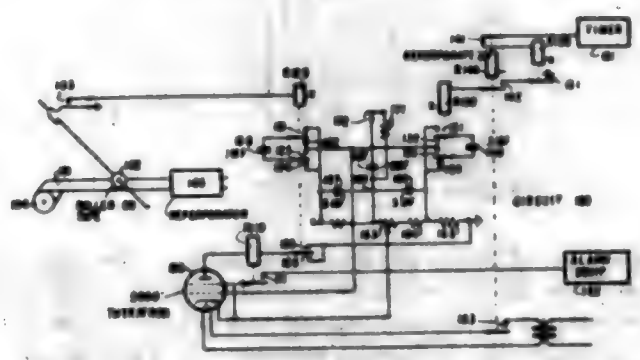
level in the recorder including means for rendering the signal level control operative only before the start of the subject copy transmission, means including a motor for adjusting the level control, means including a resonant circuit tuned to the carrier frequency for detecting the interrupted carrier sent preceding subject copy transmission, means including a relay for energizing the motor means to operate the level control and means including said carrier detecting means for operating said relay when the said interrupted carrier is transmitted and the signal level is either less or greater in amplitude than a predetermined optimum value.

2,860,181
ELECTRONIC CHARACTER SELECTING AND/OR PRINTING APPARATUS
Warren H. Bliss, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 31, 1954, Serial No. 420,059
18 Claims. (Cl. 178—15)



16. A system for positioning item combinations of images of indicia produced by a system for the selective production of electron beam images of said indicia comprising an input source providing coded input signals including image producing signals and item positioning signals; an array of horizontal positioning means; an array of vertical positioning means; a plurality of gates; a gate control means; said input source being connected to said image producing system, to said gate control means, to said array of horizontal positioning means and to said array of vertical positioning means through said plurality of gates; said plurality of gates providing means for selectively isolating said image producing system, said gate control means, said array of horizontal positioning means and said array of vertical positioning means from said input source; means coupling said array of horizontal positioning means to form a counter chain of a portion of said array of horizontal positioning means; driver means connecting said counter chain to said image producing system to provide successive horizontal positioning pulses to said counter chain from said image producing system in response to said coded image producing signals; said counter chain providing means for horizontally spacing successive images in response to said successive positioning pulses; coincidence means for discriminating between said image producing and said item positioning signals being connected between said input source and said gate control means; said gate control means being operatively associated with said plurality of gates for selectively operating said gates in predetermined combination; said gate control means including means for selectively operating said gates to isolate said image producing system from said input source and for connecting said input source directly to said array of horizontal positioning means and to said array of vertical positioning means; said array of horizontal positioning means and said array of vertical positioning means including means for presetting an initial beam positioning deflection for the ensuing item in response to said item positioning signals; and reset means connecting said coincidence means to said array of horizontal positioning means and to said array of vertical positioning means for restoring said array of horizontal and vertical positioning means to a starting condition in preparation for receiving said item positioning signals for said ensuing item.

2,860,182
TAPE MOVEMENT CHECK IN A TELEGRAPH SYSTEM
Harold J. McCreary, Lombard, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application October 22, 1953, Serial No. 387,580
3 Claims. (Cl. 178—17.5)



3. For use in a telegraph system having a transmitter, a reperforator, means for selecting and seizing the reperforator, means for causing the transmitter to send signals of a telegraph message to the reperforator, and means in the reperforator for recording the message in a tape supplied thereto from a tape reel, an alarm system comprising a cold cathode tube circuit, a control relay connected to the plate of the tube, means for applying a normal positive bias potential to the starter anode of the tube, means including said bias potential for causing the tube to pass current when the reperforator is seized thereby to operate said control relay, a circuit over which signals are sent from the transmitter to the reperforator, means controlled by the operation of said relay for completing said circuit, means controlled upon the seizure of the reperforator for periodically lowering the positive bias potential of the starter anode and for momentarily deionizing the tube to give the starter anode control of the circuit, means controlled by the movement of tape to the reperforator for periodically raising the positive bias potential of the starter anode, said seventh and eighth means maintaining the starter anode potential substantially at said normal positive potential, said seventh means preventing further passing of current by the tube if said eighth means fails to operate due to the failure of the tape to move, thereby to restore the control relay, said sixth means controlled upon the restoration of the control relay to open the signalling circuit, and means controlled upon the opening of the signalling circuit for giving an alarm and for preventing further transmission of signals by the transmitter.

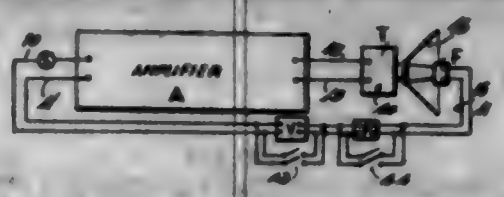
2,860,183
SOUND REPRODUCING SYSTEM
Ivan Willard Conrad, Alexandria, Va.
Application February 1, 1954, Serial No. 407,377
17 Claims. (Cl. 179—1)

1. A sound reproducing system comprising amplifier means having input and output connections, a signal source connected to said input connections, output trans-

rier frequency plus 4.5 mc.

station, in combination, means for controlling the signal

ducer means connected to said output connections of said amplifier means, and feedback means connecting said output transducer means within a feedback loop of the system, said feedback means including a separate feedback transducer mechanically coupled to said output transducer means, the output of said feedback transducer being con-



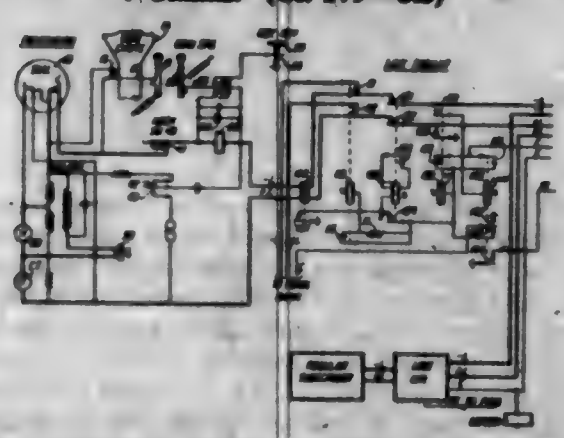
nected to an input connection of said amplifier means, and said feedback means further including variable phasing and variable attenuating networks whereby the phase and amplitude of the feedback energy are selectively controlled to vary the system response at selected regions in the frequency spectrum.

2,860,184

TELEPHONE SYSTEM SERVING BOTH REGULAR AND PAYSTATION TELEPHONES

Clarence E. Lemar, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application April 24, 1956, Serial No. 580,239
7 Claims. (Cl. 179—6.3)



1. In a telephone system, a calling paystation line, a finder-selector link having access thereto for extending a desired connection normally comprising line conductors, a line circuit individual to said paystation line, means including said finder operated responsive to the initiation of a call by said paystation for connecting said link with said paystation line over said line circuit to initiate the extension of said connection, a refund key at said paystation, means operated responsive to the operation of said refund key for unbalancing said line conductors in said connection, a differential relay in said line circuit having its windings connected in series with the said line conductors of said connection and operated responsive to said unbalancing of said line conductors in case said unbalancing takes place before said desired connection is further extended and completed, a release relay in said line circuit, means controlled by the operation of said differential relay for completing a circuit to operate said release relay, and means operated by said release relay for initiating the release of said connection.

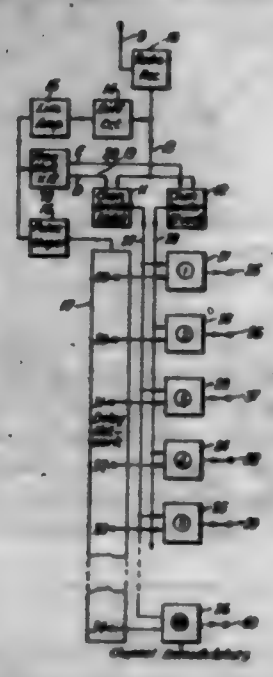
2,860,185

KEYED FREQUENCY MODULATION CARRIER WAVE SYSTEMS

Cyril Gordon Treadwell, London, England, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application July 9, 1953, Serial No. 367,849
Claims priority, application Great Britain July 16, 1952
4 Claims. (Cl. 179—15)

1. A receiver for a multichannel electric pulse position modulation system of communication in which signals are conveyed by frequency modulating a carrier wave with a wave of rectangular pulses having a plurality of boundary edges, each boundary edge being time-position modulated in accordance with a corresponding complex signal wave, the said boundary edges corresponding alternately to odd- and even-numbered channels, comprising means for recovering the said wave of rectangular pulses from the frequency modulated carrier wave, means for applying the recovered wave of rectangular pulses to first and second channel dividers, the first channel divider including an electron device having parallel inputs



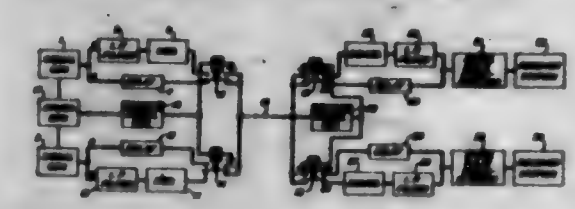
for simultaneously applying thereto two trains of rectangular pulses derived from the recovered wave and for deriving from the recovered wave a plurality of interleaved trains of rectangular duration modulated pulses corresponding to odd-numbered channels, and the second channel divider including means for deriving from the recovered wave a plurality of interleaved rectangular duration modulated pulses corresponding to even-numbered channels, and means for separately recovering the corresponding complex signal wave from each individual train of rectangular duration modulated pulses.

2,860,186

TELEVISION TRANSMISSION CHANNEL SHARING SYSTEM

John R. Hefele, Yonkers, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application July 6, 1954, Serial No. 441,195
13 Claims. (Cl. 179—15)



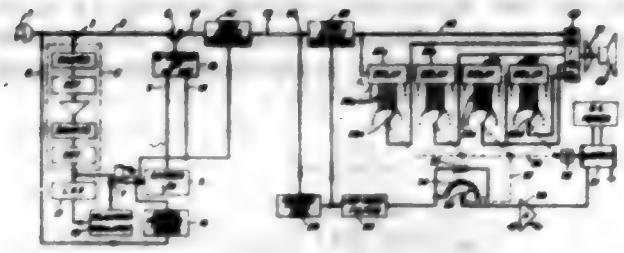
1. A television transmission system comprising means for deriving from first and second video signals a pair of low frequency signals representative respectively of the coarse components of two television picture images and another pair of signals including the frequencies representative of the fine components of the television picture images, transmission means, and means for applying said pairs of signals to said transmission means in such manner that the low frequency portions of said video signals are transmitted simultaneously and the high frequency portions of said video signals are transmitted alternatively.

2,860,187

ARTIFICIAL RECONSTRUCTION OF SPEECH

Edward E. David, Jr., Berkeley Heights, and Henry S. McDonald, Summit, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 8, 1955, Serial No. 551,948
14 Claims. (Cl. 179—15.55)



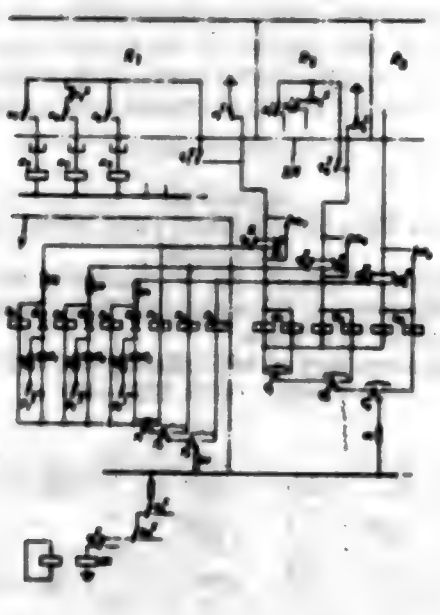
1. Speech transmission apparatus which comprises a source of a speech wave consisting of a sequence of wave portions, means for eliminating certain individual ones of said portions to leave blank intervals, means for transmitting to a receiver station wave portions preceding and following each blank interval, means for developing, at said receiver station, a sequence of artificial wave portions of which the amplitudes follow the amplitude variations of the original speech waves, and means for intercalating at least one of said artificial wave portions in each blank interval, thereby to reconstruct said original wave.

2,860,188

CIRCUIT ARRANGEMENT FOR LOGICALLY HANDLING PROCEDURES WHICH ARRIVE AT ANY TIME

Nikolaus Lewen, Stuttgart, and Hoechley Oden, Stuttgart-Stammheim, Germany, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application April 29, 1953, Serial No. 351,994
Claims priority, application Germany May 2, 1952
11 Claims. (Cl. 179—18)



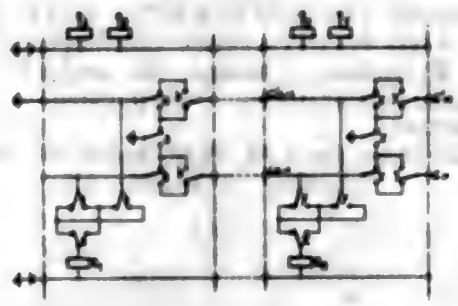
1. In combination, a group of individual equipments and a common equipment for use with any one of them, each individual equipment including means for making a demand for connection of the common equipment therewith and for thereafter terminating such demand, first relays corresponding respectively to the individual equipments, means for initiating the operation of any first relay responsive to said demand means of its associated individual equipment, means controlled by the first relays for insuring that only one of them is effectively operated at any time, second relays corresponding respectively to the first relays and to the individual equipments, means for operating any second relay responsive to operation of its corresponding first relay, means controlled by the second relays for insuring that only one of them is effectively operated at any time, means responsive to the operation of any second relay for connecting the common equipment to its associated individual equipment, and means for causing the restoration of any operated second relay responsive to the termination of the demand by said corresponding demand means.

2,860,189

AUTOMATIC SWITCHING SYSTEM WITH REDUCED INTERNAL BLOCKING

Roelof M. M. Oberman, Veerburg, Netherlands, assignor to Staatsbedrijf der Posterijen, Telegrafie en Telefonie, The Hague, Netherlands

Application August 26, 1954, Serial No. 452,421
Claims priority, application Netherlands August 27, 1953
17 Claims. (Cl. 179—18)



1. An automatic switching system having a plurality of numbered terminals any one of which may be connected to any other through a given plurality of multi-contact switches and connections by calling its corresponding number, and means for increasing the degree of freedom of connections through said switches and said connections between any calling and a called numbered terminal, said means comprising: means for storing the called number corresponding to a called terminal, separate means for converting the stored number into a corresponding number in each of a plurality of differently ordered corresponding systems of numbers, means for connecting the contacts of said switches in a multiplied group in orders corresponding to each of said systems, means controlled by the storing means and said separate converting means for connecting the contacts of said switches in accordance with each regular numerical system corresponding to said called number, and means for busy testing said connected contacts corresponding to said called number for determining a free connection to said called terminal.

2,860,190

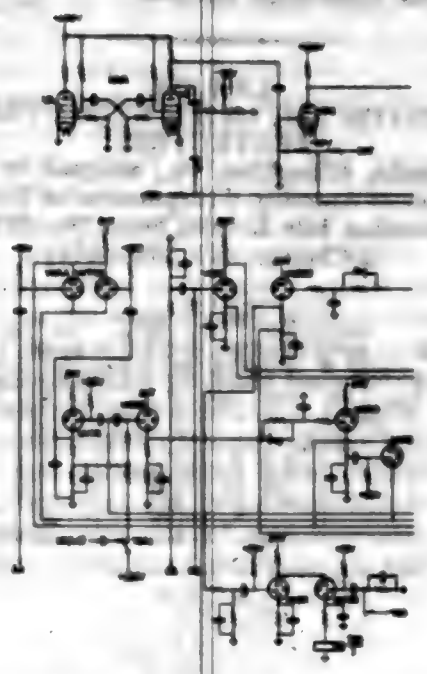
TELEPHONE SYSTEMS

Robin D. Allum, James F. Denby, and James G. Pearce, Liverpool, England, assignors to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company

Application October 18, 1955, Serial No. 541,371
Claims priority, application Great Britain November 27, 1954
10 Claims. (Cl. 179—18)

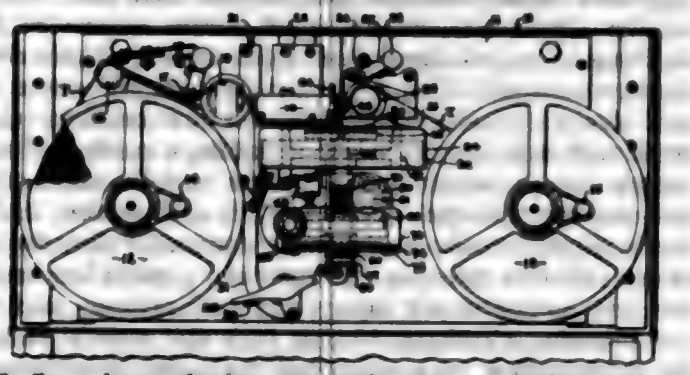
1. In a telephone exchange, apparatus comprising a plurality of subscribers' line circuits arranged in a plurality of groups of the same size, high speed scanning equipment provided in common to said plurality of line circuits and arranged to scan simultaneously corresponding line circuits in all said groups to detect a calling condition, means responsive to said scanning equipment encountering a line circuit in a calling condition in at least one of said groups of line circuits for terminating the

scanning operation and means effective in the event that a line circuit in more than one of said groups of line



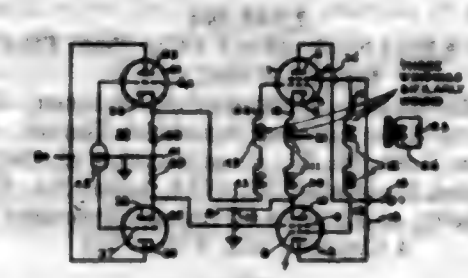
circuits is encountered in a calling condition for singularising one of said calling line circuits.

2,860,191
TURNTABLE FOR MAGNETIC RECORDER
Frank E. Range, Branford, William H. Lyon, Orange, and Donald F. Reimer, East River, Madison, Conn., assignors to The Soundscriber Corporation, New Haven, Conn., a corporation of Connecticut
Application October 30, 1953, Serial No. 389,444
11 Claims. (Cl. 179—100.2)



1. In a long playing magnetic tape recording and reproducing apparatus, drive means for continuously advancing a magnetic tape longitudinally through said apparatus, a heavy, fly-wheel shaped turntable mounted to rotate on an axis at right angles to said tape and carrying a plurality of electro-magnetic spaced apart transducer heads located below the path of said tape, a drive spindle operated by said drive means for continuously rotating said turntable in timed relation to the movement of said tape, an insulated cover shield secured to said turntable for embracing said transducer heads, said cover shield having a raised protecting rib with a plurality of slots through which said transducer heads extend, said rib also serving to maintain said tape in smooth condition, said turntable comprising a heavy metallic casting, said drive spindle extending vertically through an axial opening in said casting, disconnectable resilient coupling means interconnecting the upper end of said spindle and the top of said casting for cooperative rotational motion therewith, a sleeve member surrounding the lower end of said drive spindle, the upper end of said sleeve member providing a thrust bearing for the underside of said casting, disconnectable coupling means interconnecting the lower end of said drive shaft and the lower end of said sleeve member, and a worm on said sleeve member, said drive means including a worm gear in mesh with said worm.

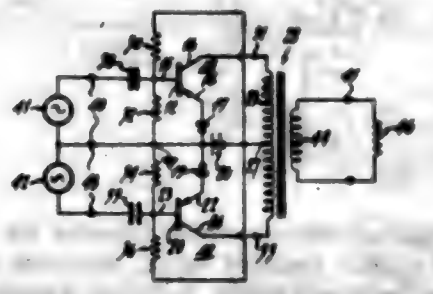
2,860,192
AMPLIFIERS
Frank H. McIntosh, Chevy Chase, Md.
Application May 1, 1953, Serial No. 352,423
23 Claims. (Cl. 179—171)



16. An amplifier, comprising a first amplifier device having a first control electrode, a first output electrode and a first common electrode, a second amplifier device having a second control electrode, a second output electrode and a second common electrode, a first output transformer primary winding connected between said common electrodes, a second output transformer primary winding connected between said output electrodes, said first and second primary windings being closely coupled and relatively wound to maintain said first output electrode and said second common electrode at substantially the same A. C. potential, and to maintain said second output electrode and said first common electrode at substantially the same A. C. potential, a source of B+ voltage connected directly to only the first said output electrode, and circuits for driving said control electrodes in push-pull balanced relation relative to the instantaneous potentials of said common electrodes.

17. The combination according to claim 16, wherein is provided means for maintaining only the second of said common electrodes at fixed reference potential.

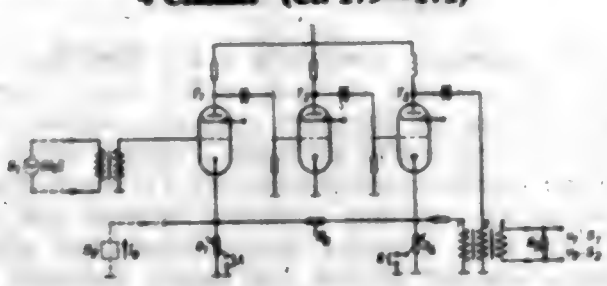
2,860,193
STABILIZED TRANSISTOR AMPLIFIER
James E. Lindsay, Moorestown, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application April 1, 1954, Serial No. 420,421
7 Claims. (Cl. 179—171)



1. In a class B signal amplifier, the combination comprising a pair of semiconductor devices each having base, emitter and collector electrodes, an input circuit connected for applying input signals between each of said base electrodes and a common point for said amplifier, means including a source of energizing potential connected for biasing said collector electrodes, direct current conductive resistance means and a unidirectionally conducting device connected in series in the order named between the base and emitter electrodes of each of said semiconductor devices and poled to pass forward current to bias each of said emitter electrodes in a forward direction relative to the respective base electrode, said unidirectionally conducting devices providing a relatively high degenerative resistance to emitter current under static operating conditions to stabilize the direct-current operating point of said semi-conductor devices and a relatively low resistance upon the application of input signals to said semi-conductor devices to reduce emitter circuit degeneration under signal conditions, the junction of said

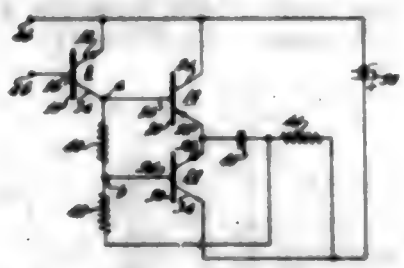
direct current conductive means and said unidirectionally conducting devices being connected to said common point, and an output circuit coupled with said collector electrodes.

2,868,194
CIRCUIT ARRANGEMENT FOR THE TRANSMISSION OF SIGNALS
Friedrich Buchholtz, Stuttgart-Zuffenhausen, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application September 21, 1954, Serial No. 457,516
Claims priority, application Germany September 25, 1953
4 Claims. (Cl. 179—171)



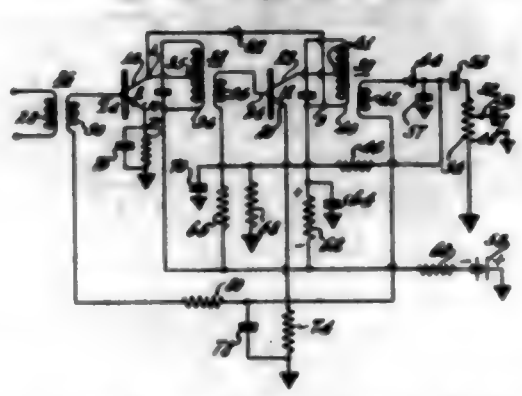
1. An amplifying circuit for the transmission of two signals simultaneously without intermodulation comprising two sources of respectively different signals of similar amplitude, a common linear amplifier therefor connected to each source, said amplifier having a negative feedback path to which one of said sources is connected and a forward amplifying path to which the other source is connected, means in said feedback path for separately controlling the amplification of each of said signals, and a common load for said signals connected to said amplifier.

2,868,195
SEMI-CONDUCTOR AMPLIFIER CIRCUIT
Thomas O. Stanley, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application September 7, 1955, Serial No. 532,825
6 Claims. (Cl. 179—171)



1. A signal amplifying circuit adapted for operation as the power output stage of signal receivers and the like comprising, in combination, a driver transistor having a base, a collector and an emitter electrode, input circuit means for applying an input signal between the base and emitter electrodes of said driver transistor, a pair of push-pull output transistors of opposite conductivity types each having a base, a collector and an emitter electrode, direct current conductive means connecting the collector of said driver transistor with the base electrode of one of said output transistors, a first resistor connected between the base electrodes of said output transistors, means connecting the emitter electrodes of said output transistors in common, a capacitor connected with the emitter electrodes of said output transistors, a direct-current conductive load impedance element serially connected between said capacitor and the collector electrode of the other of said output transistors, means providing biasing potentials for said transistors serially connected between the collector electrodes of said output transistors, and means providing operating bias for the collector electrode of said driver transistor and efficient signal coupling between said driver transistor and said output transistors including a second resistor connected between the base electrode of the other of said output transistors and the junction of said capacitor and said load impedance element.

2,868,196
TRANSISTOR AMPLIFIER WITH OVERLOAD PROTECTION
John B. Schultz, Glenolden, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application July 2, 1956, Serial No. 595,176
2 Claims. (Cl. 179—171)



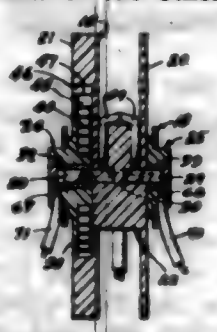
1. In a radio signal receiving system, the combination comprising, a first transistor intermediate-frequency signal amplifier device having a first base, a first emitter, and a first collector electrode, a second transistor intermediate-frequency signal amplifier device having a second base, a second emitter, and a second collector electrode, signal input means connected for applying an intermediate-frequency input signal between said first base and first emitter electrodes, tuned signal coupling means connected for deriving an amplified intermediate-frequency signal from said first collector electrode and for applying said amplified signal between said second base and second emitter electrodes, output circuit means connected for deriving an output signal from said second collector electrode, means providing a direct-current supply source for said devices, means connecting said first collector electrode with said source, means including a portion of said output circuit means and a resistor serially connecting said second collector electrode with said source, and a diode direct-current conductively connected directly between said first collector electrode and a point intermediate said output circuit means and said resistor, said resistor having a resistance value such that normal collector current flow of said second transistor therethrough provides a potential difference between said first collector electrode and said intermediate point of a magnitude and polarity to reverse bias said diode over the normal signal amplitude variation range of said receiver, said diode being forward biased in response to peak output signal voltage on said first collector electrode of a predetermined amplitude above said range to render said diode conductive and provide a low impedance shunt signal path for preventing overloading of said second transistor intermediate-frequency amplifier.

2,868,197
ELECTRICAL CONNECTOR
Harold W. Kost, Ottawa Hills, Ohio
Application March 13, 1953, Serial No. 342,171
3 Claims. (Cl. 191—12)

1. An electrical connector construction comprising, in combination, a supporting means, a current conductor carrying means comprising a reel having a hub portion of an electrically non-conductive material and flanges extending radially therefrom, a pair of axially aligned bearings of electrically conductive material mounted in one of said means and a pair of axially aligned trunnions of electrically conductive material mounted in the

element and a movable element, said switch plates adapted on said appliance, contact screws mounted within said

other of said means, wherein said trunnions and said bearings cooperate to revolvably support said conductor carrying means in said supporting means, each of said trunnions together with its cooperating bearing comprising a mounting means, those portions of said supporting means adjacent each of said mounting means being of an electrically non-conductive material, said mounting means extending axially into said hub portion from opposite sides thereof and electrically insulated from each other, said hub portion formed with a pair of openings terminating adjacent said mounting means, a first pair of current conductors individually coated with electrical insulation material each having one end extending into one of said openings and terminating within said hub portion, said insulation covering on said conductors extending to a point within said hub portion, the extreme end of the conductive portion of each of said conductors within said hub portion being bared, wherein the bared conductive portion of one of said conductors is in wedging engagement with one of said mounting means and the conductive portion of the other of said conductors



is in wedging engagement with the other of said mounting means, a second pair of current conductors individually coated with electrical insulation material each having one insulated end terminating in said supporting means, said insulation covering on said conductors extending to a point within the non-conductive portion of said mounting means, wherein the conductive portion of one of said second pair of conductors is in frictional engagement with one of said mounting means within said supporting means and the conductive portion of the other of said second pair of conductors is in frictional engagement with the other of said mounting means within said supporting means, spring biasing means biasing said reel in one direction of rotation, one end of said biasing means secured to said reel and the other end of said biasing means secured to said supporting means at a point electrically insulated from said mounting means whereby said conductors and said mounting means define electrical circuits which are insulation covered by said hub portion, said non-conductive portion of said supporting means, and said insulation coatings.

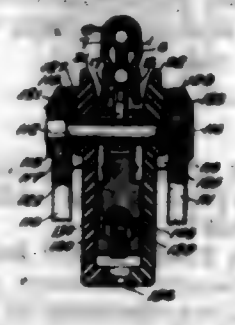
2,860,196

COLLECTOR AND INSULATOR FOR ELECTRICAL TROLLEY APPARATUS

Tirey L. Ford, Hillsborough, John B. Shaw, Redwood City, Alleyne C. Howell, Jr., San Francisco, Jacob E. Pfaff, Palo Alto, and David Rice, Newark, Calif., assignors to Insul-8-Corp., Burlingame, Calif., a corporation of California

Application February 15, 1954, Serial No. 410,204
1 Claim. (Cl. 191—59.1)

An electrical system for collecting electric energy, said system comprising an elongated fixed conductor bar having a sheath of inverted U-shaped cross-sectional shape surrounding the conductor bar but leaving exposed a side to be engaged by the collector shoe of a trolley head, said trolley head comprising a body formed of electrical insulating material which is U-shaped in cross-sections transverse to its length and to the conductor bar when engaged by the trolley head in use and having substantially vertical side walls of such vertical dimensions that the upper edges thereof extend above the spaced lower edges of the sheath when the trolley head is in operative engagement with the conductor bar, a block mounted within said trolley head body, flat, parallel, metallic plates connected to the opposite sides of said block and extending upwardly therefrom in spaced relation to each other and in parallel relation to and between the side walls of the trolley head body, said metallic plates being formed with inwardly facing ridges defining outwardly facing grooves, inwardly facing ridges formed on the inner surfaces of the side walls of the trolley head body and received within the outwardly facing grooves of said metallic plates, a collector shoe having side walls having outwardly facing grooves therein within which



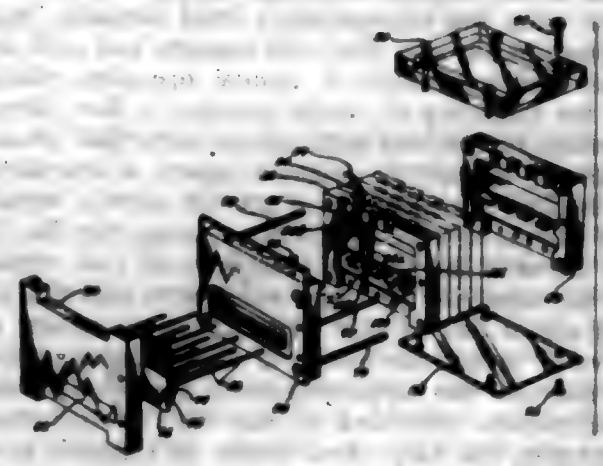
the inwardly facing ridges of said metallic plates are received to thereby support the shoe on and between the metallic plates, said shoe having an upper surface adapted to engage the conductor bar when the trolley head is in operative engagement therewith, said shoe being of such vertical dimension that said upper surface thereof is below the upper edges of the side walls of said trolley head body, the spacing between each side wall of the trolley head and the adjacent side wall of the sheath being less than the spacing between each side of the shoe and the adjacent side wall of the sheath whereby the shoe is prevented from engaging the side walls of the sheath on lateral movement of the trolley head with respect to the conductor.

2,860,199

DATA PLAYBACK UNIT AND CIRCUIT

Richard D. James, Manhattan Beach, and Walter A. Jones, Santa Monica, Calif., assignors to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application November 9, 1953, Serial No. 391,874
3 Claims. (Cl. 200—46)



1. In a data playback unit of the character described, a readout head for reading a perforated tape continuously passing therethrough, comprising: a cover plate having a non-yielding bar extending laterally across the face of said cover plate; a rod guide plate having a plurality of guide holes extending perpendicularly through the face of said guide plate, said guide holes arranged in a single line transversely of the direction of tape travel; a plurality of switch rods of different lengths passing through said guide holes; a plurality of switch plates perpendicular to said switch rods and having aligned rod openings therethrough; a plurality of switches each comprising a fixed

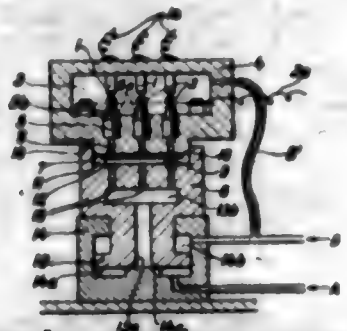
element and a movable element, said switch plates adapted to mount a plurality of said switches laterally across each said switch plate, said switch rods of different lengths passing through said rod openings of different numbers of said switch plates and positioned to respectively actuate the movable elements of said switches on said switch plates, said switch plates stacked in position providing equal rod lengths extending above said guide plate; means for securing said switch plates in said stacked position; and means for securing said cover plate to said stacked switch plates so that said non-yielding bar is positioned against said rods, the perforated tape to be passed between said non-yielding bar and said rods to compress said rods actuating said switches, the tape perforations aligned with said rods to release said rods as each perforation passes over said respective rod.

2,860,200

APPARATUS FOR PNEUMATICALLY CONVERTING PERFORATED FILM MESSAGES INTO ELECTRICAL IMPULSES

Ernst Leitz, Wetzlar, Lahn, Erhard Brück, Atzbach, and Wolfgang Uhl, Giessen, Germany, assignors to Ernst Leitz, G. m. b. H., a corporation of Germany

Application May 17, 1957, Serial No. 659,955
9 Claims. (Cl. 200—46)



1. An apparatus for converting a message in the form of perforations in a film into electric impulses in an electric system comprising, in combination, a perforated film containing a perforation message, an electric system, fixed electrical contacts in said system, movable electric contacts interposed between said film and said fixed contacts for engagement with the latter, said contacts being arranged in contacting pairs equal in number to the number of perforations spaced across the film, pressure air actuated means adapted to engage said movable contacts to close upon the corresponding fixed contacts, means for supporting the said film, said contacts and said movable air actuated means in mutual operative relation, means for supplying air under pressure to flow through the message symbolizing perforations in the film toward a like number of said air actuated means to operate the latter to close said contacts to provide electric impulses in said electric system, means for moving the film forwardly between the closing operations of said contacts, means for supplying air under pressure to said film supporting means and to said contacts closing means, separate valve means connected to and between said air supply and said film supporting means and closing means, and mechanism controlled by said film moving means for operating the said valve means in response to the speed of movement of the film through the apparatus.

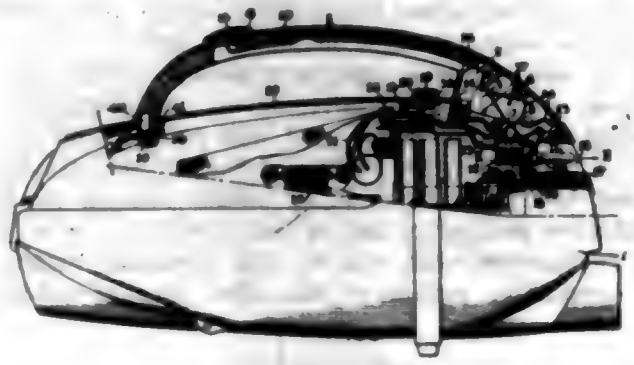
2,860,201

ARRANGEMENTS OF ELECTRICAL CONNECTIONS IN A VACUUM CLEANER

André Conord, Paris, France, assignor to "Cemaa Conord," Paris, France, a company of France

Application March 23, 1955, Serial No. 496,259
Claims priority, application France December 2, 1954
1 Claim. (Cl. 200—51)

An electrical connection for energizing the motor of a domestic appliance, comprising a non-conductive housing on said appliance, contact screws mounted within said housing and in circuit with said appliance motor, internal threaded sockets mounted in fixed relation within said housing, a handle member detachably mounted on said housing enclosing said sockets and contact screws, a contactor switch mounted within the handle, operating means connected with said switch and extending through said handle for actuation from the exterior of the handle, two current supply pins disposed on said handle and each having at one end a portion for detachable connection to a source of electrical current, the opposite ends of said



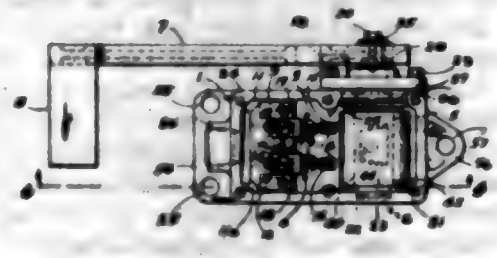
pins being screwed into said sockets, one of said pins being connected to a contact blade carried by the handle, said contact blade engaging one of said contact screws when the pin is screwed into its corresponding socket, an electrical connection between the other of said pins and one side of said switch, a second contact blade on said handle engaging the other of said contact screws of the appliance housing, an electrical connection between the other side of said switch and said latter contact blade, said switch when closed placing said supply pins in electrical circuit with the appliance motor through said housing contact screws.

2,860,202

ELECTRICAL SWITCH MECHANISM

Michael J. Dobes, Cleveland, and Charles A. Scharr, Euclid, Ohio, assignors to The National Acme Company, Cleveland, Ohio

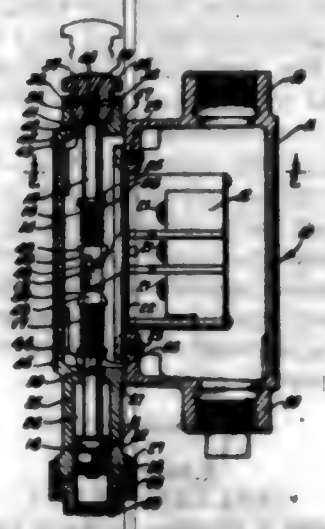
Application December 30, 1954, Serial No. 478,584
1 Claim. (Cl. 200—61.58)



A switch comprising a housing which defines a chamber, a rotor of insulation material rotatably mounted in said chamber, a pair of fixed contacts mounted in said chamber at one side of the rotor and spaced apart from each other lengthwise of the rotor, each of said fixed contacts comprising a pair of resilient contact arms in closely positioned confronting relationship to each other, each of said contact arms projecting toward the rotor and terminating in a free end spaced from the periphery of the rotor, a metal plate embedded in the rotor and extending lengthwise of the rotor and having out-turned ends which project out beyond the periphery of the rotor transverse to the axis of rotation of the rotor and which constitute mobile contacts, said mobile contacts being spaced apart lengthwise of the rotor a distance corresponding to the spacing between the fixed contacts and being aligned with the fixed contacts to engage between the arms of the respective fixed contacts when the rotor is turned, a handle outside the chamber connected to the rotor at one side of the housing and extending transverse to the axis of rotation of the

rotor, said handle being mounted to extend horizontal along said one side of the housing to position the rotor with said mobile contacts projecting down from the rotor and spaced from said fixed contacts, said handle being movable from said horizontal position up to a vertical position to turn the rotor to carry said mobile contacts up into engagement between the respective arms of the fixed contacts, and a guard on said handle away from the connection of the handle to the rotor, said guard extending transverse to the handle and extending across an end of the housing when the handle is horizontal and extending across the top of the housing when the handle is vertical.

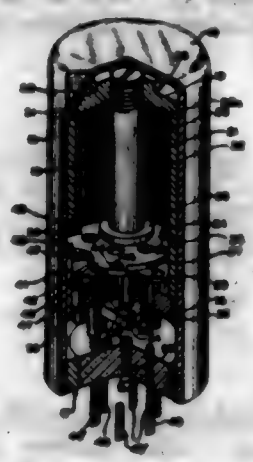
2,860,283
FLUID PRESSURE OPERATED SWITCH
Walter M. Haessler, Chatham, N. J., assignor, by mesne assignments, to The Fyr-Fyter Company, Dayton, Ohio, a corporation of Ohio
Application March 19, 1956, Serial No. 572,583
4 Claims. (Cl. 200—82)



1. A fluid pressure operated electrical switch comprising a housing, a unitary electric switch assembly including a switch operating member mounted within the housing, fluid pressure operated means within the housing and including an operating rod for the switch operating member, a pair of extension members carried by the operating rod, an offset spacer about the operating rod between the extension members, the switch operating member positioned between the extension members, the spacer less in axial length than the width of the switch operating member, and a spring for each extension member, the springs yieldingly urging the extension members in contact with the switch operating member, the spacer providing easy assembly of the switch, whereby an automatic adjustment is had between the operating rod and the switch operating member, the spacer facilitating the initial positioning of the switch operating member between the extension members.

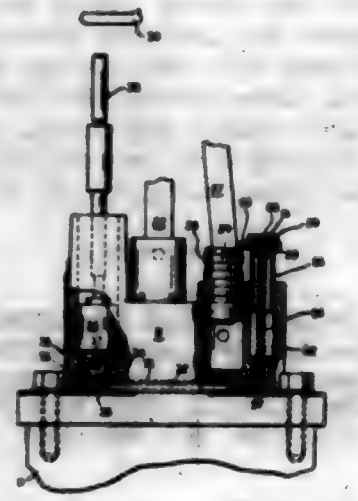
2,860,284
ELECTRICAL RELAY
John Hughes and Owen Hughes, Jackson Heights, N. Y., assignors to Bulova Watch Company Inc., Flushing, N. Y., a corporation of New York
Application March 13, 1956, Serial No. 571,206
6 Claims. (Cl. 200—87)

1. An electrical relay comprising a cylindrical housing, said housing having an open end, a magnet in said housing, said magnet having a pole terminal directed outwardly of said open end of the housing, an armature pivoted at one side of said housing and extending across said pole terminal in proximity thereto, said armature having its periphery in proximity to said housing, a snap ring in said housing between said magnet and armature, and an armature spring integral with said snap ring and having engagement with said armature tending to resiliently



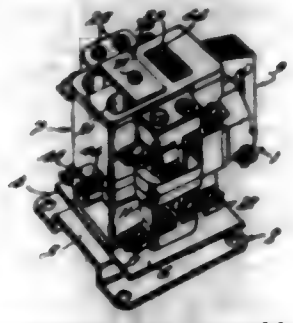
swing said armature in a direction away from said pole terminal.

2,860,285
REPEATING CIRCUIT INTERRUPTERS
Edmund J. Stramowski, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Application March 26, 1957, Serial No. 648,538
7 Claims. (Cl. 200—89)



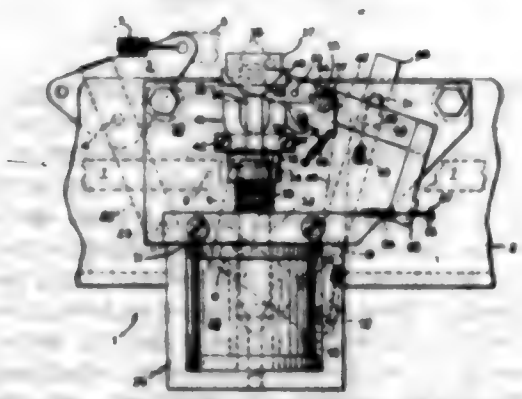
1. A repeating circuit interrupter comprising switch means, switch operating means responsive to occurrence of an overload, switch lockout means adapted to render said operating means ineffective after a predetermined number of switch operations, pump means operatively coupled to the operating means and including a pump piston adapted to stroke between initial and final positions and to remain in final position during lockout, a dashpot cylinder having an integrating piston therein advanceable to intermediate slow resetting positions when less than said predetermined number of operations are executed and to a lockout position, a relief valve means for controlling the fluid in said dashpot, said relief valve preventing discharge from the dashpot when said integrating piston is in any intermediate position, a hydraulic resettling piston adjacent said pump piston and including a spring for urging the resettling piston from initial to final position at a velocity lower than that of the pump piston, said resettling piston having a portion extending into the path of said pump piston whereby said pump and resettling pistons jointly return to initial position prior to lockout, said pump piston when in final lockout position allowing said resettling piston to open said valve and permit quick return of said lockout piston to initial position.

2,860,206
ELECTROMAGNETIC RELAY
Howard P. Stock, Brookfield, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Application June 25, 1956, Serial No. 593,443
10 Claims. (Cl. 200—104)



1. A relay comprising an assembly of nesting components constituting, a base member, a first support and guide member, a second support and guide member, first mating surfaces on each of said support and guide members, means extending through said first mating surfaces for securing said support and guide members to said base member, an electromagnetic actuator including a core and a coil, an armature electromagnetically associated with said actuator, a second mating surface on each of said first and second support and guide members, said armature being supported between said first and second support and guide members in slideable engagement with said second mating surfaces, a third mating surface on each of said first and second support and guide members, said actuator being supported between said first and second support and guide members by engagement with said third mating surfaces and operatively associated with said armature, means on said second and third mating surfaces for interlocking with said armature and actuator respectively, and said components being maintained in supported and interlocking assembly by said means passing through said first mating surfaces.

2,860,207
CIRCUIT INTERRUPTER TRIPPING RELAY
Max Rigert, West Allis, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application November 23, 1956, Serial No. 624,060
5 Claims. (Cl. 200—189)

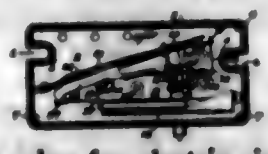


1. Tripping relay means for a circuit interrupter, said means comprising a magnet coil and plunger means attractable thereto, a permanent magnet member and a magnetizable member normally spaced from each other but movable within effective magnetic range of each other by movement of said plunger means, lever means connected to said plunger means and operably supporting one of said members, latch means, a toggle link mechanism biased toward collapsed position and normally held in rigid condition by said latch means, release means movable with said lever means through an angle of lost motion with respect to said latch means while said plunger is under an initial magnetic influence due to said magnet coil being traversed by a fault current of predetermined magnitude, said release means being adapted to impact and trip said latch means following the added magnetic influence due to attraction of said members toward each other, whereby said toggle mechanism can collapse for imparting a tripping force to said interrupter.

2,860,208
SNAP-ACTING THERMOSTAT ELEMENT
Henry David Epstein, Boston, Mass., assignor to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application March 28, 1955, Serial No. 497,109
14 Claims. (Cl. 200—113)

1. A snap-acting thermostat element comprising a sheet of thermostat metal; a pair of metal bars of electrically conductive metal, each of said bars being fastened to said sheet entirely across the width of said sheet to provide an electrically low resistance connection between each of said bars and the portion of the sheet to which each bar is fastened, the electrical conductivity of the metal of said bars being greater than the electrical conductivity of said thermostat metal; and the portion of said sheet lying between said bars being of substantially uniform width, said last-mentioned portion of said sheet being provided with a deformation capable of changing its shape suddenly with a snap motion due to change in temperature thereof upon the flow of electrical current through said last-mentioned portion of the sheet.

2,860,209
ELECTRIC RELAY
Lester J. Hadley, Newark, Calif.
Application June 3, 1957, Serial No. 663,237
3 Claims. (Cl. 200—113)

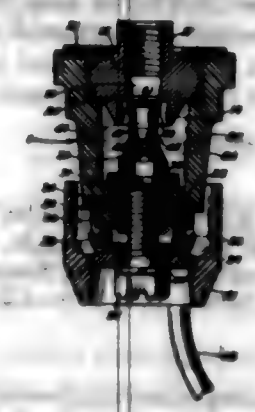


1. An overload relay for electric circuits comprising a housing, a mounting plate secured within the housing and forming therewith a substantially closed chamber, a metallic terminal bracket fixed on the mounting plate, a contact bracket fixed on the mounting plate and within the chamber, a pair of spaced contacts fixed on the mounting plate within the chamber and having terminals outside the chamber, a contact arm movably mounted on the contact bracket within the chamber and having a pair of spaced spring-pressed contacts thereon normally engaging the fixed contacts, thermally responsive conductor means interposed between the terminal bracket and said movably mounted contact arm to effect opening and closing of said contacts in accordance with the thermal response of said conductor, and means within the chamber limiting opening movement of the contact arm to a position in which said spring-pressed contacts remain in open position.

2,860,210
CIRCUIT INTERRUPTING DEVICE
Herman O. Stoelting and Francis V. Cunningham, Milwaukee, Wis., assignors to McGraw-Edison Company, a corporation of Delaware
Application November 9, 1956, Serial No. 621,292
3 Claims. (Cl. 200—115)

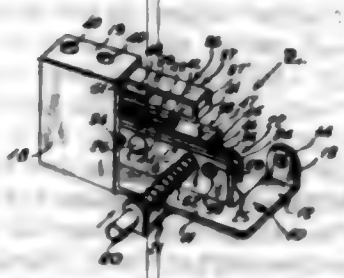
1. In a circuit interrupter including an insulating housing, spaced upper and lower electrodes providing an

air gap therebetween, the lower of said electrodes including a bore and an enlarged terminal heat dissipation and arc striking area surrounding said bore, and a headed explosive cartridge for separating said terminals to extend said air gap on excessive flow of current through



said interrupter; said cartridge being disposed in said bore, said bore being countersunk at one end and being of sufficient depth to receive the headed portion of said cartridge, whereby the said headed portion will be maintained flush with or below the lower electrode surfaces defining said air gap.

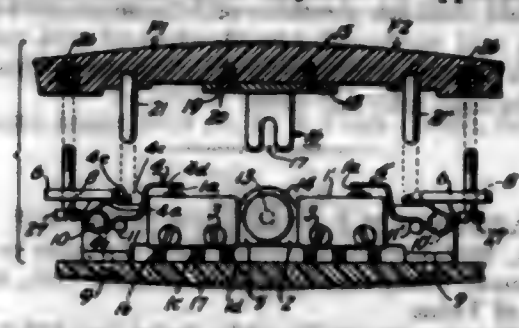
2,860,211
ELECTRIC SWITCHES
Ralph W. De Lancey, Rockford, and Frank E. Denio, Chicago, Ill., assignors to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Application August 10, 1956, Serial No. 603,168
10 Claims. (Cl. 200—122)



1. An electric switch comprising a frame member, at least two contact-carrying members pivotally mounted on said frame for movement in a plane generally at right angles to the plane of movement of said contact members upon operation from an open to a closed position, a bimetallic contact-controlling member operable to hold said contacts in one position and heating means for deflecting said bimetallic member away from said contact-carrying members in a plane generally at right angles to the plane of movement of said contact members to permit them to move to another position, said contact members being movable toward and away from said controlling member to vary the operating characteristics of the switch.

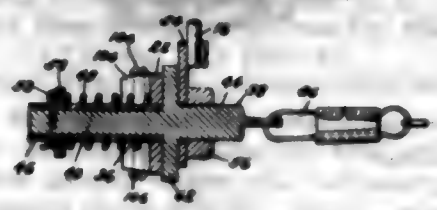
2,860,212
SWITCH CONTROL APPARATUS
Franklin Andrus Stearn, Westfield, N. J., assignor to International Telephone and Telegraph Corporation
Application January 11, 1957, Serial No. 633,578
6 Claims. (Cl. 200—159)

1. Apparatus for selectively operating electrical switching apparatus comprising a fixed mounting frame, a fixed pivot attached to said frame intermediate the ends thereof, a pair of electrical switches attached to said frame and disposed on opposite sides of said pivot, respectively, a movable lever having a portion adapted to rotate about said pivot, switch actuating means under control of said lever for operating a first one of said switches when said lever is rotated in a first direction about said pivot and for operating the other of said switches when said lever is rotated in the opposite direction, a pair of actuating pins attached to said lever disposed on opposite sides of



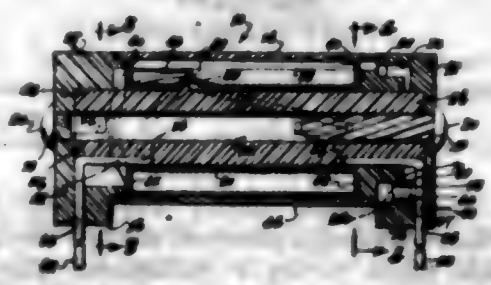
said portion and a pair of resilient interponent members attached to said frame adjacent respective of said switches, said resilient members adapted to be interposed between said pins and said switches, respectively.

2,860,213
VEHICLE BATTERY CIRCUIT BREAKER
Russell E. McNamara, Riverside, Ontario, Canada
Application December 13, 1956, Serial No. 628,121
7 Claims. (Cl. 200—161)



6. A battery circuit breaker for an automotive vehicle comprising a bracket formed of an electrically conductive material with a socket therein adapted to receive the terminal post of the vehicle battery, said bracket having an aperture therein, a switch member having a cylindrical portion axially slidable in said aperture, said cylindrical portion being formed of an insulating material, said switch member including a flange portion formed of an electrically conductive material, said flange portion being adapted to contact a portion of the brackets surrounding said aperture when the switch member is disposed in one position on said bracket, means for electrically connecting said flange portion with the electrical system of the vehicle and means for axially moving said cylindrical portion of the switch member to bring said flange portion into and out of contact with said bracket.

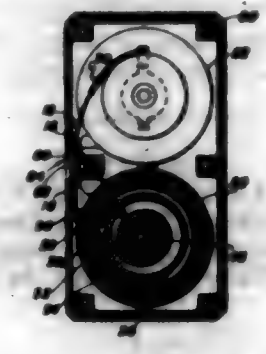
2,860,214
VARIABLE RESISTOR ADJUSTABLE ELECTRICAL INSTRUMENTS
Marlan E. Bourns, Riverside, Calif., and Richard E. Caddock, Ames, Iowa; said Caddock assignor to Bourns Laboratories, Inc., a corporation of California
Application May 2, 1957, Serial No. 656,556
1 Claim. (Cl. 201—56)



A variable resistor comprising a pair of spaced apart end caps having a cylindrical mandrel extending between them, said mandrel having a helical ridge formed thereon, resistance wire wrapped around said mandrel and over said helical ridge, a tubular sleeve rotatably mounted on said end caps and enclosing said mandrel, said sleeve

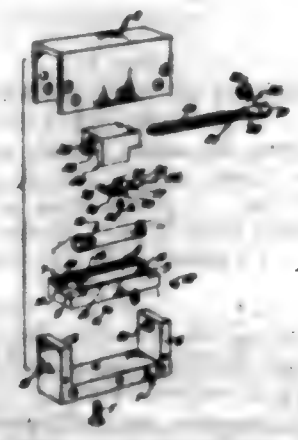
having a spiral contact element disposed to wipe on said resistance wire where the latter passes over helical ridge, a stationary washer of conductive material engaging one end of said contact element, and terminal means connected to said washer and to the ends of said resistance wire, said terminal means passing out of said variable resistor through said end caps.

2,860,215
ADJUSTABLE RESISTANCE DEVICE
Robert A. Williams, Fort Worth, Tex., assignor to B & H Instrument Company, Inc., Fort Worth, Tex., a corporation of Texas
Application March 20, 1956, Serial No. 572,758
28 Claims. (Cl. 201—59)



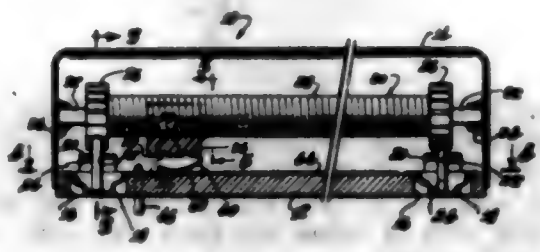
1. In an adjustable resistance device of the type having an elongated resistance element and contact means relatively movable with respect thereto, means for moving the contact means relative to the element, a member having indicia thereon for providing resistance value information, locator means for determining a reading point on said indicia carrying member, and means for continuously relating the position of the contact means relative to the resistance element with the position of the indicia carrying member relative to the locator means, the indicia being progressively placed on the member to conform to progressively electrically determined values of resistance of the element.

2,860,216
POTENTIOMETRIC DEVICES
Burton F. Hubbard and Gaynard H. Foodick, Pomona, Calif.
Application February 3, 1956, Serial No. 563,272
20 Claims. (Cl. 201—62)



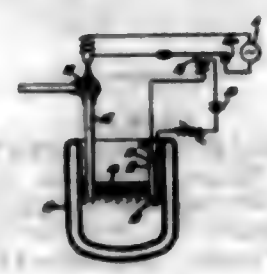
10. A potentiometric device comprising a heavy U-shaped base member, a dielectric support block secured thereto, said block having a rectangular recess and a longitudinal slot interiorly of a pair of longitudinal slide shoulders, a resistance element secured within said recess, a conductor bar secured within said slot, a dielectric travel block recessed interiorly of a pair of slide shoulders and having a threaded longitudinally extending hole, said slide shoulders of said travel block abutting said slide shoulders of said support block, a contact brush retained within said interior recess of said travel block, said brush being in contact with said resistance element and said conductor bar, a lead-screw rotatably mounted and secured against longitudinal displacement within bearing holes provided in the uprights of said base member, said lead-screw being threaded through said longitudinally extending hole of said travel block, and a U-shaped cover member mating with and secured to said base member.

2,860,217
ADJUSTABLE ELECTRICAL INSTRUMENTS
Marian E. Bourns, Riverside, Calif.
Application November 19, 1956, Serial No. 623,145
1 Claim. (Cl. 201—62)



A hermetically sealed variable resistor comprising an elongated housing having an enclosed cavity, a leadscrew journaled within said cavity parallel to the longitudinal axis of said housing, a resistance element mounted on said housing within said cavity parallel to said leadscrew, a movable member operatively engaged by said leadscrew and movable thereby along the length of said resistance element when said leadscrew is rotated, contact means on said member wiping on said resistance element, a pair of opposed ratchet wheels fixed to said leadscrew adjacent opposite ends thereof, a pawl engaging each of said ratchet wheels, and a flexible bellows operatively associated with each of said pawls, each of said bellows having an outer face exposed to the exterior of said housing, said bellows being yieldable inwardly under external pressure to engage and actuate the associated pawl against its respective ratchet wheel, thereby rotating said leadscrew in one direction or the other through an increment of rotation, each of said bellows being sealed to said housing around its entire perimeter to hermetically seal said cavity.

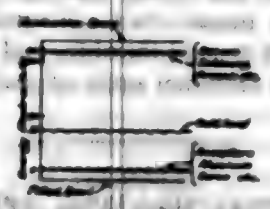
2,860,218
GERMANIUM CURRENT CONTROLLING DEVICES
William C. Dunlap, Jr., Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application February 4, 1954, Serial No. 408,121
13 Claims. (Cl. 201—63)



1. An electric current control device comprising a high purity germanium crystalline body having per cubic centimeter therein 10^{13} to 10^{15} atoms of gold, less than 10^{8} atoms of acceptor activator elements other than gold and less than 10^{15} atoms of donor activator elements, and a pair of electrical connections to spaced regions of said body.

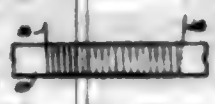
ing hinge plate; said plate having two parallel spaced outside said vessel, said thimble being rigidly secured and

2,860,219
SILICON CURRENT CONTROLLING DEVICES
Ernest A. Taft, Jr., Schenectady, and Fordyce H. Horn, Scotia, N. Y., assignors to General Electric Company, a corporation of New York
Application September 7, 1954, Serial No. 454,574
4 Claims. (Cl. 201—63)



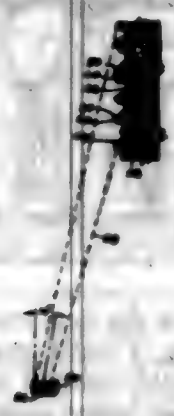
1. An electric current control device comprising a high purity p-type silicon monocrystalline body having a resistivity above 1 ohm centimeters at 25° C., said body having at least a portion thereof impregnated with 10^{13} to 10^{17} atoms of gold and a finite amount less than 10^{16} atoms of acceptor impurities per cubic centimeter thereof and being substantially free of all electrically significant donor impurities other than gold, and a pair of electrical connections to spaced regions of said body.

2,860,220
RESISTOR COMPRISING WIRE HELICALLY WOUND ON PLIANT TAPE AND METHOD OF PREPARING SAME
Ralph Paul Keeler, Redwood City, Calif.
Application January 3, 1955, Serial No. 479,291
16 Claims. (Cl. 201—63)



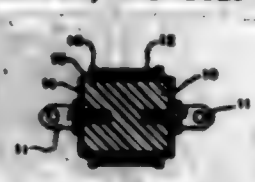
1. A method for winding wire on thin pliant adhesive tape consisting in: supporting the tape in winding position by a fixed rigid support, winding the wire around the tape and the support as the tape passes over said support, and pressing the wire against the tape.

2,860,221
METHOD OF PRODUCING A HUMIDITY SENSOR BY SHADOW CASTING AND RESULTANT PRODUCT
Douglas A. Kohl, Osseo, Minn., assignor to General Mills, Inc., a corporation of Delaware
Application November 25, 1955, Serial No. 548,977
7 Claims. (Cl. 201—63)



1. A humidity sensor comprising an inert base having a roughened surface of high electrical resistivity composed of peaks and valleys, relatively small metal areas on the top portions only of the peaks but not the valleys, and interleaved metallic grids spaced from each other on said surface.

2,860,222
MINIATURE HIGH POWER, HIGH TEMPERATURE RESISTOR
Alvin R. Saltzman, Willow Grove, and Jack M. Rosen, Levittown, Pa.
Application May 19, 1953, Serial No. 356,122
5 Claims. (Cl. 201—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A miniature resistor comprising a core of ceramic material; at least one lead attached to each end of said core; a fiber glass strip impregnated with a coating of silicone resin, carbon and copper particles wrapped around said core, a coating of silver bonded to the edges of said wrapped strip, and a coating of silver covering the path between each of said leads and said silver coated edges.

2,860,223
CURRENT REGULATOR TUBE
Clarke C. Minter, Washington, D. C.
Application January 28, 1957, Serial No. 636,841
11 Claims. (Cl. 201—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A current regulating tube comprising an elongated envelope containing hydrogen gas, a pair of support leads extending from said envelope, a straight elongated resistance wire filament having a uniform diameter and made of material having a high temperature coefficient of resistance that increases with temperature positioned longitudinally along the axis of said envelope, said filament being connected between said support leads, the surface of said envelope directly opposite said filament having portions of the surface thereof at greater distances from said filament than the distance between the ends of said envelope and said support leads, and means for maintaining said filament in axial alignment within said envelope.

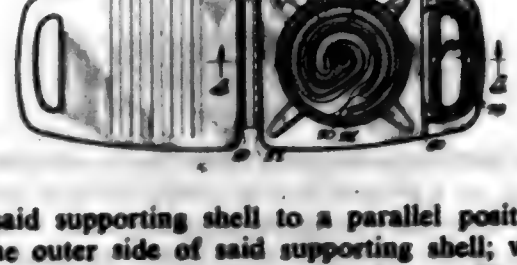
2,860,224
PORTABLE UTILITY
Glenn W. Tammen, Park Ridge, Ill., assignor to St. Joe Machines, Inc., St. Joseph, Mich., a corporation of Michigan
Application October 28, 1955, Serial No. 543,328
19 Claims. (Cl. 219—19)

1. A folding electric heater comprising, in combination: two shallow shells; each shell having a back panel; one shell being a supporting shell and the other a cover shell; a flat heating unit fastened to said supporting shell in a plane generally parallel to the back panel of said supporting shell; at least one of said shells having a peripheral lip extending toward and engaging the other shell when said cover shell is in closed position covering said heating unit; and hinge means interconnecting said shells; said hinge means including an intermediate float-

ing means and rotated concurrently therewith by said to which said piece is to be united, said hollow body in-

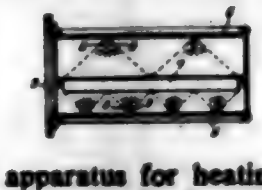
slide shoulders of said travel block abutting said slide body.

ing hinge plate; said plate having two parallel spaced pintle portions; each pintle portion being pivoted to one of said shells; the spacing of said pintle portions being substantially half the displacement, normal to the back panel of said supporting shell, required to transfer said cover shell from covering position engaging the heater



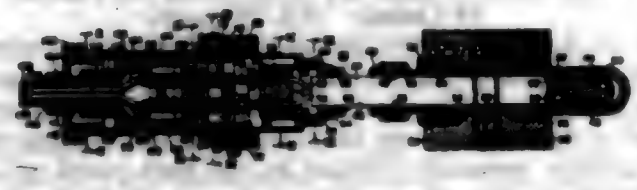
side of said supporting shell to a parallel position engaging the outer side of said supporting shell; whereby said cover can be swung from covering position away from said heating unit and around into a parallel position engaging said supporting shell on the side remote from said heating unit to constitute a plinth between said supporting shell and a foundation surface.

2,860,225
ELECTRIC HEATING APPARATUS
Carl August Stern, Villa Solbacken, Getinge, Sweden
Application October 23, 1956, Serial No. 617,827
3 Claims. (Cl. 219—35)



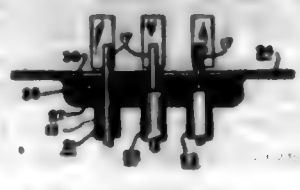
1. An electric apparatus for heating articles of food, comprising a closed casing having a hinged door at one side, a continuous supporting metal plate for said articles of food extending between two side walls of the casing so as to shield off heat radiation from above and from below, an electric heating device provided below said supporting plate at the bottom of the casing for heating said plate from below, a plurality of heating units radiating substantially only dark infra-red rays, said heating units extending freely only from one side wall of the casing to the opposite side wall thereof close below the top wall of the casing and being evenly distributed in their transverse direction opposite to the plate, said heating units being further provided with an outer, electrically insulated metal tube, and a plurality of channel-shaped metal reflectors each embracing one of said heating units so as to shield off infra-red radiation from reaching the side walls of the casing and to concentrate them evenly towards said plate.

2,860,226
ELECTRIC HEATER ASSEMBLY
Ronald L. Williams and Carroll E. Sinclair, Pittsburgh, and Robert E. Burkhart, Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 26, 1957, Serial No. 648,587
16 Claims. (Cl. 219—38)



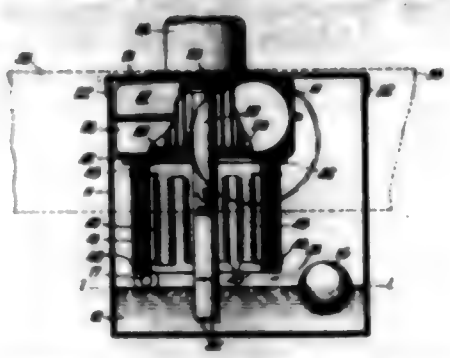
10. A replaceable heater assembly comprising, a pressure vessel having an opening in one wall, an elongated tubular pressure thimble inserted in said opening and having a closed inner end and an open outer end located outside said vessel, said thimble being rigidly secured and sealed to said vessel at said opening, an elongated electric heating element having an impervious tubular sheath receiving an elongated resistance heater and adapted to be received in said thimble, said resistance heater being rigidly secured in said sheath and having terminal ends projecting outwardly of the outer open ends of said sheath and said thimble, the inner end of said sheath being closed, releasable means located outside the vessel for sealing said sheath to said thimble, and means for permanently sealing the terminal ends of said resistance heater to said sheath.

2,860,227
ELECTRICAL HEATING APPARATUS
John J. Fox, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application June 11, 1957, Serial No. 664,942
4 Claims. (Cl. 219—38)



1. An electrical immersion heater structure comprising a tubular sheathed electrical resistance heater, a corrosion resistant mounting plate for said heater, said plate having a central drawn portion forming a recess therein, the tubular sheath of said heater having end portions extending through the plate into said recess and terminating therein, electrical terminals for the resistance heater extending from the ends of said sheath and having exposed portions projecting from the recess, and electrically insulating sealing means in said recess providing a hermetic seal between said sheath and said terminals and mechanically supporting the latter, said sealing means comprising silica granules surrounding the ends of the heater sheath and a thermal setting epoxy resin filling the voids among said granules and forming a smooth exposed electrically insulating surface around said terminals, said plate having mounting means near its periphery and having a continuous flat sealing surface encircling said recess.

2,860,228
HUMIDIFIER
John R. Boyle and Robert W. T. Olsen, Chicago, Ill.
Application March 18, 1955, Serial No. 493,394
21 Claims. (Cl. 219—39)



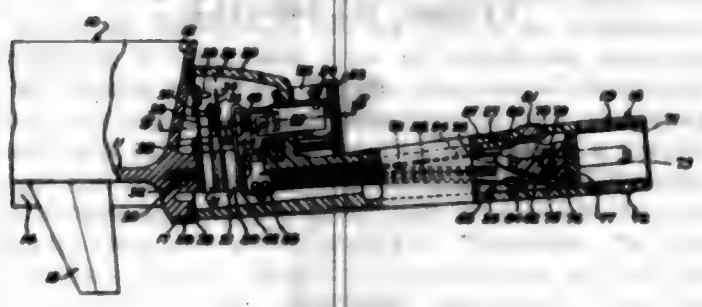
1. In a humidifier of the flash vaporizing type, the combination of a housing, a water chamber in said housing in which a substantially constant water level is normally maintained, an electric motor supported by said housing with the rotative axis of its drive shaft disposed substantially vertically above said water chamber, horizontally disposed air impelling means mounted below said motor and driven thereby, rotary water lifting and atomizing means comprising a substantially vertical spinner tube of cylindrical form disposed coaxially below said air impell-

said surface.

shells; said hinge means including an intermediate float-

ing means and rotated concurrently therewith by said electric motor, the lower end of said cylindrical tube extending below the water level in said water chamber, water lifting scoops extending inwardly at the submerged lower end of said cylindrical spinner tube, said scoops being formed by cutting longitudinal slits in the lower end of said tube and bending the intervening wall portions of the tube inwardly along upwardly sloping diagonal lines, said scoops acting to impel the water upwardly in said cylindrical tube, a plurality of angularly spaced discharge apertures in the upper portion of said cylindrical spinner tube through which the upwardly impelled water is projected outwardly in the form of an atomized spray, a flash vaporization zone comprising a cylindrical surface arranged substantially concentrically of and spaced from said cylindrical spinner tube, air passageways in said housing through which said air impelling means causes air to flow for picking up water vapor produced in said flash vaporization zone, and means for producing heat in said flash vaporization zone.

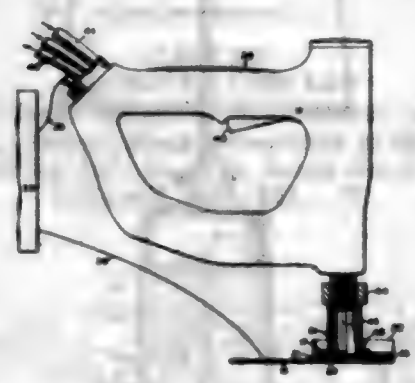
2,869,229
ELECTRIC FRY PAN
Brandt F. Ziegler, Jr., Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application May 7, 1957, Serial No. 657,586
4 Claims. (Cl. 219—44)



1. An electrically heated fry pan comprising a pan body having a side wall, an electric heating element associated with said body, a switch mounted on said body connected to said heating element and having an adjusting element, a handle having its inner end attached to said side wall, said handle having an elongated portion to provide a hand grip, said handle having a hollow housing projecting above said hand grip and interposed between the latter and said pan side wall, means defining an opening in the wall of said housing above said hand grip, said switch arranged within said handle and having its contacts projecting into said hollow housing, a control shaft connected to said adjusting element within said housing and projecting through said opening in the direction of said hand grip, and a knob secured to the projecting end of said control shaft exteriorly of said housing and positioned above said hand grip for manipulation by the operator to control said switch, and means securing said control shaft in said housing wall opening prior to attachment of said handle to said body side wall.

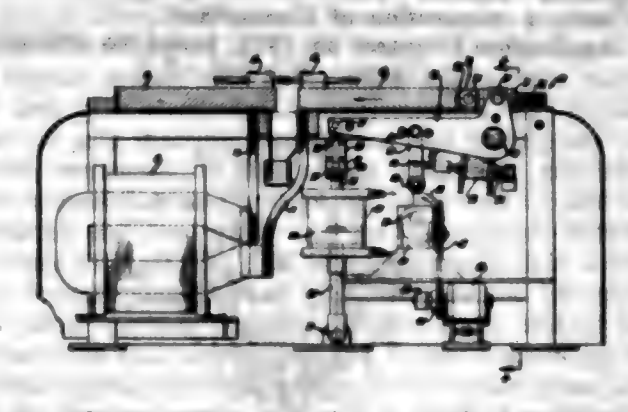
2,869,230
FASTENING MEANS AND METHOD
Francis S. Rapasky, Linden, N. J., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware
Application January 4, 1955, Serial No. 479,747
9 Claims. (Cl. 219—94)

2. In combination a metal attachment piece including a hollow body open at one end and closed at the other end by a wall adapted to be positioned on the member to which said piece is to be united, said hollow body including position determining means spaced from said wall and bearing a fixed relation relative to said wall, and a welding instrumentality adapted to enter the hollow of said body to perform a welding operation therein, said welding instrumentality including a welding element,



and position determining means bearing a fixed relation relative to said element, said position determining means of said hollow body and said welding instrumentality being complementary each to the other whereby when they are juxtaposed said welding element is predeterminedly positioned relative to said wall.

2,869,231
FLASH WELDING MACHINE
Floyd B. Stoos, San Anselmo, Calif.
Application March 8, 1956, Serial No. 570,231
6 Claims. (Cl. 219—97)



1. In a flash welding machine, a stationary clamp, a movable clamp movable toward and away from said stationary clamp, means for supplying welding current to said clamps, power means for moving said movable clamp, a cam follower operatively connected to said movable clamp, cam means adapted to be contacted by said cam follower to oppose the movement of said movable clamp by said power means towards said stationary clamp and to initially control the movement of said movable clamp by said power means, trip means for moving said cam follower out of line with said cam to permit said power to accelerate said movable clamp to complete the weld, and means adjustably connected to said movable clamp for actuating said trip means after a predetermined length of travel of said movable clamp.

2,869,232
LAMP STANDS
Arthur R. Gray, East Orange, N. J.
Application October 12, 1956, Serial No. 615,536
5 Claims. (Cl. 240—2)

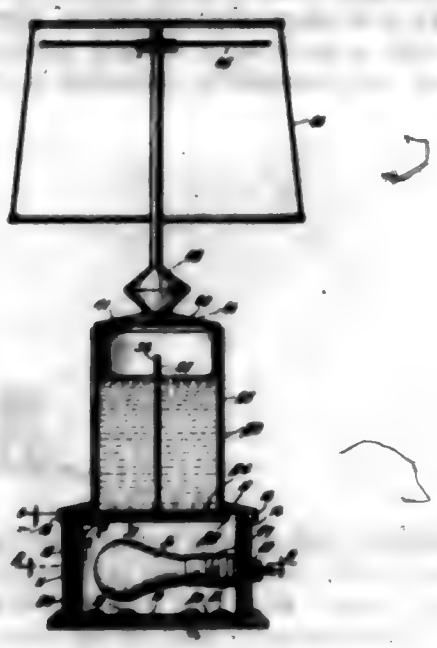
1. In a lamp stand, a base having an illuminating lamp therein, a pedestal supported on the base having a bottom and a wall extending upwardly from the bottom forming a receptacle adapted to serve as an aquarium, means for blocking the transmission of light through the bottom of the pedestal except at the peripheral portion of the bottom beneath the lower ends of the wall, said

said upper portion of the vessel to permit replacement of

controlling the phase of the carrier waves applied through

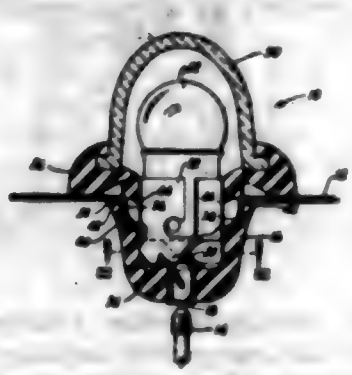
having a closed inner end and an open outer end located cylindrical form disposed coaxially below said air impell-

wall being formed of plastic material having the property of transmitting light longitudinally therethrough, and



removable means for blocking the passage of light from the base to the pedestal wall.

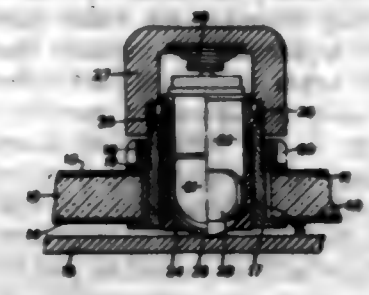
2,860,233
LAMP SOCKET UNIT
Roy W. Johnson, Jr., Pleasant Ridge, Mich., assignor to Spencer Rubber Products Company, Manchester, Conn., a corporation of Connecticut
Application February 24, 1955, Serial No. 490,169
13 Claims. (Cl. 240—7.1)



1. In an assembly adapted to be mounted in self-retaining position in an apertured plate, a unitary body portion of resilient rubber-like material having a chamber open at its one end with the latter forming a lens receiving rim, the outer surface of the body portion having a circumferential recess for receiving the edge of the aperture in said plate, the circumferential recess being formed from an annular shoulder with a flat upper surface normal to the axis of the circumferential recess and an axially spaced lip, the latter when in an unstressed condition extending through the plane of said flat upper surface so that when the body portion is inserted into the aperture the edges forming the latter will be clamped between said shoulder and lip.

2,860,234
ILLUMINATED INSTRUMENT PANEL
Bertram Stevens, Durham City, England, assignor to Thorn Electrical Industries Limited, London, England
Application March 9, 1956, Serial No. 570,446
6 Claims. (Cl. 240—8.16)

6. A trans-illuminated panel structure comprising an apertured panel, a conducting layer on the rear surface of said panel, a conducting member supported in fixed relation to said panel and spaced from the rear surface thereof, an outer metal sleeve fixed in said aperture in electrical contact with said conducting layer and projecting at least mainly forwards from the panel, an insulating sleeve mounted for limited sliding movement within the metal sleeve, an inner metal sleeve fixedly mounted within the insulating sleeve shaped and dimensioned to support a lamp having a lamp cap and



a center contact, said inner metal sleeve making electrical contact with said lamp cap and with said conducting member, a cover member at the front end of said metal sleeves and a spring within said cover member and engaging said center contact, said cover member making electrical connection between said spring and said outer metal sleeve.

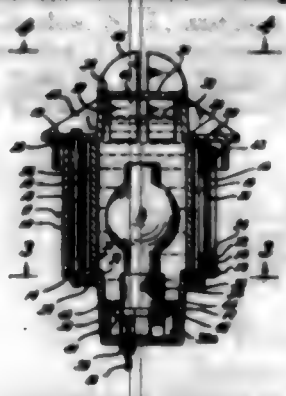
2,860,235
ORNAMENTAL LAWN LAMPS
Howard A. Dunn, Pittsburgh, Pa.
Application April 24, 1956, Serial No. 580,350
2 Claims. (Cl. 240—11.2)

1. A lighting fixture for lamp post comprising a glass globe having concavo side walls and convex top wall, the concavo side walls terminating in a constricted base for mounting on a post bracket and the convex top wall terminating in a shoulder from which an integral ornamental knob extends in an upward direction, the constricted base portion and the top shoulder portion being provided with external threads for engaging the post mounting bracket and a combined reflector and shade respectively, said lighting fixture constituting an integral sealed member which encloses the light bulb.

2,860,236
LIGHT FIXTURE
Buell Moore, Houston, Tex., assignor, by direct and mesne assignments, of twenty percent to Will F. Wilson, Houston, Tex., fifteen percent to Wilson Electrical Equipment Co., Inc., a corporation of Texas, thirty-five percent to Dallas L. Calmes, twenty percent to Buell Moore, five percent to Glenn M. Mathews and five percent to J. G. Mullins
Application May 5, 1955, Serial No. 506,115
5 Claims. (Cl. 240—11.4)

1. An enclosure for a light source, comprising a vessel having a lower end and side walls providing a sealed container for liquid when the vessel is mounted in upright position, a socket within the vessel for receiving the base of a light source and positioned to immerse at least a substantial portion of said light source in the liquid when its base is so received, an opening through

said upper portion of the vessel to permit replacement of the light source, and a cover for said opening having fins



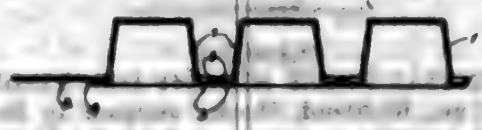
depending at its underside to contact the liquid for dissipating the heat thereof.

2,860,237

CELLULAR DIFFUSION PANEL

Douglas H. Baker, Florham Park, and Guido Barbieri, Cranford, N. J., assignors to Cell Ceiling Incorporated, New York, N. Y., a corporation of New York

Application July 11, 1956, Serial No. 597,256
9 Claims. (Cl. 240—78)



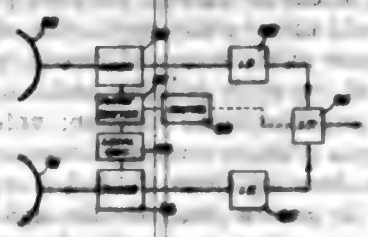
1. A cellular diffusion panel for interposition between a source of illumination and an area to be illuminated, comprising a supporting sheet of translucent material, a multiplicity of tubular cellular elements of translucent material extending through the plane of said supporting sheet, each said cellular element terminating in a circular raised rim which extends outwardly from and surrounds the element and which is offset from the plane of the supporting sheet and spaced outwardly therefrom, the outside edges of said raised rims being joined to the supporting sheet by short connecting webs, said tubular elements being circular in cross section and having their longitudinal axes parallel to each other and perpendicular to the plane of the panel.

2,860,238

DIVERSITY RECEIVING SYSTEM

Edwin Dyke, Brookfield, and Henry Magnuski, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application March 5, 1953, Serial No. 340,572
2 Claims. (Cl. 250—20)



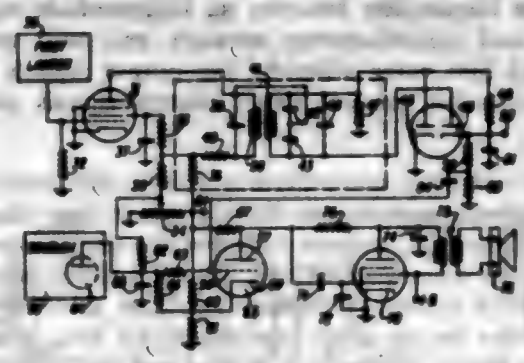
1. A diversity receiving system for microwaves including in combination, first and second antenna means including physically spaced elements for receiving carrier waves from a single source over two separate paths, means for combining carrier waves from said antenna means to provide an output carrier wave, first and second signal channels individually connecting said antenna means to said combining means for applying received carrier waves to said combining means as modulated carrier waves, said signal channels including hollow single-conductor wave guide means for conducting said carrier waves therethrough, adjustable phase shift means in said wave guide means of one of said channels for controlling the phase of the carrier waves applied through said one channel to said combining means, and means controlled by the output of said combining means for adjusting said phase shift means so that the carrier waves applied to said combining means are in phase and the output carrier waves from said combining means is a maximum.

2,860,239

RECEIVER CIRCUIT

James M. Clark, Hinsdale, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application July 24, 1953, Serial No. 370,861
6 Claims. (Cl. 250—20)



1. In a frequency modulation radio receiver of the superheterodyne type including frequency converting means, intermediate frequency amplifier means, limiter means, frequency discriminator means, and audio amplifier means connected in series in the order named, the combination including a limiter stage forming a part of said limiter means and including a triode tube having plate and grid electrodes, a discriminator coil forming a part of said discriminator means and having one end thereof connected to said plate electrode, condenser means connecting said grid to the other end of said discriminator coil for tuning out the capacitance between said plate and grid so that said triode tube has a wide linear operating range, and adjustable means for applying a direct current potential to said other end of said discriminator coil, said adjustable means controlling the potential applied through said coil and to said plate electrode to thereby control the output level of said limiter stage and the slope of the frequency-amplitude characteristic of said discriminator coil, whereby the level of the audio signal at the discriminator means is controlled by said adjustable means.

2,860,240

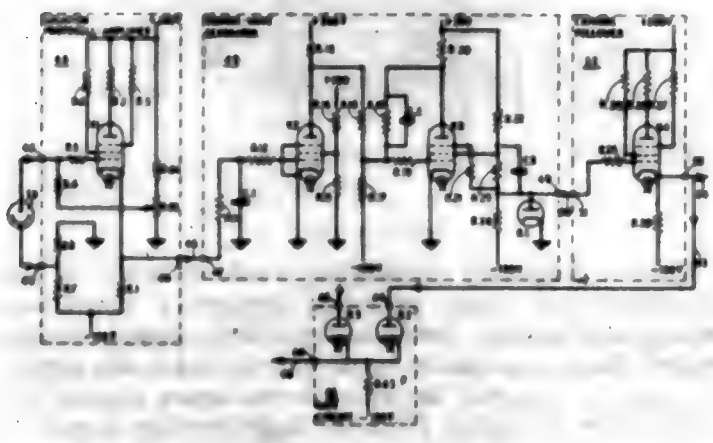
ELECTRIC WAVEFORM GENERATORS

Brian Guy Welby, Sale, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain

Application October 5, 1953, Serial No. 384,176
Claims priority, application Great Britain October 9, 1952
11 Claims. (Cl. 250—27)

10. A waveform generating device for producing an output voltage of square waveform in dependence upon a control signal such that the leading edge of each square wave output pulse is generated when the control signal passes in one direction from a datum voltage level through a first predetermined voltage level and the trailing edge of such output pulse is generated when such control signal passes in the reverse direction through a second predetermined voltage level and which includes a first thermionic valve having at least an anode, a suppressor grid, a screen grid, a control grid and a cathode in that order and arranged for transitron action between its screen grid and its suppressor grid and modified in that said screen grid and said suppres-

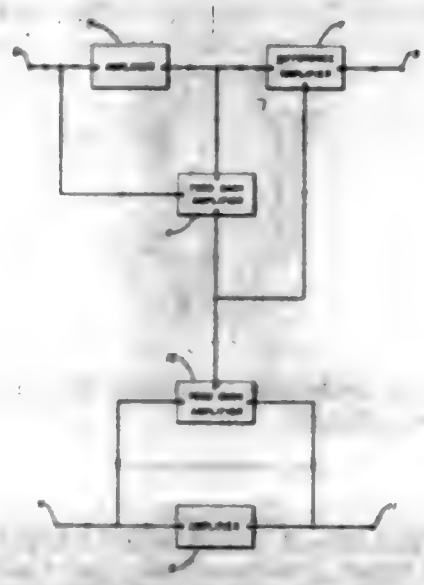
sor grid are additionally coupled by a resistor, a negative feedback path between said anode and said control grid, a source of input control signals for said first valve, said source comprising a second thermionic valve including at least an anode, a control grid and a cathode in that order, a load resistor in the anode circuit of said second valve, a direct current connection including a series-connected potentiometer network between said anode and a source of potential negative with respect to the cathode of said second valve, and a signal input connection to the control grid of said second valve for supply with an initial control signal in which the signal voltage variations are negative-going with respect to a predetermined datum level, a direct current output connection between an intermediate tapping point on said potentiometer network and said control grid of said first valve whereby the output signals from said second valve provide input control signals to said



first valve of a form such that the control grid of said first valve is biased to cut-off when said input control signal is at its datum level and that both said predetermined voltage levels are in a positive-going direction from said datum level, and a square wave output connection for deriving said output square waveform from said suppressor grid of said first valve, the arrangement being such that when said input control signal from said source reaches said first predetermined voltage level the working point on the anode voltage/anode current characteristic of said first valve reaches the upper bend thereof thereby to initiate transitron-like action to cause the voltages of said screen grid and said suppressor grid of said first valve to fall abruptly and said second predetermined voltage level being that at which said input control signal from said source on returning towards said datum level from said first predetermined voltage level causes a reverse transitron-like action.

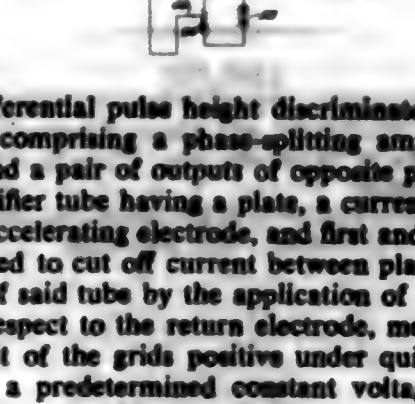
2,860,241
RATIO COMPUTER
Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application October 29, 1954, Serial No. 465,758
2 Claims. (Cl. 250—27)

1. A computer circuit comprising first and second input terminals adapted to receive input signals, a pair of like amplifiers connected one to each of said input terminals, variable negative feedback means for each of said amplifiers, a source of constant potential, and comparison means connecting said source of constant potention and the output of one of said amplifiers for producing a control voltage proportional to the voltage difference thereof, said comparison means being further connected to both of said feedback means for impressing the control voltage thereon to control the percentage feedback whereby the voltage at the output of the am-



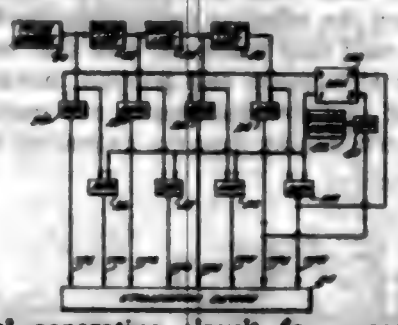
plifier not connected to said comparison means is proportional to the ratio of input voltages.

2,860,242
DIFFERENTIAL PULSE HEIGHT DISCRIMINATOR
Louis D. Test, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application February 8, 1955, Serial No. 487,806
3 Claims. (Cl. 250—27)



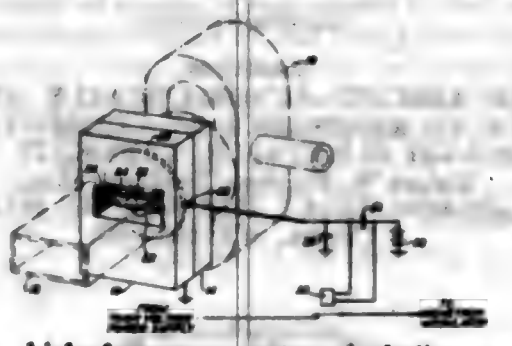
1. A differential pulse height discriminator for electrical pulses comprising a phase-splitting amplifier having an input and a pair of outputs of opposite phase, a gated beam amplifier tube having a plate, a current return electrode, an accelerating electrode, and first and second grids each adapted to cut off current between plate and return electrode of said tube by the application of voltage negative with respect to the return electrode, means for biasing the first of the grids positive under quiescent conditions with a predetermined constant voltage, a current source having a positive terminal connected to the plate and to the accelerating electrode and a negative terminal connected to the return electrode through a bias resistor and a bypass capacitor in parallel therewith, means interconnecting the second grid and the return electrode including the bias resistor and the bypass capacitor, whereby the second grid is biased negatively with respect to the return electrode, a coupling between the first grid and one of the outputs of the phase-splitting amplifier, a coupling between the second grid and the other output of the phase-splitting amplifier, and a load impedance in the plate circuit of the gated beam amplifier tube, whereby a voltage pulse appears across the plate load impedance only in response to pulses at the input of the phase-splitting amplifier which are of an amplitude insufficient to drive the first grid negative beyond cutoff, but sufficient to drive the second grid less negative than cutoff.

2,860,243
PULSE GENERATOR
Martin Kaplan, Camden, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application April 28, 1955, Serial No. 502,572
10 Claims. (Cl. 250—27)



1. A signal generating circuit for generating pulses on parallel output channels in response to successive input impulses comprising, in combination, a first coincidence gate, a second coincidence gate, both said first and second coincidence gates being responsive to the same ones of said input impulses, coincidence means coupled to the output of said first coincidence gate, means to selectively prime said coincidence means, and a multivibrator having a first input and a second input, said first multivibrator input being selectively coupled to the output of said coincidence means, said second multivibrator input being coupled to the output of said second coincidence gate, said first coincidence gate being responsive to a given steady state output from said multivibrator, and said second coincidence gate being responsive to a different steady state output from said multivibrator.

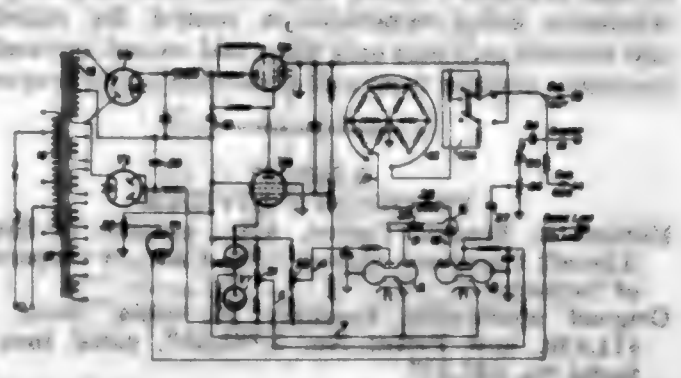
2,860,244
SUPPRESSION OF ARCING IN WAVE GUIDES
John C. Crowley, Madison, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application May 11, 1953, Serial No. 353,928
9 Claims. (Cl. 250—36)



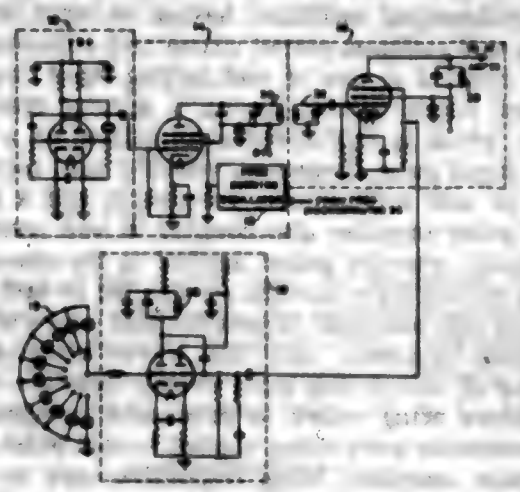
5. In a high frequency system including a magnetron oscillator having an output window and a wave guide circuit connected thereto at said window, means for suppressing voltage breakdown arcs in said wave guide adjacent said window comprising a conductor mounted in the central H-plane of said wave guide adjacent said window and insulated from said wave guide, means for disabling said magnetron and a control circuit for said disabling means including said conductor and said wave guide and completed by a voltage breakdown arc occurring adjacent said window.

2,860,245
WIDE-RANGE SWEEPING OSCILLATORS
John Harold Evans, Dartmouth, Nova Scotia, Canada, assignor to A. C. Cossor Limited, London, England
Application December 1, 1954, Serial No. 472,450
Claims priority, application Great Britain December 9, 1953
5 Claims. (Cl. 250—36)

1. A wide-range, sweep-frequency oscillation supply system comprising, a radio-frequency oscillator for generating oscillations of a frequency f having a harmonic component of a frequency nf, where n is an integer greater than unity, a second radio-frequency oscillator for generating oscillations of a frequency of approximately nf, cyclically operating means controlling said first oscillator to vary its frequency about the frequency f in repeated cycles recurring at regular intervals, a mixer circuit, means for applying oscillations from the two oscillators to said mixer circuit to produce in said circuit beat oscillations of cyclically varying frequency resulting from the beating of the nth harmonic of the first said oscillator with the fundamental frequency of the second oscillator, and an oscillation work circuit energized by the varying frequency beat oscillations produced in said mixer circuit.



2,860,246
FREQUENCY CONTROL SYSTEM
Edward Jakubowicz, Red Bank, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application July 8, 1955, Serial No. 520,939
1 Claim. (Cl. 250—36)
(Granted under Title 35, U. S. Code (1952), sec. 266)



In a system wherein a selected output from a variable frequency oscillator operative through a prescribed range having discrete frequency channel spacing is controlled by the output of a frequency discriminator responsive only to frequency deviations from a prescribed center frequency, harmonic generating means for simultaneously generating a fundamental frequency and a plurality of frequencies harmonically related thereto, said fundamental frequency being a multiple of the channel spacing of said variable frequency oscillator, a first heterodyning means responsive to the output of said harmonic generating means and the output of said variable frequency oscillator and having a tuned output circuit adapted to pass only a single intermediate frequency resulting from the combining of one of the harmonic frequencies with a controlled output from said variable frequency oscillator, said single intermediate frequency being substantially at the center of the prescribed range of the output of said variable frequency oscillator, crystal controlled frequency generating means for producing a spectrum of oscillation frequencies having said discrete fre-

2,860,250
movable means for sealing said anode-entrance opening;

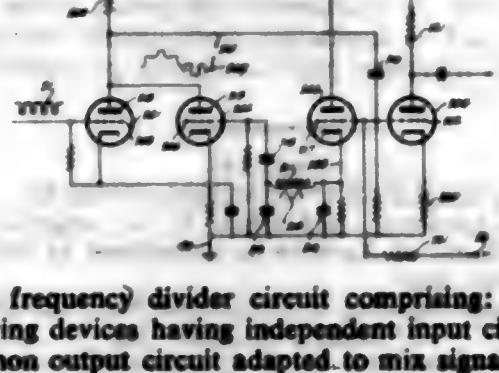
quency channel spacing and including means for selectively utilizing any one of said oscillation frequencies, and a second heterodyning means for combining said first intermediate frequency and a preselected crystal controlled oscillation frequency whereby there is produced a second intermediate frequency in the vicinity of said prescribed center frequency, said frequency discriminator being responsive to control the output of said variable oscillator only when said second intermediate frequency deviates from said prescribed center frequency.

2,860,247

FREQUENCY DIVIDER

Herbert B. Brooks, Tucson, Ariz., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Original application February 23, 1954, Serial No. 411,630, now Patent No. 2,752,497, dated June 26, 1956. Serial No. 643,337
1958. Divided and this application March 1, 1957, Serial No. 643,337
3 Claims. (Cl. 250—36)



1. A frequency divider circuit comprising: a pair of amplifying devices having independent input circuits and a common output circuit adapted to mix signals applied, respectively, to each of said input circuits; a pulse excited and synchronized oscillator, having an input circuit coupled to said common output circuit and a resonant output circuit coupled to one of said mixing input circuits, said resonant output circuit having a natural resonant frequency which is subharmonically related to a predetermined input pulse frequency, whereby said oscillator operates at said subharmonic frequency; and a negatively biased pulse amplifier also coupled to said common output circuit, whereby pulses applied to the remaining one of said mixing input circuits are applied to said oscillator to excite said oscillator to produce sine waves at said subharmonic frequency, said sine waves being applied to said one of said mixing input circuit, said sine waves and said pulses being mixed to produce a composite wave, said composite wave being applied to said pulse amplifier, said pulse amplifier being responsive only to the most positive portions of said composite wave to produce pulses having the same repetition frequency as the frequency of said sine waves.

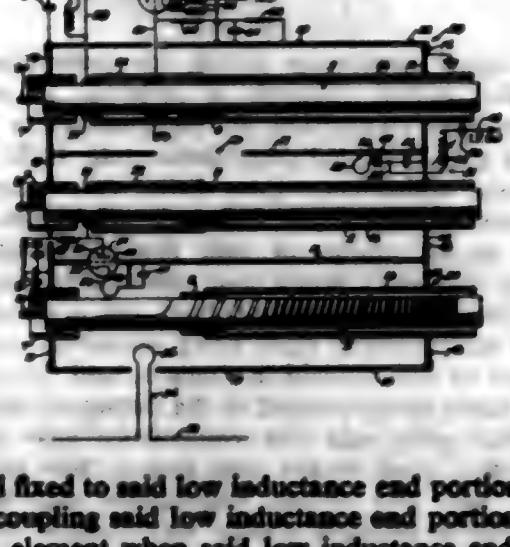
2,860,248

WIDE RANGE RADIO FREQUENCY TUNER

Harold T. Lynnes, Milford, Conn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois

Application June 9, 1954, Serial No. 435,432
4 Claims. (Cl. 250—40)

1. In a wide range radio frequency tuner, the combination comprising an elongated hollow conductive housing having first and second opposite end walls with alined apertures therein, an elongated conductive tube connected to said second end wall in alinement with said apertures and extending in said housing partway toward said first end wall, a first conductive energy exchange ring element connected to said first end wall in alinement with said apertures, a second conductive energy exchange ring element mounted on the inner end of said tube and spaced axially from said first ring element, an elongated generally cylindrical tuning coil having non-uniform inductance per unit length, said inductance per unit length increasing progressively along said coil in one direction, said coil thereby having a low inductance end portion and a high inductance end portion, said coil being received within said ring elements for axial movement therein to vary the effective inductance provided by said coil between said ring elements, said coil being disposed with its high inductance end portion movable into said tube ahead of said low inductance end portion, an elongated conductive tuning member extending longitudinally



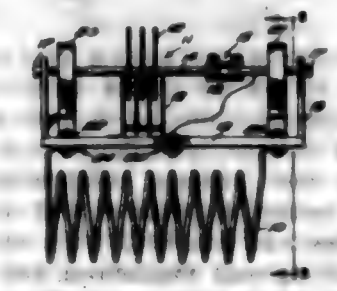
from and fixed to said low inductance end portion of said coil for coupling said low inductance end portion to said first ring element when said low inductance end portion is moved between said ring elements, said longitudinally extending member being effective to vary the capacitance between said ring elements when said coil is moved into said tube from between said ring elements, said longitudinally extending member thereby being effective to tune said housing as a re-entrant cavity resonator, and a plurality of coupling rings alined with and spaced between said first and second rings.

2,860,249

TUNED CIRCUIT AUTOMATICALLY ADJUSTABLE TO RESONANCE BY CURRENT FLOW THROUGH BI-METALLIC ELEMENTS

Robert W. Morrison, Seekonk, Mass.

Application March 2, 1955, Serial No. 491,607
7 Claims. (Cl. 250—40)

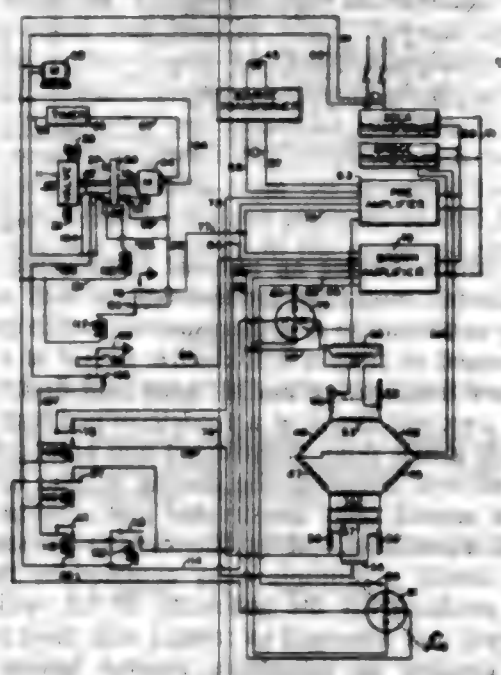


1. In a parallel tuned circuit comprising inductance and capacity for determining the reactance thereof, means for conductively coupling input energy across said tuned circuit, means including two bimetallic elements one element electrically coupled in the inductive branch of said circuit the other element coupled in the capacitive branch of said circuit, said elements mechanically coupled to one of the reactive elements to vary its reactance, one bimetallic element increasing the reactance and the other decreasing the reactance and coupled to said one reactive element in opposing torque relationship to maintain the capacitive and inductive branch currents equal in magnitude.

2,860,250
FLUID ANALYZER

Walter C. Poupsirt, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Original application December 26, 1950, Serial No. 202,617. Divided and this application August 11, 1954, Serial No. 449,212
10 Claims. (Cl. 250—43.5)



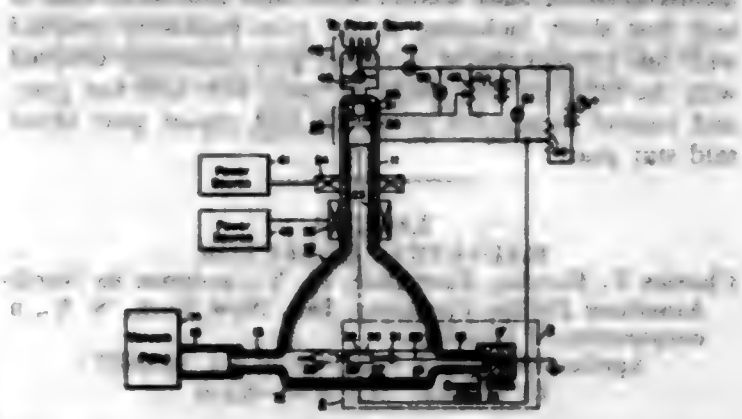
1. In a recorder system, in combination, a recorder having a recording medium, means for marking said medium responsive to an input signal, and means for effecting relative movement between said marking means and said medium to provide a record of the variation of said input signal with time, a source of different input signals, timing means connecting said source to said marking means to successively apply said different signals to said marking means, means actuated at a predetermined time by said timing means to apply a voltage pulse of one polarity to said marking means coincident with the application of certain of said signals to said marking means, and means actuated by said timing means to apply a voltage pulse of opposite polarity to said marking means coincident with the application of others of said signals to said marking means, thereby forming index marks in one direction on said recording medium at the beginning of the recording period of certain of said signals and forming index marks in the opposite direction on said recording medium at the beginning of the recording period for said other signals.

2,860,251
APPARATUS FOR MANUFACTURING SEMI-CONDUCTOR DEVICES

Serge Pakswer, Elmhurst, and Robert G. Pohl, Chicago, Ill., assignors to The Raytheon Corporation, a corporation of Illinois

Original application October 15, 1953, Serial No. 386,363. Divided and this application December 11, 1956, Serial No. 627,701
3 Claims. (Cl. 250—49.5)

2. Apparatus for the manufacture of alloy junction transistors comprising: an envelope comprising an electron-gun section and an anode section, said anode section including an anode-entrance opening; an anode structure, adapted to be inserted through said anode-entrance opening for removable mounting within said anode section of said envelope, said anode structure including a plurality of receptacle portions disposed in a predetermined position within said anode section of said envelope for individually securely holding semi-conductor bodies each having a pair of opposing surfaces with a modifier pellet disposed on a limited portion of each of said surfaces; removable means for sealing said anode-entrance opening; means for evacuating said envelope means including an electron gun mounted within said electron-gun section of said envelope for projecting a stream of electrons toward said anode structure; means for focusing and deflecting

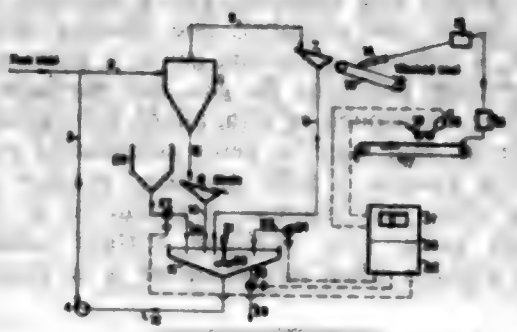


said electron stream to selectively impinge upon limited areas of each of said receptacle portions; and means for rotating said receptacle portions to selectively expose opposite sides of said receptacle portions to said electron stream.

2,860,252
COAL TESTING METHOD

Hendrik Dijkstra, Geleen, Netherlands, assignor to Stamicarbon N. V., Heerlen, Netherlands

Application May 3, 1955, Serial No. 505,850
Claims priority, application Netherlands May 7, 1954
6 Claims. (Cl. 250—53)

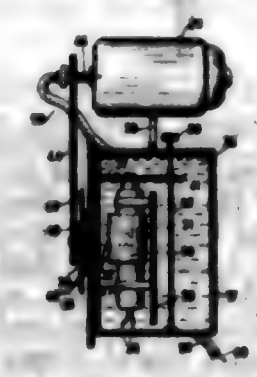


1. A method of testing coal to determine the ash content thereof, comprising the step of measuring the Roentgen ray dispersion capacity of the coal employing a technical Roentgen radiation composed entirely of rays having a wave length greater than 1.74 A. U. and less than 4.5 A. U.

2,860,253
APPARATUS FOR PRODUCING STEREOSCOPIC FLUOROSCOPIC IMAGES

Theodore R. Rosenberg, Jackson Heights, N. Y.

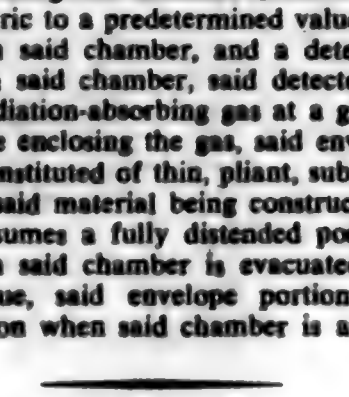
Application April 19, 1957, Serial No. 653,832
6 Claims. (Cl. 250—60)



1. In a stereoscopic viewing system, in combination, a rotatable shutter and mechanism for synchronously

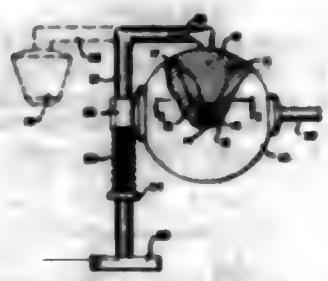
coupling said shutter with a source of alternately projected images viewable through said shutter, said mechanism comprising drive means including a rotatable element, a first shaft having one end coupled with said element, a second shaft carrying said shutter, and adjustable coupling means between said second shaft and the other end of said first shaft including a sun gear positively coupled with one of said shafts, a planet gear positively coupled with the other of said shafts in mesh with said sun gear, and control means for revolving said planet gear about said sun gear.

2,860,254
RADIATION DETECTOR
Charles F. Hendee, Hartsdale, N. Y., assignor to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application May 3, 1955, Serial No. 505,587
13 Claims. (Cl. 250—83.6)



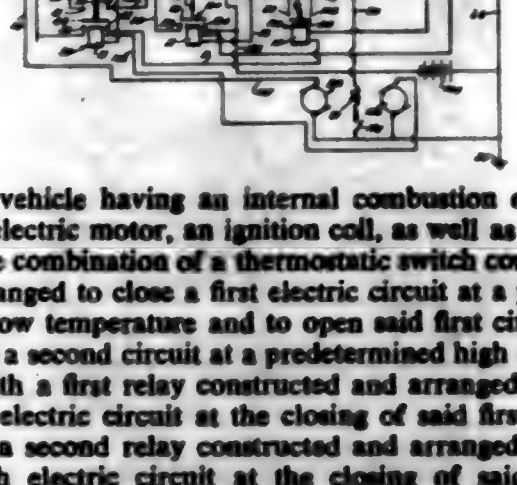
10. In combination, a substantially gas-tight chamber, means for evacuating said chamber to reduce the pressure below atmospheric to a predetermined value, a source of radiation within said chamber, and a detector for said radiation within said chamber, said detector comprising electrodes, a radiation-absorbing gas at a given pressure, and an envelope enclosing the gas, said envelope including a portion constituted of thin, pliant, substantially gas-tight material, said material being constructed such that said portion assumes a fully distended position without fracturing when said chamber is evacuated to the predetermined value, said envelope portion assuming a collapsed position when said chamber is at atmospheric pressure.

2,860,255
RADIOGRAPHIC CAMERA
Jack L. Tumath, Detroit, Mich., assignor to Radioactive Products, Inc., Ferndale, Mich., a corporation of Michigan
Application June 13, 1955, Serial No. 514,815
4 Claims. (Cl. 250—106)



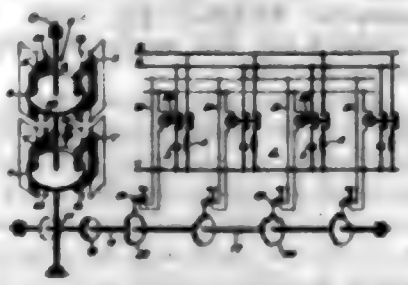
1. A radiographic "camera" comprising a body having a conoid shaped recess larger on the surface of the body than at the base of the recess, a closed bottom socket axially inward of the base of the recess and having its open top opening to it and smaller than it, a radioactive capsule in said socket and resting against the socket bottom, a springy disc retainer for said capsule to hold it in said socket, and a conoid shaped plug filling said recess, the springy disc retainer being between the plug and the socket and being snapped into place in a flat form from its free convex form.

2,860,256
AUTOMATIC SELF STARTER FOR INTERNAL COMBUSTION ENGINES
Lucien Henry Trip, Kingston, N. Y.
Application April 30, 1957, Serial No. 656,862
1 Claim. (Cl. 290—2)



In a vehicle having an internal combustion engine, a starter electric motor, an ignition coil, as well as a generator, the combination of a thermostatic switch constructed and arranged to close a first electric circuit at a predetermined low temperature and to open said first circuit and to close a second circuit at a predetermined high temperature, with a first relay constructed and arranged to close a third electric circuit at the closing of said first electric circuit, a second relay constructed and arranged to open a fourth electric circuit at the closing of said second electric circuit, a multiple relay actuated by the electric current produced by the generator of the vehicle, being constructed and arranged to control said third and fourth electric circuits, an adjustable resistor having two terminals, the first one of which is electrically connected to the starter motor of the vehicle, a conductive coil so constructed and arranged that it will partially uncoil itself when an electric current passes through it and having two terminals, one of which is grounded while the other is electrically connected to the second one of said terminals of said adjustable resistor, a shut-off switch mechanically connected to said coil so as to be moved by the uncoiling and the re-coiling thereof, an electro magnet controlled by said switch, a multiple circuit breaker connected to control said first relay and said multiple relay as well as the ignition coil of the vehicle, resilient means tending to move said multiple circuit breaker into an open position in which the electrical circuits controlled by it are interrupted, and locking means normally holding said circuit breaker in a closed position being constructed and arranged to be actuated by said magnet so as to allow said resilient means to open said circuit breaker.

2,860,257
DEVICE FOR BALANCING INDUCTION FURNACE PHASE CURRENTS
Werner Tellmann, Duisburg, Germany, assignor to Demag-Elektrometallurgie G. m. b. H., Duisburg, Germany, a corporation of Germany
Application October 14, 1957, Serial No. 689,957
Claims priority, application Germany October 15, 1956
4 Claims. (Cl. 307—14)



4. Regulating means for equalizing current in the power lines for an induction furnace coil in a furnace load circuit whose power factor may be adjusted to 1.0 and that is connected to one phase of a three phase system, first and second induction discs and a common shaft therefor, a current coil associated with each disc, the

current coil associated with the first disc being energized by current in a first line and the current coil associated with the other disc being energized by current in a second line, a voltage coil associated with each disc, the voltage coil associated with the first disc being connected to the first and second lines and the voltage coil associated with the second disc being connected to the first and third lines, the torque imparted to each disc by said coils being equal and opposite when the ratio of the induction coil power factor to the power factor of the other circuits equals a preferred ratio of approximately 1.0 to 0.577, and the net torque on the discs being unequal and tending to rotate the common shaft when the power factor ratio departs from the aforesaid ratio, and means responsive to the angular positions of said common shaft for restoring the system to the preferred ratio.

2,860,258

TRANSISTOR DECADE COUNTER

Arthur D. Hall, Berkeley Heights, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application September 17, 1954, Serial No. 456,778

2 Claims. (Cl. 307—88.5)

2. A decade counter comprising four single-transistor trigger stages connected in tandem, each stage comprising a transistor having a semiconductive body and a base electrode, an emitter electrode and a collector electrode in contact with said body, said transistor being characterized by a ratio of short-circuit collector current to emitter current which exceeds unity for electrode current voltage conditions within a preassigned range, an external network interconnecting said electrodes and including a potential source for establishing current voltage conditions within said range, said network comprising a current path by way of which current is regeneratively fed back from the collector to the emitter in amount sufficient to give rise to a negative variational resistance characteristic within said range, said network also including an impedance element operative to determine the extent of said range and a steering network connected to said emitter and base electrodes for alternately steering input pulses to first one and then the other of said electrodes, whereby said trigger stage is caused to alternate between stable operating conditions in response to said input pulses; means for applying input pulses to the first stage, and means for resetting the counter upon application of the tenth input pulse, said resetting means comprising coupling between the collector of the first stage and emitter of the fourth stage to transmit to said fourth stage a pulse to reset said fourth stage in response to the tenth input pulse, coupling between the collector of the fourth stage and the emitter of the second stage to transmit a pulse to said second stage in opposition to the normal input pulse thereto, thereby to prevent said second stage from changing from the reset condition in response to the tenth input pulse, and a pulse delaying device connecting the output of the first stage to the input of the second stage.

2,860,259

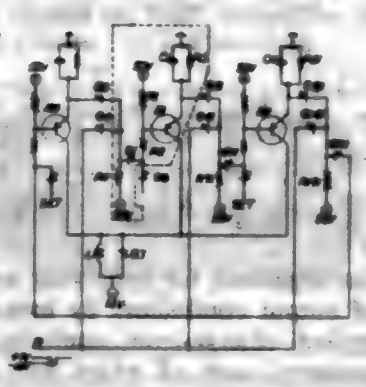
ELECTRICAL CIRCUITS EMPLOYING TRANSISTORS

Alexander Douglas Odell, John David Reynolds, and Peter Wynne Sheridan Harrild, London, England, assignors to International Standard Electric Corporation, New York, N. Y.

Application November 26, 1954, Serial No. 471,458

Claims priority, application Great Britain December 3, 1953

5 Claims. (Cl. 307—88.5)



1. A multi-stable register circuit comprising a plurality of stages coupled together, each stage having a source of switching pulses connected thereto for selectively and independently turning each stage on, a crystal electron device having a base electrode and a pair of other electrodes in each stage, means for normally biasing the electrodes of each device so as to maintain said device in an "off" state, means for altering the biasing means associated with a device so as to cause said device to assume an "on" state, means for preventing more than one of said devices at a time from assuming the "on" state, means responsive to any one of said devices assuming its "on" state for affecting said altering means so as to cause any other of said devices which might be in its "on" state to assume its "off" state, input means connected to an electrode of each device and adapted to receive a pulse, and means responsive to a pulse received on said input means of any device to affect said altering means associated with that device to cause said triode to assume its "on" state.

2,860,260

TRANSISTOR INTEGRATOR

Langthorne Sykes, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application September 27, 1956, Serial No. 612,565

1 Claim. (Cl. 307—88.5)

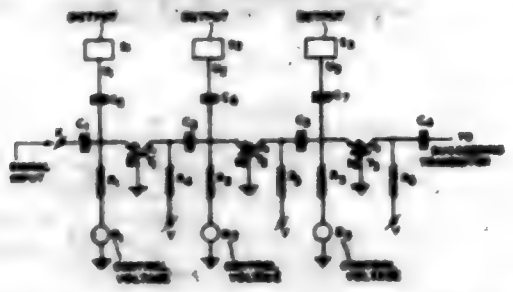
(Granted under Title 35, U. S. Code (1952), sec. 266)

A voltage integrator network which provides both positive and negative integration comprising, a resistor, a capacitor, an n-p-n transistor, a p-n-p transistor, a pair of input terminals and a pair of output terminals; one of said input terminals being connected to one end of said resistor, the other of said input terminals being connected to the emitters of said n-p-n and p-n-p transistors and to one of said output terminals; the other end of said resistor being connected to one end of said capacitor, to the collectors of said n-p-n and p-n-p transistors and to the other of said output terminals; the bases of said n-p-n and p-n-p transistors being electrically connected together and to the other end of said capacitor.

a hollow space and about an axis of rotation, means for

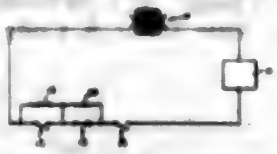
said rod relatively to said one shaft, and second motion-

2,860,261
DEVICE FOR SUPPLYING A SIGNAL TO ONE OF A PLURALITY OF OUTPUT CONDUCTORS
Arie Ferdinand Vertrijnen, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., Irvington on Hudson, N. Y.
Application February 18, 1957, Serial No. 640,788
Claims priority, application Netherlands March 3, 1956
1 Claim. (Cl. 307—88.5)



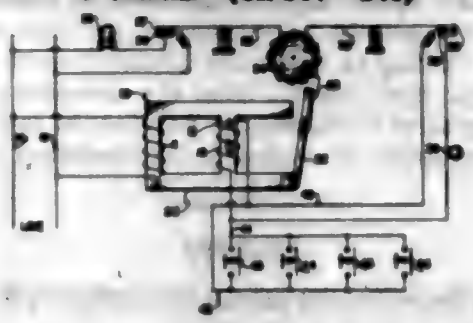
A circuit arrangement for supplying a signal to one of a plurality of output conductors by means of a chain of voltage-controlled change-over contacts, comprising: a chain of transistors each of which has an emitter electrode, a base electrode and a collector electrode, said chain of transistors being connected with the collector electrode of each transistor coupled to the emitter electrode of the next-following transistor, means for supplying a signal voltage to the emitter electrode of the first transistor of the chain, a plurality of output conductors each of which is connected to the emitter electrode of each transistor, the base electrode of each transistor being connected to a circuit having a low impedance for said signal voltage, means for supplying a control voltage between the emitter and the base electrodes of each transistor, the polarity of each of said control voltages determining the conductive state of the respective transistor, the emitter-base circuit of each transistor constituting a short circuit for said signal voltage and allowing said signal voltage to be passed by the transistor when it is in the conductive state, the signal voltage being supplied to the respective output conductor when the transistor is in its non-conductive state.

2,860,262
ELECTRIC CONTROL CIRCUIT
Charles J. Sperr, Jr., Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, Beloit, Wis., a corporation of Wisconsin
Application March 11, 1955, Serial No. 493,655
6 Claims. (Cl. 307—137)



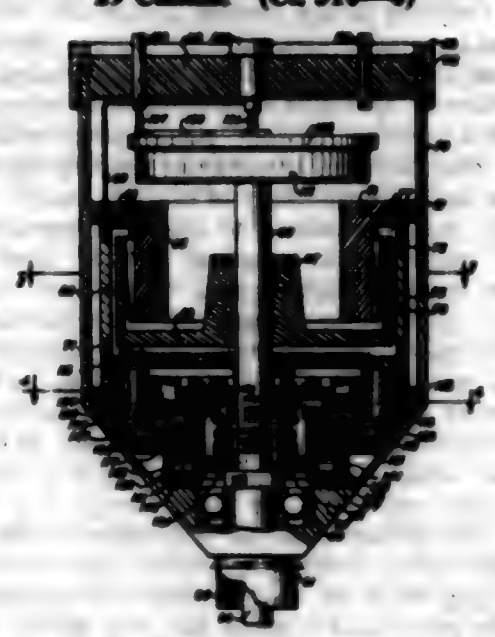
1. In combination with a device adapted to be energized by the flow therethrough of electric current and means including two sets of switch contacts connected in series with each other and said device for applying to the latter a voltage of a value sufficient to energize the device when both sets of contacts are closed, a resistor connected in shunt around a first one of said sets of contacts and in series with the second set and having a resistance sufficiently higher in value than the impedance of said device to limit current flow through the device to a value insufficient to energize the device and to produce a voltage drop across said first set of contacts substantially equal to the voltage of said source when said first contacts are separated by foreign matter and said second contacts are closed for application of said voltage to the device and said resistor in series, said resistor completing a conductive path through said device for application of said voltage across said second contacts when the contacts of both of said sets are held in open condition by foreign matter thereon.

2,860,263
REMOTE CONTROL SWITCHING CIRCUIT
Hubert T. Sparrow, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application December 26, 1957, Serial No. 705,382
6 Claims. (Cl. 307—149)



4. A remote control lighting system comprising, relay means, a ratchet type actuator including a plurality of ganged switches operated by said relay means and adapted to be simultaneously operated from an open to a closed position with sequential operations of said ratchet means and said relay means, a primary energizing coil for said relay means, a first circuit connecting said primary energizing coil to a source of power to continuously energize said relay means, a control winding for said relay means, a second circuit including a plurality of parallel connected momentary switches connected to said control winding, said momentary switches being adapted to short said control winding to operate said relay means, one of said switches of said ratchet means being adapted to connect a lighting load to the source of power and disconnect the load from the same with alternate steps of said ratchet means, a second ganged switched ratchet means being adapted to connect an indicator light to said momentary switches and said control winding.

2,860,264
QUICK STARTING ELECTROSTATIC GENERATOR
Noel Felici, Roger Morel, and Marcel Point, Grenoble, France, assignors to Societe Anonyme de Machines Electrostatiques, Grenoble, France, a corporation of France
Application October 25, 1956, Serial No. 618,407
Claims priority, application France March 10, 1954
29 Claims. (Cl. 310—6)



1. An electrostatic generator comprising a conveyor providing a wall of insulating material extending about

ing said electrode assembly against tilting movement with

2,860,271

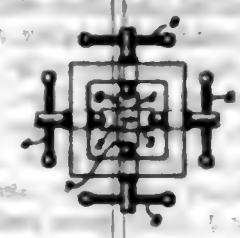
a hollow space and about an axis of rotation, means for supporting said conveyor for rotation on said axis, means disposed adjacent said conveyor for developing an electric field transversely of the wall of said hollow conveyor, a conductive inductor member supported within said hollow conveyor, a conductive conveyor member disposed within said hollow conveyor and supported for rotation thereof about said axis of rotation into and out of inductive relation to said conductive inductor member, means for establishing connection of said conductive conveyor member to a reference potential at a predetermined point in the rotation of said conductive conveyor member on said axis relative to said conductive inductor member, and means for establishing connection of said conductive conveyor member to said means for producing said electric field at another predetermined point in said rotation of said conveyor member on said axis relative to said conductive conveyor member.

2,860,265

FERROELECTRIC DEVICE

Warren P. Mason, West Orange, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application June 21, 1954, Serial No. 438,166
6 Claims. (Cl. 310—9.4)



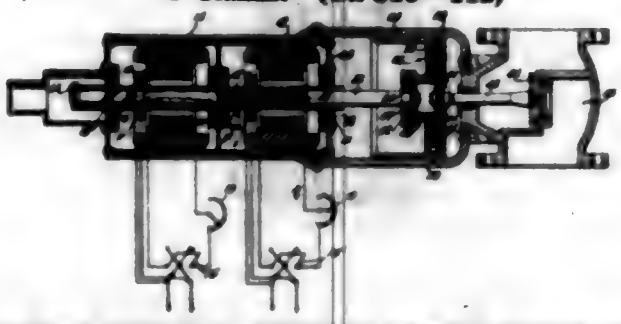
1. An electromechanical transducer comprising an element of ferroelectric crystalline material adapted for the interchange of energy between electrical and mechanical forces applied and resulting parallel to each other in a given direction in said material, said material being electrically polarized in said given direction, means for applying one of said forces to said material in said given direction, means for receiving energy of the other of said forces developed in said material in said given direction, and means for applying a substantially constant compressive force to said material in a direction normal to said given direction.

2,860,266

LINEAR ACTUATOR

Dale L. Schrader, Carlsbad, N. Mex., assignor to American Metal Climax, Inc., New York, N. Y., a corporation of New York

Application February 6, 1957, Serial No. 638,490
5 Claims. (Cl. 310—112)



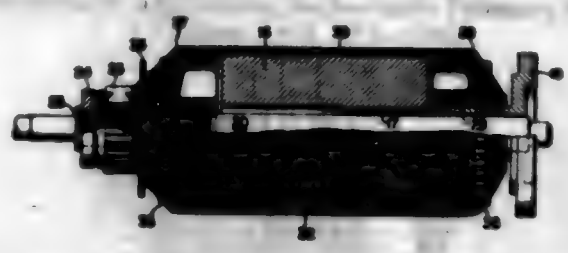
1. A linear actuator comprising a pair of rigidly and coaxially associated reversible motors having separate, tubular shafts extending coaxially within said motors and adapted to be separately rotated reversibly by said motors, a rod extending coaxially within both said shafts, first motion-transmitting means including a thread coacting between one of said shafts and said rod for reversibly moving the latter endwisely in response to rotation of said rod relatively to said one shaft, and second motion-transmitting means coacting between the other of said shafts and said rod to reversibly rotate said rod to modify its rotation relatively to said one shaft and thereby modify the endwise movement of said rod.

2,860,267

DYNAMOELECTRIC MACHINES

Frank A. Hayes, Middletown, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey

Application March 16, 1955, Serial No. 494,689
1 Claim. (Cl. 310—266)



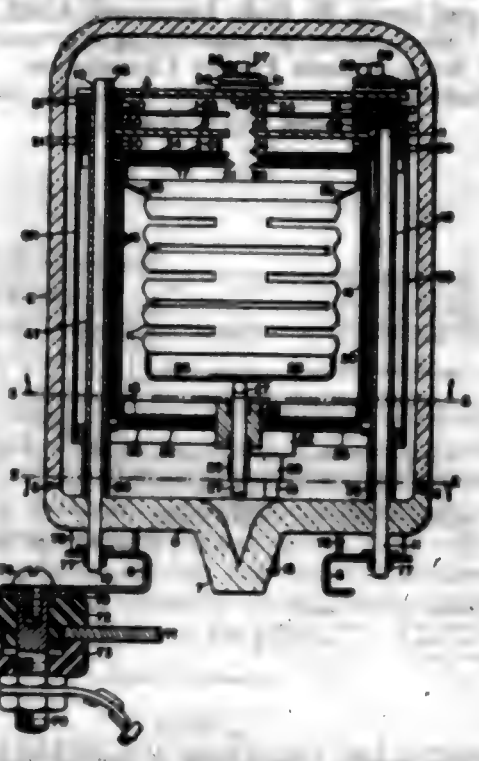
In a D. C. tachometer generator, a rotor structure comprising a preformed, non-magnetic, cylindrical tube mounted for continuous rotation within an annular air-gap and formed on its outer surface with equally-spaced, skewed grooves, conductors held in said grooves by ordinary winding tension and connected together and to a commutator to form a single-layer uniformly-distributed winding having a skew of at least ten conductors and a maximum radial thickness of one conductor.

2,860,268

STRUCTURES FOR GRID CONTROL GAS TUBES

Donald V. Edwards, West Orange, and Earle K. Smith, Montclair, N. J., assignors to Electrons, Incorporated, Newark, N. J.

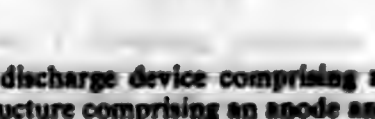
Application March 9, 1954, Serial No. 414,961
8 Claims. (Cl. 313—38)



1. A gaseous discharge tube of the character described comprising, a compact assembly of electrodes including a control grid between a heat shielded hot cathode and an anode, a tube envelope having a mounting base at one end, lead-in rods for all the tube electrodes sealed in said mounting base and extending from said seals lengthwise of the envelope in approximately parallel straight lines, and means including a plurality of metal sleeves directly engaging said mounting base for support-

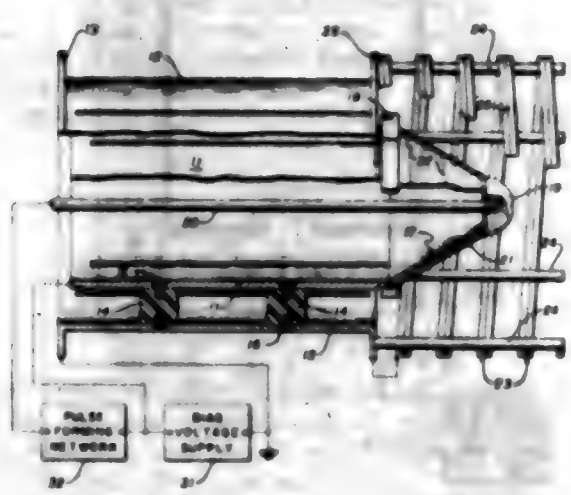
ing said electrode assembly against tilting movement with respect to said mounting base without subjecting said lead-in rods to material bending moments.

2,860,269
GAS DISCHARGE DEVICES
Sidney Jefferson, Abingdon, England, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application July 2, 1954, Serial No. 441,888
5 Claims. (Cl. 313—54)



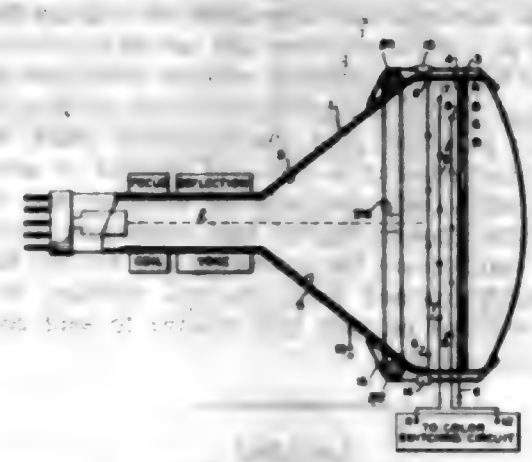
1. A gas discharge device comprising an envelope, an electrode structure comprising an anode and cathode within said envelope, a plurality of conductive supports, a metallic seed containing tritium gas connected between a first pair of said supports and disposed apart from said anode and cathode to form an independent electric circuit within said tube, a filament selected from the group consisting of zirconium and tantalum disposed adjacent said electrode structure and connected between a second pair of said supports to form a separate electric circuit for vaporization of said filament prior to release of tritium from said seed.

2,860,270
PULSED ION SOURCE
Franklin C. Ford, Danville, and Samuel G. Zizzo, Buford Cook, and James W. Ruff, Livermore, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application October 18, 1955, Serial No. 541,315
9 Claims. (Cl. 313—63)



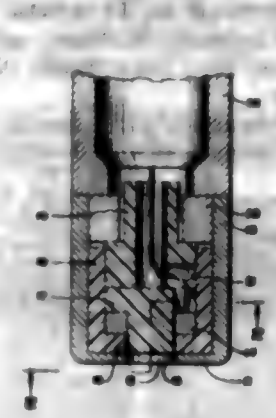
1. An ion source comprising a conical member having a metalized outer surface with grooves therein, said metal surface having gas occluded therein and being adapted for electrical pulsed energization to establish arcing across said grooves whereby ions are formed of said occluded gas, and a winding about said cone having openings therein and adapted for maintenance at a potential that is negative with respect to said cone for attracting ions therefrom and ejecting ions from the source in a diverging conical beam.

2,860,271
CATHODE RAY TUBE
Aurelius Sander, Forest Hills, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application June 3, 1955, Serial No. 513,893
9 Claims. (Cl. 313—77)



1. In combination, a cathode ray tube envelope; a planar image plate mounted within said envelope and coated with a plurality of first, second and third types of long narrow parallel phosphor strips having substantially equal widths, said strips being arranged in a repetitive pattern such that the (N) strip is of the first type, the (2N) strip is of the second type and the (3N) strip is of the third type, N being any positive integer; and a wire grid structure mounted within said envelope adjacent the coated side of said plate, said structure including first, second and third separated coplanar sets of parallel grid wires lying in corresponding first, second, and third separated planes, the number of grid wires in any set being equal to the number of strips of a corresponding color type, each grid wire being parallel to its corresponding color type, said planes being equidistantly spaced from each other and being parallel both to said plate and to each other.

2,860,272
SPARKING DEVICE
Louis H. Segall, Sidney, N. Y., assignor to Bendix Aviation Corporation, Sidney, N. Y., a corporation of Delaware
Application September 29, 1955, Serial No. 537,503
13 Claims. (Cl. 313—130)



1. A spark gap device comprising a tubular insulator, annular electrode means engaging one end of said insulator and having an internal diameter substantially equal to the diameter of the adjacent portion of the bore of said insulator, a center electrode in the bore of said insulator in spark gap relation to said annular electrode, and insulating means within said insulator and forming therewith a narrow annular passage through which any electrical flash-over between said electrodes must occur.

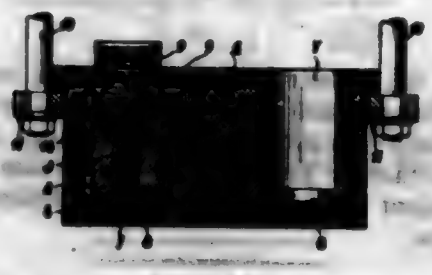
2,860,273
ELECTRON DISCHARGE DEVICE
Richard G. O'Fallon, Westchester, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application December 30, 1955, Serial No. 556,636
1 Claim. (Cl. 313—299)

An electron discharge device of the beam type subject to exhibit an irregularity in the anode current-anode voltage characteristic curve when the anode potential is at a low positive potential with respect to the cathode and below the screen grid potential, including in combination an envelope for said device, an elongated cathode having a pair of opposite faces adapted to emit electrons therefrom, an anode electrode surrounding said cathode and spaced therefrom, control and screen grid electrodes surrounding said cathode and interposed in the order named between said cathode and said anode, a beam forming structure interposed between said screen grid electrode and said anode, said beam forming structure having a pair of elongated windows one of which is associated with each of the faces of said cathode, means coupling said beam forming structure directly to said cathode for establishing the same at a common potential, and a conductor wire centrally positioned in each of said elongated windows and substantially in the plane thereof, such conductor wires extending longitudinally of said windows and being substantially parallel to said elongated cathode, said conductor wires being supported by said beam forming structure and directly electrically connected thereto internally of said envelope for establishing the same at a common potential, thereby modifying the electrostatic field through which the electrons travel from said screen grid electrode to said anode electrode.

2,860,274
ELECTRICAL LAMPS
John Willoughby Thomas Wright and Donald Arthur Howles, Leicester, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company
Application July 11, 1956, Serial No. 597,114
Claims priority, application Great Britain July 21, 1955
3 Claims. (Cl. 313—318)

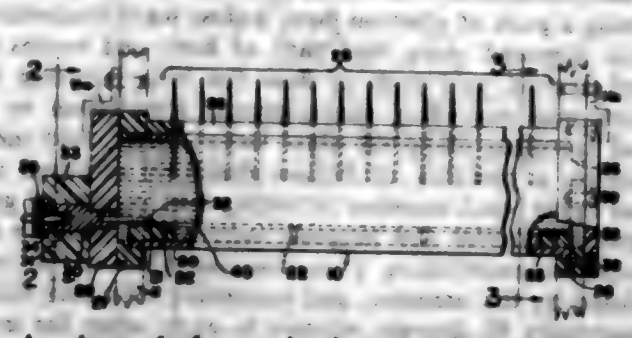
1. An electric lamp comprising a bulb having a neck portion, an exhaust tube, a seal of said exhaust tube to said neck portion in end-to-end relationship therewith, a filament, a filament mount structure locating said filament within said bulb and including filament lead wires which emerge through said seal between said exhaust tube and said neck portion and re-enter said seal at points distant from the points of emergence of said lead wires, and the portions of said lead wires remote from said filament being formed as contact stirrups embracing parts of said neck portion away from said seal and accurately locating said filament in place within said bulb prior to the formation of said seal.

2,860,275
INDIRECTLY HEATED CATHODE
Johannes Christiaan Duran, Josephus Franciscus Dams, and Gerard Charles Antoine Marie Moubis, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application January 30, 1956, Serial No. 562,341
Claims priority, application Netherlands February 9, 1955
3 Claims. (Cl. 313—346)



1. An indirectly-heated cathode comprising a sleeve member and a heater within said sleeve, and pulverulent insulating material filling up the space between the sleeve member and heater, said space at one end of the sleeve containing a greater concentration of relatively coarse particles of insulating material, said space at the other end of the sleeve containing a greater concentration of relatively fine particles of insulating material, said insulating material being sintered in position.

2,860,276
ELECTRODE FOR ELECTROSTATIC SEPARATION
William Gregg, Jr., Stow, and Melvin P. Wineberg, Copley, Ohio, assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey
Application December 2, 1955, Serial No. 550,668
4 Claims. (Cl. 313—351)



4. An electrode for use in electrostatic separation comprising, a hollow dielectric member, a bus element in the interior of said member, a series of spaced pointed emitting elements extending through the wall of said member, and a liquid current conducting medium in said hollow member contacting said bus and emitting elements, said medium having the capacity to effectively isolate each emitting element one from the other.

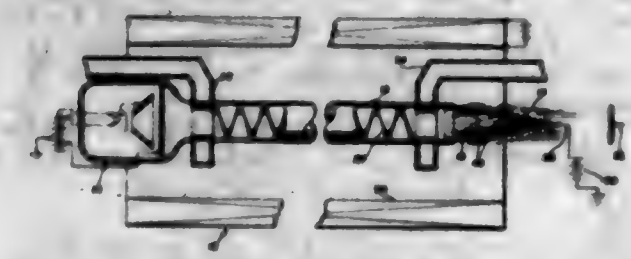
2,860,277
TRAVELING-WAVE TUBE COLLECTOR ELECTRODE
Arthur H. Iversen, Santa Monica, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application September 2, 1955, Serial No. 532,289
5 Claims. (Cl. 315—3.5)

1. A high-power traveling-wave tube comprising: means for emitting and projecting a beam of electrons along a predetermined path; a thin walled, light weight electron collector for collecting the electron beam; a slow-wave structure disposed along and enclosing a por-

electrode, and controllable means operable from outside said structure for adjusting the relative position of the

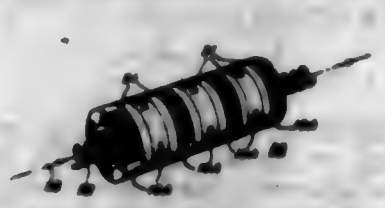
cuit to the electron-stream-producing means for biasing the operating of the electron-stream-producing means in

tion of said path; cooling means disposed externally to said path and adapted to direct a stream of coolant over said thin walled collector, said collector having a concave internal surface and a substantially conical outer surface, said inner surface being disposed in a manner such that said electrons impinge upon said inner surface while



the stream of coolant impinges upon the outer surface of said collector, said outer surface being provided with relatively deep serrations, whereby a large area of said external surface is presented to the stream of coolant made turbulent by said serrations for efficient cooling of said collector.

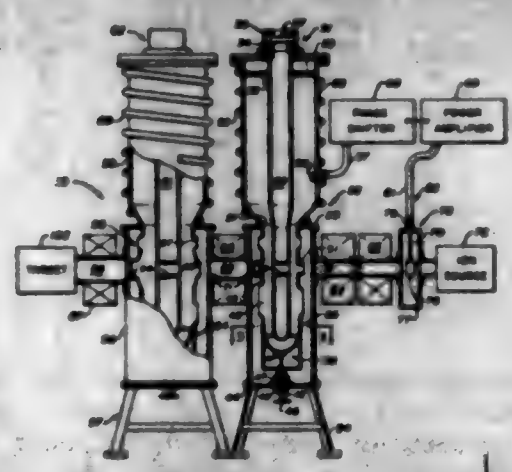
2,860,278
NON-RECIPROCAL WAVE TRANSMISSION
John S. Cook, New Providence, Rudolf Kompfner, Far Hills, and Kenneth M. Poole, New Providence, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application September 8, 1954, Serial No. 454,733
16 Claims. (Cl. 315—3.5)



1. In a device which utilizes the interaction between an electromagnetic wave and an electron stream, means defining a path of electron flow, a slow wave transmission circuit disposed along said path of flow, and means disposed around said path of flow for both focusing said stream and providing nonreciprocal attenuation to the signal traveling along the slow wave circuit, said means including a plurality of hollow members disposed in a linear array, each member including two regions of gyromagnetic material and magnets interposed between said regions for establishing a quadrupolar field in the space enclosed by the member, and successive members shifted substantially 90 degrees relative to each other for maintaining successive quadrupolar fields in quadrature.

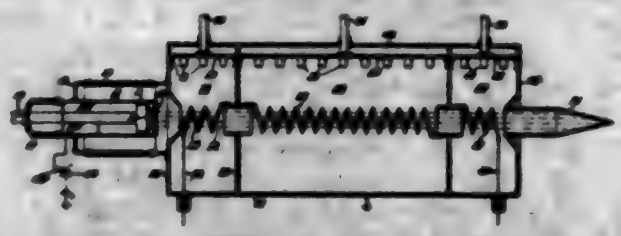
2,860,279
HIGH CURRENT LINEAR ION ACCELERATOR
Rose E. Hester and Donn O. Kippenhan, Hayward, and William A. S. Lamb, Livermore, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application April 18, 1955, Serial No. 502,151
8 Claims. (Cl. 315—5.42)

2. In a linear ion accelerator, the combination comprising an ion source emitting a beam of ions along an axis, a plurality of coaxial transmission lines spaced along said axis at right angles thereto, each of said coaxial transmission lines having a hollow outer conductor and an inner conductor, each of said coaxial transmission lines having a transverse beam bore co-linear with said axis, said coaxial transmission lines joined at said bore by hollow vacuum tubulations disposed coaxial with said axis, vacuum pumping means for evacuating said coaxial transmission lines and said vacuum tubulations, and radio-frequency oscillator means electrically coupled with said coaxial transmission lines to establish radial electric fields,



whereby ions traversing the gaps between said outer conductors and said inner conductors are accelerated.

2,860,280
ELECTRIC DISCHARGE DEVICE AND METHODS
Elmer D. McArthur, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application January 15, 1955, Serial No. 482,943
3 Claims. (Cl. 315—5.46)



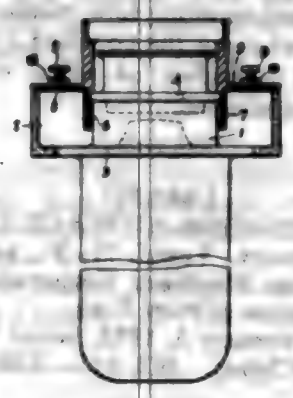
1. A high frequency electric discharge device comprising means for establishing an electron beam along a predetermined path, an input structure resonant at a predetermined frequency including spaced conducting members positioned transverse to said predetermined path and apertured for the passage of the beam and a helix extending between said transverse members so that said input structure is in energy exchanging relation with the beam, input means exciting said input structure at a frequency near said predetermined frequency for modulating the beam in accordance with an input signal impressed on said input means and a conductive structure spaced along the beam path from said input structure and supported for interaction with the modulated beam for extracting energy therefrom in accordance with the modulation produced by said input circuit.

2,860,281
RESONANT CAVITY STRUCTURES
Arthur James Young, Danbury, and John Ralph Bagnall, Chelmsford, England, assignors to English Electric Valve Company Limited, London, England, a British company
Application May 11, 1954, Serial No. 429,838
Claims priority, application Great Britain May 15, 1953
4 Claims. (Cl. 315—5.53)

1. A resonant cavity structure adapted to co-operate as a tuned circuit with an ultra high frequency electron discharge tube comprising in combination with a resonant cavity structure a first capacity electrode in the form of an annulus which extends partly across the cavity, a second annular shaped capacity electrode radially behind the first capacity electrode and fitting close to the latter so that the inner surfaces of both electrodes are in sliding and good electrical contact therewith, said first and second capacity electrodes being adapted to form effectively a single capacitive electrode capacitively coupled to said discharge tube which constitutes the second capacitive

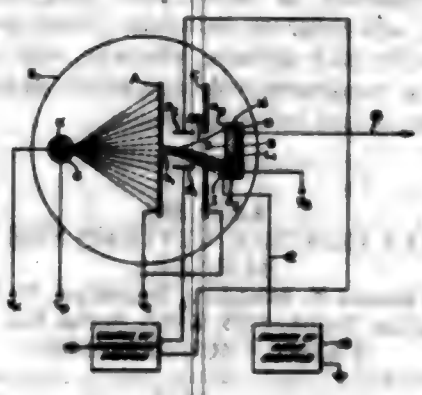
members, a cathode arranged adjacent said anode mem- eration of said trigger circuit for producing a pulse of

electrode, and controllable means operable from outside said structure for adjusting the relative position of the first and second capacity electrodes whereby the second electrode can project to an adjustable extent from radially



behind said first capacity electrode with respect to said discharge tube so as to vary the total effective area of said single capacitive electrode relative to said discharge tube.

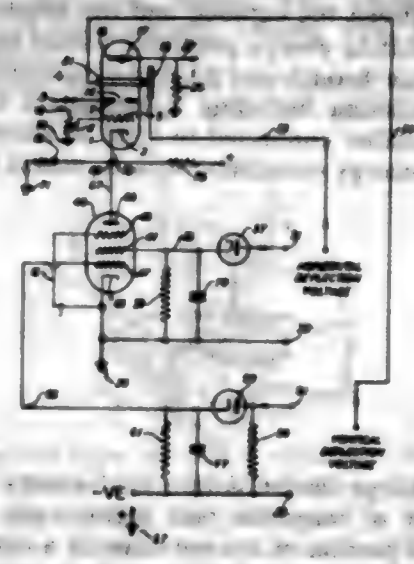
2,860,282
ELECTRON DISCHARGE STORAGE TUBES
Siegfried Hansen, Los Angeles, Calif., assignor to Litton Industries of California, Beverly Hills, Calif.
Application April 25, 1955, Serial No. 503,614
22 Claims. (Cl. 315—8.5)



8. A signal shifting apparatus comprising a semiconductive target electrode having a secondary electron emissive surface, means for successively storing applied bilevel electrical intelligence signals on a predetermined initial area of said surface, means for shifting stored signals across said surface from the initial area to a remote area of said surface, and an output electrode electrically coupled to the remote area whereby bilevel electrical signals shifted across said surface to the remote area are presented as corresponding bilevel potential variations at said output electrode.

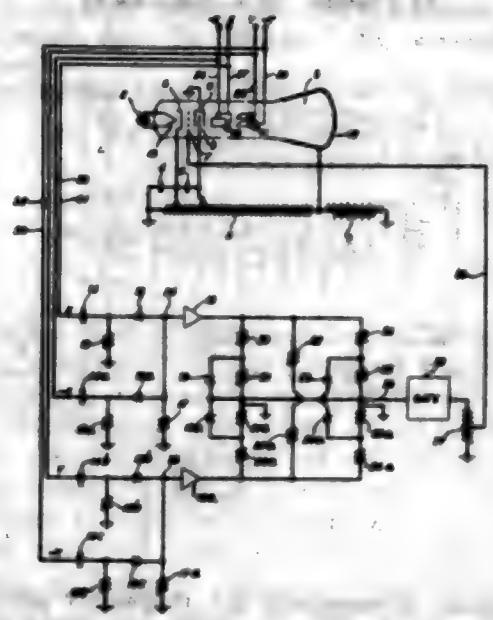
2,860,283
ELECTRONIC PROTECTIVE SYSTEM
Irving Horowitz, Eatontown, N. J., assignor, by mesne assignments, of one-half to Isaac S. Blonder and one-half to Ben H. Tongue
Application March 7, 1956, Serial No. 570,621
11 Claims. (Cl. 315—39)

1. An electric system having, in combination, electronic apparatus provided with means for producing an electron stream and means for deflecting the electron stream, electron-tube means having input and output circuits, means for applying to the input circuit rectified components of one or more electron-stream deflection voltages to be applied to the deflecting means, the rectified components having such polarity as to permit a predetermined current to flow through the electron-tube means into the output circuit during the said application of the rectified components, and an electrical connection from the output circuit to the electron-stream-producing means for biasing the operation of the electron-stream-producing means in



accordance with the potential developed in the output circuit of the electron-tube means.

2,860,284
CATHODE RAY TUBE CIRCUIT TO MAINTAIN UNIFORM TRACE INTENSITY
Burton McKim, Morristown, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application November 22, 1955, Serial No. 548,388
9 Claims. (Cl. 315—22)



1. In a cathode ray device, the method of producing a voltage proportional to the velocity of the point of incidence of a beam upon the target of said device, which comprises the steps of differentiating the vertical and horizontal beam deflection voltages with respect to time and deriving therefrom another voltage proportional to the resultant thereof, said another voltage being proportional to said velocity of said point of incidence of said beam upon said target of said device.

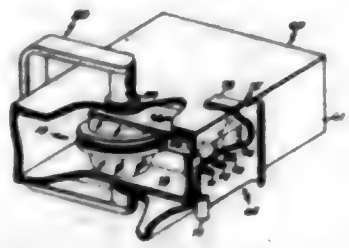
2,860,285
ELECTRON DISCHARGE DEVICES
Burton H. Smith, Belmont, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application December 14, 1956, Serial No. 628,383
5 Claims. (Cl. 315—39)

1. In combination, an electron discharge device comprising an evacuated envelope having a portion thereof transparent to electromagnetic energy and containing therein an anode assembly including a plurality of spaced

trol electrode being of a magnitude to bias electron de-

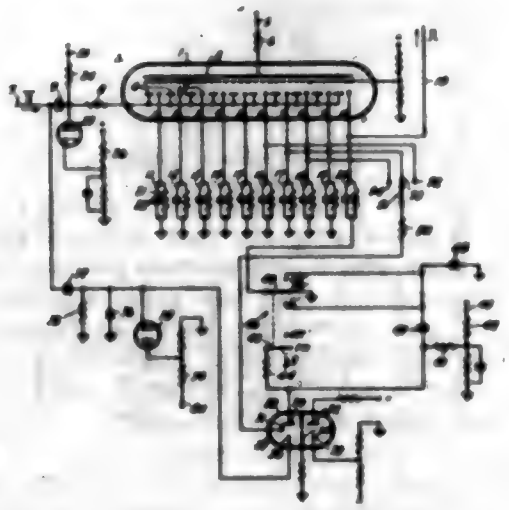
2,860,291
JUNCTION TYPE TRANSISTOR STRUCTURES

members, a cathode arranged adjacent said anode members, means for producing a magnetic field transverse to the region between the cathode and the anode assembly, means for radiating energy generated within said electron discharge device through said portion of said envelope, said means for radiating including a cylindrical electrically-conductive member connected to a set of alternate anode members, an energy containing means, means for mount-



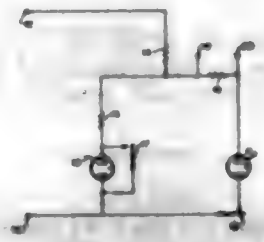
ing said discharge device within said energy containing means, a pair of magnetic pole pieces each fixedly attached to said portion of the envelope at a corresponding end of said electron discharge device, said mounting means including a pair of elements each contacting a corresponding pole piece and including means secured to and conforming to a wall of said energy containing means.

2,860,286
RANDOM PULSE COUNTER
Stanley Benedict Ost, Brooklyn, N. Y., assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application January 6, 1954, Serial No. 402,445
17 Claims. (Cl. 315—84.6)



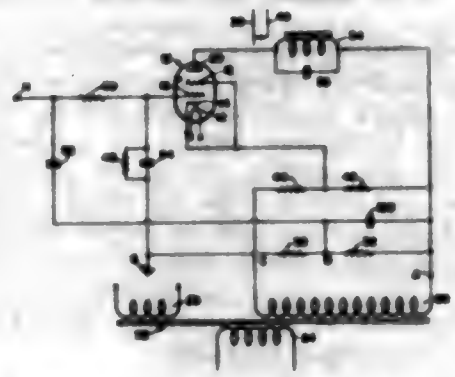
1. A circuit arrangement for repeatedly counting selected numbers of pulses comprising electron discharge counting tube means having first electrode means, a plurality of operating electrodes spaced from said first electrode means, one of said operating electrodes being an output electrode, circuit means including a resistor connected to each said operating electrode, an input circuit, means for causing an electron discharge to step from one operating electrode to a next succeeding operating electrode when a voltage pulse of a predetermined polarity and voltage is applied to said input circuit, means for feeding pulses of said predetermined polarity and voltage to said input circuit to cause an electron discharge to step from one operating electrode to the next, whereby the potential of the operating electrode receiving said discharge is altered because of the drop of potential across the associated resistor, a trigger circuit having a trigger input responsive to said altered potential and an output, means for selectively connecting one of said operating electrodes, other than said output electrode, to said trigger input, whereby the arrival of the discharge on the selected operating electrode initiates the operation of said trigger circuit, means activated by the operation of said trigger circuit for producing a pulse of sufficient voltage to cause the discharge to shift to a particular operating electrode when said pulse is applied thereto, and means connected to said output electrode for applying said pulse to said output electrode to cause the discharge in said counting tube means to jump to said output electrode, whereby the counting cycle of said tube means is changed dependent on which of said operating electrodes has been selected.

2,860,287
INFORMATION STORAGE UNITS
Theodore D. Kornaye, Vestal, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application February 3, 1955, Serial No. 485,890
9 Claims. (Cl. 315—328)



1. An information storage unit comprising: first and second gaseous discharge devices having different striking voltages, a source of potential higher than either of said striking voltages, common and individual resistance elements connected in series with said devices across said source, and separate switching means associated respectively with said devices, whereby said devices provide different predetermined indications dependent upon the actuation of said switching means.

2,860,288
SAFETY CONTROL SYSTEMS FOR FUEL BURNERS
Thomas E. Madden, Brooklyn, N. Y.
Application October 13, 1954, Serial No. 462,849
1 Claim. (Cl. 317—149)



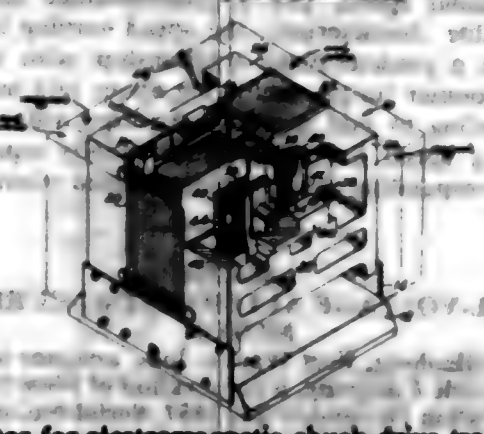
A pilot safety device for connection to a source of alternating electrical potential having a first electrical line and a second electrical line comprising a gas filled electron device including a cathode, a control electrode and an anode; a relay coil and a pair of normally open contacts adapted to be closed upon passage of an electrical current through said relay coil, said relay coil connected to said anode at one of its terminals and to said first electrical line at its opposite terminal; a first potential divider network connected electrically between said first electrical line and said second electrical line, and having a potential obtained therefrom connected to said cathode of said electron device; a second potential divider network connected electrically between said first electrical line and said second electrical line, and having a potential obtained therefrom connected to a capacitor, the other terminal of said capacitor being electrically connected to a first electrode and through a resistor to said control electrode; the potential difference between said cathode and said con-

output voltage in response to the output voltage of said

cal building up speed, means coupling said exciter and

trol electrode being of a magnitude to bias electron device to prevent a current flow between said cathode and said anode; said first and second electrodes being spaced for placement in a fixture so as to change said bias potential between said cathode and control electrode to make said electron device conductive for a current between said cathode and said anode.

2,860,289
ELECTROMAGNETIC TRANSDUCER MOTOR
John E. Verardo, Massapequa Park, N. Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Application February 3, 1955, Serial No. 485,948
5 Claims. (Cl. 317—158)

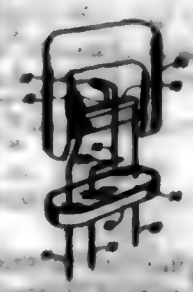


1. A rotor for electromagnetic chuck drive transducers, comprising a plurality of low-loss magnetically permeable laminations, shims of thin ductile aluminum sheet stock having anodized surfaces interposed directly between each pair of successive laminations, end plates for said rotor, and tapered pins passing through said laminations, shims and end plates and headed over to secure the same in rigid face to face contact, and an output stub shaft secured at one of its ends to at least one of said end plates.

2,860,290
VIBRATOR MOUNTING
Paul I. Puttinger, Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Application September 1, 1954, Serial No. 453,661
8 Claims. (Cl. 317—182)

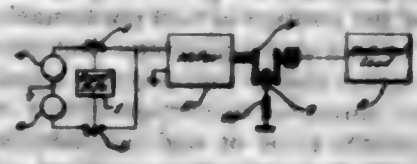
1. A vibrator assembly comprising, in combination, a container, a vibrator in said container, a supporting member formed of elastic material having a cup portion adapted to grip one end of the vibrator and a folded back skirt portion extending from the open end of the cup portion to the container with its end engaging the container adjacent the closed end of said cup, and resilient means for supporting the other end of the vibrator in said container.

2,860,291
JUNCTION TYPE TRANSISTOR STRUCTURE
Raideen C. Kenaveer, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application September 3, 1953, Serial No. 378,331
19 Claims. (Cl. 317—235)



1. A junction type transistor structure that comprises a collector electrode, an emitter electrode, a base electrode, a header holding said electrodes in proper spaced relationships, a junction type crystal including opposite end portions with an intermediate layer interposed therebetween, said crystal suspended by said collector electrode attached at one end and said emitter electrode attached at the other end, and a crystal contact wire having a straight section fixed to said base electrode, a cantilever spring section and a contact section welded to said intermediate layer of said crystal and urged toward said intermediate layer by said spring section.

2,860,292
DIGITAL SERVO SYSTEM
George H. Towner, Inglewood, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California
Application April 8, 1955, Serial No. 500,366
14 Claims. (Cl. 318—23)



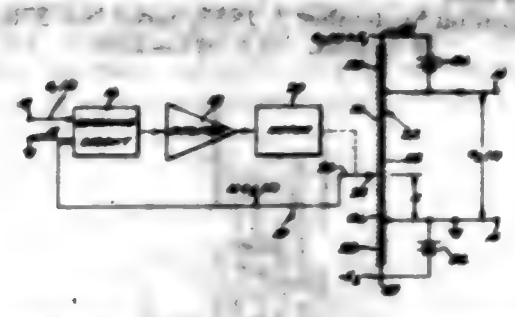
1. A digital servo system adapted to be driven by pulsed switching operations, comprising: power source means; a motor having a mechanical output shaft; first switching means for connecting said power source means to said motor to energize said motor in one direction; second switching means for connecting said power source means to said motor to energize said motor in another direction; means for damping output shaft motion and means for positioning said output shaft in a reference orientation with respect to the stator of said motor when in a static condition with said motor de-energized from said power source; and means for operating said first and second switching means, not simultaneously, whereby, when the closed time of each switching operation is for a time duration substantially equal to the time required for an integral number of revolution fractions of said output shaft, such as a single whole revolution, said output shaft is actuated in discrete increments corresponding respectively to any number of switching operations.

2,860,293
SERVO OVERTRAVEL CORRECTING SYSTEM
George M. Salamonovich, Hollywood, Calif., assignor to Gilfillan Bros. Inc., Los Angeles, Calif., a corporation of California
Application September 19, 1955, Serial No. 534,934
13 Claims. (Cl. 318—28)

9. A servomechanism having at least first and second input terminals, said servomechanism comprising: an algebraic summing circuit responsive to signals appearing at said first input terminal, an amplifier for producing an

after starting and for stopping the motor, means com- second source and said contacts and each operable, when

output voltage in response to the output voltage of said summing circuit; a motor responsive to the output signal of said amplifier, a potentiometer having a movable tap disposed in contact with a resistive winding, said motor

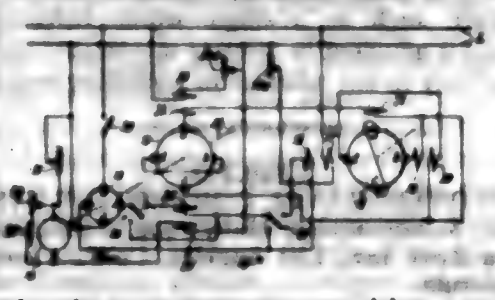


being mechanically connected to said movable tap, said movable tap being electrically connected to said summing circuit; and means providing a source of direct-current voltage connected from each end of said resistive winding to first and second spaced input taps on said winding.

2,860,294
DIGITAL POSITION SERVO SYSTEMS
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.
Application May 22, 1956, Serial No. 586,586
23 Claims. (Cl. 318—28)

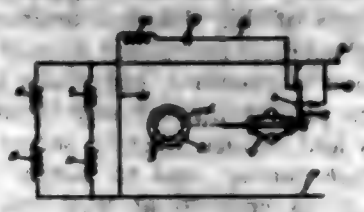
1. In a digital position servo for driving a positionable element to a desired position as represented by an applied command signal, the combination comprising: transducer means operable to move said positionable element; a signal generator for generating a position signal representative of the position of said positionable element; means coupled to said signal generator and responsive to said command signal and to said position signal for generating a train of sequential difunction signals representative of the positional error of said positionable element with respect to the desired position, each of said signals having a fixed period T and having either a first value representing a first number or a second value representing a second number, the average of the numbers represented by the signals in the train corresponding to the positional error; and means for applying said control signal train to said transducer, said transducer being responsive to said control signal train for moving said positionable element toward the desired position.

2,860,295
ELECTRIC POWER SYSTEMS
Joseph M. Pestarini, Minneapolis, Minn.; Alba M. Pestarini, executrix of said Joseph M. Pestarini, deceased
Application June 15, 1954, Serial No. 436,773
3 Claims. (Cl. 318—164)



1. An electric power system comprising a main direct current source, an auxiliary constant voltage direct current source, a dynamo electric machine comprising at least two stator windings, circuit means connecting said main current source and said dynamo electric machine, a metadyne exciter and a regulator dynamo operating at its critical building up speed, means coupling said exciter and regulator dynamo to said dynamo electric machine, said exciter including a first pair of brushes adapted to be connected to said auxiliary current source and a second pair of brushes adapted to be connected to one of the stator windings of said dynamo electric machine, circuit means connecting the output of said regulator dynamo to one of the stator windings of said dynamo electric machine, and switch means for selectively making circuit connections between said regulator dynamo, exciter, dynamo electric machine and said auxiliary current source whereby said dynamo electric machine is adapted to selectively provide torque-speed relationships including (1) a substantially constant speed independent of the developed torque, (2) a torque inversely proportional to the rotational speed, (3) a predetermined speed-mean torque value characteristic, the speed varying in accordance with a predetermined relationship, with an instantaneous counter torque oscillating about said mean value corresponding to said speed-mean torque value, the corresponding speed being kept substantially equal to the value corresponding to said predetermined relationship.

2,860,296
DUAL-VOLTAGE ALTERNATING-CURRENT MOTOR
Leroy Mollenberg, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York
Application November 20, 1957, Serial No. 697,553
3 Claims. (Cl. 318—221)



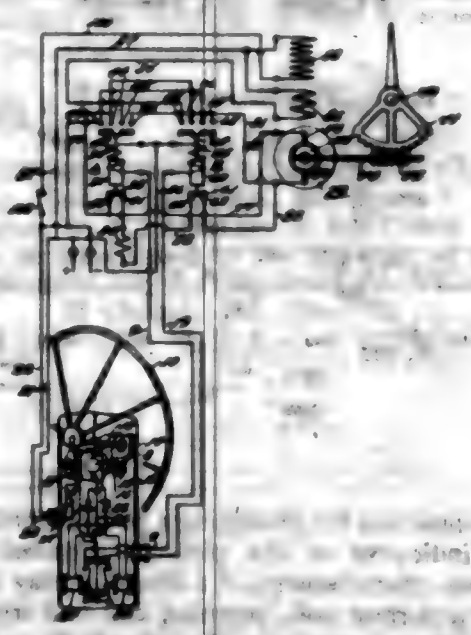
1. A dual-voltage single-phase alternating-current induction-type motor having a stator including a main winding comprising four sections, the first two of said sections each having a first predetermined number of coils, the second two of said sections each having a second greater predetermined number of coils, said first two sections being formed into a first group of poles of like polarity distributed around said stator, said second two sections being formed into a second group of poles of opposite polarity distributed around said stator alternately with the poles of said first group, said sections being connected in two parallel groupings for operation at a first lower voltage, each grouping consisting of one of said first sections and one of said second sections in series, said sections being connected in series for operation at a second higher voltage, a starting winding displaced from said main winding, and a capacitor connected in series with said starting winding, said starting winding and said capacitor being connected in parallel with both said groupings during starting at the lower voltage, said starting winding and said capacitor being connected in series with said first two sections and in parallel with said second two sections during starting at the higher voltage.

2,860,297
ANGULAR MOTION CONTROLLER FOR A MOTOR
Thomas D. Bowes, Bala-Cynwyd, Pa.
Application October 2, 1953, Serial No. 383,887
6 Claims. (Cl. 318—293)

1. In combination, a reversible electric motor, circuit means including connections for a power source and the circuit controlling portions of a first and second relay for respectively controlling the running of said motor in one direction or the other at a substantially constant speed

work across said source, said capacitor being arranged to

after starting and for stopping the motor, means comprising a centrifugal switch movable in angular motion, circuit means between said last means and said first and second relays selectively controlling the latter in accordance with the direction of angular motion and a



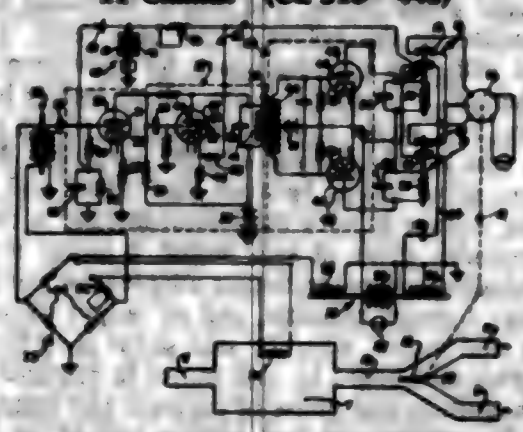
minimum speed thereof and for holding a selected relay in actuated condition maintained directly proportionally to the duration of angular motion above a minimum speed thereof, control means positioned by said motor in accordance with the running and stopping of the latter.

2,860,298

CONDITION REGULATING SERVOSYSTEM

Milton R. Carlson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Application March 15, 1956, Serial No. 571,769
11 Claims. (Cl. 318—448)



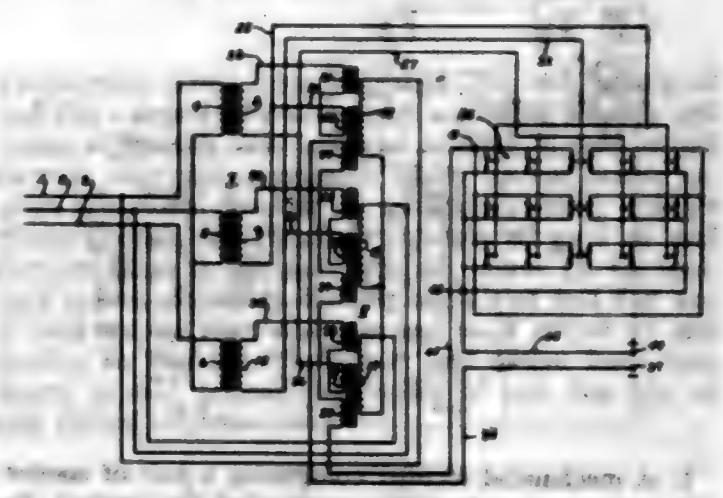
1. In a control system, the combination of, an electronic amplifier and phase detector unit providing output currents variable in polarity and magnitude with changes in phase and amplitude of an alternating current input signal, relay means sensitive to changes in said output current and having a set of first contacts closed in response to an output current of one polarity above a high level and open when the current is below a low level, said relay means having a set of second contacts closed in response to an output current of the opposite polarity above a high level and open when the current is below a low level, means providing first and second sources of alternating current of different phases, first and second detenting circuits extending respectively through said first source and said first contacts and through said second source and said second contacts and each operable, when completed by closure of the associated contacts, to apply a bias to said unit for increasing the magnitude of the prevailing output current abruptly, and first and second pulse proportioning circuits extending respectively through said first source and said first contacts and through said second source and said contacts and each operable, when completed by closure of the associated contacts, to apply a bias to said unit in a direction to decrease the magnitude of the prevailing output current, said proportioning circuits including common timing elements operable when each circuit is closed to decrease the magnitude of the prevailing output current to said low level after closure of the circuit and at the end of a time interval proportional to the amplitude of said input signal.

2,860,299

REGULATED POTENTIAL DIRECT CURRENT SOURCE

Jesse W. Pennoni, Hazelcrest, Mich., assignor to Harnischfeger Corporation, Milwaukee, Wis., a corporation of Wisconsin

Application August 4, 1954, Serial No. 447,830
6 Claims. (Cl. 321—16)



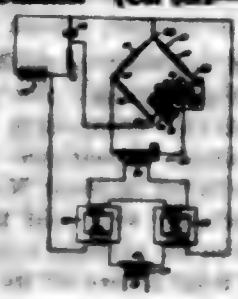
1. In an apparatus for providing a regulated supply of direct current potential the combination comprising a principal transformer with primary and secondary windings; a control transformer including magnetic means for providing a pair of magnetic flux paths, a cumulative secondary winding disposed to link with the first of said flux paths, a differential secondary winding disposed to link with the second of said flux paths, primary winding means linking each of said flux paths, and a direct current winding linking the second of said flux paths; a rectifier; an output circuit for said rectifier connecting the rectifier through said direct current winding to a set of output terminals; and circuit connections for the secondary windings of said principal and control transformers joining said cumulative and differential windings so that voltages induced therein are in opposing relation and connecting the secondary winding of the principal transformer through said cumulative and differential windings to the input of said rectifier.

2,860,300

ELECTRIC CIRCUIT

Achilles C. Scarpietro, Detroit, Mich., assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio

Application May 27, 1957, Serial No. 661,696
5 Claims. (Cl. 321—45)



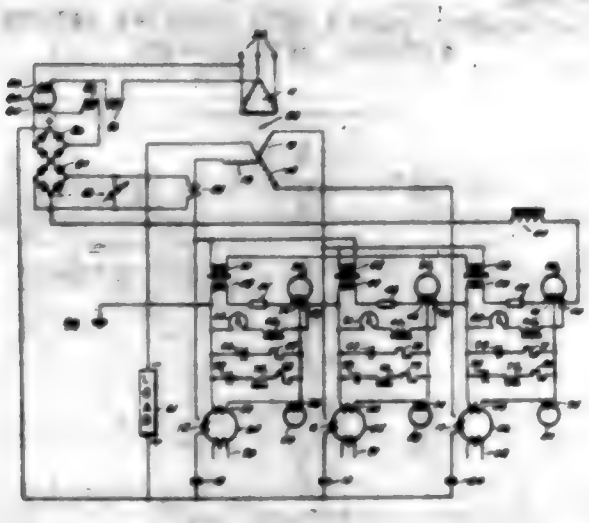
1. An alternating current generating system comprising a direct current source, a resistor and capacitor net-

comprising a pair of opposing inductive devices, potentiometer means connected across the outputs of both said

a rectifier having a cathode and an anode, the cathode of said rectifier being connected to said first output ter-

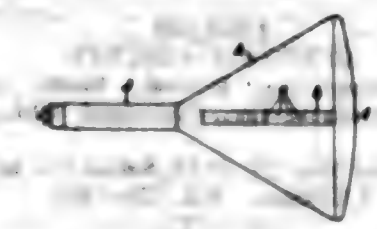
work across said source, said capacitor being arranged to be charged from said source, a resistive bridge circuit disposed across said capacitor, one arm of said bridge circuit comprising a resistive element whose resistance decreases as the voltage across said arm increases, and means for sensing the current changes in said resistive element.

2,860,301
COMMUTATING REACTOR BREAK PRE-EXCITATION FOR MECHANICAL RECTIFIERS
Edward John Diebold, Ardmore, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application April 15, 1954, Serial No. 423,357
17 Claims. (Cl. 321—48)



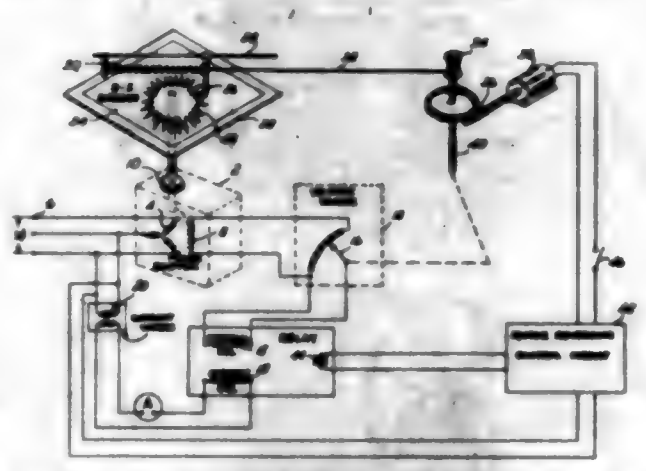
1. A mechanical rectifier comprising a pair of cooperating contacts mechanically controlled for contact engagement and disengagement; an alternating current source; a commutating reactor; said commutating reactor comprising a main commutating reactor coil and a break pre-excitation coil; said source connected through said commutating reactor coil to said cooperating contacts; and means for energizing said break pre-excitation coil after said cooperating contacts are moved to said engaged position and for de-energizing said break pre-excitation coil after said contacts are moved to said disengaged position.

2,860,302
LIFE INDICATOR FOR HIGH VOLTAGE TUBES
Johannes de Gier and Johannes Cornelis Janszen, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application June 14, 1955, Serial No. 515,454
Claims priority, application Netherlands June 28, 1954
8 Claims. (Cl. 324—20)



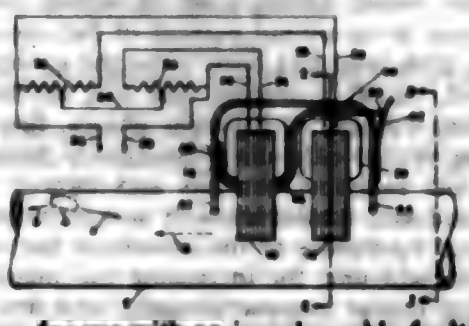
1. In combination, an electric discharge tube adapted for comparatively high voltages and producing soft X-rays, and a life indicator comprising a substance sensitive to soft X-rays whose appearance changes in accordance with the intensity of incident X-radiation, said life indicator being associated with said tube and being arranged so that some of its portions receive more X-radiation from the tube than others of its portions, whereby the extent of appearance-changes indicates the extent of use of said tube.

2,860,303
IMPEDANCE RELAY TESTER
Randall Bruce Shipley, Chattanooga, Tenn., assignor to Tennessee Valley Authority, a corporation of the United States
Application September 19, 1955, Serial No. 535,047
5 Claims. (Cl. 324—28)



1. An apparatus for producing a polar co-ordinate R–X diagram indicative of the pick-up, drop-out, and the ohmic reach characteristics of a distance relay of the type including a current coil, potential coil and tripping contacts operably responsive to the magnitude and phase of the current and potential, respectively, in a multiple phase power line to which the relay is adapted to be connected; the combination comprising a phase shifter including a stator coil adapted for connection to a regulated source of alternating voltage and rotor coil for developing a voltage in phase shift relation to said source, a two-co-ordinate plotting board mounted for synchronous rotation with said rotor and means for such rotation, a variable output type current transformer including input and output terminals adapted for connection to said source and to the current coil of a distance relay, respectively, a variable voltage device having its input connected to the rotor of said phase shifter and output terminals adapted for connection to the potential coil of a relay, a stylus associated with said plotting board for movement transversely thereof, a reversible motor, drive means between said motor and stylus for reversible movement of said stylus on said board responsive to the reversible drive of said motor, drive means between said motor and source of variable voltage to vary the output thereof in response to the reversible drive of said motor, a motor reversing circuit including control terminals adapted for connection to the relay tripping contacts, and an output circuit connected to said motor, whereby said stylus is reciprocably driven across said board by said motor in response to the relative magnitude and phase of currents and voltages applied to the current coil and voltage coil of an impedance relay connected to said apparatus for test.

2,860,304
DETECTOR
Thomas L. Hall, Morrisville, Pa.
Application June 23, 1954, Serial No. 438,847
4 Claims. (Cl. 324—53)



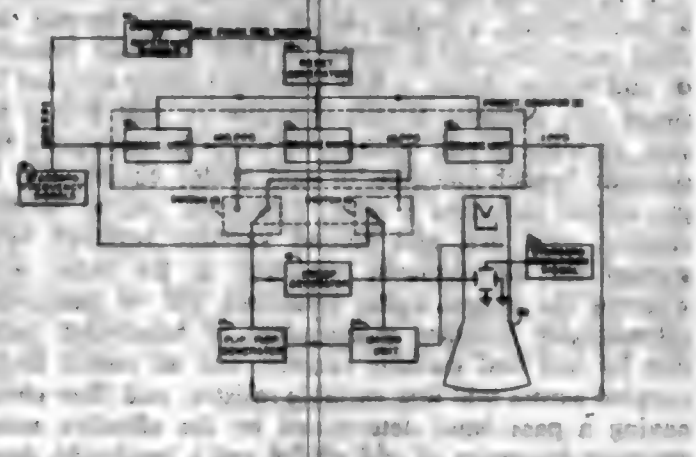
1. A detector for use with an impulse cable fault locator for determining the position of a cable fault, said detector

said first source and said first contacts and through said

ing a direct current source, a resistor and capacitor net-

comprising a pair of opposing inductive devices, potentiometer means connected across the outputs of both said devices for balancing the currents therefrom, current bypass means arranged in opposed relation with said devices, and means operable to pass current from the sheath of the cable under test through said current bypass means for creating an imbalance between said outputs which serve to indicate the direction of flow of current in the sheath of the cable under test.

2,860,335
PRECISION TIME MEASURING SYSTEM
Paul P. Bey, Temple Hills, Md., and Harris F. Hastings, Washington, D. C., assignors to the United States of America as represented by the Secretary of the Navy
Application July 6, 1956, Serial No. 596,369
11 Claims. (Cl. 324—68)
(Granted under Title 35, U. S. Code (1952), sec. 266)



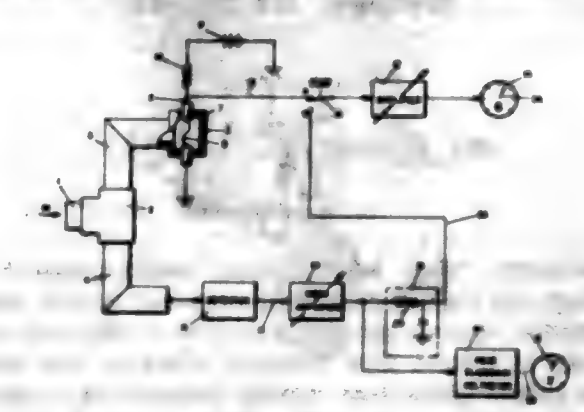
2. In a time measuring system, a source of standard frequency signals, means for producing delayed signals relative to said standard frequency signals including a first control signal, a second control signal and third control signals having desired time relationships, means for applying said standard frequency signals to said first mentioned means to produce said first control signal, said second control signal and said third control signals, an oscilloscope, a first generator for providing a sweep signal for said oscilloscope having a predetermined number of cycles per second, a second generator for providing an intensifying signal for said oscilloscope, means for applying said first control signal to said first generator and to said second generator to initiate operation of said first generator and to condition said second generator for operation, means for applying said second control signal to said second generator to develope said intensifying signal, a source of standard comparison signals, means for applying said sweep signal to said oscilloscope, means for applying said intensifying signal to said oscilloscope to intensify a particular cycle of said sweep signal, means for applying said third signals to said oscilloscope to divide said particular cycle into a desired number of intervals, and means for applying a standard comparison signal from said source of standard comparison signals to said oscilloscope, whereby said standard comparison signal appears upon the face of said oscilloscope when said particular cycle is intensified.

2,860,306
PHASE-AMPLITUDE DETECTOR
George H. Towner, San Diego, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California
Application April 2, 1954, Serial No. 420,537
4 Claims. (Cl. 324—89)

1. A phase-amplitude detector, comprising: an amplifier having an input and an output; an inductive coupling means connected to the output of said amplifier, said coupling means having first and second output terminals; a rectifier having a cathode and an anode, the cathode of said rectifier being connected to said first output terminal; resistive means connecting the anode of said rectifier to ground, said second output terminal also adapted to be connected to ground; a first electron tube and a second electron tube each having a plate, grid and cathode, the plates being connected to said first output terminal; a transformer having a primary winding and at least two secondary windings; a reference A. C. voltage of the same frequency as an input signal to said amplifier being applied to the primary winding of said

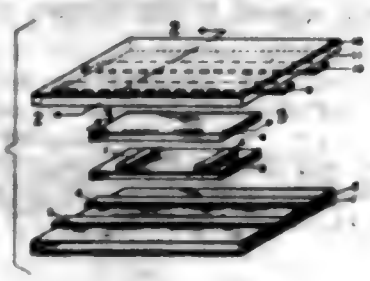
transformer, means connecting said grid and cathode of said first electron tube across one secondary winding and means connecting said grid and cathode of said second electron tube for an opposite phase voltage across another secondary winding of said transformer; resistive means connecting respective cathodes of each of said electron tubes to ground; separate plural D. C. feedback means connecting cathode outputs of said first and of said second electron tubes and plate output of said rectifier to said amplifier input; and output leads connected to said respective cathodes of said first and of said second electron tubes.

2,860,307
MICROWAVE PEAK POWER METER
Peter A. Castruccio, Baltimore, Md., assignor to Aircraft Armaments, Inc., Baltimore, Md., a corporation of Maryland
Application January 13, 1954, Serial No. 403,707
7 Claims. (Cl. 324—130)



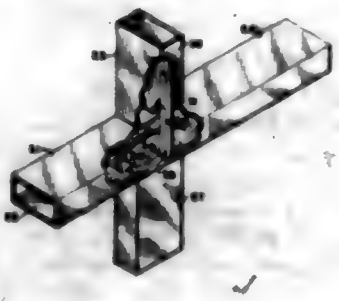
4. A wattmeter for measuring the peak power of microwave energy comprising, a galvanometer, a variable gain amplifier electrically connecting with said galvanometer, barreter means responsive to the microwave energy and generating a voltage output, the magnitude of which varies linearly with the power of the microwave energy, simulating means responsive to the microwave energy and generating a voltage output simulating the voltage output of said first-mentioned means at a certain predetermined peak power level of the microwave energy, means for adjusting the input to said simulating means, means for measuring said input, and switch means connecting said amplifier with said simulating means for calibrating said galvanometer and with said first-mentioned means for indicating the peak power of said microwave energy.

2,860,308
HIGH FREQUENCY TRANSMISSION LINE COUPLING DEVICE
Caleb W. Bates, Nashua, N. H., assignor, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N. H., a corporation of Delaware
Application December 3, 1954, Serial No. 472,260
6 Claims. (Cl. 333—10)



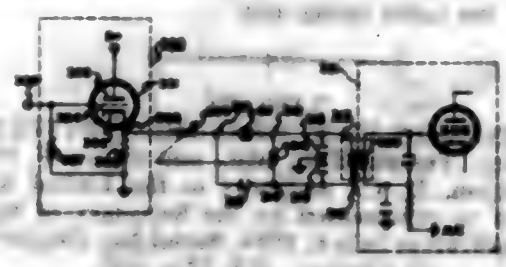
6. A composite high frequency transmission line coupling device for coupling energy from a transmission line to a desired load, comprising: a pair of planar, outer conductors providing ground planes; a pair of elongated, planar, inner conductors disposed in different planes in register, in parallel with and in insulated spaced relation between said outer conductors and electrically connected together to operate electrically as a single conductor to provide a transmission line; and a coupling conductor disposed in coupling proximity adjacent said inner conductors and in insulated spaced relation therewith along a plane extending therebetween whereby coupling of the electric fields may be effected, said coupling conductor being adapted to couple energy to said desired load.

2,860,309
BROADBAND WAVEGUIDE JUNCTION
John F. Zaleski, Valhalla, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application November 17, 1953, Serial No. 392,643
18 Claims. (Cl. 333—11)



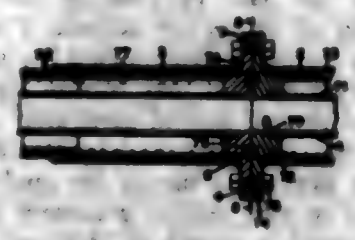
13. A microwave hollow guide cruciform magic tee comprising, a pair of collinear hollow guide arms, an E-plane side arm, an H-plane side arm, the axes of said E-plane and H-plane side arms coinciding, all of said arms forming a four-arm junction with the axes of the four arms meeting at a point, a series discontinuity matching device consisting of a thin arcuate member secured to the interior broad surface of said pair of collinear arms and symmetrical relative to the longitudinal axis of said E-plane side arm, said series discontinuity matching device lying in the common median E-plane of said collinear arms and said E-plane side arm, and a shunt matching device consisting of a member lying in a plane normal to the common collinear arm longitudinal axis, said plane including the common axis of said E-plane and H-plane arms, said shunt matching device being secured to one side of said E-plane side arm.

2,860,310
VARIABLE BANDWIDTH CRYSTAL FILTER CIRCUITS OR THE LIKE
Eugene D. Mang, Torrance, and Neil T. Kyse and Patrick M. Crosby, Los Angeles, Calif., assignors to Hoffman Radio Corporation, a corporation of California
Application June 30, 1954, Serial No. 440,374
2 Claims. (Cl. 333—72)



1. A variable bandwidth crystal filter circuit including, in combination, a bridge circuit having first, second, and third capacitors and a crystal to form the four branches of said bridge circuit, a first variable resistor coupled between two opposite branch-junctions of said bridge circuit, an input circuit coupled between the remaining two opposite branch-junctions of said bridge circuit, said input circuit including a series connected, second variable resistor, said first and second variable resistors being ganged for simultaneous variation in the same sense whereby the output signal amplitude will be maintained substantially constant independent of bandwidth variation by said first variable resistor, and an output circuit coupled across said first variable resistor, said filter circuit having a pass band determined by the effective series-resonant frequency of said crystal and a bandwidth determined by said first variable resistor.

2,860,311
WAVE GUIDES
Edward S. Ballou, North Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application April 16, 1956, Serial No. 578,210
1 Claim. (Cl. 333—98)

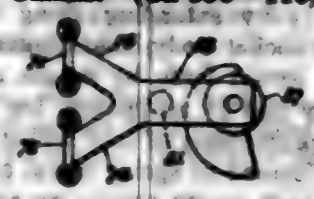


A waveguide adapted to contain a pressurized fluid dielectric for carrying electromagnetic energy at high power levels comprising, a rectangular metallic waveguide, a cylindrical metallic pipe, said rectangular waveguide being supportably contained within said pipe and having a protruding portion extending beyond a first end of said pipe; a plurality of apertures in said rectangular waveguide; first and second annular flange members attached to the two ends respectively of said rectangular waveguide; a sleeve member slidably mounted on said pipe for displacement during welding of its associated wave guide section to its associated flange and protruding beyond said first end of said pipe so as to surround said protruding portion of said waveguide, said sleeve member being subsequently welded to a first of said annular flange members, the second of said annular flange members being welded to the second end of said pipe; each of said annular flange members having a substantially flat exterior surface with an annular recess therein adapted to receive pressure retaining means when a plurality of said waveguides are clamped together to form a wave transmission line.

2,860,312
ANTENNA INPUT TRANSFORMER
James Edgar Krupp, Jr., Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Original application December 23, 1953, Serial No. 399,928, which is a division of Patent No. 2,665,377, dated January 5, 1954. Divided and this application November 2, 1955, Serial No. 544,519
5 Claims. (Cl. 336—69)

3. An antenna input transformer for signals from high and low frequency V. H. F. television stations, comprising an elongated rod-like core of ferromagnetic material, a high frequency secondary winding including a relatively wide flat conductive strip wound around said core and having end portions extending away from said core in a direction generally parallel to the axis thereof, a low frequency secondary winding wound on top of said high frequency secondary winding and having twice the number of turns per inch as said high frequency winding, a balanced primary winding including a pair of cross wound sections extending in the same direction along the length of said core and terminating in a common center tap lead extending back over said cross wound sections, and a common electrical connection for one end of both said secondary windings and said center tap lead.

2,860,313
INDUCTIVE TUNING DEVICE
Dorman D. Israel, Harrison, N. Y., assignor to Emerson Radio and Phonograph Corporation, New York, N. Y., a corporation of New York
Application September 4, 1953, Serial No. 378,653
2 Claims. (Cl. 336—110)

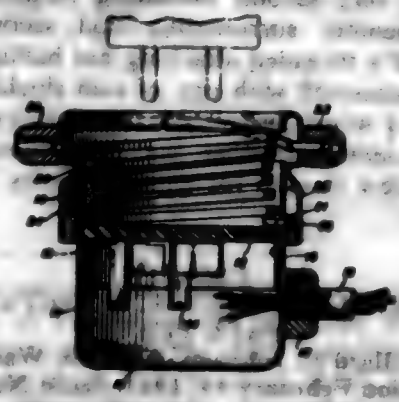


1. A ganged high frequency variable inductance device comprising a pair of high frequency cores, each having a winding disposed thereon, a pair of pole pieces each having a pair of arms respectively adjacent said cores, a permanent magnet fixed between said pole pieces, a variable magnetic shunt disposed across said pole pieces, a non-magnetic spacer between at least one of said cores and its adjacent pole piece, and a magnetic insert adjustably positioned within said pole piece and spacer for varying the magnetic reluctance thereof.

2,860,314
CROSS-WIRED WHEEL
Howard L. Daniels, St. Paul, Minn., and Walter L. Anderson, Falls Church, Va., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application January 19, 1954, Serial No. 405,056
7 Claims. (Cl. 339—18)

1. An electrical connector for scrambling a plurality of circuits in which it may be included, comprising a member having therein a cylindrical recess, a center section and end sections of cylindrical shape, all individually rotatable in said recess about its axis and arranged in an end to end relation, the abutting end faces between said sections having detachably interengaging coupling contacts arranged in circular rows concentric with said axis, equally spaced apart in each row and of the same radial distance from said axis, and all of those on one end of the center section being aligned with those on the other end thereof in a direction parallel to said axis, said coupling contacts physically coupling together the adjacent ends of said sections against unintentional angular displacement about said axis, a plurality of individual conductors in said center section, one for each contact at one end and each connecting one contact on one end of said center section with one contact on the other end of that center section in an irregular random pattern, each end section having a circular row of exposed contacts equally spaced apart, all concentric with said axis, and of the same radial distances from said axis, means within each end section individually connecting each of its said exposed contacts with one of the coupling contacts on the end adjacent said center section, but in an irregular, random pattern, a plurality of relatively stationary brush means spaced apart in the same manner and distances as said exposed contacts and engaging individually with said exposed contacts of each end section for connection to the circuits to be scrambled, and means for releasably confining said sections in end to end engagement.

2,860,315
SPRING CLAMP ELECTRON TUBE SOCKET
Henry J. Scoggins, Upper Montclair, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application September 27, 1956, Serial No. 612,518
8 Claims. (Cl. 339—75)



1. A spring clamp electron tube socket comprising a housing having conventional means therein for receiving an electron tube, a helical coil spring secured within said housing and coaxially disposed with respect to the axis of a tube to be received thereby, said spring having a normal inside diameter smaller than the outside diameter of the base of said tube, and means engaging the opposite ends of said spring for partially unwinding it to increase its diameter to receive said tube, said spring serving to wind itself tightly around the base of said tube when returning to its normal condition.

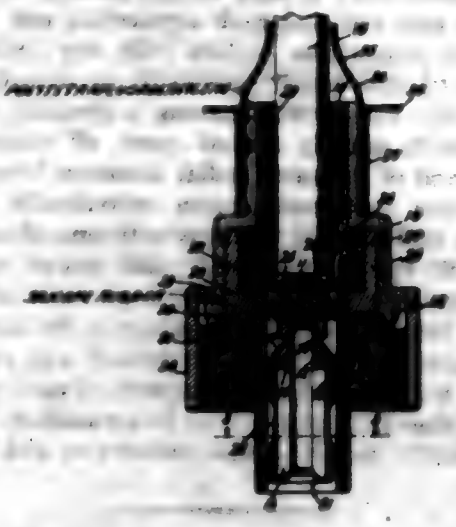
2,860,316
HIGH VOLTAGE PIN SOCKET CONNECTOR
Clarence J. Watters and William F. Niebuhr, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York
Application April 26, 1954, Serial No. 425,986
5 Claims. (Cl. 339—89)

1. A quick detachable connector including a socket assembly and a pin assembly adapted for attachment therewith, said socket assembly including a socket terminal member, a flexible insulated electrical conductor

2,860,320

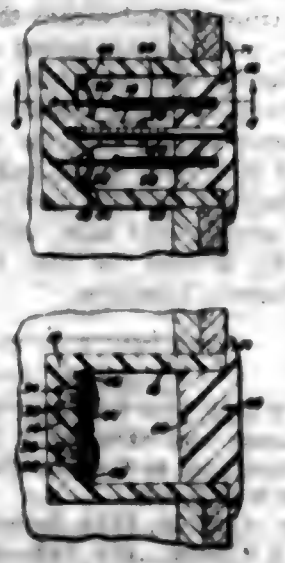
2,860,322

having a bared end connected to said terminal member, a preformed tubular insulating member surrounding said terminal and extending over the adjacent insulated portion of said conductor, said insulating member and at least the outer surface of the insulation of said conductor being comprised of polytetrafluoroethylene and having a heat bonded connection therebetween, said insulating member and said terminal member having an interlocked mechanical connection therebetween, a metallic shielding member surrounding said conductor and said insulator and attached thereto, said pin assembly including a conductive pin adapted for insertion in said socket terminal member and a second tubular insulating member con-



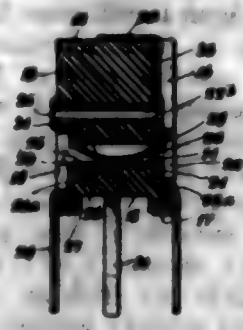
centrically spaced from and secured to said pin and adapted to surround the portion of said first insulating member covering said socket terminal member when said pin is inserted in said socket terminal member, an annular silicone rubber gasket surrounding said first insulating member and adapted to form a moisture-proof seal with the end of said second insulating member, a second shielding member surrounding said second insulating member, and a threaded attaching nut having a relatively rotatable connection with one of said shielding members and including screw threads for detachable connection to said other shielding member, said other shielding member including screw threads for engagement by said nut.

2,860,317
ELECTRICAL OUTLET WITH DETACHABLE FACE PLATE
Allard R. Johnson, Pullman, Wash.
Application February 19, 1957, Serial No. 641,314
5 Claims. (Cl. 339—163)



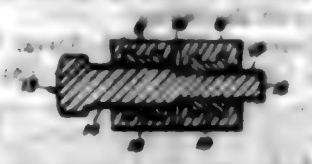
1. An outlet box comprising an insulative body having a rear wall and peripheral side walls integral with said rear wall, stab-type pin contacts partially embedded in said rear wall, saddle clamp members adjustably secured to said rear wall in alignment with said pin contacts, blades embedded in said rear wall, conductors electrically interconnecting said blades and said pin contacts, a face plate detachably secured to said body and having spring clips receiving said blades in intimate engagement therewith.

2,860,318
SOCKET STRUCTURE
Joseph P. Mercuo, Jr., Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Application March 26, 1954, Serial No. 573,947
2 Claims. (Cl. 339—193)



1. In a right angle tube socket for button type subminiature tubes, the combination which comprises a generally rectangular socket body of insulating material having a plurality of rectangular prong-receiving cavities arranged in a circle and extending from one end face of said body to the other end face of said body, a plurality of spaced projections on the bottom of said socket body for spacing said body from a chassis upon which the socket is mounted with its cavities in parallelism with the plane of said chassis, an elongated metal contact member formed of metal of high electrical conductivity for each cavity comprising a prong-engaging portion within the cavity and lining a face thereof and a terminal portion outside of the cavity extending along and beyond one end face of the socket body, said contact member being secured to said socket body by means of an ear at one end of the cavity and by an integral lug bent around one of said bottom projections of said socket body, an arched spring member formed of spring metal of lower electrical conductivity in each cavity having an ear at each end in engagement with the respective end faces of the socket body, the arched portion of said spring member being normally biased against the prong-engaging portion of said contact member and being adapted to maintain a contact prong inserted in said cavity in pressure contact with said prong-engaging portion, said contact member having no spring function and said spring member having no contact function during operation of the tube socket.

2,860,319
BATTERY CABLE TERMINAL
Byerl M. Short, Billings, Mont., assignor to Empire Cable Corporation, Billings, Mont., a corporation of Montana
Application March 21, 1955, Serial No. 495,666
3 Claims. (Cl. 339—251)



1. A battery cable terminal of the character described comprising: a split clamp comprising spaced jaws for the reception of a battery post therebetween, and a connecting bolt extending between the jaws for closing and opening same, said bolt including relatively fine and coarse thread portions of the same hand threadedly engaged in the jaws.

switching means for periodically rendering said rocking

2,860,320
BATTERY CONNECTOR

Austin G. Goodnight, Clovis, Calif., assignor of one-third to Frank D. Cobe and one-third to Marshall U. Beyer, Fresno, Calif.

Substituted for abandoned application Serial No. 264,567, January 2, 1952. This application May 5, 1955, Serial No. 506,297

2 Claims. (Cl. 339—239)

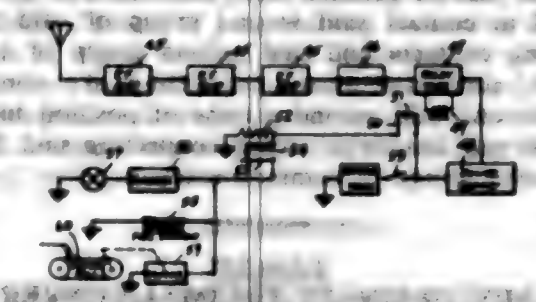
2. A battery connector comprising a base element; a cap element, said base element and cap element defining a battery post receiving opening therebetween and having substantially parallel aligned bores therein on opposite sides of the post opening and the cap element having a counterbore therein concentrically aligned with each of the bores and oppositely disposed in the cap element from the base element; guide rods slidably extended through the bores of the cap element and rigidly mounted in the base element, said guide rods constraining the cap element to rectilinear movement toward and from the base element in a plane common to the base element and normal to the axis of the post receiving opening; heads integral with the ends of the guide rods slidably fitted to the counterbores in the cap element to resist the admission of foreign material to the counterbores; and helical compression springs mounted on the guide rods under compression between the heads and the cap element at the inner ends of their respective counterbores.

2,860,321
TIRE ALARM

Albert N. Strickland and Bernard B. King, Indianapolis, Ind., assignors, by direct and mesne assignments, to Raymond James Stockholm, Indianapolis, Ind.

Application December 21, 1955, Serial No. 554,535

10 Claims. (Cl. 340—58)



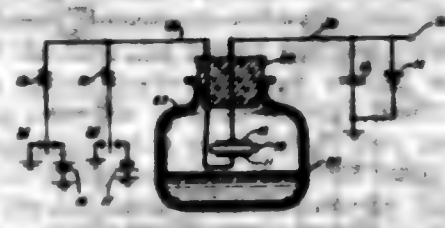
3. A radio alarm system for initiating an alarm in an automobile truck in response to abnormal air pressure in the tires of said truck, comprising a limited range radio transmitter adapted to be mounted on the hub of a wheel of said truck and having in circuit therewith a pressure controlled switch, an air hose connected to said switch and adapted to be connected to a tire of said wheel, whereby abnormal pressure in said tire may actuate said switch for initiating transmission of a radio signal, said air hose including a conductive sheath coupled to the antenna circuit of said transmitter to serve as an antenna for said transmitter, a radio receiver adapted to be mounted in the cab of said truck, and a shielded antenna coupled to said receiver and having unshielded portions adjacent the wheels of said truck, whereby said unshielded portions may receive signals radiated by the sheath of said hose.

2,860,322
BARIUM TITANATE MEMORY DEVICE

Henry L. Stadler, Berkeley Heights, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application May 25, 1956, Serial No. 587,410

2 Claims. (Cl. 340—173)



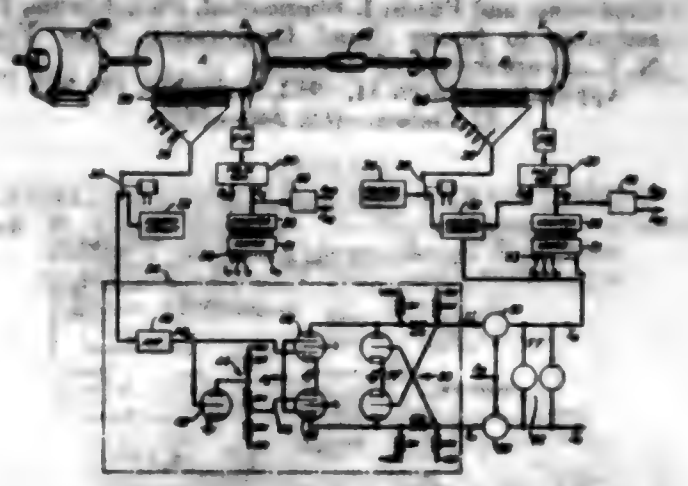
1. The method of eliminating decay under repeated pulsing, of the polarization of a barium titanate crystal which comprises cooling said crystal to substantially —195° C. and thereafter maintaining said crystal at a temperature substantially below 0° C.

2,860,323
MEANS FOR SYNCHRONIZING A PAIR OF DATA HANDLING DEVICES

William H. Burkhart, East Orange, and Richard J. La Manna, Orange, N. J., assignors to Monroe Calculating Machine Company, Orange, N. J., a corporation of Delaware

Application July 24, 1953, Serial No. 370,874

19 Claims. (Cl. 340—174)



14. Means for compensating for phase deviations between a pair of synchronously operating data handling devices of which one lags the other variable amounts up to any number *n* of digit handling times comprising *n* digit storage elements, means under the control of the leading data handler for extracting data from the same and setting the storage elements in accordance with the values of successive digits of the extracted data, each said storage element being set in accordance with the value of every *n*th digit and means under the control of the lagging data handler for sensing each said storage element to determine the value of the said every *n*th digit it is set to represent.

2,860,324
POWER LINE SIGNALLING SYSTEM

François Charles Edmond Maurice Berger and Paul Antoine Henri Roussel, Paris, France, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

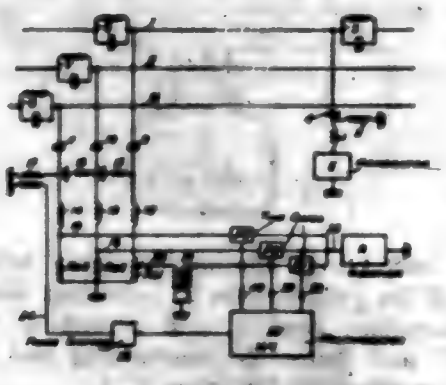
Application November 25, 1953, Serial No. 394,446

Claims priority, application France December 24, 1952

3 Claims. (Cl. 340—310)

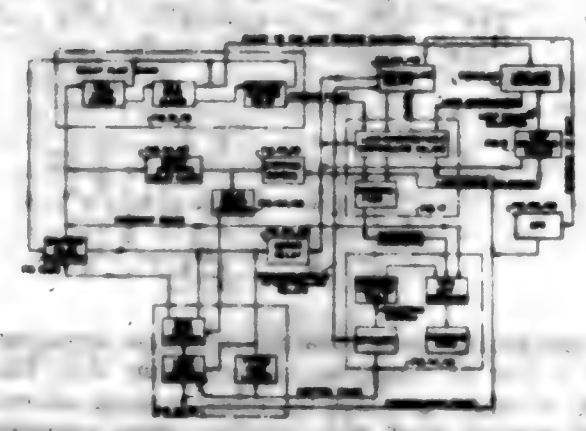
1. A system for receiving intelligence signals transmitted over an alternating current power line conductor, comprising receiving means for said intelligence signals, means for coupling said conductor to said receiving means,

switching means for periodically rendering said receiving means receptive to incoming signals, and timing means for actuating said switching means in synchronism with a predetermined period of the cycle of said alternating current power, said period corresponding to a time when the power voltage is a given fraction of its peak value, said



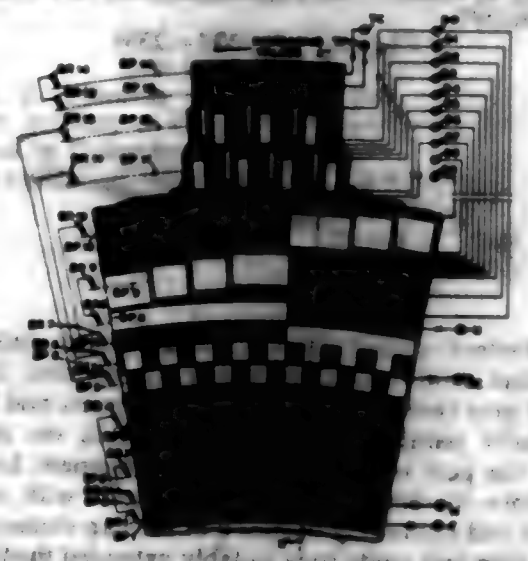
timing means comprising pulse producing means, means synchronizing said pulse producing means with the frequency of said power alternating current, and phase shifting means coupled between said synchronizing means and said pulse producing means for operating said pulsing means to produce pulses only during said predetermined period of each cycle.

2,868,325
INFORMATION TRANSLATING APPARATUS
Herbert F. Welsh, Philadelphia, John Presper Eckert, Jr., Gladwyne, and Edwin L. Blumenthal, Philadelphia, Pa., assignors to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Application March 31, 1952, Serial No. 279,712
32 Claims. (Cl. 340—347)



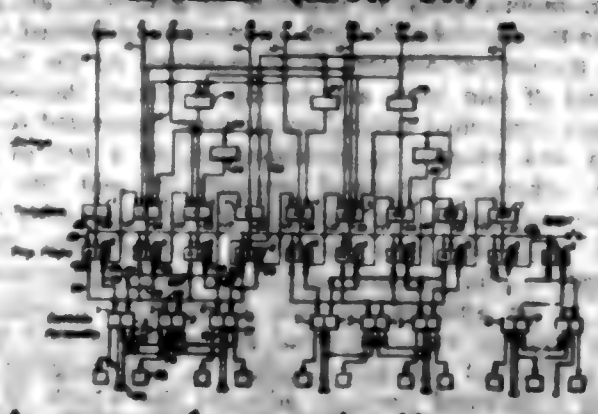
5. In combination, an information translating apparatus, including a data transforming and recording system, comprising a keyboard having a plurality of information and control keys, the operation of any one of said information keys producing an information signal and a control pulse, a magnetic recording device and a carrier for magnetic recordings, means for delivering said information signal from said keyboard to said recording device, and automatic control means operative in response to said control pulse to cause said recording device to record said information signal on said carrier, wherein said automatic control means comprises, a control device for checking the motion of said carrier, a device for sensing the motion of said carrier, and a bistable state device and an error circuit for disabling said automatic control means coupled to said control device, and wherein said control device is connected both to said sensing device and said bistable state device and jointly responsive to signals from said sensing device and the change of state of said bistable state device and switching said control pulse into said error circuit in the absence of a predetermined relationship between the signals from said sensing device and the state of said bistable state device.

2,868,326
POSITION INDICATING DEVICE
Charles A. Walton, Owego, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application August 22, 1956, Serial No. 605,615
5 Claims. (Cl. 340—347)



4. In a position indicating device for electrically indicating the position of a movable member, including a plurality of aligned brushes and a plurality of contacts traversed by said brushes in response to relative motion between said brushes and said contacts governed by the motion of said movable member, the combination comprising a first and a second group of position indicating contacts staggered with respect to the line of travel of said brushes, a first and a second group of common contacts staggered with respect to the line of travel of said brushes, said first group of position indicating contacts and said first group of common contacts being aligned with respect to each other and transverse to the line of travel of said brushes, said second group of position indicating contacts and said second group of common contacts being aligned with respect to each other and transverse to the line of travel of said brushes, a first pair of brushes electrically connected and positioned to contact said first group of said position indicating contacts and said first group of common contacts, a second pair of brushes electrically connected and positioned to contact said second group of said position indicating contacts and said second group of common contacts, conductor means connecting like contacts in said first and said second groups of position indicating contacts, and conductor means connecting said first and said second groups of common contacts.

2,868,327
BINARY-TO-BINARY DECIMAL CONVERTER
Charles A. Campbell, Melbourne, Fla.
Application April 27, 1956, Serial No. 581,193
12 Claims. (Cl. 340—347)



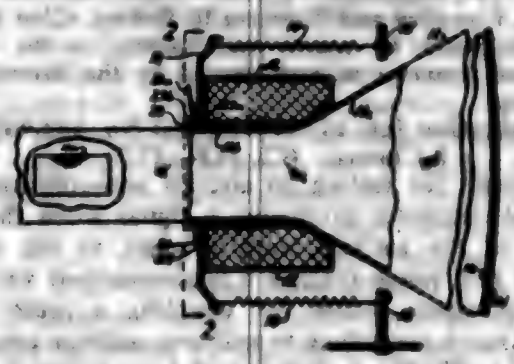
1. A converter for converting binary coded input information to individually binary-coded numbers of

other base number systems, comprising a plurality of bi-stable circuit elements connected in a cascaded circuit, means for coupling the individual elements of the binary coded input information, to preselected bi-stable elements, each element of said binary code being coupled to an integral number of bi-stable elements, including one, having a total weight in the cascaded circuit equal to the weight of the element in the binary code, means for adding a false count to said cascaded circuit equal to the difference between the count in the binary system and the count in a selected other base number system necessary to produce a transfer count from a preselected one of said bi-stable circuit elements to the next succeeding bi-stable element, said means for adding including means for feeding back a signal from said one bi-stable element to preceding bi-stable elements whose total weight in the cascaded circuit is equal to the false count, means for sensing the count represented by said bi-stable elements, said means for sensing including means for subtracting the false count from the count represented by said bi-stable elements, and delay means for preventing interaction between input information, false counts and transfer counts.

2,859,328
SHIELD FOR CATHODE RAY TUBES AND PROCESS OF MAKING THE SAME
David C. Langworthy, Narberth, Pa., assignor to Magnetic Metals Company, a corporation of New Jersey
Application November 18, 1953, Serial No. 392,925
22 Claims. (Cl. 348—367)

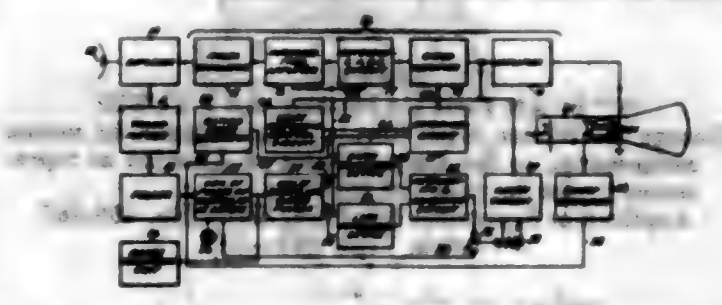
1. The process of shielding a cathode ray tube comprising winding a spiral coil of strip magnetic material in which the diameter of the coil is perpendicular to the face of the strip, the coil having an opening therein, annealing said coil to improve its magnetic properties and then allowing the coil to cool, displacing the turns of said annealed coil in a direction parallel to the axis of the coil to form a helical shield of progressively increasing diameter the turns of which overlap, said displacement of the coil turns to form said helix including such a limited bending of said magnetic material as not to impair substantially the effect of the annealing on said material, and thereafter slipping said helical shield over the neck of said cathode ray tube.

2,859,329
CENTERING DEVICE FOR CATHODE RAY TUBE AND TV RECEIVER USING SAME
Sol L. Retzloff, Shaker Heights, Ohio
Application January 18, 1955, Serial No. 482,520
1 Claim. (Cl. 348—367)



A television receiver including in combination: a chassis; a cathode ray tube having an electron gun, an envelope with a neck, a flaring generally conical portion, and a comparatively flat viewing screen located at the large end of the flaring portion, a chassis, means on the chassis to receive the flaring portion of the tube adjacent the viewing screen and to hold the same against forward movement said means including resilient elements interposed between the tube and chassis; a magnetic deflection yoke received over the neck of the tube and having portions adapted to bear against the flaring portion thereof; a rigid non-magnetic plate having a circular opening through which the neck of the tube extends and a plurality of ears reaching outboard of the deflection yoke, the plate being located on the side of the deflection yoke opposite the flaring portion of the tube; a cylindrical guide snugly received against the margin of said opening and having flange portions extending in radially outward direction to secure the guide in fixed relation to the plate; a pair of annular magnetic members rotatably received on the cylindrical guide, said members being sandwiched between the face of the plate opposite the deflection yoke and the adjacent flange portion of the guide, each member having a radially extending manipulating ear to permit rotation thereof in relation to the guide, each of said members being magnetized to define diametrically opposed poles, whereby rotation of the members in relation to the guide and to each other provides a ray beam centering magnetic field of adjustable orientation and intensity; and spring means attached to the ears respectively and to the chassis to pull the plate forwardly, said means, said plate, and said means to receive the flaring portion of the tube forming a resilient system whereby the yoke is held snugly and resiliently against the flaring portion of the tube and the tube is resiliently supported by the chassis.

2,859,330
AMPLIFICATION CONTROL ARRANGEMENT
Jack W. Glen, Camillus, N. Y., assignor to General Electric Company, a corporation of New York
Application March 27, 1952, Serial No. 278,841
18 Claims. (Cl. 343—7.3)



1. The combination, in wave-translating apparatus having an output circuit wherein impulse-type noise and echo components appear, of means coupled to said output circuit for deriving a series of pulses of fixed amplitude in response to noise and echo impulses appearing during spaced apart known units of time which have amplitudes at least equal to a predetermined threshold level, means coupled to said first-mentioned means for deriving a control signal representing the number of pulses in said series, and means for adjusting an operating characteristic of said apparatus in accordance with said control signal.

2. The combination, in wave-translating apparatus having an output circuit wherein impulse-type noise and echo components appear, of means coupled to said output circuit for deriving a series of pulses of fixed amplitude corresponding to noise and echo impulses appearing during spaced apart known units of time which have amplitudes exceeding a predetermined threshold level, means coupled to said first-mentioned means for deriving a control signal representing the number of pulses in said series, and means for adjusting an operating characteristic of said apparatus in accordance with said control signal.

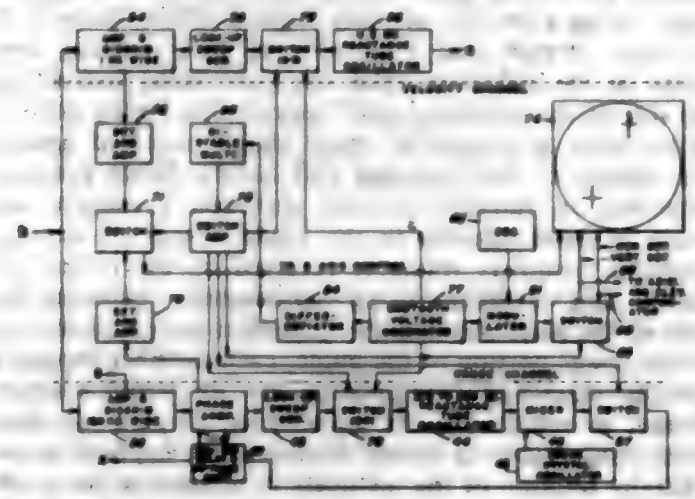
pling said known rate of change of range signals to said relative delay in one of said channels substantially equal

2,860,331

OSCILLOSCOPE DISPLAY METHOD AND CIRCUIT FOR F. M. RADAR SYSTEMS

Thomas C. Pridmore, Bath, N. Y., and Gordon S. Ley, Plainfield, N. J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application December 15, 1955, Serial No. 553,397
9 Claims. (Cl. 343—9)



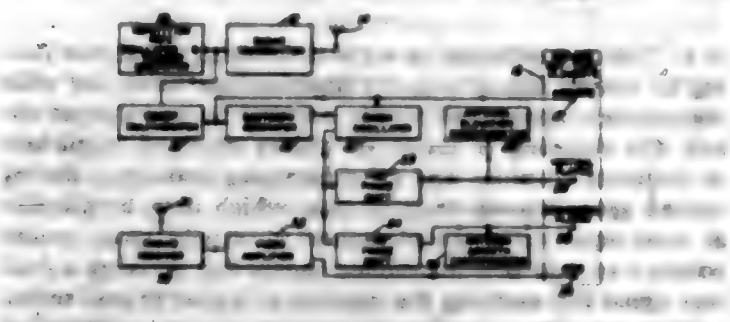
1. An oscilloscope display circuit for use in a frequency modulation radar system having a velocity channel and a range channel, said oscilloscope display circuit comprising: means for producing alternate velocity and range sweeping by a frequency modulation radar system, an oscilloscope having horizontal and vertical deflection systems and a Z axis control, means for producing a linearly changing signal alternately on said horizontal and vertical deflection systems in synchronism with the alternate velocity and range sweeping, and means responsive to the output of said velocity channel when the frequency modulation radar system is sweeping in velocity and to the output of said range channel when the frequency modulation radar system is sweeping in range for energizing said Z axis control to turn on the oscilloscope beam for a short interval.

2,860,332

"C" SCAN FOR CATHODE RAY TUBES

George W. Winter, Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application September 30, 1954, Serial No. 459,567
3 Claims. (Cl. 343—11)



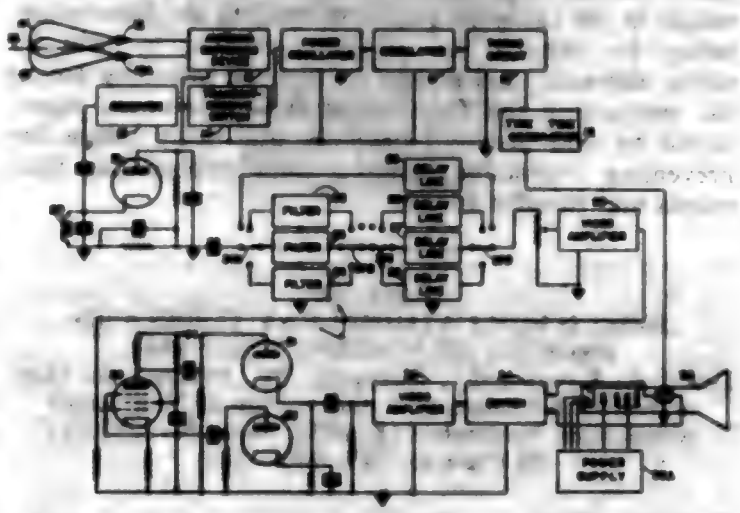
1. A radar system having a C-scan presentation which is operative over the entire range of the radar system comprising a radar transmitter, a trigger generator coupled to said transmitter for producing trigger pulses which energize said transmitter, a radar receiver, a cathode ray tube operatively associated with said receiver, horizontal and vertical deflection plates operatively associated with said cathode ray tube, means coupled to said horizontal deflection plates for applying an oscillating voltage thereto having a gradually increasing amplitude, means coupled to said vertical deflection plates for applying an oscillating voltage thereto having the same waveform as applied to said horizontal deflection plates but out of phase therewith, said voltages being applied to said plates in timed relationship to the occurrence of said trigger pulses whereby a substantially spiral waveform is produced on said face of said cathode ray tube, and means coupled to said cathode ray tube for intensity modulating portions of said spiral waveform when target echoes are received by said radar receiver.

2,860,333

INTERFERENCE SUPPRESSION SYSTEM

Harold L. Flowers, Washington, D. C., and James A. White, United States Navy

Application October 11, 1945, Serial No. 621,650
5 Claims. (Cl. 343—17.1)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A radiant energy operative system for detecting remote objects and having reduced susceptibility to interference signals comprising, a tunable transmitter operable to generate carrier frequency energy having modulation frequencies of selected characteristics, a radiator system connected to the transmitter for radiating the generated energy and intercepting energy returned by remote objects, a receiver system connected to said radiator system providing delivery of returned transmitter energy and interference signals, a linear detector connected to the output of said receiver system operative to produce heterodyne beat signals between said returned transmitter energy and said interference signals proportional to the amplitude of said returned transmitter energy, a frequency selective circuit connected to the output of said linear detector responsive to deliver the heterodyne beat signals and suppress the modulation frequencies of the returned transmitter energy and any modulation contained on the interference signals, a cathode ray tube indicating device, and detector means connected between said cathode ray indicating device and said frequency selective circuit to derive the generated carrier modulation from said heterodyne beat signals.

2,860,334

ANTI-COLLISION COMPUTER TESTER

Robert E. Cowdery and Norman R. Brown, Glen Burnie, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

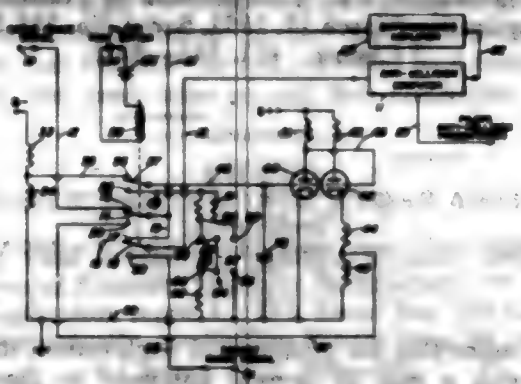
Application July 21, 1954, Serial No. 444,933
8 Claims. (Cl. 343—17.7)

1. A circuit for testing an aircraft anti-collision computer, said computer producing a signal when the ratio of range of the aircraft from a target to the rate of change of that range reaches a predetermined value, the circuit comprising means for coupling a preset range signal of known magnitude to said anti-collision computer, means for producing a plurality of known signals which are equivalent to different rates of change of range of said preset range signal, and means for selectively cou-

and insulated from the remaining loops, the support bars

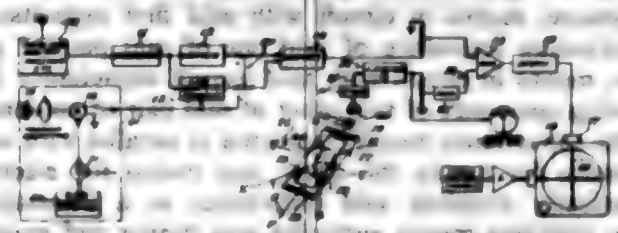
2,860,340

pling said known rate of change of range signals to said anti-collision computer, certain of said rate of change of range signals being of a certain magnitude so as not to cause an output from said anti-collision computer



and other of said rate of change of range signals being of a certain magnitude so as to cause an output from said anti-collision computer whereby the accuracy of said anti-collision computer may be tested.

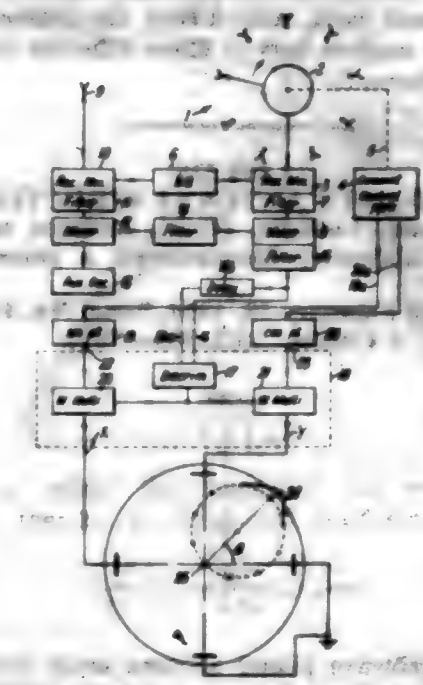
2,860,335
AIRCRAFT NAVIGATION SYSTEMS
Spencer Kellogg 2nd, Glen Head, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application August 31, 1955, Serial No. 531,673
7 Claims. (Cl. 343—107)



1. A navigation system for aircraft comprising means for providing a first signal the representative of the difference between an existing craft heading and a selected heading, means for providing a second signal proportional to the rate of change of craft heading, said second signal providing means comprising means for measuring the rate of change of heading and the rate of roll of said craft and for supplying signal components proportional thereto, said signal components including both the high and low frequencies of both of said craft rates, means responsive to said signal components for providing an output signal proportional only to the low frequency components thereof, said output signal constituting said second signal, and means responsive to said first and second signals for providing a craft control signal varying in accordance with the algebraic sum thereof.

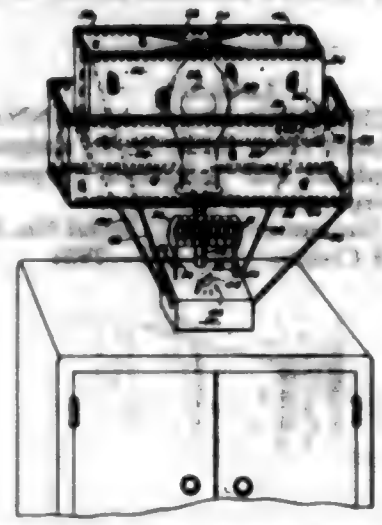
2,860,336
RADIO DIRECTION FINDING SYSTEM
Charles William Earp and Dennis Leslie Cooper-Jones, London, England, assignors to International Standard Electric Corporation, New York, N. Y.
Application March 28, 1955, Serial No. 497,264
Claims priority, application Great Britain May 21, 1954
6 Claims. (Cl. 343—120)

1. A radio direction-finding system comprising an array of at least three antenna uniformly spaced round the circumference of a circle, radio receiving means, commutating means arranged to couple each of said antenna to said radio receiving means in turn in regular succession round the array at a given commutation frequency, whereby the radio field is scanned in steps round the circumference of said circle at said given frequency, means in said radio receiving means being adapted to derive from the received radio energy a carrier wave which is phase-modulated by reason of said scanning, output means for said derived wave having two output channels with a relative delay in one of said channels substantially equal to the time of one step of said commutation means, means for producing two reference waves isochronous with said scanning but in phase quadrature with each other, and an analysing arrangement, means for applying the waves from said output channels and said reference



waves jointly to said analysing arrangement, said analysing arrangement having means including wave multiplying means and phase discriminating means, to derive from said waves two co-ordinate potentials, a direction-indicating device and means for applying said two co-ordinate potentials to said direction indicating device.

2,860,337
LAMPSHADE ANTENNA
Donald C. Andersen, Rochester, N. Y.
Application June 1, 1956, Serial No. 588,871
10 Claims. (Cl. 343—721)



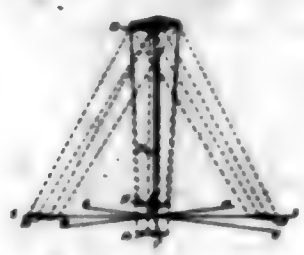
1. A combination antenna and lampshade for television reception comprising a base, four conductive support bars extending upwardly therefrom in divergent directions, a pair of lampshades each of the approximate same height, but one of larger horizontal cross section than the other disposed above said base with the smaller shade disposed above the larger shade by a distance less than the height of the larger shade, and each comprising a pair of loops of conductive material lying in substantially horizontal planes and disposed in spaced vertical relation, and joined by non-conductive lampshade material, said loops of each pair forming the upper and lower frames of the respective lampshade, each of said support bars extending to one of said loops and being electrically connected thereto

nected to the outer edge of the radiating surface of said, below the points at which said sections of said legs are

applied to said horizontal deflection plates but out of said preset range signal, and means for selectively cou-

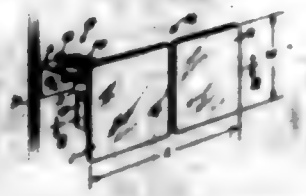
and insulated from the remaining loops, the support bars extending to the loops of one shade being connected to the respective loops thereof at opposite sides thereof, and the support bars extending to the loops of the other shade extending to the respective loops of the other shade on opposite sides thereof, a multiposition double pole switch mounted in said base, and means for connecting said switch to said support bars to effect different connections to the loops thereof.

2,860,338
MICROWAVE ANTENNA STRUCTURE
John F. Zaloudi, Valhalla, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application February 19, 1954, Serial No. 411,432
6 Claims. (Cl. 343—789)



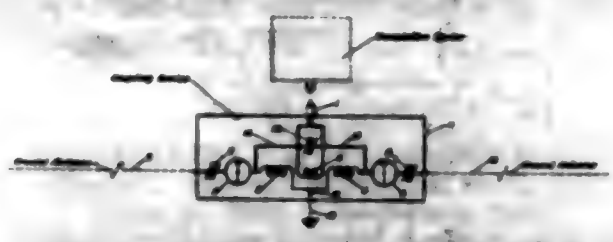
2. In a microwave planar antenna array structure for radiating a plurality of beams at acute angles to the normal thereto through an aperture in the conducting skin of a vehicle carrying said structure, said array being secured to a horizontally stabilized platform whereby motion of said conducting skin and the aperture therein may occur relative to said array, the combination with said array of a conductive planar mask containing an aperture smaller than said skin aperture for the passage of said plurality of beams, said planar mask being rigidly secured to said planar antenna array and positioned parallel thereto between said planar antenna array and said skin aperture, whereby limited relative motion between said planar antenna array and said skin aperture is without effect on the effective direction of any of said plurality of beams.

2,860,339
ULTRA-HIGH FREQUENCY ANTENNA UNIT
Arnulf G. Kandoian, Glen Rock, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application December 2, 1953, Serial No. 395,757
6 Claims. (Cl. 343—798)



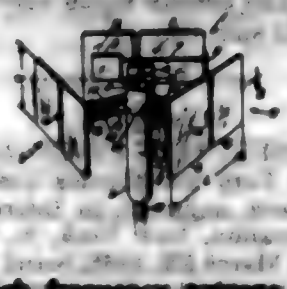
1. A broad band antenna structure comprising two separate rectangular sheets of conductive material disposed in spaced edgewise relation to each other, each sheet having an inner edge adjacent the other sheet and an outer end and edge opposite thereto, the dimension across both sheets being substantially one-half wavelength at mid-band frequency, a strap of conductive material, the width of said strap being considerably narrower than both the length thereof and widest dimension of said sheets, said strap being connected to the outer end of one of said sheets and the planar area of the other of said sheets and supporting said separate sheets and an unbalanced transmission line means to couple a source of ultra-high frequency energy between said strap and the inner edge of said one of said sheets.

2,860,340
COUPLING DEVICE FOR GROUND ANTENNAS
William M. Barret and Clarence H. Clement, Shreveport, La., assignors to The Engineering Research Corporation, Shreveport, La., a corporation of Louisiana
Application March 17, 1951, Serial No. 216,206
2 Claims. (Cl. 343—822)



2. In apparatus for geophysical exploration, in combination with a pair of ground antennas in dipole configuration; a tuning and matching device comprising, a first variable capacitance having one side thereof connected to one of said pair of antennas, said first capacitance being adapted to tune said one of said pair of antennas to resonance at the operating frequency, a second variable capacitance having one side thereof connected to the other of said pair of antennas, said second capacitance being adapted to tune said other of said pair of antennas to resonance at the operating frequency, an inductance having one end thereof connected to the other side of said first capacitance, the other end of said inductance being connected to the other side of said second capacitance, means in circuit with said first capacitance for indicating resonance of said one of said pair of antennas, means in circuit with said second capacitance for indicating resonance of said other of said pair of antennas, variable capacitance means connected in parallel with said inductance for tuning the same, and means for electromagnetically coupling said inductance to a transistion device; shielding means enclosing said tuning and matching device and said coupling means; and means for connecting said inductance at the electrical midpoint thereof to said shielding means, said shielding means being adapted to be selectively connected to ground.

2,860,341
ULTRA HIGH FREQUENCY TELEVISION ANTENNA
Arnulf G. Kandoian, Glen Rock, and Robert A. Felenbold, East Orange, N. J., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application October 7, 1953, Serial No. 384,976
4 Claims. (Cl. 343—843)



1. An ultra high frequency antenna system comprising a plurality of individual radiating members forming a substantially omnidirectional antenna, each of said members including first and second conductors each shaped to provide a substantially rectangular planar radiating surface, said conductors being disposed in spaced edgewise relation, a radiating transformer section asymmetrically connected to said conductors to provide asymmetrical electrical coupling thereto, and means to connect a source of ultra high frequency energy between said transformer section and the radiating surfaces of said conductors, said radiating transformer section comprising a metal strip spaced from the radiating surfaces of said conductors and having one end angled and con-

nected to the outer edge of the radiating surface of said first conductor and the other end of said strip angled and connected to said second conductor at a point closer to the inner edge of said second conductor and said energy connecting means having one lead thereof connected to said transformer and the other lead thereof connected to the inner edge of said first conductor.

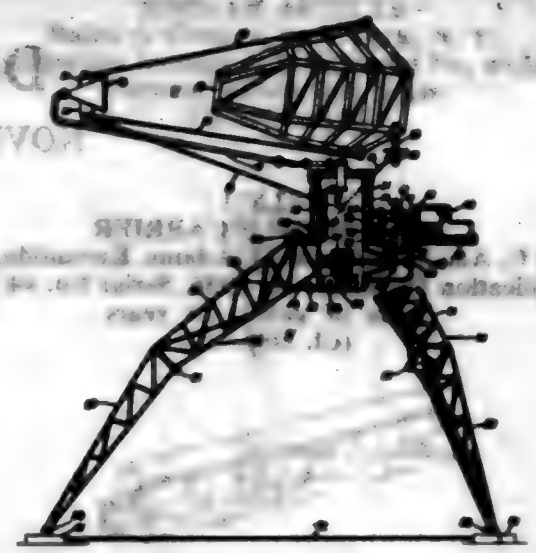
2,860,342

SUPPORT STRUCTURE FOR RADAR ANTENNA SYSTEMS

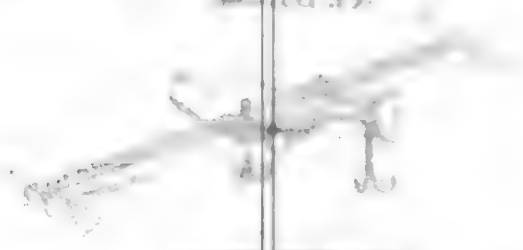
Edmond Paul Warnery, Boulogne, France, assignor to General Electric Company, Schenectady, N. Y.

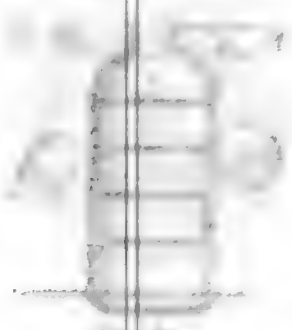
Application April 3, 1953, Serial No. 346,642
Claims priority, application France May 19, 1952
6 Claims. (Cl. 343—881)

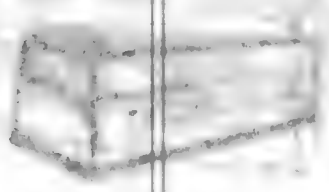
1. A support structure for an antenna, comprising a platform for supporting said antenna, a plurality of legs supporting said platform, each of said legs comprising folding sections pivoted to each other, one section of each leg being pivoted to said platform, said legs being adapted, in folded condition, to be disposed with sections in adjacent substantially vertical side by side relation, the platform then being maintained in a lowered position below the points at which said sections of said legs are pivoted to each other, and motive means on said platform



adapted to unfold the respective leg sections simultaneously, thereby to raise said platform to operating position.





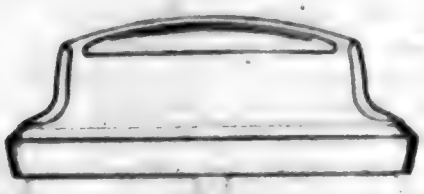


DESIGNS

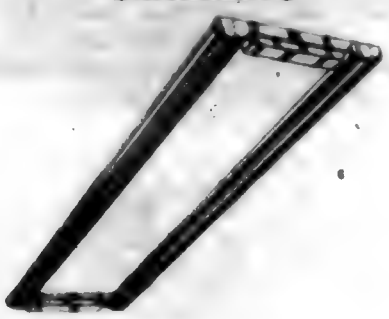
NOVEMBER 11, 1958

183,871
MILK BOTTLE CARRIER
Robert C. Adams and Irma O. Adams, Escondido, Calif.
Application December 13, 1956, Serial No. 44,187
Term of patent 14 years
(Cl. D58—5)

183,872
FLOOR POLISHER OR SIMILAR ARTICLE
Walter C. Anderson, Southport, and Robert J. Reading, Stratford, Conn., assignors to General Electric Company, a corporation of New York
Application April 17, 1957, Serial No. 45,768
Term of patent 14 years
(Cl. D9—2)

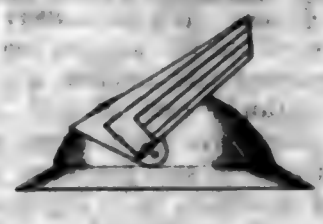


183,873
FLUORESCENT LIGHT FIXTURE
Marcus Bodian, Los Angeles, and William B. Rosenfield, Pacoima, Calif., assignors to Sunbeam Lighting Company, Los Angeles, Calif., a firm of California
Application March 10, 1958, Serial No. 49,983
Term of patent 14 years
(Cl. D48—23)



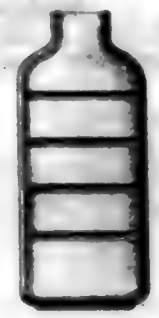
183,874
PREFABRICATED FIREPLACE
Elroy J. Bushaw and Robert A. Nightingale, Seattle, Wash.
Application September 3, 1957, Serial No. 47,563
Term of patent 3½ years
(Cl. D81—7)

183,875
NOVELTY HAT
Tony Cortese, Richmond, Calif.
Application June 28, 1957, Serial No. 46,771
Term of patent 14 years
(Cl. D3—13)

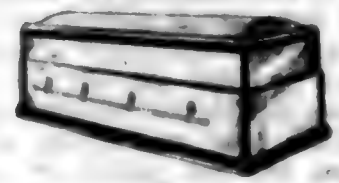


183,876
FISH LURE
William R. Courtright, Detroit, Mich., assignor of one-half to Peter MacFadyen, Highland Park, Mich.
Application May 21, 1958, Serial No. 50,999
Term of patent 3½ years
(Cl. D31—4)

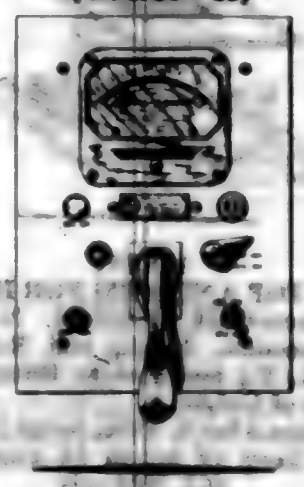
183,877
BOTTLE PACK
Urban H. Despres, Clinton, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application March 27, 1956, Serial No. 40,800
Term of patent 14 years
(Cl. D58—6)



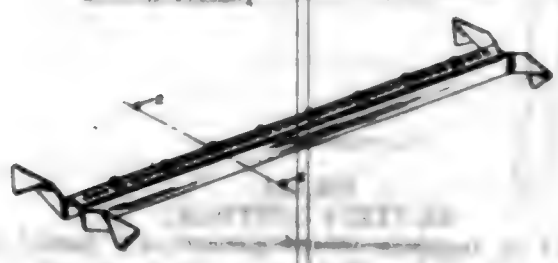
183,878
BURIAL VAULT
Thomas G. Doty, Merriam, Kans.
Application March 10, 1958, Serial No. 49,994
Term of patent 14 years
(Cl. D19—1)



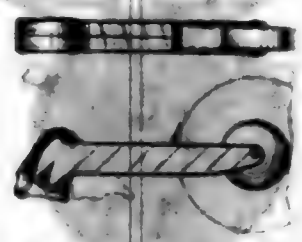
183,879
COMBINED METER AND SWITCH PANEL
Cherry L. Emerson, Jr., Duxbury, Mass., assignor to Callaghan Heaters Corporation, Boston, Mass., a corporation of Massachusetts
Application January 30, 1956, Serial No. 39,967
Term of patent 14 years
(Cl. D26—13)



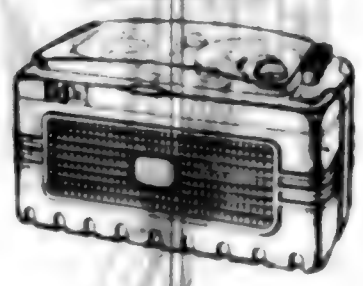
183,880
CLOTHES HANGER BAR FOR A WARDROBE
Ludwig Friedlander, Chicago, Ill., assignor to Chippewa Paper Products Co. Inc., Chicago, Ill.
Application September 4, 1957, Serial No. 47,597
Term of patent 14 years
(Cl. D33—8)



183,881
TAPE APPLICATOR OR LIKE ARTICLE
George H. Fritzinger, West Orange, N. J.
Application August 7, 1957, Serial No. 47,261
Term of patent 14 years
(Cl. D74—1)

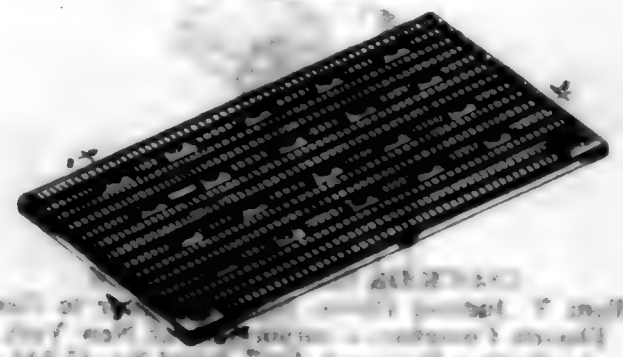


183,882
MAGNETIC RECORDER
Giovanni Geloso and Arrigo Castelli, Milan, Italy
Application February 7, 1957, Serial No. 44,799
Term of patent 14 years
(Cl. D26—14)



183,883
COMBINED BELL, RATTLE, AND FORK OR SIMILAR ARTICLE
Ralph S. Gordon, New York, N. Y.
Application January 3, 1958, Serial No. 49,118
Term of patent 3½ years
(Cl. D54—12)

183,884
AQUARIUM FILTER OR THE LIKE
Abby Halpert, Brooklyn, N. Y.
Application March 19, 1957, Serial No. 45,331
Term of patent 14 years
(Cl. D91—2)

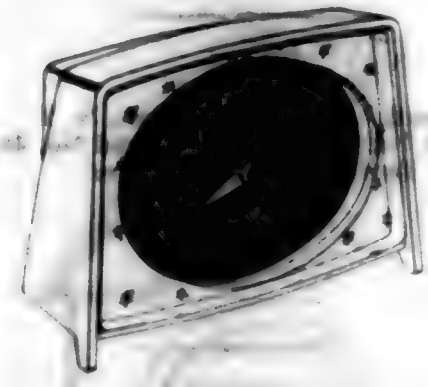


183,885
MAGNIFIER
Edward J. Herbert, Amityville, N. Y.
Application November 4, 1957, Serial No. 48,326
Term of patent 14 years
(Cl. D57—1)

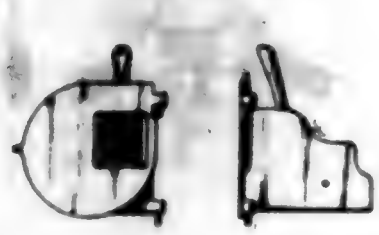
183,896
RADIO OR TELEVISION STAND
Roland N. Iverson, Dallas, Tex., assignor to Rolee Hospital Television, Inc., Dallas, Tex., a corporation of Texas
Application July 24, 1957, Serial No. 47,869
Term of patent 14 years
(Cl. D33—14)

183,897
CHAIR
Poul Jensen, Mobelfabrikk, Hadsr, Denmark, assignor to Selig Manufacturing Company, Inc., Leominster, Mass., a corporation of Massachusetts
Application September 9, 1957, Serial No. 47,671
Term of patent 14 years
(Cl. D15—1)

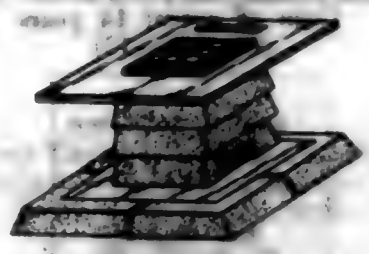
183,898
CLOCK OR SIMILAR ARTICLE
William V. Judson, Dover, Mass., assignor to General Electric Company, a corporation of New York
Application October 1, 1957, Serial No. 47,935
Term of patent 3½ years
(Cl. D42—7)



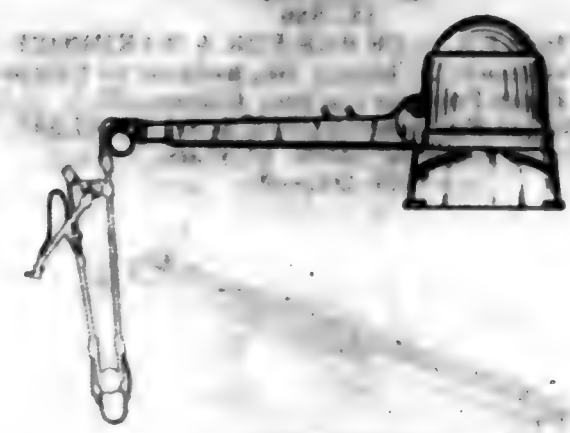
183,899
VEGETABLE AND FRUIT CUTTING MACHINE OR SIMILAR ARTICLE
Michael H. Juliano, Watertown, Mass.
Application November 26, 1956, Serial No. 43,933
Term of patent 7 years
(Cl. D69—1)



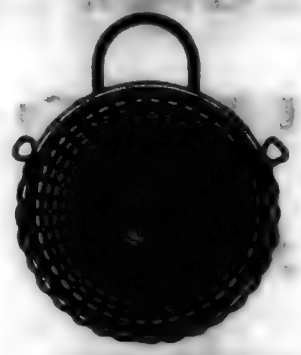
183,900
OUTDOOR FIREPLACE
Helen J. Kalikowski, Fort Lee, N. J.
Application November 27, 1957, Serial No. 48,696
Term of patent 14 years
(Cl. D61—19)



183,901
COMBINED TOP AND ARM FOR DENTAL UNIT
Norman E. Lauterbach, Pittsford, N. Y., Walter D. Teague, Annandale, N. J., and Robert H. Ensign, Bronxville, N. Y., assignors to Ritter Company, Inc., a corporation of Delaware
Application May 4, 1956, Serial No. 41,337
Term of patent 14 years
(Cl. D24—1)



183,903
HANDBAG OR SIMILAR ARTICLE
Arlbert T. Lebmann, New York, N. Y., assignor to American Artplex, Inc., New York, N. Y.
Application June 11, 1957, Serial No. 46,543
Term of patent 7 years
(Cl. D87—3)



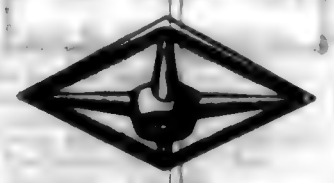
183,904
WIND PROPELLED SPINNER OR SIMILAR ARTICLE
Shirley McLarty, Dallas, Tex.
Application March 18, 1957, Serial No. 45,311
Term of patent 14 years
(Cl. D34—18)

183,901

183,894
SPECTACLE FRAME
Albert G. McNeill, Maple Glen, Pa., assignor to Bachmann Bros., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application March 20, 1958, Serial No. 58,115
Term of patent 3½ years
(Cl. D97—1)

183,895
DUCK HUNTING BOAT
Henry P. Magargee, Summit, N. J.
Application November 18, 1957, Serial No. 46,498
Term of patent 14 years
(Cl. D71—1)

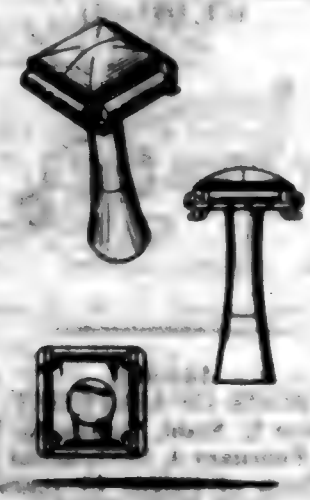
183,896
LIGHTING FIXTURE
Carl Moser, Larchmont, N. Y., assignor to Lightolier, Incorporated, a corporation of New York
Application December 18, 1956, Serial No. 44,239
Term of patent 14 years
(Cl. D48—23)



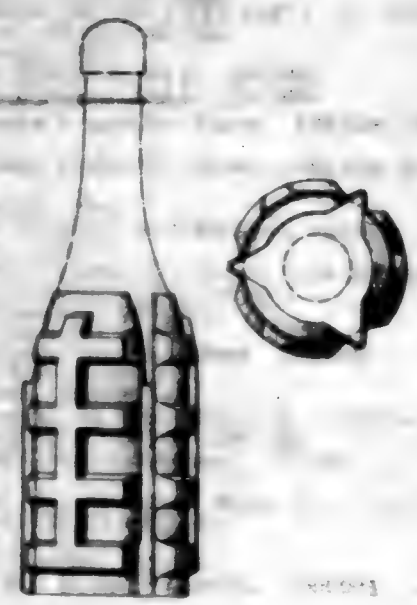
183,897
PITCHER
Efrem M. Ostrowsky, Highland Park, Ill., assignor to Jules F. Glin and Joseph A. Glin, both of River Forest, Ill.
Application September 11, 1957, Serial No. 47,718
Term of patent 14 years
(Cl. D44—31)

183,898
RAZOR
Hyman I. Freeman and Donald Freeman, Cleveland, Ohio
Application October 4, 1957, Serial No. 47,974
Term of patent 14 years
(Cl. D22—3)

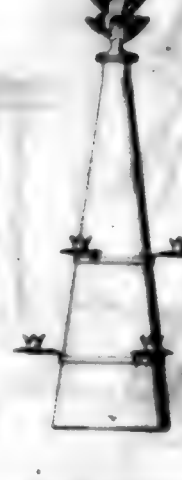
183,899
RAZOR
Hyman I. Freeman and Donald Freeman, Cleveland, Ohio
Application October 4, 1957, Serial No. 47,975
Term of patent 14 years
(Cl. D22—3)



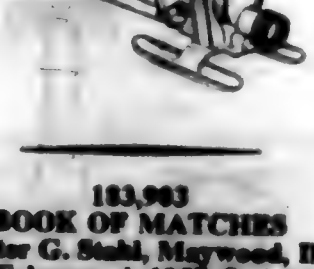
183,900
MOLDED PULP BOTTLE PACK
Ernest L. Shepard, Fairfield, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application January 23, 1957, Serial No. 44,563
Term of patent 14 years
(Cl. D59—26)



183,901
CANDELABRA
Maximilian Simon, Los Angeles, Calif.
Application June 3, 1958, Serial No. 51,173
Term of patent 14 years
(Cl. D48—3)

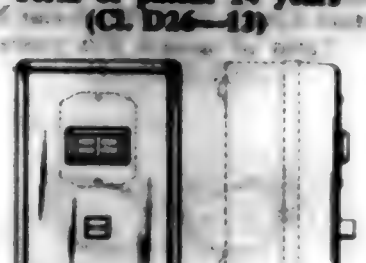


183,902
LAWN SPRINKLER
Edwin W. Smith, Climax, Mich., assignor to Atlas Press Company, Kalamazoo, Mich., a corporation of Michigan.
Application January 2, 1958, Serial No. 49,898
Term of patent 14 years
(Cl. D91—1)

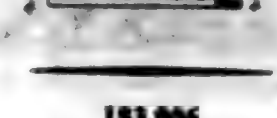


183,903
BOOK OF MATCHES
Walter G. Stahl, Maywood, Ill.
Application February 4, 1957, Serial No. 44,736
Term of patent 14 years
(Cl. D48—29)

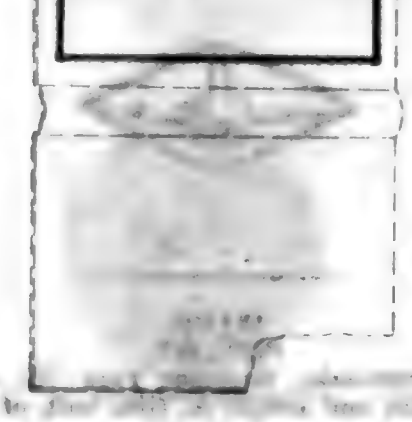
183,904
ELECTRICAL SWITCH ENCLOSURE
Carl W. Sundberg, Birmingham, Mich., assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Application September 15, 1955, Serial No. 37,954
Term of patent 14 years
(Cl. D26—13)



183,905
FOOT SUPPORT FOR A TYPEWRITER CASE OR THE LIKE
Otto Winter, Wilhelmshaven, Germany, assignor to Olympia Werke A. G., Wilhelmshaven, Germany
Application August 21, 1956, Serial No. 42,690
Term of patent 14 years
(Cl. D87—2)



183,906
BOOK COVER
Erwin Wolberg, New York, N. Y., assignor to Wolberg-Sims Printing & Engraving Co., New York, N. Y., a partnership
Application December 24, 1956, Serial No. 44,313
Term of patent 3½ years
(Cl. D6—2)



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Anaheim Lighting Co., Assignor to ... 183,904
Atlas Press Co., Assignor to ... 183,902
Bachmann, Ernest, Assignor to ... 183,906
Bodian, Max, Assignor to ... 183,903
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Callaghan, Emerson, Assignor to ... 183,905
Castelli, Arthur, Assignor to ... 183,905
Chippewa Lighting Co., Assignor to ... 183,904
Cortese, Tullio, Assignor to ... 183,905
Courtright, Emerson, Assignor to ... 183,876
Despres, Jean, Assignor to ... 183,905
Doty, Thomas, Assignor to ... 183,905
Emerson, Charles, Assignor to ... 183,904
Ensign, Robert, Assignor to ... 183,904
Friedlander, Lauterstein, Assignor to ... 183,905
Fritzinger, Clothes Line ... 183,881
Geloso, Giuseppe, Assignor to ... 183,882
General Electric Co., Assignor to ... 183,904
Gits, Joseph, Assignor to ... 183,904
Gits, Jules, Assignor to ... 183,904
Gordon, Ralph, Assignor to ... 183,904
Halpert, Abraham, Assignor to ... 183,905
Herbert, Edward, Assignor to ... 183,905
Iverson, Robert, Assignor to ... 183,904
Jensen, Poul, Assignor to ... 183,904

LIST OF REISSUE PATENTEES

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NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Decelo-Chute Corp.: *See*—
Hand, George J., Sr. Re. 24,561.

Hand, George J., Sr., to Decelo-Chute Corp. Aerodynamic aircraft brake. Re. 24,561, 11-11-58, Cl. 244—113.

Herlehy, Frank J. Railroad track lining machine. Re. 24,564, 11-11-58, Cl. 104—8.

Hughes Blades, Inc.: *See*—
Hughes, Clyde C. Re. 24,562.

Hughes, Clyde C., to Hughes Blades, Inc. Construction of circular saws. Re. 24,562, 11-11-58, Cl. 125—15.

Leslie, Donald J. Acoustic apparatus. Re. 24,566, 11-11-58, Cl. 181—27.

Monsanto Chemical Co.: *See*—
Nason, Howard K. Re. 24,563.

Moulden, Oscar O. Wire package. Re. 24,560, 11-11-58, Cl. 242—137.1.

Nason, Howard K., to Monsanto Chemical Co. Butadiene acrylonitrile copolymer softened with liquid alkylacrylate acrylonitrile prepared in the presence of a polyhalomethane chain terminating agent. Re. 24,563, 11-11-58, Cl. 260—31.8.

Wigham, Jack H. Fallen plant pick-up attachment for combines. Re. 24,565, 11-11-58, Cl. 56—98.

LIST OF PLANT PATENTEES

Bosley, Edith C.: *See*—
Shepherd, Roy E. 1,770.

Le Grice, Edward B. New and distinct variety of rosa hybrid tea plant. 1,769, 11-11-58, Cl. 47—61.

Shepherd, Roy E., to E. C. Bosley. Rose plants. 1,770, 11-11-58, Cl. 47—61.

LIST OF DESIGN PATENTEES

Adams, Irma O.: *See*—
Adams, Robert C. and I. O. 183,871.

Adams, Robert C. and I. O. Milk bottle carrier. 183,871, 11-11-58, Cl. D59—5.

American Artplex, Inc.: *See*—
Lehmann, Aribert T. 183,902.

Anderson, Walter C., and R. J. Reading, to General Electric Co. Floor polisher or similar article. 183,872, 11-11-58, Cl. D9—2.

Atlas Press Co.: *See*—
Smith, Edwin W. 183,902.

Bachmann Bros., Inc.: *See*—
McNeill, Albert G. 183,894.

Bodian, Marcus, and W. B. Rosenfield, to Sunbeam Lighting Co. Fluorescent light fixture. 183,873, 11-11-58, Cl. D48—23.

Bushaw, Elroy J., and R. A. Nightingale. Prefabricated fireplace. 183,874, 11-11-58, Cl. D61—7.

Callaghan Hession Corp.: *See*—
Emerson, Cherry L., Jr. 183,879.

Castelli, Arrigo: *See*—
Geloso, Giovanni, and Castelli. 183,882.

Chippewa Paper Products Co. Inc.: *See*—
Friedlander, Ludwig. 183,880.

Cortese, Tony. Novelty hat. 183,875, 11-11-58, Cl. D8—13.

Courtright, William R., ½, to P. MacFadyen. Fish lure. 183,876, 11-11-58, Cl. D31—4.

Despres, Urban H., to Keyes Fibre Co. Bottle pack. 183,877, 11-11-58, Cl. D58—6.

Doty, Thomas O. Burial vault. 183,878, 11-11-58, Cl. D19—1.

Emerson, Cherry L., Jr., to Callaghan Hession Corp. Combined meter and switch panel. 183,879, 11-11-58, Cl. D26—13.

Ensign, Robert H.: *See*—
Lauterbach, Norman E., Teague, and Ensign. 183,891.

Friedlander, Ludwig, to Chippewa Paper Products Co. Inc. Clothes hanger bar for a wardrobe. 183,880, 1-11-58, Cl. D32—8.

Fritzinger, George H. Tape applicator or like article. 183,881. 11-11-58, Cl. D74—1.

Geloso, Giovanni, and A. Castelli. Magnetic recorder. 183,882, 11-11-58, Cl. D26—14.

General Electric Co.: *See*—
Anderson, Walter C., and Reading. 183,872.
Judson, William V. 183,888.

Gits, Joseph A.: *See*—
Ostrowsky, Efrem M. 183,897.

Gits Jules P.: *See*—
Ostrowsky, Efrem M. 183,897.

Gordon, Ralph S. Combined bell rattle and fork or similar article. 183,883 11-11-58, Cl. D34—12.

Halpert, Abby. Aquarium filter or the like. 183,884, 11-11-58, Cl. D61—2.

Herbert, Edward J. Magnifier. 183,885, 11-11-58, Cl. D37—1.

Iverson, Roland N., to Boise Hospital Television, Inc. Radio or television stand. 183,886, 11-11-58, Cl. D32—14.

Jensen, Poul, to Selig Mfg. Co., Inc. Chair. 183,887, 11-11-58, Cl. D15—1.

Judson, William V., to General Electric Co. Clock or similar article. 183,888, 11-11-58, Cl. D42—7.

Juliano, Michael H. Vegetable and fruit cutting machine, or similar article. 183,889, 11-11-58, Cl. D69—1.

Keyes Fibre Co.: *See*—
Despres, Urban H. 183,877.
Shepard, Ernest L. 183,900.

Kulikowski, Helen J. Outdoor fireplace. 183,890, 11-11-58, Cl. D61—10.

Lauterbach, Norman E., W. D. Teague, and E. H. Ensign, to Ritter Co., Inc. Combined top and arm for dental unit. 183,891, 11-11-58, Cl. D24—1.

Lehmann, Aribert T., to American Artplex, Inc. Handbag or similar article. 183,892, 11-11-58, Cl. D67—3.

Lightolier, Inc.: *See*—
Meser, Carl. 183,896.

MacFadyen, Peter: *See*—
Courtright, William R. 183,876.

McLarty, Shirley. Wind propelled spinner or similar article. 183,893. 11-11-58, Cl. D34—15.

McNeill, Albert G., to Bachmann Bros., Inc. Spectacle frame. 183,894, 11-11-58, Cl. D37—1.

Megarree, Henry P. Duck hunting boat. 183,895, 11-11-58, Cl. D71—1.

Meser, Carl, to Lightolier, Inc. Lighting fixture. 183,896, 11-11-58, Cl. D48—22.

Nightingale, Robert A.: *See*—
Bushaw, Elroy J., and Nightingale. 183,874.

Olympia Werke A G: *See*—
Winter, Otto. 183,905.

Ostrowsky, Efrem M., to J. P. and J. A. Gits. Pitcher. 183,897. 11-11-58, Cl. D44—21.

Presseman, Donald: *See*—
Presseman, Hyman I. and D. 183,898.
Presseman, Hyman I. and D. 183,899.

Presseman, Hyman I. and D. Razor. 183,898, 11-11-58, Cl. D22—3.

Presseman, Hyman I. and D. Razor. 183,899, 1-111-58, Cl. D22—3.

Reading, Robert J.: *See*—
Anderson, Walter C. and Reading. 183,872.

Ritter Co., Inc.: *See*—
Lauterbach, Norman E., Teague, and Ensign. 183,891.

Boise Hospital Television, Inc.: *See*—
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Rosenfeld, William B.: *See*—
Bodian, Marcus, and Rosenfield. 183,873.

Selig Mfg. Co., Inc.: *See*—
Jensen, Poul. 183,887.

Shepard, Ernest L., to Keyes Fibre Co. Molded pulp bottle pack. 183,900 11-11-58. Cl. D58—26.

Simon, Maximillian. Candelabra. 183,901, 11-11-58, Cl. D48—2.

Smith, Edwin W., to Atlas Press Co. Lawn sprinkler. 183,902 11-11-58, Cl. D91—1.

Square D Co.: *See*—
Sundberg, Carl W. 183,904.

Stahl, Walter G. Book of matches. 183,903, 11-11-58, Cl. D48—20.

Sunbeam Lighting Co.: *See*—
Bodian, Marcus, and Rosenfeld. 182,973.
Sundberg, Carl W., to Square D Co. Electrical switch enclosure. 182,904. 11–11–58, Cl. D26—12.
Teague, Walter D.: *See*—
Lauterbach, Norman R., Teague, and Ensign. 182,891.
Winter, Otto, to Olympia Werke A. G. Foot support for a typewriter case or the like. 182,905. 11–11–58, Cl. D87—2.
Welberg, Erwin, to Welberg-Sims Printing & Engraving Co. Book cover. 182,906. 11–11–58, Cl. D6—2.
Welberg-Sims Printing & Engraving Co.: *See*—
Welberg, Erwin. 182,906.

Barnes, William A. Locking mechanism for adjustable bar. Wilder, Donald E.

Jensen, Poul, to Selig Mfg. Co., Inc. Chair. 183,887, 11-11-58, Cl. D15—1.

Stahl, Walter G. Book of matches. 183,903, 11-11-58, Cl. D48—20.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF NOVEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abel, Gerhard, deceased (by M. Abel, widow and heir and guardian or trustee of minor heirs), and A. Wohnhas, to Rohm & Haas G. m. b. H. Cross-linked acrylic anhydride terpolymer cation exchanger. 2,860,108, 11-11-58, Cl. 260—2.2.

Abel, Margarete: *See*—
Abel, Gerhard. 2,860,108.

Abrams, Stanley T.: *See*—
Peterson, Walter H., Abrams, and Stross. 2,860,104.

Ackley, Amos, to R. W. Hartnett Co. Fyliet marking machine. 2,859,689, 11-11-58, Cl. 101—35.

Acme Brick Co.: *See*—
Slaughter, Gibbs M. 2,859,716.

Acme Precision Products, Inc.: *See*—
Snow, John R. 2,859,928.

Adair, Robert V., and E. D. Dammert, to The Gleason Works. Quench hardening method and machine. 2,860,077, 11-11-58, Cl. 148—12.4.

Adams, Richard F., to Olin Mathieson Chemical Corp. Fabrication of hollow articles. 2,859,509, 11-11-58, Cl. 29—157.2.

Adams, William H., to Northrop Aircraft, Inc. Thermal flowmeter. 2,859,617, 11-11-58, Cl. 73—204.

Aerojet Corp.: *See*—
Elsner, Edwin C. 2,859,719.
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Af Ekenstam, Bo T., to Aktiebolaget Bofors. Process of oxidation. 2,860,162, 11-11-58, Cl. 260—507.

Aircraft Armaments, Inc.: *See*—
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Af Ekenstam, Bo T. 2,860,162.

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Wallin, Sven. 2,859,863.

Aktieselskabet Ferroman: *See*—
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Alexander, Lee E. Multiple shower. 2,859,695, 11-11-58, Cl. 99—419.

Alexander, Paul, A. S. Baxter, and M. E. Boston. Method of making a heater for vacuum deposition. 2,860,075, 11-11-58, Cl. 117—231.

Alfa Machine Co., Inc.: *See*—
Pabst, Edwin L., and Vanderbout. 2,859,963.

Allen, Arthur C., to Stewart-Warner Corp. Momentary viewing apparatus. 2,860,622, 11-11-58, Cl. 73—400.

Allen, Francis E. Surface-covering structure for a wall. 2,859,843, 11-11-58, Cl. 189—88.

Allen, Harper: *See*—
Allen, Philip H. 2,859,961.

Allen, Philip H., to H. Allen. Fan-folding machines. 2,859,961, 11-11-58, Cl. 270—72.

Aller, Willis F., and R. L. Byrkett, to The Sheffield Corp. Gauging device. 2,859,529, 11-11-58, Cl. 33—174.

Allied Chemical Corp.: *See*—
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Woolf, Cyril. 2,860,172.

Allied Chemical & Dye Corp.: *See*—
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Aladdin Industries, Inc.: *See*—
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Allum, Robin D., J. F. Denby, and J. G. Pearce, to Automatic Telephone & Electric Co. Ltd. Telephone systems. 2,860,190, 11-11-58, Cl. 179—18.

Altenburg, Gustav A., and J. C. Bruce, to Gem, Inc. Package construction. 2,859,866, 11-11-58, Cl. 206—45.21.

Aluminum Co. of America: *See*—
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American Metal Climax, Inc.: *See*—
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American Steel Foundries: *See*—
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Anderson, Donald C., Lampsidis antenna. 2,860,337, 11-11-58, Cl. 343—721.

Anderson, Lloyd L., to Jervis Corp. Latch mechanism. 2,859,989, 11-11-58, Cl. 292—338.

Anderson, Walter L.: *See*—
Daniels, Howard L., and Anderson. 2,860,214.

Angliker, Emil: *See*—
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Arditi, Victor. Receptacle and spout therefor. 2,859,901, 11-11-58, Cl. 222—482.

Argus Chemical Corp.: *See*—
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Arko, Robert R., to Teletype Corp. Variable ratio rack and pinion device. 2,859,638, 11-11-58, Cl. 74—33.

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Aronson, Theodore F., and F. A. Lyon. Sheet feeding mechanism. 2,859,964, 11-11-58, Cl. 271—29.

Asaro, Vito, to L. A. Young Spring & Wire Corp. Spring cushion structure. 2,859,962, 11-11-58, Cl. 155—179.

Atkinson, Wallace E., to Long Mfg. Co., Inc. Drawbolt assembly. 2,859,996, 11-11-58, Cl. 292—114.

Atlantic Instrument Corp.: *See*—
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Avery, Fitzhugh L., to Best Foods, Inc. Nut products. 2,860,353, 11-11-58, Cl. 99—126.

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Clinton, Raymond O., to Sterling Drug Inc. Compounds of the perhydrochrysene series and preparation thereof. 2,860,159, 11–11–58, Cl. 260—488.
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Hirst, Arthur A. 2,859,872.
Coffee, Ralph E.: *See*—
McDonnell, Thomas F., and Coffee. 2,860,042.
Cohen, Samuel A., and R. B. Mower, to Bonaddio Mills, Inc. Felt base floor covering and method of making the same. 2,860,071, 11–11–58, Cl. 117—72.
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Tholstrup, Henry L., and Skinner. 2,859,851.
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Cutler, Albert E. 2,859,338.
Compagnie de Pont-A-Mousson: *See*—
Brunot, Jean-Paul. 2,859,993.
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Conrad, Ivan W. Sound reproducing system. 2,860,183, 11–11–58, Cl. 179—1.
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Beckwith, Sterling. 2,859,895.
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Ford, Franklin C., Sisso, Cook, and Ruff. 2,860,270.
Cook, John S., R. Kompfner, and K. M. Poole, to Bell Telephone Laboratories, Inc. Non-reciprocal wave transmission. 2,860,275, 11–11–58, Cl. 315—3.5.
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Wald, John R., Jr., Corbin, and Bagshaw. 2,859,860.
Cornelius, Gail, to E. M. Wade & Co. Wheel supported movable pipe line. 2,860,001, 11–11–58, Cl. 280—47.
Corning Glass Works: *See*—
Callard, Robert L. 2,859,948.
Dickey, Clyde W. 2,859,610.
Corry-Jamestown Mfg. Corp.: *See*—
Hutzelman, Howard R. 2,860,025.
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Presler, James L. 2,859,877.
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Cossey, A. C., Ltd.: *See*—
Evans, John H. 2,860,245.
Cotner, John C., to Koehring Co. Fluid pump with fluid returned pistons. 2,859,702, 11–11–58, Cl. 103—162.
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Ziebell, Theodore R. 2,859,698.
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Covi, John B. Trailer hitch. 2,859,982, 11–11–58, Cl. 280—507.
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Tack, Carl R., Beckman, and Crabtree. 2,859,836.
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Criscione, John M., and W. H. Dermaser, to Callery Chemical Co. Preparation of dimethyl ether from alkali metal methyl carbonates. 2,860,170, 11–11–58, Cl. 260—614.
Cronin, Edward F., J. Mesmack, and A. J. Harrington, Jr., to General Electric Co. Gauge dial. 2,859,724, 11–11–58, Cl. 116—118.
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Sherman, Albert J. 2,859,339.
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Provine, Robert W., Mehlhorn, Thompson, and Lawson. 2,860,046.
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Dammert, Earl D.: *See*—
Adair, Robert V., and Dammert. 2,860,077.
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Hansen, Harold V. 2,859,678.
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Macfarlane, Robert H. 2,859,679.
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Halford, Frank B., and Gay. 2,859,934.
De Lancey, Ralph W., and F. E. Desio, to Controls Co. of America. Electric switches. 2,860,211, 11–11–58, Cl. 200—122.
De Lisle, George H. Power drive for reciprocating abrading tools. 2,859,566, 11–11–58, Cl. 51—170.
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Denby, James F.: *See*—
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Desio, Frank E.: *See*—
De Lancey, Ralph W., and Desio. 2,860,211.
De Staat Der Nederlanden, to deszn Vertegenwoordigd door de Hoofdingenieur-Directeur van de Rijkswaterstaat in de Directie Algemene Dienst en Waterbestrijding: *See*—
Meijer, Hendrik. 2,859,530.
Dettner, Delmar D.: *See*—
Jones, Edwin K., and Dettner. 2,860,173.
Deubner, Russell L., to Haloid Xerox Inc. Xerographic plate. 2,860,048, 11–11–58, Cl. 96—1.
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Nagelschmidt, Rudolf, and Rudolph. 2,860,118.

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Fox, Richard D., and H. A. Skog, to Food Machinery and

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Spahr, Werner. 2,859,431.

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Bluestone, Henry. 2,860,048.

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Newman, Leslie W., and Dine. 2,859,997.

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Dohl, Douglas A., to General Mills, Inc. Method of producing a humidity sensor by shadow casting and resultant product. 2,860,221, 11-11-58, Cl. 201—63.

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Matterson, Peter D. 2,860,015.

Dole Refrigerating Co.: *See*—
Kleist, Herman W. 2,859,945.

Doll, Henri-Georges, to Schlumberger Well Surveying Corp. Function generator of two independent variables. 2,859,915, 11-11-58, Cl. 235—61.

Doll, Henri-Georges, to Schlumberger Well Surveying Corp. Automatic computing apparatus. 2,859,916, 11-11-58, Cl. 235—61.

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Hooper, Clinton E., and North. 2,859,944.

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Berlyn, Martin J. 2,859,668.

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Doperalski, Eugene J., and E. Kodra, to Jay Mfg. Co. Piston assembly. 2,860,018, 11-11-58, Cl. 309—23.

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Dorey, George B., to Enterprise Railway Equipment Co. Means for closing a horizontally swinging door of a railway hopper car. 2,859,708, 11-11-58, Cl. 105—286.

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Dow Chemical Co., The: *See*—
Stanton, George W., and Ehlers. 2,860,121.

Dow Corning Corp: *See*—
Fletcher, Herbert J. 2,860,188.
Hedlund, Robert C. 2,860,074.
Saam, John C. 2,860,152.

Dowd, Laurence E., to Swift & Co. Packaging apparatus. 2,859,570, 11-11-58, Cl. 53—270.

Drew, R. F., & Co., Inc.: *See*—
Little, Lawrence L., and Chen. 2,860,108.

Driscoll, William C. Dog collar. 2,859,732, 11-11-58, Cl. 119—106.

Duchacek, Charles F., to Socony Mobil Oil Co., Inc. Stabilized hydrocarbon waxes. 2,860,064, 11-11-58, Cl. 106—268.

Duchacek, Charles F., to Socony Mobil Oil Co., Inc. Stabilized petroleum wax. 2,860,065, 11-11-58, Cl. 106—270.

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Dunlap, William C., Jr., to General Electric Co. Germanium current controlling devices. 2,860,218, 11-11-58, Cl. 201—61.

Dunlop Rubber Co. Ltd.: *See*—
Warren, Frederick W., and Crabbe. 2,859,422.

Dunn, James F. Method of making disposable toothbrushes. 2,860,011, 11-11-58, Cl. 300—21.

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Godshalk, Henry W. 2,860,110.
Kaser, James C. 2,860,104.
Pilz, Josef. 2,860,116.

Duran, Johannes C. J. V. Duns, and G. C. A. M. Mesbis, to North American Philips Co., Inc. Indirectly heated cathode. 2,860,275, 11-11-58, Cl. 313—346.

Dyba, Edwin, and H. Magnuski, to Motorola Inc. Diversity receiving system. 4,860,230, 11-11-58, Cl. 250—20.

Earp, Charles W., and D. L. Cooper-Jones, to International Standard Electric Corp. Radio direction finding system. 2,860,336, 11-11-58, Cl. 343—120.

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Eckel, John E., to Jersey Production Research Co. Cementing collar for drilling with casing. 2,859,836, 11-11-58, Cl. 166—136.

Eckert, John P., Jr.: *See*—
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Edelman, Abraham, and T. Lauir, to Photobell Co. Stop motion device for fabric producing machines. 2,859,803, 11-11-58, Cl. 66—166.

Edmondson, Harold A. Process for cutting wood. 2,859,781, 11-11-58, Cl. 144—208.

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Edström, John O., and U. Ö. H. Wiberg. Method of exothermically reducing oxidic ores. 2,860,046, 11-11-58, Cl. 75—61.

Edwards, Donald V., and R. K. Smith, to Electrons, Inc. Structures for grid control gas tubes. 3,860,266, 11-11-58, Cl. 313—38.

Ehlers, Forrest A.: *See*—
Stanton, George W., and Ehlers. 2,860,121.

Ehrlenmeyer, Henry O., to Bowen Corp. Compression evaporator control and method therefor. 2,859,809, 11-11-58, Cl. 159—44.

Ei, Raymond D: *See*—
Di Tirro, Domenic A., and Ei. 2,859,725.

Eiben, Bert M. Trouser cuff tack. 2,860,061, 11-11-58, Cl. 154—53.5.

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Elkins, Lloyd E., and R. P. Vincent, to Pan American Petroleum Corp. Apparatus for treating wells. 2,859,827, 11-11-58, Cl. 166—165.

Ellison, Charles D. Pick-proof partitioned pocket. 2,859,449, 11-11-58, Cl. 2—253.

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Engineering Research Corp., The: *See*—
Barret, William M., and Clement. 2,860,340.

Englander Co., Inc., The: *See*—
Koenigsberg, Max. 2,859,455.

English Electric Valve Co. Ltd.: *See*—
Young, Arthur J., and Bagnall. 2,860,281.

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Nicklin, George, and Ensign. 2,860,020.

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Dorey, George B. 2,859,708.

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Erickson, Arthur E., to Merck & Co., Inc. Preparation of diaryl sulfones. 2,860,168, 11-11-58, Cl. 260—607.

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Bear, Herman G., Kummer, and Hartman. 2,859,903.

Esso Research and Engineering Co.: *See*—
Fischl, Fred R., and Weingerber. 2,860,040.
Leary, Robert F., Bowman, and Hawley. 2,860,112.

Estep, Melvin E., to Perfect Circle Corp. Valve stem seal. 2,859,993, 11-11-58, Cl. 268—6.

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Evans, David, (Dairy Engineers) Ltd.: *See*—
Evans, David. 2,859,963.

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Vecarde, John R. 2,860,220.

Fairrington, William J., to American Can Co. Apparatus for storing and transporting articles. 2,859,888, 11-11-58, Cl. 214—611.

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Wrightson, Vic C., and Stern. 2,859,999.

Fantle, Karl S. Post and support. 2,860,800, 11-11-58, Cl. 189—38.

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Kraut, Heinrich, and Korbel. 2,860,037.
Mauhk, Gunther, and Beek. 2,860,072.

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Starck, Werner and H. 2,860,124.

Farmer Feeder Co., Inc.: *See*—
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Farmer, James W., W. P. Fergnani, and A. K. Scriven, Jr., to Reid Brothers Co., Inc. Machine tool. 2,858,564, 11-11-58, Cl. 51—93.

Fedrick, Jack E.: *See*—
Fenske, Donald M., Fedrick, and Miller. 2,859,659.

Feiger, Martin: *See*—
Kappel, Joseph W., S., and L., and Feiger. 2,860,024.

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Kandolan, Armig G., and Felsenheld. 2,860,241.

Fenske, Donald M., J. R. Fedrick, and R. N. Miller, to Fenske, Fedrick & Miller, Inc. Data plotting and indicating device. 2,859,659, 11-11-58, Cl. 33—24.

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Fenske, Donald M., Fedrick, and Miller. 2,859,659.

Ferber, Martin, and J. P. Gannon. Key holders. 2,859,788, 11-11-58, Cl. 150—40.

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Farmer, James W., Fergnani, and Scriven. 2,859,564.

Ferris, De Lacy F.: *See*—
Youngquist, Robertson, Ferris, and Bell. 2,859,808.

Fettinger, Paul L., and P. R. Mallory & Co., Inc. Vibrator mounting. 2,860,290, 11-11-58, Cl. 317—182.

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Stoll, Arthur, Angliker, Barfuss, and Kossmaul. 2,860,096.

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Filter, Ernest C.: *See*—
Firth, John W., and Filter. 2,860,052.

Finch, Harry de V.: *See*—
Furman, Kenneth E., Finch, and Hearne. 2,860,146.

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Stampe, Gerhard K. E. H. 2,859,747.

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Floehr, Walter L., to Unitcast Corp. Molding press head control system. 2,859,490, 11-11-58, Cl. 22—42.

Flowers, Harold L., and J. A. White. Interference suppression system. 2,860,332, 11-11-58, Cl. 343—17.1.

Flowers, Henry F. Body and underframe structure for mine cars. 2,859,709, 11-11-58, Cl. 105—364.

Fluor Corp., Ltd., The: *See*—
Hitz, Gifford L. 2,859,870.
Selmist, Robert L., and Lanier. 2,859,821.

Fogg, Robert E. Method and apparatus for lineup and register of printing plates. 2,859,582, 11-11-58, Cl. 33—184.5.

Folbert, Karl, and C. Shunk, to Merck & Co., Inc. Benzimidazole derivatives. 2,860,131, 11-11-58, Cl. 260—211.5.

Food Machinery and Chemical Corp.: *See*—
Fox, Richard D., and Skeg. 2,859,856.
Kelly, George B., Jr., Braithwaite, and Williams. 2,860,145.
Margulies, Paul H., and Winters. 2,860,039.

Foote Mineral Co.: *See*—
Wanamaker, Elmer M., and Forbes. 2,860,080.

Forbes, Duncan D.: *See*—
Wanamaker, Elmer M., and Forbes. 2,860,080.

Forbush, Lothrop M.: *See*—
Thorne, Maurice A., and Forbush. 2,859,839.

Ford, Franklin C., S. G. Elms, R. Cook, and J. W. Ruf, to United States of America, Atomic Energy Commission. Pulsed ion source. 2,860,270, 11-11-58, Cl. 313—63.

Ford Motor Co.: *See*—
Hollowell, John R., Smith, and Butler. 2,860,004.
Martens, Jack E., and Beyer. 2,859,908.

Ford, Troy L., J. B. Shaw, A. C. Howell, Jr., J. E. Pfaff, and D. Rice, to Insul-8-Corp. Collector and insulator for electrical trolley apparatus. 2,860,196, 11-11-58, Cl. 191—59.1.

Foremost Dairies, Inc.: *See*—
Wilcox, Donald F. 2,860,037.

Fredrick, Gaynard H.: *See*—
Hubbard, Burton F., and Fredrick. 2,860,216.

Fox, John J., to Westinghouse Electric Corp. Electrical heating apparatus. 2,860,227, 11-11-58, Cl. 219—38.

Fox, Richard D., and H. A. Skeg, to Food Machinery and Chemical Corp. Fruit orienting method and machine. 2,859,856, 11-11-58, Cl. 198—33.

Franks, Gerald N., to be dedicated to the public. Cotton sampler. 2,859,485, 11-11-58, Cl. 19—156.

Frantellizzi, Biagio. Automatic control switch for the electric motor winding up a clockwork spring. 2,859,580, 11-11-58, Cl. 59—41.

Frech, Harry E., Jr.: *See*—
Harlow, Ernest L., Frech, and Blaine. 2,859,871.

French, Clayton V., and F. E. Ihne, to Johns-Manville Corp. Method of manufacturing fiber-cement sheets. 2,859,484, 11-11-58, Cl. 18—60.

Froehlich, Kurt, to Nordberg Mfg. Co. Two-cycle scavenging system. 2,859,739, 11-11-58, Cl. 123—65.

Furman, Kenneth E., H. V. Finch, and G. W. Hearne, to Shell Development Co. Manufacture of epihalohydrins. 2,860,146, 11-11-58, Cl. 260—348.6.

Furniss, Loree E., to The Buckeye Steel Castings Co. Railway draft rigging. 2,859,883, 11-11-58, Cl. 213—69.

Furst, Stefan, to W. Reimers. Winding machine. 2,859,919, 11-11-58, Cl. 242—27.

Fusco, Raffaelle, G. Locco, and C. A. Peri, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process for preparing phosphoric esters of substituted umbelliferone, and pesticidal compositions obtained thereby. 2,860,085, 11-11-58, Cl. 167—33.

Futterer, William H. Hair comb with mechanical fingers. 2,859,754, 11-11-58, Cl. 132—145.

Fyr-Fyter Co., The: *See*—
Haessler, Walter M. 2,860,203.

Gaichel, Pearl. Article of headwear. 2,859,448, 11-11-58, Cl. 2—199.

Gallagher, William P., A. D. Stolle, and P. G. Bielik, to International Register Co. Process of staking a post to a mounting. 2,859,511, 11-11-58, Cl. 29—432.

Gallop, John C., Jr. Multiple purpose power tool. 2,859,627, 11-11-58, Cl. 74—16.

Gannon, John P.: *See*—
Ferber, Martin, and Gannon. 2,859,788.

Gardner, James D.: *See*—
Basslinger, Ross, and Gardner. 2,859,733.

Garland, Anna. Weed removing tools. 2,860,001, 11-11-58, Cl. 294—50.6.

Garrett Corp., The: *See*—
Whitaker, William D. 2,859,933.

Garwin, Lee, and J. M. Winterbottom, 10% to J. D. Wolfe. Process for separating zinc chloride from zinc sulfate. 2,860,038, 11-11-58, Cl. 23—200.

Gauthier, Alfred, G. m. b. H.: *See*—
Bentschler, Karl F. 2,859,674.

Gay, Arnold E. B.: *See*—
Halford, Frank B., and Gay. 2,859,994.

Geigy Chemical Corp.: *See*—
Kroll, Harry, and Butler. 2,860,164.

Gem, Inc.: *See*—
Altenbern, Gustav A., and Bruce. 2,859,866.

Genaszi, Donald B. True vertical indicator. 2,859,725, 11-11-58, Cl. 116—124.

General Aniline & Film Corp.: *See*—
Sundberg, Robert L., Chiddix, and Williams. 2,860,160.

General Electric Co.: *See*—
Ballan, Edward S. 2,860,311.
Boyd, Malcolm R., and McNary. 2,859,571.
Cronin, Edward F., Messack, and Harrington. 2,859,724.
Dunlap, William C., Jr. 2,860,218.
Giles, Jack W. 2,860,220.
Grimshaw, Charles S. 2,859,526.
Johnson, Frithiof V. 2,859,635.
McArthur, Elmer D. 2,860,280.
Mollenberg, Leroy. 2,860,296.
Prophet, Otto O. 2,859,585.
Roberts, Edward H. 2,859,495.
Taft, Ernest A., Jr., and Horn. 2,860,218.
Warnery, Edmond P. 2,860,342.
Watters, Clarence J., and Niebuhr. 2,860,316.
West, Donald J., and Baughman. 2,860,076.
West, Donald J., and Baughman. 2,860,079.

General Mills, Inc.: *See*—
Dohl, Douglas A. 2,860,221.

General Motors Corp.: *See*—
Geyer, Howard M. 2,859,640.
Long, George S. 2,860,022.
Murphy, John M., and Mann. 2,859,585.
Olson, Elmer. 2,859,700.
Sanden, Grant E., and Wallis. 2,859,466.
Sisson, Kenneth O. 2,859,577.
Thorne, Maurice A., and Forbush. 2,859,839.

General Precision Laboratory Inc.: *See*—
Zaleski, John F. 2,860,309.
Zaleski, John F. 2,860,336.

General Telephone Laboratories, Inc.: *See*—
Lomax, Clarence E. 2,860,184.
McCreary, Harold J. 2,860,182.

Gerin, Jacques J. J. Automatic balancing arrangement for aircraft control. 2,859,928, 11-11-58, Cl. 244—75.

Geyer, Howard M., to General Motors Corp. Fluid pressure actuator with unidirectional locking means and manual overdrive. 2,859,640, 11-11-58, Cl. 74—625.

Gilbert, A. C. Co., The: *See*—
Smith, William E., and Monaco. 2,859,556.

Giles, Jack W., to General Electric Co. Amplification control arrangement. 2,860,220, 11-11-58, Cl. 343—7.3.

Gilfillan Bros. Inc.: *See*—
Salamonovich, George M. 2,860,232.

Girton Mfg. Co., Inc.: *See*—
Evans, Darl L. 2,859,596.
Evans, Darl L. 2,859,702.

Glassco, Roy A., to Johnson & Johnson. Mold structure. 2,859,478, 11–11–58, Cl. 18—42.
Gleasman, Vernon E. Differential gear mechanism. 2,859,641, 11–11–58, Cl. 74—715.
Gleason Works, The: *See*—
Adair, Robert V., and Dammert. 2,860,077.
Wildhaber, Ernest. 2,859,666.
Glenn, Edward R. Fuel injecting apparatus. 2,859,741, 11–11–58, Cl. 123—119.
Glenn, John H., and H. L. Hubbard, to Northrop Aircraft, Inc. Aileron control system. 2,859,927, 11–11–58, Cl. 244—90.
Globe-Union Inc.: *See*—
Hundt, Lawrence H., and King. 2,859,542.
Godshalk, Henry W., to E. I. du Pont de Nemours and Co. Coating composition comprising a methyl methacrylate polymer and a cellulose ester and process for preparing same. 2,860,110, 11–11–58, Cl. 260—17.
Golay, Donaven B., to Farmer Feeder Co., Inc. Non-churning milk line elbow. 2,859,764, 11–11–58, Cl. 137—204.
Golden, David. Holder for a scouring pad. 2,859,465, 11–11–58, Cl. 15—209.
Goldtrap, Walter A., and R. Skinner, to Phillips Petroleum Co. Recovery of hydrogen sulfide and/or carbon dioxide substantially free from hydrocarbons and substantially pure hydrocarbons by chemical treatment of an impure hydrocarbon stream. 2,860,030, 11–11–58, Cl. 23—3.
Goodnight, Anetta G., ½ to P. D. Cabe, and ½ to M. U. Boyer. Battery connector. 2,860,320, 11–11–58, Cl. 339—239.
Goodrich, B. F., Co., The: *See*—
Patin, Oneil J. 2,859,792.
Gorrie, Harvard H., to Bailey Meter Co. Compensator for quantity measuring meter. 2,859,618, 11–11–58, Cl. 73—205.
Gorter, Evert W., and C. J. Enveldt, to North American Philips Co., Inc. Method of manufacturing ferromagnetic cores. 2,860,105, 11–11–58, Cl. 252—62.5.
Gräfingholt, Alfred, to Hanseila-Werke Albert Henkel Akt. Feeding arrangement for feeding mass produced articles to single conveying rows. 2,859,855, 11–11–58, Cl. 198—33.
Grant, Clarence P.: *See*—
Grant, Joseph W. and C. P. 2,859,971.
Grant, Joseph W. and C. P. Puzzle ring. 2,859,971, 11–11–58, Cl. 273—158.
Graver, Clair W.: *See*—
Meckrin, Isadore, Lowdermilk, and Graver. 2,860,033.
Gravey, Guy: *See*—
Raymond, Francis, Gravey, and Roth. 2,860,047.
Gray, Arthur O., Jr.: *See*—
Lamberti, Vincent, and Gray. 2,860,107.
Gray, Arthur R. Lamp stands. 2,860,222, 11–11–58, Cl. 140—2.
Graybill, Clinton L. Combination concrete mixer and portable dispenser. 2,859,950, 11–11–58, Cl. 259—177.
Green, Armin H., to Schlage Lock Co. Lock retractor mechanism. 2,859,997, 11–11–58, Cl. 292—169.
Green, Malcolm, to Baldwin-Lima-Hamilton Corp. Multiple bending beam force measuring device. 2,859,612, 11–11–58, Cl. 73—141.
Greig, James W., to Woodall Industries, Inc. Laminated trim sheet and method of making same. 2,859,795, 11–11–58, Cl. 154—110.
Grey, John C., to Power Jets (Research & Development) Ltd. Gas turbine plant for providing a continuous supply of hot compressed air. 2,859,954, 11–11–58, Cl. 253—19.
Griffith, George L., Jr., and D. G. Samuel, Jr., to Trojan Powder Co. Blasting explosives. 2,860,041, 11–11–58, Cl. 52—11.
Grimshaw, Charles S., to General Electric Co. Sighting mechanism. 2,859,526, 11–11–58, Cl. 33—49.
Grinstead, Robert R., to United States of America, Atomic Energy Commission. Process for utilizing organic orthophosphate extractants. 2,860,031, 11–11–58, Cl. 23—14.5.
Griswold, Hector W., to Chicopee Mfg. Corp. Stabilized loosely woven gauze fabric. 2,860,068, 11–11–58, Cl. 117—38.
Gregg, William, Jr., and M. P. Winsberg, to The Quaker Oats Co. Electrode for electrostatic separation. 2,860,276, 11–11–58, Cl. 313—251.
Gruner Miriam G., to Philco Corp. Composition for applying organic film to phosphor layer. 2,860,063, 11–11–58, Cl. 106—286.
Greenmans, Paul, to Materiel Industriel S. A., and Constructions Mecaniques S. A. Devices for measuring the horizontal coordinates of a railway track. 2,859,528, 11–11–58, Cl. 33—144.
Grout, John A. M.: *See*—
Taylor, John A. H., and Grout. 2,860,028.
Gulf Research & Development Co.: *See*—
Kramer, William E., and Maraseev. 2,860,080.
Whitaker, Arthur C. 2,860,171.
Gunnarsen, Daniel W., to Boeing Airplane Co. Fuel metering device for ram jet engines. 2,859,589, 11–11–58, Cl. 60—39.28.
Gunst, Raymond, to Ciba Ltd. Dichlorotriazine monoazo dyestuffs. 2,860,128, 11–11–58, Cl. 260—153.
Gunst, Raymond, to Ciba Ltd. Dichlorotriazine monoazodyestuffs. 2,860,129, 11–11–58, Cl. 260—153.
Gutterson, Thomas. Advertising display device. 2,859,546, 11–11–58, Cl. 40—10.
Guyer, Reynolds, to Waldorf Paper Products Co. Telescoping carton. 2,859,908, 11–11–58, Cl. 229—31.
Haber, Frida. Napkin positioning undergarment. 2,859,782, 11–11–58, Cl. 128—288.
Hadley, Lester J. Electric relay. 2,860,209, 11–11–58, Cl. 200—113.
Hadley, Richard M., to Jervis Corp. Double door construction and latch mechanism. 2,859,744, 11–11–58, Cl. 126—197.
Haessler, Walter M., to The Fyr-Fyter Co. Fluid pressure operated switch. 2,860,203, 11–11–58, Cl. 200—82.
Hagenlocher, Ernest. Torsionally resilient flexible flywheel couplings. 2,859,637, 11–11–58, Cl. 74—574.
Haight, Gates. Load handling attachment for automobiles. 2,859,887, 11–11–58, Cl. 214—450.
Halford, Frank B., and A. E. B. Gay, to The De Havilland Engine Co. Ltd. Gas turbines. 2,859,934, 11–11–58, Cl. 253—39.1.
Hall, Arthur D., to Bell Telephone Laboratories, Inc. Transistor decade counter. 2,860,258, 11–11–58, Cl. 307—88.5.
Hall, Gilbert A. Power mower attachment. 2,859,578, 11–11–58, Cl. 56—25.4.
Hall, Howard N., and J. W. La Rue, to Pan American Petroleum Corp. Method of recovering petroleum. 2,859,818, 11–11–58, Cl. 166—9.
Hall, Thomas L. Detector. 2,860,304, 11–11–58, Cl. 324—61.
Hallum, Andrew. Collapsible transplanting walk. 2,859,553, 11–11–58, Cl. 47—37.
Hallum, Andrew. Heating device. 2,859,804, 11–11–58, Cl. 61—21.
Haloid Xerox Inc.: *See*—
Deutner, Russell L. 2,860,048.
Hamerschlag, Allan H.: *See*—
Juda, Walter, and Hamerschlag. 2,860,096.
Juda, Walter, and Hamerschlag. 2,860,097.
Hamilton, Alexander H. Mounting and lubricating means for vertical spindles. 2,859,584, 11–11–58, Cl. 57—164.
Hanseila-Werke Albert Henkel Akt.: *See*—
Gräfingholt, Alfred. 2,859,855.
Hansen, Harold V., to Deere & Co. Pressure-applying means for planters. 2,859,678, 11–11–58, Cl. 97—46.73.
Hansen, John. Method and apparatus for making slicer blades. 2,859,562, 11–11–58, Cl. 51—28.
Hansen, Siegfried, to Litton Industries of California. Electron discharge storage tubes. 2,860,282, 11–11–58, Cl. 315—8.5.
Harding, James B. Shock isolator. 2,860,859, 11–11–58, Cl. 267—1.
Harker, George A. Stereoptometer. 2,859,657, 11–11–58, Cl. 88—20.
Harlow, Ernest L., H. E. Frech, Jr., and J. C. Blaine, to Olin Mathieson Chemical Corp. Apparatus for testing and assorting articles. 2,859,871, 11–11–58, Cl. 209—81.
Haraiechfeger Corp.: *See*—
Pomeral, Jesse W. 2,860,288.
Harrild, Peter W. S.: *See*—
Odell, Alexander D., Reynolds, and Harrild. 2,859,259.
Harrington, Arthur J., Jr.: *See*—
Cronin, Edward F., Mesnack, and Harrington. 2,859,734.
Hart, Arthur L., and G. O. Kamm, to American Can Co. Electroplating process. 2,860,092, 11–11–58, Cl. 204—143.
Hartman, Harold H. Combination packing, shipping and dispensing carton. 2,859,897, 11–11–58, Cl. 221—308.
Hartnett, R. W., Co.: *See*—
Ackley, Amos. 2,859,689.
Hastings, Harris F.: *See*—
Bey, Paul P., and Hastings. 2,860,305.
Hatch, Philip J. Motion transmitting mechanism. 2,859,630, 11–11–58, Cl. 74—110.
Hawley, Roger S.: *See*—
Leary, Robert F., Bowman, and Hawley. 2,860,112.
Hawthorne, Herbert J., ¼ to E. M. Weaver. Detachable blade pit. 2,859,942, 11–11–58, Cl. 255—61.
Hayes, Frank A., to The Singer Mfg. Co. Dynamoelectric machines. 2,860,297, 11–11–58, Cl. 310—266.
Healy, Elton F. Furniture leg. 2,859,804, 11–11–58, Cl. 155—191.
Hearne, George W.: *See*—
Furman, Kenneth E., Finch, and Hearne. 2,860,146.
Hecker, Arthur C., and W. R. Leistner, to Argus Chemical Corp. Composition comprising polyethylene plastic and organic phosphite and method for making same. 2,860,115, 11–11–58, Cl. 260—22.
Hedlund, Robert C., to Dow Corning Corp. Vinyl resin-acrylic ester-organopolysiloxane coating compositions and method of coating with same. 2,860,074, 11–11–58, Cl. 117—132.
Hefele, John R., to Bell Telephone Laboratories, Inc. Television transmission channel sharing system. 2,860,184, 11–11–58, Cl. 179—15.
Hellmann, Thorbjorn, to F. L. Smidth & Co. Composition and process for manufacturing cement. 2,860,081, 11–11–58, Cl. 106—100.
Heller, Franz, to American Type Founders Co., Inc. Web printing presses. 2,859,691, 11–11–58, Cl. 101—177.
Helpy Selfy Service Systems, Inc.: *See*—
McEwen, Norman S. 2,859,836.
Hendee, Charles F., to North American Philips Co., Inc. Radiation detector. 2,860,254, 11–11–58, Cl. 250—83.6.
Henkel & Cie, G. m. b. H.: *See*—
Wirth, Herbert. 2,860,144.
Hennig, Victor E. O. Concrete form tie-tensioning means. 2,859,503, 11–11–58, Cl. 25—131.
Herbst, Walter J. Hoisting apparatus. 2,860,002, 11–11–58, Cl. 294—81.
Herditchka, James W. Cigar box humidifier. 2,860,028, 11–11–58, Cl. 312—31.1.
Herrmann, Julius. Loading device. 2,859,853, 11–11–58, Cl. 198—19.
Hershberg, Emanuel B. 17α-methyl-Δ⁵·⁷-pregnadiene compounds. 2,860,148, 11–11–58, Cl. 260—397.45.
Hester, Ross E., D. O. Kippenhan, and W. A. S. Lamb, to United States of America, Atomic Energy Commission. High current linear ion accelerator. 2,860,279, 11–11–58, Cl. 315—5.42.

Jennings, Harry C., Jr. Sliding connection between seat rails and legs of collapsible wheel chairs. 2,859,800, 11–11–58, Cl. 155—140.
Karnavas, Isidoros C., to Texas Instruments Inc. Junction type transistor structure. 2,860,291, 11–11–58, Cl. 317—

High, Roy F., and M. L. Barfield, to United States of America, Army. Coalescence of pre-molded parts. 2,859,483, 11-11-58, Cl. 18—59.
Hilpert, Adolph J., to Bass Inc. Valve and actuator therefor. 2,859,931, 11-11-58, Cl. 251—64.
Hill, George B., to Sperry Rand Corp. Automatic wire tying mechanism. 2,859,697, 11-11-58, Cl. 100—28.
Himes, John M., to H. R. Wagner Mfg. Co. Bearings for fork stems. 2,859,979, 11-11-58, Cl. 280—279.
Himpole, Walter S. Electrical educational device. 2,860,540, 11-11-58, Cl. 35—10.
Hirenimus, Walter C., to Wilcox Gay Corp. Push button mechanism for tape recorder and play back device. 2,860,696, 11-11-58, Cl. 74—483.
Hirsch, Joseph. Window cleaning implement. 2,859,468, 11-11-58, Cl. 15—126.
Hirst, Arthur A., to Coal Industry (Patents) Ltd. Apparatus for cleaning coal or other granular material. 2,860,672, 11-11-58, Cl. 209—158.
Hitchcock, Reuben Jr., E. Z. Carden, and R. T. Alvord, to Rand Development Corp. Cigarette wrapper material and method for producing same. 2,859,758, 11-11-58, Cl. 131—15.
Hits, Gilford L., to The Visor Corp., Ltd. Pull press for up-setting pipe openings. 2,859,670, 11-11-58, Cl. 207—19.
Hix, Ira M., M. J. Kelly, and H. L. Read, to International Business Machines Corp. Electrophotographic printer. 2,859,673, 11-11-58, Cl. 95—1.7.
Hobdy, James D. Spray nozzle. 2,859,728, 11-11-58, Cl. 118—306.
Hobson, H. M., Ltd.: *See*—
Fellows, Horace. 2,859,616.
Fellows, Horace. 2,859,619.
Westbury, Roy. 2,859,926.
Hochreuter, Johann. Lubricating device for the power transmission belt of elastic shaft couplings. 2,859,598, 11-11-58, Cl. 64—16.
Hodges, Robert H. Inflatable crash protector for vehicles. 2,860,008, 11-11-58, Cl. 296—94.
Heel, Leroy W., and D. L. Wolfe, to Kimberly-Clark Corp. Method of coating paper. 2,860,078, 11-11-58, Cl. 117—76.
Hofer, Henry S. Vibratory flexible silencers. 2,859,880, 11-11-58, Cl. 181—49.
Hoffman Radio Corp.: *See*—
Meng, Eugene D., Keyes, and Crouts. 2,860,310.
Hoganas-Billesholms Aktiebolag: *See*—
Brundin, Nils R. 2,860,044.
Holland, Oswald A. Automatic fluid line service coupling for tractor-trailer vehicles. 2,859,980, 11-11-58, Cl. 280—421.
Hollowell, John R., B. J. Smith, and R. T. Butler, to Ford Motor Co. Vehicle body with retractable rigid top. 2,860,004, 11-11-58, Cl. 296—117.
Hollyday, James H., and P. L. Sturm, to Sperry Rand Corp. Bale metering and tripping mechanism. 2,859,686, 11-11-58, Cl. 100—4.
Honegger, Willy, ½ to A. Linz. Packing for a piston longitudinally displaceable in a housing. 2,860,017, 11-11-58, Cl. 309—23.
Hooker Chemical Corp.: *See*—
Newcomer, Jack B., K. J. Smith, and Linder. 2,860,166.
Hooper, Clinton E., and J. A. North, to Doman Helicopters, Inc. Fluid and mechanical coupling with centrifugal and frictional clutches. 2,859,944, 11-11-58, Cl. 192—3.2.
Hoover Co., The: *See*—
Duff, Jack E. 2,859,775.
Ziegler, Brandt F., Jr. 2,860,229.
Hopgood, Roy C., to Servo Corp. of America. Wide-angle, energy responsive scanning system. 2,859,652, 11-11-58, Cl. 88—1.
Horn, Fordyce H.: *See*—
Taft, Ernest A., Jr., and Horn. 2,860,219.
Horovitz, Marcus, to Metalastik Ltd. Connecting pin having depressible locking element mounted in a rubber sleeve. 2,859,651, 11-11-58, Cl. 85—5.
Horowitz, Irving, ½ to I. S. Blonder and ½ to R. H. Tongue. Electronic protective system. 2,860,269, 11-11-58, Cl. 315—20.
Hovingh, Albertus E.: *See*—
Dijksterhuis, Pepke E., and Hovingh. 2,859,512.
Howard, Allan M., to Nortons-Tividale Ltd. Vehicle haulage system. 2,860,704, 11-11-58, Cl. 104—178.
Howell, Alleyne C., Jr.: *See*—
Ford, Tirey L., Shaw, Howell, Pfaff, and Rice. 2,860,198.
Howies, Donald A.: *See*—
Wright, John W., and Howies. 2,860,274.
Hubbard, Burton F., and G. H. Foedick. Potentiometric devices. 2,860,316, 11-11-58, Cl. 201—62.
Hubbard, Herbert L.: *See*—
Glenn, John E., and Hubbard. 2,859,937.
Hudson, Charles H. Breathing mask. 2,859,748, 11-11-58, Cl. 128—146.
Huff, Jesse W., and D. E. Bouhardt, to Merck & Co., Inc. Feeding of poultry. 2,860,030, 11-11-58, Cl. 99—4.
Huffman, Max N., to Lasdon Foundation, Inc. 2,3-cyclo steroids and the production thereof. 2,860,147, 11-11-58, Cl. 260—397.4.
Hughes Aircraft Co.: *See*—
Brooks, Herbert R. 2,860,247.
Iversen, Arthur H. 2,860,277.
Watts, Reid L. 2,860,844.
Hughes, John and O., to Bulova Watch Co. Inc. Electrical relay. 2,860,204, 11-11-58, Cl. 200—87.
Hughes, Owen: *See*—
Hughes, John and O. 2,860,204.
Hull, Clair L. Awning. 2,859,494, 11-11-58, Cl. 20—87.5.
Hull R. O. & Co., Inc.: *See*—
Jackson, Joseph L. 2,860,069.
Hundt, Laurence H., and C. H. King, to Globe-Union Inc. Battery display. 2,859,542, 11-11-58, Cl. 35—51.
Hunt, Frederick V.: *See*—
Bouyoucos, John V., and Hunt. 2,859,728.
Hurwitz, Paul D. Flow proportioning and control system. 2,859,750, 11-11-58, Cl. 137—83.
Hutzelman, Howard E., to Corry-Jamestown Mfg. Corp. Drawer and file locking device. 2,860,025, 11-11-58, Cl. 312—221.
Hyde, Earl K.: *See*—
Davidson, Norman R., and Hyde. 2,860,032.
I-T-E Circuit Breaker Co.: *See*—
Diebold, Edward J. 2,860,301.
Ibaugh, Harry C., and J. R. West, to Sperry Rand Corp. Conveyor cleaning device. 2,859,864, 11-11-58, Cl. 198—229.
Ihne, Elmer R.: *See*—
French, Clayton V., and Ihne. 2,859,484.
Ikeda, Kaichi: *See*—
Kobayashi, Tatsuo, and Ikeda. 2,859,675.
Illinois Tool Works: *See*—
Nielsen, Moritz H. 2,859,647.
Stockdale, William D. 2,859,469.
Indiana Commercial Filters Corp.: *See*—
Brundage, Alan D. 2,859,876.
Institutional Industries, Inc.: *See*—
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Insul-8 Corp.: *See*—
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International Business Machines Corp.: *See*—
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Jaworski, Charles J., and Le Due. 2,859,869.
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International Minerals & Chemical Corp.: *See*—
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Gallagher, William P., Stolle, and Bielik. 2,859,511.
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Earp, Charles W., and Cooper-Jones. 2,860,236.
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Odell, Alexander D., Reynolds, and Harrild. 2,860,259.
Ost, Stanley B. 2,860,286.
Treadwell, Cyril G. 2,860,185.
International Telephone and Telegraph Corp.: *See*—
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Steam, Franklin A. 2,860,312.
Ionics, Inc.: *See*—
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Juda, Walter, and Hamerschlag. 2,860,097.
Katz, William E., and Rosenberg. 2,860,095.
Rosenberg, Norman W. 2,860,091.
Irbitis, Karl, to Canadair Ltd. Gun blast deflector. 2,859,663, 11-11-58, Cl. 89—14.
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Jacoby, Harry D. 2,860,006.
Ishizaka, Keijiro. Process for the recovery of metallic titanium. 2,860,094, 11-11-58, Cl. 204—164.
Israel, Dorman D., to Emerson Radio and Phonograph Corp. Inductive tuning device. 2,860,313, 11-11-58, Cl. 336—116.
Iversen, Arthur H., to Hughes Aircraft Co. Travelling-wave tube collector electrode. 2,860,277, 11-11-58, Cl. 315—3.5.
Jackson, Clyde R., to Eason Laboratories, Inc. Germicidal composition comprising iodine and a N-acyl colamino formyl methyl quaternary ammonium salt. 2,860,064, 11-11-58, Cl. 167—22.
Jackson, Joseph L., to R. O. Hull & Co. Inc. Method of electro depositing zinc. 2,860,069, 11-11-58, Cl. 204—55.
Jacoby, Harry D., to Irrigation Equipment Co., Inc. Portable irrigation apparatus. 2,860,006, 11-11-58, Cl. 299—47.
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Jakubowicz, Edward, to United States of America, Army. Frequency control system. 2,860,246, 11-11-58, Cl. 250—36.
James, Richard D., and W. E. Jones, to Northrop Aircraft, Inc. Data playback unit and circuit. 2,860,199, 11-11-58, Cl. 200—46.
Janney, Thomas T., and G. Y. Jean, to James Lees and Sons Co. Carpet loom attachment. 2,859,778, 11-11-58, Cl. 139—39.
Jansen, Eugene F., to United States of America, Agriculture. Process for inhibiting enzyme activity in plant tissue. 2,860,055, 11-11-58, Cl. 99—154.
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Jarvis, Cleo D. Casket mattress. 2,859,806, 11-11-58, Cl. 27—12.
Jauquet, Jean. Pocket speaking devices. 2,859,974, 11-11-58, Cl. 274—16.
Javaux, Gustave, to Pilkington Bros. Ltd. Apparatus for grinding flat glass on both faces simultaneously. 2,859,565, 11-11-58, Cl. 51—112.
Jaworski, Charles J., and J. J. La Due, to International Business Machines Corp. Tape reel package. 2,859,968, 11-11-58, Cl. 206—58.
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Jefferson, Sidney, to United States of America, Atomic Energy Commission. Gas discharge devices. 2,860,269, 11-11-58, Cl. 313—54.
Jendrisak, Joseph K. Apparatus for bending glass sheets or plates. 2,859,561, 11-11-58, Cl. 49—67.

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Jennings, Harry C., Jr. Sliding connection between seat rails and legs of collapsible wheel chairs. 2,859,800, 11-11-58. Cl. 155—140.

Jensen, Carl L.: See—
Jensen, Kai A. and C. L. 2,860,136.

Jensen, Kai A. and C. L., to Aktiebolaget Ferrosan. 3-mercuric-2-methoxy-1-succinimidepropane derivatives. 2,860,136, 11-11-58, Cl. 260—242.

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Boucher, Frank G. 2,859,823.
Eckel, John H. 2,859,826.
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Williams, Phillip S. 2,859,823.

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Anderson, Lloyd L. 2,859,899.
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Glasman, Roy A. 2,859,478.

Johnson, Roy W., Jr., to Spencer Rubber Products Co. Lamp socket unit. 2,860,223, 11-11-58, Cl. 240—7.1.

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Jones, Edward T., Jr., to Celanese Corp. of America. Reel type apparatus for the liquid treatment of yarn. 2,859,605, 11-11-58, Cl. 68—205.

Jones, Edwin K., and D. D. Dettner, to Universal Oil Products Co. Manufacture of isopropyl benzene by alkylation. 2,860,173, 11-11-58, Cl. 260—671.

Jones, Maurice W. Movable blotter and means for supporting the blotter in engagement with a movable meter chart. 2,860,029, 11-11-58, Cl. 346—146.

Jones, Rufus V., to Phillips Petroleum Co. Alkenyl sulfuric acid and vinyl-pyridine rubber compounded therewith. 2,860,123, 11-11-58, Cl. 260—79.5.

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Jordan, John. Garment hangers. 2,859,998, 11-11-58, Cl. 223—93.

Josephson, Robert H., to Cleeton Corp. Fluid pressure responsive seal. 2,860,956, 11-11-58, Cl. 286—7.

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Porsche, Erich. 2,860,602.

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Joy, Joseph F., to Joy Mfg. Co. Method of mining involving four isolated sections. 2,859,943, 11-11-58, Cl. 262—1.

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Deperalski, Eugene J., and Kodra. 2,860,018.
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Justi, Eduard, to Bahrchemie Akt., and Steinkohlen-Elektrizitat Akt. Homogeneous gas-diffusion electrode for galvanic cells. 2,860,175, 11-11-58, Cl. 136—120.

Kaghan, Walter S., and D. F. Stonebeck, to Olin Mathieson Chemical Corp. Electrical discharge treatment of polyethylene. 2,859,481, 11-11-58, Cl. 18—48.

Kalinowski, Mathew L.: See—
Crews, Lowell T., and Kalinowski. 2,860,097.

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Kandoian, Armig G., to International Telephone and Telegraph Corp. Ultra high frequency antenna unit. 2,860,339, 11-11-58, Cl. 343—795.

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Kaplan, Martin, to Radio Corp. of America. Pulse generator. 2,860,243, 11-11-58, Cl. 250—27.

Kaplan, Walter: See—
Colangelo, Marco A. 2,859,454.

Kappel, Joseph W., S., and L., and M. Feiger, Cabinet for photographic slides. 2,860,524, 11-11-58, Cl. 312—300.

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Kappel, Joseph W., S., and L., and Feiger. 2,860,034.

Kappel, Sol: See—
Kappel, Joseph W., S., and L., and Feiger. 2,860,034.

Karnaves, Matthew C., to Texas Instruments Inc. Junction type transistor structure. 2,860,291, 11-11-58, Cl. 317—235.

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Kath, William E., and N. W. Rosenberg, to Ionics, Inc. Separation of electrolytic solutions into concentrate and dilute streams. 2,860,095, 11-11-58, Cl. 204—180.

Kauer, James C., to E. I. du Pont de Nemours and Co. Fluorinated organic isocyanates and their preparation. 2,860,154, 11-11-58, Cl. 260—453.

Keeler, Ralph P. Resistor comprising wire helically wound on ribbon tape and method of preparing same. 2,860,320, 11-11-58, Cl. 201—48.

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Reed, David A., Jr., and Keith. 2,859,841.

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McNeely, William M., and O'Connell. 2,860,120.

Kellogg, M. W., Co., The: See—
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Kellogg, Spencer, 2nd, to Sperry Rand Corp. Aircraft navigation systems. 2,860,335, 11-11-58, Cl. 343—107.

Kelly, George E., Jr., C. H. Braithwaite, Jr., and D. Williams, to Food Machinery and Chemical Corp. Preparation of dichloromaleic acid and dichloromaleic anhydride. 2,860,148, 11-11-58, Cl. 260—346.4.

Kelly, Martin J.: See—
Hix, Ira M., Kelly, and Read. 2,859,673.

Kelly, Thomas M.: See—
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Kennedy, Dewey M. Supporting structure for infant's bathing device. 2,860,023, 11-11-58, Cl. 211—63.

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Keyes, Neil T.: See—
Meng, Eugene D., Keyes, and Cronin. 2,860,210.

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King, Bernard B.: See—
Strickland, Albert N., and King. 2,860,221.

King, Carl H.: See—
Hundt, Laurence H., and King. 2,859,542.

Kinman, Albert H. Disposable feeding implement. 2,859,518, 11-11-58, Cl. 30—141.

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Hester, Ross E., Kippenhan, and Lamb. 2,860,278.

Kirkman, Peter J., to Libbey-Owens-Ford Glass Co. Berthing device. 2,859,534, 11-11-58, Cl. 33—27.

Kissinger, Henry W. Dough-molding machine. 2,859,712, 11-11-58, Cl. 107—9.

Kitsos, Paul C. Measuring device. 2,859,960, 11-11-58, Cl. 222—424.

Kleist, Herman W., to Dole Refrigerating Co. Assembly for heating and cooling trucks. 2,860,945, 11-11-58, Cl. 257—2.

Klotz, Wilhelm. Sheet cutting apparatus. 2,859,818, 11-11-58, Cl. 164—62.

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Knapp Mills Inc.: See—
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Knell, Christopher V., to Miehle-Goss-Dexter, Inc. Stereotype finishing machine. 2,860,597, 11-11-58, Cl. 29—31.

Knopf, Milton, and O. J. Berngesser, to North American Aviation, Inc. Aircraft control inspection device. 2,859,621, 11-11-58, Cl. 73—432.

Kobayashi, Tatsuo, and K. Ikeda, to Chiyoda Kogaku Seiko Kabushiki Kaisha. Device for representing gradations for exposure in a binocular reflex camera. 2,859,675, 11-11-58, Cl. 95—64.

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Koenigsberg, Max, to The Englander Co., Inc. Mattress structure. 2,859,455, 11-11-58, Cl. 5—345.

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Cook, John S., Koenpfner, and Poole. 2,860,278.

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Kramer, William E., and N. Marmor, to Gulf Research & Development Co. Dispensing apparatus. 2,859,998, 11-11-58, Cl. 232—96.

Kraut, Heinrich, and W. Korbel, to Farbenfabriken Bayer Akt. Recovery of halikrein. 2,860,067, 11-11-58, Cl. 167—74.

Kraybill, Daniel W., to Northrop Aircraft, Inc. Combined resilient press pad and expandable bladder. 2,859,719, 11-11-58, Cl. 113—44.

Krehl, Willard A., and E. Snyder, to E. B. Eaton. Feed composition. 2,860,051, 11-11-58, Cl. 99—54.

Kreppel, James E., Jr., to Sarkes Tarzian, Inc. Antenna input transformer. 2,860,312, 11-11-58, Cl. 336—60.

Krell, Harley E., and D. O. Benson, to Toro Mfg. Corp. of Minnesota. Safety mower blade. 2,859,581, 11-11-58, Cl. 56—295.

Krell, Harry, and F. P. Butler, to Geigy Chemical Corp. Carboxymethylation of primary and secondary amines. 2,860,164, 11-11-58, Cl. 260—534.

Krzyzkowski, Leszek J. K., to Pennsalt Chemicals Corp. Diaphragm cells. 2,860,100, 11-11-58, Cl. 204—252.
Kuehn, Paul C. Centrifugally engaged friction clutch mechanism. 2,859,847, 11-11-58, Cl. 192—105.
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Bear, Herman G., Kummer, and Eartman. 2,859,908.
Kunsman, Walter: See—
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Rhodes, Joseph C., Segers, and Lacko. 2,859,699.
La Due, James J.: See—
Jaworski, Charles J., and La Due. 2,859,968.
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Lalt, Raymond, to Laporte Chemicals Ltd. Purification of anthraquinone solutions. 2,860,086, 11-11-58, Cl. 23—207.
Lake, Harry E., and B. K. Breed, to Preferred Utilities Mfg. Corp. Liquid flow control regulator. 2,859,806, 11-11-58, Cl. 158—36.3.
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Burkhart, William H., and La Manna. 2,860,228.
Lamb, William A. S.: See—
Hester, Rose E., Kippenhan, and Lamb. 2,860,270.
Lamberti, Vincent, and A. O. Gray, Jr., to Lever Brothers Co. Controlled sudsing heavy duty liquid detergent. 2,860,107, 11-11-58, Cl. 252—137.
Lamson, Edward R., and T. A. Renshaw. Method for the manufacture of soap. 2,860,151, 11-11-58, Cl. 260—413.
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Lane, Herbert D. Automatic fire alarm. 2,859,723, 11-11-58, Cl. 116—106.
Langan, John F., to Mishle-Gane-Dexter, Inc. Film record cards and method of making the same. 2,859,550, 11-11-58, Cl. 40—158.
Langworthy, David C., to Magnetic Metals Co. Shield for cathode ray tubes and process of making the same. 2,860,228, 11-11-58, Cl. 240—367.
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Solnick, Robert L., and Lanier. 2,859,831.
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Larrabee, Clifford E., to Chas. Pfizer & Co., Inc. Intermediate for pyridazine and process. 2,860,141, 11-11-58, Cl. 260—295.5.
Larrabee, Robert C. Corner bead applying apparatus. 2,859,445, 11-11-58, Cl. 1—260.
Larson, Raymond W.: See—
Weaver, Maybelle C., and Larson. 2,859,975.
Larson, Vernon C., to Jersey Production Research Co. Drill hole volume logging device. 2,859,614, 11-11-58, Cl. 73—149.
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Hall, Howard N., and La Rue. 2,859,818.
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Lee, Henry T. Sectional gears. 2,859,635, 11-11-58, Cl. 74—439.
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Lehmann, Harry. Apparatus for closing and sealing containers. 2,859,575, 11-11-58, Cl. 53—241.
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Leitz, Ernst, G. m. b. H.: See—
h. H. Apparatus for pneumatically converting perforated film messages into electrical impulses. 2,860,200, 11-11-58, Cl. 200—46.
Leitz, Ernest, G. m. b. H.: See—
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Levy, Samuel L. Screw joint. 2,859,992, 11-11-58, Cl. 287—125.
Lewen, Wikstaas, and H. Odén, to International Standard Electric Corp. Circuit arrangement for logically handling procedures which arrive at any time. 2,860,188, 11-11-58, Cl. 179—18.
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Prideaux, Thomas C., and Ley. 2,860,231.
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Molter, Richard C., and Swift. 2,860,059.
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Newcomer, Jack S., Smith, and Linder. 2,860,166.
Lindgren, Erik A. Screen rooms. 2,860,176, 11-11-58, Cl. 174—38.
Lindsay, James E., to Radio Corp. of America. Stabilized transistor amplifier. 2,860,193, 11-11-58, Cl. 179—171.
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Honegger, Willy. 2,860,017.
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Little, Lawrence L., and G. Chen, to E. F. Drew & Co., Inc. Urea-phosphoric acid cleaning composition. 2,860,106, 11-11-58, Cl. 252—196.
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Lokes, Bjarte, and G. Rosenkranz, to Syntex S. A. Process for the saponification of 21-esters of 20-keto pregnanes. 2,860,149, 11-11-58, Cl. 260—397.47.
Lomax, Clarence E., to General Telephone Laboratories, Inc. Telephone system serving both regular and paystation telephones. 2,860,184, 11-11-58, Cl. 179—6.3.
Long, George B., to General Motors Corp. Domestic appliance. 2,860,026, 11-11-58, Cl. 312—298.
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Atkinson, Wallace E. 2,859,996.
Long, Thomas L., to Johnston Testers, Inc. Well perforating device. 2,859,697, 11-11-58, Cl. 102—21.6.
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Love, Richard R. Easy loading shifting axle trailer. 2,859,889, 11-11-58, Cl. 214—505.
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Mockris, Isadore, Lowdermilk, and Graver. 2,860,033.
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Cagle, John W., and Lowrie. 2,860,137.
Lucas, James W. Projection device adapted to receive projected images. 2,859,660, 11-11-58, Cl. 88—24.
Lucas, Joseph, (Industries) Ltd.: See—
Bottoms, Charles H. 2,859,761.
Lunde, Einar O., to Magor Car Corp. Railway car dump valve. 2,859,774, 11-11-58, Cl. 137—620.
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Macfarlane, Robert H., to John Deere Plow Co. (Ltd.). Weeder. 2,859,679, 11-11-58, Cl. 97—144.1.
Machover, Fred J., to Clarke Sanding Machine Co. Sweeper drive and adjustment construction. 2,859,481, 11-11-58, Cl. 15—83.
Mackal, Henry H. Valve. 2,859,932, 11-11-58, Cl. 251—247.
Mackintosh, Charles. Stands. 2,859,488, 11-11-58, Cl. 20—1.126.
MacNeill, John H., to Soroban Engineering, Inc. High speed punch device. 2,859,816, 11-11-58, Cl. 164—111.
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Maddox, Thomas E. Safety control systems for fuel burners. 2,860,288, 11-11-58, Cl. 317—148.
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Pensagne, Theodore S., Blanton, and Magee. 2,860,177.
Magnetic Metals Co.: See—
Langworthy, David C. 2,860,228.
Magnuski, Henry: See—
Dyke, Edwin, and Magnuski. 2,860,238.
Magor Car Corp.: See—
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Makray, Paul W. Resilient wall tile. 2,859,607, 11-11-58, Cl. 72—18.
Maller, Aloys N. Apparatus for positioning work. 2,859,531, 11-11-58, Cl. 29—190.
Mallory, P. R., & Co., Inc.: See—
Pettinger, Paul I. 2,860,290.
Morone, Joseph P., Jr. 2,860,316.
Mancib, Alvin S.: See—
Berthold, George H., and Mancib. 2,859,480.
Mandelik, Bernard G., to Chemical Construction Corp. Production of highly concentrated nitric acid. 2,860,035, 11-11-58, Cl. 23—160.
Manhart, Charles E. Life rafts. 2,859,457, 11-11-58, Cl. 9—11.
Mann, Leonard J.: See—
Murphy, John M., and Mann. 2,859,595.
Marchetti, Ruth E. Carton lifter. 2,860,000, 11-11-58, Cl. 294—28.
Marchetti, Albert A.: See—
Sonnstrom, Harold R., and Marchetti. 2,860,010.
Mar-Gold Corp., The: See—
Shelton, Claude, Jr. 2,859,572.
Margulies, Paul H., and H. E. Winters, Jr., to Food Machinery and Chemical Corp. Graining zinc offset plates. 2,860,039, 11-11-58, Cl. 41—42.
Martens, Jack E., and D. C. Beyer, to Ford Motor Co. Door lock. 2,859,998, 11-11-58, Cl. 292—280.

Morone, Joseph P., Jr., to P. R. Mallory & Co., Inc. Rocket. Nischk, Gunther, and E. Bock, to Farbenfabriken Bayer Akt.

Martin Co., The: *See*—
McCallister, Howard H. 2,859,803.
Marusov, Nicholas: *See*—
Kramer, William E., and Marusov. 2,859,599.
Marsan, Peter R.: *See*—
McConnell, Kenneth R., and Marsan. 2,860,180.
Maschinenfabrik Augsburg-Nurnberg A. G.: *See*—
Reinartz, Robert, and Rupp. 2,859,966.
Mason, Richard J., to Bendix Aviation Corp. Piston type igniter. 2,859,590, 11-11-58, Cl. 60—39.82.
Mason, Warren P., to Bell Telephone Laboratories, Inc. Ferroelectric device. 2,860,265, 11-11-58, Cl. 310—9.4.
Master Addresser Co.: *See*—
Wright, Ansel J., and Rosenlund, Gordon T. 2,859,690.
Materiel Industriel S. A.: *See*—
Grossmann, Paul. 2,859,528.
Mathews, Glenn M.: *See*—
Moore, Buell. 2,860,236.
Matschke, Arthur L. Storm window. 2,859,493, 11-11-58, Cl. 20—55.
Matterson, Peter D., to Dolty Cranes Ltd. Adjustable mountings for shafts, axles, and other elements. 2,860,015, 11-11-58, Cl. 308—62.
Matteson, Benjamin H., Jr.: *See*—
Parker, Leland L., and Matteson. 2,859,629.
Mauch, Hans A. Hydraulic system. 2,859,451, 11-11-58, Cl. 3—22.
May, Frank J., to Rembrandt Lamp Corp. Swivel type lamp socket support. 2,859,982, 11-11-58, Cl. 285—90.
Mase, Robert O., to Minneapolis-Honeywell Regulator Co. Apparatus for adjusting the static balance of a sensitive instrument about a rotational axis. 2,859,626, 11-11-58, Cl. 74—5.7.
McAlpine, Charles H.: *See*—
Winkel, Herbert C., McAlpine, and Meschke. 2,859,859.
McArthur, Elmer D., to General Electric Co. Electric discharge device and methods. 2,860,280, 11-11-58, Cl. 315—5.46.
McCallister, Howard H., to The Martin Co. Safety seating arrangement for a high speed conveyance. 2,859,803, 11-11-58 Cl. 155—189.
McCarley, Henry L., to Northrop Aircraft, Inc. Clamp tightener. 2,859,648, 11-11-58, Cl. 81—3.
McConnell, Kenneth R., and P. R. Marsan, to Times Facsimile Corp. Remote control system for continuous facsimile recorder. 2,860,180, 11-11-58, Cl. 178—6.6.
McCreary, Harold J., to General Telephone Laboratories, Inc. Tape movement check in a telegraph system. 2,860,182, 11-11-58, Cl. 178—17.5.
McDonald, Dan, to Barber-Greene Co. Method of drying and impregnating wood. 2,860,070, 11-11-58, Cl. 117—59.
McDonald, Henry S.: *See*—
David, Edward E., Jr., and McDonald. 2,860,187.
McDonnell, Thomas F., and R. E. Coffee, to Olin Mathieson Chemical Corp. Explosives. 2,860,042, 11-11-58, Cl. 52—20.
McEwen, Norman S., to Helpy Selfy Service Systems, Inc. Automatic lid release for clothes extractor. 2,859,536, 11-11-58, Cl. 34—58.
McFarland, Forest R., to Studebaker-Packard Corp. Anti-roll and leveler unit for vehicle suspensions. 2,859,976, 11-11-58, Cl. 280—104.
McFarland, Gerald B., to M. B. McFarland & Sons. Envelope construction. 2,859,907, 11-11-58, Cl. 229—85.
McFarland, M. B., & Sons: *See*—
McFarland, Gerald B. 2,859,907.
McGraw-Edison Co.: *See*—
Rigert, Max. 2,860,207.
Stoelting, Herman O., and Cunningham. 2,860,210.
Stramowski, Edmund J. 2,860,205.
McIntire, Robert L.: *See*—
Begley, John W., and McIntire. 2,860,174.
McIntosh, Frank H. Amplifiers. 2,860,102, 11-11-58, Cl. 179—171.
McIver, Clement L., to Atlantic Instrument Corp. Machine bed and ways. 2,859,643, 11-11-58, Cl. 77—3.
McKenzie, Ronald J., and C. H. Bruner. Safety guard. 2,859,776, 11-11-58, Cl. 128—63.
McKim, Burton, to Bell Telephone Laboratories, Inc. Cathode ray tube circuit to maintain uniform trace intensity. 2,860,284, 11-11-58, Cl. 315—22.
McNamara, Russell E. Vehicle battery circuit breaker. 2,860,213, 11-11-58, Cl. 200—161.
McNary, Billy D.: *See*—
Boyd, Malcolm R., and McNary. 2,859,571.
McNeely, William H., and J. J. O'Connell, to Kelco Co. Methyl alginate. 2,860,130, 11-11-58, Cl. 260—209.6.
McQueary, Milton F. Knife and sheath with latch unit. 2,859,516, 11-11-58, Cl. 30—151.
Medearis, James F. Tool joint protector. 2,860,013, 11-11-58, Cl. 308—4.
Mehlhorn, Lawrence T.: *See*—
Provine, Robert W., Mehlhorn, Thompson, and Lawson. 2,860,066.
Meijer, Hendrik, to De Staat der Nederlanden, te dezen Vertegenwoordigd door de Hoofdingenieur-Directeur van de Rijkswaterstaat in de Directie Algemene Dienst en Waterhuishouding. Apparatus for mapping by means of overlapping aerial photographs. 2,859,520, 11-11-58, Cl. 33—1.
Meis, Heimut, and H. Sauer, to Rutgerswerke-Akt. Process for the preparation of isocyanuric acid monovinylester. 2,860,139, 11-11-58, Cl. 260—248.
Melamed, Sidney, to Rohm & Haas Co. Polymeric sulfonamide alkyl vinyl derivatives. 2,860,108, 11-11-58, Cl. 260—2.1.
Menaul, Paul L.: *See*—
Buchanan, Donnell M., and Menaul. 2,860,103.
Mendenhall, Ivan L., to Research Laboratories, Inc. Container and a cap therefor, by means of which a user can prepare a fresh solution or suspension and can readily dispense the same. 2,859,598, 11-11-58, Cl. 222—1.
Meng, Eugene D., N. T. Keyes, and P. M. Creutz, to Hoffman Radio Corp. Variable bandwidth crystal filter circuits or the like. 2,860,310, 11-11-58, Cl. 333—72.
Mercier, Bernard: *See*—
Mercier, Jean and B. 2,859,592.
Mercier, Jean and B. Hydraulic transmitter with follow-up. 2,859,592, 11-11-58, Cl. 60—97.
Merck & Co., Inc.: *See*—
Beutel, Ralph H., and Currie. 2,860,135.
Chemerda, John M. 2,860,134.
Erickson, Arthur E. 2,860,166.
Folkers, Karl, and Shunk. 2,860,131.
Huff, Jesse W., and Boshardt. 2,860,050.
Meriam, Charles. Liquid flow recorder. 2,859,956, 11-11-58, Cl. 265—6.
Merriam, Robert W. Tuned circuit automatically adjustable to resonance by current flow through bi-metallic elements. 2,860,249, 11-11-58, Cl. 250—40.
Mertz, Clyde W., to Phillips Petroleum Co. Stabilization of 2-methyl-5-vinylpyridine. 2,860,140, 11-11-58, Cl. 260—290.
Meschke, Harry H.: *See*—
Winkel, Herbert C., McAlpine, and Meschke. 2,859,859.
Mestre, Luis, to Lewfor Development Corp. Sheet delivery means for rotary offset printing presses. 2,859,692, 11-11-58, Cl. 101—217.
Metalastik Ltd.: *See*—
Horovitz, Marcus. 2,859,651.
Metals & Controls Corp.: *See*—
Epstein, Henry D. 2,860,208.
Mesnack, Joseph: *See*—
Cronin, Edward F., Mesnack, and Harrington. 2,859,724.
Michielsen, Antonius W. M.: *See*—
Dorgelo, Eduard G., and Michielsen. 2,859,562.
Michigan Tool Co.: *See*—
Birtch, Fred E., and Johnson. 2,859,665.
Miehle-Goss-Dexter, Inc.: *See*—
Knell, Christopher V. 2,859,507.
Langan, John F. 2,859,550.
Miller, Robert N.: *See*—
Fenske, Donald M., Fredrick, and Miller. 2,859,659.
Millhoff, Ohie C., to The Nye Rubber Co. Mold separator device. 2,859,477, 11-11-58, Cl. 18—42.
Mine Safety Appliances Co.: *See*—
Brochetti, Raymond E. 2,859,940.
Minneapolis-Honeywell Regulator Co.: *See*—
Beveridge, Harold N., and Mork. 2,859,962.
Bonnell, Charles R. 2,859,625.
Mase, Robert O. 2,859,626.
Sparrow, Hubert T. 2,860,268.
Minnesota Mining and Mfg. Co.: *See*—
Barnhart, William S., and Wade. 2,860,150.
Minter, Clarke C. Current regulator tube. 2,860,223, 11-11-58, Cl. 201—63.
Mitchelson, James W. Adjustable reclining chair and headrest therefor. 2,859,797, 11-11-58, Cl. 155—5.
Mize, William E., to Institutional Industries, Inc. Brake for wheel chair. 2,859,837, 11-11-58, Cl. 188—2.
Mockrin, Isadore, F. R. Lowdermilk, and C. W. Graver, to Pennsalt Chemicals Corp. Method of making granular sodium metasilicate. 2,860,033, 11-11-58, Cl. 23—110.
Mockrin, Isadore, to Pennsalt Chemicals Corp. Method of converting a finely-divided substantially anhydrous sodium metasilicate into a non-dusting granular form. 2,860,034, 11-11-58, Cl. 23—110.
Modern Plastic Machinery Corp.: *See*—
Tornberg, Henning T. 2,859,475.
Modica, Joseph, Jr., to Tudor Metal Products Corp. Rollable playing piece for a game. 2,859,968, 11-11-58, Cl. 273—58.
Modica, Joseph, Jr., to Tudor Metal Products Corp. Baseball game. 2,859,969, 11-11-58, Cl. 273—59.
Moeltgner, Ernst F. W., to Landis Machine Co. Feeding and discharging mechanism for roll forming machines. 2,859,646, 11-11-58, Cl. 80—6.
Moisan, Henry J. Pipe and tubing cutter. 2,859,514, 11-11-58, Cl. 30—101.
Mollenberg, Leroy, to General Electric Co. Dual-voltage alternating-current motor. 2,860,296, 11-11-58, Cl. 318—221.
Molter, Richard C., and H. R. Swift, to Libbey-Owens-Ford Glass Co. Ultra-violet light absorbing glass. 2,860,059, 11-11-58, Cl. 106—52.
Monaco, Gabriel R.: *See*—
Smith, William R., and Monaco. 2,859,556.
Monerieff, Leslie J., to British Celanese Ltd. Packaging. 2,859,572, 11-11-58, Cl. 53—32
Monroe Calculating Machine Co.: *See*—
Burkhart, William H., and La Manna. 2,860,823.
Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Fusco, Raffaello, Loeco, and Peri. 2,860,085.
Moore, Buell, 20% to W. F. Wilson, 15% to Wilson Electrical Equipment Co., Inc., 35% to D. L. Calmes, 20% to B. Moore, 5% to G. M. Mathews, and 5% to J. G. Mullins. Light fixture. 2,860,236, 11-11-58, Cl. 240—11.4.
Moore, Edwin R. Functional posture controller for chairs. 2,859,799, 11-11-58, Cl. 155—77.
Moore, Edwin R. Geometric controller for chairs. 2,859,801, 11-11-58, Cl. 155—157.
Morel, Roger: *See*—
Felici, Noel, Morel, and Point. 2,860,264.
Mork, Raymond P.: *See*—
Beveridge, Harold N. and Mork. 2,859,962.

Morone, Joseph P., Jr., to P. R. Mallory & Co., Inc. Socket structure. 2,860,318, 11-11-58, Cl. 339—193.

Morris, Louis, Jr., 15% to J. F. Penkala, and 15% to A. Tavares. Adjustable jamb. 2,859,491, 11-11-58, Cl. 20—12.

Morrison, James L. D., to V-M Corp. Phonograph motor device. 2,859,632, 11-11-58, Cl. 74—199.

Morrison, Willard L., to The Union Stock Yard and Transit Co. of Chicago. Collapsible insulation. 2,859,489, 11-11-58, Cl. 20—4.

Morse, Howard H. Testing means for fuel system. 2,859,611, 11-11-58, Cl. 73—118.

Morse, Howard H. Tester for fuel delivery system. 2,859,612, 11-11-58, Cl. 73—118.

Moseley, Donald: *See*—
Travis, Ralph L. 2,859,042.

Motorola, Inc.: *See*—
Clark, James M. 2,860,239.
Dyke, Edwin, and Magnuski. 2,860,238.
O'Fallon, Richard G. 2,860,273.

Moubis, Gerard C. A. M.: *See*—
Duran, Johannes C., Dams, and Moubis. 2,860,275.

Mount, Wadsworth W. Self-locking turnbuckle. 2,859,991, 11-11-58, Cl. 287—60.

Mower, Ernest R.: *See*—
Cohen, Samuel A., and Mower. 2,860,071.

Mueller, Hans F., to Vertical Axis Propellers, Inc. Vertical axis cycloidal propellers. 2,859,829, 11-11-58, Cl. 170—147.

Mullins, J. G.: *See*—
Moore, Buell. 2,860,236.

Mumford, Eustace H., to Owens-Illinois Glass Co. Means for delivering formed charges of molten glass to molds. 2,859,559, 11-11-58, Cl. 49—14.

Munson, Whitney K. Interchangeable type stamp device. 2,859,094, 11-11-58, Cl. 101—380.

Murdock, Forrest L., Sr., H. D. Boggs, and C. T. Beeson, to Plastic Products Corp. Method of embedding and sealing a plurality of bolt heads in a protective body. 2,860,082, 11-11-58, Cl. 154—110.

Murphy, John M., and L. J. Maas, to General Motors Corp. Two temperature refrigerator with forced air circulation. 2,859,595, 11-11-58, Cl. 62—214.

Murphy, William P., to United States of America, Army. Drum cooling device. 2,859,004, 11-11-58, Cl. 89—14.

Murray, Maurice J.: *See*—
Nixon, William G., Bicek, and Murray. 2,860,045.

Müschenborn, Walter: *See*—
Reerink, Wilhelm, Müschenborn, and Nötzold. 2,859,917.

Myers, David M., to United States of America, Navy. Torpedo hub nut. 2,859,722, 11-11-58, Cl. 114—20.

Nagelschmidt, Rudolf, and A. Rudolph, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Corrosion preventing coating compositions for metals comprising a chlorine containing organic polymer as film former, a copper compound and a tertiary organic heterocyclic base. 2,860,118, 11-11-58, Cl. 260—41.

Nathan, Marvin F., to The M. W. Kellogg Co. Reforming process. 2,860,102, 11-11-58, Cl. 208—140.

National Acme Co., The: *See*—
Dobes, Michael J., and Schurr. 2,860,202.

National Broach & Machine Co.: *See*—
Shannon, Roland P. 2,859,508.

National Dairy Products Corp.: *See*—
Yanick, Nicholas S. 2,860,054.

National Food Slicing Machine Co., Inc.: *See*—
Stollbach, Henry J. 2,859,780.

National Research Development Corp.: *See*—
Welby, Brian G. 2,860,240.

National Steel Corp.: *See*—
Seim, Maynard C. 2,859,683.

Neidig, Dan, to Superior Mfg. Co. Coin controlled vending apparatus. 2,859,849, 11-11-58, Cl. 194—58.

Neigel, Joseph A., to Specialties Development Corp. Aspirating device. 2,859,908, 11-11-58, Cl. 230—95.

Neilsen, Hildaur L., and A. Neustadter. List finders. 2,859,549, 11-11-58, Cl. 40—104.

Nelson, Gorman R. Hand tool for turning coupling nuts and the like. 2,859,649, 11-11-58, Cl. 81—61.

Nelsen, James K., to Westinghouse Electric Corp. Refrigeration apparatus. 2,859,496, 11-11-58, Cl. 20—89.

Nelsen, William T., to Phillips Petroleum Co. Recovery of acetylene from gases, and acetylene-N-substituted pyrrole compositions. 2,859,833, 11-11-58, Cl. 183—115.

Neustadter, Arnold: *See*—
Neilsen, Hildaur L., and Neustadter. 2,859,549.

Newcomer, Jack S., K. J. Smith, and J. Linder, to Hooker Chemical Corp. N-chloro chlorobenzamide. 2,860,160, 11-11-58, Cl. 260—558.

New Holland Machine Division of Sperry Rand Corp., The: *See*—
Nolt, Edwin B. 2,859,668.

Newman, Leslie W., and R. Dine. Pressure-fed oil fuel burner. 2,859,807, 11-11-58, Cl. 158—42.2.

New Products Corp.: *See*—
Banker, Oscar H. 2,859,762.

Neyret Freres & Cie.: *See*—
Neyret, Georges. 2,859,500.

Neyret, Georges, to Neyret Freres & Cie. Metal carrier for badges and means for securing same. 2,859,500, 11-11-58, Cl. 24—13.

Nicklas, George, and E. P. Ensign, to Western Airlines, Inc. Food carrying cart for airplanes. 2,860,620, 11-11-58, Cl. 311—17.

Nicoll, Frank S., Jr. Horizontal sliding window unit. 2,859,492, 11-11-58, Cl. 20—52.2.

Niebuhr, William F.: *See*—
Watters, Clarence J., and Niebuhr. 2,860,316.

Nielsen, Moritz H., to Illinois Tool Works. Article feeding mechanism. 2,859,647, 11-11-58, Cl. 80—8.

Nischk, Gunther, and E. Bock, to Farbenfabriken Bayer Akt. Coated solid materials and method for producing same. 2,860,072, 11-11-58, Cl. 117—72.

Nitzsche, Siegfried, and M. Wick, to Wacker-Chemie G. m. b. H. Silicone rubber adhesive. 2,860,083, 11-11-58, Cl. 154—139.

Nixon, William G., E. J. Bicek, and M. J. Murray, to Universal Oil Products Co. Method of removing platinum from a composite containing platinum and alumina. 2,860,045, 11-11-58, Cl. 75—85.

Noel, Eugene M. Continuous griddle. 2,859,713, 11-11-58, Cl. 107—57.

Nolf, Clement A., to Aluminum Co. of America. Spiral extrusion. 2,859,869, 11-11-58, Cl. 207—5.

Nolt, Edwin B., to New Holland Machine Division of Sperry Rand Corp. Method of baling. 2,859,668, 11-11-58, Cl. 100—42.

Nordberg Mfg. Co.: *See*—
Froehlich, Kurt. 2,859,739.
Talboys, Henry H. 2,859,700.

North American Aviation, Inc.: *See*—
Knopf, Milton, and Borngesser. 2,859,631.
Reed, David A., Jr., and Keith. 2,859,841.

North American Philips Co., Inc.: *See*—
De Gier, Johannes, and Janssen. 2,860,302.
Dijksterhuis, Popko E., and Hovingh. 2,859,512.
Dorgelo, Eduard G., and Michielsen. 2,859,562.
Duran, Johannes C., Dams, and Moubis. 2,860,275.
Gorter, Evert W., and Esveldt. 2,860,105.
Hendee, Charles F. 2,860,254.
Verkruissen, Arie F. 2,860,261.

North, Jacob A.: *See*—
Hooper, Clinton E., and North. 2,859,844.

Northrop Aircraft, Inc.: *See*—
Adams, William H. 2,859,617.
Glenn, John E., and Hubbard. 2,859,927.
James, Richard D., and Jones. 2,860,199.
Kraybill, Daniel W. 2,859,719.
McCarley, Henry L. 2,859,648.
Towner, George H. 2,860,292.
Towner, George H. 2,860,306.

Nortons-Tividale Ltd.: *See*—
Howard, Allan M. 2,859,704.

Nötzold, Erich: *See*—
Reerink, Wilhelm, Muschenborn, and Notzold. 2,859,917.

Nye Rubber Co., The: *See*—
Millhoff, Ohio C. 2,859,477.

Oberman, Roelof M. M., to Staatsbedrijf der Posterijen, Telegrafie en Telefonie. Automatic switching system with reduced internal blocking. 2,860,189, 11-11-58, Cl. 179—18.

O'Connell, John J.: *See*—
McNeely, William H., and O'Connell. 2,860,130.

Odell, Alexander D., J. D. Reynolds, and P. W. S. Harrild, to International Standard Electric Corp. Electrical circuits employing transistors. 2,860,259, 11-11-58, Cl. 307—88.5.

Oden, Hoeckley: *See*—
Lewen, Nikolaus, and Oden. 2,860,188.

O'Fallon, Richard G., to Motorola, Inc. Electron discharge device. 2,860,273, 11-11-58, Cl. 313—299.

Ohlinger, Leo A.: *See*—
Wigner, Eugene P., and Ohlinger. 2,860,093.

Older, Lincoln G., to Paterson Pacific Parchment Co. Bib. 2,859,446, 11-11-58, Cl. 2—52.

Olin Mathieson Chemical Corp.: *See*—
Adams, Richard F. 2,859,500.
Berthold, George H., and Mancib. 2,859,490.
Harlow, Ernest L., Frech, and Blaine. 2,859,871.
Kaghan, Walter S., and Stoneback. 2,859,481.
McDonnell, Thomas F., and Coffee. 2,860,042.

Olivette, Ralph K., to Ames Harris Neville Co. Bag filling machine. 2,859,574, 11-11-58, Cl. 53—261.

Olson, Elmer, to General Motors Corp. Windshield washer pump. 2,859,700, 11-11-58, Cl. 103—150.

Olson, Robert W. T.: *See*—
Boyle, John R., and Olson. 2,860,228.

Olsson, Ingemar, to Research Aktiebolag. Method for the manufacture of a cigarette package envelope and package envelope produced according to this method. 2,859,671, 11-11-58, Cl. 93—36.

Optical Gaging Products, Inc.: *See*—
Polidor, Edward C. 2,859,523.

Orloff, George: *See*—
Rimer, Arthur E. H., Pawling, and Orloff. 2,859,734.

Orr, Charles P., to Spray Products Corp. Fuel atomizing spray device. 2,860,009, 11-11-58, Cl. 299—88.

Osame, Gohei. Testing apparatus for electrostatic coating material. 2,859,615, 11-11-58, Cl. 73—150.

O'Shei, William E. Windscreen wiper blades. 2,859,467, 11-11-58, Cl. 15—245.

O'Shei, William E. Windscreen wiper blades. 2,859,468, 11-11-58, Cl. 15—245.

O'Shei, William E. Ventilating device for the bodies of motor cars and other passenger carrying vehicles. 2,859,680, 11-11-58, Cl. 98—2.

Osmun, Charles W. Packing or sealing structure. 2,860,019, 11-11-58, Cl. 309—29.

Ost, Stanley B., to International Standard Electric Corp. Random pulse counter. 2,860,280, 11-11-58, Cl. 315—94.6.

Otis Engineering Corp.: *See*—
Wilhoit, Lowell M. 2,859,825.

Owens-Corning Fiberglas Corp.: *See*—
Slayter, James. 2,859,506.

Owens-Illinois Glass Co.: *See*—
Mumford, Eustace H. 2,859,559.

Pabst, Edwin L., and H. Vanderhout, to Alfa Machine Co., Inc. Stackers and work delivery apparatus. 2,859,965, 11-11-58, Cl. 271—68.

Radio Corp. of America: *See*—
Bliss, Warren H. 2,860,181.

Robinson, Ellis. Printing frame. 2,859,661, 11-11-58, Cl. 88—24.

Pacific Pulp Molding Co.: *See*—
Leitzel, Ammon M. 2,859,669.
Paige, Richard E. Sound emitting instrument. 2,859,555, 11-11-58, Cl. 46—179.
Pakswer, Serge, and R. G. Pohl to The Rauland Corp. Apparatus for manufacturing semi-conductor devices. 2,860,251, 11-11-58 Cl. 250—49.5.
Palmer, Michel C., E. W. Johnson, and C. B. Davis. Jig. 2,859,720. 11-11-58, Cl. 113—99.
Pan American Petroleum Corp.: *See*—
Buchanan, Donnell M., and Mensul. 2,860,108.
Elkins, Lloyd E., and Vincent. 2,859,827.
Hall, Howard N., and La Rue. 2,859,818.
Sharp, Shelby P., and Stelts. 2,860,150.
Wright, James M. 2,859,822.
Paperlynen Co.: *See*—
De Villers, Edmund J. 2,859,447.
Parker, Leland L., and B. H. Matteson, Jr., to United States of America, Navy. Differential cable drive mechanism. 2,859,629. 11-11-58, Cl. 74—95.
Parker, Samuel P., to Callaway Mills Co. Apparatus for producing core yarns. 2,859,582, 11-11-58, Cl. 57—36.
Parks, Robert F., to Steel Heddle Mfg. Co. Self-locking adjusting screw assembly for yarn tensioning device. 2,859,779, 11-11-58, Cl. 139—217.
Parmenter, Morgan D., to University of Toronto, Ontario College of Education, The Guidance Centre. Question and answer sheet with answers on both faces readable through translucent area. 2,859,541. 11-11-58, Cl. 33—48.
Parsons, James R., to Phillips Petroleum Co. Pipeline monitoring and control. 2,859,757, 11-11-58, Cl. 137—2.
Parsons, Milton A. Wheeled vehicle. 2,859,686, 11-11-58, Cl. 214—371.
Paschke, Henry A. and W. C. Mail box flag. 2,859,913, 11-11-58, Cl. 232—35.
Paschke, William C.: *See*—
Paschke, Henry A. and W. C. 2,859,913.
Paterson Pacific Parchment Co.: *See*—
Older, Lincoln G. 2,859,446.
Patin, Oneil J., to The B. F. Goodrich Co. Rim for tubeless truck tires. 2,859,792. 11-11-58, Cl. 152—406.
Patissier, Albert. Lifting mechanisms for use with agricultural tractors. 2,859,632. 11-11-58, Cl. 74—519.
Pawling, Frank: *See*—
Elmer, Arthur E. H., Pawling, and Orloff. 2,859,734.
Payne, Frank E., to Crane Packing Co. Rotary mechanical seal. 2,859,988, 11-11-58, Cl. 286—11.14.
Pearce, James G.: *See*—
Allum, Robin D., Denby, and Pearce. 2,860,190.
Pearce, John H. Method and means for the erection of tip up walls. 2,859,884, 11-11-58, Cl. 214—1.
Pease, F. B., Co.: *See*—
Woodward, Bernard, Jr., and Thomson. 2,859,784.
Pechiney: *See*—
Perieres, Rene A. P. 2,859,958.
Peck, Alvin W., to Phillips Petroleum Co. Transfer of volatile liquids and recovery of vapors of same. 2,859,594, 11-11-58, Cl. 62—50.
Peck, Jean R. Self-propelled rotary mower having improved drive. 2,859,579, 11-11-58, Cl. 56—25.4.
Pelipets, Michail G., to United States of America, Interior. Balanced hydrogenation of coal. 2,860,101, 11-11-58, Cl. 208—10.
Pellegrino, Samuel C. Segmental tire and wheel assembly. 2,859,791, 11-11-58, Cl. 152—324.
Penkala, John F.: *See*—
Morris, Louis, Jr. 2,859,491.
Pennsalt Chemicals Corp.: *See*—
Krzyszkowski, Leszek J. K. 2,860,100.
Mockrin, Isadore. 2,860,034.
Mockrin, Isadore, Lowdermilk, and Graver. 2,860,033.
Perfect Circle Corp.: *See*—
Estey, Melvin E. 2,859,903.
Peri, Cesare A.: *See*—
Fusco, Raffaello, Losco, and Peri. 2,860,085.
Perieres, Rene A. P., to Pechiney. Apparatus for separating aluminum from its alloys. 2,859,958, 11-11-58, Cl. 266—37.
Perlin, Samuel, to Savoy Leather Mfg. Corp. Locking flap for brief cases. 2,859,787. 11-11-58, Cl. 150—1.6.
Pero, Gladys. Interchangeable button. 2,859,501, 11-11-58, Cl. 24—97.
Persson, Erie S. Radiators. 2,859,947, 11-11-58, Cl. 257—136.
Pessagno, Theodore S., W. B. Blanton, and B. V. Magee, to The Western Union Telegraph Co. Telegraph system. 2,860,177. 11-11-58, Cl. 178—2.
Pestarini, Alba M.: *See*—
Pestarini, Joseph M. 2,860,295.
Pestarini Joseph M., deceased; A. M. Pestarini, executrix. Electric power systems. 2,860,295, 11-11-58, Cl. 318—154.
Petersen, Louis, to F. L. Smidth & Co. Cooling apparatus for use with rotary kilns. 2,859,955, 11-11-58, Cl. 263—32.
Peterson, Benjamin R., Jr.: *See*—
Cummings, Thomas N., Peterson, and Shiu. 2,859,714.
Peterson, Walter H., S. T. Abrams, and F. H. Stross, to Shell Development Co. High temperature inorganic gel grease compositions. 2,860,104, 11-11-58, Cl. 252—28.
Petrecca, Emil A., to Congoleum-Nairn Inc. Mask block transfer print process. 2,860,069, 11-11-58, Cl. 117—38.
Petrell, Wilfred M. to Reserve Mining Co. Rotary drive bushing. 2,859,939 11-11-58, Cl. 255—22.
Petropoulos, John C., and L. E. Cadwell, to American Cyanamid Co. Alkyd resins, their preparation, and compositions thereof with aminoplast resins. 2,860,119, 11-11-58, Cl. 260—45.5.
Pfaff, Jacob E.: *See*—
Ford, Tirey L., Shaw, Howell, Pfaff, and Rice. 2,860,198.
Pfizer, Chas., & Co., Inc.: *See*—
Larrabee, Clifford E. 2,860,141.
Stroop, John H. 2,859,750.
Stroop, John H. 2,859,751.
Philco Corp.: *See*—
Courson, Iber C. 2,859,715.
Groner, Miriam G. 2,860,063.
Phillips Mfg. Co.: *See*—
Plassmeyer, Louis E. 2,860,088.
Phillips Petroleum Co.: *See*—
Begley, John W., and McIntire. 2,860,174.
Banks, Robert L. 2,860,127.
Breese, Dick P. 2,859,873.
Cines Martin R. 2,860,126.
Goldtrap, Walter A., and Skinner. 2,860,030.
Jones, Rufus V. 2,860,123.
Jura, Peter C. 2,859,753.
Lanning, William C. 2,860,125.
Mertz, Clyde W. 2,860,140.
Nelson, William T. 2,859,833.
Parsons, James R. 2,859,757.
Peck, Alvin W. 2,859,594.
Pouppirt, Walter C. Jr. 2,860,250.
Pritchard, James E., and Canterino. 2,860,117.
Phillips Petroleum Co.: *See*—
Pritchard, James E., and Canterino. 2,860,120.
Scott, Cleveland R., and Ayers. 2,859,587.
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Cammaro, Louis A. 2,859,782.
Phin, Sidney E., and F. Kempler. Gluing device for box forming machines. 2,859,727, 11-11-58, Cl. 118—3.
Photobell Co.: *See*—
Edelman, Abraham, and Lasar. 2,859,603.
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Pilkington Brothers Ltd.: *See*—
Javaux, Gustave. 2,859,565.
Planck, Charles E. Exercising equipment. 2,859,967, 11-11-58, Cl. 272—1.
Plassmeyer, Louis E., to Phillips Mfg. Co. Vapor degreaser. 2,860,088, 11-11-58, Cl. 202—170.
Plastic Products Corp.: *See*—
Murdock, Forrest L., Sr., Boggs, and Beeson. 2,860,062.
Pohl, Robert G.: *See*—
Pakswer, Serge, and Pohl. 2,860,251.
Point, Marcel: *See*—
Felici, Noel, Marel, and Point. 2,860,264.
Poitdor, Edward C., to Optical Gaging Products, Inc. Engraving machine. 2,859,523, 11-11-58, Cl. 33—26.
Polizzi, Anthony C. Coffee filtering retainers. 2,859,684, 11-11-58, Cl. 99—310.
Pomagal, Jesse W., to Harnischfeger Corp. Regulated potential direct current source. 2,860,299, 11-11-58, Cl. 321—16.
Poole, Kenneth M.: *See*—
Cook, John S., Kempfner, and Poole. 2,860,278.
Porsche, Erich, to Jettka Metallwarenfabrik Edgar G. Schob. Yarn carrier. 2,859,602, 11-11-58, Cl. 66—126.
Post, Richard F., to United States of America, Atomic Energy Commission. Ratio computer. 2,860,241, 11-11-58, Cl. 250—27.
Pottol, Charles E. and R. F. Power weeder. 2,859,676, 11-11-58, Cl. 97—44.
Pottol, Robert F.: *See*—
Pottol, Charles E. and R. F. 2,859,676.
Potvin, Richard J. Blank for a moccasin shoe. 2,859,543, 11-11-58, Cl. 36—48.
Pouppirt, Walter C., Jr., to Phillips Petroleum Co. Fluid analyser. 2,860,250, 11-11-58, Cl. 250—43.5.
Power Jets (Research & Development) Ltd.: *See*—
Grey, John C. 2,859,954.
Roesch, Georges H. 2,859,925.
Prades, Manuel G. Combined level and inclinometer. 2,859,533, 11-11-58, Cl. 33—206.
Preferred Utilities Mfg. Corp.: *See*—
Lake, Harry E., and Breed. 2,859,806.
Presler, James L., to Corson Brothers, Inc. Harrow. 2,859,577, 11-11-58, Cl. 55—86.
Pridmore, Thomas C., and G. S. Ley, to United States of America, Navy. Oscilloscope display method and circuit for FM radar systems. 2,860,331, 11-11-58, Cl. 343—9.
Pritchard, James E., and P. J. Canterino, to Phillips Petroleum Co. Epoxy compounds as plasticisers for quaternized polymers. 2,860,117, 11-11-58, Cl. 260—30.4.
Pritchard, James E., and P. J. Canterino, to Phillips Petroleum Co. Resins of epoxy compounds and polymers of alkyl substituted vinylpyridines and the like. 2,860,120, 11-11-58, Cl. 260—45.5.
Progra Master Co., Inc.: *See*—
Lemieux, Frank J. 2,859,656.
Prophet, Otto O., to General Electric Co. Alarm clock movement. 2,859,585, 11-11-58, Cl. 58—22.
Provine, Robert W., L. T. Mehlhorn, W. L. Thompson, and J. V. Lawson, to D-X Sunray Oil Co. Stabilized paraffin wax resistant to discoloration by light. 2,860,066, 11-11-58, Cl. 106—270.
Pruner, Ronald L. Viewer. 2,859,546, 11-11-58, Cl. 40—61.
Public, Dedicated to the: *See*—
Franks, Gerald N. 2,859,485.
Purdy, Frederick A.: *See*—
De Magondeaux, Leo. 2,859,960.
Puretic, Mario J. Oscillating system for derrick booms. 2,859,982, 11-11-58, Cl. 212—66.
Quaker Oats Co., The: *See*—
Gregg, William, Jr., and M. P. Wineberg. 2,860,276.
Rachlin, Joel E. Air-flow ceiling arrangements. 2,859,681, 11-11-58, Cl. 98—40.

Sandor, Aurelius, to Sylvania Electric Products Inc. Cath[illegible]

Radio Corp. of America: *See*—
Bliss, Warren H. 2,860,181.
Kaplan, Martin. 2,860,243.
Lindsay, James E. 2,860,194.
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Rand Development Corp.: *See*—
Hitchcock, Reuben, Jr., Carden, and Alvord. 2,859,753.

Ransburg Electro-Coating Corp.: *See*—
Williams, Herschel A. 2,859,701.

Rapasky, Francis S., to The M. W. Kellogg Co. Fastening means and method. 2,860,230, 11-11-58, Cl. 219—94.

Ranland Corp., The: *See*—
Paksuer, Serge, and Pohl. 2,860,251.

Rawe, Martin. Securing device for valve-bags in valve-bag manufacturing machines. 2,859,670, 11-11-58, Cl. 93—8.

Raytheon Mfg. Co.: *See*—
Copson, David A. 2,859,534.
Smith, Burton H. 2,860,285.

Reach, Milton B. Golf club. 2,859,972, 11-11-58, Cl. 273—164.

Read, Harold L.: *See*—
Hix, Ira M., Kelly, and Read. 2,859,673.

Redfarn, Cyril A., to Walker Extract and Chemical Co. Ltd. Production of semi-ceramic materials. 2,860,058, 11-11-58, Cl. 106—39.

Reed, David A., Jr., and D. E. Keith, to North American Aviation, Inc. Quick disconnect structural fastener. 2,859,841, 11-11-58, Cl. 189—36.

Reed, Murray X. Transparent receptacle. 2,859,893, 11-11-58, Cl. 220—4.

Reerink, Wilhelm, W. Mllechenborn, and E. Nötzold. Process for re-wetting water-wetted solid particles. 2,859,917, 11-11-58, Cl. 241—15.

Reichert, William G. Automatic method and apparatus for making castings. 2,859,498, 11-11-58, Cl. 22—20.

Reiches, Sol L. Centering device for cathode ray tube and TV receiver using same. 2,860,329, 11-11-58, Cl. 340—387.

Reid Brothers Co., Inc.: *See*—
Farmer, James W., Fergnani, and Scriven. 2,859,564.

Reil, Herbert, to Triumph Werke Nuraberg A. G. Business machine improvement. 2,859,850, 11-11-58, Cl. 197—19.

Reinartz, Robert, and F. Rupp, to Maschinenfabrik Augsburg-Nurnberg A. G. Intermediate stacking device for sheets delivered by a printing machine. 2,859,966, 11-11-58, Cl. 271—86.

Reiners, Walter: *See*—
Furst, Stefan. 2,859,918.

Reitter, Teodoro. Rotary compressor. 2,859,911, 11-11-58, Cl. 230—147.

Rembrandt Lamp Corp.: *See*—
May, Frank J. 2,859,983.

Renard, Joffre R., to Societe Th. Pernin & Fils. Mobile mechanical handling device. 2,859,890, 11-11-58, Cl. 214—670.

Renaud, Harold E., to Ren-Ite Plastics, Inc. Surface plate. 2,859,530, 11-11-58, Cl. 33—174.

Ren-Ite Plastics, Inc.: *See*—
Renaud, Harold E. 2,859,530.

Renshaw, Theodore A.: *See*—
Lamson, Edward R., and Renshaw. 2,860,151.

Rentschler, Karl F., to Alfred Gauthier G. m. b. H. Photographic shutter for stereoscopic cameras. 2,859,674, 11-11-58, Cl. 95—11.5.

Research Aktiebolag: *See*—
Olsson, Ingemar. 2,859,671.

Research Laboratories, Inc.: *See*—
Mendenhall, Ivan L. 2,859,808.

Reserve Mining Co.: *See*—
Petrell, Wilfred M. 2,859,939.

Reymond, Michel, to Societe Civile d'Etude de Procédés de Ecellement. Explosively actuated gun. 2,859,444, 11-11-58, Cl. 1—106.

Reynaud, Francis, G. Gravey, and A. Roth, to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Aciéries Electriques d'Ugine. Process of removing arsenic from hydrochloric acid suspensions of arsenids and sulpharsenide ores utilizing gaseous chlorids. 2,860,047, 11-11-58, Cl. 75—112.

Reynolds, John D.: *See*—
Odell, Alexander D., Reynolds, and Hartfid. 2,860,259.

Rhodes, Joseph C., J. P. Segers, and A. V. Lacko, to Standard Oil Co. Automatic constant rate sample feeder. 2,859,620, 11-11-58, Cl. 73—421.

Rice, David: *See*—
Ford, Tirey L., Shaw, Howell, Pfaff, and Rice. 2,860,198.

Rider, Morris. Reflecting marker for vehicle doors. 2,859,662, 11-11-58, Cl. 88—81.

Rignud, Maurice, to Societe des Agrafes Francaises & d'Articles Metalliques (Societe Anonyme). Locking device. 2,859,995, 11-11-58, Cl. 292—53.

Rigert, Max, to McGraw-Edison Co. Circuit interrupter tripping relay. 2,860,207, 11-11-58, Cl. 200—109.

Ribeer, Arthur R. Foot pedal. 2,859,638, 11-11-58, Cl. 74—594.4.

Riverside Mfg. Co., Inc.: *See*—
Choate, James R. 2,859,905.

Roberson, William V. Shoulder brace. 2,859,746, 11-11-58, Cl. 128—87.

Roberts, Edward H., to General Electric Co. Refrigerator cabinet including closure sealing means. 2,859,495, 11-11-58, Cl. 20—69.

Robins, Erford E., and L. W. Lerch, to Columbus McKinnon Chain Corp. Hoist chain container. 2,859,937, 11-11-58, Cl. 284—107.

Robinson, Ellis. Printing frame. 2,859,661, 11-11-58, Cl. 88—24.

Roche, William J., 50% to F. Maddi. Carpenter's level. 2,859,527, 11-11-58, Cl. 33—88.

Roesch, Georges R., to Power Jets (Research and Development) Ltd. Cooling of turbines. 2,859,925, 11-11-58, Cl. 253—39.15.

Rogers, Delmar R. and E. L. Shelf and pole bracket. 2,859,879, 11-11-58, Cl. 211—90.

Rogers, Eleanor L.: *See*—
Rogers, Delmar R. and E. L. 2,859,879.

Rohm & Haas Co.: *See*—
Melamed, Sidney. 2,860,108.

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Abel, Gerhard, and Wohnhas. 2,860,109.

Rolfsen, Ole and P. Sintering apparatus. 2,859,957, 11-11-58, Cl. 266—21.

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Rolfsen, Ole and P. 2,859,957.

Rolle, Edward. Submarine signal bomb. 2,859,695, 11-11-58, Cl. 102—7.

Rolle, Edward W. Thermosetting polyester composition containing molybdenum disulfide and method of making bearings therefrom. 2,860,111, 11-11-58, Cl. 260—22.

Roller, Paul S. Electrolytic generation of metal hydroxide. 2,860,090, 11-11-58, Cl. 204—96.

Rosen, Jack M.: *See*—
Saltzman, Alvin R., and Rosen. 2,860,222.

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Katz, William E., and Rosenberg. 2,860,095.

Rosenberg, Norman W., to Ionics, Inc. Treatment of polyhydric solutions. 2,860,091, 11-11-58, Cl. 204—138.

Rosenberg, Theodore R. Apparatus for producing stereoscopic fluoroscopic images. 2,860,253, 11-11-58, Cl. 250—60.

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Loken, Bjarte, and Rosenkranz. 2,860,149.

Rosenkranz, George, and C. Djerassi, to Syntex S. A. Process of reducing 3-enol saponesin acylates with sodium borohydride. 2,860,133, 11-11-58, Cl. 260—239.55.

Rosenlund, Gordon T.: *See*—
Wright, Ansel J., and Rosenlund. 2,859,690.

Ross, John L. F., to The Ajax Mfg. Co. Pivotally mounted laterally spaced fluid pressure means for twisting crankshafts. 2,859,793, 11-11-58, Cl. 153—78.

Ross Operating Valve Co.: *See*—
Di Tirro, Domenic A., and Et. 2,859,735.

Roth, André: *See*—
Reynaud, Francis, Gravey, and Roth. 2,860,047.

Roussel, Paul A. H.: *See*—
Berger, Francois C. E. M., and Roussel. 2,860,324.

Rovich, Danas D. Building spacer. 2,859,486, 11-11-58, Cl. 20—.5.

Rudolph, Anton: *See*—
Nagelschmidt, Rudolf, and Rudolph. 2,860,118.

Ruff, James W.: *See*—
Ford, Franklin C., Zisso, Cook, and Ruff. 2,860,270.

Ruhl, Charles L. Baffle system in space or wall heater. 2,859,742, 11-11-58, Cl. 126—92.

Ruhrchemie Akt. and Steinkohlen-Elektrizitat Akt.: *See*—
Justi, Eduard. 2,860,175.

Runge, Frank E., to The Soundscriber Corp. Turntable changing mechanism for magnetic recorder. 2,859,972, 11-11-58, Cl. 274—4.

Runge, Frank E., W. H. Lyon, and D. F. Balmer, to The Soundscriber Corp. Turntable for magnetic recorder. 2,860,191, 11-11-58, Cl. 179—100.2.

Rupp, Fritz: *See*—
Reinartz, Robert, and Rupp. 2,859,966.

Rusch, William H., to Worldsbest Industries, Inc. Removable gate. 2,859,811, 11-11-58, Cl. 160—136.

Rusco Laboratories, Inc.: *See*—
Jackson, Clyde R. 2,860,084.

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Meis, Helmut, and Sauer. 2,860,139.

Saam, John C., to Dow Corning Corp. Method of preparing β-cyanoethyltrichlorosilane. 2,860,153, 11-11-58, Cl. 260—448.2.

Sacha, Florence F. Drapery protectors. 2,859,810, 11-11-58, Cl. 160—124.

St. Joe Machines, Inc.: *See*—
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Salamonovich, George M., to Gilfillan Bros. Inc. Servo overtravel correcting system. 2,860,293, 11-11-58, Cl. 318—28.

Salamy, Alice M.: *See*—
Salamy, Saad F. 2,859,580.

Salamy, Saad F., deceased, by A. M. Salamy, administratrix. Rotary reel power mower. 2,859,580, 11-11-58, Cl. 56—26.

Salmon, Leonard. Jig for holding twist drills. 2,859,569, 11-11-58, Cl. 51—219.

Saltzman, Alvin R., and J. M. Rosen. Miniature high power, high temperature resistor. 2,860,222, 11-11-58, Cl. 201—65.

Salzberg, Harold K., and W. R. Kinney, to The Borden Co. Modified protein preparation. 2,860,062, 11-11-58, Cl. 106—146.

Sampietro, Achilles C., to Thompson Products, Inc. Electric circuit. 2,860,300, 11-11-58, Cl. 321—45.

Samuel, David G., Jr.: *See*—
Griffith, George L., Jr., and Samuel. 2,860,041.

Sanden, Grant E., and C. T. Wallis, to General Motors Corp. Windshield wiper blade assembly. 2,859,466, 11-11-58, Cl. 15—248.

Sanders Associates, Inc.: *See*—
Bales, Caleb W. 2,860,308.

Sandlin, Elmore L., and M. M. Smith. Governor for internal combustion engines. 2,859,740, 11-11-58, Cl. 123—108.

Seinich, Robert L., and W. D. Lanier, to The Fluor Corp., Ltd. Cooling tower mist eliminator. 2,859,831, 11-11-58, Cl.

Stiteler, Charles H., to United States Rubber Co. Making trans-N-carbamylamic esters. 2,860,157, 11-11-58, Cl.

Sandor, Aurelius, to Sylvania Electric Products Inc. Cathode ray tube. 2,860,271, 11-11-58, Cl. 313—77.

Sandus Trust: *See*—
Stoll, Arthur, Angliker, Barfuss, and Kussmaul. 2,860,066.

Sarah, Thomas F., to The Enterprise Mfg. Co. Free spool fishing reel. 2,859,924, 11-11-58, Cl. 242—84.54.

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Kreppa, James E., Jr. 2,860,312.

Sarver, Carter L. Connection facilitating trailer hitch. 2,859,981, 11-11-58, Cl. 280—477.

Sauer, Hubert: *See*—
Meis, Helmut, and Sauer. 2,860,129.

Saul & Co.: *See*—
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Savoy Leather Mfg. Corp.: *See*—
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Scagnelli, Henry J., to Bell Telephone Laboratories, Inc. Spring clamp electron tube socket. 2,860,315, 11-11-58, Cl. 339—75.

Scardino, Joseph P. Supports for wall installed accessories. 2,859,606, 11-11-58, Cl. 72—5.

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Schering Corp.: *See*—
Sherlock, Margaret H., and Sperber. 2,860,128.

Schick Inc.: *See*—
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Schlage, Ernest L., to Schlage Lock Co. Heat releasable device for hold open door closers. 2,859,842, 11-11-58, Cl. 189—40.

Schlage Lock Co.: *See*—
Green, Armin H. 2,859,907.
Schlage, Ernest L. 2,859,842.

Schlatter, Maurice J., to California Research Corp. Process for producing 1,2,3-trialkylbenzenes by alkyl transfer reactions. 2,860,169, 11-11-58, Cl. 260—612.

Schlumberger Well Surveying Corp.: *See*—
Doll, Henri-Georges. 2,859,915.
Doll, Henri-Georges. 2,859,916.

Schmerling, Louis, and J. P. Luvisi, to Universal Oil Products Co. Hexachlorobicycloheptenyl benzenesulfonic acid. 2,860,161, 11-11-58, Cl. 260—505.

Schonrock, Edwin A. Tilting dump trailers for detachable fifth wheel and winch mounting assembly. 2,860,006, 11-11-58, Cl. 298—20.

Schrader, Dale L., to American Metal Climax, Inc. Linear actuator. 2,860,286, 11-11-58, Cl. 310—112.

Schraufstätter, Ernst, to Schenley Industries, Inc. Diaryl disulfonamides and processes for their production. 2,860,165, 11-11-58, Cl. 260—556.

Schröder, Karl. Method and composition for increasing animal growth rate. 2,860,049, 11-11-58, Cl. 99—2.

Schultz, John B., to Radio Corp. of America. Transistor amplifier with overload protection. 2,860,196, 11-11-58, Cl. 179—171.

Schurr, Charles A.: *See*—
Dobes, Michael J., and Schurr. 2,860,202.

Scott, Cleveland E., and A. L. Avers, to Phillips Petroleum Co. Hypergolic fuel and method of propelling rockets. 2,859,587, 11-11-58, Cl. 60—35.4.

Scovill Mfg. Co.: *See*—
Shotton, Harold F. 2,859,867.

Scriven, Albert K., Jr.: *See*—
Farmer, James W., Ferguani, and Scriven. 2,859,564.

Searle, G. D., & Co.: *See*—
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Sedgfield, Hugh B., to The Sperry Gyroscope Co. Ltd. Gyroscopic apparatus. 2,859,628, 11-11-58, Cl. 74—5.

Seewack, Benjamin. Shower drain combination. 2,859,452, 11-11-58, Cl. 4—146.

Segall, Louis H., to Bendix Aviation Corp. Sparking device. 2,860,272, 11-11-58, Cl. 313—130.

Segers, John P.: *See*—
Rhodes, Joseph C., Segers, and Lacko. 2,859,620.

Seim, Maynard C., to National Steel Corp. Ventilating tunnel. 2,859,683, 11-11-58, Cl. 98—56.

Sennstrom, Harold E., and A. A. Marchetti, to American Bosch Arma Corp. Fuel injection nozzle. 2,860,010, 11-11-58, Cl. 299—107.6.

Servo Corp. of America: *See*—
Blackstone, Henry. 2,860,179.
Hopgood, Roy C. 2,859,652.
Blackstone, Henry, and Willey. 2,859,653.

Shafer, Marcus. Paste spreading machine. 2,859,462, 11-11-58, Cl. 15—99.

Shannon, Roland P., to National Broach & Machine Co. Gear shaving cutter. 2,859,508, 11-11-58, Cl. 29—103.

Shappell, Stanley, to Sylvania Electric Products Inc. Overload relief mechanism. 2,859,846, 11-11-58, Cl. 192—56.

Sharp, Shelby P., and A. Stelts, Jr., to Pan American Petroleum Corp. Process for preparation of vinyl monoesters. 2,860,159, 11-11-58, Cl. 260—491.

Shaw, John B.: *See*—
Ford, Tirey L., Shaw, Howell, Pfaff, and Rice. 2,860,198.

Sheehan, Robert T. Articulated belt conveyor. 2,859,861, 11-11-58, Cl. 198—109.

Sheffield Corp., The: *See*—
Aller, Willis F., and Byrkett. 2,859,529.

Shell Development Co.: *See*—
Furman, Kenneth E., Finch, and Hearne. 2,860,146.
Peterson, Walter H., Abrams, and Stross. 2,860,104.

Shelton, Claude, Jr., to The Mar-Gold Corp. Machine for forming and handling margarine and the like. 2,859,578, 11-11-58, Cl. 53—123.

Sherlock, Margaret H., and N. Sperber, to Schering Corp. Carbamate esters of hydroxyalkyl piperazino alkyl phenothiazines. 2,860,128, 11-11-58, Cl. 260—243.

Sherman, Albert J., to Curtiss-Wright Corp. Simulated aircraft thrust computing system. 2,859,539, 11-11-58, Cl. 35—12.

Shipley, Randall B., to Tennessee Valley Authority. Impedance relay tester. 2,860,308, 11-11-58, Cl. 324—28.

Shiu, Thomas B.: *See*—
Cummings, Thomas N., Petersen, and Shiu. 2,859,714.

Shockey, Cecil M. Suction cleaner for doctor blades for drying rollers. 2,859,537, 11-11-58, Cl. 34—85.

Shontz, Harry W. Outboard motor lift. 2,859,929, 11-11-58, Cl. 248—4.

Short, Byerl M., to Empire Cable Corp. Battery cable terminal. 2,860,319, 11-11-58, Cl. 339—231.

Short, Richard P. J. Machine tool guiding means. 2,860,014, 11-11-58, Cl. 308—6.

Shotton, Harold F., to Scovill Mfg. Co. Refillable lipstick containers. 2,859,867, 11-11-58, Cl. 206—56.

Shuidener, Henry L., to Water Service Laboratories, Inc. Unit for checking corrosion, slime and scale in water recirculating installations. 2,859,766, 11-11-58, Cl. 137—263.

Shunk, Clifford: *See*—
Folkers, Karl, and Shunk. 2,860,131.

Shyne, James J.: *See*—
Fahnoe, Frederick, and Shyne. 2,860,068.

Simpson, Warren O., to Western Electric Co., Inc. Article-handling apparatus. 2,859,885, 11-11-58, Cl. 214—18.

Simpson, Warren O., and F. L. Strain, to Western Electric Co., Inc. Article-loading apparatus. 2,859,854, 11-11-58, Cl. 198—26.

Sinclair, Carroll B.: *See*—
Williams, Ronald L., Sinclair, and Burkhart. 2,860,226.

Singer Mfg. Co., The: *See*—
Hayes, Frank A. 2,860,267.

Sisson, Kenneth O., to General Motors Corp. Suspension system for spinner type washing machine. 2,859,877, 11-11-58, Cl. 210—365.

Sitris, Gabriel M., to Carrick Products. Welding nut with pilot portion defined by flanges and having welding projections on said flanges. 2,859,790, 11-11-58, Cl. 151—41.7.

Skinner, Bradley: *See*—
Goldtrap, Walter A., and Skinner. 2,860,080.

Skinner, John A.: *See*—
Tholstrup, Henry L., and Skinner. 2,859,851.

Skog, Henry A.: *See*—
Fox, Richard D., and Skog. 2,859,856.

Skog, Henry A., to Canning Equipment Co. Fruit pitter having spiral knife and pit retaining member. 2,859,783, 11-11-58, Cl. 140—28.

Skrebba-Werk K. G.: *See*—
Jopp, Walter. 2,859,442.
Jopp, Walter. 2,859,443.

Slaughter, Gibbs M., to Acme Brick Co. Incinerator. 2,859,716, 11-11-58, Cl. 110—18.

Slayter, Games, to Owens-Corning Fiberglas Corp. Apparatus for producing a filamentary mat material. 2,859,506, 11-11-58, Cl. 28—1.

Smart, Charles L.: *See*—
White, Blanche B., and Smart. 2,860,132.

Smidth, F. L., & Co.: *See*—
Heilmann, Thorbjorn. 2,860,061.
Petersen, Louis. 2,859,955.

Smisko, John, to Aeroquip Corp. Fire protective sleeve for hose end fittings. 2,859,985, 11-11-58, Cl. 285—247.

Smisko, Paul, to Stackpole Carbon Co. Dynamoelectric brush. 2,860,076, 11-11-58, Cl. 117—224.

Smith, Ben J.: *See*—
Hollowell, John R., Smith, and Butler. 2,860,004.

Smith, Burton H., to Raytheon Mfg. Co. Electron discharge devices. 2,860,285, 11-11-58, Cl. 315—39.

Smith, Carl A. Lock lip side feed punch. 2,859,818, 11-11-58, Cl. 164—109.

Smith, Earle K.: *See*—
Edwards, Donald V., and Smith. 2,860,268.

Smith, Keith J.: *See*—
Newcomer, Jack S., Smith, and Linder. 2,860,166.

Smith, Maurice M.: *See*—
Sandlin, Elmore L., and Smith. 2,859,740.

Smith, Norman A.: *See*—
Emmons, Joseph V., and Smith. 2,859,645.

Smith, William R., and G. R. Monaco, to The A. C. Gilbert Co. Reversing forward travel in vibration operated toy. 2,859,556, 11-11-58, Cl. 46—245.

Snow, John E., to Acme Precision Products, Inc. Lifter strap for aircraft barriers. 2,859,928, 11-11-58, Cl. 244—110.

Snyder, Blake: *See*—
Krehl, Willard A., and Snyder. 2,860,051.

Societe Anonyme de Machines Electrostatiques: *See*—
Felici, Noel, Morel, and Point. 2,860,264.

Societe Civile d'Etude de Procedes de Scellement: *See*—
Reymond, Michel. 2,859,444.

Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Reynaud, Francis, Gravey, and Roth. 2,860,047.

Societe des Agrafes Francaises & d'Articles Metalliques (Societe Anonyme): *See*—
Rigaud, Maurice. 2,859,995.

Societe Th. Pernin & Fils: *See*—
Renard, Joffre R. 2,859,890.

Socke, John E., to American Can Co. Support for can body internal treating devices. 2,859,720, 11-11-58, Cl. 118—317.

Socony Mobil Oil Co., Inc.: *See*—
Duchacek, Charles F. 2,860,064.
Duchacek, Charles F. 2,860,065.

Tengue, Walter D., Jr., to Bendix Aviation Corp. Valve.

Union Stock Yard and Transit Co. of Chicago, The: *See*—

Soinick, Robert L., and W. D. Lanier, to The Finor Corp., Ltd. Cooling tower mist eliminator. 2,859,631, 11-11-58, Cl. 183—22.

Soroban Engineering, Inc.: *See*—
MacNeill, John H. 2,859,816.

Soundscriber Corp., The: *See*—
Runge, Frank E. 2,859,972.
Runge, Frank E., Lyon, and Balmer. 2,860,191.

Spahr, Werner, to Deutsche Telephonwerke und Kabelindustrie Akt. (De Te We). Actuating mechanism. 2,859,631, 11-11-58, Cl. 74—112.

Sparrow, Hubert T., to Minneapolis-Honeywell Regulator Co. Remote control switching circuit. 2,860,263, 11-11-58, Cl. 307—140.

Specialties Development Corp.: *See*—
Daley, Horace S. 2,859,892.
Neigel, Joseph A. 2,859,906.

Spencer, Percival H. Toy airplane. 2,859,553, 11-11-58, Cl. 46—74.

Spencer Rubber Products Co.: *See*—
Johnson, Roy W., Jr. 2,860,233.

Spencer, William H. Apparatus for making elastic bands. 2,859,474, 11-11-58, Cl. 18—6.

Sperber, Nathan: *See*—
Sherlock, Margaret H., and Sperber. 2,860,188.

Sperr, Charles J., Jr., to Warner Electric Brake & Clutch Co. Electric control circuit. 2,860,262, 11-11-58, Cl. 307—137.

Sperry Gyroscope Co. Ltd., The: *See*—
Sedgfield, Hugh B. 2,859,623.

Sperry Rand Corp.: *See*—
Best, Albert M. 2,859,862.
Carter, Leslie F. 2,859,624.
Hill, George B. 2,859,687.
Holliday, James H., and Sturla. 2,859,680.
Ibaugh, Harry C., and West. 2,859,864.
Kellogg, Spencer, 2nd. 2,860,335.
Welsh, Herbert F., Eckert, and Blumenthal. 2,860,325.
West, James R. 2,859,860.

Spiselman, Phillip P. Filter-supporting funnel. 2,859,878, 11-11-58, Cl. 210—541.

Spray Products Corp.: *See*—
Orr, Charles P. 2,860,009.

Square D Co.: *See*—
Stock, Howard P. 2,860,206.

Staatsbedrijf der Posterijen, Telegrafie en Telefonie: *See*—
Oberman, Roelof M. M. 2,860,189.

Stackpole Carbon Co.: *See*—
Emisko, Paul. 2,860,076.

Stadler, Henry L., to Bell Telephone Laboratories, Inc. Barium titanate memory device. 2,860,322, 11-11-58, Cl. 340—173.

Stalker, Edward A. Radial diffusion compressors having reduced rotor exits. 2,859,900, 11-11-58, Cl. 230—120.

Stalker, Edward A. Stators for axial flow compressors. 2,859,910, 11-11-58, Cl. 230—120.

Stamicarbon N. V.: *See*—
Dijkstra, Hendrik. 2,860,252.

Stampa, Gerhard K. H., to Firma Dragerwerk, Heinr. & Bernh. Drager. Dust respirator. 2,859,747, 11-11-58, Cl. 128—146.

Standard Oil Co. (Indiana): *See*—
Bolton, Benjamin A., and Van Strien. 2,860,113.
Bolton, Benjamin A., and Van Strien. 2,860,114.
Crews, Lowell T., and Kalinowski. 2,860,067.
Rhodes, Joseph C., Segers, and Lacko. 2,859,620.

Stanley, Thomas O., to Radio Corp. of America. Semi-conductor amplifier circuit. 2,860,195, 11-11-58, Cl. 179—171.

Stanton, George W., and F. A. Ehlers, to The Dow Chemical Co. Stabilized compositions comprised of polymers and copolymers of acrylonitrile and method for their preparation. 2,860,121, 11-11-58, Cl. 260—45.9.

Starck, Hans: *See*—
Starck, Werner and H. 2,860,124.

Starck, Werner and H., to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Process for preparing highly viscous soluble polyvinylalcohols. 2,860,124, 11-11-58, Cl. 260—91.3.

Stearn, Franklin A., to International Telephone and Telegraph Corp. Switch control apparatus. 2,860,212, 11-11-58, Cl. 200—159.

Stearns, Harry C. Carburetor float chamber screen and sediment trap. 2,859,874, 11-11-58, Cl. 210—106.

Steel Heddle Mfg. Co.: *See*—
Parks, Robert F. 2,859,779.

Steele, Floyd G., to Digital Control Systems, Inc. Digital position servo systems. 2,860,294, 11-11-58, Cl. 318—28.

Steele, Ray N. Tray attachment for automobiles and the like. 2,860,021, 11-11-58, Cl. 211—21.

Steen, Carl A. Electric heating apparatus. 2,860,225, 11-11-58, Cl. 219—35.

Steinkohlen-Elektrizitat Akt.: *See*—
Justi, Eduard. 2,860,175.

Stelts, Alfred, Jr.: *See*—
Sharp, Shelby P., and Stelts. 2,860,159.

Sterling Drug Inc.: *See*—
Clinton, Raymond O. 2,860,158.

Sterling Precision Instrument Corp.: *See*—
Bachman, Rudolph. 2,859,948.

Stern, Emil F.: *See*—
Wrightson, Vic C., and Stern. 2,859,600.

Stevens, Bertram, to Thorn Electrical Industries Ltd. Illuminated instrument panel. 2,860,234, 11-11-58, Cl. 240—8.16.

Stevens, F. B., Inc.: *See*—
Barton, James. 2,860,090.

Stewart-Warner Corp.: *See*—
Allen, Arthur C. 2,859,822.

Stitzer, Charles H., to United States Rubber Co. Making trans N-carbamylamic esters. 2,860,157, 11-11-58, Cl. 260—482.

Stock, Howard P., to Square D Co. Electromagnetic relay. 2,860,206, 11-11-58, Cl. 200—104.

Stockdale, William D., to Illinois Tool Works. Assembly and fastener therefor. 2,859,489, 11-11-58, Cl. 16—42.

Stockholm, Raymond J.: *See*—
Strickland, Albert N., and King. 2,860,221.

Stoelting, Herman O., and F. V. Cunningham, to McGraw-Edison Co. Circuit interrupting device. 2,860,210, 11-11-58, Cl. 200—115.

Stolbach, Henry J., to National Food Slicing Machine Co., Inc. Food slicer having safety switch. 2,859,785, 11-11-58, Cl. 146—102.

Stoll, Albert. Apparatus for making self-locking nuts having radially deformed thread portions. 2,859,459, 11-11-58, Cl. 10—72.

Stoll, Arthur, R. Angliker, F. Bartgess, and W. Kuesmaul, to Saul & Co., nominee of Fidelity Union Trust Co., executive trustee under Sandos Trust. Stable solutions of pure cardioactive glycosides. 2,860,086, 11-11-58, Cl. 167—65.

Stolle, Anthony D.: *See*—
Gallagher, William P., Stolle, and Bielik. 2,859,511.

Stone, Floyd H. Flash welding machine. 2,860,231, 11-11-58, Cl. 219—97.

Stoneback, Donald F.: *See*—
Kaghan, Walter S., and Stoneback. 2,859,481.

Stover, Harry E., to Anchor Hocking Glass Corp. Sealing machine. 2,859,858, 11-11-58, Cl. 198—34.

Strain, Frederick L.: *See*—
Simpson, Warren O., and Strain. 2,859,854.

Stramowski, Edmund J., to McGraw-Edison Co. Repeating circuit interrupters. 2,860,205, 11-11-58, Cl. 200—89.

Streed, William R. Sampling valve for suspensions. 2,859,765, 11-11-58, Cl. 137—242.

Strickland, Albert N., and B. B. King, to R. J. Stockholm. Tire alarm. 2,860,321, 11-11-58, Cl. 340—58.

Stroop, John H., to Chas. Pfizer & Co., Inc. Hypodermic syringe. 2,859,750, 11-11-58, Cl. 128—218.

Stroop, John H., to Chas. Pfizer & Co., Inc. Hypodermic syringe. 2,859,751, 11-11-58, Cl. 128—218.

Stross, Fred H.: *See*—
Peterson, Walter H., Abrams, and Stross. 2,860,104.

Studebaker-Packard Corp.: *See*—
De Lorean, John Z. 2,859,977.
McFarland, Forest R. 2,859,976.
Weise, Erwin A. 2,859,772.

Sturla, Peter L.: *See*—
Holliday, James H., and Sturla. 2,859,680.

Sulf, Fernand A. Moulded element portable typewriter. 2,859,852, 11-11-58, Cl. 197—22.

Sun Oil Co.: *See*—
Thompson, William E. 2,860,142.

Sundberg, Robert L., M. E. Chiddix, and E. P. Williams, to General Aniline & Film Corp. Preparation of aminoalkyl acids and derivatives thereof. 2,860,160, 11-11-58, Cl. 260—501.

Superior Mfg. Co.: *See*—
Naldig, Dan. 2,859,849.

Sutton, Vera. Puppy comforter. 2,859,731, 11-11-58, Cl. 119—1.

Swanson, Donald F., and E. J. Buzicky, to Whirlpool Corp. Storage bin for ice cube making machine. 2,860,027, 11-11-58, Cl. 312—312.

Swanson, Wallace R., to Boeing Airplane Co. Fuel cell bead retainers. 2,859,812, 11-11-58, Cl. 160—368.

Swart, Richard H., and R. W. Ayling, to Carrier Corp. Crescent shaped reed valve. 2,859,912, 11-11-58, Cl. 230—172.

Swart, Richard H., Sr., to Carrier Corp. Lubrication means. 2,860,016, 11-11-58, Cl. 309—19.

Swift & Co.: *See*—
Bradford, Purdy. 2,860,056.
Burnett, Alexander H. 2,859,570.
Dowd, Laurence E. 2,859,576.

Swift, Howard R.: *See*—
Molter, Richard C., and Swift. 2,860,059.

Sykes, Langthorne, to United States of America, Navy. Transistor integrator. 2,860,260, 11-11-58, Cl. 307—88.5.

Sylvania Electric Products Inc.: *See*—
Barr, Francis A. 2,859,794.
Sandor, Aurelius. 2,860,271.
Shappell, Stanley. 2,859,846.

Syntex S. A.: *See*—
Loken, Bjarte, and Rosenkranz. 2,860,149.
Rosenkranz, George, and Djerassi. 2,860,153.

Tack, Carl E., F. E. Bachman, and G. W. Crabtree, to American Steel Foundries. Rotor brake actuating mechanism. 2,859,838, 11-11-58, Cl. 188—59.

Taft, Ernest A., Jr., and F. H. Horn, to General Electric Co. Silicon current controlling devices. 2,860,219, 11-11-58, Cl. 301—42.

Talboys, Henry H., to Nordberg Mfg. Co. Track working machine. 2,859,706, 11-11-58, Cl. 105—157.

Tammen, Glenn W., to St. Joe Machines, Inc. Portable utility. 2,860,224, 11-11-58, Cl. 219—19.

Taunton, Gerald, to Wilts United Dairies Ltd. Means for sealing materials by heat. 2,859,794, 11-11-58, Cl. 154—42.

Tavares, Arthur: *See*—
Morris, Louis, Jr. 2,859,491.

Taylor, John A. H., and J. A. M. Grout, to George Kent, Ltd. Pen mountings for recording instruments. 2,860,028, 11-11-58, Cl. 346—139.

Taylor, Nathan E. Combination bushing remover, seat reamer and bushing setter. 2,859,456, 11-11-58, Cl. 7—14.1.

Teague, Walter D., Jr., to Bendix Aviation Corp. Valve for fluid pumping system and regulation means therefor. 2,859,768, 11-11-58, Cl. 137—468.
Tee-Pak, Inc.: *See*—
Firth, John W., and Filter. 2,860,052.
Teletype Corp.: *See*—
Arke, Robert E. 2,859,623.
Tellmann, Werner, to Demag-Elektrometallurgie G. m. b. H. Device for balancing induction furnace phase currents. 2,860,287, 11-11-58, Cl. 307—14.
Tennessee Valley Authority: *See*—
Shipley, Randall B. 2,860,302.
Test, Louis D., to United States of America, Atomic Energy Commission. Differential pulse height discriminator. 2,860,242, 11-11-58, Cl. 250—27.
Teubner, Edmund E. Machine tool table mechanism. 2,859,667, 11-11-58, Cl. 90—18.
Texas Co., The: *See*—
Wilson, Herman I. 2,859,588.
Texas Instruments Inc.: *See*—
Karnavas, Ealdores C. 2,860,291.
Thiokol Chemical Corp.: *See*—
Youngquist, Robertson, Ferris, and Bell. 2,859,866.
Tholstrup, Henry L., to Commercial Controls Corp. Generation of line feed signals in tape punch equipment. 2,860,817, 11-11-58, Cl. 164—113.
Tholstrup, Henry L., and J. A. Skinner; said Tholstrup assor. to Commercial Controls Corp. Shift functions circuits. 2,859,851, 11-11-58, Cl. 197—20.
Thomas, Charles M. Pipe marker. 2,859,522, 11-11-58, Cl. 33—21.
Thomas, Michael. Threaded connector for attaching armored cable to a junction box wall. 2,859,984, 11-11-58, Cl. 285—158.
Thompson Products, Inc.: *See*—
Sampietro, Achilles C. 2,860,300.
Thompson, Warren L.: *See*—
Provine, Robert W., Mehlhorn, Thompson, and Lawson. 2,860,086.
Thompson, William E., to Sun Oil Co. Wetting agents and their preparation. 2,860,143, 11-11-58, Cl. 260—309.6.
Thomson, Winslow E.: *See*—
Woodward, Bernard, Jr., and Thomson. 2,859,784.
Thorn Electrical Industries Ltd.: *See*—
Stevens, Bertram. 2,860,234.
Thorne, Maurice A., and L. M. Forbush, to General Motors Corp. Combination hydraulic and mechanical brake. 2,859,839, 11-11-58, Cl. 188—78.
Times Facsimile Corp.: *See*—
McConnell, Kenneth R., and Marsan. 2,860,180.
Toledo Scale Corp.: *See*—
Borden, Joseph H. 2,859,838.
Tomchak, Joseph A. Tire testing rack. 2,859,609, 11-11-58, Cl. 73—45.5.
Tongue, Ben H.: *See*—
Horowitz, Irving. 2,860,263.
Toonen, Vincent F., and W. F. Warns. Termite shield. 2,859,487, 11-11-58, Cl. 20—1.
Ternberg, Henning T., to Modern Plastic Machinery Corp. Adjustable extrusion dies. 2,859,475, 11-11-58, Cl. 18—12.
Toro Mfg. Corp. of Minnesota: *See*—
Kroll, Harley E., and Benson. 2,859,581.
Towinaver, Inc.: *See*—
Berney, Joseph C. 2,859,814.
Towner, George H., to Northrop Aircraft, Inc. Phase-amplitude detector. 2,860,306, 11-11-58, Cl. 324—39.
Towner, George H., to Northrop Aircraft, Inc. Digital servo system. 2,860,292, 11-11-58, Cl. 318—28.
Track, Frank A. Fluid suspension for a load carrying body. 2,859,711, 11-11-58, Cl. 105—453.
Travis, Ralph L., ½ to E. D. Schade and ½ to D. Moseley. Device for sharpening chain saw chains. 2,859,642, 11-11-58, Cl. 76—31.
Treadwell, Cyril G., to International Standard Electric Corp. Keyed frequency modulation carrier wave systems. 2,860,185, 11-11-58, Cl. 179—15.
Triolo, Louis. Envelope making machine. 2,859,672. 11-11-58, Cl. 93—61.
Trip, Lucien H. Automatic self starter for internal combustion engines. 2,860,256, 11-11-58, Cl. 290—2.
Triumph Werke Nurnberg A. G.: *See*—
Reil, Herbert. 2,859,880.
Trojan Powder Co.: *See*—
Griffith, George L., Jr., and Samuel. 2,860,041.
Trott, Donald E., to California Research Corp. Hydraulic fracturing with overflushing. 2,859,819, 11-11-58, Cl. 166—22.
Trott, Donald E., to California Research Corp. Method of reducing water production in oil wells. 2,859,820, 11-11-58, Cl. 166—22.
Trott, Donald E., to California Research Corp. Method of increasing permeability of subterranean formations by hydraulic fracturing. 2,859,821, 11-11-58, Cl. 166—42.
Tschudi, Traugott, and A. P. Knapp, to Knapp Mills Inc. Valve seat and housing. 2,859,767, 11-11-58, Cl. 137—315.
Tudor Metal Products Corp.: *See*—
Modica, Joseph, Jr. 2,859,968.
Modica, Joseph, Jr. 2,859,969.
Tufts, William F., to L. M. Leathers Sons. Pants guard. 2,859,903, 11-11-58, Cl. 223—98.
Tumath, Jack L., to Radioactive Products, Inc. Radiographic camera. 2,860,256, 11-11-58, Cl. 250—106.
Tupper Corp.: *See*—
Tupper, Earl S. 2,859,786.
Tupper, Earl S., to Tupper Corp. Coupling means for tubular vessels. 2,859,786, 11-11-58, Cl. 150—.5.
Uhl, Wolfgang: *See*—
Leitz, Ernst, Brück, and Uhl. 2,860,200.
Union Stock Yard and Transit Co. of Chicago, The: *See*—
Morrison, Willard L. 2,858,453.
Unitcast Corp.: *See*—
Flochr, Walter L. 2,858,420.
U. S. Industries, Inc.: *See*—
Zimmerman, Louis. 2,858,591.
United States of America
Agriculture: *See*—
Jansen, Eugene F. 2,860,055.
Air Force: *See*—
Bulvid, George M. 2,859,770.
Johnson, Francis M. 2,859,696.
Army: *See*—
High, Roy F., and Barfield. 2,859,453.
Jakubowicz, Edward. 2,860,246.
Murphy, William P. 2,859,664.
Atomic Energy Commission: *See*—
Davidson, Norman R., and Hyde. 2,860,032.
Ford, Franklin C., Zinn, Cook, and Ruff. 2,860,270.
Grinstead, Robert R. 2,860,031.
Hester, Ross E., Kippenhan, and Lamb. 2,860,279.
Jefferson, Sidney. 2,860,269.
Post, Richard F. 2,860,241.
Test, Louis D. 2,860,242.
Wigner, Eugene P., and Ohlinger. 2,860,093.
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Navy: *See*—
Bey, Paul P., and Hastings. 2,860,305.
Cowdery, Robert E., and Brown. 2,860,234.
Daniels, Howard L., and Anderson. 2,860,214.
Emley, Warren E., Jr. 2,859,987.
Myers, David M. 2,859,722.
Parker, Leland L., and Matteson. 2,859,629.
Pridmore, Thomas C., and Ley. 2,860,231.
Sykes, Langthorne. 2,860,260.
Winter, George W. 2,860,282.
United States Rubber Co.: *See*—
Case, Richard Y. 2,859,599.
Conly, James C. 2,860,142.
Stiteler, Charles H. 2,860,157.
United States Steel Corp.: *See*—
Buehler, Walter O. 2,859,698.
Universal Oil Products Co.: *See*—
Jones, Edwin K., and Dettner. 2,860,173.
Nixon, William G., Bicek, and Murray. 2,860,045.
Schmerling, Louis, and Lavisi. 2,860,161.
University of Toronto, Ontario College of Education, The Guidance Centre: *See*—
Parmenter, Morgan D. 2,859,541.
V-M Corp.: *See*—
Morrison, James L. D. 2,859,632.
Vanderhout, Harry: *See*—
Pabst, Edwin L., and Vanderhout. 2,859,965.
Van Strien, Richard E.: *See*—
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ISSUED NOVEMBER 11, 1958

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Classification of Designs

D 8—12: Des. 183,875
D 6— 2: Des. 183,906
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D87— 2: Des. 183,905
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D91— 1: Des. 183,903
2: Des. 183,884

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
November 11, 1958 Volume 736 Number 2

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 16, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Oct. 15, 1958. *Chairman, Committee on Enrollment.*

Trademark Suits

Notices under 15 U. S. C. 1118; Trademark Act of July 5, 1946

Reg. No. 75,365 (ALLIGATOR BRAND AND DESIGN), Ferguson Waterproof Co., Oiled clothing; **Reg. No. 251,291** (ALLIGATOR), The Alligator Co., Fabric coats, jackets, pants, hats, etc., for men, women, etc., filed Dec. 10, 1956, D. C., S. D. N. Y., Doc. 115/272, *The Alligator Co.* v. *David Crystal, Inc.* Consent judgment; injunction issued Sept. 22, 1958.

Reg. No. 95,516 (ROCK OF AGES AND DESIGN), Rock of Ages Corp., Granite blocks and monumental stones; **Reg. No. 194,826**, same, Granite monuments and memorials; **Reg. No. 196,033**, same, Polished blocks, or slabs of granite, etc.; **Reg. No. 641,854**, same, Granite surface plates; **Reg. No. 641,855** (ROCK OF AGES), same, Granite monuments and memorials, filed Sept. 30, 1958, D. C., S. D. N. Y., Doc. 138/177, *Rock of Ages Corp.* v. *Dominic De Nigris, Inc.*

Reg. No. 122,089 (PURITAN AND DESIGN), The Cudahy Packing Co., Sugar-cured hams, boiled hams, bacon, etc., filed May 8, 1958, D. C., S. D. N. Y., Doc. 133/160, *The Cudahy Packing Co.* v. *Puritan Beef Co., Inc.* Notice of voluntary dismissal filed Sept. 24, 1958.

Reg. No. 251,291. (See Reg. No. 75,365.)

Reg. No. 194,826. (See Reg. No. 95,516.)

Reg. No. 196,033. (See Reg. No. 95,516.)

Reg. No. 371,396 ("HELEN HARPER"), Blume Knitwear, Inc., Knitwear, consisting of women's and children's knitted sweaters, blouses, etc., filed Sept. 11, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19006, *Blume Knitwear, Inc.* v. *J. W. Mays, Inc.* Same, filed Sept. 25, 1958, D. C., S. D. N. Y., Doc. 138/105, *Blume Knitwear, Inc.* v. *Fishkin Knitwear Co., Inc.*

Reg. No. 497,439 (GLAMOUR), Conde Nast Publications, Inc., Monthly magazine; **Reg. No. 598,282**, same, filed Sept. 25, 1958, D. C., S. D. N. Y., Doc. 138/107, *Conde Nast Publications, Inc.* v. *Peter B. Martin.*

Reg. No. 448,878 (TRAVEL), Robert M. McBride & Co., Magazine relating to travel, filed Sept. 26, 1958, D. C., S. D.

CONDITION OF TRADEMARK APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,285
Date of oldest new application	Feb. 27, 1958
Date of oldest amended application	May 19, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 29, 31, 33, 34, 35, 36, 50	3-10-58	6-2-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	3-10-58	7-2-58
(III) M. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	3-27-58	5-19-58
Renewals (All Classes)	9-15-58	9-26-58
Sec. 12 (c) Publications (All Classes)	9-8-58	9-25-58

Applications Filed During the Month of September 1958—1,735

Registrations Issued	300—No. 669,443 to No. 669,742
Renewals Issued	48

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

N. Y., Doc. 138/122, *Travel Magazine, Inc. v. Travel Digest, Inc.*

Reg. No. 593,281. (See Reg. No. 607,429.)

Reg. No. 593,473 (GLOBE TROTTERS), A. M. Saperstein, Athletic entertainment services; Reg. No. 542,474 (HARLEM GLOBE TROTTERS), same; Reg. No. 570,888 (TROTTERS), same, Entertainment services in the nature of basketball exhibitions; Reg. No. 602,272 (MAGICIANS OF BASKETBALL), same, filed Sept. 24, 1958, D. C., N. D. Calif. (San Francisco), Doc. 37,867, *A. M. Saperstein v. Western Promotions, Inc.*

Reg. No. 542,474. (See Reg. No. 542,473.)

Reg. No. 570,888. (See Reg. No. 542,473.)

Reg. No. 592,294 (CHEMPUMP), Chempump Corp., Magnetic drive pump, filed Mar. 18, 1958, D. C., E. D. Pa. (Philadelphia), Doc. 24300, *Chempump Corp. v. Nukem Pumps, Inc. et al.* Consent judgment for plaintiff Sept. 17, 1958.

Reg. No. 618,511 (AUDIO HAILER), Audio Equipment Co., Inc., Loud speakers; 2,801,489, A. J. Saniel, Electric megaphone; 2,411,694, same, Sound amplifying apparatus; 2,422,147, H. C. Dalrymple, Electric megaphone; Des. 144,698, same, filed Oct. 4, 1957, D. C. N. J. (Trenton), Doc. 1044/57, *Audio Equipment Co., Inc. v. Pye Corp. of America*, Stipulation and order of dismissal Sept. 26, 1958.

Reg. No. 613,699 (EMBA), Mutation Mink Breeders Assn., Mink for pelts, filed Apr. 8, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c633, *Mutation Mink Breeders Assn. v. Evans Fur Co., Inc. et al.*

Reg. No. 641,554. (See Reg. No. 95,516.)

Reg. No. 641,555. (See Reg. No. 95,516.)

Reg. No. 642,819 (FAMOUS FIFTY 50 AND DESIGN), Jack's Cookie Co., Bakery products, filed Aug. 25, 1958, D. C., W. D. N. C. (Charlotte), Doc. 1334, *Jack's Cookie Co. v. Southern Biscuit Co.* Consent judgment; injunction issued Sept. 24, 1958. Same, filed Sept. 9, 1958, Doc. 1336, *Jack's Cookie Co. v. Bishop Baking Co.* Consent judgment of dismissal Sept. 24, 1958.

Reg. No. 602,272. (See Reg. No. 542,473.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 697,257. W. Thomas Burdick, d. b. a. Burdick's Seed House, Saginaw, Mich. Filed Oct. 21, 1955. Sec. 2(f).

Velvet

For Lawn Seeds.
First use Jan. 12, 1915.
Subj. to Intf. with Reg. No. 659,652 and SN 48,794.

SN 33,004. Thermo Materials, Inc., Menlo Park, Calif. Filed July 1, 1957.

TMI

For Industrial Ceramics for Electronic and Structural Usage.
First use on or about June 1, 1956.

SN 33,450. American Petrochemical Corporation, Minneapolis, Minn. Filed July 10, 1957.

PLEOGEN

For Polyester Resins.
First use Aug. 7, 1953.

SN 47,174. Armour & Company, Chicago, Ill. Filed Mar. 6, 1958.

DELWAN

For Suede Leather.
First use Feb. 7, 1958.

SN 47,238. Eagle-Ottawa Leather Company, Grand Haven, Mich. Filed Mar. 7, 1958.

ARMADILLO

For Leather.
First use Feb. 25, 1958.

SN 47,239. Eagle-Ottawa Leather Company, Grand Haven, Mich. Filed Mar. 7, 1958.

MICHIMOC

For Leather.
First use Feb. 14, 1958.

SN 47,240. Eagle-Ottawa Leather Company, Grand Haven, Mich. Filed Mar. 7, 1958.

MICHIGRAIN

For Leather.
First use Feb. 25, 1958.

SN 48,794. Wm. G. Scarlett & Co., Baltimore, Md. Filed Mar. 31, 1958. Sec. 2(f).

Velvet

For Lawn Seeds.
First use June 28, 1927.
Subj. to Intf. with Reg. No. 659,652 and SN 697,257.

SN 50,039. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed Apr. 21, 1958.

MICHICORP

For Leather.
First use Apr. 1, 1958.

Class 2—Receptacles

SN 36,003. Lincoln Metal Products Corp., Brooklyn, N. Y. Filed Aug. 22, 1957.

LINCOLN
Beautyware

For Housewares—Namely, Bread Boxes, Canister Sets, Paper Dispensers, Waste Baskets, Step-On Cans, and Cleanser Cabinets.
First use Dec. 1, 1949.

SN 38,201. Constellation Cup Corporation, Long Island City, N. Y. Filed Oct. 2, 1957.

PLASTISLA

For Paper Cups and Covers Therefor.
First use July 25, 1957.

SN 44,643. The Ohio Art Company, Bryan, Ohio. Filed Jan. 24, 1958.

PRETTY POLLY

For Plastic Housewares Receptacles and Containers—Namely, Baskets, Buckets, Dishpans, Wash Basins, Waste Baskets, Utility Pails, Serving Trays and Similar Articles.
First use Jan. 6, 1958.

SN 46,406. Kenneth T. Bayard, d. b. a. Litterid Company, Duluth, Minn. Filed Feb. 24, 1958.

LITTERID

For Bag and Holder Therefor for Refuse.
First use Jan. 31, 1958.

SN 46,407. Bekins Van & Storage Co., Los Angeles, Calif. Filed Feb. 24, 1958.

SAFE-T-PAK

Owner of Reg. No. 654,258.
For Containers for Packing of Household Goods for Storage and Transportation Thereof.
First use November 1956.

SN 46,710. Diadem, Inc., Leominster, Mass. Filed Feb. 27, 1958.

SAVE-A-SPILL

For Child's Drinking Cup.
First use August 1949.

SN 46,759. Rheem Manufacturing Company, Richmond, Calif. Filed Feb. 27, 1958. Sec. 2(f).

RHEEM

Owner of Reg. Nos. 264,137 and 543,262.
For Metal Drums, Fiber Drums, Pails and Tanks—Namely, Basement Tanks, Pneumatic Tanks, and Storage Tanks.
First use Nov. 15, 1926, on metal drums.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 43,885. I. Smallman & Sons Co., New York, N. Y. Filed Jan. 13, 1958.

COFFEE BREAK

For Billfolds, Wallets, Key Cases, Card Cases, Pass Cases, Change Purses and Pocket Secretaries.
First use June 1957.

SN 47,700. Herbert J. Walsh, Park Ridge, Ill. Filed Mar. 18, 1958.

GLAD-MAR

For Vinyl Products—Namely, Brief Cases, Portfolios, Folders, Billfolds, Tie Cases, Card Cases, Money Pouches, Pencil Pocket Pouches, Multi-Pocket Pak for Valuable Papers, and Air Cushions.
First use Nov. 15, 1957.

SN 49,460. Platt Luggage, Inc., Chicago, Ill. Filed Apr. 10, 1958.

ROYGEN

For Hand Luggage.
First use Mar. 25, 1958.

Class 4—Abrasives and Polishing Materials

SN 16,500. Jack F. Brannick, d. b. a. Steel Glo Products, Midland, Mich. Filed Sept. 26, 1956.

The term "Super-Quick" shown on the drawing is disclaimed as part of the mark.
For Combined Polish and Cleaner for Metal Surfaces.
First use May 2, 1939.

SN 47,984. The J. R. Watkins Company, Winona, Minn. Filed Mar. 18, 1958.

Owner of Reg. Nos. 363,286 and 364,537.
For Furniture Polish, Furniture Creme, and Floor Wax.
First use Feb. 17, 1958.

SN 50,878. Diamond Alkali Company, Cleveland, Ohio. Filed May 2, 1958.

DELOZIN

For Electropolishing Compound for Use in the Metal Industry.
First use Apr. 23, 1958.

Class 5—Adhesives

SN 47,599. National Starch Products Inc., New York, N. Y. Filed Mar. 12, 1958.

INSTANT LOK

For Liquid Adhesive for General Adhesive Use.
First use Jan. 23, 1958.

Class 6—Chemicals and Chemical Compositions

SN 10,855. Destruxol Corporation, Ltd., d. b. a. Destruxol Corporation, Pasadena, Calif. Filed June 25, 1956.

DUBL-DETH

For Insecticide.
First use May 14, 1956.

SN 30,713. Ansul Chemical Company, Marinette, Wis. Filed May 27, 1957.

ANSUL D.M.B.

Owner of Reg. Nos. 402,775, 594,071, and others.
For Para Dimethoxy Benzene.
First use June 16, 1955.

SN 31,458. Bonewitz Laboratories, Inc., Burlington, Iowa, assignee of Bonewitz Chemicals, Inc., Burlington, Iowa. Filed June 6, 1957.

Junpastur

For Compound Useful for the Treating and Preserving of Ensilage.
First use Apr. 10, 1957.

SN 32,335. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed June 20, 1957.

CLOR-TABS

Owner of Reg. No. 207,661.
For Composition Useful as a Bactericide, Algaecide, and Disinfectant.
First use Mar. 22, 1957.

SN 34,247. Hendry Process Corporation, Philadelphia, Pa. Filed Aug. 5, 1957.

DABCO

For Triethylene Diamine Salt as a Chemical Product, and Being Useful as a Catalyst for the Production of Urethane Foams and for Other Base-Catalyzed Condensation Reactions, and as a Chemical Intermediate.
First use Mar. 8, 1956.

SN 35,886. Purex Corporation, Ltd., South Gate, Calif. Filed Aug. 12, 1957.

The mark consists, in part, of the portrait of Diane Brewster, whose written consent is filed herewith. Owner of Reg. Nos. 211,650, 639,834, and others.
For Bleach, Presently Sold in Liquid Form.
First use June 12, 1957.

SN 35,492. Chempel, Inc., Camden, N. J. Filed Aug. 14, 1957.

CHEMPEL

For Room Deodorants.
First use Feb. 1, 1957.

SN 35,576. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

CYANANTHROL

For Dyestuffs.
First use on or about Dec. 31, 1957.

SN 35,654. Inspection Supply, Incorporated, Seattle, Wash. Filed Aug. 16, 1957.

The drawing is lined for blue.
For Chemical Preparation Used To Detect Leaks in Any Container, Vessel, Tank, or Tube Assembly.
First use June 18, 1957.

SN 35,757. The Dow Chemical Company, Midland, Mich. Filed Aug. 19, 1957.

ZOALENE

For Nitrophenyl Compound for Use Principally as an Active Ingredient in Parasiticidal Compositions.
First use Mar. 27, 1957.

SN 36,800. Marsen Corporation, Revere, Mass. Filed Sept. 3, 1957.

PRO

For Epoxy Resin Formulations and Hardeners.
First use Aug. 19, 1957.

SN 37,605. Swift & Company, Chicago, Ill. Filed Sept. 20, 1957.

EPOXOL

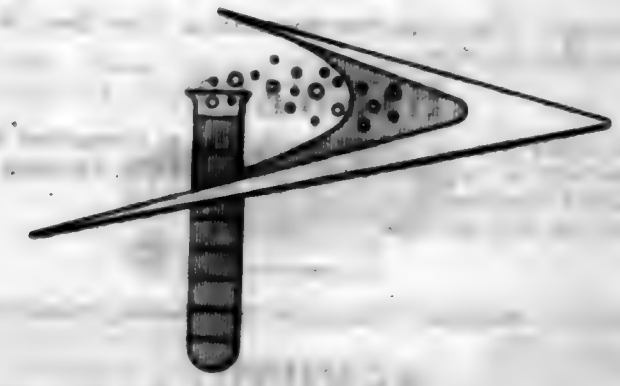
For Epoxidized Oils.
First use Dec. 8, 1953.

SN 41,089. General Foods Corporation, White Plains, N. Y. Filed Nov. 21, 1957.

G O

Owner of Reg. No. 652,841.
For Ironing Aid—Namely, a Preparation To Make Ironing Easier and Give Fabrics a Finer Finish.
First use Aug. 4, 1955.

SN 41,587. Turco Products, Inc., Los Angeles, Calif. Filed Nov. 29, 1957.



The drawing is lined for red.
For Alkaline Mixture of Solid Material for Etching Aluminum and Its Alloys, and Also a Mixture of Solid Compounds as Additive to Acids for Etching Magnesium.
First use Oct. 28, 1957.

SN 41,737. American Cyanamid Company, New York, N. Y. Filed Dec. 4, 1957.

AM-9

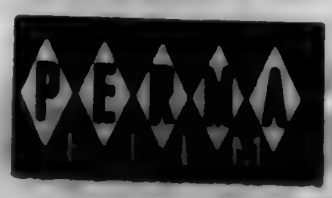
For Acrylamide Composition for Use in Non-Agricultural Soil Stabilization.
First use Oct. 10, 1957.

SN 43,433. Cowles Chemical Company, Cleveland, Ohio. Filed Jan. 6, 1958.

DETAMIDE

For Insect Repellent.
First use Oct. 22, 1957.

SN 44,751. Permaflm, Incorporated, New York, N. Y. Filed Jan. 27, 1958.



No claim is made to the word "Film" apart from the mark as shown.
For Chemical Preservative of Exposed Photographic Film.
First use on or about Feb. 1, 1956.

SN 45,222. Stauffer Chemical Company, San Francisco, Calif. Filed Feb. 8, 1958.

EPTAM

For Ingredient of a Herbicide for Experimental Use Only.
First use Jan. 23, 1958.

SN 46,660. Solusol Chemical Co., Inc., Natick, R. I. Filed Feb. 26, 1958.

SOLUPON

Owner of Reg. Nos. 550,026, 654,645, and others.
For Waxes, Oils, Fatty Acids, or Derivatives Thereof, per se or in Various Combinations, for the Treatment of Textile Fibers, Both Natural and Synthetic, and Fabrics Made Therefrom, Particularly in Connection With Softening and Lubricating, for Processing, and Dyeing and Finishing.
First use on or about Oct. 20, 1957.

SN 46,677. C. C. Wakefield & Company Limited, London, England. Filed Feb. 28, 1958.

NANOUK

For Anti-Freeze Fluids.
First use Aug. 7, 1948; in commerce July 26, 1957.

SN 48,189. Johns-Manville Corporation, New York, N. Y. Filed Mar. 21, 1958.

HYSWEET

For Filter Aid and Sweetener for Use in Connection With Fluids Such as Solvents Employed in the Dry Cleaning and Laundry Industries.
First use Feb. 20, 1958.

SN 48,218. Reichhold Chemicals, Inc., Detroit, Mich. Filed Mar. 21, 1958.

ACRIPOL

Owner of Reg. Nos. 301,085, 573,286, and others.
For Synthetic Resins.
First use Feb. 20, 1958.

SN 48,754. Eugene D. Koch, d. b. a. Duzo Products, Cincinnati, Ohio. Filed Mar. 31, 1958.

POWDETTE

For Starch Derivative Powder for Dusting Rubber Gloves.
First use about Nov. 1, 1957.

SN 48,863. Niagara Blower Company, New York, N. Y. Filed Apr. 1, 1958.

HYGROL

For Hygroscopic Liquid Which Is Contacted With Air or Other Gases To Dehumidify the Same.
First use September 1940.

Class 7 — Cordage

SN 39,675. Van Waters & Rogers, Inc., South Seattle, Wash. Filed May 8, 1957.

Guardsman

Owner of Reg. No. 404,420.
For Wrapping Twine, Baler and Binder Twine, and Rope and Cordage Including Spring Tying Twine and Welt Cord Used in the Manufacture of Upholstered Furniture.
First use Jan. 1, 1946.

SN 55,232. Midwest Cordage Co., Inc., Fayette, Mo. Filed July 15, 1958.

ACCURATE CORD

No claim is made to the term "Cord" apart from the mark in its entirety.
For Binder Twine.
First use May 15, 1958.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 45,365. Amity Leather Products Co., West Bend, Wis. Filed Feb. 6, 1958.

SMOKE TOTE

For Ladies' Leather Pouch for Carrying a Cigarette Package and Having Attached Thereto a Cigarette Lighter.
First use Jan. 13, 1958.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 45,302. Alcan Shells, Inc., Alton, Ill. Filed Feb. 5, 1958.

ECONOMAX

For Shotgun Shells.
First use Jan. 29, 1958.

SN 45,361. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Feb. 5, 1958.

ŠKODA

Owner of Czechoslovakian Reg. No. 152,674, dated June 26, 1956.
For Large-Calibre Weapons; Large-Calibre Ammunitions; Aiming and Fire Control Devices; Armours; Armoured Cars and Tanks and Protective Steel or Iron Plating.

SN 56,015. Jet Research Center, Inc., Arlington, Tex. Filed July 25, 1958.

SUPER DYNA-JET

Owner of Reg. No. 652,592.
For Shaped Explosive Charge Perforating Units for Use in Perforating Oil Wells and the Like.
First use July 18, 1958.

Class 10 — Fertilizers

SN 50,848. Tennessee Corporation, New York, N. Y. Filed May 1, 1958.

USPHOS

For Fertilizers.
First use Aug. 15, 1957.

Class 11—Inks and Inking Materials

SN 47,551. United States Printing Ink Corporation, Little Ferry, N. J. Filed Mar. 11, 1958.

SPECTROPLAN

For Printing Inks.
First use Jan. 6, 1958.

Class 12—Construction Materials

SN 34,385. Architectural Porcelain Constructors, Oakland, Calif. Filed July 25, 1957.

STYROCOR

For Building Panels Having an Insulating Core of Foamed Plastic (Styrene) Having a Closed Cellular Structure With Zero Water Absorption, the Faces of the Core Being Covered With Various Types of Sheet Material.
First use April 1957.

SN 36,268. Agency Tile Supply Corp. of New York, New York, N. Y. Filed Aug. 27, 1957.

MURANTINE

For Glass Mosaic Tile.
First use in or about June 1957.

SN 36,696. The Clark Grave Vault Company, Columbus, Ohio. Filed Sept. 5, 1957.

CLARK WEDGE-LOK

For Road Paving Forms.
First use June 15, 1957.

SN 36,934. Quartz Products Corporation, Plainfield, N. J. Filed Sept. 9, 1957.

ELECTROSIL

For Ceramic Powder Compound for Making Refractory Cements, Low Expansion Refractory Powder, Castable Refractory Powder for Capsulating and Potting Electronic Components, Refractory Powder for Forming Shapes Such as Molds, Pipes, Tubes and Similar Forms by Pressing or Extruding, and Ceramic Filler for Plastics.
First use July 15, 1957.

SN 41,484. The Sparta Ceramic Company, East Sparta, Ohio. Filed Nov. 27, 1957.

SPARTEX

For Floor and Wall Tiles.
First use Feb. 6, 1957.

SN 42,026. The Inland Fire Brick Company, Cleveland, Ohio. Filed Dec. 6, 1957.

BRIXAVER

For Refractory Cement, Both Heat-Setting and Air-Setting.
First use July 1, 1933.

SN 42,138. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Dec. 16, 1957.

CLOISONNE

For Vinyl Flooring.
First use Oct. 24, 1957.

SN 42,658. Newman Brothers, Incorporated, Cincinnati, Ohio. Filed Dec. 18, 1957.

Fiesta-rail

For Aluminum Railings.
First use Nov. 15, 1957.

SN 42,656. Alumatic Corporation of America, Milwaukee, Wis. Filed Dec. 18, 1957.

COMET

For Windows and Doors.
First use Nov. 28, 1957.

SN 43,427. Dean Cut-Rate Floor Covering Company, Inc., Newark, N. J. Filed Jan. 6, 1958.

DEAN CUT-RATE

No rights to registration are claimed for "Cut-Rate" apart from the mark as shown.
For Floor and Wall Coverings—Namely, Asphalt, Rubber and Vinyl Tile, Felt Linings, and Enamel Surface Coverings.
First use June 1945.

SN 45,281. Unit Structures, Inc., Peshtigo, Wis. Filed Feb. 3, 1958.

UNIT DECK

The word "Deck" and the representation of the goods are disclaimed apart from the mark shown. Owner of Reg. Nos. 442,240, 545,439, and 585,402.
For Building Timbers Used for Roofs, Floors and Ceilings, Walls and Partitions.
First use Nov. 6, 1957; Dec. 18, 1951, as to "Unit Deck."

SN 46,895. The Philip Carey Manufacturing Company, Cincinnati, Ohio. Filed Mar. 3, 1958. Sec. 2(f).

ROOFCRAFTER

Owner of Reg. No. 662,947.
For Asphalt Shingles.
First use Mar. 12, 1951.

SN 47,711. The Babcock & Wilcox Company, New York, N. Y. Filed Mar. 14, 1958.

FLOORCRETE

For Refractory Concrete Mix.
First use Jan. 22, 1958.

SN 48,724. The Eagle-Picher Company, Cincinnati, Ohio. Filed Mar. 31, 1958.

INSULGLAS

For Glass Wool Insulation Sold in Bulk and in Rolls and Bats and as Pipe Covering.
First use Mar. 18, 1958.

SN 48,730. Fentron Industries, Inc., Seattle, Wash. Filed Mar. 31, 1958.

FENTRON

For Metal Construction Materials—Namely, Window Frames, Doors, Door Frames, Soffits, Facias, Sills, Column Covers, Gutters, Solar Shades, Mullions, Spandrel Panels, Store Fronts, Stair Railing, Marquees, and Prefabricated Metal Buildings.
First use 1934.

SN 49,103. Wood-Lam, Inc., Milwaukee, Wis. Filed Apr. 4, 1958.

WOOD-LAM

For Structural Building Units—Namely, Wood Trusses; Wood Fiber Roof Decks and Plank Roof Decks.
First use Mar. 4, 1957.

SN 49,712. Stebbins Engineering & Manufacturing Company, Watertown, N. Y. Filed Apr. 15, 1958.

HEDTILE

For Tile Block.
First use May 1948.

SN 49,713. Stebbins Engineering & Manufacturing Company, Watertown, N. Y. Filed Apr. 15, 1958.

SEMTILE

Owner of Reg. No. 618,068.
For Tile Block.
First use December 1940.

SN 49,960. E. A. Mortrude & Co., d. b. a. Plastic-Stone Products, Seattle, Wash. Filed Apr. 18, 1958.

QUIETRED

For Latex Mastic Composition Used as Floor Undercoating Material.
First use Mar. 5, 1958.

SN 50,429. Arcadia Air Products Co., Pasadena, Calif. Filed Apr. 28, 1958.

DURAFLEX

For Diving Boards.
First use Mar. 9, 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 37,389. Plymouth Cordage Industries, Inc., Boston, Mass. Filed Sept. 17, 1957.

"SNAPER"

For Conduit Straps.
First use June 27, 1957.

SN 48,751. Kilgore Ceramics Corporation, Kilgore, Tex. Filed Mar. 31, 1958.

KILGORE

The lining on the drawing is an integral part of the mark.
For China Plumbing Fixtures.
First use June 24, 1949.

SN 50,625. International Precision Manufacturers, Inc., Carmel, Calif. Filed Apr. 29, 1958.

IPM

For Mechanical Burglar Alarm.
First use Oct. 29, 1957.

SN 50,693. G & S Metal Products Co., Inc., Cleveland, Ohio. Filed Apr. 30, 1958.

FAT-AWAY

For Receptacles—Namely, Floating Skimmers.
First use Mar. 11, 1958.

SN 51,518. Taco Heaters, Incorporated, Cranston, R. I. Filed May 12, 1958.

Taco

Owner of Reg. Nos. 441,726, 546,532, and others.
For Pressure Reducing Valves for Hot Water Heating Systems, Flow Check Valves, and Relief Valves for Hot Water Heating Systems.
First use 1940.

SN 51,574. Metal Wood Manufacturing Company, Salem, Ohio. Filed May 13, 1958.

UNABRAC

For Sign Holding Brackets.
First use Dec. 15, 1957.

SN 51,694. Aluminum Specialty Company, Manitowoc, Wis. Filed May 15, 1958.

Chilton ware

For Cooking Utensils—Namely, Combination Pan Sets, Covered Sauce Pans, Covered Sauce Pots, Drip Coffee Makers, Fry Pans, and Percolators.
First use Apr. 3, 1958.

Class 14—Metals and Metal Castings and Forgings

SN 26,574. M. Swift & Sons, Inc., Hartford, Conn. Filed Mar. 20, 1957.

EXCELLO BRONZE

The word "Bronze" is disclaimed apart from the mark as shown.
For Metal Foil Used as a Transfer Marking Tape.
First use Feb. 1, 1956.

SN 44,498. Unitcast Corporation, Toledo, Ohio. Filed Jan. 22, 1958.

For Miscellaneous Alloy Steel Castings.
First use Feb. 27, 1885.

SN 46,319. Jackson-Wheeler Metals Service, Inc., Brooklyn, N. Y. Filed Feb. 21, 1958.

GUNTEX

For White Metal Bearing Alloys in Wire Form.
First use Jan. 20, 1958.

SN 46,481. Printers Plates Limited, London, England. Filed Mar. 25, 1958.

PRIMAG

Owner of British Reg. No. 697,808, dated Apr. 27, 1951.
For Metal Plates for Process Engraving.

SN 46,458. A. M. Byers Company, Pittsburgh, Pa. Filed Mar. 26, 1958.

AMBALLOY

For Metal Plates, Bars, and Billets.
First use Jan. 6, 1958.

SN 46,459. A. M. Byers Company, Pittsburgh, Pa. Filed Mar. 26, 1958.

BYLOY

For Metal Plates and Bars.
First use Jan. 6, 1958.

SN 46,580. Quasi-Arc Limited, London, England. Filed Mar. 27, 1958.

FERROMAX

Owner of British Reg. No. 788,624, dated Aug. 22, 1957.
For Electrodes for Electric Arc Welding.

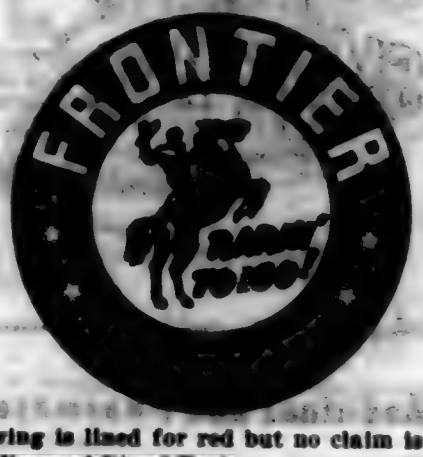
SN 48,805. Universal-Cyclops Steel Corporation, Bridgeville, Pa. Filed Mar. 31, 1958.

REFRACTOMET

For Refractory and Reactive Metals, Such as Hafnium, Molybdenum, Niobium, Tantalum, Titanium, Tungsten, Zirconium, Etc. and Their Alloys and for Products Formed From Such Metals and Alloys, Such as Blooms, Billets, Bars, Rods, Wire, Forgings, Plates, Sheets, and Strip.
First use Mar. 21, 1958.

Class 15—Oils and Greases

SN 620,884. The Frontier Refining Company, Denver, Colo. Filed Nov. 5, 1951. CONCURRENT USE to be restricted to Wyoming, Colorado, Nebraska, Utah, South Dakota, Nevada, Idaho, Kansas, Montana, Iowa, and New Mexico. Concurrent Use with SN 11,051.



The drawing is lined for red but no claim is made to color.
For Gasoline and Diesel Fuel.
First use on or about July 1, 1940.

SN 11,051. Ashland Oil & Refining Company, d. b. a. Frontier Oil Refining Company, Buffalo, N. Y. Filed June 27, 1956. CONCURRENT USE to be restricted to the United States except Wyoming, Colorado, Nebraska, Utah, South Dakota, Nevada, Idaho, Kansas, Montana, Iowa, and New Mexico. Concurrent Use with SN 620,884.

FRONTIER

Owner of Reg. No. 505,892.
For Gasoline, Kerosene, Naphtha, Fuel Oil, and Fuel for Jet Engines.
First use on or about Nov. 1, 1938.

SN 41,771. Midas, Inc., Chicago, Ill. Filed Dec. 4, 1957.
Owner of Reg. Nos. 641,711, 651,091, and others.

MIDAS

For Gasoline.
First use Nov. 13, 1937.

Class 16—Protective and Decorative Coatings

SN 55,756. W & M Products Corporation, East Detroit, Mich. Filed July 21, 1958.

TUFF-KOTE

For Fluid Types Asphaltic Base, Automobile Sound Deadeners, Under-Coating, Sealers, Sheet Metal Protective Coating, and Similar Allied Products.
First use Nov. 15, 1946.

SN 55,998. The Glidden Company, Cleveland, Ohio. Filed July 25, 1958. Sec. 2(f).

METALSHIELD

Owner of Reg. No. 389,041.
For Metal Protective Paints.
First use Sept. 30, 1931.

SN 52,209. Donald G. Edmonston, Glendale, Calif. Filed May 23, 1958.

SN 53,362. Aktiebolaget Hassle, Apotekare Paul Nordstroms

First use June 27, 1957.

First use Apr. 3, 1958.

SN 56,221. C. K. Williams & Co., East St. Louis, Ill. Filed July 28, 1958. Sec. 2(f).

WILLIAMS

Owner of Reg. No. 502,441.

For Paint Pigments and Paint Colors in Dry Form Used for Manufacture of Paints, Varnishes, and Lacquers.

First use on or about May 7, 1946.

Class 17—Tobacco Products

SN 48,025. H. Fendrich, Inc., Evansville, Ind. Filed Mar. 19, 1958.

For Cigars.

First use Jan. 2, 1952.

Class 18—Medicines and Pharmaceutical Preparations

SN 600,970. Ionx Exchange & Chemical Corp., New York, N. Y. Filed Dec. 14, 1955.

AGOSAN

For Anti-Bacterial Liquid for Personal Use.

First use Oct. 21, 1953.

SN 51,383. Chesebrough-Pond's Inc., New York, N. Y. Filed June 5, 1957.

THE FIRST AID KIT IN A JAR

For Petroleum Jelly.

First use Apr. 26, 1957.

SN 36,607. Marlyn Co., Inc., Los Angeles, Calif. Filed Sept. 3, 1957.

C SPERIDIN

For Dietary Supplement Capsules Containing Ascorbic Acid, Lemon Bioflavonoid Complex, and Hesperidin Complex.

First use July 1, 1957.

SN 41,524. Fellows Medical Manufacturing Company, Inc., d. b. a. Fellows "TF" Tentagar, New York, N. Y. Filed Nov. 23, 1957.

PARAL

For Paraldehyde U. S. P.

First use Jan. 12, 1956.

SN 41,725. Standex Laboratories, Inc., Columbus, Ohio. Filed Dec. 8, 1957.

ALSORB GEL

For Preparation for the Relief of Gastric Acidity.

First use Sept. 7, 1948.

SN 48,285. Hemoglobin, Inc., Tabor City, N. C. Filed Dec. 31, 1957.

ENERGPLUS

For Multiple Vitamin-Mineral Preparation in Tablet Form.

First use June 16, 1957.

SN 45,219. Societe des Laboratoires des Proxytases, Paris, France. Filed Feb. 3, 1958.

TROFORMONE

Owner of French Reg. No. 394,988, dated June 16, 1949 (Paris); Natl. Inst. No. 452,782.

For Pharmaceutical Products—Namely, Material for Cicatrizing Wounds, Disinfectants for Humans, and Veterinary Products.

SN 45,744. Mead Johnson & Company, Evansville, Ind. Filed Feb. 12, 1958.

DECA-VI-TABS

Owner of Reg. No. 635,478.

For Pharmaceutical Preparation of a Vitamin and Dietary-Supplement Nature.

First use Dec. 9, 1957.

SN 48,284. Hise Pharmacal Company, Inc., New Hartford, N. Y. Filed Mar. 24, 1958.

MELFIAT UNICELLES

For Timed Disintegration Capsules Containing Dextro-Amphetamine Sulphate and Thyroid.

First use in or before January 1958.

SN 49,556. The Central Pharmacal Company, Seymour, Ind. Filed Apr. 14, 1958.

CENULES

For Timed Disintegration Products, Specifically Sustained Release Pharmaceutical Preparations in Capsule Form.

First use Feb. 1, 1957.

SN 50,260. Brooks Tyler & Co., Inc., Miami, Fla. Filed Apr. 23, 1958.

For Antiseptic Skin Health Lotion.

First use Apr. 4, 1958.

SN 51,853. Bristol Laboratories Inc., Syracuse, N. Y. Filed May 19, 1958.

TELOTREX

For Antibiotic Pharmaceutical Preparation.

First use Feb. 17, 1958.

SN 52,191. B Y's, Inc., San Francisco, Calif. Filed May 23, 1958.

BY'S

Owner of Reg. No. 337,066.

For Medicated Eye Drops, Medicated Skin Ointment for Infants, Liniment and Medicated Ointment for Relief of Poison Oak, Ivy, and Sumac.

First use about January 1949 as to medicated ointment.

SN 42,185. Thos. F. Moroney Co., Shrewsbury, Mass. Filed

SN 50,914. Northrop Aircraft, Inc., Beverly Hills, Calif.

For Electrodes for Electric Arc Welding.
TM 786 O. G.—6

First use Sept. 30, 1931.

SN 52,280. Donald G. Ellenston, Glendale, Calif. Filed May 23, 1958.

CONCEPTROL

For Medicated Jelly Preparation for Feminine Hygiene.
First use May 16, 1958.

SN 52,284. Deseret Pharmaceutical Company, Inc., Salt Lake City, Utah. Filed May 26, 1958.

DESATRIC

For Steroid-Nutritional Compound.
First use Mar. 28, 1958.

SN 52,381. Bell-Craig Inc., New York, N. Y. Filed May 27, 1958.

ULTRAPAQUE

For Barium Sulfate Preparations for Alimentary Tract Radiography.
First use Nov. 21, 1957.

SN 52,419. Knoll Pharmaceutical Company, Orange, N. J. Filed May 27, 1958.

RAPAGESIC

For Pharmaceutical Preparation Which Is Useful as an Analgesic Agent and Is Sold in Powder, Tablet, and Capsule Form.
First use May 16, 1958.

SN 52,502. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed May 28, 1958.

GERILIQUID

For Geriatric Medication.
First use Apr. 17, 1958.

SN 52,803. Ciba Pharmaceutical Products Inc., Summit, N. J. Filed June 3, 1958.

RITONIC

For Geriatric Preparation.
First use May 20, 1958.

SN 53,140. Standex Laboratories, Inc., Columbus, Ohio, assignee of Edgar A. Ferguson, Jr., Brooklyn, N. Y. Filed June 9, 1958.

HERCULAX

For Laxative Composition.
First use Dec. 14, 1942.

SN 53,245. Drug Research Corporation, New York, N. Y. Filed June 10, 1958.

INSTA-PEP

For Vitamin-Mineral Tablet With Caffeine and Royal Jelly.
First use June 3, 1958.

SN 53,336. G and G Pharmacal Co., Inc., South Bend, Ind. Filed June 11, 1958.

VIMULTIMIN

For Vitamin and Mineral Tablets.
First use July 31, 1953.

SN 53,382. Aktiebolaget Hassle, Apotekare Paul Nordstroms Fabriker, Gothenburg, Sweden. Filed June 12, 1958.

BAMYL

Owner of Swedish Reg. No. 43,706, dated June 28, 1934.
For Analgesics.

SN 53,470. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed June 13, 1958.

DIAXANTHIN

Owner of German Reg. No. 633,092, dated Apr. 28, 1937.
For Cardiac and Circulatory Preparation.

SN 53,584. Ciba Pharmaceutical Products Inc., Summit, N. J. Filed June 16, 1958.

SINGOSERP

For Hypotensive Agent.
First use June 11, 1958.

Class 19—Vehicles

SN 29,035. Societe Anonyme Andre Citroen, Paris, France. Filed May 8, 1957.

CITRO-MATIC

Owner of French Reg. No. 459,380, dated July 31, 1956 (Seine); Natl. Inst. No. 77,522; and U. S. Reg. Nos. 558,421, 558,422, and 612,960.
For Automobiles, and More Particularly Servo-Control and Suspension Devices.

SN 30,721. Bucks County Enterprises, Inc., Quakertown, Pa. Filed May 27, 1957.

Bucksco

For Wheeled Racks, Dollies, Hand Trucks, Wheeled Cabinets and Carts.
First use June 11, 1955.

SN 30,722. Bucks County Enterprises, Inc., Quakertown, Pa. Filed May 27, 1957.

"TEMPER-LUMINUM"

For Wheeled Racks, Dollies, Hand Trucks, Wheeled Cabinets and Carts.
First use June 11, 1955.

SN 36,713. Hercules Galion Products, Incorporated, Galion, Ohio. Filed Sept. 5, 1957.

HYDRO E-Z PACK

For Truck Bodies for the Hauling of Garbage and Refuse.
First use in May 1955.

SN 38,480. Rol-Away Truck Manufacturing Company, Inc., Portland, Oreg. Filed Oct. 7, 1957.

STOCK PICKER

For Hand Trucks and Parts Thereof.
First use Jan. 10, 1950.

SN 37,715. General Electric Company, Schenectady, N. Y. Filed Sept. 24, 1957.

SN 42,253. Robert W. McFaelin, d. b. a. Tap-A-Line Mfg. Co., Pompano Beach, Fla. Filed Dec. 11, 1957. Sec. 2(f).

For Preparation for the Relief of Gastric Acidity.
First use Sept. 7, 1948.

First use about January 1949 as to medicated ointment.

SN 42,185. Thos. F. Moroney Co., Shrewsbury, Mass. Filed Dec. 5, 1957.

MONOLITE

For Van-Type Vehicle Bodies.
First use July 1, 1955.

SN 44,261. Ceske Zavody Motocyklove, Narodni Podnik, Strakonice, Czechoslovakia. Filed Jan. 20, 1958.

Owner of Czechoslovakian Reg. No. 111,080, dated Feb. 19, 1930.
For Bicycles, Motorcycles and Sidecars; Motor Scooters; Motorized Threewheelers; Minicars and Mopeds and Parts Thereof.

SN 45,362. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Feb. 5, 1958.

ŠKODA

Owner of Czechoslovakian Reg. No. 152,674, dated June 26, 1956.
For Automobiles; Buses; Trolley Buses; Motorized Cars; Trucks; Trailers; Truck Tractors; Ships, Boats and Structural Parts Thereof; Airplanes; and Parts of Said Goods.

SN 47,172. The American Pulley Company, Philadelphia, Pa. Filed Apr. 23, 1958.

AMPULCO

For Steel Hand Trucks, Appliance Trucks, Barrel Cradle Trucks, Industrial Wheels, and Baggage Trucks.
First use Feb. 7, 1957.

SN 48,264. The Flour City Ornamental Iron Company, d. b. a. Aluma Craft Boat Company, Minneapolis, Minn. Filed Mar. 24, 1958.

ALUMA LINE

Owner of Reg. Nos. 429,596 and 504,097.
For Boats—Namely, Small Pleasure Craft Including Row Boats and Oars.
First use Jan. 6, 1958.

SN 50,661. Ambulitter Corporation, Chestertown, Md. Filed Apr. 30, 1958.

Ambulitter

For Pneumatic Roller-Supported Frame for Load Carriers Such as Litters, Weapons Carriers and the Like Used Principally in Off-the-Road Service.
First use Aug. 28, 1957.

SN 50,914. Northrop Aircraft, Inc., Beverly Hills, Calif. Filed May 2, 1958.

For Aircraft Including Manned Aircraft, Missiles, Drones, and Parts Thereof.
First use Mar. 20, 1958.

SN 50,944. Vauxhall Motors Limited, Luton, England. Filed May 2, 1958.

BEDFORD

Owner of British Reg. No. 582,893, dated Jan. 19, 1938.
For Motor Road Vehicles and Motor Chassis Therefor.

Class 20—Linoleum and Oiled Cloth

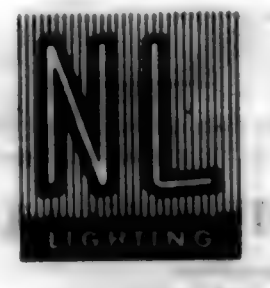
SN 15,418. Velvetex Corporation, New York, N. Y. Filed Sept. 10, 1956.

VELVETEX

Owner of Reg. Nos. 287,011, 361,033, and others.
For Fabric Wall Covering Consisting of Vinyl Plastic Fused to a Cotton Backing.
First use April 1954.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 36,387. N L Corporation, Cleveland, Ohio. Filed Aug. 28, 1957.



The word "Lighting" is disclaimed apart from the mark as shown.
For Electric Lighting Fixtures, Lighting Equipment and Lighting Products for Use in the Church, School, Hospital, Residence, Institution, and Commercial Building.
First use Aug. 1, 1957.

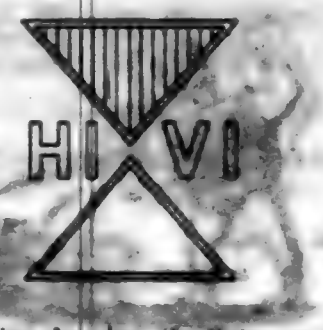
SN 37,565. Fanon Electric Co. Inc., Brooklyn, N. Y. Filed Sept. 20, 1957.

BABY-COM

For Miniature Radio Transmitting Devices for Home and Other Short Range Communication Systems.
First use Sept. 16, 1957.

SN 40,119. The Electric Auto-Lite Company, Toledo, Ohio. SN 40,917. Gardner International Corporation, Dearborn,

SN 37,795. General Electric Company, Schenectady, N. Y. Filed Sept. 24, 1957.



In the accompanying drawing, the lining in the uppermost triangle is intended to designate that the colors of the respective triangles may be different, without intending to represent any particular color combination.

For Television Broadcast Receivers.
First use June 6, 1956.

SN 38,620. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Oct. 9, 1957.

Highlander

For Electro-Magnetic Circuit Breakers and Electrical Vibrators Used in Converting Electrical Current From One Type to Another.
First use Sept. 2, 1957.

SN 39,020. Rudolf Wendel, Incorporated, New York, N. Y. Filed Oct. 16, 1957.

WENDELIGHT

For Lighting Projectors and Lighting Reflectors for Electrical Lighting Fixtures, Electrical Lamps, Electrical Chandeliers, and Electrical Lighting Fixtures.
First use 1930.

SN 39,617. The Gates Rubber Company, Denver, Colo. Filed Oct. 28, 1957. Sec. 2(f).

Gates

Owner of Reg. Nos. 353,065 and 507,628.
For Storage Batteries and Storage Battery Casings.
First use July 30, 1948; Feb. 29, 1936, as to "Gates."

SN 40,976. U. S. Electrical Motors, Inc., Los Angeles, Calif. Filed Nov. 19, 1957.

DIAL-A-TORQ

For Control for Adjusting the Voltage Applied to Dynamo-electric Machines and Comprising Variable Circuit Elements—Namely, Autotransformers and Resistances.
First use Oct. 22, 1957.

SN 42,223. Major Equipment Co., Inc., Chicago, Ill. Filed Dec. 11, 1957.

MANULUX

For Lighting Control Switchboards.
First use July 15, 1957.

SN 42,255. Robert W. McFaelin, d. b. a. Tap-A-Line Mfg. Co., Pompano Beach, Fla. Filed Dec. 11, 1957. Sec. 2(f). Owner of Reg. No. 566,145.

TAP-A-LINE

For Electrical Outlets Featured By Elongated Slots and Bus-Bar Connectors To Receive Closely Spaced Appliance Plugs for Such Use as in Modern Kitchens and the Like.
First use May 20, 1948.

SN 43,844. Fryonic Corporation, San Francisco, Calif. Filed Jan. 13, 1958.

FRYONIC

For Electric Food Cooking and Warming Devices.
First use Oct. 15, 1957.

SN 44,267. Jack Dreyfus Co., New York, N. Y. Filed Jan. 20, 1958.

DREYCO

For Electrical Parts—Namely, Starters, Generators, Batteries, Spark Plugs, Distributor Caps, Distributor Rotors, Ignition Points, Starter Solenoids, Condensers, Voltage Regulators, Cut Outs, Starter Switches, Ignition Coils, Dimmer Switches, and Headlight Switches.
First use Jan. 1, 1951.

SN 45,597. Notifier Corporation, Lincoln, Nebr. Filed Feb. 10, 1958.

ECON-O-MATIC

For Electrical Fire Alarm Systems, Sprinkler Supervisory Systems and Parts Thereof.
First use Sept. 18, 1957.

SN 45,598. Notifier Corporation, Lincoln, Nebr. Filed Feb. 10, 1958. Sec. 2(f) as to "Notifier."

The drawing is lined for red. The words "Automatic" and "Fire Alarm" are disclaimed apart from the mark as shown.
Owner of Reg. No. 548,883.
For Electric Fire Alarm Systems, Sprinkler Supervisory Systems, Burglary Alarm Systems, Police Communication Systems, Watchmen Service Systems and Parts Thereof.
First use Oct. 8, 1949.

SN 45,708. Sunbeam Lighting Company, Los Angeles, Calif. Filed Feb. 11, 1958.

Sightline

For Lighting Fixtures.
First use on or about Aug. 1, 1957.

The word "Tonka" is a commonly used abbreviation [illegible]

SN 46,119. The Electric Auto-Lite Company, Toledo, Ohio. Filed Feb. 19, 1958.

SodALite

For Electrical Conductors—Namely, Insulated Wire and Cable.
First use Nov. 21, 1955.

SN 46,613. The Electric Auto-Lite Company, Toledo, Ohio. Filed Feb. 26, 1958.

LectALite

For Electrical Conductors—Namely, Insulated Wire and Cable.
First use July 18, 1955.

SN 47,794. United Recording Laboratories Inc., New York, N. Y. Filed Mar. 14, 1958.

Applicant disclaims any right to the representation of the goods apart from the mark as shown.
For Electrical Transcriptions on Acetate Disks (Records) and Tape Recordings.
First use on or about Oct. 15, 1951.

SN 48,138. Beldea Manufacturing Company, Chicago, Ill. Filed Mar. 21, 1958.

BELDPAK

For Electrical Wire.
First use May 1, 1957.

SN 48,832. Engelhard Industries, Inc., Newark, N. J. Filed Apr. 1, 1958.

ECON-O-TAPE

For Wires and Tapes for Electrical Contacts.
First use Mar. 14, 1958.

SN 48,876. Ensleco Oilfield Lighting Company, Incorporated, Fort Worth, Tex. Filed Apr. 1, 1958.

OILIGHTS

For Electrical Connection Devices—Namely, Plug Connectors, Line Connectors, Junction Boxes, Outlet Box Receptacles, Splice Boxes, and Parts of Such Electrical Connector Devices.
First use July 15, 1957.

SN 49,917. Gardner International Corporation, Dearborn, Mich. Filed Apr. 18, 1958.

For Electrical Screens for Killing Insects.
First use Dec. 15, 1957.

SN 49,923. Globe American Corporation, d. b. a. Vulcan-Hart Manufacturing Company, Kokomo, Ind. Filed Apr. 18, 1958.

AUTOMIX

For Electric Food Mixers.
First use in May 1957.

SN 50,066. Walter Valentine Kassel, d. b. a. Kassel Export Company, Englewood, N. J. Filed Apr. 21, 1958.

TERMOSYN

For Copper Magnet Wire With a Dielectric Heat Resistant Coat.
First use in or about Jan. 15, 1958.

SN 50,507. Motorola Inc., Chicago, Ill. Filed Apr. 28, 1958.

WEATHERAMA

For Radio Receivers.
First use Oct. 2, 1957.

Class 22 — Games, Toys, and Sporting Goods

SN 37,740. Levin Brothers, New York, N. Y. Filed Sept. 24, 1957.

For Inexpensive Children's Novelty Games, Toys, and Sporting Goods, as, for Example, Toy Airplanes and Other Wheeled Vehicles, Play Dishes and Other Furnishings, Board Games, Bicycle Horns, Field Glasses, Etc.
First use on or about Nov. 1, 1940.

SN 41,054. Tonka Toys, Inc., Mound, Minn. Filed Nov. 20, 1957.

The drawing is lined for red. However, the coloring is not deemed to be an essential characteristic of the mark. No claim of exclusive right is made to "Toys" as used on toys.

SN 48,906. Donald L. Johnson, d. b. a. Flaker-Surfacer Com-

SN 50,806. Atwater-Streng Company, Atwater, Ohio. Filed

The word "Tonka" is a commonly used abbreviation term for the famous Lake Minnetonka near which applicant is located.

For Toys—Namely, Miniature Metal Trucks, Steamshovels, Roadgraders, and Trailers.

First use January 1957.

SN 43,854. Shur-Fit Company, Berkeley, Calif. Filed Jan. 13, 1958. Sec. 2(f).

SHUR-FIT

For Safety Mouth Protectors for Use in Competitive Sports and Similar Contact Pursuits.

First use Apr. 8, 1951.

SN 45,606. E-J-E Toys, Inc., St. Joseph, Mo. Filed Feb. 10, 1958.

THINKIE WINKIES

For Toys in the Nature of Magnetized Discs.

First use Nov. 8, 1957.

SN 47,544. Aktiebolaget Urfabriken, Svangsta, County of Blekinge, Sweden. Filed Mar. 12, 1958.

ABU-MATIC

Owner of Swedish Reg. No. 82,838, dated June 20, 1957; and U. S. Reg. No. 574,634.

For Fishing Implements in the Form of Spinning Reels, Fly Fishing Reels, Spinning and Fly Fishing Rods Without Lines, Gaffs and Baits, Such as Spinners, Spoon Baits, Wobblers, and Dibbing-Tackle.

SN 48,858. Baum's Sporting Goods Inc., d. b. a. Pecsolite Equipment Company, Sunbury, Pa. Filed Apr. 3, 1958.

PECSOLITE

For Exercise Mats, Swim Vests, and Football Equipment—Namely, Hip Pads, Shoulder Pads, Knee Pads, Helmets, and Thigh Guards.

First use in January 1957.

SN 49,202. South Bend Tackle Company, Inc., South Bend, Ind. Filed Apr. 7, 1958.

WATER WIGGLER

For Artificial Fishing Lure.

First use Jan. 20, 1958.

SN 49,283. Life-Like Products, Inc., Baltimore, Md. Filed Apr. 8, 1958. Sec. 2(f).

LIFE-LIKE

For Parts for Model Railroads, Scenery and Train Layouts—Namely, Lychen, Trees, Grass, Gravel, Wood Ties, Scenic Stone, Smoke Pellets and Similar Items.

First use Dec. 1, 1952.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 37,726. Industriewerk Schaeffler O. H. G., Herzogenaurach, Germany. Filed Sept. 24, 1957.

Owner of German Reg. No. 645,725, dated Oct. 8, 1953.

For Machinery—Namely, Textile Machines and Machine Parts—Namely, Bearings.

SN 39,369. The Warner & Swasey Company, Cleveland, Ohio, assignee of Badger Machine Company, Winona, Minn. Filed Oct. 22, 1957.

HYDRO-SCOPIC

For Telescopic Booms and the Like for Use With Material Handling Equipment, Such as Earth Digging Machines, Cranes and Associated Equipment.

First use Mar. 15, 1957.

SN 42,522. New Era Muffler Corporation, Rochester, Mich. Filed Dec. 16, 1957.

QUADRI-LOK

For Automotive Mufflers.

First use Feb. 1, 1957.

SN 43,478. Pneumatic-Hydraulic Development Company, Inc., Fort Wayne, Ind. Filed Jan. 6, 1958.

TOM THUMB

For Air and Hydraulic Cylinders.

First use Mar. 15, 1957.

SN 46,784. The Heyer Corporation, Chicago, Ill. Filed Feb. 27, 1958. Sec. 2(f).

HEYER

For Duplicators and Parts Thereof.

First use in about 1910 on duplicators.

SN 48,235. Buffalo Eclipse Corporation, North Tonawanda, N. Y. Filed Mar. 24, 1958.

IRON-GUARD

For Pumps for Liquids.

First use Jan. 8, 1957.

SN 48,912. Ford Motor Company, Dearborn, Mich. Filed Apr. 2, 1958.

MARAUDER

Owner of Reg. No. 555,081.

For Engines.

First use Jan. 2, 1958.

SN 36,450. J. I. Case Company, Racine, Wis. Filed Aug. 1, 1958.

SN 36,507. Ercsam, Paris, France. Filed Aug. 26, 1957.

SN 48,996. Donald L. Johnson, d. b. a. Flaker-Surfacer Company, Tacoma, Wash. Filed Apr. 2, 1958.

F-S

For Wood Flaking and Surfacing Machines, Including the Cutter Heads Used in Such Machines and the Individual Removable Knives in the Cutter Head.
First use on or about July 1, 1957.

SN 49,772. Outboard Marine Corporation, Waukegan, Ill. Filed Apr. 16, 1958.

LOAFER

For Riding and Propelling Attachment for Lawn Mowers and Yard Care Accessories.
First use Feb. 24, 1958.

SN 50,136. Whiteley Bearing Corp., Chicago, Ill. Filed Apr. 21, 1958.

EXPANDOLIFE

For Self-Lubricating Bearings.
First use Apr. 15, 1958.

SN 51,013. H-P Products, Inc., Louisville, Ohio. Filed May 5, 1958.

FLOOR/ac

For Slotted Outlet Fixtures for Vacuum Cleaning Systems.
First use Apr. 2, 1958.

SN 55,742. Stowe-Woodward, Inc., Newton Upper Falls, Mass. Filed July 21, 1958.

FABULITE

For Rolls for Machinery Having a Metallic Core and a Non-Metallic Covering.
First use Oct. 11, 1957.

SN 55,758. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 21, 1958.

STAR MIST

For Tableware Including Knives, Forks, and Spoons.
First use June 10, 1958.

SN 55,765. Joh. Winkelhofer & Söhne, Munich, Germany. Filed July 21, 1958.

JWS

For Driving Chains for Use With Sprocket Wheels.
First use in commerce since 1955.

SN 55,926. Atwater-Streng Company, Atwater, Ohio. Filed July 24, 1958.

LO-BLO, the Air-Broom

For Portable Power-Driven Blowers for Cleaning Walks, Pavements, Parking Areas, Lawns, Golf Courses, Roofs, Etc.
First use June 26, 1956.

SN 55,931. C. A. Litzler Co., Inc., Cleveland, Ohio. Filed July 24, 1958.

Computreater

For Cord Treating Equipment—Namely, Such Equipment and Parts and Components Thereof for Laboratory and Pilot Plant Use in Dipping, Tensioning, Heating and Cooling of Continuous Cord Materials.
First use June 20, 1958.

SN 56,014. Ivers-Lee Company, Newark, N. J. Filed July 25, 1958. Sec. 2(f).

IVERS-LEE

For Machinery for Handling Packaging Material and for Producing and Fabricating Packages and Wrappings, Particularly Machines for Forming Packages and Receptacles; Machines for Wrapping Articles; and Parts for Such Machines.
First use in November 1919.

SN 56,068. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 25, 1958.

SNOW WHITE

For Tableware Including Knives, Forks, and Spoons.
First use June 30, 1958.

SN 56,098. The Deming Company, Salem, Ohio. Filed July 28, 1958.

DEMING PUMPS THE WORLD'S BEST

For Hand and Power Pumps.
First use in 1898.

SN 56,114. Ford Motor Company, Dearborn, Mich. Filed July 28, 1958.

SELECT-O-SHIFT

For Tractor Transmissions.
First use Apr. 25, 1958.

SN 56,133. Dayton G. Ryals, Coll[illegible], Oreg. Filed July 28, 1958.

TUMBLEWEED

For Multiple Wirelayers.
First use Apr. 1, 1958.

SN 56,450. J. I. Case Company, Racine, Wis. Filed Aug. 1, 1955.

Case-o-matic

Owner of Reg. No. 663,765.
For Tractors and Tractive Vehicles.
First use Oct. 31, 1957.

Class 26—Measuring and Scientific Appliances

SN 21,448. Magnolia Petroleum Company, Dallas, Tex. Filed Dec. 21, 1956.

MARINE SONOPROBE

For Apparatus for Acoustically Exploring Buried Submarine Geological Features.
First use Oct. 5, 1956.

SN 24,889. Wiancko Engineering Company, Pasadena, Calif. Filed Feb. 21, 1957.

For Power Supplies.
First use in May 1953.

SN 29,297. Bernhard Nickel, d. b. a. Physikalisch-Technische Werkstatten, Marburg (Lahn), Germany. Filed May 2, 1957.

For Hunting Sights, Prism Binoculars, Range Finders, and Telescopes.
First use in January 1939; in commerce in October 1950.

SN 36,149. Ateliers Barigaud & Marre, Societe Anonyme, Arcueil, Seine, France. Filed Aug. 26, 1957.

OPTYPE

Owner of French Reg. No. 484,568, dated Dec. 15, 1955 (Paris); Natl. Inst. No. 65,842.
For Optical Line-Justification Device for Photo-Composition.

SN 36,337. American Machine & Foundry Company, New York, N. Y. Filed Aug. 28, 1957.

PRO-GLO

For Instruments for Testing Continuity, Shorts and Grounds of Electrical Circuits.
First use on or about Nov. 20, 1956.

SN 36,507. Kreisau, Paris, France. Filed Aug. 29, 1957.

CAMEX

Owner of French Reg. No. 449,981, dated Mar. 22, 1955 (Seine); Natl. Inst. No. 54,002.
For Cinematographic Apparatus and Accessories, Including Cinematographic Cameras and Projectors.

SN 37,777. The Brearley Company, Rockford, Ill. Filed Sept. 25, 1957.

PACE

For Bathroom Scales.
First use July 26, 1957.

SN 39,882. Penn Controls, Inc., Goshen, Ind. Filed Oct. 31, 1957.

BOILERMASTER

For Thermostatic Control Switches for Oil and Gas Fired Boilers.
First use Sept. 17, 1957.

SN 40,232. Herbert H. Ellis, d. b. a. Navar Manufacturing Co., Belmont, Mass. Filed Nov. 6, 1957.

NAVAR

For Radar Apparatus—Namely, Apparatus for Detecting and Locating Objects by the Use of Radiated Electromagnetic Energy.
First use in January 1957.

SN 40,368. S O D E C O Societe des Compteurs de Geneve, Geneva, Switzerland. Filed Feb. 22, 1958.

SODECO

Owner of U. S. Reg. No. 423,850.
For Electronic Computers, Impulse Counters, Impulse Transmitters, and Parts of the Foregoing.
First use in 1929.

SN 47,226. Andromeda Inc., Kensington, Md. Filed Mar. 7, 1958.

EDACON

For Coding and Decoding Equipment—Namely, Analog-to-Digital Encoders and Digital-to-Analog Decoders.
First use Jan. 24, 1958.

SN 47,443. George W. Bisl, d. b. a. Model Industries Co., Kansas City, Mo. Filed Mar. 10, 1958.

RENAISSANCE RULE

The word "Rule" is disclaimed apart from the mark as shown.
For Measuring Rules.
First use Mar. 5, 1958.

SN 40,866. Monsanto Chemical Company, St. Louis, Mo. Filed Apr. 17, 1958.

SPRAY SAVER

For Measuring Device for Determining the Exact Amount of Active Ingredient To Be Used in Mixing Liquid Sprays Such as Herbicides, Brush Killers, Weed Killers, and Similar Materials.
First use in January 1958.

SN 50,604. General Aniline & Film Corporation, d. b. a. Anaco, New York, N. Y. Filed Apr. 30, 1958.

LANCER

For Cameras.
First use Apr. 2, 1958.

SN 50,962. Bell & Lewis Optical Co., Chicago, Ill. Filed May 5, 1958.

MAGNI-SEG BIFOCALS

No exclusive rights are claimed in the word "Bifocals" apart from the mark as shown.
For Optical Lenses, Particularly Bifocal Lenses Adapted To Relieve Sub-Normal Vision.
First use Oct. 17, 1956.

Class 27—Horological Instruments

SN 42,958. Woodstock-Hoefer Watch & Jewelry Company, Kansas City, Mo. Filed Dec. 23, 1957.

Admiration

For Watches.
First use Apr. 1, 1948.

SN 43,409. Societe Anonyme Aubry Freres Montres Ciny, La Neirmont, Switzerland. Filed Dec. 9, 1957.

DEGADO

Owner of Swiss Reg. No. 320,426, dated May 12, 1947.
For Watches and Parts of Watches.

SN 43,941. Hamilton Watch Company, Lancaster, Pa. Filed Jan. 14, 1958.

THIN-O-MATIC

For Men's and Women's Wrist Watches.
First use Dec. 23, 1957.

Class 28—Jewelry and Precious-Metal Wares

SN 26,298. Ripley and Gowen Company Incorporated, Attleboro, Mass. Filed Mar. 15, 1957.

La Mode

For Ladies' Jewelry, Consisting of Bracelets, Necklets, Brooches, Lockets, Bar Pins, Finger Rings, and Other Jewelry for Ladies' Wear or Adornment, Such as Necklaces, Clips, Pins, and Earrings, and Men's Jewelry Consisting of Tie Slides, Collar Pins, Cuff Buttons, Dress Sets Which Consist of a Pair of Cuff Links and Three Studs for Men's Dress Shirts, Watch Chains, and Other Jewelry for Men's Personal Wear or Adornment Such as Cuff Links, Tie Bars, and Key Chains, Not Including Watches, All Made Wholly or in Part of Precious Metal.
First use in January 1924 on ladies' personal wear.

SN 29,957. Erich Schewe o. H. G., Hamburg, Germany. Filed May 13, 1957.

PETRA

Owner of German Reg. No. 965,641, dated Nov. 2, 1954.
For Jewelry and Costume Jewelry—Namely, Stick Pins, Brooches, Clips, Bracelets, Arm Bands, Necklaces, Earrings, Ear Clips, Rings, Shawl Clasps; Tie Clips, Cuff Links, Tie Pins, Wristwatch Bands, Watch Chains, Genuine and Imitation Decorative Stones, Genuine and Imitation Pearls.

SN 29,958. Erich Schewe o. H. G., Hamburg, Germany. Filed May 13, 1957.

Gazelle

Owner of German Reg. No. 675,191, dated Apr. 29, 1955.
For Jewelry and Costume Jewelry—Namely, Stick Pins, Brooches, Clips as Dress Ornaments, Bracelets, Arm Bands, Necklaces, Earrings, Ear Clips, Rings, Shawl Clasps, Tie Clips, Cuff Links, Tie Pins, Wristwatch Bands, Watch Chains, Genuine and Imitation Decorative Stones, Genuine and Imitation Pearls.

SN 31,017. L. & C. Mayers Co, Incorporated, New York, N. Y. Filed May 29, 1957.

CELEBRITY DIAMOND

Applicant disclaims the word "Diamond" apart from the mark as shown.
For Diamonds and Diamond Rings.
First use on or about Mar. 19, 1957.

SN 33,628. Mayer Bros., Seattle, Wash. Filed July 12, 1957.

FASHION ART

For Semi-Precious Jewelry—Namely, Earrings, Necklaces, Bracelets, Individually or in Sets.
First use June 20, 1957.

SN 35,483. Baden & Foss Co., New York, N. Y. Filed Aug. 12, 1957.

B & F

For Finger Rings and Mountings Therefor.
First use in 1938.

SN 36,590. Identi-Med, Inc., Rochester, Minn., assignee of Edward H. Klopp, Rochester, Minn. Filed Sept. 3, 1957.

IDENTI-MED

For Lockets, Medallions, Bracelets, and Brooches Designed To Carry Certain Identification Information About the Wearer.
First use Aug. 9, 1957.

Class 34—Heating, Lighting and Ventilating

SN 46,219. Feature Ring Co., Inc., New York, N. Y. Filed Nov. 7, 1957.

FEATURE-FLEX

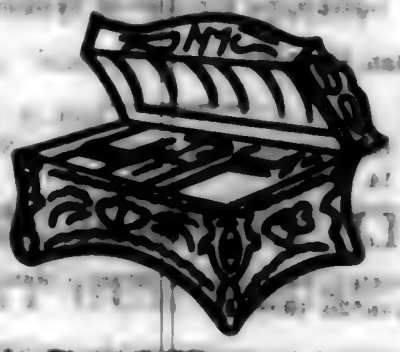
Owner of Reg. No. 423,923.
For Finger Rings Made of Precious Metal.
First use on or about Oct. 21, 1957.

SN 46,660. Castleclif, Inc., New York, N. Y. Filed Feb. 26, 1958.

CASSANDRA

For Jewelry Containing Simulated Pearls, Including Necklaces, Bracelets, Pins, Earrings, Etc.
First use Oct. 31, 1957.

SN 46,822. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Feb. 26, 1958.



For Diamonds, Diamond Rings, and Mountings for Diamonds, Silver Plated Flatware and Hollowware, and Table Cutlery Made of Silver.
First use Aug. 30, 1954.

SN 47,082. Towle Manufacturing Company, Newburyport, Mass. Filed Mar. 4, 1958.

CASCADE

Owner of Reg. No. 380,188.
For Sterling Silver and Sterling Silver Mounted Flatware and Table Cutlery.
First use August 1933.

SN 47,528. Taunton Pearl Works, Taunton, Mass. Filed Mar. 11, 1958.

REVERE

Owner of Reg. No. 411,234.
For Religious Jewelry and Women's Jewelry for Personal Wear, Not Including Watches.
First use in or about October 1957.

Class 29—Brooms, Brushes, and Dusters

SN 47,040. American-Marietta Company, O-Cedar Division, Chicago, Ill. Filed Mar. 4, 1958.

LADY MARIETTA

For Brooms.
First use on or about Feb. 7, 1958.

SN 47,309. American-Marietta Company, O-Cedar Division, Chicago, Ill. Filed Mar. 17, 1958.

SPIN-ABOUT

For Mops and Refill Heads Therefor.
First use Mar. 3, 1958.

SN 48,211. Silver Chamberlin Co., Clarton, N. J. Filed May 21, 1958.

QUIK-KLEEN

For Nylon Dust Mops.
First use Feb. 28, 1958.

Class 30—Crockery, Earthenware, and Porcelain

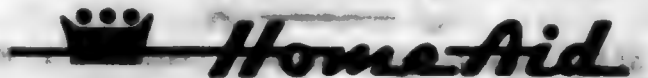
SN 40,230. Gladding, McBean & Co., Los Angeles, Calif. Filed Nov. 7, 1957.

STARBURST

For Tableware Including Dinnerware of China and Fine China.
First use in April 1954.

Class 31—Filters and Refrigerators

SN 55,165. Silex Co., also known as The Silex Company, Chicago, Ill. Filed July 11, 1958. Sec. 2(f).



Owner of Reg. No. 572,796.
For Electric Ice Cream Freezers.
First use Jan. 6, 1951.

SN 56,166. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

GLOBEMASTER

For Refrigeration Equipment—Namely, Packed Shut-Off Valves.
First use June 25, 1958.

Class 32—Furniture and Upholstery

SN 51,948. Schadt and Mathewson, Detroit, Mich. Filed May 19, 1958.

BLUE GOOSE

Owner of Reg. Nos. 123,325, 345,256, and others.
For Bed Pillows, Baby Cushions, Upholsterers' Seat Cushions, Sofa or Decorative Cushions.
First use August 1917.

SN 55,496. Midwest Folding Products Mfg. Corp., Roselle, Ill. Filed July 17, 1958.

DU HONEY

For Foldable-Leg Tables, Benches, Table-Bench Combinations, Platforms Including Stages and Risers.
First use on or before May 1947 on foldable-leg-tables.

SN 55,855. Bathey Manufacturing Company, Plymouth, Mich. Filed July 22, 1958.

S-L RACK

For Shipping and Storage Racks.
First use June 4, 1956.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 42,813. Way-Wolf Associates, Inc., New York, N. Y. Filed Dec. 17, 1957.

W-W SHIP-HEATER

The words "Ship" and "Heater" are disclaimed apart from the mark as a whole.
For Marine Heating Boilers.
First use January 1944.

SN 47,285. Safeguard Corporation, Lansdale, Pa. Filed Mar. 7, 1958.

HUMI-ZON

For Humidifiers.
First use Nov. 15, 1957.

SN 49,969. Porta-Dry, Inc., Medford, Oreg. Filed Apr. 18, 1958.

PORTA-DRY

For Portable Machine for Heating and Drying Lumber.
First use Mar. 1, 1958.

SN 51,517. Taco Heaters, Incorporated, Cranston, R. I. Filed May 12, 1958.

Taco

Owner of Reg. Nos. 441,726, 540,532, and others.
For Domestic and Commercial Hot Water Heaters and Venturi Fittings for Heating Systems.
First use 1940.

SN 51,793. The Hotstream Heater Company, Cleveland, Ohio. Filed May 16, 1958.

AQUA STEEL

For Water Heaters.
First use Apr. 9, 1958.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 50,151. Cordovan Associates, Inc., Indianapolis, Ind. Filed Apr. 22, 1958.

TRACTION MASTER

For Vehicle Tires.
First use Mar. 19, 1958.

SN 50,322. Smith-Monroe Company, South Bend, Ind. Filed Apr. 24, 1958.

For Hose, Hose Couplings, Hose Adapters, and Assemblies Thereof.
First use Mar. 29, 1958.

Class 36 — Musical Instruments and Supplies

SN 36,634. Toy Electronics, Inc., Framingham, Mass. Filed Sept. 3, 1957.

PLAY-PAK

For Grooved Phonograph Records.
First use Nov. 9, 1954.

Class 38 — Prints and Publications

SN 34,549. Julius Nelson, d. b. a. Artistic Typing Headquarters, Baltimore, Md. Filed July 29, 1957. Sec. 2(f).

TYPEWRITER MYSTERY GAMES

For Periodical Feature and a Series of Booklets Containing Line-by-Line Instructions for Making Designs With a Typewriter.
First use Jan. 15, 1945.

SN 45,873. General Features Corporation, New York, N. Y. Filed Feb. 14, 1958.

GOLD IN YOUR ATTIC

For Syndicated Newspaper Feature Column.
First use Jan. 26, 1958.

SN 46,476. NEA Service, Inc., Cleveland, Ohio. Filed Feb. 24, 1958.

TV SCOUT

For Section or Column, Published in Daily or Sunday Newspapers.
First use Jan. 6, 1958.

SN 46,778. Topps Chewing Gum, Incorporated, Brooklyn, N. Y. Filed Feb. 27, 1958.

BAZOOKA JOE

For Comic Strip in Sheet Form.
First use August 1954.

SN 47,116. Holmes & Narver, Inc., Los Angeles, Calif. Filed Mar. 5, 1958.

For Engineering and Construction Reports, Exhibits, Studies, and Other Related Items to the Engineering and Construction Field.
First use Aug. 1, 1955.

SN 47,389. International Minerals & Chemical Corporation, Chicago, Ill. Filed Mar. 10, 1958.

MIN & CHEM

For House Organ, Published Periodically.
First use January 1942.

SN 50,206. Aqui Esta Publishing Corp., West Hempstead, N. Y. Filed Apr. 23, 1958.

ANDREA

For Semi-Monthly Periodical Publication.
First use Apr. 1, 1958.

SN 50,278. The Bureau of National Affairs, Inc., Washington, D. C. Filed Apr. 24, 1958, Sec. 2(f).

RETAIL LABOR REPORT

For Periodically Issued Newsreports.
First use Mar. 20, 1958.

SN 50,511. Harry Edward Neal, Springfield, Md. Filed Apr. 28, 1958.

SEEK-RET-LOK

For Series of Children's Books Published From Time to Time.
First use Apr. 21, 1958.

SN 50,685. National Catholic Welfare Conference, Washington, D. C. Filed Apr. 29, 1958.

AT OUR HOUSE

For Weekly Newspaper Column.
First use May 5, 1947.

SN 50,881. The First National City Bank of New York, New York, N. Y. Filed May 2, 1958.

Owner of Reg. Nos. 576,617 and 657,867.
For Printed Publications—Namely, Periodical Publications, Booklets Relating to the Banking Business or to Other Matters of Interest to Applicant's Customers, Directories, and Printed Bulletins.
First use Jan. 28, 1958.

Class 39 — Clothing

SN 673,925. Joseph Kanner Hat Co. Inc., South Norwalk, Conn. Filed Sept. 28, 1954.

"Benneditto Martino" is the name of a living individual whose consent is of record.
For Men's Hats.
First use Feb. 26, 1950.

SN 38,988. Trent B. Terry, d. b. a. Monticello Shirt Company, Charlottesville, Va. Filed Sept. 10, 1957.

Owner of Reg. No. 379,155.
For Sport Shirts.
First use July 5, 1957; Jan. 3, 1939, in another form.

SN 38,828. Lebof Limited, London, England. Filed Oct. 14, 1957.

ELMOOR

Owner of British Reg. No. 603,166, dated Dec. 15, 1958.
For Ladies' Coats, Suits, Dresses, and Skirts.

SN 39,436. Janetne Blair Leighton, Miami, Fla. Filed Sept. 27, 1957.

For Men's Plastic Belts.
First use Apr. 15, 1955.

SN 39,869. Louise Garnier, Pinehurst, N. C. Filed Oct. 31, 1957.

PINEHURST GOLFER

For Women's Skirts and Jackets.
First use Nov. 15, 1954.

SN 40,806. Beau Brummel Company, Omaha, Nebr. Filed Nov. 18, 1957.

For Men's Wearing Apparel—Namely, Shirts.
First use Nov. 4, 1957.

SN 41,734. Wolf & Dessauer Company, Fort Wayne, Ind. Filed Dec. 3, 1957.

GLAMETTES

For Women's, Misses', and Girls' Lingerie—Namely, Nightgowns, Half Slips, Bouffant Petticoats, Panties, Peignoirs, Pajamas, and Briefs; and Women's and Children's Hosiery and Anklets.
First use Oct. 1, 1957.

SN 42,788. S. p. A. Alfredo Meiti, Settola di Cinisello Balsamo, Italy. Filed Dec. 30, 1957.

ASTIN

Priority claimed under Sec. 44(d) on Italian application filed Sept. 18, 1957; Reg. No. 183,999, dated Dec. 14, 1957.
For Gloves.

SN 43,861. Little Rock Tent and Awning Company, Little Rock, Ark. Filed Jan. 13, 1958.

Tuf-Nut
WESTERNS

Applicant disclaims all rights to use of "Westerns" apart from the trademark as used and shown. Owner of Reg. Nos. 197,476, 536,623, and 536,624.

For Western Wear for Adults and Children, Including Jeans, Pants, Shirts and Jackets.

First use Apr. 15, 1947; Nov. 1, 1920, on work clothes.

SN 44,087. Esther R. Degenberger, d. b. a. Ka-Koon Company, Milwaukee, Wis. Filed Jan. 27, 1958.

Ka-Koon

The drawing is lined for blue (copen).

For Cover or Outer Garment for Babies Which Attaches to a Stroller.

First use Nov. 11, 1957.

SN 46,325. Lord Jeff Knitting Company, Incorporated, Maspeth, N. Y. Filed Feb. 21, 1958.

RAMBULE'

For Knitted Polo Shirts and Knitted Sweaters.

First use July 15, 1957.

SN 46,642. Fred H. Beam, d. b. a. Buddy Bib Company, Dayton, Ohio. Filed Feb. 26, 1958.

BUDDY BIB

No claim is made to exclusive rights in "Bib" as used on the goods.

For Bibs.

First use May 1, 1949.

SN 46,875. Aquascutum, Limited, London, England. Filed Mar. 3, 1958.

TRAVELORD

Owner of British Reg. No. 767,321, dated July 11, 1957.

For Men's Coats, Raincoats, and Car Coats.

SN 47,156. So-Lo Works, Inc., Loveland, Ohio. Filed Mar. 5, 1958.

The Original Skooba-Skin

Applicant disclaims the words "The Original" apart from the mark.

For Natural Rubber Underwater Swim and Water Ski Suit.

First use Nov. 19, 1957.

SN 48,179. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed Mar. 21, 1958.

MATEX

Owner of Reg. No. 666,061.

For Sweaters.

First use Feb. 4, 1958.

SN 48,277. Robert Hall Clothes, Inc., New York, N. Y. Filed Mar. 24, 1958.

AUTOMATIC
"Fifty-fives"

Applicant disclaims exclusive right to use the term "Fifty-fives" except as part of the mark as shown.

For Men's Slacks, Suits, Sportcoats, and Jackets.

First use on or about Feb. 24, 1958.

SN 48,278. Robert Hall Clothes, Inc., New York, N. Y. Filed Mar. 24, 1958.

TROPIC-HALL
"Fifty-fives"

Applicant disclaims exclusive right to use the term "Fifty-fives" except as part of the mark as shown. Owner of Reg. No. 640,727.

For Men's Slacks, Suits, Sportcoats, and Jackets.

First use on or about Feb. 24, 1958.

SN 48,390. Austin Knitting Mills, Inc., Albemarle, N. C. Filed Mar. 25, 1958.

Linda Deane

For Ladies' Full Fashioned Sweaters.

First use Mar. 10, 1958.

SN 48,466. Bettye S. Dudley, Alexandria, Va. Filed Mar. 26, 1958.

BA-BE-SNUG

For Infants' Sleeping Garments.

First use Mar. 13, 1958.

SN 48,604. William Barry, Inc., Lawrence, Mass. Filed Mar. 28, 1958.

WILLIAM BARRY

For Jackets and Coats of Leather, Cloth, and Combinations Thereof.

First use June 1950.

SN 48,654. Lester Pincus Shoe Corporation, New York, N. Y. Filed Mar. 28, 1958.

SOCIETY DEBS

For Shoes, Slippers, and Boots.

First use Dec. 9, 1950.

SN 48,655. Lester Pincus Shoe Corporation, New York, N. Y. Filed Mar. 28, 1958.

COMPANION-ETTES

For Shoes, Slippers, and Boots.

First use June 9, 1948.

SN 50,887. J. P. Stevens & Co. Inc., New York, N. Y., as-

SN 48,430. Emergency Medical Oxygen Company, Inc.,

SN 49,573. Gantner & Mattern Company, San Francisco, Calif. Filed Apr. 14, 1958.

GANTNER OF CALIFORNIA

Owner of Reg. Nos. 296,584 and 329,845.
For Men's, Boys', Ladies', and Children's Sportswear, Particularly Swimwear and Sweaters.
First use in January 1937.

SN 50,869. Jacob Bolts Knitting Mill, Inc., Pottsville, Pa. Filed May 2, 1958.

LA VIVE

For Knit Underwear.
First use Mar. 1, 1934.

SN 50,983. Crown Prince, Inc., Milwaukee, Wis. Filed May 5, 1958.

Perfect Strike

For Shirts and Jackets for Men, Women, and Children.
First use on or about Feb. 1, 1958.

SN 51,387. Western Art Manufacturing Co., Inc., Denver, Colo. Filed May 9, 1958.

"Lazy-Lil"

For Infants', Toddlers', and Children's Sleepwear.
First use on or about Apr. 12, 1958.

Class 40—Fancy Goods, Furnishings, and Notions

SN 38,018. The Cee Bee Mfg. Co. Inc., Brooklyn, N. Y. Filed Sept. 30, 1957.

CEE-BEE

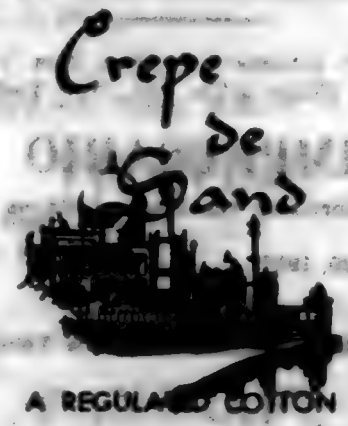
Owner of Reg. No. 650,113.
For Extruded Plastic Trimmings for Shoes, Hats, Luggage, Seat Covers, Furniture Covers and the Like.
First use January 1942.

SN 45,657. Stanley Chasin, d. b. a. Stanley C. P. Co., New York, N. Y. Filed Feb. 10, 1958.

No claim is made to the representation of the goods, apart from the mark as shown.
For Combs.
First use Mar. 20, 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 37,040. Regulated Cottons, Inc., New York, N. Y. Filed Sept. 11, 1957.



Owner of Reg. No. 611,136.
For Cotton Piece Goods.
First use Aug. 12, 1957.

SN 38,654. Wheeler Protective Apparel, Inc., Chicago, Ill. Filed Oct. 9, 1957.

BLOCKOTE

For Water, Flame, and Acid Resistant Fabric for Use in Safety Apparel and Equipment.
First use July 31, 1957.

SN 46,132. Glen Raven Cotton Mills, Inc., Glen Raven, N. C. Filed Feb. 10, 1958.

GLEN-RAY

Owner of Reg. Nos. 552,804, 279,711, and 658,301.
For Synthetic Fiber Piece Goods Used for Awnings, Chair Covers, Boat Tops, and the Like.
First use Mar. 11, 1957.

SN 48,877. J. P. Stevens & Co., Inc., New York, N. Y. Filed Apr. 1, 1958.

CLINTON FABRIC

Applicant disclaims the name of the goods "Fabric" apart from the mark as shown.
For Piece Goods of Wool, Synthetic Fibers, and Combinations Thereof.
First use Feb. 5, 1958.

SN 49,399. Ackerman Associates, Incorporated, New York, N. Y. Filed Apr. 10, 1958.

SHAPETROL

For Interlining Fabrics for Wearing Apparel.
First use Mar. 21, 1958.

SN 49,477. J. P. Stevens & Co., Inc., New York, N. Y. Filed Apr. 10, 1958.

WONDERTOUCH

Owner of Reg. Nos. 628,771 and 634,411.
For Synthetic Fabrics and Combinations Thereof in the Piece for Lingerie, Blouses, and Dresses.
First use Feb. 21, 1958.

SN 33,340. Go-Forth Enterprises, Inc., Charlotte, N. C. SN 48,479. Wesson Oil & Snowdrift Sales Company, New

SN 50,887. J. P. Stevens & Co. Inc., New York, N. Y., assignee of D. B. Fuller & Co., Inc., New York, N. Y. Filed May 2, 1958.

SURACHENE

For Textile Fabrics in the Piece of Cotton.
First use Dec. 2, 1957.

SN 50,889. J. P. Stevens & Co. Inc., New York, N. Y., assignee of D. B. Fuller & Co., Inc., New York, N. Y. Filed May 2, 1958.

IMPRESARIO

For Textile Fabrics in the Piece of Rayon and Synthetic Fibers.
First use Nov. 20, 1957.

SN 50,952. Ashley Fashions, Inc., New York, N. Y. Filed May 5, 1958.

Karaza

For Cashmere Cloth.
First use Mar. 1, 1956.

SN 51,147. Lisa M. Specht, Warwick, N. Y. Filed May 6, 1958.

STAY-STRAYT

For Towels and Blankets.
First use Apr. 9, 1958.

SN 51,236. United States Rubber Company, New York, N. Y. Filed May 7, 1958.

AIRMASTER

For Rug Underlay.
First use Apr. 3, 1958.

SN 51,946. Schadt and Mathewson, Detroit, Mich. Filed May 19, 1958.

BLUE GOOSE

Owner of Reg. Nos. 122,535, 544,130, and others.
For Comforters, Pillow Protectors, Bed Spreads, Drapes.
First use August 1917.

Class 43 — Thread and Yarn

SN 51,112. Celanese Corporation of America, New York, N. Y. Filed May 6, 1958.

CELALOFT

For Yarn.
First use Apr. 14, 1958.

Class 44 — Dental, Medical, and Surgical Appliances

SN 46,718. Becton, Dickinson and Company, Rutherford, N. J. Filed Feb. 13, 1956.

HYPAK

Owner of Reg. No. 434,632.
For Hypodermic Syringes and Needles.
First use on or about Apr. 16, 1946.

SN 46,430. Emergency Medical Oxygen Company, Inc., Chicago, Ill. Filed Feb. 24, 1956.

OXY-AID

For Portable Oxygen Dispensing Units, Masks and Refill Oxygen Bottles for Use Therewith for Medical Purposes.
First use Oct. 27, 1957.

Class 45 — Soft Drinks and Carbonated Waters

SN 48,737. The Goody Company, St. Louis, Mo. Filed Mar. 31, 1958.

GOODY

For Soft Drinks and Concentrates for Making the Same.
First use in 1936.

Class 46 — Foods and Ingredients of Foods

SN 11,378. Kadison & Company, Chicago, Ill. Filed July 2, 1956.

PACKERS POWDER

No claim of exclusive right is made to the word "Powder" as used on meat curing compositions.
For Meat Curing Composition Comprising a Mixture of Various Chemical Compositions.
First use June 22, 1956.

SN 27,729. Edmund B. Quinby, d. b. a. Garden Gold Foods, Tampa, Fla. Filed Apr. 8, 1957.

JUNE KIST

For Canned Vegetables, Canned Fruits, and Canned Orange Juice.
First use Nov. 7, 1956.

SN 27,822. Standard Brands Incorporated, New York, N. Y. Filed Apr. 9, 1957.

Give yourself a
FLAVOR BREAK

For Instant Coffee.
First use Apr. 1, 1957.

SN 28,401. Vienna Sausage Manufacturing Co., Chicago, Ill. Filed Apr. 17, 1957. Sec. 2(f).

VIENNA

For Meat Products—Namely, Smoked Beef Tongue, Corned Beef, Cooked Corn Beef Brisket, Frankfurters, Knockwurst, Polish Sausage, Beef Stix, Pastrami, Salami, and Bologna.
First use Oct. 1, 1932.

SN 32,864. Allied Food Products Sales, Inc., Brooklyn, N. Y. Filed June 11, 1957.

LO-SAL

For Salad Dressing.
First use Feb. 12, 1957.

SN 49,284. Martin Ranch, d. b. a. J. D. Martin, Fresno, Calif. Filed Apr. 8, 1958.

Class 47 — Wines

SN 32,340. Go-Forth Enterprises, Inc., Charlotte, N. C. Filed July 5, 1957.

Golden Gem

For Fresh Eggs.
First use in August 1956.

SN 33,677. Beaty Grocery Company, Inc., St. Joseph, Mo. Filed July 15, 1957.

VALU

For Oleomargarine, Canned Fruits and Vegetables, Dried Fruits, Canned Fish, Coffee, Tea, Spices, Cocoa, and Food Flavoring Extracts.
First use during 1931.

SN 34,770. Bryn Mawr Fruit Growers Association, Bryn Mawr, Calif. Filed Aug. 1, 1957. Sec. 2(f).

REDLANDS BEST

Owner of Reg. No. 372,275.
For Fresh Citrus Fruits.
First use 1915.

SN 38,929. Lee & Oshita Co., Castroville, Calif. Filed Oct. 15, 1957.

Chive-ettes

For Green Onions.
First use Aug. 5, 1954.

SN 39,359. Herbert Victor Nootbaar, d. b. a. H. V. Nootbaar & Co., Pasadena, Calif. Filed Oct. 31, 1957.

HAVEN

For Almond Hull Meal, Bone Meal, Fish Meal, Liver Meal, Tomato Pomace Meal, Ground Cracked or Rolled Grains for Animal Consumption.
First use Dec. 1, 1946.

SN 39,670. The Procter & Gamble Company, Cincinnati, Ohio. Filed Oct. 28, 1957.

LARK

For Edible Vegetable Oil.
First use Oct. 9, 1957.

SN 41,676. TV Time Foods, Inc., Evansville, Ind. Filed Dec. 2, 1957.

TV TIME YELLO-WHITE HYBRID

The words "Yello-White Hybrid" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 553,867, 633,851, and others.
For Raw Popcorn.
First use Oct. 31, 1955.

SN 43,572. Wesson Oil & Snowdrift Sales Company, New Orleans, La. Filed Jan. 7, 1958.

LO-MELT

For Shortening Made of Hydrogenated Vegetable Oil.
First use Oct. 18, 1957.

SN 44,068. Sta-Norm, Forest Hills, N. Y. Filed Jan. 30, 1958.

VITAVIMS

For Chewing Gum.
First use Nov. 13, 1957.

SN 47,804. Pillsbury Mills, Inc., Minneapolis, Minn. Filed Mar. 12, 1958.

PANCRAFT

Owner of Reg. No. 354,833.
For Mix for the Making of Sweet Rolls and Other Pastry Goods, Consisting Principally of Sugar, Shortening, Powdered Milk, Powdered Egg Yolk, Salt, Yeast Nutrients, and Flour.
First use at least as early as Aug. 1, 1952.

SN 47,870. J. A. Kirsch Co., New York, N. Y. Filed Mar. 17, 1958.

RUBY

For Canned Fish and Canned Seafood.
First use July 1956.

SN 48,233. Bonner Packing Co., d. b. a. California Raisin Co., Fresno, Calif. Filed Mar. 24, 1958.

FARM BOY

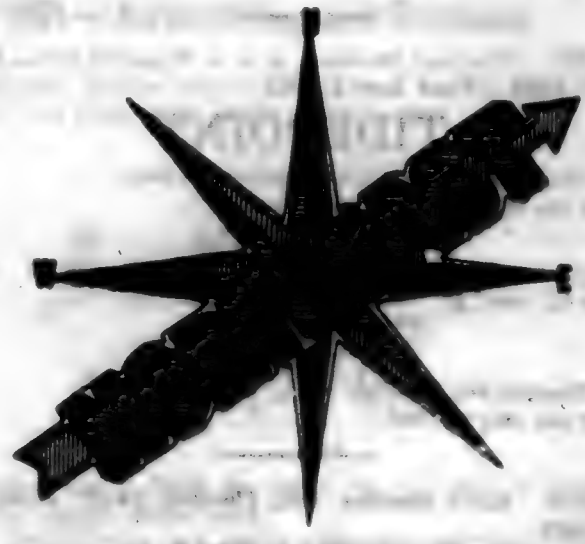
Owner of Reg. No. 577,894.
For Dried Fruits and Fruit Pastes.
First use Sept. 24, 1951.

SN 48,968. Joseph M. Christensen, Chicago, Ill. Filed Apr. 3, 1958.

SPRAYONNAISE

For Salad Dressing.
First use Feb. 6, 1958.

SN 49,178. Northeast Potato Company, Houlton, Maine. Filed Apr. 7, 1958.



The drawing is lined for red and blue but no claim is made to color.
For Potatoes in Their Natural State.
First use July 26, 1946.

SN 49,044. Chetley Products, Inc., New York, N. Y. Filed Apr. 4, 1958.

SN 28,342. J. C. Garet Incorporated, Los Angeles, Calif.

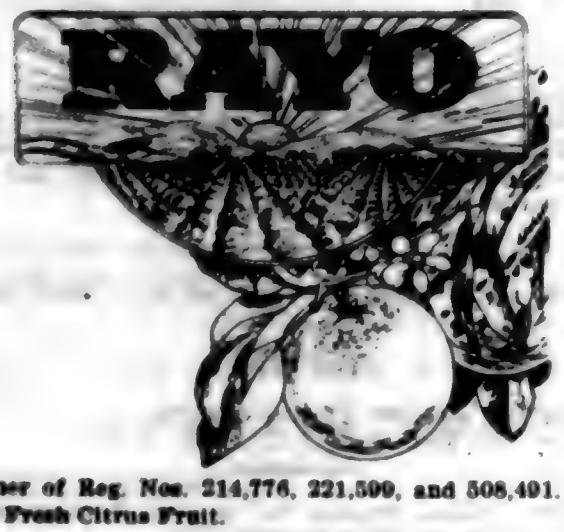
First use on or about Apr. 16, 1946.

First use Feb. 12, 1957.

SN 49,284. Martin Ranch, d. b. a. J. D. Martin, Fresno, Calif. Filed Apr. 8, 1958.

Owner of Reg. No. 221,163.
For Fresh Citrus Fruit.
First use in or about 1925 on fresh oranges.

SN 49,286. Martin Ranch, d. b. a. J. D. Martin, Fresno, Calif. Filed Apr. 8, 1958.



Owner of Reg. Nos. 214,776, 221,509, and 508,491.
For Fresh Citrus Fruit.
First use in or about 1925 on fresh oranges.

SN 49,916. Florida Citrus Canners Cooperative, Lake Wales, Fla. Filed Apr. 18, 1958.

DAILY SUN

For Canned and Frozen Citrus Juices.
First use Mar. 1, 1958.

SN 49,918. James Herbert Gigandet, d. b. a. Celebrity House, Glendale, Calif. Filed Apr. 18, 1958.

CELLO-ETTES

For Packages of Granulated Sugar.
First use Jan. 15, 1958.

SN 52,787. Wiegardt Brothers, d. b. a. Wiegardt Bros., Ocean Park, Wash. Filed June 2, 1958.

TIDEPOINT

For Canned Oysters and Canned Oyster Stew.
First use in 1940.

SN 53,402. General Mills, Inc., Minneapolis, Minn. Filed June 12, 1958.

MIZZA

For Toasted Soy Protein.
First use May 6, 1958.

SN 53,619. Kay's Ranches, Inc., Thermal, Calif. Filed June 16, 1958.

CROWN HILL

For Fresh Grapes.
First use May 28, 1958.

Class 47 — Wines

SN 44,725. Maison Rochez, Ltd., Los Angeles, Calif. Filed Jan. 27, 1958.

ROCHEZ

For Wine Specialty.
First use Aug. 30, 1954.

SN 47,979. Sovereign Importers, Ltd., Long Island City, N. Y. Filed Mar. 18, 1958.

VILLANOVA

For Wines.
First use in the year 1954.

Class 48 — Malt Beverages and Liquors

SN 47,034. Wausau Brewing Company, Wausau, Wis. Filed Mar. 3, 1958.

Adel Bräu

The word "Bräu" is disclaimed apart from the mark as shown.
For Beer.
First use June 3, 1933.

Class 49 — Distilled Alcoholic Liquors

SN 43,924. Campbells (Distillery) Limited, Glasgow, Scotland. Filed Jan. 14, 1958.

WHITE HEATHER

Owner of U. S. Reg. No. 305,157..
For Scotch Whisky.
First use Jan. 1, 1926; in commerce in the year 1933.

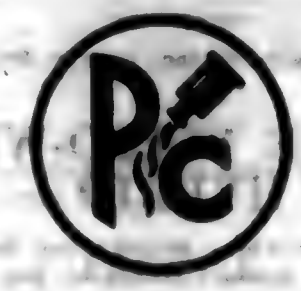
Class 50 — Merchandise Not Otherwise Classified

SN 39,103. Tutti Enterprises, Salt Lake City, Utah. Filed Oct. 17, 1957.

TUTTI

For Baby Slings, Which Are Cloth Slings Made To Fit Around a Person's Neck or Shoulder, in Which Such Person Can Carry a Small Baby, and Still Carry on Normal Household Duties.
First use July 1, 1957.

SN 48,657. Polychrome Corporation, Yonkers, N. Y. Filed Mar. 28, 1958.



For Presensitised Offset Plates.
First use July 1952.

First use Oct. 31, 1955.

First use July 26, 1946.

SN 49,044. Chetley Products, Inc., New York, N. Y. Filed Apr. 4, 1958.

COUNTESS

For Plastic Table Pads.
First use Feb. 1, 1958.

Class 51—Cosmetics and Toilet Preparations

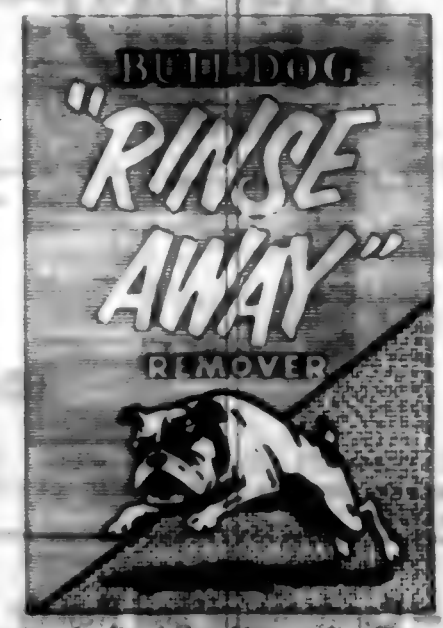
SN 37,026. Les Parfums de Dana, Inc., New York, N. Y. Filed Sept. 11, 1957.

DIVIDEND

For Cologne, Shaving Cream, Pre-Shave and After-Shave Perfumed Lotions, Shaving Sticks, Talcum Powder, and a Deodorant Preparation.
First use Aug. 21, 1957.

Class 52—Detergents and Soaps

SN 9,521. The Bulldog Corporation, Jersey City, N. J. Filed June 4, 1956.



The drawing is lined for blue and yellow. No claim is made to the words "Rinse Away Remover" apart from the mark shown.
For Paint Remover.
First use Mar. 25, 1955.

SN 28,342. J. C. Garet Incorporated, Los Angeles, Calif. Filed Apr. 17, 1957.

Lam

For Cold Water Soap.
First use Mar. 8, 1957.

SN 38,153. Golden Peacock Co., Inc., Paris, Tenn. Filed Oct. 1, 1957.

RECEPTIV

For Antiseptic Cleansing Lotion.
First use Sept. 10, 1957.

SN 47,607. Rhodia Inc., New York, N. Y. Filed Mar. 12, 1958.

FLUSHEX H-7

For Chemical Toilet Bowl and Sump Cleaners.
First use Feb. 11, 1958.

SN 49,125. Coloramic Tile Co., Inc., Chicago, Ill. Filed Apr. 7, 1958.

COLORAMIC

Owner of Reg. No. 636,692.
For Cleaners, Both in Paste and Liquid Form, for Removing Cement, Dirt, Grease, and the Like From Rubber, Ceramic, Linoleum, Vinyl Plastic, Felt Base and Asphalt Tile Surfaces.
First use August 1955.

SERVICE MARKS

Class 100—Miscellaneous

SN 696,977. Mister Donut of America, Inc., Brookline, Mass., by change of name from Harwin Management Corporation, Brookline, Mass. Filed Nov. 28, 1955.

For Snack Bar Services.
First use Aug. 16, 1955.

Class 101—Advertising and Business

SN 693,476. Martin Miller, d. b. a. The Martin Miller Company, New York, N. Y. Filed Aug. 22, 1955.

Assembly-Line Selling*

The drawing is lined for grey, but no claim is made to color as a feature of the mark.
For Advertising and Sales Planning Services—Namely, Creating, Planning, Writing, and Producing Direct Mail Advertising Campaigns, Including Controlled Prospecting Plans, Art Work, and Copy.
First use Aug. 10, 1955.

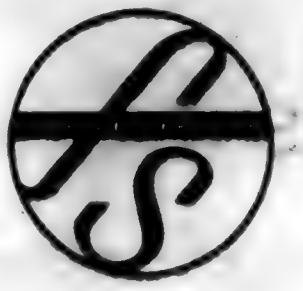
SN 39,652. J. T. Thorpe Inc., Los Angeles, Calif. Filed Oct. 28, 1957.

Class 106—Material Treatment

SN 30,777. Hi Neighbor Inc., Denver, Colo. Filed May 27, 1957.

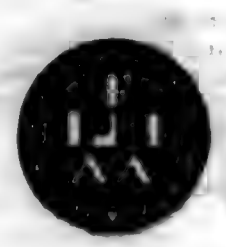
The lining on the drawing designates the color red.
For Promoting the Sale of Merchandise of Others Through the Medium of Trading Stamps Redeemable in Goods or Cash.
First use on or about Mar. 29, 1957.

SN 39,055. Fristech Services, Inc., Kansas City, Mo. Filed Oct. 17, 1957.



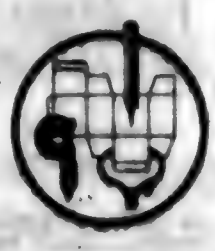
Applicant disclaims the use of the words "Office Services."
For Supplying Temporary Office Help.
First use Jan. 7, 1957.

SN 42,465. Folding Paper Box Association of America, Chicago, Ill. Filed Dec. 16, 1957.



For Trade Association Services in Promoting Standardization and Improvement of Folding Paper Boxes, in Collecting and Assimilating Trade Statistics, and Developing New Uses for Folding Paper Boxes, and in Distributing Information Relating Thereto.
First use July 1954.

SN 42,466. Folding Paper Box Association of America, Chicago, Ill. Filed Dec. 16, 1957.



For Trade Association Services in Conducting Studies and Research in Regard to Materials, Machinery and Methods of Production, in Studying Costs and Developing Accurate Methods of Cost-Finding and Accounting, and in Distributing Information Relating Thereto.
First use July 1950.

Class 102 — Insurance and Financial

SN 16,913. Thanksgiving Day Hospital Stamp, Inc., Perth Amboy, N. J. Filed Oct. 3, 1956.

THANKSGIVING DAY

For Raising Funds for Hospital or Similar Uses.
First use July 12, 1949.

SN 41,808. Factory Mutual Liability Insurance Company of America, Providence, R. I. Filed Dec. 5, 1957.

For Underwriting Casualty Insurance.
First use in 1925.

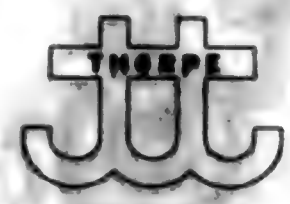
Class 103 — Construction and Repair

SN 677,098. Western Waterproofing Company, Inc., St. Louis, Mo. Filed Dec. 2, 1954. Ser. 2(f).

WET-AGGREGATE

For Cleaning Stone Structures and the Like.
First use May 1940.

SN 30,681. J. T. Thorpe Inc., Los Angeles, Calif. Filed Oct. 28, 1957.



For Designing, Constructing, and Servicing of All Types of Industrial-Process Heat-Enclosures, Such as Metallurgical Furnaces, Boilers, and the Like.
First use in December 1956.

First use Aug. 16, 1955.

Plans, Art Work, and Copy.
First use Aug. 10, 1955.

SN 39,652. J. T. Thorpe Inc., Los Angeles, Calif. Filed Oct. 28, 1957.

jtt

For Designing, Constructing, and Servicing of All Types of Industrial-Process Heat-Enclosures, Such as Metallurgical Furnaces, Boilers, and the Like.
First use in December 1956.

Class 105 — Transportation and Storage

SN 48,046. Pacific Air Lines, Inc., Phoenix, Ariz. Filed May 7, 1958.

PACIFIC AIR LINES

For Transportation of Passengers and Freight by Air.
First use Mar. 3, 1958.

Class 106 — Material Treatment

SN 4,740. Photo Chemical Products, Inc., Long Island City, N. Y. Filed Mar. 16, 1956.

PHOTO Wrinlay

Owner of Reg. No. 596,931.
For Applying Simulated Engraving Designs, by Means of a Photographic Printing Process, to the Products of Others—Namely, Dials, Panels, Chassis and Components for Airplanes, Radios, and Television Sets.
First use Feb. 1, 1956.

Class 107 — Education and Entertainment

SN 42,492. M. A. Kitay, Newark, N. J. Filed Dec. 16, 1957.

"YOURS FOR THE ASKING"

For Title of a Television Program Featuring Motion Pictures and/or Live Variety Shows.
First use Nov. 1, 1954.

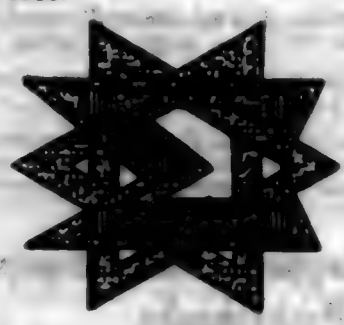
COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 48,720. Delta Sigma Delta Fraternity, Detroit, Mich. Filed Mar. 31, 1958.

The drawing is lined for blue, garnet, and gold.
For Indicating Membership in a Dental Fraternity.
First use during 1907.

SN 48,721. Delta Sigma Delta Fraternity, Detroit, Mich. Filed Mar. 31, 1958.



The drawing is lined for gold, garnet, and turquoise.
For Indicating Membership in a Dental Fraternity.
First use during 1882.

SN 51,769. American Nurses' Association, New York, N. Y. Filed May 16, 1958.

For Indicating Membership to Applicant.
First use Oct. 15, 1957.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

669,443. TOOL STONE. Kerr Manufacturing Company. SN 15,372. Pub. 8–26–58. Filed 9–10–56.

669,444. PAK-N-FOAM AND DESIGN. Freeman Chemical Corporation. SN 29,772. Pub. 8–26–58. Filed 4–29–57.

669,445. INSULINING. Nopco Chemical Company. SN 32,405. Pub. 8–26–58. Filed 6–21–57.

669,446. TRU-TEST. Oakes Ranches. SN 33,785. Pub. 8–26–58. Filed 7–15–57.

669,447. DESIGN OF HAND ETC. Ferry-Morse Seed Co. SN 36,794. Pub. 8–26–58. Filed 9–6–57.

669,448. BUCKITE AND DESIGN. Ohio Lime Company. SN 37,180. Pub. 8–26–58. Filed 9–13–57.

669,449. MAKROLON. Farbenfabriken Bayer Aktiengesellschaft. SN 48,073. Pub. 8–26–58. Filed 1–30–58.

669,450. IT'S BACTI-VATED! AND DESIGN. Michigan Peat, Inc. SN 51,484. Pub. 8–26–58. Filed 5–12–58.

Class 2—Receptacles

669,451. PE-LI-CON AND DESIGN. Container Corporation of America. SN 11,230. Pub. 8–26–58. Filed 6–29–56.

669,452. J–E AND DESIGN. J. E. Plastics Manufacturing Corp. SN 27,317. Pub. 8–26–58. Filed 4–1–57.

669,453. LIVE-PAK. W. R. Richey. SN 33,748. Pub. 8–26–58. Filed 7–15–57.

669,454. BORAXO. United States Borax & Chemical Corporation. SN 38,777. Pub. 8–26–58. Filed 10–11–57.

669,455. WESTROLL. West Chemical Products, Inc. SN 40,520. Pub. 8–26–58. Filed 11–12–57.

669,456. TALL-BOY. H. P. Gott Manufacturing Company. SN 42,475. Pub. 8–26–58. Filed 12–16–57.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

669,457. "TWO FOR THE MONEY." Philip Mitchell & Sons, Inc. SN 33,730. Pub. 8–26–58. Filed 7–15–57.

669,458. BOYLE AND DESIGN. Reliable Luggage, Inc. SN 45,278. Pub. 8–26–58. Filed 2–4–58.

669,459. TOWNSMAN. Amity Leather Products Co. SN 45,442. Pub. 8–26–58. Filed 2–7–58.

669,460. SAC-MOBILE. Droutman Manufacturing Company. SN 46,115. Pub. 8–26–58. Filed 2–19–58.

669,461. LITTLE MISS. Bernard Cahn Co., Inc. SN 46,802. Pub. 8–26–58. Filed 2–28–58.

Class 4—Abrasives and Polishing Materials

669,462. SHINE-EASE. Merion Company. SN 32,515. Pub. 8–26–58. Filed 6–24–57.

Class 6—Chemicals and Chemical Compositions

669,463. STANLEY. Stanley Home Products, Inc. SN 8,518. Pub. 8–26–58. Filed 5–17–56.

669,464. SHARPLES. Pennsalt Chemicals Corporation, by change of name from The Pennsylvania Salt Manufacturing Company. CONSOLIDATED CERTIFICATE. SN 23,822, pub. 3–11–58, filed 2–5–57, Cl. 6; SN 33,498, pub. 7–29–58, filed 7–10–57, Cl. 52.

669,465. NU-SHEEN. Chemurgy Products, Inc. SN 36,772. Pub. 8–26–58. Filed 8–25–57.

669,466. ATLANTIC. Charles Kneu Johnson Carbon Black Company. SN 33,060. Pub. 8–26–58. Filed 7–2–57.

669,467. DIAMINOGEN. General Aniline & Film Corporation. SN 35,578. Pub. 8–26–58. Filed 8–15–57.

669,468. OXYDIAMINOGEN. General Aniline & Film Corporation. SN 35,584. Pub. 8–26–58. Filed 8–15–57.

669,469. LANAMID. Allied Chemical & Dye Corporation, now by change of name Allied Chemical Corporation. SN 37,538. Pub. 8–26–58. Filed 9–20–57.

669,470. PROVENTIN. Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. SN 38,806. Pub. 8–26–58. Filed 10–14–57.

669,471. EASY GLITTER. Easy Glitter Wax Company. SN 39,389. Pub. 8–26–58. Filed 10–23–57.

669,472. POLYCIN. The Baker Castor Oil Company. SN 41,228. Pub. 8–26–58. Filed 11–25–57.

669,473. GRAPH-O-TONE. Philip A. Hunt Company. SN 41,819. Pub. 8–26–58. Filed 12–5–57.

669,474. HALOID XEROX. Haloid Xerox Inc., by change of name from The Haloid Company. SN 42,133. Pub. 8–26–58. Filed 12–10–57.

669,475. SUPERFLEX. The B. F. Goodrich Company. SN 42,863. Pub. 8–26–58. Filed 12–23–57.

669,476. THIOPON. Tennessee Corporation. SN 43,789. Pub. 8–26–58. Filed 1–10–58.

669,477. AMOCO. The American Oil Company. SN 43,915. Pub. 8–26–58. Filed 1–14–58.

669,478. NALCOMO. National Aluminate Corporation. SN 43,955. Pub. 8–26–58. Filed 1–14–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

669,479. LIGHTNING. J. L. Galef & Son, Inc. SN 30,015. Pub. 8–26–58. Filed 5–14–57.

Class 10—Fertilizers

669,480. CAMPBELL'S GREEN-GLO AND DESIGN. Campbell Fertilizer Company, Inc. SN 47,097. Pub. 8–26–58. Filed 3–5–58.

669,481. STADLER'S TRIPLE-X BAN-A-WEED AND DESIGN. The Stadler Fertilizer Company. SN 49,311. Pub. 8–26–58. Filed 4–8–58.

669,482. NORTHRUP KING. Northrup, King & Co. SN 49,606. Pub. 8–26–58. Filed 4–14–58.

669,483. MIRACID. Stern's Nurseries, Inc. SN 49,891. Pub. 8–26–58. Filed 4–17–58.

669,484. TREL. Smith-Douglass Company, Incorporated. SN 49,985. Pub. 8–26–58. Filed 4–18–58.

669,485. THE REAL McCOY. Organics, Incorporated. SN 50,182. Pub. 8–26–58. Filed 4–22–58.

669,486. SMIDO. Smith-Douglass Company, Incorporated. SN 50,253. Pub. 8–26–58. Filed 4–23–58.

669,487. PEP-SOIL. Lone Star Cotton Company. SN 50,810. Pub. 8–26–58. Filed 5–1–58.

Class 21—Electrical Apparatus, Machines,

669,505. VOLCK-NU-MATIC AND DESIGN. Volck-Nu-

669,488. FLORAGANIC. Wilson & Toomer Fertilizer Co. SN 51,158. Pub. 8-26-58. Filed 5-6-58.

669,489. IT'S "BACTI-VATED!" AND DESIGN. Michigan Peat, Inc. SN 51,482. Pub. 8-26-58. Filed 5-12-58.

669,490. 27 GRAN. Smith-Douglass Company, Incorporated. SN 51,596. Pub. 8-26-58. Filed 5-15-58.

669,491. ABC. A. B. Chrisman Grain Company. SN 51,776. Pub. 8-26-58. Filed 5-19-58.

669,492. ARMORGANIC. Armour and Company. SN 52,550. Pub. 8-26-58. Filed 5-29-58.

Class 11 — Inks and Inking Materials

669,493. READEX AND DESIGN. Readex Process, Inc. SN 25,280. Pub. 8-26-58. Filed 2-28-57.

669,494. WARRIOR. The Fulton Marking Equipment Company, Inc. SN 38,915. Pub. 8-26-58. Filed 10-15-57.

669,495. LETTERS WP WITHIN TRIANGLE. Willpac, Inc. SN 42,662. Pub. 8-26-58. Filed 12-18-57.

669,496. MAXIPRINT. Claremont Pigment Dispersion Corporation. SN 44,262. Pub. 8-26-58. Filed 1-20-58.

669,497. ELECTRO WRITE. Code Manufacturing Corporation. SN 44,438. Pub. 8-26-58. Filed 1-22-58.

669,498. SPLIT SEC. Sun Chemical Corporation. SN 45,079. Pub. 8-26-58. Filed 1-31-58.

Class 12 — Construction Materials

669,499. THERMO-BLOC. National Gypsum Company. SN 41,296. Pub. 6-17-58. Filed 11-25-57.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

669,500. DEXLOCK. Dexter Industries, Inc. SN 27,675. Pub. 8-26-58. Filed 4-8-57.

669,501. FISHBONE. Beauty Products, Ltd., d. b. a. Funco Products. SN 29,780. Pub. 8-26-58. Filed 5-10-57.

669,502. FLEXFLO. Grove Valve and Regulator Company. SN 31,005. Pub. 8-26-58. Filed 5-20-57.

669,503. TOT. Swingline, Inc. SN 42,739. Pub. 8-26-58. Filed 12-19-57.

669,504. SPEED AND DESIGN. Swingline, Inc. SN 42,945. Pub. 8-26-58. Filed 12-23-57.

669,505. TRIPLE PACK. The Gilbert & Bennett Mfg. Co. SN 44,701. Pub. 8-26-58. Filed 1-27-58.

669,506. WATERATOR. Hercules Plastics Corp. SN 44,820. Pub. 8-26-58. Filed 1-28-58.

669,507. AER-LINER. Aerator Sales Corp. SN 45,098. Pub. 8-26-58. Filed 2-3-58.

669,508. D AND DESIGN. Detroit Brass & Malleable Co. SN 45,146. Pub. 8-26-58. Filed 2-3-58.

669,509. E-Z JUST. E-Z Just Hinge Company. SN 45,152. Pub. 8-26-58. Filed 2-3-58.

669,510. REVALON. Revere Copper and Brass Incorporated. SN 45,200. Pub. 8-26-58. Filed 2-3-58.

669,511. KAMAX. Rudolf Kellermann Fabrik fuer Gewindeteile, Schraubenfabrik. SN 45,436. Pub. 8-26-58. Filed 2-6-58.

Class 14 — Metals and Metal Castings and Forgings

669,512. 3C SPECIAL. Vanadium-Alloys Steel Company. SN 28,901. Pub. 8-26-58. Filed 4-25-57.

Class 15 — Oils and Greases

669,513. JOHNSON'S. S. C. Johnson & Son, Inc. SN 32,761. Pub. 8-26-58. Filed 6-27-57.

669,514. EGGOL. Continental Oil Company. SN 33,120. Pub. 8-26-58. Filed 7-2-57.

669,515. ALKAR. Universal Oil Products Company. SN 35,710. Pub. 8-26-58. Filed 8-16-57.

669,516. WESTERN AND DESIGN. Western Oil and Fuel Company. SN 40,902. Pub. 8-26-58. Filed 11-18-57.

669,517. BORIPEN. The Standard Oil Company. SN 42,549. Pub. 8-26-58. Filed 12-16-57.

669,518. CELESTIAL. United Candle Company, Inc. SN 43,986. Pub. 8-26-58. Filed 1-14-58.

669,519. TEXACO. The Texas Company. SN 44,568. Pub. 8-26-58. Filed 1-23-58.

Class 16 — Protective and Decorative Coatings

669,520. ORO AND DESIGN. Bradley-Van Holm Chemical Corporation. SN 41,618. Pub. 4-22-58. Filed 12-2-57.

669,521. KEON. Grand Rapids Varnish Corporation. SN 48,630. Pub. 8-26-58. Filed 3-28-58.

Class 18 — Medicines and Pharmaceutical Preparations

669,522. BLUE CREST AND DESIGN. Blue Crest Products Co. SN 684,526. Pub. 10-16-55. Filed 2-20-55.

669,523. STAN DISPENSTICK. The Stanley Research Corporation. SN 30,452. Pub. 8-26-58. Filed 5-21-57.

669,524. CHAP-ADE. Plough, Inc. SN 35,289. Pub. 8-26-58. Filed 8-9-57.

669,525. FERAVIM. Nutritional Quality Controls, Inc. SN 38,115. Pub. 8-5-58. Filed 9-16-57.

669,526. FEMALIN. Nutritional Quality Controls, Inc. SN 38,118. Pub. 8-5-58. Filed 9-16-57.

669,527. PRE-17. Standex Laboratories, Inc. SN 41,727. Pub. 8-12-58. Filed 12-3-57.

669,528. NARLENE. The Dow Chemical Company. SN 45,725. Pub. 8-26-58. Filed 2-12-58.

669,529. MILVONIQUE. Sterling Drug Inc., d. b. a. Winthrop Laboratories. SN 46,503. Pub. 8-26-58. Filed 2-24-58.

Class 19 — Vehicles

669,530. TOW-BEAR. Hudson House, Inc. SN 12,670. Pub. 4-16-57. Filed 8-9-56.

669,531. AMAZONE. Kreidler's Metall-U. Drahtwerke G. m. b. H. SN 31,401. Pub. 8-26-58. Filed 6-5-57.

669,532. COOL-PACK. General Motors Corporation. SN 34,689. Pub. 7-22-58. Filed 7-31-57.

669,533. ELIPRESS. Società Applicazioni Gomma Antivibranti "S. A. G. A." S. p. A. SN 35,696. Pub. 8-26-58. Filed 4-21-58.

669,534. AQUA SWAN AND DESIGN. Miles Tank & Boat Co. SN 36,094. Pub. 4-22-58. Filed 5-23-57.

669,535. ADMIRAL. Adam Opel Aktiengesellschaft. SN 37,080. Pub. 4-29-58. Filed 7-29-57.

669,536. HUB-O-MATIC. Hub-O-Matic, Inc. SN 44,286. Pub. 8-26-58. Filed 1-10-58.

669,537. KOLCRAFT. Kolcraft Products, Inc. SN 46,458. Pub. 8-26-58. Filed 2-24-58.

669,538. ROC-OK. Robertson Manufacturing Company, Incorporated. SN 46,484. Pub. 8-26-58. Filed 2-24-58.

669,539. YELLOWSTONE. Melvin E. Kreeder, d. b. a. Yellowstone Coach Company. SN 46,555. Pub. 8-26-58. Filed 2-25-58.

669,632. EOBOVISION. Optics Engineering Corporation. SN 29,229. Pub. 8-26-58. Filed 5-1-57.

669,616. WEATHERITE. International Oil Burner Co. SN

Class 21—Electrical Apparatus, Machines, and Supplies

669,540. V DURATED LIGHTING. Verd-A-Ray Corporation. SN 669,588. Pub. 1-11-55. Filed 7-7-54.

669,541. UNEPAC. The Electric Products Company. SN 18,560. Pub. 4-23-57. Filed 11-1-56.

669,542. WR AND DESIGN. White-Rodgers Company. CONSOLIDATED CERTIFICATE. SN 42,100, pub. 7-8-58, filed 12-9-57, Cl. 21; SN 22,845, pub. 8-19-58, filed 1-18-57, Cl. 26.

669,543. MARQUETTE. Marquette Appliances, Inc. CONSOLIDATED CERTIFICATE. SN 25,872, pub. 4-29-58, filed 3-11-57, Cl. 21; SN 43,174, pub. 8-19-58, filed 12-30-57, Cl. 24; SN 25,873, pub. 3-11-58, filed 3-11-57, Cl. 34.

669,544. BOBRICH. Bobrich Products Corp. SN 27,416. Pub. 8-26-58. Filed 4-3-57.

669,545. UNIMATIC. Comptometer Corporation. SN 32,919. Pub. 4-8-58. Filed 7-1-57.

669,546. ISO-DUCT. Electrical Engineers Equipment Co. SN 43,017. Pub. 8-26-58. Filed 12-26-57.

669,547. GA. Good-All Electric Mfg. Co. SN 43,098. Pub. 8-26-58. Filed 12-27-57.

669,548. POLYSIL. Belden Manufacturing Company. SN 43,135. Pub. 8-26-58. Filed 12-30-57.

669,549. AURORA. Metalcraft Products Company, Inc. SN 43,201. Pub. 8-26-58. Filed 12-31-57.

669,550. ARC. The Firestone Tire & Rubber Company. SN 43,307. Pub. 8-26-58. Filed 1-2-58.

669,551. PORTA-BELL. Packard Bell Electronics Corporation. SN 43,336. Pub. 8-26-58. Filed 1-2-58.

669,552. SILVER RAY. Silver Ray Tube Manufacturing Co. SN 43,348. Pub. 8-26-58. Filed 1-2-58.

Class 22—Games, Toys, and Sporting Goods

669,553. BRONSON SPIN KING. Higbie Manufacturing Company. SN 12,508. Pub. 8-26-58. Filed 7-20-56.

669,554. OLT'S FAMOUS GAME CALLS ETC. AND DESIGN. The Philip S. Olt Company. SN 29,652. Pub. 8-26-58. Filed 5-8-57.

669,555. SKI-MASTER. Texas Water Crafters. SN 30,965. Pub. 8-26-58. Filed 5-28-57.

669,556. SKELLY 13 AND DESIGN. Milton L. Brenner, d. b. a. Skelly Manufacturing Company. SN 35,739. Pub. 4-1-58. Filed 8-19-57.

669,557. E-ROW TRIM-SLIM. Ero Manufacturing Company. SN 39,052. Pub. 8-26-58. Filed 10-17-57.

669,558. HETTRICK SHIP MATE AND DESIGN. The Hettrick Manufacturing Company. SN 39,227. Pub. 8-26-58. Filed 10-21-57.

669,559. AH ETC. AND DESIGN. Allan Herschell Company, Inc. SN 40,121. Pub. 8-26-58. Filed 11-5-57.

669,560. THE STOCK MARKET TRADER ETC. AND DESIGN. Paul F. Henning, d. b. a. T. T. Products Co. SN 40,387. Pub. 8-27-58. Filed 4-12-57.

669,561. FIRETAIL. James Heddon's Sons. SN 41,271. Pub. 8-26-58. Filed 11-25-57.

669,562. MILKBOAT AND DESIGN. Stephen Lipka. SN 41,460. Pub. 8-26-58. Filed 11-27-57.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

669,563. HARVESTAIRE H. Harvestaire, Inc. SN 692,600. Pub. 5-6-58. Filed 5-6-55.

669,564. STELLRAM. Wolfram & Molybdene Société Anonyme. SN 24,219. Pub. 8-26-58. Filed 3-11-57.

669,565. VOLCK-NU-MATIC AND DESIGN. Volck-Nu-Matic Corporation. SN 26,410. Pub. 8-26-58. Filed 8-15-57.

669,566. DESIGN OF PLAYING CARD. Geo. W. King Limited. SN 41,761. Pub. 8-26-58. Filed 12-4-57.

669,567. HELITUF. The Osborn Manufacturing Company. SN 43,625. Pub. 8-19-58. Filed 1-8-58.

669,568. OXFORD. Underwood Corporation. SN 45,228. Pub. 6-17-58. Filed 2-3-58.

669,569. FIGURE OF SCOTSMAN. Scottish Tool, Die & Metal Products Company. SN 45,496. Pub. 8-26-58. Filed 2-7-58.

669,570. CYCLEAN. Bird Machine Company. SN 46,781. Pub. 8-26-58. Filed 3-13-58.

669,571. LANCER. The Great Lakes Tractor Company. SN 47,375. Pub. 8-12-58. Filed 3-10-58.

669,572. ROCKFORD B-W BORG-WARNER AND DESIGN. Borg-Warner Corporation. SN 47,833. Pub. 7-29-58. Filed 3-17-58.

669,573. SOSTEEL. Solingen Steel Distributors, Inc. SN 48,590. Pub. 8-26-58. Filed 3-27-58.

669,574. FABROLAY AND DESIGN. Unifex Engineering, Inc. SN 48,595. Pub. 8-26-58. Filed 3-27-58.

669,575. BLU-MOL. Millers Falls Company. SN 48,644. Pub. 8-26-58. Filed 3-28-58.

Class 24—Laundry Appliances and Machines

669,543. CONSOLIDATED CERTIFICATE. See Class 21.

Class 26—Measuring and Scientific Appliances

669,542. CONSOLIDATED CERTIFICATE. See Class 21.

669,576. BETTER MEASURE WITH LUFKIN. The Lufkin Rule Company. SN 603,757. Pub. 8-26-58. Filed 8-26-55.

669,577. SEARCH WITH SIRCHIE AND DESIGN. F. J. Sirchie, d. b. a. Sirchie Finger Print Laboratories. SN 16,299. Pub. 8-26-58. Filed 10-12-56.

669,578. SYMBOLS (PRONOUNCED MINUS DELTA P). Milton Roy Company. SN 16,968. Pub. 8-26-58. Filed 10-4-56.

669,579. DESIGN OF RETORT AND CIRCLES. New Brunswick Scientific Company. SN 19,451. Pub. 8-26-58. Filed 10-30-56.

669,580. LOTT AND DESIGN. U. D. A. Inc. SN 19,710. Pub. 8-26-58. Filed 11-21-56.

669,581. PIN MIKE. William L. Davis. SN 20,362. Pub. 8-26-58. Filed 12-4-56.

669,582. STAINLESS-SUPREME. Charles Bruning Company, Inc. SN 20,988. Pub. 6-24-58. Filed 12-13-56.

669,583. W. & L. E. GURLEY. W. & L. E. Gurley. SN 21,372. Pub. 8-26-58. Filed 12-20-56.

669,584. IZUKAR. Ichizuka Kōgaku Kōgyō Kabushikigaisha. SN 22,923. Pub. 8-26-58. Filed 1-22-57.

669,585. STANDARD. The Standard Electric Time Company. SN 24,269. Pub. 8-26-58. Filed 2-12-57.

669,586. BULOVA. Bulova Research & Development Laboratories, Inc. SN 25,311. Pub. 8-26-58. Filed 3-1-57.

669,587. SERVO AND DESIGN. Servo Corporation of America. SN 25,791. Pub. 8-26-58. Filed 3-8-57.

669,588. UNIVAC SCIENTIFIC. Sperry Rand Corporation. SN 26,554. Pub. 8-26-58. Filed 4-19-57.

669,589. MAKIFLEX. Goetz Schrader, d. b. a. Plaubel Feinmechanik und Optik. SN 28,804. Pub. 8-26-58. Filed 4-24-57.

669,590. TRU-SPACE. Tru-Space, Inc. SN 28,978. Pub. 8-26-58. Filed 4-26-57.

669,591. ACCUTROL. Industrial Nucleonics Corporation. SN 29,215. Pub. 8-26-58. Filed 5-1-57.

669,642. MISS T. J. Tailored Junior Dress Co. SN 48,685. Pub. 8-26-58. Filed 1-6-58.

Class 46—Foods and Ingredients of Foods

669,592. ROBOVISION. Oakton Engineering Corporation. SN 29,229. Pub. 8-26-58. Filed 5-1-57.

669,593. STANOMATIC. The Standard Register Company. SN 29,663. Pub. 8-26-58. Filed 5-8-57.

669,594. MODAC. Cutler-Hammer, Inc., assignee of Airborne Instruments Laboratory, Incorporated. SN 30,122. Pub. 8-26-58. Filed 5-16-57.

669,595. RINSE BAR. Clairol, Incorporated. SN 30,637. Pub. 8-26-58. Filed 5-24-57.

669,596. CYCLESAFE. Seneca Falls Machine Company. SN 31,873. Pub. 8-26-58. Filed 6-12-57.

669,597. PICLEAR. Piclear, Inc. SN 32,772. Pub. 8-26-58. Filed 6-27-57.

669,598. VERNAC. Simpson Optical Manufacturing Company. SN 38,762. Pub. 8-25-58. Filed 7-15-57.

669,599. INDI-AC. Cleveland Instrument Company. SN 36,355. Pub. 7-22-58. Filed 8-28-57.

669,600. MICRO-AC. Cleveland Instrument Company. SN 36,356. Pub. 7-22-58. Filed 8-28-57.

669,601. PAR-AC. Cleveland Instrument Company. SN 36,357. Pub. 7-22-58. Filed 8-28-57.

669,602. IGI AND DESIGN. Industrial Gauge & Instrument Co., Inc. SN 36,660. Pub. 8-26-58. Filed 9-4-57.

669,603. TELEMETROSCOPE. Tobe Deutschmann Corporation. SN 36,757. Pub. 8-26-58. Filed 9-5-57.

669,604. STANDATROL. Bailey Meter Company. SN 36,839. Pub. 8-26-58. Filed 9-9-57.

669,605. TOSHIBA. Tokyo Shibaura Electric Company Limited. SN 41,857. Pub. 8-26-58. Filed 12-5-57.

669,606. VANGUARD. Ronal Electric Products Co., Inc. SN 42,922. Pub. 8-26-58. Filed 12-23-57.

669,607. MAGNA-LINE. Florence M. Chapman, d. b. a. Chapman's Idea House. SN 43,815. Pub. 8-26-58. Filed 1-13-58.

669,608. PUFF METER. John E. Goldsmith. SN 44,704. Pub. 8-26-58. Filed 1-27-58.

669,609. SPEC SAVER AND DESIGN. Shepard J. Wilder. SN 46,681. Pub. 8-26-58. Filed 2-26-58.

Class 28 — Jewelry and Precious-Metal Ware

669,610. HUBERT DE GIVENCHY. "Givenchy" (Société Anonyme). SN 30,081. Pub. 8-26-58. Filed 5-15-57.

Class 31 — Filters and Refrigerators

669,611. RUSTRAP. Lena A. Bennett, d. b. a. Appliance Specialty Co. SN 48,606. Pub. 8-26-58. Filed 3-28-58.

669,612. "SWING-N-SERVE." Borg-Warner Corporation. SN 48,696. Pub. 8-26-58. Filed 3-31-58.

Class 33 — Glassware

669,613. CH. Castle-Hanson Corporation. SN 36,852. Pub. 9-9-58. Filed 9-9-57.

Class 34 — Heating, Lighting, and Ventilating Apparatus

669,542. CONSOLIDATED CERTIFICATE. See Class 21.

669,614. FSP. Whirlpool Corporation, by change of name from Whirlpool-Seeger Corporation. SN 27,157. Pub. 8-26-58. Filed 3-28-57.

669,615. ST PETER AND DESIGN. G. A. Glafey. SN 27,669. Pub. 8-26-58. Filed 4-8-57.

669,616. WEATHERITE. International Oil Burner Co. SN 33,313. Pub. 4-8-58. Filed 6-14-57.

669,617. SUN VALLEY. Artia Air Conditioning Corporation. SN 44,795. Pub. 8-26-58. Filed 1-28-58.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

669,618. SR AND DESIGN. Stillman Rubber Company. SN 26,888. Pub. 8-26-58. Filed 3-25-57.

669,619. HAUL-AWAY. The Goodyear Tire & Rubber Company. SN 40,938. Pub. 8-26-58. Filed 11-18-57.

Class 37 — Paper and Stationery

669,620. WHITEWOOD. Graham Paper Company. SN 39,221. Pub. 8-26-58. Filed 10-21-57.

Class 38 — Prints and Publications

669,621. IDENT DECALS. Regal Stationery Company Limited. SN 43,269. Pub. 8-26-58. Filed 12-31-57.

669,622. "PERSONALLY YOURS." A. Pomerantz & Company. SN 44,920. Pub. 8-26-58. Filed 1-29-58.

669,623. F. W. DODGE CORPORATION AND DESIGN. F. W. Dodge Corporation. SN 45,149. Pub. 8-26-58. Filed 2-3-58.

Class 39 — Clothing

669,624. LAZY-TIME TOGS. Lazy-Time Togs, Inc. SN 678,919. Pub. 9-20-55. Filed 12-24-54.

669,625. LILLI-DELL. Rawls Distributing Co. SN 680,082. Pub. 8-23-55. Filed 1-17-55.

669,626. LI'L TOTS. Bristol Manufacturing Corporation. SN 20,590. Pub. 8-26-58. Filed 12-7-56.

669,627. FANTAM. Atlas Underwear Corporation. SN 28,236. Pub. 8-26-58. Filed 3-15-57.

669,628. JET ACE. Schuessler Knitting Mills, Inc. SN 29,895. Pub. 8-26-58. Filed 5-3-57.

669,629. SLUMBR'ETTES. I. Schneierson & Sons, Inc. SN 30,971. Pub. 8-26-58. Filed 5-17-57.

669,630. SKOL COAT. Lakeland Manufacturing Company. SN 32,263. Pub. 8-26-58. Filed 6-19-57.

669,631. SNOOPERS. R. Johnston & Co. Proprietary Limited. SN 34,142. Pub. 8-26-58. Filed 7-22-57.

669,632. JANIE. Frances & Walter Nelkin, Inc. SN 35,445. Pub. 8-26-58. Filed 8-13-57.

669,633. WHW AND DESIGN. Hi-Line Co., Inc. SN 35,997. Pub. 8-26-58. Filed 8-22-57.

669,634. RM AUTHENTIC FASHIONS AND DESIGN. M. H. Raab-Meyerhoff Co., Inc. SN 39,497. Pub. 8-26-58. Filed 10-24-57.

669,635. DURA-NEAT. Cluett, Peabody & Co., Inc. SN 40,816. Pub. 8-26-58. Filed 11-18-57.

669,636. WONDER-FEEL. Victor Gloves Inc. SN 41,418. Pub. 8-26-58. Filed 11-26-57.

669,637. WHOPPER. Good Luck Glove Company. SN 42,474. Pub. 8-26-58. Filed 12-16-57.

669,638. FULL FREEDOM SLEEVE. Standard Knitting Mills, Inc. SN 43,053. Pub. 8-26-58. Filed 12-26-57.

669,639. FREEDOM SLEEVE. Standard Knitting Mills, Inc. SN 43,054. Pub. 8-26-58. Filed 12-26-57.

669,640. FRIGIVEST. North American Utility & Construction Corp. SN 43,200. Pub. 8-26-58. Filed 12-30-57.

669,641. FRIGIVEST AND DESIGN. North American Utility & Construction Corp. SN 43,201. Pub. 8-26-58. Filed 12-30-57.

669,702. STEAKFURTER. Milton Lampe, d. b. a. Kare-Pak

Class 51 — Cosmetics and Toilet Preparations

669,642. MISS T. J. Tailored Junior Dress Co. SN 45,085. Pub. 8-26-58. Filed 1-6-58.

669,643. MOTIONAIRE. Grayson-Robinson Stores, Inc. SN 44,065. Pub. 8-26-58. Filed 1-16-58.

669,644. JOHN SABATINI. Somersworth Manufacturing Company. SN 44,565. Pub. 8-26-58. Filed 1-23-58.

669,645. RACEWAY. C. H. Hyer & Sons, Inc. SN 44,719. Pub. 8-26-58. Filed 1-27-58.

669,646. BEACHBUOY. The Manhattan Shirt Company. SN 45,176. Pub. 8-26-58. Filed 2-3-58.

669,647. JANET WALKER. Ely & Walker, Inc., by change of name from Ely & Walker Dry Goods Company. SN 45,316. Pub. 8-26-58. Filed 2-5-58.

669,648. Q-P'S. Plymouth Undergarment Co. SN 45,346. Pub. 8-26-58. Filed 2-5-58.

669,649. PET-E-PLUS. Karell Lingerie, Inc. SN 45,394. Pub. 8-26-58. Filed 2-6-58.

669,650. LOVE AFFAIR. Super-Form Brassiere, Inc. SN 45,660. Pub. 8-26-58. Filed 2-10-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

669,651. OPAQUEEN. Bourne Mills. SN 649,680. Pub. 6-8-54. Filed 7-6-53.

669,652. BLENDID. Seamprufe Incorporated. SN 18,353. Pub. 8-26-58. Filed 10-29-56.

669,653. NYLUX. Hornwood Warp Knitting Corporation. SN 19,972. Pub. 8-26-58. Filed 11-27-56.

669,654. SNOW SPUN AND DESIGN. Crompton Company. SN 25,972. Pub. 8-26-58. Filed 3-12-57.

669,655. SCOTCLAD. Preston S. Schwarz. SN 31,026. Pub. 8-26-58. Filed 5-29-57.

669,656. WHISPERCALE. Bates Manufacturing Company. SN 35,900. Pub. 8-26-58. Filed 8-21-57.

669,657. SYNBEST. Aasen-Hill Mfg. Co. SN 39,856. Pub. 8-26-58. Filed 10-31-57.

669,658. HONEYTRIQUE. United Mills Corporation. SN 39,999. Pub. 8-26-58. Filed 11-1-57.

669,659. DESIGN OF GROTESQUE FIGURES. Hockmeyer Bros. Inc. SN 41,517. Pub. 8-26-58. Filed 12-5-57.

669,660. DELTAWEAVE. J. P. Stevens & Co., Inc. SN 44,046. Pub. 8-26-58. Filed 1-15-58.

669,661. DELTARAY. J. P. Stevens & Co., Inc. SN 44,047. Pub. 8-26-58. Filed 1-15-58.

669,662. PLAY-FILE. J. P. Stevens & Co., Inc. SN 44,048. Pub. 8-26-58. Filed 1-15-58.

669,663. NAUTICOOL. Indian Head Mills, Inc. SN 44,094. Pub. 8-26-58. Filed 1-16-58.

669,664. BAN-CARE. Joseph Bancroft & Sons Co. SN 44,587. Pub. 8-26-58. Filed 1-24-58.

669,665. FORWARD LOOK. Fabrex Corporation. SN 44,893. Pub. 8-26-58. Filed 1-29-58.

669,666. THE LINE OF ROYALTY CORONATION AND DESIGN. James W. Whitsitt, d. b. a. Jim Whitsitt Textiles Co. SN 45,641. Pub. 8-26-58. Filed 2-10-58.

Class 43—Thread and Yarn

669,667. TEYLAN. Celanese Corporation of America. SN 671,018. Pub. 1-11-55. Filed 8-3-54.

669,668. JETSPUN. American Enka Corporation. SN 40,798. Pub. 8-26-58. Filed 11-16-57.

669,669. AV XL. American Viscose Corporation. SN 43,995. Pub. 8-26-58. Filed 1-15-58.

669,670. D-D. The American Thread Company. SN 45,010. Pub. 8-26-58. Filed 1-31-58.

Class 46—Foods and Ingredients of Foods

669,671. FROSTY SEAS. The Frozen Food Forum Inc. SN 670,735. Pub. 11-6-55. Filed 7-28-54.

669,672. S AND DESIGN. United Biscuit Company of America. SN 7,581. Pub. 8-26-58. Filed 5-7-56.

669,673. H AND DESIGN. Winter Garden Sales, Inc. SN 30,975. Pub. 8-26-58. Filed 5-23-57.

669,674. DAIRYLEA. Dairymen's League Co-Operative Association, Inc. SN 31,068. Pub. 8-26-58. Filed 5-31-57.

669,675. A WEBER'S VARIETY BREAD AND DESIGN. Interstate Bakeries Corporation. SN 31,221. Pub. 8-26-58. Filed 6-3-57.

669,676. CUP-O-CHEER. The Kroger Co. SN 32,605. Pub. 8-26-58. Filed 6-25-57.

669,677. FERN-JAMES. David Epstein Co., Inc. SN 32,670. Pub. 8-26-58. Filed 6-26-57.

669,678. SILVER REY. S. B. Rykoff & Company. SN 33,757. Pub. 8-26-58. Filed 7-15-57.

669,679. SERCO. S. B. Rykoff & Company. SN 33,758. Pub. 8-26-58. Filed 7-15-57.

669,680. MALTANZA. Fruit Products Corporation. SN 33,809. Pub. 8-26-58. Filed 7-17-57.

669,681. SEA GLORY AND DESIGN. South Coast Fisheries, Inc. SN 34,183. Pub. 8-26-58. Filed 7-22-57.

669,682. BRIL-LEM. H. C. Brill Company, Inc. SN 34,214. Pub. 8-26-58. Filed 7-23-57.

669,683. BRIL-BG. H. C. Brill Company, Inc. SN 34,215. Pub. 8-26-58. Filed 7-23-57.

669,684. GOLD BOND. International Salt Company. SN 34,357. Pub. 8-26-58. Filed 7-25-57.

669,685. OK CLEAR QUILL AND DESIGN. Waterloo Mills Company. SN 35,307. Pub. 8-26-58. Filed 8-9-57.

669,686. HI-BOW. Bowman Dairy Company. SN 35,320. Pub. 8-26-58. Filed 8-12-57.

669,687. CHOC-O-LASS. O. W. Meyer, d. b. a. O. W. Meyer Laboratories. SN 35,533. Pub. 8-26-58. Filed 8-14-57.

669,688. TOWN CRIER AND DESIGN. Paul Peters Company, Inc., d. b. a. The Town Crier. SN 35,631. Pub. 8-26-58. Filed 10-9-57.

669,689. BUBLETS. Elmer Candy Co., Inc. SN 38,742. Pub. 8-26-58. Filed 10-11-57.

669,690. ROYAL. Standard Brands Incorporated. SN 39,911. Pub. 8-26-58. Filed 10-31-57.

669,691. HENRICI'S. John R. Thompson Co., d. b. a. Henrici's. SN 41,730. Pub. 8-26-58. Filed 12-3-57.

669,692. BELL HEATHER. Bell Heather Preserves Company Limited. SN 41,976. Pub. 8-26-58. Filed 12-9-57.

669,693. FOUR STAR BRAND 4 AND DESIGN. Cashmere Cooperative Association, Inc. SN 41,988. Pub. 8-26-58. Filed 12-9-57.

669,694. KENT. The U. & J. Lennon Corporation. SN 42,357. Pub. 8-26-58. Filed 12-13-57.

669,695. MASTER SEED. Harts Mountain Products Corp. SN 43,612. Pub. 8-26-58. Filed 1-9-58.

669,696. ONE-ELEVEN. J. S. Danenberg, d. b. a. Danny Danenberg. SN 44,606. Pub. 8-26-58. Filed 1-24-58.

669,697. APPLE GROVE. Loblaw Inc. SN 44,946. Pub. 8-26-58. Filed 1-30-58.

669,698. MAGIC CUP. Loblaw Inc. SN 44,947. Pub. 8-26-58. Filed 1-30-58.

669,699. HIGH PARK. Loblaw Inc. SN 44,948. Pub. 8-26-58. Filed 1-30-58.

669,700. SHUEGOLD. Pacific Mercantile Company. SN 45,190. Pub. 8-26-58. Filed 2-3-58.

669,701. NUX-O-FINE. J. Eibel, Nuxo-Werk A.-G. SN 44,629. Pub. 8-26-58. Filed 2-26-58.

669,702. COTTON TOP. Joseph Oscola. SN 45,752. Pub. 8-26-58. Filed 2-27-58.

669,702. STEAKFURTER. Milton Lampe, d. b. a. Kare-Pak Foods Co. SN 46,956. Pub. 8-26-58. Filed 3-3-58.

669,704. HI-COUNTRY. Alhambra Wine Company, d. b. a. Hi-Country Processors. SN 47,805. Pub. 8-26-58. Filed 3-17-58.

669,705. FLORALA. James J. Catalano, d. b. a. Catalano Companies. SN 47,835. Pub. 8-26-58. Filed 3-17-58.

Class 47—Wines

669,706. ASSUMPTION ABBEY WINES AND DESIGN. Brookside Vineyard Company. SN 34,036. Pub. 8-26-58. Filed 7-19-57.

669,707. BIRD. E. & J. Gallo Winery. SN 37,563. Pub. 8-26-58. Filed 9-20-57.

669,708. BRISTOL MILK. John Harvey & Sons, Ltd. SN 40,753. Pub. 7-22-58. Filed 11-15-57.

Class 48—Malt Beverages and Liquors

669,709. MEL O DRY. International Breweries, Inc. SN 30,090. Pub. 8-26-58. Filed 5-15-57.

Class 49—Distilled Alcoholic Liquors

669,710. EL AND DESIGN. James Robertson Company. SN 40,080. Pub. 8-26-58. Filed 11-4-57.

669,711. WHITE CHRISTMAS. Maison Rochez, Ltd. SN 44,724. Pub. 8-26-58. Filed 1-27-58.

Class 50—Merchandise Not Otherwise Classified

669,712. QUIXET. Quixet, Inc. SN 26,868. Pub. 8-26-58. Filed 3-25-57.

669,713. POPPIN PAK AND DESIGN. Kenro Products. SN 28,605. Pub. 8-26-58. Filed 4-23-57.

669,714. MAR-B-LINE. F. H. Noble and Company. SN 29,163. Pub. 8-26-58. Filed 4-30-57.

669,715. PERMATONE. Bernard B. White. SN 34,575. Pub. 8-26-58. Filed 7-29-57.

669,716. STRUCTO LITE. Lasting Building Supply & Equipment Company. SN 40,239. Pub. 8-26-58. Filed 11-7-57.

669,717. MEMORIALS OF LOVE. Bronze Marker Corporation. SN 41,614. Pub. 8-26-58. Filed 12-2-57.

Class 51—Cosmetics and Toilet Preparations

669,718. RIVIERA. Helene Curtis Industries, Inc. SN 27,017. Pub. 4-8-58. Filed 3-27-57.

669,719. MODERNA. Helen Neushaefer, Inc. SN 33,272. Pub. 8-26-58. Filed 7-5-57.

Class 52—Detergents and Soaps

669,464. CONSOLIDATED CERTIFICATE. See Class 6.

669,720. SWIFT'S ARROW AND DESIGN. Swift & Company. SN 679,349. Pub. 9-6-55. Filed 1-3-55.

669,721. WHITE ARROW. B. Fischer & Co., Inc. SN 8,650. Pub. 8-6-57. Filed 5-21-56.

669,722. ZINGO. Andersen Specialty Mfg. Corp. SN 30,662. Pub. 8-26-58. Filed 6-28-57.

669,723. PHISEL. Pennsalt Chemicals Corporation. SN 34,627. Pub. 8-26-58. Filed 7-30-57.

669,724. DISH-DRI. Solventol Chemical Products, Incorporated. SN 40,696. Pub. 8-26-58. Filed 11-18-57.

669,725. HOMCO. Houston Oil Field Material Company, Inc. SN 42,023. Pub. 8-26-58. Filed 12-9-57.

669,726. HALOID XEROX AND DESIGN. Haloid Xerox Inc., by change of name from The Haloid Company. SN 42,130. Pub. 8-26-58. Filed 12-10-57.

669,727. HALOID XEROX. Haloid Xerox Inc., by change of name from The Haloid Company. SN 42,135. Pub. 8-26-58. Filed 12-10-57.

669,728. SKODE. Cut Kravagna, d. b. a. Cleano Products Company. SN 42,494. Pub. 8-26-58. Filed 12-16-57.

669,729. SPOTCRAFT. Duraclean Company. SN 43,651. Pub. 8-26-58. Filed 8-13-57.

669,730. TINKERBELL. Tom Fields, Ltd. SN 50,469. Pub. 8-26-58. Filed 4-28-58.

669,731. DESIGN WITH DIAMOND-SHAPED CENTER. Diamond Alkali Company. SN 51,701. Pub. 8-26-58. Filed 5-15-58.

Service Marks

Class 100—Miscellaneous

669,732. TC AND DESIGN. Transistor Consultants, Inc. SN 17,532. Pub. 12-3-57. Filed 10-15-56.

Class 101—Advertising and Business

669,733. S. P. L AND DESIGN. Thos. Dunne Co., Inc. SN 29,276. Pub. 8-26-58. Filed 6-2-57.

669,734. DESIGN OF GROTESQUE HUMAN. Ralph Heineman, Inc. SN 30,901. Pub. 8-26-58. Filed 8-26-57.

359,096. PRO-TEK-TOR. Cl. 8. 8-2-38.

359,481. SUPERTHERM. Cl. 24. 8-23-38.

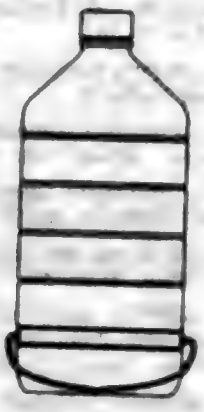
363,691. HUSH. Cl. 51. 1-3-39.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 18—Medicines and Pharmaceutical Preparations

469,735. Baxter Laboratories, Inc., Morton Grove, Ill. SN 24,515. Filed 2-3-57.



As shown on the drawing, the mark consists of a generally cylindrical bottle having four transverse grooves equidistant apart.

For Parenteral Solution Contained in a Parenteral Solution Container.

First use Nov. 23, 1955.

Class 39—Clothing

469,736. Irwill Knitwear Corporation, New York, N. Y. SN 25,860. Filed P. R. 8-11-57. Am. S. R. 9-24-58.

SHET'L-KNIT

For Ladies' Sweaters.
First use Jan. 25, 1957.

469,737. Corde-dé Paris Corset Co., Inc., New York, N. Y. SN 37,461. Filed P. R. 9-19-57. Am. S. R. 9-11-58.

For Brassieres and Corselets.
First use Jan. 4, 1955.

Class 46—Foods and Ingredients of Foods

469,738. Chan King Frozen Foods Corporation, Duluth, Minn. SN 696,868. Filed 10-1-56.

canton ese dinner

For Frozen Unitarily-Packed Complete Oriental Dinner Consisting of Chicken Almond Chop Suey, Rice, and Egg Rolls.
First use on or about June 1, 1955.

469,739. Kretschmer Wheat Germ Corporation, Carrollton, Mich., by change of name from Kretschmer Corporation, Carrollton, Mich. SN 7,256. Filed P. R. 4-30-56. Am. S. R. 2-10-58.

SUGAR 'n HONEY

For Wheat Germ Cereal.
First use June 27, 1955.

Class 50—Merchandise Not Otherwise Classified

469,740. Glu-Down Products Company, Chicago, Ill. SN 27,026. Filed P. R. 3-27-57. Am. S. R. 9-18-58.

GLU-DOWN

For Resilient Moulding for Protecting the Edges of Rugs, Carpets or the Like.
First use on or about Jan. 16, 1957.

Class 51—Cosmetics and Toilet Preparations

469,741. Estee Lauder Cosmetic Company, d. b. a. Estee Lauder, New York, N. Y. SN 22,482. Filed P. R. 1-30-57. Am. S. R. 8-6-58.

CHRISTMAS KISS

For Lipsticks.
First use Oct. 15, 1956.

469,742. Helena Rubinstein, Inc., New York, N. Y. SN 40,970. Filed P. R. 11-19-57. Am. S. R. 9-3-58.

PLAYING WITH FIRE

For Lipsticks.
First use May 15, 1957.

TRADEMARK REGISTRATIONS RENEWED

121,966. GEM. Cl. 46. 6-11-18.
122,046. LORD CALVERT. Cl. 46. 9-3-18.
122,049. VESPER. Cl. 46. 9-3-18.
122,824. SOMERSET CLUB AND DESIGN. Cl. 46. 9-17-18.
122,838. SWIFT'S PREMIUM. Cl. 46. 9-17-18.
123,163. AIRLITE. Cl. 32. 10-15-18.
123,483. ENOZ. Cl. 6. 11-12-18.
123,606. ANACIN. Cl. 18. 11-19-18.
355,016. SANDRA. Cl. 51. 2-8-38.
357,921. OLD MR. BOSTON ANCIENT LABEL AND DESIGN. Cl. 49. 6-21-38.
359,093. CLUB QUART OLD MR. BOSTON AND DESIGN. Cl. 49. 8-2-38.

564,320. LODI. Cl. 1.
564,321. "TINY TROOPER." Cl. 22.

359,096. PRO-TEK-TOR. Cl. 31. 9-2-38.
359,481. SUPERTHERM. Cl. 34. 8-23-38.
359,797. BAROPAKE. Cl. 18. 8-30-38.
359,812. RECOTIN. Cl. 18. 8-30-38.
359,818. OLD MR. BOSTON "SILVER LABEL." Cl. 49. 8-30-38.
360,148. CELOSATIN. Cl. 42. 9-6-38.
360,218. PLEASANT VALLEY. Cl. 47. 9-13-38.
360,242. CHARM STEP THE SHOE OF THE HOUR AND DESIGN. Cl. 39. 9-13-38.
360,284. RUSCO FUSED FABRIC. Cl. 35. 9-13-38.
360,304. NAKETTE. Cl. 39. 9-13-38.
360,354. CHAMONESE. Cl. 42. 9-13-38.
360,439. ELLIOTT ADDRESSING MACHINES. Cl. 23. 9-20-38.
360,488. PILLSBURY'S NORTHERN KING ETC. AND DESIGN. Cl. 46. 9-20-38.
360,648. LOUISE-ANNE. Cl. 46. 9-20-38.
361,142. FORD. Cl. 6. 10-11-38.
361,799. WAFCHESE. Cl. 46. 11-1-38.
362,016. VERNONITE. Cl. 44. 11-8-38.
362,325. FLEXONED. Cl. 5. 11-15-38.
362,994. NUTSICLE. Cl. 46. 12-6-38.
363,490. HOMEGUARD. Cl. 16. 12-27-38.
363,540. TOC'S. Cl. 6. 1-3-39.
363,691. HUSH. Cl. 51. 1-3-39.
363,777. PASTEL AND DESIGN. Cl. 46. 1-10-39.
363,827. ROTOL. Cl. 23. 1-10-39.
363,828. ROTOL AND DESIGN. Cl. 23. 1-10-39.
363,907. DREAMSICLE. Cl. 46. 1-10-39.
363,976. MONEY MAKER. Cl. 46. 1-17-39.
364,195. SHEPARDESS. Cl. 39. 1-24-39.
364,203. THUNDERBOLT. Cl. 39. 1-24-39.
364,274. MODERN PUBLICITY. Cl. 35. 1-24-39.
364,588. MID-STATE. Cl. 46. 2-7-39.
364,611. FORMEX. Cl. 21. 2-7-39.
364,735. ARNAUD'S SAUCE AND DESIGN. Cl. 46. 2-14-39.
364,774. ROYAL AWARD. Cl. 39. 2-14-39.
364,825. TAN-O-TEX BRAND ETC. Cl. 50. 2-14-39.
364,852. PREMAX. Cl. 26. 2-14-39.
365,078. GLOBE POLAR-JAMAS AND DESIGN. Cl. 39. 2-21-39.

Vacation of Renewal

The notice of the issuance of renewal certificate in connection with Trademark Registration No. 359,761 appearing in the OFFICIAL GAZETTE of September 2, 1958, page TM 33, was inadvertent and is vacated.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

518,142. MT. TALLAC. Cl. 46. 11-29-49.
530,115. SYNCHROMATIC. Cl. 23. 9-5-50.

Section 8

294,221. FULTON'S A-1 AND DESIGN. Cl. 6. 5-24-32.
295,403. DAINTEX. Cl. 52. 6-28-32.
392,411. PHENEX. Cl. 18. 12-23-41.
441,217. TOURNADOZER. Cl. 23. 11-2-48.

The following registrations issued Sept. 23, 1958

564,256. LUSCO. Cl. 3.
564,259. PURITAN AND DESIGN. Cl. 46.
564,263. THE "HART" LINE ETC. AND DESIGN. Cl. 23.
564,265. "SORB-SALL." Cl. 52.
564,268. WEATHER-WAY. Cl. 12.
564,270. ONKOSPONGE. Cl. 44.
564,275. D AND H AND DESIGN. Cl. 52.
564,278. SANOVAL. Cl. 44.
564,279. WHITE SUPER POWER WITHIN DESIGN. Cl. 23.
564,280. SPEED AND DESIGN. Cl. 13.
564,281. ALA-DYNE. Cl. 18.
564,289. DERMATHYN. Cl. 18.
564,290. INDUST. Cl. 23.
564,293. BENZ 804. Cl. 18.
564,294. TABER-NICKEL BANK AND DESIGN. Cl. 22.
564,298. SEARS APPROVED ETC. AND DESIGN. Cl. 13.
564,299. KLING. Cl. 12.
564,304. PIONEER. Cl. 46.
564,317. PREG-MI-LEEN. Cl. 18.
564,318. FERRY-MORSE SEED CO. AND DESIGN. Cl. 1.
564,319. DUST KING. Cl. 31.
564,320. CABANA KIT. Cl. 3.
564,323. ALCOLAC. Cl. 52.
564,324. BAGTAINER. Cl. 31.
564,331. CLORPUR. Cl. 6.
564,332. ADICO. Cl. 18.
564,334. DESIQUEN'. Cl. 18.
564,337. MISS MATTESON. Cl. 22.
564,339. FRIN-GEE. Cl. 22.
564,340. HCO. Cl. 18.
564,341. ANATENSOL. Cl. 18.
564,345. X-CEL. Cl. 18.
564,346. SAN CARLOS. Cl. 46.
564,348. DANBURY AND DESIGN. Cl. 35.
564,350. FEATHER FLOTE. Cl. 12.
564,356. MINIGRANS. Cl. 18.
564,359. ISOPTO. Cl. 18.
564,360. UCENAL. Cl. 18.
564,365. ACROMAL. Cl. 18.
564,366. LINDA. Cl. 46.
564,370. A AND O. Cl. 18.
564,374. FEATHER TOUCH. Cl. 4.
564,375. NORISTALTIC. Cl. 23.
564,377. STEEL-O AND DESIGN. Cl. 4.
564,378. POLINEL. Cl. 18.
564,379. SP. Cl. 2.
564,388. ALL 'N ONE WINDOW UNIT. Cl. 12.
564,392. WHAMBERG SANDWICH AND DESIGN. Cl. 46.
564,396. BOFEC WITHIN DESIGN. Cl. 12.
564,398. COLONIAL DAME. Cl. 42.
564,403. THE MEDALIST. Cl. 32.
564,404. THE PALEFACE. Cl. 32.
564,409. NYLCO. Cl. 2.
564,414. UNI-CLIP. Cl. 13.
564,418. MONIX. Cl. 52.
564,420. L-1. Cl. 5.
564,429. PARACASE. Cl. 6.
564,432. SANDEZE AND DESIGN. Cl. 12.
564,438. METHOCARA. Cl. 18.
564,444. ORGALAC. Cl. 18.
564,447. HAPPY DIET SQUARES. Cl. 46.
564,458. WHITNEY. Cl. 2.
564,466. NANSUE. Cl. 39.
564,472. BAN-ZUKA. Cl. 46.
564,488. CU-SAN. Cl. 6.
564,490. NYLO-WHIPPER. Cl. 42.
564,493. BASECURITY. Cl. 102.
564,495. NATIONAL AND DESIGN. Cl. 102.
564,496. NATIONAL AND DESIGN. Cl. 102.
564,499. PATIO PRINTS. Cl. 42.
564,500. CHALKIES. Cl. 39.
564,501. SUPER LAVANDA PIEMONTE REALE AND DESIGN. Cl. 51.
564,502. GLIDE-RIDE. Cl. 19.
564,506. DI-FRAM-ETTE. Cl. 44.
564,510. MAGIC SWORD. Cl. 22.
564,512. BLO-BYE. Cl. 19.
564,513. LOCK-TITE. Cl. 19.
564,514. SUPER SONIC. Cl. 21.
564,516. LOX-ON. Cl. 50.
564,518. SHURLOK. Cl. 25.
564,519. TAPER. Cl. 39.
564,520. BROIL QUIK AND DESIGN. Cl. 31.
564,521. PERFECTION AND DESIGN. Cl. 39.
564,523. DEODOR-LITE AND DESIGN. Cl. 21.
564,524. MODERN ROLL. Cl. 12.
564,525. McCAMMANT'S. Cl. 18.

122,828. SWIFT'S PREMIUM. Cl. 46. 9–17–18.
123,168. AIRLITE. Cl. 32. 10–15–18.

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564,531. "TINY TROOPER." Cl. 22.
564,532. PEDALFLASH. Cl. 19.
564,534. MANCHESTER. Cl. 24.
564,535. RACONNEED. Cl. 46.
564,537. AKERS. Cl. 32.
564,538. LAYCWEVE. Cl. 42.
564,539. RINSIT. Cl. 48.

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436,932. JUNGLE JUICE AND DESIGN. Cl. 45. 5–18–48.
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631,269. PORCELAINE DE PARIS. Cl. 30. 7–24–56.

Crompton Co., New York, N. Y. 669,654, pub. 8–26–58. Cl. 42.
Gallo, E. & J., Winery, Modesto, Calif. 669,707, pub. 8–26–58. Cl. 47.

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Actual Lure Co., Inc., The, New York, N. Y. 564,531, canc. Cl. 22.
Adam Opel Aktiengesellschaft, Russelsheim am Main, Germany. 669,535, pub. 4-29-58. Cl. 19.
Aerator Sales Corp., Chicago, Ill. 669,507, pub. 8-26-58. Cl. 13.
Airborne Instruments Laboratory, Inc.: *See*—
Cutler-Hammer, Inc.
Akers, Lynn R., Louisville, Ky. 564,537, canc. Cl. 52.
Alcon Laboratories, Inc., Fort Worth, Tex. 564,259, canc. Cl. 18.
Alhambra Wine Co., d. b. a. Hi-Country Processors, Selah, Wash. 669,704, pub. 8-26-58. Cl. 46.
All Drugs International Co., New York, N. Y. 564,232, canc. Cl. 18.
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American Oil Co., The, New York, N. Y. 669,477, pub. 8-26-58. Cl. 6.
American Thread Co., The, New York, N. Y. 669,670, pub. 8-26-58. Cl. 43.
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Amity Leather Products Co., West Bend, Wis. 669,459, pub. 8-26-58. Cl. 3.
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Bailey Meter Co., Cleveland, Ohio. 669,604, pub. 8-26-58. Cl. 26.
Baker Castor Oil Co., The, Bayonne, N. J. 669,472, pub. 8-26-58. Cl. 6.
Bancroft, Joseph, & Sons Co., Wilmington, Del. 669,664, pub. 8-26-58. Cl. 42.
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Borg-Warner Corp., Chicago, Ill. 669,572, pub. 7-29-58. Cl. 23.
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Pleasant Valley Wine Co., The, Rheims, N. Y., to Great Western Producers, Inc., Baltimore, Md. 360,218, ren. 9–13–58. Cl. 47.
Plough, Inc., Memphis, Tenn. 669,524, pub. 8–26–58. Cl. 18.
Plymouth Undergarment Co., New York, N. Y. 669,648, pub. 8–26–58. Cl. 39.
Polinel Co.: *See*— Potasch, Lionel N.
Pomerantz, A., & Co., Philadelphia, Pa. 669,622, pub. 8–26–58. Cl. 38.
Potasch, Lionel N., d. b. a. Polinel Co., Milwaukee, Wis. 564,378, canc. Cl. 18.
Pries, Leland H., Forest Hills, N. Y. 564,256, canc. Cl. 3.
Quixet, Inc., Dayton, Ohio. 669,712, pub. 8–26–58. Cl. 50.
R. & J. Chemical Co.: *See*— Jackson, Eleanor M.
Raab, M. H., Meyerhoff Co., Inc., Philadelphia, Pa. 669,634, pub. 8–26–58. Cl. 39.
Rawls Distributing Co., Chicago, Ill. 669,625, pub. 8–23–58. Cl. 39.
Rayco Mfg. Co., Paterson, N. J. 564,513, canc. Cl. 19.
Readex Process, Inc., New York, N. Y. 669,493, pub. 8–26–58. Cl. 11.
Regal Stationary Co. Ltd., Toronto, Ontario, Canada. 669,621, pub. 8–26–58. Cl. 38.
Reinecke, Charles A., Jr., St. Louis, Mo. 564,306, canc. Cl. 46.
Reliable Luggage, Inc., West Pittsburgh, Pa. 669,458, pub. 8–26–58. Cl. 3.
Revere Copper and Brass Inc., New York, N. Y. 669,510, pub. 8–26–58. Cl. 13.
Richey, W. R., Shreveport, La. 669,453, pub. 8–26–58. Cl. 2.
Robertson, James, Co., Los Angeles, Calif. 669,710, pub. 8–26–58. Cl. 40.
Robertson Mfg. Co., Inc., Moberly, Mo. 669,536, pub. 8–26–58. Cl. 19.
Roches, Maison, Ltd., Los Angeles, Calif. 669,711, pub. 8–26–58. Cl. 40.
Romal Electric Products Co., Inc., New York, N. Y. 669,606, pub. 8–26–58. Cl. 28.
Ross, J. O., Engineering Corp., New York, N. Y., to Midland-Ross Corp., Cleveland, Ohio. 259,481, ren. 8–25–58. Cl. 84.
Rotol Airscrews Ltd., to Rotol Ltd., Gloucester, England. 363,827, ren. 1–10–59. Cl. 23.
Rotol Airscrews Ltd., to Rotol Ltd., Gloucester, England. 363,828, ren. 1–10–59. Cl. 23.
Rotol Ltd.: *See*— Rotol Airscrews Ltd.
Royal Robes Inc., New York, N. Y. 564,320, canc. Cl. 3.
Rubinstein, Helena, Inc., New York, N. Y. 669,742. Cl. 51.
Rudy-Patrick Seed Co., Kansas City, Mo. 564,520, canc. Cl. 1.
Russell Mfg. Co., The, Middletown, Conn. 360,284, ren. 9–13–58. Cl. 38.
Rykoff, S. E., & Co., Los Angeles, Calif. 669,678–9, pub. 8–26–58. Cl. 46.
Sandra Cosmetiques Supreme: *See*— Sandra, Inc.
Sandra, Inc., d. b. a. Sandra, Hollywood, Los Angeles, to E. J. Fouque, d. b. a. Sandra Cosmetiques Supreme, Los Angeles, Calif. 255,016, ren. 3–8–58. Cl. 51.
Sanitron, Inc., Long Island City, N. Y., 564,523, canc. Cl. 21.
Schneieroon, L. & Sons, Inc., New York, N. Y. 669,629, pub. 8–26–58. Cl. 39.
Schrader, Goetz, d. b. a. Plaubel Feinmechanik und Optik, Frankfurt am Main, Germany. 669,589, pub. 8–26–58. Cl. 26.
Schuessler Knitting Mills, Inc., Chicago, Ill. 669,628, pub. 8–26–58. Cl. 39.
Schwarz, Preston S., New York, N. Y. 669,655, pub. 8–26–58. Cl. 42.
Scottish Tool, Die & Metal Products Co., Cleveland, Ohio. 669,569, pub. 8–26–58. Cl. 23.
Sealy Mattress Co., Sugar Land, Tex., to Hanon Freed, Los Angeles, Calif. 123,163, ren. 10–15–58. Cl. 32.
Seamprufe Inc., New York, N. Y. 669,652, pub. 8–26–58. Cl. 42.
Sears, Roebuck and Co., Chicago, Ill. 564,298, canc. Cl. 13.
Seneca Falls Machine Co., Seneca Falls, N. Y. 669,596, pub. 8–26–58. Cl. 26.
Servo Corp. of America, New Hyde Park, N. Y. 669,587, pub. 8–26–58. Cl. 26.
Shapleigh Coffee Co., to Martin L. Hall Co., Boston, Mass. 122,824, ren. 9–17–58. Cl. 46.
Shellmar Products Corp., Chicago, Ill. 564,279, canc. Cl. 2.
Shepard Co., The, Providence, R. I. 364,196, ren. 1–24–59. Cl. 39.
Shepard Co., The, Providence, R. I. 364,203, ren. 1–24–58. Cl. 39.
Shirley Fabrics Corp., New York, N. Y. 564,539, canc. Cl. 42.
Silver Ray Tube Mfg. Co., Chicago, Ill. 669,552, pub. 8–26–58. Cl. 21.
Simpson Optical Mfg. Co., Chicago, Ill. 669,598, pub. 8–25–58. Cl. 26.
Sirchie, F. J., d. b. a. Sirchie Finger Print Laboratories, Berlin, N. J. 669,577, pub. 8–26–58. Cl. 26.
Sirchie Finger Print Laboratories: *See*— Sirchie, F. J.
Skelly Mfg. Co.: *See*— Brenner, Milton L.
Smith-Douglass Co., Inc., Norfolk, Va. 669,484, pub. 8–26–58. Cl. 10.
Smith-Douglass Co., Inc., Norfolk, Va. 669,486, pub. 8–26–58. Cl. 10.
Smith-Douglass Co., Inc., Norfolk, Va. 669,490, pub. 8–26–58. Cl. 10.
Smith, G. Edwin, Shoe Co., The, Nashville, Tenn. 360,242, ren. 9–13–58. Cl. 39.
Smith, Kline & French Laboratories, Philadelphia, Pa. 564,293, canc. Cl. 18.
Smith, Kline & French Laboratories, Philadelphia, Pa. 564,356, canc. Cl. 18.
Snyder, Sampson, d. b. a. Bastrop, Bastrop, La. 360,648, ren. 9–20–58. Cl. 46.
Societa Applicazioni Gomma Antivibranti "S. A. G. A." S. p. A., Milan, Italy. 669,533, pub. 8–26–58. Cl. 19.
Solingen Steel Distributors, Inc., New York, N. Y. 669,573, pub. 8–26–58. Cl. 23.
Solventol Chemical Products, Inc., Detroit, Mich. 669,724, pub. 8–26–58. Cl. 52.
Somersworth Mfg. Co., Somersworth, N. H. 669,644, pub. 8–26–58. Cl. 39.
Sonic Industries, Inc., New York, N. Y. 564,514, canc. Cl. 21.
South Coast Fisheries, Inc., Terminal Island, Calif. 669,681, pub. 8–26–58. Cl. 46.
Sperry Rand Corp., New York, N. Y. 669,588, pub. 8–26–58. Cl. 26.
Springfield Flour Mills: *See*— Colorado Milling & Elevator Co., The.
Squibb, E. R., & Sons, New York, N. Y. 564,341, canc. Cl. 18.
Stadler Fertiliser Co., The, Cleveland, Ohio. 669,481, pub. 8–26–58. Cl. 10.
Standard Brands Inc., New York, N. Y. 669,690, pub. 8–26–58. Cl. 46.
Standard Electric Time Co., The, Springfield, Mass. 669,585, pub. 8–26–58. Cl. 26.
Standard Knitting Mills, Inc., Knoxville, Tenn. 669,638–9, pub. 8–26–58. Cl. 39.
Standard Oil Co., The, Cleveland, Ohio. 669,517, pub. 8–26–58. Cl. 15.
Standard Register Co., The, Dayton, Ohio. 669,593, pub. 8–26–58. Cl. 26.
Standex Laboratories, Inc., Columbus, Ohio. 669,527, pub. 8–12–58. Cl. 18.
Stanley Home Products, Inc., Westfield, Mass. 669,463, pub. 8–26–58. Cl. 6.
Stanley Research Corp., The, Fairfield, Conn. 669,523, pub. 8–26–58. Cl. 18.
Sterlick Co., Inc., The, New York, N. Y. 359,086, ren. 8–2–58. Cl. 37.
Sterling Drug Inc., d. b. a. Winthrop Laboratories, New York, N. Y. 669,529, pub. 8–26–58. Cl. 18.
Stern's Nurseries, Inc., Geneva, N. Y. 669,483, pub. 8–26–58. Cl. 10.
Stevens, J. P., & Co. Inc., New York, N. Y. 669,660–2, pub. 8–26–58. Cl. 42.
Stillman Rubber Co., Culver City, Calif. 669,618, pub. 8–26–58. Cl. 35.
Stocker Mfg. Co., Netcong, N. J. 564,409, canc. Cl. 2.
Stockton, Eugene M., Chicago, Ill. 564,535, canc. Cl. 46.

Studio Publications, Inc., The, New York, N. Y. 564,274, ren. 1–24–59. Cl. 38.
Sun Chemical Corp., Long Island City, N. Y. 669,498, pub. 8–26–58. Cl. 11.
Super-Form Brassiere, Inc., New York, N. Y. 669,650, pub. 8–26–58. Cl. 39.
Swift & Co., Chicago, Ill. 669,720, pub. 9–6–55. Cl. 52.
Swift and Co., to Swift & Co., Chicago, Ill. 121,966, ren. 6–11–58. Cl. 46.
Swift and Co., to Swift & Co., Chicago, Ill. 122,828, ren. 9–17–58. Cl. 46.
Swingline, Inc., Long Island City, N. Y. 669,503, pub. 8–26–58. Cl. 13.
Swingline, Inc., Long Island City, N. Y. 669,504, pub. 8–26–58. Cl. 18.
T. T. Products Co.: *See*—
Henning, Paul F.
Tailored Junior Dress Co., New York, N. Y. 669,642, pub. 8–26–58. Cl. 39.
Tate-O-Nut Donut Shop: *See*—
Leiby, Dayton O.
Taylor, Lloyd G., Ellicott City, Md. 564,324, canc. Cl. 31.
Technical Glass Co., Inc., Los Angeles, Calif. 564,518, canc. Cl. 25.
Tennessee Corp., New York, N. Y. 669,476, pub. 8–26–58. Cl. 6.
Texas Co., The, New York, N. Y. 669,519, pub. 8–26–58. Cl. 15.
Texas Water Crafters, Wichita Falls, Tex. 669,555, pub. 8–26–58. Cl. 22.
Thompson, John R., Co., d. b. a. Henrici's, Chicago, Ill. 669,691, pub. 8–26–58. Cl. 46.
Tobe Deutschmann Corp., Norwood, Mass. 669,603, pub. 8–26–58. Cl. 26.
Toc's Products Co., Inc., to Toc's Products, Inc., Syracuse, N. Y. 363,540, ren. 1–3–59. Cl. 6.
Tokyo Shibaura Electric Co. Ltd., Kawasaki-shi, Japan. 669,605, pub. 8–26–58. Cl. 26.
Topton Rug Mfg. Co., Mertztown, Pa. 564,396, canc. Cl. 42.
Town Crier, The: *See*—
Peters, Paul, Co., Inc.
Transistor Consultants, Inc., Morris Plains, N. J. 669,732, pub. 12–3–57. Cl. 100.
Tru-Space, Inc., Renton, Wash. 669,590, pub. 8–26–58. Cl. 26.
U. D. A. Inc., St. Louis, Mo. 669,580, pub. 8–26–58. Cl. 26.
Underwood Corp., New York, N. Y. 669,568, pub. 8–17–58. Cl. 23.
Uniflex Engineering, Inc., Elgin, Ill. 669,574, pub. 8–26–58. Cl. 23.
Unistrut Corp., Wayne, Mich. 564,414, canc. Cl. 13.
United Biscuit Co. of America, Melrose Park, Ill. 669,672, pub. 8–26–58. Cl. 46.
United Candle Co., Inc., New York, N. Y. 669,518, pub. 8–26–58. Cl. 15.
United Mills Corp., Mt. Gilead, N. C. 669,658, pub. 8–26–58. Cl. 42.
United States Borax & Chemical Corp., Los Angeles, Calif. 669,454, pub. 8–26–58. Cl. 2.
United States Plywood Corp., New York, N. Y. 564,420, canc. Cl. 5.
Universal Oil Products Co., Des Plaines, Ill. 669,515, pub. 8–26–58. Cl. 15.
Upjohn Co., The, Kalamazoo, Mich. 564,334, canc. Cl. 18.
V S B Mfg. Co., Brooklyn, N. Y. 564,377, canc. Cl. 4.
Vanadium-Alloys Steel Co., Latrobe, Pa. 669,512, pub. 8–26–58. Cl. 14.
Verd-A-Ray Corp., Toledo, Ohio. 669,540, pub. 1–11–55. Cl. 21.
Vernon-Benshoff Co., to Vernon-Benshoff Co., Pittsburgh, Pa. 362,016, ren. 11–8–58. Cl. 44.
Victor Gloves Inc., New York, N. Y. 669,636, pub. 8–26–58. Cl. 39.
Volck-Nu-Matic Corp., Brooklyn, N. Y. 669,565, pub. 8–26–58. Cl. 23.
Wampole, Henry K., & Co., Inc., Philadelphia, Pa. 564,444, canc. Cl. 18.
Warner-Hutnut, Inc., New York, N. Y. 564,438, canc. Cl. 18.
Waterloo Mills Co., Waterloo, Iowa. 669,685, pub. 8–26–58. Cl. 46.
Wells, Germaine C.: *See*—
Casenave, Leon A.
West Chemical Products, Inc., Long Island City, N. Y. 669,455, pub. 8–26–58. Cl. 2.
Western Oil and Fuel Co., Minneapolis, Minn. 669,516, pub. 8–26–58. Cl. 15.
Whirlpool Corp., by change of name from Whirlpool-Seeger Corp., St. Joseph, Mich. 669,614, pub. 8–26–58. Cl. 34.
Whirlpool-Seeger Corp.: *See*—
Whirlpool Corp.
White, Bernard B., New York, N. Y. 669,715, pub. 8–26–58. Cl. 50.
White Motor Co., The, Cleveland, Ohio. 564,279, canc. Cl. 23.
White-Rodgers Co., St. Louis, Mo. 669,542. Pub. 7–8–58, Cl. 21; pub. 8–19–58, Cl. 26. (Consolidated certificate, Classes 21 and 26.)
Whitney, F. A., Carriage Co., Leominster, Mass. 564,458, canc. Cl. 2.
Whitsitt, James W., d. b. a. Jim Whitsitt Textiles Co., Kansas City, Mo. 669,666, pub. 8–26–58. Cl. 42.
Whitsitt, Jim, Textiles Co.: *See*—
Whitsitt, James W.
Wilder, Shepard J., Concord, N. H. 669,609, pub. 8–26–58. Cl. 26.
Willems & Co.: *See*—
Willems, Edward J.
Willems, Edward J., d. b. a. Willems & Co., Brooklyn, N. Y. 564,280, canc. Cl. 13.
Willpac, Inc., Long Island City, N. Y. 669,495, pub. 8–26–58. Cl. 11.
Wilson & Toomer Fertilizer Co., Jacksonville, Fla. 669,486, pub. 8–26–58. Cl. 10.
Winter Garden Sales, Inc., Jackson, Miss. 669,673, pub. 8–26–58. Cl. 46.
Winthrop Laboratories: *See*—
Sterling Drug Inc.
Wolfram & Molybdene Societe Anonyme, Nyon, Switzerland. 669,564, pub. 8–26–58. Cl. 23.
Yellowstone Coach Co.: *See*—
Kroeder, Melvin R.

U. S. GOVERNMENT PRINTING OFFICE: 0——1959

Pat. 2,743,201, R. P. Johnson, R. G. Shulman, and D. M. Turbine Division, Cincinnati 15, Ohio. Attention Patent

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PATENTS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 16, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Oct. 15, 1958. *Chairman, Committee on Enrollment.*

Adjudicated Patents

(C. A. N. Y.) Deskey Patent No. 2,296,068 (20—89), for plywood panel. Claim 1 *Held* valid and infringed; claims 2 to 7 *Held* invalid. *Georgia-Pacific Corporation* v. *United States Plywood Corporation*, 258 F.2d 124; 118 USPQ 122.

(D. C. Calif.) Gross and Cornwall Patent No. 2,396,005 (85—1), for sealing device. Claim 1 *Held* invalid and not infringed. *Rohr Aircraft Corporation* v. *Rubber Teck, Inc.*, 163 F. Supp. 787; 118 USPQ 8.

(C. A. Ind.) Freeman Patent No. 2,542,919 (20—57.5), for rigid type sheet material awning. Claims 1 to 10 *Held* invalid. *B. & M. Corporation* v. *Aluminum Awning Corporation of Indiana*, 257 F.2d 264; 118 USPQ 191.

(C. A. N. Y.) Redman Patent No. 2,597,528 (26—55), for apparatus for treatment of tubular knitted fabrics, *Held* valid and infringed. *Stedman Mfg. Co.* v. *Redman*, 257 F.2d 867; 118 USPQ 247.

(C. A. N. Y.) Redman Patent No. 2,597,530 (26—18.5), for method of treating fabric, *Held* valid and infringed. *Id.*

(D. C. R. I.) Jones Patent No. 2,598,265 (2—14), for goggle. Claim 1 *Held* not infringed. *Jones* v. *Progress Industries, Inc.*, 163 F. Supp. 824; — USPQ —.

(D. C. N. J.) Samolewitz Patent No. 2,657,500 (46—169), for transparent doll eye. Claims 1 to 4 and 20 *Held* invalid. *Dollac Corporation* v. *Margus Corporation*, 164 F. Supp. 41; 118 USPQ 257.

(D. C. N. J.) Wolfe Patent No. 2,700,248 (46—169), for movable doll eye, *Held* invalid. *Id.*

(D. C. Tex.) Smith Patent No. 2,765,373 (179—107), for hearing aid. Claims 1, 3, and 6 *Held* valid and infringed. *Smith* v. *Gibbs*, 163 F. Supp. 897; 118 USPQ 415.

(D. C. Mass.) Glagovsky Patent No. 2,792,585 (41—34), for ornamental stud, *Held* invalid. *Glagovsky* v. *Bowcraft Trimming Co.*, 164 F. Supp. 265; — USPQ —.

(D. C. R. I.) Jones Design Patent No. 166,257 (57—1), for goggle, *Held* invalid. *Jones* v. *Progress Industries*, 163 F. Supp. 824; — USPQ —.

(D. C. N. Y.) Reiner and Braga Reissue Patent No. 23,163 (132—46), for a clamp. Claims 1 to 4, 7, 10, and 11 *Held* invalid but infringed if valid. *Reiner* v. *I. Leon Co., Inc.*, 163 F. Supp. 724; 118 USPQ 30.

Disclaimers

2,624,522.—*Charles F. Van Hook*, Paterson, N. J. RAIL STAND. Patent dated Jan. 6, 1953. Disclaimer filed Oct. 14, 1958, by the inventor.

Hereby enters this disclaimer to claims 1, 2, 4, 7, and 8 of said patent.

2,658,681.—*Ralph L. Palmer*, Poughkeepsie, *James E. Verscheos*, Wappingers Falls, *Jervier A. Haddad*, Fishkill, *Byron E. Phelps*, Wappingers Falls, and *James V. Williams, Jr.*, Poughkeepsie, N. Y. ELECTRONIC CALCULATOR. Patent dated Nov. 10, 1953. Disclaimer filed Oct. 16, 1958, by the assignee, *International Business Machines Corporation*.

Hereby enters this disclaimer to claim 17 of said patent.

2,702,866.—*Arthur H. Dickinson*, Greenwich, Conn. MULTIFREQUENCY ELECTRONIC MULTIPLIER. Patent dated Feb. 22, 1955. Disclaimer filed Oct. 16, 1958, by the assignee, *International Business Machines Corporation*.

Hereby enters this disclaimer to claim 17 of said patent.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,680,121, R. J. Hlavacek, Color stabilizers for tallow, decided Aug. 5, 1958, Interference No. 87,305, claims 1, 3, and 4.

Pat. 2,697,216, A. P. Glenny, Resettable pick-off for control systems for navigational craft, decided Sept. 30, 1957, Interference No. 87,726, claim 1.

New Applications Received During September 1958

Patents	6,386
Designs	371
Plant Pats	6
Reissues	16
Total	6,879

Issue

Patents	926	No. 2,860,343 to No. 2,861,268, incl.
Designs	49	No. 183,907 to No. 183,955, incl.
Plant Pats	2	No. 1,771 to No. 1,772, incl.
Reissues	3	No. 24,567 to No. 24,569, incl.
Total	980	

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of pending applications (excluding Designs)	204,214
Total number of pending Design applications	6,982

Pat. 2,743,201, R. P. Johnson, R. G. Shulman, and D. M. Van Winkle, Monatomic semiconductor devices, decided Sept. 18, 1958, Interference No. 88,252, claims 2 and 3.

Pat. 2,754,474, P. W. Barnhart, Arrangement for producing full-wave output from half-wave magnetic amplifiers, decided Oct. 27, 1958, Interference No. 88,597, claims 8 and 9.

Pat. 2,779,054, M. Doriat and A. Vogt, Apparatus for homogenizing and kneading plastic masses, Interference No. 88,912, decided Oct. 14, 1958, claims 1 and 2.

Patents Available for Licensing or Sale

2,851,225. Removable Jaws for Rock Crusher. Charles A. McMahan, Blue Ridge Welding Co., Route 4, Marion, N. C.

Patents Research, Inc., is prepared to grant non-exclusive licenses under the following three patents, upon reasonable terms, to domestic manufacturers.

Applications for license may be addressed to: Patents Research, Inc., 6 Gaywood Circle, Birmingham 13, Ala.

2,794,166. Walking Sticks for the Blind.

2,797,042. Tamper Proof Envelope.

2,832,383. Hypertension Cold Meter.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: Patent Counsel, Atomic Products Division, General Electric Company, 1 River Road, Schenectady 5, N. Y.

2,812,109. Electromagnetic Pump.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Aircraft Gas Turbine Division, Cincinnati 15, Ohio. Attention Patent Counsel.

2,805,192. Plated Refractory Metals.

2,846,137. Construction for Axial-Flow Turbomachinery.

Applications for license under the following 5 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind. Attention Patent Counsel.

Des. 180,960. Timer Face Assembly for a Kitchen Range.

2,827,615. Inductive Device.

2,834,930. Reversible Constant-Voltage Direct-Current.

2,845,198. Electrical Terminal Box and Cover Therefor.

2,845,602. Transformer Core Construction.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N. Y.

2,837,578. Chloro-Nitro Compounds and Their Preparation.

2,840,540. Ethoxyline Resin-Hexachloroendomethylenetetrahydrophthalic Anhydride Compositions Having Long Pot Life.

Classification Order No. 264

The following class transfers, for concurrent reclassification and examination of applications pending therein, are hereby ordered to take effect on Monday, October 20, 1958:

From Division 29 to Classification Division V
Class 286, PACKED SHAFT OR ROD JOINTS
Class 288, JOINT PACKINGS.

From Division 61 to Classification Division V
Class 161, TIME-CONTROLLING MECHANISM.

M. C. ROSA,
Director, Patent Examining Operation.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION

Oldest Application

Total	6,679	Total	980

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of pending applications (excluding Designs)	204, 214
Total number of pending Design applications	6, 982
Total number of applications awaiting action (excluding Designs)	86, 231
Total number of Design applications awaiting action	3, 504
Date of oldest new application	Nov. 1, 1957
Date of oldest amended application	Oct. 15, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 81, 86, 43, 46, 86, 86, 89, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 25, 37, 41, 42, 44, 45, 51, 64, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 13, 15, 14, 21, 31, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 9, 20, 29, 33, 36, 40, 52, 56.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 28, 38, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	8, 15, 19, 26, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Bureau numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-30-57	2-3-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-2-58	12-26-57
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	1-15-58	1-15-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	1-17-58	1-21-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	12-10-57	12-2-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	2-21-58	2-27-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-29-57	11-18-57
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	2-3-58	2-17-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	2-17-58	1-9-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	2-25-58	2-11-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-58	1-21-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-6-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	2-3-58	1-10-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-6-57	12-2-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-6-58	1-2-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	12-30-57	12-24-57
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	1-10-58	1-7-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-16-58	1-2-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	2-3-58	1-14-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-30-58	1-28-58
21. (III) MADER, R. C., Textiles	12-5-57	12-4-57
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-6-58	1-2-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers, Voting Machines; Counters	11-4-57	10-15-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	1-1-58	1-1-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	2-27-58	2-6-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	2-21-58	2-20-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	12-23-57	12-17-57
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Cleaning or Sealing; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-11-57	11-27-57
29. (V) FRITZ, M. M., Tools; Wood working; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	1-6-58	1-20-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Condensators; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	1-6-58	1-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Examiner numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	10-24-57	10-23-57
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	12-2-57	12-5-57
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements	1-23-58	1-27-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	12-9-57	12-13-57
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet or Web Feeding	2-7-58	2-6-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	9-30-57	9-17-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	11-6-57	11 13-57
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	2-3-58	2-11-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	2-10-58	2-6-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-2-58	1-2-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	11-7-57	11-6-57
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-3-57	10-2-57
43. (I) KNIGHT, W. D. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	11-15-57	11-6-57
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	11-4-57	11-1-57
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	11-22-57	11-26-57
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-19-57	12-9-57
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-57	11-4-57
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-1-57	11-1-57
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	1-26-58	2-11-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	7-18-57	7-8-57
51. (VII) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas	11-6-57	11-18-57
52. (V) NEFF, P. B., Supports and Racks	11-4-57	11-5-57
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	2-17-58	2-10-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	1-23-58	2-3 58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	10-15-57	10-11-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	1-2-58	1-6-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Metal Bending	2-10-58	2-14-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part)	1-13-58	1-6-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-20-57	11-25-57
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	8-1-57	7-2-57
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Time Controlling Apparatus; Railway Mail Delivery; Feeding of Indefinite Lengths	11-1-57	11-4-57
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	1-2-58	1-2-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-6-57	11-5-57
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-31-57	10-31-57
66. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	10-24-57	11-4-57
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	12-30-57	10-11-57
68. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	1-7-58	1-8-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	12-18-57	12-17-57
CLASS. DIVS. II—LADY, J. E., Oscillators	1-13-58	1-16-58
CLASS. DIVS. III—WAHL, R. A., Cutting and Punching	11-1-57	11-1-57
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	1-21-58	1-23-58
CLASS. DIVS. V—ANGEL, C. D., Roofs; Scaffolds; Masonry and Concrete Structures	11-6-57	11-1-57
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	12-2-57	11-22-57
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	12-9-57	2-3-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	10-30-57	12-16-57

*Established August 23, 1957, by order of the Commissioner—722 O. G. 315.

The following divisions have been abolished: 55 and 58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during September 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,254,197 to 2,257,723, inclusive
Plant Patents ..... Numbers 489 to 490, inclusive

30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration		1-8-58	1-10-58

PATENT SUITS

Notices under 35 U. S. C. 290; Patent Act of 1952

2,266,280. (See 2,244,820.)

2,292,786, H. P. Kendall, Shingle structure, filed Aug. 17, 1956, D. C. N. J. (Newark), Doc. 627/56, *Cree-Dipt Co., Inc. et al. v. National Building Materials Co., Inc.* Stipulation and order of dismissal (notice Oct. 9, 1958).

2,444,880, Waldo Kelligrea et al., Adhesive sheet and method of making; 2,266,880, W. Kelligren, Method of making pressure-sensitive adhesive sheet, suit for Declaratory Judgment filed Apr. 20, 1956, D. C. N. J. (Newark), Doc. 359/56, *Technical Tape Corp. v. Minnesota Mining & Mfg. Co.* Stipulation and order of dismissal Sept. 18, 1958.

2,482,329, J. L. Snoek, Magnetic core; 2,482,530, same, Magnetic core; 2,482,531, same, Process of manufacturing a magnetic material and magnetic core; 2,490,780, J. A. M. Smelt, Method of manufacturing magnetic mass cores; 2,551,711, J. L. Snoek et al., Manganese zinc ferrite core; 2,570,978, same, Soft ferromagnetic material and method of making same; 2,596,271, F. H. Gaedorf, Coated ferromagnetic coil element; 2,606,869, J. L. Snoek et al., Magnetic core; 2,646,388, J. Boeke, Process of manufacturing a magnetic material, filed May 18, 1954, D. C., S. D. N. Y., Doc. 93/163, *The Yale & Towne Mfg. Co. v. North American Philips Co., Inc.* (*substituted Oct. 3, 1958 for Philips Laboratories, Inc.*). Consent judgment; plaintiffs enjoined Oct. 3, 1958.

2,452,530. (See 2,452,529.)

2,452,531. (See 2,452,529.)

2,459,696, C. M. Holloway, Self-sealing electric light socket for refrigerator panels, filed Aug. 9, 1957, D. C., W. D. Mich. (Grand Rapids), Doc. 3262, *Helwin Corp. v. Pont Electric Co., Inc.* Final consent judgment; injunction issued Oct. 2, 1958.

2,481,765. (See 2,632,102.)

2,695,979, Ferris and Klancnik, Jr., Antenna, filed Nov. 22, 1952; 2,748,397, F. J. Klancnik, Jr., Antenna structure, supplemental complaint filed June 16, 1956, D. C., N. D. Ill. (Chicago), Doc. 53c2292, *Hi-Lo Antenna Corp. v. Midwest Naturalite Co. et al.* On Jan. 4, 1954, order on stipulation dismissing John McBride as co-defendant without prejudice; Oct. 7, 1958, Patent 2,748,397 held valid and infringed; original complaint dismissed.

2,459,789. (See 2,452,529.)

2,545,554, R. L. Meadows, Heavy-duty trailer and tractor hitch, suit for Declaratory Judgment filed Oct. 9, 1958, D. C., E. D. Pa. (Philadelphia), Doc. 25412, *L. B. Smith, Inc. v. Hughes Trailers.*

2,551,711. (See 2,452,529.)

2,570,978. (See 2,452,529.)

2,588,745, R. Miller, High-frequency antenna, filed Nov. 30, 1953, D. C., N. D. Ill. (Chicago), Doc. 53c2271, *Hi-Lo TV Antenna Corp. v. Midwest Naturalite Co. et al.* Order of dismissal Oct. 7, 1958.

2,607,710, R. M. Downey, Apparatus and process for making mineral wool; 2,646,595, same, Method and apparatus for fiberizing molten material, filed Oct. 7, 1958, D. C. Colo. (Denver), Doc. 6182, *United States Gypsum Co. v. Rock Wool Insulating Co. et al.*

2,609,210, H. L. Rogers, Detachable fluid pressure operated gooseneck for trailers, filed Oct. 1, 1958, D. C. Mass. (Boston), Doc. 58/961-W, *Rogers Brothers Corp. v. Scherizer Equipment Co.*

2,609,271. (See 2,452,529.)

2,615,177, Werthen and Barbour, Low-pressure flash evaporator, filed Mar. 9, 1956, D. C., E. D. Wis. (Milwaukee), Doc. 56c37, *Bethlehem Steel Co. v. Cleaver-Brooks Co.* Dismissal by stipulation Oct. 6, 1958.

2,627,626, J. M. De Grandis, Waterproof plastic covered bust pad, filed Oct. 3, 1955, D. C., W. D. N. Y. (Buffalo), Doc. 8013, *Virginia Hall, Inc. v. Miriam Gates, Inc.*

2,632,102. (See 2,452,529.)

2,646,702, Hasley and Swayze, Etching, filed Sept. 22, 1958, D. C. N. J. (Newark), Doc. 1092/58, *Dow Chemical Co. v. Linden Photo Engraving.*

2,646,703. (See 2,267,710.)

2,646,882. (See 2,452,529.)

2,654,771, Salvatori and Stewart, Tool for removing material from well bore walls, filed Sept. 28, 1955, D. C., W. D. Tex. (San Antonio), Doc. 2330, *Great Oil Tool Co. v. Superior Tool & Reamer Co., Inc.* Final judgment; patent held infringed Sept. 13, 1958.

2,657,395, N. H. Goodman, Tights and method of making same, filed Sept. 30, 1958, D. C., S. D. N. Y., Doc. 138/188, *David G. Goff et al. v. Donobin, Inc.*

2,766,141, J. H. McKee, Overhead doors, filed Oct. 2, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1791, *McKee Door Co. v. Forest Door Co., Inc.*

2,718,966. (See Re. 24,189.)

2,722,681, P. Kuhar, Electric generator regulater, filed Oct. 7, 1958, D. C., W. D. Ohio (Cleveland), Doc. 54844, *Peter Cook v. Sears, Roebuck & Co.*

2,722,919, L. E. Johnson, Jr., Sliding door frame assembly, filed Oct. 2, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1787, *Kennetrack Corp. v. The Stanley Works.*

2,748,827. (See 2,465,579.)

2,757,806, A. P. Heidenbrand, Tension machine, filed Oct. 3, 1958, D. C. Kans. (Topeka), Doc. W-1679, *Arthur P. Heidenbrand v. Mike Welch.*

2,762,226, K. Eyssel, Vegetable shredder, filed Apr. 29, 1957, D. C., W. D. Ill. (Chicago), Doc. 57c783, *Karl Eyssel v. Popeil Brothers, Inc.* Patent held valid and infringed (notice Oct. 7, 1958).

2,782,842, E. V. Koskela, Combination film strip and slide projector, filed Oct. 3, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1796, *Elmer V. Koskela v. Standard Projector and Equipment Co., Inc. et al.*

2,829,644, M. Mascaferri, Plastic wall tile for packing; 2,841,824, same, Self-sealing wall tiles, filed Oct. 6, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19074, *Mario Mascaferri v. Martin's Floor Coverings, Inc.*

2,826,102, E. O. Roof, Variable pitch mower; 2,681,766, same, Mowing machines; Re. 24,286, same, filed Oct. 2, 1958, D. C., N. D. Iowa (Cedar Rapids), Doc. 650, *Earl O. Roof et al. v. Oisch Manufacturing & Distributing Co.*

2,806,671, S. L. McNair, Electrical vibrating device in combination with a cushion, filed Sept. 25, 1958, D. C., S. D. N. Y., Doc. 138/112, *Roto-Broil Corp. of America v. Samuel L. McNair.*

2,841,656. (See 2,828,544.)

2,841,664, J. P. Bagby et al., Exposure control for photographic cameras, supplemental complaint filed July 1, 1958, D. C., N. D. Ill. (Chicago), Doc. 57c1998, *Bell & Howell Co. v. Revere Camera Co.*

2,845,728, I. I. Arnold, Stretchable footwear construction, filed Oct. 2, 1958, D. C. Mass. (Boston), Doc. 58/965-W, *Arnold Stretchmates Corp. v. Jordan Marsh Co.*

2,854,122, Tellers and Bernhardt, Package for cosmetics and the like, filed Oct. 1, 1958, D. C. N. J. (Newark), Doc. 1109/58, *Joseph E. Seagram & Sons, Inc. v. Celluplastics Corp. et al.* Same, filed Oct. 1, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1779, *Joseph E. Seagram & Sons, Inc. v. Perfex Plastics, Inc. et al.*

Re. 24,126, H. E. Marvel, Water-fuel separator, filed Oct. 22, 1956, D. C., E. D. Va. (Richmond), Doc. 2424, *Bowser, Inc. v. Richmond Engineering Co., Inc.* Claims 1, 2, 3, and 5 held valid and infringed; defendants restrained July 9, 1958.

Re. 24,129 (of 2,713,826), V. H. Peeples, Spreader control, filed Oct. 7, 1958, D. C., S. D. Ohio (Columbus), Doc. 135/170 (originally filed July 2, 1958, D. C., S. D. N. Y.) *Tromatic Machine & Tool Co., Inc. v. O. M. Scott & Sons Co.*

Re. 24,288. (See 2,632,102.)

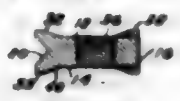
Patents ..... Numbers 2,264,197 to 2,267,723, inclusive
Plant Patents ..... Numbers 489 to 490, inclusive

REISSUES

NOVEMBER 18, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,567
WELD NUT AND METHOD OF MAKING SAME
Frederick G. Richardson, Detroit, Mich.
Original No. 2,761,483, dated September 4, 1956, Serial No. 294,314, June 19, 1952. Application for reissue October 30, 1956, Serial No. 619,372
5 Claims. (Cl. 151—41.7)

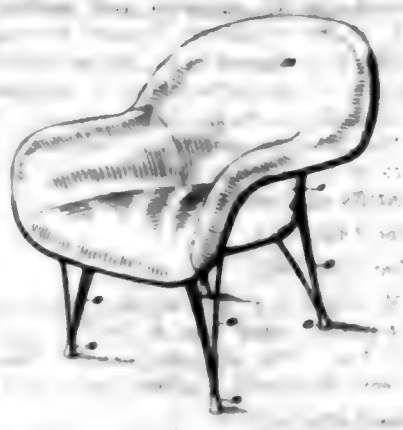


1. A weld nut particularly adapted for use in hopper feeding comprising a nut body, a threaded bore in the center of said body, said body having generally flat end surfaces adjacent said bore and generaly flat side surfaces meeting at corner edges to form sharp points, and a plurality of weld projections, one at each corner of each of said end surfaces, each of said projections having a flat end surface parallel with said end surfaces of the nut and equally spaced therefrom, and each of said projections including an end surface inclined inwardly from the projection end surface to the nut end surface, said body metal and projection metal being of the same standard nut stock and substantially the same hardness.

24,568
MANUFACTURE OF SOLID CATALYSTS
Charles H. Watkins, Arlington Heights, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Original No. 2,746,898, dated May 29, 1956, Serial No. 491,188, February 28, 1955. Application for reissue July 16, 1957, Serial No. 672,850
18 Claims. (Cl. 252—433)

1. A process for the manufacture of a solid [polymerization] catalyst which comprises admixing a metal salt with an acidic oxide of phosphorus, adding said mixture to a solid adsorbent, drying and calcining said composite, and thereafter treating the resultant composite with a boron halide.

24,569
CHAIR CONSTRUCTION
Herbert V. Thaden, High Point, N. C., assignor, by mesne assignments, to Thaden Molding Corporation, High Point, N. C., a corporation of North Carolina
Original No. 2,831,534, dated April 22, 1958, Serial No. 485,898, February 3, 1955. Application for reissue May 28, 1958, Serial No. 736,915
8 Claims. (Cl. 155—191)



1. A chair structure comprising a seat portion, arm portions secured to the side edges of the seat portion and extending upwardly therefrom, a back portion secured to the rear edge of the seat portion and extending upwardly therefrom, the front edge of the seat portion, the front and upper edges of the arm portions and the edge of said back portion above said arm portions merging smoothly into each other, said edges having aligned reverse grooves therein to form a continuous groove extending around the periphery of said structure, and a fabric cover covering the seating portion of said chair structure, the peripheral edge of said cover being secured to said structure by means of the continuous groove.

PLANT PATENTS

GRANTED NOVEMBER 18, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,771
ROSE PLANT
Gerrit de Ruiter, Hazerswoude, Netherlands, assignor to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania
Application March 3, 1958, Serial No. 718,936
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of its compact habit of growth and bloom, with attendant special suitability for greenhouse pot forcing, excellent and disease-resistant foliage, uniform and decorative distribution of bloom on the plant, well-formed and long-lasting blooms, and the distinctive Orient Red general color tonality of the blooms.

1,772
AZALEA PLANT
Alfred Nill, Wantagh, N. Y., assignor to Dannenhelm, Inc., Wantagh, N. Y., a corporation of New York
Application April 4, 1958, Serial No. 726,595
1 Claim. (Cl. 47—68)

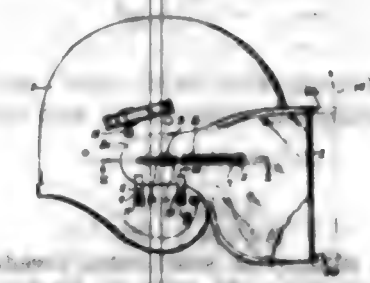
A new and distinct variety of azalea plant of the Belgian Indicum type, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of vigorous and uniform habits of growth, persistent foliage, firm texture and attendant good keeping quality of the flowers, a distinctive pink general color tonality of the flowers, and excellent suitability for forcing.

PATENTS

GRANTED NOVEMBER 18, 1958

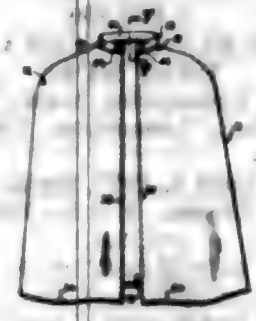
GENERAL AND MECHANICAL

2,860,343
HEADGEAR WITH RETRACTABLE EYE SHIELD
Jackson A. Alleo, Carbondale, Pa., assignor to Leonard P. Frieder, Great Neck, N. Y.
Application October 27, 1955, Serial No. 543,078
5 Claims. (Cl. 2—9)



1. A combined headgear and retractable eye shield comprising a head covering, an eye shield comprising a central portion adapted to extend laterally in front of the wearer's face and a pair of rearwardly extending wings, means pivotally supporting said shield comprising a pair of pivot pins, one at each side of the head covering and projecting outwardly therefrom, each wing having a longitudinally extending slot therein to receive the pin on its side of the head covering, a pair of spring retainers fixed to the respective sides of the shield at locations aligned with the longitudinal axes of said slots and spaced forwardly of said slots, a pair of springs, each extending between a pivot pin and a retainer, and latch means comprising, for each side of the head covering, a pair of spaced latch members fixed on the head covering and cooperating with the wing on that side to limit the movement of the shield, said springs cooperating to bias said shield to a latched position in which each wing engages both the latch members on its side of the head covering, thereby preventing pivotal movement of the shield on the pins.

2,860,344
RAIN CAPE
George L. Hardee, West Columbia, S. C.
Application April 11, 1956, Serial No. 577,876
1 Claim. (Cl. 2—87)

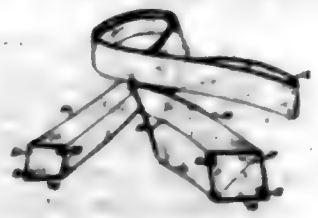


A rain cape comprising a substantially rectangularly shaped rear panel, a pair of front panels of the same length as the rear panel and having side edges of the same length as each other and being secured to opposite side edges of said rear panel, each of said panels being formed from an uninterrupted flexible water repellent material, each of said front panels having upwardly and inwardly sloping outer side edges and upper end edges, outer side edges of the rear panel being substantially parallel, the upper end edges of the rear panel sloping upwardly and inwardly toward the center, a collar secured to the upper portion of each of said panels and having its opposite ends terminating substantially flush with the proximal edges of said pair of front panels, said collar being formed of an elongated single sheet of water repellent material being folded upon itself to form an outer and inner layer, said outer layer being longer than the inner layer and being secured to the outer surfaces of said panels, said inner layer being secured to the inner surfaces of said panel and means spaced inwardly from the ends of said collar for securing the opposite ends of the collar in overlapping relation to cause portions of one of the front panels to overlap portions of the other front panel to protect the front portion of the wearer of the cape from the rain.

2,860,345
GARMENT
Armigene R. Johnson, Wantagh, N. Y.
Application March 3, 1955, Serial No. 491,869
1 Claim. (Cl. 2—106)

A blouse comprising at least two pieces of fabric forming the front and back portions of said blouse and sewn together to form a completed garment, one set of threads of the fabric being generally aligned with the vertical lines of the blouse extending between the neck and waist, one portion having an outer downwardly extending upper edge part and a downwardly extending lower edge part, the upper and lower edge parts being connected by the edges of an outwardly extending rectangular extension, the upper and lower outer edges of the extension being substantially parallel to one set of threads in said one portion and the connecting edge of the extension being substantially parallel to the other set of threads on said one portion, the other portion having an upper, outwardly and upwardly extending sleeve forming part having an upwardly and outwardly inclined edge and substantially parallel upper and lower edges, said other portion having a body forming part extending downwardly from the sleeve forming part, the body forming part having a side edge extending downwardly from the lower edge of the sleeve forming part, the said other portion further including a slit extending inwardly and upwardly from the puncture of the lower edge of the sleeve forming part and said side edge of the body forming part, the lower downwardly extending side edges of each part being connected together, the upper and lower edges of said other portion being connected together to form a sleeve, the rectangular extension having its connecting edge and its lower edge connected to the edges of said slit in said other portion to form a part of the underside of the sleeve and a part of the garment, the downwardly extending upper edge part of said one portion and the upper inclined edge of the sleeve part being connected together to complete the garment.

2,860,346
VARIABLE LENGTH AND STYLE NECKTIE
Robert A. Stebler and Harry J. Weisbaum,
Cincinnati, Ohio
Application June 13, 1955, Serial No. 514,916
1 Claim. (Cl. 2—157)



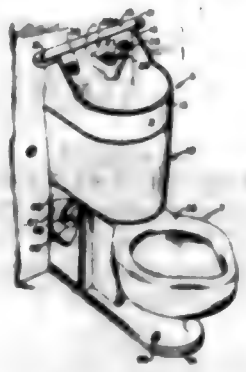
A necktie comprising a front drape portion and a rear drape portion connected by a neckband portion, said front drape portion terminating in a pointed end, a fastener on the rear surface of said front drape portion inwardly of the end thereof, a complementary fastener on the rear surface of said pointed end whereby said pointed end may be folded under and said fasteners secured together to provide a square end on said front drape portion and a necktie of less length, said rear drape portion terminating in a pointed end, a fastener on the rear surface of said rear drape portion inwardly of the end thereof, a complementary fastener on the rear surface of said last named pointed end whereby said last named pointed end may be folded under and said last named fasteners secured together to provide a square end on said rear drape portion and a still shorter necktie.

2,860,347
GLOVE
Irene C. Collins, Johnstown, N. Y.
Application January 31, 1957, Serial No. 637,454
2 Claims. (Cl. 2—169)

1. A glove formed of three, separate pieces of material; the first of said pieces forming complete coverings for the forefinger and little finger, coverings for the back of the second and third fingers, a covering for a portion of the thumb, and the major portion of the covering for the back of the hand of a wearer; the second piece forming a covering for the front and sides of the third finger and a minor portion of the covering for the palm of the hand; and the third piece forming the covering for the front and sides of the second finger, the balance of the covering for the thumb, and a substantial portion of the covering for the palm of the hand.

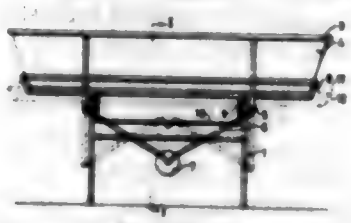
2,860,348
COMBINATION FIXTURE
William F. McClenahan, Burlingame, Calif.
Application February 6, 1958, Serial No. 713,765
3 Claims. (Cl. 4—3)

1. A tamper-proof unitary plumbing fixture comprising a combined toilet bowl and wash basin, said wash basin being mounted over and having an outlet draining into the toilet bowl and having a water inlet and having a concealing member extending downward from the wash basin at the front and sides thereof and forming a portion of the sides of the wash basin, said concealing member extending from each side of the wash basin to the bottom of the fixture and providing a support for the wash basin and said concealing member in front extending to the top of the toilet bowl, a water inlet and waste outlet ex-



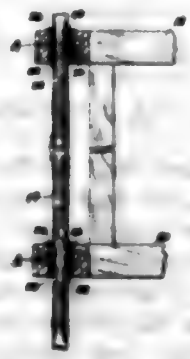
tending to and from said toilet bowl, said concealing member concealing the water inlets and outlets.

2,860,349
BATH TUBS
Olle Blomqvist, Stockholm, Sweden
Application October 30, 1956, Serial No. 619,264
Claims priority, application Sweden November 15, 1955
7 Claims. (Cl. 4—177)



1. A collapsible bathtub comprising an open frame, a flexible and collapsible tub mounted on and suspended from the frame and adapted to contain a quantity of water and support the body of a user, a supporting means, means mounting the frame on said supporting means for vertical movement toward and away from the supporting means so as to selectively lower the tub into a collapsed position and raise it into an open position and means retaining the frame in a raised or lowered position relative to the frame, a rigid plate completely underlying and supporting the bottom of the tub and fixed on the supporting means, said mounting means including levers pivoted on the frame and on the supporting means and said retaining means including a weight carried by the levers and movable above and below the pivot points of the levers on the supporting means.

2,860,350
PLASTIC SLIDE BEARING FOR CRIBS HAVING DROP SIDES
Francis A. Miller, Leominster, Mass., assignor to Joseph P. Miller Co., Inc., Leominster, Mass., a corporation of Massachusetts
Application April 1, 1957, Serial No. 649,800
2 Claims. (Cl. 5—100)



2. A crib comprising a drop side including connected top and bottom rails, said rails being apertured therethrough adjacent the ends thereof, said apertures being

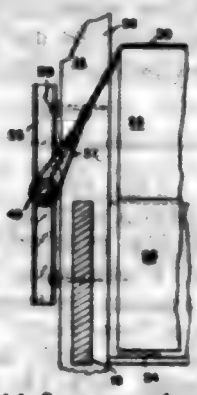
cylindrical, drop rods secured to parts of the crib and received in the apertures, each drop rod passing in effect through a pair of spaced apertures, one in each rail, the drop rods having a diameter less than that of the apertures, a generally cylindrical plastic gradually tapered slide bearing located and held in each aperture and slidably engaging the respective drop rod at all positions thereof while allowing a certain amount of lateral twist between the drop rod and the rails, the bearings being tapered inside and out and being non-cementitiously wedged in the respective cylindrical apertures, each bearing having a length approximately equal to the length of the respective aperture and an external flange on each bearing to stop the same in fixed position relative to the respective rail, and an internal constriction at one end of each bearing to slidingly engage the drop rod and provide substantially silent operation of the drop side.

2,860,351
BED CONSTRUCTION
Anthony A. La Russa, Bronx, N. Y., assignor to the United States of America as represented by the Secretary of the Army
Application April 23, 1954, Serial No. 425,333
3 Claims. (Cl. 5—178)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A folding bed construction including a bed frame comprising a pair of end members, side rails disposed between the end members, end rails adjacent to the end members and rigidly interconnecting the side rails, means pivotally connecting the end members and the rails to shift the end members between extended and folded positions and releasable locking means having a first cooperating part thereof having an opening therein and rotatably carried by one of said end rails for horizontal arcuate movement relative to said one end rail, a second cooperating part thereof rigidly carried by an end member adjacent said one end rail and including a vertical adjustable spindle member for engaging said opening in said first cooperating part for interlocking engagement therewith to maintain said one end member and adjacent end rail in extended position.

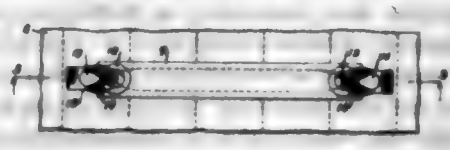
2,860,352
SHEET HOLDER
Gerald John Pierre, Detroit, Mich.
Application May 3, 1954, Serial No. 426,976
16 Claims. (Cl. 5—320)

1. The combination with a bed having an article of bed clothing thereon, of means for holding said article in position on said bed comprising an elongated bar having an intermediate body portion and end portions of reduced cross-section relative to said intermediate body portion, a hem along one edge of the article of bed clothing having openings at longitudinally spaced points, said openings being of a size sufficient to receive said end portions but insufficient to receive said intermediate portion, another opening in said hem adjacent one of said first mentioned openings of a size to receive the intermediate portion, said bar being insertable into said hem through said other opening and being disposed in said hem with the end portions projecting through said first mentioned openings, the distance between the end portions of said bar being approximately equal to the



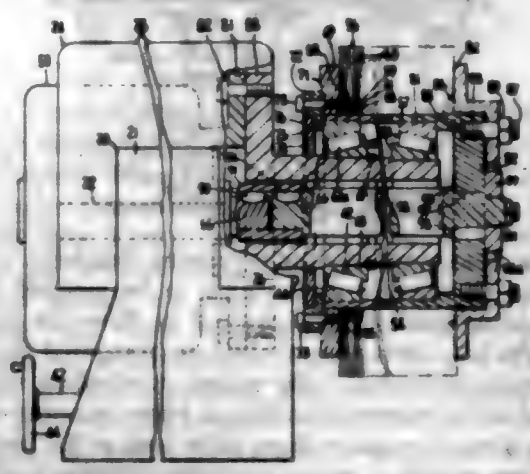
distance between said first mentioned openings whereby said bar may be removed from said hem by slight lengthwise stretching of the latter, and attaching means at one end of the bed releasably engageable with the end portions of said bar.

2,860,353
HANDLE FOR MATTRESSES AND THE LIKE
Joseph A. Byer, West Hartford, Conn., assignor to Corby Manufacturing Company, New Britain, Conn.
Application April 3, 1957, Serial No. 650,333
14 Claims. (Cl. 5—345)



1. In combination with a mattress wall, a mattress handle comprising an anchoring bar overlying the inner surface of said mattress wall, a pair of spaced eyelets extending through said wall and said bar inwardly of the opposite ends of said bar and securing the bar to the wall, a handle comprising a strip of flexible fabric tape overlying the outer surface of said wall between said eyelets and having its opposite ends extending therethrough, said handle having openings adjacent its opposite ends whereby said ends may be passed over the respective ends of said anchoring bar to thereby connect said handle to said anchoring bar.

2,860,354
MOUNTINGS FOR ROTARY BRUSHES
William C. Van Cleef, Jr., Baltimore, Md., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Application May 13, 1955, Serial No. 508,234
8 Claims. (Cl. 15—21)

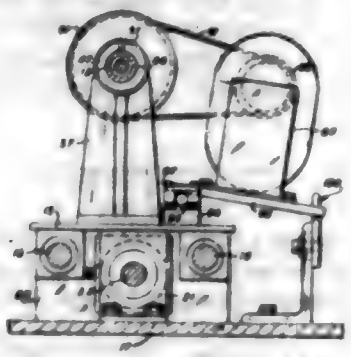


1. A brush mounting comprising a base, a frame journaled upon the base and having a web normal to the axis

of the fixture and providing a support for the wash basin through adjacent the ends thereof, said apertures being

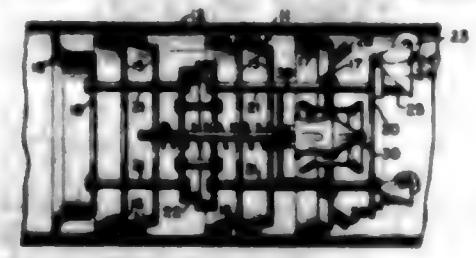
of rotation of the frame, a driving motor secured upon the web with the axis thereof normal to the web, a tubular support for a rotary brush secured upon the web in coaxial alignment with the axis of the motor, a rotary brush having a tubular core mounted to rotate upon the support, a shaft from the motor extending through the support, a cap member upon the end of the core beyond the tubular support and being drivingly connected to the shaft and to the core.

2,860,355
APPARATUS FOR ADVANCING AND ROTATING WORK PIECES
Carroll D. Spainhour, Greensboro, N. C., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application November 23, 1955, Serial No. 548,579
10 Claims. (Cl. 15—21)



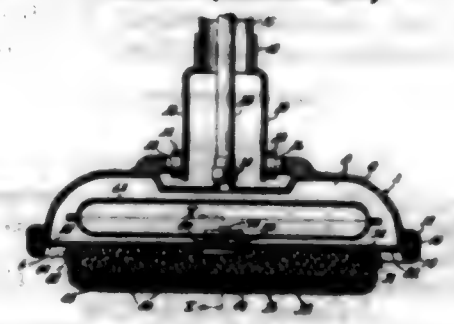
1. Apparatus for presenting a workpiece to a work-finishing device, which comprises a movable support, means for mounting a workpiece rotatably on the support, means for reciprocating the support between a position wherein the workpiece is immediately adjacent to the work-finishing device and a position wherein the workpiece is remote therefrom, a tiltable mounting plate attached pivotally to the support for movement therewith, a cam positioned adjacent to the movable support and having a camming surface formed thereon cooperating with the tiltable mounting plate, said camming surface being designed to tilt the mounting plate when the support is positioned adjacent to the work-finishing device, and drive means secured to the mounting plate and operable for rotating the workpiece whenever the mounting plate is so tilted.

2,860,356
PIPE-CLEANING MACHINE
Francis M. Matheny, Lynwood, Calif., assignor to Pipe Linings, Inc., Wilmington, Calif., a corporation of Delaware
Application June 17, 1957, Serial No. 666,064
5 Claims. (Cl. 15—104.06)



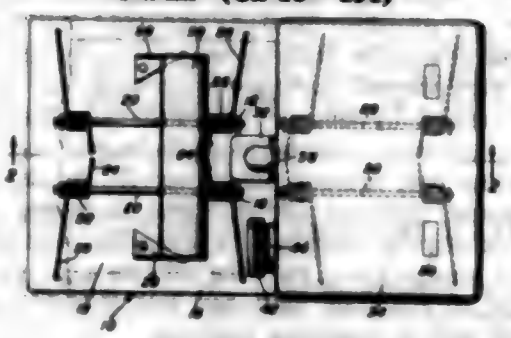
1. In a fluid-operated pipe-cleaning machine, a head adapted to fit slidably in the pipe to be cleaned behind which fluid pressure can be applied to drive the machine through the pipe, means providing an elongated fluid passage through said head, valve means controlling said passage, said valve means including a valve member having a passage therethrough with an inlet port at the periphery of the valve member, means yieldably holding said valve member partially within said passage means in a position such that fluid behind said head can freely enter the inlet port of said valve and flow therethrough, said valve member being movable further into said passage under the influence of fluid pressure whereby access of fluid to said port is restricted thereby limiting flow of fluid through said valve member and said passage, said valve member being further movable through said passage to a position therebeyond under the influence of increased fluid pressure whereby to leave said passage substantially unrestricted.

2,860,357
CAR WASHING MAT
Tate R. Teters, Fayette, Mo.
Application October 18, 1955, Serial No. 539,430
1 Claim. (Cl. 15—129)



A fountain washing device comprising a head having a water chamber therein adapted to receive water under pressure, a pliable detergent container disposed within said water chamber, a mixing chamber carried by said head, said mixing chamber having outlet ports and a pair of inlet ports interconnecting it respectively with said water chamber and said detergent container, and a substantially planar scrubbing pad carried by said head and interconnected with the outlet ports of said mixing chamber, said head having a series of water outlet ports interconnecting with said water chamber, said last named ports being operable to direct streams of water outwardly from said pad in spaced relation from the edges thereof.

2,860,358
WALL CLEANING DEVICE
Edley Darrow, Haddon Heights, N. J.
Application July 13, 1956, Serial No. 597,626
1 Claim. (Cl. 15—131)



A device for cleaning wall surfaces comprising a generally rectangular flat plate, a pair of laterally spaced upstanding brackets on the outer surface of the plate, a transverse cylindrical handle extending between the upper ends of said brackets in spaced parallel relation to the plate, said plate having a centrally disposed aperture therein, an L-shaped bracket having a horizontal leg and a vertical leg, said horizontal leg being attached to the central portion of the plate and having an opening in alignment with the aperture in the plates, a generally rectangular tank disposed in overlying spaced relation to the plate, one end of said tank being attached to the vertical leg of said L-shaped bracket, upstanding bracket means on the plate for supporting the tank adjacent the other end thereof for rigidly supporting the tank on the plate, said tank having a filler opening and cap for permitting the tank to be filled with cleaning solution, an L-shaped pipe having a vertical leg extend-

ing alongside the vertical leg of the L-shaped bracket and extending through the opening in the horizontal leg of the L-shaped bracket and communicating with the aperture in the plate, the horizontal leg of said pipe extending through the upper end of the vertical leg of the L-shaped bracket and communicating with the tank thereby permitting gravity discharge of cleaning solution to the lower surface of the plate, a pad of absorbent fabric material covering the undersurface of said plate, the edges of said pad being folded inwardly over the edges of said plate, and a plurality of independent spring means for holding said pad in position whereby cleaning solution may be discharged onto said pad.

2,860,359
MOISTENER
Gertrude H. James, Chicago, Ill.
Application August 1, 1955, Serial No. 525,425
5 Claims. (Cl. 15—132.5)

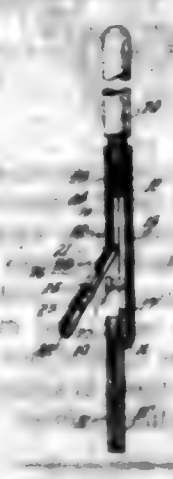
3. In a moistening device adapted for use in wetting the adhesive coating of envelope flaps, a compressible handle providing a deformable reservoir therein adapted to contain a liquid, a stem extending from said handle, said stem being provided with a passage therein communicating with said reservoir, a mounting member carried by said stem and extending therefrom, said mounting member being provided with a plurality of restricted flow passageways communicating with said passage and terminating in openings on the surface of the mounting member, a sleeve rotatably carried by said mounting member and being provided with a plurality of openings therethrough, an absorbent roller carried by said sleeve, said mounting member being provided with an annular rib extending laterally therefrom, and said sleeve being provided with at least one slit extending longitudinally therealong and with an annular recess aligned with and receiving said rib, said sleeve being removably mounted upon said mounting member, the split portion of said sleeve being operative to facilitate movement thereof onto and off of said mounting member about said annular rib.

2,860,360
SWEEPING MOP
Francis M. Leavelle, Greenwood, S. C.
Application September 21, 1955, Serial No. 535,555
2 Claims. (Cl. 15—221)

1. A sweeping device comprising a pair of elongated relatively movable mop sections having their rear ends hingedly connected so that their forward ends may be swung laterally toward and from each other, handle means connected with the mop sections to shift them to an inner position and to an outer position so that the mop sections diverge forwardly, a transverse resilient bowed frame member having a high intermediate portion and low ends, said low ends being mounted upon the forward ends of the mop sections, said bowed frame member extending above the mop sections and arranged in substantially vertical plane extending transversely of the mop sections adjacent to their forward ends when the mop sections are in the open position, a longitudinal frame member which is vertically inclined and has a forward high end and a rear low end, said forward high end being attached to the transverse resilient frame

member near the center of the raised intermediate portion thereof, said rear low end being secured to the rear ends of the mop sections, and a generally triangular flexible cover having a reduced rear end and a wide forward end and inclined side edges, said wide forward end being secured to said transverse resilient frame member and its rear reduced end secured to the rear ends of the mop sections, said inclined side edges being arranged adjacent to the mop sections, the arrangement being such that when the mop sections are in the outer position and diverge forwardly said cover will extend substantially entirely over the space between the mop sections thus covering the sweepings and protecting the same from overhead air currents, the transverse resilient frame member yielding to permit the mop sections being swung toward each other.

2,860,361
CLEANING DEVICE
Meredith M. Moody, East Orange, N. J.
Application January 6, 1955, Serial No. 480,213
6 Claims. (Cl. 15—223)

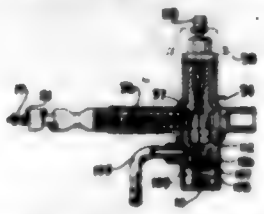


4. A combination sweeper-duster comprising a supporting member including a pair of relatively movable jaw elements of plastic material, said supporting member comprising a back member terminating in an offset end that forms one jaw element, a front member hinged for pivoted movement relative to the back member and having an offset end that forms another jaw element, said front and back members having registering pockets; a fibrous pad with a stiffened edge portion secured to the supporting member by having said stiffened edge portion gripped in said pockets when the said jaw elements are in the closed position; and means fastening the front member in a fixed position relative to the back member comprising a depression formed in the

such that fluid behind said head can freely enter the in- solution, an L-shaped pipe having a vertical leg extend-

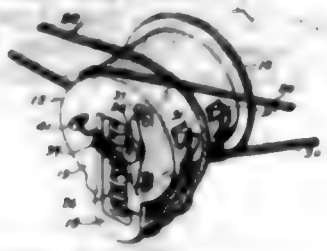
front member and having a hole therethrough, and a button extending from the back member and insertable through said hole for reception of its head in said depression, said head having a maximum diameter slightly larger than the diameter of the hole.

2,860,362
WINDSHIELD WASHER-WIPER ARRANGEMENT
William C. Riester, Buffalo, N. Y., assignor to Trico Products Corporation, Buffalo, N. Y.
Application November 28, 1956, Serial No. 624,910
10 Claims. (Cl. 15—250.4)



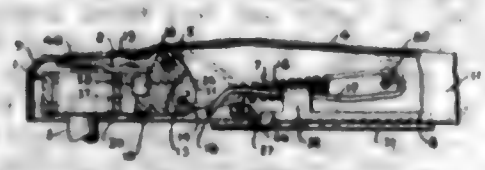
1. An all-pneumatic windshield cleaning system comprising a cleaner unit including a wiper, a motor to drive the same, and a control for the motor operable for connecting the same to a source of fluid pressure; a washer unit including a nozzle and a pump means connected thereto and operable from such a source of fluid pressure for spraying liquid solvent upon an associated windshield in the path of the wiper; and coordinating means operable in response to the fluid pressure from such a source to actuate the control and the pump to initiate a liquid spray prior to wiper operation.

2,860,363
CABLE TENSIONER FOR WINDSHIELD CLEANER TRANSMISSION
Sheldon J. Howard, Buffalo, and George O. Bartoo, Eden, N. Y., assignors to Trico Products Corporation, Buffalo, N. Y.
Application July 26, 1957, Serial No. 674,475
10 Claims. (Cl. 15—253)



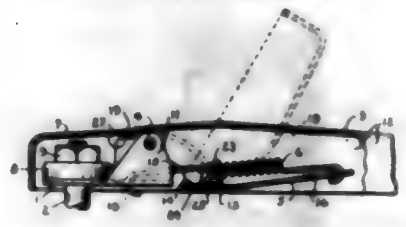
1. In a windshield cleaner transmission, drum means, a cable having a partial wrap about said drum means, a cable tensioning slide member carried by said drum means for movement relative thereto and engaging said cable, spring means urging said slide member against said cable to tension the same, and means automatically holding said slide member against movement in the opposite direction while at all times enabling such spring urged tensioning action of said slide member.

2,860,364
WINDSHIELD WIPER ARM ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Application January 2, 1953, Serial No. 329,366
23 Claims. (Cl. 15—255)



1. A windshield wiper arm assembly comprising a shaft attaching section, an arm section pivotally connected to the attaching section, means on the arm section for supporting a wiper blade, an elongated member having its inner end pivotally connected to the arm section, and elongated resilient means having one end connected to the attaching section and its other end to the outer end of the member, the points of connection between the resilient means, attaching section and member being located at one side of the point of connection between the attaching section and arm section so that the resilient means will cause the arm section to be urged toward a windshield when the attaching section is coupled to a drive shaft.

2,860,365
WINDSHIELD WIPER ARM ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana
Application June 24, 1955, Serial No. 517,837
7 Claims. (Cl. 15—255)



1. A windshield wiper arm comprising an inner section and a section pivotally connected to the inner section for supporting a blade, an elongated inflexible lever having one end pivotally connected to the pivotal section, an elongated spring having one end connected to the inner section and its other end to the lever at a location forward of the latter's connection with the pivotal section, a cap movably mounted on the arm for covering a portion of the arm, and said lever and cap being operatively connected so that the spring will cause the lever to influence movement of the cap.

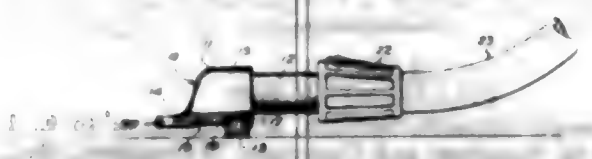
2,860,366
MECHANICAL FLOOR MAT
Gibson D. Kemp, Columbia, Ga.
Application October 13, 1954, Serial No. 462,129
4 Claims. (Cl. 15—311)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A mechanically operated floor mat comprising a pair of end members adapted to be vertically mounted in a floor opening, a stationary grill member detachably connected to the upper ends of said end members, a scraper frame mounted for reciprocating movement under the grill, means for reciprocating said frame, scraper elements mounted in said frame with their upper ends extending slightly above the upper surface of the grill, a liquid container mounted below the frame and coextensive therewith, an air pump disposed adacent one end of the container for drawing air, dust, etc., down through the mat into the container, and a baffle plate at the same end of the container for guarding the air pump and directing dust, etc., to the container.

2. A mechanically operated floor mat including a stationary grill member adapted to be mounted in an opening in a floor, a scraper frame disposed below said grill, tracks on which said frame is reciprocably mounted, scraper elements fixed to said frame with their upper ends extending slightly above the upper surface of the grill, means for reciprocating said frame, wear cups mounted on the frame, and bolts threaded downwardly

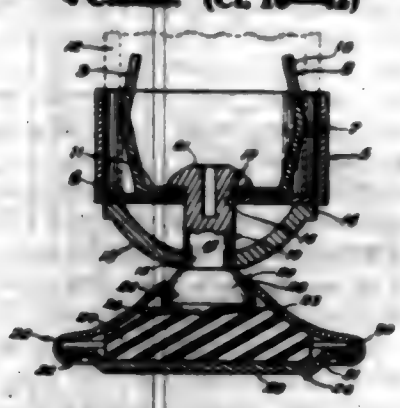
through the grill with their lower ends in engagement with the wear cups, the diameter of the wear cups being substantially greater than the diameters of the bolts.

2,860,367
SUCTION NOZZLE FOR CLEANING HARD SURFACES
Ludwig A. Kolenda, John F. Kolenda, and Ernest A. Kolenda, Clio, Mich.
Application August 19, 1953, Serial No. 375,185
1 Claim. (Cl. 15—393)



A nozzle for suction cleaners comprising a transversely elongated and substantially rectangular plate having a substantially flat unobstructed undersurface and a suction duct opening to said flat undersurface substantially midway of its length and between its forward and rear edges, and a wiper element extending the full length of said plate in rear of said suction duct, said wiper element being secured to and fixed against vertical movement relative to said plate, said wiper element projecting below the flat undersurface of said plate and being of a material of sufficient stiffness that it rockably supports said plate for movement of its forward edge towards and away from a floor surface engaged by said wiper element, said wiper element constituting the sole floor contacting support for said nozzle, said plate having a portion of its undersurface recessed along the full length thereof directly in advance of said wiper element and communicating centrally thereof with said suction duct, said recessed portion defining a shallow, continuous and uninterrupted groove extending from each end of said plate to said central duct and said undersurface being flat and unobstructed forwardly of said wiper element except for said recessed portion, said plate also having the intermediate portion of its forward edge gradually advanced forwardly of both end portions thereof so as to restrict the entrance of air under said intermediate portion upon tilting said plate on said wiper element and in a direction to move said forward edge towards the floor surface.

2,860,368
SWIVEL GLIDE UNIT FOR FURNITURE LEGS
Harry Thornsbury, Augusta, Ky., assignor to The F. A. Neider Company, Augusta, Ky., a corporation of Kentucky
Application March 23, 1956, Serial No. 573,472
4 Claims. (Cl. 16—42)

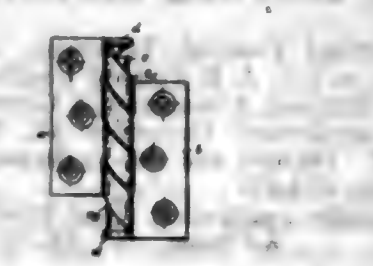


1. A swivel glide for furniture legs comprising a leg engaging member having a bottom wall, a cup shaped member positioned below the leg engaging member with its upper peripheral edge in contact with that portion of the bottom wall that is subjacent the furniture leg, a pintle, each member having a vertically aligned, central hole formed therethrough for snugly receiving the shank portion of the pintle, said pintle having a swivel head formed on the lower end thereof and bearing against that annular portion of the cup shaped member around the hole therein, the opposed end of the pintle being upset within the leg engaging member to secure the members together against lateral displacement and form a rigid pintle positioning assemblage on the leg, and a glide shoe mounted on the pintle head for swivelling movement.

2,860,369
DOOR CHECKING AND HOLDING DEVICE
Stephen J. Galla, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application October 25, 1954, Serial No. 464,269
3 Claims. (Cl. 16—86)

1. In a motor vehicle having a door structure and a door supporting structure, a pair of spaced abutments mounted upon one of said structures, one of said abutments being movable bodily toward the other abutment, spring means biasing said one abutment toward the other abutment, an arm pivotally connected to the other of said structures and extending between said abutments with its opposite edges engaged by said abutments, said arm having an inclined ramp on one edge thereof, said inclined ramp having a high point with said high point being located between a plane passing through said abutments and the pivotal connection of said arm to said other structure when the door structure is at its fully closed position, said inclined ramp facing the free end of said arm and engaging one of said abutments adjacent said high point to provide an automatic assist to the initial opening movement of the door structure from its fully closed position.

2,860,370
HINGES FOR DOORS, WINDOWS, AND OTHER APPLIANCES
Leopold Hommay, Vaux sous Chevremont, near Liege, Belgium, assignor to Joseph Ghyselbrechts and Paul Duvivier, Hasselt, Belgium
Application March 9, 1955, Serial No. 493,204
Claims priority, application Belgium March 12, 1954
3 Claims. (Cl. 16—152)

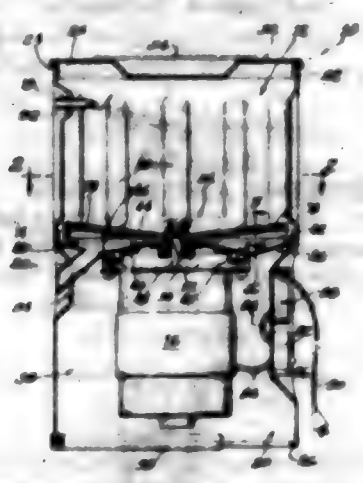


2. A hinge for use with doors and windows comprising two members interfitted along one respective edge thereof, a pin to pivotally connect the members, each said member comprising a flat portion formed as one layer over another and a tubular portion, the said member portions having a common straight line of intersection, the said tubular portion consisting of an interrupted series of tongues each forming an acute angle with the line of intersection between the portions, the said members being fitted at their respective tubular portions to fashion an elongated pin receiving cavity.

it, a core structure on the frame adapted to be inserted

2,860,376
APPARATUS FOR MOLDING TELEPHONE

2,860,371.
FISH CLEANING DEVICE
Ruth M. Krull, Tomahawk, Wis.
Application March 19, 1956, Serial No. 572,300
2 Claims. (Cl. 17—5)

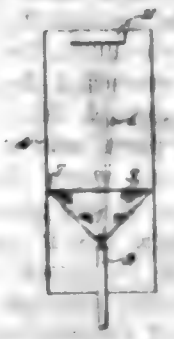


1. In a device for scaling fish, the combination comprising a generally cylindrical housing having an open top, a cover removably received on said housing for closing the top thereof, a wall extending transversely across said housing at a point between the top and bottom thereof and dividing said housing into upper and lower compartments, said housing having a plurality of longitudinal corrugations therein spaced around said upper compartment, an electric motor mounted in said lower compartment and having a vertical shaft extending through said wall into said upper compartment, a scaling plate mounted on said shaft and rotatable therewith adjacent said wall in said upper compartment, said plate having a plurality of angularly spaced upwardly projecting generally radial ridges thereon for causing tumbling action in fish contained in said upper compartment, said plate being provided with a multitude of small sharp projections on the upper side thereof for removing the scales from the fish, an inlet pipe extending through said housing adjacent the upper end thereof for introducing water into said upper compartment, and a drain pipe leading from said upper compartment and extending downwardly from said wall for carrying away the water and scales and other waste products from said fish, said wall having inner and outer downwardly sloping portions meeting in an annular concave trough-like portion, said drain pipe being connected to said concave portion to insure complete drainage of said upper compartment.

2,860,372
MEANS FOR JOINTING THERMOPLASTIC SYNTHETIC RESIN PIPES, PIPE FITTINGS AND THE LIKE
Sidney Edward Youthed, Totteridge, London, England, assignor to J. S. & F. Folkard Limited, Edgware, Middlesex, England, a company of Great Britain
Original application December 10, 1956, Serial No. 627,337. Divided and this application July 22, 1957, Serial No. 673,373
Claims priority, application Great Britain April 16, 1956
6 Claims. (Cl. 18—1)

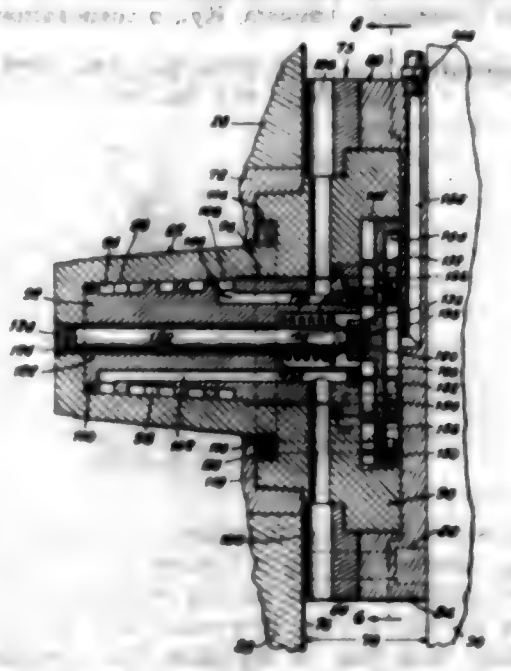
1. Means for use in jointing pipes, pipe fittings and like members made of thermo-plastic synthetic resin material such as polythene and having one member end to be jointed formed as a socket and the other as a spigot, said means including a heat conducting tool incorporating plug and collar parts dimensioned respectively to fit into said socket and to fit over said spigot and having the outer surface of said plug part and the inner surface of said collar part peripherally recessed to permit slight bellying of the spigot and socket walls during a heating operation, and sizing lips which are provided respectively around the external leading end of said plug part and the internal leading end of said socket part, said lips being adapted to heat up and size the respective socket and spigot surfaces which are caused to slide thereover on engagement with the tool parts and also to clean said surfaces on withdrawal from the tool parts.

2,860,373
FILAMENT GUIDE
Charles Joseph Schmidt, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application July 29, 1952, Serial No. 301,485
6 Claims. (Cl. 18—8)



1. Yarn bundle forwarding apparatus comprising a yarn bundle producing means; forwarding means spaced from the producing means and adapted to move the yarn bundle away from the producing means; and, mounted in the yarn bundle path between the producing means and the forwarding means a stationary perforated guide element having a large opening tapering to a smaller exit and having a slot at one side running from the large opening to the smaller exit for stringing up the yarn bundle.

2,860,374
STRIPPER MECHANISM FOR INJECTION MOLDING
James M. Harrison and Robert E. Smucker, Fort Worth, Tex., assignors to Crown Machine and Tool Company, Inc., Fort Worth, Tex., a corporation of Texas
Application September 23, 1955, Serial No. 536,070
5 Claims. (Cl. 18—30)



1. In a molding device for plastic or the like, a frame, a cavity platen on the frame with at least one cavity in

hole formed therethrough for snugly receiving the shank

fitted at their respective tubular portions to fashion an elongated pin receiving cavity.

it, a core structure on the frame adapted to be inserted in the cavity to define a molding cavity, the core structure and cavity being constructed so that they define a thin wall cup-like molding cavity between them for molding cups, means for injecting liquid plastic into the molding cavity, the core structure having a generally frusto conical insertable core element, a stripper ring around the large end of the core element defining the top edge of a molded cup, a stripper rod generally in the center of the core element adapted to bear against the bottom of a molded cup, and means for actuating the striper rod and ring in timed relation to each other so that pressure will be brought against the edge of a molded cup by the stripper ring ahead of the stripper rod.

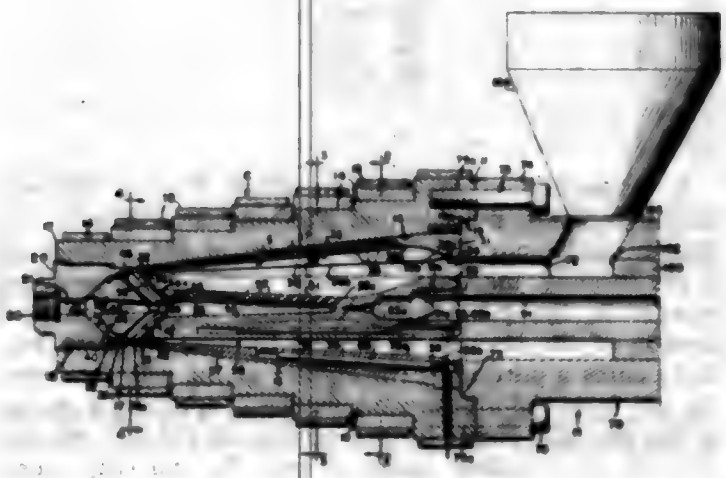
2,860,375

MELT EXTRACTOR TYPE HEATING CYLINDERS

Mario Maccaferri, Rye, N. Y.

Application June 13, 1956, Serial No. 591,057

15 Claims. (Cl. 18—30)



1. A heating cylinder of the melt extractor type including, in combination, a cylinder body of heat conducting material having a plastic intake opening through one end thereof, a melted plastic discharge opening through the opposite end thereof, and an axial bore therethrough from said intake opening to said discharge opening; a melt extractor sleeve member of heat conducting material having an axial bore therethrough mounted in and extending through said bore in said cylinder body in direct heat transfer contact therewith; a melt extractor core member of heat conducting material mounted in and extending axially through said bore in said melt extractor sleeve member; said core member forming said axial bore through said sleeve member into an annular passage therethrough along and between said core member and said sleeve member; said core member having an axial passage therein and being also provided with ducts therethrough along said passage from and around the inner side of said annular passage within said sleeve member to and discharging into said axial passage of said core member; said cylinder body and said sleeve member formed to provide plastic melt receiving channels longitudinally therealong and therebetween spaced from and spaced apart around said sleeve member; said sleeve member having ducts therethrough from and along the outer side of said annular passage therewithin to said channels; and said cylinder having plastic melt flow passages from said axial passage within said core member and from said channels around said sleeve member to said discharge opening from said cylinder body.

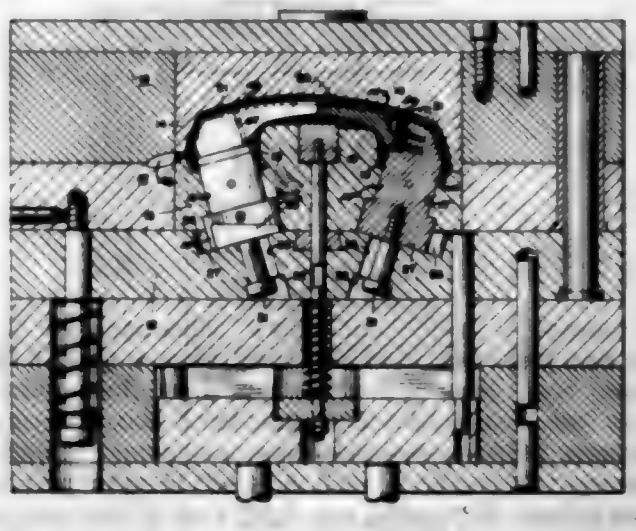
2,860,376

APPARATUS FOR MOLDING TELEPHONE HANDSET HANDLES

William C. Graves and Fred H. Waltl, Indianapolis, Ind., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application July 16, 1954, Serial No. 443,902

6 Claims. (Cl. 18—42)



4. A molding apparatus, which comprises a platen having angularly extending slots therethrough and guideways extending transversely of the slots, a pair of elongated socket-forming cores seated at one end of each in the guideways for transverse sliding movement along the guideways, draw means connected to the cores and extending through the slots for permitting transverse movement of the cores and preventing longitudinal movement of the cores, a first mold section movably mounted on the platen having angularly disposed bores through which the cores extend and project from, and a second mold section movably mounted on the first mold section having a mold cavity for receiving the projecting portions of the cores, said platen and said first mold section being movable apart to pull the socket-forming cores from an article molded by the cavity.

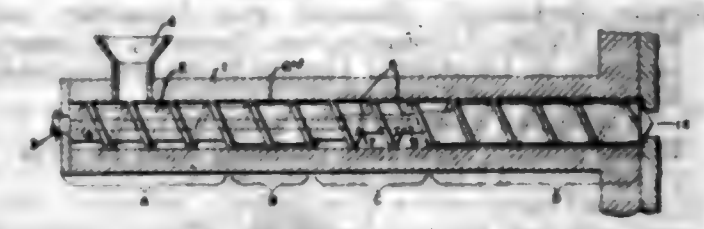
2,860,377

METHOD FOR EXTRUDING AND FOAMING RESIN

Ernest Carl Bernhardt and Harold Barnard Whitfield, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application August 31, 1955, Serial No. 531,771

5 Claims. (Cl. 18—48)



1. The method of producing a plastic foam which comprises dissolving a gas in a plastic material while the said material is being advanced through an extruder barrel by the action of a rotating extruder screw, and extruding the plastic through a die, whereby the extruded plastic foams due to release of said gas therefrom, said screw having a zone of greater drag flow capacity following a throttling zone of lesser drag-flow capacity, said screw having a hollow core communicating with said zone of greater drag-flow capacity, said communication being positioned in the forward half of a channel between threads in the zone of greater drag flow capacity, said gas being introduced into said plastic material through said communication.

spigot, said means including a heat conducting tool incorporating plug and collar parts dimensioned respec-

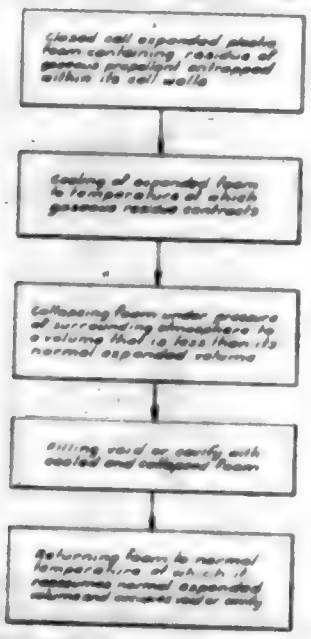
1. In a molding device for plastic or the like, a frame, a cavity platen on the frame with at least one cavity in

2,860,378

FILLING VOIDS WITH PLASTIC FOAM

Demetrius Urchick, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application January 9, 1957, Serial No. 633,187
8 Claims. (Cl. 18—48)



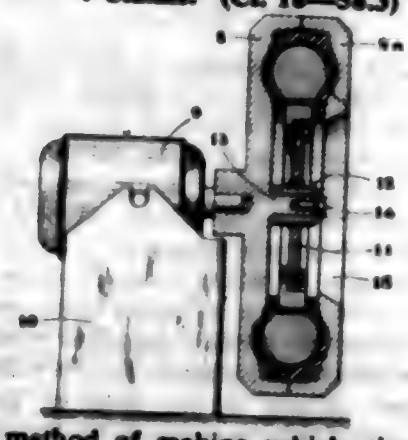
1. Technique for filling structurally confined voids with a packing of closed cell plastic foam which contains a gaseous residue of the primary propellant that was utilized for its expansion entrapped within its cell walls, said cell walls being substantially impervious to said entrapped propellant and which foam consists of a flexible plastic material, which technique comprises cooling a quantity of an expanded plastic foam from a normal temperature to a temperature that is sufficiently low to cause contraction of the gaseous blowing agent residuum entrapped within its cells and to collapse the foam under the pressure of the surrounding atmosphere to a volume that is less than its normal expanded volume, said quantity of foam having a normal expanded volume that is at least about as great as the volume of the portion of void that is to be occupied; filling the void with the cooled and collapsed quantity of foam; then returning said foam to a normal temperature at which it reassumes at least a portion of its normal expanded volume thereby occupying said void or cavity.

2,860,379

METHOD OF CENTRIFUGALLY CASTING VEHICLE TIRES

Richard Bockdolph, Grasdorf uber Hannover, and Walter Nicias, Altwarmbuchen, Hannover, Germany, assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany

Application April 29, 1955, Serial No. 502,582
Claims priority, application Germany April 24, 1954
4 Claims. (Cl. 18—58.3)



1. In a method of making vehicle tires from elastic materials while employing an annular mandrel, the steps of: placing reinforcing means having two free ends on and about said mandrel, placing cores against those portions of said reinforcing means where beads are to be formed, folding the free end of said reinforcing means about said cores so that said free ends will be located near the circumferential portion of said mandrel while securing said cores in their desired respective positions relative to said mandrel, tightly placing an annular bandage over the thus located free ends of said reinforcing means only to thereby non-displaceably secure the respective portions of said free ends relative to said mandrel, and centrifugally casting elastic material around said bandage and said reinforcing means.

2,860,380

METHOD OF MOLDING THERMOSETTING SYNTHETIC MATERIALS WITH SURFACE DECORATION

Harold Walker, New York, N. Y.

Application July 5, 1957, Serial No. 670,369
5 Claims. (Cl. 18—61)

1. A method of molding an article from a thermosetting molding powder and applying a design to the article, comprising heating a portion of the interior of a pre-forming machine, forming a pill from molding powder in the pre-forming machine while the heated portion of the interior of the pre-forming machine partially cures a portion of the surface of the pill, removing the pill from the pre-forming machine, applying a design to the partially cured surface portion of the pill, placing the pill in a heated mold so that the partially cured portion of the surface of the pill will come into contact with a surface of the mold, closing the mold to mold the article, leaving the mold closed until the article is completely cured, opening the mold, and removing the finished article.

2,860,381

FALLER BAR AND METHOD OF MAKING SAME

Andrew A. Spisak, Cleveland, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Application December 15, 1954, Serial No. 475,425
3 Claims. (Cl. 19—129)

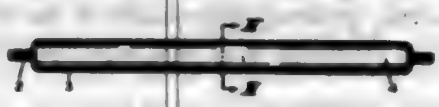
1. A faller bar comprising a metal body provided with hardened end portions with an intermediate portion therebetween having therein a longitudinally extending groove, a molded plastic base of a pin strip insert unit in which the butts of the pins are embedded positioned in said groove so as to substantially fill the same, and a hardened non-shrinking cementitious material filling said groove and the interstices between the base and the walls of the groove and extending across the top of the base and securing said base in said groove and hermetically sealing the same therein.

a latching device located at each vertical edge of the, relatively thin plywood cover sheets opposite

2,860,362
TEXTILE FIBER UNIT

Richard A. Garrett, Manor Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Application May 6, 1953, Serial No. 353,367
16 Claims. (Cl. 19—143)



1. A textile fiber working unit having a static-free working surface formed of a composition of a resin selected from the group consisting of vinyl chloride, the polymerization product of a mixture of vinyl chloride and vinyl acetate containing about 95% vinyl chloride and about 5% vinyl acetate, and mixtures thereof, having incorporated therewith between about 50 parts by weight and about 150 parts by weight for each 100 parts by weight of resin of a plasticizer for the resin which is compatible with the resin in such proportions at temperatures above 45° F. and which renders the composition static-free, said plasticizer being selected from the group consisting of: (*a*) an ester, the acid component of which is selected from the group consisting of at least one aliphatic acid, phosphoric acid, and phosphonic acid, the molecular weight of the aliphatic portion of said ester representing more than 50% of the total molecular weight of said ester, (*b*) 2-ethylhexyl di ester amide, (*c*) fatty acid nitrile of C_8–C_{20} fatty acids, (*d*)

$$C_4H_9OC_2H_4OC_2H_4OCH_2OC_2H_4OC_2H_4OC_4H_9$$

and (*e*) mixtures of two or more of the above plasticizers.

2,860,383
FOLDABLE PLATFORM

Harold Heisler, Lombard, Ill., assignor to Midwest Folding Products Mfg. Corp., Roselle, Ill., a corporation of Illinois

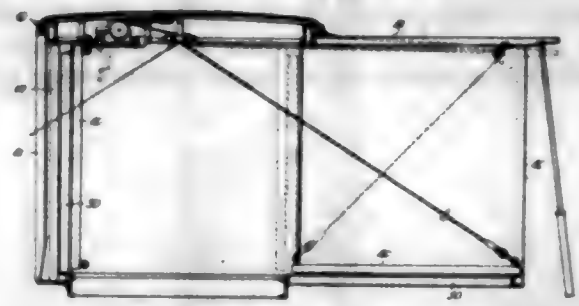
Application February 28, 1956, Serial No. 568,386
21 Claims. (Cl. 20—1.123)

1. In a platform structure of the character described, a pair of spaced apart support members, each of said support members comprising two segments carried adjacent the inner ends thereof for pivotal movement with respect to each other, a plurality of platform sections interposed between said spaced apart support members, said platform sections being hingedly secured to each other along the adjacent edges thereof, means for each of said platform sections carried by the respective support members and being movable longitudinally therealong for supporting the platform sections and being connected therewith at points intermediate the transverse edges thereof, said means being adapted to support said platform sections in planar relation when extended and to support the platform sections in substantially contiguous parallel planes when folded with portions of each section extending both above and below said support members, and means supporting said support segments to afford the aforesaid pivotal movement thereof inwardly along the planes of said platform sections when those sections are in folded position.

2,860,384
TAPERED SECTIONAL DESIGN FOR EXPANSIBLE UNITS

Clyde F. Walt and Donald F. Cole, Flint, Mich., assignors to Palace Corporation, Flint, Mich., a corporation of Michigan

Application March 9, 1954, Serial No. 414,968
5 Claims. (Cl. 20—3)

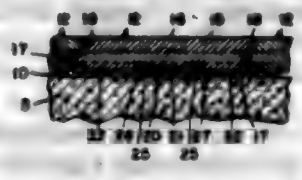


1. An expansible trailer comprising a central fixed unit having a rigid floor and roof and rigid end walls; a wing roof, wing end walls and wing floor pivotally secured to said fixed unit, and a wing side wall of substantially rectangular configuration pivotally secured to the outer edge of the wing floor, a rectangular opening in the side wall of said fixed unit adapted to receive therein said wing roof, wing end walls, wing floor and wing side wall, and tapered top edges on said wing walls, sealing means secured to the bottom lateral edge and outer vertical edge of the inner surface of each wing end wall, sealing means secured along each lateral edge and along the outer edge of the inner surface of said wing roof, said sealing means including a metal trough with a sealing element therein having a corrugated form in which the peaks are laterally displaced into the valleys during relative movements of said wing end walls and said wing roof for weather-proofing, said expansible unit when said wing end walls abut said wing floor in its extended horizontal position, and when said wing end walls and said wing roof abut said wing side wall in its extended vertical position.

2,860,385
FLOORING

Harold J. Cohn, Los Angeles, Calif.

Application February 27, 1956, Serial No. 567,958
3 Claims. (Cl. 20—8)



1. In building construction, a finishing strip adapted to be adhered to a building foundation surface by an adhesive layer and comprising a rectangular body having a tongue along one of its side edge portions and one of its end edge portions having a tongue-receiving slot along one of its side edge portions and along one of its end edge portions, and having a bottom surface interrupted between its side edges by a pair of opposed inwardly diverging, transversely spaced, longitudinally extending slots; that portion of said bottom surface between said slots being inwardly offset from the plane of the contiguous portions of said bottom surface.

2,860,386
LATCHES FOR COUNTERBALANCED DOORS

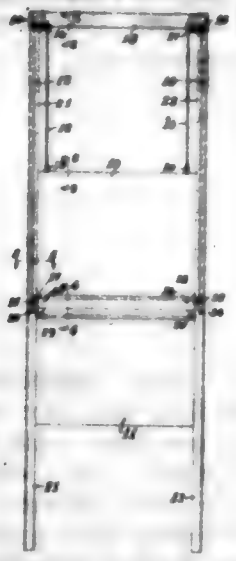
Paul R. Deeg, Lynbrook, and Arthur W. Croker, Valley Stream, N. Y., assignors to The Peelle Company, Brooklyn, N. Y.

Application July 2, 1956, Serial No. 595,335
4 Claims. (Cl. 20—19)

1. In combination with a counterbalanced door composed of an upper door section and a lower door section,

materials while employing an annular mandrel, the steps cally sealing the same therein.

a latching device located at each vertical edge of the door, a keeper secured at each vertical edge of the upper door section, a hinge member secured at each vertical edge of the lower door section, a keeper-engaging member pivotally secured to each of the hinge members, with the keeper-engaging members being adapted to en-



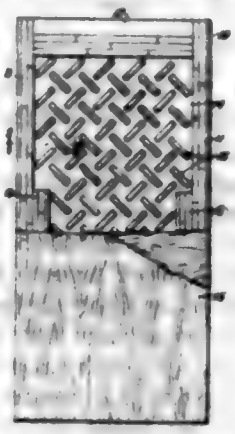
gage the respective keepers, with the door sections being connected together by means of door chains, with one end of each of the door chains being secured to a respective keeper-engaging member, and with the engaging surfaces of the keeper and the keeper-engaging members being in the form of cams.

2,860,387
SLIDING DOORS AND HARDWARE THEREFOR
Darwin B. Grossman, New Rochelle, N. Y.
Application October 17, 1956, Serial No. 616,525
12 Claims. (Cl. 20—19)

1. A sliding door assembly comprising: a door opening, a pair of doors in said opening, a switching mechanism positioned centrally of a horizontal portion of the door opening embodying a rotary switching member having thereon relatively rotatable switch guides, engaging with the meeting portions of the doors to permit movement of the meeting edges thereof from flush to offset relation and vice versa with rotation of said rotary switching member and concurrent rotation of both switch guides, stationary front guides positioned on said horizontal portion of the door opening laterally of the switching member to engage with and maintain the doors in the same plane when the meeting edges of said doors are in flush relation, and stationary back guides also mounted on said horizontal portion of the door opening laterally of the rotary switching member in divergent relation to the front guides and cooperable with the corresponding switch guide to guide a selected door into open position back of the other door and substantially parallel thereto after the meeting edges of said doors have been moved into offset relation.

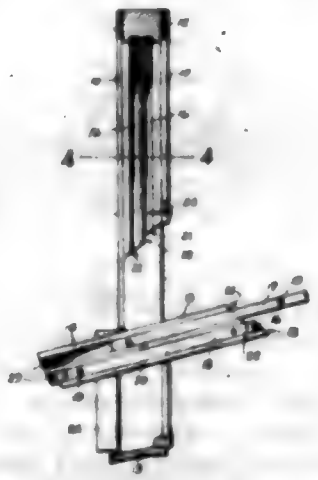
2,860,388
HOLLOW CORE FLUSH DOOR
Arthur B. Chapman, Oshkosh, Wis., assignor to Morgan Company of Wisconsin, Oshkosh, Wis., a corporation of Wisconsin
Application May 20, 1953, Serial No. 356,185
3 Claims. (Cl. 20—35)

2. A composite building panel adapted for use as a door, said panel consisting of a hollow rectangular frame, relatively thin plywood cover sheets secured on opposite faces of said frame, elongate reinforcing blocks of rectangular cross section mounted in independent relation in the hollow frame between said cover sheets, said reinforcing blocks being formed of relatively short sections of resin bonded pressed wood fiber sheathing, said blocks being positioned in spaced longitudinal and transverse row forming relation with the long axes of the blocks extending generaly diagonally of the frame, each of said blocks forming with the adjacent block in the



adjoining row a T-formation and each of said blocks being disconnected and spaced from the adjoining blocks, said blocks each being arranged with its edge faces adjacent the cover sheets, said edge faces presenting a rectangular surface area of substantial width which is adhesively secured to the cover sheets, whereby the cover sheets are connected to each other by said blocks and restrained against relative movement at spaced areas which are surrounded by areas in which the cover sheets are free to move relative to each other.

2,860,389
TILTING WINDOW STRUCTURE
Hermann Hess and Albert Mann, Hamilton, Ontario, Canada
Application December 28, 1955, Serial No. 555,994
1 Claim. (Cl. 20—45)



In a window structure having a stationary outer frame including a sill, a divided inner frame set within the outer frame and comprising an upper portion in fixed relation with the outer frame and a lower portion pivoted to and in tiltable relation with the outer frame, sash grooves in both said portions and forming continuous grooves when said lower portion is in normally untilted position, displaceable sashes slidable in said grooves and arranged therein so that either may be in said upper portion while the other may be in said lower portion or so that both may be at once in either portion, the division between said portions being oblique and intermediately stepped, the obliqueness being directed downwardly and to the outside of the window, the stepped portion coin-

those sections are in folded position.

posed of an upper door section and a lower door section,

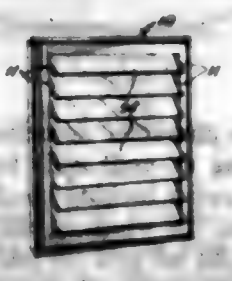
ciding with the bottom piece of the upper sash and the head piece of the lower sash when both sashes are in normally closed position, rests in the grooves of said lower portion supportingly engageable with the bottoms of both sashes proximate the sill, hinged wings forming divided parts of the outside of said outer frame and normally partially overlapping the lower sections of said lower portion to a height slightly above the tilting axis, said wings being swingingly displaceable outwardly to permit tilting of said lower portion outwardly until the section below the pivot rests on the outside frame member while the section above the pivot rests on the inside frame member, pivoted arms forming divided parts of the inside of said outer frame and normally partially overlapping the upper sections of said lower portion, said arms being pivotally displaceable inwardly and upwardly across the face of said frame to permit tilting of said lower portion inwardly.

2,860,390
WINDOW CONSTRUCTION
George C. Griffin, Jacksonville, Fla.
Application December 24, 1957, Serial No. 704,961
6 Claims. (Cl. 20—53)

1. A window construction comprising a window frame, coaxial horizontal pivots carried by said window frame, a sash mounted within said window frame for swinging movement about said horizontal pivots, said sash including a sash frame having vertical frame members, at least one of said vertical frame members being hollow, a weight in said one vertical frame member for sliding movement whereby said weight slides to the lowest point in said one vertical frame member to retain said sash in a last placed position.

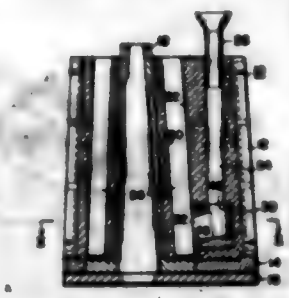
2,860,391
JALOUSIE LOUVRE END CLIP
William H. Braun, Elkins Park, Pa., assignor to Carey-McFall Company, Philadelphia, Pa., a corporation of Pennsylvania
Application February 7, 1957, Serial No. 638,775
6 Claims. (Cl. 20—62)

1. A louvre end clip for jalousie windows, doors and the like, comprising an outside member for pivotally mounting the louvre on the window side frame, said member having an elongated flange overlying one surface of the louvre end portion and terminating at one end in a lip engaging one side edge of the louvre; a support bracket on said member having a web spaced apart from the opposite surface of said louvre, a leg projecting toward said flange at one end of the web, means defining an aperture in said leg and an ear at the other end of said web projecting toward said flange; an elongated resilient spring strip releasably mounted at only one end on said bracket and operable to engage against the opposite surface of said louvre when the latter is in place, and operable to engage against said flange upon removal of said louvre, said strip being formed intermediate the ends thereof with an inwardly bowed section for engagement with said opposite surface of the louvre, means to limit lateral displacement of said strip relative to said web including an out-turned finger at the terminus of said one



end section projecting through said aperture of the leg, and means defining an opening in said one end section receiving said ear upon intereagagement of said finger and said aperture both when the louvre is in place and when it is removed whereby the strip must be flexed to disengage said opening from said ear to disassemble said strip from said bracket, said strip including at the free terminus of the other end section an in-turned lip engaging the opposite side edge of the louvre, said free terminus and said bowed section being operable to be disengaged from said louvre by flexing said other end section outwardly.

2,860,392
GATE BRICK
James M. McCracken, Sharpsville, Pa.
Application December 8, 1955, Serial No. 551,853
1 Claim. (Cl. 22—129)

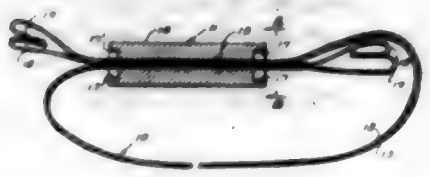


In a bottom-pour sand mold having a gate brick at the bottom for establishing communication laterally between a vertical sprue and the mold cavity, a one-piece refractory gate brick of generally keyhole shape as viewed in outline from the top to fit in a correspondingly key-hole shaped void formed thereby in the sand mold material, said brick having a block-like hollow body portion with a front face arranged to form part of a major wall in the mold cavity, a vertically oblong gate opening formed in said face for connecting the mold cavity with the hollow interior of said block-like body portion, and a cylindrical portion joined to the rear of the block-like body portion in a manner to complete said general key-hole shape and defining a vertical passage communicatively connected to said hollow interior of the latter portion to form substantially a right-angled intersection therewith, said block-like body and cylindrical portions mutually defining a passage floor of generally key-hole shape in outline and generally sloping at least approximately 8° from the horizontal toward said gate opening, said cylindrical rear portion having an outside diametrical width at least approximately 25% greater than the sidewise span between both cheeks of the block-like body portion so as to bulge into said void for locking the brick laterally against falling face-forward into the mold cavity.

2,860,397

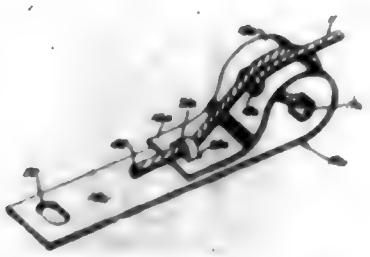
2. A composite building panel adapted for use as a door, said panel consisting of a hollow rectangular frame, stepped, the obliqueness being directed downwardly and to the outside of the window, the stepped portion coin-

2,860,393
BAND TIES
Joseph A. Brock, Jacksonville, Fla.
Application July 5, 1957, Serial No. 670,269
1 Claim. (Cl. 24—16)



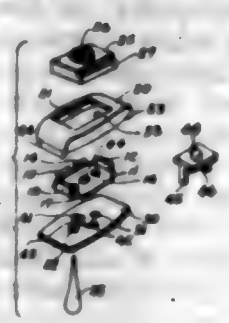
In a device of the character described, in combination, a flat tie strip having its ends split transversely to form two flat end strips, and a locking block having a longitudinal flat slot therein, the width of said slot being slightly in excess of the width of said tie and the depth of said slot being slightly in excess of two thicknesses of said tie, whereby the ends of said tie may be passed through said slot in opposite directions, and the split end strips reverted inwardly, the ends being drawn back into said slot with the inwardly reverted end strips wedgingly engaging in said locking block firmly to secure the opposite ends of said tie in said locking blocks, said tie being comprised of bonded two ply material and the ends being split along the bond line of said plies and the ends of said block being recessed to prevent shearing of said tie along its juncture with said slot.

2,860,394
TENSION ABSORBING DEVICE
John E. McHugh, Jr., North Hollywood, Calif.
Application October 29, 1957, Serial No. 693,093
7 Claims. (Cl. 24—73)



4. A device for clamping a line, comprising: an elongated, resilient strip curved to form a loop portion upstanding from a base, the loop portion terminating in a forwardly directed end portion overlying and substantially parallel to the said base, said end portion having an opening therein and said base having a clamp element adapted to extend upwardly through said opening so that said clamp element and said end portion cooperate to form a clamp therebetween, said upstanding loop portion having a pair of longitudinally spaced apertures on the peripheral surface thereof, so that a line may be brought downwardly through the aperture positioned on the loop nearest to the opening in the end portion, across the inside of the loop, then brought outwardly through the other aperture, directed upwardly and around the outside top surface of the loop portion and then forwardly and under the said clamp element so as to lie between the top of the said clamp element and the top of said end portion, the relationship being such that the line may be pulled through the device forwardly but is clamped by the device if the line is pulled rearwardly so that the force on the loop causes the said free end portion to rise and increase the clamping pressure between said end portion and said clamp element.

2,860,395
INSIGNIA CARRYING DEVICE
Olof V. Anderson, Cowesett, R. I., assignor to Amron Inc., Providence, R. I., a corporation of Rhode Island
Application October 24, 1955, Serial No. 542,343
4 Claims. (Cl. 24—90)



1. An insignia carrying device comprising a backing member, a guide member, a first means to secure said guide member to said backing member, a holding member formed with a cavity and provided with a window, a second means to secure said holding member to said backing member with said guide member located in said cavity, an insignia carrying member, resilient means on said guide member and a ledge in said insignia to removably secure said insignia carrying member in said cavity with the insignia of said insignia carrying member viewable through said window and said ledge engaging said holding member with a force provided by said resilient means.

2,860,396
UNIVERSAL POCKET BOOK HANDLE ANCHOR AND INSTALLATION
Daniel I. Reiter, New York, N. Y.
Application August 14, 1953, Serial No. 374,239
1 Claim. (Cl. 24—114.5)

A universal one-piece anchor or holder for anchoring the end strap portion of a pocket book handle to the side walls of a box-type or soft pocket book; said holder comprising a flat substantially rectangular body having opposing flat faces and opposing side edges and adapted to bear flat at either of its opposing faces against the inside of a side wall of a pocket book as a bearing washer and having opposing transverse end edges, a pair of clamping arms extending normal to the body and disposed integral with the opposing side edges at one of the end edges, said arms being disposed in substantially confronting relation and being spaced apart sufficiently to receive therebetween the end strap portion, which is placed axially on the body, and the arms being adapted to be rolled over onto the strap portion, an end extension extending axially from said one of the end edges beyond the arms and disposed coplanar with the body and defining a bearing prolongation of the body and a transversely enlarged head on the other end edge of the body and extending axially and laterally thereof and disposed coplanar therewith, said head being formed with an opening transversely therethrough and having an outer edge disposed transverse to the body and said head having a slot extending through said outer edge and aligned with the axis of the body and communicating with the opening.

plate thereon and having a forward margin, said cam, said annular and outer

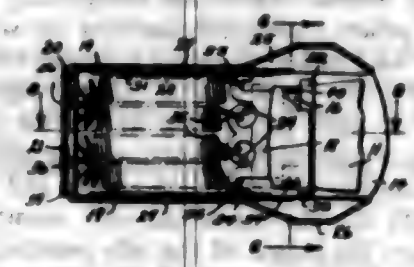
ward said flange at one end of the web, means defining an aperture in said leg and an ear at the other end of

to bulge into said void for locking the brick laterally against falling face-forward into the mold cavity.

2,860,397
SAFETY PIN
Walter W. Green, Linwood, Pa.
Application May 2, 1957, Serial No. 656,543
1 Claim. (Cl. 24—156)

In a safety pin, a pointed pin portion of spring wire extending toward one end of the pin, a first reverse bend portion of U formation on the spring wire connected to the pointed pin portion at the opposite end of the pin, a backstretch of spring wire connected to the opposite side of the first reverse bend portion and in spaced relation to the pointed pin portion, the backstretch being accessible to material through which the pin extends when the pin is closed, a second reverse bend portion of spring wire connected to the end of the backstretch, a socket having an open side portion at the end of the second reverse bend portion adapted to receive the pointed pin portion in closed position, a locking extension extending from the socket generally along the pointed pin portion in closed position and having a laterally open hook end which in closed position extends around and engages the pointed pin portion of the pin, there being on the pointed pin portion a bend in the wire opposite the hook in the direction toward the base of the hook, the bend in closed position of the safety pin carrying the pointed pin portion in the open hook and under the locking lever to engage in the socket, the point of the pointed pin portion when engaged in the socket being located between the locking extension in the socket and the open side of the socket.

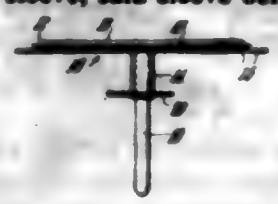
2,860,398
EXPANSIBLE BUCKLE
Kenneth W. MacPherson, Rochester, N. Y.
Application December 28, 1954, Serial No. 478,864
7 Claims. (Cl. 24—163)



1. A expansible buckle adapted to be attached to a garment supporting belt comprising sliding means adapted to be attached to one end of the belt, a front plate and housing membr adapted to be engaged with the other end of the belt to hold the belt in substantially circular shape about the body of the wearer, and yieldable means between said sliding means and said member for permitting relative movement between said sliding means and said member for allowing the belt to vary its circumference when subjected to a pressure and for automatically restoring the belt to its original circumference when the belt is relieved of the pressure, said sliding means comprising a rear sliding plate and an anchor plate both of which are attached to the sliding end of the belt, the anchor plate making connection with the yieldable means.

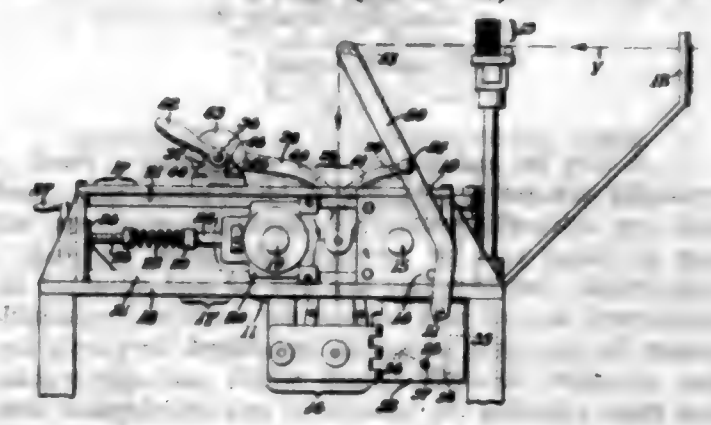
2,860,399
DESIGN FORMING DEVICE
Wells C. Bates, Chester, Conn., assignor to C. J. Bates & Son, Chester, Conn., a firm
Application June 28, 1955, Serial No. 516,645
1 Claim. (Cl. 28—19)

A device for forming designs comprising in combination, an upper circular form disc having an upper face, an elongated stem having an upper end secured to the form disc centrally thereof and extending downwardly therefrom, a sleeve freely rotatable and reciprocable on said stem between upper position therealong and removal therefrom, an upper finger plate secured to the upper end of said sleeve for underlying the form disc in upper position of the sleeve on the stem and being provided with circumferentially spaced radially extending flexible fingers having outer ends disposed outwardly of the periphery of the form disc, and a lower disc secured to the lower end of the sleeve, said sleeve being adapted for en-



gagement by the fingers of a hand of the user of the device for movement thereof on said stem, said stem being of a length relative to the length of said sleeve to provide a lower free end below the sleeve for engagement by the fingers of a hand of a user of the device when the sleeve is in upper position on said stem and to permit removal of the sleeve from said stem, and the upper form disc provided on the upper face thereof with an annular raised rib adjacent the periphery of the disc for spacing design forming material from said fingers above said upper face to facilitate insertion of an implement beneath said material.

2,860,400
LEASING MECHANISM FOR TEXTILE MACHINES
Thomas F. Suggs, Gastonia, N. C., assignor to Cocker Machine & Foundry Company, Gastonia, N. C., a corporation of North Carolina
Application February 20, 1957, Serial No. 641,288
6 Claims. (Cl. 28—40)



1. Leasing mechanism for a textile machine including in combination, a pair of opposed rolls; a guide rod over which plural yarns are passed and directed into the nip of the rolls; and means operative to displace segments of alternate yarns between the guide rod and the nip of the rolls laterally relative to corresponding segments of the intervening yarns in one direction to form a shed for insertion therein of a leasing thread, and thereafter to displace the segments of the alternate yarns in the opposite direction relative to the corresponding segments of the intervening yarns to form a reverse shed for insertion therein of a second leasing thread.

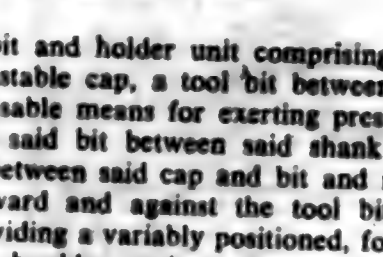
2,860,401
FEED REGULATOR FOR STEREOTYPE FINISHING MACHINES
Robert W. O'Connor, South Plainfield, and Martin H. McNulty, North Plainfield, N. J.
Application April 19, 1957, Serial No. 653,871
2 Claims. (Cl. 29—31)

1. In a stereotype plate processing machine, a semi-cylindrical core member for positioning of a stereotype

clamping pressure between said end portion and said clamp element.

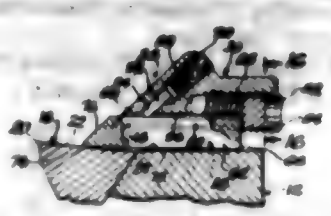
slot extending through said outer edge and aligned with the axis of the body and communicating with the opening.

plate thereon and having a forward margin, said core member being provided with a longitudinal slot extending inwardly from the forward margin, a driven shaft within said core member and having one end adjacent the forward end of said core member, a cam element on one shaft end, a stop lever positioned within said core member adjacent said longitudinal slot and connected intermediate its ends to said core member for pivotal movement about a transverse axis, the portion of said



lever adjacent one end being normally below the longitudinal slot and the portion of said lever adjacent the other end being normally adjacent to and spaced from said cam element, and weight means on the other end of said lever for biasing the portion of said lever adjacent one end to the normal position, said weight means being engageable at times with said cam element to elevate the portion of said lever adjacent one end to an obstructing position above the longitudinal slot.

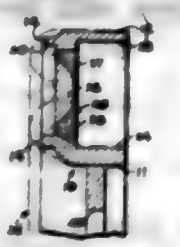
2,860,402
CUTTING TOOL HOLDER
John R. Prokas, Elmwood Park, Ill.
Application June 9, 1954, Serial No. 435,580
17 Claims. (Cl. 29—96)



1. A tool bit and holder unit comprising a shank, a rotatably adjustable cap, a tool bit between said shank and cap, releasable means for exerting pressure on said cap to clamp said bit between said shank and cap, a chip-breaker between said cap and bit and mounted for movement toward and against the tool bit, adjustable means for providing a variably positioned, forwardly facing abutment shoulder against which said chip-breaker can bear; adjusting the position of said chip-breaker relative to said cap and bit, and separate means adjustable in position relative to the cap along a line making a substantial angle with the direction of adjustment of said chip-breaker for clamping said chip-breaker in adjusted position against said bit.

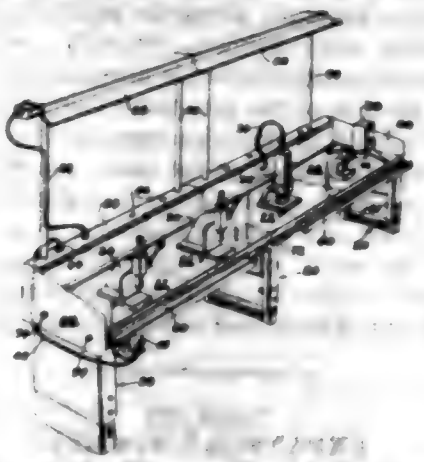
2,860,403
METHOD OF MAKING A POLE PIECE UNIT FOR MAGNETS
Arthur A. Meyer, Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois
Application June 30, 1953, Serial No. 365,213
1 Claim. (Cl. 29—155.59)

The method of making a magnetic friction element, said method comprising the steps of forming an annulus of magnetic material with a first annular recess in one side thereof, inserting nonmagnetic material in said recess and fusing the same to said annulus on opposite sides of the recess to form intermolecular bonds at the junctions of said sides and said nonmagnetic material, cutting a second annular recess in the opposite side of said annulus and extending said second recess through to the bottom of said first recess to divide the annulus into two separate rings joined together and held in fixed relation by said nonmagnetic material and said bonds



whereby said rings constitute axially projecting magnetically separated pole pieces, and inserting nonmagnetic friction material in said second recess to substantially fill the later between the projecting ends of said pole pieces.

2,860,404
WORK CENTER
Milton Aldon, Wellesley, Mass.
Application June 22, 1954, Serial No. 438,451
10 Claims. (Cl. 29—200)

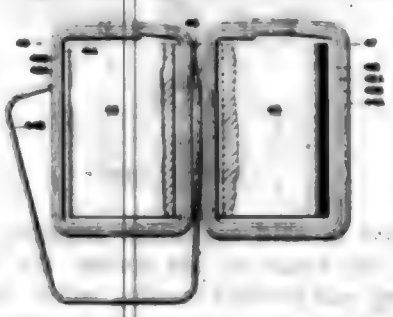


1. A manufacturing setup for the carrying out of a multiplicity of related operations comprising a plurality of rectilinear pallets having substantially the same dimensions, each of said pallets forming a respective work station and holding the tools used at the corresponding station; and one or more supporting frames for said pallets each including a pair of horizontal side members spaced to accommodate the width of said pallets and adapted to be aligned with the corresponding side members of the adjacent frames, the length of the side members being an integral multiple of the length of the pallets so that the members support the pallets in abutting end to end relationship, a channel member of substantially the same length as the rear side member attached respectively to each thereof with its web vertically disposed adjacent the rear sides of the pallets to form a backing therefor and a panel interposed between the flanges of the channel member to form a rectangular duct for the lines furnishing services, such as power, light and compressed air, to the tools carried by the pallets at the various stations.

2,860,405
METHOD OF MANUFACTURING TRANSFORMER CORES
George A. Smith, Pine Bluff, Ark., assignor to Central Transformer Corporation, Pine Bluff, Ark., a corporation of Arkansas
Original application July 5, 1955, Serial No. 519,965. Divided and this application May 14, 1956, Serial No. 584,575
5 Claims. (Cl. 29—155.57)

5. In the method of constructing a transformer core comprising the steps of winding magnetic strip material on a first trapezoidal mandrel and winding magnetic strip

material on a second trapezoidal mandrel to form a first trapezoidal winding and a second trapezoidal winding, each winding comprising a plurality of lamination layers, the equal legs of said first trapezoidal winding being formed to have the same length as the equal legs of said second winding, the shorter of the parallel legs of said first winding being equal to the longer of the parallel legs of said second winding, the longer of the parallel legs of each of said windings respectively exceeding the shorter of the legs of each of said windings by the same amount, holding said first winding and said second winding in substantially their wound trapezoidal shape and annealing said windings while being so held to remove the



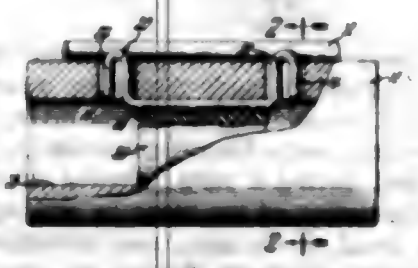
strains and to set the windings in said shape, cutting through the longer parallel side of said first winding in a plane intermediate the equal sides and cutting through the shorter parallel side of said second winding in a plane intermediate the equal sides, removing alternate lamination layers from the windings and concentrically alternately stacking the lamination layers removed from said first winding with the lamination layers removed from said second winding to form a core having alternate lap and staggered butt joints, said lap joints being formed in the respective individual lamination layers of the said first winding and said core being formed with a substantially uniform cross sectional area.

2,860,686

ROLLER BEARING RETAINER MEANS

Mayo M. Reichardt, Milford, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 28, 1956, Serial No. 566,644
1 Claim. (Cl. 29—201)



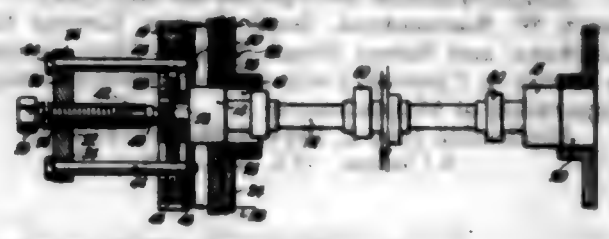
Means for keystoning roller bearings within a cylindrical shell which includes, a tubular member adapted to receive a plurality of roller bearings circumferentially thereof, apertures provided through said tubular member near opposite ends thereof, a spring wire member having offset spring fingers formed from opposite ends thereof, said spring wire member being received within said tubular member with said fingers received through said apertures, and a removable plug received within said tubular member for retaining said spring wire member therewithin, said spring fingers being receivable between adjacent of said roller bearings and circumferentially offsetting the ends thereof and of the others of said roller bearings into keystoned engagement with said cylindrical shell.

2,860,687

PULLER FOR TIMING GEARS OF INTERNAL COMBUSTION ENGINES

Harold R. Grunder and William R. Whitehead, Wichita, Kans.

Application September 25, 1953, Serial No. 382,444
1 Claim. (Cl. 29—258)



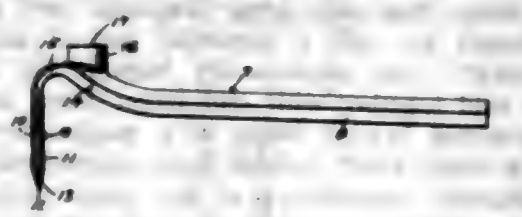
In apparatus for pulling the timing gear from the cam shaft of an internal combustion engine, a tool comprising a cross-head having a central, internally threaded bore and a pair of holes spaced equally from the bore; a thrust screw threaded in said bore and engageable with the cam shaft; a bolt in each hole respectively, said gear having clearance openings therein for passage of said bolts; a generally inverted U-shaped, circularly segmental, gear-engaging plate having threaded openings therein disposed upon a horizontal diameter thereof for receiving said bolts, said plate having a central slot extending upwardly from the bottom, chord edge thereof for clearing the cam shaft, the bolts having heads thereon engageable with the cross-head for limiting the extent of movement thereof when the screw is turned whereby, upon further turning of the screw, the plate engages the gear to pull the same from the shaft; and an L-shaped bracket having one leg thereof attached adjustably to the plate at the top of the latter and on a central axis of the slot and the other leg thereof extending across the plate in a direction toward the cross-head, said other leg being engageable with the top of the gear for aligning the openings of the plate with the openings of the gear during installation of the apparatus.

2,860,688

MUFFLER TAIL PIPE REMOVING TOOL

Thomas M. Woyton, Elmont, N. Y.

Application June 15, 1956, Serial No. 591,616
2 Claims. (Cl. 29—275)



1. A tail pipe removing tool comprising an elongated blade of arcuate cross section adapted to conformably fit between a slotted rear end of a muffler nipple and a tail pipe end secured therein, said blade including a concave outer side adapted to engage the tail pipe and a convex inner side adapted to engage the nipple, the blade being of a length substantially greater than the width thereof and being adapted to be driven into the nipple longitudinally thereof and of the tail pipe and adjacent a slot of the nipple, said blade constituting the tool head and having a rounded leading end and being relatively thick and beveled toward the leading end thereof for expanding the slotted portion of the nipple and for shrinking the tail pipe end disposed inwardly of the slotted nipple portion, an elongated handle forming a part of said tool and joined to a rear end of said blade, said handle extending from the convex side of the blade and being disposed with its axis at substantially a right angle to the axis of the blade, and an anvil portion forming a part of the tool and projecting from the handle adjacent the

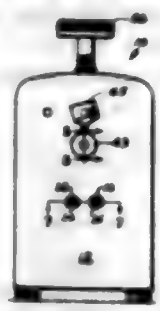
blade and in a direction away from said blade, said anvil having an impact receiving surface disposed at substantially a right angle to the axis of the blade.

2,860,409
SOLID-PHASE BONDING OF METALS
Helmich W. Boesenkool, South Easton, George Durst, Attleboro, and Sidney Siegel, Sharon, Mass., assignors to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application June 2, 1954, Serial No. 434,813
6 Claims. (Cl. 29—497)

1. The method of interfacially solid-phase bonding malleable metal components which have eliminated from their faces to be interfacially bonded gross contaminants and films which would act as a barrier to bonding, said components being free of any side edge welding adapted to hold them together as an assembled unit, comprising subjecting said components to a temperature which is in a range which is lower than the hot-short temperature of the metal having the least hot-short temperature or lower than the temperature at which interfacial liquid phase material or a brittle intermetallic compound would form in appreciable amount, whichever temperature is the lower, squeezing the components together substantially in said temperature range with concomitant increase in the interfacial area at a reduction adapted to effect a first formation of a multitude of discrete bonds with a first integrated strength of said discrete bonds which is only a minor fractional part of the final bond strength, applying a force to the partially bonded components in a direction adapted to offset any transverse separating forces therebetween incurred as the components emerge from said squeezing operation, holding the components together under said force, then while subject to said holding force again at least once squeezing said components together in said temperature range and at a reduction adapted to produce additional bond formation which with the first bond formation has a subsequent integrated bond strength larger than said minor fractional part of final bond strength but still a fractional part of said final bond strength, and subsequently heating the components as held together with said larger bond strength, said last-named heating being at a temperature lying within the range which extends from approximately the recrystallization temperature of the metal component having the lowest recrystallization temperature to a point below one of those temperatures, whichever is the lower, at which liquid phase material would form, or at which a brittle intermetallic compound would form in appreciable amount, said heating being continued for such a length of time as to effect growth of the bonds, thereby to increase the over-all bond strength.

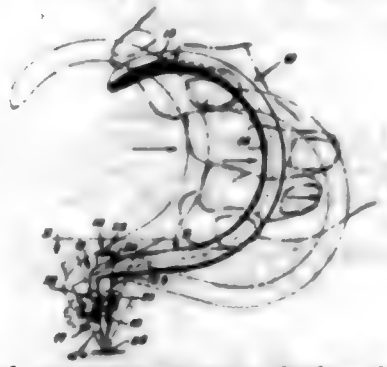
2,860,410
MOTOR DRIVEN CAN OPENER
Thomas F. McNally, Pawtucket, R. I.
Application May 31, 1957, Serial No. 662,862
1 Claim. (Cl. 30—4)

A motor driven can opener comprising a housing provided with a front plate and a top plate and defining a cavity, a can to be opened having a rim, a pivoting bar provided with a cutter pivotally connected to said front plate and located in said cavity, an elongated slot in said front plate having said cutter on one side of said front plate and said pivoting bar on the other side of said front plate, a spring fixed on one end to said housing and on the other end to said pivoting bar, said cutter having a guiding ledge and a V shaped knife edge projecting beyond said guiding ledge, a toothed feeding roller located adjacent said cutter, an electric motor, a gear train connecting said electric motor to said toothed feeding roller, said electric motor and said gear train located in said cavity with a connection through said front plate from said gear train to said toothed feeding roller, a guide end located in said front plate and projecting beneath said toothed feeding roller, a hand



screw located in said top plate engaging said pivoting bar against the force of said spring, the bottom of said rim engaging said toothed feeding wheel, said hand screw engaging said pivoting bar to force said guiding ledge against the top of said rim to wedge said rim between said guiding ledge and said toothed feeding wheel, said knife penetrating said can top through the pivoting movement of said pivoting bar, said can resting against said guide end and said motor driving said toothed feeding wheel to cause said knife to cut the top of said can.

2,860,411
HAND SCRAPER
Lee S. Stogsdill, Webster Groves, Mo.
Application May 11, 1955, Serial No. 507,616
3 Claims. (Cl. 30—171)



1. In a hand operated scraper device the improvement which comprises blade mounting means, a scraper blade attached to said mounting means to avoid chatter and vibration, and a handle connected to said mounting means and having a long gripping surface to allow angular manipulation of the blade by shifting the surface through the hand of the user; said mounting means including a blade abutment having an aperture therein near one end and a slot opening adjacent its opposite end, side members extending from said abutment and forming the lateral limits of said slot, said slot having a fulcrum surface between said side members, and threaded attachment means disposed in said aperture; said blade having a scraping edge, a crown end, and a threaded aperture in said blade to receive said attachment means, the attachment means rigidly holding said blade against said abutment with its said crown end inserted in said slot between said side members and against said fulcrum surface; and said handle including a body portion connected to said side members of the blade mounting means, and a portion circularly curved along the lengthwise axis thereof extending upwardly from said body portion and forming said long gripping surface for manually grasping the scraper at different places on its cir-

2,860,416

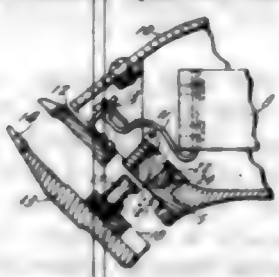
2,860,418

drical shell.

the tool and projecting from the handle adjacent the

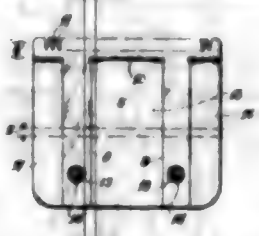
clar length to have the hand pull substantially parallel to the surface to be scraped and for shifting the grasp along the length thereof to maintain the same relative grasp, while effecting tilting of the blade selectively between positive and negative angles, whereby a scraping pull on said blade through said handle can be maintained parallel to the surface to be scraped.

2,860,412
HAIR CLIPPERS HAVING INTERCHANGEABLE COMB PLATES
Mathew Andis, Racine, Wis., assignor to Andis Clipper Co., Racine, Wis., a corporation of Wisconsin
Application September 12, 1956, Serial No. 609,457
2 Claims. (Cl. 30—200)



1. In a hair clipper having a shear blade, the combination of a clipper case having a bed member and a comb plate member, one of said members having a socket and the other having a dowel post, said comb plate member being mounted on said bed member for coaction with the shear blade when said post is seated in said socket, a transverse shaft intersecting said socket, said dowel post being provided with a notch into which a portion of said shaft interfits in one position thereof whereby to interlock the comb plate to the bed, said shaft having a notch which aligns with said dowel post in another position of said shaft whereby to permit withdrawal of said dowel post from said socket and removal of the comb plate from the bed.

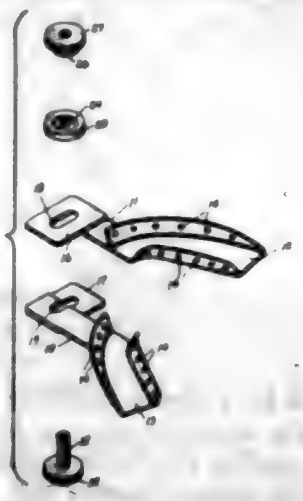
2,860,413
HAIR CLIPPER BASE PLATE
Clarence Proctor, Riverside, Ill., assignor, by mesne assignments, to Supreme Products Corporation, Chicago, Ill., a corporation of Illinois
Application November 12, 1954, Serial No. 468,195
6 Claims. (Cl. 30—223)



1. A hair clipper base plate comprising a front bearing land provided with a series of teeth along the front edge thereof substantially coextensive therewith, and a pair of transversely extending bearing-lands of substantially the same width as the front land spaced from each other and extending to the back edge of the front land, each land being spaced from its respective side of the plate a distance substantially less than the distance between them to form a tripod type of support with said front land of uniform level when lapping pressure is uniformly applied to said lands.

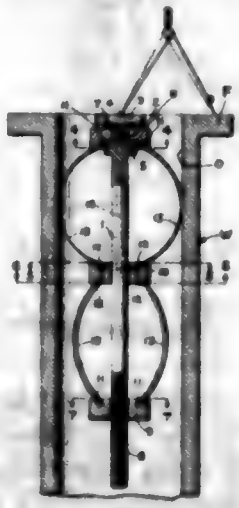
2,860,414
DENTAL IMPRESSION TRAY
Bridaus W. Brust, Kokomo, Ind.
Application July 29, 1957, Serial No. 674,697
2 Claims. (Cl. 32—17)

1. An adjustable dental impression tray assembly comprising dual members each carrying at one of their extremities a jaw-segment fitting tray, each of said trays having a series of openings along its side walls and adapted to accommodate a dental impression material, adjustable means for pivotally joining the opposite extremities of said members including laterally extending plates carried by said members, said plates being adapted to overlie said members with the members extending within the same



plane, concentric matching slots formed in said plates and said members, a single thumbscrew adapted to extend through said slots, a washer and a clamping nut accommodated on said thumbscrew, said washer having a generally concave outer face accommodating said clamping nut, tightening of said nut on said thumbscrew serving to fix the relative angular position of said members.

2,860,415
LAYOUT GAGE
Eugene Dauilow, North Arlington, N. J.
Application September 13, 1956, Serial No. 609,598
4 Claims. (Cl. 33—1)

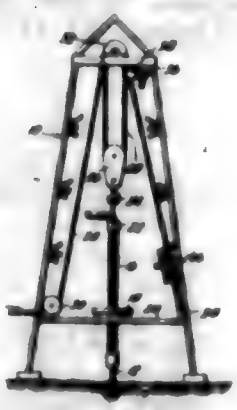


1. In a layout gauge for a part having an opening therein comprising, an elongated rod-like member having a reference center in one end and a threaded portion in the other end, a roller rotatably disposed on said rod-like member, said roller having a fixed axial position relative to said rod-like member near said reference center in the one end, at least one roller axially slidably disposed on said rod-like member intermediate said fixed roller and said threaded end of the rod-like member, an additional roller threadably mounted on said threaded end of said rod-like member, and a plurality of circumferentially spaced resilient elements connected between said threadably mounted roller and said axially slidable roller and said axially slidable roller and said fixed roller, whereby rotation of the rod-like member moves the threadably mounted roller and thus also the axially slidable roller towards the fixed roller to cause the resilient elements to bow outwardly and center said layout gauge in said opening.

2,860,416
SEATED IMPRESSION FITTING AIDS
Charles E. Pfund, Timonium, Md., assignor of one-half to Joseph E. Ruez, Arlington, Va.
Application January 24, 1952, Serial No. 268,011
7 Claims. (Cl. 33—3)

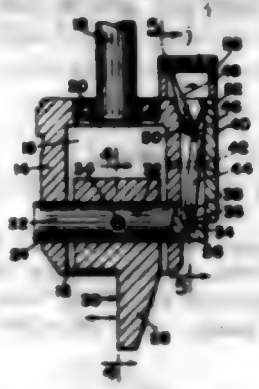
1. A fitting aid for a shoe comprising a thin imprintable insole member for orienting said aid in said shoe, a thin sheet having a coating of pressure transferable marking compound on one surface thereof and substantially congruent with the portion of said insole desired to be imprinted by the foot of the wearer, and means separably securing said sheet and said member in face adjacency with said compound therebetween.

2,860,417
DEPTH MEASURING APPARATUS
Robert F. Knight, Irving, Tex., assignor to Core Laboratories, Inc., Dallas, Tex.
Application December 20, 1956, Serial No. 629,581
8 Claims. (Cl. 33—134)



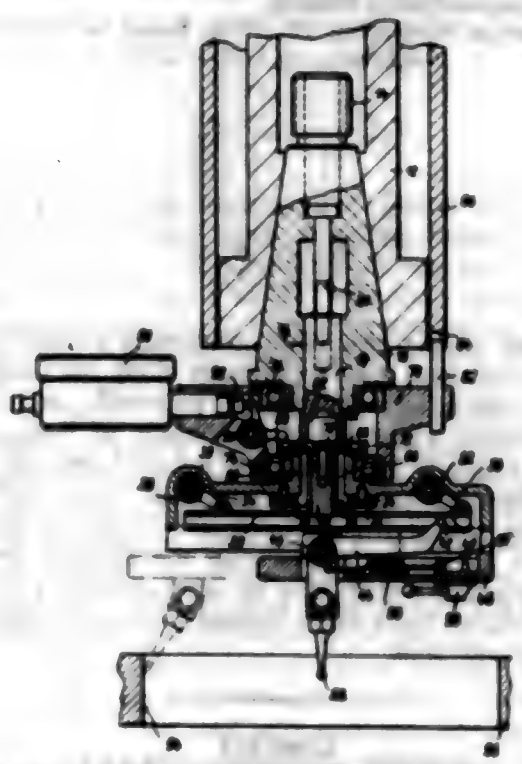
1. Apparatus for measuring the depth of a well bore hole comprising a pickup mechanism mechanically associated with the drill string supporting tackle, said mechanism including a measuring switch means adapted to be actuated to form an electrical pulse each time the drill string is moved vertically through a given increment of distance, and a directional switch means arranged to connect said pulses into either an "up" circuit or a "down" circuit depending on the direction of movement of said drill string, an electrically responsive memory means connected to both said circuits and adapted to be varied from an "on bottom" condition to an "off bottom" condition depending upon the number of pulses received in said "up" circuit and returned to said "on bottom" condition only when an equal number of pulses have been received in said "down" circuit, an "off bottom" switch means adapted to be actuated in accordance with the condition of said memory means, and an electrically responsive depth counter connected to said "down" circuit through said "off bottom" switch means, and adapted to give a depth indication proportional to the number of pulses received in said "down" circuit when said memory means is in said "on bottom" condition.

2,860,418
EDGE AND CENTER FINDER
Kenneth I. Johnson, Marlboro, Mass.
Application October 29, 1954, Serial No. 619,827
2 Claims. (Cl. 33—172)



1. A device of the class described comprising an inverted thimble, a shaft thereon, said thimble and shaft being axially aligned, a gauging finger extending out of the thimble opposite to the shaft, a series of interengaged links connected for pivotal operation to the finger, a housing on the thimble at the exterior thereof, said links being mounted in the housing generally parallel to the axis of the shaft, a scale in position to be swept by one link, means movably mounting the finger in the thimble, said means including an operating connection from the finger to the links, said means comprising a relatively thick bar diametrically arranged in and extending through opposite walls of the thimble and being axially movable transversely of the thimble, said finger having a bore receiving the bar, and means connecting the finger to the bar and preventing relative motion therebetween, said finger having a semi-conical shape with a diametrical flat gauging face.

2,860,419
FEELER-PIN MEASURING DEVICES
Hanns Müller, Munich, Germany, assignor to Hans Deckel, Munchen-Solln, and Friedrich Wilhelm Deckel, Post Tutzing, Germany
Application February 5, 1954, Serial No. 408,535
Claims priority, application Germany February 13, 1953
5 Claims. (Cl. 33—172)



1. A feeler device comprising a holder rotatably driven about an axis of rotation, a bearing member mounted on said holder, a locking element engaging said bearing member and holding it in a pre-set stationary position, a carrier connected with said holder for common rotating

prising dual members each carrying at one of their ex- bow outwardly and center said layout gauge in said opening.

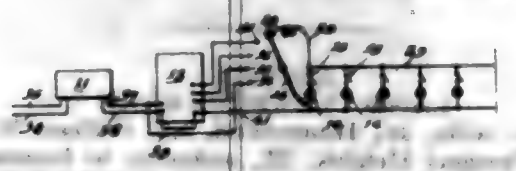
movement, a slide provided on said carrier and capable of adjustment approximately transverse to said axis of rotation, a feeler lever movably mounted on said slide, an indicator provided on said bearing member, and a bell crank carried by said holder and adjustable transversely to the axis of rotation of said holder for transmitting the movement of said feeler lever to said indicator while said indicator remains stationary in the pre-set position.

2,860,420

VOLUME MEASURING APPARATUS

Joe Carter Denman, Jr., and Robert Hansen, Diboll, Tex., assignors to Southern Pine Lumber Company, Diboll, Tex., a corporation of Texas

Application January 27, 1955, Serial No. 484,520
8 Claims. (Cl. 33—174)



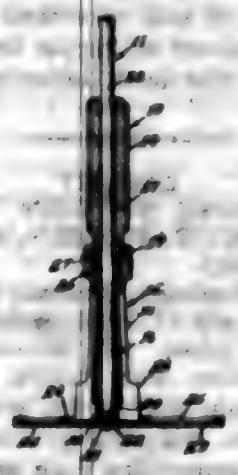
1. In a lumber measuring apparatus, a lumber conveyor operable at a constant speed, a source of electrical power, means for aligning boards on the conveyor extending transversely thereof with corresponding ends of each in a common vertical plane, contact members spaced at equal linear unit intervals transversely of the conveyor in a common measuring zone for individual simultaneous actuation by each individual board passing through said zone in proportion to the number of predetermined unit lengths of the board, circuit closing means operable by said contact members and resistors connectible in parallel by said circuit closing means for a time period proportional to the width of each board and its rate of travel through said zone, watt hour measuring and recording means connected with said power source, and means including a member movable by contact with each board in proportion to the vertical dimension of the board cooperating with said circuit closing means for connecting to the watt hour measuring means a steady wattage load imposed by the connected resistors in proportion to the volume of each board being measured for the duration of the passage of the board through said zone.

2,860,421

SELF-CENTERING TRANSFER PUNCH

Joseph J. Smith, East Hartford, Conn.

Application July 26, 1955, Serial No. 524,391
3 Claims. (Cl. 33—191)



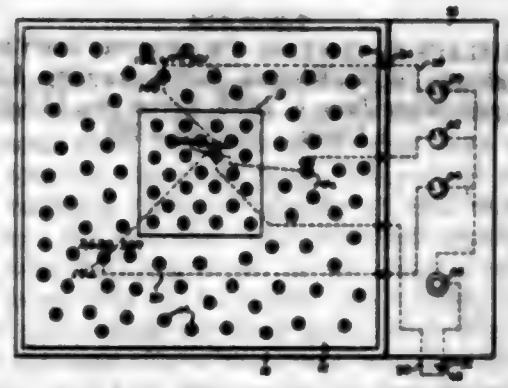
1. In a self-centering transfer punch, a body member including an enlarged cylindrical portion, said body member including a reduced diameter cylindrical portion having an upper threaded section, there being a longitudinally extending bore in said body member, the lower edge of said body member being tapered, a punch extending through said bore and having a lower pointed end, a support member arranged over the reduced diameter portion of said body member and including an intermediate cylindrical section, an enlarged shoulder arranged in threaded engagement with the threaded section of the reduced diameter portion of said body member, there being an annular collar on the lower end of said support member, there being a plurality of spaced radially disposed slots in said collar and in the intermediate section of said support member, the inner portion of the support member adjacent the collar being tapered for engagement with the tapered lower end of said body member and the lower edge of said support member being concave in cross section.

2,860,422

MULTIPLE ANSWER ELECTRICAL QUIZ GAME

Shelomo May, Jerusalem, Israel

Application April 16, 1956, Serial No. 578,274
3 Claims. (Cl. 35—9)



1. A multiple answer electrical quiz game, comprising a plurality of electrical signaling devices, a plurality of jacks, said jacks being grouped into a plurality of groups with a plurality of jacks in each group, there being at least three jacks in each group of jacks, a plurality of circuits connecting each group of jacks with said signaling devices, a source of electric current connected to all of said circuits, and electrically conductive plugs adapted to be inserted into said jacks, each said jack comprising a pair of electrically insulated contacts and each said plug being insertable into each said jack for engagement with said contacts to close the circuit between them, said signaling devices comprising a plurality of electric bulbs mounted on a board, said board being fixedly supported on a base, said jacks being mounted on a second board which is removably and replaceably supported on said base, the circuits between said bulbs and said jacks including a plurality of contact members on the first board and a corresponding number of contact members on the second board, the two groups of contact members being engageable with each other when the second board is mounted upon said base adjacent the first board.

2,860,423

FLIGHT TRAINING APPARATUS FOR SIMULATING CONTROL LOADING WITH PILOT PRESSURE CONTROL

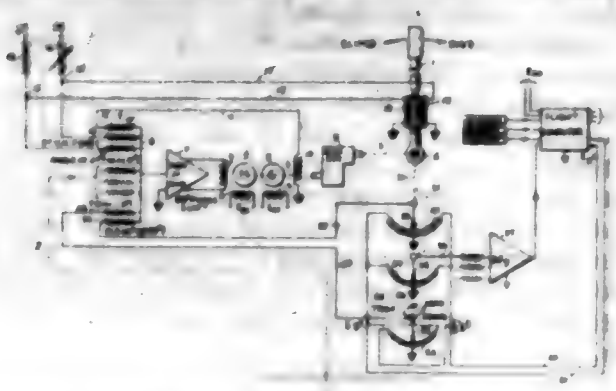
Richard C. Dehmel, Short Hills, N. J.

Continuation of application Serial No. 229,794, June 4, 1951. This application October 15, 1954, Serial No. 462,488
13 Claims. (Cl. 35—12)

1. Flight simulating apparatus for loading aircraft flight controls operable by a pilot to simulate aerodynamic forces comprising motive power means operatively connected to a respective flight control for varying opposition to the force applied by the pilot tending to move the control from a neutral position, means responsive to small or minute distortion under stress operatively connected to said control for deriving according to the applied force on said control as distinguished from its displacement from neutral

with the axis of said control head in substantial parallel- anchored to free ends of said strands and disposed adja-

a control voltage having a precise and predetermined relation to the applied force on said flight control, and means

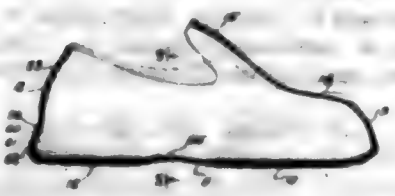


responsive to said control voltage for primarily controlling the effectiveness of said motive power means so as to vary the reactive force of the flight control.

2,860,424
CHILD'S WALKING TRAINING DEVICE
Malcolm N. McKinnon, Salt Lake City, Utah
Application June 6, 1955, Serial No. 513,437
1 Claim. (Cl. 35—29)

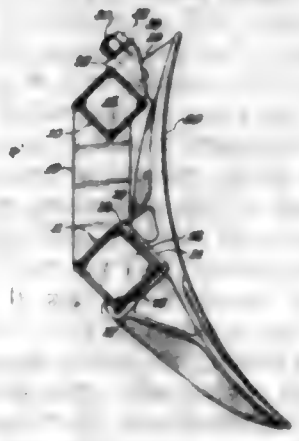
A means for teaching the mechanics of walking comprising in combination, the laces of the pair of shoes worn by a teacher and the laces of a pair of shoes worn by a pupil, a pair of flexible non-elastic cords, and a pair of hooks secured to the ends of each cord, the hooks at one end of said cords being engaged in the laces of the shoes of a teacher, and the hooks at the opposite ends of said cords being engaged in the laces of the shoes of the pupil, said cords being of equal length, the length of said cords being such that when the teacher's outstretched hands contact the outstretched hands of the pupil, said cords will be substantially taut, whereby rearward movement of the foot of the teacher will impart forward movement to the foot of the pupil.

2,860,425
RUBBER OVERSHOE
Walter C. Jackson, Mountainside, N. J., assignor to Tingley Rubber Corporation, a corporation of New Jersey
Application June 17, 1955, Serial No. 516,183
3 Claims. (Cl. 36—7.3)



1. An overshoe for children's inner shoes of various sizes within a limited prescribed range and of the type in which the heel rim projects along the sides and rear outwardly from the upper part of the inner shoe, said overshoe consisting entirely of one piece of elastic material of uniform composition and having a substantially flat lower part consisting of a sole, a heel and an intervening shank, said heel bulging outward along the sides and rear to form a peripheral recess into which the projecting part of the heel of the inner shoe is adapted to extend with a substantially snug fit, the wall of said recess around the sides and rear having a reinforcing strip on the outside, said shank having a channel extending substantially across its full width and having a width less than half the length of the shank between the heel and the sole, said channel having a base wall of substantially uniform thickness and forming a substantially uniform thinned-out section of the shank affording reduced resistance by which the overshoe can be stretched lengthwise at the lower part mainly along said thinned-out section to fit said inner shoes of various sizes within a limited prescribed range while said heel retains substantially its form, size and shape.

2,860,426
LAND CLEARING RAKE
George S. Allis, Jr., Homewood, and William W. Henning, Prospect Heights, Ill., assignors to International Harvester Company, a corporation of New Jersey
Application April 2, 1954, Serial No. 420,528
8 Claims. (Cl. 37—2)



1. A land clearing rake comprising a rake frame formed of upper and lower box channels, a plurality of plates, said plurality of plates mounted in a parallel spaced apart relationship between said upper and lower box channels, a plurality of rake teeth, hook means formed on each of said rake teeth, a notch formed in each of said hook means formed on each of said rake teeth, said hook means mounted about a portion of said lower box channel, each of said notches engaging one of said plates whereby each of said rake teeth is laterally spaced and maintained on said rake frame, and fastening means mounted to said upper box channel and to the upper end of each of said rake teeth for stressing each of said rake teeth toward said upper box channel to maintain each of said rake teeth securely mounted to said rake frame.

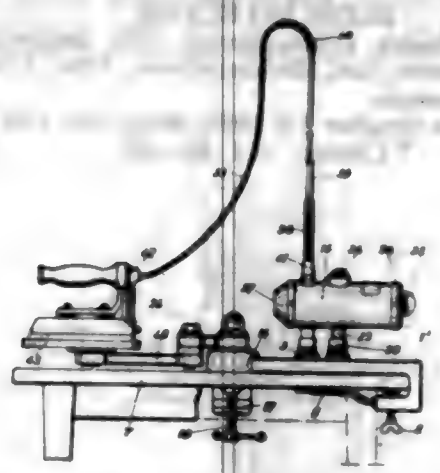
2,860,427
ELECTRIC IRONING STATION FOR DOMESTIC PURPOSES, FOR CRAFTSMEN, AND FOR INDUSTRIAL PURPOSES
Léon Fantinger, Oberaal, France
Application April 27, 1954, Serial No. 426,019
8 Claims. (Cl. 38—142)

1. The combination, with ironing table structure, of ironing station means and means securing said ironing station means to the said table structure, each said ironing station means comprising each an element having a flat surface, said means securing said ironing station means to said table including, means securing said element to said table structure with said flat surface in an engagement with an upper surface portion of said table structure, a hollow cylindrical control head, a pair of conductors securing said control head to said element

extending bore in said body member, the lower edge of said body member being tapered, a punch extending

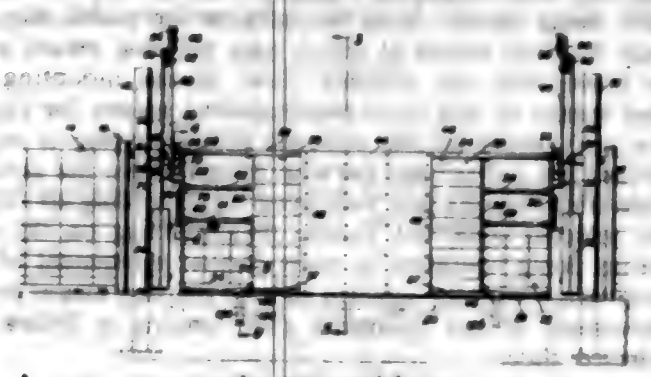
control for deriving according to the applied force on said control as distinguished from its displacement from neutral

with the axis of said control head in substantial parallelism with the upper surface of said element, a socket projecting from said control head, a tube, a spring surrounding said tube and securing the latter to said socket, a pair of electric conductors having each a portion extending through said tube and connected with each one of



the first mentioned conductors, support means secured to said table structure in proximity to said element, supporting arm structure pivotally secured to said support means and laundry iron receiving means carried by said supporting arm structure, said spring being arranged to urge said tube to extend from said socket with its axis in registry with the axis of said socket.

2,860,428
GATE
Elmer H. Flathman, Rankin, Nebr.
Application August 30, 1956, Serial No. 607,100
4 Claims. (Cl. 39—5)



1. A gate construction comprising a pair of spaced posts, a closure mounted between said posts, a pair of generally vertical spaced spindles between said posts, a bearing at the upper end of each spindle in which the lower part of said closure is pivotally mounted in order that the closure may be swung to the open and closed positions about a generally horizontal axis, a lever pivoted to each post, a link slidably and pivotally connected to each lever, means releasably connecting said links to the sides of said closure so that said closure may be swung about a generally vertical axis upon separation of one of said spindles, a pair of latches operatively connected to said links and the sides of said closure to hold said closure erect, and means connected to said levers for yieldingly retaining said levers in a position wherein said closure is erect.

2,860,429
WIRE GATE FASTENER
Charles F. Carothers, Chandler, Ariz.
Application May 8, 1957, Serial No. 657,783
7 Claims. (Cl. 39—74)

1. In combination with two spaced fence posts, a wire gate extending from one fence post including strands of wire anchored to said fence post and an end gate bar

anchored to free ends of said strands and disposed adjacent said other fence post and substantially parallel thereto when the wire gate is in an extended and closed position, and a loop member anchored to said other fence post and in which a lower end of said end bar of the gate is detachably engaged; a gate fastener connected to said other fence post, above said loop, and disposed to be extended therefrom toward the first mentioned fence post, said gate fastener including a bowed bar forming a rigid frame, means tethering one end of said frame to said other fence post, a lever, means pivotally connecting one end of said lever to the other end of said frame for swinging movement of said lever relative to the frame in a

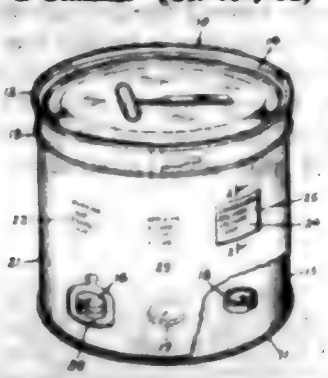
plane substantially coinciding with the plane of the frame, and a yoke member rigidly secured to the lever adjacent to but spaced from the lever pivot, said yoke member having a concave inner side facing away from the lever pivot for engaging an upper portion of said end bar of the gate, said yoke member being disposed relative to the lever to swing into said frame as the lever is swung toward the open side of the frame for causing the gate strands to pass across the lever pivot in a direction inwardly of the open side of the frame whereby the tension of the wire gate will resist swinging movement of the lever away from the frame and toward a released position of the fastener.

2,860,430
PRESCHEDULING MEANS FOR MACHINE TOOL
John H. McKewen, Cincinnati, Ohio, assignor, by mesne assignments, to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Application December 12, 1955, Serial No. 552,575
8 Claims. (Cl. 40—10)

1. In a prescheduling device for the purposes described, a base member comprising an elongated generally rectangular body, spacing members extending along the opposite sides and bottom of the rear surface of said base member, the rear surface of said base member, said spacers and the surface to which said base is secured defining a job card receiving pocket, an elongated opening in said base member in the area of said pocket, pointer mounting means extending along an edge of said base member, a pointer movably mounted on said mounting means and movable relative to the opening in said base member, means for securing said pointer in predetermined fixed position, and a face plate covering said base member, said face plate having an opening therein overlying the opening in said base member.

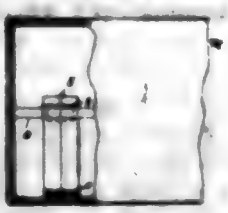
terial of uniform composition and having a substantially conductors securing said control head to said element

2,860,431
CONTAINER HAVING A RECIPE-SELECTING LABEL THEREON
Howard J. Barnum, Jr., Forest Hills, N. Y., assignor to Lever Brothers Company, New York, N. Y., a corporation of Maine
Application December 29, 1953, Serial No. 400,847
2 Claims. (Cl. 40—61)



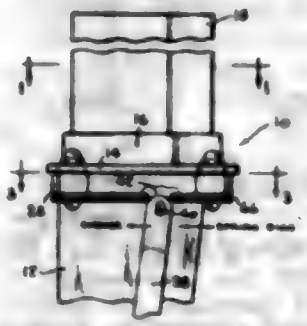
1. A package comprising a disposable container having an outer wall, circumferential beads in axially spaced relation on said outer wall and a comestible in said container having a label fixed to said outer wall between said beads and bearing a series of recipes for foods containing the comestible and a corresponding series of pictures of the foods prepared with the recipes, said pictures and said recipes being in fixed spaced relation, and an opaque label movably retained on said container by and between said beads and overlying the pictures and recipes and contiguous thereto, said opaque label having window areas therein corresponding in spacing and position to one recipe and a corresponding picture, the covering member being movable over said fixed label to display any one of said recipes and the corresponding picture through said window areas.

2,860,432
SERVICING RECORDING DEVICES
Fred Z. Harris, San Francisco, Calif.
Application January 2, 1957, Serial No. 632,627
2 Claims. (Cl. 40—65)



1. A device for visual indication of the recommended speedometer readings of a plurality of common future automobile servicing requirements, which comprises a rectangular, flat, shallow casing having a front formed with a plurality of spaced apertures spaced along a line extending across said front substantially midway between the top and bottom of said front and marked with first indicia adjacent each said aperture, said first indicia setting forth the nature of each of said servicing requirements, said casing further having thin sides along the edges of said front, a transversal strip extending across and fixed to the back face of said front behind said line of said apertures, said strip being formed with a plurality of grooves in its face adjacent said front and each positioned immediately behind one of said apertures, and a plurality of rigid slide members each of a length substantially equal to one-half the height of said front fitting into said grooves and slidable in a direction parallel to said front and transverse to said transversal strip, said slide members being frictionally retained within said casing by said transversal strip by engagement with said slide members, said slide members being marked with second indicia positioned to be exposed through said apertures, said second indicia being mileage indications, said slide members being provided with finger tabs extending rearwardly, the thickness of said casing being sufficient to completely enclose said slide members and tabs.

2,860,433
SLIDE SELECTOR
Lester W. Birbeum, Ocenomowec, Wis., assignor to La Belle Industries, Inc., Ocenomowec, Wis., a corporation of Wisconsin
Application October 17, 1956, Serial No. 616,518
7 Claims. (Cl. 40—78)

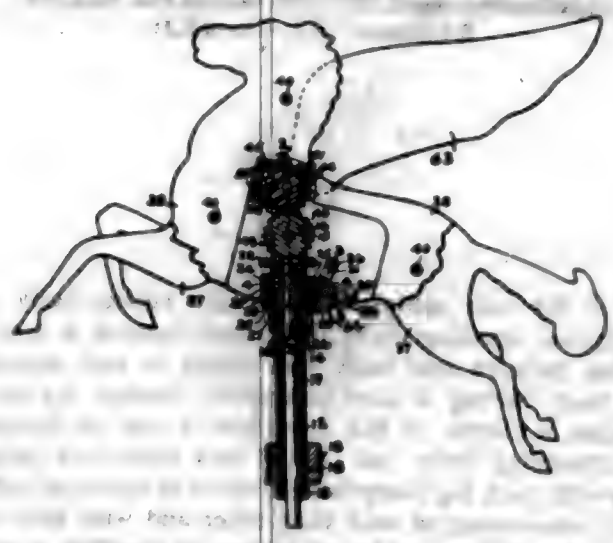


1. A slide selector comprising, a head having an inlet and an outlet offset from the inlet, the inlet and outlet respectively receiving and discharging slides in paths of motion generally normal to the plane of the slides, selector means movable between the inlet and the outlet for engaging the slide at the inlet and transporting the selected slide to the outlet, movement of the selected slide from the inlet to the outlet being in the plane of the slide, stop means operable to gage the thickness of the selected slide and to permit transport of the selected slide to the outlet while obstructing similar movement of any succeeding slide concurrently with the selected slide, means biasing said stop means to a position in which the selected slide being moved from the inlet to the outlet may engage the stop means at which time the stop means tends to move with the selected slide, means mounting the stop means in said head and including means for raising the stop means as the selected slide engaging it moves toward the outlet until the stop means clears the selected slide and engages any following slide tending to follow the selected slide, the biasing means acting on the stop means being operative to resist further movement of the stop means with the selected slide so the stop means resists movement of any following slide tending to follow the selected slide.

2,860,434
DISPLAY DEVICE SIMULATING AN OBJECT IN FLIGHT
Alwin Kost and Glen Ralph Quilici, Portland, Oreg., assignors to Kost Multiple X, Inc., Portland, Oreg., a corporation of Oregon
Application September 3, 1957, Serial No. 681,786
9 Claims. (Cl. 40—106.33)

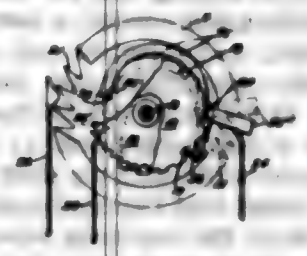
9. In display devices simulating an object in flight, a flight display object; a support extending upwardly into said flight display object; a substantially horizontal shaft carried by said support mounting said display object for rocking movement on said support; shaft driving means connected with said substantially horizontal shaft; an eccentric driven by said shaft driving means; two toggle links having adjoining ends pivotally connected with said eccentric and having other ends which are pivotally connected respectively with said object and said support, whereby operation of said eccentric will impart a rocking movement to said object; two wing mounting shafts positioned above and generally parallel with said substantially horizontal shaft and extending in opposite directions from the medial plane of the object outwardly to the exterior of said object; ball type pivot means carried by said object pivotally supporting each wing mounting shaft

intermediate its two ends; a ball on the inner end of each of said wing mounting shafts; a gearwheel rotatively mounted coaxially of the pivotal supports of said wing mounting shafts adjacent the inner ends of said wing mounting shafts and having off center receptacles receiving the balls on the inner ends of said wing mounting shafts; another gearwheel on said substantially horizontal shaft meshing with the gearwheel which receives said balls, whereby said wing mounting shafts will be moved



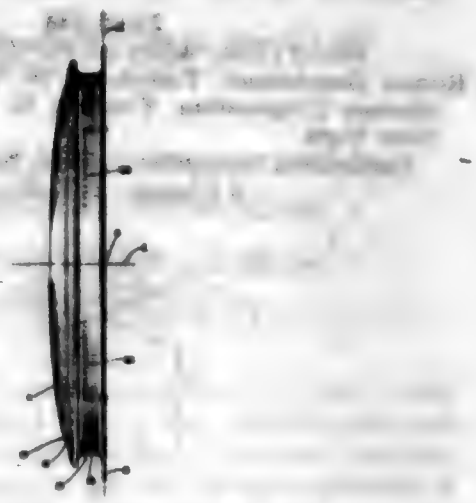
in conical paths when said gearwheels are driven; a lever arm rigid with and extending transversely from each wing mounting shaft adjacent the pivotal support thereof; brackets fixed to the display object and engaged by the outer end portions of the lever arms providing angular oscillating movement of each wing mounting shaft on its axis when the wing mounting shaft is moved in a conical path; and a wing fixedly attached to the outer end portion of each wing mounting shaft.

2,860,435
CALENDAR MECHANISM
Paul Grekov, New City, N. Y.
Application April 8, 1957, Serial No. 651,470
10 Claims. (Cl. 40—114)



1. A calendar mechanism, comprising, in combination, a rotatable date element; a rotatable circular month element having consecutive segmental operating portions along its circumference, said consecutive operating portions respectively corresponding to consecutive months of the year and those portions representing months of less than 31 days differing from those representing other months by being recessed from said circumference a varying amount corresponding to the difference between 31 days and the number of days of the respective month; first actuating means operated by rotation of said rotatable date element and moving after each revolution of said date element said rotatable month element through an angular step corresponding to the distance between two consecutive operating portions on said rotatable month element; second actuating means controlled by said consecutive operating portions on said rotatable month element so as to turn in a month having less than 31 days said rotatable date element depending upon the depth of the respective recessed operating portion through an angular step equal to and representing 2, 3 or 4 days; and third actuating means for turning said rotatable date element once each day through 1/31 of a full turn.

2,860,436
TIRE CENTER SIGN CONSTRUCTION
Joseph R. Silver, Akron, Ohio, assignor to The Massillon-Cleveland-Akron Sign Company, Massillon, Ohio, a corporation of Ohio
Application December 14, 1955, Serial No. 553,878
1 Claim. (Cl. 40—125)



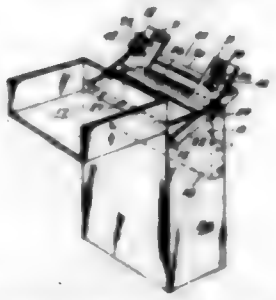
A shell adapted for use as a tire center sign, the shell having an axis of symmetry and being constituted by a three-dimensionally curved one-piece wall including a central disk having an outer face with a convex curvature and an inner face with a concave curvature, the curvatures of the disk faces having centers on the axis and the disk having a circular periphery having a center on the axis, and the disk periphery merging with an annular rim symmetrical with respect to the axis, the annular rim having a formation which is an outwardly opening U-channel including an inner annular web having a rear border and a front border, a rear annular flange extending radially from the rear web border, and a front annular flange including an inner portion extending outwardly from the front web border and a reversely extending outer portion making junction with the disk periphery, the rear annular flange having an outer radius greater than that of the front annular flange; and the shell wall being made of distortable resilient material.

2,860,437
PICTURE FRAME
Noble Carroll, Grand Rapids, Mich.
Application November 4, 1957, Serial No. 694,334
9 Claims. (Cl. 40—152)

1. A picture frame comprising complementary elongated side rails and top and bottom end bars, said end bars being connected to end portions of the side rails and supporting said side rails in spaced apart substantially parallel relation to one another, said side rails having substantially coplanar front faces constituting the front

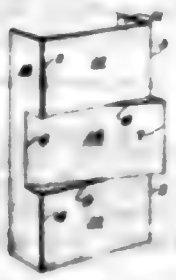
of the frame, said top and bottom bars being bowed from end-to-end thereof rearwardly of the frame and away from the front thereof, said side rails having rear faces and being provided with grooves opening outwardly of said rear faces, beyond the ends of the top and bottom bars, said grooves being adapted to receive side edge portions of a sheet for supporting the sheet flexed rearwardly and away from the frame and with the concave picture bearing front side of the sheet facing forwardly and toward the frame.

2,860,438
ADAPTING AND ALIGNING DEVICE
Robert Gumbinner, Tarrytown, N. Y., assignor to Polychrome Corporation, Yonkers, N. Y., a corporation of New York
Application December 1, 1955, Serial No. 550,452
8 Claims. (Cl. 41—1)



1. An adapting and aligning device for use in connection with a photomechanical copier involving the mechanical transfer of a gelatinous emulsion layer from a matrix sheet to a receiving support sheet, which comprises an angular plate, said plate having associated therewith parallel guide members and projecting stops for positioning the matrix sheet relative to the receiving support, and roller means for applying pressure against the plate when the matrix and supporting sheets are drawn between the said roller means and the plate.

2,860,439
FOLDABLE DISPLAY PIECE
Arnold E. Johnson, Chicago, Ill., assignor to Arvey Corporation, Chicago, Ill., a corporation of Illinois
Application August 16, 1955, Serial No. 527,549
1 Claim. (Cl. 41—11)



A display piece constructed of foldable board material which comprises, a blank having opposite side edges and a top edge, said blank being provided with a line of severance which extends intermediate the side edges of said blank and at an angle to said side edges, said line of severance being substantially parallel to said top edge, said blank being provided with a plurality of spaced score lines upon one side of said line of severance having respective ends which terminate at said line of severance, said blank also being provided with spaced score lines on the opposite side of said line of severance, said last-mentioned score lines also having respective ends which terminate at said line of severance, a score line on one side of said line of severance being closer to a side edge of said blank than to an adjacent score line on the same side of said line of severance, all of said score lines being disposed at an angle to said line of severance, and all of the score lines on one side of said line of severance being respectively laterally offset from all of the score lines on the opposite side of said line of severance whereby said blank when folded about said score lines presents a plurality of panels the planes of which are disposed at different angles to one another.

2,860,440
BUOYANT FISH LURE
Adolph R. Hendry, Portland, Oreg.
Application April 25, 1955, Serial No. 503,375
2 Claims. (Cl. 43—42.3)

1. A fish lure comprising a hollow rubber body having aligned openings in opposite ends thereof, a tube extending through said body and sealed in said openings, said body having a semi-spherically beaded surface to simulate a cluster of fish eggs, and a pair of divergent legs extending from one end of said body and integral therewith, each leg comprising a series of spherical rubber beads interconnected with each other and with said body by slender flexible necks of rubber to simulate a string of eggs capable of free oscillating movement when the lure is pulled through the water.

2,860,441
WEEDLESS LURE
Earl August Castner, Justice, Ill.
Application July 19, 1957, Serial No. 673,052
2 Claims. (Cl. 43—42.5)

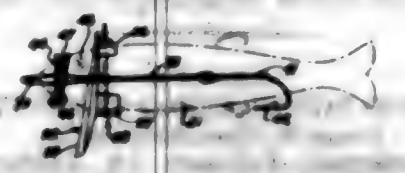
1. In a fishing lure, an elongated lure body with a lower convex surface and a concave upper surface and having an apertured leading end portion and a recessed and apertured trailing end portion, a hook having an eye, an elongated shank, and a barbed end portion, said eye being downwardly offset from said shank portion, the forward portion of the shank of said hook having a flattened portion in a plane transverse to the plane of the hook and of greater width than the thickness of the offset portion of said hook, said flattened portion of the hook being elevated above the lure body when in service position and resilient to accommodate flexing movement of the hook between the eye and the barbed end thereof, the barbed end of said hook forming a downwardly directed hook with the barbed end portion thereof extending forwardly and adapted to receive the recessed trailing end portion of the lure body by placing the end of the hook in the aperture in the trailing end portion when in service position for fishing, said lure body mounted on the hook by placing the aperture in the leading end portion over the shank of the hook between the eye and the flattened portion permitting the lure body to dangle freely therefrom, said recessed trailing end portion of the lure body capable of being biased into engagement with the barbed end of the hook when in service position for fishing by the intersecting engagement of the offset portion of the hook with the leading end portion of the lure body at the leading end thereof, and said lure body also being disengageable from the barbed end of said hook when a fish bites on the lure and pushes the recessed portion of the trailing end portion of the lure body out of its engaged relation with the barbed end of the hook, and said

lure body with its recesses therein and said downwardly extending hook serving to protect each other to a great extent from the entanglement with weeds when used in water containing the same when in service position.

2,860,442
BOBBERS WITH WATER-RELEASED LINE CASTING REELS
Marion W. Turner, Puyallup, Wash.
Application September 24, 1957, Serial No. 685,909
6 Claims. (Cl. 43—43.11)

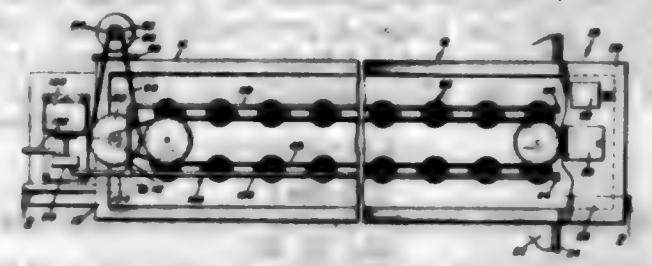
3. A fishing line casting and paying-out bobber wherein the amount of the line which is to be used for fishing in a body of water at a predetermined depth may be regulated comprising, an elongated hollow bobber body, said body being apertured and embodying a reel chamber which is open at one end, a removable closing cap for said one end, a buoyant line winding, storing and casting reel insertable into said chamber by way of said open end and held in operative position and against displacement by said cap, said cap having a centered bearing hole, said reel having an axial shaft with a finger knob on the outer end of the shaft, said shaft being journaled for rotation in said bearing hole, a line anchoring limiting cleat carried by said reel, circumferentially spaced radial fins carried by said reel and serving as selectively usable detents, and a lug fixed in said chamber, said lug serving as a holding catch with which a selected one of said relatively movable detents may be releasably and temporarily engaged, said chamber being of a length and cross-section greater than the length and cross-section, respectively, of the reel, and said reel being movable up and down in the chamber relative to the chamber so that said detent may clear and be disengaged from said catch.

2,860,443
ANIMATION ATTACHMENT FOR MINNOW BAIT
Earle W. Robinson, Oakland, Calif.
Application May 9, 1955, Serial No. 506,767
1 Claim. (Cl. 43—44.4)



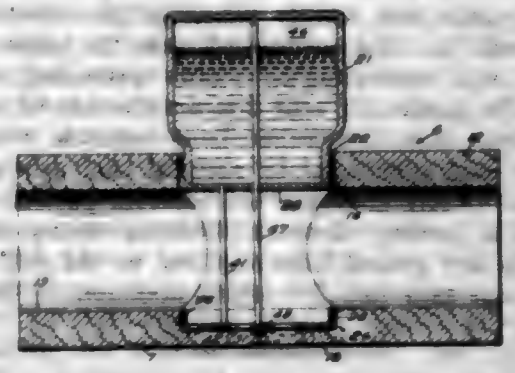
An attachment for dead bait comprising an animating plate substantially ovoid in plan, said plate having an aperture proximate its center, said aperture defining an elongate ovoid inverted relative to said plate to conform to and adjustably receive the dead bait, the wider extremity of said plate being dished to provide a control fin, the remainder of said plate being substantially flat, and at least one flange extending rearwardly from a segment of the periphery of said aperture and conforming to the shape of said segment, said flange being formed with a pin-receiving perforation to secure the attachment to a dead bait.

2,860,444
MINNOW VENDER
Edward V. McHugh, Mitchell, S. Dak., assignor of forty-nine percent to Frank Wisner and H. R. Kibbee, Mitchell, S. Dak.
Application May 7, 1957, Serial No. 657,559
7 Claims. (Cl. 43—56)



1. A vender for live bait and the like, said vender comprising an elongated tank, a cover on said tank, said cover having a dispensing opening, a conveyor mounted within said tank, water within said tank, a plurality of containers at least partially submerged in said water and suspended from said conveyor, and means connected to said conveyor for operating said conveyor to progressively align said containers with said dispensing opening for removal through said dispensing opening.

2,860,445
RODENT EXTERMINATING DEVICE
Herschel Yates, Vacaville, Calif.
Application November 4, 1955, Serial No. 544,925
9 Claims. (Cl. 43—131)



1. A device of the character described including a longitudinally extending member having an axial bore therethrough, a transverse bore in said member and terminating subjacent said longitudinal bore and defining a well, a container disposed in said transverse bore and positioned over said longitudinal bore, a feed pipe from said container extending along said transverse bore and terminating subjacent the longitudinal bore in said well, a vent pipe extending from said container to said well, and means for selectively opening and closing said vent tube.

2,860,446
MARIONETTE FIGURE ASSEMBLY
Dorothy F. Williams, Independence, Mo.
Application February 1, 1957, Serial No. 637,781
3 Claims. (Cl. 46—126)

1. In a marionette figure assembly, the combination with a marionette figure including a body having spaced shoulders, a movable head projecting from said body intermediate said shoulders, a jointed arm positioned adjacent to and carried by each of said shoulders, a jointed

leg positioned on each side of said body and dependingly carried by said body, and an actuating cord having one end attached to each of a pair of opposed points of said head, to each of said shoulders, to each of said arms, and to each of said legs, a horizontally disposed disc positioned in superimposed spaced relation with respect to said figure head, the other end of each of the head-attached cords being dependingly secured to said disc at diametrically opposed points with the other end of each of said shoulder-attached cords being dependingly secured to said disc at spaced points lying along a line extending between said diametrically opposed points, a bar positioned above said disc on one side of and extending parallel to said line and normally resting upon said disc,

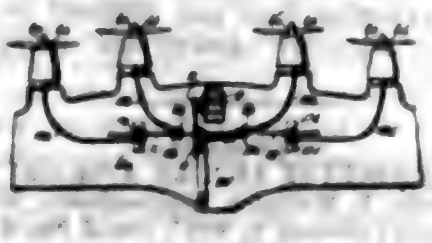
the portion adjacent the other end of each of said leg-attached cords extending slidably through said disc and said bar adjacent the ends of the latter, hand actuable means attached to said other end of each of said leg-attached cords and loosely engaging the adjacent portion of said bar, the portion adjacent the other end of each of said arm-attached cords extending slidably through the portion of said disc on the side of said bar remote from said line, other hand actuable means attached to said other end of each of said arm-attached cords and loosely engaging the adjacent portion of said disc, and a holding element extending across said disc parallel to and spaced from said bar on the side of said bar adjacent said line for accommodation of the hand of a user.

2,860,447

TOY AIRCRAFT

Helmrich Müller and Alexander Girz, Nurnberg, Germany, assignors to Schreyer & Co., Nurnberg, Germany, a corporation of Germany

Application July 10, 1957, Serial No. 671,002
Claims priority, application Germany July 27, 1956
9 Claims. (Cl. 46—243)



1. Toy aircraft, comprising a fuselage and a plurality of propellers and ground-travel gear, a drive for said propellers and travel gear, said drive being mounted in said fuselage, transmission shaft means with which said drive is drivingly connected, said shaft means having a plurality of pinions and being axially displaceable, spur gears connected with said respective propellers for driving them, said pinions being sequentially engageable with said spur gears by axial displacement of said shaft means, and control means operatively connected with said transmission shaft means for displacing it, the tooth face length and mutual longitudinal spacing of respective ones of said pinions and spur gears being arranged so that on axial displacement of said shaft means respective ones of said pinions and spur gears will mesh in time sequence to thereby start said propellers in time sequence and for maintaining each of said propellers in rotation once it has started and during the starting and continued rotation of subsequent ones of said propellers.

2,860,448

PROCESS FOR RECLAIMING AND IMPROVING SALINE AND ALKALINE SOILS

Fred M. Carnes, Yuma, Ariz.

No Drawing. Application April 11, 1955
Serial No. 500,703
5 Claims. (Cl. 47—58)

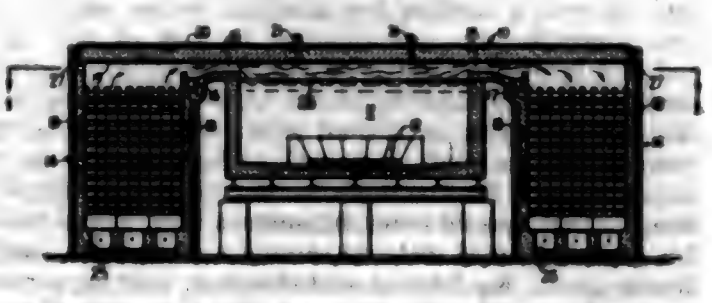
1. In a method of reclaiming and improving saline and alkaline soils, the step of adding to the soil a product including the combination of: bis (2-ethylhexyl) sodium sulfosuccinate, guar gum, a preservative, calcium lignosulfonate, and at least one organic acid; said product being effective as a unit in saline and alkaline soils to improve soil structure and promote plant growth.

2,860,449

CONTINUOUS GLASS MELTING FURNACE

Elisha W. Paxton, Columbus, Ohio, assignor to Thermal Engineering Company, Columbus, Ohio, a partnership of Ohio

Application July 7, 1955, Serial No. 520,477
9 Claims. (Cl. 49—54)



1. A furnace for the continuous production of molten silicates comprising, in combination, a rectangular melting and refining basin for containing a bath of said silicates and including a first firing port across substantially the entire length of a first side of said basin and a second firing port across substantially the entire length of a second side of said basin opposite said first side; firing means for producing a flame blanket alternatively originating at said ports and extending over substantially the entire surface of said bath; and a submerged throat through a third side of said basin, said throat including an inlet underlying the paths of said flame blankets.

2,860,450

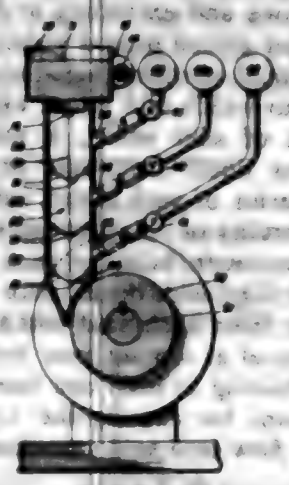
METHOD FOR COATING GLASS FIBERS

James W. Case, Fairfax, Va.

Original application February 25, 1953, Serial No. 338,924. Divided and this application January 10, 1956, Serial No. 558,391
3 Claims. (Cl. 49—77)
(Granted under Title 35, U. S. Code (1952), sec. 266)

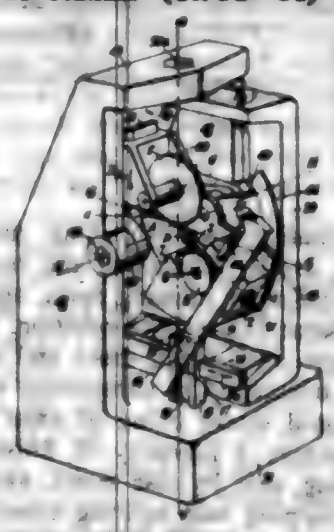
1. A method of intimately bonding a coating to glass fibers comprising the steps of incorporating an impurity

in the glass melt, and drawing the fibers in a nascent state from the melt through an atmosphere containing



particles of a coating material, said impurity being chosen of a material readily bondable with the coating material.

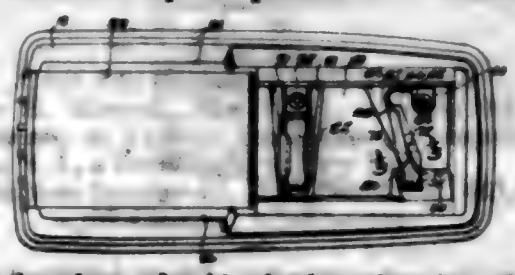
2,860,451
GEAR GENERATING MACHINES
Thomas Meyrick Deakin, London, England, assignor to Deakin Gears Limited, London, England, a company of Great Britain
Application January 24, 1952, Serial No. 267,986
Claims priority, application Great Britain January 31, 1951
13 Claims. (Cl. 51—56)



3. In a gear generating machine for forming bevel gears, a frame, a sub-frame mounted on said frame, a work spindle mounted on said sub-frame and adapted to have a workpiece secured thereto, a tool mounted on said frame, a generating roll mechanism including a first reciprocable slide mounted on said sub-frame and operatively connected to said work spindle, the movement of said first slide being directly proportional to the angular displacement of said workpiece about the axis thereof, a disc mounted on said frame and being concentric with the axis about which the axis of said workpiece is bodily angularly displaceable with respect to said tool, a second reciprocable slide mounted in said sub-frame and secured to said disc, means for compounding the displacement of said slides in accordance with the cone angle of said workpiece, and means for reciprocating one of said slides to produce the desired generating roll of said workpiece relative to said tool.

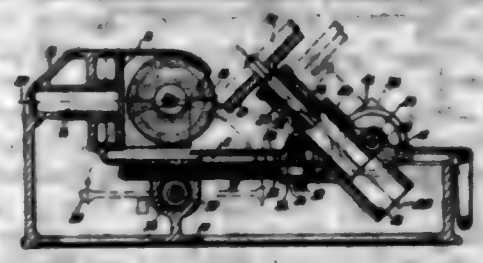
2,860,452
KNIFE SHARPENER
William A. Lainz, Riverside, Ill.
Continuation of application Serial No. 524,360, July 26, 1955. This application August 19, 1957, Serial No. 678,991
14 Claims. (Cl. 51—182)

11. In a knife and scissors sharpener having a motor, a housing and an abrasive wheel rotatable by said motor, a circumferential edge on said wheel having a predetermined taper relative to the axis of said wheel, a pair of substantially spaced parallel shoulders forming a guide way in said housing extending into partially overlying relation with said tapered portion at a predetermined



angle to the plane of said wheel, and spring means secured at one end to the housing and extending along one of the shoulders adjacent to the wheel including an elongated depending flange adapted to bear resiliently against a blade inserted between said spring and one of said shoulders.

2,860,453
APPARATUS FOR CHAMFERING THE TEETH OF GEARS
Karl Frey, Goeppingen, Wuerttemberg, Germany, assignor to Gebr. Boehringer G. m. b. H., Goeppingen, Wuerttemberg, Germany, a limited liability company of Germany
Application February 18, 1957, Serial No. 640,697
Claims priority, application Germany February 20, 1956
1 Claim. (Cl. 51—105)



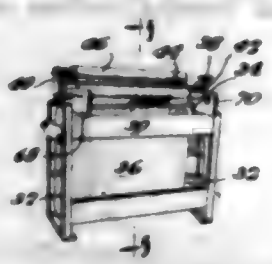
Apparatus for removing the burr from the ends of the teeth of a gear comprising a frame, a tool support mounted on said frame for rotary adjustment about a pivotal axis, a grinding spindle journaled in said support and extending at right angles to said pivotal axis, an electric motor mounted on said support for driving said grinding spindle, a grinding wheel fixed to said spindle and formed with a peripheral helical grinding thread, said frame forming a guideway extending parallel to said pivotal axis, a carriage slidably mounted on said guideway and formed with a guideway inclined to said first-mentioned guideway, a bushing slidably mounted on said guideway of said carriage, a work-spindle journaled in said bushing for free rotation therein and having an end section extending out of said bushing for holding a blank gear in position for engagement with the thread of said grinding wheel, means for adjusting said bushing along said guideway of said carriage, a threaded spindle extending parallel to said guideway of said frame, means for rotatably and non-shiftably mounting said threaded spindle in said carriage, a worm gear fixed to said threaded spindle, a worm journaled in said carriage in engagement with said worm gear for rotatably adjusting said threaded spindle to thereby effect fine adjustment of said carriage, a gear rotatably mounted in said frame in engagement with said threaded spindle, and manual means for turning said last-mentioned gear to thereby effect coarse adjustment of said carriage.

2,860,454
LEATHER SANDER
Raymond F. Pemberpaul, Robbinsdale, Minn.
Application October 3, 1955, Serial No. 538,110
19 Claims. (Cl. 51—139)

1. A spreading and feeding assembly for flexible sheet material comprising a frame, two rolls forming a bite

passage and engageable therein for preventing radial out- pass to a rejection zone, advancing the remaining groups

mounted on said frame, a spreading plate having a delivery edge positioned adjacent one roll, a shaft positioned between said edge and the bite of the rolls and parallel to their axes, a second shaft parallel to the first mounted



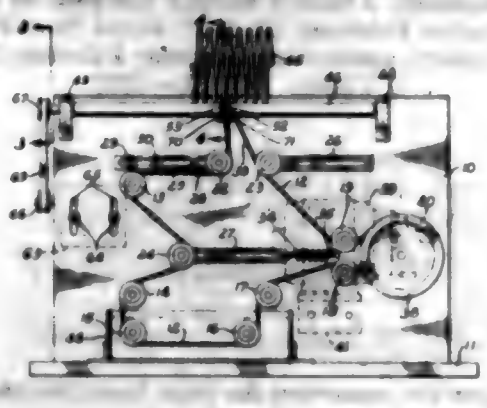
on the frame, and a plurality of belts entrained over said shafts, said shafts being so related that the belts pass close to the edge of the plate and engage a substantial portion of the convex surface of the adjacent roll.

2,860,455

COIL BUFFING PROCESS AND APPARATUS

Harry H. Houdyshell, Pasadena, and Clayton O. Griffith, Whittier, Calif., assignors to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California

Application August 5, 1957, Serial No. 676,998
11 Claims. (Cl. 51—139)



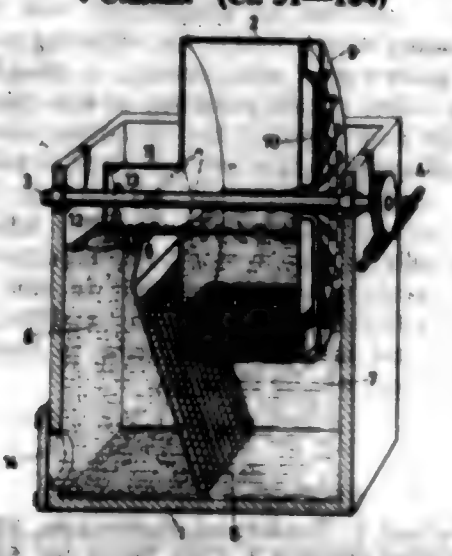
1. In a method of buffing the inner surface of a plurality of turns of a helical coil with an endless belt, the steps of: threading one end of the coil through the belt; driving the belt; forcing the inner surface of a portion of the moving belt against the inner surface of a portion of a turn of the coil; and rotating the coil about its axis.

2,860,456

WET TUMBLING IN ROTATING BARRELS

Carl-Axel Leopold Bergman, Atvidaberg, Sweden, assignor to Kemiska AB Cander, Stockholm, Sweden

Application March 13, 1956, Serial No. 571,218
Claims priority, application Sweden March 14, 1955
4 Claims. (Cl. 51—164)



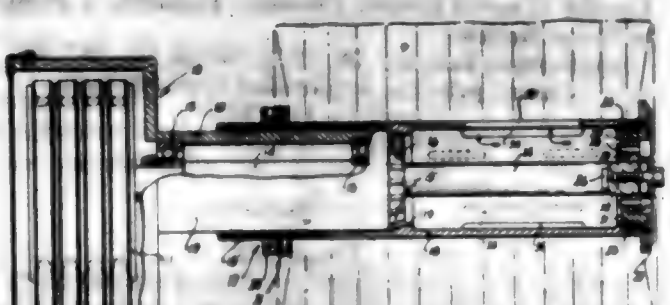
1. Apparatus for carrying out wet tumbling operations such as wet scouring, ball polishing, barrel nickel plating or the like in which work pieces are acted upon by a bath as well as by the abrasives included therein, said apparatus comprising a liquid vessel, a barrel rotatably mounted above and extending at least partially into said vessel, a filter placed in said vessel to provide an approximately vertical partition separating a first portion of said vessel into which said barrel extends from the remaining portion of said vessel, a pumping device arranged to convey liquid from said first portion of said vessel to the interior of said barrel, said pumping device comprising a plurality of compartments along the periphery of said barrel with holes in each of said compartments communicating with the exterior of said barrel and conduits leading from each said compartment to the interior of said barrel at a point near the axis of said barrel, said barrel having at least one opening near the axis thereof and means for causing the liquid flowing from said opening to flow into said remaining portion of said vessel.

2,860,457

WHEEL SPOOL ADAPTER

Glen A. Carlson, Bloomfield Hills, Mich.

Application March 5, 1956, Serial No. 569,568
16 Claims. (Cl. 51—168)



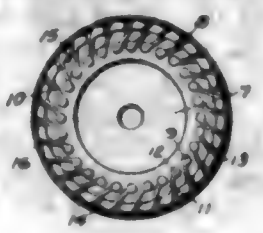
8. In combination with finishing machine structure having coaxial, axially telescoped and relatively rotatable inner spindle and outer housing parts, and bearing means mounting the same for relative rotation, a rigid rotatable cylindrical sleeve open at an inner end and dimensioned to be axially telescoped a substantial distance on said housing part, said sleeve being of axial length sufficient to drivingly receive a plurality of finishing disks in an axially extending, side by side series, and in a zone substantially overlapping said bearing means axially, means to secure said disks on said sleeve, and means removably mounting said sleeve on the relatively rotative part for rotation therewith.

2,860,458

ABRADING OR GRINDING WHEEL

Arthur Raske, Willoughby, Ohio

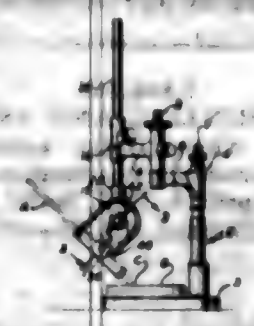
Application August 16, 1956, Serial No. 604,000
6 Claims. (Cl. 51—191)



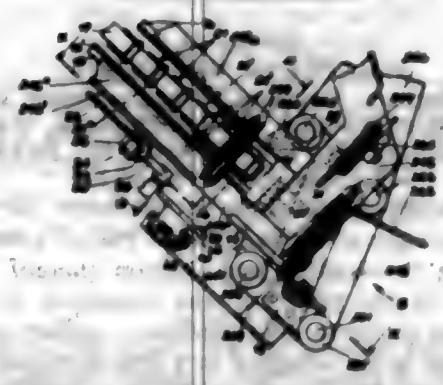
1. A grinding or abrasive wheel of the class described, comprising: a rigid rotatable wheel having inwardly from the periphery thereof a plurality of axially directed passages formed therethrough and arranged circumferentially in spaced relation and provided with chordally directed slots extending outwardly from the passages and opening through the periphery, said slots being of less thickness than the diameter of said passages; a flexible plate engageable in each of said slots; a bead on one end of each of said plates conforming in shape and size to the said

driven roller member, the web being adapted to pass cutting tool into the top of the bottle and across for

passages and engageable therein for preventing radial outward movement of the plates after insertion into the slots; an individual presser head on the opposite end of each of said plates and flexible relative thereto; and, an encircling band of abrasive or grinding material embracing said heads.

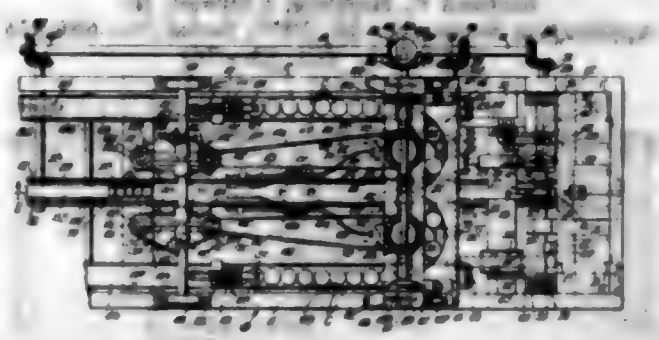
2,860,459
TOOL GRINDING MECHANISM
Wally J. Pwonnyk, Phoenix, Ariz.
Application June 6, 1958, Serial No. 740,333
3 Claims. (Cl. 51—221)

1. In tool sharpening mechanism, a base having a flat grinding stone on its upper face, an upright standard on said base and a hinged horizontal arm with a vertical hole in its free end and a vertical shaft slidable in said hole to provide horizontal motion at a plurality of levels at the lower end of said shaft, a tool holding chuck attached to the lower end of said shaft consisting of a boss and attaching plate having a finished vertical face, with a centrally disposed bolt hole, attached to the lower end of said shaft, a chuck body having a transverse opening and a flat under face and a vertical plate with a vertical friction face bearing on the face of said attaching plate and having a centrally disposed bolt hole, a bolt extending through the holes in said adjacent plates and a nut holding them together with frictional engagement, a lip formed along one edge of the under face of the chuck body having an under cut inner face to hold the side edge of a tool to be ground, and a clamp screw in the transverse opening in the base of the chuck body having a hook to engage the edge of a tool to be ground opposite to the edge held in said under cut groove of said lip, and a nut on said screw adapted to draw said hook toward the under cut groove in said lip.

2,860,460
CARTONING DEVICE
Adolf G. F. Rambold, Viersen, Germany, assignor to Teepack Spezialmaschinen, G. m. b. H., Viersen, Germany, a company of Germany
Application February 23, 1954, Serial No. 411,801
22 Claims. (Cl. 53—26)



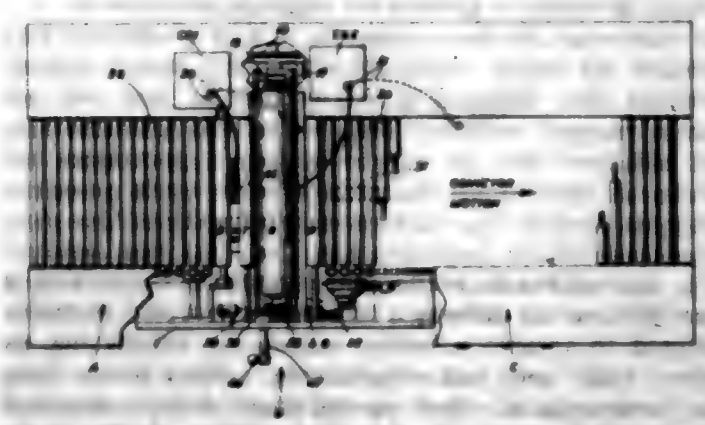
13. In the method of cartoning relatively thin flat packages each of substantially non-uniform thickness in stacks of a predetermined number the steps of, arranging said packages into groups which may or may not be of more nearly uniform thickness, sensing the thickness of each of said groups, diverting those groups not of proper thickness to a rejection zone, advancing the remaining groups group by group to a stacking zone until a stack of the predetermined size is assembled, and loading the stack in the stacking zone into a carton.

2,860,461
CAN PACKAGING APPARATUS
Lawrence E. Arneson, Morris, Ill., assignor, by mesne assignments, to Federal Paper Board Company, Inc., Bogota, N. J., a corporation of New York
Application January 21, 1955, Serial No. 483,349
27 Claims. (Cl. 53—56)



1. Apparatus for packaging a group of like objects in a paperboard container having side, top and bottom wall panels snugly encircling said group, comprising a conveyor feeding flat container blanks in the direction of the end to end dimension of said panels, means feeding a group of objects onto an inner panel of said blank, former elements acting to form said blank into a container in which said group is housed, said elements folding side wall panels and panels of said blank on either side thereof respectively upright and inwardly toward one another into generally parallel and overlapped relation to the sides of said group and to adjoining surfaces thereof, presser means, and means supporting said presser means adjacent the conveyor for travel in the direction of advancing movement of said container and for engaging said container adjacent the juncture of said side panels and said overlapped panels to press the container snugly against the group as said presser means travels with the container, the action of said presser means also inwardly depressing said side wall panels adjacent said overlapped panels at longitudinally spaced points intermediate the objects in the group.

2,860,462
MACHINE FOR WRAPPING BUNDLES OR STACKS OF NEWSPAPERS
Thomas Robert Sykes, Toronto, Ontario, Canada, assignor to The Toronto Star Limited, Toronto, Ontario, Canada, a corporation
Application August 11, 1955, Serial No. 527,735
15 Claims. (Cl. 53—66)



1. In a bundle wrapping machine, a conveyor for bundles to be wrapped and means for feeding a web of wrapping paper to the conveyor, said means comprising a driven roller member, a pressure member spaced from the

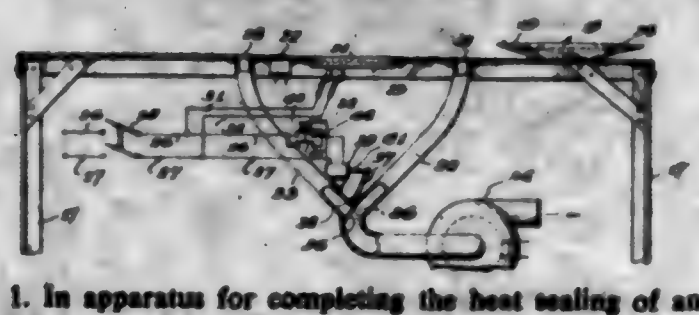
vation below said platform; cutting means disposed at member preventing internal access to said member from

plating or the like in which work pieces are acted upon

of said plates conforming in shape and size to the said

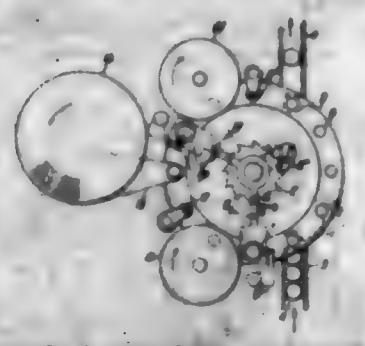
driven roller member, the web being adapted to pass between the driven roller member and the pressure member, means for causing the pressure member and the driven roller member to come into contact to grip the web of paper between them whereby the roller will feed the web to the bundle conveyor, and means operated by one of the above said members for gripping the web to hold it in position between the said members when they are apart.

2,860,463
PACKAGING MACHINE
Richard F. Hartwig, Chicago, Ill.
Application September 26, 1957, Serial No. 686,416
8 Claims. (Cl. 53—76)



1. In apparatus for completing the heat sealing of an article wrapped in a film of thermoplastic material where such material is initially wrapped about the article and sealed on itself with portions of said material protruding beyond the end of such article, a table over which said partly wrapped article is moved, an opening in said table adapted to be connected to means for causing air to be entrant at said opening, said protruding portion being adapted to move into said opening and to fold under as said partly wrapped article moves past said opening, a hot surface in said table surface arranged to heat said folded under portion and seal same against the already sealed film, a switch controlled by movement of said partly wrapped article, a second opening in said table, and means controlled by said switch for connecting said second opening to means for causing air to be entrant at said second opening whereby the other protruding portion moves into said opening and is folded under as said partly wrapped article moves past said second opening for further heat sealing.

2,860,464
AUTOMATIC BOTTLE FILLING MACHINE
Max Barthelemy, Deuil, France, assignor to Societe Parisienne d'Expansion Chimique S. P. E. C. I. A., Paris, France, a French body corporate
Application October 13, 1955, Serial No. 540,306
Claims priority, application France October 21, 1954
3 Claims. (Cl. 53—115)



1. An automatic bottle filling machine comprising a turntable; means defining a compartment in said turntable adapted to receive a bottle; means for introducing an empty bottle into and withdrawing a filled bottle from the compartment; three spaced-apart devices mounted above said turntable, the first device being adapted to introduce a wad of cotton wool into the bottom of the bottle, the second device being adapted to introduce a predetermined number of lozenges into the bottle, and the third device being adapted to introduce a wad of cotton wool into the top of the bottle; and means for imparting a step-by-step movement to the turntable whereby the compartment is moved into alignment below each of the said devices in turn; the said first and third devices comprising a hollow guide formed with a vertical slot therethrough, means for feeding a slub of cotton wool to the interior of the guide, a comb, teeth on said comb projecting through the said slot, means for reciprocating the teeth in the slot whereby to move the slub downwardly within the guide so that an end of the slub projects beneath the bottom of the guide, means for cutting off the projecting portion of the slub so as to form a wad, and means for introducing the wad into the bottle.

2,860,465
ARTICLE COUNTING AND ASSEMBLING
Harry A. Welter, Akron, Ohio, assignor to Diamond Gardner Corporation, a corporation of Delaware
Application April 15, 1957, Serial No. 653,928
13 Claims. (Cl. 53—197)

12. An apparatus for counting and assembling slotted articles comprising a movable conveyor means, a holder supported by and movable with said conveyor means, said holder including a blade-like portion adapted to receive and engage slotted articles, a first dispensing station disposed along the path of movement of said holder, means at said first dispensing station for dispensing a predetermined number of slotted articles to said holder, a second dispensing station disposed adjacent the path of movement of said holder, means at said second dispensing station for dispensing securing means to the slots of a plurality of slotted articles positioned on said holder to unite said plurality of articles together as a group, and means for intermittently moving said conveyor means to index said holder successively to said first and second dispensing stations.

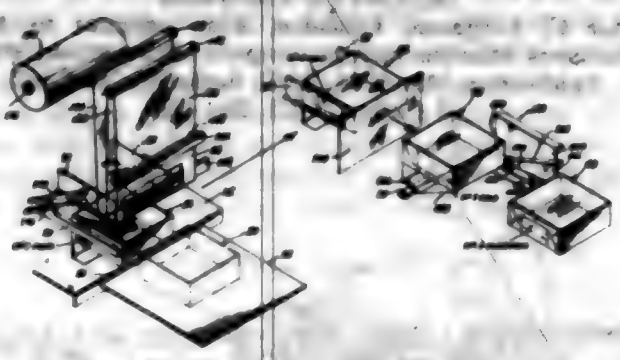
2,860,466
WRAPPING MACHINES
Marvin L. Ingram, Portland, Oreg., assignor to Bellingham Steel Products, Inc., Bellingham, Wash.
Application May 8, 1956, Serial No. 583,415
12 Claims. (Cl. 53—223)

1. In a wrapping machine, a platform for disposing thereon a package to be wrapped; a roll of wrapping material having the leading end portion thereof extending transversely of the platform and extending from above said platform to below said platform; pusher means urging a package to be wrapped in a first direction and into and past the vertical line of extension of said end portion of wrapping material, the package to be wrapped carrying with it wrapping material under the advancing portion of its bottom, over its advancing edge, and over its top; carriage means mounted for vertical travel and engaging a portion of the wrapping material behind the package to be wrapped and urging a bight of the same to an ele-

said groups, diverting those groups not of proper thick-

wrapping paper to the conveyor, said means comprising a driven roller member, a pressure member spaced from the

vation below said platform; cutting means disposed at a location below said platform, severing said bight portion of wrapping material from said roll of wrapping material, leaving the then trailing end portion of the wrapping material over the package hanging downwardly from the package and leaving the leading end portion of wrapping material attached to the roll at an elevation below the platform; traveling table means transferring said pack-



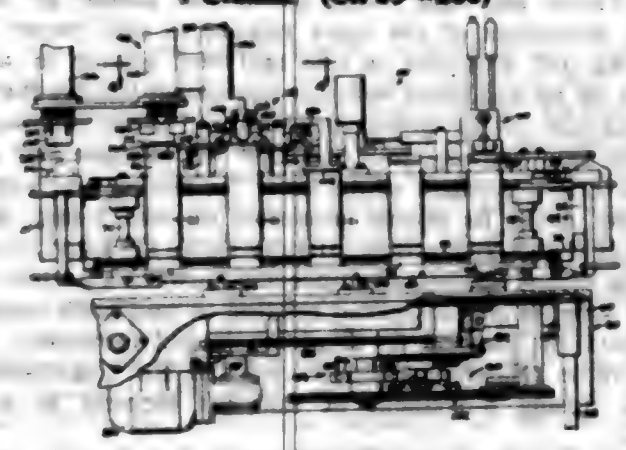
age and the wrapping material thereon in a second direction and at substantially right angles to said first direction of travel and at substantially the same elevation; and ejector means transferring said package and the wrapping material thereon in a third direction of travel and at substantially the same elevation as in the first and second directions of travel and in a direction substantially directly opposite to the first direction of travel.

2,860,467

CONTAINER OPENING MECHANISM

Clarence M. Clemens, Livonia, and Clarence W. Jane, Detroit, Mich., assignors to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan

Application September 15, 1955, Serial No. 534,513
7 Claims. (Cl. 53—266)



6. A multiple station machine for filling an upright gable top paper container the gable top closure of which includes a pair of closure flaps on opposite sides thereof, said machine comprising, in combination, means for intermittently conveying a container through a series of dwell stations, means at one of said stations for engaging the gable top closure of the container to separate the flaps, means at a succeeding station for engaging the facing sides of said flaps and maintaining a minimum spacing between them, means at said second mentioned station for spreading the portion of the gable top intermediate the flaps, and means at succeeding stations for filling and closing the opened containers.

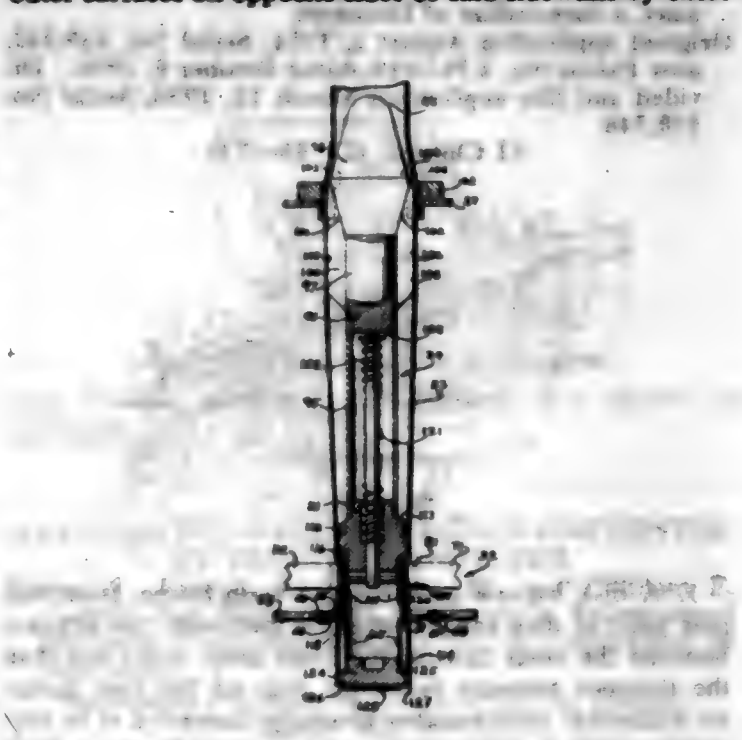
2,860,468

BAND APPLYING DEVICE AND METHOD

John G. Aguilar, Concord, and Harold B. Rice, Walnut Creek, Calif., assignors to John Burton Machine Corporation, Concord, Calif.

Application October 26, 1956, Serial No. 618,462
18 Claims. (Cl. 53—291)

1. The method of longitudinally feeding an elongated tubular member relative to an obstruction within said member preventing internal access to said member from one end thereof, comprising the steps of: gripping a portion of the wall of said member between inner and outer surfaces on opposite sides of said sidewalls by exert-



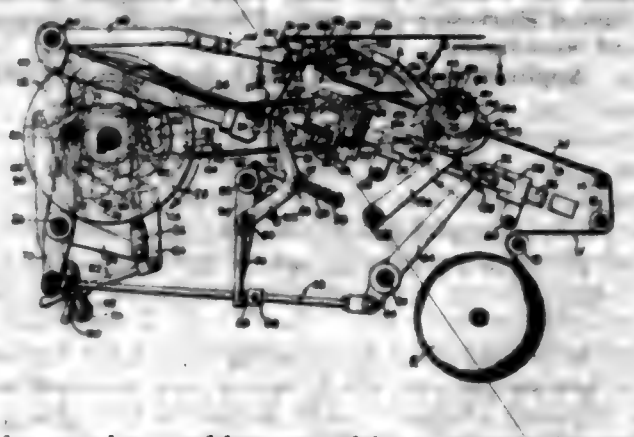
ing opposed outwardly and inwardly directed forces on said surfaces as one unit, and relatively moving said surfaces and said obstruction as another unit longitudinally of said member.

2,860,469

WRAPPER FEED MECHANISM FOR WRAPPING MACHINES

Leo R. Bell, Snyder, N. Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Application February 25, 1954, Serial No. 412,421
8 Claims. (Cl. 53—389)

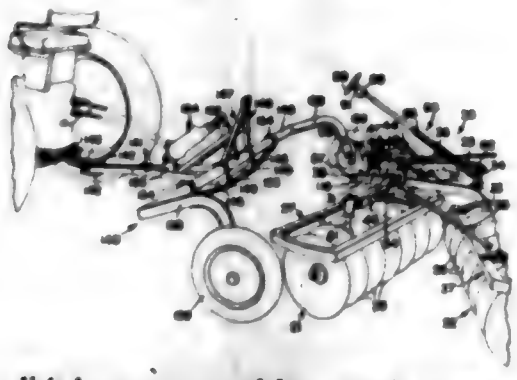


1. A wrapping machine comprising a source of supply of a continuous web of wrapping material, an article receiving station, an article conveyor, means for draping the free end of said wrapping material web between said receiving station and said conveyor, support means for supporting a reserve supply of web available for wrapping about an article, means for moving an article from said receiving station against said draped wrapping material web and onto said conveyor, mechanism operative during to the movement of said article with said wrapping material onto said conveyor for moving said support means to pay out said reserve supply of wrapping material web for arrangement about said article and means for subsequently moving said support means, during the operation of said conveyor, to tighten said wrapping material web about said draping means, thereby controlling the free end of said wrapping material web.

the third device being adapted to introduce a wad of

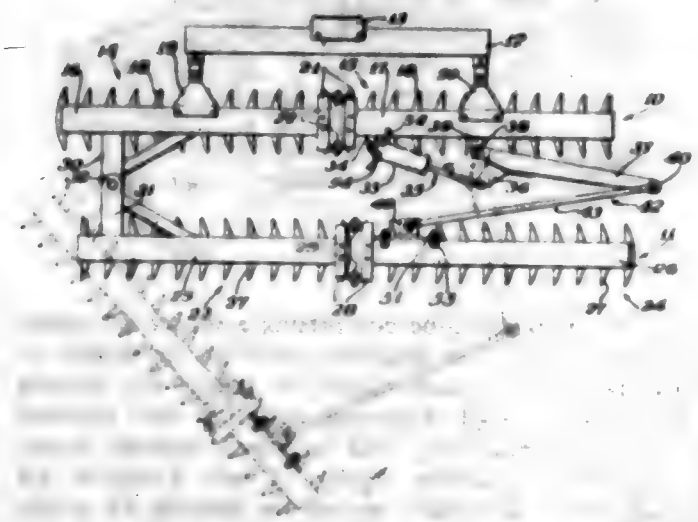
a portion of the wrapping material around the package to be wrapped and urging a bight of the same to an ele-

2,860,470
DISK HARROW
William P. Oehler and Charles H. Youngberg, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Original application August 2, 1951, Serial No. 239,922, now Patent No. 2,765,610, dated October 9, 1956. Divided and this application March 12, 1956, Serial No. 570,748
11 Claims. (Cl. 55—73)



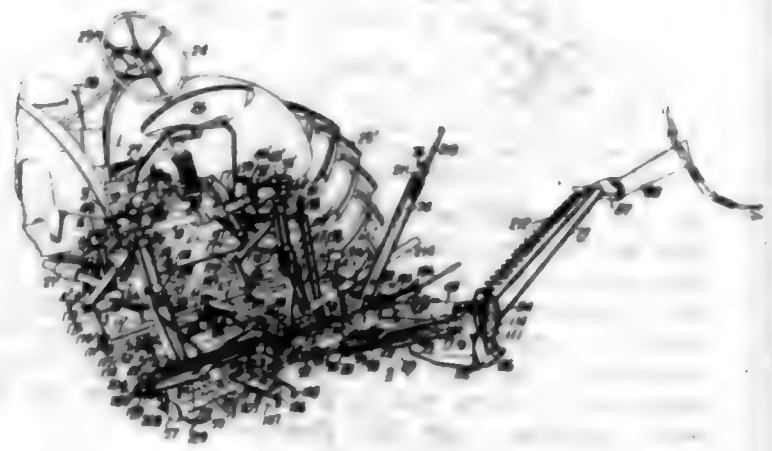
1. A disk harrow comprising a main frame, front and rear pairs of disk gangs connected therewith, the distance between the outer ends of the front gangs being less than the distance between the outer ends of the rear gangs, an adjustable strut member pivotally connected at its rear portion with the rear portion of said main frame, a hitch device having lower laterally spaced attachment means adapted to receive the forward portion of said main frame and an upper section adapted to receive the forward portion of said strut member, and a wheel frame pivotally connected with said hitch device and including a pair of ground engaging means spaced apart laterally farther than the distance between the outer ends of said front gangs and less than the distance between the outer ends of the rear gangs.

2,860,471
DISK HARROW TORSION CONTROL APPARATUS
Kimo M. Welch, Palo Alto, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application August 21, 1957, Serial No. 679,397
9 Claims. (Cl. 55—81)



1. In an offset disk harrow having front and rear transversely disposed disk-carrying sections pivotally connected at one end for horizontal swinging from a substantially parallel closed position to a relatively angled open position, connecting linkage between the other ends of the sections including a horizontal bar operatively connected to said sections for horizontal swinging therewith, the connection of said bar to one of said sections comprising vertically extending pivot means on the bar, a bracket affixed to said last-mentioned section adapted to pivotally receive said pivot means, and means cooperative between said bracket and said pivot means effective to automatically twist said bar about an axis generally perpendicular to said pivot means when said sections move from closed to open position.

2,860,472
SUSPENSION SYSTEM FOR TRACTOR MOUNTED MOWERS
Rector C. Ferguson, Gadsden, Ala., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application March 11, 1957, Serial No. 645,362
15 Claims. (Cl. 56—25)



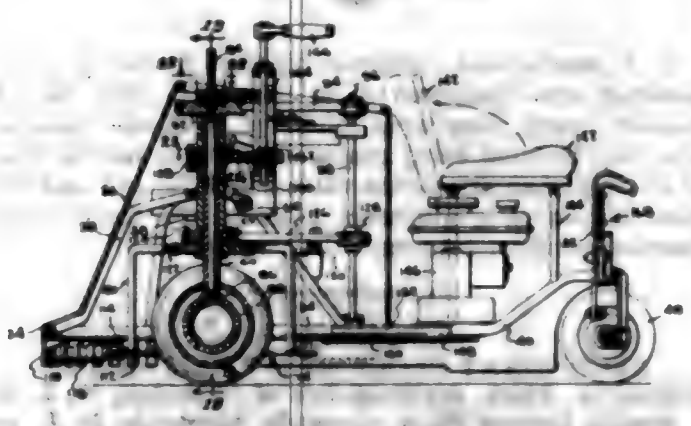
1. In combination with a tractor having a laterally rigid up and down movable implement lift element and a single point hitch member, an implement frame having forward and rearward portions, hitch means interposed between said forward portion of said frame and said hitch member providing a single draft transmitting connection between said tractor and said frame which will permit up and down movement of the latter relative to said tractor, a working tool mounted on said rearward portion of said frame for up and down swinging movement relative thereto, laterally stable power transmitting means interconnecting said working tool and said lift element and responsive to movement of the latter for raising said working tool about its pivotal mounting on said frame, and extensible and contractible laterally stable lift force transmitting means operatively connected between a portion of said frame located in spaced relation to said hitch means and said lift element to eliminate lateral movement of said frame relative to said tractor and for transmitting frame raising movement of said lift element to said frame.

2,860,473
VARIABLE SPEED ROTARY MOWER
William C. Wehner, Grosse Pointe, Mich., assignor, by mesne assignments, to Moto-Mower, Inc., a corporation of Delaware
Application April 4, 1955, Serial No. 498,997
3 Claims. (Cl. 56—25.4)

1. In a power lawn mower, in combination, a deck member having a horizontal portion, a marginal skirt portion and a downwardly extending conical portion at the center thereof; drive wheels mounted on said skirt portion; an engine mounted on said deck over said conical portion and having a drive shaft extending down-

wardly through said conical portion; a cutting blade mounted on said drive shaft below said conical deck portion; a driving pulley mounted on said drive shaft within said conical deck portion; said deck having an elongated, longitudinally disposed, depressed portion extending rearwardly from said conical portion; a speed reduction gearbox mounted on the underside of said depressed deck portion; an output shaft extending from each side of said gearbox; means drivingly connecting said output shaft with said drive wheels; an input shaft extending upwardly from said gearbox and through said depressed deck portion; a driven pulley mounted on the upper end of said input shaft in substantial horizontal alignment with said driving pulley; a belt connecting said pulleys, said pulleys and belt being disposed within said depressed deck portions.

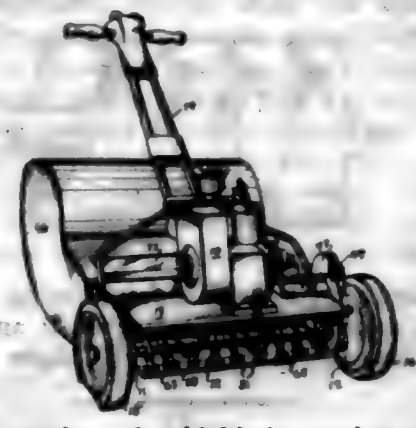
2,860,474
DRIVE FOR RIDING, DISK TYPE LAWN MOWER
Lawrence Cyr, Houston, Tex.
Application October 15, 1957, Serial No. 690,253
3 Claims. (Cl. 56—25.4)



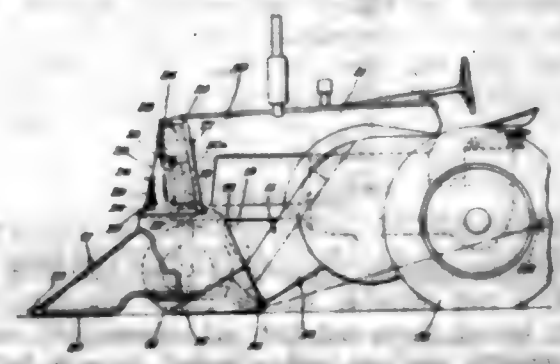
1. In a power lawn mower, a horizontally disposed frame having a forward end and a rearward end, a pair of ground-engaging wheels supporting the rearward end of said frame, a vertically disposed housing fixedly carried by said frame adjacent the forward end thereof, a rotatable sleeve positioned within said housing and connected to said housing for vertical up and down movement, a steerable wheel assembly including an axle and a ground-engaging wheel carried by said axle positioned within said frame adjacent the forward end thereof and connected to said sleeve for movement with the latter, a rotatable driven shaft extending through said sleeve and having the lower end exteriorly of and below the lower end of said sleeve and having the portion adjacent the upper end projecting above the upper end of said sleeve, means drivably connecting the lower end of said driven shaft to said axle, means on the projecting upper end of said shaft for imparting rotary movement to the latter, and a cutter blade assembly including a ring having a plurality of cutter blades projecting in radial spaced relation therefrom positioned so that the ring lies in a horizontal plane adjacent to and spaced above the lower end of said frame and encircles said steerable wheel assembly and connected to said sleeve for rotary movement about said sleeve as an axis.

2,860,475
POWER LAWNMOWER
Alphonse J. Richard, Seattle, Wash.
Application September 4, 1956, Serial No. 607,724
7 Claims. (Cl. 56—26)

1. In a lawnmower, a journal-mounted shaft, a power transfer wheel rigidly mounted at one end of the shaft, a collar threadably received on the other end of the shaft, a plurality of blade carriers sleeved on the shaft and independently turnable on the shaft relative to one another, spacers between said blade carriers, and a spring seated against said collar and yieldingly urging said blade carriers and spacers toward said wheel for yieldingly resisting turning of said blade carriers relative to said shaft.



2,860,476
ARTICULATED RADIATOR SHIELD FOR CENTER DIVIDER OF CORN PICKER
Robert L. Francis, East Moline, Ill., and William E. Castrey, San Diego, Calif., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application February 12, 1958, Serial No. 714,886
5 Claims. (Cl. 56—119)



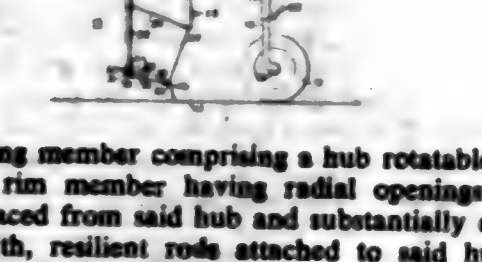
1. In a tricycle type tractor having a narrow longitudinally extending body supported at its front by a narrow steerable wheel structure and at its rear by widely spaced traction wheels, a harvester mounted on said tractor between one traction wheel and the body and having a forwardly extending gathering unit positioned closely adjacent the body of the tractor and terminating adjacent the steerable wheel structure, a crop raising and deflecting means forming a part of said corn picker and extending around said steerable wheel structure, said crop raising and deflecting means extending forwardly and downwardly for closely following the ground and for engaging crops to be harvested and directing them into the path of the gathering unit, said entire harvester hingedly mounted on said tractor at the rear thereof and said crop raising and deflecting means hingedly mounted on said harvester at substantially the forward end thereof, and the device including a radiator shield hingedly mounted on said tractor in front of the tractor radiator and said crop raising and deflecting means having means sealingly engaging said radiator shield whereby regardless of the angular inclination of the crop raising and deflecting means about its forwardly positioned hinge the radiator shield will substantially seal any opening between the crop raising and deflecting means and the radiator shield.

2,860,477
MULTIPLE BLADE OSILIQUE VEGETATION CUTTER
John A. Chamblin, Lookout Mountain, Tenn.
Application May 27, 1955, Serial No. 511,551
3 Claims. (Cl. 56—295)

1. An apparatus for scything growing vegetation in alternately inclined sweeps comprising a driven shaft,

to pivotally receive said pivot means, and means co- ical portion and having a drive shaft extending down-

a plurality of rectangular, plane cutter blades mounted loosely thereon and spacers mounted on the shaft be-



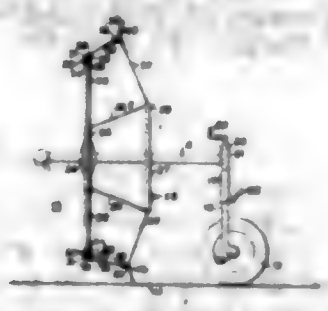
tween adjacent blades, the spacers having faces abutting the blades at acute angles to the shaft and maintaining the blades parallel to each other at those angles.

2,860,478

RAKING DEVICE WITH A RAKING MEMBER ADAPTING ITSELF TO THE GROUND

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors, by mesne assignments, to C. van der Lely Canada Ltd., Ottawa, Ontario, Canada, a corporation of Canada

Application November 9, 1953, Serial No. 390,981
Claims priority, application Netherlands October 16, 1953
28 Claims. (Cl. 56—377)



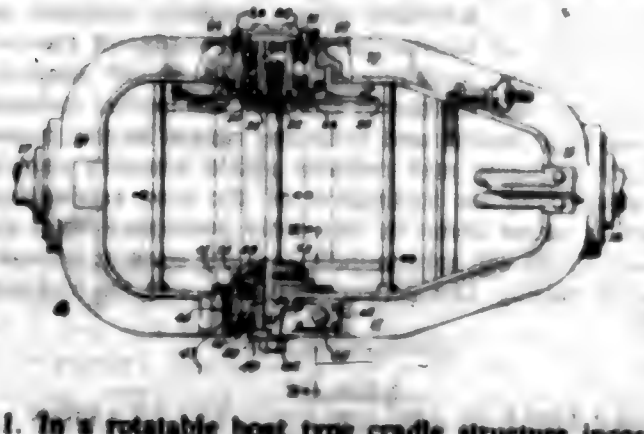
1. A raking member comprising a hub rotatable about an axis, a rim member having radial openings therethrough, spaced from said hub and substantially concentric therewith, resilient rods attached to said hub and each having a first portion extending through said openings in said rim member, said resilient rods each having a second portion on the outside of said rim member extending substantially normally to said first portion, and said resilient rods each having a third raking portion extending outwardly from said second portion.

2,860,479

REEL SUPPORTING CRADLES

William W. Wheeler, Massena, N. Y., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 16, 1953, Serial No. 398,570
3 Claims. (Cl. 57—65)



1. In a rotatable boat type cradle structure incorporating a pair of rotatable pintles disposed in axial alignment in oppositely disposed legs of the cradle, a tension bolt tie between the pintles urging the same into clamping relationship on a reel supported therebetween, one of said pintles being secured against other than rotational movement in its supporting cradle leg, the other pintle being initially movable in its supporting cradle leg coaxially towards and away from the first-mentioned pintle into and out of clamping relationship on the reel rotatably supported therebetween, and locking means for securing the second-mentioned pintle against relative movement other than rotational movement in its supporting cradle leg.

2,860,480

REGENERATED CELLULOSE STRUCTURES AND PROCESS FOR PRODUCING THEM

Norman Louis Cox, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application April 18, 1956, Serial No. 579,063
8 Claims. (Cl. 57—140)

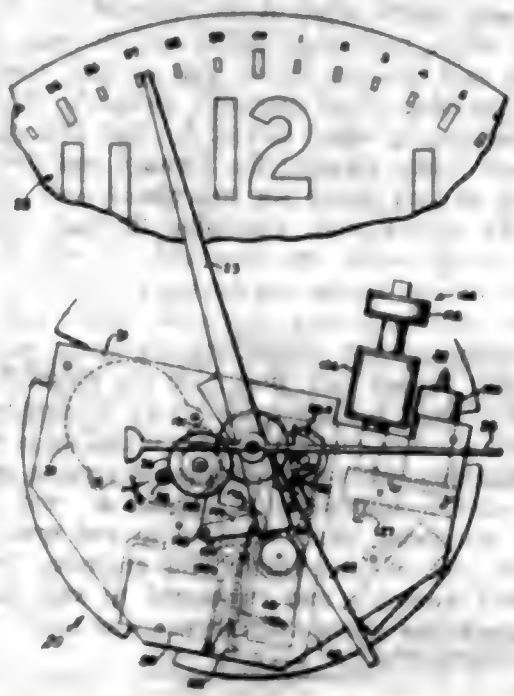
1. A regenerated cellulose filament having a cross-sectional area composed of at least 75% skin, the remainder being core; when subjected to X-ray examination, said filament being characterized by a lateral order of 15–40 and an orientation value above 12; and said filament displaying a minimum point in the force versus temperature curve between 60° C. and 95° C.

2,860,481

SECONDARY CLOCK RESETTING MEANS

William A. Black, deceased, late of Montclair, N. J., by Marion Bennett Black, executrix, Montclair, N. J., assignor to General Time Corporation, New York, N. Y., a corporation of Delaware

Application March 28, 1957, Serial No. 649,827
14 Claims. (Cl. 58—34)



1. In a secondary clock energized from an A. C. supply line, the combination comprising a synchronous motor, hour and minute hands driven by said motor, means for positioning said minute hand at a predetermined reference position, means for positioning said hour hand at a predetermined reference position, an electromagnet, means for supplying electrical control impulses to said electromagnet, first and second movable armatures for cooperating therewith, an armature carrier for mounting said armatures and arranged for cyclical movement

casing which surrounds at least the inlet and outlet of said cylindrical member to close said here, a plurality of

other, spacers between said blade carriers, and a spring

alternately inclined sweeps comprising a driven shaft,

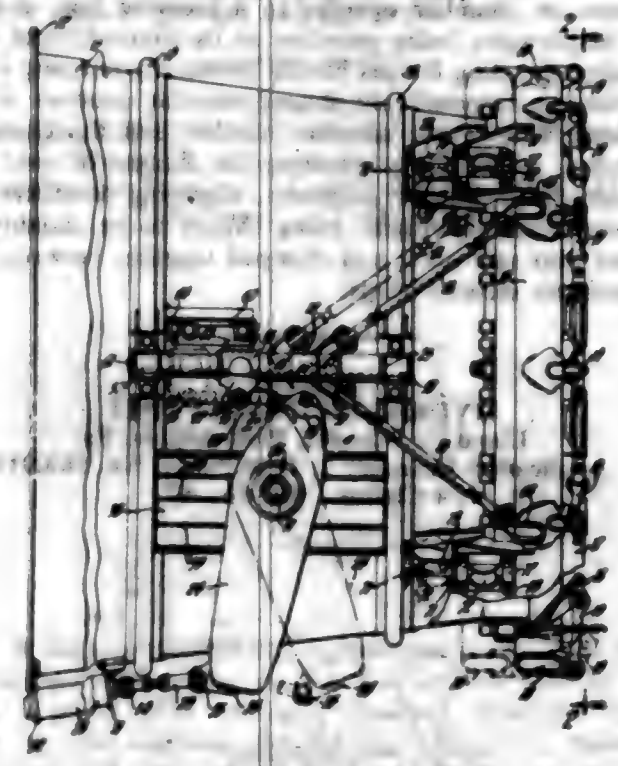
so that the first armature is opposite said electromagnet at the beginning of a cycle and said second armature is opposite said electromagnet at a predetermined later time in the cycle, means including a first single-cycle clutch driven by said motor and arranged for actuation by said first armature for driving said armature carrier and said minute hand positioning means through a single cycle of operation upon receipt of a first control impulse by said electromagnet, and means including a second single-cycle clutch driven by said motor and arranged for actuation by said second armature upon receipt of a second control impulse at said predetermined later time for driving said hour hand positioning means.

2,860,482

VARIABLE NOZZLE ACTUATING MECHANISM

Arthur W. Gardiner and George M. Ferry, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 18, 1951, Serial No. 206,624
5 Claims. (Cl. 60—35.6)



1. An operating mechanism comprising, in combination, a body, a control ring encircling the body and mounted for reciprocation axially of the ring, two coupling members mounted for reciprocation axially of the ring at opposite sides of the body, two links connecting each coupling member to spaced points on the ring, a yoke lever pivoted on the body, means connecting the yoke lever to the coupling members for concurrent reciprocation thereof, and means for moving the yoke lever.

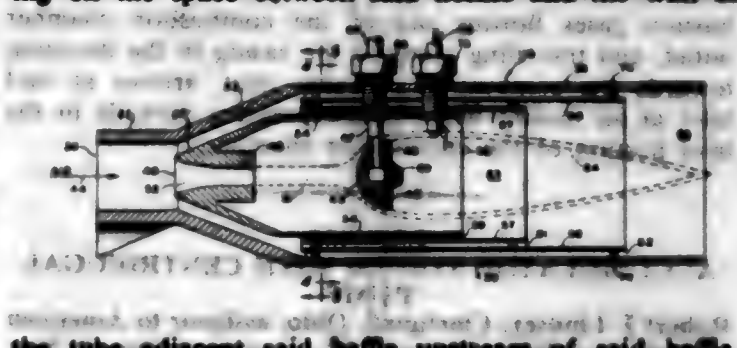
2,860,483

APPARATUS FOR BURNING FLUID FUEL IN A HIGH VELOCITY AIR STREAM WITH ADDITION OF LOWER VELOCITY AIR DURING SAID BURNING

Homer M. Fox, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application January 2, 1953, Serial No. 329,296
4 Claims. (Cl. 60—39.65)

1. Combustion apparatus for burning a fluid fuel in a moving stream of a combustion supporting gas comprising in combination a body having a conduit therethrough provided with an inlet and an outlet for said gas, a baffle disposed in said conduit having a streamlined end disposed toward said inlet and an abruptly terminating non-streamline end disposed toward said outlet, a plurality of spaced concentric tubes surrounding and spaced from said baffle and disposed in and spaced from the walls of said conduit, said tubes overlapping in longitudinal extent along the axis of said conduit with the tubes terminating progressively closer to said outlet in the same order as their distance from said baffle, a converging nozzle with an inlet disposed in the inlet end portion of said conduit and with an outlet disposed to discharge a reduced-area stream of said gas of higher velocity than enters said nozzle against said streamlined end of said baffle, means sealing off the space between said nozzle and the wall of



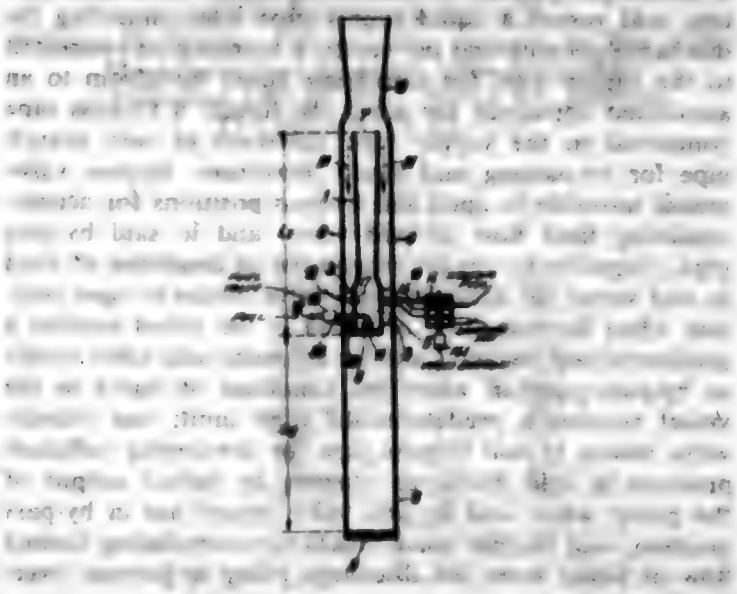
the tube adjacent said baffle upstream of said baffle, said conduit enlarging in area downstream of the inlet of said nozzle, and said tubes and conduit being disposed in said enlarged portion to lower the velocity of said gas passing around said nozzle and reunite the same downstream of said baffle with the gas that has passed through said nozzle, means for injecting said fluid fuel into the space downstream of and adjacent to said baffle, and means to burn said fuel and said combustion supporting gas in said body downstream of said baffle.

2,860,484

APPARATUS FOR CAUSING INTERMITTENT COMBUSTION OF A FUEL IN A CHAMBER AS A MEANS OF PRODUCING USEFUL ENERGY

Paul Schmidt, Munich, Germany

Application June 4, 1956, Serial No. 589,199
11 Claims. (Cl. 60—39.77)



1. Apparatus for the production of useful mechanical and/or thermal energy by intermittent burning of a fuel mixture, comprising: an elongated combustion chamber with controlled inlet and open outlet; means connected to the combustion chamber, for the intermittent formation of a gaseous ignitable mixture in the inlet portion of the combustion chamber, the mixture being formed with the use of a gaseous, oxygen-containing medium e. g. air, which is introduced through the controlled inlet of the combustion chamber into the inlet portion thereof; means controlled in timed dependence on the combustion operations, for the periodic ignition of the fuel mixture formed intermittently in the combustion chamber; a

of said pintles being secured against other than rotational ing said armatures and arranged for cyclical movement

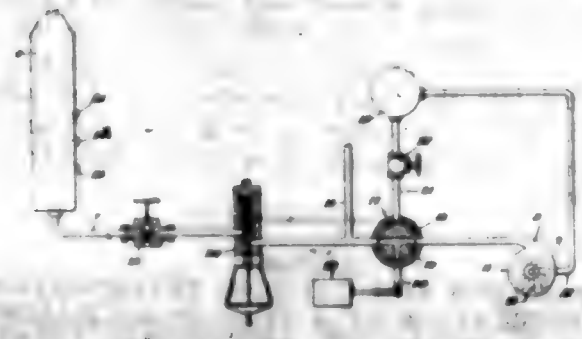
casing which surrounds at least the inlet and outlet of the combustion chamber, which bounds a chamber forming outside the combustion chamber a means of communication between the outlet and inlet of the combustion chamber, and which at its front end comprises an inlet aperture for a gaseous oxygen-containing medium suitable for forming the ignitable mixture, and wherein the length of the said casing between the combustion chamber outlet and combustion chamber inlet is so calculated that a pressure wave, produced in the gaseous medium within the casing by the pressure of the combustion gases flowing out of the combustion chamber outlet, and travelling along in the casing in the direction towards the combustion chamber inlet, arrives at said inlet at an instant when a low pressure prevails in the inlet portion of the combustion chamber.

2,860,486

ACCUMULATOR SYSTEM WITH CENTRIFUGAL PUMP

Robert J. Lindsey, Cincinnati, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application June 2, 1955, Serial No. 512,691
6 Claims. (Cl. 60—51)



1. In an accumulator system, the combination of an accumulator vessel to receive a charge of liquid under pressure; a centrifugal pump having an inlet and having a discharge opening for delivering liquid under pressure into said vessel; a liquid supply pipe interconnecting the discharge opening and the vessel; a branch pipe connected to the supply pipe for conveying liquid therefrom to an associated apparatus for using the liquid; a by-pass pipe connected to the supply pipe upstream of said branch pipe for by-passing said liquid therefrom; by-pass valve means movable to open and by-pass positions for accommodating fluid flow to said vessel and to said by-pass pipe, respectively; means responsive to condition of fluid in said vessel for actuating said valve means to open position when the condition of liquid in the vessel reaches a predetermined low limit and for actuating said valve means to by-pass position when the condition of liquid in the vessel reaches a predetermined high limit; and bleeder valve means in said by-pass pipe for developing sufficient pressure in said discharge opening to reduce output of the pump when said by-pass valve means are in by-pass position, said bleeder valve means accommodating limited flow of liquid from the discharge pump to prevent overheating thereof.

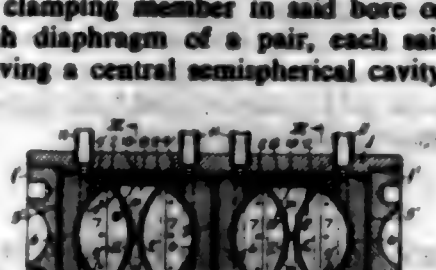
2,860,486

SECURITY DEVICE FOR HYDRAULIC OPERATED VEHICLE BRAKES

Kåre W. Berg, Reistad, Frithjof Balchen, Hundorp, and Sigvard Aardahl, Vinstra, Norway

Application September 24, 1954, Serial No. 458,048
Claims priority, application Sweden September 25, 1953
4 Claims. (Cl. 60—54.5)

1. A safety device adapted to be positioned between a master cylinder and brake cylinders of a hydraulic brake system, comprising a cylindrical member, a bore in said member, heads detachably secured on the ends of said cylindrical member to close said bore, a plurality of semispherical diaphragms having concave and concave surfaces within said bore spaced axially thereof, said diaphragms being arranged in pairs with their convex surfaces facing each other, an intermediate annular member positioned between each pair of diaphragms, and defining together with said convex surfaces a pressure chamber, said chamber having a port opening to the master cylinder, a clamping member in said bore on the other side of each diaphragm of a pair, each said clamping member having a central semispherical cavity facing the



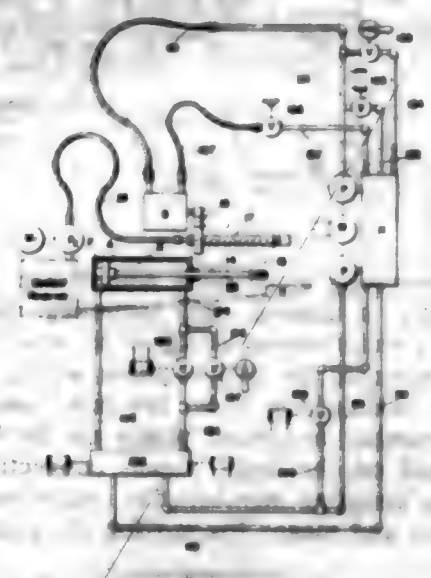
concave surface of the diaphragm and defining therewith a pressure chamber opening to a pressure line, each of the diaphragms being provided at its circumference with axially extending flanges having outwardly tapering cross-section, correspondingly shaped annular grooves in the adjacent face of the annular member and the clamping member, respectively, receiving the flanges of said diaphragm, said annular members, clamping members and intermediate diaphragms being shaped to be slidably inserted into said bore, and clamped together between said detachably secured heads.

2,860,487

HYDRAULIC POWER UNIT

Lloyd G. Wheeler, Philadelphia, Pa.

Application February 2, 1956, Serial No. 563,012
4 Claims. (Cl. 60—97)



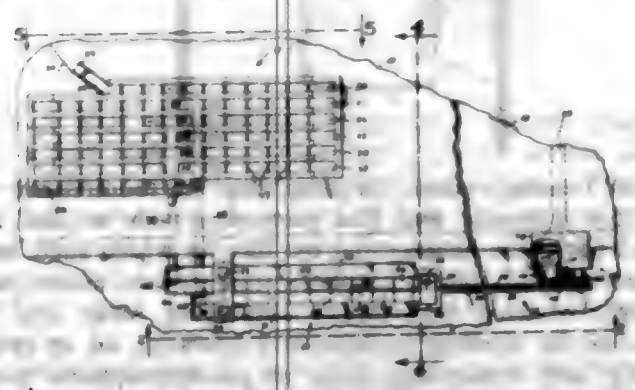
1. A hydraulic system for operating a machine tool which comprises a first fluid motor and a first hydraulic circuit for reciprocating the tool; a second fluid motor and a second fluid circuit for rotating the tool; a hydraulic fluid reservoir; a first pumping means for circulating fluid through the first circuit and a second pumping means for circulating fluid through the second circuit; said first circuit including a main supply line from the first pumping means and a main return line to the reservoir, a first branch line and a second branch line in communication with the first motor, selector valve means between said branch lines and said main supply and said main return lines, said selector valve means being operable in one position to provide communication between the first branch line and the main supply line and simultaneously therewith to provide communication between the second branch line and the main return line for

outlet, a plurality of spaced concentric tubes surrounding

formed intermittently in the combustion chamber; a

effecting the rapid advance movement of the tool, and being operable in another position to provide communication between the second branch line and the main supply line and simultaneously therewith to provide communication between the first branch line and the main return line for effecting the rapid return movement of the tool, a valve in the second branch line which is open during the rapid advance and rapid return movement of the tool, a bleed-off line which is operative when the last mentioned valve is closed for metering fluid from said second branch line to provide for slow and regulated advance movement of the tool; said second hydraulic circuit including a main supply line from the second pumping means to the second motor and a main return line from said motor to the reservoir for rapid rotation of the tool, a bleed-off line for metering fluid from the main supply line to effect slow or reduced speed of rotation of the tool and a back pressure regulating valve in the main return line which is operable to apply torque to the tool substantially at the instant the advance movement of the tool by the first motor contacts a workpiece to thereby prevent damage to the tool.

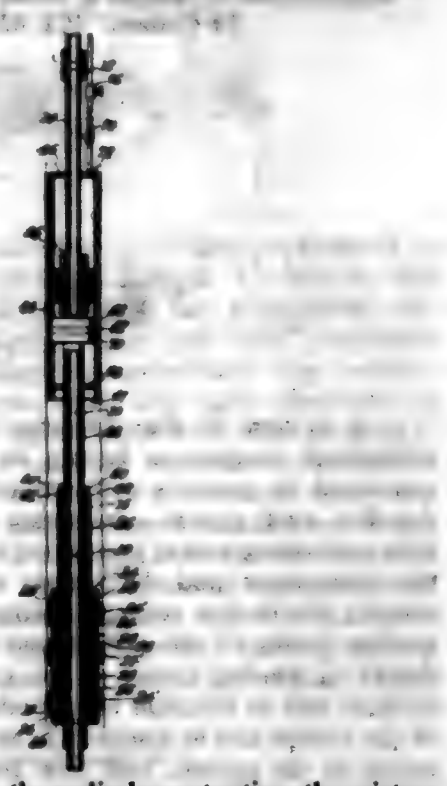
2,860,488
FISH MIGRATION APPARATUS FOR HIGH DAMS
Donald L. Johnson, Tacoma, Wash.
Application February 11, 1953, Serial No. 336,237
10 Claims. (Cl. 61—21)



1. A fishway comprising, in combination with a dam, an inclined fish ladder on the downstream side of the dam, a plurality of vertically disposed elongated staircases on the reservoir side of the dam, each staircase including side and bottom walls and being open at one end and closed at the other end, a plurality of passageway means extending through the dam and each connecting a staircase at the closed end to a different level of the fish ladder, gate means in each passageway means for releasably sealing the latter, and a plurality of transverse wall means arranged at longitudinally spaced intervals in each staircase in progressively ascending height away from the passageway means.

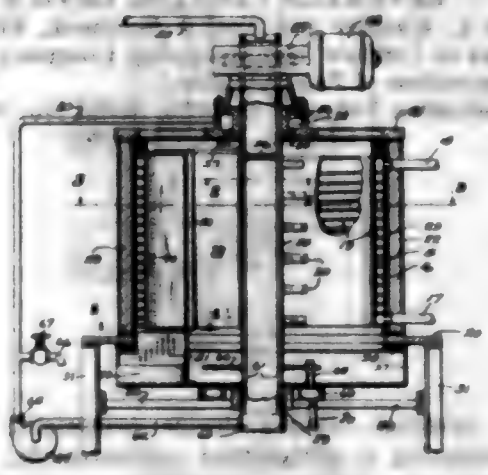
2,860,489
GROUTING OR SEALING APPARATUS
Lawrence E. Townsend, Riverdale, N. Dak.
Application September 18, 1953, Serial No. 381,158
7 Claims. (Cl. 61—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A grouting apparatus comprising, in combination, a grouting conduit having a lower end and an upper end, a sealing assembly mounted on the conduit and including a rigidly mounted cup-shaped retaining member immovably carried by the said conduit adjacent to the lower end thereof, a plurality of elastic sealing rings carried by the cup-shaped retaining member, and spaced retaining and separating means movable with the sealing rings for retaining the sleeves in separated end-to-end relation and spaced one from another by the separating means, a piston assembly including a reciprocable piston head, a tubular piston stem connected thereto, and compression means for the sealing rings mounted on the said piston stem, the piston assembly enclosing the said conduit and reciprocally movable thereon, an actuating cylinder enclosing the piston head, and means separate from the grouting conduit for introducting actuating fluid into the cylinder for actuating the piston in the cylinder, outward movement of the



piston head relative to the cylinder actuating the piston stem to force the compression means against the said elastic sleeves for deforming the latter into a plurality of sealing nodes extending outwardly between the said retaining and separating means and into fluid-sealing engagement with side portions of a hole receiving the grouting conduit.

2,860,490
METHOD AND APPARATUS FOR PRODUCTION OF SUPER-COOLED ICE
William H. Taylor, Chicago, Ill., assignor to The Vilter Manufacturing Company, Milwaukee, Wis.
Application July 25, 1952, Serial No. 300,915
27 Claims. (Cl. 62—71)



1. A method of ice chip manufacture which comprises spraying a super cooled refrigerated surface with a finely atomized chilled liquid to form increments of ice, flowing unatomized liquid at a temperature too high for freezing over the ice so formed to wash the ice free of impurities, at the same time chilling the unatomized liquid by its traverse of the ice, discharging a portion of the unatomized liquid sufficient to maintain at a low level the concentration of impurities therein, and taking the liquid to be atomized as aforesaid from a remaining portion of such unatomized liquid after said remaining portion has been reduced to temperatures close to its freezing point.

apply heat to the working fluid, the heat not utilized by

2,860,496

in said member, heads detachably secured on the ends of

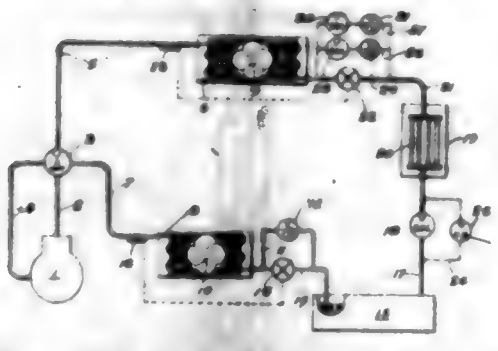
the second branch line and the main return line for

2,860,491

REVERSIBLE AIR CONDITIONING SYSTEM WITH HOT GAS DEFROSTING MEANS

David Goldenberg, Trenton, N. J., assignor to Kramer Trenton Company, Trenton, N. J., a corporation of New Jersey

Application November 5, 1954, Serial No. 467,115
10 Claims. (Cl. 62—161)



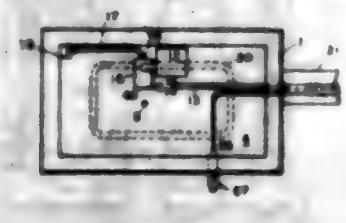
1. A system of the character described including a refrigerant compressor having its discharge and intake connected by conduits with indoor and outdoor coils or the like, said system comprising, reversible refrigerant flow controlling means positioned in the conduits between the compressor and the indoor and outdoor coils for causing the indoor coil to function as an evaporator in cooling cycles of the system and to function as a condenser in heating cycles of the system and causing the outdoor coil to function as a condenser in cooling cycles of the system and to function as an evaporator in heating cycles of the system, said flow controlling means being also adapted for causing hot gas flow from the compressor discharge to the outdoor coil for defrosting the latter without causing the indoor coil to function either as an evaporator or a condenser, means positioned between the indoor and outdoor coils and in heat exchange relation with conduits connecting both said coils for storing heat during both the cooling and heating cycles of the system, and means conduit connected between the indoor and outdoor coils for refrigerant flow from the latter to the former for reevaporating refrigerant that has been condensed in the outdoor coil during defrosting.

2,860,492

BEVERAGE COOLING DEVICE

Thomas L. Koebler and Carl J. Schmock, Erie, Pa., assignors to Uniflow Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Application February 8, 1954, Serial No. 408,809
7 Claims. (Cl. 62—185)



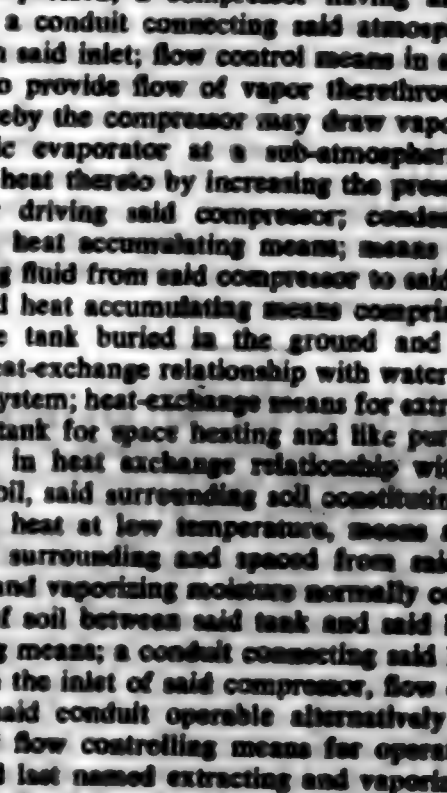
1. A beverage cooling device comprising a cooling unit containing a refrigerated compartment, a conduit, a beverage pipe, a pump, a temperature responsive valve, a liquid, said beverage pipe passing through said conduit, means connecting said pump in flow relationship to said conduit, said pump circulating said liquid through said connecting means and said conduit, means connecting said valve in the path of flow of said liquid, flow line means connecting said valve to said refrigerated compartment, and means connecting said refrigerated compartment in flow relationship to said conduit, said valve having means directing said liquid through said refrigerated compartment when the temperature of said liquid passing through said valve rises above a predetermined value, said valve means allowing said liquid to circulate through said conduit without passing through said refrigerated compartment when the temperature of said liquid drops to the predetermined value.

2,860,493

HEAT-PUMP APPARATUS FOR PROVIDING HEAT FOR DOMESTIC AND LIKE PURPOSES

Martin William Richard Capps, Nina Constance Capps, and Arthur William Francis Capps, Edgcumbe, Crowthorne, England

Application June 2, 1952, Serial No. 291,214
Claims priority, application Great Britain June 4, 1951
4 Claims. (Cl. 62—238)



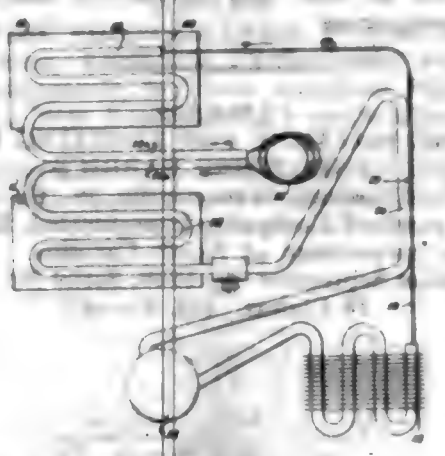
1. A heating system for supplying the requirement of heat for domestic and like purposes, such as that required for space-heating and the like, in which such heat is derived from the atmosphere, said system embodying a single working fluid circuit employing water and its vapor as the working medium and operating on an evaporating and condensing cycle at sub-atmospheric pressure: the system comprising an atmospheric evaporator; means supplying water to said evaporator wherein the water is vaporized; a compressor having an inlet and an outlet; a conduit connecting said atmospheric evaporator with said inlet; flow control means in said conduit operable to provide flow of vapor therethrough to said inlet, whereby the compressor may draw vapor from the atmospheric evaporator at a sub-atmospheric pressure and apply heat thereto by increasing the pressure; motor means for driving said compressor; condenser means comprising heat accumulating means; means conducting the working fluid from said compressor to said condenser means; said heat accumulating means comprising a relatively large tank buried in the ground and containing water in heat-exchange relationship with water condensed from said system; heat-exchange means for extracting heat from said tank for space heating and like purposes; said tank being in heat exchange relationship with the surrounding soil, said surrounding soil constituting an accumulator of heat at low temperature, means also buried in the soil surrounding and spaced from said tank for extracting and vaporizing moisture normally contained in the body of soil between said tank and said last named surrounding means; a conduit connecting said last named means with the inlet of said compressor, flow controlling means in said conduit operable alternatively with said first named flow controlling means for operatively connecting said last named extracting and vaporizing means with the suction inlet of said compressor, whereby when the atmosphere is at a higher temperature than the said last-named extracting and vaporizing means, the atmospheric evaporator may be connected to the compressor to

piston stem connected thereto, and compression means for

been reduced to temperatures close to its freezing point.

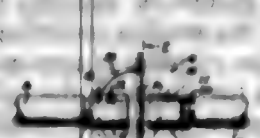
apply heat to the working fluid, the heat not utilized by said heat-exchange means being stored in said tank and said body of soil, and when the atmosphere is at a lower temperature than said soil-immersed evaporator, the latter may be placed in communication with the compressor to supply heat to the vapor extracted from the pre-heated soil moisture.

2,860,494
MULTIPLE TEMPERATURE REFRIGERATION SYSTEM
Harry A. Whitesel, Cedar Rapids, Iowa, assignor to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa
Application March 2, 1955, Serial No. 491,752
7 Claims. (Cl. 62—513)



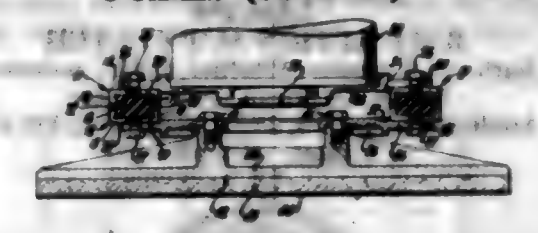
7. A dual temperature refrigeration system comprising a first high temperature high pressure section and a second low temperature low pressure section, a fixed restrictor connecting the outlet of said first section to the inlet of said second section, the outlet portion of said first section having heat transfer connection for a substantial extent to the inlet portion of said second section effective for liquefying gaseous refrigerant in said first section in advance of said restrictor, an accumulator in advance of said heat transfer connection receiving a part of the outlet portion of said first section and connected to the outlet of said second section, a compressor and condenser unit having its inlet connected to said accumulator, and means connecting the outlet of said unit to the inlet of said first section for delivery of refrigerant thereto, said last named means comprising pressure reducing means connected to the inlet of said first section.

2,860,495
FLEXIBLE COUPLINGS
James A. Stark, Western Springs, Ill., assignor to John B. Thompson, Pleasantville, N. Y.
Application June 7, 1955, Serial No. 513,775
4 Claims. (Cl. 64—11)



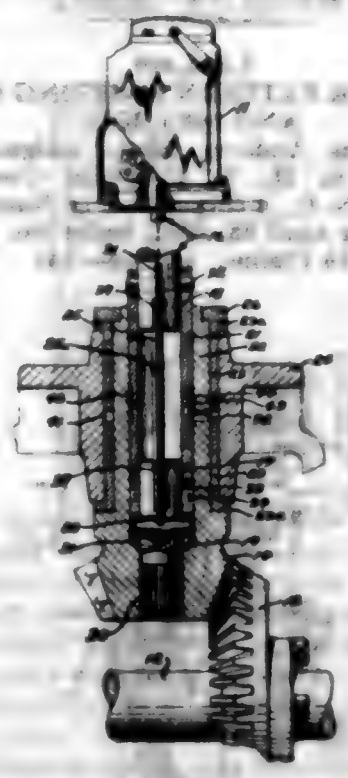
1. A flexible coupling comprising molded tough, resilient linear polyamide composition said piece having shaft-coupling means at each end, a centrally apertured member, and two sets of oppositely disposed substantially curved connectors joining the shaft-coupling means to the member, the connectors of each set being joined to the member between the points at which the connectors of the other set are joined to the member said connectors being of a length sufficient to permit substantial flexing.

2,860,496
RING OSCILLATOR
Berne Tecci-Guilbert, San Francisco, Calif., assignor to Berne Tecci-Guilbert, San Francisco, and Henry Gifford Hardy, Berkeley, Calif., jointly as trustees
Application April 13, 1955, Serial No. 501,058
8 Claims. (Cl. 64—13)



1. A ring resilient coupling for coaxial attachment as a unit between a drive shaft defining a common axis and a driven member comprising a first nonresilient narrow ring member having at least one axial peripheral flange, a second and opposed nonresilient ring member of substantially the same inner and outer diameters as said first member having at least one axial peripheral flange, and a body of resilient material between said two ring members of substantially the same inner and outer diameters as the ring members, bonded and keyed theretogether to form a nonseparable unitary structure with a portion of said resilient material being exposed along the inner and outer periphery and with no direct contact between said ring members the inner periphery of said coupling being spaced a substantial distance from said common axis.

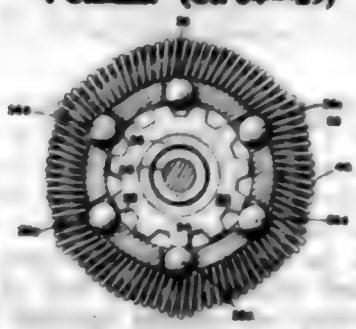
2,860,497
RESILIENT COUPLING FOR TORQUE TRANSMITTING DRIVE SHAFT
John H. Parks, Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Application August 16, 1954, Serial No. 604,388
2 Claims. (Cl. 64—15)



1. A resilient coupling in a power transmitting shaft for connecting a driving shaft portion to a driven shaft portion in spaced axial alignment, comprising a flat blade connecting said shaft portions, tubular bearing members secured to the end of each portion and circumscribing said blade, driving dogs formed in the adjacent ends of said members to establish a positive drive between the driving and driven shaft portions under conditions of excessive torque loads, whereby torsional loads imposed by the driving portion twist said blade, and

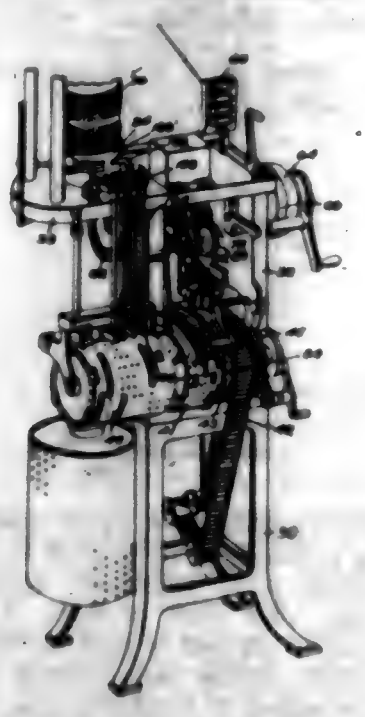
means formed in ends of said shaft portions to alter the effective length of said blade under certain conditions of torque to alter the frequency of vibrations and prevent harmonic increase.

2,860,498
BALL ACTION SLIP CLUTCH
Charles N. Crossley, Whittier, Calif., assignor to North American Aviation, Inc.
Application April 4, 1955, Serial No. 499,851
4 Claims. (Cl. 64—29)



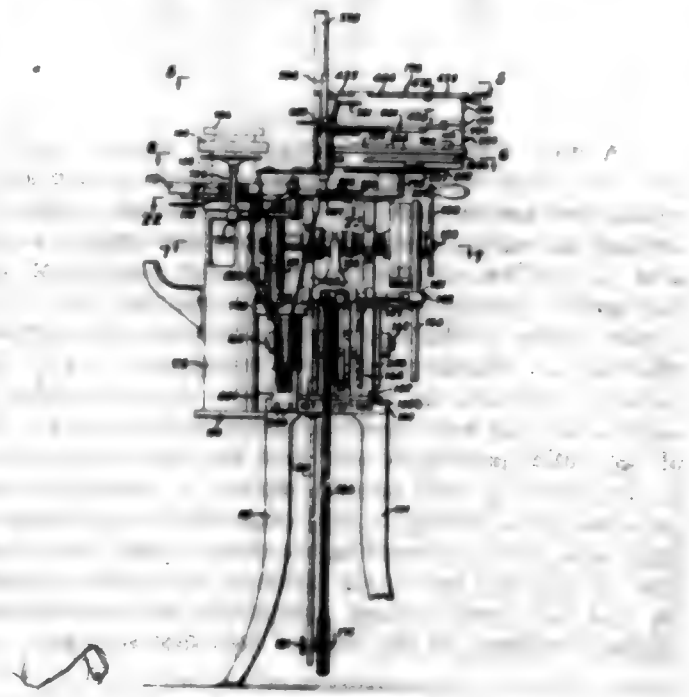
1. An automatic slip clutch comprising concentric rotatable driving and rotatable driven members, the outer of said members having a plurality of spaced radial apertures and a peripheral outer annular groove communicating with the interior of said member through said apertures, clutch elements carried in said radial apertures, more than one but less than all of said elements drivingly engaging the other of said members in all positions of said driving and driven members, the other of said members having a notched periphery about which said elements are located, the number of notches on said periphery being an even number greater than the number of said elements, and clutch element controlling means comprising a simple, double extension spring encircling said element-holding member and adapted to prevent the centrifugal movement of said elements.

2,860,499
SOLID COLOR PATTERN KNITTING MACHINE AND METHOD
Hans H. Marum, Andover, Mass., assignor, by mesne assignments, to H. E. Crawford Company, Inc., Kernersville, N. C., a corporation of North Carolina
Application April 28, 1951, Serial No. 223,521
10 Claims. (Cl. 66—14)



10. In a circular knitting machine having two rotary needle beds for knitting articles having a ribbed fabric section and a plain knit fabric section having at least four coursewise adjacent suture-joined intarsia areas, independently movable needles for said beds, means for feeding yarn to said needles, driving means for rotating said beds through continuous rotary and reciprocating movements, including a rotary driver and a reciprocatory driver and clutch means automatically shiftable to engage said rotary and reciprocatory drivers, means for shifting said clutch means to engage said rotary driver and to engage said reciprocatory driver in a plurality of fixed positions corresponding to a plurality of predetermined angular positions of the needle beds in relation to said reciprocatory driver, automatic means for operation when said clutch means is shifted to engage said rotary driver to cause needles of said beds to cooperatively knit rib fabric, and automatic means for operation when said clutch is shifted to engage said reciprocatory driver in said plurality of fixed positions to cause needles of one of said beds to knit at least four coursewise adjacent suture-joined intarsia areas.

2,860,500
KNITTING MACHINE FOR KNITTING HOSIERY AND OTHER FABRICS
Herman E. Crawford, Kernersville, N. C., assignor to H. E. Crawford Company, Incorporated, Kernersville, N. C., a corporation of North Carolina
Application September 30, 1949, Serial No. 118,964
36 Claims. (Cl. 66—48)



16. In a knitting machine having a needle cylinder provided with a plurality of needles divided into groups having different length butts, including long butts, thereon, means for imparting both circular and reciprocatory knitting to the needle cylinder, means for feeding different yarns to different groups of needles, means for feeding yarn to a group of the needles including at least one long butt needle while the cylinder is engaged in reciprocatory knitting and means for shogging the cylinder varying distances to present other groups of needles each including at least one long butt needle to knitting position to receive and knit a different yarn.

2,860,501
AUTOMATIC WELT TURNING MECHANISM FOR STRAIGHT BAR KNITTING MACHINES
Arthur J. Cobert, Chattanooga, Tenn.
Application June 21, 1952, Serial No. 294,804
32 Claims. (Cl. 66—96)

1. In a straight bar knitting machine arranged for the transfer of a series of loops held on a loop supporting im-

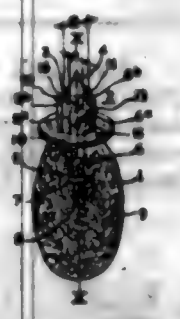
2,860,502

aligned orifice means therein, said axially aligned orifice

plement bar to the needles, the combination of a needle bar provided with a series of needles, a knocking over bar provided with a series of knocking over bits on the front

side of said needle bar, and a transfer bar provided with a series of transfer points on the back side of said needle bar.

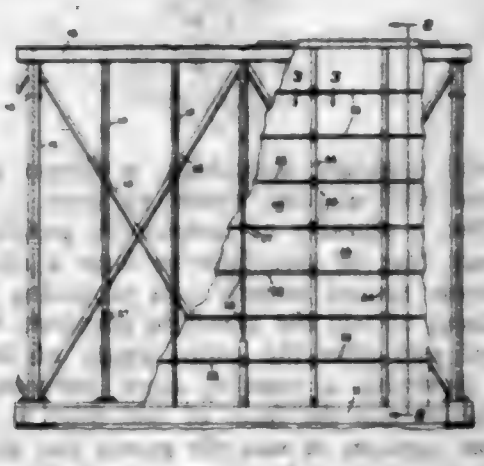
2,860,562
ELECTRIC PHOTOGRAPHIC FLASH LAMP
Reinder Westra, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application June 15, 1956, Serial No. 592,050
Claims priority, application Netherlands June 17, 1955
3 Claims. (Cl. 67—31)



1. An electric flash bulb having a glass base constituted by a substantially circular neck of the bulb and an exhaust tube sealed therewith comprising an ignition mechanism, a plurality of current supply wires electrically connected to said ignition mechanism and having part thereof located between the sealed edges of the neck of the bulb and the exhaust tube and another part thereof located adjacent to a portion of the outer periphery of said neck, said neck of the bulb being provided with at least one flat axial surface, the distance between the flat axial surface and the axis of the bulb being substantially equal to the distance between each of the lead-in current supply wires and the axis of the bulb.

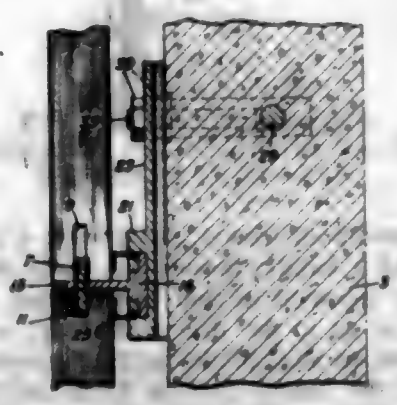
2,860,583
BUILDING STRUCTURES
Roy C. Kendall, Sylvania, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Continuation of abandoned application Serial No. 170,553, June 27, 1950. This application April 27, 1955, Serial No. 504,320
3 Claims. (Cl. 72—16)

1. A building wall structure comprising a plurality of horizontally spaced vertical metal uprights joined at their upper and lower ends by horizontal cross members and stabilized by vertically extending diagonal braces, rectangular slabs of building material, said slabs extending horizontally along the length of said wall and between said vertical uprights, said slabs being vertically disposed one on top of the other, the horizontal joint between said slabs comprising opposing trapezoidal grooves formed in and extending longitudinally along the adjacent horizontal edges of the slabs, a locking spline positioned in and wedged into said trapezoidal grooves and extending into and through the vertical joints between adjacent slabs, a thin resilient strip having portions of its cross-sectional shape conforming to the configuration of the sides of said groove and an intermediate portion conforming to the top of said spline, said strip being wedged in said groove and over said spline, a further cross-sectional portion of said strip extending between the adjacent horizontal outer edges of said slabs and projecting outwardly and downwardly from the outer vertical face of said slabs to form a weather strip, said strip extending through the length of each slab, bolting means formed upon said vertical metal



uprights and extending outwardly between adjacent slabs, a holding bracket attached to each of said bolting means and engaging exterior portions of the adjacent slabs and thereby holding said slabs in position against the respective vertical metal upright, and a curved covering strip mounted upon said brackets, said covering strip in sealing engagement with the vertically disposed edge portions of adjacent slabs.

2,860,584
CRYPT FASTENERS FOR KEYING TOGETHER CRYPT FRONT SLABS
John B. Skinner and Oscar A. Skinner, San Diego, Calif.
Application April 9, 1957, Serial No. 651,701
1 Claim. (Cl. 72—19)



In a crypt including a wall and upper and lower pairs of closure slabs opposed to said wall with lower confronting corners of the upper pair and upper confronting corners of the lower pair contiguous and provided with slots therein, a horizontal elongated ledge fixed to said wall between said lower and upper corners and having a slot therein, and an elongated flat fastener key member extending downwardly through the slot in the ledge and projecting above and below the same into the slots in the lower corners of the upper pair of slabs and into the slots in the upper corners of the lower pair of slabs, said key member having undercut notched ends seating on said ledge at the ends of the slot in said ledge to suspend said key member on said ledge, the slots in the upper pair of slabs being of a depth corresponding to the width of said key member whereby said key member is displaceable out of the slot in said ledge upwardly into the slots in the upper pair of slabs to thereby unfasten said slabs.

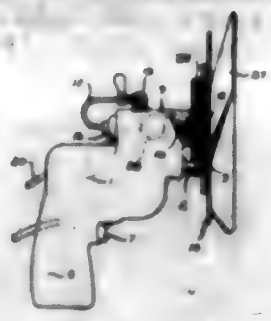
section and a plain knit fabric section having at least four

transfer of a series of loops held on a loop supporting im-

2,860,586
TILE WALL
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application December 11, 1953, Serial No. 397,628
4 Claims. (Cl. 72—21)

3. A wall structure comprising a fibrous glass mat impregnated with a resin binder to form a load-supporting filler, a plurality of ceramic tile panels fastened against each face of said filler to form a ceramic tile layer thereon, spaced integral lugs projecting from the inner surfaces of said tile panels to penetrate below the surfaces of said filler the entire length of the lug to interlock therewith, a bonding agent between each of said tile layers and the faces of said filler to bond the entire inner surfaces of said tile panels and all surfaces of the lugs projecting therefrom to said filler, securing means within said filler adjacent a vertical edge and along the top edge thereof to secure the wall structure to a wall surface, and locating means within said filler along the bottom edge thereof to engage a floor surface to position said wall structure.

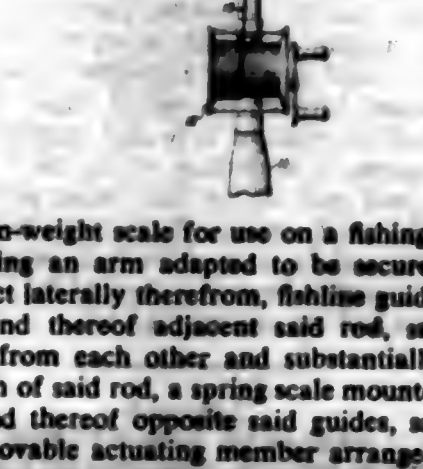
2,860,596
POWER DRIVEN PLASTERING TROWELS
John D. Drummond, North Burnaby, British Columbia, Canada
Application July 26, 1954, Serial No. 445,628
4 Claims. (Cl. 72—136)



1. A power-driven trowel, comprising a motor having a housing and a handle therefor, a blade-carrying member rotatably mounted in said housing and connected to said motor so as to be driven thereby, a plurality of blades secured to said blade-carrying member at points spaced from the center of said blade-carrying member and having trailing edges tangential to an imaginary circle radially spaced from said center, said blades extending at an inclination outwardly from said member for for engagement with plaster material, and means for discharging water onto said material through the central portion of said blade-carrying member, whereby the outer portion of the trailing edge of each blade, by leading the inner portion thereof in rotation, directs the material inwardly to mix with said water during movement of the trowel to keep said plaster material plastic.

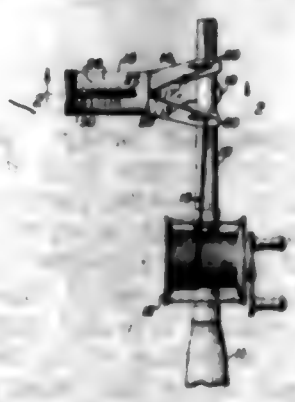
2,860,597
AREA MEASURING GAGE
Kenneth R. Geiser, Schenectady, N. Y., and Emmett H. Wiley, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Application December 28, 1954, Serial No. 478,854
3 Claims. (Cl. 73—37.7)

1. An area measuring gage comprising a pair of plenum chambers, each said chamber having a pair of axially aligned orifice means therein, said axially aligned orifice means in one said chamber receiving a continuously running wire whose size is to be measured and having replaceable inserts, said axially aligned orifices in the other said chamber receiving a wire of standard diameter,



means for connecting said chambers to a source of fluid under pressure, said connecting means including means for regulating the flow of fluid to said chambers, and means connected to said chambers for measuring the pressure in each said chamber.

2,860,598
LINE TENSION-WEIGHT SCALE
Shirley Johnson, Mineral Wells, Tex.
Application November 7, 1955, Serial No. 545,403
4 Claims. (Cl. 73—144)

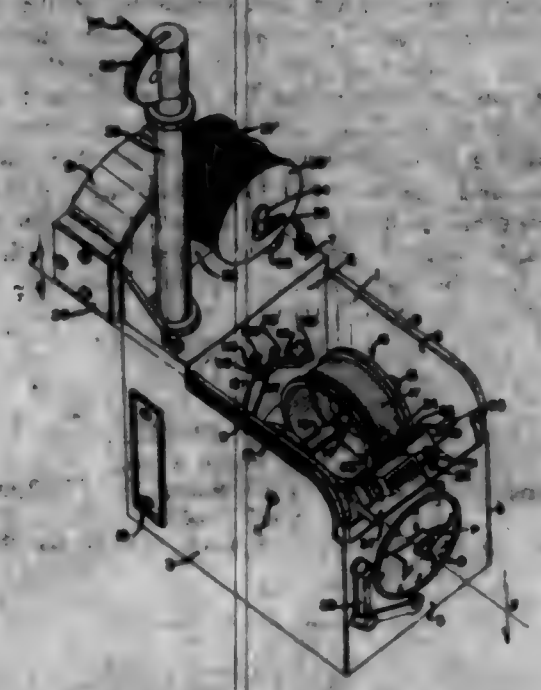


1. A tension-weight scale for use on a fishing rod, said scale comprising an arm adapted to be secured to said rod and project laterally therefrom, fishline guides on said arm at the end thereof adjacent said rod, said guides being spaced from each other and substantially parallel with the length of said rod, a spring scale mounted on said arm at the end thereof opposite said guides, said spring including a movable actuating member arranged for longitudinal movement on a line perpendicular to and between said guides, and means in said actuating member slidably receiving the fishline of said rod.

2,860,599
RECORDING APPARATUS FOR EARTH BORE DRILLING
Oliver V. Phillips, Littleton, Colo., assignor to The Star Recorder Corporation of Denver, Denver, Colo., a corporation of Colorado
Application October 18, 1954, Serial No. 462,833
14 Claims. (Cl. 73—151.5)

1. A recorder for an earth bore drilling apparatus having a drilling stem, said recorder comprising a recording chart sheet, time means for moving the sheet at a predetermined rate in one direction of travel, a main drive member for the recorder connected to be driven by vertical movement of the drill stem, an element for marking the chart sheet as it moves and when drilling is occurring, first means for operating the element to indi-

rate the amount of drilling with respect to time, other marking means for the chart to indicate on the chart the direction of movement of the drill steam, second means including said main drive member for operating said other marking means, clutch means between the main driving member and said first operating means for setting up a connection for driving relationship of the member



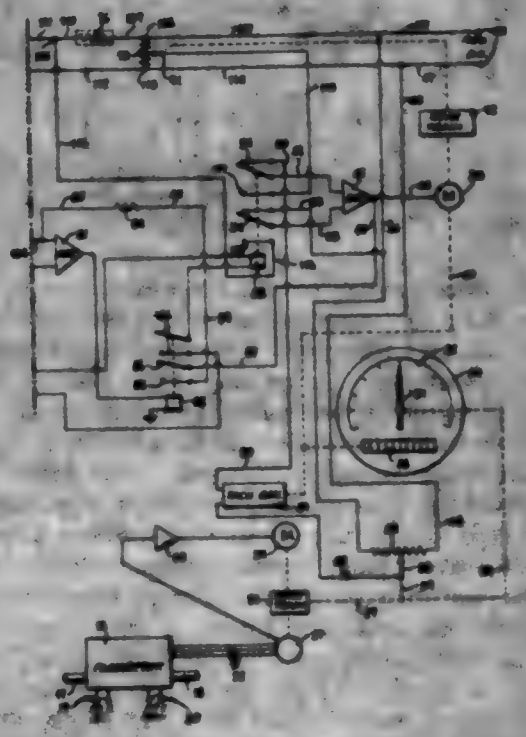
and first operating means, said second operating means being permanently set up with such a connection, and means without interfering with the continued operation of said second means for disengaging the clutch means upon the ceasing of drilling, said last named means including a lever operated shaft, cam means on the shaft and a pivotally mounted member positioned between and engaging the cam means and the clutch means.

2,860,510
CANTILEVER STIFFNESS AND CURL TESTER
Jack J. Press, New York, N. Y.
Application July 6, 1955, Serial No. 520,303
10 Claims. (Cl. 73—159)
(Granted under Title 35, U. S. Code (1952), sec. 266)

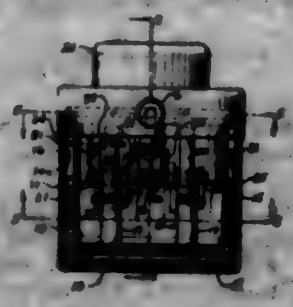
8. A cantilever-type fabric tester comprising a sloping wall having a fabric-specimen receiving slot, and means secured to said wall for supporting a test specimen horizontally at a line co-planar with said wall, and for moving a free end of said specimen, so supported, into projected position over said wall whereby said free end is adapted to move partly into said slot.

2,860,511
FLUID QUANTITY MEASURING SYSTEM
Arthur Wichmer, St. Albans, N. Y., assignor to The Liquidometer Corporation, Long Island City, N. Y., a corporation of Delaware
Application November 14, 1955, Serial No. 546,515
10 Claims. (Cl. 73—194)

1. A fluid quantity-measuring system for indicating the total amount of fluid that has flowed out of a predetermined quantity of confined fluid, comprising means for measuring the rate of flow of said fluid out of said predetermined quantity, power-actuated means for integrating the rate of flow with respect to time in order to determine the total quantity of fluid flow, means for indicating the amount of fluid which has flowed out of said predetermined quantity as thus determined; independent means for accurately determining when the quantity of the confined fluid has been reduced to a predetermined amount which is less than said predetermined quantity; and automatic means, initiated in its operation by said independent means, for adjustably changing the value shown by said indicating means to correspond with said predetermined amount.

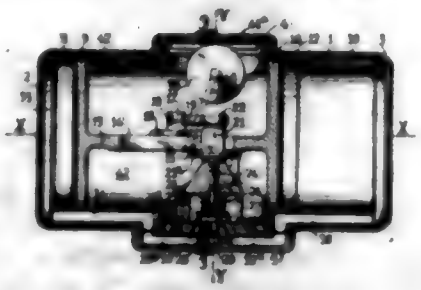


2,860,512
LIQUID METERS
Eric Hoerner, Dayton, Ohio
Application May 11, 1953, Serial No. 354,884
8 Claims. (Cl. 73—251)



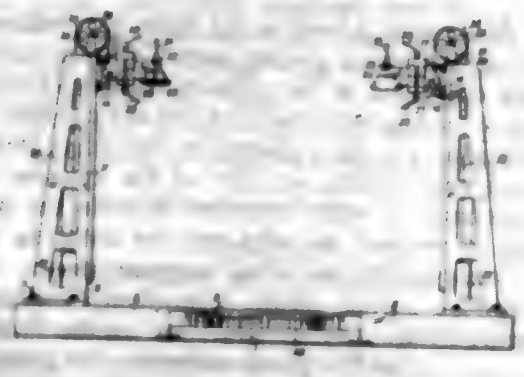
1. In a fluid meter, a body in the form of a hollow cylinder closed at one end, a piston assembly in the cylinder, a head at the other end of the cylinder, said head and cylinder having a passageway leading from the cylinder on one side of the piston to the cylinder on the other side of the piston, said head having an inlet to the cylinder and an outlet therefrom, a valve member slidable on the head alternately to connect the inlet and the outlet to the passageway, reciprocably mounted support means for said valve member, spring means operatively connected to said support means, and restraining means including a member attached to the piston assembly for holding said support means against movement during travel of the piston between predetermined limits, the support means being released at such limits for actuation by the spring means and shifting of the valve member.

2,860,513
LIQUID METER
Jean Chevrounet, Paris, France, assignor to Ste: Compteurs et Moteurs Aster, Paris, France, a French body corporate
Application March 21, 1956, Serial No. 572,941
4 Claims. (Cl. 73—251)



1. In a liquid meter of the fluid-tight type in combination: a fluid-tight housing comprising two coaxial cylinders disposed on either side of a central chamber, a single movable assemblage comprising two pistons each of which is movable in one of said cylinders, and a rigid distance member interconnecting the pistons; a distributor capable of being oscillated disposed in the central chamber between the two pistons; a counter disposed in the housing; first connecting means operatively connecting the movable assemblage to the distributor, these connecting means comprising a first flat face of determined length disposed on the distance member, a shaft rigid with the distributor and having two laterally adjoining flat faces extending longitudinally of the shaft and arranged to form a dihedral portion, said first face being capable of slidably engaging one of said shaft faces in the course of movement of the pistons in the cylinders in one direction and the other of said shaft faces in the other direction of piston movement so that the distributor is held stationary while said first face is in contact with either of said shaft faces, two elastically yieldable means connected to the distance member and between which said shaft is disposed, the arrangement being such that one of said yieldable means is put under stress in one direction of movement of the movable assemblage and the other yieldable means is put under stress in the other direction of movement whereby the distributor is oscillated by one of the yieldable means as soon as one of said shaft faces leaves said first face; and second connecting means connecting the distance member to the counter to actuate the latter as a function of the movements of the pistons.

2,860,514
APPARATUS FOR MEASURING MUSCULAR FORCES INVOLVED IN VARIOUS MOVEMENTS
Lucien Laure, Paris, France
Application September 22, 1955, Serial No. 535,976
Claims priority, application France June 29, 1955
15 Claims. (Cl. 73—379)



1. An apparatus for measuring the muscular efforts of a subject, comprising in combination a horizontal base plate, a flat supporting member suspended on said base plate in a plane parallel thereto and spaced apart therefrom by means of flexible cables for free lateral movements of limited amplitude of said supporting member in its own plane, a platform adapted to receive a subject and resting upon said flat supporting member by means of supporting elements interposed therebetween, frictionless linking means connecting said platform and said supporting member in such a manner as to allow only vertical relative movement of said platform and of said supporting member, first pressure-sensitive means inserted between said platform and said supporting member for measuring the vertical pressure exerted upon said supporting member by said platform and the subject standing thereon, and second pressure-sensitive means inserted between said supporting member and said base plate and operative in two horizontal directions disposed perpendicularly relative to each other for measuring the horizontal pressures exerted in both said directions by the subject through the intermediary of said platform and said supporting member.

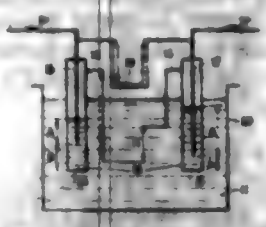
2,860,515
SOIL MOISTURE PROBE
Paul L. Brown, Hays, Kans.
Application March 30, 1956, Serial No. 575,296
1 Claim. (Cl. 73—425)
(Granted under Title 35, U. S. Code (1952), sec. 266)

A soil moisture probe comprising a rod having a handle fixed to its upper end and a spherical part fixed to its lower end extending laterally beyond the rod, and a bit, having spirals, fixed to and extending below the said spherical part in alignment with the said rod, whereupon as the bit is placed against moist ground and downward pressure applied to the handle without turning it, the probe enters and passes downward into the moist soil until it reaches a desired depth where it is stopped, and when the handle is thereafter turned while applying pressure, the spirals are forced into the soil a short distance immediately below the depth at which the probe had been stopped, and a representative sample of the soil at this new slightly lower level is acquired and held by the spirals, the probe containing the sample being thereafter pulled out of the ground without turning it and being facilitated thereby by the said spherical part.

2,860,516
APPARATUS AND METHOD FOR MEASURING DENSITY
Claude Bardonnet and Roger Commarmot, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate
Application June 27, 1957, Serial No. 668,463
Claims priority, application France June 29, 1956
1 Claim. (Cl. 73—439)

Apparatus for use in the measurement of the density of a liquid comprising container means adapted to be filled with liquid whose density is to be measured, a

gas outlet for said container means, a pair of closed vessels each having substantially vertical internal sides and a substantially horizontal internal bottom, reference liquid contained in said vessels, which reference liquid is the same for each vessel and is at the same temperature as that of the liquid in said container means, a gas inlet pipe and a gas outlet pipe for each closed vessel such that a gas may be introduced into each said vessel



through its inlet pipe and pass out of the vessel through its outlet pipe having passed through said reference liquid, said outlet pipes extending into said container means to different depths in the liquid contained in said container means and a pressure differential responsive device connected across said inlet pipes so as to measure the difference in pressure between the gases in said inlet pipes, the variables hereinafter set forth being adjusted to satisfy the following equations:

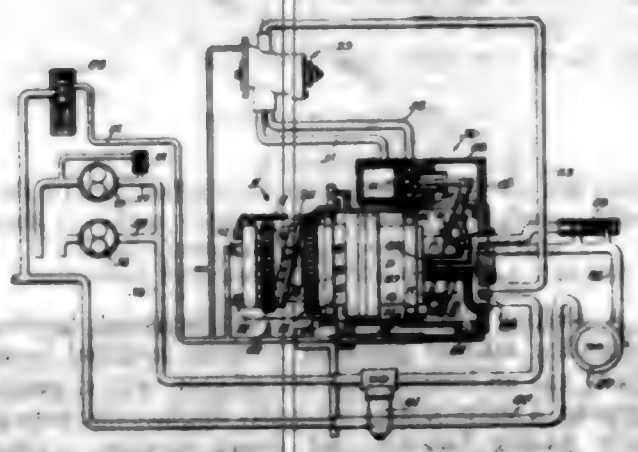
$$B_0 - b_0 = H \times \frac{lD_0^m}{\lambda \Delta_0}$$

and

$$a_0 - A_0 = H \times \frac{D_0^m - d_0^M}{\Delta_0}$$

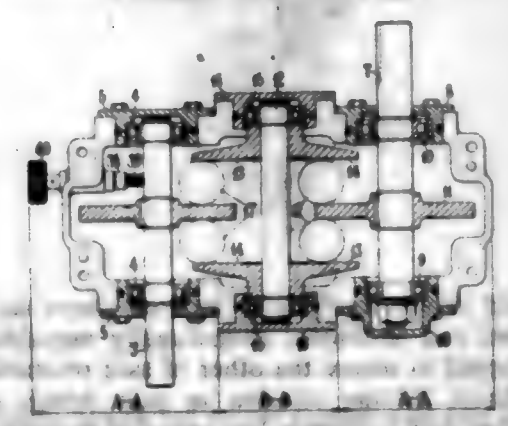
wherein B_0 and A_0 each relate to one vessel and are respectively the vertical height of the end of the gas inlet pipe above the bottom of the vessel and its depth below the surface of the reference liquid in the vessel and a_0 and b_0 have the same significance as A_0 and B_0 in relation to the other vessel, Δ_0 is the density of the reference liquid, D_0^m is the mean density of the liquid whose density is to be measured, d_0^M is the maximum value of the variation of the density of the liquid whose density is to be measured from D_0^m, each of the aforesaid values being measured at the temperature at which the density is to be determined, H is the vertical height between the ends of the gas outlet pipes and l and λ are the coefficients of expansion of the liquid whose density is to be measured and of the reference liquid respectively.

2,860,517
PUMP CONTROL
Donald L. Cauble, Rockford, Ill., assignor to Sundstrand Machine Tool Co., a corporation of Illinois
Application August 10, 1953, Serial No. 373,237
3 Claims. (Cl. 74—60)



1. Control means for the wobbler of a multiple piston wobbler type variable displacement pump comprising a cylinder, a first piston part having an annular portion slidably engaging the walls of the cylinder, a second piston part having an annular portion slidably engaging the walls of the cylinder and spaced from the first mentioned annular portion, a skirt on said second piston part extending axially of the cylinder away from the first piston part, means for introducing control fluid under pressure into opposite end portions of said cylinder to move said piston parts together and to move said piston parts axially of said cylinder as a unit, and means for connecting the piston parts to the wobbler including a first element having one end in contact with the side of the first piston part sealed from control fluid in the cylinder by said annular portions and extending through the skirt with its other end being connected to the wobbler, and a second element having one end connected for movement with the second piston part and extending through said skirt with its other end being connected to the wobbler, the interior of said skirt being sealed from control fluid in the cylinder by said annular portions.

2,860,518
FRICTION DRIVEN STEPLESSLY VARIABLE GEARS
William Robinson Andrews, Burley-in-Wharfedale, England
Application June 3, 1957, Serial No. 663,185
Claims priority, application Great Britain June 19, 1956
14 Claims. (Cl. 74—200)

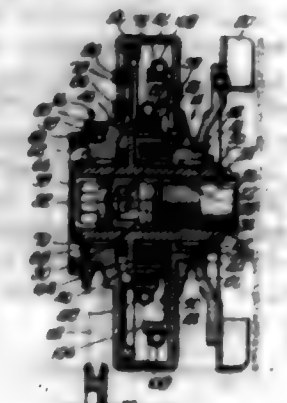


1. Variable gearing of the type described comprising a pair of friction discs mounted in rigidly spaced relation on a shaft, a second shaft carrying a friction disc located between the spaced discs in overlapping relation thereto and inclined with respect to the first shaft, a motion transmitting ball or roller member disposed in each of the V formations afforded by the relatively inclined discs to engage one of said spaced discs and one side of the disc on the second shaft, mounting means for said motion transmitting members affording them a degree of freedom in a direction in and out of the V formation in a plane which includes the centres of the three friction discs, means for spring loading the said members into the V formations, means for limiting movement of said members out of the V formation, and means for adjustably displacing the said members simultaneously in a direction to vary their relative distances from the two shaft axes in order to change the gear ratio.

2,860,519
DUAL DRIVE RATIO POWER TRANSMISSION MECHANISM
James R. Cavanaugh, Park Ridge, Ill.; Mildred Cavanaugh, administratrix of said James R. Cavanaugh, deceased
Application June 18, 1955, Serial No. 515,750
15 Claims. (Cl. 74—217)

1. A variable drive ratio power transmission mechanism comprising: a drive shaft; a driven shaft; a pair of driven members rotatably mounted on said driven shaft; driving means independently connecting each said rotat-

able driven member to a drive member fixed to said drive shaft, each set of drive and driven members so connected having a different drive ratio; centrifugally movable clutch means adapted to secure one of said driven members to said driven shaft in direct driving relation thereto below a relatively low speed of rotation of said drive shaft, and to



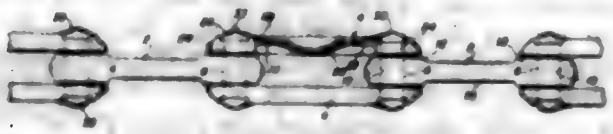
release said driven member so secured above said speed of rotation; and additional centrifugally movable clutch means adapted to secure the other of said rotatable members in direct driving relation to said driven shaft at speeds above said relatively low speed of rotation of said drive shaft.

2,860,520

CHAIN CONVEYOR

Chester Suft, Parma, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey

Application September 24, 1957, Serial No. 685,955
2 Claims. (Cl. 74—254)



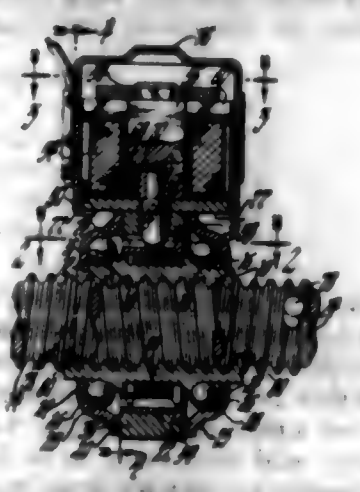
1. A chain comprising a plurality of longitudinally spaced center links, each of said center links including a wall forming an enlongated opening, the ends of said wall being thicker than the intermediate portion thereof, a pair of side bars extending between and overlapping the ends of adjacent center links, each of said side bars having side walls with a notch therein adjacent each end and a central web connecting the side walls with an opening between said central web and each end of the side bar, a pin extending through the aligned openings in said side bars and center links, each of said pins having an elongated head on each end received in said notches, and a spring having one end bearing against one head of the pin at one end of a side link and extending therefrom through the openings in said side bar to the corresponding head of the pin at the other end of the same side link and bearing on the inner side of the central web.

2,860,521

MECHANICAL MOVEMENT DEVICE

George W. Sherant, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 18, 1957, Serial No. 640,766
10 Claims. (Cl. 74—424.8)



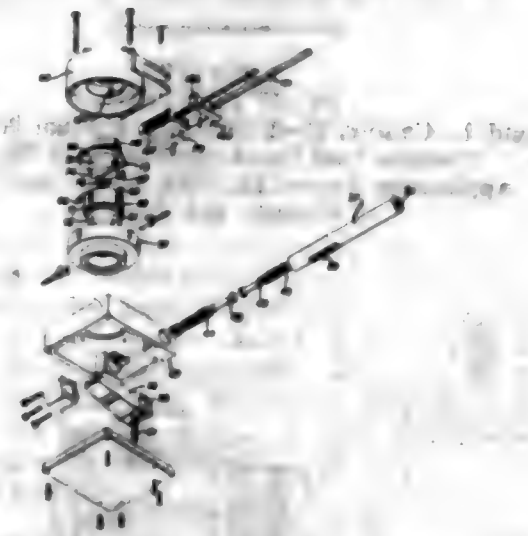
1. A mechanical movement device comprising, a rotatable lead screw, a nut threadedly receiving said lead screw, a non-rotatable member, a braking member rotatably supported on said non-rotatable member, first braking means operatively secured to said braking member and grippingly engageable with said nut within predetermined torque limits to secure said nut to said braking member for simultaneous rotational movement therewith within said predetermined torque limits, and second braking means operatively interconnecting said non-rotatable member and said braking member to secure said braking member to said non-rotatable member whereby said first and second braking means cooperatively secure said nut against rotation for axial movement along said lead screw upon relative rotational movement therebetween.

2,860,522

SHIFTING MECHANISM FOR TRANSMISSION

George H. Howlett, Oakland, Calif., assignor to Frank H. Howlett, Oakland, Calif.

Application July 10, 1956, Serial No. 597,830
8 Claims. (Cl. 74—473)



1. A shifting mechanism for a transmission having a reciprocating selector movable between terminal in-gear positions and an intermediate out-of-gear neutral position comprising, a reciprocating manually displaceable actuator member having forward and return strokes, a rotary driven member adapted for connection to and for driving said selector and having four quarter-turn positions corresponding alternately to said terminal and neutral positions of said selector, and latch means connecting said actuator and driven members and effecting a quarter-turn dis-

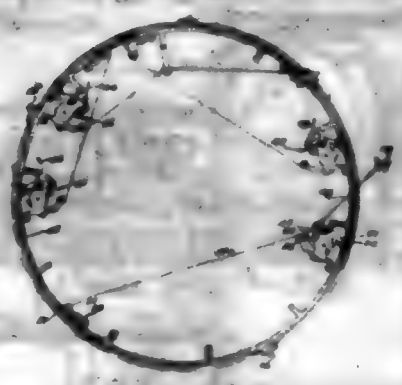
placement of said driven member upon each forward stroke of said actuator member, said latch means locking said driven member in each of its quarter-turn positions during said return stroke of said actuator member.

2,860,523
STEERING HANDLE FOR MOTOR VEHICLES
Monroe Arnold Lerman, Sunnyside, N. Y.
Application February 23, 1955, Serial No. 489,918
1 Claim. (Cl. 74—494)

A steering mechanism for motor vehicles, comprising steering gear, a steering shaft actuating said steering gear, a power steering mechanism operatively connected to the steering shaft, a steering wheel connected to the top of said steering shaft, a drum secured to said steering shaft coaxially therewith adjacent said steering wheel, a collar mounted on said steering column and enclosing said drum, a pair of openings formed in said collar and a pair of pulleys rotatably supported by said collar at said openings, a bracket mounted on said collar and projecting radially outwardly therefrom, a handle pivotally mounted at one end on said bracket, the pivotal axis being parallel to the steering shaft axis and the handle extending radially outwardly from said pivotal axis in the direction of the steering wheel rim, the opposite end of said handle projecting outwardly beyond said steering wheel rim, a pair of laterally extending arms connected to said handle on opposite sides thereof and adjacent the pivotal connection between said handle and said bracket, the outer ends of said arms extending to points adjacent the rim of the steering wheel, and a cable wound intermediate its ends around said drum, the ends of said cable extending around said pulleys and through said openings in the collar and being connected to the outer ends of said arms, whereby pivotal movement of the handle about its said pivotal axis, caused by engaging the outer end of said handle and swinging it in either clockwise or counter-clockwise direction, causes the cable to turn the drum and the steering shaft and thereby to operate the steering gear of the vehicle, said pivotal axis being located a sufficient distance from the steering shaft axis and the drum being of such diameter as to provide a mechanical advantage in the handle such that the angular movement of the handle is exceeded by the angular movement of the steering shaft, whereby it is possible to steer the vehicle by moving the handle relatively small angular distances.

2,860,524
ADJUSTING MECHANISM FOR TIMING DEVICES
Russell G. Allen, Godfrey, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application February 17, 1954, Serial No. 410,860
17 Claims. (Cl. 74—505)

9. The combination with a cylindrical drum mounted with its axis vertical, of an actuating device and adjusting mechanism for adjusting said device, the drum being formed with a track extending circumferentially thereof along its exterior surface, the wall of the drum having openings therethrough at the level of said track, said adjusting mechanism comprising a reel, a frame in which the reel is journaled, means for mounting said frame on the inner wall of the drum, a cable having portions wound in opposite directions on the reel, sheaves over which the cable is trained, said sheaves journaled within the drum and extending into said openings in the wall of the drum, the cable including a length extending between said



sheaves and along the said track, a hand crank positioned exteriorly of the drum, and means providing operating connections between the hand crank and the reel for rotating the latter.

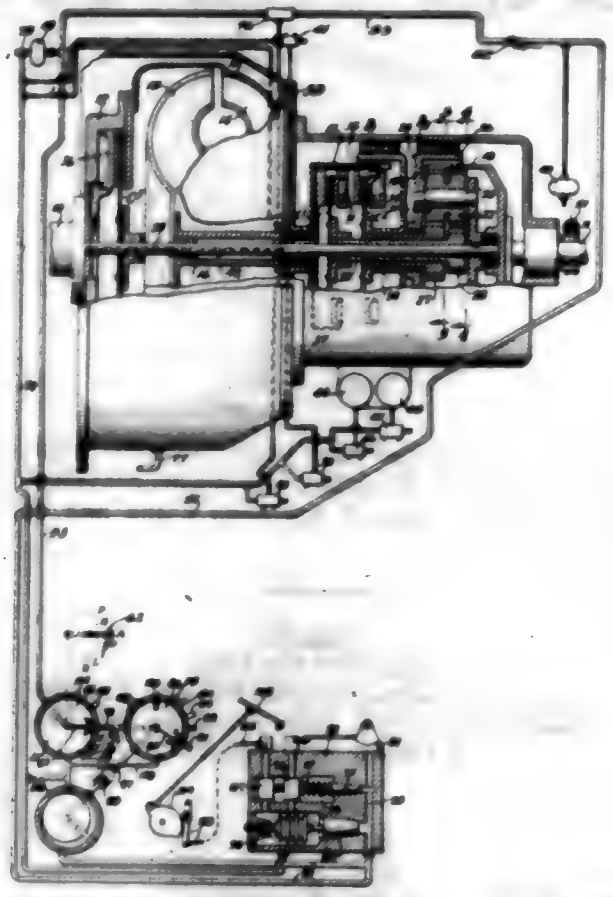
2,860,525
SAFETY GUARD
Jack A. Breadner, Ottawa, Ontario, Canada
Application July 6, 1953, Serial No. 366,266
1 Claim. (Cl. 74—613)

In a safety device for power presses and like machines, the combination with a frame having a work table, a descending element mounted on said frame arranged to strike a piece of work on said table, driving means for the descending element, and a tripping lever, a switch mounted on the frame adjacent the descending element and solely actuatable by each and every descending stroke of said element, a second switch mounted on the frame adjacent the tripping lever and operable thereby, a sweeping arm pivotally mounted in the frame for sweeping the area above said table, a linkage connected to said arm to swing the latter, and power means operating the linkage in response to each and every actuation of either of said switches.

2,860,526
TRANSMISSIONS
Adiel Y. Dodge, Rockford, Ill.
Application March 2, 1953, Serial No. 339,787
10 Claims. (Cl. 74—754)

1. A transmission for connecting a driving shaft to a driven shaft comprising a pair of sun gears, a ring gear, a gear carrier, a pair of connected planet pinions on the carrier, one of the planet pinions meshing with the ring gear and one of the sun gears, an idler pinion on the carrier meshing with the other planet pinion and the other sun gear, a connection from the ring gear to the driven shaft, means including clutches to connect the sun gears selectively to the driving shaft, brakes selectively to hold the gear carrier and one of the sun gears against rotation, fluid actuators to control the clutches and brakes, a source of fluid under pressure, connections from the source to the actuators to supply fluid thereto, and automatic return valves in the connections including parts

movable to one position responsive to supply of fluid under pressure to connect the actuators to the source of



fluid under pressure and movable to a second position when pressure is relieved to connect the actuators directly to a pressure return connection.

2,860,527

CONNECTING RODS FOR INTERNAL COMBUSTION ENGINES PARTICULARLY HIGH-SPEED AUTOMOBILE ENGINES

Martin Fritz, Ditzingen, Kreis Leonberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Application December 16, 1952, Serial No. 326,221
Claims priority, application Germany December 17, 1951
10 Claims. (Cl. 74—588)

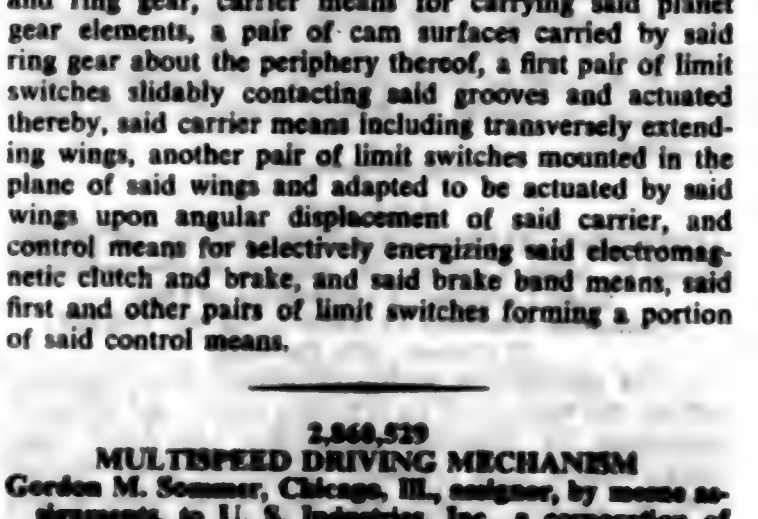
7. Light-weight connecting rod made of a plurality of individual parts comprising a tubular bearing member, a semi-circular bearing, and means for connecting said bearing members with the axes thereof in parallel spaced relationship, said means including two side members provided at one end thereof with a bore corresponding to the circumferential dimension of said tubular bearing member and at the other end thereof with a semi-circular bearing member, shoulder-like stop surfaces for said side members provided on said bearing members near the ends thereof along the sides facing said side members, said side members being mounted over said bearing members and fastened thereto at said stop surfaces in a plane perpendicular to the axes thereof so as to extend in a radial direction with respect to said bearing members, a web member in the plane of said axes located between said side members and provided with holes to reduce the weight thereof, said web member including projecting portions shorter than said web member along the longitudinal edges thereof, and longitudinal slots in said side members to receive said projecting portions and to thereby secure said web member against said side members, said web member having a stop shoulder for said side members slipped on said web member from the outside thereof.

2,860,528

ELECTROMAGNETICALLY CONTROLLED TRANSMISSION

John P. Butterfield, Grosse Pointe, Franklin Walter, Harper Woods, and Otto Johann Winkelmann, Berkley, Mich., and John Franklin Jones, New Orleans, La., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application June 29, 1953, Serial No. 364,774
17 Claims. (Cl. 74—753)



6. In a multispeed automatic transmission for delivering power from an engine source to a rotating tailshaft and having a planetary gear unit comprising a plurality of gear elements, an electromagnetic clutch means and an electromagnetic brake means for selectively controlling certain of said elements to obtain either of two forward speed planetary reduction ratios, and brake band means for controlling other of said elements to selectively obtain a reverse speed planetary reduction ratio and an additional forward speed planetary reduction ratio, the combination of an axially extending camshaft, cam elements carried by said camshaft and operatively engaged with said brake band means, an axially extending electric motor actuator, a motor armature shaft extending from said motor actuator, an auxiliary armature shaft, a planetary sun gear carried by said auxiliary armature shaft, a planetary ring gear carried by said camshaft in concentric relationship with respect to said sun gear, planet gear elements inter-engaging said sun and ring gear, carrier means for carrying said planet gear elements, a pair of cam surfaces carried by said ring gear about the periphery thereof, a first pair of limit switches slidably contacting said grooves and actuated thereby, said carrier means including transversely extending wings, another pair of limit switches mounted in the plane of said wings and adapted to be actuated by said wings upon angular displacement of said carrier, and control means for selectively energizing said electromagnetic clutch and brake, and said brake band means, said first and other pairs of limit switches forming a portion of said control means.

2,860,529

MULTISPEED DRIVING MECHANISM

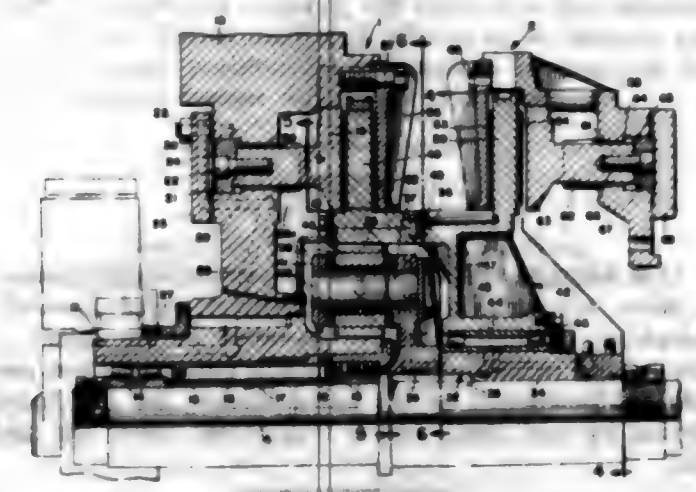
Gordon M. Sommer, Chicago, Ill., assignor, by mesne assignments, to U. S. Industries, Inc., a corporation of Delaware

Application July 16, 1953, Serial No. 368,389
4 Claims. (Cl. 74—785)

1. A multispeed driving mechanism for a driven shaft, comprising a driving member secured to the shaft and

in opposite directions on the reel, sheaves over which the matic return valves in the connections including parts

rotatable therewith, a plurality of planetary gears mounted on said driving member, a rotatable friction member having internal teeth thereon in mesh with said planetary gears and forming an orbit gear, said friction member including two identical axially spaced friction supporting flanges, one of said flanges being radially aligned with said planetary and orbit gear, and each of said flanges having friction elements mounted thereon, a flywheel freely rotatable on the driven shaft and having a sun gear thereon in mesh with said planetary gears,



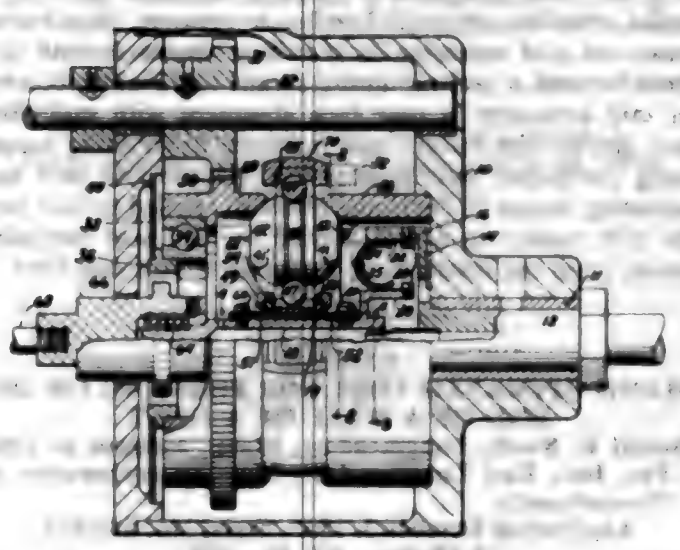
fluid operated clutch means on said flywheel operable to frictionally engage the friction elements on said one flange to drivingly connect said friction member with said flywheel, whereby said driving member and driven shaft will rotate at the same speed as said flywheel, and fluid operated control means operable to frictionally engage the friction elements on the other of said flanges to maintain said friction member against rotation, whereby said driving member and driven shaft will rotate at a speed less than that of said flywheel.

2,860,530

BALL SPEED CHANGERS

Edward K. Hine, North Caldwell, and Charles W. Chillson, Packanack Lake, N. J., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Application October 29, 1954, Serial No. 465,590
19 Claims. (Cl. 74—796)



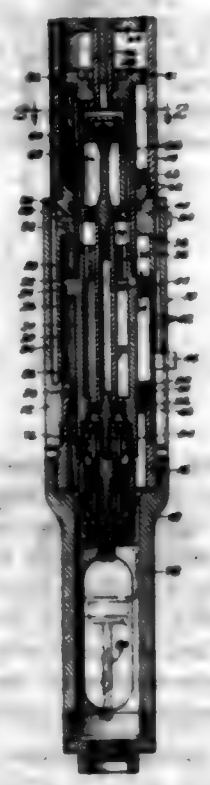
1. A speed changer comprising opposed, coaxial annular track members, a rotational member eccentric to the axis of said track members and lying therebetween, said rotational member having portions defining spherical surfaces in frictional engagement with said track members, means engaging the surface of said rotational member adjacent the axis of said track members preventing inward movement thereof, means loading said track members toward one another into engagement with the rotational member, a grooved track formed on the rotational member between said spherical surfaces defining a rotation axis for the rotational member normal to the groove, and means engaging said grooved track axially movable to tilt the rotation axis relative to the axis of said track members.

2,860,531

PNEUMATIC DRILL CONSTRUCTION

William R. De Groff, Bryan, Ohio, assignor to Aro Equipment Corporation, Bryan, Ohio, a corporation of Ohio

Application March 21, 1955, Serial No. 495,386
2 Claims. (Cl. 77—33.5)



1. A portable automatic drill comprising an elongated tubular casing, first transverse wall means separating said casing into forward and rear compartments, a rotary air motor of elongated form slidably extending through said transverse wall means in fluid-tight relation therewith so as to effect fluid isolation of said compartments within said casing, said air motor being of substantially smaller diameter than the inner wall of said casing to define therewith an oil dash-pot chamber in said forward compartment and an air actuator chamber in said rear compartment, a pair of pistons secured to the opposite ends of said air motor and slidably reciprocable within said oil dash-pot and air actuator chambers respectively, second transverse wall means at the forward end of said casing, a gearing assembly slidably reciprocable through said second wall means in fluid-tight relation therewith and adapted to mount a drilling tool for driving rotation, elongated shaft means operatively interconnecting said air motor and said gearing assembly, and means for alternately admitting and exhausting air under pressure to the opposite sides of said air actuator piston to effect unitary reciprocation of said air motor, dash-pot piston, and gearing assembly.

2,860,532

PRECISION DRILL AND ALIGNMENT FIXTURE

Basil C. Zickafoose, Jr., Takoma Park, Md.

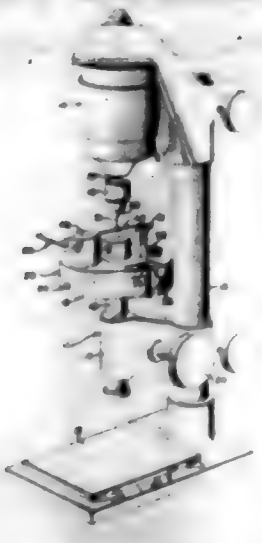
Application June 29, 1956, Serial No. 595,826
4 Claims. (Cl. 77—62)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In combination with a high speed precision drill press having a chuck and a movable pad, a drilling fixture for attachment to the pad comprising a base plate provided with a groove on the upper side thereof, a member fitted to said groove and movable therealong,

member in the plane of said axes located between said

comprising a driving member secured to the shaft and

adjustment means including a micrometer head and micrometer spindle, said micrometer head being secured to said plate with said spindle normally in contact with said member, spring means urging said member to maintain said contact with the spindle, means on said member for supporting a piece of work to be drilled, a swingable arm pivotally mounted on a post on said plate, said arm having a guide hole extending therethrough for receipt of a drill in alignment with the position of the desired hole

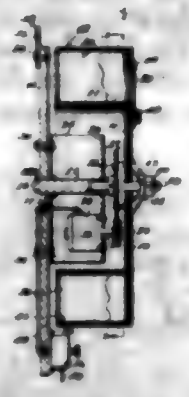


in said piece of work and for support of the shank portion of the drill, an adjustable stop on said base plate adapted to engage said arm for positioning the guide hole in substantial alignment with the chuck of the drill press, and a flexible coupling interconnecting the drill and the chuck; whereby the drill drills into said piece of work and accuracy and concentricity of the finished hole is assured by accommodation of the flexible coupling to any slight misalignment of the chuck and drill.

2,868,533
METAL LID LIFTER WITH PRESSER SHOE
Martin Patrick Lydon, Inglewood, Calif., assignor to Continental Can Company, New York, N. Y., a corporation of New York
Application October 23, 1956, Serial No. 617,861
2 Claims. (Cl. 81—3.46)

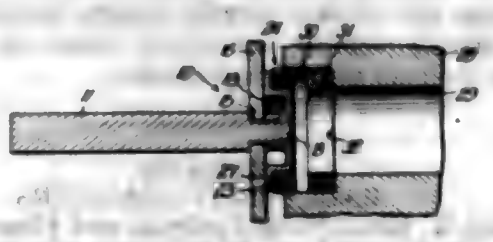
1. A lid lifter for lids having a skirt, a wall, a peripheral channel, and a central countersunk portion, said lifter comprising a flat bar-like handle body portion engageable over the channel of such a lid in a generally horizontal position and having a broad flat hook portion struck downwardly out of said body portion and engageable under the depending skirt of the lid, said body portion merging into a downward offset for extending downwardly into the lid's countersunk portion, and a broad presser shoe projecting from the offset in a plane generally paralleling the plane of the handle portion and having a length greater than the width of the handle portion disposed to extend at each end beyond the side edge line of said handle body portion and to engage flatwise over a large area of the central countersunk portion of the lid, the depth of the offset of said presser shoe being greater than the depth to which the hook portion is struck down from the handle body portion to place the lower limit of the hook portion intermediately of the depth of said offset and above a line between the offset and the free end of the body portion.

2,868,534
ROTATING DRUM FOR SELF-WINDING AND CONVENTIONAL WRIST WATCHES
Werner S. Nelson, Tampa, Fla.
Application April 5, 1956, Serial No. 576,463
4 Claims. (Cl. 81—7.5)



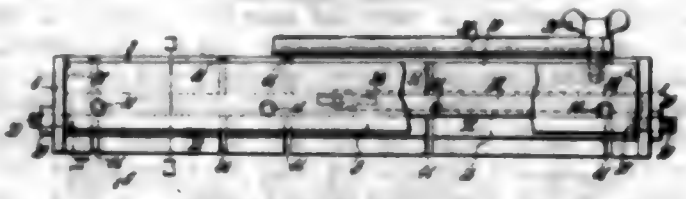
1. A rotatable watch carrying drum comprising a panel, a sleeve mounted in the panel and extended inwardly therefrom, a shaft rotatably mounted in the sleeve, a disc having radially disposed pockets extended from one side and positioned on the outer portion, the disc being carried by said shaft, and a transparent cover for said disc.

2,868,535
SEAL INSTALLATION TOOL
William J. Fowler, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application February 20, 1956, Serial No. 566,622
12 Claims. (Cl. 81—8.1)



1. A hand tool for use in the installation of seals in the bore of a housing, said tool comprising a seal position directing handle being provided at an end thereof with an axial extension of reduced diameter defining a radial shoulder on said handle, a pressure distributing means on said extension in rear face abutment with said shoulder, and a seal mounting means removably received on said extension in rear face abutment with said pressure distributing means, said pressure distributing means being positioned intermediate said handle and said seal mounting means to distribute pressure applied to said handle with respect to a seal carried by said seal mounting means upon the insertion of the same within said bore.

2,868,536
HAND OPERATED TOOL FOR FORMING LIP ON END OF A WALL OF A DUCT
Russell F. Swett, Longmeadow, Mass., assignor to Duc-Pac, Inc., East Longmeadow, Mass., a corporation of Massachusetts
Application October 3, 1957, Serial No. 688,875
3 Claims. (Cl. 81—15)

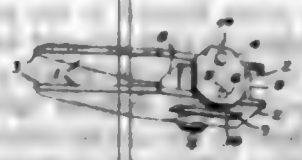


1. A hand tool for turning over the end of the wall of a sheet metal duct section to form a lip, an elongated

the rotational member, a grooved track formed on the member fitted to said groove and movable therealong.

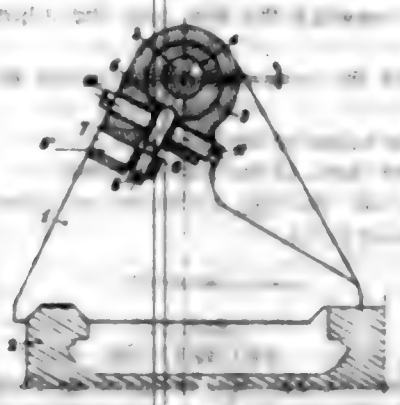
frame having opposite ends, an elongated former having opposite ends swingably connected to said opposite ends of the frame for swinging between a position to receive the end of a duct wall and a lip forming position, said former being provided with an elongated slot along an edge thereof to receive the edge of a duct wall in the receiving position thereof and adapted to cooperate with said frame to form a lip on said edge as the former swings to lip forming position, adjacent edges of said former and frame being provided with longitudinally spaced slots to receive the edges of the walls of a duct adjacent to the wall thereof on which a lip is to be formed, and handle means positionable for manual engagement for swinging said former relative to said frame.

2,860,537
TWEEZERS
George M. Ferguson, Portland, Oreg.
Application January 17, 1957, Serial No. 634,753
4 Claims. (Cl. 81—43)



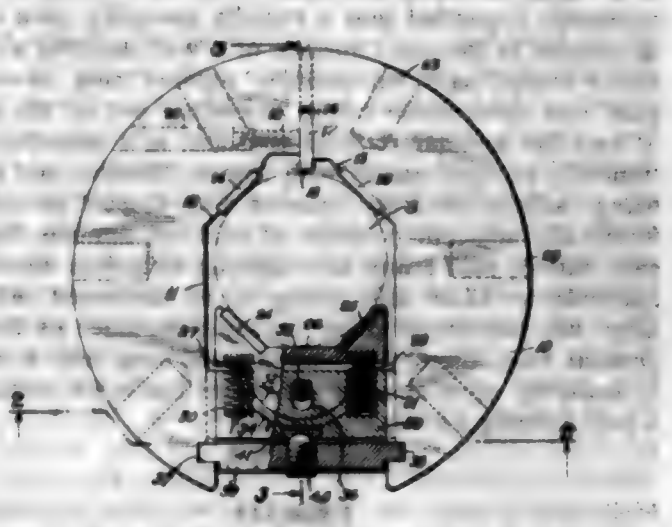
1. Tweezers comprising a pair of opposed elongated spaced co-operating blades one end of each blade terminating in a gripping tip member, pivot means joining said blades adjacent their other ends, and an elastic element lying intermediate said blades adjacent the pivot means joining said blades, said elastic element comprising an elongated block of rubbery material having plane opposed faces and extending in both directions along said blades beyond said pivot means, said elastic element spacing said blades out of contact with each other in a predetermined rest position for the blades, said elastic element tending to bias the blades into the predetermined rest position for the blades.

2,860,538
ARRANGEMENT FOR ADJUSTING THE POSITION OF THE DEAD CENTER IN MACHINE TOOLS
Henri René Brust, Paris, France, assignor of one-half to Societe Anonyme dite: Etablissements A. Cazeneuve, La Plaine Saint-Denis (Seine), France, a French company
Application July 24, 1957, Serial No. 673,964
Claims priority, application France August 10, 1956
5 Claims. (Cl. 82—31)



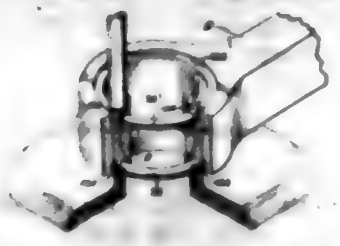
1. An arrangement for adjusting the position of the dead center of a machine tool provided with a bed, comprising a dead center body adapted to be rigidly and directly secured to the bed of the machine-tool, a barrel slidingly fitted in said body and the axis of which is parallel with that of said bed, a frusto-conical eccentric bore being provided in said barrel to carry the dead center, said sliding barrel being provided furthermore with a longitudinal groove, a flat key slidingly engaging said groove, and projecting radially out of the latter, aligned screws located to either side of the key perpendicularly thereto and the tips of which are in contact with the opposite sides of the key, the movements of the screws in either direction by equal and opposite amounts shifting the key laterally and thereby urging the barrel into an angular rotation by a small amount and holding it fast in the angular position assumed by it.

2,860,539
TOOL FOR TRUING CRANKSHAFTS AND THE LIKE
Gomer William Davies, Gainesville, Fla.
Application September 8, 1953, Serial No. 378,776
1 Claim. (Cl. 82—4)



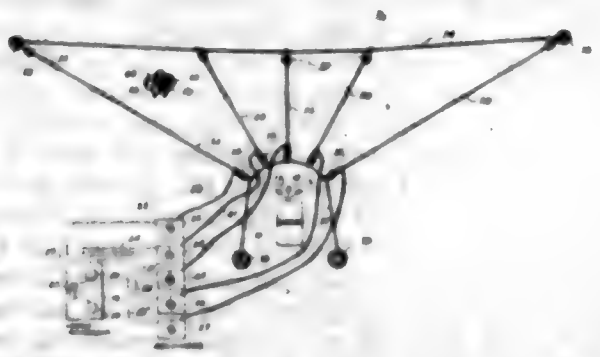
A tool for truing shafts and the like, comprising a generally U-shaped housing having an arcuate outer perimeter, said U-shaped housing having a yoke and a pair of arms which are joined by said yoke and occupy a common plane therewith, said arcuate perimeter extending, substantially, from the free end of one of said arms around said yoke to the free end of the other arm, a slot formed in said yoke, a cutter adjustably mounted in said slot, a pair of bearing plates secured to said housing on opposite sides of said cutter, a bridge extending between the arms of said U-shaped housing, adjacent their free ends, a block slidably mounted between said arms for longitudinal movement along said arms in one direction toward said bridge and in the opposite direction toward the yoke of said housing, an adjusting screw on the bridge engaging said slidable block to urge said block in the direction of the yoke of said housing, a rocker slidably mounted on said block for slidable movement relative to said block in one direction toward the bridge and in the opposite direction toward said yoke, said rocker being also mounted on said block for rocking movement relative thereto in the plane occupied by said yoke and said arms, a pair of compression springs mounted between said block and said rocker on opposite sides of the rocking axis urging the rocker in the direction of said yoke, a pair of bearing plates mounted on said rocker opposite the bearing plates on the housing, said bearing plates on the rocker being spaced from the bearing plates and cutter on the housing to provide room for a shaft placed between said bearing plates on the rocker and said bearing plates and cutter on the housing, whereby the adjusting screw on the bridge may be turned to push the block and said spring-urged rocker in the direction of the yoke of the housing, thereby pressing the shaft by means of said bearing plates on the rocker against said bearing plates and cutter on the housing, and means for turning said housing about the axis of said shaft to cause the cutter to true said shaft.

2,860,540
CONTINUOUS BEARING RETAINER RING ADAPTED FOR RADIAL EXPANSION
Karl H. Karlsson, Studio City, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application March 20, 1957, Serial No. 647,233
2 Claims. (Cl. 85—8.6)



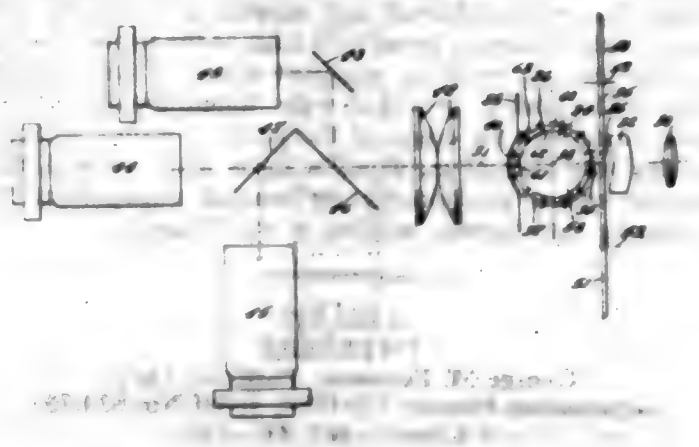
1. A continuous annular retainer ring substantially flat in a radial direction and adapted to be forcibly radially outwardly expanded into a radially inwardly open circular groove in the inner surface of a wall defining a cylindrical recess, said flat annular retainer ring having at least one deformable crimp extending out of the plane of said flat annular retainer ring and in a direction substantially at right angles with respect thereto, said crimp being radially inwardly reduced with respect to circumferentially adjacent portions of said flat annular ring on each side of said crimp and defining clearance means cooperable to allow said crimp to be deformed into the same flat horizontal plane as the remainder of the flat annular ring, thereby expanding said ring into a radially inwardly open circular groove in the inner surface of a wall defining a cylindrical recess.

2,860,541
WIRELESS CONTROL FOR RECORDING SOUND FOR STEREOPHONIC REPRODUCTION
Willis Robert Dresser, Long Hill, Conn., assignor to The Vitarama Corporation, Huntington, N. Y., a corporation of New York
Application April 27, 1954, Serial No. 425,856
11 Claims. (Cl. 88—16.2)



1. Apparatus for recording stereophonic sound for accompanying a motion picture, the apparatus including a recorder having mechanism for feeding a sound film, a plurality of recording heads for making separate sound tracks on the film, a separate radio receiver for operating each of the recording heads, a plurality of aerials each of which is elongated in one direction and extends for a substantial distance lengthwise at an elevation above the field to be photographed, each of the aerials being connected with one of the radio receivers, the receivers being tuned to receive signals from the sending station, a camera in position to photograph a region located under the aerials, and a radio transmitter tuned to send signals to all of the receivers simultaneously, the transmitter having an aerial carried by a movable sound source that operates below the level of the aerials and in the region to be photographed by the camera.

2,860,542
CONTINUOUS MOTION PICTURE APPARATUS, COMPOSITE PRISM
John C. Kinder, Philadelphia, Pa.
Application October 30, 1953, Serial No. 389,257
1 Claim. (Cl. 88—16.8)



An optical device comprising a source of light, a rotatable polygonal prism located in the path of the light and having a transparent core of solid material, rotating with the rest of the prism and which core has, in the light path, circumferential surfaces spherically curved about a center located on the axis of rotation of the prism, the prism having also, affixed on the outside of the core, a series of individual plano-concave lens elements having the concave side inward with a spherical curvature substantially identical to that of the core having their edges near each other substantially radial, and having their plane faces symmetrically positioned about the core with each paired with another opposite thereto to form a regular polygon having a series of plane facets, the light path being continuously through solid transparent material between facets, the lens elements being all of substantially the same refractive index which is substantially different from and higher than that of the core, and the prism having radial opaque strips between neighboring radial edges of the lens elements, and film sprockets mounted rigidly on the outside of the prism to rotate therewith and hold successive films in a film strip opposite successive prism facets in the light path, the different components being interrelated substantially in accordance with the following equation:

$$\frac{2n_2t_1+D}{D(n_2-1)}=1+\frac{2n_2t_1+D}{R_1}\cdot\frac{n_2-n_1}{n_1}$$

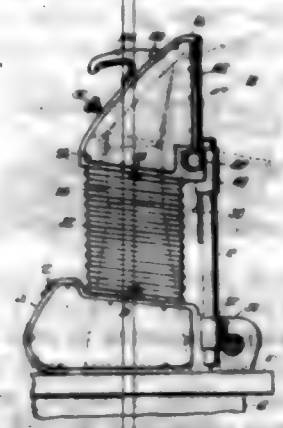
in which

D=flat-to-flat thickness between opposed facets of the polygon.
t_1=distance between the film and the adjoining polygon facet.
R_1=radius of the core and of the cavity of the lens elements.
n_1=refractive index of the core.
n_2=refractive index of the lens elements.
t_2=thickness of the lens elements measured radially at their thinnest point.

2,860,543
PROJECTOR
John R. Miles, Skokie, Ill., assignor to Projection Optics Co. Inc., Rochester, N. Y., a corporation of New York
Application June 21, 1956, Serial No. 592,894
4 Claims. (Cl. 88—26)

1. An optical instrument adapted to project the image of an object onto a screen comprising a base member adapted to support the object to be imaged, a source of artificial light in said base member adapted to illuminate the object to be imaged, a plurality of elongated support

members removably secured to said base member, a projection head adjustably supported by said support members having two substantially normal adjacent sides, rack means secured to said support members, gear means attached to said projection head and adapted to co-operate with said rack means, means for operating said gear means so as to adjust said projection head with respect



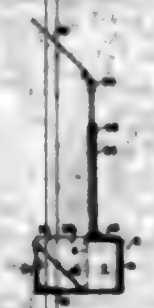
to said base member, an entrance opening and an exit opening in said substantially normal sides respectively, a reflector member in said projection head disposed so as to provide a nonlinear axis through said projection head, a lens member, a lens board adapted to adjustably support said lens, and means for removably securing said lens board to said projection head in association with a selected one of said openings as desired.

2,860,544

CUING DEVICE

Irving B. Kahn, New Rochelle, N. Y., assignor to Teleprompter Corporation, New York, N. Y., a corporation of New York

Application June 8, 1955, Serial No. 514,680
1 Claim. (Cl. 88—74)



In combination, a cuing device adapted to present changing graphic data in a delimited plane area, a housing having lateral, top, bottom, front and rear walls, said top wall having an aperture therein of at least the same dimensions as said area, a stand of adjustable height arranged on said top wall, a first mirror disposed within said housing adjacent said area with its plane inclined at substantially 45° to the plane of said area, said mirror having parallel to the intersection of its plane with the plane of said area a first dimension substantially equal to the dimension of said area parallel to said intersection, said mirror further having perpendicular to its said first dimension a dimension of at least the square root of two times the dimension of said area perpendicular to said intersection, and a second mirror affixed at the end of said stand remote from said housing, said second mirror having dimensions at least as great as the dimensions of said first mirror and being arranged with its plane substantially parallel to the plane of said first mirror, said second mirror being at least partially transparent.

2,860,545

REAR VIEW MIRROR MOUNTING STRUCTURE

Gerhard Herz, Wuppertal-Vohwinkel, and Kurt Culpitschirsch, Wuppertal-Elberfeld, Germany, assignors to Gebruder Happich-Gesellschaft mit beschrankter Haftung, Wuppertal-Elberfeld, Germany

Application July 18, 1955, Serial No. 522,728
Claims priority, application Germany July 19, 1954
4 Claims. (Cl. 88—96)

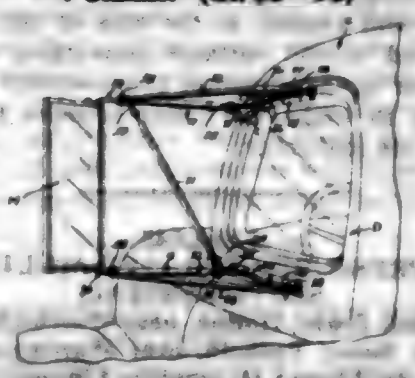
1. A vehicle rear view mirror device comprising mirror means, a support arm, mounting means mounting said mirror means on one end of said support arm, a mounting plate adapted to be secured to a vehicle interior, said support arm having a substantially T-shaped appendage on the opposite end thereof, said appendage having leg portions and a stem portion, substantially T-shaped recess means on said support plate receiving said appendage, and pressure means normally maintaining said appendage within said recess means, said pressure means comprising a ball projecting from the end face of each leg portion and stem portion, spring means yieldably urging said balls outwardly, and conical recess means carried in the side walls of said mounting plate recess means receiving said balls, said spring means being yieldable to permit separation of said mounting plate and support arm upon the latter being subject to an impact, said balls projecting from the leg portion end faces being in alignment to provide an axis about which the support arm is tiltable, said stem portion ball being selectively receivable in at least two conical recesses to maintain said support arm in one of at least two selective positions.

2,860,546

TRUCK MIRROR AND SUPPORTING MEANS THEREFOR

Clark M. Bolser, Cedar Falls, Iowa, assignor to Bolser Corporation, Cedar Falls, Iowa, a corporation of Iowa

Application September 19, 1955, Serial No. 534,987
4 Claims. (Cl. 88—98)



1. A mirror for trucks and the like and means for mounting the mirror on the truck comprising upper and lower elongated mounting brackets, upper and lower arms pivoted to the forward ends of said brackets and extending laterally from the truck, said mirror being pivoted to the outer ends of said arms, and upper and lower braces pivoted to said arms and extending toward the rear ends of said mounting bracket, said rear ends having a series of spaced openings therein, the rear ends of said arm braces having openings therein, and readily removable pins for connecting said rear ends of said

to be photographed by the camera.

artificial light in said base member adapted to illuminate the object to be imaged, a plurality of elongated support

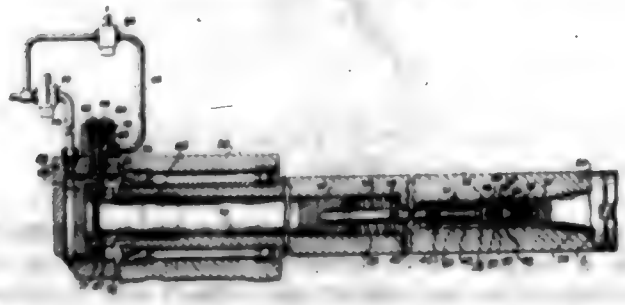
braces selectively to the openings of said brackets by said pins being received in said openings for adjusting the angles between said arms and said brackets.

2,860,567

HORIZONTAL BORING, DRILLING, AND MILLING MACHINE

Hallis Noah Stephan, Cleveland Heights, Ohio, assignor to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Application July 14, 1955, Serial No. 522,066
13 Claims. (Cl. 90—11)



1. In a machine tool, a spindle having an axially extending aperture therein opening into the forward end thereof, the forward portion of the spindle aperture forming a rearwardly converging tapered socket for the reception of a tool arbor having a surface inclined with respect to the axis of the arbor in a direction opposite to that of said socket and which surface is adapted to be engaged to secure the arbor in the socket, a locking member in and movable axially of said aperture for releasably securing the tool arbor in the spindle socket, means providing a fixed abutment surface in said aperture inclined with respect to the spindle axis in a direction opposite to that of said socket, said abutment surface being adjacent to said locking member, said locking member having a first surface inclined in the same general direction as said fixed abutment surface for engaging the inclined surface on the arbor to be secured and a second inclined surface adapted to engage said fixed abutment surface to wedge the locking member into engagement with the arbor, means for moving said locking member axially in a rearwardly direction with respect to said spindle to cause engagement of said second surface with said abutment surface and engagement of said first surface with the inclined surface of said tool arbor and to wedge said locking member between the tool arbor and said fixed abutment surface, said second surface and said abutment surface having substantially the same angle of inclination with respect to the axis of the spindle and said first and second surfaces converging with respect to each other in the direction of movement of the locking member to wedge the latter between the abutment surface and the tool arbor.

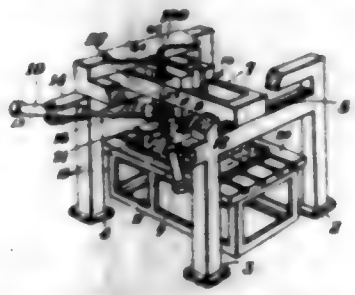
2,860,568

FLUID PRESSURE OPERATED MULTILINEAR SERVO-SYSTEMS

Donald Marsh Bruce, Hatton, near Warrington, and Robert Harry Burns, Penketh, near Warrington, England, assignors to Electro-Hydraulics Limited, Warrington, England, a company of Great Britain

Application November 29, 1954, Serial No. 471,850
Claims priority, application Great Britain April 29, 1954
5 Claims. (Cl. 90—13)

1. A fluid pressure-operated multilinear servo-system for controlling movement of a copying router machine tool, comprising a cutter head; means mounting said cutter head for compound movement with movement components in a plane; two fluid pressure-operated jacks each including a cylinder element and a piston and piston rod element slidable relatively in the associated cylinder element; means respectively pivotally mounting one element of each jack, the pivotal mountings being spaced from each other parallel to said plane; a common pivot on said cutter head; means respectively pivotally connecting the other element of each of said jacks to said common pivot with the lines of action of said jacks converging upon each other from said pivotal mountings to said common pivot; valve means mounted on said jacks for controlling supplying of fluid under pressure to said



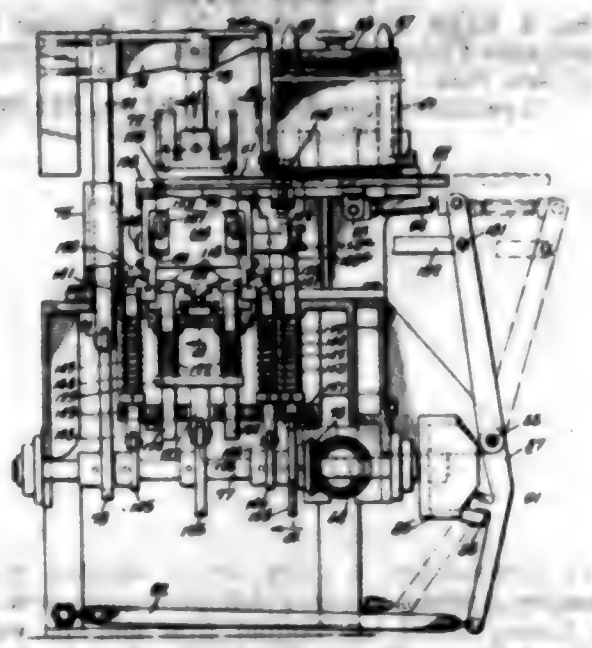
jacks; a spindle; means connected to said spindle adjacent to one end thereof and mounting said spindle for substantially 360 degree orbital sweeping movement of its other end; and means connected to said spindle between its mounting and its said other end and also connected to said valve means for operating the latter conjointly and differentially in response to movement of said spindle to effect selected compound movement of said cutter head.

2,860,569

BOX FORMING MACHINE

Joseph P. Mancuso, Jamesburg, and Robert R. Maffett, Westfield, N. J., assignors to Robert E. Bauer, Wyndmoor, Pa.

Application June 8, 1954, Serial No. 435,154
10 Claims. (Cl. 93—51)



2. In a packaging machine operable to form a box blank into a finished box; said box blank comprising a rectangular base portion, side and end wall portions foldably secured to said base portion, flap portions secured to the upper ends of opposite wall portions, and locking tabs on the side edges of said flap portions operable to be inserted into slits in adjacent wall portions, support means operable to support a supply of box blanks, a ram assembly mounted adjacent said support means for vertical movement between opposite limit positions, drive means operable to actuate said ram assembly between said opposite limit positions, means defining a die opening positioned in axial alignment with said ram assembly into which said ram assembly projects during movement toward one of said limit positions, a box blank shuttle operable to transfer a box blank from said support means to a position overlying said die opening with the rectangular base portion of the box blank coextensive with

parent.

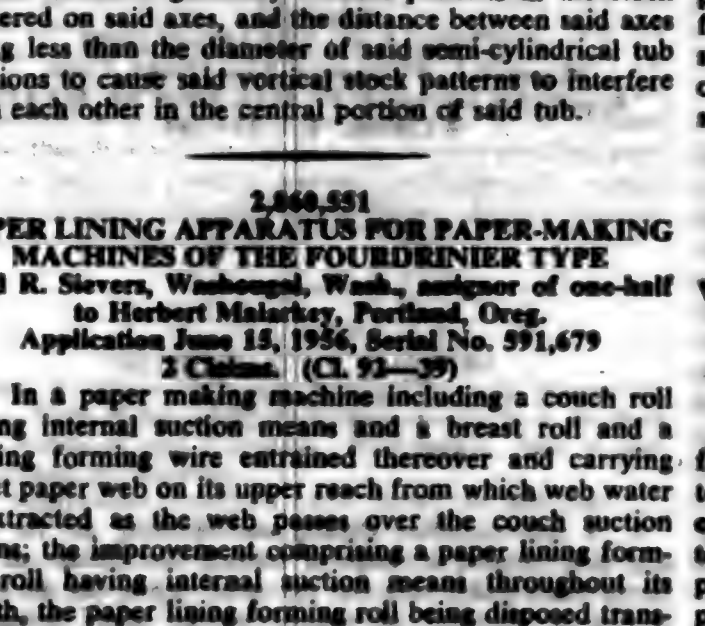
removable pins for connecting said rear ends of said

the die opening, a plurality of forming edges on said box blank shuttle and adjacent said die opening operable during movement of the ram assembly toward said one limit position to engage the side and end walls of the box blank and fold the same upwardly relative to the box blank base portion, and means in said die opening operable after the box blank has been inserted into said die opening by said ram assembly to fold said flap portions downwardly across the upper end of said box and insert said locking tabs into said slits in the box blank wall portions.

2,860,550
PAPER MACHINERY

Donald Louis Stark, Appleton, Wis., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio

Application September 28, 1956, Serial No. 612,634
6 Claims. (Cl. 92—23)



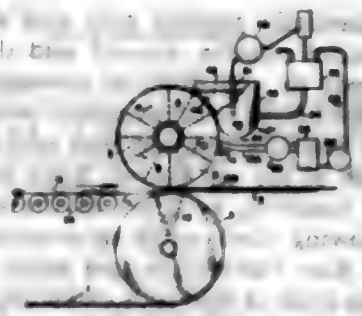
1. Pulping apparatus of the character described for paper making stock especially adapted for receiving broke webs of substantial width for repulping, comprising a tub having semi-cylindrical end portions spaced from each other by a distance greater than the radius thereof, straight side portions connecting said semi-cylindrical portions of said tub, a bottom connected with said side and end portions of said tub, a pair of rotary impellers mounted in said tub on vertical axes coaxial with said semi-cylindrical end portions respectively, means forming an annular perforate screen surrounding each of said impellers and cooperating with said tub bottom to define annular chambers for receiving stock from the interior of said tub of sufficiently small particle size for passage through said screens, drive means for rotating said impellers to create generally vortical patterns in the stock centered on said axes, and the distance between said axes being less than the diameter of said semi-cylindrical tub portions to cause said vortical stock patterns to interfere with each other in the central portion of said tub.

2,860,551
PAPER LINING APPARATUS FOR PAPER-MAKING MACHINES OF THE FOURDRINIER TYPE

Fred R. Sievers, Washougal, Wash., assignor of one-half to Herbert Malarkey, Portland, Oreg.

Application June 15, 1956, Serial No. 591,679
2 Claims. (Cl. 92—39)

1. In a paper making machine including a couch roll having internal suction means and a breast roll and a moving forming wire entrained thereover and carrying a wet paper web on its upper reach from which web water is extracted as the web passes over the couch suction means; the improvement comprising a paper lining forming roll having internal suction means throughout its length, the paper lining forming roll being disposed transversely of the forming wire directly above the couch suction means and being rotatably carried by a pair of beams pivotally and slidably supported at one of their ends to the sides of the paper making machine and movable vertically at their opposite ends, means carried by the sides of the paper making machine cooperating with means carried by said beams for selectively locking their said opposite ends in vertically adjusted positions, said roll being thereby adapted to move vertically with respect to the suction means in accordance with surface irregularities in the web carried by the forming wire and rotatable by frictional engagement with the web, a flow box mounted upon said beams adjacent the peripheral surface of said paper lining forming roll and adapted to deliver a predetermined and regulatable flow of wet paper lining forming stock onto said paper lining forming roll to which it is held by and from which stock water is extracted by the internal suction means of the paper lining forming roll, said paper lining forming roll comprising a cylinder of porous material closed at both of its ends by end plates and divided into longitudinal compartments by radially disposed webs extending throughout the length of the roll and secured at their ends to said end plates and along their inner edges to a suction tube secured to and extending through said end plates and rotatably mounted in bearings and sealed at both of its ends, said tube being perforated entirely about its circumference and throughout its length and thereby in open communication with the interior of said compartments, a stationary suction tube concentrically disposed within the first mentioned suction tube sealed and secured at one of its ends to one of said end plates and extending through the other and connected to a source of suction, said stationary tube being perforated through a portion of its circumference throughout its length and being of lesser outside diameter than the inside diameter of the first mentioned tube to provide an annular space between the tubes, radially disposed sealing elements carried by said stationary tube to divide said annular space into a suction area for directing suction forces to the interior of certain of said compartments and a non-suction area for sealing off suction forces to the other of said compartments whereby the rotating paper lining forming roll will apply the paper lining thus formed to the surface of the paper web above the couch suction means and whereby suction forces to the interior of said certain of said compartments will be progressively sealed off by rotation of the paper lining forming roll.



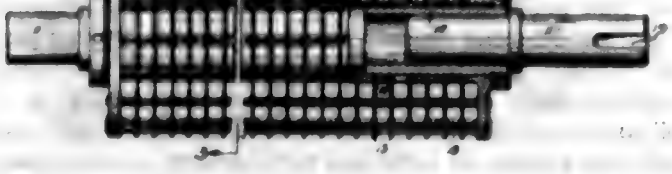
2,860,552
FLOW EVENER ROLL FOR PAPER MAKING MACHINES

Wesley S. Corbin, Watertown, N. Y., assignor, by mesne assignments, to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio

Application January 26, 1955, Serial No. 484,257
4 Claims. (Cl. 92—44)

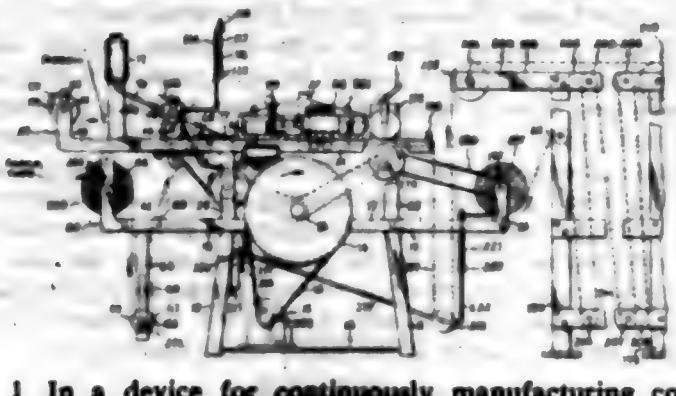
1. A flow distributor roll of the character described for mounting in conjunction with a stock flow passage to the forming member of a paper making machine to establish maintained effectively parallel flow of the stock to said forming member while reducing the tendencies to parallelism of the individual fibers in the stock, comprising a central shaft, a pair of opposed end plates mounted on said shaft and extending radially thereof, means

for mounting said shaft in said passage for rotation about an axis extending transversely of the direction of flow of the stock through said passage and with said end plates spaced inwardly of the side walls of said passage leaving clearances therebetween of predetermined width, a plurality of flat and relatively thin disks of rigid material and substantially the same diameter as said end plates, means mounting said disks between said end plates in axially spaced relation along said shaft with the individual said disks each extending at substantially right angles to the axis of said shaft to reduce to a minimum the development of cross currents in stock passing between said disks during rotation thereof with said shaft, a plurality of rods mounted on said end plates and extending there-



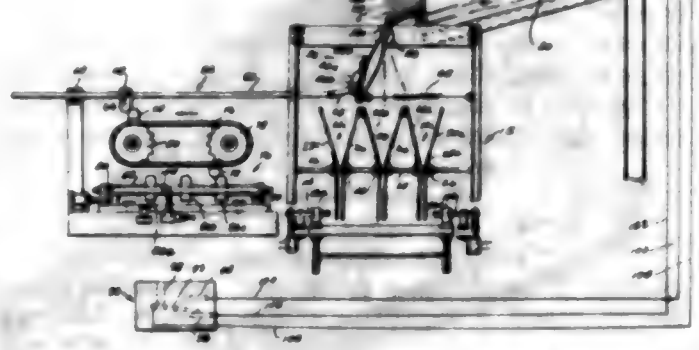
between substantially parallel with said shaft in circumferentially spaced relation around said disks, means securing said rods to said disks at substantially the outer periphery of said disks in substantially perpendicular relation with said disks for rotation with said disks essentially across the path of the out-flowing stock from within said roll to cause tumbling agitation of the individual fibers in said out-flowing stock while minimizing the introduction of cross flow currents in said stock, and projecting portions of the ends of said rods extending axially beyond said end plates and substantially equal in length to the widths of said clearances to effect similar tumbling action on the stock flowing through said clearances between said end plates and the side walls of said passage.

2,860,553
AUTOMATIC DEVICE FOR THE MANUFACTURE OF PARCEL CARRIERS
Hugh W. Vogt, Chicago, Ill.
Application November 9, 1954, Serial No. 467,712
6 Claims. (Cl. 93—1)



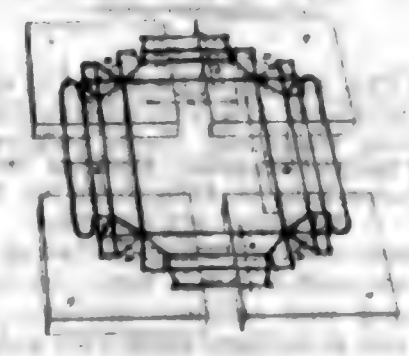
1. In a device for continuously manufacturing connected severable parcel carriers having looped handles, the combination of a frame; a prime mover means; means for feeding into and pulling a tape through said frame from a ribbon supply source including a pair of ribbon feeding elements; means, including a reciprocating head, for securing portions of the ribbon to said tape and forming a handle from other portions of the ribbon, and means for accumulating the finished parcel carriers, with means for controlling the rate of ribbon feed comprising an eccentric operably connected to said prime mover means and varying the rate of ribbon feed; an adjustable pulley operably connected to said eccentric, said pulley having relatively adjustable sections, said pair of ribbon feeding elements operably connected to said pulley, the speed of rotation of said ribbon feeding elements being determined by the position of said eccentric; a manually controllable lever normally pressing against one of said adjustable pulley sections, and manually operable means connected to said lever, regulating the pressure on said lever, whereby the speed of rotation of said pulley can be selectively controlled, a pair of opposed shafts, said ribbon feeding elements being secured to said shafts, and means for separating one of said shafts from the other thereof.

2,860,554
PARTITION ASSEMBLY MACHINE
Albert F. Shields, Forest Hills, N. Y., assignor to S. & S. Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y., a corporation of New York
Application April 16, 1953, Serial No. 349,164
5 Claims. (Cl. 93—37)



1. In a machine of the class described, means for holding an array of slotted partition blanks and means for feeding said array to a feed station, a pusher device for intermittently feeding individual blanks out of said array and toward a transfer chute, a pivotally mounted transfer chute having an input end for receiving successive blanks from said array and an output end successively registerable with a plurality of respective guide means in the course of pivotal motion, wherein successive blanks fed to said pivotal transfer chute by said pusher device are deposited successively in respective guide means, actuating means for effecting pivotal motion of said transfer chute, and means synchronizing the intermittent motion of said pusher device with the pivotal motion of said transfer chute to feed successive blanks to said transfer chutes in timed relation to blanks leaving said transfer chute to be deposited in respective guide means.

2,860,555
CUTTING AND CREASING DIES
Marshall L. Williamson, New Haven, Conn.
Application December 27, 1955, Serial No. 555,432
4 Claims. (Cl. 93—58)



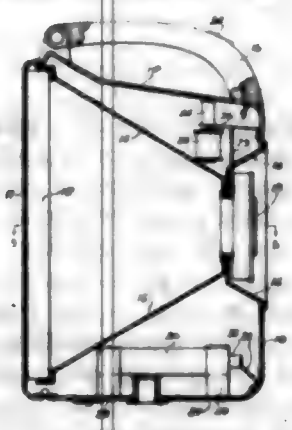
1. A self-contained cutting and creasing die for cutting and creasing a range of folding box blanks of different main panel area but the same depth, the die comprising a plurality of spaced blocks, there being at least one block for each corner of the box blank, said

2,860,559

2,860,561

blocks having vertical slots therein adapted to receive cutting knives and creasing rules, certain portions of the slots extending entirely through the blocks, said slots being interrupted at other portions, so as to leave connecting bridges between the portions of the block on both sides of the respective slot; a first set of internal cutting knives and creasing rules in said blocks, the knives and rules of the first set terminating short of the boundaries of the respective block and representing a standardized configuration of the corners of the box blank; and a second set of interconnecting cutting knives and creasing rules abutting the ends of said internal knives and rules and extending from one block to another, said second set of knives and rules being replaceable by others of different lengths to produce a series of blanks of different main panel size, said second set of knives and rules having notches extending into said external knives and rules from the bottom edge and adjacent the ends, said notches fitting said bridges, thereby locking said blocks together at predetermined distances, said cutting knives and creasing rules being taller than the blocks to protrude above the top surfaces of the blocks when the bottom edges of the knives and rules lie flush with the bottom surfaces of the blocks.

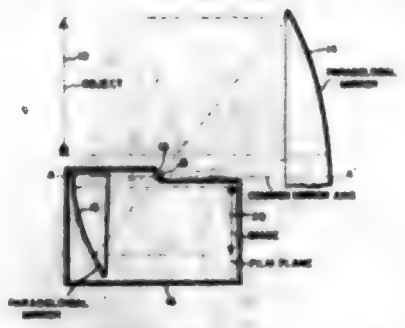
2,860,556
CAMERA
Berenice Abbott, New York, N. Y.
Application July 23, 1953, Serial No. 369,812
8 Claims. (Cl. 95—11)



4. A camera comprising a casing, a camera obscura inside said casing and having a lens and shutter opening at the front wall thereof, a rigid handle secured rigidly and directly to the casing of the camera and extending substantially parallel to but spaced from the adjacent wall of the camera casing to enable the fingers to be inserted between the handle and camera casing, whereby the handle can be firmly gripped within the hand with the thumb upon the outer surface of the handle, so that the camera can be pointed by means of the thumb toward the object or scene to be photographed, and shutter release mechanism so positioned on the handle as to be engaged by the thumb when the latter is in camera-pointing position, so that the camera can be simultaneously pointed and the shutter released by said thumb without preliminary view or range finding.

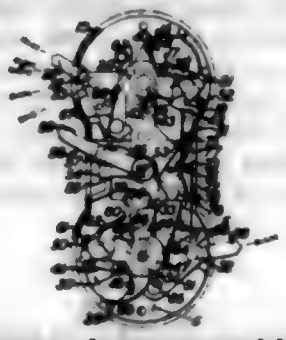
2,860,557
ORTHOGRAPHIC CAMERA
Charles B. Moore, Kennett Square, Pa., and Robert D. Van Veld, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application March 29, 1957, Serial No. 649,354
3 Claims. (Cl. 95—11)

3. An orthographic camera comprising in combination a first paraboloidal reflecting mirror of focal length of about 25.5" adapted to view an object to be photographed and a second paraboloidal reflecting mirror of focal length of about 4" disposed on a common axis with said first mirror with reflective surface facing the reflective surface of said first mirror and at a common focal point with said first mirror, a light-tight housing enclosing said second mirror, a circular aperture of diameter of about 0.016" in said light-tight housing disposed at said



focal point transmitting substantially only the light passed through said focal point from said first mirror to said second mirror, and means for exposing for predetermined time durations a photosensitive medium disposed within said housing to light rays reflected from said second mirror.

2,860,558
DUPLEX CAMERA SHUTTER
Frederick L. O. Rocheig, Redlands, Calif.
Application November 3, 1953, Serial No. 389,947
2 Claims. (Cl. 95—18)



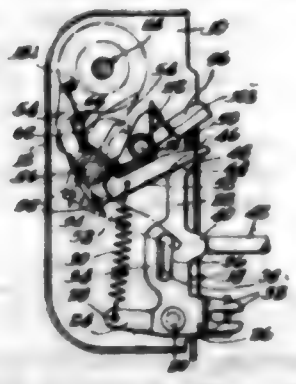
1. A duplex camera shutter comprising a base, spaced apertures extending through said base, a shutter rotatably mounted on said base adjacent each aperture with a portion of each shutter overlying the adjacent aperture, an arcuate notch in each shutter, a stud projecting from said base midway between said spaced apertures therein, a shutter operating bar pivotally mounted on said stud, each end of said bar having an enlargement overlying the adjacent shutter and aperture in said base when said bar is in inoperative position, spring means for urging said bar toward inoperative position, an over-center spring connecting each end of said bar and the adjacent shutter, a laterally projecting lip on each shutter and a cooperating lip on each end of said bar, an arm extending laterally from said bar, spaced offset lips on said arm, an operating lever pivotally mounted on said stud and disposed between said offset lips, a finger engaging portion on said lever disposed outwardly of said base, a tension spring for urging said lever in one direction whereby upon movement of said lever in the opposite direction the same will engage one of said offset lips and move said bar in the same direction to load said over-center springs, the lips on said shutters engaging the lips on said bar to prevent movement of said shutters, continued movement of said bar disengaging the lips thereon from the lips on said shutters to permit movement thereof with a snap action thereby moving said arcuate notches by the apertures in said base to make an exposure, return movement of said bar loading said over-center springs in the opposite direction to return said shutters to original position with the enlargement of each end of said bar overlying the adjacent aperture in said base to prevent an exposure during return movement of said shutters.

stantially greater diameter at one of its ends than at the other of its ends; a headed can screw within said tube ber and acting against said toggle links to release them when an overload on said tool means acts to rock said

speed of rotation of said ribbon feeding elements being determined by the position of said eccentric; a manually

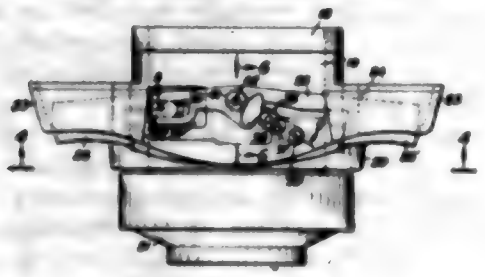
prising a plurality of spaced blocks, there being at least one block for each corner of the box blank, said

2,860,559
SHUTTER COCKING MECHANISM
Karl M. Maierhofer, Norridge, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois
Application November 16, 1955, Serial No. 547,686
4 Claims. (Cl. 95—31)



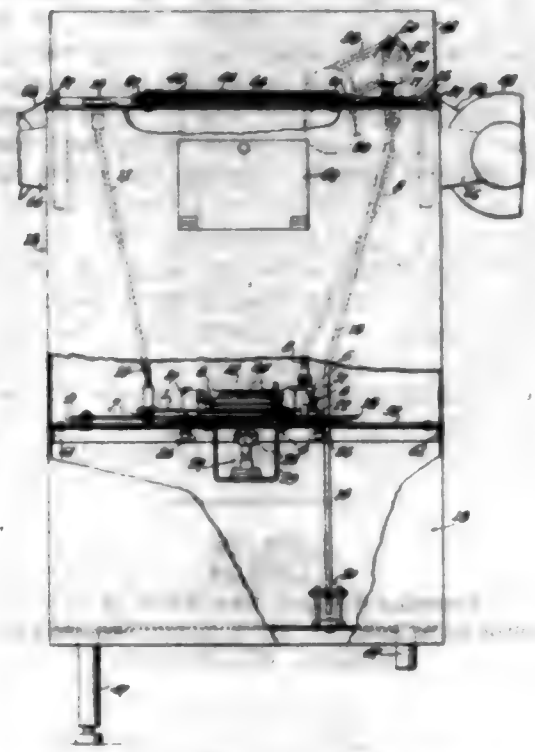
3. In a camera having a film wind mechanism and a resiliently biased shutter part, a camera shutter control mechanism comprising means retaining said shutter part in a cocked position against its resilient bias, said retaining means comprising a pivoted arm, a lever engageable with said shutter part for moving said shutter part into such cocked position, means operatively connected to said film winding mechanism for pivoting said lever to move said shutter part to cocked position upon operation of said cocking mechanism, manually operable means for moving said retaining means from said shutter part to allow movement of said shutter for effecting an exposure, and intermediate means controlled by said lever preventing movement of said moving means prior to operation of said film winding mechanism, the movement preventing means controlled by the lever comprising a stop engageable by said pivoted arm.

2,860,560
FOCUSING MECHANISM FOR PHOTOGRAPHIC CAMERA
Louis M. Traino and Leif Arneson, Rochester, N. Y., assignors to Graflex, Inc., Rochester, N. Y., a corporation of Delaware
Application July 29, 1953, Serial No. 371,053
10 Claims. (Cl. 95—45)



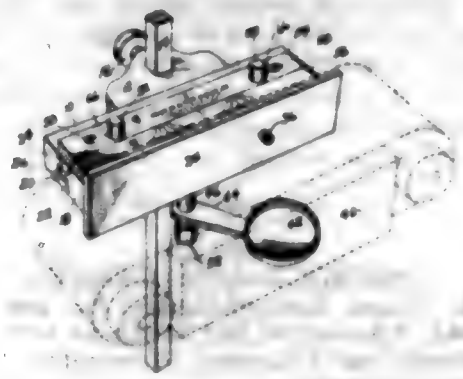
1. A photographic camera comprising a casing, a tube reciprocably mounted in said casing and constituting an objective lens mount, said tube being axially adjustable forwardly and rearwardly in said casing for focusing, and means for effecting said adjustment comprising a double-armed lever pivotally mounted in said casing for movement about an axis radial of the axis of said tube and intermediate the ends of said lever, said lever having its opposite ends extending outside said casing adjacent to opposite sides, respectively, of said casing and having finger rests at its opposite ends whereby it may be manually moved in opposite directions about its pivot by a photographer holding said casing at opposite sides, and means connecting said lever to said tube to move said tube axially in opposite directions, respectively, upon pressure on the opposite finger rests, respectively.

2,860,561
PHOTOGRAPHIC PRINTER WITH A POINT LIGHT SOURCE AND MECHANICAL DODGING DEVICE
John T. Pennington, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Army
Application August 9, 1957, Serial No. 677,411
7 Claims. (Cl. 95—79)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A photographic printer for negatives, the densities of which radially decrease from a point on said negatives, comprising a casing including a base, a printing stage thereon, a point light source within said casing directing a cone of light towards said printing stage, said cone of light having a diameter at its intersection with said printing stage at least as large as the diagonal of said printing stage, an iris diaphragm positioned between the said light source and the printing stage, drive means to open and close said iris diaphragm at a pre-set rate of speed, timer means for pre-setting the overall time of exposure, and means for positioning the said iris diaphragm laterally in two directions in a plane parallel to the printing stage in the cone of light from the said point light source.

2,860,562
SHIFT BAR
Howard G. Swift, Jr., Des Moines, Iowa
Application February 9, 1954, Serial No. 409,060
5 Claims. (Cl. 95—86)



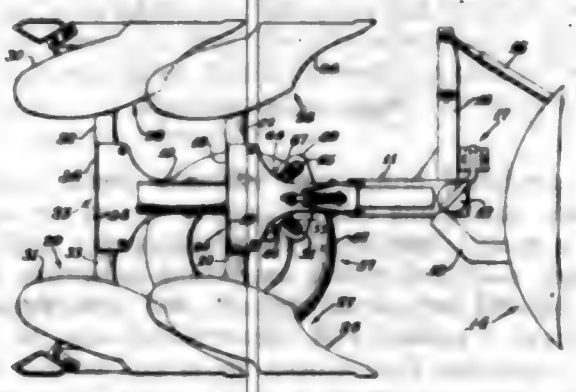
1. In a shift bar; a member adapted to be secured to a stable support; a second member slidably secured to said first mentioned member and having means for securing a camera to said second member; a threaded well in said second member; a tube having a bore of sub-

about 25.5" adapted to view an object to be photographed and a second paraboloidal reflecting mirror of focal

cent aperture in said base to prevent an exposure during return movement of said shutters.

stantially greater diameter at one of its ends than at the other of its ends; a headed cap screw within said tube and engaging the threaded well of said second member; said cap screw having its head in the larger diameter bore and its shank in the smaller diameter bore of said tube; a spring embracing the shank of said cap screw and interposed between the head of said cap screw and the inside end of the larger bore of said tube; an arm secured to said tube; and a lens cover secured to said arm.

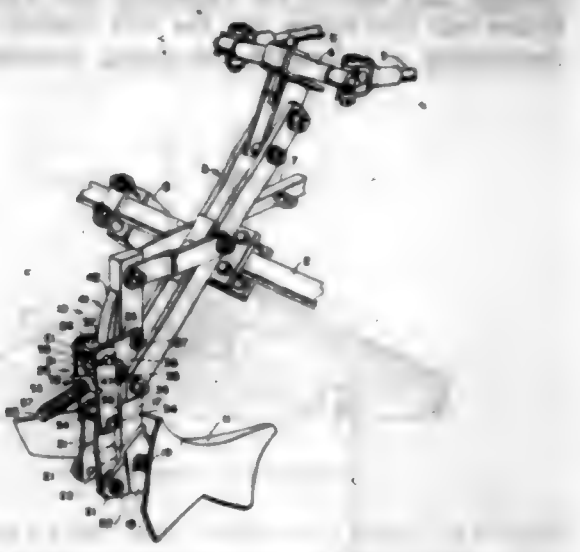
2,860,563
GAUGE WHEEL MOUNTING
Karl Martin Zahn and Harry E. Theocharides, Stockton, Calif., assignors to International Harvester Company, a corporation of New Jersey
Application April 30, 1956, Serial No. 581,400
4 Claims. (Cl. 97—26)



1. For use with a two-way plow of the type including a support having right and left hand plow units mounted thereon and rotatable about a longitudinal axis to place the plow units alternately in operation: a common gauge wheel for both said units and means for mounting said wheel on the support for rotation therewith, comprising a toothed quadrant secured to the support, a wheel-carrying arm pivotally mounted on the quadrant, said arm and wheel unit being rotatable bodily with the support from a gauging position relative to the operating plow unit to a raised position when the alternate plow unit is moved to operating position, said arm and wheel being swingable by gravity downwardly over said quadrant to an operating position with respect to the alternate plow unit, a latch member pivotally mounted on said wheel arm having a set of teeth at each end thereof, the teeth on opposite ends of said latch member being in cooperative engagement with the teeth of said quadrant in alternate operating positions of said gauge wheel to lock the wheel in its operating position.

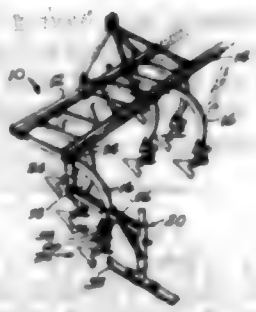
2,860,564
SAFETY TRIP DEVICE
Walter H. Silver, Robert E. Cox, and Anthony S. Trapkus, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Application July 19, 1956, Serial No. 598,896
10 Claims. (Cl. 97—47.88)

1. In a ground working implement, a support, a ground working tool means pivoted thereto and swingable in one direction relative to said support under overload conditions, a pair of toggle links pivotally interconnected at their adjacent ends, means pivotally connecting the other end of one of said toggle links to said tool means at a point spaced from the point of pivotal connection of said tool means with said support, a toggle anchoring member pivoted to said support and pivotally receiving the other end of the other of said toggle links, load-resisting leaf spring means fixed non-rotatably to said anchoring member and reacting at one end against said support, and means carried by said anchoring member and acting against said toggle links to release them when an overload on said tool means acts to rock said



anchoring member against the resisting force of said spring means.

2,860,565
SLIDE FOR RIGID SHANK CULTIVATOR
Maynard C. Anderson, Alma, and Norman Cole, Nicholls, Ga.
Application August 23, 1957, Serial No. 679,987
3 Claims. (Cl. 97—179)



1. In a cultivator, front and rear horizontal transverse members, a rearwardly and downwardly extending rigid shank secured to said members and extending rearwardly beyond said rear member and having a rear end, an adjustable plow assembly mounted on said rear end, a bracket secured to said rear member having arms positioned at opposite sides of said shank and having a bar depending below said shank in the region of the bracket, a horizontal arm having a forward end pivoted on said depending bar and a rear end, a vertical sleeve fixed on the rear end of said arm, a vertical post slidable in said sleeve and having a lower end below the sleeve and having thereon a mounting plate, a forwardly and rearwardly elongated ground engaging slide plate removably secured to the underside of the mounting plate and positioned behind and in line with the plow assembly, and means for securing said post in the sleeve in different vertically adjusted positions.

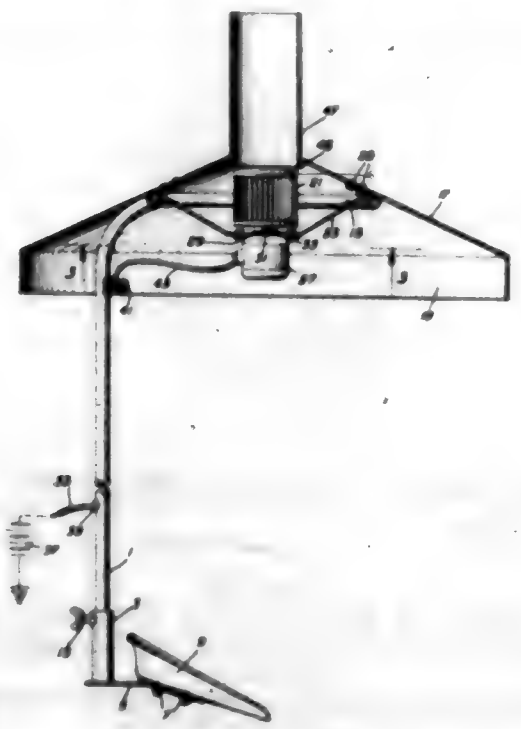
2,860,566
PROTECTING DEVICE FOR VEHICLE OPERATORS
Walter L. Allsup and Thad M. McSwain, Stuttgart, Ark.
Application June 3, 1957, Serial No. 663,899
1 Claim. (Cl. 98—1)

In combination, a standard, means for attaching the standard to an operator's seat of an agricultural machine, a horizontal annular frame on the upper end of the standard, a frusto-conical canopy seated on said frame for directing air downwardly toward said seat, said canopy having an axial opening for passing air downwardly therethrough, a motor and fan unit in said canopy be-

pressure on the opposite finger rests, respectively.

in said second member; a tube having a bore of sub-

neath said opening for drawing air downwardly through said opening and blowing such air outwardly in the canopy, and means for centering said canopy on said frame and said motor and fan unit beneath said opening comprising a V-bracket depending through said frame

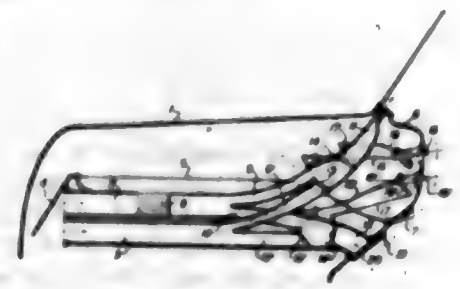


and fixed to said canopy, and having the motor depending from the center of the bracket with the fan carried above said bracket by said motor, said canopy and motor and fan unit and the bracket comprising a unitary removable and replaceable structure.

2,860,567
HEATING AND VENTILATING SYSTEM FOR MOTOR VEHICLES

Karl Wilfert, Stuttgart-Degerloch, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany

Application June 30, 1954, Serial No. 440,417
Claims priority, application Germany July 2, 1953
11 Claims. (Cl. 98—2)

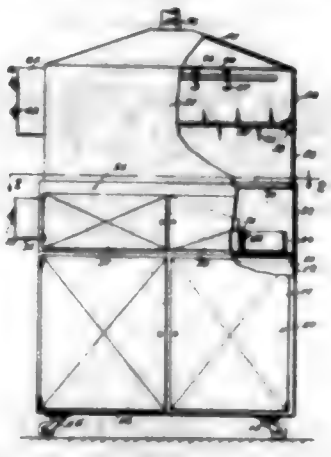


1. A heating and ventilating system for a motor vehicle with a windshield and a floor comprising means for heating and ventilating both sides of the interior of the vehicle independently of one another, said means including a pair of heating air and cold air channels on each side of the engine, each pair including at least one lower outlet into said interior of the vehicle located near the floor of the vehicle on the respective side of the vehicle and at least one upper outlet directed toward said windshield, and means connected between said channels and said outlets for combining each pair of channels of each side of the vehicle for selectively mixing the air streams flowing through said channels to enable adjustment of the upper and lower outlet of each side independent of one another to provide air streams of different temperature flowing therethrough into said interior of the vehicle.

2,860,568
ELECTRIC OVEN

Virgil S. Magee, Rockport, Tex., assignor of twenty-five percent to The James Darrell Spencer Trust Estate, and twenty-five percent to The Sandra Carol Spencer Trust Estate, both of which the trustee is Emory M. Spencer, all of Rockport, Tex.

Application August 10, 1956, Serial No. 603,342
1 Claim. (Cl. 99—339)

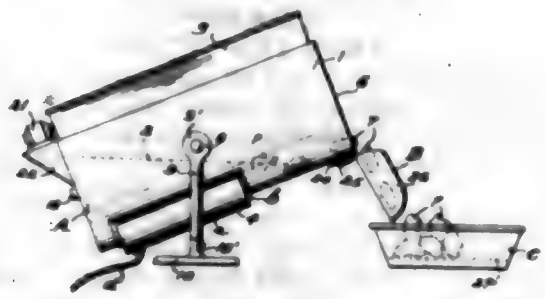


A combined broiler and barbecue means comprising a lower supporting cabinet, casters carried by said cabinet, a broiler unit mounted on the upper end of said cabinet, said broiler unit comprising a housing open at the top and formed of opposite side and opposite end walls and a bottom wall, means comprising an inclined grid, supporting food articles above said bottom wall, an electric heating element in said housing below said supporting means, an inclined drain pan having a plurality of upwardly projecting perforated dimples providing draft openings between said grid and said heating element, a removable drain pan on said bottom wall below said heating element adjacent the lower end of said drain pan, a depending flange extending from the lower end of said drain pan into said drip pan, a removable second drip pan seated on said bottom wall beneath said drain pan, a hood rising from the top of said housing, a U-shaped hood support carried by the upper end of said housing, a spit rotatably carried interiorly of said hood, an electric motor for rotating said spit, a second electric heating element in said hood above said spit, and food suspension hooks carried by said hood directly beneath said second heating element.

2,860,569
COOKING APPARATUS

Alfred T. Pitman, Fairburn, Ga.

Application September 27, 1955, Serial No. 536,878
6 Claims. (Cl. 99—404)

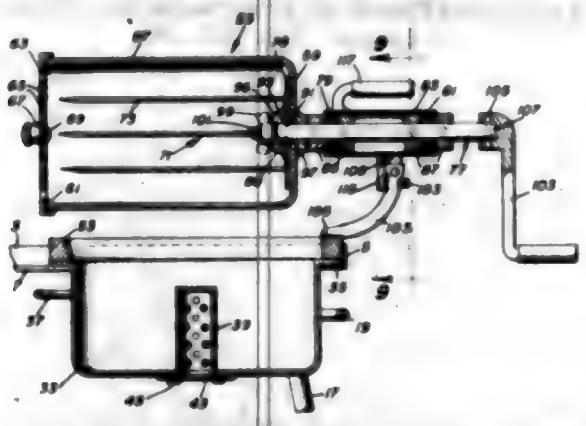


1. A cooking apparatus comprising, in combination, a cooking unit for receiving articles of food to be cooked, the unit including a housing having a closed end and a discharge end having a discharge opening therethrough, pivotal trunnion mounting means for the housing for selectively tilting the housing downwardly from the discharge end to the closed end for cooking operations and from the closed end to the discharge end for draining and cleaning, rotary conveyor means in the housing for conveying articles of food being cooked through the

each reciprocation to displace an end one of said slugments each actuating member being movable between an

housing, means adjacent to the closed end of the housing for gravitationally mounting the conveyor means at an end thereof, the said conveyor means having an opposite free end adjacent to the discharge end of the housing, the weight of the conveying means retaining the said conveying means in its mounting means while the housing is tilted downwardly towards its closed end, the mounting means gravitationally releasing the conveying means responsively to reverse tilting of the housing on its pivotal trunnion mounting means so that the discharge end of the housing becomes depressed and the closed end raised, the conveying means being adapted to slide out by gravity from the housing through the discharge end, and driving means for rotating the conveying means at a selected variable speed, the said driving means for the conveying means including a sprocket mounted in the housing adjacent to the closed end, a variable speed motor mounted on the housing exteriorly thereof, and having a shaft, a second sprocket on the said shaft, and a driving chain interconnecting the second sprocket with the first-mentioned sprocket for effecting rotation of the conveying means responsively to actuation of the motor.

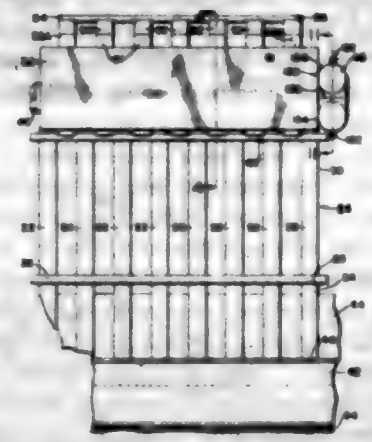
2,860,570
OUTDOOR COOKERS
Oscar E. Broome, Detroit, Mich.
Application June 11, 1956, Serial No. 590,574
1 Claim. (Cl. 99—421)



An outdoor cooker comprising a fuel containing fire pan having a lateral surrounding rim flange, means supporting said pan in elevated position, a grid removably disposed on said flange over said pan for cooking thereon, a cylindrical oven for rotisserie cooking having a closed end, a shaft for rotating said oven having one end extending through said closed end, clamp means on said shaft for detachably attaching said closed end to said end of the shaft, bearing means journaling said shaft, and means pivotally mounting said bearing means on an edge of said flange for vertical swinging to correspondingly swing said shaft for swinging said oven into horizontal position over said grid for heating through the grid or into upright position at one side of the grid for cooking on the grid, said pan having a central perforated draft flue upstanding therein.

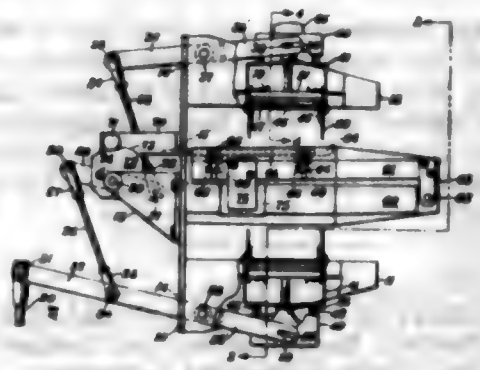
2,860,571
LAMINATED PRESS
Meredith R. Hatch, Toledo, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Application August 1, 1955, Serial No. 525,526
7 Claims. (Cl. 100—231)

1. The improvement in industrial presses comprising: a plurality of frame members aligned side by side and laterally spaced apart one from another; a drive shaft extending through and journaled in said frame members; a plurality of slide members having circular openings in their body portions and adapted to reciprocate between adjacent frame members; first co-planar circular discs adapted to slidably fit within said slide member circular openings, said discs also having circular openings eccentric to their axes; second co-planar circular discs eccentri-



cally mounted on said drive shaft and adapted to slidably fit within the circular openings in said first circular discs, whereby rotation of said drive shaft will cause said slide members to reciprocate between adjacent frame members.

2,860,572
CAN STAMPING MACHINE
James J. Prohaska, La Grange, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application June 1, 1953, Serial No. 358,815
6 Claims. (Cl. 101—41)



1. In a container stamping machine, the combination which comprises: expansible means for holding a container, said expansible means comprising a first jaw and a second jaw, one of said jaws being movable toward and away from the other; means to cause relative movement of said jaws; stamping means adjacent to but normally spaced from said expansible means; means actuated when said jaws are moved to move said stamping means toward and away from said expansible means; at least a portion of the surface of the movable jaw comprising a resiliently supported plate held on said jaw by adjustable means; said means to cause relative movement of said jaws being operatively connected to said plate whereby the expansion of said mandrel may be adjusted.

2,860,573
TYPE SLUG FEEDING, INKING, AND PRINT CONTROL MEANS IN ADDRESS PRINTING MACHINES
Ray Marsh Fox, Laguna Beach, Calif., assignor to The Dexkfinder Company, Costa Mesta, Calif., a corporation of California
Application April 11, 1955, Serial No. 500,428
19 Claims. (Cl. 101—57)

1. A printing press for printing on a series of work sheets with a series of different cast slugs of the character described each having a face with printing impressions cast thereon; said press comprising a channel like guideway for holding a series of said cast slugs with said faces directed upwardly, a reciprocating feed bar moving transversely across an end of said guideway and acting on

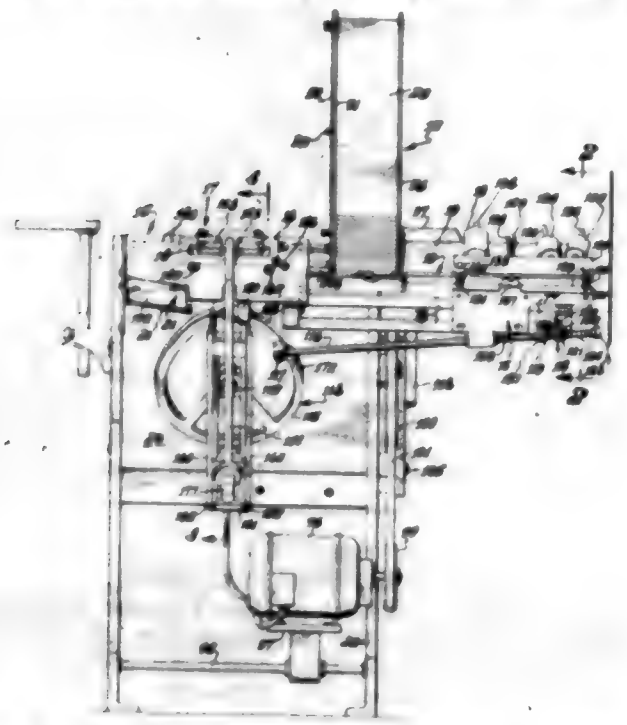
2,860,576

with said blanket cylinder, first and second springs bias-

to provide air streams of different temperature flowing therethrough into said interior of the vehicle.

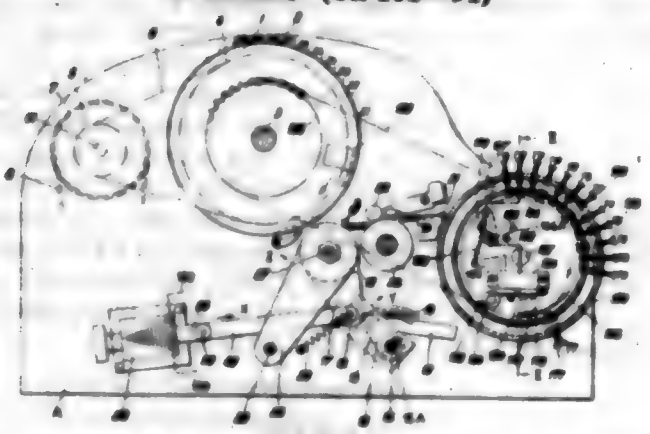
and cleaning, rotary conveyor means in the housing for conveying articles of food being cooked through the

each reciprocation to displace an end one of said slugs laterally from the guideway to a laterally offset printing location, an ink roller reciprocating with said feed bar and acting to engage and apply ink to said faces of the slugs while the latter are in the guideway, an ink supply member at a side of said guideway engageable by said roller to apply ink thereto, a base member along which



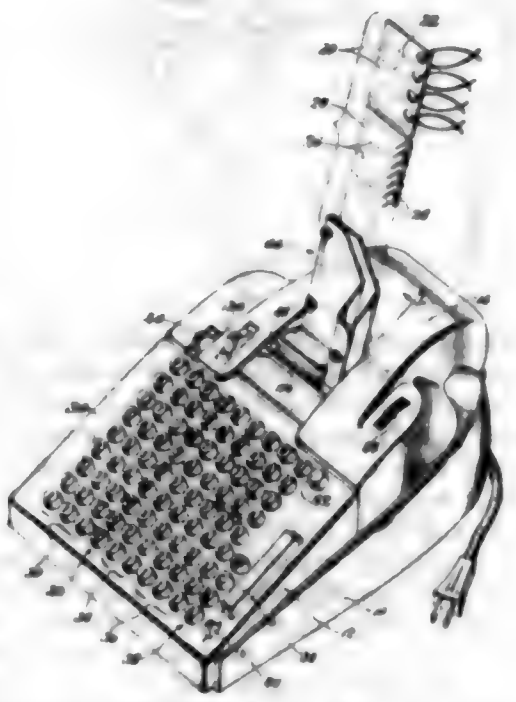
said slugs are advanced by said feed bar, a work supporting plate for holding a work sheet above a slug at said printing location, a printing head above said plate reciprocable toward and away from a slug at said printing location to press said work sheet thereagainst, and power driven means for actuating said feed bar and said printing head.

2,860,574
SELECTIVE PRINTING APPARATUS
Wilhelm Ritzerfeld, Berlin-Dahlem, and Gerhard Ritzerfeld, Berlin-Grunewald, Germany
Application November 5, 1956, Serial No. 620,546
Claims priority, application Germany November 5, 1955
22 Claims. (Cl. 101—91)



1. In a printing apparatus, in combination, a frame; a printing roll carried for rotation about its axis by said frame and adapted to have a printing form fixed thereto; a counter roll carried by said frame for movement to and from an operating position in close proximity to said printing roll for printing a sheet passing between said rolls, said counter roll having an axis parallel to that of said printing roll; electrical moving means operatively connected to said counter roll for moving the same to and from said operating position thereof; a first supporting element and a second supporting element mounted on said frame, said second supporting element being movable relative to said first supporting element; a set of actuating members mounted on one of said supporting elements each actuating member being movable between an inoperative position and an operative position and adapted to be manually shifted between said positions, said actuating members in said operative position being located along a predetermined path, each of said actuating members being associated with a portion of said printing form; a normally open switch member mounted on the other supporting element and projecting into said predetermined path, said switch member being movable to a circuit closing position and being moved to said circuit closing position by said actuating members engaging said switch member in said operative position during the movement of said second supporting element; circuit means connecting said switch member with said electric moving means so that said electric moving means move said counter roll to said operating position whenever said switch member is moved to said circuit closing position; and drive means operatively connected to said printing roll and to said second supporting element for moving the latter in timed relation with said printing roll whereby selected portions of said printing form corresponding to selected actuating members in operative positions are printed on a sheet passing between said rolls.

2,860,575
TAG AND TICKET PRINTING MACHINE
William E. Sievers, Morton Grove, Ill., assignor to Victor Adding Machine Co., Chicago, Ill., a corporation of Illinois
Application March 28, 1956, Serial No. 574,589
4 Claims. (Cl. 101—93)



1. In a machine for imprinting legends upon string tags and pin tags, the combination of means for imprinting indicia on tags having attaching means secured to the ends thereof, comprising a platen, manually controlled printing impression members for cooperation with the platen to cause a printing impression upon the tags, said platen being of reduced length to provide for the passage of the attaching means of the tags, a chute leading to the platen tangentially thereof and providing a passageway for the tags and their attaching means, said chute including means for deflecting the attaching means of the tags to a position beyond the end of said platen where there is provided passage for the attaching means of the tags, and means providing an arcuate trough adjacent one end of the platen and aligned with said deflecting means of said chute for the passage of the attaching means of tags transmitted through the chute.

2,860,579

extending slideway in said one shaft, and means carried by

their body portions and adapted to reciprocate between adjacent frame members; first co-planar circular discs

directed upwardly, a reciprocating feed bar moving transversely across an end of said guideway and acting on

2,860,576

METHOD OF PRODUCING STENCIL SCREENS

Oliver A. Short, Metuchen, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application May 24, 1956
Serial No. 586,923
3 Claims. (Cl. 101—128.3)

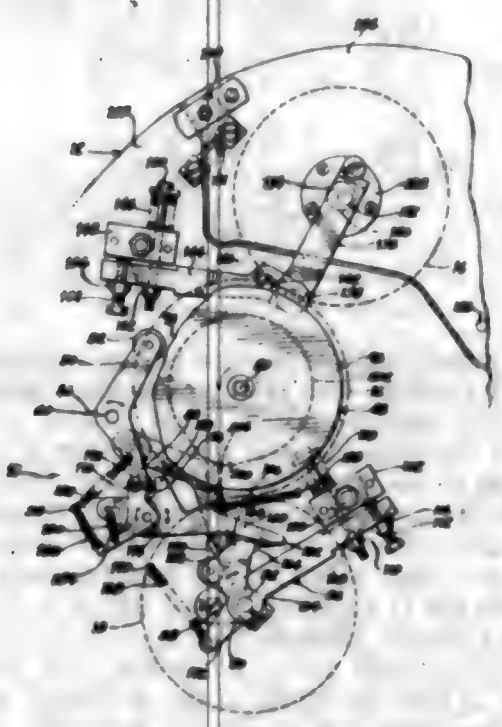
1. The process of incorporating a design on a stencil screen which comprises forming thereon a photographic negative design with a soluble light-hardened material, filling the open screen meshes of such design with a liquid organic film taken from the group consisting of polytetrafluoroethylene and polysilicone resins, drying said film to form a heat-resistant insoluble solid, and dissolving said soluble light-hardened material from said screen, thus leaving on the screen a photographic positive of the desired design with filled meshes of said heat-resistant material.

2,860,577

CYLINDER SEPARATING MECHANISM FOR DUPLICATORS

Wallace R. Fowle, North Riverside, Ill., assignor to A. B. Dick Company, Niles, Ill., a corporation of Illinois

Application September 26, 1956, Serial No. 612,236
5 Claims. (Cl. 101—218)



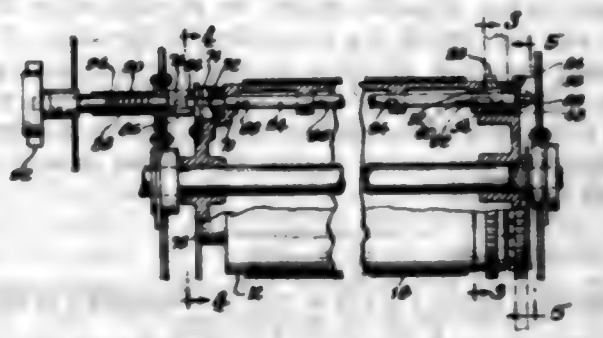
1. In a printing machine, the combination comprising a blanket cylinder, a master cylinder movable into and out of engagement with said blanket cylinder, an impression cylinder movable into and out of printing relation with said blanket cylinder, first and second eccentric shafts supporting said master and impression cylinders respectively for rotation and movement toward and away from said blanket cylinder, first and second bearing means supported for movement toward and away from said blanket cylinder and rotatably supporting said first and second eccentric shafts respectively, first and second spring means yieldably biasing said first and second bearing means respectively toward said blanket cylinder, first and second adjustable stop means limiting movement of said first and second bearing means respectively toward said blanket cylinder, first and second levers secured to said first and second eccentric shafts respectively and swingable therewith, said levers being swingable between first and second positions with said master and impression cylinders in and out of printing relation respectively with said blanket cylinder, first and second springs biasing said first and second levers respectively toward said second positions, first and second pawls for latching said first and second levers respectively in said first positions against movement to said second positions, means for feeding successive sheets between said blanket and impression cylinders, control means for detecting the feeding and nonfeeding of successive sheets between said blanket and impression cylinders, means operable by said control means in response to nonfeeding of sheets for disengaging said second pawl from said second lever and thereby initiating movement of said second eccentric shaft to said second position and movement of said impression cylinder away from said blanket cylinder, means operable in response to movement of said second eccentric shaft to said second position for disengaging said first pawl from said first lever and thereby initiating movement of said master cylinder away from said blanket cylinder, and first and second means for cyclically resetting said first and second levers respectively to said first positions for relatching by said first and second pawls respectively.

2,860,578

HEAD REGISTRATION ADJUSTING MECHANISM FOR DUPLICATORS

John L. Tregay, Broadview, Ill., assignor to A. B. Dick Company, Niles, Ill., a corporation of Illinois

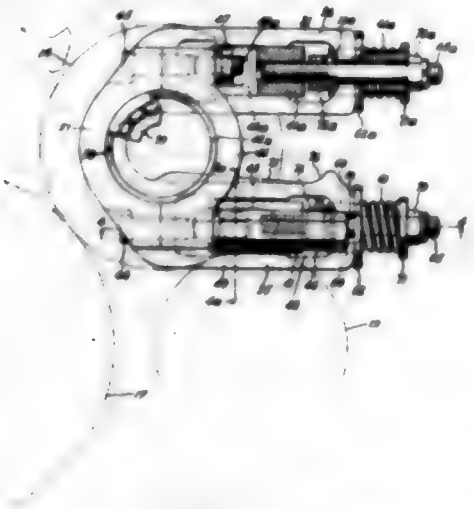
Application September 19, 1956, Serial No. 610,744
7 Claims. (Cl. 101—248)



1. In a printing machine, the combination comprising a master cylinder, an offset cylinder engageable with said master cylinder, an impression cylinder engageable with said offset cylinder, a first gear secured to one end of said offset cylinder, a second gear meshing with said first gear and secured to said master cylinder, a third gear mounted on said offset cylinder adjacent said first gear for angular adjustment relative to said offset cylinder, a fourth gear meshing with said third gear and secured to said impression cylinder, a clamping plate engageable with said third gear for disengageably clamping said third gear against said first gear, indicia on said first and third gears to indicate the relative angular positions thereof, a rod secured to said clamping plate and extending longitudinally through said offset cylinder, said rod having a threaded end portion extending outwardly beyond the opposite end of said offset cylinder, a nut screwed onto said threaded end portion for tensioning said rod and thereby clamping said third gear, a positioning plate secured to said opposite end of said offset cylinder and having a locating hole therein positioned opposite said nut, a wrench movable against said positioning plate and through said hole into engagement with said nut, said wrench and said nut having complementary formations adapted to interlock for transmitting torque between said wrench and said nut, a shaft supporting said wrench and having handle means thereon, means supporting said shaft for rotation and sliding movement toward and away from said positioning plate, and spring means biasing said shaft away from said positioning plate.

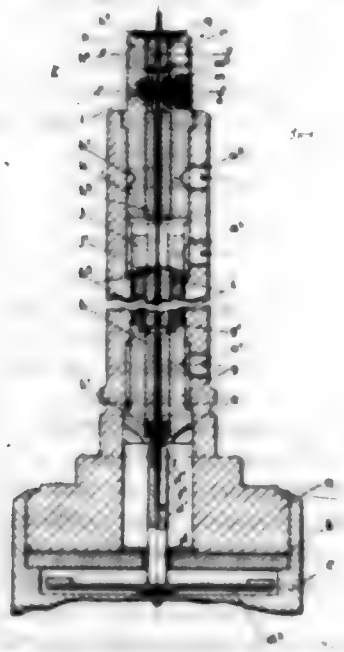
ble relative to said first supporting element; a set of actuating members mounted on one of said supporting elements one end of the pinion and angled with said detecting means of said chute for the passage of the attaching means of tags transmitted through the chute.

2,860,579
INK ROLLER SOCKET CONSTRUCTION
Wallace H. Granger, Kentfield, Calif., assignor to Michle-Gego-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Application January 10, 1956, Serial No. 558,239
9 Claims. (Cl. 101—348)



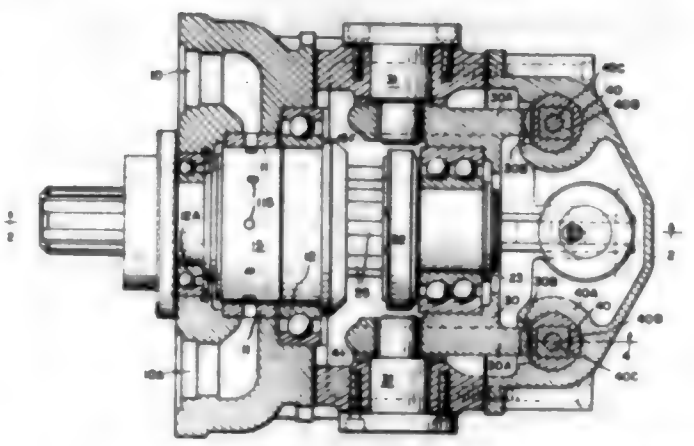
1. In a printing press, the combination comprising a side frame, a pair of ink cylinders laterally spaced from one another, an ink roller having a shaft and rollingly engaging said ink cylinders, an ink roller socket for journaling said ink roller, means for retaining the socket seated on the side frame while permitting relative sliding and rocking movement, means including springs engaging said socket at points spaced on opposite sides of the roller axis for urging the socket in the direction of said cylinders, separate adjusting means for said springs to adjust said socket to an equilibrium condition in which equal pressure is exerted against said cylinders, and means for clamping said socket against said frame in said equilibrium condition.

2,860,580
REGULATING DEVICE WITH TORSION WIRE FOR CLOCKWORK
Claude Varaud, Geneva, Switzerland
Application August 5, 1953, Serial No. 372,453
Claims priority, application Switzerland August 15, 1952
1 Claim. (Cl. 102—84)



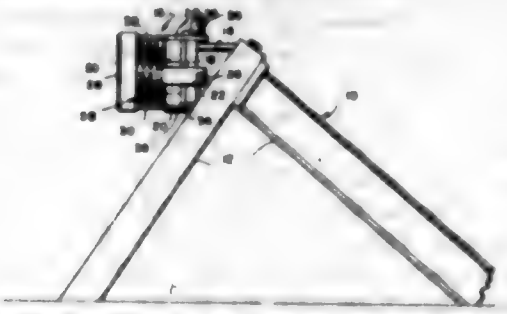
A torsion balance comprising a housing, a balance wheel having two oppositely extending shafts in said housing, a torsion spring in said housing, means connecting one end of said spring to one of said shafts for rotation therewith, said connecting means including an axially extending slideway in said one shaft, and means carried by the spring and extending into said slideway to permit relative axial movement of the spring and shaft, a body mounted on said housing remote from said balance wheel, means in said body to selectively axially move and hold the other end of said spring, said last-mentioned means comprising a first cylinder rotatably mounted transversely of and adjacent to said spring, said cylinder having friction means extending around the same engageable with said spring, a second cylinder mounted transversely of and adjacent to said spring, and parallel to the axis of and opposite to said first cylinder with respect to said spring, and means to urge said second cylinder into contact with said spring, whereby said spring may be axially adjusted by coaction with the friction means of said first cylinder when said first cylinder is rotated, and whereby adjustment of said spring may be maintained by a clamping of the spring between the cylinders.

2,860,581
FLUID PUMPS
Cecil C. Buckner, Detroit, Mich.
Application September 23, 1954, Serial No. 457,860
2 Claims. (Cl. 103—162)



1. In a fluid pump of the type having a rotatable cylinder block provided with axially extending pumping cylinders and a rotatable piston carrier tiltable to vary the stroke of the pistons in said cylinders from a position of maximum stroke to position of minimum stroke, means for controlling the delivery of the pump consisting of a pair of arms fixed to said carrier, slidable members movable by said arms, guides for said members each terminating at one end in a cylinder, a stop piston in each of said terminal cylinders adapted to act as stops for said slidable members, hydraulic means for moving said stop pistons whereby to vary the extent of the movement of the said slidable members, and means for separately controlling the hydraulic means for said stop pistons.

2,860,582
SHOCK-ABSORBING BUMPING POST ATTACHMENT
Brice E. Hayes, Park Ridge, Ill.
Application July 19, 1956, Serial No. 598,843
11 Claims. (Cl. 104—254)



1. A shock-absorbing attachment for a rigid railroad bumping post comprising a first vertical plate for abutting

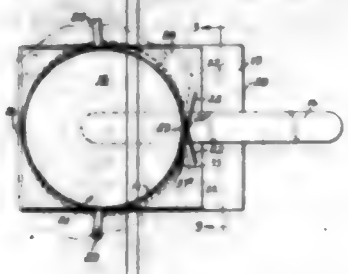
and outer casings being spaced to provide an air supply, piercing needle and said thread forming needle being

sion cylinders in and out of printing relation respectively

ing said shaft away from said positioning plate.

the contacting surface of a bumping post, a plurality of rigid lugs extending rearwardly from the edges of said vertical plate, releasable means carried by said lugs for engaging the bumping post rearwardly of the contacting surface thereof so as to rigidly secure said vertical plate in abutting relation thereto, a second vertical plate disposed forwardly of said first plate, resilient means extending between said plates biasing said second plate forwardly with respect to said first plate, rigid arms extending rearwardly from said second plate to said first plate, each of said arms having one end rigidly secured to an edge portion of said second plate and an opposite end slidably mounted with respect to the corresponding edge of said first plate for horizontal reciprocation with respect thereto, and removable means acting between the other end of each arm and said first plate for limiting the forward movement of said second plate with respect thereto.

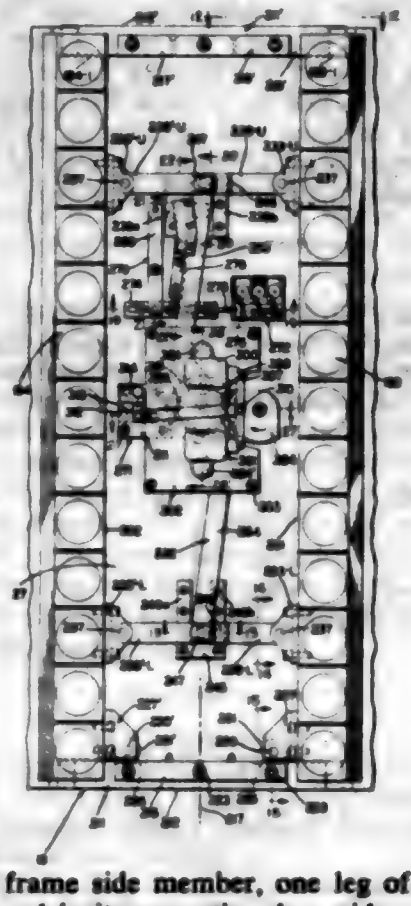
2,860,583
ICE CREAM MOLD
Van H. Hitch, Dayton, Ohio
Application October 24, 1956, Serial No. 618,061
4 Claims. (Cl. 107—19)



1. A form for shaping a product on a stick to be frozen thereon, comprising a base portion, a molding rim received on said base portion and separable therefrom, said rim having a split therein providing for movement of said rim on said base between an open position and a closed position, said rim in closed position being shaped in the contour of said product, means on said rim for releasably positioning said rim in predetermined relation on said base, said positioning means gripping said base in supporting relation to said rim in the closed position of said rim and being adapted for complete removal from said rim of said base with said product thereon in the open position of said rim, the ends of said rim at said split having opposed mating slots intermediate the upper and lower edges of said rim, said slots in the closed position of said rim forming an aperture for insertion of said stick therethrough into predetermined position in said product and in the open position of said rim providing for withdrawal of said product on said base from said rim without disturbing said stick from its position in said product.

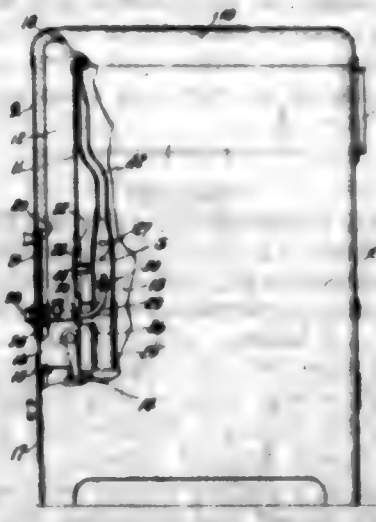
2,860,584
BOLT AND LOCK CONSTRUCTION
Charles U. Deaton, Kirkwood, Mo., and Carl D. Gruber, Orrville, Ohio, assignors to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Original application August 3, 1954, Serial No. 447,544. Divided and this application October 6, 1955, Serial No. 538,841
11 Claims. (Cl. 109—59)

1. Bolt work in combination with a door and frame, the frame including members bordering an opening, a door dimensioned for fitting in the opening hingedly connected to the frame for moving to and from closed position, said frame members including opposite side members and the door including opposite side members alignable with the frame side members when the door is closed, each side member having a length and a rear surface, each of the door side members having a groove formed lengthwise therein spaced forwardly from the rear surface thereof and opening in a direction away from its alignable frame side member to form a tongue extending lengthwise between the groove and rear surface directed away from the frame side member, bolt bars slidably mounted extending lengthwise on the door at the door side members, each bolt bar having a U-shaped cross section forming two legs with a groove therebetween opening toward its



associated frame side member, one leg of each bolt bar being engaged in its respective door side member groove and the other leg of each bolt bar being engaged with its associated frame side member rear surface with the door side member tongues being engaged in the bolt bar grooves when the bolt bars are extended toward the frame side members, and means on the door operative to extend and retract the bolt bars to and from engagement with the frame side members.

2,860,585
INCINERATOR WITH BURNER ASSEMBLY
John W. Hebert, Bay City, Mich., assignor to Calcinator Corporation, Bay City, Mich.
Application August 21, 1953, Serial No. 375,636
4 Claims. (Cl. 110—18)



1. The combination with a downdraft incinerator comprising an outer casing, an inner casing within the outer casing and forming a combustion chamber, said inner

prising a series of looper arms slidably mounted for

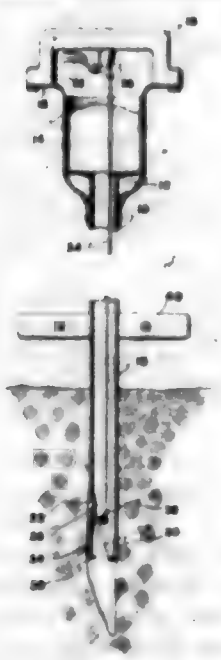
threaded needle through the necktie fabric elements while

therewith, said connecting means including an axially

1. A shock-absorbing attachment for a rigid railroad bumping post comprising a first vertical plate for abutting

and outer casings being spaced to provide an air supply passage therebetween, said inner casing being provided with an opening therethrough leading into said combustion chamber, of a burner assembly including a panel secured over said opening, a source of fuel gas supply, a mixing tube connected to said source of fuel gas supply and extending from said passage through said panel into said chamber, a burner head fixed to the end of said tube within the combustion chamber, said mixing tube having an air port for inspirating clean air thereinto located within said passage, the outer casing having an access opening adjacent the opening in the inner casing, and a tube open to said air passage extending from said panel into said chamber and terminating above and adjacent said burner head to permit lighting of the burner head from without the combustion chamber.

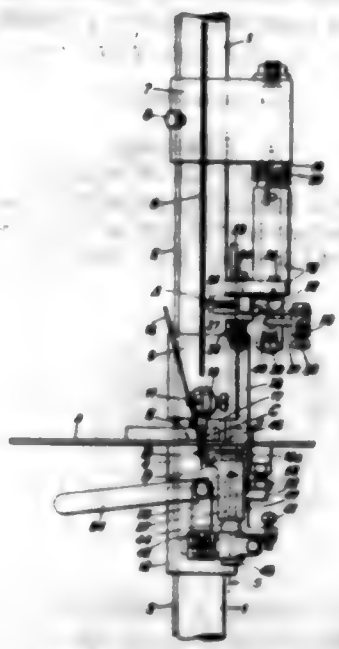
2,860,586
DRY FERTILIZER INJECTOR
Anthony V. Nocell, Corpus Christi, Tex.
Application May 9, 1955, Serial No. 506,700
3 Claims. (Cl. 111—92)



1. A fertilizer injector including a hollow tube, a communicating container secured to one end of said tube, an oblique opening in the other end of said tube, a handle positioned above said container, a closure hingedly secured to said tube at the edge of said oblique opening remote from the end of said tube and adapted to open and close said opening, a band outstanding from the edge of said opening, a lip extending from, and bent at right angles to, said closure and having a length approximately equal to the width of said band, and means, including a push rod within said tube, associated with said handle adapted to open and close said closure and opening.

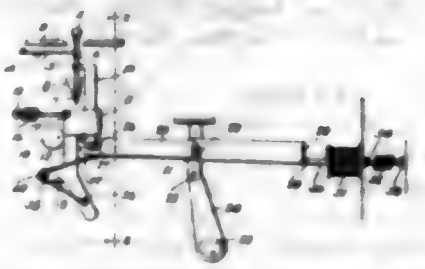
2,860,587
TAG STRINGING APPARATUS
Henri Schneerer, La Chaux-de-Fonds, Switzerland
Application June 27, 1956, Serial No. 594,211
Claims priority, application Switzerland July 1, 1955
2 Claims. (Cl. 112—2)

1. An apparatus for piercing film-like material and simultaneously passing a thread therethrough, comprising a piercing needle having a longitudinal groove and an eye for the thread formed therein, a thread-drawing needle clamped to a portion of said piercing needle lying behind said eye thereof and projecting into said eye by a pointed tip; a needle holder, said thread-drawing needle being located with a portion of the cross-section thereof in said longitudinal groove of said piercing needle, said piercing needle and said thread-drawing needle being detachably clamped together to said needle holder; a first and a second slide, a supporting and guiding column, a table for putting the film material to be pierced thereon, a thread cutting device above said table, said needle holder being secured to said first slide, said first slide being vertically movable on said supporting and guiding column, said column also carrying said table, said thread cutting device and said second slide; a thread-drawing gripper, said second slide being guided below said table by said column and carrying said gripper; an actuating mechanism for vertically moving said first and said second slide towards each other and away from each other on said column for automatically controlling a plurality of de-



vices in cooperation with stationary parts of the apparatus, one of said devices being operative to open said gripper at a first time shortly before said second slide attains its topmost position to close the gripper again during the subsequent downstroke of said second slide to grip the thread end projecting through said eye of said piercing needle and draw up said thread end, and to temporarily open said gripper upon said second slide reaching the lower terminal position; a second of said devices being operative to swing in the thread cutting device at a position immediately below the tip of the piercing needle, and a third of said devices being operative to tension a spring which acts on a pin to actuate the cutting device, said pin being detained by a pawl which is released immediately upon angular movement of the cutting device.

2,860,588
LOOPER MECHANISM FOR MULTIPLE NEEDLE LOOPING MACHINES
Montgomery B. Freeman, Bloomsburg, Pa., assignor to The Magee Carpet Company, Bloomsburg, Pa., a corporation of Pennsylvania
Application December 22, 1954, Serial No. 477,093
13 Claims. (Cl. 112—79)



1. A looper mechanism for a multiple needle looping machine having a fabric support and a plurality of reciprocating needles for carrying yarns through a fabric com-

loop-seizing beak for holding a loop of thread during a means lying in planes substantially normal to the travel

each side member having a length and a rear surface, each of the door side members having a groove formed

prising an outer casing, an inner casing within the outer casing and forming a combustion chamber, said inner

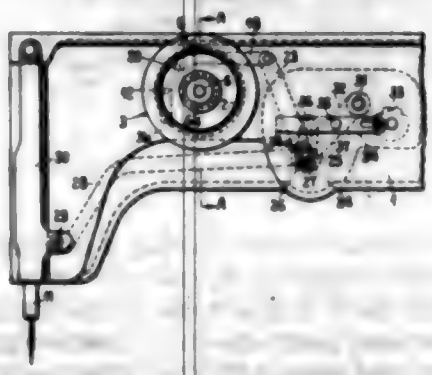
prising a series of looper arms slidably mounted for movement towards and from the fabric support, means for moving said looper arms across the path of movement of said needles to engage the yarns, rocker arms at right angles to said looper arms mounted for pivotal and vertical movement having ends pivotally connected to said looper arms, means for reciprocating said rocker arms and releasable fulcrum means for engagement with the other ends of said rocker arms at various points vertically of the other ends whereby the down stroke of said rocker arms is controlled to move said looper arms to various distances from the fabric support.

2,860,589

SEWING-MACHINE WITH ZIGZAG OR ORNAMENTAL STITCHING ATTACHMENT

Hans Sixt, Zurich, Switzerland, assignor to Heinrich Gelbert, Zurich, Switzerland

Application December 27, 1954, Serial No. 477,689
Claims priority, application Switzerland April 24, 1954
8 Claims. (Cl. 112—158)



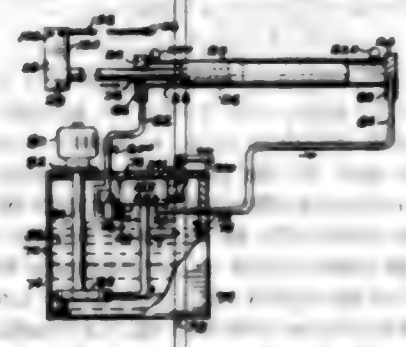
1. A sewing machine comprising a vertically reciprocated and variably oscillatable needle bar, independently operating means for varying the needle oscillations and including a tracer, and pattern mechanism operative jointly upon said normally independent operating means comprising a pattern actuating shaft, means for intermittently rotating the shaft, a casing provided with a hinged cover plate and mounted on the shaft, a clutch member on said shaft, a pattern disc loosely carried by said shaft and movable longitudinally thereon into and out of engagement with said clutch member, the pattern disc having a cam in the form of a groove on the face of the disc and said groove positively guiding the tracer forming part of the said independently operating means for varying said needle oscillations, and a spring on the inside of the cover engaging said pattern disc in the closed position of the cover plate to force the cam groove onto the tracer, said cover when closed causing the cam in position to be clutched and the tracer to be in its operative position.

2,860,590

HYDRAULIC ACTUATED SEWING MACHINE

Audrey W. Orr, Westport, Conn.

Application May 24, 1955, Serial No. 510,731
4 Claims. (Cl. 112—174)



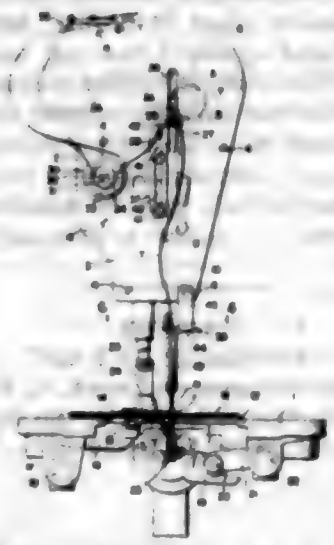
1. In a sewing machine which forms a loose longitudinal necktie assembly stitch by passage of an elongated threaded needle through the necktie fabric elements while the latter are being held in undulated form by a plurality of sequentially movable crimping members which releasably hold said elements against a complementary stationary crimping bar in response to movement of the needle carrier on its sewing stroke and until after its return stroke; a hydraulic actuator system adapted to cooperate with said needle carrier for actuating said needle and said crimping members comprising a main hydraulic cylinder affixable to said machine, a piston slidably disposed in said cylinder and having a shaft adapted for interconnecting said piston with said needle carrier for movement of the latter on sewing strokes and return strokes in response to said piston, first and second fluid ports at opposite end portions of said main cylinder, a fluid reservoir containing hydraulic fluid, pump means disposed within said reservoir and having an outlet for delivering hydraulic fluid under pressure therefrom, slide valve means affixed to said outlet, respective conduits interconnecting said slide valve means with said first and second fluid ports, said slide valve means reversibly shiftable from a first position in which said outlet is connected to said first port whereby said piston is moved axially in said cylinder by said hydraulic fluid on a sewing stroke, to a second position in which said outlet is connected to said second port whereby said piston moves in the opposite direction on a return stroke, and adjustable flow control valve means interposed in one of said conduits for obtaining full fluid pressure on the piston during the return stroke, and restricted controlled pressure thereon during the sewing stroke.

2,860,591

LOOP-TAKERS FOR SEWING MACHINES

William C. Van Ness, Devon, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey

Application July 22, 1954, Serial No. 444,998
5 Claims. (Cl. 112—201)



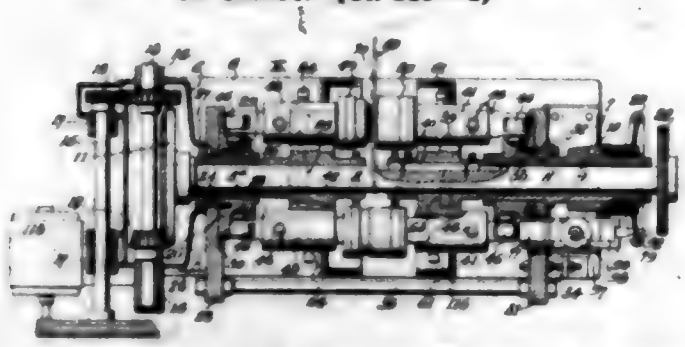
4. In a sewing machine, a bed, a head overhanging said bed, stitch-forming mechanism comprising a needle-bar mounted in said head for endwise reciprocation and carrying a needle at its lower end and a rotary wing-type looper mounted for rotation in said bed, said looper cooperating with said needle in the formation of single-thread chain-stitches and having a loop-seizing beak for entering a loop of thread cast by said needle upon rotation of said looper during stitch formation, a take-up mechanism mounted in said head and having a position of maximum action, a variable thread tension device disposed in advance of said take-up relative to the lead of the thread for imposing a drag upon a thread run therethrough, means for actuating said needle, looper and take-up in timed relation to effect stitch formation, and means on said looper spaced angularly from said

being located with a portion of the cross-section thereof in said longitudinal groove of said piercing needle, said

machine having a fabric support and a plurality of reciprocating needles for carrying yarns through a fabric com-

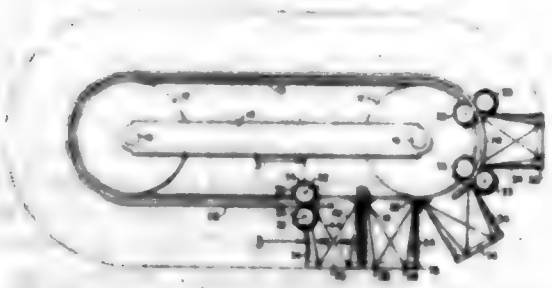
loop-seizing beak for holding a loop of thread during a portion of the stitching cycle while said take-up is operative and for releasing said loop at substantially the time said take-up reaches the position of maximum action.

2,860,592
OVERLOAD CONTROL CAM INSERT
Ralph M. Mero, Chicago, Ill., assignor to Continental Can Company, New York, N. Y., a corporation of New York
Application May 4, 1954, Serial No. 427,637
18 Claims. (Cl. 113—1)



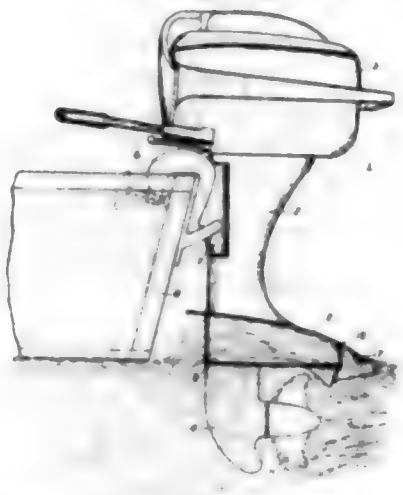
1. In apparatus of the character described, a carrier, a die head support slidable on said carrier, a first die head mounted on said support, a second die head mounted on the carrier in opposition to said first die head, said die heads having complementary opposing surfaces effective when the die heads are brought together by movement of the slidable support to reshape portions of can ends placed between the die heads, cam means engageable by the support for imparting movement to said first die head to bring it against a can end placed between it and the second die head, means for bringing about relative movement between said carrier and the cam means in a direction perpendicular to the direction of sliding movement of said support for imparting the sliding movement to the slidable support, said cam means including a movable section in the portion thereof effective when in normal position to press the slidable die head against a can end, and means yieldably holding said cam section in its normal position during engagement of the slidable support carried first die head with a normal can end but permitting said section to move away upon imposition of an overload such as by the engagement of said first die head with an abnormally thick or bent can end or superposed can ends.

2,860,593
AMPHIBIOUS CRAFT
John N. Laycock, Derry, N. H.
Application January 19, 1954, Serial No. 404,965
9 Claims. (Cl. 115—1)



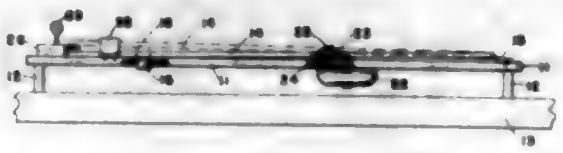
1. An amphibious propelling device comprising an endless traveling surface, a plurality of individually inflatable members mounted on said surface, axles extending across and secured to the traveling surface and disposed between each of the inflatable members, and stabilizing means fastened to each of said inflatable members and the adjacent axles securing the members to the surface and opposing deformation of said members, the stabilizing means lying in planes substantially normal to the traveling surface and being in tension to compress the inflatable members against the surface.

2,860,594
SPLASH DEFLECTOR
Elmer C. Kiekhaefer, Cedarburg, Wis.
Application April 20, 1955, Serial No. 502,710
3 Claims. (Cl. 115—17)



1. In an outboard motor having a substantially vertical drive shaft extending downwardly from the engine to a propeller shaft in the water to drive the propeller, a housing for said shafts having a rearwardly extending shoe portion, said shoe portion forming an exhaust passage extending rearwardly and downwardly to an exhaust port through which the exhaust is discharged rearwardly and downwardly, an anti-caviation plate carried by the lower end of said shoe portion substantially parallel to the water line, and a splash deflector comprising a downwardly curved flange of substantial width carried by said shoe above the water line and spaced from said anti-cavitation plate, said splash deflector having a trailing edge extending rearwardly and downwardly above said exhaust passage and substantially parallel thereto to direct a substantially solid sheet of water in a rearward and downward direction substantially parallel to said exhaust discharge during forward movement of the outboard motor whereby said exhaust discharge is effectively muffled and the exhaust back pressure of the engine reduced.

2,860,595
ALARM
Lucio Androsiglio, North Bergen, N. J.
Application November 29, 1957, Serial No. 699,859
1 Claim. (Cl. 116—98)



An alarm comprising a resonating board platform disposed on legs to place the board in spaced relation to the surface upon which it rests, a trigger board hingedly secured at one end to the platform, a spring secured to the platform and normally urging one end of the trigger board to hinge upwardly in response to the spring, said spring being of such thrust as to normally be overcome by the weight of an infant with which the alarm is to be used, an audible alarm attached to the platform, a latch means motivating the alarm, the latch means attached to the trigger board and movable in response to the hinging of the trigger board to release the alarm for making

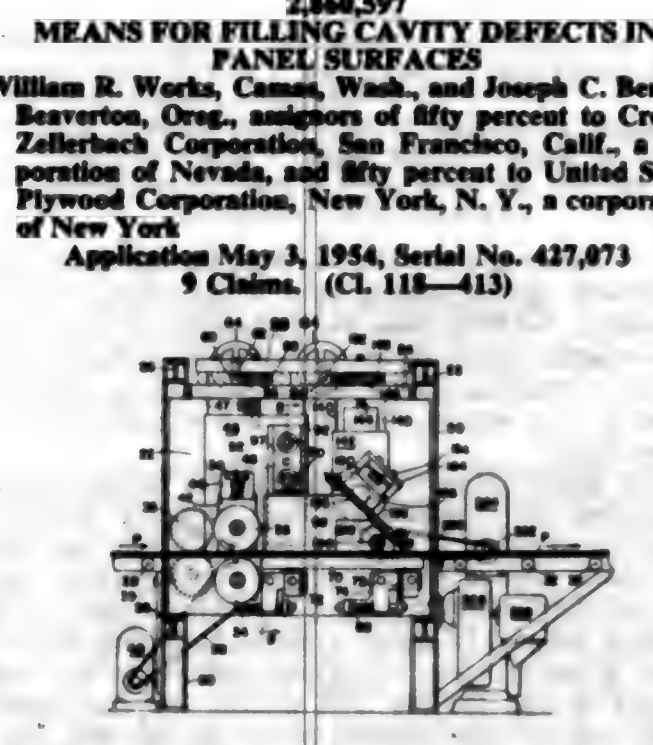
nal necktie assembly stitch by passage of an elongated and means on said looper spaced angularly from said

an audible signal, and a detent attached to the platform to limit the upward hinging of the trigger board beyond the point at which it releases the latch of the alarm.

2,860,596
AUTOMOTIVE TRANSMISSION RANGE SELECTOR

John Najjar, Farmington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Application May 1, 1957, Serial No. 656,302
10 Claims. (Cl. 116—124)



1. In an automotive vehicle having a steering column, a manually operable transmission shift lever mounted on said steering column, an electric lamp located within said column in the vicinity of said lever, and adapted to produce a transverse beam of light, a light reflecting prism mounted on said column adjacent said light and adapted to direct said beam of light from said lamp in a direction substantially parallel to the principal axis of said column, and an indicator element carried by said lever within said beam of light to designate the position of the shift lever.

2,860,597
MEANS FOR FILLING CAVITY DEFECTS IN PANEL SURFACES

William R. Werks, Camas, Wash., and Joseph C. Berney, Beaverton, Oreg., assignors of fifty percent to Crown-Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada, and fifty percent to United States Plywood Corporation, New York, N. Y., a corporation of New York

Application May 3, 1954, Serial No. 427,073
9 Claims. (Cl. 118—413)

8. A mechanism for filling cavity defects in the face of a woody panel with a hardenable viscous patching material, comprising: means for supporting a panel with the face to be filled directed upward; a doctor blade extending entirely across said panel and inclined at an acute angle relative the panel and having a lower edge presented contiguous to the face of the panel; upright edge dam means fitted closely to the ends of the blade and to the edges of the panel on the acute angular side of the blade to form therewith a pressure zone for patching material ahead of the blade; means to obtain relative horizontal movement between said panel face and said doctor blade at right angles to the disposition of the blade whereby cavity defects are filled by said patching material in said pressure zone which leads said blade and the lower edge of said blade has a leveling and wiping action on the deposited patching material substantially flush with the remainder of the panel face at the location of the blade; and a rotatable pump roll in said pressure zone having its axis oriented longitudinally of said pressure zone and located closely adjacent the under surface of said blade and unsymmetrical relative the median of the angle formed by the blade and the panel face and drive means operative to rotate said pump roll in a direction to impart an inward force upon the patching material disposed between the roll and the panel face.

2,860,598
PRODUCTION OF GRANULATED MATERIALS CONSISTING OF A CORE AND ONE OR MORE SHELLS

Ernst Gunter Loesche, Duesseldorf, Germany

Application July 27, 1956, Serial No. 600,596
4 Claims. (Cl. 118—418)

1. Apparatus for producing granulations comprising a core and shell, which apparatus comprises a container of circular form and adapted to rotate about an axis inclined to the vertical and having an annular partition dividing the space inside said container into a central zone and an annular outer zone, both zones being open at the top, means adapted to drive the container in rotation, a filling device adapted to discharge powdered core material into the central zone, spraying means adapted to spray moisture into the central zone, a further filling device adapted to discharge powdered shell material of a different nature from the core material, into the outer zone and further spraying means adapted to spray moisture into the outer zone, whereby granulations formed in the central zone are discharged over the partition into the outer zone and are provided with a shell in the outer zone.

2,860,599
ELECTROSTATIC COATING DEVICE WITH RESTRICTED FLUID PASSAGEWAY OPENING ADJACENT SHARP DISCHARGE EDGE

James H. Rice, Chicago, Ill., and Virgil R. Johnson, Kansas City, Mo., assignors to Binks Manufacturing Company, Chicago, Ill., a corporation of Delaware

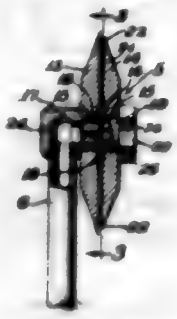
Application August 13, 1954, Serial No. 449,697
3 Claims. (Cl. 118—626)

3. An electrostatic spray device for coating the surface of an object with a liquid coating material which comprises, a stationary spray electrode comprising a pair of opposed substantially disc-shaped members one of which has an arcuate relatively sharp discharge edge portion, said spray electrode being adapted to be disposed in

of said cylinder, and means operable by the movement

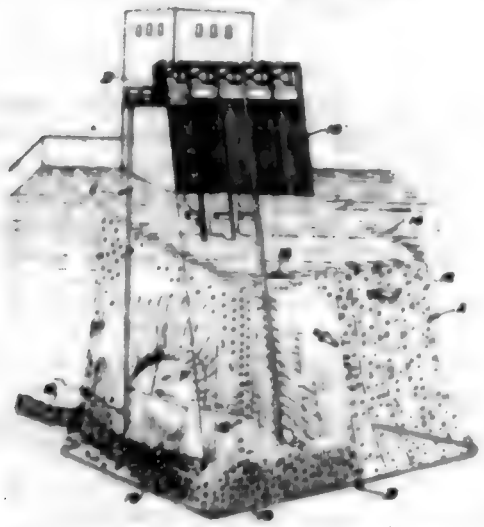
opposing deformation of said members, the stabilizing ing of the trigger board to release the alarm for making

spaced relationship to said surface to be coated, a spacer member of lesser area than the area of either of said disc members being disposed between said disc members to provide a restricted passageway which opens adjacent to said sharp discharge edge portion of the electrode, stationary means for connecting said entire passageway to a source of liquid coating material under pressure whereby coating material is fed uninterruptedly through said passageway to the sharp discharge edge portion of the electrode, means for maintaining the surface to be coated



at a predetermined electrical potential, means for connecting said sharp discharge edge portion of the electrode to a source of electrical potential sufficiently different from that of said surface to be coated to disrupt the coating material emerging from said passageway and to reduce it to finely divided charged particles whereby said particles are carried by the electric field established between said electrode and the surface to be coated to said surface to uniformly coat said surface.

2,860,600
DIVERTING FISH AIR BUBBLE SCREEN
William O. Cheney, San Leandro, Calif., assignor to Pacific Gas and Electric Company, San Francisco, Calif., a corporation of California
Application February 7, 1955, Serial No. 486,585
5 Claims. (Cl. 119—3)



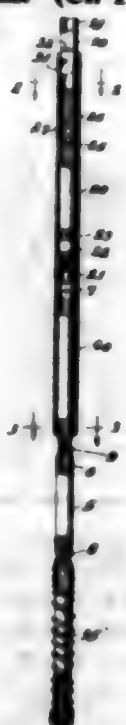
1. In combination with an intake portal from a body of water, a perforated conduit adjacent the bottom of said body of water and substantially completely surrounding said intake portal, and a source of compressed air connected to said perforated conduit, whereby a curtain of air bubbles surrounding said intake portal will be produced to deter passage of fish from said body of water to said intake portal.

2,860,601
DRINKING FOUNTAIN FOR LIVESTOCK
Edward Herbert Stein, Leland, Ill.
Application April 20, 1956, Serial No. 579,644
1 Claim. (Cl. 119—78)

A drinking fountain for livestock comprising an elongated water tank having a plurality of longitudinally spaced openings in one side wall thereof, a trough extending outwardly from the lower portion of each opening, a plurality of hoppers each affixed to the inner side of said wall about one of said openings, a sluiceway interconnecting the lower portions of said hoppers, and float-

valve controlled means in one of said hoppers for admitting water from said tank, whereby a preselected level of water is maintained in all of said troughs.

2,860,602
UNIVERSAL TYPE REFILL CARTRIDGE FOR BALL POINT PENS
Paul C. Fisher, Chicago, Ill.
Continuation of abandoned application, Serial No. 397,347, December 10, 1953. This application November 1, 1954, Serial No. 465,961
7 Claims. (Cl. 120—42.4)



1. A universal type refill cartridge for ball point pens comprising an ink holding tube, a ball point assembly telescoping the lower tube end and extending therefrom, an elongated closure structure telescoping the upper tube end and extending therefrom, said structure being reduced in cross-section at spaced points to provide planes of weakness.

5. A universal-type refill cartridge for ball-point pens comprising an elongated cartridge structure having a ball-point assembly at one end thereof, a thin ink-holding tubular portion adjacent to and communicating with said ball-point assembly, a stop between the ends of the cartridge adapted to engage a spring for urging the cartridge in one direction, the tubular portion having a vent opening beyond the ink level therein, the end portion of the said cartridge structure beyond the ink level being provided with a plurality of planes of weakness of progressively decreasing strength in a direction toward the free end of the cartridge so that the cartridge structure may be broken off selectively at any of the plurality of planes of weakness to provide a refill cartridge of selected length and of a strength sufficient in the weakened planes to withstand writing pressure and pressure of and against the spring.

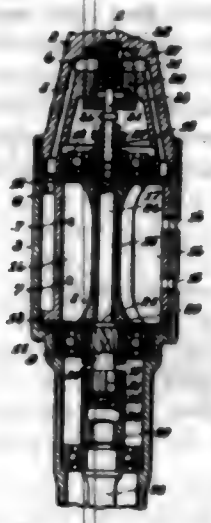
edge dam means fitted closely to the ends of the blade said spray electrode being adapted to be disposed in

2,860,603

TORQUE REGULATOR FOR COMPRESSED AIR OPERATED HAND TOOLS AND OTHER MOTORS

Albert Heidler, Eltville, Rhineland, Germany

Application December 13, 1954, Serial No. 474,825
Claims priority, application Germany
December 12, 1953
10 Claims. (Cl. 121—34)



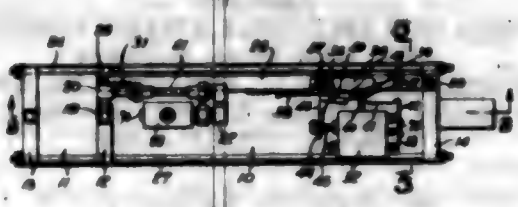
1. A torque regulator for motors of the class described, comprising a motor driven shaft section, a driving shaft section movably mounted with respect to the said motor driven shaft section and connected to the unit to be driven, coupling means between the said two shaft sections engaging at least one of the said shaft sections and adapted to be displaced axially with respect to at least one of the said shaft sections by the torque transmitted by the coupling means from the motor driven shaft section to the driving shaft section, a bolt connected to the said coupling means and extending co-axially to the shaft sections, a spring means counteracting the axial displacement of the said coupling means and said bolt, and power supply means to the motor controlled by the displacement of said bolt.

2,860,604

AIR AND LIQUID OPERATED APPARATUS FOR INTERMITTENTLY FEEDING A BUFFING BAR TO A BUFFING WHEEL

Walter J. Morf, Rahway, N. J., assignor to Samuel Krivit and Milton Feldman, both of Linden, N. J.

Application October 8, 1956, Serial No. 614,708
13 Claims. (Cl. 121—38)



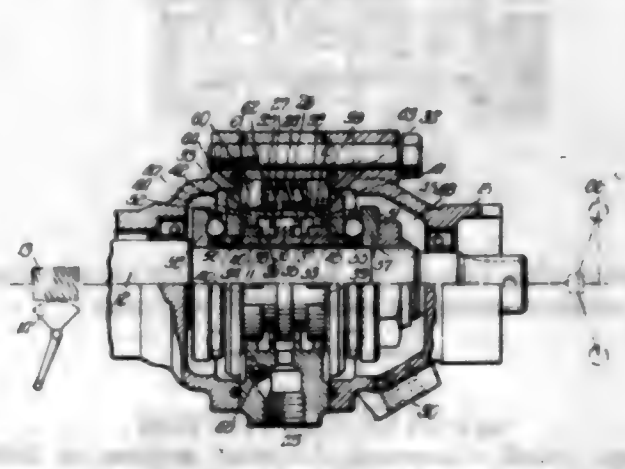
1. A feed mechanism, particularly for feeding buffing bars to buffing wheels, said mechanism comprising a casing, a supporting plate separating the interior of said casing into a main portion and a front portion in alinement with said main portion, a piston located in said front portion of the casing intermediate its ends to divide the interior of said front portion of the casing into a front chamber and a rear chamber, means supplying compressed air alternately to said chambers for the forward and return movements of said piston, a cylinder within said main portion of the casing, another piston located in said cylinder intermediate its ends to divide the interior of said cylinder into a front chamber and a rear fluid-containing chamber, a closure member firmly connected with the front end of said cylinder and with the first-mentioned piston and having a passage operatively connecting the front chamber of said casing with the front chamber of said cylinder, and means operable by the movement of the first-mentioned piston for providing an outflow for the fluid in the rear chamber of said cylinder and for interrupting said outflow.

2,860,605

POWER STEERING VALVE

Oscar H. Banker, Evanston, Ill., assignor to New Products Corporation, Chicago, Ill., a corporation of Delaware

Application December 30, 1953, Serial No. 401,122
9 Claims. (Cl. 121—46.5)



1. In a power steering valve adapted for connection with a hydraulic power cylinder in which a piston operates and with high and low pressure sources, which valve includes a sleeve and a core which fits closely within the sleeve and is axially shiftable relative to the sleeve; said sleeve being provided with an inwardly opening annular channel for connection with the high pressure source, with cylindrical lands at the sides of said high pressure channel, and with inwardly opening annular channels at the far sides of said lands for connection with the opposite ends of the cylinder; and said core being provided with a cylindrical land of the same diameter as the lands in the sleeve for fluid-tight shiftable association with said lands, which land is located opposite the high pressure channel in the sleeve and is of less axial extent than said channel, and with outwardly opening annular channels at the sides of said land, which channels are located opposite the cylinder-connected channels in the sleeve and are of greater axial extent than the lands in the sleeve; said core being also provided beyond the ends of the sleeve with radially extending disks having faces which confront the end faces of the sleeve and form therebetween annular passages, which passages are connected respectively with the annular channels in the core and are both connected with the low pressure source, said disks having annular ribs which project toward the ends of the sleeve.

2,860,606

SERVO CONTROL VALVE

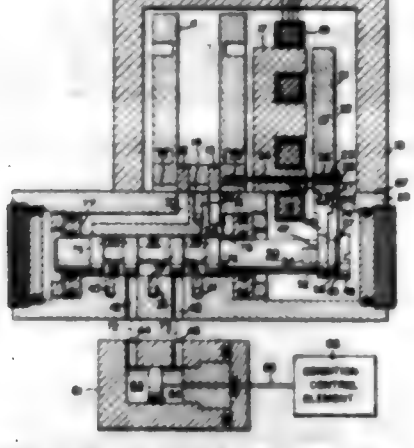
Frank W. Ainsworth, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application November 17, 1954, Serial No. 469,366
7 Claims. (Cl. 121—46.5)

5. In a system consisting of two members and means connecting said members, the combination comprising a first of said members movable upon reception of a signal from an outside source to cause relative movement of the second member, resilient means, and means containing a lost motion connection interposed between and operably connecting said first and second members, said resilient means being arranged to transfer a feed back signal from said second member so said first member upon movement of said second member and said

spaced openings in one side wall thereof, a trough ex-

lost motion connection being arranged to transmit the feedback signal by positive engagement between said



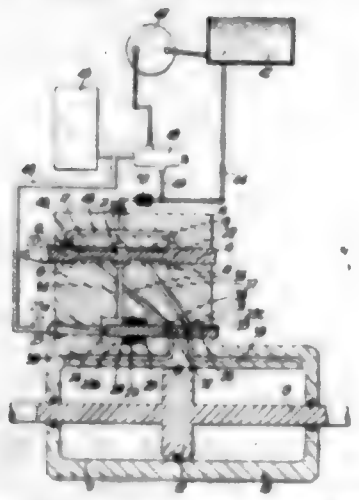
members after take-up of the lost motion therein should said resilient means be incapable of so doing.

2,860,607

SERVO-MOTOR SYSTEMS

George Orloff, Gloucester, England, assignor to British Messier Limited, Gloucester, England, a British company

Application May 23, 1956, Serial No. 586,807
Claims priority, application Great Britain May 24, 1955
4 Claims. (Cl. 121—47)



1. A liquid pressure servo-motor system comprising in combination a hydraulic cylinder having a double acting hydraulic piston movable therein, a servo-control valve for the cylinder, a low pressure reservoir, liquid pressurizing and distributing means supplied from the reservoir, liquid pressure supply and exhaust lines connecting said pressurizing means and said reservoir with the servo-control valve, passages connecting the servo-control valve with either end of the hydraulic cylinder, and valve means in said passages, which valve means act independently of the servo-control valve and permit flow of liquid through said passages under normal operating conditions but operate to close off and isolate simultaneously the passages upon the pressure of the liquid supply falling below a predetermined value.

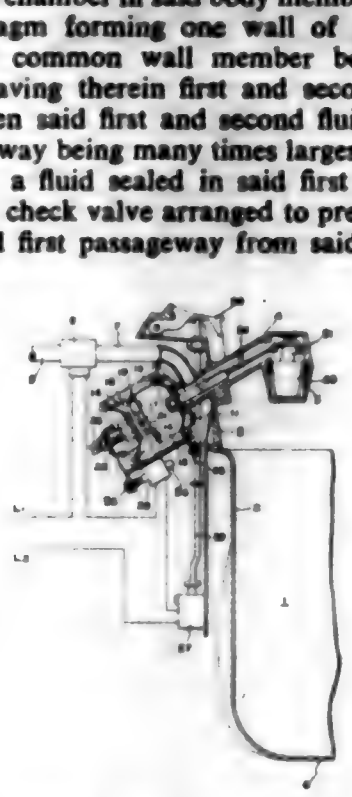
2,860,608

HYDRAULIC RECIPROCATING MOTION DEVICE

Albert L. Hardy and Thomas E. Jenkins, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Application December 30, 1957, Serial No. 705,956
3 Claims. (Cl. 121—48)

3. A hydraulic reciprocating motion device comprising a conduit having a discharge opening therein, a solenoid valve connected to said conduit and arranged when energized to admit water thereto under pressure, a generally cylindrical body member enclosing a first fluid chamber, a first movable diaphragm forming one wall of said first fluid chamber, said first diaphragm also forming one wall of a water chamber communicating with said conduit, a second fluid chamber in said body member, a second movable diaphragm forming one wall of said second fluid chamber, a common wall member between said fluid chambers having therein first and second fluid passageways between said first and second fluid chambers, said first passageway being many times larger than said second passageway, a fluid sealed in said first and second fluid chambers, a check valve arranged to prevent flow of fluid through said first passageway from said first fluid cham-



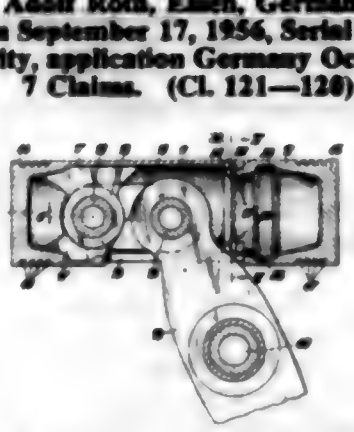
ber to said second fluid chamber, an arm member secured to said second diaphragm and said body member so as to bias said second diaphragm from a first position in which the volume of said second fluid chamber is at its maximum value to a second position in which said volume is at its minimum value, the force exerted on said diaphragm by said spring being less than the force exerted thereon by the pressure within said second chamber resulting from the pressure within said water chamber when said solenoid valve is open, a control switch connected in circuit with said solenoid valve so as to control the operation thereof, and switch actuating means secured to said second diaphragm to operate said control switch to its energizing position when said second diaphragm moves to said second position.

2,860,609

PISTON FOR MULTIPLE PISTON ENGINES

Adolf Roth, Essen, Germany

Application September 17, 1956, Serial No. 610,169
Claims priority, application Germany October 13, 1955
7 Claims. (Cl. 121—120)



1. In an engine having a double-headed piston with a skirt portion between the piston heads and a rocking lever operatively connecting said piston and the crank shaft of said engine, the improvement consisting of an access slot in said skirt portion for said rocking lever through which one end of said rocking lever extends, bearing means inside said piston to which said end of said rocking lever is pivotally connected, the width of said access

slot being slightly larger than the width of said rocking lever end, said bearing means comprising two aligned pin bearings, one in each side of said piston and an additional pin bearing substantially of the width of said rocking lever, said additional bearing being disposed between and aligned with said two side bearings, ribs integrally mounting said additional pin bearing in said piston with spaces left between said side pin bearings, a piston arm being formed by two parallel links being spaced apart and with one of their ends being respectively disposed in said spaces at the sides of said additional pin bearing, each of the ends of said links having openings, a pivot pin through said bearings and the openings in one of the ends of said links, the other ends of said links being respectively disposed on both sides of said pivot end of said rocking lever, and a pivot pin through the openings in said other link ends and said pivot end of said rocking lever.

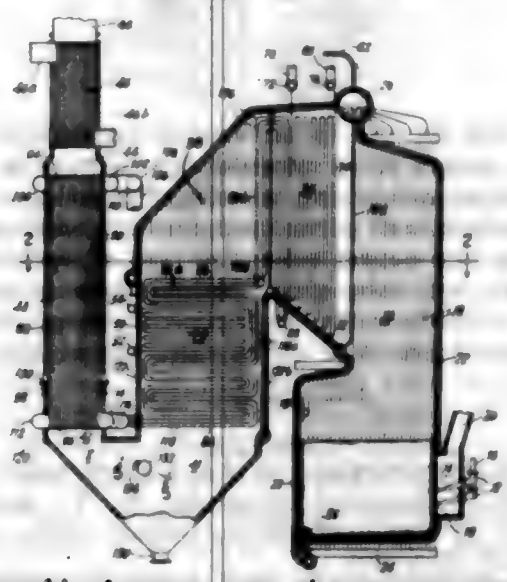
2,860,610

STEAM GENERATING AND SUPERHEATING AND AIR HEATING UNIT

Lewis W. Heller, Yardley, Pa., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

Original application October 31, 1946, Serial No. 706,926, now Patent No. 2,653,447, dated September 29, 1953. Divided and this application September 23, 1953, Serial No. 381,813

7 Claims. (Cl. 122—1)



1. A combined steam generating, steam superheating and air heating apparatus comprising walls including steam generating tubes forming a casing enclosing a furnace chamber, means for burning fuel in said furnace chamber, a plurality of parallel flow heating gas passes opening directly to one side of said furnace chamber, steam superheating tubes arranged in one of said gas passes adjacent said furnace chamber, steam superheating tubes in a second of said gas passes adjacent said furnace chamber and serially connected to the superheater tubes in said first gas pass, air heating tubes in said second gas pass rearwardly of said superheating tubes, steam generating tubes in said first gas pass rearwardly of said superheating tubes and substantially opposite to said air heating tubes, and damper means arranged to proportion the heating gas flow between said gas passes.

2,860,611

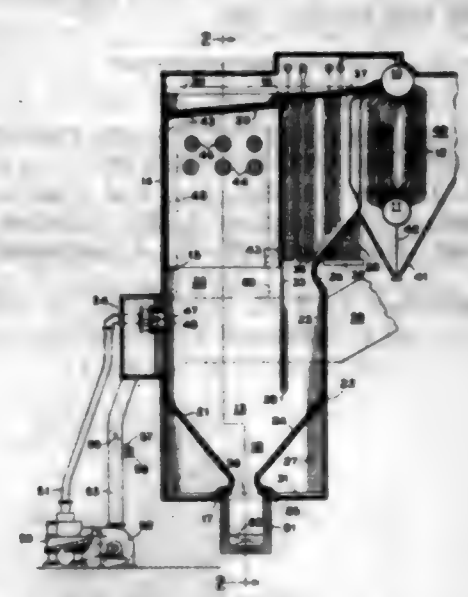
APPARATUS FOR BURNING RESIDUAL LIQUOR

Robert K. Allen, Ridgewood, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

Application January 27, 1955, Serial No. 484,417

2 Claims. (Cl. 122—240)

1. Apparatus for the incineration of the pulp residual liquor resulting from a sulphite cooking process comprising walls defining an upwardly elongated furnace having a gas outlet in the upper rear portion and a hopper bottom in the lower portion thereof, means forming a division wall extending downwardly from the roof of said furnace to a position spaced above said hopper bottom, burner means positioned in the upper portion of said furnace for the introduction of residual liquor and combustion air thereto, burner means positioned in a wall of said furnace upwardly adjacent said hopper bottom



and at a level spaced immediately above the lower end of said division wall for the introduction of an ash containing solid fuel and combustion air thereto, and means for passing the mingled products of combustion around the lower end of said division wall to separate noncombustible solids from the mingled gases of combustion from both fuels before said mingled gases pass to said gas outlet.

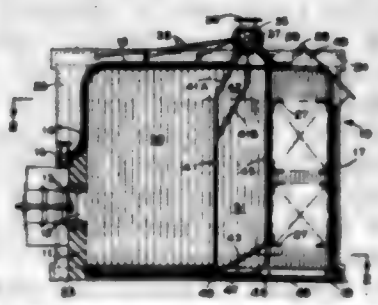
2,860,612

APPARATUS FOR HEATING LIQUID TO HIGH TEMPERATURE

Edwin Durham, Westfield, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

Application November 15, 1955, Serial No. 546,853

4 Claims. (Cl. 122—336)



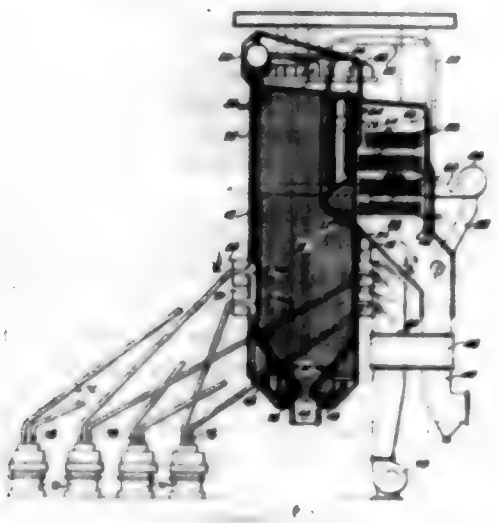
1. A high temperature liquid heater comprising walls defining a heating unit, wall means separating the interior of said heating unit into a combustion chamber and a gas pass connected for serial flow of heating gases therethrough, a liquid inlet header positioned on the exterior side and intermediate the height of the front wall of said heating unit, a horizontally disposed lower header positioned adjacent the rear wall of said heating unit, liquid cooled tubes extending along the interior surface of the upper portion of the front wall and the roof of said heating unit connected to said inlet header and said lower rear header, a bank of convection heating tubes positioned in said gas pass of said heating unit, means for passing liquid from said lower rear header through said bank of

manifold vacuum acting on said nozzle normally has no

an elongated casing, means in the casing defining an elon-

convection tubes, upper and lower headers horizontally disposed longitudinally of said heating unit along the side edges thereof, means for discharging liquid from said bank of convection tubes to said lower longitudinally disposed side headers, substantially upright tubes in the walls of said heating unit connecting said upper and lower longitudinally disposed side headers, and means for collecting the heated liquid from said upper headers for discharge from said heating unit including a transverse header directly connected with said upper headers and positioned above the roof of said heating unit.

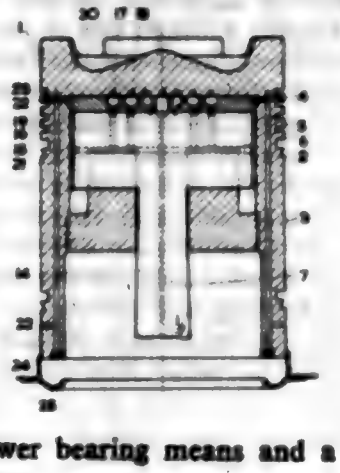
2,860,613
STEAM GENERATING UNIT WITH CORNER FIRED FURNACE AND GAS RECIRCULATION
Lewis W. Heller, Yardley, Pa., and Charles S. Smith, Westfield, N. J., assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application April 30, 1953, Serial No. 352,228
12 Claims. (Cl. 122—478)



1. A vapor generating and superheating unit comprising walls defining a furnace chamber having a gas exit opening in the upper part thereof, vapor generating tubes lining the walls of said furnace chamber, a convection type vapor superheater arranged to be heated by gases from said gas exit opening, means for firing said furnace chamber comprising a group of fuel burners symmetrically arranged in the walls of said furnace chamber to discharge fuel and air streams in directions substantially tangential to an imaginary vertical cylinder located centrally in the furnace for creating a turbulent rotating burning gas mass in the lower portion of the furnace chamber transmitting heat to the vapor generating wall tubes, and means for withdrawing gaseous products of combustion from a point in the gas flow path downstream of said superheater and introducing the withdrawn gases into said furnace chamber in horizontally directed streams separate from said fuel and air streams at points alongside corresponding fuel burners and in a direction diverging from the axis of discharge of said burner, to maintain a layer of recirculated gas between each burning fuel stream and the more closely adjacent furnace chamber wall.

2,860,614
PISTONS
John Burnand, Teddington, England
Application September 6, 1956, Serial No. 608,235
7 Claims. (Cl. 123—41.38)

1. A piston comprising a solid head having a load-receiving outside surface and an internal surface, parallel channels formed in said internal surface and extending over that surface, a gudgeon pin upper bearing surface channels in said upper bearing surface communicating with said channels in said internal surface, removable

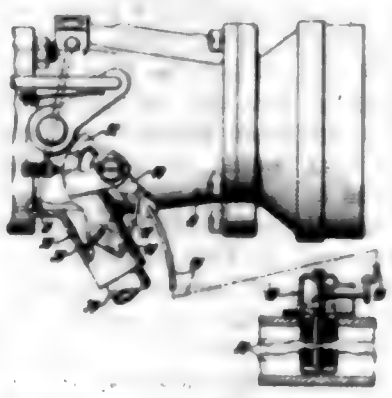


gudgeon pin lower bearing means and a lower bearing retaining member.

2,860,615
SEAL
Ronald W. Mayes, Washington, D. C.
Application May 24, 1957, Serial No. 661,456
20 Claims. (Cl. 123—90)

1. A seal for use in an internal combustion engine having a poppet valve stem slidably received in a valve guide bushing comprising, a sealing lip having a radially curved surface in its normal undeformed condition snugly embracing said poppet valve stem and a depending skirt secured to said valve guide bushing wherein said sealing lip normally rolls in frictional engagement upon said poppet valve stem as the valve reciprocates.

2,860,616
ATMOSPHERIC NOZZLE CONTROL
Lawrence C. Dermond, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 31, 1957, Serial No. 662,928
5 Claims. (Cl. 123—119)



1. A fuel injection system for an internal combustion engine comprising an air intake passage for supplying air to the individual cylinders of the engine, a throttle valve in said passage for controlling the quantity of air flow therethrough, means for supplying a metered quantity of fuel to the passage posteriorly of said throttle, said means including a nozzle disposed in said passage proximate the individual cylinders of the engine, a conduit communicating said nozzle with said intake passage anteriorly of said throttle, the pressure differential across the throttle normally causing air to flow through said conduit whereby

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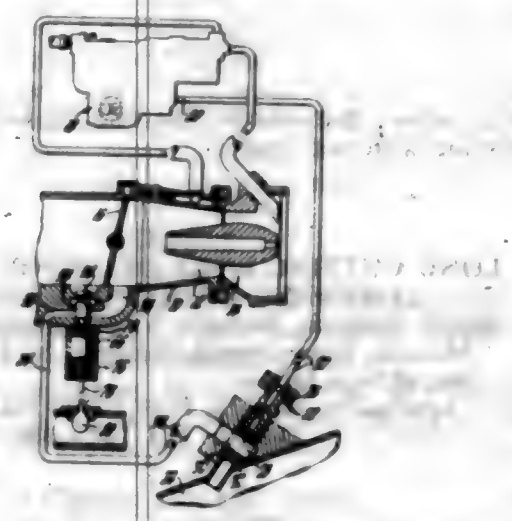
liquor resulting from a sulphite cooking process com-

liquid from said lower rear header through said bank of

manifold vacuum acting on said nozzle normally has no effect on the quantity of fuel flowing therethrough when the air flow through said conduit is unrestricted, a valve disposed in said air conduit, and engine temperature responsive means connected to said valve for restricting the quantity of air flow through said conduit in inverse proportion to the temperature of said engine.

2,860,617
ENRICHMENT DEVICE FOR FUEL INJECTION SYSTEM
Henry E. J. Pringham, Grosse Pointe, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 21, 1957, Serial No. 667,153
11 Claims. (Cl. 123—119)

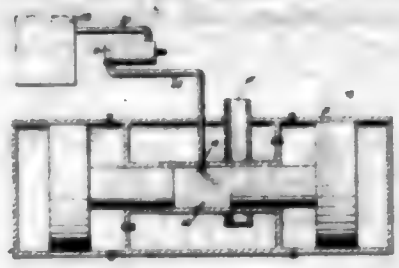


1. A charge forming device for an internal combustion engine comprising an air induction passage, a venturi formed in said induction passage, a throttle valve rotatably mounted in said induction passage posteriorly of said venturi, a source of fuel under pressure, and conduit means for communicating said fuel source with the individual cylinders of the engine, means for metering the quantity of fuel flow through said conduit means in accordance with the mass of air flow through said venturi, each of said fuel conduit means terminating in a nozzle for supplying fuel to each cylinder of the engine, first passage means communicating said nozzle with said induction passage anteriorly of said throttle for supplying air to said fuel stream prior to its injection into said cylinder, second passage means formed in said casing for bypassing air around said throttle, and valve means for restricting air flow through said first and second passage means whereby manifold vacuum will act on said nozzle to increase the flow of fuel therethrough.

2,860,618
INJECTION DEVICE FOR INTERNAL COMBUSTION ENGINES
William R. Mansfield, Moonachie, N. J.
Application November 5, 1957, Serial No. 694,643
9 Claims. (Cl. 123—119)

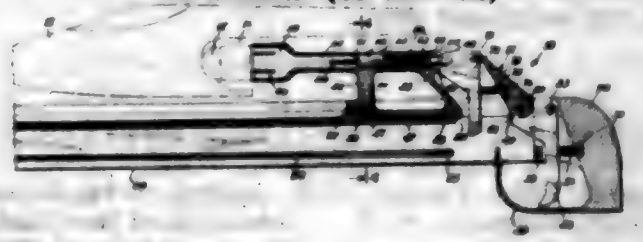
1. A water and heavy fuel ends injecting device for use intermediate the exhaust tail pipe of an internal combustion engine and the carburetor of said engine, comprising an elongated casing, means in the casing defining an elongated spiral path for gases in said casing, a first tube connected at one end to said exhaust tail pipe and opening interiorly thereof so as to pick up exhaust gases passing through the exhaust tail pipe, said tube connected at the other end to the casing and opening interiorly thereof so as to discharge exhaust gases passing through said tube from the tail pipe into the casing, a second tube connected at one end to said casing and opening interiorly thereof at the bottom so as to pick up heavy ends of gasoline and moisture in the casing at that point, said second tube connected, at the other end, to the carburetor and means in the casing for discharging the exhaust gases from the casing.

2,860,619
VARIABLE INJECTION DEPHASOR
Paul A. Ribaux, Wayne, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application October 18, 1956, Serial No. 616,709
4 Claims. (Cl. 123—139)



1. A fuel injection system for an internal combustion engine which comprises; a fuel injection nozzle, a fuel pump having a delivery port, fuel tubing connecting the delivery port of said pump to said fuel injection nozzle, a dephasor in said fuel tubing, the dephasor having an inlet connected to the delivery of said pump and an outlet connected to said fuel injection nozzle, said dephasor comprising a hollow body open at one end, a tubular core within said hollow body fittingly engaged with the inner walls of said body, a generally spiral groove along the surface of said core in engagement with said body, said groove and said body together forming a fluid path of fixed length through said dephasor, said core including a plurality of radial holes connecting selected points on said fluid path with the interior of said core, a shaft having a generally spiral groove along its length rotatably fitted within said tubular core, said second named spiral groove being substantially shorter than said first named groove, said first named groove and said second named groove both connected to said inlet and said first named groove only connected to said outlet, whereby said second named spiral groove may be aligned with a predetermined radial hole in said tubular core by rotation of said shaft to selectively alter the effective length of said first named groove.

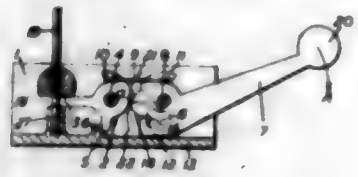
2,860,620
CATAPULT FOR MODEL AIRCRAFT
William L. Ellinger, Jr., Glen Cove, N. Y.
Application February 15, 1956, Serial No. 565,608
11 Claims. (Cl. 124—21)



1. In a catapult for launching a model aircraft having mounted thereon a jet propulsion cartridge, in combina-

tion, means defining a track, a carriage movable along said track from a first end to a second end of said track, elastic propelling means for moving said carriage forwardly away from said first end along said track, latch means for releasably retaining said carriage at the first end of said track against force exerted on said carriage by said propelling means, means on said carriage for releasably holding said cartridge and thereby releasably holding said aircraft on said carriage, and means for activating said cartridge after said carriage has moved along said track under the influence of said elastic propelling means from said first end to a point in the vicinity of said second end.

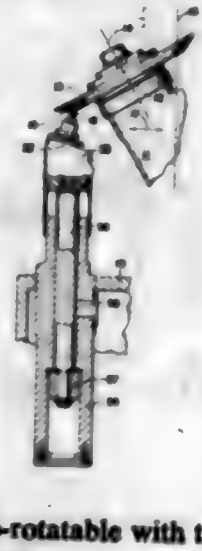
2,860,621
GUIDED PROJECTILE TOY
William Blackadder, Blackpool, England, assignor to Sunnytoys (Distributors) Limited, Blackpool, England, a company incorporated of Great Britain
Application April 12, 1957, Serial No. 652,563
Claims priority, application Great Britain November 30, 1956
2 Claims. (Cl. 124—21)



1. A toy comprising a support which includes side walls extending from a base, a guide means extending from and supported by a stop carried by the base, an object movable relative to the guide means into and out of engagement with said stop, an impeller rockable about the axis of a pivot pin carried by said walls, said impeller including a head movable by rocking movement of the impeller in one direction from a starting position thereof in which said head engages said object and supports it in spaced relation with said stop, a projection engageable with a second stop when the impeller is in the starting position thereof, and a shoulder radial to the axis of rotation of the impeller, an actuating lever rockable about the axis of a second pivot pin carried by said walls, resilient means connecting said impeller and actuating lever and tending to urge said projection towards said second stop and to retain the actuating lever and the impeller in the starting positions thereof, a nose on said actuating lever and a trip member movable with and relative to the actuating lever about an axis movable in a path concentric with the axis of rotation of the actuating lever and biased towards said nose, said trip member being so disposed that on rocking of the actuating lever from the starting position thereof the trip member is movable thereby first to engage said shoulder and effect rocking of the impeller away from the starting position thereof thereby to permit said object to rest against said first mentioned stop and to tension said resilient means and then past the shoulder to permit the tensioned resilient means quickly to restore the impeller to the starting position thereof and to impel said object away from said first-mentioned stop.

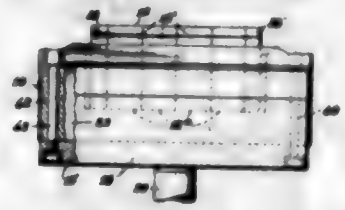
2,860,622
GRINDING MACHINE HAVING ROTATABLE WHEEL DRESSING TOOL
Glenn A. Hilder, Penfield, N. Y., assignor to The Gleason Works, Rochester, N. Y., a corporation of New York
Application September 21, 1956, Serial No. 611,227
8 Claims. (Cl. 125—11)

1. A machine comprising a tool head, a wheel dressing tool rotatable in the head, actuating means including a member rotatable step-by-step in the head about the same axis as the tool, a drive gear co-rotatable with said mem-



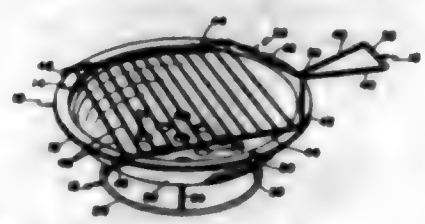
ber, a driven gear co-rotatable with the tool, and a pinion meshing with both gears.

2,860,623
LONG CUTTING EDGE DIAMOND TOOL FOR DRESSING GRINDING WHEELS
Walter Muench, Newark, N. J., assignor to Walter Muench, Incorporated, Newark, N. J., a corporation of New Jersey
Application May 14, 1953, Serial No. 354,917
6 Claims. (Cl. 125—39)



1. In a device of the class described a cutting tool comprising a tool holder, a plurality of similar diamonds arranged side by side in said holder and having abutting and coextensive coplanar faces and coplanar faces converging to collectively form a single continuous straight cutting edge.

2,860,624
MANUALLY PORTABLE CHARCOAL BROILER
William F. Eddy, La Jolla, Calif.
Application January 25, 1954, Serial No. 405,689
2 Claims. (Cl. 126—25)



1. A portable charcoal broiler comprising a dished pan forming a fire chamber and having an outwardly extending rim, a unitary grill and handle detachably secured to said rim, said grill constituting a frame having a pair of spaced, parallel side bars, hooks at the ends of said side bars shaped to engage said rim, and a plurality of spaced parallel cross pars secured transversely to said side bars, said handle comprising an extension of said frame, a locking hook secured to said frame adjacent said handle and engaging said rim, a notch in said rim, said grill being rotatable on said pan whereby said locking hook may be passed through said notch in one position to release the grill from the pan, said pan having a perforated bottom portion, and a base stand detachably secured beneath said pan.

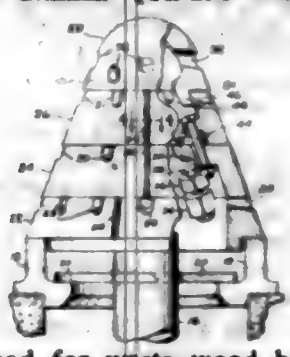
2,860,630

of the valve on its opening movement, means for exposing

2,860,625
DRAFT HEAD FOR WASTE WOOD BURNERS

Robert Edward Huffschmidt, Portland, Oreg., assignor to Western Foundry Company, Portland, Oreg., a corporation of Oregon

Application January 21, 1955, Serial No. 483,226
9 Claims. (Cl. 126—163)

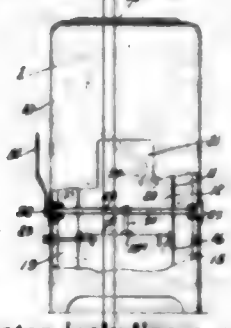


1. A draft head for waste wood burners comprising a plurality of sections superimposed upon each other to form a hollow body, and a plurality of draft ports through the body, the sections having transverse, spaced apart scorings across their respective faces to cause them to fracture along the scorings when thermally expanded.

2,860,626
REMOVABLE GRATE ACTUATOR AND BEARINGS

John W. Hebert, Bay City, Mich., assignor to Calcinator Corporation, Bay City, Mich.

Original application May 29, 1953, Serial No. 358,476, now Patent No. 2,790,401, dated April 30, 1957. Divided and this application December 7, 1953, Serial No. 396,681
9 Claims. (Cl. 126—169)



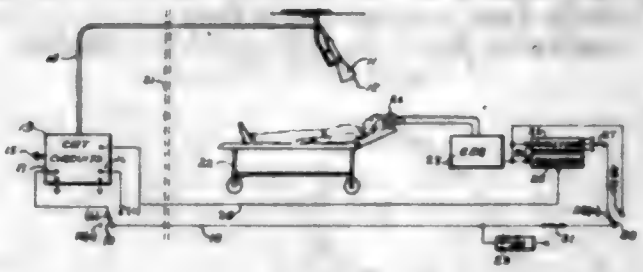
9. In an incinerator including a casing with an access opening therein; a grate mounted for reciprocating movement in said casing; spaced apart tubular bearings in said casing; a shaker shaft including means in engagement with the grate to actuate the same on movement of the shaft; said bearings having inner end walls with substantially centrally disposed openings therein to accommodate and support the ends of the shaft in a manner to permit axial movement thereof, at least one of the opposite outer ends of said bearings being open; a handle sleeve insertable through the outer end of said one of said bearings in driving engagement with the shaft and operable to rock the same and actuate said grate; pins provided adjacent the ends of said shaft, the end walls of the bearings having slots in communication with said openings to permit passage of the ends of the shaft out of the bearings on axial movement of said shaft so that the shaft can be removed from said bearings, said sleeve having a slot therein open to the inner end thereof to accommodate one of said pins so that rotation of said sleeve rocks said shaft.

2,860,627
PATTERN PHOTIC STIMULATOR

Charles M. Harden, Natick, Mass., and Curtis Marshall, Baltimore, Md.

Application March 26, 1953, Serial No. 344,853
12 Claims. (Cl. 128—2.1)

2. Photo stimulation apparatus comprising, means for generating a quasi-visible rate scansion light pattern substantially in the form of an expanding or contracting ring, means for varying said scansion rate, electroencephalographic means for sensing brain wave potentials influenced by said light pattern, means for developing modu-

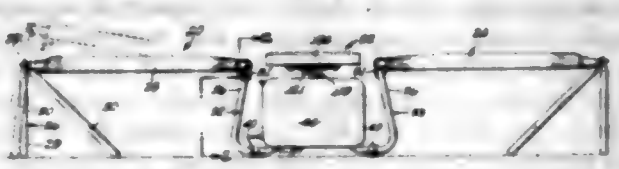


lation signals in accordance with said potentials, means for differentially selecting control signals from said varying means and said modulation signals, and means for controlling said scansion in accordance with said control signals.

2,860,628
PASSIVE EXERCISE MACHINE

Bernard Hamilton Stauffer, Fullerton, Calif.

Application April 9, 1957, Serial No. 651,727
4 Claims. (Cl. 128—33)

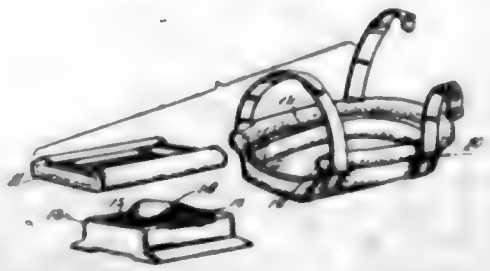


1. A passive exercise machine comprising: an electromotor having an output shaft; means coupling said output shaft to a vertically disposed drive shaft in speed reducing relation; an eccentric pin carried by said drive shaft; a generally horizontally disposed link having a bearing journalled to said pin and a second bearing; a generally vertically disposed pin journalled in said second bearing; said bearings each being retained in said link by flexible mountings whereby said link is arranged for a motion having both horizontal and vertical components; a horizontally disposed shaft; an arm pivoted on said horizontally disposed shaft and carrying said generally vertically disposed pin; an applicator support affixed to said arm and an applicator carried by said support whereby on rotation of said motor said applicator is oscillated about said horizontally disposed shaft through a small arc from vertical.

2,860,629
ELBOW TREATMENT DEVICE

Alice A. Bergholt, Addison, Ill.

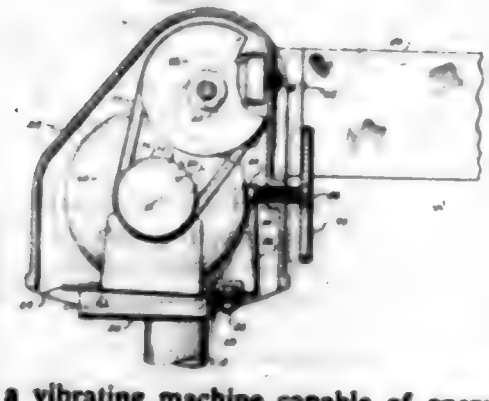
Application September 12, 1957, Serial No. 683,656
3 Claims. (Cl. 128—57)



1. An elbow treatment device comprising a flexible body member, fastening means attached to said body member for removably attaching the device to the arm of a user, a flexible slidable member slidably mounted on said body member, and a flexible cup removably mounted on said slidable member and adapted to hold elbow treating means, said slidable member permitting movement of the elbow within said cup during flexing of the arm by the user.

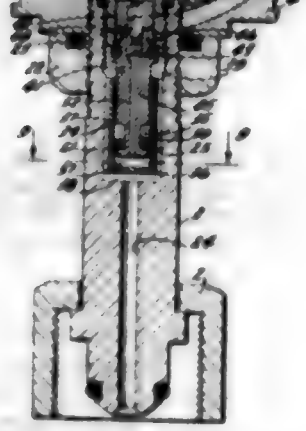
1. A machine comprising a tool head, a wheel dressing tool rotatable in the head, actuating means including a perforated bottom portion, and a base stand detachably secured beneath said pan.

2,860,630
VIBRATING MASSAGE MACHINE
Lloyd A. Christensen, Lowell C. Christensen, William A. Christensen, and Weston W. Christensen, Lohrville, Iowa, assignors to Air Electric Machine Co., Inc., Lohrville, Iowa, a corporation of Iowa
Application March 18, 1957, Serial No. 646,602
17 Claims. (Cl. 128—63)



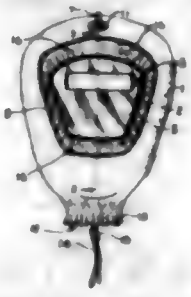
9. In a vibrating machine capable of operating at an infinite number of speeds, a supporting means, a housing on said supporting means, a shaft rotatably supported by said housing, a first pulley on said shaft, a separate bearing member operatively independently eccentrically secured to each end of said shaft, a friction-reducing means on each of said bearing members, said bearing members on said shaft being out of phase with each other, a flexible belt having its respective ends secured to said bearing members and engaging said friction-reducing means, a motor pivotally mounted in said housing, a drive shaft extending from said motor, a second pulley on said drive shaft, a continuous belt connecting said first and second pulleys and adapted to resist the gravitational pivoting of said motor with respect to said housing.

2,860,631
GAS DEMAND EQUIPMENT
George Sajeck, Milwaukee, Wis.
Application July 11, 1956, Serial No. 597,236
3 Claims. (Cl. 128—142)



1. In gas demand equipment, the combination of a housing, a supply of gas under pressure, valve mechanism for controlling the passage of said pressure gas to said housing comprising a conduit connecting said supply with said housing, said conduit having a valve seat therein, a bore in said housing spaced from said seat and concentric therewith, a chamber formed between said bore and said seat, the cross-sectional area of said bore being slightly less than the area enclosed by said valve seat, a valve member having a seat contacting portion disposed in said chamber and having a piston extension working in said bore, sealing means for said piston extension operative when said valve is closed and completely free of the valve on its opening movement, means for exposing the outer end of said piston extension to gas pressure within said housing, the gas from said supply acting upon the differential area between said valve seat and bore to normally urge the valve to a closed position, and fluid pressure operated means connected to said valve member acting in response to a gas demand to move said valve member to open position.

2,860,632
RESPIRATOR
Angelo A. Conti, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Army, as trustee
Application November 28, 1950, Serial No. 197,963
8 Claims. (Cl. 128—143)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a protective device of the class described, the combination of a hood adapted to envelop the head and to snugly embrace the neck of the wearer in substantially airtight relation thereto, means for admitting air under pressure to the interior of said hood, said hood having an opening at the front thereof, a transparent lens member having an aperture therein mounted in said opening, said aperture comprising a small portion of said lens member area, said aperture being positioned so as to be in front of the eyes of a wearer and sufficiently large to permit unobstructed vision therethrough, but sufficiently small to cause said air to issue therethrough in the form of a jet, and means for covering and uncovering said aperture, comprising a second transparent lens member.

2,860,633
COMPOUND SWIVEL ADAPTOR AND COUPLING FOR ANESTHESIA
John W. Phillips, Olive View, Calif.
Application August 17, 1956, Serial No. 604,668
16 Claims. (Cl. 128—188)

1. A fluid pressure applicator head providing means for connecting a face mask or tracheal tube to the breather system of an anesthesia machine, and means for controlling the fluid pressure therein, comprising: a pair of symmetrical tube members being oppositely disposed in parallel spaced relationship, said tubes having nipples at one end adapted to interfit with breather system tubing, and having elbow sections with facing spaced apertures at their other ends; socket means journalled interiorly of said spaced apertures and rotatable therebetween, said socket means being adapted to receive rotatably therein the nipple communicating with a face mask or tracheal tube; transverse duct means communicating interiorly with both of said tubes and disposed intermediate of

generating a quasi-visible rate scansion light pattern sub-

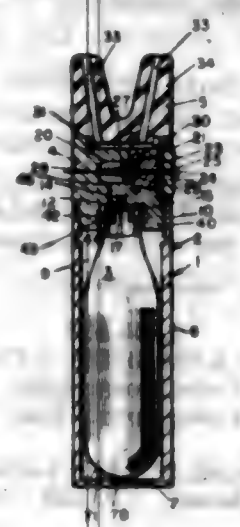
of the arm by the user.

the ends thereof, and valve means opening from said duct being adapted to open and relieve pressure within said duct at a predetermined limit.

2,860,634
OXYGEN DISPENSING DEVICE AND NOSE PIECE COMBINATION

James G. Duncan and Leo E. Trambley, Erie, Pa., assignors to Research Laboratories, Inc., Erie, Pa., a corporation of Pennsylvania

Application May 18, 1955, Serial No. 509,234
9 Claims. (Cl. 128—206)

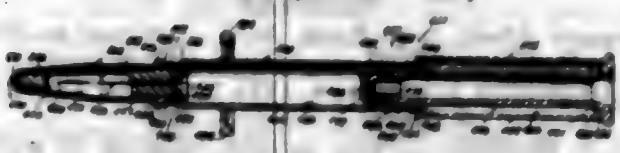


6. In combination, a container for gas and a nose piece having passages therethrough communicating with the inside of said container, said container comprising a bottle having a threaded neck, a valve body comprising a cylindrical head attached to said container and having an axially threaded bore in one end with a groove having an O-shaped washer extending around the inner periphery of said axial bore, a lateral bore in said head having a threaded counterbore, a threaded plug in said counterbore having an actuating rod extending through an axial bore in said plug, said counterbore terminating adjacent said lateral bore in a shoulder, a flat washer of resilient material adapted to be compressed between said plug and said shoulder whereby said washer has an annular portion thereof deflected inwardly to form an enlarged portion, a cup shaped member on said actuating rod concentric therewith with a flanged end directed toward said annular portion and having the edges thereof extending toward said enlarged portion, and passages for gas connecting said lateral bore, said axial bore, and bores in a nose piece connected to said head.

2,860,635
STERILIZABLE AND STERILIZED HYPODERMIC SYRINGE ASSEMBLIES

Edgar H. Wilburn, Rutherford, N. J.

Application February 25, 1958, Serial No. 720,804
21 Claims. (Cl. 128—218)



1. A closed sterilized hypodermic syringe assembly comprising, in combination; hollow barrel means having head means closing off one end thereof and together defining a chamber for containing parenteral liquid, the back end of said barrel means terminating in circumambient structure defining an open chamber back end, said head means having a liquid outlet passage communicating with said chamber for injective discharge of liquid contents; removable protective cap means having a back end supported by said head means and isolating the outlet passage from airborne bacteria in the surrounding atmosphere exterior of said barrel and cap means, at least said cap means being of a structure to provide thereat a front end sterilizing-fluid flow passage leading from the surrounding atmosphere directly to the space therein while said cap means remains supported by said head means to permit pressure flow of sterilizing fluid into and out of the cap means and about structure housed in said cap means via the liquid outlet passage and this sterilizing-fluid passage, one of said cap and head means having blocking means preventing flow of bacteria-laden air through the front end sterilizing-fluid flow passage into the interior of the sterilized assembly; and plunger sub-assembly means including piston means slidably mounted in a forward position in said chamber for drawing fluid thereinto upon retraction to a rearward position and expelling fluid therefrom upon forward thrust to its forward position, elongated plunger stem means extending through the open back end of said chamber and carrying said piston means on its front end, and an elongated hood having an open front end with its back end being closed and carried by the back end of said plunger stem means, said hood being in a forward position and surrounding a major portion of said stem means with an annular space defined therebetween into which the back end of said barrel means is telescoped

with a rear portion of said barrel means protectively housed by overlap thereby, said housed barrel portion and said plunger sub-assembly means being relatively shaped to provide therebetween a back end sterilizing-fluid flow passage leading from surrounding atmosphere at the front end of said hood between the latter and said housed barrel portion to the open back end of the latter for communication to said chamber when said plunger sub-assembly means is retracted to a rearward position with maintenance of connection thereof to said barrel means, said piston means in such rearward position permitting pressure flow therepast of sterilizing fluid into and out of said chamber, said plunger sub-assembly in its forward position and said barrel means having interengaging means serving as blocking means cooperatively closing off the back end flow passage to prevent flow therethrough of bacteria-laden air from surrounding atmosphere into the sterilized assembly.

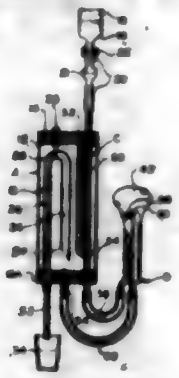
12. A sterilizable hypodermic syringe assembly comprising, in combination, barrel means providing a parenteral liquid chamber and having head means at one end with its other end terminating in circumambient edge means defining an open chamber back end, said head means having an outlet passage communicating with said chamber for injective discharge of contents, removable protective cap means supported by said head means with provision of a flow passage extending from the exterior

their extremities secured solely to said lateral borders, forward upper portion of said second lower portion also

operative when said valve is closed and completely free with both of said tubes and disposed intermediate of

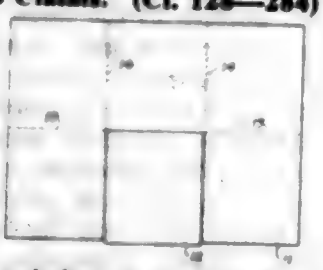
to the interior of said cap means, fluid flow-permitting filtering means covering said flow passage and isolating the interior of said cap means and outlet passage from airborne bacteria in the surrounding atmosphere exterior of said barrel and cap means, plunger means reciprocatively mounted in said chamber through its open back end, and a plurality of cooperative valve means on said plunger means and said barrel means closing off fluid communication between said chamber and the surrounding atmosphere when said plunger means is in a forward position in said chamber, said valve means being in relative open positions when said plunger means is retracted.

2,860,636
TIDAL DRAINAGE AND IRRIGATION VALVE
Murray W. Seltchik, Philadelphia, and John L. Sberbaro, Jr., Merion, Pa.
Application December 21, 1956, Serial No. 629,980
1 Claim. (Cl. 128—227)



A tidal drainage and irrigation valve comprising an outer jacket having a vent at its upper portion thereof, a vertically disposed manometer having an inlet arm extending through the upper portion of said jacket for tubular connection with an overhanging reservoir containing irrigation solution, the lower portion of said inlet arm extending through the bottom of said jacket and being tubularly connected to one orifice of a dual lumen catheter, the second orifice of said catheter communicating with the lower portion of said jacket through a drain tube, a manometer arm having one end in communication with said inlet arm, the other end of said manometer arm communicating with the upper portion of said jacket, and a syphon member axially disposed within said jacket and having one arm communicating therewith, the second arm of said syphon member extending through the bottom portion of said jacket.

2,860,637
DIAPERS
Paul Stamberger, Stamford, Conn.
Application March 12, 1954, Serial No. 415,741
6 Claims. (Cl. 128—284)



1. A diaper consisting of a sheet of a textile material folded in a plurality of folds, and a flexible insert sheet lying between the folds, the insert sheet being impervious to the passage of urine from the upper folds of the diaper, and being formed of a high polymer which is soluble in either hot or alkaline aqueous liquids.

2,860,638
SMOKING DEVICE
Frank Bartolomeo, Merrick, N. Y.
Application February 21, 1956, Serial No. 566,879
15 Claims. (Cl. 128—201)

1. A fireless smoking device comprising a rear mouthpiece section having a mouth end and having a bore through said section, a rear pierce pin having a pierce point and an integral flange and having a passage therethrough fixedly secured in the bore of the mouthpiece with the pierce point disposed away from the mouth end, a front section having a bore therethrough, a front piece pin having a flange and a pierce point integral thereto and having a passage therethrough and fixedly secured to the front end of the front section, the pierce point of

the front pierce pin being disposed inwardly into the bore of said front section, said bore of said front section and said rear section being of approximately equal diameter and adapted to receive a hermetically sealed capsule having tobacco components therein, and means for removeably securing said rear and said front sections together.

2,860,639
PACIFIER AND SHIELD THEREFOR
Frank M. Hoover, Youngstown, Ohio, assignor to Hoover Products, Inc., Youngstown, Ohio, a corporation of Ohio
Application April 29, 1957, Serial No. 655,870
2 Claims. (Cl. 128—359)

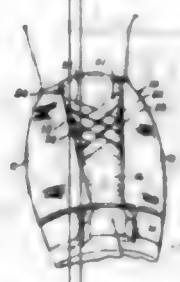
1. A pacifier comprising a body member having a stem rotatably mounted therein and extending outwardly therefrom, said stem having a head portion and a non-perforated nipple engaged over said head portion, an apertured disc engaged over said nipple and head portion for self-retention thereon, said head portion, nipple and apertured disc arranged to distort an annular section of said nipple when said disc is positioned over said nipple and head portion.

2,860,640
GIRDLES
Margaret Clark, New York, N. Y., assignor to Flexnit Company, Inc., a corporation of New Jersey
Application February 16, 1955, Serial No. 488,517
3 Claims. (Cl. 128—540)

1. A generally tubular garment adapted to embrace the torso of and to support the abdomen of a wearer, said garment having in combination right and left side panels, a back panel, and a front panel secured together, said front panel being shaped generally like an inverted keystone, said last panel having lateral borders and having top and bottom edges coinciding with the top and bottom edges of the garment, and an array carried upon said last panel and comprising; a first series of angularly disposed comparatively narrow flexible fabric webs having

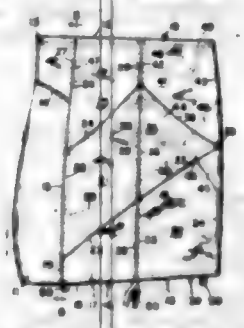
of liquid contents; removable protective cap means hav- provision of a flow passage extending from the exterior

their extremities secured solely to said lateral borders, and a second series of comparatively narrow flexible



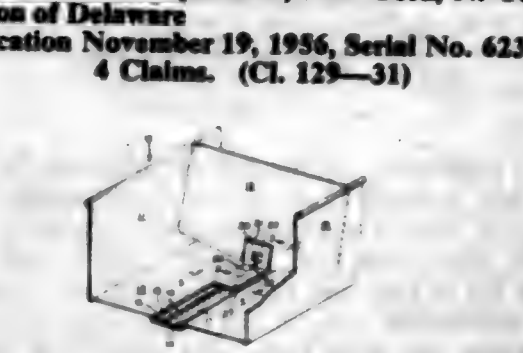
fabric webs angularly disposed relative to and interlaced with said first webs and also having their extremities secured solely to said borders.

2,860,641
FOUNDATION GARMENT OR THE LIKE
Mario Laguzzi, New York, N. Y., assignor to Poirette Corsets, Inc., New York, N. Y.
Application July 29, 1955, Serial No. 525,199
13 Claims. (Cl. 128—541)



1. In a foundation garment of the type having a rear panel, a pair of opposed side panels having their rear side edges secured to the forward edges of said rear panel and a pair of front panels having their forward edges secured together and their rear edges secured to the froward edges of said side panels with each of said side panels comprising, a lower section having an upper edge extending upwardly and forwardly from the rear edge of said panel to the forward edge of said panel, a central section having a lower edge portion substantially overlapping the upper edge of said lower section with the lower edge of said central section extending upwardly and forwardly from the rear edge of said side panel to the forward edge thereof, said central section having an upper edge extending upwardly and forwardly from the forward edge of said rear panel to the rear edge of said front panel, an upper section having a lower edge portion substantially underlapping the upper edge of said central section and extending upwardly and forwardly from the forward edge of said rear panel to the rear edge of said front panel, the width of the overlapped and underlapped portions of said sections decreasing from the rear panel to the front panel, said front panels each comprising a second lower section having an upper edge extending upwardly and forwardly from the forward edge of said side panel to the front edge of said front panel, a second central section having a lower edge extending upwardly and forwardly from the forward edge of said side panel to the front edge of said front panel and having the lower edge portion thereof substantially overlapping the top edge of said second lower section, said second central section having an upper edge extending downwardly and forwardly from the forward edge of said side pnael to the front edge of said front panel and a second upper section having a lower edge portion substantially underlapping the upper edge portion of said central section and extending forwardly and downwardly from the forward edge of said side panel to the front edge of said front panel, the forward lower portion of said second upper section and the forward upper portion of said second lower portion also substantially overlapping with maximum width of each of the overlapped portions occurring along the front edge of said front panel.

2,860,642
CARD FILE
Lou F. Marks and Leonard Louik, Pittsburgh, Pa., assignors to Heskell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application July 26, 1956, Serial No. 600,239
3 Claims. (Cl. 129—31)



1. A card file drawer having front and rear ends and having a bottom wall provided with a central slot therethrough extending lengthwise of the drawer, an upright card follower in the drawer having a central foot projecting toward the rear end of the drawer and extending down through said slot and slidable lengthwise thereof, said foot having grooves in its opposite sides receiving the opposite side walls of the slot to hold the foot therein with the upper walls of the grooves seated flat on top of said side walls, the top of said bottom wall being provided along the opposite sides of the slot with rows of longitudinally spaced teeth spaced from said slot sides, and the rear end of said foot having lateral projections fitting between a pair of said teeth in each row to normally lock said follower against movement along the slot, the lower walls of said foot grooves being inclined downwardly and rearwardly to permit the rear end of the foot to be tilted up to lift said lateral projections from between the teeth, whereby the follower can be moved along the slot to another position in the drawer.

2,860,643
TILTABLE DIVIDER PLATE
Wallace R. Senechal, North Tonawanda, N. Y., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Application November 19, 1956, Serial No. 623,127
4 Claims. (Cl. 129—31)

1. In combination with a file drawer having a bottom, a track in the bottom of the drawer and extending longitudinally thereof, said track having a series of spaced upwardly projecting stop elements, a guide plate slidable along and above said track, means on said track and guide plate cooperating to permit the plate to slide along and above said track, said guide plate being apertured, a divider plate having a portion extending through said aperture but disconnected from said guide plate, and having at its lower end outwardly and oppositely flared flanges and capable of being tilted in one direction or another in said aperture, the vertical distance between the stop elements on the track and the under surface of the guide plate permitting the tilting of the divider plate, the flanges at the bottom of the divider plate when

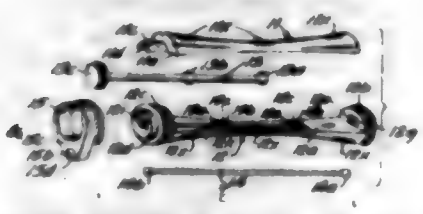
portion between its end portion and the end portion of of a valve body having a flow channel therethrough with

tilted respectively engaging the stop elements and the underside of the guide plate to hold the divider plate in this position when tilted.

2,860,644
COMBINE BEATER CYLINDER
John Johnson, Brockton, Mont.
Application April 30, 1957, Serial No. 656,113
4 Claims. (Cl. 130—22)

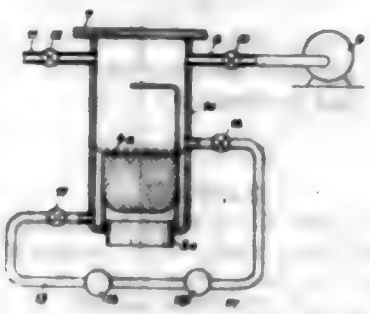
1. A rotary beater for a combine comprising a fixed crankshaft having a throw intermediate the ends thereof, a hollow closed ended cylinder encompassing the throw of said crankshaft and having its ends rotatably mounted upon the ends of said crankshaft, there being a plurality of slots in said cylinder arranged in staggered spaced relation therealong, a plurality of beater fingers each having a rigid arm and a finger projecting from one end of said arm positioned within said cylinder so that the fingers are transversely of the throw of said crankshaft with the free end of each finger being in registry with a slot of said cylinder, each of said arms having a longitudinally extending closed slot therein slidably embracing the adjacent portion of the throw of said crankshaft, and means pivotally connecting the other end of each of said arms to the inner wall of said cylinder, each of said fingers being alternatingly projected and retracted through the associated cylinder slot responsive to the rotation of said cylinder.

2,860,645
EXPANDABLE PERMANENT WAVE ROD
Silvero Brancaccio, Washington, D. C., and Walter C. Smith, Minneapolis, Minn.
Application March 14, 1957, Serial No. 646,142
5 Claims. (Cl. 132—42)



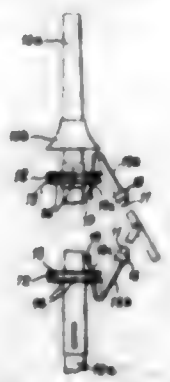
1. An expansible curling rod for permanently waving human hair comprising an elongated, substantially cylindrical body formed of first and second, cooperating, substantially semi-cylindrical sections, said second section having a lug at each end extending generally transversely of the longitudinal axis of the body, each of said lugs having inner and outer faces, said inner faces being opposed, cooperating means at one end of the rod for interconnecting the two sections adjacent said end with freedom for limited relative displacement of said sections transversely of the axis of the rod, the lug on said second section at the opposite end from said last mentioned interconnecting means having a substantially planar inner face provided with a substantially rectangular shallow recess opening to said face, said first section at its end corresponding to said recessed lug having a longitudinally extending, short projecting detent adapted to interfit and be seated in said recess, said recess being of a height relative to said detent to provide for slight movement of said sections apart and together, an expansion shaft having camming means thereon and extending axially between the two sections with one of its extremities projecting beyond the end of said rod for actuation to cause said camming means to cooperate with opposed cammed surfaces recessed from the planar surfaces of said sections.

2,860,646
APPARATUS FOR THE CLEANING OF METAL PARTS
Jacques Zucker, Zurich, Switzerland
Application March 29, 1955, Serial No. 497,733
Claims priority, application Switzerland April 1, 1954
3 Claims. (Cl. 134—111)



2. A particle cleaning apparatus comprising, in combination, a receptacle defining a closed cleaning chamber adapted to receive a liquid; support means for supporting in said cleaning chamber and under the level of a liquid received therewithin particles to be cleaned; generator means for producing supersonic waves in the liquid, thereby subjecting to supersonic waves particles supported by said support means in said cleaning chamber below the liquid level of the liquid; and means communicating with said cleaning chamber at a portion above the liquid level for creating a vacuum in that portion of said cleaning chamber which is above the liquid level of the liquid.

2,860,647
UMBRELLA AND A REPLACEABLE RIB THEREFOR
Adolph Negri, Brooklyn, N. Y.
Application September 10, 1956, Serial No. 608,765
1 Claim. (Cl. 135—29)

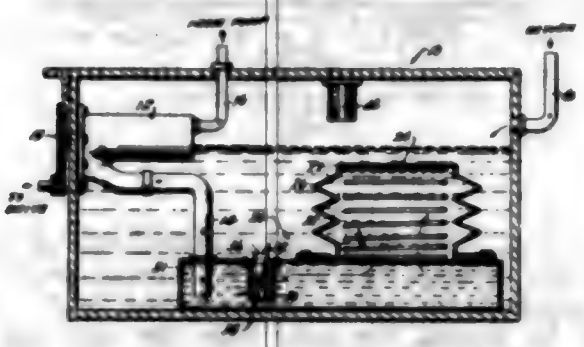


An umbrella having replaceable ribs embodying, in combination, a grommet having a fixed pivot ring, a replaceable umbrella rib pivotally mountable upon said pivot ring and having fastened thereto at its terminal end a resilient openable and closable socket-forming element composed of a pair of arms formed of spring material and in open position disposed in V-shaped relationship to each other, said socket-forming element comprising a mounting arm fixedly fastened at one side of and in parallel relationship to the rib body, an intermediate U-shaped socket portion at the terminal end of the rib body to provide in said element a pivot socket portion, and an elongated spring guide-arm having an integral connection with said intermediate U-shaped socket portion and in open position extending in inclined relationship to the opposite side of said rib, said guide-arm being adapted automatically to spring open into said inclined relationship to said rib body to provide a V-shaped access channel to the socket

side panel to the front edge of said front panel, the forward lower portion of said second upper section and the plate permitting the tilting of the divider plate, the flanges at the bottom of the divider plate when

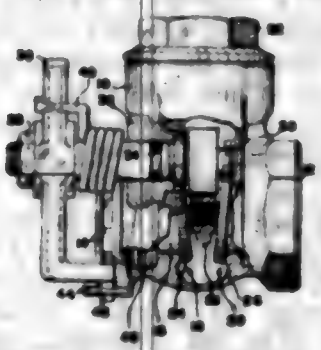
portion between its end portion and the end portion of the rib body, said spring guide-arm being resiliently-movable into engagement with said opposite side of the rib body to close said access channel, said end portion of said guide-arm being movable through the fixed pivot ring to guide the terminal end of the replaceable rib into connection therewith, said rib being provided adjacent to the socket-forming portion of said guide-arm with a beveled end to form one side of the end of the V-shaped channel and to assist in guiding said rib and guide-arm members over and into operative engagement with the fixed pivot ring, means for locking said guide-arm in contact with the surface of the rib body to close the V-shaped access channel to the socket portion after engagement thereof with the pivot ring and to securely lock the said spring guide-arm against said rib and produce a closed pivot-socket for mounting of a replaceable rib upon a fixed pivot ring in the grommet.

2,860,648
ANTI "G" LIQUID RESERVOIR
John Ward Harrison, Danvers, Mass., assignor to General Electric Company, a corporation of New York
Application December 28, 1955, Serial No. 555,830
7 Claims. (Cl. 137—38)



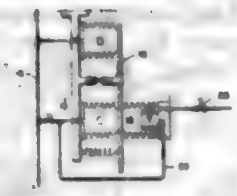
1. In a liquid supply system, first and second liquid containers, at least a portion of the total volume defining structure of said first container comprising a member deflectable to vary the total volume of said first container responsive to a pressure differential between the interior and the exterior thereof, means for supplying liquid to said second container, means to withdraw liquid from said first container and means to provide fluid communication between said first and second liquid containers when the net force acting on said system is in the direction of the normal gravitational force and the system is in its normal operating position and to interrupt said fluid communication on inversion of the system or in response to a net acceleration force opposite in direction to the normal force of gravity.

2,860,649
EMERGENCY SHUT-OFF VALVE
Donald L. Billiu, Dayton, Ohio, assignor to Buckeye Iron & Brass Works, Dayton, Ohio, a corporation of Ohio
Application October 20, 1955, Serial No. 541,774
2 Claims. (Cl. 137—75)



1. In a normally open emergency shut-off valve for a tank used in the transportation of fluids; the combination of a valve body having a flow channel therethrough with an inlet port at one end of the valve body and an outlet port at the other end thereof for connection of the valve in a flow system, a valve seat in the channel between said ports, a valve member in said body movable toward and away from said seat thereby to close or open said channel, a lever external of the valve body connected with said valve member to move the valve member, a spring connected between the lever and valve body biasing the lever toward a position where the valve member is held in channel closed position, means having at least a portion thereof fusibly connected between the lever and a point on the end of the valve body adjacent the outlet port and holding the lever against the bias of the spring in position to locate the valve member in channel open position, said means becoming separated upon a rise in temperature to a predetermined level to release said lever, an annular frangible area about the valve body between the said point of attachment thereto of said means and the said valve seat to provide for breaking off of the outlet end of the valve body downstream from the said valve seat thereby to release said lever and permit closing of said valve upon the valve being subjected to a sharp blow, and means on the said point on the valve body so that one end of said fusible means is looped therearound whereby said fusible means may be selectively disconnected from the valve body at said point to permit releasing of said lever and the closing of the valve.

2,860,650
FLUID PRESSURE DEVICES
Howard C. Schink, Cleveland Heights, Ohio, assignor to Bailey Meter Company, a corporation of Delaware
Application November 1, 1952, Serial No. 318,388
5 Claims. (Cl. 137—85)



1. In a fluid pressure relay having, a system of beam members, means applying a predetermined force to pivot each beam of the system, fluid pressure supply and waste valve positioned by a beam of the system, a first chamber acting on the beam system in response to a variable fluid loading pressure received, a second chamber acting on the system in response to the output of the supply and waste valve, a third chamber acting on the system in response to the output of the supply and waste valve, and a restriction in the connection between the third chamber and the supply and waste valve; the improvement including, a fourth chamber acting on the beam system in opposition to the force exerted by the third chamber, and an adjustable bleed restriction in the connection between the fourth chamber and the atmosphere.

2,860,651
APPARATUS FOR CONTROLLING THE EMPTYING OF TANKS
Robert H. Davies, Aurora, Ohio, assignor to Parker-Hannifin Corporation, a corporation of Ohio
Application January 24, 1955, Serial No. 483,646
10 Claims. (Cl. 137—98)

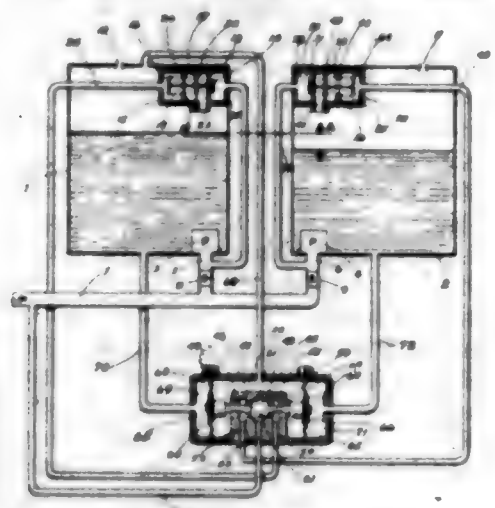
1. Apparatus for controlling the emptying of liquid from tanks, comprising, in combination, first and second tanks each containing liquid, each tank having a discharge pipe through which it may be emptied, a return conduit extending from one of the discharge pipes back to the interior of its respective tank, a differential pressure control device including first and second movable elements, means operatively connected with the first tank and the

2,860,654

electrical series the switch-actuating means and the relay

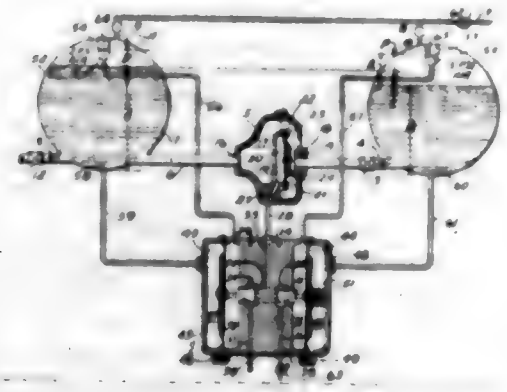
between the two sections with one of its extremities pro- body to provide a V-shaped access channel to the socket

first element for transmitting the head pressure from the first tank to the first element to urge said first element in one direction, means operatively connected with the second tank and the second element for transmitting the head pressure from the second tank to the second element to urge said second element in an opposite direction, a



source of power fluid, means including a pressure operated valve in said return conduit and operatively connected to said control device, said control device also including a pilot valve acted upon by said elements and positionable by the difference in force developed on the two elements by said head pressures for controlling the flow of power fluid to said pressure operated valve.

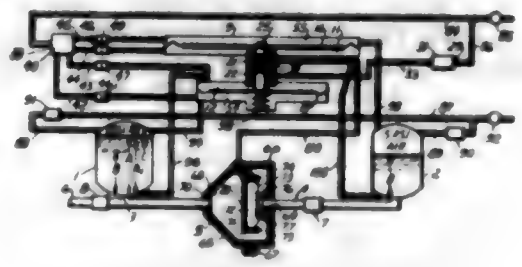
2,860,652
APPARATUS FOR EMPTYING TANKS
Everett H. Badger, Jr., Los Angeles, Calif., assignor to Parker-Hannifin Corporation, a corporation of Ohio
Application January 24, 1955, Serial No. 483,647
20 Claims. (Cl. 137—98)



1. Apparatus for use with a pair of tanks for controlling the discharge of liquid therefrom, comprising, in combination: means for emptying liquid from each tank, means for regulating the rate at which liquid empties from one of the tanks, a control means connected to the regulating means, a pair of vertically spaced pressure sensing outlets in each tank, means for transmitting fluid pressures existing at each of said four outlets to said control means, said control means being responsive to said transmitted pressures for controlling the regulating means.

19. A differential pressure control device comprising a casing having an enlarged chamber at each end thereof, said chambers being separated by a partition in the casing, a bore in said partition, inlet and outlet passages in the casing communicating with the bore, a movable valve member mounted in the bore and having means for opening and closing communication between the inlet and outlet ports, a movable wall in each enlarged chamber and dividing the same into opposed pressure chambers, means including passages in the casing communicating with each pressure chamber whereby fluid may be introduced to both sides of each movable wall, the movable member forming a sliding seal in the bore preventing communication between the ports and the pressure chambers adjacent thereto, said movable walls being connected to opposite ends of the valve member whereby movement of said walls in response to unbalanced fluid pressures acting thereon will position the valve member for controlling communication between the inlet and outlet ports.

2,860,653
APPARATUS FOR CONTROLLING THE EMPTYING OF TANKS
William Taylor, Pomona, and Everett H. Badger, Jr., and Samuel D. Burton, Los Angeles, Calif., assignors to The Parker Appliance Company, Cleveland, Ohio, a corporation of Ohio
Application January 24, 1955, Serial No. 483,662
12 Claims. (Cl. 137—98)



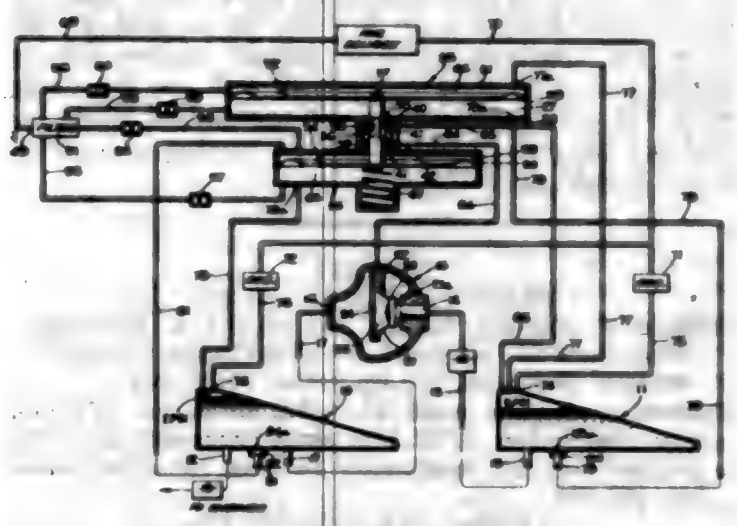
5. Apparatus for controlling the discharge of liquid from a pair of tanks, each having a discharge conduit and each containing air under pressure acting on the liquid therein for forcing the same from the tank into the respective discharge conduit, comprising in combination: means for regulating the rate at which one of the tanks empties through its respective discharge conduit, pressure sensing outlets at the top and bottom of each tank, a control means connected to the regulating means, a source of air under pressure, conduits for transmitting the air pressure at the top of each tank to the control means for acting thereon, conduits connecting the control means to the bottom of each tank, means for continuously introducing air from said source into said bottom connected conduits, the air in said bottom connected conduits being subject to the liquid pressure at the bottom of the respective tank and acting on said control means, said control means being responsive to said transmitted pressures for controlling the regulating means, and said bottom connected conduits being open to the respective tank whereby air within said bottom connected conduits continuously discharges into the respective tank to prevent liquid from entering the bottom connected conduits.

10. Apparatus for controlling the discharge of liquid from a pair of tanks, comprising, in combination: means for emptying the liquid from each tank, a fluid pressure operated valve for regulating the rate at which one of the tanks empties, a differential pressure device, means for sensing the liquid head pressure in each tank and for transmitting the same to the differential pressure device, a pressure chamber in said fluid pressure operated valve, a source of fluid under pressure, means including a pilot valve for admitting fluid from said source to said pressure chamber for operating said fluid pressure valve, said differential pressure device being responsive to the liquid head pressures transmitted thereto for controlling said pilot valve, and a restricted opening in said pressure chamber for venting the chamber to reduce the fluid pressure therein when the differential pressure device causes the pilot valve to cut off this supply of fluid under pressure to said chamber.

outlet pressure of said regulating valve, said first-men- said guideways when the pressure in said chambers is be-

tank used in the transportation of fluids; the combination means operatively connected with the first tank and the

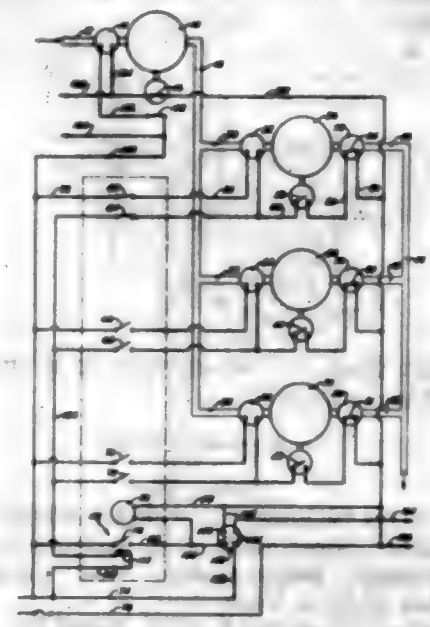
2,860,654
FUEL SYSTEM HEAD CONTROL UNIT
John Morley, Huntington, John Karasik, Hempstead, and Alexander P. Moore, Bethpage, N. Y., assignors to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Application February 15, 1956, Serial No. 565,700
4 Claims. (Cl. 137—98)



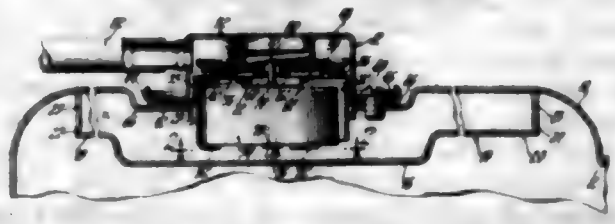
1. In a device for controlling the relative rate of discharge of liquid from two tanks to a common discharge conduit and wherein one of the tanks discharges through a modulating valve, the improvement comprising, in combination: a differential pressure control device including a pair of movable members each having opposed pressure receiving areas, means including sensing lines for applying pressures to the opposed areas of one of said members to reflect pressures in the top and bottom, respectively, of one of said tanks, means including sensing lines for applying pressures to the opposed areas of the other of said members to reflect pressures in the top and bottom, respectively, of the other of said tanks, respectively, means for causing pneumatic flow through each of the sensing lines in a direction into the tanks, means forming a restriction at the point where each lower sensing line enters the lower portion of its respective tank, said restriction being located at a position directly below the mean centroid of the liquid mass when the tank is filled and in normal position, and means whereby said control device may actuate the modulating valve.

2,860,655
LIQUID STORAGE
Charles R. Bayless, deceased, late of Channelview, Tex., by Daisy M. B. Bayless, executrix, Channelview, Joseph W. Daughtrey, Pasadena, and Melborne L. Robertson, Laird Hill, Tex., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application February 28, 1956, Serial No. 568,214
12 Claims. (Cl. 137—122)

1. Apparatus for controlling the introduction of liquid into a plurality of storage tanks comprising a plurality of electrically controlled valves that are open solely during electrical energization thereof, a liquid-level-responsive-electric-switch means associated with each of the valves, a pair of normally open, electric-selector switches associated with each valve, switch-actuating means responsive to electrical energization thereof to sequentially and cyclically close the pairs of selector switches, an electric relay comprising a solenoid and a normally closed relay switch, electric-circuit means for controlling energization of the solenoid comprising an associated electric-circuit branch for each valve including in electrical series the switch means and one of the pair of selector switches associated with such valve, said circuit branches being in electrical parallel with each other and in electrical series with the solenoid, means for energizing the switch-actuating means comprising an electric circuit including in electrical series the switch-actuating means and the relay switch, and means for energizing the valves comprising a further electric circuit associated with each valve that includes in electrical series the valve, the switch means, and the other of the pair of switches associated with such valve.



2,860,656
TANK VENT STRUCTURES
Jesse E. Eshbaugh, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 21, 1954, Serial No. 457,495
2 Claims. (Cl. 137—202)



1. A tank vent structure including a tank, a channel with imperforate sides and bottom extending along the top of said tank and having small ancillary vents communicating with opposite interior zones of the latter, said tank having a filler tube communicating directly with one of said zones, a vent structure provided with two concentric vent openings leading from the ambient atmosphere to an intermediate portion of said channel, a large valve arranged to control one of said openings and urged towards the interior of said tank and into closed position by means of a spring, a small valve arranged to close the other of said vent openings, a float mounted in said channel and connected to the latter valve for closing the associated vent opening when the tank is full of liquid.

2,860,657
REGULATING VALVE
Paulsen Spence, Baton Rouge, La.
Application December 16, 1955, Serial No. 553,660
4 Claims. (Cl. 137—489.5)

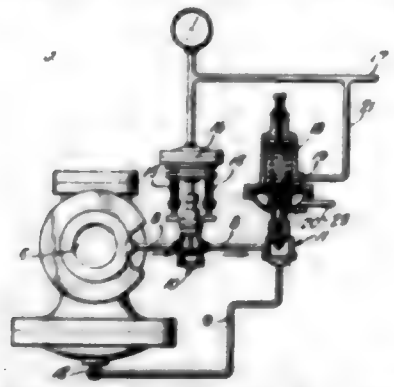
1. In a regulator of the character indicated a main regulating valve, fluid pressure actuated means for operating the same, a pressure pilot, operating means therefor subject to a relatively fixed pressure and to a source of variable pressure, a differential pilot in series with said pressure pilot, said differential pilot operating in response to the differential between said variable pressure and the

[el arrangement with a bottom face, said body having

chamber and dividing the same into opposed pressure

causes the pilot valve to cut off this supply of fluid under pressure to said chamber.

outlet pressure of said regulating valve, said first-mentioned pressure pilot being adjusted to shut off control

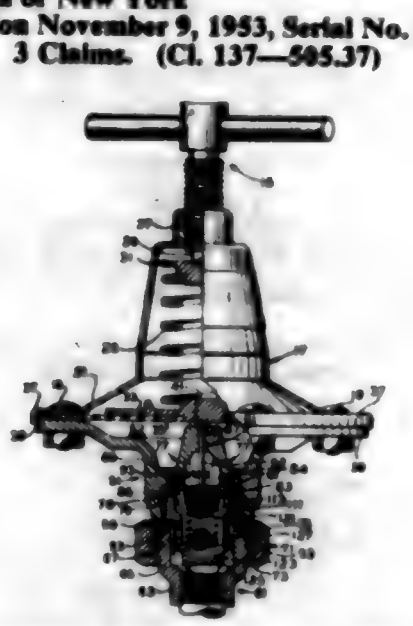


pressure fluid upon the attainment of a predetermined limit of said variable pressure.

2,860,658
GAS PRESSURE REGULATOR

John S. Senesky, Somerville, N. J., assignor to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York

Application November 9, 1953, Serial No. 390,886
3 Claims. (Cl. 137—505.37)

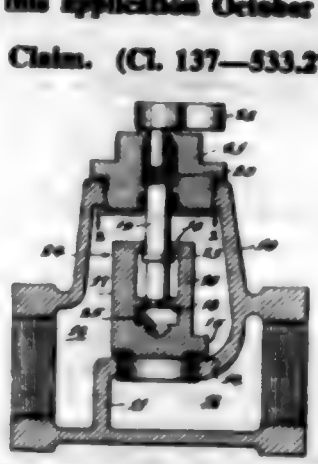


3. A gas pressure regulator having a dish-like formation formed in a body part providing a cavity which is adapted to cooperate with a diaphragm to form a diaphragm chamber, a radial transverse ridge extending up from the bottom of said diaphragm cavity of said dish-like formation, said ridge having a straight outlet gas passage therethrough, said body part having an axial tubular portion extending from the bottom of the dish-like formation, a flat transverse wall axially-inwardly terminating said tubular portion whereby a cylindrical cavity results, two axial guideways aligned with each other and with the axis of the tubular body with one of said guideways extending through the upper axial part of said transverse ridge to the outlet gas passage and with the other guideway extending from said outlet passage to said cylindrical cavity, intermediate straight gas passages extending from said cylindrical cavity to said transverse passage with the openings of said passages into said cylindrical cavity being spaced slightly from the opening of said other guideway whereby a non-axial gas flow path from said cylindrical cavity to said transverse passage is provided, a valve plate having an axial valve passage positioned in said cylindrical cavity so as to be aligned with the axis of said tubular portion, said valve plate being constructed and arranged so as to provide a gas path from its valve passage to said intermediate passages, a restricted passage connecting said transverse passage and said diaphragm cavity, a diaphragm spring construction connected to said dish-like formation with the diaphragm exposed to said diaphragm cavity and constructed and arranged to exert an axial force towards said guideways when the pressure in said chamber is below a predetermined value, a thrust pin extending from said diaphragm-spring construction through said guideways and said valve passage into said cylindrical cavity, a movable rubber-like O ring positioned in an O ring holder and a spring bearing against said O ring holder, said O ring and said spring associated with said thrust pin and said valve plate and constructed and arranged to interrupt the flow of a gas towards the gas path in said valve, and means in said axial tubular position for retaining said valve plate in abutment with said flat transverse wall and for supporting said spring, said means including a gas path to said axial valve passage, and a filter device in said gas path.

2,860,659
FLOW CONTROL VALVE

Gilbert F. Carlson, Skokie, and Harold A. Lockhart, Wauconda, Ill., assignors to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois

Original application April 13, 1951, Serial No. 220,948, now Patent No. 2,701,581, dated February 8, 1955. Divided and this application October 15, 1954, Serial No. 462,486
1 Claim. (Cl. 137—533.27)

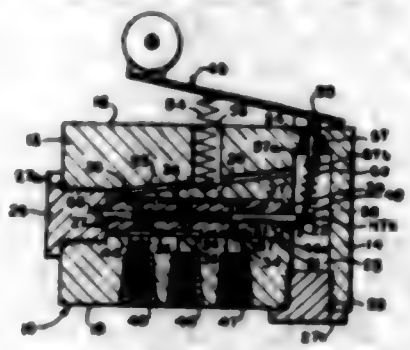


A flow control valve comprising a hollow body having an apertured interior wall including a valve seat and defining with the body inlet and outlet chambers, a vertical stem mounted within the body coaxial with the seat, a valve disk operably related to the seat and having an upwardly extending skeleton structure including a pair of opposed legs and a pair of vertically spaced, guide elements slidable freely along the stem, one of the legs having a greater mass than the other to thereby offset the center of gravity of the disk from the sliding axis thereof and the disk being moved upwardly in an opening direction by pressure in the inlet chamber, the pressure rocking the member so that the guide elements bear oppositely, respectively, against the stem.

2,860,660
VALVES

John C. Swatsworth, Newark, N. J., assignor to Barworth, Inc., Summit, N. J., a corporation of New Jersey

Application August 28, 1953, Serial No. 377,097
6 Claims. (Cl. 137—625.42)

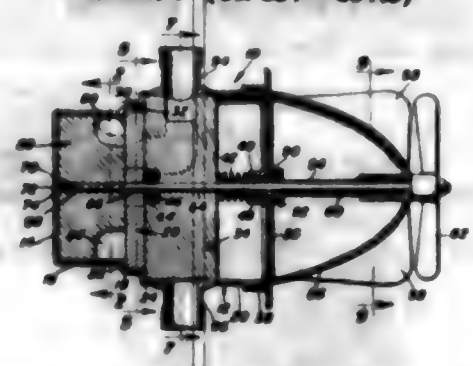


4. A valve comprising a substantially solid body, said body comprising spaced parallel front and back faces, spaced parallel end faces, and a top face in spaced paral-

ating means comprising an electric circuit including in to the differential between said variable pressure and the

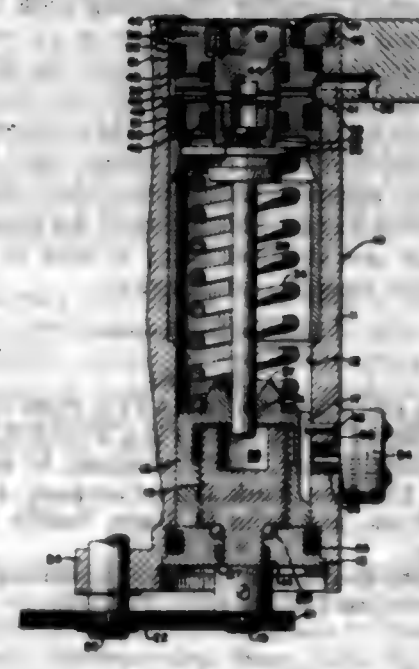
lel arrangement with a bottom face, said body having formed therein a longitudinal bore extending from one end face toward the opposite end face, said body having formed therein a transverse bore extending from said bottom face toward said top face adjacent the opposite end face and interconnecting the inner end of the longitudinal bore, said body having formed therein a substantially vertical and constricted passage interconnecting the transverse bore at the top, said body further having formed therein a plurality of longitudinally spaced ports interconnecting the longitudinal bore, a core with axial bore removably disposed in the longitudinal bore, means for sealing the core in the longitudinal bore, the core having formed therein a plurality of circumferentially spaced openings interconnecting the ports with the axial bore, a valve stem reciprocable in the axial bore and with the inner end extending into the transverse bore, the inner extended end of the valve stem having a circumferential recess formed thereon, said valve stem further having two spaced lands formed thereon, each land in one position of said valve stem closing at least one port when the remaining ports are open, a pin, a yoke having one end swingably connected with one end of said stem and another end swingably connected with said pin, a spring between said pin and said yoke, said pin having a portion located in said transverse bore, a ring packing disposed about said portion of the pin and sealing said pin relatively to said transverse bore, pivot means carrying said ring packing and said pin and centrally aligned therewith, said pivot means being supported in said body, and an actuating lever swingably mounted upon said body and actuating said pin.

2,860,661
CONTROLLABLE MIXING FAUCET
Ernest F. Boegel, Oakland, Calif.
Application March 28, 1956, Serial No. 574,406
4 Claims. (Cl. 137—637.3)



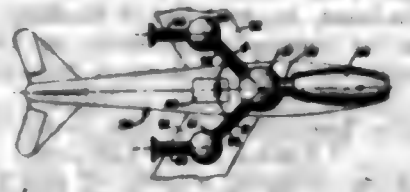
1. A mixing faucet comprising a hollow body, hot and cold water inlet fittings on said hollow body and communicated with the interior thereof, a volume control valve member mounted in said hollow body for rotation, hot and cold water ports in said hollow body, said volume control valve member being disposed within said hollow body intermediate said hot and cold water inlet fittings and said hot and cold water ports and controlling the volume flow of water between said hot and cold water inlet fittings and said hot and cold water ports, respectively, a pair of diametrically opposed outlet fittings on said hollow body, a combined water temperature control and mixing valve member disposed within said hollow body between said hot and cold water ports and said outlet fittings and controlling the proportional flow of hot and cold water through said hot and cold water ports to control the temperature of water discharged from said faucet, said mixing valve member having an outlet port selectively aligned with said outlet fittings to control the direction of flow of water out of said hollow body, and control means for said volume control valve member and said combined water temperature control and mixing valve member.

2,860,663
QUICK ACTING, ACCURATE SENSING, VARIABLE SETTING POPPET VALVE
Marcel E. Gres and Edwin H. Block, Austin, Tex., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application September 21, 1955, Serial No. 535,771
7 Claims. (Cl. 137—469)



1. In a hydraulically actuated valve mechanism for use in actuating a depth charge which is adjustable to render the depth charge effective at selected depths, in combination, a casing having a hermetically sealed chamber formed therein of different cross-sectional areas and having an inlet in communication with the surrounding fluid medium, valve means including a stem arranged to seal said inlet and forming a substantial seal with the casing portion of smaller cross-section and moveable into the casing portion of larger cross-section to open by forming with the latter portion a fluid passage, outlet means in communication with said latter portion so constructed as to effect rapid equalization of fluid pressure on opposite sides of the valve means upon opening of said valve means, a helical biasing spring for said valve, adjustable means threaded into said casing and settable at will to an adjusted position for compressing the spring just sufficiently to retain the valve in an initial closed position when the inlet is not connected to a source of pressure, and means including a shaft rotatably carried by the casing in sealed relation therewith for additionally compressing the spring sufficiently to apply a second bias thereto such that the valve is opened momentarily when the pressure applied to said inlet has increased to a predetermined value and closed by said spring when the pressure within the casing has increased to a value substantially equal to the pressure applied to said inlet.

2,860,663
STRUCTURE FOR DIVERTING GASES OF HIGH VELOCITY
William J. Kroeger, Philadelphia, and George Schecter, Somerton, Pa.
Application August 7, 1953, Serial No. 373,873
2 Claims. (Cl. 137—561)
(Granted under Title 35, U. S. Code (1952), sec. 266)



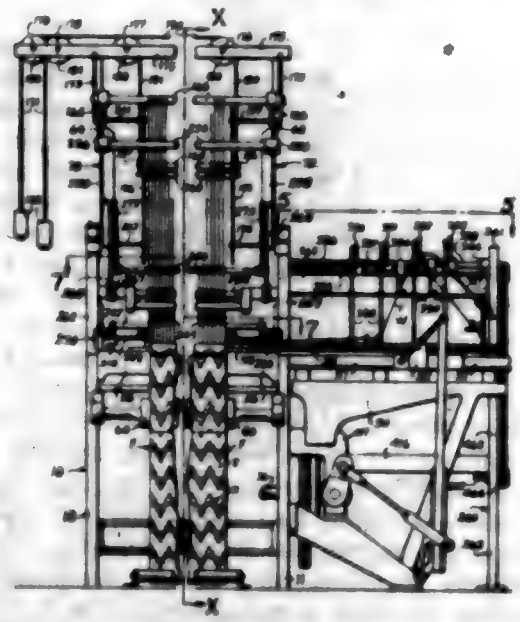
1. A system for displacing the flow of a fluid stream laterally comprising: a first receiver associated with a

fluid source for receiving the fluid in a stream, comprising at least one hollow spherical chamber, additional receivers for receiving said fluid stream from said first receiver comprising at least two hollow spherical chambers; at least one inlet portion associated with each of said chambers, at least one outlet portion associated with each of said chambers to exit fluid from respective ones of said chambers, conduit connecting each inlet portion of each of said additional receivers to an outlet portion of said first receiver; all of said receivers together with their outlet and inlets being disposed with their respective central axes in a common plane; said additional receivers together with their respective outlets and inlets being symmetrically disposed on opposite sides of the central axis of the inlet to said first receiver; the sum total outlet area for each said chamber being at least as great as the sum total inlet area of said chamber.

2,860,664
METHOD OF AND APPARATUS FOR WEAVING HIGH AND LOW PILE FABRICS

Ivar O. Moberg, Spray, N. C., assignor, by mesne assignments, to The New York Trust Company, a corporation of New York, and John H. Balle, Saddle River, N. J., as trustees

Application December 15, 1953, Serial No. 398,287
46 Claims. (Cl. 139—46)



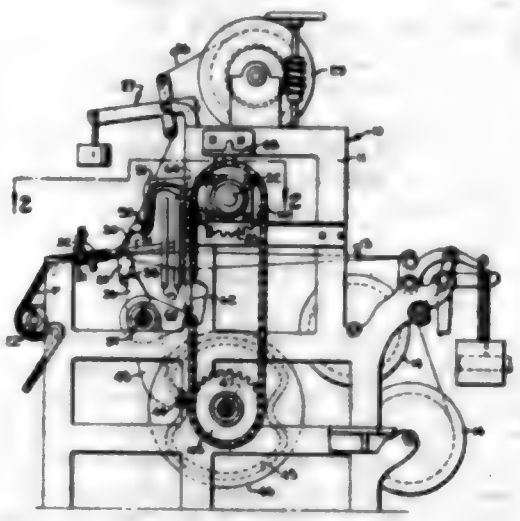
46. In a loom for weaving pile fabrics, said loom having means for making a base fabric including a reed and additional means for forming loops from pile yarns over longitudinal loop forming fingers; the combination therewith of a series of spaced warpwise extending loop forming fingers mounted on the loom and disposed adjacent the fell of the fabric being woven, said fingers being provided with loop forming portions of different heights, and means for selectively shifting the fingers warpwise to vary the position of said fingers within and without the point at which loops are formed in order to provide surfaces over which loops may be formed to achieve a predetermined pattern in relief in the fabric being woven.

2,860,665
PILE YARN SHOGGING MOTION FOR LOOMS

John T. Maclennc, Jr., and Frank W. Brey, Spray, N. C., assignors, by mesne assignments, to The New York Trust Company, a corporation of New York, and John H. Balle, Saddle River, N. J., as trustees

Application September 25, 1956, Serial No. 612,015
7 Claims. (Cl. 139—46)

7. Means for shogging a series of pile yarn guides on a loom for weaving pile fabrics comprising a carriage supporting said guides, means pivotally connecting said carriage to the loom frame rearwardly of and above said guides including a shaft journaled on the frame, at least one cam wheel journaled on said shaft, means restraining said cam wheel from axial movement relative to said

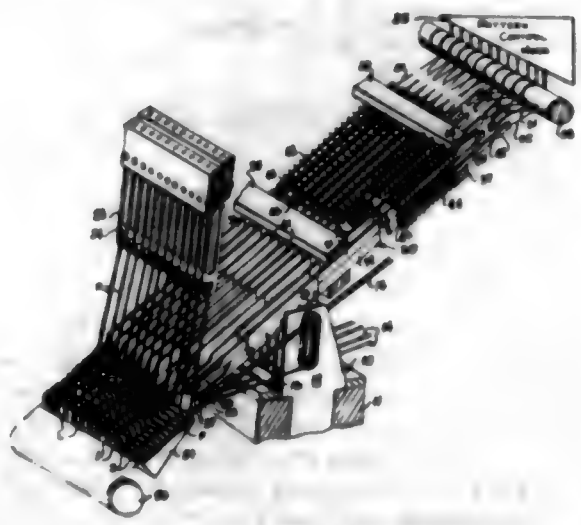


shaft, said cam wheel having an irregular cam surface on either of its end faces, a follower carried by said frame, means to drive said cam wheel in timed relation to the operation of the loom, and means maintaining the cam wheel in engagement with the follower.

2,860,666
METHOD OF WEAVING AND COMPOSITE PILE WIRE FOR LOOMS

Eugene F. Clark, Leaksville, N. C., assignor, by mesne assignments, to The New York Trust Company, a corporation of New York, and John H. Balle, Saddle River, N. J., as trustees

Application December 19, 1956, Serial No. 629,345
29 Claims. (Cl. 139—46)

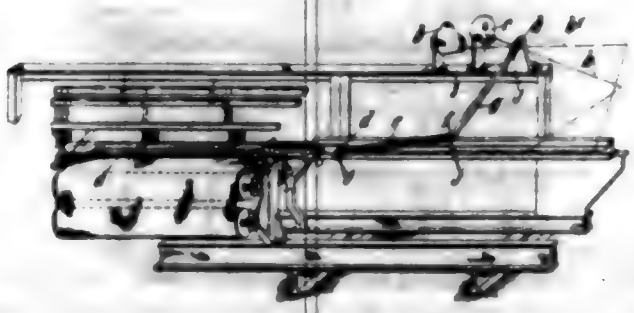


1. In a loom having a reed and other means for making cloth, longitudinal pile gauge wires having free end portions extending through the reed dents, individual wires of said pile wires having a plurality of loop-forming stages of different height including a lower stage and at least one upper stage and means for importing relative longitudinal movement to the lower and upper stages of each of said individual wires relative to the cloth during weaving to position different loop-forming stages of different heights to the fell of the cloth at predetermined intervals.

27. In a method of weaving pile fabrics on a loom having weft insertion means, warp pile yarn shogging means and sets of upper and lower longitudinal pile gauge elements extending through reed dents to the fell

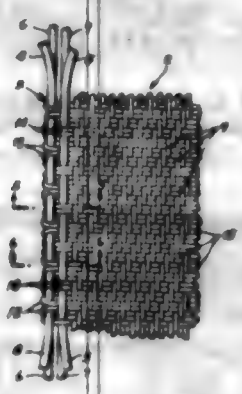
of the fabric, the steps which comprise weaving a ground fabric, during said weaving forming loops by shogging pile yarn over upper gauge elements and interlacing it with selected weft shots, then withdrawing from the fell of the fabric selected upper elements, then shogging warp pile yarn over the remaining upper elements and such lower elements as are then exposed, then withdrawing and advancing other selected upper elements, and repeating said shogging step to produce, during the weaving of the ground fabric, individual high and low loops.

2,860,667
LOOMS FOR WEAVING
Derrick Walter Shimwell, Jurby, Isle of Man, assignor to Weaving Research & Textile Commission Agents Limited, Jurby, Isle of Man, a British company
Application July 20, 1956, Serial No. 599,288
Claims priority, application Great Britain August 3, 1955
2 Claims. (Cl. 139—123)



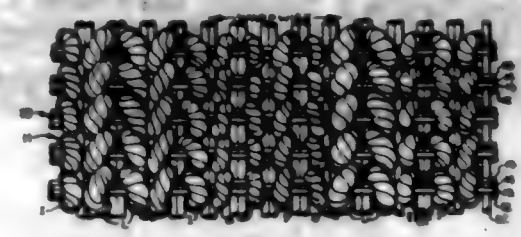
1. A loom of the type in which weft is inserted into the warp shed by a reciprocatory weft inserting spear and in which the supply of weft yarn is obtained from a stationary package located at the side of the loom, having a pivotally interconnected linkage system of elbow form pivotally attached at one end to the rear end of the spear and at the other end to a fixed part of the loom near the yarn package, with guides at the pivotal points through which the weft yarn passes.

2,860,668
TAPE FOR SLIDE FASTENERS
James A. Headley, Stanley, N. C., assignor to Talon, Inc., a corporation of Pennsylvania
Application March 13, 1956, Serial No. 571,235
7 Claims. (Cl. 139—384)



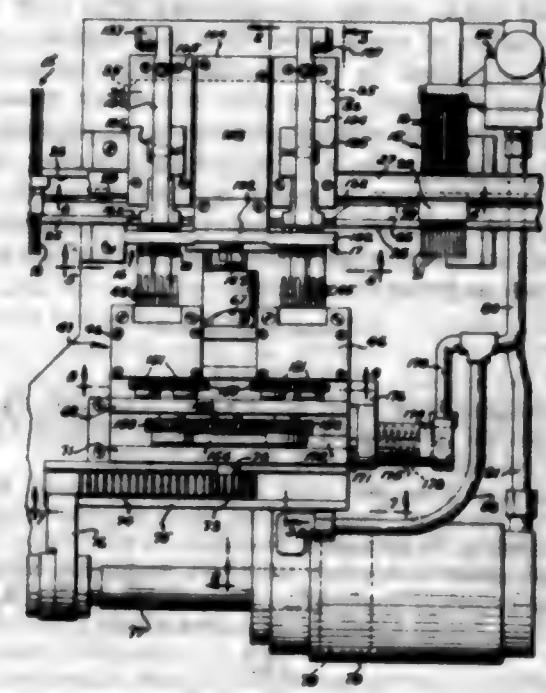
1. In a tape for slide fastener stringers of the class described, a plurality of longitudinally extending warp threads, a continuous weft thread interwoven back and forth through and between said warp threads so as to provide a woven web, a beaded edge arranged along one edge of said tape formed by four relatively large soft cords with a pair of cords being disposed on each side of the tape, the cords being held by loops of said weft thread, each lay of the weft being a double pick and extending over and around two of the diametrically opposed cords and between all of the cords.

2,860,669
HIGH AND LOW PILE FABRIC AND METHOD OF MAKING SAME
Ivar O. Moberg, Spray, N. C., assignor, by mesne assignments, to The New York Trust Company, a corporation of New York, and John H. Balis, Saddle River, N. J., as trustees
Application October 4, 1956, Serial No. 613,899
29 Claims. (Cl. 139—402)



1. An improved pile fabric including a base having warp yarns interwoven with filler yarns, pile yarns extending generally warpwise and interwoven with the base in the form of loops varying in height warpwise of the fabric and wherein the bight of each loop extends across and above at least one of said warp yarns.

2,860,670
APPARATUS FOR TWISTING WIRES
Cecil C. McCain, Glen Ellyn, and George Stuhlfauth and Ben L. Wright, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application March 9, 1956, Serial No. 570,607
6 Claims. (Cl. 140—149)

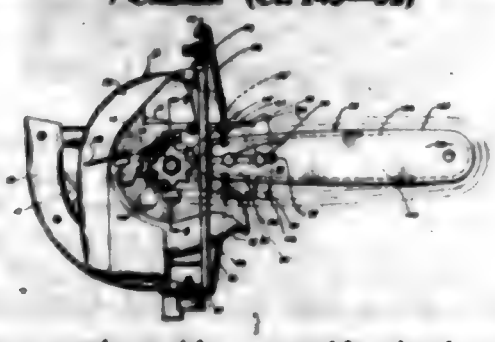


1. In an apparatus having first and second wire twisting stations for twisting wires of a relay part having a row of wires disposed in parallel and closely spaced relation to each other, means for intermittently feeding relay parts successively to the first and the second stations, a carriage, a plurality of apertured wire twisting spindles on said carriage aligned with alternate pairs of wires of a relay part at said first station and with the other pairs of wires at the second station, means for reciprocating the carriage in a direction parallel to the wires of the relay parts in said stations to telescope the spindles over a predetermined portion of pairs of the wires and withdraw the spindles therefrom, clamping means for clamping the pairs of wires at predetermined distances from the ends thereof to limit the length of the portion of the wires being twisted, means for flexing the wires of the pairs of wires to be twisted to move the ends thereof into engagement with each other to facilitate the telescoping of the

supporting said guides, means pivotally connecting said gauge elements extending through reed dents to the fell

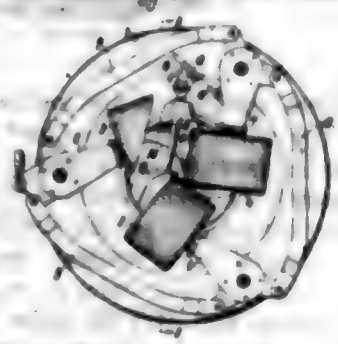
spindles thereonto, and means for rotating the spindles during the withdrawal movement of the spindle to twist the pairs of wires.

2,860,671
CHAIN SAW ATTACHMENT FOR PORTABLE CIRCULAR SAWS
Alfred A. Wilder, Fresno, Calif., assignor to Edward C. Mossman, Newton J. Caffelian, and Charles J. Vagim, doing business as Cenatron Industries, Fresno, Calif., a co-partnership
Application December 24, 1956, Serial No. 630,394
7 Claims. (Cl. 143—32)



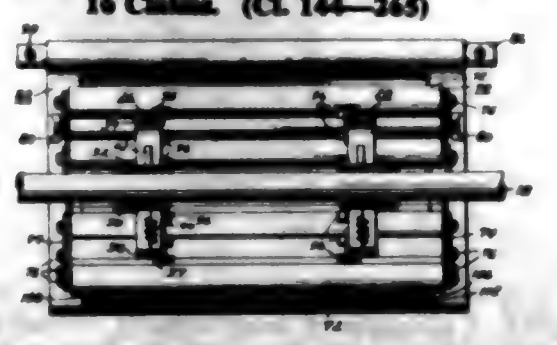
6. In connection with a portable circular saw drive means including a housing, a prime mover in the housing, a drive shaft rotatably driven by the prime mover and extended out of the housing for removably receiving a circular saw blade, and a substantially rectangular flat support shoe having peripheral edges and being connected to the housing in substantially parallel spaced relation to the drive shaft, an auxiliary attachment for converting the circular saw to a chain saw comprising a bracket, elongated hooks having curved necks fitted over the peripheral edges of the support shoe and opposite ends releasably connected to the bracket rigidly mounting the bracket on the shoe, a sprocket releasably mounted on the drive shaft for rotation therewith, an elongated cutter bar radially extended relative to the drive shaft in substantially the same plane as the sprocket, means mounting the bar on the bracket, and an endless chain saw blade extended around the cutter bar and the sprocket for circuitous travel thereabout.

2,860,672
ARRANGEMENT FOR DISINTEGRATING SLIVERS OF BARK IN DEBARKING MACHINES OF THE SO-CALLED HOLLOW-HEAD TYPE
Per Gunnar Brundell and Karl Erik Arnold Jonsson, Gavle, Sweden, assignors to Soderhamns Verkstader Aktiebolag, Soderhamn, Sweden
Application November 13, 1956, Serial No. 621,788
Claims priority, application Sweden December 6, 1955
10 Claims. (Cl. 144—208)



1. In a debarking machine of the so-called hollow-head type having a tool-carrying rotor, an arrangement for disintegrating bark in the shape of long slivers and for removing from the debarking tools such bark that tends to adhere to the tools and prevent their operation, each of these debarking tools being provided with an edge directed toward an oncoming log and revolving in a planar path transverse to the axis of rotation of the rotor, said arrangement comprising a countersteel normally stationary relative to the tools revolving with said rotor, said steel being mounted for swinging movement toward and away from the oncoming revolving tools and provided with a sharp edge situated close to said planar path and in confronting relation to the oncoming tools as they revolve past said steel, and means for swinging the countersteel toward said oncoming tools in order to utilize the rotational movement of the rotor to cut off, saw off or tear off those slivers of bark that come between the log-directed edges of the oncoming tools and said sharp edge of the countersteel.

2,860,673
APPARATUS FOR SHAPING SHEETS OF FLEXIBLE MATERIAL TO FORM A SHAPED MULTI-PLY ARTICLE
Michael A. Rauseo, Philadelphia, Pa.
Application October 2, 1956, Serial No. 613,536
17 Claims. (Cl. 144—265)



1. Apparatus for shaping a plurality of plies of flexible material to form a shaped multi-ply article, said apparatus including an axle, a plurality of closely spaced rigid bars disposed about said axle, means connecting each of said bars in close side-by-side disposition to each other to form a closed cordon, extender means having a shaped outer edge of predetermined configuration, said extender means being radially mounted on said axle and disposed intermediate said axle and said cordon of bars, said extender means being distendably engaged with said cordon of bars whereby said cordon of bars are disposed along the shaped outer edge of said extender means in conformity with the shape of said outer edge, a blanket of flexible material, and means for tightening said blanket about said cordon of bars.

2,860,674
APPARATUS FOR SHAPING SHEETS OF FLEXIBLE MATERIAL TO FORM A SHAPED MULTI-PLY ARTICLE
Michael A. Rauseo, Philadelphia, Pa.
Application November 19, 1956, Serial No. 622,950
16 Claims. (Cl. 144—265)

1. Apparatus for shaping a plurality of plies of flexible material to form a shaped multi-ply article, said apparatus including an axle, a plurality of closely spaced rigid bars disposed about said axle in close side-by-side disposition to each other to form a closed cordon, extender means mounted on said axle and disposed intermediate said axle and said cordon of bars, said extender means having a shaped outer edge of predetermined configuration juxtaposed to the inner surface of said cordon of bars, said ex-

body having a plurality of axially spaced cylindrical sur- nection with said wallet and having a front face

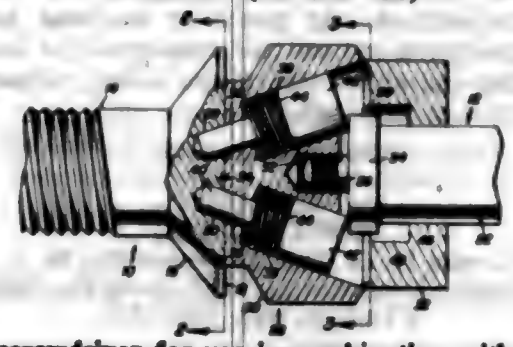
tender means being distendably engaged with said cordon of bars with said cordon of bars being operatively disposed along the shaped outer edge of said extender means in conformity with the shape of said outer edge, said extender means comprising a plurality of elements, resilient means for urging at least one of said elements toward another of said elements, and spacer means for releasably maintaining each of the elements comprising said extender means in its distendably engaged disposition.

2,860,675

SCREWDRIVER HAVING SCREW RETAINING MEANS

Richmond H. Kauffman, Van Nuys, Calif., assignor of one-third to Anthony R. Cagliano and one-third to Leon J. Huberland, both of Los Angeles, Calif.

Application July 26, 1955, Serial No. 524,421
2 Claims. (Cl. 145—50)



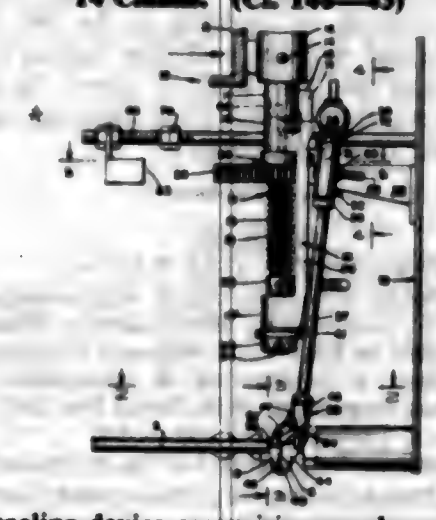
1. A screwdriver for use in combination with a screw having tool receiving holes, said screwdriver comprising a shank having a driving end, a driving head mounted on said driving end for axial movement relative to said shaft, said driving head having a screw engaging face remote from said shank, a plurality of bores in said driving head opening through said screw engaging face, screw driving pins receivable in tool receiving holes of a screw, said pins being slidably mounted in said bores and retractible within said driving head, said pins being engaged with said shank and being extendable by movement of said shank into said driving head, means on said shank and said driving head for effecting relative axial movement, said pins and said bores having axes disposed in angular relation to the axis of said shank, whereby withdrawal of said pins from complementary holes in a screw when said pins are extended is prevented.

2,860,676

CLEANOUT MECHANISM FOR PEELING KNIFE

Burton C. Coons, San Jose, and Willard B. Coons, Santa Clara, Calif.

Continuation of application Serial No. 457,359, September 21, 1954. This application October 25, 1955, Serial No. 542,612
14 Claims. (Cl. 146—43)



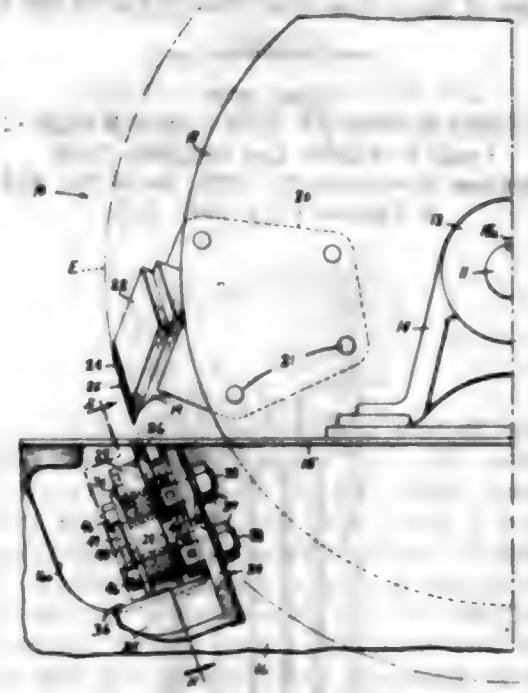
12. A peeling device comprising an elongated movable peeling head having a blade adjacent one end, a blade clearing stylus adjacent said blade, mounting means for said stylus operatively associated with said peeling head, a movable support operatively associated with said peeling head for moving said blade in a predetermined path, and abutment means adjacent said peeling head and having coacting engagement with said stylus mounting means to cause said stylus to move across and clear said blade during movement of said peeling head.

2,860,677

KNIFE SUPPORTING MEANS

James R. West and Edward C. Procter, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Application July 20, 1956, Serial No. 599,126
6 Claims. (Cl. 146—117)



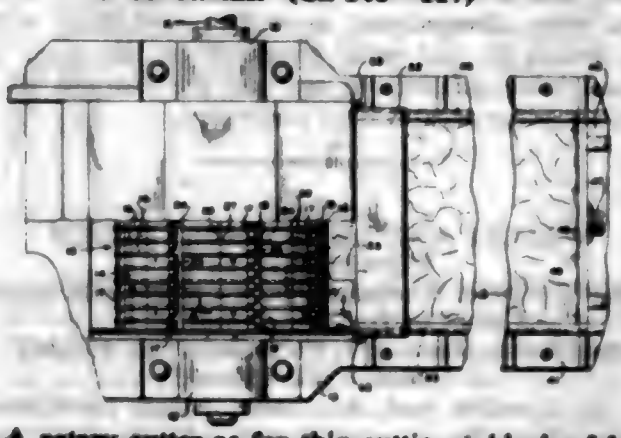
1. A device for adjustably mounting a knife, comprising a holder, means connecting said knife to said holder, a support, releasable means connecting said holder to said support and locking the holder against movement relative to the support, a member threaded into a hole in said holder and having a head portion projecting out of said hole which spaces the holder from said support, said member being rotatable only on release of said connecting means to vary the projection of said portion out of said hole and thus the space between said holder and said support.

2,860,678

APPARATUS FOR CUTTING FROZEN MEAT

Howard M. Condon, deceased, late of Clinton, and William Cleland, Silver Lake, Ohio, assignors, by mesne assignments, to Merchants National Bank and Trust Company, Indianapolis, Ind.

Application June 25, 1956, Serial No. 612,078
(Filed under Rule 47(a) and 35 U. S. C. 116)
12 Claims. (Cl. 146—117)

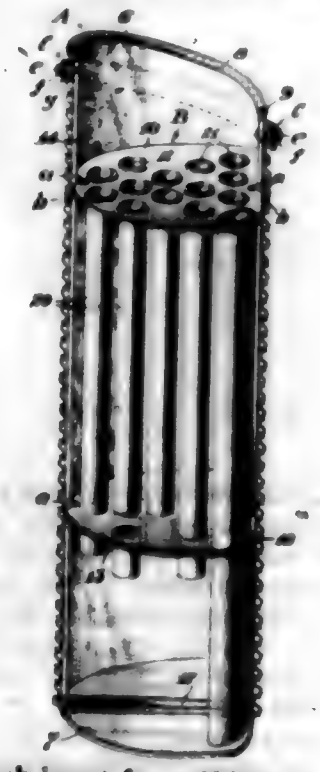


1. A rotary cutter as for thin cutting a block of hard frozen raw meat into flake-like pieces thereof, comprising a frame, a body rotatably mounted on said frame to rotate about an axis, means for rotating said body, said

said arrangement comprising a countersteel normally posed to the inner surface of said cordon of bars, said ex-

body having a plurality of axially spaced cylindrical surface portions in substantial axial alignment and defining peripherally extending spaces therebetween, knife means mounted on said body presenting axially spaced straight cutting edges predeterminately spaced radially outwardly of said cylindrical surface portions, and a supporting platform on said frame and terminating in a relatively fixed continuous cutting edge predeterminately closely spaced from the path of said edge portions, whereby a said block supported upon said platform is adapted to have the leading end thereof urged solidly against the backing of said cylindrical surface portions of the rotating body, and whereby said knife edges will progressively cut relatively thin pieces of meat from said leading end of the block.

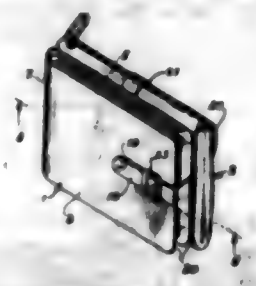
2,860,679
RACK INSERT FOR GOLF BAGS
Louis L. Kouke, Los Angeles, Calif.
Application September 28, 1956, Serial No. 612,667
4 Claims. (Cl. 150—1.5)



1. In a club rack insert for golf bags, a pair of spaced superimposed complementary plates formed with corresponding arrangements of apertures, a pair of elongated narrow posts between which said plates are interposed and arranged in spaced parallel relation to each other, means rigidly fastening said plates to said posts, a series of rigid tubes leading from the margin of each of the apertures in the uppermost of the plates through the apertures in the other of said plates, the apertures in the uppermost of said plates being dimensioned to freely receive said tubes and the apertures in the other of said plates being dimensioned to receive said tubes with a snug driving fit, and metal grommets on the upper ends of said tubes adapted to seat on the margins of the apertures in the uppermost of said plates.

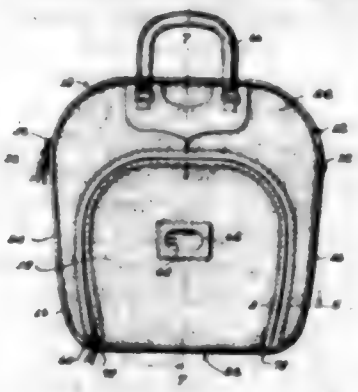
2,860,680
WALLET AND DETACHABLE POUCH COMBINATION
Herbert S. Chase, Woodmere, N. Y., assignor to Bernard Cahn Co., Inc., New York, N. Y.
Application January 9, 1957, Serial No. 633,302
3 Claims. (Cl. 150—35)

1. In a wallet and detachable pouch combination, wherein the wallet is provided with a flexible fabric strip secured at its one end exteriorly to the wallet for detachably connecting the latter to the pouch, said strip having a free end; a pouch body adapted for detachable connection with said wallet and having a front face portion and a rear face portion; means forming a pocket secured exteriorly of said pouch's rear face portion, said pocket having an open end, and a closed end provided with a transverse slot adjacent and spaced from said closed end for the insertion therethrough of said flexible fabric strip,



fastener means for securing the free end of the strip to the wallet, whereby said wallet may be detachably secured exteriorly of said pouch by inserting said strip through said open end and said transverse slot and securing the free end of the strip to the wallet, without opening the wallet or the pouch.

2,860,681
BOWLING BAG
Lomas H. Le Goff, Lawrenceville, N. J.
Application December 12, 1957, Serial No. 702,358
8 Claims. (Cl. 150—52)



1. In a bag of the class described including side, end, top and bottom walls and a central concave bowling ball support on the inside of said bottom wall, a resilient partition board having upturned end and side portions, fastening means projecting through said portions and the end and side walls of the bag, thereby attaching said board to said walls in a horizontal plane with the plane of its bottom surface slightly below that of the upper periphery of the ball when in said support, said board forming a shoe compartment in the upper portion of the bag and also providing means for pressing the ball against said concave support, an opening in the top wall and portions of the end walls to said shoe compartment, an opening in one of said side walls to permit the insertion into and the removal of the ball from said bag, and means for closing each of said openings.

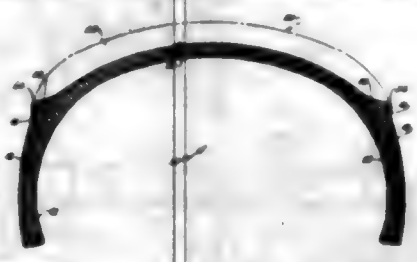
2,860,682
PNEUMATIC TIRE CASING
Paul E. Hawkinson, deceased, late of Minneapolis, Minn., by Francis W. Genzodeion, administrator, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Application August 24, 1956, Serial No. 605,965
3 Claims. (Cl. 152—354)

1. A shoulderless tire casing having a retread bonded thereto, said retread extending transversely across the casing a distance substantially equal to the transverse width of the flat ground engaging area at rolling radius of the casing, said casing having outwardly inclined substantially axially extending retread stock edge engaging and confining portions engaging and bonded to the longi-

length of the mating die surfaces of the respective die face of the conveyor, means for reciprocating the open

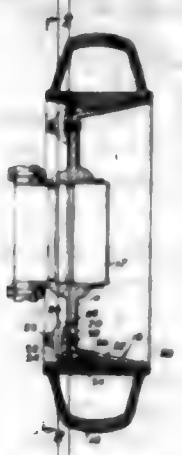
a movable support operatively associated with said peel-

tudinal edges of the retread, said retread having correspondingly beveled side edges, the outer surface of the retread being on longitudinal and transverse arcs substantially uniformly spaced from the corresponding longitudinal and transverse arcs of the inner periphery of the casing, said retread being under a varying tensioned condition when said casing is unloaded and under a vary-



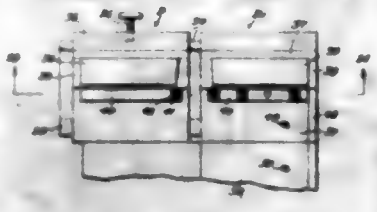
ing state of compression when said casing is loaded, said tensioned condition and state of compression being a maximum at the longitudinal center of the retread and decreasing in quantity uniformly axially therefrom, said retread being fully relaxed, unstressed and at approximately the rolling radius of the casing adjacent to and axially inwardly from said retread beveled side edges.

2,860,683
RIM STRUCTURE FOR DEMOUNTABLE SOLID TIRES
Cornelius W. Smith, Grosse Pointe Farms, Mich.
Application January 26, 1955, Serial No. 484,150
6 Claims. (Cl. 152—402)



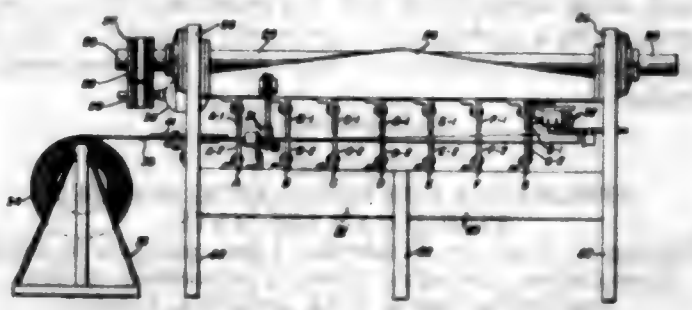
1. A wheel rim structure for detachably mounting a solid tire, the inner periphery of which is defined by two oppositely inclined frusto-conical surfaces which intersect generally at the radial central plane of the tire to define the minimum inner diameter of the tire, comprising a pair of rim members each having axially extending annular portions which are inclined to correspond with the inclination of said frusto-conical surface, one of said axially extending annular portions having an axial extent corresponding generally with the axial extent of one of said frusto-conical surfaces and having a diameter at its smaller end corresponding to said minimum inner diameter of the tire, the other axially extending annular portion of frusto-conical shape having an axial extent greater than the other frusto-conical surface of the tire and having a diameter at its smaller end less than said minimum inner diameter whereby said rim members may be telescoped into engagement with one another from opposite faces of the tire to form a V-shaped annular groove therebetween in which said frusto-conical faces of the tire are firmly engaged, said smaller end portion of said other axially extending annular portion forming with said one axially extending annular portion an annular groove which is wedge-shaped in axial section, wedge means in said groove engaging the adjacent faces of said axially extending annular portions forming said groove to firmly hold the rim members in said telescoping relation in engagement with the tire, and means on said two rim members for drawing the rim members axially toward one another, the smaller end of said one axially extending annular portion being fashioned with a bevel face, said bevel face being inclined to correspond with the inclination of said other axially extending annular portion and being dimensioned to engage the outer peripheral face of said other axially extending annular portion to thereby limit the movement of said portions toward each other to a position wherein the annular V-shaped groove formed between said axially extending annular portion conforms in size and shape to the inner peripheral surface of the tire.

2,860,684
ADJUSTABLE DIE
Haig Paloian, Philadelphia, Pa.
Application November 26, 1954, Serial No. 471,284
2 Claims. (Cl. 153—2)



1. In an adjustable die, a bed, a pair of spaced die assemblies each having a cutter movable toward and away from said bed, said cutters being spaced from each other and having cutting edges lying in a common plane, an indenting tool mounted on one of said die assemblies, a plurality of indenting tools mounted on the other of said die assemblies, all of said indenting tools being movable toward and away from said bed concurrently with the corresponding movement of said cutters, all of said indenting tools lying in a common plane parallel to the plane of said cutting edges, and removable side stops extending upwardly from said bed and lying in a plane normal to the planes of said cutting edges and indenting tools and intersecting the plane of said indenting tools at a point between the mounting of the indenting tool on said last-mentioned die assembly most remote from said first die assembly and one of the mountings of one of the other indenting tools of said last-mentioned die assembly.

2,860,685
METHOD AND APPARATUS FOR SEQUENTIALLY FORMING SHEET METAL WITH SPACED DIES
John McDonald, Westlake, Ohio, assignor of one-half to Bruce B. Krost, Cleveland, Ohio
Application May 14, 1956, Serial No. 584,708
13 Claims. (Cl. 153—31)



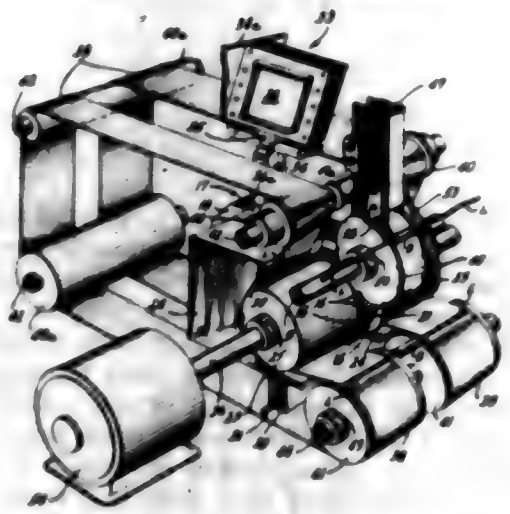
9. In combination, a plurality of sequentially arranged die devices positioned at spaced intervals along a course for pressing between the opposed mating die surfaces of the die devices a strip of metal progressing through the course into a series of cross-sectional forms having progressively increasing bends, operating means for simultaneously operating all said die devices to simultaneously press said strip at all of said intervals, said die devices being spaced apart a greater distance than the effective

a horizontal portion paralleling the horizontal portion of and extending upwardly from the rear thereof, seat sup-

ing a free end; a pouch body adapted for detachable connecting the latter to the pouch, said strip having outwardly inclined substantially axially extending retread stock edge engaging and confining portions engaging and bonded to the longi-

length of the mating die surfaces of the respective die devices to permit the strip to progressively conform lengthwise of the course without compression between the die devices to the cross-sectional form being pressed at a said die device from the cross-sectional form being pressed at a preceding die device, and advancing means for advancing said strip in successive increments along the course during the interim between pressing operations of said die devices to successively subject said increments to pressing by said sequentially arranged die devices.

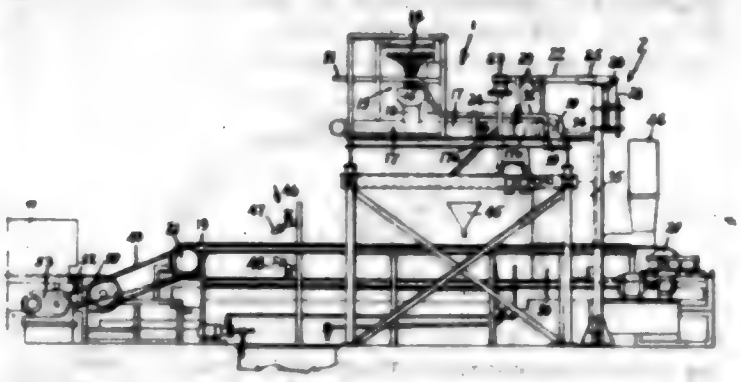
2,860,686
COMPONENT-LEAD STRAIGHTENING MACHINERY
Robert J. Frank, Horsham, and Louis Burke, Perkasie, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application December 3, 1956, Serial No. 625,992
12 Claims. (Cl. 153—32)



1. A machine for straightening and aligning elongated wire leads extending axially from opposite ends of cylindrical component bodies, comprising a carriage structure for moving said bodies together with their leads through the machine, said carriage structure including a pair of relatively spaced rotatable disc-like elements each having means for engaging a wire lead of a cylindrical component body, anvil means for providing a supporting surface for said wire leads, said anvil means consisting of a pair of cylinders rotatable with said elements, hammer means mounted to confront said anvil means and to move with respect thereto for striking repeated blows on said wire leads against said anvil means, said hammer means including a pair of blocks having surface portions overlying part of said cylinders, and means for frictionally engaging said bodies to impart axial rotation thereto and to said wire leads while being struck, said last mentioned means being provided by a snubber of compressible material having an edge portion disposed to bear upon said component bodies.

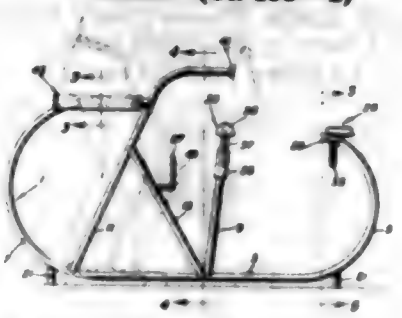
2,860,687
APPARATUS FOR PRODUCING BONDED FIBROUS GLASS MATS
William G. Cole, Jr., Nashville, Tenn., assignor to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Application June 6, 1955, Serial No. 513,463
5 Claims. (Cl. 154—1)

1. In an apparatus for producing a felted mat of chopped fibrous glass, the combination comprising, a movable foraminous planular conveyor, a confining guide member having an open end movably supported for discharge against one side of said planular conveyor, jet means for directing a stream of fluid through said guide member, means for feeding short lengths of fibrous glass into the fluid jet stream in said guide member for discharge through the open end against said one surface of the conveyor, means for reciprocating the open end of said guide member across said one surface of the conveyor and transverse to the direction of the conveyor movement, and suction means disposed adjacent the



opposite surface of said planular conveyor for coacting with said discharged fibrous glass to provide a felted mat of fibrous glass on said one surface of the conveyor having substantially even distribution and uniform density.

2,860,688
LEG AND FOOTREST DEVICE
Jack C. Edge, Kingfisher, Okla.
Application April 4, 1957, Serial No. 650,626
1 Claim. (Cl. 155—2)



A device for supporting a lower leg of a person for wrapping of the ankle comprising a frame having upstanding front and rear ends, a leg rest for the calf of the leg mounted in elevated position on said front end for supporting the leg by the calf in horizontal position, a vertical post on said frame rearwardly of said leg rest, a footrest comprising a horizontal heel supporting plate mounted on said post in elevated position and in substantially horizontal alignment with said leg rest, a foot thrust member for engagement with the ball of the foot, means mounting said foot thrust member on said frame above said heel supporting plate and offset from said heel supporting plate toward said leg rest whereby the foot of the leg with the heel supported on said heel supporting plate and the ball of the foot engaged against the foot thrust plate will be flexed rearwardly of the leg at an angle thereto preparatory to wrapping of the ankle, said heel supporting plate having a heel thrust flange rising therefrom for engagement by a heel supported on the heel supporting plate to establish the angle of flexing of the foot, and means rotatably mounting said heel supporting plate on said post with said flange offset from the axis of rotation of the heel supporting plate for rotary adjustment horizontally to rotatably vary the position of said heel thrust flange relative to the axis of rotation of said heel supporting plate and to the foot thrust member for varying the angle of flexing of the foot.

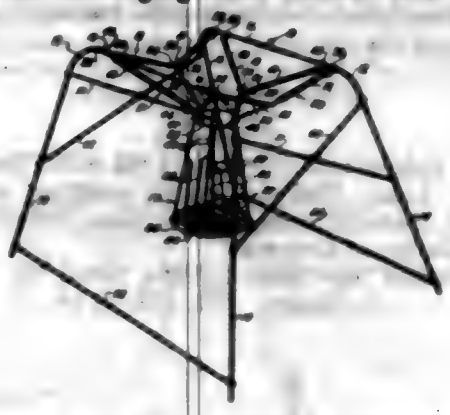
2,860,689
CHILDREN'S RIDING DEVICE
Foy A. Baker, Texarkana, Ark.
Application May 9, 1955, Serial No. 507,873
2 Claims. (Cl. 155—17)

1. An amusement apparatus comprising a pair of opposed and interconnected frame members, each having

groove to firmly hold the rim members in said telescoping relation in engagement with the tire, and means on

press said strip at all of said intervals, said die devices being spaced apart a greater distance than the effective

a horizontal portion paralleling the horizontal portion of the companion frame member, a plurality of pairs of coil springs, each having one end connected to a horizontal portion of said frame members and extending in substantially horizontal planes toward the center of said frame, a riding seat in a basket, and means detachably connecting the converging inner ends of said springs to

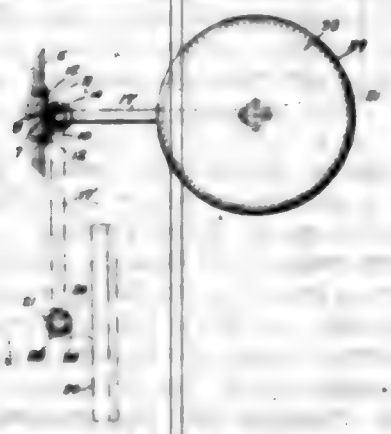


said riding seat basket, to yieldably suspend the latter midway between said frame members composed of a pair of links pivoted together at one end, each having its opposite end connected to an inner end of a coil spring of each pair of said coil springs and a third link connected at one end to the pivoted ends of said pair of links and at its opposite end to said basket.

2,860,690
SWINGING COLLAPSIBLE AND VERTICALLY MOVABLE SEAT

Samuel N. Small, Valley Stream, N. Y., assignor, by mesne assignments, to Atkins Industries, Inc., Ozone Park, N. Y.

Application November 1, 1954, Serial No. 465,801
4 Claims. (Cl. 155—81)



4. A seat structure of the character described, comprising a seat, means comprising a rotatably supported post, a column and a pair of parallel rods pivoted to upper and lower end portions of the post and column for supporting said seat to swing horizontally through an arc of substantially 180° and for supporting said column to move vertically into and out of engagement with a horizontal support, spaced brackets for support of said post, means for rotatably, slidably and pivotally mounting the seat on said column, and a spring coupled with one of said brackets and one of said rods for moving and holding the column in spaced relation to the horizontal support when the seat is not in use.

2,860,691
RECLINING CHAIR FOR PASSENGER VEHICLES

Orville S. Caesar, Barrington, Ill.

Application February 24, 1955, Serial No. 490,190
5 Claims. (Cl. 155—116)

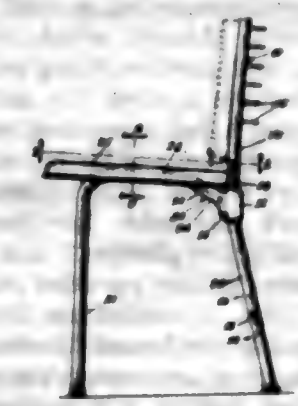
4. In an adjustable chair, the combination of a support frame, a movable chair seat frame extending from front to rear on said support frame, a movable chair back frame structurally separate from said seat frame and extending upwardly from the rear thereof, seat support means on said support frame movably supporting said seat frame and including seat adjusting means connected with said seat frame to adjust on the support frame the position of the seat frame relative to said back frame, back support means on said support frame movably supporting said chair back frame and including back adjusting means connected with said back frame to adjust on the support frame the position of the back frame relative to said seat frame, coordinating means connecting said seat adjusting means and said back adjusting means to produce a relative displacement between adjacent ends

of said seat and back frames as an incident to adjustment of said seat and back frames on said support frame, a transverse cushion support on the forward end of said seat frame, a transverse cushion support on the upper end of said back frame, a first web support mounted on said seat frame rearwardly of said cushion support thereon, a second web support mounted on said back frame downwardly of said cushion support thereon, one of said web supports being yieldable toward the lower end of said back frame, a flexible support web connected at opposite ends to said respective web supports and suspended therebetween, and cushioning means supported on said web and on said transverse cushion supports.

2,860,692
CHAIR

Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Manufacturing Corporation, Columbus, Ind., a corporation of Indiana

Application January 25, 1954, Serial No. 405,787
19 Claims. (Cl. 155—139)



1. In a chair, a frame, a means pivotally suspending a chair seat therefrom, said means comprising a generally U-shaped yoke of metal rod of circular cross-section having its ends turned outwardly to form transversely extending aligned fingers, said fingers being pivotally received in transversely extending openings provided in said frame, the intermediate stretch of said yoke formed to possess non-aligned stretches extending transverse to

the axis of said fingers and along the bottom of said seat, and means acting on said stretches to hold said yoke to said seat.

2,860,693

COMBINATION SPRING SUPPORT AND SPANNER

Fred J. Riebel, Chicago, Ill., assignor to Fred Riebel and Company, Chicago, Ill.

Application January 14, 1957, Serial No. 634,117
15 Claims. (Cl. 155—179)

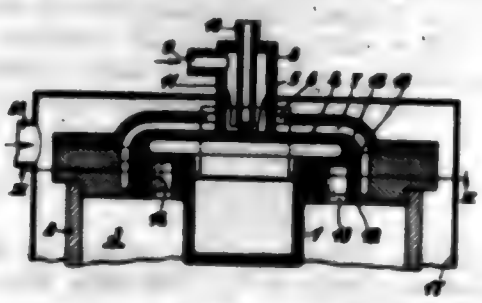
1. A combination spring support and spanner unit for use with an arched spring having transverse end hook portions, the unit being characterized by an elongate spanner portion in the shape of an inverted channel, upturned end portions at each end of the spanner, the end portions being a continuation of the spanner channel section, outwardly extending mounting tabs extending from the terminals of the upturned end portions, mounting means on the mounting tabs for securing the tabs to a preselected structural member, and a notch defined at the intersection of the mounting tab and upturned end portions proportioned to receive and hold the transverse hooked ends of arched spring.

2,860,694

BURNER FOR LIQUID HYDROCARBONS

Arie Harm Edens, Eindhoven, and Gomarus Maria Adrianus Cornelis Geeven, Dordrecht, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application September 25, 1952, Serial No. 311,514
Claims priority, application Netherlands October 6, 1951
1 Claim. (Cl. 158—53)



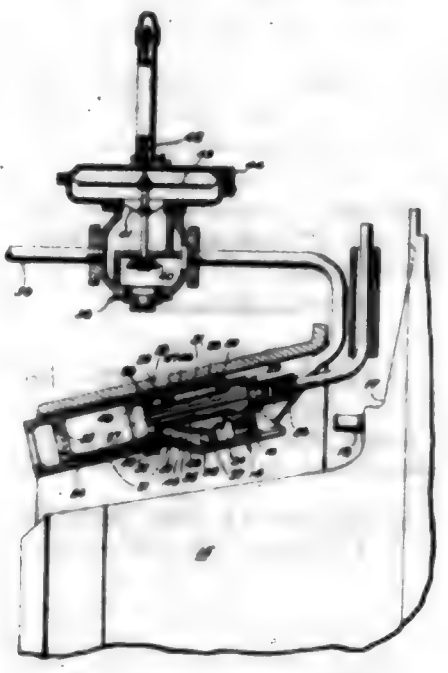
A vaporizing burner for liquid hydrocarbons comprising an atomizer to which fuel and air is supplied, a retort chamber, a fuel supply member in said atomizer provided with an opening through which said fuel in the form of a jet passes, said atomizer being provided with extensions which constitute a cover for said retort chamber, said cover having a fuel atomizing aperture therein aligned with said opening, means for introducing said fuel through said aperture to said retort chamber, means for introducing atomized air under low pressure through said aperture to said retort chamber, said atomized fuel in said retort chamber having particles each of which is less than 100 μ in size, a combustion chamber, conduit means for introducing pre-heated combustion air into said combustion chamber, and means for separately conducting said atomized fuel to said combustion chamber where said fuel is burned, said quantity of air under low pressure being used for atomization being less than 2% of the total quantity of air required for complete combustion, said air under low pressure adjacent said aperture having a higher velocity than said fuel, a plurality of holes in the cover of said retort chamber and radially spaced about said fuel atomizing aperture, a member secured to said retort chamber having an outlet opening axially aligned with said fuel atomizing aperture and spaced from the side of the atomizing aperture of said cover from which said fuel emerges whereby a relatively small quantity of air passing through said holes may be supplied to said fuel at substantially right angles to the direction of movement of said atomized fuel, said member being imperforate except for said outlet opening and having its periphery sealingly joined to the undersurface of said cover for the retort chamber.

2,860,695

GAS-FUELED IGNITER SYSTEM

Harry E. Lake, Bethel, Conn., assignor to Preferred Utilities Manufacturing Corporation, New York, N. Y., a corporation of Delaware

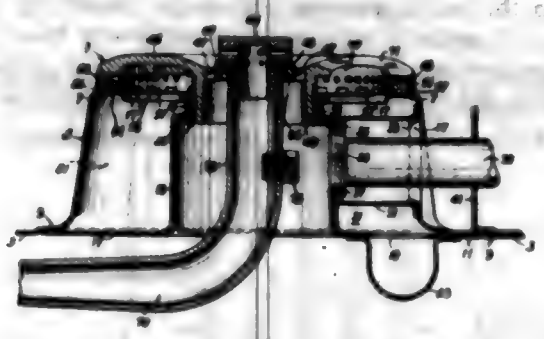
Application November 1, 1954, Serial No. 465,830
2 Claims. (Cl. 158—115)



1. A gas igniter system for burners wherein said burners have a primary air source at a pressure higher than the pressure in the furnace which is sufficient to meet the requirements of all firing rates, said igniter system comprising a hollow main body having an opening at its forward end, an electric spark means mounted at the rear end portion of said main body and extending centrally therethrough and having an igniter disc mounted at its free end concentric with said opening, a tube surrounding and outwardly spaced from said spark means and having a forward free end terminating rearwardly of said igniter disc, said tube having an air bypass hole and forming an annular conduit with the electric spark means, said tube extending approximately to the periphery of said igniter disc, said main body having a venturi means in fluid communication with said opening at said forward end including a partition extending inwardly from the wall of said main body and defining with said wall a rearward air chamber and a forward gas chamber, the inner edge of said partition surrounding and being outwardly spaced from said tube at a point forwardly of said bypass hole whereby one portion of air flow is directed through said bypass hole and the remaining portion of air flow is directed through said venturi means, said main body having an air inlet opening adapted for conducting air from said primary air source to said air chamber, said main body having a gaseous fuel inlet port of sufficient size to supply the required amount of gaseous fuel to said gas chamber without appreciable friction loss, and means for providing a source for gaseous fuel at a constant pressure of substantially zero gauge pressure, said venturi means being adapted to cause air flow from said rearward air chamber to said opening at said forward end to

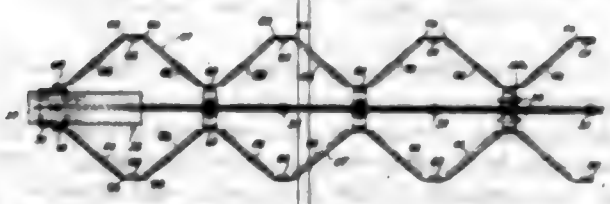
draw gaseous fuel from said forward gas chamber in amounts varying substantially directly with the varying air flow from said primary source.

2,860,696
GAS BURNER HEAD
Harold C. Reinhart, Ferguson, Mo., assignor to Food Giant Markets, Inc., a corporation of New Jersey
Application March 5, 1954, Serial No. 414,339
1 Claim. (Cl. 158—116)



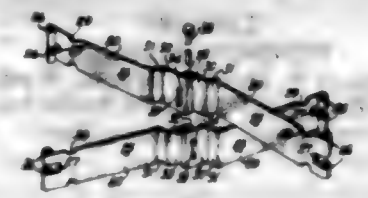
A cooking range burner comprising inner and outer cuffs forming an annular mixing chamber, the inner cuff having an internally threaded part on its end, the outer cuff having an inwardly directed flat annular flange which is integral therewith, a one-piece head having an inner hollow stem threaded into said threaded part and having an integral outer depending rim, said rim having a series of shallow horizontally flat notches extending from the inside to the outside of the rim and the seat and forming flat-bottomed lands between them, said lands flatly engaging with said inwardly directed flat flange, a first group of radially directed horizontal round holes extending through the rim, pairs of adjacent holes having their respective outlets directly above the lateral margins of said flat notches for access to secondary air between said notches, and a second group of upwardly and outwardly directed holes extending through the rim and having their outlets located at an elevation above the outlets of the first group of holes, each outlet of the second group of holes being located above a land for access to secondary air between said notches and first group of holes, said second group of holes being adapted for complete peripheral ignition throughout the first group of holes and notches for all, including low, rates of gas flow, the depths perpendicular to said flat seat of said notches being no greater than the diameters of said holes and being substantially less than the peripheral widths and radial lengths of the notches themselves.

2,860,697
ACCORDION TYPE FOLDING DOOR
Robert H. Ensign, Bronxville, N. Y., and Danforth Cardano, Jr., Weston, Conn., assignors to The Hough Shade Corporation, a corporation of Connecticut
Application December 2, 1954, Serial No. 472,614
6 Claims. (Cl. 160—84)



1. In a folding door including a pair of door posts, at least one lazy tongs extending between and connected to said posts, with the lazy tongs comprising a plurality of pairs of pivotally connected links and the ends of adjacent pairs of links being pivotally connected together by substantially horizontal support pins, mounting brackets carried by the lazy tongs and a door covering secured to the brackets, the improvement wherein the pins include a central bearing portion and a pair of flanking bearing portions separated from said central bearing portion by grooves, said pins including a further groove on the outer side of each flanking bearing portion, and wherein the link ends are received on said central bearing portion, locking washers are received in said first mentioned grooves, the mounting brackets are received on said flanking bearing portions, and further locking washers are received in said second mentioned grooves.

2,860,698
TWO-PIECE HINGE PLATE FOR FOLDING CLOSURE LINKAGES
Donald S. Harris, New Castle, Ind., assignor to New Castle Products, Inc., New Castle, Ind., a corporation of Indiana
Application October 2, 1956, Serial No. 613,571
7 Claims. (Cl. 160—84)



2. An expansible and collapsible closure structure including separate series of cooperatively acting hinge plates, the intermediate hinge plates of any one series crossing a hinge plate of another series at a common pivot point which is centrally located relative to each of the hinge plates associated therewith, each of said intermediate hinge plates being formed from identical hinge plate members having ends overlapping one another and interconnected by the material of said plate members with one another about means defining a pivot point, each of said plate members having an end formed from bearing members constituting one of the ends of a hinge plate when two of said plate members are interconnected, the remaining end of each plate member being provided with a neck portion having a radially directed arcuate marginal portion carrying an integral tongue, and a slot in said neck portion axially inwardly of said arcuate marginal portion receiving therethrough a tongue of the other plate member combined therewith to form a hinge plate.

2,860,699
BOTTOMRAIL ASSEMBLY
William H. Braun, Elkins Park, Pa., assignor to Cory-McFall Company, Philadelphia, Pa., a corporation of Pennsylvania
Application February 7, 1957, Serial No. 638,854
4 Claims. (Cl. 160—173)

1. In a bottomrail assembly for Venetian blinds and the like having tapes and comprising a tubular bottomrail having a top wall and a bottom wall, means defining cord-receiving apertures in said top wall, wall means defining at least one tape-receiving aperture in said bottom wall, a roller, and a bracket mounting said roller and releasably mounted in said bottomrail intermediate said cord-receiving aperture and said tape-receiving aperture, said bracket comprising a generally U-shaped member having a base mounted flush against said top wall, a hollow nipple adapted to be received in said cord-

said electric reset motor incorporating a pair of limit

2,860,704

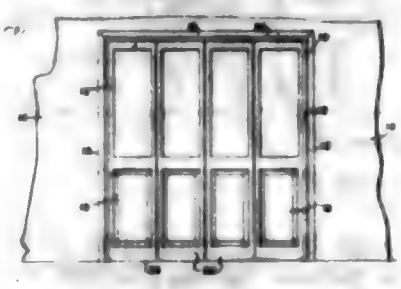
receiving aperture to anchor the bracket against longitudinal displacement in said bottomrail, and leg members projecting normal to said base and terminating in engagement with said bottom wall adjacent said tape-receiving aperture to releasably secure said bracket to said bottomrail, a tape clamp member releasably engaged with said bottomrail in registry with said tape-receiving aperture, said clamp member comprising a body portion formed to lie flush against and depend below the undersurface of said bottom wall adjacent said tape-receiving aperture to cover the same and enclose said bracket, and clamping elements for seating in said tape-receiving apertures and biased outwardly into divergent relationship toward the wall means defining said aperture and operable to interlock the terminal portions of the tapes with said bottomrail upon insertion of said tapes between said clamping elements and said wall means.

2,860,700
WINDOW SCREEN
Richard F. Horton, Seattle, Wash.
Application December 10, 1954, Serial No. 474,398
1 Claim. (Cl. 160—180)

In a window screen, a generally rectangular border frame providing a continuous border channel and modified from a rectangle by a re-entrant portion which forms an entry and has one of its faces for a wicket strike, a screen covering the opening defined by said frame and having its margin in said channel, rod means within said channel for retaining said margin of the screen therein, a hinge member spanning the mouth of said entry with co-planar portions projecting at each end therebeyond and having said end portions overlying and removably secured by screws to the border frame adjacent the ends of the re-entrant portion, a wicket hingedly connected to said hinge member, said wicket comprising a wicket screen for covering said entry and a wicket frame gripping the margin of said wicket screen, and spring means yieldingly urging said wicket frame into contact with said wicket strike.

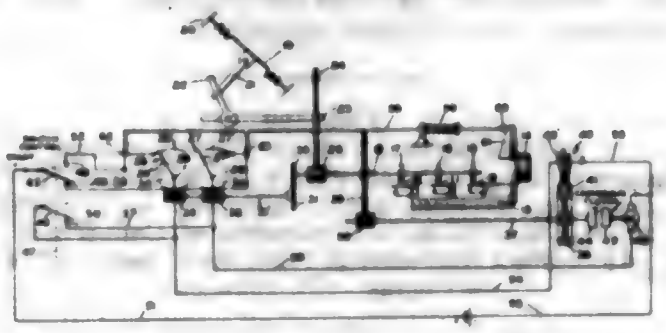
2,860,701
FOLDABLE PANEL ASSEMBLY
John Carter Wood and Russell S. Hatcher, Jr., Amarillo, Tex., assignors to Maywood, Inc., Amarillo, Tex., a corporation of Texas
Application August 17, 1956, Serial No. 604,786
2 Claims. (Cl. 160—199)

1. A foldable panel assembly comprising vertically spaced parallel tracks each having a horizontal longitudinally extending groove formed therein, enlarged axially aligned vertical bores formed in said tracks with their common axis disposed in a plane passing longitudinally through said grooves, axially aligned cylindrical bearing elements having exterior surfaces of greater transverse dimension than the width of said grooves fixedly extending in said bores therein, a first panel having a first pair of axially aligned cylindrical guide elements carried on opposite ends thereof and mounted within said bearing elements for rotation about the fixed axis thereof, a second panel having an edge portion hinged to an edge portion of said first panel for pivotal movement about an axis parallel to said fixed axis, a second pair of axially aligned cylindrical guide elements carried on opposite ends of said second panel and slidably mounted within the track grooves, and means mounting one of the guide elements of each pair for resiliently biased axial sliding movement away from the associated panel and for inward sliding movement against such resilient bias-



ing, said mounting means for each of said one element including a plate secured to the central portion of the associated panel end and having a central opening therein, a sleeve secured to said plate in surrounding relation to said opening and extending inwardly therefrom, a rivet having a head disposed inwardly of said sleeve and a shank extending outwardly through said sleeve and said plate opening, the outer end portion of said shank being reduced in diameter so as to form on outwardly facing shoulder, said reduced outer end portion extending through the associated guide element with said shoulder engaging the inner end thereof and the outer extremity of said reduced end portion deformed into engagement with the outer end thereof, and a coil spring disposed in surrounding relation to the rivet shank between the inner end of the guide element and said plate.

2,860,702
TIMING MECHANISM
Clarence W. Dalzell, Princeton, N. J., assignor to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware
Application March 15, 1954, Serial No. 416,146
4 Claims. (Cl. 161—1)



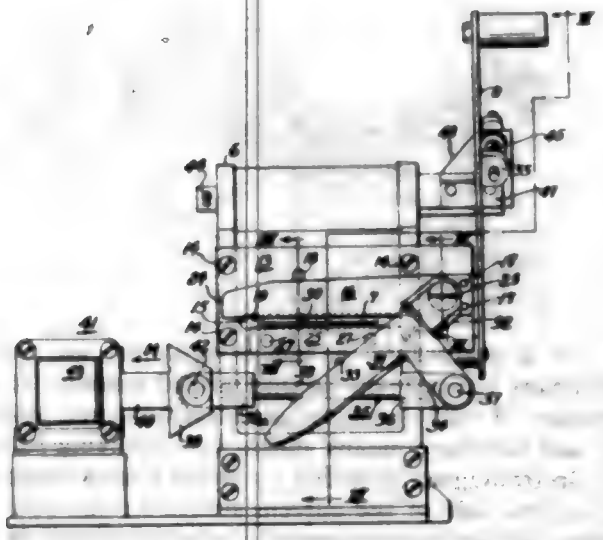
1. Timing mechanism including a flywheel having a predetermined moment of inertia, a spring motor, a gear train providing a driving connection between said motor and said flywheel, at least one movable timing element having an operative connection with said flywheel for movement in predetermined ratio to rotation of the flywheel, an electric reset motor having a releasable reverse driving connection with said spring motor for tensioning the latter, a brake for holding the flywheel against movement until it is desired to start the timing cycle, said brake having a friction member and an electric solenoid for effecting release from braking position of said friction member, an electric circuit for said brake solenoid and

ets carried by the lazy tongs and a door covering secured to the brackets, the improvement wherein the pins include

ber having a base mounted flush against said top wall, a hollow nipple adapted to be received in said cord-

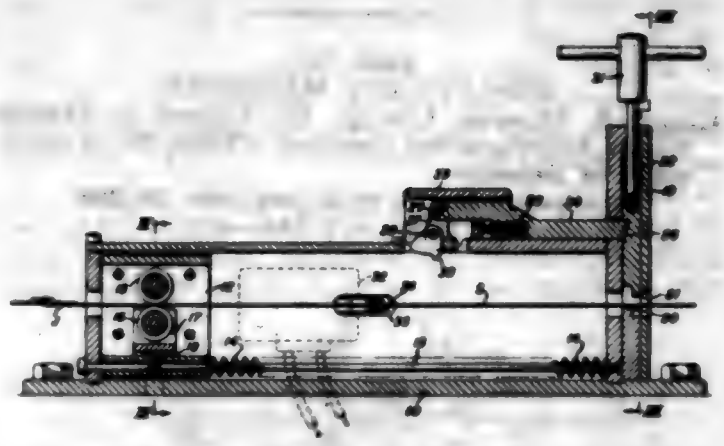
said electric reset motor incorporating a pair of limit switches, one connected to said solenoid and the other connected to said electric reset motor, said limit switches being provided with movable contact elements adapted for movement in predetermined ratio to rotation of said flywheel to time the energization of said solenoid and said electric reset motor, said circuit also incorporating switch mechanism for effecting release of said brake to start the timing cycle and for energizing the electric reset motor to tension said spring motor following termination of the timing cycle.

2,868,703
DISPENSER WITH AUTOMATIC CUT-OFF
Philip L. O'Donnell, Norwood, Ohio
Application June 20, 1956, Serial No. 592,402
1 Claim. (Cl. 164—42)



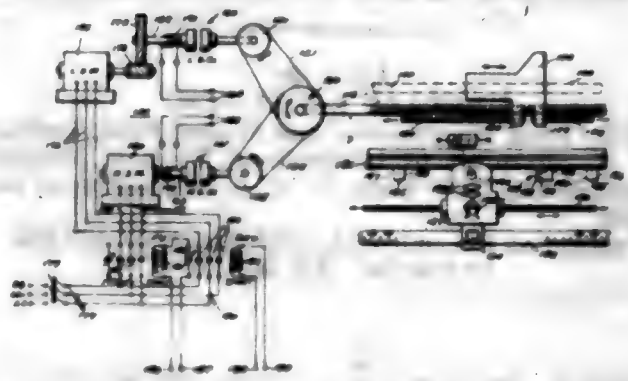
A tape dispenser for cut and tear resistant, pressure sensitive adhesive tape comprising a frame, means for supporting a supply of dispensable tape thereon, at least one tape feed roll adapted to cooperate with the adhesive face of said tape, a lever pivotally mounted upon said frame, means connecting said lever to said feed roll to effect correlated movement thereof at least when said lever is moved in one direction to advance tape, a stripper mounted on said frame for disengaging tape from said feed roll, said stripper being driven at a speed related to the speed of the feed roll to strip the tape therefrom, a fixed blade supported on said frame transversely of and adjacent to the path of tape advanced from said stripper, a second blade mounted in cooperative relation to the first blade adjacent one side thereof and being adapted to engage the adhesive face of the tape to lift the tape into engagement with the fixed blade, said second blade having its cutting edge adjacent the cutting edge of the first blade, a solenoid having a reciprocable armature, linkage comprising at least one link, said linkage being pivotally joined to and connecting the solenoid armature and the second blade, a control switch for said solenoid mounted on said frame and actuatable by said feed lever adjacent one end of the path thereof, means biasing the cutting edge of said second blade toward non-parallel relation to the cutting edge of said first blade in the common shearing plane whereby the feed lever may be actuated to advance tape past the first blade and then swung to actuate the control switch to effect energization of the solenoid to swing the second blade toward the first blade to shear off the projecting portion of cut and tear resistant tape.

2,868,704
AUTOMATIC SHEAR FOR CUTTING STRIP
Elmer W. Mirick, Worcester, Mass., assignor to United States Steel Corporation, a corporation of New Jersey
Application January 11, 1956, Serial No. 558,571
4 Claims. (Cl. 164—67)



1. A shear comprising a frame having entry and exit ends, a pair of cutting blades mounted adjacent the exit end of said frame, at least one of said blades being movable with respect to the other, a latch bar carried by said frame normally engaging said movable blade to hold it away from the other to allow a strip to pass therebetween, an operating lever for said latch bar pivoted to said frame, a slide housed in said frame for longitudinal movement, means urging said slide toward the entry end of said frame, and spaced apart rolls journaled on parallel horizontal axes in said slide allowing a strip to pass substantially unimpeded but adapted to be engaged by a thickened portion in the strip to move said slide longitudinally of the frame toward the exit end, said slide being engageable with said operating lever for moving said latch bar and releasing said movable blade to cut the strip ahead of the thickened portion.

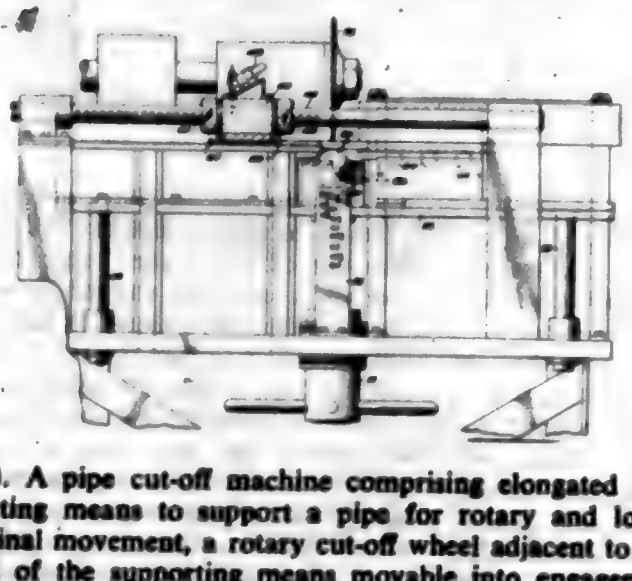
2,868,705
PHOTOELECTRIC CONTROLLED BACK GAUGE
Carl Thomsen, Westbury, N. Y., assignor to E. P. Lawson Co., Inc., New York, N. Y., a corporation of New York
Application April 24, 1956, Serial No. 580,300
8 Claims. (Cl. 164—59)



2. Spacer mechanism for a machine having a work table, a back gauge movable across the work table, and a program of stop signals for predetermining the positions of the back gauge, comprising: motor means; driveable means connecting the back gauge with the output of said motor means including clutching means with first and second solenoids for controllably effecting movement of the back gauge by said motor means; and circuit means for controlling the movement of the back gauge in accordance with said program of stop signals incorporating a single photoelectric cell coactable with the stop signals and moveable in unison with the member, said photoelectric cell activating said circuit means to correspondingly engage and disengage said solenoids to drive the back

gauge predeterminedly and selectively forward starting at slow speed and after a predetermined short interval then at fast speed, and stopping the back gauge by first reducing it to slow speed when signaled by a stop signal and then stopping the back gauge at a position as determined by the said stop signal.

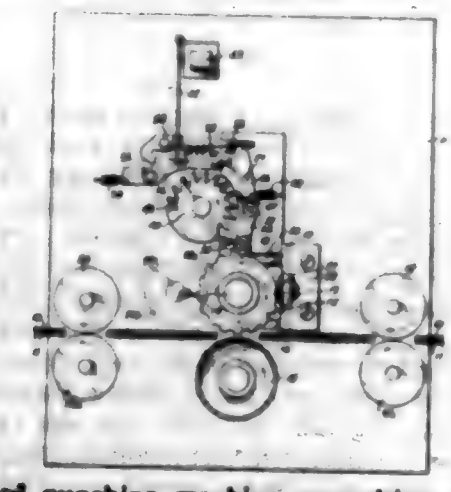
2,860,706
PIPE-CUT-OFF MACHINES
George B. Marsden, Chicago, Ill., assignor to Chicago Nipple Manufacturing Company, Cicero, Ill., a corporation of Delaware
Application June 6, 1952, Serial No. 292,688
14 Claims. (Cl. 164—61)



3. A pipe cut-off machine comprising elongated supporting means to support a pipe for rotary and longitudinal movement, a rotary cut-off wheel adjacent to one end of the supporting means movable into engagement with the pipe to cut it off, a stop spaced from the wheel to determine the length of pipe to be cut off, and pipe driving means engaging the pipe and movable in a plane at an acute angle to the pipe length to rotate the pipe about its axis and to urge it lengthwise toward the stop.

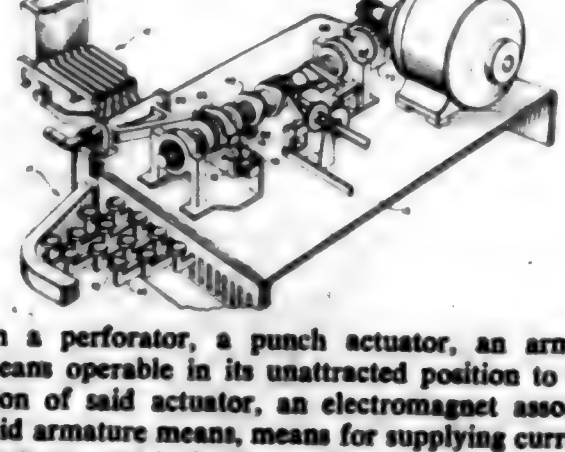
9. In a pipe cut-off machine, a rotatable cut-off wheel, means mounting the wheel for movement in its own plane toward and way from a pipe to be cut off, and supporting means to hold the pipe with its axis parallel to the wheel axis, the supporting means including a ball mounted for universal rotation about a center in the plane of the wheel and engageable with the pipe at a point spaced from the point of engagement of the wheel with the pipe.

2,860,707
ROTARY DIE PUNCH
Clair D. Lake, Binghamton, and Wesley Pfaff, Endicott, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 24, 1954, Serial No. 477,554
10 Claims. (Cl. 164—89)



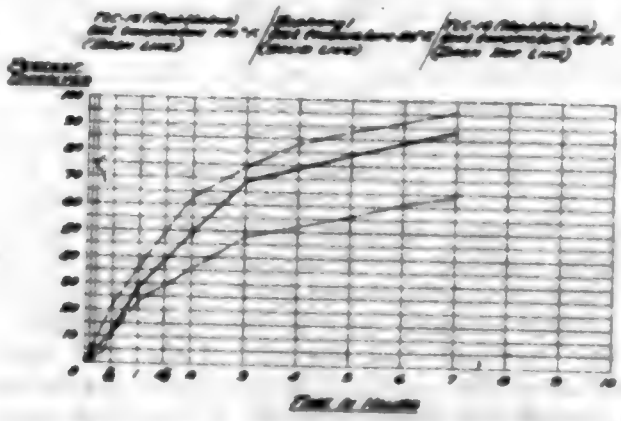
1. A card punching machine comprising, perforating means supported for movement and driven to move in unison with the movement of a card which is transported through the machine and is to be perforated in transit therethrough and including toggle linkage means for actuating said perforating means between perforating and non-perforating positions, means for selectably actuating said toggle linkage means to initiate a perforation cycle of operation, and means moved in timed relation to said first-mentioned movement of said perforating means for automatically reverse actuating said toggle linkage means positively and abruptly to terminate said cycle of operation.

2,860,708
KEYBOARD PERFORATOR
Edward S. Larson, Chicago, Ill., assignor, by mesne assignments, to Fairchild Camera & Instrument Corporation, a corporation of Delaware
Application June 30, 1955, Serial No. 519,171
2 Claims. (Cl. 164—113)



1. In a perforator, a punch actuator, an armature ture means operable in its unattracted position to block operation of said actuator, an electromagnet associated with said armature means, means for supplying current to said electromagnet including a current source, means connecting one side of the current source to one end of the winding of the electromagnet, a parallel circuit in series with the other side of the winding of the electromagnet and the other side of the current source, a resistor and a repeat contact connected in one arm of said parallel circuit for limiting the current through said electromagnet, and a capacitor and a key-operated contact connected in a second arm of said parallel circuit for supplying an actuating pulse to said electromagnet.

2,860,709
FRACTURE BRIDGING IN OIL WELLS
William H. Rieger, Indianapolis, Ind., assignor to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana
Application February 15, 1957, Serial No. 640,418
2 Claims. (Cl. 166—22)



1. That method of bridging a fractured oil bearing stratum in an oil well wherein there exists a temperature at the stratum to be bridged of approximately 80 to 90 degrees F., which method comprises dusting graduated particles of biphenyl with dry silica gel in particle sizes ranging from approximately 0.02 micron to 5 microns in

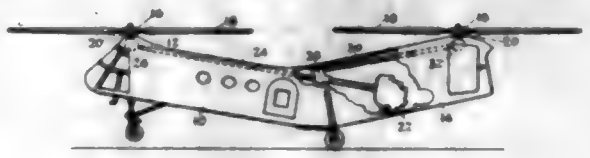
the proportion of silica gel to biphenyl ranging from approximately one to five percent by weight; adding the mixture to a pumpable fracturing fluid; pressurizing the fluid containing the additive at said stratum to fracture the stratum; and allowing the silica gel, through its affinity with the crude oil, to be flowed out of the fracture resulting from said pressurizing to expose the bridged biphenyl to solvent action of the oil.

2,860,710
PARAFFIN SCRAPER
Randolph Bryant, Jr., Houston, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application August 6, 1954, Serial No. 448,308
4 Claims. (Cl. 166—173)

3. A paraffin scraper adapted for free longitudinal movement within an oil well flow pipe provided with upper and lower stops in the path of said scraper, said scraper comprising a hollow cylinder having a longitudinal slot intermediate the ends thereof, a circular scraper blade attached adjacent an end of said cylinder and projecting outwardly therefrom, a rod positioned axially within and extending longitudinally beyond the ends of said cylinder, said rod having a lateral extension intermediate the ends thereof fitting slidably within said slot in said cylinder, said extension and said slot cooperating to limit the relative longitudinal movement of said cylinder and said rod when said rod strikes a stop, a cup shaped sleeve valve element having ports therein mounted on said rod adjacent an end thereof, said sleeve valve element fitting slidably within an end of said cylinder, whereby the ports in said sleeve valve element are adapted to be alternately covered and uncovered by the relative longitudinal movement of said cylinder and said rod, arcuate positioning springs carried by said rod and contacting said cylinder, an inwardly extending annular neck on said cylinder position substantially mid-way between the extreme limits of movement of said springs with respect to said cylinder, whereby said springs position said rod centrally within said cylinder and cooperate with said neck to maintain said rod in either extreme longitudinal position with respect to said cylinder.

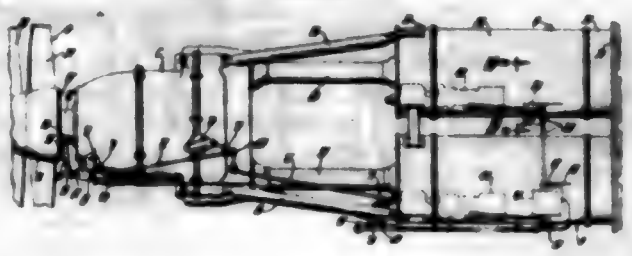
2,860,711
CONTROL SYSTEM FOR TANDEM HELICOPTER
Paul Julius Danckl, Media, Pa., assignor to Vertol Aircraft Corporation, a corporation of Pennsylvania
Application April 19, 1955, Serial No. 502,456
9 Claims. (Cl. 170—135.22)

1. In a helicopter, in combination, a fuselage, a rotor carried by each end portion of said fuselage, said rotors each comprising a rotatable shaft and a plurality of airfoil blades coupled to said shaft and rotatable therewith, a swash plate associated with each of said rotors and movable longitudinally of and tiltable in any direction with respect to said shaft, the blades of said rotors being connected to the respective swash plates and rotatable about their substantially longitudinal axes in response to changes in position of the swash plate relative to said shaft, said blades of each rotor when rotated defining a cone of rotation about said shaft, the axis of said cone being angularly related to said rotor axis when cyclic pitch changes are applied to said blades, said swash plates being related to the blades of their respective rotors to change the collective pitch thereof upon movement of said swash plates longitudinally of said shafts and to impart a cyclic pitch change to said blades upon tilting motion of said swash plates to tilt the respective axes



of said cones in the same direction, a control column universally supported in the helicopter for oscillation longitudinally and transversely thereof, an upper control assembly associated with each of said swash plates, each of said control assemblies including a shaft and a torque tube mounted to the fuselage, a quadrant carried by said shaft, an arm carried by said torque tube, a differential bell crank carried by said arm and connected to its respective swash plate, a bell crank mounted on said torque tube and connected to said quadrant and to said differential bell crank, and an articulated coupling connecting said quadrant of each of said assemblies to said control column, whereby movement of said control column in a fore and aft direction rotates said swash plates an equal amount in the same direction about their generally transverse axes.

2,860,712
CONTROL FOR AIRCRAFT POWER PLANT
Charles J. McDowall, Arthur W. Goubetz, Robert J. Wente, and Edmund M. Irwin, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 23, 1952, Serial No. 272,922
19 Claims. (Cl. 170—135.74)

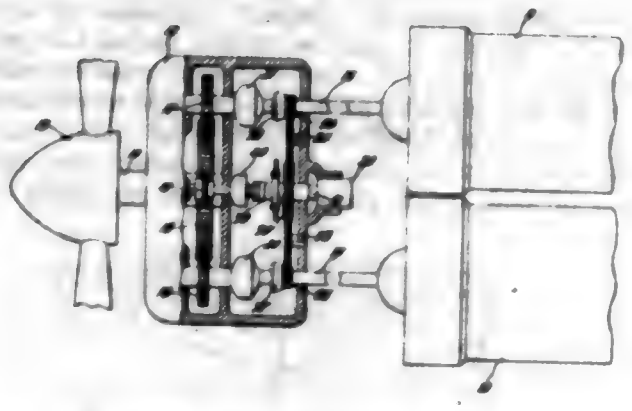


1. An aircraft power plant comprising, in combination, two power units, a propeller driven thereby, a fuel control device for each power unit, means coupling the fuel control devices for concurrent regulation, a coordinating control device driving the said means, a manually operable power control for setting the coordinating control at will, a propeller pitch control means having a propeller feathering position, motion transmitting means coupling the propeller pitch control means to the coordinating control device, a manually operable feather control, and means, actuated by movement of the feather control to feather the propeller, for operating the motion transmitting means to move the pitch control means to feathering position independently of the fuel control devices.

1. A card punching machine comprising, perforating means supported for movement and driven to move in

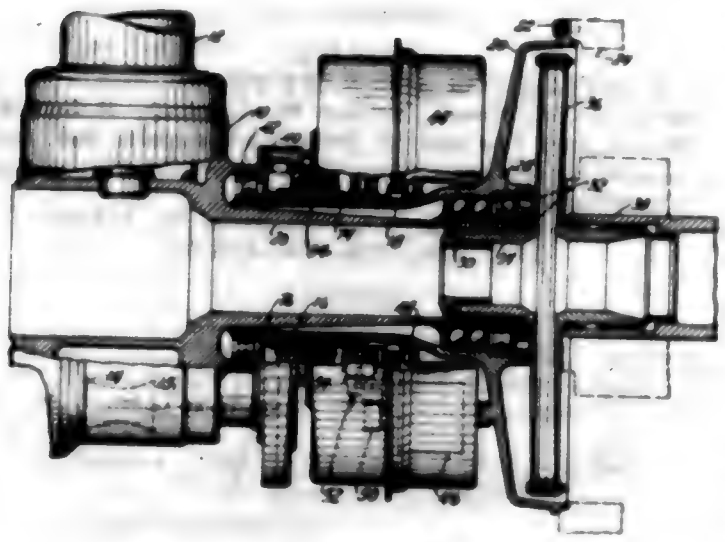
particles of biphenyl with dry silica gel in particle sizes ranging from approximately 0.02 micron to 5 microns in

2,860,713
POWER TRANSMISSION SYSTEM
Victor W. Peterson, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 9, 1952, Serial No. 313,960
28 Claims. (Cl. 170—135.75)



24. An aircraft propulsion unit comprising a pair of gas turbine engines each connecting to a common propeller and to a common starter, a brake for the propeller to prevent windmilling, automatic means to release the brake when the starter is energized, and automatic means to release each engine from the starter as the engine becomes operative.

2,860,714
PROPELLER AUTOMATIC FEATHERING MEANS
Russell T. De Muth, Passaic, N. J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application April 23, 1954, Serial No. 425,179
15 Claims. (Cl. 170—160.13)

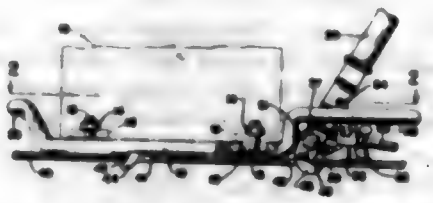


1. In an aeronautical propeller having a hub and blades locatable therein for pitch change, a non rotating structure and a shaft on which the propeller is rotatably mounted, said propeller having freedom for limited axial movement on said shaft, a sleeve rotatable on the propeller, coaxial with the shaft, normally rotatable with the propeller and operably connected to said blades to control their pitch, means to rotate said sleeve slower than the propeller to increase propeller blade pitch, brake plates rotatable with said sleeve, non rotative brake plates mounted on the structure interleaved with said rotatable plates, an abutment on and axially movable with the propeller engageable with one end of the stack of plates, an adjustable abutment for the other end of the stack of plates, and means selectively operable to move said adjustable abutment toward and away from said plates.

2,860,715
VEHICLE PROVIDED WITH ADJUSTABLE ENDLESS TRACKS
Victor Albert Bouffort, Paris, France, assignor to Mecatec S. A., Tangier, a limited-liability stock company of Tangier
Application January 26, 1955, Serial No. 484,258
Claims priority, application Tangier February 15, 1954
3 Claims. (Cl. 180—9.1)

2. In a motor vehicle provided with endless tracks and comprising a frame having lateral walls, a motor carried by said frame, driving wheels carried by said frame and disposed laterally at one end of said frame, said driving wheels being mechanically connected to said motor, a sprocket disposed on either side of the front end of said frame, tightening devices acting on said sprockets in order to tighten said tracks, the combination of angled levers hinged to said frame on either side thereof, an idler revolving on the lower end of each of said angled levers, actuating members, elastic rings connecting the second end of each angled lever to one actuating member, driving means located inside said frame and driving said actuating members, guiding means provided in said lateral walls of said frame for guiding said actuating members and comprising slots in said lateral walls, said actuating members extending through said slots, and flanges on said actuating members on either side of said walls, whereby said elastic rings constitute simultaneously connecting members of the second end of each angled lever with one actuating member and suspension members of said frame.

2,860,716
DETACHABLE MOTOR AND HANDLE UNIT
Jules P. Floch, Manton, Ohio
Application January 17, 1955, Serial No. 482,118
5 Claims. (Cl. 180—19)

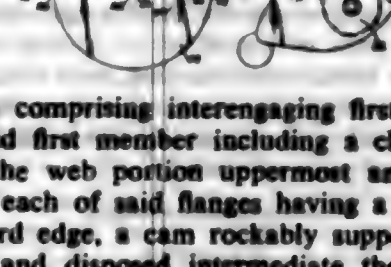


1. In power driven mechanism of the class described, a frame with a driving motor secured thereto, a control handle shiftably carried by said frame, latch mechanism carried by said frame and movable consequent upon shifting of said control handle, a second frame, wheel elements carried by said second frame to move the same over the ground, a ground working tool secured to said second frame, latch mechanism carried by said second frame complementary to the latch mechanism carried by said first frame, engaging portions on said two frames adapted to be placed in contact with each other and locked together by said latch mechanisms to support said first frame wholly on the wheel elements of said second frame and a power connection on each frame, said connections being adapted to be coupled together to drive said ground working tool, a camming lug, and a pressure applying member secured to one of said frames and adapted to apply pressure to said camming lug to force said latch mechanisms into locked engagement, said latch mechanisms being non-yieldable.

the passenger compartment and separated therefrom by

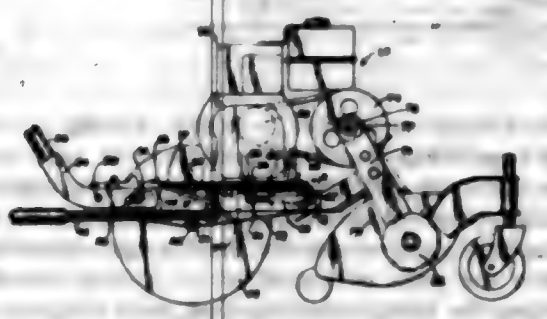
source comprising voltage step-up transformer means sup-

2,860,717
MOUNTING FOR TRACTOR GENERATOR
Edmund Jedrzykowski and Clarence A. Hubert, Chicago, Ill., assignors to International Harvester Company, a corporation of New Jersey
Application December 24, 1954, Serial No. 477,491
3 Claims. (Cl. 180—53)



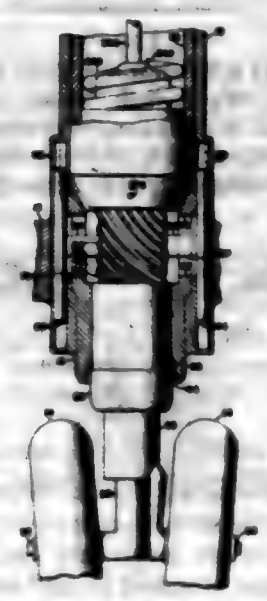
1. A generator mounting arrangement for a tractor comprising: a bracket adapted to be mounted to a frame member of said tractor adjacent the transmission section thereof, said bracket having a back plate portion and two spaced apart projecting flange portions, each of said two projecting flange portions being provided with upwardly opening hook sections, said hook sections positioned along a common axis, the outer surface of one of said hook sections formed to provide a circular conical washer seat, said generator being provided with a pair of stub shafts extending from the lower portion of said generator with said stub shafts positioned along a common axis, each of said stub shafts positioned within one of said hook sections of said bracket, a conical washer mounted about one of said stub shafts and in engagement with said conical washer seat, a fastener mounted on said one stub shaft in engagement with said washer, and a turnbuckle arrangement pivotally mounted between the top of said generator and said tractor.

2,860,718
COUPLING AND CLUTCHING MEANS FOR POWER AND TRACTION DEVICES AND IMPLEMENTS
John Vincent Webster, Byron T. Aasland, and George R. Louthan, Kankakee, Ill., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application February 29, 1956, Serial No. 568,598
4 Claims. (Cl. 180—53)



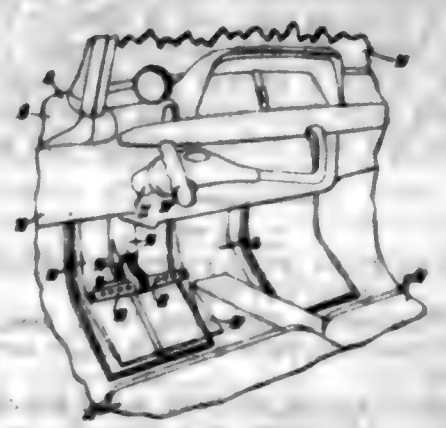
1. A hitch comprising interengaging first and second members, said first member including a channel member having the web portion uppermost and depending side flanges, each of said flanges having a slot opening to the forward edge, a cam rockably supported in said side flanges and disposed intermediate the same, said second member including a channel member having a web portion uppermost and depending side flanges, said last mentioned flanges having axially alined projections engageable in said slots, said second member arranged to be nested in said first member, cooperating means associated with respective web portions to effect operable alinement and securement between said channel members when the web portion of said second member is engaged by said cam and is rocked about the axis of said projections into nested relationship with said first member, a leaf spring secured at one end to the forward end of the web portion of said first member, the other end of said spring engaging the web portion of said second member and normally biasing said second member away from said first member.

2,860,719
COMBINATION VEHICLE STEERING AND WHEEL MOUNTING ARRANGEMENT
William Roy Furches, Pineville, La.
Application December 3, 1956, Serial No. 626,022
14 Claims. (Cl. 180—79.2)



1. In a steerable vehicle supporting truck for tractors or the like, a stationary tubular housing carried by the frame of the tractor on a substantially upright axis, a second tubular housing mounted within said first tubular housing and rotatable on the substantially upright axis, concentric shafts carried within and rotatable with said second tubular housing, said concentric shafts being movable along the substantially upright axis with respect to one another and said second tubular housing, axles extending in opposite direction from the ends of said concentric shafts for mounting wheels of the tractor, means for mounting said concentric shafts for differential movement with respect to each other, and means to cause said tubular housing to rotate on the substantially upright axis whereby the wheels may be steered.

2,860,720
ADJUSTABLE TOEBOARD FOR AN AUTOMOBILE
John V. Huff, Harper Woods, and Robert F. McLean, Oak Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 18, 1956, Serial No. 559,871
6 Claims. (Cl. 180—90.6)



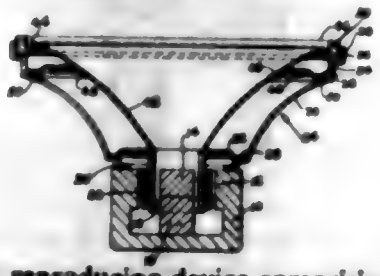
1. In combination in a vehicle having a passenger compartment and an engine compartment forwardly of

an adjustable abutment for the other end of the stack of plates, and means selectively operable to move said adjustable abutment toward and away from said plates.

sure to said camming lug to force said latch mechanisms into locked engagement, said latch mechanisms being non-yieldable.

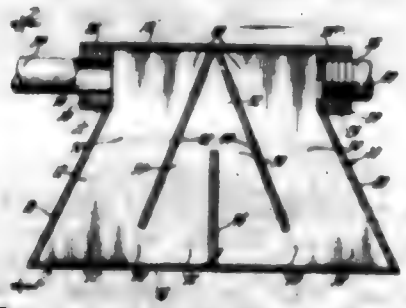
the passenger compartment and separated therefrom by a generally vertical fire wall, a fixed support member in the passenger compartment, a toeboard panel extending in generally parallel relationship to said fire wall, means hingedly mounting said toeboard adjacent its upper end on said support member for swinging movement toward and away from said fire wall, operating means in the engine compartment for swinging said toeboard toward and away from said fire wall, means connecting said operating means to the toeboard at a location spaced from the hinge mounting thereof, and at least one control pedal movably mounted on said toeboard.

2,860,721
SOUND REPRODUCING DEVICE
Joseph A. Hassan, Weymouth, Mass., assignor of one-half to Fouthal A. Hassan, Weymouth, Mass.
Application March 24, 1954, Serial No. 418,417
5 Claims. (Cl. 181—31)



2. A sound reproducing device comprising vibrating instrumentalities, a diaphragm operatively connected to said instrumentalities at its inner end and unattached at its outer end, a support attached to said instrumentalities and extending outwardly of said diaphragm, and a radially expansible, flexible connector ring of vibrating material attached to said diaphragm at a point intermediate the said inner and outer ends thereof and extending outwardly to and attached to said support.

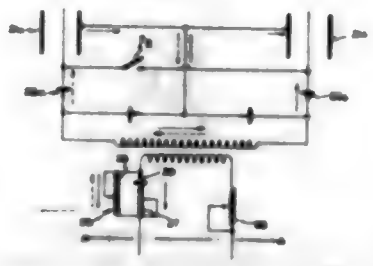
2,860,722
SILENCER
George W. Gerstung, Lockport, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 23, 1954, Serial No. 451,562
5 Claims. (Cl. 181—68)



1. A muffler comprising a trapezoidal body portion having a continuous single passage therethrough extending between interchangeable inlet and outlet openings located near a common edge and at opposite ends of said body, said body and said passage being substantially symmetrical about a vertical plane passage extending first obliquely away from and then toward both the axes of said inlet and said outlet openings and said vertical plane.

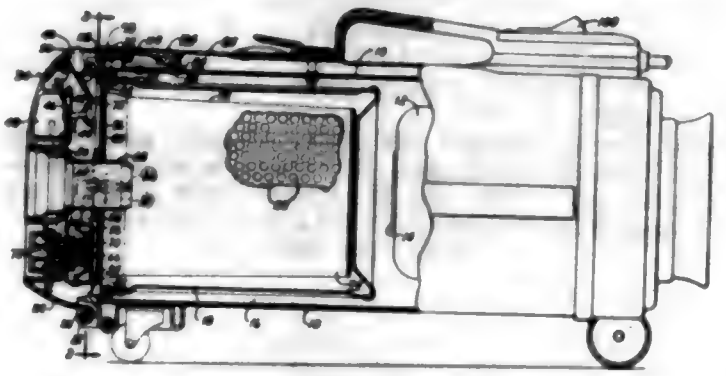
2,860,723
ELECTRICAL PRECIPITATORS AND ENERGIZING CIRCUIT THEREFOR
Harry A. Winternute, Plainfield, N. J., assignor to Research Corporation, New York, N. Y., a corporation of New York
Application August 23, 1954, Serial No. 451,397
14 Claims. (Cl. 183—7)

5. A system for energizing electrical precipitators and the like apparatus from a low voltage alternating current source comprising voltage step-up transformer means supplied by the source of low voltage, rectifying means connecting the electrodes of the electrical precipitator apparatus to the secondary circuit of said transformer means to provide unidirectional excitation for said electrodes, said electrodes comprise the respective electrodes of a first electrical precipitation section and a second separate electrical precipitation section, said rectifier means being



arranged and oriented to supply alternate half-waves of rectified voltage alternately to the electrodes of the respective precipitator sections, voltage control means in the primary circuit of said transformer means comprising primary low impedance diode means, and first impedance means shunting said primary rectifier means whereby respectively selective regulation of the half-waves of current flowing in each direction is obtained.

2,860,724
MECHANISM FOR RENDERING A VACUUM CLEANER INOPERATIVE IF NO BAG IS IN PLACE
Arnold H. Beede, Stamford, and Allen P. Cawl, Noroton Heights, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Application November 13, 1956, Serial No. 621,638
8 Claims. (Cl. 183—37)

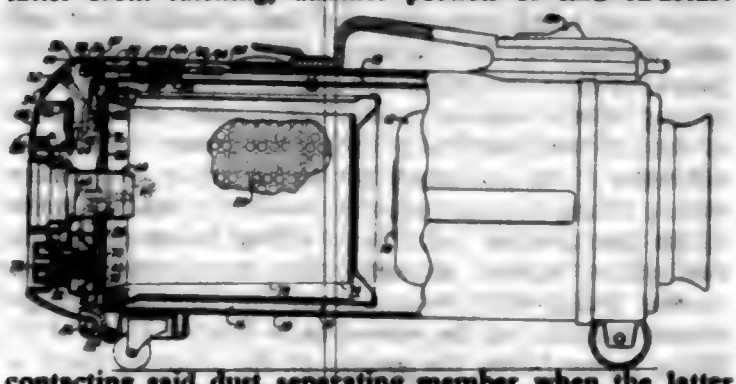


1. In a vacuum cleaner, a casing having an opening, a dust separating member receivable in said casing, a closure for said opening, a movable latch member for releasably securing said closure in closed position, movable structure, and means for biasing said movable structure into the path of travel of said latch member for preventing the latter from latching, said structure having a portion contacting said dust separating member when the latter is received in said casing for holding said structure out of said path of travel.

2,860,725
MECHANISM IN THE COVER OF A VACUUM CLEANER FOR RENDERING THE CLEANER INOPERATIVE IF NO BAG IS IN PLACE
Allen P. Cawl, Noroton Heights, and John J. Kowalewski, Riverside, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Application November 29, 1956, Serial No. 625,667
8 Claims. (Cl. 183—43)

1. In a vacuum cleaner, a casing having an opening, a dust separating member receivable in said casing, a closure for said opening, a latch member movably mounted on said closure for releasably securing the latter in closed position, structure movably mounted on said closure, and

means for binning one portion of said structure into the path of movement of said latch member to prevent the latter from latching, another portion of said structure



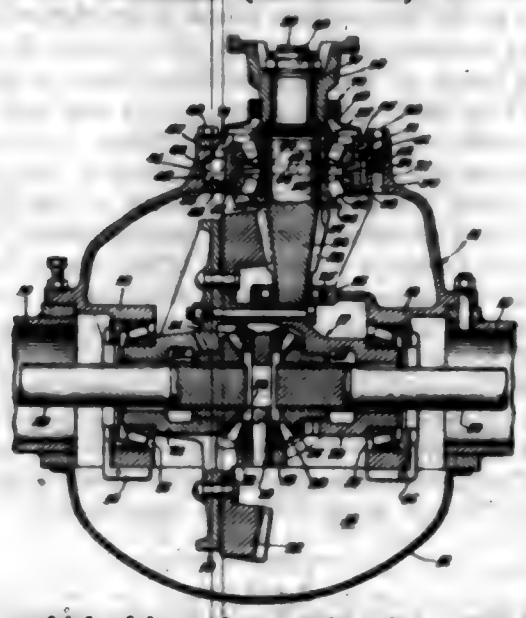
contacting said dust separating member when the latter is in place in said casing for holding the first-mentioned portion out of said path of movement.

2,860,726

VEHICLE DRIVE AXLE PINION BEARINGS AND MEANS FOR LUBRICATING THE SAME

John Thomas and John I. Firth, Jr., Harlan, Ind., assignors to International Harvester Company, a corporation of New Jersey

Application August 4, 1955, Serial No. 526,347
9 Claims. (Cl. 184—11)



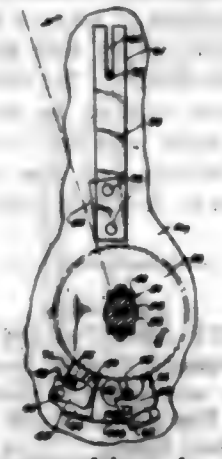
1. In a vehicle drive axle assembly the combination of a housing having a tubular section projecting from one wall thereof and a sump in the bottom thereof adapted to contain lubricant having a normal level below said tubular section, said tubular section including radially inwardly extending flanges at each end thereof to form a continuous annular channel; a power transmitting mechanism rotatably supported in said housing including a ring gear having a continuous annular surface, the lower portion of said surface being submerged in said lubricant whereby rotation of said ring gear causes lubricant to be thrown from said surface by centrifugal force radially upon the interior surface of said housing; a sleeve-like bearing retainer having a flange extending radially outwardly from one end thereof adapted to abut one of said tubular section flanges and be secured thereto, said bearing retainer bridging said flanges of said tubular section whereby said tubular section continuous annular channel is closed, said bearing retainer including an annular flange intermediate its ends extending radially inwardly; a pinion shaft extending through said bearing retainer carrying a pinion gear meshing with said ring gear to drive the same; a bearing interposed between said bearing retainer and said shaft for rotatably supporting said shaft including a pair of bearing sections, each of said bearing sections being of the tapered-roller type having inner and outer races and having the small ends of its tapered rollers facing the small ends of the tapered rollers of the other bearing section, the outer race of each of said bearing sections abutting a respective opposite axial face of said radially inwardly extending flange of said bearing retainer to be spaced from the other bearing section thereby; duct means extending radially through said bearing retainer for establishing lubricant communication between said channel and the space between said bearing sections, said duct means being formed in the lowermost portion of said radially inwardly extending flange of said bearing retainer; sealing means secured to said radially outwardly extending flange of said bearing retainer and engaging said shaft, said sealing means being axially spaced from one of said bearing sections and partially defining a lubricant-receiving chamber for receiving lubricant from one of said bearing sections; duct means extending from said chamber to said channel at a point above the lowermost portion thereof; and means for collecting lubricant deposited on the interior wall surface of said housing above said tubular section and conducting all of the collected lubricant to the uppermost portion of said channel by gravity.

2,860,727

MECHANICALLY AGITATED CRADLE

Joseph De Pasqua, Detroit, Mich., assignor to Mechanical Swinging Cradle Company, Detroit, Mich., a corporation of Michigan

Application August 23, 1957, Serial No. 679,913
2 Claims. (Cl. 185—38)



1. In a spring motor driven by a coiled spring and adapted to actuate a suspended object for a pendulum-like movement, an escape mechanism including a stationary mounting plate, a horizontal shaft journalled in said mounting plate, a rocking plate mounted upon the shaft for a limited reciprocating swing about the shaft, an escapement wheel mounted upon the shaft, a vertical bar mounted intermediate its end upon said shaft for a limiting reciprocating swing thereon, a pawl pivotally mounted upon the mounting plate for engagement with the escapement wheel, another pawl pivotally mounted upon the lower end of the bar for engagement with said escapement wheel, each pawl having a flange adapted to be brought into encounter with the rocker plate and to be tipped out of engagement with the escapement wheel, and spring means responsive to the movement of the bar in a direction against the tension of the coil spring to cause the pawl on the bar to check the rotation of the escapement wheel under the tension of the coil spring and to operate the pawl on the mounting plate to permit a limited rotation of the escapement wheel under the tension of the coiled spring on completion of the return swing of the bar.

2,860,728

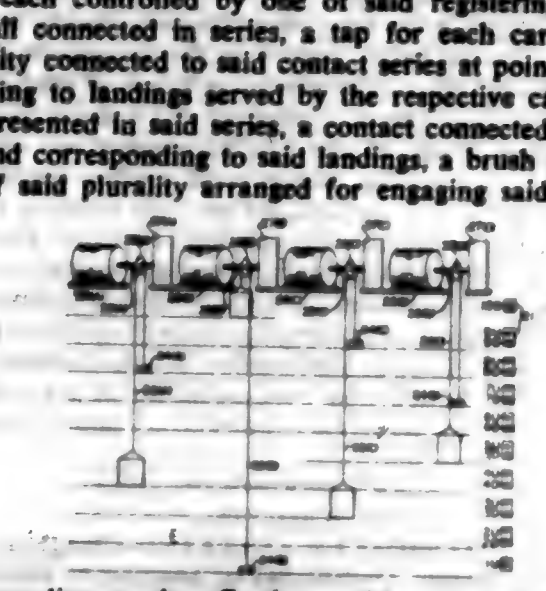
ELEVATOR CONTROLS

Raymond A. Burgy, Maumee, Ohio, assignor to Toledo Scale Corporation, a corporation of Ohio

Application January 2, 1957, Serial No. 632,130
36 Claims. (Cl. 187—29)

31. In an elevator system, a plurality of cars, a plu-

rality of landings, one of said landings intermediate the extremes of car travel served by at least one of said cars and less than all of said cars, means to register a landing signal at each of said plurality of landings, a family of normally closed landing signal registration contacts each controlled by one of said registering means and all connected in series, a tap for each car of said plurality connected to said contact series at points corresponding to landings served by the respective car which is represented in said series, a contact connected to each tap and corresponding to said landings, a brush for each car of said plurality arranged for engaging said contact



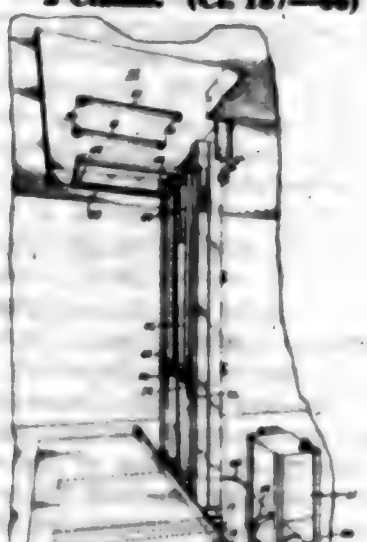
corresponding to the effective position of its respective elevator car, translating means connected to said brush and actuated by the absence of a landing call registered on any one of said family of contacts in a given direction from the effective position of a car, a contact intermediate said brush of the car serving said one landing and said reversing means responsive to the registration of a landing signal at said one landing to prevent the actuation of said translating means, and means to by-pass said contact when said car serving said one landing is effectively positioned in said given direction with respect to said one landing.

2,860,729

SAFETY LIFTING DEVICE

Howard Vincent Stoddard, Nutley, David Monroe Baeder, Packanack Lake, and Sidney Messeri, West Orange, N. J., assignors to Essex Conveyors, Inc., Newark, N. J., a corporation of New Jersey

Application January 12, 1956, Serial No. 558,661
2 Claims. (Cl. 187—66)



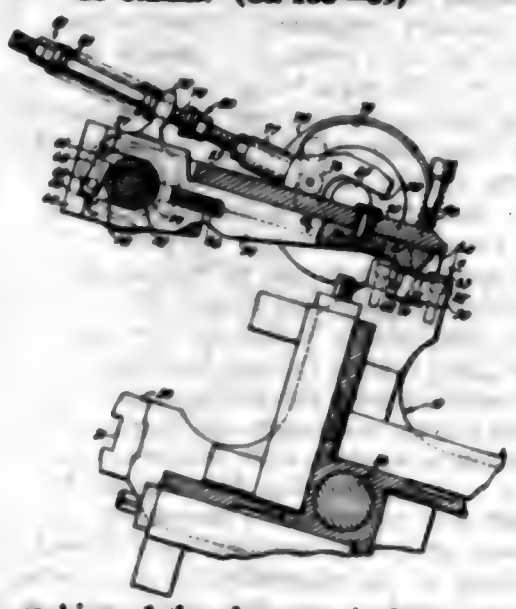
1. An apparatus comprising a stationary frame containing two spaced vertical channel beams having the grooves thereof facing each other to provide travelways, at least one of said channel beams containing an adjustable stop member attached to the upper end thereof, a movable intermediate frame disposed between the channel beams of the stationary frame, said intermediate frame containing two spaced vertical channel beams having the grooves thereof facing each other to provide travelways, each of said channel beams of the intermediate frame containing on each side thereof at least one guide member projecting laterally in direction of the stationary frame and being so constructed and arranged that each channel beam of the stationary frame is positioned between at least two guide members, a pair of rotatable flanged wheels mounted on the side of each channel beam of the intermediate frame facing the groove of a channel beam of the stationary frame for engagement therewith, a lifting frame disposed between the channel beams of the intermediate frame, said lifting frame containing two spaced vertical channel beams having the grooves thereof facing each other, a pair of rotatable flanged wheels mounted on the side of each channel beam of the lifting frame facing the groove of the channel beam of the intermediate frame for engagement therewith, each of the channel beams of the lifting frame containing a guide member on the side thereof facing the groove of the intermediate frame and being so constructed and arranged that the guide member engages the groove of the intermediate frame, said intermediate frame containing a horizontal member fastened to the upper ends of the vertical channel beams, a hydraulic lift containing a cylinder disposed between the channel beams of the intermediate frame, said hydraulic lift containing a vertically movable piston having the end thereof fastened to the horizontal member of the intermediate frame, a sprocket wheel being rotatably mounted at the top on the grooved side of each channel beam of the intermediate frame, a link chain mounted on each sprocket and having one end fastened to the stationary frame at a level below the position of the sprocket and the other end fastened to the top of the lifting frame, the plane of movement of the link chain being closely positioned to each channel beam of the intermediate frame, a floor cover lifting frame being disposed on said lifting frame, said floor lifting frame having a vertical member attached to the upper part of each channel beam of said lifting frame and floor engaging members laterally disposed on the upper part of said vertical members, the floor cover lifting member being adapted to move an elevated floor cover for passage of the lifting platform through the resulting opening, and the aforesaid frames being in planar alignment.

2,860,730

LOCATING AND LOCKING MECHANISM FOR A MACHINE TOOL

William B. Retz, Plainville, and George A. Cardell, New Britain, Conn., assignors to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Application January 19, 1954, Serial No. 404,936
11 Claims. (Cl. 188—69)



1. In a machine of the character indicated, a frame, an indexible turret journalled on a first axis in said

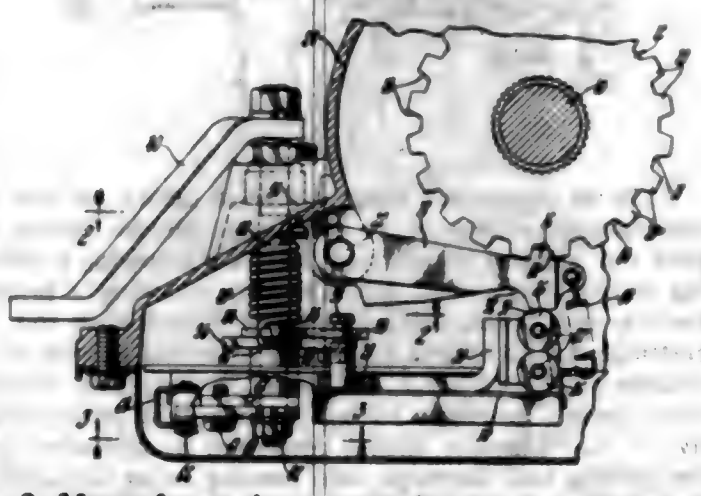
frame, and a unitary locating and locking assembly journalled in said frame on a second axis off the turret-indexing axis and including parts engageable with two reference points carried by said turret off the axis thereof, one of said parts being journalled on said second axis and including abutment means engageable with one of said reference points, the other of said parts being guided by said first part for slidable movement radially of said second axis and including abutment means engageable with the other of said refrrence points, and cam means reacting between said two parts for laterally displacing said abutment means with respect to each other for firm anchorage of said reference points about said first axis.

2,860,731

POSITIVE PARKING BRAKE

Gilbert K. Hause, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 2, 1956, Serial No. 601,698
6 Claims. (Cl. 188—69)



2. Means for at times preventing rotation of a rotatable part comprising in combination a peripherally notched member adapted to rotate whenever the part is rotated, non-rotatable means, a pawl pivoted to said means and having a locking tooth adapted to be received in any of the notches of the member to lock the member against rotation, a cam surface on the pawl, an abutment, an actuator for the pawl including a first roller journalled on the actuator and adapted to engage the cam surface and a second roller journalled on the actuator and adapted to support the actuator on the abutment, and means for placing the actuator with one roller on the abutment and so that the center of rotation of the member, a notch, the pawl tooth and the centers of both rollers are in a line.

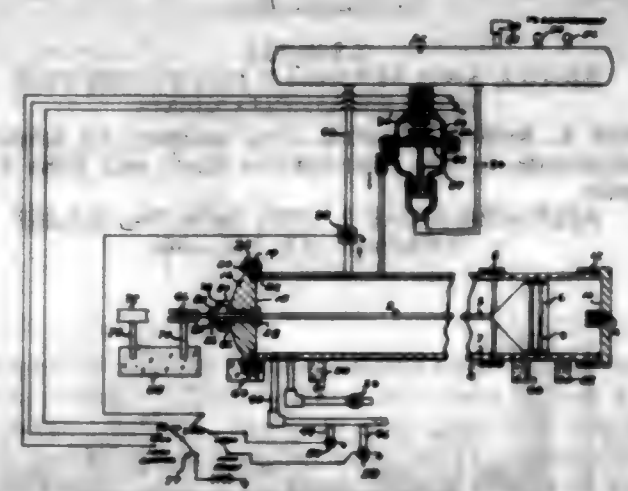
2,860,732

PNEUMATIC ENERGY ABSORBER FOR AIRCRAFT BARRIERS

John E. Snow, Fairborn, Ohio

Application August 1, 1955, Serial No. 525,754
7 Claims. (Cl. 188—67)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. An energy absorber assembly comprising a cylinder having its forward end airtight, there being a piston within said cylinder, said piston adapted to reciprocate within said cylinder, means on said piston to form an airtight seal with said cylinder, an aircraft arresting cable passing through said airtight end, means in said airtight end to seal said forward end and said arresting cable, said last named means adapted to permit said arresting cable to be passed in and out of said airtight end, in airtight relationship, said arresting cable being attached to said piston at its forward end and adapted to pull said piston forwardly in said cylinder, means exterior of said cylinder to charge said cylinder with air under predetermined pressure exerted against the forward side of said piston and said airtight end, means responsive to air pressure connected to said cylinder to permit the escape of air between said piston and said airtight end at pressure in excess of said predetermined air pressure whereby when said arresting cable pulls said piston forwardly inside of said cylinder



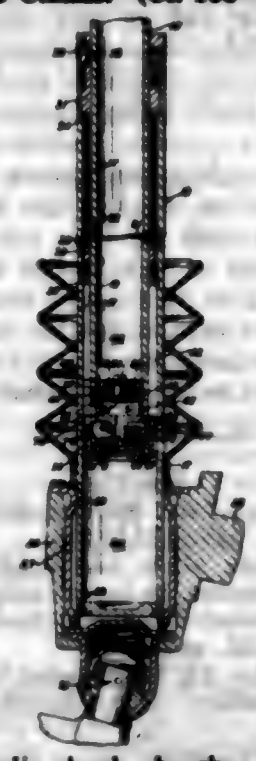
said piston thereby increasing the air pressure within said cylinder forward of said piston causing said escape means to permit said excess air pressure to escape from within said cylinder.

2,860,733

SHOCK ABSORBER

George H. Muller, Northville, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

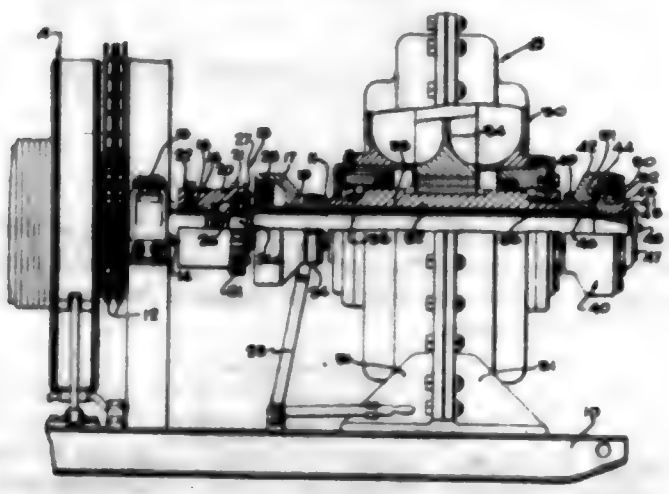
Application March 7, 1956, Serial No. 570,844
3 Claims. (Cl. 188—88)



1. In a hydraulic shock absorber for a motor vehicle having sprung and unsprung members, an inner tube connected to one of said members, an outer tube telescopically arranged with respect to said inner tube and connected to the other of said members, a pair of axially spaced annular bearings between said tubes, one of said bearings being carried by one of said tubes and the other by the other of said tubes to define with said tubes a variable displacement annular fluid chamber, a dividing part carried by said inner tube forming a reservoir chamber within said inner tube on one side of said part and a pressure chamber within said outer tube on the opposite side of said part, said part comprising a valve body having an axial passageway therethrough, oppositely acting compression and replenishing valves controlling the flow of fluid through said passageway in each direction, a pair of ports in the wall of said inner tube adjacent said valve body, passageways in said valve body establishing communication between said ports and said pressure

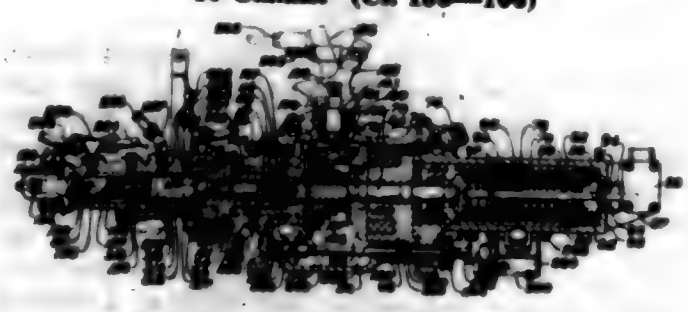
chamber, and compression and rebound valves carried by said valve body controlling said last named passageways.

2,860,734
BRAKE AND FLEXIBLE COUPLING FOR ROTARY MECHANISMS
Albert A. Ashton, Houston, Tex., assignor, by mesne assignments, to The Youngstown Sheet and Tube Company
Application March 9, 1953, Serial No. 341,269
3 Claims. (Cl. 188—90)



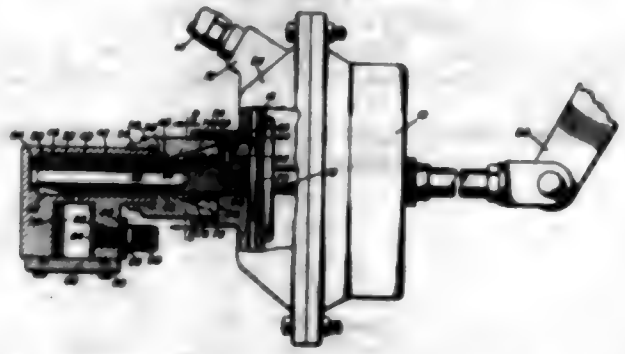
1. In a brake mechanism for a rotary drawworks having a power operated shaft: a brake housing supported adjacent one end of said shaft, said housing having bearings defining an axis aligned with said shaft; a rotor in said housing; a tubular shaft supporting said rotor, said tubular shaft being supported by said bearings; a flexible drive coupling connected to the end of said tubular shaft far from said power operated shaft; a floating shaft extending through said hollow shaft, the end of said floating shaft far from said power operated shaft being connected to said flexible drive coupling; a self-aligning bearing on said power operated shaft supporting the near end of said floating shaft; and a flexible drive coupling connecting said near end of said floating shaft to said power driven shaft.

2,860,735
POWER ACTUATED BRAKE OPERATING MECHANISM
Ross D. Grover, Alma, Mich., and Achilles C. Sampietro, Toledo, Ohio, assignors, by mesne assignments, to Bank of America National Trust and Savings Association, San Francisco, Calif., as agent
Application May 11, 1954, Serial No. 429,016
10 Claims. (Cl. 188—106)



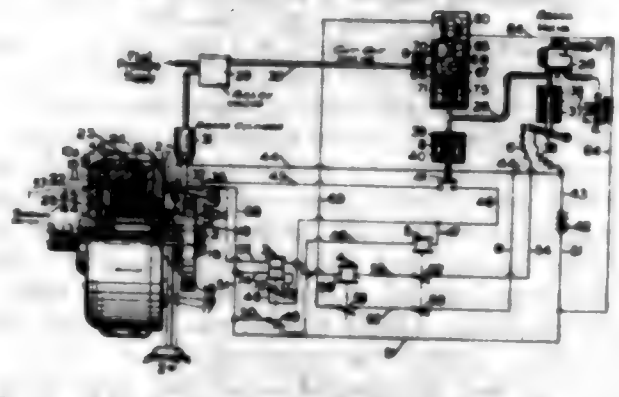
1. Apparatus of the character disclosed in combination with hydraulically actuated brake mechanism of a vehicle, a source of fluid under pressure, an automatic brake-setting unit including a housing, a ram in the housing, spring means engageable with the ram, control means for directing fluid pressure against the ram to compress the spring means, armature means carried by said ram, electrically controlled magnet means engageable with said armature means for retaining said ram in spring-compressing position and for releasing the ram, said spring means in ram-released position exerting a force to set the brake mechanism, and means operable upon release of the ram to brake-setting position for directing fluid under pressure against the ram in a direction to augment the brake-setting force of the spring means.

2,860,736
CARTRIDGE ACTUATED BRAKES
Jerome Belsky, Falls Church, Va., assignor to Talco Engineering Co., Inc., Hamden, Conn., a corporation of Connecticut
Application January 18, 1956, Serial No. 559,975
4 Claims. (Cl. 188—106)



1. In an emergency brake actuation device for use in combination with a brake operating cylinder having a push rod actuated thereby, said device comprising a housing having a chamber, said chamber receiving a piston therein, said piston being connected to said push rod, a cartridge carried by said housing communicating with said chamber, said cartridge containing a propellant which when ignited generates energy to move said piston relative to said chamber, means connected to said cartridge for igniting said cartridge, said housing being threadedly detachably secured to said brake operating cylinder, said brake operating cylinder having an internally threaded recess threadedly receiving an externally threaded end portion of said housing, said recess forming a shoulder, a tapered cavity in said threaded end portion of said housing, said piston extending through said cavity, a series of locking spheres and a washer in said cavity, and spring means resiliently engaging said shoulder and said washer urging said locking spheres into locking engagement with said housing and said piston.

2,860,737
INTERLOCKED PNEUMATIC AND MAGNETIC FLUID BRAKE SYSTEM
Claude M. Hines, Verona, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application May 4, 1954, Serial No. 427,619
15 Claims. (Cl. 188—156)



1. In combination, a magnetic fluid brake device having an energizing coil effective upon energization to cause said magnetic fluid brake device to exert a braking effect on a member to be braked, a normally open control circuit effective upon closure to effect energization of said

having a partially severed arm defining a hook and a member being T-shaped in cross section and including

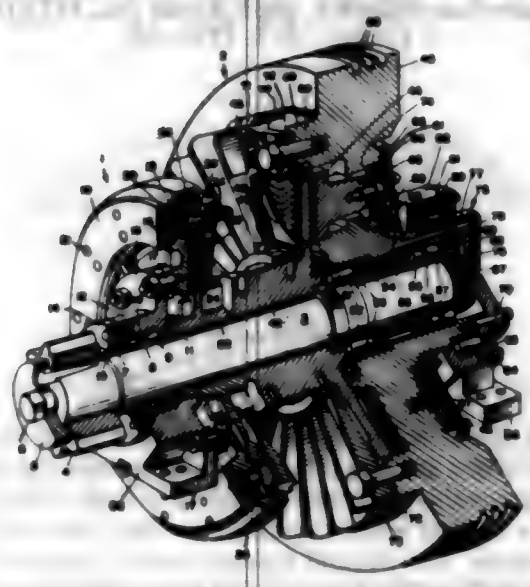
said cylinder to permit the escape of air between said communication between said ports and said pressure

coil, a fluid pressure brake device also operative to exert a braking effect on said member to be braked, and current-responsive means effective so long as said control circuit remains closed for rendering said fluid pressure brake device non-operative and effective upon opening of said circuit to cause operation of said fluid pressure brake to effect a brake application.

2,860,738
BRAKE MECHANISM

Elmer K. Johnson, Oak Park, Ill., assignor, by mesne assignments, to U. S. Industries, Inc., a corporation of Delaware

Original application November 14, 1950, Serial No. 195,661, now Patent No. 2,785,781, dated March 19, 1957. Divided and this application June 29, 1953, Serial No. 364,637
4 Claims. (Cl. 188—170)



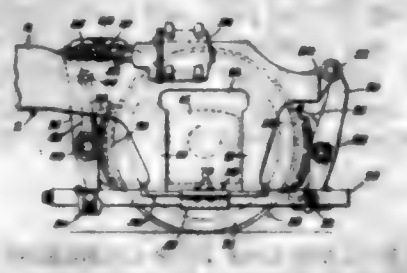
1. A brake mechanism comprising a shaft, a brake spider fixed to the shaft and rotatable therewith, a plurality of substantially semicircular recesses circumferentially spaced along the outer periphery of said brake spider, removable friction means carried in said recesses on said spider, a fixed brake ring at one side of said spider and extending beyond the periphery thereof, a non-rotatable brake reaction plate at the other side of said spider, means including interengaging axially extending and radially projecting teeth mounting said reaction plate on said brake ring for movement axially with respect thereto into and out of engagement with the friction means on said spider, yieldable means normally urging said reaction plate into engagement with said friction means, and means adapted to move said reaction plate out of engagement with said friction means against the force of said yieldable means, thereby to permit rotation of the shaft.

2,860,739
BRAKE STRAP GUIDE

Norman F. Flesch, Park Forest, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application April 16, 1954, Serial No. 423,901
7 Claims. (Cl. 188—205)

1. In a railway truck having a truck frame and a supporting wheel and axle assembly including a journal box received between spaced jaws of the frame; the combination of a tie bar interconnecting said jaws, truck levers at opposite sides of said assembly, friction means actuated by said levers for braking engagement with said assembly, an underaxle strap interconnecting said levers, said strap being positioned outboardly of the wheel and axle assembly and being disposed to extend longitudinally of the truck frame in a horizontal plane, and a guide assembly carried by the tie bar, said assembly comprising a plurality of generally vertically extending longitudinally spaced walls some of which are transversely spaced from each other transversely of the truck frame and having liners secured thereto defining therebetween a generally



U-shaped slot open at the top guidably receiving the strap, and means to detachably connect said liners to said walls to accommodate the adjustment of the width of said slot and to accommodate the adjustment of the location of the slot in a horizontal plane in a direction toward or away from the wheel and axle assembly.

2,860,740
SPLICED METAL FOIL HONEYCOMB PRODUCT AND METHOD OF MAKING SAME

Kenneth M. Holland, Albany, and Edwin L. Rule, Hayward, Calif., assignors to Hexcel Products Inc., a corporation of California

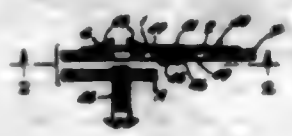
Application July 27, 1953, Serial No. 370,326
4 Claims. (Cl. 189—36)

1. A product formed of metal foil honeycomb of the type defined by double thickness cell walls at points where adjacent corrugated webs are bonded to one another, node-to-node, and single thickness walls elsewhere, comprising: two sheets of said metal foil honeycomb spliced together in edge-to-edge relationship; the spliced edges of said sheets being formed with complementary bevels in cross section; the joined edges of said sheets being spliced together with a plurality of double thickness cell walls of one sheet imbedded within contiguous sheared single thickness cell walls of said second sheet and with a plurality of double thickness cell walls of said second sheet imbedded within contiguous sheared single thickness cell walls of said first sheet.

2,860,741
FASTENING CONSTRUCTION

Laurence H. Flora, Cleveland, Ohio, assignor to Timerman Products, Inc., Cleveland, Ohio, a corporation of Ohio

Original application October 24, 1952, Serial No. 316,673, now Patent No. 2,689,992, dated September 28, 1954. Divided and this application August 11, 1954, Serial No. 449,881
3 Claims. (Cl. 189—36)



1. A fastening construction comprising a supporting part in the form of a plate or panel provided with three openings in spaced relation, and a fastener comprising a piece of sheet metal defining a base attached to said supporting part over said openings, said base comprising a portion carrying bolt or screw engaging means and a portion at one side of said bolt or screw engaging means

extruded aluminum including a hollow interior portion formations, and the other side of said piston being sub-

armature means for retaining said ram in spring-com-

on a member to be braked, a normally open control circuit effective upon closure to effect energization of said

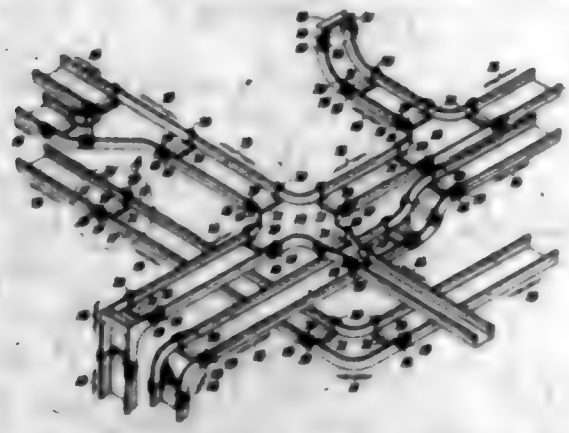
having a partially severed area defining a hook and a cooperating tab both projecting from the underside of said base, said tab having a free end severed from the base, said hook and tab being in spaced relation to each other and said tab facing the free end of said hook, said bolt or screw engaging means overlying one of said openings in said supporting part, said hook extending through a second of said openings and engaging a marginal portion thereof, and said tab being in abutting relation to the wall of the third of said openings thereby retaining said hook against removal from attached position.

2,860,742

CONNECTING MEANS FOR CABLE-SUPPORTING TROUGH SYSTEMS AND THE LIKE

David Waters, Sr., Philadelphia, David Waters, Jr., Glenolden, and Thomas C. Reeves, Philadelphia, Pa., assignors to T. J. Cope, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Application January 5, 1955, Serial No. 479,982
1 Claim. (Cl. 189—36)



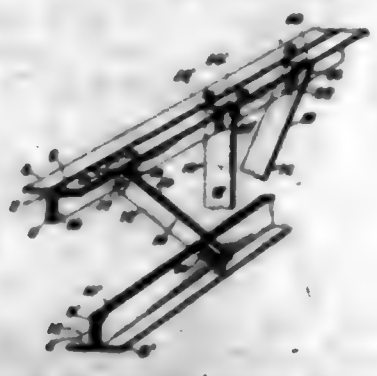
Means for connecting, end to end in abutting relation, prefabricated channel units of cable or tube supporting trough systems or the like, said means comprising lugs affixed to the side walls of the trough units adjacent the confronting ends of said units, said lugs having extending downwardly through them, apertures which are narrow and oblong in the direction of the length of said units; and flat U-shaped coupling elements struck from stout plate metal, said elements having spaced prongs cross sectionally configured to correspond with the cross section of the apertures in the lugs and to engage downwardly into said apertures with a tight fit, thereby to insure maintenance of the connected abutted ends of the trough units rigidly in true axial alignment.

2,860,743

OPEN WEB METAL JOIST

William Ott, Alexandria, Va.

Application February 1, 1955, Serial No. 485,475
5 Claims. (Cl. 189—37)



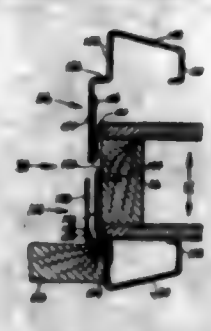
1. An upper chord member and a lower chord member, each of said chord members comprising a pair of angle irons, each angle iron having a laterally extending leg and a vertically extending leg, said vertical legs being spaced apart, and a plurality of strut members, each strut member being T-shaped in cross section and including a web portion, each strut being provided at each end with two inwardly extending slots, one on either side of the web of the strut, said slots defining two end tongues, said slots being directly adjacent said web, and having a width substantially equal to the thickness of the adjacent vertically extending leg, being positioned in said slots in the strut members, with the webs of the struts between the vertically extending legs of the chord members and with said end tongues extending over the outside of said vertically extending legs, said webs and said end tongues being secured to said vertically extending legs.

2,860,744

ADJUSTABLE DOOR FRAMES

Elton P. Muscarl, Levittown, N. Y., assignor, by direct and mesne assignments, to Conjour Corporation, Lincoln, N. Y.

Application March 7, 1955, Serial No. 492,510
5 Claims. (Cl. 189—46)



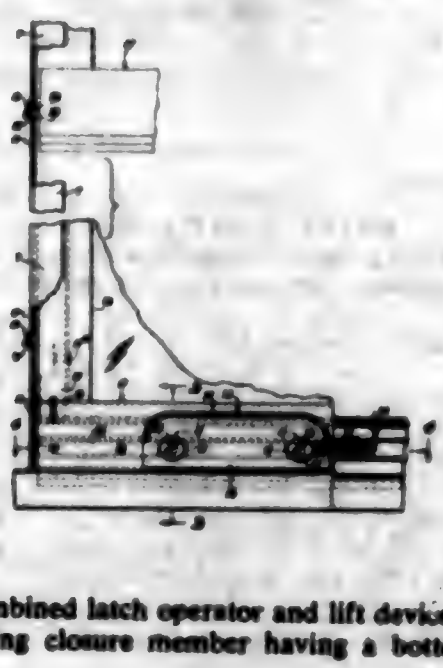
1. In a frame to be applied to an opening, a first section including a stop strip face, a guide means and ratchet means immovably secured directly to a wall of the opening, and a second section including a stop strip face and ratchet means, said second section and its respective stop strip face and ratchet means being telescopically movable relative to and between said stop strip face and said secured guide means of said first section whereby said ratchet means on said first and second sections are guided into cooperation automatically to secure said sections relative to each other to define a unitary frame and said telescopic faces define a single stop strip face.

2,860,745

WINDOW STRUCTURE HAVING A COMBINED LIFT AND LATCH DEVICE

Henry J. Bianco, Baltimore, Md., assignor to The Burch Company, Baltimore, Md., a corporation of Maryland

Application June 30, 1953, Serial No. 364,986
10 Claims. (Cl. 189—72)



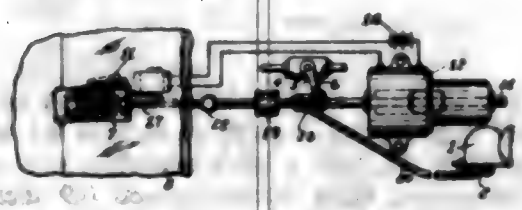
1. A combined latch operator and lift device for a vertically sliding closure member having a bottom rail of

axle assembly and being disposed to extend longitudinally

portion at one side of said bolt or screw engaging means

extruded aluminum including a hollow interior portion and an exterior portion presenting a flat vertical surface, comprising: a latch bolt guided for longitudinal sliding movement within said hollow interior portion; a hand grip member for raising and lowering said closure member having a finger engaging portion and a flat base portion, said hand grip member being positioned outside of said bottom rail and being arranged for sliding movement laterally of said closure member over said flat vertical surface of said bottom rail, said finger engaging portion being an integral flange extending along the upper edge of said flat base portion and disposed perpendicular to said flat base portion; means extending from said flat base portion and through elongated slots in said bottom rail and connecting said hand grip member to said latch; spring means normally urging said latch bolt to extended position; and means rigidly interconnecting said latch bolt and said grip member whereby lateral movement of said grip member will cause a corresponding longitudinal movement of said latch bolt.

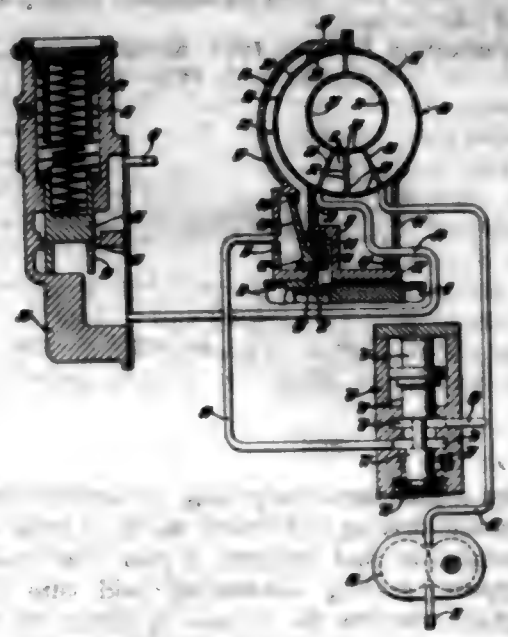
2,860,746
POWER BRAKE CONTROL
Jewel G. Ross, Iron Mountain, Mo.
Application March 22, 1957, Serial No. 648,480
8 Claims. (Cl. 192—3)



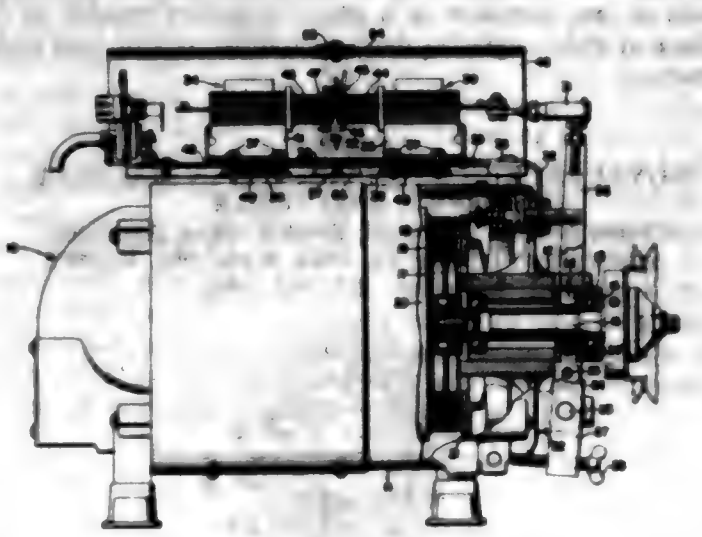
1. In a motor vehicle that includes a power brake, a power brake valve and a motor-speed regulator, a control mechanism for said valve and comprising an accelerator pedal mounted for both vertical and lateral movement, a solenoid having a reciprocatory core, a normally open switch controlling said solenoid and which is operable only through lateral movement of said pedal during all positions of vertical adjustment of the latter to energize said solenoid so as to shift said core in only one direction of its reciprocation, means coupling said pedal and core so that only said last-mentioned shift of the core actuates the power brake valve and the pedal in unison, and means coupling said last-mentioned coupling means and the speed regulator so that the latter is moved to adjustably increase speed on downward vertical movement only of said pedal.

2,860,747
HYDRODYNAMIC DRIVE DEVICES
Oliver K. Kelley, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 9, 1953, Serial No. 347,695
7 Claims. (Cl. 192—3.2)

6. In a transmission having a drive shaft and a driven shaft, a hydrodynamic drive device comprising a pump and a turbine, a housing connecting said pump to said drive shaft and cooperating with said pump to form a rotatable container for liquid, a driving connection between said turbine and said driven shaft, said turbine being movable axially relative to said housing, cooperating clutch formations on the interior of said housing and the exterior of said turbine, means for establishing predetermined fluid pressure in said device, a piston operatively connected to said turbine, one side of said piston being subject to said predetermined fluid pressure to cause movement of said turbine to engage said clutch formations, and the other side of said piston being subject to fluid under pressure higher than said predetermined pressure to move said turbine to disengage said formations.

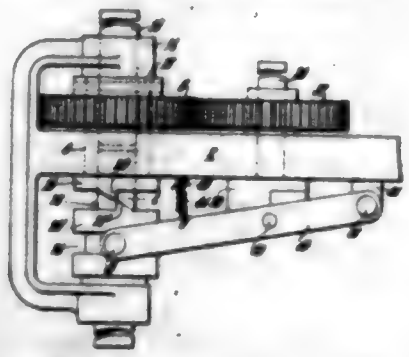


2,860,748
ELECTRICALLY CONTROLLED POWER TRANSMITTERS
Edgar P. Turner, Watchung, Lorenz A. Wendel, Somerville, and Vladimir Marchuk, Manville, N. J., assignors to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application September 26, 1955, Serial No. 536,414
7 Claims. (Cl. 192—18)



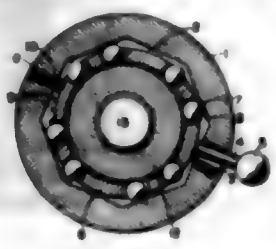
1. A unitary electric power transmitter having a casing, and a driven element, a clutch and brake actuating element for engaging and disengaging the transmitter clutch and brake, a control lever for moving said actuating element, means operatively connecting said lever to said actuating element, means carried by said casing for pivotally supporting said lever, a primary solenoid having an armature operatively connected to said lever for moving said lever in one direction, a second solenoid having a second armature operatively connected to said lever for moving said lever in the opposite direction, yieldable means operatively connecting said armatures together and yieldable in tension and compression, and means for selectively energizing said solenoids.

2,860,749
CLUTCH FOR DRIVING MECHANISM
Max J. Keitz, Springfield, Mass., assignor to Perkins Machine & Gear Co., West Springfield, Mass., a corporation of Massachusetts
Application July 22, 1957, Serial No. 673,243
1 Claim. (Cl. 192—33)



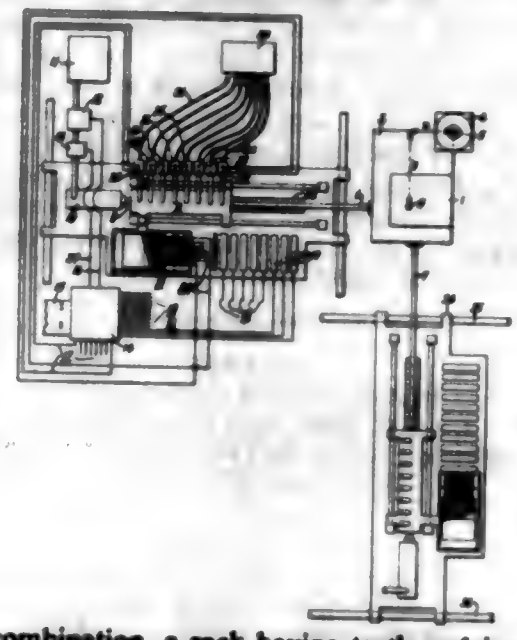
Driving mechanism comprising in combination, a support, separate driving and driven shafts in axial alignment and rotatable in said support, a cam shaft rotatable in said support, gearing connecting said cam shaft and driven shaft whereby the former is driven by the latter, clutch mechanism for operatively connecting said driving and driven shafts including a shiftable member for connecting or disconnecting said mechanism, a lever swingable on said support in opposite directions operatively connected to said shiftable member to connect or disconnect said clutch mechanism and having a cam engageable part, spring means urging said lever in clutch connecting direction, and a cam on said cam shaft having means adapted to engage the cam engageable part of said lever to swing said lever in clutch disconnecting direction and then to release said lever for said spring means to swing said lever in clutch connecting direction, said cam being in the form of a disc provided with a cut-out on its forward face and with a part pivoted in the cut-out for swinging in and out on an axis parallel to the axis of said cam shaft and having a cam portion provided with a face disposed in a plane angularly related to a plane at right angles to the longitudinal axis of said cam shaft.

2,860,750
NOVEL JACK CLUTCH FOR USE IN MACHINE-TOOLS AND TOOLS
Carlos Alberto Avanzati, Buenos Aires, Argentina
Application October 12, 1954, Serial No. 461,902
1 Claim. (Cl. 192—44)



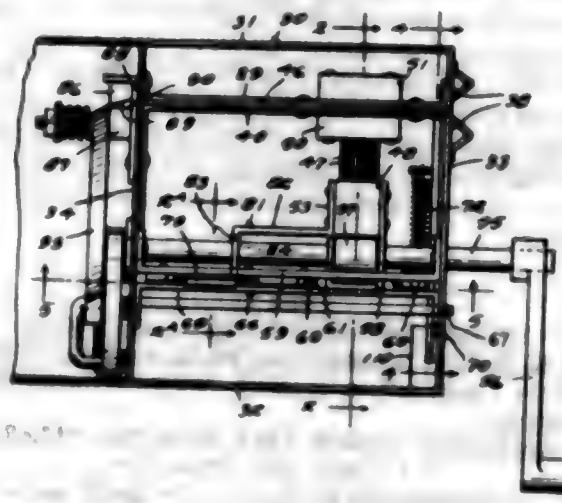
A jack for use in machine-tool and tools, comprising an outer member having an inner hollow octagonal in shape, pairs of balls, a ring lodged in said hollow and carrying in respective holes said pairs of balls, said balls being of a diameter larger than the thickness of said ring, a pin projecting outside of said outer member through an opening therein, said pin being provided with gripping means, said ring being connected at one point of its periphery with one end of said pin, a spring-urged stop traversing the wall of said outer member, said ring being provided at another point of its periphery with a plurality of notches arranged in line with said stop, a core having an axial drill and being arranged to contact said balls, said balls being arranged in four pairs, each pair being equidistantly spaced from the other and the balls of each pair being equidistantly spaced one from the other, driving means connected to said outer member, and driven means connected to said core.

2,860,751
POSITIONING DEVICE
William R. Seigle, New Hartford, N. Y., assignor to General Electric Company, a corporation of New York
Application July 5, 1956, Serial No. 596,970
10 Claims. (Cl. 192—143)



1. In combination, a rack having teeth and interposed lands, said teeth having a width of at least 0.1 inch and spaced apart by 0.8 inch, a latch assembly, said latch assembly comprising eight latches spaced 0.9 inch apart, said latches being of substantially equal but no greater width than the width of the lands on said rack, and means for driving a selected one of said latches into a land.

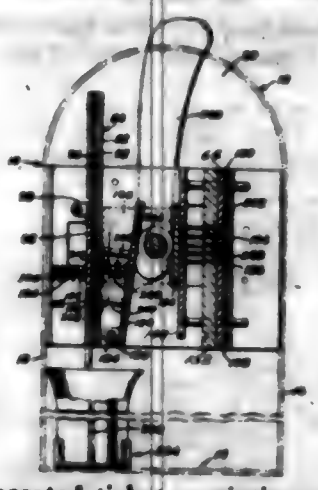
2,860,753
COIN COLLECTOR FOR TRAFFIC VIOLATIONS
Norman E. Moxley, Ellicott City, Md.
Application February 15, 1954, Serial No. 410,245
6 Claims. (Cl. 194—74)



1. A coin collecting machine for traffic violations comprising a housing, a ticket guide means carried by said housing, a spring-pressed normally closed shutter at one end of said guide means, a ticket receipting means movably carried by said housing, a movable operator connected with said ticket receipting means, a shutter operator rockably carried by said housing, and coin guide means carried by said housing confronting said shutter operator, said coin guide means guiding a coin moving therethrough to a position lodged between said operators, said shutter operator having an opening adapted for engaging about said first named operator, said opening having a width

less than the diameter of a coin whereby a coin lodged between said operators will close the opening in said shutter operator, movement of said first named operator effecting movement of said shutter to open position and insertion of a ticket in said guide means holding said shutter against closing whereby movement of said first named operator will effect release of the coin.

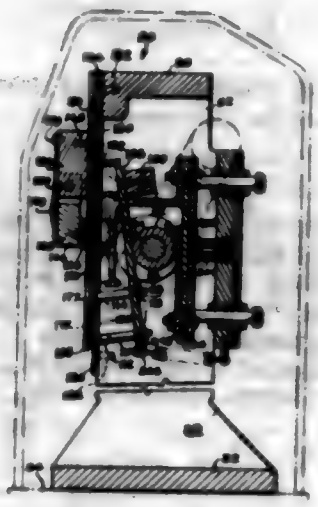
2,860,733
COIN COLLECTING AND RECEIPTING DEVICE
Norman E. Mozley, Ellicott City, Md.
Application September 21, 1954, Serial No. 457,329
3 Claims. (Cl. 194—78)



1. A coin operated ticket receipting machine comprising a housing, ticket guide means disposed in said housing and extending transversely thereacross, a carriage mounted for reciprocation on said housing, said carriage having a plurality of punches mounted thereon and adapted for movement towards and away from said ticket guide means, said punches having a length to extend across said ticket guide means, a coin chute connected with said housing, said coin chute comprising a pair of spaced substantially parallel upright plates, a third plate pivotally mounted for rotation below one of said pair of plates, the other of said pair of plates and said pivotally mounted plate having a plurality of apertures formed therein and substantially in register with each other, a fourth plate pivotally mounted on said housing adjacent the other of said pair of plates, said fourth plate having a plurality of coin sensing pins mounted thereon, said pins being disposed for pivotal projection through said registering apertures upon pivotal movement of said fourth plate toward said other of said pair of plates, means on said other of said pair of plates cooperating with said first pivotal plate to retain deposited coins of proper denomination in registry with said apertures, cam means fixedly mounted on a shaft, means mounting said shaft for rotation on said housing, said cam means constantly engaging said fourth plate and upon rotation of said shaft in one direction effecting movement of said pins to their coin sensing positions, said coin sensing pins moving said third plate after engaging coins supported on said coin retaining means, said first pivotal plate having a projection thereon extending laterally from a side thereof, eccentric means mounted on said shaft for effecting reciprocation of said carriage, and means on said eccentric for engagement with said projection to prevent operation of said machine in the absence of coins of the proper denomination in registry with said apertures, said projection being moved out of the path of said eccentric on movement of said third plate.

2,860,754
COIN COLLECTING AND RECEIPTING DEVICE
Norman E. Mozley, Ellicott City, Md.
Application July 7, 1955, Serial No. 520,423
3 Claims. (Cl. 194—83)

1. A coin operated ticket receipting device for a ticket having a stub portion, said device comprising a substantially hollow rectangular housing having a pair of opposed open ends, a coin receiving member mounted on said housing and extending across an end thereof, a plurality of coin sensing elements mounted in said housing for relative movement toward and away from said coin receiving member, a ticket receiving casing having a ticket guide passage therethrough, means fixedly securing said ticket receiving casing on said housing, said ticket receiving casing extending across the open side of said housing, said ticket receiving casing having a plurality of spaced aligned apertures extending transversely therethrough on each side of said passage, a mounting plate, said mounting plate having a plurality of spaced elongated punches loosely mounted thereon and projecting laterally therefrom, a backing plate for said mounting plate, said backing plate being adapted to extend across one of the re-

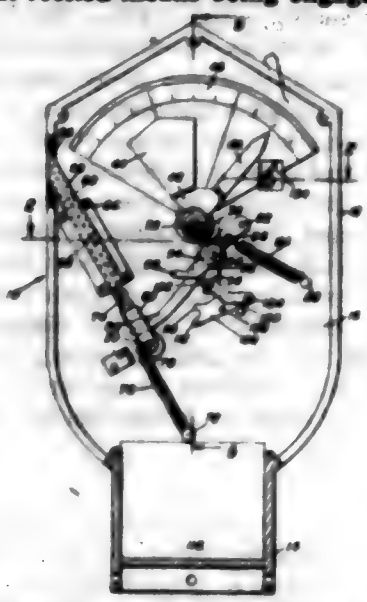


spective ends of said punches to prevent displacement thereof from said mounting plate, means mounting said mounting and backing plate for reciprocation on said ticket receiving casing with said punches slidably engaging within said aligned apertures, cam means mounted in said housing, said cam means being rotatable to effect reciprocation of said backing and mounting plates and to effect actuation of said coin sensing elements, a knife blade mounted on said housing, said knife blade being disposed substantially adjacent said guide passage, a second knife blade fixedly secured to said mounting plate for reciprocal movement toward and away from said first knife blade to effect a shearing action of said stub from said ticket, and means operable to prevent movement of said punches if said sensing elements fail to encounter coins in said coin receiving member.

2,860,755
PARKING METER
Rosario G. Ispadro, Indiana, Pa.
Application October 11, 1955, Serial No. 539,789
2 Claims. (Cl. 194—83)

1. A parking meter comprising a head enclosing a clockwork mechanism, a timing scale on said head, an indicating member having a pointer, said pointer cooperating with said timing scale, a coin chute mounted in said head, a coin receiver for receiving a coin from said coin chute, said coin receiver being pivotally mounted in said head, said indicating member being actuated by said clockwork mechanism, said indicating member being mounted on a shaft, a resilient disk on said shaft frictionally engaging said indicating member, a pivotally mounted arm having an actuating wheel rotatably mounted thereon, said wheel being engageable with said disk, means associated with said coin receiver for pivoting said arm to engage said wheel with said resilient disk,

and means connected to said wheel for rotating said wheel, said last recited means being engageable by a coin



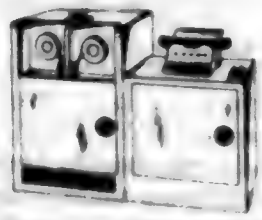
carried by said coin receiver whereby pivoting of said coin receiver will rotate said wheel.

2,860,756

INFORMATION TRANSLATING APPARATUS

Louis D. Wilson and Herbert F. Welsh, Philadelphia, and John Prosper Eckert, Jr., Gladwyne, Pa., assignors, by mesne assignments, to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application March 31, 1952, Serial No. 279,711
25 Claims. (Cl. 197—19)



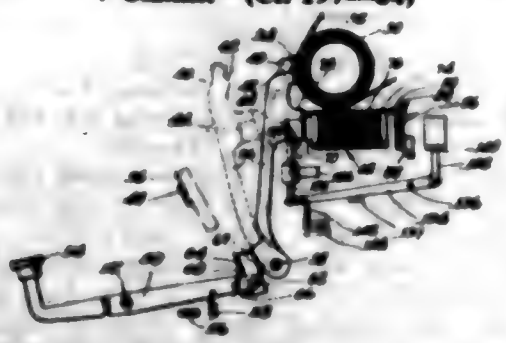
2. In apparatus for use with a record bearing medium and responsive to group entries on said medium, apparatus for transferring the intelligence represented by said group entries to another medium, said group entries being normally characterized by an odd number of component parts, and apparatus responsive to the presence of any even number of component parts in a group entry for disabling the transfer process.

2,860,757

ELECTRO-MAGNETIC TYPEWRITER

Abraham E. Auerbach, La Mesa, Calif., assignor to Leon Fine & Associates, Highland Park, Ill., a partnership

Application October 16, 1956, Serial No. 616,306
7 Claims. (Cl. 197—84)



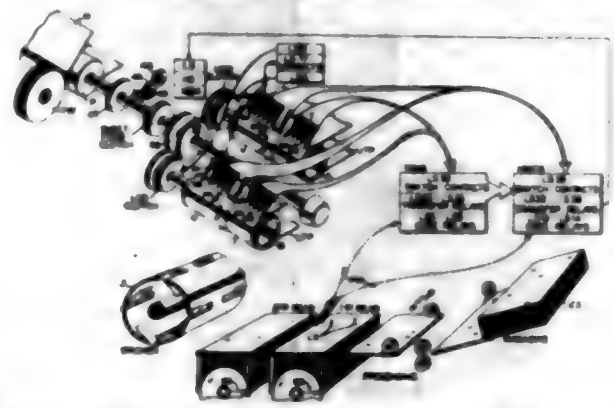
1. A typewriter having a platen, a pivotally mounted type bar having a type face thereon, a key for pivoting said type bar towards the platen, and a carriage escapement, the combination comprising a magnetic slug carried by said type bar, an electro-magnet acting on said slug upon energization of said electro-magnet to urge the type face toward the platen to form a typing impression, electrical circuit means for energizing said electro-magnet, a magnetic operator positioned adjacent said slug when said electro-magnet acts thereon for activating said operator by magnetic flux passing through said slug from said electro-magnet, and means operatively connecting said operator to said carriage escapement for operation thereof upon activation of said operator.

2,860,758

RECORD POSITIONING DEVICE

Kenneth E. Rhodes and Walter W. Wagner, Endicott, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application December 31, 1956, Serial No. 631,676
15 Claims. (Cl. 197—133)



5. In a machine controlled by a succession of records each bearing data indicia and line number representing line selection indicia for selecting the line of a record sheet upon which the data is to be recorded, means under control of said data indicia for recording the data on the sheet, means for feeding sheets one at a time to said recording means, a pair of feed control tapes each bearing indicia corresponding to the line selection identification of each line, means for advancing said control tapes in synchronism with a sheet advancing to said recording means, switch means for selecting one of said tapes to control said advancing sheet, means for causing the other tape to index to a home position to control the next sheet to be fed, and electrical control means for said feeding means and operated under joint control of the record line selection indicia and indicia on said selected tape for stopping the sheet in the selected recording position.

2,860,759

SENSING CONTROL FOR TABULATING MECHANISM

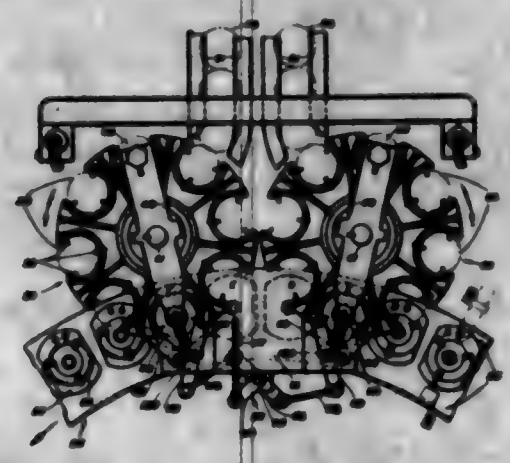
John B. Clark, Santa Clara, Calif., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application February 10, 1955, Serial No. 487,425
6 Claims. (Cl. 197—179)

1. The combination of a printing station, a carriage for supporting adjacent said printing station a worksheet hav-

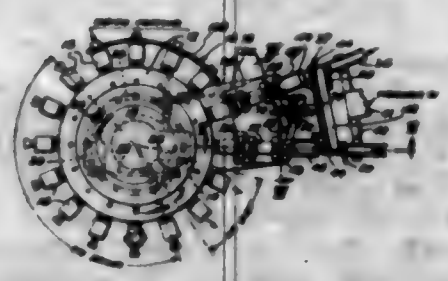
ing indicia of a selected printing position recorded thereon a predetermined distance therefrom, means for moving said carriage transversely of said printing station for placing various printing positions of a line of printing positions of said worksheet at said printing station, means for sensing said indicia, means responsive to sensed indicia for impeding the motion of said carriage and operative to position said selected printing position of said worksheet at said printing station, and means for automatically removing said impeding means.

2,860,760
LAMP BULB LOADER
Ernest E. Yee, Wenham, and Henry B. Maloney, Wakefield, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application June 17, 1955, Serial No. 516,313
7 Claims. (Cl. 198—34)



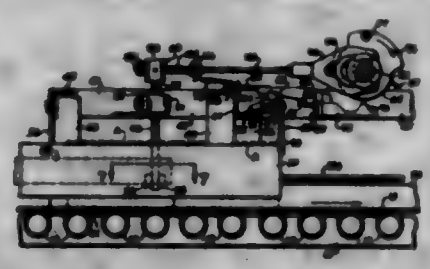
1. Apparatus for transferring bulbs comprising spring loaded fingers for receiving and bearing the weight of said bulb, means for positioning said bulb vertically on said fingers and while it rests thereon, a plunger for urging said bulb downwardly against the spring force of said fingers, and means for retaining said bulb from dropping after said bulb has passed clear below said fingers including suction means operatively associated with said plunger.

2,860,761
ARTICLE FEEDING DEVICE
Stephen J. Kocan, Cedar Grove, and Rudolph Walz, Jr., West Orange, N. J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 15, 1957, Serial No. 678,340
4 Claims. (Cl. 198—39)



1. Apparatus for feeding articles into a head of the vacuum-suction type and movable into an article-receiving position, comprising a stationary member disposed adjacent the article-receiving position of said head and adapted to receive an article in a predetermined position, a telescoping member normally in telescope axial engagement with said stationary member, means connected to said telescoping member for moving the latter from its telescoped position to an extended axial position and into atmospheric-sealing engagement with said head when in its article-receiving position to permit the sealed suction created by the vacuum within said head to rapidly and positively draw said article through said stationary member and said axially extended telescoping member and seat said article in said head.

2,860,762
ARTICLE CONVERGER CONVEYOR
Perry L. Alexander, William E. Hartis, and Louis F. Wilkens, Charlotte, N. C., assignors to Deacon Corporation, Charlotte, N. C., a corporation of North Carolina
Application April 5, 1954, Serial No. 421,884
1 Claim. (Cl. 198—32)

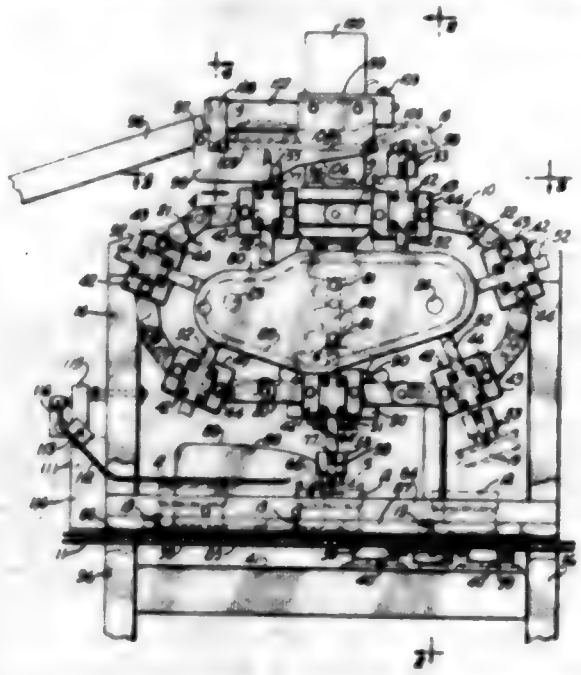


Apparatus for forming a plurality of rows of moving articles into a single row of moving articles comprising a plurality of laterally spaced primary side wall members defining passageways for receiving said plurality of rows of articles, conveyor means upon which said articles rest and for advancing said articles along said passageways, said conveyor means extending beyond the front ends of said primary wall members, a cam shaft driven in timed relation to said conveyor means and having a plurality of cams fixed thereon, one for each of said passageways, an inwardly biased clamping member adjacent the discharge end of each passageway and disposed adjacent at least one of the wall members defining each passageway, means successively controlled by said cams for actuating said clamping member comprising a vertically positioned rod extending between one of said side wall members and said clamping member, a cam connected to the lower end of said rod whereby upon said rod being rotated by one of said plurality of cams the cam on the lower end of the rod engages the clamping member for clampingly engaging the side surface of the leading article in each row in each passageway for restraining forward movement of the corresponding rows of articles, gate means spaced forwardly from the clamping means and normally being disposed in the path of travel of the row of articles in each passageway, means under control of said cams for normally maintaining said gate means in operative position whereby each successive leading article in each row is restrained from forward movement as it engages the corresponding gate means, and said cams being so arranged as to open the corresponding gate means while actuating the corresponding clamping means to thereby permit the leading article in each row to be advanced by the conveyor means as the second leading article in each row is restrained from forward movement by the conveyor means, and a pair of converging side wall members having their rear ends connected to the outermost of the primary side wall members and having their front ends spaced from each other whereby the converging side wall members cause the successive articles to be converged into a single row.

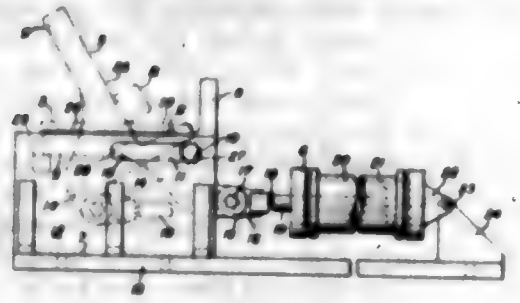
2,860,763
TRANSFER MECHANISM
William R. Kohrs and Daniel L. Orloff, Madison, and Robert L. Robde, Fort Atkinson, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois
Application July 31, 1956, Serial No. 601,210
8 Claims. (Cl. 198—33)

1. In an article handling machine, a transfer device for removing articles from successive supporting forms carried on a horizontal run of a continuously traveling

endless conveyor and for delivering the articles in inverted relation onto a discharge platform arranged in spaced relation above the article carrying conveyor, said transfer device comprising an endless chain supported on a pair of spaced end sprockets which are mounted above the conveyor, a series of supporting plates mounted on the chain and having guideway forming recesses, T-shaped supporting heads with the stem portion thereof slidable in the guideway forming recess for movement in a path transversely of the path of travel of the chain, cam means for controlling the sliding movement of the heads, gripper members swingably mounted on opposite sides of each of the heads and having laterally extending arms, cam plates mounted along said chain and engaging said arms for controlling the operation of the gripper members to engage the articles between the gripper members as the heads are moved by the chain into aligned relation with the article supporting forms on the endless conveyor and cam plates mounted along said discharge platform for engaging said arms and moving the gripper members to release the articles as the heads are moved beneath the discharge platform.



2,860,764
BLOOM MANIPULATOR
John P. Barton, Antioch, Calif., assignor to United States Steel Corporation, a corporation of New Jersey
Application August 17, 1956, Serial No. 604,845
5 Claims. (Cl. 198—33)



4. An apparatus for centering and turning an elongated article while supported on a pair of rolls of a runout roller conveyor table comprising a member having a pair of legs connected in L-shaped configuration and normally occupying a position with one of said legs arranged vertically at one side of said table and with the other of said legs extending horizontally inwardly between said rolls, in which position both of said legs are out of the path of movement of an article over said table, a pair of trunnions connected with and projecting in opposite directions from said member, a pair of trackways on which said trunnions have sliding engagement to mount said member for rectilinear movement in a direction axially of said rolls from its said normal position to a second position in which said vertical leg is adjacent the longitudinal centerline of said table, each of said trackways having stops engageable with said trunnions upon movement of said member to said second position and cooperating therewith to provide a pivot support about which said member may be rotated to tilt said horizontal leg upwardly to engage and turn said article.

2,860,765
SWIVEL COUPLING
Charles N. Bebinger, New Philadelphia, Ohio, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 16, 1955, Serial No. 508,376
4 Claims. (Cl. 198—95)

1. In a swivel joint for providing for a wide range of swing between upper and lower elements, a guide plate upon which an upper element is supported, said guide plate having a pair of elongated arcuate guide surfaces extending from spaced points, respectively towards a point of intersection, laterally spaced horizontally elongated shoes secured to said upper element having lateral guided contact of the remote sides thereof with said elongated arcuate guide surfaces, respectively, each of said shoes having an arcuate surface on the end thereof facing toward said point of intersection, said arcuate end surface of one of said shoes slidingly engaging one of said arcuate guide surfaces as the other of said shoes moves in lateral guided contact with the other of said arcuate guide surfaces whereby said shoes remain in constant engagement with said arcuate guide surfaces.

2,860,766
ROLLER CONVEYOR
Willy Welter, Schaffhausen, Switzerland, assignor to Wheelabrator Corporation, Mishawaka, Ind., a corporation of Nebraska
Application May 7, 1956, Serial No. 583,274
10 Claims. (Cl. 198—127)

1. In a roller conveyor, a roller assembly comprising an elongate shaft having a cross-section other than round and mounted for rotational movement about a horizontal axis, a plurality of solid annular roller discs having a bore extending axially therethrough corresponding in cross-section to the cross-section of the shaft for enabling sliding movement of said discs axially on the shaft, said discs having annular grooves in the end faces adjacent the bore, segmental spacer members each of which is formed with a bore corresponding to the cross-section of the shaft to enable the spacer members to be received about the shaft in fitting relation and annular ribs extending outwardly axially from the end faces of the spacers about the bore dimensioned to be received in fitting relation with the grooves in the roller discs, said spacers being formed of at least two segmental parts separable along planes which extend longitudinally of the shaft and through the bore for assembly onto the shaft alongside the disc rollers, and means for holding the disc members and spacer members in fixed side by

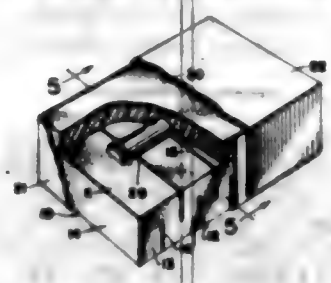
therewith an infolded upper marginal top portion with ing slots at right angles to the plane of the projections,

side relation on the shaft with the ribs of the spacer members seated within the grooves of the disc members for holding the spacer members in the assembled relation on the shaft.

2,860,767
DISPLAY CONTAINERS
Jerome Shiffman, New York, N. Y.
Application September 10, 1957, Serial No. 683,169
6 Claims. (Cl. 206—45.13)

1. A display container having a bottom casing in the form of a tray, a cover having opposite walls, the tray being pivotally attached to said walls at points between its front and back, a substantially V-shaped leaf spring having one of its legs attached to the rear wall of the cover, its other leg being free and positioned to cause it to exert resilient pressure against the rear wall of the tray when the cover is in closed position over the tray, and being resiliently operative against the bottom of the tray to support the tray in an inclined position with respect to the cover when the container is in its display position.

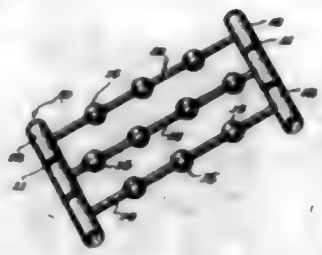
2,860,768
PACKAGING OF FRAGILE OBJECTS
Vernon L. Smithers, Akron, Ohio, assignor to The V. L. Smithers Manufacturing Company, Akron, Ohio, a corporation of Ohio
Application August 23, 1954, Serial No. 451,455
1 Claim. (Cl. 206—46)



In combination with a shipping container, a block of foamed synthetic resinous material fitting within said shipping container, said block having a plurality of substantially parallel spaced cuts extending inwardly from the top and bottom surfaces thereof beyond the central plane of the block, said cuts extending across the entire width of said block and having a transverse dimension, said block having low resilience and being oversize with respect to the interior of said shipping container in a direction transverse to said plurality of cuts, and compressible for insertion within the container.

2,860,769
SUPPORTING STRUCTURE KIT
Harold E. Waller, Kewanee, Ill.
Application October 5, 1956, Serial No. 614,146
3 Claims. (Cl. 206—46)

1. In a kit for assembly into a grid-like supporting structure having a generally rectangular shape and having a size selected from a range of sizes that vary in predetermined increments and comprising a plurality of parallel dowel rods telescoped over and secured to a plurality of parallel dowel pins, said dowel pins extending at right angles to said dowel rods, and a plurality of discrete elemental dowel pin receiving members telescoped over and secured to said dowel pins in predetermined spaced relationship; the combination of a plurality of elongated wooden dowel rods each having a plurality of spaced score grooves defining a plurality of severable rod sections, said grooves marking and facilitating the shortening of said rods by any desired incremental length; each rod section being formed with a bore such that all the bores in each rod are identical in size and shape, parallel, and coplanar; a plurality of wooden dowel pins having a cross sectional shape and size corresponding to that of said bores; and a plurality of discrete elemental wooden dowel pin receiving members each having a single bore of substantially the same size and shape as the bores in said rod sections, said dowel pin receiving members having the same cross sectional dimension as the cross sectional dimension of said dowel rod sections, with said pins being insertable in said rods and said dowel pin receiving members to form said supporting structure.



2,860,770
STORAGE AND SALES PACKAGE
Leo F. Wagner, Brooklyn, and Milton N. Schreiber, Flushing, N. Y., assignors of one-third to Ira J. Seigfreid, Kansas City, Mo.
Application November 15, 1956, Serial No. 622,431
3 Claims. (Cl. 206—46)

1. A sales and display package for a precious jewel comprising the following elements: a precious jewel, a paper base sheet, a display cloth secured to and positioned over a substantial area of said paper, a pad formed in the center of said paper and said cloth, said pad comprising an outside cover, an intermediate wadding section of comparatively large cross-sectional area having an aperture therein, and a base of soft, pliable adhesive-like material, said jewel being depressed into the surface of the outer covering through the aperture in the wadding and into the soft pliable material, whereby it will be securely held and able to be viewed in an attractive manner, and said paper base sheet and display cloth being foldable for securing said precious jewels while being shipped or carried.

2,860,771
CARRYING CONTAINER
Edwin J. Spiegel, Jr., Webster Groves, and Robert J. Schoknecht, Olivette, Mo., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Application November 12, 1953, Serial No. 391,552
5 Claims. (Cl. 206—65)

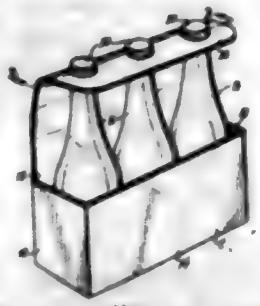
5. A carrying package having a body portion with aligned bottles or the like with crown caps or similar top closures therein, the body portion having upstanding side and end walls, one side wall being substantially the height of the bottles or the like and having integral

ternal shoulder at the upper end of each cylinder half, a

adapted to be connected to said circuit, a transducer support adapted to carry said transducer, a workpiece ro-

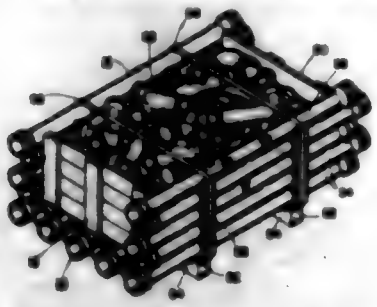
nions connected with and projecting in opposite directions from said member, a pair of trackways on which said the shaft alongside the disc rollers, and means for holding the disc members and spacer members in fixed side by

therewith an infolded upper marginal top portion with spaced openings therein, said openings being of smaller diameter than the diameter of the closure caps, said top portion extending only substantially in a horizontal plane with respect to its side wall and over the top of the bottles with the closure caps extending through the openings therein and having a terminal free end edge, said bottle closure caps being securely engaged by the



margins of the top portion defining said openings, and the other side wall providing an unobstructed opening substantially the width of said side wall and defined by and between a terminal free upper edge thereof and the terminal free end edge of said top portion, whereby the package may be carried by inserting one's fingers into the last mentioned opening and under the said infolded marginal top portion.

2,860,772
SHIPPING PACKAGE FOR PIPE LENGTHS AND FITTINGS
Samuel C. Northington, Jr., Lookout Mountain, and James D. Martin, Chattanooga, Tenn., assignors to Combustion Engineering, Inc., New York, N. Y., a corporation of Delaware
Application August 24, 1956, Serial No. 605,983
10 Claims. (Cl. 206—65)

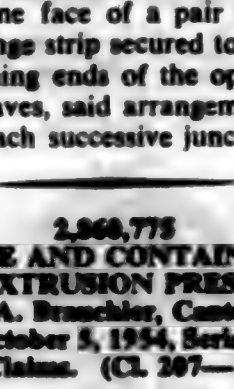


4. A unitary package containing pipe fittings and comprising spaced outer walls formed of parallelly disposed uniform pipe lengths having enlarged end portions, said package including end walls extending between said outer walls; cooperatively associated therewith to form a container casing, said end walls butting up against the inside shoulders of said enlarged end portions, said pipe fittings being confined in said container and exerting pressure against said end walls, and girding means holding the pipe lengths, pipe fittings, and end walls in assembled relation.

2,860,773
MULTIPLE ROLL PACKAGE
Eli Alvin Zachheim, South Plainfield, N. J., assignor to Johnson & Johnson, a corporation of New Jersey
Application June 4, 1957, Serial No. 663,404
13 Claims. (Cl. 206—65)

12. A carton for holding rolled material on a core tube comprising a series of four wall panels hingedly joined to each other and forming a substantially square carton, an end closure comprising a flap at the end of each wall panel, the flaps being folded over in abutting relation, the flaps on the first and third panels having inwardly folded axially extending abutting projections and the said projections and the flaps to which joined having register-

ing slots at right angles to the plane of the projections, and the flaps on the second and fourth panels having bifurcated projections fitting in the said slots and around

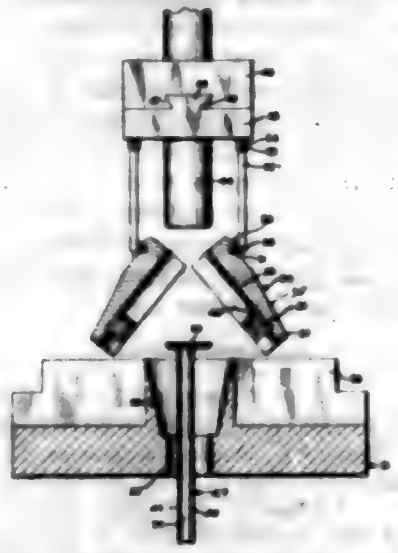


the first said projections below the said slots, the four said projections forming a stud for holding a core tube in position.

2,860,774
COIN HOLDER FOLDER
Cecil G. Ball, North Little Rock, Ark.
Application June 13, 1956, Serial No. 591,148
1 Claim. (Cl. 206—84)

A coin folder comprising a plurality of leaves of appreciable thickness, means joining the adjoining ends of said leaves to provide an accordion pleat, means in each leaf to receive a coin and means to retain the coin in said receiving means, said means of joining said leaves comprising a flexible hinge strip secured to only the adjoining edge portions of one face of a pair of adjacent leaves, a second flexible hinge strip secured to the adjoining edge portions and adjoining ends of the opposite face of said pair of adjacent leaves, said arrangement of hinge strips being reversed at each successive juncture of said leaves.

2,860,775
SPLIT DIE AND CONTAINER FOR EXTRUSION PRESS
Charles A. Brauchler, Canton, Ohio
Application October 5, 1954, Serial No. 460,461
2 Claims. (Cl. 207—17)



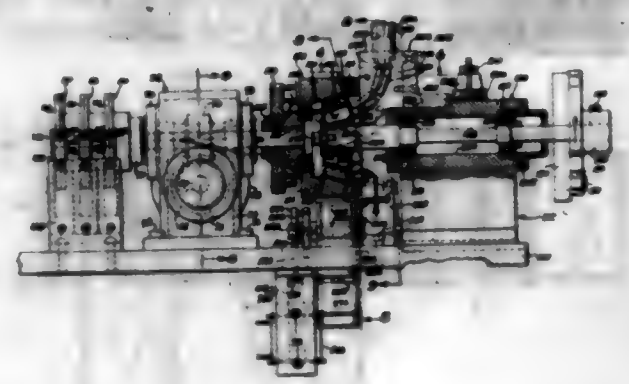
1. Extrusion apparatus comprising a stationary die block having a vertical opening therethrough, the upper end of said opening being upwardly flared, a pair of similar downwardly tapered cylinder halves fitting in the flared upper end of said opening and having mating half-cylindrical openings therein forming an extrusion chamber to receive a metal blank, an internal annular shoulder at the lower end of each half-cylindrical opening, an ex-

scoped over and secured to said dowel pins in predetermined spaced relationship; the combination of a plu-

ing side and end walls, one side wall being substantially the height of the bottles or the like and having integral

ternal shoulder at the upper end of each cylinder half, a die half located within the lower portion of the half-cylindrical opening in each cylinder half and seated upon the internal annular shoulder therein, said die halves having mating die openings therein, a vertically movable head above the extrusion chamber, a plunger carried by said head and slidable into the extrusion chamber to extrude the metal of the blank from the extrusion chamber through the cavities of the die halves with a relatively thin integral head at the top of the extruded metal remaining in the extrusion chamber, and hooks depending from said head for engaging said external shoulders for raising the cylinder halves out of the opening in the block upon upward movement of the head, so that said cylinder halves will pivot upon said hooks and the lower ends of the cylinder heads with the die halves therein will swing apart releasing the head on the extruded metal from said die halves, so that the extruded metal may drop through the opening in the stationary die block.

adapted to be connected to said circuit, a transducer support adapted to carry said transducer, a workpiece rotator having a rotary portion with an internal workpiece-rotating surface of substantially circular cross-section therein disposed adjacent said transducer, means for driving said rotator, a workpiece inlet and a workpiece outlet spaced apart from said transducer, and means for



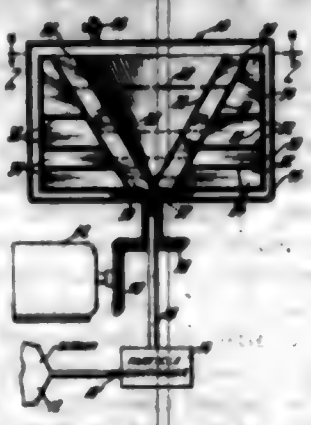
moving the workpiece from said inlet to said transducer into rotative engagement with said rotator, said workpiece rotator having means associated therewith for discharging the workpiece from its position of engagement with said rotator into said outlet, said workpiece-discharging means including a workpiece-releasing opening in said rotary portion communicating with said outlet.

2,868,776

CLASSIFYING APPARATUS

Donald F. Hays, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 15, 1954, Serial No. 416,268
9 Claims. (Cl. 209—12)



1. A device for classifying small solid particles, comprising in combination fluid means for agitating and suspending said particles and rotating means for classifying said particles, said classifying means comprising a hollow inverted inner cone, a hollow outer coaxial cone surrounding said inner cone and disposed in spaced relation thereto, a coaxial cylindrical housing surrounding said outer cone and disposed in spaced relation thereto, said cones and said housing being secured together and adapted to be rotated as a unit, radial vanes extending from the outer surface of said inner cone to the inner surface of said outer cone and thence in the same direction from the outer surface of said outer cone to said housing, said vanes dividing vertically and radially the spaces between said cones and between said outer cone and said housing, vertically spaced horizontal rings extending from said outer cone to said housing, said rings dividing the space between said outer cone and said housing into adjacent horizontal annular chambers, said chambers being divided radially by said vanes, and horizontal slots in said outer cone between said rings providing access of said particles to each of said chambers.

2,868,777

ELECTRONIC FLAW-DETECTING DEVICE

Herman A. Ortegren, Grosse Pointe, and Marvin J. Minter, Detroit, Mich., assignors, by mesne assignments, to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

Application January 18, 1954, Serial No. 404,478
9 Claims. (Cl. 209—72)

1. A work handling and controlling machine for an electronic flaw-detecting circuit comprising a transducer

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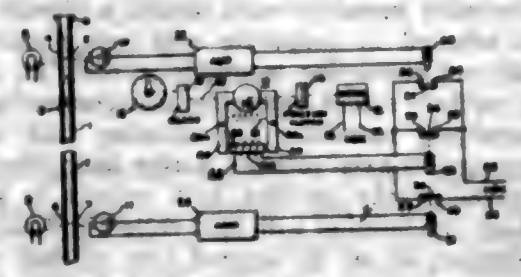
2,868,778

METHOD AND APPARATUS FOR TESTING MAGNETS

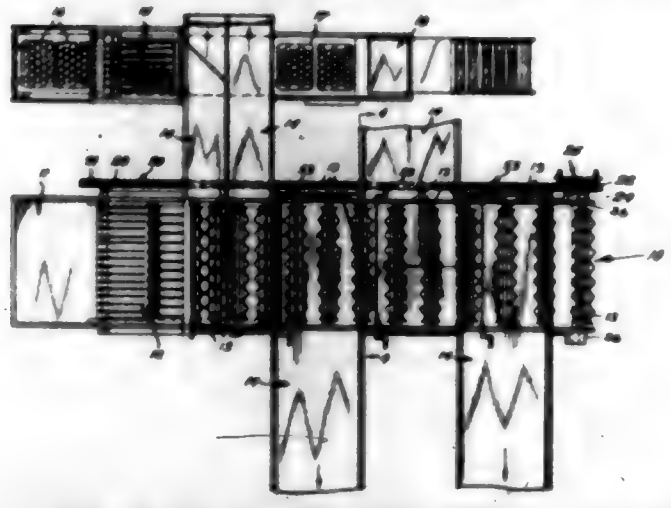
Howard L. Becker, Jr., Louisville, Ky., assignor to General Electric Company, a corporation of New York

Original application July 11, 1951, Serial No. 236,282, now Patent No. 2,781,127, dated February 12, 1957. Divided and this application October 12, 1956, Serial No. 615,697
4 Claims. (Cl. 209—72)



1. Apparatus for testing magnets comprising a generally vertical hollow elongated member for loosely accommodating the magnets to be tested, said member having a first transverse passage therethrough in the upper portion thereof, said member having a second transverse passage therethrough spaced below said first passage, a first light source for directing light through said first passage, a second light source for directing light through said second passage, a first light-sensitive cell aligned with said first passage for receiving light from said first light source, a second light-sensitive cell aligned with said second passage for receiving light from said second light source, an indicator, means responsive to the interruption of light through said first passage by a magnet falling through said member past said first passage for initiating operation of said indicator, and means responsive to the interruption of light through said second passage by said magnet falling through said member past said second passage for stopping operation of said indicator.

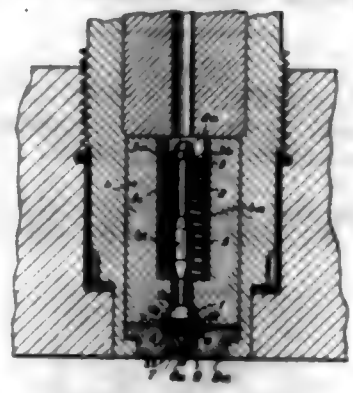
2,860,779
MACHINE FOR GRADING ARTICLES BY SIZE
Joseph F. Linderman and William Gerald Dobbs, Yakima, Wash., assignors to Northwest Equipment Company, Inc., a corporation of Washington
Application April 28, 1955, Serial No. 504,579
7 Claims. (Cl. 209—84)



1. A machine for grading articles by size comprising a conveyor embracing in its construction a pair of spaced parallel driven chains; each formed with a number of identical lengths of flexible chain alternating with a number of rigid members each substantially longer than a link of said lengths of chain; a roller journaled on each said rigid member at a point spaced from a plane common to said rigid members and said lengths of chain; said driven chains each being trained about a driving sprocket and a take-up sprocket carried by journaled shafts spaced longitudinally of the machine; driving means having means for rotating said take-up sprocket shaft at a faster speed than said drive sprocket shaft; a slip clutch interposed between and operably interconnecting said driving means and said take-up sprocket shaft and constituting a rotation differential compensator therebetween; laterally extending conveying members each having its end journaled on opposed rigid members of said chains; said conveying members each having a plurality of half pockets adapted to cooperate with half pockets of the next adjacent conveying members to form an article receiving pocket; means operably interconnecting successive conveying members for securing said conveying members against axial rotation during their effective operating travel; tracks inclined with respect to said common plane cooperating with said rollers for rotating said rigid members about the journal axes of their respective conveying members; and manually operable means for varying the inclination of said tracks at multiple locations along their lengths.

2,860,780
FUEL INJECTION VALVE
Kurt Zieseke, Koln-Holweide, and Bernhard Sonntag, Koln-Buchforst, Germany, assignors to Klockner-Humboldt-Deutz Aktiengesellschaft, Koln, Germany
Original application December 6, 1954, Serial No. 473,397, now Patent No. 2,812,979, dated November 12, 1957. Divided and this application May 22, 1957, Serial No. 660,913
Claims priority, application Germany December 12, 1953
5 Claims. (Cl. 299—107.6)

1. In combination in a fuel injection valve: a casing having fuel passage means therethrough including a substantially vertical first bore and a frusto-conical shaped chamber arranged below said bore in substantially axial alignment therewith and provided with a frusto-conical valve seat for conveying fuel therethrough to a combustion chamber, said passage means also including an injection bore communicating with said frusto-conical shaped chamber and in substantially axial alignment therewith while being arranged below said valve seat, a valve member including a stem extending into said first bore and having its upper end provided with a shoulder and having its lower end provided with a closing body located within said frusto-conical shaped chamber, said closing body having a hemispherical surface for engagement with said valve seat, supporting means adjacent said shoulder, spring means resting in said first bore while having its upper end in engagement with said supporting means so as continuously to urge the same upwardly, said supporting means comprising a spring collar having an axial bore therethrough comprising a lower cylindrical portion of a diameter considerably greater than the diameter of the adjacent stem portion of said valve member and having an adjacent upper frusto-conical portion tapering toward said cylindrical portion and being spaced from said shoulder, rolling means arranged in

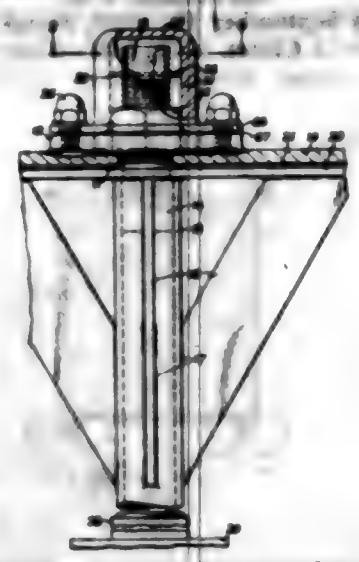


said frusto-conical portion and in engagement with said shoulder to thereby suspend said valve member so as to allow tilting movement thereof in any direction, and an extension member rigidly connected to the bottom portion of said closing body, said extension member having a frusto-conical control surface section widening in a direction away from said stem and extending into said injection bore, the largest diameter of said control surface section within said injection bore when said valve member engages said valve seat being slightly less than the diameter of said injection bore so as to leave a clearance therebetween for the fuel to be injected and to allow tilting movement of said extension member within said injection bore when said valve member tilts about said supporting means, said frusto-conical control surface section being operable gradually to increase the space between the latter and said injection bore in response to the downward movement of said valve member against the thrust of said spring means.

2,860,781
CATHODIC PROTECTION OF METAL STRUCTURES
Jack Horace Percival Randall, deceased, late of London, England, by Grosvenor Gardens Branch of the Trustee Department of the Westminster Bank Limited, executor, London, England, assignor to F. A. Hughes & Co. Limited, London, England, a British company
Application March 15, 1957, Serial No. 646,448
Claims priority, application Great Britain March 21, 1956
6 Claims. (Cl. 204—196)

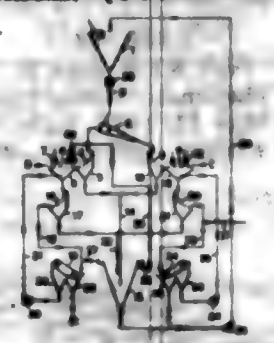
1. Means for suspending an anode from the top of a ship's tank comprising upwardly extending diverging arms attached together at their lower ends, a plate fixed horizontally on the top of said arms for engagement with the underside of the top of the tank, said plate being fixed to said arms, a bolt rigidly attached to the plate and having its threaded upper portion passing up through a bolt hole in the tank top, connection means on said bolt for detachable engagement with a lifting cable whereby said bolt may be drawn up through the hole in the tank top, a nut threaded on the bolt for drawing the

plate upwardly whereby the tank top is clamped between the plate and the nut, said connection means being of a size to permit the nut to pass freely over the cable and



said connecting means, a cap for covering the bolt hole, bolt and nut, and means for connecting said cap to the tank top.

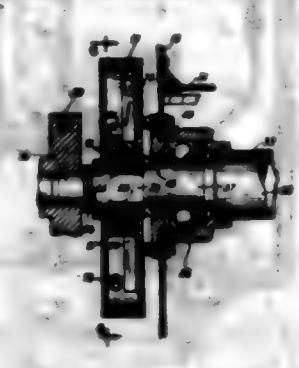
2,868,782
PROCESS FOR SEPARATING A MIXTURE OF SOLID PARTICLES
Frank J. Fontein, Heerlen, Netherlands, assignor to Stamicarbon N. V., Heerlen, Netherlands
Application January 25, 1957, Serial No. 636,333
Claims priority, application Netherlands January 27, 1956
7 Claims. (Cl. 209—172.5)



1. A continuous separation process comprising the steps of separating a mixture of solid particles into fractions in accordance with specific gravity in a hydrocyclone with the aid of a separating suspension of fine magnetizable particles in liquid, rinsing the separated fractions on rinsing screens to remove adhering magnetizable particles therefrom, the throughput of the rinsing screens constituting separating suspension diluted by rinse liquid and containing some non-magnetic particles, screening said diluted suspension to remove relatively coarse non-magnetic particles therefrom, supplying said diluted and screened suspension to a static thickener yielding a dilute overflow fraction and a thickened suspension of magnetizable particles at such a rate that the thickener is overloaded, whereby a major portion of the remaining non-magnetic particles are discharged in the dilute overflow fraction together with a minor portion of the fine magnetizable particles, supplying at least part of said dilute overflow fraction to a magnetic separator to recover magnetizable particles therefrom, and recycling the recovered magnetizable particles into the system.

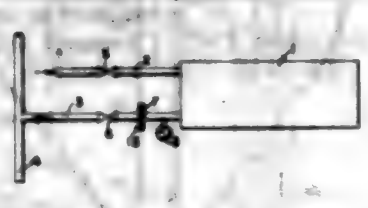
2,868,783
VIBRATING APPARATUS FOR HANDLING LOOSE MATERIAL
Louis W. Johnson, Eugene, Oreg.
Application April 23, 1956, Serial No. 579,836
8 Claims. (Cl. 209—366.5)

1. A screen vibrating apparatus for imparting constant amplitude of vibration to a screen member whose effective mass varies in accordance with loading and other conditions, comprising means mounting said member for vibrating movement, a pair of weights mounted on said member for swinging movement about a first axis and for rotary movement about a second axis parallel to said first axis but offset therefrom so that swinging movement of said weights about said first axis changes the distance between the center of gravity of each weight and said second axis, means for rotating said weights about said second axis to cause said weights to move



about said first axis toward positions at which said distance is a maximum, said weights having sufficient mass to cause said member to vibrate about said first axis before said weights reach such positions so that upon an increase in the effective mass of said member said weights will swing toward such positions to compensate for such increase and will swing away from such positions to compensate for a decrease in the effective mass of said member thus to maintain said member vibrating about said first axis to maintain a uniform amplitude of vibration.

2,868,784
FILTRATION METHOD
Charles E. Breithaupt, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application March 15, 1955, Serial No. 494,321
2 Claims. (Cl. 210—75)



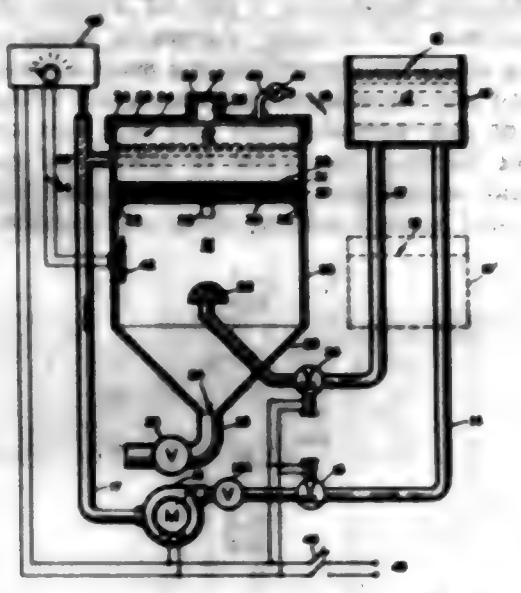
1. In the process of filtering a liquid containing a fibrous filtering aid by passing said liquid through a rupturable filtering means, the improvement comprising passing the filtrate liquid from the filtering means past a pressure-responsive means through a downstream perforate member capable of transmitting the filtrate without substantial pressure increase and which retains fibrous filtering aid upon rupture of the filtering means, whereupon the pressure at the downstream perforate member is increased by the massing of the filtering aid thereon and indicated by the pressure-responsive means, whereby ruptures in the upstream filtering means are detected.

2,868,785
LIQUID RECIRCULATION SYSTEM
Paul John Gardner, Davenport, Iowa, assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application October 21, 1954, Serial No. 463,789
14 Claims. (Cl. 210—195)

1. A liquid recirculation system, comprising a liquid supply container, an open liquid treatment container, means for recirculating liquid from the supply container to the treatment container and back to the supply container, and means for automatically maintaining the liquid level in the open treatment container comprising

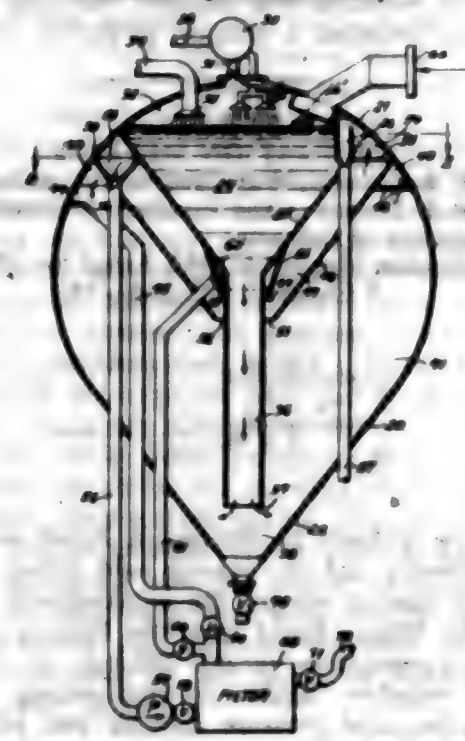
injection bore communicating with said frusto-conical the tank top, a nut threaded on the bolt for drawing the

means including a centrifugal pump in the recirculation means for supplying liquid from the supply container to



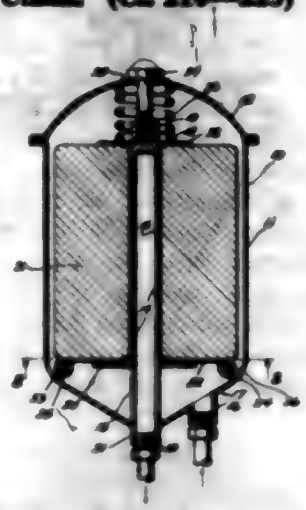
the treatment container and means for sealing the supply container except at the connections to said recirculation means.

2,860,785
HOT PROCESS SOFTENER
Arthur E. Kittredge, Audubon, N. J.
Application August 8, 1955, Serial No. 527,049
2 Claims. (Cl. 210—196)



1. In a hot process water softener, an outer casing having downwardly converging conical walls, downwardly converging conical walls coaxial with the casing near the top thereof and defining a primary mixing and reaction chamber, a downcomer at the center of the casing extending vertically downward from the bottom of the primary mixing and reaction chamber and terminating adjacent to and above the bottom of the casing, a further downwardly converging conical wall in the casing spaced below and generally in conformity with the wall defining the bottom of the primary mixing and reaction chamber, opened at the bottom around the downcomer and with the downcomer, and the downwardly converging wall defining the primary mixing and reaction chamber, forming a backwash storage compartment immediately below the primary mixing and reaction chamber, the further downwardly converging conical wall and the casing defining a sludge filtration compartment beneath the downwash storage compartment.

2,860,787
MAGNETIC OIL FILTERS
George E. Pieper and Arthur C. Fraehmel, Milwaukee, Wis.
Application September 12, 1955, Serial No. 533,684
1 Claim. (Cl. 210—223)



In combination with a conventional container for an oil filter cartridge in a vehicle oil system, a filter cartridge, a circular metal plate having a circular central aperture disposed freely under said cartridge, a pair of cylindrical permanent magnets, tab means oppositely laterally integral with said plate embracing the magnets and securing the same thereto, and stops struck from the plate engaging the ends of said magnets to prevent longitudinal displacement thereof.

2,860,788
NECKTIE RACK
Albert H. Hardman, Mount Lebanon, Pa.
Application May 12, 1955, Serial No. 507,798
5 Claims. (Cl. 211—69)

1. A necktie holder in the form of a wall mountable base having a series of outwardly open holes each fitted with an outwardly extending rod and a spring for each rod supported from said base and having its outer end turned away from said rod, characterized in that each spring is a U-shaped wire with a loop at its outer end connecting spaced legs that extend along opposite sides of its rod toward said base, a pair of sockets in said base, one socket on each side of its rod and spaced therefrom to receive the ends of said legs and hold them spaced from said rod at its inner end, and means defining a bend in each leg adjacent its loop, said bends curved to contact said rod adjacent its outer end to maintain said legs spaced from said rod at its outer end.

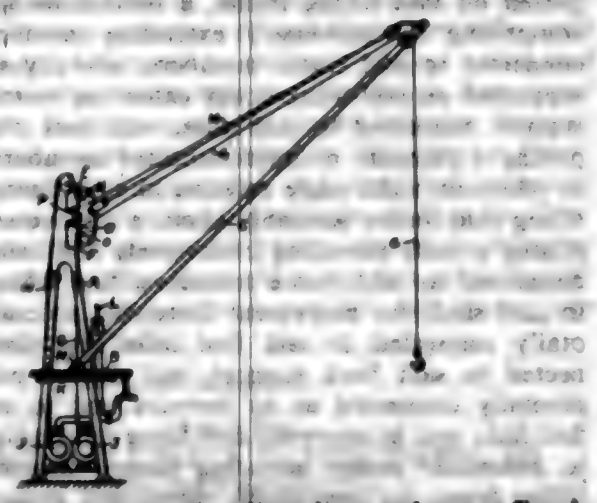
2,860,789
TURNING CRANES
Thor Fladmark, Voldsdalen, Aalesund, Norway
Application May 31, 1956, Serial No. 586,861
1 Claim. (Cl. 212—58)

In a stationary turnable crane having a liftable and lowerable outrigger, particularly for use on ships, comprising a stationary crane mast having a fixed axis and having a platform mounted thereon, a rotatable cogged rim on said platform, a V-shaped boom attached to said rim so as to be turned therewith in a horizontal plane, the improvement comprising a pair of guide pulleys, a hoisting

amplitude of vibration to a screen member whose effec-

uid level in the open treatment container comprising

wire and a boom lift wire extending over said pulleys respectively, a turnable mounting member in which said pulleys are mounted, a vertically extending pintle attached to said mast and about which said mounting member is turnably mounted, a third guide pulley located above said pintle in a position to receive said boom lift wire from



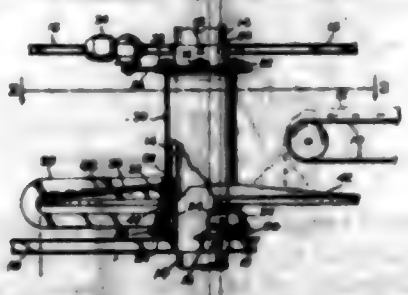
one of said first mentioned pulleys in a path extending in prolongation of the center line of said pintle, said boom lift wire passing first upwardly and over said third guide pulley, then downwards, whereas said hoisting wire passes directly downwards, all in such a manner that said wires cannot enter into contact with each other, when the mast is turned about the vertical axis of the crane.

2,860,798

FEEDER FOR FILLING SILOS AND LIKE STRUCTURES

Harold E. Erickson, Auburn, and Byron R. Brookhyser, Milton, Wash.; said Erickson assignor to Dale L. Schubert, Tacoma, Wash., and said Brookhyser assignor to Columbia Veneer Company, Seattle, Wash., a corporation of Washington

Application February 21, 1956, Serial No. 566,933
6 Claims. (Cl. 214—17)



1. A feeder for filling silos and like structures comprising a plate having a diameter smaller than the internal diameter of the silo and an upper surface adapted for the deposition of material thereon, means for rotatably mounting the plate in a horizontal position within the silo centrally thereof, material deflecting means to be arranged across the upper surface of the plate, means for mounting the deflecting means for rotation, drive means interconnecting the plate and deflecting means for simultaneous rotation of the deflecting means by rotation of the plate and in the direction of rotation of the plate but at a speed less than that of the plate, and power means operatively connected to the drive means for driving the latter.

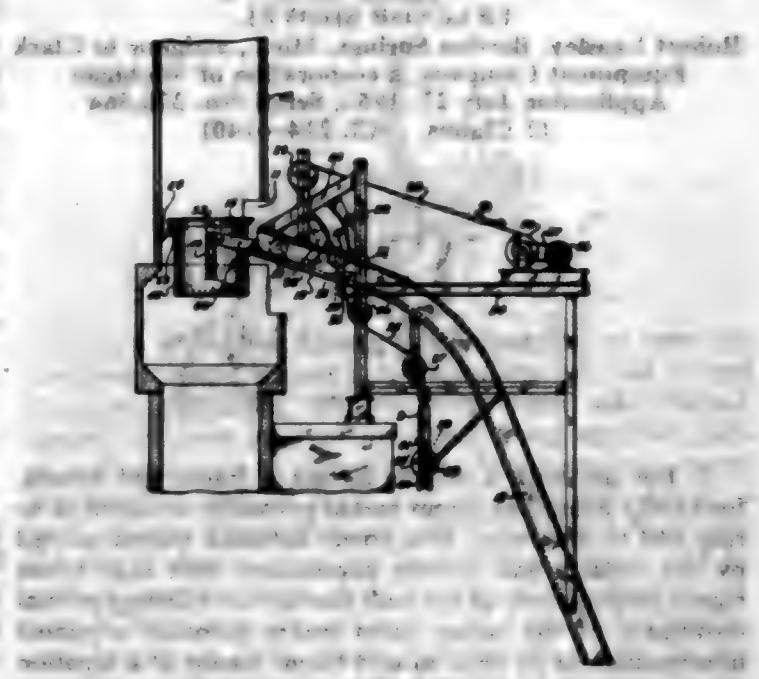
2,860,791

CUPOLA CHARGING APPARATUS UTILIZING A CONE BOTTOM BUCKET

Francis T. Kaiser, Fort Washington, Wis., assignor to Modern Equipment Company, Fort Washington, Wis., a corporation of Wisconsin

Application January 13, 1958, Serial No. 681,635
9 Claims. (Cl. 214—19)

1. In a cupola charger including a track having a delivery end, a skip carriage movable on said track and having front wheels and having a projection depending from its rear end, a hook releasably supported adjacent said track in a position to be engaged by said projection as the skip carriage arrives at the delivery end of the track, means for causing upward tilting movement of the rear



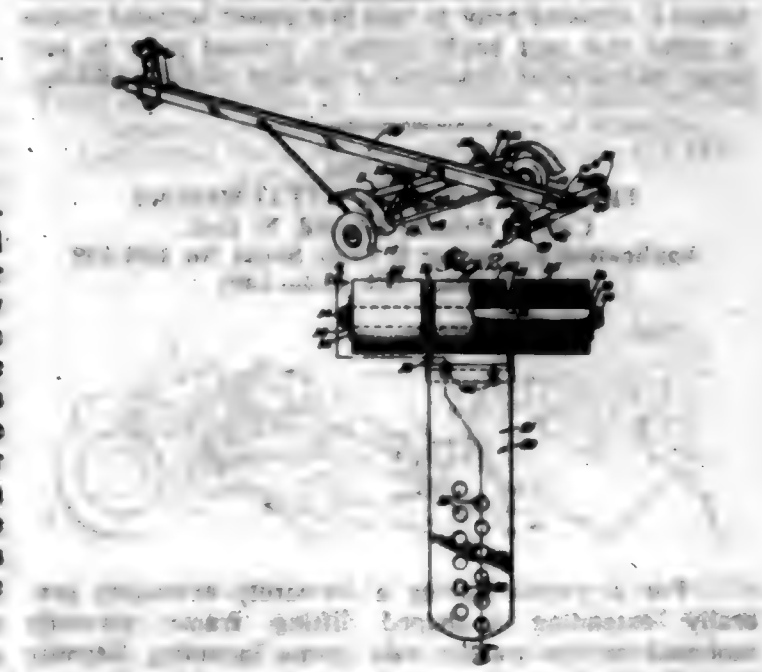
of the skip carriage with said hook on said front wheels after said hook has been engaged, and means including a counterweight connected to said hook for counterbalancing said upward tilting movement of the skip carriage and for subsequently urging said hook and the rear of the skip carriage back to their original positions.

2,860,792

BOAT TRAILER

Marvin D. Nelson and Donald N. Cole, Hastings, Nebr., assignors to Dutton-Lainson Company, Hastings, Nebr., a corporation of Nebraska

Application January 7, 1957, Serial No. 632,784
8 Claims. (Cl. 214—84)



1. In a boat trailer, a main longitudinal frame, a cross frame member extending transversely of and secured to the main frame, and combination boat supporting and guiding devices secured to the cross frame member, at opposite sides of the main frame, each device comprising a supporting bracket having an upwardly extending leg portion and a top portion inclined relative to said leg portion, boat hull engaging means car-

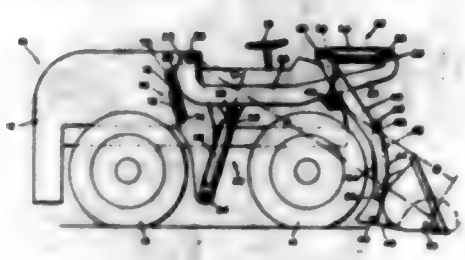
2,860,797

wash storage compartment.

improvement comprising a pair of guide pulleys, a hoisting

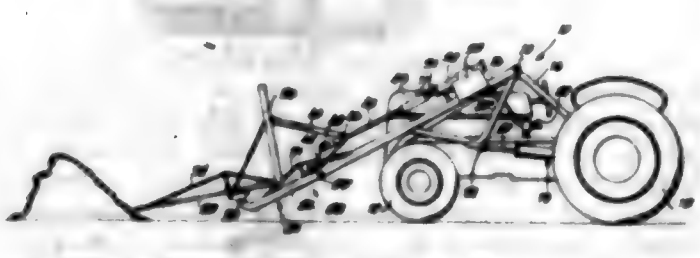
ried on said top portion, and means for adjustably securing said engaging means at a selected position, longitudinally along said top portion.

2,860,793
TRACTOR SHOVEL
Robert Lapsley, Berrien Springs, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Application July 27, 1953, Serial No. 370,564
11 Claims. (Cl. 214—140)



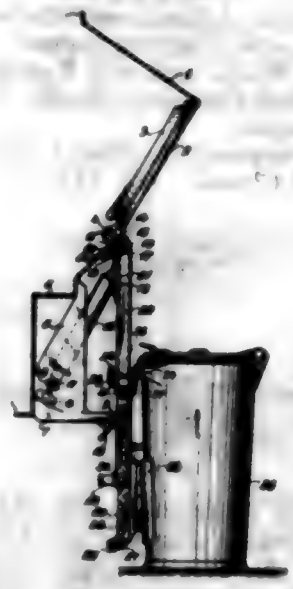
1. For use with a vehicle having a frame and wheels, forwardly extending boom means pivotally mounted at its rear end to the frame, first power actuated means carried by the vehicle and having connection with said boom means intermediate of the ends thereof for effecting pivotal movement of the latter, beam means pivotally mounted intermediate of its ends to said boom means at a location intermediate the ends of the latter, second power actuated means carried by said boom means and having connection between the forward end thereof and one end of said beam means for effecting pivotal movement of the latter, a shovel carried by said beam means at the other end thereof, said shovel being arranged substantially forwardly of the pivotal mounting of said beam means to said boom means so that a substantial portion of the force component of the resistance of a load being engaged by said shovel during pivoting of said beam means is exerted downwardly on the forward wheels of the vehicle, said first and second power actuated means adapted to have simultaneous connection with a common power source, and the mechanical advantage of said boom means being less than the mechanical advantage of said beam means so that said second power actuated means is actuated prior to said first power actuated means in order that said beam means is pivoted prior to said boom means when elevation of the said shovel is effected.

2,860,794
TRACTOR LOADER ATTACHMENT
Casmir Paluck, Belfield, N. Dak.
Application September 5, 1956, Serial No. 608,139
3 Claims. (Cl. 214—140)



1. For a tractor having a forwardly extending generally extending U-shaped lifting frame pivotally mounted on the tractor, said frame including laterally spaced arms having connecting elements at the forward ends thereof, a laterally extending connecting member longitudinally spaced from said forward ends and connected to said arms, and power operated means for raising and lowering said arms; a tractor loader attachment comprising laterally spaced frame members, laterally extending and longitudinally spaced beams connecting said frame members, each of said frame members having at one free and a recess positioned for releasable engagement by said laterally extending connecting member, each of said frame members and arms having an opening longitudinally spaced from said recesses, said openings being in registrable alinement, removable connecting elements adapted for connective reception into said openings whereby said frame members are detachably supported on said lifting frame, a tiltable loader assembly comprising a transversely extending member pivotally connected to said frame members, laterally spaced tines supported on said transversely extending member, a back support connected to said tines, said back support comprising a plurality of interconnected members extending in relatively right angle relation to said tines, means for tilting said loader assembly about a transverse axis comprising a shaft extending transversely and being pivotally connected to said frame members, first links connected to said shaft for movement therewith, second links pivotally connected to said first links and pivotally connected to said back support, and a push-pull member pivotally connected at its forward end to one of said first links and its rearward end being releasably connected to extensible power actuating means mounted on said lifting frame for controlably tilting said loader assembly, said loader attachment being moveable in substantially a vertical direction responsive to movement of said lifting frame.

2,860,795
LIFTING AND TIPPING DEVICE FOR DUST-BINS
Hans Zöller, Laubenheim, near Mainz, Germany
Application May 2, 1957, Serial No. 656,573
Claims priority, application Germany May 4, 1956
8 Claims. (Cl. 214—303)



1. A lift-tipping device particularly for dust-bins, comprising a lifting cylinder with piston, a tipping cylinder with piston, a pressure medium feed conduit means leading to both of said cylinders, a common control valve having one side connected to said feed conduit means for uniformly and simultaneously supplying pressure medium to both of said cylinders, a return conduit for the pressure medium connected to the other side of said control valve, a dumping chamber arranged on the rear wall of a dust-cart, a pivot axle on said dumping chamber, a front plate mounted on said pivot axle, a bearing bolt on said front plate, a tipping frame pivotally mounted along with said lifting cylinder on said bearing bolt, a lift carriage adapted to carry a dust-bin and mounted for upward and downward movement in said tipping frame, the tipping cylinder being at its upper end normally hingedly connected at such an angle to the tipping frame so that the pressure medium will act first on the piston in the lifting cylinder and subsequently will cause a displacement of the tipping cylinder

1. In a cupola charger including a track having a delivery end, a skip carriage movable on said track and having extending leg portion and a top portion inclined relative to said leg portion, boat hull engaging means car-

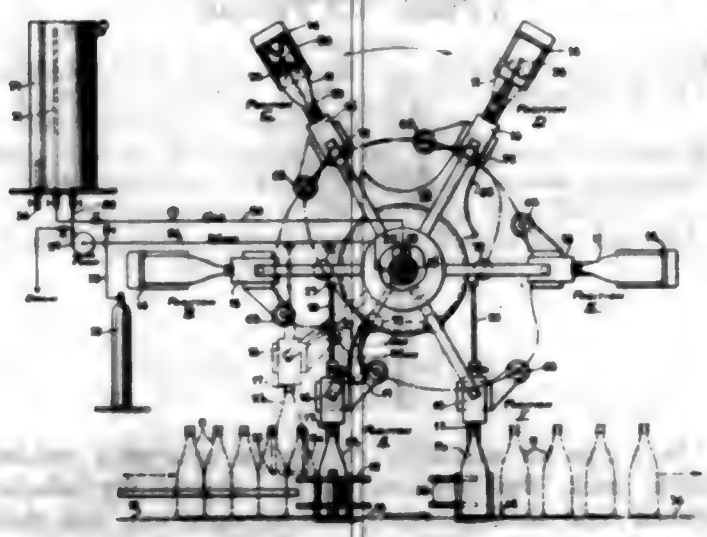
relatively to its piston, run on roller and track means operable at the end of the movement of the lift carriage for initially tilting said tipping frame with respect to said tipping cylinder so as to facilitate the subsequent displacement of the tipping cylinder relatively to its piston, an eye on said lifting cylinder in the path of said lift carriage and defining the upper end of its upward movement, the arrangement of said tipping cylinder, said lifting cylinder, lift carriage and said run on roller and track means being such that the dust-bin is first raised by said lift carriage until the latter engages the eye on said lifting cylinder, whereupon the tipping frame together with the lift carriage and dust-bin are swung about said eye by the tipping cylinder so that the dust-bin comes to bear against the front plate of the dumping chamber and then the front plate together with the tipping frame, lift carriage and dust-bin are swung into the dumping chamber.

2,860,796

MACHINERY USEFUL IN PROCESSING OF LIQUID PRODUCTS

John H. Holstein, Fresno, Calif., assignor to Schenley Industries, Inc., New York, N. Y., a corporation of Delaware

Application November 10, 1955, Serial No. 546,854
7 Claims. (Cl. 214—310)



1. Apparatus for transferring a liquid containing a dissolved gas under super-atmospheric pressure from a first container to a second container that comprises: rotatable first container carrying means having a plurality of container supporting means; container engaging means, carried by said rotatable means, for engaging a first container on said supporting means at predetermined positions of said rotatable means, said engaging means being adapted to have fluid-tight engagement with said first container; insertable means carried by said rotatable means and insertable into and removable from said first container when positioned on said supporting means; means for supplying gas under superatmospheric pressure to said insertable means; tubular fluid conducting means for interconnecting said container engaging means and said second container and for conducting said liquid from said first container to said second container; first cam means for engaging said container engaging means in fluid-tight engagement with said first container in a first predetermined position of said rotatable means and for disengaging said container engaging means from said first container in a second predetermined position of said rotatable means; and second cam means for inserting said insertable means into said first container when said container engaging means is in engagement with said first container and for withdrawing said insertable means from said first container.

2,860,797

MATERIAL HANDLING DEVICE

John F. Wilcox, Royal Oak, Mich., assignor to Sherman Products, Inc., Royal Oak, Mich., a corporation of Michigan

Application January 12, 1956, Serial No. 558,641
2 Claims. (Cl. 214—313)

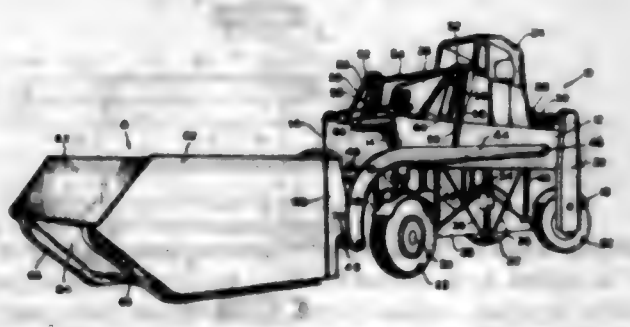
1. In a device for handling and dumping an open top container having transversely extending first and second trunnions projecting laterally from each side thereof, spaced lift arms adapted to extend along opposite sides of said container to underline the first trunnions, means for elevating said lift arms, said lift arms each having a semi-circular open-topped slot therein adapted to receive the first trunnions, a swingable dumping arm carried by each lift arm pivotable about the axis of the circular portion of the slot in the associated lift arm, each dumping arm having an open-topped slot therein in the inactive position of the dumping arm adapted to receive the second trunnions, means for swinging said dumping arms with respect to the lift arms from said inactive position, a cylindrical shaped bushing carried by each dumping arm with the axis thereof aligned with the axis of the circular portion of the slot in the associated lift arm, said bushings each having an upward facing open area registering with the open top of the slot in the lift arm to receive free ends of the first trunnions when the dumping arms are in an inactive position, and each bushing being connected to the associated dumping arm so that cylindrical portions of the bushings in turn about the free ends of the first trunnions during swinging movement of the dumping arms to retain the first trunnions within the open-topped slots in the lift arms.

2,860,798

STRADDLE CARRIER WITH DUMPING DEVICE

Franz H. Van Hellen, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Application November 26, 1954, Serial No. 471,188
3 Claims. (Cl. 214—318)

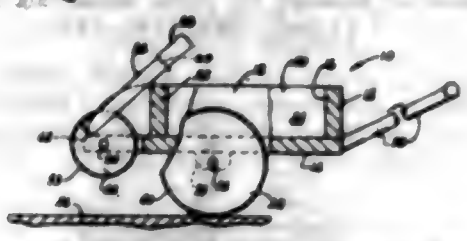


1. In an industrial material handling vehicle of the type equipped to straddle, elevate, transport, and deposit box-like containers, the combination comprising, a horizontal load upending bar disposed across the forward end of the vehicle, parallel arm members supported on the vehicle and carrying said bar therebetween, selectively operable power actuated means having connection with said arm members for raising and lowering said bar substantially vertically, and engagement means on the container adapted to be coupled with said bar whereby the container may be upended and its contents discharged by upward vertical movement of said bar.

one tree and a recess positioned for releasable engage-

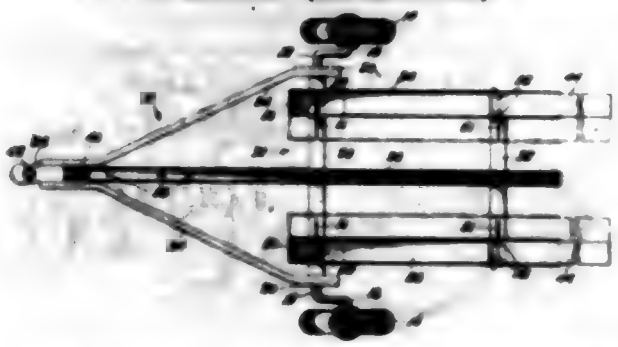
quently will cause a displacement of the tipping cylinder

2,860,799
TOY
Joseph Benedict Dubitsky, Lincoln Park, Mich.
Application June 24, 1957, Serial No. 667,558
3 Claims. (Cl. 214—358)



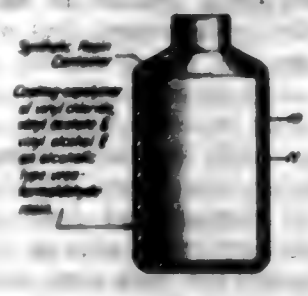
1. A toy comprising a vehicle body including a floor; a front wall, two side walls and a back wall extending upwardly from said floor to define therewith a recess for carrying granular material; a pair of axially aligned gound-engaging wheels supporting said vehicle body for horizontal movement while permitting said body to be tilted around the wheel axis; a handle projecting upwardly from the front end of the vehicle body for permitting manual movement of the vehicle; said vehicle including two spaced extensions projecting rearwardly from the back wall; a ground-engaging member rotatably mounted between said extensions and having an arcuate ground-engaging surface; said ground-engaging member having its ground-engaging surface spaced from the lowermost point on the wheels when the vehicle is in a non-tilted position; a pair of spaced parallel arms extending from said ground-engaging member in directions at right angles to the wheel axis; the free ends of said arms being connected by two angularly related wall elements, said wall elements forming a shovel structure for carrying granular material; whereby the handle may be grasped to tilt the vehicle body so as to put the ground-engaging member into contact with the ground surface, after which the vehicle body can be moved along the ground with the aforementioned arcuate ground-engaging surface being frictionally driven by its contact with the ground surface so as to move the shovel structure between a position on the ground and a position of overturnment above the vehicle body recess.

2,860,800
TRAILER
Rufus W. Wilson, Huntingdon, and John C. Horn, Alexandria, Pa., assignors to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Application May 3, 1954, Serial No. 582,453
10 Claims. (Cl. 214—506)



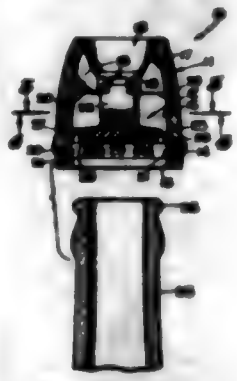
1. In a trailer for transporting wheeled vehicles thereon, an axle having wheels mounted for rotation thereon, a platform assembly pivotally mounted over said axle, said platform assembly including spaced trackways, struts interconnecting said trackways, said struts having slots formed therein providing for lateral adjustment of said trackways, and a ramp-chock device secured to each of said trackways, said ramp-chock device being positioned initially for aiding in loading said vehicle on said platform assembly and being moved to a second position in engagement with the wheels of said vehicle thereby aiding in retaining said vehicle on said platform assembly.

2,860,801
COATED SYNTHETIC RESIN CONTAINER
Alvin R. Nielsen, Hartford, Conn., assignor to Plax Corporation, Bloomfield, Conn., a corporation of Delaware
Application March 23, 1956, Serial No. 573,599
20 Claims. (Cl. 215—1)



1. A sealable synthetic resin container having a surface characterized by enhanced resistance to permeation by organic fluids, said surface having an adherent coating of a composition consisting essentially of a copolymer of vinyl chloride, vinyl acetate and vinyl alcohol and an alcoholic type urea-formaldehyde resin.

2,860,802
BOTTLE CLOSURE
Max L. Gold, Los Angeles, Calif., assignor, by mesne assignments, to Harold H. Kahn, Cleveland, Ohio, as escrowee
Application February 11, 1957, Serial No. 639,432
1 Claim. (Cl. 215—45)



In a cap for manually closing an externally beaded bottle neck, the combination of: a generally tubular shaped rigid shell provided with an open top, said shell having a main bore with a lower flaring mouth terminating at its lower edge in an internal flange; a slidable sealing device within said bore comprising a closure disc; flexible means extending radially outwardly and downwardly from said disc into expanding engagement with said mouth and said flange, lower portions of said flexible means extending inwardly to engage the external bead of said bottle neck from beneath when said disc is placed against said neck and said shell slid downwardly over said device, thereby locking said disc in closing relation with said neck, said open top of said shell having a deep finger-fitting hollow formed downwardly therein, there being a central hole in the bottom of said hollow which is substantially smaller than the outer opening of said hollow; and a guide stem provided on said closure disc, which stem extends axially upwardly from said disc into said hole so as to be guided by said hole whereby said stem extends upwardly through said hole and a substantial distance into said hollow when said cap is applied to a bottle neck.

2,860,803
WALLPAPER APPLYING DEVICE
William A. Fleming, Hackensack, N. J.
Application January 4, 1956, Serial No. 557,315
1 Claim. (Cl. 216—7)

A wallpaper applying device comprising a receptacle, a liquid applying roller rotatably mounted in said recep-

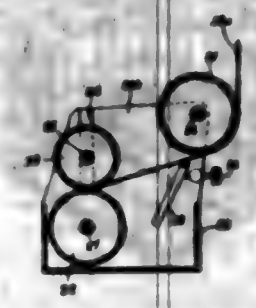
2,860,807

posed, straight offset portions, said offset portions of said

tainer.

upward vertical movement of said bar.

tacle on one side thereof, means for supporting a roll of paper above said liquid applying roller such that said paper on said roll is in contact with said liquid applying roller, an applicator roller rotatably mounted in said receptacle on the opposite side of said receptacle from said liquid applying roller, means for removing excess liquid from said paper, means for adjusting the position of said means for removing excess liquid from said paper



with respect to said paper, and means for coupling the motion of said rollers and said roll of paper, said motion coupling means comprising a gear train connecting the liquid applying roller and the applicator roller, said gear train comprising a first gear affixed to said liquid applying roller, a second gear affixed to said applicator roller, said first and second gears being coupled together by means of an intermediate gear rotatably mounted in said receptacle.

2,860,884

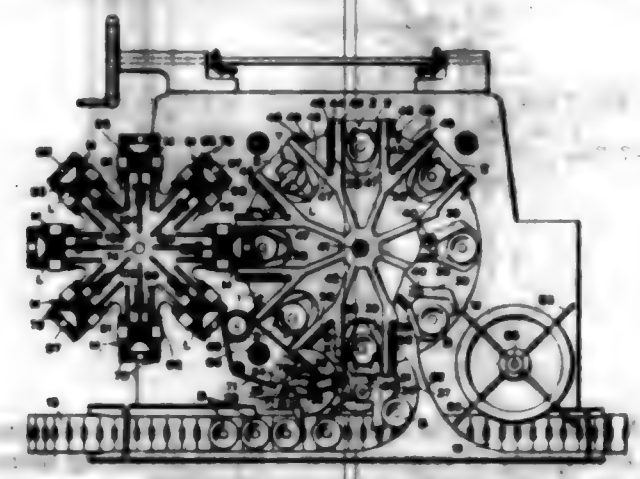
APPARATUS FOR FEEDING SHEETS, SUCH AS LABELS, FROM A PACK TO POSITIONS AT WHICH THEY ARE REQUIRED

John Eustace Sherrington, London, England, assignor to Purdy Machinery Company Limited, London, England

Application July 25, 1955, Serial No. 524,231

Claims priority, application Great Britain July 26, 1954

13 Claims. (Cl. 216—54)



1. A machine for feeding a series of sheets to a series of objects, said machine comprising, in combination, a conveyor for the objects, a gripper mounted on the conveyor to circulate therewith and located so that it lies beyond one end of one of the objects, a sheet carrier including a magazine arranged to circulate along a predetermined path and to hold a pack of sheets with the sheet at one end of the pack in a predetermined position in said magazine, means for driving said conveyor and said sheet carrier in timed relationship with one another, means for causing said gripper to have an adhesive affinity for the sheets, said conveyor and said sheet carrier being so located relatively to one another that said gripper, periodically makes contact with a sheet at said predetermined position and then separates from said magazine with said sheet adhering to said gripper, said gripper being mounted to move towards and away from the end of the object, and means for moving said gripper to transfer the sheet so separated to the end of the object.

2,860,885

CORNER BRACE FOR CRATES AND BOXES

Charles M. Katterjohn, Henderson, Ky.

Application November 18, 1954, Serial No. 467,957

1 Claim. (Cl. 217—69)

A corner brace for the corners of an approximately rectangular container having border rails disposed outside and secured to its side walls, said brace comprising ctrate between the border rails and adjacent side walls an angle member of sheet material having mutually perpendicular side plates adapted to engage the outer faces of said border rails, said side plates meeting one another at a common corner edge and having upper and lower side edges thereon, upper edge flanges projecting inadapted to extend substantially entirely across the upper faces of the border rails, the ends of said upper edge flanges nearest said common corner edge engaging one another and being firmly secured to one another at their place of engagement, and lower edge arms projecting inwardly from the upper side edges of said side plates and wardly from the lower edges of said side plates near the ends thereof remote from said common corner edge and disposed approximately perpendicular to said side plates, said arms being adapted to extend entirely across the lower faces of the border rails, said flanges and arms being adapted to grippingly engage the upper and lower faces respectively of the border rails in substantially parallel relationship, each of said arms at its inner end having an upstanding anchoring tongue thereon disposed approximately perpendicular thereto and adapted to penetrate between the border rails and adjacent side walls of the container, said arms having upstanding prongs extending upwardly above the level of said arms.

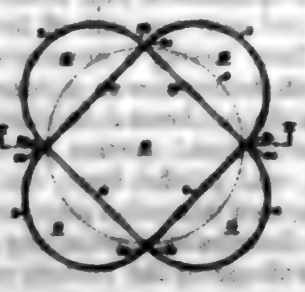
2,860,886

CIRCULAR BAY TANK STRUCTURE

Arthur Yanowitz, Elizabeth, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application May 31, 1956, Serial No. 585,496

10 Claims. (Cl. 220—1)



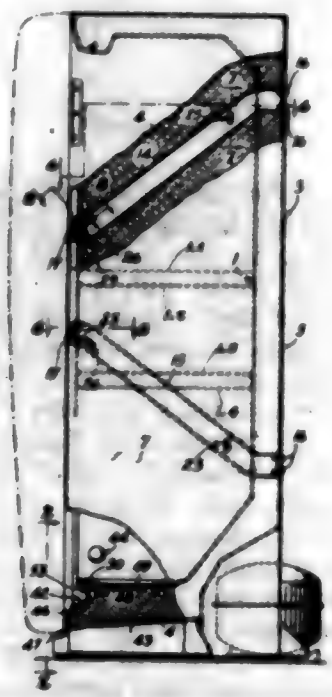
1. A storage tank structure comprising an even number of semi-circular vertical wall elements in a series of at least four wall elements of equal radius, each of which is a one-half vertical section of a right cylinder, having two diametrically opposite vertical edge portions, said wall elements arranged in liquid-tight, edgewise juxtaposition one to another exteriorly of a circular path common to the diametrically opposite edge portions of each wall element, each wall element being disposed in paired, mirror-opposite, edgewise relation to one other wall element in said series, and spaced therefrom diametrically of said circular path and tension means substantially connecting the opposite edge portions of each pair of mirror-opposite wall elements along lines parallel to each other and perpendicular to the respective diameters of said wall elements.

wall joined by a bottom wall and defining an open top

in retaining said vehicle on said platform assembly.

liquid applying roller rotatably mounted in said recep-

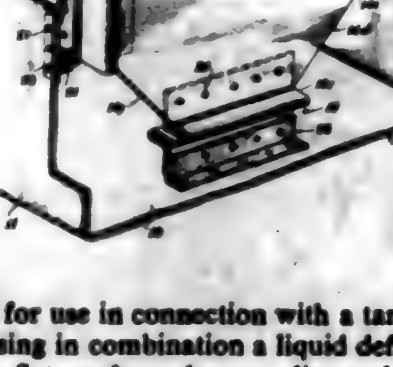
2,860,807
REFRIGERATOR CABINET
Evans T. Morton, Galesburg, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Application March 30, 1954, Serial No. 419,845
7 Claims. (Cl. 220—15)



7. A refrigerator cabinet comprising an outer shell which has spaced sides, a bottom wall and a front opening above the bottom wall and between the sides, an inner liner within said shell and having spaced sides and a bottom wall in spaced relation to the sides and bottom wall of the shell, said liner having a front opening above its bottom wall and between its sides, a rigid corner piece having a lateral portion which is attached to the bottom wall of the shell and having an upstanding portion which extends upward from said lateral portion around the corner between the bottom wall of the liner and one of the sides of the liner, said corner piece projecting upward between the adjacent side of the shell and said one side of the liner and being spaced from both, a connector connecting said one side of the liner to said upstanding portion of the corner piece, said connector including a spacer of thermal insulation material engaged between said one side of the liner and said upstanding portion of the corner piece and an attachment member thermally insulated from the liner which connects said upstanding portion of the corner piece and said one side of the liner, said bottom wall of the liner having a downturned flange at its forward end which terminates in a rearwardly and upwardly projecting lip, a thermal insulation member engaged between said lateral portion of the corner piece and said bottom wall of the liner, and an attachment member carried by said insulation member and presenting a forwardly and downwardly projecting lip which seats on said lip on the flange of the bottom wall of the liner.

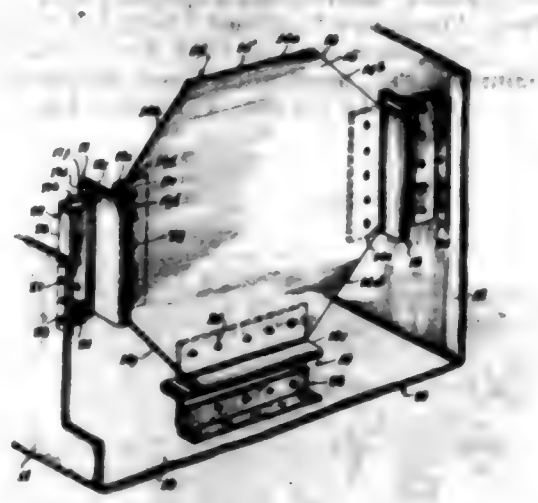
2,860,808
WIRE CASE HAVING SHEET METAL BOTTOM
Robert A. Bruce, Keosauqua, Iowa, assignor to Barker Equipment Company, Keosauqua, Iowa, a corporation of Iowa
Application July 20, 1956, Serial No. 599,241
5 Claims. (Cl. 220—19)

5. In an open wire-work carrying case of generally rectangular shape with an open top, an upper perimeter frame wire, a lower perimeter frame wire, said frame wires being of substantially congruent shapes, upright wires secured to said frame wires, a plurality of spaced apart bottom wires, secured at their ends to opposite portions of said lower frame wire, said bottom wires each having a series of longitudinally spaced, upwardly disposed, straight offset portions, said offset portions of said bottom wires being aligned in sets, a plurality of sheet metal slats seated upon and welded to the respective sets of offset portions of the bottom wires, a reinforcing wire extending transversely of and seated on said bottom wires, intermediate a pair of adjacent sets of offset portions, and



having its opposite ends secured to the underside of said lower frame wire, and a stacking ring separate from the lower frame wire and secured to the under surface of said bottom wires and said reinforcing wire, said stacking ring being of lesser transverse dimensions than the corresponding dimensions of the upper frame wire.

2,860,809
TANK BAFFLE
Thomas A. Perry, Babylon, N. Y., assignor to Skyline Products, Inc., Deer Park, N. Y., a corporation of New York
Application February 14, 1957, Serial No. 640,266
2 Claims. (Cl. 220—22)



1. A baffle for use in connection with a tank containing liquid comprising in combination a liquid deflecting member having a flat surface thereon disposed transversely within said tank and spaced from the interior surface thereof with said flat surface substantially perpendicular the interior surface of said tank; and a resilient member, a flange on said resilient member rigidly attached to said flat surface, a central portion of said resilient member maintaining a position substantially perpendicular to said flat surface and a second flange on said resilient member and means for rigidly attaching said second flange to the interior surface of said tank.

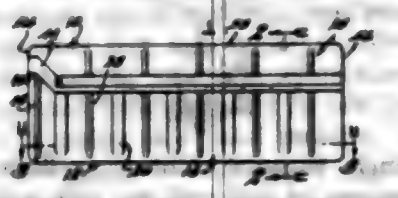
2,860,810
FILE BOX
Albert M. Sargent, Detroit, Mich.
Original application December 13, 1954, Serial No. 474,783. Divided and this application June 24, 1957, Serial No. 667,354
1 Claim. (Cl. 220—41)

In a file box, the combination comprising a body having a pair of spaced side walls and a pair of spaced end

moving said gripper to transfer the sheet so separated to the end of the object.

perpendicular to the respective diameters of said wall elements.

walls joined by a bottom wall and defining an open top chamber, said side walls including a first pair of ways extending along opposite sides of said chamber, one of said end walls including a second pair of ways extending transversely of said first pair of ways, said second pair of ways being open at the end thereof adjacent said bottom wall, stop means on said body adjacent the end of said second pair of ways remote from said bottom wall, a closure member having a pair of spaced side walls and a pair of spaced end walls joined by a top wall, said side walls of said closure member being adapted to engage said first pair of ways to support said closure member for sliding movement between an open position and a closed position to open and close the chamber defined by said



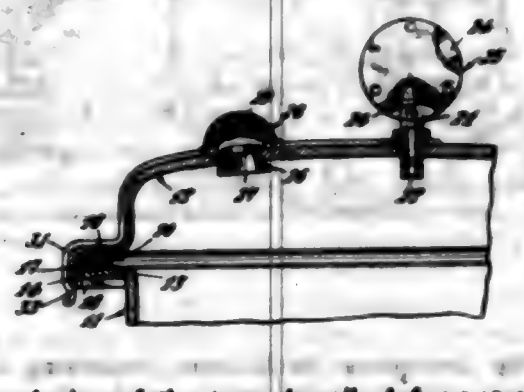
body, portions of said side walls of said closure member overlapping portions of said side walls of said body and portions of said end walls of said closure member overlapping portions of said end walls of said body when said closure member is in the closed position, one of said end walls of said closure member terminating above the other said end wall of said body when said closure member is mounted on said first pair of ways so that said one end wall of said closure member moves clear of said other end wall of said body to permit removal of said closure member from said first pair of ways at the end thereof remote from said one end wall of said body, said side walls of said closure member also being adapted to slide on said second pair of ways and engage said stop means to support said body in an inclined position.

2,860,811

PRESSURE COOKER SAFETY DEVICE

Harold A. Heasler, New York, N. Y.

Application March 21, 1957, Serial No. 647,717
1 Claim. (Cl. 220—44)



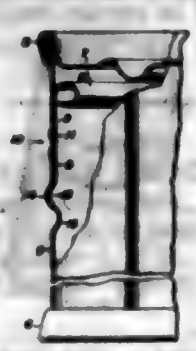
In a device of the type described for use with a domestic type pressure cooker having a cover with an excess pressure blow-out disk therein, said device including a pair of spaced apart flexible rod-like members secured together at a plurality of points intermediate the ends thereof, an inverted cup-shaped cage member secured to said rod-like members, means including the flexibility of said rod-like members and reverse opposed bends at one pair of adjacent ends thereof to detently engage an upwardly extending stem on said cover and means including reverse bends in each of the other pair of adjacent ends of said rod-like members to detently engage the edge of said cover, said arms conforming generally to the contour of a part of said cover and with the ends thereof engaged with said stem and cover edge being adapted to position said cage over said blow-out disk.

2,860,812

CONTAINER HAVING TEAR STRIP

John Heuchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application July 6, 1955, Serial No. 520,195
7 Claims. (Cl. 220—54)



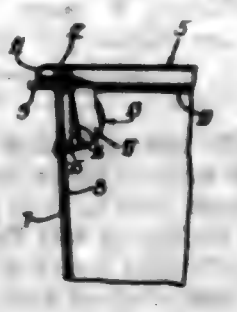
1. In a can structure of the character described, a body wall provided with a tear strip defined by parallel score lines extending circumferentially about the wall, and at least three parallel spaced rib means extending about the wall within the confines of the tear strip with an intermediate rib projecting in one direction from the wall cross section and the two immediately adjacent ribs projecting in the opposite direction from the wall cross section, thereby to provide cooperating rib and groove means effective to nest and prevent side slipping of the tear strip as it is wound about a key in the process of being torn out of the wall.

2,860,813

SPRING FASTENER

George A. Lyon, Jr., Birmingham, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Application March 25, 1955, Serial No. 496,824
3 Claims. (Cl. 220—59)

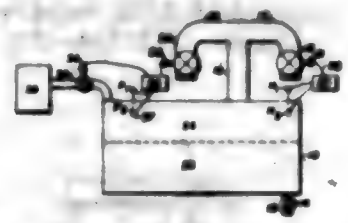


1. Spring retaining means on a circular closure member for a hollow object, having an outer peripheral margin reinforced by multiple layers of metal extending generally radially and defining an abutment shoulder for engagement with the hollow object, said margin having therebehind and spaced radially inwardly from its edge a plurality of generally axially inwardly projecting circumferentially spaced retaining finger extensions resiliently yieldable in a radial direction, said finger extensions having body portions connected at one end to said margin and provided with a reinforcing structure at each side thereof to enhance the resilient resistance to yielding of the body portions, said reinforcing structure comprising wing flanges integrally connected to said body portion ends and said peripheral margin and extending substantially perpendicular thereto at the lines of juncture of said wing flanges with said body portion ends and said peripheral margin, said body portions of the finger extensions having outwardly and reversely bent relatively stiff retaining terminals engageable under radially deflected resilient tensioning of the retaining fingers and said angular reinforcing structure with the hollow object.

2,860,814
CONTAINER
Robert F. Decosse, Meadowbrook, Pa., assignor to Crown Cork & Seal Company, Inc., Philadelphia, Pa., a corporation of New York
Application May 24, 1955, Serial No. 510,613
2 Claims. (Cl. 220—66)

1. A container having a closure and a reseal closure removably carried within the container and useable to replace the first closure, wherein the reseal closure is made of plastic material and has a top and a skirt, the skirt having recesses formed therein extending from the free edge of the skirt upwardly to below the top of the cap whereby the skirt adjacent the top has a continuous circumferential sealing portion.

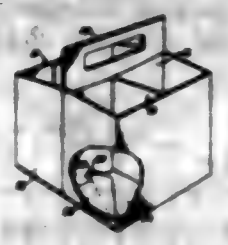
2,860,815
METHOD OF AND APPARATUS FOR REDUCING WATER ABSORPTION BY LIQUID FUELS
Richard F. Flinn, Iselin, John J. Kolfenbach, North Plainfield, and William E. Lifson, Union, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application December 22, 1953, Serial No. 399,682
4 Claims. (Cl. 220—85)



1. A method for storing volatile liquids containing or tending to absorb water, wherein said liquids are retained in a confined storage zone so as to provide a vapor space above the upper surface of said liquids and wherein absorption of water by said liquids is inhibited and liquids having an initial water content have such content reduced, which method comprises admitting air, from an ambient atmosphere of air exteriorly of said zone, into said vapor space and into contact with the upper surface of said retained liquid only when the pressure in said vapor space is less than the static pressure of said ambient atmosphere and the indicated partial pressure of water vapor in said vapor space is higher than the indicated partial pressure of water vapor in said ambient atmosphere of air, and discharging said air and vapors from said vapor space whenever the positive pressure in said vapor space is higher than the static pressure of said ambient atmosphere exteriorly of said zone.

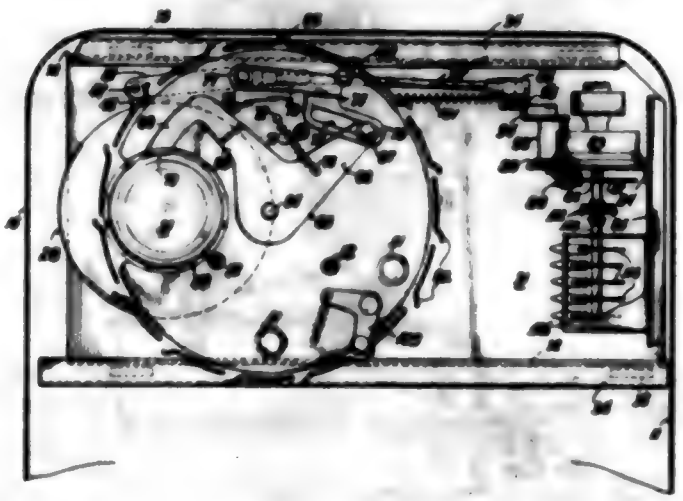
2,860,816
FOUR-BOTTLE COLLAPSIBLE CARRIER
Francis W. Fielding, New Orleans, La., assignor to Longfold Brothers, Inc., New Orleans, La., a corporation of Louisiana
Application June 16, 1955, Serial No. 516,664
2 Claims. (Cl. 220—113)

1. A collapsible article carrier formed from a single unitary pattern of foldable sheet material, particularly cut, scored, and coated with glue to provide, in the assembled carrier when erected, four separate article receiving compartments; said carrier comprising, a pair of elongated panel lengths of complementary form defining a pair of side walls and a pair of end walls, a bottom wall extending integrally between said side walls and foldable relative thereto, said panel lengths further serving to define a center partition extending between said end walls and a cross partition extending between said side walls said center partition being formed by a pair of half-partition portions in abutting end-to-end relation, each half-partition portion being formed by face-to-face mating pairs of panel portions to define a two-ply material thickness, upwardly extending portions of said center parti-



tion and matingly engaged reinforcing flaps formed by cut-away extensions of said end and side walls cooperating to define a carrying handle of four-ply material thickness and to maintain said abutting half-partition portions in rigidly planar relation, first bottom wall reinforcing means comprising flaps extending integrally and foldably between said bottom wall and one of said end walls, and second bottom wall reinforcing means comprising a flap extending integrally and foldably between portions of said cross partition, said reinforcing flaps serving to overlie said bottom wall with portions thereof secured thereto.

2,860,817
BEVERAGE VENDING MACHINES AND CUP-DROP MECHANISM THEREFOR
George C. Bell, Aurora, Ill., assignor to Stoner Mfg. Corp., Aurora, Ill., a corporation of Illinois
Application October 11, 1954, Serial No. 461,529
5 Claims. (Cl. 221—11)



1. A cup dispensing mechanism comprising a cup-drop device adapted to receive a stack of cups and actuable to successively dispense cups from said stack, a turret rotatably mounted above said cup-drop device, said turret comprising a plurality of upright compartments each adapted to contain a stack of cups, said turret being rotatable to successive indexed positions so as to align successively each stack of cups with respect to said cup-drop device, means for depositing each aligned stack of cups into said cup-drop device, a feeler member, means mounting said feeler member for alternate movement either to an innermost position located within the space normally occupied by said deposited stack of cups or to an intermediate position wherein the feeler member is in contact with said deposited stack of cups or to an outermost position spaced outwardly from said deposited stack of cups and the space normally

occupied thereby, spring means continually urging said feeler member inwardly toward said innermost position for maintaining said feeler member normally in said innermost position when there are less than a predetermined number of cups left in said deposited stack and for maintaining said feeler member normally in said intermediate position in contact with the cups when there are at least said predetermined number of cups left in said deposited stack, a ratchet member secured to said turret, a pawl member, means mounting said pawl member for alternate alignment thereof either to a first orientation for drivingly engaging said ratchet member or to a second orientation in which said pawl member will be drivingly disengaged with respect to said ratchet member, drive means actuable to move said pawl member and to actuate said cup-drop device, and means connecting said pawl member and said feeler member for aligning said pawl member in said first orientation in response to location of said feeler member in said innermost position and for aligning said pawl member in said second orientation in response to location of said feeler member in said intermediate position, said connecting means including means for moving said feeler member momentarily against the action of said spring means to said outermost position in response to movement of said pawl member by said drive means.

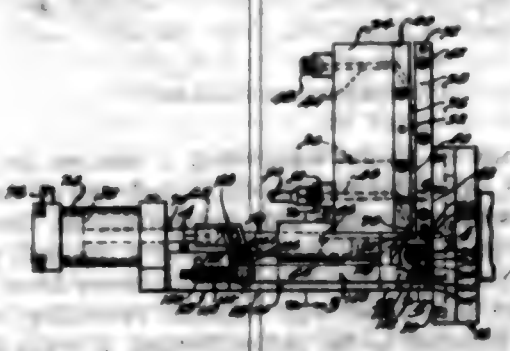
2,860,818

TRANSFER MECHANISM

George Maurer, Detroit, Mich., assignor to Huck Manufacturing Company, Detroit, Mich., a corporation of Michigan

Application November 9, 1953, Serial No. 391,058

3 Claims. (Cl. 221—243)



1. In a transfer mechanism, the combination comprising a supporting structure, guide means fixed to said supporting structure and defining a passageway adapted to receive a workpiece, means for successively feeding workpieces into said passageway, stop means limiting the movement of a workpiece in said passageway, reciprocating means including a movable element slidably mounted in said passageway and actuable to engage said workpiece and move said workpiece longitudinally of said passageway, and means operable in response to the movement of said reciprocating means to disengage said stop means, said disengaging means including an elongate actuating arm extending in spaced substantially parallel relationship to said element and movable in a direction substantially parallel to the direction of movement of said element, means connecting one end portion of said actuating arm to said stop means, a link arm pivotally connected to said supporting structure intermediate said element and said actuating arm, one end portion of said link arm being connected to said actuating arm for combined pivotal and sliding movement, the other end portion of said link arm being connected to said element for combined pivotal and sliding movement, resilient means opposing the sliding movement of said link arm relative to said actuating arm, the forces exerted by said resilient means being greater than the forces required to move said actuating arm to disengage said stop means, and means for positively stopping the movement of said actuating arm after said actuating arm has moved a predetermined distance while permitting said element to continue to move whereby upon continued movement of said element, the forces applied to said element to effect movement thereof are transmitted through said link arm to overcome the forces exerted by said resilient means so that sliding movement of said link arm relative to said actuating arm is permitted.

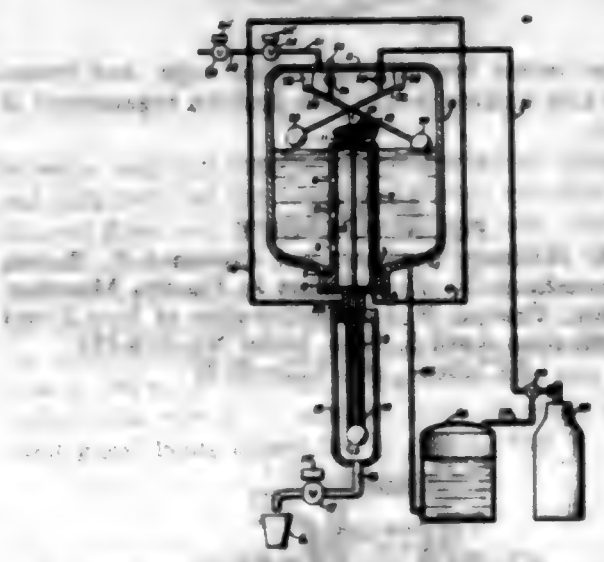
2,860,819

BEVERAGE DISPENSERS

Harold A. Ledingham, Alton, Mo., assignor to Vis-O-Lite Co., St. Louis, Mo., a corporation of Missouri

Application December 6, 1956, Serial No. 626,642

11 Claims. (Cl. 222—68)



1. A beverage dispensing system comprising a reservoir adapted to hold a substantial quantity of beverage up to a predetermined level, a closed vessel having beverage-dispensing means, a beverage conduit opening at one end to the reservoir below the liquid level thereof and opening at its other end to the vessel, a pressure-responsive diaphragm associated with the conduit and having one side exposed to the pressure within the reservoir, a valve operatively connected to said pressure-responsive diaphragm for controlling the flow of beverage between the reservoir and the vessel, means for communicating the other side of said pressure-responsive diaphragm to the vessel, means for equalizing the pressure on both sides of the pressure-responsive diaphragm to actuate said valve and open the beverage conduit whereby fluid may flow from the reservoir into the vessel, and means for reducing the pressure on said other side of the diaphragm to close said valve and shut off the flow of beverage from the conduit.

2,860,820

ASSEMBLY AND LOCKING MEANS FOR LIQUID HANDLING DEVICES

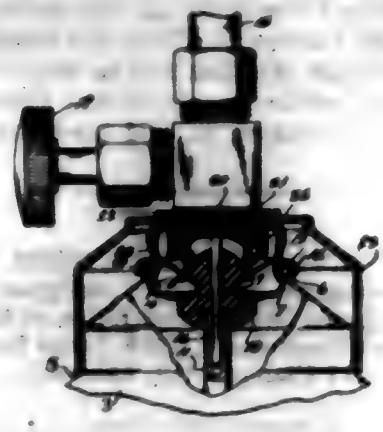
Louis A. Fallgatt, Prairie View, Ill., assignor to Prepo Corporation, Edgerton, Wis., a company of Delaware

Application July 30, 1953, Serial No. 371,213

8 Claims. (Cl. 222—82)

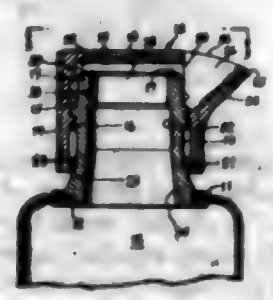
6. In a device of the class described, a fluid container having a cup shaped sealed outlet cap with its circumferential flange pressed over a rolled edge of the container and providing an undercut annular recess beneath the edge, a rubber-like grommet secured centrally of the cap, a valve unit having a base for securement to said container and a delivery conduit adapted to extend centrally through said grommet and to seal therewith to establish communication between said container and valve unit for transfer of the fluid therebetween, locking means carried by said base and adapted to move into a position adjacent said rolled edge generally concurrently with the entry of said delivery conduit through said grommet,

said locking means being arranged circumferentially about said delivery means for radial movement into said under-



cut annular recess beneath said rolled edge, and means to actuate said locking means into positive engagement in said recess.

2,860,821
POURING SPOUT
Richard E. Hartung, Rumson, and Leonard F. Harms, East Keansburg, N. J., assignors to Plastics Manufacturing Inc., Orange, N. J., a corporation of New Jersey
Application April 5, 1956, Serial No. 576,293
5 Claims. (Cl. 222—519)



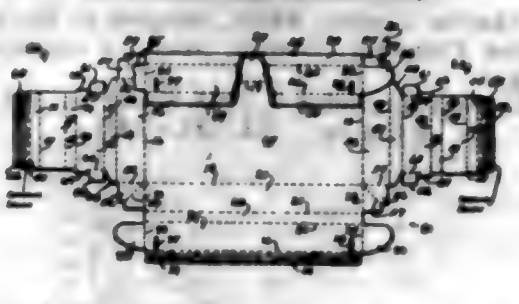
1. A pouring device for use with a container having an opening, comprising a tube adapted to be secured, at its lower end, in the container opening and extending therefrom, a spout cap having a serrated portion on the inner face of the end wall thereof inwardly of its juncture with the side wall, and a portion of complementary outline at the upper edge of the tube for interfitting engagement with the mentioned portion on said inner face when the cap is closed on the tube, to then seal the device, and complementary means on the spout cap and tube for movement of said cap axially on the tube to thereby selectively open or close the outer end of the tube and thereby the container, said spout cap comprising an end wall and a side wall depending therefrom and defining therewith a cap-shaped cross-section and having an aperture in said side wall, and complementary means on the cap and tube to prevent displacement of the cap from the tube, and a laterally extending lip portion on said cap forming a spout tapering laterally from the aperture in the side wall of the cap.

2,860,822
RETRACTABLE LADDER
William S. Smith, Bridge City, and Dolphy W. Van Slyke, Port Acres, Tex., assignors of one-third to Calvin A. Risley, Port Arthur, Tex.
Application September 19, 1956, Serial No. 610,765
1 Claim. (Cl. 228—17.3)

In a retractable ladder, the combination comprising a pair of U-shaped guide members, a ladder vertically slidably mounted in said guide members, a tubular handpost mounted to the outside of each of said guide members and extending upwardly from said guide members, a sheave mounted on the upward part of each of said handposts, a counterweight in each of said handposts, and

means connecting said ladder with said counterweights and being guided by said sheaves.

2,860,823
CARTON
William P. Frankenstein, Cincinnati, Ohio
Application June 5, 1952, Serial No. 291,872
6 Claims. (Cl. 229—31)



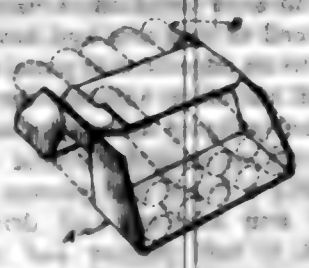
1. A box or carton comprising a bottom, upstanding side walls, upstanding end walls at each end of the carton bottom with each end wall comprising an inner wall member, an outer wall member and a top wall member spacing said inner and outer wall members from one another with said inner wall member extending from the top wall member to the carton bottom, a brace for each end wall with each brace including a vertical brace member of an area substantially equal to the area of the end wall inner wall member disposed vertically of and spaced from the said end wall inner and outer wall members, a transverse brace member carried by the upper and lower ends of said vertical brace member extending toward one of said end wall inner and outer wall members, and said veritcal brace member having a portion thereof extending toward one of said end walls inner and outer wall members and located at a point spaced from the end wall top wall member and carton bottom, and means locking the carton walls in their erected upstanding positions.

2,860,824
PRODUCT ENCIRCLING BAND
Reynolds Guyer, St. Paul, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Application April 2, 1954, Serial No. 420,519
5 Claims. (Cl. 229—40)

1. A band for use in encircling a product including a bottom panel, side walls hingedly connected to the bottom panel along parallel fold lines and extending upwardly therefrom, and a pair of strips cut from the center portion of the side walls and bottom panel and hingedly connected to the side walls at points spaced from the upper edges thereof, said bands being folded

arm to disengage said stop means, and means for posi-

upwardly and outwardly of the side walls in surface contact thereto and having ends folded parallel to the bot-

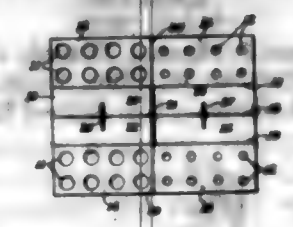


tom panel into overlapping relation, and means securing the overlapped ends of said strips together.

2,860,825
CARTON PARTITION FOR ARTIFICIAL SILK COPS

James A. Montgomery and Ralph D. Morton, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application February 24, 1955, Serial No. 490,264
1 Claim. (Cl. 229—42)



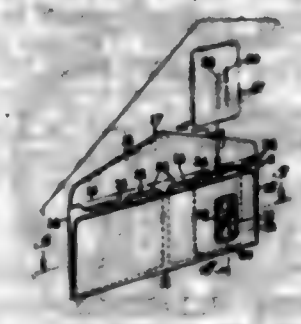
Interengaging partitions for containers used in shipping yarn carried by yarn cop supports having one end of greater diameter than the other, each of said partitions comprising a single sheet of material of generally rectangular configuration folded intermediate its length to form a base portion having two contacting layers of material; each contacting layer including a double thickness flange extending at right angles to the base portion and formed by folding a corresponding intermediate area of each base portion upon itself, the flanges in the respective contacting layers extending from the base portion in opposite directions; each flange provided with a slot extending from the middle of the outer edge thereof toward the base portion and having a width substantially equal to the thickness of another double thickness flange of a like partition whereby when the flanges of two partitions are brought into interengaging right angle relation with the slots in each aligned with one another, the top edges of the flanges form supports for spacing apart the base portions of adjacent partitions and divide the space between the base portions of adjacent partitions into four cop-receiving pockets of equal size; each contacting layer of said base portion on both sides of said flange provided with holes which are in axial alignment with one another, the holes in one layer having a diameter slightly larger than the small end of the cop and the holes in the other layer having a diameter slightly larger than the large end of the cop whereby the edges of said holes position the cops transversely on the base portions and the surface of the layer containing the smaller holes and surrounding said holes forms a support for the large end of the cops to position them against longitudinal movement.

2,860,826
SERVICE ENVELOPE

John A. Cooke, Lynbrook, N. Y., assignor to Berlin & Jones Company, Incorporated, New York, N. Y.

Application May 14, 1957, Serial No. 659,173
1 Claim. (Cl. 229—73)

A service envelope including an elongated front panel having an address window occupying a limited portion thereof and at the upper edge thereof a closing flap, an elongated rear panel connected to the front panel along the bottom edge of said front panel, a pair of opposite flaps connected to the opposite vertical side edges of the front panel forming end flaps for the envelope and folded inwardly upon said front panel and terminating medially adjacent to each other to form a large, continuous elongated chamber between said end flaps and said front panel, two pairs of vertical paste bands upon the inner side of the rear panel serving to secure the same to the two end flaps when said rear panel is folded up exteriorly thereof with one pair of paste bands assigned to each end flap and providing two relatively smaller chambers

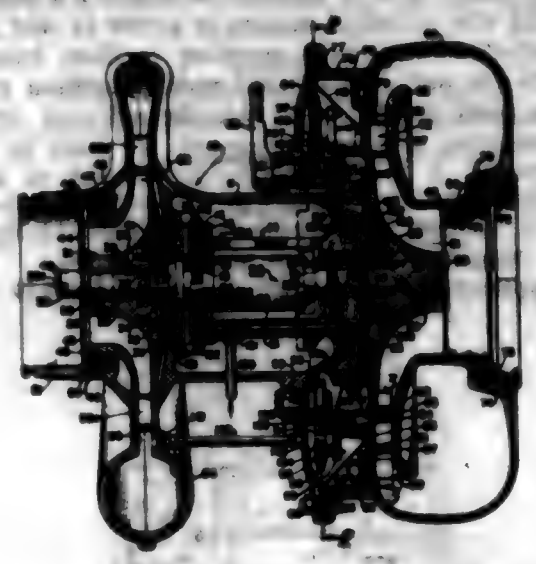


between said end flaps and said rear panel independently and exteriorly of the large continuous chamber between the end flaps and the front panel, said rear panel having a small rear window for the chamber within the same at one end, and a sheet of transparent material secured upon the interior surface of the front panel and a portion of the inner surface of the rear panel corresponding to the area of the small window in the latter, the two chambers within said rear panel and the large chamber within the front panel being closed by the closing flap.

2,860,827
TURBOSUPERCHARGER

Hans Egli, Santa Monica, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Application June 8, 1953, Serial No. 360,263
28 Claims. (Cl. 230—116)



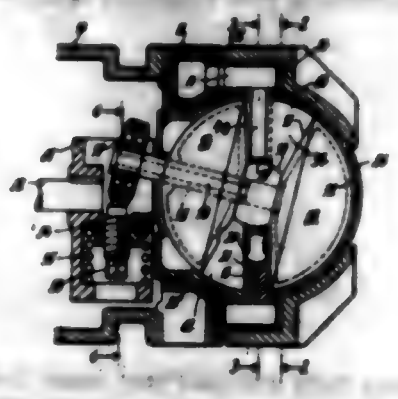
1. An engine supercharging device comprising, in combination: a housing; a shaft rotatably supported within said housing; a compressor wheel; means for mounting said compressor wheel on one end of said shaft; a turbine rotor; means for mounting said turbine rotor on the other end of said shaft in spaced relationship to said compressor wheel; sealing means disposed about said shaft intermediate said compressor wheel and said turbine rotor; fluid entrance and discharge passage means operatively associated with the entrance to and discharge from said compressor wheel; means forming an annular passage at the entrance to said turbine rotor, said last mentioned means being substantially rigidly secured to said housing at one portion and relatively movably engaged with said housing at another portion; and actuating means for

and extending upwardly from said guide members, a

from the upper edges thereof, said bands being folded

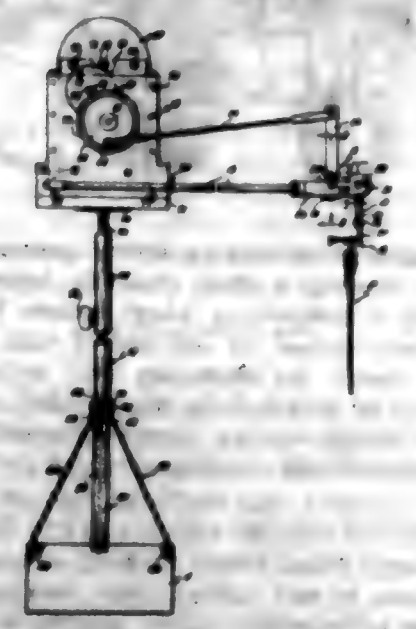
changing the effective area of said annular passage means, said actuating means being carried by and operable from outside said housing.

2,860,223
COMPRESSOR
Jorgen W. Jonassen, Rutherford, N. J.
Application July 29, 1954, Serial No. 446,467
3 Claims. (Cl. 230—138)



1. A conic crank compressor comprising a housing having a substantially spherical interior, a diametrical disc member separating said spherical interior into two pumping chambers each less than hemispherical, inlet and discharge ports and passages in said diametrical disc member and opening into and from said pumping chambers, a ball socket central in said disc member and a sleeve in said disc member extending radially from said socket to the periphery of said housing, a wabbler comprising a pilot ball operably mounted in said socket and a pair of spherical sectors operable within said pumping chambers and having conical faces coacting with said diametrical disc member, a dividing plate radiating from said pilot ball and connecting said spherical sectors, a fork slidably astride said dividing plate and operable within said sleeve and forming with said dividing plate a radial partition across said pumping chambers, and conic crank means for causing the axis of said wabbler to describe a cone and for causing said spherical sectors to gyrate in said pumping chambers to transfer a working medium from said inlet ports on one side of said radial partition to said discharge ports on the other side thereof.

2,860,829
LOW AIR VELOCITY FAN
Nanell Elise Bibley, McKeesport, Pa.
Application July 5, 1955, Serial No. 519,849
6 Claims. (Cl. 230—264)



1. A power driven fan for creating a low velocity cooling movement of air adapted for direct application to the body of a user comprising a support standard; a panel-like fan blade; a generally horizontal support arm having one end mounted on said standard; a driven gear journalled at the other end of said arm and having a depending arm connected to an edge of said panel-like fan blade and supporting said fan blade adjacent the other end of said support arm for swinging movement around an axis extending transversely of said horizontal support arm; drive means including a crank and pitman, a drive gear journalled on said arm adjacent said driven gear and drivingly connected to said pitman and meshingly engaging and imparting limited oscillation to said driven gear and depending arm around said axis to swing said fan blade first in one direction and then the other through the air; and motor means operatively connected to said drive means for driving said drive means, said drive and driven gears cooperating to form a speed increasing drive train between said crank and pitman and said depending arm and its panel-like fan blade to assure a movement of air by said fan blade.

2,860,830
MAIL BOX
Thomas J. Mrozek, Detroit, Mich.
Application October 30, 1956, Serial No. 619,241
2 Claims. (Cl. 232—17)

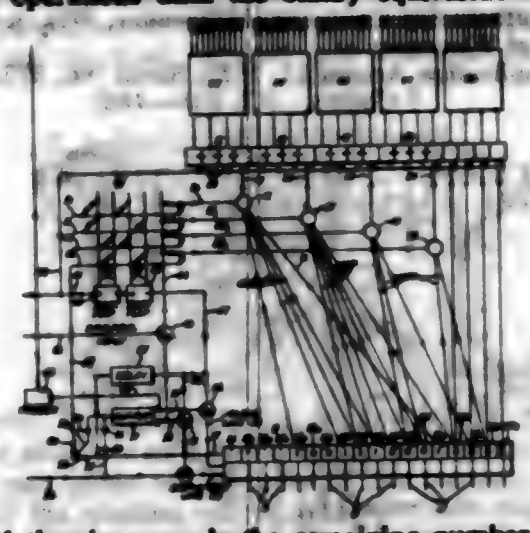
1. A mail receiver comprising a box open at its top, and including a back wall, a front wall, two side walls, and a bottom; an upstanding flat portion provided along the top edge of said back wall and extending upwardly therefrom for a substantial distance, a visor extending downwardly and forwardly from the upper edge of said upstanding portion and terminating forwardly and below the upper edge of said portion, a swinging cover for said box adapted to close substantially the entire top opening of said box and having along its rear edge a flange extending upwardly and forwardly, a hinge provided underneath said visor and connecting said swinging cover thereto along the upper edge of its upwardly and forwardly extending flange, the ends of said upstanding portion of the back wall and said visor extending for a substantial distance beyond the sides of said cover, and depending flanges provided on the ends of said visor and overlying the rear portion of the sides of said cover.

2,860,831
RADIX CONVERTER
George W. Hobbs, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application December 21, 1953, Serial No. 399,283
38 Claims. (Cl. 235—61)

1. A binary to decimal converter comprising an accumulator, means for entering impulses representing a binary number to be converted therein, a plurality of generators, each said generator operable to enter im-

drain opening, a housing having a shredding chamber fitted with inwardly struck internal detents for resting

pulses representing the binary equivalent of a different integral power of the number 10 into said accumulator in subtractive relation with the number stored in said accumulator, means for sequentially energizing said generators in the reverse order of their magnitude for enabling each generator to repetitively perform a successive series of operations until the binary equivalent number



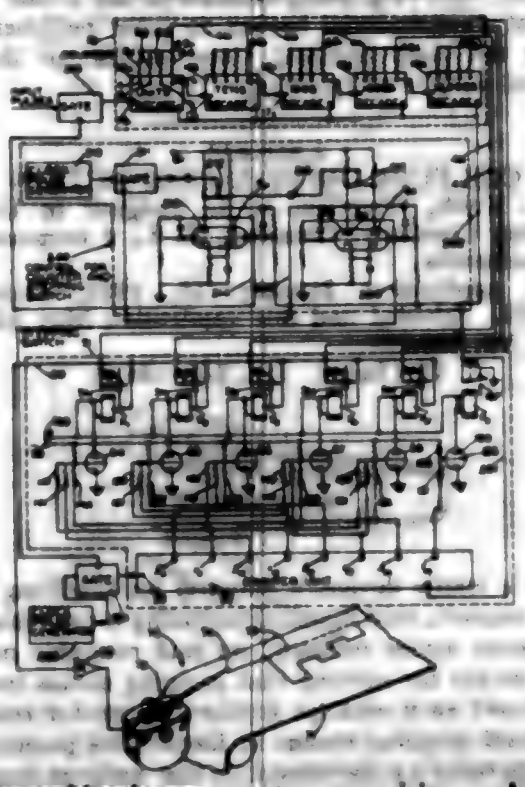
generated thereby exceeds the remaining number stored in the accumulator, a plurality of order counters, each counter connected to sum the total number of operations of a different number generator, whereby upon completion of all generator operations the number standing in said counters represents the decimal equivalent of said binary number.

2,860,832

COUNTER AND RECORDER COMBINATION

Meryl C. Burns, Cleveland Heights, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio

Application March 22, 1955, Serial No. 495,861
8 Claims. (Cl. 235—92)



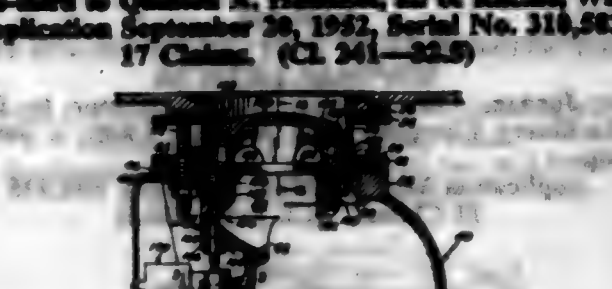
1. In combination, a counter comprising a plurality of counter units each having an input terminal, an output terminal and a readout terminal, said counter units being connected in series with the input terminal of each counter unit except the first coupled to the output terminal of the immediately preceding counter unit in the series, means for applying input pulses to the input terminal of the first counter unit in the series, means for causing each counter unit to complete a cycle of operation and deliver a pulse to its output terminal in response to a predetermined number of input pulses to its input terminal, and each counter unit having means for producing at its readout terminal a voltage representative of the pulse count in that counter unit, a visual recorder, and means operative to connect the readout terminals of the counter units individually in succession to said recorder.

2,860,833

MULTI-ROOM HEATING AND VENTILATING SYSTEM

John W. McElgin and Samuel W. Miller, Jr., Holmesburg, Pa., assignors to John J. Nesbitt, Inc., Holmesburg, Pa., a corporation of Pennsylvania

Application April 21, 1955, Serial No. 502,832
7 Claims. (Cl. 237—69)



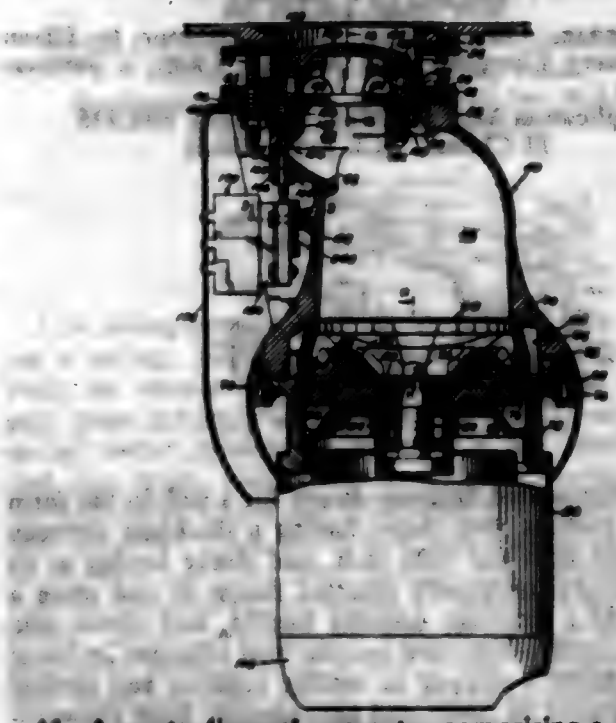
1. In a multi-room air-conditioning arrangement, an air-conditioning system in each room with each said system comprising a main heating and ventilating unit enclosed by a housing with elongated casings extending laterally from each end of said main unit housing to form convector units with said main unit and convector units forming a complete room system adapted for mounting against a wall of a room, there being a heat exchange element in each of said main and convector units, means extending through the main unit housing and convector unit casings of each air-conditioning system for supplying a heating medium to the heat exchange elements of each air-conditioning system, means extending through the main unit housings and convector unit casings of each air-conditioning system for returning the heating medium through each individual system of the air-conditioning arrangement, and means for serially connecting the supply and return means of the air-conditioning systems to provide a continuous flow path for the heating medium through the connected air-conditioning systems so as to eliminate the conventional mains and risers thereto to each individual air-conditioning system.

2,860,834

WASTE DISPOSAL APPARATUS

John W. Hammes, Racine, Wis.; Frede Hammes, executrix of John W. Hammes, deceased, assignor of one-third to herself, one-third to Ever J. Hammes, and one-third to Quinten A. Hammes, all of Racine, Wis.

Application September 20, 1952, Serial No. 310,582
17 Claims. (Cl. 241—32.5)



11. A waste disposal apparatus comprising a drain collar adapted to be supported on a vertical axis in a sink-

way core comprising means for supporting said core ad- timer means controlling said maintaining means and actu-

ing movement of air adapted for direct application to the

ordinary number to be converted therein, a plurality of generators, each said generator operable to enter im-

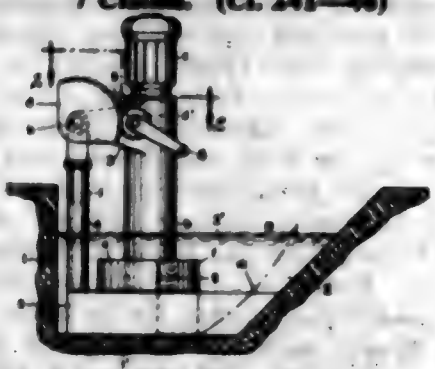
drain opening, a housing having a shredding chamber positioned below said collar and supported on said collar, a shredding rotor in said shredding chamber, electrical power means to actuate said rotor, switch means to control said power means, a stopper ring in said collar rotatably supported thereby, means depending from said ring into the top portion of said shredding housing, switch actuating means operably associating said switch means with said depending means, and a control member for said stopper ring connected with said ring for movement toward and away from said ring and including a part movable into and out of said opening by such motion to close and open said opening respectively whereby rotation of said control means will cause rotation of said ring and actuation of said switch.

2,860,835

TILTABLE UNDERWATER MACHINE STRUCTURE

Harald Joachim Georg Schade, Stuttgart-Bernhausen, Germany, assignor to Passavant Werke, Michelbacher Hutte, near Michelbach, Nassau, Germany

Application July 2, 1956, Serial No. 595,554
Claims priority, application Germany July 5, 1955
7 Claims. (Cl. 241—46)



1. An arrangement of a tiltable underwater operating machine in a body of water comprising, in combination, a first frame structure submersed in said body of water and fixedly mounted in position, a second frame structure complementing said first frame structure to jointly form a machine housing, an upward extension on said second frame structure, and pivot means for said extension arranged above the surface of said body of water for pivoting said extension about a horizontal axis to lift said second frame structure out of said body of water.

2,860,836

MOUNTING SLEEVE AND CLAMP MEANS FOR DISPOSAL DEVICES

Hans Jordan, Los Angeles, Calif., assignor to Given Machinery Company, Los Angeles, Calif., a partnership

Application May 16, 1955, Serial No. 508,495
11 Claims. (Cl. 241—100.5)

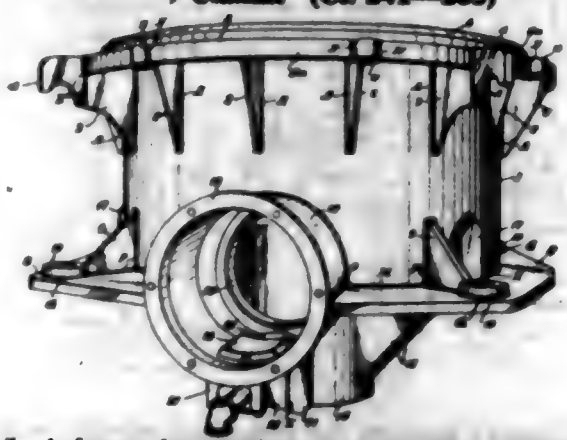
11. A thin-walled drainage sleeve for a sink in the form of a thin rustless steel sleeve having a thickness between about 0.025 inch and 0.04 inch, said sleeve having at its top an integral outwardly directed flange to rest upon a sink around a drainage opening therein, said sleeve also having an integral inturned annular seat adjacent its lower end to support a stopper in sealing relation and further having adjacent its lower end permanently fixed outwardly directed shoulder-providing means extending beyond the sleeve wall to support an underlying disposal device, said sleeve being provided at spaced intermediate locations with inwardly struck integral detents for resting thereon of spaced cooperating stopper means to hold a stopper in mounted position.

2,860,837

CRUSHER MAIN FRAME

Ewald Werner, Milwaukee, Wis., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

Application August 11, 1953, Serial No. 373,576
7 Claims. (Cl. 241—285)



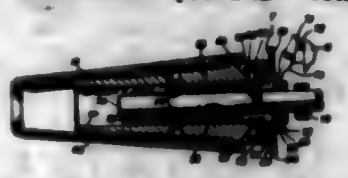
5. A frame for crushers and the like, including a horizontally disposed, generally ring-like supporting plate having a central aperture therein, a vertically disposed circumferential frame wall welded along its lower edge to said plate within said aperture, a plurality of lower supporting rib members welded to the upper surface of said plate and the outer surface of said wall, a massive ring welded to said frame wall along and above the upper edge of said wall and extending outwardly beyond the periphery of said wall, and a plurality of upper rib members welded to the lower surface of said ring and the outer surface of said wall, said ring having its inner and outer peripheral surfaces inclined in upwardly converging planes, said ring being secured to the frame wall by a mass of weld material having an inner peripheral edge lying in the same inclined plane as that of the inner peripheral surface of said ring.

2,860,838

COP TUBE DRIVING CONNECTION

John V. Keith, Warwick, R. I., assignor to Universal Winding Company, Cranston, R. I., a corporation of Massachusetts

Original application January 15, 1953, Serial No. 331,358. Divided and this application May 29, 1956, Serial No. 588,984
20 Claims. (Cl. 242—46.3)



12. In a textile device, a mandrel for receiving a yarn package support, said mandrel including a rotatable member, gripping means mounted on said rotatable member, resilient means for moving said gripping means into contact with said yarn package support, means for releasably holding said gripping means in inoperative position, and means, operated by movement of the yarn package support as it is placed on said mandrel, for releasing said holding means so as to cause said gripping means to move into contact with said yarn tube.

2,860,839

WEB WINDING MACHINE

Fred C. Bower, Fulton, N. Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio

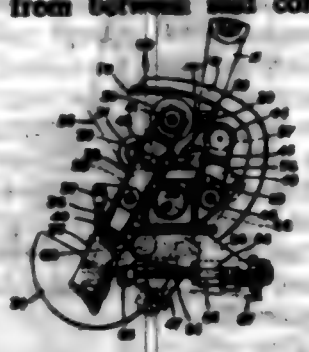
Application February 24, 1953, Serial No. 338,519
7 Claims. (Cl. 242—56)

6. In a continuous winder for web material, apparatus for transferring the advancing web from a full roll to a

2,860,843

spaced forked downwardly extending guides for accom-

new core comprising means for supporting said core adjacent the web advancing to said full roll, means for rotating said core at substantially the surface speed of the web, a guide roll for guiding the web into partially enveloping relation with said rotating core, means for severing the advancing web at a position closely adjacent said core and said full roll, means for smoothing the severed leading end portion of the web against said rotating core to force out air from between said core and the web



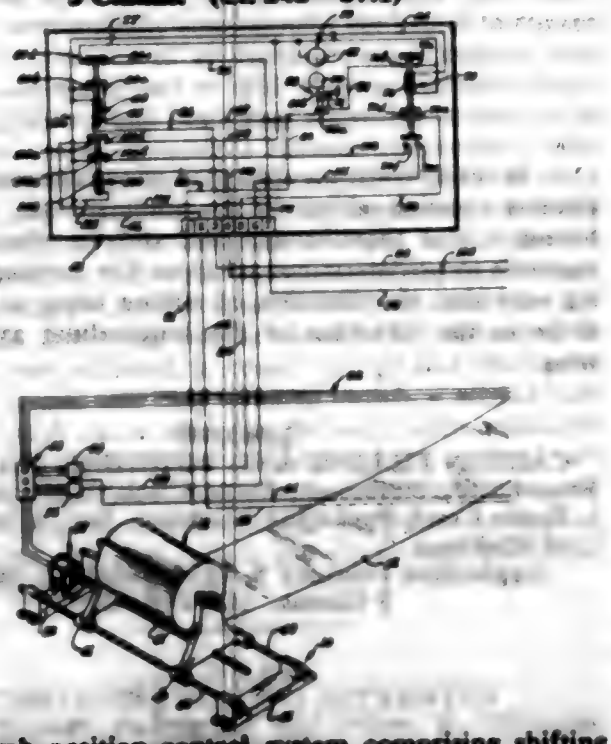
and thereby to cause said end portion of the web to adhere to said core and to start winding thereon, means adjacent said guide roll for sensing the position of the surface of the winding roll on said core with respect to said guide roll, and a drive actuated by said sensing means for moving said supporting means to shift said core away from said guide roll when the space between the adjacent surfaces of said guide roll and the web winding on said core decreases below a predetermined minimum.

2,860,848

REMOTE CONTROL EDGE ALIGNMENT DEVICE

Paul W. Jacobsen, Kiel, and Herbert H. Weber, Sheboygan, Wis., assignors to H. G. Weber & Company, Kiel, Wis., a corporation of Wisconsin

Application August 12, 1952, Serial No. 304,838
3 Claims. (Cl. 242—57.1)



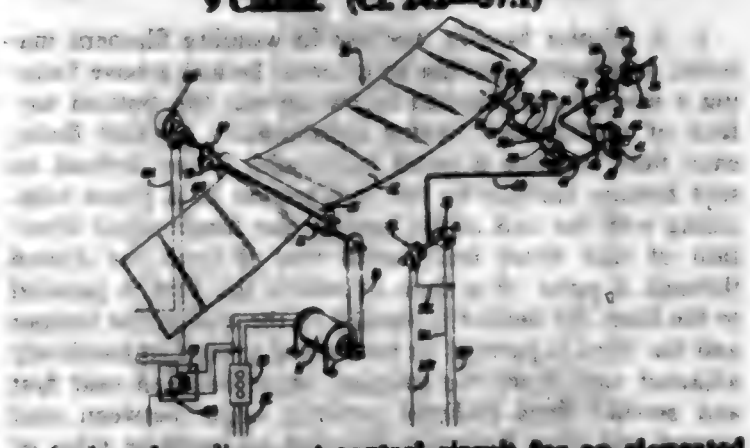
1. A web position control system comprising shifting means for shifting a roll in opposite directions to adjust the lateral position of a web unwinding therefrom, means controlling the direction of shifting of said shifting means to require shifting of the roll in a direction to correct for a deviation of the web from a desired position, a timer relay controlling actuation of said shifting means when a correction is indicated by said direction controlling means, an interval control switch controlling actuation of said timer relay, means for momentarily actuating said interval control switch at spaced intervals to actuate said timer relay, means for maintaining said timer relay in actuated condition after momentary actuation and subsequent deactuation of said interval control switch, and timer means controlling said maintaining means and actuated by the momentary actuation of said interval control switch to initiate a timing cycle, said timer means being operative to deactuate said timer relay at the end of a predetermined period to terminate a correction cycle, and said direction controlling means controlling the direction of shifting of the roll by the shifting means during a correction cycle.

2,860,841

REMOTE CONTROL EDGE ALIGNMENT DEVICE

Paul W. Jacobsen, Kiel, Wis., assignor to H. G. Weber & Company, Kiel, Wis., a corporation of Wisconsin

Application September 16, 1953, Serial No. 380,404
9 Claims. (Cl. 242—57.1)



1. An edge alignment control circuit for an elongated traveling web comprising reversible motor means for shifting a roll in opposite directions, first and second relay means controlling operation of said motor to shift the roll in opposite directions, first and second correction signalling switches controlling actuation of said first and second relay means, respectively, further relay means also controlling actuation of said first and second relay means, means for actuating said further relay means, said actuating means including switch means operative at intervals to initiate an edge correction cycle and timing means controlling the duration of said edge correction cycles, rotary means engaging the web for rotation in synchronism with the speed of movement of said web, and said switch means comprising a footage control switch driven by said rotary means and thereby responsive to the speed of movement of the web and having contacts which are actuated each time a predetermined length of web travels past said switch irrespective of speed variations of said web.

2,860,842

WIND UP REEL MEANS FOR ANCHOR LINES

Michael E. Ryan, Memphis, Tenn.

Application March 8, 1954, Serial No. 414,789
5 Claims. (Cl. 242—107.3)

3. A spring-powered reel for floating decoys, comprising a casing, including a pair of substantially parallel walls, an anchor line reel housed within said casing, a gear train drivingly coupled at one end to said reel, a spring motor drivingly connected to the other end of said gear train, said casing including a partition dividing said casing into a pair of segregated chambers, one of said chambers being water-tight and housing said spring motor, said partition being stepped and including a portion substantially perpendicular to said walls and an additional portion substantially parallel to said walls, said additional portion being provided with an aperture, said gear train including a shaft intermediate the ends of said gear train water-tightly journalled in said aperture and extending through said partition additional portion.

carton underneath said chute, a bar, an upright tiltably orifice, with the secondary orifice discharging fluid under

ly directed shoulder-providing means extending beyond the sleeve wall to support an underlying disposal device, said sleeve being provided at spaced intermediate loca-

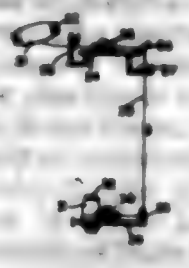
7 Claims. (Cl. 242—56)

6. In a continuous winder for web material, apparatus for transferring the advancing web from a full roll to a

2,860,843
BOBBIN
Dirk van Katwijk, Velp, Netherlands
Application September 30, 1954, Serial No. 459,259
3 Claims. (Cl. 242—118.3)

3. A tubular bobbin, for use in winding filament material, said bobbin having an external helical groove forming a normal right-handed screw thread, the bottom surface of said groove having substantially parallel flutes, each flute forming a small angle with a line defined on said bottom surface by the intersection of a plane coinciding with the axis of the bobbin, the longitudinal direction of said flutes being such that if lines are drawn through a point of a flute of which the first is parallel to the flute, the second is parallel to the axis of the bottom and the third is parallel to the helical groove immediately adjacent said flute, the smallest angle between said first and second lines and the smallest angle between said second and third lines are disposed on opposite sides of a plane coinciding with said axis and with said second line.

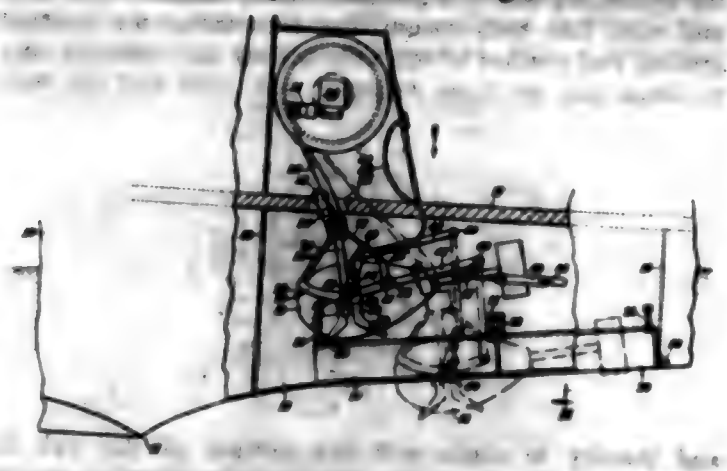
2,860,844
THREAD TENSIONER
Cecil J. Price, Lugoff, S. C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application October 27, 1953, Serial No. 543,047
4 Claims. (Cl. 242—150)



4. Yarn-winding apparatus comprising a yarn-delivery bobbin, a first yarn-tensioning device as defined in claim 1 adapted to receive yarn from the yarn-delivery bobbin, a yarn guide mounted on a reciprocating traverse arm and adapted to receive yarn from the first yarn-tensioning device, a second yarn-tensioning device as defined in claim 1 mounted on the traverse arm adapted to receive yarn from the yarn guide, and a yarn-receiving bobbin rotatably mounted on an axis parallel to the direction of reciprocation of the traverse arm and adapted to receive yarn from the second yarn-tensioning device during reciprocation of the traverse arm.

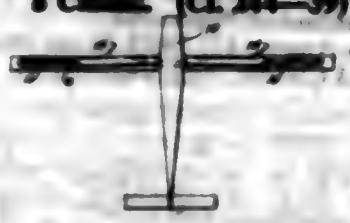
2,860,845
AIRCRAFT TRAILING MEMBER RELEASE AND REENTRY MECHANISM
Lionel Hugh Ireland, Cowes, Isle of Wight, assignor to Saunders-Roe Limited, East Cowes, Isle of Wight, England, a British company
Application August 4, 1954, Serial No. 447,782
6 Claims. (Cl. 244—1)

1. In a craft, apparatus for projecting into position beneath the craft from an enclosure within said craft an object having trunnions projecting from opposite sides thereof, said apparatus comprising a cradle shaped to fit against the sides of said object, and including a pair of spaced forked downwardly extending guides for accommodating said trunnions, each of said guides being outwardly flared at its lower end, a superstructure projecting above said cradle, guide rollers mounted on said superstructure, a power-operated cable drum mounted within said enclosure, a cable extending from said drum



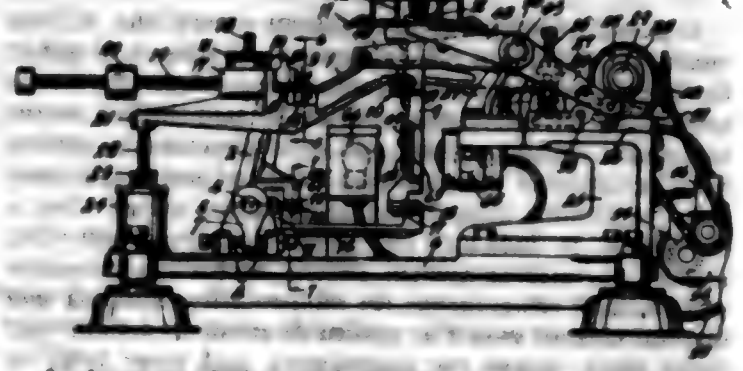
and around said guide rollers and attached at its free end to said object, a linkage connecting said cradle to said craft, and power means for moving said cradle between a retracted position, in which it is housed within said enclosure, and a projected position in which the flared lower ends at least of said guides project beneath said craft.

2,860,846
ROTARY SUSTAINING WING FOR AIRCRAFT
Paolo Orsi, Brescia, Italy
Application December 1, 1954, Serial No. 472,462
Claims priority, application Italy August 14, 1954
8 Claims. (Cl. 244—39)



1. In an aircraft, an elongated wing mounted for continuous rotation about its longitudinal axis, said wing having a slot therethrough and slidable shutter means operable to predetermined positions for opening and closing said slot, the direction of sliding being at least partially in the direction of the longitudinal axis of said wing.

2,860,847
CARTON FILLING AND WEIGHING MACHINE
Franklin M. Willemsdt, Battle Creek, Mich., assignor to Battle Creek Packaging Machines, Inc., a corporation of Michigan
Application February 8, 1954, Serial No. 408,772
3 Claims. (Cl. 249—69)



1. A carton filling and weighing machine, comprising a vibratory delivery chute, a conveyor belt for advancing

between said members that being said

actuated condition after momentary actuation and subsequent deactuation of said interval control switch, and

gear train water-tightly journalled in said aperture and extending through said partition additional portion.

cretion underneath said chute, a beam, an upright tiltably supported on said base to one side of said belt, a primary scale beam having an intermediate portion suspended from said upright by flexible leaves extending vertically between said upright and said beam and clamped thereto, a horizontal leaf clamped to said upright and said beam and lying in a plane intersecting the flexing portions of said vertically extending leaves, a column extending vertically alongside said beam and spaced from said upright, vertically extending flexible leaves suspending said column from said beam, a second horizontal flexible leaf having its ends connected to said column and said beam, a secondary beam positioned below said scale beam and having its ends connected to said upright and said column by means of pairs of flexible leaves, said pairs of leaves extending horizontally with one end of each leaf of each pair secured to said lower beam at longitudinally spaced points and projecting oppositely to the connecting member whereby the intermediate flexing portions of the leaves tend to bend oppositely under the weight of the lower beam, a counterweight carried by said scale beam outwardly from said upright, a magnetically attractive iron mass carried by said scale beam outwardly from said upright and magnetically insulated therefrom, an electromagnet positioned on said base and cooperative with said iron mass, a scale pan carried on said column above said scale beam and below said belt, a pedestal on said base positioned inwardly of said column, the inner end of said scale beam projecting over said pedestal, a cam shaft rotatably mounted on said pedestal, a shoe disposed between said belt and said pan and slidably supporting said belt, a lever pivotally supported on said pedestal and connected to said shoe, a first cam on said cam shaft cooperative with said lever to elevate said shoe and belt above said pan, a motor having a one revolution clutch drivingly associated therewith, means forming a driving connection between the driven side of said clutch and said shaft, a solenoid mechanically continuously connected to engage said clutch, a source of alternating electric current connected to said motor and to said vibratory delivery chute, current regulating and rectifying apparatus connected to said source, means including a rheostat continuously connecting said electromagnet to the output of said regulating and rectifying apparatus, switching apparatus energized by said rectifying apparatus and arranged to be actuated by movement of said scale beam, means connecting said clutch operating solenoid to said switching apparatus for energization thereby, a cam actuated switch connected in series with said solenoid, a second cam on said shaft positioned to actuate said cam actuated switch, a second cam actuated switch and a solenoid operated switch connected in series with said vibratory delivery chute, a third cam on said shaft positioned to actuate said second cam actuated switch, and a second solenoid positioned to control said solenoid operated switch and electrically connected to said switching apparatus.

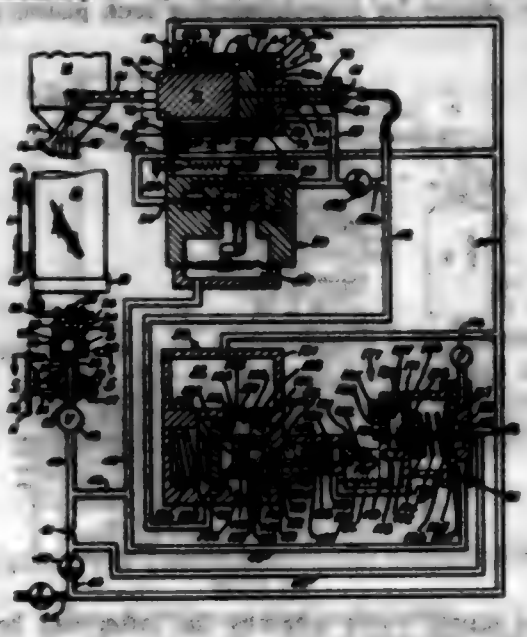
2,860,846

CONTAINER FILLING APPARATUS

Paul J. Weaver, Paramount, and Oliver R. Tichenal, Emeryville, Calif., assignors to St. Regis Paper Company, New York, N. Y., a corporation of New York

Application September 23, 1955, Serial No. 536,876
9 Claims. (Cl. 249—63)

1. Apparatus for filling a container with a predetermined weight of material, comprising: a chair to support the container to be filled; a deflection means attached to the chair which are movable in response to weight in the container; a control circuit conduit; a primary orifice discharging into said conduit; regulator means for supplying pressurized fluid to said primary orifice; a secondary orifice assembly comprising a secondary orifice member and a buffeting surface member having a buffeting surface, said buffeting surface being spaced from said secondary orifice, with the secondary orifice discharging fluid under pressure upon said buffeting surface, one of said members being stationary and the other being attached to and movable with the chair whereby deflection of the deflection means in response to material loaded into the container varies the spacing between said members and variably impedes flow of fluid through the secondary orifice assembly, thereby varying the pressure in the control circuit conduit; a supply line for conveying material to the container; a supply valve in said line; a power cylinder; a slidable piston assembly in said power cylinder whose extension is responsive to fluid pressure in said power cylinder, said piston assembly comprising a primary piston and a secondary piston, said secondary piston being movable independently of said primary cylinder, said piston assembly being linked with said supply valve for opening and closing said supply valve, said power cylinder having an inlet for the primary piston and an inlet for the secondary piston, power valve means connected to the inlet for the primary piston for supplying fluid under pressure to said primary piston in response to an increased pressure in the control circuit conduit; cut-off valve means connected to the inlet for the secondary piston for supplying fluid under pressure to said secondary piston, said cut-off means being responsive to pressure in the control circuit conduit at a control circuit pressure corresponding to a predetermined weight of material in the container.



2,860,849

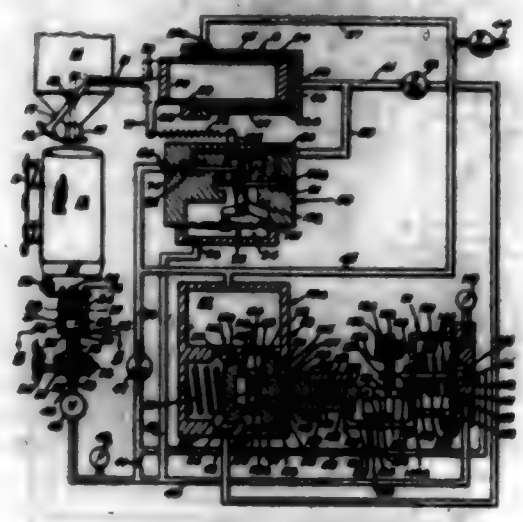
APPARATUS FOR FILLING CONTAINERS TO A PRECISE WEIGHT

Paul J. Weaver, Paramount, and Oliver R. Tichenal, Emeryville, Calif., assignors to St. Regis Paper Company, New York, N. Y., a corporation of New York

Application September 23, 1955, Serial No. 536,877
15 Claims. (Cl. 249—63)

1. Apparatus for filling a container with a predetermined weight of material comprising: container support means for supporting such container while being filled, said container support means including deflection means which are movable in response to the weight of material in the container; a control circuit conduit; primary orifice means connected to said conduit for discharging therein; regulator means connected to said primary orifice means for regulating the pressure of fluid directed to said primary orifice means; secondary orifice means including a secondary orifice member and a buffeting surface member, the latter member normally being spaced from the orifice of said secondary orifice member, in operation such secondary orifice discharging fluid under pressure against said buffeting surface member, one of said members being stationary and the other being attached to and movable with said container support means, the spacing

between said members thus being variable in response to deflection of said deflection means occurring in response to the weight of material filled into the container thereby variably to impede the flow of fluid through such secondary orifice, the pressure in said control circuit conduit thus being variable in response to the degree of impeding of such flow of fluid; means for supplying material to such container; a material supply valve for controlling the flow of such material to the container; and means for opening and closing such supply valve including: the power cylinder having a slidable piston assembly therein, the extension of said piston assembly from a norm position being responsive to fluid pressure in said power cylinder, means for interconnecting such piston assembly



and said supply valve whereby the latter can be opened and closed as aforementioned, power valve means connected to said power cylinder for supplying fluid under pressure to the latter in response to the occurrence of a selected fluid pressure in said control circuit conduit, feedback means operatively interconnecting said piston assembly and said power valve means for opposing the flow of fluid to said power cylinder in response to movement of said piston assembly by fluid controlled by said power valve means, and cutoff valve means connected to said power cylinder for controlling a flow of fluid under pressure to said power cylinder in response to a selected pressure in said control circuit conduit occurring in response to a preselected weight of material in the container.

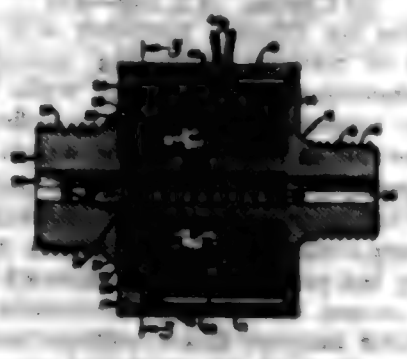
2,860,850

SOLENOID VALVE

William A. Rhoden, Phoenix, and Harry E. Etches, Mesa, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Application May 25, 1953, Serial No. 357,143

11 Claims. (Cl. 251—139)



1. An electromagnetic valve comprising: a casing; core means disposed axially within said casing and having a free end; an electromagnetic winding disposed about said core means; end closure members associated with said core means and forming a part of said casing, an electromagnetic gap being formed intermediate said free end of said core means and one of said closure members; conduit attachment members associated with each of said end closure members, one of said attachment members adjacent said free end of said core means being of non-magnetic material and spaced from said free end of said core means; axially extending passage means formed in said core means, said closure members and said attachment members; a reversible circular armature-valve member of magnetic material positioned intermediate said free end of said core means and said non-magnetic attachment member, said armature-valve member being adapted to extend radially outwardly beyond said electromagnetic gap; valve seats formed on the facing ends of said non-magnetic attachment member and said core means, said armature-valve member being adapted to be moved in one direction relative to one of said valve seats by energization of said winding; and means for biasing said armature-valve member in another direction relative to said one of said valve seats upon deenergization of said winding.

2,860,851

MULTI-STAGE TURBINE ROTOR ASSEMBLIES

Frank Bernard Halford and William Ker Wilson, Edgware, England, assignors to The De Havilland Engine Company Limited, Edgware, England, a British company

Application December 11, 1953, Serial No. 397,788

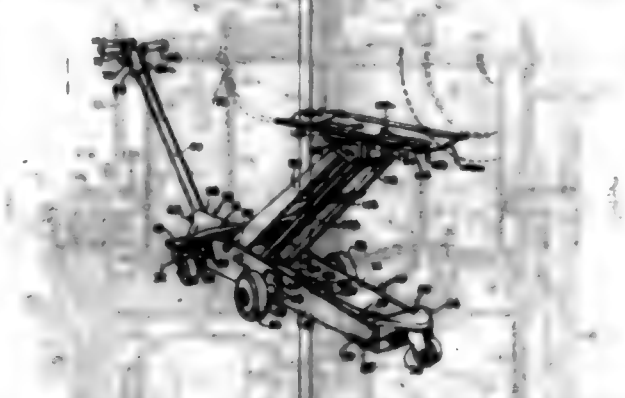
5 Claims. (Cl. 253—39.15)

1. A multi-stage turbine rotor assembly comprising a hollow shaft and a plurality of blade carrying discs axially spaced on said shaft, means securing one of said discs rigidly to an intermediate portion of said shaft, said means providing a driving connection between said first disc and shaft, means concentrically supporting a second of said discs at an end of said shaft, said disc supporting means including a concentric cylindrical flange on said second disc circumferentially engaging and having limited movement within the hollow end of the shaft, the second disc and end face of said flange being spaced axially from the end face of said shaft and from any axially aimed interior part of said shaft respectively, thereby maintaining said second disc concentric with the shaft but permitting it limited axial movement and limited movement of rotation relatively to the shaft, and a tubular connecting piece concentric with said first and second discs extending between and fixedly secured to parts of said discs adjacent to their outer circumferences and maintaining the discs adjacent their outer circumferences in angular circumferential alinement.

said baffling surface being spaced from said secondary

movable with said container support means, the spacing

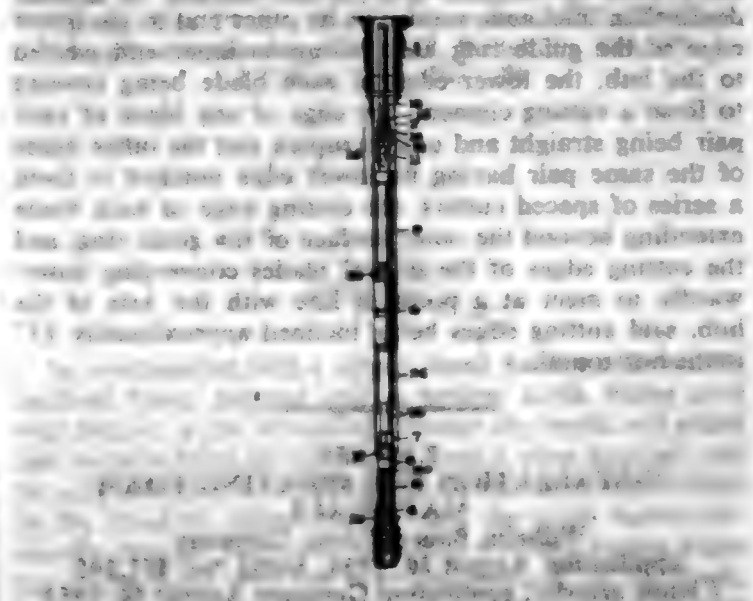
2,860,852
LIFT TRUCK
James Wyatt Lewis, Jr., Spartanburg, S. C.
Application June 25, 1956, Serial No. 593,761
2 Claims. (Cl. 254—10)



1. A lift truck comprising an elongated narrow chassis, at least one caster carried adjacent the rear of the chassis, a pair of spaced aligned relatively large wheels rotatably mounted adjacent the medial portion of the chassis, an element having a pair of horizontal legs and a vertical web forming the front end of the truck, said element being positioned in such a manner that one of the legs of the element extends forwardly from the upper portion of the chassis while the other leg of the element projects beneath and reinforces the lower portion of the chassis, a caster carried by said forwardly extending leg, said relatively large wheels projecting slightly below a plane tangent to the lower points of the casters, a relatively long lifting boom pivoted adjacent the rear of the chassis, a cradle carried by the free end of the boom and being positioned so that the free end of said boom nests within the chassis above said other leg and closely adjacent the web when in lowered position, the disposition of the web and legs of said element on said chassis providing space for nesting a boom of maximum length as well as maximum strength for the truck, means mounting the cradle for adjustment about a vertical axis, and means maintaining the cradle substantially level for all positions of the boom whereby, the load will be positioned on the relatively large wheels and either on the front caster or on the rear caster for all positions of the load except when the load is centered over the relatively large wheels and whereby, the cradle may be placed under a load without encountering obstructions adjacent the floor beneath the load.

2,860,853
METHOD OF JEEP HOLE COMPLETION
Harry S. Brigham, Los Angeles, Calif., assignor to Western Gulf Oil Company, Los Angeles, Calif., a corporation of Delaware
Application February 21, 1955, Serial No. 489,599
4 Claims. (Cl. 255—1.5)

1. The method of completing jeep holes as producing wells comprising drilling hole to within a short distance above the upper horizon of a producing formation, drilling a rat hole therefrom into the producing formation, reaming the rat hole and the larger hole thereabove to form a shoulder at their juncture, assembling tubing to provide a perforated lower portion adapted to extend into the rat hole and mounting spaced packers thereabove, the tubing above the packers having ports which are controlled by relative movement of adjacent sections of the tubing as manipulated from the surface, running the tubing into the hole to total depth, seating the lower of said packers within the rat hole to seal it from the larger bore above, expanding the upper of said packers to engage the wall of the larger bore and thereby to isolate the annulus between the packers, manipulating the tubing to open the ports therein above the upper packer, establishing a circulation of drilling fluid through the annulus between the larger hole and tubing, displacing the drilling fluid from the annulus by a protective cush-



ioning liquid to support the tubing in spaced relation to the wall of the hole, manipulating the tubing to close the aforesaid ports, flushing drilling fluid from said tubing, and installing pumping means within the tubing.

2,860,854
METHOD FOR DRILLING AND COMPLETING WELLS
Roy F. Wilcox, McCook, Nebr.
Application September 1, 1956, Serial No. 532,889
7 Claims. (Cl. 255—1.8)

6. A method of completing a water well in a loose sanded formation, comprising the steps of drilling an open hole into a loose sanded formation below the adjacent ground water level of said formation, maintaining during said step of drilling a fluid level in the hole above said ground water level by introducing fluid into said hole as required, thereafter progressively lowering the fluid level in the hole until it falls below the ground water level and a cave-in occurs, thus preventing enlarging of the cave-in by again introducing fluid into the hole and raising the fluid level above said ground water level and thereafter drilling the hole to completion.

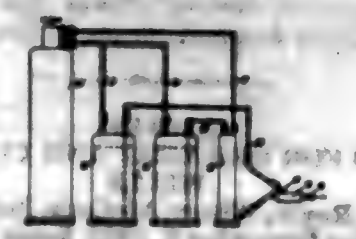
2,860,855
APPARATUS FOR BORING FISHING HOLES IN ICE
Bertram J. Vincent, Leominster, Mass.
Application July 26, 1956, Serial No. 600,189
1 Claim. (Cl. 255—61)

Apparatus for use in cutting holes in ice comprising in combination with a vertical rotary shaft which turns in bearings and which is of a length to extend downwardly through ice of a thickness of at least three feet, a boring tool comprising a tubular hub member having an axial bore in which the lower end portion of the shaft is removably fitted, a key which constrains the hub to turn with the shaft, a plurality of pairs of radial arms welded at their inner ends to the hub, a cylindrical guide ring, of an axial length approximating that of the hub, coaxial with the shaft and welded to the outer ends of the several arms, the arms being symmetrically spaced about

core means; end closure members associated with said ment.

the axis of the hub and substantially perpendicular to said axis, and a pair of cutter blades corresponding to each pair of arms, each blade being a rigid bar, substantially rectangular in transverse section and of greater depth than thickness, welded at its outer end to the lower edge of the guide ring and having its inner end welded to the hub, the lower edge of each blade being beveled to form a cutting element, the edge of one blade of each pair being straight and uninterrupted and the other blade of the same pair having its lower edge notched to form a series of spaced cutters, the cutting edge of each blade extending beyond the outer surface of the guide ring, and the cutting edges of the several blades converging downwardly to meet at a point in line with the axis of the hub, said cutting edges being inclined approximately 15° to the horizontal.

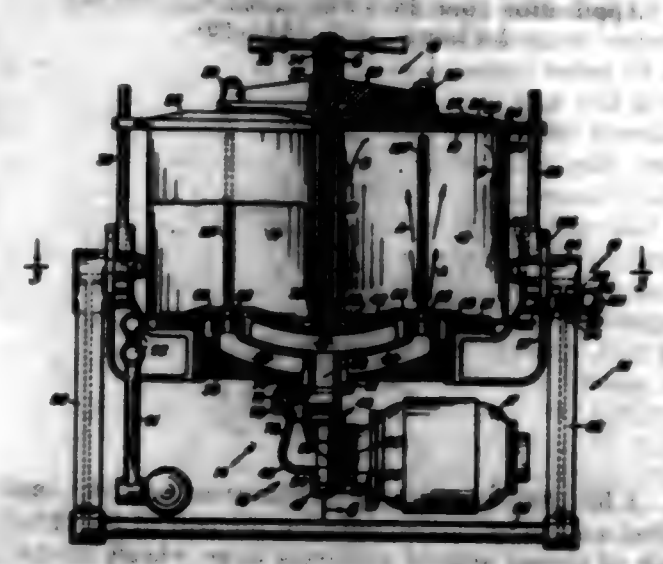
2,848,855
INSTALLATION FOR SPRAYING FOAM MATERIALS
Wilhelm Benzer, Essen, Germany
Application August 20, 1954, Serial No. 451,285
Claims priority, application Germany August 20, 1953
1 Claim. (Cl. 259—4)



Installation for preparing and spraying foam, comprising a compressed air source, a first closed container adapted to hold a solution of a foam-forming spraying material, a second closed container adapted to hold a solution of a hardening agent for the spraying material when in foamed form, a third closed container to form foam therein, a mixing chamber, a spraying device associated with the mixing chamber, a first system of conduits, and a second system of conduits, the first system of conduits including a line leading from said air source to the first container, a line from the first container to the third container, a line from the air source to the third container, and a line from the third container to the mixing chamber, the second system of conduits including a line connecting the air source and the second container, and a line connecting the second container and the mixing chamber, the third container thus having two inlets and an outlet and being of considerably larger cross sectional area than the inlets and outlet communicating with the third container and having considerable volume so that sufficient space is provided in the container for the foam formation.

2,848,857
MIXING APPARATUS FOR MIXING MATERIALS OF DIFFERENT CHARACTERISTICS
Julian Stephens Brown, Fayetteville, N. Y., assignor to Edmund L. Lewis, Syracuse, N. Y.
Application May 3, 1956, Serial No. 585,798
11 Claims. (Cl. 259—96)

1. Mixing apparatus comprising, in combination, a container, a support for the bottom of the container, said container having its top open, means for engaging the margins of said open top in a sealing manner, a pair of conduits in communication with the container through its open top, a pump for drawing material from the container through one of said conduits and returning it to the container through the other of said conduits and means for turning the apparatus upside down to prime the pump and conduits prior to initiating the priming cycle, said apparatus being turned right side up again



at the end of the priming cycle to drain the pump and conduits into the container.

2,848,858
COMBINATION STIRRING AND MIXING PADDLE AND CONTAINER SCRAPER
Abraham Kum, Brooklyn, N. Y.
Application April 4, 1955, Serial No. 726,585
1 Claim. (Cl. 259—144)

A stirring paddle for selective use in stirring liquids confined in jars and paint cans, comprising a single, elongated, flat strip extendable in a generally vertical direction when in use and reversible side for side according to the type of container in which the liquids are confined, with one side edge to extend in wiping contact with the wall of a paint can in stirring the contents thereof and the other to extend in a corresponding manner in wiping contact with the wall of a jar, said paddle having in one side edge a notch proportioned to receive the overhanging lip of a paint can, said strip having a straight bottom end edge perpendicularly intersecting said one side edge to form a square corner at the lower end of said one side edge, adapted to complement a correspondingly square corner of a paint can the overhanging lip of which is engaged in the notch of said one side edge, the other side edge having a rounded corner at its lower end merging into said bottom edge to complement the rounded corner defined in a jar at the intersection of the side and bottom walls thereof, said other side edge having a rounded upper corner merging into a straight, longitudinally extending shoulder that extends parallel to, said is offset by the upper corner inwardly from, said other edge, for engagement of the upper corner against the complementarily rounded overhang of a jar simultaneously with engagement of said shoulder against the inner surface of the jar neck.

having a front edge and a rear edge angularly related to yielding means for urging the actuator to an inoperative

the tubing to open the ports therein above the upper

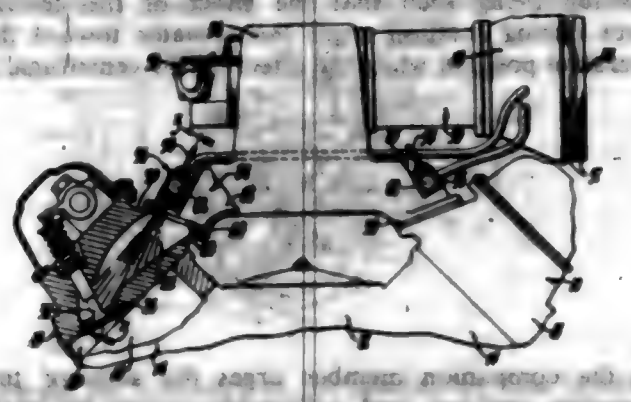
several arms, the arms being symmetrically spaced about

2,860,889

FUEL INJECTION NOZZLE

John Dolza, Fenton, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 19, 1956, Serial No. 610,893
5 Claims. (Cl. 261—78)



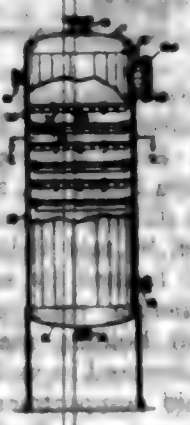
1. Fuel discharge means for use in a fuel injection system for an internal combustion engine having induction passages for charging the engine cylinders, said means comprising a mounting block of heat insulating material having a passageway extending therethrough, said mounting block being adapted to be secured to said engine with said passageway opening into said induction passage, a fuel nozzle disposed in said passageway and adapted to be interconnected with said fuel injection system for injecting metered fuel therefrom and into said induction passage, and fastening means for retaining said nozzle and said block in position.

2,860,860

CONTACTING TRAY DECK ASSEMBLY

Joseph G. Wilson, St. Louis, Mo., assignor to Shell Development Company, Emeryville, Calif., a corporation of Delaware

Application October 28, 1953, Serial No. 388,895
4 Claims. (Cl. 261—113)



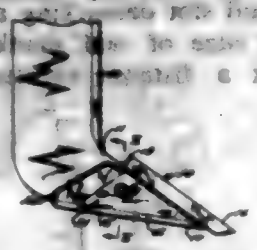
1. A tray deck section for contacting towers including a plate of sheet metal entirely flat between the longitudinal edges thereof, whereby marginal strips along said edges are adapted to rest on elongate support means, at least one longitudinal stiffening beam extending along the underside of said plate substantially for the full length thereof in spaced relation to said marginal strips to provide at least two vertically unobstructed longitudinal areas in said plate between said marginal strips and the stiffening beam, said plate having a plurality of openings in each of said unobstructed areas for the passage of material to be contacted; said a downward vertical flange at each transverse edge of the plate, each said flange having the ends thereof terminated short of said marginal strips so as to lie wholly between said support means and having a horizontal lip turned inwardly under said plate and in supporting engagement with a downwardly directed part of the stiffening beam.

2,860,861

RIPPER TOOTH CONSTRUCTION HAVING STOP MEMBER TO PREVENT WEDGING OF TOOTH TO SHANK

Donald J. Larson, Joliet, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California

Application January 24, 1957, Serial No. 636,139
1 Claim. (Cl. 262—9)



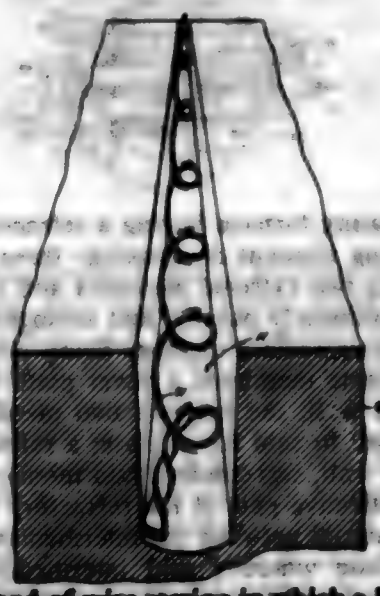
In combination with a ripper shank having a forwardly inclined lower tapered end, a hollow tooth fitting over said shanks, a pin extending through the tooth and shank and loosely fitted in the shank, and a stop member embracing two sides and the bottom of the shank and welded to the shank to absorb thrust when the tooth moves forwardly through the earth, said stop member having edges for engagement with the rear side portions of the tooth, and having notches in said edges providing space to weld it to the shank and also providing a surface for abutment with the bottom rear edge of the tooth.

2,860,862

METHODS AND APPARATUS FOR WIRE SAWING

William B. Horton, Concord, Mass., assignor to H. E. Fletcher Co., West Chelmsford, Mass., a corporation of Massachusetts

Continuation of application Serial No. 453,276, August 26, 1954. This application April 12, 1957, Serial No. 652,530
11 Claims. (Cl. 262—50)



2. In a method of wire sawing in which a kerf is formed in a body of material, the steps which comprise passing a helically-shaped saw along the bottom of the kerf in the presence of an abrasive, said saw having an helical diameter which exceeds the width of the kerf, and simultaneously elongating and radially compressing the helically-shaped wire saw whereby an increase in pressure is exerted on the abrasive and the kerf is thereby enlarged.

2,860,863

MINING CUTTER BIT HAVING A RESILIENT TONGUE

Arnold O. Brownlie and Claude B. Kreissler, Cincinnati, Ohio, assignors to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio

Application March 15, 1957, Serial No. 646,469
3 Claims. (Cl. 262—39)

1. A cutter bit for mining machinery, said cutter bit having a head and an integral elongated shank, said shank

adapted to be deflected in direct relation to the edge and an inner peripheral edge, said body portion

the container through the other of said conduits and means for turning the apparatus upside down to prime

jar neck.

having a front edge and a rear edge angularly related to each other to provide a wedge shape, whereby said shank can enter a similarly formed opening in a socket member for a fixed distance as determined by said wedge shape, said shank being characterized by a slot extending inwardly from its outer end, and positioned substantially closer to the rear edge of said shank than to the front edge thereof, said slot demarking a resilient tongue adjacent the rear edge of said shank, said slot extending into said shank a distance substantially less than the

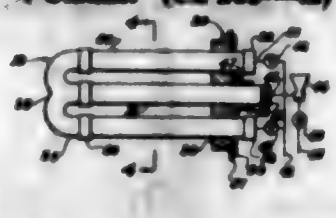
length of said shank which is engageable in said socket member, so that the rearward strains of cutting can be resisted at the outer side of said socket member by the engagement of a rear face of a solid portion of said shank with said socket member and by the engagement of a lower portion of said shank at its front edge with said socket member, which lower portion is substantially non-resilient, the said tongue being slightly displaced with respect to the axis of said shank to provide a binding action in the socket opening thereof.

2,860,864

RADIANT TUBE HEATER

Philip L. Knight, Toledo, Ohio, assignor to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application January 7, 1955, Serial No. 480,465
4 Claims. (Cl. 263—42)



2. In a heating furnace having a refractory lined metal wall, a heating element comprising: three tubular members including two extreme members and an intermediate member, substantially parallel and arranged in a common plane; said intermediate member being disposed between said two extreme members; a cover plate forming a part of said metal wall, the extreme two members being gas tightly attached to said cover plate; a refractory material adjacent said wall, surrounding said tubular members and forming an effective part of the refractory lining thereof; a resilient material between the intermediate member and said cover plate whereby said intermediate member is capable of moving through said cover plate and retaining a substantially gas tight seal therewith; a burner adjacent an end of each of the extreme two tubular members and capable of firing therein to; and a header connected to the other ends of said extreme two members and to a corresponding end of the intermediate member to provide separate passages from each of said extreme two members to said intermediate member for products of combustion from said burners.

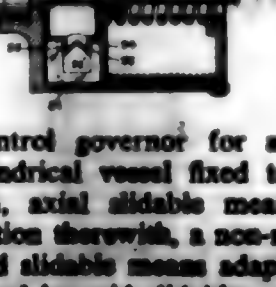
2,860,865

OVERSPEED GOVERNOR

Horace L. Gardner, Jr., Wantagh, N. Y., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland

Application November 26, 1954, Serial No. 472,623
5 Claims. (Cl. 264—17)

1. A centrifugal governor for a rotary member comprising an actuator slidably carried by the rotary member, yielding means for urging the actuator to an inoperative position, movable companion member carried by the rotary member and engageable with said actuator, means for maintaining said companion member in a normal position, the relative positions of the actuator in inoperative position and the movable companion member in normal position being such that the effect of the centrifugal force during rotation urges the actuator toward the inoperative position while the effect of the centrifugal force



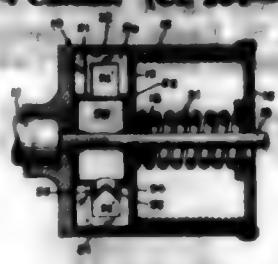
on the companion member urges the actuator toward operative position, and collapsible means for resisting the slidable movement of the companion member until a predetermined speed of rotation is exceeded, whereupon the resistance of the collapsible means is overcome suddenly, permitting the companion member to shift the center of gravity of the actuator to the opposite side of the axis of rotation of the governor, whereupon the centrifugal force of rotation will urge the actuator to operative position.

2,860,866

GOVERNOR

Rolf H. Roeder, Weerzburg, Germany, assignor to Worthington Corporation, Harrison, N. J., a corporation of Delaware

Application August 23, 1956, Serial No. 606,713
4 Claims. (Cl. 264—19)



1. A speed control governor for a rotatable shaft comprising a cylindrical vessel fixed to said shaft for rotation therewith, axial slidable means connected to the vessel for rotation therewith, a non-rotating governor rod carried by said slidable means adapted to be moved axially of said vessel by said slidable means, a compartment in said vessel formed by said slidable means for containing liquid therein, said rod extending into said compartment, liquid holding means fixedly connected on the rod portion disposed in said compartment in communication with said compartment for receiving liquid from said compartment and discharging liquid thereto, vane means disposed in said compartment for rotating liquid therein to move said slidable means and governor rod axially in one direction when the shaft speed increases above a predetermined value, and tension means for moving the slidable means and said rod axially in the opposite direction when the shaft speed decreases below a predetermined value whereby the governor responds instantaneously to speed variations.

2,860,867

COMPUTING SCALE

Kenneth C. Allen and Lawrence B. Biebel, Dayton, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio

Application August 24, 1953, Serial No. 376,138
16 Claims. (Cl. 265—29)

1. A computing scale having a load receiving platter, a lever, weighing mechanism associated therewith, an

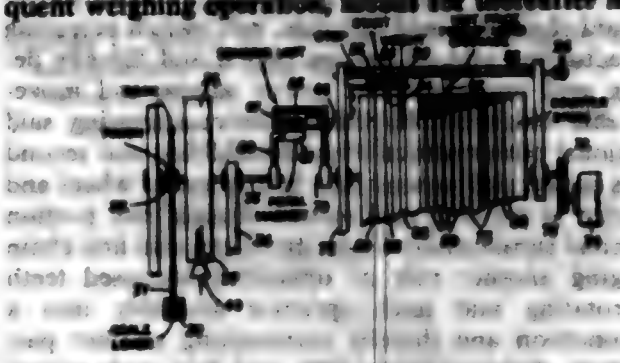
2,860,871

after engaging said stop means at said first end portion of

porting engagement with a downwardly directed part of the stiffening beam.

1. A cutter bit for mining machinery, said cutter bit having a head and an integral elongated shank, said shank

element adapted to be deflected in direct relation to the displacement of said lever upon application of a load to said platter, a memory device having a datum position, means for temporarily recording the amount of deflection of said element in predetermined relation to said datum position leaving the scale free for a subsequent weighing operation, means for thereafter measuring



the weight by reference to the spacing of said recorded position on said memory device relative to said datum position, additional means for computing the value at a predetermined price by additional reference to the spacing of said positions on said memory device, and means operable thereafter for erasing said recorded position from said memory device.

2,860,868

WEIGHING SYSTEM

Theodore A. Wells, Wichita, Kans., assignor to Central Engineering Corporation, Wichita, Kans., a corporation of Kansas

Application July 25, 1955, Serial No. 524,212
7 Claims. (Cl. 265—71)

1. In combination with a relatively rigid floor, a weigh scale adapted for use in ascertaining the loads carried by dragline carts and the like, comprising a pair of spaced apart runway members adapted to receive the wheels of a dragline cart thereon, each of said runway members being equipped with a pair of spaced apart standards extending upwardly therefrom, a pair of support members for each said runway member and being oriented in alignment with the standards thereof, means anchoring said support members to said floor, a bed plate for each said runway and being supported on said floor beneath a portion of the runway, load sensitive means interposed between each said portion and each bed plate for receiving a load imposed on the runway associated therewith, link members pivotally connecting each support member and standard to afford substantially free movement of the standards with respect to the support members within predetermined limits while preventing substantially all movement in other directions, and a torque bar extending between the links of each support member and being rigidly secured thereto.

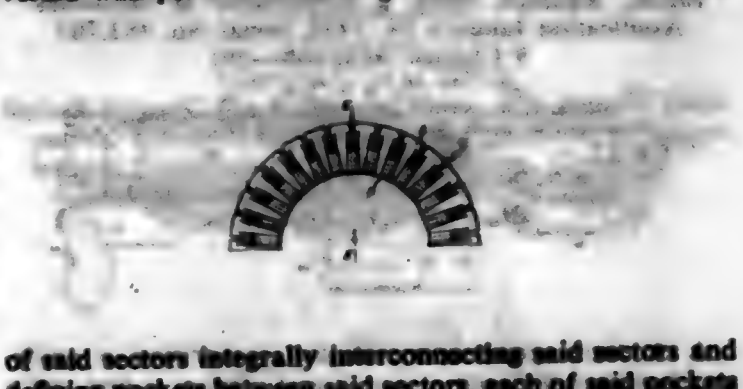
2,860,869

ANNULAR SPRINGS AND METHOD OF MANUFACTURING THEM

Jovan Utvitch, Paris, France, assignor to International Engineering General Research & Licensing Company, Wilmington, Del.

Application May 3, 1956, Serial No. 582,483
Claims priority, application France May 12, 1955
9 Claims. (Cl. 267—1)

1. An annular spring having an integral body portion formed from a resilient material with an outer peripheral edge and an inner peripheral edge, said body portion being defined by a plurality of circumferentially spaced-apart identical sectors extending radially from said inner peripheral edge to said outer peripheral edge and retroverted wall portions extending from one axial face only



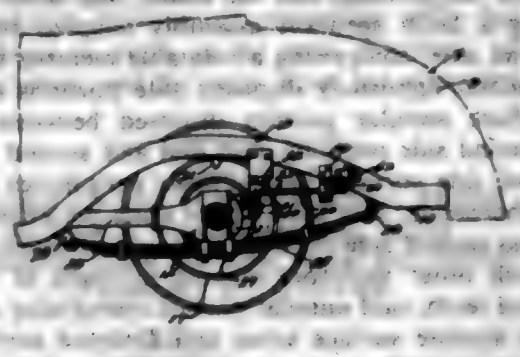
of said sectors integrally interconnecting said sectors and defining pockets between said sectors, each of said pockets extending along a radial line but terminating short of at least one of said peripheral edges of the body portion to define a radial slot along which said sectors are free from interconnection.

2,860,870

STABILIZER AND SPRING DEVICE

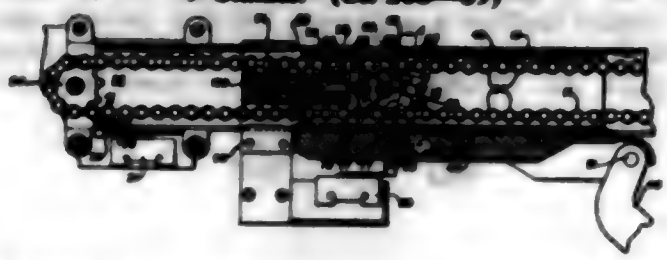
Brouwer D. McIntyre, Monroe, Mich., assignor, by mesne assignments, to Monroe Auto Equipment Company, a corporation of Michigan

Application January 28, 1954, Serial No. 406,621
8 Claims. (Cl. 267—11)



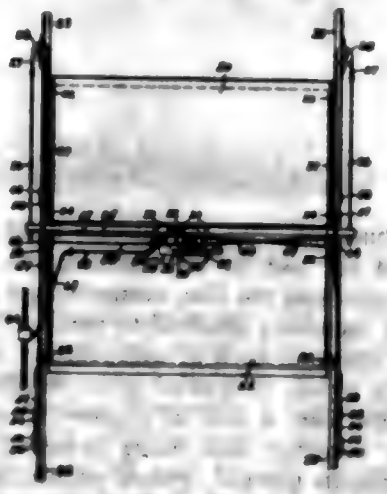
1. In a vehicle having a pair of laterally spaced ground engaging wheels, axle housing means extending between and interconnecting said wheels, vehicle frame means, spring means connected between said axle housing means and said frame means so that said frame means is sprung on said housing means and wheels, a pair of bar members disposed on opposite sides of said frame means, said bar members including laterally extending portions disposed in substantially coaxial spaced relationship under a predetermined load, each of said bar members including a portion extending angularly and substantially horizontally from the outer end of its laterally extending portion, elements connecting the inner ends of said lateral bar member portions to the rear of said axle housing means and in substantially the same horizontal plane as said axle housing means, elements connecting the free ends of said angularly extending bar member portions to opposite sides of said frame means, the elements connecting the bar member portions to one of said means effecting pivotal connections with said means to permit those portions of said bar members to rock generally vertically, the elements connecting the other bar member portions to the other of said means effecting an anchoring of the bar portions to the other of said means so that said anchored portions will be placed in torsion upon rocking movement of said pivotally connected bar portions, and means rotatably connecting the anchored bar member portions intermediate their ends to the means to which they are connected.

2,860,871
DOOR OPERATOR
Emmett V. Schneider, Mansfield, Ohio, assignor, by mesne assignments, to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Alliance, Ohio, a corporation of Delaware
Application January 19, 1955, Serial No. 482,763
9 Claims. (Cl. 268—89)



1. A door operating mechanism comprising, a guideway having a first and a second end portion, a first and a second sprocket wheel located at said first and second end portions of the guideway, a continuous chain carried by said first and second sprocket wheels, a positive drive uni-directional power source adapted to drive one of said sprocket wheels and having an off and on switch, said chain having a first and a second straight run portion across which said chain is adapted to travel in a first and a second substantially linear direction respectively, a carriage mounted within said guideway for movement in said first and second substantially linear directions, connection means for connecting a door to be operated to the carriage whereby movement of the carriage is transmitted to the door, latch means adapted to maintain alternately a latched condition and an unlatched condition between the carriage and the chain, said latch means including a latch sprocket assembly adapted for rotation about an axis, comprising a rotatable member having first and second oppositely disposed side portions and an intermediate annular portion disposed between said first and second side portions, said first and second oppositely disposed side portions having outer peripheries defined by teeth thereupon, said teeth on the outer peripheries of said first and second side portions disposed substantially opposite each other therefore making up pairs of oppositely disposed teeth, said annular portion comprising alternately spaced arcuate surface areas and flattened surface areas, said arcuate surface areas and said flattened surface areas connected by angular surface areas, a plunger having a first surface area adapted to engage said flattened surface area and a second surface area adapted to engage said angular surface area when said latch means is in the latched position, spring means urging said plunger toward said intermediate annular portion, said latched condition creating a latched resistance to rotation of said latch sprocket assembly about said axis, said first surface area of said plunger adapted to engage said arcuate surface area when said latch means is in the unlatched condition, said unlatched condition creating an unlatched resistance to rotation of said latch sprocket assembly, stop means mounted at said first and second end portions of said guideway whereby movement of said carriage in said first and second linear directions within said guideway is limited, said chain being made up of a series of interconnecting links which are adapted to travel between the oppositely disposed teeth on said first and second side portions of the latch sprocket assembly and adjacent said intermediate annular portion, lug means comprising a first and a second chain lug mounted upon said chain, a switch actuating member carried by said chain, resistance to movement of said carriage and said door being less than said latched resistance and greater than said unlatched resistance, said first and second chain lug surrounding one of said pairs of oppositely disposed teeth on said latch sprocket assembly when said latch means is in said latched condition whereby said carriage is transported in said first linear direction within said guideway, said carriage thereafter engaging said stop means at said first end portion of the guideway thus preventing further movement of said carriage in said first linear direction whereby said second chain lug overcomes the latched resistance to rotation of said latch sprocket assembly and said sprocket assembly rotates slightly thus moving said latch means to the unlatched condition and thus permitting relative movement of said chain and said carriage, said switch actuating member actuating said off and on switch and thereby de-energizing said uni-directional power source and movement of said chain ceases, means for re-activating said uni-directional power source whereby said first and second chain lugs are carried around said first sprocket wheel and into position to traverse said second straight run portion in said second substantially linear direction, said first chain lug engaging another pair of oppositely disposed teeth thereby rotating said latch sprocket assembly into a latched condition and thereby surrounding another pair of oppositely disposed teeth with said first and second chain lug thus positively locking said carriage to said chain, thereafter the movement of said chain lugs in said second substantially linear direction transports said carriage in said second linear direction until engagement of said carriage with said stop means at said second end portion of the guideway is effected.

2,860,872
CABLE TRACTION DRIVE OPERATOR
Paul R. Doeg, Lynbrook, N. Y., assignor to The Peelle Company, Brooklyn, N. Y., a corporation of New York
Application January 27, 1955, Serial No. 484,449
4 Claims. (Cl. 268—89)



1. In combination with a counterbalanced elevator door comprising a pair of oppositely movable door sections mounted one above the other between a pair of spaced-apart guide rails for vertical movement with the door sections being connected together by means of flexible chains running over respective sheaves, a cable traction drive operator secured into the lower door section, said operator being composed of a reversible electric motor geared to a pair of cable drums, a cable passed around and engaging one of the cable drums and having one end thereof secured to one of the spaced-apart guide rails with the opposite end of the cable being secured to a cable-tightening device secured to the opposite guide rail, a second cable passed around and engaging a second cable drum with one end of the second cable being secured to an opposite guide rail from the first-mentioned fastening of the first cable and with the other end of the second cable being secured to a cable-tightening device secured to an opposite guide rail from the second end of the first-mentioned cable, with the rotation of the electric motor being transferred through gears to the cable drums, with the rotation of the cable drums within the engaging cables transmitting

2,860,877
AUTOMATIC BOWLING PIN SPOTTER

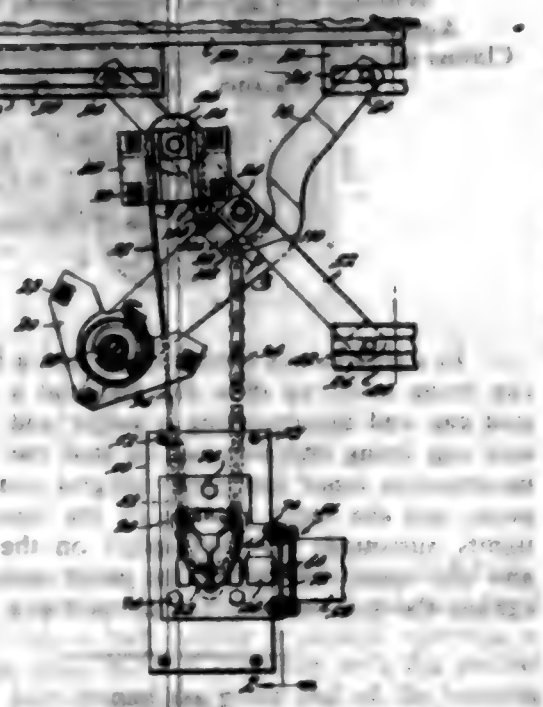
cyclic raising and lowering of said first gates to effect en

formed from a resilient material with an outer peripheral

to the means to which they are connected.

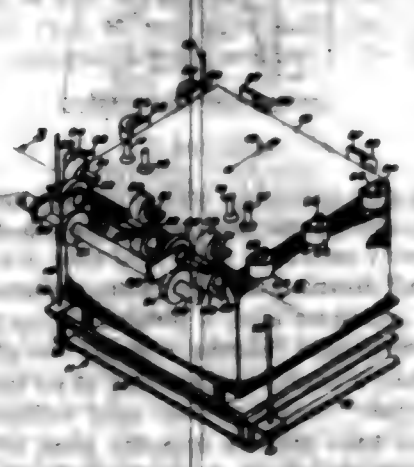
vertical movement to the lower door section, and with the movement of the lower door section being reversely transferred to the upper door section simultaneously therewith.

2,860,873
WINDOW REGULATOR
Charles C. Miles, Jr., Detroit, Mich., assignor, by mesne assignments, to Doorville Products Co., Inc., a corporation of Illinois
Application October 4, 1956, Serial No. 616,385
8 Claims. (Cl. 268—124)



1. In a vehicle window regulator including an actuating arm pivoted on a fixed axis and connected to the window for raising and lowering the window upon actuation of said arm, a pulley rotatable on a fixed axis above said arm, a drive sprocket rotatable on a fixed axis below said arm, a flexible drive member passed around said pulley and sprocket, means for driving said sprocket, and means connecting one strand of said drive member to said arm at two spaced points thereon whereby the effective length of said drive member remains substantially constant at all angular positions of said arm.

2,860,874
MAGNETIC SEPARATION OF FILED MAGNETIC SHEETS
Kenneth H. Gulick, Northfield, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Application June 16, 1955, Serial No. 515,944
13 Claims. (Cl. 271—10)



1. The method of feeding magnetizable sheets from a pile thereof, which comprises positioning in front of the forward end of the pile magnet means above the level of the pile, positioning a second magnet means below the pile level with a space therebetween, whereby the uppermost sheets are magnetically separated, and feeding off the top sheet through the space between said magnet means.

2,860,875
COPYING MACHINE
Rudolf Stanger, Frankfurt am Main, and Rudolf Steinmeyer, Hanau (Main), Germany, assignors to Quarz-lampen Gesellschaft m. b. H., Hanau, Germany
Application April 20, 1956, Serial No. 579,609
12 Claims. (Cl. 271—31)

1. In a copying machine, in combination, a pair of transporting rollers parallel to each other and located closely adjacent to each other for engaging an original and an exposed copy sheet and transporting the same while said rollers turn in opposite directions, one of said rollers being reversible; a device for reversing the direction of rotation of said one roller; and feeler means located in the path along which the sheets are moved by said rollers to be engaged and moved by said sheets for actuating said device for reversing the direction of rotation of said one roller so that the sheet engaged by the latter changes its direction of movement while the other sheet continues to move in the same direction, whereby the original sheet and the copy sheet are separated from each other.

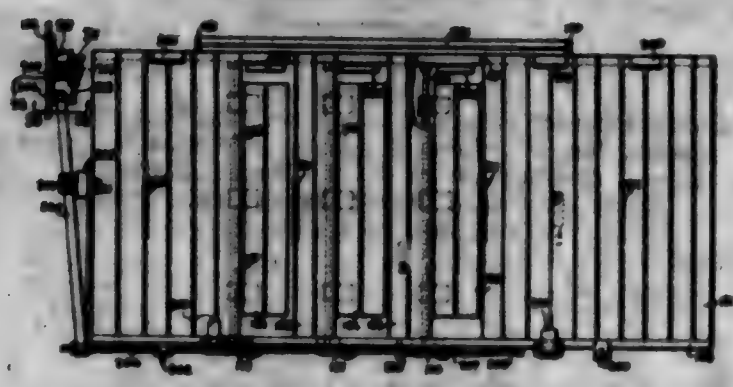
2,860,876
PAPER GUIDE FOR PRINTING PRESS
Richard A. Canever, Seattle, Wash.
Application April 16, 1956, Serial No. 578,477
5 Claims. (Cl. 271—68)

5. A paper guide for printing presses of the character described having a platen against which paper sheets are disposed for printing, a guide mounting bar extended along the lower edge surface of the platen for limited movement toward and away from said lower edge surface with the closing and opening of the press, a paper guide mounted on the bar for support of the paper sheets as successively laid against the platen for printing; said paper guide comprising a block that extends along the bar, said block having a flat guiding surface adapted to move into a position parallel with the plane of the bottom edge surface of the platen and adapted for engagement by the lower edge of each paper sheet as it is laid for printing on the platen, said block having a top surface slightly above the plane of the paper as laid on the platen, a narrow paper retaining strip adjustably mounted on the top surface of the block and extending beyond said flat guiding surface, and means extending from said flat guiding surface of the block to prevent paper from being disposed between the platen and the block.

2,860,881

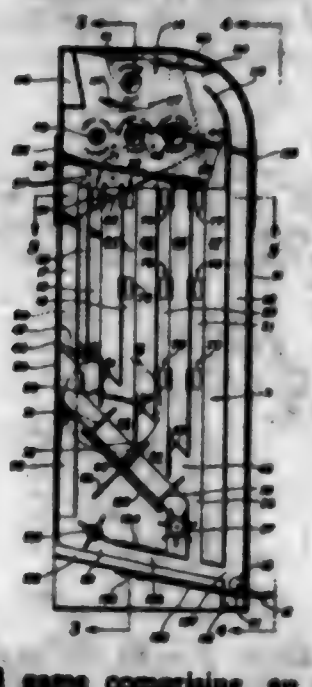
said connecting members and engaged with another there-

2,860,877
AUTOMATIC BOWLING PIN SETTERS
Donald M. Cann, Needham, Mass.
Application June 11, 1952, Serial No. 292,900
13 Claims. (Cl. 273—43)



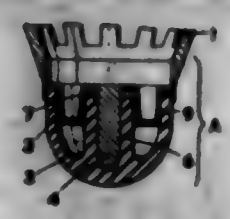
10. In an automatic candle pin setter, in combination, a candle pins transfer shelf provided with channels parallelly arranged to receive candle pins and having therein trapdoors spaced apart from one another by distances at least the breadth of a candle pin and hinged parallelly to the longitudinal axes of the channels and mechanisms for separating bowling balls and candle pins and for delivering onto the candle pins transfer shelf the candle pins parallelly disposed.

2,860,878
SIMULATED BASEBALL GAME
Elmer Hughes, Berkeley, Calif.
Application February 25, 1957, Serial No. 651,564
4 Claims. (Cl. 273—88)



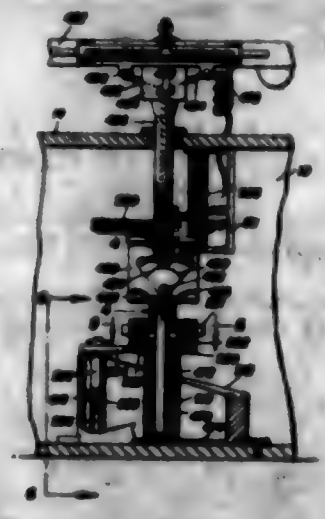
1. A baseball game comprising, an inclined playing field having a plurality of first downwardly sloping ball-confining paths opening to a downwardly sloping diagonal path traversing the lower ends of said first paths and terminating at its lower end in a ball exitway, a plurality of first gates extending into said diagonal path from the lower side thereof and defining therewith a plurality of open upper ended ball-receiving stations disposed on declining levels and aligned with and arranged to receive balls from the lower ends of said first paths, a plurality of hinged gates mounted in said diagonal path and normally biased to positions aligned with said first paths for directing balls therefrom into said stations, each of said hinged gates being formed and mounted for displacement by a ball guided thereby into its associated station to a position lying across and closing the normally open end of said station and on a downwardly-sloping diagonal so as to thereat causing balls from the closed station and to the next lower open station, electric means for effecting joint cyclic raising and lowering of said first gates to effect on each cycle an advance of balls from one to another of said stations and from the lowermost station to said exitway, and electric switches mounted in said first paths for closing by balls rolling therethrough and connected for energizing said electric means, said hinged gates returning to their said normally biased positions upon release of balls from their associated stations.

2,860,879
SHUTTLECOCK
William C. Carlton, Heemskerk, England
Application August 1, 1957, Serial No. 675,608
Claims priority, application Great Britain May 15, 1957
2 Claims. (Cl. 273—196)



1. In a shuttlecock having a cap and a flared skirt, said cap being made up of a cap end and a cap cover, and said cap end incorporating a spigot and a landing; and said cap being characterised in that the said cap cover incorporates inner and outer integral concentric annular parts, and the inner surface of the inner annular part tightly surrounds the said spigot on the said cap end, and the inner surface of the outer annular part rests against the said landing on the said cap end.

2,860,880
TONE ARM VERTICAL COMPENSATING MECHANISM FOR AUTOMATIC INTERLOCKING DUAL PHONOGRAPH RECORD PLAYERS
Herman H. Mueller, Ephrata, Pa., assignor of small interests to various assignees
Original application July 1, 1952, Serial No. 294,558, now Patent No. 2,809,841, dated October 15, 1957. Divided and this application May 25, 1956, Serial No. 586,973
22 Claims. (Cl. 274—10)

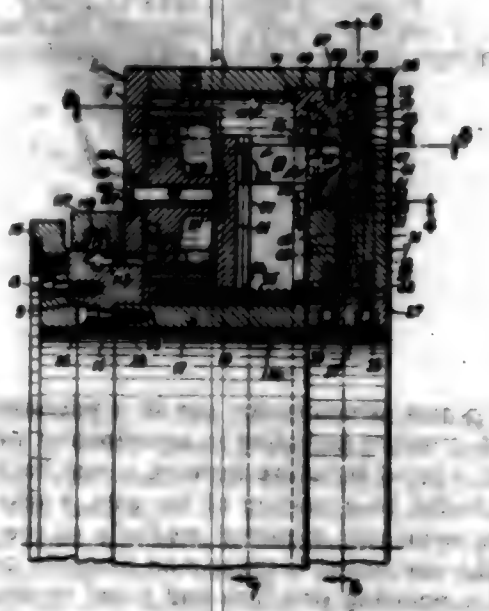


1. A tone arm assembly and actuating mechanism for phonograph record players comprising a tone arm, a needle assembly mounted upon said tone arm and having upwardly and downwardly projecting needles, a fulcrum support for said tone arm, a pivotal connection securing said tone arm to said fulcrum support for tilting about a horizontal axis, a column supporting at its upper end said fulcrum support, means within said column and connected to said tone arm on opposite sides of said pivotal connection for positively and alternatively tilting said tone arm in opposite directions about a horizontal axis between upward and downward inclined playing positions of said tone arm.

a pile thereof, which comprises positioning in front of the forward end of the pile magnet means above the

guiding surface of the block to prevent paper from being disposed between the plates and the block.

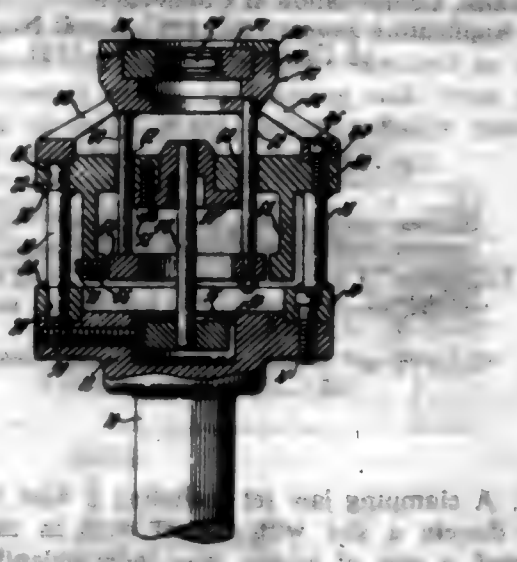
2,860,891
CHUCK
Jean Perrochioux, Country Club Hills, Mo., assignor to John Bunning Machine Company, St. Louis, Mo., a corporation of Missouri
Application July 18, 1955, Serial No. 522,427
10 Claims. (Cl. 279—4)



7. A chuck comprising an annular housing, said housing comprising a ring having a head at one end, said head being formed with a hub having a central opening, a sleeve extending from the hub coaxially with the central opening in the hub toward the other end of the housing ring, a flange on said sleeve at said other end of the housing ring, said flange having a plurality of radial slots, a jaw carrier slidable in each slot, each jaw carrier having a radially outer end face inclined toward the chuck axis in the direction toward said head, a cam ring rotary in said housing ring at said other end of the housing ring, cam followers, one for each jaw carrier, having a positive-motion connection to the cam ring and movable radially inward and outward on rotation of the cam ring in opposite directions, wedges interposed between the cam followers and said inclined faces of the jaw carriers, spring means biasing the jaw carriers radially outward toward the followers, a pressure plate slidable on the sleeve, said wedges having radial sliding connections with said pressure plate, spring means biasing said pressure plate in the direction toward said head, fluid pressure means between said head and pressure plate for moving the pressure plate and wedges toward said other end of the housing ring, and a cover plate removably fixed on said other end of the housing ring, said cam ring being on the inside of said cover plate within said housing surrounding said cam followers, and having its periphery rotary in an internal annular recess in the housing ring.

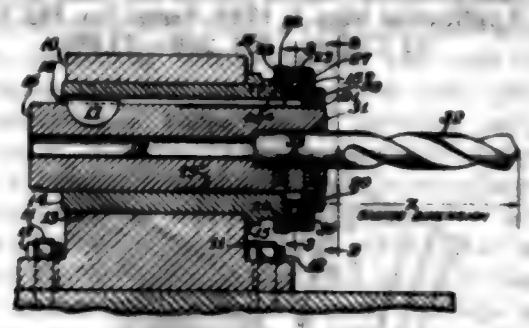
2,860,893
WORK CHUCK
Donald R. Whitney, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 11, 1957, Serial No. 683,256
6 Claims. (Cl. 279—6)

1. A work holding chuck device comprising a rotatable spindle member receivable within a driving member and including means for holding a work member substantially centered relative to the axis of rotation of said spindle, said chuck device including a work holding jaw member spaced apart from said spindle and having separate connecting members of different stiffness secured therebetween, and turn screw means threaded through one of said connecting members and engaged with another thereof of different stiffness for deflecting said connecting members from their normal position an amount inversely



proportional to the ratio of stiffness therebetween and for simultaneously effecting an adjustment of said work jaw member relative to the axis of rotation of said spindle.

2,860,883
QUICK CHANGE CHUCK
Bernard R. Better and Harry Conn, Chicago, Ill., assignors to Scully-Jones and Company, Chicago, Ill., a corporation of Illinois
Application November 8, 1956, Serial No. 621,867
4 Claims. (Cl. 279—83)

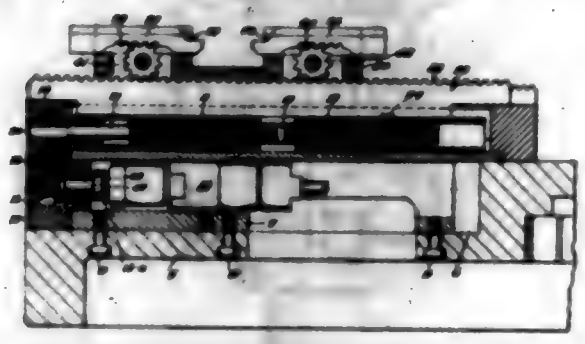


1. A quick change chuck including a supporting block adapted to be secured to a machine tool and having a cylindrical hole therethrough, a cylindrical chuck body fitting in said hole and having an annular flange engaging with one end of the block, a collet mounted in the body and having a Woodruff key connection with the body for permitting the collet to move longitudinally and preventing its turning in the body, said collet having threads at the outer portion thereof, a lock nut engaging with said threads and fitting in an annular recess in the end of the body, said lock nut having an annular groove, holes in the end of the body which project over the lock nut, balls fixed in said holes and engaging with said groove, and a collar slidably mounted on the end of the chuck body and adapted to engage with the flange, said collar having an inner annular groove, a resilient O-ring mounted in the groove and engaging with the surface of the adjacent portion of the body, said portion also having a groove for receiving the O-ring to hold the collar in adjusted position, the collar having an annular enlarged opening at its outer end, the arrangement being that when the collar is in projected position, it will hold the balls in engagement with the lock nut and when the collar is in retracted position, the balls may move outwardly and permit the nut and parts connected therewith to be withdrawn from the chuck body.

of said frames to support said locking means outward- for said power source, and force producing means con-

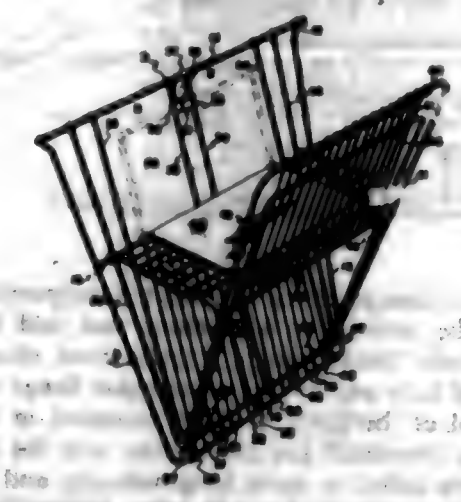
next lower open station, electric means for effecting joint tions of said tone arm.

2,860,884
CLAMPING JAWS FOR CHUCKS
Harry E. Sloan and Herbert W. Hickey, Hartford, Conn., assignors to The Cushman Chuck Company, Hartford, Conn., a corporation of Connecticut
Application January 31, 1957, Serial No. 637,443
15 Claims. (Cl. 279—112)



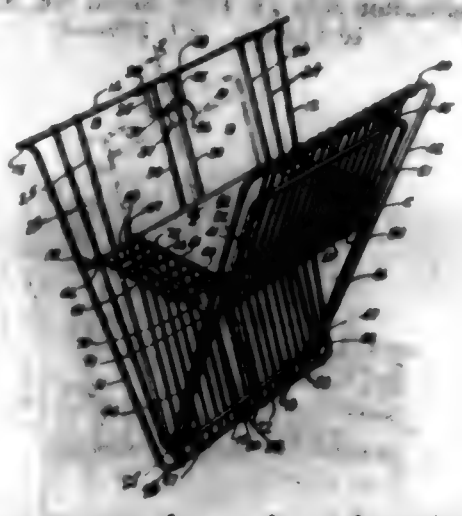
1. A clamping jaw set including a base member having therein a slot with lateral slots in the side walls thereof, a pair of master jaws independently slidable in said slot and having lateral flanges fitting in the said lateral slots, a pair of top jaws mounted on said base member, a clamping screw threaded to said master jaws for moving them in opposite directions, and means for transmitting longitudinal movement of the master jaws along said slot to the top jaws; the said means being incapable of causing movement of the top jaws in a direction perpendicular to the plane of the said base member upon engagement thereof with the workpiece.

2,860,885
CHILD'S SEAT FOR NESTING CARRIERS
Kurt H. Schweitzer, Oklahoma City, Okla.
Application May 2, 1955, Serial No. 505,289
11 Claims. (Cl. 280—33.99)



3. In a folding seat structure for use in a telescoping carrier having a swinging gate formed with leg openings at its upper portion, a seat structure including in combination with a swinging gate, a panel structure forming a seat back swingably secured to the lower portion of the gate, a seat-supporting structure swingably mounted medially of the gate structure, stop means on one of said swinging members for supporting the seat-supporting structure in a horizontal position, means connecting and limiting the relative movement between the swinging gate and the panel structure, a seat, means for hingedly mounting said seat to the gate structure for movement independently of the seat-supporting structure from a position resting on the horizontally positioned seat-supporting structure to a vertical position against the gate for closing the leg openings, and means for retaining the seat in its vertical position while permitting the seat-supporting structure to assume a horizontal position.

2,860,886
CHILD'S SEAT FOR NESTING CARRIERS
Kurt H. Schweitzer, Oklahoma City, Okla.
Application July 20, 1955, Serial No. 526,250
6 Claims. (Cl. 280—33.99)



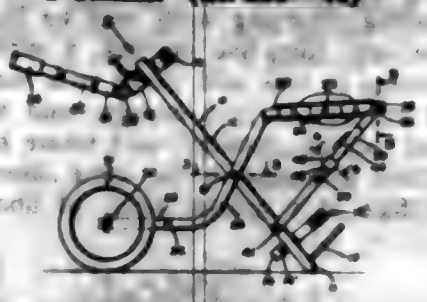
1. In a seat structure for use in a telescoping carrier, said seat structure including in combination with a swinging gate, a panel structure forming a seat back swingably secured to the base portion of the gate, a seat-supporting structure swingably mounted medially of the gate structure, links interposed between and hingedly connected to the seat supporting structure and panel structure to limit relative movement between the seat support and panel structure, a seat slidably and hingedly mounted on the gate structure for swinging movement independent of the seat-supporting structure from an upright position against the gate to a horizontal position upon said seat support, and hook means carried by the gate for engaging and retaining said seat in its upright position.

2,860,887
OUTBOARD MOTOR CART AND STAND
Buren W. Stewart, Cleburne, Tex.
Application July 22, 1955, Serial No. 523,797
3 Claims. (Cl. 280—34)

1. An outboard motor stand and transporting device comprising a chassis adapted to support the motor in a generally horizontal position or in the inclined position, said chassis comprising a first frame having an axle at the outer end thereof on which wheels are mounted, a second frame having an axle at the outer end thereof, means hingedly securing the inner end of said first frame to said second frame between said second frame axle and the inner end of said second frame so that a portion of said second frame protrudes beyond said first frame when said frames are arranged to carry the motor in the inclined position, a spring secured to said frames opposing pivotal movement of said frames, means secured to said second frame portion on which to secure an outboard motor clamp, locking means on one axle and engageable with the other axle to retain said frames in angular relationship with each other with said portion of the second frame projecting outwardly and upwardly from the first frame so as to support the motor in an inclined position, a latch carried by one frame and engageable with the other frame to hold said frames generally parallel and generally coplanar, means carried by one

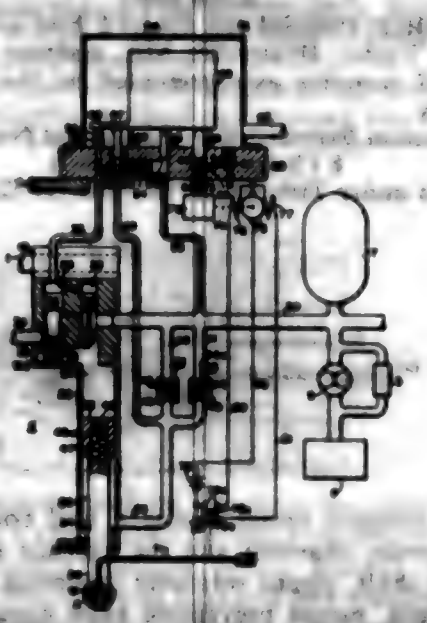
of said frames to support said locking means approximately horizontal so that said locking means forms a shelf while the device is adjusted to support a motor in a horizontal position, and said locking means also constituting a shelf while said device is adjusted to support a motor in the inclined position.

2,860,866
COLLAPSIBLE GOLF CARTS
Charles E. Marcott, Valley Stream, N. Y.
Application October 4, 1954, Serial No. 459,963
2 Claims. (Cl. 280—41)



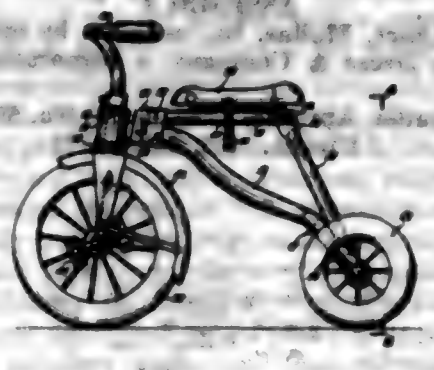
1. The combination with a golf cart, comprising a main frame having a lower ground engaging end and upper parallel sides, with means for supporting golf clubs on said frame and including an adjustable handle member coupled with the upper sides of said frame, of a combination wheel and seat frame having a central portion pivotally mounted on said main frame, the pivotal mounting being substantially centrally of both of said frames, said wheel and seat frame having long offset substantially parallel wheel and seat supporting end portions, said end portion being of a length substantially equal to the length of the central portion and substantially equally offset with respect to said pivotal mounting, said end portions extending beyond the lower end and upper sides of the main frame when the cart is in use position, the wheel and seat portions of the wheel and seat frame extending outwardly of the central portion of said frame, and means extending between the ends of the seat supporting end portions and the lower end portion of the main frame for bracing the second named frame on the main frame in support of the frames in extended use position.

2,860,889
VEHICLE STABILIZER, TILTER, AND LEVELING DEVICE
Clinton E. Hamm and Lawrence E. Lynn, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 27, 1956, Serial No. 630,836
5 Claims. (Cl. 280—112)



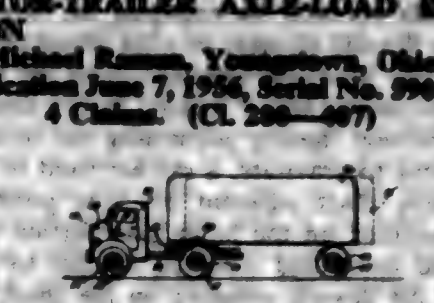
1. In a stabilizer for a vehicle having relatively movable masses, a power source, sensing and control means for said power source, and force producing means connected between said relatively movable masses, said sensing and control means causing said force producing means to develop forces in proportion to both vertical and lateral accelerations of one of said masses and also in proportion to the relative velocity of said relatively movable masses, and thermal means connected to said sensing and control means for causing said force producing means to maintain an average relative spacing between said relatively movable masses.

2,860,890
VELOCIPEDE WITH RECIPROCATING SEAT
Malcom R. Oxford and Edward T. McBride, Selma, Ala.
Application March 9, 1956, Serial No. 570,639
1 Claim. (Cl. 280—226)



A velocipede having a frame, a fork pivoted to said frame and carrying a front wheel, pedals mounted on the front wheel, a pair of rear wheels rotatably mounted on an axle carried by said frame, means releasably connecting one of said rear wheels to said axle for rotation therewith, a seat carried by a seat support pivoted to said frame adjacent said fork, a crank on said axle, and a member connecting said crank and said seat support to reciprocate said seat on rotation of said axle, said frame comprising a bar pivotally receiving said fork and having a U-shaped member rotatably supporting said axle, a bracket mounted on said frame adjacent the pivotal connection of said fork thereto and a pivot in said bracket pivotally securing said seat support to said frame, said bracket being a U-shaped member receiving said seat support in the bight thereof, the legs in said U-shaped bracket being secured on both sides of said bar.

2,860,991
ADJUSTABLE FIFTH WHEEL ASSEMBLY FOR TRACTOR-TRAILER AXLE-LOAD EQUALIZATION
Michael Ramun, Youngstown, Ohio
Application June 7, 1956, Serial No. 590,840
4 Claims. (Cl. 280—407)



1. A vehicle having a pair of parallel frame members, a pair of I-beams mounted in rigid relation on said members, a pair of channel slides fitted in nesting relation over the top rail of each of said I-beams, a plurality of spaced and aligned apertures in the web portions of said I-beams, apertures in said slides adapted to be aligned with said apertures in said I-beams, a pair of cross bars spanning said parallel members in parallel relation with each other and attached to said slides, a plate overlying said slides, a fifth wheel assembly mounted on said plate, said cross bars being apertured intermediate their ends, a rod journaled in said last mentioned aper-

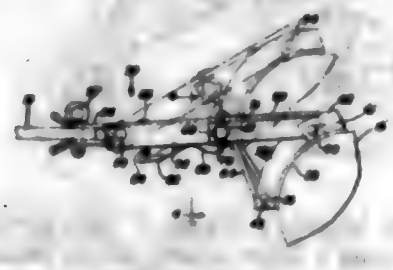
tures and being generally parallel with said parallel members, a pair of spaced links mounted on said rod; a plurality of retaining pins supported adjacent said cross bars and adapted to normally extend through aligned apertures of said slides and said I-beams, linkage means interconnecting said retaining pins and said links, a fitting attached to said rod, a fluid cylinder having its piston arm connected to said fitting, means for supplying fluid to said fluid cylinder whereby when said piston arm is actuated said rod is rotated to retract said pins from said apertures thereby allowing said slides to be moved on said I-beams, and said pins being the sole means of retaining said slides and said fifth wheel assembly in position with respect to said I-beams.

2,860,892

CONNECTION FACILITATING VEHICLE DRAFT ASSEMBLY

Orville P. Lance, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Application April 28, 1955, Serial No. 504,417
5 Claims. (Cl. 280—477)



5. An implement hitch device operative to attach a trailing implement with a draft vehicle having an implement connecting means at a fixed height relative to the ground, the implement being of the type rockably mounted on transverse wheel means and overbalanced to cause, unless otherwise restricted, a portion forward of the wheel means to engage the ground; said hitch device comprising: a plate member including a laterally disposed plate portion having front and rear ends and a pair of depending side portions extending from transversely spaced edges of the plate portion, said plate member being mounted for vertical swinging at its rear end to a forward portion of the implement and at its front end to the implement connecting means; a flexible element disposed beneath the plate member and connected to the forward portion of the implement; a transverse drivable shaft rotatably supported on the side portions of the plate member and having one end thereof extending outwardly of a side portion connecting means on the shaft between the side portions for engaging the flexible element to cause the flexible element to wind about the shaft upon rotation in one direction thereby raising the forward end of the implement and to unwind upon rotation in the opposite direction thereby permitting the forward end of the implement to gravitate, a ratchet fixed to said end of the transverse shaft adjacent the side portion, a pawl pivotally mounted on the latter side portion of the plate member and associated with the ratchet to prevent unwinding of the flexible member on the shaft, and means extending between the pawl and the plate member normally biasing the pawl into engagement with the ratchet.

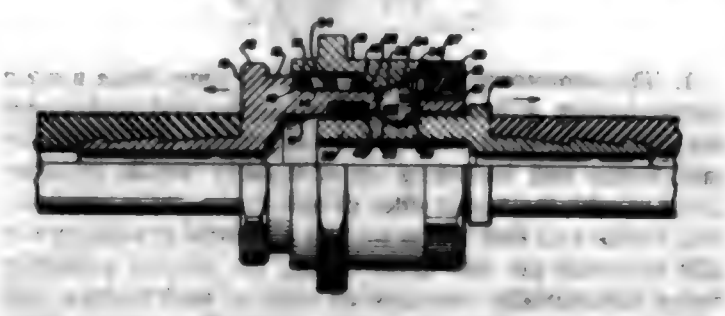
2,860,893

BALL DETENT TYPE COUPLING WITH BREAK-AWAY FEATURE

Malcolm S. Clark, Union City, Pa., assignor to Snap-Tite, Inc.

Application May 9, 1955, Serial No. 507,852
1 Claim. (Cl. 285—1)

A break-away coupling comprising male and female units, said female unit having a bore for the reception of a male unit having an annular locking groove with outwardly flared side walls, said female unit having a series of circumferentially spaced sockets with outwardly flared side walls, locking balls in said sockets normally projecting into said bore and into said locking groove when said male unit is inserted into said bore to lock said units in coupled condition, a locking sleeve slidable longitudinally on said female unit and having a primary inclined surface arranged in opposition to and diverging from one of said flared side walls of said locking groove at an angle of about fifteen degrees to the coupling axis and defining with said flared side wall a ball locking chamber having diverging walls with an included angle of approximately forty-five degrees, a spring having a fixed preloading to bias said sleeve to a locked position where said primary surface engages said balls to hold them in said locking chamber, said sleeve having a secondary surface diverging in the same direction as said primary surface at a greater angle of about forty-five



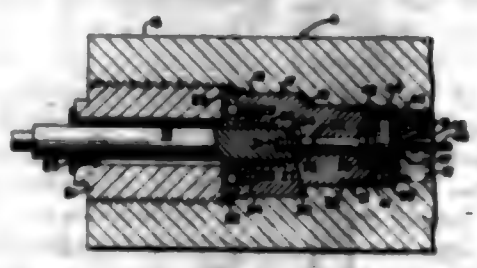
degrees to the coupling axis to define a break-away angle and a ball release chamber, said secondary surface forming with a side wall of said socket a restricted mouth into said ball release chamber, said units when separating forces are exerted thereon being relatively slightly movable axially to cause said balls to engage said primary surface and move said sleeve axially against the tension of said spring only to such degree as will position said balls nearer to said break-away angle while still preventing separation of said units but with said included angle sufficient to permit only slight further movement of said sleeve against the tension of said spring upon exertion of greater separating forces that will cause said spring to be further tensioned to allow said balls to pass over said break-away angle and into said mouth to cam against said secondary surface and move said sleeve further axially to an unlocking position to allow said balls to enter said ball release chamber and leave said locking groove to release said male unit from said female unit.

2,860,894

HIGH PRESSURE SHAFT PACKING

Dudley D. Taylor, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Application February 11, 1953, Serial No. 714,663
3 Claims. (Cl. 286—7)
(Granted under Title 35, U. S. Code (1952), sec. 266)

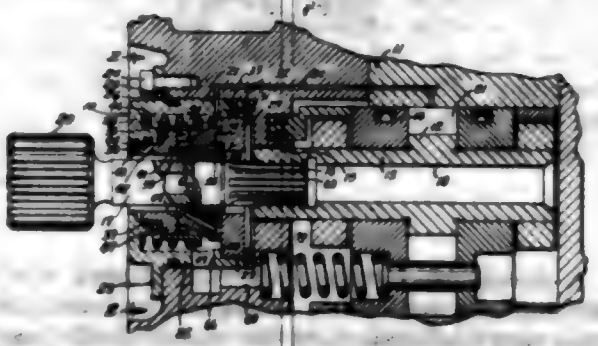


1. In a pressure vessel having a wall bore connecting a high-pressure chamber and the exterior of the vessel, a two-part shaft, means rotatably mounting said shaft in the wall bore, means preventing axial movement of the first part of said shaft, means connecting said parts for mutual rotation, means allowing axial movement of the

spherical lining cup in said housing between and in engagement with said inner wall and said ball member; a relatively thin flexible rib formed between said

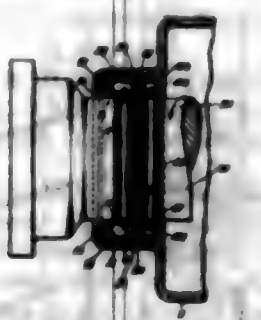
second part of the shaft relative to said first part, means communicating pressure from said chamber for applying an axial thrust to said second part in a direction toward said first part, and a deformable seal between said parts and having its periphery in contact with said bore, whereby relative axial movement between the shaft parts will cause extrusion of the seal toward the surface of the bore.

2,868,095
SHAFT SEAL CONSTRUCTION
Bruce H. Mosbacher, Rockford, Ill., assignor to Roper Industries Inc., Rockford, Ill., a corporation of Illinois
Application November 1, 1954, Serial No. 465,968
14 Claims. (Cl. 286—8)



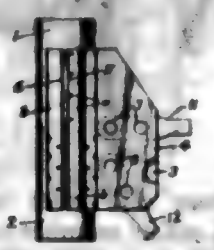
1. In an hydraulic apparatus including a housing, a shaft extending into said housing and having the inner end thereof exposed to fluid pressure within said housing and the outer end thereof exposed to fluid pressure externally of the housing, a shaft seal for sealing the interface between said housing and said shaft comprising inner and outer axially spaced seal members mounted on said housing and having aligned passages for the reception of said shaft, a rotary seal member disposed on said shaft between said spaced seal members and having seal faces at the inner and outer sides thereof respectively engaging said inner and outer seal members, means connecting the rotary seal member to the shaft to apply the end thrust on the shaft due to the pressure unbalance on opposite ends of the shaft to the rotary seal member, a first passage means for applying fluid under pressure from within said housing to an area on the outer side of the rotary seal member, and a second passage means for applying the fluid under pressure from externally of the housing to an area on the inner side of the rotary seal member.

2,868,096
MEANS FOR SEALING THE GAP BETWEEN A WALL AND ROTARY SHAFT EXTENDING THERETHROUGH
Willy R. Naumann, Stuttgart-Degerloch, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application June 4, 1954, Serial No. 434,496
Claims priority, application Germany July 7, 1953
3 Claims. (Cl. 286—11.16)



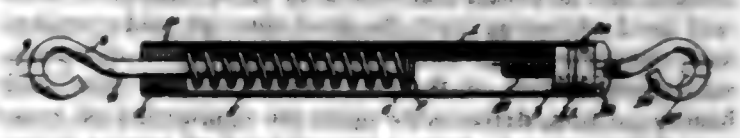
1. In a mechanism of the character described, the combination with a rotary shaft having a peripheral zone provided with closely adjacent helical grooves of a depth and width of less than 0.02 inch of a non-rotatable packing embracing said shaft and including a non-metallic packing ring and means pressing the same against said zone.

2,868,897
ROD JOINT
Robert W. Weeks and Peter G. Park, West Chester, Pa., assignors to Wind Turbine Company, a corporation of Pennsylvania
Application March 15, 1951, Serial No. 215,716
2 Claims. (Cl. 287—54)



1. A splice construction, comprising a pair of tubular rod sections arranged in end-to-end relation, a flat metal splice plate having an angularly disposed flange along one edge thereof secured in face-to-face contact with the side wall of one of said sections, a flat metal splice plate having an angularly disposed flange along one edge thereof secured in face-to-face contact with the side wall of the other of said sections, both of said plates projecting radially outward from said sections and extending longitudinally beyond the ends of their respective sections into longitudinally overlapping relation, the angularly disposed flange of each plate occupying the full longitudinal extent of and stiffening its longitudinally projecting portion against lateral deflection, while abutting against the side wall of the adjacent section and thus stiffening the joint between said sections, and means firmly clamping together the overlapping portions of said plates.

2,868,898
TENSION ABSORBING TURNBUCKLE
John F. Dooley, Jr., Pacoima, Calif.
Application October 2, 1956, Serial No. 613,452
1 Claim. (Cl. 287—61)



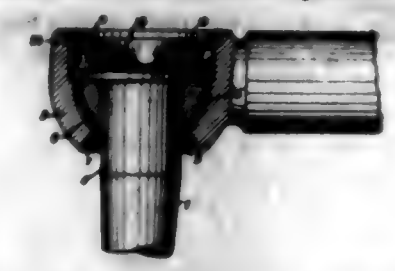
A tension relieving turnbuckle for a cable comprising, a tube, plugs seated in the ends of the tube, a stem seated for axial movement in one of the plugs to receive one end of the cable, a compression spring on the stem within the tube, a head on the inner end of the stem maintaining the spring in position thereon, a threaded rod seated in threads of the other plug to receive the other end of the cable, each plug having a circular groove sunk into the cylindrical surface thereof, the wall of the tube being crimped tightly to seat in the grooves of the plugs, a recess cut through the wall of the tube into the threaded rod supporting plug, a pin driven into the recess tightly to seat in the plug to lock the plug against rotative movement in the tube, a nut on the threads of the rod for engagement with the end of the tube to lock the rod and plug against rotative movement within the tube, and a spring washer seated on the threads of the rod between the nut and the end of the tube.

2,868,899
UNIVERSAL JOINTS
Rudolf Gottschald, Duesseldorf-Oberkassel, Germany
Application August 31, 1955, Serial No. 531,653
Claims priority, application Germany September 17, 1954
5 Claims. (Cl. 287—90)

1. A joint assembly comprising a housing having a hollow spherical inner wall having an aperture therein, a stem passing through said aperture and carrying a ball member at the end thereof in said housing, a generally hemi-

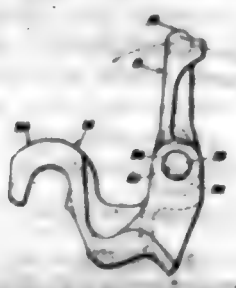
A break-away coupling comprising male and female units, said female unit having a bore for the reception of first part of said shaft, means connecting said parts for mutual rotation, means allowing axial movement of the

spherical lining cup in said housing between and in engagement with said inner wall and said ball member, said lining cup having an aperture therein through which said stem passes, said last named aperture being of a



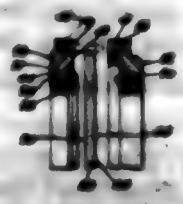
greater diameter than said stem to provide clearance therebetween, and a collar member on said ball overlying the upper edge of said cup so that said collar engages said edge of said cup for movement of said cup within said housing on angular movement of said stem.

2,860,900
COUPLER OPERATING MECHANISM
Norman H. Sudock, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Application May 20, 1953, Serial No. 356,223
1 Claim. (Cl. 287—100)



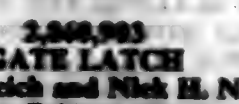
In an operating mechanism for a machine including a pair of members having aligned openings, the combination of: a rivet comprising a circular head on one end thereof and a cylindrical shank of lesser diameter than said head extending from the head through said openings and operable to pivotally interconnect said members, said shank having at the end thereof remote from said head a portion, deformable upon the application of pressure thereagainst to form a second head of greater diameter than said shank, operable to prevent the accidental removal of said rivet axially from said openings; and a lug on one of said members projecting into the opening of said one member and being embeddable in said end portion of the rivet shank, when said portion is deformed by the application of pressure thereagainst, to prevent the rotation of the rivet relative to said one member.

2,860,901
SEALING RING
John W. Whalen, Inglewood, Calif., assignor to Daniel Orifice Fitting Company, Los Angeles, Calif., a corporation of California
Application March 25, 1955, Serial No. 496,669
2 Claims. (Cl. 288—33)



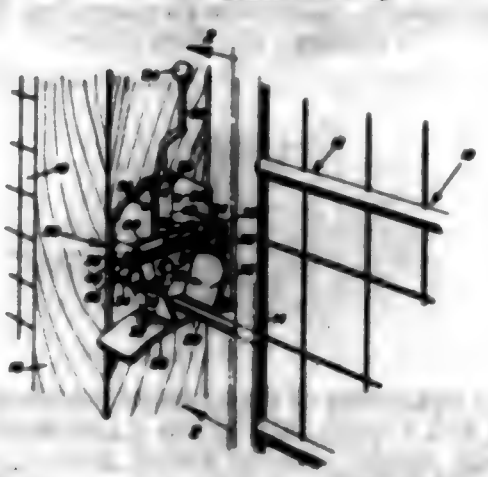
1. A sealing ring for orifice plate assemblies, comprising: a relatively massive ring member formed of yieldable non-metallic material and having substantial axial length as well as radial wall thickness; an annular groove disposed adjacent one axial end and extending radially outward from the radially inner wall of the ring member; a relatively thin flexible rib formed between said groove and the adjacent axial end of said ring member; and an axial enlargement at the radially inner portion of said rib, said enlargement normally projecting axially beyond said body and arranged for axial displacement.

2,860,902
MEANS FOR MECHANICALLY TYING KNOTS
Albert Diels, Brussels-Uccle, Belgium
Application May 8, 1956, Serial No. 583,433
Claims priority, application Germany May 12, 1955
2 Claims. (Cl. 289—2)



1. A device for forming and tying a knot around an object with one continuous length of cord, comprising a tortuous and convolute tube for receiving the cord and having the configuration of the desired knot, the tube being longitudinally slotted to permit the cord to be laterally pulled inwardly from the tube around the object placed centrally in respect of the tube convolutions, the tube comprising a first interior convolution, an outer convolution and a second interior convolution, the interior convolutions crossing alternately over and under each other at three points whereby the first interior convolution forms a portion surrounding a portion of the second interior convolution between two crossing points and the second interior convolution forms a portion surrounding a portion of the first interior convolution between two crossing points, the interior convolutions having cord inlet and cord outlet end portions respectively, the outer convolution surrounding said inner convolutions, and one of said end portions surrounded by the outer convolution as well as the two portions of the first and second interior convolutions respectively surrounded by the respective second and first convolution portions being transversely notched to permit the cord to be laterally pulled inwardly from the surrounding convolutions through the surrounded convolutions.

2,860,903
GATE LATCH
Pete R. Naranicich and Nick H. Naranicich, Twin Bridges, Mont.
Application June 14, 1957, Serial No. 665,753
5 Claims. (Cl. 292—48)



1. A gate latch assembly comprising a latch arm adapted to be carried by a swinging gate, a mounting

plates having four equi-angularly spaced arms, the ends of opposed arms

bracket adapted to be carried by a gate post, a guide member carried by said mounting bracket for engagement by said latch arm, a pair of downwardly converging latch dogs having lower ends engaging said guide member and being restricted in movement away from each other by said guide member, pivot means pivotally mounting said latch dogs on said mounting bracket, spring means urging the lower ends of said latch dogs apart and resiliently retaining said latch dogs in engagement with said guide member, said latch dogs having upper ends extending above said pivot means, a horizontally elongate trip member extending between said upper ends, said upper ends of the latch dogs and the opposite ends of said trip member being so formed as to permit horizontal separation thereof without permitting vertical separation therebetween, and a vertically elongate trip operator having an intermediate portion pivotally mounted on said mounting bracket and having its lower end pivotally connected to a portion of said trip member intermediate said upper ends of the latch dogs for horizontally shifting said trip member.

2,860,904
DOOR OR PANEL FASTENER
John K. Barry, Philadelphia, and Michael R. Tuozzo, Prospect Park, Pa., assignors to South Chester Corporation, Lester, Pa., a corporation of Delaware
Application June 7, 1955, Serial No. 513,742
12 Claims. (Cl. 292—256)

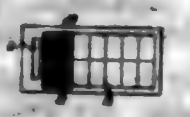
1. In a fastening device of the character described, a rotary shaft extending transversely through a door or panel perimetrically lapping an opening in the outer side of a wall; a latch finger mounted on the shaft and adapted, when in latching position, to engage over an inside edge margin of the opening at the back of the wall; a manipulating member having a sliding key connection with the outer end portion of the shaft; a finger knob threadedly engaged with the outer end of the shaft; and yielding means operative to resist outward axial movement of the shaft as the knob is turned to draw up the shaft and finger after the latter has been turned to latching position and thereby to bring the finger into firm bearing contact with the inside face of the wall.

2,860,905
DOOR LOCK STRIKER AND BUMPER
Emil J. Wiese, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 28, 1956, Serial No. 600,074
6 Claims. (Cl. 292—341.12)

1. A door lock striker and bumper combination, including: a striker formed with a recess having bolt holding means therein, said striker having a generally vertical strut forming a wall of said recess, a resilient bumper mounted on said strut, said bumper having a plane surface facing into said recess, and a bolt housing having a bolt movably mounted therein, said bolt housing being adapted to enter said recess so that the bolt engages said bolt holding means, said housing having a straight flange extending generally parallel to the plane surface of said bumper and abutting said surface over substantially the entire

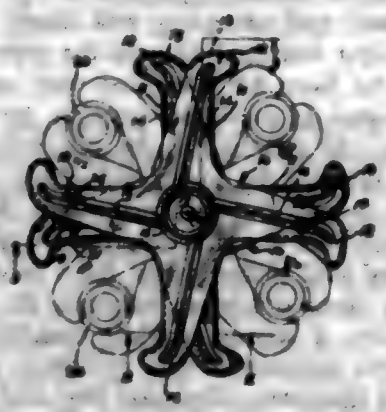
length thereof when the bolt is in engagement with the bolt holding means.

2,860,906
DEVICE FOR HANDLING A PLURALITY OF INFORMATION BEARING MEDIUMS
William Bornemann and Carter J. Hughey, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application June 23, 1955, Serial No. 517,611
8 Claims. (Cl. 294—1)



1. A device for handling as a unit a variable number of information bearing mediums, each medium having a non-circular aperture adjacent one edge thereof, comprising an elongated member having a cross section congruous to said aperture and adapted to be inserted into said aperture for positioning said mediums thereon, handle means fixed to one end of said member and having a surface extending perpendicular to said elongated member for engaging the first of said mediums positioned thereon, retaining means adapted to be received by the other end of said elongated member and freely movable therealong only in a direction toward said handle means for maintaining said mediums in contiguous relation between said surface and said retaining means, holding means carried by said retaining means and engaging said elongated member for permitting movement of said retaining means in only the one direction, and means on said retaining means for engaging and moving said holding means to an inoperative position to permit movement of said retaining means in either direction along said elongated member.

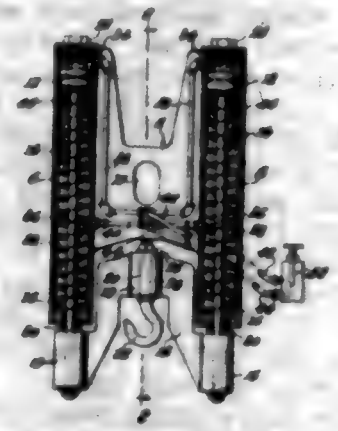
2,860,907
MILK BOTTLE CARRIER
Jean L. Vanciel, Sacramento, Calif.
Application August 31, 1956, Serial No. 607,443
6 Claims. (Cl. 294—87.24)



1. A bottle carrier comprising a pair of multi-armed plates in face to face relation, each of said multi-armed

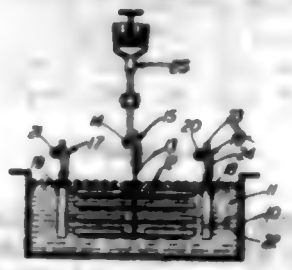
plates having four equi-angularly spaced arms, the edges of which converge towards their outer ends, said arms at their outer ends being formed with laterally curved portions, said multi-armed plates being substantially the same in size and shape but reversed with respect to each other so that the curved end portions extend in opposite directions and are adapted to be brought together to grip a milk bottle neck below the upper lip thereof upon rotational movement of said plates, means pivotally connecting said plates together at their central portions, and handle means for supporting said plates and for rotating the same in the desired direction whereby to grip the neck of the milk bottle below the lip thereof, said handle means including a pair of oppositely disposed horizontal parallel gripping portions adapted to be brought together when the carrier is locked, each of said pair of horizontal portions being mounted on a pair of vertical portions, each of said pair of vertical portions including a first vertical portion pivotally mounted on one of said plates and a second vertical portion pivotally mounted on the other of said plates and releasable means for retaining said horizontal portions in the locked position.

2,860,908
HYDRAULIC MATERIAL HANDLING APPARATUS
Walter R. Peterson, Alexandria, Va., assignor to the United States of America as represented by the Secretary of the Army
Application April 12, 1956, Serial No. 577,899
1 Claim. (Cl. 294—88)
(Granted under Title 35, U. S. Code (1952), sec. 266)



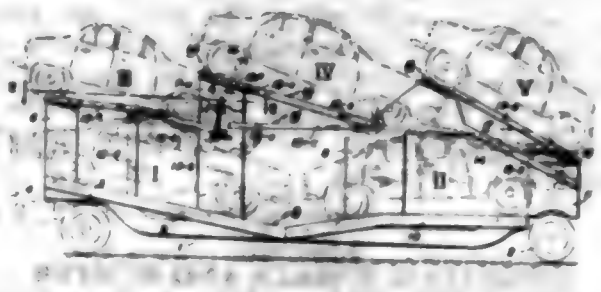
A hydraulic material handling apparatus comprising a first U-shaped web and a second U-shaped web placed back to back in a common plane with proximate bight portions and oppositely extending legs, the ends of the legs of the first U-shaped web defining the top of the apparatus, the ends of each leg of the second web having an outward projection, the first web having a hook receiving means centrally of its bight portion, the second web having a hook member attached to the bight portion between the legs thereof, said hook and said hook receiving means establishing an axis of load support through the apparatus; said first web supporting a pair of spaced, elongated hydraulic cylinders parallel to but spaced from said axis of load and extending one along each leg of the U of said first web and beyond the bight portion of said first web to form an H-shaped unit, each cylinder containing a piston in the upper portion, an axial piston rod having one end attached to the piston and the other end extending through the lower end of the cylinder and being attached to said outward projection on one leg of said second web and a coil compression spring around said rod biasing said piston away from said lower end; a first conduit communicating between the upper ends of said cylinders, a second conduit communicating between the central portions of said cylinders, an elongated flexible conduit interconnecting said first and second conduits and a control valve in said elongated conduit whereby a load supported by said hook, when the apparatus is supported by said hook receiving means and said pistons are in the upper portions of the cylinders, may be retained by hydraulic pressure in the cylinder by maintenance of said valve in a closed position and said load may be lowered by opening said valve to permit hydraulic fluid to flow from below to above the pistons in said cylinders, said springs returning the pistons to their upper positions when said hook is not supporting a load and said valve is open.

2,860,909
QUICK-DISCONNECT COUPLING
George R. Isaac, Jr., Grand Rapids, Mich.
Application February 28, 1955, Serial No. 490,969
4 Claims. (Cl. 294—102)



1. In combination with a rod member, a coupling, comprising: a hook member having an opening formed to partially receive said rod member; means forming a guideway extending opposite said opening and fixed with respect to said hook member; and a locking member slideably received in said guideway with a surface thereof opposite said opening, said locking member varying in the dimention parallel to the shortest distance of said surface from said guideway, whereby sliding movement of said locking member along said guideway alters the distance from said surface to said hook member, said locking member having an aperture disposed exteriorly of said hook and guideway when said locking member is in locking position, said locking member having a portion disposed to bear against said rod member to clamp the same against said hook portion; and means for suspending a load from said locking member.

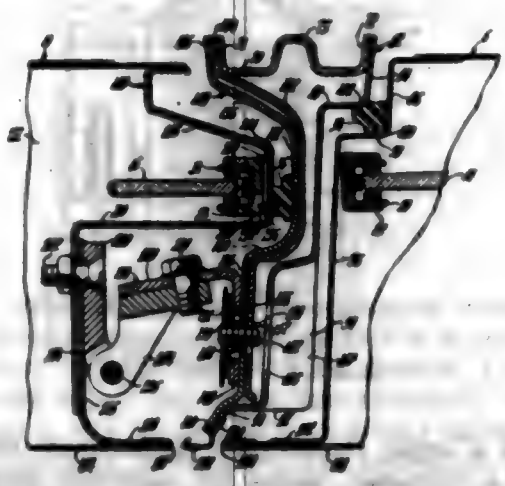
2,860,910
AUTOMOBILE CARRIERS
Robert C. Risner, Towson, Md.
Application September 11, 1956, Serial No. 609,125
3 Claims. (Cl. 296—1)



1. In an automobile carrier, the combination of a lower trackway adapted to carry two automobiles; an upper trackway adapted to carry a third automobile; a pivotally mounted bridge member spaced above said upper trackway for receiving one set of wheels of a fourth automobile; a pair of removable skids connecting said upper trackway and said bridge for passage of said fourth automobile to said bridge; a second pivotally mounted bridge member spaced above said upper trackway for receiving one set of wheels of a fifth automobile; and a second pair of skids removably connecting said upper trackway with said second bridge member for passage of said fifth automobile to said second bridge.

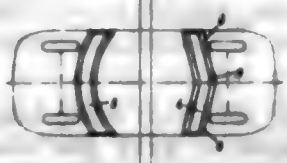
ing means, said housing having a straight flange extend- plates in face to face relation, each of said multi-armed

2,860,911
AUTOMOBILE BODY PILLAR AND DOOR CONSTRUCTION
Bart Cotter, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 25, 1954, Serial No. 464,201
5 Claims. (Cl. 296—28)



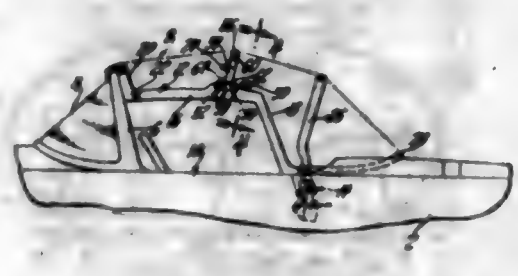
1. In a vehicle body of the type having front and rear doors on one side of said body, the combination comprising a substantially upright door pillar rigidly mounted on said body between said front and rear doors, means hingedly mounting one of said doors on said pillar for swinging movement outboard of said body, the inboard portion of the one side of said pillar facing said one door having a channeled portion recessed into the one side of said pillar, the outboard portion of said pillar being spaced longitudinally of the outer edge of said one door to provide clearance for the inward swinging of said edge as said door is opened, said one door facing said one side of said pillar having an extension extending beyond the inner marginal edge thereof and received within said channeled portion of said pillar in the closed position of said one door, said channeled portion having a length sufficient to receive said extension in the closed position of said door, and a window slidably mounted in said one door and having an edge portion thereof received within said extension of said door in the lowered position of said window within said door.

2,860,912
PARTITION WALLS DEFINING THE PASSENGER COMPARTMENT OF MOTOR VEHICLES
Béla Barényi, Stuttgart-Hohenheim, Germany
Application May 20, 1955, Serial No. 509,948
Claims priority, application Germany January 26, 1949
6 Claims. (Cl. 296—28)



1. A motor vehicle having a body forming a passenger compartment and at least one separate transverse partition wall adapted to be connected to said body and defining by itself over the entire surface thereof the extent of said compartment in the longitudinal direction of the vehicle, said partition wall being constituted by a separate member independent from adjacent parts of the vehicle body and being at least partly bent in the direction toward the adjacent end of said vehicle about an axis disposed within the central vertical longitudinal plane of said vehicle and substantially parallel to said transverse partition wall, said partition wall being also inclined upwardly, outwardly from the bottom of said compartment toward the respective adjacent end of said vehicle so that its upper end is located closer to the respective end of said vehicle than is the lower end thereof thereby constituting a strong and vibration-free reinforcement of said vehicle body that provides greater protection to the passengers of the vehicle and eliminates annoying vibration noise.

2,860,913
FOLDING TOP WITH INWARDLY COLLAPSING SIDE RAILS
Gerhard C. R. Kaiser, Birmingham, and John W. Fyuro, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 1, 1954, Serial No. 465,827
6 Claims. (Cl. 296—107)



5. In an automobile having a body and a convertible top, a supporting frame for raising and lowering said top comprising, spaced foldable side rails, each rail including a front rail section and a rear rail section, means pivotally interconnecting the sections of each rail for folding movement thereof inboard of said body, spaced means rotatably mounted on said body for movement about substantially parallel spaced axes and defining a pair of converging axes extending angularly forwardly and downwardly inboard of said body, means swingably mounting each of said rear rail sections on a respective one of said converging axes for folding said rails inboard of said body upon pivotal movement of said rear rail sections rearwardly and downwardly about said converging axes, and means interconnecting said spaced means for simultaneously rotating each of said means about a respective one of said parallel spaced axes during folding movement of said rails inboard of said body to adjust the angular relationship of said converging axes with respect to each other.

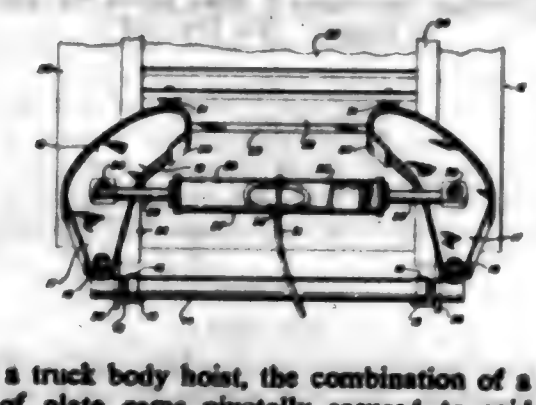
2,860,914
RETRACTIBLE HARDTOP FOR MOTOR VEHICLES
James W. Kerr, Detroit, Mich.
Application January 26, 1956, Serial No. 561,619
7 Claims. (Cl. 296—117)

1. In an automotive vehicle having a body provided with a passenger compartment, a retractible rigid top for said passenger compartment, said top having an upper portion and rear side portions at opposite sides thereof defining a rear central opening, a deck lid pivotally mounted at its rearward end upon said vehicle body, means to support and guide said top during its travel in a predetermined rearward and downward path, a window pivotally mounted in said rear central opening, means on said body for engaging and swinging said window from a position closing the rear central opening in said top to a position underlying the rear of said top, and

by a load supported by said hook, when the apparatus is said fifth automobile to said second bridge.

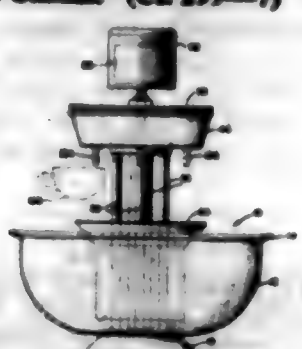
means for raising the forward end of said deck lid in timed relation with respect to the rearward and downward movement of said top to store said top beneath said deck lid, said means being subsequently operable to raise said deck lid and restore said top to its position over said passenger compartment.

2,860,915
CAM BODY HOIST
Wallace J. Wiewer, Galion, Ohio, assignor to The Cotey Corporation, Galion, Ohio, a corporation of Ohio
Application March 11, 1956, Serial No. 493,619
10 Claims. (Cl. 298—22)



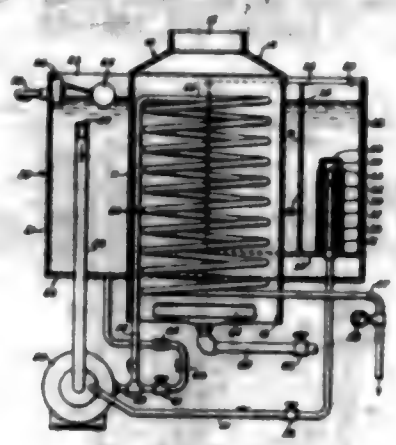
1. In a truck body hoist, the combination of a frame, a pair of plate cams pivotally secured to said frame for rotation in a substantially vertical plane transverse of the body, each of said cams having a progressively increasing radius of curvature, and means for simultaneously rotating each of said plate cams into body elevating engagement with the body.

2,860,916
FOUNTAIN DEVICE
John Hynko, Elmira, N. Y.
Application October 19, 1956, Serial No. 617,061
2 Claims. (Cl. 299—7)



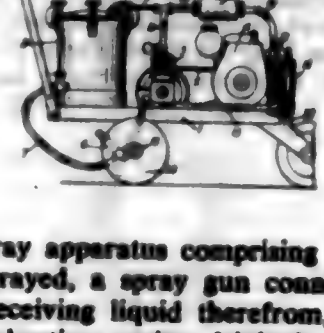
1. In a fountain device, the combination of a lower bowl mounted on a base, posts extending vertically upwardly from the bottom of said base, a splash deflector surrounding said posts and extending above the rim of said lower bowl, said splash deflector including an upwardly extending side wall, a depending skirt, and inwardly extending ears, secured to said vertical posts, upper posts, releasably secured in vertical relation with said first mentioned posts, an upper bowl having an apertured bottom mounted on said upper posts, a pump tube extending from the apertured bottom of said upper bowl to a point adjacent the bottom of said lower bowl, studs secured to the upper ends of said upper posts, in vertical alignment therewith, a cover member secured to said studs spaced from the top of said upper bowl, a motor housing carried by said studs, an electric motor in said housing, a motor shaft depending from said motor, interiorly of said pump tube to a point closely adjacent the bottom of said lower bowl, an impeller secured to the lower portion of said motor shaft, and depending nozzles radially positioned about the underside of said upper bowl, and overlying said lower bowl, said lower bowl being of greater extent than said upper bowl.

2,860,917
STEAM CLEANER
Max C. Thompson, South Pasadena, Calif.
Application February 23, 1954, Serial No. 411,689
5 Claims. (Cl. 299—84)



4. In a steam cleaner, the improvement which comprises: a container; means for supplying water to said container whenever the supply of water therein falls below a predetermined minimum; a chemical dispenser so placed as to have its lower portion immersed in said water, there being an inlet opening through the wall of said dispenser near but below the normal surface of said water, there being an outlet opening through the wall of said dispenser, said outlet opening being substantially below said inlet opening; pump means; pipe means withdrawing liquid from said dispenser and delivering it to said pump means; pipe means for delivering liquid from said pump to said water supply in said container; and pipe means for delivering liquid to said pump means from said water supply in said container and from said pump means to a place of use.

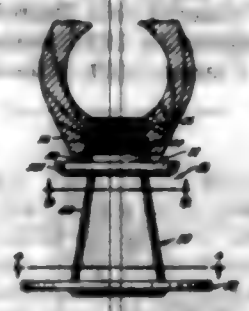
2,860,918
LIQUID SPRAY APPARATUS
Sidney Harold White and Robert Joseph Webb, North Acton, London, England, assignors to Aerostyle Limited, London, England, a British company
Application October 4, 1955, Serial No. 538,496
2 Claims. (Cl. 299—86)



1. Liquid spray apparatus comprising a container for liquid to be sprayed, a spray gun connected with said container for receiving liquid therefrom, a compressor, an internal combustion engine drivingly connected with said compressor, means connecting said compressor and said spray gun for supplying air under pressure to said spray gun for atomizing the liquid as it is discharged by said gun, and a heat exchanger connected with the exhaust of said engine, said connecting means including means for conveying compressed air from the compressor to the container, means for conveying compressed air from said compressor to said heat exchanger to be heated by the exhaust gases in said heat exchanger and means for conveying the heated compressed air from the heat exchanger to the spray gun to heat the liquid within the gun and increase the fluidity of the liquid as it is sprayed.

inclined upwardly, outwardly from the bottom of said compartment toward the respective adjacent end of said top to a position closing the rear central opening in said top to a position underlying the rear of said top, and

2,860,919
BAFFLED SPRAY NOZZLE
James G. De Flon, Whittier, Calif., assignor to The Flon Corporation, Ltd., Los Angeles, Calif., a corporation of California
Application February 24, 1956, Serial No. 567,637
3 Claims. (Cl. 299—121)

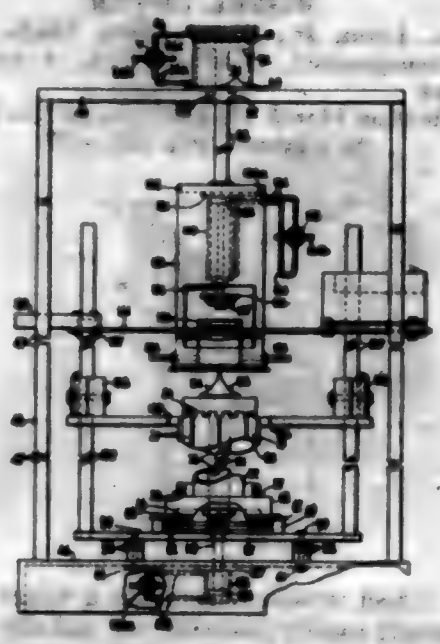


1. The combination comprising an open tubular externally threaded ceramic nozzle adapted to be screwed in vertical axial position with a water conduit, a ceramic baffle spaced below and in vertical alinement with the nozzle, and a pair of U-shaped resiliently flexed metal members extending downwardly and outwardly from inside the nozzle through openings in said baffle and thence beneath the baffle, said members having turned free upper ends received within recesses in the nozzle and removable therefrom by inward flexure of the members, said nozzle holding said members in flexed condition.

2,860,920
SHOWER HEAD CONSTRUCTION
Harold E. Waller, Kewanee, Ill.
Application October 2, 1956, Serial No. 613,402
3 Claims. (Cl. 299—141)

1. A renewable shower head construction comprising a hollow, one-piece shower bell having a cylindrical attachment wall defining a flow passage and terminating in an end shoulder that surrounds and defines an outlet for said passage, said shoulder providing a planar annular end face having an annular groove therein surrounding said outlet, a generally planar one-piece disposable diffuser member of lightweight, waterproof sheet material having a perforated central portion spanning said outlet and surrounded by an imperforate sealing lip having an annular upstanding ridge for mating in said groove to register and seal said diffuser member against said end face, said lip having an outer edge portion projecting beyond said end face to facilitate manual engagement with said diffuser member for removing the same, and a one-piece retainer ring comprising a cylindrical attachment wall having an internal shoulder surrounding and defining a spray outlet for register with said flow passage outlet, said last-mentioned shoulder providing a planar end face surrounding said spray outlet and integrally carrying internal support ribs spanning said spray outlet to present abutment faces coplanar with said last-mentioned end face for reinforcing and preventing streamwise displacement of said central portion by pressure of liquid flowing therethrough, said attachment walls carrying interengaging, manually releasable fastening means for mounting said retainer ring on said bell, with said end faces in parallel gripping relation against opposite sides of said lip.

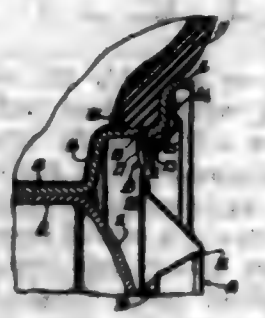
2,860,921
METHOD AND APPARATUS FOR FORMING ROTARY BRUSH
William C. Van Cleef, Jr., Baltimore, Md., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Application October 11, 1954, Serial No. 461,363
13 Claims. (Cl. 300—21)



1. In apparatus to form an annular rotary brush lamination from a bundle of parallel double ended brush bristles, a stock tube adapted to receive and hold said bundle of parallel double-ended brush bristles, a pointed element coaxially disposed with respect to the tube and against which an end of the bundle can be axially forced to flare outwardly the ends of the bristles thereof to a radial position, means to hold the outwardly flared ends in position and means to double the remaining ends of the bristles over upon the first mentioned ends.

9. In a method of forming an annular rotary brush lamination, the steps of radially outwardly bending the tips of the bristles at one end of a bunch of parallel bristles from the axis of the bunch to such degree as to bring the tips substantially to their final outward position in the lamination while retaining the ends of the bristles at the other end of the bunch from radial displacement, more than half of each bristle being displaced, placing a retaining ring of substantially larger internal diameter than the bundle around the undisplaced portion of stock and in position upon the mid portion of the outwardly flared portion and doubling over the remaining ends of the bristles on the first ends.

2,860,922
WHEEL COVER
George Albert Lyon, Jr., Birmingham, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Application January 3, 1955, Serial No. 479,554
23 Claims. (Cl. 301—37)



1. In a wheel structure including a portion facing generally radially, a cover for disposition at the outer side of the wheel having a portion with generally axially

radially and axially inwardly in a direction divergently under pressure to said volume and preventing reverse

being of greater extent than said upper bowl.

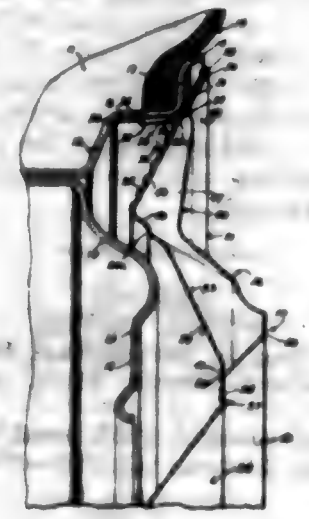
sprayed.

extending retaining finger structure thereon provided with means for retainingly engaging said radially facing wheel portion, and side shoulder flanges on the fingers thrusting in backed-up relation against an adjacent portion of the cover.

2,860,923
WHEEL COVER
George A. Lyon, Jr., Birmingham, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Application March 25, 1955, Serial No. 496,726
11 Claims. (Cl. 301—37)

1. In a wheel structure including a wheel portion having a generally axially inwardly and radially facing shoulder structure, a cover for disposition at the outer side of the wheel having therebehind a continuous circumferential flange provided with spaced flange portions arranged to back up against the cover and alternating with circumferential generally radially offset radially resiliently deflectable cover retaining portions between the backup portions and retainingly engageable with the shoulder structure of the wheel.

2,860,924
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application February 17, 1956, Serial No. 566,228
12 Claims. (Cl. 301—37)

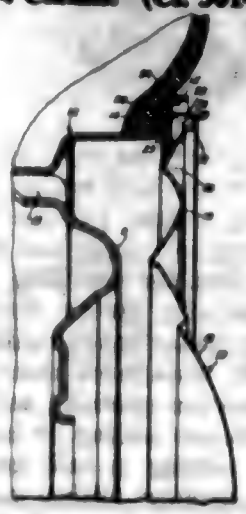


1. A multipart cover assembly for overlying retained engagement upon a vehicle wheel including an inner cover member having a first radially outer marginal portion and a first radially inner crown portion, said portions being separated by an intermediate annular axially inwardly dished portion, and a second cover member being disposed on the outer side of said inner cover member having a second radially outer marginal portion in assembly with said first radially outer marginal portion, said second cover member having a second radially inner crown portion carried in assembly with said first crown portion, said second portions being connected together by a plurality of circumferentially spaced spoke-like portions with said spoke-like portions spanning said annular dished portion in assembly.

2,860,925
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application March 26, 1956, Serial No. 573,923
13 Claims. (Cl. 301—37)

1. A multi-part cover structure including an axially inner cover member and an axially outer cover member in overlying relation to one another, said cover structure having means to retain same upon a vehicle wheel, said inner cover member provided with a portion having circumferentially spaced sets of ribs separated by seats, said outer cover member having a series of circumferentially spaced spoke-like elements for disposition in said seats, and means for maintaining said cover members assembled.

2,860,926
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application June 7, 1956, Serial No. 589,949
4 Claims. (Cl. 301—37)



1. In a wheel structure including a tire rim having a terminal flange structure including a generally axially facing portion and a generally radially facing portion, a cover for disposition at the outer side of the wheel including an outer marginal portion with a generally axially inwardly extending flange of a smaller diameter than said radially facing rim flange portion and having cover retaining fingers extending therefrom arranged to bottom against the axially facing flange portion and having terminals directed generally radially outwardly and engageable retainingly under resilient tension of the fingers against the radially facing rim flange portion, the axially extending cover flange having an underturned inner marginal reinforcing and pry-off shoulder margin disposed in gap relation to both of said rim flange portions, said underturned flange shoulder margin extending generally

against opposite sides of said lip.

of the wheel having a portion with generally axially

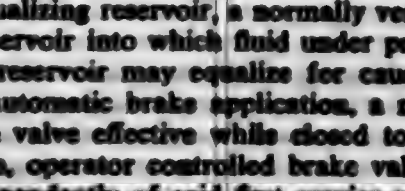
radially and axially inwardly in a direction divergently relative to the plane of the inner face of the radially facing rim flange portion so as to facilitate insertion of the tip of a pry-off tool behind the turned flange marginal shoulder portion for fulcruming on the tip of the radially facing rim flange portion in prying the cover from the wheel, and generally radially inwardly projecting substantially triangular wing-like side portions of the fingers joining said shoulder margin and enhancing the resilient stiffness of the retaining fingers.

2,860,927

APPARATUS FOR PNEUMATICALLY DRAWING OFF GREEN MALT BATCH OR AGGLOMERATION FROM GERMINATING BOXES

August Rothbaeumler, Kulmbach, Bavaria, Germany, assignor to Erste Kulmbacher Actien-Exportbier-Brauerei, Kulmbach, Bavaria, Germany

Application February 20, 1957, Serial No. 641,328
Claims priority, application Germany October 17, 1956
11 Claims. (Cl. 302—50)



1. Apparatus for pneumatically drawing off green malt out of germinating boxes and adapted to be pulled over the entire width of the box comprising a pair of struts having means to removably connect the struts to a traction member, a shield connected to the struts to form an elongated suction chamber and having a lower edge adapted to contact the bottom of the box, said shield having an upper edge adjacent the struts, a shaft having bearing surfaces in the struts and extending longitudinally in the elongated suction chamber parallel to the bottom and longitudinal axis of the box, a pair of spiral conveyors arranged on the shaft to rotate therewith and each having a helical surface extending and terminating at the approximate mid-point of the shaft with the direction of the conveyor flights extending toward each other at the center of the longitudinal shaft, and a suction outlet tube connected to the shield and communicating with the suction chamber at the mid-point of the chamber adjacent the inner ends of the spiral conveyors and at the terminals of the conveyor flights therebetween.

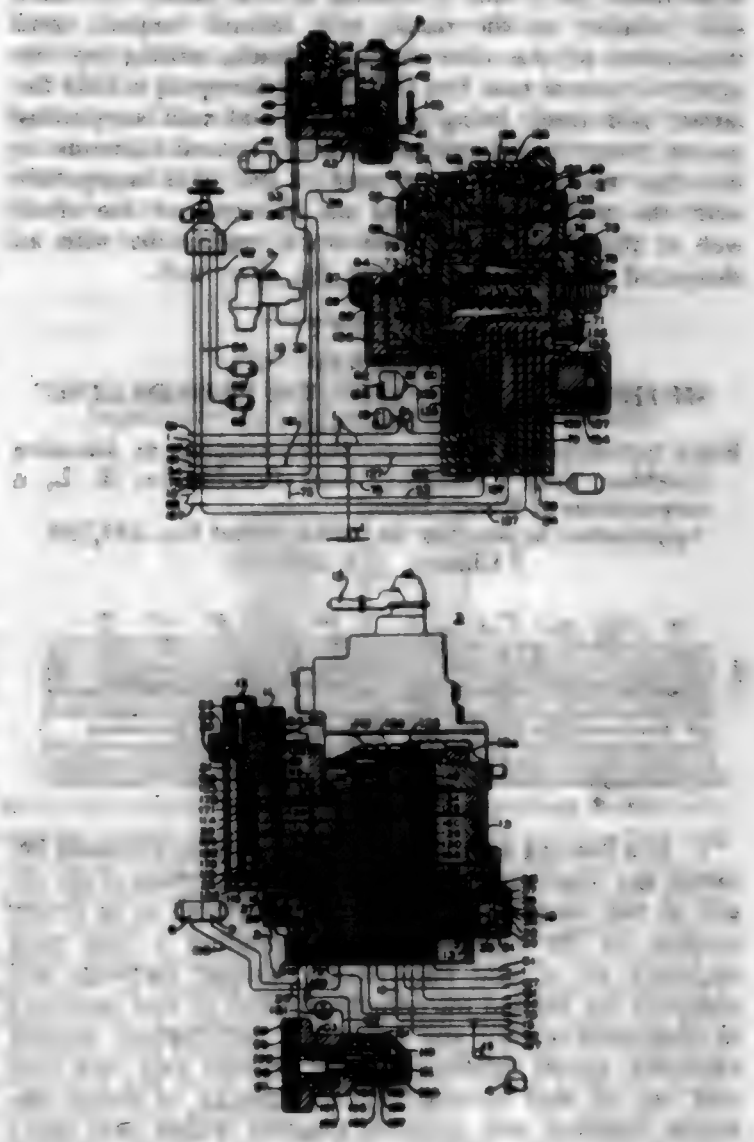
2,860,928

FLUID PRESSURE BRAKE APPARATUS WITH MEANS FOR PREVENTING IMPROPER SUPPRESSION OF AUTOMATIC TRAIN CONTROL

Andrew T. Gorman, Monroeville, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application June 29, 1955, Serial No. 518,735
13 Claims. (Cl. 303—18)

1. In a fluid pressure brake apparatus, in combination, a volume for storing fluid under pressure, suppression means responsive to pressure of fluid supplied from said volume to a normally vented chamber to effect suppression of a train control brake application, a normally charged equalizing reservoir, a normally vented reduction limiting reservoir into which fluid under pressure in said equalizing reservoir may equalize for causing a limited degree of automatic brake application, a normally open first service valve effective while closed to prevent such equalization, operator controlled brake valve means operable independently of said first service valve and normally in one position for preventing such equalization and supplying fluid under pressure to said volume, one-way flow valve means interposed between brake valve means and volume for permitting such supply of fluid under pressure to said volume and preventing reverse flow, and interlock valve means normally ineffective to permit release of fluid under pressure from said volume and operative by pressure in said reduction limiting reservoir in excess of a chosen value occurring during and in consequence of such equalization to connect said volume to said brake valve means via a communication



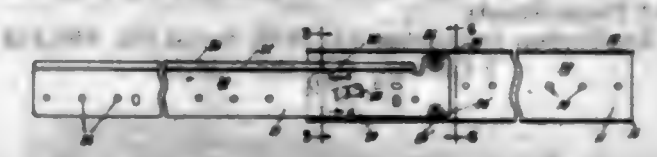
by-passing said one-way flow valve means for permitting such release, said brake valve means being operable to another position for cutting off such supply to said volume and connecting said chamber to the part of said communication leading to said interlock means, whereby fluid under pressure will be released from said volume to said chamber in said other position of said brake valve means only while said first service valve is open.

2,860,929

DRAWER SLIDE ASSEMBLY

Nathan A. Gennuch, Manhasset, N. Y.

Application May 14, 1956, Serial No. 584,667
3 Claims. (Cl. 308—3.8)



1. A drawer slide assembly comprising, in combination, a track having a substantially upright web; a slide having a substantially upright web in laterally spaced substantially parallel relation to the track web; interengageable supporting means on said track and slide providing for relative longitudinal movement thereof; a first tongue extending laterally from the track web toward the slide web adjacent the outer end of the track

and lying in a plane sloping downwardly and outwardly; a second tongue extending laterally from the slide web toward the track web adjacent the inner end of the slide and lying in a substantially horizontal plane; said tongues being relatively positioned for interengagement upon outward movement of said slide relative to said track and movable out of engagement, for extraction of the slide from the track, by tilting of the partly extended slide relative to the track; said second tongue, upon reinsertion of the slide into the track, sliding up the upper surface of said first tongue and dropping behind the latter; said track being a channel, and said supporting means comprising a pair of vertically spaced elements on the slide web at the inner end of the slide engageable with the track flanges; and an element on the track web at the outer end of the track engageable with an elongated horizontal flange on the slide web.

2,860,930

METHODS AND DEVICES FOR PRE-LOADING BEARINGS

Erich Schafranik, Providence, R. I., assignor to Abrasive Machine Tool Company, East Providence, R. I., a corporation of Rhode Island

Application September 22, 1954, Serial No. 457,755
5 Claims. (Cl. 308—6)

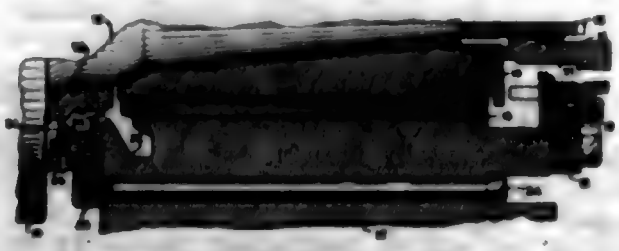
1. In a bearing having anti-friction bearing elements between and distributed along a substantial portion of the extent of two members of which one is adapted to be driven relative to the other, means constituting a race strip engaging all of said anti-friction bearing elements and mounted for limited movements relative to said members in directions toward and from said anti-friction bearing elements, means defining a space between said race strip and one of said members, a multiplicity of thrust elements confined and crowded together within said space with alternate ones of the thrust elements engaging said race strip and supporting intervening thrust elements in engagement with said one of said members, and manually operable means for applying pressure to only one of a multiplicity of said intervening thrust elements thereby to apply distributed substantially equalized pressure to said race strip throughout a substantial portion of the extent of the said race strip where said multiplicity of intervening thrust elements are supported by said wall-engaging thrust elements.

2,860,931

ROLL NECK BEARING SEALS

Moses E. Brooks, Pittsburgh, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Application September 11, 1956, Serial No. 609,138
3 Claims. (Cl. 308—36.1)



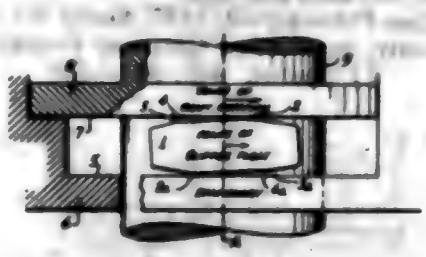
1. A bearing seal arrangement for a rolling mill roll neck and its bearing chuck, comprising a bearing chuck, roll coolant and bearing lubricant seals associated with at least one end of said chuck, each disposed to contact a cylindrical sealing surface associated with the corresponding end of a roll neck, a spring pressed wiping device mounted between said seals below the horizontal centerline of said chuck and disposed to contact a cylindrical wiping surface associated with the roll neck, and a bottom drain between said seals for discharging to waste any fluid leaking past either of said seals.

2,860,932

SLIPPER THRUST BEARING

Henry C. Hill, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Application October 5, 1956, Serial No. 614,589
8 Claims. (Cl. 308—73)



1. An end thrust slipper bearing comprising a plurality of free-floating slipper blocks arranged end to end in a circle, and each of like thickness between parallel planar faces, said opposite faces of said slipper blocks being beveled at the respectively opposite ends of the block along lines parallel to each other and chordally disposed close to but at opposite sides of a plane through the axis of such circle at the midpoint in the slipper block's length, and so arranged in use that the beveled ends trail with respect to the contiguous axially facing slipper block, in the intended sense of rotation, for tilting about such lines.

2,860,933

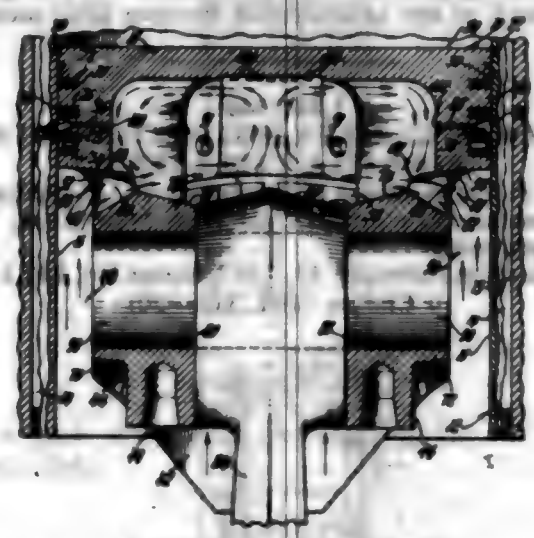
BEARING FOR DEVICE FOR TRANSMITTING ROTARY MOTION INTO A SEALED CHAMBER

George J. Woltz, Mountainside, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application August 4, 1955, Serial No. 526,531
3 Claims. (Cl. 308—238)

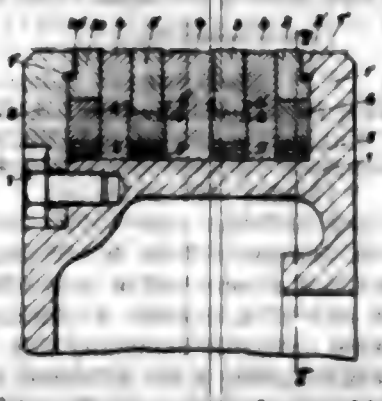
1. A sleeve bearing which comprises a drive shaft of metal, a lubrication-free journal supporting said shaft and composed of a hard, smooth, substantially vapor-free, heat-resistant, vitreous material characterized by a coefficient of friction of less than 0.05 with respect to said shaft, said metal having a coefficient of thermal expansion which approximates that of said vitreous material over a range of temperatures extending up to about 420 degrees centigrade.

2,860,934
PISTON
George C. Trevarthen, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 14, 1954, Serial No. 436,379
10 Claims. (Cl. 309—10)



1. A piston comprising a closed end having a surface thereon adapted to form one wall of a combustion chamber, a cylindrical ring portion formed on said end, said ring portion including a plurality of annular ring receiving grooves separated by radially projecting lands, a skirt portion secured to said ring portion by pairs of piers, wrist pin bosses projecting inwardly into the interior of said skirt portion and being secured to the lower end of said piers, the piers in each pair being spaced to form passages extending inwardly through said portions parallel to and immediately above said pin bosses, vent means extending through one of said lands to form apertures on the inside of said cylindrical ring portion, all of said apertures being adjacent said inner ends of said passages.

2,860,935
PISTON ARRANGEMENT
Alfred Frentzen, Dahlbruch, Westphalia, Germany, assignor to Firma Siemag, Siegener Maschinenbau G. m. b. H., Dahlbruch, Westphalia, Germany
Application April 18, 1955, Serial No. 502,095
Claims priority, application Germany April 17, 1954
7 Claims. (Cl. 309—29)

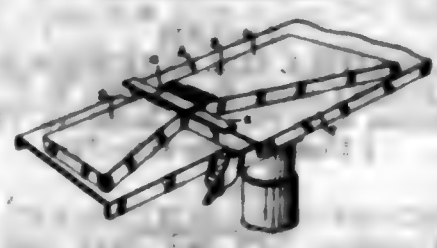


4. In a piston arrangement, in combination, a substantially cylindrical main body means having an annular flange at one end thereof; clamping means removably mounted at the other end of said main body means; at least one annular outwardly biased guiding piston ring mounted on said main body means between said annular flange and said clamping means and having an outer diameter larger than the outer diameter of said main body means; at least one annular outwardly biased sealing piston ring mounted on said main body means between said guiding piston ring means and said clamping means and spaced therefrom, said sealing piston ring means having an outer diameter larger than the outer diameter of said main body means, said guiding piston ring being outwardly biased by a force greater than said sealing piston ring; spacing means for maintaining said flange, said piston rings and said clamping means in spaced relationship; and a plurality of stop means, at least one of said stop means being mounted respectively between said annular flange of said main body means and one of said piston ring means, at least another of said stop means being mounted respectively between said clamping means and another of said piston ring means, each of said stop means limiting the outward movement of its respective outwardly biased piston ring, the stop means limiting the outward movement of said sealing piston ring permitting farther outward movement of said ring than the stop means limiting the outward movement of said guiding piston ring.

2,860,936
PISTON ASSEMBLY
August F. Habenicht, Tinley Park, Ill.
Application July 12, 1957, Serial No. 671,626
7 Claims. (Cl. 309—29)

1. In a piston-cylinder structure, a cylinder, a piston assembly reciprocable therein and comprising a relatively narrow piston rod and a sleeve coaxially surrounding said rod so as to occupy a substantial volume of said cylinder and thereby decrease the effective volume thereof along said piston rod, said piston assembly comprising also a piston head secured to said rod and sleeve and having a plurality of spaced channels extending circumferentially thereabout, a piston ring mounted within each of said channels and extending outwardly therefrom for sealingly engaging the walls of said cylinder, and a resilient compressible seal member in the form of an endless ring mounted within each of said channels interiorly of the piston ring for sealingly engaging the surrounding surfaces to prevent the escape of pressure around each of said rings and through the respective channels.

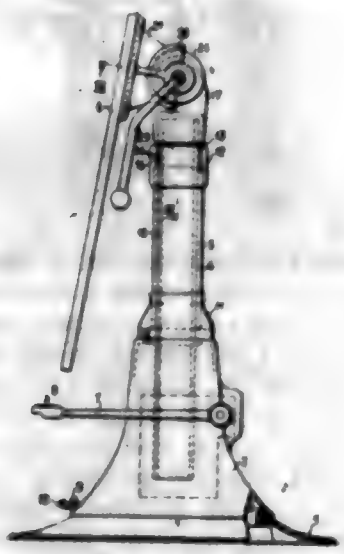
2,860,937
OPERATING TABLE ACCESSORY
Alfred C. Ehrstein, University City, Mo., and John L. McPhee, Redwood City, Calif., assignors to Stampaloe Company, St. Louis, Mo., a corporation of Missouri
Application April 23, 1956, Serial No. 579,966
6 Claims. (Cl. 311—7)



1. A pad adapted for use with the kidney elevator of a surgical operating table, said pad comprising an elongated relatively rigid panel-like seat section having a substantially straight rear margin and being adapted to be interposed between the seat member of a surgical operating table and the lower portion of the patient's body, an elongated relatively rigid panel-like back section having a substantially straight forward margin and being adapted to be interposed between the back member

of a surgical operating table and the upper portion of the patient's body, said seat section and back section being positioned with respect to each other in such a manner that the said margins are respectively disposed in spaced parallel relation to provide a substantial gap therebetween, a piece of flexible webbing secured at its opposite sides to the seat section and back section along said margins respectively to span said gap and thereby flexibly connect the back section and seat section, said webbing being adapted to overlie and rest conformably upon the kidney elevator of a surgical operating table, and strap members secured to the under face of said webbing for releasably securing the pad to the kidney elevator of a surgical operating table.

2,860,938
SELF-LOCKING PEDESTAL DRAFTING TABLE
Arnold Martl, Zurich, Switzerland, assignor to Bureautechnik A. G., Zurich, Switzerland
Application November 21, 1956, Serial No. 623,674
Claims priority, application Switzerland November 23, 1955
4 Claims. (Cl. 311—36)

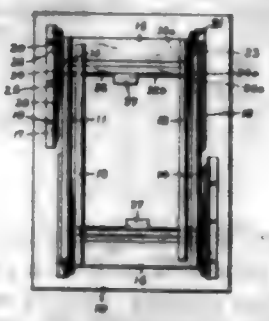


1. A pedestal drafting table comprising a bearing bracket mounted on top of a board column supporting a board, a horizontal shaft eccentrically journalled in said bearing bracket, the board proper being mounted pivotally about said horizontal shaft, a spring attached both to said eccentrically journalled shaft and to said bearing bracket and tending to bias said shaft into a low position relative to said bearing bracket, a brake component fixedly connected to said column, and a brake component fixedly connected to said board proper, the said two brake components being forced against one another by the biasing action of said spring, whereby the slope of said board proper is automatically fixed.

2,860,939
SLIDE ASSEMBLY FOR EXTENSION TABLES
Joseph Cooper, Forest Hills, N. Y.
Application April 22, 1958, Serial No. 730,152
3 Claims. (Cl. 311—71)

1. In slides for extension tables a first member formed of strong and rigid metallic material and having a top horizontal flange merging into a vertical wall which in turn merges into a depending U-shaped extension open at its side, a second member having the same form as the first member and with its U-shaped extension so reduced in size as to fit within the like extension of the first member, the flanges of both members being apertured, a strap disposed near one end of one of said members and rigidly secured thereto, the strap having parallel legs embracing the two members, and the member opposite that carrying the strap being provided near each end with a finger for limit control of the extension of the two slide members.

2,860,940
LOCKING AND RELEASING MECHANISM FOR FOLDABLE TABLE LEGS
William P. De Saussure, Englewood, N. J., assignor to De Saussure Equipment Co., West New York, N. J., a copartnership
Application February 19, 1957, Serial No. 641,140
4 Claims. (Cl. 311—88)



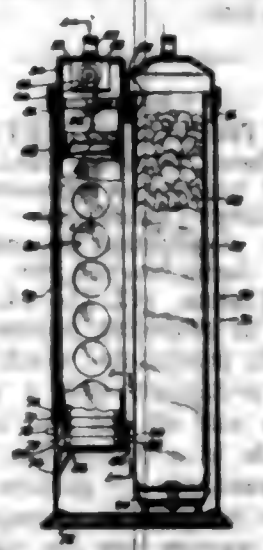
1. A folding table comprising a top, pairs of legs at opposite ends of said table, the legs of each pair being fixed to each other in spaced relation, supporting members fixed to said top on opposite sides of each pair of legs, links pivotally connected to said top and to said legs, each supporting member having a slot therein substantially parallel with said top and adjacent and corresponding to one of said legs, a pin fixed to each leg and extending into a corresponding slot for sliding movement therealong to enable said legs to be erected and folded against said top selectively, spring biased latches mounted on said table top and having notches in their upper edges engageable with said pins when said legs are erected, a latch release member adjacent to each pair of legs and spanning said top between said supporting members, each release member having angularly related flanges thereon, one of said flanges engaging between said top and a latch at each end thereof and being rockable relative to said latches and top to displace the latches away from said top and release said pins from said notches.

2,860,941
BUTTER DISPENSING APPARATUS
Edward Fromwiller, Richmond Hill, N. Y.
Application April 12, 1954, Serial No. 422,493
9 Claims. (Cl. 312—36)

1. A dispensing cartridge for butter comprising, in combination, an elongated tube of rectangular cross-section, an inner rim at one end of said tube, a bottom at the opposite end of said tube, a plurality of butter dishes each having upwardly extending side walls within said tube, each dish having a pat of butter thereon, said dish side walls having inherent resiliency and pressing outwardly against the side walls of said tube, said tube maintaining said dish side walls erect to prevent contact between the butter on one of said dishes and the bottom of the dish next above said one dish, and an opening in one wall of said container adjacent said bottom, said opening permitting one of the resilient walls of an individual dish to protrude from said container whereby said dish may readily be removed from said container, each said butter dish being provided with a projecting tab on one side wall thereof, said dishes being arrayed in said cartridge so that the said tabs press against the side wall having an opening therein, said side wall

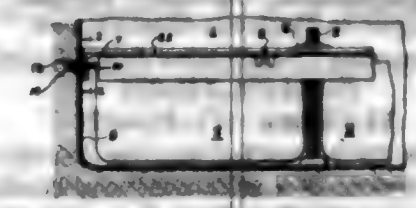
about 70 to about 90° C. while continuously withdrawing

opening being provided with an upwardly extending notch through which the tab on the lowermost butter



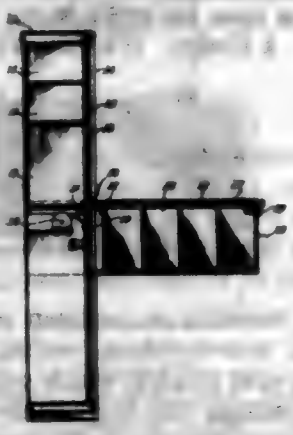
dish extends due to the resiliency of the said side wall of said dish.

2,860,943
ADJUSTABLE SUPPORT
Arthur W. Carew, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application June 17, 1957, Serial No. 665,982
2 Claims. (Cl. 312—270)



1. An adjustable support structure comprising a supported member having a bracket thereon including spaced depending legs, an adjustable supporting member including a stud portion adapted to be rotatably mounted in an aperture in a supporting wall in frictional engagement with said supporting wall and a head extending between said legs, and an arm integral with said head for engaging the lower extremity of one of said legs upon rotation of said supporting member to vary the vertical position of said supported member.

2,860,943
COIN AND CURRENCY TILL
William D. Brawner, Birmingham, Mich., assignor to Le Febure Corporation, Cedar Rapids, Iowa, a corporation of Iowa
Application July 30, 1957, Serial No. 675,852
4 Claims. (Cl. 312—298)



1. In a coin and currency till, a vertical cabinet, a horizontal tray positioned midway of said vertical cabinet and extending outwardly therefrom the rearwardmost wall being positioned at a spaced distance from said first cabinet to form a cavity therebetween, a cover portion slideably positioned in said vertical cabinet and positioned to be moved vertically through said cavity, a second cover portion hingedly attached to said vertical cover and adapted to pivot outwardly and downwardly to cover said horizontal tray when said vertical cover is in its uppermost vertical position, and counter-balance means mounted internally of said vertical cabinet and adapted to bias said first and second cover members upwardly in relation to said vertical cabinet to create a total enclosure of said cabinet and tray.

CHEMICAL

2,849,944
BLEACHING FIBERS OF VEGETABLE ORIGIN WITH FORMAMIDINE SULFINATE AND ALKALINE PEROXIDE
James H. Young, Niagara Falls, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application November 28, 1955
Serial No. 549,537
9 Claims. (Cl. 8—104)

1. In a method of bleaching vegetable fibers of the group consisting of cotton, kraft wood pulp and sulfite wood pulp with an alkaline peroxide solution, the improvement comprising extracting naturally occurring color bodies from said fibers with an aqueous alkali metal hydroxide solution of a formamidine sulfinate prior to bleaching said fibers with the alkaline peroxide solution.

2,860,945
BLEACHING CYANOETHYLATED COTTON FIBERS WITH HYDROGEN PEROXIDE-PHOSPHATE SOLUTION AND OPTIONALLY WITH WATER-SOLUBLE SULFOXYLATE SOLUTION
Robert B. Dustman, Jr., Niagara Falls, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application July 28, 1955
Serial No. 525,864
10 Claims. (Cl. 8—116)

4. The method of bleaching cyanoethylated cotton fibers containing cyanoethyl groups equivalent to from 1.8 to 6.5% nitrogen based upon the weight of said fibers comprising bleaching said fibers in two separate bleaching treatments with solutions (1) and (2) at a temperature in each treatment between room temperature and the boiling temperature of the solution used, said solution (1) being an aqueous alkaline hydrogen peroxide solution in which the alkaline agent consists essentially of a water-soluble alkali metal molecularly dehydrated phosphate which is present at a concentration of from 0.1 to 4% along with from 0.1 to 2% H_2O_2, and said solution (2) being a 0.5 to 5% aqueous solution of a water-soluble sulfoxylate from the group consisting of the sodium and zinc formaldehyde sulfoxylates.

2,860,946
CYANOETHYLATION PROCESS
Salem F. Bolt, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application August 15, 1955
Serial No. 528,543
14 Claims. (Cl. 8—120)

1. A continuous process for cyanoethylating cellulose which comprises the steps of continuously impregnating the cellulose with an aqueous solution of a strongly alkaline hydroxide, continuously subjecting said alkali-impregnated cellulose to contact with vapors of acrylonitrile in a suitable apparatus maintained at a temperature from

salt and a compound selected from the group consisting upper portion of said vessel above said bed, a mixed gas

about 70 to about 80° C. while continuously withdrawing and removing from said apparatus an azeotropic mixture formed from the acrylonitrile therein and the water present in said cellulose, and thereafter washing and drying the cyanoethylated cellulose.

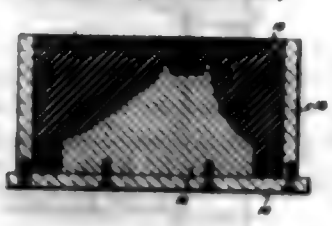
2,860,947

METHOD OF CASTING PHENOLIC RESINS IN A TIN-PLATED MOLD

Joseph F. Kaist, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application June 14, 1954, Serial No. 436,311

1 Claim. (Cl. 18—47)



A method of molding in an open steel mold thermosetting phenolic non-shrinking casting resins hardened by the use of an acid catalyst which comprises tin plating the steel mold, mixing the ingredients of the resin and pouring the mixture into the mold, heating the mold and the mixture therein to polymerize the resin, and removing the casting from the mold.

2,860,948

SEPARATION OF NEPTUNIUM FROM PLUTONIUM BY CHLORINATION AND SUBLIMATION

Sherman M. Fried, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application May 24, 1949

Serial No. 95,150

9 Claims. (Cl. 23—14.5)

3. A process for the separation of neptunium values from plutonium values comprising heating in vacuo a mixture containing an oxygen-containing compound of neptunium and an oxygen-containing compound of plutonium with carbon and chlorine at a temperature between 300 and 800° C. so as to form neptunium tetrachloride, cooling and condensing the neptunium tetrachloride fraction in a separate zone cooler than the reaction zone and fractionally resubliming the neptunium tetrachloride from any plutonium trichloride.

2,860,949

PLUTONIUM SEPARATION METHOD

Loren J. Bernstein, Jr., San Pablo, Frederick R. Stevenson, Santa Rosa, and Gerhard K. Rollefson, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application November 28, 1953

Serial No. 393,528

6 Claims. (Cl. 23—14.5)

1. The method of recovering plutonium ions from neutron-irradiated uranium ions which comprises forming an aqueous solution containing uranium ions, tetravalent plutonium ions and ions of fission products, buffering said solution to a pH of 4–7, adding sufficient excess acetate ion to the solution to complex the uranyl ion present, treating the solution with a ferric hydroxide precipitate, separating said precipitate together with associated plutonium ions and ions of fission products from the solution, dissolving said carrier precipitate in an aqueous mineral acid solution, oxidizing the plutonium values present in the solution to the hexavalent state, treating the resultant solution with a ferric hydroxide precipitate, and then separating said precipitate together with associated ions of fission products from the solution containing the purified plutonium ions.

2,860,950

METHOD OF PREPARING METAL HALIDES

Angus V. Henrickson, Boulder, Colo., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 21, 1955

Serial No. 554,593

4 Claims. (Cl. 23—14.5)

1. The method of preparing plutonium halides from plutonium peroxide precipitates which comprises washing the peroxide precipitate with a water solution of hydrogen peroxide until all free acid has been removed, drying the peroxide at a temperature not greater than 90° C., promptly passing a dry gaseous hydrohalide over the surface of the peroxide at a temperature of about 100° C. until the reaction rate has stabilized, and then raising the reaction temperature to between 400° C. and 600° C. until the conversion to plutonium halide is substantially complete.

2,860,951

RECOVERY OF VALUES IN NATURALLY OCCURRING ALKALI METAL SULFATE MINERALS

George L. Cunningham, Cleveland Heights, Ohio, assignor to Horizons Incorporated

No Drawing. Application July 28, 1955

Serial No. 525,004

10 Claims. (Cl. 23—32)

1. A process for separating and recovering the alkali metal sulfate content of a sulfate mineral consisting of at least one alkali metal sulfate from the group consisting of sodium sulfate and potassium sulfate and at least one other sulfate from the group consisting of the sulfates of calcium, magnesium, aluminum, copper, lead and manganese which comprises: freeing the sulfate mineral from any chloride associated therewith by rapidly washing the sulfate mineral with cold water; forming an intimate mixture of the washed sulfate mineral and at least one solid oxide selected from the group consisting of silica, titania, zirconia, alumina, and iron oxide, which oxides form relatively insoluble compounds with the oxides of the metals of the second group enumerated above; maintaining the mixture at a temperature between about 500° C. and 1500° C. for a time sufficient to effect conversion of a substantial portion of the sulfate mineral to the relatively insoluble compound of the added oxide; leaching the reaction mixture with water at about 100° C. to extract the alkali metal sulfate from the insoluble reaction product; cooling the aqueous extraction liquor sufficiently to crystallize the alkali metal sulfate therefrom and recovering the said sulfate.

2,860,952

PROCESS FOR THE RECOVERY OF DISSOLVED MERCURY SALTS FROM BRINE EFFLUENT FROM MERCURY CATHODE ELECTROLYTIC CELLS

Grafton L. Bergeron and Charles K. Bon, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application July 3, 1957, Serial No. 668,749

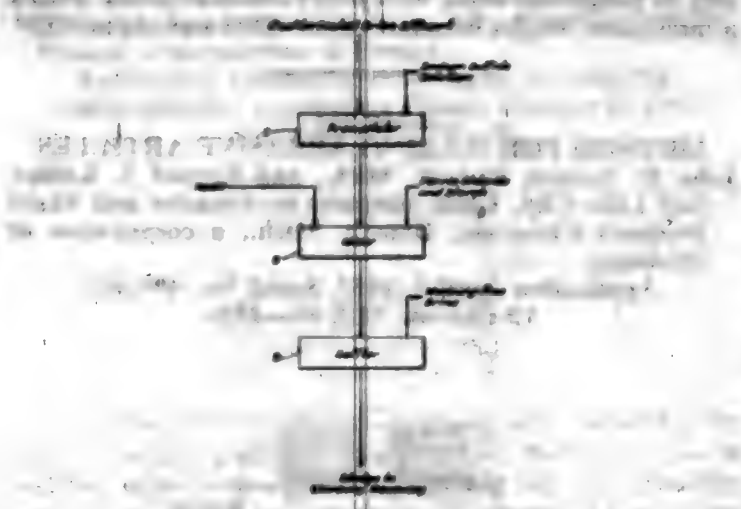
4 Claims. (Cl. 23—134)

1. A process for the recovery of dissolved mercury salts from brine effluent from mercury cathode electrolytic cells, which comprises adding to the brine a soluble sulfide compound in an amount not greater than a 100 percent stoichiometric excess to convert the dissolved mercury to a mercury sulfide dispersion, intermixing with the brine containing the mercury sulfide dispersion a soluble ferric

4. The method of bleaching cyanoethylated cotton

kaline hydroxide, continuously subjecting said alkali-impregnated cellulose to contact with vapors of acrylonitrile in a suitable apparatus maintained at a temperature from

salt and a compound selected from the group consisting of starch and gum arabic at a pH in the range of 5 to 11



to flocculate the mercury sulfide, and separating the flocculated mercury sulfide from the mixture.

2,860,953
CORROSION INHIBITION OF TITANIUM-BASE MATERIALS BY FUMING NITRIC ACID
Howard B. Bomberger, East Liverpool, Ohio, assignor, by mesne assignments, to Crucible Steel Company of America, Flemington, N. J., a corporation of New Jersey
No Drawing. Application July 19, 1956
Serial No. 598,743
7 Claims. (Cl. 23—157)

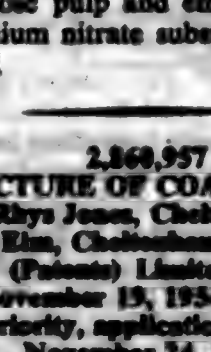
1. A method of inhibiting the corrosion of titanium base material by red fuming nitric acid, which comprises incorporating with said fuming nitric acid at least about 0.01% by weight of a salt of a metal in its highest degree of oxidation selected from the group consisting of copper, chromium, iron, manganese, tin and mixtures thereof, and maintaining said acid substantially free of fluoride ions.

2,860,954
METHOD OF PRODUCING PURIFIED SELENIUM FROM SELENIOUS ACID SOLUTION CONTAINING IMPURITIES
Edgar L. Bueker and Vernon K. Kofron, St. Louis, Mo., assignors to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
No Drawing. Application August 18, 1953
Serial No. 375,870
4 Claims. (Cl. 23—209)

1. The method of producing selenium from a selenious acid solution containing impurities including mercury, said method comprising the steps of adjusting the pH of the solution to approximately between .8 and 2, dispersing a small quantity of freshly precipitated selenium through the solution, thereby to collect the mercury in the solution, separating the precipitate with the mercury collected thereby from the solution, passing the solution through a cation exchanger, and finally recovering the selenium from the solution.

2,860,955
APPARATUS FOR DISTRIBUTING A MIXED PHASE FLUID STREAM
Louis S. Kassel, Oak Park, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Application December 15, 1954, Serial No. 475,421
1 Claim. (Cl. 23—288)

A contacting apparatus comprising an enlarged closed vessel containing a bed of solid material in the lower portion thereof, a smaller phase separating chamber in the upper portion of said vessel above said bed, a mixed gas and liquid phase inlet connected to said chamber at an intermediate point in the height thereof, said chamber being open at its upper end and in vapor communication



with said bed through the interior upper portion of said vessel around the separating chamber, and a plurality of horizontally disposed, perforated liquid distributing conduits connected to the lower end of said separating chamber and positioned over the surface of said bed.

2,860,956
PRODUCTION OF METALS AND THEIR COMPOUNDS
Thomas Victor Arden, Francis Hereward Burstall, Glynn Rees Davies, Reginald Patrick Linstead, and Ronald Alfred Wells, Teddington, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application April 18, 1949
Serial No. 88,237
Claims priority, application Great Britain April 22, 1948
2 Claims. (Cl. 23—309)

1. A method of separating zirconium nitrate from hafnium nitrate wherein the said nitrates in admixture are added to a mass of cellulose pulp, the nitrates of the metals and the cellulose pulp are eluted with diethyl ether containing 12.5 percent by volume of nitric acid of density 1.42 and the eluent is caused to pass through a column of cellulose pulp and effluent from the column containing zirconium nitrate substantially free from hafnium is collected.

2,860,957
MANUFACTURE OF COAL BRIQUETTES
David Clarence Rhys Jones, Cheltenham, and Harry Rex Gregory, Pitt Elm, Cheltenham, England, assignors to Coal Industry (Patents) Limited, London, England
Application November 19, 1954, Serial No. 470,106
Claims priority, application Great Britain November 24, 1953
22 Claims. (Cl. 44—10)

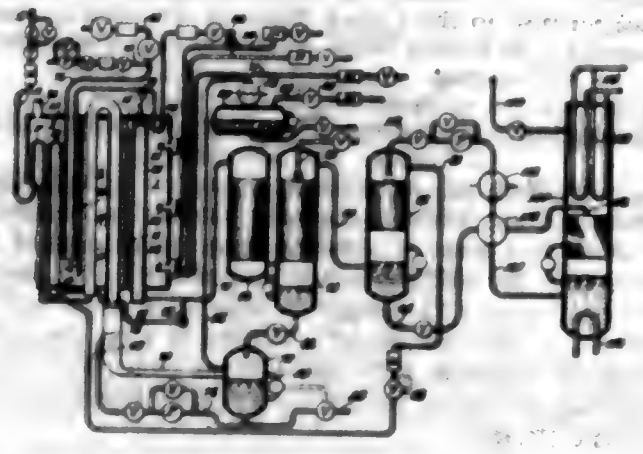
1. A method of making a high strength briquette without a binder which comprises the steps of applying a load to a quantity of particles to compact the particles into a compacted mass whereby a relatively small angular shear strain may be produced, and then applying a load to at least a part of the said compacted mass so as to substantially change the shape of such part of the mass and create within the greater part of the compacted mass an angular shear strain of relatively larger and pre-determined magnitude.

residual solution with a ferric hydroxide precipitate, and containing the mercury sulfide dispersion a soluble ferric

2,860,958
ANTIKNOCK COMPOSITIONS
Lewis F. Gilbert, Fraser, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application August 10, 1956
Serial No. 603,227
6 Claims. (Cl. 44—69)

4. Gasoline containing from about 0.53 to about 6.34 grams of lead per gallon as an alkyllead antiknock agent, a scavenging amount of an organic halide scavenger capable of reacting with the lead during combustion in a spark ignition internal combustion engine to form relatively volatile lead halide and a trialkylphosphate in which each alkyl group contains from 5 to 8 carbon atoms and is branched on a carbon atom other than the alpha carbon atom, each branch being from 1 to 2 carbon atoms in length, said phosphate being present in the gasoline in amount such that the phosphorus-to-lead atom ratio is from about 0.1:3 to 1.6:3.

2,860,959
PRESSURE HYDROGASIFICATION OF NATURAL GAS LIQUIDS AND PETROLEUM DISTILLATES
Elmore S. Pettyjohn, Evanston, and Henry R. Linden, Franklin Park, Ill., assignors to The Institute of Gas Technology, Chicago, Ill., a corporation of Illinois
Application June 14, 1954, Serial No. 436,406
1 Claim. (Cl. 48—197)

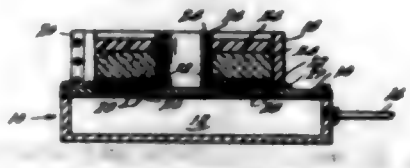


A process for completely converting natural gas liquids into a fuel gas completely interchangeable with natural gas which comprises producing a hydrogen-rich gas by catalytically reforming a hydrocarbon in the presence of steam, removing oxides of carbon from said hydrogen-rich gas to a residual concentration of less than 10 volume percent, preheating said feedstock to vaporize it without cracking thoroughly intermixing said hydrogen-rich gas and said vaporized feed stock but below cracking temperature, gradually increasing the temperature of said mixture of hydrogen-rich gas and vaporized feedstock to 1300°–1500° F. at a pressure of 50–80 pounds per square inch absolute to convert substantially all of said feedstock into said interchangeable fuel gas, the quantity of hydrogen ranging from 50–80 cubic feet per gallon of feedstock and the residence time at 1300–1500° F. ranging from 2–5 seconds.

2,860,960
ABRASIVE ARTICLES AND METHOD FOR MAKING THE SAME
John R. Gregor, Detroit, Mich., assignor to Abrasive and Metal Products Co., a corporation of Michigan
No Drawing. Application November 10, 1953
Serial No. 391,395
10 Claims. (Cl. 51—298)

1. An abrasive wheel comprising 50% to 64% abrasive grains by volume of the wheel, 12% to 30% by volume of said wheel of a phenol-aldehyde bond, and 0.8% to 25% by weight of said bond of a plasticizer for said bond consisting of a condensation product of ethylene oxide and a hydrophobic base formed by the condensation of propylene oxide with propylene glycol and having a molecular weight between about 2000 and about 7500.

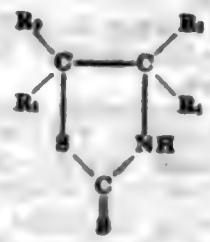
2,860,961
METHOD FOR MAKING ABRASIVE ARTICLES
John R. Gregor, Detroit, Mich., and Samuel S. Kistler, Salt Lake City, Utah, assignors to Abrasive and Metal Products Company, Detroit, Mich., a corporation of Michigan
Application April 5, 1955, Serial No. 499,443
12 Claims. (Cl. 51—298)



1. A method of making abrasive articles which comprises placing a quantity of unbonded abrasive grains in a mold in contact with an air permeable, liquid bond-impermeable barrier layer to thus form a grain layer, introducing a liquid bond mix containing a thermosetting binder resin to the exposed side of said grain layer so as to form a continuous bond layer thereover, applying a pressure differential across the said grain and said bond layers to thereby expel air from said grain layer through said barrier and to force said bond into the interstices of said grain layer, and thereafter hardening the said bond.

2,860,962
METHOD OF DEFOLIATING PLANTS
Henry Binstock, Cleveland Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application March 29, 1954
Serial No. 419,587
6 Claims. (Cl. 71—2.5)

1. A method of defoliating plants which comprises applying to the plants, in an amount sufficient to effect the desired defoliation, a compound having the formula



wherein R_1, R_2, R_3, and R_4 are selected from the group consisting of hydrogen alkyl, aryl, alkaryl and aralkyl radicals, wherein the alkyl radicals contain from 1 to 4 carbon atoms.

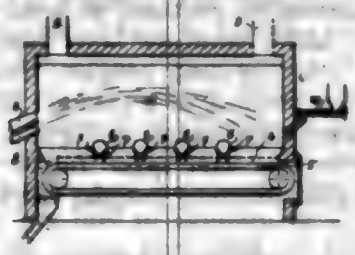
2,860,963
MONOHEMIACETAL
Warren C. Ellis, Columbus, Daniel C. Rowlands, Worthington, and Donald P. Uhl, Columbus, Ohio, assignors, by mesne assignments, to Air Reduction Company, Inc., New York, N. Y., a corporation of New York
No Drawing. Application September 14, 1955
Serial No. 534,379
7 Claims. (Cl. 71—2.7)

5. A plant regulant composition comprising 1-(2',5'-dimethyl-3'-hexyn-5'-ol-2'-oxy)-2,2,2-trichloroethanol as an active ingredient and a carrier which is substantially inert with respect to said ingredient, said active ingredient being present in an amount sufficient to effect a pre-emergence herbicidal action.

2,860,964
METHOD OF ROASTING SULPHUR ORES IN SUSPENSION

Ernest Lerol, Chatenay-Malabry, France, assignor to Societe Anonyme dite: Krebs & Cie, Neuilly-sur-Seine, France, a corporation of France

Application October 4, 1954, Serial No. 460,226
Claims priority, application France October 5, 1953
3 Claims. (Cl. 75—9)



1. A process for oxidizing sulphide ores, including the steps: injecting a stream consisting of a mixture of coarse and fine sulphide ore particles together with air upwardly into a combustion chamber and allowing said mixture to fall freely within said chamber; simultaneously injecting a stream of non-oxidizable temperature controlling gas into said combustion chamber in the same direction as, and in close proximity to, said first mentioned stream; receiving the partially oxidized particles upon a moving surface in the lower portion of said chamber and progressively removing said partially oxidized particles from said chamber; simultaneously injecting air streams into said partially oxidized material on said moving surface to further oxidize said particles, said last mentioned air streams passing upwardly through said combustion chamber to contact and oxidize particles falling downwardly therein.

2,860,965
PROCESS FOR PRODUCING PURE MANGANESE

Louis Ruelle, Grenoble, France, and Pierre Tardieu, Edea, Cameroons, assignors to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France

No Drawing. Application June 7, 1957
Serial No. 664,151
Claims priority, application France June 22, 1956
5 Claims. (Cl. 75—84)

2. The process of producing pure manganese from a carbon-containing manganese alloy, which comprises the steps: heating particles of said alloy in a vacuum to a temperature below the melting point of said alloy but sufficient to evaporate manganese therefrom, whereby a porous graphite layer is formed on each individual particle; condensing and collecting the manganese so evaporated; thereafter raising the particles to a higher temperature, maintaining the particles at said higher temperature whereby additional quantities of manganese are evaporated, and condensing and collecting such additional evaporated manganese.

2,860,966
METHOD OF PRODUCING GROUP IV-A METALS

Charles D. Atkinson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application January 31, 1955
Serial No. 485,287
6 Claims. (Cl. 75—84.5)

1. A process for preparing a metal from group IV-A of the periodic table selected from the group consisting of titanium, zirconium and hafnium which comprises reducing a halide of said metal selected from the group consisting of a chloride, bromide and iodide with a reducing metal selected from the group consisting of alkali and alkaline earth metals, effecting said reduction under an elevated temperature ranging from 750–1100° C. within a closed reaction vessel the internal surfaces of which vessel are coated with an adherent protective layer consisting essentially of iron oxide selected from the group consisting of FeO, Fe_2O_3, Fe_3O_4, and mixtures thereof, said layer constituting the only vessel contact with the reactants and reaction products during the reduction, and thereafter purifying and recovering the metal product.

2,860,967
PROCESSING OF SULFIDIC NICKEL-CONTAINING MATERIALS

Leo Schlecht and Georg Traguer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application January 28, 1954
Serial No. 406,897
Claims priority, application Germany February 3, 1953
6 Claims. (Cl. 75—103)

1. A process for working up a sulfidic raw material containing, in addition to iron, at least one non-iron metal of the group consisting of copper, nickel and cobalt which comprises first partially oxidising roasting the raw material to an adjusted sulfur content approximately sufficient for combining with the amount of the non-iron metal present, then subjecting the partially roasted material having said adjusted sulfur content to a treatment with a solution of ammonia in the presence of an oxidising agent to dissolve the non-iron metals, and separating the residue consisting mainly of a sulfur-free iron oxide.

2,860,968
WROUGHT HIGH TEMPERATURE ALLOY

Alfred L. Boegehold, Pontiac, Mich., Dean K. Hanink, Indianapolis, Ind., and Fred J. Webbere, Pontiac, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Application March 14, 1956
Serial No. 571,377
8 Claims. (Cl. 75—122)

1. An alloy capable of being hot worked and withstanding high and prolonged stress at elevated temperature consisting essentially as follows:

0.03–0.30% carbon
0.00–1.00% silicon
0.00–1.00% manganese
13.00–17.00% chromium
4.00–6.00% molybdenum
24.00–55.00% nickel
14.00–55.00% iron
1.50–5.00% aluminum
1.50–3.00% titanium
0.01–0.20% boron

2,860,969
LEAD-ACID ACCUMULATOR ALLOY

Stanley Walsh, Walkden, near Manchester, England, assignor to The Chloride Electrical Storage Company Limited, London, England, a British company

No Drawing. Application January 31, 1957
Serial No. 637,359
Claims priority, application Great Britain April 26, 1956
5 Claims. (Cl. 75—167)

2. A lead-based calcium alloy containing calcium from 0.03–0.10% and cerium from 0.01–0.10% and having an equi-axed grain structure and at least 30 grains across a ¾" diameter casting.

2,860,970
METAL ALLOY
Rudolf H. Thielemann, Palo Alto, Calif., assignor to Sierra Metals Corporation, a corporation of Delaware
No Drawing. Application October 11, 1957
Serial No. 689,476
10 Claims. (Cl. 75—174)

4. A metal alloy which comprises, by weight: 3 to 20 percent of chromium; 2 to 8 percent of aluminum; 3 to 10 percent of vanadium; up to 10 percent of tungsten; up to 5 percent of iron; and the balance, essentially a metal of the group consisting of tantalum, columbium, and mixtures thereof.

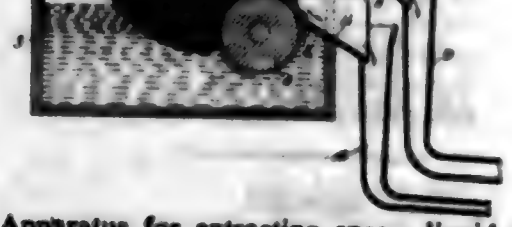
2,860,971
TITANIUM BASE ALLOYS
Harold Margolin, Mount Vernon, and William Frank Kirk, Bronx, N. Y., assignors to Kennecott Copper Corporation, New York, N. Y., a corporation of New York
No Drawing. Application October 16, 1956
Serial No. 616,120
7 Claims. (Cl. 75—175.5)

1. Titanium base alloys consisting essentially of from 0.1% to 4% of lead, from 3% to 7% of aluminum, from 0.5% to 2.8% of vanadium, from 0.5% to 2.5% of tin and the balance of alloying metal being titanium, said alloys having tensile strengths in excess of 136,000 p. s. i. coupled with good ductility, as represented by a reduction in area of at least 8.7%.

2,860,972
MOLYBDENUM-COBALT-NICKEL ALLOY
William M. Fraser, Cedar Grove, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application July 2, 1956
Serial No. 595,045
2 Claims. (Cl. 75—176)

1. A metallic alloy containing from 93.3% to 97.4% by weight of molybdenum, from 2.5% to 6% by weight of cobalt, and from 0.1% to 0.7% by weight of nickel.

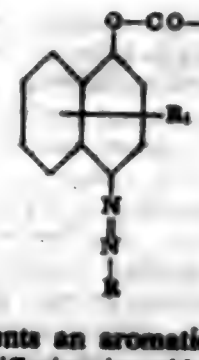
2,860,973
PULP STOCK THICKENER
Roger Wells, Plattsburg, N. Y., assignor to Diamond Gardner Corporation, a corporation of Delaware
Application December 31, 1956, Serial No. 631,625
12 Claims. (Cl. 92—20)



1. Apparatus for extracting excess liquid from dilute liquid suspensions of fibers, comprising a massive spongy roll composed of an absorbent resilient material mounted rotatably partially submerged in such a suspension, means for compressing successive portions of the periphery of the roll as they enter the suspension during rotation of the roll, which portions are allowed to re-expand beneath the surface of the suspension thereby extracting fibers from the liquid and depositing the fibers on the periphery of the roll, and take-off means mounted in partially compressive contact with said periphery for removing the deposited fibers from the roll after they have emerged from the suspension.

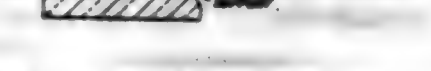
2,860,974
PHOTOGRAPHIC COLOR CORRECTION PROCESS
John Williams, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
No Drawing. Application August 15, 1955
Serial No. 528,516
8 Claims. (Cl. 96—9)

1. The method of producing a masking image in a multilayer photographic element, at least one of which layers is a silver halide emulsion layer containing at least one uncolored color-forming coupler which is reactive with the oxidation product of a primary aromatic amino silver halide developing agent to form a non-diffusing dye in said layer and said layer further containing a yellow colored color-forming coupler having the general formula



wherein R represents an aromatic group which renders the coupler non-diffusing in said layer, R_1 represents a strongly acidic alkali-solubilizing group and R_2 represents a member of the class consisting of cyanophenyl and nitrophenyl groups, which comprises exposing said element, hydrolyzing said coupler at the ester group to change its color to magenta, and developing the exposed element with said developing agent to split off the azo group of the hydrolyzed colored coupler and to form color images from said uncolored coupler and the hydrolyzed colored coupler in the exposed portions, thus forming a soluble dye from the hydrolyzed coupler which is removed from the emulsion layer leaving the uncoupled portion of said yellow-colored coupler in the emulsion layer as a magenta masking image.

2,860,975
PHOTOGRAPHIC COLOR CORRECTION PROCESS USING 2-AZO-1-NAPHTHOL DYES
Keith E. Whitmore and Edward T. Peach, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application September 28, 1956, Serial No. 612,681
7 Claims. (Cl. 96—9)



5. A method for forming a photographic color-correction image which comprises locally exposing a silver halide emulsion layer containing a mixture of a colorless coupler compound capable of reaction with the oxidation product of a primary aromatic amino silver halide developing agent to form a dye, and a 2-azo-1-naphthol dye the 3- and 4-positions of which are free of substituents, developing the exposed emulsion layer with said developer agent until there is obtained in the exposed region of the emulsion layer a composite dye image composed of the reaction products of said developing agent with said colorless coupler and said 2-azo-1-naphthol dye, the 2-azo-1-naphthol dye remaining substantially unchanged in the unexposed region of the emulsion layer as the result of color development.

the group consisting of a hydrogen atom, an alkyl group

2,860,983

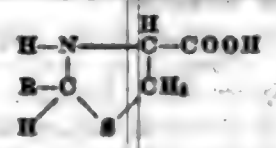
2,860,976

ANTIFOGGANTS FOR PHOTOGRAPHIC DEVELOPERS

Catherine M. Spath, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 3, 1956
Serial No. 602,867
11 Claims. (Cl. 96—22)

1. A photographic developer having a reduced tendency to fog photographic silver halide emulsions comprising an alkaline solution of (1) a silver halide developing agent selected from the group consisting of polyhydroxybenzenes, N-monoalkylaminophenols, and mixtures of said polyhydroxybenzenes and N-monoalkylaminophenols and at least 10 mg. per liter of solution of (2) a compound selected from the group consisting of (A) those represented by the following general formula:



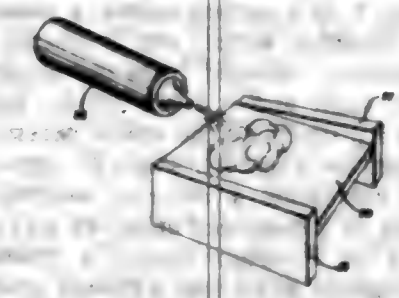
wherein R represents a member selected from the group consisting of a hydrogen atom, a lower alkyl group containing from 1 to 2 carbon atoms and a monocyclic aryl group of the benzene series, and (B) a water-soluble salt of said compound.

2,860,977

PHOTOGRAPHIC FOAM PROCESSING

Leonard W. Tregillus, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application August 26, 1953, Serial No. 376,733
3 Claims. (Cl. 96—61)



1. The method of forming a visible image in an exposed gelatino-silver halide emulsion layer, which comprises spreading on said exposed layer a foam consisting of a concentrated dispersion of gas bubbles in a liquid the volume of liquid being between 2% and 30% of the foam volume, said foam containing an aqueous solution of an anionic surface-active agent and at least hydroquinone as a developing agent, allowing said foam to remain in contact with said layer for about 5 seconds, removing the excess foam from said layer, spreading on said layer a stabilizing foam of thiourea and a surface-active agent which creates a stable physical foam for an appreciable period of time, allowing said stabilizing foam to remain in contact with said layer for about 10 seconds, and then removing the excess stabilizing foam from said layer.

2,860,978

PHOTOGRAPHIC WASHING ACCELERATORS

Richard W. Henn and John I. Crabtree, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application April 1, 1954
Serial No. 420,454
1 Claim. (Cl. 96—61)

In the method of exposing, developing, fixing, water washing and drying a gelatin-silver halide emulsion layer, the improvement residing in the step which consists in rinsing said emulsion layer intermediate the said fixing and water washing steps with a solution consisting of about 20.0 grams sodium sulfite, 5.0 grams sodium bisulfite and 0.5 gram tetrasodium salt of ethylene diamine tetraacetic acid per liter of solution, whereby the time of the duration of said water washing step is materially reduced.

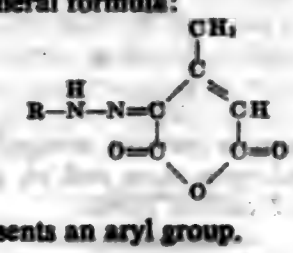
2,860,979

AZO DYES AS FILTERS IN COLOR PHOTOGRAPHY

James M. Straley, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application April 26, 1955, Serial No. 503,877
8 Claims. (Cl. 96—84)

1. A light-sensitive photographic element comprising light-sensitive silver halide and a light-absorbing, water-permeable colloid layer containing a dye represented by the following general formula:



wherein R represents an aryl group.

2,860,980

PLASTICIZATION OF GELATIN WITH DIALKOXY-POLYOXYALKYLENE GLYCOLS

Kirby M. Milton, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application July 1, 1955
Serial No. 519,639
7 Claims. (Cl. 96—94)

1. A plasticized gelatin composition comprising gelatin mixed with 5–50% of a plasticizing material at least 50% of which is a dialkoxypolyoxyalkylene glycol having the formula:

$$R_1—O—(R_2O)_n—R_1$$

where R_1 and R_1 are alkyl groups of 1–2 carbon atoms, R_2 is a saturated aliphatic hydrocarbon group from 1–3 carbon atoms and n is an integer within the range of 1–9.

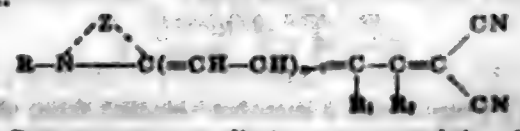
2,860,981

SUPERSENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Jean E. Jones, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application May 21, 1956, Serial No. 586,053
18 Claims. (Cl. 96—104)

1. A photographic silver halide emulsion sensitized with a supersensitizing combination of at least one dye selected from those represented by the following general formula:

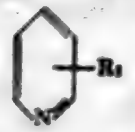


wherein R represents an alkyl group containing from 1 to 2 carbon atoms, R_1 represents a member selected from

from the suspension.

changed in the unexposed region of the emulsion layer as the result of color development.

the group consisting of a hydrogen atom, an alkyl group containing from 1 to 2 carbon atoms and groups which, together with R_2, represent the atoms necessary to complete a cycloalkane ring containing from 5 to 6 carbon atoms, R_2, when R_1 represents a member selected from the group consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms, represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 2 carbon atoms, an alkoxyl group containing from 1 to 2 carbon atoms, a monocyclic aryl group of the benzene series and a thienyl group, *n* represents a positive integer of from 1 to 2, and Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series, those of the naphthothiazole series, those of the benzoxazole series, those of the naphthoxazole series, those of the benzoselenazole series, those of the naphthoselenazole series, those of the thiazoline series, those of the benzimidazole series, and those of the 3,3-dialkylindolenine series, and at least one pyridine base selected from those represented by the following general formula:



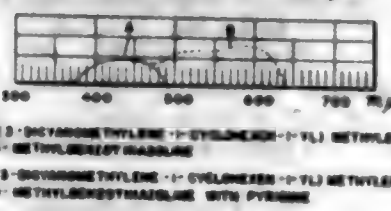
wherein R_3 represents a member selected from the group consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms.

2,860,982

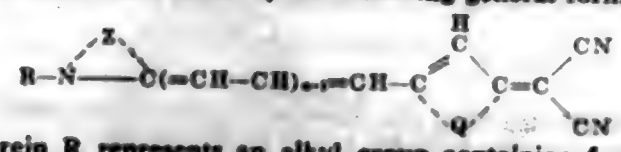
SUPERSENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Jean E. Jones, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

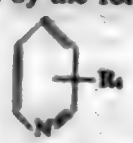
Application May 21, 1956, Serial No. 586,654
19 Claims. (Cl. 96—104)



1. A photographic silver halide emulsion sensitized with a supersensitizing combination of at least one dye selected from those represented by the following general formula:



wherein R represents an alkyl group containing from 1 to 4 carbon atoms, *n* represents a positive integer of from 1 to 2, Q represents the non-metallic atoms necessary to complete a cyclohexene ring, and Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series, those of the naphthothiazole series, those of the acenaphtho[1,2]thiazole series, those of the benzoxazole series, those of the naphthoxazole series, those of the benzoselenazole series, those of the naphthoselenazole series, those of the thiazoline series, those of the benzimidazole series, and those of the 3,3-dialkylindolenine series, and at least one pyridine base selected from those represented by the following general formula:



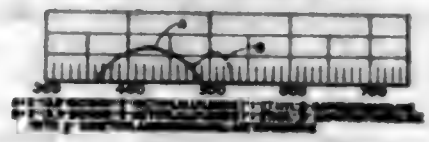
wherein R_4 represents a member selected from the group consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms.

2,860,983

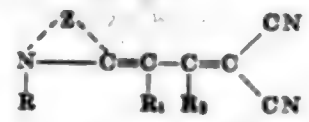
PHOTOGRAPHIC EMULSIONS CONTAINING POLYMETHINE DYES AND KETONE COMPOUNDS

Jean E. Jones, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

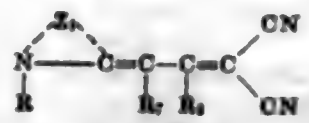
Application May 21, 1956, Serial No. 586,655
18 Claims. (Cl. 96—104)



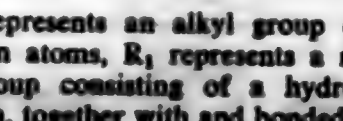
1. A photographic silver halide emulsion sensitized with a supersensitizing combination of at least one polymethine dye selected from those represented by the following two general formulas:



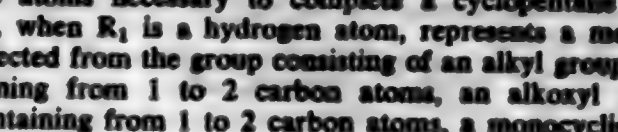
and



wherein R represents an alkyl group containing from 1 to 2 carbon atoms, R_1 represents a member selected from the group consisting of a hydrogen atom and radicals which, together with and bonded to R_6, represent the atoms necessary to complete a cyclopentane ring, R_2, when R_1 is a hydrogen atom, represents a member selected from the group consisting of an alkyl group containing from 1 to 2 carbon atoms, an alkoxyl group containing from 1 to 2 carbon atoms, a monocyclic aryl group of the benzene series, and a thienyl group, R_7 represents a member selected from the group consisting of a hydrogen atom and radicals which, together with and bonded to R_8, represent the atoms necessary to complete a cyclopentane ring, R_8, when R_7 represents a hydrogen atom, represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 7 carbon atoms, a monocyclic aryl group of the benzene series and a thienyl group, Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series and those of the naphthothiazole series, provided that when Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus of the benzothiazole series, R represents a methyl group, and Z_1 represents the nonmetallic atoms necessary to complete a heterocyclic nucleus of the benzoxazole series, and at least one ketone compound selected from those represented by the following two general formulas:



and



wherein D represents a member selected from the group consisting of a dialkylaminoaryl group wherein the alkyl groups contain from 1 to 2 carbon atoms and a pyrryl group, R_6 represents a member selected from the group consisting of an aryl group, a dialkylaminoarylvinyl group wherein the alkyl groups contain from 1 to 2 carbon atoms and a dialkylaminoaryl-1,3-butadienyl group wherein the alkyl groups contain from 1 to 2 carbon

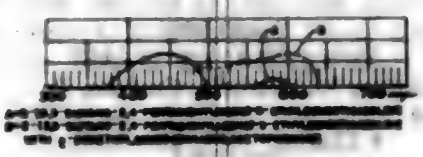
comprises adding to said liquid medium, in a precipitation, the [illegible]

atoms, R_3 and R_4 each represents an alkyl group containing from 1 to 2 carbon atoms, and *n* represents a positive integer of from 1 to 2.

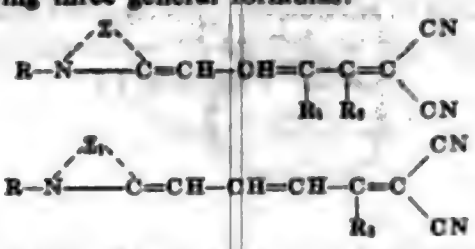
2,860,984
SUPERSENSITIZED PHOTOGRAPHIC EMULSIONS CONTAINING POLYMETHINE DYES AND KETONES

Jean E. Jones, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

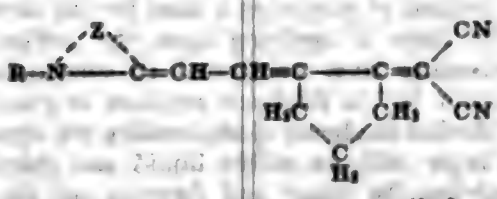
Application May 21, 1956, Serial No. 586,656
17 Claims. (Cl. 96—104)



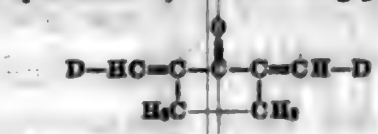
1. A photographic silver halide emulsion sensitized with a supersensitizing combination of at least one polymethine dye selected from those represented by the following three general formulas:



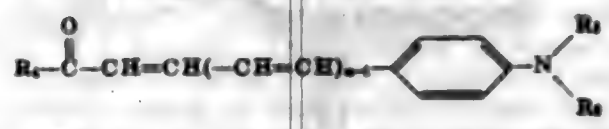
and



wherein R and R_1 each represents an alkyl group containing from 1 to 2 carbon atoms, R_2 represents an alkoxyl group containing from 1 to 2 carbon atoms, Z and Z_1 each represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series, those of the naphthothiazole series, and those of the benzoxazole series, and R_3 represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 2 carbon atoms, an alkoxyl group containing from 1 to 2 carbon atoms, a monocyclic aryl group, and a thienyl group, provided that when Z_1 represents the non-metallic atoms necessary to complete a heterocyclic nucleus of the benzothiazole series, R represents an ethyl group and R_3 represents a hydrogen atom, and at least one ketone compound selected from those represented by the following general formulas:



and



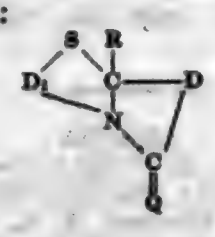
wherein D represents a member selected from the group consisting of a dialkylaminoaryl group wherein the alkyl groups contain from 1 to 2 carbon atoms and a pyrryl group, R_4 represents a member selected from the group consisting of an aryl group, a dialkylaminoarylvinyl group wherein the alkyl groups contain from 1 to 2 carbon atoms and a dialkylaminoaryl-1,3-butadienyl group wherein the alkyl groups contain from 1 to 2 carbon atoms, R_5 and R_6 each represents an alkyl group containing from 1 to 2 carbon atoms, and *n* represents a positive integer of from 1 to 2.

2,860,985
STABILIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS AND MEANS OF INCREASING CONTRAST

John R. Dann, Gene L. Oliver, and John W. Gates, Jr., Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application February 11, 1957
Serial No. 639,190
19 Claims. (Cl. 96—109)

1. A photographic silver halide emulsion containing a compound selected from those represented by the following general formula:



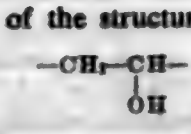
wherein R represents a member selected from the group consisting of a hydrogen atom and a methyl group, D represents a member selected from the group consisting of an ethylene group and an o-phenylene group, D_1 represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of a thiazolidine nucleus, a tetrahydrothiazine nucleus, and a benzothiazoline nucleus, and Q represents a member selected from the group consisting of an oxygen atom and an imino group.

2,860,986
PARTIALLY ACETALIZED POLYVINYL ALCOHOL CONTAINING ACTIVE HALOGEN

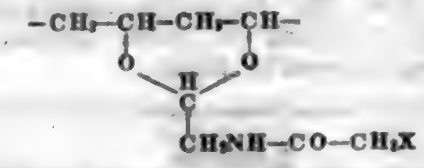
Donald A. Smith and Cornelius C. Unruh, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 31, 1956
Serial No. 607,258
6 Claims. (Cl. 96—114)

3. A photographic emulsion comprising a mixture of silver halide and a vinyl alcohol copolymer consisting essentially of from 85 to 96.5 mole percent of recurring vinyl alcohol units of the structure



and from 15 to 3.5 mole percent of recurring vinyl acetal units of the structure



wherein X represents a member selected from the group consisting of an atom of chlorine and an atom of bromine, the said emulsion being capable of being insolubilized by treatment with a nitrogen base compound selected from the group consisting of ammonia vapor and aqueous lysine.

2,860,987
PROCESS FOR PRECIPITATING TANNINS AND PROTEINACEOUS MATERIALS FROM LIQUID MEDIA

Jesse Werner, Hollywood, N. Y., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

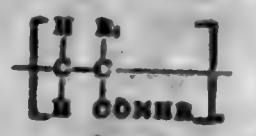
No Drawing. Application October 31, 1957
Serial No. 693,538
6 Claims. (Cl. 99—48)

1. The process of precipitating substances selected from the group consisting of natural tannins and protein-tannin complexes from liquid mediums containing the same which

taining from 1 to 2 carbon atoms.

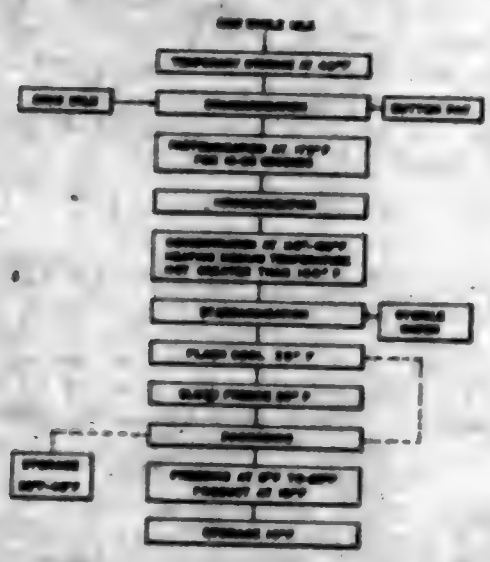
wherein the alkyl groups contain from 1 to 2 carbon

comprises adding to said liquid medium, in a precipitating amount, a polyacrylamide having the following general formula:



wherein R represents a member selected from the group consisting of hydrogen, methyl and ethyl groups, R_1 represents a member selected from the class consisting of hydrogen and methyl and *n* represents the extent of polymerization indicative of a molecular weight ranging from 100,000 to 2,500,000.

2,860,988
PROCESS OF CONCENTRATING MILK AND MILK PRODUCTS
James F. Keville, Jr., Syracuse, N. Y., assignor to Carrier Corporation, Syracuse, N. Y., a corporation of Delaware
Application February 16, 1954, Serial No. 410,666
7 Claims. (Cl. 99—55)



1. In a process for concentrating milk and milk products, the steps which consist in concentrating the milk in a vacuum within the range of 22.3 to 27.3 inches of mercury and at a temperature within the range of 110° to 150° Fahrenheit by repeated passage in heat exchange relation with a heating medium having a temperature not greater than about 180° Fahrenheit, cooling the concentrated product, packaging the cooled concentrated product, and placing the same in storage.

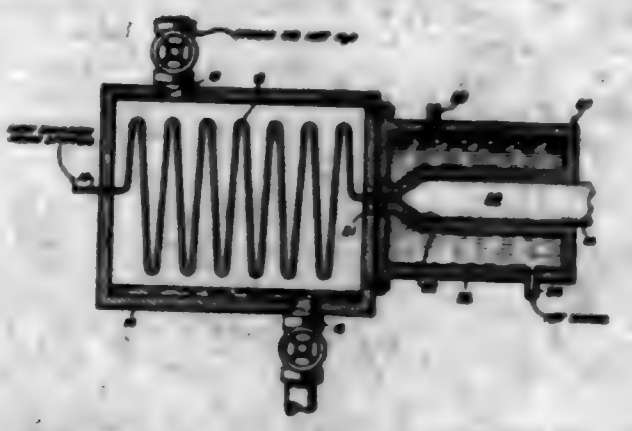
2,860,989
BEVERAGE INFUSION PACKAGE
John R. Geisinger, Gremloch, N. J.
Application February 12, 1957, Serial No. 639,688
2 Claims. (Cl. 99—77.1)

1. A beverage infusion package comprising a relatively flat envelope of flexible, substantially waterproof material open at its bottom edge and sealed along its other edges, the lower portions of the walls of the envelope being formed with outwardly directed vertical pleats to render same more flexible than the upper portions of the walls, the upper portion of one wall of said envelope being formed with an aperture, a porous bag containing beverage infusion material, said bag being receivable in said envelope, a flexible string element secured to said bag and extending slidably through said aperture, and a tag on said string element, said tag being too large to pass through said aperture, the lower portion of the envelope being foldable upwardly when the bag is received in the envelope, whereby to substantially seal said lower portion.

2,860,990
TREATING OF HAMS
James M. Guthrie, Crafton, Pa.
Application September 15, 1955, Serial No. 534,438
4 Claims. (Cl. 99—107)

1. The method of preparing a ham for the oven which includes the steps of applying upon the surface of the ham a seasoning layer comprised of substantially dry sugar of about 3/16" in thickness retained in place on the ham in a blanket of cheese cloth, wetting the applied and blanketed layer with an edible liquid and thereby partially dissolving the sugar and forming on the ham a sticky heat-liquefiable paste that is adapted slowly to exude through the cheese cloth to the surface of the ham.

2,860,991
METHOD FOR PREPARING MEAT PRODUCTS
George Christiansen, Waterloo, Iowa, and Robert H. Benner, Chicago, Ill., assignors to The Rath Packing Company, Waterloo, Iowa, a corporation of Iowa
Application February 7, 1955, Serial No. 486,333
6 Claims. (Cl. 99—189)



1. A method of preparing a shaped meat product from heat coagulable comminuted meat which comprises uniformly heating said meat to a selected coagulating temperature within the range of 130°–170° F., shaping the heated meat to desired form immediately upon attaining said selected coagulating temperature, and causing the shaped meat to coagulate within a time period within the range of 0.5 to .035 minute, while maintaining said selected coagulating temperature.

2,860,998
METAL TITANATE COMPOSITION

consisting of the following ingredients in the proportions

2,860,992

PROCESS OF MANUFACTURING LIVER SAUSAGE

Marvin M. Voegeli, Downers Grove, and Robert H. Harper, Park Forest, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application February 21, 1955
Serial No. 489,784
5 Claims. (Cl. 99—109)

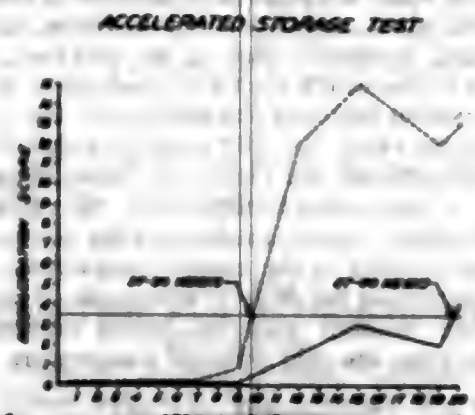
1. In the manufacture of a liver sausage having a high fat content and a stable emulsion, the steps comprising chopping the liver and the fat together to form an emulsion, said chopping being discontinued when the emulsion is at a temperature within the range of 88–122° F., stuffing the emulsion into the casings, and thereafter cooking the stuffed sausage, said cooking being commenced before the temperature of the emulsion cools below 88° F.

2,860,993

PROCESS OF STABILIZING THE COLOR OF COOKED MEAT

Robert H. Maher, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

Application June 15, 1953, Serial No. 361,742
10 Claims. (Cl. 99—187)



1. In the process of preparing a canned food product containing meat, the steps which comprise: cooking said meat sufficiently to insure the denaturization of the protein and pigments therein; adding to said cooked meat from about 0.054% to about 0.495% of a substance selected from the group consisting of ascorbic acid, reductone, levulinic acid, salts and analogues of ascorbic acid, and compounds containing ascorbic acid as a component thereof; and, thereafter, canning the product which includes said color-stabilized meat.

2,860,994

PREPARATION OF CANDIED FROZEN FOOD

Walter H. Outhout, Little Rock, Ark.

No Drawing. Application October 21, 1955
Serial No. 542,093
2 Claims. (Cl. 99—193)

1. The process of producing frozen candied foods to be held in a non-fluid tight container in frozen state which consists in adding to food a mixture of around 62½ parts by weight of disaccharides selected from the group consisting of granulated white sugar and brown sugar in dry and solid condition at temperatures below a heating temperature of around 400° F., to which have been added 12½ parts by weight of monosaccharides selected from a group consisting of crystalline dextrose and corn sugar, being in dry condition at freezing temperatures and at temperatures below the above stated temperature, further adding to said mixture about 2 parts by weight of a fruit juice concentrate, in heating the frozen food to a temperature of 400° F.–425° F., thus liquefying the monosaccharides which form a solvent for the disaccharides, the latter, being partly inverted by the fruit juice concentrate, forming a viscous syrup covering the food and forming a coating for the same thus producing a candied food.

2,860,995

MEAT PROCESSING COMPOUND

Lewis Salz, Evergreen Park, Ill., assignor to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Application April 15, 1958
Serial No. 728,558
10 Claims. (Cl. 99—222)

1. A composition useful in treating meat and meat products, comprising a substantially dry homogeneous mixture containing from 0.2% to 20% by weight of material selected from the group consisting of di-iso-ascorbic acid and its edible salts, and as substantially all of the remainder a diluting edible carrier composition therefor suitable as an additive in the treating process, said carrier composition being non-essential for the nitrite-curing of meat.

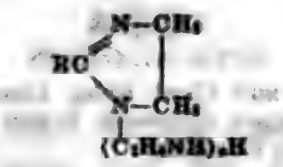
2,860,996

RUST PREVENTIVE COMPOSITION

Michael J. Furey, Berkeley Heights, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application March 5, 1956
Serial No. 569,253
6 Claims. (Cl. 106—14)

1. The method of improving the storage stability of cutback asphalt-base thin film rust preventive compositions which comprises blending with said compositions a minor but viscosity-stabilizing amount of a wax amine compound having the formula



wherein R is a monovalent saturated hydrocarbon radical having from 40 to 80 carbon atoms and wherein x is a number of from 1 to 2.

2,860,997

METHOD OF PRODUCING CELLULATED ARTICLES

Dominic D'Eustachio, Port Allegany, Pa., assignor to Pittsburgh Corning Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Original application March 21, 1952, Serial No. 277,895, now Patent No. 2,775,524, dated December 25, 1956. Divided and this application August 14, 1956, Serial No. 603,879
1 Claim. (Cl. 106—48)

A method of preparing cellular glass, which comprises mixing a slurry of finely divided carbon with an inert material selected from the group consisting of diatomaceous earth and silica and having a surface area greater than about 10 square meters per gram, drying the mixture, said mixture containing carbon in an amount from 5 to 50 parts by weight to 100 parts of said inert material, grinding glass cullet with an amount of said mixture to provide from 0.08 to 0.15 percent by weight of carbon based on the weight of said cullet, heating the ground mixture to a temperatupre sufficient to soften and cellulate the glass, and cooling the product.

posit of an oil-in-water stable mixing-type bituminous vinyl resin paint containing solvents and diluents which

2,860,998
METAL TITANATE COMPOSITION
Leon Merker, Bronx, N. Y., assignor to National Lead Company, New York, N. Y., a corporation of New Jersey
Application November 29, 1955, Serial No. 549,597
6 Claims. (Cl. 106—42)

1. Monocrystalline tetragonal titanate composition consisting essentially of barium titanate, from about 1% to about 10% by weight of a compound selected from the group consisting of an oxidic compound of strontium and an oxidic compound of calcium calculated as the metal oxide and from about 0.01% to about 0.1% of a compound selected from the group consisting of an oxidic compound of manganese, oxidic compound of iron, oxidic compound of cobalt and oxidic compound of nickel calculated as the metal oxide, said composition being formed synthetically by crystallizing into the form of a boule a fused mixture of finely divided barium titanate and said compounds, and characterized by a clear uniform appearance and high index of refraction.

2,860,999
SILICON CARBIDE REFRACTORIES
Herbert F. G. Ueltz, Worcester, and Neil N. Ault, Holden, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application December 16, 1954, Serial No. 475,846
8 Claims. (Cl. 106—44)

1. Silicon carbide refractory article which is the reaction product of a mixture of from 98 to 99.9 parts by weight of silicon carbide with from 2.0 to 0.1 parts by weight of silicate glass which before firing has a liquidus temperature of from 750° C. to 1250° C. and which has a composition within the composition range designated by the shaded area ABCD in Figure 1 and said silicate glass after firing having a liquidus temperature of from 1450° C. to 1700° C., all parts being by weight.

2,861,000
OPTICAL GLASS
Walter Geffcken and Gerd Rehs, Landshut, Germany, assignors to Jenaer Glaswerk Schott & Gen. Mainz, Rhineland-Pfalz, Germany
No Drawing. Application May 4, 1953
Serial No. 352,992
Claims priority, application Germany May 9, 1952
12 Claims. (Cl. 106—47)

1. A thorium oxide and beryllium oxide free optical glass with a high refractive index consisting of (*a*) 36–50 weight percent boron oxide; (*b*) 26–44 weight percent lanthanum oxide; (*c*) 5–19 weight percent calcium oxide; (*d*) 0–11 weight percent zirconium oxide; (*e*) 0–6 weight percent of a bivalent basic component other than calcium oxide; (*f*) 0–9 weight percent of a member selected from the group consisting of niobium oxide, tantalum oxide, and mixtures thereof; (*g*) 0–2 weight percent lithium oxide; (*h*) 0–4 weight percent of compatible glass constituents; the amounts of (*c*), (*e*), and (*g*) not exceeding a total of 19 weight percent, the sum of (*c*), (*e*), and 2(*g*) not exceeding the value of 33 weight percent minus one-half (*b*).

2,861,001
GLASS COMPOSITION
Guy E. Rindone, State College, Pa., assignor to Prismo Safety Corporation, Huntingdon, Pa., a corporation of Pennsylvania
No Drawing. Application August 27, 1956
Serial No. 606,214
11 Claims. (Cl. 106—53)

1. Transparent, weather-resistant small glass beads having a refractive index over 1.90 and a composition consisting of the following ingredients in the mol percents indicated:

SiO_2	Up to 15
TiO_2	15.7–20.7
BaO	7.3–12.3
PbO	11.9–26.9
$AsO_{1.5}$	Up to 15
$SbO_{1.5}$	20.1–40.1

wherein the mol percent of $AsO_{1.5}$ plus $SbO_{1.5}$ is between 2.5 and 15.

2,861,002
HOT MELT RESINOUS ADHESIVE COMPOSITION
Richard K. Britton, Sidney, N. Y., assignor to The Borden Company, New York, N. Y., a corporation of New Jersey
Application February 9, 1956, Serial No. 564,398
5 Claims. (Cl. 106—177)

1. A hot melt adhesive composition, of controlled delayed setting time on cooling from the elevated temperature of application to a surface, the adhesive consisting essentially of an anhydrous combination of a potentially adhesive thermoplastic resinous material, a plasticizer therefor that is a crystalline solid at normal temperatures and is soluble when hot in large proportion in the resinous material and when cold in lesser proportion, and an admixed setting promoter that is an inorganic mineral powder and is chemically inert and insoluble in the combination of resinous material and plasticizer, the proportion of the promoter being 100–200 parts by weight for 100 of the resinous material, the plasticizer being in proportion to dissolve in the resinous material at the elevated temperature of application and in excess of the amount soluble without supercooling in the cooled composition, and the promoter decreasing the delay in separation of the plasticizer from the resinous material during cooling of the composition from the said elevated temperature of application.

2,861,003
NAPHTHA SUSPENSION OF UNREFINED WAXY RESIDUE
Kenneth L. Waite, Milwaukee, Wis.
No Drawing. Application January 12, 1955
Serial No. 481,487
6 Claims. (Cl. 106—271)

1. An impregnating and coating composition for treating fibrous material and consisting essentially of one part by weight of waxy residue in the distillation of wax-containing petroleum and having a melting point of 130–190° F., and six parts by weight of a petroleum distillate of a group having a closed cup flash point of 10–118° F. and a drying time below 15 minutes, the distillate being a volatile vehicle and leaving the waxy material as a coating dry to touch.

2,861,004
CONSTRUCTION AND COATING MATERIALS
Glenn Sucetti, Grass Valley, Calif.
No Drawing. Application July 31, 1956
Serial No. 601,114
16 Claims. (Cl. 106—277)

1. A composition of matter consisting essentially of a moist intimate admixture of a major portion of dense concrete aggregate particles having an apparent density of above about fifty pounds per cubic foot and a minor portion of about 5% to about 20% by volume of the total aggregate of a low density concrete aggregate having an apparent density of less than about twenty pounds per cubic foot, at least said dense particles bearing a first coating-film of an aqueous solution of a salt selected from the group consisting of hygroscopic calcium salts and hygroscopic magnesium salts, and an overlying de-

thus liquefying the monosaccharides which form a soi- | cellulate the glass, and cooling the product.

posit of an oil-in-water stable mixing-type bituminous emulsion such as that passing ASTM D631–46 mixing test, said dense and said light weight aggregates being of a size range normally employed with hydraulic binders and water to form mortar, said composition being further characterized in that it is an essentially particulate aggregate which is sufficiently free-flowing to be poured from containers and readily mixed with water and a hydraulic cement binder to form a mortar which is readily poured, screeded and troweled without undue loss of volume or segregation of components before setting to form a rigid structure.

2,861,905

PHTHALOCYANINE PIGMENTS

Alfred Siegel, Summit, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 12, 1953
Serial No. 391,767
4 Claims. (Cl. 106—288)

1. A phthalocyanine pigment highly resistant to flocculation in an organic coating vehicle consisting essentially of a mixture of a major amount of a copper phthalocyanine pigment subject to said flocculation and a minor amount sufficient to impart flocculation resistance to said pigment of a substituted copper phthalocyanine in which the substituent is sulfonamide

$$(SO_2NX_2)$$

wherein X is a member of the group consisting of hydrogen, alkyl, and aryl radicals.

2,861,906

ADHESIVE TAPE AND METHOD OF MAKING THE SAME

Ferdinand Saldtt, Neuwied (Rhine), Germany, assignor to The Scholl Mfg. Co., Inc., Chicago, Ill., a corporation of New York

Application February 19, 1957, Serial No. 641,095
10 Claims. (Cl. 117—7)

2. The method of making porous adhesive tape, including the steps of applying a relatively hot adhesive mass to one face of a backing sheet, contemporaneously chilling the opposite face of the tape and deviating the surface of the tape to form numerous high spots therein, and doctoring the application of adhesive to leave the high spots substantially devoid of adhesive and provide apertures in the adhesive mass.

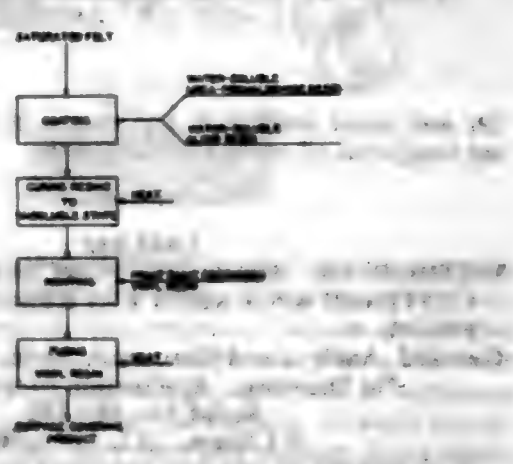
2,861,907

METHOD OF MAKING COATED FLOOR COVERINGS

James E. Hazeltine, Jr., Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Application January 18, 1954, Serial No. 404,783
2 Claims. (Cl. 117—15)

1. In the manufacture of block printed floor or wall covering prepared by printing onto a saturated backing a vinyl resin paint containing solvents and diluents which will deleteriously affect a urea-formaldehyde resin coating on said backing, and subjecting the printed floor covering to temperatures in excess of about 300° F., the improvement comprising coating said saturated felt with a composition, the binder of which contains relative proportions



of about 50 parts by weight water-soluble urea-formaldehyde resin and about 50 to about 75 parts by weight water-soluble alkyd resins, and treating said binder to convert said resins to a water-insoluble condition, whereby said solvents and diluents in said print paint will not deleteriously affect said composition.

2,861,908

PRODUCTION OF LIGHT-SENSITIVE MATERIAL FOR DIAZOTYPES

Walter G. Hellmann, Deerfield, Ill., assignor to Frederick Post Company, Chicago, Ill., a corporation of Illinois

Application December 14, 1953, Serial No. 398,231
12 Claims. (Cl. 117—34)

1. The method which comprises forming on a transfer surface a penetrating fluid film containing essentially a fluid vehicle and normally solid content dispersed in said vehicle including essentially light-sensitive diazo compound capable of decomposition by actinic light and capable of union with a coupling agent to form a dye, the transfer surface being wettable by and non-absorptive of said fluid, transferring the contents of said film to a body having a receiving surface by bringing the film on the transfer surface into contact with the receiving surface and then separating the said two surfaces while maintaining the contacting portions of said two surfaces stationary relative to each other during said contact, the material of the body providing said receiving surface being absorptive of said fluid whereby to remove the film from said transfer surface and to deposit said light-sensitive compound within the body and in the vicinity of the receiving surface.

2,861,909

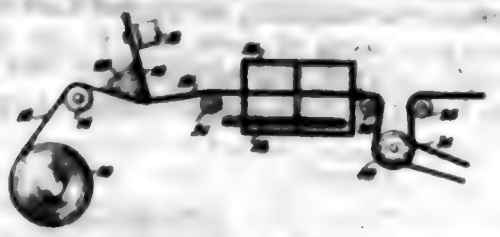
PROCESS OF DECORATING A SHEET

Gustave Rubner, White Plains, N. Y.; Rebecca Rubner and Chemical Corn Exchange Bank, executors of said Gustave Rubner, deceased

Application February 19, 1954, Serial No. 411,420
1 Claim. (Cl. 117—41)

The process of decorating a sheet having a penetrable face which comprises applying an aqueous dispersion of plastic, containing water as the sole gas-forming agent, to the said face so that the plastic penetrates into the face portion of the sheet and becomes anchored therein and

subjecting the thus treated sheet to a temperature substantially above the boiling point of water, so as to cause

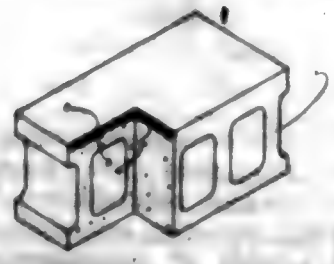


dry and rapid generation and escape of steam and resultant roughness of surface of the plastic.

2,861,010
METHOD OF BONDING PORCELAIN TO GOLD CASTINGS AND ARTICLES RESULTING THEREFROM
Gerald J. Axelrod and Herman Axelrod, Philadelphia, Pa.
No Drawing. Application May 15, 1956
Serial No. 584,882
9 Claims. (Cl. 117—70)

2. A process of bonding porcelain to a casting of gold or gold alloys comprising applying successive layers of porcelain containing powdered gold or gold alloys upon the casting and separately baking each layer on the preceding one before the next layer is applied, the metal content of the porcelain progressively decreasing from the innermost to the outermost layer, the metal content of the innermost layer being approximately 0.1% by volume.

2,861,011
COATED BUILDING BLOCKS AND METHOD OF PRODUCING SAME
Henry J. Adbock, Lakewood, and Lloyd J. Jordan, Eastlake, Ohio, assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
Application December 11, 1953, Serial No. 397,666
3 Claims. (Cl. 117—72)



1. The method of making a structural unit which comprises substantially filling the pores of a formed porous physically solid building block by working a viscous admixture of a polyglycidyl polyether of a polyhydric phenol and from about 1% to about 10% by weight of an organic polyamine based on the weight of said polyether having an inert filler material dispersed therein into the surface to yield a substantially smooth surface and then superimposing a second coating composition thereover, which composition also comprises a resinous admixture of a polyglycidyl polyether of a polyhydric phenol and from about 1% to about 10% by weight of an organic polyamine based on the weight of said polyether having dispersed therein a hiding pigment and allowing the plural coatings to harden.

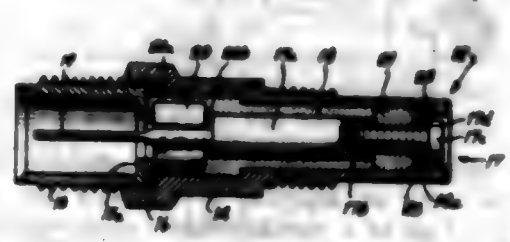
2,861,012
FIREPROOF TAR COMPOSITION
Bernard Lowell, Oakland, Calif.
No Drawing. Application June 27, 1955
Serial No. 518,366
7 Claims. (Cl. 117—137)

1. A fire resistant and water repellent composition of matter comprising a major amount of tar, sodium silicate, carbamide phosphoric acid, and ammonium sulfate.

2,861,013
ELECTRODES FOR ARC WELDING OF SPECIAL STEEL
Jean Lucien Sarrazin, Simone Alice Fracchia, and Marcel Monoyrou, Neuilly-sur-Seine, France
Application July 9, 1953, Serial No. 367,892
Claims priority, application France July 11, 1952
5 Claims. (Cl. 117—207)

1. An arc welding electrode for welding stainless steels of the chromium-nickel-molybdenum type and adapted upon deposition by means of arc welding to produce an alloy steel containing from 19 to 23% chromium, from 8 to 11% nickel and from 1.7 to 3.5% molybdenum, said electrode comprising a core of mild carbon steel wire having a coating thereon the outside diameter of which is from 1.7 to 2.05 times the diameter of the wire core, said coating consisting essentially of: a dry powdered mixture of nickel and chromium and molybdenum compounds, 3,300 to 7,700 grams; metallic silicate, 300 to 700 grams; up to 100 grams of an organic glue adapted to facilitate extrusion; and 1,800 grams of an electrode coating composition containing deoxidizing and slag forming ingredients.

2,861,014
PROCESS OF MAKING A SEMI-CONDUCTIVE CERAMIC BODY
Shay J. Shaheen, Ilion, and Edward L. Mooney, Norwich, N. Y., assignors to General Laboratory Associates, Inc., Norwich, N. Y., a corporation of New York
Application August 14, 1956, Serial No. 603,971
7 Claims. (Cl. 117—219)



1. The process of making a ceramic element usable in a spark-producing device, which comprises the steps of applying to a predetermined surface portion of a body of non-conducting refractory oxide material a first coating, the essential active ingredients of which are cuprous oxide and calcium oxide, firing said first coating on said body in a non-reducing atmosphere for about one-half hour to an hour at a temperature in the range of about 2300° F. to about 2600° F.; thereafter applying onto at least a part of said predetermined surface portion a second coating, the essential active ingredients of which are cuprous oxide and an alkaline earth metal chromate, and

firing said second coating onto said body in an oxidizing atmosphere for about one-half hour to an hour at a temperature in the range of about 1900° F. to about 2300° F., so as to produce on said selected portion of said element an impregnated area having an electrical resistance of about 5,000–30,000 ohms between points 0.04 inch apart.

2,861,015

METHOD OF DESCALING TITANIUM

Robert A. Simon, Seattle, Wash., assignor to North American Aviation, Inc.

No Drawing. Application May 27, 1955
Serial No. 511,746
6 Claims. (Cl. 134—3)

2. The method of descaling a titanium workpiece comprising the steps of immersing such a workpiece in a scale conditioning bath comprised of an aqueous solution of from about 40 to about 55 weight percent sodium hydroxide, from about 1 to about 1½ weight percent of a compound selected from the class consisting of sodium chromate, sodium dichromate, potassium chromate, potassium dichromate, and chromium trioxide, and the balance being water, maintained at substantially 270° F., and subsequently immersing said workpiece in an acid bath for removing the scale therefrom.

2,861,016

ELECTROLYTE LIQUID FOR STORAGE BATTERIES

James F. Macholl, Milwaukee, Wis., assignor to Gould-National Batteries, Inc., St. Paul, Minn.

No Drawing. Application June 4, 1956
Serial No. 588,950
1 Claim. (Cl. 136—154)

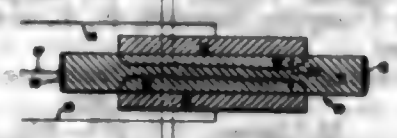
In a lead acid storage battery having a positive grid and a negative plate separated by means of a cellulose fibre type separator exposed to a common liquid electrolyte, said electrolyte comprising essentially a water solution of sulphuric acid without substantial impurities, having also silver sulphate dissolved therein, said solution having a specific gravity of at least 1.20.

2,861,017

METHOD OF PREPARING SEMI-CONDUCTOR DEVICES

Van W. Bearinger, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application December 29, 1954, Serial No. 478,394
2 Claims. (Cl. 148—1.5)



1. The method of preparing a relatively high-power electrical current translating device including an n-type body of germanium having a single crystal orientation and having an alloyed p-n junction adjacent a surface thereof, which method comprises making a pre-alloy of germanium and indium containing up to 12% of germanium, and alloying and diffusing a quantity of said prepared alloy to a controlled depth below one surface of said body to form said alloyed p-n junction in said body, said alloying and diffusing operation being conducted in a treating zone passing through a heating cycle wherein an initial elevated temperature of about 925° F. is established, this temperature being reduced rapidly to about 850° F. and thence being cooled slowly to room temperature at a rate of about 80° F. per minute.

2,861,018

FABRICATION OF SEMICONDUCTIVE DEVICES

Calvin S. Fuller, Chatham, and Morris Tanenbaum, Plainfield, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application June 28, 1955, Serial No. 516,674
7 Claims. (Cl. 148—1.5)

1. The process of fabricating a silicon semiconductive device which comprises the steps of heating a semiconductive silicon body in the presence of indium antimonide for the diffusion of indium and antimony into the body for forming therein a surface layer which is antimony rich and n-type and a layer intermediate between the interior portion of the body and said surface layer which is indium rich and p-type, and alloying aluminum over a selected portion of the surface of the body for forming an aluminum-rich region which overdopes a corresponding portion of the antimony-rich surface layer and penetrates to said indium-rich intermediate layer.

2,861,019

CHROMATE-COATING MAGNESIUM AND ITS ALLOYS

Herbert E. De Long, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application June 7, 1956
Serial No. 589,853
12 Claims. (Cl. 148—6.21)

1. In a method of producing a coating on an article composed of at least 85 percent magnesium, the step which consists of subjecting the article, for a period of between 1 and 5 minutes, to the action of an aqueous solution at a pH between 0.9 and 1.8 containing as effective constituents based upon the weight of the solution between about 0.25 and 3.0 percent of chromium trioxide and a sulfate selected from the class consisting of ammonium, hydrogen and alkali metal and alkaline earth metal sulfates in an amount sufficient to provide the chemical equivalent SO_4 group corresponding to the sulfate fraction contained in 0.1 to 3.0 percent ammonium sulfate.

2,861,020

METHOD OF ANNEALING ALUMINUM

Iver W. Mills, Glenolden, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application July 29, 1953
Serial No. 371,163
11 Claims. (Cl. 148—13.1)

1. In the annealing of aluminum having a surface film of hydrocarbon lubricant thereon, the method of preventing staining of the aluminum surface which comprises subjecting the aluminum to an annealing temperature in the presence of a surface film of lubricant comprising hydrocarbon oil having incorporated therein 0.5–10% of colloidal solid adsorbent.

2,861,231

TRANSPARENT PROTECTIVE SHIELD

Albert G. H. Dietz, Winchester, and Fred E. Mooney, Harvard, Mass., assignors to the United States of America as represented by the Secretary of the Army

Application December 13, 1956, Serial No. 628,289
11 Claims. (Cl. 154—52.5)

1. A projectile- and projectile-fragment-penetration-resistant non-splintering transparent shield, comprising a

thick, rigid, shatterable transparent outer layer of polymethyl methacrylate, said outer layer having a thickness from about .25 to about .5 in., a tough, flexible, non-shatterable resilient transparent thin intermediate layer of polyvinyl butyral bonded to the inner surface of said outer layer, said intermediate layer having a thickness of at least about .05 in. and being thinner than said outer layer, and a thin high-tensile-strength elongatable transparent inner layer bonded to the inner surface of said

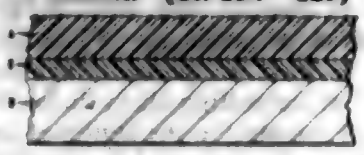
intermediate layer, said inner layer being of a thickness of at least about .001 in. and having lesser thickness and a harder surface than said polyvinyl butyral intermediate layer, and said inner layer being a member of the group consisting of polyamide, polyester and regenerated cellulose; whereby when said outer layer is shattered by a projectile or projectile-fragment, the splinters of said outer layer are embedded in said intermediate layer backed by said inner layer, and said projectile or projectile-fragment is stopped before penetrating said inner layer.

2,861,022

THERMOPLASTIC FILM-METAL-LAMINATED STRUCTURE AND PROCESS

Christian Bent Landauger, Fairfax, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 19, 1956, Serial No. 560,175
6 Claims. (Cl. 154—129)



1. A process for laminating crystalline, oriented, heat-set polyethylene terephthalate film to metal which comprises, (1) heating the surface of the metal to which a crystalline, oriented, heat-set polyethylene terephthalate film is to be bonded to a temperature above the melting point of said film; (2) bringing the surface of said film into contact with the heated metal surface maintained at said temperature whereby to effect superficial melting of said film surface; and (3) immediately thereafter quenching the film and metal in contact therewith to rapidly cool the superficially melted surface of said film to the solid amorphous state whereby to produce a tightly bonded laminated structure of said film and metal.

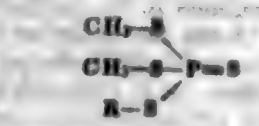
2,861,023

FUNGICIDAL COMPOSITIONS AND METHODS OF DESTROYING FUNGI EMPLOYING TRIALKYL TETRA-THIOPHOSPHATES

Carleton E. Scott, Pomona, and John W. Yale, Jr., Yorba Linda, Calif., assignors, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

No Drawing. Application September 6, 1955
Serial No. 532,803
9 Claims. (Cl. 167—22)

1. A fungicidal composition comprising as the essential active ingredient a dimethyl alkyl tetrathiophosphate of the general formula:



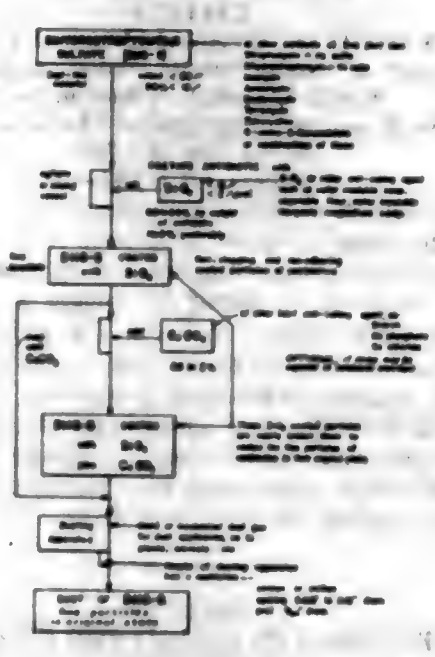
wherein R represents an alkyl group containing from 1 to 6 carbon atoms, and an inert fungicidal adjuvant as a carrier therefor.

2,861,024

ANTIBIOTIC DUSTS

Leonard H. Silver, Cranford, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

Application November 12, 1957, Serial No. 695,763
14 Claims. (Cl. 167—65)



1. An antibiotic dust useful for combating respiratory diseases in animals, said dust being in the form of a free-flowing mass of fine beadlets comprising antibiotic having a particle size below about 20 microns coated with 0.5 to 20% by weight of an essentially inert and water insoluble coating agent having a particle size less than 15 microns, said coating agent being an anti-caking agent selected from the group consisting of silicon dioxide, water insoluble soaps, vegetable flours, and water insoluble inorganic salts of magnesium, and the said coating agent forming a loose bond with said antibiotic such that the bond is mechanically rupturable in ejecting said beadlets from a dust gun to thereby disperse a dust in which the antibiotic particles approximate their original size.

2,861,025

PROCESS FOR OBTAINING VITAMIN B_{12} AND VITAMIN B_{12}-LIKE SUBSTANCES AND THE PRODUCTS THEREOF

Abraham L. Baron, Bloomfield, N. J., and Emil J. Maxion, Queens Village, N. Y., assignors to Chase Chemical Company, Newark, N. J., a corporation of New Jersey

No Drawing. Application December 20, 1954
Serial No. 476,584
26 Claims. (Cl. 167—81)

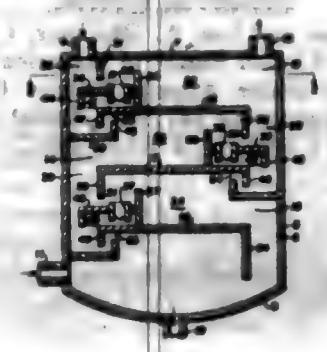
23. A process for separating cobalamins from an aqueous liquid containing the same which comprises adding to such liquid, at a pH of about 4.0 to 10.0, a compound selected from the group consisting of hydroxynaphthoic, methylene-bis-hydroxybenzoic and methylene-bis-hydroxynaphthoic acids and nuclearly substituted lower alkyl, phenyl, halo, and nitro hydroxybenzoic, hydroxynaphthoic, methylene-bis-hydroxybenzoic and methylene-bis-hydroxynaphthoic acids, acidifying said liquid to a pH of about 1.0 to 4.0 by addition of a mineral acid thereto to precipitate from said liquid an addition product of said cobalamins with said compound, removing the excess of said compound from the precipitate by extraction with a solvent in which said cobalamins and said addition product are insoluble, and then extracting the cobalamins from said precipitate by dissolving said precipitate with aqueous caustic soda and

extracting the cobalamins from the resulting solution by treatment with a water immiscible organic solvent for said cobalamins.

2,861,826
VITAMIN B_{12} PREPARATIONS
Edward G. Martin, Whitestone, N. Y., assignor to Chas. Pfizer & Co., Inc., New York, N. Y., a corporation of Delaware
No Drawing. Application June 20, 1955
Serial No. 516,803
4 Claims. (Cl. 167—81)

4. A process for the preparation of a solid vitamin B_{12} product which comprises mixing a partially purified aqueous concentrate of vitamin B_{12} with approximately an equal volume of acetone and adding said mixture to an agitated suspension of dicalcium phosphate in approximately 10 volumes of acetone, separating the solid vitamin B_{12} bearing product and drying said product.

2,861,827
LIQUID-LIQUID EXTRACTION TOWER
Michael H. Farmer, Roselle Park, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application February 16, 1956, Serial No. 565,822
3 Claims. (Cl. 196—14.52)

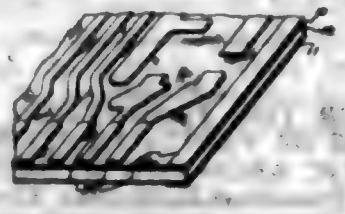


1. An improved apparatus for contacting two incompletely miscible liquids, comprising an upright vessel having conduits for introduction and withdrawal of the liquids; a plurality of contacting stages disposed one above the other, each stage compriaing an upper imperforate horizontal plate extending across the major portion of the cross section of the vessel and having downwardly extending vertical lip members on diametrically opposite sides, one of said lip members being adapted to form an underflow weir, a smaller imperforate plate disposed below said first named plate attached at one end to the wall of said vessel and extending substantially horizontally inwardly to a point beyond said underflow weir member, an upwardly extending vertical lip attached to the other end of said smaller plate forming a tortuous path with said underflow weir member, a vertically disposed separator plate, the lower edge of which is attached to the upper side of said upper horizontal imperforate plate and extending to a point above the lower surface of the lip member opposite said last named underflow weir member, a horizontal plate attached on one side to said separator plate and extending towards the adjacent wall of said vessel to a point closer to said wall than said weir member and terminating in a downwardly extending baffle, a conduit weir member extending through said last named plate, and a downcomer formed by the second lip member of said upper imperforate horizontal plate with the walls of said vessel, said downcomer extending to a point beyond the upper edge of the vertical separator plate of the next lower stage, said last named separator plate being on the diametrically opposite side of said vessel from the separator plate of said first stage.

2,861,828
PRODUCTION OF COKE
Adolf Jenkner, Wanne-Eickel, Germany
No Drawing. Application April 8, 1955
Serial No. 500,263
Claims priority, application Germany April 9, 1954
3 Claims. (Cl. 202—37)

1. In a process of producing coke from a bituminous caking coal so as to reduce the quantity of small and large particles and which does not yield metallurgical coke without pre-treatment with an oxidizing agent, the improvement which comprises separating from the coal the particles having a grain size below about 0.3 mm. and above about 6 mm., treating the caking coal to be coked with an oxidizing medium, at increased temperature of the coal before coking and in a continuous flow, and then treating the coal to a temperature above about 70° C.

2,861,829
METHODS OF MAKING PRINTED WIRING CIRCUITS
Lewis A. Bain, Jr., Hinsdale, Ill., and Robert A. Gessner, Rochester, N. Y., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application December 14, 1955, Serial No. 553,128
1 Claim. (Cl. 204—15)

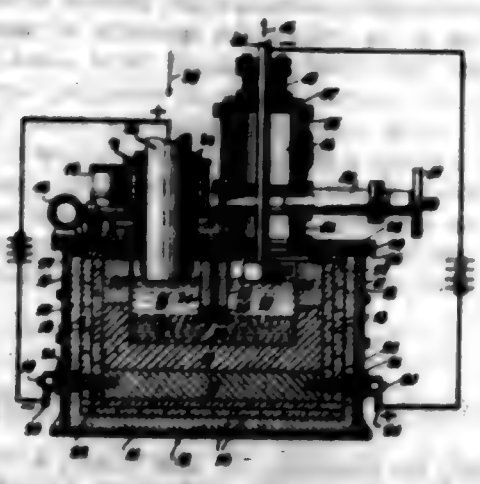


The method of making a printed wiring board having gold-plated terminal portions, comprising bonding metal foil onto one side of a phenol-fiber board with an adhesive, depositing a resist on the foil in a pattern exposing the terminal portions to be gold-plated, immersing the board in a gold-plating solution caustic to the adhesive, electroplating a layer of gold onto the exposed terminal portions, removing the board from the solution, removing the resist to expose the metal foil and the gold-plated terminal portions, depositing resist onto the metal foil to cover the gold-plated terminal portions and other portions of the foil defining a predetermined circuit pattern, etching away the metal foil not covered by the resist to leave said predetermined circuit pattern with its gold-plated terminal portions, and removing the resist from the gold-plated terminal portions and the predetermined circuit pattern.

2,861,830
ELECTROLYTIC PRODUCTION OF MULTIVALENT METALS FROM REFRACTORY OXIDES
Harvey L. Slatin, New York, N. Y., assignor to Timax Corporation, Wilmington, Del., a corporation of Delaware
Application May 15, 1957, Serial No. 659,379
32 Claims. (Cl. 204—64)

1. A process for the electrolytic production of a pure and ductile multivalent metal of the group consisting of titanium, zirconium, hafnium, thorium and uranium, comprising passing an electrolyzing current through at least one compartment of an electrolytic cell between a liquid alloy electrode as cathode and a solid anode immersed in a molten electrolyte containing at least one oxide of said multivalent metal in a fused solvent having cations more electropositive than those of said multivalent metal with respect to oxygen and halogens, said liquid alloy electrode containing said multivalent metal and a solvent of at least one of the group of metals less electropositive than said multivalent metal with respect to halogens, thereby discharging oxygen at said anode and depositing

said multivalent metal in said liquid alloy cathode, simultaneously passing an electrolyzing current through another compartment of said electrolytic cell between said common liquid alloy electrode as anode and a solid cathode immersed in a fused electrolyte containing at least one halide of said multivalent metal as a solute in a solvent



halide having metallic cations more electropositive than those of said multivalent metal with respect to halogen, thereby selectively dissolving said multivalent metal in said electrolyte from said liquid alloy anode and depositing said pure and ductile multivalent metal on said solid cathode.

2,861,031

PROCESS FOR THE PRODUCTION OF HYDROPEROXIDES OF PARTIALLY HYDROGENATED POLYCYCLIC AROMATIC HYDROCARBONS

Rudolf Heise, Duesseldorf-Holthausen, Germany, assignor to Dehydag, Deutsche Hydrierwerke G. m. b. H., Duesseldorf, Germany, a corporation of Germany

No Drawing. Application February 1, 1955
Serial No. 485,596
Claims priority, application Germany February 4, 1954
3 Claims. (Cl. 204—162)

1. The method of producing hydroperoxides of partially hydrogenated naphthalene derivatives, which comprises passing an oxygen-containing gas through a partially hydrogenated naphthalene at a temperature between 20 and 120° C. in the presence of a light-sensitizable organic dye selected from the group consisting of chlorophyll, phthalocyanins, fluorescein, dinaphthylenedioxide, phenylbenzimidazole and phenyldimethylacridine, while exposing the reaction mixture to light.

2,861,032

PREPARATION OF 1,1-DIFLUORO-1-CHLOROETHANE

Otto Scherer and Johann Queck, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruening, Frankfurt, Germany, a corporation of Germany

No Drawing. Application February 17, 1956
Serial No. 566,090
3 Claims. (Cl. 204—163)

2. A process for the manufacture of 1,1-difluoro-1-chloroethane which comprises reacting 1,1-difluoroethane in the liquid phase with chlorine in the presence of light at a temperature not higher than 10° C.

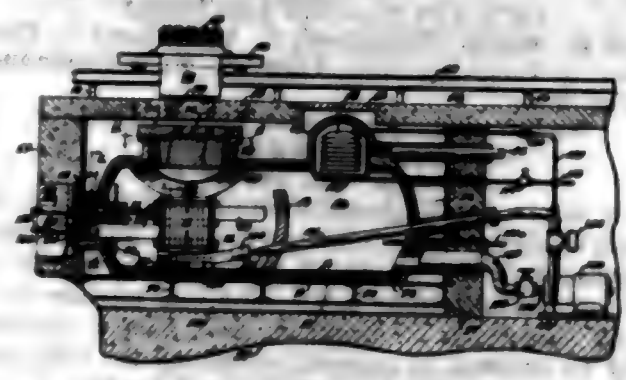
2,861,033

HORIZONTAL BOILING REACTOR SYSTEM

Michael Trumbow, Hinsdale, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application April 26, 1956, Serial No. 580,965
4 Claims. (Cl. 204—193.2)

1. A neutronic reactor system, comprising a horizontal pressure vessel, containing a weir dividing the pressure vessel into two approximately equal compartments, a thermal neutronic reactor core having vertical coolant passages and capable of being moderated by liquid water in said first compartment disposed so that the weir is capable of maintaining a body of water about said core which will be



equivalent to an infinite reflector on all sides of said reactor, a second compartment containing means for removing live steam from said compartment, means for conveying water from said second compartment to said first compartment, said means being responsive to the pressure in said pressure vessel.

2,861,034

NEUTRONIC REACTOR SHIELD AND SPACER CONSTRUCTION

Eugene P. Wigner and Leo A. Ohlinger, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application September 18, 1946, Serial No. 617,123
1 Claim. (Cl. 204—193.2)

A neutronic reactor comprising a graphite moderator provided with a plurality of channels therethrough, a shield disposed about the moderator, the channels extending through the shield, a plurality of abutting bodies of uranium disposed within the channels in the graphite moderator except in those portions of the channels in the moderator that are adjacent that part of the shield through which the channels extend, a plurality of spacer elements disposed within said outer portions of the channels in the graphite moderator, each spacing element comprising a solid rod member and a pair of ribs winding about said member in opposite directions, shielding elements constructed of material having high neutron and radiation absorption cross sections disposed within the channels traversing the shields within the reactor, means inside each channel for spacing the shielding elements therein from the inside of the channel, and means to flow fluid coolant through the channels.

2,861,035

CONTROL ROD

Walter H. Zinn, Dunedin, Fla., and Herbert V. Ross, Palos Park, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

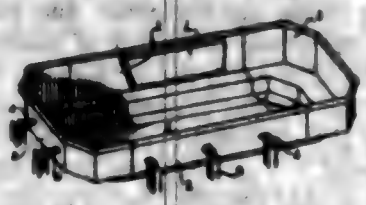
Application January 18, 1957, Serial No. 635,566
4 Claims. (Cl. 204—193.2)

1. A control member for a neutronic reactor comprising a plurality of triangular tubes joined side-to-side in a parallel relationship to form an element having a void space provided therein and two parallel surfaces, each tube having a side in the plane of one surface and an edge in the plane of the other surface, a neutron-absorbing slug hermetically sealed within each tube in fixed relationship

thereto, said slugs being of substantially less volume than the internal volume of the tubes, a hollow retainer hermetically sealed within each tube in end-to-end relationship with the slugs to generally fix the positions thereof

and to provide void spaces within the tubes, a triangular plug joined to the interior of each tube at each end to seal the slugs and the retainers within the tubes, and an end piece joined to the ends of the tubes to provide rigidity for the control member.

2,861,836
VAT FOR ELECTRO-METALLURGY
Jean-Charles Simon-Suisse, Montbonnot, France, assignor, by mesne assignments, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Lyon, France, a French company
Application March 15, 1955, Serial No. 494,516
Claims priority, application France March 29, 1954
6 Claims. (Cl. 204—243)



1. Apparatus for electro-metallurgy comprising a metallic casing having a carbonaceous lining and comprising five separate elements, namely, a flat bottom, and four sides slidably engaging said bottom, support means comprising means underlying and sustaining said flat bottom, adjustable elastic means mounted on said support means and operatively engaging said sides for permitting movement of said sides relative to said bottom,

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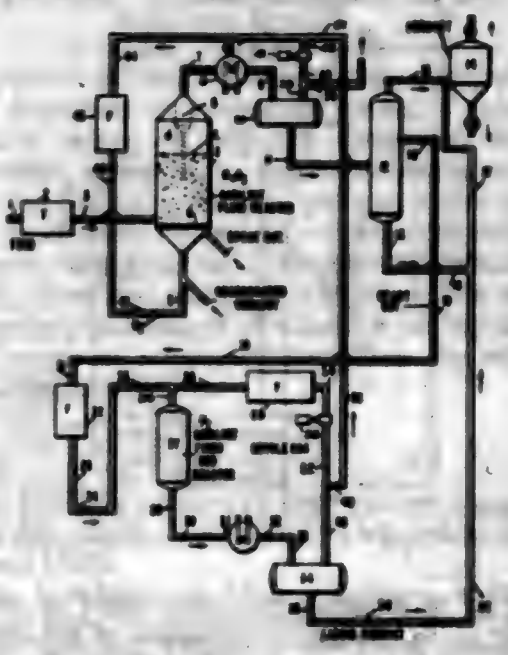
2,861,837
HYDROFORMING IN TWO STAGES
Charles E. Hemminger, Westfield, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application July 29, 1953, Serial No. 370,951
5 Claims. (Cl. 208—65)

1. The method of hydroforming a naphtha containing sulfur which comprises contacting said naphtha with a fluidized bed of a desulfurizing catalyst selected from the class consisting of molybdenum oxide carried on activated alumina and cobalt molybdate, in the presence of added hydrogen, at elevated temperatures and pressures for a sufficient period of time to convert the sulfur contained in the said naphtha to volatile sulfur compounds and to accomplish 50–75% of the hydroforming operation, withdrawing the treated naphtha from contact with the fluidized bed of molybdenum oxide catalyst, cooling and condensing the product, recovering a fraction boiling substantially within the range above about 250°–350° F., contacting this fraction, in the presence of added hydrogen, under hydroforming conditions of temperature, pressure and contact time with a platinum



group metal catalyst to complete the hydroforming process, recovering from the latter step the product, mixing said product with the material boiling below 250° F. and above 350° F. recovered from the first step to obtain a naphtha which is substantially sulfur-free and of improved octane number.

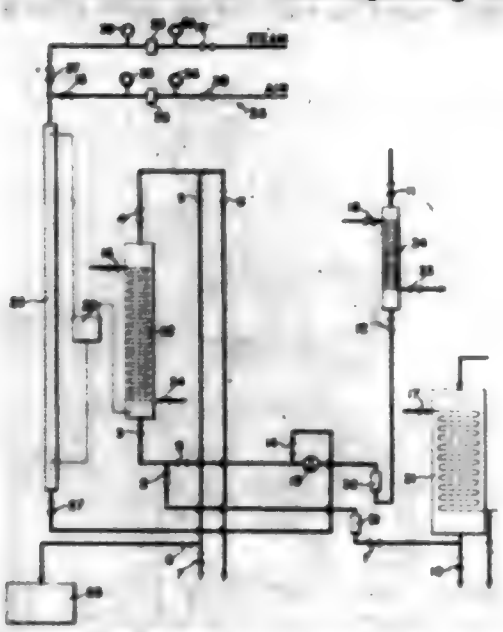
2,861,838
DEWATERING CELLULOSE ESTER COMPOSITION
Henry W. Steinmann, Madison, and Michael Dunay, Fanwood, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware
No Drawing. Application March 3, 1955
Serial No. 492,945
6 Claims. (Cl. 210—23)

1. In a process wherein a solution of an organic acid ester of cellulose in a water immiscible solvent comprising methylene chloride is subjected to a two-phase extraction with an aqueous material and wherein there is recovered from said extraction an extracted solution free from impurities but containing a small percentage of water, the improvement which comprises dewatering said solution by bringing it into contact with a semi-permeable membrane through which water alone can pass and removing from the other surface of said membrane the water that has passed therethrough.

2,861,839
CHEMICAL PROCESS
William Charles Moser, Chesterfield County, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application March 9, 1955, Serial No. 493,227
3 Claims. (Cl. 210—32)

1. In a process for removing organic contaminants from alkali liquor wherein the alkali liquor containing alkali and organic contaminants is passed through a bed of activated carbon until the carbon has adsorbed a substantial amount of the organic contaminants, an improved method for reactivating the carbon which comprises passing water through the bed to remove alkali liquor adhering to the carbon; drying the carbon containing the organic contaminants; contacting the bed with a steam-air mixture to initiate combustion of the organic contaminants; regulating the proportion of air in said steam-air mixture to maintain the temperature of the bed below

250° C.; increasing the percentage of air as combustion of the organic contaminants progresses to maintain the temperature between 200° C. and 250° C.; and contacting the bed with heated air while regulating the admission of air to maintain the temperature of the bed below 250° C. to complete combustion of the organic contaminants and to restore substantially the adsorptive capacity of the carbon.



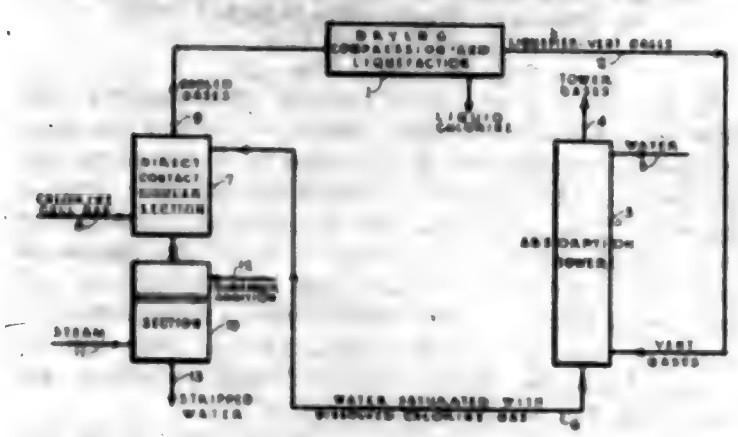
2,861,840

REMOVAL OF CHLORINE FROM CHLORINE-WATER SOLUTIONS

Donald A. Buchanan, Queenston, Ontario, Canada, and Robert H. Miller, Tonawanda, and Joseph E. Thornberg, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

Application February 28, 1955, Serial No. 491,131

15 Claims. (Cl. 210—63)



1. In a method for removal of residual chlorine from chlorine-water wherein said chlorine-water is passed through a desorption system, the improvement which comprises: adding an oxidizable sulfur compound to said chlorine-water being maintained at a temperature between about 60 and 100 degrees centigrade and separating the gaseous chlorine and the dechlorinated water so produced.

2,861,841

POLYMERIZATION INHIBITOR

Herbert H. Nelson, Dickinson, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application May 4, 1954

Serial No. 427,669

2 Claims. (Cl. 252—1)

1. A composition of matter consisting essentially of diacetylene dissolved in butyrolactone, and containing pyridine in an amount from about 0.01% to about 5% by weight of the total composition.

2,861,842

EMULSION FLUID FOR WELLS

Thomas E. Watkins, Arlington, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N. Y., a corporation of New York

No Drawing. Application August 15, 1955

Serial No. 528,540

13 Claims. (Cl. 252—8.5)

1. A fluid for the treatment of a well comprising a water-in-oil emulsion containing as an emulsifying agent tall oil which has been subjected to the action of oxygen for such time and at such temperatures that its viscosity measured in centipoises at 200° F. has increased to between 125 and 250 percent of the original value.

2. A fluid for the treatment of a well comprising a water-in-oil emulsion containing as an emulsifying agent tall oil which has been subjected to the action of oxygen for such time and at such temperatures that its viscosity measured in centipoises at 200° F. has increased to between 125 and 250 percent of the original value and containing a quaternary amine.

2,861,843

COMPLEX GREASE CONTAINING INORGANIC SALT THICKENER

Arnold J. Morway, Clark-Rahway, and John J. Kolfenbach, North Plainfield, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application October 6, 1954

Serial No. 460,762

10 Claims. (Cl. 252—21)

1. A lubricating grease composition comprising a major proportion of a lubricating oil and about 5 to 35% by weight, based on the total composition, of a complex of an alkaline earth metal soap of a high molecular weight monocarboxylic acid having from about 12 to 30 carbon atoms per molecule, an alkaline earth metal salt of a low molecular weight monocarboxylic acid having about 1 to 6 carbon atoms per molecule, and an inorganic salt selected from the group consisting of alkaline earth metal nitrates and alkaline earth metal silicates, the molar ratio of low molecular weight carboxylic acid radicals to high molecular weight carboxylic acid radicals in said complex being about 7:1 to 25:1 and the proportion of said inorganic salt in said complex being in the range of about 10 to 50% by weight, said complex being prepared at a temperature of about 450 to 600° F.

2,861,844

POLYPHOSPHATE COMPOSITION CONTAINING TARNISH INHIBITOR

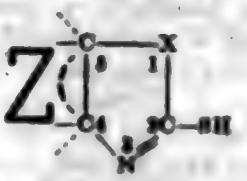
Edgar E. Ruff and Robert E. Dubenbire, Cambridge, Mass., assignors to Lever Brothers Company, New York, N. Y., a corporation of Maine

No Drawing. Application July 8, 1950

Serial No. 172,776

16 Claims. (Cl. 252—137)

1. A composition comprising a water-soluble polyphosphate which in aqueous solution tarnishes copper and copper and nickel alloys and a tarnish inhibitor in an amount to lessen the tarnishing action of the polyphosphate and having the general formula



where X is selected from the group consisting of oxygen and sulfur and Z is a radical taken in sufficient number to satisfy the free valences of the 4- and 5-ring carbon

and (*b*) a mixture consisting of at least 80% by weight carbamide compound, 2 moles of fatty acid amide per

atoms and is selected from the group consisting of hydrogen, oxo oxygen, alkyl, aryl and saturated and unsaturated mono and polynuclear alicyclic and heterocyclic rings condensed therewith.

2,861,045

CATALYTIC METAL-MODIFIED RESIN

Arthur W. Langer, Jr., Nixon, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application November 15, 1954
Serial No. 469,007
4 Claims. (Cl. 252—430)

4. A hydration catalyst which comprises a solid sulfonated cross-linked polymer of a styrene compound containing about 12–16% sulfur in the form of sulfonate groups, 25–75% of the hydrogen ion of said sulfonate groups having been replaced by an ion of a metal selected from the group consisting of group I and group VIII heavy metals of the periodic table, said metal ion being subsequently converted to its elemental state.

2,861,046

PROCESS OF FOAMING A MIXTURE OF A THERMOPLASTIC RESIN AND A BINDING AGENT

Fritz Stastny, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Rhineland-Pfalz, Germany

No Drawing. Application February 6, 1957
Serial No. 638,439
Claims priority, application Germany February 24, 1956
5 Claims. (Cl. 260—2.5)

1. An improved process for the production of a lightweight expanded material which comprises: mixing (A) 10 to 90 parts by weight of expandable individual particles of a thermoplastic resin selected from the group consisting of polystyrene and polymethacrylic acid methyl ester, said resin containing a blowing agent capable of expanding said resin particles when softened, with (B) 90 to 10 parts by weight of a binding agent selected from the group consisting of bitumen and paraffin waxes having a melting point below the softening point of said resin particles; heating the resultant mixture to melt said binding agent, said resin being insoluble in said molten binding agent, whereby said expandable resin particles are uniformly coated with said binding agent; further heating the resultant mixture to soften and expand said individual coated resin particles; and placing said expanded particles in adhering contact with each other.

2,861,047

LOW TEMPERATURE PREPARATION OF ALKYD RESINS FROM LONG CHAIN FATTY ACIDS

John S. Hochlin, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Application June 20, 1955
Serial No. 516,004
6 Claims. (Cl. 260—22)

1. The method of making an alkyd resin comprising reacting at a temperature in the range of about 150°–250° C. a long chain fatty acid obtained from an oil selected from the group consisting of drying oils, semi-drying oils, nondrying oils, and mixtures thereof with pentaerythritol in the ratio of about 1.3 to 2.2 equivalents of fatty acid to about 4 equivalents of pentaerythritol to form fatty acid-pentaerythritol diester, dissolving in said diester at a temperature in the range of about 220°–260° C. about 0.5–1.5 equivalents of isophthalic acid, and reacting with the resulting product about 0.3–2.5 equivalents of said long chain fatty acid.

2,861,048

THIXOTROPIC COATING COMPOSITIONS

Howard J. Wright, David R. McGuire, and Paul F. Weisfall, Kansas City, Mo., assignors to Cook Paint & Varnish Company, Kansas City, Mo., a corporation of Delaware

No Drawing. Application October 18, 1955
Serial No. 541,586
5 Claims. (Cl. 260—32)

1. The process for making a thixotropic product which comprises dispersing a polyamide having a molecular weight not in excess of 1500 and comprising the heat reaction product of polymeric polyene fat acids, an alkylene polyamine having at least two primary amino groups, and from 20 to 60% by weight, of the total weight of all ingredients of a long chain monomer fatty acid having at least six carbon atoms, in a paint vehicle selected from the group consisting of alkyd resins, drying oils and resin acid esters at a temperature below the softening point of said polyamide.

2,861,049

SOLUTION OF POLYETHYLENE TEREPHTHALATE IN O-NITROBENZALDEHYDE AND PROCESS OF PREPARATION

Otto Fuchs, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application February 19, 1954
Serial No. 411,575
Claims priority, application Germany February 27, 1953
2 Claims. (Cl. 260—32.4)

1. A composition of matter comprising a solution of polyethylene terephthalate in ortho-nitrobenzaldehyde.

2,861,050

METHOD OF PREPARING INTERPOLYMERS OF A VINYL ESTER, A CONJUGATED DIENE HYDROCARBON, AND AN ETHYLENICALLY UNSATURATED MONOMER, AND PRODUCT THEREOF

Roger M. Christenson, Milwaukee, Wis., assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation

No Drawing. Application September 15, 1953
Serial No. 380,358
5 Claims. (Cl. 260—33.6)

1. In a method of forming a heat curable interpolymer which is soluble in xylene and is non-rubbery, said method comprising heating a mixture of (A) about 20 percent to 50 percent by weight of a vinyl ester of a fatty acid containing at least 8 carbon atoms, (B) about 40 percent to 10 percent by weight of a conjugate diene, (C) about 20 percent to 40 percent by weight of at least one compound having at least one terminal ethylenic group which is not in conjugate relationship to any aliphatic ethylenic group and (D) about 0.1 to 10 percent by weight of an organic peroxide which is a catalyst of interpolymerization of the mixture whereby to effect solution of components (A), (B) and (C) in each other and continuing to heat the solution until said interpolymer is formed.

2,861,051

CROSS-LINKED GRAFT COPOLYMERS OF ACRYLONITRILE AND POLYVINYL ALCOHOLS AND METHOD OF PREPARING SAME

John R. Caldwell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application May 29, 1956
Serial No. 587,963
10 Claims. (Cl. 260—45.5)

1. A resinous graft copolymer of (1) from 24.9 to 53.9% by weight of polymerizable monomeric material selected from the group consisting of (a) acrylonitrile

by weight of the total composition.

and sulfur and Z is a radical taken in sufficient number to satisfy the free valences of the 4- and 5-ring carbon

and (*b*) a mixture consisting of at least 80% by weight of acrylonitrile and the remainder of a monomer selected from the group consisting of isopropenyl acetate and acrylamide, (2) from 74.6 to 44.9% by weight of a preformed polymer selected from the group consisting of, a hydrolyzed polyvinyl acetate wherein from 70 to 100% of the vinyl acetate units have been converted to vinyl alcohol units, and a copolymer consisting of 70% by weight of vinyl alcohol units and the remainder of isopropenyl acetate units, and (3) from 0.5 to 1.2% by weight of a cross-linking agent selected from the group consisting of divinylbenzene, diallyl phthalate, triallyl cyanurate, allyl acrylate and ethylene glycol dimethacrylate, and wherein the said polymerizable monomeric material and the said cross-linking agent have been combined by addition polymerization with the said preformed polymer to give the said graft copolymer.

2,861,052

VINYL CHLORIDE RESIN STABILIZED WITH POLYHYDRIC ALCOHOL AND FRIEDEL-CRAFTS CATALYST

Stanley B. Elliott, Walton Hills, Ohio, assignor to Ferro Chemical Corporation, Bedford, Ohio, a corporation of Ohio

No Drawing. Application January 4, 1954
Serial No. 402,140
8 Claims. (Cl. 260—45.75)

2. A composition of matter comprising a vinyl chloride resin and from 0.5% to 10% per 100 parts of said resin of a stabilizer, said stabilizer comprising a primary aliphatic polyhydric alcohol having at least three hydroxyl groups of which at least two hydroxyl groups are free and a boiling point not less than 250° F. and from .05 to 100 parts per 100 parts of said alcohol of a material selected from the group consisting of the halides of Al, Sb, Zn Sn, Ti, Zr, Be, B, Cd and Bi.

2,861,053

POLYOLEFIN COMPOSITIONS CONTAINING CERTAIN 2-HYDROXY-4-ALKOXY BENZOPHENONES

Gerald R. Lappin and John W. Tumblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application November 7, 1957
Serial No. 694,986
12 Claims. (Cl. 260—45.95)

1. A polyolefin plastic composition comprising a polyolefin selected from the group consisting of polyethylene and polypropylene, and, as an agent for inhibiting deterioration of the plastic by ultraviolet light, a 2-hydroxy-4-alkoxybenzophenone in which the alkoxy group contains from 12 to 14 carbon atoms.

2,861,054

WATER REPELLENTS TECHNIQUES

John B. Rust, Verona, and William B. Canfield, Montclair, N. J., assignors, by direct and mesne assignments, of one-half to Montclair Research Corporation, Montclair, N. J., a corporation of New Jersey, and one-half to Ellis-Foster Company, a corporation of New Jersey

No Drawing. Application June 3, 1953
Serial No. 359,427
18 Claims. (Cl. 260—78)

1. The method of making water dispersible water repellents which consists essentially in heating a carbamido compound selected from the group consisting of urea, thiourea, guanidine, dicyandiamine, and melamine, a fatty acid amide of at least nine carbon atoms having replaceable hydrogen on the nitrogen, and a water soluble amino lower alkyl sulfonic acid, in the presence of formaldehyde, to form a water dispersible water repellent resulting from the reaction of the stated components in the molar ratios of 1–3 moles of said carbamido compound, 2 moles of fatty acid amide per mole of carbamido compound, 1 to 3 moles of aminoalkyl sulfonic acid per mole of carbamido compound and formaldehyde to methylolate the carbamido compound.

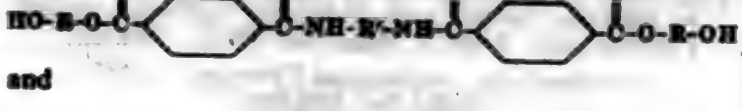
2,861,055

COPOLYESTERS OF A GLYCOL AND AN ALKYLENE DIAMINE DICARBOXYLATE CONTAINING ISOPHTHALATE MODIFIER AND THEIR PREPARATION

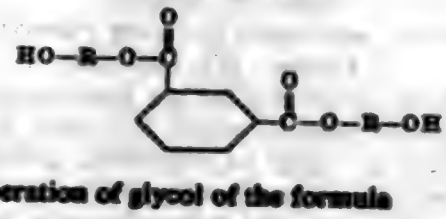
Jack L. R. Williams and Thomas M. Laakso, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application April 26, 1955
Serial No. 504,104
14 Claims. (Cl. 260—75)

1. A highly polymeric copolyester having a melting point of at least 200° C., an inherent viscosity of at least 0.8 and being obtained by heating at a temperature of 100–300° C. a mixture of bifunctional reactants consisting functionally of alkylene glycol, N,N'-bis(p-carboxybenzoyl)alkylene diamine, and isophthalic acid, each of said alkylene groups containing 2–10 carbon atoms, said copolyester resulting solely from the condensation polymerization of the glycol diesters of the formulas



and



with the liberation of glycol of the formula

HO—R—OH

wherein R and R' are alkylene groups of 2–10 carbon atoms said alkylene glycol amounting to at least two molar proportions for each molar proportion of the combined amount of said diamine and said isophthalic acid, said isophthalic acid amounting to 5–60% of the combined amount of said diamine and said isophthalic acid.

2,861,056

RESINOUS CARBOXY ESTER-LACTONES AND PROCESS FOR PREPARING THEM

Louis M. Minsk, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application November 12, 1953
Serial No. 391,736
12 Claims. (Cl. 260—78.3)

10. The method which comprises heating to at least 60° C., in the presence of sulfuric acid as a catalyst, 1 molar proportion of an interpolymer of vinyl acetate and maleic anhydride with at least 2 molar proportions of glycolic acid and thereby forming a flexible water-insoluble alkali-soluble carboxy ester-lactone resin.

2,861,057

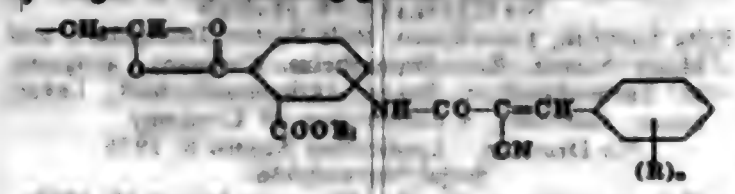
3- AND 4-(α-CYANOCINNAMIDO) PHTHALATES OF HYDROXYL-CONTAINING POLYMERS

Stewart H. Merrill and Donald A. Smith, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application December 17, 1956
Serial No. 628,514
12 Claims. (Cl. 260—78.4)

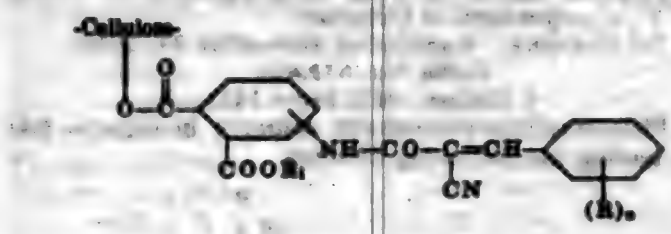
1. A resinous polymer selected from the group con-

sisting of (1) a vinyl polymer consisting of at least 30% by weight of the recurring general structural unit:

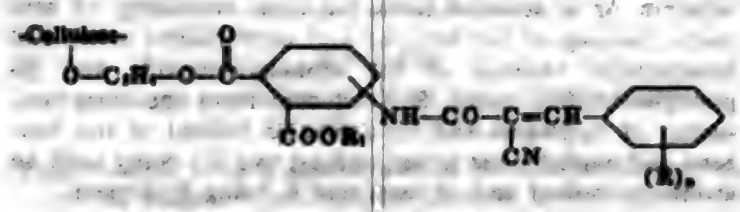


wherein n represents an integer of from 1 to 2 and R represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, an alkyl group of 1 to 4 carbon atoms, an alkoxy group of 1 to 4 carbon atoms, an acetamido group, a $-COOR_1$ group, an $-SO_2R_1$ group and an

and wherein in each instance R_1 represents a member selected from the group consisting of a hydrogen atom and an alkali metal atom and R_2 represents an alkyl group of 1 to 4 carbon atoms, the remainder of the polymer molecule to make a total of 100% being composed of residual recurring structural units selected from the group consisting of a vinyl alcohol unit, a vinyl ester of a saturated monobasic fatty acid of 2 to 4 carbon atoms unit, and vinyl alcohol and said vinyl ester units in linear combination, (2) a cellulose ester consisting of at least 30% by weight of the recurring general structural unit:



wherein *n*, R and R_1 are as above defined, the remainder of the cellulose ester molecule to make a total of 100% being cellulose acetate units, and (3) a cellulose ether consisting of at least 30% by weight of the recurring general structural unit:



wherein *n*, R and R_1 are as above defined, the remainder of the cellulose ether molecule to make a total of 100% being hydroxyethylcellulose units.

2,861,858

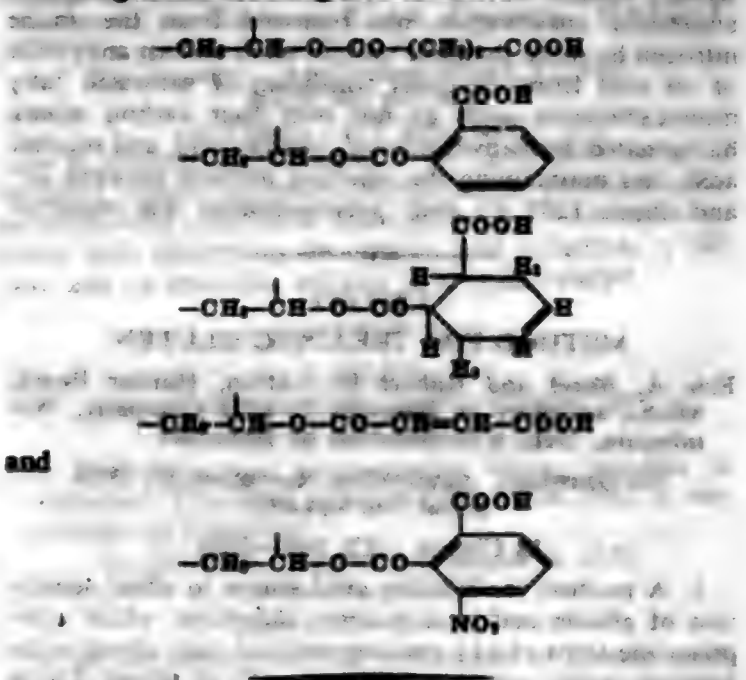
LIGHT-SENSITIVE POLYMERS FOR MAKING PRINTING PLATES

Cornelius C. Unruh, Gerhard W. Ledeboer, and Albert C. Smith, Jr., Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

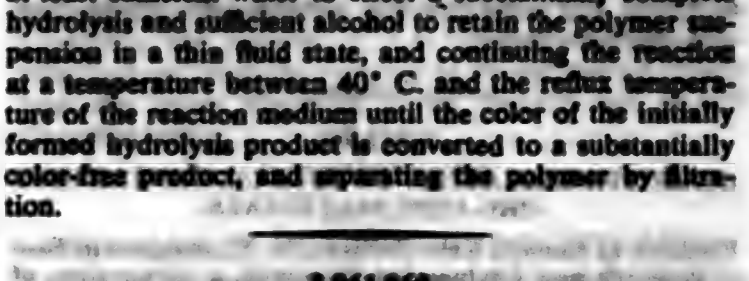
No Drawing. Application July 29, 1955
Serial No. 525,367
3 Claims. (Cl. 260—78.5)

1. A light-sensitive film-forming polymer containing from about 30 to 60 mol percent of recurring units having the general structure

wherein R represents a univalent aromatic monocyclic radical of the benzene series whose free valence belongs to the aromatic nucleus, and from about 70 to 40 mol percent of recurring units selected from the class consisting of those having the structures



and



2,861,859

HYDROLYSIS OF ACRYLONITRILE-CONTAINING POLYMERS

David T. Mowry, Kirkwood, Mo., and Eugene L. Ringwald, Decatur, Ala., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 23, 1953
Serial No. 393,930
8 Claims. (Cl. 260—85.5)

7. The method of hydrolyzing a polymer of at least 90 percent by weight acrylonitrile and up to 10 percent of another monomer copolymerizable with acrylonitrile, which comprises heating the said polymer with from 60 to 120 percent of the stoichiometric equivalent of an alkali metal hydroxide (based on the nitrile) while the polymer is in a pulverulent state dispersed in a liquid medium of which 5 to 50 percent by weight is water and 50 to 95 percent is an alcohol of the formula

$$HO—C_nH_{2n}—(OC_mH_{2m})_x—H$$

wherein *n* is an integer from one (1) to four (4) inclusive, *m* is an integer from one (1) to two (2) inclusive, and *x* is an integer from zero (0) to three (3) inclusive, the proportions of said liquid medium being such as to provide at least sufficient water to effect a substantially complete hydrolysis and sufficient alcohol to retain the polymer suspension in a thin fluid state, and continuing the reaction at a temperature between 40° C. and the reflux temperature of the reaction medium until the color of the initially formed hydrolysis product is converted to a substantially color-free product, and separating the polymer by filtration.

2,861,860

INITIATOR SYSTEMS

William E. Goode, Beverly, N. J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application September 10, 1954
Serial No. 455,349
4 Claims. (Cl. 260—89.5)

1. A process of forming polymers which comprises mixing with an ester of the formula

where R is an alkyl group and R^a is a member of the class consisting of hydrogen and the methyl group, a

components in the molar ratios of 1-3 moles of said

12 Claims. (Cl. 260—78.4)

1. A resinous polymer selected from the group con-

catalyst system consisting essentially of an oxide of a tertiary amine having at least one substituent having benzenoid unsaturation not removed from the amine nitrogen by more than one carbon atom and an anhydride of an acid from the class consisting of saturated fatty monocarboxylic acids of not over four carbon atoms, halogenated derivatives thereof, benzoic acid, and succinic acid, and maintaining the resulting mixture between 20° and about 120° C. until polymerization has occurred.

2,861,861

METHOD FOR TREATING GLUTEN

Eric A. Boyd and Robert H. Cotton, Harbor Beach, Mich., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 27, 1956 Serial No. 624,491

12 Claims. (Cl. 260—123)

1. A method for treating vital gluten to effect separation of gliadin and vital glutenin therefrom which comprises the steps of (1) reacting undried vital gluten in an aqueous acidic solution having a pH of about 3.0 to about 4.0 at a temperature between 40° C. and 70° C. for 1 to 20 minutes while mildly agitating the same, and (2) separating the glutenin and gliadin from the said reaction solution.

2,861,862

METHOD OF TREATING GLUTEN TO PRODUCE GLIADIN AND GLUTAMATES THEREFROM

Eric A. Boyd and Robert H. Cotton, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

Application May 13, 1957, Serial No. 658,798

6 Claims. (Cl. 260—123)

1. A method for treating gluten containing gliadin and glutenin which comprises the steps of (1) heating wet gluten containing at least about 65% water by weight to an elevated temperature not exceeding about 75° C. for a time sufficient to reduce the water content of said gluten to a minimum of about 50% by weight, (2) reacting the gluten from step #1 with an aqueous acidic solution having a pH of about 3.0 to about 4.0 at a temperature between about 40° C. and 80° C. for 1 to 20 minutes while mildly agitating the same to form a reaction solution, and (3) separating the glutenin and gliadin from said reaction solution.

2,861,863

ODOR STABILIZATION OF SULFUR-CONTAINING ORGANIC MATERIALS

Fredrick L. Jonach, Kew Gardens, N. Y., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application September 22, 1955 Serial No. 536,013

5 Claims. (Cl. 260—139)

1. An odor stabilized organic product obtained by treating a phosphorus sulfide treated olefin polymer with PbO_2 at an elevated temperature in the range of 80° to 400° F. for a time in the range of 8 to 24 hours.

4. A method for reducing the evolution of hydrogen sulfide from a phosphorus sulfide treated olefin polymer which comprises treating said phosphorus sulfide treated polymer with about 5 to 30% by weight of finely divided PbO_2 at a temperature of about 150° to 350° F. for about 8 to 24 hours.

2,861,864

o-HYDROXY DIAZO COMPOUNDS OF THE NAPHTHALENE SERIES

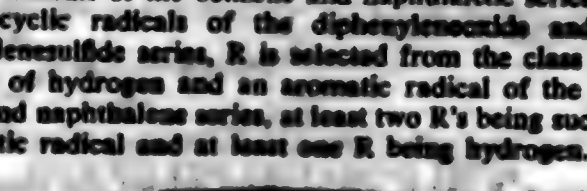
Fritz Suchfull, Leverkusen, Rolf Putter, Duesseldorf, and Horst Nickel, Koln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application August 8, 1956 Serial No. 602,936

Claims priority, application Germany August 18, 1955

6 Claims. (Cl. 260—141)

1. An o-hydroxy-diazo compound corresponding to the formula



wherein X stands for a radical selected from the group consisting of sulfophenyl-azo, sulfonaphthyl-azo and phenyl sulfonyl hydroxy group, Y is a member selected from the group consisting of hydrogen and sodium, when n is an integer of 1 and hydrogen when n is an integer from 0 to 1.

2,861,865

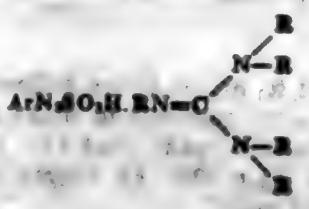
ARYLGUANIDINE ARENEDIAZOSULFONATES

Clifford E. Herrick, Jr., Chenango Forks, N. Y., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 31, 1956 Serial No. 631,424

6 Claims. (Cl. 260—141)

1. Photosensitive compounds soluable in organic solvents having the following formula:



wherein Ar is selected from the class consisting of aromatic radicals of the benzene and naphthalene series and heterocyclic radicals of the diphenylenoxide and diphenylenesulfide series, R is selected from the class consisting of hydrogen and an aromatic radical of the benzene and naphthalene series, at least two R's being such an aromatic radical and at least one R being hydrogen.

2,861,866

METALLISABLE AZO DYESTUFFS

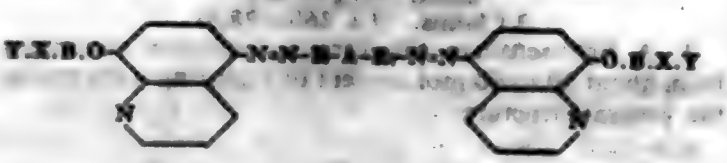
Herbert Francis Andrew, Harold Charles Boyd, and Robert Ronald Davies, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application October 31, 1955 Serial No. 544,982

Claims priority, application Great Britain November 3, 1954

2 Claims. (Cl. 260—155)

1. A metallizable azo dyestuff of the formula:



wherein R and R' are monocyclic aryl radicals selected from the group consisting of phenylene and methoxyphenylene radicals; B is selected from the group consisting of CO and SO_2; X is selected from the group consisting of $—C_6H_4—$; $—C_6H_3O—$; and $—C_6H_4—CH_2—$;

A is selected from the group consisting of a direct linkage —N=N—; —CONH—; —NH—; and

—NH—CO—NH—

and Y is selected from the group consisting of CO_2H, SO_3H and a quaternary ammonium group of the form —N(tert) anion.

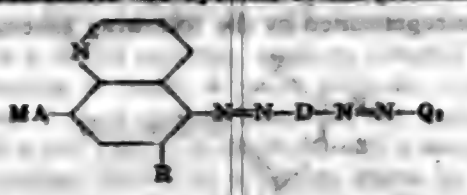
2,861,067

METALLISABLE AZO DYESTUFFS

Herbert Francis Andrew and Robert Ronald Davies, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application October 31, 1955
Serial No. 544,083
Claims priority, application Great Britain November 3, 1954
6 Claims. (Cl. 260—156)

1. A metallisable azo dyestuff of the formula:



wherein D stands for the residue of a primary aromatic diamine, Q_2 stands for the residue of a coupling component selected from the group consisting of 6:8-dihydroxyquinoline, 6-hydroxy-8-aminoquinoline, 6-methoxy-8-hydroxyquinoline, 6-methoxy-8-aminoquinoline, 6-hydroxyindazole, 1-phenyl-3-methyl-5-pyrazolone, 8-hydroxyquinoline, 8-hydroxyquinoline-7-sulphonic acid, salicylaldoxime, 2-amino-4-hydroxybenzthiazole, 6-chloro-8-hydroxyquinoline and 2-acetylamino-4-hydroxybenzthiazole, A is selected from the group consisting of —O— and —NH—, R is selected from the group consisting of hydroxy, methoxy and amino, and M is selected from the group consisting of $—SO_3H$, $—PO_3H_2$, $—CO—R_1—SO_3H$, and $—CO—R_1—X$ where R_1 is selected from the group consisting of $—C_6H_4—$, $—C_4H_8O—$ and $C_6H_4—CH_2—$, and X is a tertiary amino group.

2,861,068

PREPARATION OF NITROGEN CONTAINING CELLULOSE DERIVATIVES

John Warren Mench and Benaiden Fulkerson, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application November 1, 1956
Serial No. 619,681
8 Claims. (Cl. 260—227)

1. A method of preparing a product which is insoluble in and resistant to water but is soluble in organic solvents and in dilute aqueous acid solutions having a pH below 5.4 which comprises chloroacylating in a solution esterification procedure a cellulose derivative, selected from the group consisting of the lower fatty acid esters of cellulose, at least 1.8, but not all of the cellulose hydroxyls, per C6 unit of cellulose having been replaced by lower fatty acid radicals and the lower alkyl ethers of cellulose at least ⅓ but not all of the cellulose hydroxyls having been replaced by lower alkyl radicals, whereby a product is obtained having its chloroacyl groups attached only to the cellulose, a chlorine content of at least 3% and an intrinsic viscosity of at least 0.2 and reacting upon the chloroacylated cellulose derivative thus obtained with a secondary amine until substantially all of the combined chlorine content of the cellulose compound has been replaced by the group supplied by the amine.

2,861,069

METHOD OF PREPARING CELLULOSE ESTERS

George P. Tenney and John E. Kiefer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application March 21, 1957
Serial No. 647,500
8 Claims. (Cl. 260—227)

1. A method of preparing lower fatty acid esters of cellulose which comprises esterifying a cellulose compound having esterifiable hydroxyl groups with an esterifying bath comprising an organic acid anhydride, a diluent and an insoluble sulfonic acid resin catalyst.

2,861,070

PROCESS FOR THE PRODUCTION OF MONOPHENYLMELAMINE

Leo E. Rademacher, Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application August 8, 1956
Serial No. 602,927
3 Claims. (Cl. 260—249.6)

1. In the process for the production of monophenylmelamine wherein 2,4-diamino-6-chloro-s-triazine and aniline are reacted in aqueous medium and the monophenylmelamine hydrochloride formed is subsequently neutralized with an alkali metal hydroxide to obtain the monophenylmelamine, the improvement which comprises conducting the reaction of 2,4-diamino-6-chloro-s-triazine and aniline under an atmosphere of an inert gas chosen from the group consisting of nitrogen, carbon dioxide, hydrogen, argon, methane, ethane, and hexane.

2,861,071

PROCESS FOR THE PRODUCTION OF MONOPHENYLMELAMINE

Oscar P. Cohen, Longmeadow, Harry M. Culbertson, Wilbraham, and Leo E. Rademacher, Longmeadow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application August 8, 1956
Serial No. 602,928
9 Claims. (Cl. 260—249.6)

2. In the process for the production of monophenylmelamine wherein 2,4-diamino-6-chloro-s-triazine and aniline are reacted in aqueous medium and the monophenylmelamine hydrochloride formed is subsequently neutralized with an alkali metal hydroxide to obtain the monophenylmelamine, the improvement which comprises conducting the reaction of 2,4-diamino-6-chloro-s-triazine and aniline in the presence of an antioxidant chosen from the group consisting of the tri-alkyl and tri-aryl phosphite esters.

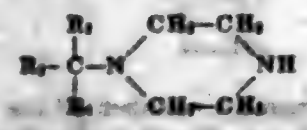
2,861,072

PREPARATION OF PIPERAZINE DERIVATIVES

Arthur W. Weston, Waukegan, and Kenneth E. Hamlin, Jr., Lake Bluff, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Application July 19, 1952
Serial No. 299,904
3 Claims. (Cl. 260—268)

1. The process of preparing a compound having the general formula:

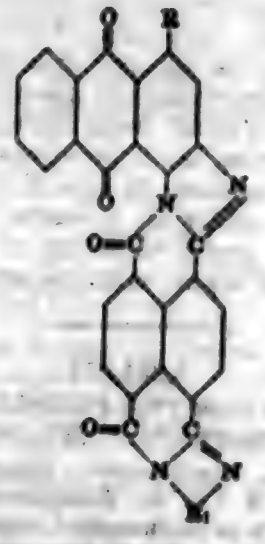


wherein R_2 is selected from the group consisting of hydrogen and an alkyl group containing up to four carbon atoms, R_3 is a monocyclic aromatic hydrocarbon

group having a 6-membered ring, and R_4 is a member selected from the class consisting of monocyclic aromatic hydrocarbon group having a 6-membered ring, a pyridyl group, a thienyl group, and a cyclohexyl group; which comprises treating a N-carbalkoxy piperazine with a (R_2, R_3, R_4, C)-halide and subjecting the resulting N-(R_2, R_3, R_4, C)-N'-carbalkoxy piperazine to hydrolysis and decarboxylation by contacting with a compound selected from the group consisting of an acidic reagent and an alkaline reagent.

2,861,873
VAT DYESTUFFS
Wilhelm Eckert and Otto Fuchs, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Application December 26, 1956
Serial No. 630,467
Claims priority, application Germany January 4, 1956
3 Claims. (Cl. 260—272)

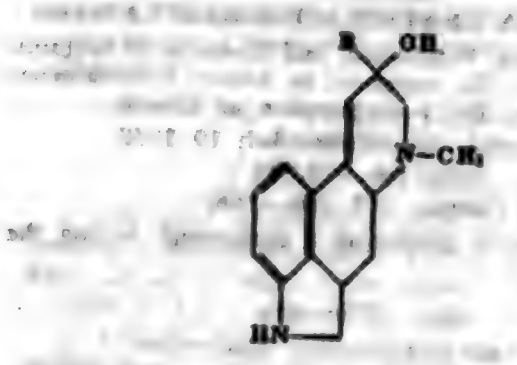
1. The vat dyestuffs corresponding to the following general formula



wherein R represents a member selected from the group consisting of hydrogen, benzoylamino, 4-chlorobenzoylamino and 2-fluorobenzoylamino, and R_1 represents a member selected from the group consisting of phenylene, chlorophenylene and ethoxyphenylene.

2,861,874
SUBSTITUTED HYDROXYERGOLENES
Edmund C. Kornfeld, Indianapolis, and Granville Bruce Kline, Greenwood, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
No Drawing. Application October 22, 1956
Serial No. 617,248
5 Claims. (Cl. 260—285.5)

1. A compound selected from the group consisting of bases represented by the formula



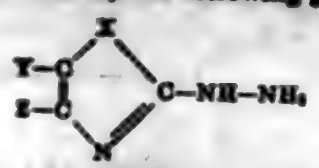
wherein R represents a member of the group consisting of lower alkyl, lower alkenyl, and monocarbocyclic aromatic hydrocarbon radicals, and nontoxic acid addition salts thereof.

2,861,875
β-LACTONE OF YOHIMBIC ACID
Patrick A. Diassi, Westfield, N. J., assignor to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia
No Drawing. Application July 22, 1957
Serial No. 673,170
3 Claims. (Cl. 260—287)

1. The β-lactone of yohimbic acid.

2,861,876
PROCESS FOR THE PREPARATION OF 1:2:4-TRIAZOLE-3-THIOLS
Edward Bowes Knott and Leslie Alfred Williams, Wealdstone, England, assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
No Drawing. Application April 29, 1957
Serial No. 655,512
Claims priority, application Great Britain June 14, 1956
7 Claims. (Cl. 260—239)

1. A method for making 1:2:4 - triazole - 3 - thiol compounds comprising intermixing a compound selected from those represented by the following general formula:



wherein X represents a member selected from the group consisting of a vinylene group, a sulfur atom, an oxygen atom, a —NH— group, and a —CR'=N— group wherein R' represents a member selected from the group consisting of a hydrogen atom and an alkyl group, and Y and Z each represents a member selected from the group consisting of a hydrogen atom, an alkyl group, an hydroxyl group, and Y and Z together represent the atoms necessary to complete a benzene ring, together with carbon disulfide, and heating the resulting β-substituted dithiocarbazic acid in the presence of a basic compound selected from the group consisting of ammonia and an organic amine to produce the desired thiol.

5. A method for making 1':2' - dihydroquinolino-1':2':4:5 - triazole(1:2:4) - 3 - thiol comprising intermixing 2 - quinolylhydrazine with carbon disulfide in the presence of pyridine and heating the reaction mixture until a substantial quantity of hydrogen sulfide has been evolved.

2,861,877
PREPARATION OF NICOTINIC ACID ESTERS
Robert S. Aries, New York, N. Y.
No Drawing. Application October 7, 1955
Serial No. 539,273
8 Claims. (Cl. 260—295.5)

1. The process for preparing a pyridine monocarboxylic acid ester which comprises refluxing a mass consisting essentially of a pyridine dicarboxylic acid and an alkanol at a temperature ranging from about 125° C. to about 250° C.

2,861,878
PREPARATION OF BENZOTRIAZOLES
Emery B. Miller and George F. Schimmelschmidt, Toledo, Ohio
No Drawing. Application November 13, 1956
Serial No. 622,767
6 Claims. (Cl. 260—308)

1. A method for producing benzotriazoles which comprises effecting a mixture in an aqueous system of a nitrite and a compound selected from the group consisting of orthophenylenediamine and substituted orthophenylenediamines wherein the substituent is attached to a carbon atom of the benzene ring, and adding thereto at least 1 chemical equivalent of an acid reacting substance having a dissociation constant between about 10^{-4} and about

chloro-2,3-butanediol; (4) forming a mixture comprising

10^{-4}, which acid reacting substance is selected from the group consisting of citric acid, glycolic acid, diglycolic acid, carbonic acid, acids having the generic formula R—COOH, where R is a member of the group consisting of hydrogen and alkyl radicals having from 1 to 5 carbon atoms, and acids having the generic formula

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2,861,879

PROCESS FOR MAKING UNSATURATED HYDANTOINS

Edgar C. Britton and Howard T. Smith, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application June 4, 1956
Serial No. 588,944
14 Claims. (Cl. 260—309.5)

1. In a process for making an unsaturated hydantoin wherein hydantoin is reacted with an aldehyde, the steps which consist in heating approximately equimolecular proportions of hydantoin and an aldehyde containing at least 4 carbon atoms in the molecule at reaction temperatures between 50° and 150° C. while having the reactants dissolved in a liquid reaction medium selected from the group consisting of water, a lower aliphatic alcohol containing from 1 to 4 carbon atoms in the molecule and mixtures of water and such alcohols, and a monoalkanolamine containing from 2 to 4 carbon atoms in the molecule in amount corresponding to from 0.2 to 10 gram molecular proportions of the monoalkanolamine per gram mole of the hydantoin.

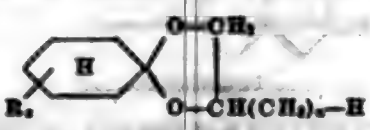
2,861,880

PROCESS FOR MAKING DIOXOLANES

Peter S. Potrin, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 3, 1957
Serial No. 669,717
5 Claims. (Cl. 260—340.9)

1. A process for making a 1,3-dioxolane having the formula



comprising hydrogenating an ether having the formula

wherein, in each of the above formulas, R is an alkyl radical containing 1 to 18 carbon atoms, x is an integer from 0 to 3 and n is an integer from 0 to 2, said hydrogenation being effected at a temperature of about 50 to 200° C. and a hydrogen pressure of about 100 to 500 p. s. i. and in the presence of a hydrogenation catalyst selected from the group consisting of nickel, platinum, palladium and copper chromite catalysts.

2,861,881

PROCESS FOR MAKING ALKYLDIOXOLANES

Peter S. Potrin, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 3, 1957
Serial No. 669,719
5 Claims. (Cl. 260—340.9)

1. A process for making a 4-alkyl-1,3-dioxolane comprising heating a compound having the formula

$$ROCH_2CHOH—(CH_2)_n—H$$

wherein R is a β-alkenyl radical containing 3 to 4 carbon atoms and n is an integer from 0 to 2, in the presence of a hydrogenation catalyst selected from the group consisting of platinum, palladium and nickel and at a temperature of about 50 to 200° C.

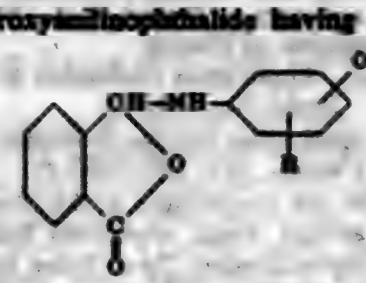
2,861,882

HYDROXYANILINOPHTHALIDES

Donald D. Wheeler and David C. Young, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 5, 1956
Serial No. 595,852
3 Claims. (Cl. 260—343.3)

1. A hydroxyanilinophthalide having the formula



wherein R represents a member of the group consisting of hydrogen and chlorine.

2,861,883

PREPARATION OF 2,3-DIHYDROPYRAN-2-YL 2-FORMYL-2,3-DIHYDROPYRAN-2-YL CARBINOL

Howard R. Guest, Charleston, and Ben W. Kilt, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application February 1, 1957
Serial No. 637,616
8 Claims. (Cl. 260—345.9)

1. The method for the aldolization of acrolein dimer which comprises subjecting a mixture of 2,3-dihydro-2-formyl-1,4-pyran and a copper catalyst to elevated temperatures to obtain 2,3-dihydropyran-2-yl 2-formyl-2,3-dihydropyran-2-yl carbinol.

2,861,884

PROCESS FOR THE PRODUCTION OF BUTADIENE DIOXIDE

Paul S. Starcher, Donald L. MacPeek, and Benjamin Phillips, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application July 6, 1954
Serial No. 441,682
12 Claims. (Cl. 260—348.8)

1. A process for the production of butadiene dioxide, the combination of steps which comprises (1) reacting butadiene and chlorine to produce 1,4-dichloro-2-butene; (2) reacting the 1,4-dichloro-2-butene and an epoxidizing agent selected from the group consisting of peracetic acid and acetaldehyde monoperacetate at a temperature in the range of from about 50° C. to 150° C. to produce 1,4-dichloro-2,3-epoxybutane; (3) hydrolyzing the 1,4-dichloro-2,3-epoxybutane by heating at a temperature in the range of from 50° C. to 175° C., with water and a water-miscible organic hydrocarbon ether free from functional groups other than ether linkages in which the 1,4-dichloro-2,3-epoxybutane is substantially soluble, said water-miscible ether being employed in an amount sufficient to provide a single phase reaction mixture, to produce 1,4-dichloro-2,3-butanediol and isolating the 1,4-di-

esters of carboxylic acids which comprises grinding, to

2,861,892

chloro-2,3-butanediol; (4) forming a mixture comprising 1,4-dichloro-2,3-butanediol, an anhydrous salt selected from the group consisting of alkali and alkaline earth metal sulfates and a water-immiscible dialkyl ether and reacting said mixture with finely divided alkali hydroxide to produce butadiene dioxide and recovering the butadiene dioxide thus formed.

2,861,085

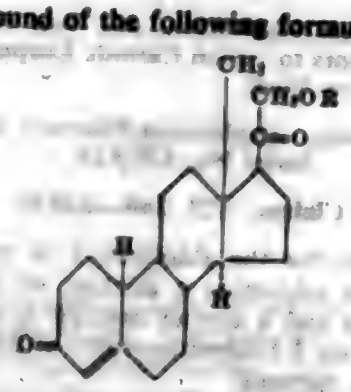
19-NORDESOXYCORTICOSTERONE AND PROCESS THEREFOR

Carl Djerassi, Birmingham, Mich., and Franz Sondheimer, Alberto Sandoval, and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S. A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application November 6, 1953
Serial No. 390,723
Claims priority, application Mexico November 11, 1952
10 Claims. (Cl. 260—397.4)

1. A method for the preparation of Δ^4-19-norpregnen-21-ol-3,20-dione acetate which comprises hydrogenating Δ^4-19-nor-17α-ethinylandrosten-17β-ol-3-one with approximately one molar equivalent of hydrogen in the presence of a hydrogenation catalyst to form Δ^4-19-nor-17α-vinylandrosten-17β-ol-3-one, hydroxylating the double bond in the side chain of the last mentioned compound to form Δ^4-19-nor-17-isopregnen-17β,20,21-triol-3-one, treating said last mentioned compound with an acetylating agent to form the corresponding 20,21-diacetyl derivative and treating the 20,21-diacetyl derivative with zinc in presence of toluene.

8. A compound of the following formula



wherein R is selected from the group consisting of hydrogen, a lower alkanoyl group, and a benzoyl group.

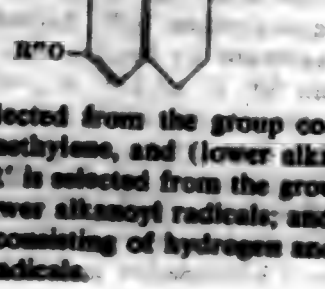
2,861,086

17-OXYGENATED ESTRA-1,3,5(10)-TRIENE-1,3-DIOLS, AND THE CORRESPONDING ESTERS AND ETHERS

James Jin, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application December 27, 1957
Serial No. 705,493
7 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein Z is selected from the group consisting of carbonyl, hydroxymethylene, and (lower alkanoyl)oxymethylene radicals; R' is selected from the group consisting of hydrogen and lower alkanoyl radicals; and R'' is selected from the group consisting of hydrogen and isopropyl and lower alkanoyl radicals.

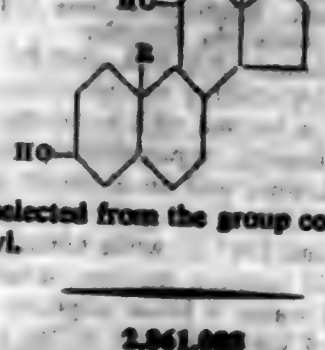
2,861,087

17α-METHYL-ANDROSTANE 3,11β,17β-TRIOL COMPOUNDS

Milton E. Herr, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application December 5, 1955
Serial No. 550,869
5 Claims. (Cl. 260—397.5)

1. 17α-methylandrostane-3,11β,17β-triol of the formula



wherein R is selected from the group consisting of hydrogen and methyl.

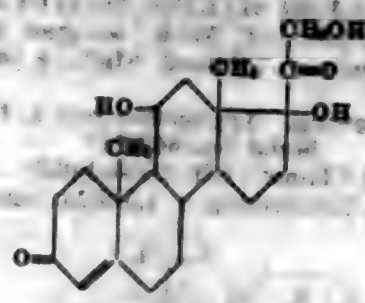
2,861,088

11α,17α,21-TRIHYDROXY-4-PREGNENE-3,20-DIONE AND ESTERS THEREOF

Herbert C. Murray, Hickory Corners, and Durey H. Peterson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application April 10, 1952
Serial No. 281,656
18 Claims. (Cl. 260—397.45)

1. Δ^4-pregnene-11α,17α,21-triol-3,20-dione of the formula:



2,861,089

PROCESS FOR THE PREPARATION OF 21-BROMO STEROIDS

William Graham, Greenford, England, assignor to Glaxo Laboratories Limited, Greenford, England, a British company

No Drawing. Application June 7, 1957
Serial No. 664,170
Claims priority, application Great Britain August 3, 1954
8 Claims. (Cl. 260—397.45)

1. A process for the bromination in the 21-position of the 3β:17α-dihydroxy-11:20-diketo derivatives of pregnane and allo-pregnane consisting of reacting said diketo derivative with a hydrogen halide selected from the group consisting of hydrogen bromide and hydrogen chloride in the presence of a substantially non-polar organic solvent containing from 0.5 to 10% weight/volume of an alcohol selected from the group consisting of C_1–C_3 aliphatic primary alcohols and C_3–C_5 aliphatic secondary alcohols and brominating the resulting hydrogen halide complex.

2,861,090

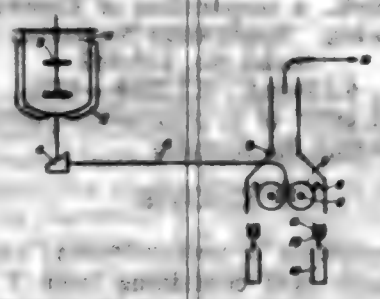
PROCESS OF PREPARING β-SULFOALKYLESTERS OF CARBOXYLIC ACIDS

Herman H. Thedeman, Fanwood, N. J., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

Application October 5, 1954, Serial No. 460,438
6 Claims. (Cl. 260—459)

1. A continuous process for preparing β-sulfoalkyl-

esters of carboxylic acids which comprises grinding, to a particle size ranging between 3 and 10 microns, a salt of



a 2-hydroxyalkane sulfonic acid selected from the class consisting of those of the following formulae:

$$HO-(CH_2)_n-O-(CH_2)_nSO_3M$$

and

wherein R represents a member selected from the class consisting of hydrogen and lower alkyl, M represents a salt-forming group selected from the class consisting of alkali metals, alkaline earth metals, metals of periodic table group 2B, triethanolamine, quinoline and pyridine, and *n* represents an integer of from 1 to 2, intimately mixing the said ground salt with a carboxylic acid chloride of at least 6 carbon atoms selected from the group consisting of aliphatic and alicyclic carboxylic acid chlorides devoid of reactive interfering substituents to form a homogeneous non-settling slurry, continuously feeding said slurry to a metallic surface heated to approximately 120°–170° C., and recovering the said β-sulfoalkylester as a broken film which is friable on grinding.

2,861,891

MANGANOUS DIMETHYLDITHIOCARBAMATE STABILIZED WITH ZINC DIMETHYLDITHIOCARBAMATE

Robert O. Bauschaup, Jr., Wilmington, Del., and Thomas P. Johnston, Atlanta, Ga., assignors to Tennessee Corporation, New York, N. Y., a corporation of New York

No Drawing. Application April 5, 1957
Serial No. 650,825
7 Claims. (Cl. 260—429)

1. A co-precipitated intimates mixture of manganous and zinc dimethyldithiocarbamates containing from about 50% to 70% zinc dimethyldithiocarbamate having stability against spontaneous combustion, deterioration, and loss of fungitoxicity.

3. In a process for stabilizing manganous dimethyldithiocarbamate against spontaneous combustion, deterioration, and loss of fungitoxicity, the steps of mixing an aqueous solution of inorganic soluble manganous and zinc salts and an aqueous solution of a chemical compound selected from the group consisting of alkali metal dimethyldithiocarbamates and alkaline earth dimethyldithiocarbamates until a slurry is obtained, filtering the slurry to remove precipitated manganous and zinc dimethyldithiocarbamates, washing the precipitated manganous and zinc dimethyldithiocarbamates with water, and then drying the manganous and zinc dimethyldithiocarbamates.

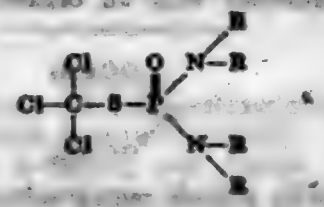
2,861,892

5-TRICHLOROMETHYL TETRAALKYLPHOSPHORODIAMIDOTHIOLATES

Richard L. McConnell and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 22, 1956
Serial No. 605,480
7 Claims. (Cl. 260—461)

1. The compounds of the general formula:



wherein each R is an alkyl group containing 1 to 4 carbon atoms.

2. The process of making the compounds of claim 1 comprising the bringing together of approximately equimolar quantities of trichloromethane sulfenyl chloride and an alkyl tetraalkylphosphorodiamidite, said alkyl radicals containing from 1 to 4 carbon atoms, by gradual addition of the chloride while temperature is maintained in the 0° to 25° C. range.

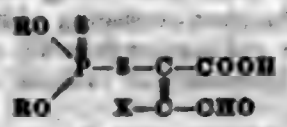
2,861,893

REACTION PRODUCTS OF DIALKYL PHOSPHOROTHIOLOTHIONATES AND MUCOHALIC ACIDS

Richard L. McConnell and Joseph B. Dickey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application September 24, 1956
Serial No. 611,760
7 Claims. (Cl. 260—461)

1. As new compositions of matter, the compounds represented by the general formula:



where X is selected from the group consisting of bromine and chlorine, and R is a lower alkyl group containing from one to four carbon atoms.

2,861,894

PHOSPHOROTHIOLOTHIONATES DERIVED FROM ESTERS OF ALKENE- AND ALKANE-1,1-DIOLS

Richard L. McConnell and Thomas H. Wicker, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 28, 1957
Serial No. 680,684
12 Claims. (Cl. 260—461)

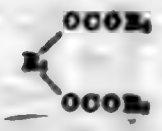
1. As compositions of matter, the organophosphorus compounds having the structural formula:

wherein R is a lower alkyl radical containing 1 to 4 carbon atoms, R_1 is an organic radical selected from the group consisting of radicals having the formula $(CH_2)_n$ and corresponding halogenated radicals, wherein *n* is an integer of 1 to 3, R_2 is an organic radical selected from the group consisting of radicals having the formula $(CH_2)_n$, C_nH_{2n-4} and corresponding halogenated radicals, wherein *n* is an integer of 1 to 4 and R_3 is an organic radical selected from the group consisting of radicals having the formula C_nH_{2n-4}, wherein *n* is an integer of 1 to 3, and halogenated lower alkyl radicals.

7. The method for producing new organophosphorus compounds which comprises reacting a compound se-

lected from the group consisting of dialkyl phosphorothiolothionates having the formula:

wherein R is a lower alkyl radical containing from 1 to 4 carbon atoms and ammonium salts of said dialkyl phosphorothiolothionates with an organic ester having the formula:



wherein R_1 is an organic radical selected from the group consisting of radicals having the formula $(CH_2)_n$, C_nH_{2n-2} and corresponding halogenated radicals, wherein n is an integer of 1 to 4 and R_2 is an organic radical selected from the group consisting of radicals having the formula C_nH_{2n-1}, wherein n is an integer of 1 to 3, and halogenated lower alkyl radicals at a temperature within the range of −25 to 150° C.

2,861,095

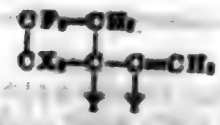
FLUOROCYCLOHEXENE DERIVATIVES

John J. Drysdale, Clifton Park Manor, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 7, 1954
Serial No. 454,697
7 Claims. (Cl. 260—464)

1. A fluorocyclohexene containing two adjacent annular CF_2 groups, two annular CH_2 groups, and a pair of annular carbon atoms doubly bonded to each other, the respective extra-nuclear valences of the carbon atoms doubly bonded to each other being satisfied by at least one member of the class consisting of hydrogen, halogen of atomic number not greater than 35, cyano, and monovalent saturated hydrocarbon radicals of no more than six carbon atoms.

7. The process for preparing fluorine containing cyclohexanes which comprises exposing, to a temperature within the range 450–800° C. a vinylidenefluorocyclobutane of the formula



wherein each X is a halogen of atomic number not greater than 35 and each Y is a member of the class consisting of hydrogen, fluorine, chlorine, bromine, cyano, and monovalent hydrocarbon radicals free from non-aromatic unsaturation and recovering the fluorocyclohexane.

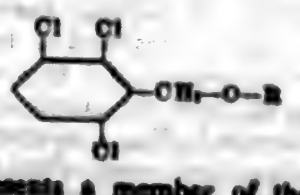
2,861,096

2,3,6-TRICHLOROBENZYL ESTERS OF CHLOROACETIC ACIDS

Charles T. Pumpelly, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application November 2, 1956
Serial No. 619,961
3 Claims. (Cl. 260—487)

1. A 2,3,6-trichlorobenzyl ester of a chloroacetic acid having the formula



wherein R represents a member of the group selected from monochloroacetyl, dichloroacetyl and trichloroacetyl.

2,861,097

BENZYL ESTERS OF POLYCHLOROALIPHATIC MONOCARBOXYLIC ACIDS

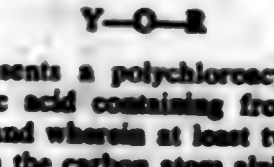
Herman O. Swoboda and Charles T. Pumpelly, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application November 2, 1956
Serial No. 619,963
6 Claims. (Cl. 260—487)

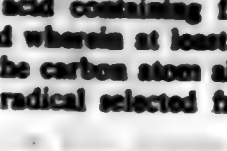
1. A benzyl ester of a polychloroaliphatic monocarboxylic acid having the formula

Y—O—R

wherein R represents a polychloroacyl radical derived from an alkanoic acid containing from 3 to 5 carbon atoms, inclusive and wherein at least two chlorine atoms are substituted on the carbon atom alpha to the carboxyl group, and Y is a radical selected from the group consisting of



and



in which X is selected from the group consisting of hydrogen, methyl, ethyl, chloromethyl and chloroethyl, Z is selected from the group consisting of chloromethyl and chloroethyl and n represents an integer from 1 to 3, inclusive.

2,861,098

PRODUCTION OF CARBOXYLIC ACID ESTERS

Richard A. Di Somma, Grand Rapids, Mich., and Alex Hlynsky, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application July 17, 1956
Serial No. 598,243
4 Claims. (Cl. 260—493)

1. The method which includes the steps of heating a mixture of a chlorinated aliphatic hydrocarbon having from 18 to 36 carbon atoms and containing about 35% to 75% of chemically combined chlorine by weight, a potassium salt of a lower alkanoic acid, and a lower-alkoxy-lower-alkanol as a mutual solvent for said chlorinated hydrocarbon and said salt, and recovering the reaction product thus formed containing ester groups.

2,861,099

METHOD OF MAKING FORMAMIDINE SULFINIC ACID

Simon Frank, Stamford, and George W. Kennedy, Darien, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application June 6, 1957
Serial No. 663,910
13 Claims. (Cl. 260—550)

1. The method of making formamidine sulfinic acid which comprises bringing a gas comprised of ozone, as an essential component, into intimate contact with a solution of thiourea thereby to effect reaction between the acid ozone and the said thiourea, the thiourea being present in the solution as the reaction proceeds in a concentration of from 0.1 N to 1.0 N, the molar proportions of thiourea and ozone being within the range of from 0.8 to 1.2 moles of thiourea per mole of ozone, the reaction mass being maintained at a temperature within the range of from about −10° C. to about 50° C. and within a pH range of from 2 to 6, and the rate at which the gas comprised of ozone is brought into contact with the said thiourea solution and the accompanying agitation of the reaction mass being controlled to provide a maximum

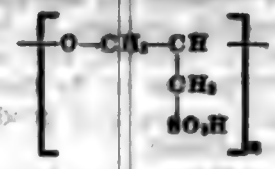
rate of reaction of the amine with the thiourea that is consistent with minimum decomposition of the formamidine sulfinic acid which is formed; and isolating formamidine sulfinic acid from the resulting reaction mass.

2,861,100
PREPARATION OF PERCARBOXYLATE SALTS
Leslie G. Humber, Rochester, N. Y., assignor to Shawinigan Chemicals Limited, West Montreal, Quebec, Canada, a corporation of the Dominion of Canada
Application December 9, 1957, Serial No. 701,656
9 Claims. (Cl. 260—582)

1. A process for the preparation of an anhydrous alkali salt of a saturated aliphatic percarboxylic acid, containing from 2 to 4 carbon atoms, from an aqueous solution of the percarboxylic acid and its corresponding carboxylic acid, comprising (1) neutralizing the carboxylic acid by adding sufficient weakly alkaline material to the aqueous solution of acids to form a soluble salt of the carboxylic acid without forming a salt of the percarboxylic acid, (2) extracting the percarboxylic acid from the aqueous solution with a water immiscible organic liquid solvent for the percarboxylic acid, (3) adding sufficient organic solvent solution of a strong alkali to the solution of percarboxylic acid to precipitate alkali percarboxylate from the solution, and (4) recovering the precipitate of alkali percarboxylate.

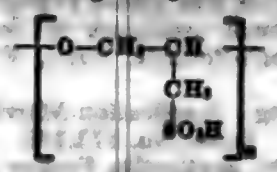
2,861,101
LINEAR POLYSULFONIC ACID POLYMERS
William F. Tousignant and Thomas Hostman, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application April 13, 1956
Serial No. 577,916
13 Claims. (Cl. 260—513)

1. A polymeric material having the general formula:



wherein *n* is a plural integer, and X is selected from the group consisting of a hydrogen atom and a salt forming ion.

6. Method for the preparation of a polysulfonic acid polymeric material having the general formula:



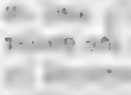
wherein *n* is a plural integer, which comprises reacting a polyepichlorohydrin with an alkali metal sulfite salt in the proportion of at least about one mole of the alkali metal sulfite salt for each mole of substituent chlorine atom which is present in the polyepichlorohydrin to form an intermediate polysulfonate polymer, and converting the polysulfonate polymer to a polysulfonic acid polymeric material.

2,861,102
CONTINUOUS PROCESS FOR PRODUCING α-ETHYLCINNAMIC ACID
James E. Huff and Rodney D. Mott, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application August 30, 1956
Serial No. 606,988
8 Claims. (Cl. 260—523)

1. A continuous process comprising intimately and continuously mixing in a reaction zone the reagents (*a*) one molecular equivalent of 3-benzylidene-2-pentanone and (*b*) at least about 4 molecular equivalents of an aqueous solution of an alkaline hypochlorite of at least about 15% concentration by weight and a pH of at least about 12 and a feed temperature not higher than about 15° C.; maintaining the temperature in the reaction zone at about 90 to 100° C.; continuously withdrawing the thus formed product solution and isolating therefrom a member of the group consisting of α-ethylcinnamic acid and its salts.

2,861,103
MANUFACTURE OF THIOPHOSGENE AND ALPHA-HALOSULFIDES
George R. Lalos, Irvington, and Joseph T. Rubello, Nyack, N. Y., assignors to Stauffer Chemical Company, a corporation of Delaware
No Drawing. Application January 11, 1957
Serial No. 633,536
5 Claims. (Cl. 260—543)

1. The process of making thiophosgene and an alpha-chlorosulfide comprising reacting together perchloromethyl mercaptan and a compound of the formula



wherein R_1 is selected from the group consisting of lower alkyl and aryl, and R_2 and R_3 are selected from the group consisting of lower alkyl radicals and hydrogen.

2,861,104
METHOD OF PREPARING 2-HYDROXY-4-ALKOXYBENZOPHENONES
William H. van Glahn, Lenoxville, and Lester N. Stanley, Delmar, N. Y., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application June 22, 1956
Serial No. 593,023
6 Claims. (Cl. 260—591)

1. The process of preparing 2-hydroxy-4-alkoxybenzophenones which comprises first condensing 100–180 parts by weight of a 1,3-dialkoxybenzene with benzoyl chloride at a temperature ranging between 0° and 10° C. in the presence of an inert solvent-diluent and in the presence of a reagent mixture consisting of 10–30% by weight of zinc chloride and 70–90% by weight of aluminum chloride, said reagent mixture being employed in the range of 95–125 parts by weight per 100–180 parts by weight of said 1,3-dialkoxybenzene, then raising and holding the temperature between 45°–75° C. to dealkylate the condensation product and isolating a 2-hydroxy-4-alkoxybenzophenone.

2,861,105
PROCESS OF PREPARING 2-HYDROXY-4-ALKOXYBENZOPHENONES
Lester N. Stanley, Delmar, and Silas M. Roberts, Lenoxville, N. Y., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application June 22, 1956
Serial No. 593,024
6 Claims. (Cl. 260—591)

1. The process of preparing 2-hydroxy-4-alkoxybenzophenones which comprises first condensing a 1,3-dialkoxybenzene with benzoyl chloride at a temperature ranging between 0° and 10° C., in the presence of an inert solvent-diluent and in the presence of a reagent mixture selected from the group consisting of a two-component mixture of 15–40% by weight of a sodium halide and 60–85% by weight of aluminum chloride, and a three-component mixture consisting of 5–16% by weight of a sodium halide, 5–25% by weight of a potassium halide and 59–90% by weight of aluminum chloride, said two-

acetyl.

mixture solution and the accompanying agitation of the reaction mass being controlled to provide a maximum

and three-component mixture being employed in the range of 140–215 parts by weight per 100–180 parts by weight of said 1,3-dialkoxybenzene, then raising and holding the temperature between 45°–85° C. to dealkylate the condensation product and isolating a 2-hydroxy-4-alkoxybenzophenone.

2,861,106

PROCESS OF PREPARING ALDEHYDES OR KETONES BY DEHYDROGENATION OF ALCOHOLS

Wolfgang Opitz, Knapsack, near Koln, and Werner Urbanski, Koln-Bickendorf, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

No Drawing. Application February 24, 1955
Serial No. 490,482
Claims priority, application Germany February 24, 1954
6 Claims. (Cl. 260—596)

4. A process for dehydrogenating a saturated aliphatic alcohol which comprises passing the alcohol over a catalyst at a temperature of about 250° C.–380° C., said catalyst consisting essentially of about 97–99.5 parts by weight CuO, about 0.5–3 parts by weight Cr_2O_3 and an alkali metal oxide comprising about 2 to 6 times the molar amount of the Cr_2O_3, the said catalyst being prepared by applying an aqueous solution of an oxygen-containing chromium salt to a pulverulent mass of CuO, said chromium salt being a member of the group consisting of sodium chromate, potassium chromate, rubidium chromate, caesium chromate, lithium chromate, mixtures of said chromates, and peroxy chromates of the formula $MeCrO_3$ wherein Me is a monovalent alkali metal, forming shaped bodies from said mixture of CuO and chromium salt and heating said bodies to a temperature of between about 100° C.–900° C.

2,861,107

PROCESS FOR THE PRODUCTION OF CUMENE HYDROPEROXIDE

Kiso Hiratsuka, Fujisawa-shi, and Ei Ichi Yonemitsu, Takashi Itabashi, Shigehiro Date, and Shotaro Kitamura, Tokyo, Japan, assignors to Edogawa Kagaku Kogyo Kabushiki Kaisha, Tokyo, Japan

No Drawing. Application August 17, 1956
Serial No. 604,616
Claims priority, application Japan August 22, 1955
8 Claims. (Cl. 260—610)

1. In a process for the production of cumene hydroperoxide wherein cumene is oxidized by a gas selected from the group consisting of molecular oxygen and oxygenous gases at an elevated temperature, a step of adding thereto ethylenediamine tetraacetic acid in a ratio up to 1 percent of cumene used as accelerator.

2,861,108

PRODUCTION OF POLYETHENOXY ALKYL PHENATE ETHERS

Joseph V. Karabinos and Aloysius T. Ballun, Joliet, Ill., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application June 30, 1953
Serial No. 365,250
8 Claims. (Cl. 260—613)

5. Non-ionic water-dispersible material consisting essentially of the reaction product of ozone with an ether mass, said mass being selected from the group consisting of (1) the product of condensing ethylene oxide with an alkyl phenol selected from the group consisting of octyl phenol and nonyl phenol, and (2) the product of reacting aqueous hydrogen peroxide with the product of condensing ethylene oxide with said alkyl phenol, said non-ionic material being characterized by increased light-transmittancy and detergency over those characteristics of the ether mass unreacted with ozone.

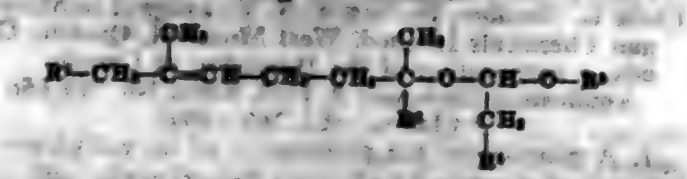
2,861,109

POLY-UNSATURATED ACYCLIC DI-ETHERS

August Bienenstock, Clifton, N. J., assignor to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application December 11, 1956
Serial No. 627,571
5 Claims. (Cl. 260—615)

1. A compound having the formula



wherein R^1 represents a member selected from the group consisting of hydrogen and lower alkyl radicals, R^2 represents the ethinyl radical, R^3 represents a lower alkyl radical, and R^4 represents a member selected from the group consisting of hydrogen and lower alkyl radicals.

2,861,110

PROCEDURE FOR THE OBTENTION OF HIGHER ALCOHOLS BY CONDENSATION OF LOWER ALCOHOLS

Jean Herzenberg, Guidobaldo Cevidalli, and Adriano Nosa, Milan, Italy, assignors to Sicedison S. p. A., Milan, Italy

No Drawing. Application July 17, 1956
Serial No. 598,262
Claims priority, application Italy July 19, 1955
6 Claims. (Cl. 260—642)

1. In a process for the production of higher alcohols from lower alcohols, according to the Guerbet condensation, the improvement comprising reacting an alkali hydroxide with a lower alcohol selected from the group consisting of primary and secondary butyl and amyl alcohols, whereby there is obtained a product comprising a reaction mixture of alcoholate and alcohol, subjecting said reaction mixture to azeotropic distillation, whereby water is removed, and until an alcoholate content of 85 to 95 percent of the theoretical value has been obtained, and reacting said product with a boric ester of said lower alcohol.

2,861,111

PROCESS FOR THE ALLYLATION OF BENZENE AND HOMOLOGOUS HYDROCARBONS

Igor Scriabine, Lyon, and André Peyronnet, Le Pecq-de-Roussillon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Application March 19, 1956
Serial No. 572,383
Claims priority, application France April 7, 1955
4 Claims. (Cl. 260—671)

1. A process for the production of p-allylcumene which comprises heating cumene with allyl borate in the presence of ferric chloride.

2,861,112

FRACTIONAL CRYSTALLIZATION

Edward R. Christensen, Beacon, and Howard V. Hess, Glenham, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

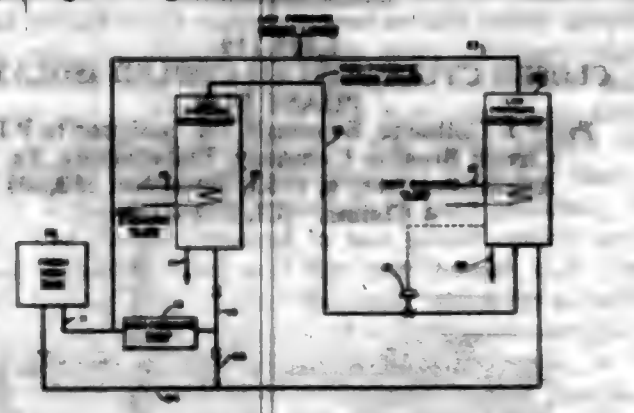
Application August 31, 1954, Serial No. 453,228
15 Claims. (Cl. 260—674)

1. A method of fractionally crystallizing a liquid mixture of components which form a eutectic mixture the composition and melting point of which varies with the pressure applied to said liquid mixture during crystallization, which comprises subjecting said liquid mixture to fractional crystallization under first conditions of temperature and a pressure in the range 0–100,000 p. s. i. g. to crystallize therefrom one of said components, con-

2,861,116

molecular equivalent of 3-benzylidene-2-pentenone and sodium halide, 5–25% by weight of a potassium halide and 59–90% by weight of aluminum chloride, said two-

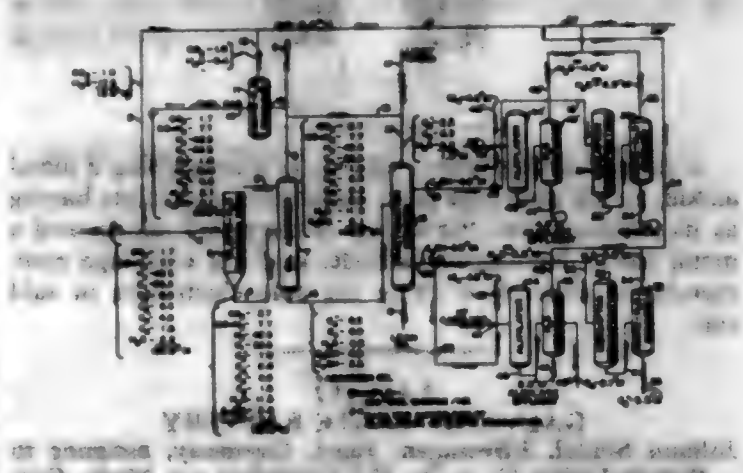
tioning said crystallization operation until the composition of the resulting first mother liquor is substantially the same as the composition of the first eutectic mixture crystallizable therefrom under said first crystallization condition of pressure, removing the resulting crystallized material, subjecting the resulting mother liquor to second conditions of temperature and a pressure in the range 0–100,000 p. s. i. g. different from said first conditions



the pressure differential between the above-indicated first pressure and second pressure being at least 2,000 p. s. i. g., to effect crystallization therefrom of additional crystallized material and continuing this second crystallization operation until the composition of the resulting second mother liquor is substantially the same as the second eutectic composition crystallizable therefrom under said second crystallization conditions of pressure.

2,861,113
RECOVERY AND USE OF OLEFINS AND HYDROGEN SULFIDE IN GASES
Carl S. Kelley, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 27, 1954, Serial No. 477,779
22 Claims. (Cl. 260—677)

4. A process for the production of a propylene alkylate from a gas containing ethylene, propylene, hydrogen sulfide, and other gases, which comprises contacting said gas under mercaptan-forming conditions with a catalyst so as to produce an effluent containing propyl mercaptan, separating from said effluent a propyl mercaptan stream, admixing said propyl mercaptan stream with a low-boiling isoparaffin and under alkylating conditions, passing the propyl mercaptan-low-boiling isoparaffin admixture, thus obtained, into contact with an alkylation catalyst and recovering from the alkylation effluent hydrogen sulfide and a propylene alkylate.



7. The separation of low-boiling olefins from a cracked hydrocarbon gas containing the same which comprises admixing with said gas hydrogen sulfide, contacting the admixture thus obtained under mercaptan-forming conditions and at a temperature in the range 150–300° F. with a bauxite catalyst so as to obtain mercaptans from said olefins, separating said mercaptans from the catalyst effluent, decomposing said mercaptans to olefins and hydrogen sulfide, and separating the same into a hydrogen sulfide stream and an olefin-containing stream.

20. The reaction under alkylating conditions, including a temperature in the range 20–140° F. and the presence of an acid alkylation catalyst, of a low-boiling isoparaffin and a low-boiling mercaptan.

ELECTRICAL

2,861,114
THERMOCOUPLE AND ELEMENTS THEREOF
Hideo Nishimura, Yoshida, Saiye-ku, Japan
Application May 22, 1956, Serial No. 586,421
Claims priority, application Japan May 23, 1955
1 Claim. (Cl. 136—5)

A thermocouple formed by coupling platinum with a platinum-molybdenum-tungsten alloy in which the amount of molybdenum is between 0.5 and 4% while the amount of tungsten is between 3 and 6.5%, the sum of molybdenum and tungsten being less than 7%.

2,861,115
BATTERY PLATE AND TAB ASSEMBLY
Marcus Berg, Easthampton, Mass., assignor to Nickel Cadmium Battery Corporation, Easthampton, Mass., a corporation of Delaware
Application February 20, 1956, Serial No. 566,468
4 Claims. (Cl. 136—28)

1. An electrode plate for alkaline storage battery cells comprising a metallic grid, a porous plaque of sintered nickel powder particles supported by the grid, said plaque being compressed in an area lying along one edge of the plate to form an indented zone of reduced cross section, and a metal tab overlying the grid in said indented zone, said tab being formed with integral projections on the side overlying the compacted area and extending through the grid to the other side thereof, the ends of the projections being bent into engagement with said other side of the grid, and said tab and projections being fused to the grid.

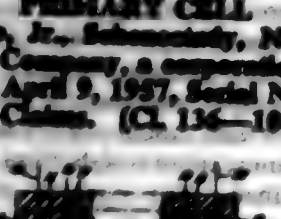
of the ether mass unreacted with ozone.

perature and a pressure in the range 0–100,000 p. s. i. g. to crystallize therefrom one of said components, con-

2,861,116
PRIMARY CELL

Willard T. Grubb, Jr., Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application April 9, 1957, Serial No. 651,792
20 Claims. (Cl. 136—100)

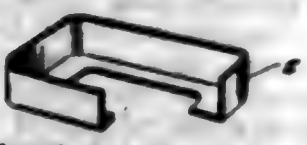


1. A solid state primary electric cell comprising a metal anode, an ion exchange resin membrane electrolyte having as its mobile cation the cation of the metal anode, and a metal oxide depolarizer cathode, said ion exchange resin membrane electrolyte being the sole electrolyte in said cell.

2,861,117
GALVANIC PLATE BATTERY

Johann Stadel, Elwerath, Jagel, Germany, assignor to Pertrix-Union G. m. b. H., Frankfurt am Main, Germany

Application May 5, 1955, Serial No. 506,291
4 Claims. (Cl. 136—111)

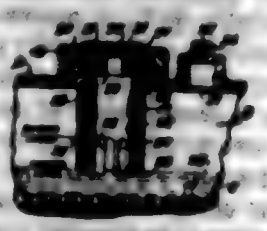


1. As an article of manufacture, an enclosure for a galvanic cell, said enclosure comprising an outer cup and an inner cup, each said cup formed with a bottom portion and a rim portion, each of said bottom portions having a central opening therein, said rim portion of the outer cup being in overlapping and fitting relationship with said rim portion of the inner cup, the said bottom portions of said cups being spaced from each other for enclosing the galvanic cell, said inner cup being cold-pressed of a material having a lower temperature at which internal mechanical stress becomes released than has the material of which the outer cup consists, and having the property of becoming deformed and having its rim portion bent outwardly when subjected to a slight rise in temperature above said stress relieving temperature; said outer cup made of a material less deformable by such slight rise in temperature, said enclosure having the rim of the inner cup in sealed relationship with the rim of the outer cup when at normal temperature, after having been subjected to such slight rise in temperature.

2,861,118
STORAGE BATTERY

Samuel Wyman Ralph, Philadelphia, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, a corporation of New Jersey

Application June 5, 1953, Serial No. 359,841
7 Claims. (Cl. 136—177)

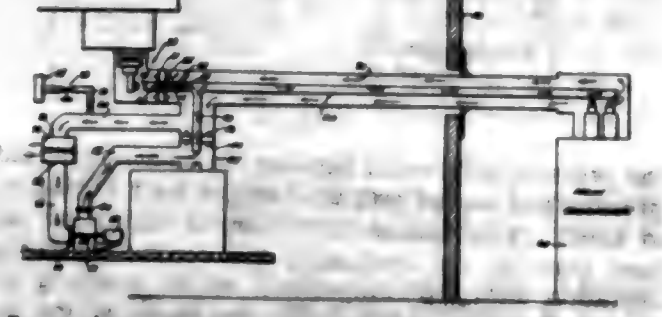


1. In combination, a storage battery cell cover provided with an opening, a filling well surrounding said opening, and extending downwardly from said cover, a ledge extending along the inner perimeter of said well; and an invertable insert disposed within the well, said insert being supported by said ledge and adapted to indicate different electrolyte levels when in alternate positions; said insert comprising a base provided with an aperture, and an upstanding skirt attached to and extending continuously around said base.

2,861,119
CLOSED CYCLE FORCED COOLED ISOLATED PHASE BUS

Perry J. Collenge, Broomall, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa.

Application May 6, 1953, Serial No. 353,301
4 Claims. (Cl. 174—16)

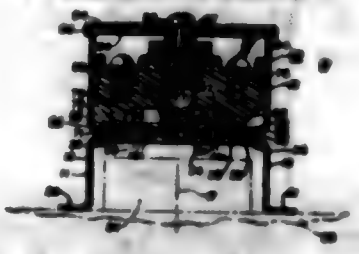


1. In a closed cycle forced cooled isolated phase bus system comprising a hollow conductor, insulator supports and a housing, said insulator supports interposed between said hollow conductor and said housing for maintaining said conductor in spaced relation with respect to said housing, said conductor electrically connected between a generator and a primary of a main transformer, a conductor section connected to said conductor at a point between said generator and said main transformer, a heat exchanger and a blower, said blower forcing cooling fluid only in a first direction through the hollow center of said conductor between said conductor section and said main transformer, said blower forcing cooling fluid only in a second direction in the space adjacent said conductor and said housing between said conductor connection and said main transformer, said blower forcing cooling fluid in a first and second direction in one portion of said conductor between said conductor connection and said generator, means including an air barrier to separate said last mentioned first and second flow of said cooling fluid.

2,861,120
JUNCTION BOX ASSEMBLY

Allan J. Park, Cleveland, Ohio, assignor to The National Acme Company

Application October 24, 1956, Serial No. 542,170
4 Claims. (Cl. 174—59)



1. A junction box assembly comprising in combination a base member having first and second legs and an axis and a case member having axially extending sidewalls, each said first and second legs having a mounting means thereon, a mounting plate integral with said base member and extending generally transverse to said axis, said mounting plate having first and second sides, said mounting plate including a raised central portion with an outer portion of said mounting plate extending around said raised central portion, said raised central portion and said

outer portion of said base member connected by an annular shoulder, first and second apertures extending through said raised central portion from said first to said second side thereof, an annular case retainer having a slot in the central portion thereof and located on said first side of said mounting plate with said slot in register with said first and second apertures, said case retainer fixedly attached to said first side of said raised central portion by first and second screw means secured to said raised central portion, said case retainer having an outer peripheral edge portion axially spaced from said outer portion of said mounting plate a first distance, said outer peripheral edge portion of said case retainer and said outer portion of said mounting plate forming an annular guideway therebetween, a gasket member residing in said guideway, a retainer stud fixedly attached to said raised central portion and extending from said first side thereof, said case member having a lip integral therewith which lip extends inwardly toward said retainer stud in a direction substantially transverse to said axis, said lip terminating in a lip wall which is annular in configuration, said annular lip wall being of a greater diameter than said annular shoulder, a hub attached to one of said sidewalls of said case member for receiving and connecting electrical conduit thereto, a terminal block having an opening extending axially therethrough and residing within said case member with said retainer stud slidably extending through said opening in said terminal block, said terminal block having means for electrically connecting conductors which enter said case through said apertures and said hub, respectively, a cover member residing over and covering said case member, screw means extending through said cover member and into said retainer stud for securing said cover member relative to said case member, said lip residing within said annular guideway whereby said case and base members are attached to each other and may be moved angularly about said axis relative to each other and may also be moved laterally with respect to each other before said cover member is secured, said first distance between said outer peripheral edge portion of said case retainer and said outer portion of said mounting plate being substantially equal to the combined thickness of said gasket member and said lip, said first and second screw means comprising means for decreasing and increasing the physical size of said guideway whereby said case and base members may be alternatively fixed and moved relative to each other.

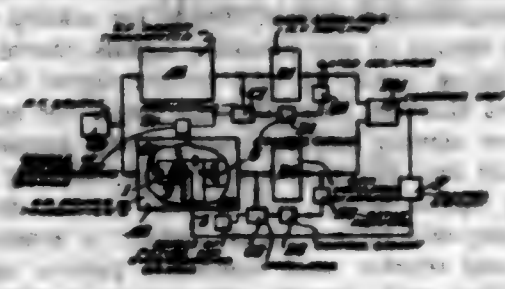
2,861,121
LIGHTING FIXTURE SUSPENSION DEVICES
Isidore Weiss, Mount Vernon, N. Y.
Application February 23, 1954, Serial No. 411,774
23 Claims. (Cl. 174—61)

1. A lighting fixture suspension device providing two points of support on opposite sides of a vertical axis and for accommodating fixture wiring, comprising a stamping having an upper, inwardly directed annular flange, a lower, outwardly directed annular flange, a horizontal bearing plate adapted to be supported from above by means passing through the stamping and engageable with the lower face of the upper flange to support the stamping for angular movement about said vertical axis, the plate and stamping having passageways for wiring, a closure member engageable with the lower face of the stamping outside the plate, the closure member and stamping having a shape when assembled to form a wiring chamber, means to secure the closure in place, and means carried by the lower flange outside the closure member for attaching fixture supports.

2,861,122
ELECTRIC CONDUCTOR WIRE SPACER AND METHOD OF APPLYING SAME
Archibald T. Flower, Philadelphia, Pa.
Application July 16, 1953, Serial No. 368,314
1 Claim. (Cl. 174—146)

The method of assembling conductor wires and a spreader formed of a strip of spring insulating material having a series of slots extending across the longitudinal axis of said strip comprising the steps of compressing the longitudinal sides of the strip to bend the strip along its medial longitudinal axis whereby said slots present openings for the reception of said wires, inserting the conductor wires in said slots of the bent strip, inserting retainer means between the bent portion of the compressed strip and the wires, and then allowing said strip to expand to press the wires into tight engagement with the retainer means and to force said retainer means into tight engagement with said strip.

2,861,123
TELEVISION AND LIKE TRANSMITTER INSTALLATIONS
Victor James Cooper, Writtle, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Application December 5, 1952, Serial No. 324,371
Claims priority, application Great Britain
February 11, 1952
3 Claims. (Cl. 178—7.1)



1. A television installation comprising at the same station at least two television transmitters having a

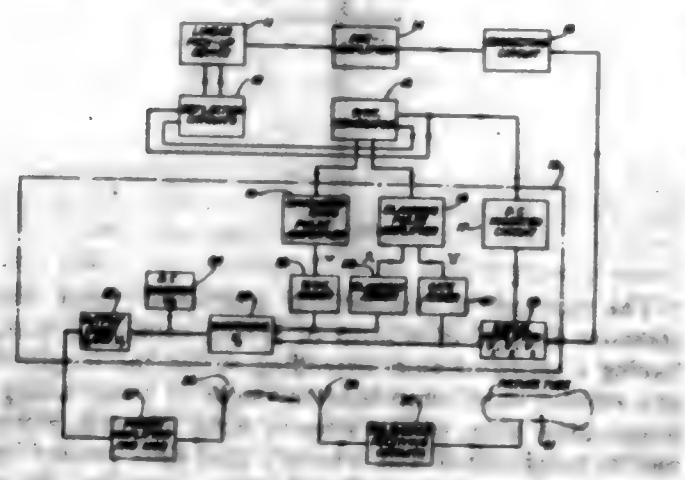
common central radio frequency source and each having a separate source of picture and synchronizing signals connected with individual modulation circuits and each comprising automatic means for maintaining substantially constant output and each adapted to transmit picture signals as variations on one side of a predetermined level and synchronizing signals as variations on the other side of said level, a combining unit, means for combining the outputs of the two transmitters in parallel in said combining unit, and means operable in response to control potential derived from said combining unit and dependent upon the relation between the combined output level from said transmitter and a predetermined level a little below that which obtains when the two transmitters are exactly in phase for controlling the relative phase relation of the said two transmitters whereby the combined output is maintained substantially at said predetermined level.

2,861,124

LINE AMPLIFIER FOR A TELEVISION SYSTEM

John R. Hefele, Yonkers, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application June 1, 1953, Serial No. 358,647
5 Claims. (Cl. 178—7.1)



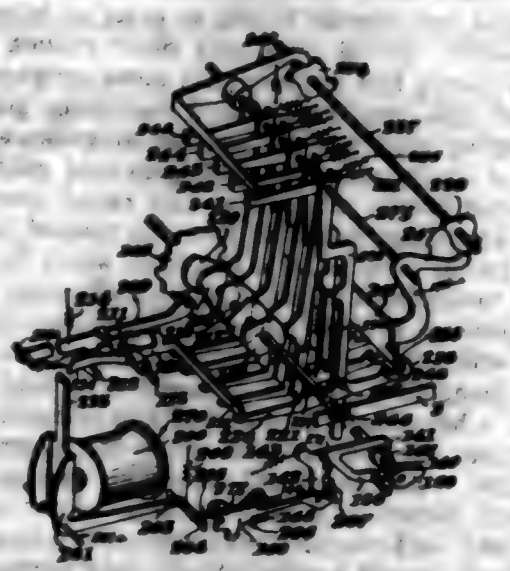
1. In a line amplifier for a television system, means for combining blanking and synchronizing signals with a television picture signal having picture information portions and prescribed blanking interval portions, said means comprising a first electron discharge device including an anode, a cathode and a grid, a second electron discharge device including an anode, a cathode and a grid, a constant potential source having a negative terminal and a positive terminal, means including a load resistor for connecting the cathodes of said devices to said negative terminal, means for connecting the anode of said first device to said positive terminal, means for connecting the anode of said second device to said positive terminal, a source of blanking signals and gating signals, said gating signals and blanking signals being of equal magnitude, simultaneous occurrence and opposite polarity, a source of synchronizing signals, means for adding said synchronizing signals to said blanking signals, means for adding said gating signals to said picture signal during said prescribed blanking intervals, and means for applying the picture signals including said gating signals to the grid of said first device and the added blanking and synchronizing signals to the grid of said second device whereby a composite picture signal voltage is generated across said load resistor, said composite picture signal voltage including said picture information portion of said picture signal and said blanking and synchronizing signals.

2,861,125

APPARATUS FOR TRANSLATING ELECTRICAL SIGNALS INTO MECHANICAL PERMUTATION SETTINGS

Ronald C. Griffith, Montreal, Quebec, Canada

Application May 2, 1955, Serial No. 505,479
Claims priority, application Great Britain May 3, 1954
5 Claims. (Cl. 178—33)



1. A mechanical telegraph signal selecting mechanism comprising a single pivoted transfer lever having first and second arms on opposite sides of the pivot, driving means for oscillating said pivot of said lever in a direction substantially perpendicular to the pivotal axis of said pivot through a complete cycle of movement in each signal unit interval of each character cycle, said driving means acting with a positive drive to move said pivot in one direction of the oscillation, signal-responsive means comprising a single member controlled by received signal units having one nature to place said single member in a position in which it is engaged by said first arm of said lever during its positive drive movement and responding to signal units of another nature to move said single member into a position in which it is not engaged at all by said first arm of said lever, a plurality of pivoted members arranged to be moved in succession in timed relationship with received signal units into the path of movement of said second arm of said lever and being positioned to be engaged and operated upon by said second arm of said lever only when said transfer lever is rocked by engagement with said single member, whereby the positions of said pivoted members at the end of a cycle of signal character selecting operation depend on the nature of the corresponding units of the signal character.

2,861,126

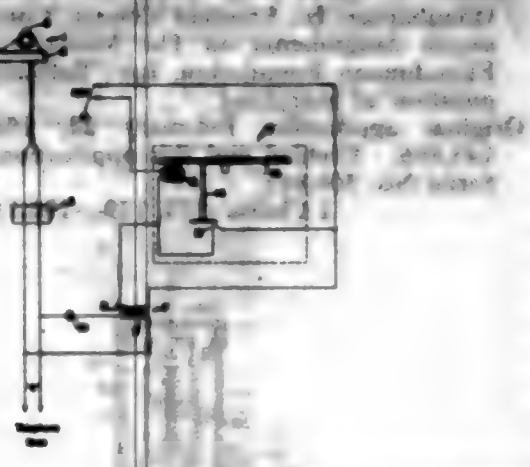
TELEPHONE ANSWERING EQUIPMENT ACTUATING DEVICE

Joseph J. Zimmermann, Milwaukee, Wis., assignor to Electronic Secretary Industries, Inc., Waukesha, Wis., a corporation of Wisconsin

Application October 12, 1953, Serial No. 385,427
4 Claims. (Cl. 179—6)

1. In an actuating device for telephone answering equipment associated with a party line telephone having a harmonic ringer energized by a signal current of selected frequency different than the frequency of other telephones on the same party line, frequency sensitive means responsive to the frequency of the harmonic ringer, circuit means connecting said frequency sensitive means with the telephone answering equipment to control said telephone answering equipment in response to energization of said frequency sensitive means, and circuit means connecting said frequency sensitive means to the tele-

phone lines of said telephone, said construction automatically operating to initiate actuation of the telephone answering equipment in response to a normal energization of the harmonic ringer.

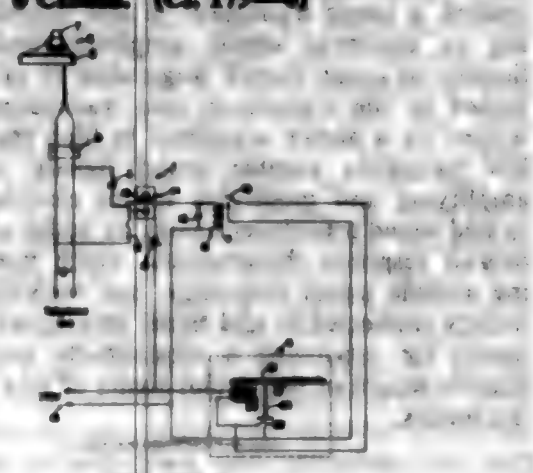


2,861,127

PARTY LINE TELEPHONE ANSWERING ACTUATOR

George W. Dunster, Milwaukee, Wis., assignor to Electronic Secretary Industries, Inc., Waukesha, Wis., a corporation of Wisconsin

Application October 12, 1953, Serial No. 385,455
6 Claims. (Cl. 179—6)



1. In an actuating system for telephone answering equipment associated with a party line telephone having a normal exclusive ring current, a frequency responsive vibrator responsive only to the frequency of said normal ringing current, and connected in circuit with the telephone lines for said telephone, said vibrator having circuit making and breaking means, a source of current, electromagnetic means connected in circuit with said source of current and said circuit making and breaking means, and circuit means connecting said electromagnetic means and said telephone answering equipment to initiate actuation of the latter in response to the normal ringing current for said telephone.

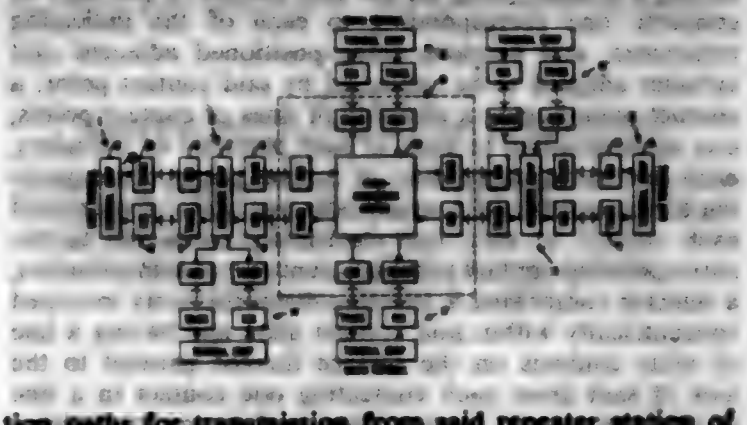
2,861,128

MULTIPLEX BRANCH REPEATER STATION

Sidney Metzger, Bergenfield, N. J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application November 12, 1952, Serial No. 319,930
19 Claims. (Cl. 179—15)

3. In a multiplex pulse communication system of the type described, a junction repeater station disposed at the junction of a plurality of converging communication paths, said repeater station including a transmitter and receiver for each of said communication paths and an interconnection means disposed in said repeater station coupled between each of said transmitters and receivers to directly re-route in said repeater station selected channel pulses of certain of the pulse trains received at said repeater station to the transmitter of given ones of said communication paths for transmission from said repeater station of a pulse train comprising certain of said selected channel pulses.

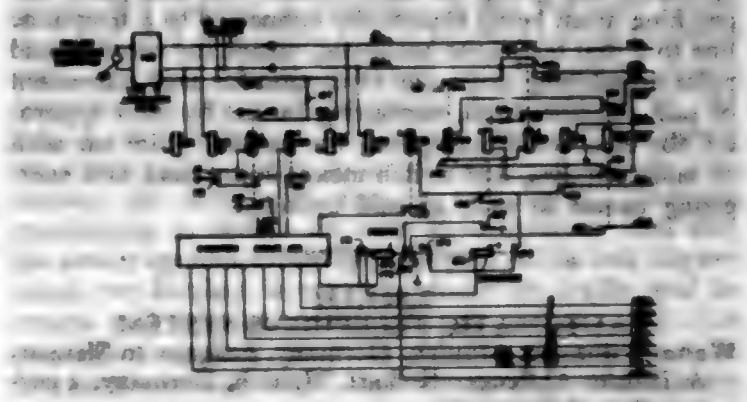


2,861,129

AUTOMATIC TELEPHONE SYSTEM

Jack E. Callender, Galion, Ohio, assignor to North Electric Company, Galion, Ohio, a corporation of Ohio

Application February 9, 1956, Serial No. 564,489
4 Claims. (Cl. 179—18)



1. An automatic telephone system including a plurality of connector switches for extending connections from an incoming line to associated lines, said lines being divided into groups and subgroups, certain of said lines being connected as subscriber lines and others of said lines being connected as trunk lines, selection means associated with at least one of said connector switches including means operative responsive to receipt of impulses indicative of a group and subgroup designating a line connected as a subscriber line to select the line indicated by said impulses, and means including said selection means operative responsive to receipt of impulses indicative of a group and subgroup designating a line connected as a trunk line to connect a busy indication to said trunk line to busy said trunk line to said connector switch.

2,861,130

AUTOMATIC TELEPHONE CALLING APPARATUS

Yoichiro Yamagida, Tochigi-ken, Japan

Application July 10, 1953, Serial No. 367,138
Claims priority, application Japan August 23, 1952
4 Claims. (Cl. 179—90)

1. An automatic telephone calling apparatus comprising a plurality of telephone number indicators in the form

2,861,134

MAGNETIC TRANSDUCING HEAD WITH MOUNT-

ing notches therein, laminated pole tips positioned in

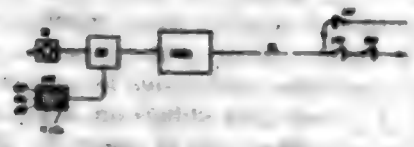
of a plurality of cylinders each having a plurality of indicating references on the cylindrical surface thereof, and having a contact point on the side thereof, a plurality of contacts, one corresponding to each of the indicating references, said contacts being positioned adjacent said cylinder adapted to be contacted by said contact point, a contact plate having a plurality of lines of contact points, one corresponding to each of said plurality of cylinders, each line having a plurality of contact points corresponding to the number of contacts adjacent said cylinders and each contact in each line electrically connected to the corresponding contact point adjacent one of said cylinders, a selector comprising a selecting drum rotatably mounted concentrically within said contact plate and having a line of plate contacts on the surface thereof parallel to the axis of said drum each contacting one contact in a line of contacts on said contact plate, and means for rotating said drum to bring said plate contacts into contact with the next line of contact points on said contact plate, a plurality of contact rods one electrically connected to each plate contact on said drum, an electric pulse dispatching drum rotatably mounted adjacent said contact rods in contact therewith and having a plurality of plate contacts arranged in groups about the circumference of said pulse dispatching drum, the number of contacts in each group corresponding to one of the indicating references on said cylinders, one group for each contact rod, said pulse dispatching drum being electrically connected to a telephone line to a dial telephone exchange, means for rotating said pulse dispatching drum one revolution for each movement of said selector drum, energizing means for said apparatus for electrically energizing the contact point on each of said cylinders, and switch means connecting said energizing means to each of said cylinders.

2,861,131

AUTOMATIC TELEPHONE SYSTEM

Walter Villmann, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany

Application May 11, 1954, Serial No. 429,831
Claims priority, application Germany January 27, 1954
14 Claims. (Cl. 179—99)



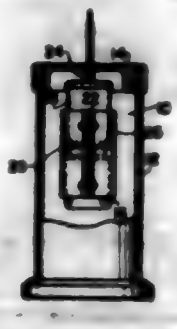
1. In an automatic telephone system having subscribers' lines, selection robot apparatus associated with a calling line for automatically selecting predetermined called lines, selection repeating robot apparatus for automatically storing digits transmitted and designating a desired called line and for automatically extending a call to said called line and for supervising the operating condition of said called line to which a call is to be extended and including means for utilizing said stored digits for the purpose of automatically successively repeating the building up of the connection to said called line if such line is found busy and having means for ringing the calling line when said called line is found idle, switching means at said calling line for separately selectively initiating the operations of said selection robot apparatus and of said selection repeating robot apparatus, and cooperating circuit switching means respectively included in said selection robot apparatus and said selection repeating robot apparatus, said cooperating circuit switching means being operatively responsive solely to the actuation of the switching means for initiating the operations of said selection robot apparatus for causing operative actuation of said selection repeating robot apparatus.

2,861,133

INSECT CONTROL APPARATUS

Morton C. Kahn, New York, N. Y., and William H. Offenhauser, Jr., Fairfield County, Conn., assignors, by mesne assignments, to The Mercelle and Edwin M. Fleischmann Foundation, Inc., Baltimore, Md., a corporation of Maryland

Original application February 21, 1950, Serial No. 145,496. Divided and this application July 25, 1952, Serial No. 300,845
1 Claim. (Cl. 179—100.1)



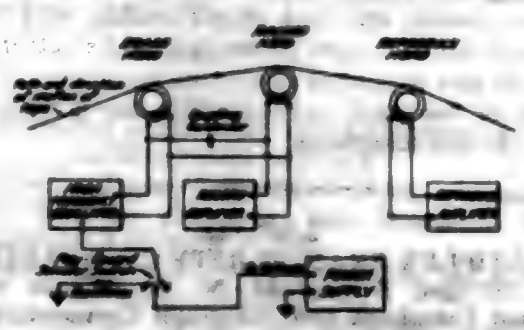
In a system for arthropod insect control utilizing a recorded insect-audible sound signal as the sole insect lure, the improved means for producing said recorded sound signal which comprises a small-volume sound chamber, acoustic insulation substantially surrounding said chamber for minimizing entry thereinto of external ambient sounds, a sound transducer in said chamber for producing an electrical signal, amplitude-modulated proportionally to sound signals originating in said chamber and sensed by the transducer, said transducer being characterized by a higher sensitivity to high frequency than to low frequency audible sound signals, electrical signal amplifying and modifying means electrically connected to said sound transducer having an audio amplifier with an overall response characteristic which rises with increasing audible signal frequency, and recording means electrically connected to said signal amplifying and modifying means for producing a substantially undistorted reproducible record of the output signal of said signal amplifying means.

2,861,133

METHOD AND APPARATUS FOR THE SELECTIVE ERASURE OF UNDESIRED TRANSFERRED SIGNALS IN MAGNETIC RECORDING

Robert Herr, St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application August 1, 1949, Serial No. 108,826
23 Claims. (Cl. 179—100.2)

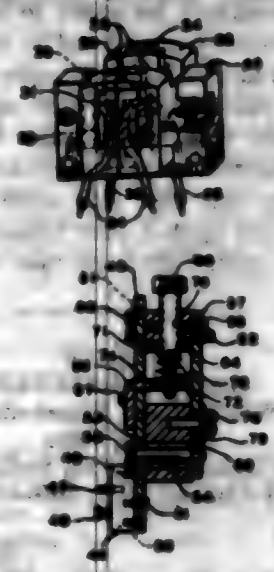


13. The method of substantially attenuating the effects of undesired signals without bias upon desired signals recorded with bias on a magnetic medium without substantially affecting the desired signals, which comprises the step by subjecting the medium carrying such undesired signals to an alternating current field of such value as to attenuate substantially the undesired superimposed effects while substantially maintaining the desired recorded signal level.

between each of said transmitters and receivers to directly re-route in said repeater station selected channel pulses of

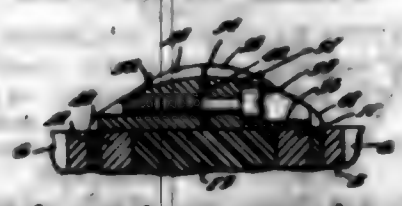
1. An automatic telephone calling apparatus comprising a plurality of telephone number indicators in the form

2,861,134
MAGNETIC TRANSDUCING HEAD WITH MOUNTING AND ADJUSTMENT MEANS
Lawrence H. Gernert, Chatham, N. J., assignor to Monroe Calculating Machine Company, Orange, N. J., a corporation of Delaware
Application October 28, 1954, Serial No. 465,565
16 Claims. (Cl. 179—100.2)



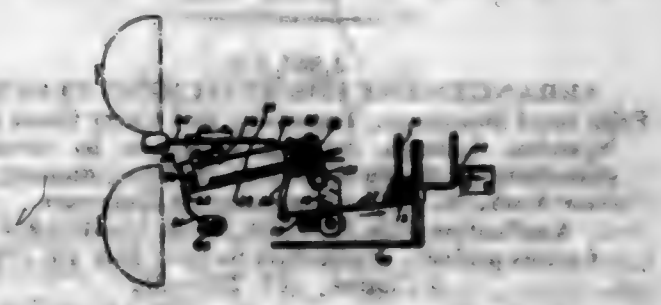
16. The combination with a unit embodying a plurality of magnetic transducing heads each comprising a pair of opposite approximately C-shaped pole pieces having their one end faces abutting and the others separated by a thin non-magnetic shim, in which the shims are substantially perfectly aligned, which comprises a pair of plastic blocks in which the corresponding pole pieces of the heads are embedded with their end faces exposed, said block being provided with aligned channels in the surfaces thereof adjacent the one ends of the pole pieces, a U-shaped yoke having its cross piece engaged in said channel, and a plastic block embedding the first said blocks and at least the inner edge of said yoke; of means for supporting the same relative to a magnetic drum comprising, a fixed frame member, a plate having an edge located in close proximity to the surface of the drum and slidably secured to said member, said member having an aperture adjacent said plate, an ear secured to said plate and extending into said aperture, screw means engaging said ear to adjust said plate radially of the drum, and a pair of rails secured to the plate adjacent the edge nearest the drum and extending longitudinally of the drum, the side arms of said U-shaped member being secured to said rails.

2,861,135
MAGNETIC HEADS AND REPLACEABLE POLE CAP ASSEMBLIES THEREFOR
Michael Rettinger, Encino, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Application February 3, 1956, Serial No. 563,278
9 Claims. (Cl. 179—100.2)



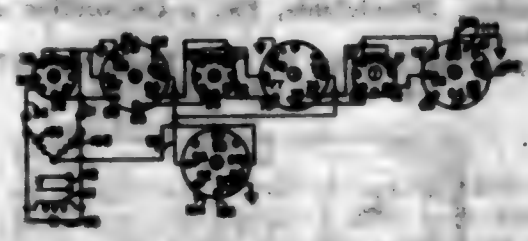
1. A magnetic transducer construction comprising a hollow frame having one side open, longitudinal wall members within said frame, a magnetic core between said wall members, a winding on said core, the ends of said core, the edges of said wall members and the edges of said frame being disposed in the same plane, a casting resin filling the spaces between said longitudinal members, said cores and said frame, and a pole tip assembly including a pair of opposing sections having notches therein, laminated pole tips positioned in said notches in said sections, means for maintaining said pole tips and sections in assembly, and means for attaching said assembly to said longitudinal members.

2,861,136
SWITCH MECHANISM FOR TELEPHONE APPARATUS
Jordan W. Brown, South Park, Charleston, W. Va., assignor to American Telephone and Telegraph Company, a corporation of New York
Application June 6, 1956, Serial No. 589,489
10 Claims. (Cl. 179—164)



1. In a telephone set having a switch operating mechanism controlled by removal from and replacement of the handset on its cradle and a ringer including a vibratile bell clapper; a normally closed auxiliary switch mounted on a deflectable arm in proximity to said mechanism and said clapper, auxiliary switch opening means connected to the auxiliary switch for operation by the bell clapper when said clapper is vibrating, latch means for retaining the switch in open position, a linkage connecting the deflectable arm to said switch operating mechanism to deflect the arm to a position such that the switch opening means is in the path of the bell clapper when the handset is removed from its cradle and to return said arm to an undeflected position such that said switch opening means is out of said path when the handset is on its cradle, and means for disabling the latch means when the arm is in its undeflected position.

2,861,137
HIGH GAIN AMPLIFIERS WITH INTERCHANGEABLE UNITS
George Donald Hendricks, Campbell's Island, Ill., assignor to Eagle Signal Corporation, Moline, Ill., a corporation of Massachusetts
Application July 31, 1954, Serial No. 444,874
1 Claim. (Cl. 179—171)



In a traffic detector amplifier, a chassis, two input terminals, two power terminals, and three output terminals all mounted thereon, three nine-pin tube sockets mounted thereon, four eight-pin component sockets mounted thereon, a double triode vacuum tube mounted in each tube socket each containing two control grids, two cathodes, two anodes, and a cathode heater element, a first compensated filter network to receive signals from said input terminals and to pass to the grids of first said triode only those signals whose wave length is substantially 2 to 30 cycles per second, a second compensated coupling network containing an anode power supply and filter circuit to receive signals from said anodes of first said triode and apply said signals to said grids of second said double triode, a third compensated coupling net-

work containing an anode power supply and filter circuit to receive said signals from said anodes of second said triode and apply said signals to said grids of third said double triode, a final stage including two plate resistors, a relay coil, a rectifier, and said two output terminals all in parallel, a fourth encapsulated network including power rectifiers and filter network the output of which is connected to the same numbered receptacle in each component socket, a power supply transformer connected to said power terminals the output of which is connected to two same numbered receptacles in each component socket, and a ground connection made to an identically numbered receptacle in each component socket.

2,861,138

ARRANGEMENT FOR SWITCHING CLOCKS

Fritz Josef Simonsson, Trosaberg, and Curry Oscar Eugen Nyström, Lidingö, Sweden, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application July 13, 1954, Serial No. 443,004
Claims priority, application Sweden July 13, 1953
4 Claims. (Cl. 200—38)

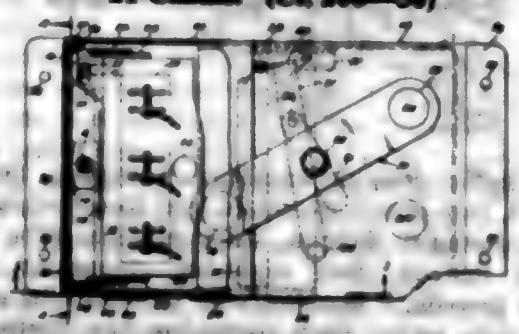
1. A control means for a clock comprising, a switch, rotatable switch plate constituted of at least one outer layer of non-yielding material and one inner layer of yieldable material joined thereto, a plurality of apertures arranged in both the non-yielding and yieldable material of said switch plate and concentric with the axis of rotation of the latter, and a plurality of pins of between 0.6 mm. and 0.8 mm. in diameter inserted without play in said apertures and alternately co-acting with said switch, each of said pins being maintained in position by the friction between the surface of the pin and the yieldable material.

2,861,139

BUS DUCT PLUGS WITH COVER OPERATED RETRACTABLE CONTACT FINGERS

Elwood T. Platz and William H. Frank, Detroit, and John A. Herrmann, Grosse Pointe Farms, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Application January 31, 1957, Serial No. 637,575
21 Claims. (Cl. 200—50)



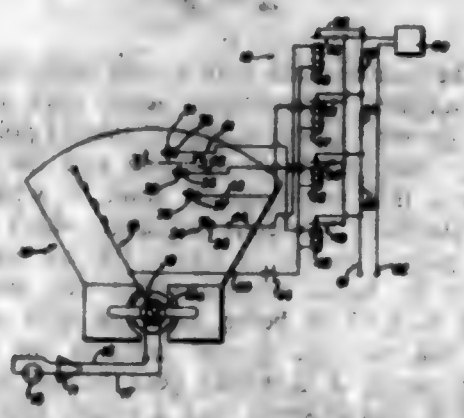
1. A plug-in unit for a bus duct system comprising a plug housing, a first means, a second means and a first control; said first control being operatively and selectively connected to said first and said second means, said first means being comprised of a projecting member and a first positioning mechanism associated with said projecting member to position said projecting member; said projecting member positioned to engage an opening in a duct housing shutter; said plug housing being comprised of a case having an opening and a cover; said cover being comprised of a line side section and a load side section; said second means being comprised of a conducting finger in alignment opposite said case opening and a finger positioning mechanism associated with said conducting finger to retract said conducting finger through said case opening; said first control being comprised of an actuating member operatively mounted to said line side cover section and operatively connected to said finger positioning mechanism and positioned to operatively engage said first positioning mechanism so that opening of said line side cover section will retract said finger and position said projecting member to close a duct housing shutter and when closing said line side cover section said projecting member will open a duct housing shutter and said finger will be projected through said case opening.

2,861,140

GALVANOMETER

Harry M. Woodall and Elizabeth R. Woodall, Akron, Ohio

Application October 3, 1956, Serial No. 613,720
8 Claims. (Cl. 200—56)



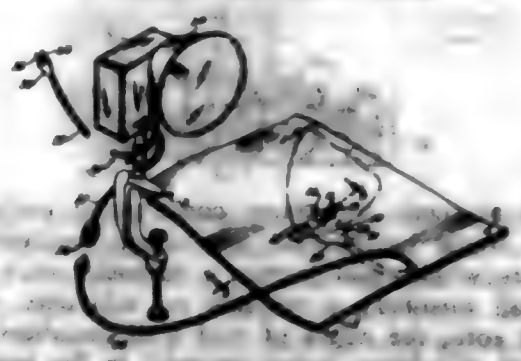
1. An electrical measuring instrument having a dial face and a pointer movable thereacross in response to electrical variations received by said instrument; a plurality of elongate arms arranged in abutted relationship so as to define an aligned longitudinal end that is secured to said pointer for co-extensive projection therewith; said arms being of substantially uniform cross-sectional configuration and varying in longitudinal length whereby the respective projecting ends of said arms are staggered at varying distances from said aligned longitudinal end; and a series of contact points received on said face and being progressively engaged by the staggered projecting ends of said arms upon movement thereof.

2,861,141

IMPACT ACTUATED CIRCUIT CLOSERS, ADJUSTABLE FOR SIMULTANEOUS AND DELAYED ACTION

Ben H. De Bonis, Hicksville, N. Y.

Application January 28, 1957, Serial No. 636,579
2 Claims. (Cl. 200—61.41)



1. An impact-actuated circuit closer comprising a carpet-like member consisting of a pair of sheets of insulating material portions of which are fastened to each other

thin relative to said flange portion whereby to allow

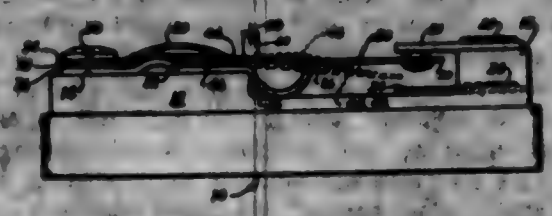
and one of which is placed upon the other, a first conductive member having a main portion located between said sheets and being secured to a first one of the sheets and having also an end portion extending through said first sheet, a second conductive member between said sheets being secured to the first sheet and being in spaced relation to said first conductive member and being obliquely inclined in the same direction as said first conductive member, a first resilient contact extending from that end portion of said first conductive member which is extended through said first sheet, and a second resilient contact secured to said second conductive member and extended through said first sheet, said resilient contacts being bendable and disposed at acute angles to said carpet-like member and having a tendency to be normally in spaced relation to each other and being constructed and arranged for touching each other if an impact is exerted upon an object placed on said carpet-like member.

2,861,142

SNAP SWITCH-LARGE AIR GAP

Carl Herman Millerwise, Trumbull, Conn., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware

Application October 5, 1956, Serial No. 614,115
11 Claims. (Cl. 200—67)



1. In a snap switch: a terminal structure having first and second spaced contact members at one end and a terminal structure at the other end; a contact blade having a contact end disposed between the said contact members, having an opposite terminal end connected to the said terminal structure and said blade being slotted to form first and second bands; first force means acting on said first band near its terminal end tending to urge said contact end of said blade resiliently against said first contact member; second force means acting on said second band near its terminal end tending to prevent said band from moving in the direction of said first force; third force means acting on said second band near its said contact end tending to prevent said band from moving in substantially the opposite direction as said first force; and fourth force means adapted to act on said first band between the said first force means and the contact end of said first band in substantially the opposite direction as said first force so that the contact end of said blade will snap from said first contact member to said second contact member when said fourth force is applied.

2,861,143

STRESSED BLADE SNAP SWITCH

Philip D. Grover, Chicago, Ill., assignor, by mesne assignments, to Anderson Controls, Inc., Des Plaines, Ill., a corporation of Illinois

Application July 25, 1957, Serial No. 674,068
20 Claims. (Cl. 200—67)

1. In a stressed blade snap switch structure, a casing provided with a pair of fixed contacts oriented in spaced apart relation, a spring blade of triangular configuration having an enlarged opening therein defining a base leg and side legs extending from the corners of the base leg and merging to form an apex, a pair of contacts carried by said blade at the apex for engagement with the respective fixed contacts, the base leg of said blade being shortened intermediate the connecting ends of the side legs and also having a reinforced portion more than

modiate said blade contacts and the adjacent end of the blade opening, means for anchoring the blade within the casing adjacent one of said base corners with said apex contacts interposed between said casing contacts, and other means on the casing for applying an actuating force against said blade other base corner, said blade having a normal position within said casing whereby one of said

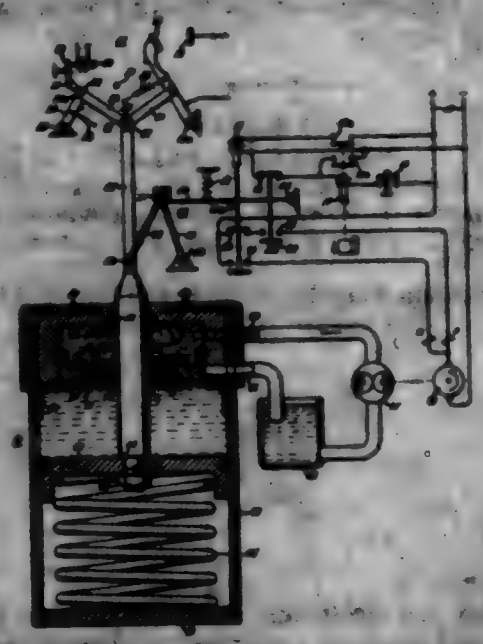
blade contacts normally are in engagement with one of said fixed casing contacts, the forces of stress within said blade being effective to snap the apex thereof into transient position when an actuating force is applied to said other means to engage the other said blade contact with the other of said fixed contacts and to return the blade to its normal position when such actuating force is removed from said other means.

2,861,144

STORED ENERGY TYPE CLOSING DEVICE FOR AN ELECTRIC CIRCUIT BREAKER

John A. Favre, Broomall, Pa., assignor to General Electric Company, a corporation of New York

Application July 8, 1957, Serial No. 670,484
11 Claims. (Cl. 200—82)

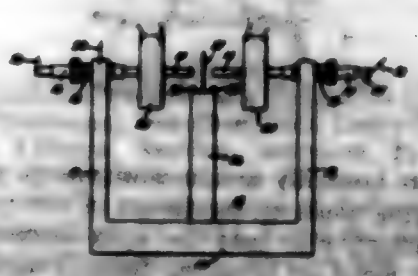


1. In an electric circuit breaker, a chargeable closing spring which is dischargeable to close said breaker, a cylinder, a movable piston mounted within said cylinder and operatively coupled to one end of said spring, means for supplying pressurized fluid to the cylinder space at one side of said piston for driving said piston in a first direction to charge said spring, releasable restraining means for holding said piston in a position to maintain said spring charged, means for subsequently releasing said restraining means to allow said spring to discharge at said one end and drive said piston in a direction opposite to said first direction, means actuated by piston movement in said opposite direction for closing said circuit breaker, a dump passage leading from said cylinder space, pressure valve member blocking flow through said dump passage during charging of said spring, and means operable after completion of said spring-charging operation for moving said valve member out of blocking relation-

duct housing shoulder, said plug housing being comprised ing material portions of which are fastened to each other

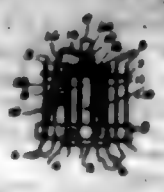
ship relative to said dump passage whereby to allow said spring during discharge to drive said piston in said opposite direction without appreciable restraint from fluid in said cylinder space.

2,861,145
HIGH SPEED RELAY
Paul C. Gardiner, Scotia, and Alfred F. Bischoff, Ballston Spa, N. Y., assignors to General Electric Company, a corporation of New York
Application August 31, 1953, Serial No. 377,356
17 Claims. (Cl. 200—93)



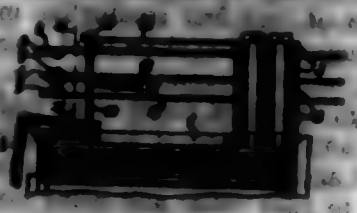
1. A high speed relay comprising a core member, an operating winding for inducing flux in said core member, a contact element carried by and electrically insulated from said core member, a polarizing magnet having one end secured to said core member and the remaining end thereof positioned adjacent an end portion of said core member, an armature movably retained on the free end of said polarizing magnet by magnetic force and responsive selectively to the polarity of current in said operating winding to be attracted toward said end portion of said core member, thereby to engage said contact element, and electrical connections to said armature and said contact element.

2,861,146
PIPE ORGAN RELAY
Samuel G. Bowman, Pittsburgh, Pa., assignor of one-half each to Anna H. Bowman, Mount Lebanon Township, Allegheny County, and James M. Gaskets, Crafton Borough, Pa.
Application May 28, 1954, Serial No. 433,148
4 Claims. (Cl. 200—104)



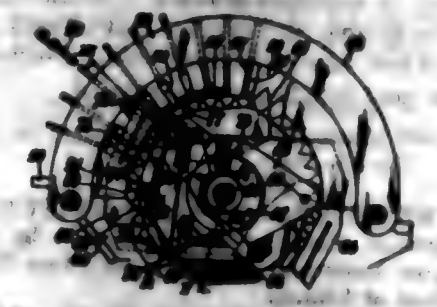
1. A relay for electrically controlled organs comprising a support bearing two rows of spaced conductor fingers electrically insulated from one another, said two rows of fingers extending in opposed spaced relation and the fingers of each row comprising one contact terminal for each circuit of a group of electrical circuits, an electrically conductive contact bar for each row of fingers, each contact bar comprising the other contact terminal for a plurality of the group of circuits for which the associate row of fingers provide the first-mentioned contact terminals, two spaced-apart legs for severally and resiliently supporting said contact bars normally removed from electrical engagement with the associate row of fingers, and electro-magnetically operated means including a member movable with lateral motion relatively to said legs for spreading the legs to carry said bars into positions of electrical union severally with said rows of contact fingers, whereby one contact bar closes a group of circuits simultaneously with the closing of a group of circuits through the other contact bar.

2,861,147
SPRING ARRANGEMENT
Johan Hendrik Coevelt and Hendrik Johannes de Jong, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application October 21, 1955, Serial No. 541,194
Claims priority, application Netherlands
November 3, 1954
3 Claims. (Cl. 200—104)



1. An electric contact arrangement comprising a plurality of contact springs, means mounting said contact springs in superposed relationship, at least one bendable contact spring firmly held in said means at one end thereof, a first electric contact secured to the free end of said bendable contact spring, a second electric contact mounted on an adjacent contact spring, said first electric contact engaging said second electric contact upon movement of said bendable contact spring, a flexible strip secured to said bendable contact spring and extending from the point of fixation freely along said bendable contact spring in the direction of the fixed end of said bendable contact spring, said flexible strip being secured in a manner whereby a free end thereof leans towards said adjacent contact spring, and operating means for engaging said bendable contact spring and movable in a direction substantially perpendicular to the plane of said contact spring, said operating means being provided with an abutment which engages said strip on the side remote from said bendable contact spring, the point of engagement of said abutment with said strip being between said point of fixation of said strip to said bendable contact spring and the fixed end thereof.

2,861,148
MOVABLE SELECTOR MECHANISM WITH FIXED CONTACTS
Nicolaas Scheffer and Pieter Cornelis Willem Sloeff, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application November 7, 1955, Serial No. 545,450
Claims priority, application Netherlands
November 6, 1954
2 Claims. (Cl. 200—165)

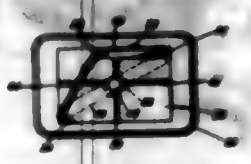


1. A selector mechanism co-acting with a plurality of fixed contacts on a contact bank comprising a wiper carriage adapted to be stopped in a plurality of contact positions, a driving shaft, a disengageable coupling linking said driving shaft with said carriage, a plurality of movable wipers mounted on said carriage, said wipers engaging selected fixed contacts when said carriage is stationary, a spring urging each of said wipers into an operative position in engagement with a selected fixed contact, a pawl device for locking each of said wipers in an inoperative position, a movable inertia member mounted on each

said plates, said exhaust port having a substantially larger able contact mounted on said metal leaf spring inter-

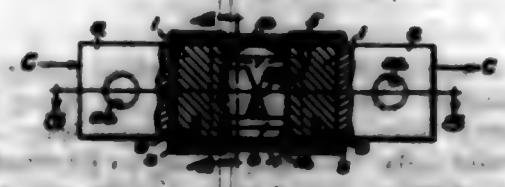
carriage, and yieldable means biasing said inertia member in a clockwise direction, said inertia member being displaced by inertia against said yieldable means relative to the wiper carriage upon stoppage of the latter, said inertia member being operatively coupled to said pawl device whereby said pawl device unlocks said wipers upon the arresting of said wiper carriage.

2,861,149
SNAP ACTION SWITCH
Arthur J. Hollis, Danvers, and Robert E. Shaw, Beverly, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application February 9, 1956, Serial No. 564,455
6 Claims. (Cl. 200—113)



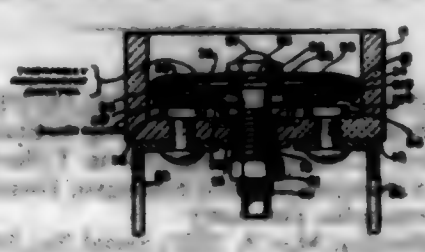
1. A snap action switch comprising: a base; a substantially flat vane of electrically conductive material having a central opening, a concave deformation in a face thereof extending from opposite edges of the vane to said opening, and a convex deformation in the same face extending along a line passing through said opening and disposed generally normal to the concave deformation; electrically conductive means for supporting said vane in spaced relation with said base; means in thermally-expansive relationship with the vane alternately to apply and release vane bending stresses along a line obliquely disposed relative to each of said deformations to effect snapping of the vane between a stress-deformed position in which the vane is bent along the line of said convex deformation and a pre-set restored position in which the vane is bent along said concave deformation; a movable contact mounted on said vane at a point having substantial motion, relative to said base, resulting from said snapping action; a stationary contact fixed to said base in the path of said movable contact for engagement with the latter in the stress-deformed position of the vane and separation therefrom in the restored position of the vane, said stationary contact and said previously-mentioned electrically-conductive means being spaced apart by said base but insulated from each other along a path through said base and a separate terminal on said base in electrical communication with each contact.

2,861,150
FUSE STRUCTURES
Kenneth W. Swain, Hampton Falls, N. H., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Application December 22, 1954, Serial No. 476,936
15 Claims. (Cl. 200—131)



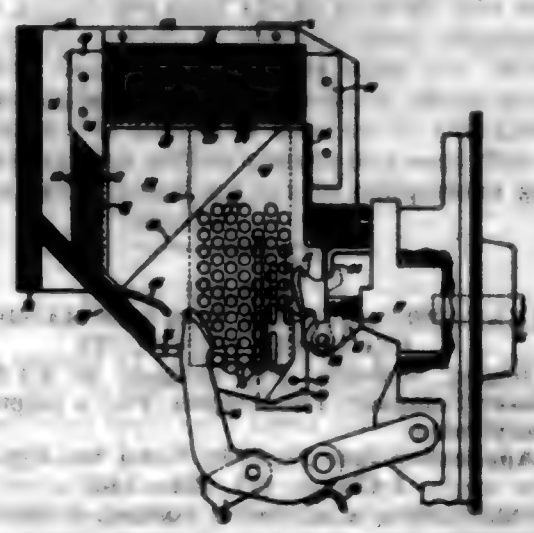
1. A fuse comprising a pair of spaced metallic cylindrical blocks, a plurality of substantially spaced grooves in each of the juxtaposed surfaces of said pair of blocks, a plurality of spacing plates of an electric insulating material inserted into said plurality of grooves to maintain a predetermined spacing between said pair of blocks, fuse link means spaced from said plurality of spacing plates conductively interconnecting said pair of blocks, and a casing of insulating material mounted on said pair of blocks enclosing said plurality of spacing plates and said fuse link means.

2,861,151
TEMPERATURE-CONTROLLED APPARATUS
Robert L. Moore, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 22, 1957, Serial No. 654,137
2 Claims. (Cl. 200—138)



1. In a snap-acting thermostatic switch, a base; stationary contact members carried thereby; a stud carried by said base; a snap-acting bimetallic disc centrally mounted on said stud; a contact disc disposed at the side of said bimetallic disc which faces the stationary contacts, said contact disc being concentric relative to the bimetallic disc and of approximately the same diameter and engageable with the stationary contact members; and an annular member engaging the peripheral portion of the other side of the bimetallic disc, said annular member having fingers extending past the peripheral edges of the two discs and engaging the peripheral portion of the side of the contact disc facing the stationary contacts, said fingers being of such length and shape that they retain the peripheral portions of the two discs in engagement at all times, whereby warping or sagging of the bimetallic disc is prevented.

2,861,152
ELECTRIC CIRCUIT INTERRUPTER
Thomas J. Scully, Bridgeport, Pa., assignor to General Electric Company, a corporation of New York
Application December 13, 1954, Serial No. 474,782
2 Claims. (Cl. 200—144)



1. In a circuit interrupter, an arc chute comprising a first group of transversely-extending, spaced-apart metallic plates stacked along one side of said chute, a second group of transversely-extending, spaced-apart plates stacked along a side of said chute which intersects said one side, a pair of relatively-movable switch parts separable to initiate an arc at a predetermined location within said chute, means extending through a restricted opening in said chute for effecting relative movement of said switch parts, means for propelling said arc into engagement with said groups of plates, said groups of plates being spaced apart to form an exhaust port located in a region of said chute which is generally more remote from said arc initiation point than are the majority of

the other contact bar.

pawl device for locking each of said wipers in an inoperative position, a movable inertia member mounted on each

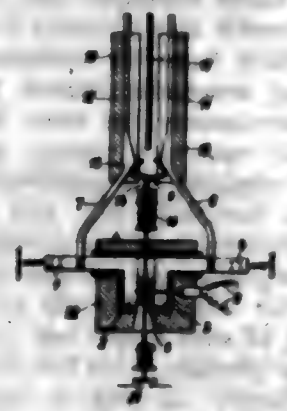
said plates, said exhaust port having a substantially larger effective venting area than the venting area between adjacent plates in each of said groups, and means for inhibiting the flow of arc-generated gases through said restricted opening comprising a series of irregularly-shaped, turbulence-producing recesses formed in the portion of said chute adjacent said restricted opening.

2,861,153

QUICK-ACTION SWITCH DEVICE

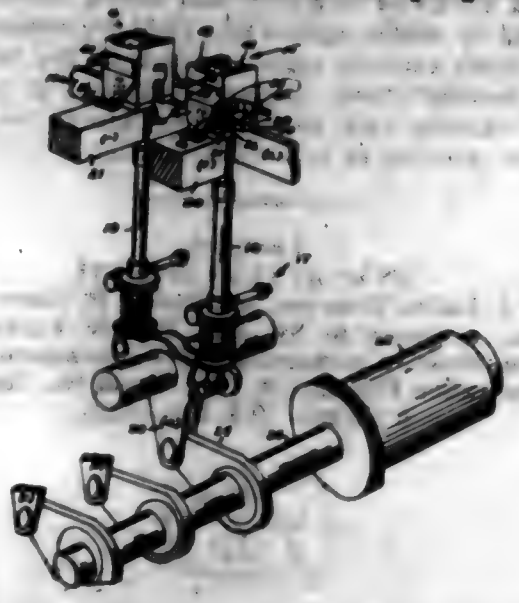
Adil Erk, Braunschweig, and Ludwig Schmitz, Ratingen, Duesseldorf, Germany, assignors to Calor-Emag Elektrizitäts-Aktiengesellschaft, Ratingen, Duesseldorf, Nordrhein-Westphalia, Germany

Application May 9, 1955, Serial No. 506,898
Claims priority, application Germany May 22, 1954
11 Claims. (Cl. 200—146)



1. An electric current quickbreak switching device comprising, in combination, electrically conductive means constituting a main current path, a source for the generation of chemical energy disposed in said main cur-

able contact mounted on said metal leaf spring intermediate said stationary supports; said spring being sub-



stantially flat between said movable contact and said support.

2,861,155

INTERNALLY OXIDIZED ELECTRICAL CONTACT

Frederick R. Furnham and Herbert C. Graves, Jr., Pittsburgh, Pa., assignors to Gibson Electric Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application April 20, 1956
Serial No. 579,462
6 Claims. (Cl. 200—166)

1. An electrical contact comprising an alloy of 85–95% silver, 5–15% cadmium, and zinc present in an amount up to about 50% of the cadmium present, the contact surface thereof containing a mixture of precipi-

rent path, means for releasing said chemical energy from said source, circuit breaking means in said current path associated with said source of chemical energy and adapted for interrupting said main current path upon release of said chemical energy from said source, electrically conductive means forming a current shunt path for bypassing said main current path, contact making and breaking means in said shunt path, and means serving for elongating to the point of rupture arcs arising in said shunt path upon said contact making and breaking means causing interruption of current flow through said shunt path.

2,861,154

LEAF SPRING GUIDE FOR MECHANICAL RECTIFIER CONTACTS

Otto Jensen, Malvern, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Application June 22, 1954, Serial No. 438,414
1 Claim. (Cl. 200—166)

In combination, a stationary contact, a movable contact movable into and out of engagement with said stationary contact, biasing means for biasing said movable contact into contact engagement with said stationary contact, a push rod for operating said movable contact out of engagement with said stationary contact against the action of said biasing means; and means for guiding said movable contact from said disengaged position to said engaged position and preventing both rotation and sliding of said movable contact; said means comprising a metal leaf spring, a housing for said biasing means, said movable contact and said stationary contact; stationary supporting means mounted on said housing and having ends flaring away therefrom, said ends providing stationary supports for the end of said metal leaf spring said spring being rigidly secured to said supports; said mov-

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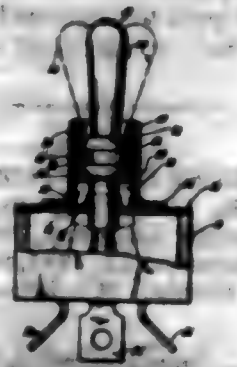
2,861,156

LEVER MOUNT ASSEMBLY FOR TOGGLE SWITCHES

Eugene R. Kulka, Mount Vernon, N. Y., assignor to Kulka Electric Corp., Mount Vernon, N. Y., a corporation of New York

Application October 25, 1956, Serial No. 618,213
8 Claims. (Cl. 200—168)



1. In a toggle switch having a hollow casing, a collar communicating with the interior of said casing and having a central through bore, and a toggle lever extending through said collar bore and having an intermediate ball portion swivelly contained in said collar, the upper end of said bore being shaped to provide an upper swivel seat for said ball portion, that improvement which comprises a member inserted into said collar bore and rigidly held therein for reducing the area of said bore below said ball portion, said member being located to engage the lower surface of said ball portion and to act as a lower swivel seat therefor, and means for holding said member immovably within said bore whereby said member retains said ball portion against downward movement in said bore.

of blocks enclosing said plurality of spacing plates and said fuse link means.

a region of said chute which is generally more remote from said arc initiation point than are the majority of

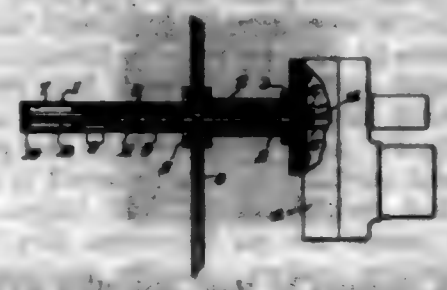
2,861,157
POTENTIOMETER
Kenneth H. Chapple, Binghamton, N. Y., assignor to Link Aviation, Inc., Binghamton, N. Y., a corporation of New York
Application September 16, 1955, Serial No. 534,656
9 Claims. (Cl. 201—48)

1. In a rotary potentiometer having a cylindrical housing, a resistor mounted adjacent the inner wall of said housing, an end wall of said housing carrying a rotary shaft and a wiper contact movable along said resistor by means of said shaft, the combination of an annular insulating track concentrically mounted on said end wall, a resilient spring arm mounted on said track and contacting said resistor, said spring arm being continuously slidable along said track, and means to lock said spring arm at a fixed position along said track.

2,861,158
VARIABLE RESISTOR
Kenneth W. Jarvis, Wauseka, Ill.
Application August 27, 1956, Serial No. 606,487
15 Claims. (Cl. 201—48)

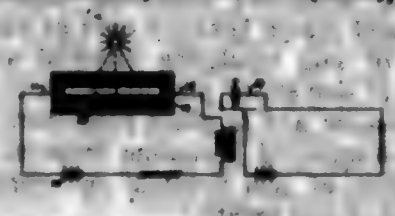
6. A variable resistor comprising a cylindrical hollow container constructed of electrically conducting material having one end provided with a central aperture, a shaft disposed on the axis of the container and rotatably journaled in the aperture in the end thereof, a strip of electrical insulating material having parallel faces and generally parallel edges, said strip being annularly disposed within and adjacent to the periphery of the container, an electrically insulating member disposed between the strip and the container, a plurality of turns of resistance wire disposed about the strip and secured to the faces and one edge thereof, said turns extending outwardly from the other edge of the strip in the region between the strip and shaft and being secured to the strip in parallel spaced apart insulated relationship, a coating of electrical insulating material covering the strip and windings except for a band generally normal to the turns and spaced from the apertured end of the container, a mass of electrical insulating material disposed in the container covering the outwardly extending portions of the windings, and an electrical contact mounted to the shaft slidably abutting the uncoated band of windings.

2,861,159
RESISTANCE PROBE FOR LEVEL CONTROL
John S. Seney, Henrico County, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application August 31, 1953, Serial No. 377,422
5 Claims. (Cl. 201—63)



1. Apparatus comprising an elongated cylindrical heat-conductive housing carrying therein in thermally conductive, electrically non-conductive contact with the inside wall thereof two temperature-sensitive, electrically-conductive coils; a thermally and electrically non-conductive disc-shaped washer supporting the end of the first coil nearest the end of the housing and intervening therebetween; a thermally and electrically non-conductive tube centered in the housing and extending from within the other end of the first coil to the other end of the housing; a heater coil protruding from out of the end of the tube to a location within the first coil but out of contact therewith; a thermally and electrically non-conductive annular washer within and supporting the other end of the first coil about the heater coil; and a pair of thermally and electrically non-conductive annular washers surrounding the tube within each end of the second coil and in contact therewith; electrical leads from the coils passing outside the tube to the other end of the housing; and electrical leads from the heater coil passing inside the tube to the other end of the housing.

2,861,160
MAKING PHOTODETECTORS
Sidney H. Herrk, Washington, D. C.
Application August 26, 1955, Serial No. 530,916
12 Claims. (Cl. 201—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)

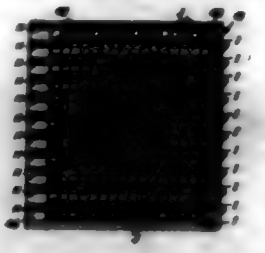


1. The method of photosensitizing a pair of semiconductor crystals having affronting topographically mating faces comprising applying a direct current voltage across the mating faces at increasing potentials until a continuous conduction occurs, terminating voltage application when the crystals are photoconductive, and subsequently supplying a voltage at a lower operating potential to test the sensitivity thereof.

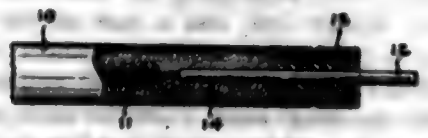
2,861,161
PHOTOCONDUCTIVE TARGET
Norman C. Anderson, Wellesley, Mass., assignor to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
Original application May 5, 1951, Serial No. 224,787, now Patent No. 2,789,193, dated April 16, 1957. Divided and this application February 28, 1957, Serial No. 643,668
1 Claim. (Cl. 201—63)

A photoconductive target comprising a plate-like body structure of electrical insulating material having a relatively large flat surface, a photoconductive coating ap-

plied directly to said large flat surface, said photoconductive coating being separated into relatively long and narrow photoconductive cell sections by long insulating sections having no photoconductive coating, each of said cell sections including a long and narrow grid element, each of said cell sections being divided into photoconductive cell elements by short insulating sections having no photoconductive coating, said short insulating sections extending from said grid element to one of said long insulating sections, and a plurality of connecting pins projecting through said body structure and each contacting one of said small photoconductive cell elements.



2,861,162
METHODS OF CONSTRUCTING SHEATHED ELECTRIC HEATERS
John Van Intbondt, Milwaukee, Wis.
Continuation of application Serial No. 233,196, June 23, 1951. This application May 17, 1956, Serial No. 585,578
5 Claims. (Cl. 201—67)

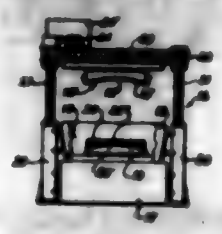


1. The method of making a sheathed electric heater wherein a resistor with a terminal end portion is surrounded by a tubular metal sheath containing granular refractory insulation in which said resistor is embedded, comprising inserting into an end of said sheath prior to filling the same with granular insulating material a plug formed of elastic heat resistant material which is perforated to receive a terminal end portion of the resistor, then filling said sheath to a point adjacent its other end with granular refractory insulating material, and then contracting said sheath laterally over its entire length for compaction of said insulating material and for lateral compression of said elastic plug to anchor the same against axial displacement and to effect permanent sealing thereof with the compacted insulating material, with the peripheral surface of said terminal end portion, and with the inner wall of said sheath.

2,861,163
HEATING ELEMENT
George Asakawa, Yellow Springs, Ohio, assignor, by mesne assignments, to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Application July 11, 1956, Serial No. 597,288
8 Claims. (Cl. 201—72)

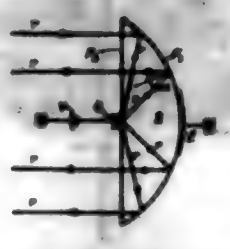
1. An electrical resistance element comprising a wire-like strand of partially conductive material; said strand of material being formed of solid, finely divided electrically conductive particles dispersed in a softenable thermally expansible dielectric material; and a covering of solid sealing material surrounding said strand, said covering material being a non-conductor of electricity; whereby the finely divided particles are caused to develop heat during the passage of an electric current, with said thermally expansible dielectric material undergoing a volumetric expansion so as to increase the spacing between adjacent ones of the finely divided particles in such manner as to control current flow through the strand and thereby limit its heat output.

2,861,164
TOOL FOR ELECTRICAL MACHINING AND THE METHOD OF MAKING AND USING THE SAME
Richard E. Stegler, Stony Brook, N. Y., assignor to Republic Aviation Corporation, Farmingdale, N. Y., a corporation of Delaware
Application May 27, 1955, Serial No. 511,605
11 Claims. (Cl. 219—69)



1. A tool for use in the electrical machining of a workpiece, said tool comprising a body having a contoured surface in flush abutment therewith for producing a complemental contour on the workpiece, a replaceable face element of electrical conductive material formed in exact conformance with the contoured surface of said body and adapted to be removably mounted on said contoured surface, and a layer of insulating material interposed between the adjacent surfaces of said body and said face element.

2,861,165
INFRA-RED EMITTING DEVICE
Pierre Algrain and Claude Benoit a la Guillaume, Paris, France, assignors to Compagnie Generale Telegraphie Sans Fil, a corporation of France
Application May 4, 1954, Serial No. 427,522
Claims priority, application France May 5, 1953
5 Claims. (Cl. 219—34)

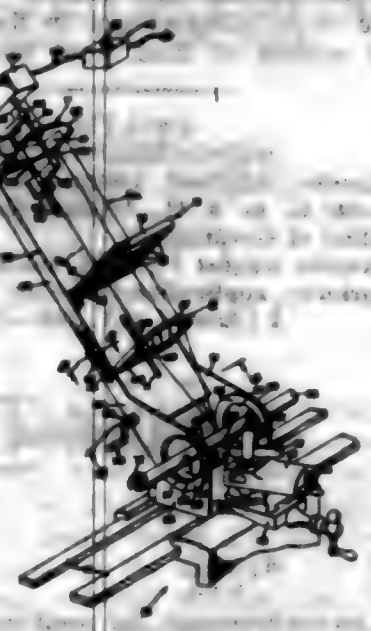


1. Infra-red emitting device comprising in combination: a rectifying body of revolution, made of crystalline semi-conducting material, having a first and a second face; a metallic layer, deposited at least over the portion of said first face surrounding the axis of said body; at the centre of said second face a rectifying contact covering a small area of said face a source of direct current energy and connections from said source to said contacts for creating within said body minority carriers; said first face and said second face forming an optical system whose focus is located at the center of said small area, whereby the infra-red radiations emitted by said area are concentrated in a cylindrical beam in the direction of said axis, after reflexion over said first face and refraction across said second face.

2,861,166
METHOD AND APPARATUS FOR HOT MACHINING
William W. Cargill, Jr., Los Angeles, Calif.
Application March 14, 1955, Serial No. 494,023
18 Claims. (Cl. 219—34)

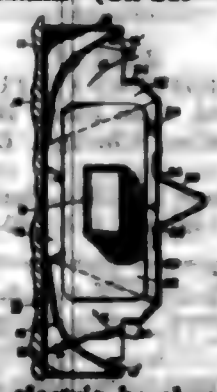
18. Apparatus for hot machining metals, plastics, and similar materials both electrically conductive and elec-

trically non-conductive, which comprises a cutting tool actuating means to effect continuous and controlled movement of said cutting tool and a workpiece relative to each other and along a predetermined path to thereby effect removal by said cutting tool of workpiece material along said path, electric arc means located remote from said workpiece and from said cutting tool, means to control the heat energy emitted from said electric arc means, a parabolic reflector located adjacent said electric arc means to receive radiant heat energy therefrom and transmit said radiant heat energy in a beam to a point remote from said electric arc means, a lens mounted at said point to effect concentration of said beam



and bring said beam to an approximate focus on said workpiece along said path in advance of said cutting tool, and mounting and control means to effect controlled movement of said electric arc means, said parabolic reflector and said lens in relation to the movement of said cutting tool and workpiece to thus maintain the focus of said beam on said path to a predetermined degree and over a predetermined area located a predetermined distance from said cutting tool, thereby insuring controlled heating of said workpiece area and controlled lead time prior to cutting for optimum cutting efficiency and minimum effect upon portions of said workpiece remote from said area.

2,861,167
REVERSIBLE ELECTRIC FIN-TYPE BASEBOARD HEATER
Alwood P. Wick, Portland, Oreg.
Application March 4, 1957, Serial No. 643,783
2 Claims. (Cl. 219—34)



1. In a reversible electric baseboard heater, an open-faced rectangular housing having a rear wall and identical top and bottom walls, a heating element container extending horizontally and centrally along in said housing, brackets mounted on said rear wall of said housing supporting said container, a series of identical vertical fins mounted on said container and extending from the open face of said housing, the rear edges of said fins spaced from said rear wall, the top and bottom ends of said fins spaced equal distances below and above said top and bottom walls respectively of said housing, the front edges of said fins lying in a plane parallel to but spaced in front of the plane of the front edges of said top and bottom walls of said housing, a vertical front cover plate extending over the front edges of said fins and spaced from said front edges, said cover plate supported by said brackets, said cover plate having a central elongated horizontal slot substantially co-extensive with said container and located at the same height as said container, a protruding protector grid extending forwardly from said cover plate opening, whereby to prevent articles of furniture and the like from being brought into actual contact with said cover plate, said protector grid formed with converging top and bottom walls, and a pair of identical reflecting surface members in said housing extending from the front edges of said top and bottom walls respectively to said rear wall, said container, said fins, said cover plate, and said protector grid being symmetrically positioned with respect to the longitudinal center line of said housing, whereby said heater will function with equal efficiency if the position of said top and bottom walls is reversed.

2,861,168
ELECTRIC HEATER PANEL CONTACT STRUCTURE
David Knoll, Bayside, N. Y., assignor to Berko Electric Manufacturing Corporation, Queens Village, N. Y., a corporation of New York
Application May 14, 1957, Serial No. 659,854
6 Claims. (Cl. 219—34)

1. In an electric panel type heater having a conductive panel and electrical connector stripe adjacent at least two edges of said panel, pressure connectors for applying energy to said panel and uniformly bearing against said strips, each connector comprising at least one bowed member of resilient electrically-conductive material, said member having means for attachment to a supporting member with the free end of the bow in slidable contact with said member, an elongated member of conductive material carried at the crest of said bow and at least two electrical contacts carried in spaced relationship by the last said member.

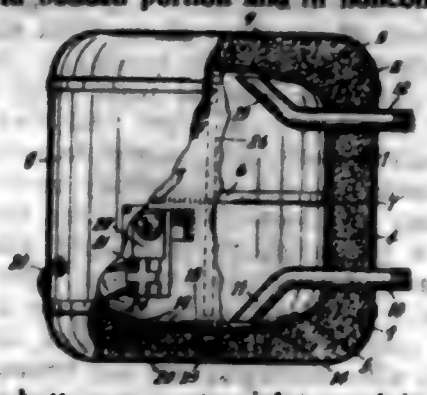
2,861,169
ELECTRIC WATER HEATER
Max E. Bowen and Theodore E. Carlson, Wixom, Mich., assignors to Handling Equipment Manufacturing Corporation, Wixom, Mich.
Application June 6, 1956, Serial No. 590,298
5 Claims. (Cl. 219—38)

1. An electric water heater comprising a cylindrical vertically disposed closed water tank having relatively thin aluminum walls and having convexedly curved top and bottom walls, and annular heating element of a diameter approximately one-half the diameter of the tank and including a tubular aluminum sheath of cylindrical section disposed upon the outer side of the bottom and in contacting engagement therewith and centered relative thereto, a fused aluminum bond filling the recess defined by adjacent annular segments of the sheath and the bottom of the heater and fixedly uniting the sheath to the bottom and providing an annular heat transfer bond of

sources being positioned so that light rays therefrom

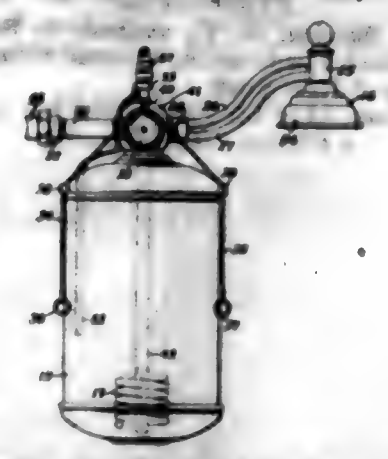
member having a pair of opposed open ends, said cylin-

substantial width for the sheath to the bottom, the sheath having radially disposed terminals at its ends projecting from its said bonded portion and in noncontacting rela-



tion to the bottom, a water inlet conduit discharging against the bottom within the said sheath bonded zone thereof, and a water outlet conduit opening to said tank closely adjacent to the convexedly curved top wall of the tank.

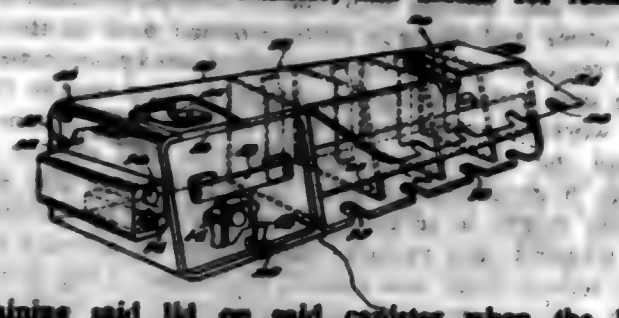
2,861,170
WATER HEATING ATTACHMENT FOR COLD WATER PIPES
Juan C. Lateere Rodriguez, Palmira, Colombia
Application July 31, 1957, Serial No. 675,494
3 Claims. (Cl. 219—39)



2. A portable electric water-heating attachment for cold water pipes comprising, in combination, an electrical water-heating unit; a switch for controlling energization of said unit; a tank surrounding said heating unit; a cold water inlet pipe connectible to a cold water supply pipe and discharging water adjacent said heating unit; said tank being adapted to hold a substantial volume of water which is in direct contact wtih said heating unit; a discharge pipe; a tube directly connecting the upper end of the tank with the discharge pipe; and a single manually operated valve having a by-pass, said valve being connected to the cold water supply pipe and to the tank through said cold water inlet pipe, and also being connected to the discharge pipe, and controlling flow of cold water into the tank and flow of cold water by-passing the tank; the hot water displaced from the tank by the incoming cold water flowing through said tube directly into said discharge pipe and there mingling with any cold water that may be flowing through the by-pass, as permitted by the position of said valve.

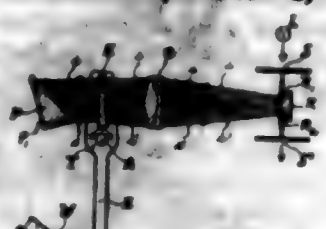
2,861,171
APPARATUS FOR THE PREPARATION OF HOT BEVERAGES
Ronald E. Adler, Highland Park, Ill.
Application June 6, 1956, Serial No. 589,655
3 Claims. (Cl. 219—43)

1. Apparatus for the provision of hot beverages comprising, in combination, an elongated cabinet divided into a series of compartments, a fluids canister removably positioned in one of said compartments, others of said compartments being arranged for dispensing packaged solids, used in preparing hot beverages, an electric heating element for heating the fluid in said fluids canister, a lid on said fluids canister, and means for resiliently



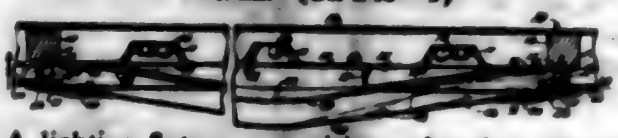
retaining said lid on said canister when the latter is in place in its compartment in the cabinet thereby preventing spilling of fluid from the canister.

2,861,172
MONOCHROMATOR
Walter Mandler, Midland, Ontario, Canada, assignor to Ernst Leitz G. m. b. H., Wetzlar (Lahn), Germany, a corporation of Germany
Application August 17, 1955, Serial No. 604,728
Claims priority, application Germany August 18, 1955
2 Claims. (Cl. 240—1)



1. In a monochromator, the combination of means defining an entrance slit for a beam of light rays, a stationary dispersing prism having a reflective rear face in the path of the rays coming from said entrance slit, a means defining an exit slit in the path of the rays reflected by the rear face of the dispersing prism, an objective positioned in the paths of said rays, the dispersing prism being on one side of the objective and the entrance and exit slits being on the other side thereof, said objective parallelizing the rays coming from the entrance slit and focusing the rays reflected by the rear face of the prism, a glass wedge between said objective and said prism, the objective and the glass wedge being large enough to admit the entire light beam coming to and reflected by the dispersing prism, a pivoted holder mounting said wedge for rotation about an axis perpendicular to the optical axis of the monochromator, said holder including an arm forming a fixed part of and movable with said holder and constituting a pointer, and a scale, said pointer being movable in relation to said scale.

2,861,173
LIGHTING FIXTURE
Robert G. Nordquist, Glen Ellyn, Ill., assignor to Patent License Corporation, Chicago, Ill., a corporation of Illinois
Application June 11, 1956, Serial No. 590,741
7 Claims. (Cl. 240—9)



1. A lighting fixture comprising a housing carrying a plurality of light sources, a first screen in said housing enclosing some of said light sources, and a second screen forming an outer surface of said housing, said first screen being provided with apertures to admit spaced limited fields of light therethrough emanating from the light sources enclosed thereby, said spaced limited fields each being directed against the inner surface of said second screen to be diffused thereby, the remainder of said light

open face of said housing, the rear edges of said fins spaced from said rear wall, the top and bottom ends of

tom of the heater and fixedly uniting the sheath to the bottom and providing an annular heat transfer bond of

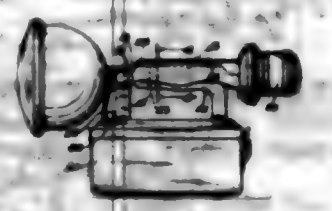
sources being positioned so that light rays therefrom are directed intermediate said screens to provide light rays for reflection by said first screen toward said second screen at least substantially throughout the entire surface thereof, said remainder of light sources being shielded by means forming a part of said fixture to prevent normal direct observance of the same from points outwardly of said fixture.

2,861,174

SIGNAL HAND LAMPS

Cyrus G. Talbot and Joseph F. Talbot, Chicago, Ill.

Application October 2, 1953, Serial No. 383,892
4 Claims. (Cl. 240—10.63)



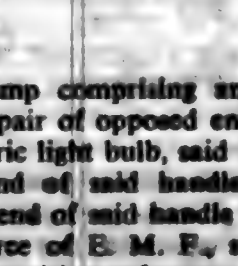
1. The combination with a hand lamp having a frontal standard, a head lamp pivoted to the same, and a handle extending rearwardly from the pivoting zone of the standard; of a bracket attached to the standard in said zone, and a signal lamp carried by said bracket, the bracket being hinged on the pivot of the head lamp and swingable from a folded position over the handle directing the signal lamp rearwardly to an upright position placing the signal lamp high and visible from a distance and all sides.

2,861,175

TROUBLE LAMP

Otto W. Schweikle, Williamsport, Pa.

Application June 14, 1957, Serial No. 665,684
3 Claims. (Cl. 240—54)



1. A trouble lamp comprising an elongated handle member having a pair of opposed ends, an electric light socket for an electric light bulb, said socket being fixedly secured to one end of said handle, means extending through the other end of said handle for connecting said socket with a source of E. M. F., support means, said support means comprising a frusto-conical member having a depending substantially hollow cylindrical split sleeve, said sleeve having the adjacent ends thereof terminating in outwardly extending spaced and confronting tabs, said sleeve being mounted on said socket, means for securing said tabs together to clamp said sleeve against said socket, a plurality of apertures formed in said support member adjacent the junction of said frusto-conical member with said sleeve, a light guard comprising an elongated substantially hollow cylindrical

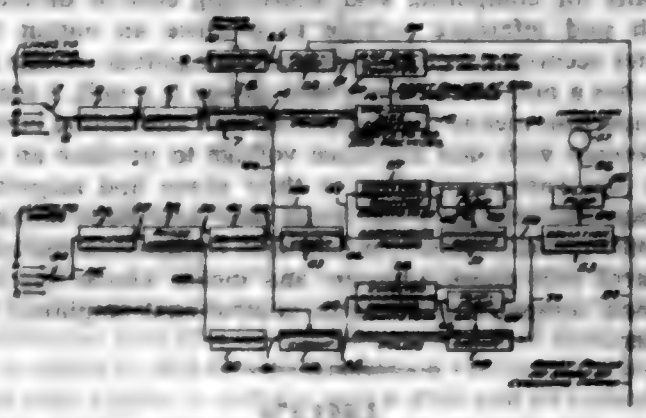
member having a pair of opposed open ends, said cylindrical member being disposed on said support with one of its said ends engaging against said frusto-conical member, means fixedly securing said one end of said guard to said frusto-conical member, said cylindrical member having a window formed in the side wall thereof, a plurality of ribs extending laterally across said window in spaced relation relative to each other, means fixedly securing the opposed ends of said ribs to said cylindrical member, a plurality of ribs extending longitudinally of said window in spaced relation relative to each other, means fixedly securing the opposed ends of said last named ribs to said cylindrical member, said cylindrical member having a pin extending inwardly thereof, said pin being disposed adjacent the other end of said cylindrical member proximate said window, a light reflector, said reflector comprising an elongated substantially hollow cylindrical element having a pair of opposed open ends and an opening formed in the side wall thereof, said cylindrical element having an axially extending groove formed therein immediately adjacent said window at one end thereof, said cylindrical element having an arcuately shaped slot formed therein adjacent the other end of said window, said cylindrical element having a second slot formed therein, said second slot communicating at one of its ends with said first slot and being in open communication at its other end with said opening, said cylindrical element being telescoped within said cylindrical member with said pin being disposed within said first slot to rotatably secure together said cylindrical element and cylindrical member, an annular member fixedly secured to said cylindrical element, and suspension means fixedly secured to said annular member.

2,861,176

AUDIENCE SURVEY SYSTEM

William D. Horn, New York, N. Y., and Mahlon F. Easterling, Teaneck, N. J.; said Easterling assignor to said Horn

Application July 29, 1954, Serial No. 446,536
3 Claims. (Cl. 250—2)



1. Apparatus for determining whether a selected home receiver is receiving the program being broadcast from a designated broadcast station, which comprises a monitor receiver at a survey center adapted to monitor said broadcast station and to derive therefrom an audio signal, means for transmitting to said survey center an audio signal indicative of the audio signal being received by said selected home receiver, means for repeatedly comparing the instantaneous polarities of said audio signals at selected spaced intervals over a predetermined series of sub-sample periods to determine whether or not the polarities agree during each such interval, means including counters responsive to said comparing means for determining the total deviation both plus and minus of the number of polarity agreements during the series of

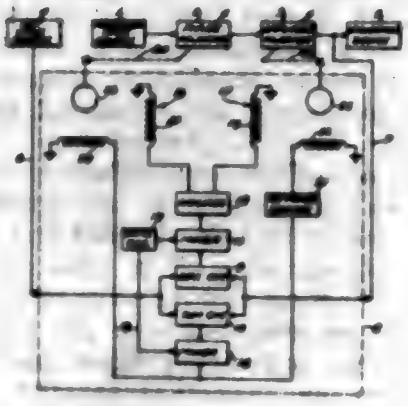
2,861,181

sub-sample periods from 50% of the number of comparisons, and means responsive to said last means producing an indication whenever such total exceeds a predetermined value.

2,861,177
CONTROL SYSTEM FOR CORRECTING PHASE AND AMPLITUDE

Milton Dishal, Nutley, and Jesse S. Le Grand, Woodridge, N. J., George L. Pellegrinelli, New York, N. Y., and Homer W. Marrow, East Orange, and John A. Kochler, Maywood, N. J., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application April 4, 1955, Serial No. 499,846
9 Claims. (Cl. 250—17)



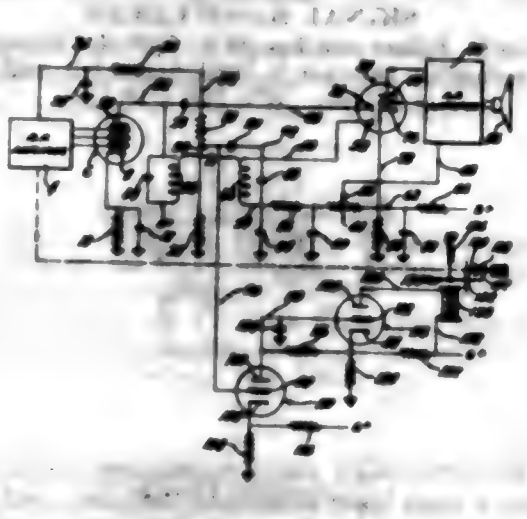
1. An electric system for bringing two waves into close phase and amplitude agreement comprising a source of said waves, a phase adjuster coupled to said source for adjusting the phase of one of said waves, an amplitude adjuster coupled to said source for adjusting the amplitude of one of said waves, means coupled to said source for taking the alternating current difference between said waves, means coupled to said source for deriving a reference voltage from one of said waves, a first comparison means for comparing said alternating current difference with said reference voltage to produce an output that varies according to their phase and magnitude outage and reaches a null when their phase outage is a null, a second comparison means for comparing said alternating current difference with said reference voltage to produce an output that varies according to their phase and magnitude outage and reaches a null when their amplitude outage is a null, means connecting said first comparison means to control said phase adjuster, and means connecting said second comparison means to control said amplitude adjuster.

2,861,178
SIGNAL TUNED RADIO CONTROL

James H. Guyton, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 6, 1952, Serial No. 319,014
4 Claims. (Cl. 250—20)

1. In control means for radio receiving apparatus having high frequency amplifying and coupling means, an automatic volume control circuit and variable tuning means for tuning the receiver over a predetermined band of frequency; driving means connected to the tuning means for driving the same, relay means controlling the driving means, a first multi-element tube connected to the relay to control the same, a control grid for said tube, a source of power, a resistor connected to said source and to the grid to apply a bias voltage thereto, a second multi-element tube having a grid, plate and cathode, conductive means connecting the plate of the second tube to the grid of the first, a condenser connected between the conductive means and ground, means applying an alternating current signal from the high frequency coupling means to the grid of the second tube to produce alternate periods of conduction and non-conduction in said tube at the frequency of the applied current to alternately discharge the condenser and allow it to charge through the resistance, creating an alternating current in the grid circuit of the first tube and lowering the biasing voltage to cut off the first tube and control the driving means, tapped resistor means connected to the automatic

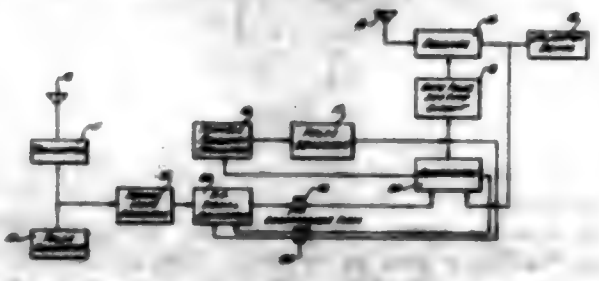


volume control circuit and to ground to develop a bias variable proportionately with signal strength, means connecting a tapped point in the last-named resistor means to the control grid of the second tube in a negative sense to oppose the generation of positive waves by the alternating current, cathode biasing means for the second tube so that no current will flow through the plate circuit of the second tube unless the amplitude of the alternating current waves is sufficient to overcome the bias and delay biasing means connected to said automatic volume control circuit to prevent any restraining action until the signal exceeds a certain strength.

2,861,179
SYSTEM FOR ESTABLISHING INITIAL OPERATION OF PULSE RECEIVER

Don M. Jacob, Los Angeles, Lowell C. Parode, Manhattan Beach, and Ercell E. St. John, Hawthorne, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application April 2, 1954, Serial No. 423,536
3 Claims. (Cl. 250—20)



1. In a pulse transmit-receive system wherein the transmitter and receiver portions are initially at the same location but are to be separated, and wherein the receiver portion is of the type which includes pulse generating means for developing periodically recurring gating pulses; comparing means for comparing received signals with the gating pulses to develop error signals having a magnitude and polarity representative of the portion of the received signals with which the gating pulses coincide, and frequency controlling means responsive to the magnitude and polarity of the error signal for controlling the repetition rate of the gating pulses to effect self-gating of the receiver, apparatus for initially establishing synchronous

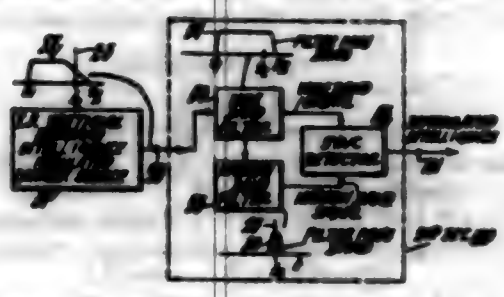
in response to input signal information supplied thereto conduction for said asymmetrically-conducting means,

prising an elongated substantially hollow cylindrical

the number of polarity agreements during the series of

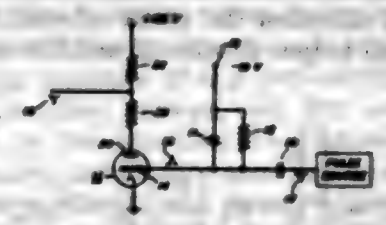
gating of the receiver with the received signal pulses comprising: signal generating means at said transmitter portion for developing cyclic reference signals having a predetermined portion which coincides with the received signal pulses, and control signal developing means at said transmitter portion coupled to said signal generating means and detachably coupled to said pulse generating means for comparing said reference signals with said gating pulses and for developing a direct current control signal having a magnitude and polarity representative of that portion of said reference signal with which said gating pulses coincide, said comparing means being detachably coupled to said control signal developing means for deriving said control signal therefrom, whereby said receiver is gated in synchronism with said predetermined portion of said reference signal.

2,861,180
DETECTOR FOR VESTIGIAL SIDEBAND SIGNALS
Richard W. Sonnenfeldt, Delaware Township, Camden County, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application May 2, 1955, Serial No. 505,184
The terminal fifteen years of the term of the patent to be granted has been disclaimed
3 Claims. (Cl. 250—20)



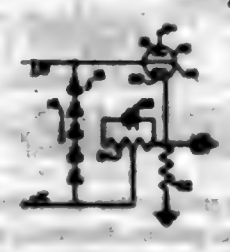
1. In a television receiver adapted to receive a vestigial sideband video signal modulated carrier, the combination of: a first circuit for deriving an intermediate frequency vestigial sideband video signal modulated carrier having carrier and video information components in a predetermined bandwidth; an intermediate frequency amplifier having an input circuit coupled to said signal deriving means and an output circuit, said intermediate frequency amplifier having a bandwidth suitable for the translation and amplification of said intermediate frequency vestigial sideband video signal modulated carrier to said output circuit, said output circuit having an output electrode at which is provided said intermediate frequency vestigial sideband video signal modulated carrier; a wide band circuit having a bandwidth substantially equal to said predetermined bandwidth of said intermediate frequency vestigial sideband video signal modulated carrier; a narrow band circuit having a bandwidth substantially equal to a bandwidth including said carrier and a prescribed range of lower modulating frequency video information components of said intermediate frequency vestigial sideband video signal modulated carrier; means to couple said wide band circuit and said narrow band circuit in series; means to operatively connect said serially connected wide band and narrow band circuits to said output electrode of said amplifier device; and synchronous detection means operatively connected to said wide band circuit and to said narrow band circuit whereby demodulation of said video information is caused by employing the carrier and the lower modulating frequency video information components provided by said narrow band circuit to synchronously demodulate said intermediate frequency vestigial sideband video signal modulated carrier provided by said wide band circuit.

2,861,181
DELAY CIRCUITS
Everett T. Burton, Millburn, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 1, 1953, Serial No. 358,925
1 Claim. (Cl. 250—27)



An electrical circuit comprising a space discharge device having at least cathode, anode and control electrode means, means applying a bias voltage to said control electrode to maintain said space discharge device nonconducting to electric current, impedance means comprising a diode and resistor in parallel arrangement connecting said bias voltage means to said control electrode, a source of negative input pulses, a capacitor connecting said pulse source to said control electrode, said capacitor being of sufficiently small size relative to said impedance means that input pulses from said source charge said capacitor to a potential substantially equal to the amplitude of said input pulses, said capacitor upon termination of a said input pulse discharging through said impedance to drive said space discharge device into a condition for current conduction, and load means connected to said space discharge device.

2,861,182
LOGARITHMIC CONVERTER CIRCUIT
Milton Green, Little Silver, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application June 16, 1953, Serial No. 362,171
2 Claims. (Cl. 250—27)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A logarithmic converter comprising first and second input terminals, a source of input current applied to said terminals, a plurality of non-linear impedance devices connected in series across said input terminals and having a continuous path of easy electron current flow from said first terminal to said second terminal, a vacuum tube having at least a plate, a cathode, and a grid, and its cathode-to-plate electron current path opposite to said easy electron current flow, said first terminal being connected to said grid, and bias means in circuit with said second terminal and said cathode for operating said tube as a non-linear impedance over a predetermined range of said input current whereby the current output of said tube is proportional to the logarithm of said input current.

2,861,183
ELECTRONIC SWITCH MODULATOR
Robert Emmett Leahy, Hicksville, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application December 31, 1954, Serial No. 479,885
10 Claims. (Cl. 250—37)

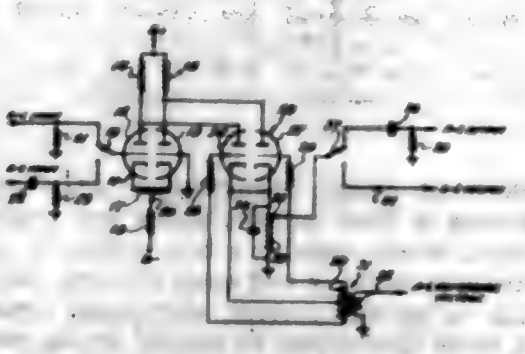
1. An electronic modulator, comprising signal information supply means, means having first and second output circuits for providing a differential voltage therebetween

nals pulse responsive means, the non-gaseous electron number of subatomic particles passing through an object

multi-element tube having a grid, plate and cathode, conductive means connecting the plate of the second tube

rate of the gating pulses to effect self-gating of the receiver, apparatus for initially establishing synchronous

in response to input signal information supplied thereto from said supply means, a balanced pair of vacuum tubes each having a plate, grid and cathode, means coupled to the grids of said tubes for supplying a push-pull reference voltage thereto for alternately biasing one tube and then the other below cut-off, said last-named means being isolated and separate from said signal information supply means, means coupling the plates of said tubes to said first and second output circuits of said first-named means,



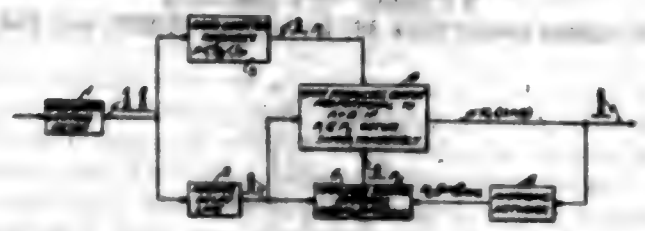
respectively, for receiving said differential voltage therefrom, means coupling the cathodes of said tubes together, and load impedance means coupled between said cathodes and ground for providing an output voltage thereacross whose magnitude is a predetermined function of said input signal information, said push-pull reference voltage supplying means having an electrical mid-point connected between said load impedance means and the cathodes of said pair of vacuum tubes.

2,861,184

PULSE PAIR DETECTOR

Ben Alexander, Nutley, and John F. Sullivan, Bloomfield, N. J., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application April 4, 1955, Serial No. 498,834
8 Claims. (Cl. 250—27)



2. A detector for pulse pair signals having a given time spacing between the pulses thereof, comprising a source of pulse signals, means coupled to said source to produce a first signal when the ratio of the amplitudes of any two succeeding pulses is within predetermined limits, means coupled to said source to produce a second signal corresponding to the addition of the amplitudes of any two succeeding pulses having said given time spacing, means, including an output circuit, for producing pulse energy upon coincidence of said first and second signals and means to apply said first and second signals to said output circuit.

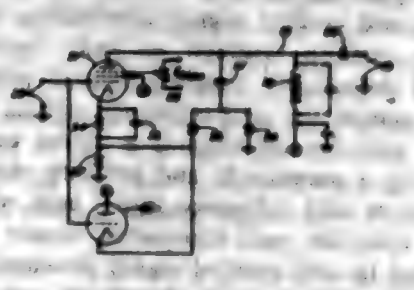
2,861,185

COMPENSATED PLATE TYPE LIMITER

Andrew L. Hopper, Summit, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application January 27, 1956, Serial No. 561,896
6 Claims. (Cl. 250—27)

1. In combination, a source of signals subject to undesired amplitude variations, means for reducing said variations comprising a wave translating circuit having an input and an output, means for applying said signals to said circuit input, asymmetrically-conducting means shunting said circuit output, means included in said wave translating circuit for establishing a threshold level of conduction for said asymmetrically-conducting means, cathode follower means supplied with said signals for applying to said asymmetrically-conducting means an in-phase portion of said input signal thereby to alter con-



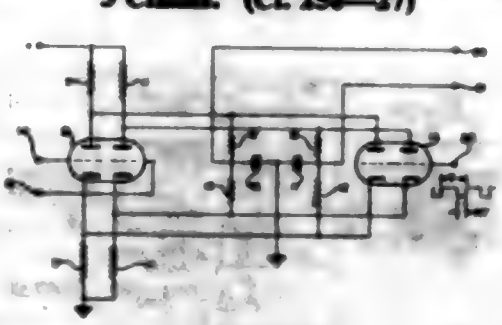
tinuously said pre-established threshold level in accordance with cyclic level changes in said input signals, and means for varying the degree of alteration of said threshold level.

2,861,186

SIGNAL ATTENUATING CIRCUIT

Bruno Rossi, Santa Fe, N. Mex., Henri S. Sack, Ithaca, N. Y., Albert C. Beer, Silver Spring, Md., and Howard W. Boehmer, Ithaca, N. Y., assignors to the United States of America as represented by the Secretary of the Navy

Application February 1, 1946, Serial No. 644,970
3 Claims. (Cl. 250—27)



1. A signal attenuator comprising, in combination, first and second electron tubes, said tubes being connected in parallel, plate to plate and cathode to cathode, and having a common cathode resistor, a storage capacitor in the plate circuit of said first electron tube, means for coupling an input signal to the control grid of said first tube and means for coupling a switching signal having a period T to the control grid of said second tube, said switching signal having a negative portion during which said second electron tube is held nonconducting and the voltage level across said storage capacitor follows the amplitude of the input signal and a positive portion during which said second tube is held sufficiently conducting to cut off said first electron tube by the blocking bias developed across said common cathode resistor and to permit said storage capacitor to discharge therethrough to a voltage level determined partially by the length of time said second electron tube is held conducting whereby the amplitude of the voltage wave produced across said storage capacitor is related to the amplitude of the input signal as the negative portion of said switching signal is related to the period T of said switching signal.

2,861,187

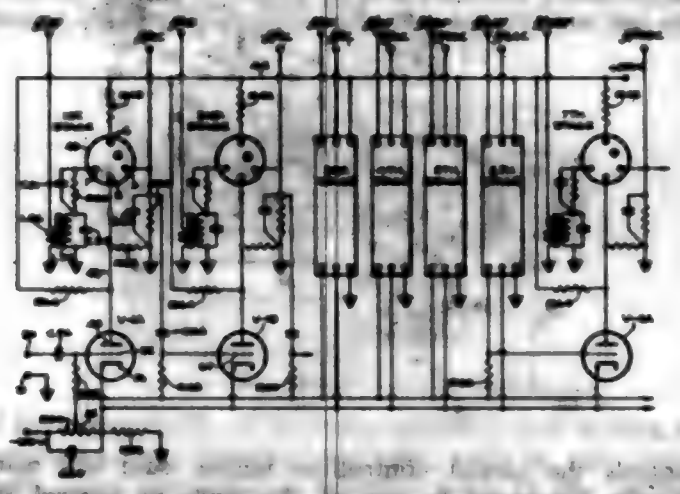
FREQUENCY DIVIDER

Philip Joseph De Vin, Chicago, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware

Application September 5, 1956, Serial No. 606,118
3 Claims. (Cl. 250—36)

3. In a multi-stage cascaded frequency divider, in which each stage comprises a gas tube circuit responsive to alternate pulses supplied thereto, and in which there is included in each stage a non-gaseous electron discharge device for supplying pulses to the gaseous alter-

nals pulse responsive means, the non-gaseous electron discharge device for the first stage being connected to an external source of pulses, the non-gaseous electron discharge device for the subsequent stages being connected to receive, sharpen, and amplify pulse signals derived from the gas tube of the preceding stage to amplify the



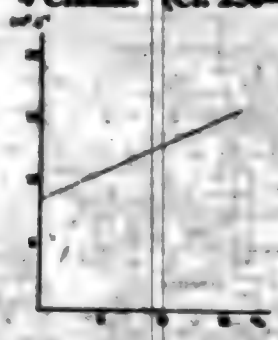
latter, and connections from the non-gaseous device to supply controlling pulses to the gaseous tube of the following stage, whereby the output of each gaseous alternate pulse responsive circuit is amplified to provide a pulse of sufficient amplitude reliably to trigger the following alternate pulse responsive gaseous tube circuit.

2,861,188

COAL TESTING METHOD

Hendrik Dijkstra, Geleen, Netherlands, assignor to Stamicarbon N. V., Heerlen, Netherlands

Application March 5, 1954, Serial No. 414,375
Claims priority, application Netherlands March 7, 1953
4 Claims. (Cl. 250—83)



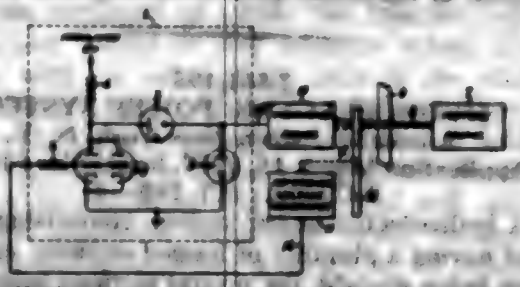
1. A method of testing coal to determine the ash content thereof, comprising the steps of subjecting the coal to X-ray radiation composed substantially entirely of rays having a wave length greater than 1.74 A. U., and measuring the X-ray absorption capacity of the coal, the X-ray absorption capacity being empirically related to the ash content.

2,861,189

PRECISION LIMITER CIRCUIT FOR A RADIATION-TYPE GAUGE

Stanley Bernstein, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application April 29, 1954, Serial No. 426,432
14 Claims. (Cl. 250—83.3)



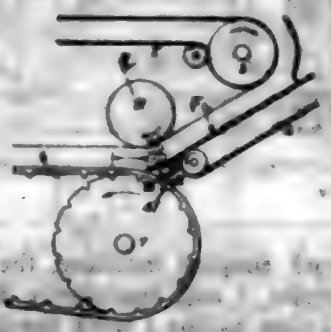
8. A radiation-type gauge comprising measuring means for producing a first alternating voltage related to the number of subatomic particles passing through an object and also for measuring any inequality between two voltages applied thereto, means for producing a second alternating voltage 180° out-of-phase with said first alternating voltage, impedance means connected to said measuring means, first switch means interconnecting said impedance means and a source of regulated, direct current potential, and second switch means connected in shunt across both said first switch means and said impedance means and being receptive of and periodically pulsed by said second alternating voltage, said first switch means being operated by the operation of said second switch means and thereby periodically applying said direct current potential to said impedance means to produce a third alternating voltage across said impedance means that is 180° out-of-phase with said first alternating voltage, said measuring means measuring any difference between said first and third alternating voltages.

2,861,190

MACHINES FOR MANIPULATING CUT TOBACCO

Desmond Walter Molins and Gordon Francis Wellington Powell, Deptford, London, England, assignors to Molins Machine Company, Limited, London, England, a British company

Original application March 15, 1954, Serial No. 416,374, now Patent No. 2,800,131, dated July 23, 1957. Divided and this application July 13, 1955, Serial No. 521,596
3 Claims. (Cl. 250—83.6)



1. In apparatus for measuring the mass of a length of moving tobacco filler by subjecting the length to rays from a radioactive source of penetrative radiation, the combination with means for feeding tobacco filler in a predetermined path having a bend, of a source-gap-chamber detecting device located at the bend for measuring the mass of a length of the moving filler, said device including an ionization chamber located at the inner side of the bend of said path, said chamber comprising a rotatable hollow member having a circular periphery forming the outer electrode of the chamber and positioned to engage with and guide the filler being detected, and an inner electrode, means for effecting electrical connections with the electrodes, and means for rotating the chamber in a direction to cause the periphery of said hollow member to move with the filler at the point of engagement thereof.

2,861,191

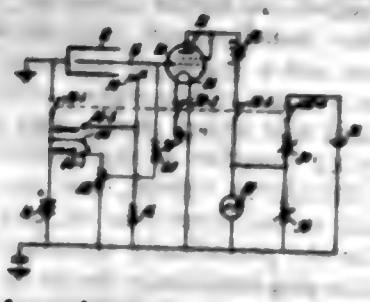
RADIATION DETECTOR

Stanley Kuo Sun Chan, Cambridge, and Hugh F. Stoddart, South Sudbury, Mass., assignors, by mesne assignments, to Baird-Atomic, Inc., a corporation of Massachusetts

Application April 12, 1956, Serial No. 577,771
7 Claims. (Cl. 250—83.6)

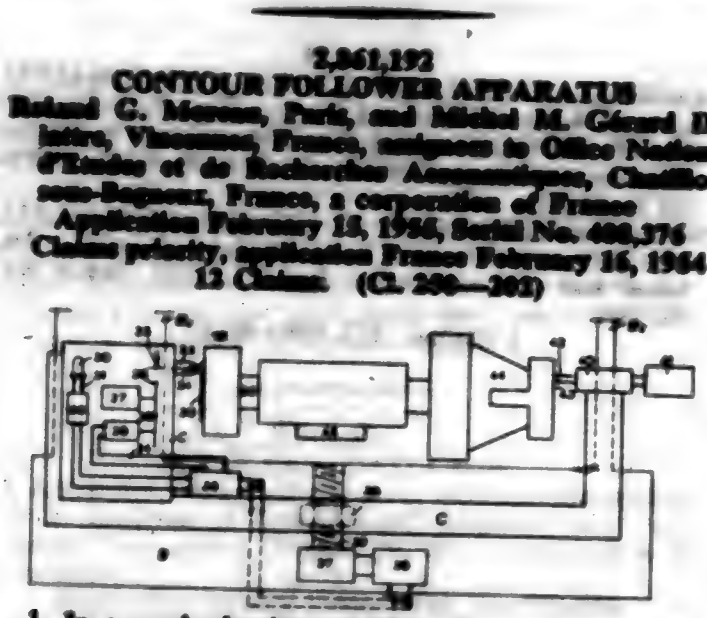
1. A radiation survey instrument comprising an ionization chamber, vacuum tube means having a plate, cathode and grid, said grid being connected to one terminal of said ionization chamber, resistance means connected between said grid and said cathode, calibrating means including a switch for connecting in one switch position a predetermined voltage to said resistance means to establish a predetermined calibrating grid current and

for disconnecting said voltage in a second switch position to provide a grid current greater than said minimum grid current responsive to the ionization of said chamber, and compensating means adjacent said one terminal for



compensating the voltage charge on said grid produced in said one switch position by said calibrating means when said switch is moved to said second position to read the state of ionization of said chamber.

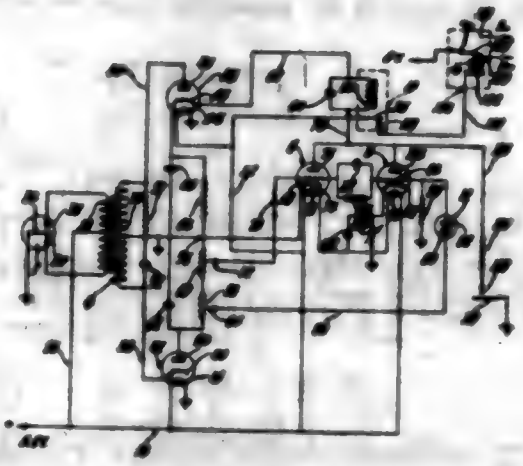
2,861,192
CONTOUR FOLLOWER APPARATUS
Roland G. Moreau, Paris, and Michel M. Gérard Delattre, Vincennes, France, assignors to Office National d'Etudes et de Recherches Aeronautiques, Chatillon-sous-Bagneux, France, a corporation of France
Application February 15, 1956, Serial No. 400,376
Claims priority, application France February 16, 1954
12 Claims. (Cl. 290—202)



1. In a work shaping machine, the combination of a workpiece carrier, a tool operatively displaced relative to said carrier, a plan having a work shaping contour formed thereon by a tracing contrasted to the background of said plan, means for producing a light beam correlative to the contrast of said tracing to the said background, tracking means, including a microscope and a photo sensitive device for developing a signal in response to an incident light beam, a rotary modulator the operational boundary of which is symmetrical in relation to its rotational axis for cyclically interrupting said incident light beam at a predetermined rate, means for developing a control signal correlative to said interrupted incident light beam, a phase discriminator operatively connected to said control signal developing means for producing an unidirectional output signal having a polarity indicative of the phase relationship between said control signal and a reference signal, motor-generator means for driving said rotary modulator at said predetermined rate and for feeding a reference signal correlative to said rate to said phase discriminator, and coupling means operatively interposed between said workpiece carrier and said tool, said means including a bi-directional motor responsive to the polarity of said unidirectional output signal for effecting a displacement of said tool relative to said carrier correlative to the shaping contour on said plan.

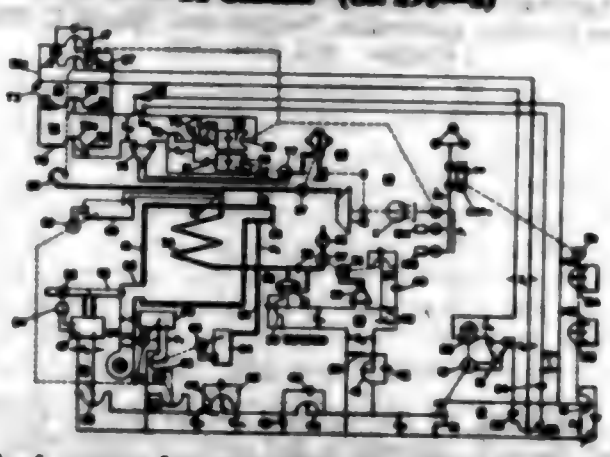
2,861,193
LIGHT SENSITIVE CONTROL CIRCUIT
Charles W. Miller, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 28, 1954, Serial No. 426,128
8 Claims. (Cl. 250—214)

1. In a control system, a light sensitive cell, a plurality of electronic amplifiers each having a control grid and plate, a source of electrical power, circuit controlling means connected to said source and to the plates of said amplifiers, the latter being connected in parallel relation so that the combined flow through the amplifiers



controls the circuit controlling means, said cell being directly connected to one of the grids to control the potential thereof, and impedance means interconnecting the grids so that voltage changes on one will be transferred to another in timed relation.

2,861,194
CONTROL SYSTEMS FOR ELECTRICAL GENERATING UNITS
Edward S. Bristol, Philadelphia, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Application January 26, 1956, Serial No. 561,408
21 Claims. (Cl. 290—2)

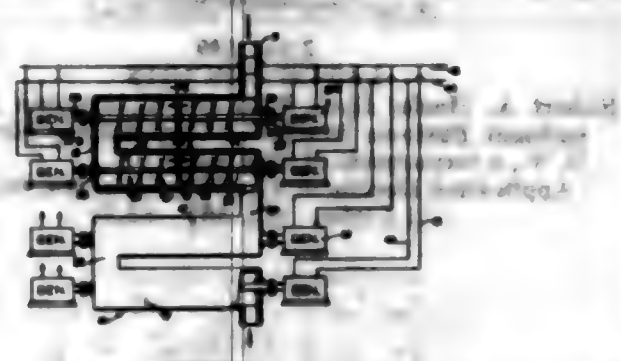


1. A system for controlling the output to an electrical distribution network of a generating unit comprising an electrical generator, a prime mover therefor and a vapor generator for supplying vapor to said prime mover; said system comprising means for producing a signal representing the electrical generation required of said unit, means responsive to said signal for correspondingly varying the heat input to said vapor generator, and means responsive to the pressure of said vapor for correspondingly varying the rate of supply of vapor to said prime mover to maintain a predetermined vapor-pressure/electrical-output relation both under constant and varying conditions of electrical generation required of the unit.

2,861,195
HYDROELECTRIC POWER SYSTEM
Alexander Safanov, New York, N. Y.
Application March 15, 1957, Serial No. 646,291
9 Claims. (Cl. 290—4)

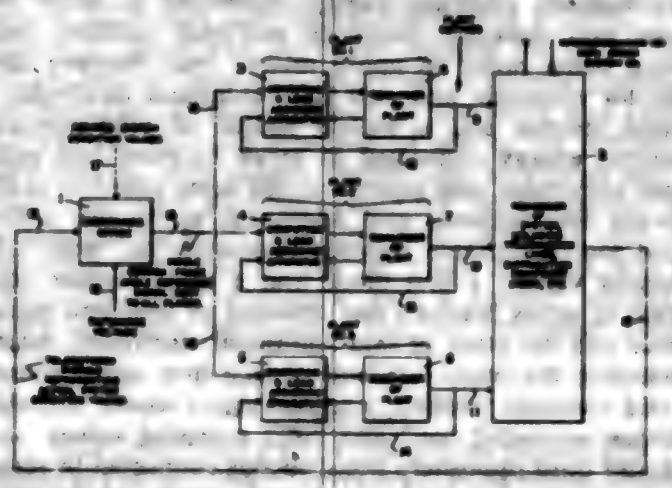
1. A hydroelectric power system, comprising a sinuous conduit having a plurality of looped sections, each of said sections being straight, the several sections being disposed parallel to each other, each of said sections being cylindrical in form, a rotor axially disposed in each of said

sections, said rotor including two independently rotatable members, each of said members being a sleeve shaft with a plurality of spaced blades mounted thereon, said blades having vanes twisted so that water passing through each pipe section rotates one rotor member in one direction and the other rotor member in an opposite direction, a spider centrally disposed in each of said sections, a pair of stationary shafts respectively extending axially into one end



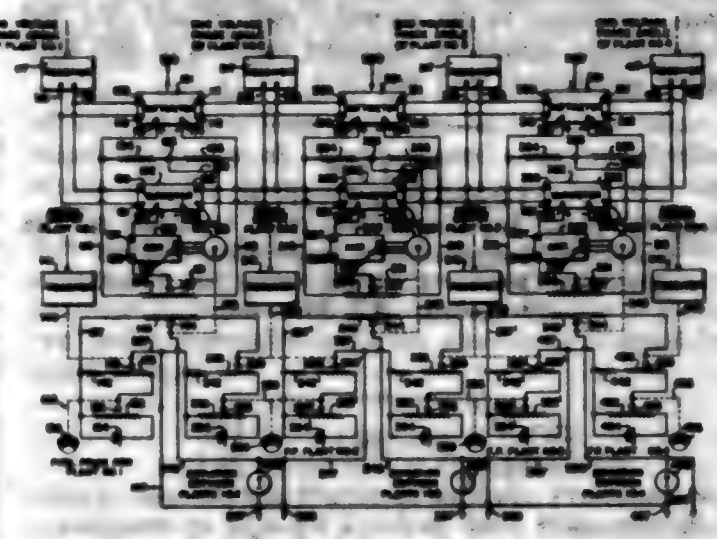
of the sleeve shafts of the rotor members and serving as journal bearings therefor, the other ends of said sleeve shafts being journaled in opposite walls of the conduit and extending therefrom, and a plurality of electrical generators, each generator having a shaft in axial alignment with the sleeve shafts of a pair of rotor members, each of said generators having wires connected to a pair of bus bars for delivering electrical energy thereto.

2,861,196
LOAD ASSIGNING APPARATUS FOR ELECTRIC POWER SYSTEMS
William R. Brownlee, Birmingham, Ala.
Application January 7, 1957, Serial No. 632,807
17 Claims. (Cl. 307—57)



12. Apparatus for determining the output to be assigned to a generating plant in a power system to cause the plant to be in economic balance with respect to a system reference point, comprising means arranged to produce an effect having a value which is a function of the phase angle between the bus voltage of said plant and a reference voltage, a bridge circuit adapted to be energized and having impedance means located in two adjacent bridge arms, a contact forming a first output terminal of said bridge and arranged to be adjusted along said impedance means in accordance with the value of said effect, means arranged to adjust the effective value of said impedance means in said adjacent bridge arms in accordance with the value of the ratio of the reactance to the resistance of the transfer impedance between said plant and said reference point, the potential of said contact being representative of the value of the incremental transmission loss between said plant and said reference point, a first adjustable impedance device located in a third arm of said bridge and arranged to be adjusted in accordance with an arbitrary reference generating cost for said reference point, a second adjustable impedance device located in the fourth arm of said bridge, the junction between said first and second impedance devices forming a second output terminal of said bridge, and means responsive to the bridge unbalance potential between said bridge output terminals and arranged to adjust the output of said plant and to adjust said second impedance device as required to rebalance said bridge and to cause the potential of said junction to be representative of the value of the incremental generating cost for said plant relative to said reference point, whereby said plant will operate in economic balance with respect to said reference point.

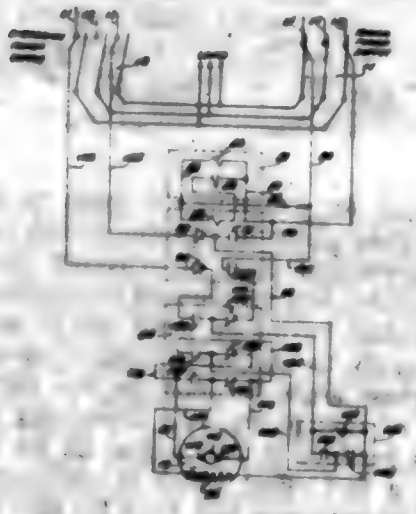
2,861,197
MEASURING AND CONTROLLING APPARATUS
William R. Brownlee, Birmingham, Ala.
Application January 7, 1957, Serial No. 632,917
19 Claims. (Cl. 307—57)



8. Apparatus for assigning the loads to the interconnected generating plants of a power system in accordance with the incremental costs of delivered energy for the plants, comprising first incremental transmission loss ratio computing means having an input and an output, means adapted to apply to said input signals representative of the actual phase angle between the bus voltages of first and second of said plants, said computing means being operative to produce in said output on the basis of said phase angle a first effect which is representative of the incremental transmission loss ratio for said first and second plants, first incremental generating cost ratio computing means having an input and an output, means adapted to apply to the last mentioned input effects representative of the generating cost and output of each of said first and second plants, the last mentioned computing means being operative to produce in the last mentioned output a second effect which is representative of the incremental generating cost ratio for said first and second plants, means operative to coordinate the incremental transmission losses and the incremental generating costs for said first and second plants, including comparison means operative to compare said first and second effects and to produce a first output signal representative of the extent and direction of any deviation between said ratios, and hence representative of the incremental cost of delivered energy for said second plant relative to said first plant, second incremental transmission loss ratio computing means having an input and an output, means adapted to apply to the last mentioned input signals representative of the actual phase angle between the bus voltages of said second and a third of said plants, the last mentioned computing means being operative to produce in the last mentioned output on the basis of the last mentioned phase angle a third effect which is representative of the incremental transmission loss ratio for said second and third

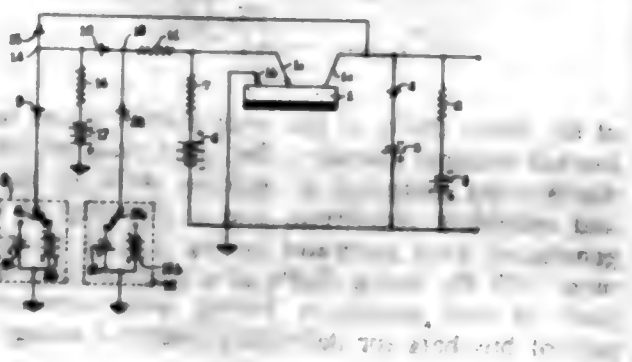
plants, second incremental generating cost ratio computing means having an input and an output, means adapted to apply to the last mentioned input effects representative of the generating cost and output of each of said second and third plants, the last mentioned computing means being operative to produce in the last mentioned output a fourth effect representative of the incremental generating cost ratio for said second and third plants, means operative to coordinate the incremental transmission losses and the incremental generating costs for said second and third plants, including comparison means operative to compare said third and fourth effects and to produce a second output signal representative of the extent and direction of any deviation between said ratios for said second and third plants, and hence representative of the incremental cost of delivered energy for said third plant relative to said second plant, means responsive to said first output signal for assigning the load to said second plant in accordance with said first output signal, and means responsive to the algebraic sum of said first and second output signals for assigning the load to said third plant in accordance with said sum.

2,861,198
TRANSFER SWITCH
Steven W. Soos, Jr., Brecksville, Ohio, assignor to The Controllix Corporation, a corporation of Ohio
Application October 17, 1956, Serial No. 616,431
19 Claims. (Cl. 307—64)



19. In a transfer mechanism, first and second circuit breakers each including an actuating mechanism for operating the breaker between two operative conditions, a rotatable member reciprocable about an axis between first and second positions, a pair of angularly spaced elements carried by said rotatable member, first and second actuating members on opposite sides of said rotatable member limited to movement between two positions for actuating said breakers between said conditions, means pivotally mounting said actuating members for pivotal movement in planes perpendicular to said axis with the median position of said actuating members between their said positions lying along a line perpendicular to said axis, the end of each of said actuating members adjacent said rotatable member extending into the path of one of said elements and the other ends of said actuating members being operatively connected to the actuating mechanisms for said circuit breakers, said elements engaging first sides of said actuating members for moving the latter upon rotation of said rotatable member from said first position to said second position to actuate each of said breakers to one of its conditions and other sides of said actuating members for moving the latter upon rotation from said first position to said second position to actuate each of said breakers to the other of its conditions, said actuating members comprising yieldable members engaged by said elements to permit the elements to move thereby when the actuating members reach the limit of their movements about their pivots, and a reversible motor for reciprocating said rotatable member.

2,861,199
LATCH CIRCUITS
Robert A. Heule, Hyde Park, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 31, 1953, Serial No. 401,638
1 Claim. (Cl. 307—88.5)



A latch circuit comprising a single transistor including a semi-conductive body, a collector electrode and two additional electrodes, all in asymmetrically conductive electrical contact with said body, means directly conductively connecting one of said additional electrodes to a common junction, a load resistor and a first source of unidirectional electrical energy connected in series between said collector electrode and said junction, said source being poled to apply reverse bias between said collector electrode and said one additional electrode, a second resistor and a second source of unidirectional electrical energy connected in series between said additional electrodes, said second source being poled to apply forward bias between said additional electrodes, a first signal source shiftable between separated "on" and "off" potential values, a first diode and a third resistor connected in series between one terminal of said first signal source and the other of said additional electrodes, means connecting the other terminal of said first signal source to said common junction, a second signal source shiftable between separated "on" and "off" potential values, second and third oppositely poled diodes connected in series between one terminal of said second source and the junction between said first diode and said third resistor, and means connecting the opposite terminal of said second signal source to said common junction, each said signal source cooperating with said second and third resistors to tend to shift the potential of said other additional electrode with respect to said common junction between "on" and "off" values corresponding to the "on" and "off" potential values of the sources, said transistor being effective when said other additional electrode is at its "on" and "off" values to produce corresponding "on" and "off" stable output conditions at the collector electrode, a fourth diode, said fourth diode only being direct current conductively connected between said collector electrode and the common junction of said second and third diodes, said fourth diode cooperating with said second and third resistors to transmit to said other additional electrode "on" and "off" direct potential values corresponding to the "on" and "off" output conditions at the collector electrode, and being effective when the circuit is in its "on" output condition to maintain said circuit stably in said "on" output conditions until both said signal sources are simultaneously shifted to their "off" potential values.

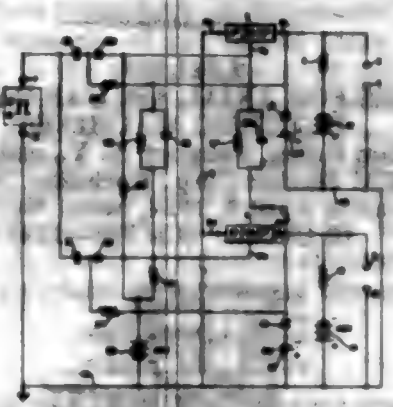
2,861,203

2,861,200

TRIGGER CIRCUITS EMPLOYING JUNCTION TRANSISTORS

Robert A. Henle, Hyde Park, Raymond W. Emery, Poughkeepsie, George D. Bruce, Wappinger Falls, and Olin L. Mac Sorley, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application September 30, 1954, Serial No. 459,381
14 Claims. (Cl. 307—88.5)



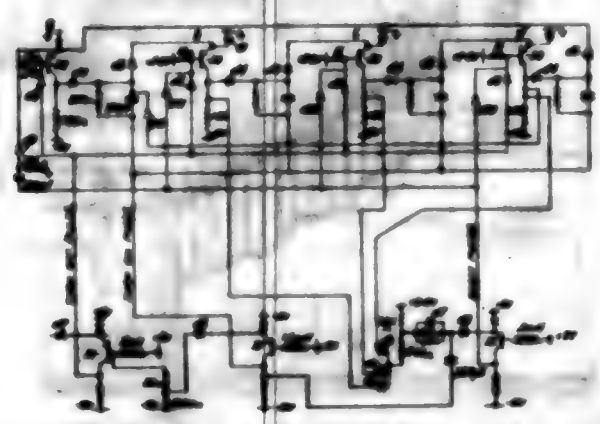
1. A trigger circuit comprising two junction transistors, each having an emitter electrode, a base electrode and a collector electrode, means holding both said emitter electrodes at a common fixed potential, means biasing both base electrodes to a potential effective to hold said transistors "off," a pair of cross-coupling means connecting the collector electrode of each transistor to the base electrode of the other transistor, each said cross-coupling means being effective when the transistor of its associated collector electrode is "off" to overcome said biasing means and hold the transistor of its associated base electrode "on," so that one or the other of the transistors is always "on," signal input means; and a pair of gate means, each said gate means comprising a diode, a capacitor in series with the diode between the signal input means and its associated base, and a resistor connected between the common junction of the diode and capacitor and the collector electrode of one of the transistors; said pair of gate means cooperating to charge the capacitor in series with the base of the "on" transistor with a polarity tending to aid the next signal to turn that transistor "off," and to bias the diode in series with the base of the "off" transistor with a polarity tending to block said next signal from the "off" transistor base.

2,861,201

ELECTRONIC PULSE SCALING CIRCUITS

Edmund Harry Cooke-Yarborough, Longworth, England, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application April 15, 1955, Serial No. 501,653
4 Claims. (Cl. 307—88.5)



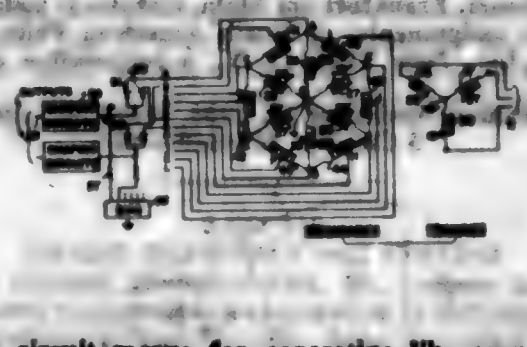
1. A ring counter comprising a plurality of counter stages including first and last stages; separate coupling means between each of said counter stages connecting said stages into a closed loop; each of said counter stages having a first and second stable state and comprising an "off" input circuit means for switching each stage from said second state to said first state upon the introduction of an off pulse, and each of said counter stages except said first stage having an "on" input circuit means arranged to receive a signal from the preceding stage through said separate coupling means when said preceding stage is swiched to said second state to permit the stage to switch to said second state upon the introduction of an "on" pulse; the said separate coupling means between said first and last stages arranged to switch said first stage to said second state when said last stage switches from said second state to said first state; pulse generating means for generating an "off" pulse upon the receipt of a trigger pulse and coupled to the "off" input means of each of said stages, the said pulse generating means further generating an "on" pulse following generation of said "off" pulse which is coupled to each said "on" input circuit means; reset means coupled to all of said stages except said first stage for sensing when each of these stages is in said second state and further coupled to each of said stages for switching said first stage to said second state and all other of said stages to said first state at the time when the sensed stages are all in said second state; and feedback means coupled from said last stage to the "on" input means of the second stage—immediately following said first stage, to deliver a signal when said last stage is switched to said second state to enable said second stage to switch to said second state upon application of the next "on" pulse, notwithstanding the absence of a signal from said first stage.

2,861,202

PULSE SEQUENCE GENERATOR

John F. Brinster and Walter C. Johnson, Princeton, N. J., assignors to General Devices, Inc., Princeton, N. J., a corporation of New Jersey

Application January 31, 1958, Serial No. 712,578
13 Claims. (Cl. 307—106)

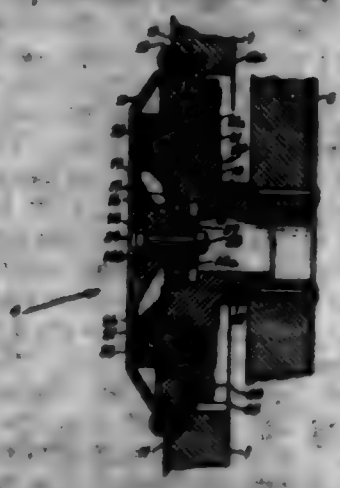


1. In circuit means for generating like sequences of electrical pulses in uniformly spaced like time intervals the combination of means for deriving from a polyphase alternating current supply a plurality of alternating potentials having the frequency of the supply and relatively spaced in phase, said potentials being maintained with respect to a common reference potential, a plurality of unidirectional conduction devices each having a pair of terminals of opposite character as determined by conduction in the device, circuit means for applying selected ones of said alternating potentials to terminals of like character of said devices, respectively, the other terminals of said devices being interconnected in groups, a source of bias potential maintained with respect to said reference potential, circuit means for applying said bias potential to each of said groups of interconnected terminals including individual impedance means therein intermediate said bias source and said groups, and pulse output circuit means connected to said last means intermediate said impedance means and said groups of terminals, respectively.

prising a multiplicity of individual target elements each and from the center of said end wall, a coaxial cylindrical

actuating members for moving the latter upon rotation simultaneously shifted to their "off" potential values.

2,861,203
TORQUER
John R. Lawson, Nesconset, and Christian H. H. Unruh, Bellerose, N. Y., assignors to Inland Motor Corporation, Pearl River, N. Y., a corporation of New York
Application July 26, 1956, Serial No. 600,120
9 Claims. (Cl. 310—40)

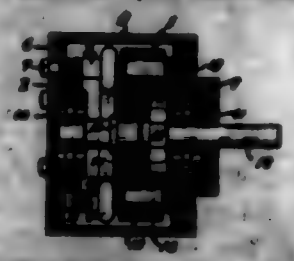


1. An armature for an electric machine, comprising a cylindrical core having transverse slots in a cylindrical surface thereof, said core having portions overhanging and partly closing said slots, the radius between said surface and the core axis determining the overall diameter of the armature, winding coils in said slots and having coil ends extending beyond said slots, insulation means covering said coil ends, said insulation means, said coil ends and said core determining the overall axial length of the armature, wedge bars in said slots adjacent said overhanging portions, said bars having end portions projecting from corresponding ends of said slots and overlying said coil ends within said overall diameter and said overall axial length, said wedge bar end portions serving as commutator segments, and means electrically connecting said bars and said winding coils.

2,861,204
MAGNETIC MOTOR
Anton Bauer, Frankfurt am Main, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application November 16, 1955, Serial No. 546,974
5 Claims. (Cl. 318—40)

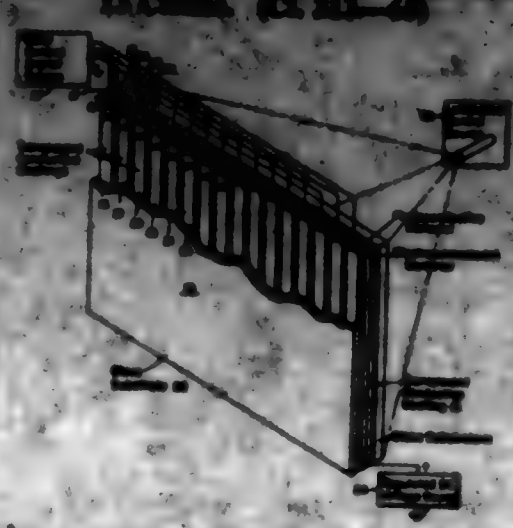
1. A speed control device for an electric motor of the type used for driving a phonograph turntable comprising a vibration assembly including a yieldable member, a permanent magnet secured to said yieldable member, separable contact means for controlling said electric motor mounted on said vibration assembly, a toothed rim of ferromagnetic material mounted on said turntable adjacent to said permanent magnet, said vibration assembly controlling the speed of said motor through said contact means in accordance with the natural amplitude of said yieldable member, said permanent magnet being vibrated by the magnetic forces between said magnet and said toothed rim of ferromagnetic material to increase and decrease the distance between the permanent magnet and the latter and to thereby open and close said contact means and holding said motor in the starting position when the same is inoperative, said vibration assembly being so arranged that there is no contact between the magnet and toothed rim in the operative condition of said device.

2,861,205
ROTORS FOR AXIAL AIR GAP DYNAMO-ELECTRIC MACHINES
William Kober, Fairport, N. Y., assignor to TKM Electric Corp., Rochester, N. Y.
Application April 8, 1954, Serial No. 421,935
10 Claims. (Cl. 310—156)



1. In a dynamo electric machine having a rotor and a stator spaced apart along the axis of rotor rotation to provide an axial air gap therebetween, a rotor construction comprising a body member of generally cylindrical form having multiple magnet-receiving holes extending therein generally lengthwise of said axis of rotation, permanent magnets inserted in said holes, a pole piece positioned against the air gap end face of each of said magnets, said pole pieces having outwardly converging inner and outer edges defining generally concentric circles about said axis of rotation, means defining a first generally annular lip formed on said body member adjacent the air gap periphery thereof, said first lip being inherent to overlie said outer pole piece edges, and means providing a second generally annular lip concentric to said first lip formed to said body member, said second lip being inherent to overlie said inner pole piece edges, whereby said pole pieces are held against the air gap end faces of said magnets by said first and second lips and by said first lip against displacement radially outwardly from said body member by centrifugal forces.

2,861,206
COLOR IMAGE REPRODUCERS
Joseph B. Flora and Charleston S. Smith, Chicago, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Application December 30, 1955, Serial No. 556,144
13 Claims. (Cl. 315—13)



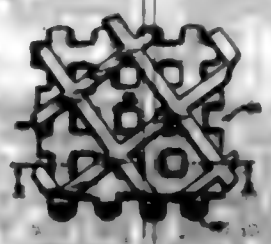
1. An image screen structure for a color image reproducer comprising: a first target element group com-

stages including first and last stages; separate coupling means between each of said counter stages connecting

connected to said last means intermediate said impedance means and said groups of terminals, respectively.

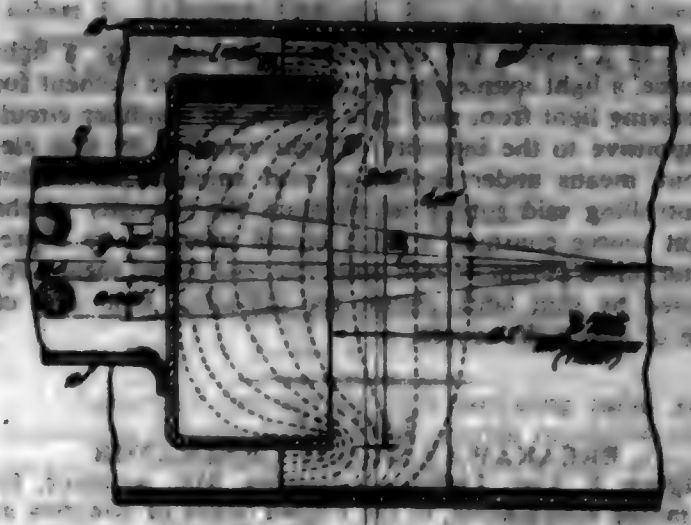
prising a multiplicity of individual target elements each comprising an electroluminescent material which effectively emits light of a first primary color when excited by an electrical field within a predetermined intensity range and a semiconductive material which varies in conductivity when subjected to corpuscular-energy bombardment; a second target element group comprising a multiplicity of individual target elements interspersed with said first group of target elements in a predetermined geometric pattern throughout an image screen area, each of said target elements of said second group being structurally similar to the target elements of said first group but comprising an electroluminescent material, which, when excited, effectively emits light of a second primary color; and electrical connector means for establishing separately controllable electrical fields across said two groups of target elements, said connector means including a pair of electrically conductive elements in contact with respective surfaces of said target element groups.

2,861,207
STORAGE SCREEN FOR DIRECT-VIEWING STORAGE TUBE
George F. Smith, Los Angeles, and Henry M. Smith, Pacific Palisades, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application April 1, 1957, Serial No. 649,721
6 Claims. (Cl. 313—65)



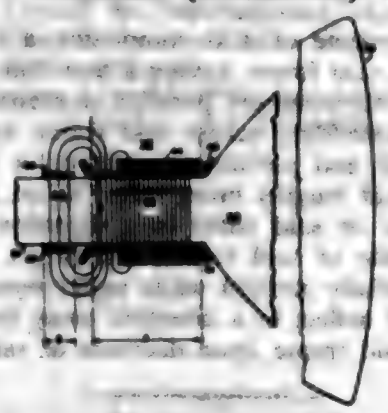
1. In an electronic storage tube, a target element comprising a conductive member for providing a support surface, a comparatively thick layer composed of individual granules of dielectric material disposed over at least a portion of said support surface to provide storage surface, and a film of magnesium fluoride disposed over said storage surface.

2,861,208
COMBINATION FOCUSING AND CONVERGING LENS FOR MULTIPLE BEAM TUBES
Robert E. Beaway, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application March 1, 1956, Serial No. 491,468
4 Claims. (Cl. 313—70)



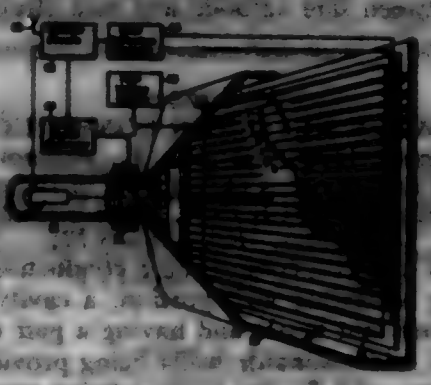
1. In a triple beam gun, means to focus and converge the electron beams comprising, a cup-shaped electrode having a cylindrical wall and an end wall provided with three circular apertures equally spaced from each other and from the center of said end wall, a coaxial cylindrical accelerating electrode of larger diameter than said cup-shaped electrode and surrounding at least the open end of said cup-shaped electrode, and means spacing and insulating said cup-shaped electrode from said cylindrical accelerating electrode whereby said accelerating electrode may be maintained at a higher positive potential than said cup-shaped electrode, the ratio of the axial length of said cup-shaped electrode to the diameter thereof being less than 0.5 to provide undistorted focusing and to provide convergence.

2,861,209
CATHODE-RAY-TUBE BEAM-DEFLECTION SYSTEM
Albert J. Biggs, Wembley, England, assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application December 1, 1954, Serial No. 472,403
Claims priority, application Great Britain December 14, 1953
3 Claims. (Cl. 313—76)



1. A cathode-ray-tube beam-deflection system comprising: a cathode-ray tube having an image-reproducing surface and means for producing an electron beam for scanning said surface; and deflection means disposed adjacent the neck of the cathode-ray tube for producing a primary deflection field for deflecting the electron beam to scan said surface and for producing an auxiliary deflection field comprising leakage flux from the primary deflection field for deflecting the electron beam in a direction opposite to that in which it is deflected by the primary deflection field, thereby to enable the electron beam to scan a larger area of said surface without striking the neck of the cathode-ray tube.

2,861,210
IMAGE REPRODUCING SYSTEM
John L. Rennick, Elmwood Park, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application May 27, 1954, Serial No. 432,732
7 Claims. (Cl. 313—92)



1. A television image reproducer of the type in which an electron beam is deflected across a luminescent target in an image raster comprising a predetermined number of scanning lines comprising: a luminescent target; means including an electron gun for generating and projecting a beam of electrons to bombard said target; and a barrier

cluding a primary winding and a pair of secondary wind- formed of primary, first secondary, and second secondary

in accordance with the natural amplitude of said yieldable

1. An image screen structure for a color image reproducer comprising: a first target element group com-

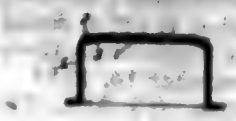
comprising a multiplicity of elements individually of predetermined width disposed intermediate said target and said electron gun in spaced relation to said target, said barrier elements having a predetermined pitch equal to the sum of the scanning line pitch at said barrier and said barrier element width.

2,861,211

PRE-STRESSED GRIDS FOR ELECTRON TUBES

Kenneth Stanley Brown, Castle Hill, New South Wales, and Thomas Nathaniel Bennett, Cheltenham, New South Wales, Australia, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application May 31, 1955, Serial No. 512,238
Claims priority, application Australia June 29, 1954
9 Claims. (Cl. 313—348)



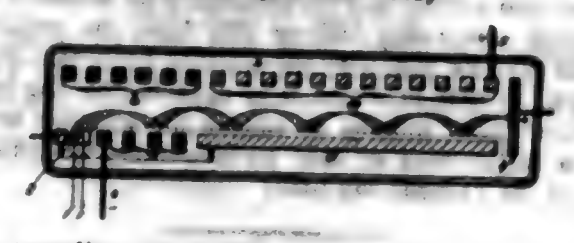
1. A planar type of grid comprising a frame which is an annulus, said frame having a first and second side, a plurality of substantially parallel co-planar spaced resilient wires extending across said frame and having a length of their end portions secured to a first side of said frame, said lengths being offset at an angle to the common plane of said wires in a direction away from said second side of said frame, said wires being maintained substantially straight while under tension whereby said wires will deflect in a direction away from said second side of said frame upon decrease of said tension.

2,861,212

TRAVELLING WAVE MAGNETRON TUBE

Alfred Lerbs, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France

Application July 11, 1952, Serial No. 298,368
Claims priority, application France July 30, 1951
4 Claims. (Cl. 315—3.6)



1. A traveling wave tube of the type comprising a cathode, a delay line and a smooth electrode, parallel to said delay line and defining therewith an electron and wave interaction space, said cathode being positioned for propagating an electron beam in said space, said tube further comprising an additional delay line portion extending between said cathode and said electrode.

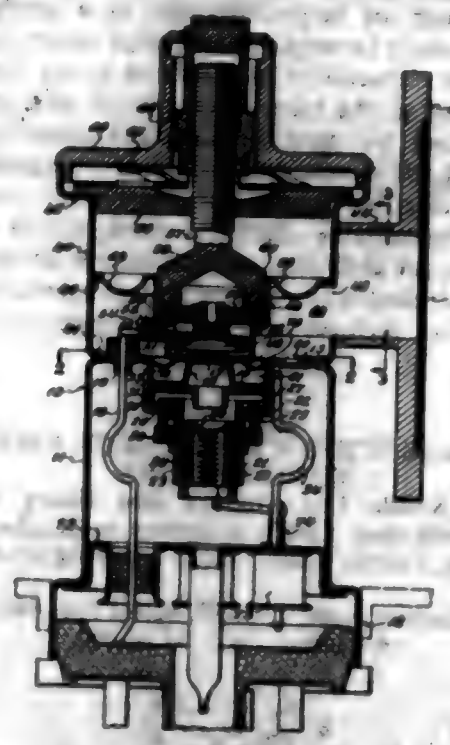
2,861,213

MICROWAVE KLYSTRON CONSTRUCTION

Glail C. Dalman, Huntington, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application August 1, 1956, Serial No. 601,417
16 Claims. (Cl. 315—5.22)

4. A reflex klystron comprising a conductive enclosing vessel having a flexible wall portion, a cavity resonator mounted within said vessel and having a pair of opposed walls, one of said resonator walls being provided with a flexible portion, said flexible portion being provided with a first aperture and being disposed opposite said vessel flexible wall portion, the other of said resonator walls being provided with a second aperture aligned with said first aperture, an electron gun aligned with said first and second apertures and opposite said other resonator wall for projecting an electron stream through said first and second apertures for interaction with said resonator, a rigid hollow conductive tube affixed at each end thereof to a respective one of said flexible wall portions, the one end of said tube affixed to said resonator flexible wall portion being adapted to surround said first aperture, an electron reflecting electrode insulatingly supported within said tube, said resonator flexible wall portion being provided with a third aperture outside said tube, whereby said third



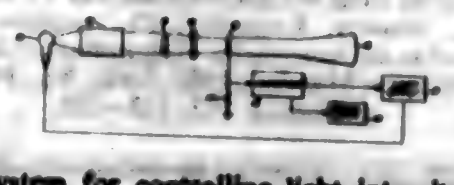
aperture serves to transfer electromagnetic energy from said cavity resonator to an intermediate coupler, said enclosing vessel, said enclosing vessel flexible wall portion, said tube, said one resonator wall, and said resonator flexible wall portion defining in part the walls of said intermediate coupler, and further coupling means for removing electromagnetic energy from said intermediate coupler.

2,861,214

BEAM INTENSITY CONTROL

Edwin J. Sawyer, Apalachin, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application March 28, 1957, Serial No. 649,219
5 Claims. (Cl. 315—11)



1. In a system for controlling light intensity, a light source, a light source supply, a photoemmitive element for receiving light from said light source, an amplifier circuit responsive to the intensity of light received by said element, means under control of said amplifier circuit for controlling said supply to maintain the intensity of the light source constant, a latch circuit operated by a predetermined output of said amplifier, and signal means operated by said latch circuit for indicating near end of life of said light source.

2,861,215

BREAKAWAY SIGNAL GENERATOR

William F. List, Linthicum Heights, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application November 15, 1956, Serial No. 622,513
12 Claims. (Cl. 315—24)

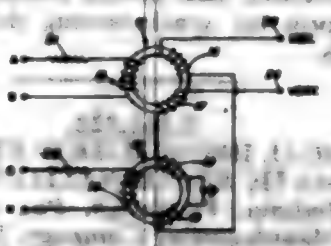
1. A signal generator of the character described comprising: a pair of saturable core transformers each in-

each having a pair of opposite hot-electrodes, one hot-

quency of said reference signal and the frequency of

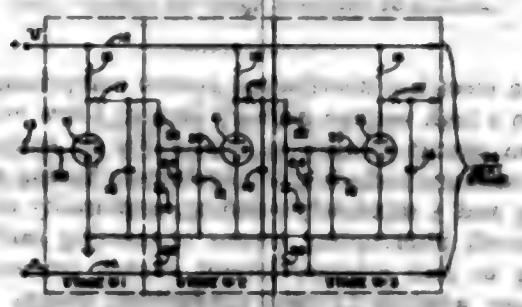
having a cylindrical wall and an end wall provided with three circular apertures equally spaced from each other including an electron gun for generating and projecting a beam of electrons to bombard said target; and a beam

cluding a primary winding and a pair of secondary windings, circuit means for respectively applying to said primary windings a pair of ninety degree phase displaced



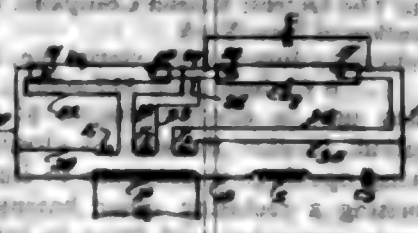
voltages, and circuit means cross-connecting said secondary windings between a circuit reference point and a pair of output terminals.

2,861,216
SHIFT REGISTER
William A. Englund, Morris Plains, N. J., assignor to Monroe Calculating Machine Company, Orange, N. J., a corporation of Delaware
Application August 27, 1956, Serial No. 606,397
2 Claims. (Cl. 315—84.5)



1. A shift register circuit comprising a series of gaseous discharge devices each having a cathode, a main anode and a starter anode, said cathodes being connected to a first potential, said main anodes being connected to a second potential sufficiently positive relative to said first potential to sustain a discharge in said devices, means for rendering at least the first device in said series conductive, a first plurality of condensers each connected between the main anode and the cathode of a respective device, a second plurality of condensers each connected between the starter anode and the cathode of a respective device, means for momentarily decreasing the potential applied to said main anodes and for charging each second condenser in accordance with the charge on the first condenser of the next preceding device.

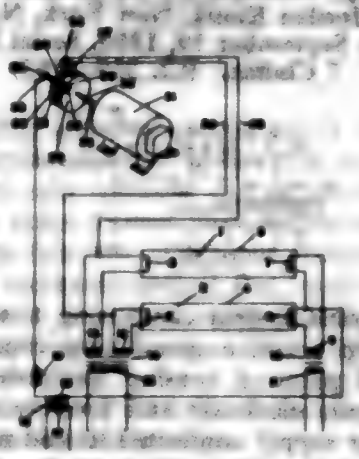
2,861,217
APPARATUS FOR IGNITING AND OPERATING GASEOUS DISCHARGE DEVICES
Albert E. Feinberg, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Application August 17, 1954, Serial No. 450,325
6 Claims. (Cl. 315—97)



1. Apparatus for igniting and operating rapid start fluorescent lighting devices with suitable regulation after operation commences, which comprises, a pair of rapid start devices each having end filaments, a source of A. C. voltage of relatively low value, an elongate iron core shell of rectangular structure and having end bridging portions, a central winding leg matingly engaged between the end bridging portions and having a transformer

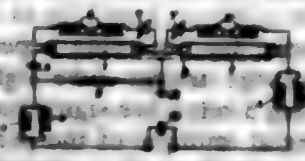
formed of primary, first secondary, and second secondary windings mounted thereon, the windings being physically separated by high reluctance magnetic shunts, the primary being between the other two windings, and an end gap between the winding leg and the bridging portion adjacent the second secondary winding, a plurality of filament windings all mounted in close coupled relation to the primary winding and connected to the filaments to continuously energize the same, the primary and secondary windings being connected end to end, with the secondaries bucking one another considering an open circuit loop containing the primary and both secondary windings in series, a condenser in series with one device, and together therewith connected across a part of the transformer excluding the second secondary winding but including at least the first secondary winding, the second device being connected across a part of the transformer including at least both secondary windings.

2,861,218
DISCHARGE LAMP FLASHING CIRCUIT
William P. Lowell, Jr., Newburyport, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application May 25, 1954, Serial No. 432,285
1 Claim. (Cl. 315—98)



Flashing apparatus for a pair only of electric gaseous discharge lamps having filamentary cathodes including a first lamp and a second lamp, the starting voltage of each lamp being greater than its operating voltage, said apparatus comprising: a common voltage supply for said lamp in parallel; a common ballasting reactance for said lamps in parallel, whereby the voltage across the lamps is reduced below the starting voltage on the passage of current by one of said lamps; a switch for connecting said voltage supply through said reactance to the first only of said lamps, then to both lamps in parallel, and then to the second only of said lamps, the switching to the second only of said lamps serving to provide a surge of voltage across said second lamp sufficient to start the same, and means for supplying heating current continuously to said filamentary cathodes.

2,861,219
LIGHTING INSTALLATION
Fritz Knobel, Ennenda, Glarus, Switzerland
Application January 4, 1955, Serial No. 479,731
Claims priority, application Switzerland January 7, 1954
4 Claims. (Cl. 315—100)



1. In a lighting installation, a pair of A. C. supply terminals, at least two fluorescent gas discharge lamps

control device electrically energized when said circuit

surface of the skirt; the axially outermost portions of the

each having a pair of opposite hot-electrodes, one hot-electrode of one lamp and one hot-electrode of the other lamp being mutually interconnected in series with each other, at least one choke-coil unit of standard construction and size comprising a core and two separately connectible choke coils symmetrically wound on said core, each of said coils being connected in parallel with one of said lamps between the two hot-electrodes thereof in series with the hot-electrodes, the said interconnected hot-electrodes of the two lamps being connected in series between the one end of one of the said choke coils and the other end of the other of the said choke coils to provide equi-directional flow of current around said core through both said choke coils, at least one further choke-coil unit of the same standard construction and size as the aforesaid choke-coil unit, the two choke coils of said further choke-coil unit being symmetrically connected each between the non-interconnected hot-electrode of one of the said lamps and a separate one of said terminals, and a capacitor connected in series with said last-mentioned choke coils and hot-electrodes to provide an oscillator circuit therewith.

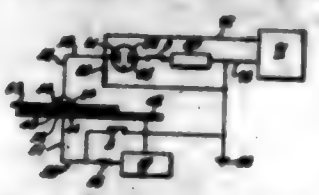
2,861,220

PUNCHED CARD AND TAPE READ OUT SYSTEM

Guy Obolensky, Yonkers, N. Y., assignor of ten percent to Jordan Kanik, New York, N. Y.

Application September 19, 1956, Serial No. 610,852

7 Claims. (Cl. 315—163)



1. An electrical system comprising a needle electrode having a sharp point, a guard ring concentrically surrounding said point, a sensing electrode spaced apart from said needle electrode and forming a gap therebetween, a power supply connected to said needle electrode and said guard ring to produce an ion cloud, said ion cloud forming an electrical circuit between said electrodes, and a dielectric information sheet having solid and apertured areas therein, said sheet being adapted to be inserted into said gap, the sides of said sheet being subjected by said ion cloud to static charges when a solid portion thereof is in the region between said electrodes thereby interrupting the circuit therebetween, said circuit being closed when an aperture appears in said sheet between said electrodes.

2,861,221

OFF-FREQUENCY SYNCHRONIZED STROBOSCOPE

William I. Hinz, York, Pa., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware

Application May 28, 1953, Serial No. 359,885

5 Claims. (Cl. 315—194)

1. A stroboscope for observing a periodic event comprising gas discharge trigger tube light source means, means for deriving a reference signal having a periodicity which is an integral multiple of the period of said event, means for automatically and continually phase shifting said reference signal to produce a phase shifted signal such that a constant difference is maintained between the frequency of said reference signal and the frequency of said phase shifted signal, means responsive to said phase shifted signal for generating a triggering waveform synchronized therewith, and means responsive to said triggering waveform for synchronizing the flashing of said tube therewith.

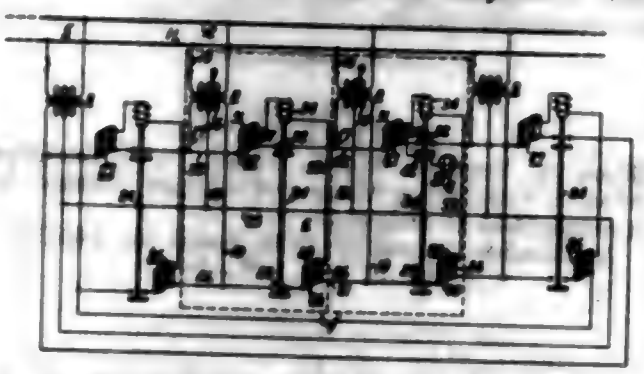
2,861,222

ELECTRICAL DISTRIBUTION SYSTEM WITH AUTOMATIC SECTIONALIZING SWITCH

Joseph B. Hedeen, Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application November 6, 1952, Serial No. 319,913

4 Claims. (Cl. 317—22)



1. An electrical distribution system comprising in combination a high voltage primary circuit; a low voltage distribution circuit comprising a plurality of sections; each of said sections including a transformer having a primary winding and a secondary winding, a plurality of conductors, circuit interrupting means connecting said primary winding to said primary circuit, means connecting said secondary winding to said conductors; means including sectionalizing switches for interconnecting the conductors of one section to the like conductors of an adjacent section; each said switch having a switch coil which when energized with the normal voltage of the section holds the switch closed; means for jointly energizing said coil from the secondaries of said transformers associated with said adjacent sections to cause said switch to close; said energizing means comprising a control circuit including in additive series relation portions of said secondaries; and means cooperating with said control circuit responsive to a fault condition in either of said adjacent sections to deenergize said coil for a predetermined time causing said switch to open and disconnect said sections whereby said circuit interrupting means associated with the faulty section operates to disconnect the transformer of that section from the primary circuit preventing said coil from being jointly energized after said predetermined time and during the period said last mentioned transformer is disconnected.

2,861,223

RECLOSING RELAY FOR CIRCUIT BREAKER

Thomas M. Soller and Leo E. Harris, Detroit, Mich., assignors to The Detroit Edison Company, Detroit, Mich., a corporation of New York

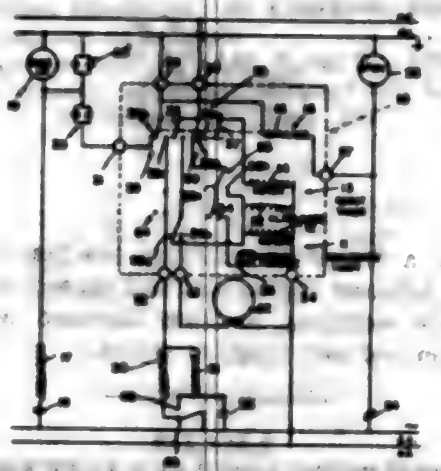
Application July 9, 1956, Serial No. 596,472

6 Claims. (Cl. 317—22)

1. A relay unit to effect reclosure of an electrically actuable circuit breaker through its closing control circuit following openings in response to line fault or the like, comprising a reclosing timer having a circuit including means governing said timer in reference to circuit breaker position to advance while the circuit breaker is open and to remain stationary while the circuit breaker is closed, contacts controlled by said reclosing timer to initiate periodic reclosing operations of said circuit breaker closing control circuit, a re-set timer controlled by a circuit governed by circuit breaker position to advance after the circuit breaker has been reclosed and to reset to its starting position if the circuit breaker opens; a

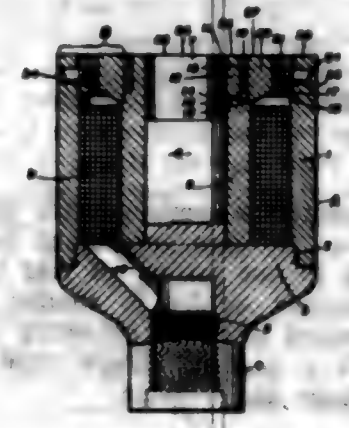
the end bridging portions and having a transformer terminals, at least two fluorescent gas discharge lamps

control device electrically energized when said circuit breaker opens to reversibly make and break said reclosing and reset timer circuits; and a two-position memory device actuated by said control device to one posi-



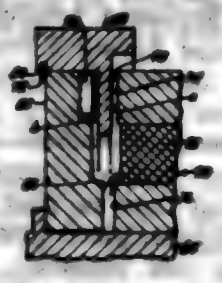
tion upon opening of the circuit breaker to energize said timers, and actuated by said reset timer to another position on completion of a pre-set travel of said re-set timer to return both timers to their starting positions.

2,861,224
MAGNETIC CHUCKS
Edwin H. Brandenberg, Lakewood, Ohio
Application October 17, 1952, Serial No. 315,386
1 Claim. (Cl. 317—163)



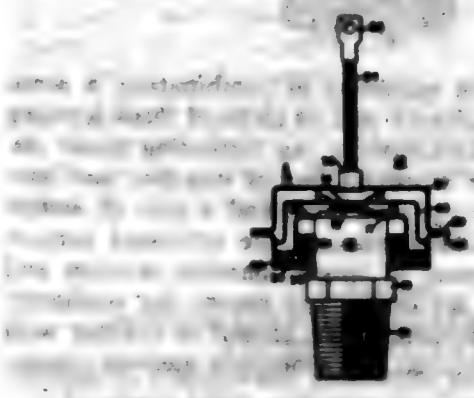
A work holding electromagnetic device comprising a generally cup-form magnet having a cup bottom, and a cup skirt, annular in cross section, extending from the periphery of the cup bottom, and a core extending from the middle of the cup bottom, substantially coaxial with the skirt; and a shank extending from the cup bottom oppositely to the skirt and core; the shank being provided with means for attaching it to a rotary element of a machine for rotating the cup bottom, skirt and core around a rotational axis; the core comprising an inner generally cylindrical body, and at its outer end being of reduced diameter over a portion of its length; a steel sleeve having a substantially uniform inside diameter telescoped over the core body and its inside surface spaced radially from the reduced diameter portion of the core, and the space being filled with non-magnetic solid material; a winding inside of the skirt, surrounding the sleeve and the core therewithin, the top of the winding being inwardly of the outer ends of the core and skirt; the outside side surface of the sleeve at its outer end and over a portion of its length being of reduced diameter; a steel ring above the winding having its inside annular surface telescoped over and fitting upon an outside surface portion of the sleeve inwardly of the reduced diameter sleeve portion, and providing an annular space between the ring and the reduced diameter portion of the sleeve, the space being filled with non-magnetic solid material; a ring of non-magnetic material above the winding and fitting between the outside annular surface of the steel ring and the inside surface of the skirt; the axially outermost portions of the core, sleeve, steel ring and skirt and of the non-magnet material all being in a common plane at right angles to the said rotational axis; whereby work engaging annular surfaces spaced apart radially are provided on the core, sleeve, steel ring and skirt; and whereby flux may be produced by the winding in the core and sleeve, and some of the flux in the sleeve, may flow into the steel ring and all of it may flow outwardly through the said work engaging surfaces on the core, sleeve and steel ring, energizing these surfaces at one polarity, and all of it may flow back into the skirt through the work engaging surface thereon, energizing it at the opposite polarity.

2,861,225
MAGNETIC ACTUATORS
Joseph M. Morgan, Verona, N. J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application April 24, 1955, Serial No. 504,007
5 Claims. (Cl. 317—189)



3. A magnetic actuator comprising a two-pole solenoid, a first armature slidably mounted to move toward and away from said solenoid and having a part overlying one of the poles thereof, a second armature slidably mounted on the first, for movement relative thereto and for movement therewith toward and away from the solenoid, said second armature being in magnetic contact with the first and overlying the other solenoid pole, and resilient means acting between said armatures, urging them apart and urging the second armature away from the solenoid pole which it overlies.

2,861,226
HIGH CURRENT RECTIFIER
William F. Leotas, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application March 22, 1956, Serial No. 573,258
3 Claims. (Cl. 317—234)

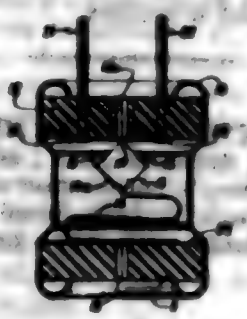


1. An asymmetrically conductive device comprising a semiconductor element having two surfaces separated by a rectification barrier, a conductive stud, means for conductively securing said semiconductor element at one of said two surfaces to said stud, a casing member, resilient means for conductively connecting the other of said two contact surfaces to said casing member, an annular ring of insulating material secured to said casing member and spaced from said stud, and a clip secured to said stud and to said annular ring for mounting said stud on said casing member, whereby said stud is electrically isolated from said casing member.

2,861,227
HIGH-VOLTAGE DRY RECTIFIER
Friedrich Scherbaum, Berlin-Siemensstadt, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany
Application June 6, 1956, Serial No. 589,676
25 Claims. (Cl. 317—234)

1. A dry rectifier device, particularly for high voltage, comprising an insulating housing member of substantially annular shape having a free inner space and having a multiplicity of chambers arranged in a circular series about said inner space and in concentric relation to the housing axis, stacks of rectifier cells in said respective chambers, contact bridges electrically interconnecting each two adjacent ones of said stacks within said housing member, and cover plates fitted into said housing member and closing said chambers, said cover plates being mechanically joined with said housing member, said inner space of said housing communicating with the outside of the device.

2,861,228
SEMI-CONDUCTOR UNIT
Gerald C. Rich, Scottsdale, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application May 29, 1953, Serial No. 358,241
12 Claims. (Cl. 317—238)



1. A transistor unit including in combination, a semi-conductive crystal having a pair of inclined faces forming a line of juncture therebetween, an insulating panel disposed parallel to the aforesaid line of juncture and having a flat surface facing such line, and a pair of etched thin elongated metallic means on the aforesaid surface of said insulating panel in spaced parallel relation and insulated one from the other, and means for resiliently maintaining said semi-conductive crystal in contact with each of said pair of etched thin elongated metallic means.

2,861,229
SEMI-CONDUCTOR DEVICES AND METHODS OF MAKING SAME
Jacques I. Pankove, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application June 19, 1953, Serial No. 362,748
13 Claims. (Cl. 317—235)

5. A semi-conductor device comprising a semi-conductor body having a major relatively high resistivity region of one conductivity type, an adjacent relatively low resistivity region of opposite conductivity type, a second relatively low resistivity region of said one conductivity type spaced from said major region, a body of an impurity material of said one conductivity type fused to said second region, a first P–N rectifying junction disposed between said adjacent region and said second region, and a second P–N rectifying junction disposed between said major region and said adjacent region.

2,861,230
CALORIZED POINT CONTACT ELECTRODE FOR SEMICONDUCTOR DEVICES
Theodore E. LeLeup, Bridgeville, Pa., assignor to General Electric Company, a corporation of New York
Application November 24, 1953, Serial No. 394,081
10 Claims. (Cl. 317—236)

1. A point contact type semiconductor electrical device comprising an "N" type germanium body, a first electrode attached to one surface of said body and a point contact electrode welded to another surface of said body, said second electrode consisting of an alloy of aluminum with a material chosen from the group consisting of platinum and tungsten.

2,861,231
ELECTRICAL CAPACITORS
Frederick Chetham Robinson and Richard Alfred Greene, Wandsworth, London, England, assignors to A. H. Hunt (Capacitors) Limited, London, England, a British company
Application July 30, 1954, Serial No. 446,824
Claims priority, application Great Britain July 31, 1953
6 Claims. (Cl. 317—260)

1. An electrical capacitor roll wound from a single strip of dielectric material metallised on both faces wherein each metallised surface is subdivided into two electrode areas by a continuous non-metallised portion, each said portion being given such a form that electrode areas of one polarity on one side of the strip are positioned opposite electrode areas of the opposite polarity on the other side of the strip so that on winding the capacitor only metallised areas of the same polarity come into contact with one another.

said switch and having the other end thereof operatively flow in one of said pair and inhibit current flow in the

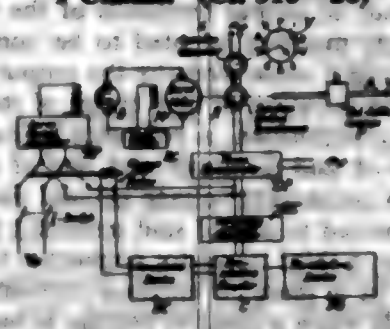
the outside annular surface of the steel ring and the inside from said casing member.

2,861,232

REMOTE CONTROL SYSTEM FOR POSITIONING OBJECTS

Paul Willems, Uccle, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a company of Belgium

Application June 27, 1957, Serial No. 668,343
Claims priority, application France July 6, 1956
9 Claims. (Cl. 318—28)



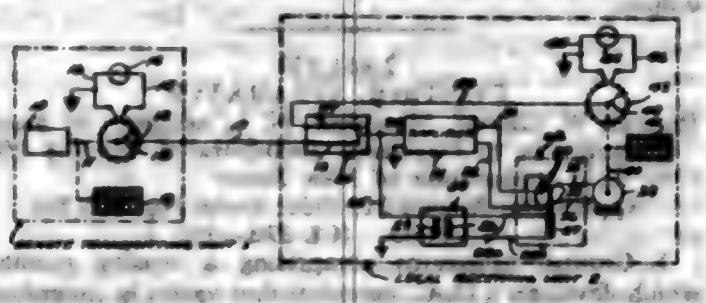
1. An automatic remote-control and follow-up system for positioning an object from a remote position comprising an output shaft for moving and positioning the object, an electrical servo motor connected for driving said output shaft, circuits for selectively impressing a given voltage on said servo motor thereby to move said object at a selected speed, a synchro generator, an input shaft connected to the generator for selecting and controlling the final position of said object, a synchro control transformer electrically connected to the synchro generator and having a rotor driven by said motor thereby having a first output comprising an error voltage representative of an error of angular alignment between the rotor and the input shaft, means connected for maintaining substantially exact correspondence of the angular positions of the output shaft and said rotor, means receptive of said error voltage and having a rectified output the polarity of which reverses when the phase of the control transformer error voltage reverses, whereby said rectified output reverses as a function of complete revolutions of said rotor, automatic means for determining a coarse position of said object as a function of a preselected number of complete revolutions of said rotor and the revolutions corresponding to a selected displacement of said object means to preselect the number of revolutions, means rendered operative when the preselected number of revolutions obtain and connected for opening said circuits and impressing on said motor a voltage dependent upon said rectified output thereby to decelerate and stop said motor and position said object in a selected position when the angular position of said input shaft corresponds with the angular position of said rotor so that the control transformer has substantially no output.

2,861,233

SERVOMECHANISM HAVING UNLIMITED SERVOING RANGE

Patrick J. McKeown, Syosset, N. Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N. Y., a corporation of Delaware

Application January 24, 1957, Serial No. 636,969
5 Claims. (Cl. 318—29)



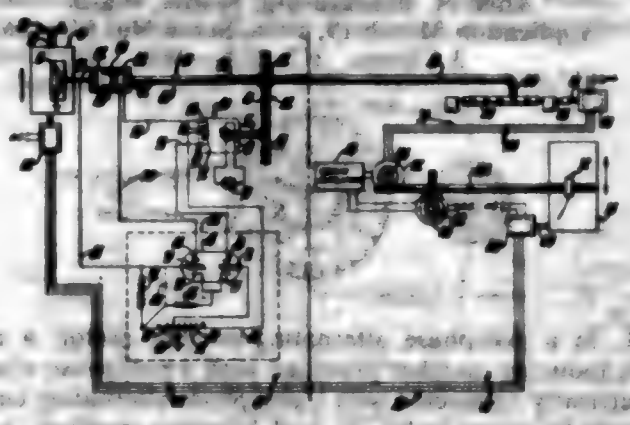
1. A closed loop servomechanism comprising a first variable voltage source, a second variable voltage source, means for varying the magnitude of the voltage from said second variable voltage source, a differential network connected at its input side to said first and second variable voltage sources, a servomotor normally connected with a given polarity to the output side of said differential network and in driving connection with said voltage varying means, a polarity reversing relay connected between said differential network and said servomotor, and impedance matching means responsive to the output of said differential network in control of said relay, said impedance matching means being adapted to operate said relay when the output of said network crosses over a predetermined voltage level.

2,861,234

SERVO CONTROLLED FOLLOWER SYSTEM

Edward J. Martin, Pleasant Ridge, and Frederick W. Chapman, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 15, 1954, Serial No. 416,367
15 Claims. (Cl. 318—31)



10. In a contour follower system for producing a trace corresponding to the shape of an electrically conducting object including means moving said object in a predetermined path, electrically conductive vibrating probe means movable in a direction to intermittently contact said object, position transfer means responsive to the position of said probe means, position transfer means responsive to the position of said object, and display means actuated by both said position transfer means, the combination of a source of electrical power, a reversible motor selectively energizable from said power source and normally driving said probe means in a direction to contact said object, and control means connected in electrical circuit relation with said probe means and said object, said control means controlling the selective energization of said motor and reversing the direction of movement thereof in proportion to the amount the probe means contacts the object and establishes an electrical circuit therethrough.

2,861,235

SERVOSYSTEM CONTROL UNIT FOR ANTENNA ROTATORS

Joseph P. Chadowski, Brooklyn, and Anthony G. Turk, Cleveland, Ohio, assignors to Cornell Dubilier Electric Corporation, South Plainfield, N. J., a corporation of Delaware

Application June 22, 1954, Serial No. 438,559
3 Claims. (Cl. 318—31)

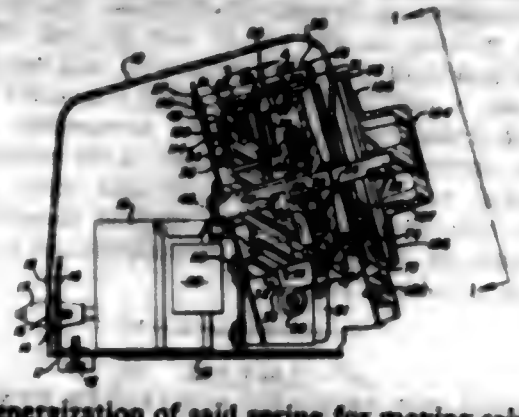
1. In a control unit for an electrically-actuated rotator device, the combination of a rotator-actuating circuit including a normally-closed rotator-actuating switch rotatably mounted on said unit, a movable switch-opening member operatively engaging said switch, means for rotating said switch in either direction out of engagement with said member to close said switch, a single torsion spring having one end thereof operatively associated with

mined level and connected in opposition to the potential means connecting said signal in opposing relation to the

sistivity region of opposite conductivity type, a second rela-

metallized areas of the same polarity come into contact with one another.

said switch and having the other end thereof operatively associated with said member, said spring being energized in response to rotation of said switch, and means responsive to energization of said spring for moving said switch-opening member in a corresponding direction to reengage said switch.



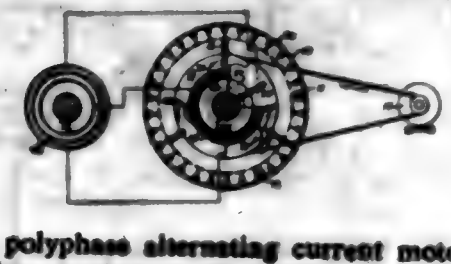
2,861,236

POLYPHASE SLAVE MOTOR

Allen N. Blankenship, Seattle, Wash.

Application March 19, 1956, Serial No. 572,426

3 Claims. (Cl. 318—361)



1. In a polyphase alternating current motor, a rotatable inducing member provided with a polyphase winding electrically connected with a polyphase alternating current source to create poles on said inducing member, an induced member having a commuted polyphase winding inductively related to the winding of said inducing member having a one-to-one turn ratio with respect thereto, a brush carrier having equally spaced brush assemblies cooperating with said commuted winding and electrically connected together via said winding of the inducing member, said brush carrier being rotatable with respect to said inducing and induced members, and stop means for limiting the rotation of said carrier with respect to said inducing member.

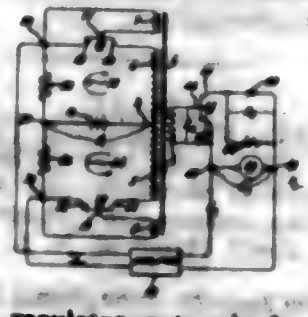
2,861,237

TRANSISTOR SWITCH VOLTAGE REGULATOR

William R. Zelina, Erie, Pa., assignor to General Electric Company, a corporation of New York

Application April 19, 1956, Serial No. 579,216

16 Claims. (Cl. 322—28)



1. A voltage regulator network for controlling the voltage of a dynamoelectric machine comprising a saturable transformer having a primary winding provided with a center tap thereby providing two equal primary portions, said transformer having a secondary winding and two tertiary windings, a pair of junctions, a pair of transisters each connected to one of said tertiary windings respectively in a sense whereby flux excursion of said transformer in either direction alternately promotes current flow in one of said pair and inhibits current flow in the other of said pair, said transisters being connected serially between said junctions and said primary winding for allowing current flow alternately from one of said junctions to one of said primary portions respectively, a pair of resistors of equal value connected serially between said junctions, a battery connected at one end to said center tap and at its other end to a voltage tap between said resistors, a pair of output terminals of the unidirectional dynamoelectric machine adapted to be connected across said junctions in a sense whereby the output voltage modulates the time duration of half cycles of the output voltage of said transformer, a reference voltage connected between one of said terminals and one of said junctions in a sense to counteract voltage of said machine, a field winding connected to one of said terminals for energizing said generator, a third transistor connected to said secondary winding in a sense to enhance current flow therein during periods when a positive voltage is induced therein, said transistor being arranged in circuit with said field winding for connecting said field winding to said other terminal whereby an error voltage equal to the difference between said generator voltage and said reference voltage determines the percentage of the time that said field winding is energized.

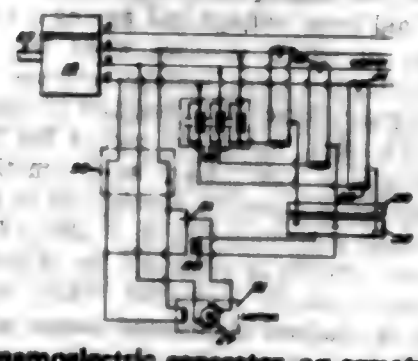
2,861,238

DYNAMO VOLTAGE CONTROL

William Kober, Fairport, N. Y.

Original application March 27, 1951, Serial No. 217,799, now Patent No. 2,784,332, dated March 5, 1957. Divided and this application March 1, 1957, Serial No. 643,211

11 Claims. (Cl. 322—46)



1. In a dynamoelectric generator, an armature, a rotating field, said armature and said field having parallel working faces spaced apart along the axis of rotation of said field to provide an axial air gap therebetween, said field producing magnetic flux entering said armature across said air gap, means mounting at least one of said armature and said field for movement relative to the other thereof in the direction of said axis of rotation whereby to change the length of said air gap, said means including position adjusting means operable to so move said one of said armature and said field while at all times maintaining the parallel relation between said working faces, and actuating means for said position adjusting means controlled by the output of said generator for actuating said position adjusting means automatically to maintain a substantially constant generator output.

2,861,239

CONTROL APPARATUS

Roswell W. Gilbert, Montclair, N. J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey

Application August 21, 1956, Serial No. 605,356

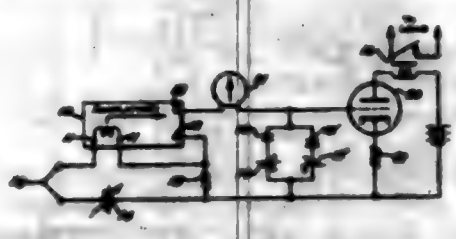
3 Claims. (Cl. 323—19)

1. Control apparatus comprising a sensing member which develops a D.-C. potential that varies in magnitude with changes in a variable condition to be controlled; a reference source of D.-C. potential having a predeter-

1. A closed loop servomechanism comprising a first variable voltage source, a second variable voltage source,

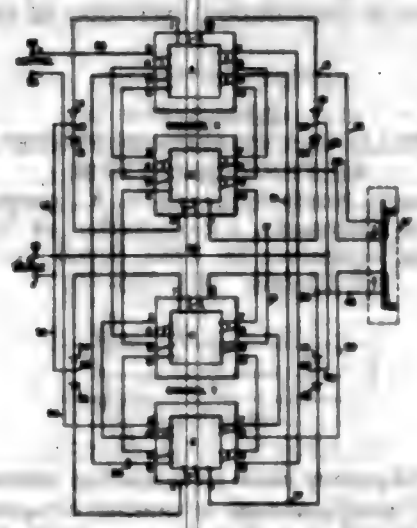
with said member to close said switch, a single torsion spring having one end thereof operatively associated with

mined level and connected in opposition to the potential produced by the said sensing member; a direct current amplifier having an input energized by the potential difference between the reference source and the sensing member, the said amplifier producing a D.-C. current output that varies in polarity sense with the directional unbalance between the potentials of the reference source and the sensing member; a D.-C. conductive degenerative feed-



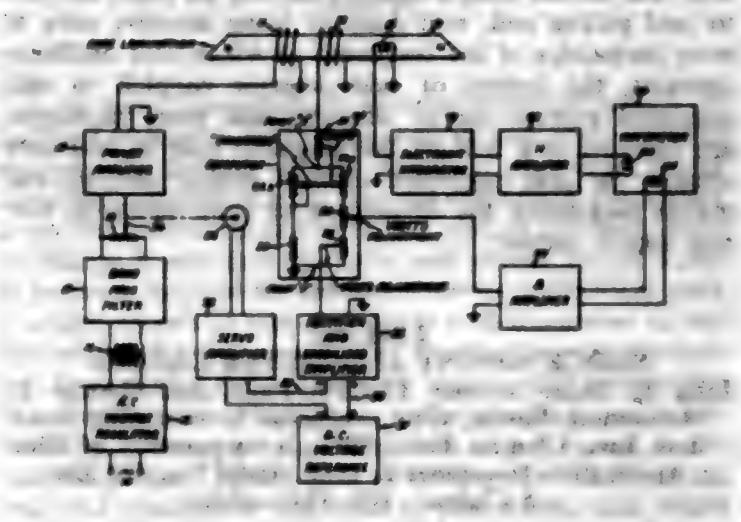
back circuit connected between the amplifier output and input circuit, said feedback path including a pair of asymmetrically-conducting elements, the said elements being non-conductive until the potential applied thereto exceeds a predetermined value, and polarity-sensitive control means connected in shunt with the said elements, said control means being adapted to bring about changes in the variable condition in a sense to balance the potentials of the sensing member and reference source.

2,861,240
MAGNETIC AMPLIFIERS
Daniel J. Sikorra, Champlin, and John A. Wolfe, St. Paul, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application July 30, 1954, Serial No. 446,769
2 Claims. (Cl. 323—89)



1. A push-pull magnetic amplifier comprising in combination: first and second magnetic amplifier channels, each of said channels including a pair of saturable reactors; a self-saturating reactance winding, a control winding, and first and second bias windings on each of said reactors; each of said self-saturating reactance windings having a rectifier in series to allow current flow in one direction through said reactance winding; a source of alternating current potential; circuit means connecting the self-saturating reactance windings of said pair of reactors from said first channel to said source in parallel; circuit means connecting the self-saturating reactance windings of said pair of reactors from said second channel to said source in parallel, the rectifiers associated with said first channel reactors being poled to allow current flow therein during one half cycle of said alternating source, the rectifiers associated with said second channel reactors being poled to allow current flow therein during the succeeding half cycle of said alternating source; a source of signal potential; circuit means connecting said signal in opposing relation, respectively, to the control windings of the reactors of said first channel; circuit means connecting said signal in opposing relation to the control windings, respectively, of the reactors of said second channel, whereby a signal applied to the reactors of said first channel tends to increase the conductivity of one reactor and simultaneously decrease by an equal amount the conductivity of the other reactor; first and second load circuit means, said first load circuit means comprising a load impedance and said first bias windings connected in a series circuit so that current flowing through said load circuit flows through said bias windings, said second load circuit means comprising a load impedance and said second bias windings connected in a series circuit so that the current flowing through said second load circuit flows through said second bias windings; circuit means connecting said first load circuit in series with said first channel reactance windings; and circuit means connecting said second load circuit in series with said second channel reactance windings.

2,861,241
SINGLE SHEET LOSS TESTER
Stephen C. Leonard, Cheshire, Robert L. Ten Broeck, Pittsfield, and Lewis R. Runaldue, Dalton, Mass., assignors to General Electric Company, a corporation of New York
Application April 29, 1955, Serial No. 504,723
13 Claims. (Cl. 324—34)



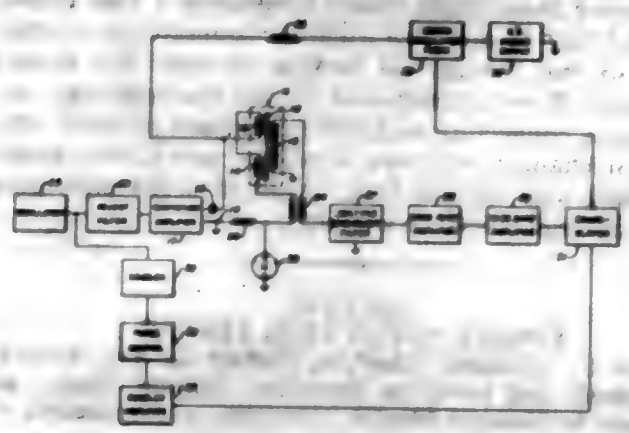
8. In an apparatus for determining the power losses per unit weight of a sheet of magnetic material, first coil means surrounding said sheet for inducing a flux in said sheet, a variable voltage source for energizing said first coil means, a second coil means surrounding said sheet inside of said first coil means providing a first voltage output proportional to the flux in said sheet, flux density computer means connected in series with said second coil means and providing a second and third voltage outputs each proportional to the flux density in said sheet, servo means actuated by said second voltage output for maintaining a predetermined constant flux density in said sheet and maintaining said third voltage proportional to said flux density by controlling said variable voltage source, third coil means adjacent said sheet inside of said first coil means for providing a fourth voltage output proportional to the flux in the field adjacent said sheet, means integrating said fourth voltage, and means connecting said third voltage and said integrated fourth voltage to a wattmeter.

2,861,242
MAGNETOMETER
Minard A. Leavitt, Pleasant Hills, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application September 6, 1955, Serial No. 533,888
4 Claims. (Cl. 324—43)

3. In apparatus for determining the magnitude of a magnetic field, the combination comprising a magnetic

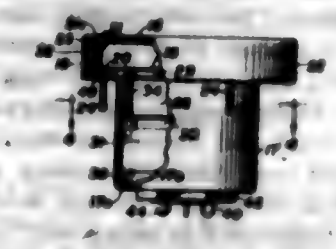
tainer, an electrical reproducer mounted in said first gas- from said line, said first and second means being posi-

core, a first coil disposed coaxially about said core, a pickup coil disposed coaxially about said first coil, a second coil disposed coaxially about said pickup coil and having a diameter substantially exceeding that of said first coil, said first coil and said second coil being connected in series opposition, said second coil producing a quantity of flux generally canceling in the area outside said second coil the flux produced by said first coil, an oscillator coupled to said first coil and said second coil and providing alternating current therefor, a regulated



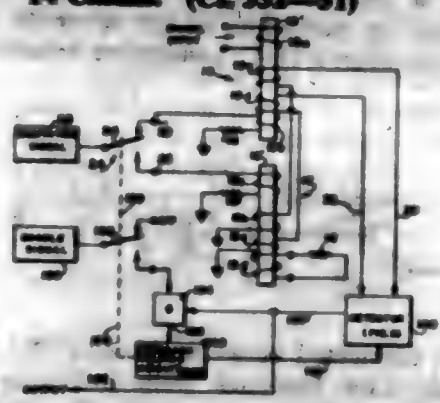
current source having an output coupled to said first coil and said second coil, a detector having an input coupled to said pickup coil, said detector being sensitive only to even harmonics of the frequency at which said oscillator operates, the output of said detector coupled to said regulated current source whereby said even harmonics are reduced to a null by the magnetic field in said core created by said regulated current source output, and means measuring the magnitude of said regulated current source output.

2,861,243
SHOCK MOUNT AND METER CASING
John D. Saint Amour, Chagrin Falls, and George E. Hammond, Euclid, Ohio, assignors to Assembly Products, Inc., Chagrin Falls, Ohio, a corporation of Ohio
Application December 2, 1955, Serial No. 550,526
5 Claims. (Cl. 324—156)



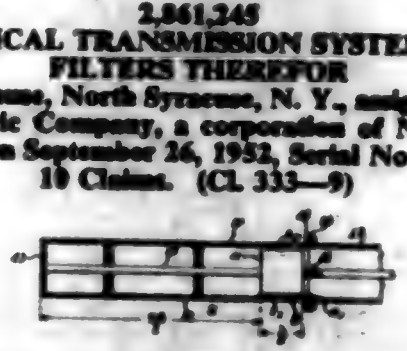
1. In a meter for use in locations where unusual shock, vibration, humidity and/or dirt conditions exist and having an interior meter mechanism comprising a permanent magnet, a can-like casing having at one end thereof a radially inwardly extending annular lip, said casing having interiorly thereof a horseshoe of resilient material containing a metal horseshoe bonded therewithin, threaded means associated with one of said horseshoes and for supporting the permanent magnet with respect to said horseshoes, said resilient horseshoe terminating at its bottom in a full annular ring of resilient material while said full annular ring in turn terminates at its bottom in a half O-ring portion, a bottom sealing header of insulating material interiorly of the full annular ring of resilient material and extending therebelow from within to outside of the casing, an externally threaded metal collar extending downwardly from a bonded connection with the full annular ring of resilient material about the header and through the casing adjacent the lip, and threaded nut means for engaging said collar and drawing the half O-ring portion of the full annular ring into intimate contact with the can lip to complete a seal.

2,861,244
MAGNETIC MODULATOR SYSTEM
Robert W. Schmeeckle, Wheaton, Ill., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Application May 15, 1956, Serial No. 585,098
14 Claims. (Cl. 332—51)



1. In a system of the type which includes excitation means coupled at least to one primary magnetic core for alternately driving same into opposing states of flux density for determining given characteristics of a current to be measured and having an effect on said core, a reference magnetic core unaffected by said current, detector means, means for coupling the detector means to the reference and primary cores, means for coupling the excitation means to the reference core at predetermined times to cause the detector means at predetermined times to then respond to excitation of the reference core, deviation determining means coupled to the detector means to sense any zero deviation in the output of the detector means while the latter responds to the reference core, and feedback means coupling the output of the deviation determining means into the system to compensate for said zero deviation at least during excitation of said primary core.

2,861,245
ELECTRICAL TRANSMISSION SYSTEMS AND FILTERS THEREFOR
Lloyd O. Krause, North Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application September 26, 1952, Serial No. 311,760
10 Claims. (Cl. 333—9)



2. A high-frequency wave filter having resonance at one frequency and antiresonance at another frequency closely spaced from said one frequency comprising a section of transmission line substantially one-eighth of a wave length long at the mean of said frequencies, a reactive impedance element connected across one end of said section, said reactive impedance element having zero reactance at said mean frequency, a capacitive reactance at said one frequency and an inductive reactance at said other frequency, said capacitive reactance at said one frequency and said inductive reactance at said other frequency each being equal to the characteristic impedance of said section of transmission line whereby at the other end of said section appears a low impedance at said one frequency and a high impedance at said other frequency.

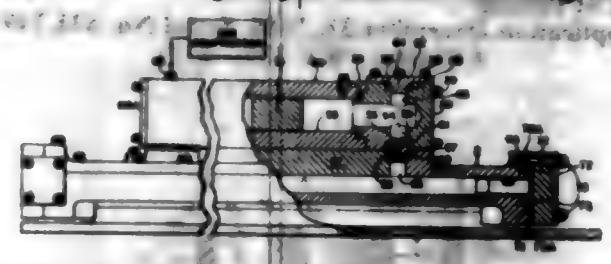
2,861,246
FLUID ELECTRICAL DELAY LINE
Terrence H. Chambers, Washington, D. C.
Application April 19, 1949, Serial No. 88,471
4 Claims. (Cl. 333—30)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In a delay line, a first gas-tight container, an electrical driving element mounted in said first gas-tight con-

signal in opposing relation, respectively, to the control windings of the reactors of said first channel; circuit

1. In apparatus for determining the magnitude of a magnetic field, the combination comprising a magnetic

tainer, an electrical reproducer mounted in said first gas-tight container in spaced relation to said driving element, a port in said first gas-tight container, a second gas-tight container connected to said port forming a gas-tight connection, said second gas-tight container including means



for varying the volume of the second gas-tight container, and an outgassed liquid completely filling the first gas-tight container and the second gas-tight container, said outgassed liquid being in intimate contact with the electrical driving element and the electrical reproducer.

2,861,267

LOW LOSS, BROAD BAND, ULTRASONIC TRANSMISSION SYSTEMS

Herbert J. McSkimin, Basking Ridge, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application April 30, 1954, Serial No. 426,565
7 Claims. (Cl. 333—30)

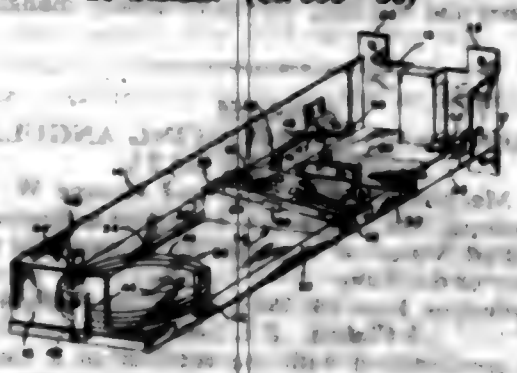
1. In combination, an electromechanical transducer, an ultrasonic transmission medium and a bond of ultrasonic transmitting material mechanically interconnecting said transducer and said medium, said bond having a thickness, in the direction of transmission, of substantially one half wavelength at the median frequency to be transmitted and a uniform characteristic mechanical impedance less than that of either of said medium or said transducer whereby a broad frequency band may be transmitted between said transducer and said medium with low transmission loss thoughout said broad band.

2,861,348

SIGNAL DELAY MEANS

Roy J. B. Beistle, Commodale, and John A. Kristy, Bridgeport, Conn., assignors to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application August 22, 1956, Serial No. 605,585
20 Claims. (Cl. 333—30)



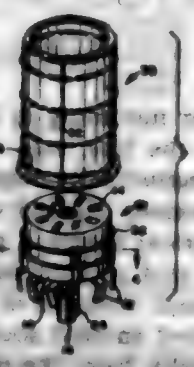
1. Signal delay means including a line comprising a magnetostrictive material and having input and output ends, a terminating element at each of said ends, each of said elements having an impedance approximately equal to the characteristic terminal impedance of said line, first means for applying a signal as an input to said line, second means for picking up a delayed signal from said line, said first and second means being positioned with respect to said input and output ends respectively such that the echos of signals reflected at said ends are in phase opposition, third means for simultaneously moving said first and second means to vary the distance therebetween along said line whereby said produced echos are maintained in said phase opposition relationship and temperature sensitive means associated with said third means for varying the length of said line between said first and second means in response to temperature changes.

2,861,249

SOCKET TUBE SHIELD AND GROUND

Russell E. Curtis, Clarence, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

Application November 21, 1955, Serial No. 547,918
4 Claims. (Cl. 339—14)



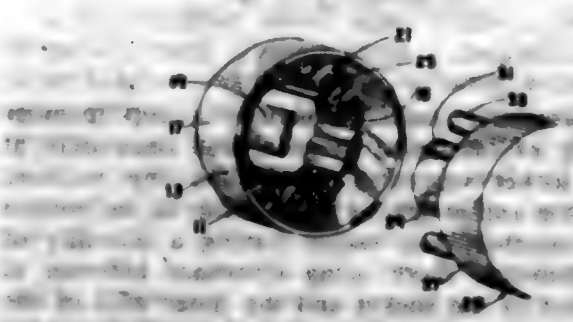
4. A socket comprising a member provided with a cylindrical wall, clips in its upper end surface and extending through the bottom of the socket, a peripheral flange about the cylindrical wall near the bottom of the socket, a circular groove in said wall at a spaced distance above the flange, a wire laid tightly in said groove but of a size to protrude beyond the periphery of the cylindrical wall, a second groove in said cylindrical wall transverse to and intersecting the first groove and flange, the wire continuing downwardly in said second groove and terminating in a positon below the bottom of the member, and a hollow shield having a cylindrical wall with a recess in the interior portion of the wall extending circularly of the wall and parallel to the base of the shield, said shield being positioned on said socket with the base in engagement with the flange and with the recessed portion embracing the protruding portion of the wire.

2,861,250

PIN PROTECTOR GAUGE

David K. Elwell, Doylestown, Pa., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

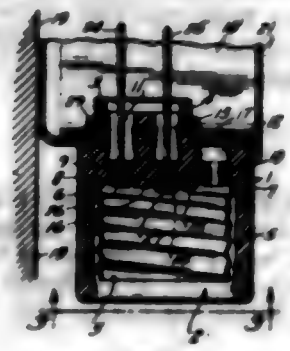
Application May 31, 1955, Serial No. 512,902
4 Claims. (Cl. 339—36)



1. A pin protector gauge for an electrical device having circular connector pins comprising a base with an integral external wall extending therefrom, and a plurality of pedestals arranged on the base adjacent said wall, each pedestal being formed to provide a circular shallow well for receiving the connector pins the diameter of said well being substantially equal to the diameter of the received pin.

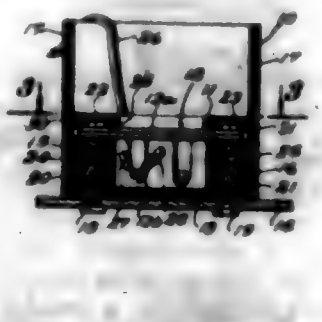
means for applying said signal to said utilization means, and means to

2,861,251
ELECTRICAL RECEPTACLE FOR MOUNTING ON OUTLET BOXES AND THE LIKE
Ray F. Wolin, Minneapolis, Minn.
Application March 9, 1955, Serial No. 493,188
3 Claims. (Cl. 339—136)



1. A receptacle for mounting in the knockout opening of an outlet box or the like, said receptacle comprising a body defining a longitudinally outwardly opening socket at one end thereof axially aligned with the body for the reception of an electrical device, a pair of radially spaced contact elements in said socket adapted to engage cooperating spaced terminal elements of said electrical device upon reception thereof in said socket, a mounting boss extending longitudinally from the other end of said body and disposed eccentric to the longitudinal axis of said socket, said boss having a pair of spaced longitudinally extending passages therethrough, each of said passages communicating at the inner end thereof with a different one of said contact elements, and means on said boss whereby the same may be anchored in said knockout opening.

2,861,252
ARC PROTECTIVE MOUNTING FOR TUBE SOCKET OR THE LIKE
Herbert Fremont, Los Angeles, Calif., assignor to Calbert Engineering & Electronics Company, Los Angeles, Calif., a corporation of California
Application February 14, 1955, Serial No. 488,069
2 Claims. (Cl. 339—193)

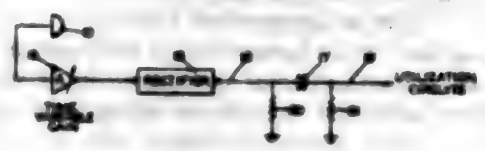


1. In a protective socket structure: a cup member made entirely of insulation material and open only at the top; a socket supported within the cup member beneath the top and in spaced relationship to the bottom of the cup member; said socket having a plurality of connector elements; there being clearance between at least a portion of the socket and the inner wall of the cup member for passage of leads from beneath the socket upwardly of the cup member; and a closure member slidably accommodated in the cup member, and having a central opening registrable with said connector elements for insertion of prongs of an electronic tube; one of said members providing openings for upward passage in the cup of leads from beneath the socket; a tube when inserted into said socket providing with the members an enclosure for the space beneath the socket.

2,861,253
SOCKET AND SNAP-IN CONTACT FOR PRINTED CIRCUITS
Bengt I. Johansson, Des Plaines, Ill., assignor to Cinch Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application December 31, 1956, Serial No. 631,749
4 Claims. (Cl. 339—217)

3. In a socket assembly of the character described, a casting provided with an opening therein extending transversely therethrough, opposite walls of the casting defining said opening each having a recess therein, a terminal positioned within said opening and having locking fingers seated within said recesses to prevent movement of said terminal in one direction out of the opening, said casting having a rib positioned in said opening and extending longitudinally thereof, said rib being interposed between said locking fingers, and said casting and terminal having cooperating means for preventing movement of said terminal out of said opening in the opposite direction.

2,861,254
PULSE-ECHO SYSTEM
Bernard W. Abrams, South Euclid, and Jerome Arberman, Cleveland, Ohio, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Application June 15, 1954, Serial No. 436,884
3 Claims. (Cl. 340—3)

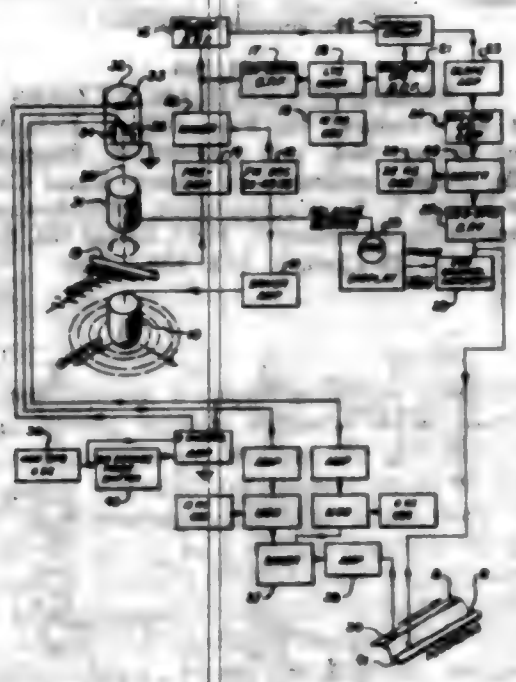


1. In combination, underwater acoustic transducer means for transmitting an abrupt acoustic signal pulse and for receiving signal echoes, a receiver circuit connected to said transducer means and operative to reduce the gain of signal echoes received initially and increase the gain of later-received signal echoes, and a differentiator in said receiver circuit capable of passing abrupt signal echoes and rejecting echoes of slowly changing amplitude.

2,861,255
RECORDING AND REPRODUCING ANGULARLY CORRELATED DATA
Mark V. Mechler, Austin, Tex., and George W. Weed, Warrensburg, Mo., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application June 28, 1954, Serial No. 439,944
3 Claims. (Cl. 340—3)

1. The combination with the receiver of a sonar system having at least a receiving transducer rotatable in azimuth and means for producing a signal having a frequency proportional to range, means for rotating said transducer in azimuth, a source of low frequency oscillations, means for deriving from said oscillations two output signals differing in phase in accordance with the azimuthal position of the receiving transducer, individual means for separately supplying the two output signals

with carrier waves of different frequencies, means for mixing the two output signals, and means for recording



the range signal and the mixed output signals along parallel tracks on a strip record medium.

2,861,256

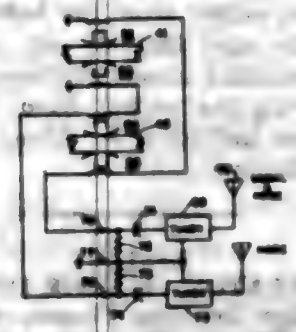
INTEGRATING SIGNAL DETECTOR EMPLOYING A RESONANT MECHANICAL SYSTEM

Robert W. Hart, Lynn, Mass.

Application April 16, 1956, Serial No. 578,551

6 Claims. (Cl. 340—6)

(Granted under Title 35, U. S. Code (1952), sec. 266)



5. In a signal detector of the type employing a resonant mechanical system having a reed driven to vibrate at a multi-node frequency, a signal insertion system comprising a pair of signal insertion units disposed on opposite sides of said reed, each of said units being adapted to inject discrete energy into said vibrating reed, signal and noise reception means coupled to one of said units, and a source of compatible noise coupled to the other of said units.

2,861,257

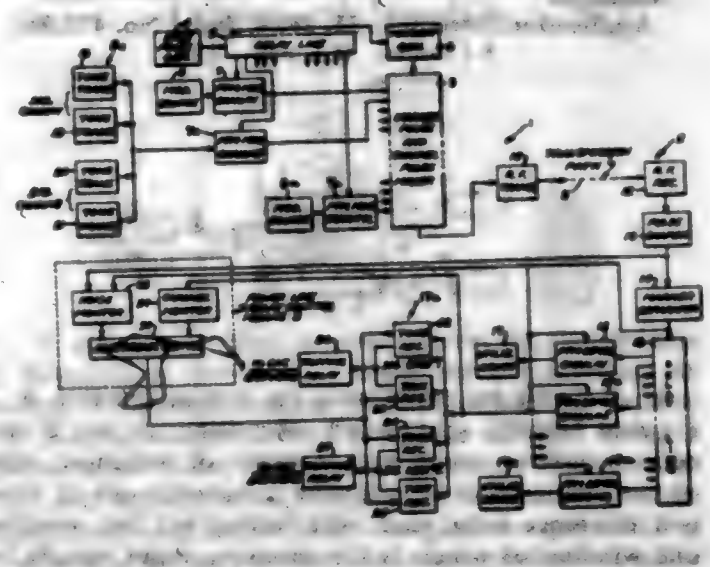
POWER LINE RELAYING

Nelson Weinstraub, Irvington, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application September 22, 1953, Serial No. 381,705

10 Claims. (Cl. 340—163)

1. A communication system comprising transmitting means for transmitting a train of signal pulses representing a marker signal and intelligence modulated pulses of at least one channel, receiving means for receiving said train of signal pulses including means for separating the marker signal from the pulses of said channel, demodulating means for demodulating the pulses of said channel for signal recovery, utilization means, means to apply the recovered signal to said utilization means, and means to control operation of said utilization means, said control means including means for detecting noise energy modulating said marker signal and means responsive to the detected noise energy above a given level to block operation of said utilization means.



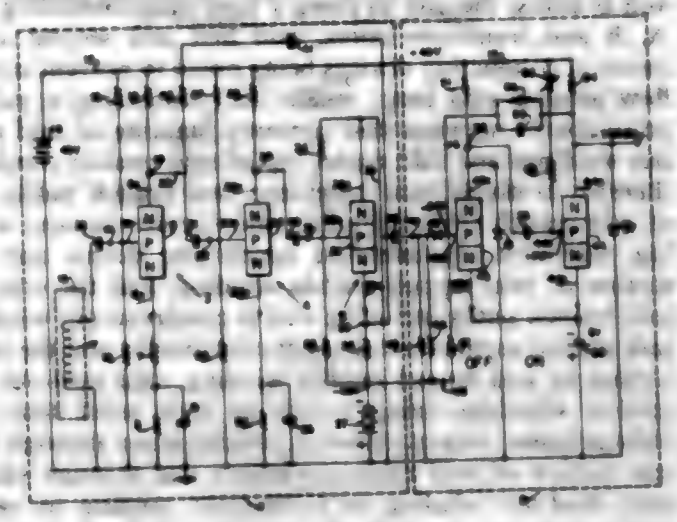
2,861,258

TRANSISTOR AMPLIFIER CIRCUIT

James L. Walsh, Hyde Park, Joseph C. Logue, Kingston, and Robert L. Martin, Pleasant Valley, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application September 30, 1954, Serial No. 459,282

2 Claims. (Cl. 340—174)



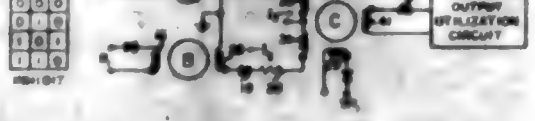
1. An amplifier for a signal within a predetermined frequency range derived from a magnetic pickup coil, comprising an amplifier stage including a transistor having a collector electrode, a base electrode and an emitter electrode; an input circuit including said coil, coupling means connecting one terminal of said coil to said base electrode, means connecting the other terminal of said coil to said emitter electrode including a first resistor, a capacitor in parallel with said first resistor and having a low impedance at said frequency range, a second resistor connected in series with said emitter electrode and unbypassed, said second resistor having an impedance of the same order of magnitude as the impedance of said coil but somewhat smaller and effective to produce a negative feedback potential at said emitter electrode opposing the potential transmitted from the coil to the base electrode; and an output circuit connected between said collector and said other terminal of said coil and including an output terminal.

2,861,259

BALANCED LOGICAL MAGNETIC CIRCUITS

Albert J. Meyerhoff, Wynnewood, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application December 31, 1954, Serial No. 479,861
5 Claims. (Cl. 340—174)



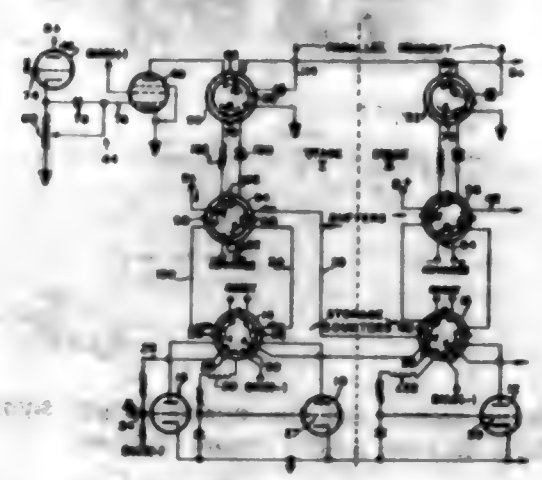
1. A circuit for performing the logical function A. B' (A And Not B), said circuit comprising: A and B magnetic transferor cores each capable of assuming either of two stable states of magnetic remanence one of which is a reference state, each core having but two windings one winding of which is for receiving input signals and the other of which serves both as a read-out switching winding and also as an output winding; a magnetic transferee core capable of assuming either of two stable states of magnetic remanence one of which is a reference state, said transferee core having a center-tapped read-in switching winding; means, including a first asymmetrical conducting device, connecting one end of said A core read-out winding to one end of said transferee-core read-in winding; means, including a second asymmetrical conducting device, connecting one end of said B core read-out winding to the other end of said transferee-core read-in winding; means connecting together at a common junction the other ends of said read-out windings of said A and B cores, thereby to form a loop interconnecting said A, B and transferee cores, said first and second asymmetrical conducting devices being poled to prevent current flow around said loop; means for connecting a voltage pulse source between said common junction of said read-out windings and said center tap of said read-in windings, thereby to divide said loop into two branch paths, one of said branch paths including said A core read-out winding, said first asymmetrical conducting device and one section of said tapped read-in winding, and the other of said branch paths including said B core read-out winding, said second asymmetrical conducting device and the other section of said tapped read-in winding, said read-out and read-in windings being wound in such sense that said voltage pulse source drives a current pulse through said one section of said read-in winding and through said A core read-out winding in a direction tending to switch said transferee core and also said A core to their respective reference states, and drives another current pulse through said other section of said read-in winding and through said read-out winding of said B core in a direction tending to switch said transferee core to the state other than its reference state but tending to switch said B core to its reference state, the circuit parameters being such that if neither or both of said A and B cores switch in response to said current pulse through its respective read-out winding, then the current pulses through said two sections of said read-in winding apply substantially equal and opposing magnetizing forces to said transferee core, whereas if only one of said A and B cores switch in response to said current pulse through its respective read-out winding, then the back voltage induced in the read-out winding of the core which switches is effective to cause unequal currents to flow through said two sections of said read-in winding, whereby unequal magnetizing forces are applied to said transferee core tending to switch said transferee core either to said reference or said other state according to whether said A or B core is switching; and means, including an additional winding on said transferee core, for developing an output signal indicating that said transferee core was switched to said other state.

2,861,260

READING SATURABLE CORES

Robert E. Woodward, St. Paul, Minn., Lyle W. Mader, Silver Spring, Md., and Gordon W. Johnson, Minneapolis, Minn., assignors to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application February 7, 1957, Serial No. 638,778
28 Claims. (Cl. 340—174)



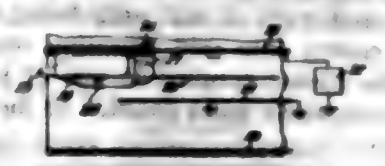
1. Apparatus for reading without destroying the state of a bistable saturable core element operable alternately between two states in response to succeeding input signals comprising bistable saturable core buffer means coupled with said core element in such a manner that said input signals cause correspondence in the states of the buffer means and said core element, said buffer means having input means for receiving advance signals which when applied allow an output from the buffer means which is indicative of the state thereof, and readout means including output winding means associated with said buffer means for reading the output from the buffer means, said output being ineffective to change the state of said saturable core element.

2,861,261

PRECIPITATOR CHARGE INDICATOR

John E. Coolidge, Jr., Des Plaines, and George Kovalinka, Northbrook, Ill., assignors to Borg-Warner Corporation, a corporation of Illinois

Application March 8, 1956, Serial No. 570,327
2 Claims. (Cl. 340—252)



1. A device for indicating a charge on the collector plates of an electrical precipitator having a plurality of spaced collector plates adapted to be charged with high voltage comprising a neon glow tube having two lead-in wires, a clip for attaching said tube on one of the collector plates so that its emitted light may be visible from outside of the precipitator, with one of said lead-in wires being electrically connected to said one collector plate and the other lead-in wire extending approximately mid-way between said one collector plate and an adjacent collector plate and parallel with said plates to act as a probe whereby visible light will be emitted by said tube when a substantial difference in voltage exists between said adjacent collector plates.

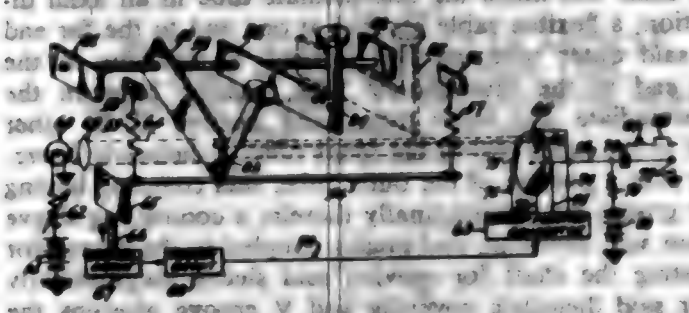
2,861,266

2,861,262

PHOTOELECTRIC CODING DEVICE

Jacques I. Pankove, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application August 23, 1955, Serial No. 530,164
17 Claims. (Cl. 340—365)



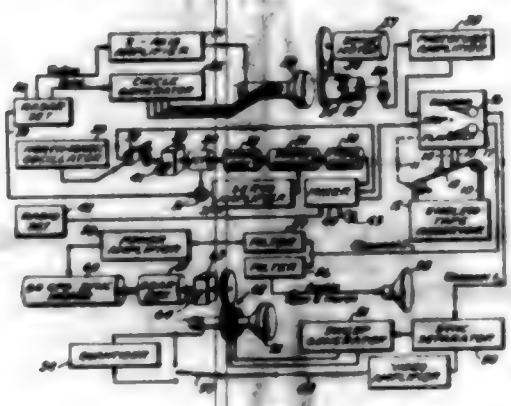
15. In combination, a photoconductive semiconductor of the type having mobile minority charge carriers, a light source, means for controlling the operation of said source to project a spacial light pattern on to an area of a surface of said semiconductor, the application of said spacial light pattern to said surface causing the generation of minority charge carriers in the illuminated area, means for producing a rotating electric field in said semiconductor, a collector electrode connected to a surface of said semiconductor, means for deriving energy from said collector electrode in a pattern related to said light pattern in a predtermined manner.

2,861,263

RECORDING SYSTEM

John L. McLucas, State College, Pa., assignor to Haller, Raymond and Brown, Inc., State College, Pa., a corporation of Pennsylvania

Application April 21, 1954, Serial No. 424,667
21 Claims. (Cl. 343—6)



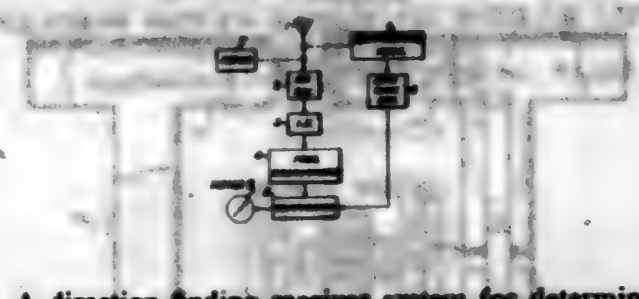
1. In combination, a radar including a directional antenna and means for continuously rotating the same, receiver means developing a radar-video signal, a cathode-ray tube responsive to the radar-video signal and displaying such signal on essentially the same sweep base for each repetition cycle thereof, photo-responsive means scanning the display on said tube at a substantially slower rate than that represented by said repetition cycle, whereby a slowed-down video signal is developed, magnetic-recorder means and means for impressing two intelligence channels thereon, said slowed-down video signal being applied to one of said channels, means connected to the other of said channels and developing signals responsive to radar-antenna rate and to antenna-reference bearing, a P. P. I. display device including intensity-modulated means connected to said one channel and responsive to the slowed-down video, means including a differential connection connected to said other channel and responsive to radar-antenna rate for orienting the instantaneous display axis of said device, and audio-presentation means connected to said other channel and responsive to a given reference bearing of said antenna.

2,861,264

DIRECTION FINDER SYSTEM

Julius J. B. Lair, Glen Ridge, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application April 12, 1955, Serial No. 500,742
5 Claims. (Cl. 343—113)



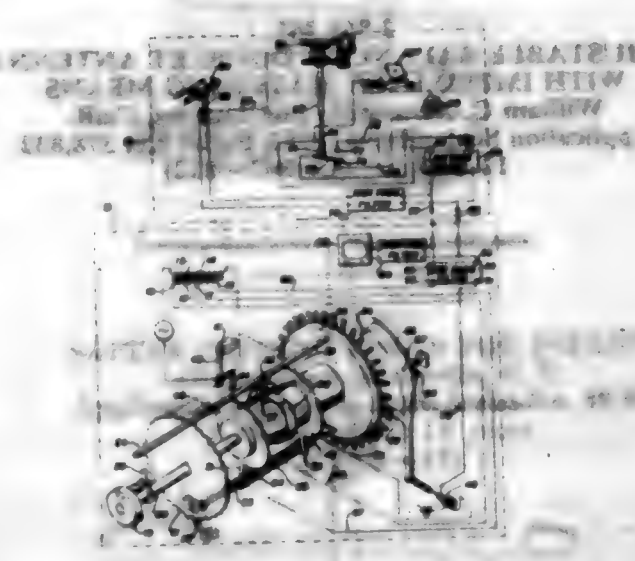
1. A direction finding receiver system for determining the direction of arrival of a signal wave comprising an antenna, a receiver coupled thereto, means for causing said antenna to move in a harmonic manner along a predetermined linear axis, means to rotate said antenna while said antenna is moving in said harmonic manner, frequency discriminator means coupled to said receiver for detecting the doppler frequency energy of the receiver output due to the movement of said antenna and comparator means coupled to said frequency discriminator means for indicating the magnitude of said doppler energy.

2,861,265

ROTATOR

Andrew F. Dunning and Emmor V. Schneider, Alliance, and Richard H. Jordan, Mansfield, Ohio, assignors, by mesne assignments, to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Alliance, Ohio, a corporation of Delaware

Application June 12, 1953, Serial No. 361,334
19 Claims. (Cl. 343—766)

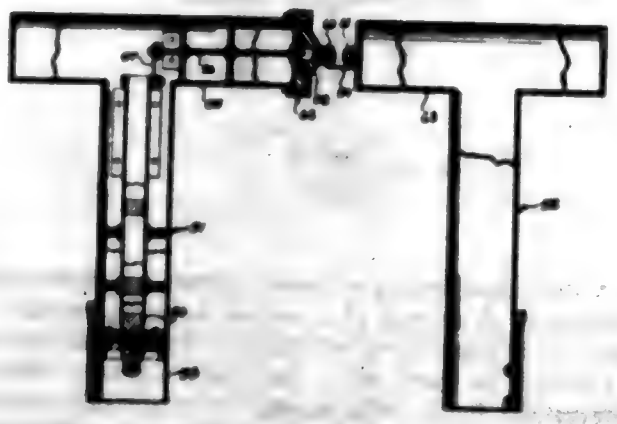


1. A mechanism comprising a control unit and a drive unit interconnectable by two conductors, said drive unit including an electric motor connectable to said two conductors and driving a drive train, a motor driven interrupter switch connectable to said two conductors and actuatable to establish first and second current conditions on said two conductors, and first electromagnetic means responsive to first and second voltage conditions to determine the rotational direction of said drive train, said control unit including voltage terminals, a selector switch connected to said terminals and to said two conductors to select said first and second voltage conditions on said two conductors, and second electromagnetic means connected to said two conductors and responsive to said first and second current conditions on said two conductors and connected to operate said selector switch.

or said other state according to whether said A or B core

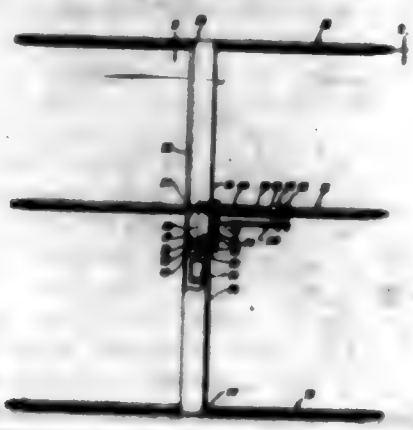
a substantial difference in voltage exists between said adjacent collector plates.

2,861,266
LOCALIZER ANTENNA SYSTEM
Andrew Alford, Winchester, Mass.
Original application February 5, 1951, Serial No. 209,431. Divided and this application July 16, 1953, Serial No. 368,485
6 Claims. (Cl. 343—792)



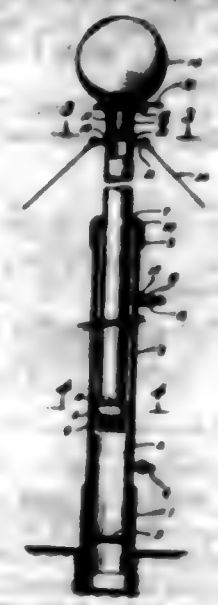
4. A full wave radiator comprising two T-shaped similar radiators, each formed of cylindrical tubes, one of said T-shaped radiators having a stem section and one branch section formed as a coaxial cable with the internal conductors connected together respectively and the other T formed solely of cylindrical tubes, said internal conductor of said one branch projecting beyond the end of the external conductor, a cap having a shoulder threading over the end of said external conductor, an insulating disc through which the internal conductor projects fitting on the end of said external conductor securing the internal conductor and sealing the same at the end of the external conductor under said cap which clamps the same to said external conductor and a conductive connection from the internal conductor of one branch of one T to a branch of the other T.

2,861,267
ADJUSTABLE BALANCED DOUBLET ANTENNA WITH IMPEDANCE MATCHING MEANS
William C. Arrasmith, Los Angeles, Calif.
Application September 8, 1953, Serial No. 378,832
12 Claims. (Cl. 343—822)



3. In an antenna, an arm element including: a elongated outer tube, an intermediate tube coxially disposed within the outer tube; an inner tube coaxially disposed within the intermediate tube; and a shaft coaxially disposed within said tubes and mounted for rotation to said outer tube, said shaft having a portion threadedly engaging said intermediate tube; means for rotating the shaft; keying means preventing said intermediate tube from rotating with respect to the outer tube whereby rotation of the shaft will move the intermediate tube in an axial direction; a flexible cable secured at one end to the far end of said outer tube, passing through an opening in the far end of the intermediate tube, passing between the intermediate and inner tubes, and secured at its other end to the inner end of the inner tube; a dielectric covering over a portion of the outer tube, said covering having a V groove cut longitudinally therein; a conducting sleeve about said covering; and means coupled to the means for rotating the shaft for moving said sleeve longitudinally over said dielectric covering and V groove whereby the capacitance between said sleeve and outer tube is made variable; a transmission line for transferring energy from or to said antenna, one conductor of the transmission line being connected to the outer tube and the other conductor being connected to the sleeve whereby operation of the means for rotating the shaft will simultaneously vary the length of the antenna and the value of said capacitance to maintain an impedance match between the transmission line and antenna.

2,861,268
AERIAL
William B. Tinsley, Houston, Tex.
Application September 18, 1956, Serial No. 608,771
2 Claims. (Cl. 343—901)



1. In an aerial, a tubular anchor, a tubular outer section mounted in said anchor and a tubular inner section telescoped within said outer section, an air chamber formed in said sections and an air inlet valve in said outer section leading into said air chamber, means for limiting the downward movement of said inner section, a flange adjacent the upper end of said inner section with guy wire openings therein, a spherical wave receiving means having an integral stem mounted in the upper end of said inner section and an insulating grommet between said stem and the inner wall of said inner section.

183,914

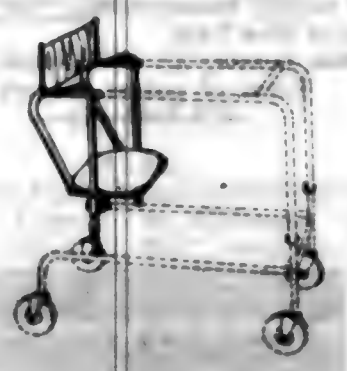
responsive to a given reference bearing or said antenna. Conductors 104 connected to sprocket 98

DESIGNS

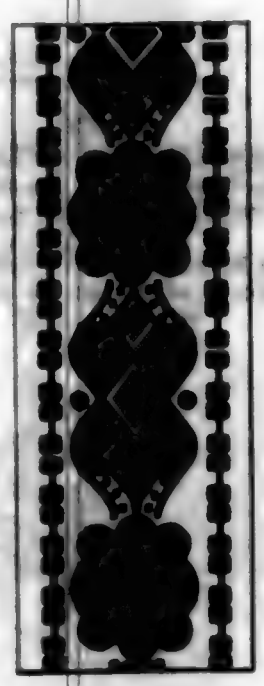
NOVEMBER 18, 1958

183,907
PIPE LIGHTER OR SIMILAR ARTICLE
Frank W. Atchley, Sunnyvale, Calif.
Application December 19, 1957, Serial No. 48,958
Term of patent 14 years
(Cl. D48—27)

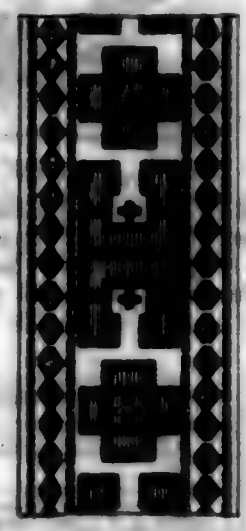
183,908
INVALID WALKER
Lester L. Bauer, Toledo, Ohio, assignor to Gendron Wheel Company, Perrysburg, Ohio, a corporation of Ohio
Application December 6, 1956, Serial No. 44,898
Term of patent 3½ years
(Cl. D14—3)



183,909
NARROW WOVEN FABRIC OR SIMILAR ARTICLE
Leo Beer, Hartsdale, N. Y.
Application May 27, 1958, Serial No. 51,099
Term of patent 7 years
(Cl. D3—32)

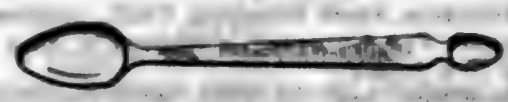


183,910
NARROW WOVEN FABRIC OR SIMILAR ARTICLE
Leo Beer, Hartsdale, N. Y.
Application June 3, 1958, Serial No. 51,168
Term of patent 7 years
(Cl. D3—32)



183,911
ACCORDION GRILL
David P. Bianco, Lincolnwood, Ill., assignor to Accordion Manufacturers and Wholesalers Outlet, Inc., Chicago, Ill., a corporation of Illinois
Application October 10, 1957, Serial No. 48,854
Term of patent 7 years
(Cl. D56—1)

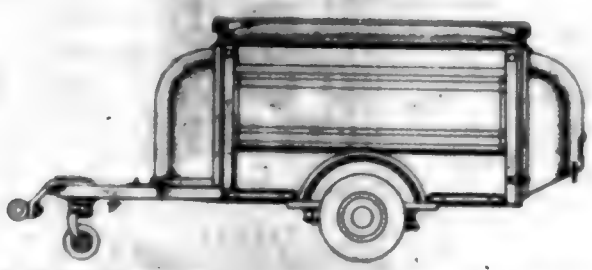
183,912
SAFETY FEEDING SPOON FOR INFANTS
Albert Bloom, Hicksville, N. Y.
Application January 2, 1958, Serial No. 49,692
Term of patent 14 years
(Cl. D54—12)



183,913
SHAVING BRUSH
William G. Brando, Glendale, Calif.
Application February 25, 1958, Serial No. 49,794
Term of patent 14 years
(Cl. D9—2)

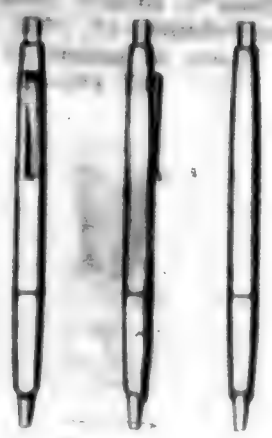
183,914
KITCHEN ACCESSORY POWER UNIT
William M. Chambers, Los Angeles, and Herbert Carvel Moore, West Los Angeles, Calif., assignors to Electro-Way Corporation, Los Angeles, Calif., a corporation
Application December 4, 1957, Serial No. 48,766
Term of patent 14 years
(Cl. D26—5)

183,915
MOBILE MACHINE SHOP TRAILER
Kibbey W. Conat, Newark, N. J.
Application August 28, 1956, Serial No. 42,747
Term of patent 14 years
(Cl. D14—3)



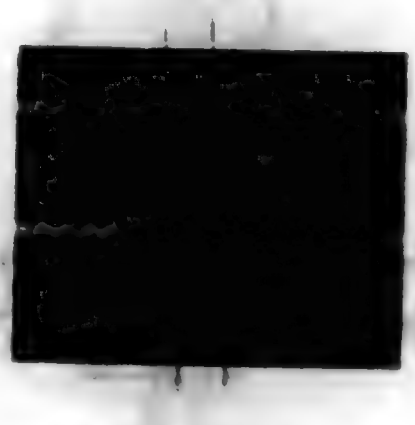
183,916
WEEDING TOOL
Jerome F. Derwallis, Portsmouth, R. I.
Application August 27, 1957, Serial No. 47,523
Term of patent 7 years
(Cl. D35—2)

183,917
BALL POINT WRITING INSTRUMENT OR SIMILAR ARTICLE
Henry Dreyfuss, South Pasadena, Calif., assignor to The Esterbrook Pen Company, Camden, N. J., a corporation of New Jersey
Application April 11, 1958, Serial No. 50,440
Term of patent 14 years
(Cl. D74—17)

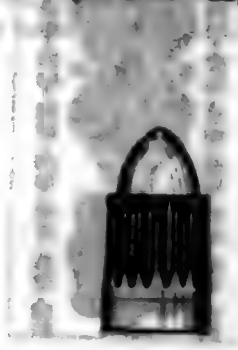


183,918
LACE
Otto Engelhard, Forest Hills, N. Y., assignor to Native Laces & Textiles, Incorporated, New York, N. Y., a corporation of New York
Application January 22, 1958, Serial No. 49,356
Term of patent 7 years
(Cl. D47—6)

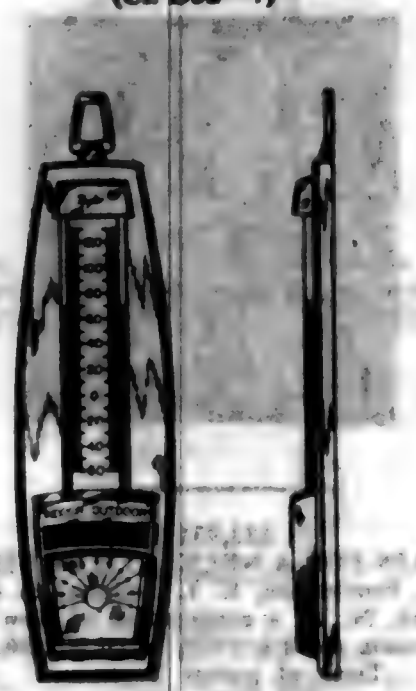
183,919
LACE
Otto Engelhard, Forest Hills, N. Y., assignor to Native Laces & Textiles, Incorporated, New York, N. Y., a corporation of New York
Application January 27, 1958, Serial No. 49,426
Term of patent 7 years
(Cl. D47—6)



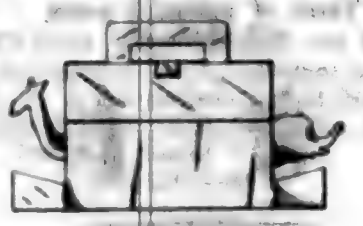
183,920
CONDIMENT DISPENSER
Tennes I. Erstad, Brooklyn, N. Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Application March 26, 1957, Serial No. 45,451
Term of patent 14 years
(Cl. D44—22)



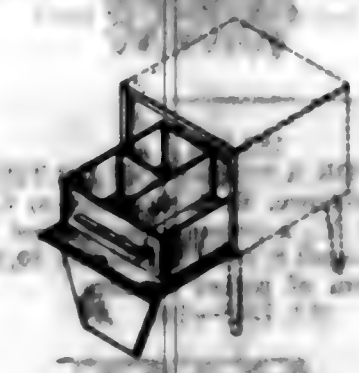
183,921
COMBINATION INDOOR-OUTDOOR THERMOMETER AND HYGROMETER
Gordon W. Florian, Fairfield, Conn., assignor to Taylor Instrument Companies, Rochester, N. Y., a corporation of New York
Application June 11, 1958, Serial No. 51,307
Term of patent 14 years
(Cl. D52—7)



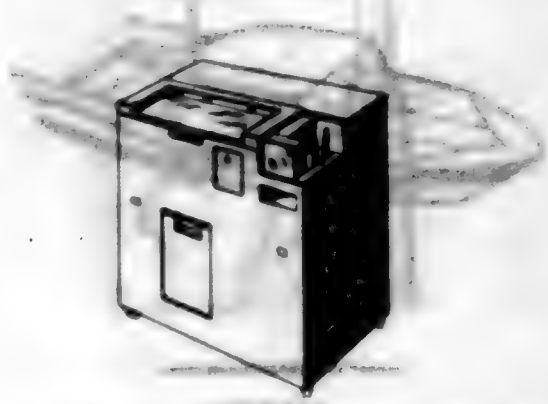
183,922
CARRIER FOR CHILDREN'S SHOES
Frank R. Fogerty, Jr., Kirkwood, Mo.
Application August 12, 1957, Serial No. 47,342
Term of patent 14 years
(Cl. D58—12)



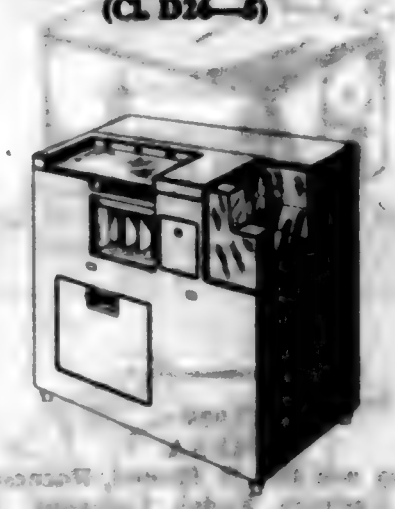
183,923
CABINET
Nayler C. Foster, Sr., Hendersonville, N. C.
Application October 9, 1956, Serial No. 43,279
Term of patent 3½ years
(Cl. D33—19)



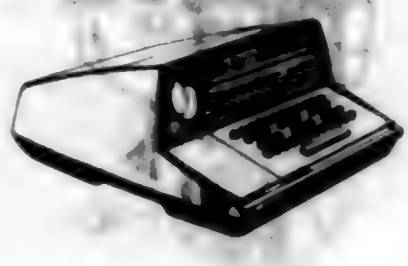
183,924
CARD INTERPRETER
Walter Furlani, Endicott, and Myron F. Davis, Jr., Binghamton, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 9, 1957, Serial No. 48,833
Term of patent 14 years
(Cl. D26—5)



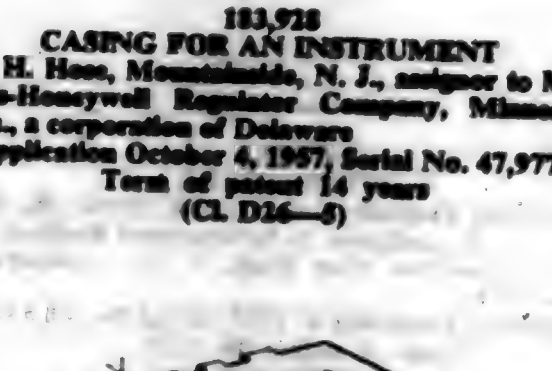
183,925
CARD COLLATOR
Walter Furlani, Endicott, and Myron F. Davis, Jr., Binghamton, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 9, 1957, Serial No. 48,834
Term of patent 14 years
(Cl. D26—5)



183,926
COMPUTER KEYBOARD
Walter Furlani, Endicott, William H. Harkins, Vestal, and Louis H. Sedaris, Endwell, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 12, 1957, Serial No. 48,879
Term of patent 14 years
(Cl. D24—5)

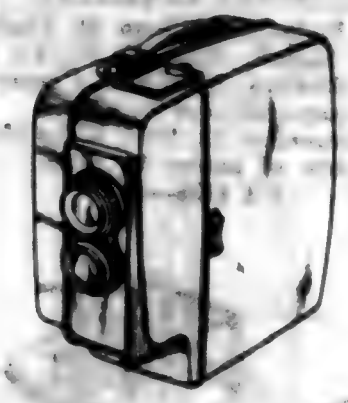


183,927
BOAT
Robert R. Hammond, Austin, Tex., assignor to Standard Glass Products, Austin, Tex., a corporation of Texas
Application October 16, 1957, Serial No. 48,115
Term of patent 14 years
(Cl. D71—1)

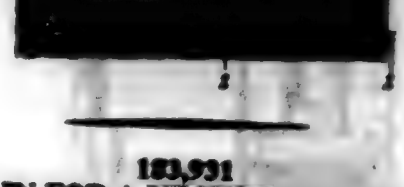


183,928
CASING FOR AN INSTRUMENT
Robert H. Hese, Mountainside, N. J., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application October 4, 1957, Serial No. 47,977
Term of patent 14 years
(Cl. D26—5)

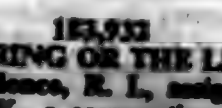
183,929
CAMERA
Carter J. Hughey and Rex B. Husted, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application November 27, 1957, Serial No. 48,701
Term of patent 3½ years
(Cl. D61—1)



183,930
TEXTILE FABRIC
Jack D. Kahney, Mishawaka, Ind., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application January 20, 1958, Serial No. 49,524
Term of patent 7 years
(Cl. D92—1)

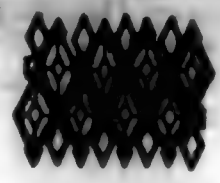


183,931
LINK CHAIN FOR A NECKLACE OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,387
Term of patent 7 years
(Cl. D45—16)



183,932
EARRING OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,388
Term of patent 7 years
(Cl. D45—9)

183,933
LINK CHAIN FOR A BRACELET OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,389
Term of patent 7 years
(Cl. D45—4)

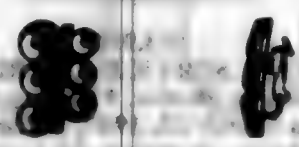


183,934
LINK CHAIN FOR A NECKLACE OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,390
Term of patent 7 years
(Cl. D45—16)

183,935
EARRING OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,391
Term of patent 7 years
(Cl. D45—9)

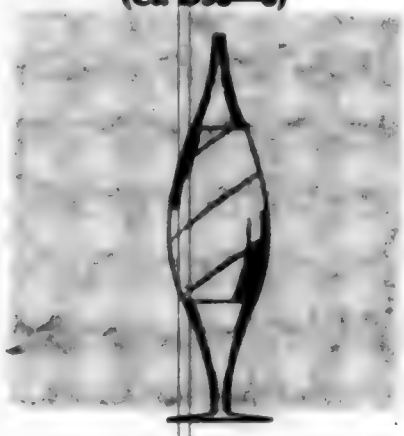
183,936
EARRING OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,392
Term of patent 7 years
(Cl. D45—9)

183,937
EARRING OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,393
Term of patent 7 years
(Cl. D45—9)



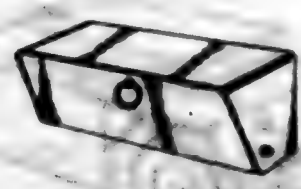
183,938
LINK CHAIN FOR A BRACELET OR THE LIKE
Adolph Katz, Providence, R. I., assignor to Coro, Inc., New York, N. Y., a corporation of New York
Application April 8, 1958, Serial No. 50,394
Term of patent 7 years
(Cl. D45—4)

183,939
DECANTER
Raymond F. Loewy, New York, N. Y.
Application November 18, 1957, Serial No. 48,513
Term of patent 14 years
(Cl. D58—8)

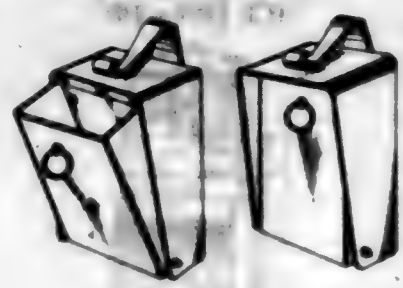


183,940
BOTTLE
Giorgio Lazzarde and Nicolo Lazzarde, Torreglia, Padova, Italy
Application November 14, 1957, Serial No. 48,455
Claims priority, application Italy September 24, 1957
Term of patent 14 years
(Cl. D59—8)

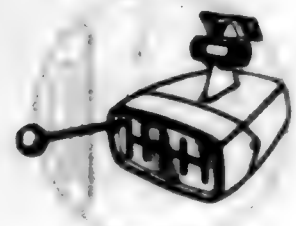
183,941
MAIL BOX
Charles A. Mauro, Erie, Pa.
Application November 7, 1957, Serial No. 48,364
Term of patent 14 years
(Cl. D74—9)



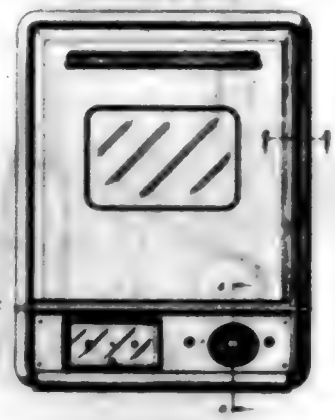
183,942
MAIL BOX
Charles A. Mauro, Erie, Pa.
Application November 7, 1957, Serial No. 48,365
Term of patent 14 years
(Cl. D74—9)



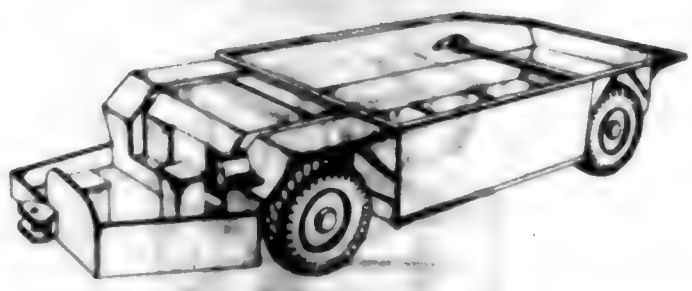
183,943
MOTOR VEHICLE TRANSMISSION CONTROL LEVER AND MOUNTING THEREFOR
Charles B. McGraw, Jr., Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application November 18, 1957, Serial No. 48,514
Term of patent 7 years
(Cl. D14—6)



183,944
FRONT FOR A WALL OVEN
William J. Miller, Elmo E. Ayler, and Armour H. Titus, Jr., Galesburg, Ill.
Application December 2, 1955, Serial No. 39,132
Term of patent 14 years
(Cl. D61—25)



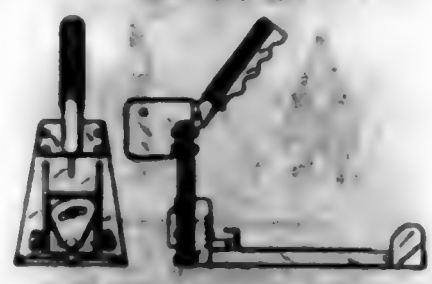
183,945
MINERAL CAR
Charles Vernon Osborne, Wise, Va.
Application May 15, 1958, Serial No. 50,898
Term of patent 7 years
(Cl. D44—1)



183,946
COMBINED BARBEQUE, QUICK WARMER, AND SELF SERVICE DISPLAY UNIT
Robert L. Paschal, Fort Worth, Tex.
Application February 28, 1956, Serial No. 40,390
Term of patent 7 years
(Cl. D61—10)

183,947
COMBINED CHEESE BOARD AND CUTTER
Jens H. Quistgaard, Copenhagen, Denmark, assignor to Dansk Designs Inc., Great Neck, N. Y.
Application May 19, 1958, Serial No. 50,955
Term of patent 14 years
(Cl. D44—1)

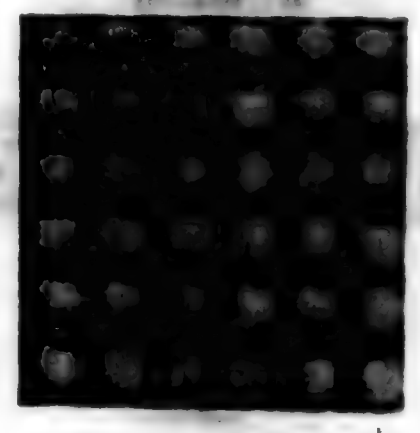
183,948
STAPLING MACHINE
Werner Schofroth, Herrin, Ill.
Application January 17, 1958, Serial No. 49,282
Term of patent 14 years
(Cl. D74—1)



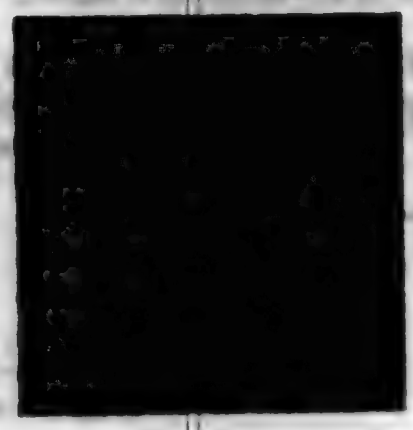
183,949
COMBINED BEVERAGE DISPENSER AND FOOD SERVICE CARRIER
H. George Stoller, Flushing, N. Y.
Application March 25, 1957, Serial No. 45,418
Term of patent 14 years
(Cl. D14—3)

183,950
FOOD SERVICE CARRIER
H. George Stoller, Flushing, N. Y.
Application March 25, 1957, Serial No. 45,419
Term of patent 14 years
(Cl. D14—3)

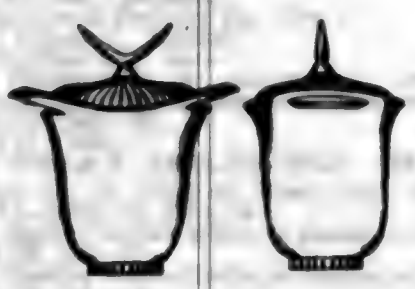
183,951
CHENILLE TEXTILE FABRIC OR SIMILAR ARTICLE
William Stark, New York, N. Y., assignor to Aileen Mills Company, Biscoe, N. C., a corporation of Delaware
Application September 16, 1957, Serial No. 47,682
Term of patent 14 years
(Cl. D92—1)



183,952
CHENILLE TEXTILE FABRIC OR SIMILAR ARTICLE
William Stark, New York, N. Y., assignor to Alleen Mills Company, Biscoe, N. C., a corporation of Delaware
Application September 19, 1957, Serial No. 47,683
Term of patent 14 years
(Cl. D92—1)

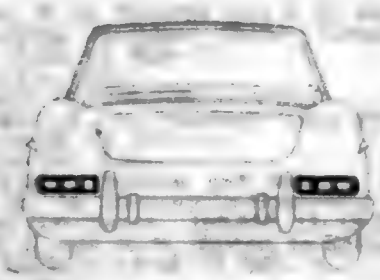


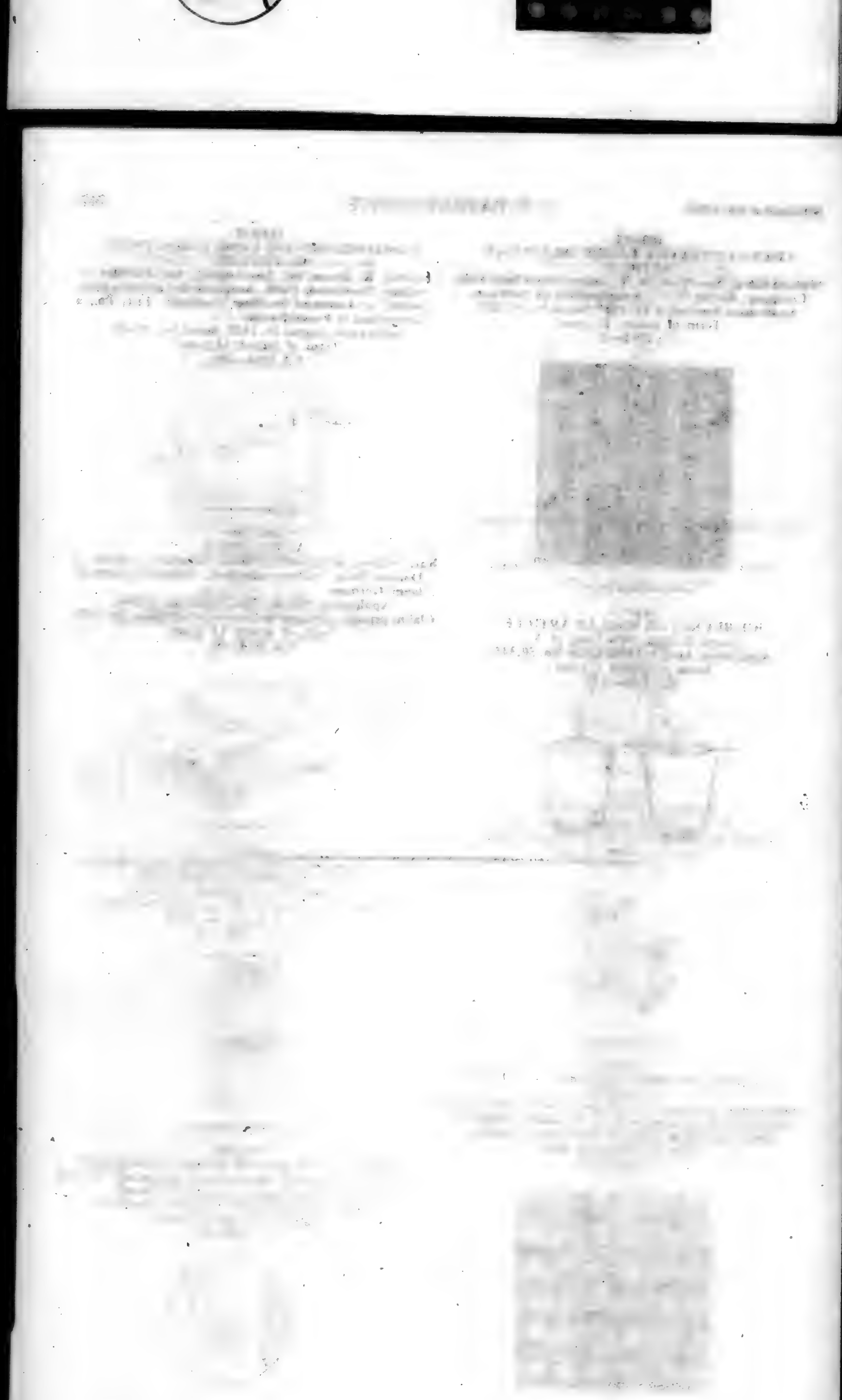
183,953
ICE BUCKET OR SIMILAR ARTICLE
Joseph B. Stier, New York, N. Y.
Application April 7, 1958, Serial No. 50,345
Term of patent 7 years
(Cl. D58—17)



183,954
COMBINED DENTAL LAMP AND SUPPORT OR THE LIKE
Frederick K. Storm, Jr., Los Angeles, and Eldridge H. Smiley, Rosemead, Calif., assignors, by mesne assignments, to American Sterilizer Company, Erie, Pa., a corporation of Pennsylvania
Application August 19, 1957, Serial No. 47,456
Term of patent 14 years
(Cl. D48—20)

183,955
AUTOMOBILE
Karl Wilfert, Stuttgart-Degerloch, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application May 4, 1956, Serial No. 41,354
Claims priority, application Germany November 18, 1953
Term of patent 14 years
(Cl. D14—3)





LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF NOVEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Richardson, Frederick G. Weld nut and method of making same. Re. 24,567, 11-18-58, Cl. 151—41.7.

Thaden, Herbert V., to Thaden Molding Corp. Chair construction. Re. 24,569, 11-18-58, Cl. 155—151.

Thaden Molding Corp.: *See*—
Thaden, Herbert V. Re. 24,569.

Universal Oil Products Co.: *See*—
Watkins, Charles H. Re. 24,566.

Watkins, Charles H., to Universal Oil Products Co. Manufacture of solid [polymerization] catalysts. Re. 24,568, 11-18-58, Cl. 252—452.

LIST OF PLANT PATENTEES

Conard-Pyle Co., The: *See*—
De Ruiter, Gerrit. 1,771.

Dauernheim Inc.: *See*—
Nill, Alfred. 1,772.

De Ruiter, Gerrit, to The Conard-Pyle Co. Rose plant. 1,771, 11-18-58, Cl. 47—61.

Nill, Alfred, to Dauernheim Inc. Azalea plant. 1,772, 11-18-58, Cl. 47—60.

LIST OF DESIGN PATENTEES

Accordion Manufacturers and Wholesalers Outlet, Inc.: *See*—
Bianco, David P. 182,911.

Allen Mills Co.: *See*—
Stark, William. 182,951.
Stark, William. 182,952.

American Machine & Foundry Co.: *See*—
Erstad, Tennes I. 182,920.

American Sterilizer Co.: *See*—
Storm, Frederick K., Jr., and Smiley. 182,954.

Atchley, Frank W. Pipe lighter or similar article. 182,907, 11-18-58, Cl. D46—27.

Ayler, Elmo E.: *See*—
Miller, William J., Ayler, and Titus. 182,944.

Bauer, Lester L., to Gendron Wheel Co. Invalid walker. 182,908, 11-18-58, Cl. D14—2.

Beer, Leo. Narrow woven fabric or similar article. 182,909, 11-18-58, Cl. D8—32.

Beer, Leo. Narrow woven fabric or similar article. 182,910, 11-18-58, Cl. D8—32.

Bianco, David P., to Accordion Manufacturers and Wholesalers Outlet, Inc. Accordion grill. 182,911, 11-18-58, Cl. D66—1.

Bloom, Albert. Safety feeding spoon for infants. 182,912, 11-18-58, Cl. D54—12.

Brands, William G. Shaving brush. 182,913, 11-18-58, Cl. D9—2.

Chambers, William M., and H. C. Moore, to Electro-Way Corp. Kitchen accessory power unit. 182,914, 11-18-58, Cl. D26—8.

Coro, Inc.: *See*—
Katz, Adolph. 182,931-182,938.

Coons, Kibbey W. Mobile machine shop trailer. 182,915, 11-18-58, Cl. D14—2.

Daimler-Benz Aktiengesellschaft: *See*—
Wilfert, Karl. 182,955.

Danek Designs Inc.: *See*—
Quistgaard, Jens H. 182,947.

Davis, Myron F., Jr.: *See*—
Furiani, Walter, and Davis. 182,924.
Furiani, Walter, and Davis. 182,925.

Derwallis, Jerome F. Wedding tool. 182,916, 11-18-58, Cl. D32—6.

Dreyfuss, Henry, to The Esterbrook Pen Co. Ball point writing instrument or similar article. 182,917, 11-18-58, Cl. D74—17.

Eastman Kodak Co.: *See*—
Hughey, Carter J., and Husted. 182,929.

Electro-Way Corp.: *See*—
Chambers, William M., and Moore. 182,914.

Engelhard, Otto, to Native Laces & Textiles, Inc. Lace. 182,918, 11-18-58, Cl. D47—6.

Engelhard, Otto, to Native Laces & Textiles, Inc. Lace. 182,919, 11-18-58, Cl. D47—6.

Erstad, Tennes I., to American Machine & Foundry Co. Condiment dispenser. 182,920, 11-18-58, Cl. D44—22.

Esterbrook Pen Co., The: *See*—
Dreyfuss, Henry. 182,917.

Florian, Gordon W., to Taylor Instrument Companies. Combination indoor-outdoor thermometer and hygrometer. 182,921, 11-18-58, Cl. D21—7.

Fogarty, Frank R., Jr. Carrier for children's shoes. 182,922, 11-18-58, Cl. D29—12.

Foster, Nayler C., Sr. Cabinet. 182,923, 11-18-58, Cl. D36—10.

Furiani, Walter, and M. F. Davis, Jr., to International Business Machines Corp. Card interpreter. 182,924, 11-18-58, Cl. D26—5.

Furiani, Walter, and M. F. Davis, Jr., to International Business Machines Corp. Card collator. 182,925, 11-18-58, Cl. D26—5.

Furiani, Walter, W. H. Harkins, and L. H. Sedaris, to International Business Machines Corp. Computer keyboard. 182,926, 11-18-58, Cl. D26—5.

Gendron Wheel Co.: *See*—
Bauer, Lester L. 182,908.

Hammond, Robert R., to Standard Glass Products. Boat. 182,927, 11-18-58, Cl. D71—1.

Harkins, William H.: *See*—
Furiani, Walter, Harkins, and Sedaris. 182,926.

Hose, Robert H., to Minneapolis-Honeywell Regulator Co. Casing for an instrument. 182,928, 11-18-58, Cl. D26—5.

Hughey, Carter J., and R. B. Husted, to Eastman Kodak Co. Camera. 182,929, 11-18-58, Cl. D61—1.

Husted, Rex B.: *See*—
Hughey, Carter J., and Husted. 182,929.

International Business Machines Corp.: *See*—
Furiani, Walter, and Davis. 182,924.
Furiani, Walter, and Davis. 182,925.
Furiani, Walter, Harkins, and Sedaris. 182,926.

International Harvester Co.: *See*—
McGrew, Charles R., Jr. 182,943.

Kahney, Jack D., to United States Rubber Co. Textile fabric. 182,930, 11-18-58, Cl. D62—1.

Katz, Adolph, to Coro, Inc. Link chain for a necklace or the like. 182,931, 11-18-58, Cl. D45—16.

Katz, Adolph, to Coro, Inc. Earring or the like. 182,932, 11-18-58, Cl. D45—9.

Katz, Adolph, to Coro, Inc. Link chain for a bracelet or the like. 182,933, 11-18-58, Cl. D45—4.

Katz, Adolph, to Coro, Inc. Link chain for a necklace or the like. 182,934, 11-18-58, Cl. D45—16.

Katz, Adolph, to Coro, Inc. Earring or the like. 182,935, 11-18-58, Cl. D45—9.

Katz, Adolph, to Coro, Inc. Earring or the like. 182,936, 11-18-58, Cl. D45—9.

Katz, Adolph, to Coro, Inc. Earring or the like. 182,937, 11-18-58, Cl. D45—9.

Katz, Adolph, to Coro, Inc. Link chain for a bracelet or the like. 182,938, 11-18-58, Cl. D45—4.

Leavy, Raymond F. Decanter. 182,939, 11-18-58, Cl. D60—6.

Lazzarde, Giorgio and N. Bottle. 182,940, 11-18-58, Cl. D60—8.

Lazzarde, Nicole: *See*—
Lazzarde, Giorgio and N. 182,940.

Masso, Charles A. Mail box. 182,941, 11-18-58, Cl. D74—9.

Masso, Charles A. Mail box. 182,942, 11-18-58, Cl. D74—9.

McGrew, Charles R., Jr., to International Harvester Co. Motor vehicle transmission control lever and mounting. 182,943, 11-18-58, Cl. D14—6.

Miller, William J., R. E. Ayler, and A. H. Titus, Jr. Front for a wall oven. 182,944, 11-18-58, Cl. D61—26.

Minneapolis-Honeywell Regulator Co.: *See*—
Hose, Robert H. 182,928.

Moore, Herbert C.: *See*—
Chambers, William M., and Moore. 182,914.

Native Laces & Textiles, Inc.: *See*—
Engelhard, Otto. 182,918.
Engelhard, Otto. 182,919.

Osborne, Charles V. Mineral car. 182,945, 11-18-58, Cl. D60—1.

Paschal, Robert L. Combined barbeque, quick warmer and self service display unit. 182,946, 11-18-58, Cl. D61—10.

Quistgaard, Jens H., to Danek Designs Inc. Combined cheese board and cutter. 182,947, 11-18-58, Cl. D44—1.

Schafroth, Werner. Stapling machine. 183,948, 11–18–58, Cl. D74—1.
Sedaris, Louis H.: *See*—
Furlani, Walter, Harkins, and Sedaris. 183,926.
Skaller, H. George. Combined beverage dispenser and food service carrier. 183,949, 11–18–58, Cl. D14—3.
Skaller, H. George. Food service carrier. 183,950, 11–18–58, Cl. D14—3.
Smiley, Eldridge H.: *See*—
Storm, Frederick K., Jr., and Smiley. 183,954.
Standard Glass Products: *See*—
Hammond, Robert R. 183,927.
Stark, William, to Aileen Mills Co. Chenille textile fabric or similar article. 183,951, 11–18–58, Cl. D92—1.
Stark, William, to Aileen Mills Co. Chenille textile fabric or similar article. 183,952, 11–18–58, Cl. D92—1.
Stier, Joseph B. Ice bucket or similar article. 183,953, 11–18–58, Cl. D59—17.
Storm, Frederick K., Jr., and E. H. Smiley, to American Sterilizer Co. Combined dental lamp and support or the like. 183,954, 11–18–58, Cl. D48—20.
Taylor Instrument Companies: *See*—
Florian, Gordon W. 183,921.
Titus, Armour H., Jr.: *See*—
Miller, William J., Ayler, and Titus. 183,944.
United States Rubber Co.: *See*—
Kahney, Jack D. 183,930.
Wifert, Karl, to Daimler-Benz Aktiengesellschaft. Automobile. 183,955, 11–18–58, Cl. D14—3.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF NOVEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Aardahl, Sigvard: *See*—
Berg, Kare W., Belchen, and Aardahl. 2,860,486.
Aasland, Byron T.: *See*—
Webster, John V., Aasland, and Louthan. 2,860,716.
Abbott, Berenice. Camera. 2,860,556, 11-18-58, Cl. 95—11.
Abbott Laboratories: *See*—
Weston, Arthur W., and Hamlin. 2,861,072.
Abrams, Bernard W., and J. Arberman, to Clevite Corp. Pulse-echo system. 2,861,254, 11-18-58, Cl. 340—3.
Abrasive Machine Tool Co.: *See*—
Schafranik, Erich. 2,860,930.
Abrasive and Metal Products Co.: *See*—
Gregor, John R. 2,860,960.
Gregor, John R., and Kistler. 2,860,961.
Adler, Ronald R. Apparatus for the preparation of hot beverages. 2,861,171, 11-18-58, Cl. 219—43.
Admiral Corp.: *See*—
Morton, Evans T. 2,860,807.
Advance Transformer Co.: *See*—
Feinberg, Albert E. 2,861,217.
Aerostyle Ltd.: *See*—
White, Sidney H., and Webb. 2,860,918.
Aguilar, John G., and H. B. Rice, to John Burton Machine Corp. Band applying device and method. 2,860,468, 11-18-58, Cl. 53—291.
Aigrain, Pierre, and C. Benoit a la Guillaume, to Compagnie Generale de Telegraphie Sans Fil. Infra-red emitting device. 2,861,165, 11-18-58, Cl. 219—34.
Allen, Jackson A., to Leonard P. Frieder. Headgear with retractable eye shield. 2,860,343, 11-18-58, Cl. 2—9.
Ainsworth, Frank W., to Minneapolis-Honeywell Regulator Co. Servo control valve. 2,860,606, 11-18-58, Cl. 121—46.5.
Air Electric Machine Co., Inc.: *See*—
Christensen, Lloyd A., L. C., W. A., and W. W. 2,860,630.
Air Reduction Co., Inc.: *See*—
Ellis, Warren C., Rowlands, and Uhl. 2,860,963.
Senecky, John S. 2,860,688.
Alden, Milton. Work center. 2,860,404, 11-18-58, Cl. 29—200.
Alexander, Ben, and J. F. Sullivan, to International Telephone and Telegraph Corp. Pulse pair detector. 2,861,184, 11-18-58, Cl. 250—27.
Alexander, Perry L., W. E. Hartis, and L. F. Wilkens, to Ducam Corp. Article converger conveyor. 2,860,762, 11-18-58, Cl. 198—32.
Alford, Andrew. Localizer antenna system. 2,861,266, 11-18-58, Cl. 343—792.
Allen, Kenneth C., and L. B. Biebel, to The Hobart Mfg. Co. Computing scale. 2,860,867, 11-18-58, Cl. 265—29.
Allen, Robert K., to The Babcock & Wilcox Co. Apparatus for burning residual liquor. 2,860,611, 11-18-58, Cl. 122—240.
Allen, Russell G., to Owens-Illinois Glass Co. Adjusting mechanism for timing devices. 2,860,524, 11-18-58, Cl. 74—505.
Alliance Mfg Co., Division of The Consolidated Electronics Industries Corp.: *See*—
Deming, Andrew F., Schneider, and Jordan. 2,861,285.
Schneider, Emmor V. 2,860,871.
Allin, George S., Jr., and W. W. Henning, to International Harvester Co. Land clearing rake. 2,860,426, 11-18-58, Cl. 37—2.
Allis-Chalmers Mfg. Co.: *See*—
Ferguson, Rector C. 2,860,472.
Hodtum, Joseph B. 2,861,222.
Allsup, Walter L., and T. M. McSwain. Protecting device for vehicle operators. 2,860,566, 11-18-58, Cl. 98—1.
Aluminum Co. of America: *See*—
Brooks, Moses B. 2,860,931.
Wheater, William W. 2,860,479.
Amana Refrigeration, Inc.: *See*—
Whitesel, Harry A. 2,860,404.
American Cyanamid Co.: *See*—
Frank, Simon, and Kennerly. 2,861,099.
American Machine & Foundry Co.: *See*—
Bell, Lee R. 2,860,469.
American Steel Foundries: *See*—
Flesch, Norman F. 2,860,729.
American Radiator & Standard Sanitary Corp.: *See*—
Millerwise, Carl H. 2,861,142.
American Steel Foundries: *See*—
Lindsey, Robert J. 2,860,485.
Sudeck, Norman H. 2,860,900.
American Telephone and Telegraph Co.: *See*—
Brison, Jordan W. 2,861,136.
Anderson Co., The: *See*—
Krohm, Fred A. 2,860,264.
Krohm, Fred A. 2,860,265.
Anderson Controls, Inc.: *See*—
Grover, Philip D. 2,861,143.
Anderson, Maynard C., and N. Cole. Slide for rigid shank cultivator. 2,860,565, 11-18-58, Cl. 97—179.
Anderson, Norman C., to Electronics Corp. of America. Photoconductive target. 2,861,161, 11-18-58, Cl. 201—63.
Andersen, Olof V., to Anson Inc. Insignia carrying device. 2,860,395, 11-18-58, Cl. 24—90.
Andis Clipper Co.: *See*—
Andis, Mathew. 2,860,412.
Andis, Mathew, to Andis Clipper Co. Hair clippers having interchangeable comb plates. 2,860,412, 11-18-58, Cl. 30—200.
Andrew, Herbert F., H. C. Boyd, and R. R. Davies, to Imperial Chemical Industries Ltd. Metallisable azo dyestuffs. 2,861,066, 11-18-58, Cl. 260—155.
Andrew, Herbert F., and R. R. Davies, to Imperial Chemical Industries, Ltd. Metallisable azo dyestuffs. 2,861,067, 11-18-58, Cl. 260—155.
Andrews, William R. Friction driven steplessly variable gears. 2,860,518, 11-18-58, Cl. 74—200.
Androsiglio, Lucio. Alarm. 2,860,595, 11-18-58, Cl. 116—98.
Anson Inc.: *See*—
Anderson, Olof V. 2,860,395.
Antioch College: *See*—
Asakawa, George. 2,861,163.
Arberman, Jerome: *See*—
Abrams, Bernard W., and Arberman. 2,861,254.
Arden, Thomas V., F. H. Burstall, G. R. Davies, R. P. Linstead, and R. A. Wells, to United States of America, Atomic Energy Commission. Production of metals and their compounds. 2,860,956, 11-18-58, Cl. 23—209.
Aries, Robert S. Preparation of nicotinic acid esters. 2,861,077, 11-18-58, Cl. 260—295.5.
Armstrong Cork Co.: *See*—
Garrett, Richard A. 2,860,382.
Hazeltine, James E., Jr. 2,861,007.
Heckles, John S. 2,861,047.
Arnesen, Leif: *See*—
Traino, Louis M., and Arnesen. 2,860,560.
Arneson, Lawrence E., to Federal Paper Board Co., Inc. Can packaging apparatus. 2,860,461, 11-18-58, Cl. 53—56.
Aro Equipment Corp.: *See*—
De Groff, William D. 2,860,531.
Arrasmith, William C. Adjustable balanced doublet antenna with impedance matching means. 2,861,267, 11-18-58, Cl. 343—822.
Arvey Corp.: *See*—
Johnson, Arnold E. 2,860,439.
Asakawa, George, to Antioch College. Heating element. 2,861,163, 11-18-58, Cl. 201—72.
Asbeck, Hans J., and L. J. Jordan, to The Sherwin-Williams Co. Coated building blocks and method of producing same. 2,861,011, 11-18-58, Cl. 117—72.
Ashton, Albert A., to The Youngstown Sheet and Tube Co. Brake and flexible coupling for rotary mechanisms. 2,860,734, 11-18-58, Cl. 188—90.
Assembly Products, Inc.: *See*—
Saint Amour, John D., and Hammond. 2,861,243.
Ateliers de Constructions Electriques de Charleroi: *See*—
Willems, Paul. 2,861,232.
Atkinson, Charles D., to E. I. du Pont de Nemours and Co. Method of producing group IV-A metals. 2,860,966, 11-18-58, Cl. 75—84.5.
Atkins Industries, Inc.: *See*—
Small, Samuel N. 2,860,690.
Auerbach, Abraham E., to Leon Fine & Associates. Electromagnetic typewriter. 2,860,757, 11-18-58, Cl. 197—84.
Ault, Neil N.: *See*—
Ueltz, Herbert F. G., and Ault. 2,860,998.
Avanzati, Carlos A. Novel jack clutch for use in machine-tools and tools. 2,860,750, 11-18-58, Cl. 192—44.
Axelrod, Gerald J. and H. Method of bonding porcelain to gold castings and articles resulting therefrom. 2,861,010, 11-18-58, Cl. 117—70.
Axelrod, Herman: *See*—
Axelrod, Gerald J. and H. 2,861,010.
Babcock & Wilcox Co., The: *See*—
Allen, Robert K. 2,860,611.
Durham, Edwin. 2,860,612.
Heller, Lewis W. 2,860,610.
Heller, Lewis W., and Smith. 2,860,613.
Badger, Everett H., Jr.: *See*—
Taylor, William, Badger, and Burton. 2,860,653.
Badger, Everett H., Jr., to Parker-Hannifin Corp. Apparatus for emptying tanks. 2,860,652, 11-18-58, Cl. 137—98.
Badische Anilin- & Soda-Fabrik Akt.: *See*—
Schlecht, Leo, and Trageser. 2,860,967.
Stastny, Fritz. 2,861,046.
Baeder, David M.: *See*—
Stoddard, Howard V., Baeder, and Messeri. 2,860,729.
Baile, John H.: *See*—
Clark, Eugene F. 2,860,666.
MacIsaac, John T., Jr., and Bray. 2,860,665.
Moberg, Ivar O. 2,860,664.
Moberg, Ivar O. 2,860,669.
Bailey Meter Co.: *See*—
Schink, Howard C. 2,860,650.

Borsemann, William, and C. J. Hughey, to Eastman Kodak Co. Device for handling a plurality of information bear-

Burch Co., The: *See*—
Blanco, Henry J. 2,860,745.

Bain, Lewis A., Jr., and R. A. Geshner, to Western Electric Co., Inc. Methods of making printed wiring circuits. 2,861,029, 11-18-58, Cl. 204—15.

Baird-Atomic, Inc.: *See*—
Chao, Stanley K. S., and Stoddart. 2,861,181.

Baker, Foy A. Children's riding device. 2,860,659, 11-18-58, Cl. 155—17.

Balchen, Fridtjof: *See*—
Berg, Kåre W., Balchen, and Aardahl. 2,860,486.

Ball, Cecil G. Coin holder folder. 2,860,774, 11-18-58, Cl. 206—84.

Ballun, Aloysius T.: *See*—
Karabinos, Joseph V., and Ballun. 2,861,108.

Bank of America National Trust and Savings: *See*—
Grover, Ross D., and Sampietro. 2,860,725.

Banker, Oscar H., to New Products Corp. Power steering valve. 2,860,605, 11-18-58, Cl. 121—46.5.

Bardonnet, Claude, and R. Commarmot, to Societe des Usines Chimiques Rhone-Poulenc. Apparatus and method for measuring density. 2,860,516, 11-18-58, Cl. 73—439.

Barenyi, Bela. Partition walls defining the passenger compartment of motor vehicles. 2,860,912, 11-18-58, Cl. 296—28.

Barker Equipment Co.: *See*—
Bruce, Robert A. 2,860,808.

Baraum, Howard J., Jr., to Lever Brothers Co. Container having a recipe-selecting label thereon. 2,860,431, 11-18-58, Cl. 40—61.

Baron, Abraham L., and E. J. Maxion, to Chase Chemical Co. Process for obtaining vitamin B_{12} and vitamin B_{12}-like substances and the products thereof. 2,861,025, 11-18-58, Cl. 167—81.

Barry, John K., and M. R. Tuozzo, to South Chester Corp. Door or panel fastener. 2,860,904, 11-18-58, Cl. 292—258.

Barthelemy, Max, to Societe Parisienne d'Expansion Chimique S. P. E. C. I. A. Automatic bottle filling machine. 2,860,464, 11-18-58, Cl. 53—115.

Bartolomeo, Frank. Smoking device. 2,860,638, 11-18-58, Cl. 128—301.

Barton, John P., to United States Steel Corp. Bloom manipulator. 2,860,764, 11-18-58, Cl. 198—33.

Bartoo, George O.: *See*—
Howard, Sheldon J., and Bartoo. 2,860,363.

Barworth, Inc.: *See*—
Swatsworth, John C. 2,860,660.

Basnett, Thomas N.: *See*—
Brown, Kenneth S., and Basnett. 2,861,211.

Bates, C. J., & Son: *See*—
Bates, Wells C. 2,860,399.

Bates, Wells C., to C. J. Bates & Son. Design forming device. 2,860,399, 11-18-58, Cl. 28—15.

Battle Creek Packaging Machines, Inc.: *See*—
Willbrandt, Franklin M. 2,860,847.

Bauer, Anton, to North American Philips Co., Inc. Magnetic motor. 2,861,204, 11-18-58, Cl. 310—46.

Bauer, Robert E.: *See*—
Mancuso, Joseph P., and Maffett. 2,860,549.

Bauer, Wilhelm. Installation for spraying foam materials. 2,860,850, 11-18-58, Cl. 259—4.

Bayless, Charles R., deceased (by D. M. B. Bayless, executrix), J. W. Daughtrey, and M. L. Robertson, to Gulf Oil Corp. Liquid storage. 2,860,655, 11-18-58, Cl. 137—122.

Bayless, Daisey M. B.: *See*—
Bayless, Charles R., Daughtrey, and Robertson. 2,860,655.

Bearinger, Van W., to Minneapolis-Honeywell Regulator Co. Method of preparing semi-conductor devices. 2,861,017, 11-18-58, Cl. 148—1.5.

Beauchamp, Robert O., Jr., and T. P. Johnston, to Tennessee Corp. Manganous dimethyldithiocarbamate stabilized with zinc dimethyldithiocarbamate. 2,861,091, 11-18-58, Cl. 260—429.

Beaufait, Loren J., Jr., F. R. Stevenson, and G. K. Rollefson, to United States of America, Atomic Energy Commission. Plutonium separation method. 2,860,949, 11-18-58, Cl. 23—14.5.

Bebinger, Charles N., to Joy Mfg. Co. Swivel coupling. 2,860,765, 11-18-58, Cl. 198—95.

Beckadolph, Richard, and W. Niclas, to Continental Gummi-Werke Akt. Method of centrifugally casting vehicle tires. 2,860,379, 11-18-58, Cl. 18—58.5.

Becker, Howard I., Jr., to General Electric Co. Method and apparatus for testing magnets. 2,860,778, 11-18-58, Cl. 209—73.

Beckman Instruments, Inc.: *See*—
Houdyshell, Harry H., and Griffith. 2,860,485.

Beede, Arnold H., and A. P. Cawl, to Electrolux Corp. Mechanism for rendering a vacuum cleaner inoperative if no bag is in place. 2,860,724, 11-18-58, Cl. 188—87.

Beer, Albert C.: *See*—
Rossi, Bruno, Sack, Beer, and Boehmer. 2,861,196.

Bell, George C., to Stoner Mfg. Corp. Beverage vending machines and cup-drop mechanism therefor. 2,860,817, 11-18-58, Cl. 221—11.

Bell & Gossett Co.: *See*—
Carlson, Gilbert F., and Lockhart. 2,860,659.

Bell, Leo R., to American Machine & Foundry Co. Wrapper feed mechanism for wrapping machines. 2,860,469, 11-18-58, Cl. 53—389.

Bell Telephone Laboratories, Inc.: *See*—
Burton, Everett T. 2,861,181.
Fuller, Calvin S., and Tanenbaum. 2,861,018.
Hefele, John R. 2,861,124.
Hopper, Andrew L. 2,861,185.
McKimin, Herbert J. 2,861,247.
Wolff, George J. 2,860,933.

Bellingham Steel Products, Inc.: *See*—
Ingram, Marvin L. 2,860,466.

Belsky, Jerome, to Talco Engineering Co., Inc. Cartridge actuated brakes. 2,860,736, 11-18-58, Cl. 188—106.

Belt, Salem F., to Monsanto Chemical Co. Cyanoethylation process. 2,860,946, 11-18-58, Cl. 8—120.

Bendix Aviation Corp.: *See*—
Dalsell, Clarence W. 2,860,702.
Gardiner, Paul J. 2,860,785.
Haas, William L. 2,861,221.

Benoit a la Guillaume, Claude: *See*—
Aigrain, Pierre, and Benoit. 2,861,165.

Benway, Robert E., to Radio Corp. of America. Combination focusing and converging lens for multiple beam tubes. 2,861,208, 11-18-58, Cl. 313—70.

Berg, Kåre W., F. Balchen, and S. Aardahl. Security device for hydraulic operated vehicle brakes. 2,860,486, 11-18-58, Cl. 60—54.5.

Berg, Marcus, to Nickel Cadmium Battery Corp. Battery plate and tab assembly. 2,861,115, 11-18-58, Cl. 136—28.

Bergeron, Grafton L., and C. K. Bea, to The Dow Chemical Co. Process for the recovery of dissolved mercury salts from brine effluent from mercury cathode electrolytic cells. 2,860,952, 11-18-58, Cl. 23—134.

Bergholt, Alice A. Elbow treatment device. 2,860,629, 11-18-58, Cl. 128—57.

Bergman, Carl-Axel L., to Kemiska A B Candor. Wet tumbling in rotating barrels. 2,860,456, 11-18-58, Cl. 51—164.

Berko Electric Mfg. Corp.: *See*—
Knoll, David. 2,861,168.

Berlin & Jones Co., Inc.: *See*—
Cooke, John A. 2,860,826.

Berney, Joseph C.: *See*—
Works, William R., and Berney. 2,860,507.

Bernhardt, Ernest C., and H. B. Whitfield, Jr., to E. I. du Pont de Nemours and Co. Method for extruding and foaming resin. 2,860,377, 11-18-48, Cl. 18—48.

Bernstein, Stanley, to General Electric Co. Precision limiter circuit for a radiation-type gauge. 2,861,189, 11-18-58, Cl. 250—83.3.

Better, Bernard R., and H. Conn, to Scully-Jones and Co. Quick change chuck. 2,860,883, 11-18-58, Cl. 279—83.

Bianco, Henry J., to The Burch Co. Window structure having a combined lift and latch device. 2,860,745, 11-18-58, Cl. 189—72.

Biebel, Lawrence B.: *See*—
Allen, Kenneth C., and Biebel. 2,860,867.

Biggs, Albert J., to Hazeltine Research, Inc. Cathode-ray-tube beam-deflection system. 2,861,209, 11-18-58, Cl. 313—76.

Billian, Donald L., to Buckeye Iron & Brass Works. Emergency shut-off valve. 2,860,649, 11-18-58, Cl. 137—75.

Binks Mfg. Co.: *See*—
Rice, James H., and Johnson. 2,860,599.

Birbaum, Lester W., to La Belle Industries, Inc. Slide selector. 2,860,433, 11-18-58, Cl. 40—78.

Bischoff, Alfred F.: *See*—
Gardiner, Paul C., and Bischoff. 2,861,145.

Black-Clawson Co., The: *See*—
Bower, Fred C. 2,860,839.
Corbin, Wesley S. 2,860,552.
Stark, Donald L. 2,860,550.

Black, Marion B.: *See*—
Black, William A. 2,860,481.

Black, William A., deceased, by M. B. Black, executrix, to General Time Corp. Secondary clock resetting means. 2,860,481, 11-18-58, Cl. 58—34.

Blackadder, William, to Sunnytoys (Distributors) Ltd. Guided projectile toy. 2,860,621, 11-18-58, Cl. 124—21.

Blankenship, Allen N. Polyphase slave motor. 2,861,236, 11-18-58, Cl. 318—361.

Bliss, E. W., Co.: *See*—
Hatch, Meredith R. 2,860,571.

Block, Edwin H.: *See*—
Gres, Marcel E., and Block. 2,860,662.

Blomqvist, Olle. Bath tube. 2,860,340, 11-18-48, Cl. 4—177.

Bluestone, Henry, to Diamond Alkali Co. Method of defoliating plants. 2,860,962, 11-18-58, Cl. 71—2.5.

Boegehold, Alfred L., D. K. Hanink, and F. J. Webbere, to General Motors Corp. Wrought high temperature alloy. 2,860,968, 11-18-58, Cl. 75—122.

Boegel, Ernest F. Controllable mixing faucet. 2,860,661, 11-18-58, Cl. 137—637.3.

Boehmer, Howard W.: *See*—
Rossi, Bruno, Sack, Beer, and Boehmer. 2,861,196.

Boeing Airplane Co.: *See*—
Hill, Henry C. 2,860,932.

Boessenkool, Helmich W., G. Durst, and S. Siegel, to Metals & Controls Corp. Solid-phase bonding of metals. 2,860,409, 11-18-58, Cl. 29—497.

Bolser, Clark M., to Bolser Corp. Truck mirror and supporting means therefor. 2,860,546, 11-18-58, Cl. 88—98.

Bolser Corp.: *See*—
Bolser, Clark M. 2,860,546.

Bomberger, Howard B., to Crucible Steel Co. of America. Corrosion inhibition of titanium-base materials by fuming nitric acid. 2,860,953, 11-18-58, Cl. 23—157.

Bon, Charles K.: *See*—
Bergeron, Grafton L., and Bon. 2,860,952.

Bonner, Robert H.: *See*—
Christianson, George, and Bonner. 2,860,991.

Borden Co., The: *See*—
Britton, Richard K. 2,861,002.

Borel, Eric A., and R. H. Cotton, to Hercules Powder Co. Method for treating gluten. 2,861,061, 11-18-58, Cl. 260—123.

Borel, Eric A., and R. H. Cotton, to Hercules Powder Co. Method of treating gluten to produce gliadin and glutamates therefrom. 2,861,062, 11-18-58, Cl. 260—123.

Borg-Warner Corp.: *See*—
Coolidge, John E., Jr., and Konvalinka. 2,861,201.

Celanese Corp. of America: *See*—

Cohen, Oscar P., H. M. Culbertson, and L. E. Rademacher

Anderson, Norman C., to Electronics Corp. of America. Photoconductive target. 2,861,161, 11-18-58, Cl. 201—63.

Bailey Meter Co.: *See*—
Schink, Howard C. 2,860,650.

Bornemann, William, and C. J. Hughey, to Eastman Kodak Co. Device for handling a plurality of information bearing mediums. 2,860,906, 11-18-58, Cl. 294—1.

Bouffort, Victor A., to Mecatec S. A. Vehicle provided with adjustable endless tracks. 2,860,715, 11-18-58, Cl. 180—9.1.

Bowen, Max E., and T. E. Carlson, to Handling Equipment Mfg. Corp. Electric water heater. 2,861,160, 11-18-58, Cl. 219—28.

Bower, Fred C., to The Black-Clawson Co. Web winding machine. 2,860,839, 11-18-58, Cl. 242—56.

Bowman, Anna H.: *See*—
Bowman, Samuel G. 2,861,146.

Bowman, Samuel G., ½ each to A. H. Bowman and J. M. Guthrie. Pipe organ relay. 2,861,146, 11-18-58, Cl. 200—104.

Boyd, Harold C.: *See*—
Andrew, Herbert F., Boyd, and Davies. 2,861,066.

Brancaccio, Silvere, and W. C. Smith. Expandable permanent wave rod. 2,860,645, 11-18-58, Cl. 132—42.

Brandenburg, Edwin H. Magnetic chucks. 2,861,224, 11-18-58, Cl. 317—163.

Brant, Bridane W. Dental impression tray. 2,860,414, 11-18-58, Cl. 32—17.

Brauchler, Charles A. Split die and container for extrusion press. 2,860,775, 11-18-58, Cl. 207—17.

Braun, William H., to Carey-McFall Co. Jalousie louvre end clip. 2,860,391, 11-18-58, Cl. 20—62.

Braun, William H., to Carey-McFall Co. Bottomrail assembly. 2,860,699, 11-18-58, Cl. 160—173.

Brawner, William D., to Le Febure Corp. Coin and currency till. 2,860,943, 11-18-58, Cl. 312—298.

Breadner, Jack A. Safety guard. 2,860,525, 11-18-58, Cl. 74—613.

Breithaupt, Charles E., to E. I. du Pont de Nemours and Co. Filtration method. 2,860,784, 11-18-58, Cl. 210—75.

Brey, Frank W.: *See*—
MacIsaac, John T., Jr., and Brey. 2,860,665.

Brigham, Harry S., to Western Gulf Oil Co. Method of jeep hole completion. 2,860,859, 11-18-58, Cl. 255—1.8.

Brinster, John F., and W. C. Johnson, to General Devices, Inc. Pulse sequence generator. 2,861,202, 11-18-58, Cl. 307—106.

Brison, Jordan W., to American Telephone and Telegraph Co. Switch mechanism for telephone apparatus. 2,861,136, 11-18-58, Cl. 179—164.

Bristol, Edward S., to Leeds and Northrup Co. Control systems for electrical generating units. 2,861,194, 11-18-58, Cl. 290—2.

British Messier Ltd.: *See*—
Orloff, George. 2,860,607.

Britton, Edgar C., and H. T. Smith, to The Dow Chemical Co. Process for making unsaturated hydantoins. 2,861,079, 11-18-58, Cl. 260—309.5.

Britton, Richard K., to The Borden Co. Hot melt resinous adhesive composition. 2,861,002, 11-18-58, Cl. 106—177.

Brock, Joseph A. Band ties. 2,860,393, 11-18-58, Cl. 24—16.

Brookhyser, Byron B.: *See*—
Erickson, Harold E., and Brookhyser. 2,860,790.

Brooks, Moses E., to Aluminum Co. of America. Roll neck bearing seals. 2,860,931, 11-18-58, Cl. 308—36.1.

Broome, Oscar E. Outdoor cookers. 2,860,570, 11-18-58, Cl. 99—421.

Brown, Julian S., to R. L. Lewis. Mixing apparatus for mixing materials of different characteristics. 2,860,857, 11-18-58, Cl. 259—96.

Brown, Kenneth S., and T. N. Bassett, to International Standard Electric Corp. Pre-stressed grids for electron tubes. 2,861,211, 11-18-58, Cl. 313—348.

Brown, Paul L. Soil moisture probe. 2,860,515, 11-18-58, Cl. 73—425.

Brownlee, William R. Load assigning apparatus for electric power systems. 2,861,196, 11-18-58, Cl. 307—57.

Brownlee, William R. Measuring and controlling apparatus. 2,861,197, 11-18-58, Cl. 307—57.

Bruce, Donald M., and R. H. Burns, to Electro-Hydraulics Ltd. Fluid pressure operated multilinear servo-systems. 2,860,548, 11-18-58, Cl. 90—13.

Bruce, George D.: *See*—
Henle, Robert A., Emery, Bruce, and MacSorley. 2,861,200.

Bruce, Robert A., to Barker Equipment Co. Wire case having sheet metal bottom. 2,860,806, 11-18-58, Cl. 220—19.

Brueggle, Armin O., and C. R. Krekeler, to The Cincinnati Mine Machinery Co. Mining cutter bit having a resilient tongue. 2,860,863, 11-18-58, Cl. 262—33.

Bruet, Henri R., ½ to Societe Anonyme dite: Etablissements A. Caseneuve. Arrangement for adjusting the position of the dead center in machine tools. 2,860,538, 11-18-58, Cl. 82—31.

Brundell, Per G., and K. E. A. Jonsson, to Soderhamns Verkstader Aktiebolag. Arrangement for disintegrating slivers of bark in debarking machines of the so-called hollow-head type. 2,860,672, 11-18-58, Cl. 144—208.

Bryant, Randolph, Jr., to Gulf Oil Corp. Paraffin scraper. 2,860,710, 11-18-58, Cl. 166—173.

Buchanan, Donald A., R. H. Miller, and J. E. Thornberg, to Hoker Chemical Corp. Removal of chlorine from chlorine-water solutions. 2,861,040, 11-18-58, Cl. 210—63.

Buckeye Iron & Brass Works: *See*—
Billian, Donald L. 2,860,649.

Buckner, Cecil C. Fluid pumps. 2,860,581, 11-18-58, Cl. 103—162.

Bueker, Edgar L., and V. K. Kofron, to Vickers Inc. Method of producing purified selenium from selenious acid solution containing impurities. 2,860,954, 11-18-58, Cl. 23—200.

Burch Co., The: *See*—
Bianco, Henry J. 2,860,745.

Bureautechnik A. G.: *See*—
Marti, Arnold. 2,860,938.

Burgy, Raymond A., to Toledo Scale Corp. Elevator controls. 2,860,728, 11-18-58, Cl. 187—29.

Burke, Louis: *See*—
Frank, Robert J., and Burke. 2,860,660.

Burnand, John. Pistons. 2,860,614, 11-18-58, Cl. 123—41.38.

Burns, Meryl C., to Clevite Corp. Counter and recorder combination. 2,860,832, 11-18-58, Cl. 235—92.

Burns, Robert H.: *See*—
Bruce, Donald M., and Burns. 2,860,548.

Burroughs Corp.: *See*—
Meyerhoff, Albert J. 2,861,259.

Burstall, Francis H.: *See*—
Arden, Thomas V., Burstall, Davies, Linstead, and Wells. 2,860,956.

Burton, Everett T., to Bell Telephone Laboratories, Inc. Delay circuits. 2,861,181, 11-18-58, Cl. 250—27.

Burton, John, Machine Corp.: *See*—
Aguilar, John G., and Rice. 2,860,468.

Burton, Samuel D.: *See*—
Taylor, William, Badger, and Burton. 2,860,653.

Butterfield, John P., F. Walter, O. J. Winkelmann, and J. F. Jones, to Chrysler Corp. Electromagnetically controlled transmission. 2,860,528, 11-18-58, Cl. 74—733.

Byer, Joseph A., to Corby Mfg. Co. Handle for mattresses and the like. 2,860,353, 11-18-58, Cl. 5—345.

Caesar, Orville S. Reclining chair for passenger vehicles. 2,860,691, 11-18-58, Cl. 155—116.

Cagliano, Anthony R.: *See*—
Kauffman, Richmond H. 2,860,675.

Cahn, Bernard, Co., Inc.: *See*—
Chase, Herbert S. 2,860,680.

Calbeat Engineering & Electronics Co.: *See*—
Fremont, Herbert. 2,861,252.

Calcinator Corp.: *See*—
Hebert, John W. 2,860,585.
Hebert, John W. 2,860,626.

Caldwell, John R., to Eastman Kodak Co. Cross-linked graft copolymers of acrylonitrile and polyvinyl alcohols and method of preparing same. 2,861,051, 11-18-58, Cl. 260—45.5.

Callender, Jack E., to North Electric Co. Automatic telephone system. 2,861,129, 11-18-58, Cl. 179—18.

Calor-Emag Elektrizitats-Akt.: *See*—
Erk, Adil, and Schmitz. 2,861,153.

Came, Donald M. Automatic bowling pin setters. 2,860,877, 11-18-58, Cl. 273—43.

Canfield, William B.: *See*—
Rust, John B., and Canfield. 2,851,054.

Capps, Arthur W. F.: *See*—
Capps, Martin W. R., N. C., and A. W. F. 2,860,493.

Capps, Martin W. R., N. C., and A. W. F. Heat-pump apparatus for providing heat for domestic and like purposes. 2,860,493, 11-18-58, Cl. 62—238.

Capps, Nina C.: *See*—
Capps, Martin W. R., N. C., and A. W. F. 2,860,493.

Carasso, Fred M. Process for reclaiming and improving saline and alkaline soils. 2,860,448, 11-18-58, Cl. 47—58.

Cardell, George A.: *See*—
Retz, William B., and Cardell. 2,860,730.

Cardozo, Danforth, Jr.: *See*—
Ensign, Robert H., and Cardozo. 2,860,697.

Carew, Arthur W., to General Electric Co. Adjustable support. 2,860,942, 11-18-58, Cl. 312—270.

Carey-McFall Co.: *See*—
Braun, William H. 2,860,391.

Cargill, William W., Jr. Method and apparatus for hot machining. 2,861,166, 11-18-58, Cl. 219—34.

Carlson, Gilbert F., and H. A. Lockhart, to Bell & Gossett Co. Flow control valve. 2,860,650, 11-18-58, Cl. 137—533.27.

Carlson, Glen A. Wheel spool adapter. 2,860,457, 11-18-58, Cl. 51—168.

Carlson, Theodore E.: *See*—
Bowen, Max E., and Carlson. 2,861,160.

Carlton, William C. Shuttlecock. 2,860,870, 11-18-58, Cl. 273—106.

Carothers, Charles F. Wire gate fastener. 2,860,429, 11-18-58, Cl. 29—74.

Carrier Corp.: *See*—
Keville, Jesse F., Jr. 2,860,988.

Carroll, Noble. Picture frame. 2,860,437, 11-18-58, Cl. 40—157.

Case, James W. Method for coating glass fibers. 2,860,450, 11-18-58, Cl. 49—77.

Castner, Earl A. Weedless lure. 2,860,441, 11-18-58, Cl. 43—42.5.

Castrey, William E.: *See*—
Francis, Robert L., and Castrey. 2,860,476.

Caterpillar Tractor Co.: *See*—
Larson, Donald J. 2,860,861.
Parks, John H. 2,860,497.

Cauble, Donald L., to Sunstrand Machine Tool Co. Pump control. 2,860,517, 11-18-58, Cl. 74—60.

Cavanaugh, James R., deceased; M. Cavanaugh, administratrix. Dual drive ratio power transmission mechanism. 2,860,510, 11-18-58, Cl. 74—217.

Cavanaugh, Mildred: *See*—
Cavanaugh, James R. 2,860,510.

Cawl, Allen P.: *See*—
Beede, Arnold H., and Cawl. 2,860,724.

Cawl, Allen P., and J. J. Kowalewski, to Electrolux Corp. Mechanism in the cover of a vacuum cleaner for rendering the cleaner inoperative if no bag is in place. 2,860,725, 11-18-58, Cl. 183—43.

Crawford, Herman E., to H. E. Crawford Co., Inc. Knitting. De Lorge, Herbert K., to The Dow Chemical Co. Organic

Celanese Corp. of America: *See*—
Steinmann, Henry W., and Dunay. 2,861,038.

Cenatron Industries: *See*—
Wilder, Alfred A. 2,860,671.

Central Engineering Corp.: *See*—
Wells, Theodore A. 2,860,868.

Central Transformer Corp.: *See*—
Smith, George A. 2,860,405.

Cevidalli, Guidobaldo: *See*—
Herzenberg, Jean, Cevidalli, and Nenz. 2,861,110.

Chadowski, Joseph P., and A. G. Turk, to Cornell-Dubilier Electric Corp. Servosystem control unit for antenna rotators. 2,861,235, 11-18-58, Cl. 318—31.

Chambers, Torrence H. Fluid electrical delay line. 2,861,246, 11-18-58, Cl. 333—30.

Chambliss, John A. Multiple blade oblique vegetation cutter. 2,860,477, 11-18-58, Cl. 56—295.

Chao, Stanley K. S., and H. F. Stoddart, to Baird-Atomic, Inc. Radiation detector. 2,861,191, 11-18-58, Cl. 250—83.6.

Chapman, Arthur B., to Morgan Co. of Wisconsin. Hollow core flush door. 2,860,388, 11-18-58, Cl. 20—35.

Chapman, Frederick W.: *See*—
Martin, Edward J., and Chapman. 2,861,234.

Chapple, Kenneth H., to Link Aviation, Inc. Potentiometer. 2,861,157, 11-18-58, Cl. 201—48.

Chase Chemical shr cm
Baron, Abraham L., and Maxion. 2,861,025.

Chase, Herbert S., to Bernard Cahn Co., Inc. Wallet and detachable pouch combination. 2,860,680, 11-18-58, Cl. 150—35.

Chase-Shawmut Co., The: *See*—
Swain, Kenneth W. 2,861,150.

Chemical Corn Exchange Bank: *See*—
Rubner, Gustave. 2,861,009.

Cheney, William O., to Pacific Gas and Electric Co. Diverting fish air bubble screen. 2,860,600, 11-18-58, Cl. 119—3.

Cheronnet, Jean, to Ste: Compteurs et Moteurs Aster. Liquid meter. 2,860,513, 11-18-58, Cl. 73—251.

Chicago Nipple Mfg. Co.: *See*—
Marsden, George B. 2,860,706.

Chicago Rawhide Mfg. Co.: *See*—
Fowler, William J. 2,860,535.

Chillson, Charles W.: *See*—
Hine, Edward K., and Chillson. 2,860,530.

Chloride Electrical Storage Co. Ltd., The: *See*—
Walsh, Stanley. 2,860,969.

Christensen, Edward R., and H. V. Hess, to The Texas Co. Fractional crystallization. 2,861,112, 11-18-58, Cl. 260—674.

Christensen, Lloyd A., L. C., W. A., and W. W., to Air Electric Machine Co., Inc. Vibrating massage machine. 2,860,630, 11-18-58, Cl. 128—63.

Christensen, Lowell C.: *See*—
Christensen, Lloyd A., L. C., W. A., and W. W. 2,860,630.

Christensen, Weston W.: *See*—
Christensen, Lloyd A., L. C., W. A., and W. W. 2,860,630.

Christensen, William A.: *See*—
Christensen, Lloyd A., L. C., W. A., and W. W. 2,860,630.

Christenson, Roger M., to Pittsburgh Plate Glass Co. Method of preparing interpolymers of a vinyl ester, a conjugated diene hydrocarbon, and an ethylenically unsaturated monomer, and product thereof. 2,861,050, 11-18-58, Cl. 260—33.6.

Christianson, George, and R. H. Bonner, to The Rath Packing Co. Method for preparing meat products. 2,860,991, 11-18-58, Cl. 99—109.

Chrysler Corp.: *See*—
Butterfield, John P., Walter, Winkelmann, and Jones. 2,860,528.

Cinch Mfg. Corp.: *See*—
Johanson, Bengt J. 2,861,253.

Cincinnati Mine Machinery Co., The: *See*—
Bruestle, Armin O., and Krekeler. 2,860,863.

Clark Equipment Co.: *See*—
Lapsley, Robert. 2,860,793.
Van Heilen, Franz H. 2,860,798.

Clark, Eugene F., to The New York Trust Co. and J. H. Baile, trustees. Method of weaving and composite pile wire for looms. 2,860,666, 11-18-58, Cl. 139—46.

Clark, John B., to International Business Machines Corp. Sensing control for tabulating mechanism. 2,860,759, 11-18-58, Cl. 197—179.

Clark, Malcolm S., to Snap-Tite, Inc. Ball detent type coupling with break-away feature. 2,860,893, 11-18-58, Cl. 285—1.

Clark, Margaret, to Flexnit Co., Inc. Girdles. 2,860,040, 11-18-58, Cl. 128—540.

Cleland, William: *See*—
Condon, Howard M., and Cleland. 2,860,678.

Clemens, Clarence M., and C. W. Jane, to Ex-Cell-O Corp. Container opening mechanism. 2,860,467, 11-18-58, Cl. 53—266.

Clevite Corp.: *See*—
Abrams, Bernard W., and Arberman. 2,861,254.
Burns, Meryl C. 2,860,832.

Cliff, William. Open web metal joist. 2,860,743, 11-18-58, Cl. 189—37.

Coal Industry (Patents) Ltd.: *See*—
Jones, David C. R., and Gregory. 2,860,957.

Cobert, Arthur J. Automatic welt turning mechanism for straight bar knitting machines. 2,860,501, 11-18-58, Cl. 66—86.

Cobey Corp., The: *See*—
Witwer, Wallace J. 2,860,915.

Cocker Machine & Foundry Co.: *See*—
Suggs, Thomas F. 2,860,400.

Cohen, Oscar P., H. M. Culbertson, and L. E. Rademacher, to Monsanto Chemical Co. Process for the production of monophenylmelamine. 2,861,071, 11-18-58, Cl. 260—249.6.

Cohn, Harold J. Flooring. 2,860,385, 11-18-58, Cl. 20—8.

Cole, Donald F.: *See*—
Wait, Clyde F., and Cole. 2,860,384.

Cole, Donald N.: *See*—
Nelson, Marvin D., and Cole. 2,860,782.

Cole, Norman: *See*—
Anderson, Maynard C., and Cole. 2,860,565.

Cole, William G., Jr., to Ferro Corp. Apparatus for producing bonded fibrous glass mats. 2,860,687, 11-18-58, Cl. 154—1.

Collier Carbon and Chemical Corp.: *See*—
Scott, Carleton B., and Yale. 2,861,023.

Collins, Irene C. Glove. 2,860,347, 11-18-58, Cl. 2—169.

Colonge, Perry J., to I-T-E Circuit Breaker Co. Closed cycle forced cooled isolated phase bus. 2,861,119, 11-18-58, Cl. 174—16.

Columbia Veneer Co.: *See*—
Erickson, Harold E., and Brookhyser. 2,860,790.

Combustion Engineering, Inc.: *See*—
Northington, Samuel C., Jr., and Martin. 2,860,772.

Commarmot, Roger: *See*—
Bardonnet, Claude, and Commarmot. 2,860,516.

Commonwealth Engineering Co. of Ohio, The: *See*—
Toulmin, Harry A., Jr. 2,860,505.

Compagnie Generale de Telegraphie Sans Fil: *See*—
Aigrain, Pierre, and Benoit. 2,861,165.
Lerbs, Alfred. 2,861,212.

Condon, Berniece J.: *See*—
Condon, Howard M., and Cleland. 2,860,678.

Condon, Howard M., deceased, and W. Cleland; W. S. Condon, executor, and B. J. Condon, administratrix, of H. M. Condon, deceased, to Merchants National Bank and Trust Co. Apparatus for cutting frozen meat. 2,860,678, 11-18-58, Cl. 146—117.

Condon, William S.: *See*—
Condon, Howard M., and Cleland. 2,860,678.

Conjaur Corp.: *See*—
Mascari, Elton P. 2,860,744.

Conn, Harry: *See*—
Better, Bernard R., and Conn. 2,860,883.

Conover, Richard A. Paper guide for printing press. 2,860,876, 11-18-58, Cl. 271—60.

Conti, Angelo A., to United States of America, Army. Respirator. 2,860,632, 11-18-58, Cl. 128—143.

Continental Can Co., Inc.: *See*—
Henchert, John. 2,860,812.
Lydon, Martin P. 2,860,533.
Mero, Ralph M. 2,860,592.

Continental Gummi-Werke Akt.: *See*—
Beckadolph, Richard, and Niclas. 2,860,379.

Controllix Corp., The: *See*—
Soos, Steven W., Jr. 2,861,198.

Cook Paint & Varnish Co.: *See*—
Wright, Howard J., McGuire, and Westfall. 2,861,048.

Cooke, John A., to Berlin & Jones Co., Inc. Service envelope. 2,860,826, 11-18-58, Cl. 229—72.

Cooke-Yarborough, Edmund H., to United States of America, Atomic Energy Commission. Electronic pulse scaling circuits. 2,861,201, 11-18-58, Cl. 307—88.5.

Coolidge, John E., Jr., and G. Konvalinka, to Borg-Warner Corp. Precipitator charge indicator. 2,861,261, 11-18-58, Cl. 340—252.

Coons, Burton C. and W. B. Cleanout mechanism for peeling knife. 2,860,676, 11-18-58, Cl. 146—43.

Coons, Willard B.: *See*—
Coons, Burton C. and W. B. 2,860,676.

Cooper, Joseph. Slide assembly for extension tables. 2,860,939, 11-18-58, Cl. 311—71.

Cooper, Victor J., to Marconi's Wireless Telegraph Co. Ltd. Television and like transmitter installations. 2,861,123, 11-18-58, Cl. 178—7.1.

Coover, Harry W., Jr.: *See*—
McConnell, Richard L., and Coover. 2,861,092.

Cope, T. J., Inc.: *See*—
Waters, David, Sr. and D., Jr., and Reeves. 2,860,742.

Corbin, Wesley S., to The Black-Clawson Co. Flow evener roll for paper making machines. 2,860,552, 11-18-58, Cl. 92—44.

Corby Mfg. Co.: *See*—
Byer, Joseph A. 2,860,353.

Core Laboratories, Inc.: *See*—
Knight, Robert F. 2,860,417.

Corey-McFall Co.: *See*—
Braun, William H. 2,860,699.

Cornell-Dubilier Electric Corp.: *See*—
Chadowski, Joseph P., and Turk. 2,861,235.

Cotter, Bart, to General Motors Corp. Automobile body pillar and door construction. 2,860,911, 11-18-58, Cl. 296—28.

Cotton, Robert H.: *See*—
Borel, Erle A., and Cotton. 2,861,061.
Borel, Erle A., and Cotton. 2,861,062.

Couveld, Johan H., and H. J. De Jong, to North American Philips Co., Inc. Spring arrangement. 2,861,147, 11-18-58, Cl. 200—104.

Cox, Norman L., to E. I. du Pont de Nemours and Co. Regenerated cellulose structures and process for producing them. 2,860,480, 11-18-58, Cl. 57—140.

Cox, Robert E.: *See*—
Silver, Walter H., Cox, and Trapkus. 2,860,564.

Crabtree, John I.: *See*—
Henn, Richard W., and Crabtree. 2,860,978.

Crawford, H. E., Co., Inc.: *See*—
Marum, Hans H. 2,860,499.
Crawford, Herman E. 2,860,500.

Duncan, James G., and L. E. Trambley, to Research Laboratory, Waymond W.: *See*—

Crawford, Herman E., to H. E. Crawford Co., Inc. Knitting machine for knitting hosiery and other fabrics. 2,860,500, 11-18-58, Cl. 66—48.

Croker, Arthur W.: *See*—
Doeg, Paul R., and Croker. 2,860,386.

Cressley, Charles N., to North American Aviation, Inc. Ball action slip clutch. 2,860,498, 11-18-58, Cl. 64—29.

Crown Cork & Seal Co., Inc.: *See*—
Duemler, Robert F. 2,860,814.

Crown Machine and Tool Co., Inc.: *See*—
Harrison, James M., and Smucker. 2,860,374.

Crown Zellerbach Corp.: *See*—
Spiegel, Edwin J., Jr., and Schoknecht. 2,860,771.
Works, William R., and Berney. 2,860,597.

Crucible Steel Co. of America: *See*—
Bomberger, Howard B. 2,860,953.

Culbertson, Harry M.: *See*—
Cohen, Oscar P., Culbertson, and Rademacher. 2,861,071.

Cunningham, George L., to Horizons Inc. Recovery of values in naturally occurring alkali metal sulfate minerals. 2,860,951, 11-18-58, Cl. 23—32.

Curtis, Russell E., to Sylvania Electric Products Inc. Socket tube shield and ground. 2,861,240, 11-18-58, Cl. 339—14.

Curtiss-Wright Corp.: *See*—
De Muth, Russell T. 2,860,714.
Hine, Edward K., and Chillson. 2,860,530.
Mergen, Joseph M. 2,861,225.

Cushman Chuck Co., The: *See*—
Sloan, Harry E., and Hickey. 2,860,884.

Cyr, Lawrence. Drive for riding, disk type lawn mower. 2,860,474, 11-18-58, Cl. 56—25.4.

Czlptschirsch, Kurt: *See*—
Herr, Gerhard, and Czlptschirsch. 2,860,545.

Decam Corp.: *See*—
Alexander, Perry L., Hartis, and Wilkens. 2,860,762.

Daimler-Benz Akt.: *See*—
Fritz, Martin. 2,860,527.
Naumann, Willy R. 2,860,896.
Wilfert, Karl. 2,860,567.

Dalman, Gisli C., to Sperry Rand Corp. Microwave klystron construction. 2,861,213, 11-18-58, Cl. 315—5.22.

Dalzell, Clarence W., to Bendix Aviation Corp. Timing mechanism. 2,860,702, 11-18-58, Cl. 161—1.

Dancik, Paul J., to Vertol Aircraft Corp. Control system for tandem helicopter. 2,860,711, 11-18-58, Cl. 170—135.22.

Daniel Orifice Fitting Co.: *See*—
Whalen, John W. 2,860,901.

Danilow, Eugene. Layout gauge. 2,860,415, 11-18-58, Cl. 33—1.

Dann, John R., G. L. Oliver, and J. W. Gates, Jr., to Eastman Kodak Co. Stabilization of photographic silver halide emulsions and means of increasing contrast. 2,860,985, 11-18-58, Cl. 96—109.

Danner, George W., to Electronic Secretary Industries, Inc. Party line telephone answering actuator. 2,861,127, 11-18-58, Cl. 179—6.

Danville Products Co., Inc.: *See*—
Miles, Charles C., Jr. 2,860,873.

Darrow, Edley. Wall cleaning device. 2,860,358, 11-18-58, Cl. 15—131.

Date, Shigehiro: *See*—
Hiratsuka, Kiso, Yonemitsu, Itabashi, Date, and Koimatsu. 2,861,107.

Daughtrey, Joseph W.: *See*—
Bayless, Charles R., Daughtrey, and Robertson. 2,860,655.

Davies, Glynn R.: *See*—
Arden, Thomas V., Burstall, Davies, Linstead, and Wells. 2,860,956.

Davies, Gomer W. Tool for truing crankshafts and the like. 2,860,539, 11-18-58, Cl. 82—4.

Davies, Robert H., to Parker-Hannifin Corp. Apparatus for controlling the emptying of tanks. 2,860,651, 11-18-58, Cl. 137—98.

Davies, Robert R.: *See*—
Andrew, Herbert F., Boyd, and Davies. 2,861,066.
Andrew, Herbert F., and Davies. 2,861,067.

Daystrom, Inc.: *See*—
Gilbert, Roswell W. 2,861,239.

Deakin Gears Ltd.: *See*—
Deakin, Thomas M. 2,860,451.

Deakin, Thomas M., to Deakin Gears Ltd. Gear generating machines. 2,860,451, 11-18-58, Cl. 51—56.

Deaton, Charles U., and C. D. Graber, to Diebold, Inc. Bolt and lock construction. 2,860,584, 11-18-58, Cl. 109—59.

De Brocke, Ben H. Impact actuated circuit closers, adjustable for simultaneous and delayed action. 2,861,141, 11-18-58, Cl. 200—61.41.

Deckel, Hans: *See*—
Müller, Hanns. 2,860,419.

Deere & Co.: *See*—
Lance, Orville P. 2,860,892.
Oehler, William P., and Youngberg. 2,860,470.
Silver, Walter H., Cox, and Trapkus. 2,860,564.

De Flon, James G., to The Fluor Corp., Ltd. Baffled spray nozzle. 2,860,919, 11-18-58, Cl. 299—121.

De Greff, William B., to Aro Equipment Corp. Pneumatic drill construction. 2,860,531, 11-18-58, Cl. 77—33.5.

De Havilland Engine Co. Ltd., The: *See*—
Halford, Frank B., and Wilson. 2,860,851.

Dehmel, Richard C. Flight training apparatus for simulating control loading with pilot pressure control. 2,860,423, 11-18-58, Cl. 35—12.

Dehydag, Deutsche Hydrierwerke G. m. b. H.: *See*—
Heise, Rudolf. 2,861,031.

De Jong, Hendrik J.: *See*—
Couveld, Johan H., and De Jong. 2,861,147.

Delattre, Michel M. G.: *See*—
Moreau, Roland G., and Delattre. 2,861,102.

De Long, Herbert K., to The Dow Chemical Co. Chromate-coating magnesium and its alloys. 2,861,019, 11-18-58, Cl. 148—6.21.

Deming, Andrew F., E. V. Schneider, and R. H. Jordan, to The Alliance Mfg. Co., Division of Consolidated Electronics Industries Corp. Rotator. 2,861,265, 11-18-58, Cl. 343—766.

De Muth, Russell T., to Curtiss-Wright Corp. Propeller automatic feathering means. 2,860,714, 11-18-58, Cl. 170—160.13.

Denman, Joe C., Jr., and R. Hansen, to Southern Pine Lumber Co. Volume measuring apparatus. 2,860,420, 11-18-58, Cl. 33—174.

De Pasqua, Joseph, to Mechanical Swinging Cradle Co. Mechanically agitated cradle. 2,860,727, 11-18-58, Cl. 185—38.

Dermond, Lawrence C., to General Motors Corp. Atmospheric nozzle control. 2,860,616, 11-18-58, Cl. 123—119.

De Saussure Eqipment Co.: *See*—
De Saussure, William P. 2,860,940.

De Saussure, William P., to De Saussure Equipment Co. Locking and releasing mechanism for foldable table legs. 2,860,940, 11-18-58, Cl. 311—88.

Deskfinder Co., The: *See*—
Fox, Ray M. 2,860,573.

Detroit Edison Co., The: *See*—
Seller, Thomas M., and Harris. 2,861,223.

D'Eustachio, Dominic, to Pittsburgh Corning Corp. Method of producing cellulated articles. 2,860,997, 11-18-58, Cl. 106—40.

De Vita, Philip J., to Hammond Organ Co. Frequency divider. 2,861,187, 11-18-58, Cl. 250—36.

Diamond Alkali Co.: *See*—
Bluestone, Henry. 2,860,962.
Di Santa, Richard A., and Hlynsky. 2,861,098.

Diamond Gardner Corp.: *See*—
Wells, Roger. 2,860,973.
Wolter, Harry A. 2,860,465.

Diassi, Patrick A., to Olin Mathieson Chemical Corp. β-lactone of yohimbic acid. 2,861,075, 11-18-58, Cl. 260—287.

Dick, A. B., Co.: *See*—
Fowlie, Wallace R.: 2,860,577.
Tregay, John L. 2,860,578.

Dickey, Joseph B.: *See*—
McConnell, Richard L., and Dickey. 2,861,093.

Diebold, Inc.: *See*—
Deaton, Charles U., and Graber. 2,860,584.

Diels, Albert. Means for mechanically tying knots. 2,860,902, 11-18-58, Cl. 289—2.

Dietz, Albert G. H., and F. R. Mooney, to United States of America, Army. Transparent protective shield. 2,861,021, 11-18-58, Cl. 154—52.5.

Dijkstra, Hendrik, to Stamicarbon N. V. Coal testing method. 2,861,188, 11-18-58, Cl. 250—83.

Di Santa, Richard A., and A. Hlynsky, to Diamond Alkali Co. Production of carboxylic acid esters. 2,861,098, 11-18-58, Cl. 260—493.

Dishal, Milton, J. S. Le Grand, G. L. Pellegrinelli, H. W. Morrow, and J. A. Koehler, to International Telephone and Telegraph Corp. Control system for correcting phase and amplitude. 2,861,177, 11-18-58, Cl. 250—17.

Djerassi, Carl, F. Sondheimer, A. Sandoval, and G. Rosenkranz, to Syntex S. A. 19-nordesoxycorticosterone and process therefor. 2,861,085, 11-18-58, Cl. 260—397.4.

Dobbs, William G.: *See*—
Lindeman, Joseph F., and Dobbs. 2,860,779.

Dodge Adiel Y. Transmissions. 2,860,526, 11-18-58, Cl. 74—754.

Doeg, Paul R., and A. W. Croker, to The Peelle Co. Latches for counterbalanced doors. 2,860,386, 11-18-58, Cl. 20—19.

Doeg, Paul R., to The Peelle Co. Cable traction drive operator. 2,860,872, 11-18-58, Cl. 268—59.

Dolza, John, to General Motors Corp. Fuel injection nozzle. 2,860,859 11-18-58, Cl. 261—78.

Dooley, John F., Jr. Tension absorbing turnbuckle. 2,860,898, 11-18-58, Cl. 287—61.

Dow Chemical Co., The: *See*—
Bergeron, Grafton L. and Bon. 2,860,932.
Britton, Edgar C., and Smith. 2,861,079.
De Long, Herbert K. 2,861,019.
Huff, James E., and Moss. 2,861,102.
Petrie, Peter S. 2,861,080.
Petrie, Peter S. 2,861,081.
Pumnelly, Charles T. 2,861,096.
Senkbeil, Herman O., and Pumpelly. 2,861,097.
Tousignant, William F., and Houtman. 2,861,101.
Urchick, Demetrius. 2,860,378.
Wheeler, Donald D., and Young. 2,861,082.

Dresser, Willis R., to The Vitarama Corp. Wireless control for recording sound for sterophonic reproduction. 2,860,541, 11-18-58, Cl. 88—16.2.

Drummond, John D. Power driven plastering trowels. 2,860,506, 11-18-58, Cl. 72—136.

Drysdale, John J., to E. I. du Pont de Nemours and Co. Fluorocyclohexene derivatives. 2,861,095, 11-18-58, Cl. 260—464.

Dubitsky, Joseph B. Toy. 2,860,799, 11-18-58, Cl. 214—858.

Duc-Pac, Inc.: *See*—
Swett, Russell F. 2,860,536.

Duemler, Robert F., to Crown Cork & Seal Co., Inc. Container. 2,860,814, 11-18-58, Cl. 220—60.

Dukeshire, Robert E.: *See*—
Ruff, Edgar E., and Dukeshire. 2,861,044.

Dunay, Michael: *See*—
Steinmann, Henry W., and Dunay. 2,861,038.

Flesch, Norman F., to American Steel Foundries. Brake

Gardner, Paul J., to Bendix Aviation Corp. Liquid recircula-

Duncan, James G., and L. E. Trambley, to Research Laboratories Inc. Oxygen dispensing device and nose piece combination. 2,860,634, 11-18-58, Cl. 128—206.

Du Pont de Nemours, E. I., and Co.: *See*—
Atkinson, Charles D. 2,860,966.
Bernhardt, Ernest C., and Whitfield. 2,860,377.
Breithaupt, Charles E. 2,860,784.
Cox, Norman L. 2,860,480.
Drysdale John J. 2,861,095.
Dustman, Robert B., Jr. 2,860,945.
Landsager, Christian B. 2,861,022.
Moore, Charles B., and Van Veld. 2,860,557.
Moser, William C. 2,861,039.
Price, Cecil J. 2,860,844.
Schmidt, Charles J. 2,860,373.
Seney, John S. 2,861,139.
Short, Oliver A. 2,860,576.
Siegel, Alfred. 2,861,005.
Young, James H. 2,860,944.

Durham, Edwin, to The Babcock & Wilcox Co. Apparatus for heating liquid to high temperature. 2,860,612, 11-18-58, Cl. 122—336.

Durst, George: *See*—
Boessenkool, Heimich W., Durst, and Siegel. 2,860,409.

Dustman, Robert B., Jr., to E. I. du Pont de Nemours and Co. Bleaching cyanoethylated cotton fibers with hydrogen peroxide-phosphate solution and optionally with water-soluble sulfoxylate solution. 2,860,945, 11-18-58, Cl. 8—110.

Dutton-Lainson Co.: *See*—
Nelson, Marvin D., and Cole. 2,860,792.

Duvivier, Paul: *See*—
Honnay, Leopold. 2,860,370.

Eagle Signal Corp.: *See*—
Hendricks, George D. 2,861,137.

Easterling Mahlon F.: *See*—
Horn, William D., and Easterling. 2,861,176.

Eastman Kodak Co.: *See*—
Bornemann, William and Hughey. 2,860,906.
Caldwell, John R. 2,861,051.
Dana, John R., Oliver, and Gates. 2,860,985.
Henn, Richard W., and Crabtree. 2,860,978.
Jones, Jean E. 2,860,981.
Jones, Jean E. 2,860,982.
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Eckert, Wilhelm, and O. Fuchs, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Vat dyestuffs. 2,861,073, 11-18-58, Cl. 260—272.

Eddy, William F. Manually portable charcoal broiler. 2,860,624 11-18-58, Cl. 126—25.

Edens, Arie H., and G. M. A. C. Geeven, to North American Philips Co., Inc. Burner for liquid hydrocarbons. 2,860,694, 11-18-58, Cl. 158—53.

Edge, Jack C. Leg and footrest device. 2,860,688, 11-18-58, Cl. 155—2.

Edogawa Kagaku Kogyo Kabushiki Kaisha: *See*—
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Ehinger, William L., Jr. Catapult for model aircraft. 2,860,620, 11-18-58, Cl. 124—21.

Egli, Hans, to The Garrett Corp. Turbosupercharger. 2,860,827, 11-18-58, Cl. 230—116.

Einstein, Alfred C., and J. L. McPhee, to Shampaine Co. Operating table accessory. 2,860,937, 11-18-58, Cl. 311—7.

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Elliott, Stanley B., to Ferro Chemical Corp. Vinyl chloride resin stabilized with polyhydric alcohol and Friedel-Crafts catalyst. 2,861,052, 11-18-58, Cl. 260—45.75.

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Elwell, David K., to Sylvania Electric Products Inc. Pin protector gauge. 2,861,250, 11-18-58, Cl. 339—36.

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England, William A., to Monroe Calculating Machine Co. Shift register. 2,861,216, 11-18-58, Cl. 315—84.5.

Ensign, Robert H., and D. Cardoso, Jr., to The Hough Shade Corp. Accordion type folding door. 2,860,607, 11-18-58, Cl. 160—84.

Erickson, Harold E., and B. B. Brookhyser; said Erickson assor. to D. L. Schubert, and said Brookhyser assor. to Columbia Veneer Co. Feeder for filling silos and like structures. 2,860,790, 11-18-58, Cl. 214—17.

Erk, Adil, and L. Schmitz, to Calor-Emag Elektrizitats-Akt. Quick-action switch device. 2,861,153, 11-18-58, Cl. 200—146.

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Farnham, Frederick R., and H. C. Graves, Jr., to Gibson Electric Co. Internally oxidized electrical contact. 2,861,155, 11-18-58, Cl. 200—166.

Fastinger, Leon. Electric ironing station for domestic purposes, for craftsmen and for industrial purposes. 2,860,427, 11-18-58, Cl. 38—142.

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Fox, Homer M., to Phillips Petroleum Co. Apparatus for burning fluid fuel in a high velocity air stream with addition of lower velocity air during said burning. 2,860,483, 11-18-58, Cl. 60—39.65.
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Heller, Lewis W., and C. S. Smith, to The Babcock & Wilcox
Hoover, Frank M., to Hoover Products, Inc. Pacifier and

Gold, Max L., to H. H. Kahn. Bottle closure. 2,860,802, 11-18-58, Cl. 215—45.

Goldenberg, David, to Kramer Trenton Co. Reversible air conditioning system with hot gas defrosting means. 2,860,491, 11-18-58, Cl. 62—161.

Goode, William E., to Rohm & Haas Co. Initiator systems. 2,861,060, 11-18-58, Cl. 260—89.5.

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Gottschald, Rudolf. Universal joints. 2,860,899, 11-18-58, Cl. 287—90.

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Granger, Wallace H., to Miehle-Goss-Dexter, Inc. Ink roller socket construction. 2,860,579, 11-18-58, Cl. 101—348.

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Green, Milton, to United States of America, Army. Logarithmic converter circuit. 2,861,182, 11-18-58, Cl. 250—27.

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Gregor, John R., to Abrasive and Metal Products Co. Abrasive articles and method for making the same. 2,860,960, 11-18-58, Cl. 51—298.

Gregor, John R., and S. S. Kistler, to Abrasive and Metal Products Co. Method for making abrasive articles. 2,860,961, 11-18-58, Cl. 51—298.

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Grekov, Paul. Calendar mechanism. 2,860,435, 11-18-58, Cl. 40—114.

Gres, Marcel E., and E. H. Block, to United States of America, Navy. Quick acting, accurate sensing, variable setting poppet valve. 2,860,662, 11-18-58, Cl. 137—469.

Griffin, George C. Window construction. 2,860,390, 11-18-58, Cl. 20—53.

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Robinson, Frederick C., and Grouse. 2,861,231.

Grover, Philip D., to Anderson Controls, Inc. Stressed blade snap switch. 2,861,143, 11-18-58, Cl. 200—67.

Grover, Ross D., and A. C. Sampietro, to Bank of America National Trust and Savings Association. Power actuated brake operating mechanism. 2,860,735, 11-18-58, Cl. 188—106.

Grubb, Willard T., Jr., to General Electric Co. Primary cell. 2,861,116, 11-18-58, Cl. 136—106.

Grunder, Harold R., and W. R. Whitehead. Puller for timing gears of internal combustion engines. 2,860,407, 11-18-58, Cl. 29—258.

Guest, Howard R., and B. W. Kiff, to Union Carbide Corp. Preparation of 2,3-dihydropyran-2-yl 2-formyl-2,3-dihydropyran-2-yl carbinol. 2,861,083, 11-18-58, Cl. 260—345.9.

Gulf Oil Corp.: *See*—
Bayless, Charles R., Daughtrey, and Robertson. 2,860,655.
Bryant, Randolph, Jr. 2,860,710.

Gulick, Kenneth H., to Harris-Intertype Corp. Magnetic separation of piled magnetic sheets. 2,860,874, 11-18-58, Cl. 271—10.

Gumbinner, Robert, to Polychrome Corp. Adapting and aligning device. 2,860,438, 11-18-58, Cl. 41—1.

Gussack, Nathan A. Drawer slide assembly. 2,860,929, 11-18-58, Cl. 308—3.8.

Guthrie, James M.: *See*—
Bowman, Samuel G. 2,861,146.

Guthrie, James M. Treating of hams. 2,860,990, 11-18-58, Cl. 99—107.

Guyer, Reynolds, to Waldorf Paper Products Co. Product encircling band. 2,860,824, 11-18-58, Cl. 229—40.

Guyton, James H., to General Motors Corp. Signal tuned radio control. 2,861,178, 11-18-58, Cl. 250—20.

Haas, William L., to Bendix Aviation Corp. Off-frequency synchronized stroboscope. 2,861,221, 11-18-58, Cl. 315—194.

Habenicht, August F. Piston assembly. 2,860,936, 11-18-58, Cl. 309—29.

Halford, Frank B., and W. K. Wilson, to The De Havilland Engine Co. Ltd. Multi-stage turbine rotor assemblies. 2,860,851, 11-18-58, Cl. 253—39.15.

Haller, Raymond and Brown, Inc.: *See*—
McLucas, John L. 2,861,263.

Hamilton, Earl F., to Hamilton Mfg. Corp. Chair. 2,860,692, 11-18-58, Cl. 155—139.

Hamilton Mfg. Corp.: *See*—
Hamilton, Earl F. 2,860,692.

Hamlin, Kenneth E., Jr.: *See*—
Weston, Arthur W., and Hamlin. 2,861,072.

Hammes, Ever J.: *See*—
Hammes, John W. 2,860,834.

Hammes, Freda: *See*—
Hammes, John W. 2,860,834.

Hammes, John W. (F. Hammes, executrix), ⅛ to herself, ⅛ to E. J. Hammes, and ⅛ to O. A. Hammes. Waste disposal apparatus. 2,860,834, 11-18-58, Cl. 241—32.5.

Hammes, Quinten A.: *See*—
Hammes, John W. 2,860,834.

Hammond George E.: *See*—
Saint Amour, John D., and Hammond. 2,861,243.

Hammond Organ Co.: *See*—
De Vita, Philip J. 2,861,187.

Handling Equipment Mfg. Corp.: *See*—
Bowen, Max E., and Carlson. 2,861,169.

Hanink, Dean K.: *See*—
Boegehold, Alfred L., Hanink, and Webbere. 2,860,968.

Hanna, Clinton R., and L. B. Lynn, to Westinghouse Electric Corp. Vehicle stabilizer, tilter and leveling device. 2,860,889, 11-18-58, Cl. 280—112.

Hansen, Robert: *See*—
Denman, Joe C., Jr., and Hansen. 2,860,420.

Hardee, George L. Rain cape. 2,860,344, 11-18-58, Cl. 2—87.

Harden, Charles M., and C. Marshall. Pattern photic stimulator. 2,860,627, 11-18-58, Cl. 128—2.1.

Hardman, Albert H. Necktie rack. 2,860,788, 11-18-58, Cl. 211—89.

Hardy, Albert L., and T. E. Jenkins, to General Electric Co. Hydraulic reciprocating motion device. 2,860,008, 11-18-58, Cl. 121—48.

Hardy, Henry G.: *See*—
Tocci-Guilbert, B. 2,860,490.

Harms, Cleonard F.: *See*—
Hartung, Richard E., and Harms. 2,860,821.

Harper, Robert H.: *See*—
Voegeli, Marvin M., and Harper. 2,860,992.

Harris, Donald S., to New Castle Products, Inc. Two-piece hinge plate for folding closure linkages. 2,860,698, 11-18-58, Cl. 160—84.

Harris, Fred Z. Servicing recording devices. 2,860,432, 11-18-58, Cl. 40—65.

Harris-Intertype Corp.: *See*—
Gulick, Kenneth H. 2,860,874.

Harris, Leo K.: *See*—
Seller, Thomas M., and Harris. 2,861,223.

Harrison, James M., and R. E. Smucker, to Crown Machine and Tool Co., Inc. Stripper mechanism for injection molding. 2,860,374, 11-18-58, Cl. 18—30.

Harrison, John W., to General Electric Co. Anti "G" liquid reservoir. 2,860,648, 11-18-58, Cl. 137—38.

Hart, Robert W. Integrating signal detector employing a resonant mechanical system. 2,861,256, 11-18-58, Cl. 340—6.

Hartis, William E.: *See*—
Alexander, Perry L., Hartis, and Wilkens. 2,860,762.

Hartung, Richard E., and C. F. Harms, to Plastics Mfg. Inc. Pouring spout. 2,860,821, 11-18-58, Cl. 222—519.

Hartwig, Richard F. Packaging machine. 2,860,463, 11-18-58, Cl. 53—76.

Haskell Mfg. Co.: *See*—
Marks, Lou F., and Louik. 2,860,642.

Hassan, Fauthal A.: *See*—
Hassan, Joseph A. 2,860,721.

Hassan, Joseph A., ½ to Fauthal A. Hassan. Sound reproducing device. 2,860,721, 11-18-58, Cl. 181—31.

Hatch, Meredith R., to E. W. Bliss Co. Laminated press. 2,860,571, 11-18-58, Cl. 100—231.

Hause, Gilbert K., to General Motors Corp. Positive parking brake. 2,860,731, 11-18-58, Cl. 188—69.

Hawkinson, Paul E., deceased, by F. W. Gaasedelen, administrator, to Paul E. Hawkinson Co. Pneumatic tire casing. 2,860,682, 11-18-58, Cl. 152—354.

Hawkinson, Paul E., Co.: *See*—
Hawkinson, Paul E. 2,860,682.

Hayes, Brice E. Shock-absorbing bumping post attachment. 2,860,582, 11-18-58, Cl. 104—254.

Hays, Donald F., to General Motors Corp. Classifying apparatus. 2,860,776, 11-18-58, Cl. 209—12.

Haseltine, James E., Jr., to Armstrong Cork Co. Method of making coated floor coverings. 2,861,007, 11-18-58, Cl. 117—15.

Haseltine Research, Inc.: *See*—
Biggs, Albert J. 2,861,200.

Hebert, John W., to Calcinator Corp. Incinerator with burner assembly. 2,860,585, 11-18-58, Cl. 110—18.

Hebert, John W., to Calcinator Corp. Removable grate actuator and bearings. 2,860,626, 11-18-58, Cl. 126—169.

Heckles, John S., to Armstrong Cork Co. Low temperature preparation of alkyd resins from long chain fatty acids. 2,861,047, 11-18-58, Cl. 260—22.

Hefele, John R., to Bell Telephone Laboratories, Inc. Line amplifier for a television system. 2,861,124, 11-18-58, Cl. 178—7.1.

Heidler, Albert. Torque regulator for compressed air operated hand tools and other motors. 2,860,603, 11-18-58, Cl. 121—34.

Heise, Rudolf, to Dehydag, Deutsche Hydrierwerke G. m. b. H. Process for the production of hydroperoxides of partially hydrogenated polycyclic aromatic hydrocarbons. 2,861,031, 11-18-58, Cl. 204—162.

Heisler, Harold, to Midwest Folding Products Mfg. Corp. Foldable platform. 2,860,383, 11-18-58, Cl. 20—1.123.

Heller, Lewis W., to The Babcock & Wilcox Co. Steam generating and superheating and air heating unit. 2,860,610, 11-18-58, Cl. 122—1.

Heller, Lewis W., and C. S. Smith, to The Babcock & Wilcox Co. Steam generating unit with corner fired furnace and gas recirculation. 2,860,612, 11-18-58, Cl. 122—478.
Hemminger, Charles E., to Esso Research and Engineering Co. Hydroforming in two stages. 2,861,037, 11-18-58, Cl. 208—65.
Henchert, John, to Continental Can Co., Inc. Container having tear strip. 2,860,812, 11-18-58, Cl. 220—54.
Hendley, James A., to Talon, Inc. Tape for slide fasteners. 2,860,668, 11-18-58, Cl. 139—384.
Hendricks, George D., to Eagle Signal Corp. High gain amplifiers with interchangeable units. 2,861,187, 11-18-58, Cl. 179—171.
Hendry, Adolph R. Buoyant fish lure. 2,860,440, 11-18-58, Cl. 43—42.3.
Henle, Robert A., to International Business Machines Corp. Latch circuits. 2,861,199, 11-18-58, Cl. 307—88.5.
Henle, Robert A., W. W. Emery, G. D. Bruce, and O. L. MacSorley, to International Business Machines Corp. Trigger circuits employing junction transistors. 2,861,200, 11-18-58, Cl. 307—88.5.
Henn, Richard W., and J. I. Crabtree, to Eastman Kodak Co. Photographic washing accelerators. 2,860,978, 11-18-58, Cl. 96—61.
Henning, William W.: *See*—
Allin, George S., Jr., and Henning. 2,860,426.
Henrickson, Angus V., to United States of America, Atomic Energy Commission. Method of preparing metal halides. 2,860,950, 11-18-58, Cl. 23—14.5.
Hercules Powder Co.: *See*—
Borel, Eric A., and Cotton. 2,861,061.
Borel, Eric A., and Cotton. 2,861,062.
Herr, Gerhard, and K. Csiptschirsch, to Gebruder Happich-Gesellschaft mit beschrankter Haftung. Rear view mirror mounting structure. 2,860,545, 11-18-58, Cl. 88—98.
Herr, Milton E., to The Upjohn Co. 17 α-methyl-androstane 3,11β, 17β-triol compounds. 2,861,087, 11-18-58, Cl. 260—397.5.
Herr, Robert, to Minnesota Mining & Mfg. Co. Method and apparatus for the selective erasure of undesired transferred signals in magnetic recording. 2,861,133, 11-18-58, Cl. 179—100.2.
Herrick, Clifford E., Jr., to General Aniline & Film Corp. Arylguanidine arenedisazosulfonates. 2,861,065, 11-18-58, Cl. 260—141.
Herrmann, John A.: *See*—
Platz, Elwood T., Frank, and Herrmann. 2,861,139.
Hersh, Sidney H. Making photodetectors. 2,861,160, 11-18-58, Cl. 201—63.
Hersenberg, Jean, G. Cevidalli, and A. Nenz, to Sicedison S. p. A. Procedure for the obtention of higher alcohols by condensation of lower alcohols. 2,861,110, 11-18-58, Cl. 260—642.
Hess, Hermann, and A. Maass. Tilting window structure. 2,860,380, 11-18-58, Cl. 20—45.
Hess, Howard V.: *See*—
Christensen, Edward R., and Hess. 2,861,112.
Hessler, Harold A. Pressure cooker safety device. 2,860,811, 11-18-58, Cl. 220—44.
Hexcel Products Inc.: *See*—
Holland, Kenneth M., and Rule. 2,860,740.
Hickey, Herbert W.: *See*—
Sloan, Harry E., and Hickey. 2,860,884.
Hider, Glenn A., to The Gleason Works. Grinding machine having rotatable wheel dressing tool. 2,860,622, 11-18-58, Cl. 125—11.
Hill, Henry C., to Boeing Airplane Co. Slipper thrust bearing. 2,860,932, 11-18-58, Cl. 308—73.
Hine, Edward K., and C. W. Chillson, to Curtiss-Wright Corp. Ball speed changers. 2,860,520, 11-18-58, Cl. 74—796.
Hines, Claude M., to Westinghouse Air Brake Co. Interlocked pneumatic and magnetic fluid brake system. 2,860,737, 11-18-58, Cl. 188—156.
Hiratsuka, Kiso, E. I. Yonemitsu, T. Itabashi, S. Date, and S. Keimatsu, to Edogawa Kagaku Kogyo Kabushiki Kaisha. Process for the production of cumene hydroperoxide. 2,861,107, 11-18-58, Cl. 260—610.
Hitch, Van H. Ice cream mold. 2,860,583, 11-18-58, Cl. 107—19.
Hlynsky, Alex: *See*—
Di Santa, Richard A., and Hlynsky. 2,861,098.
Hobart Mfg. C., The: *See*—
Allen, Kenneth C., and Biebel. 2,860,867.
Hobbs, George W., to General Electric Co. Radix converter. 2,860,631, 11-18-58, Cl. 235—61.
Hodtum, Joseph B., to Allis-Chalmers Mfg. Co. Electrical distribution system with automatic sectionalizing switch. 2,861,222, 11-18-58, Cl. 317—22.
Hoerner, Eric. Liquid meters. 2,860,512, 11-18-58, Cl. 73—251.
Hoffmann-La Roche Inc.: *See*—
Sturzenegger, August. 2,861,109.
Holland, Kenneth M., and E. L. Rule, to Hexcel Products Inc. Spliced metal foil honeycomb product and method of making same. 2,860,740, 11-18-58, Cl. 189—36.
Hollis, Arthur J., and R. E. Shaw, to Sylvania Electric Products Inc. Snap action switch. 2,861,149, 11-18-58, Cl. 200—118.
Hollmann, Walter G., to Frederick Post Co. Production of light-sensitive material for diazotypes. 2,861,008, 11-18-58, Cl. 117—34.
Holstein, John H., to Schenley Industries, Inc. Machinery useful in processing of liquid products. 2,860,796, 11-18-58, Cl. 214—310.
Honnay, Leopold, to J. Ghyselbrechts and P. Duvivier. Hinges for doors, windows and other appliances. 2,860,370, 11-18-58, Cl. 16—152.
Hooker Chemical Corp.: *See*—
Buchanan, Donald A., Miller, and Thornberg. 2,861,040.
Hoover, Frank M., to Hoover Products, Inc. Pacifier and shield therefor. 2,860,639, 11-18-58, Cl. 128—359.
Hoover Products, Inc.: *See*—
Hoover, Frank M. 2,860,639.
Hopper, Andrew L., to Bell Telephone Laboratories, Inc. Compensated plate type limiter. 2,861,185, 11-18-58, Cl. 250—27.
Horizons Inc.: *See*—
Cunningham, George L. 2,860,951.
Horn, John C.: *See*—
Wilson, Rufus W., and Horn. 2,860,800.
Horn, William D., and M. F. Easterling, said Easterling assignor to said Horn. Audience survey system. 2,861,176, 11-18-58, Cl. 250—2.
Horton, Richard F. Window screen. 2,860,700, 11-18-58, Cl. 160—180.
Horton, William B., to N. E. Fletcher Co. Methods and apparatus for wire sawing. 2,860,862, 11-18-58, Cl. 262—28.
Houdyshell, Harry H., and C. O. Griffith, to Beckman Instruments, Inc. Coil buffing process and apparatus. 2,860,455, 11-18-58, Cl. 51—139.
Hough Shade Corp., The: *See*—
Ensign, Robert H., and Cardozo. 2,860,697.
Houtman, Thomas, Jr.: *See*—
Tousignant, William F., and Houtman. 2,861,101.
Howard, Sheldon J., and G. O. Bartoo, to Trico Products Corp. Cable tensioner for windshield cleaner transmission. 2,860,363, 11-18-58, Cl. 15—253.
Howlett, Frank H.: *See*—
Howlett, George H. 2,860,322.
Howlett, George H., to F. H. Howlett. Shifting mechanism for transmission. 2,860,522, 11-18-58, Cl. 74—473.
Huberland, Leon J.: *See*—
Kauffman, Richmond H. 2,860,675.
Hubert, Clarence A.: *See*—
Jedrzykowski, Edmund, and Hubert. 2,860,717.
Huck Mfg. Co.: *See*—
Maurer, George. 2,860,818.
Huff, James E., and R. D. Moss, to The Dow Chemical Co. Continuous process for producing α ethylcinnamic acid. 2,861,102, 11-18-58, Cl. 260—523.
Huff, John V., and R. F. McLean, to General Motors Corp. Adjustable toeboard for an automobile. 2,860,720, 11-18-58 Cl. 180—90.6.
Huffschmidt, Robert E., to Western Foundry Co. Draft head for waste wood burners. 2,860,625, 11-18-58, Cl. 126—163.
Hughes Aircraft Co.: *See*—
Jacob, Don M., Parode, and St. John. 2,861,179.
Smith, George F. and H. M. 2,861,207.
Hughes, Elmer. Simulated baseball game. 2,860,878, 11-18-58, Cl. 273—88.
Hughes F. A., & Co. Ltd.: *See*—
Randall, Jack H. P. 2,860,781.
Hughey, Carter J.: *See*—
Bornemann, William, and Hughey. 2,860,906.
Humber, Leslie G, to Shawinigan Chemicals Ltd. Preparation of percarboxylate salts. 2,861,100, 11-18-58, Cl. 260—502.
Hunt, A. H., (Capacitors) Ltd.: *See*—
Robinson, Frederick C., and Grouse. 2,861,231.
Hynko, John. Fountain device. 2,860,916, 11-18-58, Cl. 299—7.
I-T-E Circuit Breaker Co.: *See*—
Collonge, Perry J. 2,861,119.
Jensen, Otto. 2,861,154.
Platz, Elwood T., Frank, and Herrmann. 2,861,139.
Iapadre, Rosario G. Parking meter. 2,860,755, 11-18-58, Cl. 194—83.
Imperial Chemical Industries Ltd.: *See*—
Andrew, Herbert F., Boyd, and Davies. 2,861,066.
Andrew, Herbert F., and Davies. 2,861,067.
Ingram, Marvin L., to Bellingham Steel Products, Inc. Wrapping machines. 2,860,466, 11-18-58, Cl. 53—228.
Inland Motor Corp.: *See*—
Luneau, John R., and Unruh. 2,861,203.
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Pettyjohn, Elmore S and Linden. 2,860,950.
International Business Machines Corp.: *See*—
Clark, John B. 2,860,759.
Henle, Robert A. 2,861,199.
Henle, Robert A., Emery, Bruce, and MacSorley. 2,861,200.
Lake, Clair D., and Pfaff. 2,860,707.
Rhodes, Kenneth E., and Wagner. 2,860,758.
Smura, Edwin J. 2,861,214.
Walsh, James L., Logue, and Martin. 2,861,258.
International Engineering General Research & Licensing Co.: *See*—
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International Harvester Co.: *See*—
Allin, George S., Jr and Henning. 2,860,426.
Francis, Robert L., and Castrey. 2,860,476.
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Thomas, John, and Firth. 2,860,726.
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Zahn, Karl M., and Theocharides. 2,860,563.
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Brown, Kenneth S., and Bassett. 2,861,211.
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Alexand, Ben, and Sullivan. 2,861,184.
Dishal, Milton, Le Grand, Pellegrinelli, Morrow, and Koehler. 2,861,177.
Lair, Julien J. B. 2,861,264.
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Coolidge, John E., Jr., and Kouvalinka. 2,861,201.
Leitz, Ernst, G. m. b. H.: *See*—
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Ireland, Lionel H., to Saunders-Roe Ltd. Aircraft trailing member release and reentry mechanism. 2,860,845, 11-18-58, Cl. 244—1.
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  McDowall, Charles J., Gaubatz, Wente, and Irwin. 2,860,712.
Isaac, George H., Jr. Quick-disconnect coupling. 2,860,909, 11-18-58, Cl. 294—102.
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Jackson, Walter C., to Tingley Rubber Corp. Rubber overshoe. 2,860,425, 11-18-58, Cl. 36—7.3.
Jacob, Don M., L. C. Parode, and E. E. St. John, to Hughes Aircraft Co. System for establishing initial operation of pulse receiver. 2,861,170, 11-18-58, Cl. 250—20.
Jacobsen, Paul W., and H. H. Weber, to H. G. Weber & Co. Remote control edge alignment device. 2,860,840, 11-18-58, Cl. 242—57.1.
Jacobsen, Paul W., to H. G. Weber & Co. Remote control edge alignment device. 2,860,841, 11-18-58, Cl. 242—57.1.
James, Gertrude H. Moistener. 2,860,359, 11-18-58, Cl. 15—132.5.
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  Clemens, Clarence M., and Jane. 2,860,467.
Jarvis, Kenneth W. Variable resistor. 2,861,158, 11-18-58, Cl. 201—48.
Jedrzykowski, Edmund, and C. A. Hubert, to International Harvester Co. Mounting for tractor/generator. 2,860,717, 11-18-58, Cl. 180—53.
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  Hardy, Albert L., and Jenkins. 2,860,608.
Jenkner, Adolf. Production of coke. 2,861,028, 11-18-58, Cl. 202—27.
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Jiu, James, to G. D. Searle & Co. 17-oxygenated estra-1,3,5(10)-triene-1,3-diols, and the corresponding esters and ethers. 2,861,086, 11-18-58, Cl. 260—397.4.
Johansen, Einar K., to U. S. Industries, Inc. Brake mechanism. 2,860,738, 11-18-58, Cl. 188—170.
Johanson, Bengt J., to Cinch Mfg. Corp. Socket and snap-in contact for printed circuits. 2,861,253, 11-18-58, Cl. 339—217.
Johnson, Armigene R. Garment. 2,860,345, 11-18-58, Cl. 2—106.
Johnson, Arnold E., to Arvey Corp. Foldable display piece. 2,860,439, 11-18-58, Cl. 41—11.
Johnson, Donald L. Fish migration apparatus for high dams. 2,860,488, 11-18-58, Cl. 61—21.
Johnson, Gordon W.: *See*—
  Wesslund, Robert E., Mader, and Johnson. 2,861,260.
Johnson, John. Combine beater cylinder. 2,860,644, 11-18-58, Cl. 130—22.
Johnson & Johnson: *See*—
  Zackheim, Eli A. 2,860,773.
Johnson, Kenneth J. Edge and center finder. 2,860,418, 11-18-58, Cl. 33—172.
Johnson, Louis W. Vibrating apparatus for handling loose material. 2,860,783, 11-18-58, Cl. 209—366.5.
Johnson, Shirley. Line tension-weight scale. 2,860,508, 11-18-58, Cl. 73—144.
Johnson, Virgil R.: *See*—
  Rice, James H., and Johnson. 2,860,599.
Johnson, Walter C.: *See*—
  Brinster, John F., and Johnson. 2,861,202.
Johnston, Thomas P.: *See*—
  Beauchamp, Robert O., Jr., and Johnston. 2,861,091.
Jonach, Fredrick L., to Esso Research and Engineering Co. Odor stabilization of sulfur-containing organic materials. 2,861,063, 11-18-58, Cl. 260—139.
Jonassen, Jorgen W. Compressor. 2,860,828, 11-18-58, Cl. 230—138.
Jones, David C. R., and H. R. Gregory, to Coal Industry (Patents) Ltd. Manufacture of coal briquettes. 2,860,957, 11-18-58, Cl. 44—10.
Jones, Jean E., to Eastman Kodak Co. Supersensitization of photographic silver halide emulsions. 2,860,981, 11-18-58, Cl. 96—104.
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Jones, Jean E., to Eastman Kodak Co. Photographic emulsions containing polymethine dyes and ketone compounds. 2,860,983, 11-18-58, Cl. 96—104.
Jones, Jean E., to Eastman Kodak Co. Supersensitized photographic emulsions containing polymethine dyes and ketones. 2,860,984, 11-18-58, Cl. 96—104.
Jones, John F.: *See*—
  Butterfield, John P., Walter, Winkelmann, and Jones. 2,860,528.
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  Brundell, Per G., and Jonsson. 2,860,672.
Jordan, Hans, to Given Machinery Co. Mounting sleeve and clamp means for disposal devices. 2,860,836, 11-18-58, Cl. 241—100.5.
Jordan, Lloyd J.: *See*—
  Asbeck, Hans J., and Jordan. 2,861,011.
Jordan, Richard H.: *See*—
  Deming, Andrew F., Schneider, and Jordan. 2,861,265.
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  Bessinger, Charles N. 2,860,765.
Kahn, Harold H.: *See*—
  Gold, Max L. 2,860,802.
Kahn, Irving B., to Teleprompter Corp. Cuing device. 2,860,544, 11-18-58, Cl. 88—74.
Kahn, Morton C., and W. H. Offenhauser, Jr., to The Marcelle and Edwin M. Fleischmann Foundation, Inc. Insect control apparatus. 2,861,132, 11-18-58, Cl. 179—100.1.
Kaiser, Francis T., to Modern Equipment Co. Cupola charging apparatus utilizing a cone bottom bucket. 2,860,791, 11-18-58, Cl. 214—19.
Kalat, Joseph F., to Western Electric Co., Inc. Method of casting phenolic resins in a tin-plated mold. 2,860,947, 11-18-58, Cl. 18—47.
Karabinos, Joseph V., and A. T. Ballum, to Olin Mathieson Chemical Corp. Production of polyethenoxy alkyl phenate ethers. 2,861,108, 11-18-58, Cl. 260—613.
Karanik, John: *See*—
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Karlsson, Karl H., to Gadget-Of-The-Month Club, Inc. Continuous bearing retainer ring adapted for radial expansion. 2,860,540, 11-18-58, Cl. 85—8.6.
Kassel, Louis S., to Universal Oil Products Co. Apparatus for distributing a mixed phase fluid stream. 2,860,955, 11-18-58, Cl. 23—288.
Katterjohn, Charles M. Corner brace for crates and boxes. 2,860,806, 11-18-58, Cl. 217—69.
Kauffman, Eleanor M.: *See*—
  Mueller, Herman H. 2,860,880.
Kauffman, Richmond H., ⅛ to A. R. Cagliano, and ⅛ to L. J. Huberland. Screwdriver having screw retaining means. 2,860,675, 11-18-58, Cl. 145—50.
Keimatsu, Shotaro: *See*—
  Hiratsuka, Kizo, Yonemitsu, Itabashi, Date, and Keimatsu. 2,861,107.
Keith, John V., to Universal Winding Co. Cop tube driving connection. 2,860,838, 11-18-58, Cl. 242—46.3.
Kelley, Carl S., to Phillips Petroleum Co. Recovery and use of olefins and hydrogen sulfide in gases. 2,861,113, 11-18-58, Cl. 260—677.
Kelley, Oliver K., to General Motors Corp. Hydrodynamic drive devices. 2,860,747, 11-18-58, Cl. 192—3.2.
Keltz, Max J., to Perkins Machine & Gear Co. Clutch for driving mechanism. 2,860,749, 11-18-58, Cl. 192—33.
Kemiska A B Candor: *See*—
  Bergman, Carl-Axel L. 2,860,456.
Kemp, Gibson D. Mechanical floor mat. 2,860,366, 11-18-58, Cl. 13—311.
Kendall, Roy C., to Owens-Illinois Glass Co. Building structures. 2,860,503, 11-18-58, Cl. 72—16.
Kennecott Copper Corp.: *See*—
  Margolin, Harold, and Kirk. 2,860,971.
Kennerly, George W.: *See*—
  Frank, Simon, and Kennerly. 2,861,099.
Kerr, James W. Retractible hardtop for motor vehicles. 2,860,914, 11-18-58, Cl. 296—117.
Keville, Jesse F., Jr., to Carrier Corp. Process of concentrating milk and milk products. 2,860,988, 11-18-58, Cl. 99—55.
Kibbee, H. R.: *See*—
  McHugh, Edward V. 2,860,444.
Kiefer, John E.: *See*—
  Touey, George P., and Kiefer. 2,861,069.
Kiekhaefer, Elmer C. Splash deflector. 2,860,594, 11-18-58, Cl. 115—17.
Kiff, Ben W.: *See*—
  Guest, Howard R., and Kiff. 2,861,083.
Kirk, William F.: *See*—
  Margolin, Harold, and Kirk. 2,860,971.
Kistler, Samuel S.: *See*—
  Gregor, John R., and Kistler. 2,860,961.
Kittredge, Arthur E. Hot process softener. 2,860,786, 11-18-58, Cl. 210—196.
Kline, Granville B.: *See*—
  Kornfeld, Edmund C., and Kline. 2,861,074.
Klockner-Humboldt-Deutz, Akt.: *See*—
  Ziesche, Kurt, and Sonntag. 2,860,780.
Knapsack-Griesheim Akt.: *See*—
  Opitz, Wolfgang, and Urbanski. 2,861,106.
Knight, Philip L., to Surface Combustion Corp. Radiant tube heater. 2,860,864, 11-18-58, Cl. 263—42.
Knight, Robert F., to Core Laboratories, Inc. Depth measuring apparatus. 2,860,417, 11-18-58, Cl. 33—134.
Knobel, Fritz. Lighting installation. 2,861,219, 11-18-58, Cl. 315—100.
Knoll, David, to Berko Electric Mfg. Corp. Electric heater panel contact structure. 2,861,168, 11-18-58, Cl. 219—34.
Knott, Edward B., and L. A. Williams, to Eastman Kodak Co. Process for the preparation of 1:2:4-triazole-3-thiols. 2,861,076, 11-18-58, Cl. 260—288.
Kober, William, to TKM Electric Corp. Rotors for axial air gap dynamoelectric machines. 2,861,205, 11-18-58, Cl. 310—156.
Kober, William. Dynamo voltage control. 2,861,238, 11-18-58, Cl. 322—46.
Kocan, Stephen J., and R. Walz, Jr., to Westinghouse Electric Corp. Article feeding device. 2,860,761, 11-18-58, Cl. 198—26.
Koehler, John A.: *See*—
  Dishal, Milton, Le Grand, Pellegrinelli, Morrow, and Koehler. 2,861,177.
Kofron, Vernon K.: *See*—
  Bueker, Edgar L., and Kofron. 2,860,954.
Kohrs, William R., D. L. Orloff, and R. L. Rohde, to Oscar Mayer & Co., Inc. Transfer mechanism. 2,860,763, 11-18-58, Cl. 198—33.
Kolenda, Ernest A.: *See*—
  Kolenda, Ludwig A., J. F., and E. A. 2,860,367.
Kolenda, John F.: *See*—
  Kolenda, Ludwig A., J. F., and E. A. 2,860,367.
Kolenda, Ludwig A., J. F. and E. A. Suction nozzle for cleaning hard surfaces. 2,860,367, 11-18-58, Cl. 15—393.
Kolfenbach, John J.: *See*—
  Finn, Richard F., Kolfenbach, and Lifson. 2,860,815.
  Morway, Arnold J., and Kolfenbach. 2,861,043.

Konvalinka, George: *See*—
Coolidge, John E., Jr., and Konvalinka. 2,861,261.
Kornfeld, Edmund C., and G. B. Kline, to Eli Lilly and Co. Substituted hydroxyergolenes. 2,861,074, 11-18-58, Cl. 260—285.5.
Kost, Alwin, and G. B. Quillici, to Kost Multiple X, Inc. Display devices simulating an object in flight. 2,860,434, 11-18-58, Cl. 40—106.33.
Kost Multiple X, Inc.: *See*—
Kost, Alwin, and Quillici. 2,860,434.
Kouke, Louis L. Rack insert for golf bags. 2,860,679, 11-18-58, Cl. 150—1.5.
Kowalewski, John J.: *See*—
Cawl, Allen P., and Kowalewski. 2,860,725.
Kramer Trenton Co.: *See*—
Goldenberg, David. 2,860,491.
Krause, Lloyd O., to General Electric Co. Electrical transmission systems and filters therefor. 2,861,245, 11-18-58, Cl. 333—9.
Krekeler, Claude B.: *See*—
Bruestle, Armin O., and Krekeler. 2,860,863.
Krivit, Samuel: *See*—
Morf, Walter J. 2,860,804.
Kroeger, William J., and G. Schecter. Structure for diverting gases of high velocity. 2,860,663, 11-18-58, Cl. 137—561.
Krohm, Fred A., to The Anderson Co. Windshield wiper arm assembly. 2,860,364, 11-18-58, Cl. 15—255.
Krohm, Fred A., to The Anderson Co. Windshield wiper arm assembly. 2,860,365, 11-18-58, Cl. 15—255.
Krost, Bruce B.: *See*—
McDonald, John. 2,860,695.
Krull, Ruth M. Fish cleaning device. 2,860,371, 11-18-58, Cl. 17—5.
Kudar, John C. Continuous motion picture apparatus, composite prism. 2,860,542, 11-18-58, Cl. 88—16.8.
Kuebler, Thomas L., and C. J. Schmock, to Uniflow Mfg. Co. Beverage cooling device. 2,860,492, 11-18-58, Cl. 62—185.
Kuiper, Gerhard C. R., and J. W. Pyure, to General Motors Corp. Folding top with inwardly collapsing side rails. 2,860,913, 11-18-58, Cl. 296—107.
Kulka Electric Corp.: *See*—
Kulka, Eugene R. 2,861,156.
Kulka, Eugene R., to Kulka Electric Corp. Lever mount assembly for toggle switches. 2,861,156, 11-18-58, Cl. 200—168.
Kunik, Jordan: *See*—
Obolensky, Guy. 2,861,220.
Kurs, Abraham. Combination stirring and mixing paddle and container scraper. 2,860,838, 11-18-58, Cl. 259—144.
Laakso, Thomas M.: *See*—
Williams, Jack L. R., and Laakso. 2,861,055.
La Belle Industries, Inc.: *See*—
Birbaum, Lester W. 2,860,433.
Laguzzi, Mario, to Poirette Corsets, Inc. Foundation garment or the like. 2,860,641, 11-18-58, Cl. 128—541.
Lair, Julien J. B., to International Telephone and Telegraph Corp. Direction finder system. 2,861,264, 11-18-58, Cl. 343—113.
Lake, Clair D., and W. Pfaff, to International Business Machines Corp. Rotary die punch. 2,860,707, 11-18-58, Cl. 164—89.
Lake, Harry E., to Preferred Utilities Mfg. Corp. Gas-fueled igniter system. 2,860,695, 11-18-58, Cl. 158—115.
Lanes, Orville P., to Deere & Co. Connection facilitating vehicle draft assembly. 2,860,892, 11-18-58, Cl. 280—477.
Langer, Arthur W., Jr., to Esso Research and Engineering Co. Catalytic metal-modified resin. 2,861,045, 11-18-58, Cl. 252—430.
Lappin, Gerald R., and J. W. Tamblyn, to Eastman Kodak Co. Polyolefin compositions containing certain 2-hydroxy-4-alkoxy benzophenones. 2,861,053, 11-18-58, Cl. 260—45.95.
Lapsley, Robert, to Clark Equipment Co. Tractor shovel. 2,860,793, 11-18-58, Cl. 214—140.
Larson, Donald J., to Caterpillar Tractor Co. Ripper tooth construction having stop member to prevent wedging of tooth to shank. 2,860,861, 11-18-58, Cl. 262—8.
Larson, Edward S., to Fairchild Camera & Instrument Corp. Keyboard perforator. 2,860,708, 11-18-58, Cl. 164—113.
La Russa, Anthony A., to United States of America, Army. Bed construction. 2,860,351, 11-18-58, Cl. 5—178.
Lauru, Lucien. Apparatus for measuring muscular forces involved in various movements. 2,860,514, 11-18-58, Cl. 73—379.
Lawson, E. P., Co., Inc.: *See*—
Thumin, Carl. 2,860,705.
Laycock, John N. Amphibious craft. 2,860,593, 11-18-58, Cl. 115—1.
Leahy, Robert E., to Sperry Rand Corp. Electronic switch modulator. 2,861,183, 11-18-58, Cl. 250—27.
Leavelle, Francis M. Sweeping mop. 2,860,360, 11-18-58, Cl. 15—221.
Leavitt, Minard A., to United States of America, Atomic Energy Commission. Magnetometer. 2,861,242, 11-18-58, Cl. 324—43.
Lebus, William A. Knife sharpener. 2,860,452, 11-18-58, Cl. 51—102.
Ledingham, Harold A., to Vis-O-Lite Co. Beverage dispensers. 2,860,819, 11-18-58, Cl. 222—68.
Leeds and Northrup Co.: *See*—
Bristol, Edward S. 2,861,194.
Le Febure Corp.: *See*—
Brawner, William D. 2,860,948.
Le Geff, Leman H. Bowling bag. 2,860,081, 11-18-58, Cl. 150—52.
Le Grand, Jesse S.: *See*—
Dishal, Milton, Le Grand, Pellegrinelli, Morrow, and Koehler. 2,861,177.
Leitz, Ernst, G. m. b. H.: *See*—
Mandler, Walter. 2,861,172.
Le Loup, Theodore E., to General Electric Co. Calorized point contact electrode for semiconductor devices. 2,861,230, 11-18-58, Cl. 317—236.
Lengsfield Brothers, Inc.: *See*—
Fielding, Francis W. 2,860,816.
Leonard, Stephen C., R. L. Ten Broeck, and L. R. Runaldue, to General Electric Co. Single sheet loss tester. 2,861,241, 11-18-58, Cl. 324—34.
Lerbs, Alfred, to Compagnie Generale de Telegraphie Sans Fil. Travelling wave magnetron tube. 2,861,212, 11-18-58, Cl. 315—3.6.
Lerman, Monroe A. Steering handle for motor vehicles. 2,860,523, 11-18-58, Cl. 74—494.
Lero, Ernest, to Societe Anonyme dite: Krebs & Cie. Method of roasting sulphur ores in suspension. 2,860,964, 11-18-58, Cl. 75—9.
Leubner, Gerhard W.: *See*—
Unruh, Cornelius C., Leubner, and Smith. 2,861,058.
Lever Brothers Co.: *See*—
Barnum, Howard J., Jr. 2,860,431.
Ruff, Edgar E., and Dukeshire. 2,861,044.
Lewis, Edmund L.: *See*—
Brown, Julian S. 2,860,857.
Lewis, James W., Jr. Lift truck. 2,860,852, 11-18-58, Cl. 254—10.
Lifson, William R.: *See*—
Finn, Richard F., Kolfenbach, and Lifson. 2,860,815.
Lilly, Eli, and Co.: *See*—
Kornfeld, Edmund C., and Kline. 2,861,074.
Lindeman, Joseph F., and W. G. Dobbs, to Northwest Equipment Co., Inc. Machine for grading articles by size. 2,860,779, 11-18-58, Cl. 209—84.
Linden, Henry R.: *See*—
Pettyjohn, Elmore S., and Linden. 2,860,959.
Lindsey, Robert J., to American Steel Foundries. Accumulator system with centrifugal pump. 2,860,485, 11-18-58, Cl. 60—51.
Link Aviation, Inc.: *See*—
Chapple, Kenneth H. 2,861,157.
Linstead, Reginald P.: *See*—
Arden, Thomas V., Burstall, Davies, Linstead, and Wells. 2,860,936.
Liquidometer Corp., The: *See*—
Wickesser, Arthur. 2,860,511.
List, William F., to United States of America, Navy. Breakaway signal generator. 2,861,215, 11-18-58, Cl. 315—24.
Lockhart, Harold A.: *See*—
Carlson, Gilbert F., and Lockhart. 2,860,659.
Loesche, Ernst G. Production of granulated materials consisting of a core and one or more shells. 2,860,598, 11-18-58, Cl. 118—418.
Logue, Joseph C.: *See*—
Walsh, James L., Logue, and Martin. 2,861,268.
Lootens, William F., to General Electric Co. High current rectifier. 2,861,226, 11-18-58, Cl. 317—234.
Loulk, Leonard: *See*—
Marks, Lou F., and Loulk. 2,860,642.
Louthan, George R.: *See*—
Webster, John V., Aasland, and Louthan. 2,860,718.
Lowell, Bernard. Fireproof tar composition. 2,861,012, 11-18-58, Cl. 117—137.
Lowell, William P., Jr., to Sylvania Electric Products Inc. Discharge lamp flashing circuit. 2,861,218, 11-18-58, Cl. 315—96.
Lukes, George E., and J. T. Rabatin, to Stauffer Chemical Co. Manufacture of thiophosgene and alpha-halosulfides. 2,861,103, 11-18-58, Cl. 260—543.
Lundsager, Christian B., to E. I. du Pont de Nemours and Co. Thermoplastic film-metal-laminated structure and process. 2,861,022, 11-18-58, Cl. 154—129.
Luneau, John R., and C. H. H. Unruh, to Inland Motor Corp. Torquer. 2,861,203, 11-18-58, Cl. 310—40.
Lydon, Martin P., to Continental Can Co., Inc. Metal lid lifter with presser shoe. 2,860,033, 11-18-58, Cl. 81—3.46.
Lynn, Lawrence B.: *See*—
Hanna, Clinton R., and Lynn. 2,860,889.
Lyon, George A., Jr., to Lyon Inc. Spring fastener. 2,860,813, 11-18-58, Cl. 220—59.
Lyon, George A., Jr., to Lyon Inc. Wheel cover. 2,860,923, 11-18-58, Cl. 301—37.
Lyon, George A., Jr., to Lyon Inc. Wheel cover. 2,860,922, 11-18-58, Cl. 301—37.
Lyon, George A. Wheel cover. 2,860,924, 11-18-58, Cl. 301—37.
Lyon, George A. Wheel cover. 2,860,925, 11-18-58, Cl. 301—37.
Lyon, George A. Wheel cover. 2,860,926, 11-18-58, Cl. 301—37.
Lyon Inc.: *See*—
Lyon, George A., Jr. 2,860,813.
Lyon, George A., Jr. 2,860,923.
Lyon, George A., Jr. 2,860,922.
Maass, Albert: *See*—
Hess, Hermann, and Maass. 2,860,869.
Maccaferri, Mario. Melt extractor type heating cylinders. 2,860,375, 11-18-58, Cl. 18—30.
Macholl, James F., to Gould-National Batteries, Inc. Electrolyte liquid for storage batteries. 2,861,016, 11-18-58, Cl. 136—154.
MacIsaac, John T., Jr., and F. W. Brey, to The New York Trust Co., and J. H. Balle, trustees. Pile yarn shogging motion for looms. 2,860,665, 11-18-58, Cl. 139—46.
MacPeek, Donald L.: *See*—
Starcher, Paul S., MacPeek, and Phillips. 2,861,094.

Moberg, Ivar O., to The New York Trust Co. and J. H. Balle, Murray, Herbert C., and P. H. Peterson, to The Bridge Co.

MacPherson, Kenneth W. Expansible buckle. 2,860,398, 11–18–58, Cl. 24—163.
MacSorley, Olin L.: *See*—
Henle, Robert A., Emery, Bruce, and MacSorley. 2,861,200.
Mader, Lyle W.: *See*—
Wesslund, Robert E., Mader, and Johnson. 2,861,260.
Maffett, Robert R.: *See*—
Mancuso, Joseph P., and Maffett. 2,860,549.
Magee Carpet Co., The: *See*—
Penman, Montgomery B. 2,860,568.
Magee, Virgil S., 25% to The James Darrell Spencer Trust Estate, and 25% to The Sandra Carol Spencer Trust Estate, both of whom the trustee is E. M. Spencer. Electric oven. 2,860,568, 11–18–58, Cl. 99—339.
Maher, Robert H., to Swift & Co. Process of stabilizing the color of cooked meat. 2,860,993, 11–18–58, Cl. 99—157.
Malershofer, Karl M., to G-M Laboratories Inc. Shutter cocking mechanism. 2,860,550, 11–18–58, Cl. 95—31.
Malarkey, Herbert: *See*—
Sievers, Fred R. 2,860,551.
Maloney, Henry B.: *See*—
Yeo, Ernest E., and Maloney. 2,860,760.
Mancuso, Joseph P., and R. R. Maffett, to R. E. Bauer. Box forming machine. 2,860,549. 11–18–58, Cl. 93—51.
Mandler, Walter, to Ernst Leitz, G. m. b. H. Monochromator. 2,861,172, 11–18–58, Cl. 240—1.
Mansfield, William R. Injection device for internal combustion engines. 2,860,618, 11–18–58, Cl. 123—119.
Marchuk, Vladimir: *See*—
Turner, Edgar P., Wendel, and Marchuk. 2,860,748.
Marconi's Wireless Telegraph Co. Ltd.: *See*—
Cooper, Victor J. 2,861,123.
Margolin, Harold, and W. F. Kirk, to Kennecott Copper Corp. Titanium base alloys. 2,860,971, 11–18–58, Cl. 75—175.5.
Marks, Lou F., and L. Louik, to Haskell Mfg. Co. Card file. 2,860,642, 11–18–58, Cl. 129—31.
Marsden, George B., to Chicago Nipple Mfg. Co. Pipe cut-off machines. 2,860,706, 11–18–58, Cl. 104—61.
Marshall, Curtis: *See*—
Harden, Charles M., and Marshall. 2,860,627.
Marti, Arnold, to Bureautechnik A. G. Self-locking pedestal drafting table. 2,860,938, 11–18–58, Cl. 311—36.
Martin, Edward G., to Chas. Pfizer & Co., Inc. Vitamin B_{12} preparations. 2,861,026, 11–18–58, Cl. 167—81.
Martin, Edward J., and F. W. Chapman, to General Motors Corp. Servo controlled follower system. 2,861,234, 11–18–58, Cl. 318—31.
Martin, James D.: *See*—
Northington, Samuel C., Jr., and Martin. 2,860,772.
Martin, Robert L.: *See*—
Walsh, James L., Logue, and Martin. 2,861,258.
Marum, Hans H., to H. E. Crawford Co., Inc. Solid color pattern knitting machine and method. 2,860,499, 11–18–58, Cl. 66—14.
Mascari, Elton P., to Conjaur Corp. Adjustable door frames. 2,860,744, 11–18–58, Cl. 189—46.
Massillon-Cleveland-Akron Sign Co., The: *See*—
Silver, Joseph R. 2,860,436.
Matheny, Francis M., to Pipe Linings, Inc. Pipe-cleaning machine. 2,860,256, 11–18–58, Cl. 15—104.06.
Maurer, George, to Huck Mfg. Co. Transfer mechanism. 2,860,818, 11–18–58, Cl. 221—243.
Maxion, Emil J.: *See*—
Barca, Abraham L., and Maxion. 2,861,025.
May, Shelomo. Multiple answer electrical quiz game. 2,860,422, 11–18–58, Cl. 35—9.
Mayer, Oscar, & Co., Inc.: *See*—
Kohrs, William R., Orloff, and Rohde. 2,860,763.
Mayes, Ronald W. Seal. 2,860,615, 11–18–58, Cl. 123—90.
Maywood, Inc.: *See*—
Wood, John C., and Hatcher. 2,860,701.
McBride, Edward T.: *See*—
Oxford, Malcolm R., and McBride. 2,860,890.
McCain, Cecil C., G. Stuhfauth, and B. L. Wright, to Western Electric Co., Inc. Apparatus for twisting wires. 2,860,670, 11–18–58, Cl. 140—149.
McClenahan, William F. Combination fixture. 2,860,348, 11–18–58, Cl. 4—3.
McConnell, Richard L., and H. W. Coover, Jr., to Eastman Kodak Co. S-trichloromethyl tetraalkylphosphorodiamidothiolates. 2,861,092, 11–18–58, Cl. 260—461.
McConnell, Richard L., and J. B. Dickey, to Eastman Kodak Co. Reaction products of dialkyl phosphorothiolothionates and mucohalic acids. 2,861,093, 11–18–58, Cl. 260—461.
McConnell, Richard L., and T. H. Wicker, Jr., to Eastman Kodak Co. Phosphorothiolothionates derived from esters of alkene- and alkane-1,1-diols. 2,861,094, 11–18–58, Cl. 260—461.
McCracken, James M. Gate brick. 2,860,392, 11–18–58, Cl. 22—129.
McDonald, John, ½ to B. B. Krost. Method and apparatus for sequentially forming sheet metal with spaced dies. 2,860,685, 11–18–58, Cl. 153—21.
McDowall, Charles J., A. W. Gaubatz, R. J. Wente, and R. M. Irwin, to General Motors Corp. Control for aircraft power plant. 2,860,712, 11–18–58, Cl. 170—135.74.
McElgin, John W., and S. W. Miller, Jr., to John J. Nesbitt, Inc. Multi-room heating and ventilating system. 2,860,833, 11–18–58, Cl. 237—56.
McGuire, David R.: *See*—
Wright, Howard J., McGuire, and Westfall. 2,861,048.
McHugh, Edward V., 49% to F. Minner and H. R. Kibbee. Minnow vender. 2,860,444, 11–18–58, Cl. 43—50.
McHugh, John E., Jr. Tension absorbing device. 2,860,394, 11–18–58, Cl. 24—73.
McIntyre, Brouwer D., to Monroe Auto Equipment Co. Stabilizer and spring device. 2,860,870, 11–18–58, Cl. 267—11.
McKeown, Patrick J., to Sperry Rand Corp., Ford Instrument Co. Div. Servomechanism having unlimited servoing range. 2,861,223, 11–18–58, Cl. 318—29.
McKewen, John H., to Giddings & Lewis Machine Tool Co. Prescheduling means for machine tool. 2,860,430, 11–18–58, Cl. 40—10.
McKinnon, Malcolm N. Child's walking training device. 2,860,424, 11–18–58, Cl. 35—29.
McLean, Robert F.: *See*—
Huff, John V., and McLean. 2,860,720.
McLucas, John L., to Haller, Raymond and Brown, Inc. Recording system. 2,861,263, 11–18–58, Cl. 343—6.
McNally, Thomas F. Motor driven can opener. 2,860,410, 11–18–58, Cl. 30—4.
McNulty, Martin H.: *See*—
O'Connor, Robert W., and McNulty. 2,860,401.
McPhee, John L.: *See*—
Einstein, Alfred C., and McPhee. 2,860,937.
McSkimin, Herbert J., to Bell Telephone Laboratories, Inc. Low loss, broad band, ultrasonic transmission systems. 2,861,247, 11–18–58, Cl. 333—30.
McSwain, Thad M.: *See*—
Allsup, Walter L., and McSwain. 2,860,506.
Mecatec S. A.: *See*—
Bouffort, Victor A. 2,860,715.
Mechanical Swinging Cradle Co.: *See*—
De Pasqua, Joseph. 2,860,727.
Mechler, Mark V., and G. W. Wood, to United States of America, Navy. Recording and reproducing angularly correlated data. 2,861,255, 11–18–58, Cl. 340—3.
Mench, John W., and B. Fulkerson, to Eastman Kodak Co. Preparation of nitrogen containing cellulose derivatives. 2,861,068, 11–18–58, Cl. 260—227.
Mentzer, Elizabeth M.: *See*—
Mueller, Herman H. 2,860,880.
Merchants National Bank and Trust Co.: *See*—
Condon, Howard M., and Cleland. 2,860,678.
Merck & Co., Inc.: *See*—
Silver, Leonard H. 2,861,024.
Mergen, Joseph M., to Curtiss-Wright Corp. Magnetic actuators. 2,861,225, 11–18–58, Cl. 317—189.
Merker, Leon, to National Lead Co. Metal titanate composition. 2,860,998, 11–18–58, Cl. 106—42.
Mero, Ralph M., to Continental Can Co., Inc. Overload control cam insert. 2,860,592, 11–18–58, Cl. 113—1.
Merrill, Stewart H., and D. A. Smith, to Eastman Kodak Co. 3- and 4-(α-cyanocinnamido) phthalates of hydroxyl-containing polymers. 2,861,057, 11–18–58, Cl. 260—78.4.
Messeri, Sidney: *See*—
Stoddard, Howard V., Baeder, and Messeri. 2,860,729.
Metals & Controls Corp.: *See*—
Boessenkool, Helmich W., Durst, and Siegel. 2,860,409.
Metzger, Sidney, to International Telephone and Telegraph Corp. Multiplex branch repeater station. 2,861,128, 11–18–58, Cl. 179—15.
Meyer, Arthur A., to Warner Electric Brake & Clutch Co. Method of making a pole piece unit for magnets. 2,860,403, 11–18–58, Cl. 29—155.59.
Meyerhoff, Albert J., to Burroughs Corp. Balanced logical magnetic circuits. 2,861,259, 11–18–58, Cl. 340—174.
Midwest Folding Products Mfg. Corp.: *See*—
Heisler, Harold. 2,860,383.
Miehle-Goss-Dexter, Inc.: *See*—
Granger, Wallace H. 2,860,579.
Miles, Charles C., Jr., to Danville Products Co., Inc. Window regulator. 2,860,873, 11–18–58, Cl. 268—124.
Miles, John R., to Projection Optics Co., Inc. Projector. 2,860,543, 11–18–58, Cl. 88—26.
Miller, Charles W., to General Motors Corp. Light sensitive control circuit. 2,861,193, 11–18–58, Cl. 250—214.
Miller, Emery B., and G. F. Schlaudecker. Preparation of benzotriazoles. 2,861,078, 11–18–58, Cl. 260—308.
Miller, Francis A., to Joseph P. Miller Co., Inc. Plastic slide bearing for cribs having drop sides. 2,860,350, 11–18–58, Cl. 5—100.
Miller, Joseph P., Co., Inc.: *See*—
Miller, Francis A. 2,860,350.
Miller, Robert H.: *See*—
Buchanan, Donald A., Miller, and Thornberg. 2,861,040.
Miller, Samuel W., Jr.: *See*—
McElgin, John W., and Miller. 2,860,833.
Millerwise, Carl H., to American Radiator & Standard Sanitary Corp. Snap switch-large air gap. 2,861,142, 11–18–58, Cl. 200—67.
Mills, Ivor W., to Sun Oil Co. Method of annealing aluminum. 2,861,020, 11–18–58, Cl. 148—13.1.
Milton, Kirby M., to Eastman Kodak Co. Plasticisation of gelatin with dialkoxy-polyoxy-alkylene glycols. 2,860,980, 11–18–58, Cl. 96—94.
Minneapolis-Honeywell Regulator Co.: *See*—
Ainsworth, Frank W. 2,860,606.
Bearinger, Van W. 2,861,017.
Sikorra, Daniel J., and Wolfe. 2,861,240.
Minner, Frank: *See*—
McHugh, Edward V. 2,860,444.
Minnesota Mining & Mfg. Co.: *See*—
Herr, Robert. 2,861,133.
Minsk, Louis M., to Eastman Kodak Co. Resinous carboxy ester-lactones and process for preparing them. 2,861,056, 11–18–58, Cl. 260—78.3.
Minter, Marvin J.: *See*—
Ortegren, Herman A., and Minter. 2,860,777.
Mirick, Elmer W., to United States Steel Corp. Automatic shear for cutting strip. 2,860,704, 11–18–58, Cl. 164—47.

Moberg, Ivar O., to The New York Trust Co. and J. H. Baile, trustees. Method of and apparatus for weaving high and low pile fabrics. 2,860,664, 11-18-58, Cl. 139—46.

Moberg, Ivar O., to The New York Trust Co. and J. H. Baile, trustees. High and low pile fabric and method of making same. 2,860,669, 11-18-58, Cl. 139—402.

Modern Equipment Co.: *See*—
Kaiser, Francis T. 2,860,791.

Molins, Desmond W., and G. F. W. Powell, to Molins Machine Co., Ltd. Machines for manipulating cut tobacco. 2,861,190, 11-18-58, Cl. 250—83.6.

Molins Machine Co., Ltd.: *See*—
Molins, Desmond W., and Powell. 2,861,190.

Moneyron, Marcel: *See*—
Sarazin, Jean L., Fracchia, and Moneyron. 2,861,013.

Monroe Auto Equipment Co.: *See*—
McIntyre, Brouwer D. 2,860,870.

Monroe Calculating Machine Co.: *See*—
England, William A. 2,861,216.
Gernert, Lawrence H. 2,861,134.

Monsanto Chemical Co.: *See*—
Belt, Salem F. 2,860,948.
Cohen, Oscar P., Culbertson, and Rademacher. 2,861,071.
Mowry, David T., and Ringwald. 2,861,059.
Nelson, Herbert H. 2,861,041.
Rademacher, Leo E. 2,861,070.

Montclair Research Corp.: *See*—
Rust, John B., and Canfield. 2,861,054.

Montgomery, James A., and R. D. Morton, to Eastman Kodak Co. Carton partition for artificial silk cops. 2,860,825, 11-18-58, Cl. 229—42.

Moody, Meredith M. Cleaning device. 2,860,861, 11-18-58, Cl. 15—223.

Mooney, Edward L.: *See*—
Sheheen, Shay J., and Mooney. 2,861,014.

Mooney, Fred E.: *See*—
Dietz, Albert G. H., and Mooney. 2,861,021.

Moore, Alexander P.: *See*—
Morley, John, Karanik, and Moore. 2,860,654.

Moore, Charles B., and R. D. Van Veld, to E. I. du Pont de Nemours and Co. Orthographic camera. 2,860,557, 11-18-58, Cl. 95—11.

Moore, Robert L., to Westinghouse Electric Corp. Temperature-controlled apparatus. 2,861,151, 11-18-58, Cl. 200—138.

Moreau, Roland G., and M. M. G. Delattre, to Office National d'Etudes et de Recherches Aeronautiques. Contour follower apparatus. 2,861,192, 11-18-58, Cl. 250—202.

Morf, Walter J., to S. Krivit and M. Feldman. Air and liquid operated apparatus for intermittently feeding a buffing bar to a buffing wheel. 2,860,604, 11-18-58, Cl. 121—38.

Morgan Co. of Wisconsin: *See*—
Chapman, Arthur B. 2,860,388.

Morley, John, J. Karanik, and A. P. Moore, to Parker-Hannifin Corp. Fuel system head control unit. 2,860,654, 11-18-58, Cl. 137—98.

Morrow, Homer W.: *See*—
Dishal, Milton, Le Grand, Pellegrinelli, Morrow, and Koehler. 2,861,177.

Morton, Evans T., to Admiral Corp. Refrigerator cabinet. 2,860,807, 11-18-58, Cl. 220—15.

Morton, Ralph D.: *See*—
Montgomery, James A., and Morton. 2,860,825.

Morway, Arnold J., and J. J. Kolfenbach, to Esso Research and Engineering Co. Complex grease containing inorganic salt thickener. 2,861,043, 11-18-58, Cl. 252—21.

Mosbacher, Bruce H., to Roper Industries Inc. Shaft seal construction. 2,860,895, 11-18-58, Cl. 286—8.

Moser, William C., to E. I. du Pont de Nemours and Co. Chemical process. 2,861,039, 11-18-58, Cl. 210—32.

Mosesian, Edward C.: *See*—
Wilder, Alfred A. 2,860,671.

Moss, Rodney D.: *See*—
Huff, James E., and Moss. 2,861,102.

Moto-Mower, Inc.: *See*—
Wehner, William C. 2,860,473.

Motorola, Inc.: *See*—
Rich, Gerald C. 2,861,228.

Mowry, David T., and E. L. Ringwald, to Monsanto Chemical Co. Hydrolysis of acrylonitrile-containing polymers. 2,861,059, 11-18-58, Cl. 260—85.5.

Moxley, Norman E. Coin collector for traffic violations. 2,860,752, 11-18-58, Cl. 194—74.

Moxley, Norman E. Coin collecting and receipting device. 2,860,753, 11-18-58, Cl. 194—78.

Moxley, Norman E. Coin collecting and receipting device. 2,860,754, 11-18-58, Cl. 194—83.

Mrenna, Thomas J. Mail box. 2,860,830, 11-18-58, Cl. 232—17.

Mueller, Alfred H.: *See*—
Mueller, Herman H. 2,860,880.

Mueller, Herman H., 3% each to E. M. Mentser, B. M. Kauffman, and A. H. Mueller. Tone arm vertical compensating mechanism for automatic interlocking dual phonograph record players. 2,860,880, 11-18-58, Cl. 274—10.

Muench, Walter, to Walter Muench, Inc. Long cutting edge diamond tool for dressing grinding wheels. 2,860,623, 11-18-58, Cl. 125—39.

Muench, Walter, Inc.: *See*—
Muench, Walter. 2,860,623.

Muller, George H., to Ford Motor Co. Shock absorber. 2,860,733, 11-18-58, Cl. 188—88.

Müller, Hans, to H. and F. W. Deckel. Feeler-pin measuring devices. 2,860,419, 11-18-58, Cl. 33—172.

Muller, Heinrich, and A. Girs, to Schreyer & Co. Toy aircraft. 2,860,447, 11-18-58, Cl. 46—243.

Murcott, Charles E. Collapsible golf carts. 2,860,888, 11-18-58, Cl. 280—41.

Murray, Herbert C., and D. H. Peterson, to The Upjohn Co. 11α,17α,21-trihydroxy-4-pregnene-3,20-dione and esters thereof. 2,861,088, 11-18-58, Cl. 260—397.45.

Najjar, John, to Ford Motor Co. Automotive transmission range selector. 2,860,596, 11-18-58, Cl. 116—124.

Narancich, Nick H.: *See*—
Narancich, Pete R. and N. H. 2,860,903.

Narancich, Pete R. and N. H. Gate latch. 2,860,903, 11-18-58, Cl. 292—48.

National Acme Co., The: *See*—
Park, Allan J. 2,861,120.

National Lead Co.: *See*—
Merker, Leon. 2,860,998.

Naumann, Willy R., to Daimler-Benz Akt. Means for sealing the gap between a wall and rotary shaft extending therethrough. 2,860,896, 11-18-58, Cl. 286—11.16.

Negri, Adolph. Umbrella and a replaceable rib therefor. 2,860,647, 11-18-58, Cl. 135—29.

Neider, F. A., Co., The: *See*—
Thornsbury, Harry. 2,860,368.

Nelson, Herbert H., to Monsanto Chemical Co. Polymerization inhibitor. 2,861,041, 11-18-58, Cl. 252—1.

Nelson, Marvin D., and D. N. Cole, to Dutton-Lainson Co. Boat trailer. 2,860,792, 11-18-58, Cl. 214—84.

Nelson, Werner R. Rotating drum for self winding and conventional wrist watches. 2,860,534, 11-18-58, Cl. 81—7.5.

Nenz, Adriano: *See*—
Hermenberg, Jean, Cevidalli, and Nenz. 2,861,110.

Nesbitt, John J., Inc.: *See*—
McElgin, John W., and Miller. 2,860,833.

New Britain Machine Co., The: *See*—
Retz, William B., and Cardell. 2,860,730.
Stephan, Hallis N. 2,860,547.

New Castle Products, Inc.: *See*—
Harris, Donald S. 2,860,698.

New Products Corp.: *See*—
Banker, Oscar H. 2,860,605.

New York Trust Co., The: *See*—
Clark, Eugene F. 2,860,666.
MacIsaac, John T., Jr., and Brey. 2,860,665.
Moberg, Ivar O. 2,860,664.
Moberg, Ivar O. 2,860,669.

Nickel Cadmium Battery Corp.: *See*—
Berg, Marcus. 2,861,115.

Nickel, Horst: *See*—
Suckfull, Fritz, Putter, and Nickel. 2,861,064.

Nielas, Walter: *See*—
Beckadolph, Richard, and Nielas. 2,860,370.

Nielsen, Alvin R., to Plax Corp. Coated synthetic resin container. 2,860,801, 11-18-58, Cl. 215—1.

Nishimura, Hideo. Thermocouple and elements thereof. 2,861,114, 11-18-58, Cl. 136—5.

Nordberg Mfg. Co.: *See*—
Werner, Ewald. 2,860,837.

Nordquist, Robert G., to Patent License Corp. Lighting fixture. 2,861,173, 11-18-58, Cl. 240—9.

North American Aviation, Inc.: *See*—
Crossley, Charles N. 2,860,498.
Simon, Robert A. 2,861,015.

North American Philips Co., Inc.: *See*—
Bauer, Anton. 2,861,204.
Couveld, Johan H., and De Jong. 2,861,147.
Edens, Arie H., and Geeven. 2,860,694.
Scheffer, Nicolaas, and Slooff. 2,861,148.
Simonsson, Fritz J., and Nyström. 2,861,138.
Westra, Reinder. 2,860,502.

North Electric Co.: *See*—
Callender, Jack E. 2,861,129.

Northington, Samuel C., Jr., and J. D. Martin, to Combustion Engineering, Inc. Shipping package for pipe lengths and fittings. 2,860,772, 11-18-58, Cl. 206—65.

Northwest Equipment Co., Inc.: *See*—
Lindeman, Joseph F., and Dobbs. 2,860,779.

Norton Co.: *See*—
Uelts, Herbert F. G., and Ault. 2,860,999.

Nowell, Anthony V. Dry fertiliser injector. 2,860,586, 11-18-58, Cl. 111—92.

Nyström, Curry O. E.: *See*—
Simonsson, Fritz J., and Nyström. 2,861,138.

Oathout, Walter H. Preparation of candied frozen food. 2,860,804, 11-18-58, Cl. 99—193.

Obolensky, Guy, 10% to J. Kunik. Punched card and tape read out system. 2,861,220, 11-18-58, Cl. 315—163.

O'Connor, Robert W., and M. H. McNulty. Feed regulator for stereotype finishing machines. 2,860,401, 11-18-58, Cl. 29—21.

O'Donnell, Philip L. Dispenser with automatic cut-off. 2,860,703, 11-18-58, Cl. 164—42.

Oehler, William P., and C. H. Youngberg, to Deere & Co. Disk harrow. 2,860,470, 11-18-58, Cl. 55—73.

Offenhauser, William H., Jr.: *See*—
Kahn, Morton C., and Offenhauser. 2,861,132.

Office National d'Etudes et de Recherches Aeronatiques: *See*—
Moreau, Roland G., and Delattre. 2,861,192.

Ohlinger, Leo A.: *See*—
Wigner, Eugene P., and Ohlinger. 2,861,034.

Olin Mathieson Chemical Corp.: *See*—
Diassi, Patrick A. 2,861,075.
Karabinos, Joseph V., and Ballun. 2,861,108.

Oliver, Gene L.: *See*—
Dann, John R., Oliver, and Gates. 2,860,985.

Opitz, Wolfgang, and W. Urbenski, to Knapsack-Griesheim Akt. Process of preparing aldehydes or ketones by dehydrogenation of alcohols. 2,861,106, 11-18-58, Cl. 260—596.

Orazi, Paolo. Rotary sustaining wing for aircraft. 2,860,846, 11-18-58, Cl. 244—39.

Orloff, Daniel L.: *See*—
Kohrs, William R., Orloff, and Rohde. 2,860,763.

Rebe, Gerd: *See*—

Orloff, George, to British Messier Ltd. Servo-motor systems. 2,860,607, 11-18-58, Cl. 121—47.

Orr, Audrey W. Hydraulic actuated sewing machine. 2,860,590, 11-18-58, Cl. 112—174.

Ortegren, Herman A., and M. J. Minter, to Federal-Mogul-Bower Bearings, Inc. Electronic flaw-detecting device. 2,860,777, 11-18-58, Cl. 209—72.

Owens-Illinois Glass Co.: *See*—
Allen, Russell G. 2,860,524.
Kendall, Roy C. 2,860,503.

Oxford, Malcolm R., and E. T. McBride. Velocipede with reciprocating seat. 2,860,890, 11-18-58, Cl. 280—226.

Pacific Gas and Electric Co.: *See*—
Cheney, William O. 2,860,800.

Palace Corp.: *See*—
Walt, Clyde F., and Cole. 2,860,334.

Palevitch, Haig. Adjustable die. 2,860,684, 11-18-58, Cl. 153—2.

Palach, Casmir. Tractor loader attachment. 2,860,794, 11-18-58, Cl. 214—140.

Pankove, Jacques I., to Radio Corp. of America. Semi-conductor devices and methods of making same. 2,861,229, 11-18-58, Cl. 317—235.

Pankove, Jacques I., to Radio Corp. of America. Photoelectric coding device. 2,861,262, 11-18-58, Cl. 340—365.

Park, Allan J., to The National Acme Co. Junction box assembly. 2,861,150, 11-18-58, Cl. 174—59.

Park, Peter G.: *See*—
Weeks, Robert W., and Park. 2,860,897.

Parker Appliance Co., The: *See*—
Taylor, William, Badger, and Burton. 2,860,653.

Parker-Hannifin Corp.: *See*—
Badger, Everett H., Jr. 2,860,652.
Davies, Robert H. 2,860,651.
Morley, John, Karanik, and Moore. 2,860,654.

Parks, John H., to Caterpillar Tractor Co. Resilient coupling for torque transmitting drive shaft. 2,860,497, 11-18-58, Cl. 64—15.

Parode, Lowell C.: *See*—
Jacob, Don M., Parode, and St. John. 2,861,179.

Passavant Werke of Michelbacher: *See*—
Schade, Harald J. G. 2,860,835.

Patent Licenses Corp.: *See*—
Nordquist, Robert G. 2,861,172.

Paxton, Elisha W., to Thermal Engineering Co. Continuous glass melting furnace. 2,860,448, 11-18-58, Cl. 49—54.

Pechiney Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Ruelle, Louis, and Tardieu. 2,860,965.
Simon, Suisse. 2,861,036.

Peelle Co., The: *See*—
Doeg, Paul R. 2,860,872.
Doeg, Paul R., and Croker. 2,860,386.

Pellegrinelli, George L.: *See*—
Dishal, Milton, Le Grand, Pellegrinelli, Morrow, and Koehler. 2,861,177.

Pendergast, Raymond F. Leather sander. 2,860,454, 11-18-58, Cl. 51—139.

Penman, Montgomery B., to The Magee Carpet Co. Looper mechanism for multiple needle looping machines. 2,860,588, 11-18-58, Cl. 112—79.

Pennington, John T., to United States of America, Army. Photographic printer with a point light source and mechanical dodging device. 2,860,561, 11-18-58, Cl. 95—79.

Perkins Machine & Gear Co.: *See*—
Keitz, Max J. 2,860,749.

Perrachione, Jean, to John Ramming Machine Co. Chuck. 2,860,881, 11-18-58, Cl. 279—4.

Perry, Thomas A., to Skyline Products, Inc. Tank baffle. 2,860,809, 11-18-58, Cl. 220—22.

Pertrix-Union G. m. b. H.: *See*—
Sindel, Johann. 2,861,117.

Peach, Edward T.: *See*—
Whitmore, Keith E., and Peach. 2,860,975.

Peterson Durey H.: *See*—
Murray, Herbert C., and Peterson. 2,861,088.

Peterson, Victor W., to General Motors Corp. Power transmission system. 2,860,713, 11-18-58, Cl. 170—135.75.

Peterson, Walter E., to United States of America, Army. Hydraulic material handling apparatus. 2,860,908, 11-18-58, Cl. 294—68.

Petrie, Peter S., to The Dow Chemical Co. Process for making dioxolanes. 2,861,080, 11-18-58, Cl. 260—340.9.

Petrie, Peter S., to The Dow Chemical Co. Process for making alkyldioxolanes. 2,861,081, 11-18-58, Cl. 260—340.9.

Pettyjohn, Elmore S., and H. R. Linden, to The Institute of Gas Technology. Pressure hydrogasification of natural gas liquids and petroleum distillates. 2,860,959, 11-18-58, Cl. 48—197.

Peyrolade, Andre: *See*—
Scriabine, Igor, and Peyrolade. 2,861,111.

Pfaff, Wesley: *See*—
Lake, Clair D. 2,860,707.

Pfizer, Chas., & Co., Inc.: *See*—
Martin, Edward G. 2,861,026.

Pfund, Charles E., ½ to J. E. Ross. Sealed impression fitting aids. 2,860,416, 11-18-58, Cl. 33—3.

Philco Corp.: *See*—
Frank, Robert J., and Burke. 2,860,686.

Phillips, Benjamin: *See*—
Starcher, Paul S., MacPeek, and Phillips. 2,861,084.

Phillips, John W. Compound swivel adaptor and coupling for anesthesia. 2,860,633, 11-18-58, Cl. 128—188.

Phillips, Oliver V., to The Star Recorder Corp. of Denver. Recording apparatus for earth bore drilling. 2,860,509, 11-18-58, Cl. 73—151.5.

Phillips Petroleum Co.: *See*—
Fox, Homer M. 2,860,483.
Kelley, Carl S. 2,861,113.

Pieper, George R., and A. C. Fechnel. Magnetic oil filters. 2,860,787, 11-18-58, Cl. 210—223.

Pierre Gerald J. Sheet holder. 2,860,352, 11-18-58, Cl. 5—320.

Pipe Linings, Inc.: *See*—
Matheny, Francis M. 2,860,356.

Pitman, Alfred T. Cooking apparatus. 2,860,569, 11-18-58, Cl. 99—404.

Pittsburgh Corning Corp.: *See*—
D'Eustachio, Dominic. 2,860,997.

Pittsburgh Plate Glass Co.: *See*—
Christenson, Roger M. 2,861,050.
Van Cleef, William C., Jr. 2,860,354.
Van Cleef, William C., Jr. 2,860,921.

Plastics Mfg. Inc.: *See*—
Hartung, Richard E., and Harms. 2,860,821.

Platz, Elwood T., W. H. Frank, and J. A. Herrmann, to I-T-E Circuit Breaker Co. Bus duct plugs with cover operated retractable contact fingers. 2,861,139, 11-18-58, Cl. 200—50.

Plax Corp.: *See*—
Nielsen, Alvin R. 2,860,801.

Poirette Corsets, Inc.: *See*—
Laguzzi, Mario. 2,860,641.

Polychrome Corp.: *See*—
Gumbinner, Robert. 2,860,438.

Post, Frederick, Co.: *See*—
Hollmann, Walter G. 2,861,008.

Powell, Gordon F. W.: *See*—
Moline, Desmond W., and Powell. 2,861,190.

Preferred Utilities Mfg. Corp.: *See*—
Lake, Harry E. 2,860,695.

Prepo Corp.: *See*—
Falligant, Louis A. 2,860,820.

Presmyk, Wally J. Tool grinding mechanism. 2,860,459, 11-18-58, Cl. 51—221.

Press, Jack J. Cantilever stiffness and curl tester. 2,860,510, 11-18-58, Cl. 73—159.

Price, Cecil J., to E. I. du Pont de Nemours and Co. Thread tensioner. 2,860,844, 11-18-58, Cl. 242—150.

Pringham, Henry E. J., to General Motors Corp. Enrichment device for fuel injection system. 2,860,617, 11-18-58, Cl. 123—119.

Prismo Safety Corp.: *See*—
Rindone, Guy E.: 2,861,001.

Procter, Edward C.: *See*—
West, James R., and Procter. 2,860,677.

Prohaska, James J., to Swift & Co. Can stamping machine. 2,860,572, 11-18-58, Cl. 101—41.

Projection Optics Co., Inc.: *See*—
Miles, John R. 2,860,543.

Prokes, John R. Cutting tool holder. 2,860,402, 11-18-58, Cl. 29—96.

Prueter, Clarence, to Supreme Products Corp. Hair clipper base plate. 2,860,413, 11-18-58, Cl. 30—223.

Pumpelly, Charles T.: *See*—
Senkbeil, Herman O., and Pumpelly. 2,861,097.

Pumpelly, Charles T., to The Dow Chemical Co. 2,3,6-trichlorobenzyl esters of chloroacetic acids. 2,861,096, 11-18-58, Cl. 260—487.

Purdy Machinery Co. Ltd.: *See*—
Sherrington, John E. 2,860,804.

Putter, Rolf: *See*—
Suckfull, Fritz, Putter, and Nickel. 2,861,064.

Pyuro, John W.: *See*—
Kuiper, Gerhard C. R., and Pyuro. 2,860,913.

Quarzlampen Gesellschaft m. b. H.: *See*—
Staeger Rudolf, and Steinmeyer. 2,860,875.

Queck, Johann: *See*—
Scherer, Otto, and Queck. 2,861,032.

Quilici, Gino R.: *See*—
Kost Alwin, and Quilici. 2,860,434.

Rabatin, Joseph T.: *See*—
Lukes, George E., and Rabatin. 2,861,103.

Rademacher, Leo E.: *See*—
Cohen, Oscar P., Culbertson, and Rademacher. 2,861,071.

Rademacher, Leo E., to Monsanto Chemical Co. Process for the production of monophenylmelamine. 2,861,070, 11-18-58, Cl. 260—249.6.

Radio Corp. of America: *See*—
Benway, Robert E. 2,861,208.
Pankove, Jacques I. 2,861,229.
Pankove, Jacques I. 2,861,262.
Rettinger, Michael. 2,861,125.
Sonnenfeldt, Richard W. 2,861,180.

Rambold, Adolf G. F. to Terpack Spezialmaschinen, G. m. b. H. Cartoning device. 2,860,460, 11-18-58, Cl. 53—26.

Ramming, John, Machine Co.: *See*—
Perrachione, Jean. 2,860,881.

Ramun, Michael. Adjustable fifth wheel assembly for tractor-trailer axle-load equalization. 2,860,891, 11-18-58, Cl. 280—407.

Randall, Jack H. P., deceased, by Grosvenor Gardens Branch of the trustee department of the Westminster Bank Ltd., executor, to F. A. Hughes & Co., Ltd. Cathodic protection of metal structures. 2,860,781, 11-18-58, Cl. 204—196.

Raske, Arthur. Abrading or grinding wheel. 2,860,458, 11-18-58, Cl. 51—191.

Rath Packing Co., The: *See*—
Christianson, George, and Bonnes. 2,860,981.

Rausse, Michael A. Apparatus for shaping sheets of flexible material to form a shaped multi-ply article. 2,860,672, 11-18-58, Cl. 144—285.

Rausse, Michael A. Apparatus for shaping sheets of flexible material to form a shaped multi-ply article. 2,860,674, 11-18-58, Cl. 144—285.

Reeves, Thomas C.: *See*—
Waters, David, Sr., and David Waters, Jr., and Reeves. 2,860,742.

Schumann, Robert W., to Sperry Rand Corp. Magnetic modulator system. 2,861,244, 11-18-58, Cl. 332—51.

Simon-Suisse, Jean-Charles, to Pechiney, Compagnie de

Reha, Gerd: *See*—
Geffcken, Walter, and Reha. 2,861,000.
Reichardt, Mayo M., to General Motors Corp. Roller bearing retainer means. 2,860,406, 11-18-58, Cl. 29—201.
Reilly Tar & Chemical Corp.: *See*—
Rieger, William H. 2,860,709.
Reinhart, Harold C., to Food Giant Markets, Inc. Gas burner head. 2,860,696, 11-18-58, Cl. 158—116.
Reiter, Daniel I. Universal pocket book handle anchor and installation. 2,860,396, 11-18-58, Cl. 24—114.5.
Rennick, John L., to Zenith Radio Corp. Image reproducing system. 2,861,210, 11-18-58, Cl. 313—92.
Republic Aviation Corp.: *See*—
Stegler, Richard E. 2,861,164.
Research Corp.: *See*—
Winternute, Harry A. 2,860,723.
Research Laboratories, Inc.: *See*—
Duncan, James G., and Trambley. 2,860,634.
Rettinger, Michael, to Radio Corp. of America. Magnetic heads and replaceable pole cap assemblies therefor. 2,861,135, 11-18-58, Cl. 179—100.2.
Retz, William B., and G. A. Cardell, to The New Britain Machine Co. Locating and locking mechanism for a machine tool. 2,860,730, 11-18-58, Cl. 188—40.
Rhodes, Kenneth E., and W. W. Wagner, to International Business Machines Corp. Record positioning device. 2,860,758, 11-18-58, Cl. 197—123.
Rhodes, William A., and H. E. Etches, to The Garrett Corp. Solenoid valve. 2,860,850, 11-18-58, Cl. 251—139.
Ribaux, Paul A., to Ford Motor Co. Variable injection dephasor. 2,860,619, 11-18-58, Cl. 123—139.
Rice, Harold B.: *See*—
Aguilar, John G., and Rice. 2,860,468.
Rice, James H., and V. R. Johnson, to Binks Mfg. Co. Electrostatic coating device with restricted fluid passageway opening adjacent sharp discharge edge. 2,860,599, 11-18-58, Cl. 118—626.
Rich, Gerald C., to Motorola, Inc. Semi-conductor unit. 2,861,228, 11-18-58, Cl. 317—235.
Richard, Alphonse J. Power lawnmower. 2,860,475, 11-18-58, Cl. 56—26.
Riebel, Fred, and Co.: *See*—
Riebel, Fred J. 2,860,693.
Riebel, Fred J., to Fred Riebel and Co. Combination spring support and spanner. 2,860,693, 11-18-58, Cl. 155—179.
Rieger, William H., to Reilly Tar & Chemical Corp. Fracture bridging in oil wells. 2,860,709, 11-18-58, Cl. 166—22.
Riester, William C., to Trico Products Corp. Windshield wash-wiper arrangement. 2,860,362, 11-18-58, Cl. 15—250.4.
Rindone, Guy E., to Prismo Safety Corp. Glass composition. 2,861,001, 11-18-58, Cl. 106—53.
Ringwald, Eugene L.: *See*—
Mowry, David T., and Ringwald. 2,861,059.
Rising, Calvin A.: *See*—
Smith, William S., and Van Slyke. 2,860,822.
Risner, Robert C. Automobile carriers. 2,860,910, 11-18-58, Cl. 296—1.
Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm and G. 2,860,574.
Ritzerfeld, Wilhelm and G. Selective printing apparatus. 2,860,574, 11-18-58, Cl. 101—91.
Roberts, Stiles M.: *See*—
Stanley, Lester N., and Roberts. 2,861,103.
Robertson, Melborne L.: *See*—
Bayless, Charles R., Daughtrey, and Robertson. 2,860,655.
Robinson, Earle W. Animation attachment for minnow bait. 2,860,443, 11-18-58, Cl. 43—44.4.
Robinson, Frederick C., and R. A. Grouse, to A. H. Hunt (Capacitors) Ltd. Electrical capacitors. 2,861,231, 11-18-58, Cl. 317—260.
Rodriguez, Juan C. L. Water heating attachment for cold water pipes. 2,861,170, 11-18-58, Cl. 219—39.
Roeder, Rolf H., to Worthington Corp. Governor. 2,860,866, 11-18-58, Cl. 264—19.
Roehrig, Frederick L. O. Duplex camera shutter. 2,860,558, 11-18-58, Cl. 95—18.
Rohde, Robert L.: *See*—
Kohrs, William R., Orloff, and Rohde. 2,860,763.
Rohm & Haas Co.: *See*—
Goode, William E. 2,861,080.
Rollefson, Gerhard K.: *See*—
Beaufait, Loren J., Jr., Stevenson, and Rollefson. 2,860,949.
Rolph, Samuel W., to The Electric Storage Battery Co. Storage battery. 2,861,118, 11-18-58, Cl. 136—177.
Roper Industries Inc.: *See*—
Mosbacher, Bruce H. 2,860,895.
Rosenkranz, George: *See*—
Djerassi, Carl, Sondheimer, Sandoval, and Rosenkranz. 2,861,085.
Ross, Herbert V.: *See*—
Zinn, Walter H., and Ross. 2,861,035.
Ross, Jewel G. Power brake control. 2,860,746, 11-18-58, Cl. 192—3.
Rossi, Bruno, H. S. Sack, A. C. Beer, and H. W. Roehmer, to United States of America, Navy. Signal attenuating circuit 2,861,186, 11-18-58, Cl. 250—27.
Roth, Adolf. Piston for multiple piston engines. 2,860,609, 11-18-58, Cl. 121—120.
Rothbaeusler, August, to Erste Kulmbacher Actien-Exportbier-Brauerei. Apparatus for pneumatically drawing off green malt batch or agglomeration from germinating boxes. 2,860,927, 11-18-58, Cl. 302—50.
Rowlands, Daniel C.: *See*—
Ellis, Warren C., Rowlands, and Uhl. 2,860,963.
Rubner, Gustave, deceased; R. Rubner, and Chemical Corn Exchange Bank, executors. Process of decorating a sheet. 2,861,009, 11-18-58, Cl. 117—41.
Rubner, Rebecca: *See*—
Rubner, Gustave. 2,861,009.
Ruelle, Louis, and P. Tardieu, to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques. Process for producing pure manganese. 2,860,965, 11-18-58, Cl. 75—80.
Ruff, Edgar E., and R. E. Dubeshire, to Lever Brothers Co. Polyphosphate composition containing tarnish inhibitor. 2,861,044, 11-18-58, Cl. 252—127.
Rule, Edwin L.: *See*—
Holland, Kenneth M., and Rule. 2,860,740.
Runaldue, Lewis R.: *See*—
Leonard, Stephen C., Ten Broeck, and Runaldue. 2,861,241.
Rust, John B., and W. B. Canfield, ⅛ to Montclair Research Corp., and ⅞ to Ellis-Foster Co. Water repellents techniques. 2,861,054, 11-18-58, Cl. 260—70.
Russ, Joseph E.: *See*—
Pfund, Charles E. 2,860,416.
Ryan, Michael E. Wind up reel means for anchor lines. 2,860,842, 11-18-58, Cl. 242—107.3.
S. & S. Corrugated Paper Machinery Co., Inc.: *See*—
Shields, Albert F. 2,860,554.
Sack, Henri S.: *See*—
Rossi, Bruno, Sack, Beer, and Boehmer. 2,861,186.
Saint Amour, John D., and G. E. Hammond, to Assembly Products, Inc. Shock mount and meter casing. 2,861,243, 11-18-58, Cl. 324—156.
St. John, Ercell E.: *See*—
Jacob, Don M., Parode, and St. John. 2,861,179.
St. Regis Paper Co.: *See*—
Weaver, Paul J., and Titchenal. 2,860,848.
Weaver, Paul J., and Titchenal. 2,860,849.
Sair, Louis, to The Griffith Laboratories, Inc. Meat processing compound. 2,860,905, 11-18-58, Cl. 99—222.
Sajeck, George. Gas demand equipment. 2,860,631, 11-18-58, Cl. 128—142.
Salditt, Ferdinand, to The Scholl Mfg. Co., Inc. Adhesive tape and method of making the same. 2,861,006, 11-18-58, Cl. 117—7.
Salzer, Alexander. Hydroelectric power system. 2,861,195, 11-18-58, Cl. 290—1.
Sampietro, Achilles C.: *See*—
Grover, Ross D., and Sampietro. 2,860,735.
Sandoval, Alberto: *See*—
Djerassi, Carl, Sondheimer, Sandoval, and Rosenkranz. 2,861,085.
Sarazin, Jean L., S. A. Fracchia, and M. Moneyron. Electrodes for arc welding of special steel. 2,861,013, 11-18-58, Cl. 117—207.
Sargent, Albert M. File box. 2,860,810, 11-18-58, Cl. 220—41.
Saunders-Roe Ltd.: *See*—
Ireland, Lionel H. 2,860,845.
Sbarbaro, John L., Jr.: *See*—
Seitchik, Murray W., and Sbarbaro. 2,860,636.
Schade, Harald J. G., to Passavant Werke of Michelbacher. Tiltable underwater machine structure. 2,860,885, 11-18-58, Cl. 241—46.
Schaerer, Henri. Tag stringing apparatus. 2,860,587, 11-18-58, Cl. 112—2.
Schafranik, Erich, to Abrasive Machine Tool Co. Methods and devices for pre-loading bearings. 2,860,930, 11-18-58, Cl. 308—6.
Schecter, George: *See*—
Kroeger, William J., and Schecter. 2,860,663.
Scheffer, Nicolaas, and F. C. W. Slooff, to North American Philips Co., Inc. Movable selector mechanism with fixed contacts. 2,861,148, 11-18-58, Cl. 200—105.
Schenley Industries, Inc.: *See*—
Holstein, John H. 2,860,796.
Scherbaum, Friedrich, to Siemens-Schuckertwerke Akt. High-voltage dry rectifier. 2,861,227, 11-18-58, Cl. 317—234.
Scherer, Otto, and J. Queck, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Preparation of 1,1-difluoro-1-chloroethane. 2,861,032, 11-18-58, Cl. 204—163.
Schink, Howard C., to Bailey Meter Co. Fluid pressure devices. 2,860,650, 11-18-58, Cl. 137—85.
Schlecht, Leo, and G. Trageser, to Badische Anilin- & Soda-Fabrik Akt. Processing of sulfidic nickel-containing materials. 2,860,967, 11-18-58, Cl. 75—103.
Schlaudecker, George F.: *See*—
Miller, Emery B., and Schlaudecker. 2,861,078.
Schmidt, Charles J., to E. I. du Pont de Nemours and Co. Filament guide. 2,860,373, 11-18-58, Cl. 18—8.
Schmidt, Paul. Apparatus for causing intermittent combustion of a fuel in a chamber as a means of producing useful energy. 2,860,484, 11-18-58, Cl. 60—39.77.
Schmitz, Ludwig: *See*—
Erk, Adil, and Schmitz. 2,861,153.
Schmock, Carl J.: *See*—
Kuebler, Thomas L., and Schmock. 2,860,492.
Schneider, Emmor V.: *See*—
Deming, Andrew F., Schneider, and Jordan. 2,861,265.
Schneider, Emmor V., to Alliance Mfg. Co., The Division of Consolidated Electronics Industries Corp. Door operator. 2,860,871, 11-18-58, Cl. 268—59.
Schoknecht, Robert J.: *See*—
Spiegel, Edwin J., Jr., and Schoknecht. 2,860,771.
Scholl Mfg. Co., Inc., The: *See*—
Salditt, Ferdinand. 2,861,006.
Schreyer & Co.: *See*—
Muller, Heinrich, and Girx. 2,860,447.
Schubert, Dale L.: *See*—
Erickson, Harold E., and Brookhyser. 2,860,780.

Spencer, Emory M.: *See*—
Magee, Virgil S. 2,860,568.
Supreme Products Corp.: *See*—
Prueter, Clarence. 2,860,413.

Schumann, Robert W., to Sperry Rand Corp. Magnetic modulator system. 2,861,244, 11-18-58, Cl. 332—51.

Schweikle, Otto W. Trouble lamp. 2,861,175, 11-18-58, Cl. 240—54.

Schweitzer, Kurt H. Child's seat for nesting carriers. 2,860,885, 11-18-58, Cl. 280—33.99.

Schweitzer, Kurt H. Child's seat for nesting carriers. 2,860,886, 11-18-58, Cl. 280—33.99.

Scott, Carleton B., and J. W. Yale, Jr., to Collier Carbon and Chemical Corp. Fungicidal compositions and methods of destroying fungi employing trialkyl tetra-thiophosphates. 2,861,023, 11-18-58, Cl. 167—22.

Seriabine, Igor, and A. Peyrolade, to Societe des Usines Chimiques Rhone-Poulenc. Process for the allylation of benzene and homologous hydrocarbons. 2,861,111, 11-18-58, Cl. 260—671.

Scully-Jones and Co.: *See*—
Better, Bernard R., and Conn. 2,860,883.

Scully, Thomas J., to General Electric Co. Electric circuit interrupter. 2,861,152, 11-18-58, Cl. 200—144.

Searle, G. D., & Co.: *See*—
Jiu, James. 2,861,086.

Sears, Roebuck and Co.: *See*—
Webster, John V., Aasland, and Louthan. 2,860,718.

Seigfreid, Ira J.: *See*—
Wagner, Leo F., and Schreiber. 2,860,770.

Seigle, William R., to General Electric Co. Positioning device. 2,860,751, 11-18-58, Cl. 192—143.

Seitchik, Murray W., and J. L. Sbarbaro, Jr. Tidal drainage and irrigation valve. 2,860,636, 11-18-58, Cl. 128—227.

Seller, Thomas M., and L. K. Harris, to The Detroit Edison Co. Reclosing relay for circuit breaker. 2,861,223, 11-18-58, Cl. 317—22.

Senechal, Wallace R., to Sperry Rand Corp. Tiltable divider plate. 2,860,643, 11-18-58, Cl. 129—31.

Senesky, John S., to Air Reduction Co., Inc. Gas pressure regulator. 2,860,658, 11-18-58, Cl. 137—505.37.

Seney, John S., to E. I. du Pont de Nemours and Co. Resistance probe for level control. 2,861,159, 11-18-58, Cl. 201—63.

Senkbeil, Herman O., and C. T. Pumpelly, to The Dow Chemical Co. Benzyl esters of polychloroaliphatic monocarboxylic acids. 2,861,097, 11-18-58, Cl. 260—487.

Shampaine Co.: *See*—
Einstein, Alfred C., and McPhee. 2,860,937.

Shaw, Robert E.: *See*—
Hollis, Arthur J., and Shaw. 2,861,149.

Shawinigan Chemicals Ltd.: *See*—
Humber, Leslie G. 2,861,100.

Sheheen, Shay J., and E. L. Mooney, to General Laboratory Associates, Inc. Process of making a semi-conductive ceramic body. 2,861,014, 11-18-58, Cl. 117—219.

Shell Development Co.: *See*—
Wilson, Joseph G. 2,860,860.

Sherman Products, Inc.: *See*—
Wilcox, John F. 2,860,797.

Sherrington, John E., to Purdy Machinery Co. Ltd. Apparatus for feeding sheets, such as labels, from a pack to positions at which they are required. 2,860,804, 11-18-58, Cl. 216—54.

Sherwin-Williams Co., The: *See*—
Asbeck, Hans J., and Jordan. 2,861,011.

Shibley, Nassiff E. Low air velocity fan. 2,860,829, 11-18-58, Cl. 230—264.

Shields, Albert F., to S. & S. Corrugated Paper Machinery Co., Inc. Partition assembly machine. 2,860,554, 11-18-58, Cl. 93—37.

Shiffman, Jerome. Display containers. 2,860,767, 11-18-58, Cl. 206—45.13.

Shimwell, Derrick W., to Weaving Research & Textile Commission Agents Ltd. Looms for weaving. 2,860,667, 11-18-58, Cl. 139—123.

Short, Oliver A., to E. I. du Pont de Nemours and Co. Method of producing stencil screens. 2,860,576, 11-18-58, Cl. 101—128.3.

Sicedison S. p. A.: *See*—
Horsenberg, Jean, Cevidalli, and Nenz. 2,861,110.

Siebler, Robert A., and H. J. Weisbaum. Variable length and style necktie. 2,860,346, 11-18-58, Cl. 2—157.

Siegel, Alfred, to E. I. du Pont de Nemours and Co. Phthalocyanine pigments. 2,861,005, 11-18-58, Cl. 106—288.

Siegel, Sidney: *See*—
Borsenkool, Helmich W., Durst, and Siegel. 2,860,409.

Siemens & Halske Akt.: *See*—
Villmann, Walter. 2,861,131.

Siemens-Schuckertwerke Akt.: *See*—
Scherbaum, Friedrich. 2,861,227.

Sierant, George W., to General Motors Corp. Mechanical movement device. 2,860,521, 11-18-58, Cl. 74—424.8.

Sierra Metals Corp.: *See*—
Thielemann, Rudolf H. 2,860,970.

Sievers, Fred R., ½ to H. Malarkey. Paper lining apparatus for paper-making machines of the Fourdrinier type. 2,860,551, 11-18-58, Cl. 92—39.

Sievers, William R., to Victor Adding Machine Co. Tag and ticket printing machine. 2,860,575, 11-18-58, Cl. 101—93.

Sikorra, Daniel J., and J. A. Wolfe, to Minneapolis-Honeywell Regulator Co. Magnetic amplifiers. 2,861,240, 11-18-58, Cl. 323—89.

Silver, Joseph R., to The Massillon-Cleveland-Akron Sign Co. Tire center sign construction. 2,860,436, 11-18-58, Cl. 40—125.

Silver, Leonard H., to Merck & Co., Inc., Antibiotic dusts. 2,861,024, 11-18-58, Cl. 167—65.

Silver, Walter H., R. E. Cox, and A. S. Trankus, to Deere & Co. Safety trip device. 2,860,564, 11-18-58, Cl. 97—47.88.

Simon, Robert A., to North American Aviation, Inc. Method of descaling titanium. 2,861,015, 11-18-58, Cl. 134—3.

Simon-Suisse, Jean-Charles, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques. Vat for electro-metallurgy. 2,861,036, 11-18-58, Cl. 204—243.

Simonsson, Fritz J., and C. O. E. Nyström, to North American Philips Co., Inc. Arrangement for switching clocks. 2,861,138, 11-18-58, Cl. 200—38.

Sindel, Johann, to Pertrix-Union G. m. b. H. Galvanic plate battery. 2,861,117, 11-18-58, Cl. 136—111.

Singer Mfg. Co., The: *See*—
Turner, Edgar P., Wendel, and Marchiuk. 2,860,748.
Van Ness, William C. 2,860,501.

Sinner, John B. and O. A. Crypt fasteners for keying together crypt front slabs. 2,860,504, 11-18-58, Cl. 72—19.

Sinner, Oscar A.: *See*—
Sinner, John B. and O. A. 2,860,504.

Sixt, Hans, to H. Gelbert. Sewing-machine with zigzag or ornamental stitching attachment. 2,860,589, 11-18-58, Cl. 112—158.

Skyline Products, Inc.: *See*—
Perry, Thomas A. 2,860,800.

Slatin, Harvey L., to Timax Corp. Electrolytic production of multivalent metals from refractory oxides. 2,861,030, 11-18-58, Cl. 204—64.

Sloan, Harry E., and H. W. Hickey, to The Cushman Chuck Co. Clamping jaws for chucks. 2,860,884, 11-18-58, Cl. 279—112.

Slooff, Florus C. W.: *See*—
Scheffer, Nicolaas, and Slooff. 2,861,148.

Small, Samuel N., to Atkins Industries, Inc. Swinging collapsible and vertically movable seat. 2,860,690, 11-18-58, Cl. 155—81.

Smith, Albert C., Jr.: *See*—
Unruh, Cornelius C., Leubner, and Smith. 2,861,058.

Smith, Charles S.: *See*—
Heller, Lewis W., and Smith. 2,860,613.

Smith, Cornelius W. Rim structure for demountable solid tires. 2,860,683, 11-18-58, Cl. 152—402.

Smith, Donald A.: *See*—
Merrill, Stewart H., and Smith. 2,861,057.

Smith, Donald A., and C. C. Unruh, to Eastman Kodak Co. Partially acetalized polyvinyl alcohol containing active halogen. 2,860,986, 11-18-58, Cl. 96—114.

Smith, George A., to Central Transformer Corp. Method of manufacturing transformer cores. 2,860,405, 11-18-58, Cl. 29—155.57.

Smith, George F. and H. M., to Hughes Aircraft Co. Storage screen for direct-viewing storage tube. 2,861,207, 11-18-58, Cl. 313—68.

Smith, Henry M.: *See*—
Smith, George F. and H. M. 2,861,207.

Smith, Howard T.: *See*—
Britton, Edgar C., and Smith. 2,861,079.

Smith, Joseph J. Self-centering transfer punch. 2,860,421, 11-18-58, Cl. 33—191.

Smith, Walter C.: *See*—
Brancaccio, Silvere, and Smith. 2,860,645.

Smith, William S., and D. W. Van Slyke, ½ to C. A. Rising. Retractable ladder. 2,860,822, 11-18-58, Cl. 228—17.3.

Smithers, V. L., Mfg. Co., The: *See*—
Smithers, Vernon L. 2,860,768.

Smithers, Vernon L., to The V. L. Smithers Mfg. Co. Packaging of fragile objects. 2,860,768, 11-18-58, Cl. 206—46.

Smucker, Robert E.: *See*—
Harrison, James M., and Smucker. 2,860,374.

Smura, Edwin J., to International Business Machines Corp. Beam intensity control. 2,861,214, 11-18-58, Cl. 315—11.

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Clark, Malcolm S. 2,860,893.

Snow, John E. Pneumatic energy absorber for aircraft barriers. 2,860,732, 11-18-58, Cl. 188—87.

Societe Anonyme dite: Etablissements A. Caseneuve, La Plaine Saint-Denis (Seine): *See*—
Bruet, Henri R. 2,860,538.

Societe Anonyme dite: Krebs & Cie: *See*—
Lero, Ernest. 2,860,964.

Societe des Usines Chimiques Rhone-Poulenc: *See*—
Bardonnet, Claude, and Commarmot. 2,860,516.
Seriabine, Igor, and Peyrolade. 2,861,111.

Societe Parisienne d'Expansion Chimique S. P. E. C. I. A.: *See*—
Barthelemy, Max. 2,860,464.

Socony Mobil Oil Co., Inc.: *See*—
Watkins, Thomas E. 2,861,042.

Soderhamns Verkstader Aktiebolag: *See*—
Brundell, Per G., and Jonssen. 2,860,672.

Sommer, Gordon M., to U. S. Industries, Inc. Multispeed driving mechanism. 2,860,529, 11-18-58, Cl. 74—785.

Sondheimer, Franz: *See*—
Djerassi, Carl, Sondheimer, Sandoval, and Rosenkrans. 2,861,085.

Sonnenfeldt, Richard W., to Radio Corp. of America. Detector for vestigial sideband signals. 2,861,180, 11-18-58, Cl. 250—20.

Sonntag, Bernhard: *See*—
Zieseke, Kurt, and Sonntag. 2,860,780.

Soos, Steven W., Jr., to The Controllix Corp. Transfer switch. 2,861,198, 11-18-58, Cl. 307—64.

South Chester Corp.: *See*—
Barry, John K., and Tuosso. 2,860,904.

Southern Pine Lumber Co.: *See*—
Denman, Joe C., Jr., and Hansen. 2,860,420.

Spainhour, Carroll D., to Western Electric Co., Inc. Apparatus for advancing and rotating work pieces. 2,860,355, 11-18-58, Cl. 15—21.

Spath, Catherine M., to Eastman Kodak Co. Antifoggants for photographic developers. 2,860,976, 11-18-58, Cl. 96—22.

Spence, Paulsen. Regulating valve. 2,860,657, 11-18-58, Cl. 137—489.5.

Ellis, Warren C., Rowlands, and Uhl. 2,860,963.

Schubert, Dale L.: *See*—
Erickson, Harold E., and Brookhyser. 2,860,760.

Spencer, Emory M.: *See*—
Magee, Virgil S. 2,860,568.
Spencer, James D., The Trust Estate: *See*—
Magee, Virgil S. 2,860,568.
Spencer, Sandra C., The Trust Estate: *See*—
Magee, Virgil S. 2,860,568.
Sperry Rand Corp.: *See*—
Dalman, Gisli C. 2,861,213.
Leahy, Robert K. 2,861,183.
Schumann, Robert W. 2,861,244.
Senechal, Wallace R. 2,860,643.
Wesslund, Robert E., Mader, and Johnson. 2,861,260.
West, James R., and Procter. 2,860,677.
Wilson, Louis D., Welsh, and Eckert. 2,860,756.
Sperry Rand Corp., Ford Instrument Co. Division: *See*—
McKeown, Patrick J. 2,861,233.
Spiegel, Edwin J., Jr., and R. J. Schoknecht, to Crown Zellerbach Corp. Carrying container. 2,860,771, 11-18-58, Cl. 206—65.
Spisak, Andrew A., to The Warner & Swasey Co. Faller bar and method of making same. 2,860,381, 11-18-58, Cl. 19—129.
Staeger, Rudolf, and R. Steinmeyer, to Quarzlampen Gesellschaft m. b. H. Copying machine. 2,860,875, 11-18-58, Cl. 271—21.
Stamberger, Paul. Diapers. 2,860,637, 11-18-58, Cl. 128—284.
Stamicarbon N. V.: *See*—
Dijkstra, Hendrik. 2,861,188.
Fontein, Freerk J. 2,860,782.
Stanley, Lester N.: *See*—
Von Glahn, William H., and Stanley. 2,861,104.
Stanley, Lester N., and S. M. Roberts, to General Aniline & Film Corp. Process of preparing 2-hydroxy-4-alkoxybenzophenones. 2,861,105, 11-18-58, Cl. 260—591.
Star Recorder Corp. of Denver, The: *See*—
Phillips, Oliver V. 2,860,309.
Starcher, Paul S., D. L. MacPeek, and B. Phillips, to Union Carbide Corp. Process for the production of butadiene dioxide. 2,861,084, 11-18-58, Cl. 260—348.5.
Stark, Donald L., to The Black-Clawson Co. Paper machinery. 2,860,550, 11-18-58, Cl. 92—23.
Stark, James A., to J. B. Thomson. Flexible couplings. 2,860,495, 11-18-58, Cl. 64—11.
Stastny, Fritz, to Badische Anilin- & Soda-Fabrik Akt. Process of foaming a mixture of a thermoplastic resin and a binding agent. 2,861,046, 11-18-58, Cl. 260—2.5.
Stauffer, Bernard H. Passive exercise machine. 2,860,628, 11-18-58, Cl. 128—33.
Stauffer Chemical Co.: *See*—
Lukes, George E., and Rubatin. 2,861,103.
Ste: Compteurs et Moteurs Aster: *See*—
Cheronnet, Jean. 2,860,513.
Stegler, Richard E., to Republic Aviation Corp. Tool for electrical machining and the method of making and using the same. 2,861,164, 11-18-58, Cl. 219—69.
Stein, Edward H. Drinking fountain for livestock. 2,860,601, 11-18-58, Cl. 119—78.
Steinmann, Henry W., and M. Dunay, to Celanese Corp. of America. Dewatering cellulose ester composition. 2,861,038, 11-18-58, Cl. 210—23.
Steinmeyer, Rudolf: *See*—
Staeger, Rudolf, and Steinmeyer. 2,860,875.
Stephan, Hallis N., to The New Britain Machine Co. Horizontal boring, drilling and milling machine. 2,860,547, 11-18-58, Cl. 90—11.
Stevenson, Frederick R.: *See*—
Beaufait, Loren J., Jr., Stevenson, and Rollefson. 2,860,949.
Stewart, Buren W. Outboard motor cart and stand. 2,860,887, 11-18-58, Cl. 280—36.
Stoddard, Howard V., D. M. Baeder, and S. Messeri, to Essex Conveyors, Inc. Safety lifting device. 2,860,729, 11-18-58, Cl. 187—66.
Stoddart, Hugh F.: *See*—
Chao, Stanley K. S., and Stoddart. 2,861,101.
Stogsdill, Lee S. Hand scraper. 2,860,411, 11-18-58, Cl. 30—171.
Stoner Mfg. Corp.: *See*—
Bell, George C. 2,860,817.
Straley, James M., to Eastman Kodak Co. Azo dyes as filters in color photography. 2,860,979, 11-18-58, Cl. 96—84.
Stuhfauth, George: *See*—
McCain, Cecil C., Stuhfauth, and Wright. 2,860,670.
Stursenegger, August, to Hoffmann-La Roche Inc. Polyunsaturated acyclic di-ethers. 2,861,109, 11-18-58, Cl. 260—615.
Sucetti, Glenn. Construction and coating materials. 2,861,004, 11-18-58, Cl. 106—277.
Suckfull, Fritz, R. Putter, and H. Nickel, to Farbenfabriken Bayer Akt. o-Hydroxy diazo compounds of the naphthalene series. 2,861,064, 11-18-58, Cl. 260—141.
Sudeck, Norman H., to American Steel Foundries. Coupler operating mechanism. 2,860,900, 11-18-58, Cl. 287—100.
Suggs, Thomas F., to Cocker Machine & Foundry Co. Leasing mechanism for textile machines. 2,860,400, 11-18-58, Cl. 28—40.
Sull, Chester, to United States Steel Corp. Chain conveyor. 2,860,520, 11-18-58, Cl. 74—254.
Sullivan, John F.: *See*—
Alexander, Ben, and Sullivan. 2,861,184.
Sun Oil Co.: *See*—
Mills, Ivor W. 2,861,020.
Sunnytoys (Distributors) Ltd.: *See*—
Blackadder, William. 2,860,621.
Sunstrand Machine Tool Co.: *See*—
Cauble, Donald L. 2,860,817.

Supreme Products Corp.: *See*—
Procter, Clarence. 2,860,412.
Surface Combustion Corp.: *See*—
Knight, Phillip L. 2,860,864.
Swain, Kenneth W., to The Chase-Shawmut Co. Fuse structures. 2,861,150, 11-18-58, Cl. 200—131.
Swatsworth, John C., to Barworth, Inc. Valves. 2,860,660, 11-18-58, Cl. 137—625.42.
Swett, Russell F., to Duc-Pac, Inc. Hand operated tool for forming lip on end of a wall of a duct. 2,860,536, 11-18-58, Cl. 81—15.
Swift & Co.: *See*—
Maher, Robert H. 2,860,993.
Prohaska, James J. 2,860,572.
Voegeli, Marvin M., and Harper. 2,860,992.
Swift, Howard G., Jr. Shift bar. 2,860,562, 11-18-58, Cl. 95—86.
Sykes, Thomas R., to The Toronto Star Ltd. Machine for wrapping bundles or stacks of newspapers. 2,860,462, 11-18-58, Cl. 53—66.
Sylvania Electric Products Inc.: *See*—
Curtis, Russell E. 2,861,249.
Elwell, David K. 2,861,250.
Hollis, Arthur J., and Shaw. 2,861,149.
Lowell, William P., Jr. 2,861,218.
Yeo, Ernest E., and Maloney. 2,860,760.
Syntex S. A.: *See*—
Djerassi, Carl, Sondheimer, Sandoval, and Rosenkrans. 2,861,085.
Szegho, Constantin S.: *See*—
Fiore, Joseph P., and Szegho. 2,861,206.
TKM Electric Corp.: *See*—
Kober, William. 2,861,205.
Talbot, Cyrus G. and J. F. Signal hand lamps. 2,861,174, 11-18-58, Cl. 240—10.63.
Talbot, Joseph F.: *See*—
Talbot, Cyrus G., and J. F. 2,861,174.
Talco Engineering Co., Inc.: *See*—
Belsky, Jerome. 2,860,736.
Talon, Inc.: *See*—
Hendley, James A. 2,860,668.
Tamblyn, John W.: *See*—
Lappin, Gerald R., and Tamblyn. 2,861,053.
Tanenbaum, Morris: *See*—
Fuller, Calvin S., and Tanenbaum. 2,861,018.
Tardieu, Pierre: *See*—
Ruelle, Louis, and Tardieu. 2,860,965.
Taylor, Dudley D., to United States of America, Navy. High pressure shaft packing. 2,860,894, 11-18-58, Cl. 286—7.
Taylor, William, E. H. Badger, Jr., and S. D. Burton, to The Parker Appliance Co. Apparatus for controlling the emptying of tanks. 2,860,653, 11-18-58, Cl. 137—98.
Taylor, William H., to The Vilter Mfg. Co. Method and apparatus for production of super-cooled ice. 2,860,490, 11-18-58, Cl. 62—71.
Teepack Spezialmaschinen, G. m. b. H.: *See*—
Rambold, Adolf G. F. 2,860,460.
Telepromter Corp.: *See*—
Kahn, Irving B. 2,860,544.
Ten Broeck, Robert L.: *See*—
Leonard, Stephen C., Ten Broeck, and Runaldue. 2,861,241.
Tennessee Corp.: *See*—
Beauchamp, Robert O., Jr., and Johnston. 2,861,091.
Teters, Tinie R. Car washing mat. 2,860,857, 11-18-58, Cl. 15—129.
Texas Co., The: *See*—
Christensen, Edward R., and Hess. 2,861,112.
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Zahn, Karl M., and Theocharides. 2,860,563.
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Paxton, Elisha W. 2,860,449.
Thielemann, Rudolf H., to Sierra Metals Corp. Metal alloy. 2,860,970, 11-18-58, Cl. 75—174.
Thomas, John, and J. I. Firth, Jr., to International Harvester Co. Vehicle drive axle pinion bearings and means for lubricating the same. 2,860,726, 11-18-58, Cl. 184—11.
Thomson, John B.: *See*—
Stark, James A. 2,860,495.
Thompson, Max C. Steam cleaner. 2,860,917, 11-18-58, Cl. 299—64.
Thornberg, Joseph E.: *See*—
Buchanan, Donald A., Miller, and Thornberg. 2,861,040.
Thornsbury, Harry, to The F. A. Nelder Co. Swivel glide unit for furniture legs. 2,860,368, 11-18-58, Cl. 16—42.
Thumin, Carl, to E. P. Lawson Co., Inc. Photoelectric controlled back gauge. 2,860,705, 11-18-58, Cl. 164—59.
Tiedemann, Herman H., to General Aniline & Film Corp. Process for preparing β-sulfoalkylesters of carboxylic acids. 2,861,090, 11-18-58, Cl. 260—400.
Timax Corp.: *See*—
Slatin, Harvey L. 2,861,030.
Tingley Rubber Corp.: *See*—
Jackson, Walter C. 2,860,425.
Tinnerman Products, Inc.: *See*—
Flora, Laurence H. 2,860,741.
Tinsley, William B. Aerial. 2,861,268, 11-18-58, Cl. 343—902.
Titchenal, Oliver R.: *See*—
Weaver, Paul J., and Titchenal. 2,860,848.
Weaver, Paul J., and Titchenal. 2,860,849.
Tocci-Guilbert, Berne, to B. Tocci-Guilbert and H. G. Hardy, trustees. Ring oscillator. 2,860,496, 11-18-58, Cl. 64—13.
Toledo Scale Corp.: *See*—
Burgy, Raymond A. 2,860,728.
Toronto Star Ltd., The: *See*—
Sykes, Thomas R. 2,860,462.
Touey, George P., and J. E. Kiefer, to Eastman Kodak Co. Method of preparing cellulose esters. 2,861,069, 11-18-58, Cl. 260—227.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Tile wall. 2,860,505, 11-18-58, Cl. 72—21.
Tousignant, William F., and T. Houtman, Jr., to The Dow Chemical Co. Linear polysulfonic acid polymers. 2,861,101, 11-18-58, Cl. 260—513.
Townsend, Lawrence R. Greeting or sealing apparatus. 2,860,469, 11-18-58, Cl. 61—63.
Tragesser, Georg: *See*—
Schlecht, Leo, and Tragesser. 2,860,967.
Traino, Louis M., and L. Arnesen, to Graflex, Inc. Focusing mechanism for photographic camera. 2,860,560, 11-18-58, Cl. 95—45.
Silver, Walter H., Cox, and Traphus. 3,860,564.
Trambley, Leo E.: *See*—
Duncan, James G., and Trambley. 3,860,634.
Traphus, Anthony S.: *See*—
Tregay, John L., to A. B. Dick Co. Head registration adjusting mechanism for duplicators. 2,860,578, 11-18-58, Cl. 101—248.
Tregillus, Leonard W., to Eastman Kodak Co. Photographic foam processing. 2,860 977, 11-18-58, Cl. 96—61.
Treshow, Michael, to United States of America, Atomic Energy Commission. Horizontal boiling reactor system. 2,861 033, 11-18-58, Cl. 204—193.2.
Trevarthen, George C., to General Motors Corp. Piston. 2,860 934, 11-18-58, Cl. 309—10.
Trico Products Corp.: *See*—
Howard, Sheldon J., and Barteo. 2,860,363.
Riester, William C. 2,860,862.
Tuosso, Michael R.: *See*—
Barry, John K., and Tuosso. 2,860,904.
Turk, Anthony G.: *See*—
Chadowski, Joseph P., and Turk. 2,861,235.
Turner, Edgar P., L. A. Wendel, and V. Marchuk, to The Singer Mfg. Co. Electrically controlled power transmitters. 2,860,748, 11-18-58, Cl. 192—18.
Turner, Marion W. Bobbers with water-released line casting reels. 2,860,442, 11-18-58, Cl. 43—43.11.
Ueltz, Herbert F. G., and N. N. Ault, to Norton Co. Silicon carbide refractories. 2,860,999, 11-18-58, Cl. 106—44.
Uhl, Donald P.: *See*—
Ellis, Warren C., Rowlands, and Uhl. 2,860,963.
Uniflow Mfg. Co.: *See*—
Knebler, Thomas L., and Schmock. 2,860,492.
Union Carbide Corp.: *See*—
Guest, Howard R., and Kiff. 2,861,068.
Stareher, Paul S., MacPeek, and Phillips. 2,861,064.
U. S. Industries, Inc.: *See*—
Johansen, Einar K. 2,860,738.
Sommer, Gordon M. 2,860,529.
United States of America
Army: *See*—
Conti, Angelo A. 2,860,632.
Dietz, Albert G. H., and Mooney. 2,861,021.
Green, Milton. 2,861,182.
La Russa, Anthony A. 2,860,551.
Pennington, John T. 2,860,561.
Peterson, Walter R. 2,860,906.
Atomic Energy Commission: *See*—
Arden, Thomas V., Burstall, Davies, Linstead, and Wells. 2,860,956.
Beaufait, Loren J., Jr., Stevenson, and Rollefson. 2,860,949.
Cooke-Yarborough, Edmund H. 2,861,201.
Fried, Sherman M. 2,860,948.
Henrickson, Angus V. 2,860,960.
Leavitt, Minard A. 2,861,242.
Treshow, Michael. 2,861,033.
Wigner, Eugene P., and Ohlinger. 2,861,034.
Zinn, Walter H., and Ross. 2,861,035.
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Gros, Marcel E., and Block. 2,860,862.
List, William F. 2,861,215.
Mechler, Mark V., and Wood. 2,861,255.
Rossi, Bruno, Sack, Beer, and Boehmer. 2,861,186.
Taylor, Dudley D. 2,860,894.
United States Plywood Corp.: *See*—
Works, William R., and Berney. 2,860,597.
United States Steel Corp.: *See*—
Barton, John P. 2,860,764.
Mirick, Elmer W. 2,860,704.
Sull, Chester. 2,860,520.
Universal Oil Products Co.: *See*—
Kassel, Louis S. 2,860,958.
Universal Winding Co.: *See*—
Keith, John V. 2,860,838.
Unruh, Christian H. H.: *See*—
Luneau, John E., and Unruh. 2,861,203.
Unruh, Cornelius C.: *See*—
Smith, Donald A., and Unruh. 2,860,986.
Unruh, Cornelius C., G. W. Leubner, and A. C. Smith, Jr., to Eastman Kodak Co. Light-sensitive polymers for making printing plates. 2,861,058, 11-18-58, Cl. 260—78.5.
Upjohn Co., The: *See*—
Herr, Milton E. 2,861,087.
Murray, Herbert C., and Peterson. 2,861,068.
Urbenski, Werner: *See*—
Opitz, Wolfgang, and Urbenski. 2,861,108.
Urchick, Demetrius, to The Dow Chemical Co. Filling voids with plastic foam. 2,860,378, 11-18-58, Cl. 18—48.
Utvitch, Jovan, to International Engineering General Research & Licensing Co. Annular springs and method of manufacturing them. 2,860,880, 11-18-58, Cl. 267—1.
Vagim, Charles J.: *See*—
Wilder, Alfred A. 2,860,671.
Vanciel, Jean L. Milk bottle carrier. 2,860,907, 11-18-58, Cl. 294—87.24.
Van Clief, William C., Jr., to Pittsburgh Plate Glass Co. Mountings for rotary brushes. 2,860,254, 11-18-58, Cl. 15—21.
Van Clief, William C., Jr., to Pittsburgh Plate Glass Co. Method and apparatus for forming rotary brush. 2,860,921, 11-18-58, Cl. 300—21.
Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 2,860,478.
Van der Lely, C., Canada Ltd.: *See*—
Van der Lely, Cornelis and A. 2,860,478.
Van der Lely, Cornelis and A., to C. van der Lely Canada Ltd. Raking device with a raking member adapting itself to the ground. 2,860,478, 11-18-58, Cl. 56—377.
Van Hellen, Franz H., to Clark Equipment Co. Straddle carrier with dumping device. 2,860,788, 11-18-58, Cl. 214—818.
Van Inthoudt, John. Methods of constructing sheathed electric heaters. 2,861,162, 11-18-58, Cl. 201—67.
Van Katwijk, Dirk. Bobbin. 2,860,843, 11-18-58, Cl. 242—118.3.
Van Ness, William C., to The Singer Mfg. Co. Loop-takers for sewing machines. 2,860,591, 11-18-58, Cl. 112—201.
Van Slyke, Dolphy W.: *See*—
Smith, William S., and Van Slyke. 2,860,822.
Van Veld, Robert D.: *See*—
Moore, Charles B., and Van Veld. 2,860,557.
Varaud, Claude. Regulating device with torsion wire for clockwork. 2,860,580, 11-18-58, Cl. 102—84.
Vertol Aircraft Corp.: *See*—
Dancik, Paul J. 2,860,711.
Vickers Inc.: *See*—
Bueker, Edgar L., and Kofron. 2,860,954.
Victor Adding Machine Co.: *See*—
Sievers, William E. 2,860,575.
Villmann, Walter, to Siemens & Halske Akt. Automatic telephone system. 2,861,131, 11-18-58, Cl. 179—90.
Vilter Mfg. Co., The: *See*—
Taylor, William H. 2,860,490.
Vincent, Bertram J. Apparatus for boring fishing holes in ice. 2,860,855, 11-18-58, Cl. 255—61.
Vis-O-Lite Co.: *See*—
Ledingham, Harold A. 2,860,819.
Vitarama Corp., The: *See*—
Dresser, Willis R. 2,860,541.
Voegeli, Marvin M., and R. H. Harper, to Swift & Co. Process of manufacturing liver sausage. 2,860,992, 11-18-58, Cl. 99—109.
Vogt, Hugh W. Automatic device for the manufacture of parcel carriers. 2,860,553, 11-18-58, Cl. 93—1.
Von Glahn, William H., and L. N. Stanley, to General Aniline & Film Corp. Method of preparing 2-hydroxy-4-alkoxybenzophenones. 2,861,104, 11-18-58, Cl. 260—591.
Wagner, Leo F., and M. N. Schreiber, ½ to I. J. Seigfreid. Storage and sales package. 2,860,770, 11-18-58, Cl. 206—46.
Wagner, Walter W.: *See*—
Rhodes, Kenneth E., and Wagner. 2,860,758.
Wait, Clyde F., and D. F. Cole, to Palace Corp. Tapered sectional design for expansible units. 2,860,884, 11-18-58, Cl. 20—2.
Waite, Kenneth L. Naphtha suspension of unrefined waxy residue. 2,861,003, 11-18-58, Cl. 106—271.
Wald Industries, Inc.: *See*—
Wilson, Rufus W., and Horn. 2,860,800.
Waldorf Paper Products Co.: *See*—
Guyer, Reynolds. 2,860,824.
Walin, Roy F. Electrical receptacle for mounting on outlet boxes and the like. 2,861,251, 11-18-58, Cl. 339—180.
Walker, Harold. Method of molding thermosetting synthetic materials with surface decoration. 2,860,380, 11-18-58, Cl. 18—61.
Waller, Harold E. Supporting structure kit. 2,860,769, 11-18-58, Cl. 206—46.
Waller, Harold E. Shower head construction. 2,860,920, 11-18-58, Cl. 299—141.
Walsh, James L., J. C. Logue, and R. L. Martin, to International Business Machines Corp. Transistor amplifier circuit. 2,861,256, 11-18-58, Cl. 340—174.
Walsh, Stanley, to The Chloride Electrical Storage Co. Ltd. Lead-acid accumulator alloy. 2,860,909, 11-18-58, Cl. 75—167.
Walter, Franklin: *See*—
Butterfield, John P., Walter, Winkelmann, and Jones. 2,860,528.
Walti, Fred H.: *See*—
Graves, William C., and Walti. 2,860,376.
Walz, Rudolph, Jr.: *See*—
Kocan, Stephen J., and Walz. 2,860,761.
Warner Electric Brake & Clutch Co.: *See*—
Meyer, Arthur A. 2,860 403.
Warner & Swasey Co., The: *See*—
Spisak, Andrew A. 2,860,381.
Waters, David, Jr.: *See*—
Waters, David, Sr., D. Waters, Jr., and Reeves. 2,860,742.
Waters, David, Sr., D. Waters, Jr., and T. C. Reeves, to T. J. Cope, Inc. Connecting means for cable-supporting trough systems and the like. 2,860,742, 11-18-58, Cl. 189—36.
Watkins, Thomas E., to Socony Mobil Oil Co., Inc. Emulsion fluid for wells. 2,861,042, 11-18-58, Cl. 252—8.5.
Weaver, Paul J., and O. R. Titchenal, to St. Regis Paper Co. Container filling apparatus. 2,860,848, 11-18-58, Cl. 249—63.
Weaver, Paul J., and O. R. Titchenal, to St. Regis Paper Co. Apparatus for filling containers to a precise weight. 2,860,849, 11-18-58, Cl. 249—63.
Weaving Research & Textile Commission Agents Ltd.: *See*—
Shimwell, Derrick W. 2,860,987.

Webb, Robert J.: *See*—
White, Sidney H., and Webb. 2,860,918.
Webbere, Fred J.: *See*—
Boeschold, Alfred L., Hanlak, and Webbere. 2,860,968.
Weber, H. G., & Co.: *See*—
Jacobsen, Paul W. 2,860,841.
Jacobsen, Paul W., and Weber. 2,860,840.
Weber, Herbert H.: *See*—
Jacobsen, Paul W., and Weber. 2,860,840.
Webster, John V., B. T. Aasland, and G. R. Louthan, to Sears, Roebuck and Co. Coupling and clutching means for power and traction devices and implements. 2,860,718, 11-18-58, Cl. 180—53.
Weeks, Robert W., and P. G. Park, to Wind Turbine Co. Rod joint. 2,860,897, 11-18-58, Cl. 287—54.
Wehner, William C., to Moto-Mower, Inc. Variable speed rotary mower. 2,860,473, 11-18-58, Cl. 56—25.4.
Weinstraub, Nelson, to International Telephone and Telegraph Corp. Power line relaying. 2,861,257, 11-18-58, Cl. 340—163.
Weisbaum, Harry J.: *See*—
Siebler, Robert A., and Weisbaum. 2,860,346.
Welch, Kimo M., to International Harvester Co. Disk harrow torsion control apparatus. 2,860,471, 11-18-58, Cl. 55—81.
Wells, Roger, to Diamond Gardner Corp. Pulp stock thickener. 2,860,973, 11-18-58, Cl. 92—20.
Wells, Ronald A.: *See*—
Arden, Thomas V., Burstall, Davies, Linstead, and Wells. 2,860,956.
Wells, Theodore A., to Central Engineering Corp. Weighing system. 2,860,868, 11-18-58, Cl. 265—71.
Welsh, Herbert F.: *See*—
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Welter, Willy, to Wheelabrator Corp. Roller conveyor. 2,860,766, 11-18-58, Cl. 198—127.
Wendel, Lorena A.: *See*—
Turner, Edgar P., Wendel, and Marchuk. 2,860,748.
Wente, Robert J.: *See*—
McDowall, Charles J., Gaubatz, Wente, and Irwin. 2,860,712.
Werner, Ewald, to Nordberg Mfg. Co. Crusher main frame. 2,860,837, 11-18-58, Cl. 241—285.
Werner, Jesse, to General Aniline & Film Corp. Process for precipitating tannins and proteinaceous materials from liquid media. 2,860,987, 11-18-58, Cl. 99—48.
Wesslund, Robert E., L. W. Mader, and G. W. Johnson, to Sperry Rand Corp. Reading saturable cores. 2,861,260, 11-18-58, Cl. 340—174.
West, James R., and E. C. Procter, to Sperry Rand Corp. Knife supporting means. 2,860,677, 11-18-58, Cl. 146—117.
Western Electric Co., Inc.: *See*—
Bain, Lewis A., Jr., and Gashner. 2,861,029.
Graves, William C., and Walti. 2,860,376.
Kalat, Joseph F. 2,860,947.
McCain, Cecil C., Stuhfauth, and Wright. 2,860,670.
Spainhour, Carroll D. 2,860,355.
Western Foundry Co.: *See*—
Huffschmidt, Robert E. 2,860,625.
Western Gulf Oil Co.: *See*—
Brigham, Harry S. 2,860,853.
Westfall, Paul F.: *See*—
Wright, Howard J., McGuire, and Westfall. 2,861,048.
Westinghouse Air Brake Co.: *See*—
Gorman, Andrew T. 2,860,928.
Hines, Claude M. 2,860,737.
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Fraser, William M. 2,860,972.
Hanna, Clinton R., and Lynn. 2,860,880.
Kocan, Stephen J., and Walz. 2,860,761.
Moore, Robert L. 2,861,151.
Weston, Arthur W., and K. E. Hamlin, Jr., to Abbott Laboratories. Preparation of piperazine derivatives. 2,861,072, 11-18-58, Cl. 260—268.
Westra, Reinder, to North American Philips Co., Inc. Electric photographic flash lamp. 2,860,502, 11-18-58, Cl. 67—31.
Whalen, John W., to Daniel Orifice Fitting Co. Sealing ring. 2,860,901, 11-18-58, Cl. 288—33.
Wheater, William W., to Aluminum Co. of America. Reel supporting cradles. 2,860,479, 11-18-58, Cl. 57—65.
Wheelabrator Corp.: *See*—
Welter, Willy. 2,860,766.
Wheeler, Donald D., and D. C. Young, to The Dow Chemical Co. Hydroxyanilinophthalides. 2,861,082, 11-18-58, Cl. 260—343.2.
Wheeler, Lloyd G. Hydraulic power unit. 2,860,487, 11-18-58, Cl. 60—97.
White, Sidney H., and R. J. Webb, to Aerostyle Ltd. Liquid spray apparatus. 2,860,918, 11-18-58, Cl. 299—86.
Whitehead, William R.: *See*—
Grunder, Harold R., and Whitehead. 2,860,407.
Whitesel, Harry A., to Amana Refrigeration, Inc. Multiple temperature refrigeration system. 2,860,494, 11-18-58, Cl. 62—513.
Whitfield, Harold B., Jr.: *See*—
Bernhardt, Ernest C., and Whitfield. 2,860,377.
Whitmore, Keith R., and R. T. Pesch, to Eastman Kodak Co. Photographic color correction process using 2-aso-1-naphthol dyes. 2,860,975, 11-18-58, Cl. 96—9.
Whitney, Donald E., to General Motors Corp. Work chuck. 2,860,882, 11-18-58, Cl. 279—6.
Wick, Alwood P. Reversible electric fin-type baseboard heater. 2,861,167, 11-18-58, Cl. 219—34.
Wicker, Thomas H., Jr.: *See*—
McConnell, Richard L., and Wicker. 2,861,084.
Wichesser, Arthur, to The Liquidometer Corp. Fluid quantity measuring system. 2,860,511, 11-18-58, Cl. 73—194.
Wiese, Emil J., to General Motors Corp. Door lock striker and bumper. 2,860,966, 11-18-58, Cl. 292—341.12.
Wigner, Eugene P., and L. A. Ohlinger, to United States of America, Atomic Energy Commission. Neutronic reactor shield and spacer construction. 2,861,034, 11-18-58, Cl. 204—193.2.
Wilburn, Edgar H. Sterilizable and sterilized hypodermic syringe assemblies. 2,860,635, 11-18-58, Cl. 128—218.
Wilcox, John F., to Sherman Products, Inc. Material handling device. 2,860,797, 11-18-58, Cl. 214—313.
Wilcox, Roy F. Method for drilling and completing wells. 2,860,854, 11-18-58, Cl. 255—1.8.
Wilder, Alfred A., to E. C. Mossoian and C. I. Vagim, d. b. a. Cenatron Industries. Chain saw attachment for portable circular saws. 2,860,671, 11-18-58, Cl. 143—32.
Wiley, Emmett H.: *See*—
Geiser, Kenneth R., and Wiley. 2,860,507.
Wilfert, Karl, to Daimler-Benz Akt. Heating and ventilating system for motor vehicles. 2,860,567, 11-18-58, Cl. 98—2.
Wilkens, Louis F.: *See*—
Alexander, Perry L., Hartis, and Wilkens. 2,860,762.
Willbrandt, Franklin M., to Battle Creek Packaging Machines, Inc. Carton filling and weighing machine. 2,860,847, 11-18-58, Cl. 249—59.
Willems, Paul, to Ateliers de Constructions Electriques de Charleroi. Remote control system for positioning objects. 2,861,323, 11-18-58, Cl. 318—28.
Williams, Dorothy F. Marionette figure assembly. 2,860,446, 11-18-58, Cl. 46—126.
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Williams, John, to Eastman Kodak Co. Photographic color correction process. 2,860,974, 11-18-58, Cl. 96—9.
Williams, Leslie A.: *See*—
Knott, Edward B., and Williams. 2,861,076.
Williamson, Marshall I. Cutting and creasing dies. 2,860,555, 11-18-58, Cl. 93—58.
Wilson, Joseph G., to Shell Development Co. Contacting tray deck assembly. 2,860,860, 11-18-58, Cl. 261—113.
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Halford, Frank B., and Wilson. 2,860,851.
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Weeks, Robert W., and Park. 2,860,897.
Winkelmann, Otto J.: *See*—
Butterfield, John P., Walter, Winkelmann, and Jones. 2,860,528.
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Wolfe, John A.: *See*—
Sikorra, Daniel J., and Wolfe. 2,861,240.
Wolff, George J., to Bell Telephone Laboratories, Inc. Bearing for device for transmitting rotary motion into a sealed chamber. 2,860,933, 11-18-58, Cl. 308—236.
Wolter, Harry A., to Diamond Gardner Corp. Article counting and assembling. 2,860,465, 11-18-58, Cl. 53—197.
Wood, George W.: *See*—
Mechler, Mark V., and Wood. 2,861,255.
Wood, John C., and R. S. Hatcher, Jr., to Maywood, Inc. Foldable panel assembly. 2,860,701, 11-18-58, Cl. 160—199.
Woodall, Elizabeth R.: *See*—
Woodall, Harry M. and E. R. 2,861,140.
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Wright, Ben L.: *See*—
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Hiratsuka, Kiso, Yonemitsu, Itabashi, Date, and Keimatsu. 2,861,107.
Young, David C.: *See*—
Wheeler, Donald D., and Young. 2,861,082.
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Youngberg, Charles H.: *See*—
Oehler, William P., and Youngberg. 2,860,470.
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Fiore, Joseph P., and Suecho. 2,861,206.
Rennick, John L. 2,861,210.
Zickafoose, Basil C., Jr. Precision drill and alignment fixture. 2,860,532, 11–18–58, Cl. 77—62.
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Zinn, Walter H., and H. V. Ross, to United States of America, Atomic Energy Commission. Control rod. 2,861,035, 11–18–58, Cl. 204—193.2.
Zöller, Hans. Lifting and tipping device for dust-bins. 2,860,795, 11–18–58, Cl. 214—303.
Zucker, Jacques. Apparatus for the cleaning of metal parts. 2,860,646, 11–18–58, Cl. 134—111.

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CLASSIFICATION OF PATENTS

ISSUED NOVEMBER 18, 1958

NOTE.—First number=class, second number=subclass, third number=patent number

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Classification of Designs

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Reg. No. 283,767. (See Reg. No. 283,766.)

Reg. No. 289,570. (See Reg. No. 283,766.)

OFFICIAL GAZETTE ✦ UNITED STATES PATENT OFFICE

November 18, 1958 Volume 736 Number 3

TRADEMARKS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 16, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Oct. 15, 1958. *Chairman, Committee on Enrollment.*

Trademark Suits

Notices under 15 U. S. C. 1116; Trademark Act of July 5, 1946

Reg. No. 155,951 (ALFRED DUNHILL), Alfred Dunhill, Tobacco; Reg. No. 268,722 (UNIQUE DUNHILL LIGHTER AND DESIGN), Alfred Dunhill of London, Inc., Portable and pocket cigar and cigarette lighters; Reg. No. 355,294 (DUNHILL), same, Razors; Reg. No. 354,294 (DUNHILL DOUBLE-CLARO), same, Tobacco products, particularly cigars; Reg. No. 466,568 (DUNHILL), same, Clocks and watches; Reg. No. 466,661, same, Pyrophoric lighters; Reg. No. 464,218, same, Tobacco, manufactured or unmanufactured, cigars and cigarettes; Reg. No. 466,688, same, Tobacco pipes, cigars and cigarette holders; Reg. No. 419,717 (ALFRED DUNHILL), Alfred Dunhill Limited, Cosmetic preparations and dentifrices; Reg. No. 421,429, same, Cleaning and abrasive preparations, soaps, perfumery, toilet preparations (not medicated); Reg. No. 527,297 (DUNHILL), same, Pyrophoric lighters; Reg. No. 527,298, same, Tobacco pipes, cigars and cigarette holders; Reg. No. 534,705, same, Tobacco pouches made of leather; Reg. No. 539,893, same, Tobacco, manufactured or unmanufactured, cigars and cigarettes; Reg. No. 540,389, same, Billfolds, writing cases, purses, etc., made of leather; Reg. No. 541,949 (DUNHILL DOUBLE-CLARO), Alfred Dunhill of London, Inc., Tobacco products, particularly cigars; Reg. No. 634,671 (ALFRED DUNHILL), Alfred Dunhill of London, Inc., Men's neckties, filed Apr. 18, 1957, D. C., S. D. N. Y., Doc. 119/295, *Alfred Dunhill of London, Inc. v. Dunhill Tailored Clothes, Inc.* Final judgment; defendants enjoined Sept. 22, 1958.

Reg. No. 268,722. (See Reg. No. 155,951.)

Reg. No. 283,766 (PING-PONG), Parker Brothers, Inc., Bats and rackets of the tennis type for games; Reg. No. 283,767, same, Hollow composition and like balls for indoor games and the like; Reg. No. 284,468, same, Table and parts thereof especially constructed for a game; Reg. No. 302,270, same, Board games, filed Feb. 25, 1958, D. C., S. D. Fla. (Miami), Doc. 8246–M, *Parker Brothers, Inc. v. Mini-Pong, Inc. et al.* Final judgment against Sel-O-Rak Corp.; injunction granted June 20, 1958; final judgment against Mini-Pong, Inc.; injunction granted Aug. 6, 1958 (notice Oct. 3, 1958).

CONDITION OF TRADEMARK APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,285
Date of oldest new application	Feb. 27, 1958
Date of oldest amended application	May 19, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	5-10-58	6-3-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 29, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	5-10-58	7-3-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 28, 37, 38, 39, 40, 41, 42, 45, 48, 47, 48, 49, 52; and Certification Marks	3-27-58	5-19-58
Renewals (All Classes)	9-15-58	9-26-58
Sec. 12 (c) Publications (All Classes)	9-8-58	9-26-58

Applications Filed During the Month of September 1958—1,735

Registrations Issued	309—No. 669,743 to No. 670,051
Renewals Issued	50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

Reg. No. 233,767. (See Reg. No. 282,766.)

Reg. No. 234,469. (See Reg. No. 282,766.)

Reg. No. 235,906. (See Reg. No. 155,951.)

Reg. No. 236,564. (See Reg. No. 155,951.)

Reg. No. 300,054 (DANIEL BOONE AND DESIGN), United Sheeplined Clothing Co., Leather and fabric coats and jackets, etc., for men, women and children, filed Apr. 1, 1958, D. C., S. D. N. Y., Doc. 103/92, *United Sheeplined Clothing Co. Inc. v. Artic Fur Cap Corp.* Memo endorsed on dismissal filed Dec. 31, 1957; order vacated; case returned to top of reserve calendar Apr. 1, 1958 (notice Oct. 2, 1958).

Reg. No. 402,585. (See Reg. No. 155,951.)

Reg. No. 403,981. (See Reg. No. 155,951.)

Reg. No. 404,318. (See Reg. No. 155,951.)

Reg. No. 408,838. (See Reg. No. 155,951.)

Reg. No. 419,717. (See Reg. No. 155,951.)

Reg. No. 421,420. (See Reg. No. 155,951.)

Reg. No. 520,770. (See Reg. No. 282,766.)

Reg. No. 527,997. (See Reg. No. 155,951.)

Reg. No. 527,998. (See Reg. No. 155,951.)

Reg. No. 534,765. (See Reg. No. 155,951.)

Reg. No. 539,892. (See Reg. No. 155,951.)

Reg. No. 540,289. (See Reg. No. 155,951.)

Reg. No. 541,949. (See Reg. No. 155,951.)

Reg. No. 550,513 (ADVANCE AND DESIGN), Advance Polishing Wheels, Inc., Buffs and buffing wheels, filed Oct. 8, 1958, D. C., E. D. N. Y. (Buffalo), Doc. C–19071, *Advance Polishing Wheels, Inc.* v. *Advance Buff Corp.*

Reg. No. 611,474 (SUZY PERETTE), Lombardy Dresses, Inc., Dresses, filed Apr. 24, 1957, D. C., S. D. N. Y., Doc. 119/359, *Lombardy Dresses, Inc.* v. *Miss Suzette, Inc.* Stipulation and order of discontinuance Oct. 7, 1958.

Reg. No. 634,071. (See Reg. No. 155,951.)

SN 48,959. Omega Shoe Polish Company, Los Angeles, Calif. **SN 38,805.** Lenga Electric and Chemical Works Ltd., Prest

of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 47,742. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 14, 1958.

LYCRA

For Synthetic Fibers and Filaments for Generalized Use in the Industrial Arts.
First use Feb. 13, 1958.

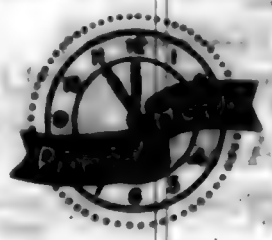
SN 50,226. Paramount Enterprises, Inc., New York, N. Y. Filed May 1, 1958.

PLANTERS GOLD

The drawing is lined for yellow.
For Horticultural Potting Medium.
First use Feb. 17, 1958.

Class 2—Receptacles

SN 28,076. Time Products, Inc., Indianapolis, Ind. Filed Apr. 12, 1957.



For Plates, Trays, and Cups Formed of Paper.
First use Oct. 28, 1956.

SN 30,057. Baywood Manufacturing Co., Inc., Brooklyn, N. Y. Filed May 15, 1957.

For Wooden Candy Trays and Cases.
First use Sept. 15, 1954.

SN 37,661. Keyes Fibre Company, Waterville, Maine. Filed Sept. 23, 1957.

PYRAMID PAKS

For Molded Pulp Packing Trays.
First use Sept. 9, 1957.

SN 47,569. The Duraflex Co., Miami, Fla. Filed Mar. 12, 1958.

MAILMATE

For Home Type Mailbox.
First use Sept. 16, 1957.

SN 48,315. Frank E. Nemec, d. b. a. Lovelite Products, San Gabriel, Calif. Filed Mar. 24, 1958.

Lovelite

For Compacts.
First use Jan. 23, 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 34,193. Veldoré Company, Houston, Tex. Filed July 22, 1957.

Veldoré

For Women's Handbags, Pocketbooks, and Jewelry Boxes.
First use Oct. 15, 1956, on handbags.

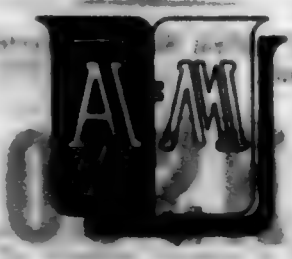
SN 34,269. U. S. Handbag Corp., New York, N. Y. Filed July 23, 1957.

Lavalize

For Handbags.
First use Mar. 1, 1939.

Class 4—Abrasives and Polishing Materials

SN 42,803. American-Marietta Company, O'Cedar Division, Chicago, Ill. Filed Dec. 23, 1957.



For Polishes and Wax Polishes.
First use in July 1952.

SN 44,202. The Eastman Corp., Cleveland, Ohio. Filed SN 48,440. Trojan Powder Company, Allentown, Pa. Filed

SN 48,959. Omega Shoe Polish Company, Los Angeles, Calif. Filed Jan. 14, 1958.

"SIR"

For Cream Boot and Shoe Conditioner and Polish.
First use Nov. 8, 1957.

SN 51,183. Garry Laboratories, Inc., Buffalo, N. Y. Filed May 7, 1958.

Garry's

Owner of Reg. No. 604,948.
For Preparation for Polishing and Protectively Coating the Exposed Sheet Metal Parts of Automobiles, the Preparation Having a Wax Base.
First use on or about Apr. 13, 1953.

Class 5—Adhesives

SN 36,177. Harry E. Glauser, d. b. a. The World's Greatest Barber Shop, Lawrence Park, Pa. Filed Aug. 26, 1957.

BARBEREX-HARTSER

For Spirit Gum for Holding Toupees and Wigs in Place.
First use May 1, 1957.

Class 6—Chemicals and Chemical Compositions

SN 38,344. Fritz Schenker-Winkler, d. b. a. Kaspar Winkler & Co., Zurich, Switzerland. Filed July 8, 1957.

RUGASOL

Owner of Swiss Reg. No. 120,520, dated May 3, 1947.
For Preparations To Be Applied to the Surface of Plaster, Concrete, Cast Stone or Forms Therefor for Retarding the Setting and Facilitating the Roughening of the Concrete or Cast Stone Surfaces so Treated.

SN 35,753. The Dow Chemical Company, Midland, Mich. Filed Aug. 19, 1957.

VEON

For Brush and Weed Killing Compositions.
First use Apr. 17, 1957.

SN 35,786. The Dow Chemical Company, Midland, Mich. Filed Aug. 19, 1957.

INVERTON

For Brush and Weed Killing Compositions.
First use May 24, 1957.

SN 37,960. Insect Control Sales & Service, Candor, N. C. Filed Sept. 27, 1957.

INSCO

For Insecticides and Fungicides.
First use Sept. 1, 1954.

SN 38,865. Lonza Electric and Chemical Works Ltd., Basel, Switzerland. Filed Oct. 4, 1957.

LONZAVYL

Owner of Swiss Reg. No. 165,346, dated Apr. 4, 1957.
For Synthetic Resins in the Form of Granules and Powders; and Dispersions of Monomeric Compounds for the Production of the Same.

SN 38,866. Lonza Electric and Chemical Works Ltd., Basel, Switzerland. Filed Oct. 4, 1957.

LONZAPOL

Owner of Swiss Reg. No. 165,349, dated Apr. 4, 1957.
For Synthetic Resins in the Form of Granules and Powders; and Dispersions of Monomeric Compounds for the Production of the Same.

SN 38,867. Lonza Electric and Chemical Works Ltd., Basel, Switzerland. Filed Oct. 4, 1957.

LONZALIT

Owner of Swiss Reg. No. 165,347, dated Apr. 4, 1957.
For Synthetic Resins in the Form of Granules and Powders; and Dispersions of Monomeric Compounds for the Production of the Same.

SN 39,388. The Dow Chemical Company, Midland, Mich. Filed Oct. 23, 1957.

TROLENE

For Organic Phosphorus Compound Principally for Use as an Active Ingredient in Parasiticidal, Especially Insecticidal Compositions.
First use Oct. 1, 1957.

SN 43,326. Monsanto Chemical Company, St. Louis, Mo. Filed Jan. 2, 1958.

COOLANOL

For Liquid Functional Fluid Sold for Use as a Dielectric Coolant for Electronic Equipment, a Force or Power Transmission Fluid, a Heat Exchange Medium or a Lubricant.
First use Dec. 19, 1957.

SN 44,378. Consolidated Royal Chemical Corporation, Chicago, Ill. Filed Jan. 21, 1958.

AIRMIST

For Room Deodorants.
First use Nov. 9, 1957.

SN 44,544. International Salt Company, Scranton, Pa. Filed Jan. 23, 1958. Sec. 2(f).

BRINE BUTTONS

Owner of Reg. No. 571,441.
For Salt To Be Used in Home or Industrial Water Softeners.
First use Apr. 15, 1953.

SN 44,926. The Seymour Manufacturing Company, Seymour, Conn. Filed Jan. 29, 1958.

CUSOL

For Additive for Use in the Electrodeposition of Copper.
First use June 8, 1957.

SN 45,545. The Dow Chemical Company, Midland, Mich. Filed Feb. 10, 1958.

NARLENE

For Organic Phosphorus Compound Principally for Use as an Active Ingredient in Parasiticidal, Especially Insecticidal Compositions.
First use Dec. 11, 1957.

SN 22,450. The Mosaic Tile Company, Zanesville, Ohio. SN 45,114. Caldwell Lumber Sales Bureau, Inc., Portland, Oreg. Filed Feb. 3, 1958.

PONDEROSA

For Lumber.
First use Jan. 1, 1958.

SN 46,302. The Electromark Corp., Cleveland, Ohio. Filed Feb. 21, 1958.

electr@mark

For Electrolytic Solutions for Electroetching of Metals and Neutralising Solutions for Electrolytic Apparatus.
First use Oct. 21, 1955.

SN 46,837. Metal & Thermit Corporation, Woodbridge Township, Middlesex County, N. J. Filed Feb. 21, 1958.

FUMETROL

For Chemical Additive to Electroplating Baths.
First use on or about Jan. 2, 1958.

SN 46,515. Cecil Ernest Watts, Sunbury-on-Thames, Middlesex, England. Filed Feb. 24, 1958.

PAROSTATIK

Priority claimed under Sec. 44(d) on British Reg. No. 769,310, dated Sept. 10, 1957.
For Chemical Preparations in Liquid Form for Use in Preventing the Build-Up of Static Electricity.

SN 46,575. Strouse, Inc., Norristown, Pa. Filed Feb. 25, 1958.

For Refreshing Fragrance To Be Sprayed in Enclosures and Apparel, Linens and Furnishings.
First use Dec. 11, 1957.

SN 47,114. Hoffmann-La Roche Inc., Nutley, N. J. Filed Mar. 5, 1958.

PENTIOL

For Aromatic Scent Chemical Substance.
First use Feb. 11, 1958.

SN 46,986. Glenn Chemical Company, Inc., Chicago, Ill. Filed Apr. 3, 1958.

TABATREX

For Ingredient, Consisting Wholly or Predominantly of Di-N-Butyl Succinate, for Further Manufacturing Use in Insect Repellent Compositions.
First use Mar. 24, 1958.

SN 49,303. Safety Products Co., Carrollton, Mo. Filed Apr. 8, 1958.

STOP-IT

For Chemical for Extinguishing Fires.
First use May 15, 1954.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 53,027. American Cyanamid Company, New York, N. Y. Filed May 21, 1958.

BLACK DIAMOND

For Dynamite.
First use May 23, 1912.

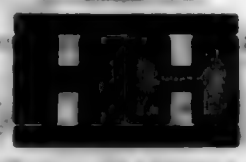
SN 53,440. Trojan Powder Company, Allentown, Pa. Filed June 12, 1958.

TROMAX

For Explosive Materials Including Nitrostarch, Other Explosive Nitrated Organic Compounds or Ammonium Nitrate and Mixtures Thereof.
First use May 15, 1958.

Class 10—Fertilizers

SN 50,620. The Hubbard-Hall Chemical Company, Waterbury, Conn. Filed Apr. 29, 1958.



The small lines in the drawing are a feature of the mark and do not represent color lining.
For Fertilizers.
First use Jan. 7, 1957.

SN 53,378. Northern Field Seed Co., Winona, Minn. Filed May 23, 1958.

For Organic Soil Builder and Conditioner, the Product of Packing House Animal Compost, Natural Minerals From Decomposed Marine Life and Cultured Soil Microorganisms.
First use Sept. 1, 1951.

Class 11—Inks and Inking Materials

SN 42,074. Stenographic Machines, Inc., Chicago, Ill. Filed Dec. 9, 1957.

STENOGRAPH

Owner of Reg. No. 514,021.
For Ribbon for Shorthand Machines, and Ink for Re-Inking Such Ribbons.
First use 1939.

SN 49,776. Phillips Process Co., Inc., Rochester, N. Y. Filed Apr. 16, 1958.

PROTYPE

Owner of Reg. No. 361,769.
For Carbon Paper Sheets, Ink Pads, and Inking Ribbons Including Typewriter Ribbons.
First use Jan. 12, 1923.

Class 12—Construction Materials

SN 20,473. The Mosaic Tile Company, Zanesville, Ohio. Filed Dec. 5, 1956.

MEDLEY

Owner of Reg. No. 545,801.
For Assemblies of Small Ceramic Tiles of a Series of Colors and Positioned To Produce Decorative Patterns for Use on Floors, Walls, and Ceilings.
First use Sept. 24, 1956.

SN 47,554. The Syracuse Stamping Co., Inc., Syracuse, N. Y. SN 51,251. The International Silver Company, Meriden,

First use Sept. 1, 1954.

First use Dec. 11, 1957.

SN 22,450. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

POMPEIAN

For Ceramic Floor, Wall, and Ceiling Tile.
First use June 1936.

SN 22,451. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

NAVAJO

For Floor, Wall, and Ceiling Ceramic Tile.
First use June 1936.

SN 22,452. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

EGYPTIAN

For Floor, Wall, and Ceiling Ceramic Tile.
First use June 1936.

SN 31,491. Insulation Engineers, Inc., Minneapolis, Minn. Filed June 6, 1957.

NORTHERN LITE

For Window Structures, Particularly Primary and Sash Frames, Constructed of Wood, and Parts Thereof.
First use May 9, 1957.

SN 32,190. Louisiana Concrete Products, Inc., Baton Rouge, La. Filed June 18, 1957.

MOJAVE

For Building Blocks of Concrete and Crushed Rock or Stone.
First use Apr. 1, 1955.

SN 36,865. Ralph L. Dugger, d. b. a. Omnico, Minneapolis, Minn. Filed Sept. 9, 1957.

omni

For Large Doors for Airplane Hangars and the Like and Parts Thereof.
First use April 1954.

SN 37,845. American Celcure Wood Preserving Corporation, Jacksonville, Fla. Filed Sept. 26, 1957.

CELCURE

Owner of Reg. No. 266,384.
For Lumber Processed for Preservation.
First use Jan. 3, 1950.

SN 39,539. Manhattan Terrazzo Brass Strip Co., Inc., Norwalk, Conn. Filed Oct. 25, 1957.

RIJTEX

Owner of Reg. Nos. 245,805, 606,559, and 645,309.
For Metal Strips for Terrazzo Flooring.
First use July 19, 1957.

SN 43,340. The Rearden Company, St. Louis County, Mo. Filed Jan. 2, 1958.

HI AND DRI

For Materials for Jointing Wallboard.
First use May 1, 1957; Jan. 31, 1957, as to "High & Dry."

SN 45,118. Caldwell Lumber Sales, Sacramento, Calif. Filed Feb. 3, 1958.

PRE-PAK

For Unassembled Prefabricated Wooden Fencing Adapted To Be Erected by the Purchaser.
First use June 1957.

SN 48,902. Honeycomb Company of America, Inc., Bridgeport, Conn. Filed Apr. 2, 1958.

TRU HEX

For Honeycomb Core.
First use Apr. 1, 1957.

SN 50,562. United States Plywood Corporation, New York, N. Y. Filed Apr. 28, 1958.

EVERGRAIN

For Wood and Lumber Products, Such as, Plywood.
First use Mar. 3, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 30,695. F. P. Smith Wire & Iron Works, Chicago, Ill. Filed May 24, 1957.

META LOOM PRODUCTS

No claim is made to the exclusive use of the word "Products" apart from the mark as shown.
For Wire Mesh —Namely, Wire Cloth in the Piece, Space Screens, Bullet Resistant Wire Cloth, Wire Mesh Fabric, Galvanized Wire Cloth and Screens; and Woven Wire Products—Namely, Decorative Furniture Grilles.
First use Jan. 1, 1957.

SN 36,030. Temploc, Inc., Baldwin Park, Calif. Filed Aug. 22, 1957.

TEMP-LOC

For Metal Pipe Having Prefabricated Insulation Thereon.
First use Mar. 11, 1955.

SN 36,099. National Cylinder Gas Company, Chicago, Ill. Filed Aug. 23, 1957.

Owner of Reg. Nos. 523,795, 582,702, and 624,911.
For Piping System Components and Fittings Comprised of Plastic Materials, and Fluid Plastic Materials Adapted To Integrate Such Fittings and Components and To Seal Connections Between Parts of Such Systems.
First use on or about Sept. 7, 1954, on plastic fittings for piping systems.

First use May 23, 1912.

First use Sept. 24, 1956.

SN 42,554. The Syracuse Stamping Co., Inc., Syracuse, N. Y. Filed Dec. 16, 1957.

SYRACO

For Molasses Gates, and Metal Stampings for Overhead Doors.
First use at least as early as 1920.

SN 48,744. Indianapolis Reed Co., Inc., Indianapolis, Ind. Filed Mar. 31, 1958.

Lulu

For Wire Baskets Used as Planters.
First use Feb. 20, 1958.

SN 49,171. William H. Mackenzie, New York, N. Y. Filed Apr. 7, 1958.

MACKENZIE
STEAM KING

Owner of Reg. No. 578,958.
For Steam Traps and Valves.
First use Oct. 15, 1951.

SN 49,530. Eugene G. Sutcliffe, d. b. a. Sutcliffe Specialty Company, St. Louis, Mo. Filed Apr. 11, 1958.

For Magnets for Gasoline Pump Nozzles, and Guards Therefor and for Parts of Such Nozzles and Guards.
First use on or about Mar. 1, 1952.

SN 50,024. Chicago Pottery Company, Chicago, Ill. Filed Apr. 21, 1958.

CLEARFLOR

For Water Closets for Bathrooms.
First use Jan. 16, 1958.

SN 50,462. Drilling Equipment Manufacturing Company, Oklahoma City, Okla. Filed Apr. 28, 1958.

Mud King

For Valves.
First use Apr. 8, 1958.

SN 50,497. Harold Leonard & Co. Inc., New York, N. Y. Filed Apr. 28, 1958.

Halcoware

For Aluminum Cooking Pots and Pans.
First use Feb. 1, 1958.

SN 51,351. The International Silver Company, Meriden, Conn. Filed May 9, 1958.

Applicant, reserving unto itself all of its common law rights in the mark on the accompanying drawing, hereby disclaims for the purpose of registration, the word "Pewter" apart from the mark as shown.
For Pewter Hollowware, Such as Candelabra, Tea and Coffee Sets, Trays, and Vases.
First use Mar. 18, 1958.

SN 51,477. William H. MacKenzie, New York, N. Y. Filed May 12, 1958.

MSK

For Steam Traps and Valves.
First use Oct. 15, 1951.

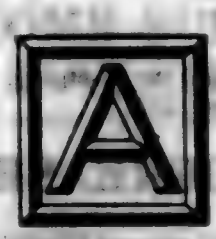
SN 51,601. Kyova Fiber Pipe Company, Ironton, Ohio. Filed May 16, 1958.

KYOVA

For Bituminized Fiber Conduits and Bituminized Fiber Sewer Pipe.
First use on Sept. 1, 1957.

Class 14—Metals and Metal Castings and Forgings

SN 38,143. Alloy Steel and Metals Company, Los Angeles, Calif. Filed Aug. 26, 1957.



For Metal Foundry Castings.
First use in the year 1939.

SN 47,997. American Metal Climax, Inc., New York, N. Y. Filed Mar. 19, 1958.

AMZIRC

For Zirconium-Containing Copper-Base Alloys.
First use Feb. 25, 1958.

SN 48,238. Continental Industries, Incorporated, d. b. a. Continental Industries Inc., Tulsa, Okla. Filed Apr. 1, 1958.

THERMOWELD

For Cartridges Containing Exothermic Powdered Metal Weld Mix.
First use Mar. 12, 1958.

SN 35,512. Pittsburgh Plate Glass Company, Pittsburgh, Pa.

SN 31,819. Carter Products, Inc., New York, N. Y. Filed

SN 49,018. Universal-Cyclops Steel Corporation, Bridgeville, Pa. Filed Apr. 3, 1958.

UNIMACH

For Metal Products, Especially Suited for Use at Elevated Temperatures, Such as Blooms, Billets, Bars, Rods, Wire, Forgings, Plates, Sheets, and Strip.
First use Mar. 21, 1958.

Class 15—Oils and Greases

SN 44,750. Pel-State Oil Company, Inc., Shreveport, La. Filed Jan. 27, 1958.

The drawing is lined for red and green.
For Petroleum Motor Oil, Gasoline, Lubricating Oils, and Greases.
First use on or about Oct. 23, 1957.

SN 46,796. The American Oil Company, New York, N. Y. Filed Feb. 28, 1958.

VISCRETE

For Form Lubricant—a Viscous, Tacky, Petroleum Base Product Used To Treat Wood or Metal Forms To Prevent Poured Concrete From Sticking to the Form.
First use Dec. 15, 1955.

SN 46,906. Continental Oil Company, Ponca City, Okla. Filed Mar. 3, 1958. Sec. 2(f).

COGREASE

Owner of Reg. Nos. 283,689 and 500,602.
For Lubricating Grease.
First use Aug. 7, 1952.

SN 46,906. Continental Oil Company, Ponca City, Okla. Filed Mar. 3, 1958.

CONOLITH

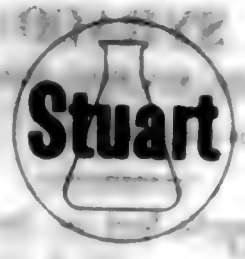
Owner of Reg. No. 631,540.
For Lubricating Grease.
First use on or about Aug. 25, 1956.

SN 47,855. Harley-Davidson Motor Co., Milwaukee, Wis. Filed Mar. 17, 1958.

PRE-LUXE

For Lubricating Oil.
First use Mar. 4, 1958.

SN 47,990. D. A. Stuart Oil Co., Limited, Chicago, Ill. Filed Mar. 18, 1958.



For Industrial Metalworking and Lubricating Compounds, Oils, and Greases.
First use Feb. 25, 1957.

SN 48,659. Power Petroleum Products, Dallas, Tex. Filed Mar. 28, 1958.

RUB-R-EZE

For Rubber Lubricant.
First use in January 1946.

Class 16—Protective and Decorative Coatings

SN 9,962. Donald F. Duncan, Incorporated, Chicago, Ill. Filed June 11, 1954.

PEARLESSENCE

For Finish to the Exterior Surface of Bandalore Return Tops.
First use Sept. 15, 1954.

SN 44,824. Insul-Mastic, Inc., Summit, Ill. Filed Jan. 28, 1958.

For Paints and Preservative Materials Particularly Useful as Vehicle Undercoatings, Such as for Trains, Automobiles, and Airplanes.
First use Apr. 1, 1945.

SN 45,848. The Sherwin-Williams Company, Cleveland, Ohio. Filed Feb. 5, 1958.

SILA-CHEK

For Additive Composition for Lacquers and Enamels.
First use Dec. 18, 1957.

SN 52,429. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed May 27, 1958.

COAL CAT

For Coal Tar Epoxy Coatings.
First use May 16, 1957.

SN 55,511. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed July 17, 1958.

RAYBAKE

For Liquid Enamels for Drying and/or Baking on Metal Products.
First use Feb. 15, 1958; Dec. 7, 1943, in a different form.

SN 50,855. Abbott Laboratories, North Chicago, Ill. Filed May 2, 1958.

SN 52,208. Hine Pharmacal Company, Inc., New Hartford, N. Y. Filed May 20, 1958.

SN 55,512. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed July 17, 1958.

RAYBAKE PLASTOX

For Liquid Enamels for Drying and/or Baking on Metal Products.
First use Apr. 17, 1958; Dec. 7, 1940, in a different form.

SN 55,719. Pylon Distributors of America, Inc., St. Louis, Mo. Filed July 21, 1958.

PYLON

For Paint and Plastic Finishes.
First use Dec. 1, 1957.

SN 55,727. Rosenthal Cleane-Quick Company, Oak Park, Mich. Filed July 21, 1958. Sec. 2(f).

ROSENTHAL'S

For Scratch Covering Compositions for Furniture in the Form of a Stain.
First use in the year 1920.

Class 18—Medicines and Pharmaceutical Preparations

SN 700,531. Schering Corporation, Bloomfield, N. J. Filed Dec. 23, 1955.

Rx-Saver

No claim is made under the statute to the symbol "℞" apart from the mark as shown.
For Ethical Pharmaceuticals, Issued on Doctors' Prescriptions—Namely, Hormones, Antihistamines, Analgesics, and Pharmaceutical Combinations Thereof.
First use Sept. 20, 1955.

SN 24,640. Frank B. Sewell, d. b. a. Sewell Enterprises, Detroit, Mich. Filed Feb. 18, 1957.

For Rubbing Oil, Used for Muscular Aches and Pains, Arthritis, Rheumatism, Etc.
First use October 1954.

SN 31,816. Carter Products, Inc., New York, N. Y. Filed June 12, 1957.

REALETS

For Timed Disintegration Capsules Filled With a Medicament To Relieve Tension, Nervousness, Sleeplessness, and Depression.
First use May 9, 1957.

SN 31,816. Carter Products, Inc., New York, N. Y. Filed June 12, 1957.

CONTINULES

For Timed Disintegration Capsules Filled With a Medicament To Relieve Tension, Nervousness, Sleeplessness, and Depression.
First use May 8, 1957.

SN 34,287. Warner-Lambert Pharmaceutical Company, Morris Plains, N. J. Filed July 25, 1957.

ELSIX

Owner of Reg. No. 648,539.
For Ear Drops for Bacterial Infections, Medicated Shampoo for Scalp Infections, Ointment for Bacterial Infections, and Pre-Operative Disinfectant Spray.
First use May 10, 1957.

SN 34,830. White Laboratories, Inc. (New Jersey corporation, a new company), Kenilworth, N. J., assignee of White Laboratories, Inc. (New Jersey corporation), Kenilworth, N. J. Filed Aug. 1, 1957.

CHRONOTABS

For Time-Disintegration Multiple-Vitamin Preparations.
First use July 12, 1957.

SN 37,107. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Sept. 12, 1957.

FAUNAMYCIN

For Antibiotic Preparation.
First use May 18, 1956.

SN 37,988. Curtis Laboratories, Inc., Kansas City, Kans. Filed Sept. 26, 1957.

ANTISEPTIGEN

For Veterinary Preparation Described as: a Germicidal Compound for Pre-Operative Scrub-Up of the Patient and of the Operator's Hands and Arms.
First use Mar. 15, 1938.

SN 41,753. Hales & Hunter Co., Chicago, Ill. Filed Dec. 4, 1957.

RED COMB SUP-R-EGG BOOSTER

For Medicated Poultry Feed Containing Vitamins, Iron, and Antibiotics.
First use Sept. 26, 1957.

SN 44,777. Vick Chemical Company, New York, N. Y. Filed Jan. 27, 1958.

For Medicated Cough Drops.
First use Sept. 10, 1957.

SN 48,042. Organon Inc., Orange, N. J. Filed Mar. 19, 1958.

PAVULON

For Ethically Promoted Enzyme Preparation for Intramuscular Injection To Be Used in the Treatment of Phlebitis, Ulcers (Decubitus, Diabetic, Varicose), Carbuncles, Impetigo, Boils, Burns, and Other Inflammatory Conditions.
First use Mar. 8, 1958.

SN 48,753. Elt Manufacturing Company, Long Beach, Calif. Filed Mar. 31, 1958.

SN 38,524. Leitz Opta Aktiengesellschaft, Berlin-Steglitz, Germany. Filed Aug. 30, 1957.

First use Mar. 4, 1958.

First use Feb. 18, 1958; Dec. 7, 1943, in a different form.

SN 50,855. Abbott Laboratories, North Chicago, Ill. Filed May 2, 1958.

MODUMATE

For Pharmaceutical Preparation for Treatment of Ammonia Intoxication.
First use Apr. 15, 1958.

SN 50,966. Norman Dartell, d. b. a. Dartell Laboratories, Los Angeles, Calif. Filed May 5, 1958.

EUFADERM

For Cream for the Treatment of Skin Disorders.
First use Apr. 24, 1958.

SN 51,006. Frankay Laboratories, Inc., Harrison, N. J. Filed May 5, 1958.

LICORT

For Ointment for the Relief of Pruritus and Inflammation Including Poison Ivy.
First use June 11, 1957.

SN 51,019. Jensen-Salsbery Laboratories, Inc., Kansas City, Mo. Filed May 5, 1958.

STEREOCIDE

For Pharmaceutical Preparation for the Control of Bacterial Diarrhea of Calves.
First use Mar. 6, 1958.

SN 51,020. Jensen-Salsbery Laboratories, Inc., Kansas City, Mo. Filed May 5, 1958.

STEREOMIDE

For Pharmaceutical Preparation for the Control of Bacterial Diarrhea of Dogs.
First use Mar. 27, 1958.

SN 51,129. The Iso-Sol Company, Inc., Lindenhurst, N. Y. Filed May 6, 1958.

PILOMIOTIN

For Ophthalmic Medicines.
First use on or about Oct. 4, 1955.

SN 51,576. Modern-Lab, Incorporated, Baltimore, Md. Filed May 13, 1958.

ENTRIN

For Di-Mono-Triethylamine Salicylate, Benzocaine, and Hexachlorophene as an Ingredient in a Topical Analgesic Preparation.
First use Dec. 30, 1957.

52,084. White Laboratories, Inc., Kenilworth, N. J. Filed May 21, 1958.

RESILAX

For Laxative.
First use Mar. 30, 1951.

SN 52,094. The E. Berghausen Chemical Co., Cincinnati, Ohio. Filed May 22, 1958.

SUPROMENE

For Dietary Supplement Containing Principally Non-Fat Dry Milk, Vitamin Preparations, and Minerals Sold Under Directions of Physicians.
First use May 19, 1958.

SN 52,308. Hiss Pharmacal Company, Inc., New Hartford, N. Y. Filed May 26, 1958.

TENOC

For Anti-Spasmodic Preparation.
First use Apr. 5, 1958.

SN 52,822. Merck & Co., Inc., Rahway, N. J. Filed May 26, 1958.

DECADRON

For Hormonal Compound for Medicinal and Pharmaceutical Use.
First use May 16, 1958.

SN 52,456. American Cyanamid Company, New York, N. Y. Filed May 28, 1958.

HIBIMAL

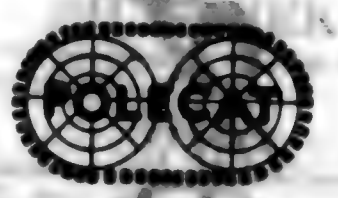
Owner of Reg. No. 569,182.
For Pre-Menstrual Tension Preparations.
First use May 12, 1958.

Class 19 — Vehicles

SN 38,007. R. C. Albertson, d. b. a. Albertson Manufacturing Co., Pasadena, Calif. Filed Sept. 30, 1957.

The word "Trailer" is disclaimed apart from the mark as shown.
For Wheeled Trailers Adapted To Be Drawn by Automotive Vehicles.
First use June 1954.

SN 43,644. Wilson, Nuttall, Raimond Engineers, Inc., Chestertown, Md. Filed Jan. 8, 1958.



For Articulated Tracked Vehicles for Use as a Cargo and/or Personnel Carrier in Snow Country and Off-the-Road Terrain.
First use Dec. 6, 1957.

SN 46,650. Kreidler's Metall- u. Drahtwerke G. m. b. H., Zuffenhausen, Germany. Filed Feb. 26, 1958.

ESKAPADE

Owner of German Reg. No. 783,596, dated Nov. 22, 1957.
For Land-, Air-, and Water Vehicles, Motor Vehicles, Two-, Three-, and Four Wheel Motorcars, Particularly Motor-Bicycles, Motorcycles, Scooters, and Pedal Assisted Motorcycles, and Parts Thereof—Namely, Frames, Cycle Forks and Chassis, Brake Devices and Coupling Devices.

First use May 9, 1957.

TM 736 O. G.—9

SN 52,763. Kit Manufacturing Company, Long Beach, Calif. Filed Mar. 31, 1958.

KIT STATELINER

Owner of Reg. Nos. 511,662 and 570,045.
For House Trailers.
First use Feb. 12, 1958.

SN 51,088. Vesely Manufacturing Company, Lapeer, Mich. Filed May 5, 1958.

APACHE

For Camp Trailers and Parts Thereof.
First use July 1, 1957.

SN 53,961. Fisher Manufacturing, Inc., Mount Pleasant, Mich. Filed June 9, 1958.

LOADMOR

For Vehicle Dump Bodies.
First use July 1957.
Subj. to Intf. with SN 51,607.

Class 20—Linoleum and Oiled Cloth

SN 49,245. Bonafide Mills, Inc., New York, N. Y. Filed Apr. 9, 1958.

VERSA-VINYL

Owner of Reg. No. 561,957.
For Plastic and Composition Floor and Wall Coverings Made in Part of Vinyl.
First use Mar. 27, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 24,963. Hoffman Electronics Corporation, Los Angeles, Calif. Filed Feb. 25, 1957.

SOLAR SHINGLE

For Photoelectric Converters for Converting Light Energy Into Electrical Energy.
First use Jan. 28, 1957.

SN 26,141. Zenith Radio Corporation (Delaware corporation), Chicago, Ill., assignee of Zenith Radio Corporation (Illinois corporation), Chicago, Ill. Filed Mar. 13, 1957.

THE ROYALTY OF TELEVISION

Owner of Reg. Nos. 430,946; 526,304, and others.
For Television Receivers and Parts Thereof.
First use Feb. 4, 1957.

SN 26,142. Zenith Radio Corporation (Delaware corporation), Chicago, Ill., by merger from Zenith Radio corporation (Illinois corporation), Chicago, Ill. Filed Mar. 13, 1957.

THE ROYALTY OF HIGH FIDELITY

Owner of Reg. Nos. 430,946; 526,304, and others.
For Radio Receivers, Television Receivers, Electrically Operated Phonographs, and Parts Thereof.
First use Feb. 4, 1957.

SN 36,324. Loewe Opta Aktiengesellschaft, Berlin-Steglitz, Germany. Filed Aug. 30, 1957.

LOEWE OPTA

Owner of German Reg. No. 632,941, dated Jan. 19, 1953.
For Electric Communication Apparatus and Component Parts Thereof—Namely, Radio and Television Receivers, Music Consoles, Music Boxes, Loudspeakers, Microphones, Voice Reproducers, Magnetic Sound Recorders and Reproducers, Electron Tubes for Receiving, Amplifying, and Rectifying, Electron Beam Tubes for Television and Oscillograph Equipment.

SN 37,493. Grundig Radio-Werke G. m. b. H., Fuerth, Bayern, Germany. Filed Sept. 19, 1957.

GRUNDIG

Owner of Reg. Nos. 624,841, 624,842, and 624,843.
For Radio Apparatus, Television Apparatus, Magnetic Tape Apparatus, and Their Individual Parts.
First use in December 1956; in commerce January 1957.

SN 39,536. Leakart Electric Co., Inc., San Carlos, Calif. Filed Oct. 25, 1957.

MICROTEL

For Terminal Apparatus for Microwave Communication Service, Comprising Carrier, Telephone, Telegraph, and Signalling.
First use Sept. 27, 1957.

SN 40,238. Lam Workshop Inc., Wakefield, Mass. Filed Nov. 7, 1957.

MODULUME

For Diffusers, Cornices, Coves, and Valances for Illumination Sources.
First use in March 1957.

SN 40,637. Woodward Baldwin Rich, Baltimore, Md. Filed Nov. 13, 1957.

SAVE-A-LIFE-LIGHT

For Day and Night Reflecting Automatic Electric Emergency Water Light.
First use June 26, 1957.

SN 41,242. Elinderwerke Ernest Brix, Zweigniederlassung der Wasag-Chemie AG, Krefeld-Uerdingen, Germany. Filed Oct. 14, 1957.

ZEB

Owner of German Reg. No. 705,806, dated Aug. 26, 1957.
For Blasting Machines and Safety Fuses.

SN 41,698. Eldema Corporation, El Monte, Calif. Filed Dec. 3, 1957.

ELDEMA

For Lamps, Lamp Housings, and Switches.
First use Apr. 15, 1954.

SN 41,841. Simmonds Aerocessories, Inc., Tarrytown, N. Y. Filed Dec. 5, 1957.

LOCAR

For Radio Frequency Emitting Device Used for Locating Objects or Persons, With the Added Optional Function of Two-Way Voice Communications Over Short Ranges.
First use Aug. 28, 1957.

SN 45,363. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Feb. 5, 1958.

ŠKODA

Owner of Czechoslovakian Reg. No. 152,674, dated June 26, 1956.
For Electrolysing Apparatus; Electric Generators; Turbo Generators; Electric Motors; Transformers; Reactors; Choke Coils; Circuit Breakers; Switches; Change-Over Switches; Safety Switches; Contactors; Starters; Speed Regulating and Checking Devices; Shunt-Field Regulators; Speed Governors for Commutators; Regulators; Electric Filters; Relays; Lifting Magnets; Slip-Ring Collectors; Electric Switch Apparatus.

SN 45,599. Notifier Corporation, Lincoln, Nebr. Filed Feb. 10, 1958.

PHON-O-MATIC

For Electrically Operated, Closed Network Audio-Communication and Signalling Systems for Restricted Emergency and Security Control Use—Namely, Fire Alarm Systems, Police Communication Systems, Watchmen Service Systems and Parts Thereof.
First use Nov. 14, 1957.

SN 45,700. Pacific Automation Products, Inc., Glendale, Calif. Filed Feb. 11, 1958.

For Electrical Conductive Cables of the Heat and Water Resistant Type; Extension Sleeves for Electrical Plugs; Electrical Cable Clamp Adapters; Electrical Power Supply Equipment.
First use Dec. 16, 1957.

SN 46,001. Organic Development Corporation, Garden Grove, Calif. Filed Feb. 17, 1958.

MAGNA-STRIP

For Multi-Conductor Magnet Wire Cable.
First use Nov. 13, 1956.

SN 46,500. Standard Electrical Products Company, Dayton, Ohio. Filed Feb. 24, 1958.

STACO

For Electrical Relays, Electrical Transformers, Electric Switches and Etchers.
First use in 1937, on electrical transformers.

SN 47,221. The H. J. Aabe Co., Inc., Glenbrook, Conn. Filed Mar. 10, 1958.

EXPLORER

For Battery-Operated Lanterns.
First use Feb. 5, 1958.

SN 47,415. Paragon Electric Company, Two Rivers, Wis. Filed Mar. 10, 1958.

For Electric Control Devices Especially Clock Timed Switches.
First use Oct. 15, 1953.

SN 47,502. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 12, 1958.

SCOTCHWELD

Owner of Reg. Nos. 519,756, 521,969, and 596,953.
For Plastic Film Useful for Electrical Insulating.
First use Dec. 27, 1957.

SN 47,787. Sorensen & Company, Inc., South Norwalk, Conn. Filed Mar. 14, 1958.

HI-SEL

For High Voltage Transformers and Rectifiers.
First use on or before Aug. 27, 1956.

SN 48,094. Borg-Warner Corporation, Chicago, Ill. Filed Mar. 31, 1958.

Meal Sentry

For Electric Ranges.
First use on or before June 1, 1957.

SN 49,193. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Apr. 7, 1958.

DYNASLIDE

For Snap Acting Switches.
First use Feb. 13, 1958.

SN 49,231. Western Fire Equipment Co., San Francisco, Calif. Filed Apr. 7, 1958.

FORESTER

Owner of Reg. No. 364,331.
For Electric Flashlights.
First use Dec. 10, 1943.

SN 49,924. W. R. Grace & Co., Cambridge, Mass. Filed Apr. 18, 1958.

ARMORIB

For Separator Plates for Storage Batteries.
First use Mar. 20, 1956.

SN 37,547. B & J Manufacturing Co., Chicago, Ill. Filed Sept. 20, 1957.

SN 48,075. The Abbott Ball Company, Hartford, Conn. Filed

SN 50,500. Luxo Lamp Corporation, Yorkaboo, N. Y. Filed Jan. 28, 1958.

CROWN LITE

For Portable Electric Lamps.
First use Nov. 21, 1957.

Class 22—Games, Toys, and Sporting Goods

SN 28,234. Superior Industries Corp., Bronx, N. Y. Filed Apr. 16, 1957.

DIAL-A-SCORE

For Billiard Tables, Pool Tables, and Shuffleboard Equipment.
First use May 22, 1956.

SN 31,266. Sacket Sporting Goods Company, Los Angeles, Calif. Filed June 3, 1957.

SACKET

For Nets, Balls, Bats, and Carrying Sack for Use by Players on Opposing Teams of Nine Players Each in Playing a Game.
First use May 21, 1953.

SN 36,471. Catharine B. Pfeffer, York, Pa. Filed Aug. 29, 1957.

TRIPLE PLAY

For Playing Board, Game Pieces, Markers and Number Tabs for Playing a Baseball Game.
First use July 17, 1957.

SN 45,988. Mac-Dan Co., San Bernardino, Calif. Filed Feb. 17, 1958.

MAC-DAN

For Artificial Fishing Lures.
First use on or about July 27, 1957.

SN 47,616. Williams Gold Refining Company, Inc., Buffalo, N. Y. Filed Mar. 12, 1958.

WEEDLER

For Artificial Fishing Lures.
First use on or about Oct. 8, 1957.

SN 49,068. Andia Progress Company, Inc., White Plains, N. Y. Filed Apr. 15, 1958.

ANDIA

For Baseball Gloves.
First use Dec. 17, 1957.

SN 49,788. Bu-Son Products Co., Jersey City, N. J. Filed Apr. 16, 1958.

SKI-CHAMP

For Tow Rope for Water Skiers.
First use Mar. 5, 1958.

SN 49,804. Alexander Doll Company, Inc., d. b. a. Madame Alexander, New York, N. Y. Filed Apr. 17, 1958.

"Cuddles"

For Dolls.
First use Mar. 18, 1958.

SN 50,127. United Metal Products Corp., Detroit, Mich. Filed Apr. 21, 1958.

RAMBLER

For Cart for Carrying Golf Clubs.
First use Jan. 24, 1958.

SN 50,233. Albert Kandarian, Jr., d. b. a. Kando Enterprises, North Attleboro, Mass. Filed Apr. 23, 1958.

KANDO

For Portable Miniature Golf Course.
First use Jan. 15, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 27,709. Modernair Corporation, San Leandro, Calif. Filed Apr. 8, 1957.

Modernair

For Air Control Units and Air Conversion Units and Parts Thereof for Controlling the Speed and Operation of Machine Tools.
First use in August 1944.

SN 32,160. Abbott Laboratories, North Chicago, Ill. Filed June 18, 1957.

SAF-TURN

For Device for Gripping, Removing, and Replacing Caps on Containers of Radioactive Pharmaceuticals Without Radiological Exposure of the Technician Prior to and After Extraction of Unit Doses Therefrom for Use in Radiological Therapy.
First use May 21, 1957.

SN 37,176. The Nycal Company, Inc., Hackensack, N. J. Filed Sept. 13, 1957.

NYCAL
"Where Quality is Reclaimed"

For Motor (Engine) and Drive Parts for Motor Trucks.
First use Feb. 1, 1957.

SN 54,480. Pettibone Mulliken Corporation, Chicago, Ill. Filed

SN 49,099. Trio Mills Mfg. Corp., New York, N. Y. Filed

First use in 1937, on electrical transformers.

First use Mar. 29, 1958.

SN 87,547. B & J Manufacturing Co., Chicago, Ill. Filed Sept. 20, 1957.

ROCKET-CACTUS

For Power-Driven Rasps for Preparing Pneumatic Tires for Recapping, and Replacement Parts for Such Rasps.
First use Aug. 26, 1957.

SN 41,564. Pag Presswerk Aktiengesellschaft, Essen, Germany. Filed Nov. 29, 1957.

PAG

Owner of German Reg. No. 680,204, dated Apr. 28, 1956.
For Press-Molded and Injection-Molded Articles of All Kinds and Associated Machinery.

SN 42,523. New Era Muffler Corporation, Rochester, Mich. Filed Dec. 16, 1957.

For Automotive Mufflers and Gears.
First use June 17, 1957.

SN 44,750. Porter Precision Products Company, d. b. a. Porter Precision Products, Cincinnati, Ohio. Filed Jan. 27, 1958. Sec. 2(f).

PORTER PUNCHES

No claim is made to the exclusive right to the use of the word "Punches" apart from the mark as shown.
For Piercing and Extruding Punches and Die Buttons.
First use Feb. 1, 1948.

SN 45,647. Societe Bertin & Cie, Paris, France. Filed Jan. 20, 1958.

SPRINGMATIC

Owner of French Reg. No. 462,994, dated Apr. 3, 1957 (Seine); Natl. Inst. No. 88,146.
For Transmissions for All Types of Vehicles and Machines.

SN 46,202. Bristol Aero-Engines Limited, Bristol, England. Filed Feb. 20, 1958.

THOR

Owner of British Reg. No. 746,781, dated Oct. 10, 1955.
For Continuous Combustion Ramjet Engines for Aerial Vehicles.

SN 48,075. The Abbott Ball Company, Hartford, Conn. Filed Mar. 20, 1958.

Owner of Reg. No. 648,565.
For Steel Balls, Burnishing Materials, Barrel Finishing Equipment, Apparatus, and Ball Bearings and Abrasives and Compounds for Burnishing and Tumbling Machines.
First use Oct. 2, 1957.

SN 48,591. Standard Steel Works, Inc., North Kansas City, Mo. Filed Mar. 27, 1958. Sec. 2(f).

EASY WAY

Owner of Reg. No. 558,274.
For Post Hole Digger for Attachment to Tractors.
First use June 1, 1944.

SN 50,008. National Tool Company, Cleveland, Ohio, assignee, by mesne assignments, of Auto-Vac Company, Bridgeport, Conn. Filed Apr. 21, 1958.

AUTO-VAC

For Vacuum Forming Machines.
First use on or about Aug. 1, 1952.

SN 50,375. Michle-Goss-Dexter, Incorporated, Chicago, Ill. Filed S. R. Apr. 25, 1958. Am. P. R. Sept. 30, 1958.

Owner of Reg. Nos. 152,386, 643,061, and others.
For Apparatus for Building-In Hard Cased Books, and Book Jacketing Machines.
First use Jan. 16, 1955.

SN 51,385. Kelsey-Hayes Company, Detroit, Mich. Filed May 9, 1958. Sec. 2(f).

"RIB JOINT"

Owner of Reg. No. 585,176.
For Pliers.
First use on or about Sept. 5, 1952.

SN 51,407. American Equipment Corporation, Sioux City, Iowa. Filed May 12, 1958.

LOADMOR

For Hydraulically Actuated Truck Body Hoists.
First use Feb. 25, 1957.
Subj. to Intf. with SN 53,961.

SN 52,052. Metalwash Machinery Corporation, Elizabeth, N. J. Filed May 21, 1958.

MERSA-MATIC

For Automatic Tank Dipping Machines.
First use May 8, 1958.

SN 38,419. The Babcock & Wilcox Company, New York, N. Y. Drying Cabinets for Laboratory Use.

For Baseball Gloves.
First use Dec. 17, 1957.

First use Feb. 1, 1957.

SN 54,490. Pettibone Mulliken Corporation, Chicago, Ill. Filed June 27, 1958.

MULL-ALL

For Apparatus for Mulling Molding Sand and Other Granular Material.
First use May 8, 1958.

SN 55,619. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 18, 1958.

TRILLIUM

For Tableware Including Knives, Forks, and Spoons.
First use July 1, 1956.

SN 55,620. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 18, 1958.

STAR STREAM

For Tableware Including Knives, Forks, and Spoons.
First use Jan. 15, 1958.

SN 55,621. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 18, 1958.

HEAVENLY STAR

For Tableware Including Knives, Forks, and Spoons.
First use Jan. 15, 1958.

SN 55,622. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 18, 1958.

STAR SWEPT

For Tableware Including Knives, Forks, and Spoons.
First use Jan. 15, 1958.

SN 55,623. Wallace Silversmiths, Inc., Wallingford, Conn. Filed July 18, 1958.

STAR CREST

For Tableware Including Knives, Forks, and Spoons.
First use June 1, 1958.

SN 57,518. Wallace Silversmiths, Inc., Wallingford, Conn. Filed Aug. 19, 1958.

SWIRLING STAR

For Tableware Including Knives, Forks, and Spoons.
First use June 10, 1958.

Class 24—Laundry Appliances and Machines

SN 48,068. Bishop David Freeman Co., Evanston, Ill. Filed Mar. 20, 1958.

CUSTOMATIC

For Folding Arms for Shirt Tables.
First use on or about Jan. 31, 1958.

SN 48,524. Weibrod-Eßrer Bahne, Hausen am Albis, Switzerland. Filed Mar. 28, 1958.

SPEEDO

Owner of Swiss Reg. No. 142,648, dated Dec. 11, 1956.
For Laundry Drying Frames.

SN 49,069. Trio Mills Mfg. Corp., New York, N. Y. Filed Apr. 4, 1958.

SWEETHEART

For Ironing Board Covers and Pad Sets.
First use Feb. 1, 1958.

Class 25—Locks and Safes

SN 48,196. National Lock Co., Rockford, Ill. Filed Mar. 21, 1958.

MEDALIST

For Locks, Latches, and Bolts for Cabinets, Lockers, Switchboard Boxes, Metal Boxes, Tool Chests, Filing Cabinets; Garage Doors, Shackles, Safes, Laboratory Equipment, Drawers, Chest Locks, Sewing Machines, Pianos, Sliding and Folding Doors, Sashes, Builders' Locksets, Keys, and Key Blanks.
First use Jan. 13, 1958.

Class 26—Measuring and Scientific Appliances

SN 13,550. The Solartron Electronic Group Limited, Thames Ditton, England. Filed Aug. 7, 1956.

SOLARTRON

Owner of British Reg. No. 704,195, dated Apr. 2, 1952.
For Electronic Laboratory Testing Equipment, Such as Oscilloscopes, Transfer Function Analysers, Servo Test Equipment, Missiles Scoring Systems, Computers, Power Amplifiers, Wave Generators, Calibrating Units, Pulse Generators, Instruments for Measuring the Rate of Gyro Transfer Function and Damping Characteristics, Amplifying Voltmeters, Multichannel Magnetic Recording Equipment, Alternators, Instruments for the Dynamic Analysis of Servo Systems, Etc.

SN 28,357. Librascope, Incorporated, Glendale, Calif. Filed Apr. 17, 1957.

LGP-30

For Electronic Computers.
First use Sept. 24, 1956.

SN 29,226. Sabine-Dohrmann Co., San Diego, Calif. Filed May 10, 1957.

CATHANODE

For Cathodic Protection System for Use on Ships and Pipe Lines, Consisting of Magnesium Anodes and Control Panels Equipped With Instruments To Determine the Protection of the Ship or Pipe Line Against Galvanic Metal Losses.
First use on or about Mar. 1, 1956.

SN 34,867. Rotolite Corporation, Stirling, N. J. Filed Aug. 2, 1957.

Rotolite

For Photo-Copying Apparatus; for Accessory Apparatus—Namely, Photographic Lamps and Photographic Developing Tubes; Also for Photo Sensitized Printing Material.
First use Dec. 31, 1954.

SN 51,056. Rett Products Co., Detroit, Mich. Filed May 5,

SN 32,624. The Raine-Pharmas Company, Mount Holly

SN 38,410. The Babcock & Wilcox Company, New York, N. Y. Filed Oct. 7, 1957. Sec. 2(f).

BABCOCK & WILCOX

For Equipment Useful in the Production or Utilization of Special Nuclear Material or Atomic Energy, Such as Nuclear Reactors, Nuclear Reactor Fuel Elements, Heat Exchange Apparatus and the Like.

First use June 29, 1953.

SN 38,707. The Partlow Corporation, New Hartford, N. Y. Filed Oct. 10, 1957.

PARTLOW

For Temperature, Humidity and Time Measuring, Indicating, Recording, and Control Instruments.

First use on or before Jan. 1, 1921.

SN 38,990. Gilbert & Barker Manufacturing Company, West Springfield, Mass. Filed Oct. 16, 1957.

GILBARCO

Owner of Reg. Nos. 310,944, 584,462, and others.

For Electronic Devices for Determining the Condition of Liquids in Containers, for Diverting Flowing Fluids and for Detecting Residual Electrostatic Charges—Namely, Electronic Tank Gauges, Automatic Samplers, and Indicating Grounds.

First use Mar. 23, 1951.

SN 47,762. The Gyrex Corporation, Santa Monica, Calif. Filed Mar. 14, 1958.

VIBRA-TINE

For Electro-Mechanical Resonators and Electro-Mechanical Frequency Generators or Standards.

First use Oct. 31, 1957.

SN 47,763. Hancock Industries, Inc., Jackson, Mich. Filed Mar. 14, 1958.

TELECONTROL

For Systems for Registering at a Central Station Information Concerning the Production and Status of a Plurality of Machine Tools at Different Locations and for Transmitting Information Regarding Such Production and Status Between the Central Station and the Independent Machines.

First use Mar. 3, 1958.

SN 48,079. Biological Research, Inc., St. Louis, Mo. Filed Mar. 20, 1958.

SPIRACRIT

For Hematocrit Reading Instruments.

First use July 17, 1950.

SN 48,483. Reeves Soundcraft Corp., New York, N. Y. Filed Mar. 25, 1958.

SOUNDCRAFT

Owner of Reg. Nos. 512,683 and 663,066.

For Motion Picture Film Having a Coating of Magnetic Composition Applied Thereto.

First use May 1, 1951.

SN 49,839. Walrus Manufacturing Company, Decatur, Ill. Filed Apr. 14, 1958.

WALRUS

Owner of Reg. No. 685,727.

For Laboratory Equipment—Namely, Laboratory Work Tables Including Cabinets, Racks, Sinks, Electrical Outlets, and Plumbing Fixtures for Gas, Air, Vacuum and Water; Drying Cabinets for Laboratory Use; Developing Tables for Photographic Use; Laboratory Desks for Use With Microscopes; Titration Tables; Glass Blower Tables; Balance Tables; Distillation Racks; Gyrorotating Beds; Film Loading Bins; Aquariums; Fume Hoods for Laboratory Use; Laboratory Steam Bath Equipment; Dust Caps; Turret Units Including Plumbing Equipment Such as Water Faucets, Gas Cocks, Air Cocks, Vacuum Cocks, and Electrical Receptacles.

First use in or about 1910.

SN 50,376. Monsanto Chemical Company, St. Louis, Mo. Filed Apr. 25, 1958.

Monsanto

Owner of Reg. Nos. 537,997, 500,474, and others.

For Measuring Devices for Calibrating the Rate of Application of Various Types of Liquid Sprays, Such as Herbicides, Insecticides, and Liquid Fertilizers; Measuring Devices for Determining the Exact Amount of Active Ingredient To Be Used in Mixing Liquid Sprays Such as Herbicides, Brush Killers, Weed Killers, and Similar Materials.

First use Feb. 5, 1957.

SN 50,502. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Apr. 28, 1958.

TILT-A-MITE

For Photographic Flash Units.

First use Dec. 17, 1957.

SN 50,503. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Apr. 28, 1958.

PRESSMASTER

For Photographic Equipment—Namely, Photo-Flash Lamp Heads.

First use at least as early as July 1, 1947.

SN 50,608. Dictograph Products Company, Inc., Jamaica, N. Y. Filed Apr. 29, 1958.

Dictograph

Owner of Reg. Nos. 85,473 and 523,020.

For Electrical Protective Signal Systems, Including Fire and Burglar Alarm Systems, Telephone Interference Detection Systems, Police Detection Systems and Parts Therefor.

First use in October 1948.

SN 50,771. Asia Chadli, Paris, France. Filed May 1, 1958.

POLARIS

Priority claimed under Sec. 44(d) on French Reg. No. 468,505, dated Nov. 27, 1957 (Paris); Natl. Inst. No. 98,820.

For Polarized Glass for Use in the Manufacture of Sun Glasses, Corrective Optical Glasses or Lenses, Photographic and Cinematographic Lenses and Filters, Vehicle Windshields and Sun Visors, Etc.

SN 51,056. Rett Products Co., Detroit, Mich. Filed May 6, 1958.

WINDPATROL

For Meteorological Equipment—Namely, Wind Speed and Wind Direction Indicating and Recording Equipment.
First use Feb. 3, 1956.

SN 51,169. The Bin-Dicator Company, Detroit, Mich. Filed May 7, 1958.

ROTO-GUARD

For Motion Indicator, That Is, a Device for Indicating Whether or Not a Conveyor or Machine Is Operating.
First use Apr. 14, 1958.

SN 51,728. Lehn & Fink Products Corporation, Bloomfield, N. J. Filed May 15, 1958.

ECONOMIX

For Mechanical Measuring Device To Be Attached to a Container of Concentrated Disinfectant and Also to a Water Faucet To Compute the Proportion of Water and Disinfectant To Be Used Together.
First use Apr. 15, 1958.

SN 51,750. Sterling-Howard Corporation, New York, N. Y. Filed May 15, 1958.

MINILUX

For Photographic Exposure Meters and Flash Guns.
First use June 1957.

SN 51,970. Adage, Inc., Cambridge, Mass. Filed May 20, 1958.

VOLDICON

For Analogue to Digital Converters.
First use Dec. 28, 1957.

SN 52,527. Sunbeam Corporation, Chicago, Ill. Filed May 28, 1958.

SUNBEAM

For Temperature Indicating Instruments Including Thermocouples, Thermometers, and Pyrometers.
First use in or before October 1955.

Class 31—Filters and Refrigerators

SN 15,451. Cyclone Filter Corporation, Longmont, Colo. Filed Sept. 11, 1956.

CYCLONE

For Oil Filters for Internal Combustion Engines.
First use about September 1945.

SN 41,097. Donaldson Company, Inc., St. Paul, Minn. Filed Dec. 3, 1957.

Duralife

Owner of Reg. No. 637,442.
For Air Filters.
First use Nov. 1, 1957.

SN 52,624. The Eaton-Dikeman Company, Mount Holly Springs, Pa. Filed May 22, 1958.

E D

Owner of Reg. Nos. 426,361, 616,196, and others.
For Filter Papers for Industrial and Scientific Use.
First use March 1958.

Class 32—Furniture and Upholstery

SN 658,118. Schnadig Corporation, Chicago, Ill., by merger from International Furniture Company, Chicago, Ill. Filed Dec. 17, 1953.

Karpen

DUO-FOAM

Owner of Reg. No. 519,195.
For Mattresses, Box Springs, Sofas, and Upholstered Chairs.
First use June 22, 1953.

SN 658,115. Schnadig Corporation, Chicago, Ill., by merger from International Furniture Company, Chicago, Ill. Filed Dec. 17, 1953.

Karpen

DUO-REST

Assignee owner of Reg. Nos. 519,195 and 529,729.
For Mattresses, Box Springs, Sofas, and Upholstered Chairs.
First use Nov. 15, 1956.

SN 19,803. Alfred J. Ouellette, St. Paul, Minn. Filed Nov. 23, 1956.

Prop-a-Seat

For Baby Chair or Seat for Small Infants.
First use Mar. 9, 1955.

SN 41,315. Howard Parlor Furniture Company, Chicago, Ill. Filed Nov. 25, 1957.

SKY LINE

For Upholstered Living Room Furniture.
First use Sept. 15, 1952.

SN 46,444. Herbert Glatt, d. b. a. Maple Products, Newark, N. J. Filed Feb. 28, 1958.

POLY-U

Owner of Reg. Nos. 635,365 and 655,216.
For Padding Shaped or Cut to Size for Use in Articles of Furniture.
First use Dec. 18, 1957.

SN 50,814. Marshallan Mfg. Company, Cleveland, Ohio. Filed May 1, 1958.

MARSHALLAN

For Kitchen Furniture.
First use Sept. 1, 1946.

SN 50,926. Percy A. Ross, d. b. a. Crown Flex Corporation, Los Angeles, Calif. Filed May 2, 1958.

CROWN FLEX

For Wire Insulator Pads for Bedding, Upholstered Furniture and Auto Upholstery.
First use Feb. 14, 1958.

SN 54,115. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed June 23, 1958.

WILLIAMSBURG

Owner of Reg. Nos. 309,815 and 685,074.
For Household Furniture—Namely, Furniture for Living Rooms, Dining Rooms, Libraries, Game Rooms, Hall, and Bedrooms.
First use Mar. 2, 1957.

SN 56,885. Slumber Products Corporation, d. b. a. Sealy Mattress Company, Memphis, Tenn. Filed Aug. 8, 1958.

REST GUARD

For Mattresses and Box Springs.
First use Sept. 13, 1957.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 46,519. Wright Manufacturing Company, Phoenix, Ariz. Filed Feb. 24, 1958.

REGAL

For Evaporative Air Coolers.
First use Jan. 10, 1957.

SN 48,279. Sid Harvey, Inc., Valley Stream, N. Y. Filed Mar. 24, 1958.

SID HARVEY'S

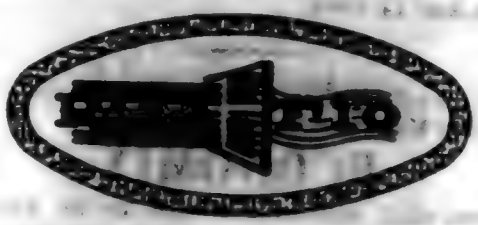
For Household Heating Apparatus and Replacement Parts Therefor.
First use September 1944.

SN 48,280. Sid Harvey, Inc., Valley Stream, N. Y. Filed Mar. 24, 1958.

SH

For Household Heating Apparatus and Replacement Parts Therefor.
First use September 1944.

SN 49,590. Lenly Manufacturing Co. Inc., Los Angeles, Calif. Filed Apr. 14, 1958.



The drawing is lined for particular colors, but color is not claimed as an integral part of the mark.
For Air Conditioning Registers, Grilles, and Diffusers.
First use Jan. 5, 1957.

SN 51,127. Hollywood Water Heater Company, Los Angeles, Calif. Filed May 6, 1958.

HOLLY MAID

For Automatic, Gas Fired Water Heaters.
First use Mar. 7, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

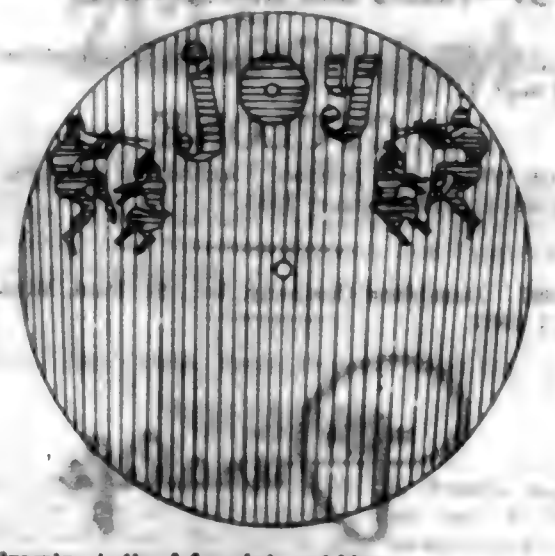
SN 50,988. The Dill Manufacturing Company, Cleveland, Ohio. Filed May 5, 1958.

DILL'CO

For Patches for Tires and Analogous Rubber Articles.
First use Apr. 14, 1958.

Class 36—Musical Instruments and Supplies

SN 22,055. Joy Records Corp., Durham, N. C. Filed Jan. 3, 1957.



The drawing is lined for pink and blue.
For Grooved Phonograph Records.
First use Nov. 30, 1956.

SN 48,516. Cecil Ernest Watts, Sunbury-on-Thames, Middlesex, England. Filed Feb. 24, 1958.

DUST BUG

Priority claimed under Sec. 44(d) on British Reg. No. 774,223, dated Feb. 11, 1958.

For Devices for Incorporation in Gramophone Turntables for Cleaning and Applying Anti-Static Fluid to Gramophone Records While They Are Being Played.

SN 48,771. Mold Craft, Inc., Chicago, Ill. Filed Mar. 31, 1958.

SPIN-A-TUNE

For Drum Type Record Holders of Plastic Materials Adapted To Hold Records in a Vertical Position.

First use February 1958.

Class 37—Paper and Stationery

SN 30,586. Imperial Paper and Color Corporation, Glen Falls, N. Y. Filed May 22, 1957.

GLENDURA

Owner of Reg. No. 526,110.

For Wallpapers.

First use Jan. 3, 1949.

SN 38,503. Union Bag-Camp Paper Corporation, New York, N. Y. Filed Oct. 7, 1957. Sec. 2(f).

STA-KOLD

Owner of Reg. No. 549,105.

For Paper Bags.

First use Apr. 28, 1950.

SN 40,929. Eberhard Faber Pencil Company, Wilkes-Barre, Pa. Filed Nov. 19, 1957.

LITHO-PRINT

For Pencils and Ball Point Pens.

First use Nov. 1, 1957.

SN 41,783. Waxon-Carboff, Inc., Rochester, N. Y. Filed Dec. 4, 1957.

WAXON

For Wax Process Recording Chart Paper.

First use Nov. 25, 1957.

SN 41,794. Waxon-Carboff, Inc., Rochester, N. Y. Filed Dec. 4, 1957.

CARBOFF

For Wax Process Manifolding Paper.

First use Nov. 14, 1957.

SN 47,866. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 17, 1958.

MARVALON

Owner of Reg. No. 444,050.

For Plastic Coated Paper.

First use Oct. 24, 1945.

Class 38—Prints and Publications

SN 37,285. National Safety Book Publishers, Chicago, Ill. Filed Sept. 16, 1957.

CHILDREN'S SAFETY PROGRAM

For Periodically Published Booklets Pertaining to the Safety of Children and Others.

First use Jan. 15, 1956.

SN 41,701. Goodrex Products Corporation, Englewood, N. J. Filed Dec. 3, 1957.

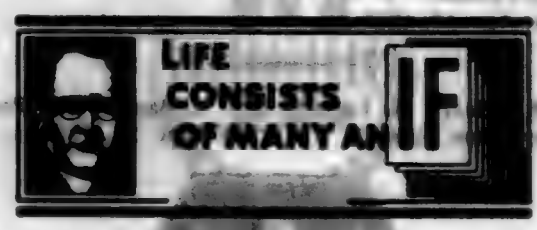
Goodrex IDENTIFIERS

Applicant disclaims exclusive right to or ownership of the term "Identifiers" except insofar as same constitutes part of the trademark. Owner of Reg. Nos. 625,034 and 627,877.

For Printed Plastic Labels for Mailing, Marking Packages, Merchandise, Etc.

First use Apr. 1, 1957.

SN 42,630. Roscoe C. Boswell, Utica, N. Y. Filed Dec. 18, 1957.



The representation of the man shown in the drawing is a likeness of the applicant.

For Periodical Column on Miscellaneous Current Interest Items.

First use Nov. 24, 1957.

SN 44,935. The Stevens-Davis Company, Chicago, Ill. Filed Jan. 29, 1958.

MOTTOGRAM

For Printed Advertising Material Prepared for Clients.

First use May 6, 1957.

SN 46,102. The Wilderness Society, Washington, D. C. Filed Apr. 4, 1958.

The LIVING WILDERNESS

For Magazine.

First use September 1935.

SN 51,308. Oliver D. Rogers and John C. Kennedy, Chicago, Ill. Filed Apr. 28, 1958.

JINGO

For Greeting Cards.

First use on or about Nov. 15, 1957.

SN 48,519. United Mills Corporation, Mount Gilead, N. C.

SN 50,050. H. B. I. Knitting Mills, Inc., Brooklyn, N. Y.

Class 39—Clothing

SN 31,316. Framex International, New York, N. Y. Filed June 4, 1957.

Framex

For Men's, Women's, Girls', Boys', and Children's Wearing Apparel—Namely, Suits, Dresses, Slips, Coats, Pants, Trousers, Slacks, Skirts, Petticoats, Bouffants, Jackets, Gowns, Robes, Pajamas, Blouses, Sweaters, Hosiery, Socks, Stockings, Girdles, Brassieres, Shirts, Vests, Swimsuits and Trunks, Caps, Underwear, Ties, Scarves, Kerchiefs, Handkerchiefs, Shoes, Slippers, Belts, Suspenders, Gloves, Mittens, Creepers, Infants' Diapers.

First use since at least February 1948.

SN 35,274. Le Monde Corset Company, Saginaw, Mich. Filed Aug. 9, 1957. Sec. 2(f).

MATERNITY SASH

For Corsets.
First use Mar. 1, 1943.

SN 35,928. Goodstein Bros. & Co., Inc., New York, N. Y. Filed Aug. 21, 1957.

ROCK-KNIT

For Men's Coats.
First use Apr. 17, 1935.

SN 37,886. Harry H. Lerner, d. b. a. Sani-Shield Products Company, New York, N. Y. Filed Sept. 26, 1957.

For Panties, Night Garments, Shirts and the Like, for Sick and Aged Persons.
First use Oct. 2, 1956.

SN 40,172. Her Majesty Underwear Company, Mauldin, S. C. Filed Nov. 6, 1957.

Tape-O-Last

For Panties, Petticoats, Pajamas.
First use Oct. 25, 1957.

SN 41,014. Arthur H. Freedberg Co., Boston, Mass. Filed Nov. 20, 1957.

FREELITE

For Men's Suits and Slacks.
First use Jan. 1, 1937.

SN 42,128. Hollywood-Maxwell Co., Los Angeles, Calif. Filed Dec. 10, 1957.

STAY THERE!

For Brassieres.
First use Nov. 7, 1957.

SN 42,574. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Dec. 17, 1957.

BAN-LON

Owner of Reg. Nos. 505,385 and 621,848.
For Yarn Products—Namely, Knitted Outerwear, Knitted Underwear, Hosiery, and Garments Made From Textile Fabric.
First use during April 1954 on men's nylon hose.

SN 44,089. Hickey-Freeman Company, Rochester, N. Y. Filed Jan. 16, 1958.

LLAMALOOM

For Men's Overcoats Made in Whole or Substantial Part of Fabrics Made in Substantial Part of Llama Fleece.
First use on or about Sept. 22, 1957.

SN 45,387. Good Luck Glove Company, Carbondale, Ill. Filed Feb. 6, 1958.

For Work Gloves.
First use Jan. 21, 1958.

SN 46,706. Capezio, Inc., New York, N. Y. Filed Feb. 27, 1958.

STEMTITE

Owner of Reg. No. 662,630.
For Tights.
First use Jan. 15, 1958.

SN 47,045. Co-Pilot, Inc., New York, N. Y. Filed Mar. 4, 1958.

RUTHENE

For Girdles, Corsets, Corselets, Garter Belts, Pantie Girdles.
First use Apr. 13, 1946.

SN 47,542. Wispess Corp., New York, N. Y. Filed Mar. 11, 1958.

DADEE-O

For Girdles.
First use Feb. 13, 1958.

SN 48,378. Harold Levy, New York, N. Y. Filed Mar. 24, 1958.

ANN ARBER

For Ladies' Hosiery.
First use September 1947.

SN 51,542. Bodin & Bock, New York, N. Y. Filed May 6, 1958.

SN 37,618. Redwood & Ross, Inc., Kalamazoo, Mich. Filed

SN 48,519. United Mills Corporation, Mount Gilead, N. C. Filed Mar. 26, 1958.

SUZY of Paris

Owner of Reg. No. 635,976.
For Brassieres, Panties, Hosiery, Girdles, Slips, and Lingerie.
First use Aug. 1, 1955.

SN 48,584. Irving Rosen, New York, N. Y. Filed Mar. 27, 1958.

WILLIAM LESLIE

For Shoes.
First use Apr. 1, 1957.

SN 48,638. Mr. John, Inc., New York, N. Y. Filed Mar. 28, 1958.

MR. JOHN

Owner of Reg. Nos. 549,819 and 632,767.
For Men's and Women's Hose.
First use Mar. 21, 1958.

SN 48,978. Plemit Company, Inc., Elizabeth, N. J. Filed Apr. 3, 1958.

CHEMEATH

For Corselette.
First use on or about Mar. 5, 1958.

SN 49,161. Kaylon Incorporated, New York, N. Y. Filed Apr. 7, 1958.

KAYLON

Owner of Reg. Nos. 355,645 and 504,172.
For Sportswear for Women and Girls, Including T-Shirts, Shirts, Blouses, Shorts, Skirts, Slacks, Jackets, Pedal Pushers, and Bermuda Shorts.
First use in December 1957.

SN 49,162. Kaylon Incorporated, New York, N. Y. Filed Apr. 7, 1958.

TOMMIES

Owner of Reg. Nos. 352,190, 567,750, and others.
For Sportswear for Women and Girls, Including T-Shirts, Shirts, Blouses, Shorts, Skirts, Slacks, Jackets, Pedal Pushers, and Bermuda Shorts.
First use in December 1957.

SN 49,721. Max Udell Sons & Co. Inc., New York, N. Y. Filed Apr. 15, 1958.

KIT-CRAFT

For Men's and Young Men's Suits and Sportcoats.
First use Jan. 1, 1945.

SN 49,898. Argo Knitting Mills, Inc., Schuylkill Haven, Pa. Filed Apr. 18, 1958.

MR. PHILIP

For Men's Knitted Polo Shirts and Men's Knitted Pajamas.
First use Apr. 1, 1958.

SN 50,050. H. B. I. Knitting Mills, Inc., Brooklyn, N. Y. Filed Apr. 21, 1958.

Betty Hope

For Ladies' Sweaters.
First use Jan. 22, 1958.

SN 50,074. Lewel Manufacturing Co., Inc., New York, N. Y. Filed Apr. 21, 1958.

WEE BIT

For Girdles.
First use in 1932.

SN 50,167. La Jolla Sportswear Company, Los Angeles, Calif. Filed Apr. 22, 1958.

"One-Twenty-One"

For Men's Sport Shirts.
First use Sept. 1, 1957.

SN 50,362. Grodins of California, Inc., Oakland, Calif. Filed Apr. 25, 1958.

12 12-MAY WALDRON

For Men's Clothing—Namely, Suits, Slacks, Sport Jackets.
First use Mar. 8, 1958.

SN 50,737. Shoe Corporation of America, Columbus, Ohio. Filed Apr. 30, 1958.

JELLY BEAN

For Women's Shoes.
First use Apr. 2, 1958.

SN 50,738. Shoe Corporation of America, Columbus, Ohio. Filed Apr. 30, 1958.

SUM JIM

For Men's Shoes.
First use Apr. 2, 1958.

SN 50,867. G. H. Bass & Co., Wilton, Maine. Filed May 2, 1958.

HALF-BREED

Owner of Reg. No. 348,223.
For Boots, Shoes, Slippers, and Moccasins, of Leather, Rubber, and Fabric or Combinations Thereof.
First use Mar. 15, 1955.

SN 43,721. Etablissements Poinsot Freres Societe Anonyme, SN 51,556. Mixed Fields Incorporated, New York, N. Y.

SN 51,142. Rudin & Roth, New York, N. Y. Filed May 6, 1958.

For Boys' Socks.
First use Apr. 9, 1958.
Subj. to Intf. with SN 57,418.

SN 51,272. Protective Footwear Service Limited, Bristol, England. Filed May 9, 1958.

PLUS FIFTY

Owner of British Reg. No. 709,548, dated Aug. 6, 1952.
For Boots, Shoes, Slippers, and Sandals.

SN 51,508. International Latex Corporation, Dover, Del. Filed May 13, 1958.

SUGAR PLUM

For Waterproof Baby Pants.
First use Apr. 15, 1958.

SN 51,656. Petite Miss Co., New York, N. Y. Filed May 14, 1958.

JOSHUA

For Ladies' and Misses' Coats and Suits.
First use Apr. 28, 1958.

SN 51,657. Petite Miss Co., New York, N. Y. Filed May 14, 1958.

MIMINCK

For Ladies' and Misses' Coats, Suits, and Capes.
First use Apr. 11, 1958.

SN 51,831. O'Bryan Bros., Inc., Chicago, Ill. Filed May 19, 1958.

SHORT STORIES

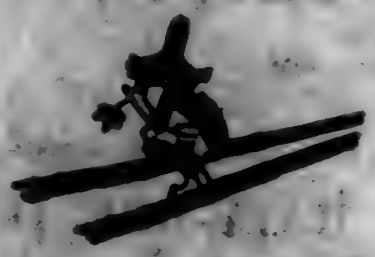
For Women's and Children's Panties.
First use Apr. 11, 1958.

SN 51,884. Fernald Co., Boston, Mass. Filed May 20, 1958.

DISCREET

For Brassieres.
First use Apr. 7, 1958.

SN 51,942. Haymaker Sports, Inc., New York, N. Y. Filed May 21, 1958.



Owner of Reg. No. 626,167.
For Slacks, Leotards, Playsuits, Bermuda Shorts, Jumpers, Sweaters, and Beachwear.
First use in January 1949 on playsuits.

SN 57,418. Redwood & Ross, Inc., Kalamazoo, Mich. Filed Aug. 18, 1958.

For Men's and Children's Pants, Shorts, Coats, Underwear, Hosiery, Neckties, Hats, Shirts, Sport Shirts, and Women's Shorts, Suits, Topcoats, and Overcoats.
First use Sept. 21, 1956.
Subj. to Intf. with SN 51,142.

Class 40—Fancy Goods, Furnishings, and Notions

SN 51,718. Edward C. Koch, d. b. a. Koch Products, Highland, Ill. Filed May 15, 1958.

SPOOL POOL

For Holders for Spools of Thread.
First use Apr. 3, 1956.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 28,451. The James Textile Corp., New York, N. Y. Filed Mar. 4, 1957.

Penna-Tee
SHRINKAGE CONTROL

The words "Shrinkage Control" are disclaimed apart from the mark as shown.
For Fabric Treated for Shrinkage Control Sold Only in Finished Articles of Apparel—Namely, Women's and Girls' Sweaters, Polo Shirts, Scarves, Blouses, Jackets, Shorts, Bathing Suits, Dresses, Halters, and Hosiery.
First use Aug. 20, 1956.

SN 57,505. Simon Kunst & Co. Inc., New York, N. Y. Filed Sept. 19, 1957.

STURDI-KROME

For Textile Fabrics of Synthetic Fibers for Making Wearing Apparel and Yarn Thereof, Domestics, Shower and Other Curtains, Draperies and Upholstery Fabrics Sold by the Yard and in the Piece.
First use Sept. 13, 1957.

SN 57,515. Skidmore Fabrics, Inc., Paterson, N. J. Filed Sept. 19, 1957.

GUARAN-TONED

For Lining Fabrics of Synthetic Fibers for Draperies.
First use Aug. 1, 1957.

SN 47,746. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed May 14, 1958.

SN 52,349. General Foods Corporation, White Plains, N. Y.

SN 45,722. Etablissements Bidaut Freres Societe Anonyme, Paris, France. Filed Feb. 12, 1958.

ROYAL PARIS

No claim is made to the word "Paris." Owner of French Reg. No. 468,430, dated Nov. 22, 1957 (Paris); Natl. Inst. No. 98,477.

For Canvas in the Piece Used for Embroidering.

SN 46,929. Edmund Garigue, London, England. Filed Mar. 3, 1958.

GARIGUE

For Textile Fabrics Wholly or Partly of Wool for Use in Manufacture of Dresses and Men's and Women's Coats and Suits.

First use August 1947; in commerce Sept. 12, 1952.

SN 47,790. Technical Textile Co., Philadelphia, Pa. Filed Mar. 14, 1958.

JET-TEX

For Rayon Fabrics for Use in the Manufacture of Luggage and in the Manufacture of Automobile Slip Covers.

First use on or about July 1, 1955.

SN 48,956. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Apr. 3, 1958.

EVERGLAZE

The words "Quality Tested" and "Easy Care Fabrics" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 655,290 and 854,038.

For Piece Goods Having a Wash Resistant Finish.

First use Mar. 17, 1958, on finished cotton piece goods.

SN 50,020. Jesse F. Calloway, Jr., d. b. a. Hallmark Carpet House, Dalton, Ga. Filed Apr. 21, 1958.

Hallmark Carpets

Applicant disclaims the use of the word "Carpets" apart from the mark.

For Tufted Carpets.

First use Apr. 12, 1957.

SN 50,209. Beacon Manufacturing Company, Swannanoa, N. C. Filed Apr. 23, 1958. Sec. 2(f).

WELLINGTON

For Blankets.

First use Sept. 23, 1952.

SN 51,202. A. Sagner's Son, Frederick, Md. Filed May 8, 1958.

NORTHWEAVE

Owner of Reg. Nos. 571,167, 627,063, and others.

For Fabrics Made of Woolen, Cotton, Nylon and Other Synthetic Fibers and Combinations Thereof for Making Men's and Women's Suits, Coats, Slacks, Jackets, and Sport Shirts.

First use September 1948.

SN 51,556. Edward Fields Incorporated, New York, N. Y. Filed May 13, 1958.

TAPISRUG

For Needle Point Tufted Rugs and Carpets.

First use Dec. 4, 1957.

SN 51,613. Reliable Textile Company, Inc., New York, N. Y. Filed May 16, 1958.

TACUBA

For Textile Piece Goods of Mixed Cotton and Synthetic Fibers.

First use Dec. 23, 1957.

SN 51,614. Reliable Textile Company, Inc., New York, N. Y. Filed May 16, 1958.

SINGALLA

For Textile Piece Goods of Mixed Synthetic Fibers.

First use Mar. 11, 1958.

SN 51,615. Reliable Textile Company, Inc., New York, N. Y. Filed May 16, 1958.

UMBRIA

For Textile Piece Goods of Synthetic Fibers.

First use July 12, 1957.

SN 51,616. Reliable Textile Company, Inc., New York, N. Y. Filed May 16, 1958.

TIROLIO

For Textile Piece Goods of Mixed Cotton and Synthetic Fibers.

First use Feb. 25, 1958.

Class 43—Thread and Yarn

SN 24,475. Teikoku Rayon Company Limited, Nishi-ku, Osaka, Japan. Filed Feb. 15, 1957.

Teviron

Priority claimed under Sec. 44(d) on Japanese application filed Nov. 21, 1956, Reg. No. 328,840, dated July 10, 1956.

For Yarns and Threads of Synthetic Fibres.

SN 41,207. Industrial Rayon Corporation, Cleveland, Ohio. Filed June 17, 1957. Sec. 2(f).

SPUN BLACK

For Yarn.

First use Feb. 18, 1938.

SN 48,427. Oregon Worsted Company, Portland, Oreg. Filed Feb. 5, 1958.

Fleece Gold

Owner of Reg. No. 439,619.

For Wool and Wool and Nylon Yarn.

First use June 15, 1935.

SN 45,466. The Farm Bureau Cooperative Association, Inc.,

Class 47—Wearing Apparel

SN 47,744. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 14, 1958.

LYCRA

For Yarns and Threads of Synthetic Fibers.
First use Feb. 13, 1958.

SN 52,018. Stephen Spinning Company, Manchester, N. H. Filed May 20, 1958.

TWEEDLON

For Thread and Yarn.
First use Mar. 5, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 34,458. Herman Krauss, Toledo, Ohio. Filed July 26, 1957.

THEREXERCISE

For Foam Rubber Sculpture Kit Having a Supply of Foam Rubber in Block and Sheet Form, Foam Rubber Cutting Shears, Foam Rubber Adhesive and Applicator Therefor, Foam Rubber Marking Ball-Point Pen, Calipers, a Scale, and an Instruction Booklet as Parts of the Kit for Use in Inducing Therapeutic Manual Exercise.
First use July 1, 1957.

SN 46,273. Don Baxter, Inc., Glendale, Calif. Filed Feb. 21, 1958.

STYLEX

For Empty Disposable Hypodermic Syringes, With and Without Needles.
First use Jan. 6, 1958.

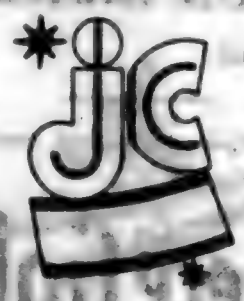
SN 49,042. Brooks Appliance Company, Inc., Marshall, Mich. Filed Apr. 4, 1958.

PEERLESS

Owner of Reg. No. 387,043.
For Trusses for Use With Injection Treated Hernia.
First use on or about Dec. 1, 1936.

Class 45—Soft Drinks and Carbonated Waters

SN 10,406. Crystal Spring Bottling Works Limited, d. b. a. John Collins of Canada, Waterloo, Quebec, Canada. Filed June 18, 1956.



Priority claimed under Sec. 44(d) on Canadian application filed Apr. 5, 1956; Reg. No. 110,717, dated July 4, 1956. Owner of U. S. Reg. No. 602,778.
For Soft Drinks.

SN 38,349. General Foods Corporation, White Plains, N. Y. Filed Oct. 4, 1957.

KOOL FIZZ

Owner of Reg. Nos. 217,985, 642,703, and others.
For Tablets for Use in Making Soft Drinks.
First use Aug. 6, 1957.

SN 39,568. Kist Double Cola Bottling Company, Inc., Macon, Miss. Filed Oct. 14, 1957.

BIG 12

For Soft Drinks.
First use Jan. 2, 1955.

Class 46—Foods and Ingredients of Foods

SN 694,999. Joe & Nemo, Inc., Boston, Mass. Filed Sept. 20, 1955.

The drawing is lined for orange.
For Frankforts and Hamburgers.
First use Jan. 1, 1919.

SN 11,900. V. Arena & Sons, Inc., Norristown, Pa. Filed July 11, 1956.

TWISTETTI

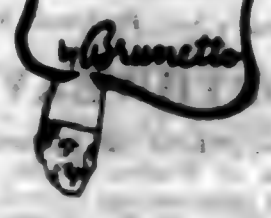
For Alimentary Pastes.
First use Feb. 27, 1956.

SN 20,294. Sunshine Biscuits, Inc., Long Island City, N. Y., assignee of Peanut Fluf Company, Detroit, Mich. Filed Dec. 3, 1956.

peanut fluf

Applicant disclaims the word "Peanut" apart from the mark as shown.
For Foamed Peanut Butter.
First use Jan. 12, 1956.

SN 21,870. Brunetto Cheese Co., Inc., Teghers, N. Y. Filed Dec. 31, 1956.



For Cheese.
First use Nov. 23, 1956.

First use September 1948.

First use June 15, 1935.

SN 45,466. The Farm Bureau Cooperative Association, Inc., Columbus, Ohio. Filed Feb. 7, 1958.

LANDMARK

For Feed for Cattle, Livestock, and Other Domestic Animals, Such as Dogs and the Like.
First use Jan. 31, 1958.

SN 50,808. Merck & Co., Inc., Rahway, N. J. Filed Apr. 24, 1958.

NEO-CEBITABS

Owner of Reg. Nos. 647,959 and 653,878.
For Compound for Use in Curing Foods, Particularly Meats.
First use Apr. 11, 1958.

SN 50,920. Pillsbury Mills, Inc., Minneapolis, Minn. Filed May 2, 1958.

TURBO.

For Wheat Flour.
First use Aug. 30, 1957.

SN 51,150. Stella D'Oro Biscuit Co. Inc., New York, N. Y. Filed May 6, 1958.

LADY MARGHERITE

For Cookies and Biscuits.
First use May 15, 1956.

SN 52,044. Healthco, Inc., Franklin Square, N. Y. Filed May 21, 1958.

HEALTHCO

For Sunflower Seeds.
First use Oct. 29, 1957.

SN 52,355. Tenderfrost, Inc., Brockport, N. Y. Filed May 26, 1958.

TENDERFROST

Owner of Reg. No. 660,622.
For Meats—Namely, Frozen Veal Steaks, Frozen Beef Steaks, Frozen Pork Steaks, and Pre-Cooked Sausage.
First use June 27, 1957.

SN 52,478. Dairyland Feed Laboratories, Inc., Waukesha, Wis. Filed May 28, 1958.

ITALASE

For Enzymatic Preparation With Lipolytic and Proteolytic Effect for Use in Foods.
First use July 19, 1946.

Class 47—Wines

SN 26,762. Beringer Bros., Inc., St. Helena, Calif. Filed Mar. 25, 1957. Sec. 2(f) as to "Beringer."

BERINGER
THE GUEST QUALITY
WINE

No claim is made to the term "The Guest Quality Wine" apart from the mark as shown. Owner of Reg. Nos. 319,190 and 629,812.
For Wines.
First use Feb. 28, 1957; 1876 as to "Beringer."

SN 45,967. E. & J. Gallo Winery, Modesto, Calif. Filed Feb. 17, 1958.

Las Vegas

For Wines.
First use Jan. 20, 1958.

Class 48—Malt Beverages and Liquors

SN 38,590. Carlsberg Bryggerierne, Indehaver Carlsbergfondet, d. b. a. The Carlsberg Breweries, Copenhagen, Denmark. Filed Oct. 9, 1957.

Carlsberg

Owner of Danish Reg. No. 1127—1936, dated Oct. 31, 1936; and U. S. Reg. No. 631,897.
For Beer, Ale, Porter, and Stout.
First use May 1904; in commerce April 1946.

SN 38,592. Carlsberg Bryggerierne, Indehaver Carlsbergfondet, Copenhagen, Denmark. Filed Oct. 9, 1957.

Owner of Danish Reg. No. 1117-1955, dated June 25, 1955.
For Beer, Ale, Porter, and Stout.

Class 49—Distilled Alcoholic Liquors

SN 48,923. Campbells (Distillery) Limited, Glasgow, Scotland. Filed Jan. 14, 1958.

PRECIOUS HEATHER

Owner of British Reg. No. B. 758,822, dated Oct. 25, 1956.
For Scotch Whisky.

Class 50—Merchandise Not Otherwise Classified

SN 17,709. Delano Granite Works, Inc., Delano, Minn. Filed Oct. 18, 1956. Sec. 2(f).

DELANO

For Stone Monuments and Markers.
First use January 1941.

SN 36,992. Arthur L. Harris, d. b. a. North Shore Figurine Co., Lynn, Mass. Filed Oct. 16, 1957.

HOUSE OF FUN

For Unpainted Plaster Figurines Sold Separately and Kits, Comprising Unpainted Plaster Figurines and Paints, Glazes and Brushes for Decorating the Figurines, Sold as a Unit.
First use June 10, 1957, on unpainted plaster figurines.

SN 46,219. Samuel Furness Mat Co., Inc., Union, N. J. Filed Feb. 20, 1958.

ULTI-MAT

For Floor Mats Made of Plastic or Rubber Elements, Some of Which Are Reinforced by Metal Plates, All of Which Are Mounted on Heavy Metal Wire.
First use Feb. 6, 1958.

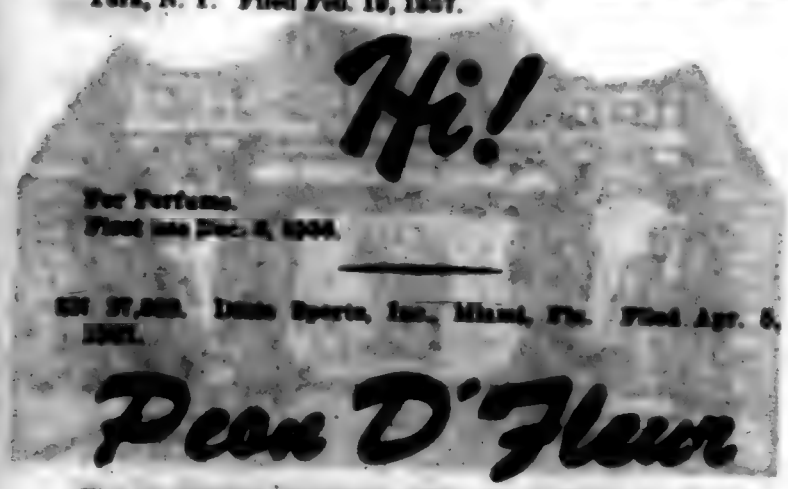
SN 45,608. William A. Borba, d. b. a. Borba Manufacturing Co., South San Francisco, Calif. Filed Mar. 28, 1958.

CLEARLITE

For Trophies of the Prize or Award Type.
First use May 3, 1949.

Class 51—Cosmetics and Toilet Preparations

SN 24,094. Kenneth Henderson, d. b. a. Andrea Gail, New York, N. Y. Filed Feb. 19, 1957.



For Perfume.
First use Dec. 6, 1954.

SN 37,888. Dittie Sports, Inc., Miami, Fla. Filed Apr. 5, 1957.

The translation of "Poon D'Fleur" appears to be "of or from the common flower" or "of or from the peasant's flower."
For Cologne for Dogs.
First use Nov. 1, 1956.

SN 31,341. Ferdinand Mülhens, d. b. a. Eau de Cologne- & Parfümerie-Fabrik Glockengasse No. 4711 Gegenüber der Pferdepost Von Ferd. Mülhens, Cologne (Rhine), Germany. Filed June 4, 1957.

MASCOTA

The word "Mascota" translated from Spanish means "a good luck charm." Owner of German Reg. No. 472,217, dated Jan. 9, 1935.
For Eau de Cologne, Perfumes, Toilet Waters, Cosmetic Skin Cream in Liquid Form, Cosmetic Skin Astringent, After Shaving Lotion, Shaving Cream, Shaving Soap, Brilliantine, Suntan Cream and Oil, Face and Hand Massage Cream and Lotion, Depilatories, Anti-Perspirants, Mascara, Balm for Promoting the Growth of Eyelashes, Eye Shadow, Eyebrow Pencil, Lipsticks, Rouge, Make-Up in Cake and Liquid Form, Bath Salts and Crystals, Nail Polish, Nail Polish Remover, Nail Oil, Nail White Pencil, Hair Tonic, Hair Setting Lotion, Hair Waving Lotion, Mouth Wash, Dentifrices, Face Powder in Loose and in Cake Form, Essential Oils Incorporated as an Ingredient in Perfumed and Other Cosmetic Preparations, and Body Skin Powder, Foot Powder for Soothing the Feet, After Shave Powder, Massage Powder, and Baby Powder.

SN 32,929. Anthony de Falco, d. b. a. De Falchia Company, Chicago, Ill. Filed July 1, 1957.

HOLLYWOOD 7

For Hair Grooming and Hair Conditioning Preparation.
First use June 21, 1956.

SN 34,593. Conte, Societa Anonyme, Paris, France. Filed July 30, 1957.

CILCOLOR

Owner of French Reg. No. 165,586, dated June 18, 1957 (Paris); Natl. Inst. No. 91,702.
For Eyebrow and Eyelash Pencils, and Hair Coloring Pencils.

SN 38,547. La Bora, Inc., Chicago, Ill. Filed Oct. 8, 1957.

FOOT PAL

For Foot Spray To Relieve Tired, Burning Feet and Foot Odors.
First use July 31, 1957.

SN 40,289. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROFLOR

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 40,290. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROFIX

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 40,961. Dorothy Perkins Company, Inc., Newark, N. J. Filed Nov. 19, 1957.

Check Check

Owner of Reg. No. 432,324.
For Anti-Perspirant Deodorant Stick.
First use at least as early as May 15, 1957; at least as early as June 15, 1946, as to "Check."

SN 42,204. Delagar Products, Inc., Rouses Point, N. Y. Filed Dec. 11, 1957.

DELAGAR

Owner of Reg. No. 596,905.
For Bubbling Bath Preparation and Bath Oil.
First use Sept. 20, 1946.

SN 43,866. Natone Company, Los Angeles, Calif. Filed Jan. 13, 1958.

Cent Fleurs

The words "Cent Fleurs" translated into English mean "hundred flowers."
For Perfumes.
First use Dec. 16, 1957.

SN 44,696. G. A. Davis Incorporated, San Francisco, Calif. Filed Jan. 27, 1958.

Embellir

The French word "Embellir" when translated into English means "to embellish" or "to beautify."
For Face Powder, Cosmetic Skin Creams and Lotions, Facial Liquid Powder Foundation, Body Deodorant, Hair Dressing Cream, Eyeshadow, Rouge, Mascara, Skin Oil, Lipstick, and Hair Spray.
First use Nov. 26, 1957.

SN 45,763. Societe Maurice Blanchet Parfums de Luxe, Societe Anonyme, Suresnes (Seine), France. Filed Feb. 12, 1958.

PECHE PERMIS

The French expression "Peche Permis" is translated as "permitted sin." Owner of French Reg. No. 466,091, dated July 4, 1957 (Paris); Natl. Inst. No. 92,894.
For Perfumes, Essential Oils Used in the Manufacture of Cosmetics, Toilet Water, Face Powder, Rouge, Lipstick, Hair Dressing, and Setting Lotions and Dentifrices.

Class 52 — Detergents and Soaps

SN 38,770. Sandee, Inc., New York, N. Y. Filed Oct. 11, 1957.

CRYPTAN

For Chemical Ingredient for Cleaning Preparations of All Kinds, Such as Detergents, Soaps, Dishwashing Compounds, Home Laundry and Commercial Laundry Cleaning Preparations, Shampoos, Toothpastes, and Similar Preparations.
First use Sept. 30, 1957.

SN 39,889. Newton, Chambers & Company Limited, Thorncliffe, near Sheffield, England. Filed Oct. 31, 1957.

ZALPON

For Cleansing Preparation for Human Use Containing Soap and Detergents.
First use January 1950.

SN 43,430. Pennsylvania Refining Company, Cleveland, Ohio. Filed Mar. 25, 1958.

SPD

For Liquid Cleaning Preparation for Metal Parts and the Like.
First use Feb. 20, 1958.

SN 43,598. Wright Chemical Corporation, Chicago, Ill. Filed Mar. 27, 1958.

TYPEX

For Detergents Utilized Principally in Cleaning Automotive Vehicles.
First use Apr. 23, 1948.

SN 40,366. Roux Laboratories, Inc., New York, N. Y. Filed Apr. 9, 1958.

ROUX

The drawing is lined for red, blue, and gold. Owner of Reg. Nos. 511,696, 598,554, and others.
For Creme Color Shampoo for the Hair.
First use Mar. 20, 1958.

SN 50,530. William R. Stevens, Long Beach, Calif. Filed Apr. 28, 1958.

AMAZING

For Window Cleaning Compounds.
First use Apr. 2, 1958.

SN 36,404. Kee Lox Manufacturing Company, Rochester, N. Y. Filed July 31, 1958.

SPIRIT AWAY

For Detergent Impregnated Tissue.
First use about April 1958.

SN 37,073. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Aug. 12, 1958.

ORBIT

For Liquid and Dry Powdered Detergents.
First use June 9, 1958.

First use Nov. 1, 1955.

First use Aug. 15, 1957.

SERVICE MARKS

Class 101—Advertising and Business

SN 10,504. Wise-O-Services, Inc., Kansas City, Mo. Filed June 18, 1956.

WISE-O

For Services in the Preparation of Advertising, Furnishing Business Know-How and Assisting in Merchandising.
First use Jan. 16, 1956.

SN 20,638. Loblaw, Inc., Buffalo, N. Y. Filed Dec. 7, 1956.

DOMINO

For Promotion of the Sale of Goods of Others Through the Issuance of Trading Stamps Redeemable in Merchandise or Other Recompense.
First use July 29, 1954.

SN 22,166. Decision, Inc., Cincinnati, Ohio. Filed Jan. 7, 1957.

DMR

For Advertising and Mailing Services in the Field of Employee Recruiting.
First use June 1, 1956.

Class 102—Insurance and Financial

SN 38,305. Security Benefit Life Insurance Company, Topeka, Kans. Filed Oct. 3, 1957.

SECUR-O-MATIC

For Insurance Collection Services Facilitating Periodic Payment of Insurance Premiums Due on Contracts of Insurance Issued by Applicant Through the Premium Payer's Bank Account.
First use June 21, 1956.

SN 40,364. North American Life and Casualty Company, Minneapolis, Minn. Filed Nov. 8, 1957.

The mark as illustrated in the accompanying drawing is speckled to indicate shading only and not any specific color.
For Underwriting of Life Insurance.
First use on or about Feb. 1, 1955.
TM 112

Class 104—Communication

SN 36,709. Globe Wireless Ltd., San Francisco, Calif. Filed Sept. 5, 1957.

VIA GLOBE

Owner of Reg. No. 566,660.
For Radiotelegraph and Radio-Printing Message Services.
First use Mar. 1, 1946.

Class 105—Transportation and Storage

SN 40,779. Trans-American Van Service, Inc., Chicago, Ill. Filed Feb. 27, 1958.

TRANS-VANS

Owner of Reg. No. 545,382.
For Motor Van Transportation and Warehousing Service—Namely, Moving Household Goods, Machinery, Fixtures and Like Merchandise and Storing and Warehousing the Same.
First use Dec. 16, 1957.

Class 106—Material Treatment

SN 36,365. Federal Stamping Company, d. b. a. Federal Tool and Manufacturing Co., Minneapolis, Minn. Filed Aug. 28, 1957.

For Metal Stamping Services for Others.
First use on or about Jan. 15, 1948.

Class 107—Education and Entertainment

SN 37,820. Triangle Publications, Inc., Philadelphia, Pa. Filed Sept. 25, 1957.

AMERICAN BANDSTAND

For Title of a Television Program Appearing From Time to Time, Said Program Featuring Recorded Music and Visual Presentation of Studio Audience Dancing.
First use July 30, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 47,545. American Council of Independent Laboratories, New York, N. Y.—Filed Mar. 12, 1956.

For Indicating Membership in Applicant Organization.
First use in January 1948.

TM 113

600,178. POWERUP. The Thomas Company. SN 45,425.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 2—Receptacles

669,743. VARNI-GRAPHIC. Gibraltar Corrugated Paper Company, Inc. SN 35,769. Pub. 9–2–58. Filed 8–19–57.

669,744. PARAPLY. American Can Company, assignee of Marathon Corporation. SN 40,356. Pub. 9–2–58. Filed 11–8–57.

669,745. HI-KARE AND DESIGN. Herman W. Patterson, d. b. a. Hi-Kare. SN 44,915. Pub. 9–2–58. Filed 1–29–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

669,746. KANT-KOM-OFF AND DESIGN. R. Leache Company. SN 41,553. Pub. 9–2–58. Filed 11–29–57.

669,747. NIGHT-N-DAY. I. Smallman & Sons Co. SN 43,785. Pub. 9–2–58. Filed 1–10–58.

Class 5—Adhesives

669,748. DAXCEL. Dacar Chemical Products Company. SN 39,452. Pub. 9–2–58. Filed 10–24–57.

669,749. COL-DOP AND DESIGN. Willard R. Gifford, d. b. a. Gifford's Lapidary. SN 44,173. Pub. 9–2–58. Filed 1–17–58.

669,750. ROCKET BAKE. Archer-Daniels-Midland Company. SN 46,691. Pub. 9–2–58. Filed 2–27–58.

669,751. DESIGN OF A BIRD. The Crowell Corporation. SN 46,807. Pub. 9–2–58. Filed 3–3–58.

Class 6—Chemicals and Chemical Compositions

669,752. EXTERMO. Rochester Germicide Company, Inc. SN 696,741. Pub. 12–25–56. Filed 10–19–56.

669,753. HT-260. The Kindt-Collins Company. SN 21,553. Pub. 9–2–58. Filed 12–24–56.

669,754. HI-TEMP. The Kindt-Collins Company. SN 21,554. Pub. 9–2–58. Filed 12–24–56.

669,755. V AND DESIGN. R. T. Vanderbilt Company, Inc. SN 29,321. Pub. 9–2–58. Filed 5–2–57.

669,756. GLUCOSTAT. Worthington Biochemical Corporation. SN 30,539. Pub. 9–2–58. Filed 5–22–57.

669,757. NIAGARA AND DESIGN. Food Machinery and Chemical Corporation. SN 30,977. Pub. 9–2–58. Filed 5–24–57.

669,758. DYNATOX. Hayes-Sammons Chemical Company. SN 35,547. Pub. 9–2–58. Filed 8–12–57.

669,759. RINS-AID. R. O. Hull & Company, Inc. SN 38,355. Pub. 9–2–58. Filed 10–4–57.

669,760. "SAFE-T-HUES." H. Kohnstamm & Co., Inc. SN 44,625. Pub. 9–2–58. Filed 1–24–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

669,761. YE OLD HUNTER AND DESIGN. Hunters Lodge, Inc. SN 42,382. Pub. 9–2–58. Filed 12–13–57.

669,762. THE BLADESMAN ETC. AND DESIGN. Hunters Lodge, Inc. SN 42,385. Pub. 9–2–58. Filed 12–23–57.

Class 10—Fertilizers

669,763. MOLY-GRO. American Metal Climax, Inc. SN 53,868. Pub. 9–2–58. Filed 6–16–58.

669,764. SINGING HILLS. Bonnie Brands, Inc. SN 53,998. Pub. 9–2–58. Filed 6–23–58.

Class 11—Inks and Inking Materials

669,765. TINTINK. Jeanette Fisher. SN 41,263. Pub. 9–2–58. Filed 11–25–57.

669,766. CRESCENDO. Peerless Imperial Co. Inc. SN 44,494. Pub. 9–2–58. Filed 1–22–58.

669,767. CAPRI. Copy-Craft, Inc. SN 44,952. Pub. 9–2–58. Filed 1–30–58.

Class 12—Construction Materials

669,768. SHOWER GLASS. Shower Door Company of America, Ltd. SN 7,634. Pub. 9–2–58. Filed 5–3–56.

669,769. V-BAK. Murray Tile Company, Inc. SN 33,564. Pub. 9–2–58. Filed 7–11–57.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

669,770. HEADS AND THREADS AND DESIGN. Heads and Threads, Inc. SN 43,164. Pub. 9–2–58. Filed 12–30–57.

669,771. SUPER-GLIDE. Western Newell Mfg. Co. SN 45,930. Pub. 9–2–58. Filed 2–14–58.

669,772. SANI-GLAS. Sani-Glas, Inc. SN 46,469. Pub. 9–2–58. Filed 2–24–58.

669,773. TAPOLET. Bonney Forge & Tool Works. SN 46,702. Pub. 9–2–58. Filed 2–27–58.

Class 14—Metals and Metal Castings and Forgings

669,774. CERALLOY. New Process Metals, Inc. SN 8,500. Pub. 1–1–57. Filed 5–17–58.

Class 15—Oils and Greases

669,775. VREECO PRODUCTS AND DESIGN. Vreeco Products Company. SN 29,226. Pub. 9–2–58. Filed 5–2–57.

669,776. CANDELART BRAND. Mersch-Kreuser Candle Co., Inc. SN 42,713. Pub. 9–2–58. Filed 12–19–57.

669,777. SHELLSPEED. Shell Oil Company. SN 44,927. Pub. 9–2–58. Filed 1–29–58.

669,778. PEREX. Shell Oil Company. SN 44,925. Pub. 9–2–58. Filed 1–29–58.

Class 23—Cutlery, Machinery, and Tools

669,805. TACH-X. Educational Developmental Laboratories, Inc.

669,778. POWERUP. The Thomas Company. SN 45,425. Pub. 9-2-58. Filed 2-6-58.

669,780. GOOP. Crawford Fitting Company. SN 45,487. Pub. 9-2-58. Filed 2-7-58.

Class 16—Protective and Decorative Coatings

669,781. HUV-SOL. Hukill Chemical Corporation. SN 39,239. Pub. 9-2-58. Filed 5-30-57.

669,782. COLOR-SHIELD. The Lubriset Corporation. SN 31,855. Pub. 9-2-58. Filed 8-12-57.

669,783. MG. M. Grumbacher, Inc. SN 32,678. Pub. 9-2-58. Filed 6-28-57.

669,784. PERM-A-FILM. The Berg Paper Company. SN 39,419. Pub. 9-2-58. Filed 10-23-57.

669,785. C & D. Ogilvay Norton Company. SN 43,785. Pub. 9-2-58. Filed 12-30-57.

669,786. SYNTHETASINE. Synthetasine Protective Coatings, Inc. SN 49,096. Pub. 9-2-58. Filed 4-4-58.

669,787. DYNAKOTE. Canadian Industries Limited. SN 49,520. Pub. 9-2-58. Filed 4-17-58.

Class 18—Medicines and Pharmaceutical Preparations

669,788. DEXTROFER. Productera Co., Inc. SN 7,110. Pub. 9-2-58. Filed 4-25-56.

669,789. ALOXED. Chicago Pharmacal Company. SN 20,706. Pub. 9-2-58. Filed 12-10-56.

669,790. CHLOTRIDE. Merck & Co., Inc. SN 33,262. Pub. 9-2-58. Filed 7-5-57.

669,791. CLOTRIDE. Merck & Co., Inc. SN 33,265. Pub. 9-2-58. Filed 7-5-57.

669,792. RETROGRAFIN. Olin Mathieson Chemical Corporation. SN 40,595. Pub. 9-2-58. Filed 11-13-57.

669,793. DUOGRAFIN. Olin Mathieson Chemical Corporation. SN 40,596. Pub. 9-2-58. Filed 11-13-57.

669,794. SINOGRAFIN. Olin Mathieson Chemical Corporation. SN 40,597. Pub. 9-2-58. Filed 11-13-57.

669,795. CORIGLUTE. Vitamix Corporation. SN 40,981. Pub. 9-2-58. Filed 11-19-57.

669,796. PELLIFORM. C. H. Boehringer Sohn. SN 41,964. Pub. 9-2-58. Filed 12-9-57.

669,797. NELVITE. The H. W. Nelson Company. SN 42,155. Pub. 9-2-58. Filed 12-10-57.

669,798. CARDIO-GREEN. Hynson, Westcott & Dunning Incorporated. SN 43,027. Pub. 9-2-58. Filed 12-26-57.

669,799. SIDECARB. The Prince Manufacturing Company. SN 43,267. Pub. 9-2-58. Filed 12-31-57.

669,800. THIOBAN. Parke, Davis & Company. SN 45,601. Pub. 9-2-58. Filed 2-10-58.

669,801. HI-FI. David Grant, d. b. a. Nu-Life Vitamins Company. SN 45,900. Pub. 9-2-58. Filed 2-17-58.

669,802. PREDNASINE. Schering Corporation. SN 46,021. Pub. 9-2-58. Filed 2-17-58.

669,803. CELLORIGEN. Jensen-Salsbery Laboratories Inc. SN 46,072. Pub. 9-2-58. Filed 1-2-58.

669,804. ALESTROL. Testagar & Co., Inc. SN 46,373. Pub. 9-2-58. Filed 3-21-58.

669,805. LIQUAMYCIN. Chas. Pfizer & Co., Inc. SN 46,757. Pub. 9-2-58. Filed 2-27-58.

669,806. BOCINE. Cutter Laboratories. SN 46,911. Pub. 9-2-58. Filed 3-3-58.

669,807. BU-MA-MIN. Cutter Laboratories. SN 46,912. Pub. 9-2-58. Filed 3-3-58.

669,808. VASODILEN. Mead Johnson & Company. SN 46,965. Pub. 9-2-58. Filed 3-3-58.

669,809. VASODILIN. Mead Johnson & Company. SN 46,966. Pub. 9-2-58. Filed 3-3-58.

669,810. VASODILAN. Mead Johnson & Company. SN 46,968. Pub. 9-2-58. Filed 3-3-58.

669,811. VASODILON. Mead Johnson & Company. SN 46,969. Pub. 9-2-58. Filed 3-3-58.

Class 19—Vehicles

669,812. FLYING FALCON. American Machine and Foundry Company. SN 22,243. Pub. 9-2-58. Filed 1-8-57.

669,813. MORSE-BILT. Morse Metal Products Co. Inc. SN 22,624. Pub. 9-2-58. Filed 1-15-57.

669,814. DETROITER TOPS THEM ALL AND DESIGN. Detroiter Mobile Homes Mfg., Inc. SN 34,518. Pub. 9-2-58. Filed 7-30-57.

669,815. RENAK AND DESIGN. VEB Reichenbacher Näh- und Kupplungswerke. SN 39,350. Pub. 9-2-58. Filed 10-22-57.

669,816. STANDARD. Standard Mirror Company, Inc. SN 42,072. Pub. 9-2-58. Filed 12-6-57.

669,817. EPCO AND DESIGN. Exchange Parts Company of Fort Worth. SN 43,826. Pub. 9-2-58. Filed 1-13-58.

669,818. NYLOX. Nylox Corporation. SN 43,867. Pub. 9-2-58. Filed 1-13-58.

669,819. TALISMAN. The Excelsior Motor Company Limited. SN 47,048. Pub. 9-2-58. Filed 3-4-58.

Class 21—Electrical Apparatus, Machines, and Supplies

669,820. SNAP-GRIP. R. H. Dietz Company. SN 43,208. Pub. 9-2-58. Filed 1-2-58.

669,821. GRAPHANODE. Stackpole Carbon Company. SN 43,632. Pub. 9-2-58. Filed 1-6-58.

669,822. CALEBET. Calbest Engineering & Electronics Co. SN 43,810. Pub. 9-2-58. Filed 1-13-58.

669,823. INDERCO. Industrial Engineering & Equipment Co. SN 43,832. Pub. 9-2-58. Filed 1-13-58.

669,824. SATELLITE AND DESIGN. Robert and Mikael's Industries. SN 43,879. Pub. 9-2-58. Filed 1-13-58.

669,825. NARAX. Narragansett Wire Co. SN 44,193. Pub. 9-2-58. Filed 1-17-58.

669,826. NARACORD. Narragansett Wire Co. SN 44,194. Pub. 9-2-58. Filed 1-17-58.

669,827. NARAWIRE. Narragansett Wire Co. SN 44,197. Pub. 9-2-58. Filed 1-17-58.

669,828. SCHAUER. Schauer Manufacturing Corporation. SN 44,546. Pub. 9-2-58. Filed 2-26-58.

Class 22—Games, Toys, and Sporting Goods

669,829. SLENDERELLA. Slenderella Systems, Inc. SN 32,638. Pub. 9-2-58. Filed 6-25-57.

669,830. SOLLO-GYM. Sterling Enterprises, Inc. SN 34,261. Pub. 9-2-58. Filed 7-22-57.

669,831. MR. BUBBLES. Morris Plastic Corp. SN 40,891. Pub. 9-2-58. Filed 11-12-57.

669,832. SCOTTIE 66. Zebco Company. SN 40,638. Pub. 9-2-58. Filed 11-12-57.

669,833. THE ARCHER AND DESIGN. Barney Lizarde, d. b. a. Lizarde Gloves. SN 42,085. Pub. 9-2-58. Filed 12-9-57.

669,834. SLENDERCICLE. Slendercycle Corp. SN 42,115. Pub. 9-2-58. Filed 12-12-57.

669,835. TELL-A-TALE GAMES AND DESIGN. Whitman Publishing Company. SN 42,569. Pub. 9-2-58. Filed 12-16-57.

669,836. FIELD-FLEX. Franklin Manufacturing Co., Inc. SN 44,171. Pub. 9-2-58. Filed 1-17-58.

669,837. RAGDERELLA. Robert H. Dozier, Sr. SN 44,446. Pub. 9-2-58. Filed 2-22-58.

Class 25—Clothing and Personal Articles

669,838. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,000. Pub. 9-2-58. Filed 12-26-57.

669,839. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,001. Pub. 9-2-58. Filed 12-26-57.

669,840. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,002. Pub. 9-2-58. Filed 12-26-57.

669,841. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,003. Pub. 9-2-58. Filed 12-26-57.

669,842. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,004. Pub. 9-2-58. Filed 12-26-57.

669,843. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,005. Pub. 9-2-58. Filed 12-26-57.

669,844. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,006. Pub. 9-2-58. Filed 12-26-57.

669,845. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,007. Pub. 9-2-58. Filed 12-26-57.

669,846. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,008. Pub. 9-2-58. Filed 12-26-57.

669,847. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,009. Pub. 9-2-58. Filed 12-26-57.

669,848. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,010. Pub. 9-2-58. Filed 12-26-57.

669,849. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,011. Pub. 9-2-58. Filed 12-26-57.

669,850. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,012. Pub. 9-2-58. Filed 12-26-57.

669,851. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,013. Pub. 9-2-58. Filed 12-26-57.

669,852. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,014. Pub. 9-2-58. Filed 12-26-57.

669,853. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,015. Pub. 9-2-58. Filed 12-26-57.

669,854. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,016. Pub. 9-2-58. Filed 12-26-57.

669,855. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,017. Pub. 9-2-58. Filed 12-26-57.

669,856. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,018. Pub. 9-2-58. Filed 12-26-57.

669,857. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,019. Pub. 9-2-58. Filed 12-26-57.

669,858. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,020. Pub. 9-2-58. Filed 12-26-57.

669,859. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,021. Pub. 9-2-58. Filed 12-26-57.

669,860. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,022. Pub. 9-2-58. Filed 12-26-57.

669,861. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,023. Pub. 9-2-58. Filed 12-26-57.

669,862. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,024. Pub. 9-2-58. Filed 12-26-57.

669,863. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,025. Pub. 9-2-58. Filed 12-26-57.

669,864. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,026. Pub. 9-2-58. Filed 12-26-57.

669,865. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,027. Pub. 9-2-58. Filed 12-26-57.

669,866. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,028. Pub. 9-2-58. Filed 12-26-57.

669,867. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,029. Pub. 9-2-58. Filed 12-26-57.

669,868. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,030. Pub. 9-2-58. Filed 12-26-57.

669,869. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,031. Pub. 9-2-58. Filed 12-26-57.

669,870. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,032. Pub. 9-2-58. Filed 12-26-57.

669,871. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,033. Pub. 9-2-58. Filed 12-26-57.

669,872. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,034. Pub. 9-2-58. Filed 12-26-57.

669,873. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,035. Pub. 9-2-58. Filed 12-26-57.

669,874. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,036. Pub. 9-2-58. Filed 12-26-57.

669,875. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,037. Pub. 9-2-58. Filed 12-26-57.

669,876. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,038. Pub. 9-2-58. Filed 12-26-57.

669,877. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,039. Pub. 9-2-58. Filed 12-26-57.

669,878. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,040. Pub. 9-2-58. Filed 12-26-57.

669,879. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,041. Pub. 9-2-58. Filed 12-26-57.

669,880. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,042. Pub. 9-2-58. Filed 12-26-57.

669,881. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,043. Pub. 9-2-58. Filed 12-26-57.

669,882. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,044. Pub. 9-2-58. Filed 12-26-57.

669,883. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,045. Pub. 9-2-58. Filed 12-26-57.

669,884. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,046. Pub. 9-2-58. Filed 12-26-57.

669,885. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,047. Pub. 9-2-58. Filed 12-26-57.

669,886. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,048. Pub. 9-2-58. Filed 12-26-57.

669,887. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,049. Pub. 9-2-58. Filed 12-26-57.

669,888. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,050. Pub. 9-2-58. Filed 12-26-57.

669,889. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,051. Pub. 9-2-58. Filed 12-26-57.

669,890. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,052. Pub. 9-2-58. Filed 12-26-57.

669,891. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,053. Pub. 9-2-58. Filed 12-26-57.

669,892. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,054. Pub. 9-2-58. Filed 12-26-57.

669,893. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,055. Pub. 9-2-58. Filed 12-26-57.

669,894. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,056. Pub. 9-2-58. Filed 12-26-57.

669,895. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,057. Pub. 9-2-58. Filed 12-26-57.

669,896. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,058. Pub. 9-2-58. Filed 12-26-57.

669,897. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,059. Pub. 9-2-58. Filed 12-26-57.

669,898. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,060. Pub. 9-2-58. Filed 12-26-57.

669,899. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,061. Pub. 9-2-58. Filed 12-26-57.

669,900. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,062. Pub. 9-2-58. Filed 12-26-57.

669,901. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,063. Pub. 9-2-58. Filed 12-26-57.

669,902. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,064. Pub. 9-2-58. Filed 12-26-57.

669,903. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,065. Pub. 9-2-58. Filed 12-26-57.

669,904. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,066. Pub. 9-2-58. Filed 12-26-57.

669,905. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,067. Pub. 9-2-58. Filed 12-26-57.

669,906. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,068. Pub. 9-2-58. Filed 12-26-57.

669,907. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,069. Pub. 9-2-58. Filed 12-26-57.

669,908. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,070. Pub. 9-2-58. Filed 12-26-57.

669,909. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,071. Pub. 9-2-58. Filed 12-26-57.

669,910. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,072. Pub. 9-2-58. Filed 12-26-57.

669,911. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,073. Pub. 9-2-58. Filed 12-26-57.

669,912. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,074. Pub. 9-2-58. Filed 12-26-57.

669,913. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,075. Pub. 9-2-58. Filed 12-26-57.

669,914. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,076. Pub. 9-2-58. Filed 12-26-57.

669,915. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,077. Pub. 9-2-58. Filed 12-26-57.

669,916. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,078. Pub. 9-2-58. Filed 12-26-57.

669,917. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,079. Pub. 9-2-58. Filed 12-26-57.

669,918. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,080. Pub. 9-2-58. Filed 12-26-57.

669,919. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,081. Pub. 9-2-58. Filed 12-26-57.

669,920. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,082. Pub. 9-2-58. Filed 12-26-57.

669,921. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,083. Pub. 9-2-58. Filed 12-26-57.

669,922. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,084. Pub. 9-2-58. Filed 12-26-57.

669,923. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,085. Pub. 9-2-58. Filed 12-26-57.

669,924. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,086. Pub. 9-2-58. Filed 12-26-57.

669,925. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,087. Pub. 9-2-58. Filed 12-26-57.

669,926. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,088. Pub. 9-2-58. Filed 12-26-57.

669,927. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,089. Pub. 9-2-58. Filed 12-26-57.

669,928. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,090. Pub. 9-2-58. Filed 12-26-57.

669,929. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,091. Pub. 9-2-58. Filed 12-26-57.

669,930. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,092. Pub. 9-2-58. Filed 12-26-57.

669,931. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,093. Pub. 9-2-58. Filed 12-26-57.

669,932. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,094. Pub. 9-2-58. Filed 12-26-57.

669,933. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,095. Pub. 9-2-58. Filed 12-26-57.

669,934. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,096. Pub. 9-2-58. Filed 12-26-57.

669,935. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,097. Pub. 9-2-58. Filed 12-26-57.

669,936. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,098. Pub. 9-2-58. Filed 12-26-57.

669,937. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,099. Pub. 9-2-58. Filed 12-26-57.

669,938. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,100. Pub. 9-2-58. Filed 12-26-57.

669,939. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,101. Pub. 9-2-58. Filed 12-26-57.

669,940. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,102. Pub. 9-2-58. Filed 12-26-57.

669,941. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,103. Pub. 9-2-58. Filed 12-26-57.

669,942. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,104. Pub. 9-2-58. Filed 12-26-57.

669,943. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,105. Pub. 9-2-58. Filed 12-26-57.

669,944. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,106. Pub. 9-2-58. Filed 12-26-57.

669,945. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,107. Pub. 9-2-58. Filed 12-26-57.

669,946. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,108. Pub. 9-2-58. Filed 12-26-57.

669,947. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,109. Pub. 9-2-58. Filed 12-26-57.

669,948. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,110. Pub. 9-2-58. Filed 12-26-57.

669,949. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,111. Pub. 9-2-58. Filed 12-26-57.

669,950. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,112. Pub. 9-2-58. Filed 12-26-57.

669,951. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,113. Pub. 9-2-58. Filed 12-26-57.

669,952. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,114. Pub. 9-2-58. Filed 12-26-57.

669,953. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,115. Pub. 9-2-58. Filed 12-26-57.

669,954. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,116. Pub. 9-2-58. Filed 12-26-57.

669,955. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,117. Pub. 9-2-58. Filed 12-26-57.

669,956. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,118. Pub. 9-2-58. Filed 12-26-57.

669,957. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,119. Pub. 9-2-58. Filed 12-26-57.

669,958. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,120. Pub. 9-2-58. Filed 12-26-57.

669,959. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,121. Pub. 9-2-58. Filed 12-26-57.

669,960. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,122. Pub. 9-2-58. Filed 12-26-57.

669,961. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,123. Pub. 9-2-58. Filed 12-26-57.

669,962. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,124. Pub. 9-2-58. Filed 12-26-57.

669,963. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,125. Pub. 9-2-58. Filed 12-26-57.

669,964. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,126. Pub. 9-2-58. Filed 12-26-57.

669,965. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,127. Pub. 9-2-58. Filed 12-26-57.

669,966. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,128. Pub. 9-2-58. Filed 12-26-57.

669,967. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,129. Pub. 9-2-58. Filed 12-26-57.

669,968. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,130. Pub. 9-2-58. Filed 12-26-57.

669,969. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,131. Pub. 9-2-58. Filed 12-26-57.

669,970. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,132. Pub. 9-2-58. Filed 12-26-57.

669,971. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,133. Pub. 9-2-58. Filed 12-26-57.

669,972. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,134. Pub. 9-2-58. Filed 12-26-57.

669,973. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,135. Pub. 9-2-58. Filed 12-26-57.

669,974. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,136. Pub. 9-2-58. Filed 12-26-57.

669,975. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,137. Pub. 9-2-58. Filed 12-26-57.

669,976. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,138. Pub. 9-2-58. Filed 12-26-57.

669,977. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,139. Pub. 9-2-58. Filed 12-26-57.

669,978. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,140. Pub. 9-2-58. Filed 12-26-57.

669,979. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,141. Pub. 9-2-58. Filed 12-26-57.

669,980. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,142. Pub. 9-2-58. Filed 12-26-57.

669,981. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,143. Pub. 9-2-58. Filed 12-26-57.

669,982. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,144. Pub. 9-2-58. Filed 12-26-57.

669,983. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,145. Pub. 9-2-58. Filed 12-26-57.

669,984. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,146. Pub. 9-2-58. Filed 12-26-57.

669,985. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,147. Pub. 9-2-58. Filed 12-26-57.

669,986. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,148. Pub. 9-2-58. Filed 12-26-57.

669,987. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,149. Pub. 9-2-58. Filed 12-26-57.

669,988. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,150. Pub. 9-2-58. Filed 12-26-57.

669,989. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,151. Pub. 9-2-58. Filed 12-26-57.

669,990. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,152. Pub. 9-2-58. Filed 12-26-57.

669,991. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,153. Pub. 9-2-58. Filed 12-26-57.

669,992. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,154. Pub. 9-2-58. Filed 12-26-57.

669,993. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,155. Pub. 9-2-58. Filed 12-26-57.

669,994. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,156. Pub. 9-2-58. Filed 12-26-57.

669,995. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,157. Pub. 9-2-58. Filed 12-26-57.

669,996. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,158. Pub. 9-2-58. Filed 12-26-57.

669,997. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,159. Pub. 9-2-58. Filed 12-26-57.

669,998. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,160. Pub. 9-2-58. Filed 12-26-57.

669,999. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,161. Pub. 9-2-58. Filed 12-26-57.

669,1000. SUPER-SEAL. Super-Seal Manufacturing Co. SN 43,162. Pub. 9-2-58. Filed 12-26-57.

9-2-58. Filed 1-29-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

669,838. CERALOX. Adamas Carbide Corporation. SN 11,215. Pub. 8-27-57. Filed 6-29-56.

669,839. STOELTING. Stoelting Brothers Co. SN 28,652. Pub. 9-2-58. Filed 4-22-57.

669,840. CALIBORE. Beaver Tool and Engineering Corporation. SN 23,601. Pub. 9-2-58. Filed 7-12-57.

669,841. MH. E. W. Bliss Company. SN 35,734. Pub. 9-2-58. Filed 5-10-57.

669,842. MIRELLA. Necchi Società per Azioni. SN 37,366. Pub. 9-2-58. Filed 9-17-57.

669,843. DESIGN OF ARROW. Gebr. Weyersberg. SN 27,426. Pub. 9-2-58. Filed 9-18-57.

669,844. SHORTY. Ideco, Inc. SN 38,211. Pub. 9-2-58. Filed 10-2-57.

669,845. IVI AND DESIGN. Industrial Vendors, Inc. SN 39,532. Pub. 9-2-58. Filed 10-28-57.

669,846. DUSTEOP. Aget Manufacturing Company. SN 39,934. Pub. 9-2-58. Filed 11-1-57.

669,847. F. DICK AND DESIGN. Friedr. Dick GmbH. SN 41,448. Pub. 9-2-58. Filed 11-27-57.

669,848. F. D. AND DESIGN. Friedr. Dick GmbH. SN 41,449. Pub. 9-2-58. Filed 11-27-57.

669,849. NATIONAL. The National Supply Company (Ohio corporation), assignee of The National Supply Company (Pennsylvania corporation). SN 41,830. Pub. 9-2-58. Filed 12-5-57.

669,850. C & D. Ogiebay Norton Company. SN 42,784. Pub. 9-2-58. Filed 12-20-57.

669,851. VIBRASLIDE AND DESIGN. B. W. Elliott Manufacturing Co., Inc. SN 43,604. Pub. 9-2-58. Filed 1-8-58.

669,852. SUPERMATIC. Cutting Room Appliances Corp. SN 43,623. Pub. 9-2-58. Filed 1-13-58.

669,853. DELUXE STEEL KING AND DESIGN. De Luxe Saw and Tool Company. SN 43,625. Pub. 9-2-58. Filed 1-13-58.

669,854. FOILCRIMP. Kaiser Aluminum & Chemical Corporation. SN 45,907. Pub. 9-2-58. Filed 2-13-58.

669,855. CYCLO-MATION. Barker Poultry Equipment Co. SN 45,943. Pub. 9-2-58. Filed 2-17-58.

669,856. ARUNCORDER. Arundel Coulthard & Company Limited. SN 46,090. Pub. 9-2-58. Filed 2-19-58.

669,857. SPECTRA-STRIPER. Organic Development Corporation. SN 46,478. Pub. 9-2-58. Filed 2-24-58.

669,858. SCHAUER. Schauer Manufacturing Corporation. SN 46,645. Pub. 9-2-58. Filed 2-26-58.

669,859. GERLINGER. Gerlinger Carrier Company. SN 46,721. Pub. 9-2-58. Filed 2-27-58.

669,860. WYSSMONT ROTO-SCOOP. Wyssmont Company, Inc. SN 47,622. Pub. 9-2-58. Filed 3-12-58.

669,861. BROKEMASTER. E. D. Jones and Sons Company. SN 48,158. Pub. 9-2-58. Filed 4-7-58.

669,862. ALPINA. Alpina-Büromaschinen-Werk G. m. b. H. SN 49,400. Pub. 9-2-58. Filed 4-10-58.

669,863. ACE. Ace Fastener Corporation. SN 49,479. Pub. 9-2-58. Filed 4-11-58.

Class 26—Measuring and Scientific Appliances

669,864. DEKAVIDER. Electro-Measurements, Inc. SN 671,730. Pub. 9-2-58. Filed 8-16-54.

669,865. FARRINGTON. Farrington Manufacturing Company. SN 5,914. Pub. 9-2-58. Filed 4-23-56.

669,866. MARADO AND DESIGN. Marado Trading Corporation. SN 24,705. Pub. 9-2-58. Filed 2-19-57.

669,867. FLO-GARD. Brooks Rotameter Company. SN 27,569. Pub. 9-2-58. Filed 4-5-57.

669,868. TACH-X. Educational Developmental Laboratories. SN 28,846. Pub. 9-2-58. Filed 4-25-57.

669,869. AUGER-ETTE. Bemis Bro. Bag Co. SN 29,782. Pub. 9-2-58. Filed 5-16-57.

669,870. COROMET. Cormac Industries, Inc. SN 30,233. Pub. 9-2-58. Filed 5-17-57.

669,871. KEYPAK. Benson-Lehner Corporation. SN 30,535. Pub. 9-2-58. Filed 5-23-57.

669,872. 888 HERMETIC EYE. Superior Valve and Fittings Company. SN 30,962. Pub. 9-2-58. Filed 5-28-57.

669,873. LIFETIME. Westinghouse Electric Corporation. SN 31,442. Pub. 9-2-58. Filed 6-5-57.

669,874. RECONOPAK. Haller, Raymond and Brown, Inc. SN 32,597. Pub. 9-2-58. Filed 6-25-57.

669,875. FABCO AND DESIGN. Houston Glass Fabricating Company. SN 33,966. Pub. 9-2-58. Filed 7-18-57.

669,876. HELLIGE. Heilige, Incorporated. SN 34,700. Pub. 9-2-58. Filed 7-31-57.

669,877. CHEF-O-MATIC. King-Seeley Corporation. SN 35,209. Pub. 9-2-58. Filed 8-9-57.

669,878. ROYAL TANK. Sidney Schaffer, d. b. a. Star X-Ray Co. SN 37,378. Pub. 9-2-58. Filed 9-17-57.

669,879. KIMAX. Kimble Glass Company, assignee of Owens-Illinois Glass Company. SN 40,871. Pub. 9-2-58. Filed 11-16-57.

669,880. DESIGN OF SHIELD. Regula-Projekt, Narodni Podnik. SN 41,716. Pub. 9-2-58. Filed 12-3-57.

669,881. IBO-SEAL. John Chatillon & Sons. SN 41,796. Pub. 9-2-58. Filed 12-5-57.

669,882. HYCEL AND DESIGN. Hormone Chemistry Laboratory. SN 42,379. Pub. 9-2-58. Filed 12-13-57.

669,883. DESIGN OF PENTAGON CIRCLE AND RETORT. Hormone Chemistry Laboratory. SN 42,830. Pub. 9-2-58. Filed 12-13-57.

669,884. BOUNCEMASTER. Photographic Importing and Distributing Corp. SN 44,496. Pub. 9-2-58. Filed 1-22-58.

669,885. AIRLITE. The Frederick Post Co. SN 45,217. Pub. 9-2-58. Filed 2-5-58.

Class 27—Horological Instruments

669,886. GOLD TONE AND DESIGN. Daniel Silverman, d. b. a. Jameco Metal Products Company. SN 43,273. Pub. 9-2-58. Filed 12-31-57.

Class 28—Jewelry and Precious-Metal Ware

669,887. HI-FIRE. Persi & Lowenstein, Inc. SN 37,287. Pub. 9-2-58. Filed 9-16-57.

669,888. FIRECREST. Kay Jewelry Stores, Inc. SN 42,490. Pub. 9-2-58. Filed 12-16-57.

669,889. WHITE FIRE. Maier & Berkele, Inc. SN 44,031. Pub. 9-2-58. Filed 1-15-58.

669,890. CRYSTALETTE. Joseph H. Meyer Bros. SN 44,034. Pub. 9-2-58. Filed 1-24-58.

669,891. JEWELETTE. Celia Mackit, d. b. a. Empress Novelty Jewelry Co. SN 45,190. Pub. 9-2-58. Filed 2-3-58.

669,892. YOUNG LOVE. Oneida Ltd. SN 45,821. Pub. 9-2-58. Filed 2-13-58.

669,893. CHALICE. Oneida Ltd. SN 45,823. Pub. 9-2-58. Filed 2-13-58.

669,894. CHERIE. Oneida Ltd. SN 45,824. Pub. 9-2-58. Filed 2-13-58.

Class 30—Crockery, Earthenware, and Porcelain

669,895. DESIGN OF A CHEST. The Hope Chest Company, Inc. SN 42,049. Pub. 9-2-58. Filed 12-18-57.

669,951. PONY LEAGUE. Pioneer Batteries Co., Inc.

Class 31 — Plants and Refrigerators

669,897. HANDI-CURE. Borg-Warner Corporation. SN 42,696. Pub. 9-2-58. Filed 2-25-58.

669,897. COMMANDER. The Tait Manufacturing Company. SN 40,611. Pub. 9-2-58. Filed 6-14-58.

669,899. DERMAJET AND DESIGN. Crystal Research Laboratories, Inc. SN 40,906. Pub. 9-2-58. Filed 6-18-58.

Class 33 — Glassware

669,899. MARIGOLD GLASSWARE AND DESIGN. Orville C. Hansen, d. b. a. Scott Depot Glass Company. SN 36,294. Pub. 9-2-58. Filed 8-27-57.

669,900. P/F. Pittsburgh Plate Glass Company. SN 45,066. Pub. 9-2-58. Filed 1-31-58.

Class 34 — Heating, Lighting, and Ventilating Apparatus

669,901. REVECON. Skinner Furnaces Limited. SN 30,198. Pub. 9-2-58. Filed 5-26-57.

669,901. WET WING. Ecco-Matic Products Company, Inc. SN 38,739. Pub. 9-2-58. Filed 10-15-57.

669,902. VAPOR AND DESIGN. Vapor Heating Corporation. SN 42,406. Pub. 9-2-58. Filed 1-3-58.

669,904. PRECIPI-COND. The McDonald Company. SN 42,656. Pub. 9-2-58. Filed 1-6-58.

669,905. MICROMIX. Graham Manufacturing Co., Inc. SN 45,164. Pub. 9-2-58. Filed 2-3-58.

669,906. "DEAN." Washburn & Granger, Inc. SN 45,503. Pub. 9-2-58. Filed 2-7-58.

669,907. SOLAR FLAME. National-U. S. Radiator Corporation. SN 45,085. Pub. 9-2-58. Filed 2-10-58.

669,908. ACET-O-LITE. Gems Gas, Inc. SN 43,773. Pub. 9-2-58. Filed 1-31-58.

Class 36 — Musical Instruments and Supplies

669,909. TAMCORDEX. Radio Wire Television, Inc. SN 40,701. Pub. 9-2-58. Filed 11-14-57.

Class 37 — Paper and Stationery

669,910. WRENN'S. The Wrenn Paper Company. SN 10,056. Pub. 9-2-58. Filed 6-11-56.

669,911. WRENN'S AND DESIGN. The Wrenn Paper Company. SN 10,057. Pub. 9-2-58. Filed 6-11-56.

669,912. POLY-PREG. U. S. Polymeric Chemicals, Inc. SN 15,656. Pub. 9-2-58. Filed 9-12-56.

669,913. TUFF POINT. American Pencil Company, Inc. SN 23,008. Pub. 9-2-58. Filed 1-23-57.

669,914. DECAFIX. Bettinine Limited. SN 29,519. Pub. 9-2-58. Filed 3-5-57.

669,915. SEAL LABEL AND DESIGN. Ames Harris Neville Co. SN 25,943. Pub. 9-2-58. Filed 3-12-57.

669,916. ANCHOR. Anchor Office Supply Company. SN 30,900. Pub. 9-2-58. Filed 5-29-57.

669,917. S AND DESIGN. George Melvin Hocken, d. b. a. Rockfield House. SN 34,137. Pub. 9-2-58. Filed 7-23-57.

669,918. REDDIRAP. Riegel Paper Corporation. SN 36,887. Pub. 9-2-58. Filed 10-4-57.

669,919. SCOTT. Scott Paper Company. SN 41,182. Pub. 9-2-58. Filed 11-22-57.

Class 38 — Prints and Publications

669,920. APPE-DIAL. The Fleas Nutritional Laboratories. SN 40,518. Pub. 9-2-58. Filed 11-12-57.

669,921. HEADHUNTER. Hoffmaster Studios. SN 45,659. Pub. 9-2-58. Filed 2-19-58.

669,922. KNOW YOUR CONGRESS. Capitol Publishers, Inc. SN 45,006. Pub. 9-2-58. Filed 2-14-58.

669,923. WORLD-FOLL. New York Herald Tribune, Inc. SN 45,902. Pub. 9-2-58. Filed 2-14-58.

Class 39 — Clothing

669,924. SNAG-LOC. Bonnetown Hosiery Mills, Inc. SN 45,946. Pub. 9-2-58. Filed 10-15-56.

669,925. THE SPECTATOR. Spectator, Inc., assignee of Swirl, Inc. SN 39,665. Pub. 7-29-58. Filed 10-7-54.

669,926. ROYAL VIKING. Revere Knitting Mills, Inc. SN 23,542. Pub. 9-2-58. Filed 6-10-57.

669,927. ROMANO. The Joseph & Feiss Company. SN 32,500. Pub. 9-2-58. Filed 6-24-57.

669,928. FARRINGDON. Joseph H. Cohen & Sons, Inc. SN 33,055. Pub. 9-2-58. Filed 7-3-57.

669,929. BLUE CROSS AND DESIGN. Henry A. Dix & Sons Corporation. SN 32,230. Pub. 9-2-58. Filed 7-5-57.

669,930. LEW MAGRAM. Lew Magram. SN 35,804. Pub. 9-2-58. Filed 7-17-57.

669,931. GODCHAUX'S. The Leon Godchaux Clothing Company, Limited. SN 34,237. Pub. 9-2-58. Filed 7-23-57.

669,932. AVON. Camp & McInnes, Inc. SN 34,879. Pub. 4-8-58. Filed 7-25-57.

669,933. DSC. The American Foot Health Foundation. SN 37,238. Pub. 9-2-58. Filed 9-17-57.

669,934. THE SPECTATOR ETC. AND DESIGN. Spectator, Inc. SN 37,526. Pub. 7-29-58. Filed 9-19-57.

669,935. TRANS-AIRE. J. Schoeneman, Incorporated. SN 38,565. Pub. 7-8-58. Filed 10-8-57.

669,936. RIVERSIDE MASTERLINER AND DESIGN. Riverside Manufacturing Company. SN 41,075. Pub. 9-2-58. Filed 11-29-57.

669,937. SARONG TWO. Sarong Inc. SN 41,838. Pub. 9-2-58. Filed 12-6-57.

669,938. HOP. Morpul, Inc. SN 43,624. Pub. 9-2-58. Filed 1-6-58.

669,939. EUGENIE DE PARIS. Hayette, Inc. SN 44,466. Pub. 9-2-58. Filed 1-22-58.

669,940. LITE 'N DRY. Holeproof Hosiery Co. SN 44,632. Pub. 9-2-58. Filed 1-24-58.

669,941. IMPERATOR. Weinberg Corporation. SN 44,779. Pub. 9-2-58. Filed 1-27-58.

669,942. FG AND DESIGN. Foster Grant Co., Inc. SN 44,995. Pub. 9-2-58. Filed 1-30-58.

669,943. MANSMOOTH. The Manhattan Shirt Company. SN 44,910. Pub. 9-2-58. Filed 1-29-58.

669,944. KASHMIST. Fenway Coats, Inc. SN 44,959. Pub. 9-2-58. Filed 1-30-58.

669,945. "SUBURBAN." Ormsteen Shoe Company, Inc. SN 45,180. Pub. 9-2-58. Filed 2-3-58.

669,946. BLUE HEAVEN. Blue Heaven Hosiery Co. SN 45,522. Pub. 9-2-58. Filed 2-10-58.

669,947. GENUINE HAWAIIAN. Mfgrs. of California. SN 45,617. Pub. 9-2-58. Filed 2-10-58.

669,948. WAMESET'S TEMPTRESS. Wameset Sales Co., Inc. SN 45,638. Pub. 9-2-58. Filed 2-10-58.

669,949. DAISY LEAGUE. Famous Bathrobe Co., Inc. SN 45,790. Pub. 9-26-58. Filed 2-13-58.

669,950. BABY LEAGUE. Famous Bathrobe Co., Inc. SN 45,791. Pub. 9-26-58. Filed 2-13-58.

669,951. PONY LEAGUE. Famous Bathrobe Co., Inc. SN 45,792. Pub. 9-30-58. Filed 2-13-58.

669,952. MARCH AND DESIGN. Pachter Garment Co., Inc. SN 46,000. Pub. 9-2-58. Filed 2-17-58.

669,953. MOTHER KNOWS BEST. Dolly Dimple Incorporated. SN 46,114. Pub. 9-2-58. Filed 2-19-58.

Class 40—Fancy Goods, Furnishings, and Notions

669,954. BURETAPE. American Velcro, Inc. SN 42,512. Pub. 9-2-58. Filed 12-23-57.

669,955. FG AND DESIGN. Foster Grant Co., Inc. SN 45,554. Pub. 9-2-58. Filed 2-10-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

669,956. ELASKI AND DESIGN. S. p. A. Lanifici Riuniti Bona e Defilanti-Carignano (Torino). SN 38,750. Pub. 5-6-58. Filed 7-15-57.

669,957. COUNTRY CLOTH. Cricketeer, Inc. SN 34,402. Pub. 9-2-58. Filed 7-26-57.

669,958. CYCLOMATIC. Tripler National Corporation. SN 41,732. Pub. 9-9-58. Filed 12-3-57.

669,959. VIRGINIA BELLE. Normandie Bedspread Co. SN 45,506. Pub. 9-2-58. Filed 2-10-58.

Class 43—Thread and Yarn

669,960. STITCHLOK. The Masco Silk Company. SN 44,023. Pub. 9-2-58. Filed 1-15-58.

Class 44—Dental, Medical, and Surgical Appliances

669,961. DERMOMETER. Burl Products. SN 30,300. Pub. 9-2-58. Filed 5-20-57.

669,962. SLENDER-BEER. Mark Leach Health Furniture Co., by change of name from Miracle Health Furniture Company. SN 30,346. Pub. 9-2-58. Filed 5-20-57.

669,963. AFR DRIVE, ETC. AND DESIGN. Midwest Dental Mfg. Co. SN 31,181. Pub. 9-2-58. Filed 5-31-57.

669,964. GOLDEN CROWN. H. G. Enterprises. SN 31,560. Pub. 9-2-58. Filed 6-7-57.

669,965. F-N-S AND DESIGN. Newton Instrument Company. SN 39,243. Pub. 9-2-58. Filed 10-25-57.

669,966. REDUCOROLL. Reduc-O-Roll Corporation. SN 39,542. Pub. 9-2-58. Filed 10-25-57.

669,967. SURGIDERM. The B. F. Goodrich Company, d. b. a. The B. F. Goodrich Industrial Products Company. SN 40,631. Pub. 9-2-58. Filed 11-18-57.

669,968. TROPIC. Silhouette Products Limited. SN 41,673. Pub. 9-2-58. Filed 12-2-57.

Class 45—Soft Drinks and Carbonated Waters

669,969. JOHNNIE RYAN. Walter Janik, d. b. a. The Johnnie Ryan Co. SN 40,720. Pub. 9-2-58. Filed 11-8-57.

669,970. HI-CECIL AND DESIGN. Minute Maid Corporation. SN 41,709. Pub. 9-2-58. Filed 12-2-57.

Class 46—Foods and Ingredients of Foods

669,971. ROCHESTER DAIRY AND DESIGN. Rochester Dairy Cooperative. SN 994,811. Pub. 9-2-58. Filed 9-12-58.

669,972. IT'S "DOG-LICIOUS!". Corn Products Refining Company. SN 8,320. Pub. 9-2-58. Filed 5-15-58.

669,973. ROYAL. Klein Chocolate Company. SN 11,934. Pub. 9-2-58. Filed 7-11-36.

669,974. BB-MB AND DESIGN. Bertha Darve. SN 16,563. Pub. 9-2-58. Filed 9-20-56.

669,975. MRS. KLEIN'S AND DESIGN. Mrs. Klein's, Inc., assignee of Mrs. Klein's. SN 19,148. Pub. 9-2-58. Filed 11-13-56.

669,976. LINDA JANE. Spaulding Bakeries, Inc. SN 20,316. Pub. 9-2-58. Filed 12-3-56.

669,977. NORTH WOODS EGG COFFEE AND DESIGN. William L. McLennan, d. b. a. North Woods Coffee Company. SN 21,935. Pub. 9-2-58. Filed 12-31-56.

669,978. CHRISTY. Kenneth N. Rider Company, Inc. SN 22,940. Pub. 9-2-58. Filed 4-2-57.

669,979. PENNANT MARSHMAL-O AND DESIGN. Union Starch & Refining Co. SN 22,457. Pub. 9-2-58. Filed 1-11-57.

669,980. TABBY. Ucon Canning Co. SN 23,108. Pub. 9-2-58. Filed 1-23-57.

669,981. TENDERN. Miles Laboratories, Inc. SN 26,955. Pub. 9-2-58. Filed 3-20-57.

669,982. CRADLE. Morris M. Stein, d. b. a. Stein Bakers. SN 28,977. Pub. 9-2-58. Filed 4-26-57.

669,983. QK AND DESIGN OF CROWN. National Queen's Kitchens, Inc., d. b. a. The National Queen's Kitchen Inc. SN 30,031. Pub. 9-2-58. Filed 5-14-57.

669,984. FORINO AND DESIGN. Forino S. p. A. (Societa per Azioni). SN 31,207. Pub. 9-2-58. Filed 6-3-57.

669,985. "PEPPY" AND DESIGN. Wise Potato Chip Co. SN 33,813. Pub. 9-2-58. Filed 7-5-57.

669,986. DOS PALOS. Borneo Sumatra Trading Co. of California, Inc., d. b. a. Borneo Trading Company of California, Inc. SN 33,796. Pub. 9-2-58. Filed 7-16-57.

669,987. WAFCO FEATHER-SOFT AND DESIGN. Wafco Mills, Inc., by change of name from Watson Feed Company, d. b. a. Wafco Mills. SN 35,669. Pub. 9-2-58. Filed 8-12-57.

669,988. DUBLIN. The R. V. Dublin Company. SN 35,502. Pub. 9-2-58. Filed 8-14-57.

669,989. BRILL'S NOODLE-DE-DO. H. C. Brill Company, Inc. SN 37,135. Pub. 9-2-58. Filed 9-13-57.

669,990. TAKATABS. Miles Laboratories, Inc. SN 37,284. Pub. 9-2-58. Filed 9-26-57.

669,991. D'ORO ROSO. Food Products Company of America. SN 42,467. Pub. 9-2-58. Filed 12-16-57.

669,992. SHOWCASE. Trans-American Management Co., Inc., assignee of Candy Industries, Inc. SN 44,592. Pub. 9-2-58. Filed 1-24-58.

669,993. CREST VALUE AND DESIGN. Crest Value Cookie Company. SN 44,921. Pub. 9-2-58. Filed 1-27-58.

669,994. WHITE CHRISTMAS. Maison Rochas, Ltd. SN 44,723. Pub. 9-2-58. Filed 1-27-58.

669,995. DREAM CROWN. Sun Crown Food Corporation. SN 44,766. Pub. 9-2-58. Filed 1-27-58.

669,996. PIB WIX. Robert C. Ross, d. b. a. Ross & Company. SN 45,419. Pub. 9-2-58. Filed 2-6-58.

669,997. WEEP NO MORE. G and E Co. SN 45,870. Pub. 9-2-58. Filed 2-14-58.

669,998. FANCIES. John Wagner & Sons Inc. SN 46,736. Pub. 9-2-58. Filed 3-27-58.

669,999. RANCHO PALM SPRINGS. Paul E. Kersten, d. b. a. P. E. Kersten Produce. SN 46,825. Pub. 9-2-58. Filed 2-28-58.

Class 49—Distilled Alcoholic Liquors

670,000. CANADIAN TEN. Canadian Distillers, Ltd., assignee of Distillers Corporation Limited. SN 32,902. Pub. 5-27-58. Filed 7-1-57.

670,001. ROMANOFF. Romanoff Caviar Company. SN 37,815. Pub. 9-2-58. Filed 9-25-57.

670,002. FARMDALE. National Distillers and Chemical Corporation. SN 41,918. Pub. 9-2-58. Filed 1-29-58.

Class 50—Merchandise Not Otherwise Classified

670,003. FENGLO. Feng, Incorporated. SN 31,481. Pub. 9-2-58. Filed 6-24-57.

670,004. ADAPTO. Howard L. Stewart, d. b. a. The Rotho Products Company. SN 36,972. Pub. 9-2-58. Filed 10-16-57.

670,005. PARA WING AND DESIGN. Pep-Tent Corporation. SN 40,494. Pub. 9-2-58. Filed 11-12-57.

Class 51—Cosmetics and Toilet Preparations

670,006. PEGGY NEWTON. Paul D. Newton & Co. Inc., SN 612,754. Pub. 10-12-58. Filed 4-17-51.

670,007. DEOMYCIN. The Upjohn Company. SN 40,282. Pub. 9-26-58. Filed 11-7-57.

670,008. CHAMPAGNE MINK ETC. AND DESIGN. Vivian Parfums, Inc. SN 41,499. Pub. 9-2-58. Filed 11-27-57.

670,009. COLOR BEAUTY. Charles Antell, Inc. SN 41,909. Pub. 9-2-58. Filed 12-9-57.

Class 52—Detergents and Soaps

670,010. SIF-O. Pitman Laboratory Sales, Inc. SN 605,881. Pub. 1-10-56. Filed 10-5-55.

670,011. BOOTY. Booty Cosmetics Limited. SN 700,288. Pub. 9-2-58. Filed 12-19-56.

670,012. SENCO VOGUE MIRACLE. Standard Merchandising Co., Inc. SN 30,571. Pub. 9-2-58. Filed 12-6-56.

670,013. NALCO. National Aluminate Corporation. SN 34,518. Pub. 9-2-58. Filed 9-18-57.

670,014. QUICKBRITE. Formost Chemicals Corporation. SN 34,624. Pub. 9-2-58. Filed 7-30-57.

Service Marks

Class 100—Miscellaneous

670,015. BOEDO-MAT. Serio-Mat Process Engineers. SN 4,561. Pub. 9-2-58. Filed 8-22-56.

670,016. GSI AND DESIGN. Geophysical Service Inc. SN 35,771. Pub. 9-2-58. Filed 9-3-57.

670,017. WH. The Western Hills Hotel, Inc., d. b. a. The Western Hills Hotel. SN 36,130. Pub. 9-2-58. Filed 9-23-57.

670,018. SELECTO. Henry L. Jerue, Inc. SN 34,001. Pub. 9-2-58. Filed 9-6-57.

Class 101—Advertising and Business

670,019. SELLORAMA. Sean Kaufman, d. b. a. Sellorama Service. SN 606,915. Pub. 9-2-58. Filed 8-30-55.

670,020. SMART LIVING AND DESIGN. Smart Living Stores, Inc. SN 604,916. COLLECTIVE MARK. Pub. 9-2-58. Filed 10-21-55.

670,021. TOP VALUE AND DESIGN. Top Value Enterprises, Inc. SN 15,000. Pub. 9-2-58. Filed 9-6-57.

670,022. MERCURY. John H. Respondek, d. b. a. Mercury Stamp Company. SN 31,613. Pub. 9-2-58. Filed 10-19-57.

670,023. FAMILY-DISCOUNT AND DESIGN. Family Discount Stamp Co. SN 38,047. Pub. 9-2-58. Filed 1-29-57.

670,024. ESTIMATIC. Estimatic Corporation. SN 28,206. Pub. 9-2-58. Filed 12-26-57.

670,025. LESTAL MISS COTTON AND DESIGN. National Cotton Council of America. SN 39,610. Pub. 9-2-58. Filed 2-27-57.

670,026. TOPPER. Top Value Enterprises, Inc. SN 40,715. Pub. 9-2-58. Filed 12-16-57.

670,027. STC. Statistical Tabulating Corporation. SN 41,226. Pub. 9-2-58. Filed 11-26-57.

670,028. FAST FORCE. Statistical Tabulating Corporation. SN 42,000. Pub. 9-2-58. Filed 12-6-57.

670,029. TRAVELERS EXPRESS COMPANY AND DESIGN. Travelers Express Company, Inc. SN 42,805. Pub. 9-2-58. Filed 12-30-57.

Class 102—Insurance and Financial

670,030. REDI-MADE. The Beloit State Bank. SN 39,127. Pub. 9-2-58. Filed 10-18-57.

Class 103—Construction and Repair

670,031. SOUNDBOND. Aeroprojects, Incorporated. SN 31,174. Pub. 9-2-58. Filed 6-3-57.

Class 104—Communication

670,032. WBMS BOSTON AND DESIGN. BH Trade Broadcasting, Inc. SN 43,519. Pub. 9-2-58. Filed 1-7-58.

Class 106—Material Treatment

670,033. HNM. Hertzberg-New Method, Inc. SN 26,818. Pub. 9-2-58. Filed 6-6-57.

Class 107—Education and Entertainment

670,034. DESIGN OF HUMAN HEAD AND HELMET. Pasadena Junior Chamber of Commerce. SN 23,870. Pub. 9-2-58. Filed 1-14-57.

670,035. HEAT 'EM CHAMP. A. R. Schmidt Company. SN 35,122. Pub. 9-2-58. Filed 8-1-57.

Class 23—Cutlery, Machinery, and Tools. Class 38—Prints and Publications

Filed 12-3-57.

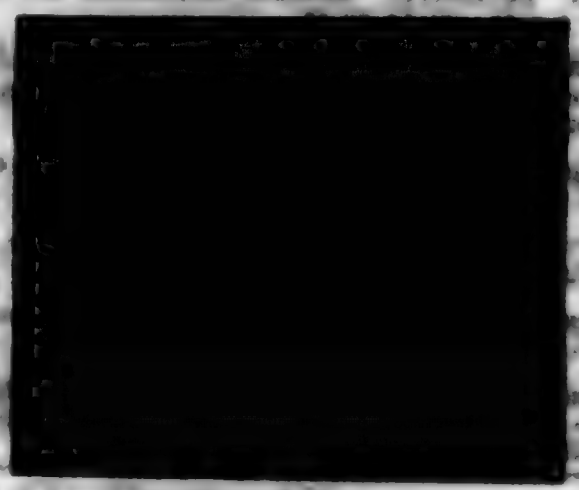
Filed 1-28-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6—Chemicals and Chemical Compositions

670,009. Gomei Kitchi Kokwaku, Fukushima-ku, Osaka, Japan. SN 9,604. Filed P. R. 6-5-56. Am. S. R. 6-24-58.



The translation of the trademark is "Plum," "Bamboo," "Pine." The translation of the Japanese characters on either side of the mark is "joss stick" which words are disclaimed. The translation of the Japanese characters beneath the mark proper, is "manufactured by Kokando, Osaka" which are also disclaimed.

For Joss Sticks.

First use May 20, 1955; in commerce May 20, 1955.

670,037. Burton Manufacturing Company, St. Louis, Mo. SN 12,235. Filed P. R. 7-19-56. Am. S. R. 6-22-58.

FASTART

For Lighting Fluid.

First use July 5, 1956.

Class 7—Cordage

670,058. Sunlite Plastics, Inc., Milwaukee, Wis. SN 49,092. Filed P. R. 4-4-58. Am. S. R. 9-15-58.

TUFLINE

For Plastic Clothes Line.

First use Mar. 1, 1956.

Class 12—Construction Materials

670,020. Roddis Plywood Corporation, Marshfield, Wis. SN 32,504. Filed P. R. 7-10-57. Am. S. R. 6-6-58.

MATCH MOLD

For Hardwood Moulding and Trim.

First use Jan. 10, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

670,040. Rock-Hart Stainless Steel Co., Orlando, Fla. SN 38,961. Filed P. R. 10-16-57. Am. S. R. 9-30-58.

EVEN-HEET

For Stainless Steel Cooking Vessels Comprising Sauce Pans, Tea Kettles, Coffee Makers, Pots, Dutch Ovens, and Skillets.

First use Sept. 9, 1957.

Class 14—Metals and Metal Castings and Forgings

670,041. M. Swift & Sons, Inc., Hartford, Conn. SN 20,964. Filed P. R. 8-28-57. Am. S. R. 10-8-58.

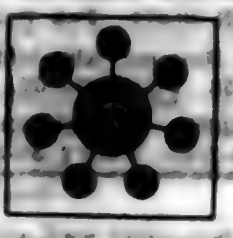
GOLDEN-HUE METAL

For Metallic Foils Used as Transfer Marking Tapes.

First use May 7, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

670,042. Electro Silv-A- King Corporation, Chicago, Ill. SN 18,722. Filed P. R. 11-5-56. Am. S. R. 9-15-58.



For Electric Lighting Fixtures and Parts Thereon.

First use Nov. 7, 1938.

Class 22—Games, Toys, and Sporting Goods

670,043. Alvin R. Goodman, Philadelphia, Pa. SN 24,528. Filed P. R. 7-23-57. Am. S. R. 6-18-58.

TRI-DUPLICATE BRIDGE

For Playing Card Tray Holders, Score Pads, Scoring Summary Sheet, Playing Matters and Instruction Booklet for Playing Duplicate Contract Bridge.

First use June 17, 1957.

301,400. RAINBOW, Cl. 50. 12-12-56.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

870,044. Buck Equipment Corporation, Cincinnati, Ohio. SN 253,488. Filed P. R. 6-29-57. Am. S. R. 9-17-58.

HOLSTOWER

For Transportable Elevators.
First use 6 Aug. U.S. 1957.

870,045. Clarkson (Engineers) Limited, Nuneaton, England. SN 11,254. Filed 4-9-58.

CLARKSON

Owner of British Reg. No. 807,211, dated Aug. 27, 1958.
For Cutter Grinding Machines; and Chucks, Arbors, and Cutting Tools, All for Machine Tools.

Class 29—Brooms, Brushes, and Dusters

870,046. Star Brush Manufacturing Co., Inc., Boston, Mass. SN 30,084. Filed P. R. 11-26-56. Am. S. R. 6-30-57.

TOASTER DUSTER

For Cleaning Brush for Electrical Appliances—Namely, Toasters.
First use Nov. 1, 1955.

Class 35—Bolting, Hose, Machinery Packing, and Nonmetallic Tires

870,047. Liberty Distributors Union, Philadelphia, Pa. SN 24,550. COLLECTIVE MARK. Filed P. R. 5-3-57. Am. S. R. 9-26-57.

TRUSTWORTHY

For Flexible Hose—Namely, Lawn Hose and Garden Hose.
First use in December 1955.

Class 38—Prints and Publications

870,048. Administrative Publishing Company, Inc., Greenwich, Conn. SN 35,742. Filed P. R. 5-3-57. Am. S. R. 6-25-58.

CATHOLIC PROPERTY ADMINISTRATION

For Periodical Publication.
First use Feb. 21, 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

870,049. Tinsmet Cutting Co., Inc., Boston, Mass. SN 15,966. Filed P. R. 5-14-56. Am. S. R. 6-30-58.

TWEED OF TRALEE

For Tweed Fabrics Sold Only in Finished Apparel—Namely, Men's and Youths' Suits, Coats, and Slacks, the Fabrics Being Made in Ireland.
First use Mar. 19, 1956.

Class 50—Merchandise Not Otherwise Classified

870,050. Key Products Company, Boston, Mass. SN 29,215. Filed P. R. 5-1-57. Am. S. R. 9-11-58.

FRAGRANT FLOWER

For Perfumed Artificial Flower and Pot Used as an Air Freshener.
First use on or about Apr. 1, 1957.

Class 51—Cosmetics and Toilet Preparations

870,051. Richard Hudnut, New York, N. Y. SN 32,694. Filed P. R. 7-30-56. Am. S. R. 9-11-58.

PRETTY PECAN

For Hair Coloring.
First use July 17, 1956.

TRADEMARK REGISTRATIONS RENEWED

16,696. MOSCU. Cl. 26. 12-4-1908.
122,517. NATIONAL. Cl. 26. 8-30-38.
162,357. DEERSTOCK. Cl. 6. 8-16-48.
122,626. SCHUTTER'S AND DESIGN. Cl. 26. 11-15-18.
[illegible]. DUBALL. Cl. 26. 12-20-18.
[illegible]. CROWN. Cl. 26. 8-31-20.
[illegible]. VIKEN. Cl. 26. 6-20-26.
[illegible]. ZAILORCRÊP. Cl. 26. 9-6-26.
[illegible]. DIAMOND PINK. Cl. 26. 9-12-28.
[illegible]. NUTRENA. Cl. 46. 9-12-28.
[illegible]. PROTRENA. Cl. 46. 9-12-28.
[illegible]. REYNSOLE. Cl. 26. 9-12-28.
[illegible]. TRICO. Cl. 26. 9-12-28.
[illegible]. OLYMPIC. Cl. 46. 9-20-28.
[illegible]. PUREOTHERM. Cl. 13. 9-20-28.
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[illegible]. COMCOL. Cl. 46. 10-11-28.
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[illegible]. SHORELAND SHETLAND AND DESIGN. Cl. 26. 10-16-28.
[illegible]. QUALITY TOWN WORSTEDS AND DESIGN. Cl. 26. 10-16-28.

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361,438. TEX-JTE. Cl. 22. 10-18-38.
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361,518. D. & P. L. CO. ORIGINATORS OF DELTA-PINE PLATING SEED AND DESIGN. Cl. 1. 10-25-38.
362,008. DESICOL. Cl. 18. 11-8-38.
362,134. REPRESENTATION OF OTTER AND FISH ETC. DESIGN. Cl. 39. 11-15-38.
362,135. OTTOCOT AND OTTER AND FISH ETC. DESIGN. Cl. 39. 11-15-38.
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362,963. ACB. Cl. 22. 8-27-29.
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364,846. SUODITE. Cl. 11. 2-14-39.
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294,368. WESTLAND. Cl. 37. 5-24-32.
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543,810. BARBARA WELLES. Cl. 107. 6-12-51.
545,045. CORONA. Cl. 46. 7-17-51.
555,291. HYWORTH. Cl. 42. 3-20-52.

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564,568. NITRINOSE. Cl. 18.
564,573. DIOX. Cl. 6.
564,581. KLEEN-PAK AND DESIGN. Cl. 46.
564,582. "ENCHANTED EVENING." Cl. 3.
564,585. HI-LITE. Cl. 23.
564,588. ACTIVON. Cl. 52.
564,593. ALA-ARRIBA. Cl. 46.
564,594. SKIP-NYL. Cl. 39.
564,596. CANNICK AND DESIGN. Cl. 18.
564,600. PAY-PAY AND DESIGN. Cl. 46.
564,601. SHELL CROWN. Cl. 46.
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564,606. STENZEL'S TICKLE TIM AND DESIGN. Cl. 46.
564,610. PERSUEDER. Cl. 39.
564,615. RILL-O-WHIP. Cl. 22.
564,620. ADRENOCAPS. Cl. 18.
564,623. DO-NETS AND DESIGN. Cl. 46.
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564,804. NEWBERRY AND DESIGN. Cl. 13.
564,805. STEINER. Cl. 52.
564,806. PUFFS. Cl. 30.
564,807. FIRE-BRITE. Cl. 29.
564,812. REDI-SHAVE. Cl. 51.
564,813. CUTS TOGS OF NEW ORLEANS AND DESIGN. Cl. 39.
564,814. FREUD. Cl. 27.
564,815. NIELSEN'S. Cl. 39.
564,817. GRAND PRIER. Cl. 28.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

368,505. PRO-HYGIN. Cl. 18. 12-30-52. Essex Pharmaceal Co. *Lydia E. Pinkham Medicine Company*, Lynn, Mass. Amended: In the statement column 1, line 8, "Powder" is deleted.

575,472. NOPCAY "10" AND DESIGN. Cl. 18. 6-9-53. Nopco Chemical Company, Harrison, N. J. Amended to appear:

NOPCAY "10"

628,857. HYPREGUN. Cl. 23. 6-12-56. Rockwell Manufacturing Company, Pittsburgh, Pa. Corrected: In column 2, line 2, "June 27," both occurrences, should be deleted and *July 6* should be inserted.

664,791. WEYDRIDGE. Cl. 50. 7-22-58. Julius Garfinckel & Co., Incorporated, New York, N. Y. Corrected: In the certificate column 1, line 1, "Inc." should be deleted and *Incorporated* should be inserted.

664,950. P AND DESIGN. Cl. 13. 7-29-58. Phcoil Manufacturing Company, Chicago, Ill. Corrected:

667,458. BROOKS BROTHERS. Cl. 39. 9-23-58. Julius Garfinckel & Co., Incorporated, New York, N. Y. Corrected: In the certificate, column 1, line 1, "and Company, Inc." should be deleted and *& Co., Incorporated* should be inserted.

667,531. FARE PLAN AND DESIGN. Cl. 102. 9-23-58. Fare Plan, Inc., Columbus, Ohio. Corrected: In the certificate, column 2, line 1, "collecting" should be deleted and *collection* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

354,597. SETTLER AND DESIGN. Cl. 18. Dawstell Laboratories. 2-15-36. New Cert. Sec. 7(c), to Harold F. Ritchie, Inc., Clifton, N. J., 11-18-58.

442,869. HOE-E-OPTICS. Cl. 26. Charles W. North, doing business as Industrial Service. 6-28-49. New Cert. Sec. 7(c), to Alvin J. Luebbers and Burnadette B. Luebbers, doing business as American Lens and Photo Company, Chicago, Ill., 11-18-58.

511,023. THE AMERICAN PRESS AND DESIGN. Cl. 38. American Press Association. 6-14-49. New Cert. Sec. 7(c), to The American Press, Inc., Stanton, N. J., 11-18-58.

547,176. HOLLIWOOD. Cl. 21. Finders Manufacturing Co. 8-28-51. New Cert. Sec. 7(c), to Berns Air King Corporation, Chicago, Ill., 11-18-58.

568,002. DUALEX ETC. AND DESIGN. Cl. 21. Fred W. Albertson. 12-16-52. New Cert. Sec. 7(c), to The Dualex Corporation, Washington, D. C., 11-18-58.

621,523. SILVER KLEEN AND DESIGN. Cl. 4. Kilgiar Manufacturing Company. 2-21-56. New Cert. Sec. 7(c), to Klean Sheen Products, Inc., Wilson, Kans., 11-18-58.

636,360. SENTRY. Cl. 50. Traffic Equipment Corp. 10-23-56. New Cert. Sec. 7(c), to Traffic Equipment Company, Denver, Colo., 11-18-58.

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Abbott Laboratories, North Chicago, Ill. 564,628, canc. Cl. 26.

Ace Fastener Corp., Chicago, Ill. 669,653, pub. 9-2-58. Cl. 26.

Ace Fastener Corp. (1957): See—
Ace Fastener Corp.

Ace Fastener Corp., to Ace Fastener Corp. (1957), Chicago, Ill. 563,963, ren. 1-17-58. Cl. 22.

Adamas Carbide Corp., Kenilworth, N. J. 560,886, pub. 6-27-57. Cl. 26.

Administrative Publishing Co., Inc., Greenwich, Conn. 670,045. Cl. 36.

Aeroscientific Inc., West Chester, Pa. 670,031, pub. 9-9-58. Cl. 106.

Agat Mfg. Co., Adrian, Mich. 669,846, pub. 9-2-58. Cl. 21.

Air Trade Broadcasting, Inc., Boston, Mass. 670,026, pub. 9-2-58. Cl. 104.

Albertson, Fred W., to The Dealer Corp., Washington, D. C. 565,002, new cert. Cl. 21.

Allen, Mark, Co.: See—
Allen, Mark W., & Co.

Allen, Mark W., & Co., to Mark Allen Co., Detroit, Mich. 564,901, ren. 2-21-58. Cl. 51.

Alpine-Maschinenbauen-Werk G. m. b. H., Ennefoerren, Germany. 669,862, pub. 9-2-58. Cl. 28.

American Foot Health Foundation, The, Washington, D. C. 669,933, pub. 9-2-58. Cl. 39.

American Lime and Plaste Co.: See—
North, Charles W.

American Machine and Foundry Co., New York, N. Y. 669,811, pub. 9-2-58. Cl. 19.

American Metal Climax, Inc., New York, N. Y. 669,762, pub. 9-2-58. Cl. 10.

American Pencil Co., Inc., Louisburg, Tenn. 669,918, pub. 9-2-58. Cl. 37.

American Plasticraft Co., New York, N. Y. 564,850, canc. Cl. 38.

American Press Association, to The American Press, Inc., Stanton, N. J. 511,022, new cert. Cl. 36.

American Press, Inc., The: See—
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American Velcro, Inc., Manchester, N. H. 669,954, pub. 9-9-58. Cl. 44.

Ames Harris Neville Co., San Francisco, Calif. 669,815, pub. 9-2-58. Cl. 37.

Archer Office Supply Co., Cleveland, Ohio. 669,816, pub. 9-2-58. Cl. 37.

Arkell, Charles, Inc., Baltimore, Md. 670,009, pub. 9-9-58. Cl. 31.

Archer-Daniels-Midland Co., Cleveland, Ohio. 669,750, pub. 9-2-58. Cl. 5.

Arizona Dawn Gardens, Phoenix, Ariz. 542,936, canc. Cl. 44.

Arlington Laboratories, Inc., Harrison and Arlington, N. J. 564,643, canc. Cl. 18.

Arundel Coulthard & Co. Ltd., Colchester, England. 669,852, pub. 9-2-58. Cl. 23.

Associated Dry Goods Corp.: See—
Stewart Dry Goods Co., The.

Avildsen Tools & Machines, Inc., d. b. a. Century Drill & Tool Works, Chicago, Ill. 564,735, canc. Cl. 23.

Avocet Co., San Francisco, Calif. 564,645, canc. Cl. 44.

B & B Mfg. Co.: See—
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Bamberger Broadcasting Service Inc.: See—
General Teleradio, Inc.

Barclay Knitwear Co., Inc., New York, N. Y. 564,827, canc. Cl. 39.

Baron, Bertha, Oakville, Conn. 669,874, pub. 9-2-58. Cl. 44.

Barker Poultry Equipment Co., Ottumwa, Iowa. 669,855, pub. 9-2-58. Cl. 31.

Barton Mfg. Co., St. Louis, Mo. 670,037. Cl. 4.

Basil, Hartman, Inc., New York, N. Y. 564,731, canc. Cl. 39.

Beaver Tool and Engineering Corp., Royal Oak, Mich. 669,840, pub. 9-2-58. Cl. 23.

Beloit State Bank, The, Beloit, Wis. 670,028, pub. 9-9-58. Cl. 102.

Bemis Bro. Bag Co., Minneapolis, Minn. 669,899, pub. 9-2-58. Cl. 29.

Benzoo-Lehner Corp., West Los Angeles, Calif. 669,871, pub. 9-2-58. Cl. 26.

Bernard, Oscar A., to The Kramik Factories Co., Cincinnati, Ohio. 122,781, ren. 12-10-58. Cl. 36.

Berns Air King Corp.: See—
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Bierbrier, Howard L., d. b. a. The Retro Products Co., South Orange, N. J. 670,004, pub. 9-9-58. Cl. 44.

Birch, J., & Sons, Inc., Birmingham, Ala. 202,771, ren. 11-20-58. Cl. 36.

Blair, R. W., Co., Pittsburgh, Pa. 669,841, pub. 9-2-58. Cl. 23.

Blue Anchor Fishing Co., Inc., Blue Anchor, N. J. 564,691, canc. Cl. 46.

Blue Blood Aquatics: See—
Doyle, Andrew M.

Blue Heaven Hosiery Co., New York, N. Y. 669,848, pub. 9-2-58. Cl. 39.

Bollinger, C. H., Sohn, Inhaber von Ehmig, Germany. 669,796, pub. 9-2-58. Cl. 15.

Bonney Forge & Tool Works, Allentown, Pa. 669,772, pub. 9-2-58. Cl. 12.

Bonnie Blonde, Inc., New York, N. Y. 669,784, pub. 9-2-58. Cl. 10.

Borg-Warner Corp., Chicago, Ill. 669,894, pub. 9-2-58. Cl. 31.

Borneo Sumatra Trading Co. of California, Inc. d. b. a. Borneany Trading Co. of California, Inc., San Francisco, Calif. 669,936, pub. 9-2-58. Cl. 46.

Borneany Trading Co. of California, Inc.: See—
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Brand, Morris M., d. b. a. Corpus Christi Granite Co., Corpus Christi, Tex. 564,714, canc. Cl. 32.

Brill, H. C., Co., Inc., Newark, N. J. 669,935, pub. 9-9-58. Cl. 46.

Britains Ltd., Lock, Staffordshire, England. 669,816, pub. 9-2-58. Cl. 27.

Brooks Bar Corner: See—
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Brooks Rotameter Co., Lansdale, Pa. 669,867, pub. 9-2-58. Cl. 24.

Bubble-O-Bill Co.: See—
Corcoran, Robert J.

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Buck Equipment Corp., Cincinnati, Ohio. 670,044. Cl. 23.

Burberrys Ltd., London, England, and New York, N. Y. 362,134, ren. 11-15-58. Cl. 39.

Burberrys Ltd., London, England, and New York, N. Y. 362,135, ren. 11-15-58. Cl. 39.

Burl Products, New York, N. Y. 669,881, pub. 9-9-58. Cl. 46.

Calbest Engineering & Electronics Co., Los Angeles, Calif. 669,822, pub. 9-2-58. Cl. 21.

California Sportwear Co., Los Angeles, Calif. 564,830, canc. Cl. 39.

Cal-Weed Mfg. Co.: See—
Roberts, Melvin R.

Camp & Melanee, Inc., Reading, Pa. 669,821, pub. 9-2-58. Cl. 39.

Canadian Distillers, Ltd. from Distillers Corp. Ltd., Montreal, Quebec, Canada. 670,000, pub. 9-27-58. Cl. 46.

Canadian Industries Ltd., Montreal, Quebec, Canada. 669,987, pub. 9-2-58. Cl. 16.

Candy Industries, Inc.: See—
Trans-American Management Co., Inc.

Capital Publishers, Inc., Washington, D. C. 669,922, pub. 9-2-58. Cl. 36.

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Avildsen Tools & Machines, Inc.

Century Product Works, Inc., New York, N. Y. 564,735, canc. Cl. 37.

Charlton Co., Inc., Fitchburg, Mass. 564,731, canc. Cl. 39.

Chatillon, John, & Sons, New York, N. Y. 669,831, pub. 9-2-58. Cl. 26.

Cheese Producers' Marketing Association, Monroe, Wis. 564,702, canc. Cl. 46.

Chicago Pharmacal Co., Chicago, Ill. 669,789, pub. 9-2-58. Cl. 18.

Chile Products Co., San Francisco, Calif. 564,550, canc. Cl. 46.

Choc-O-Vita Co., The: See—
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Ciba Ltd., Basel, Switzerland, to Ciba Pharmaceutical Products, Inc., Summit, N. J. 564,641, canc. Cl. 18.

Ciba Pharmaceutical Products, Inc.: See—
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Clarkson (Engineers) Ltd., Wanneton, England. 670,046. Cl. 23.

Clayton, Walter B., d. b. a. The Poly-Vern Co., San Francisco, Calif. 564,548, canc. Cl. 4.

Cohen, Joseph H., & Sons, Inc., New York, N. Y. 669,833, pub. 9-2-58. Cl. 39.

Cold Spring Granite Co., Cold Spring, Minn. 510,245, ren. 8-12-58. Cl. 32.

Cold Spring Granite Co., Cold Spring, Minn. 561,460, ren. 10-15-58. Cl. 32.

Commercial Importing Co., Seattle, Wash. 543,945, canc. Cl. 46.

Commercial Milling Co., Detroit, Mich., to International Milling Co., Minneapolis, Minn. 561,121, ren. 10-11-58. Cl. 46.

Commercial Milling Co., Detroit, Mich., to International Milling Co., Minneapolis, Minn. 561,581, ren. 10-25-58. Cl. 46.

Compañía Corchera, Limitada, Figo, Spain. 564,629, canc. Cl. 46.

Corr-Craft, Inc., New York, N. Y. 669,757, pub. 9-2-58. Cl. 11.

Corcoran, Robert J., d. b. a. Bubble-O-Bill Co., Beverly Hills, to Bubble-O-Bill Corp., Los Angeles, Calif. 564,627, canc. Cl. 26.

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Cormac Industries, Inc., New York, N. Y. 669,870, pub. 9–2–58. Cl. 26.
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Crawford Fitting Co., Cleveland, Ohio. 669,785, pub. 9–2–58. Cl. 15.
Crest Value Cookie Co., Columbus, Ohio. 669,993, pub. 9–2–58. Cl. 46.
Cricketeer, Inc., Chicago, Ill. 669,857, pub. 9–2–58. Cl. 42.
Crowell Corp., The, Yorklyn, Del. 669,751, pub. 9–2–58. Cl. 5.
Crystal Research Laboratories, Inc., Hartford, Conn. 669,846, pub. 9–2–58. Cl. 31.
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Custom Scarfs, Inc., New York, N. Y., 564,721, canc. Cl. 39.
Cutter Laboratories, Berkeley, Calif. 669,806–7, pub. 9–2–58. Cl. 18.
Cutting Room Appliances Corp., New York, N. Y. 669,882, pub. 9–2–58. Cl. 23.
Dacar Chemical Products Co., Pittsburgh, Pa. 669,748, pub. 9–2–58. Cl. 5.
Davis, P. H., Tailoring Co., The, to Globe Tailoring Co., Cincinnati, Ohio. 360,109, ren. 9–9–58. Cl. 39.
Dawstell Laboratories, to Harold F. Ritchie, Inc., Clifton, N. J. 354,537, new cert. Cl. 18.
Delta & Pine Land Co. of Mississippi, Scott, Miss. 361,518, ren. 10–25–58. Cl. 1.
DeLuxe Saw and Tool Co., Louisville, Ky. 669,853, pub. 9–2–58. Cl. 23.
De Luxe Wash Suit Co. Inc., New York, N. Y. 564,803, canc. Cl. 39.
Denfis Chemical Laboratories, Inc., Brooklyn, N. Y. 564,630, canc. Cl. 52.
Detrotter Mobile Homes Mfg., Inc., St. Louis, Mich. 669,814, pub. 9–2–58. Cl. 19.
Dewild, Benjamin, d. b. a. B & E Mfg. Co., Knoxville, Iowa. 564,703, canc. Cl. 52.
Dick, A. B., Co., Chicago, Ill. 294,363, canc. Cl. 37.
Dietz, R. E., Co., Syracuse, N. Y. 669,820, pub. 9–2–58. Cl. 21.
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Dix, Henry A., & Sons Corp., New York, N. Y. 669,929, pub. 9–2–58. Cl. 39.
Dolly Dimple Inc., Montreal, Quebec, Canada. 669,958, pub. 9–2–58. Cl. 39.
Dozier, Robert H., Sr., Newport News, Va. 669,837, pub. 9–2–58. Cl. 22.
Dualex Corp., The: *See*—
Albertson, Fred W.
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Duvic, Andres M., d. b. a. Blue Blood Aquatics, New Orleans, La. 564,642, canc. Cl. 46.
Econo-Matic Products Co., Inc., Detroit, Mich. 669,902, pub. 9–2–58. Cl. 34.
Educational Developmental Laboratories, Huntington, N. Y. 669,868, pub. 9–2–58. Cl. 26.
Electro-Measurements, Inc., Portland, Oreg. 669,864, pub. 9–2–58. Cl. 28.
Electro Silv-A-King Corp., Chicago, Ill. 670,042. Cl. 21.
Elliott, B. W., Mfg. Co., Inc., Binghamton, N. Y. 669,851, pub. 9–2–58. Cl. 23.
Empress Novelty Jewelry Co.: *See*—
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Essex Pharmacal Co., Lydia E. Pinkham Medicine Co., Lynn, Mass. 566,596, Am. 7(d). Cl. 18.
Estimatic Corp., Denver, Colo. 670,024, pub. 9–2–58. Cl. 101.
Even-Heat Stainless Steel Co., Orlando, Fla. 670,040. Cl. 12.
Excelsior Motor Co. Ltd., The, Birmingham, England. 669,819, pub. 9–2–58. Cl. 19.
Exchange Parts Co. of Fort Worth, Fort Worth, Tex. 669,817, pub. 9–2–58. Cl. 19.
Extensole Corp.: *See*—
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Fabrica de Conservas Madrugada Limitada, Povoa de Varzim, Portugal. 564,593, canc. Cl. 46.
Family Discount Stamp Co., Cleveland, Ohio. 670,038, pub. 9–2–58. Cl. 101.
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Rossler, Freres, Montreal, Quebec, Canada. 564,803, canc. Cl. 18.
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Janik, Walter.
S. & C. Products Co., Dallas, Tex. 564,697, canc. Cl. 18.
S. p. A. Lanifici Riuniti Rossi e Dellenai-Carignano (Torino), Carignano, Turin, Italy. 669,966, pub. 9-2-58. Cl. 46.
S. T. S. Inc., also d. b. a. Old Mission Laboratories, Burbank, Calif. 564,757, canc. Cl. 18.
Saal-Glas, Inc., Amsterdam, N. Y. 669,772, pub. 9-2-58. Cl. 13.
Sarong, Inc., West Haven, Conn. 669,827, pub. 9-2-58. Cl. 39.
Shiers of California, El Monte, Calif. 669,947, pub. 9-2-58. Cl. 39.
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Schauer Mfg. Corp., Cincinnati, Ohio. 669,834, pub. 9-2-58. Cl. 23.
Schering Corp., Bloomfield, N. J. 564,635, canc. Cl. 18.
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Schmid, Dr. Georg, Prof., Wabern, Bern, Switzerland. 564,747, canc. Cl. 18.
Schmidt, A. R., Co., St. Louis, Mo. 670,033, pub. 9-2-58. Cl. 107.
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Hamon, Orville C.
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Seed Trade Reporting Bureau, The.
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Seville Olive Packing Co.
Sharp & Dohme, Inc., Philadelphia, Pa., to Merck & Co., Inc., Rahway, N. J. 362,941, ren. 2-21-59. Cl. 18.
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Shotwell Mfg. Co., The, Chicago, Ill. 564,587, canc. Cl. 44.
Shroyer Door Co. of America, Ltd., Athens, Ga. 669,788, pub. 9-2-58. Cl. 19.
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Blendersells Systems, Inc., Stamford, Conn. 669,838, pub. 9–2–58. Cl. 22.
Smallman, L. & Son Co., New York, N. Y. 669,747, pub. 9–2–58. Cl. 1.
Smart Living Stores, Inc., Chicago, Ill. 670,020, pub. 9–2–58. Cl. 101.
Smith, Coleman J., Taylorsville, Calif. 564,798, canc. Cl. 13.
Societe Anonyme Novacel (Nouvelles Applications Chimiques et Cellulosiques), Paris, France. 564,804, canc. Cl. 41.
Sooty Concessions Ltd., London, England. 670,011, pub. 9–2–58. Cl. 52.
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Star Brush Mfg. Co., Inc., Boston, Mass. 670,046. Cl. 29.
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Statistical Tabulating Corp., Chicago, Ill. 670,027–8, pub. 9–2–58. Cl. 101.
Stein Bakers: *See*—
Stein, Morris M.
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Stensel, Rudolph J.
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Stewart Dry Goods Co., The, Louisville, Ky., to Associated Dry Goods Corp., Richmond, Va. 555,891, canc. Cl. 42.
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Sunlite Plastics, Inc., Milwaukee, Wis. 670,038. Cl. 7.
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Sutton Shirt Corp., New York, N. Y. 564,594, canc. Cl. 39.
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Synthetasine Protective Coatings, Inc., New York, N. Y. 669,786, pub. 9–2–58. Cl. 16.
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Theobald Industries, The, Kearny, N. J. 564,833, canc. Cl. 52.
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Thies, Charles R., Minneapolis, Minn. 564,784, canc. Cl. 23.
Thomas Co., The, Minneapolis, Minn. 669,778, pub. 9–2–58. Cl. 15.
Top Value Enterprises, Inc., Dayton, Ohio. 670,021, pub. 9–2–58. Cl. 101.
Top Value Enterprises, Inc., Dayton, Ohio. 670,022, pub. 9–2–58. Cl. 101.
Traffic Equipment Co.: *See*—
Traffic Equipment Corp.
Traffic Equipment Corp., to Traffic Equipment Co., Denver, Colo. 636,200, new cert. Cl. 50.
Trans-American Management Co., Inc., New York, N. Y., from Candy Industries, Inc., Elkton, Md. 669,982, pub. 9–2–58. Cl. 46.
Travelers Express Co., Inc., Minneapolis, Minn. 670,019, pub. 9–2–58. Cl. 101.
Trico Products Corp., Buffalo, N. Y. 360,366, ren. 9–12–58. Cl. 35.
Trimount Clothing Co., Inc., Boston, Mass. 670,049. Cl. 42.
Triplex National Corp., New York, N. Y. 669,958, pub. 9–2–58. Cl. 42.
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Union Starch & Refining Co., Columbus, Ind. 669,979, pub. 9–2–58. Cl. 46.
United Research Laboratories, Inc., Philadelphia, Pa. 564,620, canc. Cl. 18.
U. S. Polymeric Chemicals, Inc., Stamford, Conn. 669,912, pub. 9–2–58. Cl. 37.
United States Rubber Co.: *See*—
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Upjohn Co., The, Kalamazoo, Mich. 670,007, pub. 9–24–58. Cl. 51.
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Vanderbilt, R. T., Co., Inc., New York, N. Y. 669,755, pub. 9–2–58. Cl. 6.
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VEB Reichenbacher Nahen- und Kupplungswerke, Reichenbach, Germany. 669,815, pub. 9–2–58. Cl. 19.
Vimm Nutritional Laboratories, Burbank, Calif. 669,920, pub. 9–2–58. Cl. 38.
Vista Mfg. Co., New York, N. Y. 564,699, canc. Cl. 39.
Vitamix Corp., Philadelphia, Pa. 669,735, pub. 9–2–58. Cl. 18.
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Wamesit Sales Co., Inc., Lowell, Mass. 669,948, pub. 9–2–58. Cl. 39.
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Watson Feed Co.: *See*—
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Weinberg Corp., Chicago, Ill. 669,941, pub. 9–2–58. Cl. 39.
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Western Hills Hotel, Inc., The, d. b. a. The Western Hills Hotel, Fort Worth, Tex. 670,017, pub. 9–2–58. Cl. 100.
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Western Hills Hotel, Inc., The.
Western Newell Mfg. Co., Freeport, Ill. 669,771, pub. 9–2–58. Cl. 13.
Westinghouse Electric Corp., Pittsburgh, Pa. 669,873, pub. 9–2–58. Cl. 26.
Whitman Publishing Co., Racine, Wis. 669,825, pub. 9–2–58. Cl. 22.
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Wise Potato Chip Co., Berwick, Pa. 669,965, pub. 9–2–58. Cl. 46.
Worthington Biochemical Corp., Freehold, N. J. 669,756, pub. 9–2–58. Cl. 6.
Wrena Paper Co., The, Middletown, Ohio. 669,910–11, pub. 9–2–58. Cl. 37.
Wyanmont Co., Inc., Long Island City, N. Y. 669,860, pub. 9–2–58. Cl. 23.
Yamakochi, Fred M., San Luis Rey, Calif. 564,767, canc. Cl. 46.
Zebco Co., Tulsa, Okla. 669,832, pub. 9–2–58. Cl. 22.

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November 25, 1958 Volume 736 Number 4

PATENTS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter I—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

ADVERTISING

The date on which amended § 1.345 of Part 1 (23 F. R. 6199, August 12, 1958) is to take effect is extended to May 1, 1959. Until amended § 1.345 comes into effect, § 1.345, Title 37, Code of Federal Regulations, shall be in effect.

(Sec. 6, 66 Stat. 793; 35 U. S. C. 6. Interprets or applies secs. 31, 32, 66 Stat. 795, 796; 35 U. S. C. 31, 32)

ARTHUR W. CROCKER,
Acting Commissioner of Patents.

Approved: October 29, 1958.

SINCLAIR WEEKS,
Secretary of Commerce.

[F. R. Doc. 58-9164; Filed, Nov. 4, 1958; 8:51 a. m.]

Published in 23 F. R. 8622, November 5, 1958.

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, February 16, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Oct. 15, 1958. *Chairman, Committee on Enrollment.*

New Applications Received During September 1958

Patents	6,286
Designs	371
Plant Pats	6
Reissues	16
Total	6,679

Issue

Patents	930	No. 2,861,269 to No. 2,862,204, incl.
Designs	43	No. 183,956 to No. 183,998, incl.
Plant Pats	2	No. 1,773 to No. 1,774, incl.
Reissues	3	No. 24,370 to No. 24,372, incl.
Total	978	

CONDITION OF PATENT APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of pending applications (excluding Designs)	204, 214
Total number of pending Design applications	6, 982
Total number of applications awaiting action (excluding Designs)	88, 231
Total number of Design applications awaiting action	3, 504
Date of oldest new application	Nov. 1, 1957
Date of oldest amended application	Oct. 15, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 21, 23, 42, 46, 50, 56, 58, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	15, 35, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 37, 48, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 38, 50, 52, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 30, 32, 33, 40, 52, 53.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 28, 33, 45, 47.
(VII) KAUFFMAN, H. S., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 57.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-20-57	2-6-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-3-58	12-26-57
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	4-15-58	4-15-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	1-17-58	1-21-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	12-16-57	12-5-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	2-21-58	2-27-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-25-57	11-15-57
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	2-3-58	2-17-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	2-17-58	1-9-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	2-25-58	2-11-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-58	1-21-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-6-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	2-3-58	1-10-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-3-57	12-3-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-6-58	1-2-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	12-30-57	12-24-57
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	1-10-58	1-7-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-16-58	1-9-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	2-3-58	1-14-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-20-58	1-23-58
21. (III) MADER, R. C., Textiles	12-5-57	12-5-57
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-9-58	1-2-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-4-57	10-15-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	5-1-58	5-1-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	2-27-58	2-3-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	2-21-58	2-26-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	12-23-57	12-17-57
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-11-57	11-27-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	1-6-58	1-20-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	1-6-58	1-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	12-30-57	12-26-57
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	1-27-58	1-6-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements	2-3-58	2-20-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	1-29-58	1-17-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet or Web Feeding	2-4-58	1-6-58
36. (V) EVANS, E. L., Measuring and Testing; Automatic Weighers; Weighing Scales	10-8-57	10-7-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	12-10-57	12-6-57
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	2-5-58	2-25-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	2-27-58	2-27-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-20-58	1-21-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	12-27-57	12-23-57
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	11-1-57	11-1-57
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	12-13-57	12-16-57
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	12-5-57	12-4-57
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	12-30-57	1-2-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., Santonable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	1-3-58	12-13-57
47. (VI) KANOF, W. J., Mining, Quarrying, and Its Harvesting; Motor Vehicles; Land Vehicles; Education	1-29-58	12-10-57
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	12-2-57	12-4-57
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-4-58	2-7-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-17-57	9-12-57
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas	1-15-58	1-6-58
52. (V) NEFF, P. R., Supports and Racks	12-2-57	12-2-57
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators	2-18-58	2-6-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	2-11-58	2-11-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	11-2-57	10-18-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	2-3-58	2-5-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	2-17-58	2-11-58
58. (III) BRONAUGH, E. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part)	2-3-58	2-6-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-25-57	12-6-57
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-16-57	11-6-57
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Time Controlling Apparatus; Railway Mail Delivery; Feeding of Indefinite Lengths	12-3-57	12-5-57
62. (IV) LOWE, D. E., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	2-4-58	2-4-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-3-57	12-5-57
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	12-5-57	12-3-57
65. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	11-20-57	11-13-57
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	1-6-58	12-5-57
68. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	2-18-58	2-17-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	1-20-58	1-20-58
CLASS. DIVS. II—LADY, J. E., Oscillators	2-6-58	2-10-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Selective Punching	12-2-57	12-2-57
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	2-12-58	2-12-58
CLASS. DIVS. V—ANGEL, C. D., Roofs; Scaffolds; Masonry and Concrete Structures	12-16-57	12-16-57
M. E. DIV. A* (I) LANHAM, H. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	1-31-58	1-16-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	1-20-58	2-17-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	11-15-57	1-6-58

*Established August 22, 1957, by order of the Commissioner—722 O. G. 315.

The following divisions have been abolished: 53 and 66

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during October 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,257,723 to 2,261,101, inclusive
Plant Patents ..... Number 491

Re. 22,871, E. N. Castle, Foldable cardboard bottle carrier, Des. 179,187. (fee $ 708.90)

Dispensing; Coin Handling; Refrigeration	1-6-66	1-10-66

PATENT SUITS

Notices under 35 U. S. C. 295; Patent Act of 1952

2,574,785, T. G. Le Clair, Automatic printing metering system; 2,805,613, same, Automatic printing and totalizing metering system, filed Oct. 22, 1956, D. C., S. D. Ill. (Springfield), Doc. 2564, *Titus G. Le Clair v. Shell Oil Co.*

2,855,215. (See 2,813,752).

2,588,780, J. E. Du Bois, Eye shield; 2,686,906, same; 2,688,594, same, appeal filed Sept. 13, 1956, C. C. A., 8th Cir., Doc. 16084, *Du Bois Plastic Products, Inc. et al. v. United States Safety Service Co.* Appeal from District Court, Western District of Missouri dismissed with prejudice, on stipulation of parties Oct. 20, 1958.

2,606,069. (See 2,808,780.)

2,622,594. (See 2,845,780.)

2,628,668, Lapeyre and Lapeyre, III, Shrimp peeler; 2,657,266, F. S. Lapeyre, et al., Machine for peeling shrimp; 2,674,004, Lapeyre and Lapeyre, III, Shrimp peeling machine, filed Oct. 14, 1958, D. C., W. D. Wash. (Tacoma), Doc. 2350, *The Peelers Co. v. Ivar Wendt and Pacific Pearl Frozen Foods, Inc. et al.*

2,672,905, J. M. Oldak, Cuff link construction, appeal filed Feb. 12, 1958, C. C. A., 1st Cir., Doc. 5331, *Nisch Refining Co. v. Asor, Inc.* Judgment of District Court, Rhode Island, affirmed (notice Oct. 23, 1958).

2,686,181, E. J. Hercicia, Dimethylaminoalkylamina antihistiminic compounds, filed Nov. 20, 1956, D. C., S. D. N. Y., Doc. 114/301, *Merck & Co., Inc. v. Hexagon Laboratories, Inc.* Stipulation and order of dismissal with prejudice Oct. 20, 1958.

2,615,462, Greenleaf and Webster, Back pressure mop; 2,804,886, same, Sponge element and backing therefor for removable attachment to a mop head, filed Oct. 17, 1956, D. C., N. D. Ill. (Chicago), Doc. 58c1863, *Sponge Products Corp. v. American-Marietta Co.*

2,696,774, R. L. Samuel, Process of coating ferrous metal and heat pack mixture therefor, filed Oct. 10, 1956, D. C., S. D. Calif. (Los Angeles), Doc. 972/56-WB, *Chromalloy Corp. v. The Chrysalizing Co. et al.*

2,697,655. (See 2,836,526.)

2,571,644. (See 2,628,925.)

2,594,988. (See 2,815,406.)

2,671,818, Sharpless and Herbert, Jr., Magnetic data storage system, filed Oct. 18, 1949, D. C., N. D. N. Y. (Utica), Doc. 7265, *Technitrol Engineering Co., Inc. v. Sperry Rand Corp.*

2,686,197, R. W. Handelberg, Heating boiler with vertical undulating flue, appeal filed Oct. 16, 1958, C. C. A., 4th Cir., Doc. 7766, *Monolite Boiler Co., Inc. v. Columbia Boiler Co. of Portstown, Inc. et al.*

2,669,702, Huxley and Swayne, Etching; 2,688,194, Hopkins and Huxley, same, filed Sept. 8, 1958, D. C., S. D. N. Y., Doc. 137/208, *Dow Chemical Co. v. Western Photo Engraving Co., Inc.* Stipulation and order of dismissal with prejudice Oct. 24, 1958.

2,699,604, S. D. Vigren et al., Electrical control magnet, filed June 13, 1958, D. C., S. D. N. Y., Doc. 124/288, *Siva Daniel Vigren et al. v. Western Electric Co., Inc. et al.* Stipulation and order of dismissal Oct. 17, 1958.

2,709,698, Ricken and Wood, Vitamin B-12-active composition and process of preparing same, filed Oct. 18, 1955, D. C., N. D. Ill. (Chicago), Doc. 58c1838, *Merck & Co., Inc. v. Hallcrest Laboratories, Inc.*

2,709,682, J. Q. Adams, Pig creep feeder; Des. 178,197, same, filed Jan. 8, 1957, D. C., S. D. Ill. (Springfield), Doc. 2871, *Adams and Reynolds Co. v. The Brewer Mfg. Co.* Complaint dismissed without prejudice Sept. 23, 1958.

2,721,020, H. Shames, Expansion type adapter for use with a conduit adapted to deliver fluid under pressure, filed Oct. 31, 1956, D. C., S. D. N. Y., Doc. 139/63, *Meierd Mfg. Corp. v. Amerik Crystal Dairies, Inc.*

2,721,022, E. D. Ostrow, Electroplating composition for copper; 2,770,587, same, Bath for plating bright copper;

2,814,598, Portner and Lattenberger, Electrodeposition of copper, filed Oct. 27, 1958, D. C. Md. (Baltimore), Doc. 10962, *Lea-Ronal, Inc. et al. v. Allied Research Products, Inc.*

2,730,051, R. W. Wisberg, Buckle-forming machine, filed May 17, 1957, D. C., S. D. N. Y., Doc. 120/295, *O & W Sewing Machine Attachments, Inc. v. Dun-Rite Covered Buckle and Button Works.* Consent judgment; defendants enjoined Oct. 14, 1958.

2,769,685, H. J. Larsen, deceased, by Phyllis H. Larsen, Administratrix, Process for bonding hydraulic cementitious materials, filed Oct. 14, 1958, D. C. Md. (Baltimore), Doc. 10963, *Air Reduction Co., Inc. v. Larsen Products Corp. et al.*

2,765,756, A. Farmer, Spray device, filed Feb. 11, 1956, D. C., S. D. Fla. (Miami), Doc. 8218-M, *Alfred Farmer v. Sprayers & Nozzles, Inc.* Final decree; patent held invalid and not infringed; dismissed with prejudice Aug. 1, 1958.

2,765,554, Dorman and Lindquist, Jr., Method of sterilizing soil, filed Oct. 28, 1957, D. C. N. J. (Trenton), Doc. 1108/57, *Stauffer Chemical Co. v. Chemical Insecticide Corp.* Consent judgment; injunction issued Oct. 10, 1958.

2,788,662, Persinger and Persinger, Table attachment for barbecue equipment; 2,830,609, same, Barbecue grill attachment, filed Aug. 28, 1958, D. C., S. D. Calif. (Los Angeles), Doc. 985/58-TC, *Seidelhuber Steel Rolling Mills Corp. v. Allied Mfg. Co., Inc.* Consent judgment; patents held valid and infringed; defendants restrained (notice Oct. 15, 1958).

2,750,891. (See 2,783,596.)

2,787,488, E. Mlcek, Valve ball mountings for toilet flush tanks, filed Oct. 14, 1958, D. C., S. D. Calif. (Los Angeles), Doc. 956/58-PH, *Richard Mlcek v. Indicator Specialty Co.*

2,798,805, S. C. Harlan, Brushes, filed Oct. 9, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1827, *Zimmerman Brush Works, Inc. v. Montgomery Ward & Co., Inc.*

2,781,973, G. B. Dorey, Operating mechanism for sliding gate for a discharge outlet etc., filed July 28, 1957, D. C., N. D. Ill. (Chicago), Doc. 57c1245, *Enterprise Railway Equipment Co. v. Keystone Railway Equipment Co.* Patent held valid and infringed (notice Oct. 25, 1958).

2,816,808. (See 2,732,826.)

2,815,205, Schaeffer and Ekland, Wheeled carrier for crates, filed Mar. 27, 1958, D. C. Oreg. (Portland), Doc. 9712, *K-E Carrier Co. v. Phil E. Lusby.* Order of dismissal on stipulation (notice Oct. 13, 1958).

2,817,788, N. S. Florence, Lighting system and ceiling panel, filed Oct. 8, 1958, D. C., E. D. Pa. (Philadelphia), Doc. 25408, *Lightolier, Inc. v. Metalcraft Products Co., Inc.*

2,806,279, R. W. Page, Dental drill, filed May 28, 1958, D. C. N. J. (Newark), Doc. 612/58, *Chayes Dental Instrument Corp. v. National Dental Supply Co., Inc.* Stipulation and order of dismissal Oct. 15, 1958.

2,808,174, J. Shapiro, Piece of hardware for attaching a leg to furniture and the like, filed Oct. 21, 1958, D. C., S. D. N. Y., Doc. 139/64, *Joseph Shapiro v. Butler Lumber Co., Inc.*

2,809,191. (See 2,699,782.)

2,808,625, R. G. Owen, Hard facing material and method of making; 2,808,126, J. Chadderdon, Milling cutter for use in oil wells, filed Oct. 13, 1958, D. C., S. D. Calif. (Los Angeles), Doc. 984/58-TC, *Servco Mfg. Co. v. Best Oil Tool Co.*

2,824,696, Bates-Miller and Tabet, Saddle for spinning frame or the like, filed Oct. 13, 1958, D. C., M. D. N. C. (Greensboro), Doc. C/204/D/58, *Dixon Corp. v. Roberts Co.*

2,829,020. (See 2,780,042.)

2,840,671, S. L. McNair, Electrical vibrating device in combination with a cushion, filed Sept. 25, 1958, D. C., S. D. N. Y., Doc. 128/112, *Kole-Broil Corp. of America v. Samuel L. McNair.* Notice of dismissal Oct. 17, 1958.

2,844,155. (See 2,838,626.)

2,850,000. (See Des. 180,078.)

Patents ..... Numbers 2,257,723 to 2,261,101, inclusive
Plant Patents ..... Number 491

Re. 23,611, E. N. Castle, Foldable cardboard bottle carrier, filed Oct. 17, 1958, D. C., S. D. N. Y., Doc. 139/25, *Diamond Gardner Corp. v. Coaster Board & Carton Co., Inc.*

Re. 24,186, H. E. Marvel, Water-fuel separator, appeal filed Oct. 3, 1958, C. C. A., 4th Cir., Doc. 7761, *Richmond Engineering Co., Inc. v. Bowser, Inc.*

Des. 168,988, C. J. Olson et al., Awning; **Des. 176,709,** Brennan and Hudson, same, filed Oct. 15, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1847, *Ray-O-Lite Corp. of America et al. v. Fiberlite Corp. et al.*

Des. 174,344, Elt Silvestri, Novelty lamp, filed Oct. 16, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1861, *Silvestri Brothers Statuary Co. v. Premium Products Mfg. Co. et al.*

Des. 176,788. (See Des. 165,363.)

Des. 179,187. (See 2,708,901.)

Des. 179,747, A. D. Sylvester, Plastic covered sheet material, filed July 29, 1957, D. C. N. J. (Newark), Doc. 782/57, *L. E. Carpenter & Co., Inc. v. Interchemical Corp.* Consent order of dismissal Oct. 22, 1958.

Des. 180,572, S. Briskman, Shears or the like; **2,809,692,** Briskman and Weidauer, Shears with arcuate profiled teeth, filed Oct. 10, 1958, D. C., S. D. N. Y., Doc. 138/349, *Samuel Briskman et al. v. Cutlers Guild, Ltd. et al.*

Des. 181,167, A. W. Madl, Electric food comminuting machine, filed Oct. 17, 1958, D. C., E. D. Wis. (Milwaukee), Doc. 58c308, *John Oster Mfg. Co. v. Sunbeam Mfg. Co.*

Des. 182,897, W. D. Warren, Sugar server, filed Oct. 24, 1958, D. C., S. D. N. Y., Doc. 139/119, *William D. Warren v. M. Willis Co.*

REISSUES

NOVEMBER 25, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,570
PERMEABLE CONCRETE

George B. Mangold, Los Angeles, Calif., James A. Dyer, Kings Ferry, N. Y., and John T. Hart, Monrovia, Calif., assignors, by mesne assignments, to Florent H. Bailly, Pasadena, Calif.

Original No. 2,793,957, dated May 28, 1957, Serial No. 267,318, January 19, 1952. Application for reissue February 21, 1958, Serial No. 719,986

3 Claims. (Cl. 106—96)

1. A concrete characterized by a relatively high permeability to liquids which as a slurry consists essentially of approximately 1 part of Portland cement, 0.10 to 0.40 part of a pozzolan, 4.0 to 7.0 parts of a first [lightweight] aggregate having a particle size distribution of from about 3 to about 6 mesh, 1.0 to 2.0 parts of a second [lightweight] aggregate having a particle size distribution of from about 10 mesh to about 100 mesh, there being substantially no aggregate particles in the size range of from about 7 to about 9 mesh, and water.

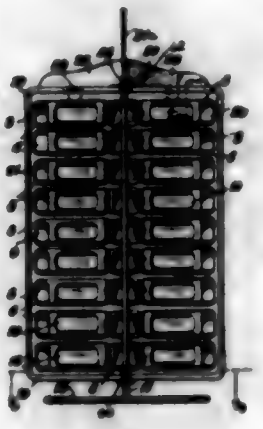
24,571
DISPLAY DEVICES

Manuel R. Nadel, New York, N. Y., assignor to Compton Company, Ltd., New York, N. Y., a corporation of New York

Original No. 2,816,666, dated December 17, 1957, Serial No. 615,068, October 10, 1956. Application for reissue March 10, 1958, Serial No. 721,878

9 Claims. (Cl. 211—13)

1. A display stand comprising a base, a central spindle extending upwardly from the base, a plurality of crossed rectangular frames rotatively supported in radial relation on the spindle, each frame containing a plurality of back-to-back display cards, each card having a transparent plastic sheet secured to its face, each plastic sheet being distorted to form a plurality of forwardly-protruding pockets of a size and shape to each contain and enclose an eyeglass, each pocket being open at an end at the outer edge of its frame to permit of the insertion of the eyeglass in it or permit the removal of the eyeglass from within the pocket.



PLANT PATENTS

GRANTED NOVEMBER 25, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,773
CHRYSANTHEMUM

Elizabeth B. Parker, Los Angeles, Calif.

Application March 3, 1958, Serial No. 718,933

1 Claim. (Cl. 47—69)

A new and distinct variety of chrysanthemum plant, substantially as shown and described herein, characterized particularly as to novelty by the pronounced jasmine sweet fragrance of its flowers, the long duration of the fragrance, the great height of the plant, the cluster habit and the large number of blooms, the distinctive two-tone Baryta Yellow background overlaid with streaks of Pompeian Red general color tonality of the outside of the petals of the open flower and the distinctive two-tone Pinard Yellow background of the center of the inside of the petals darkening to Apricot Yellow towards the tips of the inside of the petals overlaid with streaks of Dragon's Blood Red general color tonality of the inside of the petals of the open flower, and the resistance to mildew of the plant.

1,774
ROSE PLANT

Sidney Reece and Roy L. Byrum, Richmond, Ind., assignors to Joseph H. Hill Company, Richmond, Ind., a corporation of Indiana

Application April 21, 1958, Serial No. 734,630

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of freedom from "bull-heads," absence of malformed flowers, absence of "dirty" or cloudy guard petals in the flowers, a distinctive pink general color tonality of the flowers, an intensification of the pink flower color as the flowers open, and the absence of substantial "bluing" of the flowers.

PATENTS

GRANTED NOVEMBER 25, 1958

GENERAL AND MECHANICAL

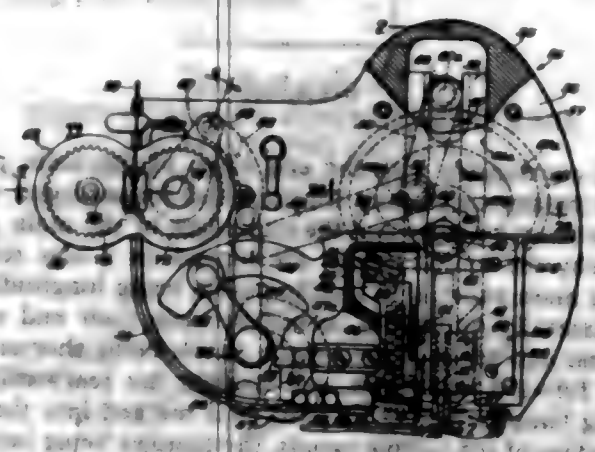
2,861,269

METHOD AND APPARATUS FOR FORMING AND DRIVING AN IMPROVED STAPLE

George H. Reed, Chicago, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois

Application June 19, 1952, Serial No. 294,352

6 Claims. (Cl. 1—82)



4. The combination in a wire stitching machine, of means for intermittently feeding transversely curved stitching wire in an endwise direction, a die over which said transversely curved wire is fed, a cutting member cooperating with said die to cut said transversely curved wire into lengths, said cutting member and said die having cooperating cutting surfaces for maintaining transverse curvature in said wire during the cutting thereof, and means for forming said lengths into staples while maintaining transverse curvature therein.

2,861,270

HEAD PROTECTIVE CAP DEVICE FOR ATHLETES

Robert McCoy, New York, N. Y.

Application September 3, 1957, Serial No. 681,619

3 Claims. (Cl. 2—3)

1. A combination cap and head and temple protector comprising a cap member, a resilient protector member extending therein in position to protectively overlie the forehead and temples of a wearer, resilient side pads depending from the protector member, and means connecting the side pads to the protector member for adjustment along opposite sides of the protector member, said protector member being of U-shape, said means comprising clamp members secured to opposite faces of each side pad in position to engage the protector member, the protector member having along opposite sides thereof longitudinal slots, said clamp members engaging at their upper ends in the slots to effect the connection of the side pads to the protector member.

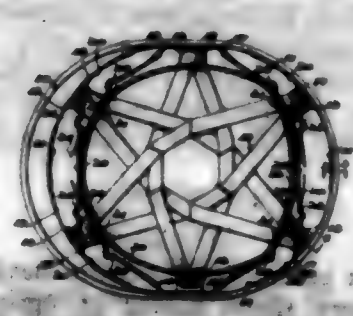
2,861,271

SWEATBAND MOUNTING MEANS

Wilbur J. Lee, Williamsville, and John M. Rigby, Tonawanda, N. Y., assignors to the United States of America as represented by the Secretary of the Army

Application December 27, 1957, Serial No. 706,725

8 Claims. (Cl. 2—3)



4. In a head covering including a sweatband; the improvement comprising sweatband mounting means supporting said sweatband in said head covering in radially inwardly spaced relation thereto, said means including a circumferential series of pairs of spaced anchors, means mounting said anchors on said head covering inwardly thereof, there being opposed pairs of front and back anchors and opposed pairs of side anchors therebetween, each pair of said side anchors comprising a forward and a rear anchor, a first flexible member connecting said front pair of anchors together, a second flexible member connecting said back pair of anchors together, a third flexible member connecting said forward anchors of said side anchors together, a fourth flexible member connecting said rear anchors of said anchors together, connecting means connecting said third and fourth flexible members respectively to said first and second flexible members inwardly thereof and substantially centrally the same, fastening means securing said sweatband to said third and fourth flexible members inwardly thereof, each flexible member having two end portions, and means for adjusting the length of each end portion to provide an all around adjustable support for said sweatband.

2,861,272

HINGED HELMET

Whitney A. Stuart, New Brunswick, N. J., and Leonard G. Hextable, New York, N. Y., assignors to the United States of America as represented by the Secretary of the Army

Application February 21, 1957, Serial No. 641,774

13 Claims. (Cl. 2—6)

1. A protective rigid helmet, said helmet including two substantially rigid lower portions, said lower portions being shaped for a close fit with cheek and neck areas of a wearer, coaxial front and rear pivot means pivotally connecting said lower portions together, and said lower

portions being movable on said pivot means laterally outwardly in opposite directions from operative positions close to said cheek and neck areas to spread positions remote from said areas, whereby to permit donning and doffing of said helmet.

2,861,273
HELMET WITH RETRACTABLE ANNULAR SHIELD

Whitney A. Stuart, New Brunswick, N. J., and Leonard G. Huntable, New York, N. Y., assignors to the United States of America as represented by the Secretary of the Army

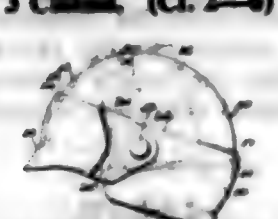
Application February 21, 1957, Serial No. 641,779
6 Claims. (Cl. 2—6)

1. A helmet comprising a crown, having a brim, an annular auxiliary shield having an upper edge, a pair of coaxial pivots pivotally connecting said shield to said crown for pivotal movement relative thereto from an operative position wherein said shield depends from said crown in encircling relation with said upper edge overlapping said brim so as to provide an extension of said brim in all directions to a retracted position wherein said shield is disposed upside down substantially entirely above said brim, and said shield including a radially outwardly extending portion providing a downwardly directed eye shade when said shield is in said retracted position.

2,861,274
THREE PIECE HELMET

Whitney A. Stuart, New Brunswick, N. J., and Leonard G. Huntable, New York, N. Y., assignors to the United States of America as represented by the Secretary of the Army

Application February 21, 1957, Serial No. 641,777
3 Claims. (Cl. 2—6)



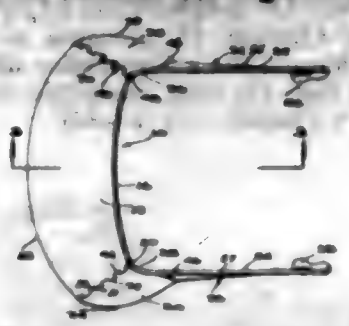
1. A three piece helmet, comprising a crown, a visor, and a combined neck and ear shield, a pair of coaxial pivot means pivotally connecting said visor and shield to said crown, said visor and shield being independently and pivotally movable from operative positions wherein they depend from said crown to a plurality of raised positions, one of said shield and visor having laterally outwardly offset ends including radially directed portions providing shoulders, and said shoulders providing movable stops for engaging the other of said shield and visor so as to limit raising movement of one of said shield and visor to a selected raised position.

2,861,275
FOLDABLE EYESHADE

Glen A. Lougee, Laconia, N. H.

Application October 19, 1956, Serial No. 617,121
3 Claims. (Cl. 2—12)

1. In an eyeshade, a transversely and forwardly curved and elongated main panel having upper and lower edges, said upper edge being slightly concavely curved forehead engaging edge and said lower edge being convexly curved, the upper edge having a greater radius of curvature than said lower edge, said main panel having beveled edges which diverge from each other downwardly and forwardly, temple pieces comprising segmental temple panels having mutually downwardly divergent forward and rear vertical end edges said forward end edges extending forwardly and downwardly and said rear end edges extending rearwardly and downwardly relative to the vertical, the forward end edges of the temple panels

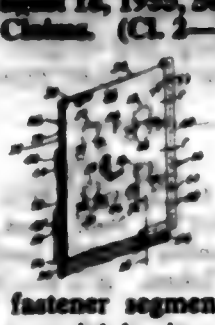


being coextensive with the end edges of the main panel, hinge means connecting together the forward end edges of the temple panels and the end edges of the main panel whereby the temple pieces are hinged on a bias relative to the main panel, said temple panels being longitudinally and laterally outwardly curved between their end edges, the rear end edges of the temple panels being shorter than their forward end edges, and straight flat rearwardly tapering temples having forward ends merged into the rear end edges of the temple panels, the temples being laterally inset relative to the temple panels, and ear hooks on the rear ends of the temples.

2,861,276
GARMENT CLOSURES

Harry Allmendre, Jamaica, N. Y., assignor to Scovill Manufacturing Company, Waterbury, Conn.

Application August 18, 1955, Serial No. 529,293
6 Claims. (Cl. 2—265)



5. A composite fastener segment, comprising a strip of inelastic fabric material having a plurality of layers, each of which layers has opposite unfinished marginal edges, said edges being encompassed by a flexible plastic binding in stitchless, sealing relation therewith to prevent unraveling of said layers of inelastic fabric along said marginal edges, a fastener element secured on one face of said strip, an elastic strip extending across another marginal edge of said inelastic fabric strip, and a flexible plastic binding in stitchless sealing relation with said another marginal edge of said inelastic strip and with said elastic strip for connecting said inelastic strip to said elastic strip, whereby to incorporate said elastic strip into said composite fastener segment without impairing the elasticity of said elastic strip.

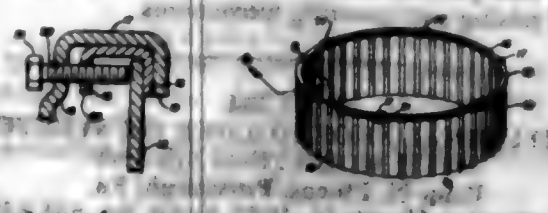
2,861,277
SWIMMING POOL CONSTRUCTION

Louis Hermann, Youngstown, Ohio, assignor to Superior Aluminum Products, Inc., Youngstown, Ohio, a corporation of Ohio

Application October 9, 1957, Serial No. 689,338
1 Claim. (Cl. 4—172)

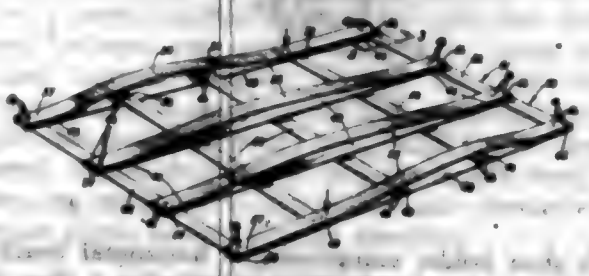
In a swimming pool construction including an assembly of a plurality of extruded sections, each of which has en-

gaging formations on its longitudinal edges, the improvement comprising a plurality of arcuate cross sectionally channel-shaped rigid extruded members positioned in end-to-end relation over the upper ends of said extruded sec-



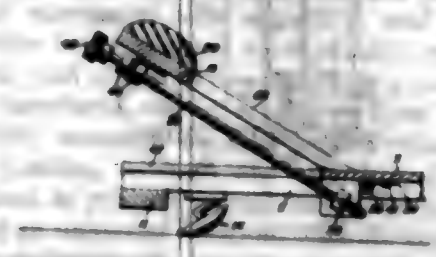
tions and a plurality of inverted U-shaped clamps incorporating bolts securing said arcuate sections to one another and to said extruded sections and a waterproof swimming pool liner positioned in and supported by said swimming pool construction.

2,861,278
BODY CONTOUR CONFORMING AND SUPPORTING DEVICE
Modesto P. Young, Fresno, Calif.
Application May 27, 1957, Serial No. 661,772
9 Claims. (Cl. 5—317)



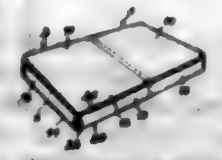
1. In a body contour conforming and supporting device, an elongated resiliently flexible flat backing member of predetermined length having opposite ends and an elongated flat highly flexible body contouring member of sheet material having a fixed length greater than the length of and positioned over the backing member and having opposite ends rigidly connected to the opposite ends of the backing member so as to be curved upwardly from the backing member, the ends of the contouring member being rigidly held against movement longitudinally of the backing member, the contouring member having appreciable longitudinal flexibility facilitating longitudinal undulating movement thereof toward and away from the backing member incident to application of force on the contouring member moving it toward the backing member, there being sufficient flexibility in the contouring member such that the contouring member exerts negligible reactive force in opposition to said force moving the contouring member toward the backing member.

2,861,279
CREEPERS AND HEAD RESTS THEREFOR
Paul Theron Myers, Newton, Ill., assignor of fifty percent to David A. Turnipseed, Newton, Ill.
Application July 3, 1956, Serial No. 595,727
1 Claim. (Cl. 5—327)



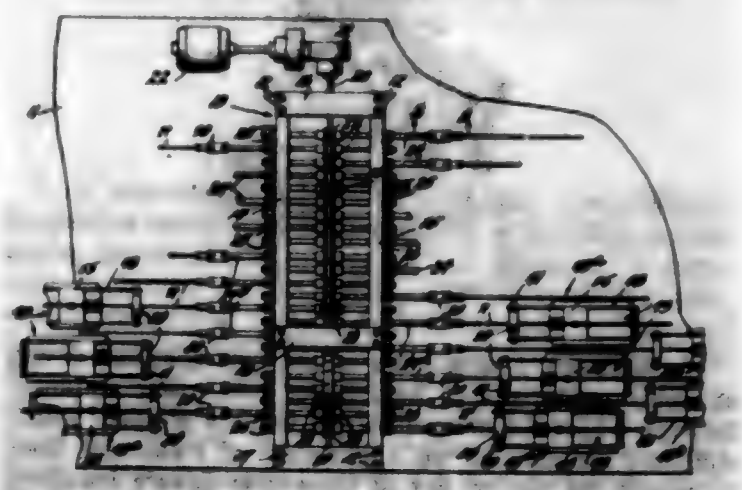
A creeper comprising a rectangular bed having front and rear ends and including side bars and a panel on said bars, a head rest extending crosswise of said rear end, a pair of support arms for said head rest extending forwardly therefrom at opposite sides of said bed and having front ends pivoted between said side bars beneath said panel for vertical swinging whereby said head rest is vertically swingably adjustable, and means for adjusting said head rest comprising a shaft beneath said head rest extending forwardly therefrom beneath said panel, means pivotally mounting said shaft adjacent a front end thereof for vertical swinging, and means connecting said shaft adjacent its other end to said head rest, said panel being slotted for swinging of said arms and shaft therethrough, the second named means comprising a swivelled nut through which said shaft is threaded for screw feed relative thereto, the last named means comprising a lug on said head rest through which said shaft is journaled, and collars on said shaft on opposite sides of said lug for engaging the same to adjust the head rest in opposite directions in response to screw feed of said shaft in opposite directions, said nut having trunnions on opposite sides thereof and said panel having a pair of depending lugs therein in which said trunnions are journaled with the nut between said pair of depending lugs for swivelling said nut.

2,861,280
MATTRESS COVER
Norma Sachs, Chicago, Ill.
Application August 18, 1954, Serial No. 450,670
3 Claims. (Cl. 5—354)



1. In combination with a mattress, a mattress covering formed from a pair of overlapping bag-like cover sections which surround opposite ends of the mattress and each of which extends along only part of the length of the mattress, one of which bag-like sections overlies a part of the top surface of the mattress and also the adjacent part of the bottom surface of the mattress, and the other bag-like section overlies the remainder of the top and the bottom surfaces of the mattress, and means at the overlapped portion of said sections for holding the mattress cover sections in place on the mattress.

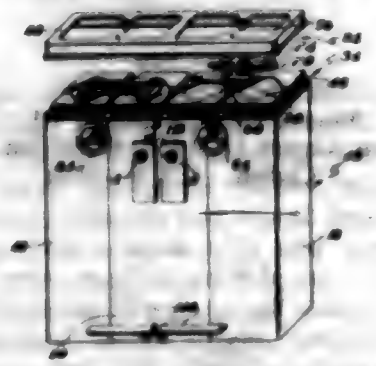
2,861,281
APPARATUS FOR SIMULTANEOUSLY THREADING A PLURALITY OF RODS AND SEQUENTIALLY RELEASING THE RODS FROM ROTARY WORK HOLDERS
James E. Carpenter, Gaithersburg, Md.
Application June 13, 1955, Serial No. 514,956
2 Claims. (Cl. 10—91)



1. Apparatus for threading rods, dowels and the like which comprises a planar supporting surface, a plurality of rotatable spindles mounted in spaced relationship with their axes substantially parallel to the plane of said sur-

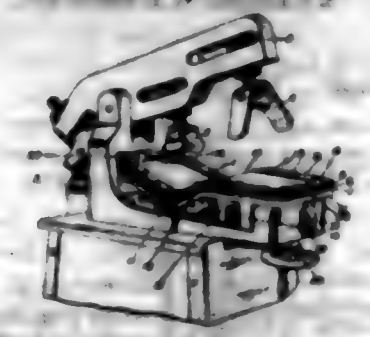
face and to each other, drive means common to all of said spindles for rotating the same, a coupling connecting one end of a rod to each of said spindles, which coupling is adapted to release the rod when an abnormal resistance to rotation of the rods is encountered, a die for threading each of said rods, said dies being staggered along the lengths of the rods during the threading operation and means supporting said dies for longitudinal movement along the surface but preventing rotation thereof, said rods being released sequentially when the dies encounter the coupling due to the resultant increase in resistance to the rods to rotation above that of normal threading.

2,861,282
MACHINE FOR SOLE ATTACHING AND/OR LAYING OPERATIONS
Edward F. Small, Newton, Mass., assignor, by mesne assignments, to Jacob S. Kamberian, West Newton, Mass.
Application March 11, 1954, Serial No. 415,563
16 Claims. (Cl. 12—36)



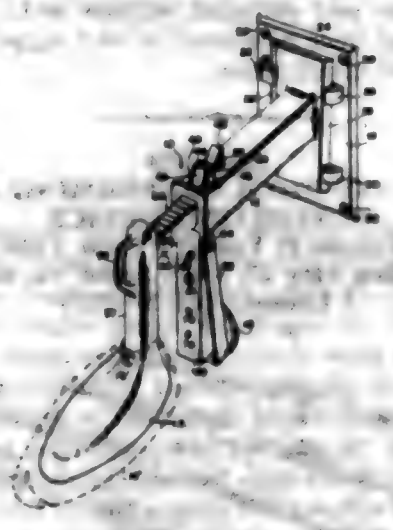
7. A bottom attaching machine comprising laterally spaced operating stations, each station including opposed relatively movable parts between which two shoes may be placed for an application of sole laying pressure thereto, one of the parts of each station comprising a pair of receptacles, each including a flexible diaphragm distended by an incompressible fluid contained within the receptacle and means interconnecting the receptacles of each station permitting free flow of the incompressible fluid from one receptacle to the other, said receptacles and means interconnecting them constituting a closed system containing a constant volume of fluid.

2,861,283
SHOE PRESS
George Trevor Ralphs, Oadby, Leicestershire, England, assignor to The Ralphs Engineering Company Limited, Leicester, England
Application July 7, 1953, Serial No. 366,499
13 Claims. (Cl. 12—38)



12. In or for a shoe press of the type specified, a bag assembly comprising a bag, upper and lower stiffeners between which the margins of the bag are gripped, which stiffeners are divided on a plurality of transverse lines to permit the bag to flex at transverse flexure locations and to sub-divide the bag into a plurality of longitudinal portions including end portions and an intermediate portion, a base on which the bag and stiffeners are mounted, means tiltably mounting one end portion of the bag and the contiguous intermediate portion of the bag on said base for raising and lowering movements of the transverse flexure line formed and located between said end portion and said intermediate portion with relation to the opposite end portion and means for effecting such tilting and said raising and lowering movements.

2,861,284
LONGITUDINAL SHOE HOLDER OR STRETCHER WITH MOUNTING MEANS
Peter N. Fiocco, Pittsburgh, Pa.
Application March 18, 1957, Serial No. 646,839
5 Claims. (Cl. 12—53.7)



1. A shoe holder comprising: a horizontal bracket, a toe portion and a heel portion constituting a shoe form, said toe portion slidably connected to said bracket adjacent one end of the bracket for adjustable outward projection thereof, a rigid member rigidly secured to and depending from said bracket rearwardly of said toe portion, said heel portion pivotally engaged to said member, and spring means acting between said member and said heel portion and urging said heel portion rearwardly away from said toe portion.

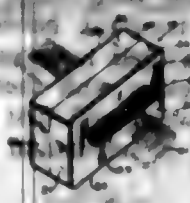
2,861,285
YIELDABLE BARRIERS
Emerson D. Sawyer, Chicago, Ill.
Application February 27, 1953, Serial No. 339,441
10 Claims. (Cl. 14—82)

1. In a yieldable barrier gate column having a base portion and a counterweight fitted to move in said column, a buffer device comprising a plunger mounted in the bottom portion of said counterweight having a free end protruding therefrom, a plunger receiving member

their axes substantially parallel to the plane of said sur-

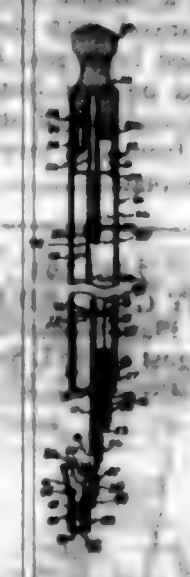
mounted on said base within said column, and shock absorbing means within said plunger receiving member to absorb impact if the counterweight should fall.

2,861,296
COMB CLEANING DEVICE
Harry D. Koenig, New York, N. Y., assignor to Bruno, Wettberg & Co., Beerfelden (Odenwald), West Germany, a firm
Application October 27, 1955, Serial No. 543,136
1 Claim. (Cl. 15—39)



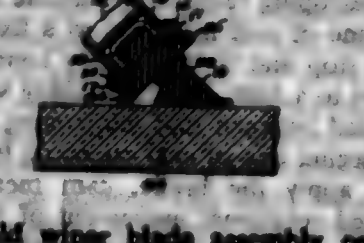
A comb cleaner comprising a hollow rectangular casing having opposed sides with opposed aligned comb slot openings for a comb to pass through flatwise and endwise in one opening and out the other, a pair of spiral brushes with central axial shafts rotatably and removably mounted in the casing adjacent the comb slot openings for a comb inserted through the comb slot openings to pass between and rotate same, said casing having U-shaped bearing members against the ends thereof, said brush shafts being rotatably and removably mounted in said bearing members, and hold down inverted U-shaped clamps frictionally and removably fitted over the bearing members to removably and rotatably hold the brush shafts in said bearing members.

2,861,287
SWIVEL DUST MOP HOLDER
Richard T. Scott, Malvern Park, Ill., assignor to George Ball, Jr., Chicago, Ill.
Application August 27, 1953, Serial No. 376,969
3 Claims. (Cl. 15—144)



3. A mop holder comprising, an elongated tubular handle; a clamp device connected to one end of said handle for pivotal movement with respect to said handle, said clamp device being adapted to releasably engage a mop head frame, said clamp device including a mounting plate having a peripheral recess; a lock member slidably and non-rotatably mounted on said handle slidable between a locked position, wherein one end thereof is disposed in said recess to prevent pivotal movement of said clamp device and an unlocked position, wherein said lock member end is withdrawn from said recess and out of engagement with said mounting plate whereby said clamp device is free to pivot with respect to said handle; a grippable knob slidably mounted on the end of said handle opposite said clamp device; cable means disposed within said handle having its ends operatively connected, respectively, to said lock member and said knob, said knob being slidable between a first position, wherein said lock member is in its locked position and a second position, wherein said lock member is withdrawn from said recess and out of engagement with said mounting plate; spring means for yieldably urging said knob to its first position; a plug secured and disposed within said handle adjacent the end thereof opposite said clamp device, said knob abutting said plug when in its first position; and releasable retaining means associated with said knob and plug for maintaining said knob in said second position.

2,861,288
CLEANERS FOR SPATULAS
Jack W. Steindorf, Corvallis, Oreg.
Application August 23, 1957, Serial No. 679,578
2 Claims. (Cl. 15—236)



1. In a device for cleaning flat tools such as spatulas, knives or the like, comprising a flat base having vertical standards fixedly secured to the sides thereof in parallel relation to each other, said standards having portions bent toward one another and vertical tongues on said bent portions, said tongues being inclined toward each other to provide an acute angle between them and a pair of flat, juxtaposed, confronting, spaced-apart scraping blades supported on said tongues, the improvement comprising each blade including a loop removably mounted on its nearest tongue; and a bolt passing through both the blades and the vertical standards for retaining said blade loops on said tongues while regulating the pressure between said blades and forming stop means for a flat tool when it is passed between the blades for cleaning.

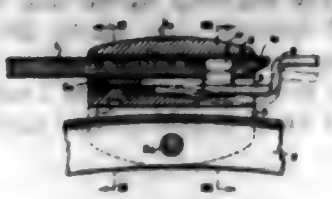
2,861,289
WINDSHIELD WIPER BLADE
Israel Nemen, Lynn, Mass., assignor to Max Zaiger, Swampscott, Mass.
Application February 16, 1956, Serial No. 485,488
6 Claims. (Cl. 15—245)

1. A windshield wiper blade assembly comprising a flat flexible backer having longitudinal outer edges, a yoke having fingers slidably engaging said edges, and a wiper strip connected to the backer, said strip having sidewardly projecting flanges underlying said backer and fingers running longitudinally along the entire blade, said flanges having free longitudinal outer edges disposed outward of said backer and said fingers, and the flanges being of sufficient rigidity to maintain said fingers and backer edges in spaced relationship to a windshield when the backer is disposed at an acute angle to the windshield, and the strip having a portion to which said flanges are joined which seats against said backer and prevents tilting of the flanges with respect to said backer.

the cutting edges of one roll interdigitating with similar ones beyond the extrusion nozzle into the mold cavity

means tiltably mounting one end portion of the bag and protruding therefrom, a plunger receiving member

2,861,290
WINDSHIELD WIPER ATTACHMENT
Alfred Ernst Heyler, Bühlertal, Baden, Germany, assignor to Aveg Elektro- und Feinmechanik G. m. b. H., Bühlertal, Baden, Germany, a corporation of Germany
Application August 21, 1956, Serial No. 605,347
Claims priority, application Germany August 27, 1955
2 Claims. (Cl. 15—250)



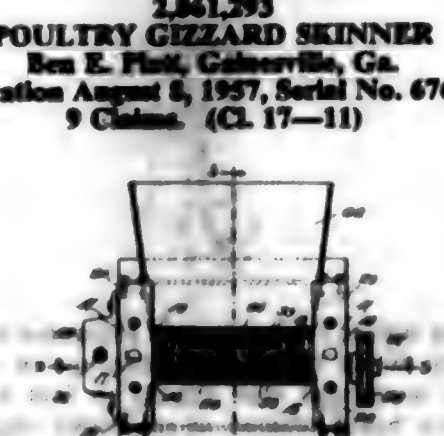
1. A windshield-wiper attaching structure, comprising a wiper arm of flat rod shape having a straight free end and having recess means in one of the flat sides of said end portion, a wiper-blade holder having a sleeve member and a bifurcated leg member integral with said sleeve member, said sleeve member having an opening which has a portion elongated in the longitudinal direction of said arm, said opening having along said elongated portion a flat cross-sectional shape closely mating that of said wiper-arm end so as to permit only longitudinal displacement of said arm while preventing angular edging and rotary motion of said arm relative to said sleeve member, and said sleeve member forming a wall between said opening and said leg member, a leaf spring member extending longitudinally of said sleeve opening and being mounted on said wall outside said opening, said spring member having a protuberance protruding into said opening and being in latching-pressure engagement with said recess means of said end when said end is inserted into said opening, and said end being in face-to-face abutting engagement with said sleeve member at the sleeve side remote from said wall and over the entire area of said sleeve side.

2,861,291
DOOR HOLDING AND CLOSING MECHANISM
Robert H. Milton, Detroit, Mich., assignor of one-half to Thomas W. Milton, Detroit, Mich.
Application April 11, 1955, Serial No. 500,565
14 Claims. (Cl. 16—65)

1. A door holding and closing mechanism comprising a pair of telescoping relatively rotatable members, means to connect one of said members to a fixed support adjacent a door stop and to operatively connect the other of said members to a door, conical braking surfaces provided on and located between said telescoping members, yielding means urging one of said members toward said other member to apply the brake, cam means operable by predetermined rotational movement of the member connected to the door to shift said members relatively in opposition to said yielding means to disengage the brake between a door closed position and a predetermined open position of the door, and additional yielding means to urge the door toward the closed position when the brake is disengaged.

2,861,292
POULTRY PROCESSING APPARATUS
Theodore R. Powers, Culver, Ind.
Application April 30, 1956, Serial No. 581,593
4 Claims. (Cl. 17—11)

1. A poultry processing apparatus, comprising a frame, a first set of coaxial sprockets supported on horizontal axes on said frame, a second set of coaxial sprockets supported on a horizontal axis on said frame and spaced from said first set, the bottom of said sets of sprockets being on substantially common horizontal planes, an endless chain mounted on the corresponding sprocket of each set, an endless chain mounted on the other corresponding sprockets of each set and being spaced from said first mentioned chain, said chains moving in vertical parallel planes, a plurality of spaced funnel shaped bird retainers mounted between and fixedly attached to said chains and extending perpendicularly thereto and outwardly therefrom, with their large ends adjacent the chains, said retainers traveling between the bottoms of said sprocket sets with their large ends up and between the tops of said sprockets with their large ends down, a cover mounted between said first and second sets of sprockets and spaced a substantial distance from said



first sprocket set over which the chains pass before passing under said cover, thereby providing a station for inserting the birds in the retainers, a pipe extending parallel with said chains adjacent said cover, a series of nozzles connected to said pipe below said cover for spraying water on said retainers as they move beneath said cover, a trough below said chains and beneath said retainers for catching blood from the birds as they are carried by the retainers under said cover, a plate mounted between said first and second sets of sprockets and above said cover for holding the birds in said retainers during a portion of the distance through which the retainers travel with their large ends down, said plate being spaced from said first set of sprockets, and a chute mounted on said frame at said plate end farthest from said second set of sprockets for receiving the birds as they fall from said inverted retainers moving beyond the end of said plate.

2,861,293
POULTRY GIZZARD SKINNER
Ben E. Platt, Gainesville, Ga.
Application August 8, 1957, Serial No. 676,955
9 Claims. (Cl. 17—11)

1. In a device of the character described, a supporting frame, blocks on opposite sides thereof, a pair of rolls each having a plurality of spaced angular cutting teeth disposed around the peripheral edges thereof, said edges having a contour approximating that of an inverted pyramid, said rolls being journaled in said blocks with

the cutting edges of one roll interdigitating with similar surfaces of the other roll, and means connecting with said rolls for driving the rolls in opposite directions.

2,861,354

APPARATUS FOR TREATING CARBON BLACK

Daniel Glauser and Elmer C. Elizabeth, Pampa, Tex., assignors to Columbian Carbon Company, New York, N. Y., a corporation of Delaware

Original application January 22, 1953, Serial No. 332,668, now Patent No. 2,838,191, dated March 25, 1958. Divided and this application December 16, 1957, Serial No. 702,969

6 Claims. (Cl. 18—1)

1. Apparatus for increasing the bulk density of beaded carbon black comprising a horizontally-elongated chamber of greater height than width, means for introducing preformed carbon black beads into the upper portion of said chamber, a plurality of rotatably mounted shafts extending longitudinally through said chamber each provided with a plurality of radially-extending pins arranged about the respective shafts in helical formation, the axes of said shafts being parallel and so positioned that in rotation the pins on the respective shafts interdigitate in close proximity to, but out of contact with, those of adjacent shafts, said shafts being adapted to be rotated at a speed of 300–400 R. P. M., means for withdrawing beaded carbon black from the lower portion of said chamber and for maintaining within said chamber a body of carbon black beads of a depth such that the upper surface thereof lies above the orbit of the pins of the uppermost shaft.

2,861,295

MANUFACTURE OF PLASTIC BOTTLES AND SIMILAR HOLLOW BODIES

Reinold Hagen and Norbert Hagen, Siegburg, Rhineland, Germany

Application June 7, 1955, Serial No. 513,851
Claims priority, application Germany June 18, 1954

5 Claims. (Cl. 18—5)

1. Apparatus for the manufacture from plastics of bottles and other containers having a neck, including a sectional mold to form, when closed, a cavity for the article to be produced, an annular extrusion nozzle to extrude an open-ended tube to suspend vertically into the space between the open mold sections, the nozzle being formed by an outer and inner ring, said rings being concentric and spacedly arranged with respect to each other, and a blow pipe having a portion extending axially through the inner ring, and an end portion projecting beyond the extrusion nozzle into the mold cavity, the portion of the blow pipe extending through the inner ring having an external diameter smaller than the internal diameter of the inner ring, the end portion of the blow pipe having an external diameter substantially equal to the internal diameter of the neck of the article to be produced, the portion of the blow pipe extending through the inner ring and the inner ring defining an annular space, the blow pipe forming a conduit for a gaseous pressure medium to be led into the article to be blown, the mold sections being provided with edges to pinch the tube shut at a point remote from the nozzle, when the mold sections are closed over a segment of the tube, the mold sections, when being closed, forming in cooperation with the blow pipe the neck part of the article being produced.

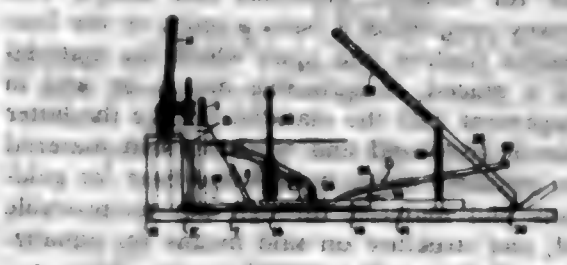
2,861,296

METHOD AND APPARATUS FOR FORMING HOLLOW BODIES OF DOUBLE OR VARIABLE CURVATURE

Verle A. Miller, Albert J. Firth, and Leonard F. Shepard, Dover, Del., assignors to International Latex Corporation, Dover, Del., a corporation of Delaware

Application July 1, 1952, Serial No. 296,618

10 Claims. (Cl. 18—19)



1. Apparatus for molding plastic hollow bodies from sheet blanks, comprising a male form provided adjacent one end with a portion of relatively uniform lateral curvature and tapering from said portion throughout a longitudinally and laterally curved portion corresponding to the body to be formed, the smaller end of said form being somewhat rounded in plan view, said form having a transversely extending base and being undercut to provide a relief zone below said tapered end, a female saddle form having a lateral curvature complementary to the curvature of said male form portion at its larger end, means for guiding said female form for registered movement relative to said male form, a wiping plate having a forward edge provided with a curved recess complementary to the smaller rounded end of said male form, said wiping plate being mounted for downward movement toward said male form and positioned so that when moved downwardly to its lower limit its curved recess will lie in spaced relation to said male die a distance substantially as great as the thickness of the sheet blank being operated upon, and a tuck-in plate mounted for movement toward the rounded end of said male form in substantial register with said relief zone and having a concave leading edge adapted to be moved into contiguity with the perimeter of said rounded end adjacent said relief zone.

9. Method of making a hollow plastic body generally tapered in side elevation and plan view which comprises heating a thermoplastic blank until soft enough to form, placing the softened blank over a male form having the desired contour of the finished article, bending respectively oppositely extending side portions of said blank simultaneously over said male form in a transverse direction until said blank lies closely against said form throughout an end zone extending for a minor portion of its length, after said blank has been only partially bent and concurrently with the further formation of said end zone progressively forming without appreciable stretching the major portion of said blank in a transverse and longitudinal direction against said male form, holding said partially

formed blank firmly against said form, and while so held exerting pressure on the marginal lower portion of said partially formed blank in a direction generally parallel to the blank position before the first bending operation.

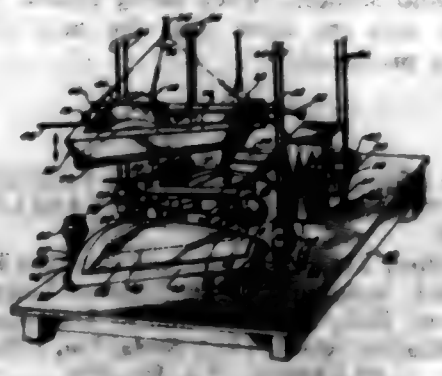
2,861,297

AUTOMATIC FORMING OF THERMO-PLASTIC MATERIALS TO OPTICALLY TRUE CONTOURS

Antone M. Guerreiro, Long Beach, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application July 25, 1955, Serial No. 524,136

3 Claims. (Cl. 18—19)



1. A device for forming materials into simple and compound curves comprising a base; a mold on the base having the desired contour and upon which the material to be formed is placed; reciprocable means on and in frictional engagement with the material to urge the latter to the contour of the mold and to cause said material to reciprocate; elements on the means and base for guiding said means and material through the reciprocable path of travel; and structure on said means for equalizing the force applied to said material.

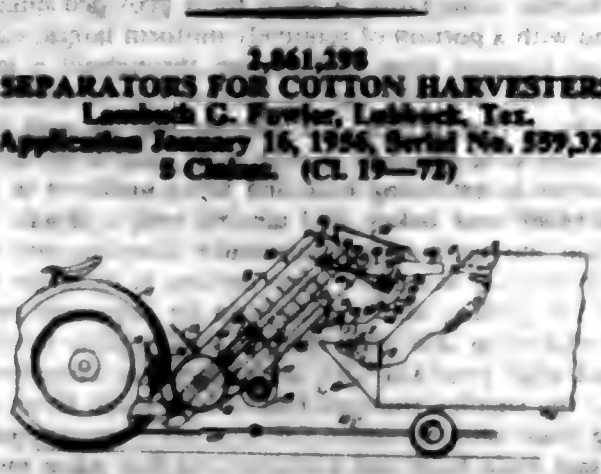
2,861,298

SEPARATORS FOR COTTON HARVESTERS

Lambuth G. Fowler, Lubbock, Tex.

Application January 16, 1956, Serial No. 559,324

5 Claims. (Cl. 19—72)



1. In combination with a cotton harvester having an upwardly inclined elevator with a discharge opening at its upper end for directing mature cotton, immature cotton and other foreign matter downwardly and rearwardly from the elevator, a separator including a housing extending rearwardly from the elevator and communicating with its discharge opening for receiving the cotton and foreign matter therefrom, the housing having an opening in its lower front end for discharging immature cotton and other foreign matter and an opening in its upper rear end for discharging mature cotton, means for directing a stream of air rearwardly through said housing and its rear opening from a point between its front opening and the elevator opening whereby the air stream passes transversely and upwardly through the cotton and foreign matter discharged from the elevator opening for entraining mature cotton therein, a substantially horizontal rotary cylinder in said housing between its rear opening and the elevator opening and having its upper portion in the path of discharge from the elevator opening for impeding the movement of the cotton and foreign matter through said housing by imparting reverse movement to the foreign matter and immature cotton so as to permit said foreign matter and immature cotton to drop out and separate from the mature cotton for discharge through the front opening of said housing, and drive means for rotating the cylinder, said housing having a rear wall between its front and rear openings and spaced from said cylinder to provide a passage for directing foreign matter and immature cotton around said cylinder to said front opening.

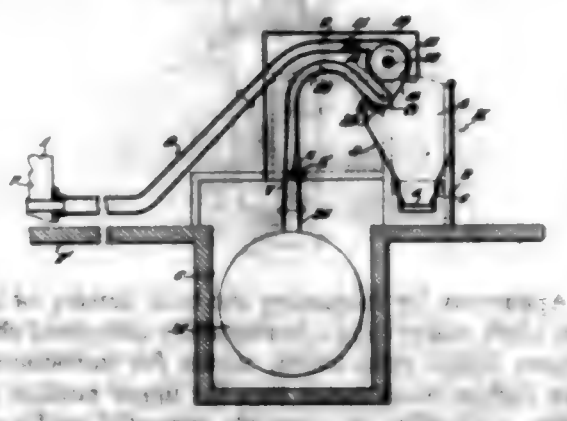
2,861,299

APPARATUS FOR AND METHOD OF CLEANING LINT COTTON

Dewey D. Day, Dallas, Tex., assignor to The Murray Company of Texas, Inc., Dallas, Tex., a corporation of Delaware

Application December 17, 1952, Serial No. 326,528

8 Claims. (Cl. 19—76)



8. That method of cleaning lint from a gin which delivers a lint-laden current of air at super-atmospheric pressure in which lint and motes are suspended, said method comprising as steps creating pulsations in the air current, transversely of its general direction of flow thereby to loosen the motes from the lint, thereafter directing said air current to flow downwardly, while under confinement, along a predetermined path comprising a portion which is inclined at an angle of approximately 60° to the horizontal and which at its terminal portion merges with a bend of approximately 90° of arcuate extent, increasing the velocity of the air as it approaches the bend, freeing the air from confinement at the outer side of said bend thereby to permit particles, heavier than the lint fibers, to escape downwardly by inertia assisted by gravity from the air current as the latter turns the bend, and discharging the clean lint-carrying air current into a space wherein a sub-atmospheric pressure is maintained.

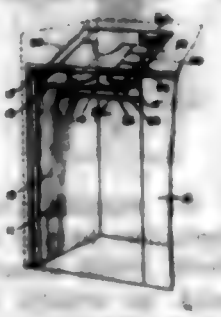
2,861,300

CONCEALABLE APPAREL RACK FOR CLOSETS

Stanley M. Friedenreich, New Hyde Park, N. Y.

Application February 6, 1956, Serial No. 563,480

6 Claims. (Cl. 20—1.11)



6. The combination with a closet having a door opening, a shelf at the upper rear portion of the closet adjacent the top of the door opening and a compartment at the top of the closet above said shelf, of an open-work rack, a pair of brackets secured to the closet at sides and exposed at the door opening, said rack comprising

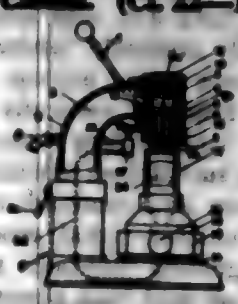
a rectangular main rod frame, U-shaped rails at sides of the main frame, said main frame having spaced rod means for supporting articles thereon, each of said brackets having a plurality of spaced and aligned pins engaged by said U-shaped rails for guiding and supporting the rack in movement from a stored position in said top compartment to a lowered position in said door opening, each of said brackets comprising a plate having angularly extending supporting portions, and at least one of the pins of each bracket being grooved to receive said rails, another pin of each bracket being arranged adjacent the grooved pin, and the other pins of each bracket supporting the rack in stored and lowered positions.

2,861,301

SAND BLAST MOLDING MACHINE

Hans Paul Hilbertz, Schaffhausen, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland, a Swiss company

Application December 1, 1954, Serial No. 472,451
Claims priority, application Switzerland December 5, 1953
3 Claims. (Cl. 22—10)



1. A sand blast molding machine, comprising a standard and a support thereon, compressed air supply means, compressed air-actuated clamping means located on said support for clamping a core box in position thereon, conduit means interconnecting said supply means and said clamping means, a control valve operatively connected to said conduit means for regulating flow of compressed air from said supply means to said clamping means, a hopper for delivering sand and positionable on said core box when the latter is placed on said support, said hopper being provided with a first opening at its bottom to communicate with the interior of said core box and being further provided with a second opening at its top, valve means comprising a sleeve, a valve bushing and a valve carried by said standard for movement toward and away from said hopper when the latter is positioned on said core box, said valve means communicating with said supply means and said valve bushing being adapted when moved toward said hopper to first close said second opening from the surrounding atmosphere and said valve being then adapted to admit compressed air into said hopper from said supply means, and single means arranged for pivotal movement on said standard and provided with a first member operatively connected to said control valve for actuating the latter and thus said clamping means during said pivotal movement of said single means, said single means being further provided with a second member operatively connected to said sleeve for moving the latter toward said hopper during said pivotal movement whereby sand may be blown from said hopper into said core box by said compressed air.

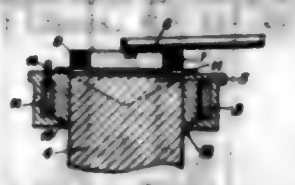
2,861,302

APPARATUS FOR CONTINUOUS CASTING

Karl Ernst Mann, Meinerzhagen, Westphalia, and Erich Rippert, Frommersbach, near Gummersbach, Rhineland, Germany, assignors to Vereinigte Leichtmetall-Werke Gesellschaft mit beschraenkter Haftung, Bonn (Rhine), Germany

Application August 24, 1956, Serial No. 603,915
5 Claims. (Cl. 22—57.2)

5. In an apparatus for the continuous casting of molten material, in combination, a mold for receiving the molten material to be cast, said mold having an inlet through which the molten material is poured to be solidified in the mold; an annular current conducting member disposed directly above and adjacent said mold inlet for establishing alternating magnetic lines of flux in the region of said mold inlet when alternating current flows therethrough; and an annular magnetic member made up from a plurality of transformer laminations,



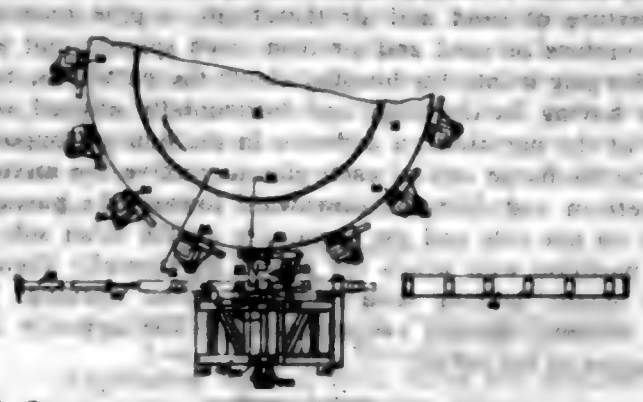
each of said transformer laminations having a horseshoe-shaped cross section in a direction perpendicular to the axis of said annular magnetic member with the open end of the horseshoe-shaped cross section facing said mold inlet, said annular magnetic member being disposed in the region of said magnetic lines of flux for distributing said lines of flux into a pattern extending through the solidification zone of the material poured into the mold wherein solidification of said material occurs.

2,861,303

ROTARY CASTING MACHINE

Sheldon E. Wells, Youngstown, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio

Application July 13, 1956, Serial No. 597,777
16 Claims. (Cl. 22—77)

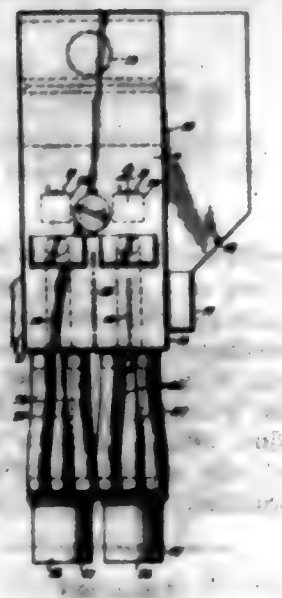


1. In a casting machine, the combination of a conveyor, a plurality of upright molds mounted upon the conveyor, means to advance the conveyor step by step whereby each mold is stopped at a succession of stations, means at one of said stations for charging a mold with molten material, means located at a subsequent station for ejecting a casting from its mold, and a clamping device located at said subsequent station for receiving and retaining a casting when it is ejected from its associated mold.

13. In a casting machine, a mold comprising a pair of complementary elongated mold sections of L-shaped cross section, each of said mold sections having a pair of mold sides which intersect at right angles, guideways extending laterally outwardly from the top and bottom of one of said mold sections, the other of said mold sections being reciprocable on said guideways whereby the other mold section may be moved on said guideways from an open position to a closed position wherein the L-shaped sections form a mold cavity, a generally C-shaped clamping device of spring material having one end pivotally connected to the outside of said other mold section at the intersection of its sides, a latch block on the outside of said one mold section at the intersection of its sides, a latch block on the outside of said one mold section at the intersection of its sides, and a cam on the other end of said clamping device for engaging said latch block to hold the mold sections in closed position.

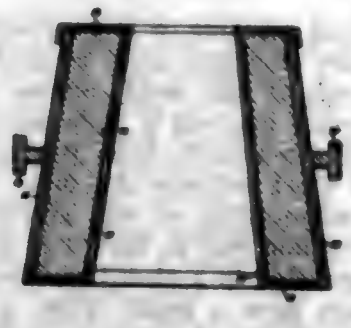
matter through said housing by imparting reverse move- and exposed at the door opening, said rack comprising

2,861,304
SAND CLEANING SYSTEM
Clifford E. Wenninger, River Forest, Ill., assignor, by mesne assignments, to American-Marietta Company, Chicago, Ill., a corporation of Illinois
Application June 18, 1956, Serial No. 592,199
14 Claims. (Cl. 22—89)



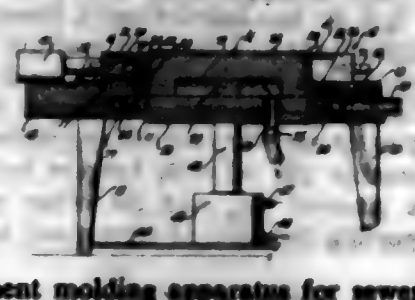
14. Sand cleaning apparatus comprising a housing, partitions in the lower part of the housing separating it into a series of side by side vertical passages, spinner units connected to the passages to receive sand therefrom, means to supply air to the spinner units to force a mixture of sand and air therefrom, a pipe receiving the mixture of sand and air from each spinner unit and discharging it into the housing above the partitions, each pipe having its discharge end horizontally aligned with one of the partitions, a deflector in the housing opposite to the discharge end of each pipe to receive the mixture therefrom and deflect it downward toward the passages part on one side and the remainder on the other side of the partition with which the pipe is horizontally aligned, and means defining sand inlet and outlet openings for the housing opening respectively into the opposite end passages of the series.

2,861,305
INGOT CASTING
Geoffrey Fenton, Richmond, Sheffield, and Reginald Mayoress, Sheffield, England, assignors to The British Iron and Steel Research Association, London, England
Application October 22, 1956, Serial No. 617,421
8 Claims. (Cl. 22—147)



1. A feeder head comprising a tubular container which includes a removable tubular metal inner wall, uncompacted heat insulating material located in said container, and a thin refractory lining of small heat capacity secured on and supported by the inside of said inner wall to protect said inner wall and said insulating material from temperature effects.

2,861,306
CASTING APPARATUS
Matthew Wagner, Burbank, Calif.
Application March 12, 1956, Serial No. 570,883
1 Claim. (Cl. 22—151)



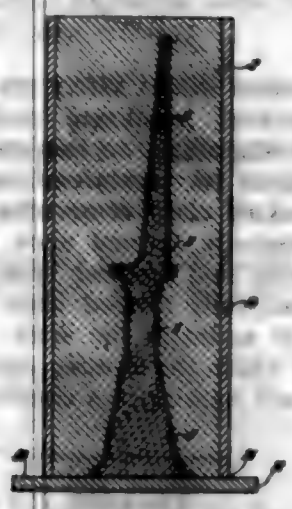
A permanent molding apparatus for sewer rings comprising, in combination: a generally annular base structure having a centrally disposed aperture therein; a generally cylindrical core movably disposed through said aperture, said core having an upper end; a segmented cope slidably disposed on said base structure and positioned normally to surround a portion of said core in spaced relationship thereto whereby to define an annular cavity therebetween, said core and said aperture having complementary generally conically tapered mating surfaces, segments of said cope being arcuate and having upper surfaces normally disposed vertically below said upper end of said core, said surface defining an unconfined open face molding surface; an additional cavity formed in said base structure and communicating with said first mentioned cavity; tapered radial groove means on said base structure for guiding said cope segments for radial movement thereof on said base structure and relative to said core, said core and said cope being angularly stationary relative to said base structure; a plurality of first hydraulic cylinders positioned on said base structure, each cope segment being operatively directly connected with one of said cylinders; a second hydraulic cylinder mounted on said base structure and connected with said core; means for simultaneously actuating said first hydraulic cylinders whereby to effect radial movement of said cope segments relative to said core; means for actuating said second hydraulic cylinder to effect longitudinal movement of said core in said aperture, said movement of said cope segments and said core acting to open said first mentioned cavity following disposition of molten metal therein whereby to permit removal of said sewer ring from said additional cavity; a pouring basin carried by one of said cope segments, said pouring basin having a molten metal discharge end positioned generally tangentially with respect to said annular cavity; and means for circulating cooling fluid through said base structure, cope segments and said core.

2,861,307
SHELL MOLDS
Charles F. Froberger, Oak Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 10, 1956, Serial No. 558,243
10 Claims. (Cl. 22—193)

1. A sand-resin mold for use in shell molding operations, said mold being formed from a dry mixture comprising approximately 3% to 20% by weight of silica flour, 2% to 15% by weight of a mixture of thermosetting and thermoplastic binders, and the balance substantially all sand, said thermosetting binder constituting at least

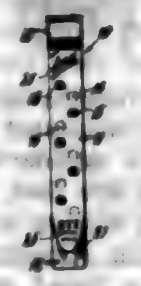
60% by weight of the total binder content, said thermoplastic binder being a residue fraction resulting from distillation of petroleum and being substantially free of methoxyl and hydroxyl groups.

2,861,306
REFRACTORY MOLD HAVING HIGH PERMEABILITY, COMPOSITION FOR MAKING, AND METHOD OF MAKING SAME
Harold L. Benham, Bedford, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 1, 1957, Serial No. 637,768
10 Claims. (Cl. 22—193)



10. A precision casting mold having a body of refractory material resulting from setting of a mixture of a silicate-type binder solution and a grog consisting essentially of 0.5% to 3% by weight of stearic acid and the balance substantially all comminuted refractory material, the ratio, by weight, of the grog to the silicate-type binder solution being between 2.5 to 1 and 4.5 to 1.

2,861,309
CLASP DEVICE FOR LOOSE LEAF PAPERS
George P. Savieliden, New York, N. Y.
Application April 13, 1956, Serial No. 578,006
1 Claim. (Cl. 24—66)



A clasp device for securing a stack of loose leaf papers along superpositioned fold lines thereof comprising a substantially U-shaped holder of substantially uniform width throughout its length and having a front portion, a rearward portion, a loop portion integrally connecting said rearward portion with said front portion and extending forwardly beyond the surface of said front portion to form a handle for said holder, and round-ended ridges disposed to extend rearwardly from said front portion and forwardly from said rearward portion within the space between said front portion and said rearward portion to thereby frictionally engage said stacked loose leaf papers when located within said space and in contact with said round-ended ridges, adjacent ridges extending into said space overlapping each other as seen in endwise direction of said holder and being disposed in staggered relation to each other, whereby said ridges come to lie in contact with the uppermost and lowermost loose leaf papers of said stack to hold same together, said front portion being shorter than said rearward portion to facilitate insertion of said papers into said space into which said round-ended ridges extend.

2,861,310
SKI-BOOT LACING SYSTEM
Hans Martin, Zurich, Switzerland
Application December 2, 1954, Serial No. 472,701
Claims priority, application Switzerland January 25, 1954
3 Claims. (Cl. 24—69)

1. Closure means for a boot with overlapping flaps in closed position thereof comprising pairs of longitudinally spaced anchoring means on one of said flaps, tensioning means on the other flap, a plurality of separate loop means each terminating in two ends, the ends of each loop means being attached to a respective pair of said anchoring means, each of said tensioning means including a base plate provided at one end thereof with a holder carrying a pivot, and a tension lever arranged for swinging movement on said pivot and swingable to position away from said base plate, said tension lever being provided with successive recesses, said loop means being, respectively, engageable with corresponding tension levers in predetermined recesses thereof for closing said boot, each respective base plate being positioned on said other flap to extend from said pivot toward the anchoring means and to extend at a level intermediate two anchoring means of each pair thereof, whereby upon engagement with said loop means and in closed position of said boot pressure caused by said tension levers on said pivot holders is taken up by the respective base plates which come to lie over the respective overlapping boot flaps.

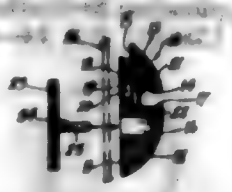
2,861,311
GARMENT TIE BACK FOR DISPLAYS
Leo J. Kurland, Brooklyn, N. Y.
Application April 5, 1956, Serial No. 576,364
1 Claim. (Cl. 24—73)

A device of the kind described comprising a pair of flexible metal oval-shaped bodies open at one end with reentrant jaws thereat, projections on the bodies opposite said jaws and slightly inwardly thereof, flat shafts extending outwardly from the projections on the bodies, in planes parallel to the planes of the long axes of the bodies, integral looped handle portions extending from the sides of the bodies midway the ends thereof, integral split crimped tubular wings on the shafts, and a flexible cord joining the shafts, the ends of the cord being crimped within said wings.

2,861,312
FASTENING DEVICE
Alex S. Bachwald, Bronx, N. Y., Israel Benjamin, Miami, Fla., and George Gold, Staten Island, N. Y.
Application May 16, 1955, Serial No. 508,416
1 Claim. (Cl. 24—100.5)

A fastening device having a circular button-shaped body with a flat base portion and a crowned front por-

tion, said body having an elongated recess therein opening outwardly into the flat base portion, said recess having flat opposed walls, one wall of said recess having a passage therethrough, a segment of said front portion being slidable on said base portion, said segment having a flat bottom and a flat side, a disc having a flat perforated projecting lug cooperating with the opposed walls of said recess to fold fabric material and to force said folded

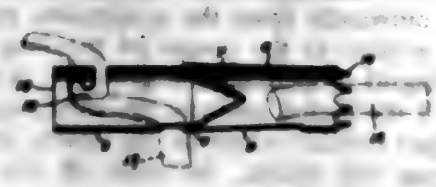


material into said recess, a pin projecting from the flat side of said slidable segment and movable through said passage into said recess for interlocking with said lug and with the folded material thereon, said base portion having an elongated slot, and a headed screw carried by said segment and movable in said slot for limiting the movement of the segment and for preventing separation thereof from the body.

2,861,313
KEY CHAIN CONSTRUCTION
Hermann Ruf, Union, N. J., assignor, by mesne assignments, to Forstner, Inc., Irvington, N. J., a corporation of New Jersey
Application May 24, 1954, Serial No. 431,817
1 Claim. (Cl. 24—115)

A slide for an extensible key chain, having two cup-shaped sections with annular rims, said rims being lock seated together, whereby a hollow compartment with an annular wall is provided, the section rims having aligned diametrically opposite U-shaped slots providing circular openings for passage of a flexible chain therethrough, said compartment having two springs of flat stock with arcuate center portions in convexly opposed relation and bent-in ends conforming to and slidably engaging the inner surface of the compartment annular wall.

2,861,314
FASTENER FOR SHOE LACES OR OTHER FLEXIBLE TIES
Jack Jacob Applebaum, Chicago, Ill.
Application December 8, 1955, Serial No. 551,762
2 Claims. (Cl. 24—117)

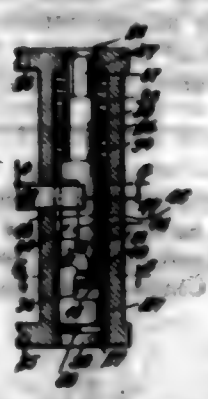


1. A fastener for a flexible tie comprising a pair of tubular members frictionally fitting one within the other in telescoping pull-apart relation, each of said members being adapted to receive an end portion of a flexible tie in one end of the members, and a bayonet slot in one side of each of the members extending longitudinally and circumferentially thereof and through which the end portions of the tie pass outwardly of the members for retention in the slot, said members having longitudinal slots therein for reception of an intermediate portion of the flexible tie and for aligning to dispose the bayonet slots at opposite sides of the fastener so that said end portions are correspondingly disposed to reduce tendency of the same to tangle.

2,861,315
SAFETY PIN
Robert De Kyvon, Tangier, Morocco
Application December 5, 1955, Serial No. 551,138
4 Claims. (Cl. 24—157)

1. In combination with a safety pin having a pair of substantially parallel positioned resiliently connected arms, and a housing affixed to one end of a first one of said arms adaptable to receive one end of the other of said arms, a locking clasp comprising a plate member, a hinge tab integrally formed upon said member for rotatably mounting said member upon the housing, and a locking tab integrally formed upon said member and being adapted to maintain the arms of the safety pin spatially locked within the housing upon rotation of said member about said housing in a direction parallel to said arms.

2,861,316
LOCK BUCKLE
Hugo R. Kirsten, New York, N. Y.
Application August 31, 1955, Serial No. 531,775
3 Claims. (Cl. 24—167)



1. In a buckle, the combination of a frame having two side bars, a cross bar connected at its ends to the rear ends of said side bars, a cylinder connected at its ends to the front ends of said side bars, said cylinder having a cylindrical chamber, a closure at the inner end of said cylinder, a first annular shoulder at the outer end of said cylinder having a round opening concentric with said cylindrical chamber and smaller in diameter than said cylindrical chamber, a barrel slidably mounted in said cylindrical chamber, said barrel having a main cylindrical wall conforming to the cylindrical chamber, a multi-sided extension, and a cylindrical extension less in diameter than the diameter of said cylindrical wall between said multi-sided extension and said cylindrical wall, said cylindrical extension being concentric to said cylindrical wall and defined from said cylindrical wall by a second annular shoulder, a coil spring seated between said second annular shoulder and said first annular shoulder, said multi-sided extension extending into said round opening, a pair of anchoring openings in said cylindrical wall diametrically opposed to one another, a projection in said wall at the inner end of each of said anchoring openings, a pin connected to said cylinder and extending through said anchoring openings and maintained in cooperative engagement with said projections by said spring, said barrel having a locking opening with an axially ex-

conductor, cutting slits in the conductor at spaced points tective means affixed to said face for preventing said

tending first shoulder and a second axially extending shoulder, said cylinder having a slot registering with said locking opening, and a tongue pivotally mounted on said cross bar and having two jaw forming projections at its free end to receive said second axially extending shoulder when said pin engages one of the sides of said projections and said tongue clearing said second axially extending shoulder and in position to rest on said first axially extending shoulder when said barrel is turned to enable said pin to rest on the other sides of said projections, the overall combined length of said barrel and multi-sided extension being greater than the distance between the inner face of said first annular shoulder and the inner face of said closure to insure spacing the outer end of said multi-sided extension from the outer end of said cylinder at all times.

2,861,317
ORNAMENTAL SNAP FASTENER ASSEMBLY
Bernard R. Silver, Providence, R. I., assignor to Rex Fastener Company, Providence, R. I., a corporation of Rhode Island
Application September 19, 1955, Serial No. 535,486
7 Claims. (Cl. 24—219)

1. An ornamental snap fastener assembly comprising, a female member for mounting on a supporting sheet, said female member including an eyelet on one side of the sheet and comprising a disc portion having a tubular connector projecting through the sheet and a socket part on the other side of said sheet fixed on the projecting end portion of the tubular connector, a male member for mounting on another supporting sheet, said male member including a male part on one side of said other sheet adapted to detachably engage in the socket part and a mounting for an ornamental front on the other side of said other sheet and comprising a disc portion having a tubular connector projecting through the said other sheet and fixed in the said male part, a flanged deformable pin seated on said last named disc portion, said last named disc portion having a peripheral inturned flange overlying the peripheral margin of the pin flange, and an ornamental fastener front overlying said flanged disc portion and secured thereto by said flanged pin.

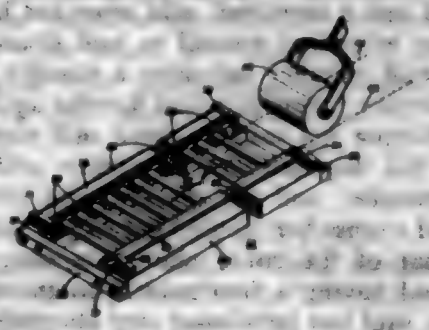
2,861,318
FASTENERS
Eric Birger Forsberg, Northwood, England, assignor to F. T. Products Limited, London, England, a British company
Application January 26, 1954, Serial No. 406,341
Claims priority, application Great Britain January 27, 1953
2 Claims. (Cl. 24—239)

1. A clip for securing a sheet of flexible material in lapped relation around one longitudinal side of a cylindrical metallic tube, said clip comprising a one-piece smooth C-shaped body of resilient sheet material having a diameter approximately equal to that of the tube and a length to extend over a major arc of the tube, an inwardly and rearwardly extending sharply pointed prong integral with each arm of said body and constituting an extension of each end thereof, the distance between said prongs measured around said tube covering a major arc of the tube and the prongs projecting inside the space defined by the curved wall of the body, the body embracing opposite sides of the tube over a major arc of its section with one arm thereof overlapping the flexible sheet material and the prong in the overlapping arm engaging both the flexible sheet material and the tube, and the prong in the other arm engaging the tube alone.

2,861,319
INTERMITTENT CORE FILAMENTS
Alvin L. Breen, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application December 31, 1956, Serial No. 629,063
12 Claims. (Cl. 28—82)

1. A composite filament comprising, as one component, a sheath of fiber-forming polymer, and, as a second component, a core having less extensibility than said fiber-forming polymer, said core being formed in sections within the sheath and having voids formed between said core sections, said core and said voids being enclosed by said sheath whereby to impart to said sheath a smooth exterior.

2,861,320
FABRICATING DIELECTRIC ELECTROMECHANICAL TRANSDUCER ELEMENTS
Charles K. Gravley, Lakewood, Ohio, assignor, by mesne assignments, to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Application March 18, 1953, Serial No. 343,056
19 Claims. (Cl. 29—25.35)



19. The method of fabricating a dielectric element containing an internal electrode, comprising the steps of forming at least one through bore of capillary cross-sectional dimension in a body of dielectric material; causing a liquid, capable of wetting said material and containing conductive material, to flow into said bore by capillary action; and drying said liquid in said bore to form an electrode of said conductive material covering substantially all of the internal walls of said bore along which said liquid has flowed.

2,861,321
MANUFACTURE OF ELECTRICAL CAPACITORS
Roy Mayne Barnard, Douglas Stacey Girling, and Nigel Cecil William Judd, London, England, assignors to International Standard Electric Corporation, New York, N. Y.
Application December 14, 1953, Serial No. 397,826
Claims priority, application Great Britain November 14, 1952
3 Claims. (Cl. 29—25.42)

1. A method of making a multi-layer capacitor comprising applying a layer of insulation to an elongated foil

which comprises preparing a steel backing plate and a unit said machine having, in combination, a plurality of

slots therein for reception of an intermediate portion of

said barrel having a locking opening with an axially ex-

conductor, cutting slits in the conductor at spaced points along its length, the slits extending transversely of the conductor from one edge towards the other but terminating short thereof, dissolving the exposed portions of the conductor, cutting the conductor into separate sections by continuing said slits to the other edge of the conductor,

whereby each conductor section is recessed with respect to the insulation except where the insulation was not cut prior to the dissolving process, and stacking said sections with the edges in alignment and so that the conductor portions which were not recessed are placed successively at opposite ends of the stack.

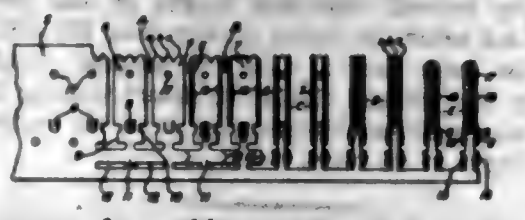
2,861,322
GANG LATHE TOOL
Josef Benes and Howard C. Tomasch, Garfield Heights, Ohio, assignors to United States Steel Corporation, Pittsburgh, Pa., a corporation of New Jersey
Application January 5, 1955, Serial No. 479,971
1 Claim. (Cl. 29—97)

A lathe tool comprising a T-shaped base plate including a shank and a cross-bar, said cross-bar having a step on one face extending normal to said shank, a separate U-shaped wall member including a straight bottom rail, said wall member being disposed flatwise against said face with said bottom rail seated against said step, a plurality of cutting bits disposed flatwise against said face within said wall member, and a T-shaped cover plate including a shank and a cross-bar secured flatwise to said base plate, the cross-bar of the cover plate extending partly over said bits and having a step normal to the shank of the cover plate, said last mentioned step abutting said bottom rail and the shank of the cover plate being alined with the shank of the base plate.

2,861,323
ROTARY PUTTY REMOVING TOOL
Clarence J. Ebel, St. Paul, Minn.
Application March 14, 1956, Serial No. 571,452
6 Claims. (Cl. 29—103)

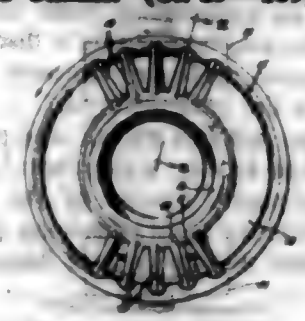
1. A rotary tool suitable for use, in connection with power rotation means, in the removal of sealing putty and the like from windows, said tool comprising a rotary body having an axially perpendicular end face at the free end thereof and a series of peripheral cutting edges extending along said body adjacent said free end, means for connecting said body for axial rotation with power rotation means, and tough slippery shock-absorbent protective means affixed to said face for preventing said cutting edges from striking a pane of glass when said tool is employed in putty removal operations.

2,861,324
METHOD OF MAKING AN ELECTRICAL CONDUCTOR TERMINAL
Ferdinand Klumpp, Jr., Union, N. J.
Application December 16, 1954, Serial No. 475,638
3 Claims. (Cl. 29—155.53)



1. A process for making an electrical conductor terminal for the special purpose defined herein, which consists in passing a strip of suitable metal through a punch press, punching out at least one forming blank at a time for a terminal, leaving one end of the blank free while the opposite end is anchored through an intermediate piece and a connecting lug to an adjacent edge of the strip, at the same time forming a stop finger and parts for at least engaging the bare wire of a conductor between the said stop and said intermediate piece, then partially bending up the longitudinal edges of the blank and at the same time moving the stop finger to its final stop position to prevent material from getting into this end of the terminal and blanking out the arms for engaging the insulation of a conductor, then further forming up the said sides and the conductor engaging fingers, then closing in the sides into close engagement to form a single line contact and a closed cylindrical plug and finally closing in the free end of the said plug as and for the purpose described.

2,861,325
METHOD OF MAKING WHEEL COVERS
George Albert Lyon, Detroit, Mich.
Application June 16, 1953, Serial No. 361,916
3 Claims. (Cl. 29—159)



1. In a method of making wheel covers from sheet metal, the steps of shaping a sheet metal piece to provide an annular depressed portion, polishing the surface of the cover including said depressed portion by applying thereto an end face rotary polishing wheel, pressing outwardly across said polished depressed portion a transverse rib having oppositely divergently sloping sides, and turning the cover about its axis relative to oppositely turning buffing wheels to buff alternately the opposite sides of said rib.

2,861,326
METHOD OF MAKING PUNCH PLATE SCREENS
Frank S. Bergstrom, Eveleth, Minn., assignor to Drill Development Company, Biwabik, Minn., a corporation of Minnesota
Application February 1, 1954, Serial No. 407,523
2 Claims. (Cl. 29—163.5)

1. The process for making an abrasion-resistant and blinding-resistant screen for sizing granular materials

a length to extend over a major arc of the tube, an in-

prising applying a layer of insulation to an elongated foil

which comprises preparing a steel backing plate and a face sheet comprising an elastic, flexible, abrasion-resistant rubber or rubber-like material of approximately 60 durometer hardness, then bonding said face sheet to the normally upper surface of said plate, then forming a multiplicity of downwardly flaring perforations in the face sheet and substantially straight perforations in the backing plate by a plurality of punching operations in the first of which the punch dies are forced through the face sheet and the backing plate and then withdrawn, and

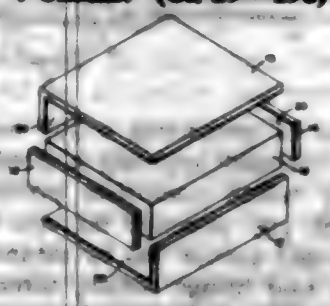
in the second of which the perforations in the face sheet are enlarged and the surfaces defining them given a smooth finish while employing the perforated backing plate as a die to receive the cuttings and while compressing the sheet material at the sides of the perforations whereby, when the punch dies are withdrawn after the second punching operation, the perforations at the normally upper side of said sheet are substantially reduced by expansion of the face material and said perforations are caused to flare downward to the perforations in the backing plate.

2,861,327

APPLYING PROTECTIVE METAL COATINGS ON MOLYBDENUM

James H. Seckteld, Wilkins Township, Allegheny County, and John P. Webb, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application September 12, 1956, Serial No. 609,477
4 Claims. (Cl. 29—198)



1. In the process of producing well bonded, oxidation-resistant coatings on a molybdenum body, the steps comprising (1) preparing an assembly comprising a molybdenum body completely enclosed and sealed in a relatively thick casing of at least one oxidation-resistant metal selected from the group consisting of nickel, cobalt and alloys comprising at least 50% thereof and the balance being at least one of the group consisting of iron and chromium and a relatively thin intermediate bonding layer displaced between the molybdenum body and the casing of a metal selected from the group consisting of palladium, copper, chromium and an alloy comprising, by weight, from 60% to 70% nickel and the balance being substantially all copper, (2) heating the assembly to a temperature of from 870° C. to 1320° C., and (3) rolling the heated assembly to effect a reduction of at least 30% in the cross-sectional area and to effect intimate bonding of the molybdenum body, the intermediate layer and the casing.

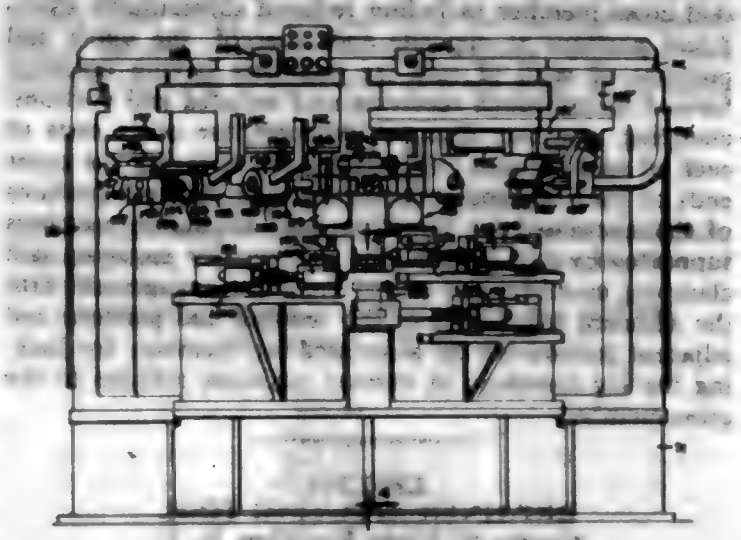
2,861,328

MACHINE FOR ASSEMBLING UNIVERSAL JOINTS

Theodore C. Mann, Beloit, Wis., assignor to Ekstrom-Carlson & Co., Rockford, Ill., a corporation of Illinois

Application July 2, 1954, Serial No. 441,894
10 Claims. (Cl. 29—208)

1. A machine for inserting bearings onto the spider trunnions of a loosely assembled spider and double yoke unit, said machine having, in combination, a plurality of fixtures each having a body and holders mounted thereon for movement back and forth and into and out of advanced positions in which the holders abut pairs of exposed surfaces on said unit to center all of the trunnions thereof in the respective holes of the yokes, means for supporting said fixtures in spaced relation and advancing the same step by step along a predetermined path and through a plurality of stations, means at one of said stations for shifting the holders of the fixture into said advanced positions and thereby bringing the trunnions and yokes into final centered positions, latch elements acting between said body and said holders to hold the



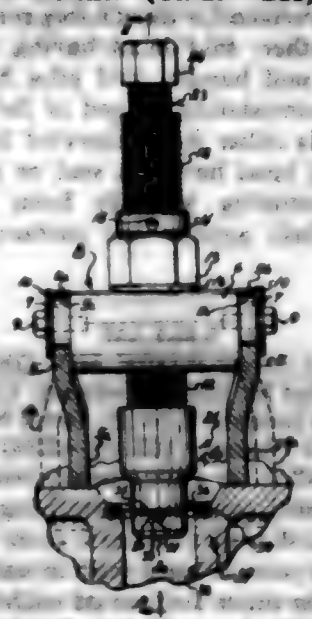
latter in said advanced positions thereof and mounted on the fixture for turning with the latter relative to said path while maintaining the holders in their advanced positions, means at two of said stations for presenting bearings to two of the alined trunnions and pressing the same into the yoke holes and onto the trunnions, means operable after the insertion of one pair of bearings to turn the fixture relative to said path while said holders are held in said advanced positions by said latch elements, and mechanism operable automatically in response to the movement of each fixture to a final one of said stations to release said latch elements for movement of the holders out of said advanced positions.

2,861,329

VALVE SEAT PULLER

Walter August Richman, Osseo, Minn., assignor to Richman Manufacturing Co., Osseo, Minn., a corporation of Minnesota

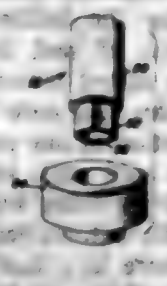
Application November 27, 1953, Serial No. 394,762
3 Claims. (Cl. 29—213)



1. A valve seat puller for removing valve seats from a motor head the upper surface of which extends at an

angle other than parallel to the plane in which the valve seat is set within the motor head, said valve seat puller comprising a pair of upright spaced non-extensible leg members each of which has upper and lower end portions, the lower end portions of said leg members being adapted to rest upon the upper surface of such a motor head on opposite sides of the valve seat to be pulled, a cross member extending between the upper end portions of said leg members, mechanism for engaging and drawing a valve seat, said mechanism being supported by said cross member for pivotal movement about an axis extending transversely to said leg members, said mechanism including a reaction member abutting said cross member, said cross member including reduced substantially cylindrical portions at opposite ends thereof, the upper end portions of each of said leg members having openings formed therethrough receiving said reduced end portions, clamping members disposed adjacent the outer ends of each of said reduced end portions for engaging the outer ends of said reduced end portions and adjacent portions of the associated leg members, and adjustable members supported by said reduced end portions for engaging said clamping members and urging them into engagement with the adjacent outer ends of the reduced end portions and adjacent portions of the associated leg members for locking the leg members in various positions relative to the cross member.

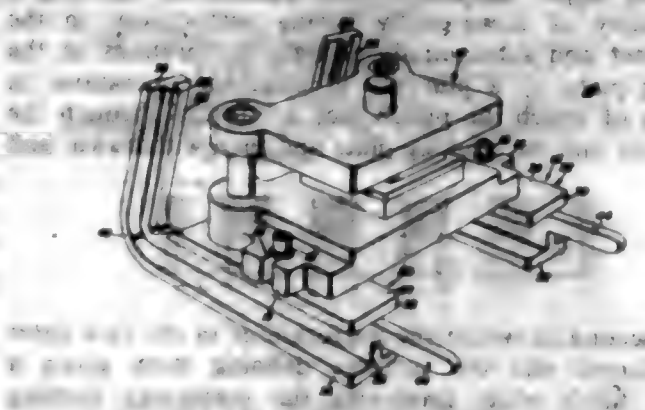
2,861,330
RETAINER APPLYING TOOL
George H. Kratz, Brooklyn, N. Y.
Application December 20, 1956, Serial No. 629,646
1 Claim. (Cl. 29—275)



A tool to insert an oil seal or grease retainer into a cavity or onto a shaft without damaging the seal or retainer, said tool comprising a substantially cylindrical handle, a substantially cylindrical head at one end of said handle, said head having an aperture therein for concentrically accommodating a portion of said handle, said portion comprising an extension of said handle and coaxial therewith, said extension having a flat surface thereon, said head having an internally threaded aperture therethrough for accommodating a setscrew to bear against said flat surface for detachably retaining said head and handle together, said head having a pilot coaxially extending from said handle, said pilot having a passage therein for accommodating an end of the shaft while the seal or retainer is either being inserted in a cavity or on a shaft, and said head having a seal or retainer contacting surface protruding laterally from said pilot and adapted to fit flush against one surface of the seal or retainer.

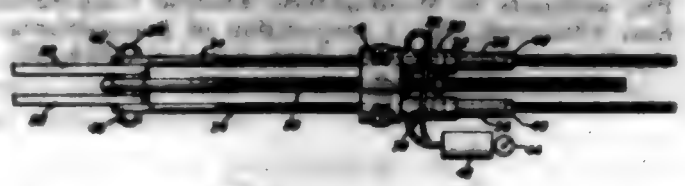
2,861,331
TILTING WORK HOLDER
Robert H. Abell, Norwalk, Calif.
Application January 7, 1955, Serial No. 480,537
2 Claims. (Cl. 29—284)

1. A work holder for tilting heavy work from a horizontal to a vertical position comprising a pair of separate identical L-shaped members, each member including a first and a second leg joined to each other at confronting ends, the outer surface of each leg being flat in order to rest upon a supporting surface, a rib rising from the second leg of each member, flange connected to said rib and having portions which project laterally therefrom, the upper surface of said flange constituting a seat on which to support the heavy work piece, means in said flange for securing said heavy work piece to said flange, said means being remote from said legs of said member,



and means comprising a smoothly curved portion of said member at the junction of said legs constituting a tilt axis about which said member is adapted to be rolled when tilting said member from a generally horizontal position to a generally vertical position in order that the undersurface of the heavy work piece may be exposed.

2,861,332
METHOD OF TENSIONING GUYS
Albert P. Hayden, East Haven, Conn., assignor to United States Steel Corporation, a corporation of New Jersey
Application May 11, 1956, Serial No. 584,576
5 Claims. (Cl. 29—452)



1. The method of connecting a guy between a tower and an anchor bar and applying a predetermined tension to the guy which comprises providing a bridge socket having the guy attached thereto, connecting the bridge socket to said anchor bar by means of a first bolt extending above said bridge socket, threading a nut on said first bolt until it bears against the upper end of the socket, passing a second bolt through a hole in said bridge socket and anchoring its lower end, placing a center hole hydraulic ram over said second bolt above the bridge socket, threading a nut on said second named bolt, applying pressure to said ram to force said bridge socket downwardly, then threading the nut downwardly on said first bolt until it bears against the upper end of the socket, then releasing the pressure on said ram, and removing said second bolt.

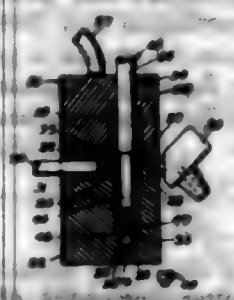
2,861,333
METHOD OF CASTING BALL INTEGRAL WITH THE INK FEED SECTION OF A BALL POINT PEN
Louis H. Morin, Bronx, and Otto Grim, New Rochelle, N. Y., said Otto Grim, assignor to Cassis & Clark Inc., New York, N. Y., a corporation of Delaware
Application October 5, 1956, Serial No. 614,197
4 Claims. (Cl. 29—437)

1. The herein described method of producing a tubular device having a ball positioned at and protruding beyond one end of said device, which comprises positioning a ball at one end portion of the cavity of a pair of relatively movable dies with said ball seating in a recess extending beyond the limits of said cavity, supporting the ball in the cavity by a core pin positioned centrally of the cavity and defining the bore of a tubular section to be formed in said cavity, pressure injecting heated moulding

and offset longitudinally with respect to said leg, said

2,861,340

material into the die cavity around said pin and that part of said ball exposed to the cavity, forming by said core pin, a passage placing the bore of the section in direct communication with that part of the ball exposed to said passage for the transfer of a flowable material contained



in the bore of the section to the surface of the ball exposed at the end of the section in rotation of the ball in said section, and shaping that part of the section in which the ball is arranged to provide free rotation of the ball and passage of the flowable material over the surface of said ball.

2,861,334

METHOD AND MEANS FOR ACCURATELY POSITIONING MATRICES FOR TRIMMING OR CASTING

Craig C. Baker, Arcadia, and Leland H. Satre, Pasadena, Calif., assignors to Sta-Hi Corporation, Whittier, Calif., a corporation of Oregon

Application December 23, 1955, Serial No. 554,976

3 Claims. (Cl. 29—533)

1. In the producing of stereotypes from matrices, the improved method for accurately and removably positioning a series of matrices successively on the matrix-supporting plate in a trimmer or casting box which method consists in cutting a straight slit in each edge of each matrix, the exact location of the corresponding slits in the matrices being identical, providing segmented depressions in said plate corresponding in position to said slits respectively, each depression having a straight wall adapted to be engaged by an edge of the corresponding slit in a matrix, and, when placing each matrix in turn on said plate, adjusting each matrix so that slits spaced 180° apart will over-lie segmental depressions spaced 180° apart, then manually depressing the edges of said slits to move said slit edges into said segmental depressions and against the straight wall of said segmental depressions, thereafter adjusting the other two slits spaced 180° apart over the other two underlying segmental depressions spaced 180° apart, and manually depressing the edges of said slits into said segmental depressions so as to accurately position and secure said matrix to said plate.

2,861,335

METHOD OF FORMING A HOLLOW BOX IN A METAL WALL

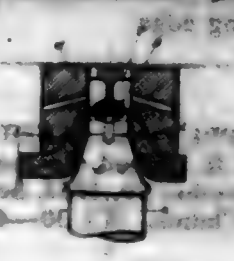
André Hunt, Paris, France

Application January 4, 1955, Serial No. 479,737

Claims priority, application France February 26, 1954

3 Claims. (Cl. 29—548)

1. In a method for forming a hollow boss in a plane or cylindrical metal wall by means of a punch which penetrates from one side of the wall and squeezes the metal into a clearance space between the punch and a die held against the other side of the wall, the steps which comprise preheating the wall before the punch is actuated and, during the punching operation continuously heating the portion of the wall disposed within the die by means of heated gases by providing within the die a confined heating chamber containing said gases and communi-



cating with said portion of the wall within the die, the heated gases being prevented from leaving said chamber except through confined outlet channels, whereby said confined chamber is filled with said hot gases at all times.

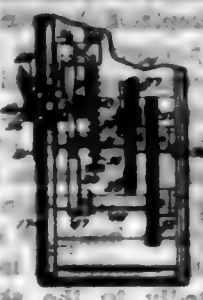
2,861,336

ELECTRIC CAN OPENER

Bernard Klamon, Centerville, Calif., assignor to Klamon Enterprises, Inc., Hayward, Calif., a corporation of California

Application February 4, 1957, Serial No. 637,994

10 Claims. (Cl. 30—6)



1. Apparatus of the character described comprising a motor, a motor switch, a can drive wheel operatively connected to said motor for rotation therewith, a vertically movable can cutter overlying said drive wheel, means releasably holding said cutter in an upper position, a control member operatively connected with said cutter holding means and operable in one position to release the same and with said motor switch for closing the latter, and means resiliently moving said cutter downwardly towards said drive wheel upon actuation of said control member and resiliently maintaining the cutter adjacent the drive wheel.

2,861,337

CAN OPENER

Adolph J. Bolden, South Merchantville, N. J.

Application April 19, 1957, Serial No. 653,827

2 Claims. (Cl. 30—22)

1. In a can opener, an elongate flat metallic bar having side edges and a notch entering one end of said bar between said side edges, the metal between said notch and one side edge being bent inwardly to form an inturned lug on the end of said bar, the metal between said notch and the other side edge being deformed inwardly in the direction of said lug to provide a portion offset inwardly with respect to the plane of said bar and spaced inwardly from said lug and which offset portion has an end edge substantially normal to said side edges

a front wall opposed to and spaced from the back and having an outer surface in the form of a reflector, said

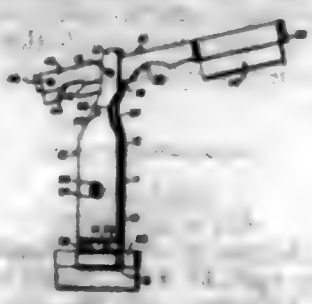
gun barrel to which the member is to be attached with

and offset longitudinally with respect to said lug, said end edge being ground to a sharp cutting edge, and a rounded corner at the joinder of said last-mentioned side edge and said cutting edge.

2,861,338
LATHER-APPLYING SAFETY RAZORS
Edward R. Boland, Boston, Mass.
Application September 20, 1955, Serial No. 535,382
2 Claims. (Cl. 30—41)

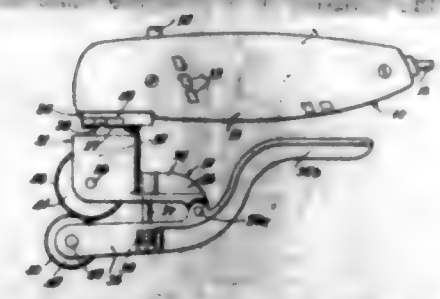
1. In a safety razor having a head portion for holding a razor blade and a handle on which said head portion is mounted, a lather-collecting receptacle having one side open toward said head, said receptacle removably mounted on said handle and movable along said handle in directions toward and from said head portion, roller means rotatably mounted in said receptacle at the open side thereof, said receptacle having a wall portion for engaging said head portion of the razor when the receptacle is moved toward said head portion thereby to stop the receptacle with its open side in a position to receive lather scraped from the skin by the razor blade in a shaving process, said roller means constituting a lather applicator for rolling over the skin in advance of the shaving edge of the razor blade in said shaving process and for picking up lather collected in said receptacle and re-applying it repeatedly to the skin as said shaving process proceeds.

2,861,339
COMBINATION SAFETY RAZOR AND BOTTLE OPENING DEVICE
Michael Maiocki, Brooklyn, N. Y.
Application October 15, 1953, Serial No. 386,193
1 Claim. (Cl. 30—55)



A safety razor device for receiving blades comprising a handle having spaced members, a blade arm pivotally connected to one end of the handle and in frictional engagement with said spaced handle members and pivoted in jackknife fashion in and out of said spaced handle members, said blade arm constructed of spring metal and having closed and slotted ends, said ends upon being expanded adapted to receive the guard edge of the blade, said blade being releasably removable from the blade arm, said blade arm having an extension projecting beyond the pivot connection of the blade with the handle, said handle members having projections surrounding the pivot connection of the blade arm with the handle and extending therebeyond and a blade guard for the razor blade adapted to be placed upon the blade arm when closed into the handle and to tightly fit over the extension of the blade arm and the projections of the handle to a point beyond the pivot connection, whereby the guard may serve to lock the blade arm against movement out of the handle.

2,861,340
POWER CUTTER
George P. Hazzard, Chicago, Ill.
Application October 18, 1954, Serial No. 462,583
14 Claims. (Cl. 30—264)

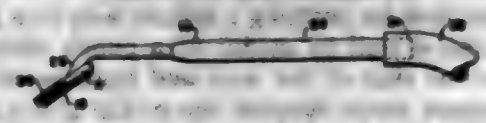


12. In power cutter apparatus of the character described, a casing equipped with a drive gear and having power means for actuating the same, a head equipped with a driven gear and being adapted to mesh with said drive gear, interlocking connectors carried respectively by said casing and head for removably mounting said head upon said casing with said drive and driven gears in intermeshed relation, a pair of cutters carried by said head, and means for establishing a driving relation between said driven gear and the driven cutter.

2,861,341
DENTAL DRILLS
Gustaf Erik Bjorklund, Stockholm, Sweden, assignor to Aktiebolaget Dentatus, Hagersten, Sweden, a corporation of Sweden
Application January 7, 1955, Serial No. 480,563
Claims priority, application Sweden January 13, 1954
3 Claims. (Cl. 32—48)

1. A dental drill comprising a cutting element of a hard but comparatively brittle metal having cutting edges on the exterior surface thereof, a channel or hole extending in axial direction through the whole length of said element, a shank of relatively softer and less brittle metal having a reduced end portion forming a projection inserted in the channel of said element and in spaced relation to the walls thereof, a layer of brazing metal uniting the projection of said shank and said element, said projection having less axial length than the channel in which said projection is inserted, and a piece of hard metal arranged in said channel outside the free end of said projection and in spaced relation to the walls of the channel, a layer of brazing metal uniting said piece of hard metal and said element.

2,861,342
DENTAL REFLECTOR AND ASPIRATING INSTRUMENT
Fred Katz, Vancouver, British Columbia, Canada
Application July 5, 1957, Serial No. 670,302
5 Claims. (Cl. 32—69)



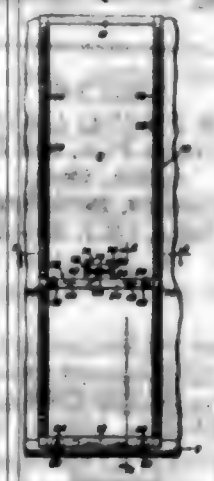
1. A dental reflecting and aspirating instrument comprising a thin casing having a peripheral wall and a back,

upon rotation of the thimble about its longitudinal axis, be held by said cutter slide support, a slide pivotally sup-

and, during the punching operation continuously heating has an end edge substantially normal to said side edges

a front wall opposed to and spaced from the back and having an outer surface in the form of a reflector, said back, front and peripheral walls forming a large unobstructed suction chamber behind the reflector, a large inlet for the chamber near an edge thereof, a handle connected to the casing and extending away from the peripheral wall thereof, and unobstructed means at the casing for connecting a source of suction to the casing in order to draw moisture through the inlet into the chamber while the reflector is being used in a patient's mouth for observation purposes.

2,861,343
BLACKBOARD RULING DEVICE
James O. Click, Wilder, Idaho
Application March 29, 1957, Serial No. 649,337
3 Claims. (Cl. 33—41)



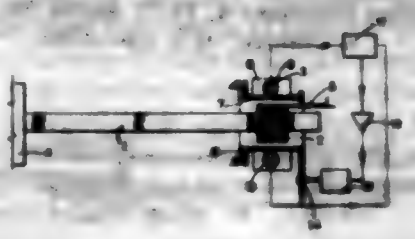
1. A ruling device, adapted to make lines on a writing surface, said device comprising a rectangular frame having a horizontal base with parallel vertically disposed side members attached to and extending upward from either end thereof, the upper ends of said side members being attached to the opposite ends of a top member, said base having antifriction base rollers attached thereto, said rollers being adapted to support said frame, a horizontally disposed bridge member attached to and extending between said side members, said bridge member having at least one anti-friction roller adapted to rollingly engage such writing surface and to keep said bridge member in spaced relation from such writing surface and said bridge member comprising a pair of elongated members disposed in parallel relation on opposite faces of said frame respectively, releasable compression means connecting said elongated members and clamping said side members therebetween, said bridge member having mounted thereon between said side members clamping means adapted to hold in compressive engagement a writing instrument in a position whereby said instrument is adapted to write on such writing surface and whereby said frame may be supported with said base rollers on a supporting surface substantially perpendicular to such writing surface and be moved therealong with said bridge rollers and said writing instrument engaging the writing surface and making thereon a line parallel to such supporting surface.

2,861,344
GUN SIGHT
Robert Edwin Moore, Wilmette, Ill.
Application May 16, 1957, Serial No. 659,254
3 Claims. (Cl. 33—47)

1. A readily attachable and detachable rear gun sight for shotguns comprising a one piece, inverted U-shape member of permanently magnetized material, and having leg portions connected above by a transverse bridge portion, said leg portions having end faces shaped to conform generally to the shape of that rear portion of the gun barrel to which the member is to be attached with the magnetic poles adjacent said end faces to form a low reluctance magnetic path of extended area therebetween, the transverse bridge portion of the sight being spaced a

substantial distance above the gun barrel when the sight is in place to thereby form with the leg portions of the sight a relatively large framed opening through which a person firing the gun may sight when aiming at a target.

2,861,345
DISPLACEMENT MEASURING DEVICES
Rolf Edmund Spencer, West Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, England, a British company
Application September 7, 1955, Serial No. 532,954
Claims priority, application Great Britain September 11, 1954
6 Claims. (Cl. 33—125)



1. A displacement measuring device comprising cooperating optical gratings one of which is responsive to a primary displacement to be measured and which are arranged to produce a repeating light pattern which on displacement of said first grating undergoes a corresponding but magnified displacement relative to the other grating, an observing device, tracking means responsive to said observing device for producing relative displacement between said observing device and said other grating to maintain a substantially fixed relationship between said light pattern and said observing device and thereby to obtain a magnified measure of the primary displacement.

2,861,346
MICROMETER GAGE
Arnold L. Patterson, Hendersonville, N. C., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application September 1, 1955, Serial No. 532,831
3 Claims. (Cl. 33—167)

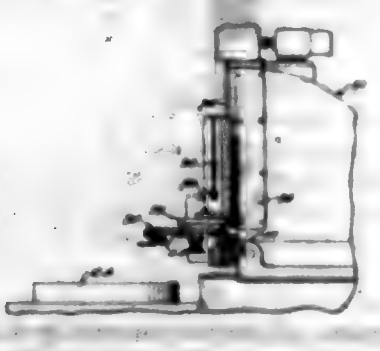
3. A micrometer-caliper for measuring a dimension of a piece-part, which comprises a semicircular yoke, a spindle mounted at a first extremity of the yoke, a thimble mounted coaxially with the spindle in such a manner as to cause longitudinal movement of the spindle

upon rotation of the thimble about its longitudinal axis, and an anvil secured to the second extremity of the yoke in a position axially aligned with the spindle, the anvil having an offset portion disposed parallel to the longitudinal axis of the spindle but out of the path of movement of said spindle, a plurality of projections of rectangular configuration extending laterally from said offset portion, each of said projections having a reference surface lying in a common plane perpendicular to the longitudinal axis of the spindle and located a predetermined distance from the second extremity of the yoke, the lateral projections being designed to be received within complementary rectangular notches formed in the piece-part and to support said piece-part a dimension of which is to be measured from the common plane containing the reference surfaces on the lateral projections along a line coincident with the longitudinal axis of the spindle so that when the spindle is advanced along its longitudinal axis into engagement with the upper surface of the piece-part a distance extending from said upper surface to the common plane of the reference surfaces is measured along a line that is coincident with the longitudinal axis of the spindle.

2,861,347
RETRACTABLE PLUG OR THREAD GAUGE
Mladen Von Turski, Chicago, Ill.
Application February 4, 1957, Serial No. 638,894
4 Claims. (Cl. 33—178)

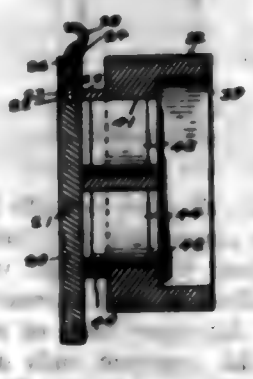
2. In a plug gauge, a hollow handle having a smooth interior bore and a longitudinal slot in the wall thereof adjacent each end, externally threaded ends on said handle, a centrally apertured cap nut on each said threaded end, a collet bushing and nut assembly in said handle adjacent each end thereof, and a gauge bar held by each assembly and extending through the aperture in the respective cap nut, said assemblies being slidable in the bore of said handle to expel and retract said gauge bars, means extending through the respective slot to lock each said assembly in a position of adjustment, and spring means between each assembly and the respective cap nut urging said assemblies inwardly to gauge bar retracted position.

2,861,348
AXIAL PITCH MEASURING DEVICE
William R. Carlson, Huntington Woods, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Application November 19, 1953, Serial No. 393,109
2 Claims. (Cl. 33—179.5)



1. In a device for checking gears in a gear finishing machine, a column, means for securing said column to the cutter slide support of a gear finishing machine, said securing means comprising a pivot support adapted to be held by said cutter slide support, a slide pivotally supported on said column at right angles to said first pivot support, a carriage slidably mounted on said slide, the column and slide being adjustable on their respective pivotal supports to achieve a true plumb position for said slide, means for indicating the position of said carriage relative to said column, a bar extending transversely with respect to the direction of movement of said carriage, means on said carriage supporting said bar for lengthwise movement and for pivotal movement on an axis parallel to the direction of carriage movement, an indicator carried by one end of said bar, said indicator comprising a feeler pivotally mounted on said bar for engagement with an object to be measured and means operatively associated with the feeler for indicating the pivotal movement of said feeler, and a stop for limiting the movement of said one end of the bar toward an object to be measured.

2,861,349
SAW FILING GAUGE
Carl L. Olson, Grants Pass, and Donald G. Freel, Salem, Oreg.
Application March 19, 1956, Serial No. 572,481
1 Claim. (Cl. 33—202)



A saw filing gauge comprising a hexagonal body having an axial bore extending partially therethrough from one side thereof, a cylindrical boss projecting integrally from the side of said body opposite said bore, said hexagonal body having a plurality of outer flat faces formed thereon, said flat faces having a plurality of saw filing guide lines inscribed thereon with indicia adjacent each of said guide lines for identifying the angle thereof, said body having a pair of bores formed therein with their axes equispaced from and parallel to the axis of said body and extending from the base of said axial bore through the remainder of said body and through said boss, and magnets mounted in said pair of bores.

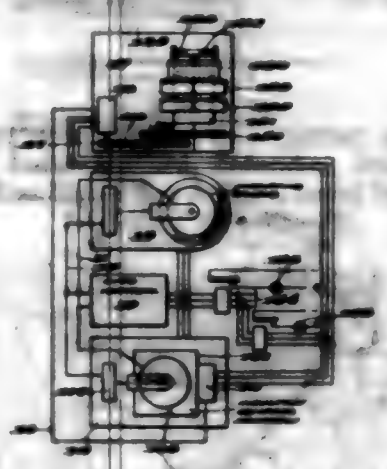
2,861,350
GYRO SYSTEM, PARTICULARLY FOR FLIGHT NAVIGATIONAL PURPOSES
Carl-Erik Granqvist, Lidingö, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingö, near Stockholm, Sweden, a corporation of Sweden
Application December 7, 1953, Serial No. 396,662
Claims priority, application Sweden October 26, 1953
6 Claims. (Cl. 33—204)

1. An artificial horizon, particularly for flight navigation purposes, comprising a balanced sphere in the form of a hollow shell of a metal having a density higher than that of lead and being provided with indicator means, gimbals having gimbal shafts forming mounting means for said sphere, and means for correcting minor errors of alignment caused by friction and the like comprising, a central gyroscope having a gimbal mounted rotor and one synchro transmitter for each of the gimbal shafts, a synchro receiver for each of the sphere gimbal shafts, one of said synchro receivers being disposed in the in-

2,861,385

material along a plurality of superimposed concentric

terior of said sphere, said means connecting each of said transmitters to the corresponding receiver to transmit



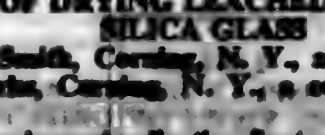
movements of said rotor gimbal shafts to said sphere gimbal shafts.

2,861,351
METHOD OF DRYING LEACHED POROUS HIGH SILICA GLASS
Wendell O. Smith, Corning, N. Y., assignor to Corning Glass Works, Corning, N. Y., a corporation of New York
No Drawing. Application September 14, 1957
Serial No. 683,946
2 Claims. (Cl. 34—7)

1. The method of drying a water-saturated, porous glass article containing over 93% SiO_2 and having a portion in which drying stresses tend to form cracks during drying and firing which comprises forming on at least such portion a coating of a water-soluble, waxy polyethylene glycol and thereafter removing the loosely held water from the pores by evaporation.

2,861,352
SILICONE RELEASE AGENT FOR DRYER FLIGHT COATINGS
Elden E. Fender, Cincinnati, Ohio, assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application January 12, 1956
Serial No. 558,625
5 Claims. (Cl. 34—22)

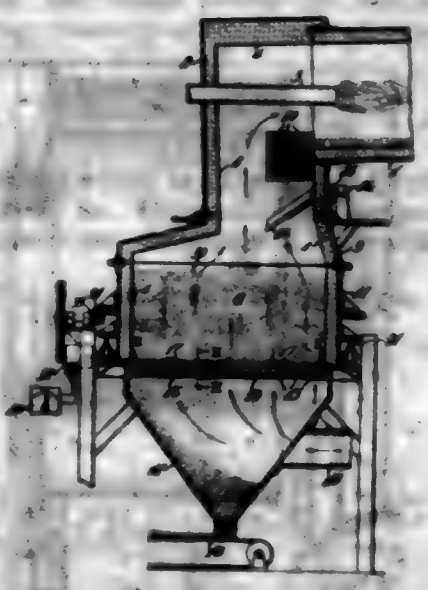
1. In a process of drying a synthetic rubber coagulated from aqueous emulsion in a dryer by conveying said rubber through said dryer on dryer flights the improvement comprising applying continuously and directly to said flights prior to contacting same with said rubber an aqueous dispersion of a silicone of the type



wherein n is an integer resulting in a compound having a viscosity of at least 40 centistokes.

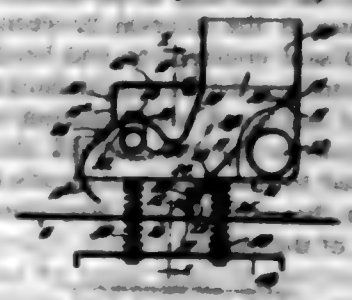
2,861,383
APPARATUS FOR COOLING GRANULAR MATERIALS
Otto G. Lellep, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application June 14, 1956, Serial No. 591,352
2 Claims. (Cl. 34—61)

1. In an apparatus for cooling hot granular material, a first member comprising a substantially horizontal perforated grate, a second member comprising a substantially vertical shaft mounted over and adjacent to said grate, a motor connected to one of said members to rotate said one member about a vertical axis, means for delivering material to be treated to the top of said shaft, a distributor for distributing said material in a homogeneous mixture of grain sizes to cover said grate evenly to build up a column of material within said shaft having a substantially horizontal top surface, a blower for blowing gases upwardly through the column of material to cool the material, a radial slot in said grate extending substantially between the center and the periphery of said shaft to discharge cooled



material in layers of uniform thickness progressively around the bottom of the column of material as said one of said members rotates to thereby lower the material through said shaft in a descending column of material having a substantially uniform depth and a controller for controlling the speed of said motor to vary the rate at which the material passes out said slot to maintain a predetermined depth of material in said shell.

2,861,384
APPARATUS FOR DRYING MOVING WEBS
Odd Hultgren, Greenwich, Conn.
Application April 25, 1955, Serial No. 503,418
5 Claims. (Cl. 34—68)



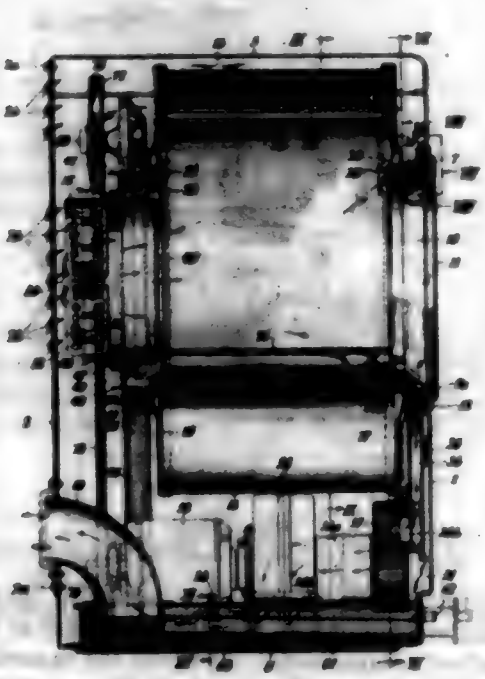
5. An apparatus for drying a moving web impregnated with an evaporatable fluid comprising a substantially flat nozzle extending across the whole of the width of said web and directed at an acute angle towards the web with the direction of angularity being opposed to the direction of travel of the web, said nozzle being defined by uniformly closely spaced, substantially parallel walls having a length, as measured in the direction of flow through said nozzle, substantially in excess of the spacing therebetween and terminating closely adjacent the web, a source of gaseous fluid communicating with said nozzle, and an elongated generally cylindrical source of radiant energy disposed on one side of the web with its axis extending in spaced parallel relationship to the plane of the web and generally at right angles to the longitudinal axis of the web, a plane perpendicular to the plane of the web through the axis of the said source being spaced oppositely to the direction of travel of the web from the mouth of the nozzle, said source also being spaced above the upper termination of the walls defining the nozzle, the space between the cylindrical source and the adjacent wall being unobstructed whereby said wall is heated by said source.

and the observer in a position in which the mask covers plow blade pivotally mounted intermediate its ends on

securing means comprising a pivot support adapted to

one of said synchro receivers being disposed in the in-

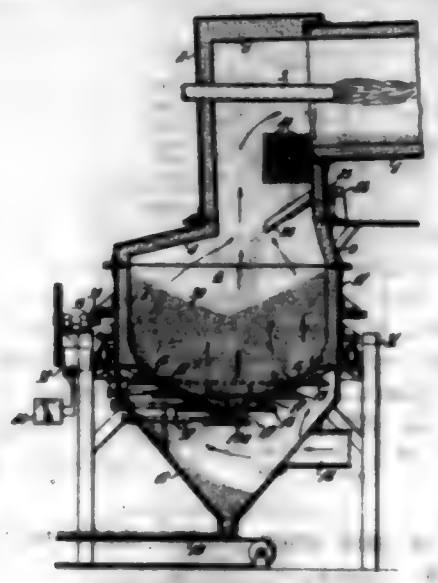
2,861,385
LAUNDRY DRYING MACHINES
Peyton W. Douglas, Syracuse, N. Y., assignor to Pennsylvania Range Boiler Co., Philadelphia, Pa., a corporation of Pennsylvania
Application September 23, 1955, Serial No. 536,164
20 Claims. (Cl. 34—82)



1. In a laundry drying machine, a casing having a loading opening in one of its side walls and a door for said opening; a drum rotatively supported within the casing, said drum having an imperforate circumferential wall and end heads coaxial with the loading opening in the aforesaid casing wall, said end heads having axial openings therein; an annular flange at the inner side of the aforesaid casing wall surrounding the loading opening and extending inwardly, with circumferential clearance thereabout, into the opening in the confronting head of the drum; a duct in the interval between the aforesaid casing wall and said confronting end head of the drum, said duct surrounding the aforesaid flange in sealed relation with said end head and communicating with the interior of the drum by way of said clearance; an air blower connected to the duct; and means for pre-heating air taken from the exterior for propulsion through the drum by action of the blower.

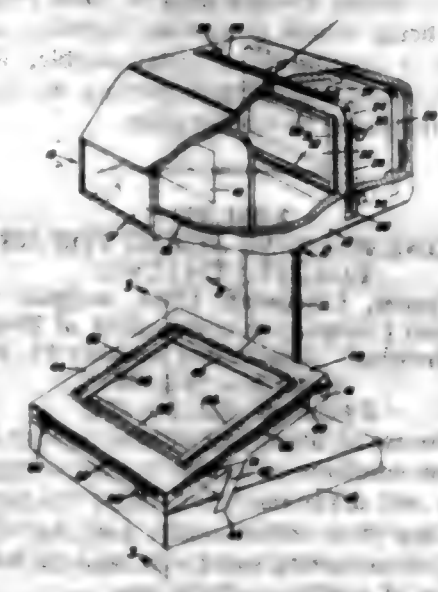
2,861,356
APPARATUS FOR COOLING GRANULAR MATERIALS
Otto G. Lellep, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application June 14, 1956, Serial No. 591,321
3 Claims. (Cl. 34—174)

1. An apparatus for cooling granular material with gases comprising means for receiving and arranging granular material to be treated in the shape of a substantially vertical column having a substantially inverted cone shaped top and bottom surfaces, means for rotating said receiving means about its vertical axis, means for feeding material to the top of said column and evenly distributing said feed material to cover the entire top surface of said column with a homogeneous mixture of grain sizes, means for blowing gases upwardly through a bottom portion of the column and passed vertically upward through and out the top of the column to treat the material, and means for removing treated material in layers of uniform thickness from substantially the entire portion of the bottom surface through which gas is blown into said column and discharging the cooled material along a plurality of superimposed concentric paths around the bottom surface of the column to pro-



vide a descending column of material through said receiving means having a uniform velocity of descent.

2,861,387
VIEWING AND DISPLAY DEVICE AND METHOD OF DISPLAYING VIEWS OF OBJECTS IN CONJUNCTION WITH PICTORIAL REPRODUCTIONS OF INTENDED CHANGES
Christian Knutson, Lake Shore, Md.
Application July 15, 1955, Serial No. 522,249
8 Claims. (Cl. 35—50)



2. A display and viewing apparatus for producing combined displays, embodying actual views of objects and preselected pictorial elements, comprising means for superimposing a mask with pictorial elements representing changes to be made on an object over an image of the said object produced in a viewing plane, said means including a viewing device for an observer viewing the object, the image of the object being produced in a predetermined scanning plane between the observer and the object, means for determining the position of selected contour lines, separating portions of the object image to be viewed unchanged and those to be covered by a superimposed pictorial element, relatively to the predetermined scanning plane in the viewing device, means for reproducing exactly the selected contour lines of the portions of the object to be covered by pictorial elements on a sheet provided with said pictorial elements to be superimposed, to enable an operator to cut the sheet along the contour lines to produce a mask, and means for holding the mask within the viewing device substantially in the predetermined scanning plane between the said plane

a bolt and nut means in said aligned openings, said

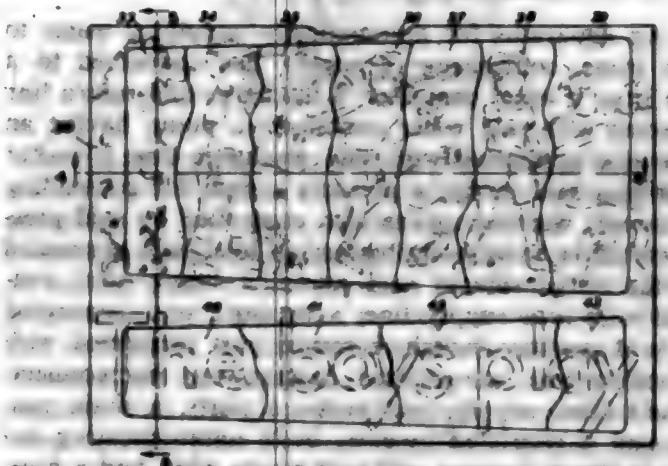
2,861,364
AUTOMATIC FEED APPARATUS FOR

material to be treated to the top of said shaft, a distributor

said source.

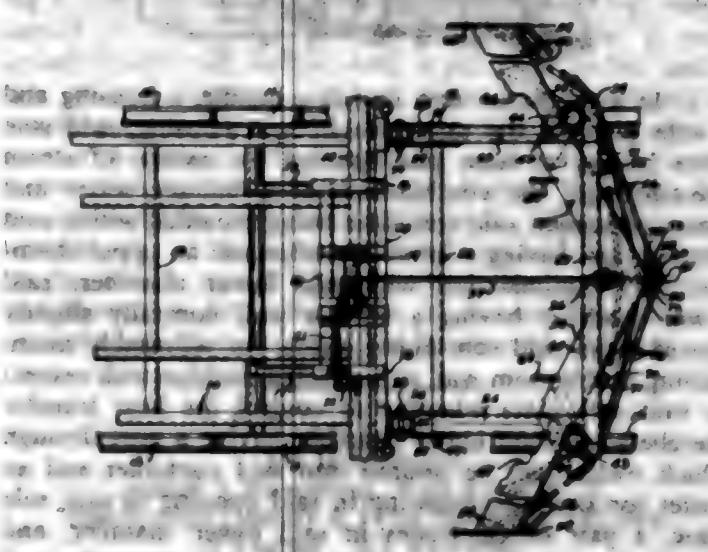
and the observer in a position in which the mask covers the selected contour of the image to be changed when the object is viewed through the viewing apparatus by an observer.

2,861,358
FITTED BLOCK TEACHING AIDS
Judith L. Ward, Columbus, Ohio
Application November 3, 1954, Serial No. 466,474
5 Claims. (Cl. 35—71)



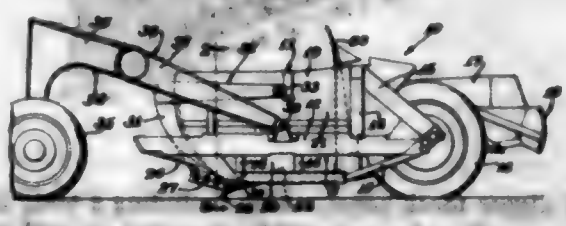
3. A teaching aid for use in teaching children learning to read the rule of left-to-right progression of letters and words comprising, in combination, a supporting and playing board having a recess formed in its upper face, said recess being slightly non-rectangular in outline due to its top and bottom edges having a small inclination to one another and being arranged with its long dimension extending horizontally, a plurality of jigsaw puzzle pieces adapted to be assembled one with the other within said recess, the top surfaces of said pieces carrying portions of a picture which is adapted to be completed only upon proper assembly of the pieces within said recess, said pieces extending top and bottom of the recess and having top and bottom edges which are inclined to one another by the same angle as are the top and bottom edges of said recess, whereby said pieces each must be located in its own width portion of the recess, and the adjacent side edges of the puzzle pieces having complemental offsets as viewed in transverse section which extend in direction as to insure assembly of the pieces in left-to-right progression.

2,861,359
BALLAST PLOW
Royce G. Kershaw, Montgomery, Ala.
Application May 11, 1953, Serial No. 354,069
4 Claims. (Cl. 37—104)



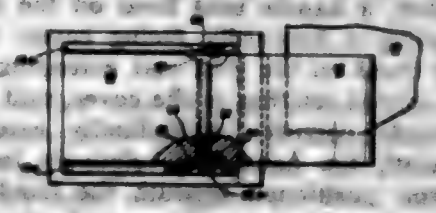
1. A railroad ballast plow comprising a supporting frame adapted for movement along a railroad track, a plow blade pivotally mounted intermediate its ends on a vertical pivot below each side of the frame and adapted for rotation through an angle of substantially 180° whereby the working face of the blade is presented selectively forwardly or rearwardly to convey the ballast outwardly or inwardly of the track, the length of each free end of each blade being greater than one-half the width of the frame, and means joining the free ends of said blades together inwardly of the frame whereby the blades thus joined assume a V-shape.

2,861,360
SCRAPER HAVING MAXIMUM WIDTH BOWL
George S. Allin, Sr., Fleanmoor, Ill., assignor to International Harvester Company, a corporation of New Jersey
Application November 2, 1955, Serial No. 544,396
11 Claims. (Cl. 37—126)



1. A scraper comprising a movable frame, ground wheels connected to said frame at the rear end thereof, a wheeled carriage disposed at the front end of said frame, means connecting said wheeled carriage to said frame comprising a pair of longitudinally extending booms connected to said carriage and disposed on opposite sides of said frame, means pivotally connecting said booms to said frame, a bowl supported on said frame, said bowl comprising a bottom wall and side walls, each side wall having a lower wall portion, an upper wall portion, and an intermediate wall portion connected to said lower and upper wall portions, said upper wall portions being disposed laterally inwardly with respect to said lower wall portions to provide longitudinally extending recesses on opposite sides of said bowl and substantially coextensive therewith, an apron disposed at the forward end of said bowl, apron arms on said apron pivotally connected to said bowl, said booms and said apron arms having portions thereof disposed within said recesses, a transversely extending blade connected to the forward end of said bowl, said blade having outer portions thereof extending laterally outwardly with respect to said upper wall portions, and an upright movable wall in said bowl, said upright wall having an upper narrow portion adjacent said upper wall portions and a lower wider portion adjacent said lower wall portions.

2,861,361
DETACHABLE POINT FOR EXCAVATING APPARATUS
John S. Pilch, Ware, Mass.
Application November 2, 1955, Serial No. 544,409
4 Claims. (Cl. 37—142)



1. In a device of the character described, a shank having a socket adjacent its upper edge and a forwardly extending lug, a tip overlying said forwardly extending lug and having a portion extending into said socket, said tip having sides overlying the sides of said lug, aligned openings through said sides and through said lug,

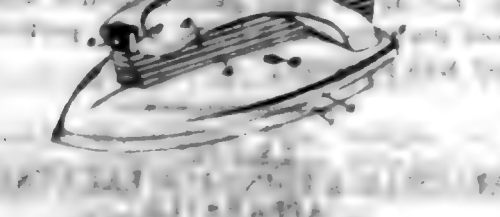
2,861,365

film strip fits closely, a top layer secured to said center

is blown into said column and discharging the cooled the predetermined scanning plane between the said plane

a bolt and nut means in said aligned openings, said opening in said lug being larger than said openings in said sides of said tip, and recesses in the opposite sides of said lug adjacent the opposite ends of said opening in said lug whereby tightening of said bolt and nut means will draw portions of said sides into said recesses.

2,861,362
DIGGER TOOTH CONSTRUCTION
Maurice Lizotte and Lionel Lizotte, Joliette, Quebec, Canada
Application May 31, 1956, Serial No. 588,494
7 Claims. (Cl. 37—142)

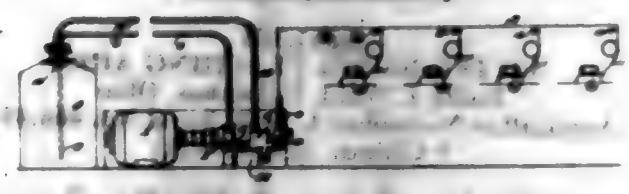


1. A digger tooth construction including a body having a tang, a tooth point removably mounted on said tang, a cut out portion in said tang adjacent said body, a keeper pivotally mounted in said cut out portion of said tang about a transverse axis with respect to said tang, said point having a groove which, when said point is in assembled position on said tang, faces said keeper, said groove having a curved face engageable by the outer end of said keeper, said curved face having its axis of curvature offset with respect to the pivot axis of said keeper, said axis of curvature being disposed rearwardly from said pivotal axis, and resilient means disposed between said keeper and the bottom of said cut out portion of said tang and urging said keeper into groove engaging position.

2,861,363
STEAM FLATIRON
Frank E. Finleyson, Oakdale, Calif., assignor to General Electric Company, a corporation of New York
Application January 31, 1954, Serial No. 405,376
1 Claim. (Cl. 38—77)

In a flatiron, a body comprising a soleplate and a cover, said body having walls therein which define a steam chamber, a handle post fixed on the body at its rear end having a forwardly facing cavity therein, an open handle fixed on the post and extending forwardly over and in spaced relation to the cover, said cover having a relatively narrow longitudinally extending slot directly beneath the handle, a relatively long narrow water reservoir positioned beneath the handle with its lower portion in said slot and on said steam chamber and its rear portion anchored in said forwardly facing cavity, a filling tube connected to the top forward corner of said reservoir and positioned in the forward end of said handle through which water may be supplied to said reservoir, and walls forming a water metering orifice connecting the reservoir to said steam chamber.

2,861,364
AUTOMATIC FEED APPARATUS FOR STEAM IRONS
Walter Klein, Los Angeles, Calif.
Application May 28, 1954, Serial No. 433,235
7 Claims. (Cl. 38—77)



1. An apparatus for automatically supplying water to steam irons, comprising: a supply line connected to a steam iron; a water container; a discharge and return line connected with said water container; a pump having an intake side connected with said discharge line; a motor for driving said pump; a pressure switch for controlling said motor; warning means also controlled by said pressure switch; a valve body having an inlet port connected with the outlet side of said pump, a supply port connected with said supply line, a pressure port connected with said pressure switch, a return port connected with said return line, unrestricted passageways interconnecting said inlet, supply, and pressure ports, a main passage, and a restricted by-pass, both communicating between said passageways and said return port; and a pressure relief valve including a check valve and spring means disposed in said main passage for effecting unidirectional flow from said passageways to said return port and return line, and tending to maintain a predetermined pressure in said passageways, supply line, and pressure switch; said pressure switch operable to stop said motor and actuate said warning means on drop of pressure in said passageways below a predetermined value; said restricted by-pass permitting limited circulation from said discharge line through said pump and back to said return line, irrespective of the position of said pressure relief valve.

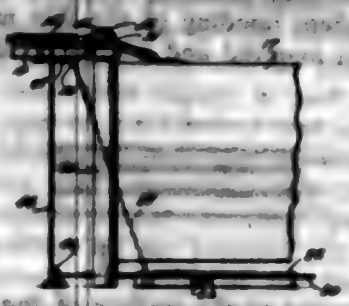
2,861,368
TOY STEAM IRONS
Meyer L. Block, Port Washington, N. Y., assignor to Nassau Products Corporation, Troy, N. Y., a corporation of New York
Application July 2, 1957, Serial No. 669,633
7 Claims. (Cl. 38—77)

1. In a toy steam iron having a handle, a housing and a sole plate at the underside of said housing, said sole plate having at least one opening for escape of steam therethrough, the combination of a unitary water and steam container, said container being mounted within said housing and having a lower chamber and an upper chamber in communication with said lower chamber, said lower chamber having a bottom wall normally slightly spaced from said sole plate, means for adjustably maintaining said bottom wall in a selected position with respect to said sole plate whereby to control the heat transfer therebetween, said upper chamber having a port through which water may be poured into said container and an outlet for steam terminating in said opening in said sole plate, a pair of electrodes in said lower chamber, and electrical conductors connected with said electrodes and extending from said steam iron.

frame adapted for movement along a railroad track, a

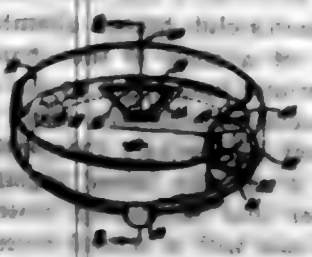
aligned openings through said sides and through said log.

2,861,365
VEHICLE ACTUATED GATE
Shell D. Denham, Fort Sumner, N. Mex.
Application December 21, 1956, Serial No. 629,954
4 Claims. (Cl. 35—18)



1. A gate actuator comprising a post, a gate pivotally mounted on the post, a gate control lever also pivotally mounted on the post, means connecting the control lever to the gate, an operating lever also pivotally mounted on the post, resilient means connecting the control lever to the operating lever, resilient means connecting the gate to the post, a ramp positioned below the gate, means mounted on the post for retaining the control lever in position with the gate closed, means connected to the ramp and the post for actuating the retaining means of the control lever to release the control lever to open the gate, means mounted on the post for retaining the operating lever in position with the gate open, and means connected to the gate and to the retaining means for releasing the operating lever whereby the gate is returned to the closed position and wherein the operating lever is returned to the cocked position.

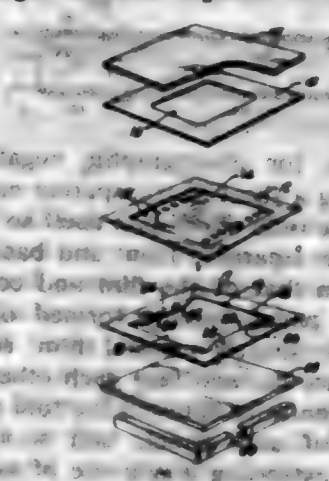
2,861,367
CHILD'S FOOD DISH
Hal Chessler, Sunset Beach, Calif.
Application October 7, 1955, Serial No. 539,887
3 Claims. (Cl. 40—79)



1. A child's eating dish comprising: a bowl portion of relatively opaque material, a transparent window in the bottom wall of said bowl portion, at least three supporting legs fixed to the under side of said bottom wall for supporting the bowl portion on a horizontal surface with the bottom wall spaced from said surface, said legs being slotted on their inner sides in a plane parallel to and spaced below said bottom wall, a pin fixed to the under side of said bottom wall and depending therefrom in coaxial relationship with the bowl portion, and a centrally apertured picture disk containing a series of pictures mounted on the under side of said bottom wall with the pin extending through the aperture in the disk and the peripheral edge of the latter extending into said slots whereby the disk is rotatably mounted on the bowl for rotation thereof to bring the series of pictures thereon successively into view through said transparent window.

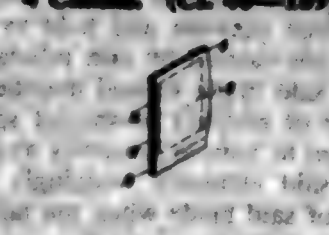
2,861,369
FILM MOUNT
Arthur J. Rosenberg, New York, N. Y.
Application January 4, 1956, Serial No. 557,366
6 Claims. (Cl. 40—158)

6. A film mount for carrying a film strip comprising a center layer having an opening therein into which the film strip fits closely, a top layer secured to said center layer and having an opening therein smaller than the opening in the center layer whereby the inner surface of the top layer is exposed adjacent the opening in the center layer, the opening in the top layer being dimensioned and positioned precisely to mask off all but the desired image area in the film strip when the film strip is fitted into the opening in the center layer, and a bottom layer secured to said center layer and having an opening therein, the opening in said bottom layer having two of its opposed edges spaced apart a distance equal to the spacing in the corresponding edges in the opening in the center layer whereby the exposed inner surface of the top layer adjacent the opening in the center layer at said two edges remains exposed to act as a guide for



the insertion of the film strip, having the central 40 to 75% of its other two opposed edges spaced apart a distance less than the spacing between the corresponding edges in the opening in the center layer but greater than the spacing between the edges in the opening in the top layer to form flaps that cooperate with the top layer to hold the film strip therebetween and having the end portions of said other two opposed edges spaced apart a distance equal to the spacing between the corresponding edges in the opening in the center layer, the construction being such that the inner surface of the top layer adjacent the opening in said layer remains exposed around its entire periphery and acts as a guide for directing the film strip under the flap, the center layer being adhesively secured to the top layer and to the bottom layer throughout its entire area.

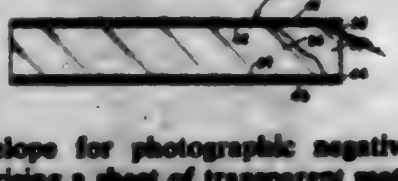
2,861,369
CARRIERS OR POCKETS FOR STAMPS AND SIMILAR FLAT ARTICLES
Hans Widmaier, Berlin, Germany
Application August 26, 1954, Serial No. 452,579
Claims priority, application Germany December 30, 1949
4 Claims. (Cl. 40—159)



1. A carrier for receiving and releasing a stamp, label and like substantially flat article, comprising two spring hard, non-hygroscopic weldable, thermoplastic leaves which are arranged one above the other and in mutual intimate surface contact, one of said leaves forming a cover leaf and being transparent, said cover leaf being united with the other leaf forming a back leaf along at least one marginal edge of same so that the leaves exert a clamping action on said flat article when inserted therebetween, at least said one leaf being curved so that the mantle line of curvature is substantially parallel to

said one marginal edge, the opposite edge of said cover leaf contacting the back leaf when the flat article is inserted therebetween.

2,861,370
FILE CARD STRUCTURE
Donald W. McArthur, Pearl River, N. Y., assignor to Mirble-Gem-Dexter, Incorporated, a corporation of Delaware
Original application September 24, 1953, Serial No. 382,172, now Patent No. 2,799,107, dated July 16, 1957. Divided and this application October 9, 1956, Serial No. 614,875
8 Claims. (Cl. 40—159)



7. An envelope for photographic negative film and the like comprising a sheet of transparent material folded longitudinally once only over upon itself so as to provide abutting hinge-like separable front and back panels of a width greater than that of the film and connected only at the fold, said panels having formed on their inner surfaces vertically spaced parallel film edge engaging shoulders which are flat and face each other for locating the inserted film centrally between the fold and the upper separable edges of said panel, said shoulders having abrupt edges and extending lengthwise of said panels and parallel to the fold and being symmetrically disposed on opposite sides of the longitudinal center line of said panels such that the spacing between the same is substantially equal to the width of the inserted film.

2,861,371
PAINTING IMPLEMENT
Edward A. Leahik, Montreal, Quebec, Canada
Application October 23, 1956, Serial No. 617,725
3 Claims. (Cl. 41—1)

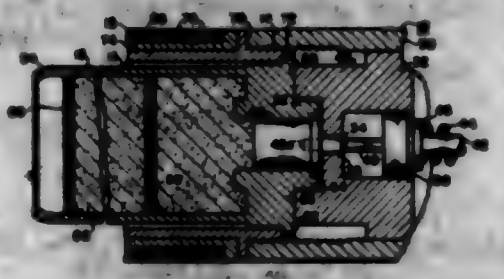
1. A spatula comprising a handle, a tubular member having one end open and the other end closed, positioned in end to end relation with respect to said handle, with the open end circumposed about and secured to the adjacent end portion of said handle, the closed end of said member being provided with a slot extending therecross, a pair of resilient elements extending longitudinally from the closed end of said handle and normally contacting each other, a resilient flat blade extending into said slot and having the portion adjacent the end within said tubular member received between and held by said resilient elements, and means carried by said tubular member releasably securing said blade to said member, said means embodying a pair of resilient W-shaped spring elements arranged in bottom to bottom normally abutting relation, the bottoms of said elements wedgingly receiving the adjacent portion of said blade when the latter is received in said slot.

2,861,372
METHOD OF SURFACE FINISH OF PLASTIC PANELS
Ernest George Hunt, Lachine, Quebec, Canada, assignor to The Arborite Company Limited, La Salle, Quebec, Canada
Application May 6, 1955, Serial No. 506,538
1 Claim. (Cl. 41—34)

A method of forming embossing plates and surface-finishing stacked sheets of plastic material which comprises inserting between individual sheets of plastic material a surface-finishing embossing plate comprising a sheet of reticulated woven material sandwiched and sealed between carrying sheets of thin metal foil and subjecting the resulting assembly to heat and pressure to effect a permanent bonding of the thin metal foil sheets with the woven material and a transfer of the pattern of

the woven material to the surface of the thin metal foil sheets and to the surface of the adjacent sheets of plastic material, separating the sheets of plastic material from the embossing plate comprising bonded sheets of thin metal foil and woven material, and thereafter using said embossing plate to surface-finish other sheets of plastic material.

2,861,373
HAND WEAPON
Carl R. Weinert, Pittsburgh, Pa., assignor to Federal Laboratories, Inc., Saltsburg, Pa., a corporation of Pennsylvania
Application April 30, 1956, Serial No. 581,693
3 Claims. (Cl. 42—1)

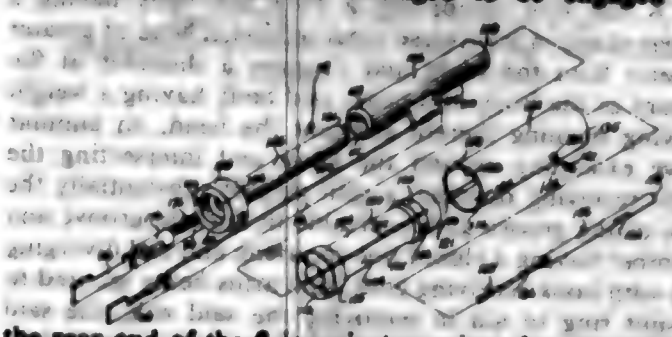


1. In a policeman's club breech chamber construction, the combination of a shell in the chamber, said shell having a firing primer and a rim at the rear and a centrally disposed metal primer boss offset behind the rim holding the primer protectively therewithin, and breech and barrel parts detachably joined together to form the cartridge chamber and presenting closely spaced confronting surfaces one with a central recess to exclusively receive the primer boss, each part having a shoulder portion offset from said central recess and cooperating with the other shoulder portion to clamp the shell with the rim in a plane immediately therebetween, said breech part further having a firing pin bore with its mouth intersecting the floor of the recess, and a firing pin retractable in the bore from a fired position with the point occupying said recess to a cocked position behind the mouth of said bore.

2,861,374
SLIDE BOLT ACTION FOR FIREARMS
Samuel L. Hampton, La Mesa, Calif.
Application February 1, 1957, Serial No. 637,790
3 Claims. (Cl. 42—16)

1. In a sliding firearm bolt action, a barrel having a rear end portion having therein a rearwardly opening cartridge chamber, a bolt housing at the rear end of the barrel having a bore aligned with said cartridge chamber, a stock on which the barrel and the bolt housing are mounted, a trigger assembly mounted on the stock rearwardly of the cartridge magazine, a cartridge magazine receiver on the stock forwardly of the trigger assembly and opening into the bolt housing bore, a slide mounted on the stock, a bolt assembly sliding in the bolt housing bore behind the barrel, said bolt assembly

comprising an outer sleeve sliding in said bore, said outer sleeve having a forwardly flaring bore portion, a locking sleeve engaged in said outer sleeve having longitudinal spring fingers having laterally projecting locking heads on their forward ends projecting laterally outwardly from the outer tube at the forward end thereof, said locking heads having internal cam surfaces, an operating and cam sleeve sliding in said locking sleeve and having a cam on its forward end operatively engageable with the locking head cam surface, means operatively connecting said operating sleeve to said slide, a firing pin tube sliding in said operating tube, an enlarged diameter ring portion on the forward end of said firing pin tube positioned forwardly of the forward end of the operating sleeve, said firing pin tube having a bore extending axially therethrough and said ring portion having an enlarged axial recess in its forward end for receiving the rim on the rear end of a cartridge positioned in said cartridge chamber, an internal partition wall in the bore of the firing tube and spaced from the ends of the firing tube, said partition wall having a reduced axial bore therethrough, a firing pin sliding in the firing pin tube rearwardly of the partition wall and having a reduced pin portion working in said reduced axial bore, spring means urging the firing pin rearwardly, said firing pin having a rear end and said trigger assembly having a hammer head arranged to be engaged with



the rear end of the firing pin to project the reduced firing pin portion to strike and fire a cartridge in the cartridge chamber, a forwardly spring pressed cylinder slidably mounted on said reduced firing pin portion forwardly of said partition wall, means for limiting longitudinal movement of said cylinder along said reduced pin portion, said cylinder having a forward cartridge engaging end, means connecting the outer sleeve, the locking sleeve and the firing pin sleeve together against rotation and longitudinal movements relative to each other, and limiting longitudinal and rotational movements of the operating and cam sleeve relative to the operating sleeves and precluding longitudinal and rotational movement of the firing pin tube relative to the operating and cam sleeve, said rear end portion of the barrel having therein an annular recess opening in the bolt housing bore and accommodating said enlarged ring portion of the firing pin tube in the forward firing position of the bolt assembly, said recess having a shoulder at its forward end, the sidewall of said annular recess having therein an annular locking recess into which said locking heads are engageable when the operating and cam sleeve is moved forwardly relative to the locking sleeve, with the enlarged ring portion of the firing pin tube engaged with said shoulder, and the cam of the operating sleeve engages the cam surface of the locking heads and spreads the heads into said locking groove.

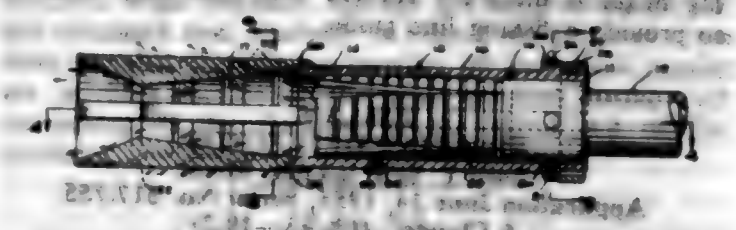
2,861,375

CHOKE DEVICE FOR ATTACHMENT TO A SHOTGUN

Douglas S. Rudick, South Portland, Maine

Application December 30, 1955, Serial No. 556,658
2 Claims. (Cl. 42—79)

1. The combination with a shotgun barrel having a free end, of a choke device operatively connected to said shotgun barrel, said device comprising a sleeve having a portion adjacent one end thereof embracingly secured to the portion of said shotgun barrel adjacent the free end of the latter, said sleeve having a plurality of slots extending from the other end to a point adjacent said portion and forming a plurality of longitudinally-extending fingers, a second sleeve having the portion adjacent one end slidably receiving and embracing said longitudinally-extending fingers, said second sleeve having in the portion adjacent the other end thereof a plurality of transversely-disposed ports arranged in longitudinal spaced relation therealong, means connecting said second sleeve to said first-named sleeve for movement from the



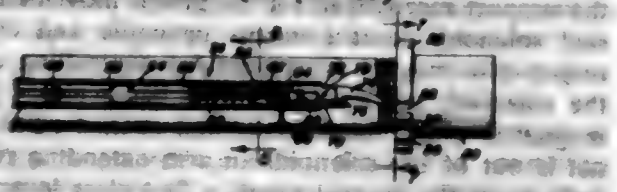
position in which said second sleeve one end portion embraces said fingers to a position in which said second sleeve other end portion surrounds said fingers, a plurality of longitudinally-extending ridges on the inner face of said second sleeve other end portion and engageable with said fingers upon execution of movement of said second sleeve from the position in which said second sleeve one end portion embraces said fingers to a position in which said second sleeve other end portion surrounds said fingers to thereby compress said fingers toward each other and effect a choking action, and a propelling surface adjacent each port and operable by the flow of gases from said port to effect the movement of said second sleeve relative to said first sleeve.

2,861,376

INERTIA OPERATED CHOKE FOR SHOTGUNS

Louis M. Deneux, Charleston, S. C.

Application May 21, 1957, Serial No. 660,567
9 Claims. (Cl. 42—79)



1. A choke assembly for shotguns and the like, said choke assembly comprising a gun barrel having a forward end in the form of a plurality of individual resilient fingers, a choke control sleeve engaged over said forward end, said choke control sleeve including an interior frusto-conical portion engaging said fingers, thread means on said barrel and said choke control sleeve for positioning said choke control sleeve longitudinally of said barrel to vary the choke of said barrel by varying the engagement of said frusto-conical portion with said fingers, and control means carried by said barrel for rotating said choke control sleeve to vary the longitudinal position of said choke control sleeve, said control means including a plurality of circumferentially spaced ears on said choke control sleeve, an operator mounted on said barrel for longitudinal movement thereon, a cam type drive finger carried by said operator and engageable with said ears to rotate said choke control sleeve.

2,861,377

HOOK AND LURE SAVER

Hunter W. Childress, Richmond, Va.

Application August 31, 1956, Serial No. 607,367
1 Claim. (Cl. 43—17.3)

The combination of an oar and means removably connected thereto for removing a hook or lure from a

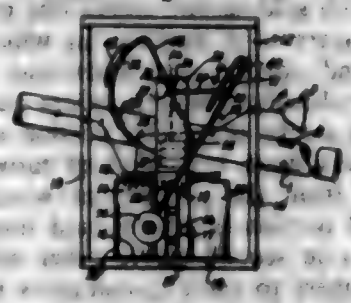
finishing stacked sheets of plastic material which com-

bolt housing bore behind the barrel, said bolt assembly

snagged position, said means comprising a U-shaped body for receiving a portion of said car, spurs formed at the free-end portions of said body for removably attaching

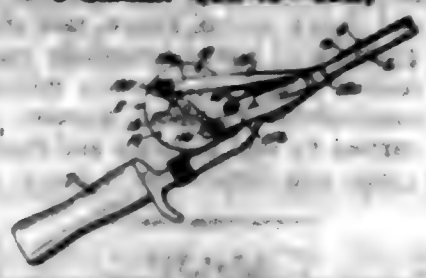
said body to said car and wherein a transversely extending finger is integrally formed with said body whereby to provide a fishing line guide.

2,861,378
FISH LINE DEFLECTOR
Basil T. Bell, Inkster, Mich.
Application June 24, 1955, Serial No. 517,755
5 Claims. (Cl. 43—19.2)



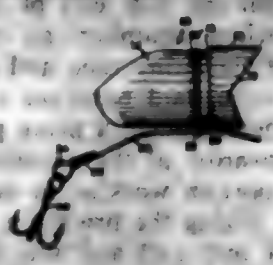
1. A fishline deflector comprising a support mechanism, means for mounting said mechanism on a fishing rod having a fishline adapted to travel therealong when payed in and out, a line-engaging member mounted on said support mechanism for pivotal line-deflecting movement across the direction of fishline travel, power mechanism connected with said line-engaging member for effecting said movement, said power mechanism including a solenoid, a permanent magnet pivotally mounted on the support mechanism for reciprocal movement through said solenoid, contact means openable and closable in response to magnet movement for controlling current to the solenoid, said contact means being closed when the magnet is within the solenoid and opened when the magnet is out of the solenoid, an arm extending right angularly from the magnet pivot, a first class lever pivotally mounted on the support mechanism and having a slide portion on one of its ends slidably engaged with the free end of the arm and having a counterweight on its other end for returning the magnet into the solenoid when the contacts are open.

2,861,379
FISHING-ROD AND REEL ACCESSORY
Clifford E. Brown, Duluth, Minn.
Application July 22, 1957, Serial No. 673,534
5 Claims. (Cl. 43—25.2)



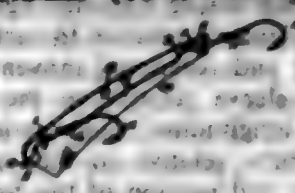
1. A combination fishing rod and reel attachment adapted to be used with a rod and a fishing reel of the type which includes a spindle upon which a line is wound and from which the line extends along the rod and a handle by means of which the reel is operated, said attachment comprising an elongated longitudinally stretchable solid strip of elastic material flat throughout its length and having portions intermediate its ends adapted to be wrapped under tension around the rod and line adjacent the reel to hold the line against sliding longitudinally of the rod and having means at each of its end portions adapted to engage the handle of the reel to cause said elastic strip to resiliently hold the same under tension against rotary movement whereby the line on the spindle and the rod will be prevented from becoming loose and entangled.

2,861,380
FISHING LURE
Alden M. Peterson, Wayzata, Minn.
Application November 18, 1957, Serial No. 697,345
4 Claims. (Cl. 43—42.22)



1. A fish lure comprising a plug like body having a circular shape in transverse cross section, a head of greater diameter than the body and forming a shoulder at the juncture of the body and head, said body having a weight receiving opening therein adjacent the head, an annular groove extending around the body and intersecting the weight receiving opening, a split ring of substantially the shape of the groove and receivable in the said groove and a member having a closed line receiving end and diverging arms with hook receiving ends, said arms being secured to the split ring to aid in removing the said ring, the said arms and split ring constituting a closure for the weight receiving opening.

2,861,381
FISHING LURE
Howard E. Snyder, Mercer Island, Wash.
Application January 27, 1955, Serial No. 484,340
2 Claims. (Cl. 43—42.36)



1. A fishing lure for rapid attachment to and release from a continuous portion of line carrying hooking means, comprising a fish-like body formed from thin handable material having a front edge on a bias slanting rearwardly from top to bottom, a straight top edge, a rear edge substantially perpendicular to the top edge, and a bottom edge on a bias slanting upwardly from said front edge and bendable line attachment means derived from and integral with the body spaced from one another and equally spaced from the top edge to receive a continuous line holding the lure to the line by frictional means.

2,861,382
SELF-BRAKING FISH HOOK MOUNTING
Jack L. Rosenberg, Largo, Fla.
Application August 30, 1957, Serial No. 681,282
4 Claims. (Cl. 43—44.91)

4. A fish hook mounting comprising an elongated fishing line receiving tube having a slot intermediate its ends, means secured to the tube in the region of the slot providing laterally spaced ears, a lever pivoted intermediate

free end, of a choke device operatively connected to said

The combination of an oar and means removably connected thereto for removing a hook or lure from a

its ends on and between said ears, said lever having angularly related upper and lower legs, a brake shoe secured on the lower leg for movement through said slot to engage a part of a fishing line in the tube exposed by said slot, a float on said upper leg normally positioning the

lever with the brake shoe withdrawn from the slot, and a leader secured to the upper leg of the lever and having a hook thereon, said float being in an intermediate part of the upper lever leg, and said upper lever leg having an upper end to which said leader is secured.

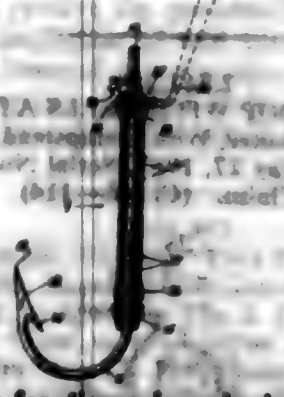
2,861,383

BEADED FISH HOOK DISGORGING DEVICE

James Harvey Gray, Clayton, Mo.

Application December 10, 1956, Serial No. 627,351

4 Claims. (Cl. 43—53.5)



1. Apparatus for disgorging a barbed hook from a fish, said apparatus comprising means movable upon the hook into a barb-disengaging position, said means comprising a plurality of bead shaped elements having openings therethrough, said beads being loosely positioned upon the hook with the shank and curved portion of the hook passing through the openings, and the bead nearest the barb having a frusto-conical form for positioning it in mating relation underneath the barb upon said curved portion of the hook.

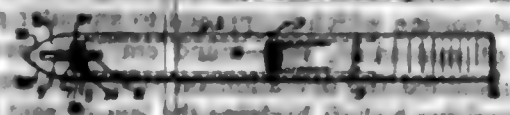
2,861,384

HOOK EXTRACTOR

Charles Kubin, Rocky River, Ohio

Application November 4, 1957, Serial No. 694,443

14 Claims. (Cl. 43—43.5)



1. A fishhook extractor comprising an anvil element having a working surface on one side, the element being formed with a cruciated through slot comprising longitudinal and transverse intersecting parts which open through said working surface, a tool element comprising a crook having a central opening and a slot in one side continuous with the central opening to allow a line attached to a fishhook to be passed laterally through the crook slot into the crook opening, and means mounting the elements for predetermined relative movement between hook receiving relative positions in which the tool element is disposed in and the crook projects through the transverse part of the cruciated slot, and relative positions in which the crook of the tool element is withdrawn from the cruciated slot of the anvil element, the tool and anvil elements being adapted, when moved from said hook receiving relative positions to said withdrawn relative positions with a fishhook engaged through the crook and held yieldingly against the latter to draw the fishhook, bight foremost, through the longitudinal part of the cruciated slot, whereby to extract the fishhook from flesh impaled thereon by reaction of such flesh against the working surface of the anvil element during such movement of the elements to the withdrawn relative positions.

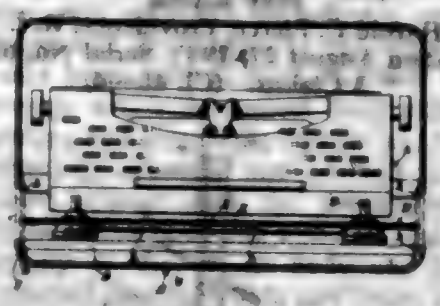
2,861,385

TYPEWRITER SUPPORT IN CARRYING CASE

Henry B. Childs, Elmwood, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware

Application September 14, 1955, Serial No. 534,308

3 Claims. (Cl. 45—68.2)



3. In combination with a typewriter or similar machine having a keyboard and a manipulative carriage, a traveling case for said typewriter, said traveling case comprising two complementing components movable to open and closed case relations and comprising means to latch the two components together in a closed-case relation, one of said components constituted to accommodate said typewriter rising upwardly from its inner side and leaving at least said carriage and the upper portion of said keyboard protruding clear therefrom, mounting means fast on and reaching outwardly from at least two opposite sides of said typewriter, means closely within a peripheral edge of said one case component, adapted in the open-case relation of said components to receive and locate said mounting means on said one case component removably seated in a definite relation thereto and so that the typewriter stands definitely located rising from the inner side of such component and with at least the carriage and the upper portion of said keyboard protruding clear above such component for ready manipulative accessibility, and means on said other case component adapted through closure of said traveling case to engage said mounting means at the proximity of said receiving and locating means to hold said mounting means, and thus the typewriter, in the closed traveling case as received and located on said one case component.

2,861,386

DRAFTING BOARD WITH FLEXIBLE DISPLACEABLE COVER

Paul L. Pavlovs and Charles W. Altmann, Two Rivers, Wis., assignors to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin

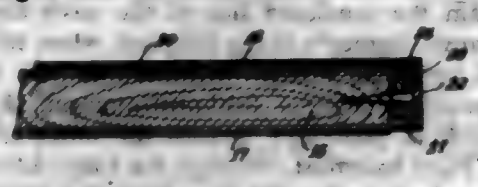
Application October 7, 1957, Serial No. 688,564

1 Claim. (Cl. 45—131)

In a drafting board with displaceable cover, the combination with a rigid board of wood material, of a rub-

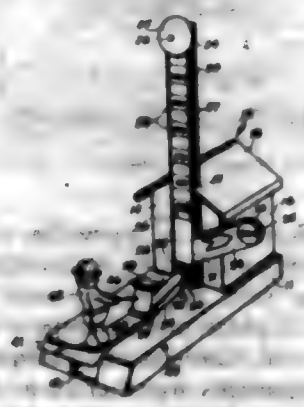
handle by means of which the roof is operated, said at- viding laterally spaced ears, a lever pivoted intermediate

tively narrow rigid carrier strip detachably secured to the rear edge of said board and extending the full length of said edge, screw means passing directly through the carrier strip into the edge of the board for removably retaining the carrier strip secured to the board, whereby said carrier strip is extraneous of the board, and a flexible sheet of linoleum glued to said carrier strip throughout its length but otherwise unsecured to said board,



whereby said flexible sheet may be draped over approximately the entire area of the board to lie snugly on the upper surface thereto to provide a working surface thereon or may be partially or wholly displaced from said surface to expose the said surface for alternative working use, said sheet terminating slightly short of the forward edge of the board and having a free flexible margin thereat.

2,861,367
TOY BANK
Harold C. Pierce, Providence, R. I.
Application August 27, 1957, Serial No. 680,507
3 Claims. (Cl. 46—4)



1. A toy bank having in combination a platform, a house secured to said platform and having a coin receiving orifice, a lever pivotally mounted to said platform, a spring interposed between said platform and lever to yieldingly hold said lever in an upward position, an intermediate lever provided with a tapered end, means to rockingly mount said intermediate lever to said platform with said tapered end rockingly engaging said lever, a standard provided with a coin chute having a coin receiving mouth secured to said house, a coin receiving slot in said standard, in register with said coin receiving orifice, a flexible deflecting apron secured in said coin receiving slot and extending into the path of said coin chute and a coin block having a coin slot, slidably mounted in said standard with said coin slot in register with said coin chute and means to pivotally connect said coin block with said intermediate lever so that upon release of said spring after depression by said lever said coin block will move upwardly rapidly through engagement of said coin block with said lever through said intermediate lever.

2,861,388
STRUCTURAL TOY AND MODEL BUILDING SET
Gianni Favaretto, Bergamo, Italy
Application August 12, 1952, Serial No. 303,849
Claims priority, application Italy August 14, 1951
9 Claims. (Cl. 46—16)

1. A set of structural members adapted to be connected by means of projections and recesses for forming various disassemblable articles, including a plurality of elements each of which comprises a hollow prismatic body having two opposed parallel base faces and an even number of side walls each situated at right angles with respect to the said base faces and the adjacent side walls, the body being provided with at least one recess which is square in section and extends from one base face within the body with its axis perpendicular to the said base face and which has at least two of its walls formed by the side walls of the said body and an open-ended tubular projection extending from the other base face of the body coaxially with each said recess, said projection being square in cross section and of a size to fit the recess in a similar superposed element, the inside of each said tubular projection communicating with the correspond-

ing recess in the body and said projection having a height in an axial direction substantially greater than half the height of said body, said members being assemblable into a continuous wall structure by interengaging the members of one course of the wall structure in staggered relationship with respect to the members of the subjacent and superposed courses to define a plurality of hollow columns extending vertically through the wall structure for reception of tie means extending upwardly through one column and downwardly through the next adjacent column and overlying the end edges of the members at the top and at the bottom of the wall structure to hold said wall structure as an inseparable unit resistant to accidental disassembly.

2,861,389
TRUNDLE HOOP WITH BELLS ATTACHED
James M. Baker, West Hempstead, N. Y.
Application May 27, 1957, Serial No. 661,643
1 Claim. (Cl. 46—114)

A toy which produces jingle bell sounds when operated comprising a trundle hoop having smooth surfaces including an uninterrupted outer periphery functioning as a surface contacting tread, a manually maneuverable push-pull stick having suitable handle means at its proximal end and a laterally bent arm at its distal end, said arm terminating in an eye and said eye loosely encircling said hoop and providing a propelling and permanent operating connection between said stick and hoop, and sound emitting means mounted for rotation on said eye, said means having a part thereof in friction-driven contact with said tread, said eye formed with a substantially U-shaped portion which is opposed to an outer peripheral surface of said tread, said sound emitting means being wholly mounted for operation on said U-shaped portion and comprising a shaft bridging the legs of said U-shaped portion and mounted for free rotation in bearings provided therefor in said legs, a friction-type roller fixed to the median portion of said shaft, located between said legs, and contacting said tread, and jingle bells fixed to end portions of said shaft outwardly of said legs and operable when the shaft is in a state of rotation.

a crook having a central opening and a slot in one side

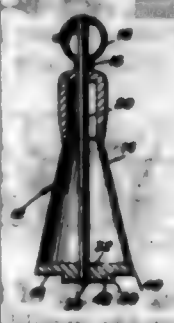
bination with a rigid board of wood material, of a rule-

2,861,396

GRAVITY ACTUATED MECHANICAL TOY

Richard Martin, Winter Park, Fla.

Application June 22, 1956, Serial No. 593,234
1 Claim. (Cl. 46—149)



In combination, a downwardly inclined panel and a gyrating toy thereon having an upright elongated body, and means on said body engageable with said panel and adapting said body to oscillate on the panel between limits of oscillatory movement under pull of gravity and to rotate about its longitudinal axis in response to such oscillation, said means comprising a circular flat bottom on said body having a circular bottom edge concentric to said axis, a protuberance depending from said bottom in said axis, and a flat disk fixed on and depending from said bottom eccentrically of the same and having a bottom edge below said circular edge eccentric to said protuberance and spaced inwardly of said circular edge and on which and said circular edge said body is oscillatable between said limits and tiltable in opposite directions on said eccentric edge and rotatable in said limits to lower and lift said protuberance onto and off said panel, respectively, and revolve the protuberance downwardly of the panel for oscillation of said body on said eccentric edge and the lowered protuberance in said limits and gravitational rotation of said body downwardly of the panel on said eccentric edge when the protuberance is raised.

2,861,391

TOY CABOOSE WITH ANIMATED FLAGMAN

William R. Smith, Hamden, and Gabriel R. Monaco, New Haven, Conn., assignors to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland

Application May 24, 1956, Serial No. 587,001
5 Claims. (Cl. 46—245)

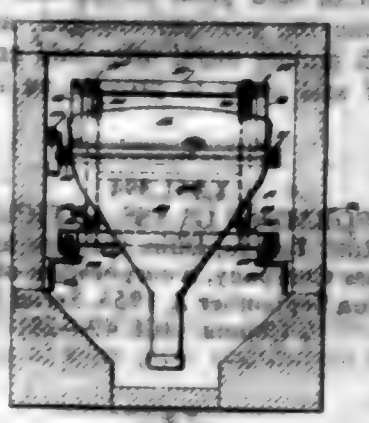
1. The combination with a toy railway caboose having a cabin between its ends and an open vestibule platform outside of said cabin at an end of the caboose, of an upright wall of said cabin separating said vestibule from the interior of said cabin containing an apertures, an electromagnet within said cabin having a reciprocative armature movably attractable in a direction crosswise of the caboose, a figurette constantly in view on said vestibule platform representing a trainman always outside of said cabin, and a motion transmitter extending through said aperture operatively connecting said figurette to said armature whereby said figurette can be shuttled sidewise back and forth between a riding position in the confines of said vestibule platform external to said cabin and a position in laterally outboard relation to said platform suitable for sighting and signalling trackwise past the cabin of the caboose.

2,861,392

APPARATUS FOR SEALING PICTURE TUBES

Harvard B. Vincent, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Application March 20, 1956, Serial No. 572,669
5 Claims. (Cl. 49—1)



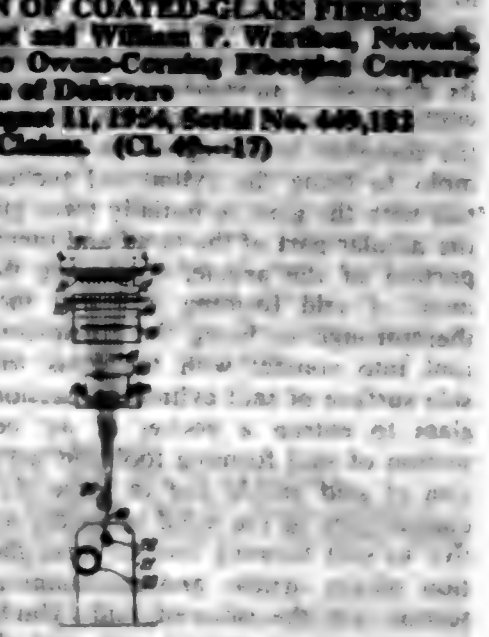
1. Apparatus for use in the manufacture of a glass picture tube comprising a funnel-shaped body and a face plate having a marginal flange portion, the body and face plate having sealing surfaces meeting in a common plane with a coating of brazing material for sealing said surfaces together, said apparatus including a carriage comprising a framework for supporting the funnel body and face plate, said framework including a lower open frame member through which the funnel body extends downwardly, centering and supporting lugs on said lower frame member projecting upwardly into position to make substantially point contact with the downwardly tapered side walls of the funnel body and with said lugs distributed circumferentially of the funnel body and holding the latter in a centered position within said lower frame member, the said framework including an upper frame member and means thereon for engaging the face plate and holding it in register with the funnel body, with said sealing surfaces in register, an electrical resistance element, an annular frame in which said resistance element is mounted, means for holding said annular frame in position to surround the picture tube at said sealing surfaces with the resistance element extending along said sealing surfaces and in close proximity thereto, and means for supplying electric current to the resistance element.

2,861,393

PRODUCTION OF COATED-GLASS FIBERS

Harry R. Whitehurst and William P. Wartbon, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Application August 11, 1954, Serial No. 449,183
10 Claims. (Cl. 49—17)



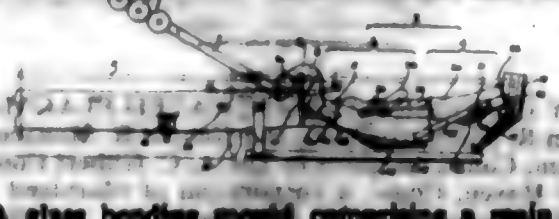
9. The method of producing a glass textile strand which comprises simultaneously and continuously drawing a multiplicity of fine glass fibers from a supply body

of molten glass, continuously winding the filaments in strand form into a package, simultaneously and continuously grouping the filaments at a point between said supply and package in the form of a strand with the filaments substantially parallel in the strand, frictionally engaging each of said filaments individually with a contact surface ahead of said point to increase tension in said fibers following the portions engaged, and coating the filaments with molten metal after said engaged portions but ahead of said point to provide an individual coating for each.

2,861,394
FORMING GLASS ARTICLES
Richard O. Ruff, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application September 2, 1953, Serial No. 378,893
2 Claims. (Cl. 49—29)

1. In the method of forming a hollow glass article having a bowl-shaped body with convergent tapering sides, a tubular lower end portion and a frusto-conical portion between said body and said end portion, the steps comprising dropping a charge of molten glass into a hollow mold having an inner molding surface conforming in shape and size to the exterior surface of the article to be molded and including downwardly convergent tapering sides, a tubular lower end part and a frusto-conical part between said sides and end part, allowing the glass to settle in the mold, thereafter accelerating the rotation of said mold about its vertical axis to spread the glass along the sides of the mold and form the body of the article by the action of centrifugal force on the glass, moving a forming tool vertically downwardly along the axis of said mold toward said glass, said tool having a shape and size similar to the shape and size of the interior surface of the frusto-conical portion of the article to be formed and including a lower cylindrical section merging with an upper inverted frusto-conical section, passing air axially downwardly through said tool during its downward movement, moving said tool downwardly while continuing the rotation of the mold and prior to the complete spreading of the glass along the sides of the mold to bring the cylindrical section thereof into contact with the glass to initially force glass downwardly into the tubular part of the mold and thereby form the tubular portion of the article, continuing the downward movement of said forming tool and the application of air therethrough to bring the frusto-conical section of said tool into contact with the glass while maintaining the side surface of said cylindrical section in contact with the glass to entrap a pocket of air below the cylindrical section of said forming tool and within said tubular portion of said article and to force glass from said frusto-conical part of the mold upwardly and downwardly relative to said forming tool to form the frusto-conical portion of the article, and maintaining said frusto-conical section and the sides of said cylindrical section of said forming tool in contact with said glass during the rotation of said mold to cause said glass which has been forced upwardly to become redistributed by the action of centrifugal force.

2,861,395
GLASS BENDING MOULDS
Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Application June 18, 1956, Serial No. 592,194
Claims priority, application Canada July 2, 1955
5 Claims. (Cl. 49—67)



1. In a glass bending mould of the concave type having two relatively pivotable mould portions movable between a "flat" position and a concave position; the provision of a supporting device pivotally mounted on one of said mould portions about an axis parallel to and closely spaced from the axis of relative pivoting of said mould portions, said supporting device having elevated supporting surfaces disposed at points near the edges of the mould and on opposite sides of both said axes whereby in the "flat" position of the mould to project upwardly therefrom in glass-supporting disposition and in the concave position of the mould to lie so as not to project from the curved surface defined by the glass-supporting edges thereof.

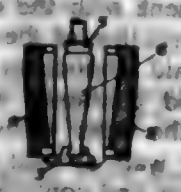
2,861,396
GLASS BENDING MOULDS
Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Application June 18, 1956, Serial No. 591,913
Claims priority, application Canada July 2, 1955
4 Claims. (Cl. 49—67)

1. A glass bending mould comprising a main mould portion; an end mould portion pivotable relatively to said main mould portion between a "flat" position and a "curved" position, said end mould portion itself comprising a first section pivotally mounted on said main mould portion and a second section pivotally mounted on said first section; and cooperating parts on said main mould portion and said second section of the end mould portion effective on pivotal movement of said first section relatively to said main mould portion to cause simultaneous predetermined movement of said second section relatively to said first section, said cooperating parts comprising a cam in the form of a slotted plate mounted substantially centrally of the lateral edges of the mould, and a cam follower engaged therewith.

2,861,397
METHOD FOR THE MANUFACTURE OF HOLLOW GLASS-WARE
Pierre Paul Morel, Reims, France, assignor to Verreries Mecaniques Champenoises, Reims (Marne), France, a corporation of France
Application October 4, 1954, Serial No. 460,319
Claims priority, application France October 16, 1953
1 Claim. (Cl. 49—66)

The method of forming an article of hollow glassware which comprises, charging an inverted roughing mold and associated neck mold with a gather of molten glass

through an upper opening provided in said roughing mold, engaging a vacuum cup cover in the upper opening of said roughing mold, applying a vacuum through the neck mold cooperating with said roughing mold thereby to draw the glass gather well into the bottom toward said neck mold and forming the neck of the article, breaking the vacuum and applying air pressure through the neck mold to blow the molten glass into a blank conforming to the roughing mold cavity, removing the blank



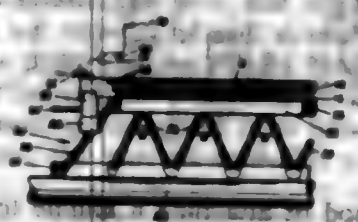
from said roughing mold while holding it between the vacuum cup cover and neck mold and rotating the blank half-a-turn while transporting it into an upright finishing mold having an upper opening receiving the neck mold and a lower opening receiving the vacuum cup cover, applying air pressure through the neck mold while engaged in the finishing mold to make the blank conform to the cavity of the finishing mold and thereby finish the article.

2,861,398

METHOD OF PRODUCING MULTIPLE SHEET GLAZING UNITS

John A. Woods, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application April 27, 1953, Serial No. 351,299
8 Claims. (Cl. 49—82)



1. In a method of producing a multiple sheet glazing unit, the steps of mounting three sheets of glass in fixed spaced and face-to-face relation one above another and while maintaining said fixed relationship, bending edge portions of the uppermost of said sheets into fused relation with corresponding portions of the intermediate sheet, and substantially simultaneously bending edge portions of said intermediate sheet into fused relation with corresponding portions of the lowermost of said sheets.

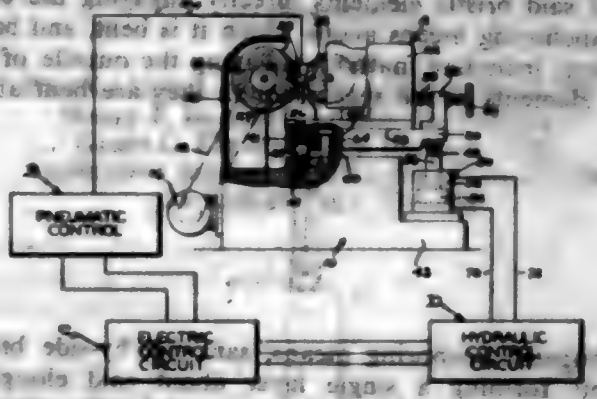
2,861,399

FEED CONTROL MECHANISM

Alton H. Landiss, East Orange, N. J., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 27, 1956, Serial No. 561,783
10 Claims. (Cl. 51—103)

1. A grinding machine comprising a rotatably driven grinding member for grinding a work piece to a predetermined size, a work piece rotating member, a work piece supporting member, a feeding mechanism for varying the distance between the grinding member and said rotating member, said mechanism including a course feeding mechanism and a fine feeding mechanism, the course feeding mechanism including a support slidably movable to regulate the radial distance between said grinding wheel and the work piece rotating member, the fine feeding mechanism being independent of said course feeding mechanism and providing a simultaneous arcuate feed of the work piece supporting member and of the work piece rotating member while maintaining said members in a fixed spaced relation to each other, and a gauge responsive to a change in work piece size during grinding and controlling the fine feed mechanism, said gauge being located out of work piece engagement during grinding.

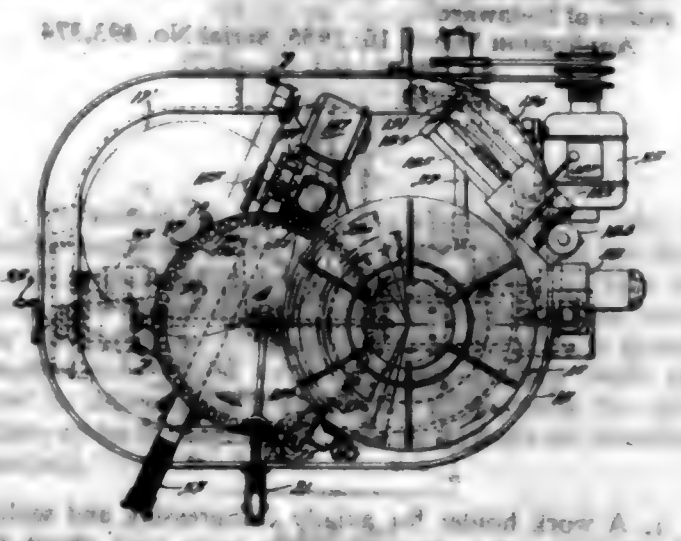


2,861,400

MACHINE FOR GRINDING PARALLEL SURFACES

Rollo G. Ellis, Royal Oak, Mich., assignor to Micromatic Hone Corporation, Detroit, Mich., a corporation of Michigan

Application November 28, 1955, Serial No. 549,427
18 Claims. (Cl. 51—118)



1. In a flat surface lapper, a pair of abrading disks having oppositely disposed working faces lying in substantially parallel planes so as to define a working gap therebetween, telescoped drive means to rotate said disks, means for axially moving one of said telescoped drive means relative to the other, means to index a plurality of workpieces through said working gap, sensing means responsive to variations from a predetermined thickness of workpieces leaving said working gap, means responsive to said sensing means to axially move one of said drive means relative to the other to change the spacing of said disks to adjust the size of said working gap to compensate for thickness variations of said workpieces from a predetermined thickness, and means to adjust said index means to retain it within the space between the abrading disks out of contact therewith.

2,861,401

BRUSH AND BRUSH MATERIAL

Ruben O. Peterson, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Original application September 6, 1952, Serial No. 308,243. Divided and this application July 11, 1955, Serial No. 521,395
18 Claims. (Cl. 51—193.9)

2. A brush element comprising elongated anchoring means, a plurality of bristle elements disposed in side-

by-side relationship with each other and bent substantially intermediate their ends directly by about the elongated anchoring means and folded back upon themselves, each of said bristle elements directly engaging the elongated anchoring means about which it is bent, and backing means including material engaging the outside of the bristle elements in the region where they are bent about

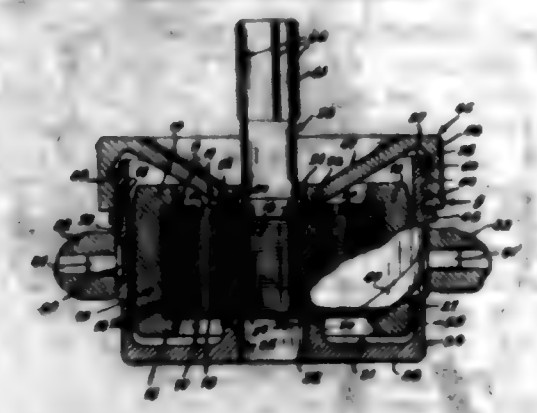
the elongated anchoring means, said side-by-side bristle elements forming a single layer about said elongated anchoring means, said single layer of bristle elements forming a double row extending away from the elongated anchoring means in substantially the same general direction, said backing means directly engaging each bristle element and holding same directly against the elongated anchoring means.

2,861,402

WORK HOLDER

Wilfred A. Okenfuss, University City, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware

Application March 18, 1955, Serial No. 493,374
4 Claims. (Cl. 51—217)



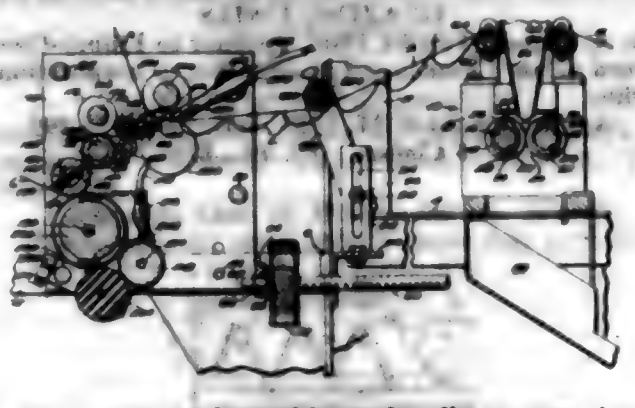
1. A work holder for axially compressing and sealing the laminae of a dynamoelectric rotor core about the shaft bore therethrough during the machining operation on the shaft bore and for sealing the rest of the rotor from the shaft bore, said work holder comprising a container and a cover, said container having an inner wall defining a cavity within said container, said container being open at one end thereof, a laterally extending first end wall disposed at the opposite end of said container, said first end wall supporting a first central longitudinally extending sleeve extension projecting into said cavity, said first sleeve extension having an opening formed longitudinally therethrough, the outer wall of said sleeve extension being spaced a substantial distance from said inner wall of the container, said first sleeve extension having a first abutment on its unattached end, a first resilient sealing ring supported by said first sleeve extension adjacent said first abutment, said cover having an inner wall engaged with the outer wall of said container in overlapping relation thereto adjacent said open end of the container, a second resilient sealing ring disposed between said cover and the outer wall of said container, said cover having a laterally extending second end wall, said laterally extending second end wall also extending longitudinally and projecting into said cavity, said second end wall supporting a second central longitudinally extending sleeve extension projecting into said cavity, said second sleeve extension having an opening formed longitudinally therethrough, the outer wall of said second sleeve extension and the inner surface of said second end wall adjacent said second sleeve extension being spaced a substantial distance from said inner wall of the container, said second sleeve extension having a second abutment formed on its unattached end, a third resilient sealing ring supported by said second sleeve extension adjacent said second abutment, whereby a rotor positioned in said holder has one of its ends engaged with said first abutment and first sealing ring and its opposite end engaged with said second abutment and third sealing ring so that the shaft bore is circumscribed thereby and in axial alignment with the openings through said sleeve extensions, a portion of the rotor extending longitudinally beyond said abutments toward the adjacent end portions of said container and being disposed in the space between the outer walls of said sleeve extensions and the inner wall of said container, and means maintaining said cover and container in fixed overlapping relationship whereby the rotor core is compressed between said abutments.

2,861,403

INFUSION PACKAGE WITH TAB AND METHOD AND APPARATUS FOR MANUFACTURE THEREOF

Maurice Weinman, Newton, Mass., assignor to Modern Coffees, Inc., Boston, Mass., a corporation of Massachusetts

Application February 27, 1956, Serial No. 567,964
6 Claims. (Cl. 53—16)



1. The method of attaching a handle to a tea bag as it is being manufactured comprising the steps of feeding a first web of paper at a predetermined rate of speed, simultaneously feeding a second web of paper at a greater speed, converging said webs, periodically tacking said two webs together at spaced points so that said second web is attached to said first web in loops, folding said loops rearwardly as said webs advance, bringing said first web into facing engagement with a third web, continuously sealing said first and third webs together at their longitudinal edges, sealing together transversely extending areas of opposed portions of said first and third webs from edge to edge to form a transverse seal, depositing a charge of commodity in powdered form between said first and third webs, and forming a second transverse seal after said charge has been deposited between said first and third webs.

4. Apparatus for forming a bag having a handle attached to one wall thereof, comprising, means for feeding a first web of paper from a first feed roll at a predetermined rate of speed, means for simultaneously feeding a second web of paper from a second feed roll at a greater speed, means for converging said webs, means for periodically tacking said two webs together at spaced points so that said second web is attached to said first web in loops, means for folding said loops rearwardly as said webs advance, means for bringing said first web into facing engagement with a third web, means for continuously sealing said first and third webs together at their longitudinal edges, means for repeatedly sealing said first and third webs together from edge to edge to form a transverse seal of limited width in the longitudinal direction of said

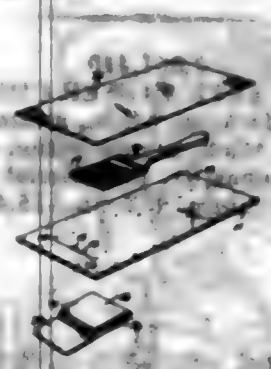
first and third webs, means for delivering a charge of commodity in particle form to a point of discharge wherein said commodity will fall between said first and third webs alternately with the formation of successive transverse seals, and means for severing said webs along said transverse seals whereby to separate successive packages from each other.

2,861,404

PACKAGE FOR CRUSHABLE ARTICLES AND A METHOD AND APPARATUS FOR PRODUCING THE SAME

Edward Bowman Stanton, Jr., Fairfield, Conn., assignor to National Tool Company, Cleveland, Ohio, a corporation of Ohio

Application October 5, 1955, Serial No. 536,555
5 Claims. (Cl. 53—22)



1. The method of packaging which comprises placing an article including a crushable part upon the upper surface of a relatively rigid backing member in spaced relation to the edges of said backing member, placing a removable rigid shield over the crushable part of said article, molding a plastic film over said shield and the part of said article not covered by said shield and laminating said film to the upper surface of said backing member at those portions thereof not contacted by said article and shield, and removing said shield from between said backing member and the part of said film molded by said shield.

2,861,405

SEALED PACKAGE AND METHOD OF MAKING THE SAME

Victor R. Hanford, East Norwalk, Conn., assignor, by mesne assignments, to National Tool Company, Cleveland, Ohio, a corporation of Ohio

Application December 6, 1956, Serial No. 626,655
2 Claims. (Cl. 53—27)

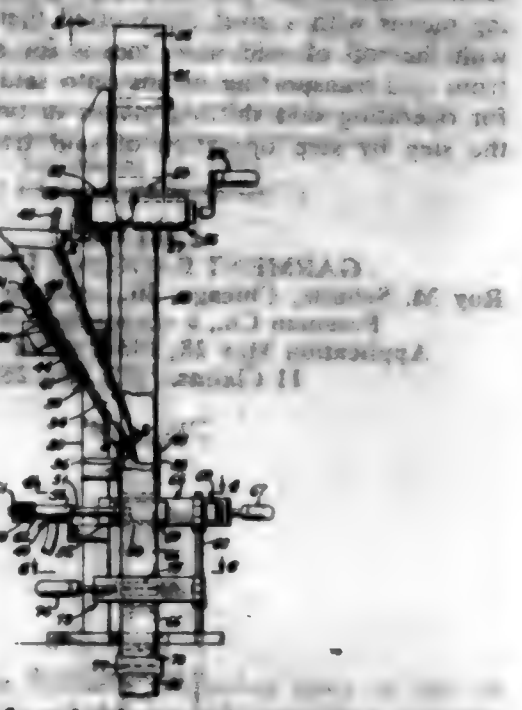
1. The method of forming a sealed package which comprises placing upon a vacuum applying support a sheet of thermoplastic film, placing a card having air passage means extending between its upper and lower surfaces upon said sheet, placing an article at the upper side of said sheet, supporting a second sheet of thermoplastic film above said card, applying heat to the upper side of said second sheet and vacuum forming said second heated sheet over said article and adhering said second sheet to the upper surface of said card in surrounding relation to said article to seal said air passage means at the upper side of said card, and continuing the application of heat and vacuum to said second adhered sheet and card following said vacuum forming operation upon said second sheet to cause penetration of heat to the under side of said card and adherence of said first sheet of thermoplastic film to the under side of said card to seal said air passage means at the lower side of said card.

2,861,406

PACKAGING METHOD AND APPARATUS

Henry T. Holeman, Lindley W. Potts, and Ernst C. Ehrlich, Santa Barbara, Calif.

Application January 2, 1953, Serial No. 329,286
25 Claims. (Cl. 53—29)



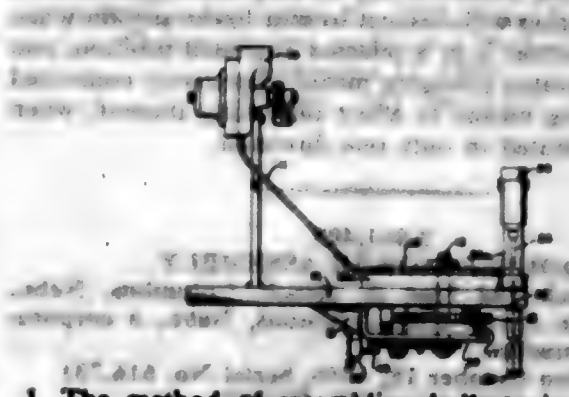
1. A method of packaging a substance in a tube of flexible material, including the steps of: closing the tube at two longitudinally spaced points; inflating the tube between said longitudinally spaced points through an opening therebetween; puncturing the tube at a point spaced longitudinally of the tube from said opening while the tube is inflated; and subsequently introducing the substance to be packaged into the tube through the resulting puncture.

2,861,407

METHOD AND APPARATUS FOR ASSEMBLING RIVETS

Jerry F. Hamlin, San Rafael, and Louis Newman, Oakland, Calif.

Application April 15, 1957, Serial No. 652,899
11 Claims. (Cl. 53—40)



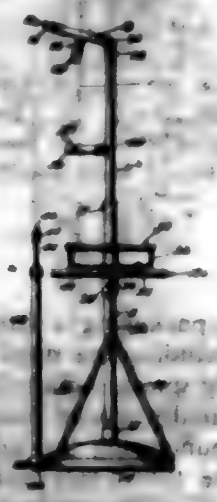
1. The method of assembling hollow rivets having a head at one end thereof comprising the steps of arranging a plurality of rivets with their heads in one direction, placing the arranged rivets on a support, supporting a wire underneath said support, rotating the support and the rivets placed thereon in step by step fashion, stopping the rivet support step by step with successive rivets supported thereby over the top of said wire, forcing the rivets one after another from said support onto said wire as said rivets are aligned therewith, and thereafter swag-

said second sleeve extension and the inner surface of of limited width in the longitudinal direction of said

ing the end of said wire to prevent the rivets from falling off of the wire.

4. An apparatus for assembling hollow-headed rivets comprising a hopper mechanism for receiving a plurality of hollow-headed rivets, said mechanism having means for feeding said rivets with the heads thereof uppermost, means for holding a wire upon which a plurality of said rivets are to be threaded in the same direction, means for transporting said rivets with the heads thereof oriented upward to said last mentioned means, means for rotating said transporting means in step by step fashion, means for periodically stopping said transporting means with a rivet transported thereby in alignment with the top of said wire, means for shifting the rivets from said transporting means onto said wire, and means for operating said shifting means in timed relation with the step by step operation of said transporting means.

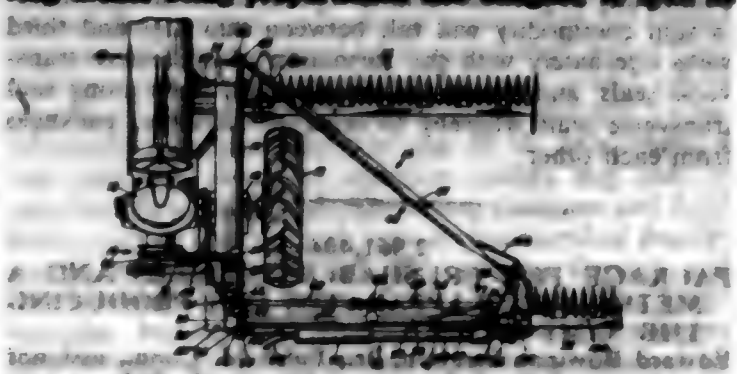
2,861,408
GARMENT BAGGING DEVICE
Roy M. Schultz, Chicago, Ill., assignor to Bishop David Freeman Co., a corporation of Illinois
Application May 28, 1954, Serial No. 432,996
11 Claims. (Cl. 53—256)



1. A device for bagging a hanger-suspended garment comprising a base, an upright post mounted on said base, a plurality of transversely extending cantilever type elongated bag racks mounted in vertically spaced relation on said post and at a predetermined height above said base, and an upright support mounted on said base in substantially parallel spaced relation with respect to said post, said support including a stationary lower section and an upwardly extensible upper section, means mounted on said support for automatically locking said upper section against retraction with respect to said lower section when said upper section is in a selected extended position, and manually operated releasing means operatively connected to said locking means to effect unlocking thereof, when manually operated in only one direction.

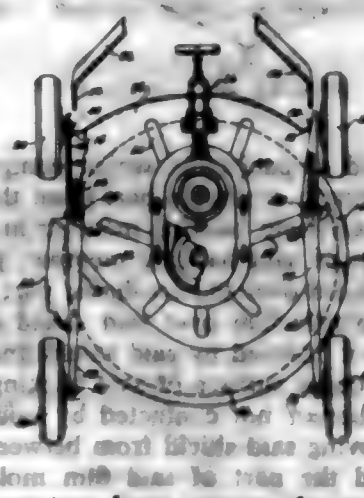
2,861,409
DOUBLE MOWER ASSEMBLY
Alois J. Koch and Max A. Koch, Columbus, Nebr., assignors to Koch Co., Columbus, Nebr., a corporation of Nebraska
Application October 18, 1956, Serial No. 616,731
10 Claims. (Cl. 56—39)

1. A resiliently expansible and contractible tie bar comprising a housing element and a stem element telescopically protruding from one end of said housing element, a first abutment in said housing element adjacent said one end thereof, a second abutment in said housing element nearer the other end thereof, a first shoulder and a second shoulder on said stem element, said shoulders being axially spaced by a distance substantially equal to the distance between said abutments, ring means loosely sleeved on said stem element adjacent each shoulder, each ring means being proportioned and designed to span its



associated shoulder and the adjacent abutment, and coiled spring means sleeved on said stem element within said housing element and confined between said ring means.

2,861,410
ROTARY DISC TYPE MOWER CONSTRUCTION
Truman B. Funk, Jackson, Mich., assignor to Yard-Man, Inc., Jackson, Mich., a corporation of Michigan
Application August 26, 1953, Serial No. 376,357
3 Claims. (Cl. 56—25.4)



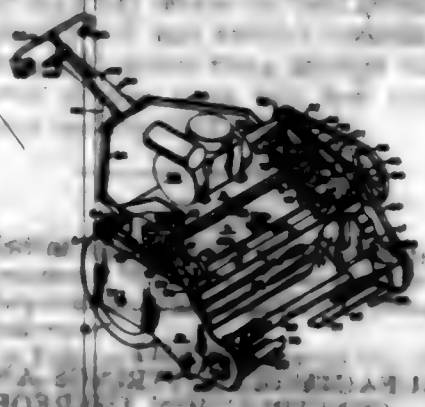
1. In a rotary type lawn mower, the combination with an open bottom cutter housing with a horizontally extending upper surface and depending sides and having a prime mover supported on said upper surface and driving a cutter within said housing, of carriage structure for said housing in the form of a pair of separate and spaced truss members each having a central arch portion disposed over said upper surface of said housing in bridging relation thereto and having depending portions adjacent each end thereof in juxtaposition to said depending sides and attached thereto to suspend said housing beneath said arch portions, and ground wheels mounted at the opposite ends of each of said truss members.

2,861,411
ROTARY REEL MOWER
Frank E. Stock, Wichita, Kans.
Application May 7, 1956, Serial No. 583,023
3 Claims. (Cl. 56—30)

1. A power driven lawn mower, comprising, in combination, a frame having an upper transverse member, each end portion of said transverse member having a pair of downwardly extending side members attached thereto, each pair being spaced in their rear portion and the outer one of each pair extending forward of the inner one of each pair, a mower drive wheel having a drive pulley fixed thereon to turn therewith mounted between each pair of side members in said rear portion thereof, each pair of side members being joined forward of said wheel mounted therebetween to shield same, a single transverse cutting reel mounted between said outer side members forward of said wheels, said reel having a

heat to the under side of said card and adherence of as said rivets are aligned therewith, and thereafter swag-

drive pulley operatively connected thereto in one end portion and mounted to turn therewith on the outside of one of said outer side members, an adjustable shear blade mounted between said outer side members in operative relation to said reel, an idler support roller mounted between said outer side members in operative relation to said reel and shear blade, said frame being open centrally between said side members and below said upper member from said roller rearward with substantially no obstruction to passage of grass cut by said reel and shear blade and thrown rearwardly therefrom, power means having a pair of power pulleys mounted on said upper frame member, a pulley belt operatively connecting one of said power pulleys and said reel drive pulley, an idler pulley mounted on said frame and adapt-



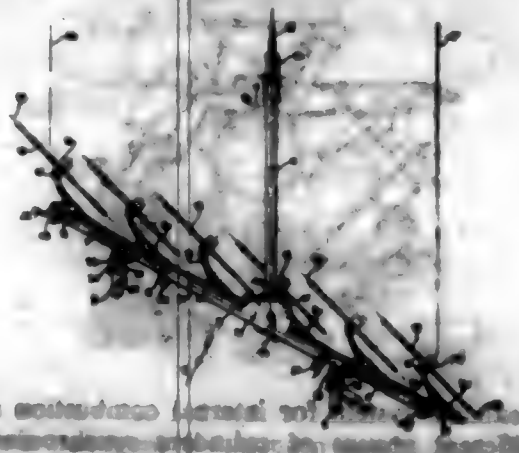
ed to adjust tension on said pulley belt, a rotatable drive shaft mounted on said upper frame member and having a drive pulley fixed thereon in one end portion thereof and a pulley belt operatively connecting the other of said power pulleys and said shaft drive pulley, said drive shaft having a pair of spaced pulleys mounted thereon to turn therewith and pulley belts operatively connecting these pulleys to said pulleys mounted on said mower drive wheels, a mower handle pivotally mounted on said upper frame member, and releasable clutch means mounted on said upper frame member having idler pulley means adapted to tighten said last-named pulley belts to engage said mower drive wheels in operative relation to said drive shaft, and said mower having no portion substantially beyond said reel and shear blade on one end thereof.

2,861,412

SIDE DELIVERY RAKING AND TEDDERING DEVICE

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N. V., Maasland, Netherlands, a Dutch limited company

Application October 15, 1953, Serial No. 386,298
Claims priority, application Netherlands October 17, 1952
18 Claims. (Cl. 56—377)



1. A tedding device comprising a mobile frame, draft means operatively associated with said frame and extending laterally therefrom in substantially the line of draft, at least one supporting wheel operatively associated with

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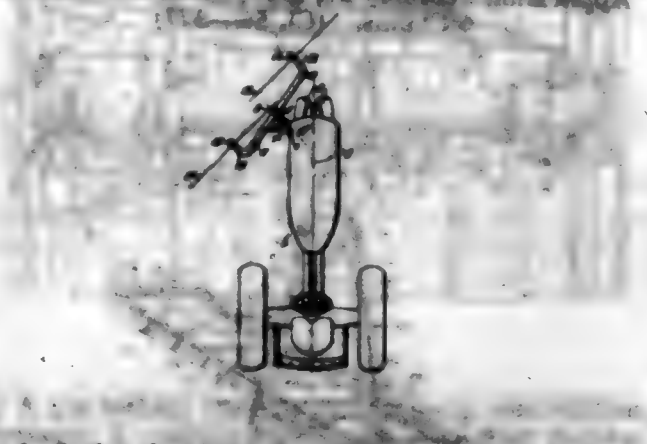
2,861,413

SIDE DELIVERY RAKING DEVICE

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N. V., Maasland, Netherlands, a Dutch limited company

Application December 3, 1953, Serial No. 390,958
Claims priority, application Netherlands December 15, 1952
22 Claims. (Cl. 56—377)



1. A device for laterally displacing grass or hay or other material lying on the ground comprising a frame, at least one rake wheel having a hub, said rake wheel rotatably mounted on said frame in a substantially vertical plane, a substantially rigid part concentrically connected to said hub, raking means comprising an outer flexible rim member having raking teeth substantially concentric with said rigid part and spaced laterally therefrom, and hinge means interconnecting said rim member and said rigid part.

2,861,414

DEVICE FOR LATERALLY DISPLACING MATERIAL LYING ON THE GROUND

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N. V., Maasland, Netherlands, a limited liability company of the Netherlands

Application September 21, 1955, Serial No. 535,693
Claims priority, application Netherlands September 23, 1954
8 Claims. (Cl. 56—377)

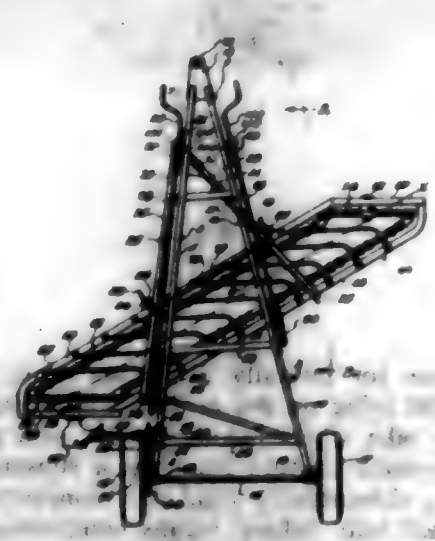
1. An implement for displacing material lying on the ground comprising a mobile frame, substantially vertical

axles supported by said frame in spaced relation, arms supported on said vertical axles and extending laterally therefrom in determinable positions relative thereto, rotatable raking members supported on said arms in mutually spaced relationship and in determinable relationship with said frame for displacing material lying on the ground, a draw arm operatively associated with said frame for imparting ground traversing movement thereto, and running wheels operatively associated with said frame for the ground traversing movement.

2,861,415
SUSPENSION SYSTEM FOR SIDE DELIVERY RAKE BASKET

Ernest C. Carlson, Wheaton, Edward J. Johnston, Cicero, and Elbie A. Hemingsen, Riverside, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Application February 27, 1957, Serial No. 642,703
6 Claims. (Cl. 56—377)



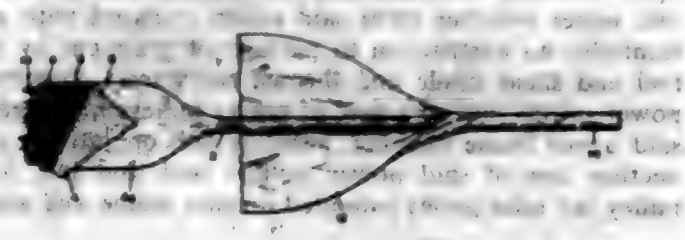
1. In a side delivery rake comprising a main frame adapted for advance over a field; a subframe below the main frame; means pivotally suspending the subframe from the main frame; and a reel assembly extending transversely of the main frame and subframe below the latter, said reel assembly including front and rear transverse beam members, the improvement comprising; dependent rear portions on said subframe having lower terminal ends positioned behind said rear member, said rear member and portions presenting opposed articulatingly engaging surfaces, means articulately interconnecting said portions with said rear member, and means operatively interconnecting said front member with said subframe for vertical swinging movement.

2,861,416
TWINE AND ITS MANUFACTURE

Patrick T. Jackson, Cambridge, and William N. Stevenson, Attleboro, Mass., assignors, by mesne assignments, to American Manufacturers Corporation, a corporation of Delaware

Application March 17, 1953, Serial No. 342,843
3 Claims. (Cl. 57—140)

1. A twine comprising a pair of thin paper strips each presenting on one of its surfaces a mass of protruding short, torn paper fibers and on the other surface a substantially smooth, less fibrous texture, the strips being superimposed on each other with their less fibrous surfaces disposed innermost and facing each other, secured together by an interposed layer of adhesive which is flexible at room temperature, reenforcing strands secured between the strips and longitudinally thereof, the strip and strand assembly being twisted about a lengthwise

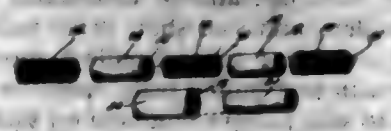


axis so that the strands are arranged in helical convolutions.

2,861,417
MANUFACTURE OF STRINGS AND THE CONSTRUCTION THEREOF

Julian T. Crandall, Ashaway, R. I., assignor to Ashaway Line & Twine Mfg. Co., a corporation of Rhode Island

Application June 16, 1954, Serial No. 437,139
1 Claim. (Cl. 57—162)

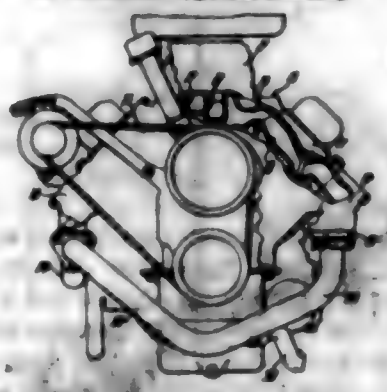


In the manufacture of strings, the steps of forming an elongated thermoplastic core, orienting same, applying a thermoplastic coating to same, spirally winding a thermoplastic strand around said coated core, applying a second thermoplastic coating, spirally winding a thermoplastic strand over said second coating in a direction opposite to that of the first winding, applying a third thermoplastic coating and then integrating the string.

2,861,418
EXHAUST SYSTEM

James H. Lewis, East Lansing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application May 24, 1956, Serial No. 587,833
5 Claims. (Cl. 60—35)



1. An exhaust system for internal combustion engines having different groups of cylinders synchronized and timed to fire and to exhaust in consecutive order and in regularly spaced relation and provided with exhaust manifold means for each group of cylinders and with a first exhaust cross-over passage extending between said mani-

at least one supporting wheel operatively associated with

ground comprising a mobile frame, substantially vertical

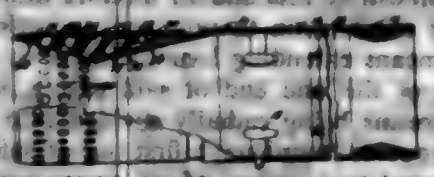
fold unions and with a heat control valve controlling the flow of exhaust gas from one of said manifold means through a manifold outlet leading from said one of said manifold means, and comprising a pair of exhaust conduits leading from said engine unit having muffler means in each of said conduits, each of said muffler means being tuned to the resonant frequency resulting from the operation of all of said cylinders in said groups, and a second exhaust cross-over passage extending between said manifold means, said second cross-over passage being connected to said manifold means through manifold outlets leading from said manifold means, one of said manifold outlets being said manifold outlet controlled by said heat control valve, said exhaust conduits both being connected at all times to said first and second cross-over passages and said manifold means for said groups of cylinders, the connection of said exhaust conduits with said one of said manifold means being through said first exhaust cross-over passage when said heat control valve closes said one of said manifold outlets.

2,861,419

VARIABLE BLEED DIFFUSER

George F. Hausmann, Windsor, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Application February 12, 1953, Serial No. 336,746
8 Claims. (Cl. 60—35.6)



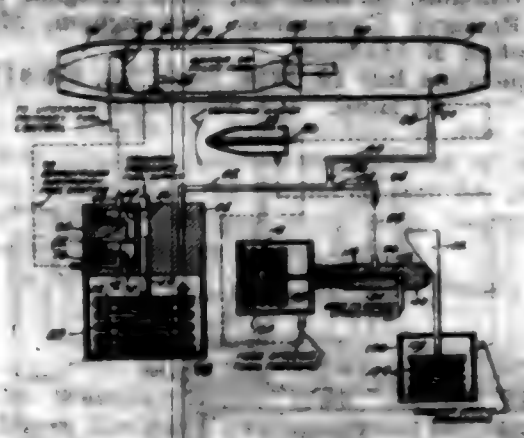
1. A convergent-divergent supersonic diffuser adapted to operate in a free airstream of relative supersonic velocity and having a portion of the stream flowing therethrough, said diffuser including a plurality of passages in the wall of the convergent portion of the diffuser, means for progressively closing said passages to prevent flow therethrough, and a Mach number responsive mechanism for moving said closing means including a probe located externally of the diffuser and sensing at least the total pressure of the free airstream.

2,861,420

FUEL REGULATOR

George D. Lewis, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Application March 28, 1955, Serial No. 543,558
13 Claims. (Cl. 60—35.6)



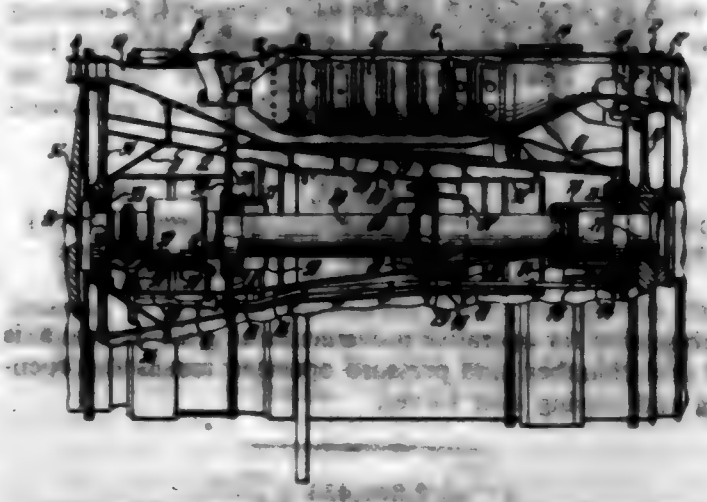
5. In a power plant having a combustion chamber, a nozzle receiving gases from said combustion chamber, a source of fuel under pressure, means for regulating the flow of fuel from said source to said combustion chamber, means responsive to one source of pressure for controlling said regulating means during starting, and means responsive to a pressure in the power plant adjacent said nozzle for normally controlling said regulating means including a temperature responsive device for permitting said last mentioned controlling means to dominate in control.

2,861,421

GAS TURBINE ENGINE WITH OIL SPLASH SHIELDS

Chester E. Eckert and Clair A. Short, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 27, 1954, Serial No. 452,590
3 Claims. (Cl. 60—39.08)



1. A gas turbine engine comprising, in combination, a compressor; a combustion apparatus supplied thereby; a turbine supplied by the combustion apparatus, the turbine and compressor being coaxial and spaced axially of their common axis, the combustion apparatus being mounted axially between the compressor and turbine and extending from the compressor to the turbine; an annular frame extending from the compressor to the turbine within the combustion apparatus; drive shaft means connecting the turbine and compressor extending through the frame, the shaft means including a shaft coupling adjacent the compressor; bearings for the shaft means supported within the frame comprising a bearing adjacent the coupling, a bearing adjacent the turbine, and a shaft bearing intermediate the other said bearings; an annular heat shield extending along the shaft means between the shaft means and the frame; a splash shield for each said bearing closely enclosing the bearing and a splash shield for the shaft coupling closely enclosing the coupling, the splash shields for the coupling, the bearing adjacent thereto, and the intermediate bearing being within the heat shield; means within the heat shield for conducting lubricating oil to the bearings and coupling; the splash shields being adapted to receive scavenge oil from the respective bearings and coupling and collect it out of contact with the heat shield; and means for conducting the scavenge oil from the splash shields out of the frame, the last-named means being within the heat shield and thereby shielded from the frame; the heat shield and splash shields being of bright-surfaced light gauge metal.

2,861,422

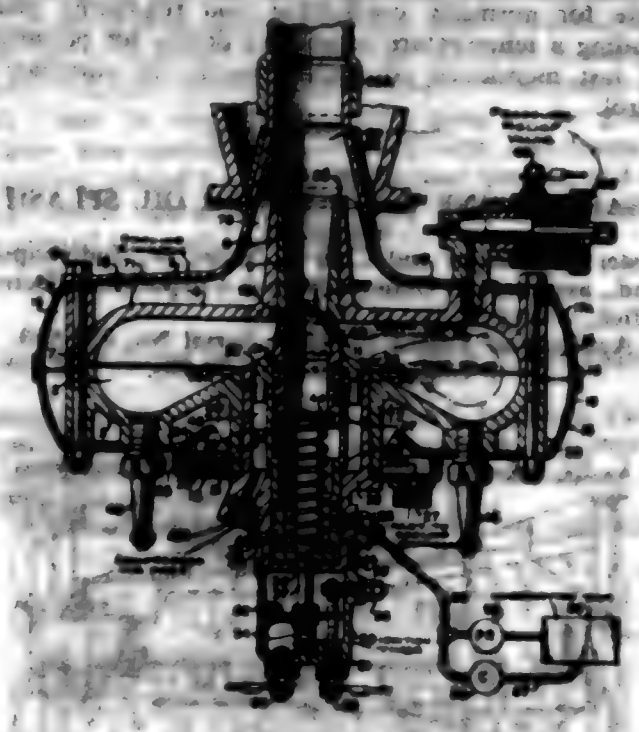
POWER GAS GENERATOR

Herbert L. Maxon, Chicago, Ill.

Application June 18, 1951, Serial No. 232,219
13 Claims. (Cl. 60—39.28)

1. In a pressure generator, a casing having a substantially circular pressure chamber, said casing being provided with a hub section at the central axis of said chamber, said chamber having a cross-sectional shape such that the sidewalls of the chamber diverge outwardly in a radial direction from said hub section to a generally rounded

section of greater depth forming the perimeter of said chamber, intake and discharge valves mounted in said

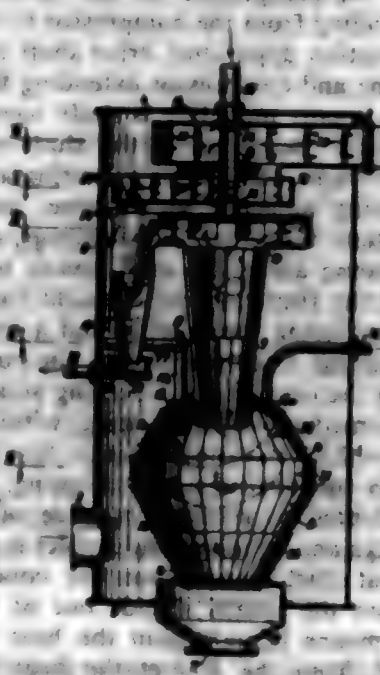


hub section for operative movement along the central axis of said chamber, and pressure operated means for opening and closing said valves.

2,861,423

COMBINED COMBUSTION CHAMBER FOR BURNING PULVERIZED FUEL AND FLY-ASH SEPARATOR

Jan Jorle and Zdenik Fencl, Prigue, Czechoslovakia
Application June 12, 1956, Serial No. 591,038
Claims priority, application Czechoslovakia June 16, 1955
6 Claims. (Cl. 60—39.46)



1. A combined combustion chamber and fly-ash separator for a pulverized fuel turbine, comprising a closed pressure vessel, means for supplying compressed air to the interior of said vessel, a flame chamber in said vessel, means for introducing a pulverized fuel and air from said vessel into said chamber to effect primary combustion in the latter, a co-axial mixer receiving products of the primary combustion from said flame chamber and having means for mixing additional air therewith to effect secondary combustion of the fuel in said mixer, a distributor head receiving the products of secondary combustion from said mixer, a plurality of cyclone separators extending parallel to axis of said flame chamber and mixer and arranged within said vessel symmetrically about the axis of the flame chamber and mixer, said separators receiving the products of secondary combustion from said distributor head to separate solid particles from the gaseous products of combustion, a collecting chamber receiving the gaseous products of combustion from said separators and concentrating said gaseous products of combustion, and an outlet chamber communicating with said collecting chamber, said collecting and outlet chambers being also disposed within said vessel.

2,861,424

FUEL SUPPLY MEANS FOR COMBUSTION APPARATUS

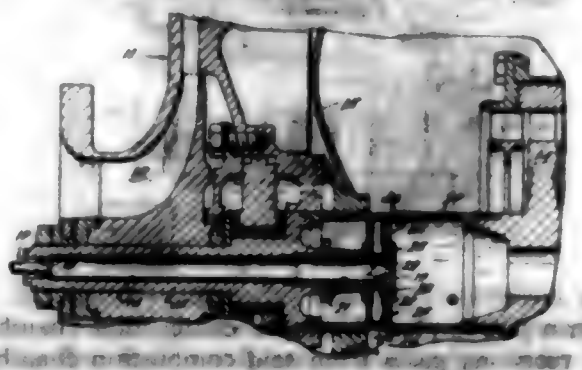
Peter L. Jaskich, Torrance, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application April 9, 1954, Serial No. 422,126
2 Claims. (Cl. 60—39.72)

1. In a combustion apparatus that includes an elongate casing open at each of its ends: means for introducing a combustible fuel-and-air mixture into said casing for enabling combustion therein and comprising hollow supporting means extending longitudinally in said casing downstream of the one end of said casing, said hollow supporting means being radially divided into a plurality of coaxial, annular chambers; a first one of said chambers being connected to a source of air under pressure so as to effectuate pressurized airflow therethrough; means for introducing fuel under pressure into a second one of said chambers; hollow coaxial members mounted on said supporting means so as to extend radially of the casing from said supporting means, each of said hollow members being perforate on the faces thereof that face transversely to the major axis of the casing; means connecting a first one of said coaxial hollow members to the aforesaid first chamber containing pressurized air; and means connecting a second one of said hollow members to the aforesaid second chamber containing fuel, whereby to effect atomized, unclogged injection into said casing of a plurality of secantwise extending combustible fluid mixtures with the minimum expenditure of power.

2,861,425

FUEL SPRAY DEVICE FOR GAS TURBINE COMBUSTION CHAMBER

Sam B. Williams, Birmingham, Mich., assignor to Williams Research Corporation, Birmingham, Mich., a corporation of Michigan
Application July 10, 1956, Serial No. 596,917
6 Claims. (Cl. 60—39.74)



4. In a liquid propelling device, a rotatable shaft, a casing extending outwardly from said shaft, a bore within said shaft connected to the inner end of said casing,

a liquid orifice at the outer end of said casing, a float within said casing movable between an outer position closing said orifice and an inner position away from said orifice, the relative dimensions of said float and casing being such as to form an end chamber within the outer end of said casing connected with said orifice, an annular chamber connected with said end chamber, and means for conducting liquid from the inner end of said casing to said annular chamber, whereby the accumulation of liquid to a predetermined level in said annular chamber during rotation of said shaft will cause said float to move from its outer to its inner position.

2,861,426

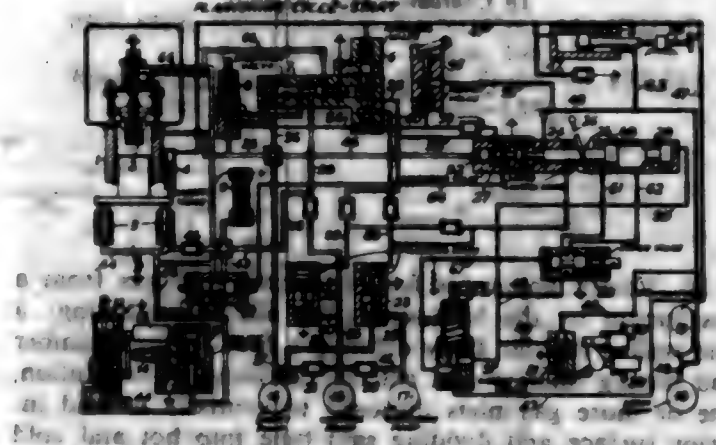
CONTROL VALVES FOR HYDRAULIC PRESSES

John Maurice Towler, deceased, late of Mayfair, London, England, by Frieda Hathorn Towler, executrix, Deb Park, England, assignor to Electronic Presses Limited, Dudley, near Leeds, England, a limited liability company of Great Britain

Application August 17, 1955, Serial No. 528,068

Claims priority, application Great Britain August 21, 1954

13 Claims. (Cl. 60—52)



1. A control system for a hydraulic press having a ram with a prefill valve adapted to be operated to permit the exhaust of fluid from the ram for a return stroke, said control system comprising, in combination, a directional control valve having a movable member spring biased toward one position and adapted to be shifted to an alternate position by fluid pressure, conduit means connecting said directional valve with the prefill valve, said directional control valve being operative when its movable member is shifted to its spring biased position to direct pressure field to the prefill valve to operate the same, a reversing valve having a movable member spring biased to one position and adapted to be shifted to an alternate position by fluid pressure, conduit means connecting said reversing valve with said directional control valve, said reversing valve being operative when its movable member is in said one position to direct pressure fluid to said directional control valve to operate the same to its alternate position, and means for controlling the supply of pressure fluid to said reversing valve, both of said valves returning to their spring biased positions to condition the control system for the beginning of another operating cycle upon interruption of the pressure fluid supply to the valves.

2,861,427

DOGHOUSE DEVICE

Owen M. Whitton, Detroit, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Application September 8, 1953, Serial No. 378,869

8 Claims. (Cl. 60—54.6)

7. A hydraulic pressure producing device comprising a casing, a hydraulic cylinder, a pressure responsive power piston in said casing defining vacuum and variable pressure chambers, a pressure transmitting member acted on by said power piston and having a fluid displacing portion in said hydraulic cylinder, valve means for controlling the connection of the variable pressure chamber to the vacuum chamber and to air at atmospheric pressure, air

passage means for the passage of air to said variable pressure chamber, and means acted on by the pressure in said hydraulic cylinder including a seal for sealing said air passage means when a predetermined pressure is created in said hydraulic cylinder.

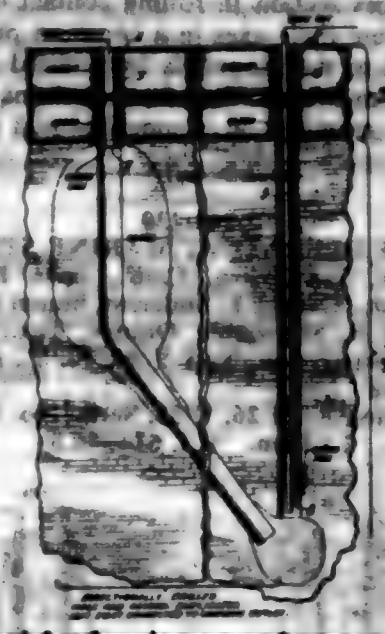
2,861,428

UNDERGROUND STORAGE CAVERN HAVING LATERALLY SPACED WELL AND METHOD THEREFOR

Hershel V. Hendrix, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 28, 1953, Serial No. 400,657

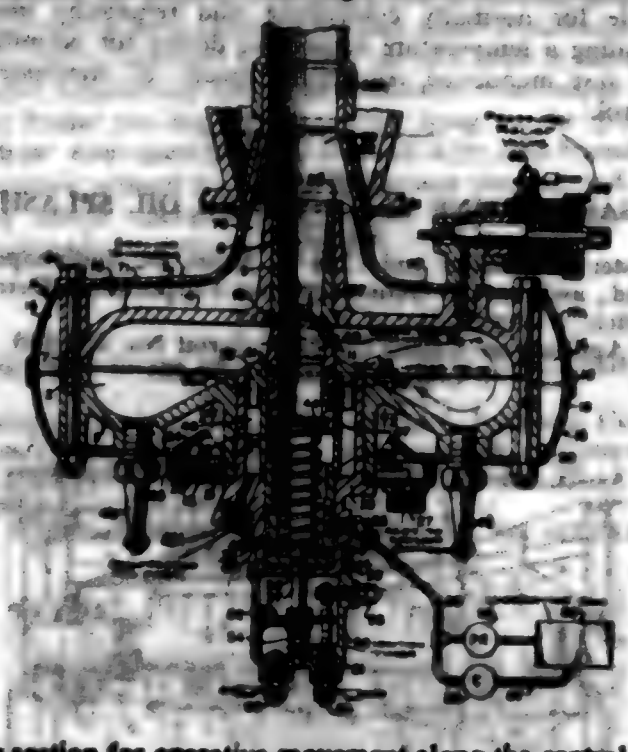
9 Claims. (Cl. 61—5)



1. A method for forming an underground storage cavern in a formation which is substantially soluble in aqueous solvents which comprises drilling an inlet from the surface of the earth to a point within said soluble formation, drilling at an oblique angle from said point to a deeper point in said formation, said points being laterally spaced, thereby forming a channel connecting said points, drilling an outlet well to intercept said channel at said deeper point, passing aqueous solvent into said inlet to dissolve part of the formation adjacent thereto, and removing through said outlet the resulting solution which is substantially saturated so that its dissolving action upon reaching said channel is virtually exhausted.

9. In an underground storage system, in combination, an underground cavern in a formation which is substantially soluble in aqueous solvents, first conduit means extending from the upper portion of the cavern to the surface, said first conduit means being cased and cemented to the overlying strata, second conduit means substantially parallel to the first, spaced laterally therefrom, and extending from the surface to a point within said soluble formation substantially deeper than the base of said cavern, said second conduit means being cased and cemented to the surrounding formation along sub-

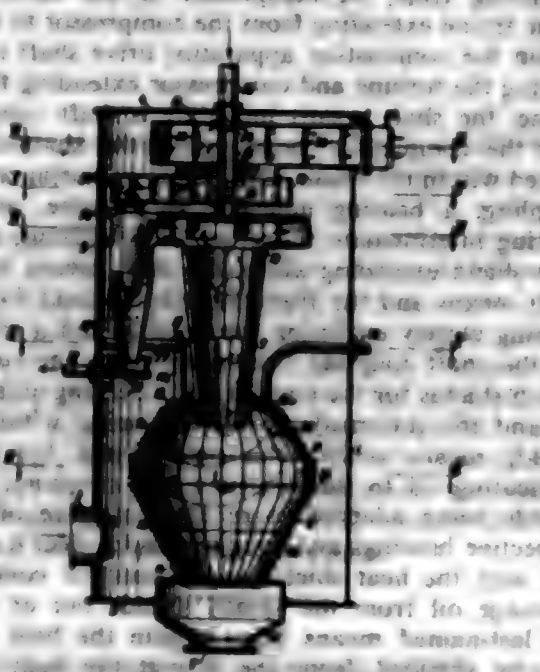
section of greater depth forming the perimeter of said chamber, intake and discharge valves mounted in said hub section for operative movement along the central axis of said chamber, and pressure operated means for opening and closing said valves.



2,861,423

COMBINED COMBUSTION CHAMBER FOR BURNING PULVERIZED FUEL AND FLY-ASH SEPARATOR

Jan Jorle and Zdenĕk Fencl, Prague, Czechoslovakia
Application June 13, 1956, Serial No. 591,038
Claims priority, application Czechoslovakia June 16, 1955
6 Claims. (Cl. 60—39.46)



1. A combined combustion chamber and fly-ash separator for a pulverized fuel turbine, comprising a closed pressure vessel, means for supplying compressed air to the interior of said vessel, a flame chamber in said vessel, means for introducing a pulverized fuel and air from said vessel into said chamber to effect primary combustion in the latter, a cylindrical mixer receiving products of the primary combustion from said flame chamber and having means for mixing additional air therewith to effect secondary combustion of the fuel in said mixer, a distributor head receiving the products of secondary combustion from said mixer, a plurality of cyclone separators extending parallel to axis of said flame chamber and mixer and arranged within said vessel symmetrically about the axis of the flame chamber and mixer, said separators receiving the products of secondary combustion from said distributor head to separate solid particles from the gaseous products of combustion, a collecting chamber receiving the gaseous products of combustion from said separators and concentrating said gaseous products of combustion, and an outlet chamber communicating with said collecting chamber, said collecting and outlet chambers being also disposed within said vessel.

2,861,424

FUEL SUPPLY MEANS FOR COMBUSTION APPARATUS

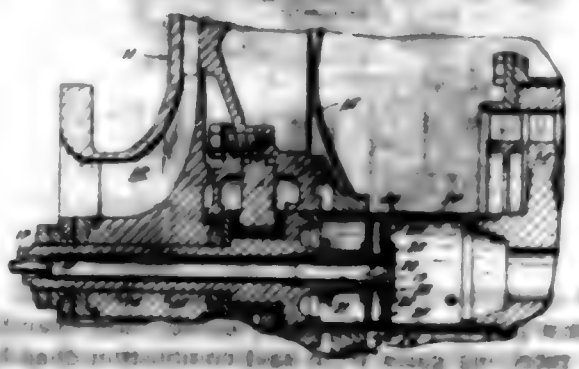
Peter L. Jutisch, Torrance, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application April 9, 1954, Serial No. 422,126
2 Claims. (Cl. 60—39.72)

1. In a combustion apparatus that includes an elongate casing open at each of its ends: means for introducing a combustible fuel-and-air mixture into said casing for enabling combustion therein and comprising hollow supporting means extending longitudinally in said casing downstream of the one end of said casing, said hollow supporting means being radially divided into a plurality of coaxial, annular chambers; a first one of said chambers being connected to a source of air under pressure so as to effectuate pressurized airflow therethrough; means for introducing fuel under pressure into a second one of said chambers; hollow coaxial members mounted on said supporting means so as to extend radially of the casing from said supporting means, each of said hollow members being perforate on the faces thereof that face transversely to the major axis of the casing; means connecting a first one of said coaxial hollow members to the aforesaid first chamber containing pressurized air, and means connecting a second one of said hollow members to the aforesaid second chamber containing fuel, whereby to effect atomized, unclogged injection into said casing of a plurality of secantwise extending combustible fluid mixtures with the minimum expenditure of power.

2,861,425

FUEL SPRAY DEVICE FOR GAS TURBINE COMBUSTION CHAMBER

Sam B. Williams, Birmingham, Mich., assignor to Williams Research Corporation, Birmingham, Mich., a corporation of Michigan
Application July 10, 1956, Serial No. 596,917
6 Claims. (Cl. 60—39.74)



4. In a liquid propelling device, a rotatable shaft, a casing extending outwardly from said shaft, a bore within said shaft connected to the inner end of said casing,

partially its entire length, and a channel establishing open end is out of engagement with the marine bottom while

a liquid orifice at the outer end of said casing, a float within said casing movable between an outer position closing said orifice and an inner position away from said orifice, the relative dimensions of said float and casing being such as to form an end chamber within the outer end of said casing connected with said orifice, an annular chamber connected with said end chamber, and means for conducting liquid from the inner end of said casing to said annular chamber, whereby the accumulation of liquid to a predetermined level in said annular chamber during rotation of said shaft will cause said float to move from its outer to its inner position.

2,861,426

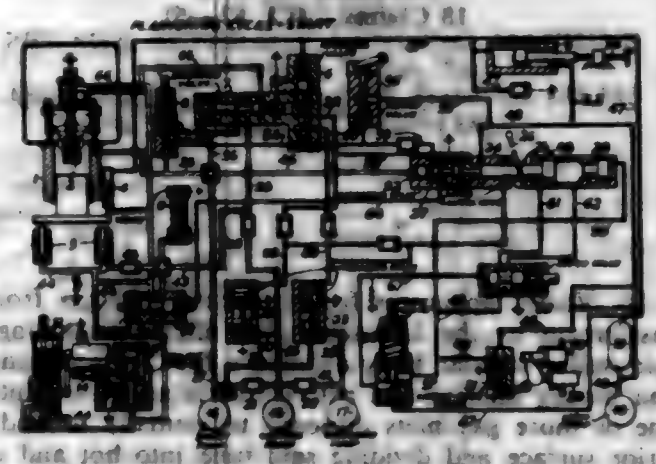
CONTROL VALVES FOR HYDRAULIC PRESSES

John Maurice Towler, deceased, late of Mayfair, London, England, by Frank Hathorn Towler, executor, Bob Park, England, assignor to Electronic Presses Limited, Hadley, near Leeds, England, a British liability company of Great Britain

Application August 17, 1955, Serial No. 528,068

Claims priority, application Great Britain August 21, 1954

13 Claims. (Cl. 60—52)



1. A control system for a hydraulic press having a ram with a prefill valve adapted to be operated to permit the exhaust of fluid from the ram for a return stroke, said control system comprising, in combination, a directional control valve having a movable member spring biased toward one position and adapted to be shifted to an alternate position by fluid pressure, conduit means connecting said directional valve with the prefill valve, said directional control valve being operative when its movable member is shifted to its spring biased position to direct pressure fluid to the prefill valve to operate the same, a reversing valve having a movable member spring biased to one position and adapted to be shifted to an alternate position by fluid pressure, conduit means connecting said reversing valve with said directional control valve, said reversing valve being operative when its movable member is in said one position to direct pressure fluid to said directional control valve to operate the same to its alternate position, and means for controlling the supply of pressure fluid to said reversing valve, both of said valves returning to their spring biased positions to condition the control system for the beginning of another operating cycle upon interruption of the pressure fluid supply to the valves.

2,861,427

BOOSTER DEVICE

Owen M. Whitton, Detroit, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Application September 8, 1953, Serial No. 378,869

8 Claims. (Cl. 60—54.6)

7. A hydraulic pressure producing device comprising a casing, a hydraulic cylinder, a pressure responsive power piston in said casing defining vacuum and variable pressure chambers, a pressure transmitting member acted on by said power piston and having a fluid displacing portion in said hydraulic cylinder, valve means for controlling the connection of the variable pressure chamber to the vacuum chamber and to air at atmospheric pressure, air

passage means for the passage of air to said variable pressure chamber, and means acted on by the pressure in said hydraulic cylinder including a seal for sealing said air passage means when a predetermined pressure is created in said hydraulic cylinder.

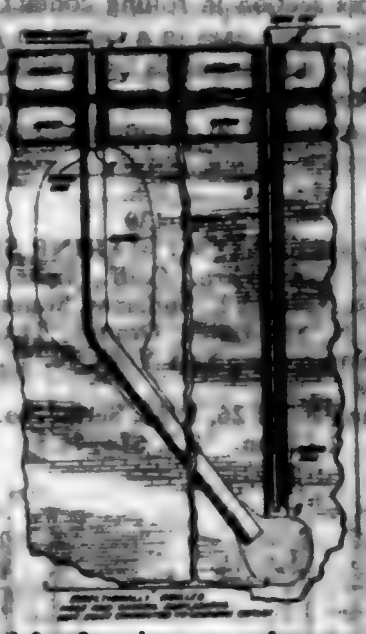
2,861,428

UNDERGROUND STORAGE CAVERN HAVING LATERALLY SPACED WELL AND METHOD THEREFOR

Harbel V. Hendrix, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 28, 1953, Serial No. 400,657

9 Claims. (Cl. 61—5)



1. A method for forming an underground storage cavern in a formation which is substantially soluble in aqueous solvents which comprises drilling an inlet from the surface of the earth to a point within said soluble formation, drilling at an oblique angle from said point to a deeper point in said formation, said points being laterally spaced, thereby forming a channel connecting said points, drilling an outlet well to intercept said channel at said deeper point, passing aqueous solvent into said inlet to dissolve part of the formation adjacent thereto, and removing through said outlet the resulting solution which is substantially saturated so that its dissolving action upon reaching said channel is virtually exhausted.

9. In an underground storage system, in combination, an underground cavern in a formation which is substantially soluble in aqueous solvents, first conduit means extending from the upper portion of the cavern to the surface, said first conduit means being cased and cemented to the overlying strata, second conduit means substantially parallel to the first, spaced laterally therefrom, and extending from the surface to a point within said soluble formation substantially deeper than the base of said cavern, said second conduit means being cased and cemented to the surrounding formation along sub-

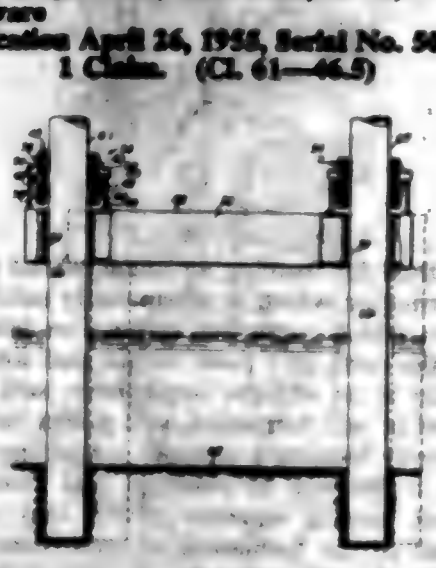
stituent of higher liquefaction point are subjected to initial partment, a rear upper machine compartment extending

stantially its entire length, and a channel establishing open communication between the lower portion of said cavern and the base of said second conduit means, said channel having a cross section substantially smaller than the cross section of said cavern.

2,861,429
ROOF SUPPORTS FOR MINE WORKINGS
Angus Wellesley Duncan, Leigh Sinton, near Malvern, England, assignor to The Mining Engineering Company Limited, Worcester, England, a British company
Application December 20, 1956, Serial No. 629,685
Claims priority, application Great Britain December 23, 1955
10 Claims. (Cl. 61—45)

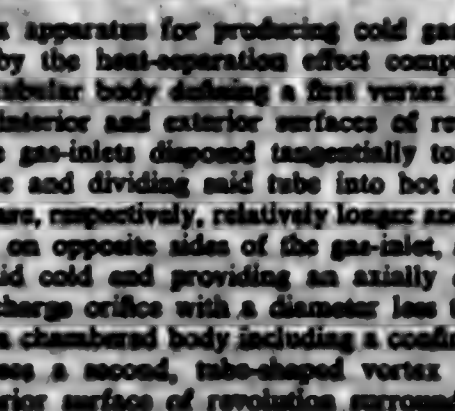
1. A roof support for underground workings comprising a plurality of superimposed rotatable members of circular cross section in rolling contact one upon the other and having their axes in a common plane whereby a load applied to the support is transmitted diametrically through said members, and frame means maintaining said rotatable members in a superimposed position.

2,861,430
METHOD OF OPERATING MARINE STRUCTURES
George Bauer, San Pedro, Calif., Leon B. De Long, Seattle, Wash., George E. Sodorow, Staten Island, N. Y., and Robert N. Showalter, Orange, Tex., assignors to De Long Corporation, New York, N. Y., a corporation of Delaware
Application April 26, 1955, Serial No. 503,958
1 Claim. (Cl. 61—46.5)



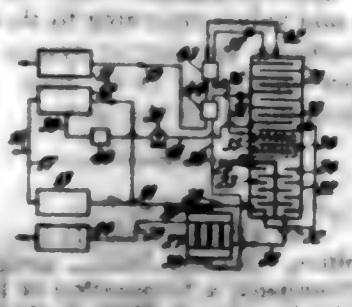
The method of precisely positioning a marine-bottom-supported above-water platform with apparatus which includes a platform-like buoyant body having a plurality of substantially-upright elongated supporting members mounted for limited universal canting and substantially-unlimited generally-longitudinal movement in guide means on the body, and further having operating means for each member for selectively and forcefully effecting such longitudinal movement in either direction or restraining such longitudinal movement, and starting with the supporting members substantially vertical, engaged with the marine bottom, and supporting at least a major portion of the weight of the body, the steps comprising: successively raising each of the members until its lower end is out of engagement with the marine bottom while supporting the body on the remaining members, canting the raised member to a predetermined extent in one direction, and moving the member, while maintaining it so canted, back down into engagement with the marine bottom and supporting a part of the weight of the body thereon, whereby all the members will be leaning substantially the same extent in substantially the same direction; tilting the body on the members sufficiently and in a direction to straighten the members substantially to the vertical; and leveling the body on the members, whereby the body will have been shifted a predetermined distance horizontally, from its original raised position, in a direction opposite that in which the members were canted.

2,861,431
EXPANDING GAS IN A PLURALITY OF VORTEX TUBES
Jan J. van Deemter, Amsterdam, Netherlands, assignor to Shell Development Company, New York, N. Y., a corporation of Delaware
Application July 23, 1956, Serial No. 599,635
Claims priority, application Netherlands November 15, 1955
18 Claims. (Cl. 62—6)



16. Vortex apparatus for producing cold gas from a gas stream by the heat-separation effect comprising: a thin-walled tubular body defining a first vortex chamber and having interior and exterior surfaces of revolution, one or more gas-inlets disposed tangentially to said interior surface and dividing said tube into hot and cold ends which are, respectively, relatively longer and shorter and situated on opposite sides of the gas-inlet, and wall means at said cold end providing an axially disposed, cold-gas discharge orifice with a diameter less than that of the tube; a chambered body including a confining wall which encloses a second, tube-shaped vortex chamber with an interior surface of revolution surrounding said hot end in radially spaced and coaxial relation; one or more gas-inlets disposed tangentially to said inner surface of the second vortex chamber; and means for discharging gas from said second vortex chamber.

2,861,432
EXTRACTION OF OXYGEN FROM THE ATMOSPHERE AND LIKE OPERATIONS
Geoffrey Gordon Haselden, Morden, England
Application November 10, 1954, Serial No. 468,110
Claims priority, application Great Britain November 12, 1953
23 Claims. (Cl. 62—29)



1. A process of separation of gases by low temperature rectification, wherein the cooled pressure-gas to be separated is divided into three portions, one of said portions and a cold portion at a lower pressure which has been previously partially fractionated and enriched in the con-

piston in said casing defining vacuum and variable pres-

of said cavern, said second conduit means being cased and cemented to the surrounding formation along sub-

stituent of higher liquefaction point are subjected to initial fractionation and further fractionation respectively alongside one another in the same column but are kept out of contact with one another by upstanding internal column-partitioning means, heat transfer taking place between the two through said partitioning means while they are undergoing said fractionations, the liquid enriched in the constituent of higher liquefaction point and the purified liquid fraction of the same constituent, obtained respectively as a result of said initial and further fractionations, collect in the bottom of the column at the same level on opposite sides of said upstanding partitioning means, the former being expanded and returned to the column at a higher level and the latter led away as product, the effluent gas from said initial fractionation is liquefied and introduced after expansion into the top of the column as reflux, the second of the three portions of the gas to be separated is liquefied by heat interchange with the outgoing liquid product from the bottom of the column and then introduced after expansion at an intermediate level in the column, and the third portion of the gas to be separated is expanded through a turbine before admission to said column.

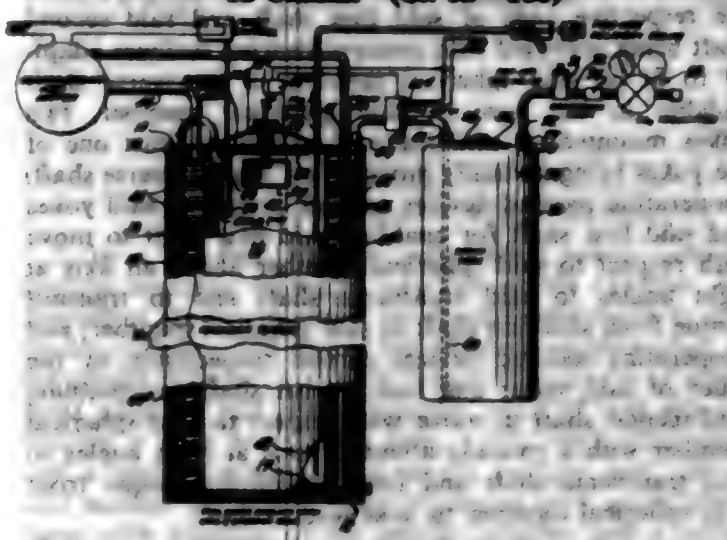
2,861,433

PRE-MIX BEVERAGE VENDING MACHINE

Jack J. Booth, Dallas, Tex.

Application December 15, 1954, Serial No. 475,393

12 Claims. (Cl. 62—139)



1. In a heat exchanger for pre-carbonated beverage vending machines, a tank having closed top and bottom, a beverage coil of tubing disposed in said tank having its inlet and outlet ends extending from the top of said tank, means for introducing beverage into said inlet end under CO_2 pressure, valve means for discharging said beverage at said outlet end, a refrigerant coil in said tank in concentric parallelism with said beverage coil, means for circulating a refrigerant through said refrigerant coil, a eutectic solution surrounding said coils from the bottom to the top of said tank, metallic particles of irregular shape in intimate contact in said solution forming voids to be filled by said solution to accelerate heat transference of said solution between said coils and thermostatic means for regulating the temperature of said beverage.

2,861,434

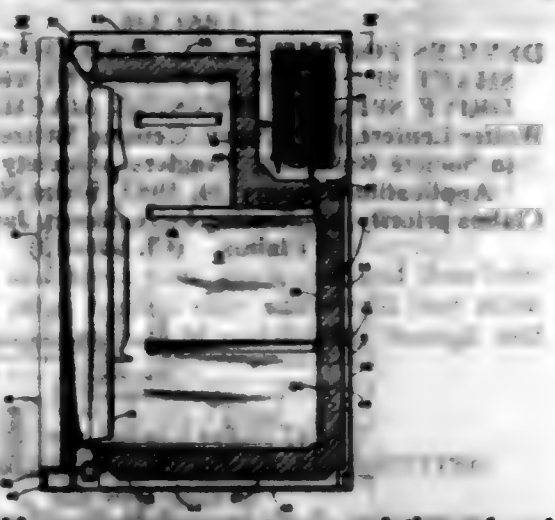
REFRIGERATING APPARATUS

Robert E. Moore, Whittier, Calif., and Wayne A. Giddings, Cedar Rapids, and Walter C. Barnard, Belle Plaine, Iowa, assignors to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa

Application March 8, 1957, Serial No. 644,922

3 Claims. (Cl. 62—439)

1. In a built-in refrigeration unit, a cabinet comprising an inner open front insulated refrigerated compartment and an outer shell extending about said compartment defining therewith a top air inlet chamber extending the full width and the major portion of the depth of said compartment, a rear upper machine compartment extending substantially the full width of said refrigerated compartment and of materially less extent than the latter from front to back, a bottom air outlet chamber and an air passage at the back of said refrigerated compartment extending substantially the full width thereof and opening from the bottom of said machine compartment into said air outlet chamber; a closure door for said refrigerated compartment; said air inlet chamber having an opening



into said machine compartment at one end thereof and being otherwise closed thereto; a condenser adjacent said one end of said machine compartment between the latter and said opening; an air impeller in and adjacent the other end of said machine compartment discharging into said air passage; and a compressor in said machine compartment between said condenser and impeller; said air inlet chamber having front inlet openings above said door in proximity thereto and said air outlet chamber having front outlet openings below and in proximity to said door.

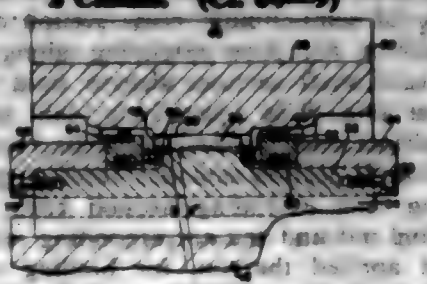
2,861,435

FLOATING GEAR ASSEMBLY FOR CALENDER ROLLS

Rex C. Seaver, Akron, Ohio, assignor to Adamson-United Co., Akron, Ohio, a corporation of Ohio

Application October 4, 1954, Serial No. 461,879

2 Claims. (Cl. 64—9)



1. In combination, a calender roll, journals on the ends of the calender roll of lesser diameter than the roll, a sleeve over a portion of one journal, means keying the sleeve to the journal, a sleeve gear formed around the axial center of the periphery of the sleeve and of greater diameter than the sleeve, the sleeve gear being materially shorter in an axial direction than the length of the sleeve, the roots and crests of the teeth of the sleeve gear in an axial direction lying substantially on an arc thrown from the axial center of the sleeve, an internal-external gear of substantially the axial length of the sleeve, the gear teeth on the outer periphery of the internal-external gear extending the full length thereof, the gear teeth on the inner periphery of the internal-external gear having an axial length about equal to those of the sleeve gear and engaging the teeth of the sleeve gear over the full circumference thereof, the roots and crests of the gear teeth on the outer and inner peripheries of the internal external gear lying substantially parallel to the axis thereof, the central plane of rotation of the internal-external gear being coincident with the center of axial curvature of the teeth of said sleeve gear whereby the center of pres-

sure of all the gear teeth is in the same plane of rotation, a pair of rings each having an external and an internal channel positioned in spaced relation between the sleeve and the internal-external gear with one ring on either side of the gear, a rubber O-ring in each channel and engaging respectively with the sleeve and the internal and external gear, and means holding the rings against axially outward displacement.

2,861,436

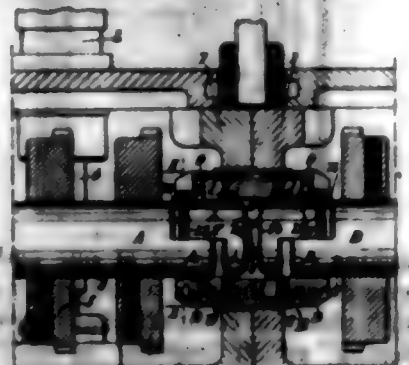
DEVICES FOR COUPLING TOGETHER ADJACENT SHAFT SECTIONS IN PARTICULAR IN DIRECT DRIVE SPINDLE SPINNING MACHINES

Walter Lenfert, Petit Lancy, Geneva, Switzerland, assignor to Société Bronzavia, Tangiers, a society of Tangiers

Application January 30, 1957, Serial No. 637,256

Claims priority, application Luxembourg January 31, 1956

3 Claims. (Cl. 64—13)



1. For use in a machine which comprises a frame and a shaft journalled in said frame, said shaft including at least two shaft sections in line with each other a device for coupling together the adjacent ends of said shaft sections, said device comprising, in combination, two circular discs at right angles to the direction of said shaft sections, the distance between said discs being small and said discs being normally coaxial and parallel to each other, non-bending means interposed between the respective central portions of said discs for transmitting rotation movement from one to the other about their common axis, each of said adjacent ends of said shaft sections being of semi-circular cross section over a limited length, with a flat face extending along a diametral plane of said shaft section, sleeves rigid with the peripheries of said discs respectively, said sleeves having semi-cylindrical ends bearing by their rectilinear edges upon said shaft section end flat faces respectively, and a clamping ring extending around each semi-circular shaft section end and the corresponding semi-cylindrical sleeve end applied thereon, for holding said two last mentioned elements assembled together.

2,861,437

PRECISION COUPLING DEVICE

Rudolph L. Bachman, Mineola, N. Y., assignor to Sterling Precision Corporation, Flushing, N. Y.

Application October 25, 1957, Serial No. 692,433

4 Claims. (Cl. 64—17)

1. A flexible coupling device for connecting a first rotatable shaft to a second rotatable shaft, said shafts being in substantial axial alignment, comprising complementary coupling members at the mutually confronting ends of said shafts, the coupling member of said first shaft comprising a plurality of flexible prongs rigidly secured at their base portion proximate to the end of said first shaft in annular configuration about the axis of said first shaft, the free ends of said prongs projecting axially forward of the free end of said first shaft, the free ends of said prongs being in the form of an axially curved offset portion biased towards the coupling member of said second shaft, and the coupling member of said second shaft comprising a plurality of spaced longitudinal indentations formed on the periphery thereof of a configuration adapted to register with a portion of the said prongs of said first shaft, whereby said axially curved offset portions will resiliently engage said indentations to couple the said first shaft to said second shaft in torque-transfer relation.

2,861,438

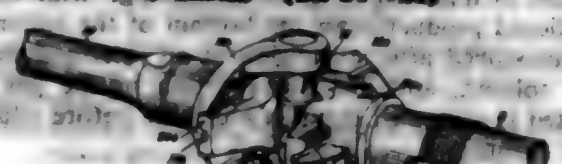
UNIVERSAL JOINTS

Marcel Villard, Courcelles-en-Parisis, France

Application June 6, 1955, Serial No. 513,528

Claims priority, application France June 9, 1954

1 Claim. (Cl. 64—21)



A universal joint which comprises, in combination, a first shaft, a second shaft, each of said shafts defining an axis, an at least partly spherical member having a bore, the respective ends of said first shaft and said second shaft being provided with concave bearing surfaces adapted to fit on said spherical member, a transverse shaft slidable in the bore of said spherical member, two yokes mounted on said transverse shaft, at least one of the yokes being pivotally mounted on the transverse shaft, cooperating toothed devices carried by one of said yokes and said first shaft for enabling said first shaft to move with respect to said spherical member about an axis at right angles to said transverse shaft and to transmit torque from said first shaft to said spherical member, and cooperating toothed devices carried respectively by the other of said yokes and said second shaft for enabling said second shaft to move with respect to said spherical member with a rotation about an axis at right angles to said transverse shaft and for transmitting torque from said spherical member to said second shaft.

2,861,439

MEANS FOR ADJUSTING THE TENSIONING OF MATERIAL WOUND ON A BEAM

Hermann Funk, Weil (Rhine), Germany, assignor to David Rothschild, Zurich, Switzerland

Application November 8, 1956, Serial No. 645,787

3 Claims. (Cl. 64—30)

1. A weight sensitive friction coupling comprising a casing having a centrally disposed bore, a pivot-type bearing having an inner and an outer race disposed in and carried by said casing, a shaft rigid with said inner race and mounted in said casing for rotating movement and for rocking movement upon a pivot point disposed in the rotating axis of said shaft, one end of the latter being adapted to be subjected to a variable weight, a swingable lever pivotally secured to said casing and es-

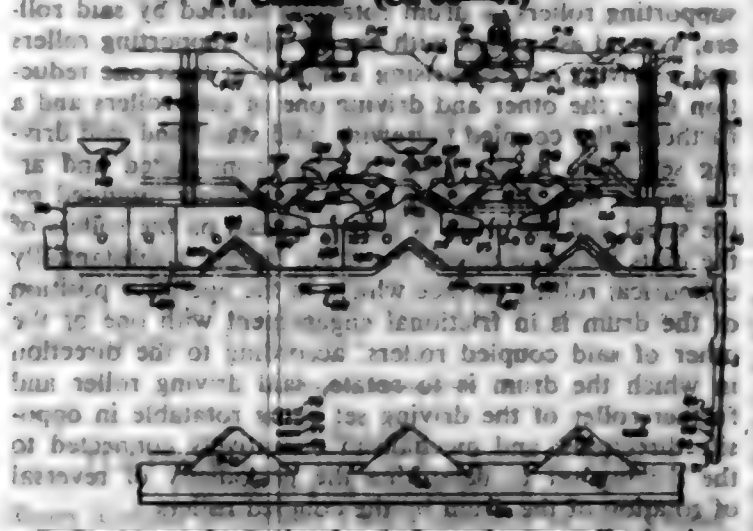
justable to a plurality of angular positions relative to the rotating axis of said shaft, and means for exerting a thrust in axial direction of said shaft from said lever dependent upon its angular position, a friction coupling including two sections, one of said sections constituting driving and braking means, respectively, and the other of said sections being secured to said shaft for common rotation, said one end of said shaft permitted to perform a rocking movement to vary the friction of said coupling as a function of the weight placed upon or removed from said shaft, and, thereby to vary the speed of rotation of said shaft.

2,861,440

MULTI-FEED CIRCULAR KNITTING MACHINE

Herman E. Crawford, Kernersville, N. C., assignor to The H. E. Crawford Company, Incorporated, Kernersville, N. C., a corporation of North Carolina

Application May 22, 1956, Serial No. 586,587
17 Claims. (Cl. 66—41)



1. In a two-feed circular independent needle hosiery knitting machine having a rotatable needle cylinder, independent needles mounted for vertical movement in said needle cylinder, and means for effecting reciprocation of the needle cylinder, a pair of closely spaced sets of stitch cams adjacent said needle cylinder, each of said sets including a right hand stitch cam, a left hand stitch cam and a stationary top center needle guiding cam, all of said needles adapted to draw stitches at each set of stitch cams with rotation of the needle cylinder and a group of said needles being adapted to draw stitches in both directions at each set of stitch cams as the needle cylinder is caused to reciprocate in the formation of a knit pocket.

7. That method of knitting make-up courses on a multi-feed circular independent needle knitting machine having a plurality of spaced sets of stitch cams including a first set and a subsequent set, vertically movable needles, a selector jack beneath each needle and jack selecting means in advance of the first of said sets of stitch cams, the steps of advancing the needles along a lower path to normally pass beneath the first set of stitch cams, selecting certain jacks to raise corresponding needles to pass through and knit at the first set of stitch cams while selecting certain other jacks to cause corresponding needles to remain in the lower path and pass beneath the first set of stitch cams and passing all of the cylinder needles through the subsequent set of stitch cams to knit.

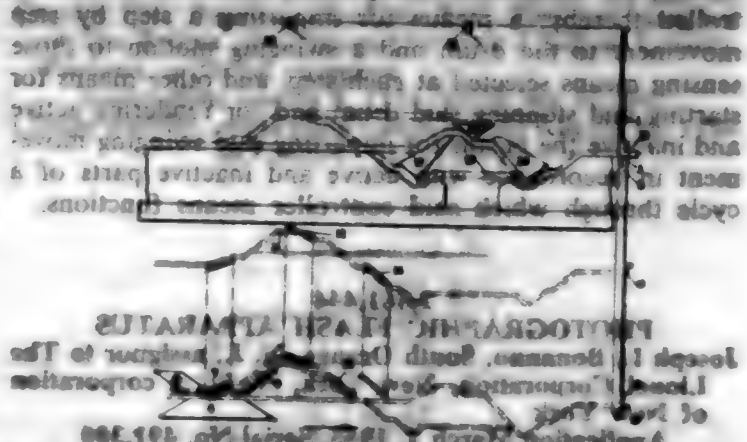
2,861,441

METHOD AND APPARATUS FOR KNITTING

Isaac H. C. Gross and Charles F. Brown, Pawtucket, R. I., assignors to Hemphill Company, Pawtucket, R. I., a corporation of Massachusetts

Application March 18, 1953, Serial No. 341,582
8 Claims. (Cl. 66—43)

5. A method of knitting on a circular, independent needle, knitting machine having a cam block with a front stitch cam and a rear stitch cam which includes the steps of drawing loops with some needles only under said front stitch cam clearing the latches of other needles by raising them over said same front stitch cam and then knitting with said other needles only under said rear stitch cam all on a single passage of said needles through said cam block.

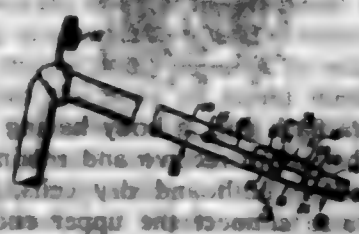


2,861,442

YARN CARRIERS OF CIRCULAR KNITTING MACHINES

Karl Ernest Hoefer, Riverside, N. J., assignor to Ernest A. Fouriel, Paramus, N. J.

Application June 18, 1956, Serial No. 514,637
1 Claim. (Cl. 66—125)



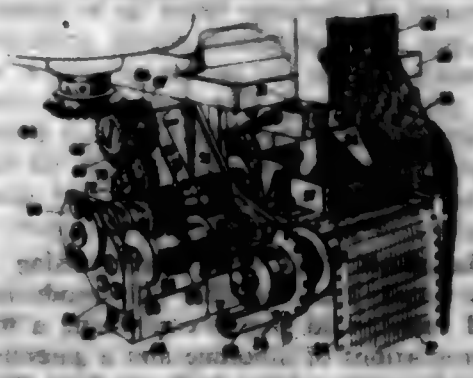
In circular hosiery knitting machines, a yarn carrier for a thread-guiding tube having a recess intermediate its ends, said yarn carrier having an outer arm and and two opposed semi-cylindrical jaws upon said outer end of the arm, said jaws having formed intermediate the ends thereof a slot extending transversely to the direction of said arm and separating the jaws into inner and outer pairs of jaw portions, said outer pair of jaw portions fitting over the recess of said thread-guiding tube, said outer end having formed therein an elongated slot separating said jaws, and extending in the direction of said arm, and a recess located adjacent to said jaws and adapted to receive an end of a tube held by said jaws.

2,861,443

CONTROLLER FOR KNITTING MACHINE

Frederick C. Weisinger, Feasterville, Pa., assignor to William Jacquard Co., Norristown, Pa., a corporation of Pennsylvania

Application July 9, 1957, Serial No. 670,734
8 Claims. (Cl. 66—156)



1. In a controller mechanism for knitting machines, the combination of a slotted drum over which an endless

strip pattern having pattern determining indicia is passed, sensing means for reading said indicia and for transmitting the dictates of said pattern to means to be controlled thereby, a means for imparting a step by step movement to the drum and a swinging motion to those sensing means selected at each step, and other means for starting and stopping said drum and for rendering active and inactive the means for imparting said swinging movement in accordance with active and inactive parts of a cycle through which said controller means functions.

2,861,444

PHOTOGRAPHIC FLASH APPARATUS

Joseph L. Bonanno, South Orange, N. J., assignor to The Lionel Corporation, New York, N. Y., a corporation of New York

Application March 1, 1955, Serial No. 491,300
2 Claims. (Cl. 67—31)

1. In a camera flash gun, a body having means in the upper portion thereof to receive and retain a forwardly extending photoflash bulb and dry cells, and carrying upper contactors to connect the upper ends of the dry cells to the lamp, the body having laterally extending lower portions and provided with top, bottom and side walls forming rearwardly opening space to receive lower contactors, two lower contactors in said space having their upper ends positioned to contact the lower ends of dry cells and their lower ends more widely spaced than the upper ends, the lower ends being apertured, mounting screws extending through the said apertures and the top and bottom walls of said laterally extending lower portion, retracting springs acting on the screws to maintain them in raised position with their lower ends above the bottom of the body, and an insulating cover secured to the body, and holding the lower contactors and the mounting screws in place.

2,861,445

PHOTOFLASH LIGHT SOURCE

Walter Roth, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application January 29, 1957, Serial No. 636,977
8 Claims. (Cl. 67—67)

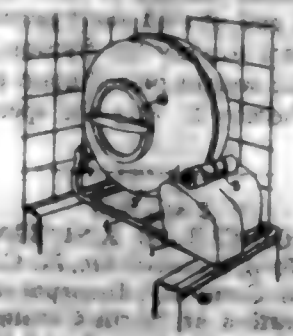
1. A photoflash light source comprising a sealed impervious vessel, a combustible light-producing charge within said vessel, said charge comprising a mixture of ignitable proportions of diborane and a gaseous oxide of nitrogen, and means within said envelope for igniting said charge.

2,861,446

MACHINES FOR TREATING OR WASHING CLOTHES AND THE LIKE

Olof Holger Petersen and Gunnar Ivar Fredholm, Bromma, Sweden

Application August 20, 1953, Serial No. 375,433
4 Claims. (Cl. 68—4)



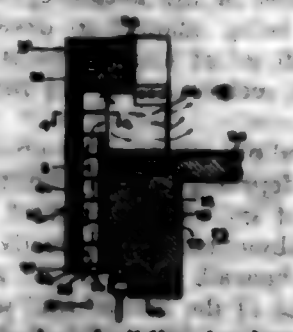
1. A tumbler type washing machine comprising two supporting rollers, a drum rotatably carried by said rollers, a stand associated with one of said supporting rollers and a driving set comprising a motor, at least one reduction gear, the other and driving one of said rollers and a further roller coupled therewith, said stand and said driving set being in the form of units constructed and arranged so that the driving set is detachably mounted on the stand and the drum is loosely placed on the rollers of the units thus assembled, the drum having a substantially cylindrical rolling surface which, in the operative position of the drum is in frictional engagement with one or the other of said coupled rollers, according to the direction in which the drum is to rotate, said driving roller and further roller of the driving set being rotatable in opposite directions, and mechanism operatively connected to the driving set to determine the periodicity of reversal of rotation of the drum by the coupled rollers.

2,861,447

BUILDING HAVING AIR INLET

Nathan L. Lieberman, New York, N. Y., assignor of thirty-three and one-third percent to Jacob Friedman and thirty-three and one-third percent to Harry Epstein, both of New York, N. Y.

Application June 24, 1954, Serial No. 439,041
4 Claims. (Cl. 72—16)



1. In combination in a building having a wall, two immediately adjacent stories, a floor between said stories, and an opening frame in the wall of the lower story, said frame being set back from the exterior face of the wall to provide a reveal on the exterior side of the frame; means providing a passageway having a downwardly facing entry port at the top of the reveal and an exit port in the interior of said upper story.

2,861,448

REINFORCED CONCRETE AND TILE WALL CONSTRUCTION

Caudus M. Currier, McKeesport, Pa.

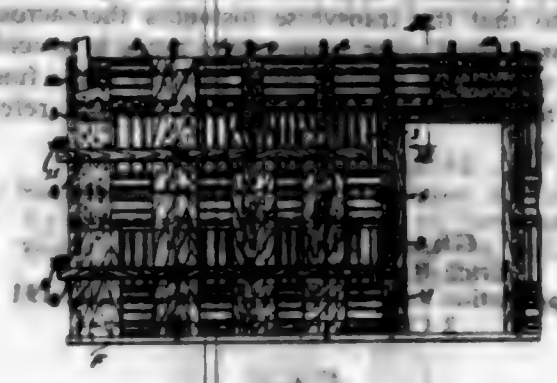
Application April 30, 1954, Serial No. 426,847
1 Claim. (Cl. 72—30)

A reinforced concrete building wall with tile filler comprising, in combination, a plurality of spaced, vertically

needle, knitting machine having a cam block with a front

the combination of a slotted drum over which an endless

extending concrete columns, and a plurality of vertical columns of tile completely filling the space therebetween, each tile column being arranged in a plurality of horizontal courses, wherein each course consists of a single tile unit spanning the space between the adjacent concrete columns, certain of said horizontal courses consisting of the tile units having aligned cellular openings extending



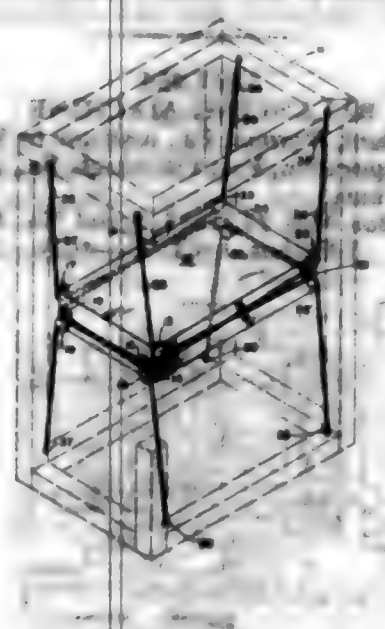
horizontally of the wall and other of said horizontal courses of each tile column consisting of tile units having aligned cellular openings extending vertically, certain of said horizontally extending aligned, cellular openings having concrete therein reinforced with metal rods extending horizontally through the adjacent columns and continuously through the aligned cellular openings throughout a major portion of the wall.

2,861,449

PLATFORM GUIDANCE SYSTEM FOR SHOCK TEST MACHINE

Henry Cohen, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application March 23, 1955, Serial No. 496,358
10 Claims. (Cl. 73—12)
(Granted under Title 35, U. S. Code (1952), sec. 266)



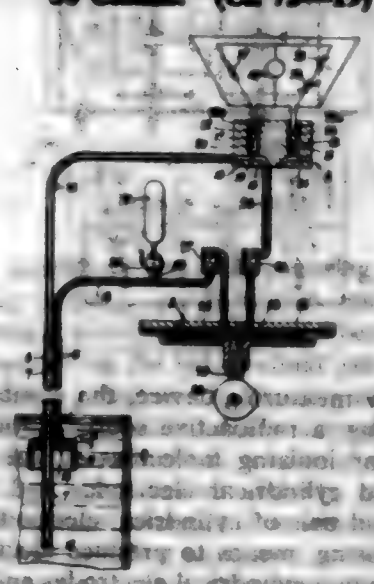
2. A platform guidance system comprising a platform adapted to be mounted within a framework encompassing said platform during a free fall, a plurality of pulleys, certain of said pulleys being mounted for rotation on said platform on a substantially horizontal axis, and a plurality of cables each adapted to have one end secured to the upper portion of said framework and the opposite end secured to the lower portion of said framework, each of said cables being trained over one of the pulleys mounted adjacent one side of said platform and over another pulley mounted adjacent another diagonally opposite side of said platform.

2,861,450

DETERMINATION OF THE GAS CONTENT OF LIQUID METALS

Charles Eric Ramsley, Cheshunt, Eng., assignor to The British Aluminium Company Limited, London, England, a British company

Application August 8, 1955, Serial No. 527,983
Claims priority, application Great Britain August 10, 1954
30 Claims. (Cl. 73—19)



1. Apparatus for determining the gas content of liquid metals, comprising an immersion head adapted to be immersed within the body of liquid metal, said immersion head including means for bringing a volume of inert gas into contact with the liquid metal in an area adjacent said head and within the body of liquid metal, means providing a path connected with said head for flow of the gas externally of said immersion head, means for circulating the gas a plurality of times through said immersion head and said liquid metal and through said path, and means for determining the hydrogen-content of the circulated gas.

2,861,451

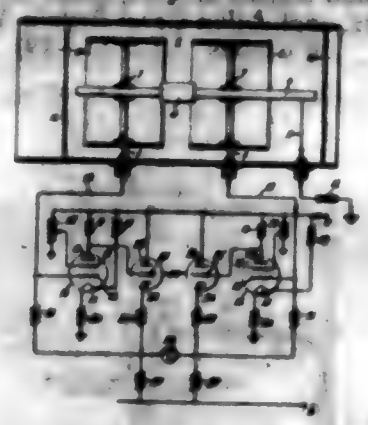
FLUID LEAKAGE GAUGING DEVICE

Nelson Emmons III, Dayton, Ohio, assignor, by mesne assignments, to The Sheffield Corporation, a corporation of Delaware

Application November 29, 1954, Serial No. 471,599
9 Claims. (Cl. 73—38)

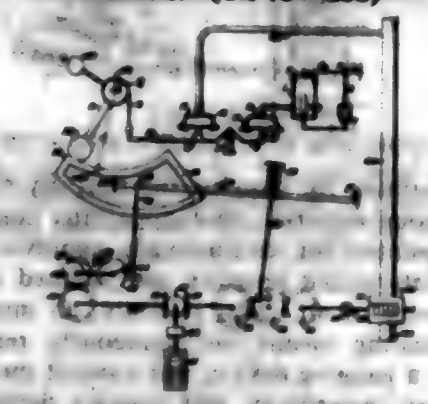
1. An apparatus for gauging the porosity of a flexible sheet of porous material, said apparatus comprising: a pressure regulator for continuously supplying air at a definite predetermined pressure and adapted for connection to a source of air under pressure, an instrument including indicating means instantaneously responsive to rate of flow, a gauging device, and conduit means placing said regulator, instrument, and gauging device in series communication in the order claimed, said gauging device providing an air flow path leading to atmosphere and including means for holding the sheet material for gauging and means cooperating therewith at the downstream side of the material supporting a predetermined area of porous sheet material across said flow path and in sealed relationship therewith, whereby the passage of fluid from the source and through the apparatus to atmosphere is determined by the porosity of a predetermined area of the material and is instantaneously indicated by said rate of flow indicating instrument.

2,861,452
NUCLEAR ANEMOMETER
Walter A. Morgan, Lolloan, N. Y., assignor to General Electric Company, a corporation of New York
Application April 18, 1956, Serial No. 579,865
1 Claim. (Cl. 73—190)



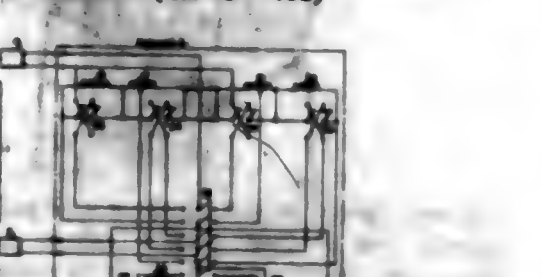
In a gas flow measuring device, the combination comprising a housing, a radioactive source positioned within said housing for ionizing molecules of the flowing gas, first and second cylindrical electrodes and an electrode coaxial with said pair of cylindrical electrodes positioned within said housing, means to produce electric fields between the individual cylindrical electrodes and said coaxial electrode whereby a portion of said ionized molecules are collected on said first cylindrical electrode to produce a current flow and the remaining portion of said ionized molecules are collected on said second cylindrical electrode to produce a current flow in response thereto, measuring means comprising a first pair of electron discharge devices having their inputs individually connected to said collecting electrodes, a pair of cathode followers connected to the outputs of said discharge device, feedback means from said cathode followers to the input of said discharge device to maintain said inputs substantially at a reference potential, indicating means connected between said cathode followers to indicate the magnitude and sense of the differential current as a measure of the velocity and direction of the gas flow.

2,861,453
VOLUME CORRECTION APPARATUS FOR GAS METERS
Hans Gelbe, Oberhausen, Sieglarsh, Germany
Application August 19, 1952, Serial No. 305,152
Claims priority, application Germany September 8, 1951
8 Claims. (Cl. 73—233)



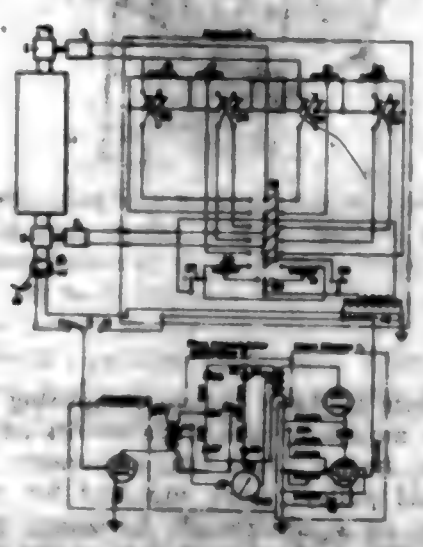
1. A volume correction device for use with a meter having a drive shaft, and a counting mechanism drive for measuring the volume of gas flowing through a pipe line; comprising means substantially continually responsive to the service gauge pressure p_s of the gas flowing through the pipe line, means substantially continually responsive to barometric pressure change, means defining a curved aperture, a reciprocating member for actuation by a meter drive shaft movable back and forth transversely across said aperture limited by the aperture edges, means connected to said reciprocating member for varying the driving ratio between the meter drive shaft and the counting mechanism drive in accordance with the amplitude of movement of said reciprocating member and means connecting said means defining said curved shape aperture to said first two mentioned means for varying the longitudinal position of said reciprocating member along said aperture in accordance with the service pressure and the barometric pressure, said curved shaped aperture being shaped so that the transverse distances thereacross are dimensioned for a given temperature range in accordance with the sum of the service gauge pressure and a function of the barometric pressure divided by the reference pressure p_b.

2,861,454
GRAIN THERMOMETER
Erich Rahlson, Des Moines, Iowa
Application July 11, 1955, Serial No. 521,191
2 Claims. (Cl. 73—362)



1. In a grain thermometer; a temperature responsive unit; a temperature indicating unit; a flexible means for transmitting temperature responses secured to and communicating between said temperature responsive unit and indicating unit; said temperature responsive unit being substantially larger in cross section than said temperature indicating unit and said flexible means; a removable rigid tube sleeved over the latter two elements and engaging the former to provide a means for forcing said temperature responsive unit and a portion of said flexible means into the grain, whereby after such insertion the rigid tube may be withdrawn leaving said temperature responsive unit and a portion of said flexible means in the grain.

2,861,455
BALANCING MACHINE
Dexter V. Wright, Verona, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 27, 1953, Serial No. 357,733
7 Claims. (Cl. 73—463)



1. Apparatus for balancing rotatable bodies, in combination, bearing means rotatably supporting said body for vibratory movement in a single plane, electrical pick-up means positioned adjacent said bearing means and responsive to vibratory movement of said bearing means in said single plane for producing an electrical signal

2,861,460

proportional to unbalance of the body, measuring means of the wattmeter type having two input circuits, each adapted to receive an electrical signal; a wave shaping circuit energized by the electrical signal of said pickup means and producing an output voltage of given configuration which is connected to one of said input circuits of said wattmeter measuring means, and circuit means controlled by the electrical signal of said pickup means and having an output connected to the other of said input circuits of said wattmeter measuring means.

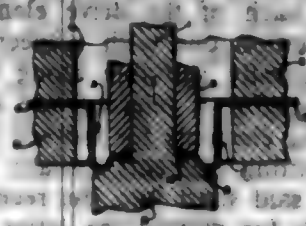
2,861,455

FLEXIBLE STEM SEAL

Sten Sodenberg, Nutley, N. J., assignor to Leslie Co., Lyndhurst, N. J., a corporation of New Jersey

Application October 8, 1954, Serial No. 461,116

2 Claims. (Cl. 74—18.2)



1. A bellows seal comprising a surrounding member having a bore, a stem movably mounted in the bore, the stem being of smaller diameter than the bore, and a seal of flexible material secured to the surrounding member and to the stem and extending across the bore to prevent flow of fluid beyond the seal, the portion of the seal extending across the space between the wall of the bore and the stem including a cylindrical portion normally occupying a position intermediate the wall and the stem, the stem beyond the seal being enlarged and being of substantially the same diameter as the cylindrical portion of the seal whereby when pressure is applied and the stem moved, the cylindrical portion of the seal will occupy a position around the enlarged portion of the stem while in a relaxed condition and will be rolled thereon without bunching.

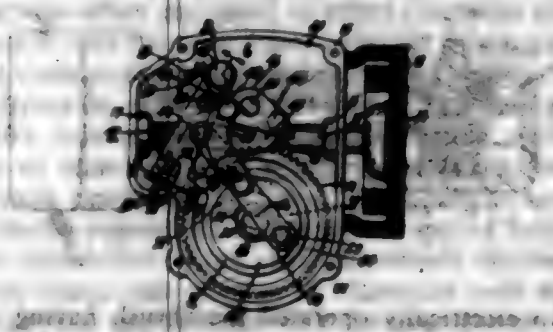
2,861,457

WINDSHIELD WIPER ACTUATING MECHANISM

Walter D. Harrison, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 7, 1954, Serial No. 435,812

9 Claims. (Cl. 74—75)



1. Windshield wiper actuating mechanism including, a rotatable driving member, a link having one end operatively connected to said driving member whereby said link is moved between predetermined limit positions during rotation of said driving member, an oscillatable driven member having a rocker arm attached thereto, and a pair of crossed links pivoted to said link at longitudinally spaced points and pivoted to said rocker arm on opposite sides of the axis of said driven member for imparting oscillation thereto upon rotation of said driving member.

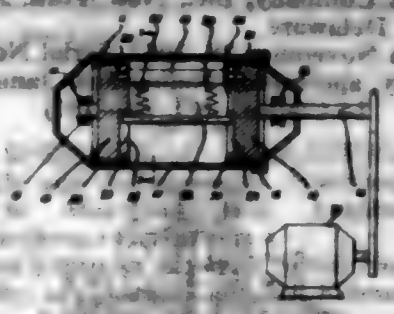
2,861,458

VIBRATION GENERATOR

Minhren K. Arvedision, Reading, Pa.

Application September 16, 1955, Serial No. 534,723

7 Claims. (Cl. 74—87)



6. In an oscillator, a cylinder casing, a pair of annular bearing surfaces spaced within said casing, a pair of discs rotatably mounted within said bearing means and coaxially disposed on the longitudinal axis of said casing, a first elongated member rigidly connecting said discs, said discs having parallel radially extending grooves on the cooperating faces thereof, a second elongated member having each end thereof slidably mounted in said grooves, said second elongated member being substantially parallel to said first elongated member, and spring means interconnecting said elongated members and urging said members together.

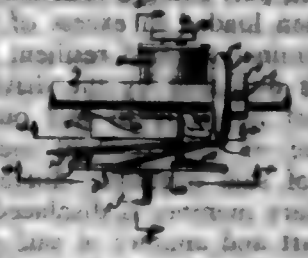
2,861,459

ELECTROMAGNETICALLY CONTROLLED FRICTION TRANSMISSION

Erle W. Authen, El Cerrito, Calif., assignor to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California

Application October 15, 1956, Serial No. 616,096

1 Claim. (Cl. 74—310)



A clutch comprising first and second rotative shafts disposed substantially perpendicular to each other, a wheel mounted in fixed position upon and rotative with said first shaft, a first disc mounted in fixed position upon, substantially normal to and rotative with said second shaft, a second disc substantially parallel and axially alined with said first disc, said second disc being of ferromagnetic material and lying between said first disc and the periphery of said wheel, a plurality of leaf springs disposed between said first and second discs and extending substantially perpendicular to diameters of the discs, each of said springs having opposite ends affixed to respective ones of said discs, whereby said second disc is resiliently mounted for axial and tilting motion but not for substantial rotative motion relative to said first disc, said springs pulling said two discs together and holding said second disc normally out of contact with said wheel, and an electromagnet having a magnet gap adjacent to said second disc and said wheel so that magnetic attraction provided when said electromagnet is energized draws said second disc into contact with the periphery of said wheel, said electromagnet being substantially U-shaped and having attached thereto two pole pieces extending obliquely inward toward each other, forming a magnet gap disposed adjacent to said second disc and close to one side of said wheel.

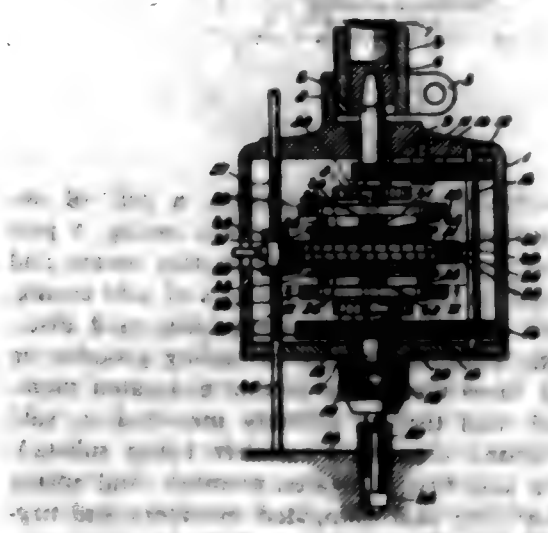
and aperture formed by the aperture edges, means connected to said reciprocating member for varying the driv- responsive to vibratory movement of said bearing means in said single plane for producing an electrical signal

2,861,460

AUTOMATICALLY VARIABLE GEARING DEVICE

Theodoor Marie Albert Lips, Martinus Johan Spierings, and Wilhelmus Lambertus Vervoet, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application November 28, 1952, Serial No. 322,894
Claims priority, application Netherlands January 11, 1952
14 Claims. (Cl. 74—337)



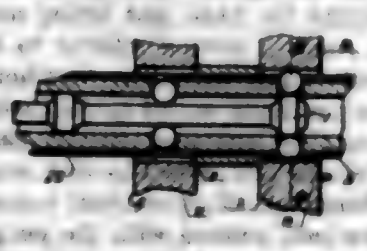
1. A gearing device with automatic changeover of the gear ratio between the input driving part and output driven part comprising a plurality of gearings, means coupling said input driving part separately and sequentially through each of said gearings to said output driven part, said coupling means comprising a plurality of clutches, an auxiliary member, resilient means connecting said auxiliary member to said output driven part, said output driven part being driven through one of said clutches and when loaded in excess of a predetermined limit value determined by said resilient means said auxiliary member is displaced by the driving force of the input driving part relatively to said output driven part against the force of said resilient means, and means by which each of said operative clutches is disengaged when said auxiliary member is displaced relative to said output driven part and another of said clutches is made operative, a connecting element for linking said coupling means to said output driven part, said coupling means coacting with said connecting element for engaging and disengaging said clutches in sequence.

2,861,461

ADJUSTABLE TRANSMISSION

Otto Kreidler, Stuttgart, Germany, assignor to Firma Georg Gotzlabo- und Zahnradfabrik G. m. b. H., Ludwigsburg, Wurttemberg, Germany

Application May 28, 1957, Serial No. 662,243
Claims priority, application Germany May 28, 1956
9 Claims. (Cl. 74—371)



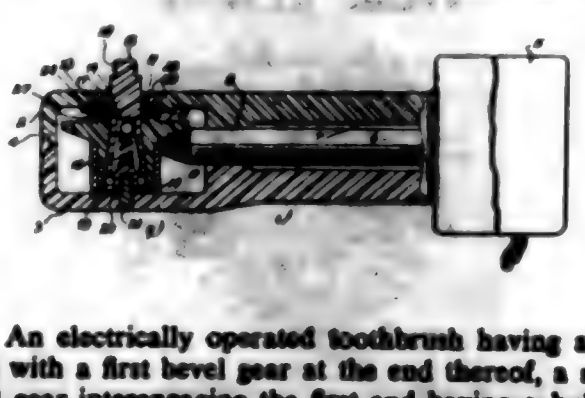
1. In an adjustable transmission, in combination, an elongated hollow shaft rotatable about its axis and being formed in each of a pair of axially spaced planes normal to said axis with a plurality of openings distributed about said axis; a pair of drive elements freely turnable on said shaft and respectively located in said planes, each of said drive elements having an inner surface surrounding and located adjacent said shaft and formed with a plurality of recesses distributed about the axis of the shaft, the recesses of said pair of drive elements being respectively located in said planes and respectively communicating with said openings of said shaft when said drive elements and shaft are in a predetermined angular position with respect to each other; a plurality of motion transmitting elements respectively located in said openings of said shaft and being radially movable therein to provide two sets of motion transmitting elements respectively located in said planes and respectively movable outwardly away from the axis of said shaft respectively into the recesses of said drive elements for placing the latter in driving engagement with said shaft and respectively toward the axis of said shaft for freeing each of the drive elements and said shaft for free rotation one with respect to the other; engaging means axially shiftable along the interior of said shaft for engaging a selected one of said sets of motion transmitting elements for moving the selected set of motion transmitting elements radially outward away from the axis of said shaft into the recesses of one of the drive elements for placing the latter in driving engagement with said shaft; and means located on said shaft at the exterior thereof for free axial shifting with respect thereto, extending between said planes, and having a neutral position partly overlapping the two sets of motion transmitting elements for maintaining the same inwardly away from their positions placing the driving elements in engagement with the shaft for rotation therewith, whereby when said engaging means is actuated to place one of the sets of motion transmitting elements in an operating position located in the recesses of one of the drive elements, the means shiftable along the exterior of the shaft will move the other of the sets of drive elements inwardly toward the axis of the shaft to prevent the other set of drive elements from moving outwardly under the action of centrifugal force.

2,861,462

LIMITED TORQUE DRIVE FOR ELECTRICALLY OPERATED ROTARY TOOTH BRUSH

Joseph P. Rosner, Weymouth, Mass., assignor to Leslie N. Baker, Belmont, Mass.

Application October 15, 1956, Serial No. 615,868
6 Claims. (Cl. 74—423)



1. An electrically operated toothbrush having a drive shaft with a first bevel gear at the end thereof, a second bevel gear interengaging the first and having a hub with a coaxially formed opening formed therethrough, said opening being tapered from one end to the other and providing an engaging friction surface, a driven shaft positioned partially within said opening and coaxially aligned therewith, and having an outer surface adapted to frictionally engage said opening, a recess formed in the portion of the driven shaft within said opening, spring means positioned within said recess urging said driven shaft and gear in friction contact, and means retaining the drive shaft and gear in operative association.

driving member.

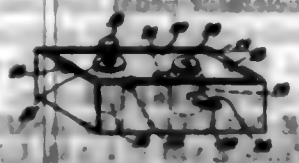
one side of said wheel.

2,861,463

SAFETY DEVICES FOR VEHICLES

Norman Gilman, Crestwood, N. Y.

Application December 3, 1954, Serial No. 472,743
4 Claims. (Cl. 74—526)



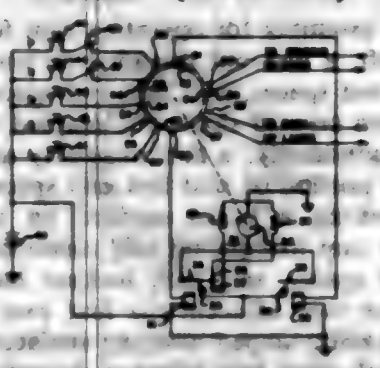
1. A speed limiting safety device for restricting the downward stroke of an accelerator pedal of a vehicle provided with a floorboard, comprising a base member having a top wall and a recess therebelow, a vertical stop post mounted above said top wall and extending into said member, a set screw disposed within said member to engage said post for maintaining an adjusted height thereof, said screw being accessible from said recess, a complementary mounting element for said base member adapted to enclose said recess, said element being attachable to said floorboard, and means to lock said member to said element.

2,861,464

TRANSMISSION SELECTOR SERVO

William G. Jensen, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Application January 21, 1953, Serial No. 718,344
6 Claims. (Cl. 74—472)



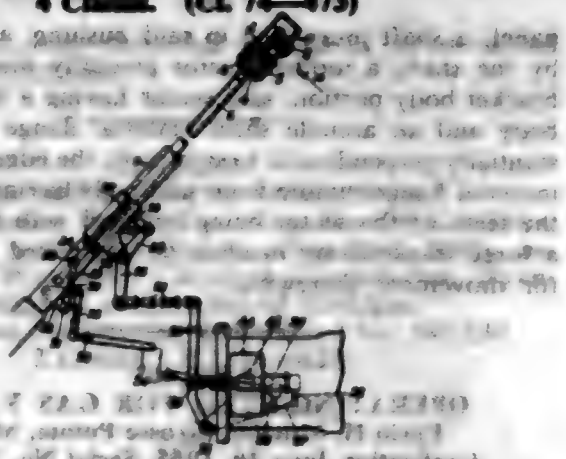
1. A power selector for positioning a movable control member in an automatic transmission for selecting a plurality of transmission operating conditions comprising a reversible electric drive motor having an output shaft, said output shaft operably connected to a control member on said transmission for selecting said conditions, said motor including a pair of electrical inputs, one of said inputs operable when energized to effect clockwise rotation of said shaft, and the other input operable when energized to effect counterclockwise rotation of said shaft, a sector switch driven by said shaft and having first and second conductive segments separated by a dielectric portion, a plurality of relatively fixed wiping contacts one for each transmission operating condition, said contacts arranged to electrically engage said segments and spaced from each other in proportion to the shaft movement necessary to selectively place each contact in alignment with said dielectric portion concomitant with the engagement of the particular transmission operating function represented by said contact, said dielectric portion having a width less than the least width between said contacts while wide enough to accept one of said contacts at a time, a source of electric energy, a plurality of manually operated circuit closing switches, interlock means preventing more than one switch to be closed at any one time, one each of said switches connected to each of said contacts, electrical circuit means operable upon energization of one of said sector switch segments to energize said clockwise motor input from said source and operable upon energization of the other of said switch segments to energize said counterclockwise motor input from said source, each of said switches individually adapted to energize one of said segments from said source when the wiping contact connected to said switch is in contact with one of said segments thereby energizing one of said motor inputs to cause said shaft to rotate bringing said contact in alignment with said dielectric portion.

2,861,465

CHANGE SPEED GEAR OPERATING SYSTEM

Ottmar Winkle and Julius Liebel, Nurnberg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg A. G., Nurnberg, Germany

Application February 16, 1953, Serial No. 337,106
Claims priority, application Germany February 14, 1952
4 Claims. (Cl. 74—473)



1. A change speed gear system for motor vehicles comprising a plurality of gear shaft blocks each of which is axially shiftable from a central non-operative position into either of two different operative positions to selectively put in either of two different speeds, a selector member which is movable into its operative position with respect to any of said gear shift blocks by movement in a first spatial dimension and adapted to move the respective gear shift block into either of its operative positions by movement in a second spatial dimension, a gear shift lever adapted to be pivoted in one plane and to be rotated about its longitudinal axis, first rotary transmission means for transmitting the rotary movements of the gear shift lever through a considerable distance to the selector member in a form adapted for causing movement thereof in one of said two spatial dimensions, said first rotary transmission means including a first gear for converting the rotary movements of the gear shift lever into rotary movements of the first rotary transmission means and a second gear for converting the movements of the first rotary transmission means into movements of the selector member, second rotary transmission means for transmitting the pivotal movements of the gear shift lever through the said distance to the selector member in a form adapted for causing movement thereof in the other of said two spatial dimensions, said second rotary transmission means including a third gear arranged separately from the first gear and adapted for converting the pivotal movements of the gear shift lever into rotary movements of the second rotary transmission means, and a fourth gear arranged separately from the second gear and adapted for converting the rotary movements of the second rotary transmission means into movements of the selector member.

2,861,466

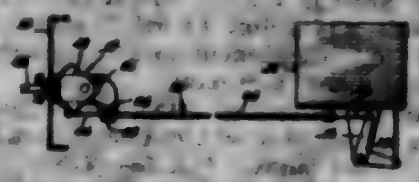
CONTROL MECHANISM

Walter Laurence Brock, Chicago, Ill., assignor to Arvus Controls, Inc., Evanston, Ill., a corporation of Illinois

Application July 27, 1954, Serial No. 445,979
13 Claims. (Cl. 74—504)

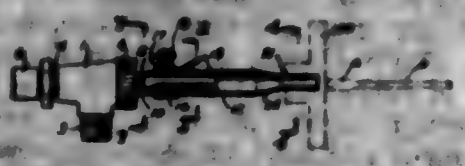
1. A manually operable control mechanism adapted to be mounted on a panel such as a dashboard of a vehicle,

comprising a support bracket having a flange engageable with the inner surface of the panel and an angularly disposed body portion, a bushing assembled with said flange and having a portion extending outwardly of the flange for projection through an opening in the panel, and having an outer end portion adapted to receive a complementary fastening member engageable with an outer surface of the panel for clamping the panel between the fastening member and said flange, thereby to mount the bracket on the



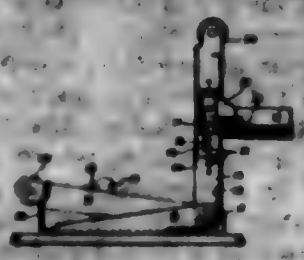
panel, a shaft journalled in said bushing, a gear carried by the shaft, a toothed sector pivotally mounted on the bracket body portion, said sector having a sheet material body and an arcuate sheet material flange thereon substantially perpendicular to said body, the edge of said sheet material flange remote from said body having sector teeth, the teeth of the sector being engaged with the gear, and a force transmission mechanism connected to the sector for movement therewith.

2,861,467
OPERATING STEM FOR GAS VALVE
Erwin H. Mueller, Grosse Pointe, Mich.
Application June 20, 1955, Serial No. 516,099
5 Claims. (Cl. 74—594)



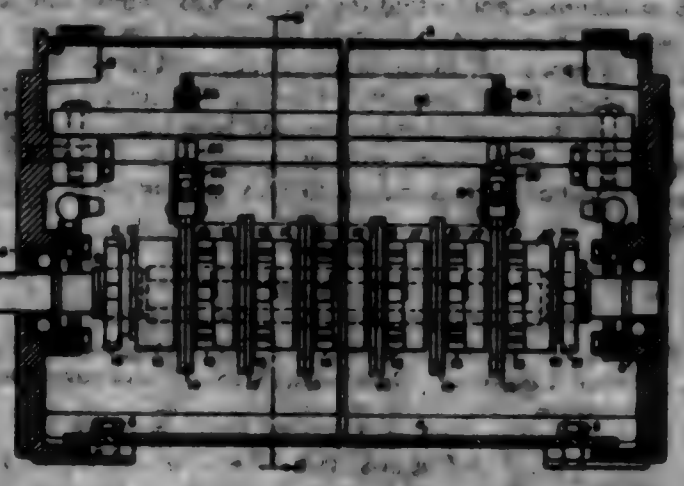
1. In a valve for controlling gas having a valve stem of hollow form and a member accessible through the hollow stem for adjustment purposes, a hollow extension having a body portion for slidably fitting upon said hollow stem, means operable to fix the hollow extension in selected positions on the stem, the extension having an end portion of relatively small cross dimensions and adapted to receive a handle, said relatively small end portion having an elongate open slot extending lengthwise and adapted to permit passage therethrough of a tool, such as a screw driver, so that the tool may be applied to said member.

2,861,468
ACCELERATOR CONTROLLING DEVICE
Walter E. Dow, Longmeadow, Mass.
Application May 31, 1957, Serial No. 662,705
4 Claims. (Cl. 74—513)



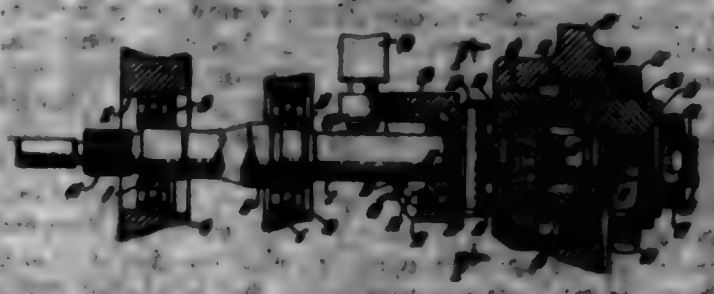
1. In a device of the character described adapted to engage an accelerator pedal, a base adapted to be secured to the floor of a vehicle, an arm pivotally connected to said base, an adjustable member carried by said arm, means for locking said adjustable member in adjusted position on said arm, catch means carried by said adjustable member adapted to engage the accelerator pedal for retaining it in predetermined adjusted position, said catch means having a wear resisting contact portion for engaging the accelerator, said accelerator pedal having a retaining ridge for engaging said catch means, said wear resisting contact portion comprising a ball set in an overhanging portion of said catch means and adapted to engage said retaining ridge on said accelerator pedal.

2,861,469
ADJUSTABLE MULTI-CAM ASSEMBLY WITH REPLACEABLE CAM UNITS
Reese T. Klatzing, Buffalo, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 27, 1953, Serial No. 357,679
13 Claims. (Cl. 74—568)



1. A rotor assembly for operating cam followers comprising, a shaft, a first nut threaded on one end of said shaft, a first end spacer, said first end spacer being fixed against rotation on said shaft, but adapted to slide along the shaft longitudinally, a first angularly adjustable cam member on a portion of said first end spacer and having one face abutting a radial surface on said first end spacer, a first cam locknut on said mentioned portion of said first end spacer, said cam locknut having a radial surface for the face adjacent the first cam member and at least two axially sloped wedging surfaces forming the face opposite the first cam member, a second end spacer similarly mounted on the shaft with axially sloped wedging surfaces at its left end which inter-mesh with the wedging surfaces of the cam locknut and having a spacing surface which abuts a part of the first end spacer and allows the wedging surfaces to overhang a portion of the first end spacer, the surface of the face of said second end spacer opposite the wedging surfaces being radial, and a second nut threaded on the end of said shaft opposite said first nut for together securing between them said end spacers firmly on said shaft.

2,861,470
VARIABLE CAM
Ray E. Baker, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 18, 1956, Serial No. 581,136
4 Claims. (Cl. 74—568)



4. An adjustable cam mechanism comprising, in combination, a first annular member having an axially facing

cam surface, a second annular member located in telescopic relationship with said first annular member and having an axially facing cam surface disposed in radially adjacent relationship to said cam surface of said first annular member whereby said cam surfaces form a continuous cam surface, said continuous cam surface having a total operative surface divided into a first section defined by an operative portion of one of said cam surfaces and a second section defined by an operative portion of the other of said cam surfaces, a shaft for supporting said annular members, means fixing the angular relationship of said members with respect to each other and to said shaft for conjoint rotational movement thereof, means for varying the proportion of the total cam surface formed by said first section and said second section, said last mentioned means including means for axially adjusting one of said annular members with respect to the other annular member and to said shaft to adjust the axial position of the cam surface of said one annular member with respect to the cam surface of the other annular member to vary the sizes of the operative portions of said cam surfaces and thereby vary the proportions of the total surface formed by each of said sections.

2,861,471

BALANCING DEVICE

Max Kronenberg, Cincinnati, Ohio, assignor to The R. K. Le Blond Machine Tool Co., Cincinnati, Ohio, a corporation of Delaware

Application August 27, 1956, Serial No. 606,278

2 Claims. (Cl. 74—573)

1. A chuck balancing device comprising a continuous annular ring having a continuous rear face, means to fix said rear face of said ring to the rear face of a chuck, a continuous annular T-slot in said ring having an annular groove facing rearwardly of the chuck, radially disposed loading slots opening in the periphery of said ring at diametrically opposite positions thereon, balance weights insertable radially into said T-slot through either of said loading slots while said ring is fixed to said chuck, stud means insertable through said annular groove to engage said weight, and clamping nut means on the outwardly projecting end of said stud to clamp said weight axially against the radially disposed surfaces of said T-slot in any circumferential position in said T-slot.

2,861,472

TORSIONAL VIBRATION DAMPER

Edward R. Hintz, New Haven, Ind., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey

Application February 10, 1953, Serial No. 336,120

1 Claim. (Cl. 74—574)

The combination of a torsional vibration damper for a shaft and a rotatable member adapted to be rigidly connected to the shaft, comprising an inertia ring, an inner metal ring having a cylindrical band and a radial flange extending therefrom along one face of said inertia ring, a resilient rubber ring having a shape symmetrical with that of said inner metal ring, said rubber ring being interposed between and adhesively secured to said inertia ring and said inner metal ring, said cylindrical band being expanded over and secured to said rotatable member by frictional engagement therewith, and the rubber of said rubber ring between said band and said inertia ring being free from shrinkage stresses by virtue of the expansion of said band.

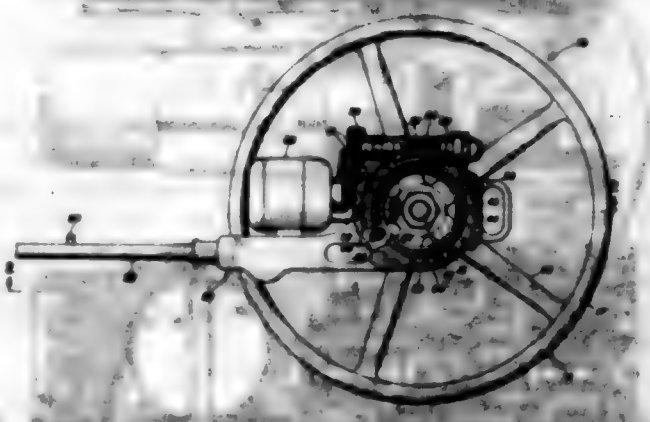
2,861,473

PORTABLE VALVE OPERATOR

Ralph C. Allman, Ecorse Township, Harold K. Miller, Grosse Ile, and Harry F. Tye, Allen Park, Mich., assignors to Wyandotte Chemicals Corporation, Wyandotte, Michigan, a corporation of Michigan

Application February 28, 1957, Serial No. 643,135

2 Claims. (Cl. 74—625)



1. An apparatus for use on a flow control valve having a rotatable, spoke-type, handwheel for effecting movement of a valve member between open and closed positions, which comprises a portable, powered, valve operator having a lever arm; at one end of said arm a rotatable ring gear lying in a plane aligned with the plane of said lever arm and comprising a retaining slot; means for housing said gear and for retaining the same in position at the end of said arm; a power unit including means for rotating said ring gear; and a rotatable cylinder with its axis in alignment with the axis of said ring gear, with one end of said cylinder inside the ring gear, which end comprises a ring member adjacent said ring gear, a lug member adjacent to said ring member and projecting into said retaining slot, and means for clamping said cylinder to said ring gear, and with the opposite end of said cylinder comprising rod members, each end of which is in a plane of said axis, which are peripherally spaced apart equidistantly from one another and which function to transmit torque from said cylinder to said handwheel.

2,861,474

SPLIT TORQUE CONVERTER TRANSMISSION

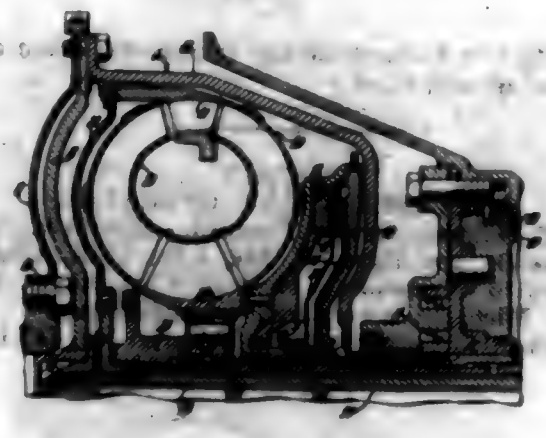
Victor C. Moore, Plymouth, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 25, 1957, Serial No. 674,156

10 Claims. (Cl. 74—677)

1. In a transmission, in combination, a first hydrodynamic torque transfer device having an impeller adapted to be driven by a power input shaft and a pair

of turbine members, first and second planetary gearing units, a second hydrodynamic torque transfer device having an impeller and a turbine, a power output shaft, means connecting one element of said first gearing unit to one of said turbine members of said first-mentioned torque transfer device, means for braking a second member of said first planetary gearing unit against rotation in one direction, means connecting a third member of said first planetary gearing unit to said output shaft, means connecting the second of said pair of turbine members to



one element of said second planetary gearing unit, means for braking a second member of said second planetary gearing unit against rotation in one direction, means connecting a third element of said second planetary gearing unit to said third element of said first planetary gearing unit, means connecting the turbine of said second mentioned hydraulic torque transfer device to said second element of said second planetary gearing unit, and means connecting said impeller of said second hydraulic torque transfer device to said power input shaft.

2,861,478

MEANS FOR DIGITALLY VARYING ROTATIONAL VELOCITIES

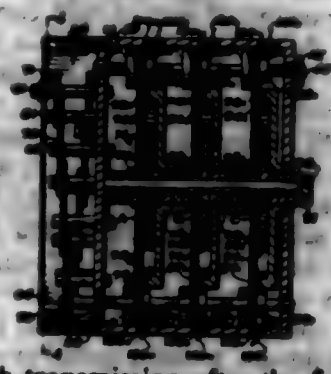
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application September 7, 1956, Serial No. 608,467
13 Claims. (Cl. 74—681)

1. Means for digitally generating rotational velocities from a single rotating input shaft in a binary manner comprising a plurality of digital-units, with each digital-unit being a differential transmission having a pair of inputs X and Y, and the output-Z of each transmission being related to its inputs as follows

$$Z=\frac{AY+X}{2}$$

a supporting frame, with the input-X to the first differential transmission being fixed to said frame, and the



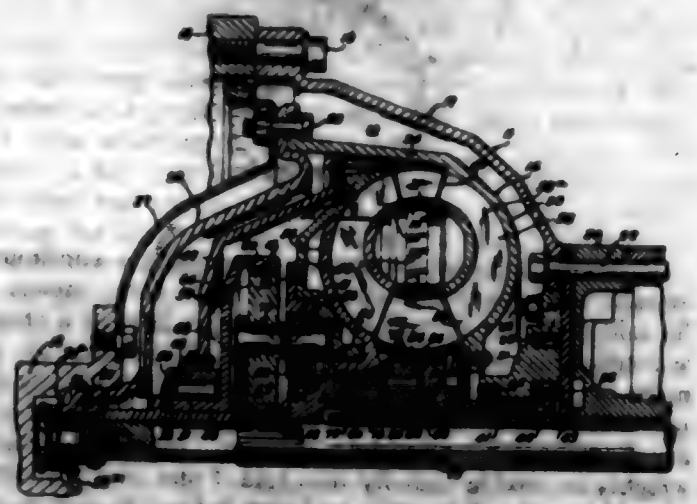
input-X to each transmission after the first being coupled to the output-Z of its immediately preceding transmission, a plurality of clutching means for respectively coupling said input shaft to the input-Y of each transmission, with each of said clutching means selectively locking the respective input-Y to said frame or to said rotating input shaft.

2,861,479

POWER TRANSMISSION MECHANISMS

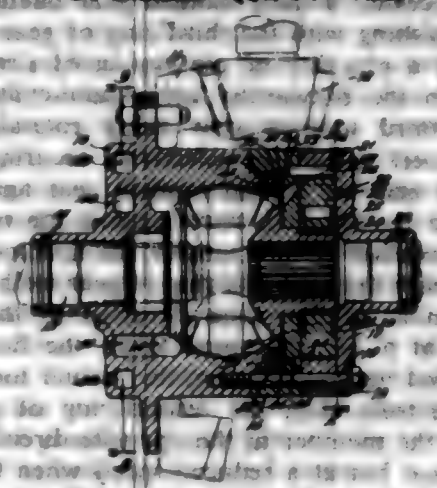
Robert C. Russell, Shaker Heights, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Application March 13, 1957, Serial No. 645,690
16 Claims. (Cl. 74—688)



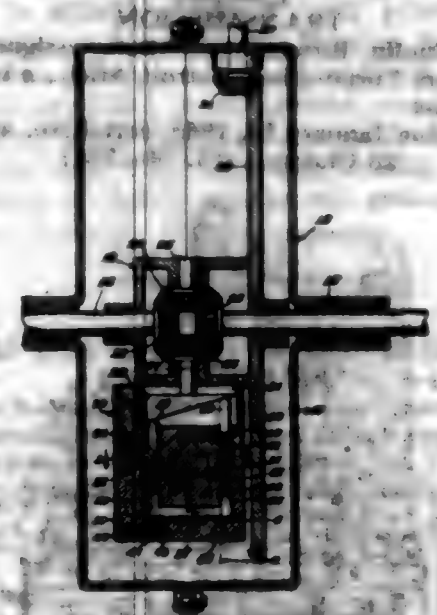
1. In a power transmission; a group of cooperating relatively rotatable bladed annular members defining a toroidal fluid circuit and including pump means, primary and secondary turbines, and a fourth such bladed annular member inhibited against reverse rotation; said members being disposed in a series relation to be traversed in succession in the order named by the fluid of said circuit with said fourth bladed member located immediately contiguous to said secondary turbine to receive the fluid directly from the latter; rotatable power input means connected with said pump means; rotatable output means; a planetary gear system including a sun gear means inhibited against reverse rotation and a planet carrier means and of which the latter is drivingly connected with said output means; said gear system also comprising interconnected planetary gear trains including planet gears on said carrier means and ring gears connected to be driven by said primary and secondary turbines; said planet gears having meshed engagement with said ring gears and said sun gear means, and said gear trains providing for the transmission of torque from said turbines to said output means at different ratios through said carrier means; and means connecting said fourth bladed member with said sun gear means for forward rotation therewith.

2,861,677
PUMP AND LOCK FOR DIFFERENTIAL
Otto Mueller, Dearborn, Mich.
Application November 21, 1955, Serial No. 547,929
14 Claims. (Cl. 74—711)



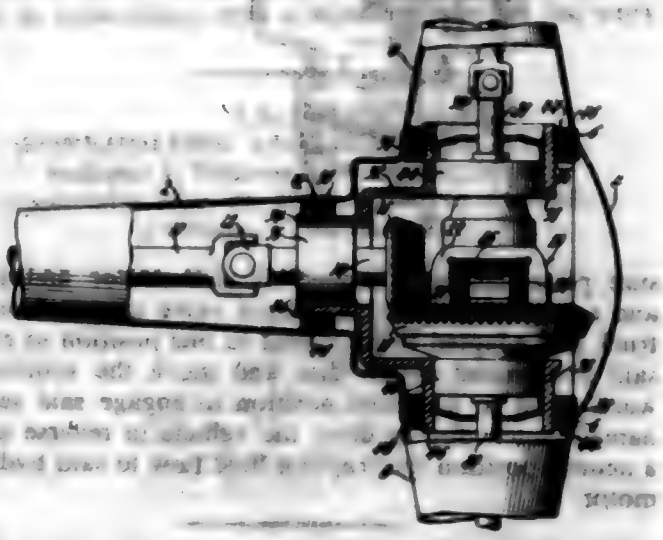
1. In a differential gear device for a vehicle having a housing with oil therein, a case rotatable within the housing, differential gear elements within the case, said case having an enclosed unobstructed circumferentially extending passageway communicating at one end with the interior of said case and at the other end with the exterior of said case, said other end comprising an open intake end facing in the direction of rotation of said case for scooping up oil from the housing and delivering it, through said passageway, to the interior of said case.

2,861,678
DIFFERENTIAL FOR VEHICLES
Verne P. Donner, Palatine, Ill., assignor to International Harvester Company, a corporation of New Jersey
Application November 9, 1956, Serial No. 621,432
3 Claims. (Cl. 74—711)



1. A differential for a vehicle including a power means and an axle made up of a pair of sections arranged in end to end spaced relation, the differential comprising a casing surrounding the sections and containing a liquid, a cage disposed in the casing and rotatably mounted on the sections and rotatably driven by the power means, a gear fixedly secured on said end of each of the sections, a pair of gears each having a shaft thereon arranged in spaced opposed relation in the cage and the shafts being rotatably mounted in the cage, a cam disposed exteriorly of the cage and fixedly secured to one of the shafts, and hydraulic means disposed exteriorly of the cage at said one of the shafts and fixedly secured to the cage and comprising a housing having a plurality of cylindrical openings therein arranged in a circle and a piston disposed in each of the cylindrical openings and intake passages in communication with the interior of the casing and the cylindrical openings and check valves in the intake passages to prevent flow of liquid from the cylindrical openings out the intake passages and exhaust passages in communication with the interior of the casing and the cylindrical openings and check valves in the exhaust passages opening to let liquid flow away from the cylindrical openings when the respective piston moves the liquid out of the respective cylindrical opening and pressure relief valves in the exhaust passages to exert resistance to turning of the cam and opening to let liquid flow into the interior of the casing at a predetermined pressure.

2,861,679
DRIVING AXLE ASSEMBLY
Lloyd E. Muller, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 16, 1955, Serial No. 547,141
3 Claims. (Cl. 74—713)

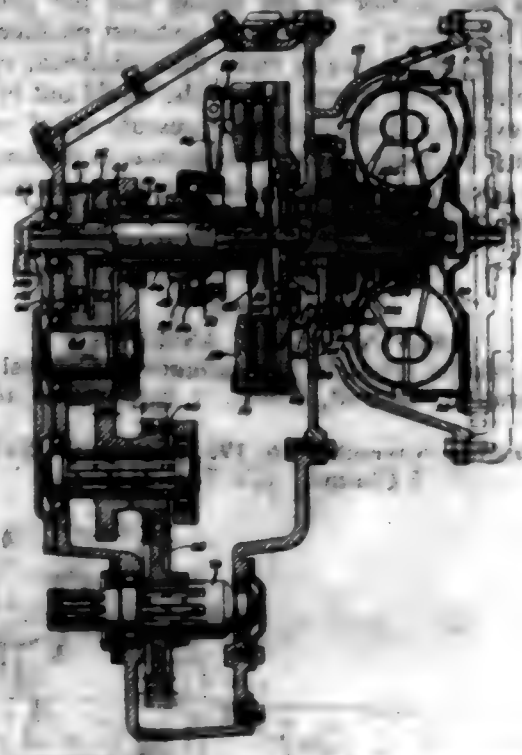


1. A rear axle driving assembly comprising a propeller shaft having a driving pinion on one end thereof, a longitudinally extending torque tube enclosing said propeller shaft and including means for journaling said shaft for rotation therein, an axle and differential housing fixed at right angles to said torque tube, a differential including axle driving means and a ring gear in meshing engagement with said pinion, a differential carrier, a supporting frame for said carrier having transversely extending portions journaling said ring gear and axle driving means for rotation, and resilient means between the transverse portions of said frame and said housing resiliently supporting said frame in said housing so as to inhibit the transfer for vibrations created by the sets of running gears of the differential to said housing.

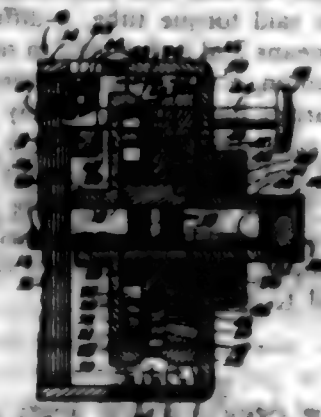
2,861,680
TORQUE CONVERTER AND GEAR TRANSMISSION DRIVE
Everett C. Curtis, Cleveland, Ohio, assignor to Towmotor Corporation, Cleveland, Ohio, a corporation of Ohio
Application September 17, 1953, Serial No. 380,734
6 Claims. (Cl. 74—723)

1. In a lift truck having an engine, a fluid coupling and a transmission axially arranged in the sequence named, said transmission including forward drive and reverse drive gears to establish forward and reverse drive of the truck, a closed hydraulic system including a hydraulic pump driven by said engine, a clutch pressure plate assembly driven by said fluid coupling, a clutch disc operably connected to said forward drive gear disposed within said clutch pressure plate assembly, a clutch disc operably connected to said reverse driving gear disposed

within said clutch pressure plate assembly, a movable pressure plate carried by said pressure plate assembly adapted to be moved to engage one or the other of said clutch discs or to be moved to a neutral position free of engagement with either of said clutch discs, a hydraulic motor operably connected to said movable pressure plate, conduits connecting said motor and pump, and a manually operable control valve mounted on said truck and adapted to be moved to one position to engage said first-named clutch disc and move the vehicle forwardly and to a second position to engage said second-named clutch disc to drive the vehicle in reverse and to a neutral position interrupting fluid flow to said hydraulic motor.

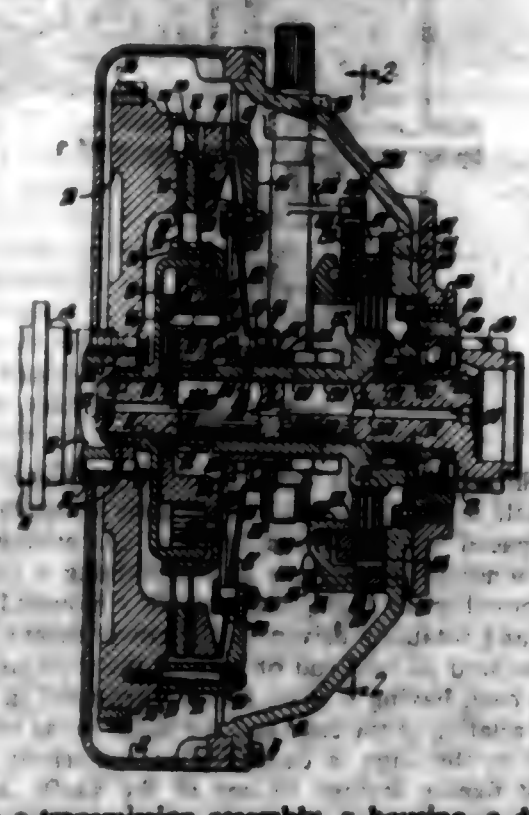


2,861,481
SPEED REDUCER
Edward V. Sundt, Wilmette, Ill.
Application April 3, 1957, Serial No. 650,349
11 Claims. (Cl. 74—760)



1. A multiple speed reducer comprising, a rotating shaft, an eccentric carried by the shaft for rotation therewith, a member rotatably mounted on the eccentric and oscillated thereby and having a first ring of internal gear teeth consisting of a plurality of inwardly facing substantially semi-cylindrical recesses, a second ring of external gear teeth consisting of a plurality of outwardly facing substantially semi-cylindrical recesses, and a third ring of external gear teeth consisting of a plurality of outwardly facing substantially semi-cylindrical recesses, a first toothed gear having external gear teeth meshing with the first ring of gear teeth and consisting of a plurality of pin supported sleeve rollers engageable in the inwardly facing semi-cylindrical recesses, a second toothed gear having internal gear teeth meshing with the second ring of gear teeth and consisting of a plurality of pin supported sleeve rollers engageable in the outwardly facing semi-cylindrical recesses, a third toothed gear having internal gear teeth meshing with the third ring of gear teeth and consisting of a plurality of pin supported sleeve rollers engageable in the outwardly facing semi-cylindrical recesses, the third toothed gear being rotatably driven by the member, means for selectively securing the first toothed gear and the second toothed gear against rotation to cause the same to react against the member to control the rotation of the member, the first toothed gear having less teeth than the first ring of gear teeth for rotating the member in the same direction as the shaft is rotated but at a reduced speed when the first toothed gear is secured against rotation, the second toothed gear having more teeth than the second ring of gear teeth for rotating the member in the opposite direction as the shaft is rotated but at a reduced speed when the second toothed gear is secured against rotation, the third toothed gear having more teeth than the third ring of gear teeth for rotating the third toothed gear with respect to the member in the same direction as the shaft is rotated but at a reduced speed, the speed reduction ratio between the second toothed gear and the member being less than the speed reduction ratio between the member and the third toothed gear, whereby the third toothed gear is driven at one resultant speed which is the sum of the speeds of rotation of the member and of third toothed gear with respect to the member when the first toothed gear is secured against rotation, and whereby the third toothed gear is driven at another resultant speed which is the difference between the speeds of rotation of the member and of the third toothed gear with respect to the member when the second toothed gear is secured against rotation.

2,861,483
TRANSMISSION
Hans O. Schjolin, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 19, 1955, Serial No. 482,792
28 Claims. (Cl. 74—781)



1. In a transmission assembly, a housing, a drive and a driven shaft, a main clutch having a driving member rotatably connected with said drive shaft and a driven

ing a housing having a plurality of cylindrical openings operably connected to said reverse driving gear disposed

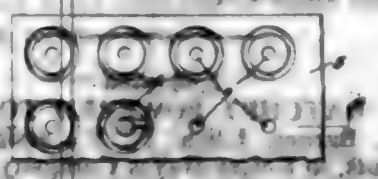
member, main clutch control element movable to engage and to disengage said clutch, a planetary gear set having a ring gear element, a sun gear element and a carrier element including planet pinions meshing with the ring and sun gear elements, one element of said planetary gear set being connected to said clutch driven member, a second element of said planetary gear set connected to said driven shaft, ratio change means including means operable in one position to connect two elements of said planetary gear set to provide one speed ratio and further means operable in another position to connect a third element and said housing to hold said third element stationary to provide another speed ratio, ratio control means connected to said ratio change means to normally position said ratio change means in said one or another position, and overcontrol means connected to and controlled by said main clutch control means to overrule said ratio control means to position said ratio change means in one of said positions regardless of the position being maintained by said ratio control means.

2,861,483

METHOD AND APPARATUS FOR FINISHING MOLD GROOVES

Olaf C. Boom, Hopkins, Minn.

Application January 13, 1953, Serial No. 330,653
2 Claims. (Cl. 76—107)



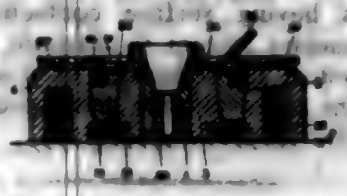
1. The method of cutting and finishing mold cavities consisting in initially cutting a cavity groove having a slightly smaller radius across the top than the ultimately desired radius, placing a ball of precisely the desired radius to be produced in said groove, moving said ball in said groove while applying downwardly directed pressure thereon and, while producing rotation of the ball in the groove, to slightly enlarge said groove and polish and harden the surface thereof.

2,861,484

DEVICES FOR EFFECTING ADJUSTMENTS IN TWO DIMENSIONS

Jack Allen Rance, Northolt, England, assignor to Ariesmec Limited, London, England, a British company

Application July 22, 1955, Serial No. 523,918
Claims priority, application Great Britain July 22, 1954
4 Claims. (Cl. 77—62)



1. An indexing device for varying the position of a part in two dimensions relative to a work piece, said device comprising a base member attachable to said work piece and having a circular bore therethrough, an inner member having a circular outer periphery and a circular bore therethrough for receiving said part in said bore, an outer member having a circular outer periphery and a circular bore therethrough, said outer member being rotatably received in the bore of the base member and said inner member being rotatably received in the bore of the outer member, the axis of the bore in the inner member being eccentric with respect to the outer periphery of the said member and the axis of the bore of the outer member being eccentric with respect to the outer periphery of the said member, the outer periphery of said outer member and the bore in said base member being correspondingly conical and the outer periphery of said inner member and the bore in said outer member being rorrespondingly conical, means for limiting axial movement of said inner member in one direction relative to said base member, the direction of the coning being such that axial pressure applied to said outer member in said one direction causes said outer member to bind both with said inner member and said base member, and a clamping ring in threaded relationship with said base member adapted to abut against said outer member and urge it into said one direction in response to a rotation thereof, whereby by rotating the inner member and the outer member relative to each other and the base member, the axis of the bore in the inner member may be positioned in coincidence with a selected point on the work piece.

2,861,485

WORKHOLDER AND HOLE LOCATER

Anthony J. Pedevano, Worcester, Mass.

Application May 24, 1957, Serial No. 661,468
5 Claims. (Cl. 77—63)

1. A device of the class described comprising a sub-base, ways thereon, a sub-plate slidable in the ways on the sub-base, a second base fixed with respect to the sub-plate, ways on the second base, a second plate slidable in the ways on the second base, said sub-plate and second plate ways being disposed at angles to each other, an anvil secured to the sub-base blocking the ways thereon and a second anvil secured to the second base and blocking the ways thereon, said anvils extending into the paths of the respective plates and positively positioning the plates in predetermined relationship in the respective ways, gauge block devices disposable between each anvil and the respective plate for accurately determining the distance of each plate from its respective anvil in order to accurately locate a piece of work on the second plate with respect to a fixed point, and means removably securing the anvils in position.

2,861,486

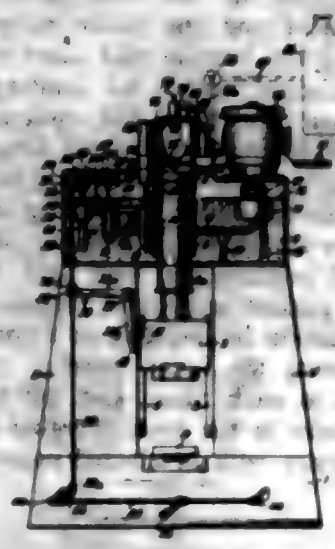
HYDRAULICALLY ACTUATED DROP HAMMER

Will Brüser, Coburg, Germany, assignor to Langenstein & Schemmann A. G., Ernstthütte-Coburg, Germany

Application May 14, 1956, Serial No. 584,771
Claims priority, application Germany May 13, 1955
9 Claims. (Cl. 78—42)

1. A hydraulically actuated drop hammer, including a vertically disposed cylinder, a piston movable in the cylinder, a tup carried by the piston, an anvil beneath the tup for supporting a workpiece during a hammering operation, means operable to establish a flow of liquid under pressure into the lower portion of the cylinder to

raise the piston and thus the tup including control means operable to permit liquid to exhaust from the cylinder beneath the piston whereby the piston and tup descend during a hammering operation and the piston displaces the liquid from the cylinder, so that gaseous medium in the cylinder above the piston being compressed during the raising of the piston and expanding as the piston descends, compressed gaseous medium containing means



operably associated with the cylinder above the upper limit of piston travel for receiving a supply of gaseous medium under such pressure as to be greater than atmospheric pressure even when the piston is in its lowermost position, and controllable flow-control means for controlling communication between said containing means and cylinder for controllably increasing the pressure of gaseous medium acting on the piston during its descent.

2,861,487

SPLIT TAPERED DIE POSITIONING CARRIAGE FOR SPLIT TAPERED DIES

Walter J. Reeman, Whitesboro, N. Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Application April 13, 1953, Serial No. 348,535
3 Claims. (Cl. 78—82)

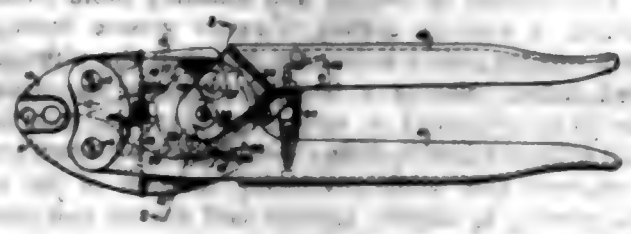
1. A device for driving the ends of two metal work pieces together under high pressure and confined flow to produce a butt weld union at a temperature less than the thermal weld temperature of the metal, comprising, first and second carriage members, said carriage members each having a front face wall, drive means for forcing said face walls toward one another along a fixed path under high pressure, said first carriage having a tapered die bed cavity opening from said face wall thereof and tapering rearwardly therefrom, said second carriage having a tapered die bed cavity opening from said face wall thereof and tapering rearwardly therefrom, a longitudinal slit in each said carriage opening into said die bed thereof, a first split tapered die in the bed cavity of said first carriage member, a second split tapered die in the bed cavity of said second carriage member, the taper of said split dies and the carriage bed cavities being non-locking, said first split tapered die having a split work piece clamping passageway extending longitudinally therethrough, recessed upset cavity surfaces on the face of said first split dies adjacent said passageway, said second split tapered die having a split work piece clamping passageway extending longitudinally therethrough, recessed upset cavity surfaces on the face of said second split dies adjacent said passageway, said first and second split dies opening laterally with respect to said slit of the carriage, die opening and retaining means for each carriage, each said means including a first and a second longitudinally reciprocable member extending longitudinally along opposite sides of said longitudinal slit, cam track and cam follower surfaces interconnecting each said longitudinally reciprocable member to the carriage, each said cam track and cam follower having an operating path extending toward said carriage face wall and diverging outwardly from the fixed path of said carriage, and interconnecting drive means from each said longitudinally reciprocable member to an adjacent split die portion, whereby movement of the first and second longitudinally reciprocable members toward the carriage face wall will exert a lateral opening force on said split dies.

2,861,488

RATCHET POWERED TOOL

William A. Barnes, Utica, N. Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Application January 17, 1956, Serial No. 559,605
7 Claims. (Cl. 81—15)



1. A ratchet device for cyclic drive actuation, comprising, a plurality of drive receiving members in spaced relationship, each drive receiving member having a driven cam surface, each drive receiving member having a work cycle path, the plurality of driven cam surfaces jointly defining a drive field area, a plurality of rollable members in a planetary system in said work field, said rollable members including planetary drive members to contact and actuate said driven cam surfaces and the remainder of said rollable members and in surface contact therewith being equidistant from the planetary members, said rollable members having surface contacting relationship across the planetary system to transmit reaction forces through the system for resistance externally of the system, and means to revolvably drive said planetary system in said drive field.

2,861,489

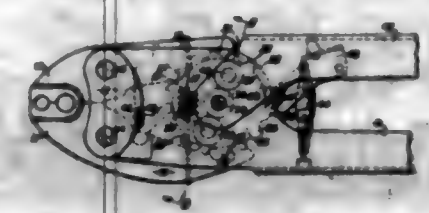
PIVOT LEVER RETAINER FOR RATCHET POWERED DEVICE

William A. Barnes, Utica, N. Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Application January 30, 1956, Serial No. 563,253
7 Claims. (Cl. 81—15)

1. In a device having operating mechanism powered by a ratchet wheel and a cooperating lever and pawl,

said lever having a spring urging the lever in a reverse pawl indexing direction, said lever having a drive movement opposed to said reverse direction, said lever movable to a drive limit position in said drive movement, the provision of means to hold said lever in said drive limit position, comprising, the provision of a plurality of teeth on said ratchet wheel, each tooth having a drive side engageable by said pawl upon drive movement of said lever, each tooth having a pawl indexing cam side engageable by said pawl upon movement of said lever in said reverse direction, means urging said pawl toward



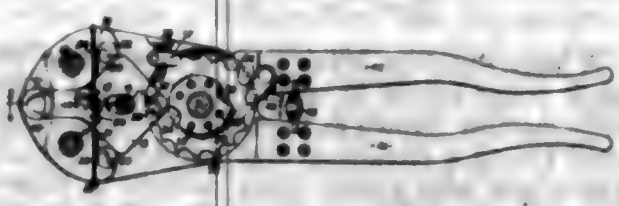
said teeth in a direction opposed to said cam indexing movement, means limiting said ratchet wheel to one direction of rotation resultant from said drive movement, said teeth of the ratchet wheel having a pawl-holding tooth serving as a series end tooth, said series end tooth having a drive side and a catch back side whereby the force required to index the pawl past the series end tooth is greater than the force required to index the pawl past the other teeth, the lever spring having a pawl indexing force less than the force required to index the pawl past the pawl-holding tooth.

2,861,490

RATCHET AND CAM ACTUATED TOOL

Walter J. Rozmus, Whitesboro, N. Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Application February 8, 1956, Serial No. 564,165
1 Claim. (Cl. 81—15)



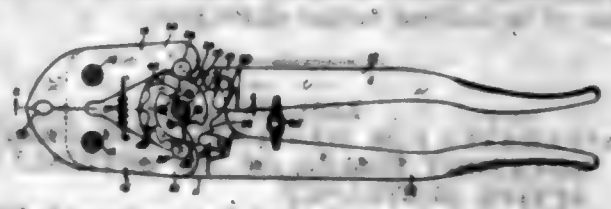
A three jaw work tool, comprising, a first jaw mounted for longitudinal reciprocable movement, second and third jaws pivoted laterally of said first jaw for closing movement toward the longitudinal path of said first jaw, said first jaw having first and second cam drive surfaces, said second jaw having a cam follower riding said first cam drive surface, said third jaw having a cam follower riding said second cam drive surface, said first and second cam surfaces and the cam followers being formed with respect to the three jaws to cause cooperative workpiece action of the jaws upon longitudinal reciprocation of the first jaw, and a ratchet powered drive for said first jaw, said ratchet powered drive having a rotatable cam structure presenting a cam surface revolvable about an axis, said cam surface having a drive surface of gradual divergence from a true circular path, said drive surface beginning and ending at a recess pocket, a drive receiving cam rider carried by said first jaw, rotation of said cam structure thereby providing a fast movement of said rider and said first jaw from a position in said recess pocket at the start of the cam surface followed by a gradual movement pattern and concluding in a fast return movement by dropping into the recess pocket at the end of the cam surface, a rotatable ratchet wheel drivingly connected to said cam structure, and a lever with pawl means to drive said ratchet wheel.

2,861,491

RATCHET AND CAM ACTUATED TOOL

Walter J. Rozmus, Whitesboro, N. Y., assignor to Kelsey-Hayes Company

Original application February 8, 1956, Serial No. 564,165. Divided and this application January 2, 1958, Serial No. 706,800
2 Claims. (Cl. 81—15)



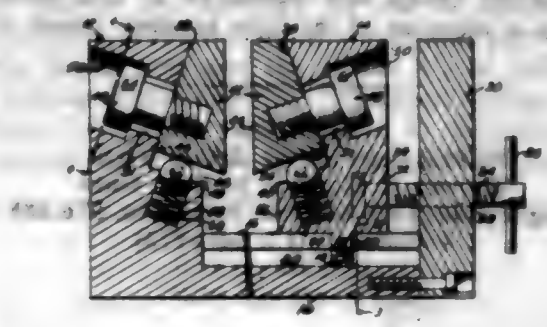
1. A work performing tool, comprising, a first and a second pivoted and relatively closable jaw, said first jaw having a work performing portion and a drive receiving lever portion with a pivot therebetween, said second jaw having a work performing portion and a drive receiving lever portion with a pivot therebetween, each drive receiving lever portion being mounted for movement in a work cycle path, the two drive receiving lever portions being laterally spaced and jointly defining an included field area, a rotatable cam member in said field area, said cam member having a peripheral cam surface revolvable about an axis of rotation, said cam surface composed of a first and a second drive surface area with a first and a second pocket recess spaced between the first and second drive surfaces, each of said first and second drive surfaces beginning at one of said pocket recesses and ending at the other, said first jaw drive receiving lever portion having a cam rider, said second jaw drive receiving lever portion having a cam rider, means urging said cam riders toward the surface of said cam, a rotatable ratchet wheel drivingly connected to said cam member, and a lever and pawl in drive imparting relationship to drive said ratchet wheel.

2,861,492

VISE-JAW FACE PLATE SLIDABLE AND PIVOTABLE ON BACKWARDLY SLOPING JAW SURFACE

Alfred P. Hokanson, Hyde Park, Mass.

Application September 8, 1955, Serial No. 533,137
6 Claims. (Cl. 81—38)

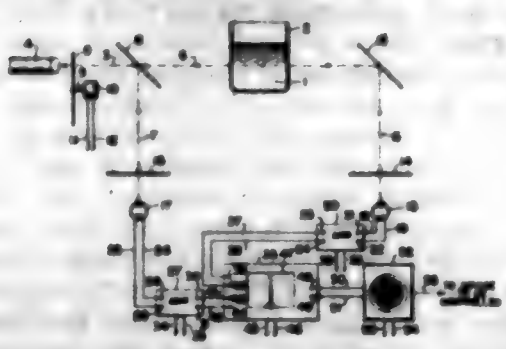


1. In combination with a vise having a fixed and a movable jaw and a bed, said movable jaw being confined to movement translationally toward and away from the fixed jaw; apparatus comprising first inclined surfaces formed on the inner walls of the jaws, said first inclined surfaces extending downwardly and outwardly from the tops of the jaws and terminating in second surfaces perpendicular to the first surfaces and extending to the inner walls of the jaws, gripping members having inclined surfaces formed on their outer walls and mating with the inclined surfaces of the jaws and having bottom surfaces parallel to the second surfaces in the jaws, said gripping members having vertical inner walls disposed inwardly of the inner walls of the jaws, vertically elongated openings extending through the jaws, said openings terminating in and being normal to the inclined surfaces of the jaws through which they extend, screws having portions of

tapering rearwardly therefrom, said second carriage hav- by a ratchet wheel and a cooperating lever and pawl,

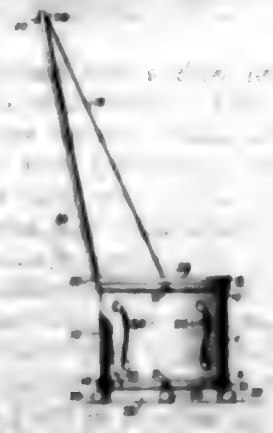
lesser diameter than the width of said elongated openings, said screws being secured to the gripping members and said portions being movable vertically and horizontally in the openings whereby said gripping members may move upwardly, downwardly and pivotally on the inclined walls of the jaws, and means for yieldably urging the gripping members to a raised position against the upper portion of the inclined surface of the jaws.

2,861,493
APPARATUS FOR MEASURING THE LIGHT ROTATORY POWER OF AN OPTICALLY ACTIVE SUBSTANCE
Gustalf F. Lundegren, Beaumont, Tex., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application January 29, 1953, Serial No. 333,911
12 Claims. (Cl. 88—14)



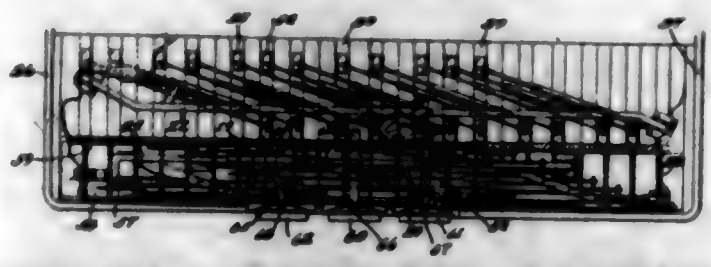
1. Apparatus for measuring the light rotatory power of an optically active substance, comprising means adapted to produce first and second beams of plane polarized light rotating at a selected rate, first and second plane polarizing devices adapted to intercept said first and second beams, respectively, and adapted to cause said beams to pulsate in intensity at a frequency related to said rate of rotation, means adapted to support an optically active substance to be analyzed in the path of one of said beams before interception by the corresponding one of said devices, thereby to cause the pulsations of said first and second pulsating beams to differ in phase by an amount dependent upon the amount which said substance rotates the plane of polarization of said one of said beams, and phase responsive means adapted to receive said pulsating beams and responsive to said phase difference as a measure of the light rotatory power of said substance.

2,861,494
SINGLE STRING BASS VIOL
Thomas E. Guthrie, Mentor, Ohio
Application April 6, 1956, Serial No. 576,688
4 Claims. (Cl. 84—173)



1. A musical instrument of the single string bass type comprising, a resonance body member of generally cylindrical form, said body member having a fibrous disc-like head and a cylindrical side, said head and side being connected by a metallic rim having an upstanding fin portion, an elongated control member pivotally mounted on said fin portion, and a vibratable string interconnecting the outer end of said control member and a central portion of said head.

2,861,495
DOUBLE OCTAVE MECHANISM FOR ACCORDIONS
Marvin D. Ekstrom, Peterson, Iowa
Application May 3, 1954, Serial No. 582,461
6 Claims. (Cl. 84—376)

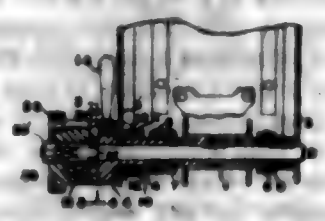


1. A coupling attachment for an accordion comprising an accordion keyboard, a telescoping rod positioned with one end anchored to a key of the accordion keyboard and with the extended end thereof positioned below a key of an adjoining octave of the keyboard, and means for engaging the extended end of the rod with a key of the adjoining octave.

2,861,496
GLARE SHIELDING STRUCTURE
Mathew H. Thornton, St. Paul, Minn.
Application June 17, 1954, Serial No. 437,422
6 Claims. (Cl. 88—41)

1. A glare shielding device used in connection with a spectacle frame having in combination, a glare shielding lens-like member formed as a segment of non-transparent material having a rectilinear edge portion of substantial thickness, said edge portion being concave in transverse section thus forming a pair of spaced parallel edges, said edges being disposed in substantially a vertical direction, means carried by said frame for holding said member in front of a lens opening in said frame, said means being adapted for swinging said member about an axis extending longitudinally of said edges whereby said member will be swung about said axis to align said spaced edges to form a sharp line in the field of vision through said lens opening, and means on said frame for moving said member longitudinally of said frame.

2,861,497
FILM PROJECTOR INDEXING MEANS
David Pelton, Jackson Heights, N. Y., assignor to Viewlex, Inc., a corporation of New York
Application June 7, 1956, Serial No. 590,024
4 Claims. (Cl. 88—18)



4. In a film strip indexing mechanism, means to index 90° and 180° comprising a rotatably mounted shaft,

drive said ratchet wheel.

through which they extend, screws having portions of

a film sprocket mounted on said shaft, a head member adjustably connected to said sprocket, the face of said head member being notched along a diameter thereof, a knob on the outer end of said shaft having a face in abutting relation to the face of said head, a first ball detent mounted in said knob, a second ball detent adjustably mounted in said knob on a radius 90° from the radius on which said first ball detent is located, and means in said knob to retract said second ball detent.

2,861,498

APPARATUS FOR KOEHLER ILLUMINATION OF PHASE CONTRAST TOP LIGHT MICROSCOPES

Walter Klein, Wetzlar, Germany, assignor to Ernst Leitz, G. m. b. H., Wetzlar, Germany, a corporation of Germany

Application April 12, 1954, Serial No. 422,612
Claims priority, application Germany July 28, 1953
16 Claims. (Cl. 88—39)

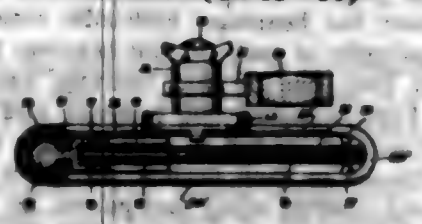
1. Apparatus for Koehler illumination of phase contrast top light microscopes with a series of different objectives, each objective containing a phase plate in the exit pupil of the optical system comprising the microscope objective, the reflecting surface of the specimen and an illuminating lens system, the exit pupil and phase plate of each objective being at a different vertical position from that of the others; comprising an angular aperture diaphragm to be projected at said phase-plates; an object plane; a field of view diaphragm to be projected at said object plane a negative lens near the aperture diaphragm and a negative lens near the field of view diaphragm; a lamp; and a lens system consisting of a collector lens to condense light from said lamp to said angular aperture, a magnifying lens slidable between said two diaphragms and a lens between said field of view diaphragm and said objective projecting the said field of view diaphragm at said object plane and the image of said angular aperture formed by said magnifying lens at the phase plate of the objective.

2,861,499

READING DEVICE FOR CHARACTERS REPRESENTED ON A PLATE IN MICRO-REPRODUCTION

Theodor Körner, Stuttgart, and Wilhelm Friedrich Pohl, Schwäbisch Gmünd, Germany

Application February 9, 1956, Serial No. 457,824
Claims priority, application Germany May 21, 1954
11 Claims. (Cl. 88—39)



1. A reading device for reading micro reproductions located on opposite faces of a plate comprising, in combination, elongated track means having a pair of guide portions and at least one connecting portion connecting said guide portions, said track means adapted to be mounted on the plate with said guide portions respectively extending substantially parallel to and at least partly over opposite faces of the plate and said connecting portion straddling one edge of the plate when said track means are mounted on the plate; a len carrier slidably mounted on said elongated track means for sliding movement along said guide portions and said connecting portion thereof; and lens means mounted on said lens carrier, whereby said lens carrier may be moved along said track means from one face of the plate to the other face thereof so that micro reproductions on either side of the plate may be read through said lens means.

2,861,500

OBJECTIVE LENS OF EXTREMELY HIGH RELATIVE APERTURE

Albrecht Wilhelm Tronnier, New York, N. Y., assignor to Farrand Optical Co., Inc., New York, N. Y., a corporation of New York

Application November 14, 1955, Serial No. 546,381
6 Claims. (Cl. 88—57)

1. A high speed optical objective system comprising, from front to back, a doublet of meniscus shape and positive over-all power including a positive biconvex front element and a biconcave negative rear element, first and second positive meniscus components having convex front surfaces, a negative component having surfaces of unequal curvature, and, behind the diaphragm position, a positive rear component having surfaces of unequal curvature, the sum of the surface powers of the outer surfaces of the doublet lying between 0.16 and 0.40 times the total power of the system and between 0.24 and 0.48 times the sum of the surface powers of the second positive meniscus component, the sum of the surface powers of the first positive meniscus component lying between 0.60 and 1.40 times the said sum of the surface powers of the doublet, the radii R_3, R_5 and R_8 of the convex front surfaces of the two positive meniscus and rear components respectively and the radius R'_4 of the concave rear surface of the negative component having surfaces of unequal curvature being related to the radius R_1 of the convex front surface of the doublet as follows:

$$0.56\,R_1<R_3<0.88\,R_1$$
$$0.36\,R_1<R_5<0.56\,R_1$$
$$0.18\,R_1<R'_4<0.36\,R_1$$
$$0.30\,R_1<R_8<0.90\,R_1$$

2,861,501

PORTABLE LIGHT REFLECTOR WITH MAGNIFYING GLASS

George P. Strelnikoff, Stamford, Conn.

Application July 9, 1956, Serial No. 442,285
7 Claims. (Cl. 88—97)

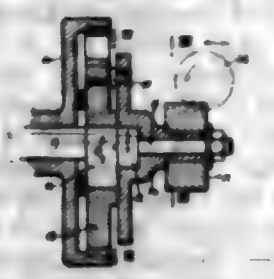
1. An industrial portable light reflector comprising a mirror having exposed opposite sides each operable as a light reflector to direct a beam of light to work being processed in a machine, said mirror including a clear portion offset laterally from the center of the mirror, a magnifying lens over the clear portion in position to observe the area on which the light beam is directed, means mounting the mirror for turning movements about a center axis at right angles to the plane of the mirror to position the lens at different angular positions about the

connected by a flexible film having an opening in axis 90° and 180° comprising a rotatably mounted shaft,

center of the mirror, a permanent magnetic means having exposed surface areas of opposite polarity whereby it may be supported on the machine, and a supporting means mounting the mirror and lens on the magnetic means for

adjustment to different positions relative thereto including connected members one of which has a rubber covered ball with the rubber fixed to the ball and the other has a forked end gripping this ball.

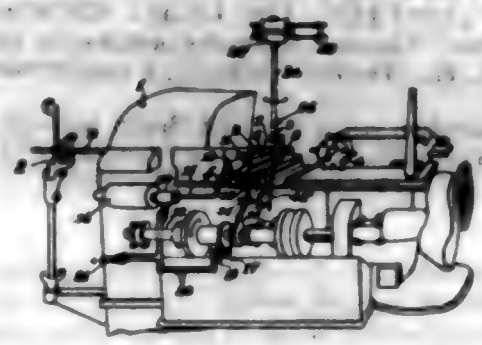
2,861,502
DEVICES FOR CUTTING AND GENERATING HYPOCYCLOIDAL GEARS
Jacques Jean Caubet, Saint-Chamond, France
Application September 25, 1956, Serial No. 611,909
Claims priority, application France October 11, 1955
2 Claims. (Cl. 90—3)



1. A device for presenting to a cutting tool, gears with hypocycloidal generation of the type in which an internal gear with $(m-1)$ teeth is associated with an external gear with m teeth, the two gears being constantly in engagement with their teeth tangential at the points of contact, comprising a shaft having first and second successive eccentric portions, said shaft carrying a fixed wheel with internal spur teeth, the first eccentric portion carrying a wheel with external teeth engaging with the said fixed wheel with internal teeth, the second portion being eccentric by the difference of the diameters of the hypocycloidal gears and carrying the blank support, and pivoted crank arms of fixed length coupling the support to the wheel with external teeth.

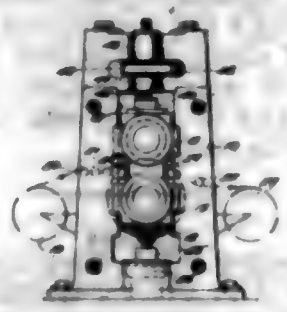
2,861,503
COMPOUND SLIDE MILLING ATTACHMENT
Bernie L. Lettner, Ferndale, and Carl R. Chafy, Royal Oak, Mich., assignors to Lettner Bros. Machine Co., Ferndale, Mich., a partnership
Application February 23, 1955, Serial No. 489,904
7 Claims. (Cl. 90—15)

1. A machine having a frame, a reciprocatory slide secured to said frame, means to actuate said slide, a tool-carrying turret rotatably mounted on said frame adjacent said slide, said turret being rotatable on an axis parallel to the direction of movement of said slide, a second reciprocatory slide secured to said first slide and movable in the same direction, a supporting means fixed to said first slide, a support fixed to said second slide in spaced relation to said supporting means, an arbor rotatably mounted on said support and projecting outwardly therefrom, a plurality of axially spaced cutting means secured on said arbor adjacent its inner end, means connected to said projecting end of said arbor to impart rotary movement to said arbor and said cutting means, automatic means carried by said supporting means and operatively connected to said support on said second slide to move it with respect to said first



slide, said last-mentioned means comprising a fluid chamber carried by said supporting means, a fluid pressure responsive member in said chamber, a rod connected at one end to said pressure responsive member and at its other end to said support, a second fluid chamber carried by said frame, a pipe connecting said chambers so that fluid in said second chamber may be conducted to said first chamber to actuate said fluid pressure responsive member to move said second slide away from said supporting means, and automatic means to return said second slide to its original position.

2,861,504
PRESSURE REGULATED CALENDER TO INSURE EQUAL NIP PRESSURE AT ALL POINTS
Thomas E. Kane, Mansfield, Mass.
Application October 26, 1956, Serial No. 618,569
3 Claims. (Cl. 92—75)

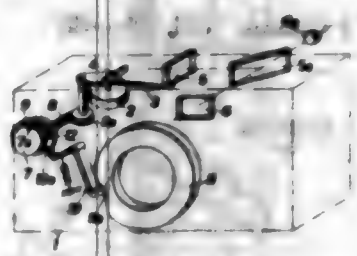


1. A calender comprising spaced frames each provided with vertical guides, bottom roll bearings in each frame slidable along said guides, a bottom roll in said bearings, a stop in the path of movement of each of said bearings located above the bearings, hydraulic means to apply pressure upwardly to each of said bearings to constantly maintain at least one of said bearings against its stop during the functioning of said calender said means comprising a branched conduit to each bearing with pressure indicating means in each branch, an upper roll bearing in each frame slidable along said guides, an upper roll in the last said bearings, means to apply downward pressure to each of said upper roll bearings in an amount less than the pressure applied by said hydraulic means and in varying amounts to cause said indicating means to register substantially the same to provide like pressures between the ends of the rolls.

2,861,535
PHOTOGRAPHIC EXPOSURE-TIME MEASURING DEVICE

Alfred Wihlter and Willy Kaden, Munich, Germany, assignors to AGFA Aktiengesellschaft

Application March 10, 1954, Serial No. 415,341
Claims priority, application Germany March 30, 1953
10 Claims. (Cl. 95—10)

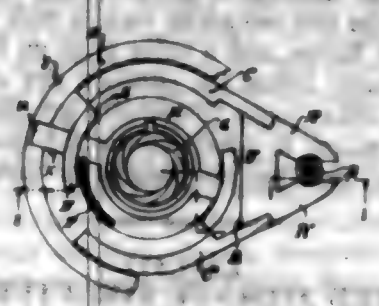


1. In a photographic camera, a shutter with a shutter-time setting means adapted to be set for "instantaneous" exposure and for "bulb" exposure, a means for indicating "bulb" exposure times comprising an exposure meter having a fixed index mark and a movable indicator, optical means for producing an image of said movable indicator, means operatively associated with said exposure meter for varying the position of said indicator in order to move said image of said indicator into a predetermined relationship to said fixed index mark when the exposure is to be made as an "instantaneous" exposure, movable means operatively associated with said optical means for moving at least a part of said optical means in order to move said image of said indicator into said predetermined relationship when the exposure is to be made as a "bulb" exposure, locking means operatively associated with said shutter-time setting means and adapted to allow movement of said movable means only when said shutter-time setting means is set for said "bulb" exposure, and means associated with said movable means for measuring the amount of movement of said movable means to move said image of said indicator into said predetermined relationship, said amount of movement of said movable means being a function of said "bulb" exposure time.

2,861,536
MEANS FOR AUTOMATICALLY ADJUSTING AN OBJECTIVE DIAPHRAGM

Martin Leder and Rudolf Haupt, Gottingen-Weende, Germany, assignors to ISCO Optische Werke G. m. b. H., Gottingen-Weende, Germany

Application January 13, 1955, Serial No. 481,612
Claims priority, application Germany January 21, 1954
2 Claims. (Cl. 95—64)

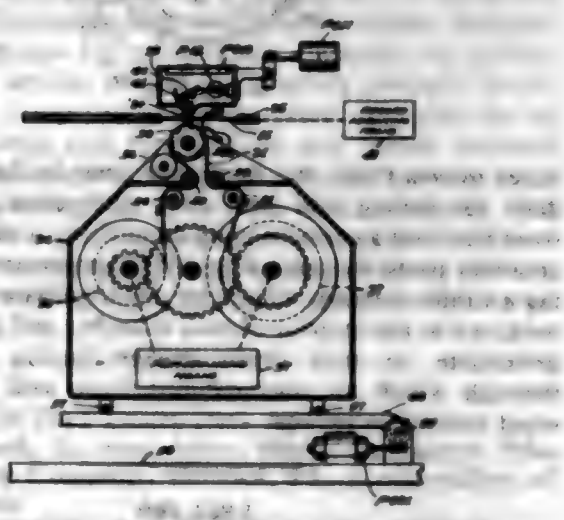


1. In a photographic camera, in combination, an adjustable diaphragm, a control element for said diaphragm, fixed stop means co-operating with said control element and defining a normal position for said diaphragm, adjustable stop means cooperating with said control element and defining a preselected off-normal position for said diaphragm, a magnet, said control element including an armature mounted adjacent said magnet and adapted to be attracted thereby into a position of contact between said control element and one of said stop means, return means for exerting upon said control element a restoring force urging said control element into contact with the other of said stop means, an actuating member displaceable between a first and a second position, and operating means controlled by said actuating member for varying the effective field strength of said magnet to a degree sufficient to make its attracting force alternately superior and inferior to said restoring force, thereby maintaining said control element in contact with said one and said other stop means in said first and second position, respectively, of said actuating member.

2,861,587
SEISMOGRAPH PROFILE PRINTER

Elton M. Palmer, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application January 24, 1956, Serial No. 561,685
18 Claims. (Cl. 95—75)



1. Apparatus for making a seismic profile from selected longitudinal strips of a seismogram which comprises means supporting a photographic medium on which the profile is to be made, a restricted light source, a carriage for holding an elongate transparent seismogram between said light source and said medium in contact with the latter, automatic means connected to said light source repeatedly moving said light source longitudinally with respect to said medium to photographically expose said medium through the selected longitudinal strips of the seismogram, automatic positioning means connected to said carriage and controlled by said light source moving means adapted to effect transverse positioning of said carriage with respect to said medium-supporting means preceding selected exposure traverses of said light source to successively present the selected longitudinal strips for photographic reproduction, and means connected to said carriage longitudinally moving said carriage so that the longitudinal motion thereof is in varying ratio with respect to motion of said light source and is dependent on the position of said light source in the exposure-traverse thereof.

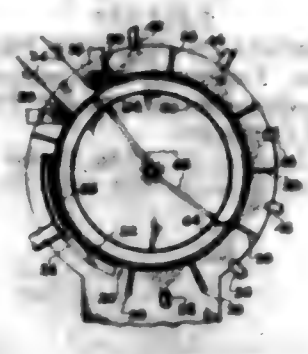
2,861,598
PROCESSING MACHINE FOR SENSITIZED PAPER AND THE LIKE

Harlan L. Bensinger, Walter Erhelmann, and Lorand Warga, Los Angeles, Calif., assignors to Unicorn Engineering Corporation, Los Angeles, Calif., a corporation of California

Application December 10, 1956, Serial No. 627,302
6 Claims. (Cl. 95—94)

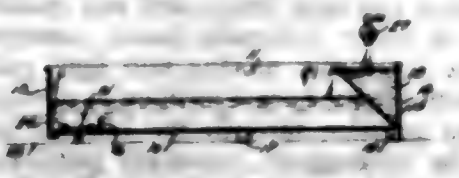
1. A photographic processing machine for treating a moving web of material bearing on one side an exposed, sensitized emulsion, comprising: frame means, rotary drum means journalled on said frame means about which said web is adapted to be trained with its emulsion side away from the drum means, a plurality of partitions

mounted on said frame means in circumferentially spaced, radial planes of said drum means and defining therebetween a series of treatment zones, a series of separate spray nozzles in said treatment zones for spraying different photographic processing liquids toward said drum means, said partitions confining the spray from each nozzle to the respective treatment zone and having radially inner surfaces engageable with a web trained about said drum means for removing liquid from the web as the



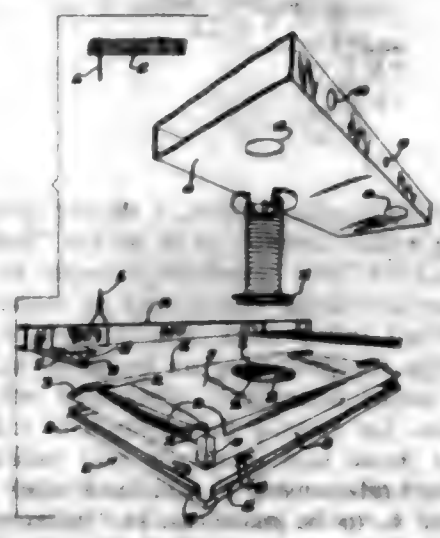
latter moves from one treatment zone to the next, and a drier for drying said web after emergence of the latter from the final treatment zone comprising a curved plenum chamber partially encircling said drum means and including an inlet through which air under pressure may be introduced to the interior of said chamber and a curved wall proximate to said drum means having perforations through which air may exhaust from said chamber toward said drum means.

2,861,589
SELF-OPERATING PHOTOPRINT WASHER
Reb B. Dodson, Post, Tex.
Application November 20, 1956, Serial No. 623,345
1 Claim. (Cl. 95—99)



In a photographic washer, the combination which comprises an elongated tray having a bottom with side and end walls with an opening in the bottom and spaced inwardly from one end, said tray also having a transversely disposed baffle spaced inwardly from said opening and a forwardly and downwardly inclined partition therein providing a compartment in the end opposite to that in which the opening is positioned above the plane of the bottom, a disc positioned on the bottom of the tray adjacent one end thereof, said disc having a stem extending through said opening providing a valve, the stem of the valve being positioned to engage a surface upon which the tray is positioned to open the valve, a plurality of radially spaced vertically disposed lugs positioned on the bottom of the tray in circumjacent relation to said disc to stabilize the movement of said disc, feet secured to the lower surface of the bottom of the tray at the opposite corners thereof at that end of the tray in which the disc is positioned, a transversely disposed cleat mounted on the lower surface of the bottom of the tray and positioned below the compartment, and another transversely disposed cleat mounted on the lower surface of the bottom of the tray and positioned a greater distance from the end in which the valve is positioned than from the end in which the compartment is positioned.

2,861,510
VENTILATING APPARATUS
William A. Wells, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey
Original application April 23, 1953, Serial No. 350,607, now Patent No. 2,775,927, dated January 1, 1957. Divided and this application July 5, 1956, Serial No. 599,235
9 Claims. (Cl. 98—40)



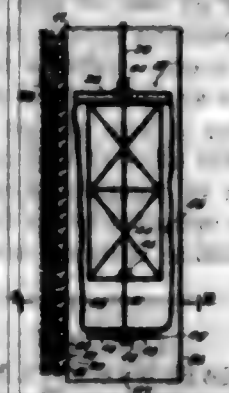
1. A ventilating apparatus, comprising, a duct carrying pressurized air and having an outlet aperture in one wall thereof, a first collar having a flange around said outlet aperture, said flange having a plurality of circumferentially spaced openings, a spring clip for each opening having a first leg overlying one side of said flange and a lug formed in said first leg and received in a corresponding opening, said clip having a second leg overlying the other side of said flange and extending beyond said flange, said second leg forming a radially outwardly retainer portion for clip-on engagement with the edges of said opening in said one wall, an air distributor unit having an inlet aperture formed therein, a second collar forming a flange around said inlet aperture, said second collar and said air distributor unit having a plurality of circumferentially spaced openings and a corresponding plurality of struck-out lugs formed therein and operatively disposed therebetween for effecting turn-on engagement of said second collar with said air distributor unit at said edges of said inlet aperture, a flexible tubular sleeve receiving said collars at opposite ends thereof and in firm assembly therewith, bracket means bridging one of said collars and having adjustment nut means mounted thereon, a bolt threaded into said adjustment nut means and advanced axially with respect to the corresponding flange, and a valve plate on the end of said bolt to selectively adjust the effective size of the opening through the collar upon threadedly positioning the bolt and the nut means to admit controlled quantities of air from the duct into the air distributor unit.

2,861,511
AERATED STORAGE STRUCTURE FOR GRANULAR MATERIALS
Leo Littmann, Unterhaching near Munchen, Germany
Application May 21, 1954, Serial No. 431,545
Claims priority, application Germany May 27, 1953
6 Claims. (Cl. 98—58)

1. An aerated storage chamber for granulous goods, comprising: means defining a storage space adapted to receive said goods and comprising vertically extending gas permeable wall means; solid wall means disposed exteriorly of said permeable wall means and uniformly spaced therefrom, said solid wall means defining with said permeable, said solid wall means defining with said permeable wall means a vertically extending ventilation duct

element a restoring force urging said control element away from the drum means, a plurality of partitions

therebetween, the lower end of said duct being adapted to receive a gaseous medium under pressure for the aeration of said goods; an inflatable gas tight bag engageable with the walls of said duct and vertically displaceable in said duct when said bag is at least partially deflated; and inlet means communicating directly between the interior



of said bag and the portion of said duct immediately below said bag for admitting said gaseous medium under pressure into said interior of said bag for inflating said bag and confining said gaseous medium in said duct for flow through the permeable wall means thereof only in those portions of said duct not engaged by said inflated bag.

2,861,512

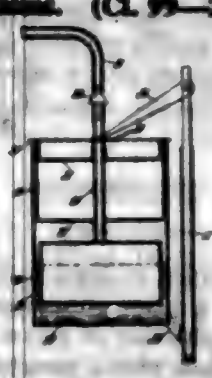
APPARATUS FOR MAKING BEVERAGES

Jonas Geoffrey Jenet, London, England

Application March 1, 1954, Serial No. 413,290

Claims priority, application Great Britain March 2, 1953

2 Claims. (Cl. 99—283)



1. Apparatus for making and dispensing beverage infusions comprising, in combination, a reservoir for the beverage infusion, automatic valve means for discharging a predetermined quantity of beverage from said reservoir, a perforated annular container for retaining a quantity of beverage forming material and disposed to deliver infusions thereof to said reservoir, sprayer means extending radially of said container and arranged to spray only one of a number of parts of the area of said perforated container at a time and to be movable peripherally with respect thereto, means responsive to operation of said automatic valve means for moving said sprayer into position to spray a part of said container other than the part thereof last sprayed, and means responsive to the level of beverage infusion in said reservoir for supplying hot liquid to said sprayer to flow through only that part of the beverage forming material carried at the particular part of said container with which said sprayer is then associated, for making and delivering to said reservoir a quantity of beverage infusion substantially equal to the predetermined quantity discharged therefrom by the operation of said automatic valve means, the means for supplying hot liquid to the sprayer comprising a pipe terminating above the centre of the container, a valve stem extending through the centre of said annular container and having a head for closing the end of said pipe and a float in said reservoir operatively associated with said valve stem.

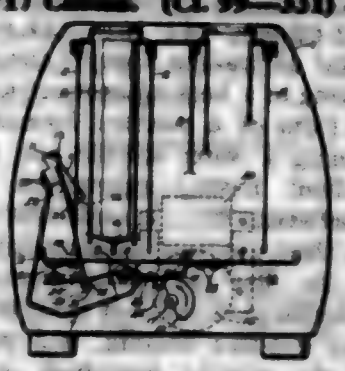
2,861,513

AUTOMATIC TOASTER

Walter R. Weeks, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Application January 23, 1957, Serial No. 635,728

17 Claims. (Cl. 99—331)



1. In a food cooking device or the like, electrical heating means, means for holding a food article to be cooked in heating relationship with said heating means, temperature-testing means for periodically engaging the surface of said food article, means for effecting periodic movement of said temperature-testing means into and out of engagement with said food article, and means actuated by said temperature-testing means during movement of said temperature-testing means out of engagement with said food article after having been in engagement therewith for de-energizing said heating means when the surface of said food article reaches a predetermined temperature.

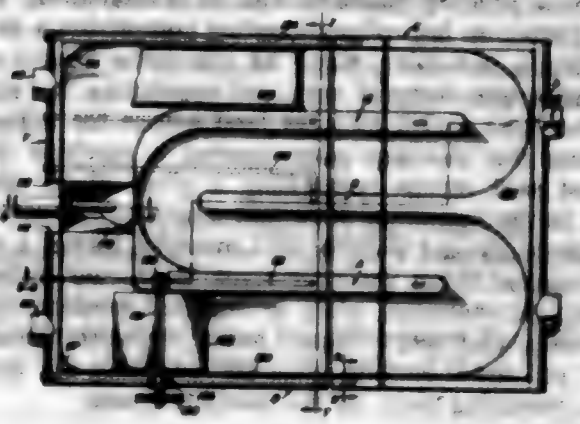
2,861,514

DEEP FAT COOKING APPARATUS

Charles E. Sech, Jr., Ann Arbor, Mich., assignor to Wise Potato Chip Company, Berwick, Pa., a corporation of Pennsylvania

Application March 4, 1957, Serial No. 643,810

4 Claims. (Cl. 99—406)



1. In a potato chip cooking apparatus, an oil containing pan adapted to receive cooking oil to a predetermined level, said pan having a double bottom and a plurality of baffles therein, said baffles dividing said pan into a series of zig-zag, interconnected channels, end and side jackets mounted on said pan, said baffles having horizontal partitions at the approximate height of said predetermined level, said end and side jackets extending upwardly to the height of said partitions, a potato discharge means leading into the first of said channels, means to circulate said oil and said potatoes through said series of channels, and means to heat said oil to a predetermined and constant temperature, said last-named means comprising heat exchange media at all contacting areas of said oil with said pan and including means to admit a vapor phase heating medium at elevated temperatures to said side and end jackets on said pan, said jackets communicating with said double bottom, said baffles having hollow, continuous interiors, said interiors interconnecting with said jackets, said partitions in said baffles preventing said medium from rising in said baffles to a height substantially above the predetermined level of said oil.

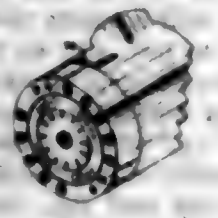
2,861,515
METHOD OF MAKING DUPLICATING MASTER
Harold R. Dalton, Jenkintown, Pa., assignor to Timefax Corporation, New York, N. Y., a corporation of New York
Application February 2, 1955, Serial No. 485,758
3 Claims. (Cl. 101—149.4)

1. The method of making a duplicating master which comprises applying to a backing an electrically conductive coating in the form of a mixture formed from a dried solution containing a water soluble and alcohol soluble waxlike ingredient having substantial flowability at temperatures between 75° C. and 100° C., powdered carbon, and a dye, applying another coating which is dye-free over the first mentioned coating, applying a point electric discharge in selected areas to form capillary recesses in said dye-free coating, and then heating the blank to melt the waxlike ingredient in said dye-containing coating to facilitate the passage of dye through said recesses in said dye-free coating to the surface of the blank or on to a receiving surface in contact with the blank.

2,861,516
INK ROLLER MOUNTING
Charles A. Harless, Riverside, Conn., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York
Application March 24, 1953, Serial No. 344,444
2 Claims. (Cl. 101—348)

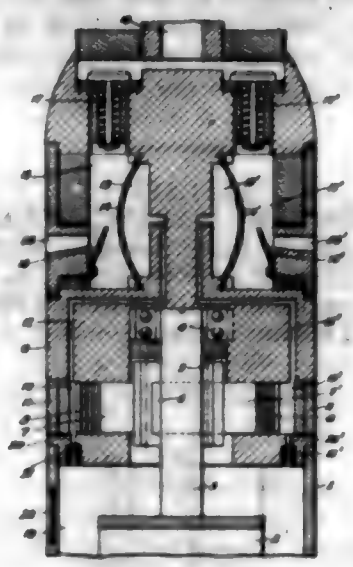
1. In a printing machine, and in combination, a machine frame, an ink roller mounting comprising a bracket including a mounting plate, an ink roller socket member and a web integral with and connecting the mounting plate and socket member, and means for adjustably fastening the mouting plate against a machine frame, the last said means comprising a pivot block slidably fitting in the mounting plate and attaching the mounting plate pivotally and slidably to a machine frame, a clamp screw spaced from the said pivot block and releasably holding the mounting plate in adjusted position against the frame, and screw means acting between the clamp screw and the mounting plate for adjusting the position of the mounting plate on the machine frame.

2,861,517
VANE PUMP
Darby B. Neff, Columbus, Ohio, assignor, by mesne assignments, to American Brake Shoe Company, New York, N. Y., a corporation of Delaware
Original application July 26, 1952, Serial No. 301,876. Divided and this application September 9, 1955, Serial No. 533,294
1 Claim. (Cl. 103—3)



A fluid pressure energy translating device including means forming a casing having two casing elements movable to two different positions relative to each other; a reversible rotary fluid pressure energy translating means within said casing; a shaft connected to rotate with said fluid pressure energy translating means; a pair of ports adapted to function reversely, one as an inlet, and one as an outlet port of said translating device, said casing elements being movable to said different positions to change the relative directions of fluid flow through said ports with respect to the directions of rotation of said shaft; two indicium on one of said casing elements including oppositely pointing arrows, and one indicium on the other of said casing elements including oppositely pointing arrows, the arrows on one of said elements indicating the direction of flow of fluid through said ports and the arrows on the other of said casing elements indicating the direction of rotation of said shaft to obtain either flow direction indicated by the flow direction arrows in each relative position of said casing elements.

2,861,518
DIAPHRAGM PUMP
Friedrich Wilhelm Pleuger, Hamburg, Germany
Application February 14, 1956, Serial No. 565,465
Claims priority, application Germany February 17, 1955
8 Claims. (Cl. 103—44)

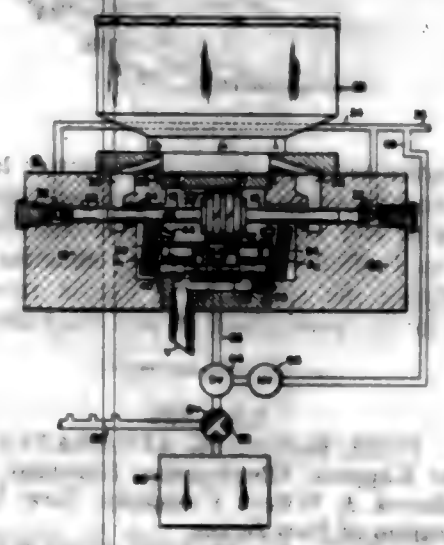


1. For the withdrawal of liquids upwardly through the riser of a deep well, a pump submerged in the liquid, said pump comprising, a plurality of piston and cylinder devices each in communication with a pressure chamber, pressure transfer liquid filling the cylinders and pressure chambers, a pumping chamber adjacent each pressure chamber, a flexible diaphragm separating each pressure chamber from the adjacent pumping chamber, each pumping chamber being adapted to draw from the well through first passage means and deliver to the well riser through second passage means, one-way inlet valve means in said first passage means and one-way outlet valve means in said second passage means, means for driving the pistons, a liquid-filled compensation chamber, the open ends of said cylinders being in communication with the compensation chamber, and a flexible compensation diaphragm in the wall of the compensation chamber, said compensation diaphragm being exposed to the pressure in the well outside the pump on one side and to the pressure of the liquid in the compensation chamber on the other side.

2,861,519
FLUID DRIVEN GREASE PUMP
Ernest A. Houle, Williamsburg, Pa., assignor to Quaker Sales Corporation, Johnstown, Pa., a corporation of Pennsylvania
Application November 28, 1956, Serial No. 625,163
12 Claims. (Cl. 103—51)

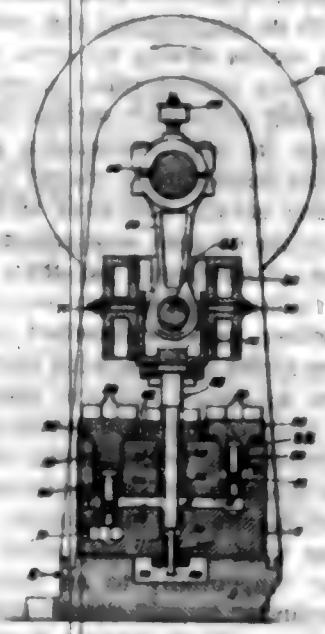
1. In a fluid driven pump, a main piston and a main cylinder divided thereby into opposite working chambers, a grease pump and cylinder disposed at each end of and operatively connected to the main piston, a one-

piece valve disposed in a transversely spaced arrangement to the path of the main piston and having fluid loaded plunger surfaces at its ends in constant communication with the piston working chamber at that end, a pair of chambered cylinder heads sealed to the opposite ends of the main cylinder and each formed with one of said grease cylinders and with a fulcrum chamber therein, a pair of fulcrumed structures rockable therein to operatively connect the main piston and the valve and



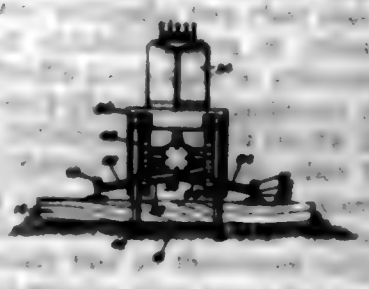
each including an elastic member having an end in the path of the main piston so as to be directly carried by the piston motion, and having a valve-shifting, opposite end disposed outside the path of motion of the piston for independent movement, said valve plunger surfaces being arranged at said opposite ends with respect to said fulcrumed structures so as to be spring loaded by the elastic member under a positive mechanical bias to constantly force the valve to shift when the main piston reaches the end of the stroke.

2,861,520
DIFFERENTIAL PISTON PUMP
Robert J. Lindsey, Cincinnati, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Application July 19, 1954, Serial No. 444,005
4 Claims. (Cl. 103—153)



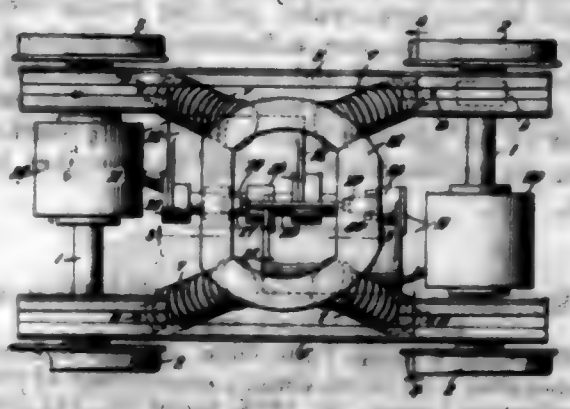
1. A reciprocating high pressure plunger type pump comprising in combination, a base, a guide frame mounted in said base, a head slidably received in said guide frame, power means operatively connected to the head to reciprocate the head in said guide frame, a working chamber in said base, said chamber having an inlet and an exhaust port, a plunger secured to and movable with said head, said plunger having a body portion and a tail portion of smaller diameter than said body portion, the juncture of said portions, being disposed in said chamber to form a high pressure working area therein, guide means and packing glands in the base above said chamber slidably receiving said body portion, and guide means and packing glands in the base below said chamber slidably receiving said tail portion.

2,861,521
RAILWAY TRACK ALIGNING DEVICE
Nicholas J. Vito, Buffalo, and August J. Galasso, Lancaster, N. Y.
Application October 29, 1953, Serial No. 388,938
5 Claims. (Cl. 104—6)



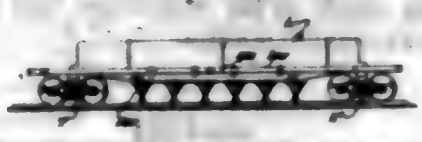
1. A railway track aligning device comprising an elongated rigid frame, endless tracks mounted on opposite sides of said frame in supporting relation to said frame for moving said frame along a roadbed, driving means mounted on said frame and operatively connected to said endless tracks, combined lifting and anchoring jacks rigidly mounted on said frame adjacent the corners of said frame for vertically moving said frame and said endless tracks to completely lift said frame and said endless track off of the roadbed, an aligning ram mounted on and directly carried by said frame and extending transversely of said frame, said aligning ram being adapted to engage a rail at right angles to the longitudinal axis thereof.

2,861,523
LIGHT-WEIGHT RAIL TRUCK
William T. Rossell, New York, N. Y., assignor to Transit Research Corporation, New York, N. Y., a corporation of New York
Application November 13, 1956, Serial No. 621,737
11 Claims. (Cl. 105—171)



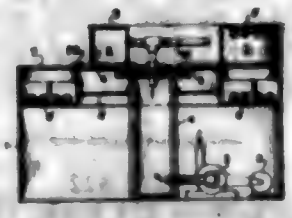
1. In a rail truck, spaced axles each having a pair of spaced journal bearings thereon, a truck frame supported by said journal bearings and car body supporting springs supported by said frames, the springs on one side of said truck being inclined toward each other, the springs also being inclined toward the springs at the other side of the truck whereby all springs together form the corners of a frusto-pyramid.

2,861,523
VERTICALLY RETRACTABLE AUXILIARY WHEELS FOR RAILROAD CARS
Ernest V. Berry, Los Angeles, Calif.
Application January 30, 1956, Serial No. 562,275
1 Claim. (Cl. 105—215)



A device for use in minimizing transverse rocking movement of a railroad car body relative to two longitudinally spaced trucks that movably support same on rails that comprises: a plurality of longitudinally spaced, vertically disposed hydraulic cylinders supported from the sides of said body and extending downwardly therefrom; a plurality of pistons slidably mounted in said cylinders; a plurality of piston rods affixed to said pistons and said rods extending downwardly from said cylinders; a plurality of wheels rotatably supported from the lower ends of said rods, said wheels movably engaging said rails; and means to supply fluid under pressure to the upper confines of said cylinders above the positions of maximum upper movement of said pistons therein, said fluid tending to raise said body relative to said wheels to prevent transverse rocking movement of said body and to remove a portion of the load from the journals of said trucks.

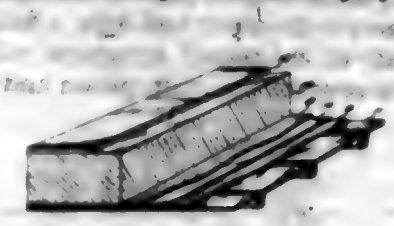
2,861,524
PANCAKE BAKING MACHINE
Octavio Peralta, Mexico City, Mexico
Application February 15, 1954, Serial No. 410,172
2 Claims. (Cl. 107—60)



1. A circular pancake baking machine comprising in combination a circular metal rotatable table including a disc portion and an annular baking pan having a baking surface and supported on the rim of said disc portion, a motor driven fan below said table, a central hollow air shaft connected to said fan, said air shaft having a horizontal bearing upon which said disc portion rests for rotation of said baking pan, a diametrically disposed tube supported by said shaft and extending above said disc portion and communicating with said air shaft to deliver a stream of air directed toward the baking surface of said pan for pneumatically shifting the pancakes baked thereon.

2,861,525
FIRE RETARDANT ROOF VAPOR BARRIER AND SECUREMENT MEANS
Frank W. Curtis, Chagrin Falls, Ohio, assignor to Lexasco, Incorporated, Cleveland, Ohio, a corporation of Ohio
Application January 30, 1956, Serial No. 562,168
4 Claims. (Cl. 108—6.5)

4. A non-fire-supporting roof construction, comprising a roof deck of a structural character which permits communication between opposite faces thereof in the event of a fire therebelow and in relatively close proximity thereto, an insulating layer having a surface area of a size to substantially completely overlie said roof deck, said insulating layer being provided with a water-proofing upper surface, a non-fire contributing vapor barrier layer which also has a surface area of a size to substantially completely overlie said roof deck, said vapor barrier layer consisting essentially of polyvinyl chloride in sheet form and being located between said roof deck and said insulating layer, non-fire contributing adhesive layers on opposite faces of said vapor barrier layer, one of said



adhesive layers securing said vapor barrier layer to said roof deck and the other adhesive layer securing said insulating layer to said vapor barrier layer, said vapor barrier layer and said adhesive layers being effective to substantially eliminate the spread of a fire in relatively close proximity to the under face of said roof deck.

2,861,526
FUEL BURNING APPARATUS
Karl-Heinz Küppers, Oberhausen, Germany, assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application November 19, 1952, Serial No. 321,383
9 Claims. (Cl. 110—28)

1. Apparatus for burning particle-form solid fuel comprising wall means forming an elongated combustion chamber of generally symmetrical transverse cross-section arranged with its longitudinal axis substantially horizontal, said wall means having an inner exposed refractory surface and fluid heating tubes proportioned for the maintenance of said refractory surface under a normal mean temperature in said combustion chamber above the fuel ash fusion temperature, means forming a longitudinally extending greatly restricted slot-like gas outlet in the upper portion of said combustion chamber, said gas outlet being proportioned so that a predominant portion of the radiant heat energy emitted within said combustion chamber will be absorbed therein and that the pressure drop of the gases flowing through said outlet will be sufficient to assure uniform distribution of the gases along the walls of the combustion chamber, means forming a restricted slag outlet in the lower portion of said combustion chamber for the continuous discharge of molten slag, and means for introducing combustion air and particle-form solid fuel in suspension into said combustion chamber tangentially to an imaginary horizontally disposed cylinder in said combustion chamber and effecting a whirling path of fuel-air travel therein along and in sweeping relation with substantially the entire inner surfaces of the walls of said combustion chamber and the slag outlet thereof to cause continuous discharge of some of the gases through the gas outlet and recirculation of some of the gases in the whirling path to enhance the ignition of the incoming fuel.

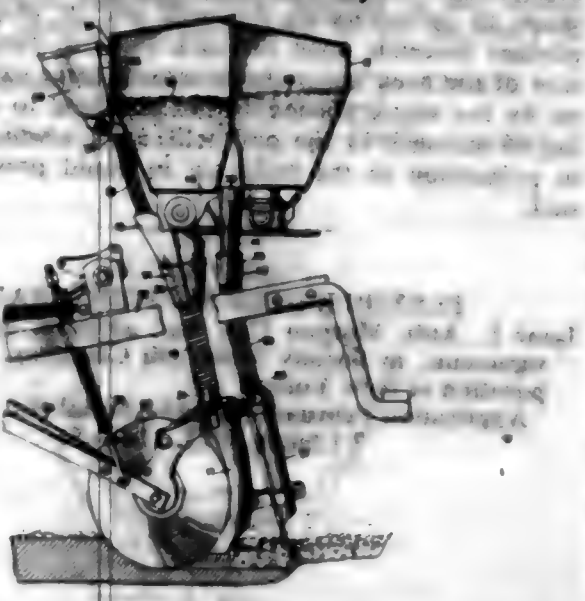
haust port, a plunger secured to and movable with said of a frusto-pyramid.

2,861,527

SEEDING AND FERTILIZING DEVICE AND HOSE SECURING MEANS THEREFOR

Charles S. Phillips, East Lansing, Mich., assignor to Thermoid Company, Trenton, N. J., a corporation of Delaware

Application May 23, 1958, Serial No. 510,983
6 Claims. (Cl. 111—87)



1. In a device of the character described having a ground turning member, a tubular feed boot, a material container having a tubular feed spout connected thereto and means for floatingly mounting said ground turning member and boot with respect to said container providing for relative movement of said spout and boot toward and away from each other, the combination with said spout and boot of a longitudinally stretchable and compressible resilient corrugated wall hose interconnecting said spout and boot and a pair of clips firmly securing the top and bottom ends of said longitudinally stretchable and compressible resilient corrugated wall hose to said spout and said boot respectively, each said clip comprising at least one relative rigid turn of a rod-like member having a preformed internal diameter encircling the root diameter of said hose and in intermeshing engagement with the corrugated walls thereof, the first one of said clips also comprising means for attaching said clip to said spout and the second of said clips also comprising means for attaching said second clip to said boot.

2,861,528

ORNAMENTAL ZIGZAG STITCHING ATTACHMENTS

John P. Enos, Union, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey

Application September 13, 1955, Serial No. 533,942
10 Claims. (Cl. 112—160)

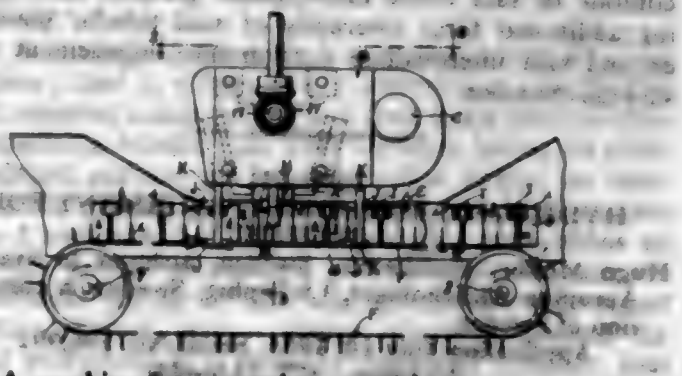
1. In a work jogging attachment having a frame adapted to be secured to a sewing machine, a work engaging presser foot, a presser foot shank secured at one extremity to said presser foot, means at the other extremity of said presser foot shank defining a pivotal axis thereof with respect to said attachment frame, said presser foot shank being rigid for sidewise movement about said pivotal axis but having the capacity for turning movement one extremity with respect to the other about a longitudinal axis transverse to said pivotal axis, an operating lever for said presser foot, means pivoting said operating lever to said attachment frame, and a universal pivotal connection between said operating lever and said presser foot shank.

2,861,529

CONTAINER SPOUT-INSERTING MACHINE

Milton H. Klemmann, Summit, N. J., assignor to Seal-Spout Corporation, Mountainside, N. J., a corporation of New Jersey

Application November 27, 1956, Serial No. 624,542
12 Claims. (Cl. 113—1)



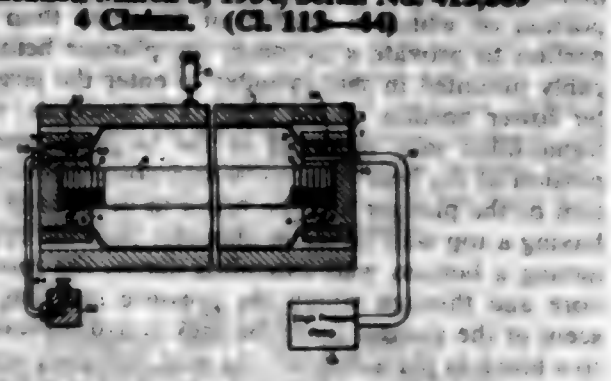
1. A machine for mounting a pouring spout in a zone of a wall of a container, comprising means for supporting and moving such a container with said zone disposed in a predetermined path, a frame, spout-holding means movably mounted on said frame, means for causing movement of said spout-holding means momentarily synchronously with the container along and parallel to a portion of said path, means including a spout inserting ram and an anvil that are mounted on said spout-holding means and movable therewith in spaced opposed relation to each other with one thereof at each of opposite sides of said path of movement of said wall zone to receive said zone of the container wall between them and that are movable relatively to said spout-holding means and toward and from each other transversely of said path of movement, said ram and anvil having coacting portions to secure said spout to said zone of the container wall upon movement of said ram and said anvil toward each other, and means for causing such relative movement of said ram and said anvil during said momentary synchronous movement of the spout-holding means with the container.

2,861,530

METHOD AND APPARATUS FOR MAKING METAL ARTICLES

Edward A. Macha, Wilmerding, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application March 3, 1954, Serial No. 413,869
4 Claims. (Cl. 113—44)



1. A method for expanding a tubular blank to reduce the wall thickness thereof, said method comprising the steps of rigidly connecting a pair of spaced end members, the outer peripheries of said end members being shaped to fit relative closely within the respective end portions

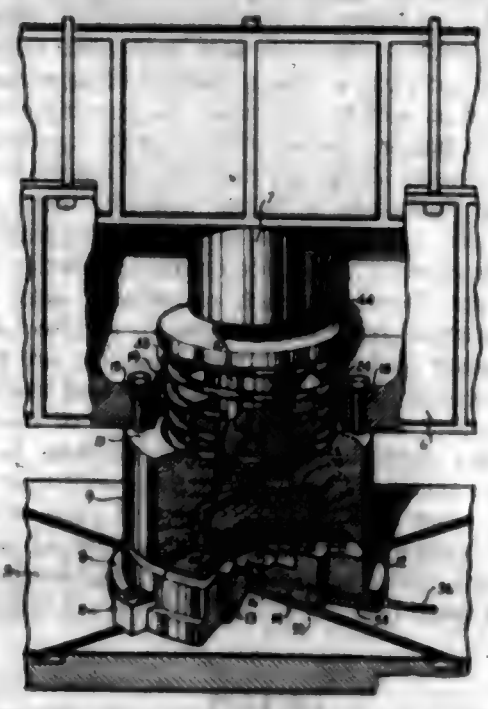
upper surface, a non-fire contributing vapor barrier layer hance the ignition of the incoming fuel.

of said blank, providing resilient sealing means on each of said outer peripheries, inserting said end members within said blank such that said blank end portions sealingly engage said sealing means respectively to seal said blank to said end members, restraining the radial expansion of said end portions with a closely fitting ring member placed over each said end portions to maintain said sealing engagement during expansion of said blank, partially expanding the portion of said blank intermediate said members by force applied internally of said blank, inserting said tubular blank, said end members and said ring members within a one-piece tubular die chamber having an interior contour larger than said ring members and said blank but the same as the final desired external contour of said blank intermediate portion, and applying additional force internally of said tubular blank to expand said intermediate portion into engagement with said die chamber.

2,861,531
HYDRAULIC FORMING ATTACHMENT FOR PRESSES

Hugo Miller, Trollhattan, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Linkoping, Sweden, a corporation of Sweden

Application July 10, 1956, Serial No. 596,992
3 Claims. (Cl. 113—44)

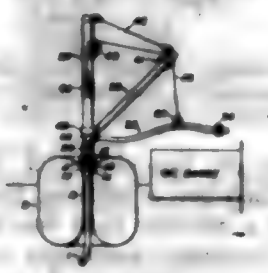


1. In a device of the type wherein pressure is exerted upon a blank to form the same in a die upon which the blank is supported as a consequence of pressure produced downward motion of a plunger toward the blank: a body member having a vertical bore therethrough, the upper portion of which is smaller in diameter than its lower portion to provide a cylinder, the plunger being reciprocably mounted in said cylinder to enter the larger diameter lower portion of the bore as it descends; an elastic, liquid-filled sack mounted in the larger diameter lower portion of the bore so as to be interposed between the bottom of the plunger and the blank to be formed, said sack having a top wall larger in diameter than the cylinder and having a bottom wall extending across the mouth of the bore and through which the pressure resulting from descent of the plunger upon the sack is hydraulically applied to a blank in place beneath the sack, said sack being imperforate except for a tubular neck which extends from its top wall toward the plunger, in spaced concentric relation to the wall of the cylinder, said neck providing an inlet for the sack; a plug closing said sack inlet, said plug having a tubular shank portion of elastic material fitting in said neck with its exterior surface in intimate engagement with the inner wall surfaces of the neck, the interior of said tubular neck being in open communication with the interior of the sack so that said shank portion tends to expand in the neck as a consequence of the rise in pressure in the sack which results from the exertion of blank forming pressure on the blank by the sack; and said plunger having a well in its underside of a size and shape to accommodate the neck and its plug when the plunger descends upon the sack so as to prevent expansion of the neck under the expansive force exerted thereon by the shank portion of the plug and to assure sealing of the neck by the plug with a force which increases in proportion to the build up in liquid pressure in the sack.

2,861,532
FLEXIBLE HOSE SUPPORT CRANE

Isaac L. Ault, Morgan City, La., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York

Application February 13, 1954, Serial No. 411,215
7 Claims. (Cl. 114—.5)

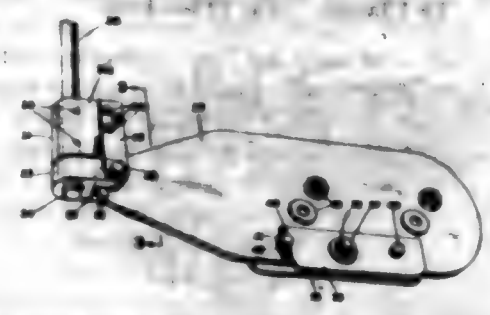


1. In combination with floating buoy, a hose support crane which comprises in combination a hollow vertical mast rotatably mounted on said buoy, a boom pivotally secured to the lower portion of said mast, a tension member secured between the upper end of said mast and the upper end of said boom to support said boom at a fixed position with respect to said mast, a first flexible hose supported at its upper end by said buoy, a second flexible hose extending outwardly from said mast, means positioned in the lower portion of said mast for connecting said first hose to said second hose, a counterweight positioned within said mast, and cable means connected between said counterweight and the outward end of said second hose whereby said hose is pulled into a position adjacent to said boom when said hose is not in use.

2,861,533
RUDDER

Alan Miller Thomas, Toronto, Ontario, Canada, assignor to Wintar Hydrocraft Ltd., York, Ontario, Canada, a corporation

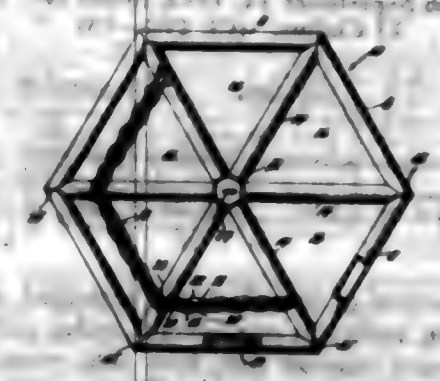
Application May 31, 1956, Serial No. 588,453
9 Claims. (Cl. 114—162)



2. A rudder for a scoot, comprising a rudder shaft, a rudder plate, a leaf spring interposed between the shaft and the plate, a rigid connection between one end of the leaf spring and the shaft, and a pivotal connection between an opposite end of the leaf spring and the plate permitting swinging movement of the plate in a plane parallel to the longitudinal axis of the shaft, the leaf spring normally restraining the plate from movement in a lateral direc-

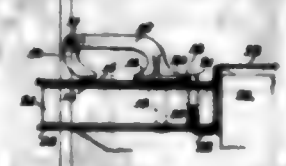
tion relatively to the shaft but permitting such movement in the event of the plate being subjected to lateral forces.

2,861,534
SEA ANCHOR
Leo F. Fehlner, Bethesda, Md., assignor to the United States of America as represented by the Secretary of the Navy
Application October 4, 1955, Serial No. 538,542
4 Claims. (Cl. 114—209)
(Granted under Title 35, U. S. Code (1952), sec. 266)



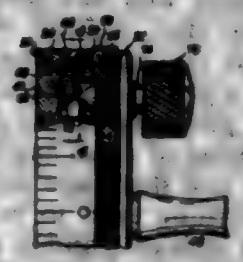
4. A device for maintaining a predetermined tension in a tow cable comprising a pyramidal frame having a polygonal base, a series of rigid undulating strands covering said frame, adjacent undulations connected to said frame in opposed phase relation and each strand connected at its maximum amplitude point to a minimum amplitude point on an adjacent undulation thereby forming a lattice, and means at the apex of said pyramid for attaching a tow cable, said lattice extending away from the base of said pyramidal frame toward said apex, whereby said pyramidal frame is adapted to be towed with its apex forwardmost.

2,861,535
DEVICES FOR SECURING TOWING LINES TO TUGS
William M. Hutchison and Kenneth W. Hopkins, London, England, assignors to Brown Lenox and Company Limited, a British joint-stock corporation
Application June 22, 1956, Serial No. 593,121
Claims priority, application Great Britain June 24, 1955
6 Claims. (Cl. 114—218)



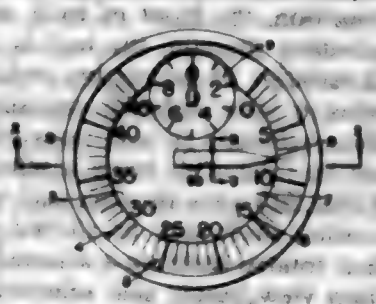
1. A device for securing a loop in a towing line to a tug, comprising a pivoted arm for engaging the loop; a rotatably mounted member to which said arm is pivoted, said member being mounted for rotation through one range of positions in which said arm is free to rotate about its pivot through a relatively long path so as to permit release of the loop when it is engaged by the arm and through another range of positions in which said arm is free to rotate about its pivot through only a portion of said path so as to prevent release of the loop when it is engaged by the arm; and, stationary means interposed in the path of movement of said arm when said rotatably mounted member is in the latter range of positions, for limiting the rotation of said arm to rotation in said portion only of said path.

2,861,536
LOCKING DEVICE FOR HANDWHEEL ASSEMBLY
Emil P. Polivin, Pittsburgh, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application March 27, 1957, Serial No. 648,881
4 Claims. (Cl. 116—124)



1. A handwheel assembly for rotating a feed screw to position a tool in a lathe device comprising, a handwheel body member connected to said feed screw and carrying an operating handle, said body member having an outer cylindrical surface, an indicator collar having an inner cylindrical surface journalled on said cylindrical surface of said body member, said collar having graduations on its outer surface cooperating with a reference mark on an adjacent portion of said lathe to indicate the rotated position of said dial, a wedge member mounted for radial movement in a recess in said body member, said wedge member having an outer arcuate surface portion formed on substantially the same radius as the inner surface of said collar, and a screw threaded into said body member for selectively urging said wedge member radially into locking engagement with said collar.

2,861,537
ILLUMINATED INSTRUMENT
Ladislav Kadlec, New York, N. Y., assignor to Avien, Inc., Woodside, N. Y.
Application April 8, 1957, Serial No. 651,485
8 Claims. (Cl. 116—129)



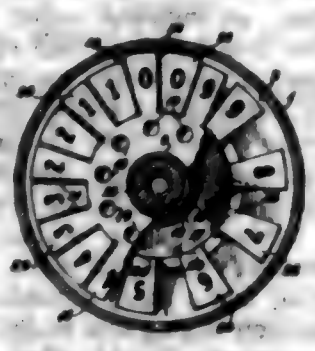
1. An indicator for use in combination with a source of illumination comprising a light transmitting cup-shaped member having a cylindrical wall portion and a beveled rim portion, a light transmitting annular member positioned adjacent to and inwardly of said beveled rim portion and adapted to receive light transmitted from said source of illumination through said cylindrical wall portion and said beveled rim portion, said annular member and the interior of said cup-shaped member comprising dial faces having opaque upper surfaces, adapted to receive a plurality of markings extending through said opaque surfaces, and a movable indicator pointer positioned within said cup-shaped member and having a portion extending under said annular member.

2,861,538
INDICIA SETTING DEVICE
Charles Howard Evans, Lake Worth, Fla.
Application November 29, 1955, Serial No. 549,797
2 Claims. (Cl. 116—133)

1. An indicia setting device comprising a housing, a fixed front cover on said housing, a boss extending inwardly from said cover, said boss having bearing means at its inner end, a setting shaft perpendicular to said

in said neck with its exterior surface in intimate engage- restraining the plate from movement in a lateral direc-

cover extending through said boss and rotatably and slidably mounted therein, a grippable portion on the outer end of said shaft for rotating and sliding it, a first disc on the inner portion of said shaft rigidly fixed thereto, a plurality of radial extensions equally spaced around the periphery of said disc, a second disc rotatably mounted on said boss coaxially with said first disc between said cover and said first disc, resilient means between said bearing means and said second disc urging the latter against said cover, a plurality of radial extensions equally spaced around the periphery of said second disc, all said radial extensions being of equal angular width measured around the axis of said shaft, said discs having matching configurations permitting them to be meshed with each other in an axially outward position of said setting shaft and said first disc with all said radial extensions lying in the same plane and the radial extensions of each disc fitting in the spaces between the radial extensions of the other disc, so that in said outward position said setting



shaft may be turned to rotate all said radial extensions together, resilient means between said housing and said setting shaft urging said discs into meshed relationship, said setting shaft and said first disc having an inward position in which said discs are unmeshed so that said first disc and its radial extensions may be rotated without rotating said second disc and so that said first disc may be remeshed with said second disc in another selected rotated position, the front of each said radial extension having indicia thereon, the indicia on each disc being arranged seriatim on successive radial extensions, said cover having a view opening exposing indicia on each of said discs, whereby in said outward position all said indicia may be rotated to bring a selected indicium on said second disc into view through said viewing opening, and said setting shaft may be shifted to its inward position and then rotated to bring a selected indicium on said first disc into view beside said selected indicium on said second disc.

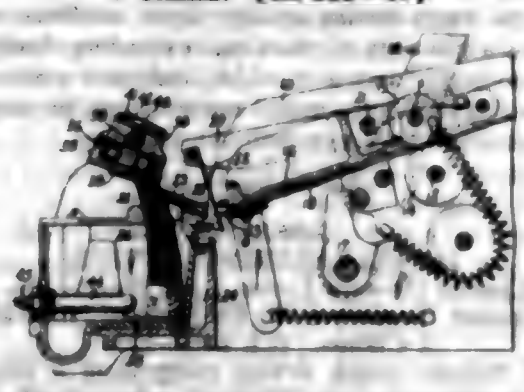
2,861,539

TAPE DISPENSER WITH TAPE-HEATING MEANS

John C. Bergmark, Boston, Mass., assignor to Derby Sealers, Incorporated, Ansonia, Conn., a corporation of Connecticut

Application June 24, 1957, Serial No. 667,569

7 Claims. (Cl. 118—69)



1. A dispenser for gummed tape comprising a frame, a moistening element carried by the frame, a pressure plate mounted in cooperation with said moistening element, means for feeding the tape over said moistening element and between it and the pressure plate, and electrical means for heating said pressure plate, said last-named means being supported on the upper surface of said pressure plate.

2,861,540

APPARATUS FOR WASHING FLUX FROM AND COATING THE SIDE SEAMS OF TRAVELLING CAN BODIES

George M. Flynn, Oak Park, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application September 14, 1953, Serial No. 379,811

13 Claims. (Cl. 118—73)

1. In apparatus of the character described, means for conveying can bodies in processional order and in longitudinally spaced relation with their side seams in alignment, means maintaining a free flowing bath of water through which the can bodies are conveyed for washing flux and flux residue from the can bodies both externally and internally as they are being conveyed, said last named means including a distributer supported internally of the moving can bodies for diverting the bath water over the whole interiors of the moving can bodies, means for drying the can bodies as they are being conveyed, and means for applying a protective striping over the can body side seams internally of the can bodies as they are being conveyed and including a coating material supply duct extending through and supported by the distributer.

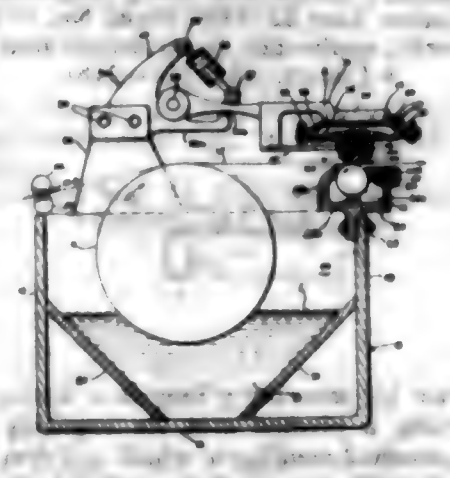
2,861,541

DEVICE FOR COATING A TRAVELING SHEET

Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Application August 16, 1955, Serial No. 528,698

6 Claims. (Cl. 118—119)



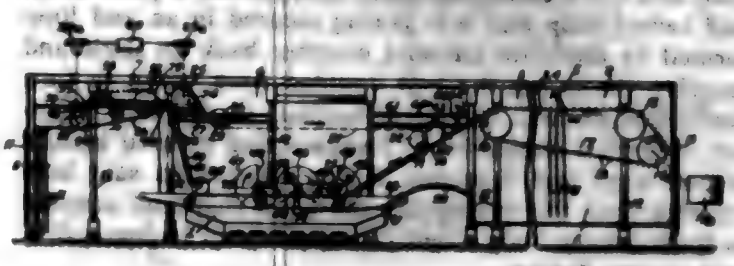
5. In a device for coating a traveling sheet, a tank maintaining a level of liquid coating bath therein, an applicator roll mounted on the tank partially submerged in the coating bath and rotating in the direction of sheet travel to apply a coating to one side thereof, a doctor roll rotating oppositely to the direction of sheet travel and positioned on said tank on the same side of the sheet behind said applicator roll in the direction of travel of said sheet for contacting and for wiping excess coating from the sheet, a flexible shoe pivotally mounted on said tank and defining with said doctor means a nip receiving the traveling sheet, and diaphragm means resiliently urg-

holes, a peripheral integral rib on each teat outwardly

2,861,547

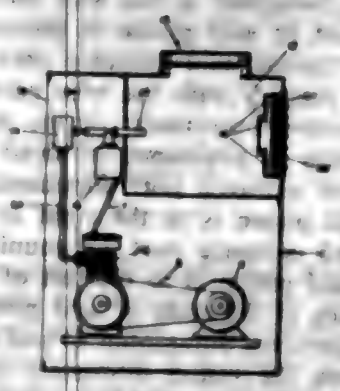
ing said shoe against the sheet throughout the full width thereof to control the extent to which excess coating is wiped from the sheet.

2,861,542
PLANT FOR THE CONTINUOUS MANUFACTURE OF FAT-IMPREGNATED LEATHER
Ferdinand Gajdošík, Otrokovice, Czechoslovakia, assignor to Svit, národní podnik, Gottwaldov, Germany
Application November 25, 1955, Serial No. 549,097
Claims priority, application Czechoslovakia November 27, 1954
2 Claims. (Cl. 118—423)



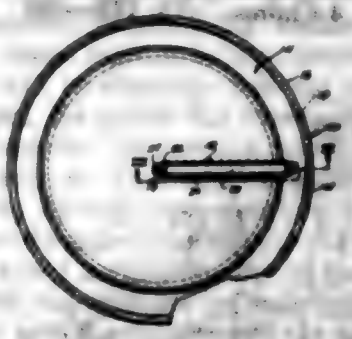
1. In a plant for the continuous production of fat-impregnated leathers; the combination of an upwardly open bath containing fat for impregnation of hides passed therethrough, conveyor means extending across the top of said bath and operative to transport successive rods from which hides to be impregnated are individually suspended, drive means propelling said conveyor means at a speed sufficient to cause a hide suspended from a rod to stream rearwardly from the latter during passage through the bath so that all portions of the hide are equally immersed in the bath, and hold-down means associated with said conveyor means and operative to engage a transported hide from above and to hold the engaged hide in the bath during transport of the related rod across the top of the bath by said conveyor means.

2,861,543
APPARATUS FOR DEVELOPMENT OF ELECTROSTATIC IMAGE
Herbert E. Crumrine and Joseph F. Rosenthal, Rochester, N. Y., and William E. Bixby, Columbus, Ohio, assignors, by direct and mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York
Application June 14, 1954, Serial No. 436,482
4 Claims. (Cl. 118—637)



1. Apparatus for the development of an electrostatic image on the surface of an image bearing plate comprising a cabinet including an opening in its upper wall, a source of pressurized gas within said cabinet, a powder supply reservoir within said cabinet connected to said source of gas and adapted to create an output mixture of powder particles and gas when fed with gas, a valve in said cabinet in the connection between said source and said powder supply reservoir, means to open and close said valve to control the feed of gas to said reservoir, a boxlike development chamber within said cabinet extending downward from said opening, plate positioning means at said opening adapted to position and dispose the image bearing surface for development substantially in a horizontal plane while facing downward and in open communication with said development chamber, dust sealing means associated with said plate positioning means to seal the upper end of said development chamber when a plate is in said positioning means, and a restrictive spray nozzle within said cabinet extending into said development chamber and connected to said powder supply reservoir positioned and disposed to spray a mixture of particles and gas fed thereto from said powder supply reservoir substantially horizontally into the development chamber, the elements within said cabinet acting in cooperation to create a billowy random flow of powder particles, from said reservoir, and gas, from said source, in said development chamber for image development.

2,861,544
SELF FEEDING SILO
William Beltz, Forrestville, Ark.
Application July 5, 1955, Serial No. 519,793
11 Claims. (Cl. 119—52)



1. In a feeding device for a circular silo including a platform and having feeding stations about the outer perimeter of the silo, a ratchet on the platform, a plate having radially inner and outer ends with its inner end pivotally mounted at generally the mid point of the silo, said plate being supported by a platform engaging roller bearing at its generally radially outer end a radially extending driven conveyor on said plate discharging feed directly into the feeding stations, a prime mover connected to said plate, an eccentrically driven link connected to said prime mover, and a pawl pivotally connected to said link and operable with said ratchet to rotate the conveyor to progressively supply the feeding stations about the perimeter of the silo.

2,861,545
CALF FEEDING DEVICE
Keston G. Schoeffel, Cotswold Farm, Menzies Creek, Victoria, Australia, assignor to Ellen Joan Schoeffel, Cotswold Farm, Menzies Creek, Victoria, Australia
Application October 14, 1957, Serial No. 689,985
Claims priority, application Australia October 31, 1956
9 Claims. (Cl. 119—71)

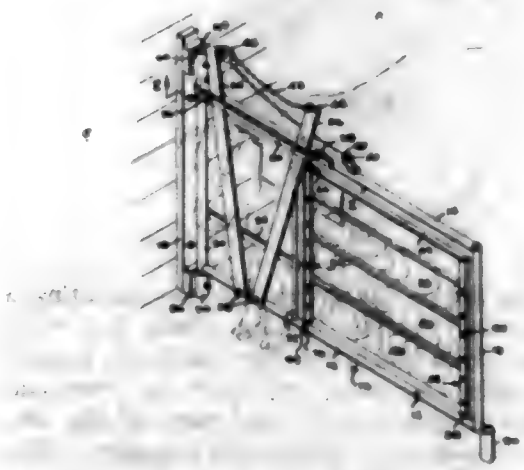
1. A calf feeding device comprising a funnel member having a side wall and a lower annular portion, said lower annular portion being adapted to be attached to the upper end of a milk container, an aperture in said lower annular portion which is adapted to communicate with the interior of said milk container, a series of holes in said side wall, teats of resilient material the inner ends of which fit through said holes, an annular groove in each teat which engages the periphery of one of said

the axis of the piston rod, said piston rod having a groove, air valves and close the discharge valves, respective con-

a moistening element carried by the frame, a pressure plate mounted in cooperation with said moistening ele- tank and defining with said doctor means a nip receiving the traveling sheet, and diaphragm means resiliently urg-

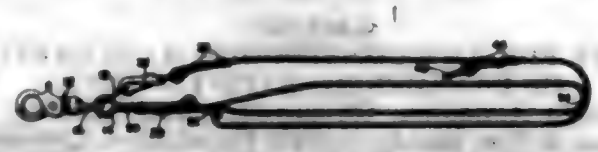
holes, a peripheral integral rib on each teat outwardly of the annular groove therein, the said rib being of greater diameter than the respective hole and engaging the outer surface of said side wall around said hole, milk supply tubes of resilient material the upper ends of which fit within the inner ends of said teats and communicate with the interior of said teats, said milk supply tubes being arranged to extend downwardly through said aperture, the upper end of each of said milk supply tubes being arranged to extend within the respective teat to a point outwardly of said side wall, and the normal external diameter of the upper end of each of said milk supply tubes being greater than the normal internal diameter of each of said teats whereby the inner end of each teat and the upper end of each milk supply tube are under compression and are thus held firmly in their respective positions.

2,861,546
PORTABLE RESTRAINING DEVICE FOR CATTLE
Clarence W. Stroup, Somerville, Tenn.
Application May 31, 1957, Serial No. 662,706
4 Claims. (Cl. 119—98)



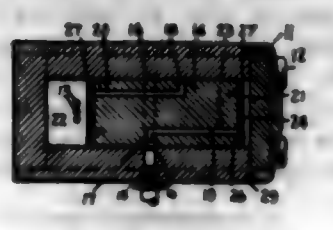
1. A cattle restraining device comprising an elongated substantially open rectangular frame having a pair of oppositely disposed vertically spaced and substantially parallel top and bottom rails, an end rail extending across and having its opposed ends fixedly secured to a pair of adjacent ends of said top and bottom rails, a second end rail extending across and fixedly secured to the other adjacent pair of ends of said top and bottom rails, an upright member, means fixedly securing said last named end rail to said upright member, ground engaging means fixedly secured to said first one of said end rails, a pair of animal neck engaging elements said elements having an elongated substantially rectangular configuration and having one of their respective ends pivotally connected to said bottom rail adjacent said last named end rail, means connected with said top rail in spaced relation relative thereto to form a guide slot therebetween, said neck engaging elements having their respective other ends extending through said guide slot and to a point thereabove, a bracket fixedly secured to said top rail, said bracket having a V-shaped slot formed therein, a link chain having one of its ends fixedly secured to one of said neck engaging elements, a pulley fixedly secured to the upper end of the other of said neck engaging elements, said link chain being trained around said pulley with the other end thereof adapted to be releasably secured within said V-shaped slot, and an elongated substantially rectangular gate pivotally mounted on said top and bottom rails adjacent said one neck engaging member, and a cross brace extending between said top and bottom rails and having its opposed ends rigidly secured thereto.

2,861,547
ADJUSTABLE LEASH
Joseph J. Dale, Seattle, Wash.
Application August 28, 1957, Serial No. 680,784
2 Claims. (Cl. 119—109)



1. An adjustable animal leash, comprising: a single flexible lead member having secured at one end, a swivel snap and a first D-ring and at the other end a plain snap; said swivel snap and first D-ring secured in an end loop formed by doubling the lead member back on itself and securing the same; the end doubled back being in turn doubled back and separately secured to the lead member to form a second loop; a square ring secured in said second loop and a second D-ring secured to said lead member near the end having the plain snap and adapted to form a hand loop when said plain snap is engaged in said second D-ring.

2,861,548
VIBRATOR
Warren C. Burgess, Jr., North Olmsted, Ohio, and William H. Sterbentz, Malibu, Calif.; said Sterbentz assignor to said Burgess
Application February 20, 1957, Serial No. 641,326
11 Claims. (Cl. 121—17)



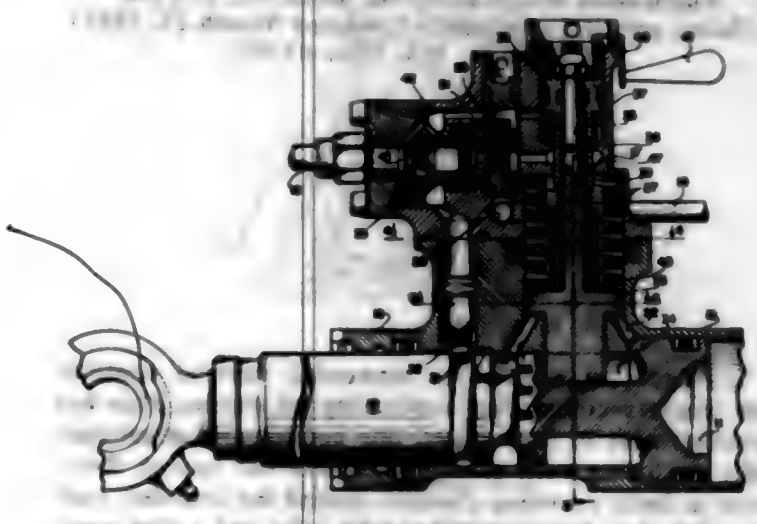
1. A vibration device comprising a casing, a piston supported for reciprocatory movement within said casing, said casing having an inlet port positioned midway of its length for transmitting fluid under pressure, and exhaust ports located near each end thereof, said piston being longer than the distance between said exhaust ports and having a first entrance port positioned in the wall thereof to the right of the mid-point of said piston in communication with the left end thereof, and a second entrance port positioned in the wall thereof to the left of the mid-point of said piston in communication with the right end thereof, said entrance ports being located for alternative registry with the inlet port of said casing during reciprocatory movement of the piston, whereby, when said piston is positioned at dead center in said casing, said first entrance port communicating with the left end of said piston is to the right of said inlet port and said second entrance port communicating with the right end of said piston is to the left of said inlet port, and valve means at the ends of said piston operative in response to a pressure differential to seal off each of said inlet ports when the piston intimately approaches each end thereof whereby to provide a cushion of pressure fluid.

2,861,549
HYDRAULIC LOCKING CYLINDER
Cornelius A. Gardener, North Hollywood, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Application March 26, 1954, Serial No. 419,047
8 Claims. (Cl. 121—40)

1. A hydraulic actuator comprising a cylinder and piston mechanism wherein the piston is carried by a piston rod for actuating a movable mechanism such as a door or landing gear, a spring urged lock movable normal to

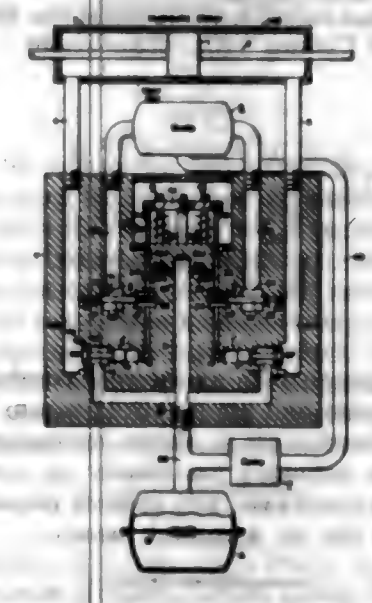
extending downward from said opening, plate positioning in each teat which engages the periphery of one of said

the axis of the piston rod, said piston rod having a groove therein which is in alignment with the lock when said actuator is extended, a housing for said lock attached to the wall of the cylinder, fluid circuits in said housing arranged to retract said lock, a run-around valve in the



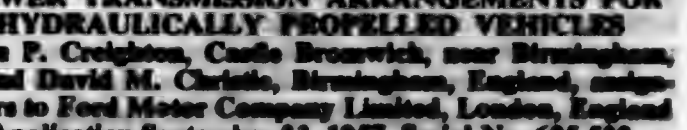
fluid circuits therein which interconnects the ends of the cylinder during the extension movement of the actuator, and means whereby such lock movement serves to admit hydraulic fluid to said cylinder in a direction to retract said piston.

2,861,530
HYDRAULIC POWER CONTROL VALVE
Clinton R. Hanna and Lawrence B. Lynn, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 28, 1952, Serial No. 317,215
20 Claims. (Cl. 121—46.5)



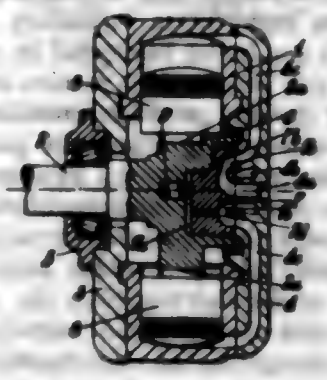
1. Hydraulic apparatus comprising, respective pressure-responsive supply valves each having separate pressure control areas and respective outlet conductors, said supply valves tending to close in response to outlet pressure, respective pressure-responsive discharge valves connected to said respective outlet conductors to receive fluid therefrom, each said discharge valves having separate pressure control areas, said discharge valves tending to open in response to outlet pressure, respective pilot pressure conductors, one pilot pressure conductor being connected to apply pressure separately to said pressure control areas of each one pair of discharge and supply valves connected to one outlet conductor and the other pilot pressure conductor being connected to apply pressure separately to said pressure control areas of each of the remaining supply and discharge valves connected to the remaining outlet conductor, said pilot pressure tending to open the supply valves and close the discharge valves, respective controllable pilot pressure valves connected in each pilot pressure conductor, and means for controlling said pilot pressure valves in opposite senses to cause an increase in pilot pressure to the supply valve of one pair causing it to open while at the same time reducing pilot pressure to the discharge valve of the other pair causing it to open.

2,861,551
FLUID OPERATED RECIPROCATING ENGINES
Charles Gordon Simons, Bridge of Allan, Scotland
Application October 7, 1957, Serial No. 688,695
Claims priority, application Great Britain October 16, 1956
1 Claim. (Cl. 121—50)



A fluid operated reciprocating engine comprising a cylinder with closed ends, a tubular piston rod to which pressure fluid can be supplied, said rod passing through one of said ends, the piston rod having ports in the wall thereof, a tubular tail rod through which spent fluid can be exhausted, said rod forming an extension of the piston rod and passing through the other end of the cylinder, a piston fast on the piston rod and provided with passages registering with said ports, a number of the passages communicating with the cylinder on one side of the piston and the others with the cylinder on the other side of the piston, a rotary valve located within the piston rod, the valve having oppositely directed passages which, in one position of the valve, place the interior of the piston rod in communication with the passages leading to one side of the piston so that pressure fluid can be supplied thereto and place the cylinder on the other side of the piston in communication with passages leading to the tail rod so that spent fluid can be exhausted therethrough and which, in another position, place the interior of the tubular piston rod in communication with that part of the cylinder formerly being exhausted and the other part of the cylinder in communication with the tail rod and means whereby said valve can be rotated to occupy the two positions alternately.

2,861,552
POWER TRANSMISSION ARRANGEMENTS FOR HYDRAULICALLY PROPELLED VEHICLES
John P. Creighton, Castle Bromwich, near Birmingham, and David M. Christie, Birmingham, England, assignors to Ford Motor Company Limited, London, England
Application September 23, 1957, Serial No. 685,529
Claims priority, application Great Britain September 28, 1956
5 Claims. (Cl. 121—119)



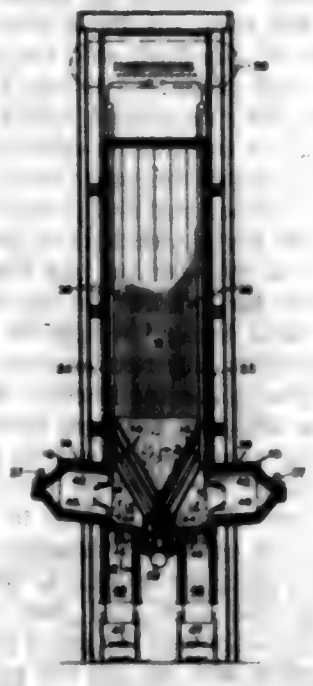
1. An hydraulic transmission arrangement comprising a plurality of circumferentially spaced pistons and cylin-

rigidly secured thereto.

or landing gear, a spring urged lock movable normal to

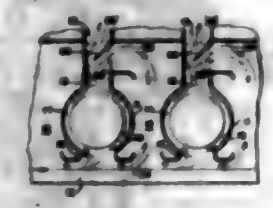
ders, a distribution valve comprising two parts rotatable with respect to each other on mating faces, one of the parts being axially fixed and having ports in its mating face and fluid passages extending therefrom to the respective cylinders and the other part being axially floating, said other part having on its face opposite to the mating face two axially spaced sections which are sealed from each other and having ports in its mating face co-operating with ports in the axially fixed part and fluid passages extending therefrom to the respective axially spaced sections, and fluid supply and exhaust passages extending to the distribution valve for supplying and exhausting the cylinders through the co-operating ports in the desired sequence.

2,861,553
CYCLONE FURNACE
Herbert Schlemberg, Oberhausen, Germany, assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application June 21, 1955, Serial No. 516,990
5 Claims. (Cl. 122—240)



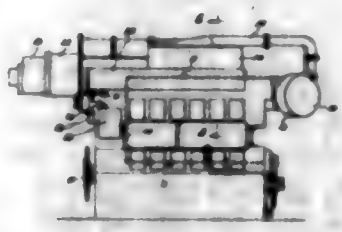
4. A fluid heating unit comprising a cyclone furnace of substantially circular cross-section arranged with its major axis substantially horizontal and having a restricted gas outlet at one end thereof, means for burning a slag-forming fuel in said cyclone furnace at a normal mean temperature above the fuel ash fusion temperature, walls including fluid heating tubes defining a vertically elongated chamber having a lower portion opening to and directly receiving gases discharging from said gas outlet, a portion of said fluid heating tubes of one wall having their lower ends bent to define a slag screen extending inwardly and downwardly from a position superjacent said gas outlet, an imperforate refractory faced target baffle opposite said gas outlet supported by some of said slag screen tubes and arranged to receive the impact of a major portion of the slag particles remaining in suspension in the gases discharging from said gas outlet, said baffle extending downwardly from a position superjacent said gas outlet to a point therebelow and having its upper and lower ends contacting spaced wall portions of said chamber, said baffle having a width greater than the width of said gas outlet and less than the width of said lower portion of said chamber and having its sides co-operating with wall portions of said chamber to provide passages for the flow of gases through the slag screen to the upper portion of said chamber, and a slag outlet in said chamber below the level of said cyclone furnace.

2,861,554
COOLING SYSTEM FOR AIR COOLED INTERNAL COMBUSTION ENGINES
Eugen Stumpp, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application March 22, 1956, Serial No. 573,198
Claims priority, application Germany March 23, 1955
19 Claims. (Cl. 123—41.05)



1. A cooling system for air-cooled internal combustion engines comprising a plurality of engine cylinders mounted next to each other, one cooling jacket substantially enclosing each of said cylinders but spaced therefrom to form a cooling channel around the cylinder, each of said jackets being provided with inlet and outlet openings at opposite sides thereof, the jackets of adjacent cylinders being spaced from each other so as to form an intermediate air channel therebetween, said intermediate air channel being provided with inlet and outlet openings, and means including a common adjustment valve member for simultaneously controlling the passage of air through a respective jacket and intermediate air channel.

2,861,555
INTERNAL COMBUSTION ENGINE
Anker K. Antonsen and Matthew L. Foreman, Beloit, Wis., assignors to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Application May 24, 1957, Serial No. 661,399
9 Claims. (Cl. 123—41.84)

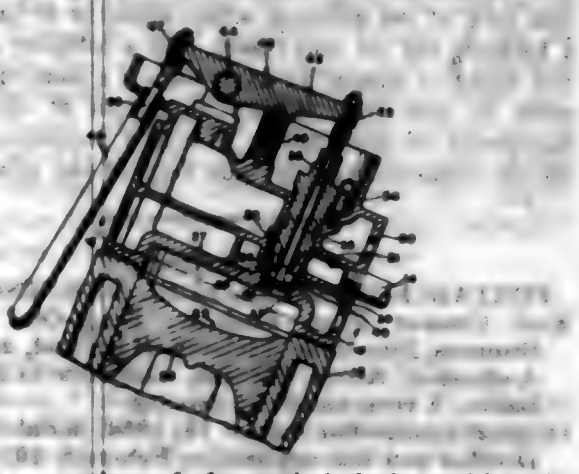


1. In combination with an internal combustion engine having a crankcase and air manifold means for cylinder supply of combustion air at above atmospheric pressure, an air pressure activated gas ejector in communication with the engine crankcase, and conduit means connecting said ejector to the air manifold means.

2,861,556
INTERNAL-COMBUSTION ENGINE
Paul A. Bancel, Montclair, N. J., assignor to Ingersoll-Rand Company, New York, N. Y., a corporation of New Jersey
Application May 9, 1953, Serial No. 353,885
6 Claims. (Cl. 123—59)

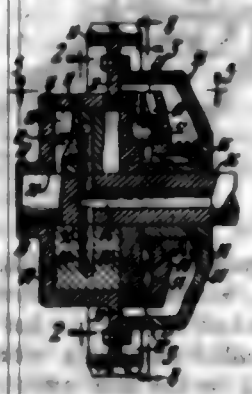
2. An internal-combustion engine having a plurality of cylinders, each cylinder having a piston chamber and a reciprocating piston therein, an air manifold, branch pipes leading from the manifold to each cylinder for supplying air under pressure to the chambers, a valve in each of said branch pipes for controlling the pressure of air supplied the chambers, air inlet valves for each cylinder for controlling the flow of air into the chambers, exhaust valves for controlling the flow of exhaust from said chambers, fuel valves for admitting fuel into said chambers, ignitors for each cylinder for igniting the fuel,

and valve actuators for actuating said inlet and exhaust valves and arranged to hold the exhaust valves open dur-



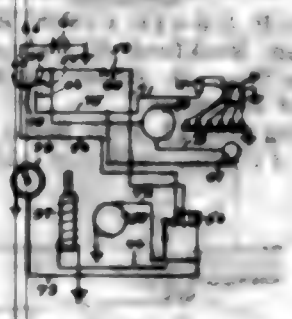
ing at least a portion of the period during which the inlet valves are open.

2,861,557
HYDRAULIC TIMER
Richard C. Stolte, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 12, 1956, Serial No. 627,799
8 Claims. (Cl. 123—90)



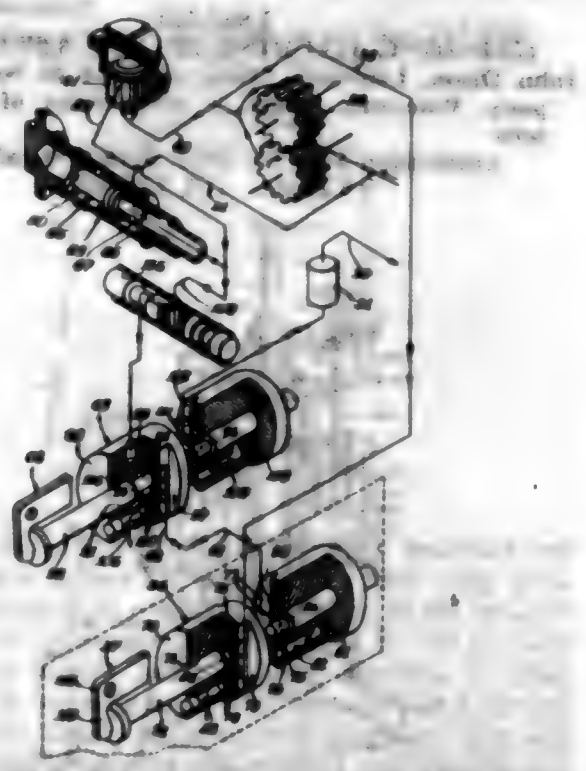
1. Means for advancing and retarding an engine camshaft with respect to an engine crankshaft, said means including a drive member and a driven member forming a fluid pressure chamber therebetween, said drive member being operatively connected for rotation with said crankshaft and said driven member being operatively and drivingly connected with said camshaft, and crankshaft speed responsive means for controlling the pressure of fluid in said chamber to advance and retard said camshaft with respect to said crankshaft.

2,861,558
TIMING AND IDLING CONTROL MECHANISM
Forrest McClain, Green Creek, N. J.
Application June 5, 1956, Serial No. 589,391
1 Claim. (Cl. 123—102)



A timing and idling control mechanism for an internal combustion engine, a movable throttle rod and having a hand grip on its outer end for manually controlling the speed of the engine, a movable bar secured to said rod, a bell crank lever pivotally mounted adjacent the bar on said throttle rod, said bell crank lever embodying first and second angularly arranged arms, a release rod having its inner end pivotally connected to said first arm, the free end of said first arm being tapered for engagement with said bar, a coil spring connected to the first arm of said bell crank lever, there being an aperture in said second arm, a solenoid embodying a rod projecting through the aperture in said second arm, a disk secured to said second arm, securing elements on the rod extending from said solenoid and said securing elements being mounted for movement into and out of engagement with said disk, a lever provided with an aperture for the projection therethrough of said throttle rod, there being a shoulder on said lever, a minute timer mounted in said housing and embodying a rotary shaft having a finger thereon mounted for movement into and out of engagement with said shoulder, a coil spring connected to said lever, a relay, a manually operable switch member, an ear secured to said throttle rod, a switch mounted adjacent said throttle rod and embodying a push button adapted to be engaged by said ear, an hour timer including a rotary shaft, a fluid pressure switch, and an electric circuit embodying said switch mounted adjacent said throttle rod, said relay, said minute timer and said hour timer and said manually operable switch member and said fluid pressure switch for controlling the operation of said throttle rod after said throttle rod has been manually pre-set to control the operation of the unattended engine.

2,861,559
GOVERNOR CONTROLLED ENGINE
Neville M. Reiners, Columbus, Ind., assignor to Cummins Engine Company, Inc., Columbus, Ind., a corporation of Indiana
Application April 23, 1956, Serial No. 580,051
10 Claims. (Cl. 123—108)



1. The combination of an engine, mechanism driven by the engine, means providing a source of fuel under pressure, a pair of control devices for controlling the flow of fuel from said source to said engine, one of said devices being connected to said source and to the other device and being operable in response to an operating characteristic of said mechanism to control the flow of fuel to said other device, and said other device being connected to the engine and being operable in response to an operating characteristic of said engine to control the flow of fuel thereto, and a connection between said source and said other device for supplying fuel to said

in said chamber below the level of said cyclone furnace.

engine under the control of said other device alone when said engine is operating at idle speed and said one device shuts off flow of fuel therethrough.

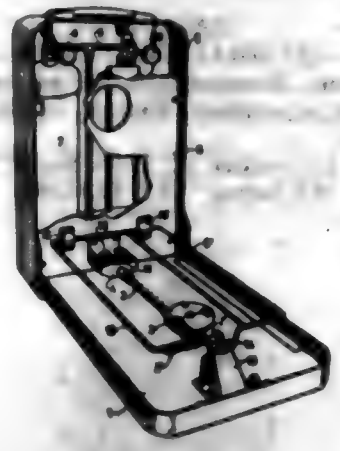
2,861,560
GUN FOR UNDERWATER FISHING
Carlo Alberti, Turin, Italy
Application July 24, 1953, Serial No. 370,835
Claims priority, application Italy July 26, 1952
5 Claims. (Cl. 124—13)

1. A gun for underwater fishing or hunting comprising, in combination, a barrel, a hollow casing communicating with one end of said barrel, a pressure gas-filled tightly closed container of resilient material arranged within said hollow casing, an outer container of perforated sheet metal surrounding said tightly closed gas-filled container of resilient material, an arrow for introducing in said barrel and freely slidable therein, a packing gland at the rear end of the said arrow tightly closing the barrel upon introducing of said arrow in said barrel, whereby said hollow casing acts as a hydraulic pressure accumulator when the arrow is fitted within the barrel in submerged condition of the gun, a non-return valve for controlling the communication between the rear end of the barrel and said hollow casing and means for opening said non-return valve for the purpose of shooting said arrow.

2,861,561
GRINDING MACHINE-TRUING APPARATUS
John Olson, Leicester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application May 16, 1957, Serial No. 659,518
9 Claims. (Cl. 125—11)

1. In a grinding machine having a rotatable wheel spindle and a grinding wheel thereon; a grinding wheel truing apparatus including a frame, a longitudinally movable slide, a transversely movable truing tool carrier on said slide, a truing tool holder on said carrier having a truing tool for truing the peripheral and side face of a grinding wheel, means to move said slide longitudinally in either direction to facilitate traversing the truing tool across the peripheral face of the grinding wheel, means to control the end position of said slide to facilitate positioning the truing tool for a side truing operation means to move said carrier transversely in either direction relative to said slide to facilitate truing a plane face on the side face of the grinding wheel adjacent to the periphery, a forming bar on said frame, and a follower on said carrier which is shaped so as to impart a longitudinal movement to said slide during a portion of the transverse movement of said carrier to true a predetermined shape on the remainder of the side face of the grinding wheel.

2,861,562
PORTABLE GASEOUS FUEL BURNING STOVE
Karl Gunnar Roos, Enskede, Bengt-Olof Johansson, Broarna, Sten Sune Axelsson, Hagalund, and Sten-Ake Andersson, Alvsjo, Sweden, assignors to Aktiebolaget Balco, a corporation of Sweden
Original application August 16, 1954, Serial No. 450,138. Divided and this application February 10, 1956, Serial No. 564,747
Claims priority, application Sweden August 19, 1953
4 Claims. (Cl. 126—38)



3. A portable gaseous fuel burning stove comprising, in combination, a boxed shaped member, at least one burner mounted in said member, a gas supply conduit for the burner, said conduit having an open inlet end, a holder pivotally connected to the box member for pivoting the holder into a raised position relative to the box shaped member, said holder having means for supporting at least one fuel bottle, a fuel feed pipe secured to said bottle for movement in unison therewith, the outlet end of said pipe in the raised position of said holder being spaced from said supply conduit for supplying a combustible mixture to the inlet end of said supply conduit, a cooking vessel support pivotally connected to said holder, the pivotal connection of said support to said holder being spaced from the pivotal connection of said holder to said box member, and catch means on said box shaped member engageable with said support when the holder is in its raised position for releasably locking the holder in the said position.

2,861,563
BURNER GRATE CONSTRUCTION
Lionel R. Jensen, Rockford, Ill., assignor, by mesne assignments, to Geo. D. Roper Corp., Chicago, Ill., a corporation of Delaware
Application May 13, 1955, Serial No. 508,222
1 Claim. (Cl. 126—214)

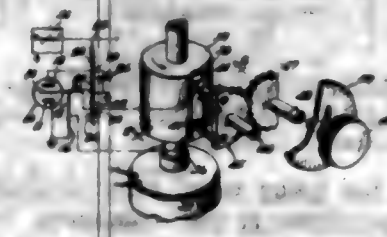
A burner grate construction for a gas burner comprising an enamel coated grate having an outer ring adapted to be supported on a stove top and more than three inwardly extending annularly spaced arms, a set of three of

sure the combination of a skin shaped to fit the wearer's predetermined amount being sufficient to provide for sub-

& bell crank lever pivotally mounted adjacent the bar source and said other device for supplying fuel to said

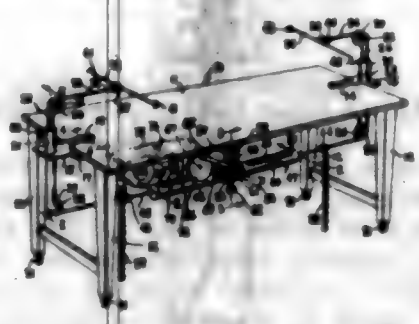
said annularly spaced arms extending radially inward of the other of said arms, a support ring having a flat annular portion overlying the inner ends of said set of three arms, means for fastening said flat portion to said set of three arms, depending inner and outer flanges on the inner and outer edges of said flat annular portion forming a channel therewith, an inwardly extending ledge portion on the lower edge of the inner flange, said set of three arms having notches formed in the upper edges thereof for receiving the outer flange on the support ring, and a glass diffuser plate disposed on said ledge portion and spaced inwardly of the inner flange.

2,861,564
THERAPEUTIC PULSING SYSTEM
Joseph Kozinski, Chicago, Ill., assignor to H. G. Fischer & Co., Franklin Park, Ill., a corporation of Illinois
Application March 28, 1955, Serial No. 496,995
4 Claims. (Cl. 128—24)



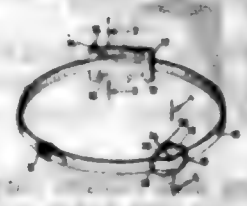
1. In a therapeutic device for administering super audible wave energy, said device in full operation providing energy at a dangerously high level and requiring full level operation at controlled recurrent time intervals, a super audible frequency electric vacuum tube system including a vacuum tube amplifier having cathode control grid and anode electrodes and circuits connecting the same for generating oscillations at a frequency of the order of about one million cycles per second, means including a crystal in the load circuit of said oscillating system, said crystal being adapted to supply vibratory energy to a patient, said oscillator system including a pair of series-connected resistors in the cathode grid circuit, said two resistors having such a value that the oscillator operates weakly and at an insufficient energy level to supply said crystal, one of said resistors having such a value that when the other resistor is shorted, said one resistor will permit said oscillator to operate vigorously and supply the crystal with rated power and means for short-circuiting said other resistor at intervals, the duration of the short-circuit being small in comparison to the duration of normal circuit conditions whereby the average energy available at the crystal may be accurately controlled.

2,861,565
INTERMITTENT OR CONTINUOUS TRACTION DEVICE
Leo A. Lapierre, Sturbridge, Mass.
Application December 11, 1953, Serial No. 397,714
6 Claims. (Cl. 128—71)



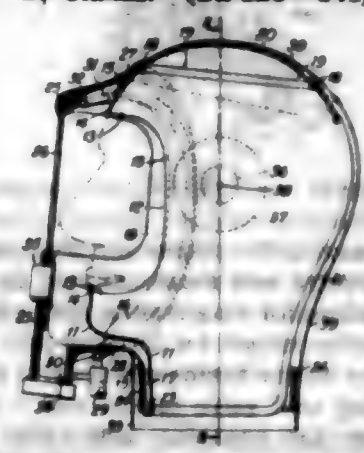
1. A device of the character described comprising means for supporting an individual in a given reclining position, upright supports adjustably connected adjacent the opposed ends of said means and each having pulleys adjacent the opposed ends thereof, a cord extending over the respective pulleys, means adjacent one end of said cords for connecting the said ends to selected portions of the anatomy of the individual, a free-floating barlike member having its opposed ends connected to the other end of each of said cords and means for exerting a longitudinal movement alternately in opposite directions on said barlike member to, in turn, impart a pulling action on one of said cords and a simultaneous releasing action on the other of said cords alternately.

2,861,566
HERNIAL BAND OR BELT TRUSS
Leo Sichel, St. George, N. Y.
Application October 21, 1957, Serial No. 691,359
1 Claim. (Cl. 128—100)



A hernial truss comprising, in combination, a body encircling belt of flexible, non-stretchable material, a rupture pad supported by said belt and adapted to be placed against the orifice of protrusion, and at least one resilient receptacle containing fluid mounted on the belt at a position substantially diametrically opposite the pad to exert a radial pressure against the pad.

2,861,567
PRESSURIZED HELMET FOR AVIATORS
John Raymond Cuthbert Quilter, Woking, and Hugh Quentin Alleyne Reeves, Surbiton, England; Sylvia Reeves, executrix of the estate of Hugh Quentin Alleyne Reeves, deceased
Application January 10, 1950, Serial No. 137,692
20 Claims. (Cl. 128—141)



1. In a pressurized helmet of the kind described and associated with means for supply of oxygen under pressure, the combination of a skin shaped to fit the wearer's head and held in contact with his head by the pressure of the oxygen supply, said skin being apertured to admit oxygen to the wearer's respiratory organs, and a flexible gas-tight cover loosely enclosing said apertured skin, said cover including means for admission of said oxygen supply.

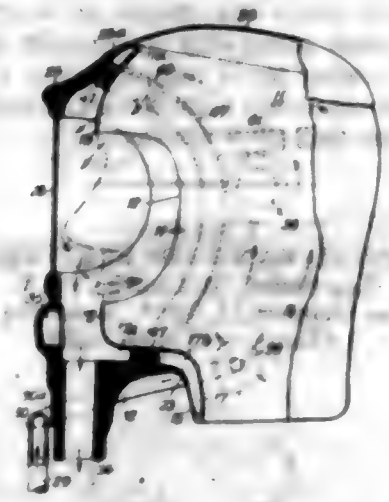
2,861,568
PRESSURIZED HELMET FOR AVIATORS
John Raymond Cuthbert Quilter, Woking, and Hugh Quentin Alleyne Reeves, Surbiton, England; Sylvia Reeves, executrix of the estate of Hugh Quentin Alleyne Reeves, deceased
Application September 27, 1950, Serial No. 186,949
20 Claims. (Cl. 128—141)

1. In a pressurized helmet of the kind described, and associated with means for supply of oxygen under pres-

across the peripheral face of the grinding wheel, means to control the end position of said slide to facilitate po-

to be supported on a stove top and more than three inwardly extending annularly spaced arms, a set of three of

sure the combination of a skin shaped to fit the wearer's head, said skin being apertured to expose the wearer's respiratory organs, a flexible cover loosely enclosing said skin, said skin and cover being joined together in a gas-tight manner to enclose a narrow space between them,



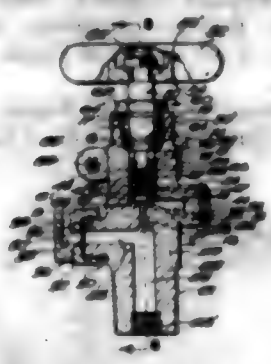
means for admitting said oxygen supply to said narrow space for holding said skin in contact with the wearer's head and for inflating said cover, and a partition dividing said narrow space between said skin and cover to form a plurality of compartments through which said oxygen supply flows in series.

2,861,569

VALVE APPARATUS FOR DISPENSING GAS

John H. Emerson, Arlington, Mass.

Application April 1, 1955, Serial No. 498,488
6 Claims. (Cl. 128—142)



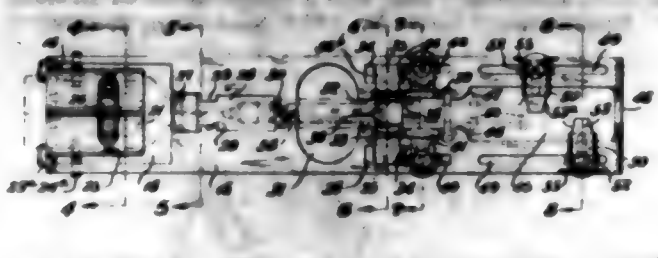
1. Valve apparatus for dispensing gas comprising gas conduit means, valve seat means located in said conduit means, valve means for cooperating with said valve seat means, valve carrier means for carrying said valve means, said valve carrier means having a first valve engaging portion for engaging said valve means and a second valve engaging portion for engaging said valve means, said valve means being adapted to move with relation to said carrier means between said first and second valve engaging portions, resilient means for resiliently urging said valve means toward said second valve engaging portion, means for moving said carrier to, and locking said carrier in, a first position in which said first valve engaging portion positively engages said valve means to positively urge the same into seating engagement with said valve seat means, an intermediate position in which said resilient means is effective to resiliently urge said valve means into engagement with said valve seat means when the pressure upstream of said valve seat means is at or below a predetermined amount, and in which, when said pressure is above said predetermined amount, said valve means is forced by said pressure out of engagement with said valve seat means against the force exerted thereon by said resilient means and a third position in which said second valve engaging portion of said carrier means positively engages said valve means to positively urge the same out of seating engagement with said valve seat means, said predetermined amount being sufficient to provide for substantial flow through the apparatus when the valve means is subsequently positively urged out of seating engagement with said valve seat means, said carrier means comprising a cylindrical shaped member having a threaded portion on the outer surface thereof, said apparatus including a valve housing having a threaded passage therein for receiving said threaded portion of said carrier means and said carrier means being moved to and from, and locked in, said positions by turning movement of said carrier member in said threaded passage.

2,861,570

SYRINGE FILLING DEVICE

Eugene L. Beecher, Cleveland Heights, Ohio

Application April 30, 1956, Serial No. 581,603
13 Claims. (Cl. 128—215)



1. A device for filling to an exact amount a medical injection syringe from a vial containing liquid to be injected into a person subcutaneously, said device comprising an elongated bed provided with longitudinally spaced means for mounting therein a vial and a syringe in a relationship such that the needle of the syringe will penetrate the exact center of the stopper of the vial on the longitudinal center line of the latter, and means carried by the bed and adjustable longitudinally thereof, and stop means carried by said last named means and movable therein transversely of the bed to an extended position in the path of movement of the head of the plunger of the syringe mounted in the device as the plunger is drawn outwardly of the barrel during the filling operation to limit positively such outward movement of the plunger to effect the filling of the syringe with the exact desired amount of the liquid or to a retracted position outside the path of movement of the head of the plunger, and means for maintaining said stop means in either said extended position or said retracted position.

2,861,571

MULTIPLE DOSE DISPOSABLE SYRINGE

Ellsworth Rolland Sandhage, Pearl River, N. Y., and Robert Lincoln Burkhart, Montvale, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application October 30, 1956, Serial No. 619,324
8 Claims. (Cl. 128—218)

1. A multiple dose disposable syringe comprising a tubular syringe barrel having a dispensing outlet at one end, a plunger member fitted within said syringe barrel

the opposed ends of said means and each having pulleys associated with means for supply of oxygen under pres-

and adapted to slide longitudinally therein in close contact with the side walls thereof thereby to force liquid from the syringe barrel through said dispensing outlet, said plunger having a longitudinal passage from one of its ends to the other permitting passage of liquid therethrough, check valve means in association with said plunger passage at the end closest to said dispensing outlet adapted to prevent flow of liquid through said passage from the syringe barrel, air relief valve means near the other end of said plunger adapted to permit air to flow into said longitudinal liquid passage when pressure within said passage is less than that outside said passage, a resilient compressible container adapted to hold a quantity of liquid, said container being attached to said plunger at the end thereof opposite the dispensing outlet of the syringe barrel whereby upon pressure being applied to said resilient container it is deformed and liquid contained therein is forced therefrom through said plunger passage and check valve into the said syringe barrel.

2,861,572
MEDICAMENT DISPENSER
Harry W. Hind, Los Altos, and Ivan Szekely, Palo Alto, Calif., assignors to Barnes-Hind Laboratories, Inc., a corporation of California
Application April 9, 1957, Serial No. 651,646
1 Claim. (Cl. 128—233)

A disposable, single dosage, ophthalmic medicament dispenser consisting of a tube of water-vapor impermeable "Saran" having a storage zone adapted to hold liquids and semiliquids; said tube being sealed upon itself at one end and having at its other end an extended narrow nozzle integral with said storage zone, said nozzle being at least about the length of said storage zone, said nozzle being formed by a pair of opposed seal lines, said seal lines being formed by the sealing together of opposite walls of said tube along the length of said nozzle, said seal lines approaching one another at the remote end of said nozzle whereby to form an elongated conical nozzle sealed at the apex; the opposed walls of said nozzle being progressively more closely juxtapositioned as the tip of said nozzle is approached to provide a capillary-like conical passage within the nozzle tapering to the apex in the nozzle, said nozzle being suitable for lateral severing at various points along the length thereof whereby to provide outlet orifices of varying sizes permitting discharge of medicaments of varying viscosities from said tube drop by drop.

2,861,573
DIAPER
Evelyn P. Daley, Buffalo, N. Y.
Application June 1, 1954, Serial No. 433,427
2 Claims. (Cl. 128—284)

1. A diaper comprising, an elongated body member of diaper material having a length approximately twice that required to fit around an infant through the crotch thereof, said body member being a unitary piece of material having its side edges folded over and secured to each other to provide two layers of diaper material defining a pocket therebetween for receiving a sheet of waterproof material, a pair of side members extending laterally from opposite sides of said body member for extending around opposite sides of an infant and secured to said body member adjacent the longitudinal mid-point thereof, and an elastic member extending between said side members across one side of said body member and normally urging said side members toward

each other, whereby said body member can be folded endwise to cover said elastic material and double the thickness of diaper material passing through the crotch of the infant.

2,861,574
TOURNIQUET
Lawrence Bradow, Riverside, Calif.
Application May 6, 1957, Serial No. 657,215
8 Claims. (Cl. 128—327)

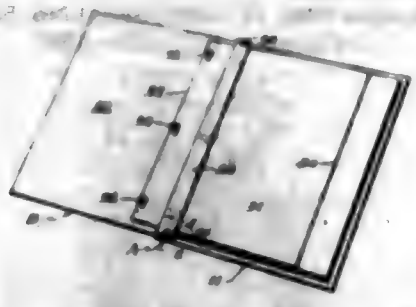
1. A tourniquet comprising two hingedly connected oppositely curved blades, means separably holding said blades in oval-defining relationship, and inflatable bag means disposed between the blades and which, when inflated, impose pressure on a vessel also disposed between the blades.

2,861,575
FOUNDATION GARMENT
John V. Heller, Fairfield, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Application May 31, 1956, Serial No. 588,530
3 Claims. (Cl. 128—436)

1. In a foundation garment, comprising front and side sections, and a back section secured at its side edges to said side sections along substantially vertical side seams

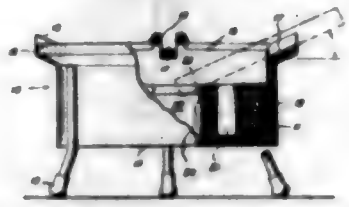
arranged to overlie the body of the wearer at each side along lines extending from points substantially above the waist line to points substantially below the hip line, said back section comprising upper and lower parts, each having upper and lower edges and a pair of side edges, said upper and lower parts being telescopically overlapped in the region of the waist line with the lower portion of said upper part slidably overlying the upper portion of said lower part, said upper part adapted to engage the body above the hip line and at the waist line and having its lower edge free of attachment between its ends, said ends being anchored to said seam lines at points substantially coincident to the hip line with the intermediate portion of said lower edge spaced a substantial distance below the waist line, said lower part adapted to engage the back and hips below the waist line and having its upper edge arched downwardly and free of attachment between its ends, said last mentioned ends being anchored to said seam lines at points spaced a substantial distance above the waist line with the intermediate portion of said upper edge normally disposed substantially coincident to the waist line, the upper edge of said lower part and its upper portion underlying said upper part being circumferentially elastic at least in part whereby said upper edge is adapted to lengthen in increasingly arched relation between its anchored ends as relative telescopic expansion movement takes place between said upper and lower parts, and is adapted to shorten between its anchored ends as relative telescopic contraction movement takes place between said upper and lower parts; the improvement wherein said upper part comprises a horizontally elastic panel having an upper edge defining the upper side of said upper part, side edges extending downwardly from the respective ends of said upper edge and partially defining the side edges of said upper part, and a lower edge including a centrally disposed lower edge portion partially defining the lower edge of said upper part, and diagonally disposed lower edge portions extending from the respective ends of said centrally disposed lower edge portion to the respective lower ends of said side edges, a pair of non-elastic triangular-shaped panels having diagonal upper edges respectively coextensive with and secured to said diagonal lower edge portions of said elastic panel, lower edges extending outwardly from the respective ends of said centrally disposed lower edge portion of said elastic panel and defining therewith the lower edge of said upper part, and side edges extending downwardly from the respective lower ends of said side edges of said elastic panel and defining therewith the side edges of said upper part.

2,861,576
LOOSE LEAF BINDER
Ephraim T. Holmgren, St. Paul, Minn.
Application December 14, 1953, Serial No. 397,970
7 Claims. (Cl. 129—33)



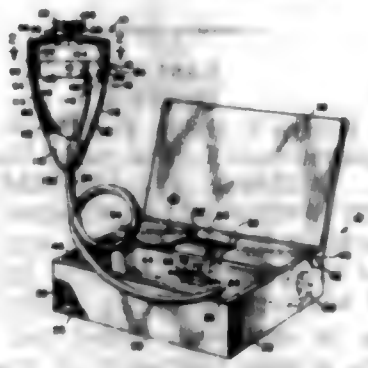
1. A loose leaf binder for use with loose leaf sheets having spaced apertures spaced from an edge of the sheet and at a predetermined distance apart and from the ends of the sheet, the binder including a hinged cover, a base member and an overlying member, the overlying member comprising a narrow elongated member, means at the ends of said members connecting said overlying member to said base member, said members being adjacent to the hinge of said cover, the overlying member being free of connection with said base member except for said connecting means and forming an opening between said members through which said sheets may slide, resilient fingers connected to one of said members and extending in a direction at substantially right angles to the elongated edges of said overlying member and toward said hinge, said fingers being substantially aligned between said connecting means and extending at an acute angle to said one member and said fingers terminating closely adjacent and at an acute angle to the other of said members, said fingers being spaced apart and spaced from said connecting means distances generally corresponding to the spacing of the apertures in the sheets, whereby one edge of each said sheet may be inserted through said opening between said fingers and the other of said members and may be guided by said connecting means, the apertures sliding past said fingers upon movement of the sheet in the direction of inclination of said fingers, said fingers extending through said apertures when said fingers and apertures are in registry upon movement of said sheets in the opposite direction.

2,861,577
CIGARETTE RECEPTACLE
Charles Glasser, Lakewood, N. J.
Application February 14, 1957, Serial No. 640,279
4 Claims. (Cl. 131—235)



1. A cigarette receptacle comprising a body having an upper rim thereon, inwardly declined cigarette supporting means disposed about said rim, extinguishing means disposed centrally of said body, said extinguishing means being provided with a lip declining inwardly therefrom at an angle greater than that of the bottom of said supporting means, whereby the angular inclination of said lip relative to that of said supporting means cooperates to permit combustion of a lighted cigarette upwardly and outwardly beyond the edge of said lip, when resting in said supporting means and on said edge.

2,861,578
UTILITY CABINET ASSEMBLY
Arnold M. Thompson, Wheaton, Ill., assignor to Thompson Tool and Manufacturing Co., Franklin Park, Ill., a corporation of Illinois
Application March 10, 1953, Serial No. 720,370
3 Claims. (Cl. 132—73.6)



1. In a utility cabinet assembly of the character described, a generally rectangular box-like structure having a bottom wall, upstanding side and end walls, and an open top, a flat cover plate hingedly secured to said struc-

2,861,581

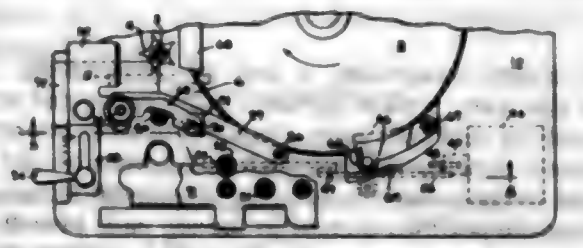
bly comprises a valve body; a main seat supported by the

ture adjacent one side wall thereof and swingable between open and closed positions over said open top, a partition wall extending between said end walls medially thereof and dividing the interior of the structure into two compartments, a spring terminal clip secured to the inside face of each side wall within one of said compartments midway between said partition wall and one of said side walls, a battery assembly within said one compartment interposed between and operatively electrically connected to said spring clips and substantially filling said compartment, there being a slot formed centrally in said partition wall midway between said end walls and midway between said bottom wall and the upper edge of said partition wall, the axis of said slot extending horizontally, a switch assembly secured to said partition wall within said one compartment and having an operating finger projecting through said slot into the other compartment for manipulation purposes, an implement assembly having a motor driven tool operatively associated therewith and comprising a housing of generally tapering design having a head portion of less longitudinal extent than the distance between said slot in the partition wall and either end wall and having a tapered stem portion, the overall longitudinal extent of said housing being such that when the housing is positioned in said other compartment shifting movement of the housing within said latter compartment sufficient to cause said head portion to engage said switch operating finger is prevented, there being a hole in said partition wall, and a dual-conductor electric lead operatively connected to said motor and passing outwardly from said housing through the tapered end thereof and passing through said hole, one conductor of said lead being connected directly to one of said spring contacts and the other conductor being operatively connected to said switch, a wire operatively connecting said switch to the other spring contact and a flat cover for said one compartment removably closing the rim thereof, said cover when in position over said one compartment lying substantially below the level of said rim.

2,861,579
COIN SEPARATORS
Fairfield W. Hoban, Babylon, N. Y.
Application October 18, 1956, Serial No. 541,232
1 Claim. (Cl. 133—3)

In a separator for coins of different sizes, a coin guide structure comprising a substantially channel-shaped main coin guide member, second and third substantially channel-shaped coin guide members nested within the main member so that the webs of all members are joined to form the rear wall of the device, the width of the second member being greater than that of the third member, the flanges of all members serving as edge guides for different coins, the flanges of the second and third members being of different heights and lengths and being shaped to serve as coin deflectors for different coins, a main coin director with an apertured body portion pivotally suspended at one of its ends from one end and between the flanges of the main member so that a coin passage is formed between the pivoted end of the main coin director and the web of the third member; a second coin director secured at one of its ends to substantially the central area of the pivoted end of the main coin director, its other, free end extending through the aperture of the main coin director and being normally biased toward the rear wall of the device; a third, fork-shaped coin director pivotally suspended at one of its ends from the pivoted end of the main coin director, its fork-shaped blades straddling the second coin director and extending between the flanges of the third member, spring means normally urging the third coin director against the webs of the joined members; a main ledge extending between the lower flange ends of the main member and serving as discharge chute for the largest coin, a second slanting ledge for the next smaller coin connecting the lower ends of the flange portions of the second member, recesses provided in the web bodies of the second and third members, and a third slanting ledge for the smallest coin located in these recesses and adjacent to the web of the main member and extending between the lower ends of the flanges of the third member, and a coin chute for the smallest coin located between these latter flanges and being inclined toward the web of the main member for directing the smallest coin onto said third slanting ledge, the flanges of all members adjacent to the lowermost ends of the three ledges having apertures to provide discharge passages for coins, said main coin director and the coin deflector of the second member serving for guiding the largest coin onto the main slanting ledge; the second coin director and the coin deflector of the third member being adapted to cause the next smaller coin to drop upon the second slanting ledge; and the fork-shaped free ends of the third coin director serving for directing the smallest coin toward the chute and hence upon the third slanting ledge.

2,861,580
COIN HANDLING MACHINE WITH ADJUSTABLE PASSAGE
Arnold R. Bechholz and Frank Hoban, Watertown, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Original application August 17, 1955, Serial No. 528,940. Divided and this application March 14, 1957, Serial No. 645,973
2 Claims. (Cl. 133—8)

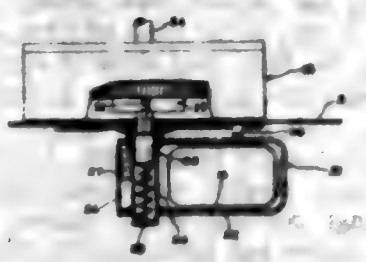


1. In a coin counting machine, the combination of a coin receiving passage, means for supplying coins to said passage, a pivotally mounted gauge lever forming a side of said passage, means for adjusting the position of said gauge lever to determine the effective width of said passage for different denominations of coins, a coin operated member in said passage, a rotary feed wheel for feeding coins past said coin operated member to operate the same and having a driven shaft, a mounting means for said shaft to permit lengthwise adjustment of said shaft to vary the position of said feed wheel, a lever operatively connected to said shaft and to said pivotally mounted gauge lever and having a one to two movement ratio relative to said gauge lever so that when said gauge lever is adjusted the center line of said wheel will be disposed in substantial alinement with the center of said passage for any particular denomination of coin to reduce wheel wear.

member comprising a narrow elongated member, means at the ends of said members connecting said overlying

a bottom wall, upstanding side and end walls, and an open top, a flat cover plate hingedly secured to said struc-

2,861,581
DISHWASHING MACHINE WITH DETERGENT DISPENSER
William D. Ryckman, Jr., Stratford, Conn., assignor to General Electric Company, a corporation of New York
Application July 24, 1957, Serial No. 673,894
10 Claims. (Cl. 134—58)



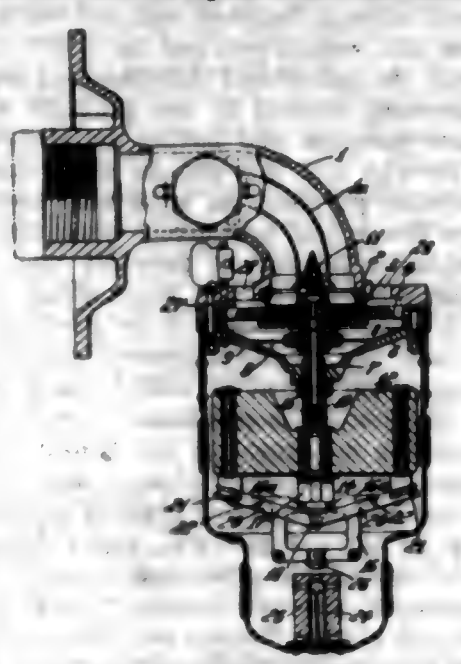
1. A washing machine comprising a tub, a container including a bottom wall for supporting detergent and the like within said tub, means for movably mounting said wall within said tub for movement between a supporting position and a discharge position, permanent magnet means for supporting said wall in its supporting position solely by magnetic force, and means for disabling said magnet means so as to allow said wall to move to its discharge position.

2,861,582
SAFETY CRUTCH HEAD
Henry W. Miller, Winter Haven, Fla.
Application May 3, 1957, Serial No. 656,886
2 Claims. (Cl. 135—49)

1. A crutch comprising a pair of downwardly convergent side bars, a stem portion rigidly connected to the lower ends of said side bars, a handle member connected transversely between the intermediate portions of said side bars, and a ring member secured at substantially diametrically opposite portions thereof to the top ends of said side bars, said ring member comprising a first segment rigidly secured to said top ends and a second segment hinged to said first segment and being rotatable upwardly relative thereto, whereby said segment may be folded upwardly at times so that the crutch may be leaned against a wall and will not roll when thus disposed.

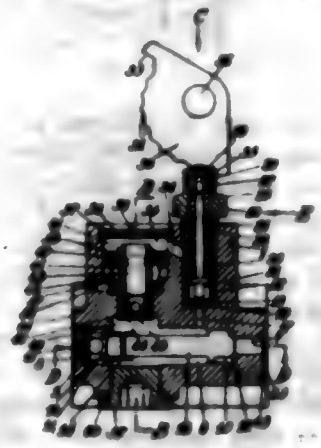
2,861,583
FLOAT VALVES
Harold Edward Sydney Colliver, Chalfont St. Peter, England, assignor to Bernard Bercovitz, Toronto, Ontario, Canada
Application January 23, 1956, Serial No. 560,816
Claims priority, application Great Britain January 24, 1955
1 Claim. (Cl. 137—39)

The combination of a tank having an inlet for liquid under pressure with a valve assembly for controlling the level of a liquid in the tank by control of the flow of liquid through the inlet into the tank, which valve assembly comprises a valve body; a main seat supported by the body and a main movable valve member engageable with the seat to shut off the inlet; a chamber having one wall comprised of a flexible diaphragm which is operative on application of fluid pressure to the chamber to move the main valve member into engagement with the seat to close the valve, the chamber having a restricted inlet from the liquid inlet and relatively less restricted outlet to the tank; a pilot valve member movable upwardly when the valve assembly is upright to close the outlet; a float responsive to the level of liquid in the tank when the valve



is upright to move the pilot valve member to closed position when said level reaches a predetermined height, whereby pressure is caused to build up in the chamber and acts on said diaphragm to engage the main valve with said seat; and a weight which is supported from the body out of engagement with the pilot valve member when the valve is upright and subjected to positive "g," but is movable relative to the body on inversion of the valve or application of negative "g" thereto, to engage the pilot valve member and to move said pilot valve member to the position in which it closes the outlet.

2,861,584
HYDRAULIC TRANSMISSION ARRANGEMENTS FOR SELF-PROPELLED VEHICLES
Albert H. Kersey, Castle Bromwich, and Frederick D. Cooper, Coventry, England, assignors to Ford Motor Company Limited, London, England
Application March 22, 1956, Serial No. 573,145
Claims priority, application Great Britain March 25, 1955
4 Claims. (Cl. 137—108)



1. Relief valve means for self-propelled vehicles of the kind in which a conventional power unit drives a pump supplying high-pressure liquid to one or more hydraulic propelling motors and receiving exhaust liquid back from

coil director and the web of the third member; a second duce wheel wear.

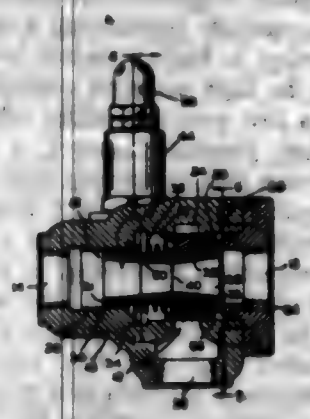
the motors comprising pressure and exhaust liquid connections, a main fluid chamber adapted to be supplied with liquid from the pressure liquid connection, a poppet-type valve and valve spring normally closing the main fluid chamber, operator controlled adjustable means for varying the pressure of the valve spring at will and hence the pressure at which the valve opens the main fluid chamber, a supplementary fluid chamber, a passage connecting the main fluid chamber to the supplementary fluid chamber when the poppet-type valve is in the open position, a combined piston and supplementary spring-loaded valve, of larger capacity than the poppet-type valve, the piston operating in the supplementary chamber, and the supplementary valve normally closing the main chamber, the piston area being larger than the area of the supplementary valve by an amount which when subject to the high pressure liquid is sufficient to open and maintain open the supplementary valve against its spring loading, a passage through the combined piston and supplementary valve connecting the main chamber and the supplementary chamber when the supplementary valve is in the open position, a further passage connecting the supplementary chamber to the exhaust fluid connection when the supplementary valve is in the open position and a one-way valve in said further passage.

2,861,535

HYDRAULIC RELIEF VALVE

Robert E. Becher, Logansport, Ind., assignor to Logansport Machine Company, Logansport, Ind., a corporation of Indiana

Application April 19, 1954, Serial No. 424,109
12 Claims. (Cl. 137—115)



1. A pressure relief valve having a valve body with a main fluid passage, inlet and outlet ports for the main passage, a relief passage communicating with the main passage, a valve piston slidably disposed in the main passage controlling the relief passage and movable between an open and a closed position, a central passage through the valve piston to provide fluid flow from the inlet to the outlet, a venturi in the central passage of the valve piston, and a bypass to the relief passage communicating with the central passage ahead of the throat of the venturi toward the inlet of the main passage.

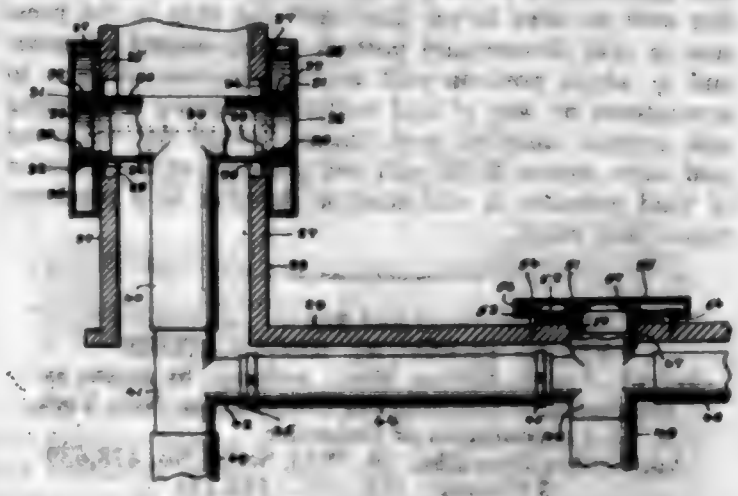
2,861,586

CONNECTOR FOR VACUUM CLEANERS

Earl B. Dobbs, Dallas, Tex.

Application February 26, 1957, Serial No. 642,619
1 Claim. (Cl. 137—368)

In a device of the character described, a horizontally disposed floor surface, a vertically disposed wall arranged at right angles with respect to said floor surface, and said wall including spaced apart portions provided with diametrically opposed openings therein, a cylindrical open ended tube extending through said openings, a sleeve made of resilient material mounted on each end of said tube and each sleeve including an inner portion snugly seated within the end of the tube, an outer portion arranged on the outer surface of the tube and said outer portion being of less length than the inner portion, a connecting portion extending between said inner and outer portions, an annular lip extending outwardly from said outer portion, said sleeves adapted to receive suction hoses therein, a pair of plates positioned in spaced parallel relation with respect to each other and said plates being provided with central openings for the projection therethrough of said sleeves, securing elements extending through said plates and through the spaced apart portions of said wall, a cover hingedly connected to each of said plates and said covers being mounted for movement into and out of closing relation with respect to said sleeves, a circular rim extending inwardly from each of said covers, a circular collar carried by each cover and said collars being mounted for movement into and out of engagement with said sleeves, a first conduit extending from said tube, a T-fitting connected to said first conduit, a second conduit connected to said T-fitting and extending beneath a portion of the floor surface, a fitting connected to said second conduit, there being an opening in the floor surface adjacent said last named fitting, a tube extending from said last named fitting and projecting through the opening in the floor surface, a resilient sleeve connected to the upper end of said last named tube, a plate extending outwardly from said last named tube and defining a shoulder, a plate surrounding said last named sleeve and secured to the floor surface, and a cover hingedly connected to said last named plate.

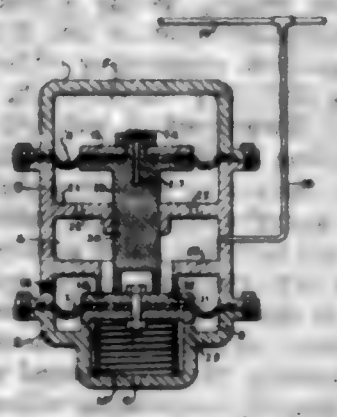


2,861,587

VENT VALVE DEVICE

Thomas F. Hurrum, McKeesport, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

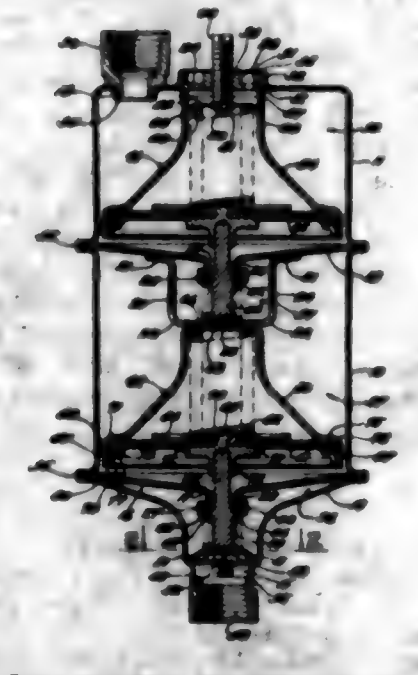
Application November 25, 1955, Serial No. 548,871
4 Claims. (Cl. 137—494)



3. A vent valve device comprising, in combination, a casing having a control chamber connectable to a conduit, in which pressure of fluid may be externally controlled, and a pressure chamber connected to said control cham-

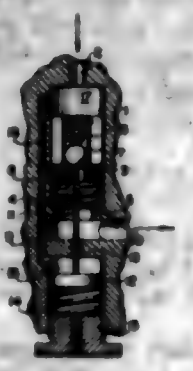
ber through a restricted passageway, a fluid pressure responsive movable abutment separating said control chamber from said pressure chamber, an apertured valve seat partition separating said control chamber into an upstream portion having an inlet and a downstream portion having a restricted opening to atmosphere, valve means normally occupying one position with respect to said seat aperture, in which position said valve means is subject over one area to the pressure in said upstream portion of the control chamber and closes off said upstream portion from atmosphere, and operable by said movable abutment, upon a preponderance of fluid pressure in said pressure chamber over that in said control chamber due to a reduction of fluid pressure in said control chamber at a certain rate to a vent position with respect to said seat aperture, in which position said valve means is subject over an area larger than said one area to the pressure in said downstream portion of the control chamber and in which position said control chamber is open to atmosphere by way of said restricted opening for venting said control chamber, and biasing means for returning said valve means to its said one position upon reduction of fluid pressure in said control chamber to a predetermined low value.

2,861,588
FLUID PRESSURE REGULATORS
John L. Crouk, Milton, Mass., assignor, by mesne assignments, to Worthington Corporation, New York, N. Y., a corporation of Delaware
Application December 30, 1954, Serial No. 478,639
3 Claims. (Cl. 137—505.12)



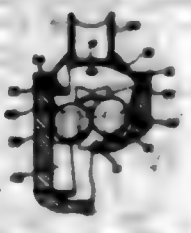
1. In a fluid pressure regulator, a housing, a first partition in the housing having a first control orifice, an inlet connection upstream of said first control orifice, a first valve member cooperating with the first control orifice to vary fluid flow therethrough, a first assembly in said housing downstream of said first orifice, said first assembly including a rigid casing having a flexible wall portion sealed thereto to provide a fluid pressure tight chamber, an operative connection between said flexible wall portion and said first valve member, means in the casing of said first assembly acting against the flexible wall portion in opposition to fluid pressure externally thereof, a second partition in the housing downstream of the first assembly having a second control orifice, a second valve member cooperating with said second control orifice to vary fluid flow therethrough, a second assembly in said housing downstream of said second control orifice, said second assembly including a casing having a fluid tight rigid wall portion and a fluid tight flexible wall portion sealed to said casing to completely segregate fluid within said casing from fluid externally thereof in said housing, an operative connection between the flexible wall portion of said second assembly and said second valve member, means in the casing of said second assembly acting against the flexible wall portion in opposition to fluid pressure externally thereof, an outlet connection downstream of said second control orifice, means supporting said first assembly casing in spaced relation with said partitions and with the wall of said housing, and means supporting said second assembly casing in spaced relation with said second partition and with the wall of said housing.

2,861,589
PRESSURE REGULATOR
Fritz Ostwald, Hoppenheim, Germany
Application September 27, 1955, Serial No. 537,010
Claims priority, application Germany September 30, 1954
5 Claims. (Cl. 137—505.13)



5. A fluid pressure regulator for operating with high and low pressure conduits comprising a casing defining a first chamber having a high pressure inlet adapted for being coupled to the high pressure conduit and a second chamber having a low pressure outlet adapted for being coupled to the low pressure conduit, a first perforated wall slidable between and separating said first and second chambers, said casing defining a third chamber, a second perforated wall separating said second and third chambers, an adjustment screw positioned in said third chamber, an abutment on said casing in said second chamber, a piston slidable in said third chamber, a first spring between said abutment and said first perforated wall, a second spring interposed between said piston and said adjustment screw, a conduit coupling said first and third chambers for the transmission of the high pressure, a closure in said first chamber for closing the perforation of said first perforated wall, and a stem extending through said second perforated wall in fluid-tight contact and operatively associating said piston with said closure, the high pressure and said second spring operating in opposite directions on said piston whereby said piston is actuated by a sufficiently high pressure received via said conduit to cause said closure to close said first perforated wall.

2,861,590
FLOW CONTROL DEVICE
Max J. Leeble, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application September 20, 1956, Serial No. 611,067
3 Claims. (Cl. 137—513.7)



1. A flow control device for maintaining a relatively constant rate of fluid flow, comprising a passageway

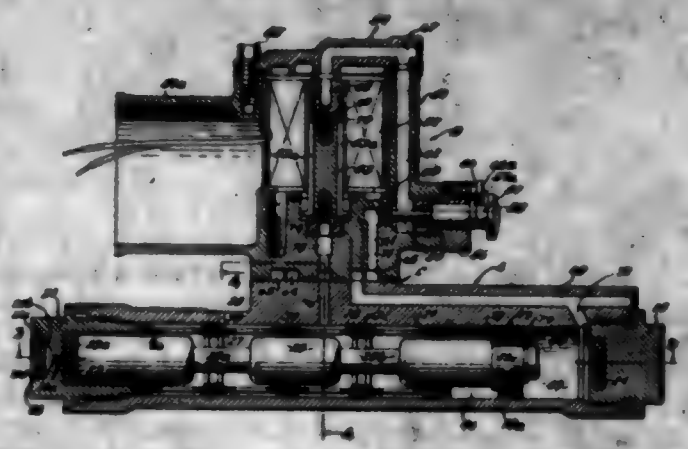
portion slidly sealed within the end of the body, an and a pressure chamber connected to said control cham-

through which the flow to be controlled is passed, a wall closing the outlet end of said passageway, said wall having a main aperture therethrough formed in a plane substantially normal to the flow axis of said passageway and at least one bypass aperture, said main aperture being of a generally hourglass shape necked down at its center to form two sections on opposite sides of said center, and a pair of resilient compressible spheres disposed side-by-side in said passageway on the upstream side of said wall, said spheres being associated respectively with the opposite sections of said aperture with each sphere partially covering its respective section, said spheres being effective to block off said main aperture progressively as they are deformed against said wall by increasing inlet pressure, thereby to maintain a relatively constant flow through said device.

2,861,591
FUEL SELECTOR VALVE
William Andrew Hertel, Cleveland, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Application September 13, 1954, Serial No. 455,660
2 Claims. (Cl. 137—607)

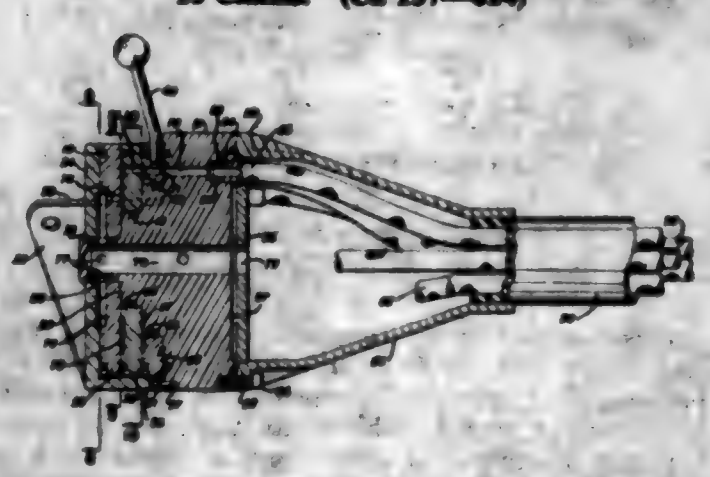
1. A selector valve comprising a body having an integrally formed back wall and side walls with said side walls disposed normal to the back wall to form a chamber, a cover plate spanning said side wall to enclose the chamber, one of said side walls having an outlet bore centrally thereof and an inlet bore at each side of the outlet bore, a pivot pin mounted in the chamber in alignment with said outlet bore, said pin being supported in the chamber transversely of the outlet bore, a rocker member mounted on said pivot pin intermediate its ends and proportioned so that the ends thereof overhang said inlet bores, a chamfered valve seat in the chamber at each of said inlet bores, said rocker member having the portions thereof at each side of its pivotal mounting angularly related to each other, a valve closure member carried at each end of the rocker member and having a diameter exceeding the diameter of the seat in the inlet bores, and an O-ring seal carried by each of the valve closure members on the side thereof adjacent the chamfered valve seat, said O-ring seal having an outer diameter corresponding substantially to the maximum diameter of said chamfered valve seat, each of said valve closure members being moved in an arcuate path by pivotal movement of the rocker member on its pivot pin, said arcuate path of each valve member being coincident with the axis of its inlet bore as the valve closure member reaches the valve seat, a leaf spring mounted on the rocker member on that side thereof away from the outlet and inlet bores, said leaf spring having a central arcuate portion concave away from the rocker member and having diverging end portions secured to the rocker member adjacent the valve closure member, an actuating shaft pivoted in the wall of the body spaced from said leaf spring, an arm on said shaft having a cam surface at the end thereof adapted to bear on said arcuate portion of the leaf spring to move said rocker to one or the other of the valve closing position, means for limiting the movement of the arm about the pivot axis of the shaft to prevent disengagement of said cam surface from said leaf spring, said arm and the arcuate portion of said leaf spring being proportioned so that the distance from the pivot axis of the actuating shaft to the end of the cam on the arm is greater than the distance from said pivot axis to all surfaces on the arcuate portion of the leaf spring except the surface in contact with the cam and so that when one or the other of the valves is in its valve closing position such valve is biased to such closed position whereby the rocker arm is biased to close one or the other of said inlet bores.

2,861,592
PLUNGER VALVE WITH SOLENOID PILOT AND MANUAL OVERRIDE VALVE MECHANISM
John E. Collins, Akron, Ohio
Application March 11, 1954, Serial No. 415,640
8 Claims. (Cl. 137—623)



6. A valve including a housing having a bore therein, said housing having a plurality of ports affording fluid flow entrances to said bore, a plunger positioned for reciprocation in said bore, means on said plunger to direct fluid flow between certain of the said ports when the plunger is reciprocated to predetermined positions in said bore, means responsive to differential fluid pressure force for reciprocating said plunger, a solenoid-operated pilot valve for regulating fluid flow to the latter said means to effect plunger reciprocation, and a manually operable override valve for directly supplying and exhausting fluid to the latter said plunger reciprocation means independently of the energization of said solenoid-operated pilot valve to effect plunger reciprocation.

2,861,593
HYDRAULIC REMOTE CONTROL
Spencer Bowman, Bay Village, Ohio, assignor, by mesne assignments, to Westinghouse Air Brake Company, a corporation of Pennsylvania
Application June 16, 1954, Serial No. 437,244
15 Claims. (Cl. 137—624)

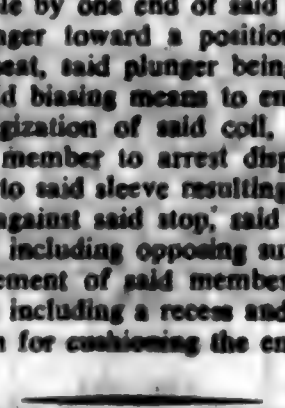


9. A control unit comprising a housing, a plurality of flat concentric annular valve seats within said housing, a disk valve rotatable on each of said seats, a fluid conveying duct opening on each of said seats, a passage-way in said housing centrally through said valves and seats, a system of passages within said valves and housing affording constant open communication of each valve with said

having a fluid tight rigid wall portion and a fluid tight constant rate of fluid flow, comprising a passageway

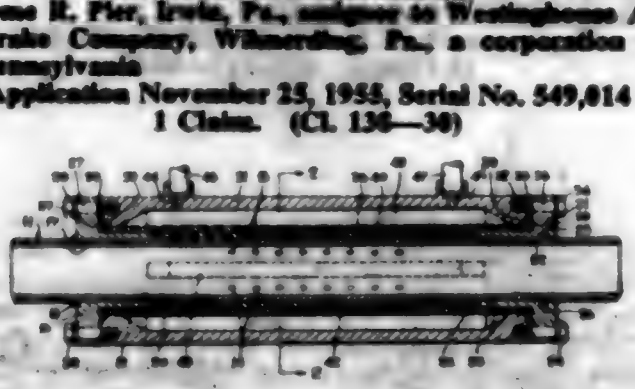
passage-way, and at least one orifice through each valve movable upon rotation of the valve to establish or sever communication of the duct opening on its respective seat with said system of passages.

2,861,594
SOLENOID VALVE
John E. Collins, Akron, Ohio
Application October 15, 1952, Serial No. 314,905
3 Claims. (Cl. 137—625.5)



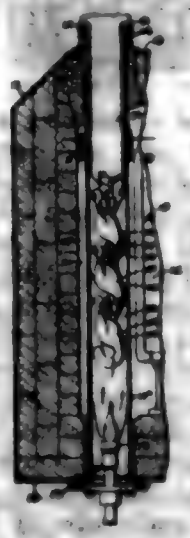
1. A fluid control valve comprising a valve housing having a flow passage therethrough, a sleeve fixed in said housing and having a first end thereof communicating with said flow passage and a second end directed away from said flow passage, an electro-magnetic coil encircling said sleeve in said housing, a member having a portion fitting within said second end of said sleeve for restricted telescopic sliding sealing engagement with said second end of the sleeve to form a yieldable stop in said sleeve, a plunger slidable in said sleeve, a valve seat in said flow passage engageable by one end of said plunger, a spring biasing said plunger toward a position of engagement with said valve seat, said plunger being slidable in said sleeve against said biasing means to engage said stop in response to energization of said coil, and means associated with said member to arrest displacement of said member relative to said sleeve resulting from the impact of said plunger against said stop, said member and the latter said means including opposing surfaces engageable to arrest displacement of said member, one of the engageable surfaces including a recess and a resilient member seated therein for cushioning the engagement of said surfaces.

2,861,595
PULSATION DAMPENER DEVICE
Jerome R. Pier, Irwin, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application November 25, 1955, Serial No. 549,014
1 Claim. (Cl. 138—30)



Pulsation dampening apparatus for absorbing pressure surges in a conduit conveying fluid at a variable pressure, said apparatus comprising in combination, a tubular mandrel connectable to the conduit, said mandrel having a plurality of throttling orifices therethrough arranged in spaced longitudinally extending rows about the circumferential outer surface thereof, casing means, and a resilient sleeve disposed within said casing means and surrounding said mandrel and sealingly secured adjacent its respective ends between said casing means and mandrel, said casing means providing a chamber surrounding the outer surface of the resilient sleeve and charged with fluid at a preselected pressure corresponding to the normal pressure of fluid in the conduit, said sleeve having a plurality of spaced inwardly directed ridges extending in a direction substantially parallel to the longitudinal axis of said sleeve, each ridge normally engaging the outer circumferential surface of the mandrel intermediate the spaced longitudinal rows of said orifices, the inner surface of the sleeve combining with the outer circumferential surface of said mandrel to define a variable volume constantly open to the conduit via the throttling orifices, said resilient sleeve being flexible radially outward responsively to a surge-induced increase in fluid pressure in said volume above that in said chamber to absorb said increase in fluid pressure, and said resilient sleeve being responsive to a decrease in fluid pressure in said volume below that in said chamber, after such surge has passed, to collapse radially inward in a predetermined controlled pattern defined by deflection of the portions of said sleeve intermediate said ridges toward engagement with the outer circumferential surface of said mandrel thereby to prevent the creation of sharp folds in said sleeve during such collapse.

2,861,596
HEAT EXCHANGER BAFFLE SYSTEM
Harold N. Igoe, Rockford, Ill.
Application February 27, 1956, Serial No. 568,032
4 Claims. (Cl. 138—38)



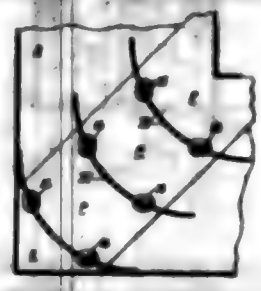
1. In a heat exchanger, the combination of, a heat exchanger tube, a plurality of strips each twisted longitudinally to define between its opposite end portions helical passages on opposite sides of each strip, each of said strips being of a substantially uniform width throughout the length thereof corresponding substantially to the internal diameter of said tube, and means for connecting said plurality of strips within said tube to extend axially thereof in contiguous end-to-end relation, the contiguous end portions of said strips extending transversely of the tube across substantially the internal diameter thereof and being angularly displaced relative to each other about the axis of said tube to form angularly displaced intercepting end portions between contiguous strips, whereby gas flowing through said tube is successively intercepted by said angularly displaced end portions and different portions of said gas are deflected along helical paths successively offset angularly one from the next thereby creating turbulence in the gas as it flows through said tube.

2,861,597
AIR GUIDE DEVICE
Martin M. Grauer, Levittown, N. Y.
Application June 23, 1953, Serial No. 363,648
6 Claims. (Cl. 138—39)

4. An air guide device comprising a plurality of curved guide blade members arranged in mutually spaced rela-

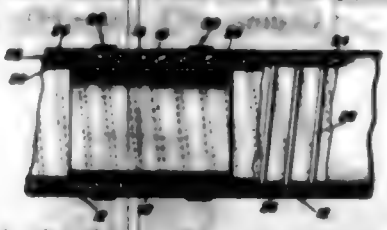
engaging wefts in each of said plies are so spaced apart of inner elongated bars mounted on said support mem-

tionship to each other, said guide blade members being rectangular in shape, with smooth, straight top and bottom edges, a top rail having a plurality of downwardly extending projections formed therein and a bottom rail having a plurality of upwardly extending projections formed therein, each of said rails being of strip material having parallel longitudinal edges, said top rail and bottom rail having a plurality of spaced narrow elongated slots cut entirely across said projections, and said slots being funnel-shaped flaring from the base of the projections adjacent the faces of the rails outwardly, said projections and said guide blade members intersecting within said slots so that portions of the top and bottom edges of said guide blade members project through said



slots and are wedged into said slots, said guide blade members being secured to said rails by having the portion of said blades which project through said slots in a bent-over projection, said narrow elongated slots being formed in laterally spaced longitudinal rows comprising a first row of slots positioned close to one of said longitudinal edges, substantially parallel therewith, and a second row of slots positioned close to the other of said longitudinal edges, substantially parallel therewith, said first and second rows of slots being positioned substantially parallel to one another, the slots in each row being parallel to one another and at an angle to the slots in the other row so that if lines were drawn through said slots, these lines would intersect at a point laterally between said slots.

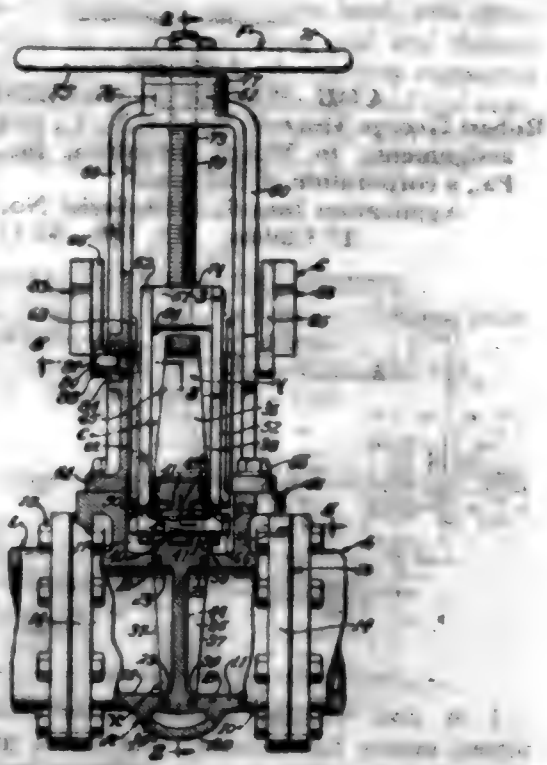
2,861,598
FLEXIBLE DUCT CONSTRUCTION
Stephen D. Carder, Jr., Oklahoma City, Okla., and Richard D. Syracool, Camden, Ark.
Application September 29, 1955, Serial No. 537,434
1 Claim. (Cl. 138—56)



In a flexible insulated duct or the like comprising bendable inner and outer spaced insulating heat reflective metal wall portions, the inner wall portion having a smooth periphery, a single layer of bendable fibrous insulating material interposed between said wall portions, and a compressive resistant wire coil extending about and engaging the periphery of said inner wall portion and partly embedded in said insulating material for maintaining a substantially uniform cross-sectional insulated duct and permitting said duct to be readily bent about its longitudinal axis, said insulation material spacing said outer wall portion from said wire coil to increase flexibility in said duct.

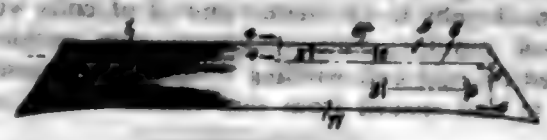
2,861,599
BALANCED VISIBLE WEDGE VALVE
Leland S. Hauser, Long Beach, Calif.
Application January 4, 1957, Serial No. 632,511
6 Claims. (Cl. 138—94.3)

1. A valve construction of the character referred to including, an elongate body having a central longitudinal flow passage, an extension on the body and defining a laterally opening chamber intersecting the flow passage, longitudinally spaced seats in the chamber, a spectacle plate having spaced valving wedges adapted to be selectively engaged with the seats, and an arm extending between and connecting the wedges, one wedge being perforate and the other wedge being imperforate and heavier than the perforate wedge, a pin fixed to the arm of the spectacle plate, a laterally shiftable carriage pivotally engaged with the pin on the plate, a support projecting laterally from the extension on the body to occur adjacent the carriage and having a channel opposing the carriage,



a key on the pin of the spectacle plate and engageable in the channel in the support and adapted to normally prevent rotation of the spectacle plate relative to the carriage and the body, and counter-balance means including, a pivot pin rotatably carried by the support to project therethrough and intersecting the channel therein at a point spaced laterally of the body and having a notch at its end to normally register with the channel, and a counter-balance fixed to the other end of the pin, and actuating means adapted to shift the carriage relative to the support and the body, the spectacle plate being adapted to be rotated when the key on the pin engages in the notch in the pivot pin of the counter-balance means.

2,861,606
MULTI-PLY FABRIC CONSTRUCTION
Oscar S. Lawton, New Bedford, Mass., assignor to Phillips-Jones Corporation, New York, N. Y., a corporation of New York
Application June 18, 1955, Serial No. 515,737
1 Claim. (Cl. 139—385.5)



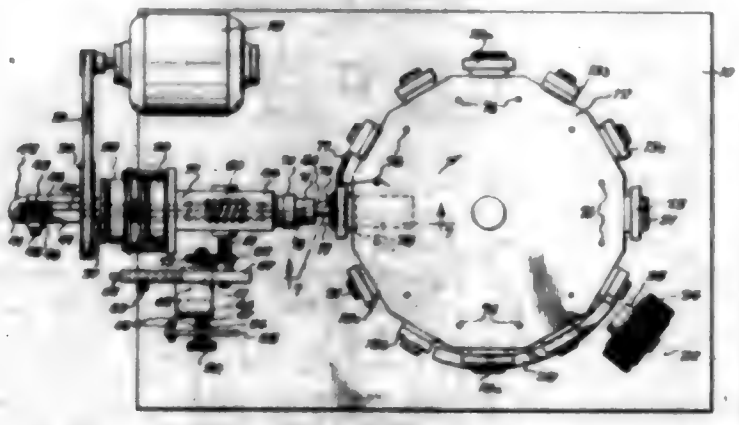
A multi-ply fabric comprising a body area and a fold-line area, the body area having a front ply composed of face warps and face wefts, a back ply composed of rear warps and rear wefts, the entire fabric area having binders connecting the face and back plies, the binders being alternately engaged with the front and rear wefts to present sections criss-crossing one another in a regular uniform pattern between the plies when viewed across the length of the fabric, each of the binders extending around the spaced-apart wefts in each of said plies, which binder-

period of time; a cup dispensing device operable to dispense cups singly and holding a supply of such cups

response to movement of said bottle, comprising: a body

engaging wefts in each of said plies are so spaced-apart that a plurality of non-engaged wefts in each ply are located between those engaged by each binder, the fold-line area having the face warps and face wefts and having rear wefts only, with the binders extending alternately between the front wefts and the rear wefts, the rear warps being wholly omitted from the weave in the fold-line area, the front face of the fabric being uniform in appearance in both the body area and the fold-line area, and each of the said individual binders also being spaced an equal distance apart as defined by predetermined numbers of face warps.

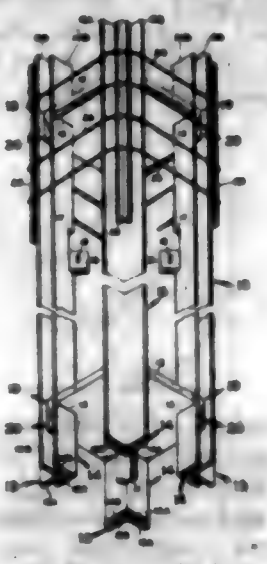
2,861,601
COIL WINDING MACHINE
Robert George Marnell, Snyder, N. Y., assignor, by mesne assignments, to Marco Industries, Inc., Womelsdorf, Pa., a corporation of Delaware
Application June 9, 1955, Serial No. 514,199
17 Claims. (Cl. 140—92.1)



1. A coil winding machine comprising a rotatable turret, means for indexing said turret to a plurality of distinct stop positions, said indexing means comprising ratchet means attached to said turret and movable pawl means adjacent said ratchet means, a plurality of coil moulds distributed about the periphery of said turret, each of said coil moulds comprising first and second coil retaining portions one of which is movable toward the other whereby each of said coil moulds is collapsible in construction, coil winding means adjacent a first one of said stop positions for winding coils on successive ones of said coil moulds as they are indexed to said first stop position, first control means for halting operation of said coil winding means after a predetermined number of turns have been placed upon a coil mould at said first stop position, second control means responsive to movement of said pawl means for reinitiating operation of said coil winding means after a next successive coil mould is indexed to said first stop position, and stationary cam means adjacent a second one of said stop positions disposed in the path of movement of movable ones of said coil retaining portions for successively collapsing each of said coil moulds as said coil moulds are indexed past said cam means at said second stop position, thereby to facilitate removal of coils wound on said coil moulds, said stationary cam means being mounted on said coil winding machine at a position adjacent to and spaced from said turret.

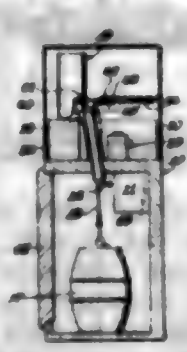
2,861,602
COLLAPSIBLE MANDREL FOR MANUFACTURING REINFORCING CAGES
Ralph D. Thomas, Miami, Fla., assignor to Anna M. Sedges, Miami Beach, Fla.
Application December 21, 1956, Serial No. 629,976
1 Claim. (Cl. 140—92.3)

A mandrel for fabricating reinforcing steel cages comprising a rotatable shaft, support members mounted on said shaft and extending radially of said shaft, a plurality of inner elongated bars mounted on said support members, said inner elongated bars being substantially parallel to said shaft and symmetrically disposed about said shaft, each of said bars having a slot, a plurality of further elongated bars, each of said further elongated bars having troughs for receiving longitudinally disposed reinforcing rods and being positioned in spaced parallel relation with one of said inner bars, a stop member mounted on each of said further elongated bars and extending through said slots for limiting the sliding movement of said further



elongated bars with relation to said inner elongated bars, a locking member mounted on each of said stop members for preventing said stop members from leaving said slots, a plurality of pair of wedges mounted on said inner and further elongated bars in opposed relation, said wedges each having an inclined surface and an elevated surface whereby when said elevated surfaces of said opposed wedges are in contact relation said further elongated bars are a greater distance from said inner bars than when said inclined surfaces of said opposed wedges are placed in contact relationship.

2,861,603
COIN OPERATED BEER DISPENSING MACHINE
Harry R. Terlecki, Berwyn, Ill.
Application May 25, 1955, Serial No. 510,927
4 Claims. (Cl. 141—94)



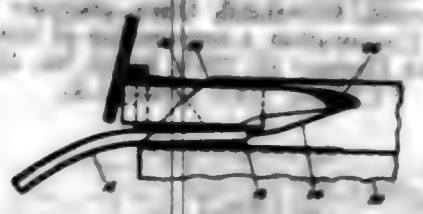
1. An automatic machine for dispensing beverage comprising in combination: a cabinet with an insulated refrigerated space with a cooling unit and an air circulating fan; a plurality of beverage containers of predetermined capacity located in the insulated refrigerated space; means to charge the beverage with equal and constant gas pressure; a dispensing device, normally closed; means defining a common discharge passage to said dispensing device, whereby the containers discharge in unison under the gas pressure; a jacket surrounding the discharge passage to the dispensing device and opening into the refrigerated space and extending to a point adjacent the dispensing device, the jacket having an air intake opening in the path of air from the fan and an air discharge opening located within the jacket; coin operated means to open the dispensing device valve for a predetermined

1. A valve construction of the character referred to including, an elongate body having a central longitudinal

of the fabric, each of the binders extending around the spaced-apart wefts in each of said plies, which binder-

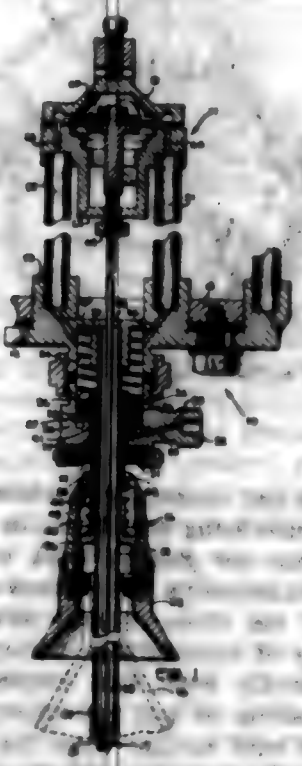
period of time; a cup dispensing device operable to dispense cups singly and holding a quantity of cups corresponding in total capacity to the predetermined capacity of the beverage container, the cup dispensing device having means responsive to the discharge of the last cup from the cup dispenser.

2,861,604
BAG FILLING SPOUT
Emmett S. Whitmire, Knoxville, Tenn., assignor to Volunteer Portland Cement Company, Knoxville, Tenn., a corporation of Delaware
Application May 22, 1956, Serial No. 586,479
4 Claims. (Cl. 141—285)



1. An attachment for filling valve bags with pulverulent material including an elongated cylindrical spout having opened inner and outer ends, the inner end of said spout having a downwardly directed discharge opening, an independent exposed gas exhausting tubular member below and outside of said spout and connected to the underside thereof, said tubular member extending longitudinally of said spout and having an outer end arranged to communicate with a dust collector and an inner end adjacent to and below the inner end of said spout, the inner end of said tubular member being shaped so that when the spout and tubular member are inserted into a valve bag, the gas and dust particles in the bag above the pulverulent material are withdrawn through said tubular member and the pulverulent material in the bag is prevented from escaping into the atmosphere.

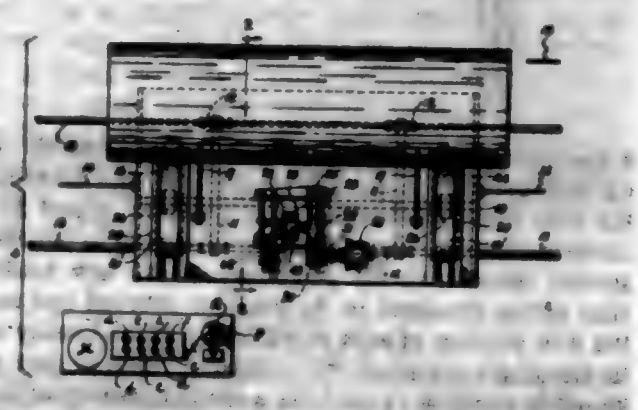
2,861,605
FLOW CONTROL MECHANISM FOR FILLING NOZZLES
Leonard P. Oliver, Paw Paw, Mich., assignor to Positive Action Filler Tube Company, Kalamazoo, Mich., a partnership
Application September 16, 1955, Serial No. 534,734
3 Claims. (Cl. 141—353)



1. An apparatus for dispensing a carbonated liquid from a reservoir into a bottle below said reservoir in

response to movement of said bottle, comprising: a body member mountable upon, and extendable through an opening in, the bottom wall of said reservoir; an open ended tube secured near its upper end upon said body and extending downwardly therefrom, said upper end communicating with said reservoir; a rod extending through said tube and spaced therefrom; a valve head secured to the lower end of said rod and engageable with the lower, axial end of said tube for effecting a liquid-tight seal therewith; a sleeve on said valve head snugly, slidably and continuously embracing the lower end of said tube; a plurality of closely spaced, circumferentially aligned openings through said sleeve adjacent to said valve head, said openings being covered by said tube when said end thereof engages said valve head; a bottle guide slidably supported upon said tube; and rod actuating means on said rod actuable in response to movement of said guide and operable for moving said valve head with respect to said tube.

2,861,606
REMOTE CONTROL SET WORKS
Marion F. Fish, Everett, Wash., assignor to Summer Iron Works, Inc., Everett, Wash.
Application January 2, 1957, Serial No. 632,685
16 Claims. (Cl. 143—120)

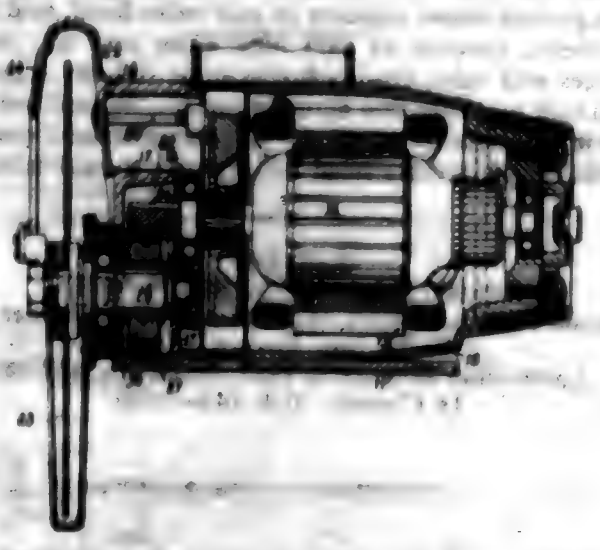


1. In combination; a log carriage equipped with means including a set shaft that is rotatable for effecting the outsetting of a log as disposed on the carriage, to various distances in accordance with the extent of rotation of said set shaft and a set works mechanism mounted on the carriage; said mechanism comprising a drive shaft that has geared connection with the set shaft, a wheel mounted to rotate in accordance with the rotation of said drive shaft, a sweep arm associated with and mounted for rotation coaxially of said wheel, releasable means on the sweep arm adapted to be actuated to lock the sweep arm to said wheel for rotation therewith, a fixed stop against which said sweep arm will engage when locked to and rotating with said wheel to limit the log outsetting rotation of said set shaft, a plurality of selectively operable devices for swinging the sweep arm away from the stop to positions at different angular distances therefrom, means for causing said releasable means to lock said sweep arm to said wheel after the arm has been selectively positioned, and means for driving said drive shaft to effect an outsetting operation of the set shaft to the extent permitted by said sweep arm as locked to said wheel.

2,861,607
JACK SHAFT AND GUARD UNIT FOR WOOD WORKING SAWS
Arthur N. Emmons, Nedrow, N. Y., assignor to The Porter-Cable Machine Company, Syracuse, N. Y., a corporation of New York
Application October 24, 1955, Serial No. 542,139
1 Claim. (Cl. 143—159)

A power operated wood saw of the circular blade type, a motor housing, a motor mounted in the housing, a stationary guard fixedly secured to the housing and having

an arcuate portion enclosing a first portion of the saw blade, said guard having a hub portion formed with a gear compartment, a bearing cap detachably secured to the guard hub, a bearing carried by said cap, an arbor shaft journalled in said bearing and having an outwardly extending end portion for supporting the circular blade, gearing mounted in said gear compartment and operatively connecting said motor to the arbor shaft, said cap being formed with a cylindrical portion encircling said bearing, said cap further having a cylindrical flange in spaced concentric relation to the cylindrical portion and forming with said cylindrical portion an annular channel,



a movable guard having a hub portion rotatably mounted on said cylindrical portion of the cap and forming a seal for said annular channel, said movable guard having an arcuate channel shaped portion extending in concentrically spaced relation to the periphery of the saw blade, a torsion spring mounted in the annular channel and encircling the hub portion of said movable guard and being operable to yieldingly maintain the arcuate portion of said movable guard in position to encircle a second portion of the blade, said movable guard being rotatable about the cylindrical portion of said cap against the action of said spring to move the arcuate portion of the movable guard within said fixed guard.

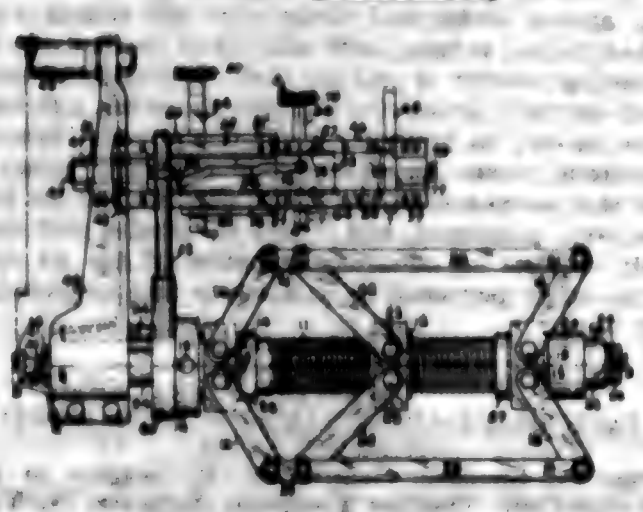
2,861,603

TENONING TOOL

Chauncey T. Brown, Seattle, Wash., assignor to Spring-Load Manufacturing Corporation, Seattle, Wash., a corporation of Washington

Application June 11, 1956, Serial No. 590,778

10 Claims. (Cl. 144—3R)



1. In a pipe tenoning tool, tool mounting means expandable within a pipe into fixed engagement with the pipe; a tubular feed shaft rotatively supported axially of the pipe by said tool mounting means; screw thread means longitudinally moving said tubular feed shaft when said feed shaft is rotated; a crank rigid with said feed shaft; a tool carrying arm rigid with said crank and extending outwardly therefrom; a tool carried by said tool carrying arm and positioned to engage the exterior of a pipe within which the tool mounting means is engaged; a cam slidably disposed within said tool carrying arm and connected with said tool, said cam being capable of moving said tool radially when the tool is longitudinally moved; and cam holding devices attached to said tool mounting means restraining longitudinal movement of said cam.

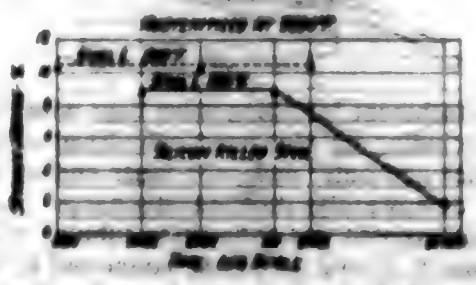
2,861,883

METHOD FOR PRODUCING NON-AGING SILICON-KILLED STEEL

William C. Leslie, Cleveland, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey

Application January 18, 1945, Serial No. 474,284

7 Claims. (Cl. 148—31.5)



1. A method of reducing the strain-aging characteristics of manganese-containing silicon-killed steel characterized by substantial freedom from the strong deoxidizers aluminum, titanium, vanadium and zirconium, with the balance iron and residual elements in common amounts comprising holding the steel at a temperature above about 1000° F. and below about 1200° F. for at least one hour.

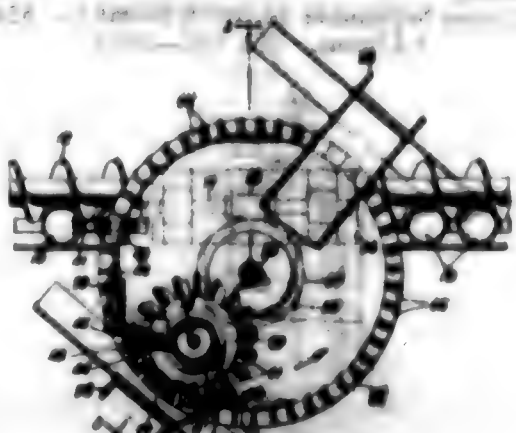
2,861,619

PORK CUTTING AND DEPOSITING MACHINE

Joseph Douglas Ramsey, Audubon, N. J., assignor to Campbell Soup Company, Camden, N. J., a corporation of New Jersey

Application December 13, 1954, Serial No. 474,815

13 Claims. (Cl. 146—114)



1. In a cutting and depositing machine, a cutting blade and means for advancing said blade in a predetermined linear path, means for guiding work material into said path on a line intersecting the surface described by the cutting edge of the blade in said advance movement, said blade being of substantially uniform thickness and including rearwardly from said cutting edge with respect to the direction of said movement and toward the opposite side of said surface from the guide means so as to present to the terminal end of the work material projecting from the guide means an inclined camming

shoulder strap being connected to said buckle and passing tioned independent substantially parallel pre-hardened

surface behind the cutting edge tending to advance the material in the guide toward the path of the blade, and a conveyor movable unilaterally with the cutting edge of the blade and having a surface confronting said inclined blade surface containing a recess forming with the blade a pocket for the severed extremity of the work material, the bottom surface of the pocket paralleling the blade, and the distance of the blade from said bottom surface corresponding to the thickness of the severed extremity.

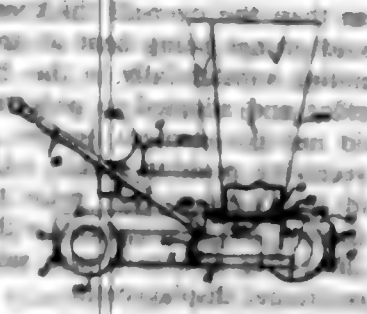
2,861,611

HOPPER FOR ROTARY MOWERS

Theodore A. Considine, Cortland, Ohio

Application September 15, 1955, Serial No. 534,459

3 Claims. (Cl. 146—124)



1. A rotary lawn mower including a housing, a blade rotatably positioned on a vertical axis within said housing, means on said housing for rotating said blade, said housing having an opening therein above said blade and guide means in said opening for receiving articles to be cut, said guide means including members normally closing said opening and movable to open position by said articles.

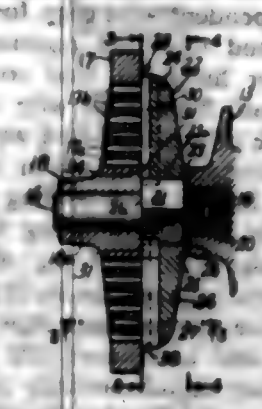
2,861,612

CUTTER BIT CONSTRUCTION

George W. Eberle, Oradell, N. J., assignor to Atlantic Service Company, Inc., Brooklyn, N. Y., a corporation of New York

Application May 28, 1956, Serial No. 587,670

6 Claims. (Cl. 146—139)



1. In a meat cutting device wherein the meat is chopped by the proximate rotation of a cutter blade assembly and a perforated plate in contacting engagement, and in which said plate has areas of lands, one portion of which has a radial displacement of lands of greater uninterrupted degree at one section than at another, each of which is arranged in stratified areas, the combination therewith of a cutter assembly comprising radially extended cutter bits which contact the stratified areas of the perforated plate during rotation, the bits having differential hardness along the radial length, the bits having segments of relatively harder abrading resistance extending over areas of higher abrasive magnitude, whereby substantially uniform wear resistance over the cutting length edge of the bits is maintained from the axial portion to the peripheral portion whereby gaps are avoided in the contact between the cutter blade and the plate.

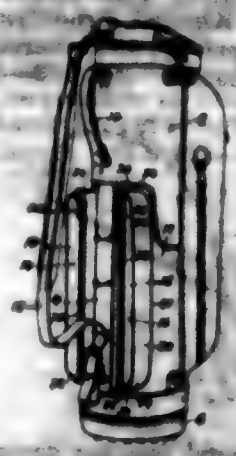
2,861,613

POCKETS FOR GOLF BAG

Michael Kish, Jr., Hightstown, N. J., assignor to Atlantic Products Corporation, Trenton, N. J., a corporation of New Jersey

Application September 27, 1956, Serial No. 612,383

3 Claims. (Cl. 150—1.5)



1. A ball pocket construction for golf bags including a vertically extending panel, said pocket comprising a front face projecting outwardly from said panel in substantially the plane thereof, a side member turned inwardly from the front face at approximately right angles thereto, the edge of said side remote from the front face being secured to the bag along a vertical line remote from the vertical edge of said panel whereby said front face and side together with the surface of said bag adjacent said panel define a vertically elongated ball pocket which is generally triangular in transverse section, and means for closing the bottom of said ball pocket.

2,861,614

ADJUSTABLE GOLF BAG

Michael Kish, Jr., Hightstown, N. J., assignor to Atlantic Products Corporation, Trenton, N. J., a corporation of New Jersey

Application September 27, 1956, Serial No. 612,422

2 Claims. (Cl. 150—1.5)

1. A golf bag having a frame member located adjacent the top of the bag, another frame member located adjacent the bottom of the bag, a metal bar extending lengthwise of the bag between said frame members, a shoulder strap for carrying the bag, means adjacent the top of the bag for attachment of one end portion of the shoulder strap to the bag, a buckle carried by the bag and located near the bottom of the bag to receive and hold the other end portion of the shoulder strap, links connected to the metal bar and located at spaced points thereon between the top and bottom frame members along a line extending from said means to said buckle, said links extending to the exterior of the bag and being of such size that the shoulder strap may be selectively threaded through any one or more of the links to said buckle, said other end portion of said

2,861,619

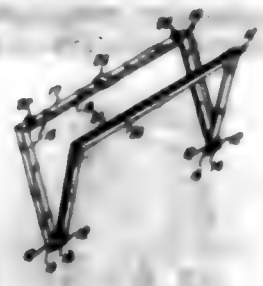
supportable in the apertures of said member and hav-

shoulder strap being connected to said buckle and passing through a selected link to vary the location of the points of support of the bag by the shoulder strap.

2,861,615
HANDLE FASTENER FOR HANDBAGS AND THE LIKE
Nathan Klement, Brooklyn, N. Y.
Application April 10, 1957, Serial No. 652,830
8 Claims. (Cl. 150—12)

1. A one-piece metal fastener device for use in fastening the extremity of a looped end of a handle strap to the body of the strap comprising a tubular metal sleeve member having a body substantially square in cross section including a front portion to receive the overlapping extremity of the looped end and the adjacent portion of the body of the strap, means on the front portion for penetrating the said extremity of the looped end and the adjacent portion of the body of the strap, rearwardly extending side portions at the side edges of said front portion closing the sides, and a pair of rear portions in contacting relation, each extending from one of the side portions.

2,861,616
HANDBAG FRAME AND ELEMENT THEREOF
George S. Mark, Flushing, N. Y.
Application March 18, 1957, Serial No. 646,898
1 Claim. (Cl. 150—39)



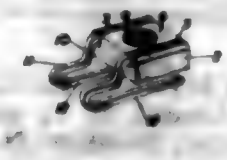
A handbag frame comprising a pair of first and second U-shaped elements pivotally connected at the free ends of such members, said first element comprising a member of U-shaped cross-section, the side leg thereof opposing said second element being longer than the other side leg of said first element, a head atop said longer leg normally extending on either side thereof to provide a pair of first and second oppositely extending flanges, said second element being dimensioned to nest within the L of said longer side leg and the proximate flange thereof when elements are pivoted to a closed position.

2,861,617
WIRE-LIKE FASTENING DEVICES FOR SECURING A NUT IN A RECESS
George A. Tinnerman, Lakewood, Ohio
Application February 3, 1955, Serial No. 486,910
3 Claims. (Cl. 151—41.73)

1. A device for securing an orificed nut-like element having two major faces in a counter-sunk portion of a stud passage hole in an article for reception of a bolt or stud passed through the hole to be engaged with said nut-like element and comprising a pair of separately positioned independent substantially parallel pre-hardened wire-like strips each having a body portion which terminates in a sharpened prong at opposite ends thereof, the body portion of each being disposed in a plane substantially parallel to the major faces of said nut-like element and permanently secured thereto in a plane normal to a diameter of the orifice thereof, said prongs being spaced from the outer wall of the nut-like element and

of a length less than the over-all thickness of said nut-like element, said prongs being bent at an angle to said faces and extending substantially in the direction of the axis of said orifice and adapted to penetrate said article and secure said nut-like element against axial displacement in stud receiving position within said counter-sunk portion of said stud passage hole prior to introduction of said stud thereto for engagement with said nut-like element, and thereafter also to secure said nut-like element against rotational displacement.

2,861,618
FASTENING DEVICE WITH INDEPENDENT PRE-HARDENED THRUST RESISTANT WIRE CLIPS
George A. Tinnerman, Lakewood, Ohio
Application February 3, 1955, Serial No. 486,969
4 Claims. (Cl. 151—41.73)



1. An assembly comprising a nut-like element having a stud receiving bore intersecting major surfaces thereof, and a pair of independent wire clips for holding said nut-like element in stud receiving position on a plate-like supporting member having a stud receiving passage to be aligned with said bore, said wire clips each formed from a single piece of pre-hardened wire bent upon itself to substantially U-shaped formation to provide a pair of thrust resisting legs in co-extending spaced apart relation to one another and terminating in free, axially co-extensive, clamping ends, one leg of each clip being permanently secured adjacent to its free end to said element from a surface thereof, said clips being disposed on opposite sides of said bore, each clip being disposed in a single plane which is substantially parallel to the axis of said bore and said clips being substantially parallel to one another and disposed within the confines of the major dimension of the face of the nut, the other legs of said clips being disposed in spaced apart relation to one of said major surfaces of said element, said legs forming therebetween a receiving space to enable the legs to be disposed over an edge of said plate-like supporting element to extend on opposite sides of said supporting member, means interacting between said assembly and the plate-like supporting member for maintaining registry between said nut-like element and said stud receiving passage, whereby said assembly may be clamped on said supporting member in registry with said stud passage and when clamped is resistant to deformation occasioned by the thrust of a stud projected through said passage for engagement with said element under any force which may be applied thereagainst during assembly, and heat treating of the assembly is avoided.

ripheral portion whereby gaps are avoided in the contact between the cutter blade and the plate.

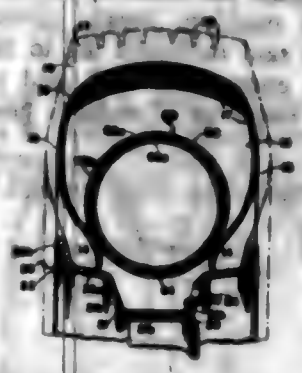
may be selectively threaded through any one or more of the links to said buckle, said other end portion of said

2,861,619

TUBELESS TIRE WITH SAFETY INNER TIRE

Edwin T. Wyman, Brookline, Mass.

Application January 25, 1954, Serial No. 405,819
4 Claims. (Cl. 152—340)



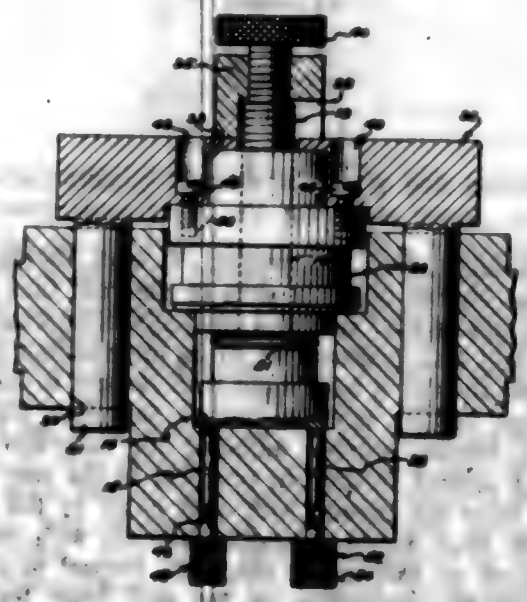
1. In combination with a tubeless tire casing and a wheel rim having outwardly extending flanged sides forming recesses to receive the beaded edges of the tubeless tire casing, a separate inflatable toroid shaped inner tire, inserted in the tubeless tire casing and provided with a wall portion in contact with the inner surface of the beaded area of said tire casing, said inner tire being smaller when in its inflated condition than the cavity of the tubeless tire, said entire inner tire being formed of a filamentary material and rubber, whereby said inner tire on inflation will press firmly against the inner surfaces of the tubeless tire beads and is enabled on deflection of the tubeless tire to carry the load imposed on it indefinitely, and valve means through which air may be supplied to said inner tire and to the air chamber between the external surface of said inner tire and the interior of the tubeless tire casing and wheel rim.

2,861,620

DEVICE FOR ALIGNING PINS ON AN ARTICLE

Christian Paulson, St. Paul, Minn., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application May 27, 1954, Serial No. 432,727
3 Claims. (Cl. 153—32)



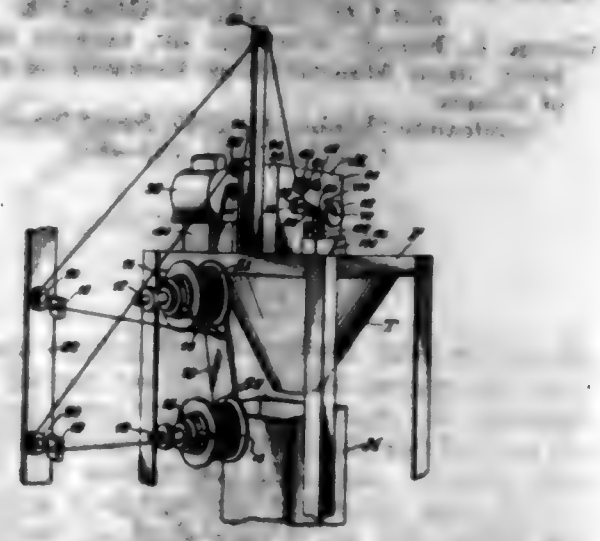
1. A fixture for aligning in parallelism a plurality of pins fixed at one end to an article comprising means for supporting the article, said supporting means having a plurality of cylindrical pin apertures positioned in parallel relation to each other and having diameters of a predetermined size larger than that of the pins for receiving the pins on said article, means for positioning the article on said supporting means with the fixed ends of the pins in coaxial alignment with said apertures, means for securing the article to said supporting means, and a tool having a cylindrical shank insertable into and rotatably supportable in the apertures of said member and having an eccentric cylindrical recess engageable with the end portions of said pins for moving the ends of the pins in a circle about the axis of the apertures.

2,861,621

COIL MAKING MACHINE HAVING A FLEXIBLE BELT FORMER

Wilfred W. Lawther, Chicago, Ill., assignor, by mesne assignments, to United Specialties Company of Illinois, Chicago, Ill., a corporation of Delaware

Application March 25, 1955, Serial No. 496,729
5 Claims. (Cl. 153—64)



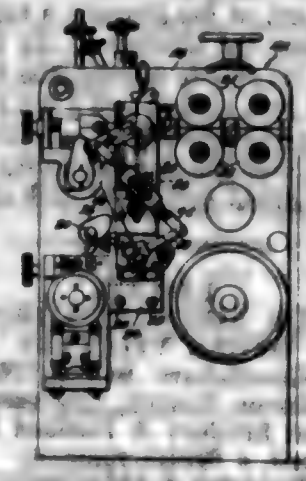
1. In a machine for forming thin wire into a helical coil, a base, a mandrel mounted on and projecting from the base, a flexible tension belt of a resilient material having the general characteristics of rubber, said belt being looped partially around the mandrel and extending from it, the belt having an inner generally smooth continuous surface in engagement with the mandrel, power means for driving the belt, and means for guiding the wire between the mandrel and belt at an obtuse angle to the axis of the mandrel to form the wire into a helical coil on the mandrel.

2,861,623

ANGULARLY ADJUSTABLE DEVICE FOR TRIMMING LEADING EDGE OF COIL SPRING

Alfons A. Bonde, Oak Park, and Joseph S. Di Pasquale, Elmwood Park, Ill.

Application September 26, 1955, Serial No. 536,476
7 Claims. (Cl. 153—65)



1. A trimming device for a spring coiling machine which includes wire feeding means, an arbor, and a cut off device located adjacent said arbor and operating along a fixed shear plane, comprising, in combination, a bearing plate mounted forwardly of said arbor, a plug mounted in said bearing plate, an anvil centrally mounted on and projecting rearwardly from the rear surface of said plug,

of said front bar means and having flange means normal

a cutter shaft journaled in said plug, and a cutter blade actuated by said cutter shaft and cooperating with said anvil to sever the leading edge of a spring which is located on said arbor, said plug being adjustably mounted in said bearing plate for angular adjustment so that the shear plane of said cutter blade may be adjusted with respect to said fixed shear plane in order to regulate the length of said spring, and means for operating said cutter shaft at the conclusion of a spring coiling operation and immediately prior to the operation of said cutoff device.

2,861,623

TUBE FLARING TOOL WITH FRUSTO CONICAL ROLLER BEARING GROOVE

George E. Franck, Riverside, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois

Application October 29, 1957, Serial No. 693,133
6 Claims. (Cl. 153—81)

6. A flaring cone construction for use in a tube flaring tool, comprising: a generally, frusto-conical support having a plurality of spaced cylindrical recesses each parallel to the generatrix of the support and opening laterally through the frusto-conical surface of the support and longitudinally through the small end of the support, said recesses being greater than 180° in transverse cross-section, said support further having an axial bore opening longitudinally through the small end thereof, and a stem extending from the large end of the support; a cylindrical roller complementary to and rotatably mounted in each recess, each roller being provided with a frusto-conical end at the small end of the support; a cap secured to the stem to extend over the recesses at the large end of the support to retain the rollers therein; and a conical spreader having a radial base surface and a pin upstanding axially therefrom rotatably received in said bore, said pin having an annular groove abutting the frusto-conical end and the adjacent cylindrical surfaces of each roller.

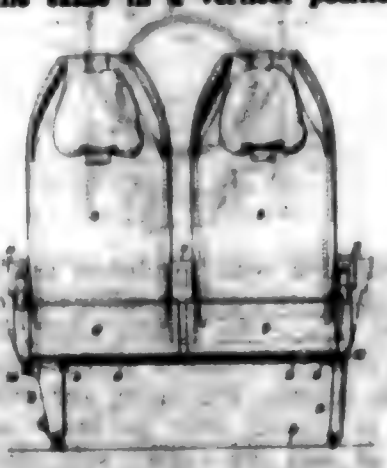
2,861,624

SEATS FOR AIRCRAFT CABINS AND OTHER VEHICLES

Percy William Goodfellow, Belfast, Northern Ireland, and John Anderson Beavell, Greenford, England, assignors to Short Brothers & Harland Limited, Belfast, Northern Ireland, a British company

Application December 4, 1956, Serial No. 626,334
Claims priority, application Great Britain December 16, 1955
4 Claims. (Cl. 155—6)

1. A foldable seat assembly movable from a horizontal operative position to a vertical inoperative position, said assembly including a chassis having at least one seat, an inboard leg pivotally connected to the chassis, an outboard leg longitudinally spaced from the inboard leg, said outboard leg having an upper end and a lower end, means pivotally connecting said upper end to said chassis, said legs normally extending downwardly from the chassis to engage the floor so as to support the seat in its horizontal position, means pivotally connecting the lower end of said outboard leg to the floor, locking means releasably engageable with said outboard leg for maintaining the same in a vertical position when the



inboard leg engages the floor, and means operatively connecting the locking means to said inboard leg so that, when the outboard leg is in its normal position and the inward leg is swung downwardly to engage the floor, said inboard leg moves the locking means in engagement with the outboard leg and, when the inboard leg is moved upwardly away from the ground, the locking means is released from engagement with the outboard leg.

2,861,625

FOLDING CHAIR

Frederick E. Walton, Owosso, Mich., assignor to The Rush Stamping Company, Toledo, Ohio, a corporation of Ohio

Application March 13, 1956, Serial No. 570,749
3 Claims. (Cl. 155—142)

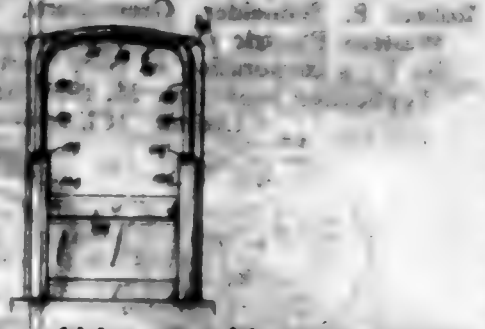
1. A folding chair, comprising: a seat; tubular front leg means having opposite slots in the rear face thereof normally above said seat and pivotally connected to the sides of said seat, respectively, at an intermediate position from front to rear; a back fixed with respect to said front leg means; tubular rear leg means, said rear leg means having a bearing surface adjacent the normally uppermost end thereof formed to conform to the rear surface of said front leg means with said chair in the erected condition; shaft means extending laterally with respect to said seat on an axis to the rear with respect to said seat of the pivotal connection of the said front leg means thereto, said shaft means traversing the width of said seat and also traversing said rear leg means, and said shaft having a notch in the sides thereof adjacent a side of and within said leg means, respectively; and a coupling member slidably mounted with respect to each of said rear leg means, respectively, for movement parallel to the axis of said rear leg means, said coupling member being disposed within said rear leg means, and having a hook-shaped end projecting beyond the said bearing surface, and having a pin engaging said notch, said hook-shaped end normally engaging said slot in the rear face

sembly of a corresponding number of shafts arranged in alignment above and inwardly of the doors, one of said

master carrier including a main body portion and a slide mounted on said traverse rod, said main body portion

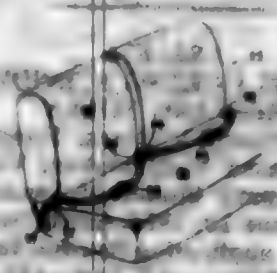
of said front leg means, and having flange means preventing the withdrawal thereof from said slot, said coupling member having a length sufficient to remain in engagement with said rear leg means throughout the movement of said chair from erect to folded condition.

2,861,626
SAFETY SEAT FOR VEHICLES
Edward E. Mills, Jr., Moorestown, N. J.
Application September 7, 1954, Serial No. 454,779
9 Claims. (Cl. 155—180)



1. A safety seat for vehicles, comprising a seat having side arms and a back joined together, a pair of oppositely inward bent arms swiveled for universal movement to said side arms adjacent their juncture with the back and independently movable with respect to one another, said bent arms being swingable between a retracted position in which they are disposed upwardly and parallel to the back and an extended position in which they extend forwardly over said side arms, and means for releasably connecting together the free ends of said bent arms.

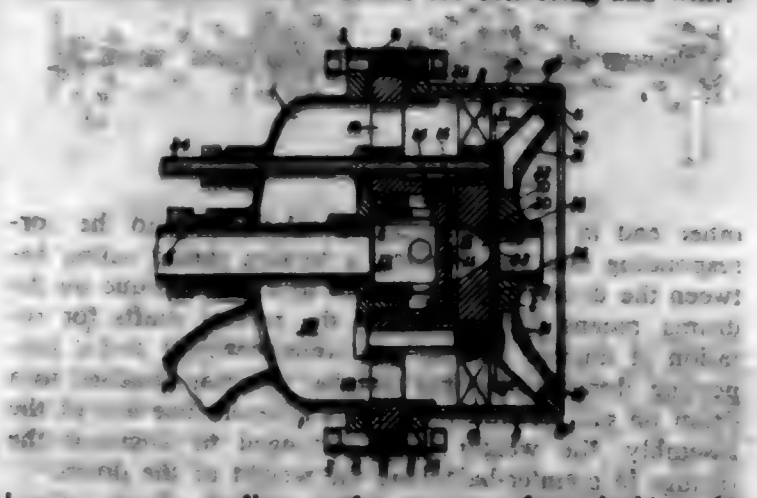
2,861,627
RETRACTABLE SAFETY BELT
William H. Smith, North Chicago, Ill.
Application October 31, 1956, Serial No. 643,848
1 Claim. (Cl. 155—180)



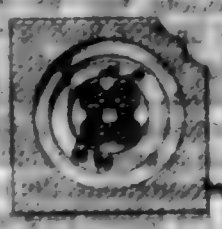
An automatically retractable safety belt assembly for a seat comprising a pair of separable straps, means to couple the straps together, a separate receptacle positioned on supporting means adjacent opposite ends of said seat at opposite ends of said straps, said opposite ends each being connected to a rotatable shaft within its corresponding receptacle, and biasing means resiliently urging each of said shafts to a rotatable position in which the strap, connected thereto, is wound up thereon, each of said receptacles comprising a pair of hinged sections each divided into separate but cooperating compartments, and wherein the shaft extends through said compartments, said strap being positioned in one pair of said compartments, and the biasing means being positioned in another pair of said cooperating compartments.

2,861,633
LIQUID ATOMIZERS
Reginald P. Fraser, Kingston Hill, England
Application November 16, 1953, Serial No. 392,134
Claims priority, application Great Britain October 16, 1952
3 Claims. (Cl. 299—77)

1. A twin-fluid atomizer consisting of a liquid swirl nozzle having a swirl chamber with tangential passages leading into it and a central exit orifice therefrom; a cover plate fitting over the face of said nozzle and having a central opening around said orifice, a tubular walled passage extending axially forwardly from said central opening and being itself open to atmosphere at its front end, a casing around said nozzle and cover plate, said cover plate having passages therein leading from inside said casing tangentially into said walled passage at the end thereof adjacent the face of said nozzle for delivering and whirling a gaseous medium under pressure from inside said casing into the rear end of said walled passage for creating a gaseous lining inside said passage, the diameter of said walled passage being substantially greater than the diameter of said swirl nozzle exit orifice, the said cover plate spreading forwardly and outwardly with the periphery adjacent the front end of the said casing and defining with said front end of said casing an annular space between them serving as a convergently directed annular nozzle, said annular space being convergent-divergent in cross section.



2,861,639
BURNER APPARATUS
William H. Dudley, Jr., Toledo, Ohio, assignor to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio
Application October 9, 1953, Serial No. 385,063
10 Claims. (Cl. 158—109)

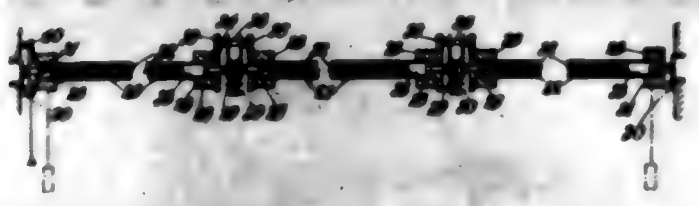


3. Burner apparatus comprising, in combination, wall means forming a burner port for delivering gas fuel and air to a combustion chamber; a cluster of four fuel conduits arranged in a square pattern to discharge four streams of fuel through said burner port; air conduit means for delivering a substantially uniformly distributed, spirally flowing stream of air through said port and about said fuel conduits; and spinner means in each of said fuel conduits for imparting spin to each of said four streams of fuel, said spinner means producing opposite rotational spin in the adjacent fuel streams defining a side of the square pattern.

2,861,636
DRUMS AND CABLES
Cyril John Baker, Toronto, Ontario, Canada
Application February 12, 1953, Serial No. 336,160
Claims priority, application Great Britain February 27, 1952
4 Claims. (Cl. 160—113)

1. Counter-balance means for a plurality of flexible, upwardly opening side-by-side doors comprising an up-

sembly of a corresponding number of shafts arranged in alignment above and inwardly of the doors, one of said shafts for each door; means for supporting the shafts for rotation, two drums fixedly mounted on each shaft and spaced apart along the length thereof, two elongated flexible tension members attached at one end to the two drums, respectively, being adapted to be wound thereabout on rotation of the drums, and attached at the



other end in weight-supporting relationship to the corresponding door, an anchor, a torsion spring acting between the drums and the anchor to exert a torque on the drums, means interconnecting the several shafts for rotation in unison; at least one counter-weight and a supporting elongated flexible member therefor attached to a drum on said assembly of shafts adjacent one end of the assembly, the weight being arranged to augment the springs in counter-balancing the weight of the doors.

2,861,631
VENETIAN BLIND BOTTOM BAR ORGANIZATION

Joseph A. Anderis, Westerleigh, N. Y., assignor to Lorentzen Hardware Mfg. Corp., New York, N. Y., a corporation of New York

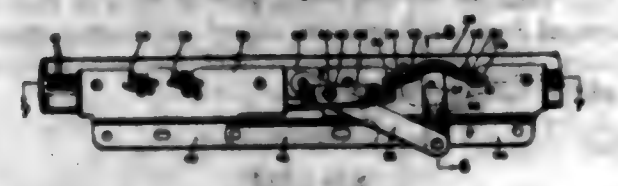
Application August 3, 1953, Serial No. 371,968
4 Claims. (Cl. 160—173)

1. In a Venetian blind bottom-bar organization of the type in which the vertical branches of a ladder tape are secured to a tape anchor and the tape anchor is attached to a sheet-metal bottom bar, the improvement which comprises: the tape anchor having confronting channel formations extending longitudinally of the bottom bar and the vertical branches of the ladder tape being secured in such channel formations by a dead-soft sheet-metal retainer distorted into spanning relationship between said confronting channel formations, the retainer engaging the vertical branches of the ladder tape and securing them in position in the respective channel formations.

2,861,632
DRAPERY FIXTURE APPARATUS

Harry S. Rosenbaum, Baltimore, Md., assignor to Eastern Products Corporation, a corporation of Maryland

Application January 14, 1955, Serial No. 481,829
10 Claims. (Cl. 160—345)

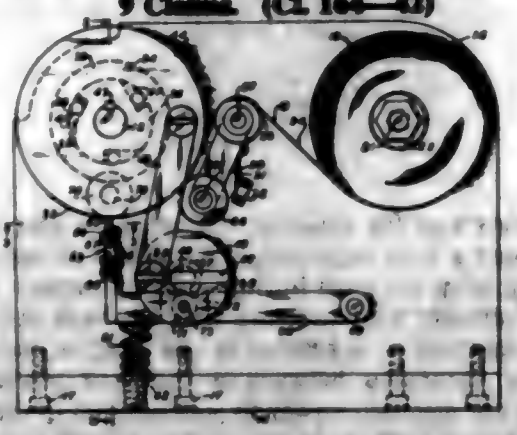


3. In a self-centering device for draperies, a traverse rod, an operating cord disposed in said traverse rod, and a pair of master carriers slidably mounted on said traverse rod, one of said master carriers being secured to the free ends of said operating cord, the other of said master carriers frictionally engaging an intermediate portion of said operating cord and movable therewith, said second master carrier including a main body portion and a slide mounted on said traverse rod, said main body portion being relatively movable with respect to said slide during the centering operation, and clutch means operatively engaging said slide, said clutch means being movable in response to the relative movement of said main body portion of said second master carrier to lock said second master carrier to said operating cord.

2,861,633
AUTOMATIC TAPE DISPENSER

Robert P. Schneider, Greensboro, N. C., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application September 26, 1956, Serial No. 612,157
9 Claims. (Cl. 164—42)



9. A tape dispenser which comprises an anvil roller, a movable tape cutting blade, drive means for effecting a cooperating rotation of the anvil roller and movement of the tape cutting blade toward and away from said anvil roller, a small auxiliary roller in juxtaposition with said anvil roller and so positioned that peripheral portions of the anvil and auxiliary rollers form a substantially straight line which is engaged by the tape cutting blade when the blade is moved toward the anvil roller.

2,861,634
CLIPPING OR PLUCKING SCISSORS IN WIRE ROLLING MILLS

Gunnar Torsten Wilson, Vesterås, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vesterås, Sweden, a joint-stock company limited of Sweden

Application June 20, 1956, Serial No. 516,729
Claims priority, application Sweden June 24, 1954
2 Claims. (Cl. 164—61)

1. Feeding and cutting apparatus for disposition between first and second pairs of rolls in a wire rolling mill, said apparatus comprising a substantially horizontal guideway for receiving a work piece from said first pair of rolls, a guideway section pivotally mounted at the discharge end of said guideway for movement about a horizontal axis from an upwardly inclined position to a substantially horizontal position in alignment with said guideway, a counterbalance for yieldably maintaining said guideway section in said inclined position, a rotary shear disposed adjacent the discharge end of said guideway section and below the inclined position thereof, a fixed substantially horizontal chute following said shear and in alignment with said guideway and said second pair of rolls and work piece deflecting means comprising an inclined plane disposed in the path of movement of the work piece discharged from said guideway section in said

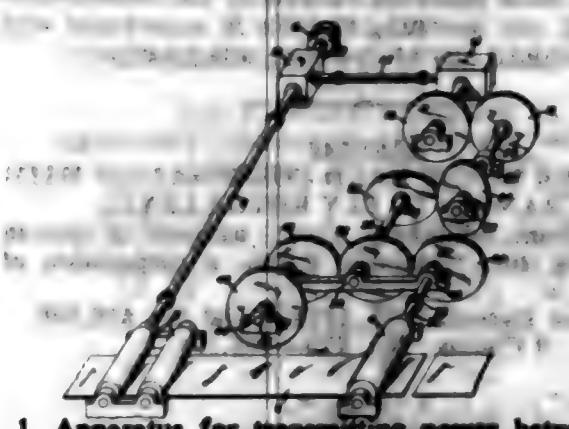
inclined position whereby said work piece moving along said guideway section in said inclined position will engage said deflecting means to move said work piece and said guideway section downwardly by said shear to sever the end of said work piece and move said guideway section into alignment with said chute to direct the remainder of said work piece therethrough to said second pair of rolls and upon removal of said work piece from said guideway section said counterbalance will operate to return said guideway section to said inclined position.

2,861,635

POWER TRANSMITTING APPARATUS

Howard S. Orr, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Application January 27, 1953, Serial No. 334,532
8 Claims. (Cl. 164—68)



1. Apparatus for transmitting power between a constant speed shaft and a variable speed shaft with the speed of the constant speed shaft being midway between the maximum and minimum speeds of the variable speed shaft, said apparatus comprising two focus rotated elliptical gears in mesh with one another, means connecting the first of said focus rotated elliptical gears to one of said shafts, two center rotated elliptical gears in mesh with one another, means connecting the first of said center rotated elliptical gears to the other of said shafts, means connecting the second of said focus rotated elliptical gears to the second of said center rotated elliptical gears, said gears being so arranged that the minor axis of the first of said center rotated elliptical gears is aligned with the major axis of the second of said center rotated elliptical gears when the maximum radius of one of said focus rotated elliptical gears is in the same plane and adjacent the minimum radius of the other of said focus rotated elliptical gears.

2,861,636

TIME SETTING CLAY CEMENT AND METHOD OF CORRECTING LOST CIRCULATION

Joseph U. Messenger, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Application April 18, 1951
Serial No. 221,129
14 Claims. (Cl. 166—33)

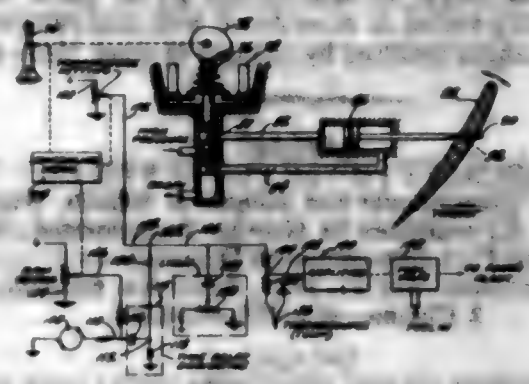
5. A method of correcting lost returns of drilling fluid in the drilling of a well into the earth comprising placing in said well at a location where drilling fluid is being lost from said well into an earth formation a slurry of clay cement comprising a clay having gel strength properties, a compound selected from the group consisting of activated silica, activated alumina, and silica-alumina in an amount not greater than about 10 percent by weight of said clay cement, said silica-alumina having the formula $M_a(SiO_2)_b(Al_2O_3)_c(H_2O)_d$, where M is selected from the group consisting of the alkali and alkaline earth metals and a=0–0.08, b=0.7–1.56, c=0.02–0.4, and d=0.25–1.0, and water in an amount not greater than about 65 percent by weight of said slurry.

2,861,637

TURBOPROP FUEL CONTROL

Stanley G. Best, Manchester, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Application December 21, 1954, Serial No. 476,646
3 Claims. (Cl. 170—135.72)



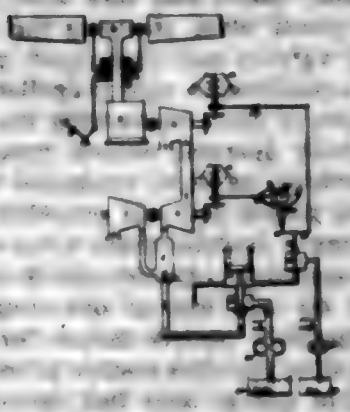
1. In a turboprop power plant having a propeller, said propeller including variable pitch blades, means for varying the pitch of said blades including an adjustable speed responsive centrifugal governing device, in combination, means for regulating the flow of fuel to the power plant, desired power plant temperature setting means for producing a signal, manual means connected to said adjustable centrifugal governing device for creating a desired speed signal, power plant speed responsive means connected to said last-mentioned means including a generator for producing a speed error signal and for modifying said temperature signal to temporarily increase and decrease said temperature signal, said means for modifying including mechanism for defining the length of time said signal is modified, adjustable means for limiting the value of said modified signal, means responsive to a temperature at a predetermined point in the power plant for producing a second signal, means for comparing said modified signal and said second signal and producing a final signal, and means receiving said final signal for controlling said regulating means.

2,861,638

HELICOPTER POWER PLANT SYSTEM

Robert A. Gronenfinger, Washington, D. C., and Jacques J. Schoch, Bethesda, Md., assignors to Grover, Incorporated, Washington, D. C., a corporation of Delaware

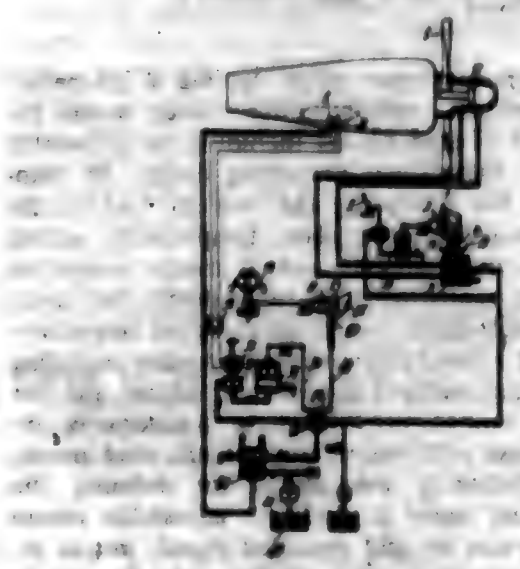
Application September 19, 1957, Serial No. 685,365
3 Claims. (Cl. 170—135.73)



1. In a rotary wing aircraft, a turbine power plant, fuel flow control means for said turbine power plant effective to vary the power thereof, a controllable pitch rotor mounted for rotation about a generally upright axis and driven by said turbine power plant, manual pitch control means for directly controlling the blade angle of said rotor, a first sensing means for sensing a first operating characteristic of said turbine power plant, a second sensing means for sensing a second operating characteristic of said turbine power plant, function generator means providing a predetermined relationship between said first and sec-

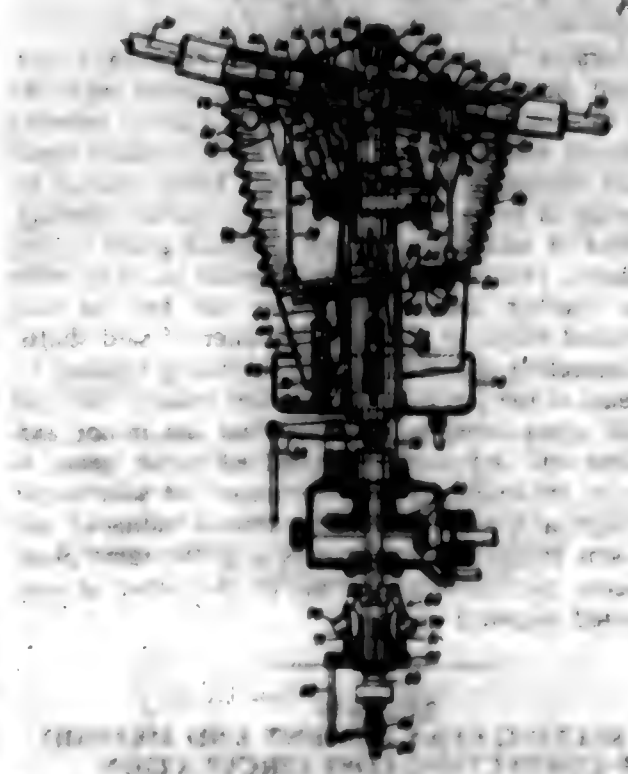
ond operating characteristics, said means being operatively connected to at least one of said sensing means to provide an output in terms of the output of said second sensing means, and comparison generator means for comparing the output of said function generator and said second sensing means to control said fuel flow control means whereby the power of said turbine power plant will be automatically varied in accordance with said relationship by load changes incurred by changes in rotor blade angle.

2,861,639
AIRCRAFT POWER PLANT SYSTEM
Robert A. Gronostinger and Jacques J. Schoch, Washington, D. C., assignors to Grover, Incorporated, Washington, D. C., a corporation of Delaware
Application May 21, 1957, Serial No. 660,648
3 Claims. (Cl. 170—135.74)



1. In a turbo-prop aircraft, a turbo-prop power plant having two engine operating variables comprising a variable fuel input and a controllable pitch propeller driven by said power plant for directly controlling the thrust thereof and for indirectly controlling two selected engine operating characteristics in accordance with a predetermined line of operating relationship between said selected engine operating characteristics establishing a range of thrust output along said line, a first sensing means connected to said power plant sensing a first selected engine operating characteristic of said turbine power plant, a second sensing means connected to said power plant sensing a second selected engine operating characteristic of said turbine power plant, fuel flow control means connected to said power plant changing the thrust of said power plant by varying said fuel input, propeller pitch control means connected to said propeller changing the thrust of said power plant by varying the pitch of said propeller, manually operable control means for one of said engine operating variables connected to one of said fuel flow control means and said propeller pitch control means establishing a predetermined value of one of said selected engine operating characteristics to define a desired operating point on said line of operating relationship, automatically operable control means for the other of said engine operating variables connected to said two sensing means and to one of said fuel flow and propeller pitch control means for directly varying said other operating variable in accordance with said predetermined line of operating relationship between said selected engine operating characteristics including function generator means establishing said predetermined line of operating relationship between said first and second operating characteristics, said function generator means being operatively connected to said first sensing means to provide an output in terms of the output of said second sensing means, comparison generator means connected to said function generator means, said second sensing means and said other of said fuel flow and propeller pitch control means comparing the output of said function generator and said second sensing means to provide a combined error signal output effective directly to control said other operating variable for changing the thrust of said power plant by varying the said other operating variable, and rate means interposed between said manually operable control means and said one of said fuel flow control means and said propeller pitch control means establishing a maximum rate of operation thereof no greater than the rate of operation of said automatically operable control means maintaining said engine operating characteristics substantially along said predetermined line of operating relationship during a change in thrust to said desired operating point on said line of operating relationship and providing substantial adherence to said predetermined relationship during a thrust change by control of the instantaneous value of said other operating variable by the instantaneous value of said one operating variable in accordance with said predetermined line of operating relationship.

2,861,640
HELICOPTER ROTOR HEAD COMBINATION WITH MECHANISM TO FLY ROTOR LEVEL
Stephen du Pont, Southbury, Conn., assignor to Doman Helicopters, Inc., Danbury, Conn., a corporation of Delaware
Application December 27, 1954, Serial No. 476,906
9 Claims. (Cl. 170—160.13)



1. A helicopter rotor head combination comprising a fixed pylon, a rotor shell, a universal joint mounting the shell on the pylon for universal tilting; a rotor including a blade casing, means rotatably mounting the blade casing on the shell, blades having a longitudinally extending axis, and means mounting each blade on the casing for pitch change on its axis; a swash plate including a rotatable part, a non-rotatable part, a bearing between the parts, a universal joint mounting one of the parts on the pylon for universal tilt with respect to the pylon, and a link for each blade connecting the rotatable part of the swash plate with its respective blade; a pair of servo motors located 90° apart with respect to the pylon, each motor including cylinder means, piston means in the cylinder means providing two chambers in the cylinder means, means pivotally connecting one of the servo motor means to the non-rotatable part of the swash plate, and means pivotally connecting the other servo motor means to a relatively stationary member carried on the pylon; a pair of control

about 65 percent by weight of said slurry.

738 O. G.—56

ing a predetermined relationship between said first and sec-

valve means one for each servo motor connected between the shell and the pylon and spaced 90° apart with respect to the pylon, each control valve means including a first member having a first outlet and a second outlet spaced from each other and an inlet, a fluid connection from one outlet to one chamber of the cylinder means, a fluid connection from the other outlet to the other chamber of the cylinder means, a discharge outlet for the valve means, and each control valve means including a second member connecting the first outlet with the inlet and the second outlet with the discharge outlet when the shell is tilted above horizontal and connecting second outlet with the inlet and the first outlet with the discharge outlet when the shell is tilted below horizontal, and means pivotally connecting one member of the control valve to the shell and the other member to the pylon.

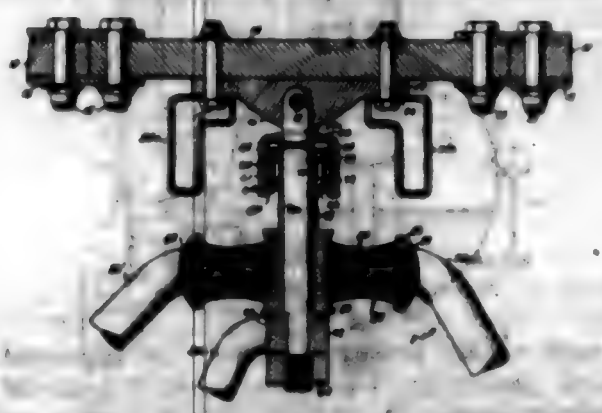
2,861,641

CONTROL MOUNTINGS FOR HELICOPTER ROTORS

Igor B. Bensen, Raleigh, N. C.

Application February 23, 1955, Serial No. 490,283

2 Claims. (Cl. 170—160.37)



1. In a rotating wing aircraft, a fuselage, a rotor comprising a hub and blades affixed to and radiating therefrom, a normally generally vertical rotor shaft, bearing means rotably supporting said hub on said shaft whereby the rotative plane of said blade may tilt with respect to the axis of said shaft, universal pivot means supporting said shaft in said fuselage whereby said shaft may be tilted with respect to said fuselage, said universal pivot means comprising a resiliently deformable supporting member connected at spaced portions thereof to said shaft and fuselage, respectively, said member providing elastic centering forces tending to maintain said shaft vertical and providing a resilient support for said shaft in said fuselage, and control means for tilting said shaft, said member comprising a generally flat annular disc having inner and outer peripheries, the connection at spaced portions thereof to said shaft and fuselage comprising means affixing the inner periphery of the disc around the shaft and means affixing the fuselage to the outer periphery of the disc, substantially the entire weight of the aircraft being supported by said disc.

2,861,642

SUSPENSION FOR TREAD SUPPORTING WHEELS OF ENDLESS TREAD VEHICLES

Oskar Blecher, Vienna, Austria

Application June 8, 1954, Serial No. 435,367

Claims priority, application Austria June 17, 1953

3 Claims. (Cl. 180—9.1)

1. In a tracklaying chassis which comprises track roller axle members carrying crank arms adjacent to their ends, a plurality of track rollers at least one of which is carried by each of said crank arms, and spring suspension means for said track rollers, the provision of a troughshaped frame mounting said axle members and having said spring suspension means attached thereto, which frame comprises a flat bottom and two side walls, each of said side walls having a main portion extending outwardly of said crank arms and spring suspension means, and a rebate extending along the lower edge of the side wall and formed

by an inner wall portion extending inwardly of said crank arms and spring suspension means, and an upper wall portion extending above said crank arms and spring suspension means between said inner wall portion and main wall portion.

2,861,643

TIRE ENGAGED FRICTION DRIVE FOR VEHICLE TRACTION WHEEL

John R. Wald, Jr., Montoursville, Rufus W. Wilson, Huntingdon, and Carl La Rue Fry, Cogan Station, Pa., assignors to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania

Application April 6, 1954, Serial No. 426,964

3 Claims. (Cl. 180—70)

3. In a drive for a traction wheel, a frame, a rockshaft journalled for rotation on said frame, a drive shaft positioned in parallel relation to said rockshaft, linkage means interconnecting said drive shaft to said rockshaft, means operatively associated with said frame for rotating said drive shaft, the axis of said rotating means being spaced from and parallel with said drive shaft, friction drive means secured to said drive shaft and adapted to engage said traction wheel for causing rotation thereof, means operatively connected to said linkage means for normally maintaining said friction drive means out of engagement with said traction wheel, said linkage means comprising a link block secured to said rockshaft, and an elbow block pivotally secured to said link block and receiving said drive shaft for rotation therein, said elbow block pivotally moving in response to rotation of said rockshaft to move said drive shaft toward said traction wheel, and control means operatively secured to said rockshaft for rotating said rockshaft, thereby actuating said linkage means for moving said drive shaft about the axis of said rotating means, whereby said friction drive means is positioned in driving engagement with said traction wheel, the movement of said drive shaft about the axis of said rotating means properly maintaining said rotating means in driving relation with said drive shaft, said control means comprising an air cylinder having a piston rod slidably disposed therein and operatively connected to said rockshaft, said piston rod being movable to rotate said rockshaft when said traction wheel is to be driven.

2,861,644

ANTI-THEFT HOUSING MEANS FOR AN AUTOMOTIVE IGNITION SYSTEM

William R. Murdo, Philadelphia, Pa.

Application November 23, 1956, Serial No. 623,695

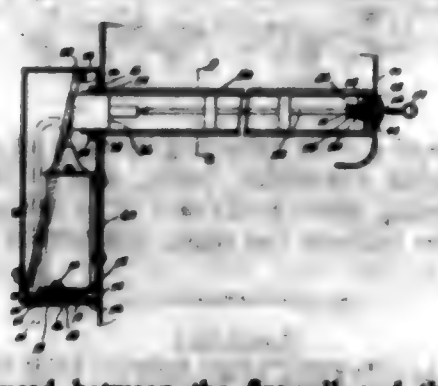
6 Claims. (Cl. 180—82)

4. For use with an automotive vehicle having an ignition system including an ignition coil and an ignition

said function generator means, said second sensing means

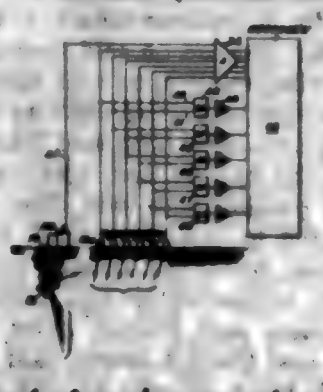
tionary member carried on the pylon; a pair of control

switch and a firewall and a dashboard; means for protectively mounting the coil and switch against unauthorized tampering; said means comprising a housing adapted to be affixed to the engine side of the firewall and in which the coil and switch are protectively housed, a removable cover for the housing, key actuated lock means for locking the cover in place, a tubular casing adapted



to be secured between the firewall and the dashboard means fixing one end of the tubular casing in the housing, means for mounting the ignition switch within said end of the casing within the housing, a key actuated lock means mounted in the casing at the end adjoining the dashboard, and means connected between said last-named lock means and the ignition switch.

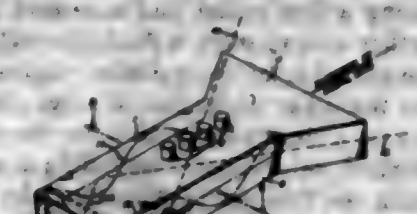
2,861,645
SEISMIC WAVE ANALYSIS
James E. White and Philip L. Lawrence, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Application December 28, 1953, Serial No. 400,454
7 Claims. (Cl. 181—5)



1. The method of sensing acoustic energy on a directionally preferential basis which comprises producing N signals representative of earth vibrations at N spaced apart receiving stations where N is one numeral of at least 2 in magnitude from the series 0, 1, 2, 3 . . . *n* and which may be odd or even in character, multiplying said signals together to produce a product voltage, filtering from said product voltage frequency components representative of the Mth side band present in said product voltage where M is a numeral from said series of the same character as the numeral N, and recording instantaneous values of said frequency components along a time scale.

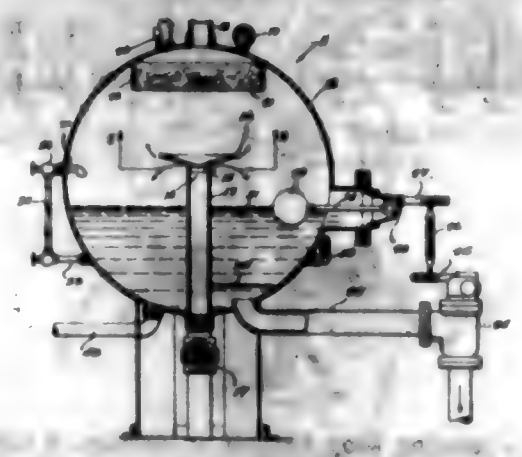
2,861,646
DIRECTION FINDER UTILIZING ELASTIC WAVES OF TRANSVERSE MODE
Winston E. Kock, Basking Ridge, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Original application July 8, 1953, Serial No. 366,838, now Patent No. 2,812,032, dated November 5, 1957. Divided and this application June 30, 1955, Serial No. 594,624
7 Claims. (Cl. 181—30)

6. A direction finder for elastic waves comprising a section of hollow-pipe wave guide open at one end, an elastic wave energy transducer coupled to said guide at a distance from said guide's other end of one half wavelength of a transverse mode transmissible within said



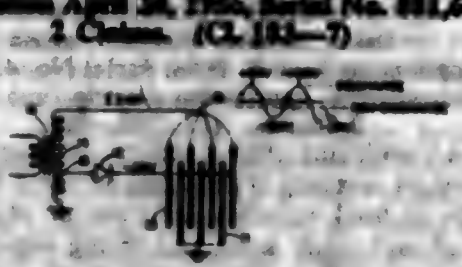
waveguide, a rigid-faced movable piston closing said guide's other end, and means disposed longitudinally along a wall of said guide for suppressing plane elastic waves.

2,861,647
OIL AND GAS SEPARATOR
Thomas W. Mieslerbitz, Arp, Tex.
Application October 1, 1957, Serial No. 687,479
3 Claims. (Cl. 183—2.7)



1. A device to separate gas from liquid comprising a closed chamber, a vertical inlet conduit extending upwardly through the bottom of the chamber and having an open top end, a downwardly convex baffle member mounted horizontally in vertical alignment with and above and adjacent the top end of said inlet conduit and presenting a closed downwardly convergent surface directly facing and closely adjacent to said top end, said downwardly convergent surface being directly engageable by liquid and gas mixture emerging from said top end, whereby to release the gas from the liquid, a gas outlet conduit connected to the top of said chamber, a liquid outlet conduit connected to the bottom of said chamber, a float member in said chamber below the level of the open top end of said inlet conduit, a valve in said liquid outlet conduit, and means operatively connecting said float member to said valve.

2,861,648
ELECTROSTATIC PRECIPITATORS
Arnold C. Fields, Medfield, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 30, 1956, Serial No. 581,668
2 Claims. (Cl. 183—7)



1. An electrostatic precipitator comprising an ionizer wire, a plurality of collector plates, alternate ones of said

suspension means attached thereto, which frame comprises

ignition system including an ignition coil and an ignition

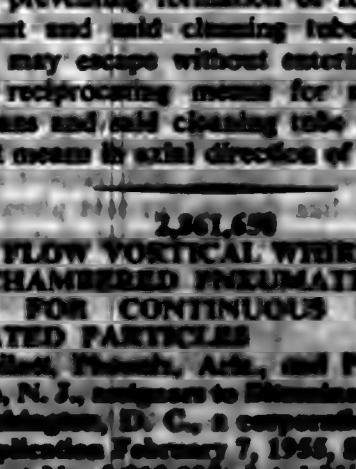
plates being grounded and the other ones of said plates being insulated from said alternate plates, a pair of said alternate plates having portions on opposite sides of said wire and forming arc-discharging boiler electrodes, a step-up transformer having a secondary winding connected at one end to said wire and at the other end to the other ones of said plates, and a half-wave rectifier connected to a tap on said winding and to said alternate plates, said tap being closer to said other end than to said one end of said winding, and said rectifier being poled to supply direct current to said other plates during the half-cycles the voltage at said wire has the same polarity as said direct current.

2,861,649

FILTER HOSE CLEANERS

Heinzjosef Junkmanns, Munster, Westphalia, Germany

Application May 3, 1955, Serial No. 505,779
6 Claims. (Cl. 183—61)



1. Apparatus for cleaning a flexible tubular filter element having a fluid-permeable wall comprising, in combination, support means; cleaning tube means carried by said support means and adapted to surround a filter element engaging the same and formed with opening means directed towards said filter element for directing a stream of fluid through the wall thereof, said tube means being formed so that in any plane normal to the axis of the filter element said tube means only partly surrounds said filter element and including two filter engaging oppositely arranged tube portions spaced from each other in axial direction of said tubular filter element a distance greater than the diameter of said tube portions so as to provide between said tube portions a gap extending in axial and circumferential directions with respect to said tubular filter element whereby upon engagement of said filter element by said cleaning tube means said filter element may in any plane bulge outwardly through said gap therein preventing formation of folds between said filter element and said cleaning tube means through which fluid may escape without entering said filter element; and reciprocating means for reciprocating said support means and said cleaning tube means carried by said support means in axial direction of the filter element.

2,861,650

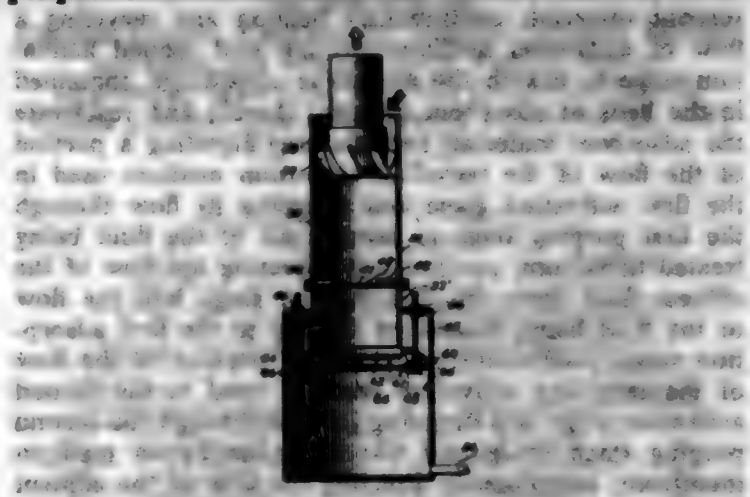
REVERSE FLOW VORTICAL WHIRL SEPARATORS WITH CHAMBERED PNEUMATIC BLOWDOWN MEANS FOR CONTINUOUS REMOVAL OF SEPARATED PARTICLES

John I. Yellott, Phoenix, Ariz., and Peter R. Brantley, Elizabeth, N. J., assignors to Bituminous Coal Research, Inc., Washington, D. C., a corporation of Delaware

Original application February 7, 1955, Serial No. 486,886, now Patent No. 2,812,828, dated November 12, 1957. Divided and this application March 12, 1957, Serial No. 646,726

2 Claims. (Cl. 183—89)

1. A vortical whirl separator of the character described, comprising a primary separator chamber having inlet means for particle-laden gaseous fluid and an axial outlet for cleaned gaseous fluid at the same end of the chamber, a secondary chamber secured to the bottom of said primary chamber, an axially apertured skimmer plate between the chambers, said plate incorporating an axial opening and peripheral openings, whereby axial and peripheral fluid communication is established between said



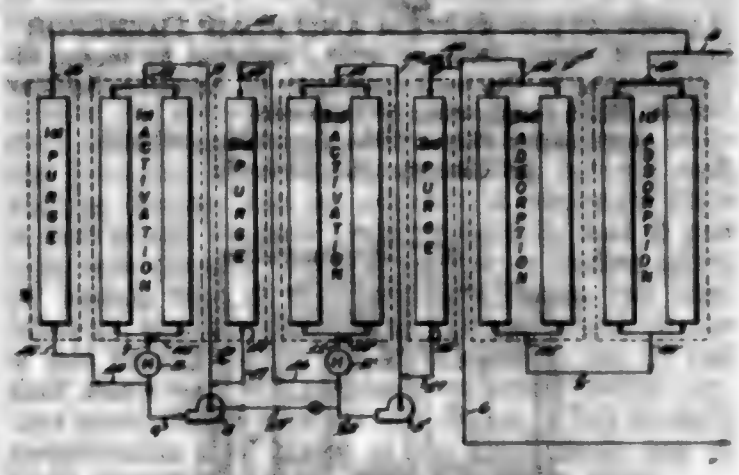
chambers, a casing for receiving discharged material disposed about the secondary chamber, a vortex reflector apposed to the bottom of the secondary chamber and defining an effluent slot therewith, said vortex reflector being adjustably mounted within the receiver, whereby the width of the slot may be varied when the reflector is moved vertically with respect to the bottom of the secondary separator.

2,861,651

CYCLIC ADSORPTION PROCESSES FOR RECOVERY OF H_2S FROM NATURAL GAS EMPLOYING TWO ACTIVATION CYCLES

Ernest B. Miller, Houston, Tex., assignor to Jefferson Lake Sulphur Company, New Orleans, La., a corporation of New Jersey

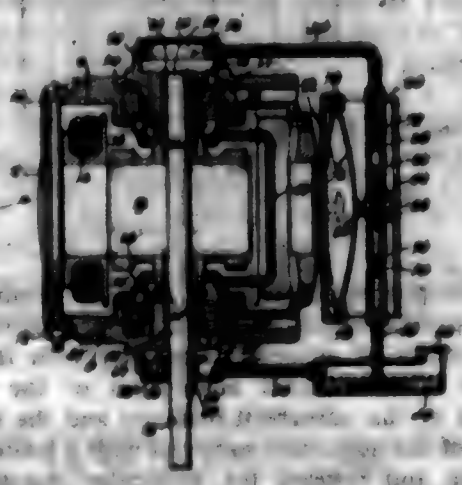
Application October 7, 1957, Serial No. 689,585
4 Claims. (Cl. 183—114.2)



1. In the process of treating fluid to remove and/or recover a particular constituent contained therein involving the contact of adsorbent material with the fluid to be treated with resultant adsorption of the particular constituent by the adsorbent material and the subsequent treatment of the adsorbent material with a heated medium to vaporize and remove the particular constituent and thereby reactivate the adsorbent material for further contact with the fluid to be treated, the improvement which comprises rotating a series of separated beds of adsorbent material directly and in successive and substantially continuously relative to and through a first purging stage, a first activation stage, a second purging stage, a second activation stage, a third purging stage, and at least one adsorption stage; continuously directing a flow of the fluid being treated, under high pressure and

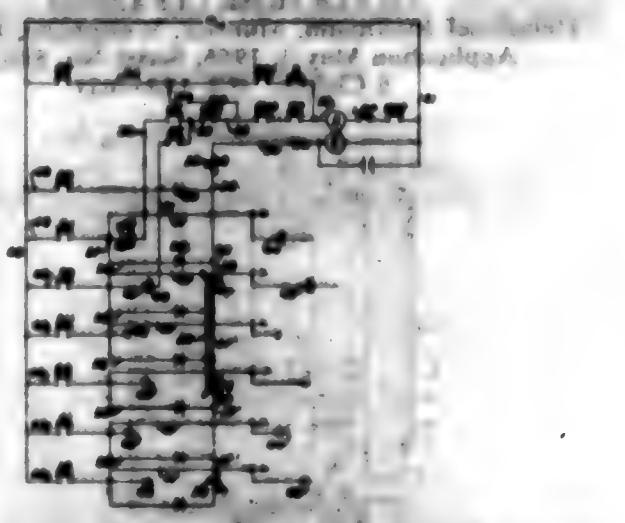
in succession, through the adsorption stage so that the particular constituent content thereof which is to be removed will be adsorbed by the adsorbent material therein; continuously heating and recycling a flow of activation medium through said first activation stage to desorb the particular constituent contained in the beds of adsorbent material therein and reactivate the adsorbent material; continuously heating and recycling a flow of activation medium through said second activation stage to desorb the particular constituent contained in the beds of adsorbent material therein and reactivate the adsorbent material; continuously diverting a portion of the flow of the recycling activation medium used in the first activation stage and directing its flow through the first purging stage to remove all of the fluid being treated therefrom; continuously directing the flow of the effluent fluid from the first purging stage into the flow of the fluid being treated on its way to the first adsorption stage; continuously diverting a portion of the flow of the recycling activation medium used in the second activation stage and directing its flow through the second purging stage to remove all of the activation medium therefrom; continuously directing the flow of the effluent fluid from the second purging stage into the flow of the recycling activation medium used in the first activation stage; continuously diverting a portion of the flow of the effluent stripped fluid being treated from the last of the adsorption stages and directing its flow through the third purging stage to remove all of the activation medium therefrom; continuously directing the flow of the effluent fluid from the third purging stage into the flow of the recycling activation medium used in the second activation stage; continuously bleeding off a determined quantity of the flow of the recycling activation medium used in the second activation stage into the flow of the recycling activation medium used in the first activation stage; and continuously withdrawing a portion of the activation medium used in the first activation stage from its recycling path after it has become highly concentrated in desorbed particular constituent, as the finished product.

2,961,663
LUBRICATION SYSTEM AND PUMP THEREFOR
Joseph M. Smith, Owosso, Mich., assignor, by mesne assignments, to Control Company of America, Schiller Park, Ill., a corporation of Delaware
Application July 1, 1954, Serial No. 440,881
15 Claims. (Cl. 184—6)



1. A heat-powered pump comprising a resilient flexible tube with check valves at the exit and inlet ends thereof, said valves opening in exit and inlet directions respectively, a support on one side of said tube between said valves and engageable with said tube, and a snap-type bimetal strip operatively connected to said tube opposite said support and movable with snap action between heated and cooled positions in accordance with the temperature thereof, said strip when in cooled position being more remote from said tube than when in heated position, said strip when moving from cooled to heated position compressing said tube against said support, thereby expelling material from said tube via its exit end, and said strip when moving from heated to cooled position permitting said tube to expand, thereby causing material to enter said tube via its inlet end.

2,961,663
ELEVATOR CONTROLS
Raymond A. Barry, Maumee, Ohio, assignor to Toledo Scale Corporation, a corporation of Ohio
Application December 12, 1956, Serial No. 627,773
17 Claims. (Cl. 187—29)



15. In an elevator system including a plurality of cars serving a plurality of floors a first family of normally closed landing call registration contacts serially connected, a second family of contacts for each car, individual connections from contacts of said second family to said first family intermediate contacts of said first family, each contact of each of said second families corresponding in position to the location of a landing of its respective car, a brush for each car engaging the contacts of a second family of contacts for that car, means to position said brush on the contacts of its second family in a location corresponding to the landing at which the car is effectively positioned, an alternating current source for each car having one terminal connected to said brush of said car, a first electrically responsive device for each car connected between a second terminal of the source for said car and one end of said family of serially connected contacts, a second electrically responsive device for each car connected between said second terminal of said source for said car and a second end of said family of serially connected contacts, and a unidirectionally conducting element connected in series with each of said devices, said elements being poled to pass current in a single direction through said serially connected family and through the device for said plurality of cars connected at one end of said first family in a given direction with respect thereto and in an opposite direction with respect to said first family through all the devices for said plurality of cars connected to the opposite end of said first family.

2,961,684
RAILWAY DISK BRAKES
Walter B. Dean, Narberth, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Application July 10, 1956, Serial No. 596,868
4 Claims. (Cl. 188—59)

1. Disk brake mechanism adapted to be mounted on a truck frame carrying a wheel and axle unit on which a brake disk is mounted, comprising in combination with the brake disk, brake operating levers mounted on op-

means to bias the pawl in one direction about its pivotal wedging said stop rollers and tending to unwedge said

posite sides of the disk, brake heads mounted on parallel axes on said brake levers, each brake head having a radial extension intermediate its length projecting beyond the circumference of the disk, removable brake shoes carried by said brake heads for acting against opposite sides of said disk, each brake shoe including a backing plate carrying brake lining and guide means between the radial extensions of said brake heads outside the circumference of said brake disk and at one side of a plane through said brake head axes, said guide means including a guide pin secured to one brake head and a tubular non-metallic guide bushing carried by the other brake head and slidably fitting said guide pin.

2,861,659

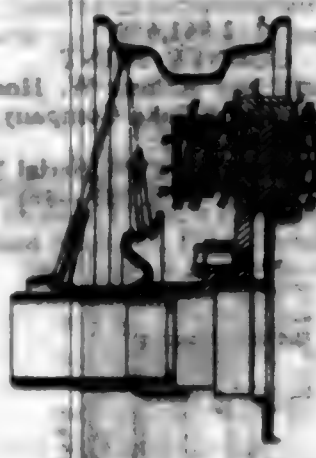
HYDRAULIC BRAKING SYSTEM

Henry Sumner Barton, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company

Application December 5, 1956, Serial No. 627,811

Claims priority, application Great Britain December 16, 1955

8 Claims. (Cl. 188—73)



1. A hydraulic braking system comprising a rotatable braking member, friction material to frictionally engage said braking member, hydraulically operated brake applying means comprising piston and cylinder elements one being fixed and the other connected with said friction material to move said friction material to and from contact with said braking member, means to provide a static head of hydraulic fluid to said piston and cylinder mechanism when said mechanism is in an inoperative position, spaced apposed limit stops associated on the fixed one of said elements, an plastically deformable pin movable with said friction material, a sleeve held in frictional engagement with said deformable pin between said spaced apposed limit stops to move with said pin until stopped by one of said limit stops and a resilient diaphragm connected with said piston and the adjacent end of said cylinder, said diaphragm being biased with sufficient force to urge said piston away from said friction material against said static head of hydraulic liquid until said sleeve is stopped by the other limit stop when the piston and cylinder mechanism are in their inoperative condition.

2,861,686

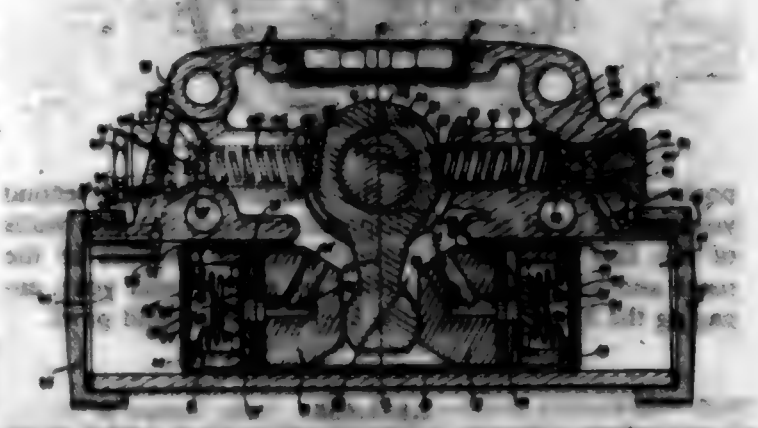
HYDRAULIC DAMPER FOR VEHICLE SUSPENSIONS

Charles Gremet, Courbevoie, Georges Boland, Neuilly-sur-Seine, and Robert Crane, Vanves, France

Application September 20, 1955, Serial No. 535,415

Claims priority, application France September 23, 1954

3 Claims. (Cl. 188—88)



1. A shock absorber comprising, in combination, a casing in which is formed a cylinder space closed at both ends and a reservoir space for hydraulic fluid which spaces communicate freely with each other, a double-headed hollow piston slidable in said cylinder and defining a working chamber of variable volume at each end of said cylinder, the interior of said piston being in hydraulic communication with the reservoir, a non-return valve in each piston head enabling hydraulic fluid to pass from the interior of the piston into the working chamber adjacent to each valve and comprising a disc-shaped element, a conical spring, and a cup-shaped stop in each head of said double-headed piston, said conical spring engaging with its smaller end said disc-shaped element and maintaining with its larger ends said cup-shaped stop in its respective piston head, said cup-shaped stop limiting the movement of the disc-shaped element away from its seat, a shaft journalled in said casing and capable of oscillating around an axis situated above the axis of the cylinder and perpendicular thereto, a crank fixed on said shaft and engaging the piston intermediate its ends, channels providing hydraulic communication between each working chamber and the reservoir, a non-return valve in each of said channels enabling hydraulic fluid to pass from each chamber into the reservoir, a loading spring for loading each of said non-return valves, two cam-followers, each constituting a movable abutment for one of said loading springs, and a circular cam fast on said shaft comprising two peripheral oppositely curved portions symmetrically disposed with respect to two mutually perpendicular axial planes of the crank shaft, one of which planes contains the center line of the crank.

2,861,697

AUTOMATIC SLACK ADJUSTER FOR BRAKE

Everett C. Carle, John T. Crawford and Dafydd W. Evans, Cleveland, Ohio, assignors to Townsend Corporation, Cleveland, Ohio, a corporation of Ohio

Application September 23, 1953, Serial No. 381,342

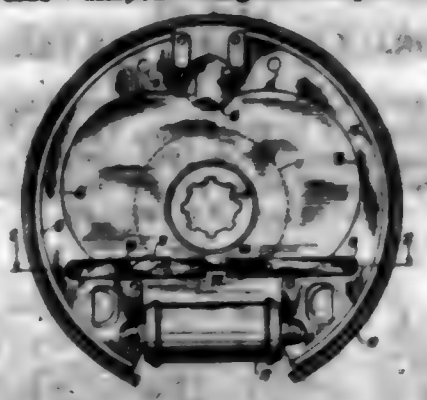
3 Claims. (Cl. 188—196)

1. A wear compensating device for a brake of the type having a pair of semi-circular brake shoes adapted to be moved away from each other into frictional engagement with a brake drum comprising a first yoke adapted for pivotal mounting on one brake shoe, said yoke having side walls spaced from each other, a notched part pivotally mounted between the side walls and spring

the frame thereby forcing the ends of the inner walls of side walls; and supporting means for said member in

and seated positions in accordance with the temperature thereof, said strip when in seated position being more

means to bias the pawl in one direction about its pivotal mounting, a second yoke adapted for pivotal mounting on the other brake shoe, said second yoke having spaced side walls and a pair of spaced apertured members connecting the side walls, an elongated keeper having a stem



portion extending through the apertures in said second yoke and a head portion disposed between the side walls of the first yoke in alignment with the notches in the pawl and spring means carried by said second yoke engaging the keeper to bias the keeper toward said pawl.

2,861,658

ADJUSTER WHICH AUTOMATICALLY LETS OUT AND TAKES UP SLACK IN RAILWAY BRAKE RIGGING

Jean Bouvet-Martin, Paris, France, assignor, by mesne assignments, to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application June 7, 1954, Serial No. 434,946
Claims priority, application France June 11, 1953
9 Claims. (Cl. 188—196)

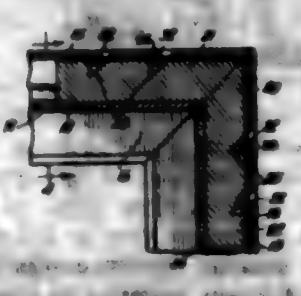
1. An adjuster capable of lengthening and shortening the distance between the spaced points at which a lever and a traction bar are connected thereto; said adjuster comprising a prismatic rod rigidly connected at one end to the traction bar; tubular body means arranged concentrically with and overlying said one end of said prismatic rod; hollow casing means surrounding said prismatic rod and body means, and operably connected to the lever, and having two spaced annular shoulders; centrally apertured stop cup means; centrally apertured retaining cup means; a spacer spring interposed between said stop cup means and retaining cup means for biasing said retaining cup means in one direction toward operative engagement with one of said shoulders and biasing said stop cup means in the opposite direction into operative engagement with the other of said shoulders; the respective central apertures of said stop cup means and of said retaining cup means being defined in part by flat inclined wedging surfaces which are so inclined that the respective apertures of said stop cup means and of said retaining cup means are largest at their respective ends nearest the spacer spring; stop rollers wedgeable between the inclined wedging surfaces of said stop cup means and corresponding flat non-inclined faces of said prismatic rod; retaining rollers wedgeable between the inclined wedging surfaces of said retaining cup means and corresponding flat non-inclined faces of said prismatic rod; roller cage means carrying said stop rollers and retaining rollers; a sleeve engageable at one end with said body means and engageable at its opposite end with said retaining cup means; a stop spring stronger than said spacer spring interposed between said sleeve and said roller cage means for normally biasing the latter in said opposite direction for wedging said stop rollers and tending to unwedge said retaining rollers; centrally apertured take-up cup means having flat inclined wedging surfaces inclined in the same general direction as those of said retaining cup means; take-up rollers carried by said body means and wedgeable between the inclined wedging surfaces of said take-up cup means and corresponding flat non-inclined faces of said prismatic rod; a take-up spring interposed between said body means and said take-up cup means for urging the latter in said opposite direction for tending to wedge the take-up rollers; a push element interposed between and engageable with said retaining cup means and said take-up cup means for normally pushing said take-up cup means in said one direction against resistance of said take-up spring so as to normally unwedge the take-up rollers; and a return spring interposed between said casing means and said body means for normally urging said body means in said opposite direction for operatively, through the medium of said sleeve, exerting a force on said retaining cup means for causing it to wedge the retaining rollers against the prismatic rod against resistance of said spacer spring and space said retaining cup means from said one shoulder while said spacer spring maintains the stop cup means operatively engaged with said other shoulder, said stop spring at this time being effective to bias said roller cage means in said opposite direction to wedge the stop rollers and hold the retaining rollers against further movement in said opposite direction; said take-up spring being of greater force than the force of the stop spring and spacer spring, and effective, in event of a shock tending to compress the return spring and thereby relieve the retaining-roller-wedging force exerted via the body means and sleeve on the retaining cup means, to positively prevent any movement of the prismatic rod in said one direction relative to the casing means by exerting a retaining-roller-wedging force on said retaining cup means through the medium of said take-up cup means and push element, which latter force is exerted in bypass of said body means.

2,861,659

CORNER JOINT

Andrew T. Hagerty and Arthur W. Hendley, Elkhart, Ind., assignors to The Adlake Company, Elkhart, Ind., a corporation of Illinois

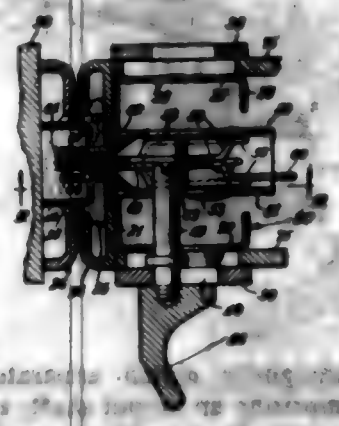
Application December 10, 1956, Serial No. 627,281
3 Claims. (Cl. 189—36)



1. In a frame construction, two hollow metal frame members arranged in right angular mitered abutment with each other at one corner of the frame, an angular connecting block positioned within the frame members at the abutting corner thereof, said connecting block having adjoining portions of the inner edges of the legs thereof cut inwardly so as to form an acute angle where the legs join at the inner corner of the block, said connecting block having spaced outwardly opening transverse grooves in its outer edges with one of the walls defining each groove facing in the direction of the corner of the frame, and staking tongues struck inwardly from the outer walls of the frame members and engaging in the transverse grooves in said connecting block, said tongues being wrapped inwardly around the outer edges of the walls of the grooves which face in the direction of the corner of

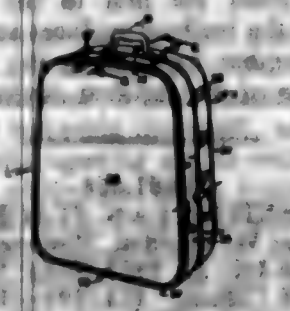
the frame thereby forcing the ends of the inner walls of the frame members into snug engagement in the inner corner of the blank.

2,861,660
LATCH CONSTRUCTION FOR SLIDING DOORS
Robert H. Ensign, Bronxville, N. Y., assignor to Hough Shade Corporation, a corporation of Connecticut
Application October 19, 1955, Serial No. 541,420
11 Claims. (Cl. 189—46)



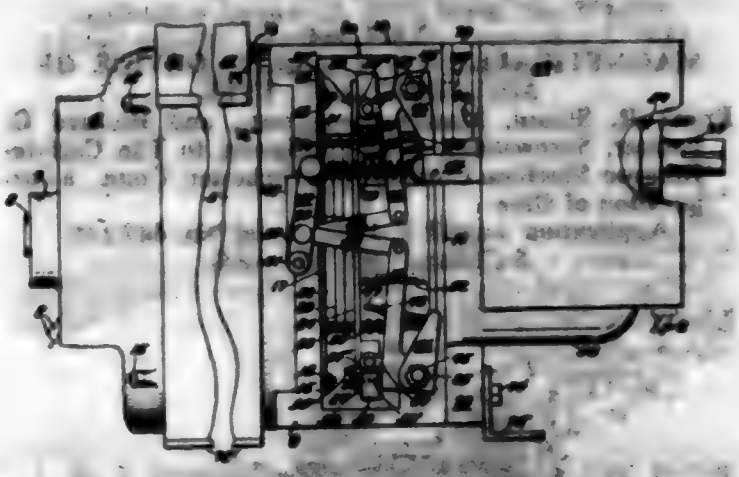
1. A convertible structure comprising relatively collinearly slidable jamb and closure members having abutting faces adapted for collinear opening and closing movement, said closure member having a channel shaped post forming one of said abutting faces, a cushioning strip mounted along the abutting face of said post with a portion of said post that is normally masked by a portion of said strip having an opening to accommodate, upon the removal of said strip portion, a latching mechanism, said post having side faces formed with registering openings, one of which accommodates an actuating rod for the latch mechanism and another of which is adapted for anchoring escutcheon plates located along said side faces, with the abutting face of the jamb member having an opening to accommodate a keeper plate for cooperation with said latch mechanism.

2,861,661
LUGGAGE CASE
Emmett H. Heller, Denver, Colo., assignor to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Application March 2, 1955, Serial No. 491,692
10 Claims. (Cl. 190—37)



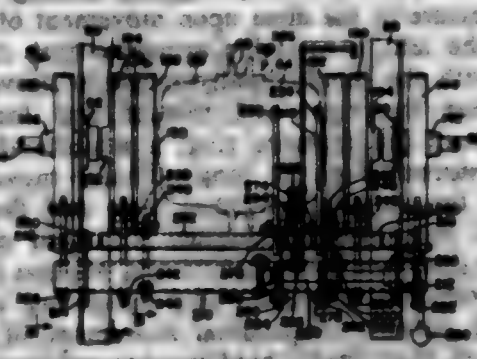
1. A luggage case, in which two opposed concave sections meet at the edges thereof when closed and each section is provided with an end wall spaced from said edge and side walls extending between said edge and said end wall, comprising strip means extending around said edge of each said section with said side walls attached to said strip means, said strip means of one section having a transversely convex, longitudinally extending portion interfitting with a complementary, transversely concave, longitudinally extending portion of said strip means of the other section with said sections closed; a member inside each said section disposed against the end wall thereof and extending around said end wall adjacent said side walls; and supporting means for said member in each said section, said supporting means extending between and engaging said strip means and said member.

2,861,662
ELECTRIC MOTOR POWER TAKE OFF
Harold E. Nelson, Toledo, Ohio
Application September 19, 1955, Serial No. 534,955
7 Claims. (Cl. 192—3)



3. A motor shaft, a housing section providing a bearing for the shaft, a friction disc brake device in the section and about the shaft, said device embodying a central disc rotatable with the shaft, a first disc anchored with said section on one side of said central disc, a second disc on the other side of said central disc, means fixed with said section upon which said second disc is shiftable axially of the shaft and is held against angular movement relative to said section, floating frictional disc means on both sides of said central disc engageable by the adjacent sides of said first and second discs, resilient means for urging said second disc toward said first disc to clamp said frictional disc means and said center disc between said first and second discs to brake the rotation of said shaft, and actuator means for shifting said second disc away from said first disc against the action of said resilient means, said actuator means including adjustable linkage exterior of said section.

2,861,663
POWER TRANSMISSION MECHANISM AND CONTROL THEREFOR
Homer D. Whitsel, Bettendorf, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Original application October 22, 1956, Serial No. 617,295. Divided and this application October 28, 1957, Serial No. 692,791
13 Claims. (Cl. 192—4)



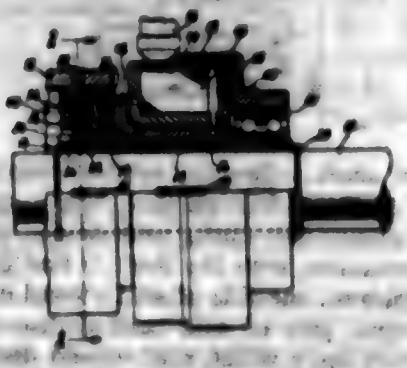
9. In power-transmission mechanism including forward-neutral-reverse drive means, control mechanism comprising: a support; drive control means connected to the drive means and movable on the support selectively in opposite directions from a neutral position incurring the neutral status of the drive means to forward and reverse positions respectively incurring forward and reverse drive of said drive means; park control means movable on the

support between park and drive positions; connecting means connected between the drive control means and the park control means for incurring the neutral position of the former in accordance with the park position of the latter, said connecting means including a lost-motion device enabling movement of the drive control means among its forward, neutral and reverse positions when the park control means is in its drive position.

2,861,664
MAGNETICALLY CONTROLLED DEVICE OF MULTIPLE DISC TYPE

Frank R. Simon, Manchester, Conn., and Richard O. Palmer, Shrewsbury, Mass., assignors to The Carlyle-Johnson Machine Company, Manchester, Conn., a corporation of Ohio

Application August 2, 1954, Serial No. 447,148
8 Claims. (Cl. 192—84)

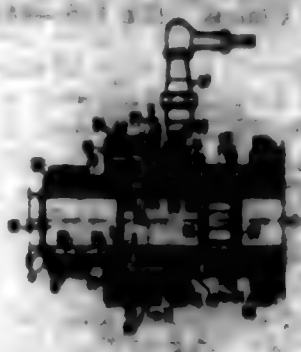


4. In a clutch of the multiple disc type, the combination of a tubular connector extending through the clutch from the left end thereof to the right end thereof and adapted to surround and be detachably connected with a power transmitting shaft for rotation therewith which tubular connector has its left and right end portions held in fixed longitudinal relationship, abutment means secured to said tubular connector near the left end thereof, a series of intermeshing friction discs surrounding the tubular connector with the disc at the left end of the series engaging the said abutment means, alternate discs of the series connected to the connector for rotation therewith and the intervening discs of the series being connectible with an annular power transmitting member surrounding the said connector, a pressure ring surrounding the shaft and rotatable therewith and engageable with the disc at the opposite end of the said series, a longitudinally movable sleeve surrounding the tubular connector and rotatable therewith, the said sleeve engaging at one end with said pressure ring and causing the ring to apply pressure to the discs upon movement of the sleeve toward the left, a rotatable armature ring rigidly connected with the longitudinally movable sleeve at a position near the right end thereof and longitudinally spaced from the pressure ring, a nonrotatable annular magnet surrounding the longitudinally movable sleeve between the rotatable pressure ring and the rotatable armature ring, means connected with said magnet and engaging said tubular connector at a position at the right of said rotatable armature ring which last said means serves to prevent longitudinal movement of said magnet and to thus enable said magnet when energized to move the armature ring and also the sleeve and the pressure ring relatively to the tubular connector and toward the left so as to cause said pressure ring to apply pressure to the discs, and separator rings between some of the friction discs which rings upon release of pressure serve to separate said discs and to move the pressure ring and the sleeve and the armature ring toward the right.

2,861,665
MAGNETIC CLUTCHES

Kurt Plocke, Berlin-Frohnau, Germany, assignor to Siemens Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Application January 14, 1955, Serial No. 481,923
Claims priority, application Germany February 13, 1954
8 Claims. (Cl. 192—84)



1. An electromagnetic clutch apparatus for torque transmission, comprising an output shaft, a driving member mounted in axially fixed position on said output shaft and free to rotate thereon, a driven device comprising first means carrying an electromagnet winding and second means comprising an armature, both means being mounted on, free to rotate on, and axially slidable along said shaft toward and away from each other, an axially movable driving clutch disc carried by the driving member and rotating together therewith about said shaft, an axially movable driven clutch disc facing said driving clutch disc and carried by the driven device and rotating together therewith about said shaft, a resilient device normally urging the said two means of the driven device apart longitudinally of the shaft, said two means being coupled together for conjoint rotation about said shaft, the energizing of the magnet drawing one of said means toward the other and compressing the clutch discs together whereby the driven device is turned on said shaft, said driven device having a first coupling member fixed thereupon and turning freely on said shaft, a second coupling member on and connected to turn said shaft, the second coupling member being in axially fixed position, the resilient device urging the first coupling member axially toward the second coupling member, the coupling members having opposed force-transferring surfaces inclined with respect to the axis of the shaft, the transmission of torque from the first to the second coupling member through the inclined surfaces serving to force the first coupling member back along the axis of the shaft against the action of the resilient device.

2,861,666
FLEXIBLE CAN STACKER

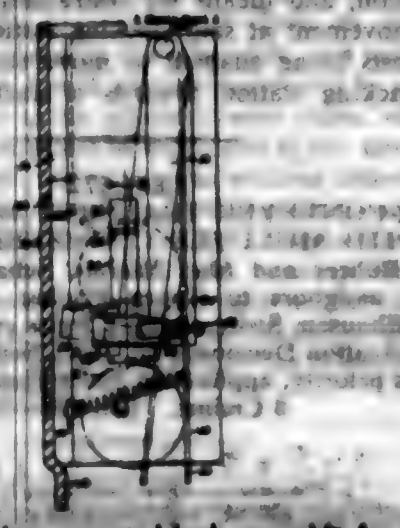
Homer W. Madden, Hanover, Ind.

Application July 22, 1957, Serial No. 673,130
18 Claims. (Cl. 193—16)

1. A flexible can stacker comprising a flexible chute having an inlet end and an outlet end, said chute being inclined downwardly from the inlet end to the outlet end thereof for the passage of cans therethrough by gravity, and including a flexible portion extending from adjacent the outlet end thereof and by which said outlet end is swingably supported for free swinging movement in any direction for stacking cans in long superimposed rows as the outlet end of the chute is manually swung back and forth, said flexible chute including a plurality of pairs of longitudinally spaced rigid collars, the collars of each pair being longitudinally spaced relative to one another, knee joints connected to and disposed between the collars of each pair of collars, the axis of at least one knee joint

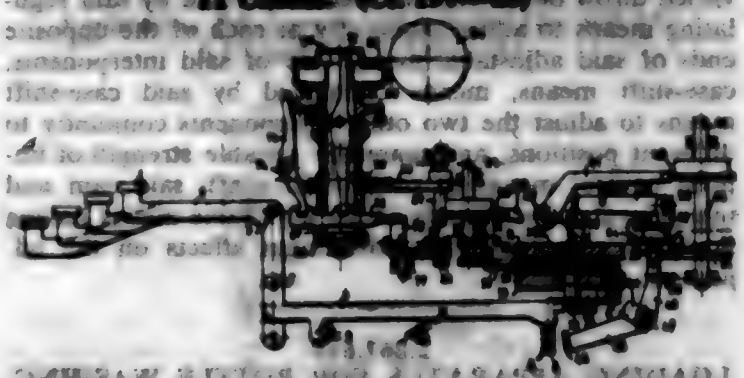
being disposed at substantially a right angle to the axis of another knee joint whereby said outlet end of the chute may be swung about said two knee joint axes both horizontally and vertically.

2,861,667
COIN AND KEY OPERATED LOCK
Joseph Austin Smith, Londonville, Ohio
Application August 16, 1956, Serial No. 603,773
6 Claims. (Cl. 194—64)



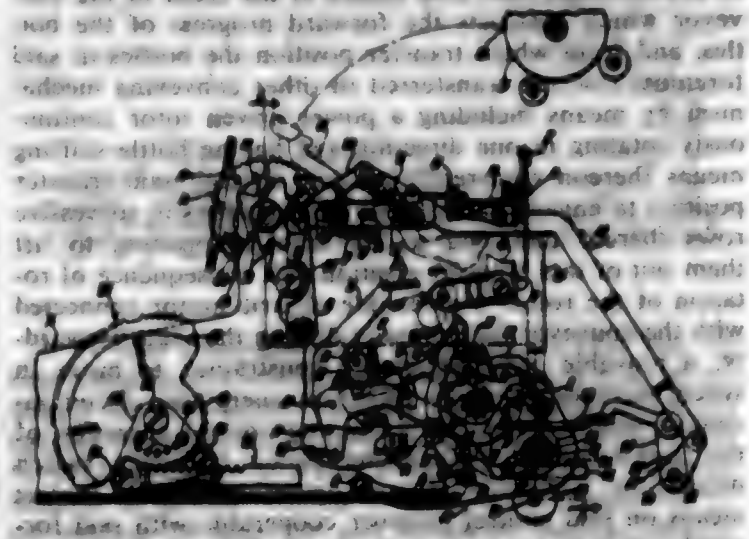
5. In a coin and key operated lock assembly for lockers and the like, the combination of a lock having a rotary barrel, a key for the lock, a latch member secured to the rotary barrel and rotatable therewith, said barrel having a substantially axial opening at the end thereof remote from the end in which the key is inserted, a rod positioned in the axial opening and movable by said key, a coin receiving chute, an arm pivotally suspended adjacent said chute, a plurality of lugs on said arm in succession along said chute and alternately movable thereby into the path of a coin in said chute, said arm being connected to said rod and movable thereby when a key is inserted in said lock, resilient means tending to move the rod into the barrel of the lock so that when the key is in the lock the first of said lugs is positioned in the chute and a second of said lugs is moved out of said chute and, when the key is removed, the rod moves further into the barrel and the first of said lugs moves out and the second of said lugs moves into the chute, a pawl carried by the latch member, a window in the coin chute through which the pawl extends, the window being positioned opposite the point a coin is stopped by the first of said lugs and a catch on said chute engaging a shoulder on said pawl for locking the pawl when no coin is present at the window and said pawl being disengaged from said catch by presence of a coin at said window.

2,861,668
TYPE CARRIER ACTUATING MECHANISM FOR TYPEWRITING MACHINES
Giuseppe Beccio, Ivrea, Italy, assignor to Ing. C. Olivetti & C. S. p. A., Ivrea, Italy
Application August 18, 1953, Serial No. 374,979
Claims priority, application Italy September 6, 1952
11 Claims. (Cl. 197—19)



1. In a typewriting machine wherein a type carrier having a set of types thereon is rotatable through various angular distances to locate a selected one of said types at the printing point, an actuating mechanism for variably rotating said type carrier according to a fundamentally harmonic motion, a driving device for imparting a constant movement to said actuating mechanism, said actuating mechanism including a linkage operable to translate said constant movement into said variable rotation, said linkage comprising a number of movable linkage members capable of being so interconnected as to leave one grade of freedom to the linkage during its operation, and a set of differently located fulcrum elements selectively settable for establishing a variable fulcrum between two consecutive movable linkage members to vary the rate of motion transmission between said two members.

2,861,669
POWER IMPULSE CONTROL FOR TYPE ACTIONS
Charles R. Letterman, West Hartford, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware
Application June 28, 1954, Serial No. 439,490
6 Claims. (Cl. 197—17)



1. In a typewriting machine, the combination with a series of laterally adjacent type actions having hotsetors which are selectively associable with a common power member for reception of power impulses, of vibrator means normally holding a typewriter ribbon removed from a printing point, means operable by the type actions

the right.

knee joints connected to and disposed between the collars of each pair of collars, the axis of at least one knee joint

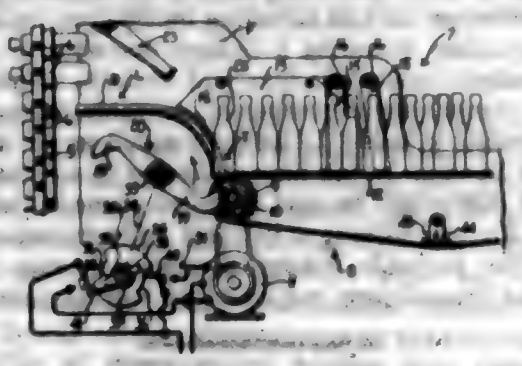
to operate said vibrator means, adjustable means universal to said type actions to predetermine therefor varying power impulses and in serving to vary such power impulses being subjected to a strong force in a certain direction, a rotatable cam near each of the opposite ends of said adjustable means, two interponents near each of the ends of said adjustable means having correlation with the cam thereat to adjust said universal means and firmly support it in the said direction, a shaft connecting the two cams for conjoint rotative adjustment, means to regulate the operation of the ribbon vibrator means for varied throw of the ribbon, means operable by said regulating means to adjust conjointly at each of the opposite ends of said adjustable means one of said interponents, case-shift means, means controlled by said case-shift means to adjust the two other interponents conjointly to different positions, and manually settable strength-of-imprint control means to rotate said shaft, said cam and interponents at both ends of the adjustable means having mutually complementing adjustment effects on the adjustable means.

2,861,670

LOADING APPARATUS FOR BOTTLE WASHING MACHINES

Philip C. Reed, Elm Grove, and Harvey F. Ufer, Milwaukee, Wis., assignors to Dentzel & Lewey Co., Inc., Menomonee Falls, Wis., a corporation of Wisconsin

Application March 16, 1956, Serial No. 571,984
7 Claims. (Cl. 198—25)



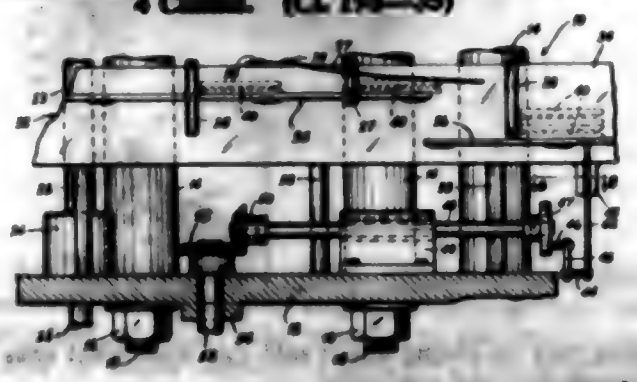
1. In bottling handling mechanism of the type wherein bottles in upright positions are moved forwardly along the upper stretch of an endless conveyor and delivered in successive transverse rows to a transfer position at which the transporting relationship between the conveyor and the foremost bottles is disrupted, and which transfer position is defined by the engagement of the bottles in the foremost row with means at the front of the conveyor which obstructs the forward progress of the bottles, and from which transfer position the bottles in said foremost row are transferred to other conveying mechanism by means including a power driven rotor continuously rotating in one direction and having bottle shifting means thereon recurrently rotated through said transfer position to engage the bottoms of the bottles in successive rows thereof delivered to the transfer position to lift them out of said transfer position as a consequence of rotation of the rotor: a reversible electric motor connected with the conveyor for normally driving the same forwardly; a movable control member constrained to move in synchronization with the rotor; an energizing circuit including switch means for governing normal operation of the motor; another energizing circuit including switch means for governing reverse operation of the motor; means on said control member cooperable with said forward switch means to recurrently effect disruption of said first designated energizing circuit for a period of time extending from shortly before until shortly after engagement of the shifting means on the rotor with the bottoms of each row of bottles delivered to the transfer position; and means on said control member cooperable with said reverse switch means for momentarily effecting completion of said second designated energizing circuit during each such period when forward operation of the motor is disrupted, said reversals of the motor effecting momentary backward travel of the top stretch of the conveyor to create a space between the bottles at the transfer position and bottles immediately behind them, whereby the bottles in the transfer position may be readily moved out of the transfer position without interference from the bottles behind them.

2,861,671

STACKER CONSTRUCTION

Frank Edward Fowler and Robert J. Minder, Athens, Ga.

Application April 12, 1957, Serial No. 652,489
4 Claims. (Cl. 198—35)



1. In combination, stacking mechanism comprising means for successively receiving units for stacking, a stacking station, means for forming stacks of units of predetermined numbers at said stacking station including an endless chain having spaced depending alternating short and long posts for moving individual units to said stacking station, means for stopping units at said stacking station, and means for restraining units against upward movement at said stacking station, said depending long posts being adapted to move stacks of units from said stacking station towards a stack-receiving means.

2,861,672

INTER-CONVEYER TRANSFER MEANS FOR USE WITH MULTIPLE CONVEYER SYSTEMS

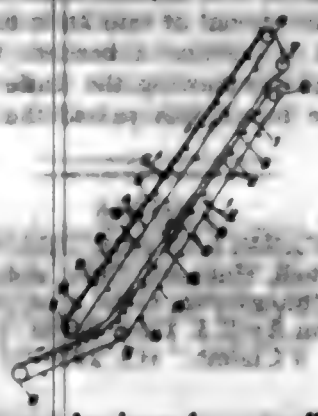
Erwin Bührer and Max Wernli, Schaffhausen, Switzerland, assignors to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland, a Swiss company

Application December 28, 1955, Serial No. 555,986
Claims priority, application Switzerland August 2, 1955
8 Claims. (Cl. 198—65)

2. A conveyer system comprising a first driven horizontal conveyer for transporting objects in one direction, a second driven horizontal conveyer located above and in alignment with said first conveyer for transporting said objects in the opposite direction, rotatable transfer means arranged adjacent at least one end of said conveyers for removing said objects sequentially from one of said conveyers and depositing them on the other conveyer, and operable means connected to said transfer means for imparting to the latter variable rotational speeds, said operable means including motor means, and transmission means driven by said motor means and interconnecting the latter and said transfer means, said transmission means including gearing means for varying the rotational speed of said transfer means in such a manner that both at the time of removal of an object from one of said conveyers and at the time of depositing of an object on the other conveyer, the horizontal component of the linear peripheral velocity of said transfer means corresponds at least to the transporting velocity of the respective con-

veyers, to thereby effect transfer of said objects from one conveyer to the other in substantially shock-free manner.

2,861,673
CONVEYOR WITH COACTING CONVEYOR BELT
Karl Sandtlinger, Dortmund, Germany
Application February 1, 1954, Serial No. 407,437
Claims priority, application Germany February 14, 1953
10 Claims. (Cl. 198—168)

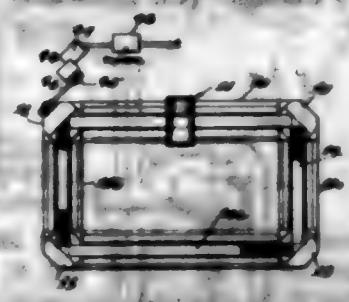


1. A belt conveyor having a lower endless belt adapted to convey granular material of non-uniform grain size in an upwardly inclined direction, and an upper endless belt which in adapted to travel above and with the lower belt and comprises heavy non-extensible chain elements pivotally interconnected to form two edge chains and a plurality of inner chains, and cross-connecting members pivotally interconnecting the chains, and in which each inner chain has only every other element cross-connected to an adjacent chain by a cross-connecting member and in each inner chain the said cross-connected elements are connected alternately to an adjacent chain on one side and to an adjacent chain on the other side, and each edge chain has only every fourth element connected by a cross-connecting member to an adjacent inner chain, whereby the upper belt is extensible in width and at the same time shortenable in length and vice versa without deformation of any of its elements, and has sufficient dead weight to increase the frictional forces acting between the lower belt and the conveyed material and between the components of the conveyed material, said weight being so great that even upon a change of inclination of the conveyor belt sufficient load is applied to the conveyed material to prevent slipping.

2,861,674
CONVEYER SYSTEM FOR NEWSPAPERS, MAGAZINES AND THE LIKE
Walter Reist, Dietikon, Zurich, Switzerland
Application July 20, 1956, Serial No. 599,158
Claims priority, application Germany July 22, 1955
2 Claims. (Cl. 198—189)

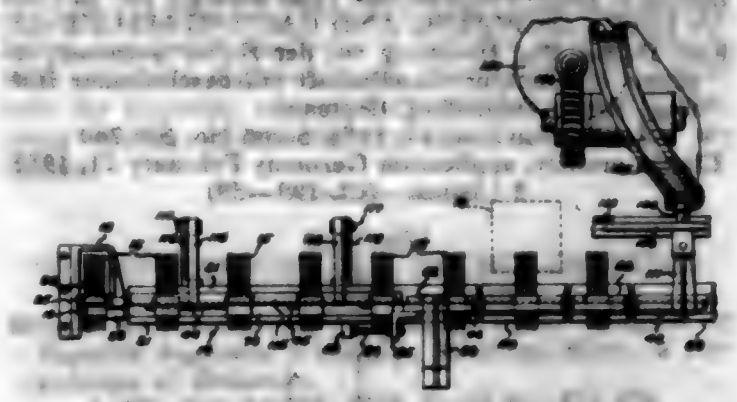
1. Apparatus for conveying newspapers and like flexible articles, comprising an endless conveyor chain, guide means for said chain, transversely extending carrying brackets for said articles secured to the chain, clamping means at either end of said transverse brackets adapted to engage two opposite edge portions of the articles to be conveyed, the clamping means defining clamping points at the ends of each bracket situated on a line passing substantially through the center of the chain, article supporting means on said brackets on either side and closely adjacent said chain, said supporting means being at a higher level with respect to the brackets than said clamping points to impart a stiffening curvature to articles engaged by said clamping means, and cooperating means on said transverse brackets cooperating with said guide means for the chain for being guided thereby, said cooperating means being on a side of said bracket which is opposite to the side at which are located said conveyor chain and said article supporting means.

2,861,675
CONTINUOUS WEB-TYPE POULTRY FEEDER
Nat Cardin, Silver Lake, Wis.
Application February 9, 1954, Serial No. 409,177
6 Claims. (Cl. 198—181)



1. A stock feeder comprising an open-topped trough means into which a feed supply is discharged, an endless continuous webbing drawn through said trough means adjacent the bottom thereof, a plurality of idler corners, a drive corner, each of said corners including a housing arranged in alignment with two adjacent flights of trough, a first web guide means in said corner in alignment with a first flight of said trough, a second web guide means in alignment with a second flight of said trough, said first and second web guide means having axes intersecting at about 90°, and an upper roller means having its axis of rotation in a vertical plane at about 45° to the longitudinal axis of the said flights of said trough means.

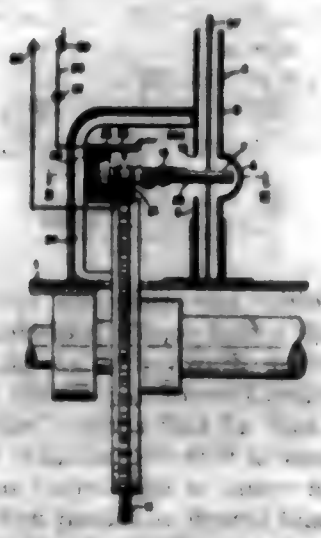
2,861,676
RECIPROCABLE FEED MECHANISM FOR ADVANCING ARTICLES STEP BY STEP
Clarence R. Rasmussen, La Grange, and James W. Rice, Hinsdale, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application October 18, 1954, Serial No. 465,276
8 Claims. (Cl. 198—218)



1. A feed mechanism for advancing articles step by step comprising a channel member having a pair of upwardly directed flanges forming rails for supporting the articles for movement thereon, a feed bar disposed between said rails, a plurality of pawls pivotally mounted thereon in spaced relation to each other, means for reciprocating the feed bar, and an inertia member slidable on said channel member and connected to said feed bar and said pawl for movement with said feed bar and for limited movement relative thereto, said inertia member being operable in response to the initial portion of the movement of the feed bar in one direction for moving the pawls in one direction to raise portions thereof to an operative position engageable with the articles on the sup-

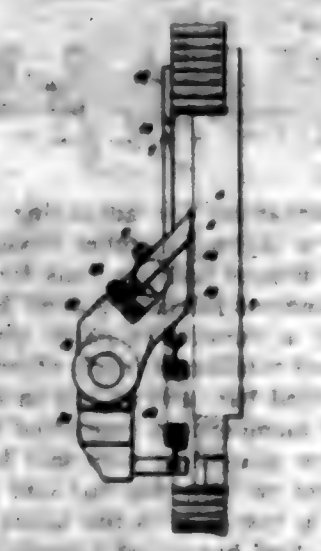
porting rails for advancing them and being operable in response to the initial portion of the movement of said bar in the reverse direction for moving the pawls in a reverse direction to an inoperative position in disengaged relation to said articles.

2,861,677
CONVEYOR MECHANISM
Frederick van Marle, The Hague, Netherlands, assignor to N. V. Technische Maatschappij Marchand-Andriessen, The Hague, Netherlands, a limited liability company of Netherlands
Application September 25, 1956, Serial No. 611,817
9 Claims. (Cl. 198—233)



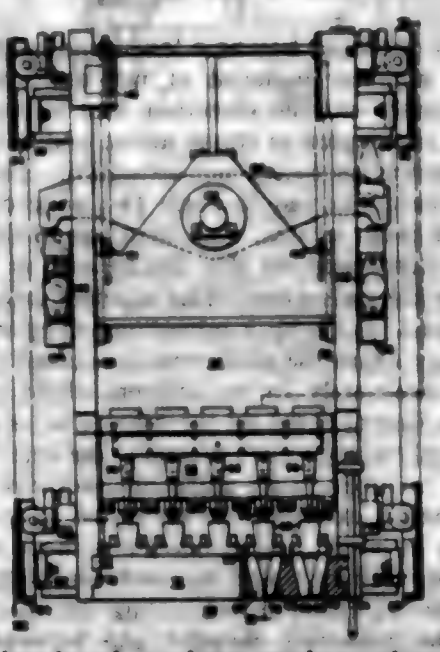
1. A conveyor comprising a conveyor chain having a plurality of pusher fingers attached laterally thereto, a trough having a slot in one vertical wall thereof through which said fingers project, said fingers each being hingedly mounted on said chain exteriorly of said trough, said fingers propelling articles longitudinally of said trough upon actuation of said chain, said fingers each being capable of swinging to a position out of said trough and out of the path of the article being propelled thereby in response to undue resistance being offered by said article to being propelled through said trough.

2,861,678
DEVICE FOR TRIMMING THE BACKS OF SLUGS IN LINE COMPOSING AND CASTING MACHINES
Karl Dobus, Bad Homburg vor der Hohe, Germany, assignor to Linotype Gesellschaft mit beschränkter Haftung, Berlin-Tempelhof, Germany
Application June 17, 1955, Serial No. 516,260
Claims priority, application Germany February 21, 1955
8 Claims. (Cl. 199—59)



1. A line composing and casting machine comprising a rotatable mould wheel, said wheel being adapted to receive a plurality of moulds in which slugs are cast; a movably mounted knife located adjacent the rear face of the mould wheel for trimming the feet of the slugs while said slugs are still in their moulds, resilient means biasing the knife in the direction of the rear face of the mould wheel to engage the rear face of the mould facing said knife to trim the slug foot parts protruding above said rear face of the mould precisely flush with said rear face while being in its pressed-on condition; and mechanical means driven in time relation with the mould wheel restraining the movement of said knife toward the mould until the mould is positioned beneath the cutting edge of the knife and for moving the knife away from the mould when the mould has passed the cutting edge of the knife.

2,861,679
DRAW CARRIAGE FOR DRAWBENCH
George A. Mitchell, Hubbard, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Application April 3, 1956, Serial No. 575,799
6 Claims. (Cl. 207—3)



2. In a drawbench, a draw carriage adapted to draw tubes and the like through a plurality of dies, said draw-carriage being movable along the central axes of said dies, guideways for restricting transverse movement of said draw carriage with respect to the central axes of said dies, anti-friction members carried by said draw carriage, and shock absorbers urging said anti-friction members against said guideways.

2,861,680
ARTICLE PACKAGING WRAPPER
Mary E. Prasch, Columbus, Ohio
Application October 13, 1955, Serial No. 540,248
1 Claim. (Cl. 206—56)

A plural compartment package comprising a single, relatively thin, rectangular sheet of flexible material folded longitudinally upon itself and defining a pair of relatively overlying panels of equal area having outer free longitudinal side edges disposed in registry with one another, means extending transversely and centrally of said panels and joining the latter to one another along a medial transverse area of substantial width, the areas of said panels extending longitudinally outwardly from said medial transverse area defining therebetween a pair of separate pockets an article positioned in each of said

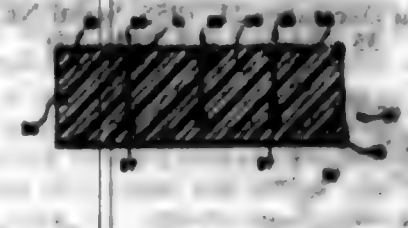
at a higher level with respect to the brackets than said operative position engageable with the articles on the sup-

pockets, said panels being folded longitudinally upon themselves a distance inwardly from their free longitudinal side edges to close said pockets about said articles along the sides of said panels opposite the longitudinal fold line of said sheet, and said panels being transversely folded upon themselves a distance inwardly from each end thereof to close said pockets about said articles at the ends of said panels opposite said medium transverse area and being additionally folded centrally along a pair of relatively spaced transverse lines contiguous to the edges of said medium transverse area to bring said pockets and the articles positioned therein into adjacent superposed relation; and the means for maintaining said panels in their aforesaid folded condition.

2,861,691
ADJUSTABLE PACKING CONTAINER FOR FRANGIBLE PLATES
Dan R. Lane, Dallas, Tex.
Application March 5, 1956, Serial No. 491,724
4 Claims. (Cl. 206—62)

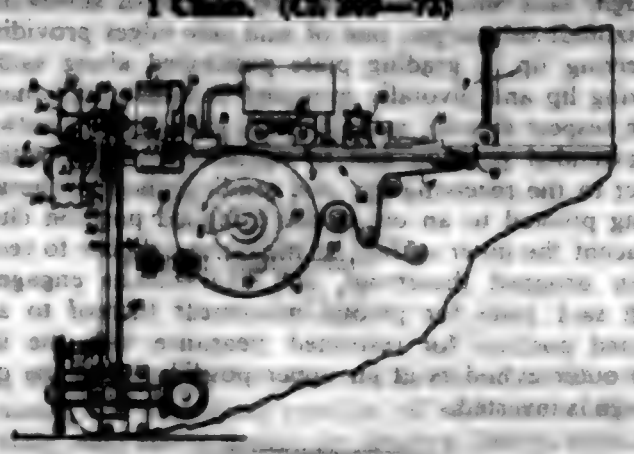
1. The combination comprising a frangible rectangular plate, a pair of shallow telescoping fiberboard trays, structure forming an inner bay inside said trays of configuration corresponding with said plate and of depth corresponding with said trays and for positioning said bay spaced from the edges of said trays, a pad for each inside corner of said bay of thickness equal said depth and with slots centrally thereof through which corners of said plate extend to form with said plate a unitary structure in said bay with said plate parallel to and intermediate the walls of said trays.

2,861,692
HOLDING AND DISPLAY DEVICE
Joseph H. Hatcher, New York, N. Y.
Application March 8, 1957, Serial No. 644,878
3 Claims. (Cl. 206—78)



1. A holding and display device including a body formed of compliant and resilient material, a plurality of spaced slots formed in said body and extending through the upper surface thereof and downwardly therein and adapted to removably receive and maintain articles therein, and each slot being formed with a cavity at the lower end thereof enlarged with respect to the slot, a covering material stretched over the exterior surface of said body and extended into said slots and cavities and a member of substantially the same configuration as that of each cavity positioned in each of said cavities to maintain said material in each slot and cavity and stretched over the exterior surface of the body.

2,861,693
MEASUREMENT OF CIGARETTE ROD DENSITY BY RADIATION
Samuel Gibson, Maplewood, N. J., assignor to American Machine & Foundry Company, a corporation of New York
Application April 15, 1953, Serial No. 349,079
1 Claim. (Cl. 209—73)



In a cigarette making machine, apparatus for detecting variations in the density of a moving cigarette rod comprising a source of radiation of known cross section and intensity positioned adjacent one side of the path of travel of said rod and adapted to project a beam of radiation through successive increments of said rod, at least one other source of radiation of known cross section and intensity positioned adjacent another side of the path of travel of said rod and adapted to project a beam of radiation through said successive increments of said rod, said last named source of radiation being arcuately displaced about said rod to direct radiation at an angle with respect to said first named source of radiation, means including fast responding radiation detectors positioned opposite each of said sources of radiation operable to detect substantially instantaneous variations in the magnitude of each of said beams caused by said variations in the density of each successive increment of said rod subjected to said beams, said last-named means being operable to provide output signals representative of said density changes in corresponding ones of said increments, means for averaging said output signals to provide a composite signal representative of the average amount of radiation absorbed by said increments, a cut-off device for severing said rod at selected intervals to form discrete cigarettes, a cigarette rejector, conveying means for guiding said rod past said detectors, said cutter and said rejector, and means operative in response to variations in said composite signals beyond a predetermined magnitude for actuating said cigarette rejector whereby cigarettes having undesirable density characteristics are ejected.

2,861,694
DUMPING TROUGH FOR DOUBLE CYLINDER GRAIN SEPARATOR
Robert K. MacGillivray, Hopkins, Minn., assignor to Superior Separator Company, Hopkins, Minn., a corporation of Delaware
Application April 2, 1956, Serial No. 575,376
7 Claims. (Cl. 209—96)

1. In a grain separator of the double cylinder double trough type having an outer rotatable cylinder and an

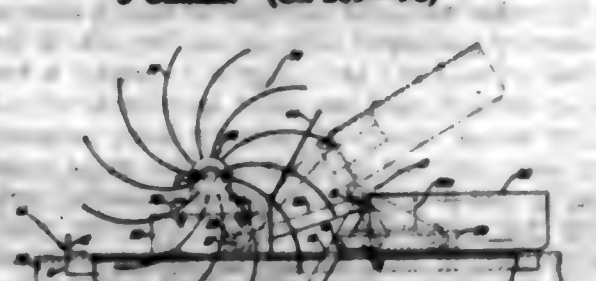
surface of the upper pool to reduce the flow rate of said

from one side of said body portion and having a cavity

a rotatable mould wheel, said wheel being adapted to separate pockets an article positioned in each of said

inner cylinder rotatably mounted in spaced clearance therein on an eccentric axis parallel to and above the axis of the outer rotatable cylinder, an outer trough therefor mounted in spaced clearance between the inner and outer cylinders and normally underlying said inner cylinder, means adapted to rotatably invert and right said outer trough, said outer trough having a pair of substantially horizontal side edges, one of said side edges providing a receiving lip, a grading plate positioned along said receiving lip and pivotally mounted in unbalanced manner with respect thereto, means biasing said plate to outwardly extended position and to retracted position with respect to the receiving lip, said grading plate in operation being pivoted to an outwardly extended position closely adjacent the inner surface of the outer cylinder to receive grain dropped therefrom, and cam means engageable with said plate for pivotal movement thereof to a retracted position for restricted clearance with the inner and outer cylinders at an upper position when the outer trough is inverted.

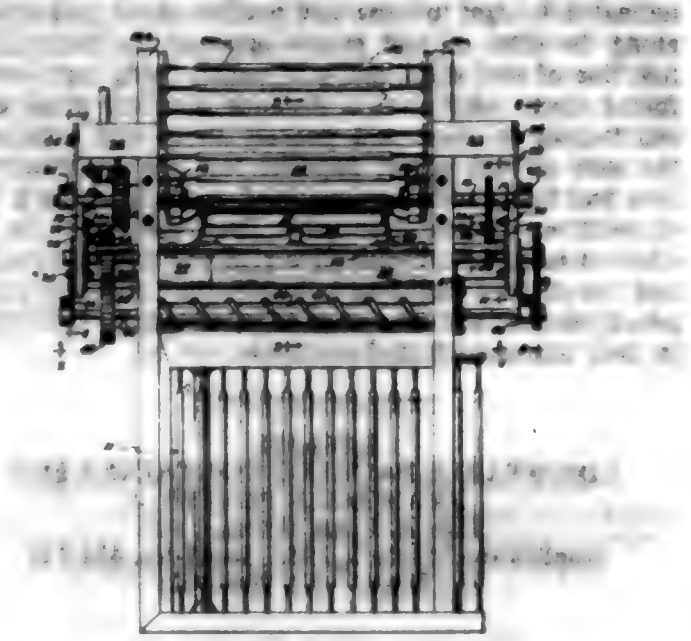
2,861,685
LITTER REMOVER FOR AUTOMATIC POULTRY FEEDER
Nat Cordle, Silver Lake, Wis.
Application May 24, 1954, Serial No. 431,728
5 Claims. (Cl. 209—98)



5. An apparatus for ejecting debris from an automatic poultry feeder of the type employing an open top trough within which a conveying member travels adjacent the bottom thereof, said mechanism including in combination a conveying member, a debris retarding means arranged transverse of said member, a rotating ejector means astride said conveying member adjacent said retarding means and so located as to engage debris accumulated by the said retarding means, and deflector means shielding a portion of said conveying means and onto which the engaged debris is impelled and from which it falls exterior of the trough within which said conveying member operates.

2,861,686
POTATO HARVESTER ATTACHMENT FOR REMOVING SOD, STICKS, STONES, ETC.
Carl E. Johnson, Blackfoot, Idaho
Application December 6, 1954, Serial No. 473,122
9 Claims. (Cl. 209—106)

4. In a potato harvester, the combination with an endless conveyor composed of a multiplicity of cross rods linked together at their ends on which the potatoes are carried, of a freely rotatable transverse roller positioned in proximity to the downwardly moving rods at the discharge end of the conveyor, a smooth surfaced transverse roller below and rearwardly of said first named roller, a roller having a spiral rib thereon and spaced rearwardly from and parallel to the smooth surfaced roller, drive means for said two last named rollers operable to move their adjacent surfaces in opposite directions, the spiral ribbed roller having a portion projecting endwise beyond the end of said smooth surfaced roller toward which the ribbed roller tends to move objects carried by and between said two last named rollers, and a rough surfaced roller axially aligned with, and of the same diameter as the smooth surfaced roller, extending from the said end of the smooth surfaced roller parallel to the projecting

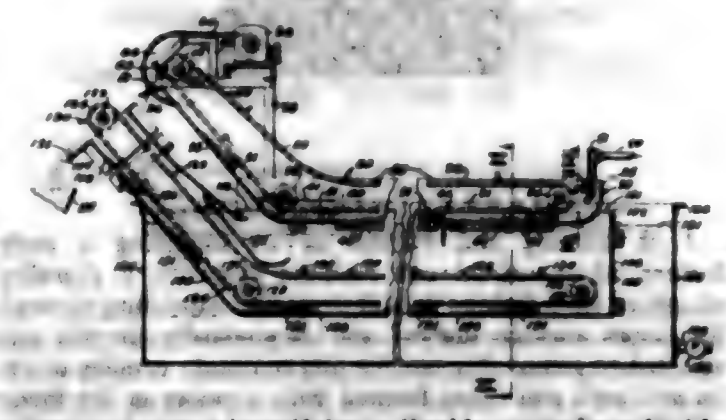


portion of the spiral ribbed roller, and means to rotate the rough surfaced roller in a direction opposite to the direction of rotation of the smooth surfaced roller.

2,861,687
FLOTATION OF HEAVY METAL OXIDES
Joseph Robert Lord, Los Angeles, Calif., assignor to Southwestern Engineering Company, a corporation of California
No Drawing. Application September 9, 1955
Serial No. 533,524
32 Claims. (Cl. 209—167)

28. In concentrating by a flotation process an ore which is an oxide ore of a heavy metal of the group consisting of titanium, iron, manganese, chromium, tin and uranium, wherein said ore is formed into a pulp and subjected to a flotation step, the step of incorporating into the pulp an organic acid collector selected from the group consisting of fatty acids having at least 12 carbon atoms and naphthenic acids and their corresponding water soluble salts, a water soluble salt of a heavy metal and a hydrocarbon oil.

2,861,688
LIQUID CLARIFICATION SYSTEM
Harold H. Harms, Toledo, Ohio, assignor to Henry Manufacturing Co., Inc., Bowling Green, Ohio, a corporation of Ohio
Application December 21, 1955, Serial No. 554,532
35 Claims. (Cl. 210—73)



30. A method of purifying a liquid contaminated with suspended particles both heavier and lighter than said liquid, comprising: forming at least two pools of said liquid having vertically spaced surface levels, circulating said liquids successively through said pools from the one with the upper level to that with the lower level, distributing said contaminated liquid along one side of the

material in each slot and cavity and stretched over the exterior surface of the body.

1. In a grain separator of the double cylinder double trough type having an outer rotatable cylinder and an

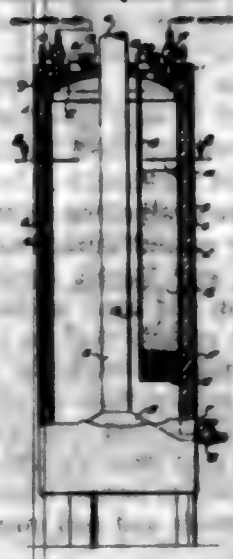
surface of the upper pool to reduce the flow rate of said particles and permit their gravity separation, accumulating the gravity separated lighter particles at the surface of said upper pool along its opposite side, forming a filter bed of at least the larger of said heavier particles at the bottom of said upper pool between said upper and the next lower pools, said filter bed being below the surface level of said next lower pool whereby said filter bed is always submerged in said liquid, filtering part of said heavier particles out of said liquid by said filter bed, automatically and intermittently removing said accumulated lighter and filtered heavier particles from said upper pool whereby the flow of said liquids between said pools and the vertical distance between their said surface levels is maintained at a predetermined value, further reducing the particle flow rate in said liquid in said next lower pool whereby the smaller of said heavier particles settle to the bottom of said next lower pool, and decanting the resulting purified liquid from the surface of said next lower pool.

2,861,689

COMBINATION WATER HEATER AND SOFTENER

Charles J. Lyall, Inglewood, Calif.

Application February 3, 1955, Serial No. 485,999
3 Claims. (Cl. 210—175)



1. A combined water heater and softener, comprising: a tank structure having insulated side walls, a central heating flue, and a burner compartment below said flue; a cold water connection and a hot water connection at the upper end of said tank structure; a partition extending downwardly from the upper end of said tank structure to a level near the bottom end of said tank structure and separating said inlet and outlet connections, said partition dividing said tank structure transversely into a major and a minor complementary zone; a perforated support at the bottom end of said minor zone; a charge of ion exchange material at least partially filling said minor zone, whereby water passing between said connections flows consecutively through said zones; and means affording access to said minor zone for introducing regenerating material therein.

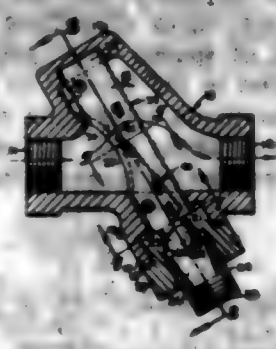
2,861,690

PIPE LINE STRAINER

Edwin C. Shaw and Harmon L. Shaw, Charlotte, N. C., assignors to Perfecting Service Co., Charlotte, N. C., a corporation of North Carolina

Continuation of abandoned application, Serial No. 357,092, May 27, 1953. This application January 9, 1957, Serial No. 633,344
5 Claims. (Cl. 210—306)

1. A pipe strainer comprising a hollow body portion provided with an inlet opening in one end thereof and an outlet opening in the other end thereof in alinement with said inlet opening, a first enlarged portion extending from one side of said body portion and having a cavity therein communicating with the interior of said body portion, and extending at an angle therefrom toward the inlet opening, a second enlarged portion extending from the other side of the body portion and having an opening therethrough in line with the cavity in said first enlarged portion, a tubular foraminated sleeve removably positioned in said cavity and said opening and extending



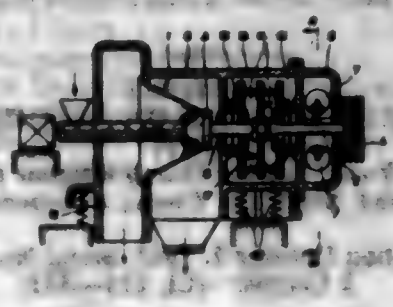
across the line of flow between said inlet and outlet opening, means for preventing rotation of said sleeve within said body, said sleeve having an opening therein adjacent said inlet opening, a rim on the inner surface of said body portion adapted to mate with said opening in said sleeve, a screen baffle position within said sleeve and the upper edge of said screen baffle extending across the opening in the sleeve.

2,861,691

CENTRIFUGE FOR SEPARATING SOLIDS FROM SLIMY MASSES

Gerhard Linke and Hans-Heinrich Hilsen, Mulheim (Ruhr), and Fritz Kleinlein, Aachen, Germany

Application January 20, 1955, Serial No. 483,158
Claims priority, application Germany January 21, 1954
12 Claims. (Cl. 210—378)



1. A centrifuge system having a screen drum body and a rotatable drive shaft to which said body is connected; housing means biased against a support therefor and enclosing said drum and said shaft; eccentric means rotatably supported by said housing means and constructed to produce oscillations of said housing means in substantially axial direction of said drive shaft, journal means for said drive shaft to support the latter during rotation thereof, and operable means supported in said housing means and positioned to extend along substantially the entire shaft and intermediate said journal means, said operable means transferring said oscillations of said housing means to said shaft, whereby the latter in addition to its rotational movement performs also oscillations in axial direction thereof, resulting in an increased output of said drum.

2,861,692

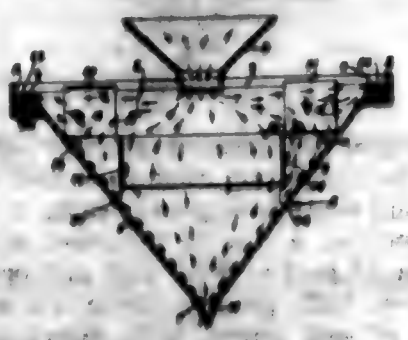
THICKENING APPARATUS FOR INCREASING THE SOLID CONTENT OF LIQUIDS

Ira B. Humphreys, Denver, Colo.

Application June 28, 1956, Serial No. 594,576
3 Claims. (Cl. 210—531)

1. In a thickening apparatus for increasing the proportion of solid content of a liquid having solids sus-

pended therein, a tank having downwardly inclined convergent side walls and provided with an outlet in its bottom, an overflow reception launder extending around the sides of the upper end of the tank, a plurality of series of settling elements, one series extending along each side of the upper end of the tank and extending inwardly from the side walls of the tank but stopping short of the center of the tank to provide a centrally positioned feed well, each series of settling elements composed of a plurality of spaced apart parallel plates disposed at an inclination to the vertical to provide sloping settling surfaces, the plates depending into the tank a distance to meet the adjacent side wall of the tank at a point remote to the bottom of the tank, the upper ends of



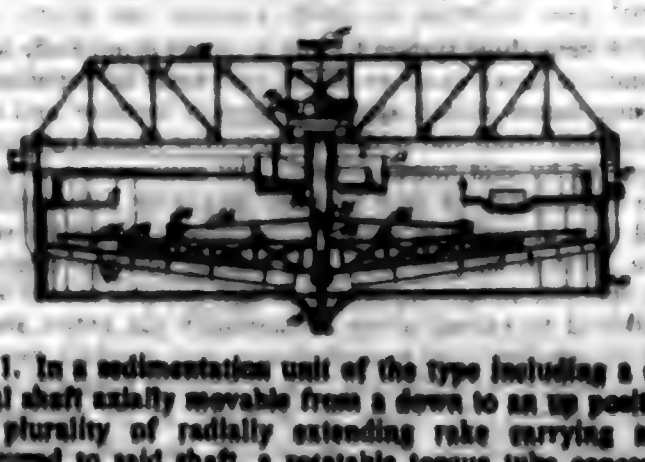
the plates extending to a point above the liquid level in the tank, the faces of the plates being disposed at right angles to the upper edge of the adjacent side wall of the tank, a vertically disposed baffle extending lengthwise of each side of the tank, each baffle associated with a series of settling element plates and extending downwardly from a point closely adjacent the inner lower corners of the plates to a point adjacent but spaced from the adjacent tank side wall, the faces of said baffles being disposed at right angles to the faces of the plates forming the series of settling elements with which the baffle is associated, the parts operating whereby all liquid traveling from the feed well to the overflow launders must pass between the plates.

2,861,693

SWAY LIMITING DEVICE ON A SEDIMENTATION UNIT

Thomas S. Wenk, Wilton, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Application October 7, 1957, Serial No. 688,600
3 Claims. (Cl. 210—531)



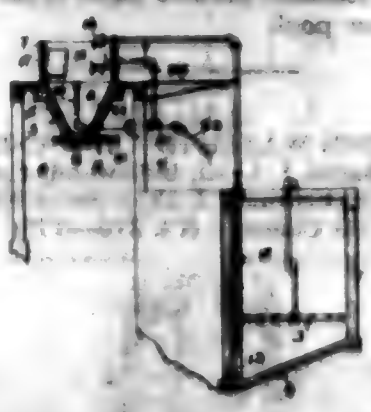
1. In a sedimentation unit of the type including a central shaft axially movable from a down to an up position, a plurality of radially extending rake carrying arms secured to said shaft, a rotatable torque tube concentrically mounted about an upper portion of said central shaft and spaced above said rake carrying arms, and drive rods connecting said torque tube to each of said rake carrying arms enabling driving of said arms by said torque tube, each of said drive rods extending in a radial direction from said tube to said arms and being pivotally mounted at one end and slidably mounted at the opposite end whereby upon lifting of said central shaft and arms any point on said drive rods travels in an arcuate path; the improvement which comprises means limiting said axial movement of said central shaft relative to said concentrically mounted rotatable torque tube, said means comprising a first element mounted on each of said drive rods intermediate the torque tube and said arms, a complementary second element mounted on each of said arms, said said first and second elements being positioned in contact with each other with the central shaft in the down position and disengagable from such contact upon lifting of said central shaft to effect arcuate movement of said first elements on said drive rods.

2,861,694

DECANTING PIPE FOR GRIT REMOVAL SYSTEM

Maxicam E. Kotow, Los Angeles, Calif., and Arthur A. Lemke, Chicago, Ill., assignors to Chicago Pump Company, a corporation of Delaware

Application January 6, 1954, Serial No. 402,991
9 Claims. (Cl. 210—434)



1. A decanting pipe comprising an inner section and a plurality of vertically spaced shields surrounding said inner section, each of said shields having a vertical wall spaced uniformly from said inner section and a transverse wall connecting said vertical wall to said inner section, said shields being spaced vertically a distance small enough to normally prevent flow of solid matter into the space between each shield and said inner section, and a plurality of orifices in said inner section adjacent the transverse wall of each shield to permit liquid to flow from the space between said shields and said inner section into said inner section.

2,861,696

VERTICALLY ADJUSTABLE AND LATERALLY SLIDABLE SHELF STRUCTURE

Richard J. Carbary, La Grange, Ill., assignor to General Electric Company, a corporation of New York

Application August 25, 1955, Serial No. 530,365
7 Claims. (Cl. 211—143)

2. A vertically adjustable and laterally slidable shelf, comprising fixed, vertical, screw-threaded support means, shelf guide means including a nut in screw-threaded relation with said support means to effect vertical travel of said guide means along said support means according to the direction of rotation of said nut, means including an endless chain engaging with said nut for rotating said nut, a shelf structure carried by said guide means for sliding movement normal to said support means, means for mechanically connecting said shelf structure to said nut rotating chain to effect rotation of said nut upon sliding said shelf, said means including a bar member movable into or out of engagement with said chain, and means for optionally moving said bar member into or

2,861,700

said connector positively transmitting linear motion in

out of such engagement, whereby the sliding movement of said shaft may or may not be used to rotate said nut, at the decision of the operator.

2,861,696

DRAFT GEAR FOR RAILWAY DRAFT RIGGING

Arnold E. Denfer, Oak Park, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware

Application December 30, 1954, Serial No. 478,797
5 Claims. (Cl. 213—46)

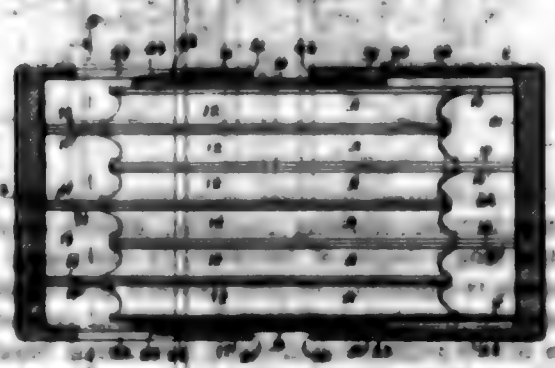
1. In a draft gear for railway draft rigging; a resilient column composed of a plurality of units, aligners dividing the units into groups, each of said units comprising a pair of metal plates with a solid rubber pad interposed therebetween and bonded thereto, the pad in each unit in each group having the same resistance to compression as the other pads in that group, which resistance is different from the resistance of the pads in the other groups; and flanges on said aligners disposed alongside of the units of a group and adapted to engage the adjacent aligner, thereby to limit the compression of the units in the group by forces acting upon the column.

2,861,697

DRAFT GEAR FOR RAILWAY DRAFT RIGGING

Harry W. Mulcahy, Chicago, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware

Application April 27, 1956, Serial No. 581,181
5 Claims. (Cl. 213—49)



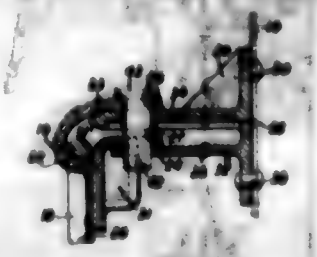
1. A draft gear for railway draft rigging, in which rubber is stressed mainly in shear during an operation of the gear, comprising: a resilient column consisting of a plurality of rectangular plates disposed parallel to each other and extending longitudinally of the gear, alternate ones of the plates being offset longitudinally with respect to the intervening plates; a pad of rubber interposed between each pair of plates and bonded thereto; a pair of locking plates disposed one on each side of said column; a lug projecting outwardly from each end of each locking plate with the lugs on the front ends of the plates beveled at their front edges; a rear cup-shaped cap against the inner face of which said alternate ones of the plates abut, there being slots in the side walls of said cap into which the lugs on the locking plates snugly register to fix the locking plates with respect to said rear cap and with respect to the outer ends of said rectangular plates which abut the inner face of the rear cap; a front cup-shaped cap against the inner face of which said intervening ones of the plates abut, there being elongated slots in the side walls of said front cap into which the beveled lugs on the locking plates extend.

2,861,698

COUPLER OPERATING ROD SUPPORT

Loree Elwyn Fuesler, Groveport, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio

Application April 26, 1956, Serial No. 580,797
5 Claims. (Cl. 213—171)



5. A support for the outer end portion of a coupler operating rod comprising, a bracket base plate for rigid attachment to the end of a railway vehicle body, a flange extending from said base plate, a second flange vertically spaced with respect to the first flange extending from said base plate, said flanges having vertically aligned openings therein, a sleeve embracing an outer end portion of the coupler operating rod, an ear extending from the sleeve overlying one of said flanges, another ear extending from the sleeve overlying the other flange, a pin extending through said openings and vertically aligned openings in said ears, an arm extending axially beyond an outer end of the sleeve and rigid with respect thereto, and a vertically disposed abutment surface on said arm parallel with the outer end portion of said operating rod.

2,861,699

METHOD AND APPARATUS FOR PERFORMING OPERATIONS AT A REMOTE POINT

Arthur H. Youmans, Tulsa, Okla., assignor, by mesne assignments, to General Mills, Inc., Minneapolis, Minn., a corporation of Delaware

Application October 16, 1950, Serial No. 190,387
10 Claims. (Cl. 214—1)

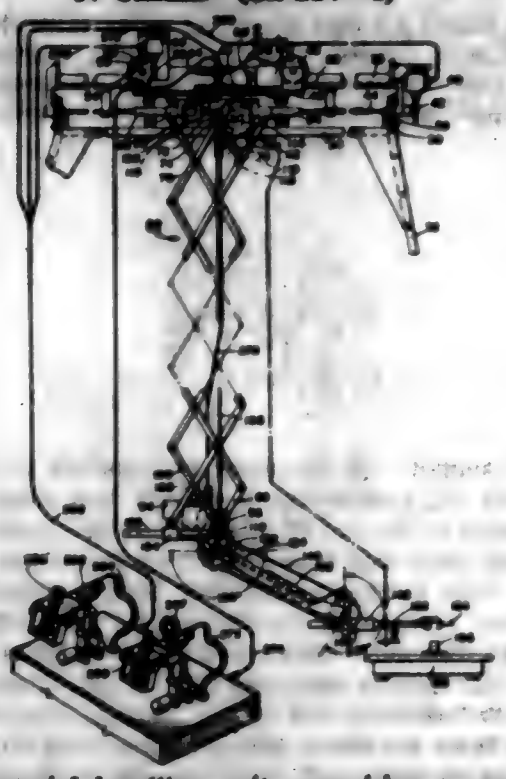
1. A system for performing operations at a remote point comprising in combination a manipulator, said manipulator having elements corresponding to a hand having a thumb and fingers, lower arm, upper arm, and shoulder, means for pivotally connecting said elements in operative relationship, means for independently moving the elements about their pivotal axes, means for rotating the hand about its own longitudinal axis, means for actuating the thumb and fingers of said hand, a controller, transmission means connecting said controller with said means for moving said elements, independent means adapted to be actuated by said controller for selectively initiating the operation of said element-moving means to move them about their pivotal axes, means also adapted to be actuated by said controller for producing rotation of the hand about its own longitudinal axis, means also actuable by said controller for operating said thumb and finger actuating means, and additional independent means for respectively controlling the speed of movement of said elements.

arm pivotally secured to each side of said frame for up-

plane of the base, and a top wall integral with and at

any point on said drive rods travels in an arcuate path; the improvement which comprises means limiting accessaid connector positively transmitting linear motion in both directions between the power means and reciprocable member and being capable of free rotation so that the hand may rotate without reciprocating the reciprocable

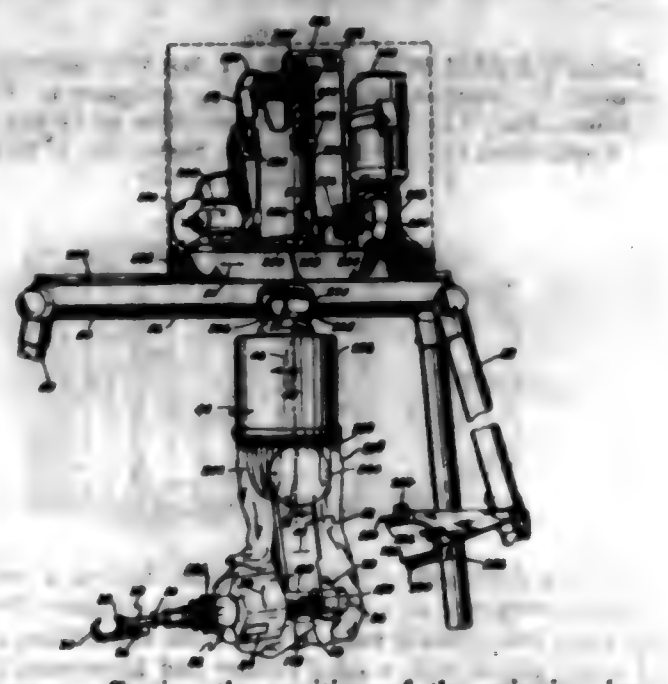
2,861,700
REMOTE CONTROL HANDLING UNIT
Thomas R. James, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Application August 23, 1951, Serial No. 243,765
37 Claims. (Cl. 214—1)



2. A material handling unit comprising a supporting arm, a wrist member mounted on the arm for relative rotation around a predetermined axis of the arm, said wrist member having a movable grip member mounted thereon for relative movement parallel to said axis between closed and open positions, means preventing relative rotation of said grip member with respect to said wrist member around said axis, first driving means on the arm operatively connected to the wrist member for rotating the wrist and grip members as a unit around said axis, the grip member and arm member having cooperating threaded members, the first of which is mounted on the arm for rotation on said axis and the second of which is fixed to the grip member and extends along said axis, second driving means on the arm operatively connected to the first cooperating threaded member for rotation of the latter to move the second threaded member and grip member along said axis independently of rotation of the wrist member, and means operatively connecting the first driving means and first threaded member for rotation of the latter at the same speed as the wrist member whenever the latter is rotated, thereby preventing undesired movement of the grip member along said axis during rotation of the wrist member.

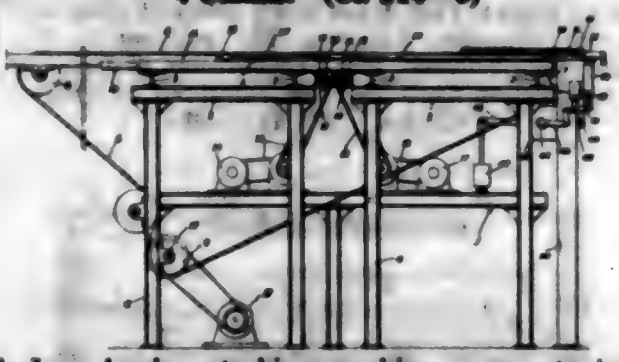
2,861,701
REMOTE CONTROLLED HANDLING UNIT
Charles H. Bergeland, Stillwater, Minn., and Robert S. Hedin, Pomeroy, Ohio, assignors to General Mills, Inc., a corporation of Delaware
Continuation of application Serial No. 456,226, September 15, 1954. This application May 19, 1958, Serial No. 736,285
28 Claims. (Cl. 214—1)

1. A remotely controlled handling unit comprising a hand member having a pair of gripping jaws, a reciprocable member positively connected to at least one of the jaws to move the jaws together or apart, a forearm member adapted to support the hand, power hand operating means carried on the forearm for operating the hand including a first power means for giving reciprocation to said reciprocable member, second power means imparting rotation to the hand, and a connector joint releasably joining the first power means to the reciprocable member,



member or affecting the position of the gripping jaws relative to each other, said connector joint being adapted by reason of its releasability to disconnect the reciprocable member from the power means for removing the hand from the forearm.

2,861,702
LUMBER STACKER
Edwin B. Mason, Stirling City, Calif.
Application October 1, 1956, Serial No. 613,183
4 Claims. (Cl. 214—6)



1. In a lumber stacking machine, means to initially support a single layer of transversely extending boards in adjacent relationship at the forward end of the machine and in number sufficient to form a course for a stack, a lift to support such stack positioned beyond the forward end of the machine, loader arm units under and normally clear of the supported boards, means mounting the units for reciprocating movement lengthwise of the machine and arranged for advance over the lift, means to advance and retract the arm units, a stop to engage the foremost board of the course as initially supported, and a mechanism connected to the arm units and the stop to raise the arm units into lifting and supporting engagement with said boards prior to advance of said units and at the same time move the stop clear of the boards.

2,861,703
AGRICULTURAL VEHICLE
Imre Imecsfalvi, Stanley R. Potter, and Michael T. Warner, San Diego County, Calif.; said Imecsfalvi and said Warner assignors to said Potter
Application May 22, 1956, Serial No. 586,576
5 Claims. (Cl. 214—83.1)

1. An agricultural vehicle comprising: a frame supported by ground engaging wheels; a laterally extending

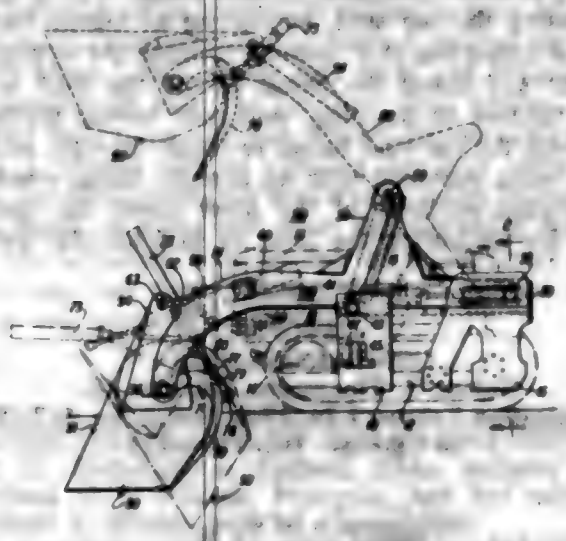
plates which abut the inner face of the rear cap; a front cup-shaped cap against the inner face of which said inter-

spectively controlling the speed of movement of said elements.

arm pivotally secured to each side of said frame for upward or downward pivotal movement; power means to selectively raise or lower each said arm; a plurality of beds carried by each arm for supporting a worker in a

prone position; power driven conveyor means associated with each arm to receive produce harvested by said prone worker for transporting said produce to a packing area, and adapted to be operative in any of its selective upward or downward positions.

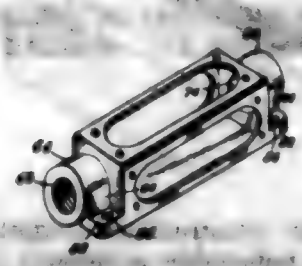
2,861,704
MATERIAL HANDLING AND EARTH DIGGING MACHINES
Edward H. Kluckhohn, Naperville, Ill.
Original application March 11, 1958, Serial No. 149,197. Divided and this application October 22, 1953, Serial No. 387,733
6 Claims. (Cl. 214—140)



6. A material handling machine comprising a mobile vehicle provided with a frame, a boom comprising a single arm at each side of said frame, means for mounting said arms for pivotal movement about a single common axis on said frame and for sliding movement of said axis on said frame, a bucket comprising a body pivoted on said arms and having a rear opening, a gate pivoted on the pivotal axis of said body for closing said opening, motor means carried by said frame for effecting pivotal movement of said boom, a second motor means for effecting said sliding movement of said boom, a third motor means carried by said arms for effecting pivotal movement of said body on said arms, and a fourth motor means mounted on said body for operating said gate.

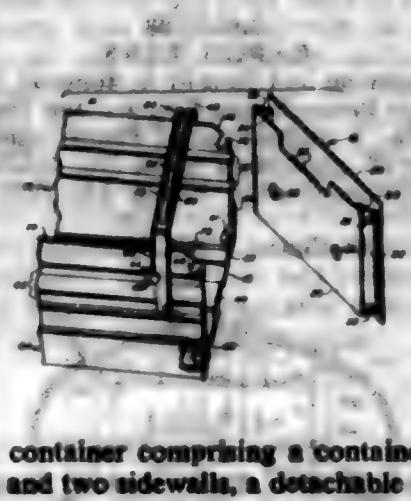
2,861,705
UNIVERSAL CONDUIT BOX
William J. Scott, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware
Application August 13, 1956, Serial No. 603,539
2 Claims. (Cl. 220—3.9)

1. In a pull box fitting, a rectangular substantially flat elongated solid base, a frame above the base and integral with it, the frame and base being generally symmetric about a center line, the frame including opposed parallel upright side and end walls perpendicular to the general plane of the base, and a top wall integral with and at right angles to the plane of the side and end walls but generally parallel to the plane of the base, elongated openings in the top and side walls, means for securing any selected one of a plurality of cover plates having various combinations of hubs thereon over each of the elongated openings, at least one conduit receiving hub integral with one of the end walls and having a center



line generally parallel but offset to one side of the center line of the frame and base, one side of each hub being generally flush with the side wall of the frame in the direction of the hub's offset, and an anchor lug integral with the said one end wall and the hub and disposed on the other side of the frame's center line from the hub, such lug extending longitudinally from the base and being generally laterally flush with the other side wall.

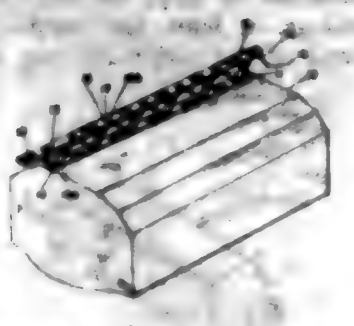
2,861,706
CARD CONTAINER
Harold R. Myers, Brooklyn, N. Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application October 26, 1955, Serial No. 543,840
5 Claims. (Cl. 220—4)



2. A card container comprising a container body having a bottom and two sidewalls, a detachable front closure having a front plate with dimensions suitable to close an end of said container body and two vertically extending and rearwardly projecting side plates attached near each side of said front plate with dimensions suitable to fit within said container body, said end closure having two laterally projecting pins extending from each of said side plates, two slots extending downwardly and away from the end edges of each of said sidewalls and adapted to receive said pins when said end closure is fitted to the end of said body, a latch on said container body having an upright and a forwardly inclined position and in its upright position extending from the outside of one sidewall and over said container body to the outside of the other sidewall to be utilized as a handle for said container body, and the tops of said side plates projecting rearwardly and upwardly from the back of said front closure, said latch being adapted in its forwardly inclined position to engage the projecting tops of said side plates to prevent vertical movement of said front closure, thereby retaining said laterally extending pins in said slots and securing said front closure to said container body.

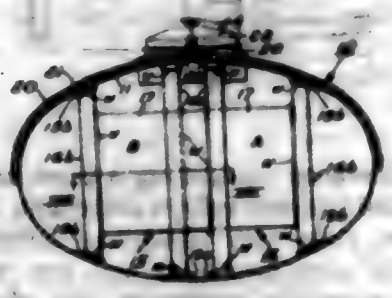
joining the first power means to the reciprocable member, ported by ground engaging wheel, a laterally extending

2,861,787
SUSPENSION FOR FLEXIBLE CLOSURE
Edward W. Moorman, Dayton, Ohio, assignor to The Dayton Rubber Company, a corporation of Ohio
Application June 27, 1956, Serial No. 593,125
1 Claim. (Cl. 220—15)



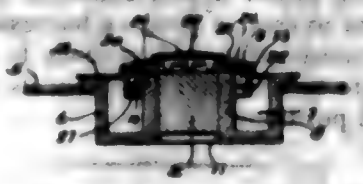
In a fuel cell construction comprising a flexible walled container removably positioned in a supporting structure, the combination with said container and said supporting structure of a first longitudinally extending elongated tape member having longitudinally spaced pairs of transverse slits formed therein, each pair of slits thereby forming a loop, said tape being bonded to the inner surface of the upper portion of said supporting structure between loops, a second longitudinally extending elongated tape member affixed to the upper surface of said flexible container, said second tape member being formed with longitudinally spaced pairs of transverse slits each pair forming a loop, said second tape member being bonded to said container between said loops and positioned with respect to said container in coextensive alignment with said first tape member, a tightly drawn tape threaded through said loops alternately of said first and second tapes longitudinally thereof, and means for maintaining said last-named tape in a tightly drawn position.

2,861,788
CARGO TANK
Curtis F. Sauereisen and Harold A. Johnson, Warren, Pa., assignors to Pennsylvania Furnace and Iron Company, Warren, Pa., a corporation of Pennsylvania
Continuation of application Serial No. 428,464, May 10, 1954. This application March 12, 1958, Serial No. 723,938
14 Claims. (Cl. 220—22)



1. A cargo tank for transporting a flowable load such as a liquid which comprises, a longitudinally-extending curvilinear enclosing wall about the interior of the tank and opposite end walls secured to said enclosing wall to define an internal load-receiving chamber, a pair of integral deflector units in a transversely staggered and longitudinally spaced-apart positioned relationship within said enclosing wall, each of said units having a pair of column leg members spaced from each other and from the sides of said enclosing wall and a deflector plate member extending transversely across the tank between said column leg members within the end reaches of said column leg members and terminating short of said enclosing wall to define passageways with the upper and lower reaches of the column members and with said enclosing wall, and said passageways extending substantially the length of the tank, said enclosing wall having integral portions mounting opposite end portions of said leg members within the chamber, and means securing the end portions of said leg members to said mounting means and sealing off the joint therebetween, and means securing said deflector plate member between said pair of leg members and sealing off the joint therebetween.

2,861,709
PROTECTIVE AND LABEL-RETAINING CAP FOR THE TAP FITTING OF A BEER BARREL OR THE LIKE
Ernest R. Goll, Milwaukee, Wis., assignor to Braun-Goll Company, Milwaukee, Wis., a corporation of Wisconsin
Application June 7, 1955, Serial No. 513,689
4 Claims. (Cl. 220—34)



1. In combination, a container tap bushing having an annular top surface and an inwardly offset portion providing a recess and having an annular tap stud disposed centrally in the recess and having a flange overhanging the recess, an annular label overlying the top surface and having a central aperture slightly larger in diameter than the overall dimension of said flange, a plug removably closing the tap stud, and a cap of elastic material having a depending skirt passing through the aperture of the label and about the flange of the tap stud in protective relation to the plug, said skirt having means engaged with the top stud flange to retain the cap, said cap further being provided with an annular flange overhanging marginal portions of the label about the aperture therein for anchoring the label to said annular surface.

2,861,710
CONTAINER SEAL
Robert T. Thompson, Palatine, Ill.
Application February 24, 1956, Serial No. 567,492
13 Claims. (Cl. 220—37)

2. A container and sealing means therefor comprising, a container having side walls, a bottom peripherally sealed to an end of said side walls, and a metallic top peripherally sealed to an opposite end of said side walls, an aperture in said top, and a spirally wound elongated wire seal, said seal wound in flat spiral substantially in one plane, said seal secured to said top and covering said aperture, said wire seal being secured to said top and between adjacent convolutions thereof by a material of sufficiently low tensile strength to be broken manually and sufficiently high tensile strength to withstand forces resulting from fluid pressure within the container.

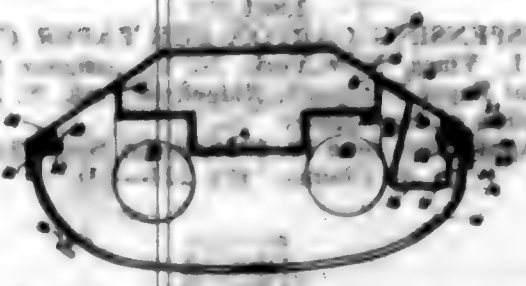
upright side and end walls perpendicular to the general

2,861,711

LIGHTING EQUIPMENT AND HOUSING AND RINGS FOR SAME

John Schneider, Frankfurt am Main, Germany, assignor to Dr.-Ing. Schneider & Co., Frankfurt am Main, Germany

Application August 23, 1957, Serial No. 679,726
8 Claims. (Cl. 220—46)



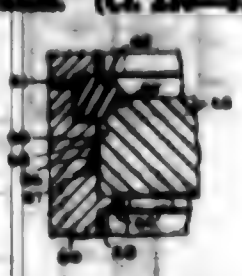
1. A fixture for supporting appliances comprising a housing section, said housing section having an opening, a cover section for closing said housing section opening, one of said fixture sections having arcuately bent inturned flanges at its periphery, portions of the edges of said housing section and said cover section adapted to be connected together, a support member, said support member secured to the inner surface of the other of the fixture sections, a hinge mounted inside said fixture, said hinge comprising first and second leaf members rotatably engaging a pivot pin, said first hinge leaf secured to said support member, said second hinge leaf secured to a pivot and actuating rod, bias means acting between said hinge leaves to rotate them with respect to each other, said hinge leaves positioned so said relative rotative movement of said hinge leaves moves said pivot and actuating rod into engagement with the arcuately bent portion of said inturned flanges on said one of said fixture sections providing a pivotal axis of rotation for said section, and means for overcoming the bias means acting between said hinge leaves to move said pivot and actuating rod away from the arcuately bent portion of the inturned flanges to free said one fixture section from its pivotal connection to the other fixture section.

2,861,712

COMBINED SEAL AND RETAINING DEVICE

Peter D. Bermingham, Suffield, Ohio, assignor of ten percent to J. William Freeman, and five percent to Robert V. Maher, both of Akron, Ohio

Application June 11, 1952, Serial No. 292,937
9 Claims. (Cl. 220—55)



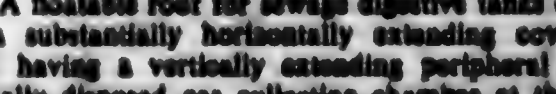
2. A closure seal for retaining a liquid body within a confined area, comprising: a container having a groove provided on the inwardly presented wall surface thereof; a resilient, endless O ring partially receivable within said groove and having a cross-sectional diameter not greater than the width of said groove; a closure plate having the bevelled peripheral portion thereof receivable against the inner wall of said container with the bevelled face forming a wall of the groove; an inwardly presented ledge, provided on the inner wall surface of said container for supporting said closure plate with respect thereto; said ledge being located so as to have said bevelled peripheral face of said closure plate restrict the opening of said groove; and means for effectuating removal of said O ring from said groove, the overall diameter of said endless O ring being less than the overall diameter of said groove whereby said O ring is retained within said groove in stretched condition.

2,861,713

METAL CLAD INSULATING FLOATING ROOF

Donald D. Cronish, Chicago, Ill., assignor to Universal Fabricated Products Co., Chicago, Ill., a corporation of Illinois

Application July 20, 1956, Serial No. 599,533
8 Claims. (Cl. 220—54)



1. A floatable roof for sewage digestive tanks comprising a substantially horizontally extending cover, said cover having a vertically extending peripheral edge, a vertically disposed gas collecting chamber at the center of said roof and having open communication with said tank, an upper roof structure carried by said cover in spaced confronting relation, said upper roof structure consisting of a plurality of prefabricated panel sections each comprising a top plate and an inner leaf carrying bottom plate, means for spacing said top plate and said bottom plate in a parallel plane with respect to each other, insulation means carried between the top plate and the bottom plate, the said top plate being of a size greater than said bottom plate so as to provide an over-lapping portion along one side and bottom edge thereof, said over-lapping portion providing a cover for the connection points between said parallel sections structural trusses carried by said cover for supporting said upper roof structure in spaced floating relation, means carried by said upper roof structure for detachably connecting itself to said structural trusses, and means on said vertically extending peripheral edge and on said vertically disposed gas collecting chamber for detachably receiving the peripheral edge of said upper roof structure.

2,861,714

SHIPPING UNIT

Glenn Ashmore Gleason, Short Hills, N. J., assignor to Colgate-Palmolive Company, Jersey City, N. J., a corporation of Delaware

Application October 8, 1955, Serial No. 538,666
3 Claims. (Cl. 220—63)

1. A shipping unit comprising a rigid cylindrically shaped drum having a flat bottom and an open end, a rigid flat cover for the open end of the drum, means for holding the cover to the drum, a flexible drum liner inside the drum adapted to contain materials to be shipped substantially equal in bulk volume to the volume of the covered drum and adapted to be tightly sealed about said

ing opposite end portions of said leg members within the resulting from fluid pressure within the container.

materials, and an inflated flexible container of relatively small limited maximum capacity inside the closed drum and in contact with an interior surface thereof and the rials to be shipped, said container having an inlet open- exterior surface of the drum liner sealed about the mating through which it is capable of being filled with, expanded by and emptied of air, and means for hermetically sealing that opening, the inflated container being in a fixed position inside the closed drum in contact with a surface thereof and being immobilized between and in contact with said surface and the material filled liner during storage and shipment.

2,861,715

FLOATING ROOF TANK AND COOLING MEANS THEREFOR

Ivan L. Wismiller, Chicago, and Lyle V. Larsen, Oak Lawn, Ill., assignors to Chicago Bridge & Iron Company, a corporation of Illinois

Application September 16, 1954, Serial No. 456,397
1 Claim. (Cl. 220—85)

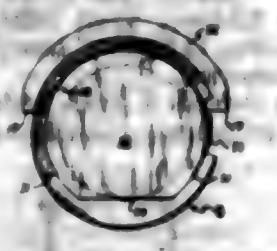
Cooling apparatus for a floating roof liquid storage tank having a sealed annular rim space between the floating roof and the tank side walls and an upper seal for said space, said cooling apparatus comprising a conduit ring supported from said floating roof in said annular space for movement vertically in the tank with rise and fall of the floating roof, said conduit ring extending about the tank adjacent the tank side walls, fluid connections to said ring for conducting cooling fluid through said ring, said ring having a plurality of orifices along its length for spraying the cooling fluid into heat exchange relation with said sealed rim space and the surface of the stored liquid.

2,861,716

DRINKING RECEPTACLE

Matthew J. Kramer, Denver, Colo.

Original application May 14, 1948, Serial No. 27,822. Divided and this application December 3, 1954, Serial No. 472,842
4 Claims. (Cl. 220—90.4)



1. In a receptacle adapted to contain liquid and to be used for drinking purposes and the like, the combination of a transverse slot in the side wall of said receptacle and, at one end of said slot, a radially outwardly projecting bulge having an internal groove forming a continuation of said slot; and a partition normally extending through said slot and at least substantially across the inside of said receptacle, said partition having a tab extending outwardly from said receptacle with said partition in closed position, said partition being movable between a substantially open position in which access to the liquid in said receptacle is provided and a substantially closed position in which said partition tends to limit the ejection of liquid from said receptacle as a consequence of a sudden movement of said receptacle, said partition and receptacle being so constructed and arranged to provide, in said closed position, at least one restricted opening adjacent the wall of said receptacle, for flow of liquid during drinking and the like.

2,861,717

DISPENSING CARTON FOR PAPER CUPS

Oscar L. Vlass, New York, N. Y., assignor to Continental Paper Company, Ridgefield Park, N. J., a corporation of New Jersey

Application June 18, 1956, Serial No. 592,032
10 Claims. (Cl. 221—63)

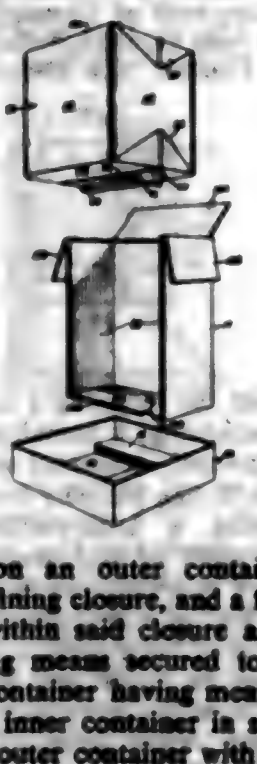
6. A dispensing carton for paper cups and the like which comprises four interconnected side walls defining a tubular carton of substantially square cross-section only slightly larger than the diameter of the cup, and a partition wall extending across the lower portion of the interior of the carton parallel to and spaced from one of the side walls a distance greater than the difference between the cross-sectional dimension of the tubular carton and the diameter of the cups, the upper edge of the partition wall being provided with a downwardly extending trough-like configuration so as to laterally compress each cup as the cup is drawn therepast and thus require forcible withdrawing action to remove each cup from the lower end of the carton.

2,861,718

DISPENSING CONTAINER

Otto C. Wixson, Mendota Township, Dakota County, Minn., assignor to Wixson Research, Inc., Minneapolis, Minn., a corporation of Minnesota

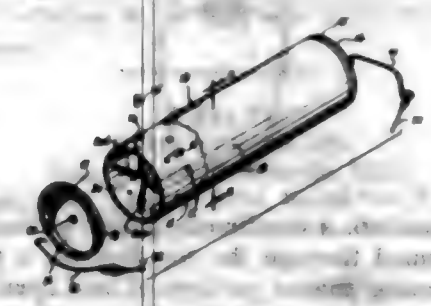
Application April 6, 1956, Serial No. 576,668
12 Claims. (Cl. 222—107)



1. In combination an outer container providing a supporting and confining closure, and a flexible inner container positioned within said closure and fluid-tight, an elongated dispensing means secured to said inner container, said outer container having means for supporting the bottom of said inner container in spaced relation to the bottom of said outer container with a portion of said elongated dispensing means therebetween, and a portion of said outer container being removable whereby said dispensing means may be exposed.

said O ring from said groove, the overall diameter of said covered drum and adapted to be tightly sealed about said

2,861,719
DISPENSING CONTAINER
Tomie L. Trotter, Vashon, Wash.
Application February 9, 1956, Serial No. 564,422
2 Claims. (Cl. 222—144)



1. A dispensing container comprising an elongated cylindrical body, formed over its surface area with spaced dispensing perforations, and adapted to be rolled upon a surface for the dispensing of material through said perforations, baffles disposed lengthwise of and within said body, in crossed relationship, diametrically of and extending from end to end of the body and dividing said container into a plurality of separate longitudinal compartments around its axial center for material to be dispensed, closure disks removably fixed in the opposite ends of the body, each formed with a central perforation fitted with a grommet, and a towing means comprising a cord equipped at its opposite ends with hook shaped attachment members applied through said perforations of the closure members and rotatable in said grommets.

2,861,720
DISPENSING APPARATUS
Arthur Zilke, Walnut Creek, Calif.
Application December 13, 1955, Serial No. 552,819
6 Claims. (Cl. 222—131)

1. Article dispensing apparatus comprising a substantially enclosed chamber adapted to contain articles to be dispensed, a rotor extending across said chamber and having a plurality of circumferentially spaced article receiving pockets of a size to receive a charge of articles, a generally horizontally disposed deflector plate within said chamber and inclined downwardly towards said rotor to deliver articles in said chamber to said rotor and into the pockets thereof, means pivotally mounting said deflector plate adjacent one end thereof below the upper portion of said rotor and the other end thereof normally positioned in vertical overlapping relationship to the peripheral edges of the respective rotor pockets upon rotation thereof, and means limiting downward movement of said deflector plate.

736 O. G. 4—57

2,861,721
GARDEN FERTILIZER SOWER
George Albert Race, Fennville, Mich.
Application August 30, 1955, Serial No. 531,318
4 Claims. (Cl. 222—246)

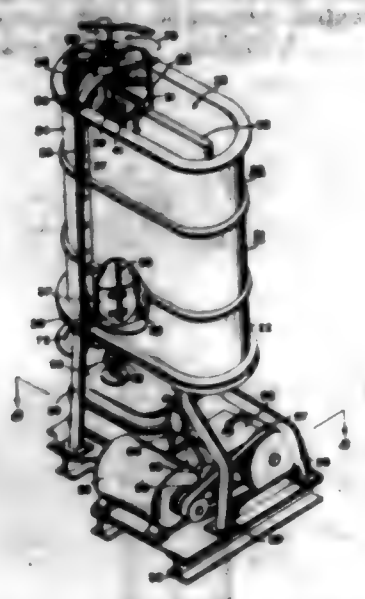
1. A fertilizer distributor comprising an upright cylindrical receptacle provided with a conically tapered bottom having a central opening constituting a discharge port, the edge surrounding the opening constituting a narrow valve seat, a standard secured to the receptacle with the receptacle projecting forwardly therefrom, a handle fixedly mounted on the upper end of said standard and including a grip projecting rearwardly from the standard and an abutment portion projecting forwardly from the standard and having a downwardly facing socket therein, a conically tapered valve seating on said valve seat, the angle of taper of the valve being substantially less than that of the bottom of the receptacle so that when seated the valve does not contact the receptacle bottom other than said valve seat thereof, said valve having a flat top and constituting a material agitator as the valve is reciprocated, a valve stem disposed in front of said standard and connected to the valve centrally thereof, a finger piece disposed below said handle member and connected to said valve stem adjacent its upper end, said standard having a keyhole slot with which said finger piece is reciprocatingly engaged, the finger piece being notched to coact with the edges of said slot and being insertable through the larger portion of the slot, and a spring seated in said socket in said handle member in thrust engagement with said finger piece, said stem projecting above said finger piece in retaining engagement with said spring.

2,861,732
PULP METER
John L. Pedrick, Milmont Park, Pa., and Charles W. Dawson, Marblehead, Mass., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania
Application December 7, 1954, Serial No. 473,641
8 Claims. (Cl. 222—283)

1. A flow control instrument for regulating the rate-of-discharge of liquid from a liquid-source to a liquid-receptacle, said instrument including a trap chamber having a liquid inlet therein, means for controlling the liquid-level in the trap chamber, said trap chamber having a carrier therein with members defining at least one movable compartment, drive means for the carrier, an outlet in the trap chamber operatively connected to the

from said receptacle as a consequence of a sudden move- dispensing means may be exposed.

liquid-receptacle, said outlet disposed within the trap chamber in such a position that at no time does one



compartment of the carrier interconnect said outlet and the liquid-inlet to the trap chamber.

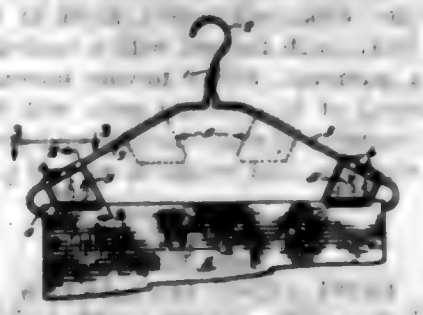
2,861,723
TWO WAY RESILIENT VALVE FOR PRESSURIZED CONTAINERS
Ralph D. Cooksley, Elizabeth, N. J., assignor, by mesne assignments, of one-half to Pressure Packaging Corporation, Union, N. J., a corporation of New Jersey
Application April 29, 1954, Serial No. 426,437
8 Claims. (Cl. 222—394)

1. A pressurized container and dispenser comprising a container body having a hollow projection with an annular seat and a central loading and dispensing hole, a valve element comprising a cylindrical portion extending into the hollow projection, a top sealing portion having its periphery engaging with the annular seat of the projection, a perforated annular flange portion extending radially outwardly from the bottom of the cylindrical portion, said hollow projection having a second annular seat surrounding the hole and parallel to the first mentioned seat and said annular flange portion of the valve element engaging with the second mentioned seat, means for retaining said valve element within the hollow projection and against downward displacement, said valve element being formed of flexible material and adapted to be flexed from its seat in the hollow projection and normally held thereagainst by the pressure of the contents within the container, and means for depressing the top portion of the valve element to discharge the contents.

2,861,724
CONDIMENT SHAKER
Sidney M. Kaplan, Worthington, Ohio
Application July 22, 1954, Serial No. 444,951
1 Claim. (Cl. 222—478)

In combination, a condiment shaker having a serrated opening formed through the top thereof, a plug in said serrated opening, spaced portions of said opening between the serrations gripping said plug for securing said plug in said opening, said spaced portions of said opening defining annularly spaced discharge openings concentrically arranged about said plug.

2,861,725
GARMENT HANGER
Michael Bochik, St. Paul, Minn.
Application September 16, 1957, Serial No. 684,178
1 Claim. (Cl. 223—91)



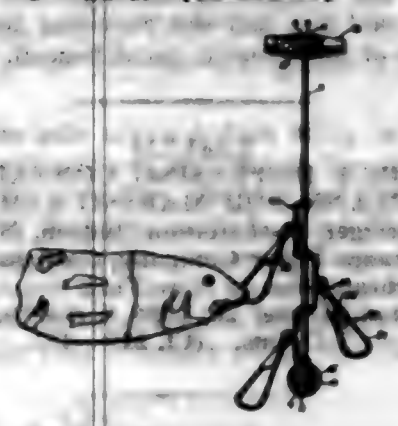
An attachment for combination coat and pants hangers of the type which include a hook-equipped shank, a pair of downwardly diverging coat supporting arms carried by said shank and a horizontal hanger bar connecting the lower ends of said arms, said attachment comprising a body of generally wedge shape in side elevation and being formed from relatively soft resilient plastic material, means for mounting the upper edge of said body on one of said arms for frictional sliding movements parallel to the axis of said arm, the undersurface of said body defining an elongated groove the axis of which is parallel to said horizontal hanger bar and the transverse width of which is greater than that of said bar, said means comprising a pair of cooperating resilient gripping jaw elements formed integrally with said body and projecting upwardly therefrom and said jaw elements being adapted to frictionally engage opposite side portions of an arm received therebetween.

2,861,726
COLLAR SUPPORT
Florence H. Whyte, Fresno, Calif., assignor of one-half to Arthur Redvers Whyte, Fresno, Calif.
Application October 31, 1955, Serial No. 543,900
8 Claims. (Cl. 223—92)

1. A collar support adapted to fit on a clothes hanger having a cross member and a support hook extended from the cross member comprising a sheet of resiliently flex-

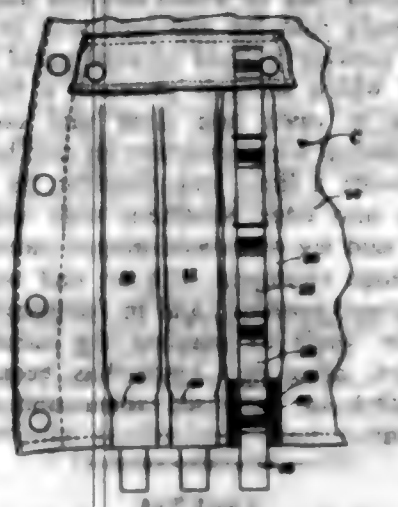
ible material having oppositely disposed upper and lower edges, oppositely disposed side edges interconnecting the upper and lower edges, a central aperture adjacent to the upper edge adapted to receive the hook of the clothes hanger, and slits extended from the lower edge toward the upper edge defining tube between the slits and the side edges adapted to fit over the cross member of the clothes hanger.

2,861,727
FISH STRINGER
John Verse, Cleveland, Ohio
Application April 6, 1956, Serial No. 576,720
3 Claims. (Cl. 224—7)



1. For use with a fish stringer having a cord or the like, hook means, and means connecting the hook means to said stringer, comprising an elongated thin rod-like body having an integrally connected arm member on each end thereof and in perpendicular extension therefrom, a circular, substantially closed eyelet formed on the end of each arm member through which the cord of said stringer is loosely extended, said body being slidably movable over the length of said cord, each of said closed eyelets being in outward extension of said arm member and perpendicular to the longitudinal axis of said body, and longitudinally extending hook link means formed on said body intermediate said arm members.

2,861,728
DISPENSER
Paul F. La Vine, St. Paul, Minn.
Application March 22, 1957, Serial No. 647,996
4 Claims. (Cl. 224—16)

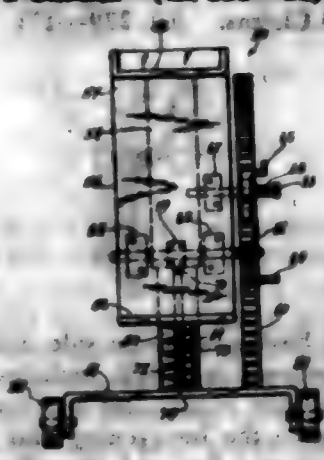


1. A shell dispenser insert for a metal rimmed shot gun shell, said insert consisting of an integral molded plastic body having an upper open end portion, an intermediate open portion and a lower open end portion, said body being formed as an elongated flexible plastic tube body having an integral enlarged external but narrow ring about said upper end portion adapted to secure the said flexible body to the end of an elongated holding tube for a plurality of said shells and the balance of the length of said elongated flexible tube body forming said intermediate portion and said lower end portion being of a uniformly lesser external diameter than the external diameter of said ring; the interior of said insert having at its upper open end a first inwardly wall sloping surface providing a shell guide, a second sloping wall surface on said intermediate body portion providing a substantially continuous wall of gradually increasing thickness against which a shell rim is adapted to normally rest in said insert, the said second sloping being formed as an integral gradually thickened body portion of said insert which increases in cross-sectional thickness towards the lower open end of said insert and provides a gradually decreasing internal diameter body size extending throughout said intermediate open portion of said insert, and the balance of the tube body having an internal diameter at the said lower open end of a larger dimension than the internal diameter of said intermediate thickened wall portion of said insert, whereby when a shot gun shell is placed in said insert the lower end of the shell extends from the said lower open end portion of said insert in a manner to be grasped and when pulled upon, the metal rim of said shell forms the circumferential diameter throughout the said intermediate thickened wall portion of said insert to allow the shell to be pulled therefrom.

2,861,729
SNACK ADAPTER FOR CARVING BOARDS, TRAYS AND THE LIKE
Samuel L. Gerson, Wilmington, Del.
Application July 31, 1956, Serial No. 601,314
1 Claim. (Cl. 224—46)

An adapter for carving boards of the type having upstanding meat-anchoring pins to convert the board to a serving tray for hors d'oeuvres and in combination with said board, and adapter consisting of a thin walled plastic bowl seating in inverted position on the board over said pins, a plurality of anchoring elements depending from the underside of said wall and registering respectively with the said pins of the board to anchor the bowl in desired position against lateral displacement on the board, a plurality of relatively small bosses also depending from the under side of said wall, and apertures in the outer surface of the bowl registered with and extending into said bosses and forming supporting sockets for the ends of tooth picks or the like carrying the hors d'oeuvres.

2,861,730
RAISABLE STEPLADDERS
Roy D. Deahl, New York, N. Y.
Application June 22, 1955, Serial No. 517,123
2 Claims. (Cl. 228—12)



1. An elevator stepladder comprising a base, an upright support post mounted on the base, a tubular slide

member slidably mounted on the post, a step member connected to the slide member and having a horizontal lower tread portion and a flat vertical riser portion and a horizontal upper portion, means to raise and lower said slide and step members on the post, said means to raise and lower said slide and step members on the post being a vertical rack mounted on the base and a pinion rotatably mounted on the step member and slide member, a crank handle connected with the pinion to rotate the pinion on the rack, a ratchet pawl movably mounted on the step member and operatively and releasably connected with the pinion to limit movement of said pinion in one direction until released, spring means biasing said pawl to operative position, and means to prevent the slide member from rotating on the post, said means being a pin extending from the slide member, said post being hollow and having a vertical keyway slot slidably to receive one end of said pin.

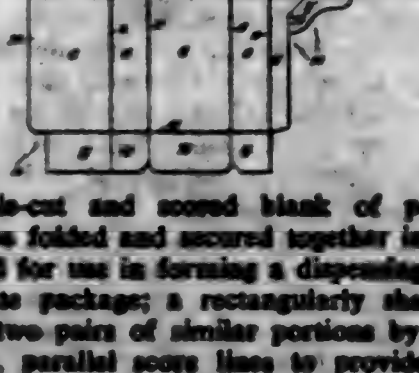
2,861,731
FOLDING PORCH
Kenneth J. Robinson, Traverse City, Mich., assignor, by mesne assignments, to Stromberg-Carlson Tool & Die Co., Traverse City, Mich., a corporation of Michigan
Application May 3, 1957, Serial No. 656,636
6 Claims. (Cl. 219—36)

1. A convertible porch comprising: upstanding rail supports; a platform pivotally mounted on said supports; leg support means pivotally mounted on said platform opposite said rail supports; a step pivotally mounted on said rail supports; said leg support means being pivotally mounted on said step; the points of said pivotal mountings of said platform and step on said rail supports, and said leg supports on said platform and said step being arranged to permit collapse of said leg support against said platform and step when the platform and steps are pivoted upwardly against said rail supports.

2,861,732
DISPENSING CARTON WITH POURING SPOUT
Edwin F. Fuchs, Stillwater, Ohio.
Application November 3, 1954, Serial No. 466,513
3 Claims. (Cl. 229—17)

1. In a carton having opposite side and opposite end panels, a top construction which includes infolded side flaps hinged to the side panels and a convergent end flap hinged at its base to the intervening end panel, bellows pleats between said end flap and the adjacent side flaps, said pleats and end flap constituting a pouring spout of which said end flap forms the floor and said pleats the sides, said pleats being collapsed against the floor in the closed position of said pouring spout, at least one of said side panels being wider than half the width of said top construction whereby said side panels form a lap in the longitudinal middle region of said top construction, said pleats each including a pair of facets folded re-entrantly in the closed position of said pouring spout, their adjacent angles being equal whereby the fold lines of the corresponding facets of each pair coincide and converge toward coincident apices, the apex of the underlying facets being overlain by said lap, said underlying facets being transversely divided by a slot adjacent and outside the overlying end of said lap, to free the parts of said underlying facets not overlain by said lap from the restraint imposed by said lap, said slot providing access for tucking the apex of said pouring spout beneath said lap.

2,861,733
COLLAPSIBLE DISPENSING CONTAINER AND BLANK FOR MAKING SAME
Henry L. Metzger, Castleton-on-Hudson, N. Y., assignor to Port Orange Paper Company, Castleton-on-Hudson, N. Y., a corporation of New York
Application October 25, 1956, Serial No. 618,346
3 Claims. (Cl. 229—17)

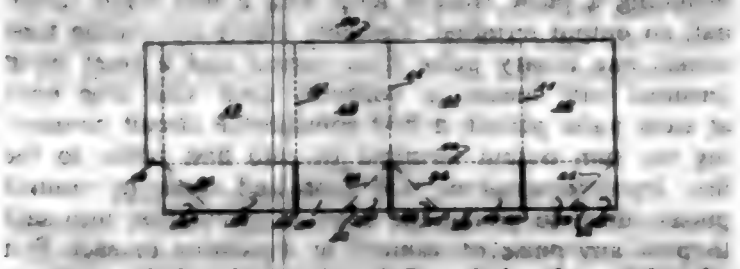


1. In a die-cut and scored blank of paper-board material, to be folded and secured together in collapsed form, adapted for use in forming a dispensing container for a cigarette package; a rectangularly shaped panel divided into two pairs of similar portions by two pairs of transverse, parallel score lines to provide alternate side and end walls for said container; a generally L-shaped structure hingedly connected along its leg to one of said walls, and having a foot defined by parallel score lines to provide a closure panel at the top of said container, said closure panel having a hinge line between said last named parallel score lines, dividing said closure panel into two sections, one of which sections has a first wing member opposite said leg and securable to an adjacent side wall to provide a fixed closure panel section, and the other of which sections provides a hinged closure panel section to open and close said container; and oppositely disposed wing members on said hinged closure panel, to provide a limit stop therefor, as each respectively comes into edge abutment with said first wing member and said leg when said hinged panel is in closed position, in edge abutment with an end wall when the same is in opened position, and in frictional engagement with said side walls to maintain the same opened or closed position, after said blank has been folded and secured together in collapsed form and erected into container form.

2,861,734
COLLAPSIBLE CARTON
Edward B. Garman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application October 9, 1956, Serial No. 614,836
3 Claims. (Cl. 229—41)

1. A generally rectangular foldable open-top paperboard box formed from a one-piece blank and comprising interconnected side and end walls, a bottom formed integrally with the side and end walls and consisting of pairs of side and end flaps formed as extensions of said side

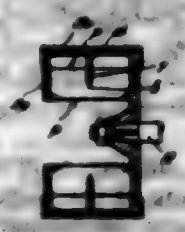
a plurality of said shells and the balance of the length right support post mounted on the base, a tubular slide

and end walls, respectively, adjacent ends of the side and end flaps in diagonally opposed corners of the box being disposed in overlapping relationship and formed with registering diagonal scores extending inwardly substantially from said corners, the diagonally scored portions of the end flaps overlying the side flaps and therefore positioned internally of the box, means securing said overlapping scored portions together and the free end

portions of the side and end flaps being in overlapping relationship with said end portions of the end flaps positioned below the side flaps, the free end portions of the end flaps being flexed to partially break the grain in a zone extending generally diagonally from the adjacent box corner toward the central areas of the box, whereby to facilitate setting up of the box by positioning such portions for sliding over a surface of the side flaps.

2,861,735
BAG-LIKE RECEPTACLE
William G. Faltin, York, Pa.
Application June 4, 1956, Serial No. 589,832
6 Claims. (Cl. 229—53)

1. A folded article of manufacture comprising an open-ended bag-like receptacle comprising connected opposing walls formed from flexible sheet material, said receptacle and walls initially being flat and folded transversely thereof upon itself, and means releasably securing the abutting folded portions of said receptacle together comprising pressure sensitive adhesive material applied to restricted areas on the outer surface of one wall of said receptacle adjacent the open end thereof, whereby said adhesive peelably secures one folded portion of said receptacle to the other folded portion thereof and the peelable portion covers and protects said adhesive until said portions are separated to expose said adhesive for adherence of said adhesive to a supporting surface upon which said receptacle is to be supported.

2,861,736
GAS PUMPS AND COMPRESSORS OF THE LIQUID RING TYPE
Robert Léon Dardelet, Grenoble, France
Application November 28, 1955, Serial No. 549,396
Claims priority, application France April 29, 1955
3 Claims. (Cl. 230—79)



1. In a liquid ring pump in combination a lobed stator with at least one partition, a rotor rotatable in the said stator and having at least one partition, both partitions being arranged in a same plane perpendicular to the rotor axis and the rotor partition having an external edge located substantially at the periphery of said rotor, and a stationary distributor which is surrounded by the said rotor, the rotor partition has a free inside edge which stops a certain distance from the inside periphery of said rotor, so as to be located at a certain distance from said distributor.

2,861,737
AIR INDUCING APPARATUS
William Spencer Bowen, Westfield, N. J.
Application September 4, 1953, Serial No. 378,482
3 Claims. (Cl. 230—117)

1. An air inducer comprising an inner ring, means forming first ports in said ring, hollow radial spokes having one end secured to the inner ring, hub means supporting the other end of said spokes, the interior of said spokes communicating with said first ports, said spokes being formed of a plurality of horizontal hollow segments disposed one above the other in series, the lower transverse dimension of each of the segments above another of the segments being greater than the upper transverse dimension of the segment immediately therebelow to provide downwardly oriented openings at their junctures to induce air into a vertical water flow thereover, the uppermost segment of each spoke being closed at its upper side to prevent the entry of water into the spoke, an outer ring concentrically positioned outside of and in engagement with said inner ring, means forming second ports in said outer ring, and means to rotate said inner and outer rings relatively to each other to move said first and second ports into and out of coincidence and vary the amount of air flowing into the spokes and induced into the downwardly flowing water.

2,861,738
BLADES, GUIDE VANES, AND THE LIKE FOR FANS, TURBINES AND THE LIKE
Eric William Rundle, Leatherhead, England, assignor to Plessey Limited, Leatherhead, England
Application July 21, 1955, Serial No. 523,514
Claims priority, application Great Britain May 19, 1953
5 Claims. (Cl. 230—134)

1. For use in a rotary-turbo machine having an axis of rotation for the rotatable parts thereof; said rotatable parts including a rotor comprising a central hub, a plurality of radially extending blades peripherally spaced about said hub and having their inner ends extending from said hub, said blades being of airfoil sections and each of said airfoil sections comprising a concave forward face and a convex rear face, said blades being twisted along their spans from the outer to the inner ends, the twist progressively decreasing from the outer to the inner ends of the blades, and the blade sections having an arcuate

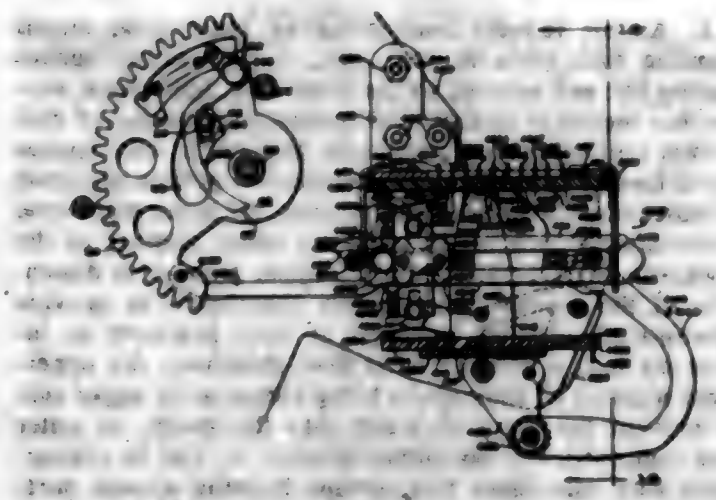
geometric camber line located between the concave and convex faces and extending from the leading to the trailing edge of the blade and approximately one-quarter the thickness of said sections from the concave face of the blade, the surface defined by an infinite number of said arcuate geometric camber lines defining a surface which if extended to the axis of the rotor would be in a line that coincides with the axis thereof; said leading and trailing edges of the blades lying in straight radial lines when viewed in a direction along the axis of the rotor.

2,861,739

PERFORATED RECORD MAKING ADDING MACHINE

Harold J. Chell, San Leandro, and Bernard F. Silverman, Oakland, Calif., assignors to Friden, Inc., a corporation of California

Application November 16, 1954, Serial No. 469,128
4 Claims. (Cl. 235—60.39)



4. An add-punch apparatus comprising, in combination, an adding machine, movable members operable in accordance with values entered in said adding machine, a tape perforating machine, and a readout switch in said adding machine operable to set up switching conditions representing values put into said adding machine, said readout switch comprising a first set of spaced conducting strips, a second set of spaced conducting strips facing said first set and extending crosswise relative to said first set, spring wiper contacts operable in the space between said first and second sets of conducting strips, means to relatively move said sets of conducting strips to bring said sets of conducting strips into conducting condition with said wiper contacts, horizontally movable carriages for carrying said wiper contacts, vertically movable contact carrying members spring supported in said carriages, connecting rods extending from said movable members to said carriages and releasable coupling means comprising nose portions on said connecting rods and on said vertically movable contact carrying members, forming releasable connecting means between said connecting rods and said carriages.

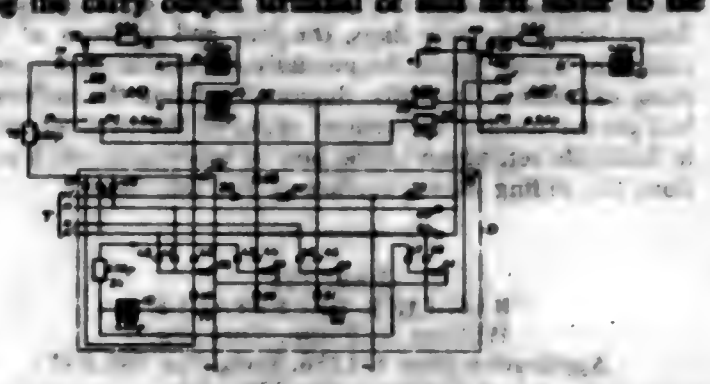
2,861,740

ELECTRONIC ADDING DEVICE

Pierre Jacques Charles Chenin, Paris, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France

Application September 23, 1952, Serial No. 311,039
Claims priority, application France September 25, 1951
7 Claims. (Cl. 235—61)

1. Electronic adding apparatus for adding together two numbers each represented by a serial train of pulses in coded group form, the successive pulse positions in each group representing the values of successive terms of the binary series, comprising: a first three-input binary adder with a first sum output terminal for delivering a first sum pulse train representing the binary coded sum of the numbers added, and a carry output terminal; a second three-input binary adder; a connection including a delay element for transmitting said first sum pulse train from the first sum output terminal of said first adder to a first input terminal of said second adder with a delay at least equal to a time interval corresponding to two pulse positions; a coincident pulse comparator including a pulse storage loop with a first input terminal, an output terminal, elements whose circulation time equals one binary pulse time period and a reset input terminal with means to normally clear said loop once at each pulse period, a first coincidence circuit connecting the sum output terminal of said first adder to the first input terminal of said loop and receiving control pulses timed to permit the entry in circulation into said loop of any pulse of value 2 or 4 existing in each first sum pulse group, a second coincidence circuit connecting the carry output terminal of said first adder to the



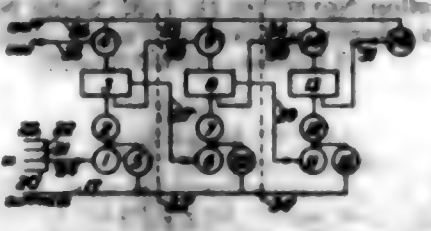
first input terminal of said loop and receiving control pulses timed to permit the entry in circulation into said loop of any carry pulse from an 8 pulse position, a third coincidence circuit connecting the sum output terminal of said first adder to the reset input terminal of said loop and receiving timed control pulses, this arrangement being such that any pulse of value 2 or 4 in a first sum pulse group when entered in said loop is maintained circulating therein until the following pulse time position of value 1 inclusive if a pulse of value 8 has been present in the same sum pulse group, a connection linking the output terminal of said loop to a second input terminal of said second adder, said connection including a fourth coincidence circuit receiving control pulses timed to permit the last two pulses thus maintained circulating in said loop to be transmitted to the second input terminal of said second adder in step with pulses of value 2 and 4 eventually received on the first input terminal of said second adder.

2,861,741

BINARY ADDER

Raymond Bird, Letchworth, England, assignor to The British Tabulating Machine Company Limited, London, England, a British company

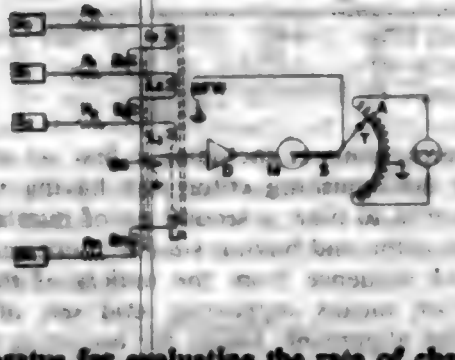
Application November 19, 1953, Serial No. 392,696
Claims priority, application Great Britain October 9, 1953
7 Claims. (Cl. 235—61)



1. Apparatus for adding a plurality of binary serial pulse trains, the timing of the pulse trains being such that pulses having the same denominational value occur successively, which apparatus comprises a first bi-stable storage device, a binary counting chain comprising a plurality of bi-stable storage devices connected in cascade, means

for changing the state of said first storage device for each pulse of the pulse trains, means controlled by said first storage device for entering one into said counting chain each time said first storage device changes from a first setting to a second setting, sum read-out means controlled by said first storage device, means for setting each device of said counting chain to the setting of the device of next higher significance and for setting said first storage device to the setting of the device of said chain of least significance, and means for rendering effective said sum read-out means and said setting means after the entry of the pulses of each denomination has been completed.

2,861,783
RATE MEASURING APPARATUS
Geoffrey Hansen Stephenson, Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application August 27, 1954, Serial No. 452,646
Claims priority, application Great Britain September 11, 1953
4 Claims. (Cl. 235—61)



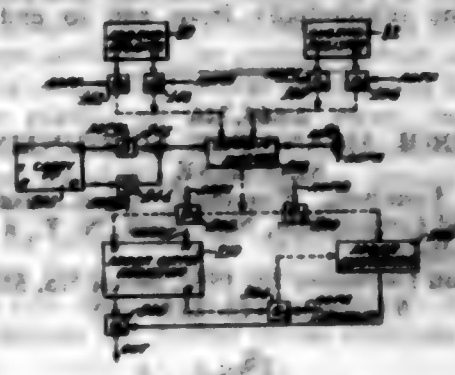
1. Apparatus for evaluating the rate of change of one variable with respect to a second variable comprising an auto-transformer, impedances leading to points on said auto-transformer representing values of said second variable, means for applying alternating voltages to said impedances with amplitudes representative of said first variable for the values of said second variable represented by the corresponding points, means for applying a feedback signal to said auto-transformer capable of varying the flux associated with said auto-transformer, and means for varying said feedback signal in response to the total ampere turns of said auto-transformer so as to tend to reduce said total to zero, thereby to produce a voltage gradient along said auto-transformer in response to the applied voltages representative of a smoothed rate of change of said first variable with respect to said second variable.

2,861,743
COMPUTER
John C. Bellamy, Barrington, and Edward J. Tschopp, Libertyville, Ill., assignors, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Application May 17, 1955, Serial No. 508,896
10 Claims. (Cl. 235—61)

4. A computer comprising a planar base member having two parallel edges, a protractor formed on said base member, a thermodynamic diagram impressed on said base member, said diagram including a grid of linear effects, a calibrated linearly extensible resilient member having one of its ends secured to said base along one of said parallel edges, the free end of said resilient member being slidably positionable at any one of a plurality of positions along said one edge, a calibrated linearly extensible resilient element having one of its ends secured to said base along the other of said parallel edges, the free end of said resilient element being positionable at any one of a plurality of positions along said other edge,

and means interconnecting said free ends to provide coincident movement thereof.

2,861,744
VERIFICATION SYSTEM
Edward J. Schmitt, Collingswood, and Spencer W. Spaulding, Haddonfield, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application June 1, 1953, Serial No. 513,302
21 Claims. (Cl. 235—61)

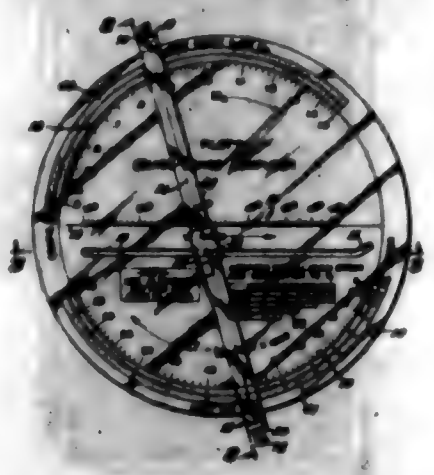


3. An adder checking system for verifying the arithmetic result of two binary coded operands comprising, in combination, register means having binary "1" and "0" output terminals for each bit of said operands; an adder; input gating means selectively coupling said binary "1" and "0" output terminals to said adder; means to provide a first timing pulse and a second timing pulse; output register means having binary "1" and "0" output terminals; a comparator; output gating means selectively coupling the output of said adder to said output register, and to said comparator; said input gating means, said adder, and said output gating means each being responsive to said first timing pulse to provide a first arithmetic result formed from said register means binary "1" output terminals to said output register means; said input gating means, said adder, and said output gating means each being responsive to said second timing pulse to provide a second arithmetic result from said register means binary "0" output terminals to said comparator; means responsive to said second timing pulse to couple the "0" output terminals of said output register to said comparator, said comparator being responsive to equality between the complement

adder with a first sum output terminal for delivering of bi-stable storage devices connected in cascade, means

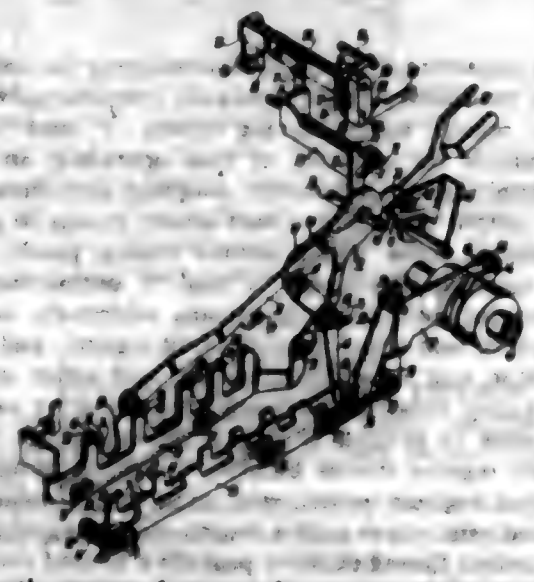
of said first arithmetic result appearing at said "0" outputs from said output register and said arithmetic result produced upon the occurrence of said second timing pulse.

2,861,745
NOMOGRAPHIC CALCULATOR
Murray J. O'Toole and Ignatius V. Toole, Lancaster, Calif.
Application July 19, 1956, Serial No. 598,879
8 Claims. (Cl. 235—61)



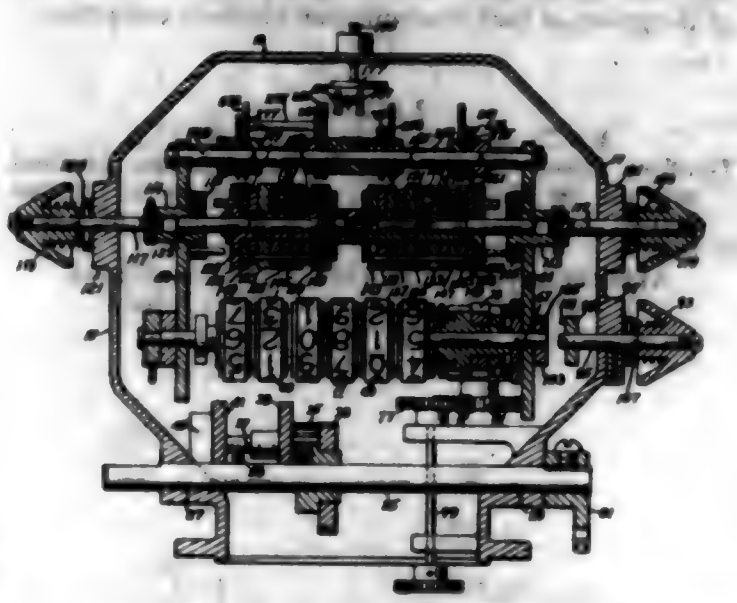
1. In a calculating device, a body assembly comprising a circular disc carrying on at least one side a set of circumferential and diametrical scales quantitatively divided to present mathematical values, said disc having a slot therethrough within the perimeter parallel to and spaced from a diametrical line, a hair line carrier having a hair line thereon adapted to extend across scales for indicating desired information, said carrier comprising a slide shoe located within and slidable in said slot and a slideway adjacent the face of said disc, a slide assembly of transparent material having a length comparable to the diameter of the disc and extending over said scales, said carrier being slidably secured in said slideway and a hair line extending substantially from end to end of said carrier.

2,861,746
CONTROL MEANS FOR ACCOUNTING MACHINE
Walter A. Andersen, Trumbull, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware
Application December 28, 1955, Serial No. 555,952
6 Claims. (Cl. 235—62)



1. Function control means for an accounting machine comprising, a plurality of selectively operable keys, means operable by each of said keys for instituting a machine cycle, power driven means operable during a machine cycle, function control elements associated with each key, and a swingable element on each of said keys for operatively connecting said power driven means to one of said function control elements.

2,861,747
REPEATING COUNTER AND CONTROL FOR CONTAINER FILLING SYSTEMS
Albert J. Greenberg, Oakland, Calif.
Application July 6, 1953, Serial No. 366,118
6 Claims. (Cl. 235—132)

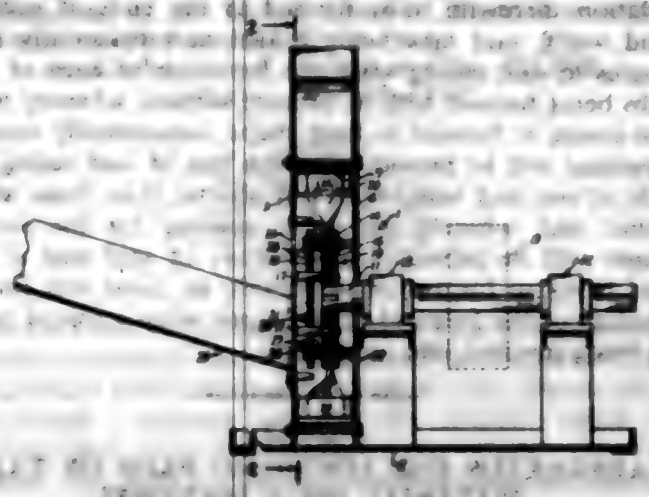


1. A repeating counter including a first set of number wheels of a distinguishing color and having numerical indicia from zero to nine; a second set of number wheels of a different color and having similar numerical indicia but in reverse sequence from the indicia of the wheels of the first set; means supporting said sets of number wheels in axial alignment; means for operating both sets of number wheels in unison to increase the reading on one set while simultaneously decreasing the reading on the other set, said means comprising a ball check interlocking each number wheel of one set with the corresponding number wheel of the other set; means for holding each number wheel of one set following adjustment thereof to permit of the independent adjustment of the corresponding number wheel of the other set, means for intermittently rotating said number wheels in one direction until one set indicates a zero reading; and means for then reversing said direction of rotation until the other set indicates a zero reading.

2,861,748
FEEDER CUTTER STRUCTURE IN A RADIAL BLADE ROTOR MILL
John D. Miller, Modesto, Calif.
Application June 1, 1956, Serial No. 588,782
2 Claims. (Cl. 241—186)

1. In a feed mill of the character described, a housing having parallel front and rear walls and an annular screen supported between the walls, a feed opening in said front wall, a rotor revolvable in the housing about an axis concentric with the screen and having a front plate with a forward face facing the opening, said front plate having vanes disposed adjacent the screen for directing an air blast from the opening through the screen when the rotor is rotated, means for feeding a bale of hay through the opening toward said front plate, a plurality of cutting means secured to said front face of the front plate and extending toward said opening for projecting into the bale of hay, said cutting means being mounted at different radial distances from said axis, each of said cutting means having an elongated tapered cutting edge extending away from said forward face of the front plate and disposed in a plane substantially normal to

a radius pasting therethrough from said axis, said cutting edge being presented in the direction of rotation of said rotor and inclined rearwardly of the direction of rotation thereof such that the cutting means cut concentric annular paths into the hay so as to cut strands of hay crossing said paths and to partly reduce the hay for ready entraining in the air blast, a plurality of cylindrical non-cutting prongs secured to said forward face of the



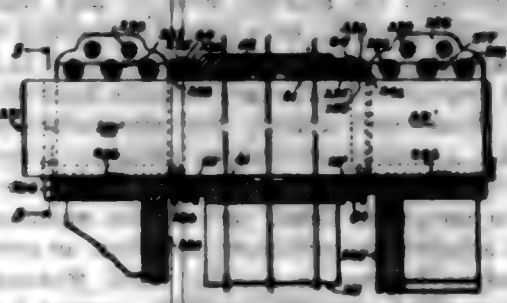
front plate and extending toward said opening, said prongs being mounted at different radial distances from said axis, the prongs being mounted at radial distances intermediate the radial distances at which some of said cutting means are mounted for tearing into the partly reduced hay and throwing bunches thereof into the air blast, said radial vanes serving to sweep the entrained hay against the screen for further reduction and discharge therefrom.

2,861,749

SWINGING JAW MOUNTING AND LUBRICATING MEANS

John R. Koeneman and Don Koeneman, Oakland, Calif.

Application October 17, 1955, Serial No. 540,766
8 Claims. (Cl. 241—262)



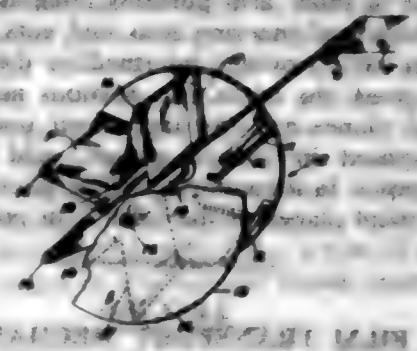
1. In a jaw-type crusher having a frame comprising fixedly spaced side members providing aligned openable bores grippingly carrying a support shaft between them in fixed relation thereto and a swinging jaw providing a bearing bore having its end portions carrying mutually spaced bearing bushings fixed therein and receiving the shaft for a supported oscillation of the jaw thereon between the frame side members, means providing a lubricant admission inlet for the bore intermediately thereof, thrust ring members receiving the shaft and fixedly related to the side members in axial opposition to the jaw sides and provided with means circumferentially and sealedly engaging the shaft portions for axially sealing-in the bearing lubricant thereat, torsionally flexible liquid-impervious sleeves extending between the jaw sides and the opposed frame side members receiving them, and means sealedly fixing the sleeves to said jaw sides and thrust members for radially sealing-in the bearing lubricant thereat.

2,861,750

APPARATUS FOR TREATING TEXTILES

Edgar C. Rust, Jr., Williamstown, and Louis M. Gagnon, North Adams, Mass., assignors to James Hunter Machine Company, North Adams, Mass., a corporation of Massachusetts

Application August 19, 1954, Serial No. 450,854
15 Claims. (Cl. 242—1)



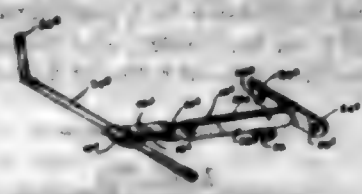
1. In a textile-treating apparatus of the character described which includes a rotor having opposed heads rotatable about a common axis, a set of outer bars extending between the heads substantially parallel to said axis and spaced circumferentially around the heads, each head having a series of tracks extending inward toward the central portion of the head and opposed to a corresponding series of tracks on the other head, the tracks of each head alternating with said bars, and a set of inner bars adapted, respectively, to be mounted at their ends on a pair of opposed tracks on the heads and to move inward along the tracks away from the outer bars, whereby the textile can be loaded in open width on the rotor so as to extend alternately over each outer bar and under the next inner bar, in zig-zag fashion about said axis, the improvement which comprises bar-retaining devices mounted on each head at the inner portions of the respective tracks and movable with the head along a closed path as the rotor rotates, each device being also movable relative to the head between a closed position for locking one end of an inner bar at said inner portion of the respective track and an open position for permitting passage of said end to and from said inner portion of the track, means responsive to movement of said devices to a predetermined portion of said path for shifting the retaining devices from their closed to their open positions, means for returning each device to its closed position when the rotor carries the device away from said path portion, and mechanism for rendering said shifting means inoperative, whereby the retaining devices are in their closed positions throughout said path.

2,861,751

TOILET TISSUE ROLL HOLDER

Silvio Sarra, New York, N. Y.

Application April 25, 1956, Serial No. 580,694
2 Claims. (Cl. 242—55.3)



1. A toilet tissue roll holder comprising a support arm formed from a single length of bar material folded on itself intermediate its ends and including a sleeve at the location at which the length is folded, said length of material at one end thereof being integrally formed with ears projecting laterally outwardly of the arm in opposite directions and apertured to receive fastening elements for attaching the arm to a support surface, and a roll support shaft extending intermediate its ends through the sleeve, thus to rotatably support a pair of rolls upon the

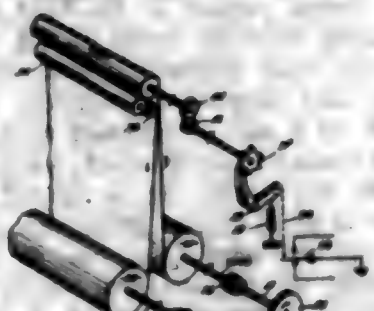
shaft at opposite sides of the arm, said arm providing a stop extending between and common to both rolls for limiting movement of the rolls axially of the shaft toward each other, the shaft being formed at its ends with radial stop fingers limiting movement of the rolls axially of the shaft in a direction away from each other, the fold providing a pair of outer contacting arm portions and a pair of inner arm portions integral with the outer arm portions and merging into said ears, said arm portions being axially twisted intermediate their ends through ninety degrees, the outer arm portions normally lying in horizontal planes and the inner arm portions normally being disposed in vertical planes, said ears normally being disposed in a common vertical plane perpendicular to the vertical planes of the inner arm portions.

2,861,752
FILM TRANSPORT MECHANISM

Elton M. Palmer, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Original application January 24, 1956, Serial No. 561,885. Divided and this application May 22, 1956, Serial No. 586,519

6 Claims. (Cl. 242—55.11)



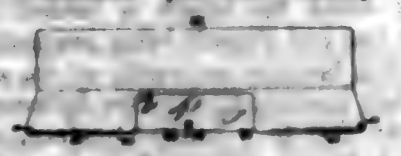
1. Apparatus for stepwise advancing a photographic film through predetermined successive increments which comprises a film supply roll, a film take-up roll, a roller traversed by and tractively engaging the film intermediate said supply roll and said take-up roll, means for providing traction between the film and said roller, controllable driving means capable of forward and reverse motion, an overrunning clutch connected between said driving means and said take-up roll arranged so that said driving means rotates said take-up roll only in a direction to wind up film thereon upon forward motion of said driving means, coupling means connected between said driving means and said supply roll capable of transmitting limited torque and tending to rotate said supply roll in a direction to rewind film thereon upon reverse motion of said driving means, control means connected to said driving means adapted to effect forward motion thereof, control means connected to said driving means adapted to effect reverse motion thereof responsive to a predetermined amount of forward rotation of said roller, and means adapted to arrest reverse rotation of said roller at a predetermined position thereof.

2,861,753
PAPER DISPENSERS

Joseph F. Sipior, North Tonawanda, N. Y.

Application June 20, 1955, Serial No. 516,554

6 Claims. (Cl. 242—55.51)



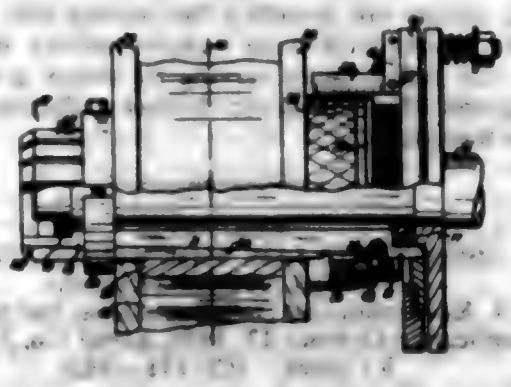
1. A paper dispenser comprising a casing formed from a sheet of material bent to provide an integral top wall, front wall, back wall, and bottom wall, the bottom wall being formed with an outwardly extending supporting flange which projects forwardly beyond the casing, the opposite longitudinal edge of the material forming the front wall being provided along its lower edge with a blade portion bent at substantially the same angle to the front wall as the supporting surface, the blade portion having a cutting edge, the cutting edge being inset from the forward edge of the supporting flange in protective relation therewith, tabs formed at the ends of each of said walls, said tabs being folded at substantially right angles to said casing wall, the free ends of each of said tabs being formed with an arcuate surface, whereby when the casing is formed in final shape, substantially circular openings will be provided in each end of said casing, the tabs at one end being relatively shorter than those at the other end, whereby an insert opening for the roll of paper will be provided, and certain of said tabs at one end being so formed as to provide an insert slot for the passage of the free end of the paper when a roll of paper is being inserted into said casing.

2,861,754
APPARATUS FOR LOCATING PADS OF TAPE MATERIAL ON A MANDREL

Samuel Pitt, Cranford, N. J., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application September 7, 1954, Serial No. 454,318

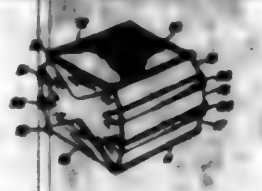
1 Claim. (Cl. 242—71.9)



An apparatus for locating pads of tape materials of various widths centrally on a rotatable mandrel of a given length supported at right angles with respect to its center and with respect to a stationary element disposed a known distance from said center, the apparatus comprising threadedly connected telescoping members disposed concentric with the mandrel adjacent the stationary element, means to secure an inner one of the members to the mandrel adjacent the stationary member, an outer one of the members having an annular mark thereon, a scale disposed parallel with the mandrel, carried by the stationary element and for use with the annular mark, a centrally apertured disk-shaped head disposed concentric with the mandrel and fixedly secured to the outer member for free rotation therewith about the mandrel relative to the inner member to locate the head relative to the stationary element varied distances indicated by the position of the annular mark relative to the scale to cause the head to locate like sides of pads of tape of varied widths on the mandrel singly with their centers coincident with the center of the mandrel, an intermediate one of the telescoping members movable threadedly on the inner member and in the outer member to adapt the outer member to move threadedly beyond the inner member and remain supported thereby for wide range adjustment of the head, internal threads of the outermost and intermediate telescoping members being disposed in narrow enlarged portions at the ends of unthreaded inner annular surfaces thereof, and outwardly extending annular supporting bearings integral with the innermost and intermediate members and positioned respectively to ride on the un-

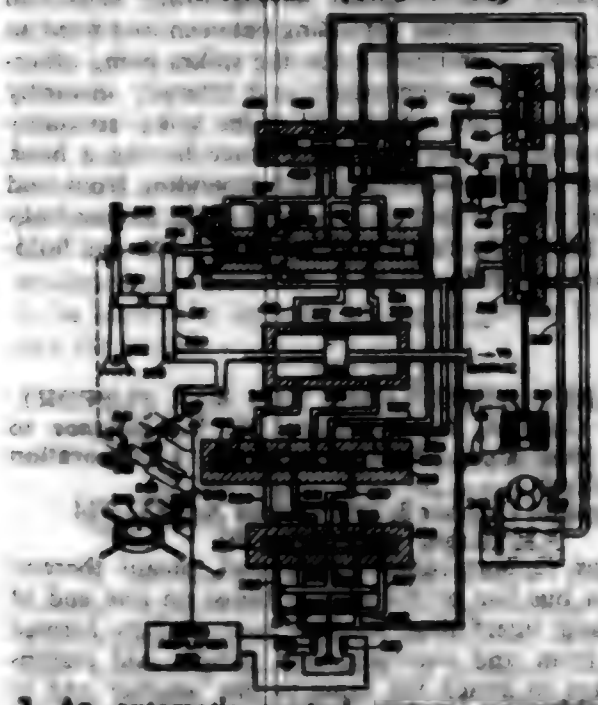
threaded annular surfaces of the intermediate and outer members to assist in supporting said members and stop said members when abutting their respective narrow enlarged portions.

2,861,753
TORQUE-COIL FORM FOR PERMANENT MAGNET GYRO
Ralph I. Hauser, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application May 5, 1954, Serial No. 427,895
1 Claim. (Cl. 242—118)



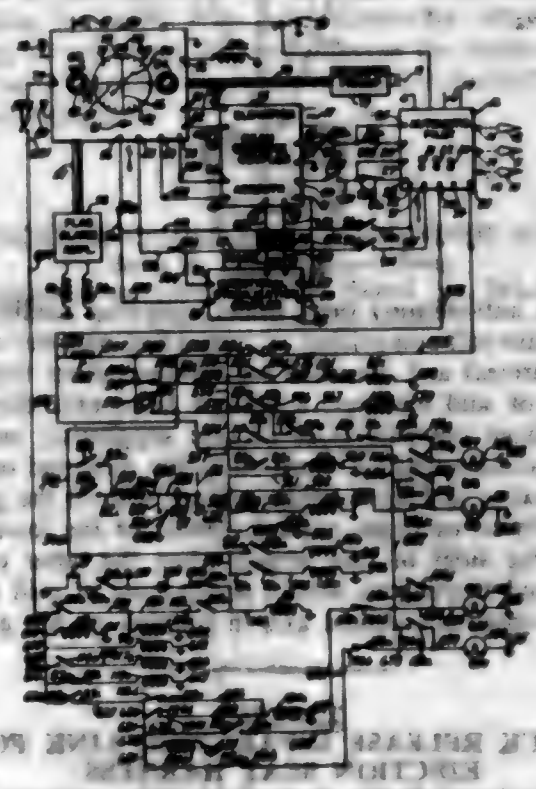
A coil form comprising: a modified portion of a right circular cylindrical shell, said portion having arcuate surfaces whose radial limits are defined by two planes which are spaced a distance less than the cylinder radius on opposite sides from and parallel to the cylinder axis; two parallel end surfaces having straight sides determined by said two parallel planes, said end surfaces being arranged orthogonally to the cylinder axis; exterior lands extending entirely around the edges of said portion, said lands being straight throughout the lengths of the arcuate surfaces but tapering to a point on the end surfaces; interior lands on said arcuate surfaces having first portions with sides parallel to the cylinder axis and second portions on said end surfaces which are tapered, whereby the exterior and interior lands define a single groove at the centers of said end surfaces; and equi-sized diametrically opposed pairs of flat bottomed grooves equal in width to that of said single groove, all of said grooves having a common juncture in said single groove.

2,861,756
MANUAL CONTROL SYSTEM FOR MODIFYING OR OVERCOMING THE AIRCRAFT AUTO PILOT CONTROL
Robert Ernest Fosche, North Bergen, John Jarvis, Dumont, and John Cornelius Ziegler, Maywood, N. J., assignors to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application March 4, 1955, Serial No. 492,168
6 Claims. (Cl. 244—76)



3. An automatic control system comprising power means for exerting an effort on a control surface for moving the latter, automatic control means for providing signals for operating said power means, a resilient member, manually operable means for exerting an effort on said member, first control means operably connecting said member to said power means and effective upon exertion of a biasing force on said resilient member in excess of a predetermined range for rendering said automatic control means ineffective to control said power means and said member effective to control said power means, and second control means responsive to a deflection of one end of said resilient member relative to another end and operable upon the application to said member of a biasing force at said one end within said predetermined range, means operably connecting said second control means to said automatic control means for providing a signal corresponding to said last-mentioned biasing force for modifying the action of said automatic control means to control said power means.

2,861,757
INTERLOCKING APPARATUS FOR RADIO CONTROL OF AIRCRAFT
Max W. Callen, St. Paul, and Theodore J. Wilson, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application June 1, 1953, Serial No. 358,684
19 Claims. (Cl. 244—77)

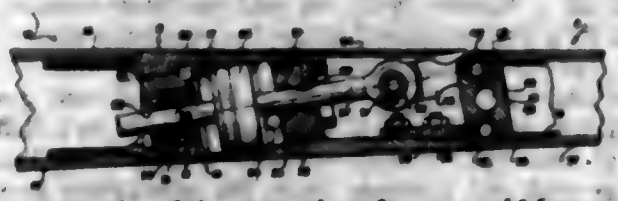


12. Aircraft control apparatus comprising, in combination: a beam guidance receiver giving azimuth error and elevation error outputs in response respectively to first and second radio signals; an automatic pilot having a turn control portion and a pitch control portion; means connecting said receiver to said automatic pilot so as to supply signals to said portions determined by said outputs; and means in said last named means connected to said receiver for restoring said pitch control portion to an initial condition if said second signal fails.

2,861,758
CONTROL SURFACE ACTUATORS
Robert G. Howard, Northridge, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Application August 3, 1954, Serial No. 447,000
7 Claims. (Cl. 244—96)

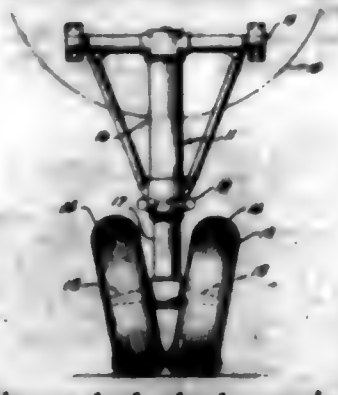
1. In combination with an airfoil and a control surface, a continuous spar extending spanwise along the

trailing edge of the airfoil having a plurality of spanwise-spaced fore and aft cylinder openings therein and having upper and lower walls extending spanwise of the airfoil substantially coincident with the upper and lower contours of the airfoil, hinge means securing the lower



forward margin of the control surface on said lower wall of the spar for angular movement about a spanwise axis, pistons operable in said openings, and means operatively connecting the pistons with the upper forward marginal region of said surface whereby the pistons are operable to move said surface about said axis.

2,861,759
ANTI-SHIMMY NOSE WHEEL
Fred A. Wright, Pacific Palisades, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application July 23, 1954, Serial No. 445,223
3 Claims. (Cl. 244—103)



1. An anti-shimmy dual wheel castering landing gear unit for aircraft comprising: a supporting member carried by the aircraft and mounted for rotation about the vertical axis of said member; a pair of axles extending outwardly from opposite sides of said supporting member, and a ground-engaging wheel rotatably mounted on each of said axles; said axles being inclined toward the ground sufficiently to establish mutual contact of the lower portion of the sides of said wheels when the latter contact the ground thereby to inhibit oscillations of said castering unit about its vertical axis in running on the ground.

2,861,760
QUICK RELEASE SEPARATING LINK FOR EJECTION SEAT HARNESS
L. D. Theriough Smith, Springfield, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application May 5, 1955, Serial No. 506,395
3 Claims. (Cl. 244—122)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In combination, an ejection seat, a shoulder harness having one end secured to the seat, said shoulder harness including straps extending from the seat downwardly over the shoulders and to the front of a wearer, a lap safety belt, a tie-down strap secured to the seat and extending upwardly between the legs of the wearer, said lap safety belt comprising two portions, one end of each portion of said belt being secured to said seat, a connecting link including a base, said base having a slot extending lengthwise thereof, the other end of one of said portions of said belt being disposed in said slot to be secured to said connecting link, an arm pivotally mounted on one end of said base, a second arm pivotally mounted on the other end of said base, each of said arms having an opening in the end remote from said base, locking means secured to the other end of the other portion of said belt, said locking means including a fastening member disposed in said openings of said arms when said openings are aligned to releasably secure the portions of the belt together whereby the belt extends across the abdomen of the wearer, the free ends of said shoulder straps being con-

nected to one of said arms of said connecting link, the free end of said tie-down strap being connected to the other arm of said connecting link, actuation of said locking means releasing said fastening member to completely free the wearer from said belt, said shoulder harness, said tie-down strap, and said seat.

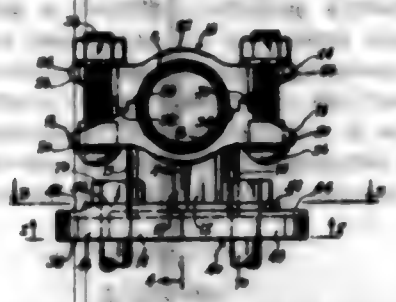
2,861,761
FISHING ROD HOLDER
Otto C. Nordell, Fort Lupton, Colo.
Application February 19, 1954, Serial No. 411,306
3 Claims. (Cl. 248—38)

3. In a fishing rod butt holder, a butt receiving socket, sleeves on and projecting laterally from opposite sides of the socket, a vertical support comprising a pair of laterally spaced vertical spikes having lower ends and upper ends, a cross brace extending between and fixed to the spikes below their upper ends, the spikes being otherwise unconnected to each other, and laterally inwardly extending arms on the upper ends of the spikes rotatably engaged in said sleeves, said cross brace having a hook thereon, and a chain secured to and depending from said socket at one side of said sleeves, said chain having links which are selectively engagable on said hook for holding the socket in tilted position.

2,861,762
ANGULARLY ADJUSTABLE BUS BAR SUPPORT
Alfred B. Gentilal, Jr., Brooklyn, N. Y., assignor to Dossert Mfg. Corp., Brooklyn, N. Y., a corporation of New York
Application October 3, 1955, Serial No. 537,374
1 Claim. (Cl. 248—70)

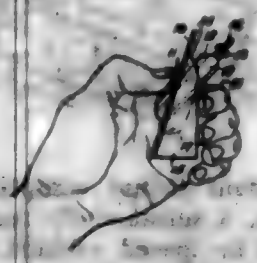
A bus bar support comprising a post, means thereon to receive a bus bar or the like, a flange on one end of the post, and interfitting, arcuate base clamps formed separately from and overlying said flange, said clamps having means to attach the same to one another and to an associated support structure, each clamp including a body extending through 180° of a circle, the bodies of

the respective clamps being disposed in end-abutting relation, said bodies being of flat, wide, configuration and being disposed in a common plane, the bodies respectively including depending flanges formed upon the outer longitudinal edges thereof, said clamps further including a tongue on each body projecting beyond one end of the body to overlie the adjacent end of the other body, said bodies and the tongues having registering openings adapted to receive fastening elements and defining the



means to attach the clamps to one another and to the support structure, the respective bodies having raised portions at said one end thereof merging into the tongues, the raised portions being formed with openings for receiving fastening elements extending through the support structure, the bodies further having openings adjacent the ends thereof remote from the tongues for receiving fastening elements, said base clamps having bosses on the under surface thereof around the openings therein for strengthening the base clamps.

2,861,765
WATCH HOLDER
Harry H. Tidwell, Smithville, Tex.
Application November 29, 1956, Serial No. 625,096
2 Claims. (Cl. 248—116)



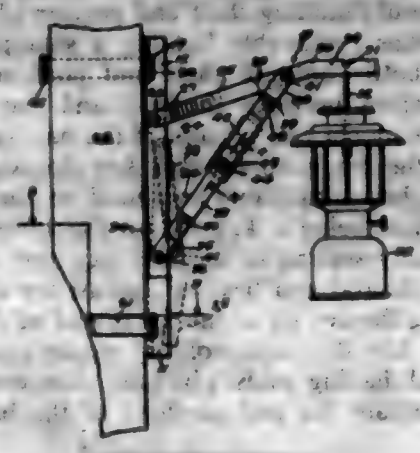
1. A watch holder for a pocket watch comprising a substantially rigid rear block having a socket therein open at its front and upper portions, said socket being bounded rearwardly by a rear wall terminating in an upwardly rearwardly inclined surface along a line at a point substantially above the middle of a pocket watch when in the socket, and a resilient thin front wall secured to the front surface of said rear block member, said front wall having an opening therethrough coaxial with said socket for viewing the watch crystal, the upper portion of said opening in said front wall lying above said line of said rear block, and said front wall being unsupported throughout the area of the socket so as to be elastically stressed by the watch as the same enters the socket.

2,861,764
RECEPTACLE HOLDER
Dolphis Fisher, Iron Mountain, Mich.
Application March 30, 1955, Serial No. 498,874
2 Claims. (Cl. 248—146)

1. A receptacle holder comprising a plate, a base member secured to said plate and extending perpendicularly thereto, said plate and said member having an axial bore extending therethrough, a standard telescopically carried in said bore and projecting upwardly therefrom, a radial flange secured to said standard intermediate its ends, a disc secured to the upper end of said standard, a plurality of reinforcing rods circumferentially spaced apart and radially spaced outwardly from said standard, an offset lower end portion on each of said rods extending radially inwardly and secured to said flange, a radially outwardly offset upper portion on each of said rods

secured to said disc, and an upwardly offset end portion extending integrally from said outwardly offset portion on each of said rods, said rods having the portions thereof between said disc and said flange substantially spaced from said standard.

2,861,765
BRACKET SUPPORT FOR SUSPENDED ARTICLE
John R. Kolb, Salem, Oreg.
Application April 30, 1956, Serial No. 581,645
1 Claim. (Cl. 248—236)



A suspended article bracket comprising a pair of spaced apart parallel angle iron members, means extending between said angle iron members at opposite ends thereof securing them together in spaced relation, a flexible strap adjacent each end of said angle iron members for securing said members to a support with said angle iron members having slots through which said straps extend, an arm pivotally secured to one of said angle iron members and inwardly offset toward the other of said angle iron members, a brace comprising a pair of end to end pivoted members, said brace having one end thereof pivotally secured to the other of said angle iron members and being inwardly offset therefrom toward the first of said angle iron members, said brace having the end thereof opposite the end pivoted to said other angle iron member pivoted to said arm, and a slider engaging over the pivoted ends of said brace with said slider having a reduced end portion for preventing said slider from moving past said pivoted ends for locking said members together against pivotal relation therebetween.

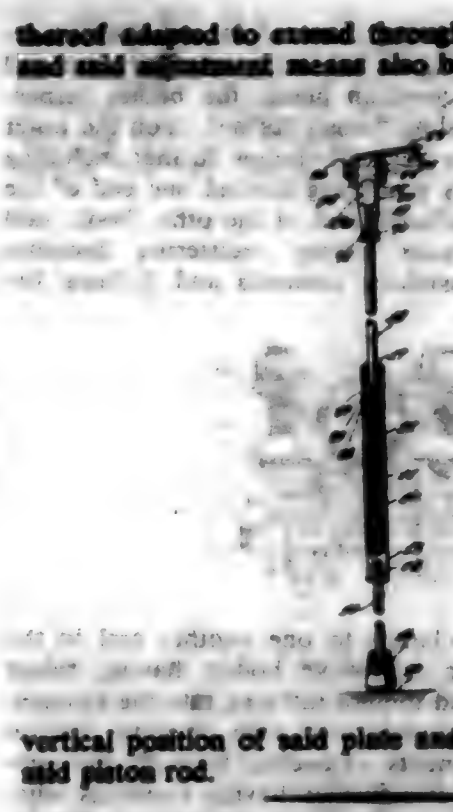
for rotation about an axis, biasing spring means, a coni- positions against the stops and expanded into fluid seal-

2,861,766
SHAMPOO BOTTLE HOLDER
Nathan Lagoma, Bronx, N. Y.
Application February 16, 1956, Serial No. 564,794
1 Claim. (Cl. 248—324)

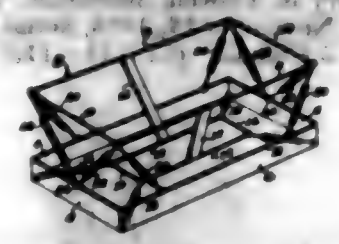
A shampoo bottle holder comprising a bar with an integral lower bottle holding shelf end portion and an upper end portion, a curved suspension rod having an upper end for suspending and a lower end rotatably connected with the upper end portion of the bar, locking means to hold selectively the rod either in one rotated position with the upper end of the rod disposed over the lower bottle holding shelf end portion of the bar or in another rotated position with the upper end of the rod disposed in the opposite direction away from and behind the lower bottle holding shelf end portion of the rod, and holding means removably holding a shampoo bottle on the lower bottle holding shelf end portion of the bar, said connection between the rod and bar including a sleeve on the upper end portion of the bar, said upper end portion of the bar having a lock key slot, said lower end of the rod being rotatably mounted in the sleeve, said locking means being a key tip on the lower end of the rod removably seating in the lock key slot, and a spring secured to the rod and bearing against the sleeve removably holding the key tip of the lower end of the rod seated in the lock key slot, said holding means being a flexible spring band having ends pivotally connected with the bar intermediate the end portions of the bar.

2,861,767
UNIPOD ACCORDION SUPPORT
Martin Martin Over, Bronx, and Edward Over, Long Island City, N. Y.
Application October 30, 1953, Serial No. 389,373
1 Claim. (Cl. 248—356)

A support comprising, in combination, a substantially vertical cylindrical sleeve closed at the lower end, a piston and piston rod slidably received in the upper end of said sleeve, a compression spring disposed within said sleeve and acting between said closed lower end and said piston, the outer extremity of said piston rod having an offset portion angularly inclined relative to said piston rod, a block carried by said offset portion, means for adjusting the vertical position of said block relative to said offset portion, a plate carried by said block having a flat serrated face and a bore extending transversely relative thereto, a substantially L-shaped plate having a serrated face displaceable in engagement with said serrated face of said block plate and having a stud adjacent to one end thereof adapted to extend through said transverse bore, and said adjustment means also being adapted to fix the vertical position of said plate and said block relative to said piston rod.

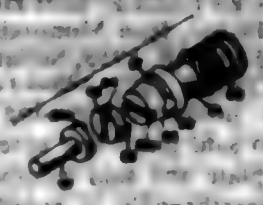


2,861,768
VIBRATION ISOLATION SYSTEM AND INSTRUMENT MOUNT
Arnold John Rocca, Rockville, Md., assignor, by mesne assignments, to Vitro Corporation of America, New York, N. Y., a corporation of Delaware
Application December 17, 1956, Serial No. 628,691
3 Claims. (Cl. 248—358)



1. An instrument mount comprising a substantially rectangular base, a substantially rectangular supporting means arranged in spaced relation to and above said base, a plurality of elongated spring means yieldably supporting said supporting means in a plane above said base, said spring means being mounted at opposite sides of said mount, each of said spring means comprising a pair of compression springs arranged at each corner of said mount, the springs of each pair each being connected at one end to the adjacent corner portion of said supporting means and at its other end to a side of said base at a point spaced from the adjacent corner, said spring means also including a tension spring extending between and connected at its ends to the adjacent corners of said base and said supporting means.

2,861,769
VALVES
Alfred F. Schumann, Lower Merion, Pa.
Application July 16, 1953, Serial No. 368,325
7 Claims. (Cl. 251—86)



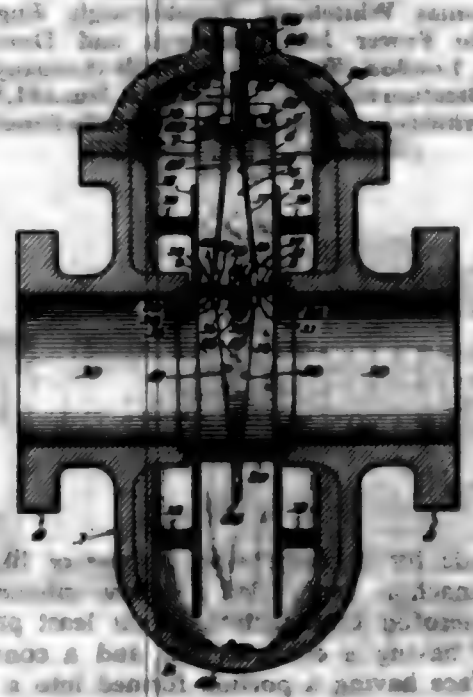
1. A valve comprising a body member having a conical recess with a port extending outwardly from a side thereof, an operating member supported by said body member

2,861,773

ends, a disc secured to the upper end of said standard, pivotal relation therebetween.

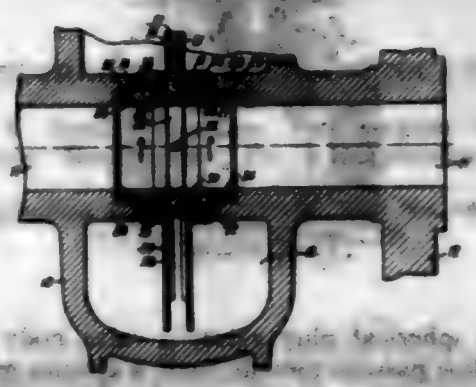
for rotation about an axis, biasing spring means, a conical valve member axially biased by said spring means into seating engagement with said recess for rotation about an independent axis continuously determined by the conical seating surfaces and which initially or with wear may be out of alignment with said axis of the operating member, said valve member having an internal flow passage extending to a peripheral metering slot cooperating with said port of the body member, and means coupling said operating member to said conical valve member including a rotatable coupling element having freedom of axial movement for continued maintenance by said spring means of the seating engagement between said conical surfaces despite their wear and having freedom of radial movement for free rotation of said conical valve member about its aforesaid independent axis as at all times determined by the aforesaid engaging conical surfaces.

2,861,770
CONDUIT GATE VALVE
Kurt B. Breitschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Application October 16, 1952, Serial No. 315,110
5 Claims. (Cl. 251—167)



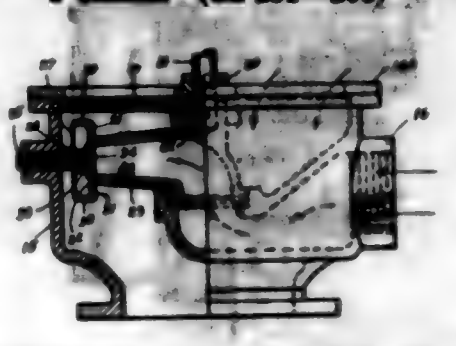
1. A valve mechanism comprising a valve casing having transverse openings therein, a valve chamber within said casing and extending transversely of the said openings, a reciprocally movable closure member within said chamber, stops at end limits of the valve chamber and casing for inhibiting the movement of the closure member, said closure member comprising opposed wedge shaped sections having their outer faces in parallel planes and their inner faces in spaced inclined converging planes, leaf-type spring means having end portions spanning and extending within oppositely disposed inner relieved portions of each of said sections, a driving wedge member between the said sections, the said driving wedge member having a relieved middle portion on oppositely disposed sides thereof forming a shoulder means for support of the said spring means at a central portion thereof, and a valve stem having a connection with oppositely disposed inner recessed portions of the said closure member, the said spring means simply engaging said inner relieved portions of the wedge shaped sections and normally providing for the said wedge shaped sections being urged outwardly relative to said driving wedge member, the said valve stem cooperating with the said spring means and wedge shaped sections to flex said spring and whereby the said closure member is moved into open and closed positions against the stops and expanded into fluid sealing engagement with the walls of the valve chamber in such positions.

2,861,771
GATE VALVE
Austin U. Bryant, Walnut Creek, Calif., assignor, by mesne assignments, to Walworth Company, New York, N. Y., a corporation of Massachusetts
Application February 23, 1954, Serial No. 411,367
6 Claims. (Cl. 251—172)



1. In a valve construction a body providing flow passages and a body space between said passages, said passages being adapted to connect with upstream and downstream piping, a gate disposed within the body and movable transversely of the flow passages between open and closed positions, resilient seal rings of the O-ring type disposed on opposite sides of the gate, mounting means for each of said seal rings, said mounting means being carried by the body and formed to provide annular recesses for accommodating the seal rings, whereby the seal rings embrace the passages when the gate is in closed position, said seal ring normally serving to establish seals between the body and the gate, and means incorporated in each mounting means serving to break sealing engagement between a seal ring and the adjacent surface of the upstream side of the gate responsive to application of a differential fluid pressure to the exterior periphery of said seal ring from the body space.

2,861,772
PROPORTIONING FUEL-AIR VALVE
Norman M. Foster, New Castle, Ind.
Application October 31, 1956, Serial No. 619,503
5 Claims. (Cl. 251—308)



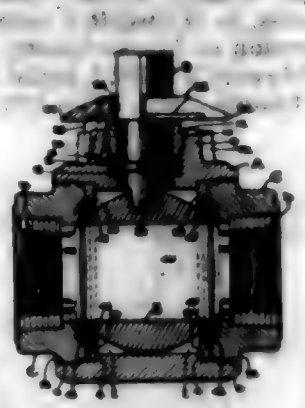
1. In apparatus for proportioning the flow of gas and air to a burner system including a housing; a fuel nozzle mounted for movement along a predetermined path in said housing, an elongated valve mounted within said housing for controlling the flow of fuel from said nozzle and having its surface from one end to the other spaced progressively further from the path of movement of the outlet end of said nozzle; a plurality of inwardly and outwardly adjustable screws mounted in the peripheral wall of said housing and extending therethrough, and means connecting said screws and said valve for positive inward and outward movement of said valve in relation to said path of movement of said nozzle outlet as said screws are turned inwardly and outwardly.

said nozzle, means establishing communication between rotor between the walls of adjacent discs being provided

of said block plate and having a stud adjacent to one end

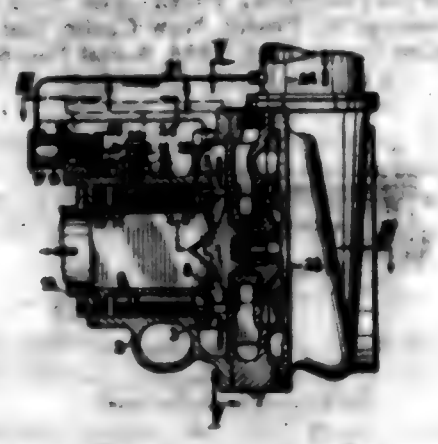
refers with a part extending outwardly from a side thereof, an operating member supported by said body member

2,861,773
SPHERICAL PLUG VALVE
Robert Clade, Detroit, Mich., assignor, by mesne assignments, to ACF Industries, Incorporated, a corporation of New Jersey
Application December 18, 1954, Serial No. 475,330
5 Claims. (Cl. 251—315)



5. In a spherical plug valve, a valve body assembly having a flow passage therethrough, a closure means having an opening therein for registry with said flow passage, said closure means being axially movable into said body at one end of said passage and forming a part of said assembly, a spherical plug rotatably mounted in said body and having a flow passage therethrough, the inner end portion of said closure means having a conical surface diverging outwardly of the valve, at least one initially flat annular seating and sealing ring disposed between the conical surface of the closure means and the spherical plug, and a clamping ring inwardly of said initially flat ring engaging the body, annular ring and closure means to distort the annular ring into a conical form and onto said conical surface.

2,861,774
INLET CONTROL FOR RADIAL FLOW TURBINES
Alfred J. Buchi, Winterthur, Switzerland
Application February 13, 1951, Serial No. 210,691
Claims priority, application Switzerland February 16, 1950
4 Claims. (Cl. 253—52)



1. A turbine having a rotor adapted to rotate in one rotational direction with blading to receive motive fluid directed at least partially radially against said blading and a casing enclosing said rotor within which casing is included duct means providing at least one inlet passage via which motive fluid is conducted from a source outside the casing into an annular space directed at least partially radially toward the blading of said rotor, said annular space being internally orificed in the vicinity of the entrance edges of said blading, a stationary guide vane assembly rigidly secured to the turbine casing having vanes which fixedly span the fluid passage radially beyond the orificed area of the annular space, a sleeve-like element slidable axially, said element being provided at its extremity nearest the orificed area of the duct means with vanes adapted to pass through said orificed area and into the fluid passage, said means operably connected to said slidable element to effect the insertion and withdrawal of the vanes through said orificed area and into and out of said duct means between the stationary vanes and said rotor blading to any desired extent by slidably displacing said element axially, said last named vanes extending in the same general direction as the vanes of said stationary guide vane assembly, maintaining the same rotational direction of the rotor and successively reducing the through flow area between said stationary vanes to thereby provide for optimal efficiency of the turbine at a smaller available quantity of motive fluid and wherein the width, taken radially of the turbine axis, of at least some of the vanes on the slidable element and their disposition as respects the stationary blades is such that at least some parts of said vanes on the slidable element project into the space between some of the guide vanes of the stationary guide vane assembly.

2,861,775
TUBULAR BLADES
Leslie Thomas Whitehead, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Application May 24, 1954, Serial No. 431,925
Claims priority, application Great Britain June 4, 1953
7 Claims. (Cl. 253—77)

1. A blade for a compressor, turbine or like bladed fluid flow machine comprising a hollow tubular part of cambered aerofoil cross-section for at least part of its length and having a concave face and a convex face, each said face having a portion formed into a loop extending in a chordwise since along its edge at its root end, said loop being being wedge-shaped in cross-section with its apex pointing towards the tip end of the blade; a wire extending in a chordwise sense through each said loop, said wires being wedge-shaped and conforming in cross-section to the inside of the loop and being a close fit therein; and a root block formed in its surface with two spaced dovetail grooves conforming in cross-section to the outside of the loops, the loops engaging and being a close fit in the grooves.

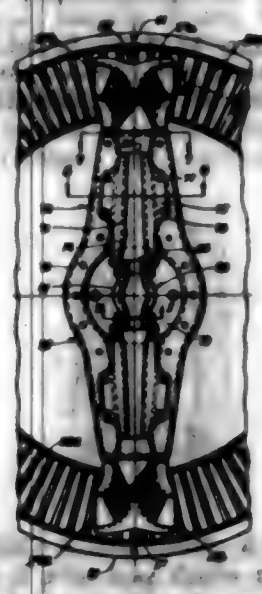
2,861,776
REACTION TURBINES
Herbert L. Magill, Chicago, Ill.
Application December 26, 1951, Serial No. 263,335
21 Claims. (Cl. 253—81)

1. In a reaction turbine, a rotor having a central hub chamber, a pure reaction nozzle mounted on said rotor at the outer region thereof and projecting outwardly beyond the periphery of said rotor, said nozzle being provided with a radially directed fluid inlet and a a pair of fluid outlets in communication with said fluid inlet, said fluid outlets being directed generally perpendicular to the radial direction of said inlet and facing in opposite directions, means for selectively closing the fluid outlets of

2,861,782

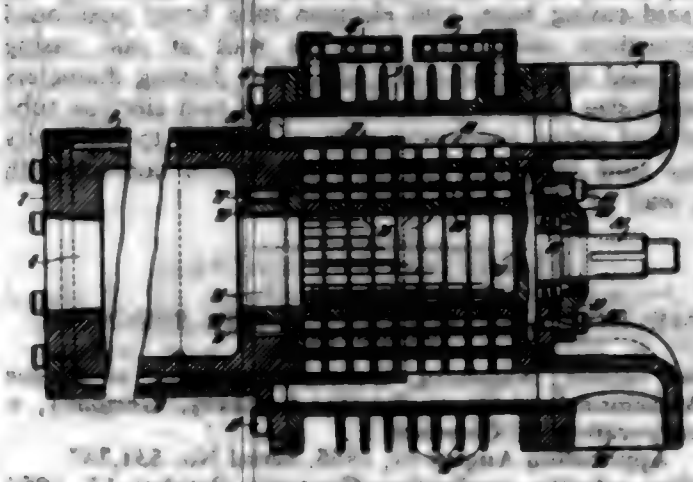
the said closure member is moved into open and closed positions are turned inwardly and outwardly.

said nozzle, means establishing communication between said fluid inlet and the central hub chamber, and means



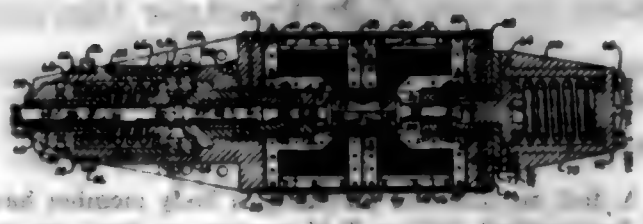
for supplying motive fluid under pressure to said central hub chamber.

2,861,777
DRIVING APPARATUS
Russell S. Ellis, Northampton, Mass.
Application September 17, 1956, Serial No. 610,158
7 Claims. (Cl. 253—166)



1. Driving apparatus of the class described comprising in combination, a housing, a stator support within said housing, an elongated straight-sided single stator comprised of a plurality of separate similar superposed circular ring-like stator discs secured to said stator support, the stator discs of said stator having aligned elongated axial bores therethrough providing an axial bore for said stator, a rotor support rotatable in said stator support, an elongated straight-sided single rotor rotatable within the axial bore of said stator and comprised of a plurality of separate similar superposed circular ring-like rotor discs secured to said rotor support, the rotor discs of said rotor having communicating axial bores therethrough providing an axial bore for fluid under pressure for said rotor, said rotor support having an input for fluid under pressure in communication with the bore of said rotor, each rotor disc of said rotor being within the bore of one of the stator discs of said stator, the rotor and stator discs having walls in the same plane disposed transversely relative to the longitudinal axis of the bore of said rotor, the stator discs between the walls of adjacent discs being provided with separate circumferentially spaced passageways extending from the bores therein generally radially outwardly, fluid discharge means being within said housing exteriorly of said stator, the rotor discs of said rotor between the walls of adjacent discs being provided with separate circumferentially spaced passageways extending from the bores therein generally radially outwardly and upon rotation of said rotor being intermittently in communication with the passageways of the stator discs of said stator, an elongated sleeve valve closely surrounding said stator and being reciprocable in opposite directions therealong to close outer ends of the passageways of predetermined stator discs of said stator, and means for reciprocating said sleeve valve.

2,861,778
ELECTROMAGNETIC RECIPROCATING HAMMER
William V. Spurlin, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Application October 7, 1954, Serial No. 460,822
4 Claims. (Cl. 255—37)

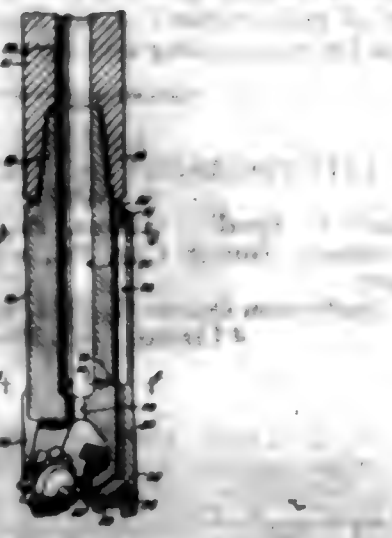


2. An electromagnetic reciprocating hammer having a tubular barrel carrying bearings and nose and head castings at opposite ends with spaced coaxially mounted coils mounted between said castings, a magnetic core having a body portion with axially projecting stems slidably supported in said bearings to reciprocally support said body portion in the barrel under the effect of the magnetic field produced by the alternate energization of said coils, characterized in that the body and stems of said core are made from a single integral piece of magnetic material, and an annular step of reduced diameter formed between the body and each stem to make the magnetic flux less effective on the core ends.

2,861,779
ROTARY DRILLING BIT
Thomas A. White, Quanah, Tex.
Application July 12, 1956, Serial No. 597,426
5 Claims. (Cl. 255—61)

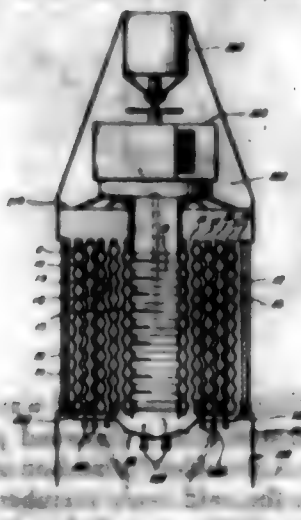
1. In a rotary drilling bit for oil and water wells having a body member formed with a threaded pin for connection to a drill stem, a shoulder formed on said body member about said pin, the said body member having a plurality of circumferentially spaced longitudinal grooves therein opening at their upper ends in said shoulder, a recess formed on at least one side of each of said grooves in said shoulder, a cutting blade, having a head member thereon, seated in each of said grooves and a web on said head member engaging said recess, each of said heads having a curvature about said pin segmentally conforming thereto and having a beveled upper surface engageable by a drill stem threaded on said pin.

2,861,730
MEANS FOR COOLING THE CUTTERS OF DRILL BITS
Jimmy L. Butler, Wichita, Kans.
Application June 20, 1956, Serial No. 592,684
7 Claims. (Cl. 255—363)



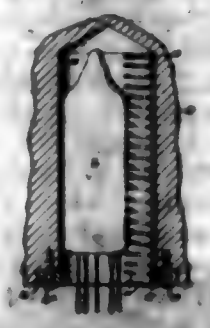
1. A drill bit structure including, a body member having a longitudinal drilling fluid passage, at least one rotatable drilling cutter carried by the body member, at least one Hilsch tube chamber in the body member, the body member having an inlet for gaseous drilling fluid extending between the drilling fluid passage and the chamber and a warm fluid outlet extending from the chamber to the exterior of said body member at a point removed from said drilling cutter, the body having a cold fluid passage between the chamber and the interior of the drilling cutter for supplying cool drilling fluid to the cutter.

2,861,781
HEAT EXCHANGE APPARATUS
Leonard P. Cohen, Bellaire, Tex., assignor of one-fourth to Joseph F. Woerner, and one-fourth to Charles C. Lightfoot, both of Harris County, Texas
Application May 31, 1955, Serial No. 512,849
3 Claims. (Cl. 257—243)



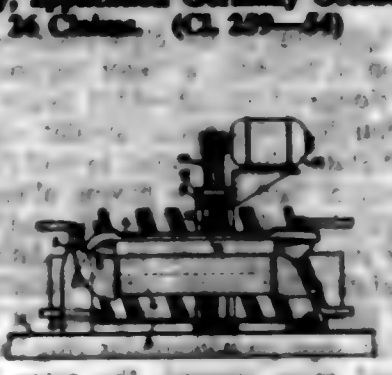
1. In heat exchange apparatus a plurality of tubular, hollow-walled, receptacles arranged one within another in spaced apart relation to form passageways of tubular shape between the receptacles, said receptacles being movable axially relative to each other, and means on the receptacles extending into the passageway and movable with the receptacles into and out of positions to form a restriction in the passageway.

2,861,782
HOLDER FOR ELECTRON TUBES
Elmer Swartz, Annandale, Va., assignor to the United States of America as represented by the Secretary of the Army
Application January 18, 1957, Serial No. 635,563
1 Claim. (Cl. 287—263)
(Granted under Title 35, U. S. Code (1952), sec. 266)



In combination, a substantially cylindrical electron tube and a holder in which said tube is firmly restrained against movement so that said tube can withstand severe shock and vibration, said holder additionally providing good heat transfer away from said tube, said holder comprising: a support having a cylindrical bore therein, a cylindrical casing having a bore therethrough, said casing fixed in the support bore, a helical spring within the casing bore, said spring attached at one end to said casing and extending substantially the entire length of said casing bore, the longitudinal axis of said spring being parallel to, and offset from, the longitudinal axis of said casing bore, said electron tube being positioned intermediate said spring and the wall of said casing bore, said spring and said casing bore having diameters of such size relative to the diameter of said electron tube that said spring cooperates with said casing to resiliently press said tube into intimate lengthwise contact with the wall of said casing bore.

2,861,783
METHOD AND APPARATUS FOR SPINNING BOTTLES
Josef Steinle, Augsburg, Germany, assignor to Certus Maschinenbau G. m. b. H., Augsburg, Germany, a corporation of Germany
Application August 31, 1955, Serial No. 531,747
Claims priority, application Germany October 12, 1954
24 Claims. (Cl. 259—54)



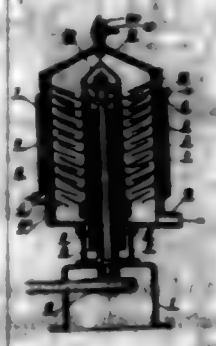
1. A method for mixing the contents of filled bottles comprising the steps of introducing a filled bottle into a mixing zone and while passing the filled bottle through the said mixing zone, effecting and maintaining a spinning of the filled bottle about an axis transverse to and intermediate the ends of the longitudinal axis of the bottle, and while spinning the said bottle, loosely but securely maintaining the respective end portions of said bottle in engagement with opposed surfaces so as to maintain the intermediate longitudinal portion of the bottle on substantially the same spinning axis during travel of the bottle throughout said mixing zone.

2,861,784

APPARATUS FOR CONTINUOUS PRODUCTION OF BUTTER

Antonin Mlsek and Zdenik Malik, Prague, Czechoslovakia, assignors to VSCHP, Výzkumný ústav strojů chladicích a potravinářských, Prague, Czechoslovakia, a Czechoslovakian company

Application August 9, 1956, Serial No. 603,858
2 Claims. (Cl. 259—107)



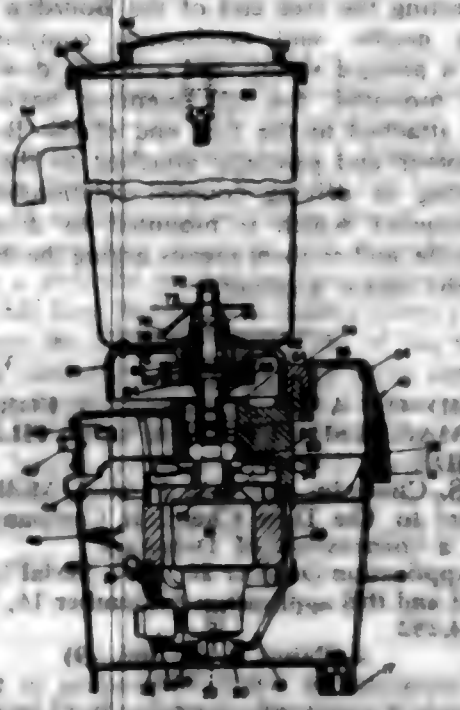
1. Apparatus for continuous production of butter from cream, comprising a vertical cylinder, a central shaft extending axially into the cylinder and being rotatable relative to the latter, a series of spacedly superposed discs secured to the shaft, the discs being angularly shaped, when viewed in cross section, each disc being formed by an inner annular portion extending outwardly and downwardly, and an outer annular portion extending outwardly and upwardly, a series of spacedly superposed rings interiorly secured to the cylinder wall to extend inwardly and substantially downwardly, the rotating discs and stationary rings alternating with each other, each ring except two at the most projecting partly into the space between two discs, each disc except two at the most projecting partly into the space between two rings, and churning means provided on the upper sides of the discs and on the undersides of the rings.

2,861,785

BLENDER FOR MATERIALS

Angelo C. De Angelis, Fair Haven, N. J., assignor, by mesne assignments, to Dynamics Corporation of America, New York, N. Y., a corporation of New York

Application March 11, 1955, Serial No. 493,625
1 Claim. (Cl. 259—108)



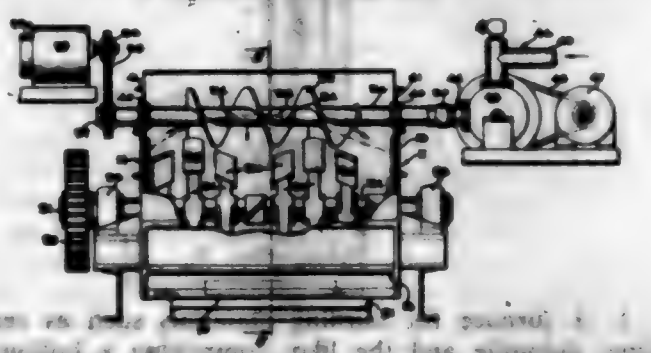
A heavy duty blender comprising a base, said base having a bottom shell and an upper shell supported on and separably secured to said bottom shell for substantially enclosing said base, said upper shell being integrally formed with annularly disposed upwardly projecting shoulders and a central opening surrounded by an integral annular downwardly projecting flange, an axial bearing secured in said central opening, an electric motor having a stator frame and a rotor with a shaft journaled in a lower bearing supported by said frame, means for suspending said frame from said flange with the axial alignment of said rotor shaft fixed by journaling said rotor shaft in said axial bearing, a blending container having a blending rotor element journaled in the bottom wall of said container, means on the outside lower portion of said container cooperating with said shoulders for supporting and positioning said container on said upper shell with the rotative axis of said blending rotor element aligned with the axis of said shaft, and a driving connection between said shaft and said blending rotor element when said container is positioned on said upper shell.

2,861,786

PUG MILL MIXER HAVING IMPROVED AGGREGATE CIRCULATING MEANS

Walter M. Madsen, Alhambra, Calif., assignor, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application November 28, 1952, Serial No. 322,859
9 Claims. (Cl. 259—146)



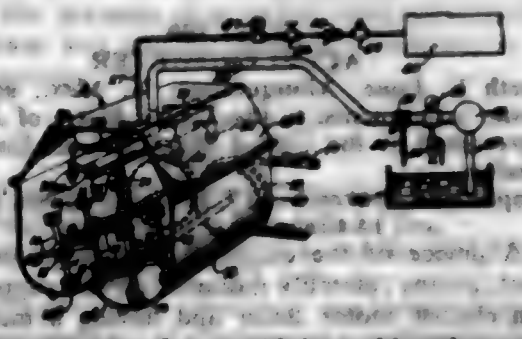
1. A method of producing paving material, which includes the steps of: mixing an aggregate and moving two bodies thereof toward each other so that said bodies merge together and move upward; moving material from the upper part of the merged bodies, first in one direction and then the other, the directions of movement being opposite the direction of movement of said contiguous bodies; and applying a liquid binding material to the aggregate.

2,861,787

APPARATUS FOR MIXING FINELY-DIVIDED SOLIDS WITH LIQUIDS

Leslie H. Canyi, Ames, Iowa, assignor to Iowa State College Research Foundation, Inc., Ames, Iowa, a corporation of Iowa

Application June 20, 1956, Serial No. 592,590
3 Claims. (Cl. 259—153)



1. In an apparatus for combining a bituminous binder with an aggregate material, including a casing providing a space wherein said bituminous binder and said aggregate material are mixed, nozzle means for discharging said binder into said space in a foamed condition, said nozzle means comprising a plurality of nozzles, each of said

metal; a furnace setting for the vessel adapted to main- said bricks each having a core essentially of alumina but

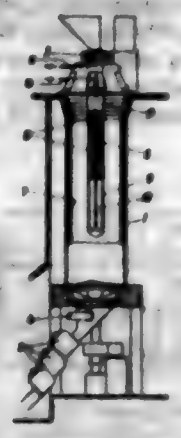
nozzles having a body portion and a tip portion providing a flow chamber therein, said tip portion having a restricted orifice passage communicating with said flow chamber on its inside and discharging to the atmosphere on its outside, said body portion having an inlet for supplying a liquified bituminous binder to said flow chamber, and a steam supply conduit extending to a point adjacent the inside end of said orifice passage, said conduit terminating at an outlet which is within said tip portion and which is oriented towards said orifice.

2,861,788

SHAFT KILN FOR THE BURNING OF CEMENT, LIME, DOLOMITE AND SIMILAR SUBSTANCES, AND METHOD OF OPERATING SAID KILN

Hans Rudolf Suter, Zurich, Switzerland, assignor to L. von Roll AG., Zurich, Switzerland, a Swiss company

Application January 28, 1955, Serial No. 484,778
Claims priority, application Switzerland January 29, 1954
9 Claims. (Cl. 263—36)



1. A furnace for burning materials such as cement, lime, dolomite and the like, comprising a hollow kiln shaft having an inner wall, a portion of which encompasses and defines a sintering section, a centrally arranged core member disposed within said hollow kiln shaft and extending at least into said sintering section, said core member having its peripheral wall surface substantially equidistantly spaced from said inner wall of said shaft to define a chamber into which said material to be burnt is directed, cooling means extending through and beyond said core and defining duct means through which a cooling medium is directed for controlled cooling of said core, and means in communication with said cooling means for regulating the rate of flow of said cooling medium through said duct means to ensure that in any horizontal cross-section of said furnace including said chamber a substantially uniform temperature is obtained to effectuate substantially even burning of said material when disposed within said chamber.

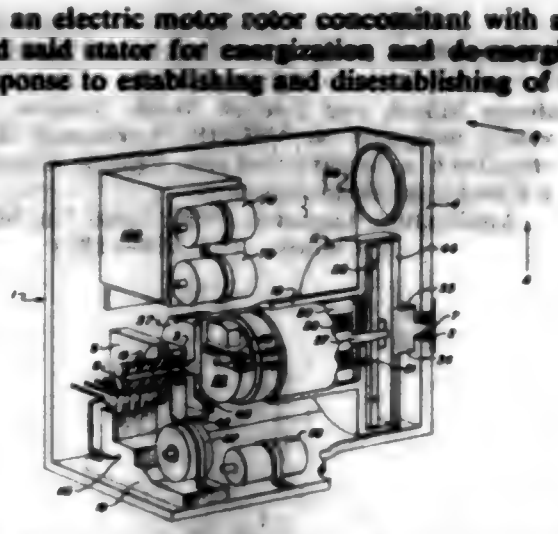
2,861,789

ACCELEROMETER

Kenneth E. Pope, Albuquerque, N. Mex., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application November 17, 1954, Serial No. 469,567
14 Claims. (Cl. 264—1)

1. A device of the character described comprising a support, means rotatably mounted on the support including an electric motor stator and having a mass thereon at a location spaced from a rotational axis of the means for rotating the means when the device is subjected to acceleration, an electrically conducting element operatively connected and movable with said means for establishing and disestablishing an electric circuit in response to rotary movements of said means in opposite directions, an electric motor rotor concomitant with said means and said stator for energization and de-energization in response to establishing and disestablishing of the



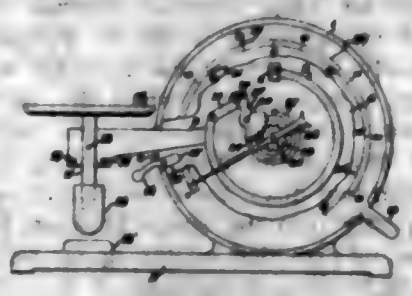
referred to circuit, and centrifugal switch means rotatable with said rotor actuable upon attainment of predetermined rotor rotational rate.

2,861,790

WEIGHING DEVICE

Daniel S. Stevens, Chicago, Ill.

Application February 27, 1956, Serial No. 567,968
8 Claims. (Cl. 265—68)



1. A weighing device having in combination a housing, a dial supported on said housing, an indicating needle rotatably mounted on said housing adjacent to the dial, a Bourdon tube having one end fixed to the housing with the other end free, an arm having one end connected to the free end of the Bourdon tube and transmitting a force thereto in a direction substantially in the plane of the central longitudinal axis of the tube, a weigh pan supported upon the other end of said arm, and mechanism for connecting the free end of the Bourdon tube to the indicating needle, said mechanism comprising a link member, a pivoted sector, and a needle driving member rotatably mounted, the link member having one end pivotally attached to the free end of the Bourdon tube and the other end pivotally attached to the sector, the sector being in driving coupled relationship with the driving member which is mounted to drive the indicating needle, and resilient means urging the driving member and the sector together.

2,861,791

METHOD OF AND APPARATUS FOR REACTING MAGNESIUM WITH A VOLATILE METAL HALIDE

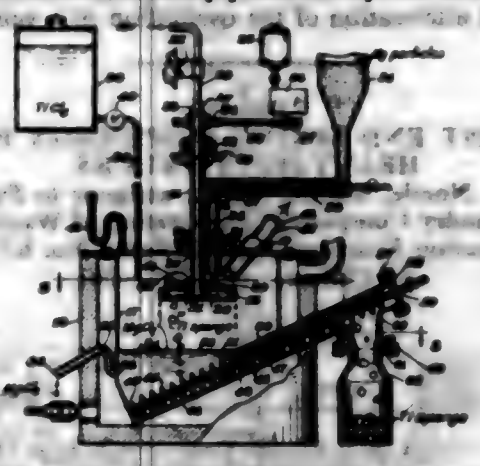
Douglas S. Chisholm and Don F. Hall, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Original application October 20, 1952, Serial No. 315,684. Divided and this application September 16, 1957, Serial No. 684,282
4 Claims. (Cl. 266—9)

1. An apparatus in which to produce in the form of metal sponge a metal selected from the group consisting of titanium and zirconium by the reduction of a volatile halide thereof with the formation of magnesium chloride as a by-product which comprises a reaction vessel adapted to contain the vapor of the halide to be reduced to sponge

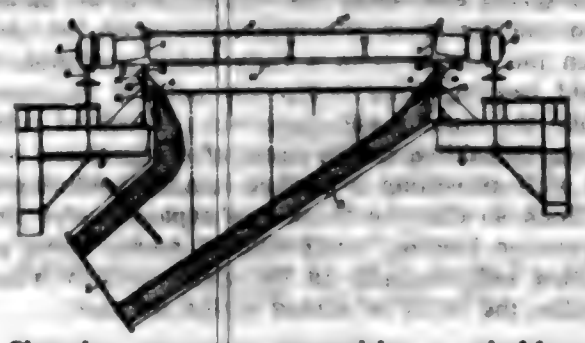
and separably secured to said bottom shell for substantially enclosing said base, said upper shell being integrally

metal; a furnace setting for the vessel adapted to maintain it at working temperature; a hearth within the vessel and spaced apart from the bottom thereof; a feed pipe associated with the vessel adapted to convey onto the hearth the magnesium in particulate form; motor means associated with the hearth adapted to move the hearth sideways below the feed pipe whereby the magnesium



particles falling from the feed pipe form a train on the hearth; cooling means associated with the hearth adapted to abstract reaction heat from particles of magnesium reacting on the hearth; and scraper means adjusted to the surface of the hearth adapted to scrape off the metal sponge formed in situ as the particles of magnesium are consumed on the hearth by the volatile halide.

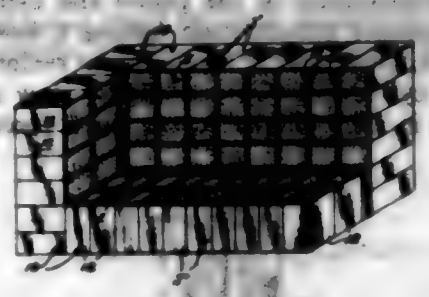
2,861,793
SINTERING APPARATUS
John H. Portius, Ben Avon Heights, and John A. Anthes, Bridgeville, Pa., assignors to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application November 15, 1955, Serial No. 546,972
5 Claims. (Cl. 266—21)



1. Sintering apparatus comprising a wind-box structure having parallel longitudinally extending side walls, a succession of pallets movable in progression over the wind-box structure, each pallet having a depending flange along each side thereof, which flanges in the travel of the pallets move in confronting vertically spaced relation to the sides of the wind-box structure, said depending flanges each having a grooved sealing surface extending along the exterior side face thereof, and sealing plates extending upwardly from the exterior of the sides of the wind-box structure and resiliently biased to urge their upper edge portions against the sealing surfaces of the pallets as the pallets move along over the wind-box structure, said plates being bowed outwardly between their upper and lower edges whereby the only contact of the plates with the pallets is in said grooves and whereby said plates may flex laterally and vertically.

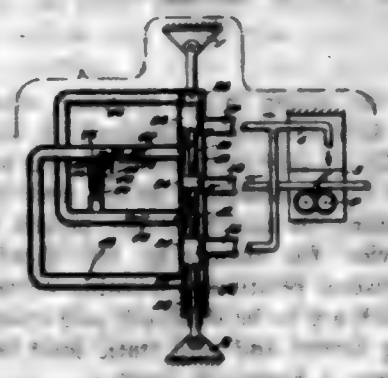
2,861,793
BRICKS
Ned W. Rondebush, Broomall, Pa.
Application July 5, 1957, Serial No. 670,138
4 Claims. (Cl. 266—43)

In a furnace for molten aluminum, side and bottom walls lined with refractory bricks laid in soldier style, said bricks each having a core essentially of alumina but containing some silica, said bricks each having elongated rectangular sides and substantially square ends and being of substantially uniform cross-section throughout, and said bricks in as-installed state having bare ends



and being clad in aluminum plate present at the joints between individual ones of said bricks at the elongated sides of the bricks, whereby said plate upon oxidizing to alumina forms a refractory shield of alumina at such joints preventing corrosive action of aluminum on silica in said bricks.

2,861,794
HYDRAULIC SPRINGS
Cyrus Bock, Philadelphia, Pa.
Application July 27, 1955, Serial No. 524,725
3 Claims. (Cl. 267—2)

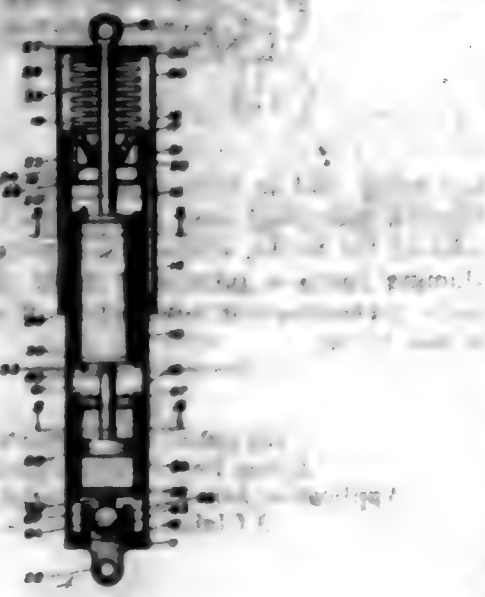


3. A hydraulic spring for operative association between two relatively movable work parts and with a source of fluid under pressure and a sump, comprising a hollow body component for mounting on one such part, and a rigid component slidable in said hollow body and for mounting on the other said part, said hollow body having inlet and outlet means for communication with such source of fluid pressure and said sump respectively, said hollow body and said rigid component together defining opposing pressure chambers in said hollow body effective between the hollow body and said rigid component, plural conduit means communicating with said hollow body and with the respective pressure chambers therein, pressure-drop-effecting means disposed between the plural conduit means, means responsive to the relative positioning of said hollow body and said rigid component selectively controlling the communication of said inlet and outlet means with said respective plural conduit means and controlling the pressure drop across said pressure-drop-effecting means and thus the respective pressures in said pressure chambers.

2,861,795
SHOCK ABSORBING MECHANISM
William T. Blake, Fort Worth, Tex.
Application January 22, 1957, Serial No. 635,325
10 Claims. (Cl. 267—8)

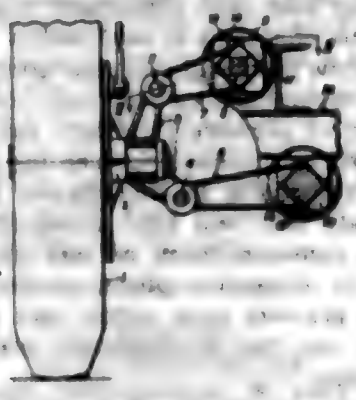
1. A hydraulic shock absorbing mechanism comprising: means providing a chamber; a cushioning device within the chamber including a piston and cylinder construction providing port means through which hydraulic fluid is moved in response to relative reciprocation of the piston and cylinder to absorb energy suddenly applied therebetween and having resilient means acting between

the piston and cylinder urging the piston to a neutral position in the cylinder; a static load compensating device including a piston and cylinder construction providing constantly open, restricted hydraulic fluid metering means through which hydraulic fluid is moved in response to relative reciprocation of the piston and cylinder, said piston and cylinder construction having a low response to suddenly applied energy tending to reciprocate the piston in the cylinder yet responding by slow movement of the piston in the cylinder to sustained forces tending



to reciprocate the piston in the cylinder, said static load compensating device being positioned in said chamber means externally of said cushioning device and mounted to act between said cushioning device and said chamber means; and means on said chamber means and on said cushioning device for mounting the shock absorbing mechanism between relatively movable elements the vibrations of which are to be damped; said chamber means, said cushioning device and said static load compensating device containing a hydraulic fluid.

2,861,796
INDEPENDENT WHEEL SPRING SUSPENSION
Ernst Rohr, Hausmannstr/Ag, Switzerland
Application May 5, 1955, Serial No. 506,328
Claims priority, application Switzerland May 7, 1954
2 Claims. (Cl. 267—31)

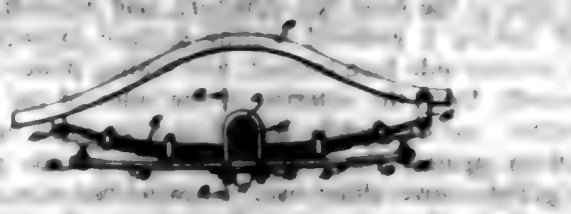


1. A resilient suspension device for a vehicle axle comprising a two-armed bracket terminating in respective end pivots, two oscillatory arm members of unequal length pivotably connected to said end pivots, said arm members being disposed in superposed relation to each other, said arm members being provided with polygonal-shaped housing sections and with central polygonal bolt sections embraced by said housing sections, and resilient deformable elements seated in the corners of said polygonal housing sections and propped against the opposite walls of the polygonal bolt sections without deformation of said elements when said bolt sections are in a neutral position, the distance between the axes of said pivots being such that said bolt sections are initially rotated so that said arm members when swinging from an initial position to operative position must overcome an initial compression imparted to at least some of said resilient elements accommodated between said housing section and said bolt section, whereby the said elements oscillate at different frequencies causing a substantial attenuation of the oscillation of a vehicle axle.

2,861,797
FRONT END SPRING SUSPENSION FOR HEAVY-DUTY TRUCKS
Robert C. Norris, Seattle, Wash., assignor to Pacific Car and Foundry Company, a corporation of Washington
Application February 1, 1957, Serial No. 637,824
10 Claims. (Cl. 267—36)

1. In a suspension mechanism for springing the frame of a vehicle from an axle and employing for each side of the vehicle as the primary springing agent a longitudinally disposed spring beam, the combination with said frame, the axle, and the spring beam, means for anchoring the center portion of the spring beam to the axle, and respective frame-carried stalls for each end of the spring beam, said stalls having an inverted U-shape when viewed from the end and each presenting two longitudinally spaced apart bearing points the outer of which bears upon the spring end when the vehicle is in an unladen condition and the inner of which bears upon the spring end when the vehicle is in a fully laden condition, the inner said bearing point being substantially incompressible while the outer point comprises a block of rubber moderately deflectible under stress of compression loading, the stall providing a pocket loosely confining the rubber block so that the block can expand under stress of compression loading, block-holding means being provided acting independently of the spring end to releasably localize the block of rubber within the stall.

2,861,798
VEHICLE SPRING
Sidney Lenet and Jack Lenet, Philadelphia, Pa.
Application March 28, 1956, Serial No. 697,156
2 Claims. (Cl. 267—45)



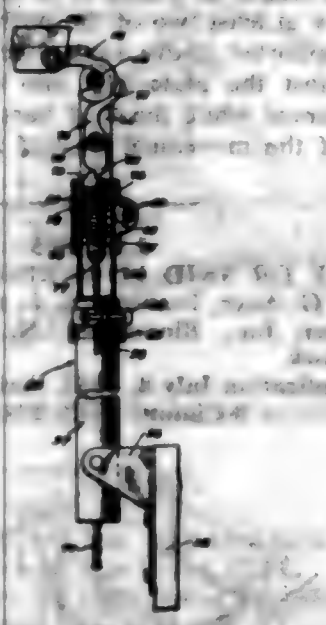
1. In vehicle spring equipment for application to a vehicle spring of the half elliptical leaf type, where the vehicle spring has its ends attached to the frame of a vehicle and has its medial portion attached to an axle of the vehicle by means of U bolts, an auxiliary spring of a length substantially equal to the vehicle spring and of a width slightly greater than the width of the vehicle spring, resilient pads mounted at the ends of the auxiliary spring, and notches formed in the side edges of the auxiliary spring to accommodate the legs of the U bolts.

2,861,799

DOOR OPERATING MECHANISM

Melvin E. Hartzler, Downers Grove, Ill., assignor to McKee Door Company, Aurora, Ill., a corporation of Illinois

Application September 14, 1955, Serial No. 534,393
5 Claims. (Cl. 268—59)



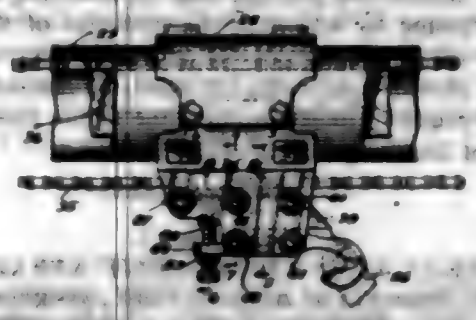
2. In an operating mechanism for an overhead garage door, a releasable connection comprising first and second conjointly movable members, said first member having a hook, said second member having a pin extending transversely to the direction of movement of said members and adapted for engagement with said hook, a latch movably secured to said second member and having a surface engaging said hook oppositely of said pin, and manually releasable locking means movably secured to said second member and yieldably urged into engagement with said latch for maintaining said latch in engagement with said hook.

2,861,800

DOOR OPERATING MECHANISM

John F. McKee, Aurora, and Melvin E. Hartzler, Downers Grove, Ill., assignors to The McKee Door Company, Aurora, Ill., a corporation of Illinois

Application September 14, 1955, Serial No. 534,394
5 Claims. (Cl. 268—59)



1. In a door operating mechanism for an overhead sliding articulated door, said mechanism including a horizontal guide member, a carriage movable along said member, reversible drive means including a continuous link-type chain for attachment to said carriage for moving said carriage in either direction on said member, linkage means for connecting said carriage to a sliding articulated door, and a prime mover for said drive means; attachment means for said chain carried by said carriage and comprising a frame member with a central opening telescoped over one run only of said chain and a locking rod rigidly and adjustably secured to said frame member for movement across said opening to extend at least partially between two adjacent links of said chain, said locking rod being attached to said carriage for locking said chain against movement relative to said carriage.

2,861,801

FOLDING MACHINES FOR LAUNDRY USE

William Broadbent Gordon Crun, Broomhill, High Flatts, Huddersfield, England, assignor to William Broadbent & Sons Limited, Huddersfield, England, a British company

Application April 18, 1956, Serial No. 579,165
Claims priority, application Great Britain May 27, 1955
2 Claims. (Cl. 270—68)

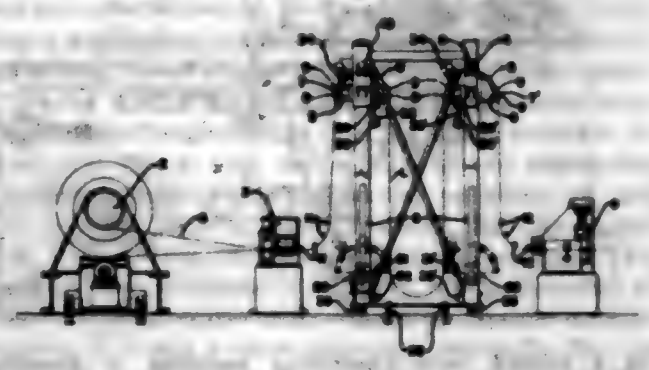
1. A folding machine for laundry use comprising gripping means for the leading edge of the article which is to be folded, a conveyor carrying forward said article, said gripping means comprising a vertically movable member having a face onto which the leading edge of the article is fed by the conveyor and a fixed member against which the moving member when it is raised presses the leading edge of the article, the conveyor carrying forward the remainder of the article beneath the moving member while the latter is raised, a flexible sheet connected to the fixed member and the moving member and of such length that said sheet is relatively taut when the moving member is in its lowest position, said sheet then acting as a barrier to prevent an excessive amount of the article from being conveyed onto and remaining upon the moving member and being gripped between the fixed and moving members when the moving member is raised, and means responsive to the movement of said article to be folded for raising said movable member when the leading edge of said article contacts said movable member and for lowering the same to its lowest position after said article has been folded.

2,861,802

LOOPING TOWER

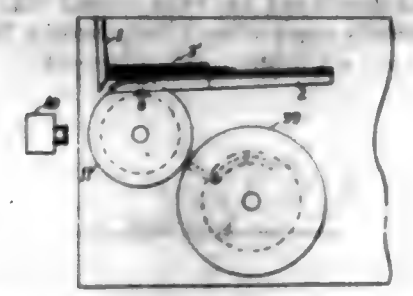
Neil J. Ramsey, Mentor Township, Lake County, Ohio, assignor to Wean Equipment Corporation, Cleveland, Ohio, a corporation of Ohio

Application August 11, 1955, Serial No. 527,793
15 Claims. (Cl. 271—2.2)



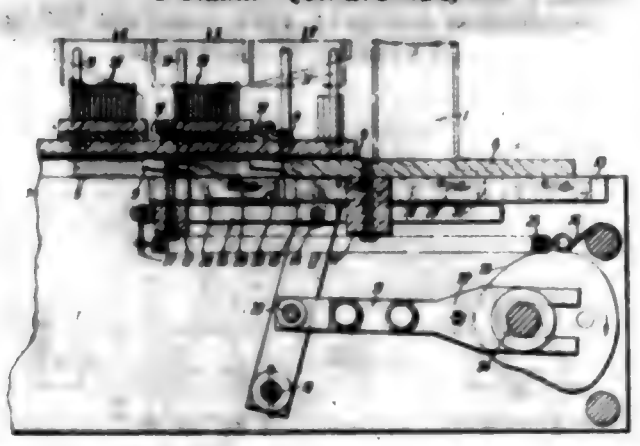
1. A looping tower comprising upstanding supporting means, a plurality of spaced apart loop supporting heads, each of the loop supporting heads having loop supporting members disposed in generally upwardly convex semicylindrical arrangement with the axes of the loop supporting heads substantially horizontal and parallel, the loop supporting heads being carried by the upstanding supporting means and the loop supporting heads when operative being disposed at the upper portion of the upstanding supporting means, and means for moving the loop supporting heads up and down.

2,861,863
SHEET FEEDING MEANS
John Halahan, Brookville, Theodore F. Arensen, Glen Cove, and Floyd A. Lyon, Brookville, N. Y.
Application June 16, 1955, Serial No. 517,292
11 Claims. (Cl. 271—29)



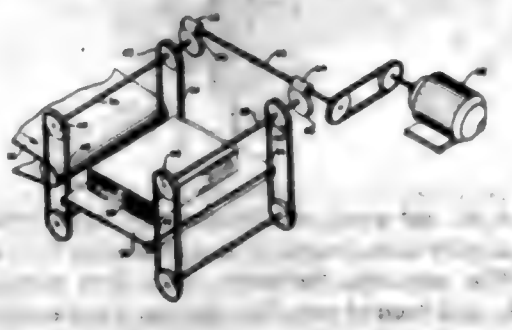
1. A feeding machanism for sheets comprising a hollow curved surface member having a recess and having at least one peripherally extending aperture therein communicating between the exterior and interior of said member, means for supporting a stack of sheets to rest operatively upon said member with the closest sheet adjacent and tangent one end of said aperture, means for placing the interior of said hollow curved surface member under a partial vacuum between overlapping sheets to peel off the leading edge of a following sheet from said stack and movable pick-up means in said recess having a surface in the same plane as said hollow curved surface, said pick-up means having at least one port on its surface, a controlled source of vacuum connected to said port whereby as said pick-up means moves past said hollow curved surface, said sheet which has been peeled off said stack is picked up by said pickup means and removed from said stack so that the line of travel of said sheet is along said curved surface member.

2,861,884
RELATING TO CARD-FEEDING APPARATUS
John Colin Davy, Woldingham, and Wilfrid Bateman Cook Watkin, Beckenham, England, assignors to Powers-Samas Accounting Machines Limited, London, England, a British company
Application May 8, 1956, Serial No. 583,417
Claims priority, application Great Britain June 3, 1955
1 Claim. (Cl. 271—54)



In a record card controlled machine, a lengthwise slotted plate along which cards are advanced intermittently to and from a succession of equi-spaced stations, a plurality of feed bars extending lengthwise beneath said plate and supported in spaced relation at right-angles to the length of the plate, a drive bar connecting all of said feed bars for simultaneous lengthwise movement thereof, drive rods connected to said drive bar, springs acting to urge the rods to a starting position thereof, a cam, means operated by said cam and connected with the drive bar to effect movement of said rods and feed bars against the action of said springs, a plurality of pusher elements pivotally mounted on each feed bar at spaced intervals along the length of the bar, a spring urging each pusher element through a slot in said plate for engagement with the trailing edge of a card to effect movement thereof from one station to the next, the corresponding pusher elements on the respective feed bars being disposed in alignment simultaneously to engage the trailing edge of a card and so spaced apart that irrespective of the length of a card to be moved the card will be engaged by at least two of the pusher elements, and leaf springs supported above said plate and acting to press cards against the plate and into engagement with the pusher element while the feed bars are slowing down at the end of the movement thereof under control of said cam.

2,861,885
TABLE OR SKID LOWERING MECHANISM
Frederick G. Auer, Teaneck, N. J., assignor to Champlain Company, Inc., Bloomfield, N. J., a corporation of New York
Application July 8, 1953, Serial No. 366,719
8 Claims. (Cl. 271—88)

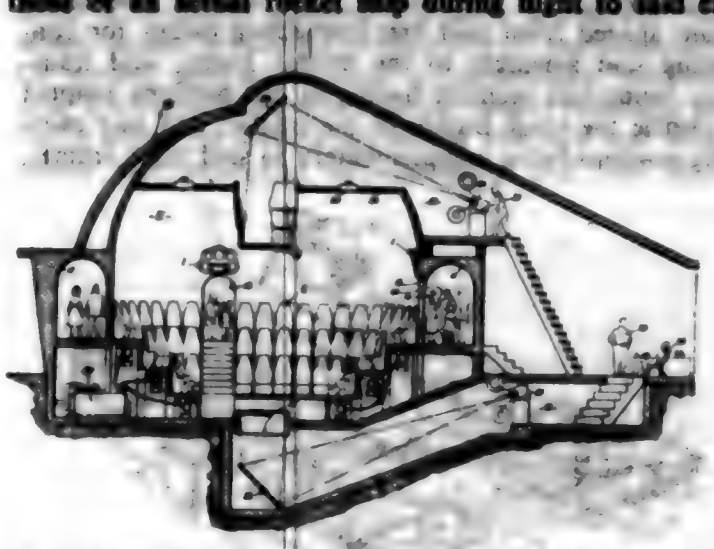


1. Lowering mechanism for receiving a relatively large stack of sheets, said lowering mechanism comprising a table to receive the sheets, an electrically controlled drive means to lower the table by a succession of slight intermittent movements, an adjustable time delay relay for the drive means set for a short increment of time, said relay having an operating magnet and having relay contacts operated by said magnet, a relay circuit for said relay magnet, switch means to repeatedly close the relay magnet circuit in order to close the relay contacts in order to energize the drive means in intermittent short increments, and means to repeatedly operate said switch means once for each accumulation of sheets to form a group of sheets containing a predetermined number of sheets which number is very small compared to the number in a full stack of sheets, the average rate of lowering of the table being adjusted by adjusting the duration of the short increment of closed time of the aforesaid time delay relay, and the closed time being at most an amount less than the time required to accumulate one of the aforesaid small groups of sheets.

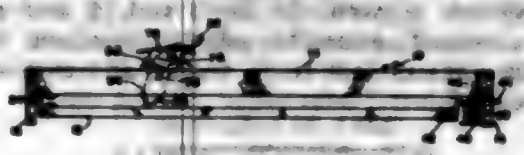
2,861,886
ROCKET SHIP AMUSEMENT APPARATUS
Walter E. Disney, Los Angeles, Calif., assignor to Disneyland, Inc., Anaheim, Calif., a corporation of California
Application July 17, 1956, Serial No. 598,448
9 Claims. (Cl. 272—18)

1. Amusement apparatus, comprising: an enclosure simulating the interior of a rocket ship and including a plurality of audience-receiving chairs; a bottom viewing screen disposed in the lower portion of said enclosure and visible to the occupants of said chairs; a top viewing screen disposed in the upper portion of said enclosure and visible to the occupants of said chairs; motion picture film projecting means for directing continuous pictures upon said screens, the pictures projected upon said lower screen simulating the view from the rear of an actual rocket ship during flight and the pictures projected upon said upper screen simulating the view from the front of an actual rocket ship during flight; sound re-

producing means for directing realistic sounds simulating those of an actual rocket ship during flight to said enclosure; and means for periodically imparting vibration to said chairs.



2,861,807
RACETRACK GAME APPARATUS
Etienne Dormoy, San Diego, Calif.
Application January 15, 1957, Serial No. 634,348
4 Claims. (Cl. 273—86)



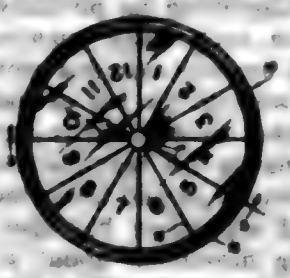
1. A racing game apparatus comprising an elongated, substantially horizontal plate member having parallel vertical slots extending longitudinally thereof; a similarly elongated platform member extending in generally parallel relation beneath said plate member; hinge means connecting a pair of adjacent ends of said members for relative movement of the members about a horizontal axis; spring means operatively interposed between said members to vibrate one of said members about said axis when said one member is suitably manipulated and released; and ambulatory elements in said slots and having lower portions engaging said platform member and upper portions engaging said plate member; said portions being spaced apart a distance slightly greater than the maximum distance between the corresponding surfaces of said members engaged by said portions; all of said ambulatory elements being pivotally vibrated as a group by said one member.

2,861,808
REVOLVING TARGET
Clair Oster Musser, Studio City, Calif., assignor to Knickerbocker Plastic Co. Inc., North Hollywood, Calif., a corporation of California
Application January 12, 1956, Serial No. 552,693
2 Claims. (Cl. 273—102.1)

1. A revolving target which comprises: a housing having a front side provided with indicia of a face; means defining a first opening corresponding to part of said face in said front side of said housing; means defining a plurality of other openings corresponding to other parts of said face in the front side of said housing; a shaft mounted in said housing and extending perpendicularly with respect to said front wall of said housing at a location such that its axis intersects said face at a point located within the outline formed by said openings; a disc disposed behind said front side of said housing and having an enlarged aperture therein of greater diameter than said shaft disposed in surrounding relationship with respect to said shaft, said disc including portions adapted to be located behind said openings in said front side of said housing and having indicia of said face located thereon; spring means connected to said disc tending to rotate said disc about the axis of said shaft; a plurality of projections on the periphery of said disc; and a stationary abutment in said housing located in the path of movement of said

projections adjacent said first opening and terminating a short distance behind said path so that a projection may be freed from contact with said abutment by rearward movement of such projection in response to the impact of a projectile passing through said first opening whereby the expression on said face will be changed each time a projectile is passed through said first opening.

2,861,809
COMBINATION DICE AND CARD GAME
Karl P. Fischl, Plandome Manor, N. Y.
Application June 13, 1956, Serial No. 591,171
2 Claims. (Cl. 273—141)

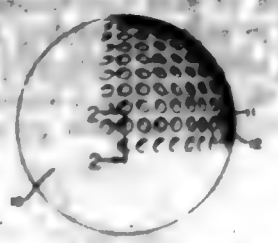


1. A combined dice and card game consisting of a circular tray-shaped board, a ring member disposed within the board and spaced from the sides thereof, a plurality of upstanding partition members within the board radiating from the center thereof and dividing the said board into pie-shaped compartments and the space between the said ring and board wall into a plurality of upstanding card receiving pockets formed in the periphery of said board, a spinner member carried within the tray-shaped member spaced from the bottom thereof consisting of a transparent disc co-extensive with the inside diameter of the ring member, a pivotally mounted pointer carried beneath the disc and a knob extending above the disc for spinning the said pointer to indicate a specific pocket, a plurality of problem defining cards bearing dice throwing instructions thereon, removably carried within the board pockets and a plurality of dice to be thrown upon the disc for solving the various problems posed by the cards.

2,861,810
GOLF BALL
Franklin Veatch, Lyndhurst, Ohio
Application December 16, 1954, Serial No. 474,451
2 Claims. (Cl. 273—213)

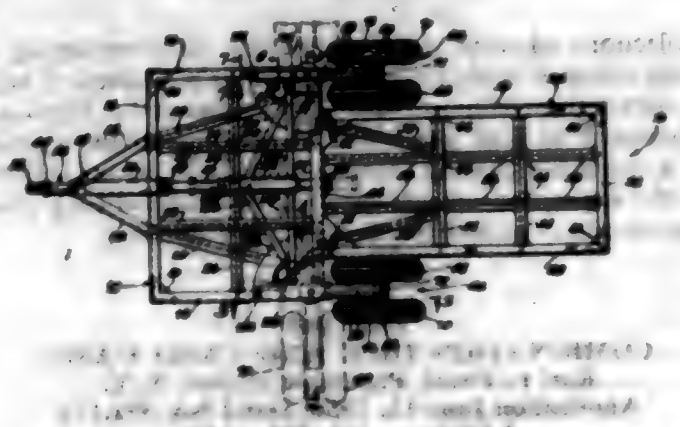
1. A golf ball having a plurality of depressions in the outer cover of said ball, each of said depressions being

coated with an inner layer of a flexible, mirror-like metallic film not over about 0.0001 inch thick and an outer



layer of a tough, transparent lacquer, and each of said depressions having a base of at least 0.001 square inch.

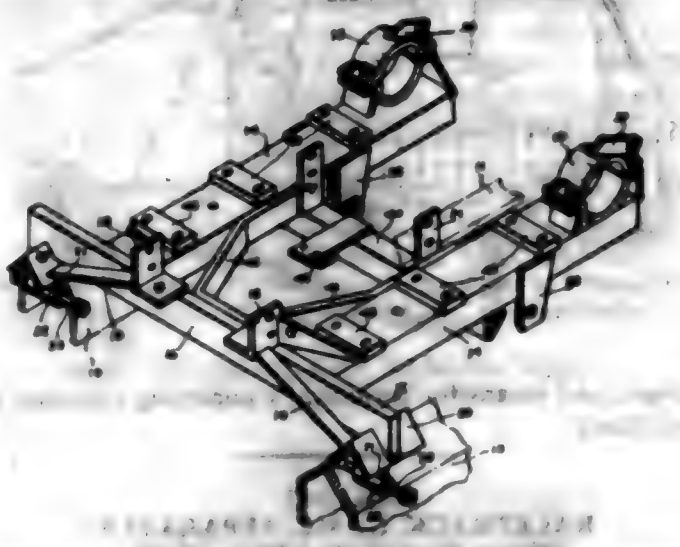
2,861,811
TRAILER CHASSIS LOWERING MEANS
Hans Gustav Lassen, Chicago, Ill., assignor of one-third to Herbert R. Lewis, Oak Park, and one-third to Adolph E. Hutcher, Verdon, Ill.
Application December 21, 1956, Serial No. 629,980
15 Claims. (Cl. 280—43)



1. In a suspension mechanism for supporting a vehicle chassis having longitudinally extending frame members, in combination, a supporting bar pivotally mounted medially of its ends on each frame member for swinging movement about a vertical axis and movable between a retracted position wherein the bar extends longitudinally of the frame member to which it is pivoted and an extended position wherein the rear portion of the bar extends laterally outwardly of said frame member at a right-angle thereto, said supporting bar also being mounted for limited rocking movement about a horizontal axis passing through said vertical axis, a wheel assembly including a supporting wheel carried at the extreme rear end of said supporting bar, antifriction means mounted on the extreme forward end of said supporting bar, a spiral ramp plate fixedly secured to said frame member and underlying said antifriction means and of a curvature conforming to the circular sweep of said antifriction means when said supporting bar is swung in either direction about said vertical axis, said ramp plate having an elevated portion against which said antifriction means bears when the supporting bar is in its retracted position, a lower portion against which said antifriction means bears when the supporting bar is in its extended position, and an intermediate inclined ramp portion connecting said elevated and lower portions.

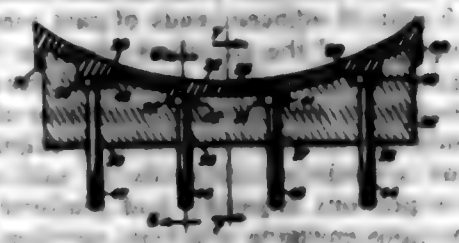
2,861,812
EQUIPMENT MOUNTING SUB-FRAME ASSEMBLY FOR TRACTORS
John S. Pfaik, Ware, Mass.
Application August 27, 1957, Serial No. 680,541
4 Claims. (Cl. 280—106)

1. In an equipment mounting sub-frame assembly for attachment to a tractor having a frame, an axle and track frames on opposite sides of said frame, said assembly comprising a pair of spaced parallel supports, a transverse connecting member connected to said supports, first connecting means carried by each of said supports for connection to the tractor axle, second connecting means spaced from said first connecting means for connecting said assembly to the tractor frame, said transverse connecting member having its end portions adapted to overlie the track frames of the tractor, and said overlying portions being complementary to said track frames,



and means for connecting said overlying portions to said track frames, said connecting means comprising depending lugs carried by each of said overlying portions and tubular portions adjacent the lower end of each of said lugs and a connecting member adapted to extend through aligned openings in said track frames and each of said tubular portions.

2,861,813
IMPROVED CRADLE FOR WARP DOLLY
Fred E. Rainey, Anderson, S. C.
Application October 4, 1955, Serial No. 538,397
2 Claims. (Cl. 280—143)



2. In combination, a base adapted to be mounted on a dolly frame, a cap on said base, said cap having a smoothly curved surface which provides a seat on which to accommodate a mill warp, projections extending from said cap, said base having recesses therein accommodating said projections in order to interlock said cap to said base, a skirt depending from said cap and extending around the edges of said base, means in said skirt and connected to said base for securing said cap to said base, the last mentioned means including a wire frame embedded in said skirt, said base having fasteners secured thereto and also embedded in said skirt, said fasteners holding said wire frame secured to said base, said skirt having projections extending therefrom, said base having curved slots in which the last mentioned projections are located, and connecting webs extending from the last mentioned projections to a spaced portion of said cap and passing through said passages.

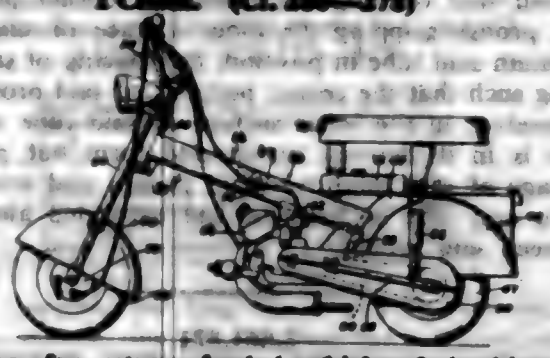
2,861,814
HAND OR FOOT OPERATED SCOOTER
Richard L. Rebhuhn, Saginaw, Mich.
Application January 31, 1957, Serial No. 637,469
10 Claims. (Cl. 280—243)

1. A scooter construction operable selectively by hand or foot comprising a framework; a rear wheel; means

journalling said rear wheel for rotation on said framework; a handlebar assembly including a steerable front wheel; means mounting said assembly on said framework for pivotal movements about a substantially horizontal axis; a unidirectional clutch device; means mounting said clutch device for driving connection with said rear wheel; means interconnecting said assembly and said clutch

device operable upon pivotal movement of said assembly in one direction for drivingly connecting said clutch device and said rear wheel; and means reacting between said framework and said assembly for selectively enabling and disabling pivotal movement of the latter for respectively enabling hand or foot operation of said scooter construction.

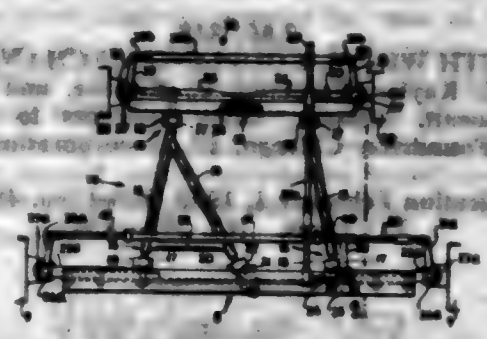
2,861,815
KNOCKDOWN MOTORCYCLE FRAME
Francis G. Williams, London, England
Application November 19, 1956, Serial No. 623,176
Claims priority, application Great Britain November 30, 1955
1 Claim. (Cl. 280—278)



A frame for a two wheeled vehicle of the bicycle or motorcycle type, comprising readily separable front and rear portions, the front portion including a head tube for mounting a steerable front wheel and handlebars, the rear portion including means for mounting a rear wheel and seat, said front and rear portions of the frame each including a part of a single longitudinal member of flattened oval cross-section, one of said parts having a pair of spaced projections adapted to enter the end of the other part and the other part being slotted transversely, said spaced projections comprising tubes each provided with a transverse notch facing each other, the end of said other part including longitudinally slotted tubes to receive the projecting tubes, said longitudinally slotted tubes having transverse slots in alignment with the slots of the projecting tubes, and a locking member inserted between said projections and having a flat head engaging within the transverse slots in said tubes.

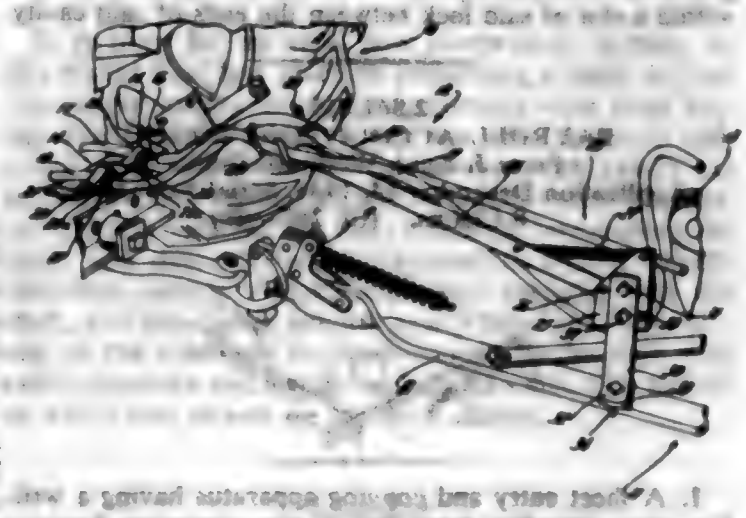
2,861,816
TRANSPORTABLE WHEELED APPLIANCES WITH INTERCONNECTED STEERING MEANS
Joseph Armstrong Whitehill, Shutterford, near Bewdley, and Marshall F. Reeves, Birmingham, England
Application August 24, 1956, Serial No. 605,971
Claims priority, application Great Britain August 26, 1955
3 Claims. (Cl. 280—419)

2. A tractor propelled wheeled appliance having an axle at the opposite ends of which steerable ground wheels are carried, the said wheels being coupled together by a track rod and the said axle being connected to the front axle of the tractor which also carries steerable ground wheels at opposite ends thereof and which wheels are also coupled together by a track rod, the connection between the two axles being by a first member which comprises a triangular strut two corners of which are coupled to



one of the axles and the third corner of which is coupled to the other axle, and by a second member which comprises a rod coupled at its opposite ends to the respective axles, each of the couplings including a universal joint, the rod being adapted to lie in the same plane as the strut but being inclined to each of the sides of the strut, and the two track rods being coupled together for simultaneous steering movement.

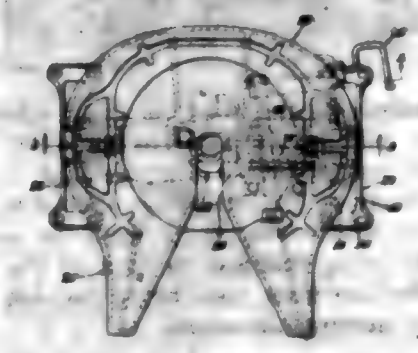
2,861,817
HOSE HOLDER FOR SEPARABLE FLUID CONNECTION BETWEEN VEHICLES
Charett B. Greeson, Rockford, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Original application September 20, 1949, Serial No. 116,644, now Patent No. 2,717,136, dated September 6, 1955. Divided and this application November 4, 1954, Serial No. 466,929
3 Claims. (Cl. 280—421)



1. For use with a propelling vehicle unit and a trailing unit interconnected for forward travel in unison by means including a separable hitch, wherein the propelling vehicle and the trailing unit respectively have fluid devices spaced apart longitudinally when the propelling vehicle and unit are normally hitched and wherein the fluid devices are interconnected by a flexible fluid transmitting conduit that is connected to the propelling vehicle fluid device by a coupling that is separable in response to the application of excessive forces thereto, as when the hitch separates and the propelling vehicle continues ahead without the trailing unit; the combination of said flexible fluid transmitting conduit, said conduit having a homogeneous resilient rubber-like outer wall, and a conduit carrier comprising an elongated member having at one end thereof means for supporting it to extend upwardly to a second end portion intermediate the fluid devices, and said elongated member having affixed thereto a substantially rigid helix, having an internal

diameter slightly smaller than the external diameter of the hose so as to press gently into the external surface of said yieldable outer wall sufficiently to secure said hose against axial movement in said helix, whereby sufficient pull may be exerted on said hose by said helix to cause disconnection of said separable coupling.

2,861,818
FIFTH WHEEL COUPLING MECHANISM
Frank H. Kayler, Frederick C. Kulicke, and Elmer J. Greenawalt, Alliance, Ohio, assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Application February 1, 1955, Serial No. 485,394
20 Claims. (Cl. 280—434)



1. In a fifth wheel coupling assembly, a wheel plate defining a pin receiving slot, a pin engaging jaw movably carried by said plate adjacent said slot, said jaw comprising spaced front and rear arms, a lock movably carried by said plate, said lock having at one end thereof protruding lips engageable with the front arm of said jaw and having at the other end thereof a cavity therein, a spring disposed for the major portion of its length within said cavity and compressed between said plate and said lock and maintaining said lock in pressured engagement with said jaw, and an operating bar received within a slot of said lock between the ends of said cavity.

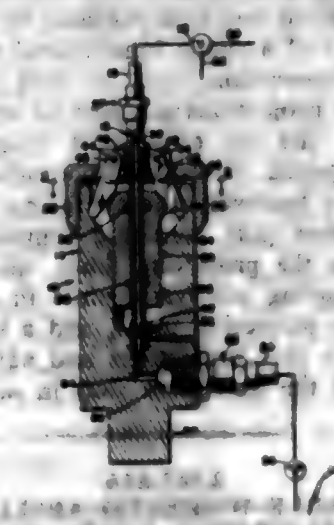
2,861,819
PAYROLL ACCOUNTING BOARD
Peter J. Apel, Westport, Conn.
Application December 14, 1956, Serial No. 628,286
8 Claims. (Cl. 282—29)

1. A sheet entry and copying apparatus having a writing area extending laterally of the apparatus between the foot and head thereof and for use in making entries on a plurality of sheets positioned thereon in superimposed relation with duplication media therebetween comprising a frame member, an elevating platform to rigidly support a stack of sheets of entry and mounted on said frame member for vertical movement to move said stacks of sheets of entry to desired vertical position, sheet guide means adjacent the elevating platform to releasably hold said stack of sheets of entry pre-positioned longitudinally and laterally with respect to the writing area, a raised platform fixed to said frame member along a side edge of said elevating platform to rigidly support at least part of another sheet of entry, a carrier to grip and hold the second-mentioned sheet of entry pre-positioned laterally with respect to the writing area over the first-mentioned stack of sheets of entry and over the raised platform and mounted on said frame member for longitudinal movement from the foot to and from the head of the apparatus to move said second-mentioned sheet of entry longitudinally with respect to the underlying stack of sheets of entry, and drive means to advance said carrier longitudinally and to simultaneously advance said elevating platform vertically through a distance related to the distance of advancement of said carrier.

2,861,820
RESILIENT TUBE TO PLATE CONNECTION
Jack H. Anderson, Fenton, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 6, 1956, Serial No. 563,643
1 Claim. (Cl. 285—189)

A tube and plate assembly for directing light beams comprising a supporting plate having an opening therein for the passage of said beams through said plate, a single pair of substantially flat prongs integral with said plate and bodily lying in substantially parallel planes extending substantially normal to one surface of said plate and at opposite sides of said opening, each of said prongs having outer edges diverging toward said plate, said edges terminating in oppositely directed corner portions that are spaced from said plate, and a flexible cylindrical tube positioned with one end abutting said plate around said opening and with said corner portions of said prongs gripping the inner surface of said tube to maintain said tube in position, the spacing of said prongs being such that the corner portions of said prongs imbed themselves in the inner surface of said tube when said tube is in its normal undistorted form but permit the passage of said tube over said prongs and into position when said tube is distorted and expanded along a line between said prongs.

2,861,821
FLUID PRESSURE ACTUATED COUPLING
James R. R. Hartee, Washington, D. C.
Application May 29, 1956, Serial No. 588,197
3 Claims. (Cl. 285—306)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A conduit coupler comprising a socket portion and a stem portion, a fluid discharge passage provided in one end of the socket, a fluid receiving passage formed in the stem and extending the length thereof and opening into the fluid discharge passage in the socket, means connecting the discharge passage of the socket to a discharge conduit, means connecting the stem passage

axle at the opposite ends of which steerable ground wheels thereto a substantially rigid helix, having an internal

to a supply conduit, said socket portion being provided with an axially extending bore open at one end thereof, an inwardly extending, annular flange provided on the socket at the open end of the bore, a piston slidably mounted on the stem for movement into and out of the bore of the socket, said piston having an outer end thereof positioned in the outer open end of the bore and subject to ambient pressures and an inner end thereof within the inner end of the bore and forming therewith a fluid chamber, cam faces formed on said outer end of said piston, means for admitting fluid under pressure from said stem to said chamber to thereby force the piston outwardly of the bore, a plurality of locking members pivotally mounted at one end thereof to said stem and having intermediate portions thereof positioned in the path of travel of the outer end of the piston and engageable by said cam faces thereon, said locking members having opposite end portions thereof adapted to engage the underside of the annular flange on the open end of the socket, the construction and arrangement being such that the locking members are held in locking engagement with the underside of the flange so long as fluid under pressure is supplied to the fluid chamber, whereas upon discontinuance of the supply of fluid under pressure to such chamber, the piston is free to move relative to the stem and bore to thereby disengage the locking members from the underside of the flange.

2,861,822

LARGE DIAMETER TYPE PIPE COUPLING WITH SEPARABLE PARKING FOLLOWER

Roger E. Risley and Robert N. Paterson, Bradford, Pa., assignors to Dresser Industries, Inc., Dallas, Tex., a corporation of Pennsylvania

Application June 25, 1953, Serial No. 364,828
2 Claims. (Cl. 285—348)

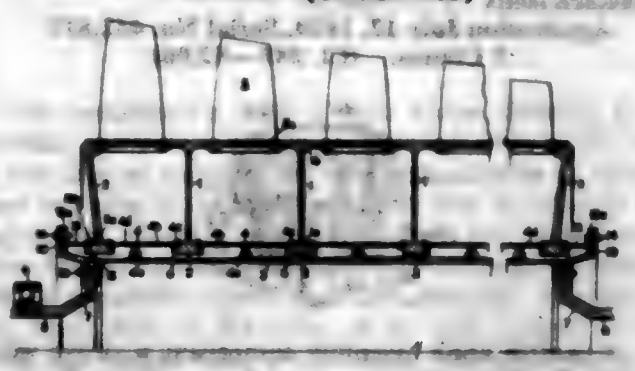
1. In a coupling for large-diameter plain end pipe, a continuous middle ring for receiving the end portions of two pipe sections to be coupled, opposite end portions of the middle ring defining annular gasket recesses open to the ring ends and to the inner surface of the ring, annular gaskets in said recesses, followers for applying pressure to said gaskets, said followers consisting of a plurality of like follower bar portions having approximately the same curvature as the ring and adapted to enter said gasket recesses so that the axially inner faces of the follower bar portions engage the gaskets, and a plurality of like separate triangular pressure plates disposed approximately perpendicular to the ring and having their base portions bearing on the axially outer faces of said follower bar portions and the apices of the triangles pointing radially outwardly, whereby each follower when viewed in a section including the axis of the ring and follower is L-shaped with the follower bar portion defining an inner arm portion entering said gasket recess and the pressure plate defining a radial portion spaced from the end face of the adjacent ring end, said followers being free from bearing contact with said middle ring and the radial portions of said followers being provided with radially-spaced apertures, tension members extending through aligned radially inner apertures in the followers at opposite ends of said ring, and nuts on said tension members, the tightening of said nuts on said tension members drawing the opposite followers toward one another to apply pressure to the gaskets, and compression members extending between said followers and engaging in the radially outer apertures in the radial portions, said tension members and said compression members being free from engagement with said middle ring, said tension members being spaced circumferentially from said compression members and the sum of the tension members and the compression members being at least three for each pressure plate, said tension members and said compression members being disposed symmetrically in each pressure plate with respect to a plane midway between the ends of the plate and including the axis of the ring, said tension members being disposed radially inwardly from the compression members and extending between opposite pressure plates close to the middle ring and when pressure is applied to the gaskets in said gasket recesses the radially outer portions of said radial portions are held apart by said compression members.

2,861,823

BLADED ROTORS FOR COMPRESSORS, TURBINES AND THE LIKE

Sydney William Henry Perry, Cove, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company

Application November 8, 1954, Serial No. 467,562
Claims priority, application Great Britain December 24, 1953
3 Claims. (Cl. 287—52)



1. A rotor for an axial flow compressor, turbine, or like bladed fluid flow machine comprising a shaft; at least two coaxial axially spaced blade-carrying rotor discs having axial bores through which the shaft extends with radial clearance, the discs being formed with axially extending central spigots on their adjacent faces; an elongated sleeve between the discs coaxially surrounding the shaft, said sleeve having intermediate its ends a radially thickened portion with an axial bore engaging with the shaft, and thin-walled tubular axial extensions from each side of the thickened portion surrounding the shaft with radial clearance and having their ends formed with sockets in which said spigots on the discs engage.

2,861,824

RETAINING RINGS

Hugo Wurzel, Bronx, N. Y., assignor to Waldes Kohinoor, Inc., Long Island City, N. Y., a corporation of New York

Application February 7, 1956, Serial No. 563,912
1 Claim. (Cl. 287—52)

An internal spring retaining ring adapted for assembly in a groove provided therefor in a housing bore and thereupon to form an artificial shoulder for axially locating a machine part in said bore comprising an open-ended ring body of spring material having a gap between its open

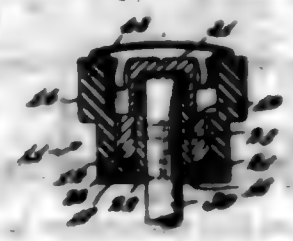
movement from the foot to and from the head of the discharge conduit, while connecting the main passage

ends enabling said ring body to be compressed in assembly, the section heights of the ring body decreasing progressively from its middle section to substantially its free end whereby the ring maintains circularity when compressed, the outer free diameter of said ring being approximately 1.12+ of the housing bore diameter and the width of said gap being approximately 12–15% of the outer circumference of the ring body, said ring body contracting to an outer diameter slightly less than the bore diameter when its free ends are brought substantially together and upon release following its first such contraction, expanding to an outer diameter which is less than its initial free diameter but substantially equal to the diameter of the circle of the groove bottom, the construction and arrangement being such that in said contraction the ring body takes on a slight permanent set by an amount such that its free diameter after release is not smaller than the initial free diameter of an elastically deformable ring having the same section heights and adapted for assembly in the same housing bore.

2,861,825
CONTROL KNOB

Ralph Abrams, Sharon, and Warren H. West, North Andover, Mass., assignors to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts

Application July 12, 1954, Serial No. 442,812
5 Claims. (Cl. 287—52.06)



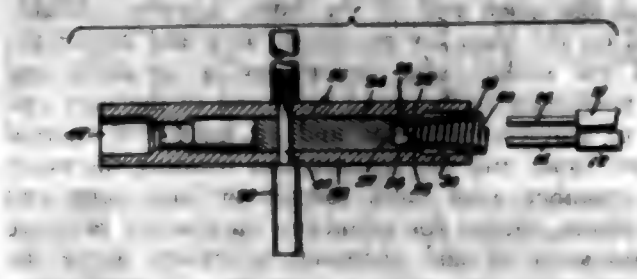
1. A control knob assembly comprising a sleeve which is longitudinally split at one end for radial resilience at that end, which has a smooth bore throughout its length adapted to accommodate a shaft, which has an outside threaded end portion, next to said threaded portion a smooth portion with an annular bead, and which has at said split end an annular taper next to said smooth portion, and a polygonal head; a knob body which at one side circularly encompasses said smooth portion and said taper of said sleeve and polygonally encompasses said head of said sleeve and has on that side a tapered recess for said taper of said sleeve and an annular groove for but wider than said bead, and which has on the other side an axial recess surrounding said threaded end portion of said sleeve, clearing it with an annular space between sleeve and knob body; and a nut having tool engaging means, which nut fits said threaded end portion of said sleeve and which nut fits with clearance said recess of said knob body, when engaging said end portion; whereby, upon tightening of the nut and consequent axial movement between sleeve and knob body, said split end of said sleeve is radially compressed to engage the shaft.

2,861,826
SPRING TYPE CONNECTOR

William G. Schinske, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware

Original application October 11, 1954, Serial No. 461,391. Divided and this application December 1, 1955, Serial No. 558,448
2 Claims. (Cl. 287—76)

1. For use in forming a connection of the screw-on type between the stripped ends of a plurality of insulated wires or the like, a wire formed into a coil which is generally tapered from end to end, the turns of the coil being closely and uniformly spaced, each being substantially in contact with its adjacent turns, a portion of the end of the wire in the last turn at the small end being axially distend-

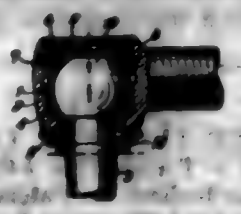


ing and in spaced relation to the adjacent turn for a substantial peripheral extent to aid in turning the coil onto the stripped ends of the wires.

2,861,827
BALL AND SOCKET JOINTS

Viktor Langen, Meererbusch, and Josef Latza and Jakob Vogt, Duesseldorf-Oberkassel, and Johannes Orthaß, Aarath (Lower Rhine), Germany, assignors to A. Ehrenreich & Cie., Duesseldorf-Oberkassel, Germany, a body corporate of Germany

Application November 13, 1953, Serial No. 393,858
5 Claims. (Cl. 287—90)



1. Ball and socket joint particularly for the steering gear of a motor vehicle comprising a socket having an aperture, a ball head in said socket having a stud extending through said aperture, an apertured rigid shell in said socket extending inwardly from said aperture and having a curved inner surface corresponding to and in supporting engagement with the lower portion of the surface of said ball head and a cylindrical portion extending beyond the meridial portion of said ball head, and an elastic lining disposed intermediate said shell and the wall of said socket, said lining extending from proximate said aperture over the lower portion of the outer surface of said shell, and the adjacent portion above said lower portion of said outer surface of said shell and the opposite portion of the inner wall of said socket defining a gap therebetween.

2,861,828
SHOT HOLE POLE AND COUPLING

Robert E. McMechin and Edwin E. McMechin, Dallas, Tex.

Application July 27, 1953, Serial No. 370,337
5 Claims. (Cl. 287—103)

1. In a shot hole loading pole, the combination of a plurality of elongated pole sections detachably connected end to end, each section comprising a tubular member having a first coupling member and a second coupling member connected to opposite ends thereof, each of the coupling members having a shank portion received in the adjacent end of the tubular member and a head portion capable of being detachably connected to the adjacent coupling member of an adjoining section, the head portions each having a shoulder formed thereon for engagement by the adjacent end of the tubular member, the shank portions each having a cylindrical inner end connected to the head portion by a plurality of circumferentially spaced, tapered longitudinal ribs each extending radially outwardly from the longitudinal axis of the shank portion, the shank portions being secured in the tubular members by friction fit and being additionally secured

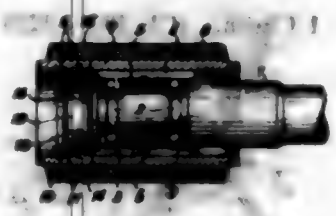
therein by pins extending transversely through the respective cylindrical end portions and the adjacent walls of the tubular member, the head portion of the first coupling member having an arcuate hook formed on the end thereof opposite the shoulder, the hook having a side opening therein, and the head portion of the second coupling member being formed with a bifurcated end portion opposite the shoulder and having a transverse bar connecting its outer extremities to thereby define an opening capable of receiving the hook of an adjacent coupling member corresponding to the first coupling member when the coupling members are disposed at right angles with respect to each other.

2,861,839

DETACHABLE CONNECTION ARRANGEMENT

Bertil Johansson, Goteborg, Sweden, and Erik Wilhelm Ehn, Stuttgart-Bad Cannstatt, and Walter Sommer, Leonberg, Germany, assignors to SKF Kugellagerfabriken G. m. b. H., Stuttgart-Bad Cannstatt, Germany

Application October 24, 1955, Serial No. 542,214
Claims priority, application Germany October 23, 1954
8 Claims. (Cl. 287—119)



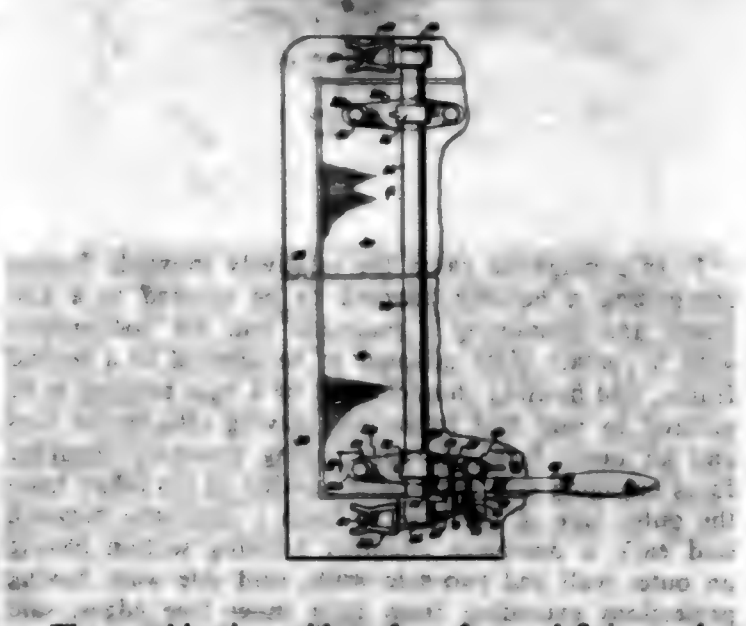
1. A detachable connection arrangement comprising, in combination, an outer hollow cylindrical member and an inner cylindrical member arranged therewithin for axial movement relative thereto, one of said members being formed with receiving means along a cylindrical surface thereof; connecting means having a radially projecting resiliently yieldable portion adapted to be received within said receiving means; and securing means for securing said connecting means to the other of said members in such a manner that said connecting means and said other member are axially movable with each other, said connecting means being so shaped as to be moved into an engaging position wherein said projecting portion thereof is received by said receiving means when said members are moved relative to each other in one axial direction into a coupled position and moved out of said engaging position when said members are moved relative to each other in the opposite axial direction out of said coupled position, said projecting portion resiliently yielding during such movements.

2,861,839

DOOR LOCKS ADAPTED TO MUTUALLY ALIGN DOORS AND DOOR FRAMES AND THE LIKE

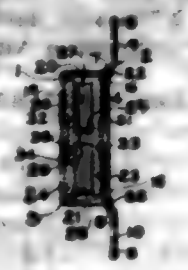
Walter Bennett, Los Angeles, Calif., assignor to Utility Trailer Manufacturing Company, Los Angeles, Calif., a corporation of California

Original application May 4, 1953, Serial No. 352,925, now Patent No. 2,764,443, dated September 25, 1956. Divided and this application August 6, 1956, Serial No. 602,369
1 Claim. (Cl. 292—340)



The combination with a door frame defining a door opening and a door hinged at a vertical edge to the frame at one side of the door opening and adapted to close the door opening by swinging inwardly into it, of door locking means adapted to forcibly aline the door with the door frame, said locking means embodying in combination a vertically extending shaft rotatably mounted on the outer face of the door on an axis spaced laterally from the hinged edge of the door, said shaft being substantially immovable in an axial direction with relation to the door, the ends of said shaft projecting beyond the upper and lower edges of the door and overhanging the upper and lower elements of the frame when the door is closed, means for forcibly rotating said shaft, elongate locking tongue elements fixed one each on each of the overhanging ends of the shaft and projecting radially therefrom, box-like keeper elements mounted one each on the upper and lower elements of the frame near said overhanging shaft ends and having openings which extend in horizontal directions generally parallel to the plane of the frame, said tongue elements adapted severally to enter said keeper elements, on rotation of the shaft, with a substantially horizontal swinging movement having a component in a direction outwardly of the door and a component in a direction parallel to the plane of the door, the keeper elements having outer opening-defining walls with which the tongues when in the keeper openings engage in their componental movement outwardly of the door to force the door closed, said tongue and keeper elements having interengaging upper and lower surfaces, the upper and lower engaging surfaces on at least one of said elements tapering toward each other in the direction of entry of the tongue element into the keeper element to force the frame and door relatively in a vertical direction simultaneously with the forcible closing of the door, the outer opening-defining walls of the keeper elements having inwardly facing locking surfaces convex in horizontal planes, and the tongue elements having complementary outwardly facing surfaces concave in horizontal planes and which engage with said convex surfaces and overhang said convex surfaces at each of the ends of the tongues to prevent relative movements of the door and frame in horizontal directions in their plane.

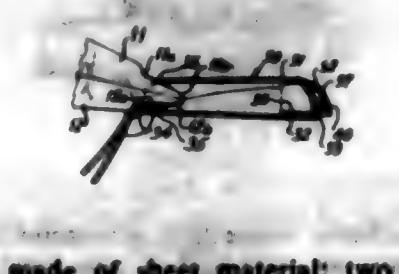
2,861,831
MAGNETIC CATCH
Morris Loeb, New York, N. Y.
Application January 13, 1958, Serial No. 708,783
6 Claims. (Cl. 292—251.5)



1. In a magnetic catch for relatively movable frames comprising a housing adapted to be secured to a first frame and containing a magnetic unit for cooperation with a contact plate adapted to be secured to a second frame, said housing characterized by a base adapted to be secured to said first frame and having attachment ears and an outer face, the ears having structure engaging faces engaging said first frame parallel to but offset from the outer face of the base to form a clearance between said ears, a one-piece chamber forming section having an outer wall and two side walls, said side walls having projections extending from their inner free edges, said base having clearances to receive the projections of said side wall, said projections being upset over said base in the clearance between said ears to anchor said base to said side walls, and a magnetic unit anchored to, but movable between said outer wall and said base, said magnetic unit having parallel metal plate portions throughout their width projecting from one of the edges of said outer wall and base for engagement with said contact plate, a magnet disposed between said metal plate portions with one of its edges spaced inwardly from the projecting edges of said metal plate portions, said magnet having an intermediate opening, said plate portions having intermediate projections in alinement with said intermediate opening and extending into the same to anchor the plate portions to said magnet, said plate portions having intermediate depressions, said outer wall and base having intermediate projections extending into the depressions in said plate portions to anchor said magnetic unit in place, and the projections of said outer wall and base being smaller in diameter than the depressions in said plate portions in diameter to allow freedom of movement of said magnetic unit for adjustment.

2,861,832
ROTARY BOLT DOOR LATCH
Robert M. Hebert, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 19, 1955, Serial No. 482,705
1 Claim. (Cl. 292—280)

An automobile door latch of the character described, including: a latch frame having a body lying in a plane generally parallel to the jamb face of the door; latching means comprising a multitoothed bolt rotatably mounted on the outside of said body and a multitoothed ratchet mounted on the inside of said body for rotation with said bolt; a detent pivotally mounted on said body and having a foot adapted to engage said ratchet to block rotary movement of the ratchet and bolt in one direction; a multiplier lever pivotally mounted on said body and having a short first arm connected to said detent, a longer second arm and a short third arm; an operating link; means for mounting said link on said body adjacent said second arm for slidable movement and for pivotal movement between operative and inoperative positions, said second arm lying in the path of sliding movement of said link when the link is in operative position and lying outside the path of said sliding movement of said link when the link is in inoperative position; means for pivoting said link; means for moving said link longitudinally, comprising a bell crank pivotally mounted on said body below said link and having an upwardly extending first arm terminating adjacent said link for sliding said link



upon pivotal movement of said bell crank, said bell crank having a horizontally extending arm which is shorter than said bell crank first arm; outside operating means comprising a push button located remotely from said latch frame; means including a rod and lever connecting the horizontally extending arm of the bell crank to said push button; and inside operating means comprising a handle located remotely from said latch frame, a hook lever on the latch frame having a hook portion overlying the third arm of said multiplier lever and a rod connecting the hook lever and the handle.

2,861,833
SEAL STRUCTURES
Henry Nierhaus, Scarsdale, N. Y., assignor to Stoffel Seals Corporation, Tuckahoe, N. Y.
Original application June 7, 1950, Serial No. 166,721. Divided and this application November 10, 1953, Serial No. 391,157
1 Claim. (Cl. 292—322)

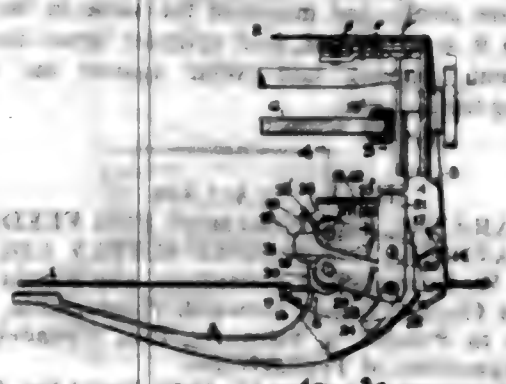
In a seal made of sheet material; two flap sections hingedly connected to each other in abutting relation along a bending line, respective interengageable means adjacent the free ends of said sections for closing said seal, each of said sections being provided with an arcuate-shaped and centrally located rupture-opening spanning said bending line intermediate the outer ends of the latter, said opening extending in a direction substantially at right angles to said bending line to thereby admit the insertion of a tool in said opening after closing of said seal for the purpose of rupturing the latter at said bending line, the outer ends of one of the sections at said bending line being sufficiently cut off, so that said bending line is reduced to two bending line portions separate from, but aligned with each other with said opening located between said bending line portions, the extent of said opening at said bending line corresponding to either of said two bending line portions to ensure sufficient rigidity of the flap sections at said bending line.

2,861,834
CONTROL MECHANISM FOR DOOR LATCHES

Edwin L. Allen, Cleveland Heights, Ohio, assignor, by mesne assignments, to Lisle W. Menzimer, trustee, Rockford, Ill.

Original application February 16, 1948, Serial No. 8,565, now Patent No. 2,573,679, dated November 6, 1951. Divided and this application August 6, 1951, Serial No. 240,523

21 Claims. (Cl. 292—336.3)



14. In a latch control system for an automobile door having an outer panel, an inner panel and a latch between the two panels, a supporting bracket on the inside face of one of said panels, a door handle pivoted on said bracket for swinging movement relative thereto, a latch actuating element mounted on said bracket out of contact with said panel, a return spring for said latch actuating element, and a spring operatively connected to said handle to be placed under actuating stress by the actuation thereof about the pivotal axis of the handle on said bracket and through which said latch actuating element is actuated when the resistance to the actuation of the latch actuating element is normal, said latch actuating element and spring being inaccessible through the handle.

2,861,835
LITTER RETRIEVING CANE

Joseph J. Smith, Bridgeport, Conn.

Application June 20, 1955, Serial No. 516,697

1 Claim. (Cl. 294—19)

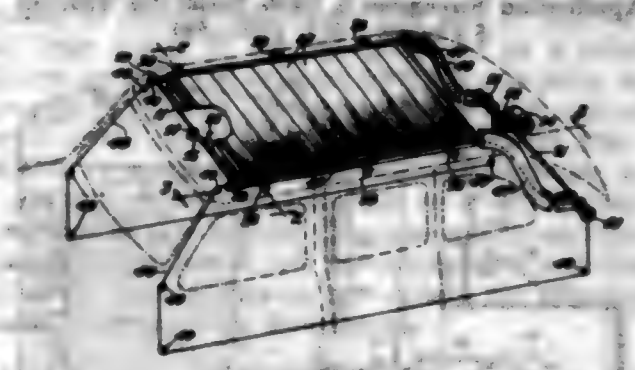
A litter retrieving cane comprising, a cane shaft whose length extends between a handle end and a ground contacting end of the cane, and two sharp-pointed straight parallel spurs projecting laterally from the same side of said shaft at a distance of approximately one half inch from said ground contacting end of the cane and at equal longitudinal distance from said end of the cane, said spurs projecting from said shaft approximately one and three quarters inches and having their axes spaced apart approximately one quarter of an inch whereby to leave said ground contacting end of the shaft free from interference by said spurs in swinging placement of said shaft end on the ground to support the user in walking, the axes of said spurs occupying a common plane that is substantially perpendicular to the length of the shaft.

2,861,836
RETRACTABLE MOTOR VEHICLE TOP

John Gengel, Newark, N. J.

Application August 23, 1954, Serial No. 451,636

2 Claims. (Cl. 296—137)



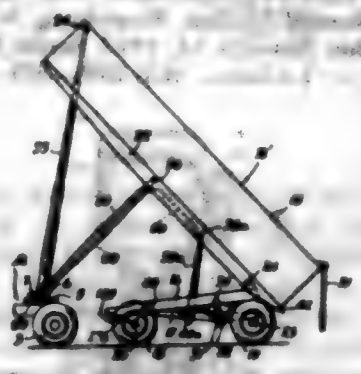
1. A retractable motor vehicle top comprising an open, flexible frame, a curved track adaptable to slidably receive the flexible frame, a plurality of slats rotatably attached transversely across the frame said rotatable attachment permitting the slats to move to and from a shuttered position, a spring for each of the slats normally urging it to shuttering position with respect to the opening in the frame, gears attached to each of the slats, a rack engageable and disengageable with the gears, and means for moving the rack, to engage with the gears.

2,861,837
FRAMELESS DUMPING TRAILER SUPPORT STABILIZING MEANS

Robert L. Merse, Shaker Heights, Ohio, assignor of one-half to Julius L. Glick, Shaker Heights, Ohio

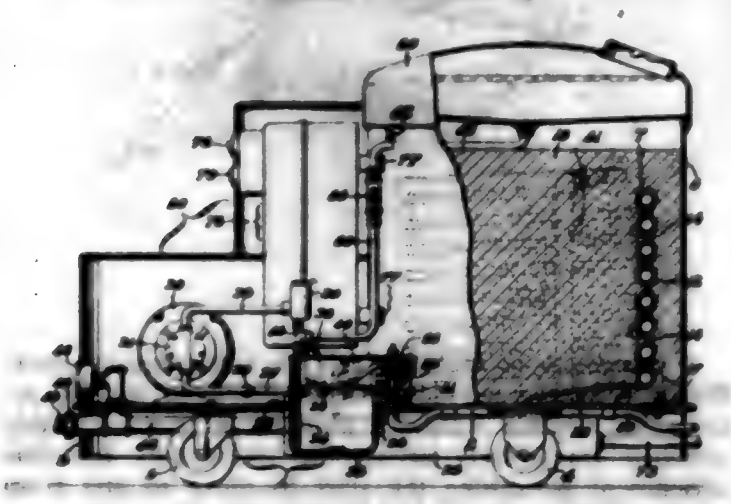
Original application October 2, 1956, Serial No. 613,435. Divided and this application May 15, 1958, Serial No. 736,659

3 Claims. (Cl. 298—38)



1. A dumping semi-trailer for use in combination with a tractor having a fifth wheel support plate comprising a tiltable dump body, a trailer frame pivotally connected at its rear end to the rear portion of said dump body on a first horizontal axis transverse of the dump body, a frame supporting wheel assembly and suspension means connected to said frame, said frame being mounted to swing about a second horizontal axis parallel to and spaced forwardly of said first horizontal axis, a turntable mounted on said fifth wheel support plate, a draft link pivotally connected at its forward end to said turntable and pivotally connected at its rear end to an intermediate portion of said dump body, elevating means for raising said dump body, and means for exerting sufficient downward force on the forward end of said trailer frame to raise said first horizontal axis during dumping which comprises a vertically extensible fluid pressure motor having a series of telescopically connected cylinders, the lowermost of said cylinders being pivotally connected at its lower end to said frame forwardly of said horizontal axes, the uppermost of said cylinders being pivotally connected at its upper end to said dump body.

2,861,838
FLUID SPRAY CLEANING MACHINES
William K. Wyatt and George E. Tradewell, Lansdale, Pa., assignors to Turbo Machine Company, Lansdale, Pa., a corporation of Pennsylvania
Application November 6, 1956, Serial No. 620,745
5 Claims. (Cl. 299—58)

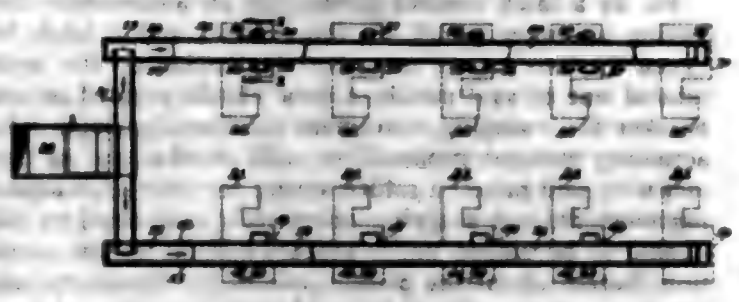


1. In a spray cleaning machine, a pipe coil and electric heating means therefor; a reservoir for cleaning fluid; a conduit for conducting the fluid from a pressure supply source to the reservoir; a motor-driven pump for drawing fluid from the reservoir and introducing it into one end of the coil; a delivery hose connected to the other end of the coil and provided with a spray nozzle; a float-controlled valve for maintaining a constant level of fluid in the reservoir; and a switch means automatically operative upon exhaustion of the fluid in the reservoir in the event of failure of the supply source, to interrupt current flow to the electric heating means and to the motor.

2,861,839
COMBINATION CONTAINER, CAP AND SPRAYER
Russell Mellon, Sloatsburg, N. Y.
Application January 14, 1957, Serial No. 634,027
1 Claim. (Cl. 299—97)

A combined closure cap, container, and sprayer comprising a container for liquid including a neck, a closure cap removably fitted about said neck, a stopper engageable in the neck, said stopper having an axial bore and a spray device including a hollow cylinder engaged in and adjustable in the axial bore of said stopper, a tubular stem extending from the cylinder into the container, and a tubular plunger working in the cylinder, a ball check valve on the stem openable on the suction stroke of the plunger and closable on the pressure stroke thereof to force liquid from the cylinder into the plunger, the plunger further including a discharge nozzle providing an outlet for said liquid and a thumb rest, the cylinder including a collar adapted to bear against one end of the stopper to limit movement of the cylinder axially of the stopper in one direction when the cap is in operative position, the stopper having a longitudinal passage constituting an air vent below the collar for communicating the interior of the container with atmosphere, said collar when engaged against the stopper closing the vent, said closure cap when in operative position on the neck bearing against the thumb rest to shift the plunger through its pressure stroke and maintain the same in the position to which it is so shifted, said cylinder upon downward adjustment carrying said collar against the stopper for sealing the air vent.

2,861,840
APPARATUS AND METHOD FOR FEEDING BULK MATERIAL TO PLURAL SUPPLY LOCATIONS
John W. Fewischill, Cheltenham, and Edwin W. Hine II and George Robert Howard, Philadelphia, Pa., assignors to Procter & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application August 12, 1955, Serial No. 528,082
7 Claims. (Cl. 302—11)



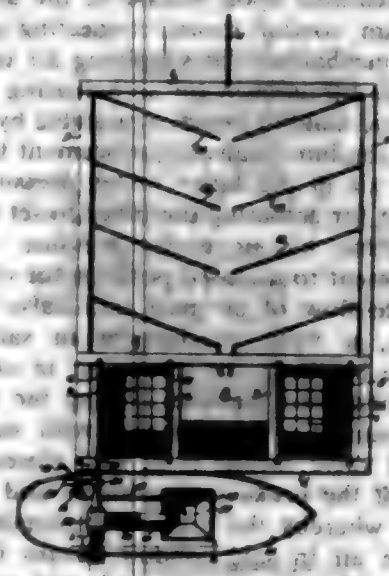
1. In apparatus for feeding bulk material to a plurality of serially arranged spaced locations, the combination comprising conveying means having conveyor run portions movable through successive positions lying in feeding relationship to each of said locations, means for supplying material to said conveying means, blowers mounted laterally and above said conveying means and positioned above said respective locations to blow material from said conveying means into said locations, means for operating each of said blowers through a predetermined time interval during advance of a body of said material forwardly upon said conveying means progressively into the range of each blower, timing means for controlling the performance of said supplying, material advancing and blowing steps in regularly timed repetitive cycles, and means associated with said supply locations and individually responsive to predetermined accumulation of material at said locations for interrupting the operations of said blowers at locations at which said material has accumulated to said predetermined extent, while continuing the operation of the remaining blowers during the continued regularly timed repetitive performance of remaining steps of the cycle.

2,861,841
HYDRAULIC LIFT FOR FISH AND THE LIKE
Arthur H. Fougre, Bellingham, Wash.
Original application December 29, 1952, Serial No. 328,278. Divided and this application April 13, 1954, Serial No. 422,997
6 Claims. (Cl. 302—14)

1. Means for pumping fish alternatively from a marine enclosure and from a normally waterless chamber such as the hold of a ship comprising a tubular conduit having an intake end insertible into said enclosure or said chamber, a water pump having an intake end insertible into a supply of water and having a discharge tube comprising two branch portions, a connection from one branch portion to said tubular conduit for aspirating water entraining fish through the conduit, and a connection from the

2,861,844
brake and a brake mechanism connected therewith actu-

other branch portion insertible into said chamber for supplying thereto water to entrain fish for removal through the intake end of the conduit when inserted in said chamber.

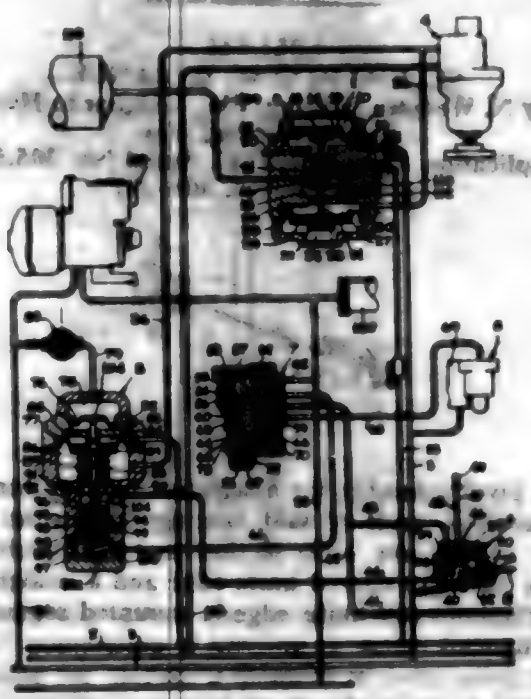


2,861,342

PRESSURE AND VACUUM BRAKE SYSTEMS INTERLOCK APPARATUS

Douglas R. Borst, Pittsburg, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application July 19, 1955, Serial No. 522,966
9 Claims. (Cl. 303—4)



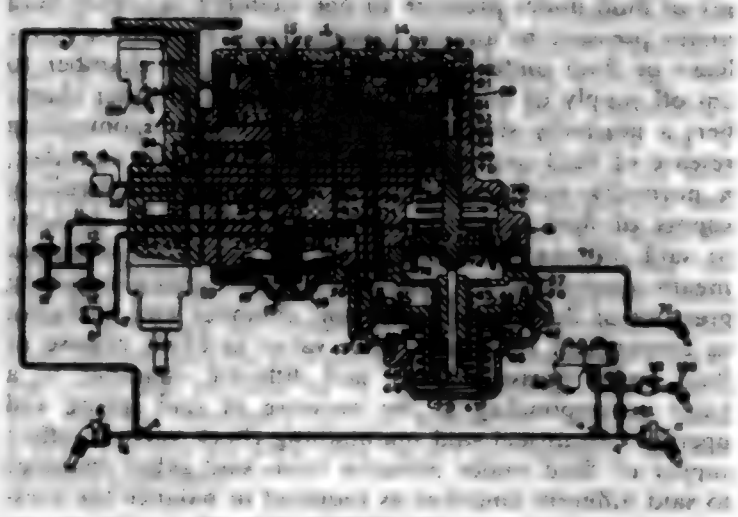
1. In a combined fluid pressure operated and vacuum operated railway brake equipment in which operation of the vacuum operated brake equipment is piloted by the operation of the fluid pressure operated brake equipment, in combination, a brake pipe normally charged with fluid under pressure which may be reduced to initiate a brake application by the fluid pressure operated brake equipment, a vacuum train pipe normally exhausted of fluid under pressure to a certain sub-atmospheric pressure which may be increased to initiate a brake application by the vacuum operated brake equipment; a safety control pipe adapted to be maintained charged with fluid at a preselected degree of pressure, application valve means operative upon reduction in pressure of fluid in said safety control pipe to effect a reduction in fluid pressure in said brake pipe, safety control valve means adapted to be normally positioned for maintaining said safety control pipe charged to said preselected degree of fluid pressure and operable to effect a reduction in pressure in said safety control pipe, and protection valve means comprising movable abutment means subject to pressure of fluid in said brake pipe and of fluid in said train pipe acting in one direction and to a reference pressure acting in the opposite direction and valve means normally establishing communication between said safety control valve means and said safety control pipe and operable by movement of said movable abutment means in said one direction in response to a certain increase in pressure in said vacuum train pipe toward atmospheric pressure to disconnect said communication and connect said safety control pipe to atmosphere for effecting reduction in pressure of fluid therein.

2,861,343

COMBINED AUTOMATIC AND STRAIGHT-AIR FLUID PRESSURE BRAKE EQUIPMENT

Ronald J. Bentz, Pittsburgh, and William B. Jeffrey, Irwin, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application May 23, 1955, Serial No. 510,174
6 Claims. (Cl. 303—26)



1. A combined automatic and straight-air fluid pressure brake equipment for a road-rail vehicle adapted to be hauled by a railway locomotive or an automotive tractor, said equipment comprising a brake pipe, a service pipe, service valve means responsive to a chosen reduction in brake pipe pressure below a normal full charge value for causing an automatic application of vehicle brakes to a degree proportionate to said chosen reduction and responsive to a subsequent increase in brake pipe pressure for correspondingly releasing brakes, said service valve means also being responsive to charging of said service pipe with fluid under pressure for causing a straight-air application of vehicle brakes to a degree corresponding to pressure of fluid in said service pipe and responsive to a subsequent decrease in service pipe pressure for correspondingly releasing brakes, said service pipe being open to atmosphere during rail service and the pressure in such pipe being controlled from the tractor during road service, a charging pipe charged with fluid under pressure from the tractor during road service and closed off from atmosphere when the vehicle is disconnected from the tractor during rail service, and reducing valve means interposed between said charging pipe and a branch of said brake pipe for providing in said brake pipe fluid at the normal full charge value of brake pipe pressure during road service, the pressure of fluid in said brake pipe being controlled from the locomotive during rail service and said brake pipe at its respective ends being closed off from atmosphere when the vehicle is disconnected from a train during road service.

having a plurality of axial steps freely communicating, connecting each of said chambers with the sump for

an outlet for said liquid and a thumb rest, the cylinder ing fish through the conduit, and a connection from the

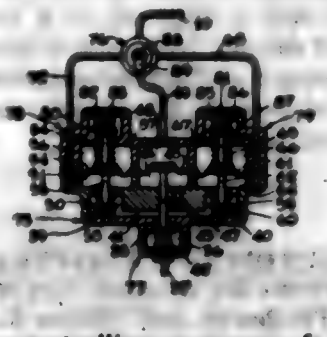
2,861,844

BRAKE CYLINDER PRESSURE RETAINING AND MAINTAINING APPARATUS

Joseph J. Libotz, Verona, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Original application May 29, 1951, Serial No. 228,858, now Patent No. 2,760,830, dated August 28, 1956. Divided and this application October 28, 1955, Serial No. 543,334

7 Claims. (Cl. 303—75)



1. Means for controlling pressure of fluid in the retainer pipe of a fluid pressure brake apparatus having a brake cylinder device which is adapted to be opened to said retainer pipe for effecting a release of brakes, said means comprising supply valve means, responsive to supply of fluid under pressure to one chamber to supply fluid under pressure to another chamber and responsive to release of fluid under pressure from said one chamber to cut off supply of fluid under pressure to said other chamber, a normally seated retaining check valve controlling release of fluid under pressure from a different chamber, a normally seated maintaining check valve controlling supply of fluid under pressure from said other chamber to said different chamber, a spring, movable abutment means controlled by pressure of said spring opposing pressure of fluid in said different chamber and operative to unseat said retaining check valve to effect release of fluid under pressure from said different chamber to a value corresponding to the pressure of said spring and operative to unseat said maintaining check valve to effect supply of fluid under pressure from said other chamber to said different chamber as required to balance the pressure of said spring, and operator-controlled valve means for either opening said retainer pipe to said one and different chambers or for venting said one and different chambers and retainer pipe directly to atmosphere.

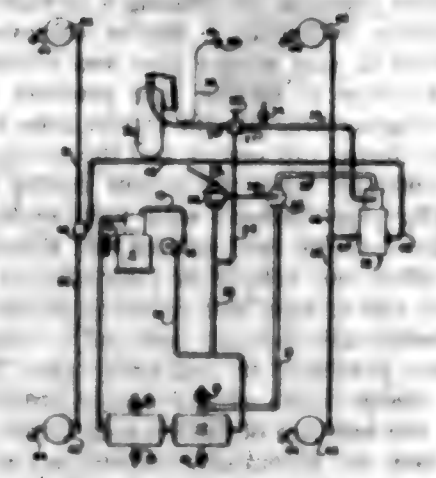
2,861,845

FLUID PRESSURE BRAKE SYSTEM

Warner L. Keehn, Santa Rosa, Calif., assignor to Keehn-O Manufacturing Company, a corporation of Nevada

Application July 5, 1955, Serial No. 519,852

4 Claims. (Cl. 303—89)



1. A brake system comprising, in combination: a source of air under pressure, brake means including a brake and a brake mechanism connected therewith actuatable by air under pressure for setting said brake and automatically releasable upon release of the air pressure in such mechanism, conduit means connecting said source with said brake mechanism for supplying air under pressure to said brake mechanism for so actuating the latter, valve means in said conduit means actuatable by air under pressure in said conduit means for movement to an open position passing air in the latter under pressure to said brake mechanism for actuating the latter to set said brake and also actuatable by air under pressure from said source for movement to a closed position for closing said conduit means to flow of air past said valve means to said mechanism, a valve mechanism in said conduit means actuatable by the brake setting air in said mechanism for movement to a position closing the portion of said conduit means that is connected with said mechanism, when said valve means is in said closed position, against release of the brake setting air in said brake setting mechanism whereby the brake will remain set independently of the air in said conduit, means that is disposed between said valve means and said source, and means actuatable for movement by air in said conduit means under pressure from said source for moving said valve mechanism from its position closing said portion to an open position releasing said brake setting air for movement therepast, an air conduit communicating with air from said source and with said valve means for conducting air under pressure to said valve means moving said valve means to its said closed position, control means respectively in said conduit means and in said air conduit actuatable for controlling the flow of air from said source to said valve means.

2,861,846

SELF-ALIGNING BALANCE

Henry N. Webster, Sebring, Fla., assignor to Harry K. Swank, Sebring, Fla.

Application August 21, 1952, Serial No. 305,581

8 Claims. (Cl. 308—2)

1. A pivot assembly for a sensitive balance comprising fixed bearings, each of said bearings having an arcuate surface of concave cross-section and a movable pivot member having a curved knife-edge and a straight knife-edge, wherein each knife edge is mounted separately on a bearing.

2,861,847

THRUST BEARING STRUCTURE

Charles Wesley Hinepeter, Owosso, Mich., assignor, by mesne assignments, to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

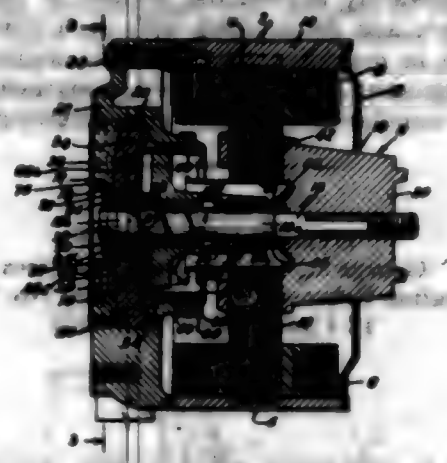
Application May 7, 1956, Serial No. 583,107

5 Claims. (Cl. 308—163)

1. In combination with a shaft having a member projecting radially therefrom, a bearing element adapted to be mounted on said shaft and comprising a body having an aperture through which such shaft is adapted to pass and having a plurality of slots of varying depth angularly disposed around said aperture and extending radially therefrom, the depth of said slots being in the direction of the axis of said aperture, the width of said slots corresponding to the width of said projecting member, said slots being located along one side of said body and being spaced from one another, the opposite side of said body

pressure in said brake pipe, safety control valve means, a train during road service.

having a plurality of axial steps freely communicating with adjacent steps, each step being diametrically opposed



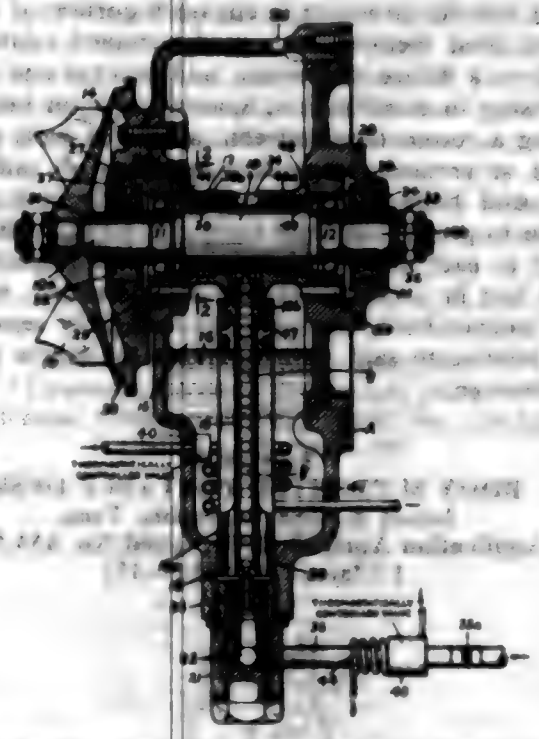
to and of substantially the same axial depth as the slot corresponding thereto.

2,861,848

LUBRICATION SYSTEM

John F. Lovelock, Syosset, and Frank J. Bongam, Jr., Roosevelt, N. Y., assignors to Fairchild Engine and Airplane Corporation, Bay Shore, N. Y., a corporation of Maryland

Application July 19, 1956, Serial No. 598,911
1 Claim. (Cl. 308—187)



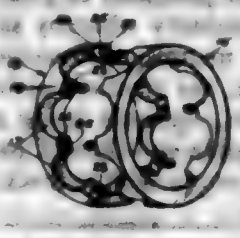
A lubricating system for an apparatus having a rotating shaft comprising a housing, a sump formed within the housing for storing a quantity of lubricating fluid, a hollow cartridge mounted to the housing at both ends and surrounding the rotating shaft, bearings for the rotating shaft accommodated within both ends of the hollow cartridge, a lift tube within said housing, the lower end of the tube communicating with the lubricating fluid in the sump and the upper end of the tube communicating with the interior of the hollow cartridge, means for introducing a stream of a gaseous fluid into the sump beneath the lower end of the lift tube, thereby lifting lubricant upwardly above the level thereof in the sump through the lift tube and into the hollow cartridge, means defining chambers outside each end of the hollow cartridge, said chambers surrounding the rotating shaft, rotatable discs accommodated within said chambers and mounted on said shaft, whereby fluid moving through the interior of said hollow cartridge and passing through said bearings will flow into said chambers, passage means formed in the wall of the hollow cartridge at both ends connecting each of said chambers with the sump for permitting the return flow of lubricant from said chambers back into said sump, and vent means formed in the upper region of said hollow cartridge surrounding the rotating shaft for permitting the gaseous fluid to escape therefrom to the atmosphere.

2,861,849

SEPARATOR FOR ANTIFRICTION BEARINGS

Edmund H. Case, Dallas, Tex., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application April 4, 1956, Serial No. 576,156
3 Claims. (Cl. 308—201)



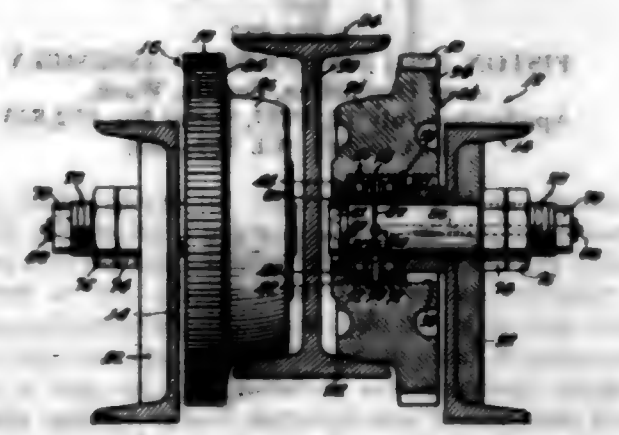
1. A separator comprising a pair of annular members adapted to be detachably engaged to form a unitary guide for a plurality of rolling elements, each member having a plurality of axially opening arcuate pockets formed therein, said pockets being circumferentially spaced and providing an axially extending shoulder between each pair of adjacent pockets, a stud respectively formed on and axially projecting from each of a plurality of said shoulders, each of a plurality of said shoulders having a stud-receiving recess, said studs and recesses being respectively disposed in an alternate sequence upon said shoulders, each stud including an enlarged portion intermediate the ends thereof, each recess including an enlarged portion intermediate the ends thereof adapted to matingly and demountably receive the enlarged portion of a corresponding stud when the annular members are in assembled relation, and a pilot portion on each stud to aid in assembly of said annular members.

2,861,850

WHEEL AND AXLE ASSEMBLY

Carl Ellis Nyblom, Chicago, Ill., assignor to Abell-Howe Company, Chicago, Ill., a corporation of Illinois

Application March 16, 1956, Serial No. 571,912
6 Claims. (Cl. 308—236)

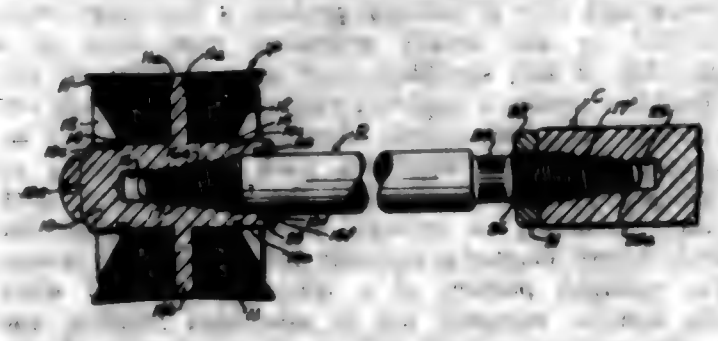


1. In a wheel and axle assembly accommodating confinement of the wheel in a substantially inaccessible space with the axle extending to the exterior of the space through a support for the assembly, the axle at one end thereof including a journal portion insertable into and removable from an axial bore in the wheel through the support, the wheel normally being mounted for rotation on said journal portion and the axle being adapted to be secured to the support, the improvement comprising

source of air under pressure, brake means including a

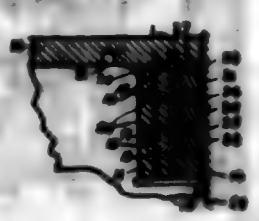
means facilitating assembly and disassembly of the axle relative to the wheel entirely from the exterior of the space within which the wheel is confined, said means comprising a member rotatably mounted in the bore in the wheel and retained therein against axial movement relative to the wheel, the axle at the free end of said journal portion having an end portion of irregular configuration relative to the remainder of the axle and a reduced portion immediately inwardly of said end portion for rotatably receiving said member, said member having an aperture therethrough complementary to said end portion of the axle in certain positions of relative rotation thereof to accommodate insertion and removal of said end portion therethrough, said aperture and said end portion in other positions of relative rotation thereof being non-complementary whereby said member and the wheel, when said member is received on said reduced portion of the axle, are retained against axial movement relative to the axle, the axle being manipulatable from the opposite, accessible end thereof to effect assembly and disassembly of the same with respect to said member.

2,861,851
PISTON AND ROD ASSEMBLIES
Henry Ben Young, Houston, Tex., assignor to Mission Manufacturing Company, Houston, Tex., a corporation of Texas
Application January 30, 1956, Serial No. 562,157
7 Claims. (Cl. 309—17)



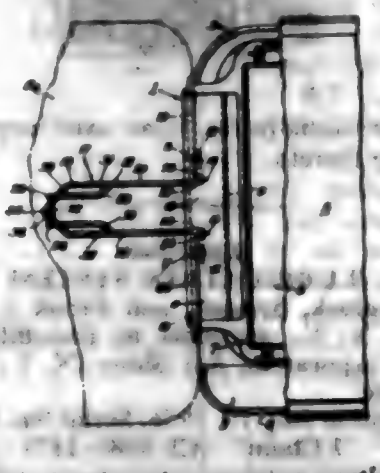
1. In combination with a piston having a longitudinal recess with internal tapered threads and a crosshead extension having a longitudinal recess with substantially identical internal tapered threads, a piston rod having each end thereof formed with tapered external threads for the threaded engagement of either end of the piston rod with either the piston or the crosshead extension, whereby said piston rod is reversible.

2,861,852
PISTON AND PISTON RING ASSEMBLY
Arnt Olaf Olsen, Seattle, Wash.
Application July 18, 1957, Serial No. 672,833
11 Claims. (Cl. 309—44)



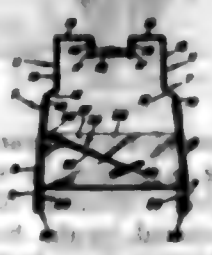
3. In a piston and ring assembly, a piston having a head and having a wide annular groove adjacent said head; three spaced apart narrow annular grooves in the bottom of said wide groove, one of said narrow annular grooves being adjacent said head and at the end of said wide annular groove, another of said narrow annular grooves being spaced from the other end of said wide annular groove and a third narrow annular groove being positioned midway between the two just mentioned narrow annular grooves; a thin flat cooling ring in each of said narrow annular grooves, all of said cooling rings extending outwardly beyond the bottom of said wide annular groove and cooperating with each other and with said piston in providing three annular compression ring receiving grooves; and three split compression rings in said three annular compression ring receiving grooves.

2,861,853
UTILITY BRACKET
George M. Gibson, Bellevue, Iowa
Application February 13, 1956, Serial No. 567,124
12 Claims. (Cl. 211—17)



1. A bracket structure to engage a portion of an overhanging shelf member in a predetermined relation with respect to a device supporting said bracket and member comprising in combination, spaced walls on said device forming a recess therebetween, a pair of bails pivotally carried at vertically separated locations on said spaced walls, said bails having coacting interlocking portions thereon to proposition said bails in a given position with respect to each other and outwardly with respect to said device and in contact with said shelf member, said bails being independently operable and swingably separable to pivot relative to said walls and into the recess provided therebetween.

2,861,854
BODY SUPPORTED PORTABLE DESK
James A. Best, Memphis, Tenn.
Application April 23, 1957, Serial No. 654,576
1 Claim. (Cl. 311—17)



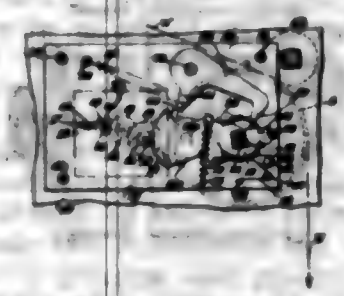
A portable desk comprising: a pair of hangers, each of said hangers including a substantially vertical tube, a rod fixedly secured in the lower end portion of the tube and depending therefrom, a hook including a depending shank mounted for sliding adjustment in the upper end portion of the tube, said hook including forwardly, upwardly and then rearwardly extending portions accommodating a shoulder of the user and further including an inwardly extending portion terminating in a downturned free end portion engageable with the back of the user, an elastic adjustable strap connecting the downturned free end portions of the hooks, a pair of forwardly extending arms having one end portion hingedly secured to the lower end portions of the rods for vertical swinging adjustment, and a work receiving panel mounted on said arms.

formed in the wall of the hollow cartridge at both ends be secured to the support, the improvement comprising

2,861,858
FOLDING TABLE MADE OF REMOVABLE TABLE TOP SECTIONS
Ervin Lesbner, Philadelphia, Pa., assignor to Falco Products Co. (also known as Falco Products Company), Philadelphia, Pa., a corporation of Pennsylvania
Application January 23, 1957, Serial No. 635,663
5 Claims. (Cl. 311—90)

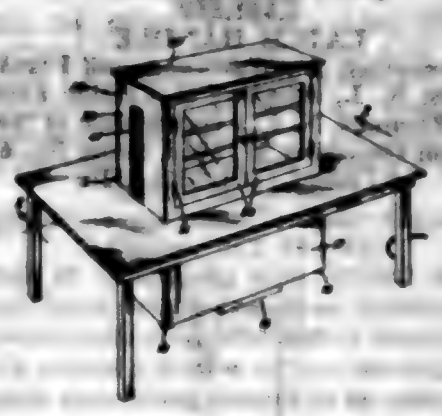
1. A sectional folding table comprising at least two substantially rectangular sections each having a top and a depending peripheral skirt, legs hinged to at least one of said sections adjacent its corners and a detachable hinge mechanism removably connecting the sections, said sections being movable from a folded side by side position to an unfolded substantially coplanar position with the inner skirt edges closely adjacent each other, said hinge mechanism comprising a pair of removably interengaging hinge members secured to the skirts of the respective sections adjacent said inner edges and a lug of predetermined length carried by one of said hinge members and extending beyond said inner skirt edge, whereby when the sections are unfolded to their substantial coplanar position, the end portion of said lug is positioned inwardly of the skirt of the other table section to prevent detachability of the sections and whereby said lug strikes a portion of the other table section before said inner skirt edges meet to thereby reduce the load on the materials from which the table sections are made.

2,861,856
TOWEL DISPENSING MEANS
Lawrence Leavey, New York, N. Y.
Application February 8, 1957, Serial No. 639,143
9 Claims. (Cl. 312—38)



4. Mechanism for controlling the feed of a web, said mechanism having a pull-actuated member which is moved in successive strokes by successive pulls on said web, latch means which are operated by said pull-actuated member, said latch-means being biased out of normal release position to a latching position in which said latch-means engage said pull-actuated member during a stop period which is intermediate the beginning and end of each of said strokes; a movable control member which is biased to an initial position to abut and hold said latch-means in the normal release position of said latch-means at the beginning of each said stroke, said control member being operated by said pull member out of said initial position to release said latch-means at the end of a selected time from the beginning of each stroke and to release said control member at the end of said stop period to permit said control member to move reversely to its initial position in order to release said latch-means.

2,861,387
COMBINED TABLE AND CABINET
Theodore Lee and Ray Pledger, Salt Lake City, Utah
Application April 1, 1957, Serial No. 650,005
1 Claim. (Cl. 312—223)



In combination, a table having an elevated top provided with an opening therein, a casing attached to said top beneath the same and forming together with said opening a well, a cabinet fitting in said well for raising out of the same and lowering into said well into a fully retracted position, an electric motor on the bottom of the cabinet, toothed rack bars secured to said casing in the well, pinions rotatably mounted on the bottom of the cabinet in mesh with said rack bars for operation in opposite directions to raise and lower said cabinet, means operatively connecting said motor to said pinions, doors on said cabinet raised above said top in response to raising of the cabinet, and means on said cabinet engaged by said doors when the latter are closed and disabling said motor in response to opening of either door.

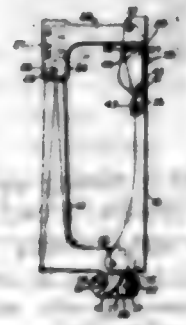
2,861,858
PANEL MOUNT
Frederick J. Potschaver, Monmouth Beach, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application August 5, 1957, Serial No. 676,449
2 Claims. (Cl. 312—283)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A panel mount for securing an array of electrical controls emanating from a plurality of electrical components wherein said controls may be reached from either the front or rear of said panel mount, and including a triangulated receptacle having at least one of its side walls open at any one determinate time, said panel mount comprising a base surface on which said electrical components are secured, a wall perpendicular to said base having an elongated longitudinally disposed opening, a ledge for said controls extending inwardly from the wall proximal to the lower edge of said opening, a housing affixed to the free end of said ledge and having a longitudinally disposed opening substantially coextensive with the opening in the wall and the ledge and a rotatable cover plate pivotably engaged at the top of said wall whereby when said cover plate is over said wall opening, entry to said electric control panel is through the opening of said hous-

annular groove and a third narrow annular groove being positioned midway between the two just mentioned narjustment, and a work receiving panel mounted on said arms.

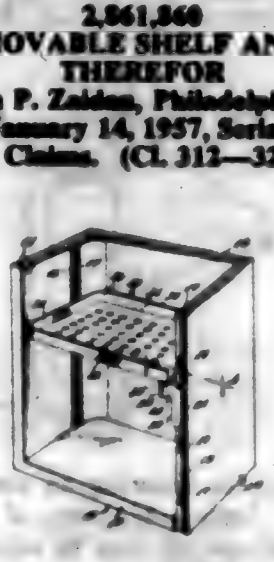
ing, and when cover plate is over the housing opening entry to said electric control panel is through said wall opening.

2,861,859
LATCH HANDLE
Jacob R. Newcomer, Jr., Westwood, and Frank Wheeler, Little Falls, N. J., assignors to Camloc Fastener Corporation, Paramus, N. J., a corporation of New York
Application December 27, 1956, Serial No. 630,788
8 Claims. (Cl. 312—319)



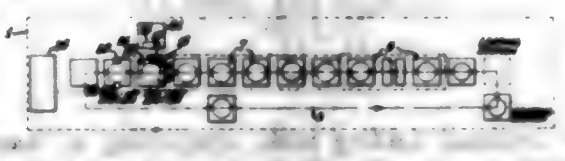
1. In a handle structure, a bracket having an opening at one end thereof and provided with a fixed pin, a pivot at its opposite end for mounting one end of the handle, a handle catch mounted at the free end of the handle and provided with a rearwardly extending, hook-shaped bolt which enters the opening and engages the pin to lock the handle against rotation, and a catch retainer restraining movement of the bolt to unlocked position, said retainer comprising a dogging member movably mounted on the bracket and having a portion in the bracket opening which in one extreme position of the dogging member retains the bolt in engagement with the pin and which, upon movement of the dogging member to its other extreme position, frees the bolt for movement to disengage itself from the pin.

2,861,860
PIVOTED REMOVABLE SHELF AND MOUNTING THEREFOR
Joseph P. Zeidan, Philadelphia, Pa.
Application January 14, 1957, Serial No. 633,946
6 Claims. (Cl. 312—325)



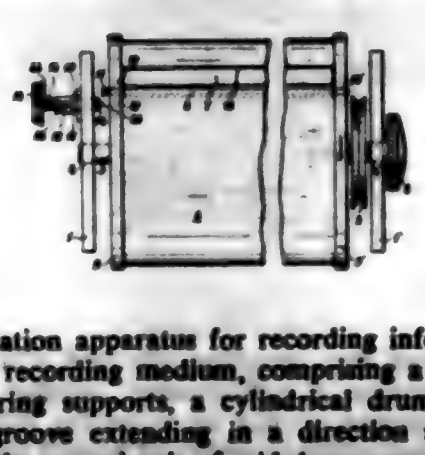
6. The combination of a cabinet structure generally rectangular in interior cross-section and a pivoted shelf structure of matching outer configuration and area, said cabinet structure including a side wall, a hinge post inwardly offset from and adjacent the outside edge of said wall and extending vertically therealong, and a hinge mounted on said post, said shelf structure having a pivot means adjacent an outer cut-out corner portion thereof mounted on said hinge for swingingly supporting said shelf structure, said hinge having a pair of vertically alined barrels spaced from each other, on one of which said shelf structure is mounted and the other of which is mounted on said post, said shelf structure movable rectilinearly and pivotally into and out of said cabinet and when in a position outside of said cabinet pivotally movable to one side of the latter.

2,861,861
GAS PRESSURE TESTING AND CONTROL APPARATUS
Eugene E. Hoffmann, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application November 13, 1951, Serial No. 256,051
9 Claims. (Cl. 316—27)



1. In a multi-operational station processing system for a vacuum tube having an anode, a cathode, and a plurality of grids, means for exhausting the air from an unsealed tube; a gas test station and a later seal-off station for said unsealed tube, said gas test station comprising first means for developing a control voltage proportional to the volume of gas in said unsealed tube, means connected to said first means for disabling said seal-off station when said control voltage exceeds a predetermined amount, said gas test station also including other means for measuring current flow through one of said grids, and means connected to said other means for disabling manually said seal-off station in response to said grid current.

2,861,862
DICTATION APPARATUS
Ferdinand Zecha and Fritz Lampe, Vienna, Austria, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application June 16, 1954, Serial No. 437,238
Claims priority, application Austria June 27, 1953
3 Claims. (Cl. 346—138)



1. A dictation apparatus for recording information on a foil type recording medium, comprising a plurality of spaced bearing supports, a cylindrical drum having an elongated groove extending in a direction substantially parallel to the central axis of said drum, means mounting said drum on said supports for rotation around said central axis thereof, a clamping member extending in said groove and having open and closed positions for inserting and securing said foil to said drum, an extension on said clamping member for alternately opening and closing the latter, driving means operably connected to said drum for rotating the same in one direction and being disconnected when said drum is rotated in the opposite direction, slidable blocking means mounted adjacent said drum for arresting the rotational movement of the drum in a predetermined position including an actuating means for engaging and moving said extension whereby the clamping member may be alternately opened and closed, and means mounting said slidable blocking means.

to its initial position in order to release said latch-means.

electric control panel is through the opening of said hous-

CHEMICAL

2,861,863

IMPROVEMENT OF FASTNESS OF CELLULOSIC FIBERS WITH A POLYMERIZATION PRODUCT OF BASIC VINYL COMPOUNDS

Curt Schuster, Robert Gehm, and Julius Eisele, Ludwigshafen (Rhine), and Wilhelm Federtzel, Frankenthal, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application December 18, 1953
Serial No. 399,168

Claims priority, application Germany December 19, 1952

18 Claims. (Cl. 8—74)

4. A process for the improvement of the fastness properties, in particular the fastness to moist treatment of dyeings with substantive dyestuff on materials of the class consisting of cellulose and regenerated cellulose fibers which comprises treating such dyeings with the aqueous solution of a polymerization product of a basic vinyl compound from the class consisting of vinyl imidazoles and vinyl pyridines.

2,861,864

PROCESS OF BLEACHING SOLID GELLED ACRYLONITRILE POLYMERS WITH ACIDIFIED CHLORITE AND OXALIC ACID BATHS

Allan O. Mogensen, Stamford, Conn., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application August 23, 1955
Serial No. 530,189

7 Claims. (Cl. 8—108)

1. The process of removing color from a freshly extruded polymeric article, produced by a wet process and containing inherent, normally occurring discolorations, said article being in one of the following forms: filaments, staple fibers, rods, tubes, films, ribbons, sheets, the liquid phase of which article is comprised of water and the solid phase of which is composed essentially of a polymer of acrylonitrile containing, combined in the polymer molecules, at least 80% by weight of acrylonitrile and up to 20% by weight of a compound which is copolymerizable with acrylonitrile and which contains a single $CH_2=C<$ grouping, said process comprising subjecting the said article to treatment by immersion in two different kinds of baths, one of which consists essentially of an aqueous solution, acidified to a pH of from 2 to 6, of a water-soluble chlorite selected from class consisting of chlorous acid, alkali-metal chlorites, alkaline-earth metal chlorites, zinc chlorite, cadmium chlorite and nickel chlorite, said chlorite being present in said aqueous solution in a concentration of from 0.07% to about 2% by weight thereof, and the other of which baths consists essentially of an aqueous solution of oxalic acid in a concentration of from 0.02% to about 2% by weight thereof, each of said baths being at a temperature of from 20° C. to 100° C.; and washing the article after removal from one of said baths and prior to immersion in the other of said baths, the article being immersed in each of said baths for a total time sufficient to effect bleaching thereof as evidenced by the lighter color of the dried article.

2,861,865

METHOD OF ROUGHENING AND DULLING POLYETHYLENE TEREPHTHALATE FIBERS

Erhard Siggel, Landenbach, Main, Germany, assignor to Vereinigte Glanzstoff-Fabriken A. G., Wuppertal-Elberfeld, Germany, a corporation of Germany

No Drawing. Application August 2, 1954
Serial No. 447,381

Claims priority, application Germany August 3, 1953

7 Claims. (Cl. 18—54)

1. Method of roughening and dulling polyethylene terephthalate fibers which comprises spinning a molten mass of solvent-containing polyethylene terephthalate into a fiber which retains a portion of said solvent, the solvent in said molten mass being present in an amount of from 5% to 30%, passing the spun fiber through a bath wherein the aforesaid solvent is extracted from a surface layer of the fiber, stretching the so treated fiber, and subjecting the stretched fiber to the action of superheated steam to expel the residual solvent.

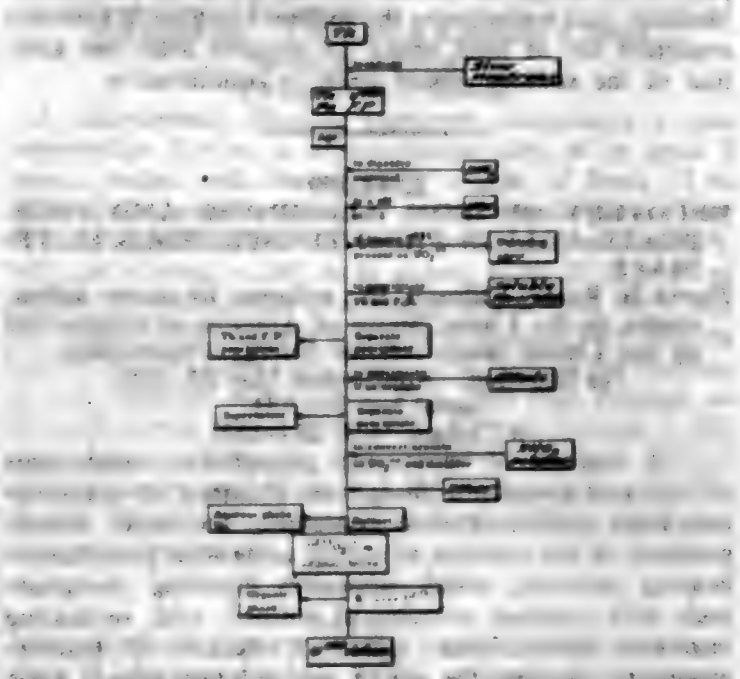
2,861,866

WET FLUORIDE SEPARATION METHOD

Glenn T. Seaborg, Chicago, Ill., John W. Gofman, Berkeley, Calif., and Raymond W. Stoughton, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application November 3, 1944, Serial No. 561,835

9 Claims. (Cl. 23—14.5)



1. The method of separating U^{238} values from thorium and foreign products present in neutron-irradiated thorium, said foreign products including protactinium and fission products, which consists of dissolving the thorium, the foreign products and the uranium values in aqueous nitric acid, adding a precipitant of the class consisting of soluble fluorides, soluble iodates, soluble phosphates, and soluble oxalates whereby the thorium and foreign products are precipitated while the uranium values remain in solution, separating the solution of uranium values from said precipitate, precipitating the uranium values from said last-mentioned solution by alkalizing said solution whereby the uranyl ions present are converted to the uranate form, and separating said precipitated uranium values.

mounted on said post, said weir structure movable recti- and means mounting said slidable blocking means.

2,861,867
METHOD OF PURIFYING SODIUM CARBONATE AND BICARBONATE SOLUTIONS
Alfred Hirsch, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application January 3, 1955
Serial No. 479,664
6 Claims. (Cl. 23—63)

1. A process for the removal of iron impurities from a complex liquor containing sodium carbonate and sodium bicarbonate comprising adding a compound selected from the group consisting of alkali metal hydroxides and ammonium hydroxide to the said mixture in an amount at least equimolar to the combined quantity of sodium bicarbonate and iron impurities contained in the said liquor; allowing the mixture thus prepared to react to substantial completion and separating the resulting precipitate from the said mixture.

2,861,868
METHOD OF PRODUCING SUBSTANTIALLY WHITE, GLOBULAR SODIUM BISULFATE
Joseph G. Stites, Jr., Chelmsford, and David C. Taylor, Everett, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application October 18, 1956
Serial No. 616,614
6 Claims. (Cl. 23—121)

1. In the process of producing substantially white sodium bisulfate from the reaction of sulfuric acid and crude solar salt at an elevated temperature to produce molten sodium bisulfate the step comprising the addition to the molten sodium bisulfate of from about 0.02 to about 2 percent by weight of sodium nitrate, based on the sodium bisulfate, and maintaining the sodium bisulfate in a molten condition for at least about 15 minutes after the addition of the sodium nitrate prior to solidification.

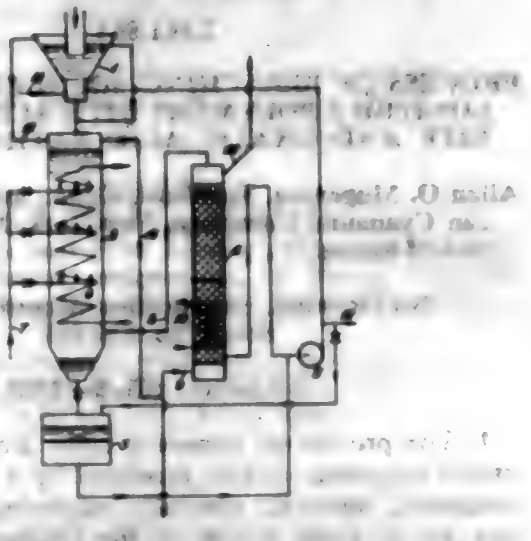
2,861,869
RECOVERY OF IRON, ALUMINUM, AND PHOSPHATE VALUES FROM PHOSPHOROUS MATERIALS
David H. Reeve, Chicago, Ill., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application May 27, 1955
Serial No. 511,751
3 Claims. (Cl. 23—123)

1. A method of recovering phosphorus components of iron and aluminum phosphates obtained by precipitation from acidic solutions containing the water soluble products of the reaction of strong acids with phosphorus-bearing material, which comprises digesting phosphate rock with aqueous solution of sulfuric acid, separating insoluble solids from aqueous solution of reaction products, adjusting the pH of said solution with a basic oxygen-bearing compound whereby predominantly iron and aluminum phosphate precipitates are formed, digesting the iron and aluminum precipitate with concentrated sulfuric acid solution, adjusting the sulfate to phosphate concentration to give a weight ratio of sulfate to phosphate in the range of between about 2:1 and about 9:1, reducing water to less than about 8% by weight whereby the solution is rendered supersaturated with respect to sulfate salts of iron and aluminum, heating said supersaturated solution upon initiation of metal sulfate crystallization to a temperature in the range between about 150° and about 250° C., crystallizing from the supersaturated solution the sulfate salts of iron and aluminum, separating the crystallized salts and recirculating the solids-free solution of sulfuric acid and phosphoric acid to the step wherein phosphate rock is treated with strong acid.

2,861,870
MANUFACTURE OF HYDROGEN CYANIDE
Alden J. Deyrup, Niagara Falls, Edward W. Heiderich, Lewiston, and Harvey E. Wagoner, Niagara Falls, N. Y., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application October 16, 1952
Serial No. 315,194
11 Claims. (Cl. 23—151)

3. The process which comprises a first step of heating a catalyst bed held within a reaction zone and containing a member of the platinum metals group to a temperature of 900–1300° C. by burning a carbonaceous combustible gas therein, a second step of passing through said catalyst bed an oxygen-free gaseous mixture of ammonia and a substantially saturated hydrocarbon and thereby reacting said mixture to form hydrogen cyanide, a third step of separating hydrogen cyanide from the gaseous mixture after the same has passed through the catalyst bed and a fourth step of alternately repeating the first and second steps for a predetermined time.

2,861,871
PROCESS FOR THE MANUFACTURE OF CHLORINE DIOXIDE
Angelo Germano, Lausanne, Switzerland, assignor to Solvay & Cie, Brussels, Belgium, a Belgian company
Application October 8, 1956, Serial No. 614,469
Claims priority, application Belgium October 8, 1955
7 Claims. (Cl. 23—152)

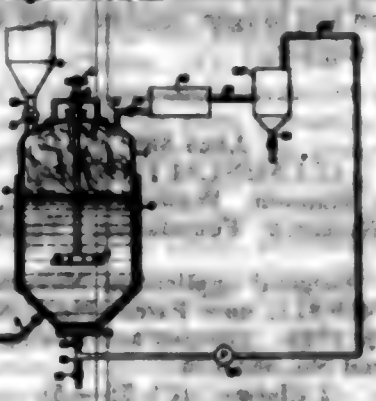


1. A process for the preparation of chlorine dioxide from sodium chlorate and hydrochloric acid which comprises the steps of introducing hydrochloric acid into a solution of sodium chlorate in an amount which is greater than the stoichiometric quantity corresponding to the chlorate to produce a mixture of chlorine dioxide and chlorine, the temperature being maintained at a value sufficiently below 10° C. that the chlorine dioxide which is formed remains substantially completely in solution, and continuing the reaction until at least some of the sodium chloride formed in the course of the reaction precipitates, separating the sodium chloride from the solution, desorbing the solution to separate the chlorine dioxide and any chlorine contained therein.

2,861,872
METHOD FOR GENERATING SILICON TETRAFLUORIDE
George L. Heller, Monroe, James A. Watson, Jr., Swartz, and Carroll D. Wallace, Jr., Monroe, La., assignors to Columbian Carbon Company, New York, N. Y., a corporation of Delaware
Application March 30, 1955, Serial No. 497,983
5 Claims. (Cl. 23—205)

1. Process for generating a mixture of silicon tetrafluoride and water vapor which comprises reacting hydrogen fluoride with silicon dioxide while the latter is sus-

pended in a hygroscopic polyhydric alcohol which is a solvent for hydrogen fluoride and boils at a temperature not less than 350° F., and while maintaining the suspension at a temperature in excess of the boiling point of



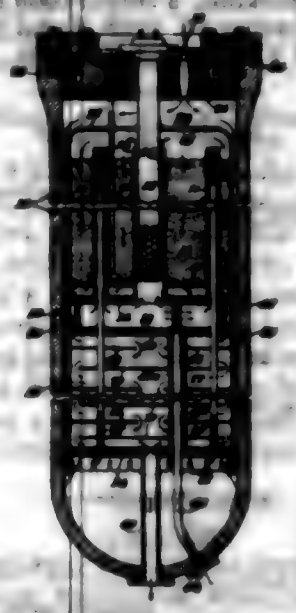
water but not exceeding the boiling point of the alcohol, and withdrawing from the zone of reaction silicon tetrafluoride and water vapor evolved from the liquid suspension.

2,861,873

APPARATUS FOR EFFECTING CATALYTIC EXOTHERMIC REACTIONS

George A. Wern, Greenwich, Conn., assignor to The Lummus Company, New York, N. Y., a corporation of Delaware

Application December 7, 1955, Serial No. 551,783
2 Claims. (Cl. 23—289)



1. Apparatus for effecting catalytic exothermic gaseous reactions, which comprises an outer shell, an inner shell mounted within said outer shell and spaced from the wall of said outer shell to leave an annular space therebetween, a shell and tube type heat exchanger mounted in the bottom of said inner shell, said annular space communicating with the lower end of tubes of said exchanger, a receptacle containing a catalyst bed mounted in said inner shell and positioned above said exchanger, the upper end of the tubes of said exchanger extending substantially through said catalyst bed, closed end tubes of greater diameter than said exchanger tubes embedded in said catalyst bed and enclosing the upper end of said exchanger tubes whereby an annular passage in communication with said exchanger tubes is formed between said exchanger tubes and said closed end tubes, means for feeding a first stream of reactant gases to be preheated into said annular space and thence through said exchanger tubes and said annular passages, a reactant header communicating with said closed end tubes for receiving preheated reactant gases flowing therefrom, said header being positioned within said inner shell and between said exchanger and said catalyst receptacle, means for feeding a second stream of reactant gases to said header for mixing with and cooling said preheated gases, means for feeding said mixed reactant gases to said catalyst bed for reaction therein, and means for withdrawing reacted gases leaving said catalyst bed through the shell side of said exchanger whereby said first stream of reactant gases is partially preheated and said reacted gases are cooled.

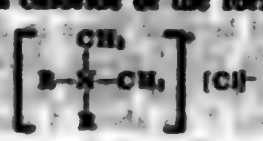
2,861,874

CORROSION INHIBITOR FOR LIGHT PETROLEUM SOLVENTS AND FUELS

Arlie A. O'Kelly, Lewiston, and Clarence A. Wollmann, Niagara Falls, N. Y., assignors to Alox Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application June 23, 1954
Serial No. 438,882
5 Claims. (Cl. 52—5)

1. A corrosion inhibitor composition for use in JP4 jet fuels and hi-test gasoline, said composition consisting essentially of a mixture of from about 90 to 70% by weight of polymerized linoleic acid and from about 10 to about 30% by weight of an oil-soluble dimethyl dialkyl ammonium chloride of the formula



in which each R represents an alkyl group having from 8 to 18 carbon atoms.

2,861,875

EXPLOSIVE COMPOSITION

Cyril James Brum, Thorofare, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application February 1, 1957
Serial No. 637,622
1 Claim. (Cl. 52—6)

A high-density blasting explosive comprising a cast composition having a cross-sectional area of at least 3 square inches and consisting by weight of from 15 to 20% of ammonium nitrate of such fineness that at least 90% will pass through a 65 mesh screen and at least 60% will pass through a 100 mesh screen, from 45 to 55% of sodium nitrate of such coarseness that at least 98% will pass throught a 10 mesh screen and at least 90% will be held on a 20 mesh screen, from 15 to 20% of ferrosilicon of such fineness that at least 95% will pass through an 80 mesh screen and at least 45% will pass through a 200 mesh screen, from 12–17% of TNT, from 2–5% of dinitrotoluene, and from 0–0.35% of stearic acid, the density of said cast composition being at least 1.8 grams per cubic centimeter.

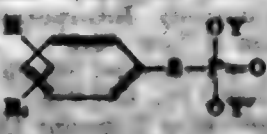
2,861,876

METHOD OF DESTROYING UNDESIRED PLANTS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 1, 1955
Serial No. 550,473
6 Claims. (Cl. 71—2.6)

1. The method of destroying undesired plants which comprises applying to said plants a toxic quantity of a herbicidal composition comprising a compound having the formula



in which R and R' are selected from the class consisting of hydrogen, chlorine, NO_2 and alkyl radicals of from 1 to 5 carbon atoms and Y and Y' are selected from the class consisting of alkyl and chloroalkyl radicals of from 1 to 12 carbon atoms.

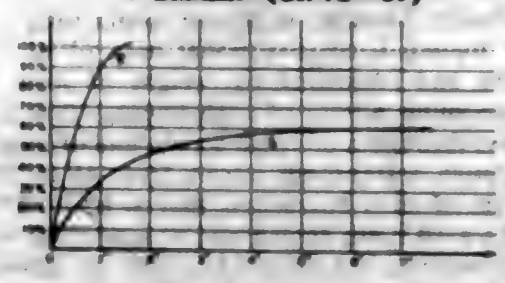
treated with strong acid.

gen fluoride with silicon dioxide while the latter is sus-

2,861,877
TREATMENT OF SEWAGE SLUDGE
Cecil J. Geraghty, Redwood City, and Richard R. Kennedy, Palo Alto, Calif., assignors to Modoc Peat Moss Company, San Francisco, Calif., a corporation
No Drawing. Application July 22, 1954
Serial No. 445,176
3 Claims. (Cl. 71—13)

1. In the treatment of sewage sludge to form a compost, the improvement which comprises placing a layer of loose porous cellulosic material over a relatively flat bottom of a shallow reservoir provided with drainage, flooding the layer in the reservoir with sewage sludge containing from about 2% to about 15% by weight of solids to form a pool of sludge in the reservoir that is several times deeper than the layer but with the layer being at least one quarter of the depth of the pool, permitting the flooded layer in a quiescent state to drain by gravity while it is exposed to the air so that liquid is removed from the pool and the solids of the sludge filter into and impregnate the layer and are also composted, the drainage being continued until the impregnated cellulosic material can be tilled without sticking appreciably to the tilling tool, thereafter tilling the drained impregnated layer in place in the reservoir, and repeating the flooding and drainage steps described above in turn of the order of four times until the layer is impregnated with about 3 to about 5 parts by weight of sewage sludge for each part by weight of cellulosic material.

2,861,878
MANUFACTURE OF COMPLEX FERTILIZERS
Bernard Bigot, Rouen, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France
Application December 8, 1954, Serial No. 473,945
Claims priority, application France December 10, 1953
7 Claims. (Cl. 71—39)



1. In a process of making fertilizers from phosphates of fertilizer grade, ammonia, and nitric acid, containing nitrogen in nitrate and in ammonium radicals, and containing phosphoric acid soluble in ammonium citrate, in which process lime phosphate is attacked by nitric acid, the product so formed is attacked by ammonia, and the resultant product is simultaneously reacted with ammonia and carbon dioxide, the step of carrying out the ammonia-carbon dioxide reaction in the presence of a quantity, on the order of .05 to 2% by weight of the phosphate treated, of at least one water soluble alkali metal salt of a mineral polyacid.

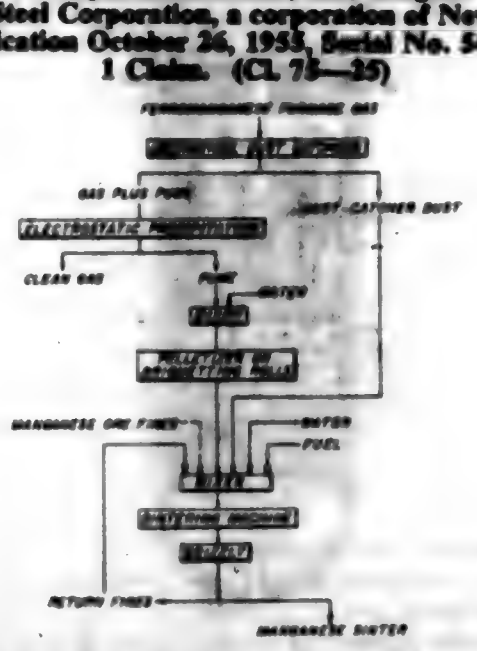
2,861,879
METHOD FOR THE PRODUCTION OF IRON FROM STEEL SCRAP
Max Michaelis, Rheydt, Germany, assignor to Easton Metal Powder Company Incorporated, New York, N. Y., a corporation of New York
No Drawing. Application March 25, 1957
Serial No. 647,976
Claims priority, application Germany October 14, 1953
3 Claims. (Cl. 75—.5)

1. The process for the manufacture of iron powder from iron having a carbon content in excess of 3%, a silicon content below 0.5%, and a sulphur content below about 0.15%, which comprises melting steel scrap in an acid-lined cupola furnace by means of a fuel consisting essentially of electrode carbon and atomizing the molten iron thus produced by means of an oxidizing gas under pressure thereby to provide a granular product containing iron, carbon and oxygen, together with small amounts of silicon and sulphur.

2,861,880
ALUMINUM POWDER
John W. G. Hunnen, Washington, Pa., assignor to McIntyre Research Foundation, Toronto, Ontario, Canada
No Drawing. Original application November 18, 1954, Serial No. 469,821, now Patent No. 2,824,843, dated February 18, 1958. Divided and this application June 7, 1957, Serial No. 664,186
2 Claims. (Cl. 75—.5)

1. A powder for use in the prevention of silicosis comprising a stable aluminum oxide powder formed from substantially pure metallic aluminum and having a particle size such that substantially all of the particles are 1.2 microns or less and the majority of the particles are 0.4 micron or less, said particles containing 12 to 15% pure metallic aluminum.

2,861,881
METHOD OF FRITTING FERROMANGANESE FLUE DUST
Donald D. Phelps, Monroeville, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application October 26, 1953, Serial No. 542,959
1 Claim. (Cl. 75—25)



A method of reclaiming ferromanganese blast furnace flue dust, which includes both particles blown from a ferromanganese blast furnace by a rising gas column and particles produced by volatilization of manganese ore and slag in the hot zones of the furnace, which method comprises recovering a coarse dust product by mechanical means, recovering a finer dust product consisting largely of minus 1-micron particles with a precipitator, moistening and agglomerating said finer dust product, forming a permeable feed by mixing together said coarse dust product, said agglomerated fine dust product, returns from a fritting operation, carbonaceous fuel and water, the proportions by weight on a dry basis in said feed being as follows:

	Percent
Coarse dust product	15 to 75
Finer dust product	up to 50
Returns	25 to 35
Fuel	5 to 7

the moisture content being 16 to 18 percent by weight of the total weight of feed, and fritting said feed to form a fritted product for re-use in charging to a blast furnace.

2,861,882

PROCESS FOR REDUCING NIOBIUM OXIDES TO METALLIC STATE

Feard von Hichowsky, Wilmington, Del.

No Drawing. Application November 12, 1957
Serial No. 695,815
6 Claims. (Cl. 75—84)

1. Process for reducing niobium oxides to the metallic state which comprises the steps consisting in heating a niobium oxygen compound from the group consisting of the pentoxide, dioxide, oxide and sub-oxide, together with an alkali metal compound selected from the group consisting of the carbonates, oxide, hydroxide, niobate and soda-lime in an amount not exceeding 10% by weight of the niobium oxide together with an amount of a spacer material selected from the group consisting of carbon, calcium carbonate, magnesium carbonate, calcium tartrate and acetate, not exceeding 10% by weight of the niobium oxide, all the ingredients being in contact with a nickelous material from the group consisting of nickel, nickel sesquioxide and nickelo-nickelic oxide and in permeable form while in a current of hydrogen at above red heat in a reducing furnace with the exclusion of nitrogen and oxygen until the reduction is completed, then cooling the reduced product under inert conditions and separating the niobium metal containing product.

2,861,883

PRECIPITATION HARDENABLE, CORROSION RESISTANT, CHROMIUM-NICKEL STAINLESS STEEL ALLOY

Norman S. Mott, Westfield, N. J., assignor to Cooper Alloy Corporation, Hillside, N. J., a corporation of New Jersey

No Drawing. Application February 9, 1956
Serial No. 564,360
8 Claims. (Cl. 75—128)

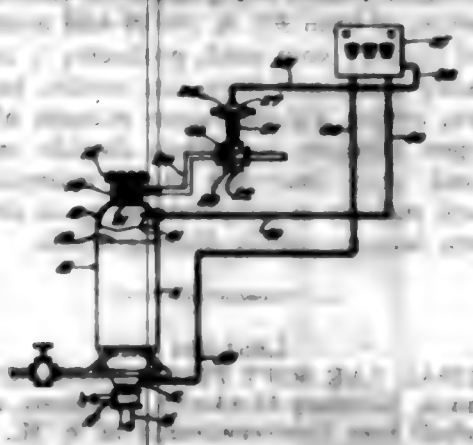
1. A low cost precipitation hardenable alloy of high corrosion, erosion, abrasion resistance and fair ductility adequate to be used for stressed parts, said alloy consisting essentially of a chromium nickel stainless steel of the type known generally as 18 and 8, having added thereto molybdenum and silicon, the molybdenum ranging from 3% to 5%, and the silicon ranging from 2.5% to 4%, said alloy having a carbon content not exceeding 0.08% and said alloy being free of beryllium and copper.

2,861,884

DIGESTER CONTROL SYSTEMS

Andrew E. Bennett, Weymouth, Mass., assignor, by mesne assignments, to Worthington Corporation, New York, N. Y., a corporation of Delaware

Application February 21, 1956, Serial No. 567,020
1 Claim. (Cl. 92—7)



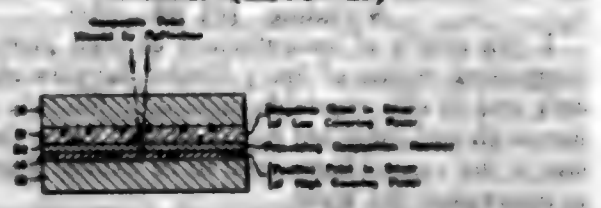
In combination, a pulp digester having heating means for varying the digester pressure and a line for venting vapors from the top of the digester, a relief valve in said line, and control apparatus having a source of power in operative connection with said relief valve, said control apparatus including an element responsive to digester pressure, an element responsive to digester top temperature, a proportioning device having a selected power operating range for varying power from said source to actuate said relief valve, mechanism operatively connecting said elements to vary the control setting of said temperature element in proportional relation to changes in digester pressure, said mechanism including means operatively connecting said temperature element with said proportioning device for varying power from said source to throttle the relief valve when the digester top temperature drops with respect to the control setting of the temperature element, and to open said valve as the digester top temperature rises with respect to the control setting of the temperature element, a differential device associated with said mechanism for varying the control setting of the temperature element in respect to the digester pressure as measured by the pressure element, and ratio adjustment mechanism associated with the differential device for varying the control setting provided by the differential device in proportional relation to changes in digester pressure.

2,861,885

PHOTOGRAPHIC PROCESSES AND PRODUCTS

Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Application November 4, 1954, Serial No. 466,839
4 Claims. (Cl. 96—29)



1. A photographic process comprising the steps of subjecting a silver halide stratum and a silver-receptive stratum, which are in contiguous relation, to a thin layer of a processing fluid, said fluid containing a silver halide developer and a silver halide solvent, reacting said silver halide developer with exposed silver halide in said silver halide stratum in order to produce a negative print by reduction of silver halide to silver, reacting said silver halide solvent with unreduced silver halide in said silver halide stratum in order to form a complex silver salt, transferring said complex silver salt to said silver-receptive stratum, reducing said complex silver salt to silver in said silver-receptive stratum in order to form a positive print containing silver, said silver of said positive print being of a first physical character, said silver of said negative print being of a second physical character, a substantial quantity of said silver in said positive print having a higher optical density than an equal quantity of said silver in said negative print, drying said layer of processing fluid to form a laminated unit containing a plurality of strata, said unit being substantially transparent from one of the faces of said unit through one of the silver halide and silver-receptive strata at least to the other of said silver halide and silver-receptive strata, both said positive print and said negative print thereby being visible through said one of said faces as a composite print.

2,861,886

FEED COMPOSITION

Robert W. Colby, Lake Jackson, Tex., and Robert J. Mosier, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application March 1, 1954
Serial No. 413,435
3 Claims. (Cl. 99—2)

1. A ruminant feed concentrate, adapted for mixing with carbohydrate and roughage feeds to prepare rumi-

about 0.15%, which comprises melting steel scrap in an

a fritted product for re-use in charging to a blast furnace.

nant feeds of enhanced available nitrogen content, which comprises an edible ruminant feed supplement and in admixture therewith from about 5 to 90 percent by weight of biuret based on the total weight of the finished composition.

2,861,887
POULTRY FEED

Robert W. Colby, Lake Jackson, Tex., and Robert J. Mosier, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 29, 1954
Serial No. 465,732
2 Claims. (Cl. 99—4)

1. A poultry feed composition which comprises poultry nutrients and in intimate admixture therewith an effective amount of polypropylene glycol-ethylene oxide condensation product prepared by the reaction of a polypropylene glycol of molecular weight of at least 750 with at least 30 percent of its weight of ethylene oxide.

2,861,888
PELLETS CONTAINING DEHYDRATED MEAT AND COCONUT AND CONFECTION CONTAINING THESE PELLETS

Edward F. Colee and Thelma A. Colee, Prineville, Oreg.

No Drawing. Application August 14, 1956
Serial No. 603,859
9 Claims. (Cl. 99—125)

1. An article of manufacture of high protein content comprising, pellets of finely divided dehydrated lean meat only and an oily vegetable material intimately intermixed therewith and subjected to dry heat to cause the oily content of the vegetable material to be exuded therefrom and to impregnate the meat.

2,861,889
METHOD OF GLAZING FOODS AND THE RESULTANT PRODUCT

William E. Carmon, Nyack, N. Y., assignor to American Maize-Products Company, a corporation of Maine

No Drawing. Application January 16, 1956
Serial No. 559,119
7 Claims. (Cl. 99—139)

1. A frozen food having a candy glaze in place thereon, said glaze comprising sugar and precooked edible starch in the proportion of about 1 to 10 parts of precooked edible starch for each 150 parts of sugar and in which the precooked starch is in the form of a gel that clings to the surface of the food and binds the sugar in place thereon whereby the sugar and precooked starch glaze substantially remains in place on the food while it is heated and cooked.

2,861,890
METHOD OF OBTAINING AND UTILIZING EDIBLE MATERIAL FROM VANILLA BEANS AND THE RESULTANT PRODUCT

Raymond R. Lockhead, Chesterfield, Mo., assignor to Angus T. Lockhead, Sr., as trustee

No Drawing. Application February 6, 1956
Serial No. 563,499
17 Claims. (Cl. 99—148)

1. The method of obtaining edible material from vanilla beans that comprises heating a mixture of vanilla beans and a de-greasing solvent to a temperature that is high enough to cause said beans to yield edible material but is low enough to avoid appreciable decomposition of said edible material, separating said solvent from said edible material by heating said solvent and said edible material, adding an anti-oxidant that does not absorb or consume oxygen, hydrogenating the separated edible material, and dispersing said hydrogenated edible material in shortening.

2,861,891
WATER DISPERSIBLE CAROTENOID COMPOSITIONS AND PROCESS OF MAKING THE SAME

Jacob Christopher Rosenfeld and Raymond Howard Bunnell, Pompton Plains, N. J., assignors to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application December 13, 1956
Serial No. 627,996
17 Claims. (Cl. 99—148)

1. A process for producing a dry, water dispersible carotenoid coloring composition which comprises dissolving a carotenoid in an edible oil which is liquid at a temperature of about 20° to about 40° C. and which has been heated to a temperature of about 100° to about 160° C., in an amount in excess of the solubility at room temperature of the carotenoid in the oil so as to form a supersaturated solution of the carotenoid in the oil, emulsifying while warm said supersaturated carotenoid solution in an aqueous gelable colloid solution and setting said emulsion in dry, particulate form.

2,861,892
RUST PREVENTIVE COMPOSITION

Frederick J. Radd, D'Arcy A. Shock, and John D. Sudbury, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Application October 27, 1954
Serial No. 465,124
3 Claims. (Cl. 106—14)

1. A coating composition adapted for use as a corrosion inhibitor comprising a bituminstic primer (cold dip) consisting of petroleum tar, rosin, gilsonite, and solvent naphtha in the approximate ratio of 28, 1, 9, and 62 percent, respectively, and from 0.002 to 0.1 part of a sulfonate per 100 parts of said primer wherein the cation of said sulfonate is organic.

2,861,893
FOUNDRY CORES

Frank S. Brewster, Lynwood, Calif., assignor to Bramley-Donaldson Co., Huntington Park, Calif., a corporation of California

No Drawing. Application May 25, 1956
Serial No. 587,223
2 Claims. (Cl. 106—38.35)

1. A binder for making stable foundry cores, comprising: 80% to 87% by weight of a hydrous, water dispersible sodium silicate solution and 13% to 20% of sucrose dissolved in said silicate solution, said silicate solution containing between 40% and 60% of a sodium silicate having one part Na_2O to each 2.0 to 3.22 parts SiO_2; said binder, upon being added to foundry sand in the proportion of from 3% to 7% of said binder to 93% to 97% of foundry core sand, producing a composition which readily pours and flows into molds, hardens into stable cores having a compression strength of over 250 p. s. i. upon exposure to carbon dioxide and without baking, and such hardened cores maintaining high strength and stability at temperatures up to about 2000° F. and then become readily disintegratable.

2,861,894
COAL TAR SOFT PITCH PRODUCT

Heinz Franck, Duisburg-Meiderich, Germany, assignor to Gesellschaft fuer Teerverwertung m. b. H., Duisburg-Meiderich, Germany, a corporation of Germany

No Drawing. Application July 5, 1955
Serial No. 520,110
Claims priority, application Germany July 8, 1954
8 Claims. (Cl. 106—279)

1. Soft pitch product homogeneously miscible in all proportions with distilled bitumen, said pitch product

consisting essentially of a mixture of coal tar pitch with a softening point of about 70° C., and a coal tar oil fraction consisting essentially of quadricuclear aromatic coal tar components, said soft pitch product having a softening point lower than about 40° C.

2,861,893

PAVING COMPOSITION OF LOW THERMAL CONDUCTIVITY

Harley F. Hardman, Lyndhurst, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application December 30, 1955
Serial No. 556,391
2 Claims. (Cl. 106—281)

1. A composition comprising 2 to 25% asphalt, 70 to 97.9% aggregate of 2-inch to less than 200 mesh, the gradation conforming to normal paving usage; 0.1 to 5% spherical particles having a bulk density of 0.01 to 0.3 g./cc., a liquid displacement density of 0.05 to 0.6 g./cc., and a size range of 1 micron to ⅛" in diameter and an average diameter of 1 to 500 microns, each of said particles being a distinct, complete and separate entity having a hollow, gas-filled interior and an exterior of film-forming material free from holes.

2,861,896

METHOD OF PRODUCING A COATED OPTICAL FILTER AND THE RESULTING ARTICLE

Thaddäus Kruss, Schaan, Liechtenstein, assignor to Gersteuben-Anstalt, Balzers, Liechtenstein

Application November 1, 1954, Serial No. 466,161
Claims priority, application Germany October 31, 1953
4 Claims. (Cl. 117—33.3)

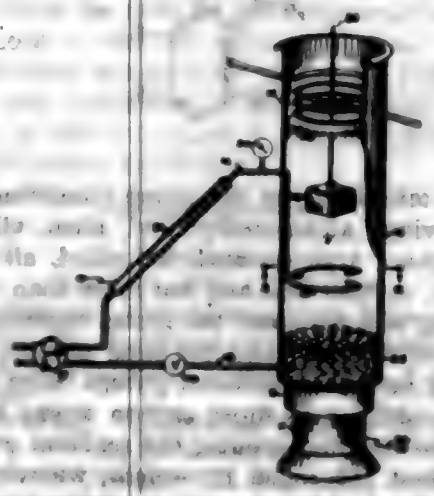
1. The method of producing a transparent layer formation with colored light transmission on a glass carrier base; comprising the steps of depositing on said base at least two different substances from the vapor phase, said substances being deposited in the form of a thin, finely mixed, greenish colored layer, one of said substances being magnesium fluoride and the other of said substances being copper, and then heating said base until the greenish color of the said layer is changed to a reddish purple color, thereby attaining a colloidal dispersion of copper in magnesium fluoride.

2,861,897

METHOD OF APPLYING AN ORGANIC FILM COATING BY SPRAYING

Philip R. Hendrixson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 13, 1955, Serial No. 481,617
20 Claims. (Cl. 117—47)



1. The method of applying a film-like organic coating to the surface of an article which comprises providing (1) a body of a liquid composition including a volatile solvent and a film-forming organic material dispersed therein, said solvent being substantially inert to the film-forming organic material, and (2) a spray zone in fluid communication with said body for retaining the vapors of the solvent; maintaining said liquid composition at its boiling temperature; condensing solvent vapors in the spray zone and returning the condensed solvent to the body of liquid; preheating the article to be coated to a temperature at least equal to the boiling point of the solvent; spraying said article in the spray zone with said liquid composition, the heat within the article evaporating the solvent as the composition is applied; and withdrawing the article from the spray zone substantially solvent-free but coated with said film-forming organic material.

2,861,898

NOVEL COATED PARTICULATE FOAMABLE STYRENE POLYMER COMPOSITIONS

Norbert Platzer, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 10, 1956
Serial No. 608,689
5 Claims. (Cl. 117—100)

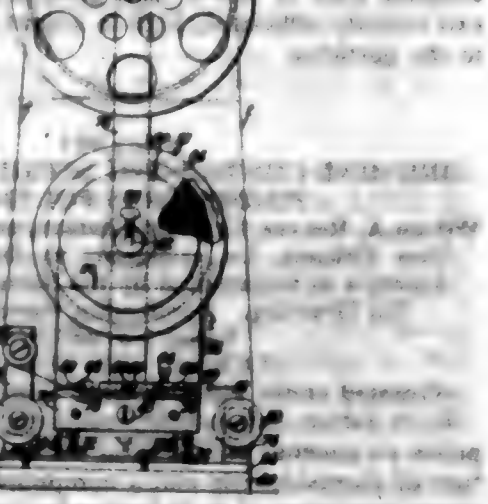
1. The method for preparing a particulate foamable styrene polymer composition having incorporated therein a volatile organic compound as a foaming agent and having deposited on the surface thereof a material of the group consisting of water-insoluble alkaline earth metal silicates, water-insoluble aluminum silicates and mixtures thereof which comprises sequentially coating a particulate foamable styrene polymer with (*a*) a water solution of a material of the group consisting of alkaline earth metal salts, aluminum salts and mixtures thereof and (*b*) a water solution of a silicate salt, the quantity of said water-soluble salts coated on the particulate styrene polymer being sufficient to deposit upon the polymer particles 0.1–5.0 weight percent of water-insoluble silicate compound.

2,861,899

PRESSURE-SENSITIVE ADHESIVE COMPOSITIONS FOR TAPE AND METHODS FOR DISPENSING SAME

Edwin E. Sylvester, Watertown, and Sumner H. Peck, Wakefield, Mass., assignors to B. B. Chemical Co., Boston, Mass., a corporation of Massachusetts

Application August 15, 1956, Serial No. 604,190
6 Claims. (Cl. 117—103)



1. The method of forming pressure-sensitive adhesive coated sheet material which includes the steps of pro-

material in shortening.

proportions with distilled bitumen, said pitch product

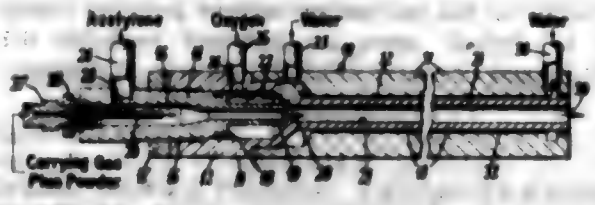
viding a body of heat stable, substantially solvent free, pressure-sensitive adhesive comprising a mixture of thermoplastic resins consisting essentially of at least one polyvinyl alkyl ether in which the alkyl group has from 2 to 4 carbon atoms and a low molecular weight styrene polymer composed of at least one styrene from the group consisting of styrene and styrene homologues, said mixture comprising from about 20% to about 70% by weight of a high molecular weight polyvinyl alkyl ether and at least about 10% by weight of said low molecular weight polymer of a styrene, heating said body of adhesive to bring it to fluid molten condition, flowing molten adhesive from said body by gravity in a column including a terminal upwardly directed column portion ending at a level below the level of the surface of adhesive in said body of molten adhesive, disposing a backing sheet across and with its under side in contact with the end of said column of molten adhesive to restrain flow of said column, moving said backing sheet across the end of said column to coat successive portions of the under side of said backing with said mixture, and then cooling said successive portions of said backing with the coating out of contact with other surfaces to solidify said mixture to a strongly cohesive pressure-sensitive adhesive layer on said backing.

2,861,900

JET PLATING OF HIGH MELTING POINT MATERIALS

George H. Smith, Kenmore, N. Y., and Richard C. Eschenbach and John F. Pelton, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York

Application May 2, 1955, Serial No. 505,212
16 Claims. (Cl. 117—105)



1. A method of applying a surface coating to an object which comprises introducing a solid coating material and a fluid combustible mixture under pressure into a confined combustion space, heating at least a portion of the coating particles to a high temperature by burning the fluid combustible mixture in said space in the presence of such material, and thereafter propelling heated coating particles toward the surface of the object to be coated at a linear velocity greater than 500 feet per second by discharging the particle-carrying burning gases through a confined path in which such gases are accelerated to an exit velocity sufficiently high to impart such linear velocity to the particles.

2,861,901

BROMINE CONTAINING NITRILO METHYLOL-PHOSPHORUS POLYMERS

Wilson A. Reeves, Carl Hamuslaiwa, and John D. Guthrie, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application November 9, 1954
Serial No. 467,896
17 Claims. (Cl. 117—136)
(Granted under Title 35, U. S. Code (1952), sec. 266)

8. A fabric flammability reducing agent which comprises an aqueous composition obtained by heating a mixture of formaldehyde and a compound selected from the group consisting of diallylmelamine and acrylamide, then adding a brominating agent selected from the group consisting of bromine and bromoform and a free radical reaction initiating catalyst, further heating the mixture, and then adding an aqueous solution containing an organic trivalent nitrogen-containing compound and a compound selected from the group consisting of tris(hydroxymethyl) phosphine oxide and tetrakis (hydroxymethyl) phosphonium chloride.

9. A process for producing a flame-retardant composition of matter which comprises heating an aqueous mixture of diallylmelamine, formaldehyde, and an emulsifying agent, then adding bromoform and a catalytic amount of potassium persulfate, and then continuing the heating until a stable aqueous emulsion is produced.

11. A method for flameproofing a fabric which comprises impregnating said fabric with the aqueous emulsion obtained by the process of claim 9, drying the impregnated fabric, and then insolubilizing the impregnant in situ at an elevated temperature.

2,861,902

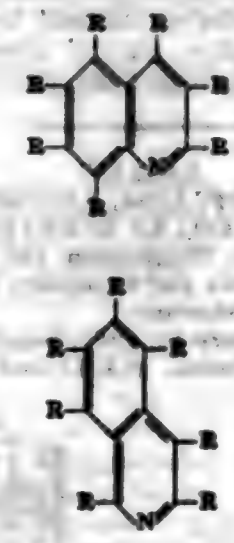
ADDITION PRODUCTS OF HETEROCYCLIC NITROGEN POLYMERS AND HEAVY METAL SALTS, METHOD OF IMPREGNATING WITH, AND IMPREGNATED ARTICLE

James E. Pritchard, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application September 7, 1954
Serial No. 454,615
23 Claims. (Cl. 117—138.5)

11. The method of rendering absorbent material water repellent and resistant to attack by parasitic microorganisms comprising impregnating said material with the reaction product of a solution of a heavy metal salt and a solution of a polymer of a monomer system comprising a compound having a structure selected from the group consisting of

and



where R is selected from the group consisting of hydrogen, alkyl, vinyl, alpha-methylvinyl, nitro, alkoxy, halo, hydroxy, cyano, aryloxy, aryl, haloalkyl, alkylaryl, and hydroxyaryl, at least one and not more than two of said groups being selected from the group consisting of vinyl and alpha-methylvinyl; and the total number of carbon atoms in the nuclear substituted groups being not greater than 12, in addition to those carbon atoms in the vinyl and alpha-methylvinyl groups; the reaction product containing at least 5% metal by weight, whereby from 0.1 to 25 parts by weight of water-insoluble reaction product is deposited per 100 parts by weight of the dry absorbent.

2,861,983

METHOD OF FORMING PHOTORESISTIVE COATINGS AND COMPOSITION

Walter Heimann, Wiesbaden, Germany, assignor to Société Nouvelle de L'Outillage R. B. V. et de la Radio-Industrie (S. B. V.-R. I.), Paris, France, a joint-stock company

Application November 3, 1953, Serial No. 390,845
Claims priority, application Germany November 18, 1952
9 Claims. (Cl. 117—200)

6. The method of forming photoresistive material sensitive to near infra-red, visible and near ultra-violet light, which consists in forming upon the surface of a dielectric plate a film of cadmium sulfide by vacuum evaporation, said film being of a thickness of a few microns, placing said film in contact with a mixture of microcrystalline powders consisting of 90 parts of pure cadmium sulfide powder, 10 parts of pure selenium, and 10 parts of cadmium sulfide containing 0.1 part of copper sulfide, and heating said film and said powders to a temperature between 500 and 600° C.

2,861,984

WITHDRAWN

2,861,985

PROCESS FOR CONTROLLING EXCESS CARRIER CONCENTRATION IN A SEMICONDUCTOR

George S. Indig, Bronxville, N. Y., and William G. Pfann, Far Hills, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

No Drawing. Application June 25, 1957
Serial No. 667,956
13 Claims. (Cl. 148—1.5)

1. A process of crystallizing semiconductive material evidencing uniform electrical conductivity characteristics from a body of liquid comprising as a major ingredient a fusible extrinsic semiconductive material, and as minor ingredients, two significant solutes, such that one of the characteristics, (*a*) the conductivity imparting type, and (*b*) the sign of the quantity (1—*k*), is opposite for the two solutes, and the other is the same for the two solutes, in which the ratio of the concentration of solute 2 in the liquid to that of solute 1 is from 0.8 to 1.2 times the absolute value of R° where R° is the ratio of the growth rate coefficient of the distribution coefficient of solute 1 to that of solute 2 and in which *k* is the effective distribution coefficient.

2,861,986

METAL TREATMENT

Ludwig K. Schuster, Philadelphia, and Alfonso L. Baldi, Drexel Hill, Pa., assignors, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

No Drawing. Application October 15, 1956
Serial No. 615,755
6 Claims. (Cl. 148—6.2)

1. In a method of coating corrodible ferrous metal by first etching the metal surface in aqueous nitric acid having a concentration of from 1 to 20% by weight for a period of from 2 to 70 seconds to a temperature of 60 to 150° F., and then applying to the etched surface a film of an in situ dried aqueous solution of partially reduced chromic acid, at least about half but less than all the chromic acid in the film being reduced, the improvement by which the etching is preceded by a step in which the metal surface is subjected to an activation treatment to minimize passivation by the nitric acid.

2,861,987

INHIBITION OF CORROSION OF METAL SURFACES BY SALT OF PHOSPHORODITHIOIC ACID

Thomas A. Butler, Cleveland, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Application September 28, 1956
Serial No. 612,597
18 Claims. (Cl. 148—6.17)

1. The process of inhibiting corrosion of metal surfaces which comprises applying to said surfaces a film of a polyvalent metal salt of a phosphorodithioic acid prepared by the process which comprises (*a*) the reaction of a mixture of a monohydric alcohol and from 0.25 to 4.0 equivalents of a polyhydric alcohol, with a phosphorus sulfide to form a phosphorodithioic acid, and (*b*) conversion of said acid to a polyvalent metal salt thereof.

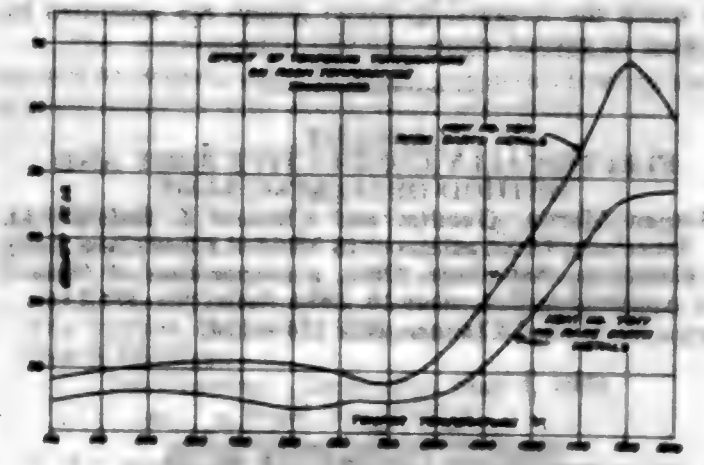
2. The process of claim 1 characterized further in that said metal surfaces are treated, prior to the application of said polyvalent metal salt, with a phosphating solution.

2,861,988

ALLOY STEEL AND METHOD OF MAKING

Cedric G. Michelson, Gary, Ind., and Gustaf A. Liljeqvist, deceased, late of Hammond, Ind., by Ellen S. Liljeqvist, administratrix, Lake County, Ind., assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application November 30, 1955, Serial No. 549,916
15 Claims. (Cl. 148—31)

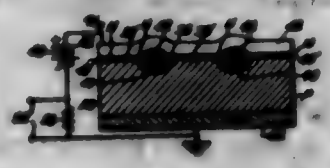


1. A steel alloy casting composed of: about .20 to .50% C, about .15 to 2.5% Mn, about .1 to 2.00% Si, nil to about .025% P, nil to about .025% S, about .50 to 1.50% Cr, about .05 to .70% Mo, residual to 1.00% Ni, about .0005 to .005% B, about 0.0015 to 0.5% rare earth metals, the balance—iron, said casting having an internal structure produced by normalizing at 1600 to 1900° F. followed by air cooling, then heating to about 1500 to 1650° F. followed by a quench, then heating to about 200 to less than 600° F. followed by another quench, and said casting being characterized by the properties of a Brinell hardness value of at least 444, and a Charpy impact value of at least 12 foot pounds at —40° F.

2,861,909
SEMICONDUCTOR DEVICES

Sidney G. Ellis, Princeton Junction, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application April 28, 1955, Serial No. 503,733
7 Claims. (Cl. 148—33)



1. A semiconductor device comprising a body of semiconductor material of one type of conductivity, a grid of semiconductor material having a conductivity-type opposite to said one type in rectifying contact with said body, said grid comprising a plurality of mutually perpendicular lines, any two adjacent elements of said grid being spaced apart a distance of the order of twice the diffusion length of minority charge carriers in said body, and a surface inversion layer on said body between said lines having said opposite type conductivity and being sufficiently thin to permit penetration of light therethrough.

2,861,910
POLYESTERS AND LAMINATES THEREFROM

Christian W. Johnston, Severna Park, and Robert A. Moore, Baltimore, Md., assignors to National Distillers and Chemical Corporation, a corporation of Virginia

No Drawing. Application August 31, 1954
Serial No. 453,434
7 Claims. (Cl. 154—27)

1. A composition comprising (A) a polyester product prepared by reacting an unsaturated acid compound selected from the group consisting of ethylenically unsaturated aliphatic organic dicarboxylic acids and anhydrides thereof, with a mixture of saturated branched chain aliphatic glycols having a total of at least ten carbon atoms per molecule, with only carbon atoms in the skeletal chain, at least one C_2 branch per molecule, and in which the terminal hydroxyl groups are separated by at least six carbon atoms, and (B) styrene.

2,861,911
ELECTRICALLY CONDUCTIVE BODY AND METHOD OF MAKING SAME

Morgan Martin, Geneva, and Clement J. Bojanowski, Ashtabula, Ohio, assignors to Molded Fiber Glass Body Company, Ashtabula, Ohio, a corporation of Ohio

Application December 30, 1954, Serial No. 476,116
7 Claims. (Cl. 154—110)

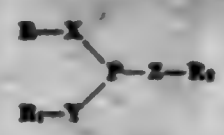
3. The method of making an electrically conductive body including a plastic base, which comprises the steps of forming discrete conductive metal elements on a carrier sheet made of a material which is compatible with the plastic of such base and electrically insulative, by spraying metal thereagainst through a stencil, applying the metal-bearing carrier sheet to a loosely bonded fibrous mass with the side of the sheet on which the metal is deposited disposed against a surface of the fibrous mass, adding liquid thermosetting resin thereto, and subjecting the material to pressure and heat sufficient to distribute the resin throughout the mass and cure the same.

2,861,912
METHOD FOR COMBATING PESTS AND PREPARATIONS SUITABLE THEREFOR

Richard Sallmann, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application January 30, 1956
Serial No. 561,976
Claims priority, application Switzerland
September 25, 1951
11 Claims. (Cl. 167—22)

1. A method for combating insects which comprises applying to the objects which are to be protected against the insects an insecticidal amount of a chloral-phosphite ester condensation product said product being prepared by adding together 1 mol of chloral and 1 mol of a phosphite ester of the general formula



wherein each of R and R_1 represents a radical selected from the group consisting of saturated aliphatic hydrocarbon radicals containing 1 to 4 carbon atoms, phenyl radicals and chlorinated phenyl radicals, R_2 represents a saturated aliphatic radical containing 1 to 4 carbon atoms, X and Y are each a member selected from the group consisting of oxygen, nitrogen and sulfur, and Z is a member selected from the group consisting of oxygen and sulfur, thus forming a condensation product.

2,861,913
DERIVATIVES OF DITHIOCARBONIC ACID

Richard Wegler, Leverkusen, and Ferdinand Grewe and Erik Regel, Köln-Flittard, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application March 2, 1954
Serial No. 413,717
Claims priority, application Germany March 5, 1953
4 Claims. (Cl. 167—30)

1. Fungicides having the formula

in which R is a lower alkyl radical, R^1 is a member selected from the group consisting of hydrogen and lower acyl radicals having from 1 to 4 carbon atoms and X is a member selected from the group consisting of nitro-substituted phenylene radicals, nitro- and chloro-substituted phenylene radicals, nitro- and lower alkyl-substituted phenylene radicals and chloro- and lower alkyl-substituted phenylene radicals.

2,861,914
NEW HALOGEN AND PHOSPHOR CONTAINING COMPOUNDS AND METHOD FOR THEIR USE

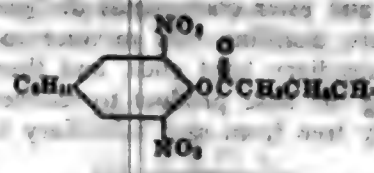
Richard Sallmann, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application January 30, 1956
Serial No. 561,979
Claims priority, application Switzerland
September 25, 1951
10 Claims. (Cl. 167—30)

10. A method for combating pests which comprises treating the objects which are to be protected against the pests with an effective amount of a condensation product from a trialkylphosphite, the alkyl radicals of which contain 1 to 4 carbon atoms, with a trichloroacetic acid aryl ester, the aryl radical of which is selected from the group consisting of phenyl, chlorophenyl, lower alkylphenyl, nitrophenyl, lower alkoxyphenyl, cyclohexylphenyl, α-naphthyl and β-naphthyl radicals.

2,861,915
DINITROPHENYL 4-PENTENOATES
Roderick C. Cary, Bristol, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application June 1, 1956
Serial No. 588,597
2 Claims. (Cl. 167—30)

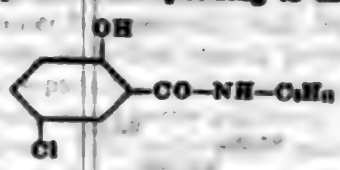
1. The compound



where C_6H_{11} is a cyclohexyl group.

2,861,916
FUNGICIDAL COMPOSITION COMPRISING 5-CHLORO-SALICYLIC ACID AMYLAMIDE
Ernst Medel, Basel, and Jakob Bindler, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland, a Swiss firm
No Drawing. Application July 9, 1956
Serial No. 596,445
Claims priority, application Switzerland July 22, 1955
3 Claims. (Cl. 167—31)

1. A fungicidal composition comprising as active ingredient a compound corresponding to the formula:



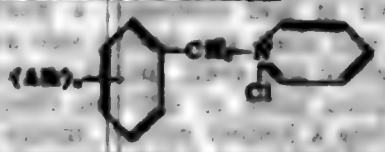
and a fungicidal adjuvant as a carrier therefor.

2,861,917
METHOD OF TREATING ENDOPARASITIC WORMS BY APPLYING A HETEROCYCLIC QUATERNARY HALIDE
Milton Kosmin, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application August 18, 1955
Serial No. 529,313
7 Claims. (Cl. 167—33)

1. The method of controlling endoparasitic worms which comprises applying to soils, plants and seeds susceptible to infestation by the worms a composition comprising a heterocyclic quaternary halide of the formula

in which R is selected from the class consisting of alkyl and chloroalkyl radicals of from 1 to 20 carbon atoms, n is an integer of from 0 to 3, and the total number of carbon atoms in the total R radicals is less than 30, Ar is an aromatic hydrocarbon radical of from 6 to 12 carbon atoms, m is an integer of from 1 to 3, X is selected from the class consisting of chlorine, bromine and iodine and N:D represents a compound of the pyridine series consisting of pyridine, quinoline, isoquinoline and C-linked alkyl homologs thereof containing from 1 to 3 C-alkyl substituents, the number of carbon atoms in each of said C-alkyl substituents being from 1 to 2.

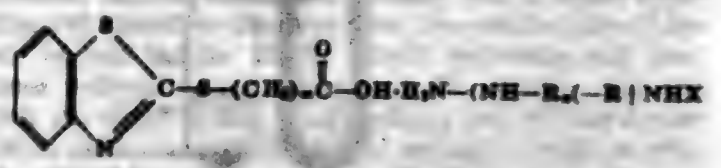
7. The method of controlling nematodes which comprises applying to soils, plants and seeds susceptible to infestation by the nematodes a composition comprising a pyridinium chloride of the formula



in which the alkyl radical has from 1 to 20 carbon atoms and in which the total number of carbon atoms in the total alkyl radicals is less than 30, and n is a number of from 1 to 2.

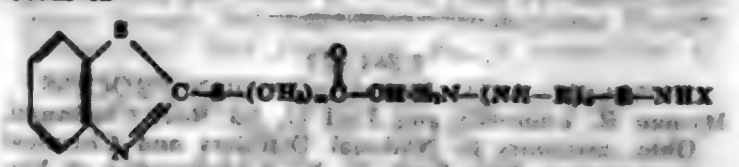
2,861,918
AMINE SALTS
Milton Kosmin, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application October 16, 1956
Serial No. 616,139
6 Claims. (Cl. 167—33)

1. A salt of the formula



in which m is an integer of from 1 to 3, R is an alkylene radical of from 2 to 3 carbon atoms, n is an integer of 0 to 2 and X is an aliphatic hydrocarbon radical of from 8 to 18 carbon atoms.

5. The method of combatting fungi which comprises exposing said fungi to a toxic quantity of a salt of the formula



in which m is an integer of from 1 to 3, R is an alkylene radical of from 2 to 3 carbon atoms, n is an integer of 0 to 2 and X is an aliphatic hydrocarbon radical of from 8 to 18 carbon atoms.

2,861,919
FUNGICIDE COMPRISING MUCOCHLORIC ANHYDRIDE
Everett E. Gilbert, Morris Township, Morris County, N. J., assignor to Allied Chemical Corporation, a corporation of New York
No Drawing. Application November 13, 1956
Serial No. 621,533
5 Claims. (Cl. 167—33)

1. The method of preventing and retarding fungus growth on organic material which comprises treating said organic material with mucochloric anhydride.

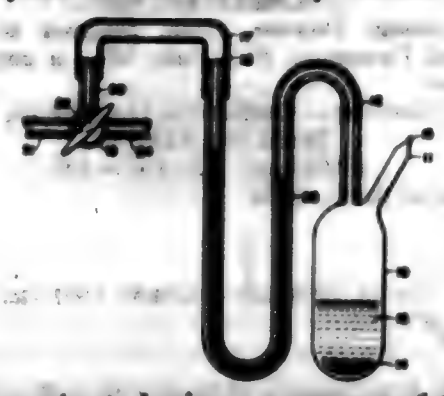
2,861,920
THERAPEUTIC SUSPENSIONS OF STEROIDS CONTAINING PVP AND/OR PVA
Jack K. Dale, Kalamazoo, and Samuel L. Ross, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application May 4, 1954
Serial No. 427,678
9 Claims. (Cl. 167—65)

1. An aqueous therapeutic suspension comprising a water-insoluble steroid subject to crystal growth and from 0.01 to ten percent weight by volume of a member selected from the group consisting of polyvinyl pyrrolidone, polyvinyl alcohol, and a mixture thereof.

2,861,921
MICROBIOLOGICAL PETROLEUM PROSPECTING METHOD
David M. Updegraff and Hubert H. Chase, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Application January 26, 1954, Serial No. 405,882
14 Claims. (Cl. 195—3)

1. A microbiological method of prospecting for a subterranean petroleum deposit comprising collecting

earth samples at spaced locations over a prospect area, admixing a known portion of each of said samples with aqueous inorganic salt medium for bacteria, contacting the resulting mixture with a nutrient comprising a petroleum hydrocarbon, and determining the time required for consumption of said nutrient by bacteria in each of



said earth samples to begin as a measure of the number of bacteria in each of said samples whereby the number of bacteria per unit amount of sample may be correlated with sample locations to detect anomalous variations in the number of bacteria indicative of the proximity of a subterranean petroleum deposit.

2,861,923

FUMARIC ACID FERMENTATION PROCESS

Hyman R. Lubowitz and Earl G. La Roe, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application December 21, 1955
Serial No. 554,413
10 Claims. (Cl. 195—36)

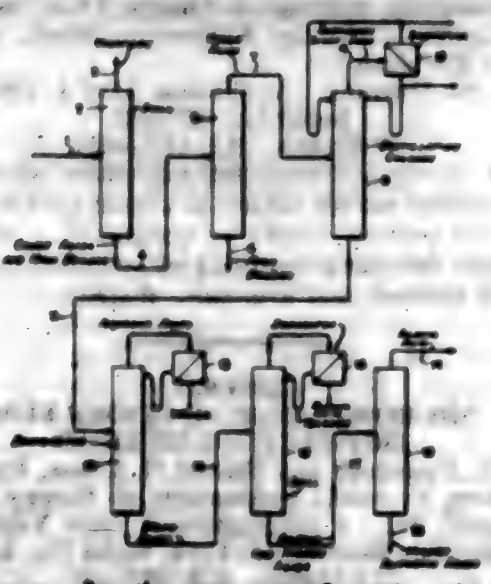
1. In a process for production of fumaric acid by fermentation of a carbohydrate-containing substance by means of fumaric acid-producing fungi of the genus Rhizopus, the improvement which comprises carrying out said fermentation in the presence of a source of nickel ions in an amount of from about 10 to about 300 parts of nickel ions per million parts of the fermentation medium.

2,861,923

PURIFICATION OF ALIPHATIC ACIDS

Alec Elce, Epsom, Archibald Robert Graham, Richmond, Alfred Frank Millidge, Coulsdon, Ian Kenneth Miles Robson, London, and Donald Peter Young, Sanderstead, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

Application June 16, 1954, Serial No. 437,174
Claims priority, application Great Britain June 25, 1953
3 Claims. (Cl. 202—39)



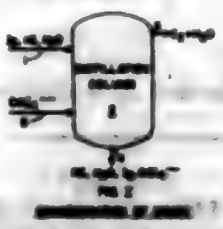
1. A process for the recovery of acetic acid from the product of the liquid phase oxidation of aliphatic hydrocarbons containing (*a*) light ends, (*b*) water, (*c*) aliphatic mono-carboxylic acids of 1–4 carbon atoms and (*d*) higher boiling residues, which comprises distilling the product prior to dehydration to remove said light ends, distilling the base product of this fractionation to separate from the higher boiling residues a distillate mixture containing water and the aliphatic mono-carboxylic acids of 1–4 carbon atoms containing colored contaminant including ketonic and ester compounds designated as subsidiary light ends, distilling said mixture to remove as distillate said subsidiary light ends, and thereafter fractionally distilling the base product to recover the acetic acid substantially free from said subsidiary light ends.

2,861,924

COMPOSITION OF MATTER AND CORROSION PREVENTION PROCESS

Philip J. Ballmider, Richmond, Calif., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

Application July 13, 1956, Serial No. 599,511
7 Claims. (Cl. 202—57)



1. In the process of condensing a mixture of water, elemental iodine and hydrogen iodide, which mixture normally causes excessive corrosion of metallic surfaces containing less than about 10% by weight of iron and at least about 49% by weight of nickel in contact therewith at temperatures in excess of about 100° F., from vapor state to liquid state, the improvement comprising contacting the vaporized mixture with a sufficient amount of a relatively colder condensed aqueous phase to effect the condensation, said aqueous phase containing zinc iodide complex anions in an amount sufficient to substantially minimize the corrosion of metallic surfaces in contact therewith.

2,861,925

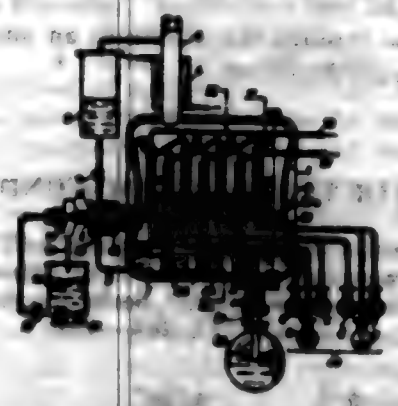
HIGH VACUUM DISTILLATION APPARATUS

Hans Mende, Winterthur, Switzerland, assignor to Sulzer Freres, S. A., Winterthur, Switzerland, a corporation of Switzerland

Application April 30, 1956, Serial No. 581,742
Claims priority, application Switzerland May 2, 1955
1 Claim. (Cl. 202—236)

An apparatus for distilling at a high vacuum comprising, in combination, a vacuum container, a horizontal shaft rotatable in said container, a plurality of discs mounted on said shaft and having side surfaces placed at a right angle to said shaft, means connected with said discs for heating same to different temperatures, said container having a bottom portion, means for supplying the fluid to be distilled into said bottom portion, said discs

dipping into the fluid in said bottom portion and picking up fluid upon rotation of said shaft for evaporating part of the fluid from said side surfaces, a plurality of cooling means individually having side surfaces individually placed opposite individual side surfaces of said discs for condensing the part of the fluid evaporating from the side surfaces of said discs on the opposed side surfaces of said cooling means, a separate trough placed beneath each of the side surfaces of those of said cooling means whose side surfaces are placed between two neighboring



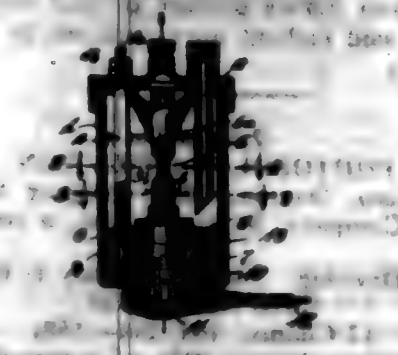
discs for separately collecting the distillate dripping from the side surfaces of the cooling means which side surfaces are located opposite the neighboring side surfaces of two different discs, and partitions disposed in said bottom portion of said container between said discs for dividing said bottom portion into individual spaces pertaining to individual discs, and separating walls individually placed in said bottom portion beneath the individual discs for subdividing said spaces into individual spaces which are contiguous to the individual side surfaces of the discs beneath which said separating walls are placed.

2,861,926

ELECTROCHEMICAL METHOD AND APPARATUS FOR GAS DETECTION

Moses G. Jacobson, Penn Township, Allegheny County, Pa., assignor to Mine Safety Appliances Co., Pittsburgh, Pa., a corporation of Pennsylvania

Application February 26, 1953, Serial No. 338,939
10 Claims. (Cl. 204—1)



1. In a system for the electrochemical detection of gas utilizing a polarized electric cell, wherein one of the electrodes is adapted to be depolarized by a gas to be detected, the method which consists in measuring the total change in electric power output of the cell produced by changing from one known gas concentration to another known gas concentration, replacing the known gases by the gas to be tested, measuring the difference in total electric power output between the gas to be tested and one of the known gas concentrations for determining the unknown concentration of the gas tested from the proportionality between changes of power and changes of concentration.

8. A system of electrochemical gas detection comprising in combination a detector element consisting of a primary electrochemical cell containing a cathode and an anode, said cathode having a more positive potential than said anode, and said cathode being polarized by current generated by said detector cell itself without the aid of external polarizing current, and means for substantially decreasing said polarizing current while simultaneously increasing terminal voltage, said means comprising: an auxiliary source of electric power, a voltage divider circuit connected to said source of power having a part which provides a fractional voltage, the said part of said voltage divider circuit having a resistance that is small in comparison both with the total resistance of the detector cell circuit and with the total resistance of the voltage divider circuit whereby a fraction of the terminal voltage of said auxiliary source smaller than any utilized potential derived from said detector cell is made available, and circuit connections from the positive side of the part of said voltage divider circuit producing said fractional voltage to the cathode of the detector cell and from the negative side of said part of said voltage divider circuit producing said fractional voltage through an electric current measuring device to the anode of the detector cell.

2,861,927

PROCESS FOR ADJUSTING THE COMPONENTS IN AQUEOUS ALKALI CYANIDE ELECTROLYTES

Myron Corson and James R. Crahs, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application April 25, 1956
Serial No. 580,458
4 Claims. (Cl. 204—44)

1. In the process of plating articles in an aqueous alkali cyanide electrolyte plating bath containing at least 0.5 ounce per gallon of alkali hydroxide in which excess carbonate builds up and in which deficiencies of free alkali metal cyanide and alkali metal hydroxide develop during use, which process includes the step of returning the electrolyte dragout to the bath, the improvement which comprises adding to the aqueous electrolyte a composition consisting essentially of from 9% to 91% by weight of calcium cyanide and from 91% to 9% by weight of calcium dioxide, said composition being added in an amount sufficient to precipitate the excess carbonate, there remaining at least about 4 ounces per gallon of carbonate in the electrolyte, and increase the free alkali metal cyanide and alkali metal hydroxide to a desired predetermined level, said composition maintaining the pH of the electrolyte at a level of at least 0.5 ounce per gallon of alkali hydroxide.

2,861,928

TREATMENT OF AQUEOUS ALKALI CYANIDE ELECTROLYTES

Myron Corson, Penn Township, Allegheny County, and Wenzel L. Bohmann, Port Vue, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application December 13, 1955
Serial No. 552,718
4 Claims. (Cl. 204—52)

1. In the process of treating an aqueous alkali copper cyanide electrolyte having an excess of carbonate, containing organic impurities and having a deficiency of free alkali metal cyanide, the improvement which comprises adding to the aqueous electrolyte a composition comprising from 85% to 5% by weight of calcium cuprous cyanide, from 5% to 85% by weight of calcium cyanide, and from 10% to 50% by weight of calcium oxide, the composition being added in an amount sufficient (1) to react with only the excess of carbonate to form a precipitate of calcium carbonate, there remaining at least about 4 ounces per gallon of carbonate in the electrolyte, and (2) to provide additional free alkali metal cyanide to remedy the deficiency thereof, said composition maintaining the pH of the aqueous electrolyte at a level of

not over substantially 16 ounces per gallon of alkali hydroxide to promote the rapid settling of the calcium carbonate precipitate in the form of a mass of relatively coarse easily filterable particles which precipitate occludes the organic impurities in the electrolyte, agitating the electrolyte and the added composition until the precipitate-forming reaction is substantially complete and separating the treated electrolyte from the precipitate.

2,861,929

COPPER PLATING WITH ADDITION AGENTS

Donnan Martin, Niagara Falls, and Arthur H. Parker, Kenmore, N. Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 20, 1957
Serial No. 667,015
3 Claims. (Cl. 204—52)

1. The process for electroplating copper which comprises electrodepositing copper from an aqueous copper cyanide solution containing free cyanide selected from the group consisting of sodium cyanide and potassium cyanide, said solution containing between 0.025 to 0.5 grams per liter of an alkali metal salt of methylene-bis-α-naphthalene sulfonic acid and between about 10 and 250 p. p. m. by weight of selenium as a compound selected from the group consisting of selenates and selenites, and additionally between about 0.01 to 0.1 p. p. m. by weight of selenium as a selenide compound, subjecting said solution to a reverse current cycle of between 10 to 120 seconds' duration wherein the forward current period is at least twice as long as the reverse current period.

2,861,930

METHOD OF ELECTROPOLISHING AND ELECTROLYTIC SOLUTION THEREFOR

Herbert B. Robinson, Long Beach, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

No Drawing. Application September 13, 1956
Serial No. 609,531
5 Claims. (Cl. 204—140.5)

5. The method of electropolishing metallic material selected from the group consisting of the 200 series of stainless steel, the 300 series of stainless steel, the 400 series of stainless steel, carbon steel, nickel and nickel base alloys, and cobalt and cobalt base alloys which comprises passing an electric current from said metallic material as the anode through an aqueous solution of a mixture of ortho phosphoric acid, a salt of alginic acid and a mineral acid selected from the group consisting of sulphuric acid and hydrochloric acid, said derivative of alginic acid being present in an amount of about 0.1% to 5.0% by weight of said solution, and continuing to pass said current with sufficient density for a sufficient length of time to remove scale and discoloration and to brighten and smooth said metallic material.

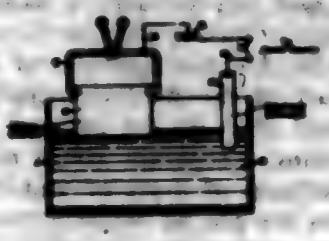
2,861,931

ELECTROLYTIC ETCHING PROCESSES

John W. Faust, Jr., Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 29, 1956, Serial No. 606,256
3 Claims. (Cl. 204—141)

1. In the process of etching silicon, the steps of mechanically polishing the silicon to remove deleterious matter from the surface, applying to the silicon an electrolyte comprising only a mixture of from 1% to 30% by volume of concentrated hydrofluoric acid and the balance being an anhydrous hydrophilic solvent comprising at least one selected from the group consisting of monohydric and polyhydric alcohols, ethers, carboxylic acids, amines, esters and ketones, and causing an electric



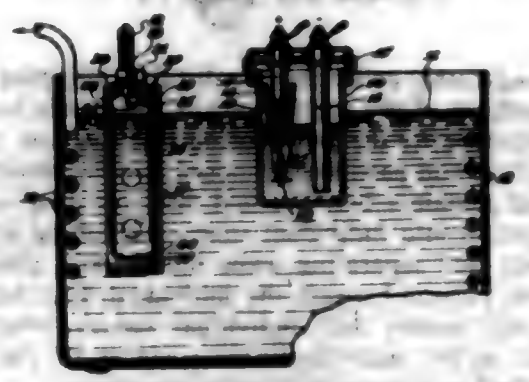
current to flow through the silicon as an anode and the electrolyte to etch the silicon.

2,861,933

METHOD OF TREATING SEMI-CONDUCTOR ARTICLES

Robert G. Pohl, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois

Application March 6, 1957, Serial No. 644,389
3 Claims. (Cl. 204—141)



1. The method of processing a semi-conductor article in a liquid electrolytic chemical etchant of predetermined volume surrounded by a liquid cooling medium of substantially larger volume comprising the steps of: maintaining said liquid cooling medium at a substantially constant predetermined temperature; immersing said article in said liquid electrolytic chemical etchant; polarizing said immersed article anodically to pass an electric current from said article through said electrolytic chemical etchant; and during passage of said electric current imparting to said etchant ultrasonic energy at a cavitation frequency.

2,861,933

PHOTOPOLYMERIZATION

Roland J. Kern, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 1, 1953
Serial No. 368,638
12 Claims. (Cl. 204—159)

1. In the photopolymerization of a monomer selected from the group consisting of acrylonitrile and methacrylonitrile, the improvement which comprises conducting said photopolymerization in the presence of a small amount of a photosensitizer consisting essentially of a thiuram monosulfide effective to photosensitize said polymerization.

2,861,934

METHOD FOR EFFECTING PHOTOPOLYMERIZATION

Roland J. Kern, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 1, 1953
Serial No. 368,639
9 Claims. (Cl. 204—159)

1. In the photopolymerization of acrylonitrile, the improvement which comprises conducting said photopoly-

between consecutive hoops, and driving means being

2,861,940

merization in the presence of a small amount of a photosensitizer consisting essentially of a benzene thiol effective to photosensitize said polymerization.

2,861,935

ELECTROPHORETIC METHOD OF APPLYING A LUBRICANT COATING

Frederick Fahnoe, Morristown, and James J. Shyne, Arlington, N. J., assignors to Vitro Corporation of America, Verona, N. J.

No Drawing. Application May 20, 1954
Serial No. 431,372
4 Claims. (Cl. 204—181)

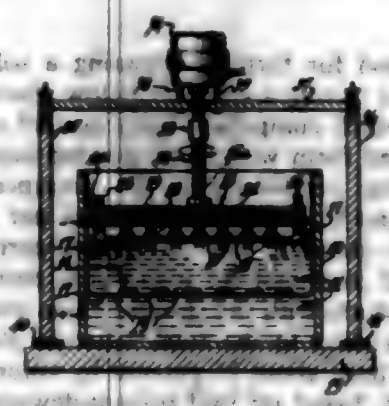
1. The method of applying a lubricant coating to the surface of a metal which comprises the steps of electrophoretically codepositing out of liquid media onto the surface of a metal a coating consisting essentially of a mixture of between 70%–95% by weight of comminuted particles of at least one reducible metallic oxide and between 30%–5% by weight of metal clad comminuted particles of at least one lubricating agent selected from the group consisting of the sulphides, disulphides, selenides and tellurides of molybdenum, tungsten, and titanium; and heating said coated metal in a reducing atmosphere until said oxide particles are reduced to metal in the form of a matrix bonded to said metal, said metal clad particles being entrapped within the pores of said matrix.

2,861,936

APPARATUS FOR COATING SIMULTANEOUSLY A PLURALITY OF SEPARATE METAL ARTICLES

Dominick William Colamento, Ridgefield, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application December 23, 1953, Serial No. 399,995
2 Claims. (Cl. 204—199)



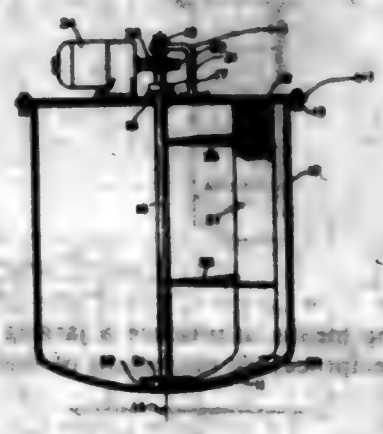
1. Apparatus for coating by electrodeposition connector wire portions extending from one face of a disc type stem assembly, compising a tank for containing a coating bath therein, a flat composite horizontally disposed structure including a flat tray and a flat electrode contact assembly removably fixed to said tray and defining a space therebetwen for receiving a plurality of disc type stem assemblies, said tray having a surface engaging portions of the discs of said assemblies, said tray having apertures in said surface through which said connector wire portions are adapted to extend, said electrode contact assembly comprising an electrode contact having a conducting surface for engaging the free ends of prong wire portions of said assemblies, a yieldable material engaging a surface of said contact opposite to said conducting surface, said conducting surface being yieldable against said yieldable material for accommodating said surface to prong wires of different lengths and for urging said discs against said tray surface, and means fixed to a surface of said electrode contact assembly opposite said conducting surface for removably supporting said composite structure horizontally in said container, and for rotating said composite structure on a vertical axis, whereby said connector wires only, are adapted to extend into said bath and said assemblies are securely supported on said composite structure for advantageously coating said connector wire portions.

2,861,937

APPARATUS FOR ELECTROPOLISHING INTERIOR SURFACES OF VESSELS

John F. Jeunet, Chicago, Ill.

Application September 15, 1954, Serial No. 456,292
10 Claims. (Cl. 204—212)



6. Apparatus for electropolishing the internal end and side wall surfaces of a vessel which is symmetrical about an axis of revolution and adapted to contain an electropolishing solution, said aparatus comprising a bearing adapted to be positioned in alignment with said axis, insulating means adapted to engage the vessel and supporting said bearing, a metal cathode rotatably supported by said bearing and comprising a generally triangular shaped end section having its apex adapted to be positioned adjacent to said axis and a second section connected to the end of the first section opposite said apex, the width of said second section being substantially equal to the width of the adjacent end of the first section, insulating means adapted to space the respective sections substantially uniformly from the internal end and side wall surfaces of the vessel, said end and second sections of the cathode including reticulated areas extending across the path of gas bubbles arising from said internal surfaces of the vessel, motor means for producing relative rotation of the vessel and cathode, and means for passing electric current through the solution between the vessel and the cathode.

2,861,938

ELECTROLYTIC CELLS

Richard Donald Samuel Glascodine, Runcorn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Application April 1, 1955, Serial No. 498,700
Claims priority, application Great Britain April 7, 1954
4 Claims. (Cl. 204—243)

1. An improved scraping device for removing undesired metal deposits from the inner wall of a vertical riser pipe of a sodium producing electrolytic cell comprising, a substantially vertically disposed supporting bar extending substantially the length of the riser, a plurality of vertically spaced cutting hoops secured at substantially equal intervals to said supporting bar, means mounting said bar for reciprocating movement within said riser, upper and lower stop means for limiting the reciprocating movement of said bar to a predetermined amplitude, said amplitude being at least equal to the greatest distance

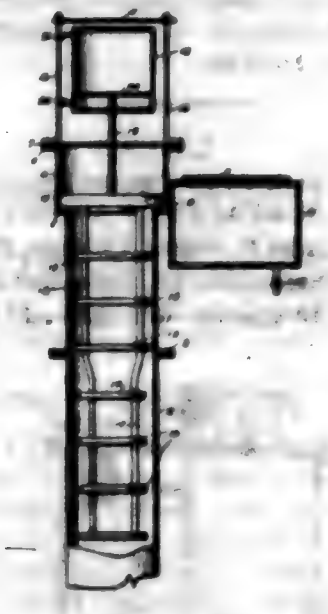
from a reaction zone and passing the heated effluent to a

2,861,944

prising at least one selected from the group consisting

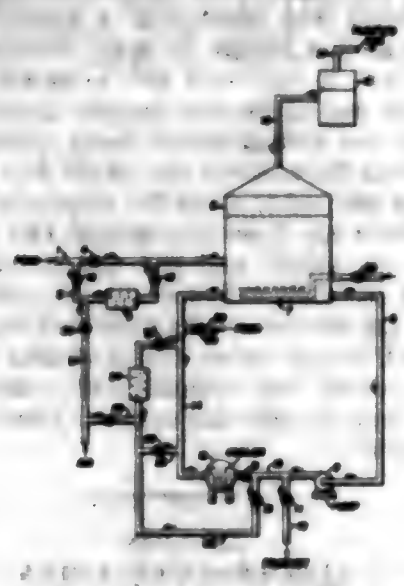
provement which comprises conducting said photopoly-

between consecutive hoops, and driving means being operable to impel said bar forcefully against said upper



and lower stop means to produce a jarring effect at both ends of the reciprocatory movement of said bar.

2,861,939
ASPHALT OXIDATION
Frank A. Birkmaier, Cranford, Gerard P. Canevari, Union, and William Lockett, Jr., Metuchen, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application March 22, 1956, Serial No. 573,276
7 Claims. (Cl. 208—4)

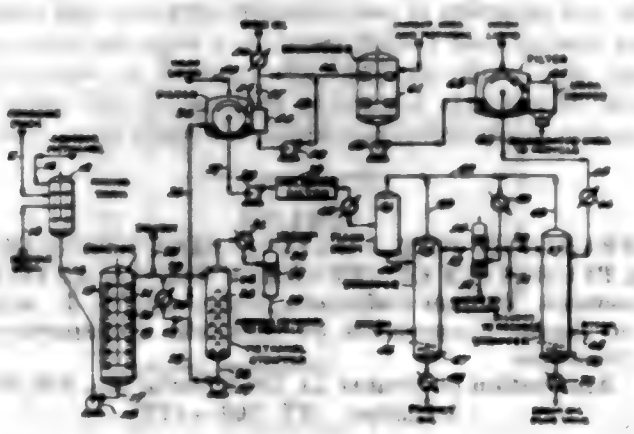


1. In a continuous process for the oxidation of asphalt wherein preheated asphalt is fed into an oxidation zone and oxidized asphalt is taken off as a product, and wherein the exothermic heat of reaction is removed by withdrawing a stream of at least partially oxidized asphalt from said oxidation zone, cooling said withdrawn stream and recycling said cooled stream to said oxidation zone, the improvement which comprises mixing an oxygen-containing gas with a cooled portion of said withdrawn stream, the resulting oxidation thereby raising the temperature to a level higher than that existing in said oxidation zone, rapidly quenching the resulting heated portion by admixing therewith sufficient cool asphalt to lower the temperature of the resulting mixture to about the temperature maintained in said oxidizing zone and recycling the quenched asphalt to said oxidizing zone.

2,861,940
PRODUCTION OF BLOWN ASPHALTS
Joseph E. Apellaniz, Binghamton, N. Y., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Application July 29, 1955
Serial No. 525,395
3 Claims. (Cl. 208—5)

1. A process for producing blown asphalts which comprises air blowing a residual oil at an elevated temperature in the presence of a catalyst comprising a complex of phosphoric acid and boron trifluoride.

2,861,941
UREA-DEWAXING LUBRICATING OIL
Andrew T. Jancosek, Hammond, Ind., and John S. Brown, Flossmoor, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application March 28, 1955, Serial No. 497,236
3 Claims. (Cl. 208—25)

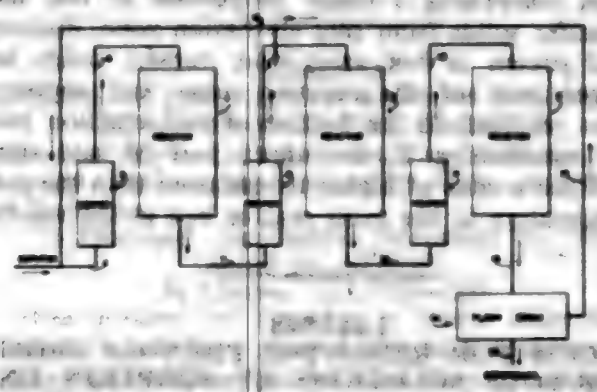


1. A method for further dewaxing a solvent-dewaxed lubricating oil having a viscosity below about 300 S. S. U. at 100° F., which comprises slurrying said oil in substantially undiluted form with finely divided urea under urea-adduct-forming conditions in the presence of between about 0.05 and 0.5 mole of methanol per mole of urea and between about 2 and 10 volume-percent of water based on said methanol for a sufficient period of time to form urea adducts with the straight-chain waxes contained in said oil, adding to the total reaction slurry resulting therefrom at least about 25 percent by volume of an inert diluent liquid, based on said solvent-dewaxed lubricating oil stock, separating urea adducts from the diluted reaction slurry, and separating said diluent liquid from the resulting liquid phase, whereby a treated oil having a pour point below about 0° F. is obtained.

2,861,943
REFORMING IN MULTIPLE STAGES EMPLOYING A PLATINUM-TYPE METAL CATALYST
La Verne H. Recktenwald, Harvey, Ill., assignor to Sinclair Refining Company, New York, N. Y., a corporation of Maine
Application November 23, 1954, Serial No. 470,201
5 Claims. (Cl. 208—65)

1. In the reforming of substantially olefin-free hydrocarbons of gasoline and naphtha boiling ranges in the presence of hydrogen and a platinum metal reforming catalyst and employing in series platinum metal catalyst beds maintained under reforming conditions in a plurality of adiabatic reaction zones and employing a heating zone before each of the plurality of reaction zones, the steps comprising heating the hydrocarbon feed, passing the heated feed to a reaction zone at an inlet temperature from about 875 to 975° F., heating the effluent

from a reaction zone and passing the heated effluent to a subsequent reaction zone at an inlet temperature of at



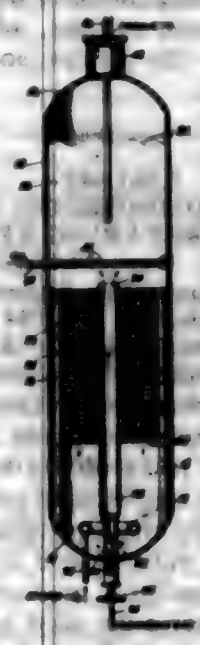
least about 25° below the inlet temperature of a preceding reaction zone.

2,861,943

HYDROCRACKING PROCESS WITH THE USE OF FLUIDIZED INERT PARTICLES

James A. Fleserue, Jr., Westbury, and Frederick B. Gressolinger, New York, N. Y., assignors to Hydrocarbon Research, Inc., New York, N. Y., a corporation of New Jersey

Application July 16, 1952, Serial No. 299,114
14 Claims. (Cl. 208—76)



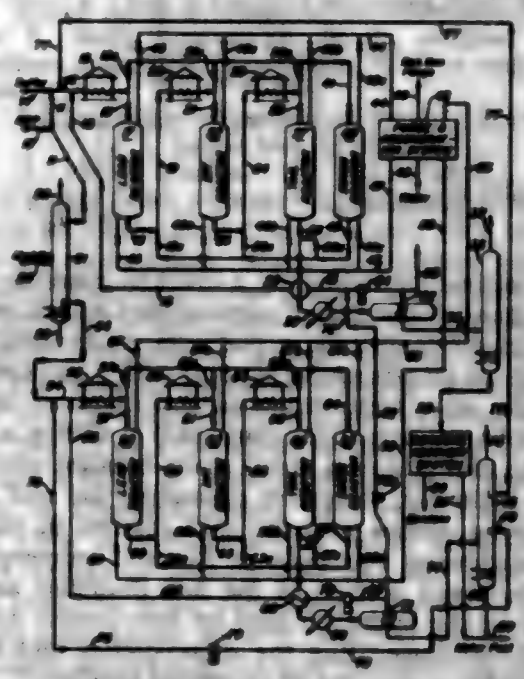
1. The process of converting a heavy hydrocarbon oil to gasoline which comprises converting said oil directly to gasoline at an elevated temperature not exceeding about 1100° F. in a primary cracking zone in the presence of heated particulate contact material maintained in a free fluidized state and in a hydrogen-containing atmosphere, passing said contact material from said primary cracking zone downwardly through a secondary cracking zone in countercurrent contact with a hydrogen-containing atmosphere in a restrained fluidized state whereby the temperature in said secondary cracking zone increases in the downward direction, regenerating said contact material after passage through said secondary cracking zone by reacting the carbonaceous deposit formed on said contact material during conversion of said oil with steam and oxygen at a temperature of at least 1600° F. thereby forming regeneration product gases containing hydrogen and simultaneously heating said contact material, flowing said regeneration product gases through said secondary and primary cracking zones to provide therein a hydrogen-containing atmosphere as aforesaid, and returning thus heated contact material to said primary cracking zone.

2,861,944

CONVERSION OF METHYLCYCLOPENTANE TO BENZENE

John R. Coley, Gary, Ind., Bernard L. Evering, Chicago, Ill., and John D. McCollum, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application June 29, 1955, Serial No. 518,764
12 Claims. (Cl. 208—92)



1. The method of converting methylcyclopentane in a naphtha charging stock, which method comprises fractionating said naphtha to obtain a light naphtha boiling within the range of 140 to 200° F. and containing at least about 5 percent of methylcyclopentane, hydroforming said light naphtha with a supported platinum catalyst at a pressure above about 50 but below 150 p. s. i. and at a temperature in the range of about 900 to 950° F. in the presence of about 1 to 10 mols of hydrogen per mol of charge, and also in the presence of about 100 to 500 parts per million of sulfur based on hydrocarbon charge whereby the presence of the sulfur increases benzene production and decreases hydrocracking without substantial adverse effect on catalyst activity and selectivity.

2,861,945

METHOD OF TREATING A SILICA-ALUMINA CRACKING CATALYST

Kenneth K. Kearby, Watchung, Isidor Kirshenbaum, Union, and Edward G. Baker, Summit, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application December 28, 1954
Serial No. 478,190
13 Claims. (Cl. 208—120)

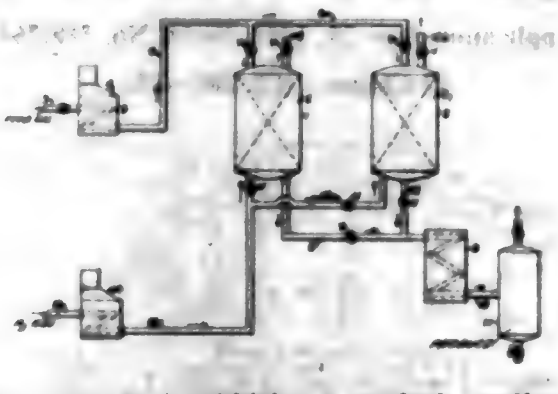
1. A method of improving the activity of fresh previously calcined silica-alumina catalyst containing a major proportion of silica and a minor proportion of alumina and prepared from solutions of sodium silicate and sulfuric acid and an aluminum compound and ammonia which comprises contacting the silica-alumina catalyst with water for an extended period of time to reduce the pH of the catalyst and then treating the washed silica-alumina catalyst with a saturated aqueous solution of a basic magnesium carbonate for an extended period of time, and then drying and calcining the washed and treated catalyst.

2,861,946

METHOD OF IMPROVING GASOLINE QUALITY

Richard W. Sage, Fanwood, N. J., and Clifton H. Jones, Palembang, South Sumatra, Indonesia, assignors to Esso Research and Engineering Company, a corporation of Delaware

Application February 29, 1956, Serial No. 568,659
5 Claims. (Cl. 208—144)



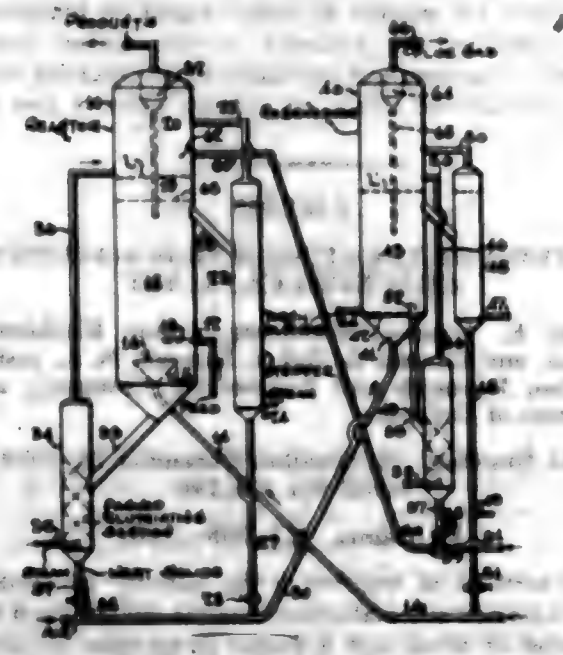
1. The method of stabilizing a cracked gasoline, containing substantial amounts of mono-olefins and di-olefins, which comprises contacting, a platinum group metal catalyst carried on an adsorptive support with a gas containing hydrogen at a temperature in the range of 100 to 1200° F. and a pressure in the range of 0 to 1500 p. s. i. g., whereby the said platinum metal group catalyst selectively adsorbs hydrogen, thereafter contacting the said gasoline containing olefins with the said catalyst in the absence of extraneous hydrogen at elevated temperatures, whereby the major portion of the said di-olefins are hydrogenated by the hydrogen held by the catalyst without substantially hydrogenating the mono-olefins and thereafter recovering a gasoline of improved stability.

2,861,947

FLUID HYDROFORMING WITH INVERSE TEMPERATURE GRADIENT

Edward W. S. Nicholson, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application December 26, 1951, Serial No. 263,447
4 Claims. (Cl. 208—149)



1. In the method of reforming hydrocarbons in contact with a mixture of finely divided reforming catalyst and inert heat transfer solids in a dense fluidized bed in which the catalyst particles and inert heat transfer solids are continuously circulated between a reaction and regeneration zone the improvement which comprises withdrawing a mixture of regenerated catalyst and inert heat transfer solids from the bottom of the regenerator dense bed, passing this mixture through an elutriation zone, separating a substantial part of the catalyst particles from said mixture and returning the separated catalyst particles to the regeneration zone, withdrawing a stream comprising a major proportion of hot, inert heat transfer solids from said elutriation zone, discharging said stream of hot, inert heat transfer solids into the upper part of the reaction zone and supplying vaporous reactants to the bottom of said reaction zone, thereby establishing at the upper part of said dense fluidized bed a zone of higher temperature than the average temperature in the main reactor bed in the reaction zone.

2,861,948

PROCESS FOR REMOVING PHENOLS FROM AQUEOUS SOLUTIONS BY SORPTION ON ION EXCHANGE RESINS AND ALCOHOL ELUTRIATION THEREFROM

Robert McKellar, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 12, 1953
Serial No. 373,995
7 Claims. (Cl. 210—30)

1. A process for removing a phenol from an aqueous solution, which comprises contacting an aqueous solution containing a dissolved phenol as solute with a salt form of a strongly basic quaternary ammonium anion exchange resin, whereby the phenol solute is sorbed by the resin and is removed from the solution, separating the solution and the resin and washing the resin with a water-miscible saturated lower aliphatic alcohol, whereby the sorbed phenol is displaced by the alcohol and is removed from the ion exchange resin.

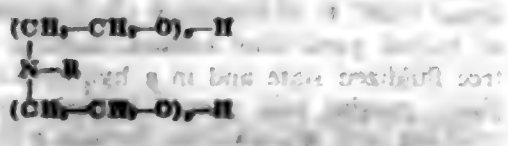
2,861,949

FUR GLAZING COMPOSITION AND METHOD FOR PREPARING SAME

Willis C. Ware, Chicago, Ill.

No Drawing. Application September 10, 1956
Serial No. 608,704
6 Claims. (Cl. 252—8.57)

1. A fur glazing composition suitable for application by spraying and comprising water having dispersed therein a dialkyl dimethyl ammonium salt wherein each alkyl group contains from 8 to 18 carbon atoms, a silicone oil selected from the group consisting of polydimethyl siloxane and polydiethyl siloxane and a material selected from the group consisting of a polyethylene glycol ether of alkyl phenol being a condensation product of one molecule of an alkyl phenol wherein the alkyl group contains from 8 to 10 carbon atoms with from 2 to 10 molecules of ethylene oxide and a tertiary amine having the following structural formula:



wherein R signifies an alkyl group containing from 8 to 18 carbon atoms and wherein x and y are numbers totalling from 2 to 10.

2,861,950

METHOD FOR GREASE MANUFACTURE UTILIZING FUSED METALLIC SOAPS

Theodore A. Bannow, Glenolden, Pa., and Edward R. Lamson, Sewell, N. J.

No Drawing. Application February 28, 1955
Serial No. 491,333
10 Claims. (Cl. 252—32)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A method of making gels comprising the step of fusing a metallic soap gelling agent, cooling the fused

balance to make 100 percent by weight of water; and

2,861,960

soap gelling agent, and then mixing and milling the fused soap gelling agent and the normally liquid oleaginous vehicle to be gelled until the desired gel results.

2,861,951

METHOD OF DISPERSING BARIUM CARBONATE IN A NON-VOLATILE CARRIER

Robert L. Carlyle, Lake Jackson, Tex., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Application December 10, 1956
Serial No. 627,106
10 Claims. (Cl. 252—33)

1. The process of forming a stable dispersion of barium carbonate in a mineral oil which comprises: (A) admixing under atmospheric conditions of temperature and pressure (1) 1 part of an oil soluble dispersing agent selected from the class consisting of sulfoeic acids, metal sulfonates, ammonium sulfonates, and amine sulfonates, (2) 0–5 parts of volatile hydrocarbon solvent for said oil soluble dispersing agent, (3) ⅛ to 2 parts of a mineral oil, (4) an aliphatic alcoholic solution of an oil insoluble barium inorganic base wherein the aliphatic alcohol contains from 1 to 3 carbon atoms and the anion of said base is selected from the group consisting of oxide and hydroxide radicals and characterized further in that the amount of said inorganic base varies from about 1⅛ to 4 times that required to react with the sulfonic acid where this material is used as dispersing agent and ½ to 3 times the number of chemical equivalents of the dispersing agent where said dispersing agent is a salt of a sulfonic acid; (B) condensing from the resulting mixture at atmospheric pressure an oil-insoluble barium carbonate in particles, the diameters of which are less than 0.25 micron, by passing carbon dioxide through said mixture to convert the excess barium inorganic base to the carbonate, and then (C) removing the residual solvents by evaporation.

2,861,952

DECOLORIZATION OF LUBRICATING OILS

William E. Thompson, Wallingford, and Robert W. Shinn, Swarthmore, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application January 25, 1957
Serial No. 636,251
3 Claims. (Cl. 252—50)

1. A process for decolorizing lubricating oils which comprises bringing a petroleum lubricating oil prepared by distillation of an essentially wax-free naphthenic crude oil and containing naturally occurring impurities in an amount sufficient to impart a dark color to the oil to a temperature less than about 40° F., irradiating the oil with light in the visible spectrum for a period of time sufficient to effect a reduction in the O. D. color of the oil, and adding from about 0.0005% to about 0.005% of an antioxidant selected from the group consisting of phenylene diamine and ditertiarybutyl paracresol prior to warming the oil to above about 40° F.

2,861,953

PACKAGED CHARGE FOR MAKING SOAP

Benjamin H. Thurman, Chicago, Ill., assignor, by mesne assignments, to The Union Stock Yard and Transit Company of Chicago, Chicago, Ill., a corporation of Illinois

No Drawing. Application July 14, 1954
Serial No. 443,426
1 Claim. (Cl. 252—109)

As an article of manufacture, a dry soap charge including, by weight, approximately 45 percent of yellow grease containing at least 5 percent free fatty acid, approximately 8–9 percent caustic soda, approximately 25 percent of an approximately 41 percent sodium silicate solution, and approximately 21–22 percent water softeners chosen from the group consisting of water soluble phosphates, carbonates and silicates, the caustic, sodium silicate solution and water softeners being distributed through the saponifiable material so that the grease coats and covers them.

2,861,954

POLYPHOSPHATE COMPOSITIONS CONTAINING SOAP AND 2-MERCAPTOTHIAZOLINE

Edgar E. Ruff, Bergenfield, N. J., assignor to Lever Brothers Company, New York, N. Y., a corporation of Maine

No Drawing. Application January 9, 1956
Serial No. 557,854
13 Claims. (Cl. 252—110)

1. A spray-dried detergent composition consisting essentially of from about 20% to about 50% of an alkali metal tripolyphosphate which in aqueous solution tarnishes German silver, from about 5% to about 15% total of at least one organic non-soap detergent selected from the group consisting of organic anionic non-soap detergents and organic nonionic non-soap detergents, from about 10% to about 20% of an alkali metal carbonate, about 10% of an alkali metal silicate, from about 0.03% to about 0.06% of 2-mercaptothiazoline based on the weight of tripolyphosphate, and from about 1.4% to about 3.0% of a water-soluble alkali metal soap based on the weight of tripolyphosphate, said soap being selected from the group consisting of the alkali metal salts of fatty acids having an acyl group of from 8 to 22 carbon atoms; the amounts of said thiazoline and soap being sufficient to inhibit the tarnishing and the components of the composition being expressed by weight at the time of mixing thereof and prior to spray drying.

2,861,955

DETERGENT FOR HARD WATER

Robert D. Aylsworth, Glendale, Ohio, assignor to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

No Drawing. Application October 22, 1954
Serial No. 464,176
3 Claims. (Cl. 252—117)

1. A bar of soap consisting essentially of a homogeneous mixture of 80–90% by weight of the sodium salts of fatty acids of from 8–22 carbon atoms chain length and from 20–10% by weight of a water soluble quaternary ammonium compound having a molecular weight of between 175 and 600, said soap composition being resistant to precipitation by hard water.

2,861,956

LIQUID DETERGENT COMPOSITIONS

Leslie Fernandez, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 28, 1955
Serial No. 338,886
11 Claims. (Cl. 252—153)

8. A liquid detergent composition comprising (1) from about 20 to about 60 percent by weight of a water-soluble salt of a sulfated condensation product of about 1 to about 5 mols of ethylene oxide with 1 mol of a C_{10}- to C_{20}-aliphatic alcohol, said salt being selected from the group consisting of the sodium, potassium and triethanolamine salts of said sulfated condensation product; (2) from about 5 to about 30 percent by weight of an aliphatic alcohol containing from 1 to 5 carbon atoms; (3) up to 20 percent by weight of an aliphatic alcohol containing from 12 to 14 carbon atoms; (4) up to 20 percent by weight of lauric acid ethanolamide; and (5) the

mers being equal to 85–95% of vinyl chloride and 15–5% ter comprising a hydrocarbon solvent boiling between

dense bed, passing this mixture through an elutriation fusing a metallic soap gelling agent, cooling the fused

balance to make 100 percent by weight of water; and at least one of components (3) and (4) is present in an amount of at least about 5 percent by weight.

2,861,957

BREAKING WATER-IN-OIL EMULSIONS

Eldon B. Cole, Tulsa, and Robert L. Lotheringer, Sand Springs, Okla., assignors to Sinclair Refining Company, New York, N. Y., a corporation of Maine

No Drawing. Application August 8, 1955
Serial No. 527,134
10 Claims. (Cl. 252—334)

1. The method of breaking a water-in-oil emulsion which comprises treating said emulsion with a demulsifying agent prepared by reacting at about 175° to 230° F. an aromatic sulfonic acid of about 250 to 5000 molecular weight, polycarboxylic acid of up to about 5000 molecular weight and polyalkylene glycol having up to about 100 ether oxygen atoms, and the alkylene radical thereof containing from 2 to 4 carbon atoms, in the ratio of about 1 to 4 moles of aromatic sulfonic acid and about 1 to 8 moles of polycarboxylic acid per mole of polyalkylene glycol, said reaction continuing at least until the product is substantially completely dehydrated.

4. The method of claim 2 in which the demulsifier product is neutralized with a diamine having the general formula:

wherein R is a hydrocarbon radical having about 16 to 18 carbon atoms derived from tallow fatty acids.

2,861,958

PROCESS OF PREPARING A SILICA-ALUMINA-PLATINUM CATALYST

Wayne Thomas Berrett, Arnold, Md., assignor to W. R. Grace & Co., Norwalk, Conn., a corporation of Connecticut

No Drawing. Application March 30, 1954
Serial No. 419,931
5 Claims. (Cl. 252—455)

1. A method for preparing a silica gel base catalyst suitable for reforming gasoline fractions which comprises impregnating silica gel with an aqueous solution of aluminum chloroplatinate in amount sufficient to incorporate in said gel about 0.05–5.0 weight percent platinum and 0.01–1.0 weight percent alumina, drying the impregnated gel, and converting the adsorbed platinum compound to alumina and metallic platinum.

2,861,959

PROMOTED HYDROFORMING CATALYST

John P. Thorn, Elizabeth, Walter R. F. Geyer, Roselle, and Erving Arundale, Westfield, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application May 3, 1952
Serial No. 286,016
2 Claims. (Cl. 252—465)

1. A catalyst for hydrocarbon conversion processes which consists essentially of 0.1 to 1% by weight of metallic platinum finely dispersed on an alumina carrier, promoted by the addition of less than 0.5% by weight of molybdic oxide said amount of molybdic oxide being below the minimum at which the oxide itself forms an effective conversion catalyst with said alumina in the absence of said platinum.

2,861,960

HYDROCARBON CONVERSION PROCESS AND CATALYSTS

Frank Edward De Boer and Edmund Field, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application November 16, 1955
Serial No. 547,205
7 Claims. (Cl. 252—466)

1. A method for preparing an alumina-supported platinum catalyst which comprises commingling with alumina a solution of a coordination compound of a platinous halide and an organic compound containing an olefinic double bond between two carbon atoms, decomposing the platinum coordination compound within the alumina to deposit platinum therein, and calcining the resulting composite.

2,861,961

SPARK GAP SEMI-CONDUCTOR

Robert C. Harris, Umatilla, N. Y., assignor to Bendix Aviation Corporation, Sidney, N. Y., a corporation of Delaware

Application July 24, 1957, Serial No. 673,945
5 Claims. (Cl. 252—516)

1. A spark gap semi-conductor consisting essentially of 40–86% silicon carbide, 4–40% of one of the group consisting of cobalt oxide, manganese oxide, and molybdenum oxide, and 10–40% of a mixture consisting essentially of a major part of alumina, a minor part of $3CaO—5Al_2O_3$, and a trace of silica, the alumina, $3CaO—5Al_2O_3$, and silica having a weight ratio with respect to each other of about 13:1.5:3.

2,861,962

PROCESS FOR THE POLYMERIZATION OF OLEFIN OXIDES WITH FERRIC COMPOUNDS

Alexej Bohumil Borkovec, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application June 5, 1957
Serial No. 663,612
7 Claims. (Cl. 260—2)

1. Process for polymerizing a lower vicinal olefin oxide that does not contain more than 4 carbon atoms in its molecule to form a solid polymeric material which comprises mixing the oxide with a minor proportion of a catalyst compound having the general empirical formula: $Fe(OH)_x(OZ)_{3-x}$, wherein Z is selected from from the group consisting of alkyl radicals containing up to 6 carbon atoms, haloalkyl radicals containing up to 6 carbon atoms, and aromatic hydrocarbon radicals containing from 6 to 10 carbon atoms and wherein x is a positive number having a value greater than zero but less than three, and heating the mixture to maintain it at a temperature between about 40° C. and 150° C. for a sufficient period of time to polymerize the oxide.

2,861,963

PROCESS OF MAKING VINYL RESIN PLASTIC SPONGE

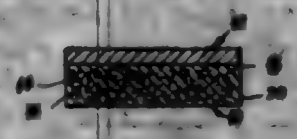
Paul V. Butsch, South Bend, Ind., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey

Application July 3, 1957, Serial No. 669,798
6 Claims. (Cl. 260—2.5)

1. The process of making a plasticized vinyl resin sponge which comprises mechanically frothing an intimate mixture of a plastisol comprising 100 parts of a particulate thermoplastic vinyl resin selected from the group consisting of polyvinyl chloride, vinyl chloride-vinyl acetate copolymer, vinyl chloride-vinylidene chloride copolymer, vinyl chloride-diethyl maleate copolymer, and vinyl chloride-diethyl fumarate, the relative proportions of combined monomers in the said copoly-

mers being equal to 85–95% of vinyl chloride and 15–5% of the other stated monomer, and from 50 to 400 parts of a high boiling organic liquid plasticizer for said resin, from 1 to 25 parts of a non-ionic surface-active agent, from 3 to 100 parts of an alkali metal salt of a sulfonated fatty acid, and from 1 to 25 parts of an alkali metal salt of ethylene diamine tetraacetic acid, and thereby incorporating a surrounding gas in said mixture, subsequently heating the resulting froth at a temperature and for a time sufficient to fuse the resin particles with said plasticizer while maintaining the froth structure, and cooling the resulting material to room temperature.

2,861,964
COMPOSITION BRAKE BLOCK
Charles L. E. de Gampon, Jr., Caldwell, and Ralph T. Halstead, Somerville, N. J., assignors to Johns-Manville Corporation, New York, N. Y., a corporation of New York
Application November 17, 1953, Serial No. 392,784
27 Claims. (Cl. 260—17.4)



1. A molded composition brake block having good wet and dry friction characteristics and a long service life, comprising 25–75% by weight of hard ferrous metal at least 50% of which is in the form of cast iron particles, staple organic reinforcing fiber in amount from 2 to 30% by weight, and at least 50% by volume of non-ferrous inorganic and organic filler and organic binder materials including a binder matrix comprising a heat resistant hard vulcanized in situ rubber selected from the group consisting of natural rubber, polychlorobutadiene, and butadiene-styrene and butadiene-acrylonitrile copolymers.

2,861,965
ANTI-MOTH COMPOSITION CONTAINING POLYVINYL CHLORIDE AND NAPHTHALENE
Antonio Ravenni, Milan, Italy, assignor to S. p. A. Fibre Tessili Artificiali, Milan, Italy
No Drawing. Application August 24, 1955
Serial No. 530,410
Claims priority, application Italy November 19, 1954
1 Claim. (Cl. 260—23)

A plastic compound composed of 100 parts by weight of polyvinylchloride, 35 parts by weight of dioctyl phthalate, 1 part by weight of cadmium stearate, 0.4 part by weight of calcium stearate, 2 parts by weight of mineral oil and 6 parts by weight of naphthalene.

2,861,966
CORE MOLDING COMPOSITION
Joseph L. Benz, Jr., Westfield, and John P. Thorn, Union, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application October 3, 1956
Serial No. 614,059
14 Claims. (Cl. 260—33.7)

1. A core oil composition composed of about 30 to 70 wt. percent of non-volatile matter which comprises about 20 to 80 wt. percent of a hydocarbon polymer oil boiling between about 400 and 1000° F., having an iodine number between about 240 and 320 and a Staudinger molecular weight between about 200 and 1000, about 20 to 80 wt. percent of a petroleum resin having a softening point between about 150 and 230° F., an iodine number between about 92 and 119 and an intrinsic viscosity between 0.037 and 0.120 and 20 to 80 wt. percent of vegetable oil, and about 70 to 30 wt. percent of volatile matter comprising a hydrocarbon solvent boiling between about 130 and 500° F. and having a kauri-butanol value between about 35 and 130.

2,861,967
FLAMEPROOF MASTIC COMPOSITION CONTAINING ISOBUTYLENE POLYMER
Wayne P. Ellis, Springfield, Pa., and Leo I. Smith, Camden, and Irvin J. Seltz, Collingswood, N. J., assignors to Benjamin Foster Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application August 21, 1957
Serial No. 679,514
4 Claims. (Cl. 260—28.5)

1. A mastic composition containing as its essential ingredients, in substantially the weight proportions indicated: 20 to 40% polymerized isobutylene selected from the group consisting of the isobutylene-styrene copolymers having about 30–70% by weight isobutylene and the balance styrene, polyisobutylene having a molecular weight in the range of about 30,000 to 90,000, and isobutylene-isoprene copolymers having about 1 to 10% by weight isoprene and the balance isobutylene, 20 to 60% paraffin base petroleum distillation residue condensation product derived from a naturally contained high molecular weight viscous material precipitated from a warm propane solution of a residual paraffin base oil fraction which has undergone no thermal decomposition or chemical change beyond that induced by ordinary fractional distillation, said chemical condensation product having an iodine number not substantially above 40, a ball and ring softening point above 110° F. and ranging up to 200° F., an average molecular weight of at least 1900, at least 40 carbon atoms per double bond, and a marked reduction in susceptibility to penetration with temperature change in the range of from 30 to 60° F., and being substantially completely soluble in 88° Baumé naphtha and virtually free of asphaltenes, and 10 to 35% resinous chlorinated paraffin flame retardant.

2,861,968
FILM FORMING AQUEOUS COLLOIDAL DISPERSIONS CONTAINING NITROGENOUS CONDENSATION PRODUCTS AND PROCESS FOR PREPARING SAME
Paul A. Wolf and Francis J. Bobalek, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application December 19, 1955
Serial No. 553,699
18 Claims. (Cl. 260—29.6)

1. An aqueous colloidal dispersion comprising (1) a synthetic latex containing in the disperse phase a polymer obtained by polymerizing an olefinically unsaturated monomer containing in its structure at least one ethylenic group having the $CH_2=CH-$ linkage, wherein said ethylenic group is joined to an atom selected from the group consisting of carbon and oxygen and (2) from about 0.3 to 5 percent by weight based on the weight of solids present in synthetic latex of a water-soluble condensation product obtained by the reaction of from about 1 to 3 molar proportions of formaldehyde with one molar proportion of a lower molecular weight aliphatic alkanolamine, said alkanolamine embodying a straight chain structure of at least 3 atoms of the group consisting of carbon and nitrogen, the nitrogen in said structure being attached only to carbon and hydrogen, and including in the molecule a hydroxyl radical and from 1 to 2 amino radicals wherein at least one amino radical is a primary amine group, and wherein said condensation product is obtained in a reaction carried out while maintaining the temperature of the reaction mixture below about 60° C.

2,861,969

COMPOSITIONS COMPRISING A POLYESTER AND 1,1,1-TRICHLORO-3-NITRO-2-PROPANOL AND PROCESS OF PREPARING SAME

Hobson D. De Witt and Arthur B. Beindorff, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Application March 23, 1955
Serial No. 496,341
18 Claims. (Cl. 260—31.2)

1. A new composition of matter comprising a solution of a synthetic linear condensation polyester formed by the reaction of a dicarboxylic acid and at least one glycol of the series $HO(CH_2)_nOH$, where n is an integer greater than one and not exceeding 10, and a solvent selected from the group consisting of 1,1,1-trichloro-3-nitro-2-propanol and mixtures of 1,1,1-trichloro-3-nitro-2-propanol and a compound selected from the group consisting of halogenated paraffin hydrocarbons containing from 1 to 6 carbon atoms, phenol, m-cresol, o-chlorophenol, and halogen-substituted fatty acids containing from 2 to 4 carbon atoms, said halogen being selected from the group consisting of chlorine and bromine.

2,861,970

COMPOSITIONS COMPRISING A POLYESTER AND TRICHLOROETHANOL AND PROCESS OF PREPARING SAME

Hobson D. De Witt, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Application March 23, 1955
Serial No. 496,342
14 Claims. (Cl. 260—31.2)

1. A new composition of matter comprising a solution of a synthetic linear condensation polyester formed by the reaction of a dicarboxylic acid and at least one glycol of the series $HO(CH_2)_nOH$, where n is an integer greater than one and not exceeding 10, and a solvent selected from the group consisting of trichloroethanol and mixtures of trichloroethanol and a compound selected from the group consisting of phenol, m-cresol and halogen-substituted acids of the fatty acid series containing from 2 to 4 carbon atoms, said halogen being selected from the group consisting of chlorine and bromine.

2,861,971

HARDENABLE RESINOUS MIXTURES CONTAINING A HALOGEN HYDRIN AND PROCESSES FOR PRODUCING AND HARDENING SAME

Wolfgang Ritter, Ludwigshafen (Rhine), Ferdinand Meyer, Mannheim, and Kurt Dennler, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application March 22, 1955
Serial No. 496,656
Claims priority, application Germany March 23, 1954
8 Claims. (Cl. 260—43)

1. A hardenable resinous mixture which comprises (a) a hardenable resin prepared by condensing (1) a compound selected from the class consisting of formaldehyde and para-formaldehyde, (2) phenol, and (3) a reaction product of phenol and an oxygen-containing condensation product of a non-alkylated polynuclear aromatic hydrocarbon and a compound selected from the class consisting of formaldehyde and para-formaldehyde; and (b) a compound selected from the class consisting of aliphatic halogen hydrins and epihalogen hydrins.

2,861,972

HIGH MOLECULAR WEIGHT CROSS-LINKED POLYESTER-URETHANE ELASTOMER PRODUCTS

Karl E. Müller and Otto Bayer, Leverkusen-Bayerwerk, and Siegfried Petersen, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application June 2, 1954
Serial No. 434,863
Claims priority, application Germany June 3, 1953
8 Claims. (Cl. 260—45.4)

1. In a process of forming a high molecular weight cross-linked product by reacting an organic diisocyanate and an aromatic glycol with an anhydrous organic linear polyester having from 0.6–2.4% by weight of hydroxyl groups and an acid value substantially not exceeding 1, said polyester being prepared substantially from a saturated aliphatic dicarboxylic acid and a glycol, the improvement comprising employing as the aromatic glycol to be reacted with said polyester a compound having two condensed aromatic rings and two aliphatically bonded —OH groups linked to the aromatic rings through alkylene groups, the latter being connected to the aromatic rings by a linkage selected from the group consisting of an ether linkage and a carboxylic ester linkage.

2,861,973

MOLDABLE SLURRY COMPRISING VINYL BUTYRATE AND POLYETHYL METHACRYLATE AND MOLDING OBTAINED THEREFROM

Harry Wechsler, Fitchburg, Mass., assignor to The Borden Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application January 31, 1956
Serial No. 562,594
4 Claims. (Cl. 260—45.5)

1. A hardenable, moldable fluid mixture comprising liquid vinyl butyrate monomer and powdered polyethyl methacrylate.

2,861,974

INTERPOLYMERS OF STYRENE WITH ELASTOMERIC TRIPOLYMERS AND METHOD OF PREPARATION

John L. Lang, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application February 17, 1956
Serial No. 566,000
7 Claims. (Cl. 260—45.5)

1. Graft copolymer compositions having relatively high elongation characteristics which consists essentially of (1) styrene which has been interpolymerized with (2) an elastomeric ternary copolymer of a monofunctional monovinyl aromatic substance selected from the group consisting of styrene, the several alkyl substituted styrenes, vinyl naphthalene and their mixtures, an aliphatic conjugated diolefine, and a vinylidene halide containing a halogen of atomic number from 17 to 35; which graft copolymer composition contains between 85 and 99 percent by weight of styrene polymerized with the ternary copolymer.

2,861,975

ANTIOXIDATION OF RUBBER WITH CERTAIN ALKYLAMINOQUINOLINES

Ralph B. Thompson, Hinsdale, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application October 10, 1955
Serial No. 539,656
11 Claims. (Cl. 260—45.5)

6. A rubber selected from the group consisting of natural rubber, butadiene-styrene copolymer, butadiene-acrylonitrile copolymer, butadiene-isobutylene copolymer,

thiokol rubber, silicone rubber and neoprene rubber containing from about 0.25% to about 10% by weight of an antiozidant selected from the group consisting of 5-alkylaminoquinolines, 6-alkylaminoquinolines, 7-alkylaminoquinolines, and 8-alkylaminoquinolines having an alkyl group of from 3 to 20 carbon atoms.

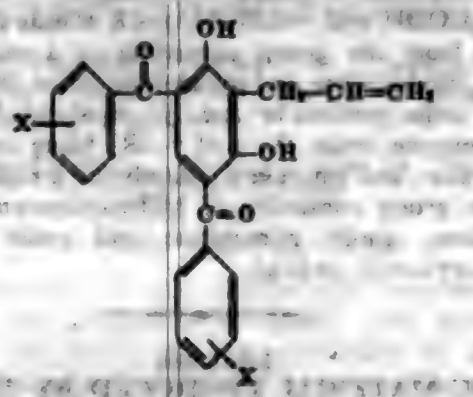
2,861,976

HALOETHYLENE POLYMERS STABILIZED WITH ALLYLATED DIBENZOYL RESORCINOL

David A. Gordon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application November 8, 1956. Serial No. 621,023
3 Claims. (Cl. 260—45.95)

1. A light stable thermoplastic composition comprising a haloethylene polymer and from 0.5 to 6 percent of the weight of said polymer of an allyl derivative of dibenzoyl resorcinol having the general formula:



wherein X is selected from the group consisting of hydrogen, chlorine, and alkyl.

2,861,977

PREPARATION OF INTERCONDENSATION PRODUCT OF MONOHYDRIC PHENOL-FURFURAL RESIN AND FORMALDEHYDE, AND UTILIZATION THEREOF IN THE PRODUCTION OF PLYWOOD

Gene F. Baxter and Donald V. Redfern, Seattle, Wash., assignors to American-Marietta Company, Adhesive, Resin and Chemical Division, Seattle, Wash., a corporation of Illinois

No Drawing. Application January 26, 1954. Serial No. 406,346
18 Claims. (Cl. 260—56)

1. The method comprising producing a thermosetting phenol-furfural-formaldehyde resin condensation product in which retardation in the rate of cure of the resin condensation product is substantially inhibited, by forming an aqueous mixture of a monohydric phenol selected from the group of phenols consisting of phenol per se, cresol and xylenol; furfural, and an alkaline catalyst accelerating the formation of the resin-reaction product on heating, there being present between about 0.1 and about 0.5 mol of furfural for each mol of phenol, heat-reacting said mixture and producing a solution of the monohydric phenol-furfural resin in an excess of monohydric phenol, the latter being adapted to combine with subsequently added formaldehyde, and heat-reacting and intercondensing said solution with formaldehyde in the presence of an inorganic alkali metal compound until the final intercondensed resin solution having a solids content between about 30% and about 55% has a viscosity between the limits of about 130 and about 10,000 centipoises, there being present between about 1.5 and about 2.9 mols of formaldehyde for each mol of phenol, the total alkaline material present during the production of the monohydric phenol-furfural-formaldehyde intercondensed resin being equivalent to between about 0.1 and about 1.0 mol of sodium hydroxide per mol of phenol.

2,861,978

ACID POLYMERIZATION OF BUTADIENE 1,3-FURFURAL REACTION PRODUCT

Mortimer T. Harvey, South Orange, and Peter L. Rosamilia, Newark, N. J., assignors to Harvel Research Corporation, a corporation of New Jersey

No Drawing. Application June 9, 1954. Serial No. 435,622
10 Claims. (Cl. 260—67)

1. The method for homopolymerizing butadiene 1,3-furfural reaction product comprising heating to a temperature in the approximate temperature range of 250–450° F., a mixture having a pH no greater than approximately 3.5 and no less than approximately .3 and comprising said butadiene-furfural reaction product and acidic agent in such amount as to provide such a pH, said heating continued at least until a solution of a 10 gram sample thereof dissolved in 5 grams of furfural has a viscosity at 25° C. at least 100% greater than that of a solution of a 10 gram sample of said original reaction product in 5 grams of furfural.

2,861,979

BUTADIENE-FURFURAL REACTION PRODUCT

Mortimer T. Harvey, South Orange, and Peter L. Rosamilia, Newark, N. J., assignors to Harvel Research Corporation, a corporation of New Jersey

No Drawing. Application July 6, 1954. Serial No. 441,456
13 Claims. (Cl. 260—67)

1. The method for homopolymerizing butadiene 1,3-furfural reaction product having molecular weight of at least 330, viscosity of at least 2,000 centipoises at 25° C. and softening point (Ball and Ring) of at least 60° F. and being soluble in furfural and being liquid at 300° F., comprising heating to a temperature in an approximate temperature range of 250–450° F. a mixture having a pH of at least approximately 8 and comprising said butadiene-furfural reaction product and alkaline agent in such amount as to provide such a pH, said heating continued at least until a solution of a 10-gram sample thereof dissolved in 5 grams of furfural has a viscosity at 25° C. at least 100% greater than that of a solution of a 10-gram sample of said original reaction product in 5 grams of furfural.

2,861,980

METHOD FOR PRODUCING UREA FORMALDEHYDE CORE BINDER RESINS

Robert L. Fischer, Pennsauken, N. J., assignor to Cities Service Research and Development Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application October 8, 1953. Serial No. 386,791
4 Claims. (Cl. 260—71)

1. A process for producing a water-clear urea formaldehyde core binder resin of increased tensile strength and shelf life which comprises heat-mixing 1 mol of solid urea with 2.2 mols of 37 percent formaldehyde solution at a pH of between 8.7 and 9.2, said pH being obtained by adding to the urea formaldehyde mixture approximately 0.1 mol of aqueous ammonia solution, heating said reactants to a temperature in the neighborhood of about 200–220° F., maintaining said reactants at the stated temperature during a reflux period of about 17 to 19 minutes, removing from the reaction mixture by vacuum distillation unreacted components of the reaction mixture and water produced during the reaction, said distillation being continued until approximately 25 percent by weight of the original reactant mixture has been obtained as distillate, cooling said reaction mixture after distillation to substantially atmospheric temperature and stabilizing said reaction product within a short time and before gellation occurs thereafter to a pH of between 7.5 and 8 with a solution of stabilizer selected from the group consisting of sodium pyrophosphate sodium pyrophosphate decahydrate and sodium tripolyphosphate.

2,861,981

POLYESTERS AND ISOCYANATE REACTION PRODUCTS THEREOF

Charles E. Frank and Virgil L. Hanzley, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application February 5, 1954
Serial No. 408,612
21 Claims. (Cl. 260—75)

1. An ester of an organic carboxylic acid and a saturated aliphatic glycol having only carbon atoms in the skeletal chain and having a total of from about eight to fourteen carbon atoms, at least one C_2 branch per molecule, and the terminal hydroxyl groups of which are separated by at least six carbon atoms.

2,861,982

POLYMERIZATION OF WATER-SOLUBLE UNSATURATED MONOMERS WITH HYDROGEN ATOMS

Guido Miso, Plainfield, N. J., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application April 13, 1956
Serial No. 577,938
9 Claims. (Cl. 260—80)

1. In the polymerization of water-soluble, polar, ethylenically unsaturated, monomeric material selected from the class consisting of the vinylpyridines, alpha-chloroacrylic acid, alpha-chloroacrylonitrile, methylene-bis-acrylamide, acrylonitrile, methacrylonitrile, acrylamide, methacrylamide, acrylic acid, methacrylic acid, and mixtures thereof, the improvement wherein the said monomeric material is polymerized by bringing the same in contact, in aqueous solution, with hydrogen atoms produced in situ by the action of a strong, non-oxidizing, inorganic acid, which is a component of the said aqueous solution, on amalgamated zinc, said hydrogen atoms being the sole polymerization catalyst for the reaction.

2,861,983

CATALYTIC PROCESS FOR THE PRODUCTION OF SOLID POLYMERS OF ETHYLENE BY THE USE OF LITHIUM

Peter Fotis, Jr., Highland, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application September 30, 1954
Serial No. 459,514
10 Claims. (Cl. 260—94.9)

1. A process for producing a solid polymer, which process comprises introducing a charging stock consisting essentially of ethylene and a catalyst consisting essentially of lithium into a polymerization zone, effecting contacting of ethylene and lithium in said zone at a temperature between about 100° C. and about 350° C. at an ethylene partial pressure of at least 500 p. s. i., and recovering a solid polymer thus produced.

2,861,984

PRODUCTION OF AROMATIC FLUORIDES

Joseph Gordon and Cyril Woolf, Morristown, N. J., assignors to Allied Chemical & Dye Corporation, New York, N. Y., a corporation of New York

No Drawing. Application January 28, 1957
Serial No. 634,504
5 Claims. (Cl. 260—141)

1. A process for making 1-isopropyl-benzene-4-diazonium fluoride which comprises dissolving a member of the group consisting of 4-cumidine and inorganic acid salts thereof in an excess of liquid, anhydrous hydrogen fluoride, and treating the resulting solution with an alkali metal nitrite in the presence of at least about 0.5 mol of sulfuric acid equivalent per mol of 4-cumidine compound.

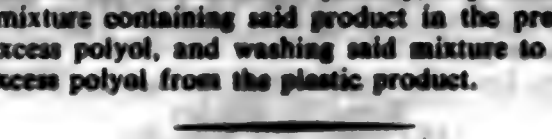
2,861,985

DISAZO DYESTUFFS

Hans Iscber and Lukas Schneider, Basel, Switzerland, assignors, by mesne assignments, to Sesl & Co., Newark, N. J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust

No Drawing. Application March 30, 1955
Serial No. 498,169
Claims priority, application Switzerland
December 24, 1952
8 Claims. (Cl. 260—147)

1. A member selected from the group consisting of a disazo dyestuff and the copper and nickel complex compounds thereof, which dyestuff corresponds in the metal-free form to the formula



wherein one *y* stands for —OH, the other *y* being a member selected from the group consisting of —OH, —OCH_3, —OCH_2COOH and —COOH, *y*—R stands for a radical selected from the group consisting of a radical of the benzene, naphthalene and pyrazolone series, the *y* of *y*—R being in ortho-position to -azo-, *y*—R_1 stands for a radical of the benzene series, the *y* of *y*—R_1 being in ortho-position to -azo-, and wherein R_2 stands for a radical selected from the group consisting of hydroxybenzene, hydroxynaphthalene, enolic pyrazolone and enolic β-ketocarboxylic arylamide radicals.

2,861,986

PLASTIC MATERIAL PRODUCED BY THE REACTION OF CELLULOSE TRIACETATE WITH A POLYOL

Michel Antoine André Fleuret, deceased, late of Paris, France, by Anna Fleuret nee Anna Jund, sole heir

No Drawing. Application July 31, 1956
Serial No. 606,792
6 Claims. (Cl. 260—226)

4. The plastic product produced by the steps of heating at a temperature of 230°–240° C. a mixture of cellulose triacetate with a polyol selected from the group consisting of propane triol and pentaerythritol, with said polyol in excess of the stoichiometric quantity, to produce a reaction mixture containing said product in the presence of the excess polyol, and washing said mixture to separate the excess polyol from the plastic product.

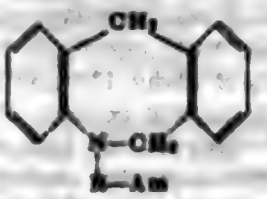
2,861,987

NEW DIPHENYL METHANE- AND 1-AZA-(2,3:5,6)-DIBENZOCYCLOHEPTADIENE DERIVATIVES, THEIR ACID SALTS AND QUATERNARY SALTS AND THE PRODUCTION THEREOF

Henry Martin, Zurich, and Ernst Habicht, Schaffhausen, Switzerland, assignors to Ciba Limited, Schaffhausen, Switzerland, a Swiss company

No Drawing. Application December 27, 1956
Serial No. 630,777
Claims priority, application Switzerland
December 28, 1955
5 Claims. (Cl. 260—239)

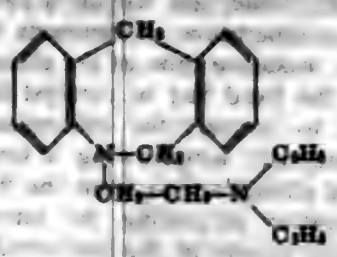
1. A new chemical compound of the group consisting of 1-aza-(2,3:5,6)-dibenzocycloheptadiene derivatives, and hydrochloric acid addition salts of said derivatives, said derivatives having the formula



wherein —R—Am is selected from the group consisting of the di-lower alkyl-amino-lower alkyl group, the N-

pyrrolidino-lower alkyl group, the N-piperidino-lower alkyl group, the N-morpholino-lower alkyl group, the 1-lower alkyl-piperazinyl-4-lower alkyl group, and the 1-lower alkyl pyrrolidyl-3-methyl group.

2. 1' - (2" - diethylaminoethyl) - 1' - aza - [2,3:5,6]-dibenzocycloheptadiene of the formula



2,861,988

CAPROLACTAM MANUFACTURE

Richard Jay England, Woodbury, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 29, 1955
Serial No. 518,937

3 Claims. (Cl. 260—239.3)

1. A process for the substantially quantitative recovery of caprolactam in relatively pure form which comprises dissolving crude caprolactam in a heated organic solvent immiscible with water, cooling said solution to crystallize out the major proportion of said caprolactam, separating said crystallized caprolactam from said organic solvent, agitating said organic solvent containing residual minor proportions of caprolactam with a quantity of water equal to from ½ to 4 parts of water per part of the caprolactam present, and separating the water phase from the organic solvent phase.

2,861,989

NEW PHOTO-SENSITIZING DYESTUFFS CONTAINING A TETRAHYDROQUINAZOLINE GROUP

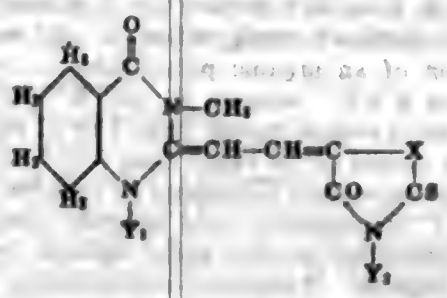
Ludwig Wilhelm Berlin and Paul Heimke, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application January 24, 1956
Serial No. 561,161

Claims priority, application Germany January 29, 1955

4 Claims. (Cl. 260—240.4)

1. Photo-sensitizing dyestuffs having the general formula:



wherein X stands for a member selected from the group consisting of O, S and N-alkyl, and Y_1 and Y_2 stand for lower alkyl groups.

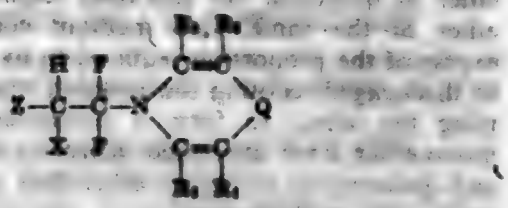
2,861,990

ORGANIC COMPOUNDS

Charles Spencer Cleaver and David Charles England, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 9, 1955
Serial No. 552,225
13 Claims. (Cl. 260—243)

1. An N-fluoroalkyl heterocyclic tertiary monoamine of the formula



wherein (1) Q is a member of the group consisting of a single bond, oxygen, sulfur, and methylene; (2) R_1 and R_2 are selected from the group consisting of hydrogen, halogen, lower alkyl, and, taken together, the radical —CH=CH—CH=CH— where the terminal carbons form with the two doubly-bonded nuclear carbons an aromatic ring; (3) R_3 and R_4 are selected from the group consisting of hydrogen, halogen, lower alkyl, and, taken together, the radical —CH=CH—CH=CH— where the terminal carbons form with the two doubly-bonded nuclear carbons an aromatic ring (4) Z is a member of the group consisting of fluorine, chlorine, alkyl and haloalkyl; and (5) X is a member of the group consisting of chlorine and fluorine.

3. N-(1,1,2,2-tetrafluoroethyl)phenothiazine.

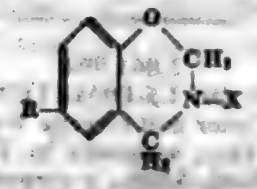
2,861,991

SUBSTITUTED BENZOXAZINES

Raymond H. Rigterink, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application September 3, 1957
Serial No. 681,452
7 Claims. (Cl. 260—244)

1. A compound corresponding to the formula



wherein R represents a member selected from the group consisting of hydrogen and lower alkyl, and X represents a member selected from the group consisting of 2-cyclohexylcyclohexyl and 4-cyclohexylcyclohexyl.

2,861,992

DERIVATIVES OF QUERCETIN AND TO PROCESSES FOR THEIR PREPARATION

Pierre E. Chabrier de Lassauniere, Paris, France, assignor to Recherches et Techniques Appliquées (Société Anonyme), Casablanca, Morocco, a company of Morocco

No Drawing. Application August 3, 1956
Serial No. 602,873
Claims priority, application France August 29, 1955
5 Claims. (Cl. 260—247.7)

1. A new derivative of quercetin produced by the process which comprises reacting a chloride selected from the class consisting of β-diethylamino ethyl chloride and β-morpholino ethyl chloride with quercetin in a stirred aqueous alkaline medium under an inert atmosphere at a temperature of 80–90° C., the proportion of said chloride with respect to quercetin being in excess of that required to form a mono-ether of quercetin but less than required to form a di-ether of the same, said medium containing alkali in excess of the proportion required to fix hydrochloric acid as disengaged; cooling

the reaction mixture and neutralizing the same, to form a precipitate; and separating the mono-ether from unreacted quercetin in said said precipitate.

5. A new derivative of quercetin produced by the process which comprises reacting β-morpholinoethyl chloride with quercetin in a stirred aqueous alkaline medium under an inert atmosphere at a temperature of 80°–90° C., the proportion of said chloride with respect to quercetin being in excess of that required to form a mono-ether of quercetin but less than required to form a di-ether of the same, said medium containing alkali in excess of the proportion required to fix hydrochloric acid as disengaged; cooling the reaction mixture and neutralizing the same, to form a precipitate; separating the mono-ether from unreacted quercetin in said precipitate, and quaternising the mono-ether thus separated by treatment with methyliodide.

2,861,993

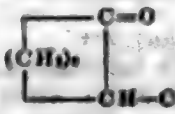
2 DISUBSTITUTED AMINO METHYL CYCLO OCTANONE (1)

Otto Schlichting, Guenter Schenerer, Franz Westphal, and August Amann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application September 13, 1956
Serial No. 609,522
Claims priority, application Germany
September 28, 1955
6 Claims. (Cl. 260—247.7)

5. 2-morpholinomethyl-cyclooctanone-(1).

6. Members of the group consisting of a cycloaliphatic aminoketone of the general formula



in which NRR' is a secondary amino radical selected from the group consisting of di-lower alkyl amino, pyrrolidino, morphonilo, piperidino, and hexamethylene-imino, and the hydrohalides, acetate, oxalate, iodomethylate and methosulfate of said aminoketone.

2,861,994

PREPARATION OF 2,5-DIMETHYLPIPERAZINE

William Perkins Coker and Greene Wallace Strother, Jr., Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application February 23, 1956
Serial No. 567,859
5 Claims. (Cl. 260—268)

1. Method which comprises subjecting 2-aminopropanol-1 to a Raney nickel catalyst mass while it is maintained, in the presence of hydrogen, under a pressure between about 750 and 2,000 pounds per square inch at a temperature between about 140° C. and 220° C. to convert substantial portions of the 2-aminopropanol-1 to 2,5-dimethylpiperazine.

2,861,995

PROCESS FOR THE CONVERSION OF ETHANOLAMINE

Gordon F. MacKenzie, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 27, 1956
Serial No. 581,009
5 Claims. (Cl. 260—268)

1. Continuous process for the conversion of ethanolamine into multiple-nitrogen-containing products that are selected from the group consisting of ethylene diamine, polyethylene polyamines and piperazine which comprises continuously passing a stream of ethanolamine and ammonia, wherein not more than 4 unit weight parts per hour of ethanolamine are contained and the molar ratio of ammonia to ethanolamine is at least about 3:1, respectively, under pressure of between about 1,000 and 2,500 pounds per square inch over a fixed bed containing about one part by unit weight of a metal hydrogenation catalyst selected from the group consisting of nickel, cobalt, copper chromite, platinum and palladium hydrogenation catalysts while said stream is being maintained at an elevated temperature of between about 150 and 225° C. and the residence time of the ethanolamine being converted with the fixed bed of catalyst does not exceed about an hour to convert the ethanolamine into said products; continuously withdrawing a stream comprised of the converted ethanolamine from the fixed bed of catalyst; and thereafter separating the nitrogen-containing products from the stream of the converted ethanolamine.

2,861,996

PROCESS OF PREPARING SERINES

Karl Hans Bratfisch, Frankfurt am Main, and Walter Siedel, Bad Soden am Taunus, Germany, assignors, by mesne assignments, to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Application March 28, 1956
Serial No. 572,621
Claims priority, application Germany March 25, 1955
5 Claims. (Cl. 260—287)

1. The process of preparing serines which comprises reacting glycocoll at a temperature in the range from room temperature to 70° C. with substantially one equivalent of a glyoxylic acid compound selected from the group consisting of glyoxylic acid and alkyl esters and alkyl ester alkyl hemiacetals thereof in the presence of a basic condensing agent selected from the group consisting of alkali metal hydroxides and alkaline earth metal hydroxides, thereby obtaining the corresponding Schiff's base, said alkyl containing not more than 4 carbon atoms; condensing said base at a temperature in the range from room temperature to 60° C. with substantially one equivalent of an aldehyde selected from the group consisting of para-nitrobenzaldehyde and 2-quinoline aldehyde in the presence of a basic condensing agent selected from the group consisting of alkali metal hydroxides and alkaline earth metal hydroxides; and hydrolyzing the resulting serine Schiff's base with an excess of dilute mineral acid at elevated temperature up to about 60° C. to obtain the corresponding primary amine.

2,861,997

STABILIZATION OF METHYL, VINYL PYRIDINE

Paul F. Warner, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application August 18, 1953
Serial No. 385,867
1 Claim. (Cl. 260—290)

A process for purifying 2-methyl-5-vinylpyridine prepared by the catalytic dehydrogenation of 2-methyl-5-ethylpyridine which comprises combining the mixture of reaction products resulting from said dehydrogenation process with from 0.1 percent to 5 percent by weight based on 2-methyl-5-vinylpyridine in said mixture of a combination of an organic polysulfide corresponding to the formula $R'S_xR''$ wherein R' and R'' are alkyl radicals, each alkyl radical having from 1 to 12 carbon atoms, and x is an integer in the range from 3 to 5 with catechol, the ratio of polysulfide compound to catechol being from 4:1 to 1:1, fractionating said mixture containing said catechol-polysulfide mixture under vacuum, recovering as bottoms product 2-methyl-5-vinylpyridine containing polysulfide and catechol inhibitor, subsequently distilling said bottoms product in a final distillation column, and recovering at least 95 percent pure 2-methyl-5-vinylpyridine.

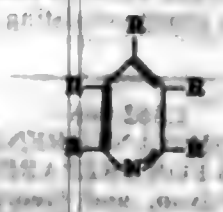
2,861,998

HETEROCYCLIC NITROGEN COMPOUND POLYMER INHIBITORS

William E. Reynolds and Robert E. Rosser, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application December 27, 1955
Serial No. 555,230
14 Claims. (Cl. 260—296)

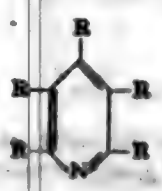
1. A method of stabilizing a polymerizable heterocyclic nitrogen compound having the formula



wherein R is selected from the group consisting of hydrogen, alkyl, vinyl, and isopropenyl (alpha-methylvinyl) groups, one of said groups being selected from the group consisting of vinyl and isopropenyl groups, the total number of carbon atoms in the alkyl groups being not greater than 12, said method comprising incorporating with said compound a stabilizing amount of a compound selected from the group consisting of

4-nitro-2-aminophenol
3-nitro-5-butyl-2-aminophenol
3-nitro-4,5,6-trimethyl-2-aminophenol
3-nitro-2-(N,N-dimethyl)aminophenol
5-nitro-3,4,6-triisobutyl-2-(N,N-diethyl)aminophenol
4,6-dinitro-2-(N-methyl-N-n-propyl)aminophenol
4,6-dinitro-3,5-dimethyl-2-(N-ethyl-N-isopropyl)-aminophenol
3,4,5,6-tetranitro-2-aminophenol
3,5,6-trinitro-2-(N,N-di-tert-butyl)aminophenol
3-nitro-2-(N,N-dimethyl)aminophenol (sodium salt)
4-nitro-2-aminophenol (sodium salt)
4-nitro-2-aminophenol (potassium salt)
5-nitro-2-(N,N-diethyl)aminophenol (potassium salt)
4,6-dinitro-2-(N-methyl-N-n-propyl)aminophenol (lithium salt)
4-nitro-2-aminophenol (rubidium salt) and
5-nitro-2-(N,N-dibutyl)aminophenol (cesium salt)

12. A heterocyclic nitrogen compound selected from the group consisting of compounds having the formula



wherein R is selected from the group consisting of hydrogen, alkyl, vinyl, and isopropenyl (alpha-methylvinyl) groups, one of said groups being selected from the group consisting of vinyl and isopropenyl groups, the total number of carbon atoms in the alkyl groups being not greater than 12, said heterocyclic compound being stabilized against polymerization by the presence of a stabilizing compound selected from the group consisting of

4-nitro-2-aminophenol
3-nitro-5-butyl-2-aminophenol
3-nitro-4,5,6-trimethyl-2-aminophenol
3-nitro-2-(N,N-dimethyl)aminophenol
5-nitro-3,4,6-triisobutyl-2-(N,N-diethyl)aminophenol
4,6-dinitro-2-(N-methyl-N-n-propyl)aminophenol
4,6-dinitro-3,5-dimethyl-2-(N-ethyl-N-isopropyl)-aminophenol
3,5,6-trinitro-2-(N,N-di-tert-butyl)aminophenol
3,4,5,6-tetranitro-2-aminophenol
3-nitro-2-(N,N-dimethyl)aminophenol (sodium salt)
4-nitro-2-aminophenol (sodium salt)
4-nitro-2-aminophenol (potassium salt)
5-nitro-2-(N,N-diethyl)aminophenol (potassium salt)
4,6-dinitro-2-(N-methyl-N-n-propyl)aminophenol (lithium salt)
4-nitro-2-aminophenol (rubidium salt) and
5-nitro-2-(N,N-dibutyl)aminophenol (cesium salt)

2,861,999

PRODUCTION OF CYANOPYRIDINES

Alfred F. D'Alessandro, Havertown, Pa., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Application March 27, 1956
Serial No. 574,899
6 Claims. (Cl. 260—294.9)

1. A process for the production of cyanopyridines which comprises passing a gaseous mixture comprising a member of the group consisting of monoalkyl and dialkyl substituted pyridines, ammonia and oxygen, in the proportions of about 2 to 5 mols of ammonia and about 5 to 50 mols of oxygen per mol of alkyl substituted pyridine, upwardly through an oxidation catalyst having a particle size of about 50 to 3000 microns and containing oxides of vanadium, molybdenum and phosphorus supported on activated alumina, at a linear velocity of about 0.02 to 10 feet per second to effect fluidization of the catalyst, and maintaining said gaseous mixture in contact with the catalyst at a temperature of about 310° to 365° C. for a period of about 0.1 to 10 seconds.

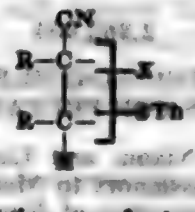
2,862,000

REACTION OF THIAZOLE SULFENYL HALIDES WITH ALPHA, BETA-OLEFIN NITRILES AND PRODUCTS

Samuel Allen Heininger and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 21, 1957
Serial No. 641,476
5 Claims. (Cl. 260—306.6)

4. A mixture of isomers of compounds of the formula



and dehydrohalogenation products thereof where X is selected from the class consisting of chlorine and bromine, R is selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation and containing from 1 to 6 carbon atoms, provided that at least one R represents hydrogen, and Th is a 2-thiazole radical selected from the class consisting of thiazyl, methyl- and phenyl-substituted thiazyl, benzothiazyl, methyl-substituted benzothiazyl, and naphthothiazyl.

2,862,001

PROCESS FOR THE MANUFACTURE OF AN ISOXAZOLIDONE COMPOUND

Hans Kirchenstreiner and Hans Spiegelberg, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application July 13, 1956
Serial No. 597,569
Claims priority, application Switzerland July 22, 1955
8 Claims. (Cl. 260—307)

1. α-Halogenacetamino-β-chloro-propionic acid halide.

2,862,002

SYNTHESIS OF 4-AMINO-3-ISOXAZOLIDONE

Arthur Boller, Ander First, and Stefano Majnoni, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application November 5, 1956
Serial No. 620,188

Claims priority, application Switzerland November 17, 1955

8 Claims. (Cl. 260—307)

1. A process which comprises reacting α-amino-β-chloropropionic acid with phosgene, reacting the product of said reaction with a member of the group consisting of hydroxylamine and salts thereof, cyclizing the reaction product by means of a basic agent to obtain 4-amino-3-isoxazolidone.

8. α-Amino-β-chloropropionohydroxamic acid.

2,862,003

SYNTHESIS OF 4-AMINO-3-ISOXAZOLIDONES

Hans Kirchenstiner, Reinhard Schlapfer, and Hans Spiegelberg, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application November 28, 1956
Serial No. 624,722

Claims priority, application Switzerland December 2, 1955

6 Claims. (Cl. 260—307)

1. A process for the production of 4-amino-3-isoxazolidone compounds which comprises reacting a mixture comprising hydroxylamine and an ester having the formula

$$R_1\text{—}\underset{\displaystyle X}{\underset{|}{CH}}\text{—}\underset{\displaystyle NH_2}{\underset{|}{CH}}\text{—}COOR_2$$

wherein R_1 represents a member of the group consisting of hydrogen, alkyl, aryl and aralkyl, R_2 represents alkyl and X represents halogen

with a strong base in the presence of water.

2,862,004

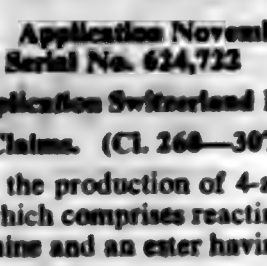
DODECAHYDROPHENANTHRENE COMPOUNDS AND PROCESSES FOR PREPARING THE SAME

Robert M. Lukes, Nixon, and George I. Poos, North Plainfield, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

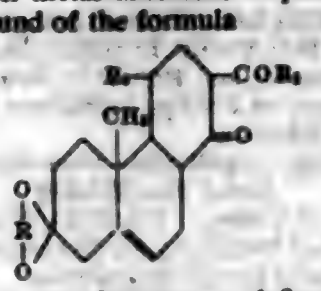
No Drawing. Application December 31, 1953
Serial No. 401,705

12 Claims. (Cl. 260—340.9)

2. The process which comprises reacting a compound of the formula



wherein R is an alkylene group having 2 to 4 carbon atoms and R_1 is a member from the group consisting of keto, hydroxy, and lower alkanoyl-oxy radicals, with a member from the group consisting of lower alkyl esters of lower alkanoic acids and lower alkyl esters of carbonic acid in the presence of an alkaline condensing agent from the group consisting of alkali metal hydrides, alkali metal amides and alkali metal alkoxides to produce the corresponding compound of the formula



wherein R and R_1 are the same as defined above and R_2 is a member from the group consisting of lower alkyl and lower alkoxy.

2,862,005

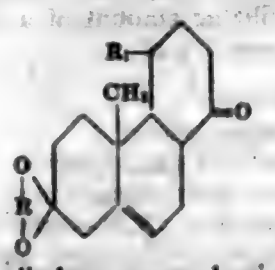
DODECAHYDROPHENANTHRENE COMPOUNDS AND PROCESSES FOR PREPARING THE SAME

Robert M. Lukes, Nixon, and George I. Poos, North Plainfield, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

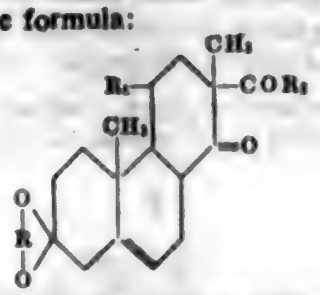
No Drawing. Application December 31, 1953
Serial No. 401,706

13 Claims. (Cl. 260—340.9)

7. The process which comprises reacting a compound of the formula:



wherein R is an alkylene group having 2 to 4 carbon atoms and R_1 is a member from the group consisting of keto, hydroxyl and lower alkanoyl-oxy radicals, with a member from the group consisting of lower alkyl esters of lower alkanoic acids and lower alkyl esters of carbonic acid in the presence of an alkaline condensing agent from the group consisting of alkali metal hydrides, alkali metal amides and alkali metal alkoxides, and reacting the resulting reaction product with methyl iodide in the presence of an alkali metal carbonate to produce a compound of the formula:



wherein R and R_1 are the same as defined above and R_2 is a member from the group consisting of lower alkyl and lower alkoxy.

2,862,006

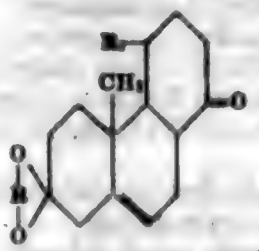
DODECAHYDROPHENANTHRENE COMPOUNDS AND PROCESSES FOR PREPARING THE SAME

Robert M. Lukes, Nixon, and George I. Poos, North Plainfield, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application December 31, 1953
Serial No. 401,707

7 Claims. (Cl. 260—340.9)

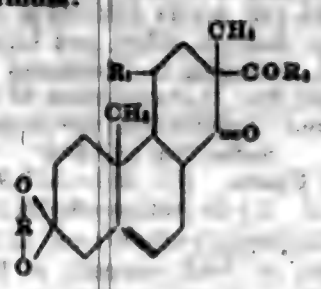
7. The process which comprises reacting a compound of the formula:



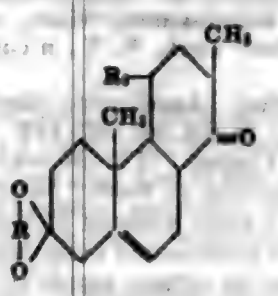
wherein R is an alkylene group having 2 to 4 carbon

in each fatty acid portion thereof and an alkyl fumarate

atoms and R_1 is a member from the group consisting of keto, hydroxyl and lower alkanoyl-oxy radicals, with a member from the group consisting of lower alkyl esters of lower alkanoic acids and lower alkyl esters of carbonic acid in the presence of an alkaline condensing agent from the group consisting of alkali metal hydrides, alkali metal amides and alkali metal alkoxides, reacting the resulting reaction product with methyl iodide in the presence of an alkali metal carbonate to produce a compound of the formula:



wherein R and R_1 are the same as defined above and R_2 is a member from the group consisting of lower alkyl and lower alkoxy, and reacting this compound with an inorganic base to produce a compound of the formula:



2,862,907

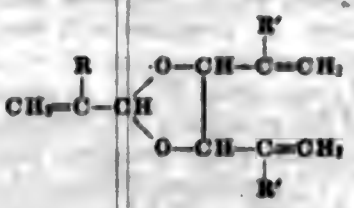
TRIPLY UNSATURATED 1,3-DIOXOLANES AND PROCESS FOR THEIR PREPARATION

Harry A. Stansbury, Jr., South Charleston, and Howard R. Guest, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application September 27, 1957 Serial No. 686,583

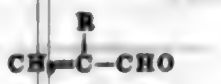
6 Claims. (Cl. 260—348.9)

1. A triply unsaturated 1,3-dioxolane having the structural formula:

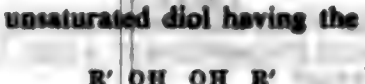


wherein R and R′ are selected from the group consisting of hydrogen and lower alkyl.

6. The process which comprises reacting an unsaturated aldehyde having the formula:



with a doubly unsaturated diol having the formula:



wherein R and R′ are selected from the group consisting of hydrogen and lower alkyl at a temperature of from about 0° C. to about 100° C. and a pressure of from about 5 to about 150 p. s. i. a. for a period of from about 0.5 to about 50 hours.

2,862,908

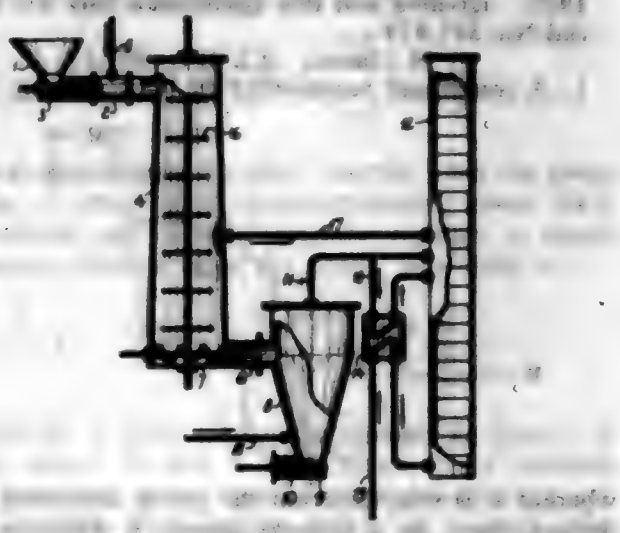
METHOD FOR CONTINUOUS PRODUCTION OF FURFURAL FROM SUITABLE RAW MATERIAL

Carl Gunnar Carlsson Sleph and Göte Emanuel Silvé, Göteborg, Sweden

Application October 5, 1953, Serial No. 384,311

Claims priority, application Sweden October 15, 1952

1 Claim. (Cl. 260—347.5)



In a process for producing furfural from solid raw material containing pentosan, employing a closed digester, a closed expansion vessel, and a distillation column, the steps of slowly reacting together and passing said raw material and steam as a reaction mass in said digester, from an intake point of said digester to a discharge point of said digester, passing said reaction mass and a first part of the steam and gaseous reaction products from said discharge point of said digester to an intake point of said expansion vessel, expanding the reaction mass in said expansion vessel to separate gaseous products comprising steam and furfural from solid residues, discharging gaseous products comprising steam and furfural from said expansion vessel at a discharge point thereof, passing said gaseous products so discharged from said discharge point of said expansion vessel from said expansion vessel to said distillation column, deriving a second part of the steam and gaseous reaction products from an intermediate point of said digester intermediate its intake and discharge points and substantially spaced from each of said points, and passing said derived second part directly from said digester intermediate point to said distillation column.

2,862,909

NEW WATER SOLUBLE QUATERNARY AMMONIUM SALTS

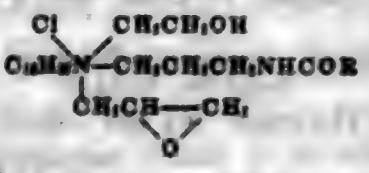
Otto Albrecht, Neuewelt, near Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Original application December 7, 1953, Serial No. 396,739. Divided and this application February 24, 1955, Serial No. 490,399

Claims priority, application Switzerland December 12, 1952

2 Claims. (Cl. 260—348)

1. The product of the formula



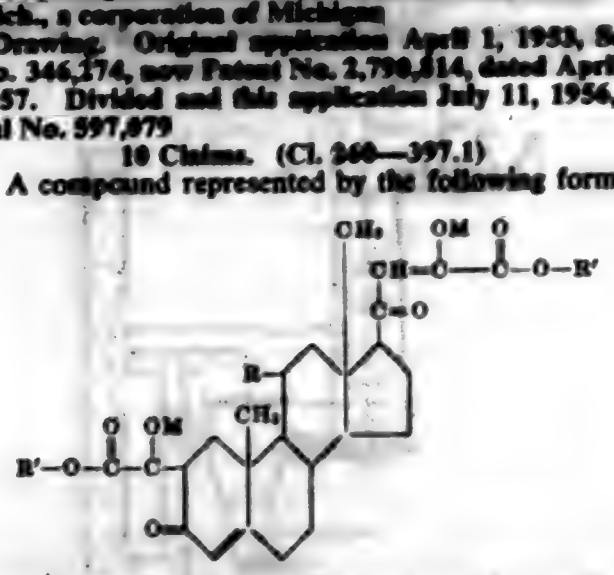
wherein R is the hydrocarbon radical of stearic acid.

asymmetrical ester of thiophosphoric acid which corre-

2,862,910

2,862,010
STEROID PRODUCTION
John A. Hogg, Kalamazoo Township, Kalamazoo County, Philip F. Beal III, Portage Township, Kalamazoo County, Alan H. Nathan, Kalamazoo Township, Kalamazoo County, and Frank H. Lincoln, Jr., Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Original application April 1, 1953, Serial No. 346,274, now Patent No. 2,790,814, dated April 30, 1957. Divided and this application July 11, 1956, Serial No. 597,979
10 Claims. (Cl. 260—397.1)

1. A compound represented by the following formula:



wherein R is selected from the group consisting of a hydrogen atom, an α-hydroxy group, a β-hydroxy group, and a ketonic oxygen; wherein M is selected from the group consisting of hydrogen and an alkali-metal; and wherein R' is selected from the group consisting of hydrogen and a lower-alkyl group.

2,862,011
PRODUCTION OF 2-BROMO-KETO-11-OXYGENATED - 4,17(20) - PREGNADIENE - 21 - OIC ACID ESTERS
John A. Hogg, Kalamazoo Township, Kalamazoo County, Philip F. Beal III, Portage Township, Kalamazoo County, Alan H. Nathan, Kalamazoo Township, Kalamazoo County, and Frank H. Lincoln, Jr., Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Original application April 1, 1953, Serial No. 346,274, now Patent No. 2,790,814, dated April 30, 1957. Divided and this application July 11, 1956, Serial No. 597,305
12 Claims. (Cl. 260—397.1)

1. A process which includes the steps of (1) mixing a Δ^4-3-keto steroid having at the 17 position a hydrogen atom and an acetyl group, and having two hydrogen atoms at the 2 position of the steroid nucleus, with more than two molar equivalents each of an alkyl diester of oxalic acid and an alkali-metal base condensing agent to produce a Δ^4-3,20-diketo-2,21-dialkoxyoxalyl alkali-metal dienolate steroid; and (2) reacting the thus-produced steroid with about three molar equivalents of a halogenating agent to produce a Δ^4-3,20-diketo-2,21,21-trihalo-2,21-dialkoxyoxalyl steroid; and (3) reacting the thus-produced steroid halogenation product with an alkanol and a base to produce a $\Delta^{4,17(20)}$-2-halo-3-keto-21-oic acid alkyl ester steroid.

2,862,012
ADDUCTS
Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application February 25, 1954
Serial No. 412,631
13 Claims. (Cl. 260—404.8)

1. An adduct of an olefinic non-conjugated, non-hydroxylated fatty oil having from 10 to 24 carbon atoms in each fatty acid portion thereof and an alkyl fumarate having from 1 to 8 carbon atoms in the alkyl radical, said adduct being further characterized by containing a total number of fumarate groups which is greater than the number of olefinic double bonds present in said oil.

2,862,013
BRANCHED-CHAIN HIGHER ALCOHOLS FORMED BY CONDENSATION OF LOWER ALCOHOLS, AND ESTERS OF SAID HIGHER ALCOHOLS
Robert E. Miller, Dayton, Ohio, and George E. Bennett, Glendale, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application November 16, 1955
Serial No. 547,340
1 Claim. (Cl. 260—410.9)

The esters of 2,4-di-(tetramethylheptyl)-butane-1-ol and 2-(tetramethylheptyl)-ethan-1-oic acid, characterized by viscosity index of +64, viscosity at 100° F. of 107.6 centigram seconds, and pour point of −25° F.

2,862,014
ORGANIC MATERIAL
Sigurd O. Rue, Birmingham, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application May 28, 1953
Serial No. 358,195
2 Claims. (Cl. 260—414)

1. New compositions of matter having the general formula $RCOOMOH \cdot H_2O$, wherein R is the organic residue of a straight chain unsaturated monobasic acid containing from about 10 to 30 carbon atoms in the molecule and M is magnesium.

2,862,015
METHOD FOR PRODUCING TRICHLORO-METHYLPROPENE AND CHLOROSULFINATE THEREOF
Donald G. Kundiger and Louis E. Ott, Manhattan, Kans., and Huey Pledger, Jr., Freeland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application November 3, 1955
Serial No. 544,809
5 Claims. (Cl. 260—456)

1. A method for the preparation of 3,3,3-trichloro-2-methyl-1-propene which comprises reacting 1,1,1-trichloro-2-methyl-2-propanol with thionyl chloride in the presence of a catalytic amount of an amine and at a temperature of from about 40° C. to about 120° C.

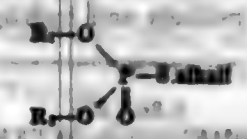
5. A method for producing 1,1,1-trichloro-2-methyl-2-propyl chlorosulfinate which comprises heating one molar proportion of 1,1,1-trichloro-2-methyl-2-propanol with about 2 molar proportions of thionyl chloride in the presence of a catalytic amount of an amine in an inert, nonpolar, reaction solvent, and at a temperature of from about 45° C. to about 80° C. for a period of time until the evolution of hydrogen chloride from the reaction mixture has substantially ceased.

2,862,016
PROCESS FOR PREPARATION OF ALKALI SALTS OF O,O-THIOLPHOSPHORIC ACID ASYMMETRICAL DIESTERS
Richard Saltzmann, Basel, and Paul Kobler, Aigle, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Application February 21, 1955
Serial No. 489,884
Claims priority, application Switzerland March 4, 1954
2 Claims. (Cl. 260—461)

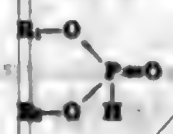
1. A process for the manufacture of a water-soluble

2,862,021
ing of lower perfluoroalkyl radicals and fluorine, X is

asymmetrical ester of thiophosphoric acid which corresponds to the formula



in which R_1 represents an alkyl radical containing 1–4 carbon atoms and R_2 represents a member of the group consisting of aliphatic hydrocarbon radicals containing 8–18 carbon atoms, and the cyclohexyl, benzyl and tetrahydrofurfuryl radicals, and "alkali" represents an alkali metal ion, which comprises combining sulfur additively with a compound of the formula



in which R_1 and R_2 have the meanings given above, in the presence of an alkali salt of carbonic acid.

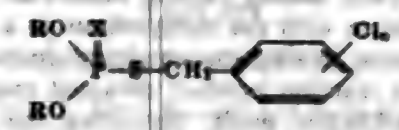
2,862,017

BENZYL ESTERS OF THIOPHOSPHORIC ACIDS AND THEIR PRODUCTION

Gerhard Schrader, Opladen, and Walter Lorenz, Wuppertal-Elberfeld, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application April 24, 1956
Serial No. 580,176
Claims priority, application Germany May 3, 1955
3 Claims. (Cl. 260—461)

1. A thiophosphoric acid ester having the general formula:



in which R is lower alkyl, X is a chalkogen having an atomic weight between 16 and 32, and *n* is an integer from one to three.

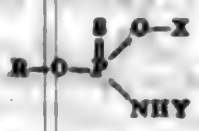
2,862,018

O-ARYL O-LOWERALKYL N-ALKENYL PHOSPHOROAMIDOTHIOATES

Kenneth C. Kauer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 30, 1956
Serial No. 600,673
5 Claims. (Cl. 260—461)

1. An O-aryl O-loweralkyl N-alkenyl phosphoroamidothioate corresponding to the formula



wherein R represents a member of the group consisting of halophenyl and 4-loweralkyl-2-halophenyl wherein the halogen in said halophenyl is selected from chlorine and bromine, X represents a loweralkyl radical and Y represents a member of the group consisting of allyl and methallyl.

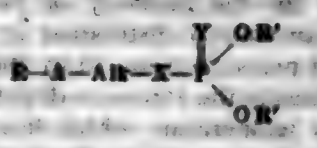
2,862,019

THIOPHOSPHORIC ACID ESTERS AND THEIR PRODUCTION

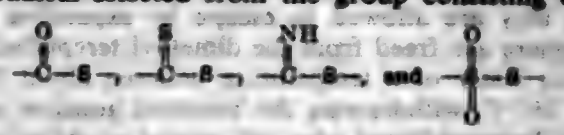
Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application March 7, 1957
Serial No. 644,463
Claims priority, application Germany March 12, 1956
5 Claims. (Cl. 260—461)

1. A compound of the general formula



in which R stands for a member selected from the group consisting of lower alkyl, halo-substituted lower alkyl, phenyl, anilino, and lower alkylamino radicals; A stands for a radical selected from the group consisting of



Alk stands for a lower alkylene chain having from 1 to 4 carbon atoms; X and Y each stand for a member selected from the group consisting of oxygen and sulfur, one of them being sulfur; and R′ is a lower alkyl radical having 1 to 4 carbon atoms.

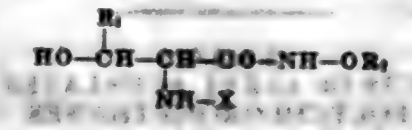
2,862,020

DERIVATIVES OF α-AMINO-β-HYDROXY HYDROXAMIC ACIDS

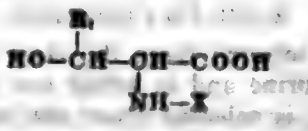
Balthasar Hegedüs, Basel, Switzerland, assignor to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

No Drawing. Application June 22, 1956
Serial No. 593,031
Claims priority, application Switzerland June 28, 1955
11 Claims. (Cl. 260—471)

1. A process for producing a compound represented by the formula

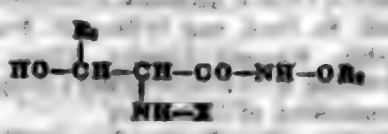


wherein R_1 represents a member of the group consisting of hydrogen, lower alkyl, phenyl and nitrophenyl, R_2 represents a member of the group consisting of hydrogen, aralkyl and nitroaralkyl and X represents a member of the group consisting of carbo-lower alkoxy, carbo-lower alkenoxy and carbaralkoxy which comprises reacting an acid represented by the formula



wherein R_1 and X have the same significance defined above with a member of the group consisting of hydroxylamine, hydroxylamine-O-aralkyl ether and hydroxylamine-O-nitroaralkyl ether in the presence of a carbodiimide.

8. A compound represented by the formula



wherein R_1 represents a member of the group consisting of hydrogen, lower alkyl, phenyl and nitrophenyl R_2 represents a member of the group consisting of aralkyl and nitroaralkyl and X represents a member of the group consisting of carbo-lower alkoxy, carbo-lower alkenoxy and carbaralkoxy.

droxylated fatty oil having from 10 to 24 carbon atoms

1. A process for the manufacture of a water-soluble

2,862,021

RECOVERY OF PURE DIMETHYL TEREPHTHALATE BY CONTINUOUS DISTILLATION

Heinz Bille, Ludwigshafen (Rhine), Hans Spohn, Frankenthal, and Hans-Georg Trieschmann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), State of Rhineland (Pfalz), Germany

Application April 4, 1957, Serial No. 650,714
Claims priority, application Germany May 17, 1956
2 Claims. (Cl. 260—475)

1. A process for the recovery of pure dimethyl terephthalate by continuous distillation of the crude ester under a reduced pressure from 10 to 200 mm. Hg which comprises condensing the vaporous dimethyl terephthalate by cooling to a temperature which lies above the melting point of the ester, separating the liquid ester from the waste gases containing the ester in an amount corresponding to its partial pressure, withdrawing the liquid ester and solidifying it by further cooling, while the waste gases, before they are allowed to escape by expanding in the atmosphere are freed from the dimethyl terephthalate by injecting water of a temperature between about 0° and about 25° C. withdrawing the resultant aqueous suspension of the precipitated ester and separating the ester from the suspension in usual manner by filtration.

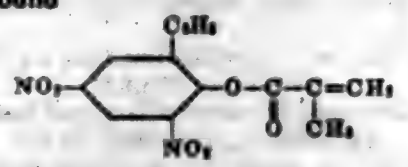
2,862,022

DINITROALKYLPHENYL METHACRYLATES

Richard S. Cook, Rockledge, and Charles H. McKeever, Meadowbrook, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application June 1, 1956
Serial No. 588,668
1 Claim. (Cl. 260—479)

The compound



where C_6H_5 is the phenyl group.

2,862,023

ADDUCTS OF ALKYL ACRYLATES AND POLYCHLOROMETHANES

Joseph E. Fields, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 9, 1954
Serial No. 474,280
5 Claims. (Cl. 260—485)

1. Adducts of an alkyl acrylate and a polyhalomethane having the formula

$$X(CH_2CH.COOR)_nCX_3$$

in which X is selected from the class consisting of hydrogen and chlorine and in which not more than one X is hydrogen, R is selected from the class consisting of alkyl radicals of 4 and 5 carbon atoms, and n is a number of from 7 to 117.

2,862,024

FLUORINATED CARBON COMPOUNDS

John L. Rendall, St. Paul, and Wilbur H. Pearlson, White Bear Township, Ramsey County, Minn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application January 3, 1956
Serial No. 555,825
1 Claim. (Cl. 260—487)

As a new product, the chemical compound

$$R_fCF_2CR'_fHCOX$$

where R_f and R'_f are selected from the group consisting of lower perfluoroalkyl radicals and fluorine, X is selected from the group consisting of —OR and —NR_2 radicals, and each R is selected from the group consisting of lower alkyl radicals and hydrogen.

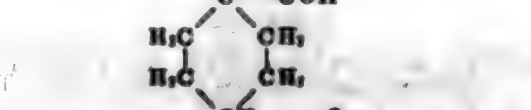
2,862,025

CHLORAMPHENICOL INTERMEDIATE

Irving Levi, Montreal, Quebec, Canada, assignor to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of the Province of Quebec

No Drawing. Application June 4, 1957
Serial No. 663,889
Claims priority, application Canada September 6, 1956
2 Claims. (Cl. 260—488)

1. As a new product, 2-halo-1-p-nitrophenyl-1,3-diacetoxypropanediol of the general formula:



wherein X is selected from the group consisting of chloro and bromo.

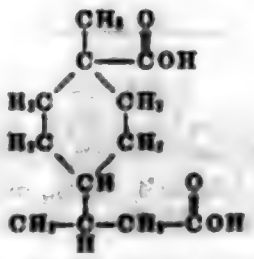
2,862,026

ISOMERIC DERIVATIVES OF MONOCYCLIC DIOLEFINIC TERPENES

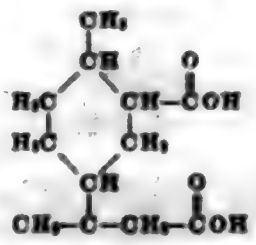
Karl Büchner, Oberhausen-Sterkrade, Otto Roelen, Oberhausen-Holten, and Heinrich Schwarz, Oberhausen-Sterkrade, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Application August 3, 1954
Serial No. 447,670
Claims priority, application Germany August 6, 1953
2 Claims. (Cl. 260—514)

1. Process for the production of isomeric dicarboxylic acids from monocyclic diolefinic terpenes, which comprises catalytically adding carbon monoxide and hydrogen in accordance with the oxosynthesis to a monocyclic diolefinic terpene having the empirical formula $C_{10}H_{16}$, converting the reaction product obtained into the corresponding dicarboxylic acids, dissolving the mixture of isomeric dicarboxylic acids in a solvent containing a mixture of heptane and pentanone in the ratio of 1:5 crystallizing an isomeric acid having the formula



a clear melting point of 147° C. and a residual acid number of 190 from the solvent solution and recovering the other isomeric acid having the formula



as a highly viscous and stringy compound having a residual acid number of 90 from the remaining solvent solution.

allyl.

known and carbalkoxy.

2,862,027

PROCESS FOR RECOVERY OF ACIDS

Julian Feldmann, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application October 22, 1956
Serial No. 617,218

10 Claims. (Cl. 260—513)

1. In a process for preparation and recovery of saturated aliphatic C_{10} diacids wherein butadiene is initially reacted with a finely divided alkali metal to form a mixture of isomeric dialkali metal octadienes, the mixture of said octadienes is carbonated to produce an isomeric mixture of dialkali metal salts of C_{10} unsaturated aliphatic diacids, said mixture of isomeric salts is hydrogenated to form the corresponding mixture of saturated salts, the resulting mixture of saturated salts is acidified to liberate the isomeric mixture of C_{10} diacids including sebacic acid, 2-ethylsuberic acid and 2,5-diethyladipic acid, and recovery of said diacids by crystallization from a solution thereof, the improvement for obtainment of increased recovery of said diacids by crystallization which comprises subjecting the liberated mixture of isomeric C_{10} diacids, dissolved in an organic solvent for said diacids and from which solution crystallization of a substantial portion of the C_{10} diacids occurs at a reduced temperature, to a reduced temperature sufficient to crystallize out a substantial portion of the C_{10} diacids thereby providing a mother liquor containing branched chain isomers of sebacic acid, and subjecting said mother liquor to an elevated temperature of not more than about 250° C. for a period of time sufficient to convert a substantial portion of the C_{10} diacids in said mother liquor to more easily crystallizable C_{10} diacids.

2,862,028

MANUFACTURE OF SUCCINIC ACID

Gifford W. Crosby, River Forest, and John B. Braunwarth, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application July 11, 1956
Serial No. 597,064

8 Claims. (Cl. 260—537)

1. The process for preparation of succinic acid which comprises oxidizing at least one unsaturated C_9–C_{13} aliphatic nitrile in an aqueous solution of a permanganate containing added alkali, at about 50°–100° C., to produce a reaction mixture containing a substantial yield of a C_4 cyanoacid, and hydrolyzing said C_4 cyanoacid and recovering the succinic acid thus produced.

2,862,029

NOVEL IMINOSULFUR DIFLUORIDES AND THEIR PREPARATION

William C. Smith, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 18, 1956
Serial No. 612,876

14 Claims. (Cl. 260—543)

1. Organic compounds characterized by the group $-NSF_2$ joined to a monovalent organic radical free of Zerewitinoff active hydrogen.

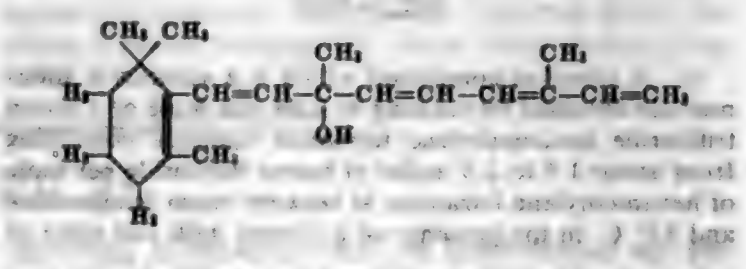
2,862,030

PREPARATION OF VITAMIN A ALDEHYDE

Howard C. Klein, Brooklyn, N. Y., assignor to Nopco Chemical Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application August 21, 1957
Serial No. 679,518
10 Claims. (Cl. 260—563)

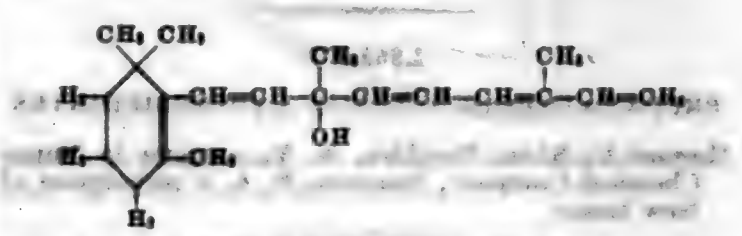
1. A process for producing an imine intermediate which when reacted with water yields anhydro free vitamin A aldehyde which comprises reacting with iodine, a complex obtained by reacting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said complex having a λ max=3300 A. and an

$$E^{1\%}_{1cm} = 1010$$

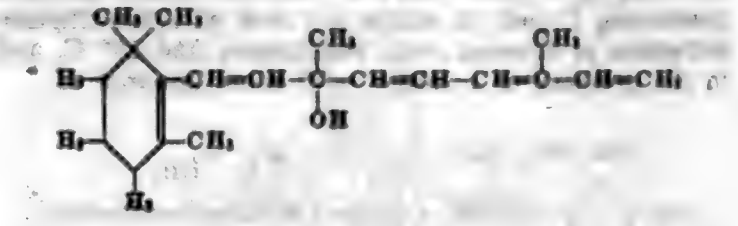
6. A process for producing anhydro free vitamin A aldehyde which comprises reacting in solution at a temperature of between 65° C. and the reflux temperature of the mixture and in the presence of a small amount of water, iodine and a complex obtained by reacting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said complex having a λ max=3300 A. and an

$$E^{1\%}_{1cm} = 1010$$

said iodine being present in an amount of from 5 to 35% by weight of said



2,862,031

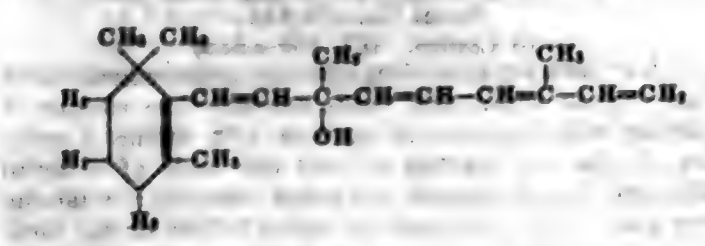
VITAMIN A INTERMEDIATES AND PROCESS FOR OBTAINING SAME

Davide R. Grassetti, Richmond, Calif., assignor to Nopco Chemical Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application August 21, 1957
Serial No. 679,519
17 Claims. (Cl. 260—563)

1. A process for producing vitamin A aldehyde which comprises reacting with water a complex obtained by re-

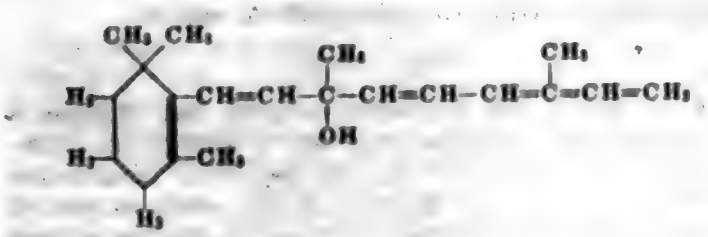
acting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said complex having a λ max=3300 A. and

$$E\frac{1\%}{1cm} = 1010$$

11. A complex compound which is a vitamin A intermediate obtained by reacting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said intermediate having a λ max=3300 A. and

$$E\frac{1\%}{1cm} = 1010$$

2,862,832

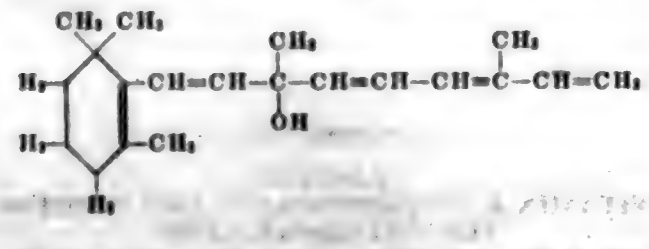
PREPARATION OF VITAMIN A INTERMEDIATES

Howard C. Klein, Brooklyn, N. Y., assignor to Nopco Chemical Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application February 5, 1958
Serial No. 713,286

13 Claims. (Cl. 260—563)

13. A process for obtaining vitamin A aldehyde free from anhydro vitamin A which comprises reacting about one mol of a hexamethylene tetramine-iodine complex containing 2 mols of iodine per mol of hexamethylene tetramine at between room temperature and 35° C. and in the presence of a solvent with about one mol of



adding to the resulting reaction mixture an amount of an alkaline material sufficient to liberate vitamin A active material from the reaction medium of hexamethylene tetramine-iodine complex and said compound and thereafter reacting said vitamin A active material with water at a temperature of from about 70° C. up to the temperature of reflux of the material.

2,862,833

PROCESS FOR PREPARING 1-ACETYL - 6 - OXO-8a-METHYL - 3,4,6,7,8,8a - HEXAHYDRONAPHTHALENE

Melvin S. Newman and Sambasiva Swaminathan, Columbus, Ohio, assignors to The Ohio State University Research Foundation, Columbus, Ohio, a corporation of Ohio

No Drawing. Original application January 18, 1952, Serial No. 267,097. Divided and this application August 12, 1953, Serial No. 377,469

1 Claim. (Cl. 260—586)

A process for isomerizing 8a-methyl-1,2,3,4,6,7,8,8a-octahydro-1-ethynyl-1β-hydroxy-6-oxonaphthalene which comprises refluxing a solution of said compound in formic acid for about two hours and separating 1-acetyl-6-oxo-8a-methyl-3,4,6,7,8,8a-hexahydronaphthalene from the reaction mixture.

2,862,834

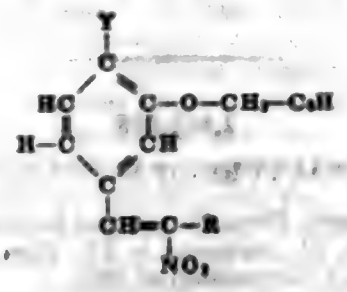
3,4-DIBENZYLOXY-β-NITROSTYRENES

Kenneth E. Hamlin, Lake Bluff, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Application June 16, 1955
Serial No. 516,043

4 Claims. (Cl. 260—613)

1. A new compound of the general formula



wherein R is a member of the group consisting of hydrogen and lower alkyl and Y is benzyloxy.

2,862,835

PROCESS FOR THE FISSION OF ETHERS

Karl-Walter Müller, Leverkusen-Bayerwerk, and Detlef Delfs, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 26, 1956
Serial No. 561,649

Claims priority, application Germany January 28, 1955

5 Claims. (Cl. 260—620)

1. A process for the fission of ethers to compounds containing hydroxyl groups and to hydrocarbons which comprises treating an ether containing only one ether configuration on one carbon atom selected from the group consisting of diaromatic, aromatic-aliphatic and cycloaromatic ethers the ring of the cyclic ethers of said group being a five-membered ring, with molecular hydrogen in the presence of an alkali metal at a temperature of about 100–300° C. and recovering the reaction products formed.

2,862,036

PREPARATION OF 2,3,3-TRICHLOROHEPTAFLUOROBUTANE

Charles F. Baranauckas and William E. Ashton, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application August 13, 1956
Serial No. 603,826
8 Claims. (Cl. 260—653.7)

1. A process for making 2,2,3-trichloroheptafluorobutane which includes: heating a perhalocarbon selected from the group consisting of hexachlorobutadiene; 2,3-dichlorohexafluorobutene-2; 1,2,3-trichloropentafluorobutene-2; 1,1,2,3-tetrachlorotetrafluorobutene-2; 1,1,1,2,3-pentachlorotrifluorobutene-2; 1,1,2,3,4,4-hexachlorodifluorobutene-2 and 1,1,1,2,3,4,4,4-octachlorobutene-2, with a fluorinating agent containing an antimony halide, hydrogen fluoride and elemental chlorine while maintaining the reaction temperature between about 200 degrees and 300 degrees centigrade for a contact time of less than ten hours.

2,862,037

VULCANIZED RUBBER COMPOSITION CONTAINING A METAL SALT COMPLEX AND PROCESS OF PREPARING SAME

John Kempton Allen, Entwistle, near Bolton, England, assignor to The Goigy Company Limited, Manchester, England, a British company

No Drawing. Application March 1, 1955
Serial No. 491,550
Claims priority, application Great Britain March 2, 1954
7 Claims. (Cl. 260—806)

1. A heat vulcanised natural rubber containing a salt, the cation of which is alkali metal and the anion of which is the complex anion formed by the combination of one atom of an alkaline earth metal with one molecule of an amine polycarboxylic acid selected from the group consisting of nitrilo triacetic acid and ethylene diamine tetraacetic acid.

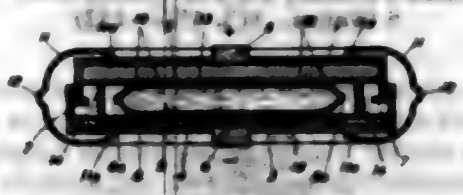
ELECTRICAL

2,862,038

SELF-PRIMING ELECTRIC CELLS AND BATTERIES

Hubert Marie Bernard Récopé de Tilly Blaru, Paris, France

Application August 8, 1955, Serial No. 527,034
Claims priority, application France August 21, 1954
2 Claims. (Cl. 136—90)



1. A self-priming battery cell comprising a pair of spaced electrodes movable towards each other, a pair of tray-like supports each supporting one of said electrodes and being movable therewith, said supports having telescoping insulated flanges and enclosing said electrodes, a frangible container formed of insulating material and containing an electrolyte, said container being disposed between said electrodes to be burst by movement of said electrodes toward each other, whereby the electrolyte is freed to bridge said electrodes and activate the cell, and flexible sealing means sealingly secured to said supports and hermetically sealing the space between said electrodes while accommodating movement of said electrodes relative to each other.

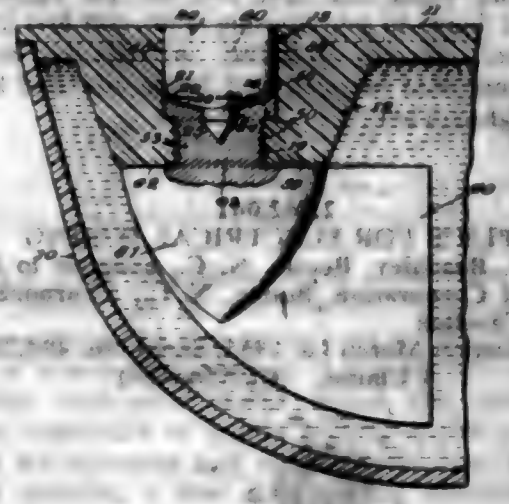
2,862,039

ART OF TERMINAL STRUCTURES FOR ELECTRICAL ENERGY CELLS

George G. Ensign and Theodor L. Boswell, Elgin, Ill., assignors to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois

Application November 21, 1956, Serial No. 623,580
16 Claims. (Cl. 136—135)

1. A terminal structure for an electrical energy cell having a casing with an aperture therein and an electrode extension of conductive ductile material, comprising an external terminal member in said aperture, the extension being in electrically conductive contact within the aperture with the terminal member, said extension having a portion located between the terminal member and the wall of the aperture, said portion successively decreasing in thickness from the inside toward the outside of the cell, the said portion having a feather edge



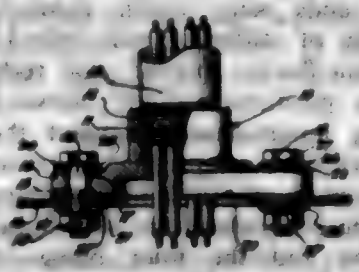
which completely encircles the extension and is spaced from the outer end of the aperture.

2,862,040

MOISTURE-PROOF FLANGED HUB TYPE CONNECTOR

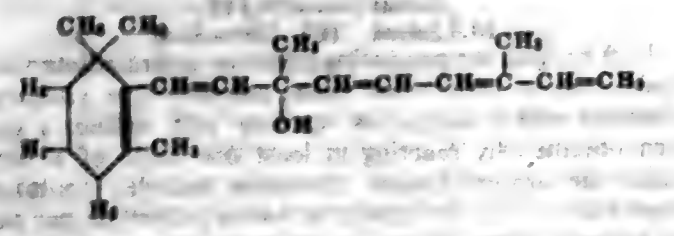
Louis J. Curran, Los Angeles, Calif.

Application January 23, 1956, Serial No. 560,606
3 Claims. (Cl. 174—51)



1. A connector for connecting an electrical conduit to a housing wall comprising: a hub having an inwardly convergent, taper threaded bore for receiving an electrical conduit, thereby establishing a moisture-proof, electrically-grounded connection between said hub and said electrical conduit; an outwardly extending flange on one end of said hub having a face surface perpendicular to the axis of said bore for engaging a housing wall; means defining holes near the outer circumference of said flange, said holes having an inwardly convergent conical seating surface at the end adjacent said hub; a

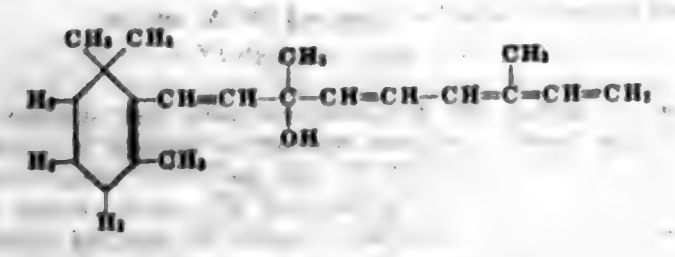
acting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said complex having a λ max=3300 A. and

$$E^{1\%}_{1cm} = 1010$$

11. A complex compound which is a vitamin A intermediate obtained by reacting at least one mole of a boron trifluoride hexamethylene tetramine complex containing from about 1.5 to 2.5 moles of boron trifluoride per mole of hexamethylene tetramine at between room temperature and 35° C. in the presence of a solvent with one mole of



said intermediate having a λ max=3300 A. and

$$E^{1\%}_{1cm} = 1010$$

2,862,032

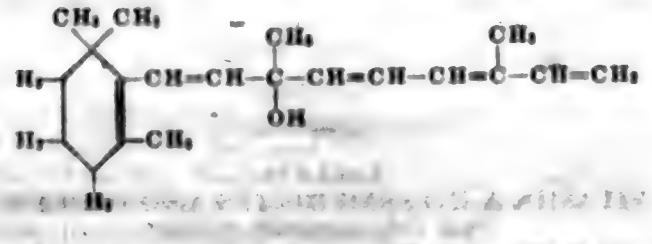
PREPARATION OF VITAMIN A INTERMEDIATES

Howard C. Klein, Brooklyn, N. Y., assignor to Nopco Chemical Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application February 5, 1958
Serial No. 713,286

13 Claims. (Cl. 260—563)

13. A process for obtaining vitamin A aldehyde free from anhydro vitamin A which comprises reacting about one mol of a hexamethylene tetramine-iodine complex containing 2 mols of iodine per mol of hexamethylene tetramine at between room temperature and 35° C. and in the presence of a solvent with about one mol of



adding to the resulting reaction mixture an amount of an alkaline material sufficient to liberate vitamin A active material from the reaction medium of hexamethylene tetramine-iodine complex and said compound and thereafter reacting said vitamin A active material with water at a temperature of from about 70° C. up to the temperature of reflux of the material.

2,862,033

PROCESS FOR PREPARING 1-ACETYL - 6 - OXO-8a-METHYL - 3,4,6,7,8,8a - HEXAHYDRONAPHTHALENE

Melvin S. Newman and Sambasiva Swaminathan, Columbus, Ohio, assignors to The Ohio State University Research Foundation, Columbus, Ohio, a corporation of Ohio

No Drawing. Original application January 18, 1952, Serial No. 267,897. Divided and this application August 12, 1953, Serial No. 377,460

1 Claim. (Cl. 260—586)

A process for isomerizing 8a-methyl-1,2,3,4,6,7,8,8a-octahydro-1-ethynyl-1β-hydroxy-6-oxonaphthalene which comprises refluxing a solution of said compound in formic acid for about two hours and separating 1-acetyl-6-oxo-8a-methyl-3,4,6,7,8,8a-hexahydronaphthalene from the reaction mixture.

2,862,034

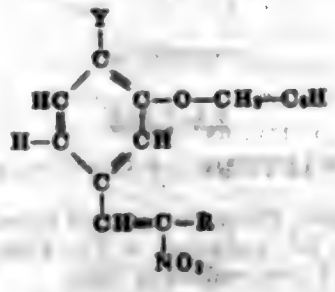
3,4-DIBENZYLOXY-β-NITROSTYRENES

Kenneth E. Hamlin, Lake Bluff, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Application June 16, 1955
Serial No. 516,043

4 Claims. (Cl. 260—613)

1. A new compound of the general formula



wherein R is a member of the group consisting of hydrogen and lower alkyl and Y is benzyloxy.

2,862,035

PROCESS FOR THE FISSION OF ETHERS

Karl-Walter Müller, Leverkusen-Bayerwerk, and Detlef Delfs, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 26, 1956
Serial No. 561,649

Claims priority, application Germany January 28, 1955

5 Claims. (Cl. 260—620)

1. A process for the fission of ethers to compounds containing hydroxyl groups and to hydrocarbons which comprises treating an ether containing only one ether configuration on one carbon atom selected from the group consisting of diaromatic, aromatic-aliphatic and cycloaromatic ethers the ring of the cyclic ethers of said group being a five-membered ring, with molecular hydrogen in the presence of an alkali metal at a temperature of about 100–300° C. and recovering the reaction products formed.

2,862,036

PREPARATION OF 2,3,3-TRICHLOROHEPTAFLUOROBUTANE

Charles F. Baranauckas and William E. Ashton, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application August 13, 1956
Serial No. 603,826
8 Claims. (Cl. 260—653.7)

1. A process for making 2,2,3-trichloroheptafluorobutane which includes: heating a perhalocarbon selected from the group consisting of hexachlorobutadiene; 2,3-dichlorohexafluorobutene-2; 1,2,3-trichloropentafluorobutene-2; 1,1,2,3-tetrachlorotetrafluorobutene-2; 1,1,1,2,3-pentachlorotrifluorobutene-2; 1,1,2,3,4,4-hexachlorodifluorobutene-2 and 1,1,1,2,3,4,4,4-octachlorobutene-2, with a fluorinating agent containing an antimony halide, hydrogen fluoride and elemental chlorine while maintaining the reaction temperature between about 200 degrees and 300 degrees centigrade for a contact time of less than ten hours.

2,862,037

VULCANIZED RUBBER COMPOSITION CONTAINING A METAL SALT COMPLEX AND PROCESS OF PREPARING SAME

John Kempton Allen, Entwistle, near Bolton, England, assignor to The Goigy Company Limited, Manchester, England, a British company

No Drawing. Application March 1, 1955
Serial No. 491,559
Claims priority, application Great Britain March 2, 1954
7 Claims. (Cl. 260—806)

1. A heat vulcanized natural rubber containing a salt, the cation of which is alkali metal and the anion of which is the complex anion formed by the combination of one atom of an alkaline earth metal with one molecule of an amine polycarboxylic acid selected from the group consisting of nitrilo triacetic acid and ethylene diamine tetraacetic acid.

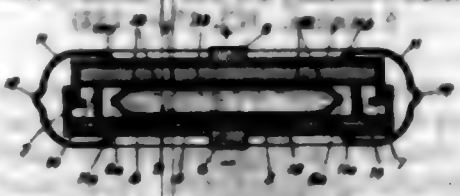
ELECTRICAL

2,862,038

SELF-PRIMING ELECTRIC CELLS AND BATTERIES

Hubert Marie Bernard Récopé de Tilly Blaru, Paris, France

Application August 8, 1955, Serial No. 527,034
Claims priority, application France August 21, 1954
2 Claims. (Cl. 136—90)



1. A self-priming battery cell comprising a pair of spaced electrodes movable towards each other, a pair of tray-like supports each supporting one of said electrodes and being movable therewith, said supports having telescoping insulated flanges and enclosing said electrodes, a frangible container formed of insulating material and containing an electrolyte, said container being disposed between said electrodes to be burst by movement of said electrodes toward each other, whereby the electrolyte is freed to bridge said electrodes and activate the cell, and flexible sealing means sealingly secured to said supports and hermetically sealing the space between said electrodes while accommodating movement of said electrodes relative to each other.

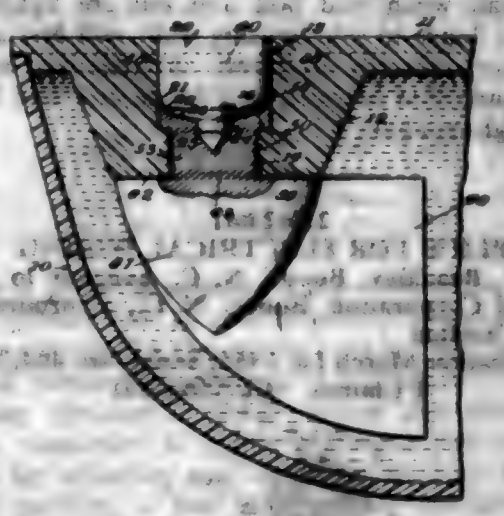
2,862,039

ART OF TERMINAL STRUCTURES FOR ELECTRICAL ENERGY CELLS

George G. Ensign and Thomas L. Boswell, Elgin, Ill., assignors to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois

Application November 21, 1956, Serial No. 623,580
26 Claims. (Cl. 136—135)

1. A terminal structure for an electrical energy cell having a casing with an aperture therein and an electrode extension of conductive ductile material, comprising an external terminal member in said aperture, the extension being in electrically conductive contact within the aperture with the terminal member, said extension having a portion located between the terminal member and the wall of the aperture, said portion successively decreasing in thickness from the inside toward the outside of the cell, the said portion having a feather edge



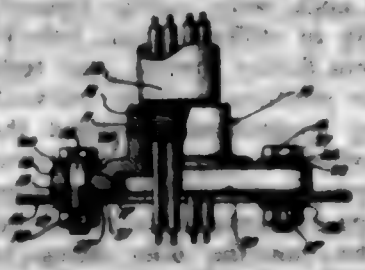
which completely encircles the extension and is spaced from the outer end of the aperture.

2,862,040

MOISTURE-PROOF FLANGED HUB TYPE CONNECTOR

Louis J. Curran, Los Angeles, Calif.

Application January 23, 1956, Serial No. 560,606
3 Claims. (Cl. 174—51)



1. A connector for connecting an electrical conduit to a housing wall comprising: a hub having an inwardly convergent, taper threaded bore for receiving an electrical conduit, thereby establishing a moisture-proof, electrically grounded connection between said hub and said electrical conduit; an outwardly extending flange on one end of said hub having a face surface perpendicular to the axis of said bore for engaging a housing wall; means defining holes near the outer circumference of said flange, said holes having an inwardly convergent conical seating surface at the end adjacent said hub; a

tively seated in said side wall openings and the other leg and an output terminal for the amplified signal, said

temperature of reflux of the material.

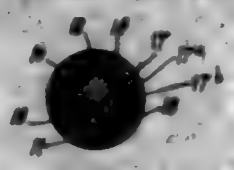
products formed.

bolt and nut for passing through said hole and securing said flange to said housing wall; a conically tapered bolt gasket having an axial bore for snugly receiving the shank of said bolt, and a conically tapered outer surface for engaging said seating surface, said gasket thereby providing a moisture-proof seal between said bolt and said seating surface when compressed therebetween; an annular face gasket having an outer circumference shaped similarly to the outer circumference of said flange, and being positioned to be compressed between said face surface and said housing wall thereby establishing, in conjunction with said bolt gasket, a moisture-proof seal between said flange and said housing wall when said bolt and nut are tightened to secure said flange to said housing wall; a first annular washer having a periphery greater than the periphery of said bolt gasket with scarfing teeth projecting therefrom at an angle approximately parallel to its longitudinal axis, said washer being mounted on said bolt shank in limiting engagement with said bolt head and between said bolt head and said bolt gasket with said scarfing teeth positioned to project over the periphery of said bolt gasket and to engage and scarf the outer surface of said flange when said bolt and nut are tightened to secure said flange to said housing wall; and a second annular washer similar to said first washer mounted on said bolt shank adjacent said nut with scarfing teeth positioned to engage and scarf the inner surface of said housing wall when said bolt and nut are tightened to secure said flange to said housing wall; said first and second washers thereby forming an effective electrical ground connection between said flange and said housing wall through said bolt.

2,862,041
SPLICE FOR ELECTRICAL WIRING

Robert W. Beachley, Boone, N. C., assignor to Lektro-Thermal Corporation, Boone, N. C., a corporation of North Carolina

Application March 14, 1955, Serial No. 494,753
4 Claims. (Cl. 174—84)



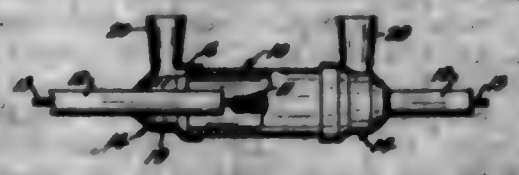
1. A splice for a pair of conductors provided with insulative sheaths except for exposed end portions, comprising a soft metal sleeve housing the exposed ends of the conductors and crimped to secure the latter therein, a transparent plastic cylinder in which said exposed ends, said sleeve and the ends of the insulative sheaths are imbedded, and hermetically sealed, the sleeve and the said exposed ends being visible through the cylinder, and a plurality of stiffening rods imbedded in the cylinder to prevent flexing thereof, said rods being located in equiangular positions radially outward of the sleeve and extending longitudinally beyond the ends of the sleeve, the cylinder comprising an outer plastic tube and an elastomeric plastical filler occupying the voids surrounding the conductors, the sleeve and the stiffening rods, the tube and the filler being integrally fused together.

2,862,042
CABLE SPLICE PROTECTOR

Emil Wayne Bollmeier, Mendota Township, Dakota County, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application August 23, 1955, Serial No. 529,526
3 Claims. (Cl. 174—93)

2. A cable splice protector useful in providing an insulating and protecting enclosure around a splice area in a horizontally positioned insulated electric cable, comprising a tubular member having smooth-surfaced end areas and fitting over the entire splice area, and terminal members for centering said cable within said tubular member and for sealing each end of said tubular member to the cable, each said terminal member having at one end a larger elastic rim portion tightly fitting a smooth-surfaced end area of said tubular member, having at the other end a smaller incipient elastic rim por-

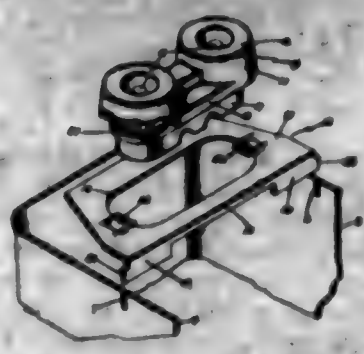


tion removably connected to a conical terminal segment and, after removal of said segment, tightly fitting over said insulated cable, and having an intermediate portion connecting said larger and smaller rim portions, said intermediate portion being provided with an extended wide-mouthed open spout for permitting passage of fluid to or from a cable splice area enclosed by said protector and for ensuring complete filling with liquid potting compound of the enclosed space defined by said protector.

2,862,043
BUSHING SUPPORT FOR ELECTRICAL APPARATUS

Harry J. Prezmire and Roy H. Dierstein, Fort Wayne, Ind., assignors to General Electric Company, a corporation of New York

Application February 27, 1957, Serial No. 642,796
5 Claims. (Cl. 174—152)



1. In electrical apparatus: a casing member having an open end with opposite side walls having a pair of transversely aligned openings respectively formed therein; an electrical bushing for making external electrical connections to said apparatus; and a bushing support bracket member having a generally L-shaped cross-section, one leg portion of said bracket member having a pair of extension portions respectively seated in said wall openings and the other leg portion engaging said bushing and providing cantilever support therefor in said casing member open end.

2,862,044
BUSHING SUPPORT FOR ELECTRICAL APPARATUS

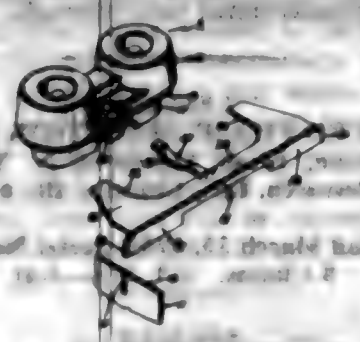
Chester A. Krudenko, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Application February 27, 1957, Serial No. 642,797
3 Claims. (Cl. 174—152)

1. In electrical apparatus: a casing member having an open end with opposite side walls thereof having a pair of transversely aligned openings respectively formed therein; an electrical bushing for making external electrical connections to said apparatus and having a transverse opening formed therein; and a bushing support bracket member having a generally L-shaped cross-section with one leg portion having a pair of portions respec-

having a portion located between the terminal member and the wall of the aperture, said portion successively said flange, said holes having an inwardly convergent conical seating surface at the end adjacent said hub; a

tively seated in said side wall openings and the other leg portion having an integral projection positioned in said

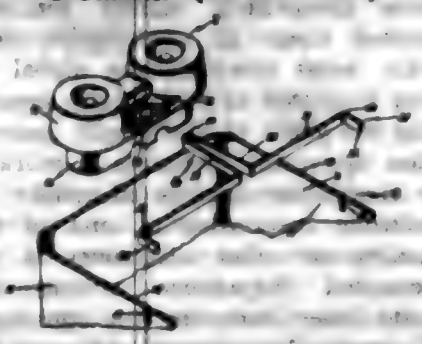


bushing opening and providing cantilever support for said bushing in said casing member open end.

2,862,045
BUSHING SUPPORT FOR ELECTRICAL APPARATUS

Roy H. Dierstein, Fort Wayne, Ind., and Joseph E. Podolsky, Youngstown, Ohio, assignors to General Electric Company, a corporation of New York

Application February 27, 1957, Serial No. 642,798
5 Claims. (Cl. 174—152)

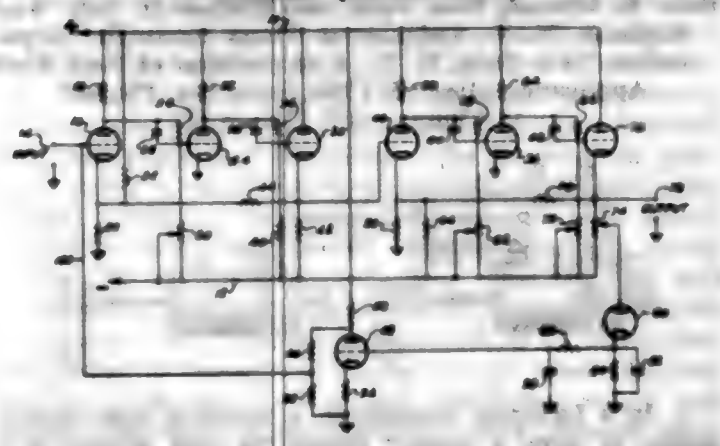


1. In electrical apparatus: a casing member having an open end with opposite side walls having a pair of transversely aligned openings respectively formed therein; an electrical bushing for making external electrical connections to said apparatus; and a bushing support bracket member formed of a single relatively narrow elongated strip of sheet material, said strip being positioned spanning said opposite side walls and generally perpendicular to the edges thereof with its ends respectively seated in said side wall openings, said strip being bent intermediate its ends to form a portion engaging said bushing and providing cantilever support therefor in said casing member open end.

2,862,046
STABILIZED DIRECT-COUPLED AMPLIFIER

Matthew J. Relis, Bayside, N. Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application January 28, 1955, Serial No. 484,622
4 Claims. (Cl. 179—171)

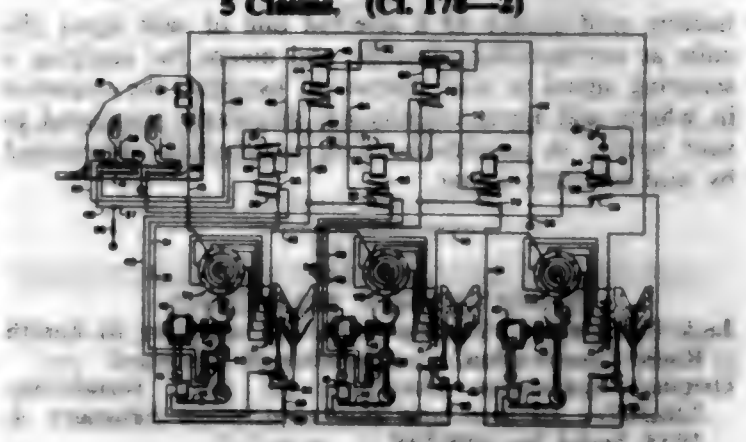


1. A stabilized direct-coupled amplifier for a signal which has repetitive excursion extremities comprising amplifier means having an input terminal for said signal and an output terminal for the amplified signal, said amplifier means including one or more amplifying transducers arranged in directly coupled and cascaded relationship to each other and to said input and output terminals respectively and said amplifier means having a gain for signals substantially independent of average operating potentials within normal operating range, potential storage means, means directly responsive to the amplified signal at said output terminal for controlling the potential stored in said potential storage means according to the excursion extremities of said amplified signal, and means for applying the potential of said potential storage means to said input terminal to oppose changes in the potential of the amplified repetitive signal excursion extremities.

2,862,047
SEQUENTIALLY OPERABLE TRANSMITTING SYSTEM

Robert L. Doerfeld, Bellwood, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application May 27, 1955, Serial No. 511,455
5 Claims. (Cl. 178—2)



3. In a telegraph system having a recording apparatus, a first contact unit in said recording apparatus adapted to be positioned in two circuit making positions, a plurality of transmitters adapted to successively control the recording apparatus, means within the recording apparatus responsive to a first predetermined sequence of signals for actuating said contact unit from a first to a second position, a first relay means operated by said contact unit in said second position for disconnecting a transmitter and connecting the next succeeding transmitter to control the recording apparatus, circuit means conditioned for operation by the return of the contact unit to the first position, said conditioned circuit means adapted to disconnect said succeeding transmitting transmitter when said contact unit is actuated to the second position, means including a second contact unit adapted to be operated into circuit making position by the receipt of a second predetermined sequence of signals for interrupting transmission from a transmitter, and means for restoring said interrupting means to render the interrupted transmitter again effective to control the recording apparatus.

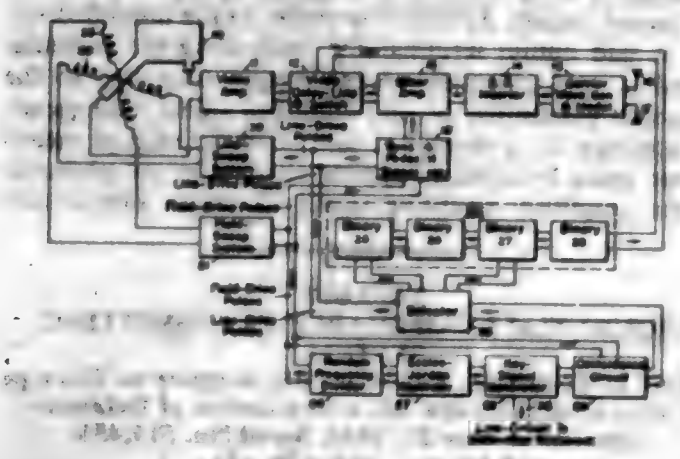
2,862,048
SUBSCRIPTION TELEVISION SYSTEM

Erwin M. Roschke, Des Plaines, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

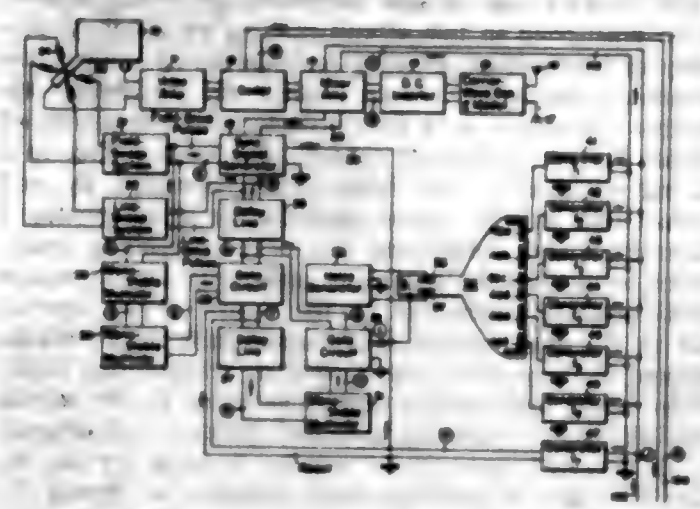
Application August 17, 1953, Serial No. 374,716
9 Claims. (Cl. 178—5.1)

1. An encoding arrangement for a subscription television system comprising: an encoding device having at least two operating conditions each of which establishes a different operating mode in said system; a pulse-counting mechanism coupled to said encoding device to effect actuation thereof from one to another of its aforesaid operating conditions at spaced intervals dependent upon the registration of a preselected count by said counting mechanism; a plurality of counting stages included in said

counting mechanism; at least two input circuits individually coupled to an assigned one of said stages so that the absolute number of applied pulses required to effect said prescribed count registration is determined by the energizing of said input circuits; a source of signal pulses to be applied to said counting mechanism; a selector for connecting said source to a selected one of said input circuits at any operating instant; and means for applying a selecting signal to said selector to establish the sequence in which said input circuits are singularly connected to said source in accordance with a schedule represented by said selecting signal.

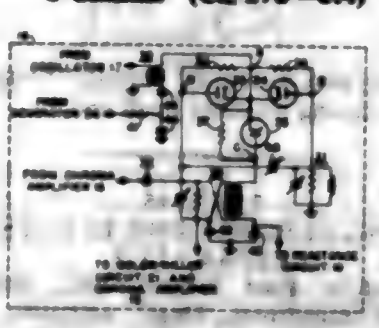


2,862,049
SUBSCRIPTION TELEVISION
Jack E. Bridges, Franklin Park, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Original application December 15, 1952, Serial No. 326,197. Divided and this application February 4, 1955, Serial No. 486,135
4 Claims. (Cl. 178—5.1)



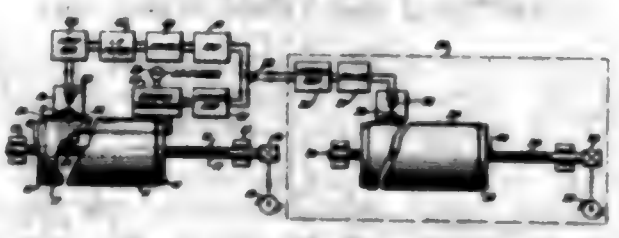
1. An encoding signal generator comprising: a code selection mechanism having a multiplicity of operating conditions and responsive to a predetermined characteristic of an applied actuating signal for actuation between said operating conditions; means for producing an actuating signal having said predetermined characteristic varying in a random manner; means for developing a series of signal pulses collectively representing a series of spaced predetermined time intervals; means coupled to both of said aforementioned means and to said code selection mechanism for effectively applying said actuating signal to said mechanism only during each of said predetermined time intervals to render said mechanism responsive to said characteristic during each such interval for establishing said mechanism in a randomly selected operating condition; a plurality of signal generators for individually producing a signal having a predetermined identifying characteristic; and means coupling said mechanism to said plurality of signal generators so that said generators are selectively operated in accordance with the operating condition assumed by said code selection mechanism during each of said predetermined time intervals.

2,862,080
BALANCED PHASE-DETECTION SYSTEM
Donald Richman, Fresh Meadows, N. Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application March 23, 1953, Serial No. 496,141
8 Claims. (Cl. 178—5.4)



1. A balanced phase-detection system for the color-signal deriving circuits of an NTSC type of color-television receiver comprising: means for supplying a locally generated signal of controllable phase and a recurrent color burst synchronizing signal of variable intensity lower than that of said locally generated signal for controlling the phase of said locally generated signal; phase-detection apparatus including a plurality of unidirectionally conductive devices effectively having one common electrode responsive to one of said signals and a plurality of other electrodes, a plurality of reactively coupled impedance circuits individually coupled to said other electrodes for applying the other one of said signals thereto with different phases, and a plurality of balanced output circuits coupled to said impedance circuits for developing one balanced output potential representative of the quadrature-phase relationship of said supplied signals and for developing another balanced output potential representative of the in-phase relationship of said supplied signals and which varies in intensity with said intensity variation of said color burst signal; means for supplying a gating signal coincident with said color burst synchronizing signal for application to said common electrode to render said phase-detection apparatus responsive to said supplied signals only during the duration of said gating signal; and means for utilizing said intensity variation of said other balanced output signal to minimize the intensity variation of said color burst synchronizing signal.

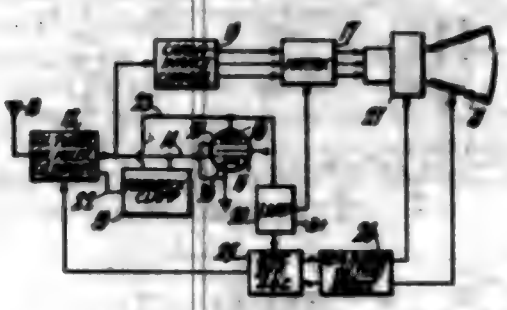
2,862,031
METHOD AND APPARATUS FOR FACSIMILE TELEGNOSIS
Peter R. Marzan, New York, and William H. Hill, West Brighton, N. Y., assignors to Times Facsimile Corporation, New York, N. Y., a corporation of New York
Application March 5, 1952, Serial No. 274,948
15 Claims. (Cl. 178—6.7)



1. In a facsimile transmitter, a scanning light source, means to scan a subject matter by said source in a point-by-point manner, a single light sensitive cell responsive to said point-by-point scanning, a source of voice frequency carrier waves, means to modulate said

carrier waves by the output of said cell to produce a modulated voice frequency carrier for transmission over a telephone line having a relatively restricted useful decibel transmission range, means to derive from said modulated carrier prior to transmission over said line a light source control voltage, and means to apply said control voltage to said light source to decrease the light intensity as the transparency of the scanned points increases and thereby to compress the range of output signal amplitude from said cell to correspond with the useful decibel transmission range of said line.

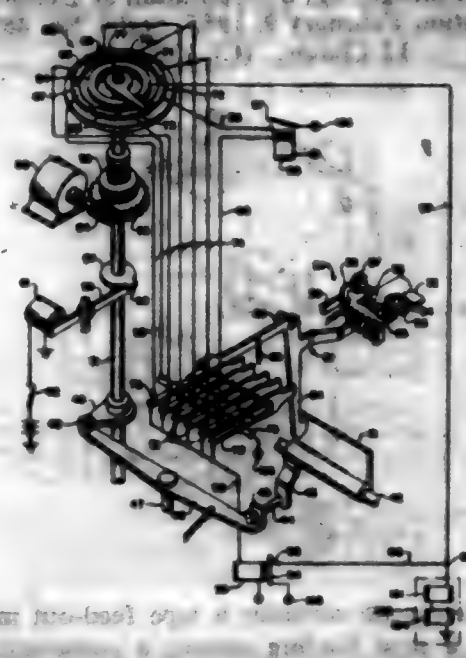
2,862,052
OVERLOAD PROTECTION CIRCUITS
Carl G. Seright, Trenton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application July 28, 1956, Serial No. 624,089
10 Claims. (Cl. 178—7.3)



3. A video signal amplifier comprising in combination, a signal input circuit adapted to receive a television signal including an alternating current component and a direct current component indicative of the luminance of a televised scene, a signal output circuit, a direct current conductive feedback circuit connected between said input and output circuits and including a unilaterally conducting device, said input circuit having means including a source of reference voltage to render said device conductive under normal average luminance signal conditions, said feedback circuit being effective under high average luminance signal conditions to render said device nonconductive to provide a predetermined direct current signal translating level in said input circuit, and a capacitor connected in shunt with said device for providing a low impedance current path for said alternating current component.

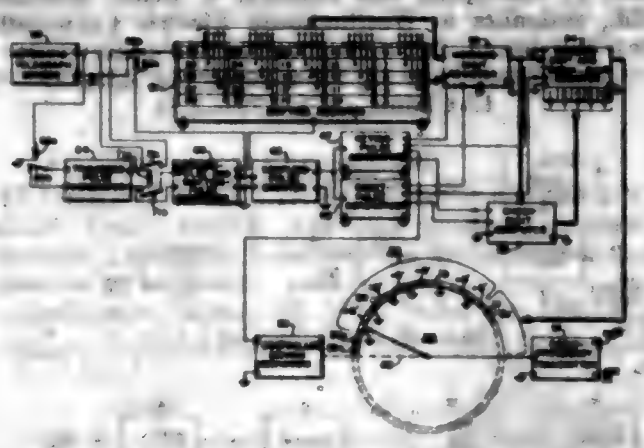
2,862,053
TRANSMITTER SUPPRESSOR
Raymond R. Smesmont, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Application October 24, 1955, Serial No. 542,447
6 Claims. (Cl. 178—17)

5. In combination, a signal line, a code tape transmitter comprising a single row of a predetermined number of tape probing instrumentalities, probing control means individually relatable to said instrumentalities, contacts individually identifiable with and controlled by said probing control means, means for operating said probing means cyclically, means for distributing signal impulses over said signal line according to the marking and spacing condition of said instrumentalities, said distributing means comprising traversable elements severally related to corresponding ones of said contacts, traversing means cooperable in predetermined timed relation with said traversable elements, signal line closing means effective in response to a predetermined condition of said instrumentalities to control the closing of said signal line irrespective of the operation of said distributing means, and means comprising a slow-to-release relay operably associated with one of said instrumentalities and its corresponding contact, said relay effective during the operation of said distributing means to insure for a predetermined period the application of a marking condition on the traversable element corresponding to said one of said



instrumentalities to facilitate the effectiveness of said signal line closing means.

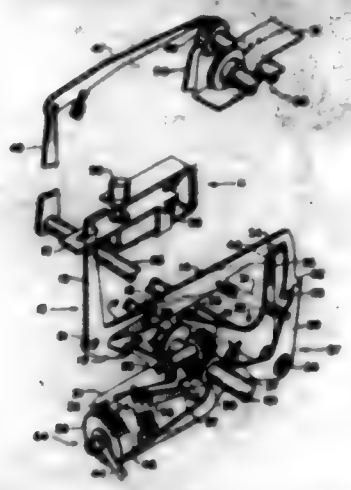
2,862,054
SELF-CORRECTING PULSE-CODE-COMMUNICATION SYSTEM
Richard C. Curtis, Old Westbury, N. Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application March 30, 1953, Serial No. 345,563
7 Claims. (Cl. 178—23)



1. A pulse-code-transmitting system for transmitting a signal representing message-code pulses representative of discrete message symbols and check-code pulses for checking said signal for signal-translation error comprising: first pulse-coding means for developing plural-digit message-code pulse groups individually representative of said symbols; pulse-storage means responsive to said pulse-coding means for storing a predetermined plurality of said groups; and second pulse-coding means responsive jointly to predetermined digital combinations of said predetermined plurality of message-code groups for developing a check-code pulse group of minimum redundancy and uniquely representative of the odd-even sum values of said combinations in said plurality of message-code groups; and means coupling said pulse-storage means to said second pulse-coding means for so determining said digital combinations that each message digit is included in a unique permutation of said combinations and that said check-code pulse group is capable of indicating which is the erroneous digit when a single signal-translation error occurs in the message and check digits.

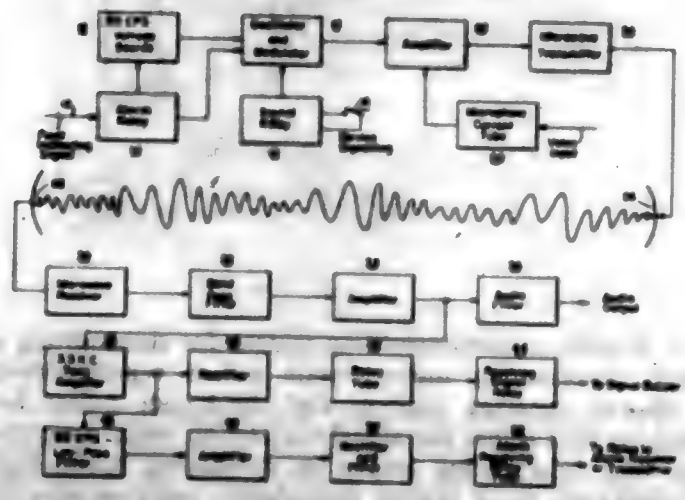
at different points of the line, each telephone station in-

2,862,055
TAPE FEED-OUT MECHANISM
Carl W. Swan, Skokie, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Application February 9, 1955, Serial No. 487,814
12 Claims. (Cl. 178—42)



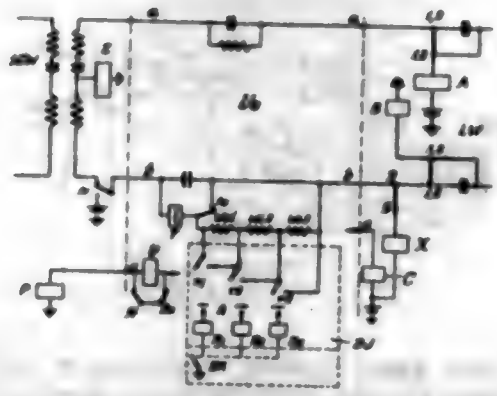
1. In a telegraph recorder a tape feed-out mechanism comprising a tape feeding means, a constantly rotating shaft, an eccentric cam constantly rotated by said shaft, an operating member adapted to be selectively oscillated by said cam, an auxiliary tape feeding means operable by the oscillation of said operating member, a latching means for preventing oscillation of said operating member, a first control means for selectively disabling said latching means to effect engagement of said operating member with said cam, and a second control means for actuating said latching means.

2,862,056
RADIO COMMUNICATION SYSTEM
Robert L. Halvorsen and Frederic S. Beale, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application June 22, 1954, Serial No. 438,393
15 Claims. (Cl. 179—2.5)



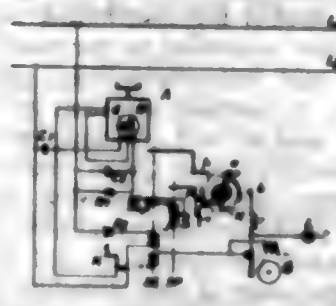
1. A receiving and transmitting system for audio, telephone and alarm signals comprising a normally inoperative oscillator, a source of alternating current alarm voltage, means for selectively rendering said oscillator operative to produce a telephone signal, means for selectively modulating the telephone signal with alarm voltage, a source of audio signal voltage, a single triode tube for amplifying both the audio voltage and the output of said oscillator, means connected to the cathode of said triode for transmitting both the amplified audio and telephone signals, a receiver located at some distant point for receiving the transmitted audio and telephone signals, speech reproducing means included in said receiver, means for separating received audio signals from a received telephone signal and for applying said audio signals to the speech reproducing means, a device included in said receiver for producing a direct current voltage in response to a received telephone signal, and means connected to said last-mentioned device for producing a direct current alarm voltage only when a received telephone signal is modulated with said source of alternating current alarm voltage.

2,862,057
CALL METERING IN TELEPHONE SYSTEMS AND THE LIKE
Herbert Töpfer, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Application April 21, 1955, Serial No. 502,909
In Germany October 1, 1948
Public Law 619, August 23, 1954
Patent expires October 1, 1968
12 Claims. (Cl. 179—7.1)



1. Circuit arrangement for metering telephone calls while connections between calling and called subscribers are in progress over line conductors extending between switches involved in such calls, said circuit arrangement comprising a polarized supervising relay having a winding disposed in one of said line conductors, circuit means for actuating said polarized supervising relay by current flowing over the called subscriber's loop responsive to answering of the called subscriber, a high resistance meter impulse control circuit, means governed by said polarized supervising relay upon actuation thereof for connecting said high resistance meter impulse control circuit to one of said line conductors, and a metering impulse transmitting device for periodically altering the resistance of said meter impulse control circuit to transmit impulses over said one line conductor to meter the corresponding call.

2,862,058
SELECTOR SYSTEMS
Nils Emil Nilsson, Enskede, Gustav Oskar Rednert, Hägersten, and John Carl Harold Björk, Stockholm, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a company of Sweden
Application May 2, 1955, Serial No. 505,491
Claims priority, application Sweden May 18, 1954
1 Claim. (Cl. 179—17)



A selector system for connecting several telephone stations to a common line, said system comprising, in combination, said telephone stations and at least two line equipments all connected in parallel to said common line

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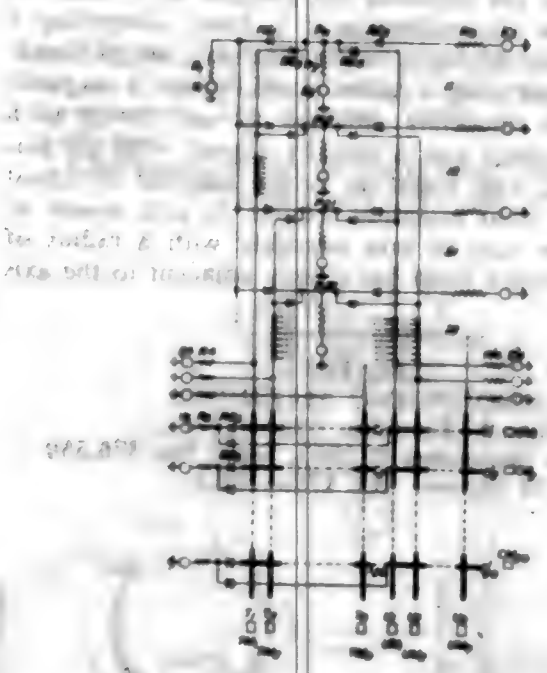
at different points of the line, each telephone station including a telephone instrument having a dial, a selector and a time-delayed bell, each line equipment comprising a first and a second relay means, the first relay means including relays for call marking, sending of a busy pulse at a call and transforming trains of dial-pulses respectively, relays for sending a first long pulse at the end of a train of dial-pulses to operate said bell at a called station and for separately sending a second long pulse to restore all line equipments, and a relay (S10) to disconnect said second relay means prior to the sending of said busy pulse, said second relay means including a pulse relay for receiving pulses from another line equipment, said pulse relay having a break-contact, a break-relay to disconnect said first relay means, said break-relay having a make-contact, a first slow-releasing auxiliary relay (S12) having a make-contact and cooperating with said pulse relay to operate said break-relay at the end of a received busy pulse and to release the break-relay upon receiving said second, separately sent long pulse, and a second slow-releasing auxiliary relay (S13) connected in a circuit including the break-contact of said pulse relay, the make-contact of said first auxiliary relay and the make-contact of said break-relay at the end of the first pulse in each of said trains of dial-pulses and cooperating with the pulse relay to prevent the release of the break-relay upon receiving said first long pulse.

2,862,059

MULTIPLEX SWITCHING MEANS

Pierre Raoul Roger Aigrain, Paris, France, and Stanislas Van Mierlo, Antwerp, Belgium, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application February 15, 1954, Serial No. 410,400
Claims priority, application Netherlands March 12, 1953
5 Claims. (Cl. 179—18)



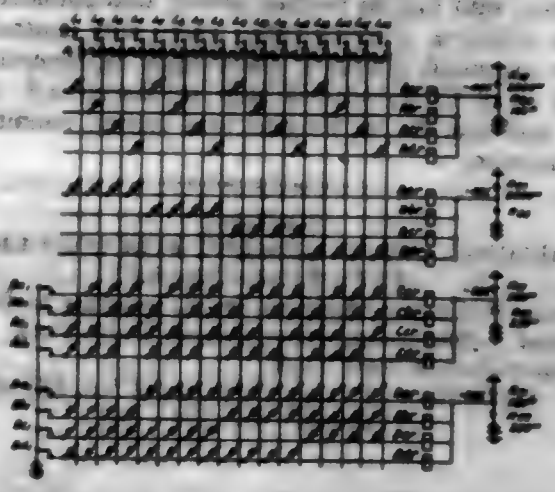
1. Multiplex switching system comprising an inlet, a plurality of outlets, a plurality of electronic gates between said inlet and the respective outlets there being one gate for each outlet, a cross-bar switch provided with *m* select bars and *n* hold bars and with *mn* contact means one at each crossing point of said select and hold bars, magnets for actuating said select bars, magnets for actuating said hold bars, *n* sources of equal length timed electric pulses the pulses of each source being staggered with respect to the others so as to occur in different time intervals, control wires extending from said select bars to said electronic gates, and connections extending from said sources of electric pulses to said hold bars.

2,862,060

ELECTRICAL CONNECTING CIRCUITS

André Ducamp and Marthieu den Hertog, Antwerp, Belgium, assignors to International Standard Electric Corporation, New York, N. Y.

Application May 19, 1954, Serial No. 430,989
Claims priority, application Great Britain May 29, 1953
16 Claims. (Cl. 179—18)



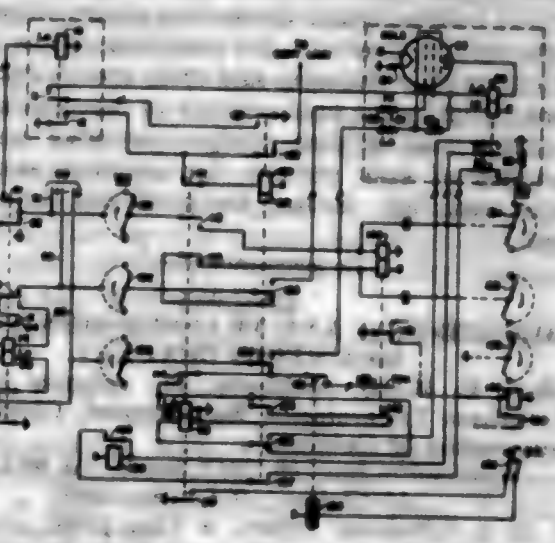
1. Discriminating means for determining on which of a number of conductors an electrical condition is applied comprising a plurality of detector devices accessible over said conductors and adapted to be selectively operated according to which conductor receives the electrical condition, a plurality of switch means, means for operating respective of said switch means in response to the operation of respective detector devices, and unidirectional current-carrying devices interconnecting each of said switch means and all of said detector devices other than that which causes the operation of said switch means, a source of potential connected to all of said switch means, whereby that switch operation, characteristic of a particular application of said electrical condition to said conductors, connects electric potential from said source via said unidirectional current-carrying devices to the non-operated detector devices to maintain them inoperative.

2,862,061

TELEPHONE LINE LOCKOUT ARRANGEMENT

Rudolph Frank Stehlik, Antwerp, Belgium, assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application January 10, 1956, Serial No. 558,331
11 Claims. (Cl. 179—18)



1. In an automatic telephone system, a switching link and a subscriber line accessible thereto, a start relay and a two-step cutoff relay for said line, means for operating said start relay responsive to a calling condition on said line for causing said link to connect itself to said line, electronic means connected with said link, a first and

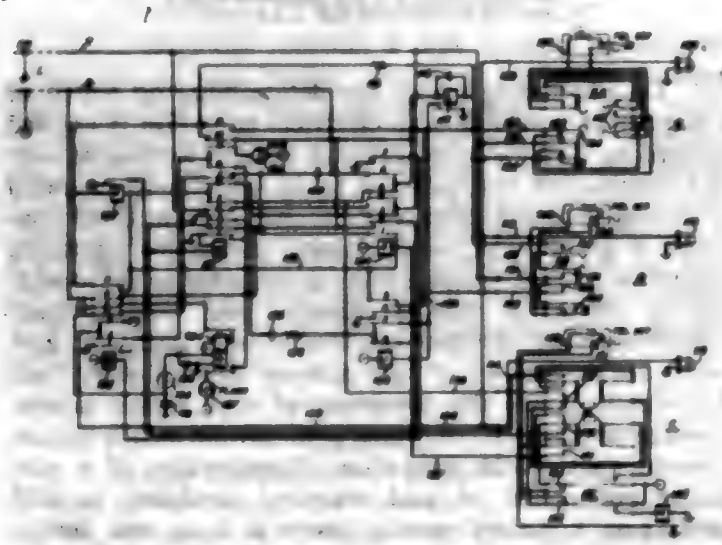
second potential connected from said line to said link responsive to said connection for activating said electronic means to cause said link to maintain said connection with said line, means for operating said cutoff relay in its first step from said link to disconnect said start relay from said line in response to the activating of said electronic means, control means for further operating said link over said line to further extend said connection, and means effective automatically when said control means is not exercised within a given time for operating said cutoff relay in its second step to disconnect said line from said link for as long as said calling condition persists thereon.

2,862,062

HOLDING ARRANGEMENT FOR UNIVERSAL-TYPE LINE CIRCUIT

Herman T. Carter, Madison, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application May 22, 1956, Serial No. 586,480
5 Claims. (Cl. 179—99)



1. In a telephone system, a central office, a source of current thereat, a plurality of stations, a line circuit arranged to interconnect said central office with any of said stations, switching means at each of said stations comprising keys for connecting the corresponding station to said line circuit, each of said keys including hold contacts, a holding bridge, means for connecting said holding bridge across said line, relay means in said line circuit operated by current from said source incident to the seizure of said line circuit at one of said stations to disable said holding bridge-connecting means, means including the hold contacts of the switching means at one of said stations for releasing said relay means and to theremeans including the hold contacts of the switching means by enable said holding bridge-connecting means, and at another of said stations for enabling said holding bridge-connecting means independently of said relay means.

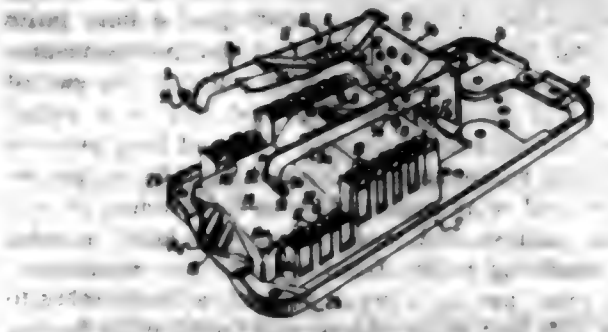
2,862,063

COMBINED DIAL AND TRANSMISSION NETWORK MOUNTING BRACKET

Frederic E. Wood, McHenry, Ill., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware

Application June 16, 1957, Serial No. 664,548
11 Claims. (Cl. 179—100)

1. In a telephone subset, a base plate, a one-piece mounting bracket comprising two front legs and a rear leg, feet on said two front legs for securing said mounting bracket to said base plate, a foot on said rear leg cooperating with a slot in said base plate for permitting pivotal movement of said mounting bracket, a transmission housing containing a transmission network secured therein, a bow spring attached to each of said front legs adapted to engage said transmission housing and resiliently hold said housing against said base plate beneath said mounting bracket, wherein said transmission housing and



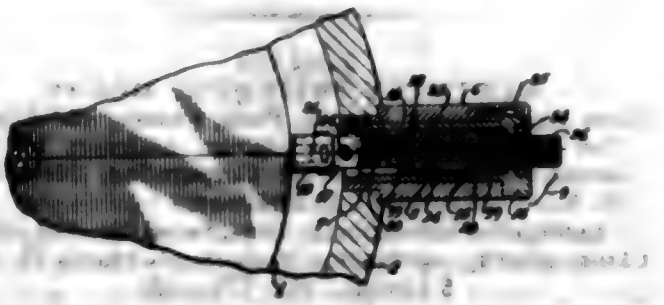
network is held in position on said base plate without utilizing any screw or bolt fastening means between the base plate and said transmission housing.

2,862,064

HEAD MOUNT

Russell B. Wallace, Manhattan Beach, and Mahlon C. Rader, Woodland Hills, Calif., assignors, by mesne assignments, to The National Cash Register Company, a corporation of Maryland

Application March 4, 1953, Serial No. 340,368
12 Claims. (Cl. 179—100.2)



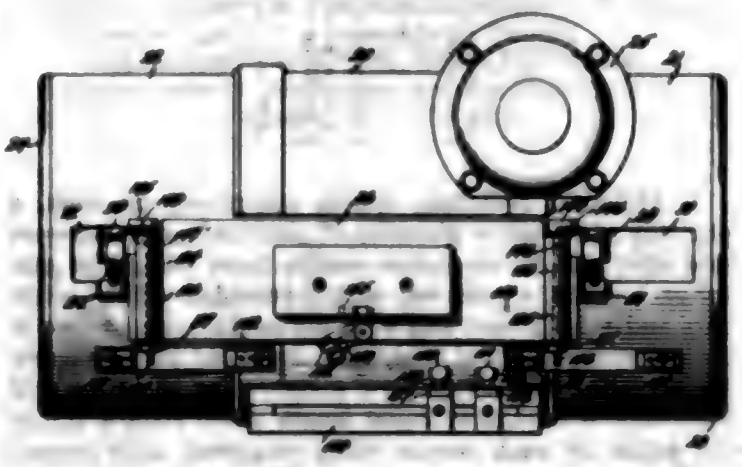
1. Apparatus for adjusting the position of a magnetic head about the circumference of a drum comprising a stationary mount having a longitudinal axis which is substantially aligned along a radius of said drum, a magnetic head assembly adjustably attached to said mount such that its longitudinal axis is initially aligned with the axis of said mount, and rotatable means adapted to adjust said magnetic head assembly relative to said mount so as to align the axis of said assembly with a radius of said drum removed from but closely adjacent to the axis said mount.

2,862,065

ANNOUNCING MACHINES

John L. Franklin, Atlanta, Ga.

Application September 4, 1953, Serial No. 378,550
14 Claims. (Cl. 179—100.2)



1. An announcing machine comprising a cam cylinder, a motor drivingly connected to said cam cylinder, a message drum, sound reproducing means including a head operatively connected to be reciprocated length-

boundary of a rear chamber within said casing, a per- having a winding and a contact, comprising manually con-

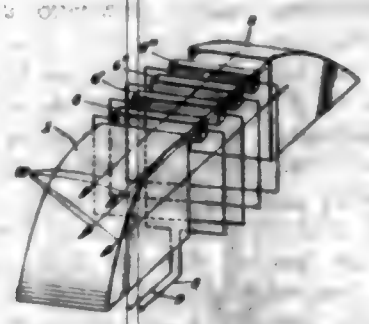
wise of said message drum by rotation of said cam cylinder, means for operatively connecting said message drum directly to said cam cylinder, alternate means including change speed gearing for operatively connecting said message drum to said cam cylinder, and clutch means for selectively engaging said message drum with one of said connecting means or disengaging said message drum from both said connecting means.

2,862,066

MEANS FOR RECORDING AND REPRODUCING ACOUSTIC SIGNALS

Heinz Thiele, Kiel-Wik, Germany, assignor to Zeiss Ikon A. G., Stuttgart, Germany

Application August 3, 1955, Serial No. 526,213
6 Claims. (Cl. 179—100.2)



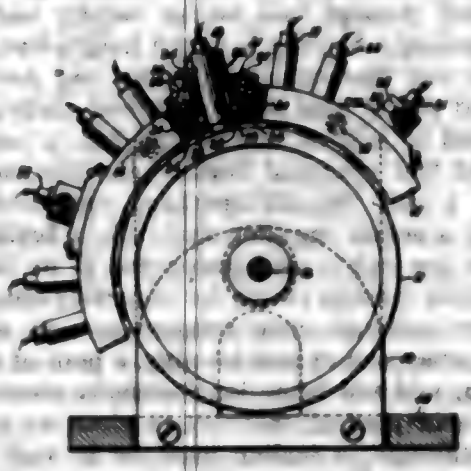
1. In an electromagnetic transducer head including a magnetic circuit having a gap formed by two oppositely disposed pole shoes forming a slot between them over which is passed a magnetic record strip, a plurality of foils in said slot, electrical insulation between said foils, an auxiliary transducer circuit including an amplifier and means interconnecting said foils electrically in series and with said auxiliary transducer circuit.

2,862,067

ADJUSTABLE MAGNETIC TRANSDUCER MOUNT

Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Application March 30, 1956, Serial No. 575,011
4 Claims. (Cl. 179—100.2)



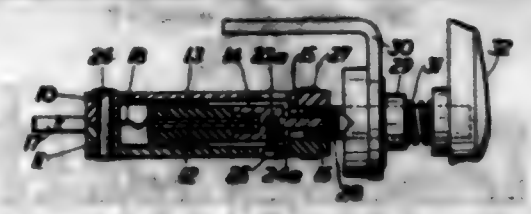
1. A device for adjusting a magnetic transducer head along the path of a traveling magnetic record member cooperable with said head, which comprises a support, a transducer head mount slideable on said support, said mount having a pair of elongated openings therein, threaded adjusting members extending through said openings and threadably secured in said support, said members engaging the sides of said openings and converging toward each other in said support, and heads on said members, a surface on the head of each of said members engaging a corresponding mating surface on said mount.

2,862,868

TRANSDUCERS

Stanley Kelly, Enfield, England, assignor to Connocord Limited, Enfield, England, a British company

Application January 21, 1953, Serial No. 332,177
5 Claims. (Cl. 179—100.41)



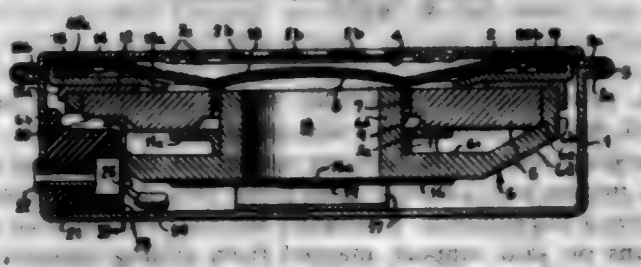
1. A gramophone pickup comprising a casing, a piezo-electric element mounted in said casing so as to be capable of vibration with respect thereto about an axis extending through said element, means for vibrating said element and means for constraining said element about said axis to resist said vibration and thereby to produce a piezo-electric output, said constraining means consisting of a moulded sheath of material embracing said element and the main body portion of said sheath being spaced from the inner wall of said casing, said sheath having spaced projections extending from the surfaces thereof to and engaging the inner wall of said casing at points spaced laterally from and on opposite sides of said axis of vibration of said element.

2,862,069

DYNAMIC TRANSDUCER

Gaston A. Marchand, New York, and Donald W. Powers, Glen Cove, N. Y., assignors to Rosswell Corporation, Brooklyn, N. Y., a corporation of New York

Application February 28, 1956, Serial No. 568,233
8 Claims. (Cl. 179—115.5)



1. A transducer comprising an annular disk, permanently magnetized radially with one pole distributed about its inner periphery and the other distributed about its outer periphery; a yoke of magnetic material comprising an inner cylinder having an outer diameter smaller than the inner diameter of the disk, an outer cylinder concentric with said inner cylinder and having an inner diameter of a size to receive tightly the outer periphery of the disk, and a web connecting said inner and outer cylinders at one end; said disk being received in said yoke with its outer periphery engaging said outer cylinder and its inner periphery spaced from the inner cylinder and cooperating therewith to define an air gap, a coil received in said air gap, and means including a diaphragm supporting said coil in said gap for vibratory movement therewith in said magnetic field.

2,862,070

MICROPHONE

Maurice Bonnefleau, Paris, France, assignor to Societe d'Appareillage et d'Exploitation des Etablissements Ponnet, in short Socapex-Ponnet, Suresnes, France, a corporation of France

Application July 7, 1954, Serial No. 441,891
Claims priority, application France July 10, 1953
5 Claims. (Cl. 179—121)

1. A microphone comprising a casing with a front wall having a perforated central portion as well as a perforated peripheral portion, a membrane positioned in said casing back of said central portion and forming the forward

2,862,874

2,862,876

therein, a bow spring attached to each of said front legs head operatively connected to be reciprocated length-

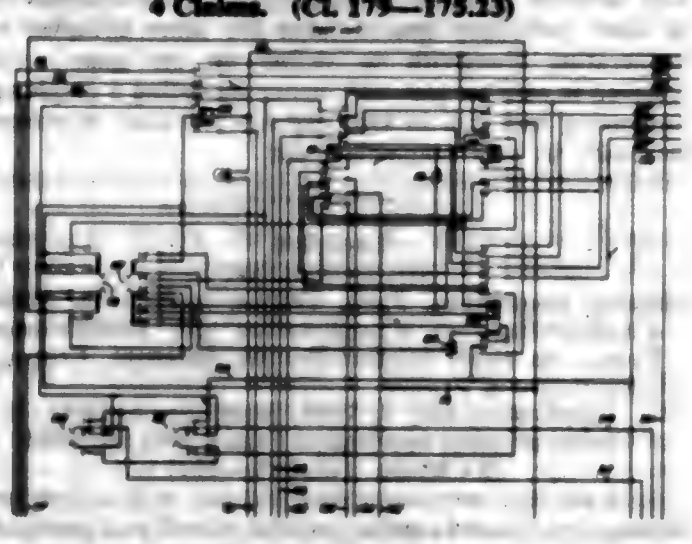
boundary of a rear chamber within said casing, a perforated barrier member interposed in the path of sound waves between said rear chamber and said perforated peripheral portion, a blocking member co-operating with

said barrier member and adapted selectively to obstruct the perforations thereof, and electro-acoustic transducer means coupled with said membrane for translating vibrations of the latter into electric currents.

2,862,071
MICROPHONE SUPPORT
Maurice Bonnaffoux, Paris, France, assignor to Société Socapex, Suresnes, France, a corporation of France
Application July 25, 1956, Serial No. 599,963
Claims priority, application France September 29, 1955
13 Claims. (Cl. 179—156)

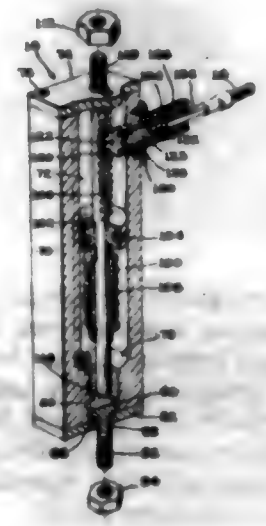
1. A microphone assembly which comprises, a head-band having depending side portions, rail means, co-operating removable fastener means on the ends of said rail means and on said head-band side portions respectively, a microphone, a support for said microphone and means on said support adapted from sliding cooperation with said rail means for moving said microphone to a selected position along said rail means.

2,862,072
TRANSLATOR TEST SET
Edward Jacobitti, Newark, and Donald A. James, Union Hill, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application March 24, 1955, Serial No. 496,398
4 Claims. (Cl. 179—175.23)



1. A testing circuit for testing apparatus which includes a plurality of similar electromagnetic devices each device having a winding and a contact, comprising manually controlled means for selecting a small number of said devices, means for repeatedly operating and releasing said devices under the control of said contacts whereby said devices operate in a self-determined rhythm, said manually controlled means operable to substitute other devices for said selected devices one at a time to detect faulty adjustment of said devices by alteration in the rhythm of operation.

2,862,073
ELECTRICAL CONTROL SYSTEMS
Rufus A. Bruteher, Sr., and Rufus A. Bruteher, Jr., Pendleton, Oreg.
Application September 30, 1957, Serial No. 687,102
1 Claim. (Cl. 200—44)



In a master switch adapted for use with an electrical alarm system for automotive vehicles of the type including a rotatable ignition switch having a plurality of connector posts thereon, a key actuated circuit maker movable into various contacting positions with said connector posts, a source of electrical energy, an electrical connection between said source of electrical energy and said ignition switch through said master switch; said master switch comprising a housing having a longitudinally movable contact rod thereon, said contact rod having one end extended out of said housing, a first electrical contact connected to said on end of said rod, a connection between said first electrical contact and the battery of the vehicle, a rack on said operating rod interiorly of said housing, a pinion engaging said rack, a flexible cable connected at one end to said pinion and at its other end to said rotatable ignition switch for imparting longitudinal movement to said rod upon rotation of said switch; a sump in the other end of said housing, a pool of mercury in said sump, said rod being longitudinally movable into and out of said pool of mercury to close an electrical circuit therethrough, a sealing partition in said housing surrounding said rod between said rack and said pool of mercury, a bellows type seal between said rod and said partition, a second electrical contact post extending from said post out of said casing, a connection between said second electrical contact and the starter of the vehicle, a connection between at least one of said connector posts and the starter of the vehicle, an alarm device, an electrical connection between a second connector post and said alarm device, a third connector post being grounded, said circuit maker being movable into a position to open the circuit between said source of electrical energy and said starter while maintaining the circuit between said alarm device and the ground.

said mount.

back of said central portion and forming the forward

2,862,074

MECHANISM FOR OPERATING AN ELECTRIC SWITCH

Reuder W. Sorensen, Arlington Heights, Ill., assignor to Oak Mfg. Co., Cook County, Ill., a corporation of Illinois

Application April 12, 1957, Serial No. 652,541
5 Claims. (Cl. 200—51.09)

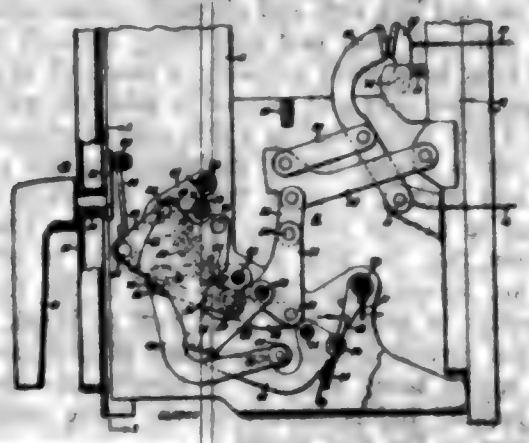
1. A switch operating means comprising a housing having a top wall, end walls and two side walls, a plate disposed in said housing between said two side walls and parallel thereto and being movable in its own plane, said plate having projecting portions extending through one end wall, means for biasing said plate toward the other end wall, said plate having an edge portion within the housing formed as a cam surface, said housing having two transverse slots through the top wall thereof, said transverse slots being dimensioned and spaced to accommodate the prongs of a 110 volt plug, one of said transverse slots being disposed so that said plug prong will engage the cam surface of the plate, said cam surface being so shaped that movement of said plate against the spring bias will result upon insertion of said plug prongs through said transverse slots.

2,862,075

OVERCENTER SPRING OPERATING MECHANISM FOR AN ELECTRIC CIRCUIT BREAKER

Philip C. Netzel, Swarthmore, Pa., assignor to General Electric Company, a corporation of New York

Application December 9, 1957, Serial No. 701,591
5 Claims. (Cl. 200—70)



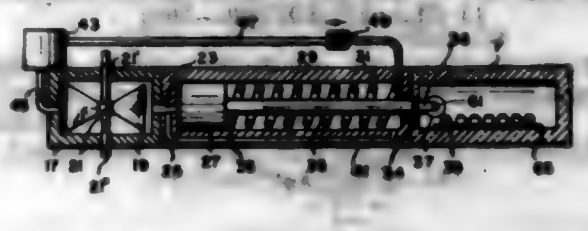
1. An operating mechanism for a circuit breaker having a movable switch member comprising: a toggle having one end connected to the switch member; latching means for releasably restraining the other end of said toggle in a latched position; an operating member movable between first and second positions at opposite ends of its normal range of movement; an overcenter tension spring coupled at one end to said operating member and at its other end to said toggle and effective in response to movement of said operating member from said first to said second position to produce snap-action movement of said toggle thereby producing circuit making movement of the switch member; and means movable with said operating member and engageable with said toggle to initiate movement of said toggle while said operating member is intermediate said first and second positions and before said overcenter spring becomes effective.

2,862,076

SPEED SIGNAL DEVICE

Frank E. Benner, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application November 30, 1956, Serial No. 625,387
1 Claim. (Cl. 200—82)



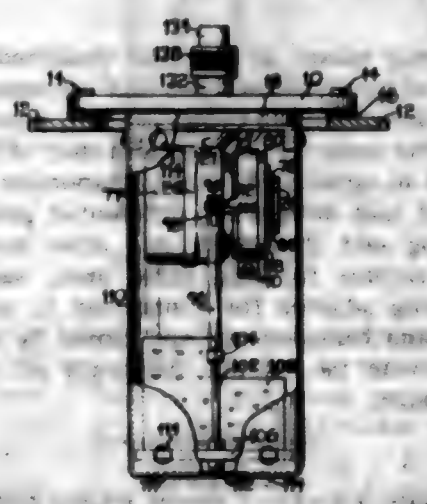
In a speed warning device for automative vehicles, the combination with a speedometer and driving cable means therefor, a centrifugal pump, a housing, a cylinder disposed in said housing, a piston reciprocable in the cylinder, a reservoir for fluid, conduit means connecting said reservoir with said pump, a passage in one end of the housing connecting said pump to said cylinder for imposing the fluid pressure of the pump against the face of said piston, a conduit disposed in the housing means and connecting said pump to the other end of the cylinder for imposing fluid pressure developed by said pump on the opposite face of said piston, an additional conduit and including a check valve and connecting said fluid reservoir with said other end of the cylinder, said check valve normally serving to prevent the flow of fluid to the reservoir from the cylinder under relatively low fluid pressure, a piston rod, a coil spring surrounding said piston rod and arranged to urge the piston to move toward said pump and against the action of the fluid pressure developed by said pump, said piston rod projecting outwardly of the housing means, a roller contact element mounted on the outer end of said piston rod and in electrically insulated relation therewith, a plurality of spaced electrically insulated contact members arranged to be sequentially traversed by said roller element upon movement of said piston rod, means to energize said contact element electrically, and means for drivingly connecting said pump to said speedometer driving means for simultaneously actuating both the speedometer and said centrifugal pump.

2,862,077

AUTOMATIC SWITCH CONTROLLING MECHANISM

Charles V. Collins, Dayton, Ohio

Application September 8, 1955, Serial No. 533,149
9 Claims. (Cl. 200—84)



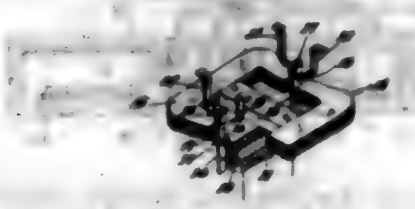
8. In a liquid level indicating device, support structure, a magnetic coupler rotatably carried by the support structure, a rod, one end of the rod being pivotally attached to the magnetic coupler, and a float, the float being attached to the rod adjacent the other end thereof.

2,862,078

ELECTROMAGNETIC CIRCUIT-CONTROLLING DEVICE AND APPARATUS EMBODYING THE SAME

John L. Russell, Naugatuck, and Warren E. Hodges, Northfield, Conn., assignors to The Bristol Company, Waterbury, Conn., a corporation of Connecticut

Application February 16, 1956, Serial No. 564,765
11 Claims. (Cl. 200—103)



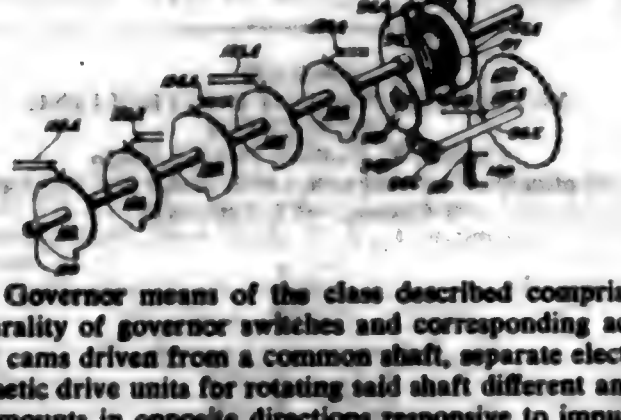
1. An electromagnetic circuit-controlling device, comprising two double-throw contactors, electromagnetic means for translating said contactors through their respective ranges of operation, said means comprising movable ferromagnetic armatures adapted individually to actuate said contactors, a winding adapted to energization from an alternating-current source to excite both said armatures for motion through a limited range, and means for shifting the time response of one of said armatures to said excitation relative to that of the other of said armatures to said excitation whereby to introduce a predetermined time differential between the motion of said respective armatures.

2,862,079

GOVERNOR SWITCH

Walter M. Burnside, Waukegan, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of the estate of said Raymond T. Moloney, deceased

Original application September 10, 1954, Serial No. 455,217, now Patent No. 2,709,593, dated May 31, 1955. Divided and this application April 12, 1955, Serial No. 500,797
7 Claims. (Cl. 200—165)



1. Governor means of the class described comprising a plurality of governor switches and corresponding actuating cams driven from a common shaft, separate electromagnetic drive units for rotating said shaft different angular amounts in opposite directions responsive to impulse-operation of said drive units, differential gear means interconnecting said shaft with said drive units, separate energizing circuits for said drive units, said governor switches being adapted for connection in circuits to be controlled, and being opened and closed by said cams in accordance with the relative frequency of operation of said drive units.

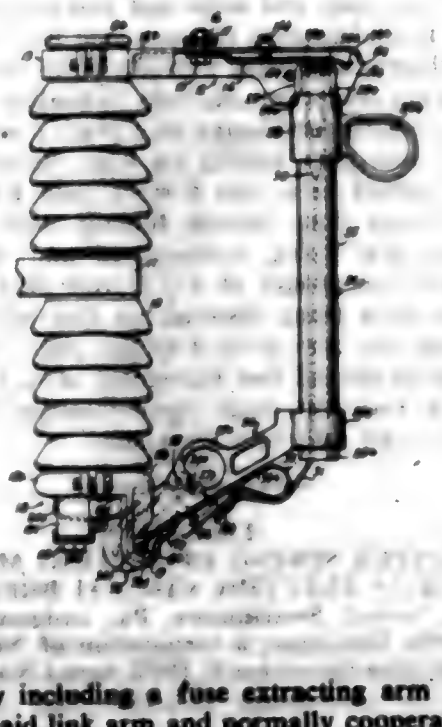
2,862,080

FUSED CUTOUT WITH KNEE JOINT

Edward H. Yonkers, Glencoe, Ill., assignor to Joslyn Mfg. & Supply Co., Chicago, Ill., a corporation of Illinois

Application November 19, 1956, Serial No. 622,923
16 Claims. (Cl. 200—114)

1. A cutout of the dropout type comprising a support, a retaining element carried by said support, a fuse tube assembly including a fuse tube provided at one end with a part engageable with said element to restrain said assembly against dropout movement, a supporting member rigidly connected to said fuse tube near its other end, a link arm pivotally connected to said supporting member to provide a knee joint, pivot means on said link arm, non-movable supporting means fixedly carried by said support for supporting said pivot means for pivotal movement to move said assembly away from said retaining element, a first spring on said supporting means acting upon said link arm in a direction tending to produce pivotal dropout movement of said assembly, said fuse tube, supporting member, link arm and pivot means being movable as a unit with respect to said supporting means to release said part from said element and thus permit pivotal dropout movement of said assembly,



said assembly including a fuse extracting arm pivotally mounted on said link arm and normally cooperating with said link arm and with said supporting member to prevent said knee joint from breaking, a fuse link extending through said fuse tube and secured to said fuse extracting arm, and a leaf spring having a first tongue engaging the link arm and a second tongue engaging the fuse extracting arm and tending to pivot the fuse extracting arm in a direction to extract the fuse link from the fuse tube in the event that the fuse link is ruptured in order to draw an arc between the ruptured ends of the fuse link and thereafter to permit said knee joint to break, thereby to permit pivotal dropout movement of said assembly, said leaf spring being effective to tension the fuse link prior to rupture independently of the force applied to the link arm by the first spring.

2,862,081

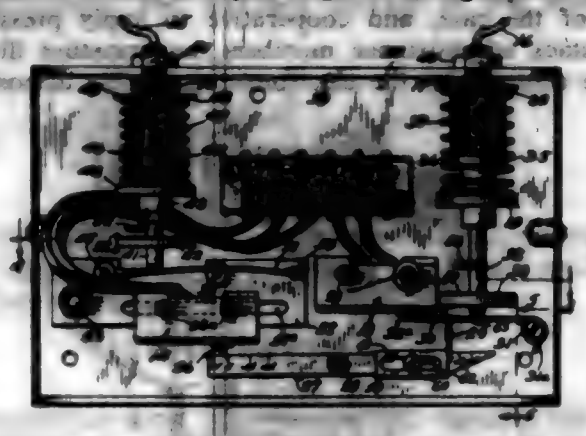
HEAT CONTROL APPARATUS CONTROLLED BY OUTSIDE TEMPERATURE

Henry T. Kucera, La Grange, Ill.

Original application August 29, 1952, Serial No. 307,001, now Patent No. 2,778,575, dated January 22, 1957. Divided and this application November 13, 1956, Serial No. 621,692
18 Claims. (Cl. 200—140)

1. Heat transfer control means comprising a plurality of thermally responsive expansive elements each mounted in fixed relationship with a lever arm, a switch mounted on one of said lever arms and arranged for movement

toward and away from a switch actuator, the switch being opened or closed by changes in the position of the



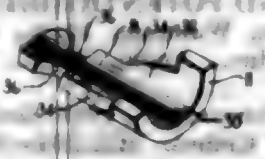
switch actuator caused by the expansion or contraction of one of said thermally responsive expansive elements.

2,862,082

COMBINED CONTACT AND TERMINAL FOR ELECTRIC SWITCH

Donald A. Pierce, South Bend, Ind., assignor to Chicago Telephone Supply Corporation, Elkhart, Ind., a corporation of Indiana

Application February 4, 1957, Serial No. 638,079
1 Claim. (Cl. 200—166)



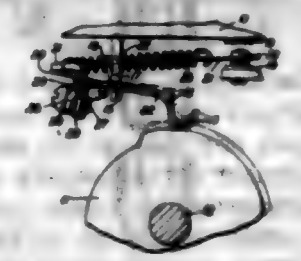
A combined stationary contact and terminal for use in an electric switch mechanism wherein a movable bridging contactor is actuated back and forth across one face of a substantially flat base of insulting material, toward and from wiping engagement with surfaces of stationary contacts that are perpendicular to the base, said combined stationary contact and terminal comprising: a generally T-shaped metal stamping having a head, a stem, and a wedge-like shank connecting the stem and head, said shank having a width greater than that of the stem but less than that of the head so that the end portions of the head which project beyond the opposite marginal edges of the shank provide abutments having surfaces which face toward the outer end of the stem and lie in a common plane normal to the longitudinal axis of the stem, a portion of the wedge-like shank which is adjacent to the head being taperingly reduced in width to provide marginal edges on the shank which are slightly inclined to the longitudinal axis of the stem and are adapted to have a drive fit in an opening through a switch base when the stem of the stamping is projected through said opening, and the portion of the shank which is adjacent to the stem being abruptly reduced in width toward the stem to provide steeply inclined shoulders on its opposite marginal edges generally facing away from the head of the T, portions of said shoulders being adapted to be swedged outwardly beyond the slightly inclined edges of the shank to provide abutments spaced from and opposing the abutments on the ends of the head and cooperable therewith to clamp portions of the switch base therebetween and thus provide for securement of the combined stationary contact and terminal to the base; and said T-shaped stamping being uniformly arcuate in transverse cross section so that the stem and shank are stiffened against bending, and so that the T has an outer convex surface all portions of which are equispaced from an imaginary line parallel to the stem of the T, the radius of curvature being shorter than the width of said shank portion having the slightly inclined marginal edges, and being such that the head of the T forms substantially a semicircle, the outer convex side of which constitutes the active contact surface of the stationary contact and is disposed in perpendicular relation to the adjacent face of a flat switch base to which the combined stationary contact and terminal may be fixed.

2,862,083

CAM ACTUATED SWITCH

Joseph A. Bailey, Rockton, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois

Application February 6, 1957, Serial No. 638,553
3 Claims. (Cl. 200—166)



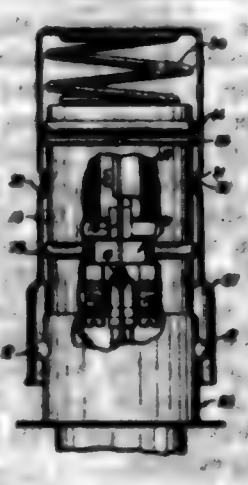
1. A switch comprising a base, switch elements thereon, a lever on said base swingable back and forth to actuate said switch elements, and a cam followetr formed on one end of said lever, said lever comprising two L-shaped parts arranged in end to end abutment at the heads of the L's with legs of the two parts lying adjacent each other but separated from each other, means defining a fulcrum for said lever across the line of abutment of said parts and comprising laterally spaced lugs on one part seated in notches on the other part, and a screw coupling said adjacent legs together at a point spaced from said fulcrum and rotatable in opposite directions to move the legs toward and away from each other and thereby vary the position of said follower for a given position of said lever.

2,862,084

CAPTIVE SHIELD AND CIRCUIT COMPONENT EMBODYING THE SAME

John L. Russell, Naugatuck, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut

Application June 14, 1955, Serial No. 515,305
8 Claims. (Cl. 200—168)



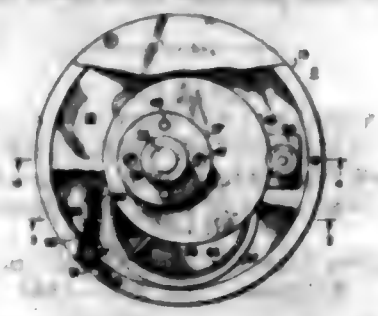
2. An electric circuit component, comprising, in combination, a tubular casing having a radially outward projection formed thereon spaced from one end thereof, means for producing a magnetic field within said casing, and magnetic circuit means comprising a ferromagnetic tubular member open at one end and enclosing said casing, said tubular member having at least one tongue formed thereon and extending radially inwardly, said tongue being in axial registration with and spaced a predetermined distance from said projection between said projection and said one end of said casing, said tubular member being free for angular displacement relative to

said casing, and said tongue limiting relative axial displacement between said tubular member and said casing in one direction to said distance, whereby said casing is normally retained in said tubular member.

2,861,885
ROTARY SWITCH COVERS FOR LAMPS
Harold Benedek, Skokie, Ill.
Application September 16, 1957, Serial No. 684,023
1 Claim. (Cl. 200—168)

In a lamp having a rotary switch disposed in the standard thereof, said rotary switch having spaced vertical grooves in the handle portion thereof, a pair of ornamental shells freely enclosing portions of said standard, and a plurality of inwardly pressed embossments on said shells engaging in said grooves whereby when the shells are manually rotated the switch will be operated.

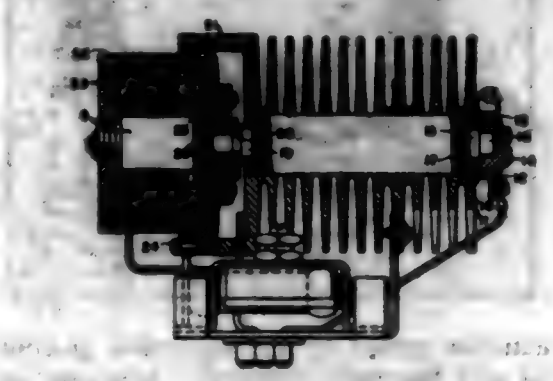
2,862,086
FUNCTION POTENTIOMETER
Ralph K. Bonell, Strafford, Pa.
Application March 5, 1956, Serial No. 569,634
5 Claims. (Cl. 201—48)



1. In a function potentiometer the combination of a frame, first and second shafts journaled thereon in spaced parallel relationship, a cam mounted on said first shaft, follower means for said cam, means mounting said follower means on said frame for guided displacement relative thereto along an axis normal to and intersecting the axis of said first shaft, means for rotating said second shaft in proportion to the displacement of said follower means along said axis, a circularly formed resistance element mounted on said frame concentric with said second shaft, contact means mounted for rotation with said second shaft cooperative with said element to make contact therewith at various points therealong, and terminal means for making connections to said element and contact means, respectively.

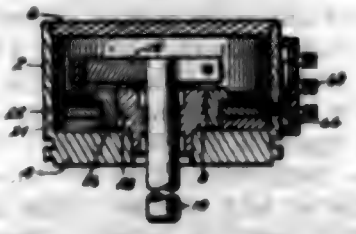
2,862,087
CARBON PILE REGULATOR ARMATURE
Harrison H. C. Richards, Jr., Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 12, 1955, Serial No. 536,042
6 Claims. (Cl. 201—51)

6. In a pile regulator, in combination, a stack of resistance members, a case in which the stack of resistance members are movably mounted, an adjustable stop disposed at one end of the case for limiting the movement of the pile, an electromagnet and spring disposed to act in opposition to one another mounted at the other end of the case, and cooperative to apply pressure to the stack of resistance members, an armature disposed to be actuated by the electromagnet, a ring disposed for



movement relative to the armature to apply a bias to the spring, an adjustable member disposed for movement relative to the armature and ring for loading the spring, and bushings disposed between the adjustable member and armature to provide for a predetermined minimum limit in spacing between them.

2,862,088
HERMETICALLY SEALED VARIABLE RESISTORS AND POTENTIOMETERS
William J. Mairs, Waltham, Mass., assignor to Acton Laboratories, Inc., Acton, Mass., a corporation of Massachusetts
Application February 11, 1958, Serial No. 714,575
5 Claims. (Cl. 201—55)

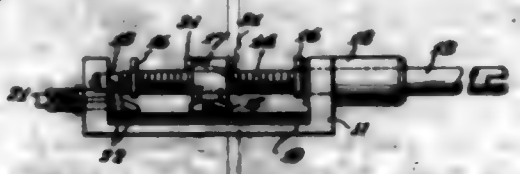


1. A variable resistor comprising a first sheet of rigid insulating material having on one surface thereof a deposited film resistance element, a second resilient flexible sheet of insulating material positioned parallel to said resistance element, gasket means positioned between said first and second sheets and supporting said first sheet in spaced relation with said resistance element, a metal foil contact surface attached to the inner surface of said second sheet, means sealing together said first sheet, said gasket means and the edges of said second sheet, a slidable pressure foot in engagement with the outer surface of said second sheet normally pressing a small area of said second sheet toward said resistance element to place a small area of said contact surface in engagement with said resistance element, a supply of lubricant on a limited area of the outer surface of said second sheet, and means containing said supply of lubricant and operative to release a limited quantity of said lubricant to the rest of the area of said outer surface as said pressure foot is moved along said outer surface.

2,862,089
VARIABLE RESISTOR OR POTENTIOMETER
William J. Mairs, Waltham, Mass., assignor to Acton Laboratories, Inc., Acton, Mass.
Application February 24, 1956, Serial No. 567,613
25 Claims. (Cl. 201—63)

1. A variable resistor comprising a first flat sheet of insulating material having on one surface thereof a resistance element, a second sheet of flexible resilient insulating material positioned parallel to and spaced from said resistance element, said second sheet fully overlying

said resistance element, a resilient metal contact surface adjacent to the inner surface of said second sheet of insulating material and arranged parallel to and spaced



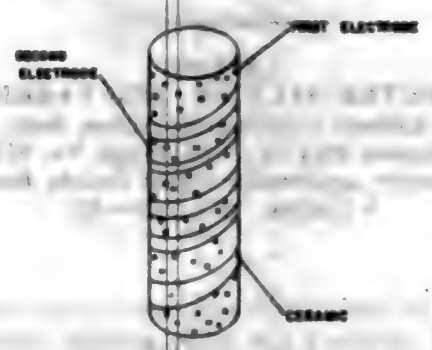
from said resistance element, and means hermetically sealing together the edges of said first and second insulating material sheets.

2,862,070

APPARATUS FOR DETERMINING MOISTURE

Edward F. Mayer, Cleveland, Ohio, assignor to Horizons Incorporated, Princeton, N. J., a corporation of New Jersey

Application March 30, 1956, Serial No. 575,045
6 Claims. (Cl. 201—63)



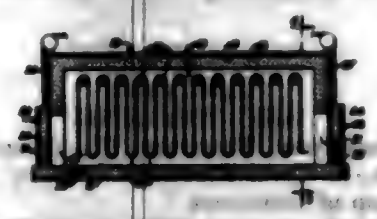
3. A hygrometric resistance element comprising two conductors connected electrically to one another through a core of titanate material whose resistance varies with the moisture content of the atmosphere surrounding said material, said material comprising the product of firing a mixture of (1) a cerium compound selected from the compounds of cerium which yield cerium oxide when ignited and (2) titanium dioxide.

2,862,091

RESISTANCE ELEMENT AND FURNACE CONTAINING THE SAME

William C. Seifert, Narberth, Pa., assignor to Donald W. Kent, Philadelphia, Pa.

Application April 5, 1956, Serial No. 577,128
2 Claims. (Cl. 201—66)



2. An electric resistance element of the direct-radiation type, comprising an external tubular sheath of high-melting-point metal resistant to gas-phase corrosion, surrounding a core of high-melting-point inorganic oxide reduced in diameter upon said core to compress said core to maximum density, and means for electrically connecting the ends of said sheath to an external electric circuit.

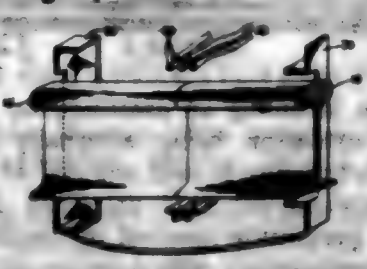
2,862,092

INDUCTION WELDING

John V. Cowan, Danbury, Conn., assignor to Sperry Products, Inc., Danbury, Conn., a corporation of New York

Application September 11, 1956, Serial No. 609,259
2 Claims. (Cl. 219—9.5)

1. An apparatus for welding objects in abutting relation, comprising an induction coil surrounding the abutting ends so that said ends form the core of the coil, a single turn secondary coil adapted to be moved to inoperative position out of the field of flux of the induction coil until the induction coil heats said ends to a predetermined degree and adapted to be moved to operative position into the field of flux of said induction coil so as to be heated thereby when the ends have been heated to said degree, means for electrically connecting



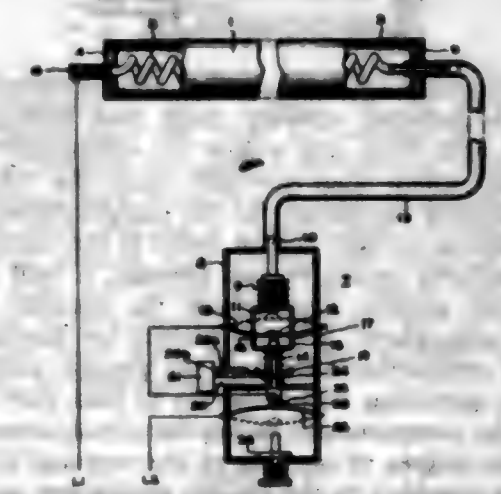
the secondary coil to said ends at predetermined distances from said abutment to form an electric circuit therethrough, and means for opening and closing said circuit, said circuit being adapted to be maintained open until the ends have been heated to the predetermined degree and being adapted to be closed when said ends have been heated to said predetermined degree to transmit to the objects the heat generated in the secondary coil by the induction coil.

2,862,093

THERMOSTATICALLY CONTROLLED HEATING APPARATUS

Thomas H. Lennox, Redondo Beach, Calif., assignor to General Electric Company, a corporation of New York

Application December 27, 1955, Serial No. 555,553
2 Claims. (Cl. 219—20)



1. Thermostatically controlled heating apparatus comprising an electrical resistance heater including a tubular sheath, a hollow tubular resistance heating element within said sheath, a mass of heat conducting electrical insulating material compacted within said sheath, and thermostatic switch means connected in circuit with said heater for controlling the energization thereof, said switch means including an expansible contact actuating chamber, a conduit interconnecting said chamber and the interior of said tubular heating element to form a closed fluid system, and a thermostatic fluid sealed therein, whereby said heater is controlled in accordance with its internal temperature.

2,862,094

SOLDERING GUN

Gregory Callal, Lawrence, Mass.

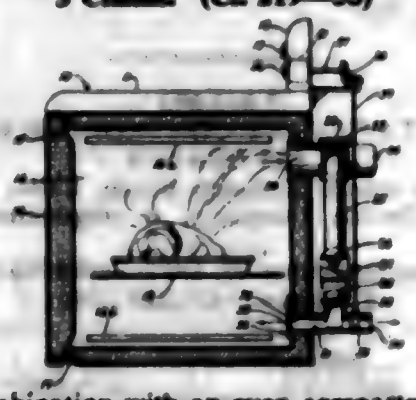
Application February 25, 1957, Serial No. 642,858
3 Claims. (Cl. 219—26)

1. A soldering gun comprising a coiled strap providing a secondary circuit of a transformer, said strap having terminal ends provided with coaxial spaced apertures, a tubular outer electrode having one end thereof secured

to one end of said strap, a tubular head removably attached to the outer end of the outer electrode and forming a continuation thereof, a sectional rod-type inner electrode connected at one end to the other aperture in said strap, an insulating sleeve interposed between said electrodes with the other end engaging the head, said

outer electrode including an extension on the inner end thereof, said extension being externally threaded and mounted in the aperture in said one end of the strap, and a sleeve interconnecting said extension and the outer electrode thus permitting removal of the outer and inner electrode for replacement with a longer set of electrodes.

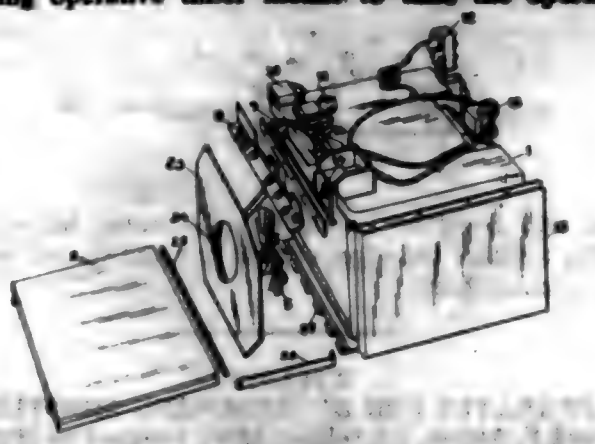
2,862,095
VAPOR TREATING MEANS
Donald W. Seefeld, Glenside, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application October 7, 1954, Serial No. 460,863
3 Claims. (Cl. 219—35)



1. In combination with an oven compartment forming part of a domestic cooking range and having a substantially open front and a door for substantially closing said front, which door partially seals the front when closed: heating equipment for the compartment; a vapor passage having an inlet and an outlet in the compartment; vapor purifying means in said passage; a vent arranged for venting purified vapor from the passage into the ambient atmosphere; a vaper blower for moving vapor from the compartment through the passage and through the vapor purifying means therein to said vent and also back to the compartment; means for simultaneously controlling the degree of opening of the vent and the degree of heating provided by the heating equipment; and means associated with said passage for lowering the pressure of circulated vapor, inside the compartment, below the normal pressure of the ambient atmosphere at all degrees of opening of the vent.

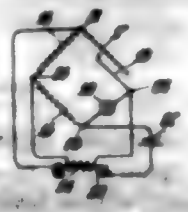
2,862,096
ELECTRIC OVENS
Henry R. Gordon, Williston Park, N. Y., assignor to Ref Manufacturing Corporation, a corporation of New York
Application June 30, 1955, Serial No. 521,843
5 Claims. (Cl. 219—35)

5. An oven comprising an oven compartment, a door movable to open and close said compartment, air circulating means in said compartment at the rear thereof, heater means vertically disposed between said air circulating means and said compartment at the rear thereof and having an opening defined therein through which said air circulating means produces a movement of air to heat the same as it passes over said heater means, at least one pair of jacks insulatedly mounted on said heater means, a heater element connected between said jacks, an electrical system including a heater circuit for said heater element and means to receive said jacks to connect the same into the system, a timer circuit including operative timer means to time the operation



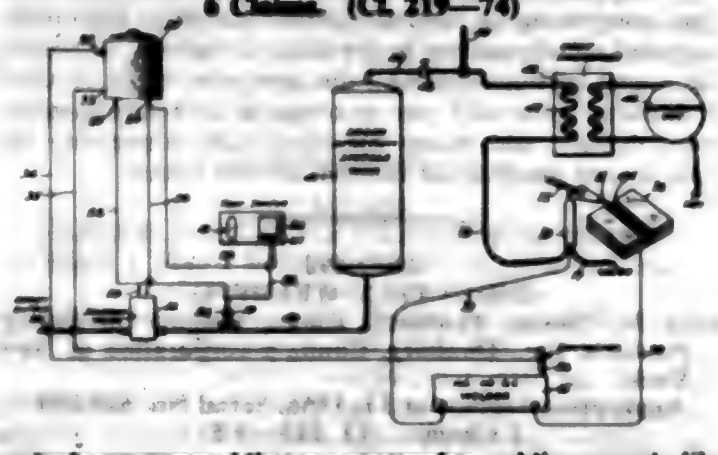
of said heater element, and relay means connecting said heater circuit with said timer circuit to automatically end the operation of said heater element upon the completion of the timing operation of said timer means.

2,862,097
ELECTRICALLY HEATED FABRICS
Antonio Negremanni, Milan, Italy
Application May 31, 1955, Serial No. 512,092
Claims priority, application Great Britain June 3, 1954
6 Claims. (Cl. 219—46)



1. An electrically heatable fabric such as a blanket or pad, comprising: a multi-tubular textile fabric incorporating both retractile and non-retractile vinyl chloride threads in which the tubes are formed by the retractile threads, bare electrical resistance heating wiring having a variable thermal coefficient extending freely through the tubes of the said fabric, means for supplying electric current to the said heating wiring, and a Wheatstone bridge, one arm of which is constituted by the electrical heating wiring, a case containing the other three arms of the Wheatstone bridge, and means for interrupting the heating circuit in the event of the Wheatstone bridge becoming unbalanced to a predetermined extent by the temperature of the heating circuit exceeding a predetermined limit.

2,862,098
ARC WELDING
Walter C. Hasselhorn, Evanston, Ill., assignor, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Application January 31, 1955, Serial No. 485,107
6 Claims. (Cl. 219—74)



1. In an arc welding apparatus for welding metals like titanium, zirconium, tantalum, etc., comprising a source

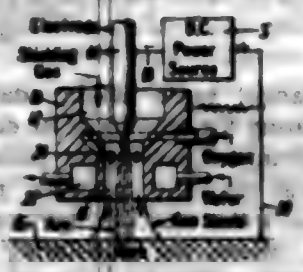
of inert gas supply, a torch including a nozzle, an electrode, and a connection for said inert gas between said source of supply and said torch, a valve in said connection, a control for said valve, a heat exchanger in said connection between said valve and said torch, and means forming a part of said heat exchanger to lower the temperature of said inert gas and substantially to increase its density by such cooling before reaching said torch whereby to provide a protective barrier about the electrode and the weld to prevent contact with the atmospheric air and to drop the temperature of the weld below oxidation temperature as the torch leaves the weld.

2,862,099

ARC TORCH PROCESS WITH REACTIVE GASES

Robert M. Gage, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Application June 17, 1957, Serial No. 666,160
16 Claims. (Cl. 219—74)



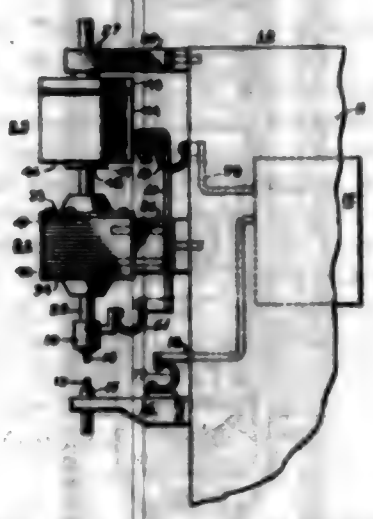
1. Process which comprises establishing an arc between two electrodes, passing along one electrode a stream of gas inert with respect thereto to shield the same, introducing a stream of gas reactive to the one electrode outside the said stream of shielding gas, and passing both streams through an orifice to form an effluent therefrom.

2,862,100

MAGNETIC FORCE RESISTANCE WELDERS OF THE INERTIA TYPE PROVIDED WITH FIXED AIR GAP

Thomas Embery Jones, Cincinnati, Ohio, assignor to Precision Welder & Machine Company, Cincinnati, Ohio, a corporation of Ohio

Application October 14, 1957, Serial No. 689,868
6 Claims. (Cl. 219—86)



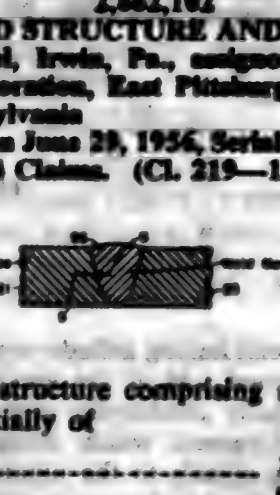
1. A magnetic force resistance welder having relatively fixed and movable welder electrodes, means for moving one of the electrodes to or from welding position with respect to the other electrode, an electromagnet connected to said electrode moving means, said magnet comprising an armature fixed to the electrode moving means and a stator movably mounted thereon and having a coil winding therefor energizable by weld current, and stop means on said electrode moving means for supporting said stator at a fixed distance from the armature, the stator being movable toward the armature and having a mass of such value that the armature develops a force of such magnitude as to actuate the electrode moving means in a direction to exert weld pressure on the work through the electrodes while the stator follows and moves with said means.

2,862,101

METHOD AND APPARATUS FOR WELDING BANDS ON SHELLS

Henry O. Klinke, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio

Application February 1, 1956, Serial No. 562,687
20 Claims. (Cl. 219—137)



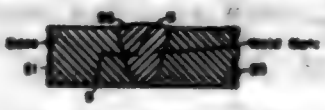
1. The method of welding a copper band around the outer periphery of shell casings by the shielded arc process comprising the steps of moving said shells in successive relation through a plurality of working stations, rotating said shells at a predetermined speed about their own axes, welding a copper band on said shells at one of said stations, and moving said shells at a predetermined time and speed while still being rotated about their own axes whereby the welding arc is caused to jump from one shell to another without being extinguished or interrupted.

2,862,102

WELDED STRUCTURE AND METHOD

Julius Houchkiel, Irwin, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 29, 1956, Serial No. 594,725
4 Claims. (Cl. 219—137)



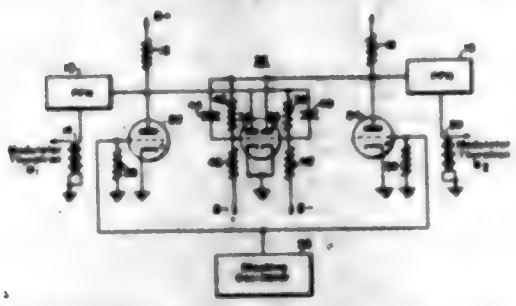
1. A welded structure comprising a base of an alloy consisting essentially of

Chromium	17% to 20%.
Nickel	9% to 12%.
Manganese	2.5%—maximum.
Silicon	.8%—maximum.
Carbon	.08%—maximum.
Phosphorous	.04%—maximum.
Sulphur	.04%—maximum.
Niobium	At least 10 times carbon content.
Iron	Remainder.

and a weld of a weld metal consisting essentially of

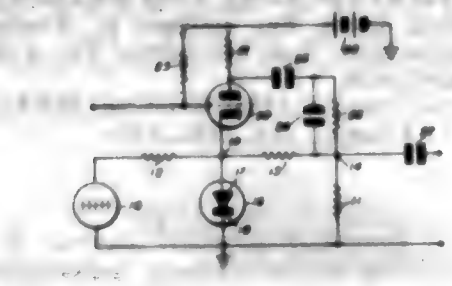
Chromium	18% to 20.5%.
Nickel	9% to 10.7%.
Manganese	3.3% to 4.75%.
Silicon	.80%—Maximum.
Carbon	.07% to .17%.
Phosphorous	.04%—maximum.
Sulphur	.04%—maximum.
Molybdenum	1.10%—maximum.
Iron	Remainder.

2,862,103
PULSE GENERATOR
Edward J. Chrzanowski, Linthicum, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 21, 1955, Serial No. 503,276
5 Claims. (Cl. 250—27)



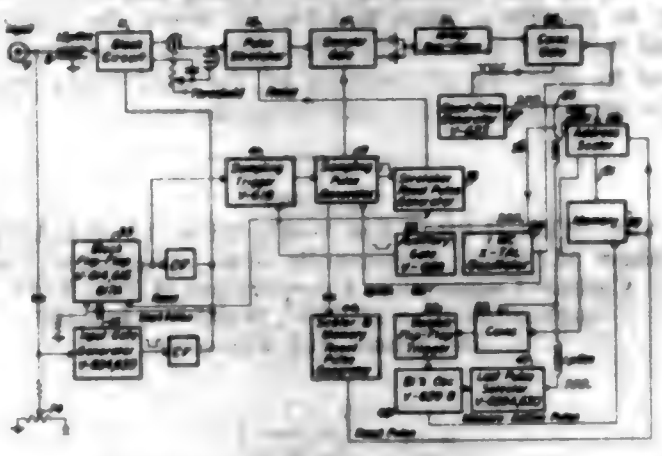
5. In combination, a pair of electron valves, an input terminal, an output terminal and an electrically responsive control element for each of said valves, means interconnecting the input terminals of said valves, a first pulse-forming network and an impedance element connected between the input and output terminals of one of said valves, a second pulse-forming network and an impedance element connected between the input and output terminals of the other of said valves, a first switching device connected in parallel with said one electron valve, and a second switching device connected in parallel with said other electron valve.

2,862,104
COMPENSATED GATE CIRCUIT
Gerald C. Summers, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N. Y., a corporation of New York
Application August 8, 1956, Serial No. 602,806
6 Claims. (Cl. 250—27)



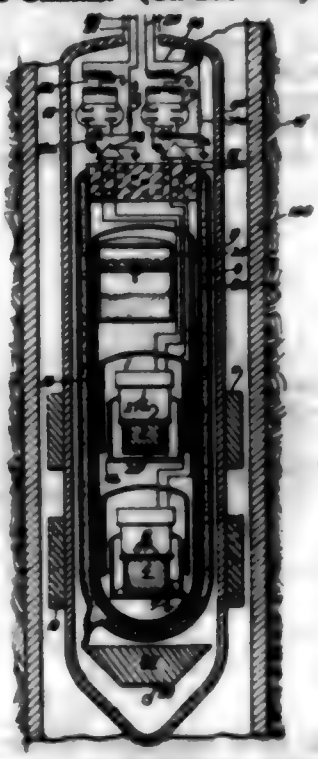
1. In a gating circuit having a diode connected to ground at the cathode thereof and at the anode thereof to the cathode of a normally conducting grid controlled vacuum tube the improvement which comprises impedance means for applying signals to the juncture between said diode and the cathode of said vacuum tube, an impedance for connecting said juncture to an output terminal, a load impedance connected at a first terminal thereof to the anode of said vacuum tube, a voltage supply source connected to the second terminal of said load impedance, and means for applying fractional portions of voltage changes appearing at the anode of said vacuum tube to said output terminal to oppose the change which appears across said diode when conductivity of said vacuum tube is varied.

2,862,105
MULTI-CHANNEL PULSE HEIGHT ANALYZER
Keith Boyer, Los Alamos, N. Mex., and Charles Wilkie Johnstone, Houston, Tex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application September 26, 1956, Serial No. 612,343
5 Claims. (Cl. 250—27)



1. A multi-channel pulse height analyzer comprising means for translating the amplitude of each of a plurality of random amplitude input signal pulses into a corresponding electrical duration quantity, means for translating the duration quantities into corresponding numbers of count pulses, means for translating the plurality of count pulses corresponding to an input signal pulse into a memory add pulse, means for storing a succeeding input signal pulse while said translation means are processing a preceding pulse signal pulse, and means responsive to the last count pulse for transferring the stored pulse to the translating means.

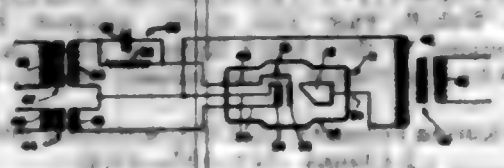
2,862,106
APPARATUS FOR DEEP-WELL LOGGING
Serge A. Scherbatskoy, Tulsa, Okla.
Application July 7, 1955, Serial No. 520,478
8 Claims. (Cl. 250—71)



1. A logging unit adapted to be lowered into a bore hole and being particularly adapted for detection of sodium and chlorine in formations surrounding the bore hole by selective detection of epithermal neutrons and gamma rays of capture returned from such formations responsively to neutron bombardment thereof, comprising, in combination, an elongated metallic housing adapted to be lowered into a bore hole, a neutron source

carried within said housing, shield means associated with said neutron source operative to prevent direct radiation from said neutron source from irradiating the interior of said housing but leaving such radiations free to penetrate said housing and to enter formations surrounding said housing, a heat-insulated container within said housing comprising means for maintaining the temperature within said container no greater than about 100° F. while said logging unit is being operated within a bore hole, and a pair of radiation detectors carried within said insulated container, one of said radiation detectors being adapted for selective detection of high-energy gamma rays and comprising a first scintillating crystal, a photomultiplier tube having a photo-sensitive cathode, light-diffusing means for diffusing over a substantial area of said cathode the light from flashes in said crystal, and shielding means surrounding said crystal comprising an outer layer of material having a large capture cross section for slow neutrons and characterized by emission of charged particles responsively to neutron captures and a metallic inner layer operative to bar passage of such charged particles from said outer layer to said crystal, the other of said radiation detectors being adapted for selective detection of epithermal neutrons and comprising a second scintillating crystal, a second photomultiplier tube having a photo-sensitive cathode, light-diffusing means operative to diffuse over a substantial area of said last-mentioned cathode the light from flashes in said crystal, a moderator layer of hydrogen-containing material surrounding said last-mentioned crystal, and other shield means enclosing both said moderator means and said crystal and made from a material characterized by large capture cross section for thermal neutrons.

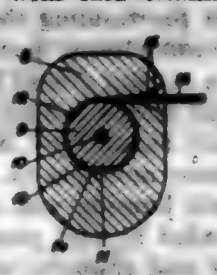
2,862,107
MEANS FOR AND METHOD OF CONTROLLING THE GENERATION OF X-RAYS
Harold R. Cummings, Waterford, Wis., assignor to General Electric Company, a corporation of New York
Application April 6, 1951, Serial No. 219,660
8 Claims. (Cl. 250—99)



1. A control system for an X-ray generating tube having an anode and a cathode structure, comprising a head formed with a groove in a face thereof, an elongated electron emitting element supported on and insulated from said head in position extending in said groove, and an electron flow controlling grid comprising filaments supported on said head in parallel spaced relationship extending transversely of said groove, and biasing means for applying a biasing potential of alternating character between said emitting element and said grid, said biasing means including means for adding a unidirectional voltage component to said biasing potential to render asymmetrical the voltage values of alternate half cycles of said biasing potential.

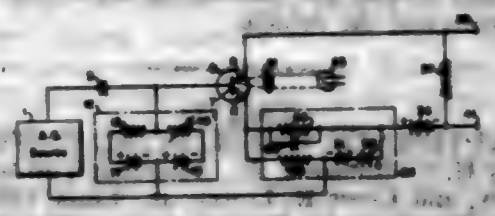
2,862,168
DEVICE FOR CONTAINING AND EXPOSING A RADIOACTIVE MATERIAL
Johannes Mellink, Vasteras, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Application June 18, 1953, Serial No. 362,639
Claims priority, application Sweden July 2, 1952
7 Claims. (Cl. 250—106)

2. A device for containing and exposing a radioactive material, comprising a body consisting of a material able to absorb radioactive radiation, a bent channel in said body, an opening located at the outer surface of said body and communicating with said channel, a receptacle for



a radioactive substance within said channel, means for moving said receptacle in said bent channel between a retracted position within said body and an exposing position at the outer surface of the body.

2,862,189
PHOTOTRANSISTOR LIGHT DETECTOR
Andrew F. Kruper, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 11, 1954, Serial No. 449,225
6 Claims. (Cl. 250—211)



1. A light detecting device comprising: junction-type photosensitive transistor means having emitter, base, and collector electrodes, the collector current of said transistor means being adapted to increase with increase in light intensity at a p-n junction thereof; alternating voltage source means coupled between said base electrode and an adjoining electrode; bias voltage means connected between said emitter and said base including a delayed action inverse feedback means adapted to increase bias voltage with increase in emitter-to-collector current beyond a given value, and said bias voltage means being adapted to maintain the collector current at cutoff with no light radiation impinging on said transistor, said bias voltage means and said inverse feedback means being serially connected between said base and emitter electrodes; a light source, the radiation from which is adapted to impinge upon the juncture of two electrodes of said transistor; and a source of operating potential and an output impedance serially connected between said emitter and said collector.

2,862,110
IGNITION CIRCUIT SWITCH
Angelo Benvisento, Buffalo, N. Y.
Application June 25, 1957, Serial No. 667,866
2 Claims. (Cl. 307—10)

1. An auto-theft switch means for the ignition circuit of motor vehicles comprising a current conducting mounting plate securable to a grounded part of the vehicle; a housing having one of its ends rigidly secured to the mounting plate, said housing including a pair of spaced parallel chambers in side-by-side relation and a

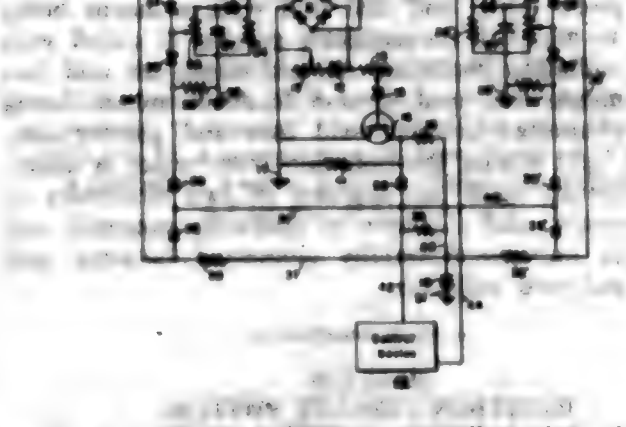
cap for sealing the opposite end of the housing; a plurality of fixed contacts; a rotatably mounted contact means for engaging selected pairs of the fixed contacts; and a key operable lock means for rotating the contact means between a primary circuit closing position and a primary circuit opening and a resistor circuit closing position, said fixed contacts, contact means and lock means being operably mounted in and encased by one chamber of said housing; and a resistor mounted in and encased by the other chamber of said housing with one end of its resistance element grounded to said plate and its other end connected to one of said contacts; another fixed contact being extended beyond the housing and connected by a wire to the primary winding of a spark coil and the other fixed contact being connected by an armoured wire to a part of a make and break mechanism encased by and groundable during its operation to a grounded distributor, the armour of said wire having one of its ends extended into and rigidly connected to the housing and its other end threadably connected to the distributor to prevent ready access to the wire, whereby when the contact means is positioned to open the primary circuit and close the resistor circuit current applied thereto is shunted through the resistor to ground, thereby preventing operation of the primary circuit and damage to the switch parts, the circuit wires and the vehicle.

2,862,111

AUTOMATIC PARALLELING SYSTEM

Harrison H. C. Richards, Jr., American Township, Allen County, and Lewis R. Lowry, Jr., Lima, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application December 10, 1957, Serial No. 701,754
10 Claims. (Cl. 307—87)



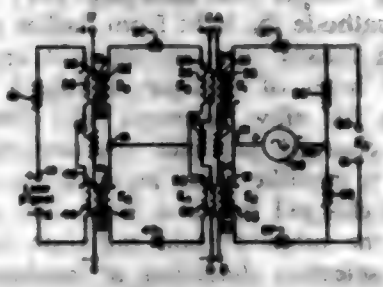
10. A system for effecting paralleling of an alternating current generator with an energized alternating current line, said system including switch means for connecting the generator to said line, transformer means connected to be energized by corresponding voltages of the generator and the line to provide an output voltage proportional to the difference in frequency and phase between the generator and the line, means for rectifying said output voltage, static voltage-responsive means connected to the rectifying means to provide an output current only when the rectified voltage is above a predetermined value, static circuit means controlled by said output current to provide a signal voltage only when said output current ceases, static voltage sensing means for providing signal voltages when the voltages of the generator and of the line are above a predetermined value, static voltage sensing means for providing signal voltages when the voltages of the generator and of the lines are below a higher predetermined value, and means for effecting closing of said switch means when all of said signal voltages are present.

2,862,112

MAGNETIC AMPLIFIER MAXIMUM OUTPUT CONTROL

John F. Ringelmann, Catonsville, and Frederick G. Tummel, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 28, 1957, Serial No. 666,954
9 Claims. (Cl. 307—88)



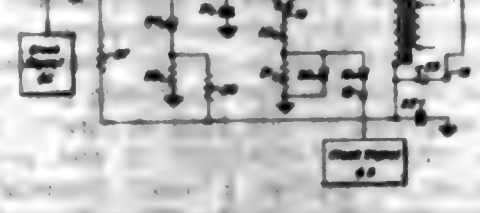
4. In a magnetic amplifier, in combination, a first saturable means, said first saturable means being driven to saturation during one half cycle of an applied alternating current voltage and then reset on the following half cycle, circuit means for resetting said first saturable means comprising a control circuit means and a bias circuit means, and limiting circuit means whereby the maximum average output of said magnetic amplifier may be limited, said limiting circuit comprising a second saturable means, input winding means, bias winding means and output winding means inductively associated with said second saturable means, said output winding means of said second saturable means being connected to limiting winding means inductively associated with said first saturable means.

2,862,113

REGENERATIVE TRANSISTOR AMPLIFIER

Louis J. Kabell, Palo Alto, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application February 14, 1955, Serial No. 488,167
2 Claims. (Cl. 307—88.5)



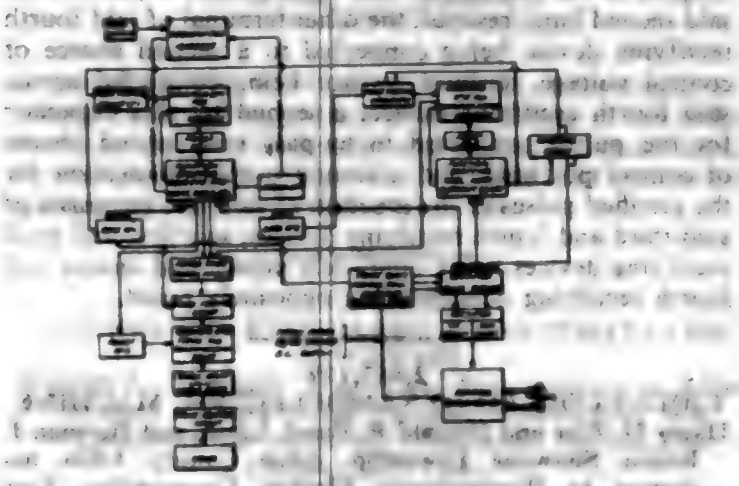
1. A regenerative amplifier for producing an output pulse when digital information pulses are applied thereto, comprising a transistor having emitter, collector and base electrodes, an input circuit connected to said emitter electrode, an output circuit connected to said collector electrode, means for generating first, second and third phases of sinusoidal signal voltages, each phase lagging the preceding phase by approximately 90 degrees, a capacitor connected to the input and output circuits adapted to be charged in response to said first phase for negatively biasing said emitter and collector electrodes, means responsive to said first phase for positively biasing said emitter electrode, means for grounding said base electrode from said third phase simultaneously with the occurrence of the information pulses and the positive emitter bias to trigger the transistor to its high current state and discharge

said capacitor across said output circuit, and for subsequently positively biasing said base electrode from said third phase to trigger the transistor to its low current state, and an asymmetrically conducting device poled in the direction of negative capacitor charging current connected between said generating means and said capacitor.

2,862,114
WELDER CONTROL MECHANISM WITH TIMING MEANS

Julius L. Solomon, Chicago, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois

Application October 1, 1957, Serial No. 687,445
7 Claims. (Cl. 307—112)

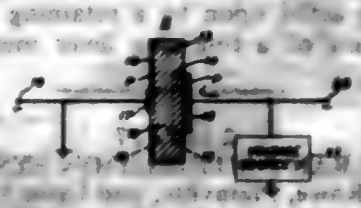


7. In electronic control apparatus, in combination, a source of alternating current, a first sequence timing unit for controlling the functions of a welder such as squeeze, preheat, weld, postheat, quench, hold and off, said sequence timing unit comprising a counter for counting electrical pulses, a function stepping circuit operated by the counter to effect a stepping from one function to the next at the end of a preset count and a resetting circuit, a second sequence timing unit for controlling the firing of the rectifier tubes of the welding transformer to produce cool, heat and current decay periods for each welding impulse, said second sequence timing unit also comprising a counter, a function stepping circuit and a resetting circuit, a first pulse forming circuit for the counter of the first sequence timing unit and which includes two peaking transformers, one peaking transformer, when operative, supplying pulses at the frequency rate of the alternating current source, the other peaking transformer having connection with the function stepping circuit of the second sequence timing unit and, when operative, supplying pulses at the repetition rate of said function stepping circuit, said pulses being produced thereby at the beginning of each cool period, a first gating circuit and which when energized renders the first peaking transformer operative to supply pulses at the frequency rate of the alternating current source, a second pulse forming circuit for the counter of the second sequence timing unit and which includes two peaking transformers for supplying pulses 180 degrees out of phase and at the frequency rate of the alternating current source, a second gating circuit and which when energized renders the second pulse forming circuit operative, circuit means for energizing at any one time either the first or the second gating circuit, and a reversing circuit in electrical connection with the second pulse forming circuit and with the function stepping circuit of the second sequence timing unit, said reversing circuit receiving pulses from said function stepping circuit at the beginning of each cool period and being operative to switch from one peaking transformer of the second pulse forming circuit to the other on each pulse.

2,862,115
SEMICONDUCTOR CIRCUIT CONTROLLING DEVICES

Ian M. Ross, New Providence, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application July 13, 1955, Serial No. 521,757
7 Claims. (Cl. 307—88.5)

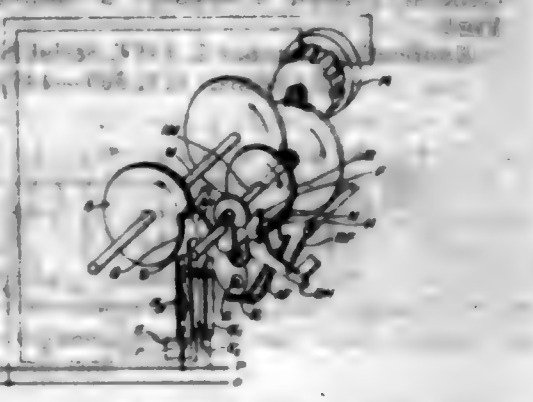


1. A circuit arrangement including in combination a circuit controlling device comprising a semiconductive wafer having on opposite faces first and second zones, each forming a distinct rectifying junction with the portion of the wafer intermediate said two zones, the lateral area of the rectifying junction associated with the first zone being substantially equal to the lateral cross section of the wafer and the lateral area of the rectifying junction associated with the second zone being substantially less than the lateral cross section of the wafer, and electrode means connected to said wafer consisting of a first electrode connection to said first zone making contact with only a limited portion of the surface area of said first zone, a second electrode connection to said second zone, the portion of the wafer intermediate said first and second zones being free of any electrode connections, and means for applying across the first and second electrode connections to the wafer a potential difference which biases the rectifying junction associated with the first zone in the forward direction and the rectifying junction associated with the second zone in the reverse direction to a point of avalanche multiplication.

2,862,116
REMOTE CONTROL RECEIVER FOR CENTRAL REMOTE CONTROL INSTALLATIONS UTILIZING AUDIO-FREQUENCY SIGNALS SUPERIMPOSED ON THE MAINS NETWORK

Hans Hörlimann, Baar, Zug, Switzerland, assignor to Landis & Gyr A. G., Zug, Switzerland, a body corporate of Switzerland

Application June 20, 1957, Serial No. 666,876
4 Claims. (Cl. 307—149)



1. In a remote control receiver for central remote control installations utilizing audio-frequency signals super-imposed on the mains network and operating in accordance with the synchronous selector principle, and in which order impulses in timed relation with a starter impulse are processed by means of a synchronous selector, having a shaft driven by a synchronous motor to actuate a contact arrangement after receiving a starter impulse and lying in the circuit of the synchronous motor driving the said shaft, at least one contact arrangement allocated to an order impulses, the synchronous selector being provided with a resetting device for returning the

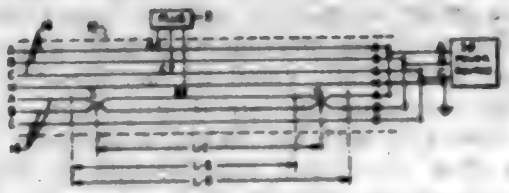
synchronous selector to its zero position on deflection from this position by impulses which do not exceed a predetermined length which is shorter than the starter impulse, said resetting device comprises a resetting member acting on the synchronous shaft, said resetting member being acted upon through a coupling by a resetting spring on a resetting lever member, and a retaining member acting on the synchronous shaft, said retaining member being acted upon by a retaining spring through the intermediary of a retaining lever member.

2,862,117

BUS BAR DISTRIBUTION SYSTEM

Raymond N. Rowe, Plainville, and Lynn M. Harton, New Britain, Conn., assignors to General Electric Company, a corporation of New York

Application December 23, 1957, Serial No. 704,594
12 Claims. (Cl. 307—147)



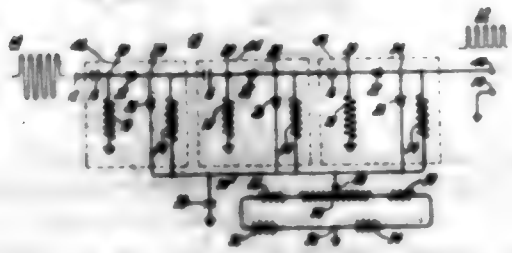
8. A combined feeder and plug-in type power busway section comprising an elongated metallic housing, a plurality of electrical bus bars supported in generally parallel insulated relation in said housing, and including at least two bus bars for connection to each phase of a multiphase power system, said bus bars for connection to each such electrical phase having their terminal end portions offset longitudinally with respect to each other, said bars for connection to a common phase having a common longitudinal position whereby the ends thereof are aligned transversely of said housing to facilitate their interconnection at such point, at least one of said common phase bars having an intermediate portion thereof adapted to be contacted by a plug-in type power takeoff device, at least one of said phase bars having an intermediate portion thereof transposed in position with a conductor not of said phase.

2,862,118

R. F. HALF-WAVE PULSE RECTIFIER

Wendell Neugebauer, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application October 2, 1957, Serial No. 687,828
13 Claims. (Cl. 307—149)



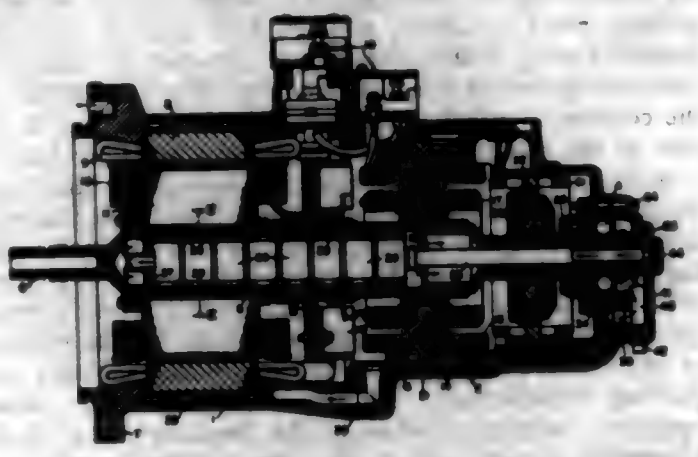
10. A radio frequency pulse rectifier comprising a source of radio frequency pulses, a first rectifier unit including a first input capacitor having one terminal thereof connected to said source of pulses, a first input resistance having one end thereof connected to the other terminal of said first input capacitor and having the other end thereof connected to ground, a first rectifying device having two terminals, a second rectifying device having two terminals, one set of the like terminals of said rectifying devices being connected together, the other terminal of said first rectifying device being coupled to the junction of said first input capacitor and said first input resistor, the other terminal of said second rectifying device being connected to a first source of control voltage, a shunt resistor connected across said second rectifying device, a first by-pass capacitor for the pulses connected to by-pass said first source of control potential, an output connection at the junction of said like terminals, a second rectifier unit including a second input capacitor having one terminal thereof coupled to said output connection, a second input resistance having one end thereof connected to the other terminal of said second input capacitor and having the other end thereof connected to ground, a third rectifying device having two terminals, a fourth rectifying device having two terminals, one set of the like terminals of said third and fourth rectifying devices being connected together, the other terminal of said third rectifying device being coupled to the junction of said second input capacitor and said second input resistor, the other terminal of said fourth rectifying device being connected to a second source of control voltage, a shunt resistor being connected across said fourth rectifying device, a second by-pass capacitor for the pulses connected to by-pass said second source of control potential, and a second output connection for the rectified pulses at the junction of said like terminals of said third and fourth rectifying devices, said first and third rectifying devices being oppositely poled, said second and fourth rectifying devices being oppositely poled.

2,862,119

LIQUID-COOLED DYNAMOELECTRIC MACHINE

Harry D. Else and Donald R. Bassl, Lima, and Herman J. Braun, Shawnee Township, Allen County, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application December 14, 1955, Serial No. 553,879
6 Claims. (Cl. 310—54)



1. A dynamoelectric machine having a stator member and a rotor member, the stator member including a frame structure having conduit means embedded therein to provide a passage for cooling liquid from end to end of the frame structure, said passage communicating with an enclosed space at one end of the frame structure, a bearing for the rotor member in said enclosed space, the rotor member including a hollow shaft supported in said bearing, and means for introducing a cooling liquid into the hollow shaft to flow axially therethrough from end to end, the liquid being discharged from the shaft into said enclosed space to lubricate the bearing and flowing from the enclosed space directly into said passage in the frame structure.

2,862,120

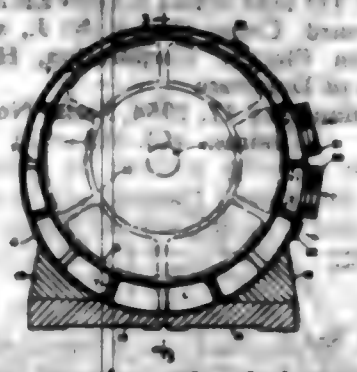
FLUID-COOLED MOTOR HOUSING

Rudolph F. Onsrud, Chicago, Ill., assignor to Onsrud Machine Works, Inc., Chicago, Ill.

Application July 2, 1957, Serial No. 669,495
5 Claims. (Cl. 310—54)

1. A fluid-cooled motor housing comprising, annular imperforate shells of differing diameters, the inner of

which is internally dimensioned to telescopically support a motor stator, the shells being supported in eccentric radially spaced relationship by a plurality of graduated-height longitudinally-disposed circumferentially-spaced baffle ribs forming a coolant-flow labyrinth longitudinally and circumferentially between the shells, and means



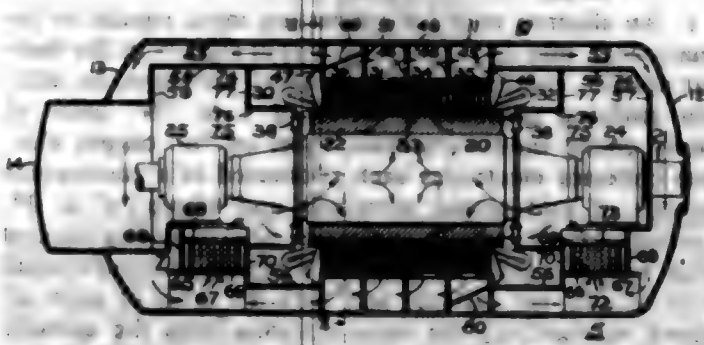
mounted on the opposite ends of the eccentrically-arranged shells for supporting the end margins of the shells in their eccentric relationship and closing the space therebetween, the outer of said shells having inlet and outlet ports communicating with the labyrinth.

2,862,121

COOLING GAS SYSTEM FOR DYNAMOELECTRIC MACHINES

William L. Ringland, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application November 14, 1955, Serial No. 546,686
4 Claims. (Cl. 310—57)



1. A totally enclosed dynamoelectric machine comprising, a housing, a rotor, a stator core spaced from said housing and forming an air gap with said rotor, means forming ducts between said core and said housing, said ducts extending axially of said stator core, said stator core having radial ventilating passages connecting said air gap to said ducts, means positioned at one end of a first group of said ducts closing said end to passage of gas, means positioned at the opposite end of a second group of said ducts closing said end to passage of gas, fans at both ends of said machine forcing cooling gas axially into said air gap and through said radial passages to said ducts to cause each of said ducts receiving gas from both of said fans, means at one end of said machine including a cooler for cooling and returning said gas from said first group of said ducts to said fan at said end of said machine, means at the other end of said machine including a cooler for cooling and returning said gas from said second group of said ducts to said fan at said other end of said machine.

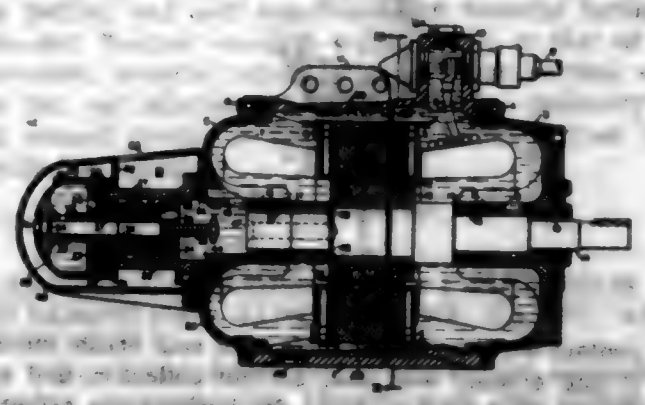
2,862,122

SUBMERSIBLE DYNAMOELECTRIC MACHINE

John J. Courtis, Buffalo, and Charles W. Irwin, Eggertsville, N. Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application March 14, 1955, Serial No. 494,025
5 Claims. (Cl. 310—87)

1. A dynamoelectric machine having a stator member and a rotor member, the stator member including a closed liquid-tight housing, the housing being completely filled with an insulating liquid, and pressure regulating means comprising a hollow body mounted on the housing and communicating therewith, a head closing the body and axially movable relative thereto, spring means in the body for applying an axial force to the head to cause the head



to apply a predetermined pressure to said liquid contained in the housing and the body, the head being exposed to the external pressure on the machine, whereby the external pressure is added to the pressure due to the spring means, and means in the housing for causing said liquid to circulate between the stator and rotor members.

2,862,123

BRUSH HOLDER AND RIGGING ASSEMBLY

Eugene W. Arsenault, Dover, N. H., and John F. Nottelmann, Erie, Pa., assignors to General Electric Company, a corporation of New York

Application September 4, 1956, Serial No. 607,611
8 Claims. (Cl. 310—241)

1. A brush holder and rigging assembly for use with a dynamoelectric machine comprising a yoke having elongated slots therein for providing adjustment thereof around the peripheral surface of a commutator for said machine, means mounting a plurality of brush holders on said yoke, each of said means comprising a support member radially adjustable on said yoke and being retained in a position against rotary movement thereon by stop members integrally formed on said yoke, a brush holder including a channel for receiving a carbon brush rigidly affixed to said support member, and adjustable means on said brush holder arranged for coaction with said support member for permitting axial adjustment of said brush holder relative to said commutator.

2,862,134

BRUSH HOLDER FOR DYNAMOELECTRIC MACHINES

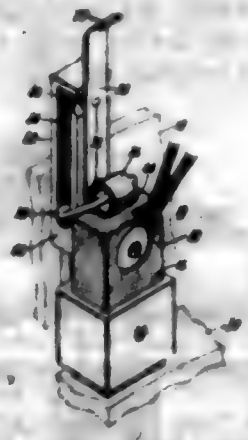
Emil Huber, Scotia, N. Y., assignor to General Electric Company, a corporation of New York

Application June 3, 1957, Serial No. 663,280
6 Claims. (Cl. 310—246)

1. A brush holder for use in a dynamoelectric machine comprising a body having an opening therein for receiving a carbon brush adapted for contact with a current collector for said machine, an upstanding guide member on said body having oppositely disposed grooves for re-

first input capacitor and said first input resistor, the other imperforate shells of differing diameters, the number of

ceiving a movable member arranged to slide therein, a spring anchored at one end on said holder and having its free end engaged by said movable member and arranged



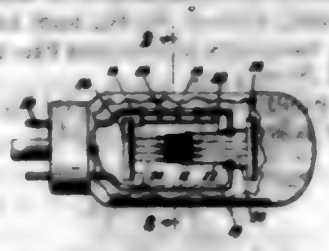
for contact with the upper surface of said brush for urging it into contact with said current collector, and stop means provided on said body for limiting the extent of downward movement of said spring.

2,862,125

HEAT SHIELD FOR INCANDESCENT LAMP

Orrick H. Biggs, Beverly, and Robert F. Reed, Salem, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

Application January 6, 1956, Serial No. 557,692
6 Claims. (Cl. 313—38)



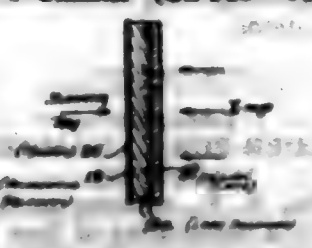
1. In an incandescent lamp having a tubular gas-filled glass envelope, support elements extending longitudinally within said envelope and a filament mounted between said elements, a heat shield comprising: a foraminous member having a plurality of openings and extending longitudinally in said envelope at the side of said filament, said member presenting an obstruction to passage of a portion of the rising gas bearing heat emanating from said filament and allowing another portion of said gas to pass through said openings whereby local overheating of said envelope is avoided when the lamp is operated horizontally with the shield above the filament.

2,862,126

RADIATION SENSITIVE SEMI-CONDUCTIVE LAYER OF AMORPHOUS SELENIUM

Martin Ficke, Stuttgart, and Manfred Keller, Stuttgart-Birkach, Germany, assignors to Zeiss Ikon A. G., Stuttgart, Stuttgart, Germany

Application August 28, 1953, Serial No. 377,214
9 Claims. (Cl. 313—66)



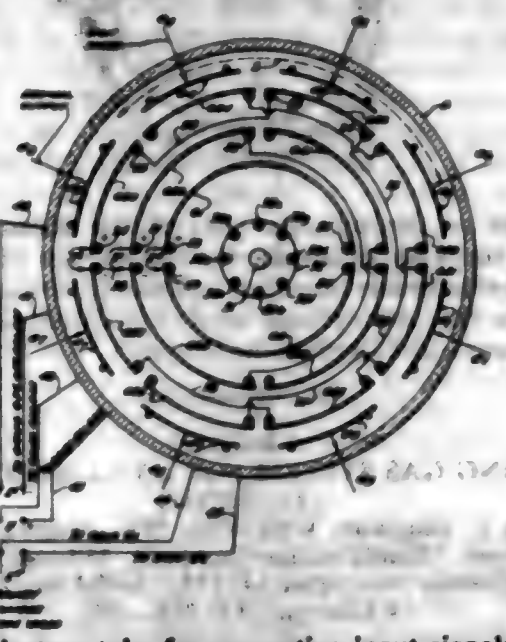
1. A semi-conductive element, comprising a radiation sensitive semi-conductive layer of amorphous selenium having a thickness of about 200 microns, said layer having been formed by evaporation in vacuum under avoidance of crystallization at a temperature below 125° F. to make it sensitive for X-rays, and foreign materials having been added to said amorphous selenium which serve for sensitivizing, i. e. for reducing the electric inertia of said selenium.

2,862,127

BINARY TO DECIMAL CONVERTER TUBE

Fred R. Maynard, Cedar Grove, N. J., assignor to National Union Electric Corporation, Hatboro, Pa., a corporation of Delaware

Application May 17, 1954, Serial No. 430,300
3 Claims. (Cl. 313—73)



1. An electron tube for converting input signals in the binary code into corresponding output signals in the decimal system, comprising an evacuated envelope, an electron emitting cathode, a series of 1 to "N" pairs of binary coded input terminals, a set of "*n*" output electron collector electrodes each connected to a corresponding one of said output terminals and where "*n*" is 2^N, a series of "N" radially successive sets of gating control grids with the grids of each set being in circumferential array around the cathode and with the grids of each set spaced substantially the same distance from the cathode but with succeive sets at respectively greater distances from the cathode, the first set of gating grids nearest the cathode comprising two grids each subtending an angle of approximately "A" degrees with respect to the cathode, the next set of gating grids comprising four grids each subtending an angle of approximately A/2 degrees with respect to the cathode, the final set of gating grids comprising 2^N grids each subtending an angle of approximately $A/2^N$ degrees with respect to the cathode, means connecting the two grids of the first set each individually to a corresponding one of a first pair of said input terminals, means connecting the alternate grids of the second set together and thence to corresponding terminals of the second pair of input terminals, means connecting the alternate grids of the final set together and thence to corresponding terminals of the final pair of said input terminals, and each of said output electrodes being in alignment with a corresponding one of the gating grids of the said final set.

2,862,128

ELECTRON GUNS

George H. Robertson, New Providence, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 30, 1953, Serial No. 461,229
12 Claims. (Cl. 313—85)

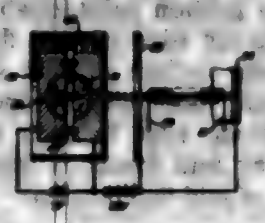
1. A dual stream electron gun assembly comprising a pair of cathode members, a vitreous insulating washer therebetween, said cathode members including mating recesses defining a cavity substantially enclosed within the

2,862,133

inwardly away from said tab to a point within said elec-

and a rotor member, the stator member including a closed on said body having oppositely disposed grooves for re-

assembly and having a single exit for electrons, said exit being small in size in comparison to said mating



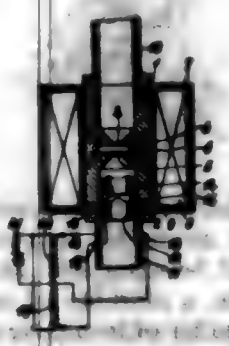
recesses, a coating of electron emissive material upon substantially all of the recessed portions of said cathode members, and means for heating said material.

2,862,129

DEVICE FOR COMPENSATING THE ASTIGMATISM OF ELECTRON LENSES

Adrianus Cornelis van Dorsten, Emmasingel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application February 28, 1955, Serial No. 491,161
Claims priority, application Netherlands March 11, 1954
4 Claims. (Cl. 313—86)



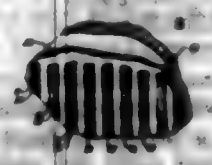
1. An electron lens system comprising in combination, means for concentrating rapidly-moving charged particles into a beam having a dot-shaped cross-sectional area, said concentrating means including means to produce a field of substantially rotational symmetry about an axis thereof, and means to compensate for the astigmatism of the field produced by said field producing means, said astigmatism compensating means being disposed at a position at which the charged particles arrive subsequent to their passage through the field and comprising a pair of tubular members spaced apart and arranged along the axis, said members having two spaced peripheral edges thereof which vary in height symmetrically in two perpendicular planes intersecting said axis at right angles, and means for producing a field within said members determined by the geometry thereof.

2,862,130

SCREEN STRUCTURE FOR CATHODE RAY TUBES

Meier Sadowsky, Elkins Park, and Richard E. Waggener, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application June 26, 1953, Serial No. 364,398
26 Claims. (Cl. 313—92)



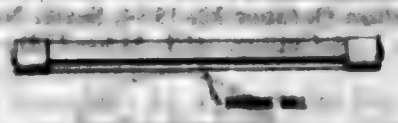
1. A screen structure for a cathode ray tube, said screen structure comprising a first portion constituted of fluorescent material having predetermined light emission efficiency and having predetermined secondary electron emission ratio, and a second portion constituted of a mixture of fluorescent material having greater light emission efficiency and non-fluorescent material, the relative proportions of said fluorescent material and of said other material being such that the light emissivity of said second portion is substantially the same as that of said first portion and said non-fluorescent material having a secondary electron emission ratio relative to that of the fluorescent material constituting said first portion such that the net effective secondary electron emissivity of said second portion is substantially different from that of said first portion.

2,862,131

GLASS FOR GLOW DISCHARGE LAMPS SUCH AS FLUORESCENT LUMINESCENT LAMPS AND THE LIKE

Jean Alfred Escher-Desrivieres, Paris, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny & Cirey, Paris, France

Application March 15, 1954, Serial No. 416,888
Claims priority, application France February 27, 1951
14 Claims. (Cl. 313—112)



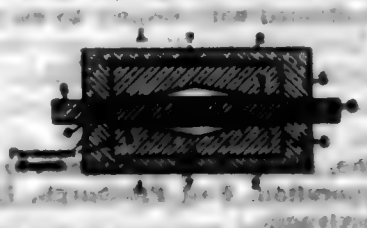
1. A glow discharge lamp having a light source which emits rays above and below 3,200 A., and a glass wall associated with said source in protective relation thereto, said wall being of the composition of an ordinary soda-lime glass and also containing on the order of .15%–1% by weight of at least one of a group of oxides consisting of cerium oxide and vanadium oxide.

2,862,132

SPARK GAP DEVICE

Tom L. Dyer, Jr., North Huntingdon Township, Westmoreland County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 8, 1956, Serial No. 590,137
4 Claims. (Cl. 313—156)

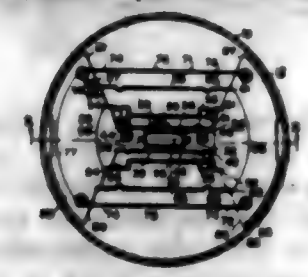


1. In a lightning arrester, the combination comprising a pair of substantially flat spark gap housing units each having an annular flange said flange having a first pair of notches in alignment and other notches circumferentially spaced, said housing units arranged with their flanges in face-to-face relation and positioned with corresponding notches in alignment, a permanent magnet of insulating material received in each of said housing units and enclosed by said flanges, said magnets arranged in attraction, a thin arc resisting ring washer having one of its faces lying adjacent its corresponding magnet and its other face flush with the free end of a corresponding housing flange, a pair of stationary electrodes received in said first pair of notches, said electrodes spaced apart radially to form a spark gap between them and a series of radially extending arc splitters received in said other set of notches.

2,862,133
GASEOUS ELECTRIC DISCHARGE DEVICES
John Reginald Acton and Kenneth Harold Woolley, Boston, England, assignors to Ericsson Telephones Limited, London, England
Application March 22, 1956, Serial No. 573,200
Claims priority, application Great Britain March 22, 1955
5 Claims. (Cl. 313—178)

1. A gaseous discharge device comprising a sealed envelope and within the envelope a cathode, and an anode, said cathode comprising a getter container whose surface constitutes at least 5% of the surface of said cathode, and said envelope having a gas filling at least 98% of which is helium.

2,862,134
ELECTRON DISCHARGE DEVICE
Carl F. Miller, Bath, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 22, 1954, Serial No. 463,937
6 Claims. (Cl. 313—250)

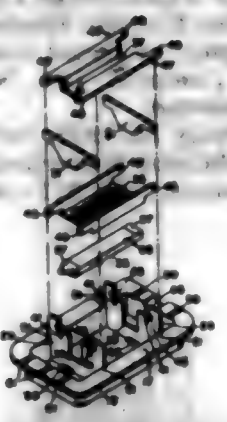


1. An electric discharge device comprising an envelope having an electrode assembly therein, said electrode assembly having a plurality of planar type electrodes, means positioning said electrodes within said assembly comprising a pair of spacers of insulating material lying within a plane transverse to the planes of said planar type electrodes, said spacers fixed in relationship with respect to each other, said electrodes positioned between opposing edges of said spacers, and the spacing between said opposing edges progressively varying along their length, said opposing edges of said spacers having a plurality of notches therein in which said planar electrodes are seated and thereby positioned with respect to each other.

2,862,135
EAR PLATE
Wesley J. Payne, Bath, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 14, 1956, Serial No. 628,419
4 Claims. (Cl. 313—268)

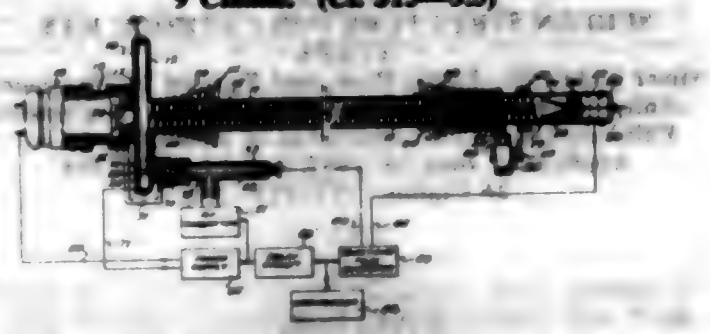
1. An electron discharge device comprising a cage assembly having a plurality of electrode elements positioned between two spacers, said spacers having elongated apertures therein, one of said electrodes having extension tabs thereon adapted to be inserted through said apertures with an edge of said electrode bearing against one surface of said spacer, one of said tabs having a fissure in one side edge to provide a body portion and a flap portion within said tab, said fissure extending at an angle from a point on said side edge of said tab and directly inwardly away from said tab to a point within said electrode, said flap portion of said tab bent at an angle with respect to said body portion of said tab, said body portion and said flap portion substantially perpendicular to said spacer, the lower edge of said flap portion bearing against the opposite surface of said spacer with respect to the edge of said electrode to bind the spacer plate against said electrode edge in such a manner that the pressure exerted by said spacer is insufficient to deform the lower portion of said flap portion.

2,862,136
ELECTRON DISCHARGE DEVICE
Carl F. Miller, Bath, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application July 31, 1956, Serial No. 601,277
6 Claims. (Cl. 313—261)



1. An electron discharge device comprising an envelope member, a cathode electrode, an anode electrode, a grid electrode positioned between said cathode electrode and said anode electrode, a plurality of insulative first spacer members and a plurality of insulative second spacer members, all of the above electrodes and spacer members being within said envelope member, said first spacer members having a plurality of recess portions, portions of said cathode electrode, said grid electrode and said anode electrode being positioned in said first spacer member recess portions, said second spacer members being located adjacent to said first spacer members, portions of said anode electrode being operable to engage said second spacer members to hold said second spacer members in intimate contact with portions of said grid electrode and said cathode electrode so that said cathode electrode and said grid electrode are rigidly fixed in position.

2,862,137
TRAVELLING WAVE TUBE
Chao C. Wang, Mineola, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application January 18, 1957, Serial No. 635,013
9 Claims. (Cl. 315—3.5)



1. A travelling wave tube, comprising a conductive helix extending along a predetermined axis, means positioned at one end of said helix for producing and directing an electron beam along said helix, coupling means along said helix for the exchange of microwave energy between said helix and an external microwave device,

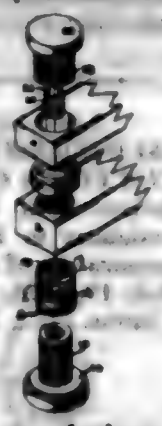
said coupling means including a spiral conductor disposed about an end region of said helix in spaced relationship with the turns of said helix, the radii of the turns of said spiral conductor along said helix increasing relative to the radii of the adjacent turns of said helix in the direction of an intermediate region of said helix, a dual conductor transmission line section having one conductor coupled in electromagnetic energy exchanging relationship with said helix, said transmission line section having a further conductor connected to the smaller end of said spiral conductor, and a coaxial line having inner and outer conductors, said inner conductor being connected to said one conductor and said outer conductor being connected to said further conductor of said dual conductor transmission line.

2,862,138

KLYSTRON TUNING STRUCTURE

Oscar L. Larkin, Allston, Mass., assignor to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts

Application November 13, 1956, Serial No. 621,580
1 Claim. (Cl. 315—5.53)



Tuning apparatus for a velocity modulated klystron tube having a body member defining a resonant cavity with grid electrodes mounted in opposed end walls thereof, one of said electrodes being movable to thereby permit altering the resonant frequency of said device and a metallic bracket member extending parallel to said body member connected to said movable grid electrode, said tuning apparatus comprising threaded members positioned within said body member and interconnecting said bracket and body members, one of said threaded members comprising a differential screw member threadably mounted in said body, said screw member defining an internal threaded passageway, a bolt member having an upper threaded portion and a lower threaded portion of narrower cross-section adapted to engage the internal threaded passageway, the pitch of the outer thread of said differential screw member being always greater than the pitch of the internal passageway thread to thereby effect positive vertical displacement of said bracket member in a similar direction as movement of the differential screw in and out said body member and a coil member disposed between the outer thread of said differential screw and the body member, said coil member having an intermediate gripping structure of polygonal shape to retain said screw member in its desired position under conditions of shock and vibration.

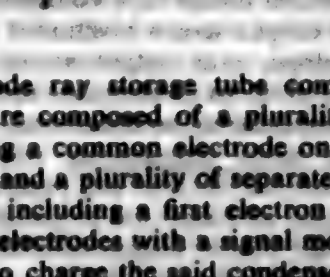
2,862,139

ELECTROSTATIC STORAGE OF DIGITAL INFORMATION

Frederic C. Williams, Timperley, and Tom Kilburn, Manchester, England, assignors to National Research Development Corporation, London, England

Application July 25, 1952, Serial No. 300,795
Claims priority, application Great Britain July 30, 1951
4 Claims. (Cl. 315—12)

1. A method of storing digital information in the form of electrostatic charges upon a charge-retaining surface employing a cathode ray beam, comprising sweeping said beam over adjacent areas on said surface during a plurality of successive intervals of time respectively, maintaining the beam on at the beginning and end of a first and a second of said intervals and at the beginning of a third and of a fourth of said intervals, storing



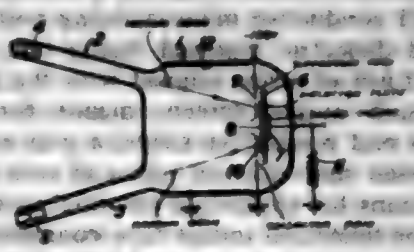
a first digit in the third and fourth of said intervals by switching said beam off shortly after the commencement of the third and fourth intervals respectively and storing a second digit in the first and second of said intervals by maintaining the beam switched on through said first and second intervals.

2,862,140

SIGNAL STORAGE DISCHARGE TUBES

George Baldwin Banks, Rawreth, England, assignor to English Electric Valve Company Limited, London, England, a British company

Application December 23, 1955, Serial No. 555,141
Claims priority, application Great Britain March 17, 1955
2 Claims. (Cl. 315—12)



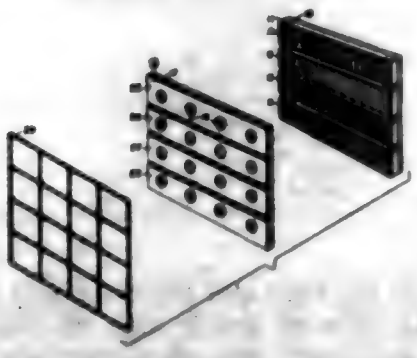
1. A cathode ray storage tube comprising a storage target structure composed of a plurality of minute condensers having a common electrode on one side of a dielectric plate and a plurality of separate electrodes on the other, means including a first electron gun for scanning said separate electrodes with a signal modulated "writing" cathode ray to charge the said condensers, means including a second electron gun for scanning said separate electrodes with a "reading" cathode ray to collect the charges, both said first electron gun and said second electron gun being disposed to the same side of said target structure as said separate electrodes, two separate fine mesh grid electrodes adjacent the target structure, each extending fully across said target structure in the direction of scanning and substantially half-way across in a direction perpendicular thereto in the plane of said target structure, one of said grid electrodes being interposed across the electron paths from said first electron gun to said target structure and the other of said grid electrodes being interposed across the electron paths between said second electron gun and said target structure, said two grid electrodes being closely adjacent said separate electrodes, means for applying potentials to said grid electrodes for setting up two different potential surfaces, the potential surface through which the "writing" ray reaches said electrodes having such predetermined value that secondary electrons from the target are suppressed and the potential surface, of a widely different value, through which the "reading" ray reaches said electrodes having such predetermined value that secondary emission from the target is assisted.

so passed for shaping that beam into desired cross-sectional

ing an insulating end cap mounted adjacent said rotor,

from a point on said side edge of said tab and directly between said helix and an external microwave device,

2,862,141
COLOR TELEVISION TUBE
Andrew P. Kruger and Charles H. Jones, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 19, 1954, Serial No. 411,382
7 Claims. (Cl. 315—31)

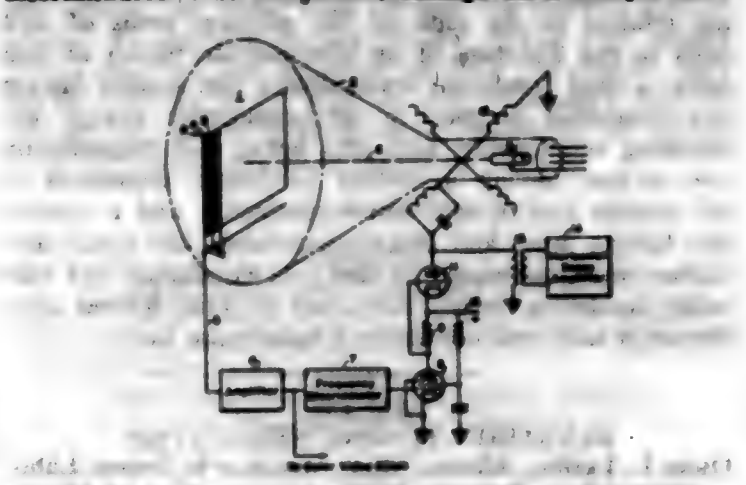


1. A color television image tube comprising an evacuated envelope, an output screen positioned at one end of said envelope, said output screen including a plurality of groups of strips of material capable of emitting light upon electron bombardment, each of said groups containing strips capable of emitting light of the selected component colors and each strip limited in representation to only one color, an electron gun positioned adjacent the other end of said envelope for projecting a beam of electrons towards said output screen, deflection means for scanning a raster on said output screen, a perforated color control electrode positioned between said output screen and said electron gun, said color control electrode comprising a layer of dielectric material having a conductive material thereon, said conductive material being positioned on the side of said dielectric material facing said electron gun and in the form of strips aligned with the light emitting strips on said output screen, means for applying a potential to said conductive strips, a grid electrode positioned between said electron gun and said color control grid, and means for applying a potential to said grid.

2. A color television image tube comprising an evacuated envelope, an output screen positioned adjacent one end of said envelope, said output screen including a plurality of groups of strips of phosphor material capable of emitting light on electron bombardment, each of said groups containing strips representing respectively, red green and blue colors, an electron gun positioned adjacent the other end of said envelope for projecting a beam of electrons toward said output screen, deflection means for scanning said electron beam to obtain a raster on said output screen, electrostatic means consisting of conducting coatings within the interior of the envelope for normalizing the electron beam from said electron gun as it approaches the output screen, a color control grid positioned between said output screen and said electron gun near to said output screen, said color control grid comprising a plurality of perforated conducting strips so that a conducting strip is positioned parallel with and in front of each of said strips of material on said output screen, said conductive strips being insulated from each other and means connecting all of the conductive strips positioned in front of the strips on the output screen emitting the same color to a terminal exterior of said envelope.

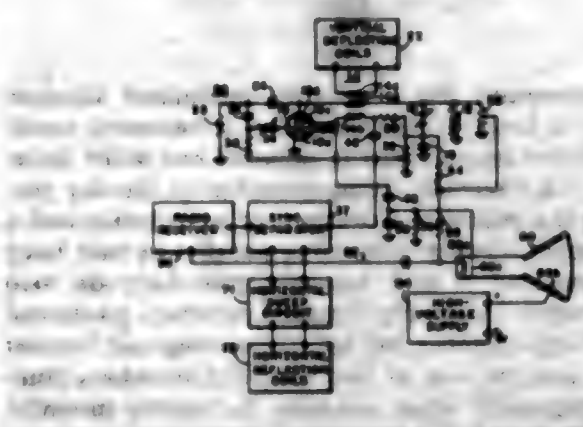
2,862,142
DEFLECTION SYSTEM FOR COLOR TELEVISION
Albert E. Welch, East Meadow, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 29, 1955, Serial No. 531,166
8 Claims. (Cl. 315—21)

1. In a color television picture receiver of the type employing a cathode ray tube having an output screen supporting parallel groups of color-emitting strips separated by conducting strips having a common lead to a control amplifier, a color video gating circuit in the output of said control amplifier and, in addition, a frequency discriminator which impresses voltage on a damper tube



which is connected in shunt with deflection coils of said cathode ray tube, means for producing saw-tooth current waves in said deflection coils, and means for applying signals from said conducting strips on said frequency discriminator.

2,862,143
COMBINED BEAM-INTENSITY AND SWEEP-CONTROL APPARATUS FOR A CATHODE-RAY TUBE
Rex Wilson, Glenview, and Howard Van Jepmond, Evanston, Ill., assignors to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application July 19, 1956, Serial No. 598,846
9 Claims. (Cl. 315—22)

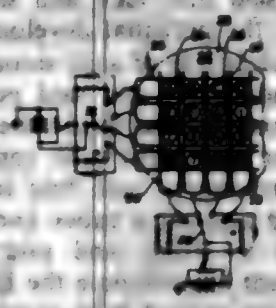


1. A combined beam-intensity and vertical sweep-control apparatus for a cathode-ray tube having beam-intensity control means and a viewing screen comprising: means for applying an adjustable voltage to the beam-intensity control means selectively to adjust the average intensity of the cathode-ray beam a vertical sweep circuit having a voltage-responsive sweep-control element for developing a sweep wave to sweep the cathode-ray beam over the viewing screen; and means coupled between said applying means and said voltage-responsive element for applying to the latter a voltage representative of said adjustable voltage to vary the magnitude of said sweep wave inversely with the average intensity of the cathode-ray beam.

2,862,144
SIMPLIFIED SYSTEM FOR CHARACTER SELECTION IN A SHAPED BEAM TUBE
Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware
Application March 21, 1958, Serial No. 722,913
5 Claims. (Cl. 315—30)

1. In an evacuated shaped beam tube comprising a cathode for generating an electron beam, a control grid adjacent the cathode and in the path of the beam for control of the electron beam, means in the path of the beam

so passed for shaping that beam into desired cross-sectional shape, target means for responding to impingement of the beam thereon positioned at an end of the tube opposed from the cathode, and means positioned in the path of the beam intermediate the control grid and the means



for shaping the beam for establishing predetermined potential conditions to permit only a selected portion of the beam to pass thereby beyond to be subsequently shaped into a single cross-sectional shape through the means for shaping the beam.

2,862,145
FLASHER LAMP
George B. Davis, Jr., Glen Mar Park, Md.
Application June 24, 1955, Serial No. 519,199
3 Claims. (Cl. 315—47)

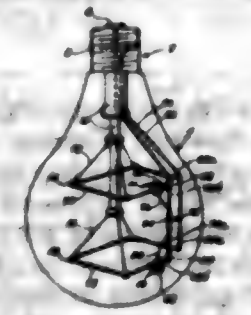
1. A flasher lamp including in combination a filament, leads to the terminal ends of said filament to effect the energization and heating thereof, a thermal strip disposed for intermittently shunting the filament to effect the periodic cooling of the filament, and a heat absorbing member surrounding said thermal strip in spaced relationship and heated by the filament to control the radiant heating and cooling of said strip.

2,862,146
SHUT-OFF APPARATUS FOR ELECTROSTATIC IGNITION SYSTEM
Donald W. Krautkramer, Denver, Colo., assignor to Heckathorn Manufacturing & Supply Co., Denver, Colo., a corporation of Colorado
Application January 23, 1956, Serial No. 560,687
12 Claims. (Cl. 315—56)

1. In an electrostatic ignition system for an engine activated by a plurality of spark plugs, the combination comprising a conductive-conveyor type electrostatic generator including a plurality of circularly disposed inductors and a plurality of circularly disposed conductive conveyors electrostatically coupled to said inductors, alternate inductors in said circular disposition being connected one to the other and disconnected from the intervening inductors whereby two separate inductor sets are formed, said conveyors being electrically connected together and disconnected from said inductors, an insulating rotor moving said conveyors relative said inductors, a housing enveloping the foregoing generator components including an insulating end cap mounted adjacent said rotor, a plurality of charge transfer elements each individually connected to a different one of said spark plugs and circularly disposed on said end cap, and a conducting finger connected to said conveyors and mounted on said rotor and movable therewith to sequentially assume a spark-gap relationship with each of said spark plugs; a magnetic solenoid housing including a circular core projection therein mounted on said end cap; a hollow non-magnetic bobbin positioned partially within said housing and including a central web dividing the internal volume of the bobbin into two portions one of which contains said core projection; a magnetic plunger positioned within the other portion of said bobbin; a

plunger stop loosely confining said plunger within said other bobbin portion; a spring confined between said web and the end of the plunger adjacent thereto thereby forcing said plunger against said stop; a conductive contact bar positioned on said rotor and connected to said conveyors; a conducting pin carried by said plunger and projecting through said plunger stop and out of said bobbin into contact with said bar; and a solenoid positioned over said bobbin and within said housing and when energized retracting said plunger and separating said pin from contact with said bar, said solenoid in the de-energized condition permitting the shorting of said conveyors to said housing in a circuit path which includes said bar, pin, plunger, bobbin and solenoid housing.

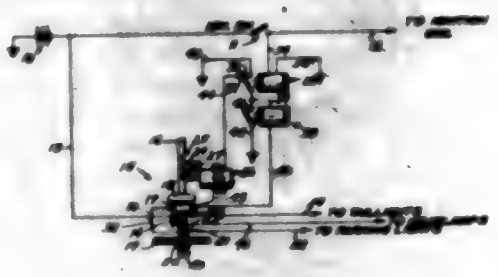
2,862,147
LAMP WITH AUTOMATIC FILAMENT SHIFTING MEANS
Vincent Conti, New York, N. Y.
Application October 18, 1955, Serial No. 541,148
13 Claims. (Cl. 315—65)



1. An electric lamp comprising a bulb having terminals, primary and secondary filaments in said bulb, said secondary filament being adapted to light when said primary filament breaks, electrical connections between one end of each of said filaments and one of said terminals, an electrical connection between the other end of said primary filament and the other of said terminals, an elongated vertical lead electrically connected to said other terminal, and means for connecting the other end of said secondary filament to said other terminal when said

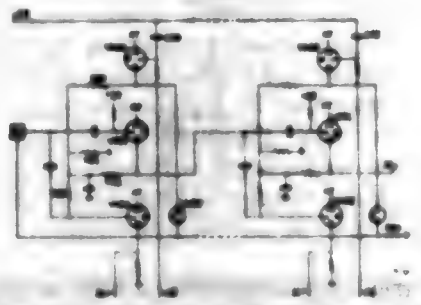
primary filament breaks, said means being mounted on said lead, slidable therealong, and comprising a conductive structure physically connected to said primary filament and normally spaced at a given point from one of said lead and said secondary filament, said space defining an open circuit between said secondary filament and said lead, whereby relative movement between said primary filament and said lead attendant upon the breaking of said primary filament causes said means to slide along said lead until said space disappears, thereby electrically connecting said other end of said secondary filament to said lead.

2,862,148
VEHICLE LIGHT CONTROL SYSTEM
William Weigl, Cleveland, and Robert K. Norton, Twinsburg, Ohio
Application January 28, 1957, Serial No. 636,827
17 Claims. (Cl. 315—80)



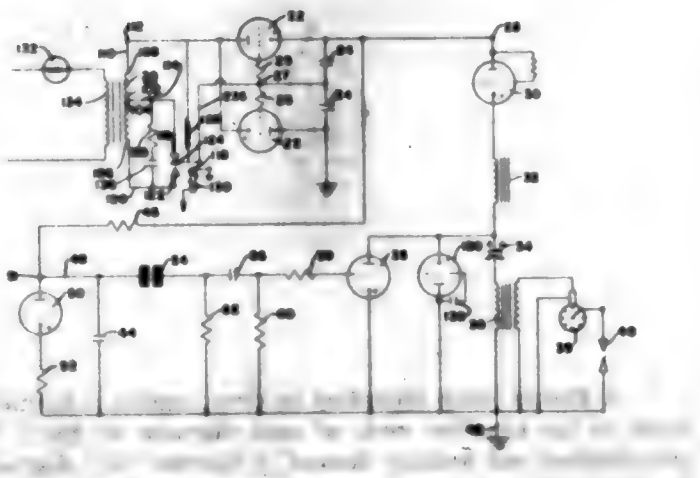
1. A control system for electrically operated apparatus of a vehicle having an engine and an ignition system therefor, switch means for said apparatus adapted to be manually closed or opened, a manually operable ignition switch for the ignition system of said vehicle, and means operated in response to opening of said ignition switch, said means being operably connected to the apparatus switch for automatically opening said latter switch whenever it is closed at the time the ignition switch is opened, and enabling manual operation at all times of said apparatus switch to opened or closed position independently of the opened or closed condition of the ignition switch.

2,863,149
TELECOMMUNICATION SYSTEMS
Alan Davison and Ronald Threadgold, Liverpool, England, assignors to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company
Original application January 12, 1953, Serial No. 330,638. Divided and this application February 26, 1957, Serial No. 642,462
6 Claims. (Cl. 315—84.5)



1. An electronic hunting arrangement for bringing into use a first available one of a plurality of pieces of equipment, comprising a plurality of successive stages, one stage for each piece of equipment, each of said stages comprising a plurality of gas-filled tubes, each of said tubes having a plurality of principal electrodes, a lead extending from a first one of said plurality of tubes to a corresponding piece of equipment to provide a marking potential biasing said first tube, means for applying a pulse to said lead causing said first tube to strike if said corresponding piece of equipment is available to provide a potential to a principal electrode of a second and a third tube of said plurality of tubes, a pair of resistors connected between said first tube and said second and third tubes to apply the potential developed at said first tube to a principal electrode of said second tube biasing this tube to nonconductance and said potential applied to a principal electrode of said third tube to trigger said electrode and render said third tube conductive, means responsive to the striking of said first tube to apply a pulse to said second and third tubes and thereby cause the said third tube to strike, and said last-mentioned pulse being insufficient to overcome the bias on said second tube leaving said second tube nonconductive, said third tube being connected to the associated piece of equipment to take the piece of equipment into use and remove the potential from said first mentioned lead when said third tube strikes.

2,862,150
IGNITION SYSTEM
Brooks H. Sherf, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 8, 1954, Serial No. 402,918
5 Claims. (Cl. 315—224)

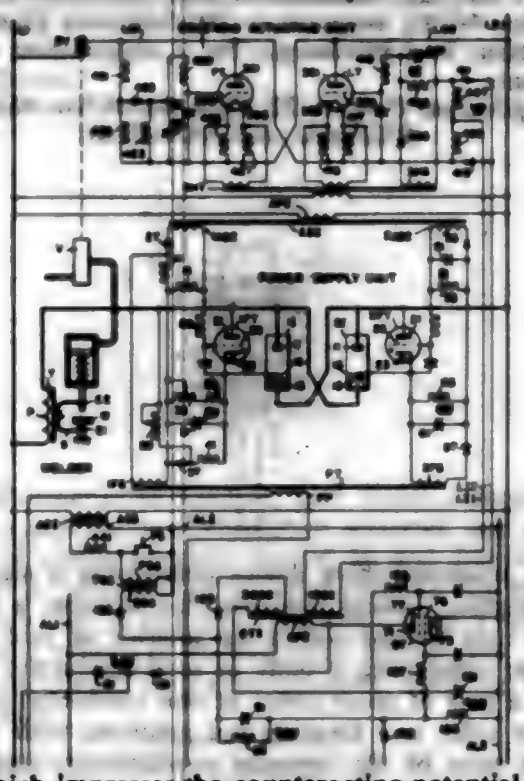


3. An electric ignition system having; an ignition condenser, a current source for charging said condenser, an ignition coil including a primary winding and a secondary winding, a unidirectional electronic switch in circuit with and adapted to close said circuit between said primary winding and condenser for one direction of current flow only, a second unidirectional electronic switch connected in circuit with and adapted to close said circuit between said primary winding and condenser when the current flow therebetween is in the reverse direction.

2,862,151
ELECTRIC DISCHARGE APPARATUS
Hubert W. Van Ness, East Aurora, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 30, 1954, Serial No. 459,331
8 Claims. (Cl. 315—251)

5. Apparatus for supplying a highly reactive load from an alternating current source comprising at least one thyratron having an anode, a cathode and a control electrode, means for connecting said load to said source through said anode and cathode, biasing means connected to said control electrode for maintaining said thyratron non-conducting in the quiescent state of said apparatus, and means to be connected to said control electrode and said source for

impressing a potential counteracting said biasing means, the said apparatus being characterized by impressing



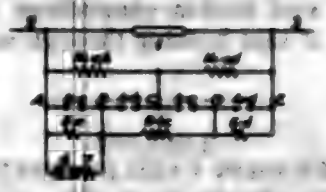
means which impresses the counteracting potential during substantially a full period of the source.

2,862,153

OVER-VOLTAGE PROTECTION DEVICE FOR PROTECTION OF ELECTRIC EQUIPMENT

Olov Rydén, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation

Application March 6, 1956, Serial No. 569,710
Claims priority, application Sweden March 23, 1955
6 Claims. (Cl. 317—12)



1. A diverter to protect electrical equipment, comprising a plurality of individual spark gaps connected in series over joining terminals, means being provided for connecting said chain of spark gaps across said electrical equipment and forming a main diverter across said equipment, a plurality of impedance elements being series connected over joining terminals to form a plurality of impedance chains conductive for direct current, means being provided for connecting said chains of impedance elements in parallel with said main diverter, said impedance chains forming a plurality of voltage dividers, means being provided for connecting said joining terminals of said voltage dividers to alternate joining terminals of said chain of spark gaps, a precision spark-over gap and a non-linear type resistor series connected; means being provided for connecting said precision spark gap and non-linear resistor in parallel with at least one impedance element in one of said voltage dividers.

2,862,153

DEVICE FOR STACKING SERIES-CONNECTED IMPEDANCE UNITS

Erland Nilsson, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden

Application July 7, 1955, Serial No. 520,563
Claims priority, application Sweden August 5, 1954
3 Claims. (Cl. 317—99)

1. A stack device of the character described comprising a plurality of impedance units arranged in axially spaced relation to each other, metallic intermediate plates interposed between adjacent impedances and in electrical contact therewith, and concavo-convex depressions formed in said plates and arranged with the concave parts in each plate opposed to the concave parts in the next adjacent plate and said concave parts receiving and making elec-

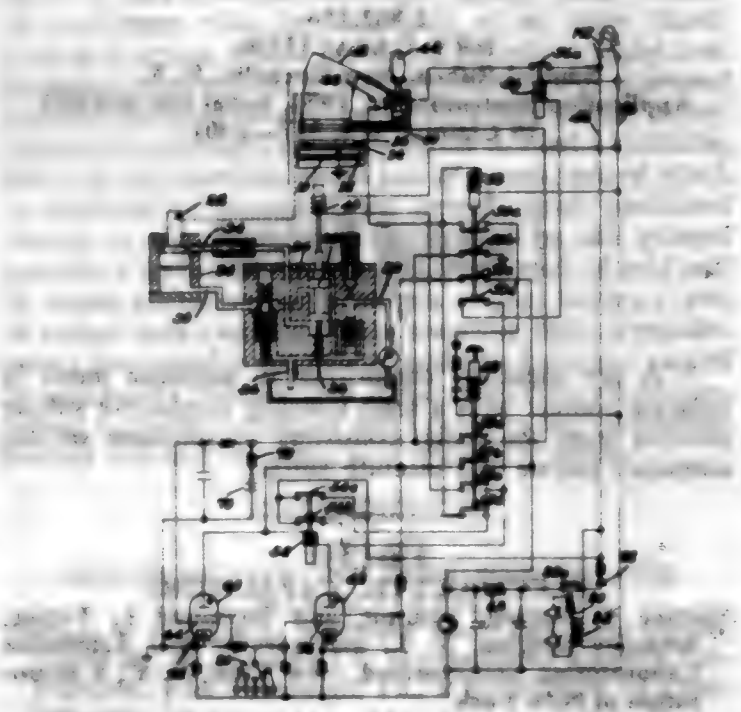
trical contact with the said impedances and the said plates being so disposed in the stack in angular relation with respect to each other that the convex part of a depression which forms, with its concave part, the seat for an impedance unit, is axially separated from the convex part of the next succeeding impedance unit seating depression in the stack device by at least one intermediate plate.

2,862,154

APPARATUS CONTROL SYSTEMS

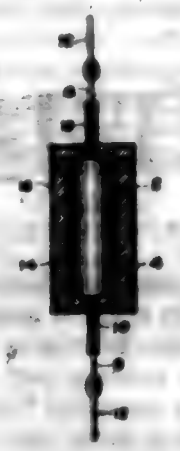
Robert W. Bradley, Marblehead, Mass., assignor to United Shoe Machinery Corporation, Flemington, N. J., a corporation of New Jersey

Application February 9, 1956, Serial No. 564,504
7 Claims. (Cl. 317—149)



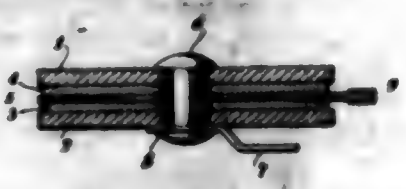
1. In apparatus having power driven operating means, means including a manually operated element for initiating the operation of said power driven means and a control operative automatically to perform a control function in response to the establishment of a predetermined input condition of said control, means for insuring that said control is capable of exercising its control function prior to initiating the operation of said power driven means comprising, in combination, means operative to disable the initiating means, means for temporarily transferring the control function of said control to control of said disabling means, means for establishing said predetermined input condition adapted to cause said control to exercise its control function and thereby to terminate the operation of said disabling means, and means operative upon operation of the initiating means for returning the control function of said control to its original control function.

2,862,155
ELECTROLYTIC CAPACITORS
Stanley W. Bobinski, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application September 17, 1953, Serial No. 380,825
5 Claims. (Cl. 317—230)



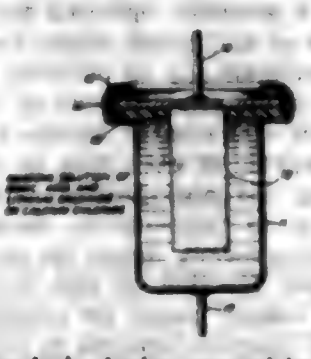
1. A miniature electrolytic capacitor comprising a tantalum electrolytic capacitance section containing a weakly acid aqueous electrolytic capacitor electrolyte, oxide coated tantalum lead-wires extending from said section, a weakly alkaline epoxy resin totally encasing said section, said resin being hermetically bonded to said lead-wires, and an expansion-constricting metal reinforcing sleeve enclosing said resinous casing and bonded thereto.

2,862,156
DRY CAPACITOR
Samuel Ruben, New Rochelle, N. Y.
Application September 14, 1954, Serial No. 455,873
10 Claims. (Cl. 317—230)



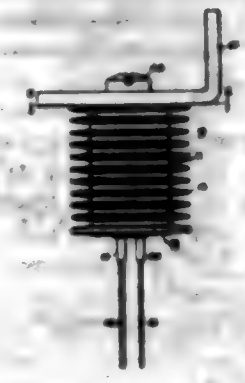
1. A dry capacitor comprising an anodized metal in intimate contact with a solid ionically conductive sulfate selected from the group consisting of stannous sulfate, antimony sulfate and bismuth sulfate.

2,862,157
ELECTROLYTIC CAPACITORS
Horace E. Haring, Summit, and Raymond L. Taylor, Berkeley Heights, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application September 14, 1956, Serial No. 609,976
8 Claims. (Cl. 317—230)



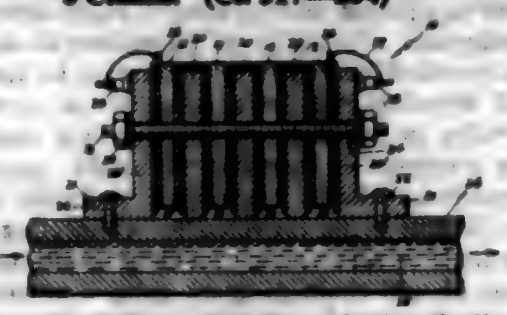
1. In an electrolytic device comprising an electrode of film-forming metal, another electrode, and an electrolyte contacting the electrodes, an electrolyte comprising a solution of boric acid and a salt which is a member of the class consisting of lithium chloride and calcium chloride.

2,862,158
SEMICONDUCTOR DEVICE
John P. Stelmak, Horseheads, and Raymond E. Brown, Elmira, N. Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 22, 1954, Serial No. 463,910
5 Claims. (Cl. 317—234)



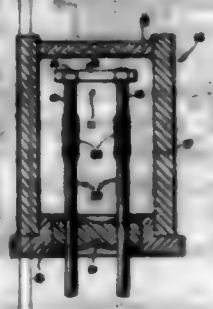
1. A semiconductive device comprising a metallic tubular housing having radiating fins thereon, a semiconductive unit located within the interior of said housing, said unit comprising a body of semi-conductive material having a pair of outer zones of one conductivity type on opposite sides and forming p-n junctions with an intermediate zone of the opposite conductivity, lead-in connection to said intermediate zone and one of said outer zones, means for positioning said semiconductive elements within said housing comprising a metallic member of high heat conductivity attached to the other of said outer zones, said member of suitable dimensions so as to be capable of being press fitted into the end of said housing, said lead-in connections to said outer zone and said intermediate zone brought out the opposite end of said housing through a closure member, said closure member comprising a button of insulating material having metallic rim and tubular sleeves embedded within the button so that said lead-in connections may be brought to the exterior of said housing through said closure member.

2,862,159
CONDUCTION COOLED RECTIFIERS
Wilbur Y. Walworth, Concord, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application October 29, 1954, Serial No. 465,683
8 Claims. (Cl. 317—234)



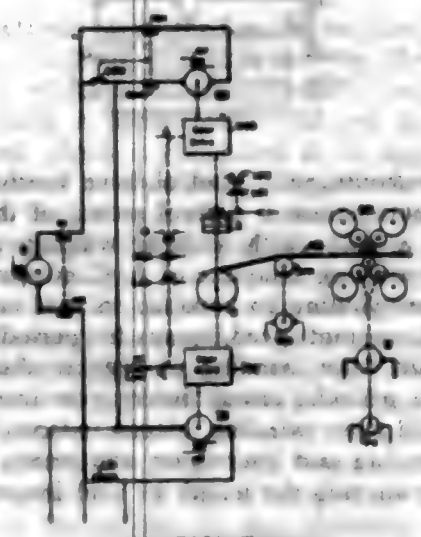
1. In combination, a plurality of electrically interconnected discoidal electronic rectifying elements, a heat dissipating structure having a single major mounting surface whose area and thermal conductivity are large as compared with the area and thermal conductivity, respectively, of said elements, a multiplicity of thermally conductive cooling members electrically insulated from and disposed between adjacent ones of said rectifying elements, all of said cooling members having a portion mechanically contacting said single mounting surface of said structure, said cooling members further being in substantial thermally conductive relationship with said mounting surface and said rectifying elements for conducting heat from said rectifying elements to said heat dissipating structure.

2,862,160
LIGHT SENSITIVE DEVICE AND METHOD OF MAKING THE SAME
Bernd Ross, Chicago, Ill., assignor to Hoffman Electronics Corporation, Los Angeles, Calif., a corporation of California
Application October 18, 1955, Serial No. 541,169
16 Claims. (Cl. 317—235)



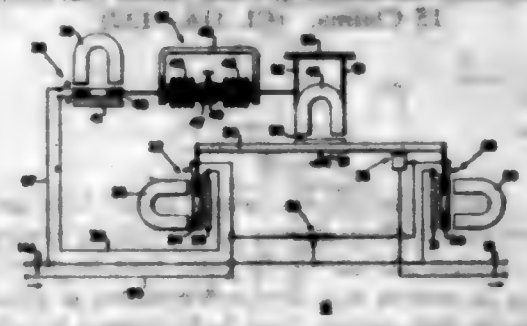
1. A photosensitive electron flow device comprising a body of crystalline, semi-conductor material, and a wire-like rod of unlike material, having an end embedded in said body to form a P–N junction between the material of the body and of said rod, said rod having a relatively flat portion extending immediately behind and closely spaced with respect to a light receptive bounding surface of said body.

2,862,161
MOTOR CONTROL WITH INERTIA COMPENSATING SYSTEMS
Donald E. Abell, Buffalo, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application January 6, 1954, Serial No. 557,748
26 Claims. (Cl. 318—6)



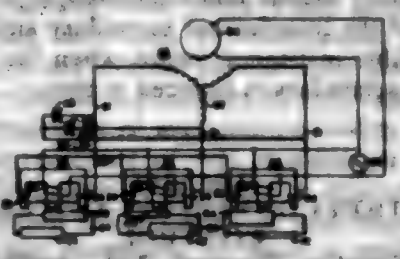
10. In an electric system of control for direct current dynamoelectric machines, in combination, a direct current generator having a field winding the excitation of which is to be controlled, a direct current motor connected in a loop circuit with the generator and having a field winding the excitation of which is to be controlled, a voltage regulating device the output voltage of which controls the excitation of the generator field winding, said motor being coupled to an overhauling rotating load the speed of which, during normal use, varies from a selected relatively low value to a selected higher value and whose weight, during such normal use, varies from a selected high value to a selected lower value, means for decreasing the excitation of the motor field winding with an increase in motor speed as a function of motor armature current and motor terminal voltage, a first control winding for the voltage regulating device, responsive to motor armature current, for increasing the output voltage of the regulating device to thus increase the counter-voltage of the generator to maintain the motor armature current constant to thus keep the power generated by the motor substantially constant, an inertia compensating control winding for the voltage regulating device, said inertia compensating control winding being energized as a function of the changes in field excitation of the motor field winding, and means for controlling the excitation of the inertia compensating winding as a function of the changes in excitation of the motor, and means for also controlling the excitation of the inertia compensating windings as a function of the changes in weight of the load.

2,862,162
FORCE REBALANCING SERVOSYSTEM
John A. Berling, Hatboro, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application May 27, 1953, Serial No. 357,477
23 Claims. (Cl. 318—31)



14. Apparatus for effecting a modification of a control signal comprising a pivoted member, input means positioned relative to said member to exert a first rotational force on said member, said input means being variable in accordance with the magnitude of an input signal, motion detecting means producing an output signal proportional to the motion of said pivoted member, a pivoted member balancing means connected to said motion detecting means and to said pivoted member to exert a balancing force on said member, and a pair of means, one of which is connected to respond to the output signal, positioned relative to said pivoted member to exert on said pivoted member a force which varies with time, each of said pair of means comprising a permanent magnet having a pair of planar pole faces, a planar magnetic field responsive means positioned in the field of said pole faces and carried by said switch member, and signal responsive means connected to create a reactive force between said permanent magnet and said magnetic field responsive means.

2,862,163
SELF-SYNCHRONOUS SERVOSYSTEM FOR TELEMETERING
Phineas S. Nierenson, Whitehall Boro, and John Mauer, Elizabeth, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 4, 1957, Serial No. 643,817
13 Claims. (Cl. 318—24)



8. In a dynamoelectric device, the combination comprising a rotor; means for supporting said rotor for rotational movement thereof; a pair of salient poles disposed on said rotor, said poles being displaced axially along the length thereof and being displaced 180° radially of said rotor; three E-core transformers mounted adjacent the periphery of said rotor and being displaced 120°

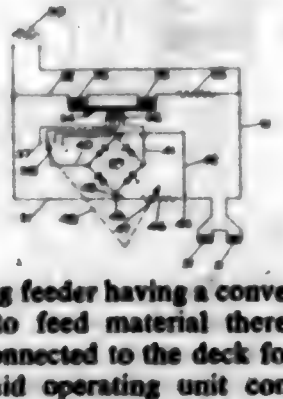
about the periphery of said rotor, said transformers being spaced about the periphery of said rotor to form a stator for said rotor and having the legs thereof in magnetic gap-bridgeable relationship with said salient poles, respectively; circuit means for coupling the primary winding of each of said transformers to a source of electric potential; and circuit means coupling the secondary windings of each of said transformers in series-oppositional relationship and for coupling said secondary windings respectively to a three-phasal output of an electrical generating device.

2,862,164

VIBRATING FEEDER CONTROL CIRCUIT

Gilbert R. Kehner, Upper Arlington, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio

Application November 2, 1956, Serial No. 619,970
15 Claims. (Cl. 318—132)



5. In a vibrating feeder having a conveying deck adapted to be vibrated to feed material therealong, a vibrator operating unit connected to the deck for imparting vibrations thereto, said operating unit comprising vibrating means and an armature secured to the vibrating means, a stator including coil means for providing a pulsating magnetic field to vibrate the armature and the vibrating means, means for supplying current to the coil means to produce said pulsating magnetic field including a control circuit comprising, a source of alternating current, a line connecting said source of alternating current to said coils, step-down transformer means connected across the alternating current line for producing a reduced alternating current, said transformer means including a tapped secondary and selector switch means connected to the secondary to provide a selected value of alternating current ranging from the maximum output of the secondary to zero, a full wave rectifier, the transformer secondary and the selector switch means being connected across the full wave rectifier to supply the selected value of alternating current to the rectifier to produce a direct current, the output of the rectifier being connected to the alternating current line to impose the direct current on the alternating current supplied to the coils for controlling the input to the coils, variable resistance means in the alternating current line connected across the output of the rectifier, control means for varying the value of the variable resistance means, said control means being ganged with said transformer secondary switch means to vary the value of the resistance means simultaneously with the change of the output of the transformer secondary and short circuiting the variable resistance means when the output of the transformer secondary is reduced to zero.

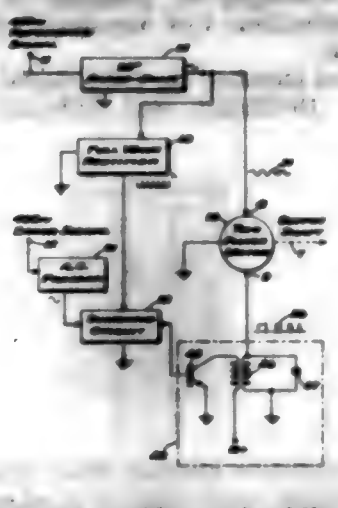
2,862,165

MODULATION-CONVERSION SWITCHED SERVO CONTROL

James R. Younkin, Garland, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application September 19, 1957, Serial No. 684,989
7 Claims. (Cl. 318—387)

1. Means for converting an amplitude-modulated signal to a pulse-width modulated signal, comprising means providing a reference signal having the center-frequency of said amplitude-modulated signal, a full-wave rectifier receiving said reference signal and rectifying it, a summing circuit receiving said amplitude-modulated signal



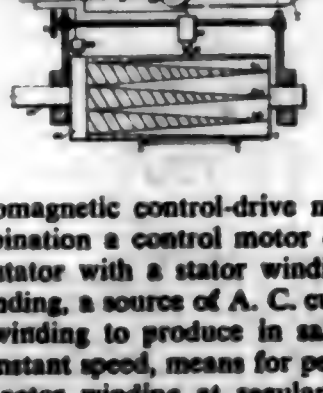
and the output of said rectifier and adding their instantaneous amplitudes, amplifier means receiving the output of said summing circuit, and said amplifier means being driven into saturation by the summing circuit output.

2,862,166

VARIABLE SPEED INDUCTION MOTOR

Wolfgang Karl Schmid, Gagny, France

Application June 2, 1954, Serial No. 434,628
11 Claims. (Cl. 318—232)



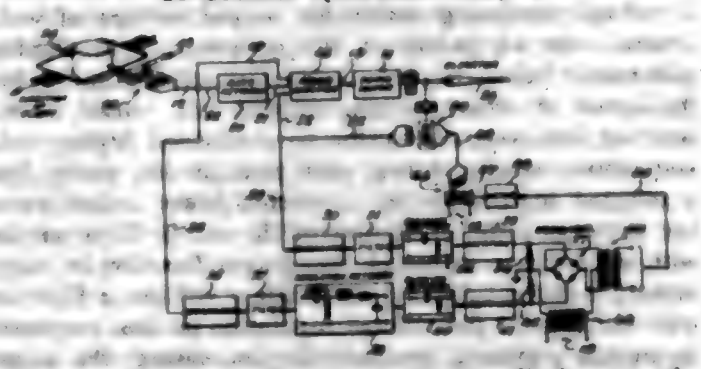
1. An electromagnetic control-drive mechanism comprising in combination a control motor of the induction type having a stator with a stator winding and a rotor with a rotor winding, a source of A. C. current connected to said stator winding to produce in said stator a field rotating at a constant speed, means for periodically short-circuiting said rotor winding at regular short intervals comprising a periodic circuit interrupter inserted in the circuit of said rotor winding, means independent of said motor for driving said interrupter and means on said interrupter for varying the length of said intervals.

2,862,167

AUTOPILOT SERVOMOTOR SYSTEMS

Robert S. Curry, Jr., Baldwin, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware

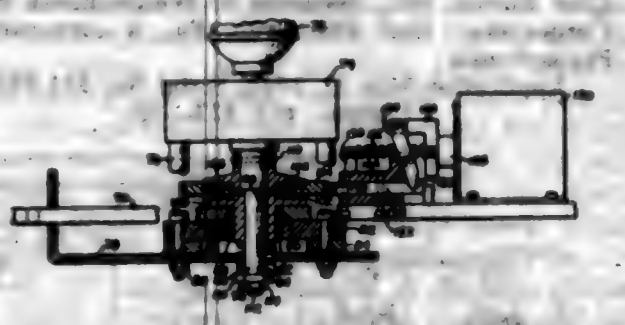
Application December 8, 1953, Serial No. 396,964
16 Claims. (Cl. 318—489)



2. A servo system for automatically piloting an aircraft movable about an axis subject to changeable load conditions including a servomotor operable to cause the

aircraft to move about the axis, means for operating said servomotor providing a signal in accordance with the angular displacement of the aircraft from a reference position about the axis, means connected to said displacement signal means providing a signal in accordance with a performance standard for the system for a particular load condition of the aircraft, signal means for measuring the output of said servomotor, means for comparing the signals of said performance standard means and output measuring signal means to provide a monitoring output under other load conditions of the aircraft, means for modifying the operating characteristics of the system, and means for adjusting said modifying means in accordance with said monitoring output signal to vary the operating characteristics of the system and thereby maintain the performance standard for the other load conditions.

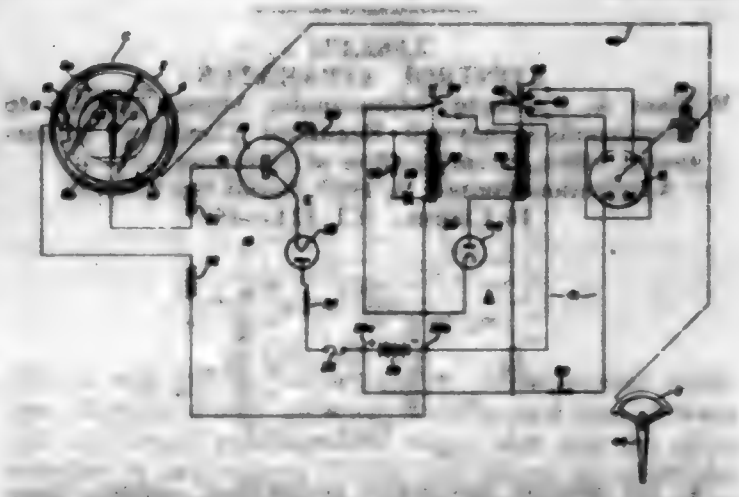
2,862,168
AUTOMATIC RUDDER CONTROL FOR AIRCRAFT, SEA CRAFT AND THE LIKE
John J. Zeber, Bayside, N. Y.
Application February 1, 1955, Serial No. 485,422
3 Claims. (Cl. 318—489)



1. A directional stabilizer for automatically controlling the rudder of aircraft, sea craft and the like, comprising a control bar which is pivotally mounted intermediate its ends and which is connected at one end to one side of a rudder and which is connected at its opposite end to the other side of said rudder, a slip clutch connected to said control bar, a reversible motor connected to said slip clutch, whereby rotation of said motor in one direction causes the control bar to pivot in one direction and whereby rotation of said motor in the opposite direction causes said control bar to pivot in the opposite direction, and a gyroscopic directional indicator having a directional pointer and a pair of contact members, one on one side of the pointer and the other on the opposite side of the pointer, said pointer and said contact members being electrically connected to said reversible motor, whereby movement of the pointer in one direction into engagement with one of said contact members closes a circuit to the motor and causes it to rotate in one direction and whereby movement of the pointer in the opposite direction into engagement with the second contact member closes a second circuit to the motor and causes the motor to rotate in the opposite direction.

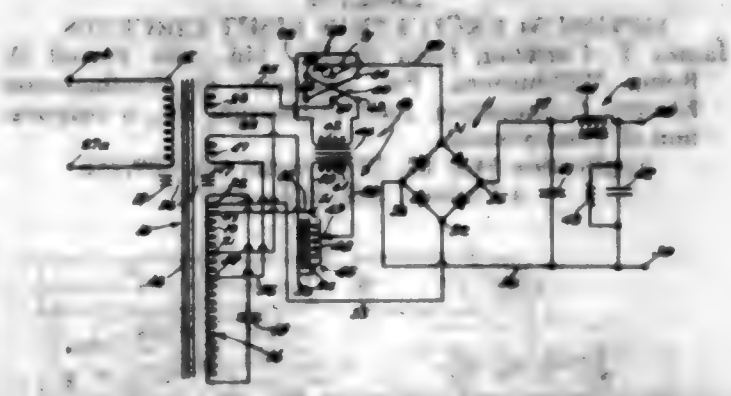
2,862,169
CONTROL CIRCUIT FOR AUTOMATIC STEERING DEVICES
Simon J. Yragui, San Francisco, Calif., assignor of one-half to Walter H. Lunsmann, Sr., San Francisco, Calif.
Application November 6, 1956, Serial No. 620,612
1 Claim. (Cl. 318—489)

In compass-controlled automatic steering devices for moving vessels a circuit arrangement for the control of a reversible motor arranged to actuate the steering means of the vessel, comprising a relay, a power circuit for said relay including a source of electric power, a normally non-conductive transistor connected into said power circuit in series with said relay, a control circuit for said transistor connected across said same source of electric power and including a compass-actuated control switch and a high ohmic resistor in series with said switch, said control circuit being effective upon closure of said compass-actuated switch to render said transistor conductive with respect to the power circuit of said relay and cause energization of said relay, a power circuit for said motor



including said same source of electric power, a switch in the power circuit of the motor operative in response to energization of said relay to reverse the manner in which said motor is connected across said source of power and thus reverse operation of said motor, and means for selectively adjusting the response sensitivity of the control arrangement including a condenser connected across said relay.

2,862,170
VARIABLE POWER SUPPLY APPARATUS
Hans U. Hjernsted, Chicago, Ill., assignor, by mesne assignments, to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin
Application November 23, 1956, Serial No. 624,070
7 Claims. (Cl. 321—16)



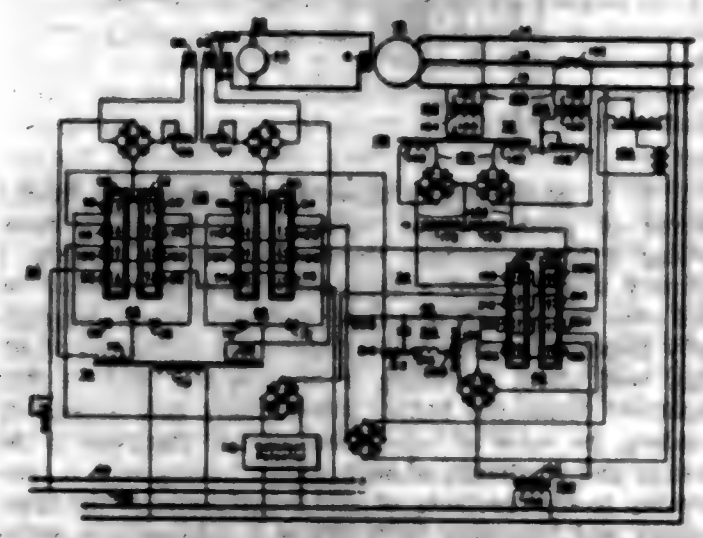
1. D. C. power supply apparatus for operation from a source of predetermined voltage and frequency comprising a high reactance transformer having a core, a primary winding and a secondary winding disposed on said core and a high reluctance magnetic shunt magnetically disposed between said primary and secondary windings, said shunt including a nonmagnetic gap, a first capacitor connected across substantially said secondary winding, the value of capacitance of said capacitor at the voltage and frequency of such source having such a relationship to the reactance of said transformer at the same voltage and frequency as to create a substantially series resonant condition in the circuit of said transformer and capacitor during operation, at least a portion of said secondary winding forming a load winding, rectifier means of low internal resistance having input terminals connected to said load winding and having output terminals, a second capacitor of high capacity value connected across said output terminals, said nonmagnetic gap having a value such that said transformer provides a reactance for limiting the charging current of said load

winding to said second capacitor, the capacity value of said second capacitor being such that the input voltage to said rectifier means becomes a substantially square wave, a variable source of voltage connected to be excited from said secondary winding and connected between said load winding and said rectifier means, and load terminals connected to the terminals of said second capacitor.

2,862,171
CONTROL APPARATUS
William A. Freeborn, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application January 2, 1957, Serial No. 632,153
10 Claims. (Cl. 321—45)

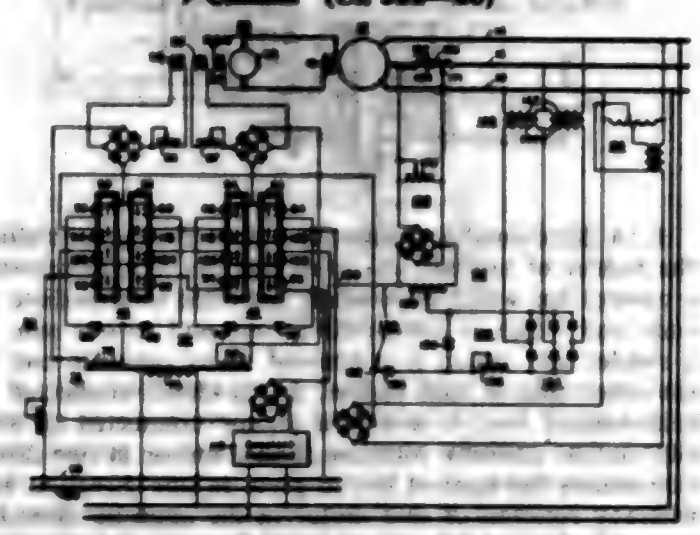
4. An electric modulator comprising: output transformer means having an output winding and an input winding, said input winding having two parts connected in series-opposing relation; switching means connected to said parts of said input winding, said switching means being operable by an alternating current to repetitively shunt alternately one and then the other of said parts; a source of modulating signal; conductive means connecting said source in parallel relation to said input winding, so that current from said source flows alternately through one and the other of said parts, thereby producing an alternating signal in said output winding of phase and magnitude determined by the polarity and magnitude of said modulating signal.

2,862,172
MINIMUM EXCITATION LIMIT CIRCUITS
James T. Carleton, Glen Burnie, Md., and Powell O. Bobo, Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 16, 1955, Serial No. 509,756
4 Claims. (Cl. 322—25)



1. In a regulator system for a generator having a field winding and disposed to supply energy to an electrical system, the combination comprising, a sensing circuit including two rectifier units each having input and output terminals, an impedance circuit connected to the electrical circuit to be energized by a measure of a current flowing in the electrical circuit and by a measure of a voltage in the electrical circuit, circuit means connected to said impedance circuit for applying to the input terminals of both of the rectifier units a voltage proportional to said measure of the voltage in the electrical circuit, said voltage applied to one of the rectifier units being of substantially greater magnitude than said voltage applied to the other of the rectifier units, and for applying only to the input terminals of said other of the rectifier units a voltage proportional to said measure of the current flowing in the electrical circuit, and an electrical network connected to the output terminals of the two rectifier units for producing at its output a direct-current voltage that is a measure of the difference in the output voltages of the two rectifier units, and further circuit means for rendering the field winding of the generator responsive to said direct-current voltage once the relative magnitudes of the output voltages of the two rectifier units reach a predetermined value, to thereby provide a minimum excitation limit for the generator which follows the pull-out characteristic of said generator.

2,862,173
OVER-CURRENT LIMIT DEVICES
Powell O. Bobo, Pittsburgh, Pa., and James T. Carleton, Glen Burnie, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 31, 1955, Serial No. 511,926
7 Claims. (Cl. 322—25)

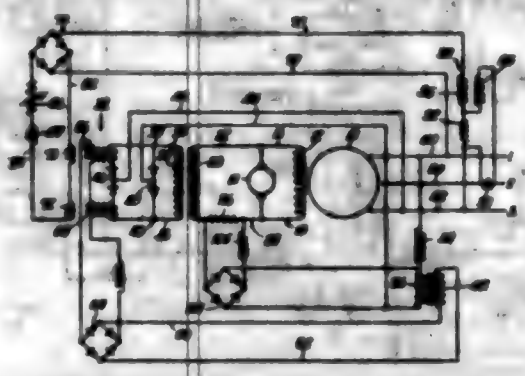


1. In a control system for a dynamo-electric machine having a field winding, the combination comprising, a non-linear circuit, means for changing the voltage-current characteristic of the non-linear circuit in accordance with the terminal voltage of the dynamo-electric machine, an impedance member, means for producing across the impedance member a voltage which varies in accordance with the current of the dynamo-electric machine, means for connecting the non-linear device in series circuit relationship with the impedance member, circuit means for comparing a measure of the terminal voltage of the dynamo-electric machine with the voltage across said series circuit, and further circuit means for controlling the field winding of the dynamo-electric machine in accordance with the larger of said compared voltages, to thereby provide an over-current limit for the dynamo-electric machine which varies with the terminal voltage of said dynamo-electric machine.

3,862,174
VOLTAGE REGULATOR FOR ALTERNATOR
Hans Richard Auger Hansen, Cudahy, and William J. Bradburn, Jr., Milwaukee, Wis., assignors to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Application October 11, 1954, Serial No. 461,856
4 Claims. (Cl. 322—28)

1. Controlling apparatus for an alternating current generator having an exciter comprising: an armature, a

self excited field winding for said armature, a separate field winding for said armature, a control field winding for said armature, an excitation coil for said generator, means for connecting the output voltage of said armature to said self excited field winding and to said excitation coil, a saturated transformer having a primary and a secondary winding, an unsaturated reactor, the primary winding of said saturated transformer and said unsaturated reactor being connected in series across the output of said generator, a first rectifying means connected to the secondary winding of said saturated transformer, means for applying the output of said first rectifying



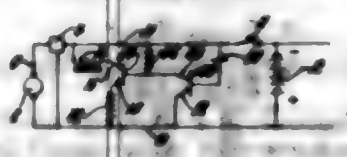
means to said separate field winding so that the ampere turns of said separate field and said self excited field are in adding relation, a second rectifying means connected to said unsaturated reactor, regulating means powered by the difference between the outputs of said first rectifying means and said second rectifying means, and regulator means supplied by the voltage across the unsaturated reactor, the output of said regulator means varying directly with the output of said generator and being connected to said control field winding in opposing relation to the inputs to said self excited field winding and separate field winding.

2,862,173

TRANSISTOR CONTROLLED VOLTAGE REGULATOR FOR A GENERATOR

James H. Guyton and Edward G. Rohn, Kokomo, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 15, 1954, Serial No. 468,731
4 Claims. (Cl. 322—28)



1. In an electrical system, a direct current generator having an output circuit and energizing field, power lines base, emitter and collector electrodes, said emitter and connectible to said output circuit, a transistor having a collector being connected in series circuit with said field across said power lines, a rectifier and a second transistor network connected across said power lines the base of said first transistor being connected to an electrode of said second transistor, said rectifier connected in such relation as to prevent flow of current from the high voltage line to the low to apply a bias to said base.

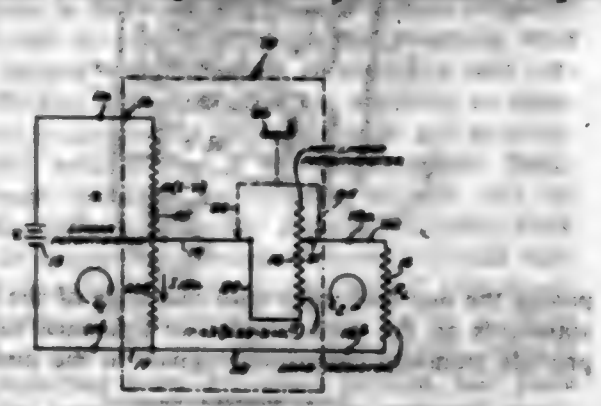
2,862,176

POTENTIOMETER LOADING COMPENSATOR

Howard E. Lustig, Flushing, N. Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N. Y., a corporation of Delaware

Application March 26, 1957, Serial No. 648,693
2 Claims. (Cl. 323—74)

1. A loading compensator for a linear potentiometer by which the output voltage thereof will be maintained linear regardless of variations in the ratio between a load resistor and the resistance of the linear potentiometer, said loading compensator comprising a linear potentiometer having a resistance element and a slidable wiper output arm, a non-linear potentiometer having a resistance element and a slidable wiper output arm, means connecting said linear potentiometer to one terminal of a voltage source, means connecting said linear potentiometer output



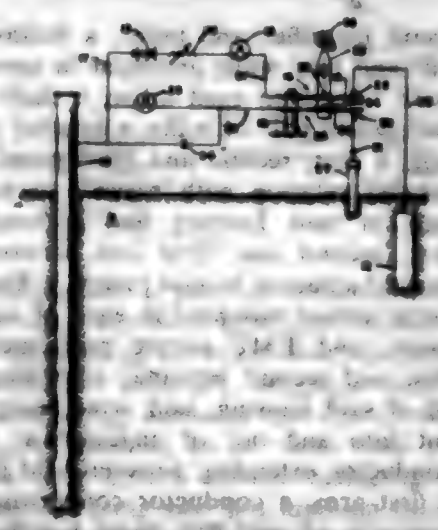
arm to one end of said non-linear potentiometer resistance element, a load, means connecting said load between said non-linear potentiometer output arm and the other terminal of said voltage source, and means by which the same longitudinal movement along the resistance elements of said linear potentiometer and said non-linear potentiometer is simultaneously imparted to both of said output arms.

2,862,177

APPARATUS FOR MEASURING THE CHARGE ON BURIED CONDUCTORS

Yale W. Titterington, Tulsa, Okla.

Application February 28, 1955, Serial No. 490,989
8 Claims. (Cl. 324—29)



1. An apparatus for measuring the electrical charge on a conductor in contact with the earth and in a state of polarization comprising means including a power supply to place an electric charge on said conductor, a first switch to disconnect said power supply from said conductor, a standard half cell, means including a condenser and a second switch in series to connect said standard half cell to said conductor, means to determine the voltage across said condenser, and gang means to open said first switch and close said second switch substantially simultaneously.

2,862,178

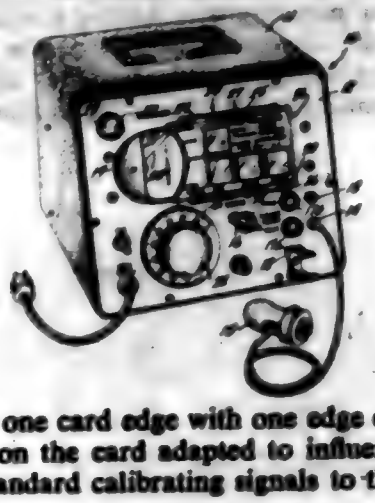
TEST INSTRUMENT CALIBRATING APPARATUS

William Cullen Moore, Mountain Lakes, N. J., assignor to Bendix Radio Corporation, Township of Parsippany-Troy Hills, N. J., a corporation of New Jersey

Application February 10, 1956, Serial No. 564,671
8 Claims. (Cl. 324—34)

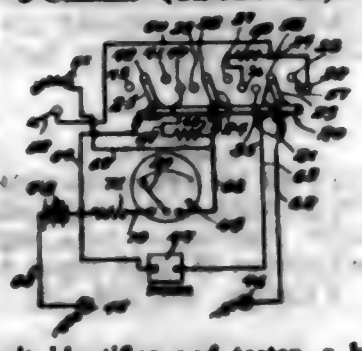
1. Calibration apparatus for a probe carrying instrument incorporating a meter deflected in accordance with

indicating signals representative of a characteristic being tested by the probe comprising an indicia carrying card including a scale on one edge, means for removably juxta-



posing the one card edge with one edge of the meter, and standards on the card adapted to influence the probe to provide standard calibrating signals to the meter.

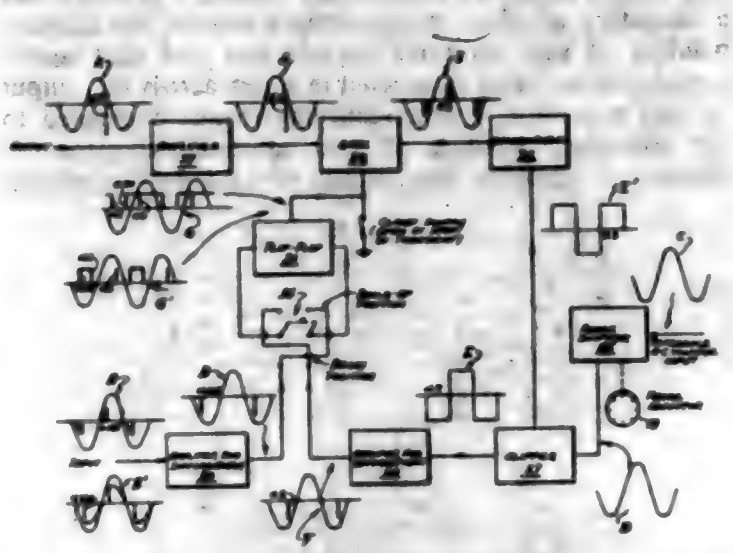
2,862,179
CIRCUIT IDENTIFIER AND TESTER
Freland M. Murphy, Houston, Tex.
Application December 20, 1954, Serial No. 476,412
3 Claims. (Cl. 324—51)



1. In a circuit identifier and tester, a hollow housing including front and rear walls arranged in spaced parallel relation with respect to each other, a shaft rotatably mounted between said pair of walls, a bracket positioned in said housing, a first, second and third panel arranged in spaced parallel relation with respect to each other and positioned in said housing and secured to said bracket, a first, second and third arm secured to said shaft and arranged adjacent to said panels, a first, second, third and fourth contact mounted in each of said panels, a buzzer, meter, and EMF source positioned in said housing, a first and second terminal extending through the front wall of said housing, said arms being mounted for movement into and out of engagement with said contacts, a conductor extending between said first terminal and said first arm, a conductor connecting the first and second contacts of said first panel together, a conductor connecting the third contact on said first panel to said buzzer, a wire connecting the first contact of said first and second panels together and having a resistor therein, an adjustable resistance connected to said wire and to said second arm and to said meter, a conductor connecting the first contact of said third panel to said second arm and having a resistor therein, a conductor connecting said EMF source to said meter and having a resistor therein, and a conductor connecting said third arm to said buzzer.

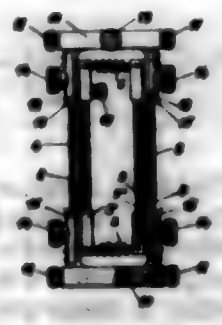
2,862,180
TRANSIENT ANALYZER FOR MAGNETIC AMPLIFIERS
Edward J. Smith, Brooklyn, N. Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application June 30, 1954, Serial No. 440,576
5 Claims. (Cl. 324—57)

1. Apparatus for measuring the response time of a magnetic amplifier comprising means for accepting an output from such magnetic amplifier, means for transforming said output into a sharp negative pulse of short duration coincident with the saturation angle of such magnetic amplifier, means for accepting an adjustable



phase A.-C. reference voltage and for shifting the phase thereof, means for transforming said reference voltage to a sharp negative pulse of short duration and means for cyclically comparing said two pulses during the transient of such magnetic amplifier.

2,862,181
APPLIANCE FOR THE MEASUREMENT OF THE ELECTRIC RESISTANCE OF INSULATING FILAMENTS MORE PARTICULARLY FOR MEASURING THE ELECTRIC SPECIFIC SURFACE RESISTANCE OF GLASS FILAMENTS
Vítězslav Havlíček and Jan Starch, Prague, Czechoslovakia, assignors to Kristl-Karlín, vyvojovy závod, narodni podnik, Prague-Karlín, Czechoslovakia
Application September 6, 1956, Serial No. 608,284
5 Claims. (Cl. 324—65)

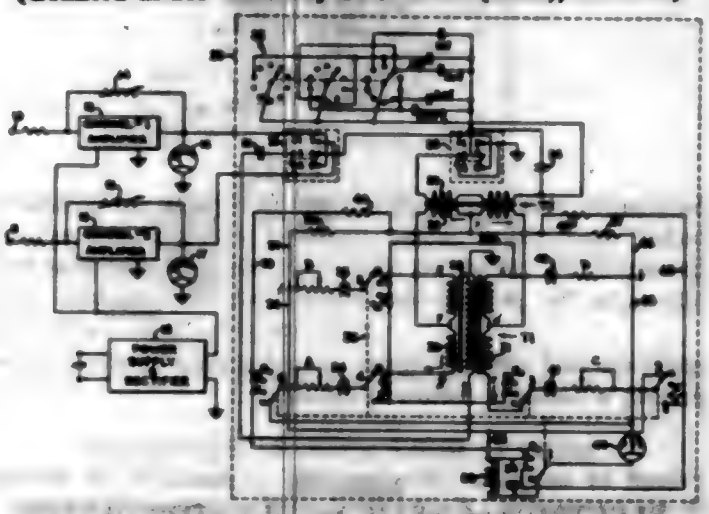


1. Apparatus for use in measuring the electrical resistance of filaments of insulating material, comprising a rigid outer, frame-like electrode having two opposed side portions, an inner frame-like electrode arranged within said outer frame-like electrode and including two opposed side portions which extend parallel to said side portions of the outer electrode and are spaced from the latter so that the adjacent side portions of the inner and outer electrodes can be wrapped with the filaments to be measured, said inner electrode further including tension springs connected between the ends of said side portions of the inner electrode for pulling together the related side portions, thereby to maintain the spaced apart relationship of said adjacent side portions, and terminals for connection to a source of electric current mounted on said outer and inner electrodes, respectively.

2,862,182
NINETY-DEGREE PHASE METER DISCRIMINATORS

Harry G. Postheuser, Zanesville, Ind., assignor to the United States of America as represented by the Secretary of the Navy

Application June 10, 1954, Serial No. 435,958
7 Claims. (Cl. 324—87)
(Granted under Title 35, U. S. Code (1952), sec. 266)

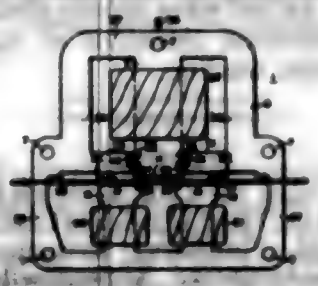


1. In a phase meter, a phase discriminator comprising; a pair of transformers each adapted to have a primary winding coupled to an alternating current source the phase relation of which is to be determined, one of which transformers has one center-tapped secondary and the other of which has two center-tapped secondaries, the end leads of said secondary of said one transformer each being connected respectively to the center taps of said other transformer secondaries and the end leads of the secondaries of said other transformer each being connected across a load to the center tap of said one transformer secondary, the connection of said end leads of said other transformer having a rectifier means and a rectifier matching means therein; means for switching the input current sources to the primaries of said transformers; means for reversing the polarity of the input current to the primary of either of said transformers; and means coupled to the primary of either of said transformers for matching the phase relation of the primary and secondary of said transformers.

2,862,183
COMBINATION SPACING AND CLAMPING DEVICE

Karl Palmer, West Orange, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application October 29, 1954, Serial No. 465,568
2 Claims. (Cl. 324—137)

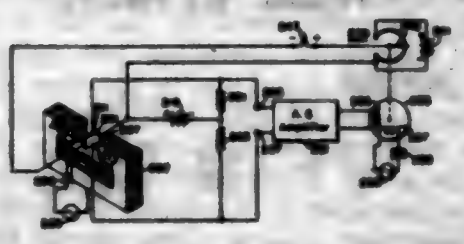


1. In an electrical meter, a magnetic structure including a voltage magnetic portion formed of a plurality of integral laminations and a current magnetic portion, said voltage portion including a voltage magnetic pole and a pair of magnetic arms connected in parallel magnetic circuit relation with said voltage pole, said voltage pole having a voltage pole face and a pair of side faces, said magnetic arms having end faces with each of the end faces being spaced from a separate one of said side faces, the laminations of said voltage pole and said magnetic arms defining first planes stacked in a direction extending transverse to the direction of spacing of the end faces and side faces, said current portion including a pair of spaced current magnetic poles having current pole faces defining a common plane spaced from the plane of the voltage pole face to define an air gap, voltage winding means surrounding the voltage pole effective when energized to direct an alternating voltage magnetic flux through said air gap and through said magnetic arms in parallel, current winding means surrounding said current poles effective when energized for directing an alternating-current magnetic flux through the air gap to establish with said voltage flux a shifting magnetic field, armature means mounted for rotation through said air gap under the influence of said shifting magnetic field, and means for spacing said magnetic arms and said voltage pole and clamping the laminations thereof, said means comprising a pair of plate members each having a spacer portion and a plurality of spaced deformable integral extensions projecting from the spacer portion, said plate members being positioned relative to the magnetic structure with each of said spacer portions extending transverse to said first planes between the voltage pole and a separate one of the magnetic arms in a wedged condition, and with said extensions extending parallel to said first planes in clamping engagement with end laminations of the voltage pole and the magnetic arms.

2,862,184
SEMICONDUCTOR TRANSLATING DEVICE

Richard L. Longini, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application September 23, 1954, Serial No. 457,599
14 Claims. (Cl. 324—142)



6. In combination: a body of semiconductive material forming one electrode of at least one p-n junction means; means for establishing a current flow through said body of semiconductive material; magnetic field producing means for deflecting minority carriers in said body of semiconductive material to or from said p-n junction means; and bias source means including output impedance means biasing said p-n junction means so as to facilitate passage of minority carriers in said semi-conductive material through said p-n junction means.

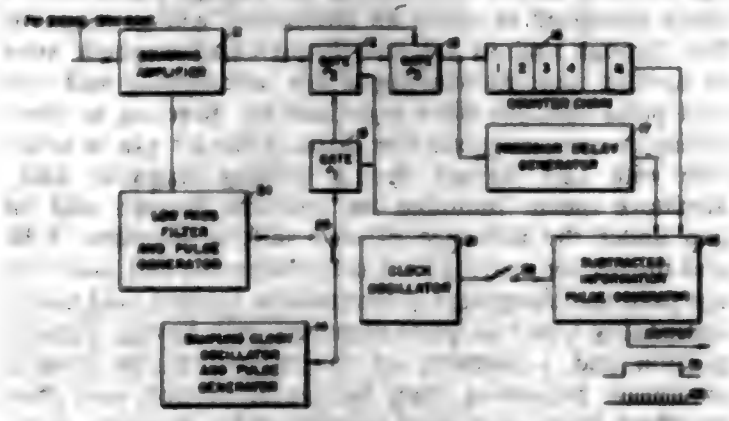
2,862,185
ELECTRONIC FM/FM TO ANALOG OR DIGITAL CONVERTER

John O. Dick, Riverside, Calif., assignor to United States of America as represented by the Secretary of the Navy

Application June 29, 1956, Serial No. 595,823
3 Claims. (Cl. 332—1)
(Granted under Title 35, U. S. Code (1952), sec. 266)

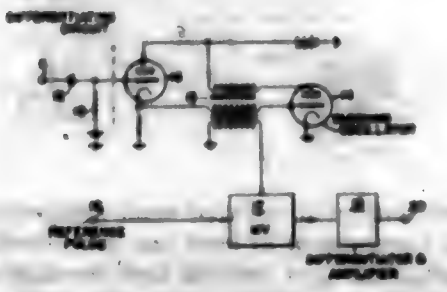
1. An electronic circuit for converting information which is a function of frequency on a frequency modulated carrier to an output signal which is a function of time comprising a squaring amplifier adapted to receive the frequency modulated sine wave input and generate a corresponding square wave output, means for providing a sampling pulse at certain intervals, a counter chain adapted to count a predetermined number of square waves and provide a pulse output at the end of said

count, a precision delay generator adapted to provide a pulse output a predetermined time after initiation, a first gate adapted to receive said sampling pulse, a second gate adapted to be primed by said first gate and pass the first negative going portion of the square wave signal from said squaring amplifier, a third gate adapted



to be opened by said second gate and pass only complete squars waves to said counter chain and precision delay generator, and a subtracted information pulse generator adapted to receive the pulse output from said counter chain and said delay generator and provide an output signal of variable time duration.

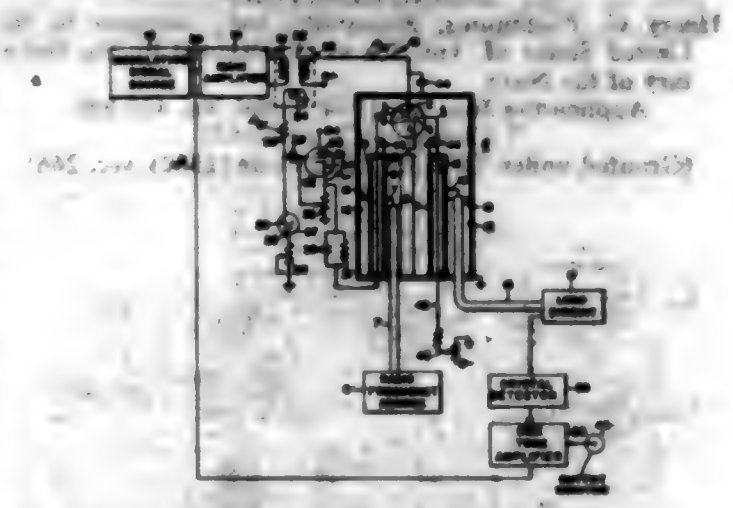
2,862,186
TRANSMISSION OF A DERIVATIVE SIGNAL BY PULSE CODE
Pierre Raoul Roger Aigrain, Paris, France, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application August 5, 1953, Serial No. 372,424
Claims priority, application France August 7, 1952
3 Claims. (Cl. 332—11)



1. A coded pulse transmission system of the type referred to comprising a signal source, means for differentiating signals of said source, means for producing pulses in response to said differentiated signals which are time modulated in accordance therewith, a source of reference pulses of predetermined constant repetition rate and means jointly responsive to said time modulated pulses and to said reference pulses for producing coded output pulses in which the signal wave intelligence is conveyed by the presence or absence of pulses in regularly repetitive time periods.

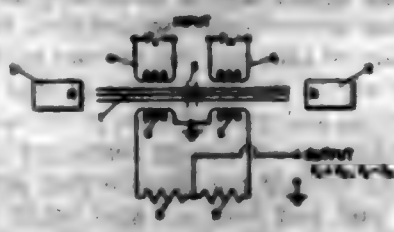
2,862,187
SIGNAL MODULATING SYSTEM
Randolph R. Frost, Syracuse, and John F. Adams, Potsdam, N. Y., assignors to General Electric Company, a corporation of New York
Application November 6, 1956, Serial No. 620,715
7 Claims. (Cl. 332—37)

1. In combination, a signal amplifier having a screen electrode and a plate electrode, a source of a first frequency signal, a source of a second frequency signal, means for applying said first signal to said amplifier, means for modulating said applied signal with said second signal comprising means for applying said second signal to said plate electrode, means for clipping a negative portion of the said second signal from said source, and means for



applying said clipped signal to said screen electrode comprising a cathode follower circuit.

2,862,188
ELECTROMAGNETIC MODULATOR DEVICE
Victor A. Minsk, Nashua, N. H., assignor, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N. H., a corporation of Delaware
Application June 17, 1954, Serial No. 437,501
7 Claims. (Cl. 332—51)

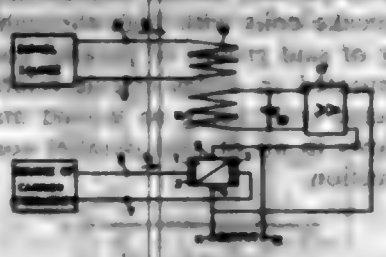


2. A magnetic modulator comprising: a core of magnetic material; magnetizing means coupled to said core for inducing in said core a pair of opposing flux paths for developing flux nulls at the regions of junction of said flux paths; a modulation-signal winding on said core in the vicinity of one of said flux-path junctions for applying a modulation signal for varying the relative flux strengths in said paths to oscillate said flux nulls; an output winding on said core in the vicinity of one of said flux-path junctions and responsive to said variations of said flux strengths and, particularly, to the motion of said flux nulls resulting from said variations; and means for coupling a carrier-wave signal to said core for applying a carrier-wave signal to further vary said flux strengths, whereby the physical positioning of said flux nulls oscillate at frequencies which are the algebraic sum of the modulation and carrier-wave signals resulting in the developing of modulation sidebands of said carrier-wave signal in said output winding.

2,862,189
HALL VOLTAGE DEVICE FOR TRANSLATING ELECTRIC MAGNITUDES
Friedrich Kuhrt, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation
Application March 26, 1953, Serial No. 724,631
Claims priority, application Germany April 10, 1957
12 Claims. (Cl. 332—51)

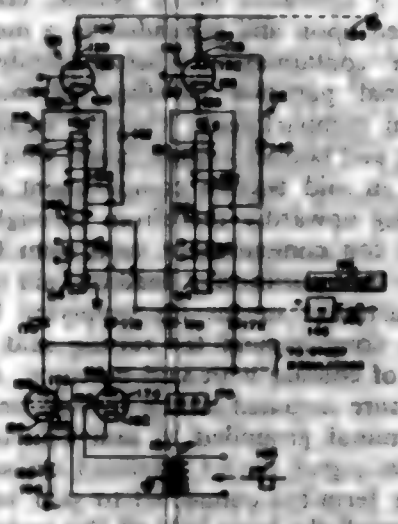
1. An electric current-translating device, comprising a Hall-voltage generator having a semiconducting Hall plate with current supply terminals and Hall electrodes and having a magnetizable core with a gap field in which said plate is disposed and a field excitation winding on said core, an input circuit having a source of signal current and being connected to said winding, an energizing

circuit having a carrier-frequency source and being connected to said terminals to pass current through said plate, said latter source having a higher frequency than the variation of said signal current, an output circuit



connected to said Hall electrodes to provide translated voltage, and oscillation circuit means inductively linked with said core and having a high frequency as compared with said carrier frequency for nulling of magnetic remanence effects of said core.

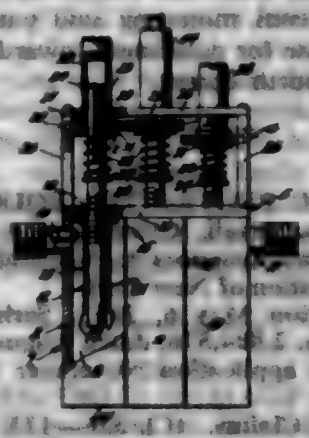
2,862,190
MAGNETIC MODULATOR SYSTEM
Robert W. Schumann, Wheaton, Ill., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware
Application May 18, 1956, Serial No. 585,104
26 Claims. (Cl. 332—51)



1. In a magnetic modulator system having a plurality of magnetic modulator elements coupled to a single detector, each of said elements including winding means, means including a source of excitation for saturating each element in opposite directions, means selectively coupling at least part of the saturating means to said winding means for permitting alternating saturation of the modulator element selected, and means for effectively decoupling the alternating saturation means from the unselected elements.

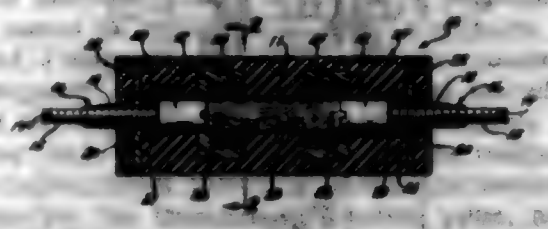
2,862,191
MULTIPLE CAVITY TUNING ARRANGEMENT
Angus A. Macdonald, Hinsdale, Ill., and Alfred W. Ward and Franklin G. Lee, Baltimore, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application February 17, 1956, Serial No. 566,316
6 Claims. (Cl. 333—73)

1. In combination, a cavity resonator having input and output coupling means and comprising a plurality of tunable coaxial cavities, a tuning slug individual to each of and adapted to be threaded into said cavities, said slugs being threaded on one end and splined on the opposite end, a spring biased tubular member individual to each of said cavities adapted to receive said splined ends of said slugs, gear means mounted on said tubular members, said gear means being in meshing relationship when said tubular members are in a biased position, said tubular members adapted to be depressed



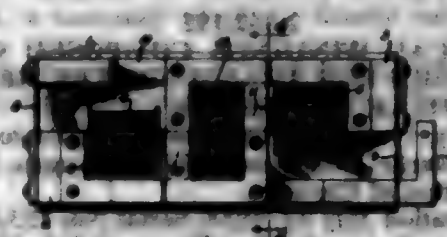
to overcome said bias thereon whereby said gear means are disengaged.

2,862,192
VARIABLE INDUCTOR
Simon A. Golbert and Edwin L. Alme, Los Angeles, Calif., said Alme assignor to said Golbert
Application September 13, 1954, Serial No. 455,702
2 Claims. (Cl. 336—96)



1. In a variable inductor for use in a radio frequency transformer or the like, the combination of: a length of tubing; a tuning slug positioned within said tubing; a cap carried at each end of said length of tubing for sealing said tubing; means projecting through at least one of said caps for moving said slug axially within said tubing; a viscous material substantially filling said sealed length of tubing; an electrical coil mounted on the exterior of said tubing; and a housing encapsulating said coil and sealed length of tubing, with said slug moving means projecting through said housing, said housing comprising a unitary molded structure of electrical insulating material.

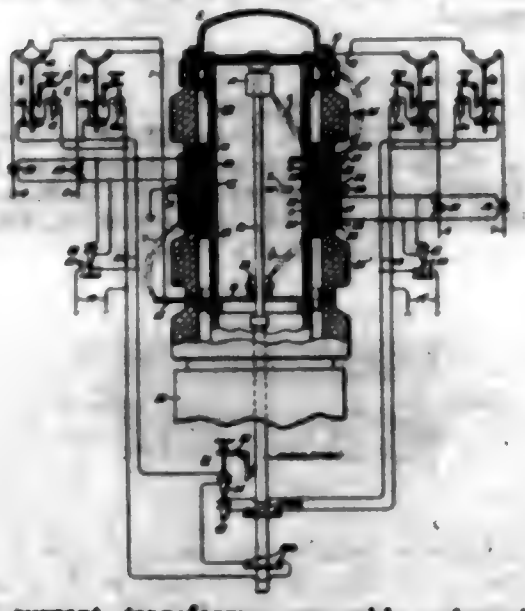
2,862,193
DIFFERENTIAL TRANSFORMER
Robert A. Frykhund, Dedham, Mass., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application March 13, 1958, Serial No. 721,156
5 Claims. (Cl. 336—119)



1. A differential transformer comprising a primary coil, a pair of secondary coils, a pair of U-shaped magnetic cores arranged with a side leg of one core adjacent a side leg of the other core and with their open ends opposite so as to form substantially a letter S, said primary coil embracing the adjacent legs of said pair of cores, a third and a fourth U-shaped magnetic core respectively arranged with their open ends facing the open ends of one and the other of said pair of cores and with legs

substantially colinear with the legs thereof, said secondary coils embracing said third and fourth cores, respectively, a base, said third and fourth cores being fixed to the base, and means mounting said pair of cores with respect to said base for movement toward and away from said third and fourth cores.

2,862,194
ELECTRIC PROTECTIVE EQUIPMENT
Thellwell R. Coggeshall, Cynwyd, and Herman Bany, Lansdowne, Pa., assignors to General Electric Company, a corporation of New York
Original application May 6, 1953, Serial No. 353,358, now Patent No. 2,804,576, dated August 27, 1957. Divided and this application November 30, 1956, Serial No. 625,359
8 Claims. (Cl. 336—173)

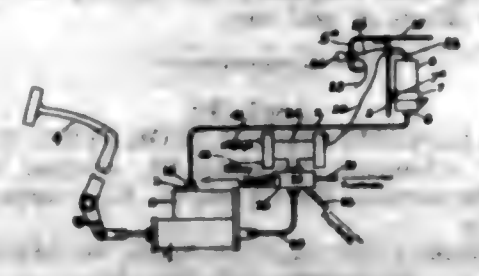


1. A current transformer assembly adapted to be mounted about a primary conductor, a pair of juxtaposed secondary windings having inner and outer peripheral portions, conductive casing means disposed about said outer peripheral portion, conducting means extending from said inner peripheral portion between said windings and into an electrical connection with said casing means adjacent said outer peripheral portion, said assembly being grounded at said outer peripheral portion, and means insulating said casing means from said conducting means at all locations except at the outer peripheral portion of the assembly electrically between said windings for causing current in said conducting means flowing between said inner and outer peripheral portions to flow to ground only in a path between said windings, and for causing current flowing to ground in said casing means to be essentially magnetically independent of said windings.

2,862,195
CYLINDRICAL WINDINGS COMPOSED OF PANCAKE COILS FOR TRANSFORMERS, REACTORS AND SIMILAR APPARATUS
Helmut Kury, Nuremberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Application July 22, 1955, Serial No. 523,871
Claims priority, application Germany July 22, 1954
5 Claims. (Cl. 336—180)

1. In an inductive winding for electrical apparatus in combination, a number of pancake coils, each pancake coil comprising a plurality of conductors wound in interleaved relationship, the turns being insulated from one another and connected in series circuit relationship, a plurality of said pancake coils spaced from one another and connected in parallel circuit relationship to provide a group of pancake coils with high through capacitance and a plurality of said groups of parallel connected pancake coils connected in series circuit relationship, said parallel connected coils being so wound and connected that current flows in all of said parallel connected coils in the same direction.

2,862,196
BRAKE SAFETY DEVICE
James Christmann, Jr., Farrell, Pa.
Application December 1, 1955, Serial No. 550,436
2 Claims. (Cl. 340—53)



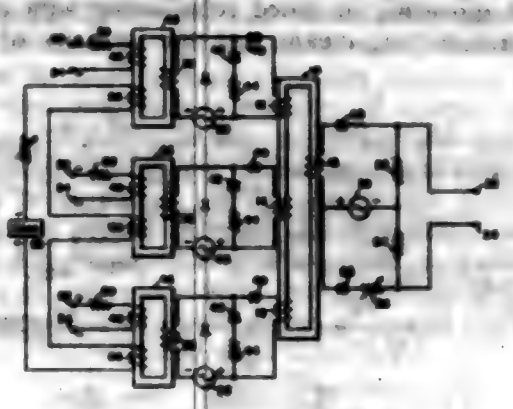
1. A safe brake fluid supply indicating device for a vehicle having a hydraulic brake system, comprising a housing mounted upon and grounded to a metal part of the vehicle for containing a reserve supply of brake fluid, an internal partition dividing the housing into top and bottom compartments, conduit means connecting the housing and bottom compartment with said brake system, a float in said bottom compartment and having a stem extending upwardly therefrom through said partition into said top compartment, said stem being insulated relative to said partition, a head on said stem within said top compartment, means for supplying brake fluid to said bottom compartment for raising said float head above and out of contact with said partition, a normally open fluid pressure actuated switch in said brake system having one terminal grounded to said vehicle, an electrically actuated signal device mounted on said vehicle and having one terminal connected to said vehicle ignition system through the open side of the ignition switch, a terminal mounted on said housing in insulated relation thereto, a wire connecting the remaining terminal of said signal device with the housing terminal and the remaining terminal of the pressure actuated switch grounding the signal device to the vehicle upon actuation of the said brake system, and means on said partition and float head grounding said signal device through said terminal and housing when the float head engages with said partition means upon depletion of brake fluid in the housing bottom compartment.

2,862,197
AMPLITUDE DISCRIMINATOR
John F. Ringelmann, Catonsville, and Gordon E. Lynn, Severn Park, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 7, 1955, Serial No. 539,139
10 Claims. (Cl. 340—172)

1. Apparatus for obtaining an output voltage proportional to the amplitude of one of a plurality of input signals and comprising a saturable inductive core member, a plurality of devices for inducing flux change in said core member, with each of said devices including first winding means inductively associated with said core member, a source of alternating current voltage and second winding means connecting in series relationship with said first winding means in each of said devices, a saturable

tubular members, said gear means being in meshing

inductive core member inductively associated with said second winding means in each of said devices, means responsive to an input signal for inducing flux change in said latter-mentioned core member of each said device, and output voltage deriving means for deriving said output voltage from said apparatus including output winding



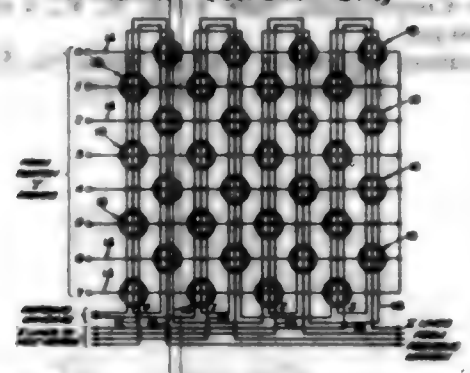
means inductively associated with said first-mentioned core member and including at least one unidirectionally conductive device serially connected to at least one output impedance element and connecting the opposite terminals of said output winding means, and a source of alternating current voltage connected between one of said terminals and said output impedance element.

2,862,198

MAGNETIC CORE MEMORY SYSTEM

Raymond Stuart-Williams, Pacific Palisades, Milton Rosenberg, Santa Monica, and Matthew Arnold Alexander, Pacific Palisades, Calif., assignors, by mesne assignments, to Telemeter Magnetics and Electronics Corporation, Los Angeles, Calif., a corporation of New York

Application April 5, 1954, Serial No. 421,142
23 Claims. (Cl. 340—174)



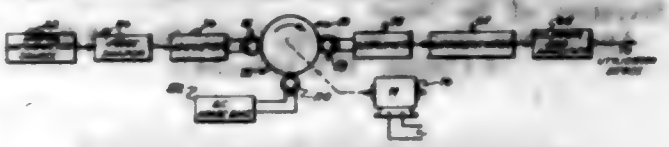
1. In a magnetic core memory system of the type including a plurality of magnetic cores each being made of material having a substantially rectangular hysteresis curve characteristic and being saturable in one or the other of two opposite magnetic polarities, a plurality of first groups of cores, a plurality of second groups of cores each of said second groups of cores being composed of a different one of the cores from each of said first groups, a plurality of first coils each of which is inductively coupled to all the cores in a different one of said first groups, a plurality of second coils each of which is inductively coupled to all the cores in a different one of said second groups, means to drive a selected core toward saturation in said one of said two opposite magnetic polarities while minimizing delta effects comprising means to generate a first current pulse of one polarity followed by a second current pulse of equal amplitude and opposite polarity both said pulses having sufficient amplitude to drive a core partially toward saturation, having a rise time on the order of a turnover time of a core and a plateau time on the order of a multiple of a core turnover time, means to apply said first and second current pulses to a first coil coupled to said selected core, means to generate a third current pulse of one polarity followed by a fourth current pulse of equal amplitude and opposite polarity during the plateau time of said first current pulse and after the effects of the rise of said first pulse having subsided, said third and fourth pulses having a duration on the order of the turnover time of a core, said third current pulse having an amplitude and polarity which added to said first pulse is sufficient to drive said selected core to said desired polarity, and means to apply said third and fourth current pulses to a second coil coupled to said selected core whereby said selected core is left in said one polarity of magnetization and is cycled to minimize delta effects.

2,862,199

MAGNETIC DRUM STORAGE SYSTEM

John E. Scott, Rego Park, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application May 24, 1955, Serial No. 510,606
8 Claims. (Cl. 340—174)



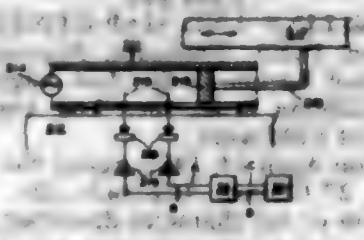
1. Apparatus for storing information received in the form of electrical pulses comprising a magnetic drum, motor means for rotating said drum, a magnetic recording head, a magnetic erase head, a magnetic reading head, said magnetic heads being positioned at spaced points around the drum, the drum surface successively passing the erase head, the recording head, and the reading head, pulse shaping means responsive to the information pulses for squaring the received information pulse, amplifier means coupling the output of the pulse shaping means to the recording head, the amplifier means being biased to produce a continuous current through the recording head, the amplifier means including means responsive to the output pulse from said pulse shaping means for interrupting the flow of current through the recording head for the duration of the pulse, means for passing a continuous direct current through the erase head to saturate the magnetic drum surface, and means including an amplifier, differentiating network, and clipping circuit coupled to the reading head for reproducing the information pulses from the flux variation produced on the magnetic drum surface by the recording head whereby fringing flux effects are minimized thereby improving the packing factor of said magnetic drum.

2,862,200

MEASURING APPARATUS

Alexander Turnbull Shepherd, George Sanderson Walker, and David Theodore Nelson Williamson, Edinburgh, Scotland, assignors to Ferranti, Limited, Hollinwood, England, a company of Great Britain and Northern Ireland

Application June 26, 1956, Serial No. 593,916
Claims priority, application Great Britain March 14, 1953
6 Claims. (Cl. 340—177)

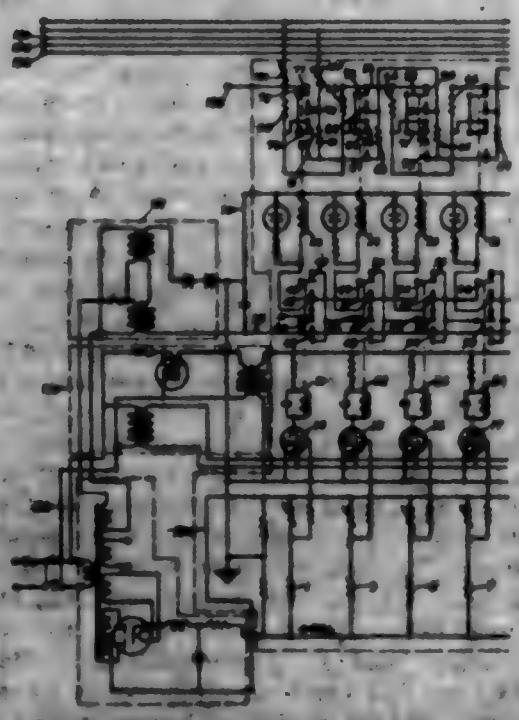


1. Measuring apparatus for determining the extent and sense of the relative movement of a first object in one or other of two opposite directions with respect to a second object comprising means for setting up a standing-wave pattern adapted to move with respect to said second

combination, a number of pancake coils, each pancake first winding means in each of said devices, a saturable

object in dependence on the said relative movement of said first object, two detecting devices adapted during the said movement of the pattern to respond electrically to the conditions of the pattern at two positions fixed with respect to the second object where said conditions are out of phase with one another by a fraction of half the wavelength of the pattern, and electrical stages for determining the sense of the said relative movement of said first object from the relative phase of the electrical output signals from said detecting devices and for determining the extent of said movement from the number of cycles of said output signals which occur during said movement.

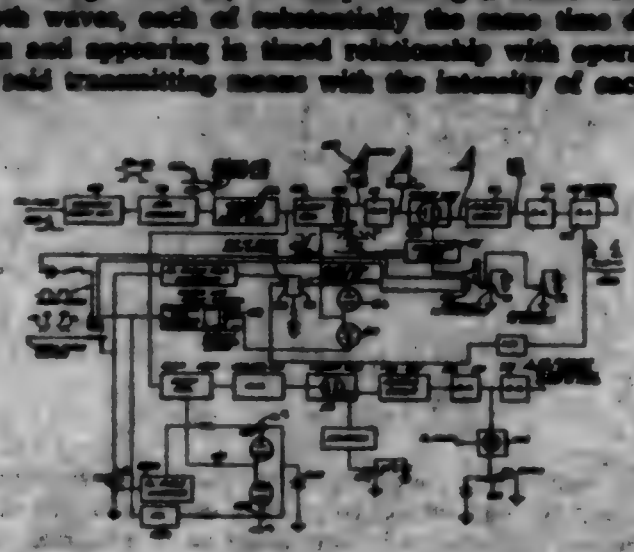
2,862,201
DECODER FOR AUTOMATIC PHOTORECTIFICATION SYSTEM
Marcus Lowinstein, Jamaica, and Stewart Rohrer, New Rochelle, N. Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application March 30, 1954, Serial No. 419,939
5 Claims. (Cl. 340—347)



2. A decoder to convert digital code group signals into discrete voltages comprising a source of potential, a constant impedance voltage divider in series with said potential, said divider comprising a first plurality of series coupled impedances series coupled to a second plurality of series coupled impedances, means to short said second plurality of impedances, and means responsive to the code group signals coupled to said voltage divider circuit to short at least one of said first plurality of impedances and to open the short of at least one of said second plurality of impedances.

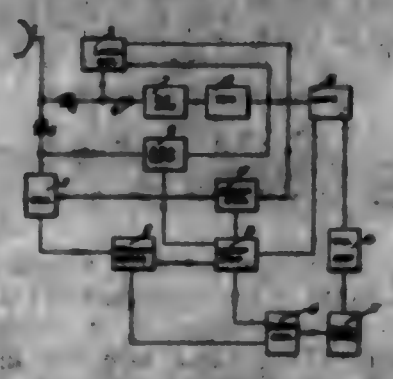
2,862,202
CURSOR LINE AND MAP GENERATOR
David J. Green, Pacific Palisades, Raymond B. Thaler, Sepulveda, and Burton Cutler, Los Angeles, Calif., assignors to Gilfillan Bros., Inc., Los Angeles, Calif., a corporation of California
Application April 23, 1951, Serial No. 222,511
27 Claims. (Cl. 343—11)

1. In a system of the character described, energy transmitting means periodically triggered at a relatively high rate to produce an antenna beam, means for scanning said antenna beam in space, means deriving an angle voltage, the instantaneous magnitude of which is representative of the position of the antenna beam, a cathode ray tube having cathode beam deflecting means, means operated synchronously with said transmitting means for energizing said beam deflecting means to produce cathode beam sweeps, said cathode ray tube having an intensity controlling electrode, means producing a series of sawtooth waves, each of substantially the same time duration and appearing in timed relationship with operation of said transmitting means with the intensity of each of



said sawtooth waves being representative of the instantaneous magnitude of said angle voltage, means picking off the peaks of said series of sawtooth waves and producing a corresponding series of voltage variations each starting at different times with respect to energization of said beam deflecting means, means peaking the last mentioned voltage variations and applying the resulting peaked waves to said intensity controlling electrode.

2,862,203
ARRANGEMENT IN A RADAR STATION
Sven Christer Stenmon and Bengt Gustav Oskar Svensson, Bromma, Sweden, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application September 7, 1955, Serial No. 532,933
3 Claims. (Cl. 343—18)



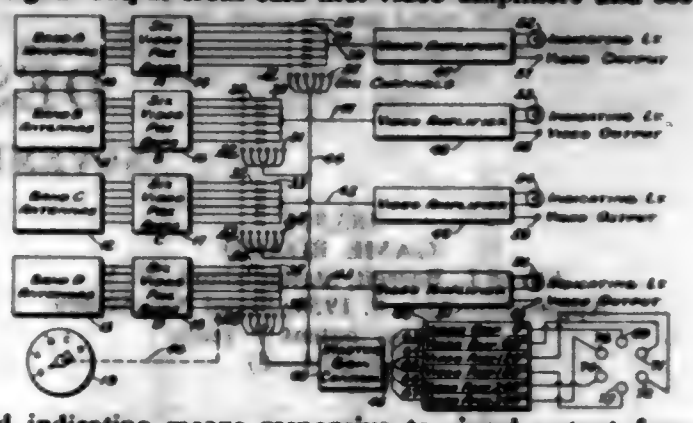
1. A radar station comprising a transmitter and a receiver, means to change the frequency of the transmitter and receiver continuously and simultaneously over a predetermined frequency band, means for receiving and detecting signals in said band during said frequency changing, means for detecting gaps during said reception in which no signals are present, and means responsive to detection of such a gap to cause transmission of a radar signal from said transmitter.

2,862,204
COUNTER MEASURE SYSTEM
Carl R. Hewitt and John P. Shanklin, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application April 27, 1956, Serial No. 581,233
7 Claims. (Cl. 343—100)

1. A system for signal reception comprising a plurality of fixed antenna means, each said antenna means

said selected core, means to generate a third current wave pattern adapted to move with respect to said second

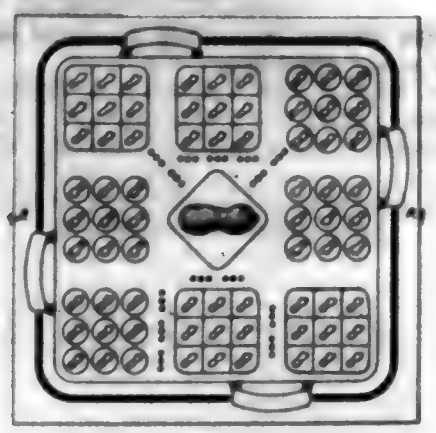
adapted for reception of a given band of frequencies and consisting of individual directional antennas oriented for reception from equal segments of a complete azimuth circle, a plurality of crystal detecting means, the outputs from said directional antennas individually connected to certain ones of said detecting means, a plurality of video preamplifiers, each said preamplifier receiving the output from one of said detecting means and delivering an output to multi-position switching means, a plurality of first video amplifiers, a plurality of second video amplifiers, said switching means being adapted such that in a first position the outputs of certain ones of said plurality of video preamplifiers are simultaneously connected to the inputs of certain ones of said first video amplifiers, and in successive switch positions, the outputs of certain ones of said plurality of video preamplifiers are individually connected to the inputs of certain ones of said second video amplifiers, first indicating means responsive to signal output from said first video amplifiers and second indicating means responsive to signal output from said second video amplifiers.



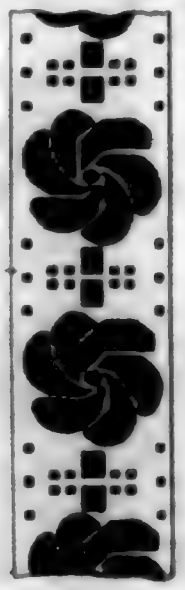
DESIGNS

NOVEMBER 25, 1958

183,956
GAME BOARD
Alfred L. Barrett, Staten Island, N. Y.
Application May 8, 1958, Serial No. 50,389
Term of patent 7 years
(Cl. D34—5)



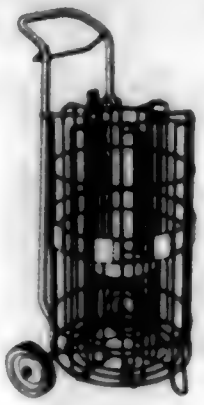
183,957
NARROW WOVEN FABRIC OR SIMILAR ARTICLE
Leo Beer, Hartsdale, N. Y.
Application February 24, 1958, Serial No. 49,768
Term of patent 7 years
(Cl. D3—32)



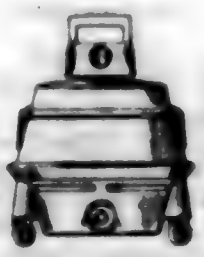
183,958
SWIVEL-CHAIR
Joseph Burger, Brooklyn, N. Y.
Application January 17, 1958, Serial No. 49,292
Term of patent 3½ years
(Cl. D15—1)

183,959
BUCKLE
Harold F. Burnham, Highland Park, N. J.
Application August 1, 1957, Serial No. 47,190
Term of patent 14 years
(Cl. D17—1)

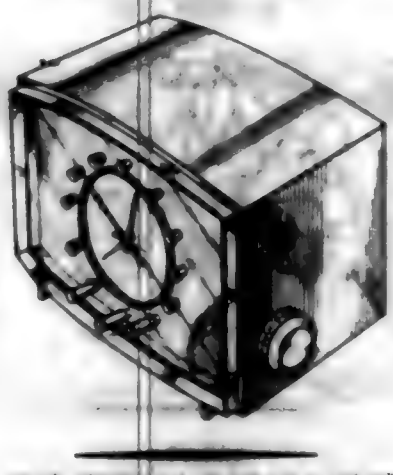
183,960
CART FOR BASEBALLS AND BATS
Robert C. Carroll, Bakersfield, Calif., assignor of one-third to G. M. Junek, Porterville, Calif., and one-third to Lloyd C. Snider, Bakersfield, Calif.
Application January 17, 1958, Serial No. 49,291
Term of patent 14 years
(Cl. D14—3)



183,961
SUCTION CLEANER
Dave Chapman, Chicago, Ill., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application May 12, 1958, Serial No. 50,841
Term of patent 14 years
(Cl. D9—3)



183,962
CLOCK RADIO
Jack De Young, Spring Lake, Mich., assignor to Zenith Radio Corporation, a corporation of Delaware
Application January 24, 1957, Serial No. 44,596
Term of patent 7 years
(Cl. D56—4)

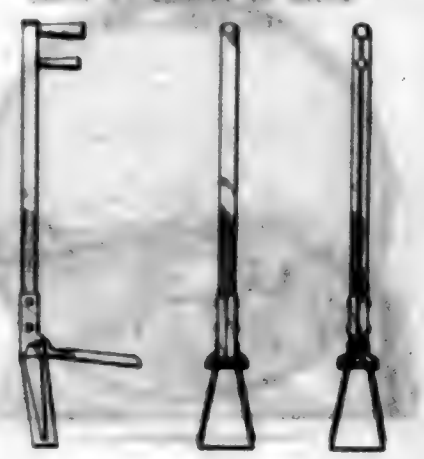


183,963
SEWING MACHINE
Philip S. Egan, Glenview, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application September 23, 1957, Serial No. 47,818
Term of patent 14 years
(Cl. D70—1)

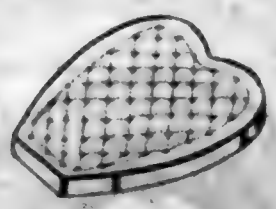
183,964
ELECTRICAL SWITCH HOUSING
Alan G. Ehrenberg, Baltimore, Md.
Application February 8, 1957, Serial No. 44,805
Term of patent 14 years
(Cl. D26—13)

183,965
DESK CALENDAR
Frank S. Elliott, Jr., Creve Coeur, Mo., assignor to Skinner & Kennedy Company, St. Louis, Mo., a corporation of Missouri
Application July 31, 1958, Serial No. 51,860
Term of patent 14 years
(Cl. D74—5)

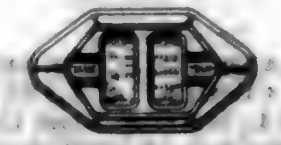
183,966
MANUALLY OPERABLE OBJECT PROPELLING AMUSEMENT DEVICE
Louis F. Gunz, Green Lake, Wis.
Application December 6, 1957, Serial No. 48,821
Term of patent 14 years
(Cl. D34—15)



183,967
MATTRESS
William T. Harris, Missoula, Mont.
Application November 7, 1955, Serial No. 38,769
Term of patent 7 years
(Cl. D5—2)



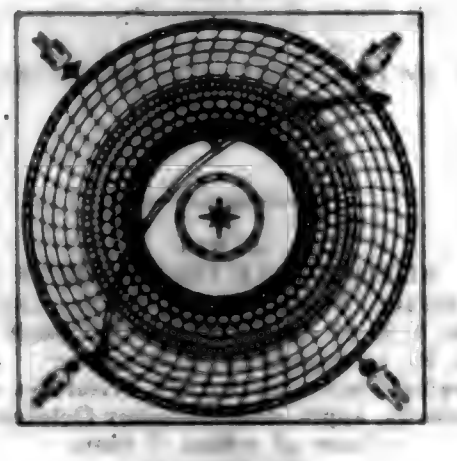
183,968
AUTOMOTIVE INSTRUMENT
Heinrich Heuer, Frankfurt am Main, Germany, assignor to V D O Tachometerwerke Adolf Schindling G. m. b. H., a corporation of Germany
Application December 4, 1957, Serial No. 48,768
Claims priority, application Germany October 15, 1957
Term of patent 7 years
(Cl. D52—1)



183,969
INSULATED PIGTAIL CONNECTOR
Harry J. Holmes, Basking Ridge, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application October 2, 1957, Serial No. 47,945
Term of patent 14 years
(Cl. D26—1)

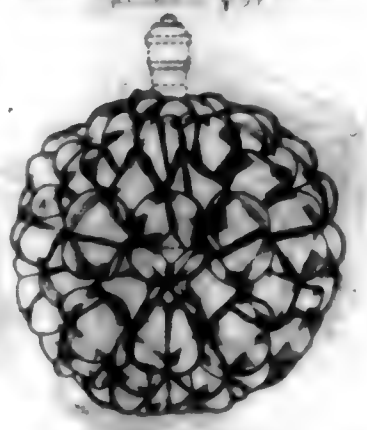
183,970
LOCAL BATTERY WALL TELEPHONE SET
Eduard Merz and Herbert Hüttisch, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Application March 19, 1957, Serial No. 45,324
Claims priority, application Germany November 7, 1956
Term of patent 14 years
(Cl. D26—14)

183,971
GAME BOARD
William E. Mortrude, Chicago, Ill.
Application June 3, 1958, Serial No. 51,175
Term of patent 7 years
(Cl. D34—6)



183,972
DRAFTSMAN'S GAGE FOR MEASURING CONICAL ANGLES
Raymond L. Melvaus, South Gate, Calif.
Original application July 19, 1957, Serial No. D. 46,992, now Patent No. D. 183,627, dated September 30, 1958. Divided and this application October 2, 1957, Serial No. 47,941
Term of patent 14 years
(Cl. D52—1)

183,973
LAMP SHADE
Mary J. Navratil, San Francisco, Calif.
Application December 6, 1957, Serial No. 48,817
Term of patent 14 years
(Cl. D48—16)

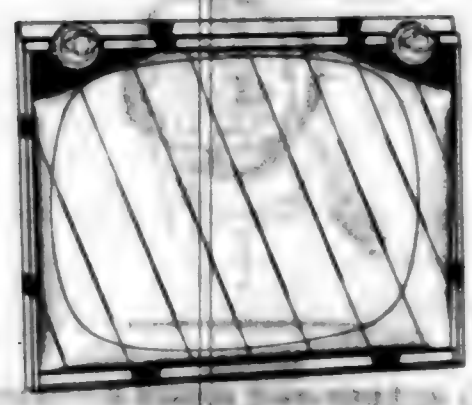


183,974
INFLATABLE ACTION TOY
William Z. Norman, Flushing, and Julius Billig, New York, N. Y., assignors to Bliner Corp., Brooklyn, N. Y., a corporation of New York
Application April 23, 1958, Serial No. 50,585
Term of patent 14 years
(Cl. D34—19)

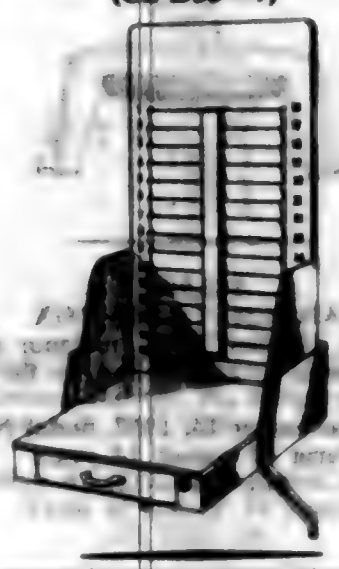
183,975
INSULATED SERVING BUCKET
David L. Painter, Evanston, Ill., assignor to West Bend Aluminum Co., West Bend, Wis., a corporation of Wisconsin
Application March 17, 1958, Serial No. 50,065
Term of patent 14 years
(Cl. D59—17)

183,976
BATTERY TERMINAL CONNECTOR
Ernest G. Prentis, New Britain, Conn.
Application May 28, 1957, Serial No. 46,377
Term of patent 14 years
(Cl. D26—1)

183,977
COMBINED ESCUTCHEON AND FACE PLATE FOR A TELEVISION RECEIVER CABINET
Kenneth P. Schory, Bensenville, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application October 17, 1956, Serial No. 43,388
Term of patent 7 years
(Cl. D56—4)



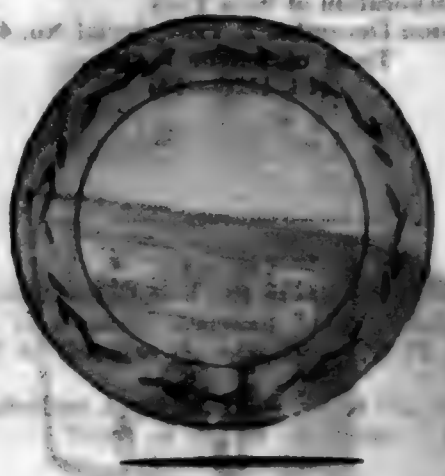
183,978
COMBINED DESK AND CARD RACK
Harvey J. Smith, Greensboro, N. C.
Application January 7, 1957, Serial No. 44,419
Term of patent 14 years
(Cl. D33—7)



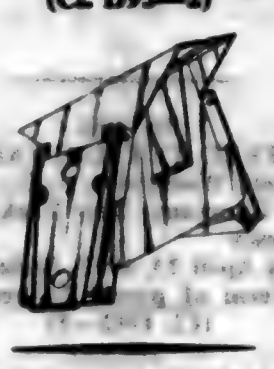
183,979
LACE
Aaron S. Stoff, New York, N. Y., assignor to Textron Mills, Incorporated, Ridgefield, N. J., a corporation of New Jersey
Application December 31, 1957, Serial No. 49,887
Term of patent 14 years
(Cl. D47—6)

183,980
PLATE OR SIMILAR ARTICLE
Shozo Tozuno, Mizuho-ku, Nagoya, Japan
Application June 3, 1957, Serial No. 46,446
Term of patent 7 years
(Cl. D44—15)

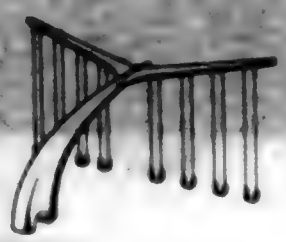
183,981
PLATE OR SIMILAR ARTICLE
Shozo Tozuno, Mizuho-ku, Nagoya, Japan
Application June 3, 1957, Serial No. 46,449
Term of patent 7 years
(Cl. D44—15)



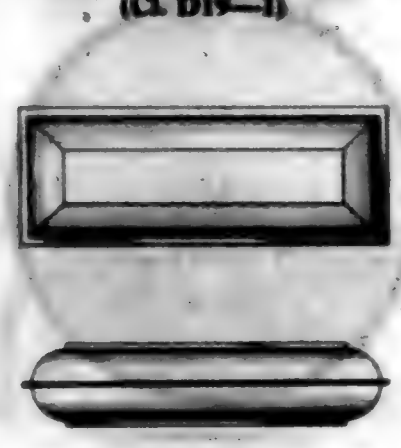
183,982
SAWHORSE BRACKET
Roy F. Thompson, Longmont, Colo.
Application September 14, 1956, Serial No. 42,931
Term of patent 14 years
(Cl. D93—2)



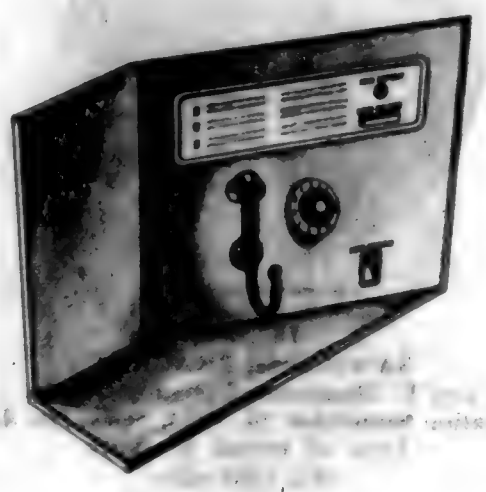
183,983
COMBINED SWING SUPPORT AND SWING SET
Franklyn G. Uzzholtz, Long Beach, Calif.
Application December 6, 1957, Serial No. 46,869
Term of patent 14 years
(Cl. D34—6)



183,984
CASKET
Robert C. Volkal, Garden Grove, Calif., assignor of forty percent to Ernest F. Tewalt, Garden Grove, and ten percent to Frank G. Volkal, Los Angeles, Calif.
Application November 18, 1957, Serial No. 48,527
Term of patent 14 years
(Cl. D19—1)



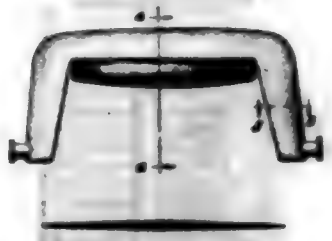
183,985
COIN TELEPHONE PAY STATION
Robert H. Hess, Mountainside, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application December 2, 1957, Serial No. 48,731
Term of patent 7 years
(Cl. D26—14)



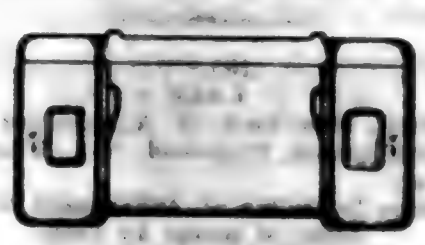
183,986
PUFFED TEXTILE FABRIC
Clement R. Howell, Winnsboro, S. C., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application April 23, 1957, Serial No. 45,857
Term of patent 14 years
(Cl. D92—1)

183,987
COMBINED TOOTHBRUSH HOLDER AND DRIER
Noah B. Jones, Brownsville, Pa.
Application December 16, 1957, Serial No. 48,903
Term of patent 14 years
(Cl. D4—3)

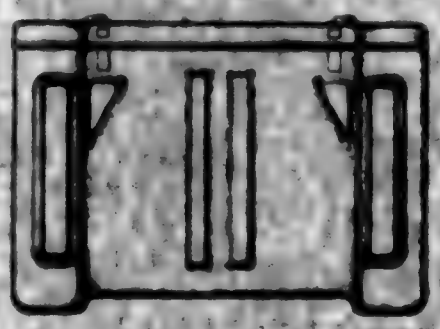
183,988
LUGGAGE HANDLE
Erwin Kalis, West Pittsburg, Pa., assignor to Reliable Luggage, Inc., West Pittsburg, Pa., a corporation of Pennsylvania
Application February 12, 1958, Serial No. 49,623
Term of patent 14 years
(Cl. D87—2)



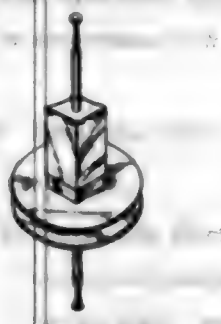
183,989
PARACHUTE BIN BOX
Albert J. Lorenz, Holden, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application November 14, 1957, Serial No. 48,461
Term of patent 14 years
(Cl. D58—12)



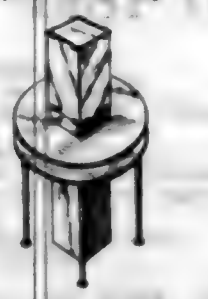
183,990
PARACHUTE BIN BOX
Albert J. Lorenz, Holden, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application November 14, 1957, Serial No. 48,462
Term of patent 14 years
(Cl. D58—12)



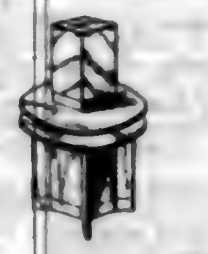
183,991
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,571
Term of patent 14 years
(Cl. D33—6)



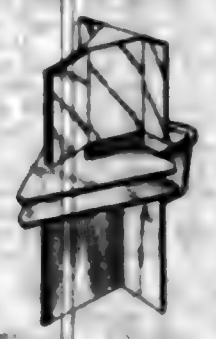
183,992
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,572
Term of patent 14 years
(Cl. D33—6)



183,993
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,573
Term of patent 14 years
(Cl. D33—6)



183,994
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,574
Term of patent 14 years
(Cl. D33—6)

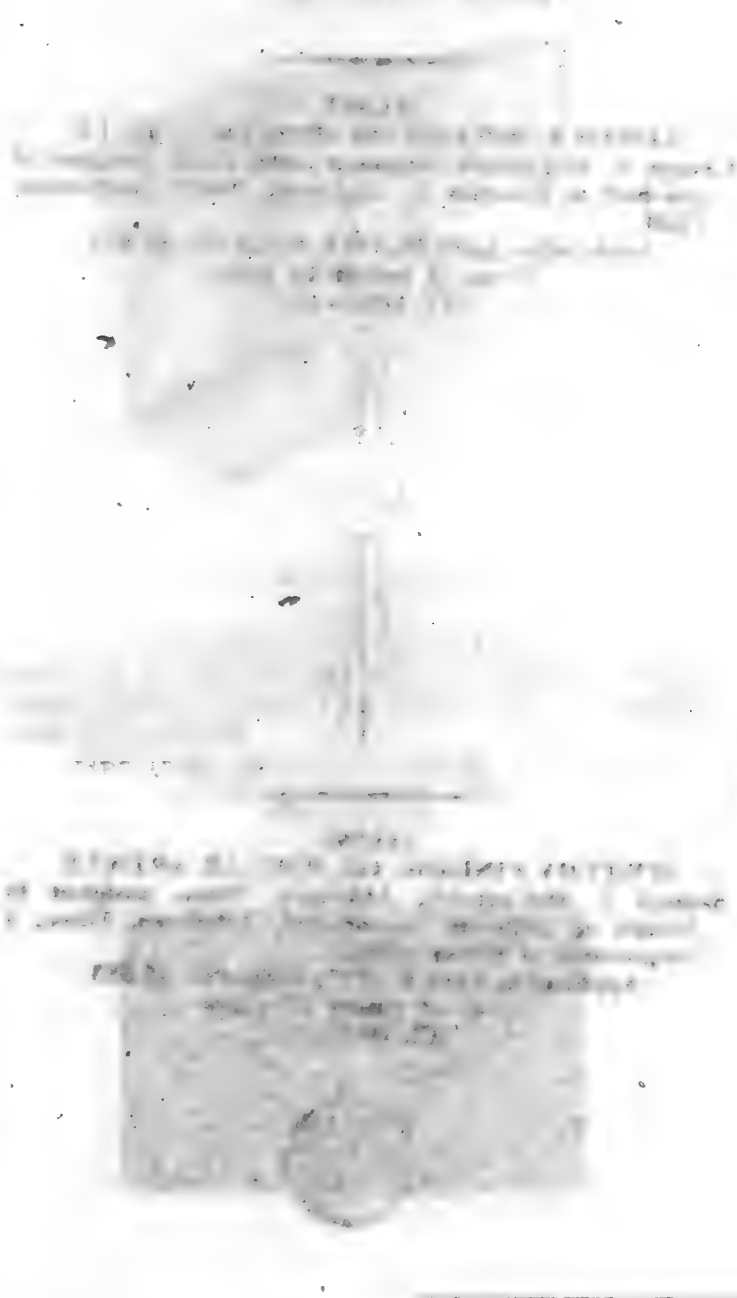


183,995
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,575
Term of patent 14 years
(Cl. D33—6)

183,996
COMBINED TABLE AND MIRROR UNIT
Thomas McCartan, Chicago, Ill., assignor to Bee and Gee Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application April 22, 1958, Serial No. 50,576
Term of patent 14 years
(Cl. D33—6)

183,997
LIPSTICK HOLDER OR SIMILAR ARTICLE
George A. McConnell, Sherman Oaks, Calif., assignor of one-half to Douglas C. Anderson, North Hollywood, Calif.
Application April 30, 1958, Serial No. 50,673
Term of patent 14 years
(Cl. D86—10)

183,998
JEWELRY FINDING OR SIMILAR ARTICLE
Samuel J. McCormick, Attleboro, Mass., assignor to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application April 9, 1957, Serial No. 45,653
Term of patent 14 years
(Cl. D48—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF NOVEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bailly, Florent H.: *See*—
Mangold, George B., Dyer, and Hart. Re. 24,570.

Compton Co., Ltd.: *See*—
Nadel, Manuel R. Re. 24,571.

Dyer, James A.: *See*—
Mangold, George B., Dyer, and Hart. Re. 24,570.

Hart, John T.: *See*—
Mangold, George B., Dyer, and Hart. Re. 24,570.

Mangold, George B., J. A. Dyer, and J. T. Hart, to Florent H. Bailly. Permeable concrete. Re. 24,570, 11–25–58, Cl. 106—86.

Nadel, Manuel R., to Compton Co., Ltd. Display devices. Re. 24,571, 11–25–58, Cl. 211—13.

LIST OF PLANT PATENTEES

Byrum, Roy L.: *See*—
Reece, Sidney, and Byrum. 1,774.

Hill, Joseph H., Co.: *See*—
Reece, Sidney, and Byrum. 1,774.

Parket, Elizabeth B. Chrysanthemum. 1,772, 11–25–58, Cl. 47—60.

Reece, Sidney, and R. L. Byrum, to Joseph H. Hill Co. Rose plant. 1,774, 11–25–58, Cl. 47—61.

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Anderson, Douglas E.: *See*—
McConnell, George A. 183,997.

Barrett, Alfred L. Game board. 183,956, 11–25–58, Cl. D34—5.

Bee and Gee Mfg. Co., Inc.: *See*—
McCartan, Thomas. 183,991–183,996.

Beer, Lee. Narrow woven fabric or similar article. 183,957, 11–25–58, Cl. D3—23.

Bell Telephone Laboratories, Inc.: *See*—
Hose, Robert H. 183,985.

Billig, Julius: *See*—
Norman, William E., and Billig. 183,974.

Bliner Corp.: *See*—
Norman, William E., and Billig. 183,974.

Burger, Joseph. Swivel-chair. 183,958, 11–25–58, Cl. D15—1.

Burnham, Harold F. Buckle. 183,959, 11–25–58, Cl. D17—1.

Carroll, Robert C., ½ to G. M. Juseck and ½ to L. C. Snider. Cast for baseballs and bats. 183,960, 11–25–58, Cl. D14—8.

Chapman, Dave, to Scovill Mfg. Co. Suction cleaner. 183,961, 11–25–58, Cl. D9—2.

De Young, Jack, to Zenith Radio Corp. Clock radio. 183,962, 11–25–58, Cl. D56—4.

Egan, Philip S., to Sears, Roebuck and Co. Sewing machine. 183,963, 11–25–58, Cl. D70—1.

Eisenberg, Alan G. Electrical switch housing. 183,964, 11–25–58, Cl. D23—13.

Elliott, Frank S., Jr., to Shinner & Kennedy Co. Desk calendar. 183,965, 11–25–58, Cl. D74—6.

Gunn, Louis F. Manually operable object propelling amusement device. 183,966, 11–25–58, Cl. D34—15.

Harris, William T. Mattress. 183,967, 11–25–58, Cl. D6—2.

Hesse, Heinrich, to VDO Tachometerwerke Adolf Schindling G. m. b. H. Automotive instrument. 183,968, 11–25–58, Cl. D62—1.

Holmes, Harry J., to The Thomas & Betts Co. Insulated pig-tail connector. 183,969, 11–25–58, Cl. D26—1.

Hose, Robert H., to Bell Telephone Laboratories, Inc. Coin telephone pay station. 183,985, 11–25–58, Cl. D26—14.

Howell, Clement R., to United States Rubber Co. Ruffed textile fabric. 183,986, 11–25–58, Cl. D61—1.

Hüttisch, Herbert: *See*—
Merz, Eduard, and Hüttisch. 183,970.

Jones, Noah B. Combined toothbrush holder and drier. 183,987, 11–25–58, Cl. D4—3.

Juseck, G. M.: *See*—
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Kalla, Erwin, to Reliable Luggage, Inc. Luggage handle. 183,988, 11–25–58, Cl. D37—2.

Lorenz, Albert J., to United States of America, Army. Parachute bin box. 183,989, 11–25–58, Cl. D58—12.

Lorenz, Albert J., to United States of America, Army. Parachute bin box. 183,990, 11–25–58, Cl. D58—12.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,991, 11–25–58, Cl. D23—6.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,992, 11–25–58, Cl. D23—6.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,993, 11–25–58, Cl. D23—6.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,994, 11–25–58, Cl. D23—6.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,995, 11–25–58, Cl. D23—6.

McCartan, Thomas, to Bee and Gee Mfg. Co., Inc. Combined table and mirror unit. 183,996, 11–25–58, Cl. D23—6.

McConnell, George A., ½ to D. E. Anderson. Lipstick holder or similar article. 183,997, 11–25–58, Cl. D38—10.

McCormick, Samuel J., to Metals & Controls Corp. Jewelry finding or similar article. 183,998, 11–25–58, Cl. D45—1.

Merz, Eduard, and H. Hüttisch, to Siemens & Halske Aktiengesellschaft Berlin. Local battery wall telephone set. 183,970, 11–25–58, Cl. D26—14.

Metals & Controls Corp.: *See*—
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Mortrude, William E. Game board. 183,971, 11–25–58, Cl. D34—5.

Mulvane, Raymond L. Draftsman's gage for measuring conical angles. 183,972, 11–25–58, Cl. D52—1.

Navratil, Mary J. Lamp shade. 183,973, 11–25–58, Cl. D48—16.

Norman, William E., and J. Billig, to Bliner Corp. Inflatable action toy. 183,974, 11–25–58, Cl. D34—15.

Painter, David L., to West Bend Aluminum Co. Insulated serving bucket. 183,975, 11–25–58, Cl. D59—17.

Prantis, Ernest G. Battery terminal connector. 183,976, 11–25–58, Cl. D26—1.

Reliable Luggage, Inc.: *See*—
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Schory, Kenneth P., to Zenith Radio Corp. Combined escutcheon and face plate for a television receiver cabinet. 183,977, 11–25–58, Cl. D56—4.

Scovill Mfg. Co.: *See*—
Chapman, Dave. 183,961.

Sears, Roebuck and Co.: *See*—
Egan, Philip S. 183,963.

Siemens & Halske Aktiengesellschaft Berlin: *See*—
Merz, Eduard, and Hüttisch. 183,970.

Shinner & Kennedy Co.: *See*—
Elliott, Frank S., Jr. 183,965.

Smith, Harvey J. Combined desk and card rack. 183,978, 11–25–58, Cl. D32—7.

Snider, Lloyd C.: *See*—
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Staff, Aaron S., to Texagon Mills, Inc. Loom. 183,979, 11–25–58, Cl. D47—6.

Terano, Shuso. Plate or similar article. 183,980, 11–25–58, Cl. D44—15.

Terano, Shuso. Plate or similar article. 183,981, 11–25–58, Cl. D44—15.

Tewalt, Russell F.: *See*—
Volkel, Robert C. 183,984.

Texagon Mills, Inc.: *See*—
Staff, Aaron S. 183,979.

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Thompson, Roy F. Hardware bracket. 183,982, 11–25–58, Cl. D26—2.

Umholtz, Franklyn G. Combined swing support and swing set. 183,983, 11–25–58, Cl. D34—5.

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Lorenz, Albert J. 183,990.

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Howell, Clement R. 183,986.

VDO Tachometerwerke Adolf Schindling G. m. b. H.: *See*—
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Volkel, Robert C. 183,984.

Volkel, Robert C., 40% to R. F. Tewalt and 10% to F. G. Volkel. Casket. 183,944, 11–25–58, Cl. D10—1.

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Painter, David L. 183,975.

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LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF NOVEMBER, 1958

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ACF Industries, Inc.: *See*—
Clade, Robert. 2,861,778.

AGFA Akt.: *See*—
Winkler, Alfred, and Kaden. 2,861,505.

Abbott Laboratories: *See*—
Hamlin, Kenneth E. 2,862,034.

Abell, Donald E., to Westinghouse Electric Corp. Motor control with inertia compensating systems. 2,862,161, 11–25–58, Cl. 318—6.

Abell-Howe Co.: *See*—
Nyblom, Carl E. 2,861,850.

Abell, Robert H. Tilting work holder. 2,861,331, 11–25–58, Cl. 29—284.

Abrams, Ralph, and W. H. West, to Cambridge Thermionic Corp. Control knob. 2,861,825, 11–25–58, Cl. 287—52.06.

Acme Steel Co.: *See*—
Reed, George H. 2,861,269.

Acton, John R., and K. H. Westley, to Ericsson Telephones Ltd. Gaseous electric discharge devices. 2,862,133, 11–25–58, Cl. 313—178.

Acton Laboratories, Inc.: *See*—
Mairs, William J. 2,862,065.
Mairs, William J. 2,862,069.

Adams, John F.: *See*—
Frost, Randolph R., and Adams. 2,862,187.

Adamson-United Co.: *See*—
Seamor, Rex C. 2,861,435.

Adlake Co., The: *See*—
Hagerty, Andrew T., and Hoadley. 2,861,659.

Aigrain, Pierre R. R., to International Standard Electric Corp. Transmission of a derivative signal by pulse code. 2,862,186, 11–25–58, Cl. 332—11.

Aigrain, Pierre R. R., and S. Van Mierlo, to International Standard Electric Corp. Multiplex switching means. 2,862,059, 11–25–58 Cl. 179—18.

Aiken, John K., to The Geigy Co., Ltd. Vulcanized rubber composition containing a metal salt complex and process of preparing same. 2,862,037, 11–25–58, Cl. 260—800.

Aktiebolaget Bahco: *See*—
Ross, Karl G., Johansson, Axelsson, and Andersson. 2,861,562.

Aktiebolaget Dentatus: *See*—
Björklund, Gustaf E. 2,861,341.

Aktiebolaget Svenska Metallverken: *See*—
Wilson, Gunnar T. 2,861,634.

Albrecht, Otto, to Ciba Ltd. New water soluble quaternary ammonium salts. 2,862,009, 11–25–58, Cl. 260—348.

Alexander, Matthew A.: *See*—
Stuart-Williams, Raymond, Rosenberg, and Alexander. 2,862,198.

Alfandre, Harry, to Scovill Mfg. Co. Garment closures. 2,861,276, 11–25–58, Cl. 2—265.

Alinari, Carlo. Gun for underwater fishing. 2,861,560, 11–25–58, Cl. 124—13.

Allen, Edwin L., to L. W. Menzimer, trustee. Control mechanism for door latches. 2,861,834, 11–25–58, Cl. 292—336.3.

Allied Chemical & Dye Corp.: *See*—
D'Alessandro, Alfred F. 2,861,999.
Gilbert, Everett E. 2,861,919.
Gordon, Joseph and Woolf. 2,861,984.

Allin, George S., Sr., to International Harvester Co. Scraper having maximum width bowl. 2,861,360, 11–25–58, Cl. 37—126.

Allis-Chalmers Mfg. Co.: *See*—
Lellep, Otto G. 2,861,353.
Lellep, Otto G. 2,861,356.
Ringland, William L. 2,862,121.

Allis, Louis, Co., The: *See*—
Hansen, Hans R. A., and Bradburn. 2,862,174.

Allman, Ralph C., H. K. Miller, and H. F. Tye, to Wyandotte Chemicals Corp. Portable valve operator. 2,861,473, 11–25–58, Cl. 74—625.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Meilink, Johannes. 2,862,108.
Nilsson, Erland. 2,862,153.
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Almo, Edwin L.: *See*—
Golbert, Simon A., and Almo. 2,862,192.

Alox Corp.: *See*—
O'Kelly, Artie A., and Weltman. 2,861,874.

Altmann, Charles W.: *See*—
Paulsen, Paul L., and Altmann. 2,861,386.

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Moore, Robert E., Giddings, and Barnard. 2,861,434.

Amann, August: *See*—
Schlichting, Otto, Scheuerer, Westphal, and Amann. 2,861,993.

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Neff, Darby B. 2,861,517.

American Cyanamid Co.: *See*—
Mino, Guido. 2,861,982.
Mogensen, Allan O. 2,861,864.
Sandhage, Ellsworth R., and Burkhart. 2,861,571.

American Machine & Foundry Co.: *See*—
Gilman, Samuel. 2,861,683.

American Maize-Products Co.: *See*—
Carman, William E. 2,861,859.

American-Marietta Co.: *See*—
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American-Marietta Co., Adhesive, Resin and Chemical Division: *See*—
Baxter, Gene F., and Redfern. 2,861,977.

American National Bank and Trust Co. of Chicago: *See*—
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American Sisalkraft Corp.: *See*—
Jackson, Patrick T., and Stevenson. 2,861,416.

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Kayler, Frank H., Kulicke, and Greenawalt. 2,861,818.

American Steel Foundries: *See*—
Lindsey, Robert J. 2,861,520.
Mickelson, Cedric G., and Lilliegvist. 2,861,908.

Anderle, Joseph A., to Lorentsen Hardware Mfg. Corp. Venetian blind bottom bar organization. 2,861,631, 11–25–58, Cl. 160—173.

Anderson, Jack H., to General Motors Corp. Resilient tube to plate connection. 2,861,820, 11–25–58, Cl. 285—189.

Anderson, Walter A., to Underwood Corp. Control means for accounting machine. 2,861,746, 11–25–58, Cl. 235—62.

Andersson, Sten-Ake: *See*—
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Porteus, John H., and Anthes. 2,861,792.

Anthon, Erik W., to Beckman Instruments, Inc. Electromagnetically controlled friction transmission. 2,861,459, 11–25–58, Cl. 74—210.

Antonsen, Anker K., and M. L. Foreman, to Fairbanks, Morse & Co. Internal combustion engine. 2,861,555, 11–25–58, Cl. 123—41.86.

Apelianiz, Joseph E., to Standard Oil Co. Production of blown asphalts. 2,861,940, 11–25–58, Cl. 208—5.

Apel, Peter J. Payroll accounting board. 2,861,819, 11–25–58, Cl. 282—29.

Applebaum, Jack J. Fastener for shoe laces or other flexible ties. 2,861,314, 11–25–58, Cl. 24—117.

Arborite Co. Ltd., The: *See*—
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Arens Controls, Inc.: *See*—
Brock, Walter L. 2,861,466.

Aronson, Theodore F.: *See*—
Halahan, John, Aronson, and Lyon. 2,861,803.

Arsenault, Eugene W., and J. F. Notteimann, to General Electric Co. Brush holder and rigging assembly. 2,862,123, 11–25–58, Cl. 310—241.

Arundale, Erving: *See*—
Thorp, John P., Guyer, and Arundale. 2,861,959.

Ashaway Line & Twine Mfg. Co.: *See*—
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Kish, Michael, Jr. 2,861,614.

Atlantic Service Co., Inc.: *See*—
Euerle, George W. 2,861,812.

Auer, Frederick G., to Champlain Co., Inc. Table or skid lowering mechanism. 2,861,305, 11–25–58, Cl. 271—38.

Ault, Isaac L., to Socony Mobil Oil Co., Inc. Flexible hose support crane. 2,861,532, 11–25–58, Cl. 114—0.5.

Automatic Telephone & Electric Co. Ltd.: *See*—
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Aviamac Ltd.: *See*—
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Avien, Inc.: *See*—
Kadlec, Ladislav. 2,861,537.

Avog Elektro-und Feinmechanik G. m. b. H.: *See*—
Heyler, Alfred E. 2,861,290.

Awedissian, Michran K. Vibration generator. 2,861,456, 11–25–58, Cl. 74—87.

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Ross, Karl G., Johansson, Axelsson, and Andersson. 2,861,502.

Aylesworth, Robert D., to Emery Industries, Inc. Detergent for hard water. 2,861,965, 11–25–58, Cl. 252—117.

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Schlomberg, Herbert. 2,861,553.

Bachman, Rudolph E., to Sterling Precision Corp. Precision coupling device. 2,861,437, 11–25–58, Cl. 69—16.

Bobo, Powell O., and J. T. Carleton, to Westinghouse Electric Brown, Charles F.: *See*—

Badische Anilin- & Soda-Fabrik Akt.: *See*—
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Ritter, Wolfgang, Meyer, and Dammler. 2,861,971.
Schlichting, Otto, Schossler, Westphal, and Amann. 2,861,865.
Schuster, Curt, Geiss, Eisele, and Federkiel. 2,861,863.

Bailey, Joseph A., to Barber-Colman Co. Cam actuated switch. 2,861,083, 11-25-58, Cl. 200—166.

Baker, Craig C., and L. H. Satre, to Sta-Hi Corp. Method and means for accurately positioning matrices for trimming or casting. 2,861,354, 11-25-58, Cl. 29—533.

Baker, Cyril J. Drums and cables. 2,861,630, 11-25-58, Cl. 160—113.

Baker, Edward G.: *See*—
Kearby, Kenneth K., Kirschenbaum, and Baker. 2,861,845.

Baker, James M. Trundle hoop with balls attached. 2,861,339, 11-25-58, Cl. 46—114.

Baker, Leslie N.: *See*—
Hannan, Joseph P. 2,861,462.

Baker, Ray H., to General Motors Corp. Variable cam. 2,861,470, 11-25-58, Cl. 74—568.

Baldi, Alfonso L.: *See*—
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Baldwin-Lima-Hamilton Corp.: *See*—
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Baltz, William. Self feeding stile. 2,861,644, 11-25-58, Cl. 119—52.

Bancel, Paul A., to Ingersoll-Rand Co. Internal-combustion engine. 2,861,554, 11-25-58, Cl. 123—59.

Banks, George H., to English Electric Valve Co. Ltd. Signal storage discharge tubes. 2,862,140, 11-25-58, Cl. 315—12.

Bany, Herman: *See*—
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Baranauckas, Charles F., and W. E. Ashton, to Hooker Chemical Corp. Preparation of 2,2,3-trichloroheptafluorobutane. 2,862,036, 11-25-58, Cl. 260—653.7.

Barber-Colman Co.: *See*—
Bailey, Joseph A. 2,862,063.

Baring, John A., to Minneapolis-Honeywell Regulator Co. Force rebalancing servosystem. 2,862,162, 11-25-58, Cl. 318—21.

Barnard, Ray M., D. S. Girling, and N. C. W. Judd, to International Standard Electric Corp. Manufacture of electrical capacitors. 2,861,321, 11-25-58, Cl. 29—25.42.

Barnard, Walter C.: *See*—
Moore, Robert R., Giddings, and Barnard. 2,861,434.

Barnes-Hind Laboratories, Inc.: *See*—
Hind, Harry W., and Sackely. 2,861,572.

Barnes, Marshall F.: *See*—
Whittall, Joseph A., and Barnes. 2,861,816.

Barnes, William A., to Kelsey-Hayes Co. Ratchet powered tool. 2,861,488, 11-25-58, Cl. 81—15.

Barnes, William A., to Kelsey-Hayes Co. Pivot lever retainer for ratchet powered device. 2,861,489, 11-25-58, Cl. 81—15.

Barrett, Wayne T., to W. R. Grace & Co. Process of preparing a silica-alumina-platinum catalyst. 2,861,958, 11-25-58, Cl. 252—455.

Basel, Donald R.: *See*—
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Bauer, George, L. B. De Long, G. E. Suderow, and E. N. Showalter, to De Long Corp. Method of operating marine structures. 2,861,430, 11-25-58, Cl. 61—46.5.

Bauernfeind, Jacob C., and R. H. Bunnell, to Hoffmann-La Roche Inc. Water dispersible carotenoid compositions and process of making the same. 2,861,891, 11-25-58, Cl. 99—148.

Baumbach, Harlan L., W. Enkelmann, and L. Wargo, to Unicorn Engineering Corp. Processing machine for sensitized paper and the like. 2,861,508, 11-25-58, Cl. 95—94.

Baxter, Gene F., and D. V. Redfern, to American-Marietta Co., Adhesive, Resin and Chemical Division. Preparation of intercondensation product of monohydric phenol-furfural resin and formaldehyde, and utilization thereof in the production of plywood. 2,861,977, 11-25-58, Cl. 260—56.

Bayer, Otto: *See*—
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Beachley, Robert W., to Lektro-Thermal Corp. Splice for electrical wiring. 2,862,041, 11-25-58, Cl. 174—84.

Beagan, Frank J., Jr.: *See*—
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Beal, Phillip F., III: *See*—
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Hogg, John A., Beal, Nathan, and Lincoln. 2,862,011.

Beale, Frederic S.: *See*—
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Beccio, Giuseppe, to Olivetti, Ing. C., & C. S. p. A. Type carrier actuating mechanism for typewriting machines. 2,861,665, 11-25-58, Cl. 197—16.

Bechik, Michael. Garment hanger. 2,861,725, 11-25-58, Cl. 223—91.

Bechtold, James H., and J. P. Webb, to Westinghouse Electric Corp. Applying protective metal coatings on molybdenum. 2,861,327, 11-25-58, Cl. 29—198.

Beck, Cyrus. Hydraulic springs. 2,861,794, 11-25-58, Cl. 267—2.

Beckberger, La Vera H., to Sinclair Refining Co. Reforming in multiple stages employing a platinum-type metal catalyst. 2,861,942, 11-25-58, Cl. 208—65.

Becker, Robert E., to Logansport Machine Co. Hydraulic relief valve. 2,861,596, 11-25-58, Cl. 137—115.

Beckman Instruments, Inc.: *See*—
Anthon, Erik W. 2,861,480.

Beecher, Eugene L. Syringe filling device. 2,861,570, 11-25-58, Cl. 128—215.

Bebbas, Adolph J. Can opener. 2,861,337, 11-25-58, Cl. 30—12.

Beindorff, Arthur R.: *See*—
De Witt, Hobson D., and Beindorff. 2,861,969.

Bell, Basil T. Fish line deflector. 2,861,378, 11-25-58, Cl. 43—19.2.

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Indig, George S., and Pfann. 2,861,906.
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Kock, Winston E. 2,861,646.
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Bendix Aviation Corp.: *See*—
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Benes, Josef, and H. C. Tomasek, to United States Steel Corp. Gang lathe tool. 2,861,322, 11-25-58, Cl. 29—97.

Benham, Harold L., to General Motors Corp. Refractory mold having high permeability, composition for making and method of making same. 2,861,308, 11-25-58, Cl. 22—193.

Benjamin, Israel: *See*—
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Bennett, Andrew E., to Worthington Corp. Digester control systems. 2,861,884, 11-25-58, Cl. 62—7.

Bennett, George E.: *See*—
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Bennett, Walter, to Utility Trailer Mfg. Co. Door locks adapted to mutually align doors and door frames and the like. 2,861,830, 11-25-58, Cl. 292—240.

Benson, Igor B. Control mountings for helicopter rotors. 2,861,641, 11-25-58, Cl. 170—160.27.

Bentz, Ronald J., and W. H. Jeffrey, to Westinghouse Air Brake Co. Combined automatic and straight-air fluid pressure brake equipment. 2,861,843, 11-25-58, Cl. 303—26.

Bercovitz, Bernard: *See*—
Colliver, Harold E. S. 2,861,593.

Bergmark, John C., to Derby Sealers, Inc. Tape dispenser with tape-heating means. 2,861,539, 11-25-58, Cl. 118—59.

Bergsland, Charles H., and R. S. Hedia, to General Mills, Inc. Remote controlled handling unit. 2,861,701, 11-25-58, Cl. 214—1.

Bergstrom, Frank S., to Drill Development Co. Method of making punch plate screens. 2,861,326, 11-25-58, Cl. 29—163.5.

Berlin, Ludwig W., and P. Heimke, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. New photo-sensifixing dyestuffs containing a tetrahydroquinazoline group. 2,861,989, 11-25-58, Cl. 260—240.4.

Bermingham, Peter D., 10% to J. W. Freeman, and 5% to R. V. Maher. Combined seal and retaining device. 2,861,712, 11-25-58, Cl. 220—55.

Berry, Ernest V. Vertically retractable auxiliary wheels for railroad cars. 2,861,523, 11-25-58, Cl. 105—215.

Best, James A. Body supported portable desk. 2,861,854, 11-25-58, Cl. 311—17.

Best, Stanley G., to United Aircraft Corp. Turboprop fuel control. 2,861,637, 11-25-58, Cl. 170—135.72.

Betts, Joseph L., Jr., and J. P. Thorn, to Esso Research and Engineering Co. Core molding composition. 2,861,966, 11-25-58, Cl. 260—23.7.

Biggs, Orrick H., and R. F. Reed, to Sylvania Electric Products Inc. Heat shield for incandescent lamp. 2,862,135, 11-25-58, Cl. 313—38.

Bigot, Bernard, to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey. Manufacture of complex fertilizers. 2,861,878, 11-25-58, Cl. 71—39.

Bille, Heinz, H. Spohn, and H. Trieschmann, to Badische Anilin- & Soda-Fabrik Akt. Recovery of pure dimethyl terephthalate by continuous distillation. 2,862,021, 11-25-58, Cl. 260—475.

Bindler, Jakob: *See*—
Medel, Ernst, and Bindler. 2,861,916.

Bird, Raymond, to The British Tabulating Machine Co. Ltd. Binary adder. 2,861,741, 11-25-58, Cl. 235—61.

Birtbauer, Frank A., G. P. Canevari, and W. Lockett, Jr., to Esso Research and Engineering Co. Asphalt oxidation. 2,861,939, 11-25-58, Cl. 208—4.

Birum, Gail H.: *See*—
Heininger, Samuel A., and Birum. 2,862,006.

Birum, Gail H., to Monsanto Chemical Co. Method of destroying undesired plants. 2,861,876, 11-25-58, Cl. 71—2.6.

Bishman Mfg. Co.: *See*—
Bishman, Walter A. 2,861,329.

Bishman, Walter A., to Bishman Mfg. Co. Valve seat puller. 2,861,329, 11-25-58, Cl. 29—212.

Bishop David Freeman Co.: *See*—
Schultz, Roy M. 2,861,408.

Bituminous Coal Research, Inc.: *See*—
Yellott, John I., and Broadley. 2,861,050.

Bixby, William E.: *See*—
Crumrine, Herbert E., Rosenthal, and Bixby. 2,861,543.

Bjork, John C. H.: *See*—
Nilsson, Nils E., Rodnert, and Bjork. 2,862,058.

Bjorklund, Gustaf H., to Aktiebolaget Dentatus. Dental drills. 2,861,241, 11-25-58, Cl. 22—48.

Blake, William T. Shock absorbing mechanism. 2,861,795, 11-25-58, Cl. 267—8.

Block, Meyer L., to Nassau Products Corp. Toy steam irons. 2,861,365, 11-25-58, Cl. 38—77.

Bobalek, Francis J.: *See*—
Wolf, Paul A., and Bobalek. 2,861,963.

Bobo, Powell O.: *See*—
Carleton, James T., and Bobo. 2,862,172.

Carter, Herman T., to Bell Telephone Laboratories, Inc. Coin Theins A.: *See*—

American Brake Shoe Co.: *See*—
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Bohman, Wensel L.: *See*—
Ceresa, Myron, and Bohman. 2,861,925.

Bojanowski, Clement J.: *See*—
Martin, Morgan, and Bojanowski. 2,861,911.

Boland, Edward R. Lather-applying safety razors. 2,861,338, 11-25-58, Cl. 30—41.

Boile, Victor W., to Collins Radio Co. Means for digitally varying rotational velocities. 2,861,475, 11-25-58, Cl. 74—661.

Boller, Arthur, A. Fürst, and S. Majnoni, to Hoffmann-La Roche, Inc. Synthesis of 4-amino-2-isonicotilidone. 2,862,002, 11-25-58, Cl. 260—307.

Bollmeier, Emil W., to Minnesota Mining & Mfg. Co. Cable splice protector. 2,862,042, 11-25-58, Cl. 174—93.

Bomac Laboratories Inc.: *See*—
Larkin, Oscar L. 2,862,128.

Bonanno, Joseph L., to The Lionel Corp. Photographic flash apparatus. 2,861,444, 11-25-58, Cl. 67—31.

Bondo, Alfons A., and J. S. Di Pasquale. Angularly adjustable device for trimming leading edge of coil spring. 2,861,622, 11-25-58, Cl. 153—85.

Bonell, Ralph K. Function potentiometer. 2,862,086, 11-25-58, Cl. 201—48.

Bonnaffoux, Maurice, to Societe d'Appareillage et d'Exploitation des Etablissements Pomot, in short Socapex-Pomot. Microphone. 2,862,070, 11-25-58, Cl. 179—121.

Bonnaffoux, Maurice, to Societe Socapex. Microphone support. 2,862,071, 11-25-58, Cl. 179—156.

Bonner, Frank R., to The Commonwealth Engineering Co. of Ohio. Speed signal device. 2,862,076, 11-25-58, Cl. 200—82.

Bonvissuto, Angelo. Ignition circuit switch. 2,862,110, 11-25-58, Cl. 307—10.

Boonton Radio Corp.: *See*—
Moore, William C. 2,862,178.

Booth, Jack J. Pre-mix beverage vending machine. 2,861,433, 11-25-58, Cl. 62—188.

Borden Co., The: *See*—
Werbaler, Harry. 2,861,973.

Borkovec, Alexej B., to The Dow Chemical Co. Process for the polymerization of olefin oxides with ferric compounds. 2,861,962, 11-25-58, Cl. 260—2.

Borst, Douglas R., to Westinghouse Air Brake Co. Pressure and vacuum brake systems interlock apparatus. 2,861,842, 11-25-58, Cl. 303—4.

Boswell, Thomas L.: *See*—
Ensign, George G., and Boswell. 2,862,039.

Bouvat-Martin, Jean, to Westinghouse Air Brake Co. Adjuster which automatically lets out and takes up slack in railway brake rigging. 2,861,658, 11-25-58, Cl. 188—196.

Bowen, William S. Air inducing apparatus. 2,861,737, 11-25-58, Cl. 230—105.

Bowman, Spencer, to Westinghouse Air Brake Co. Hydraulic remote control. 2,861,583, 11-25-58, Cl. 137—624.

Boyer, Keith, and C. W. Johnstone, to United States of America, Atomic Energy Commission. Multi-channel pulse height analyser. 2,862,106, 11-25-58, Cl. 250—27.

Bradburn, William J., Jr.: *See*—
Hansen, Hans R. A., and Bradburn. 2,862,174.

Bradley, Robert W., to United Shoe Machinery Corp. Apparatus control systems. 2,862,154, 11-25-58, Cl. 317—149.

Brandeis, Harold. Rotary switch covers for lamps. 2,862,085, 11-25-58, Cl. 200—168.

Brandt Automatic Cashier Co.: *See*—
Buchholz, Arnold R., and Haban. 2,861,580.

Braslow, Lawrence. Tourniquet. 2,861,574, 11-25-58, Cl. 128—337.

Brathge, Karl H., and W. Siedel, to Parke, Davis & Co. Process of preparing serines. 2,861,966, 11-25-58, Cl. 260—287.

Bräuer, Willi, to Langenstein & Schemann A. G. Hydraulically actuated drop hammer. 2,861,486, 11-25-58, Cl. 78—47.

Braun-Goll Co.: *See*—
Goll, Ernest R. 2,861,709.

Braun, Herman J.: *See*—
Else, Harry D., Basel, and Braun. 2,862,119.

Braun, Weitberg & Co.: *See*—
Koenig, Harry D. 2,861,286.

Braunwarth, John B.: *See*—
Crosby, Gilford W. and Braunwarth. 2,862,025.

Breitschneider, Kurt B., to Crane Co. Conduit gate valve. 2,861,770, 11-25-58, Cl. 251—167.

Brena, Alvin L., to E. I. du Pont de Nemours and Co. Intermittent core filaments. 2,861,319, 11-25-58, Cl. 25—82.

Brewster, Frank S., to Brumley-Donaldson Co. Foundry cores. 2,861,893, 11-25-58, Cl. 106—38.35.

Brena, Cyril J., to E. I. du Pont de Nemours and Co. Explosive composition. 2,861,875, 11-25-58, Cl. 52—6.

Bridges, Jack E., to Zenith Radio Corp. Subscription television. 2,862,049, 11-25-58, Cl. 178—5.1.

Bristol Co., The: *See*—
Russell, John L. 2,862,084.
Russell, John L., and Hodges. 2,862,078.

British Aluminium Co. Ltd., The: *See*—
Rawsley, Charles E. 2,861,450.

British Iron and Steel Research Assn., The: *See*—
Penton, Geoffrey, and Mayercas. 2,861,305.

British Tabulating Machine Co. Ltd., The: *See*—
Bird, Raymond. 2,861,741.

Broadbent, William, & Sons Ltd.: *See*—
Cran, William B. G. 2,861,901.

Broadley, Peter R.: *See*—
Yeffett, John L., and Broadley. 2,861,650.

Brock, Walter L., to Arens Controls, Inc. Control mechanism. 2,861,466, 11-25-58, Cl. 74—804.

Brown, Charles F.: *See*—
Green, Isaac H. C., and Brown. 2,861,441.

Brown, Chauncey T., to Spring Load Mfg. Corp. Tapering tool. 2,861,669, 11-25-58, Cl. 144—208.

Brown, Clifford K. Fishing rod and reel accessory. 2,861,379, 11-25-58, Cl. 43—23.2.

Brown, John S.: *See*—
Jancosek, Andrew T., and Brown. 2,861,941.

Brown Lenox and Co. Ltd.: *See*—
Hutchison, William M., and Hopkins. 2,861,535.

Brown, Raymond H.: *See*—
Steimak, John P., and Brown. 2,862,188.

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Brutscher, Rufus A., Jr.: *See*—
Brutscher, Rufus A., Sr. and R. A., Jr. 2,862,073.

Brutscher, Rufus A., Sr. and R. A., Jr. Electrical control systems. 2,862,073, 11-25-58, Cl. 200—44.

Bryant, Austin U., to Walworth Co. Gate valve. 2,861,771, 11-25-58, Cl. 251—172.

Bubriski, Stanley W., to Sprague Electric Co. Electrolytic capacitors. 2,862,155, 11-25-58, Cl. 317—230.

Buchholz, Arnold R., and F. Haban, to Brandt Automatic Cashier Co. Coin handling machine with adjustable passage. 2,861,580, 11-25-58, Cl. 133—8.

Buehl, Alfred J. Inlet control for radial flow turbines. 2,861,774, 11-25-58, Cl. 253—52.

Büchner, Karl, O. Roelen, and H. Schwarz, to Ruhrchemie Akt. Isocyclic derivatives of monocyclic diolefinic terpenes. 2,862,026, 11-25-58, Cl. 260—514.

Buchwald, Alex S., I. Benjamin, and G. Gold. Fastening device. 2,861,313, 11-25-58, Cl. 24—100.5.

Buckeye Steel Castings Co., The: *See*—
Furniss, Leroy E. 2,861,990.

Budd Co., The: *See*—
Dean, Walter B. 2,861,654.

Bührer, Erwin, and M. Wernli, to Georg Fischer Akt. Interconveyer transfer means for use with multiple conveyer systems. 2,861,672, 11-25-58, Cl. 198—35.

Bulk, George, Sr.: *See*—
Senif, Richard T. 2,861,287.

Bunnell, Raymond H.: *See*—
Bauernfeind, Jacob C., and Bunnell. 2,861,891.

Burgess, Warren C., Jr., and W. H. Sterbentz, said Sterbentz assor. to said Burgess. Vibrator. 2,861,545, 11-25-58, Cl. 121—17.

Burgy, Raymond A., to Toledo Scale Corp. Elevator controls. 2,861,653, 11-25-58, Cl. 187—29.

Burkhart, Robert L.: *See*—
Sandhage, Ellsworth R., and Burkhart. 2,861,571.

Burnside, Walter M., to R. T. Moloney; American National Bank and Trust Co. of Chicago, executor of estate of said R. T. Moloney, deceased. Governor switch. 2,862,079, 11-25-58, Cl. 200—105.

Burroughs Corp.: *See*—
Myers, Harold D. 2,861,706.
Reiis, Matthew J. 2,862,046.

Butler, Henry J., to Dunlop Rubber Co. Ltd. Hydraulic braking system. 2,861,655, 11-25-58, Cl. 188—73.

Butler, Jimmy L. Means for cooling the cutters of drill bits. 2,861,780, 11-25-58, Cl. 255—302.

Butler, Thomas A., to The Lubrizol Corp. Inhibition of corrosion of metal surfaces by salt of phosphorodithioic acid. 2,861,907, 11-25-58, Cl. 148—6.17.

Butsch, Paul V., to United States Rubber Co. Process of making vinyl resin plastic sponge. 2,861,963, 11-25-58, Cl. 260—2.5.

Caliri, Gregory. Soldering gun. 2,862,004, 11-25-58, Cl. 219—23.

Callen, Max W., and T. J. Wilson, to Minneapolis-Honeywell Regulator Co. Interlocking apparatus for radio control of aircraft. 2,861,757, 11-25-58, Cl. 244—77.

Cambridge Thermionic Corp.: *See*—
Abrams, Ralph, and West. 2,861,226.

Camloc Fastener Corp.: *See*—
Newcomer, Jacob B., Jr., and Wheeler. 2,861,859.

Campbell Soup Co.: *See*—
Ramsey, Joseph D. 2,861,910.

Canevari, Gerard P.: *See*—
Birtbauer, Frank A., Canevari, and Lockett. 2,861,939.

Carbary, Richard J., to General Electric Co. Vertically adjustable and laterally slidable shelf structure. 2,861,695, 11-25-58, Cl. 211—142.

Carder, Stephen D., Jr., and E. D. Savacool. Flexible duct construction. 2,861,598, 11-25-58, Cl. 138—98.

Carleton, James T.: *See*—
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Carleton, James T., and P. O. Bobo, to Westinghouse Electric Corp. Minimum excitation limit circuits. 2,862,172, 11-25-58, Cl. 322—25.

Carlson, William R., to Michigan Tool Co. Axial pitch measuring device. 2,861,348, 11-25-58, Cl. 33—179.5.

Carlson, Ernest C., E. J. Johnston, and E. A. Hennington, to International Harvester Co. Suspension system for side delivery rake basket. 2,861,418, 11-25-58, Cl. 56—377.

Carlyle-Johnson Machine Co., The: *See*—
Simon Frank R., and Palmer. 2,861,684.

Carlyle, Robert L., to Continental Oil Co. Method of dispersing barium carbonate in a non-volatile carrier. 2,861,961, 11-25-58, Cl. 252—33.

Carman, William R., to American Maize-Products Co. Method of glazing foods and the resultant product. 2,861,860, 11-25-58, Cl. 99—139.

Carpenter, James E. Apparatus for simultaneously threading a plurality of rods and sequentially releasing the rods from rotary work holders. 2,861,281, 11-25-58, Cl. 10—81.

Carrier, Cassius M. Reinforced concrete and tile wall construction. 2,861,448, 11-25-58, Cl. 72—30.

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Cary, Roderick C., to Rohm & Haas Co. Dinitrophenyl 4-pentenoates. 2,861,915, 11-25-58, Cl. 167—30.

Case, Edmund H., to General Motors Corp. Separator for antifriction bearings. 2,861,849, 11-25-58, Cl. 308—201.

Case, J. I., Co.: *See*—
Brosseau, Clarett B. 2,861,817.

Caubet, Jacques J. Device for cutting and generating hypocycloidal gears. 2,861,502, 11-25-58, Cl. 90—5.

Cereas, Myron, and J. R. Crain, to Westinghouse Electric Corp. Process for adjusting the components in aqueous alkali cyanide electrolytes. 2,861,937, 11-25-58, Cl. 204—44.

Cereas, Myron, and W. L. Bohman, to Westinghouse Electric Corp. Treatment of aqueous alkali cyanide electrolytes. 2,861,939, 11-25-58, Cl. 204—52.

Certus Maschinenbau G. m. b. H.: *See*—
Steinle, Josef. 2,861,783.

Chabrier de Lassauniere, Pierre E., to Recherches et Techniques Appliquees (Societe Anonyme). Derivatives of quercetin and to processes for their preparation. 2,861,992, 11-25-58, Cl. 260—247.7.

Chaty, Carl R.: *See*—
Lattner, Bernie L., and Chaty. 2,861,533.

Chall, Harold J., and B. P. Silverman, to Friden, Inc. Perforated record making adding machine. 2,861,739, 11-25-58, Cl. 234—60.29.

Champlain Co., Inc.: *See*—
Auer, Frederick G. 2,861,895.

Chandler, Hal. Child's food dish. 2,861,367, 11-25-58, Cl. 40—76.

Chase, Hubert H.: *See*—
Updegraff, David M., and Chase. 2,861,921.

Chemstrand Corp., The: *See*—
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De Witt, Hobson D., and Reinderff. 2,861,969.

Chenau, Pierre J. C., to Compagnie des Machines Bull (Societe Anonyme). Electronic adding device. 2,861,740, 11-25-58, Cl. 235—61.

Chicago Bridge & Iron Co.: *See*—
Wiesmiller, Ivan L., and Larsen. 2,861,718.

Chicago Pump Co.: *See*—
Katow, Masakazu S., and Lemke. 2,861,694.

Chicago Telephone Supply Corp.: *See*—
Pierce, Donald A. 2,862,062.

Childress, Hunter W. Hook and lure saver. 2,861,377, 11-25-58, Cl. 43—17.2.

Childs, Henry R., to Underwood Corp. Typewriter support in carrying case. 2,861,285, 11-25-58, Cl. 45—68.2.

Chisholm, Douglas R., and D. F. Hall, to The Dow Chemical Co. Method of and apparatus for reacting magnesium with a volatile metal halide. 2,861,791, 11-25-58, Cl. 266—3.

Christie, David M.: *See*—
Creighton, John P., and Christie. 2,861,552.

Christmas, James, Jr. Brake safety device. 2,862,106, 11-25-58, Cl. 340—52.

Christoff, Chris A., to Clary Corp. Adjustable magnetic transducer mount. 2,862,087, 11-25-58, Cl. 179—100.2.

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Ciba Ltd.: *See*—
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Sallmann, Richard. 2,861,913.
Sallmann, Richard. 2,861,914.
Sallmann, Richard, and Kobler. 2,862,967.

Clag Ltd.: *See*—
Martin, Henry, and Habicht. 2,861,967.

Cities Service Research and Development Co.: *See*—
Fischer, Robert L. 2,861,990.

Clade, Robert, to ACF Industries, Inc. Spherical plug valve. 2,861,773 11-25-58, Cl. 251—316.

Clary Corp.: *See*—
Christoff, Chris A. 2,862,067.

Cleaver, Charles R., and D. C. England, to E. I. du Pont de Nemours and Co. Organic compounds. 2,861,990, 11-25-58, Cl. 260—243.

Clevite Corp.: *See*—
Gravley, Charles K. 2,861,220.

Click, James O. Blackboard ruling device. 2,861,342, 11-25-58, Cl. 33—41.

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Coggeshall, Thellwell R., and H. Beaty, to General Electric Co. Electric protective equipment. 2,862,196, 11-25-58, Cl. 325—173.

Cohan, Henry, to United States of America, Navy. Platform guidance system for shock test machine. 2,861,449, 11-25-58, Cl. 73—12.

Cohen, Leonard P., 1/10 to J. F. Woerner and 1/4 to C. R. Lightfoot. Heat exchange apparatus. 2,861,781, 11-25-58, Cl. 257—243.

Coker, William F., and G. W. Strother, Jr., to The Dow Chemical Co. Preparation of 2,5-dimethylpiperazine. 2,861,994, 11-24-58, Cl. 260—268.

Colasanto, Dominick W., to Radio Corp. of America. Apparatus for coating simultaneously a plurality of separate metal articles. 2,861,936, 11-25-58, Cl. 204—198.

Colby, Robert W., and H. J. Mosher, Jr., to The Dow Chemical Co. Feed composition. 2,861,886, 11-25-58, Cl. 99—2.

Colby, Robert W. and H. J. Mosher, Jr., to The Dow Chemical Co. Poultry feed. 2,861,887, 11-25-58, Cl. 99—4.

Cole, Eldon B., and R. L. Letheringer, to Nicolais Refining Co. Breaking water-in-oil emulsions. 2,861,957, 11-25-58, Cl. 252—324.

Coles, Edward F. and T. A. Pellets containing dehydrated meat and coconut and confection containing these pellets. 2,861,883, 11-25-58, Cl. 99—135.

Coles, Thelma A.: *See*—
Coles, Edward F. and T. A. 2,861,883.

Coley, John E., R. L. Evering, and J. D. McCollum, to Standard Oil Co. Conversion of methylcyclopentane to benzene. 2,861,944, 11-25-58, Cl. 208—92.

Colgate Palmolive Co.: *See*—
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Collins, Charles V. Automatic switch controlling mechanism. 2,862,077, 11-25-58, Cl. 200—84.

Collins, John E. Plunger valve with solenoid pilot and manual override valve mechanism. 2,861,592, 11-25-58, Cl. 137—623.

Collins, John E.: Solenoid valve. 2,861,594, 11-25-58, Cl. 137—625.3.

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Rolle, Victor W. 2,861,475.
Henriel, Carl R., and Shanklin. 2,862,204.
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Columbian Carbon Co.: *See*—
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Commonwealth Engineering Co. of Ohio, The: *See*—
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Compagnie des Machines Bull (Societe Anonyme): *See*—
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Considder, Theodore A. Hopper for rotary mowers. 2,861,411, 11-25-58, Cl. 144—124.

Conti, Vincent. Lamp with automatic filament shifting means. 2,862,147, 11-25-58, Cl. 315—65.

Continental Can Co., Inc.: *See*—
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Continental Oil Co.: *See*—
Carlyle, Robert L. 2,861,951.
Redd, Frederick J., Shock, and Budbury. 2,861,807.

Continental Paper Co.: *See*—
Vines, Oscar L. 2,861,717.

Controls Company of America: *See*—
Hinspeter, Charles W. 2,861,847.
Small, Joseph M. 2,861,852.

Cook Electric Co.: *See*—
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Cook, Richard S., and C. H. McKeever, to Rohm & Haas Co. Dinitroalkylphenyl methacrylates. 2,862,022, 11-25-58, Cl. 260—478.

Cooksley, Ralph D., 1/2 to Pressure Packaging Corp. Two way resilient valve for pressurized containers. 2,861,725, 11-25-58, Cl. 222—394.

Cooper Alloy Corp.: *See*—
Mott, Norman S. 2,861,883.

Cooper, Frederick D.: *See*—
Kersey, Albert H., and Cooper. 2,861,584.

Cordis, Nat. Continuous web-type poultry feeder. 2,861,875, 11-25-58, Cl. 198—181.

Cordis, Nat. Litter remover for automatic poultry feeder. 2,861,663, 11-25-58, Cl. 209—98.

Corning Glass Works: *See*—
Smith, Wendell O. 2,861,351.

Cosmocord Ltd.: *See*—
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Courtin, John J., and C. W. Irwin, to Westinghouse Electric Corp. Submersible dynamoelectric machine. 2,862,122, 11-25-58, Cl. 310—87.

Cowan, John V., to Sperry Products, Inc. Induction welding. 2,862,092, 11-25-58, Cl. 219—9.5.

Crain, James R.: *See*—
Cereas, Myron, and Crain. 2,861,937.

Cran, William E. G., to William Broadbent & Sons Ltd. Folding machine for laundry use. 2,861,801, 11-25-58, Cl. 270—68.

Crandall, Julian T., to Ashaway Line & Twine Mfg. Co. Manufacture of strings and the construction thereof. 2,861,417, 11-25-58, Cl. 57—162.

Crane Co.: *See*—
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Cranc, Robert: *See*—
Granet, Charles, Roland, and Cranc. 2,861,654.

Crawford, H. E., Co., Inc., The: *See*—
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Crawford, Herman E., to The H. E. Crawford Co., Inc. Multi-feed circular knitting machine. 2,861,440, 11-25-58, Cl. 66—41.

Crawford, John T.: *See*—
Curtis, Everett C., Crawford, and Evans. 2,861,657.

Creighton, John P., and D. M. Christie, to Ford Motor Co. Ltd. Power transmission arrangements for hydraulically propelled vehicles. 2,861,552, 11-25-58, Cl. 121—119.

Cronk, John L. to Worthington Corp. Fluid pressure regulators. 2,861,589, 11-25-58, Cl. 137—505.12.

Crosby, Gifford W., and J. B. Braunwarth, to The Pure Oil Co. Manufacture of succinic acid. 2,862,036, 11-25-58, Cl. 260—537.

Cromarine, Herbert E., J. F. Rosenthal, and W. E. Bixby, to Haloid Xerox Inc. Apparatus for development of electrostatic image. 2,861,543, 11-25-58, Cl. 118—637.

Cuenyi, Ladis H., to Iowa State College Research Foundation, Inc. Apparatus for mixing finely-divided solids with liquids. 2,861,787, 11-25-58, Cl. 259—158.

Cummings, Harold R., to General Electric Co. Means for and method of controlling the generation of X-rays. 2,862,107, 11-25-58, Cl. 250—89.

Cummins Engine Co., Inc.: *See*—
Meiners, Neville M. 2,861,550.

Curran, Louis J. Moisture-proof flanged hub type connector. 2,861,040, 11-25-58, Cl. 174—51.

Curry, Robert R., Jr., to Sperry Rand Corp. Autopilot servomotor systems. 2,862,167, 11-25-58, Cl. 318—490.

Curtis, Everett C., to Towmotor Corp. Torque converter and gear transmission drive. 2,861,480, 11-25-58, Cl. 74—732.
Curtis, Everett C., J. T. Crawford, and D. W. Evans, to Towmotor Corp. Automatic slack adjuster for brake. 2,861,657, 11-25-58, Cl. 188—196.
Curtis, Frank W., to Lexseco, Inc. Fire retardant roof vapor barrier and securement means. 2,861,525, 11-25-58, Cl. 108—6.5.
Curtis, Richard C., to Hamilton Research, Inc. Self-correcting pulse-code-communication system. 2,862,054, 11-25-58, Cl. 178—23.
Cutler, Burton: *See*—
Green, David J., Tasker, and Cutler. 2,862,202.
Dailey, William H., Jr., to Surface Combustion Corp. Burner apparatus. 2,861,629, 11-25-58, Cl. 158—109.
Daimler-Benz Akt.: *See*—
Stump, Eugen. 2,861,534.
Dale, Jack K., and S. L. Ross, to The Upjohn Co. Therapeutic suspensions of steroids containing PVP and/or PVA. 2,861,920, 11-25-58, Cl. 167—65.
Dale, Joseph J. Adjustable leash. 2,861,547, 11-25-58, Cl. 119—109.
D'Alessandro, Alfred F., to Allied Chemical & Dye Corp. Production of cyanopyridines. 2,861,999, 11-25-58, Cl. 260—294.9.
Daley, Evelyn P. Diaper. 2,861,573, 11-25-58, Cl. 128—284.
Dalton, Harold R., to Timefax Corp. Method of making duplicating master. 2,861,515, 11-25-58, Cl. 101—149.4.
Dardelet, Robert L. Gas pumps and compressors of the liquid ring type. 2,861,736, 11-25-58, Cl. 230—79.
Davis, George B., Jr. Flasher lamp. 2,862,145, 11-25-58, Cl. 315—47.
Davison, Alan, and R. Threadgold, to Automatic Telephone & Electric Co. Ltd. Telecommunication systems. 2,862,140, 11-25-58, Cl. 315—84.5.
Davy, John C., and W. R. C. Watkin, to Powers-Samas Accounting Machines Ltd. Relating to card-feeding apparatus. 2,861,804, 11-25-58, Cl. 271—54.
Dawson, Charles W.: *See*—
Pedrick, Joan L., and Dawson. 2,861,732.
Day, Dewey D., to The Murray Co. of Texas, Inc. Apparatus for and method of cleaning lint cotton. 2,861,299, 11-25-58, Cl. 19—76.
Dayton Rubber Co., The: *See*—
Moorman, Edward W. 2,861,707.
Desel, Joachim, to Monsanto Chemical Co. Adducts. 2,862,012, 11-25-58, Cl. 260—404.8.
Deshl, Dey D. Rainable stepladders. 2,861,730, 11-25-58, Cl. 211—12.
Dean, Walter B., to The Budd Co. Railway disk brakes. 2,861,654, 11-25-58, Cl. 188—59.
De Angelis, Angelo C., to Dynamics Corp. of America. Blender for materials. 2,861,785, 11-25-58, Cl. 259—108.
De Boer, Frank E., and E. Field, to Standard Oil Co. Hydrocarbon conversion process and catalysts. 2,861,960, 11-25-58, Cl. 252—466.
Deiss, Karl, to Linotype Gesellschaft mit beschrankter Haftung. Device for trimming the backs of slugs in line composing and casting machines. 2,861,678, 11-25-58, Cl. 199—59.
Deere & Co.: *See*—
Witzel, Homer D. 2,861,663.
De Gaugue, Charles L. E., Jr., and R. T. Halstead, to Johns-Manville Corp. Composition brake block. 2,861,964, 11-25-58, Cl. 260—17.4.
De Kyven, Robert. Safety pin. 2,861,315, 11-25-58, Cl. 24—157.
Delfs, Detlef: *See*—
Müller, Karl-Walter, and Delfs. 2,862,033.
De Long Corp.: *See*—
Bauer, George, De Long, Suderow, and Showalter. 2,861,430.
De Long, Leon B.: *See*—
Bauer, George, De Long, Suderow, Showalter. 2,861,430.
Demmler, Kurt: *See*—
Ritter, Wolfgang, Meyer, and Demmler. 2,861,971.
Denaux, Louis M. Inertia operated choke for shotguns. 2,861,376, 11-25-58, Cl. 42—70.
Den Hertog, Martinus: *See*—
Ducamp, André, and den Hertog. 2,862,060.
Denison, Shell D. Vehicle actuated gate. 2,861,366, 11-25-58, Cl. 20—18.
Dentler, Arnold E., to W. H. Miner, Inc. Draft gear for railway draft rigging. 2,861,696, 11-25-58, Cl. 213—46.
Derby Sealers, Inc.: *See*—
Bergmark, John C. 2,861,539.
De Witt, Hobson D., and A. B. Reindorff, to The Chemstrand Corp. Compositions comprising a polyester and 1,1,1-trichloro-2-nitro-2-propanol and process of preparing same. 2,861,969, 11-25-58, Cl. 260—31.2.
De Witt, Hobson D., to The Chemstrand Corp. Compositions comprising a polyester and trichloroethanol and process of preparing same. 2,861,970, 11-25-58, Cl. 260—31.2.
Deyrup, Alden J., R. W. Heiderich, and H. E. Wagener, to E. I. du Pont de Nemours & Co. Manufacture of hydrogen cyanide. 2,861,870, 11-25-58, Cl. 23—151.
Diamond Alkali Co.: *See*—
Hirsch, Alfred. 2,861,951.
Dick, John O., to United States of America, Navy. Electronic FM/FM to analog or digital converter. 2,862,165, 11-25-58, Cl. 332—1.
Dierstein, Roy H.: *See*—
Prozmire, Harry J., and Dierstein. 2,862,043.
Dierstein, Roy H., and J. E. Podolsky, to General Electric Co. Bushing support for electrical apparatus. 2,862,045, 11-25-58, Cl. 174—152.
Di Pasquale, Joseph S.: *See*—
Bonde, Alfons A., and Di Pasquale. 2,861,622.
Disney, Walter E., to Disneyland, Inc. Rocket ship amusement apparatus. 2,861,806, 11-25-58, Cl. 272—18.
Disneyland, Inc.: *See*—
Disney, Walter E. 2,861,806.
Distillers Co. Ltd., The: *See*—
Elce, Alec, Graham, Milliken, Robson, and Young. 2,861,924.
Dobbs, Earl B. Connector for vacuum cleaners. 2,861,586, 11-25-58, Cl. 137—360.
Dodson, Reb. B. Self operating photoprint washer. 2,861,500, 11-25-58, Cl. 95—89.
Doerrfeld, Robert L., to Teletype Corp. Sequentially operable transmitting system. 2,862,047, 11-25-58, Cl. 178—2.
Domen Helicopters, Inc.: *See*—
Du Pont, Stephen. 2,861,640.
Donner, Verne P., to International Harvester Co. Differential for vehicles. 2,861,478, 11-25-58, Cl. 74—711.
Dormoy, Etienne. Racetrack game apparatus. 2,861,807, 11-25-58, Cl. 273—86.
Dorr-Oliver Inc.: *See*—
Wooh, Thomas S. 2,861,693.
Dosen, Olof C. Method and apparatus for finishing mold grooves. 2,861,483, 11-25-58, Cl. 76—107.
Dumont Mfg. Corp.: *See*—
Gunthel, Alfred B., Jr. 2,861,762.
Dustal & Lowey Co., Inc.: *See*—
Read, Philip C., and Ufer. 2,861,670.
Douglas Aircraft Co., Inc.: *See*—
Jurisich, Peter L. 2,861,424.
Wright, Fred A. 2,861,759.
Douglas, Peyton W., to Pennsylvania Range Boiler Co. Laundry drying machines. 2,861,385, 11-25-58, Cl. 34—82.
Dow Chemical Co., The: *See*—
Borkovec, Alexej B. 2,861,962.
Chisholm, Douglas S., and Hall. 2,861,791.
Coker, William P., and Strother. 2,861,994.
Colby, Robert W., and Mosier. 2,861,866.
Colby, Robert W., and Mosier. 2,861,887.
Gordon, David A. 2,861,976.
Kaser, Kenneth C. 2,862,018.
Kundiger, Donald G., Ott, and Pledger. 3,862,015.
Lang, John L. 2,861,974.
MacKenzie, Gordon F. 2,861,995.
McKellar, Robert. 2,861,948.
Rigterink, Raymond H. 2,861,991.
Wolf, Paul A., and Bobalek. 2,861,968.
Dow, Walter K. Accelerator controlling device. 2,861,408, 11-25-58, Cl. 74—513.
Dr.-Ing. Schneider & Co.: *See*—
Schneider, John. 2,861,711.
Dravo Corp.: *See*—
Portens, John H., and Anthes. 2,861,792.
Dresser Industries, Inc.: *See*—
Frykland, Robert A. 2,862,193.
Risley, Roger E., and Paterson. 2,861,822.
Drill Development Co.: *See*—
Bergstrom, Frank S. 2,861,326.
Ducamp, André, and M. den Herteg, to International Standard Electric Corp. Electrical connecting circuits. 2,862,060, 11-25-58, Cl. 179—18.
Duncan, Angus W., to The Mining Engineering Co. Ltd. Roof supports for mine workings. 2,861,429, 11-25-58, Cl. 61—45.
Dunlop Rubber Co. Ltd.: *See*—
Butler, Henry J. 2,861,635.
Du Pont de Nemours, E. I., and Co.: *See*—
Breen, Alvin L. 2,861,819.
Brena, Cyril J. 2,861,875.
Cleaver, Charles S., and England. 2,861,990.
Deyrup, Alden J., Heiderich, and Wagener. 2,861,870.
England, Richard J. 2,861,988.
Hendrixson, Phillip R. 2,861,997.
Martin, Donnan, and Parker. 2,861,839.
Smith, William C. 2,862,029.
Du Pont, Stephen, to Domen Helicopters, Inc. Helicopter rotor head combination with mechanism to fly rotor level. 2,861,640, 11-25-58, Cl. 170—160.13.
Dyer, Tom L., Jr., to Westinghouse Electric Corp. Spark gap device. 2,862,132, 11-25-58, Cl. 313—156.
Dynamics Corp. of America: *See*—
De Angelis, Angelo C. 2,861,785.
Eastern Products Corp.: *See*—
Rosenbaum, Harry S. 2,861,632.
Easton Metal Powder Co. Inc.: *See*—
Michalko, Max. 2,861,879.
Eaton Mfg. Co.: *See*—
Russell, Robert C. 2,861,470.
Ebel, Clarence J. Rotary putty removing tool. 2,861,233, 11-25-58, Cl. 29—103.
Egly, John M.: *See*—
Lee, Wilbur J., and Egly. 2,861,271.
Ehn, Erik W.: *See*—
Johansson, Bertil, Ehn, and Sommer. 2,861,629.
Ehrenreich, A., & Cie.: *See*—
Langen, Viktor, Latsen, Vogt, and Orthell. 2,861,827.
Ehrlich, Grant C.: *See*—
Holsman, Henry T., Potts, and Ehrlich. 2,861,406.
Eisele, Julius: *See*—
Schuster, Curt, Gehm, Eisele, and Federbiel. 2,861,863.
Ekstrom-Carlson & Co.: *See*—
Mann, Theodore C. 2,861,328.
Ekstrom, Marvin D. Double octave mechanism for accordions. 2,861,485, 11-25-58, Cl. 84—376.
Elce, Alec, S. B. Graham, A. F. Milliken, I. H. M. Robson, and D. P. Young, to The Distillers Co. Ltd. Purification of alkanoic acids. 2,861,924, 11-25-58, Cl. 202—39.
Electrolle Fixtures Ltd.: *See*—
Towler, John M. 2,861,436.

Electric & Musical Industries Ltd.: *See*—
Spencer, Rolf E. 2,861,245.
Stephenson, Geoffrey H. 2,861,742.

Elgin National Watch Co.: *See*—
Ensign, George G., and Boswell. 2,862,029.

Ellis, Rollo G., to Micromatic Hone Corp. Machine for grinding parallel surfaces. 2,861,400, 11–25–58, Cl. 51—118.

Ellis, Russell S. Driving apparatus. 2,861,777, 11–25–58, Cl. 252—166.

Ellis, Sidney G., to Radio Corp. of America. Semiconductor devices. 2,861,909, 11–25–58, Cl. 148—33.

Ellis, Wayne P., L. I. Smith, and L. J. Stelts, to Benjamin Foster Co. Flameproof mastic composition containing isobutylene polymer. 2,861,967, 11–25–58, Cl. 260—28.5.

Else, Harry D., D. R. Bassi, and H. J. Braun, to Westinghouse Electric Corp. Liquid-cooled dynamoelectric machine. 2,862,119, 11–25–58, Cl. 310—54.

Emerson, John H. Valve apparatus for dispensing gas. 2,861,589, 11–25–58, Cl. 128—142.

Emery Industries, Inc.: *See*—
Aylesworth, Robert D. 2,861,955.

Emmons, Arthur N., to The Porter-Cable Machine Co. Jack shaft and guard unit for wood working saws. 2,861,607, 11–25–58, Cl. 143—159.

Emmons, Nelson, III, to The Sheffield Corp. Fluid leakage gaging device. 2,861,451, 11–25–58, Cl. 73—38.

England, David C.: *See*—
Cleaver, Charles S., and England. 2,861,980.

England, Richard J., to E. I. du Pont de Nemours and Co. Caprolactam manufacture. 2,861,968, 11–25–58, Cl. 260—239.3.

English Electric Valve Co. Ltd.: *See*—
Banks, George R. 2,862,140.

Enkelmann, Walter: *See*—
Baumbach, Harlan L., Enkelmann, and Wargo. 2,861,503.

Enos, John P., to The Singer Mfg. Co. Ornamental zigzag stitching attachments. 2,861,528, 11–25–58, Cl. 112—160.

Ensign, George G., and T. L. Boswell, to Elgin National Watch Co. Art of terminal structures for electrical energy cells. 2,862,029, 11–25–58, Cl. 136—125.

Ensign, Robert R., to Hough Shade Corp. Latch construction for sliding doors. 2,861,860, 11–25–58, Cl. 189—46.

Epstein, Harry: *See*—
Lieberman, Nathan L. 2,861,447.

Ericsson Telephones Ltd.: *See*—
Acton, John R., and Westley. 2,862,133.

Eschenbach, Richard C.: *See*—
Smith, George H., Eschenbach, and Pelton. 2,861,900.

Escher-Desrivieres, Jean A., to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny & Cirey. Glass for glow discharge lamps such as fluorescent luminescent lamps and the like. 2,862,131, 11–25–58, Cl. 313—112.

Esso Research and Engineering Co.: *See*—
Betts, Joseph L., Jr., and Thorn. 2,861,998.
Biribauer, Frank A., Canevari, and Lockett. 2,861,939.
Kearby, Kenneth K., Kirshenbaum, and Baker. 2,861,945.
Nicholson, Edward W. S. 2,861,947.
Sage, Richard W., and Jones. 2,861,946.
Thorn, John P., Guyer, and Arundale. 2,861,959.

Ethyl Corp.: *See*—
Rae, Sigard O. 2,862,014.

Eberle, George W., to Atlantic Service Co., Inc. Cutter bit construction. 2,861,612, 11–25–58, Cl. 144—180.

Evans, Charles H. Indicia cutting device. 2,861,536, 11–25–58, Cl. 116—122.

Evans, Dafydd W.: *See*—
Curtis, Everett C., Crawford, and Evans. 2,861,657.

Evering, Bernard L.: *See*—
Coley, John R., Evering, and McCollum. 2,861,944.

E. T. Products Ltd.: *See*—
Fernberg, Eric B. 2,861,318.

Fahnoe, Frederick, and J. J. Rhyne, to Vitro Corp. of America. Electrophoretic method of applying a lubricant coating. 2,861,935, 11–25–58, Cl. 204—181.

Fairbanks, Morse & Co.: *See*—
Antonsen, Anker K., and Foreman. 2,861,555.

Fairchild Engine and Airplane Corp.: *See*—
Lovelock, John F., and Beagan. 2,861,848.

Falco Products Co.: *See*—
Leshner, Ervin. 2,861,855.

Falco Products Company: *See*—
Leshner, Ervin. 2,861,855.

Faltin, William G. Bag-like receptacle. 2,861,735, 11–25–58, Cl. 229—53.

Farbenfabriken Bayer Akt.: *See*—
Müller, Karl E., Bayer, and Petersen. 2,861,972.
Müller, Karl-Walter, and Delfs. 2,862,035.
Schrader, Gerhard. 2,862,019.
Schrader, Gerhard, and Lorenz. 2,862,017.
Wegler, Richard, Krewe, and Regel. 2,861,913.

Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning: *See*—
Berlin, Ludwig W., and Heimke. 2,861,969.

Farrand Optical Co., Inc.: *See*—
Tronnier, Albrecht W. 2,861,500.

Faust, John W., Jr., to Westinghouse Electric Corp. Electrolytic etching processes. 2,861,931, 11–25–58, Cl. 204—141.

Favaretto, Gianni. Structural toy and model building set. 2,861,368, 11–25–58, Cl. 46—16.

Fazis, Hermann, to D. Rothschild. Means for adjusting the tensioning of material wound on a beam. 2,861,429, 11–25–58, Cl. 64—20.

Federal Laboratories, Inc.: *See*—
Weinert, Carl E. 2,861,372.

Federkiel, Wilhelm: *See*—
Schuster, Curt, Gehm, Klenke, and Federkiel. 2,861,863.

Fehlner, Leo F., to United States of America, Navy. Sea anchor. 2,861,534, 11–25–58, Cl. 114—209.

Feldman, Julian, to National Distillers and Chemical Corp. Process for recovery of acids. 2,862,027, 11–25–58, Cl. 260—533.

Fenci, Edenth: *See*—
Jerie, Jan, and Fenci. 2,861,423.

Fender, Eldon E., to Phillips Petroleum Co. Silicone release agent for dryer flight coatings. 2,861,352, 11–25–58, Cl. 34—22.

Fenton, Geoffrey, and R. Hayoreas, to The British Iron and Steel Research Association. Ingot casting. 2,861,305, 11–25–58, Cl. 22—147.

Fernandez, Louis, to Monsanto Chemical Co. Liquid detergent compositions. 2,861,956, 11–25–58, Cl. 252—153.

Fernberg, Eric B., to F. T. Products Ltd. Fasteners. 2,861,318, 11–25–58, Cl. 24—259.

Ferranti, Ltd.: *See*—
Shepherd, Alexander T., Walker, and Williamson. 2,862,200.

Feucht, Robert E., J. Jarvis, and J. C. Ziegler, to Bendix Aviation Corp. Manual control system for modifying or overcoming the aircraft auto pilot control. 2,861,756, 11–25–58, Cl. 244—76.

Feustel, Ernest A.: *See*—
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Ischer, Hans, and Schneider. 2,861,985.

Field, Edmund: *See*—
De Boer, Frank E., and Field. 2,861,980.

Fields, Arnold C., to Westinghouse Electric Corp. Electrostatic precipitators. 2,861,648, 11–25–58, Cl. 183—7.

Fields, Joseph E., to Monsanto Chemical Co. Adducts of alkyl acrylates and polychloromethanes. 2,862,023, 11–25–58, Cl. 260—485.

Finlayson, Frank E., to General Electric Co. Steam flatiron. 2,861,362, 11–25–58, Cl. 38—77.

Finneran, James A., Jr., and F. B. Grosselfinger, to Hydrocarbon Research, Inc. Hydrocracking process with the use of fluidized inert particles. 2,861,943, 11–25–58, Cl. 208—76.

Firma Getrag Getriebe- und Zahnradfabrik G. m. b. H.: *See*—
Kreidler, Otto. 2,861,461.

Firth, Albert J.: *See*—
Miller, Verle A., Firth, and Shepard. 2,861,296.

Fischer, George, Akt.: *See*—
Bührer, Erwin, and Wernli. 2,861,672.
Häberlin, Hans P. 2,861,301.

Fischer, H. G., & Co.: *See*—
Kosinski, Joseph. 2,861,564.

Fischer, Robert L., to Cities Service Research and Development Co. Method for producing urea formaldehyde core binder resins. 2,861,980, 11–25–58, Cl. 260—71.

Fiechl, Karl P. Combination dice and card game. 2,861,809, 11–25–58, Cl. 273—141.

Fish, Marion F., to Sumner Iron Works, Inc. Remote control set works. 2,861,606, 11–25–58, Cl. 143—120.

Fisher, Delphia. Receptacle holder. 2,861,764, 11–25–58, Cl. 248—146.

Fleuret, Anna, nee A. Jaud: *See*—
Fleuret, Michel A. A., and A. 2,861,988.

Fleuret, Michel A. A., deceased; A. Fleuret, nee A. Jaud, sole heir. Plastic material produced by the reaction of cellulose triacetate. 2,861,986, 11–25–58, Cl. 260—226.

Flocos, Peter N. Longitudinal shoe holder or stretcher with mounting means. 2,861,284, 11–25–58, Cl. 12—53.7.

Flynn, George M., to Continental Can Co., Inc. Apparatus for washing flux from and coating the side seams of traveling can bodies. 2,861,540, 11–25–58, Cl. 118—73.

Ford Motor Co.: *See*—
Jensen, William G. 2,861,464.
Creighton, John P., and Christie. 2,861,552.
Kersey, Albert H., and Cooper. 2,861,534.

Foreman, Matthew L.: *See*—
Antonsen, Anker K., and Foreman. 2,861,555.

Forstner, Inc.: *See*—
Ruf, Hermann. 2,861,313.

Fort Orange Paper Co.: *See*—
Metzger, Henry L. 2,861,722.

Foster, Benjamin, Co.: *See*—
Ellis, Wayne P., Smith, and Stelts. 2,861,967.

Foster, Norman M. Proportioning fuel-air valve. 2,861,772, 11–25–58, Cl. 251—208.

Fotis, Peter, Jr., to Standard Oil Co. Catalytic process for the production of solid polymers of ethylene by the use of lithium. 2,861,982, 11–25–58, Cl. 260—94.9.

Fowler, Frank E., and R. J. Minder. Stacher construction. 2,861,671, 11–25–58, Cl. 198—35.

Fowler, Lambuth G. Separators for cotton harvesters. 2,861,298, 11–25–58, Cl. 19—72.

Franck, George H., to The Imperial Brass Mfg. Co. Tube flaring tool with frusto conical roller bearing groove. 2,861,623, 11–25–58, Cl. 153—81.

Franck, Heinz, to Gesellschaft Fuer Teerverwertung m. b. H. Coal tar soft pitch product. 2,861,894, 11–25–58, Cl. 106—279.

Frank, Charles H., and V. L. Hansley, to National Distillers and Chemical Corp. Polyesters and isocyanate reaction products thereof. 2,861,961, 11–25–58, Cl. 260—75.

Franklin, John L. Announcing machines. 2,862,045, 11–25–58, Cl. 179—100.2.

Frasch, Mary E. Article packaging wrapper. 2,861,880, 11–25–58, Cl. 206—56.

Fraser, Reginald F. Liquid atomizers. 2,861,628, 11–25–58, Cl. 158—75.

Fredholm, Gunnar L.: *See*—
Petterson, Olof H., and Fredholm. 2,861,446.

Freeburn, William A., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,862,171, 11–25–58, Cl. 321—45.

Freel, Donald G.: *See*—
Olson, Carl L., and Freel. 2,861,349.
Freeman, J. William: *See*—
Bermingham, Peter D. 2,861,712.
Friden, Inc.: *See*—
Chall, Harold J., and Silverman. 2,861,720.
Friedenreich, Stanley M. Concealable apparel rack for closets. 2,861,300, 11-25-58, Cl. 20—1.11.
Friedman, Jacob: *See*—
Lieberman, Nathan L. 2,861,447.
Froberger, Charles F., to General Motors Corp. Shell molds. 2,861,307, 11-25-58, Cl. 22—193.
Frost, Charles E., & Co.: *See*—
Levi, Irving. 2,862,025.
Frost, Randolph B., and J. F. Adams, to General Electric Co. Signal modulating system. 2,862,187, 11-25-58, Cl. 332—37.
Fry, Carl L.: *See*—
Wahl, John R., Jr., Wilson, and Fry. 2,861,843.
Fryklund, Robert A., to Dresser Industries, Inc. Differential transformer. 2,862,193, 11-25-58, Cl. 336—119.
Funk, Truman B., to Yard-Man, Inc. Rotary disc type mower construction. 2,861,410, 11-25-58, Cl. 56—25.4.
Furniss, Loree E., to The Buckeye Steel Castings Co. Coupler operating rod support. 2,861,696, 11-25-58, Cl. 213—171.
Fürst, Ander: *See*—
Boller, Arthur, Fürst, and Majnoni. 2,862,002.
Gage, Robert M., to Union Carbide Corp. Arc torch process with reactive gases. 2,862,099, 11-25-58, Cl. 219—74.
Gageant, Louis H.: *See*—
Rust, Edgar C., Jr., and Gageant. 2,861,750.
Gajdošík, Ferdinand, to Svit, národní podnik. Plant for the continuous manufacture of fat-impregnated leather. 2,861,542, 11-25-58, Cl. 118—422.
Galasso, August J.: *See*—
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Hagen, Reinold and N. Manufacture of plastic bottles and similar hollow bodies. 2,861,295, 11-25-58, Cl. 18—5.
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Kirchensteiner, Hans, and Spiegelberg. 2,862,001.
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Humphreys, Ira B. Thickening apparatus for increasing the solid content of liquids. 2,861,692, 11-25-58, Cl. 210—521.

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Hussar, Joseph P., to L. N. Baker. Limited torque drive for electrically operated rotary tooth brush. 2,861,462, 11-25-58, Cl. 74—423.

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Ipsen, Harold N. Heat exchanger baffle system. 2,861,504, 11-25-58, Cl. 122—36.

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Isaacs, Elias, and L. Schneider, to Saul & Co., as nominee of Fidelity Union Trust Co., executive trustee under Sandos Trust. Dimeno dyestuffs. 2,861,988, 11-25-58, Cl. 260—147.

Jackson, Patrick T., and W. N. Stevenson, to American Sisalkraft Corp. Twine and its manufacture. 2,861,416, 11-25-58, Cl. 57—140.

Jacobitti, Edward, and D. A. James, to Bell Telephone Laboratories, Inc. Translator test set. 2,862,072, 11-25-58, Cl. 179—175.22.

Jacobsen, Moses G., to Mine Safety Appliances Co. Electrochemical method and apparatus for gas detection. 2,861,926, 11-25-58, Cl. 204—1.

James, Donald A.: *See*—
Jacobitti, Edward, and James. 2,862,072.

James, Thomas R., to General Mills, Inc. Remote control handling unit. 2,861,700, 11-25-58, Cl. 214—11.

Jancosek, Andrew T., and J. S. Brown, to Standard Oil Co. Urea-dewaxing lubricating oil. 2,861,941, 11-25-58, Cl. 208—25.

Jarvis, John: *See*—
Fencht, Robert E., Jarvis, and Ziegler. 2,861,756.

Jaud, Anna: *See*—
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Jefferson Lake Sulphur Co.: *See*—
Miller, Ernest B. 2,861,851.

Jeffrey Mfg. Co., The: *See*—
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Jeffrey, William B.: *See*—
Bentz, Ronald J., and Jeffrey. 2,861,843.

Jensen, Lionel H., to Geo. D. Roper Corp. Burner grate construction. 2,861,562, 11-25-58, Cl. 126—214.

Jensen, William G., to Ford Motor Co. Transmission selector servo. 2,861,464, 11-25-58, Cl. 74—472.

Jerie, Jan, and Z. Fencl. Combined combustion chamber for burning pulverized fuel and fly-ash separator. 2,861,423, 11-25-58, Cl. 60—39.46.

Jessel, Jonas G. Apparatus for making beverages. 2,861,512, 11-25-58, Cl. 99—283.

Johanson, Bertil, E. W. Ehn, and W. Sommer, to SKF Kugellagerfabriken G. m. b. H. Detachable connection arrangement. 2,861,829, 11-25-58, Cl. 287—119.

Johansson, Bengt-Olof: *See*—
Ross, Karl O., Johansson, Alexsson, and Andersson. 2,861,582.

Johns-Manville Corp.: *See*—
De Gangue, Charles L. E., Jr., and Halstead. 2,861,944.

Johnson, Carl E. Potato harvester attachment for removing sod, sticks, stones, etc. 2,861,686, 11-25-58, Cl. 200—106.

Johnson, Harold A.: *See*—
Sasserson, Curtis F., and Johnson. 2,861,708.

Johnston, Christian W., and R. A. Meara, to National Distillers and Chemical Corp. Polyesters and laminates therefrom. 2,861,910, 11-25-58, Cl. 154—43.

Johnston, Edward J.: *See*—
Carlson, Ernest C., Johnston, and Hennings. 2,861,415.

Johnstone, Charles W.: *See*—
Boyer, Keith, and Johnstone. 2,862,105.

Jones, Charles H.: *See*—
Kruper, Andrew P., and Jones. 2,862,141.

Jones, Clifton H.: *See*—
Sage, Richard W., and Jones. 2,861,945.

Jones, Thomas E., to Precision Welder & Machine Co. Magnetic force resistance welders of the inertia type provided with fixed air gap. 2,862,100, 11-25-58, Cl. 219—86.

Joslyn Mfg. & Supply Co.: *See*—
Yonkers, Edward H. 2,862,080.

Judd, Nigel C. W.: *See*—
Barnard, Ray M., Girling, and Judd. 2,861,321.

Jumer, John F. Apparatus for electropolishing interior surfaces of vessels. 2,861,937, 11-25-58, Cl. 204—212.

Junkmann, Heinzjosef. Filter hose cleaners. 2,861,649, 11-25-58, Cl. 183—61.

Jurisich, Peter L., to Douglas Aircraft Co., Inc. Fuel supply means for combustion apparatus. 2,861,424, 11-25-58, Cl. 60—39.72.

Kabell, Louis J., to United States of America, Atomic Energy Commission. Regenerative transistor amplifier. 2,862,113, 11-25-58, Cl. 307—88.5.

Kaden, Willy: *See*—
Winkler, Alfred, and Kaden. 2,861,505.

Kadlec, Ladislav, to Avion, Inc. Illuminated instrument. 2,861,567, 11-25-58, Cl. 116—129.

Kamborian, Jacob S.: *See*—
Small, Edward F. 2,861,282.

Kane, Thomas E. Pressure regulated calender to insure equal nip pressure at all points. 2,861,504, 11-25-58, Cl. 92—75.

Kaplan, Sidney M. Condiment shaker. 2,861,724, 11-25-58, Cl. 222—478.

Katow, Masakazu S., and A. A. Lemke, to Chicago Pump Co. Decanting pipe for grit removal system. 2,861,694, 11-25-58, Cl. 210—534.

Katz, Fred. Dental reflector and aspirating instrument. 2,861,342, 11-25-58, Cl. 32—069.

Kauer, Kenneth C., to The Dow Chemical Co. O-aryl o-loweralkyl N-alkenyl phosphoroamidothioates. 2,862,018, 11-25-58, Cl. 260—461.

Kayler, Frank H., F. C. Kulicke, and E. J. Greenawalt, to American Steel Foundries. Fifth wheel coupling mechanism. 2,861,818, 11-25-58, Cl. 280—434.

Kearby, Kenneth K., I. Kirshenbaum, and E. G. Baker, to Esso Research and Engineering Co. Method of treating a silica-alumina cracking catalyst. 2,861,945, 11-25-58, Cl. 208—120.

Keehn-O Mfg. Co.: *See*—
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Keehn, Warner L., to Keehn-O Mfg. Co. Fluid pressure brake system. 2,861,845, 11-25-58, Cl. 303—69.

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Geraghty, Cecil J., and Kennedy. 2,861,877.
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Kern, Roland J., to Monsanto Chemical Co. Photopolymerization. 2,861,933, 11–25–58, Cl. 204—158.
Kern, Roland J., to Monsanto Chemical Co. Method for effecting photopolymerization. 2,861,934, 11–25–58, Cl. 204—158.
Kersey, Albert H., and F. D. Cooper, to Ford Motor Co., Ltd. Hydraulic transmission arrangements for self-propelled vehicles. 2,861,584, 11–25–58, Cl. 137—108.
Kershaw, Royce G. Ballast plow. 2,861,359, 11–25–58, Cl. 37—104.
Kilburn, Tom: *See*—
Williams, Frederic C., and Kilburn. 2,862,130.
Kilpatrick, Elmer C.: *See*—
Glaxner, Daniel, and Kilpatrick. 2,861,294.
Kimmel, Nathan. Handle fastener for handbags and the like. 2,861,615, 11–25–58, Cl. 150—12.
Kintzing, Reese T., to Westinghouse Electric Corp. Adjustable multi-cam assembly with replaceable cam units. 2,861,469, 11–25–58, Cl. 74—568.
Kirchensteiner, Hans, and H. Spiegelberg, to Hoffmann-La Roche Inc. Process for the manufacture of an isoxazolidone compound. 2,862,001, 11–25–58, Cl. 260—307.
Kirchensteiner, Hans, R. Schlapfer, and H. Spiegelberg, to Hoffmann-La Roche Inc. Synthesis of 4-amino-3-isoxazolidones. 2,862,003, 11–25–58, Cl. 260—307.
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Kearby, Kenneth K., Kirshenbaum, and Baker. 2,861,945.
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Kish, Michael, Jr., to Atlantic Products Corp. Pockets for golf bag. 2,861,613, 11–25–58, Cl. 150—1.5.
Kish, Michael, Jr., to Atlantic Products Corp. Adjustable golf bag. 2,861,614, 11–25–58, Cl. 150—1.5.
Klassen, Bernard, to Klassen Enterprises, Inc. Electric can opener. 2,861,336, 11–25–58, Cl. 30—4.
Klassen Enterprises, Inc.: *See*—
Klassen, Bernard. 2,861,336.
Klausmann, Milton H., to Seal-Spout Corp. Container spout-inserting machine. 2,861,529, 11–25–58, Cl. 113—1.
Klein, Howard C., to Nopco Chemical Co. Preparation of vitamin A aldehyde. 2,862,030, 11–25–58, Cl. 260—598.
Klein, Howard C., to Nopco Chemical Co. Preparation of vitamin A intermediates. 2,862,032, 11–25–58, Cl. 260—563.
Klein, Walter. Automatic feed apparatus for steam irons. 2,861,364, 11–25–58, Cl. 38—77.
Klein, Walter, to Ernst Leitz, G. m. b. H. Apparatus for Koehler illumination of phase contrast top light microscopes. 2,861,496, 11–25–58, Cl. 88—39.
Kleinlein, Fritz: *See*—
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Kliake, Henry O., to The Taylor-Winfield Corp. Method and apparatus for welding bands on shells. 2,862,101, 11–25–58, Cl. 219—137.
Klockhoha, Edward H. Material handling and earth digging machines. 2,861,704, 11–25–58, Cl. 214—140.
Klumpp, Ferdinand, Jr. Method of making an electrical conductor terminal. 2,861,324, 11–25–58, Cl. 29—155.55.
Knickerbocker Plastic Co., Inc.: *See*—
Musser, Clair O. 2,861,808.
Knutsen, Christian. Viewing and display device and method of displaying views of objects in conjunction with pictorial reproductions of intended changes. 2,861,357, 11–25–58, Cl. 35—50.
Kock, Winston E., to Bell Telephone Laboratories, Inc. Direction finder utilising elastic waves of transverse mode. 2,861,646, 11–25–58, Cl. 181—26.
Koenig, Harry D., to Braun, Wettberg & Co. Comb cleaning device. 2,861,296, 11–25–58, Cl. 15—29.
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Kolb, John E. Bracket support for suspended article. 2,861,765, 11–25–58, Cl. 248—226.
Korner, Theodor, and W. F. Pohl. Reading device for characters represented on a plate in micro-reproduction. 2,861,490, 11–25–58, Cl. 88—39.
Kosch, Alois J. and M. A., to Kosch Co. Double mower assembly. 2,861,409, 11–25–58, Cl. 56—25.
Kosch Co.: *See*—
Kosch, Alois J. and M. A. 2,861,409.
Kosch, Max A.: *See*—
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Kosmin, Milton, to Monsanto Chemical Co. Method of treating endoparasitic worms by applying a heterocyclic quaternary halide. 2,861,917, 11–25–58, Cl. 167—33.
Kosmin, Milton, to Monsanto Chemical Co. Amine salts. 2,861,918, 11–25–58, Cl. 167—33.
Kozinski, Joseph, to H. G. Fischer & Co. Therapeutic pulsing system. 2,861,564, 11–25–58, Cl. 128—24.05.
Kramer, Matthew J. Drinking receptacle. 2,861,716, 11–25–58, Cl. 220—96.4.
Krasicenko, Chester A., to General Electric Co. Bushing support for electrical apparatus. 2,862,044, 11–25–58, Cl. 174—152.
Kratz, George H. Retainer applying tool. 2,861,330, 11–25–58, Cl. 29—275.
Kraus, Thaddäus, to Gerastebau-Anstalt. Method of producing a coated optical filter and the resulting article. 2,861,906, 11–25–58, Cl. 117—33.3.
Kreidler, Otto, to Firma Getrag Getriebe- und Zahnradfabrik G. m. b. H. Adjustable transmission. 2,861,461, 11–25–58, Cl. 74—374.
Kreuthmeir, Donald W., to Heckethorn Mfg. & Supply Co. Shut-off apparatus for electrostatic ignition system. 2,862,146, 11–25–58, Cl. 313—55.
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Kronenberg, Max, to The R. K. Le Blond Machine Tool Co. Balancing device. 2,861,471, 11–25–58, Cl. 74—573.
Kruper, Andrew P., to Westinghouse Electric Corp. Phototransistor light detector. 2,862,109, 11–25–58, Cl. 250—211.
Kruper, Andrew P., and C. H. Jones, to Westinghouse Electric Corp. Color television tube. 2,862,141, 11–25–58, Cl. 315—21.
Kubin, Charles. Hook extractor. 2,861,384, 11–25–58, Cl. 43—53.5.
Kucera, Henry T. Heat control apparatus controlled by outside temperature. 2,862,081, 11–25–58, Cl. 200—140.
Kueneman, Don: *See*—
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Kueneman, John R. and D. Swinging jaw mounting and lubricating means. 2,861,749, 11–25–58, Cl. 241—262.
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Kuhrt, Friedrich, to Siemens-Schuckertwerke Akt. Hall voltage device for translating electric magnitudes. 2,862,188, 11–25–58, Cl. 332—51.
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Klippers, Karl-Heinz, to The Babcock & Wilcox Co. Fuel burning apparatus. 2,861,526, 11–25–58, Cl. 110—28.
Kurland, Leo J. Garment tie back for displays. 2,861,311, 11–25–58, Cl. 24—73.
Kurz, Helmut, to Siemens-Schuckertwerke Akt. Cylindrical windings composed of pancake coils for transformers, reactors and similar apparatus. 2,862,185, 11–25–58, Cl. 336—180.
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Land, Edwin H., to Polaroid Corp. Photographic processes and products. 2,861,885, 11–25–58, Cl. 96—29.
Landgren, Gustaff F., to Minneapolis-Honeywell Regulator Co. Apparatus for measuring the light rotatory power of an optically active substance. 2,861,488, 11–25–58, Cl. 88—14.
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Lane, Dan R. Adjustable packing container for frangible plates. 2,861,681, 11–25–58, Cl. 206—82.
Lang, John L., to The Dow Chemical Co. Interpolymers of styrene with elastomeric tripolymers and method of preparation. 2,861,974, 11–25–58, Cl. 260—45.5.
Langen, Viktor, J. Latsen, J. Vogt, and J. Orthell, to A. Ehrenreich & Cie. Ball and socket joints. 2,861,827, 11–25–58, Cl. 287—90.
Langenstein & Schemann A. G.: *See*—
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Lapierre, Leo A. Intermittent or continuous traction device. 2,861,526, 11–25–58, Cl. 128—71.
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Wiesmiller, Ivan L., and Larsen. 2,861,715.
Larsen, Hans G., ½ to H. R. Lewis, and ½ to A. E. Hatcher. Trailer chassis lowering means. 2,861,811, 11–25–58, Cl. 280—43.
Lattner, Bernie L., and C. R. Chafy, to Lattner Bros. Machine Co. Compound slide milling attachment. 2,861,503, 11–25–58, Cl. 90—15.
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Leder, Martin, and R. Haupt, to ISCO Optische Werke G. m. b. H. Means for automatically adjusting an objective diaphragm. 2,861,506, 11–25–58, Cl. 95—64.
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Legman, Nathan. Shampoo bottle holder. 2,861,764, 11–25–58, Cl. 248—324.
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Martin, Richard. Gravity actuated mechanical top. 2,861,390.
Miles, John D. Feeder cutter structure in a radial blade

Lektro-Thermal Corp.: *See*—
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Lellep, Otto G., to Allis-Chalmers Mfg. Co. Apparatus for cooling granular materials. 2,861,356, 11-25-58, Cl. 34—174.

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Lenet, Sidney and J. Vehicle spring. 2,861,798, 11-25-58, Cl. 267—45.

Lennox, Thomas H., to General Electric Co. Thermostatically controlled heating apparatus. 2,862,093, 11-25-58, Cl. 219—20.

Lenavoy, I. Lawrence. Towel dispensing means. 2,861,856, 11-25-58, Cl. 312—38.

Leshik, Edward A. Painting implement. 2,861,371, 11-25-58, Cl. 41—1.

Leubner, Ervin, to Falco Products Co. (also known as Falco Products Co.). Folding table made of removable table top sections. 2,861,855, 11-25-58, Cl. 311—90.

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Leslie, William C., to United States Steel Corp. Method for producing non-aging silicon-killed steel. 2,861,609, 11-25-58, Cl. 148—21.5.

Letterman, Charles B., to Underwood Corp. Power impulse control for type actions. 2,861,669, 11-25-58, Cl. 197—17.

Leutert, Walter, to Societe Brematex. Devices for coupling together adjacent shaft sections in particular in direct drive spindle spinning machines. 2,861,418, 11-25-58, Cl. 64—13.

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Levi, Irving, to Charles E. Frosst & Co. Chloramphenicol intermediate. 2,862,025, 11-25-58, Cl. 260—483.

Lewinstein, Marcus, and S. Reiner, to United States of America, Navy. Decoder for automatic photorectification system. 2,862,201, 11-25-58, Cl. 340—347.

Lewis, George D., to United Aircraft Corp. Fuel regulator. 2,861,420, 11-25-58, Cl. 60—35.6.

Lewis, Herbert R.: *See*—
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Lewis, James H., to General Motors Corp. Exhaust system. 2,861,418, 11-25-58, Cl. 60—29.

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Liard, Maurice and L. Digger tooth construction. 2,861,362, 11-25-58, Cl. 37—142.

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Mickelson, Cedric G., and Lilliegvist. 2,861,906.

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Hogg, John A., Beal, Nathan, and Lincoln. 2,862,011.

Lindsey, Robert J., to American Steel Foundries. Differential piston pump. 2,861,520, 11-25-58, Cl. 103—153.

Linke, Gerhard, H. Hülsen, and P. Kitzinlein. Centrifuge for separating solids from slimy masses. 2,861,091, 11-25-58, Cl. 210—370.

Linotype Gesellschaft mit beschrankter Haftung: *See*—
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Lionel Corp., The: *See*—
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Lips, Theodore M. A., M. J. Spiering, and W. L. Vervest, to North American Philips Co., Inc. Automatically variable gearing device. 2,861,460, 11-25-58, Cl. 74—337.

Littmann, Leo. Aerated storage structure for granular materials. 2,861,511, 11-25-58, Cl. 98—55.

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Lochhead, Raymond R., to A. T. Lochhead, Sr., as trustee. Method of obtaining and utilizing edible material from vanilla beans and the resultant product. 2,861,890, 11-25-58, Cl. 99—140.

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Biribauer, Frank A., Canestari, and Lockett. 2,861,939.

Lockheed Aircraft Corp.: *See*—
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Howard, Robert G. 2,861,758.

Loeb, Morris. Magnetic catch. 2,861,831, 11-25-58, Cl. 292—251.5.

Loebe, Max J., to General Electric Co. Flow control device. 2,861,590, 11-25-58, Cl. 137—513.7.

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Lougee, Glen A. Foldable eyeshade. 2,861,275, 11-25-58, Cl. 2—12.

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Lowther, Wilfred W., to United Specialties Co. of Illinois. Coil making machine having a flexible belt former. 2,861,621, 11-25-58, Cl. 153—34.

Lubowitz, Hyman R., and E. G. La Roe, to National Distillers and Chemical Corp. Fumaric acid fermentation process. 2,861,922, 11-25-58, Cl. 195—36.

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Lukes, Robert M., and G. I. Poos, to Merck & Co., Inc. Dodecahydrophenanthrene compounds and processes for preparing the same. 2,862,004, 11-25-58, Cl. 260—340.9.

Lukes, Robert M., and G. I. Poos, to Merck & Co., Inc. Dodecahydrophenanthrene compounds and processes for preparing the same. 2,862,005, 11-25-58, Cl. 260—340.9.

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Lummus Co., The: *See*—
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Lunardini, Walter H.: *See*—
Yragui, Simon J. 2,862,160.

Lundius, Alton H., to General Motors Corp. Feed control mechanism. 2,861,399, 11-25-58, Cl. 51—103.

Lustig, Howard E., to Sperry Rand Corp. Ford Instrument Co. Division. Potentiometer loading compensator. 2,862,176, 11-25-58, Cl. 322—74.

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Lyall, Charles J. Combination water heater and softener. 2,861,689, 11-25-58, Cl. 210—175.

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Lynn, Lawrence B.: *See*—
Hanna, Clinton R., and Lynn. 2,861,560.

Lyon, Floyd A.: *See*—
Halahan, John, Aronson, and Lyon. 2,861,803.

Lyon, George A. Method of making wheel covers. 2,861,825, 11-25-58, Cl. 29—159.

Macdonald, Angus A., A. W. Ward, and F. G. Lee, to United States of America, Navy. Multiple cavity tuning arrangement. 2,862,191, 11-25-58, Cl. 333—73.

MacGillivray, Robert K., to Superior Separator Co. Dumping trough for double cylinder grain separator. 2,861,684, 11-25-58, Cl. 209—95.

Macha, Edward A., to Westinghouse Electric Corp. Method and apparatus for making metal articles. 2,861,530, 11-25-58, Cl. 113—44.

MacKenzie, Gordon F., to The Dow Chemical Co. Process for the conversion of ethanolamine. 2,861,995, 11-25-58, Cl. 260—268.

Madden, Homer W. Flexible can stacker. 2,861,660, 11-25-58, Cl. 193—16.

Madsen, Walter M., to Baldwin-Lima-Hamilton Corp. Pug mill mixer having improved aggregate circulating means. 2,861,786, 11-25-58, Cl. 259—146.

Magill, Herbert L. Power gas generator. 2,861,422, 11-25-58, Cl. 60—39.28.

Magill, Herbert L. Reaction turbines. 2,861,776, 11-25-58, Cl. 253—81.

Mairs, William J., to Acton Laboratories, Inc. Hermetically sealed variable resistors and potentiometers. 2,862,088, 11-25-58, Cl. 201—58.

Mairs, William J., to Acton Laboratories, Inc. Variable resistor or potentiometer. 2,862,089, 11-25-58, Cl. 201—62.

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Boller, Arthur, Fürst, and Majnoni. 2,862,002.

Malecki, Michael. Combination safety razor and bottle opening device. 2,861,330, 11-25-58, Cl. 30—35.

Malik, Zeydi: *See*—
Malek, Antonin, and Malik. 2,861,784.

Mann, Karl R., and H. Riepert, to Vereinigte Leichtmetall-Werke Gesellschaft mit beschraenkter Haftung. Apparatus for continuous casting. 2,861,302, 11-25-58, Cl. 22—57.2.

Mann, Theodore C., to Ekstrom-Carlson & Co. Machine for assembling universal joints. 2,861,328, 11-25-58, Cl. 29—208.

Marchand, Gaston A., and D. W. Powers, to Reagwell Corp. Dynamic transducer. 2,862,069, 11-25-58, Cl. 179—115.5.

Marco Industries, Inc.: *See*—
Marsolf, Robert G. 2,861,601.

Martin, Donman, and A. H. Parker, to E. I. du Pont de Nemours and Co. Copper plating with addition agents. 2,861,929, 11-25-58, Cl. 204—52.

Martin, Hans. Ski-boot lacing system. 2,861,340, 11-25-58, Cl. 24—69.

Martin, Henry, and H. Habicht, to Ciba Ltd. New diphenylmethane- and 1-aza-[2.3':5.6]-dibenzocycloheptadiene derivatives, their acid salts and quaternary salts and the production thereof. 2,861,987, 11-25-58, Cl. 260—239.

Martin, Morgan, and C. J. Bajanowski, to Molded Fiber Glass Body Co. Electrically conductive body and method of making same. 2,861,911, 11-25-58, Cl. 154—110.

Martin, Richard. Gravity actuated mechanical toy. 2,861,399, 11-25-58, Cl. 46—149.
Martin, William R. Anti-theft locking means for an automotive ignition system. 2,861,644, 11-25-58, Cl. 180—82.
Marzan, Peter R., and W. H. Hill, to Times Facsimile Corp. Method and apparatus for facsimile telegnosis. 2,862,061, 11-25-58, Cl. 178—6.7.
Marsolf, Robert G., to Marco Industries, Inc. Coil winding machine. 2,861,601, 11-25-58, Cl. 140—92.1.
Maschinenfabrik Augsburg-Nurnberg A. G.: See—
Winkle, Ottmar, and Liebel. 2,861,423.
Masek, Antonin, and Z. Malik, to VSCHP, Vyskumny ustav stroju chladicich a Potravinarskych. Apparatus for continuous production of butter. 2,861,764, 11-25-58, Cl. 259—107.
Mason, Edwin B. Lumber stacker. 2,861,702, 11-25-58, Cl. 214—6.
Mayer, Edward F., to Herisons Inc. Apparatus for determining moisture. 2,862,090, 11-25-58, Cl. 201—63.
Maynard, Fred E., to National Union Electric Corp. Binary to decimal converter tube. 2,862,127, 11-25-58, Cl. 313—73.
Mayorcas, Reginald: See—
Fenton, Geoffrey, and Mayorcas. 2,861,205.
Mazur, John: See—
Nimeroon, Phineas S., and Mazur. 2,862,163.
McArthur, Donald W., to Mishle-Goss-Dexter, Inc. File card structure. 2,861,370, 11-25-58, Cl. 40—158.
McClain, Forrest. Timing and filing control mechanism. 2,861,586, 11-25-58, Cl. 125—102.
McCollum, John D.: See—
Coley, John R., Evering, and McCollum. 2,861,944.
McCoy, Robert. Head protective cap device for athletes. 2,861,270, 11-25-58, Cl. 2—3.
McIntyre Research Foundation: See—
Hannon, John W. G. 2,861,880.
McKee Door Co.: See—
Hartzler, Melvin E. 2,861,728.
McKee Door Co., The: See—
McKee, John F., and Hartzler. 2,861,900.
McKee, John F., and M. E. Hartzler, to The McKee Door Co. Door operating mechanism. 2,861,900, 11-25-58, Cl. 268—39.
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Cook, Richard S., and McKeever. 2,862,022.
McKellar, Robert, to The Dow Chemical Co. Process for removing phenols from aqueous solutions by sorption on ion exchange resins and alcohol elutriation therefrom. 2,861,948, 11-25-58, Cl. 210—30.
McMackin, Edwin E.: See—
McMackin, Robert E. and E. E. 2,861,828.
McMackin, Robert E. and E. E. Shot hole pole and coupling. 2,861,828, 11-25-58, Cl. 287—103.
McNaney, Joseph T., to General Dynamics Corp. Simplified system for character selection in a shaped beam tube. 2,862,144, 11-25-58, Cl. 315—30.
Mears, Robert A.: See—
Johnston, Christian W., and Mears. 2,861,910.
Mellink, Johannes, to Aktiebolaget Svenska Elektriska Aktiebolaget. Device for containing and exposing a radioactive material. 2,862,108, 11-25-58, Cl. 250—106.
Mellen, Russell. Combination container, cap and sprayer. 2,861,839, 11-25-58, Cl. 299—97.
Mende, Blazna, to Balzer Freres, S. A. High vacuum distillation apparatus. 2,861,925, 11-25-58, Cl. 202—203.
Menaker, Linie W.: See—
Allen, Edwin L. 2,861,634.
Merck & Co., Inc.: See—
Lukes, Robert M., and Poos. 2,862,004.
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Mert, George S. Handbag frame and element thereof. 2,861,616, 11-25-58, Cl. 150—29.
Mesler, Robert J., Jr.: See—
Colby, Robert W., and Mesler. 2,861,836.
Colby, Robert W., and Mesler. 2,861,837.
Messenger, Joseph U., to Socony Mobil Oil Co., Inc. Time setting clay cement and method of correcting lost circulation. 2,861,636, 11-25-58, Cl. 166—29.
Metzger, Henry L., to Fort Orange Paper Co. Collapsible dispensing container and blank for making same. 2,861,733, 11-25-58, Cl. 229—17.
Meyer, Ferdinand: See—
Ritter, Wolfgang, Meyer, and Demmler. 2,861,971.
Michalke, Max, to Eastern Metal Powder Co. Inc. Method for the production of iron from steel scrap. 2,861,879, 11-25-58, Cl. 75—.5
Michigan Tool Co.: See—
Carlson, William R. 2,861,348.
Michelsen, Cedric G., and G. A. Lilliegvist, deceased (by E. S. Lilliegvist, administratrix), to American Steel Foundries. Alloy steel and method of making. 2,861,908, 11-25-58, Cl. 148—31.
Micromatic Hone Corp.: See—
Ellis, Rollo G. 2,861,400.
Mishle-Goss-Dexter, Inc.: See—
McArthur, Donald W. 2,861,370.
Miller, Carl F., to Westinghouse Electric Corp. Electron discharge device. 2,862,134, 11-25-58, Cl. 313—250.
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Miller, Ernest B., to Jefferson Lake Sulphur Co. Cyclic adsorption processes for recovery of H_2S from natural gas employing two activation cycles. 2,861,651, 11-25-58, Cl. 183—114.2.
Miller, Harold K.: See—
Altman, Ralph C., Miller, and Tye. 2,861,673.
Miller, Henry W. Safety cruich head. 2,861,832, 11-25-58, Cl. 125—49.
Miller, John D. Feeder cutter structure in a radial blade roter mill. 2,861,746, 11-25-58, Cl. 241—188.
Miller, Robert E., and G. E. Bennett, to Monsanto Chemical Co. Branched-chain higher alcohols formed by condensation of lower alcohols, and esters of said higher alcohols. 2,862,012, 11-25-58, Cl. 260—410.9.
Miller, Verle A., A. J. Firth, and L. F. Shepard, to International Latex Corp. Method and apparatus for forming hollow bodies of double or variable curvature. 2,861,294, 11-25-58, Cl. 18—19.
Millidge, Alfred F.: See—
Rice, Alec, Graham, Millidge, Robson, and Twyg. 2,861,923.
Mills, Edward K., Jr. Safety seat for vehicles. 2,861,824, 11-25-58, Cl. 155—189.
Milton, Robert H., ½ to T. W. Milton. Door holding and closing mechanism. 2,861,291, 11-25-58, Cl. 16—65.
Milton, Thomas W.: See—
Milton, Robert H. 2,861,291.
Minder, Robert J.: See—
Fowler, Frank E., and Minder. 2,861,671.
Mine Safety Appliances Co.: See—
Jacobsen, Moses G. 2,861,920.
Miner, W. H., Inc.: See—
Deutler, Arnold E. 2,861,696.
Mulcahy, Harry W. 2,861,697.
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Duncan, Angus W. 2,861,629.
Minneapolis-Honeywell Regulator Co.: See—
Baring, John A. 2,862,162.
Callen, Max W., and Wilson. 2,861,757.
Freeborn, William A. 2,862,171.
Landegren, Gustaff F. 2,861,498.
Minnesota Mining & Mfg. Co.: See—
Bollmeier, Emil W. 2,862,042.
Randall, John L., and Pearlson. 2,862,024.
Mino, Guido, to American Cyanamid Co. Polymerization of water-soluble unsaturated monomers with hydrogen atoms. 2,861,982, 11-25-58, Cl. 260—80.
Misek, Victor A., to Sanders Associates, Inc. Electromagnetic modulator device. 2,862,188, 11-25-58, Cl. 332—51.
Mission Mfg. Co.: See—
Young, Henry B. 2,861,651.
Mitchell, George A., to Lombard Corp. Draw carriage for drawbench. 2,861,679, 11-25-58, Cl. 205—3.
Modal, Ernst, and J. Binder, to J. R. Geigy A.-G. Fungicidal composition comprising 5-chlorosalicylic acid anylamide. 2,861,910, 11-25-58, Cl. 167—31.
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Weisman, Maurice. 2,861,493.
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Geraghty, Cecil J., and Kennedy. 2,861,877.
Mogensen, Allan O., to American Cyanamid Co. Process of bleaching solid gelled acrylonitrile polymers with acidified chlorite and oxalic acid baths. 2,861,864, 11-25-58, Cl. 8—108.
Molded Fiber Glass Body Co.: See—
Martin, Morgan, and Bojanowski. 2,861,911.
Möller, Hugo, to Svenska Aeroplan Aktiebolaget. Hydraulic forming attachment for presses. 2,861,531, 11-25-58, Cl. 113—44.
Moloney, Raymond T.: See—
Burnside, Walter M. 2,862,079.
Monaco, Gabriel R.: See—
Smith, William E., and Monaco. 2,861,391.
Monsanto Chemical Co.: See—
Birum, Gail H. 2,861,876.
Dazzi, Joachim. 2,862,012.
Fernandez, Louis. 2,861,956.
Fields, Joseph E. 2,862,023.
Heininger, Samuel A., and Birum. 2,862,000.
Kern, Roland J. 2,861,933.
Kern, Roland J. 2,861,934.
Koomin, Milton. 2,861,917.
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Miller, Robert E., and Bennett. 2,862,013.
Platzer, Norbert. 2,861,938.
Stites, Joseph G., Jr., and Taylor. 2,861,868.
Moore, Robert E., W. A. Giddings, and W. C. Barnard, to Amana Refrigeration, Inc. Refrigerating apparatus. 2,861,434, 11-25-58 Cl. 62—455.
Moore, Robert E. Gun sight. 2,861,344, 11-25-58, Cl. 33—47.
Moore, Victor C., to General Motors Corp. Split torque converter transmission. 2,861,474, 11-25-58, Cl. 74—677.
Moore, William C., to Boonton Radio Corp. Test instrument calibrating apparatus. 2,862,178 11-25-58, Cl. 324—94.
Moorman, Edward W., to The Dayton Rubber Co. Suspension for flexible closure. 2,861,707, 11-25-58, Cl. 220—15.
Morel, Pierre P., to Verreries Mecaniques Champenoises. Method for the manufacture of hollow glass-ware. 2,861,397 11-25-58, Cl. 49—80.
Morgan, Walter A., to General Electric Co. Nuclear anemometer. 2,861,482, 11-25-58, Cl. 73—194.
Morin, Louis H., and O. Gries, said Gries assignor to Coats & Clark Inc. Method of casting ball integral with the ink feed section of a ball point pen. 2,861,233, 11-25-58, Cl. 29—527.
Morse, Robert L. ¼ to J. L. Glick. Francisco dumping trailer support stabilizing means. 2,861,837, 11-25-58, Cl. 298—20.
Mott, Norman S., to Cooper Alloy Corp. Precipitation hardenable, corrosion resistant, chromium-nickel stainless steel alloy. 2,861,883, 11-25-58. Cl. 75—126.
Mueller, Ervin H. Operating stem for gas valve. 2,861,487, 11-25-58 Cl. 74—504.
Mueller, Otto. Pump and bolt for differential. 2,861,477, 11-25-58 Cl. 74—711.

Mulcahy, Harry W., to W. H. Miner, Inc. Draft gear for railway draft rigging. 2,861,697, 11-25-58, Cl. 213—40.

Müller, Karl E., O. Bayer, and S. Petersen, to Farbenfabriken Bayer Akt. High molecular weight cross-linked polyester-urethane elastomer products. 2,861,972, 11-25-58, Cl. 260—45.4.

Müller, Karl-Walter, and D. Delfs, to Farbenfabriken Bayer Akt. Process for the fission of ethers. 2,862,035, 11-25-58, Cl. 260—620.

Muller, Lloyd E., to General Motors Corp. Driving axle assembly. 2,861,479, 11-25-58, Cl. 74—713.

Murphy, Freland M. Circuit identifier and tester. 2,862,179, 11-25-58, Cl. 324—51.

Murray Co. of Texas, Inc. The: *See*—
Day, Dewey D. 2,861,299.

Musser, Clair O., to Knickerbocker Plastic Co., Inc. Revolving target. 2,861,808, 11-25-58, Cl. 273—102.1.

Musslewhite, Thomas W. Oil and gas separator. 2,861,647, 11-25-58, Cl. 183—2.7.

Myers, Harold B., to Burroughs Corp. Card container. 2,861,706, 11-25-58, Cl. 220—4.

Myers, Paul T., 50% to D. A. Turnipseed. Creepers and head rests therefor. 2,861,279, 11-25-58, Cl. 5—327.

N. V. Technische Maatschappij Marchand-Andriessen: *See*—
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Nassau Products Corp.: *See*—
Block, Meyer L. 2,861,363.

Nathan, Alan H.: *See*—
Hogg, John A., Beal, Nathan, and Lincoln. 2,862,010.
Hogg, John A., Beal, Nathan, and Lincoln. 2,862,011.

National Cash Register Co., The: *See*—
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National Distillers and Chemical Corp.: *See*—
Feldman, Julian. 2,862,027.
Frank, Charles E., and Hansley. 2,861,981.
Johnston, Christian W., and Mears. 2,861,910.
Lebowitz, Hyman E., and La Roe. 2,861,922.

National Research Development Corp.: *See*—
Williams, Frederic C., and Kilburn. 2,862,139.

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Stratton, Edward B., Jr. 2,861,404.

National Union Electric Corp.: *See*—
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Neff, Darby B., to American Brake Shoe Co. Vane pump. 2,861,517, 11-25-58, Cl. 103—3.

Negromanti, Antonio. Electrically heated fabrics. 2,862,097, 11-25-58, Cl. 219—46.

Nelson, Harold E. Electric motor power take off. 2,861,662, 11-25-58 Cl. 192—2.

Nesson, Israel, to M. Zaiger. Windshield wiper blade. 2,861,289, 11-25-58, Cl. 15—245.

Netzel, Philip C., to General Electric Co. Overcenter spring operating mechanism for an electric circuit breaker. 2,862,075 11-25-58, Cl. 200—70.

Neugebauer, Wendell, to General Electric Co. RF half-wave pulse rectifier. 2,862,118, 11-25-58, Cl. 307—149.

Newcomer, Jacob E., Jr., and F. Wheeler, to Camloc Fastener Corp. Latch handle. 2,861,850, 11-25-58, Cl. 312—320.

Newman, Louis: *See*—
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Newman, Melvin S., and S. Swaminathan, to The Ohio State University Research Foundation. Process for preparing 1-acetyl-6-oxo-8a-methyl-3,4,6,7,8,8a-hexahydronaphthaline. 2,862,033, 11-25-58, Cl. 260—586.

Nicholson, Edward W. S., to Esso Research and Engineering Co. Fluid hydroforming with inverse temperature gradient. 2,861,947, 11-25-58, Cl. 208—149.

Nierhaus, Henry, to Stoffel Seals Corp. Seal structures. 2,861,833, 11-25-58, Cl. 292—322.

Nilsson, Erland, to Allmanna Svenska Elektriska Aktiebolaget. Device for stacking series-connected impedance units. 2,862,153, 11-25-58, Cl. 317—99.

Nilsson, Nils E. G. O. Rodnert, and J. C. H. Bjork, to Telefonaktiebolaget L M Ericsson. Selector systems. 2,862,056, 11-25-58, Cl. 179—17.

Nissenson, Phineas S., and J. Masur, to Westinghouse Electric Corp. Self-synchronous servosystem for telemetering. 2,862,163 11-25-58, Cl. 318—24.

Nopco Chemical Co.: *See*—
Grasselli, Davide R. 2,862,031.
Klein, Howard C. 2,862,030.
Klein, Howard C. 2,862,032.

Nordell, Otto C. Fishing rod holder. 2,861,761, 11-25-58, Cl. 248—35.

Norris, Robert C., to Pacific Car and Foundry Co. Front end spring suspension for heavy-duty trucks. 2,861,797, 11-25-58, Cl. 267—30.

North American Philips Co., Inc.: *See*—
Lips, Theodoor M. A., Spiering, and Verveat. 2,861,460.
Van Dorsten, Adrianus C. 2,862,129.
Zecha, Ferdinand, and Lampe. 2,861,862.

Northrop Aircraft, Inc.: *See*—
Guerrettre, Antone M. 2,861,297.

Norton Co.: *See*—
Olson, John. 2,861,561.

Norton, Robert K.: *See*—
Weigl, William, and Norton. 2,862,148.

Nottelmann, John F.: *See*—
Arsenault, Eugene W., and Nottelmann. 2,862,123.

Nyblom, Carl E., to Abell-Howe Co. Wheel and axle assembly. 2,861,850, 11-25-58, Cl. 308—236.

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Sorensen, Reuben W. 2,862,074.

Ohio State University Research Foundation, The: *See*—
Newman, Melvin S., and Swaminathan. 2,862,033.

O'Kelly, Arlie A., and C. A. Weitman, to Alox Corp. Corrosion inhibitor for light petroleum solvents and fuels. 2,861,874, 11-25-58, Cl. 52—5.

Okrafuss, Wilfred A., to Wagner Electric Corp. Work holder. 2,861,402, 11-25-58 Cl. 51—217.

Oliver, Leonard P., to Positive Action Filler Tube Co. Flow control mechanism for filling nozzles. 2,861,605, 11-25-58, Cl. 141—353.

Olivetti, Ing. C., & C. S. p. A.: *See*—
Beccio, Giuseppe. 2,861,868.

Olsen, Arnt O. Piston and piston ring assembly. 2,861,852, 11-25-58, Cl. 309—44.

Olson, Carl L., and D. G. Frost. Saw filing gauge. 2,861,349, 11-25-58 Cl. 33—202.

Olson, John, to Norton Co. Grinding machine-truing apparatus. 2,861,561, 11-25-58, Cl. 125—11.

Onsrud Machine Works, Inc.: *See*—
Onsrud, Rudolph F. 2,862,120.

Onsrud, Rudolph F., to Onsrud Machine Works, Inc. Fluid-cooled motor housing. 2,862,120, 11-25-58, Cl. 310—54.

Orr, Howard S., to United States Steel Corp. Power transmitting apparatus. 2,861,635, 11-25-58, Cl. 164—68.

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Langen, Viktor, Latsea, Vogt, and Orthell. 2,861,827.

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Ostwald, Fritz. Pressure regulator. 2,861,559, 11-25-58, Cl. 137—505.13.

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Kundiger, Donald G., Ott, and Pledger. 2,862,015.

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Ovea, Marks M. and E. 2,861,767.

Ovea, Marks M. and E. Unitped accordion support. 2,861,767, 11-25-58, Cl. 248—356.

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Whitehurst, Harry B., and Warthen. 2,861,393.

Owens-Illinois Glass Co.: *See*—
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Ruff, Richard O. 2,861,394.
Vincent, Harvard B. 2,861,392.

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Padavano, Anthony J. Workholder and hole locater. 2,861,465, 11-25-58, Cl. 77—63.

Palmer, Elton M., to Gulf Research & Development Co. Seismograph profile printer. 2,861,507, 11-25-58, Cl. 95—75.

Palmer, Elton M., to Gulf Research & Development Co. Film transport mechanism. 2,861,752, 11-25-58, Cl. 242—55.11.

Palmer, Karl, to Westinghouse Electric Corp. Combination spacing and clamping device. 2,862,183, 11-25-58, Cl. 324—137.

Palmer, Richard O.: *See*—
Simon, Frank E., and Palmer. 2,861,064.

Parke, Davis & Co.: *See*—
Brathge, Karl H., and Siedel. 2,861,896.

Parker, Arthur H.: *See*—
Martin, Donnan, and Parker. 2,861,929.

Parker, Edwin F. Dispensing carton with pouring spout. 2,861,732, 11-25-58, Cl. 229—17.

Pässler, Kurt, to Siemens-Schuckertwerke Akt. Magnetic clutches. 2,861,665, 11-25-58, Cl. 192—84.

Paterson, Robert N.: *See*—
Risley, Roger E., and Paterson. 2,861,822.

Patterson, Arnold L., to Western Electric Co., Inc. Micrometer gage. 2,861,346, 11-25-58, Cl. 33—167.

Paulsen, Paul L., and C. W. Altmann, to Hamilton Mfg. Co. Drafting board with flexible displaceable cover. 2,861,396, 11-25-58, Cl. 45—131.

Paulson, Christian, to Western Electric Co., Inc. Device for aligning pins on an article. 2,861,620, 11-25-58, Cl. 153—22.

Payne, Wesley J., to Westinghouse Electric Corp. Ear plate. 2,862,135, 11-25-58, Cl. 313—260.

Pearlson, Wilbur H.: *See*—
Randall, John L., and Pearlson. 2,862,024.

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Sylvester, Edwin E., and Peck. 2,861,809.

Pedrick, John L., and C. W. Dawson, to Scott Paper Co. Pulp meter. 2,861,722, 11-25-58, Cl. 222—283.

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Smith, George H., Eschenbach, and Pelton. 2,861,900.

Pengra, Arthur H. Hydraulic lift for fish and the like. 2,861,841, 11-25-58, Cl. 302—14.

Pennsylvania Furnace and Iron Co.: *See*—
Sanderson, Curtis F., and Johnson. 2,861,708.

Pennsylvania Range Boiler Co.: *See*—
Douglas, Peyton W. 2,861,855.

Peralta, Octavio. Pancake baking machine. 2,861,524, 11-25-58, Cl. 107—60.

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Perry, Sydney W. H., to Power Jets (Research and Development) Ltd. Bladed rotors for compressors, turbines and the like. 2,861,823, 11-25-58, Cl. 287—32.

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Müller, Karl E., Bayer, and Petersen. 2,861,972.

Petersen, Alden M. Fishing lure. 2,861,390, 11-25-58, Cl. 43—42.22.

Petersen, Ruben O., to The Osborn Mfg. Co. Brush and brush material. 2,861,401, 11-25-58, Cl. 51—193.5.

Petschauer, Frederick J., to United States of America, Army. Panel mount. 2,861,826, 11-25-58, Cl. 312—283.

Pfaudler, Ned W., Dricks. 2,861,793, 11-25-58, Cl.

Patterson, Olaf H., and G. I. Fredholm. Machines for treating or washing clothes and the like. 2,861,446, 11-25-58, Cl. 68—4.
Pfann, William G.: *See*—
Indig, George S., and Pfann. 2,861,905.
Phelps, Donald D., to United States Steel Corp. Method of fritting ferromanganese fine dust. 2,861,861, 11-25-58, Cl. 75—26.
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Sadowsky, Meier, and Wagoner. 2,862,130.
Scofield, Donald W. 2,862,085.
Phillips, Charles E., to Thermoid Co. Seeding and fertilizing device and hose securing means therefor. 2,861,537, 11-25-58. Cl. 111—87.
Phillips-Jones Corp.: *See*—
Lawton, Oscar S. 2,861,900.
Phillips Petroleum Co.: *See*—
Fender, Eldon E. 2,861,552.
Hendrix, Harshel V. 2,861,428.
Pritchard, James E. 2,861,902.
Reynolds, William B., and Bonesser. 2,861,998.
Warner, Paul F. 2,861,997.
Pier, Jerome R., to Westinghouse Air Brake Co. Pulsation dampener device. 2,861,596, 11-25-58, Cl. 138—30.
Pierce, Donald A., to Chicago Telephone Supply Corp. Combined contact and terminal for electric switch. 2,862,082, 11-25-58, Cl. 200—166.
Pierce, Harold C. Toy bank. 2,861,367, 11-25-58, Cl. 46—4.
Pilch, John S. Detachable point for excavating apparatus. 2,861,361, 11-25-58, Cl. 37—142.
Pilch, John S. Equipment mounting sub-frame assembly for tractors. 2,861,812, 11-25-58, Cl. 280—106.
Pitt, Samuel, to Western Electric Co., Inc. Apparatus for locating pads of tape material on a mandrel. 2,861,754, 11-25-58, Cl. 242—71.9.
Pittsburgh Plate Glass Co.: *See*—
Richardson, Ronald E. 2,861,895.
Richardson, Ronald E. 2,861,896.
Plannair Ltd.: *See*—
Rundle, Eric W. 2,861,736.
Platt, Ben E. Poultry gizzard skinner. 2,861,294, 11-25-58, Cl. 17—11.
Platzer, Norbert, to Monsanto Chemical Co. Novel coated particulate foamable styrene polymer compositions. 2,861,898, 11-25-58, Cl. 117—100.
Pledger, Huey, Jr.: *See*—
Kundiger, Donald G., Ott, and Pledger. 2,862,015.
Pledger, Ray: *See*—
Lee, Theodore, and Pledger. 2,861,857.
Pleuger, Friedrich. Diaphragm pump. 2,861,518, 11-25-58, Cl. 103—44.
Ploke, Martin, and M. Keller, to Zeiss Ikon A. G. Radiation sensitive semi-conductive layer of amorphous selenium. 2,862,128, 11-25-58, Cl. 313—66.
Podolsky, Joseph E.: *See*—
Dierstein, Roy H., and Podolsky. 2,862,045.
Pohl, Robert G., to The Rauland Corp. Method of treating semi-conductor articles. 2,861,932, 11-25-58, Cl. 204—141.
Pohl, Wilhelm F.: *See*—
Körner, Theodor, and Pohl. 2,861,480.
Polaroid Corp.: *See*—
Land, Edwin H. 2,861,885.
Polivka, Emil P., to Rockwell Mfg. Co. Locking device for handwheel assembly. 2,861,536, 11-25-58, Cl. 116—124.
Pollan, David, to Viewlex, Inc. Film projector indexing means. 2,861,497, 11-25-58, Cl. 88—28.
Poos, George L.: *See*—
Lukes, Robert M., and Poos. 2,862,004.
Lukes, Robert M., and Poos. 2,862,005.
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Pope, Kenneth E., to United States of America, Atomic Energy Commission. Accelerometer. 2,861,789, 11-25-58, Cl. 264—1.
Porter-Cable Machine Co., The: *See*—
Emmons, Arthur N. 2,861,607.
Portrus, John H., and J. A. Anthes, to Dravo Corp. Sintering apparatus. 2,861,792, 11-25-58, Cl. 266—21.
Positive Action Filler Tube Co.: *See*—
Oliver, Leonard P. 2,861,605.
Posthumus, Harry G., to United States of America, Navy. Ninety-degree phase meter discriminators. 2,862,182, 11-25-58, Cl. 324—87.
Potts, Lindley W.: *See*—
Holaman, Henry T., Potts, and Ehrlich. 2,861,406.
Potter, Stanley E.: *See*—
Imasimi, Isao, Potter, and Warner. 2,861,703.
Power Jets (Research and Development) Ltd.: *See*—
Perry, Sydney W. H. 2,861,823.
Whitehead, Leslie T. 2,861,775.
Powers, Donald W.: *See*—
Marchand, Gaston A., and Powers. 2,862,069.
Powers-Samas Accounting Machines Ltd.: *See*—
Davy, John C., and Watkin. 2,861,804.
Powers, Theodore E. Poultry processing apparatus. 2,861,292, 11-25-58, Cl. 17—11.
Powischill, John W., E. W. Hine, II, and G. R. Howard, to Procter & Schwartz, Inc. Apparatus and method for feeding bulk material to plural supply locations. 2,861,840, 11-25-58, Cl. 302—11.
Precision Welder & Machine Co.: *See*—
Jones, Thomas E. 2,862,100.
Pressure Packaging Corp.: *See*—
Cooksley, Ralph D. 2,861,728.
Pritchard, James E., to Phillips Petroleum Co. Additive products of heterocyclic nitrogen polymers and heavy metal salts, method of impregnating with, and impregnated article. 2,861,902, 11-25-58, Cl. 117—138.8.
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Powischill, John W., Hine, and Howard. 2,861,840.
Praxmire, Harry J., and R. H. Dierstein, to General Electric Co. Bushing support for electrical apparatus. 2,862,043, 11-25-58, Cl. 174—152.
Pure Oil Co., The: *See*—
Crosby, Gifford W., and Braunwarth. 2,862,022.
Pyle-National Co., The: *See*—
Wulle, William A. 2,861,510.
Quaker Sales Corp.: *See*—
Houle, Ernest A. 2,861,319.
Quilter, John R. C., and H. Q. A. Reeves, deceased (S. Reeves, executrix). Pressurized helmet for aviators. 2,861,567; 11-25-58, Cl. 128—141.
Quilter, John R. C., and H. Q. A. Reeves, deceased (S. Reeves, executrix). Pressurized helmet for aviators. 2,861,568; 11-25-58, Cl. 128—141.
Race, George A. Garden fertilizer sower. 2,861,721, 11-25-58, Cl. 222—346.
Radd, Frederick J., D. A. Shock, and J. D. Sudbury, to Continental Oil Co. Rust preventive composition. 2,861,892, 11-25-58, Cl. 106—14.
Radio Corp. of America: *See*—
Colamato, Dominick W. 2,861,936.
Ellis, Sidney G. 2,861,909.
Hoffmann, Eugene E. 2,861,861.
Schmitt, Edward J., and Spaulding. 2,861,744.
Seright, Carl G. 2,862,052.
Rahlson, Erich. Grain thermometer. 2,861,454, 11-25-58, Cl. 73—352.
Raifsnider, Philip J., to Shell Development Co. Composition of matter and corrosion prevention process. 2,861,824, 11-25-58, Cl. 202—57.
Rainey, Fred H. Improved cradle for warp dolly. 2,861,813, 11-25-58, Cl. 280—143.
Ralphs Engineering Co. Ltd., The: *See*—
Ralphs, George T. 2,861,283.
Ralphs, George T., to The Ralphs Engineering Co. Ltd. Shoe press. 2,861,283, 11-25-58, Cl. 12—58.
Ramsay, Joseph D., to Campbell Soup Co. Pork cutting and depositing machine. 2,861,610, 11-25-58, Cl. 146—114.
Rance, Jack A., to Aviamar Ltd. Devices for effecting adjustments in two dimensions. 2,861,484, 11-25-58, Cl. 77—62.
Ranney, Neil J., to Wean Equipment Corp. Looping tower. 2,861,802, 11-25-58, Cl. 271—2.2.
Ransley, Charles E., to The British Aluminium Co. Ltd. Determination of the gas content of liquid metals. 2,861,450, 11-25-58, Cl. 73—19.
Rasmussen, Clarence R., and J. W. Rice, to Western Electric Co., Inc. Reciprocable feed mechanism for advancing articles step by step. 2,861,676, 11-25-58, Cl. 198—218.
Rau Fastener Co.: *See*—
Silver, Bernard R. 2,861,317.
Rauland Corp., The: *See*—
Pohl, Robert G. 2,861,932.
Raytheon Mfg. Co.: *See*—
Walworth, Wilbur Y. 2,862,150.
Read, Philip C., and H. F. Ufer, to Dostal & Lowey Co., Inc. Loading apparatus for bottle washing machines. 2,861,670, 11-25-58, Cl. 198—25.
Reavell, John A.: *See*—
Goodfellow, Percy W., and Reavell. 2,861,634.
Rebhun, Richard L. Hand or foot operated scooter. 2,861,814, 11-25-58, Cl. 280—243.
Recherches et Techniques Appliquees (Societe Anonyme): *See*—
Chabrier de Lassaunjere, Pierre E. 2,861,992.
Récopé de Tilly Blaru, Hubert M. B. Self-priming electric cells and batteries. 2,862,038, 11-25-58, Cl. 136—90.
Redfern, Donald V.: *See*—
Baxter, Gene F., and Redfern. 2,861,977.
Reed, George H., to Acme Steel Co. Method and apparatus for forming and driving an improved staple. 2,861,269, 11-25-58, Cl. 1—82.
Reed, Robert F.: *See*—
Biggs, Orrick H., and Reed. 2,862,125.
Reeve, David H., to United States of America, Atomic Energy Commission. Recovery of iron, aluminum, and phosphate values from phosphorus materials. 2,861,860, 11-25-58, Cl. 23—123.
Reeves, Hugh Q. A.: *See*—
Quilter, John R. C., and Reeves. 2,861,567.
Quilter, John R. C., and Reeves. 2,861,568.
Reeves, Sylvia: *See*—
Quilter, John R. C., and Reeves. 2,861,567.
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Reeves, Wilson A., C. Hamalainen, and J. D. Guthrie, to United States of America, Agriculture. Bromine containing nitrilo methylol-phosphorus polymers. 2,861,901, 11-25-58, Cl. 117—136.
Ref Mfg. Corp.: *See*—
Gordon, Henry R. 2,862,096.
Regel, Erik: *See*—
Wegler, Richard, Grewe, and Regel. 2,861,813.
Reiner, Stewart: *See*—
Lewinstein, Marcus, and Reiner. 2,862,201.
Reiners, Neville M., to Cummins Engine Co., Inc. Governor controlled engine. 2,861,559, 11-25-58, Cl. 123—198.
Reist, Walter. Conveyor system for newspapers, magazines and the like. 2,861,674, 11-25-58, Cl. 198—180.
Reiss, Matthew J., to Burroughs Corp. Stabilized direct-coupled amplifier. 2,862,046, 11-25-58, Cl. 179—171.
Rendall, John L., and W. H. Pearlson, to Minnesota Mining & Mfg. Co. Fluorinated carbon compounds. 2,862,034, 11-25-58, Cl. 260—487.
Renshaw, Theodore A., and E. B. Lamson. Method for grease manufacture utilizing fused metallic soaps. 2,861,850, 11-25-58, Cl. 252—32.

Ohio State University Research Foundation, The: *See*—
Newman, Melvin S., and Swaminathan. 2,862,023.

Petschauer, Frederick J., to United States of America, Army. Panel mount. 2,861,858, 11-25-58, Cl. 312—283.

Reusser, Robert E.: *See*—
Reynolds, William B., and Reusser. 2,861,998.
Reynolds, William B., and R. E. Reusser, to Phillips Petroleum Co. Heterocyclic nitrogen compound polymer inhibitors. 2,861,998, 11-25-58, Cl. 260—290.
Rice, James W.: *See*—
Rasmussen, Clarence R., and Rice. 2,861,670.
Richards, Harrison H. C., Jr., to Westinghouse Electric Corp. Carbon pile regulator armature. 2,862,087, 11-25-58, Cl. 201—51.
Richards, Harrison H. C., Jr., and L. R. Lowry, Jr., to Westinghouse Electric Corp. Automatic paralleling system. 2,862,111, 11-25-58, Cl. 307—87.
Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass bending moulds. 2,861,395, 11-25-58, Cl. 49—67.
Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass bending moulds. 2,861,396, 11-25-58, Cl. 49—67.
Richman, Donald, to Hazeltine Research, Inc. Balanced phase-detection system. 2,862,050, 11-25-58, Cl. 178—5.4.
Riepert, Erich: *See*—
Mann, Karl E., and Riepert. 2,861,302.
Rigterink, Raymond H., to The Dow Chemical Co. Substituted benzoxazines. 2,861,901, 11-25-58, Cl. 260—244.
Ringelman, John F., and F. G. Timmel, to Westinghouse Electric Corp. Magnetic amplifier maximum output control. 2,862,112, 11-25-58, Cl. 307—88.
Ringelman, John F., and G. R. Lynn, to Westinghouse Electric Corp. Amplitude discriminator. 2,862,197, 11-25-58, Cl. 340—172.
Ringland, William L., to Allis-Chalmers Mfg. Co. Cooling gas system for dynamoelectric machines. 2,862,121, 11-25-58, Cl. 310—57.
Risley, Roger E., and R. N. Paterson, to Dresser Industries, Inc. Large diameter type pipe coupling with separable packing follower. 2,861,822, 11-25-58, Cl. 285—348.
Ritter, Wolfgang, F. Meyer, and K. Demmler, to Badische Anilin- & Soda-Fabrik Akt. Hardenable resinous mixtures containing a halogen hydrin and processes for producing and hardening same. 2,861,971, 11-25-58, Cl. 260—43.
Roanwell Corp.: *See*—
Marchand, Gaston A., and Powers. 2,862,069.
Robertson, George H., to Bell Telephone Laboratories, Inc. Electron guns. 2,862,128, 11-25-58, Cl. 313—85.
Robinson, Herbert H., to A. O. Smith Corp. Method of electropolishing and electrolytic solution therefor. 2,861,930, 11-25-58, Cl. 204—140.5.
Robinson, Kenneth J., to Stromberg-Carlson Tool & Die Co. Folding porch. 2,861,731, 11-25-58, Cl. 228—38.
Robson, Ian K. M.: *See*—
Rice, Alec, Graham, Millidge, Robson, and Young. 2,861,923.
Roccati, Arnold J., to Vitro Corp. of America. Vibration isolation system and instrument mount. 2,861,768, 11-25-58, Cl. 248—358.
Rockwell Mfg. Co.: *See*—
Polivka, Emil P. 2,861,336.
Rodick, Douglas S. Choke device for attachment to a shotgun. 2,861,375, 11-25-58, Cl. 42—79.
Rodnert, Gustav O.: *See*—
Nilsson, Nils E., Rodnert, and Bjork. 2,862,058.
Roelen, Otto: *See*—
Büchner, Karl, Roelen, and Schwarz. 2,862,026.
Rohm & Haas Co.: *See*—
Cary, Roderick C. 2,861,915.
Cook, Richard S., and McKeever. 2,862,022.
Rohr, Ernst. Independent wheel spring suspension. 2,861,796, 11-25-58, Cl. 267—21.
Roka, Edward G.: *See*—
Guyton, James H., and Roka. 2,862,175.
Roland, Georges: *See*—
Granet, Charles, Roland, and Crane. 2,861,656.
Roncoroni, Antonio, to S. P. A. Fibre Tessili Artificiali. Anti-moth composition containing polyvinyl chloride and naphthalene. 2,861,965, 11-25-58, Cl. 260—23.
Roper, Geo D., Corp.: *See*—
Jensen, Lionel E. 2,861,563.
Rosamilia, Peter L.: *See*—
Harvey, Mortimer T., and Rosamilia. 2,861,978.
Harvey, Mortimer T., and Rosamilia. 2,861,979.
Roschke, Erwin M., to Zenith Radio Corp. Subscription television system. 2,862,048, 11-25-58, Cl. 178—5.1.
Rosenbaum, Harry S., to Eastern Products Corp. Drapery fixture apparatus. 2,861,682, 11-25-58, Cl. 160—345.
Rosenberg, Arthur J. Film mount. 2,861,369, 11-25-58, Cl. 40—158.
Rosenberg, Jack L. Self-braking fish hook mounting. 2,861,382, 11-25-58, Cl. 43—44.81.
Rosenberg, Milton: *See*—
Stuart-Williams, Raymond, Rosenberg, and Alexander. 2,862,198.
Rosenthal, Joseph F.: *See*—
Crumrine, Herbert E., Rosenthal, and Bixby. 2,861,348.
Ross, Bernd, to Hoffmann Electronics Corp. Light sensitive device and method of making the same. 2,862,160, 11-25-58, Cl. 317—235.
Ross, Ian M., to Bell Telephone Laboratories, Inc. Semiconductor circuit controlling devices. 2,862,115, 11-25-58, Cl. 307—88.5.
Ross, Karl G., B. Johansson, S. S. Axelsson, and S. Andersson, to Aktiebolaget Fahes. Portable gaseous fuel burning stove. 2,861,562, 11-25-58, Cl. 126—38.
Ross, Samuel L.: *See*—
Dale, Jack K., and Ross. 2,861,920.
Rossell, William T., to Transit Research Corp. Light-weight rail truck. 2,861,522, 11-25-58, Cl. 105—171.
Roth, Walter, to General Electric Co. Photoflash light source. 2,861,448, 11-25-58, Cl. 67—87.
Rothschild, David: *See*—
Fasia, Hermann. 2,861,439.

Roudebush, Ned W. Bricks. 2,861,790, 11-25-58, Cl. 20—43.
Rowe, Raymond N., and L. M. Harton, to General Electric Co. Bus bar distribution system. 2,862,117, 11-25-58, Cl. 307—147.
Rozmus, Walter J., to Kelsey-Hayes Co. Split tapered die positioning carriage for split tapered dies. 2,861,467, 11-25-58, Cl. 78—82.
Rozmus, Walter J., to Kelsey-Hayes Co. Ratchet and cam actuated tool. 2,861,490, 11-25-58, Cl. 81—15.
Rozmus, Walter J., to Kelsey-Hayes Co. Ratchet and cam actuated tool. 2,861,491, 11-25-58, Cl. 81—15.
Ruben, Samuel. Dry capacitor. 2,862,156, 11-25-58, Cl. 317—230.
Rudner, Meinor C.: *See*—
Wallace, Russell B., and Rudner. 2,862,064.
Rue, Sigurd O., to Ethyl Corp. Organic material. 2,862,014, 11-25-58, Cl. 260—414.
Ruf, Hermann, to Forstner, Inc. Key chain construction. 2,861,313, 11-25-58, Cl. 24—115.
Ruff, Edgar E., to Lever Brothers Co. Polyphosphate compositions containing soap and 2-mercaptothiazoline. 2,861,954, 11-25-58, Cl. 252—110.
Ruff, Richard O., to Owens-Illinois Glass Co. Forming glass articles. 2,861,394, 11-25-58, Cl. 49—39.
Ruhrchemie Akt.: *See*—
Büchner, Karl, Roelen, and Schwarz. 2,862,026.
Rundle, Eric W., to Plannair Ltd. Blades, guide vanes and the like for fans, turbines and the like. 2,861,728, 11-25-58, Cl. 230—134.
Rush Stamping Co., The: *See*—
Walton, Frederick E. 2,861,635.
Russell, John L., and W. E. Hodges, to The Bristol Co. Electromagnetic circuit-controlling device and apparatus embodying the same. 2,862,076, 11-25-58, Cl. 200—103.
Russell, John L., to The Bristol Co. Captive shield and circuit component embodying the same. 2,862,094, 11-25-58, Cl. 200—168.
Russell, Robert C., to Eaton Mfg. Co. Power transmission mechanisms. 2,861,476, 11-25-58, Cl. 74—688.
Rust, Edgar C., Jr., and L. M. Gagnant, to James Hunter Machine Co. Apparatus for treating textiles. 2,861,780, 11-25-58, Cl. 242—1.
Rychman, William D., Jr., to General Electric Co. Dishwashing machine with detergent dispenser. 2,861,581, 11-25-58, Cl. 134—58.
Ryden, Olov, to Allmänna Svenska Elektriska Aktiebolaget. Over-voltage protection device for protection of electric equipment. 2,862,152, 11-25-58, Cl. 317—12.
SKF Kugellagerfabriken G. m. b. H.: *See*—
Johansson, Bertil, Ehn, and Sommer. 2,861,829.
S. P. A. Fibre Tessili Artificiali: *See*—
Roncoroni, Antonio. 2,861,965.
Sachs, Norma. Mattress cover. 2,861,280, 11-25-58, Cl. 5—354.
Sadowsky, Meier, and R. E. Waggener, to Philco Corp. Screen structure for cathode ray tubes. 2,862,130, 11-25-58, Cl. 313—92.
Sage, Richard W., and C. H. Jones, to Esso Research and Engineering Co. Method of improving gasoline quality. 2,861,946, 11-25-58, Cl. 208—144.
Sallmann, Richard, to Ciba Ltd. Method for combating pests and preparations suitable therefor. 2,861,912, 11-25-58, Cl. 167—22.
Sallmann, Richard, to Ciba Ltd. New halogen and phosphor containing compounds and method for their use. 2,861,914, 11-25-58, Cl. 167—30.
Sallmann, Richard, and P. Kohler, to Ciba Ltd. Process for preparation of alkali salts of O,O-thiolphosphoric acid asymmetrical diesters. 2,862,016, 11-25-58, Cl. 260—461.
Sanders Associates, Inc.: *See*—
Misek, Victor A. 2,862,188.
Sandgänger, Karl. Conveyor with coacting conveyor belt. 2,861,673, 11-25-58, Cl. 198—165.
Sandhage, Ellsworth R., and R. L. Burkhart, to American Cyanamid Co. Multiple dose disposable syringe. 2,861,571, 11-25-58, Cl. 128—218.
Sondes Trust: *See*—
Ischer, Hans, and Schneider. 2,861,985.
Sarro, Silvio. Toilet tissue roll holder. 2,861,751, 11-25-58, Cl. 242—55.3.
Sasserson, Curtis F., and H. A. Johnson, to Pennsylvania Furnace and Iron Co. Cargo tank. 2,861,708, 11-25-58, Cl. 220—22.
Satre, Leland H.: *See*—
Baker, Craig C., and Satre. 2,861,384.
Saul & Co.: *See*—
Ischer, Hans, and Schneider. 2,861,985.
Savacool, Richard D.: *See*—
Carder, Stephen D., Jr., and Savacool. 2,861,598.
Saviolides, George P. Clasp device for loose leaf papers. 2,861,309, 11-25-58, Cl. 24—86.
Sävö, Göte E.: *See*—
Skogh, Carl G. C., and Sävö. 2,862,008.
Sawyer, Emerson D. Yieldable barriers. 2,861,285, 11-25-58, Cl. 14—52.
Scalf, Richard T., to G. Bulk, Sr. Swivel dust mop holder. 2,861,287, 11-25-58, Cl. 15—144.
Scherbatskoy, Serge A. Apparatus for deep-well logging. 2,862,106, 11-25-58, Cl. 250—71.
Scheuerer, Guenter: *See*—
Schlichting, Otto, Scheuerer, Westphal, and Amann. 2,861,993.
Schinske, William G., to Ideal Industries, Inc. Spring type connector. 2,861,626, 11-25-58, Cl. 287—78.
Schjolin, Hans O., to General Motors Corp. Transmission. 2,861,482, 11-25-58, Cl. 74—731.
Schlapfer, Reinhard: *See*—
Kirchensteiner, Hans, Schlapfer, and Spiegelberg. 2,862,003.

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Schlumberg, Herbert, to The Babcock & Wilcox Co. Cyclone furnace. 2,861,563, 11-25-58, Cl. 122—240.

Schmid, Wolfgang K. Variable speed induction motor. 2,862,166, 11-25-58, Cl. 318—232.

Schmitt, Edward J., and R. W. Spaulding, to Radio Corp. of America. Verification system. 2,861,744, 11-25-58, Cl. 235—61.

Schneider, John, to Dr.-Ing. Schneider & Co. Lighting equipment and housing and hinges for same. 2,861,711, 11-25-58, Cl. 220—26.

Schneider, Lehne: *See*—
Lechner, Hans, and Schneider. 2,861,905.

Schneider, Robert P., to Western Electric Co., Inc. Automatic tape dispenser. 2,861,683, 11-25-58, Cl. 164—42.

Schoch, Jacques J.: *See*—
Grossellinger, Robert A., and Schoch. 2,861,686.
Grossellinger, Robert A., and Schoch. 2,861,690.

Schoeffel, Ellen J.: *See*—
Schoeffel, Kenton G. 2,861,548.

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Schrader, Gerhard, and W. Lorenz, to Farbenfabriken Bayer Akt. Benzyl esters of thiophosphoric acids and their production. 2,862,017, 11-25-58, Cl. 260—461.

Schrader, Gerhard, to Farbenfabriken Bayer Akt. Thiophosphoric acid esters and their production. 2,862,018, 11-25-58, Cl. 260—461.

Schultz, Roy M., to Bishop David Fruehauf Co. Garment bagging device. 2,861,408, 11-25-58, Cl. 38—256.

Schumann, Alfred F. Valves. 2,861,760, 11-25-58, Cl. 251—66.

Schumann, Robert W., to Sperry Rand Corp. Magnetic modulator system. 2,862,190, 11-25-58, Cl. 332—51.

Schuster, Carl, E. Gehm, J. Riesle, and W. Federkiel, to Badische Anilin- & Soda-Fabrik Akt. Improvement of fastness of cellulosic fibers with a polymerization product of basic vinyl compounds. 2,861,863, 11-25-58, Cl. 8—74.

Schuster, Ludwig K., and A. L. Baldi, to Kelsey-Hayes Co. Metal treatment. 2,861,908, 11-25-58, Cl. 148—6.2.

Schwarz, Heinrich: *See*—
Büchner, Karl Reclen, and Schwarz. 2,862,022.

Scofield, Donald W., to Philco Corp. Vapor treating means. 2,862,095, 11-25-58, Cl. 219—38.

Scott, John E., to Sperry Rand Corp. Magnetic drum storage system. 2,862,198, 11-25-58, Cl. 340—174.

Scott Paper Co.: *See*—
Fredrick, John L. and Dawson. 2,861,722.

Scott, William J., to Ideal Industries, Inc. Universal conduit box. 2,861,706, 11-25-58, Cl. 220—3.9.

Scovill Mfg. Co.: *See*—
Alfandre, Harry. 2,861,276.

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Seal-Spout Corp.: *See*—
Klaymann, Milton H. 2,861,529.

Seaver, Ray C., to Adamson-United Co. Floating gear assembly for calender rolls. 2,861,485, 11-25-58, Cl. 64—9.

Sech, Charles E., Jr., to Wise Potato Chip Co. Deep fat cooking apparatus. 2,861,514, 11-25-58, Cl. 99—404.

Sedgee, Anas M.: *See*—
Thomas, Ralph D. 2,861,902.

Seifert, William C., to D. W. Kent. Resistance element and furnace containing the same. 2,862,091, 11-25-58, Cl. 201—66.

Seright, Carl G., to Radio Corp. of America. Overhead protection circuits. 2,862,092, 11-25-58, Cl. 178—7.2.

Shanklin, John F.: *See*—
Henriel, Carl R., and Shanklin. 2,862,304.

Shaw, Edwin C. and H. L., to Perfecting Service Co. Pipe line strainer. 2,861,690, 11-25-58, Cl. 210—308.

Shaw, Harrison L.: *See*—
Shaw, Edwin C. and H. L. 2,861,690.

Sheffield Corp., The: *See*—
Emmons, Nelson, III. 2,861,651.

Shell Development Co.: *See*—
Batfelder, Philip J. 2,861,994.
Van Deemter, Jan J. 2,861,851.

Shepard, Leonard F.: *See*—
Miller, Verle A., Firth, and Shepard. 2,861,756.

Shepherd, Alexander T. G. R. Walker, and D. T. N. Williamson, to Ferranti, Ltd. Measuring apparatus. 2,862,206, 11-25-58, Cl. 343—177.

Shinn, Robert W.: *See*—
Thompson, William R., and Shinn. 2,861,982.

Shock, D'Arcy A.: *See*—
Radd, Frederick J., Shock, and Sudbury. 2,861,892.

Short, Frank E. Rotary reel mower. 2,861,411, 11-25-58, Cl. 56—26.

Short, Brooks H., to General Motors Corp. Ignition system. 2,862,150, 11-25-58, Cl. 315—224.

Short Brothers & Harland Ltd.: *See*—
Goodfellow, Percy W., and Heavell. 2,861,634.

Short, Clair A., Jr.: *See*—
Herbert, Chester E. and Short. 2,861,431.

Showalter, Robert N.: *See*—
Mayer, George, De Long, Sudrow, and Showalter. 2,861,420.

Shrayder Bros., Inc.: *See*—
Heller, Emmett E. 2,861,461.

Shyne, James J.: *See*—
Fahnoe, Frederick, and Shyne. 2,861,821.

Sichel, Leo. Hernial band or belt truss. 2,861,986, 11-25-58, Cl. 128—100.

Siedel, Walter: *See*—
Brather, Earl H., and Siedel. 2,861,806.

Siemens & Halske Akt.: *See*—
Topfer, Herbert. 2,861,697.

Siemens-Schuckertwerke Akt.: *See*—
Kuhrt, Friedrich. 2,862,188.
Kury, Helmut. 2,862,195.
Pfleider, Kurt. 2,861,665.

Siegel, Erhard, to Vereinigte Glanzstoff-Fabriken A. G. Method of roughening and dulling polyethylene terephthalate fibers. 2,861,865, 11-25-58, Cl. 18—54.

Silver, Bernard R., to Rau Fastener Co. Ornamental snap fastener assembly. 2,861,317, 11-25-58, Cl. 24—216.

Silverman, Bernard P.: *See*—
Chall, Harold J., and Silverman. 2,861,720.

Simon, Frank R., and R. O. Palmer, to The Carlyle Johnson Machine Co. Magnetically controlled device of multiple disc type. 2,861,664, 11-25-58, Cl. 192—84.

Simson, Charles G. Fluid operated reciprocating engines. 2,861,561, 11-25-58, Cl. 121—30.

Sinclair Refining Co.: *See*—
Beckberger, La Vern H. 2,861,942.
Cole, Elden E., and Letheringer. 2,861,997.

Singer Mfg. Co., The: *See*—
Ehee, John P. 2,861,815.

Sipler, Joseph P. Paper dispensers. 2,861,753, 11-25-58, Cl. 242—55.51.

Skarsten, Sven C., and R. G. O. Svensson, to International Standard Electric Corp. Arrangement in a radar station. 2,862,208, 11-25-58, Cl. 343—18.

Skogh, Carl G. C., and G. Blvd. Method for continuous production of furfural from suitable raw material. 2,862,946, 11-25-58, Cl. 260—347.9.

Small, Edward F., to J. S. Kamberian. Machine for sole attaching and/or laying operations. 2,861,282, 11-25-58, Cl. 12—36.

Small, Joseph M., to Controls Co. of America. Lubrication system and pump therefor. 2,861,652, 11-25-58, Cl. 184—6.

Smeenaert, Raymond R., to Teletype Corp. Transmitter suppressor. 2,862,058, 11-25-58, Cl. 178—17.

Smith, A. O., Corp.: *See*—
Robinson, Herbert B. 2,861,930.

Smith, Edward J., to United States of America, Navy. Transient analyzer for magnetic amplifiers. 2,862,190, 11-25-58, Cl. 324—57.

Smith, George H., R. C. Bachenbach, and J. F. Peters, to Union Carbide Corp. Jet plating of high melting point materials. 2,861,900, 11-25-58, Cl. 117—105.

Smith, Joseph A. Coin and key operated lock. 2,861,667, 11-25-58, Cl. 194—54.

Smith, Joseph J. Litter retrieving cane. 2,861,825, 11-25-58, Cl. 294—19.

Smith, L. D. Thorimade, to United States of America, Air Force. Quick release separating link for ejection seat harness. 2,861,760, 11-25-58, Cl. 244—122.

Smith, Lee J.: *See*—
Bibb, Wayne F., Smith, and Stoltz. 2,861,967.

Smith, Wendell O., to Corning Glass Works. Method of drying leached porous high silica glass. 2,861,351, 11-25-58, Cl. 34—7.

Smith, William C., to E. I. du Pont de Nemours and Co. Novel trimercuric difluorides and their preparation. 2,862,029, 11-25-58, Cl. 260—542.

Smith, William H. Retractable safety belt. 2,861,827, 11-25-58, Cl. 155—180.

Smith, William R., and G. R. Monaco, to The A. C. Gilbert Co. Toy caboose with animated flagman. 2,861,391, 11-25-58, Cl. 46—245.

Snyder, Howard R. Fishing lure. 2,861,381, 11-25-58, Cl. 43—42.26.

Socapex-Ponsot: *See*—
Bonnaffoux, Maurice. 2,862,070.

Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Bigot, Bernard. 2,861,878.
Bechet-Desrivieres, Jean A. 2,862,181.

Societe Bremaptex: *See*—
Lewtest, Walter. 2,861,426.

Societe d'Appareillage et d'Implantation des Etablissements Ponsot: *See*—
Bonnaffoux, Maurice. 2,862,070.

Societe Nouvelle de L'Outillage R. B. V. et de la Radio-Industrie (R. B. V.-R. I.): *See*—
Hermann, Walter. 2,861,902.

Societe Socapex: *See*—
Bonnaffoux, Maurice. 2,862,071.

Socony Mobil Oil Co., Inc.: *See*—
Ault, Isaac L. 2,861,632.
Messenger, Joseph U. 2,861,634.
Summers, Orville C. 2,862,104.
Updegraff, David M., and Chase. 2,861,931.
White, James E., and Lawrence. 2,861,645.

Soderberg, Sten, to Lagle Co. Flexible stem seal. 2,861,484, 11-25-58, Cl. 74—18.2.

Solomon, Julius L., to Welding Research, Inc. Welder control mechanism with timing means. 2,862,114, 11-25-58, Cl. 307—112.

Solvay & Cie: *See*—
Germann, Auguste. 2,861,871.

Sorensen, Reuben W., to Oak Mfg. Co. Mechanism for operating an electric switch. 2,862,074, 11-25-58, Cl. 200—81.66.

Southwestern Engineering Co.: *See*—
Lord, Joseph R. 2,861,697.

Spaulding, Spencer W.: *See*—
Schmitt, Edward J., and Spaulding. 2,861,744.

Spencer, Rolf E., to Electric & Musical Industries Ltd. Displacement measuring devices. 2,861,345, 11-25-58, Cl. 33—125.
Sperry Products, Inc. : *See*—
  Cowan, John V. 2,862,092.
Sperry Rand Corp. : *See*—
  Curry, Robert S., Jr. 2,862,167.
  Schumann, Robert W. 2,862,190.
  Scott, John E. 2,862,199.
  Wang, Chao C. 2,862,137.
Sperry Rand Corp., Ford Instrument Co. Division : *See*—
  Lustig, Howard E. 2,862,176.
Spiegelberg, Hans : *See*—
  Kirchensteiner, Hans, Schlapfer, and Spiegelberg. 2,862,003.
Spiegelberg, Hans : *See*—
  Kirchensteiner, Hans, and Spiegelberg. 2,862,001.
Spiering, Martinus J. : *See*—
  Lips, Theodoor M. A., Spiering, and Vervest. 2,861,460.
Spohn, Hans : *See*—
  Bille, Heinz, Spohn, and Trieschmann. 2,862,021.
Sprague Electric Co. : *See*—
  Dubriski, Stanley W. 2,862,155.
Spring Load Mfg. Corp. : *See*—
  Brown, Chauncey T. 2,861,608.
Spurlin, William V., to Syntron Co. Electromagnetic reciprocating hammer. 2,861,778, 11-25-58, Cl. 255—37.
Sta-Hi Corp. : *See*—
  Baker, Craig C., and Satre. 2,861,334.
Standard Oil Co. : *See*—
  Apelianis, Joseph E. 2,861,940.
  Coley, John R., Evering, and McCollum. 2,861,944.
  De Boer, Frank E., and Field. 2,861,960.
  Fotis, Peter, Jr. 2,861,983.
  Jancosek, Andrew T., and Brown. 2,861,941.
Standard Oil Co., The : *See*—
  Hardman, Harley F. 2,861,805.
Stansbury, Harry A., Jr., and H. R. Guest, to Union Carbide Corp. Triply unsaturated 1,3-dioxolanes and process for their preparation. 2,862,007, 11-25-58, Cl. 260—340.9.
Starch, Jan : *See*—
  Havlicek, Vitezslav, and Starch. 2,862,181.
Stehlik, Rudolph F., to General Telephone Laboratories, Inc. Telephone line lockout arrangement. 2,862,061, 11-25-58, Cl. 179—18.
Steindorf, Jack W. Cleaners for spatulas. 2,861,288, 11-25-58, Cl. 15—236.
Steinle, Josef, to Certus Maschinenbau G. m. b. H. Method and apparatus for spinning bottles. 2,861,783, 11-25-58, Cl. 259—54.
Steimak, John P., and R. E. Brown, to Westinghouse Electric Corp. Semiconductor device. 2,862,158, 11-25-58, Cl. 317—234.
Steitz, Irvin J. : *See*—
  Ellis, Wayne P., Smith, and Steitz. 2,861,967.
Stephenson, Geoffrey H., to Electric & Musical Industries Ltd. Rate measuring apparatus. 2,861,742, 11-25-58, Cl. 235—61.
Sterbentz, William H. : *See*—
  Burgess, Warren C., Jr., and Sterbentz. 2,861,548.
Sterling Precision Corp. : *See*—
  Bachman, Rudolph E. 2,861,487.
Stevens, Daniel S. Weighing device. 2,861,790, 11-25-58, Cl. 265—58.
Stevenson, William N. : *See*—
  Jackson, Patrick T., and Stevenson. 2,861,416.
Stites, Joseph G., Jr., and D. C. Taylor, to Monsanto Chemical Co. Method of producing substantially white, globular sodium bisulfate. 2,861,868, 11-25-58, Cl. 23—121.
Stoffel Seals Corp. : *See*—
  Nierhaus, Henry. 2,861,833.
Stoltz, Richard C., to General Motors Corp. Hydraulic timer. 2,861,557, 11-25-58, Cl. 123—90.
Stoughton, Raymond W. : *See*—
  Seaborg, Glenn T., Gofman, and Stoughton. 2,861,866.
Stratton, Edward Bowman, Jr., to National Tool Co. Package for crushable articles and a method and apparatus for producing the same. 2,861,404, 11-25-58, Cl. 53—22.
Streiakos, George P. Portable light reflector with magnifying glass. 2,861,501, 11-25-58, Cl. 88—97.
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  Robinson, Kenneth J. 2,861,731.
Strother, Greene W., Jr. : *See*—
  Coker, William P., and Strother. 2,861,994.
Stroup, Clarence W. Portable restraining device for cattle. 2,861,546, 11-25-58, Cl. 119—98.
Stuart, Whitney A., and L. G. Huxtable, to United States of America, Army. Hinged helmet. 2,861,272, 11-25-58, Cl. 2—6.
Stuart, Whitney A., and L. G. Huxtable, to United States of America, Army. Helmet with retractable annular shield. 2,861,273, 11-25-58, Cl. 2—6.
Stuart, Whitney A., and L. G. Huxtable, to United States of America, Army. Three piece helmet. 2,861,274, 11-25-58, Cl. 2—6.
Stuart-Williams, Raymond, M. Rosenberg, and M. A. Alexander, to Telemeter Magnetics and Electronics Corp. Magnetic core memory system. 2,862,198, 11-25-58, Cl. 340—174.
Stump, Eugen, to Daimler-Benz Akt. Cooling system for air cooled internal combustion engines. 2,861,554, 11-25-58, Cl. 123—41.08.
Sudbury, John D. : *See*—
  Radd, Frederick J., Sheck, and Sudbury. 2,861,882.
Suderow, George E. : *See*—
  Bauer, George, De Long, Suderow, and Showalter. 2,861,420.
Sulzer, Freres, S. A. : *See*—
  Meude, Hanns. 2,861,925.

Summers, Gerald C., to Socony Mobil Oil Co., Inc. Compensated gate circuit. 2,862,104, 11-25-58, Cl. 250—27.
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  Fish, Marion F. 2,861,606.
Sun Oil Co. : *See*—
  Thompson, William E., and Shinn. 2,861,952.
Sundt, Edward V. Speed reducer. 2,861,461, 11-25-58, Cl. 74—760.
Superior Aluminum Products, Inc. : *See*—
  Hermann, Louis. 2,861,277.
Superior Separator Co. : *See*—
  MacGillivray, Robert K. 2,861,684.
Surface Combustion Corp. : *See*—
  Dailey, William H., Jr. 2,861,629.
Suter, Hans R., to L. von Roll AG. Shaft kiln for the burning of cement, lime, dolomite and similar substances, and method of operating said kiln. 2,861,788, 11-25-58, Cl. 263—30.
Svenska Aeroplan Aktiebolaget : *See*—
  Möller, Hugo. 2,861,531.
Svenska Aktiebolaget Gasaccumulator : *See*—
  Granqvist, Carl-Erik. 2,861,250.
Svensson, Bengt G. O. : *See*—
  Skaraeus, Sven C., and Svensson. 2,862,205.
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  Gajdosik, Ferdinand. 2,861,542.
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  Newman, Melvin S., and Swaminathan. 2,862,033.
Swan, Carl W., to Teletype Corp. Tape feed-out mechanism. 2,862,055, 11-25-58, Cl. 178—42.
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  Webster, Henry N. 2,861,846.
Swartz, Elmer, to United States of America, Army. Holder for electron tubes. 2,861,782, 11-25-58, Cl. 257—263.
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  Biggs, Orrick H., and Reed. 2,862,125.
Sylvester, Edwin E., and S. H. Peck, to B. B. Chemical Co. Pressure-sensitive adhesive compositions for tape and methods for dispensing same. 2,861,899, 11-25-58, Cl. 117—103.
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  Spurlin William V. 2,861,778.
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  Hind, Harry W., and Szekely. 2,861,572.
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  Green, David J., Tasker, and Cutler. 2,862,202.
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  Stites, Joseph G. Jr., and Taylor. 2,861,868.
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  Klinke, Henry O. 2,862,101.
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  Doerrfeld, Robert L. 2,862,047.
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  Swan, Carl W. 2,862,055.
Terlecki, Harry R. Coin operated beer dispensing machine. 2,861,603, 11-25-58, Cl. 141—94.
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Thiele, Heinz, to Zeiss Ikon A. G. Means for recording and reproducing acoustic signals. 2,862,066, 11-25-58, Cl. 179—100.2.
Thomas, Alan M., to Winter Hydrocraft Ltd. Rudder. 2,861,533, 11-25-58, Cl. 114—162.
Thomas, Ralph D., to A. M. Sedgee. Collapsible mandrel for manufacturing reinforcing cages. 2,861,602, 11-25-58, Cl. 140—92.2.
Thompson, Arnold M., to Thompson Tool and Mfg. Co. Utility cabinet assembly. 2,861,578, 11-25-58, Cl. 132—73.6.
Thompson, Ralph B., to Universal Oil Products Co. Antioxidation of rubber with certain alkylaminoquinolines. 2,861,978, 11-25-58, Cl. 260—45.8.
Thompson, Robert T. Container seal. 2,861,710, 11-25-58, Cl. 220—27.
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  Thompson, Arnold M. 2,861,578.
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  Betts, Joseph L., Jr., and Thorn. 2,861,966.
Thorn, John P., W. R. F. Guyer, and R. Arundale, to Esso Research and Engineering Co. Promoted hydroforming catalyst. 2,861,959, 11-25-58, Cl. 252—465.
Thornton, Mathew H. Glare shielding structure. 2,861,496, 11-25-58, Cl. 88—41.
Thurman, Benjamin H., to The Union Stock Yard and Transit Co. of Chicago. Packaged charge for making soap. 2,861,953, 11-25-58, Cl. 252—109.
Tidwell, Harry R. Watch holder. 2,861,763, 11-25-58, Cl. 248—116.
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  Ringelman, John F., and Timmel. 2,862,112.
Tinnerman, George A. Wire-like fastening devices for securing a nut in a recess. 2,861,617, 11-25-58, Cl. 151—41.73.
Tinnerman, George A. Fastening device with independent pre-hardened thrust resistant wire clips. 2,861,618, 11-25-58, Cl. 151—41.75.

Titterington, Yale W. Apparatus for measuring the charge on buried conductors. 2,862,177, 11–25–58, Cl. 324—29.
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Topfer, Herbert, to Siemens & Halske Akt. Call metering in telephone systems and the like. 2,862,057, 11–25–58, Cl. 179—7.1.
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Curtis, Everett C., Crawford, and Evans. 2,861,657.
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Trotter, Tomie L. Dispensing container. 2,861,719, 11–25–58, Cl. 222—144.
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Bellamy, John C., and Tschupp. 2,861,743.
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Hogg, John A., Beal, Nathan, and Lincoln. 2,862,011.
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Van der Lely, Cornelis and A. 2,861,413.
Van der Lely, Cornelis, and A. 2,861,414.
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Classification of Designs

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TRADEMARKS

NOTICE

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
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TRADEMARKS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter I—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

ADVERTISING

The date on which amended § 1.345 of Part 1 (23 F. R. 6199, August 13, 1958) is to take effect is extended to May 1, 1959. Until amended § 1.345 comes into effect, § 1.345, Title 37, Code of Federal Regulations, shall be in effect.

(Sec. 6, 66 Stat. 793; 35 U. S. C. 6. Interprets or applies secs. 31, 32, 66 Stat. 795, 796; 35 U. S. C. 31, 32)

ARTHUR W. CROCKER,
Acting Commissioner of Patents.

Approved: October 29, 1958.

SINCLAIR WEEKS,
Secretary of Commerce.

[F. R. Doc. 58-9164; Filed, Nov. 4, 1958; 8:51 a. m.]

Published in 23 F. R. 8622, November 5, 1958.

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on **Monday, February 16, 1959.**

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than January 16, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D. C.

ARTHUR W. CROCKER,
Oct. 15, 1958. *Chairman, Committee on Enrollment.*

Trademark Suits

Notices under 15 U. S. C. 1116; Trademark Act of July 5, 1946

Reg. No. 181,000 (SIMMONS COMPANY AND "DESIGN"), Simmons Co., Metal bedsteads, bed-springs, etc.; **Reg. No. 581,319** (SIMMONS), same; **Reg. No. 642,200**, same, Hospital bed accessories—namely, safety sides and guard rails, etc., **filed** Oct. 10, 1958, D. C. Mass. (Boston), Doc. 58/1014-S, *Simmons Co. v. Simmonds Upholstering Co. et al.*

Reg. No. 206,794 (MODERN MISS), Simplicity Pattern Co., Inc., Prints and publications, **filed** Nov. 25, 1957, D. C., S. D. N. Y., Doc. 127/142, *Simplicity Pattern Co., Inc. v. Miss Publishing Co.* Stipulation and order of dismissal Oct. 16, 1958.

Reg. No. 510,488 (CLIPPER), Pan American Airways, Inc., Aircraft transportation, on air-craft and otherwise in connection with aircraft transportation, **filed** Feb. 9, 1955, D. C.,

CONDITION OF TRADEMARK APPLICATIONS AS OF SEPTEMBER 30, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,285
Date of oldest new application	Feb. 27, 1958
Date of oldest amended application	May 19, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	5-10-58	6-3-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	5-10-58	7-3-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	5-27-58	5-15-58
Renewals (All Classes)	9-15-58	9-26-58
Sec. 12 (c) Publications (All Classes)	9-8-58	9-26-58

Applications Filed During the Month of September 1958—1,735

Registrations Issued	372—No. 670,052 to No. 670,423
Renewals Issued	40

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.50 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

E. D. N. Y. (Brooklyn), Doc. C/15234, *Pan American World Airways, Inc. v. Studebaker-Packard Corp.* Order of discontinuance Oct. 24, 1958.

Reg. No. 535,310. (See Reg. No. 137,699.)

Reg. No. 561,047 (SCOTCH LADDIE), John R. MacGregor Lead Co., Paint; **Reg. No. 632,297**, same, filed Oct. 22, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19107, *John R. MacGregor Lead Co. v. Purity Paint Products Corp.*

Reg. No. 548,199. (See Reg. No. 137,690.)

Reg. No. 559,839 (DORMIN), Dormin, Inc., Medicinal Preparations intended as aids for the relief of insomnia, headaches and neuralgia, filed Oct. 18, 1958, D. C., S. D. N. Y., Doc. 139/28, *De Leon Laboratories, Inc. v. Dormin, Inc.*

Reg. No. 561,021 (PERMA-TUCK), Gehring Textiles, Inc., Piece goods of nylon, filed Sept. 4, 1958, D. C., S. D. N. Y., Doc. 137/228, *Gehring Textiles, Inc. v. R. H. Macy & Co., Inc.* Stipulation and order of discontinuance Oct. 14, 1958.

Reg. No. 571,736 (ROQUEFORT), The Community of Roquefort, Cheese, filed May 21, 1958, D. C., S. D. Calif (Los Angeles), Doc. 480/58-WM, *The Community of Roquefort et al. v. Biltmore Hotel Co.* Consent judgment; defendant restrained from using word "Roquefort" unless genuine "Roquefort" is used (notice Oct. 16, 1958).

Reg. No. 604,913 (KNITMODE), Charles Pindyck, Inc., Knitted cloth of cotton fibers, in the piece, towels, wash clothes, etc.; **Reg. No. 606,110**, same, Clothing for infants—namely, undershirts, terry towels, knit gowns, etc., filed Oct. 23, 1958, D. C., S. D. N. Y., Doc. 139/105, *Charles Pindyck, Inc. et al. v. Knit Modes, Inc.*

Reg. No. 606,110. (See Reg. No. 604,913.)

Reg. No. 626,780 (GRAND), Grand Union Co., Facial tissues, filed Mar. 17, 1958, D. C. N. J. (Newark), Doc. 427/58, *The Grand Union Co. v. Grand Union Furniture Co., Inc.* Consent judgment; injunction issued Oct. 10, 1958.

SN 47,940. Continental Can Company, Inc., New York, N. Y. Filed May 19, 1955.

Class 6—Chemicals and Chemical Com-

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 32,891. Armour and Company, Chicago, Ill. Filed July 1, 1957.

SVELTE

For Leather Splits.
First use Feb. 12, 1957.

SN 44,897. A. F. Gallun & Sons Corporation, Milwaukee, Wis. Filed Jan. 29, 1958.

HONEYCOMB CALF

The word "Calf" is disclaimed except in association with the other feature of the mark.
For Leather.
First use Jan. 13, 1958.

SN 50,898. Haveg Industries, Inc., Wilmington, Del. Filed Apr. 24, 1958.

SILTEMP

For Glass in the Form of Fibers and Woven and Unwoven Fabrics for Use in High Temperature Applications.
First use Dec. 2, 1957.

SN 52,168. Armour and Company, Chicago, Ill. Filed May 23, 1958.

ADANO

For Upper Leather.
First use Apr. 11, 1958.

Class 2—Receptacles

SN 22,348. The Union Stock Yard and Transit Company of Chicago, Chicago, Ill. Filed Jan. 9, 1957.

LIQUEFREEZE

For Shipping Containers for Frozen Foods.
First use Nov. 9, 1956.

SN 36,228. John T. Raisis Corporation, San Francisco, Calif. Filed Aug. 26, 1957.

PAN TRAY

For Foil Lined Containers for Packaging and Warming Rolls and the Like.
First use June 4, 1957.

SN 36,554. Ames Safety Envelope Company, Somerville, Mass. Filed Sept. 3, 1957.

REX

For Mailing Enclosures—Namely, Mailing Tubes.
First use Sept. 1, 1927.

SN 38,250. American Can Company, Easton, Pa. Filed Oct. 3, 1957.

Dixie
VENDALITE
Cup

Applicant disclaims the word "Cup" apart from the mark as shown. Owner of Reg. Nos. 120,264, 546,956, and others.
For Paper Cups.
First use on or before Sept. 26, 1957.

SN 38,776. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Oct. 11, 1957.

LURON

Owner of Reg. No. 522,580.
For Dispensers for Powdered Hand Cleanser.
First use 1947.

SN 47,139. Philadelphia Steel and Wire Corporation, Philadelphia, Pa. Filed Mar. 5, 1958.

QUARTER PAK

For Carton or Container.
First use Feb. 11, 1958.

SN 47,500. The Hollinger Corporation, Arlington, Va. Filed Mar. 11, 1958.

For Paper and Paperboard Boxes.
First use August 1956.

SN 47,853. Glitter Bug Products Company, Los Angeles, Calif. Filed Mar. 17, 1958.

For Litter Bags.
First use Dec. 10, 1957.

SN 39,968. Krieger Color & Chemical Co., Inc., Los Angeles, Calif. Filed Oct. 31, 1957.

KRIEGER

For Paints, Varnishes, Lacquers, Primers, Sealers, Undercoaters, Thinners, Enamels, Stains, Shellacs, Wood Fillers, Rubbing Compounds, Polishes, Waxes, Paint Removers, Paint Brushes, Roller Coaters, Spray Guns, Sandpaper, Steel Wool, Masking Tape, Drop Cloths, Turpentine, Linseed Oil, Putty, Glazing Compounds, Caulking Compounds, Wood Preservatives, Metal Primers, Rust Inhibitors, Rust Preventives, Rust Removers, Metal Conditioners, Concrete Floor Paints, Concrete Floor Enamels, Concrete Floor Stains, Concrete Floor Sealers, Concrete Floor Hardeners, Concrete Floor Waxes, Concrete Floor Polishes, Concrete Floor Cleaners, Concrete Floor Paint Removers, Concrete Floor Paint Brushes, Concrete Floor Roller Coaters, Concrete Floor Spray Guns, Concrete Floor Sandpaper, Concrete Floor Steel Wool, Concrete Floor Masking Tape, Concrete Floor Drop Cloths, Concrete Floor Turpentine, Concrete Floor Linseed Oil, Concrete Floor Putty, Concrete Floor Glazing Compounds, Concrete Floor Caulking Compounds, Concrete Floor Wood Preservatives, Concrete Floor Metal Primers, Concrete Floor Rust Inhibitors, Concrete Floor Rust Preventives, Concrete Floor Rust Removers, Concrete Floor Metal Conditioners.
First use Oct. 1, 1957.

SN 40,188. Nopco Chemical Company, Harrison, N. J. Filed Nov. 18, 1957.

NOPCO

For Chemical Preparations for Use in Manufacturing Paper, Textiles, Leather, Rubber, Plastics, Paints, Varnishes, Lacquers, Printing Inks, Adhesives, Cosmetics, Pharmaceuticals, Foods, Detergents, Soaps, Petroleum Products, Metal Products, Ceramics, Glass, Wood Products, Agricultural Products, Water Treatment, Sewage Treatment, Air Conditioning, Refrigeration, Heating, Ventilating, Air Purification, Air Filtration, Air Cleaning, Air Deodorization, Air Humidification, Air Dehumidification, Air Temperature Control, Air Pressure Control, Air Flow Control, Air Velocity Control, Air Quality Control, Air Purity Control, Air Cleanliness Control, Air Sterilization, Air Disinfection, Air Fumigation, Air Ventilation, Air Circulation, Air Distribution, Air Exhaust, Air Intake, Air Duct, Air Filter, Air Cleaner, Air Deodorizer, Air Humidifier, Air Dehumidifier, Air Temperature Controller, Air Pressure Controller, Air Flow Controller, Air Velocity Controller, Air Quality Controller, Air Purity Controller, Air Cleanliness Controller, Air Sterilizer, Air Disinfector, Air Fumigator, Air Ventilator, Air Circulator, Air Distributor, Air Exhaust Fan, Air Intake Fan, Air Duct Fan, Air Filter Fan, Air Cleaner Fan, Air Deodorizer Fan, Air Humidifier Fan, Air Dehumidifier Fan, Air Temperature Controller Fan, Air Pressure Controller Fan, Air Flow Controller Fan, Air Velocity Controller Fan, Air Quality Controller Fan, Air Purity Controller Fan, Air Cleanliness Controller Fan, Air Sterilizer Fan, Air Disinfector Fan, Air Fumigator Fan, Air Ventilator Fan, Air Circulator Fan, Air Distributor Fan.
First use Nov. 1, 1957.

SN 47,946. Continental Can Company, Inc., New York, N. Y. Filed Mar. 18, 1958.

Owner of Reg. Nos. 618,923, 686,340, and others.
For Plastic Containers, Such as Bottles and the Like.
First use Dec. 31, 1954.

SN 48,006. The Bradley Container Corporation, Maynard, Mass. Filed Mar. 19, 1958.

Owner of Reg. Nos. 605,929 and 622,846.
For Containers—Namely, Tubes and Casings Made From Plastic Materials or Plastic Compositions, Plastic Bottles and Plastic Flacons for Packing and Transporting Purposes.
First use May 20, 1957.

SN 48,741. Hamilton-Shotch Corporation, Hamilton, Ohio. Filed Mar. 31, 1958.

PORTA-TRAY

For Tray for Carrying Tools and Miscellaneous Items.
First use Feb. 24, 1958.

SN 48,878. Stone & Smith, Inc., Los Angeles, Calif. Filed Apr. 1, 1958.

FIBERMETAL

For Tote Boxes.
First use Feb. 24, 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 48,262. Roger-Kress Company, West Bend, Wis. Filed Feb. 6, 1958.

KRESSLINE

Owner of Reg. No. 577,087.
For Handbags, Billfolds, Key Cases, and Pocket Secretaries of Leather, Cloth, or Like Material.
First use June 7, 1954.

Class 4—Abrasives and Polishing Materials

SN 48,340. Royal Coach Products, Inc., Hollywood, Calif. Filed May 26, 1958.

ROYAL COACH

For Automobile and Furniture Wax Polishes.
First use on or about Feb. 20, 1951.

Class 6—Chemicals and Chemical Compositions

SN 15,488. Pennsalt Chemicals Corporation, Philadelphia, Pa., by change of name from The Pennsylvania Salt Manufacturing Company, Philadelphia, Pa. Filed Nov. 19, 1954.

A BETTER START FOR YOUR FINISH

For Chemical Compositions Used for Preparing a Metal Surface To Receive a Chemical Coating, Chemical Agents for Preparing Baths Used To Apply Chemical Coatings, Chemical Baths for Coating Metals, Replenishing Agents for Such Baths and Other Chemical Compositions Used in Treating Metals Preparatory to Drawing, Stamping, Extruding or Other Forming or Deforming Operations, or for Preparatory to Painting or for Forming a Corrosion Resistant Surface on the Metal.
First use Jan. 31, 1952.

SN 30,145. Dow Corning Corporation, Midland, Mich. Filed May 16, 1957.

SYL-GARD

For Silicone Compositions Used To Treat Glass Surfaces To Prevent Scratching, To Reduce Breakage, and To Improve the Appearance of the Glass.
First use May 1, 1957.

SN 29,081. Colebert L. Andrus, d. b. a. Andrus Chemical Company, Minneapolis, Minn. Filed Oct. 17, 1957.

For Wood Preservatives.
First use June 25, 1957.

SN 29,690. Union Carbide Corporation, New York, N. Y. Filed Oct. 28, 1957.

Owner of Reg. Nos. 119,400 and 642,465.
For Plastic Resins and Compounds.
First use Oct. 4, 1957; on or about July 1, 1958, as to "Union Carbide."

SN 29,946. Sun Oil Company, Philadelphia, Pa. Filed Oct. 30, 1957.

PDO 40

For Synthetic Resins Derived From Petroleum.
First use July 1, 1946.

SN 39,948. Krieger Color & Chemical Co., Inc., Los Angeles, Calif. Filed Nov. 1, 1957.

The word "Green" is disclaimed apart from the mark as shown. The drawing is lined to show the colors green and brown.

For Lawn Colorant.

First use Oct. 22, 1957.

SN 40,339. General Aniline & Film Corporation, New York, N. Y. Filed Nov. 8, 1957.

CLAROSOL

For Clarification Assistant for Treatment of Beverages and Other Aqueous Liquid Food Products, Such as Beer, Wine, Vinegar, Fruit Juices, Tea, Coffee, Whiskey, Brandy, and Other Distilled Alcoholic Beverages.

First use on or about Sept. 23, 1957.

SN 40,685. Arthur E. Marks, d. b. a. Skram Exterminating Company, Chicago, Ill. Filed Nov. 14, 1957.

SKRAM

For Industrial and Agricultural Insecticide and Insect Repellant Sold as a Concentrate in Bulk Quantities for Dilution in Accordance With Instructions To Produce Sprays for Plants, Growing Fruits and Vegetables, and To Produce Solutions and/or Sprays for Use in Controlling Pests of Domestic Animals.

First use Apr. 9, 1956.

SN 42,642. Four Pac Chemical Corporation, Lafayette, La. Filed Dec. 18, 1957.

FOUR-PAC

For Preparation for Use as a Corrosion and Rust Inhibiter, Sealer and Lubricant in Internal Combustion Engines.

First use June 7, 1957.

SN 42,792. United Co-Operatives, Inc., Alliance, Ohio. Filed Dec. 20, 1957.

Owner of Reg. No. 384,494.

For Insecticides, Fungicides, Miticides, Herbicides, Rodenticides, Pesticides, Bactericides, Seed Inoculants, and Roost Paint.

First use Sept. 1, 1939.

SN 43,199. Nopco Chemical Company, Harrison, N. J. Filed Dec. 30, 1957.

NOPCOSANT

Owner of Reg. Nos. 121,927, 575,697, and others.

For Naphthalene Sulfonated Derivatives for General Use in the Industrial Arts.

First use Nov. 20, 1957.

SN 43,327. Monsanto Chemical Company, St. Louis, Mo. Filed Jan. 2, 1958.

JETROL

For Liquid Functional Fluid Sold for Use as a High-Temperature Force or Power Transmission Fluid, Hydraulic Fluid, Heat Exchange Medium, Dielectric Medium, or Lubricant.

First use Dec. 19, 1957.

SN 44,653. John B. Stetson Company, Philadelphia, Pa. Filed Jan. 24, 1958.

RESISTAIN

Owner of Reg. No. 354,978.

For Chemicals for Treating Ribbons, Sweat Bands, and Other Material Used in Hats To Resist Stains by Water or Perspiration.

First use Dec. 1, 1936.

SN 45,120. Chemical Process Company, San Francisco, Calif. Filed Feb. 3, 1958.

Ilon-ISO

Owner of Reg. No. 635,391.

For Synthetic Resins.

First use Dec. 30, 1957.

SN 45,167. Imperial Chemical Industries Limited, London, England. Filed Feb. 3, 1958.

SERSEAL

Owner of British Reg. No. 765,638, dated May 16, 1957.

For Chemical Substances in Liquid Form for Floating on Aqueous Solution To Prevent the Evolution of Fumes and Steam, and To Avoid Wastage of Heat.

SN 45,531. Collingwood Laboratories, Toledo, Ohio. Filed Feb. 10, 1958.

FAB-COTE

For Water Repellant Coating for Fabrics.

First use Sept. 27, 1957.

SN 46,762. Fritz Schneider-Winkler, d. b. a. Kaspar Winkler & Co., Zurich, Switzerland. Filed Feb. 27, 1958.

PLASTAIR

For Chemical Products for Addition to Cement, Plaster and Concrete and for the Improvement of the Properties of Cement, Plaster and Concrete, Particularly for Improving Their Resistance to Frost and/or Cold.

First use Oct. 8, 1957; in commerce Oct. 8, 1957.

SN 38,822. American Vitrified Products Company, Cleveland, Ohio. Class 12 — Hardware and Plumbing and Steam Fitting Goods.

SN 52,204. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed May 26, 1958.

NEOLITE

Owner of Reg. Nos. 556,954 and 570,059.
For Edge Dye for Shoe Soles.
First use Nov. 5, 1957.

SN 53,210. Ultra-Violet Products, Inc., San Gabriel, Calif. Filed June 9, 1958.

LIVING LIGHT

For Liquid Composition for Imparting Fluorescent Characteristics to Paper Under Black Light.
First use May 29, 1957.

SN 53,542. Albert Verley & Company, Linden, N. J. Filed June 13, 1958.

AERO-SOLABSOLUTE

For Aromatic Chemicals and Essential Oils for Production of Perfumes and Flavoring Materials.
First use Apr. 30, 1957.

SN 53,546. Albert Verley & Company, Linden, N. J. Filed June 13, 1958.

AERO-SOLFLAVROMES

For Aromatic Chemicals and Essential Oils for Production of Perfumes and Flavoring Materials.
First use Apr. 30, 1957.

SN 53,547. Albert Verley & Company, Linden, N. J. Filed June 13, 1958.

AERO-SOLBASEAROMES

For Aromatic Chemicals and Essential Oils for Production of Perfumes and Flavoring Materials.
First use Apr. 30, 1957.

SN 53,548. Albert Verley & Company, Linden, N. J. Filed June 13, 1958.

AERO-SOLAROMES

For Aromatic Chemicals and Essential Oils for Production of Perfumes and Flavoring Materials.
First use Apr. 30, 1957.

SN 53,088. Union Carbide Corporation, New York, N. Y. Filed July 9, 1958.

UNION CARBIDE

Owner of Reg. Nos. 119,405 and 643,460.
For Organo-Silicon Compositions — Namely, Silicones, Silanes, and Silicone-Organic Copolymers for Use in the Industrial Arts.
First use in September 1957; Jan. 19, 1956, as to "Union Carbide."

Class 7 — Cordage

SN 40,890. Texlon Corporation, Dallas, Tex. Filed Nov. 18, 1957.

tex-sheen

For Ribbon for Gift Wrapping and Tying.
First use Aug. 28, 1957.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 46,851. S. F. A. Fabbriche Fiammiferi Ed Affini, S. A. F. F. A., Milan, Italy. Filed Mar. 24, 1958.

Saffa

For Matches.
First use Oct. 5, 1928; in commerce Oct. 5, 1928.

SN 50,785. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 7, 1958.

AIRBREAKER

For Non-Destructible Cartridges Used for Blasting Purposes and Components and Parts Thereof Including Cartridge Shells, Charging Heads, Discharge Heads, and Charge Releasing Devices.
First use on or about July 14, 1958.

SN 57,271. The High Standard Manufacturing Corporation, Hamden, Conn. Filed Aug. 15, 1958.

DOUBLE-NINE

For Revolvers and Parts Therefor.
First use on or about Apr. 12, 1958.

Class 10 — Fertilizers

SN 57,422. Science Products Company, Inc., Chicago, Ill. Filed Aug. 18, 1958. Sec. 2(f).

BERRY-SET

Owner of Reg. No. 636,704.
For Synthetic Plant Hormones Used To Promote Increased Growth of, and To Induce Setting of Certain Berries.
First use prior to Apr. 24, 1950.

Class 12 — Construction Materials

SN 36,910. The Mosaic Tile Company, Zanesville, Ohio. Filed Sept. 9, 1957.

MOSAIC

MEDLEY

Owner of Reg. No. 245,801.
For Assembly of Small Ceramic Tiles of Several Colors Positioned To Produce a Decorative Pattern for Use on Floors, Walls, and Ceilings.
First use Sept. 24, 1948.

SN 38,322. American Vitrified Products Company, Cleveland, Ohio. Filed Oct. 4, 1957.

GLAS-GLAZ

For Vitrified Clay Pipe Lined Inside and Covered Outside With a Glass-Like Ceramic Material.
First use Apr. 2, 1957.

SN 42,589. Richard P. Kahn, Silverdale, Pa. Filed Dec. 17, 1957.

BEAU-MYTE

For Laminated Plastic Surface Material.
First use Feb. 21, 1952.

SN 45,921. Simpson Timber Company, Seattle, Wash. Filed Feb. 14, 1958.

Simpson

The drawing is lined for red. Owner of Reg. Nos. 569,075, 615,505, and others.
For Plywood, Doors, Hardboard Faced Panels, Lumber, and Wood Fiber Containing Acoustical and Thermal Insulation Materials in Sheet Form for Building Purposes.
First use May 4, 1949.

SN 46,729. Hanley Company, Inc., Pittsburgh, Pa. Filed Feb. 27, 1958.

DURAMIC

For Ceramic Glazed Surface Structural Clay Units Including Standard Brick, Jumbo Brick, Norman Brick, Roman Brick, Structural Tile and Facing Wall Tile.
First use on or about Jan. 13, 1951.

SN 46,923. Filon Plastics Corporation, El Segundo, Calif. Filed Mar. 3, 1958.

FILON

Owner of Reg. No. 622,690.
For Translucent Shatterproof Fiber Glass Panels.
First use Jan. 2, 1957.

SN 50,848. L. Sonneborn Sons, Inc., New York, N. Y. Filed May 1, 1958.

EPOLITH

For Masonry Repair and Floor Resurfacing Compositions Containing Synthetic Resin.
First use in December 1957.

SN 51,034. Louver Mfg. & Supply Co., Minneapolis, Minn. Filed May 5, 1958.

LOMANCO

For Foundation Ventilators.
First use in July 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 33,617. Herculoc Corporation, New York, N. Y. Filed July 12, 1957.

HERCULOC

For Wire Splices and Wire Rope Clamps and Slings.
First use Apr. 30, 1956.

SN 38,848. Carlon Products Corporation, Cleveland, Ohio. Filed Sept. 9, 1957.

DIAMOND

For Conduits, Made of Polymeric Material, Such as Polyethylene, Cellulose Acetate, Cellulose Acetate Butyrate, Co-Polymerized Vinyls, Poly-Styrene and Co-Polymers Thereof.
First use Feb. 1, 1956.

SN 38,851. Carlon Products Corporation, Cleveland, Ohio. Filed Sept. 9, 1957.

RBS

For Conduits, Made of Polymeric Material, Such as Polyethylene, Cellulose Acetate, Cellulose Acetate Butyrate, Co-Polymerized Vinyls, Poly-Styrene and Co-Polymers Thereof.
First use Nov. 29, 1955.

SN 47,182. John L. Dorf, Inc., Houston, Tex. Filed Mar. 6, 1958.

DORLON

For Plastic Lined Pipe, Joints, and Fittings, Plastic Pipe, Joints, and Fittings.
First use Dec. 19, 1957, on plastic lined pipe.

SN 47,395. The Lamson & Sessions Company, Cleveland, Ohio. Filed Mar. 10, 1958.

SEALOC

For Coated Screw Products Having a Plastic or Adhesive Coating on the Threads Thereof.
First use late in 1955.

SN 48,915. Merton J. Gillies, Wheeling, Ill. Filed Apr. 2, 1958.

FLAVOR QUEEN

For Kitchen Cooking Vessels.
First use Mar. 21, 1958.

SN 49,435. Elf Inc., Dayton, Ohio. Filed Apr. 16, 1958.

HONEST JOHN

For Plumbing Fixtures for Toilets and Specifically Toilet Flush Valve and Guide Sets.
First use on or about Mar. 4, 1958.

SN 51,495. Russell, Burdsall & Ward Bolt and Nut Company, Port Chester, N. Y. Filed May 12, 1958.

SPIN-SEAL

For Bolts, Nuts, and Screws.
First use Apr. 8, 1958.

Class 18—Medicines and Pharmaceutical

SN 36,286. Fort Dodge Laboratories, Inc., Fort Dodge, Iowa.

SN 52,267. Borg-Warner Corporation, Chicago, Ill. Filed May 20, 1958.

B-W

Owner of Reg. Nos. 318,695, 622,965, and others.
For Lavatories, Sinks, Washtubs, Bathtubs.
First use on or before Dec. 22, 1957.

SN 52,357. Trio Manufacturing Co., Griggsville, Ill. Filed May 26, 1958.

TRIO

Owner of Reg. No. 606,232.
For Hardware and Accessories for Mounting Television Antennas Including, Clamps, Bolts, Screws, Insulator Inserts, Wall, Chimney and Foot Mounts, Turnbuckles, Ground Rods, and Stand-Offs.
First use on or about Oct. 18, 1957.

Class 14—Metals and Metal Castings and Forgings

SN 48,420. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Mar. 25, 1958.

For Aluminum and Its Alloys.
First use Nov. 27, 1957.

SN 48,547. Crucible Steel Company of America, Pittsburgh, Pa. Filed Mar. 27, 1958.

STRATALLOY

For Steel Products—Namely, Tool Steels.
First use Mar. 12, 1958.

SN 49,486. Chase Brass & Copper Co. Incorporated, Waterbury, Conn. Filed Apr. 11, 1958.

SILNIC

Owner of Reg. No. 408,889.
For Bronze Wire and Rod.
First use on or about Mar. 10, 1956.

Class 15—Oils and Greases

SN 38,272. Fargo Mfg. Company, Inc., Poughkeepsie, N. Y. Filed Oct. 8, 1957.

FARGOLENE

For Grease Used for the Protection of Electrical Connections.
First use in or about December 1947.

SN 46,267. Strohmeyer & Arpe Company, New York, N. Y. Filed Mar. 24, 1958.

ROMONTA

For Crude or Partially Prepared Mineral Wax.
First use Mar. 10, 1958.

Class 16—Protective and Decorative Coatings

SN 41,736. American Cyanamid Company, New York, N. Y. Filed Dec. 4, 1957.

CYZAC

Owner of Reg. No. 651,501.
For Surface Coating Resins.
First use June 14, 1957.

SN 56,402. The International Rustproof Corporation, Euclid, Ohio. Filed July 31, 1958.

IRCO SEAL

For Paints.
First use on or about Dec. 31, 1940.

SN 56,646. Minerals & Chemicals Corporation of America, Menlo Park, N. J. Filed Aug. 5, 1958.

ATTACOTE

For Fine Particle Size Clay for Use as a Coating Agent to Prevent Caking of Industrial and Agricultural Chemicals.
First use Aug. 28, 1957.

SN 56,649. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 5, 1958.

3M

For Concentrated Primer.
First use Nov. 27, 1957.

SN 56,743. The Sherwin-Williams Company, Cleveland, Ohio. Filed Aug. 6, 1958.

ROTO-LAC

For Lacquers.
First use Sept. 26, 1957.

Class 17—Tobacco Products

SN 43,660. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Jan. 9, 1958.

CINCO

Owner of Reg. No. 50,574.
For Cigars.
First use in July 1889.

SN 42,035. Louisana, Inc., d. b. a. Louisana Pharmaceuticals, Evansville, Ind. Filed Dec. 9, 1957.

SN 47,474. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 19, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 29,280. Magna, Inc., Bensenville, Ill. Filed Apr. 17, 1957.

VAPO-FLUID

For Liquid for the Relief of Congestion in the Chest and Upper Respiratory Tract.
First use in October 1953.

SN 29,319. The Upjohn Company, Kalamazoo, Mich. Filed May 2, 1957.

SPECIAL FORMULA NO. 17900

Applicant makes no claim for the words "Special Formula" apart from the mark as shown.
For Veterinary Hormonal Preparation.
First use Sept. 10, 1956.

SN 31,935. National Boulevard Bank of Chicago, Chicago, Ill., assignee of Lanolin Plus, Inc., Chicago, Ill. Filed July 11, 1957. Sec. 2(f).

ALL-IN-ONE

Owner of Reg. Nos. 393,742 and 604,348.
For Dietary Supplement Containing Vitamins and Minerals.
First use July 21, 1941.

SN 32,442. Alcon Laboratories, Inc., Fort Worth, Tex. Filed June 24, 1957.

STERI-UNITS

For Outer Container and Drop Dispensing Bottle Containing Ophthalmic Solution.
First use Feb. 6, 1957.

SN 36,273. Paul F. Beich Company, Bloomington, Ill. Filed Aug. 27, 1957.

Owner of Reg. No. 644,272.
For Medicated Candy Containing Vitamins and Minerals for Reducing Purposes.
First use Apr. 2, 1957.

SN 36,286. Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Filed Aug. 28, 1957.

MEDICANULS

For Medicated Cannula for the Treatment of Mastitis in Animals.
First use Feb. 19, 1957.

SN 36,326. Armour and Company, Chicago, Ill. Filed Oct. 4, 1957.

SINAXAR

For Tranquilizer Preparation.
First use Sept. 18, 1957.

SN 36,628. Ortho Pharmaceutical Corporation, Raritan, N. J. Filed Oct. 9, 1957.

PRO ACTASE

For Pharmaceutical Enzymatic Preparations for Dissolving Clotted Blood.
First use Mar. 19, 1957.

SN 39,145. Arthur L. Kraemer, d. b. a. Kraemer Products, Batavia, N. Y. Filed Oct. 16, 1957.

LINARUB

For Analgesic Liniment Containing Alcohol, Camphor, Methyl Salicylate, and Chloroform.
First use Mar. 4, 1947.

SN 39,277. Rodeon, Inc., Joplin, Mo. Filed Oct. 21, 1957.

RODEON

For Antiseptic Having Deodorant and Fungicidal Properties Applicable to Feet and Shoes.
First use June 15, 1957.

SN 39,702. Bariatric Corporation, Portland, Oreg. Filed Oct. 29, 1957.

BARIATRIC

For Therapeutic Compositions Supplying Thyroid Activity and Adjuvants for the Control Thereof.
First use Oct. 10, 1957.

SN 39,704. Bariatric Corporation, Portland, Oreg. Filed Oct. 29, 1957.

BARIATRICIAN

For Therapeutic Compositions for Use as Adjuvants in the Reduction and Control of Body Weight.
First use Oct. 10, 1957.

SN 39,705. Bariatric Corporation, Portland, Oreg. Filed Oct. 29, 1957.

NEO-BARINE

For Therapeutic Compositions Having Thyroid-Like Activity.
First use Oct. 10, 1957.

SN 33,438. G. D. Searle & Co., Skokie, Ill. Filed June 12, 1957.

SN 36,868. Hudo Corp., Pennsauken, N. J. Filed May 14,

First use on or about Mar. 10, 1958.

First use in July 1889.

SN 42,035. Louisana, Inc., d. b. a. Louisana Pharmaceuticals, Evansville, Ind. Filed Dec. 9, 1957.

TENSOFF

For Medicinal Preparation Adapted for Use as an Aid to Relaxing Sleep by Inducing Calming and Drowsiness.
First use Aug. 1, 1957.

SN 42,410. United Pharmacal Company of Missouri, Inc., d. b. a. Animal Health Associates, St. Joseph, Mo. Filed Dec. 13, 1957.

ANIMAL HEALTH ASSOCIATES

For Concentrated Ruminatorie for Animals.
First use Nov. 5, 1957.

SN 45,114. Broemmel Pharmaceuticals, San Francisco, Calif. Filed Feb. 3, 1958.

BIO-ADD

For Medicated, Sterile Ophthalmic Solution.
First use Dec. 18, 1957.

SN 45,173. Eli Lilly and Company, Indianapolis, Ind. Filed Feb. 3, 1958.

REMIN

For Medicinal Preparation Used as a Tranquilizing Drug.
First use Jan. 21, 1958.

SN 45,472. General Foods Corporation, White Plains, N. Y. Filed Feb. 7, 1958.

ATGEL GF

For Silver Metaphosphate Gelatin, and Pharmaceutical Gelatin.
First use on or about Oct. 30, 1957.

SN 46,879. S. O. Barnes and Son, Inc., Gardena, Calif. Filed Mar. 3, 1958.

X-TRAVITS

For Dietary Supplement Containing Vitamins and Minerals.
First use on or about Jan. 1, 1952.

SN 46,997. William L. Rutledge, d. b. a. Vita Well Products Co., Sawyer, Mich. Filed Mar. 3, 1958.

VitaWell

For Vitamin Preparations.
First use Feb. 7, 1958.

SN 47,474. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1958.

TRICHOCIN

For Antibiotic Preparation.
First use Nov. 18, 1957.

SN 49,532. Max Derfler, d. b. a. Nutrition Control Products, New York, N. Y. Filed Apr. 17, 1958.

VITACREST

For Multiple Vitamin and Mineral Supplement.
First use on or before Dec. 31, 1948.

SN 50,258. Brooks Tyler & Co., Inc., Miami, Fla. Filed Apr. 23, 1958.

VELVASAN

For Antiseptic Skin Health Lotion.
First use Apr. 4, 1958.

SN 50,514. Nu-Vita, Incorporated, Kenosha, Wis. Filed Apr. 28, 1958.

NU-API

For Multi Vitamin Capsules Containing Nutritive Jellies of the Queen Bee for Human Consumption.
First use Mar. 6, 1958.

SN 51,094. Whittaker Laboratories, Inc., Peekskill, N. Y. Filed May 5, 1958.

WHITOM

COOPER CREME

No claim is made to the words "Cooper Creme" apart from the mark.
For Antibiotic Creme for Various Human Skin Disorders and Feminine Hygiene.
First use Feb. 6, 1958.

SN 52,011. The Purdue Frederick Company, New York, N. Y. Filed May 20, 1958.

GLUTAZYME-PF

For Combination of Vitamins, Minerals and Monosodium L-Glutamate.
First use May 9, 1958.

SN 52,308. Enzyme Process Company, Inc., d. b. a. Doctor's Specialties Laboratories, Van Nuys, Calif. Filed May 9, 1958.

For Food Supplements Containing Vitamins.
First use Sept. 15, 1952.

SN 33,426. G. D. Searle & Co., Skokie, Ill. Filed Feb. 12, 1958.

MINCARD

For Pharmaceutical Preparations Useful in the Treatment of Cardiovascular-Renal Dysfunction.
First use May 29, 1958.

Class 19—Vehicles

SN 38,914. Folding Carrier Corporation, d. b. a. E-Z Glider & Basket Co., Oklahoma City, Okla. Filed Oct. 15, 1957. Sec. 2(f) as to "E-Z."

E-Z GLIDER & BASKET

Applicant disclaims the words "Glider & Basket" apart from the mark as shown.
For Metal Basket Carts.
First use August 1957; June 6, 1946, as to "E-Z."

SN 44,425. The Wine Railway Appliance Company, Toledo, Ohio. Filed Jan. 21, 1958.

WINE

For Railway Freight Car Structural Parts—Namely, Hopper Door Locks, Hopper Frames, Gondola Door Locks and Drop End Locks, Brake Balancers and Discharge Gates.
First use May 10, 1912.

SN 40,546. Auto Lamp Manufacturing Company, Chicago, Ill. Filed Apr. 14, 1958.

For Light Reflectors and Mirrors for Use on Vehicles.
First use Sept. 1, 1950.

SN 51,412. B-T Company, Inc., Milwaukee, Wis. Filed May 12, 1958.

TAIL-WIND

For Ride Stabilizing Fins for Connection With the Transom of Boats.
First use Feb. 24, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 35,085. The National Supply Company, Pittsburgh, Pa., assignee, by mesne assignment, of Howard Electric Company, Melrose Park, Ill. Filed Mar. 12, 1957.

HOWARDUCT

For Wire Distributing Elements and Fittings Constituting an Underfloor Wire Distribution System.
First use July 9, 1954.

SN 30,656. Enfo Corp., Pennsauken, N. J. Filed May 16, 1957.

ENFLON

For Engineered Fluorocarbons for Electrical Insulating Materials, Alone or in Conjunction With Metal Parts and/or Other Plastics—Namely, in the Form of Sheet, Tape, Cylinders, Molded and Machined Parts, Gaskets and Similar Products.
First use Mar. 1, 1957.

SN 36,832. Loewe Opta Aktiengesellschaft, Berlin-Steglitz, Germany. Filed Aug. 30, 1957.

OPTA

Owner of German Reg. No. 485,135, dated May 11, 1930.
For Electric Communication Apparatus and Component Parts Thereof—Namely, Radio and Television Receivers, Music Consoles, Music Boxes, Loudspeakers, Microphones, Voice Reproducers, Magnetic Sound Recorders and Reproducers, Electron Tubes for Receiving, Amplifying, and Rectifying, Electron Beam Tubes for Television and Oscillograph Equipment.

SN 38,142. The Gamewell Company, Newton Upper Falls, Mass. Filed Oct. 1, 1957.

Flexalarm

For Electrical Fire Alarm Systems and Parts and Components Thereof.
First use January 1956.

SN 38,373. The Nestlé Company, Inc., White Plains, N. Y. Filed Oct. 4, 1957.

NESTLÉ CHOCOLATOR

Owner of Reg. No. 342,899.
For Electrically Operated Hot Chocolate Drink Mixing and Dispensing Machine.
First use May 13, 1957.

SN 41,007. Diamond Wire & Cable Company, Sycamore, Ill. Filed Nov. 20, 1957.

The drawing is lined for red, but no claim is made to color.
Owner of Reg. Nos. 228,662, 616,479, and others.
For Electrical Plugs, Cord Sets, Electrical Wire Harnesses, Electric Wire, Electric Cable, and Insulation Therefor.
First use on or about Nov. 18, 1957.

SN 41,615. Burndy Corporation, Norwalk, Conn. Filed Dec. 2, 1957.

BURLINK

For Electrical Connectors.
First use Nov. 27, 1957.

SN 41,743. Burndy Corporation, Norwalk, Conn. Filed Dec. 4, 1957.

HYTAP

For Electrical Connectors.
First use 1939.

SN 41,744. Burndy Corporation, Norwalk, Conn. Filed Dec. 4, 1957.

HYTEE

For Electrical Connectors.
First use 1940.

SN 44,190. Malco Tool & Mfg. Co., Chicago, Ill. Filed Jan. 17, 1958.

MALCO

For Electrical Terminals, Socket Receptacles, and Soldering Lugs.
First use Apr. 15, 1946.

SN 46,000. Organic Development Corporation, Garden Grove, Calif. Filed Feb. 17, 1958.

SPECTRA-TWIST

For Flat Band Multi-Conductor Cable of Twisted Pairs of Conductors.
First use Oct. 3, 1957.

SN 46,002. Organic Development Corporation, Garden Grove, Calif. Filed Feb. 17, 1958.

VERILOCAP

For Flat Band Multi-Conductor Cable With Insulating Spacers.
First use Aug. 12, 1957.

SN 47,444. Shelly Oil Company, Tulsa, Okla. Filed Mar. 10, 1958.

RANGER

For Batteries for Vehicles.
First use Feb. 26, 1958.

SN 48,051. Realto Co., New York, N. Y. Filed Mar. 19, 1958.

REALTONE

For Radios, and the Following Accessories: Radio Earphone Attachments and Radio Batteries.
First use Dec. 3, 1957.

SN 49,119. Burger Chef Systems, Inc., Indianapolis, Ind. Filed Apr. 7, 1958.

BURGER CHEF

For Electrically Operated Malt Making Machines and Hamburger Broilers.
First use May 1, 1957.

SN 49,429. Essex Wire Corporation, Fort Wayne, Ind. Filed Apr. 10, 1958. Sec. 2(f).

CORDS LTD.

Owner of Reg. No. 582,167.
For Electric Wire and Cable, Electric Wire and Cable Equipped With Terminals, Electric Wiring Harnesses, Electric Wiring Insulation, and Electric Wiring Terminals.
First use on or about Apr. 12, 1943.

SN 49,444. Lee Electric, Inc., West New York, N. J. Filed Apr. 10, 1958.

TONEPAK

For Electrical Signaling Devices and Parts Thereof—Namely, Bells, Buzzers, Chimes, Transformers, Push Buttons, Ballasts, and Resistors.
First use May 22, 1951.

SN 49,445. Lee Electric, Inc., West New York, N. J. Filed Apr. 10, 1958.

The mark comprises a fanciful T contrastingly disposed within a circle of red color having spaced, horizontally extending white lines.
For Electrical Signaling Devices and Parts Thereof—Namely, Bells, Buzzers, Chimes, Transformers, Push Buttons, Ballasts, and Resistors.
First use May 22, 1951.

SN 49,561. Electric Machinery Mfg. Company, Los Angeles, Calif. Filed Apr. 14, 1958. Sec. 2(f).

MULLENBACH

For Switchboards, Panelboards, Welding Equipment, Resistors, Relays, and Transformers.
First use 1929 on switchboards.

SN 25,145. Ajax Flexible Coupling Co. Inc., Westfield, N. Y. SN 46,304. Brewer Sewing Supplies Company, Chicago, Ill.

Class 22—Games, Toys, and Sporting Goods

SN 29,822. R. B. M. Manufacturing Co., Carmichael, Calif. Filed May 10, 1957.

No claim of exclusive right is made to "Reel" as used on water ski line reels.

For Water Ski Line Reels and Brackets Therefor.

First use on or about Mar. 28, 1957.

SN 31,798. Renwal Toy Corporation, Mineola, N. Y. Filed June 11, 1957.

The word "Models" is disclaimed apart from the mark as shown.

For All Plastic Toy Hobby Kits Which Comprise Do It Yourself Plastic Kits Containing Boats, Trains, Autos, Planes, Tanks, Cannons, and Other Military Equipment.

First use April 1957.

SN 37,387. Oberlin Canteen Co., Oberlin, Ohio. Filed Sept. 20, 1957.

CELLUSOIL

For Pressed Paper and Clay Refills for Bait Pails or Canteens.

First use Sept. 5, 1957.

SN 40,073. James R. Neller, Olean, N. Y. Filed Nov. 4, 1957.

PUTT-A-GAME

For Practice Putting Kit Comprising an Electrical Scoring Cup Device Sold With or Without a Putter and Balls, for Playing a Golf Type of Game.

First use Oct. 1, 1957.

SN 40,903. Joseph E. White, Rockford, Ill. Filed Nov. 18, 1957.

PEEKO

For Lettered Card for Playing a Word Guessing Game.

First use Sept. 27, 1957.

SN 41,205. Otto Keith Williams, Ellensburg, Wash. Filed Nov. 22, 1957. Sec. 2(f).

The drawing is lined for blue. Owner of Reg. Nos. 562,468 and 627,308.

For Preserved Fish Bait.

First use April 1938; April 1938 except for the notation "Sure Get 'Ems."

SN 44,796. Ashaway Products, Inc., Ashaway, R. I. Filed Jan. 28, 1958. Sec. 2(f).

ASHAWAY MULTI-PLY

Owner of Reg. No. 560,203.

For Strings for Tennis Rackets, Squash Rackets, Badminton Rackets, and Fish Hook Leaders, Commercial and Sporting Fishing Lines.

First use on or about Apr. 1, 1948.

SN 47,491. Milton Bradley Company, Springfield, Mass. Filed Mar. 11, 1958.

SHERIFF

For Parts or Equipment Used in Playing a Game Including a Playing Board, and Movable Playing Pieces for Playing the Game.

First use Dec. 30, 1957.

SN 48,997. The Ka-Klar Cloth Toy Company, Manchester, Conn. Filed Apr. 3, 1958.

BONE-A-PART

For Animal Figure Toy.

First use on or about Mar. 20, 1958.

SN 57,452. Pan Avion, Inc., Miami, Fla. Filed Aug. 19, 1958.

AQUA-BUOY

For Inflatable Devices To Be Worn by a Person in the Water as an Aid or Support for the Wearer, Comprising Inflatable Balls for Use as an Aid to Water-Skiers; Floatable Swimming Belts; and Floatable Aid for Boarding Life-Rafts.

First use Aug. 20, 1954.

Subj. to Intf. with SN 38,724.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 25,144. Ajax Flexible Coupling Co. Inc., Westfield, N. Y. Filed Feb. 27, 1957.

Owner of Reg. No. 622,102.

For Drive Shaft Couplings.

First use on or about May 1, 1951.

SN 51,836. Vilter Engineering Corporation, Los Angeles, SN 54,773. Marvel Specialty Company, Inc., Defiance,

SN 35,145. Ajax Flexible Coupling Co. Inc., Westfield, N. Y. Filed Feb. 27, 1957.

AJAX DIHEDRAL

Owner of Reg. No. 622,106.
For Drive Shaft Couplings.
First use on or about Sept. 1, 1950.

SN 35,146. Ajax Flexible Coupling Co. Inc., Westfield, N. Y. Filed Feb. 27, 1957.

DIHEDRAL

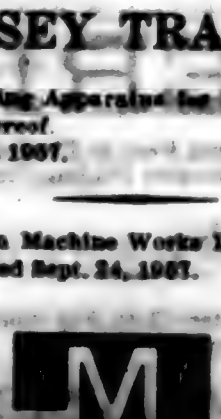
For Drive Shaft Couplings.
First use on or about Sept. 1, 1950.

SN 33,402. The Diversey Corpertation, Chicago, Ill. Filed July 9, 1957.

DIVERSEY TRANSPRAY

For Spray Cleaning Apparatus for Tank Trucks for Cleaning the Interior Thereof.
First use Jan. 29, 1957.

SN 37,743. Mikron Machine Works Ltd., Biel/Kanton Bern, Switzerland. Filed Sept. 24, 1957.



Priority claimed under Sec. 44(d) on Swiss Reg. No. 164,862, dated Aug. 2, 1957.
For Machines and Tools for Manufacturing Gears and Hobs of All Kinds as Well as Grinding Machines for Tooth Profile, Precision Lathes, Precision Universal Milling Machines, Semi and Fully Automatic Precision Machines for the Manufacture of Watch Parts.

SN 39,281. Royal Packaging Equipment, Inc., Fort Lee, N. J. Filed Oct. 21, 1957.

ROYAL-VAC

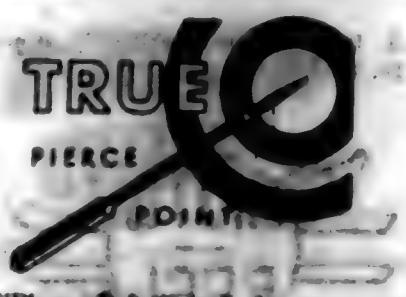
For Machines for Vacuum Packaging.
First use May 1957.

SN 40,096. Ty-Sa-Man Machine Company, Knoxville, Tenn. Filed Nov. 4, 1957.

TY-SAW

For Sawing Machines and Saw Blades Therefor for Industrial Use.
First use Dec. 22, 1952.

SN 46,806. Brewer Sewing Supplies Company, Chicago, Ill. Filed Feb. 28, 1958.



The words "Pierce Point" and the representation of the needle are disclaimed apart from the mark as shown.
For Sewing Machine Needles.
First use Oct. 28, 1957.

SN 46,958. Laukhuff-Pratt Mfg. Corp., Milwaukee, Wis. Filed Mar. 3, 1958.

Owner of Reg. No. 611,008.
For Machinery for Manufacture of Surgical Sponges, Machinery for Packaging Surgical Sponges and Other Products, Machinery for Converting Paper, and Special Machines Made on Order.
First use Jan. 8, 1954.

SN 50,806. Louis R. Baptista, d. b. a. World Export Mfg. Co., Ltd., Los Angeles, Calif. Filed May 2, 1958.

WORLDEX

For Phonograph Record Manufacturing Equipment—Namely, Presses, Electroplating Machines, Edging Machines, Molds and Lathes.
First use Jan. 11, 1954.

SN 51,014. James K. Hoover, d. b. a. Jim Hoover Electric Co., Huntington, W. Va. Filed May 5, 1958.

Rollaire

For Portable Air Compressors.
First use on or about Mar. 1, 1957.

SN 51,281. Toledo Scale Corporation, Toledo, Ohio. Filed May 9, 1958.

AUTO-SIGNAMATIC

For Elevator Systems and Parts Thereof.
First use Feb. 2, 1958.

SN 51,758. United States Steel Corporation, Pittsburgh, Pa. Filed May 15, 1958.

USS

Owner of Reg. Nos. 333,013 and 600,975.
For Pumps, Including Centrifugal Pumps, Reciprocating Pumps and Sub-Surface Well Pumps; Pump Parts; and Internal Combustion Engines.
First use Nov. 28, 1952, on internal combustion engines.

Class 26—Measuring and Scientific

SN 52,041. General Aniline & Film Corporation, New York,

First use Sept. 27, 1957.

First use on or about May 1, 1951.

SN 51,838. Vlier Engineering Corporation, Los Angeles, Calif. Filed May 16, 1958. Sec. 2(f).

Vlier

Owner of Reg. No. 606,346.

For Thumb Screws, Torque Handles, Swivel-Pad Clamps, Fixture Keys, Spring Plungers, Ball Plungers, Spring Stops, Toggle Pads, Leveling Pads, and Stock Pushers.

First use at least as early as December 1945 on torque thumb screws.

SN 51,842. Alma Corporation, Mineola, N. Y. Filed May 19, 1958.

SELECT-O-POINT

For Drill Grinding Machines.

First use Apr. 1, 1958.

SN 54,034. Galland-Henning Manufacturing Company, Milwaukee, Wis. Filed June 23, 1958.

NOPAK
VALVES & CYLINDERS

No claim is made to the expression "Valves & Cylinders" apart from the mark shown. Owner of Reg. Nos. 440,937 and 603,482.

For Valves for Controlling the Flow of Fluid and on Hydraulic and Air Operated Cylinders.

First use Feb. 21, 1958; November 1922 as to "Nopak."

SN 54,242. Superior Separator Company, Hopkins, Minn., assignee of Livestock Sprayer Mfg. Co., San Jose, Calif. Filed June 25, 1958.

RANCH-HAND

For Mobile Power Sprayer Equipment.

First use Apr. 15, 1957.

SN 54,427. Pettibone Mulliken Corporation, Chicago, Ill. Filed June 27, 1958.

FLEXIGAS

For Units for Use in Foundries in Connection With Gassing of Molds and Cores.

First use May 12, 1958.

SN 54,428. Pettibone Mulliken Corporation, Chicago, Ill. Filed June 27, 1958.

HYDRA-MOLD

For Combination Units for Use in Foundries in Connection With Molding and Drawing Molds.

First use May 10, 1952.

SN 54,772. Marvel Specialty Company, Inc., Paducah, Ky. Filed July 8, 1958.

MARVEL-X

For Hosiery Inspection and Everting Machines.

First use in March 1956.

SN 56,283. Stewart-Warner Corporation, Chicago, Ill. Filed July 30, 1958.

ACCUMITE

For Lubrication Systems Including a Pump, Valves, Fittings, and Hose for Inter-Connecting the Valves and Fittings With the Pump.

First use Jan. 14, 1958.

SN 56,382. Apmew, Inc., Glens Falls, N. Y. Filed July 31, 1958.

APMEW

For Pulp and Paper Mill Machinery and Parts Thereof—Namely, Water Pumps, Pulp Pumps, Pulp Screens, Centrifugal Separators, Pulp Beaters and Selectors, Pulp Filters, Chest Agitators, Consistency Regulators, Freeness Regulators, Stuff Meters, Proportioning Machines, Pulp Knotters, Screw Presses, Hammermills and Screens, Board Machines, Paper Machines, Valves, Digesters, Pulping Refiners, and De-Inking Machines; and Fertilizer Compost Machines.

First use Jan. 18, 1928, on water pumps.

SN 56,572. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Aug. 4, 1958.

RINGBLASTER

For Kiln Guns.

First use on or about July 3, 1958.

SN 56,691. Buehler Ltd., Evanston, Ill. Filed Aug. 6, 1958.

POWERMET

For Motor Operated Hydraulic Press for Use in Molding Metallurgical Samples in Plastic.

First use July 29, 1958.

SN 56,857. The Karl Kiefer Machine Company, Cincinnati, Ohio. Filed Aug. 8, 1958.

BOTTOMS-UP

For Machines for Cleaning Containers, Bottles, and the Like.

First use December 1939.

SN 56,904. Ace Rubber Company, Muskogee, Okla. Filed Aug. 11, 1958.

ACE

For Vulcanizing Heat Units, Vulcanizing Clamps and Valve Stem Vulcanizing and Repair Units for Pneumatic Tires and Tubes and the Like.

First use on or about Jan. 15, 1948.

SN 56,957. Gardner-Denver Company, Quincy, Ill. Filed Aug. 11, 1958.

MOLE-GUN

Owner of Reg. No. 603,435.

For Rock Drill Units.

First use July 1, 1958.

industrial Use.
First use Dec. 22, 1952.

internal Combustion Engines.
First use Nov. 28, 1952, on internal combustion engines.

Class 26—Measuring and Scientific Appliances

SN 39,068. The Jam Handy Organization, Inc., Detroit, Mich. Filed Oct. 17, 1957.

THE MEETING MASTER

For Film Projecting Equipment—Namely, Film Projectors, Mirror and Translucent Rear Projection Screens.
First use on or about Oct. 4, 1957.

SN 42,670. Taylor, Taylor & Hobson Limited, Leicester, England. Filed Dec. 18, 1957.

TALYLIN

Owner of British Reg. No. 753,423, dated May 2, 1956; U. S. Reg. No. 630,600.
For Precision Measuring Instruments for Measuring the Straightness of Surfaces.

SN 43,585. Borg-Warner Corporation, Chicago, Ill. Filed Jan. 8, 1958.

DETECTOLAB

Owner of Reg. No. 643,915.
For Electronic Instruments for Measuring Nuclear Radiations and Accessories—Namely, Cases, Cables, Timers, Radiation Shields, and the Like, and Parts Thereof for Replacement and Repair.
First use in October 1952.

SN 47,049. The Gyrex Corporation, Santa Monica, Calif. Filed Mar. 4, 1958.

GYREX

For Tuning Forks for Frequency Standards or Resonators.
First use Feb. 28, 1958.

SN 47,477. Voigtlander A. G., Braunschweig, Germany. Filed Mar. 10, 1958.

VITOMATIC

For Cameras.
First use Dec. 8, 1957; in commerce Dec. 8, 1957.

SN 51,708. Electro Precision Corporation, Arkadelphia, Ark. Filed May 15, 1958.

DIGITROL

For Electronic and Electro-Mechanical Components for Analog and Digital Control and Instrumentation Systems.
First use Apr. 16, 1958.

SN 51,851. The Brearley Company, Rockford, Ill. Filed May 19, 1958.

Century

For Weighing Scales.
First use Mar. 11, 1958.

SN 52,041. General Aniline & Film Corporation, New York, N. Y. Filed May 21, 1958.

SCONAR

Owner of Reg. Nos. 422,973, 424,329, and others.
For Lenses.
First use Apr. 14, 1958.

SN 52,447. Topp Industries, Inc., Beverly Hills, Calif. Filed May 27, 1958.

For Sideslip Transmitter, To Be Mounted in an Airborne Vehicle for the Purpose of Sensing the Wind Direction Relative to a Reference Axis of Such Vehicle.
First use Feb. 19, 1958.

Class 27—Horological Instruments

SN 37,956. Herold Products Company, Inc., Chicago, Ill. Filed Sept. 27, 1957.

SPARTUS

For Electric Wall Clocks.
First use Mar. 1, 1950.

Class 28—Jewelry and Precious-Metal Ware

SN 35,173. Delma Mfg. Co., Inc., Providence, R. I. Filed Aug. 8, 1957.

The drawing is lined for blue.
For Necklaces, Bracelets, Finger Rings, Jewelry Clips, Keychains, Cuff Links, Brooches, Earrings, and Tie Slides, Made in Whole of, in Part of, or Plated With Precious Metal, and Some Precious Gems.
First use Jan. 20, 1954.

SN 41,682. Eric Weinberger, d. b. a. Juno Products Company, Cleveland, Ohio. Filed Dec. 2, 1957.

JUNO LITE

For Jewelry—Namely, Necklaces, Bracelets, Earrings, and Pins.
First use May 1, 1957.

Class 29—Brooms, Brushes, and Dusters

SN 41,999. Della Waste Products Corporation, Brooklyn, N. Y. Filed Dec. 9, 1957.

DEWPRO

For Pieces of Cloth for Wiping, Cleaning and Polishing Surfaces, and Dish Towels.
First use September 1937.

Class 30—Crockery, Earthenware, and Porcelain

SN 46,946. Stetson China Co., Inc., Lincoln, Ill. Filed Apr. 2, 1958.

CALIFORNIA CASUAL

Owner of Reg. No. 612,172.
For China Dinnerware.
First use Mar. 26, 1958.

Class 31—Filters and Refrigerators

SN 35,034. Chemical Engineering & Softener Corporation, Fort Wayne, Ind. Filed Aug. 6, 1957.

The lining on the drawing indicates yellow or gold and red.
For Water Softeners.
First use Dec. 13, 1956.

SN 54,532. The Kool-Rite Company, River Falls, Wis. Filed June 30, 1958.

Applicant disclaims any right to the geographic expression "River Falls, Wisconsin" used in conjunction with the name "Kool-Rite."
For Package Refrigeration Systems for All Sizes Walk-In Coolers.
First use Oct. 21, 1947.

SN 56,169. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

LINEMASTER SPECIAL

For Refrigeration Equipment—Namely, Diaphragm Shut-Off Valves.
First use May 27, 1957.

SN 56,170. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

LINEMASTER

For Refrigeration Equipment—Namely, Diaphragm Shut-Off Valves.
First use June 4, 1958.

SN 56,171. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

DRYMASTER

For Refrigeration Equipment—Namely, Apparatus for Removing Water and Other Foreign Materials From Refrigerant Fluids.
First use May 13, 1957.

SN 56,172. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

SAFETYMASTER

For Refrigeration Equipment—Namely, Relief Valves.
First use June 25, 1958.

SN 56,178. Mueller Brass Co., Port Huron, Mich. Filed July 28, 1958.

SIGHTMASTER

For Refrigeration Equipment—Namely, Liquid Level Indicators.
First use Aug. 2, 1957.

SN 56,192. Siegas Metallwarenfabrik Wilhelm Loh K. G., Siegen/Westfalen, Germany. Filed July 28, 1958.

SILO

For Refrigerators.
First use May 1, 1930; in commerce May 1, 1953.

SN 56,862. Liberty Industries, Inc., Brooklyn, N. Y. Filed Aug. 8, 1958.

LIBERATOR MICRATOMIC

For Oil Filter Refills.
First use Oct. 15, 1957.

Class 32—Furniture and Upholstery

SN 44,262. James Hirashiki, d. b. a. Universe Products Co., Los Angeles, Calif. Filed Jan. 20, 1958.

JAYLIS

For Curtain Type Traverse Decorator Screens.
First use on or about July 1, 1956.

SN 50,841. Simon Ventilighter Company, Inc., New York, N. Y. Filed May 1, 1958.

VENTILIGHTER

For Ventilating Shades for Controlling the Entry of Light and Air Into Buildings.
First use January 1916.

SN 52,877. Alca Manufacturing Corporation, Hazleton, Pa. Filed May 27, 1958.

Exella

For Pillows and Cushions.
First use May 1, 1958.

SN 55,973. The Bucksteff Company, Oshkosh, Wis. Filed July 28, 1958.

RESIFRAME

For Table Tops Formed of Wood, Composition Board, Plastic and Combinations Thereof.
First use June 18, 1958.

SN 56,294. Bassett Furniture Industries, Inc., Bassett, Va. Filed July 30, 1958.

BASSETT FURNITURE INDUSTRIES, INC.

For Furniture—Namely, Bedroom, Dining Room, and Living Room Furniture.
First use in the year 1935.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 36,633. Rheem Manufacturing Company, Richmond, Calif. Filed Sept. 8, 1957.

HOLIDAY

Owner of Reg. No. 569,258.
For Hot Water Heaters.
First use Apr. 16, 1957.

SN 39,096. The Sims Company, Erie, Pa. Filed Oct. 17, 1957.

WE KEEP OTHERS IN HOT WATER

For Storage Water Heaters, Oil Heaters, Instantaneous Water Heaters, Exhaust Gas Boilers, Steam Separators, Heat Exchangers, Feed Water Heaters, Oil Coolers.
First use May 28, 1917.

SN 44,601. Clarage Fan Company, Kalamazoo, Mich. Filed Jan. 24, 1958.

MULTITHERM

For Air Conditioning Equipment.
First use 1936.

SN 48,375. Western Clay Products Co., Inc., Phoenix, Ariz. Filed Mar. 24, 1958.

BROZO

The drawing is lined for red. The representation of the barbecue is disclaimed apart from the mark.
For Barbeque Refractory in Comminuted Form for Lining a Brazier.
First use Feb. 28, 1958.

SN 49,027. Southern Assets Corp., Fort Lauderdale, Fla. Filed Apr. 3, 1958.

ACK-O-MATIC

For Gas Boilers.
First use Mar. 3, 1953.

SN 50,923. Progress Manufacturing Company, Inc., Philadelphia, Pa. Filed May 2, 1958.

THERMOLITE

For Combination Ceiling-Mounted Lighting, Heating, and Air-Circulating Units.
First use Dec. 23, 1957.

SN 52,179. Wallace Silversmiths, Inc., Wallingford, Conn. Filed May 22, 1958.

THE PURITAN LINE

For Andirons, and Fire Screens, and Fire Sets Comprising Shovels, Tongs, and Pokers.
First use in 1937.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 45,586. Manheim Manufacturing & Belting Company, Manheim, Pa. Filed Feb. 10, 1958.

MVS

For Adjustable Link V-Belting.
First use Nov. 29, 1956.

SN 43,017. E. H. Gittelsohn Co., Sterling Center, Mass. Filed

Class 36—Musical Instruments and Supplies

SN 26,554. Frank S. Justman, Chicago, Ill. Filed Mar. 20, 1957.

For Grooved Phonograph Records.
First use Feb. 5, 1957.

SN 27,869. Lucien de Lacour-Editions Costallat, Paris, France. Filed Apr. 10, 1957.

FIORI MUSICALI

Priority claimed under Sec. 44(d) on French Reg. No. 460,287, dated Oct. 12, 1956 (Paris); Natl. Inst. No. 79,919.
For Record Discs and Recorded Records.

SN 44,303. Fidelitone, Incorporated, Chicago, Ill., by change of name from Perma, Incorporated, Chicago, Ill. Filed Jan. 20, 1958.

OVALIGHT

For Phonograph Needles.
First use Dec. 1, 1957.

SN 45,306. Grover A. Barbour, d. b. a. Bee Record Co., Reading, Pa. Filed Feb. 8, 1958.

No claim of exclusive right is made of the term "Records" as used on records.
For Phonograph Records.
First use July 17, 1957.

SN 49,848. Hawkeye Records, Inc., Cedar Rapids, Iowa. Filed Apr. 17, 1958.

Hawkeye

For Phonograph Records.
First use Apr. 14, 1958.

SN 49,947. Alfred W. Lion, d. b. a. Blue Note Records, New York, N. Y. Filed Apr. 18, 1958.

BLUE NOTE

For Grooved Phonograph Records.
First use on or about Jan. 15, 1939.

SN 49,962. Nashboro Record Co., Inc., Nashville, Tenn. Filed Apr. 18, 1958.

For Grooved Phonograph Records.
First use on or about June 1, 1957.

SN 49,968. Nashboro Record Co., Inc., Nashville, Tenn. Filed Apr. 18, 1958.

For Grooved Phonograph Records.
First use on or about Oct. 1, 1954.

SN 50,025. Chris-Kraft Instrument Co., Inc., Union, N. J. Filed Apr. 21, 1958.

SOLO ESSER

For Reeds for Woodwind Instruments.
First use in May 1951.

SN 50,073. Leonard Productions Inc., Gainesville, Tex. Filed Apr. 21, 1958.

LIN

For Phonograph Records.
First use Jan. 7, 1954.

Class 37—Paper and Stationery

SN 39,350. Flex-O-Lators, Inc., Carthage, Mo. Filed May 3, 1957.

EDG-PAK

For Paper Edge Protectors.
First use Mar. 25, 1957.

SN 38,405. Vail Manufacturing Company, Chicago, Ill. Filed Oct. 4, 1957.

MONARCH

For Paper Clips.
First use in 1927.

SN 41,490. Sweet Life Brands, Inc., Schenectady, N. Y. Filed Nov. 27, 1957.

SWEET LIFE

Owner of Reg. Nos. 370,217 and 552,148.
For Facial Tissue and Waxed Paper.
First use 1955.

SN 42,017. P. H. Glatfelter Co., Spring Grove, Pa. Filed Dec. 9, 1957.

GLATEX

For Paper, Used for Printing and Converting Purposes.
First use Apr. 4, 1957.

SN 42,270. A. W. Faber-Castell Pencil Co., Inc., Newark, N. J. Filed Dec. 12, 1957.

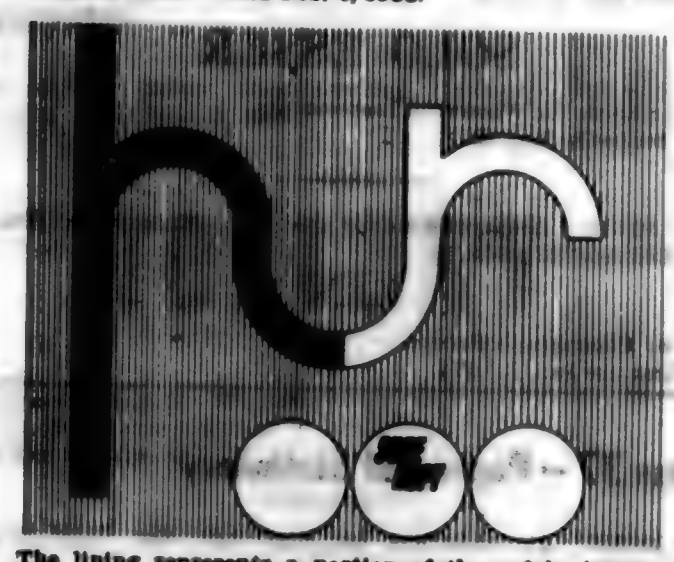
SURE-GRIP

For Mechanical Pencils, Lead Holders, Wood Encased Lead Pencils, Pen Holders.
First use July 3, 1957.

SN 42,316. Scott Paper Company, Chester, Pa. Filed Dec. 12, 1957.

Applicant disclaims the word "Paper" apart from the mark as shown.
For Paper Towels, Paper Cups, Sandwich Bags of Paper, Waxed Paper.
First use Mar. 17, 1957.

SN 43,270. P & R Reproduction Supply Corporation, Los Angeles, Calif. Filed Feb. 4, 1958.



The lining represents a portion of the red background of the label.
For Clear Copy Vellum, a Translucent Paper for the Reproduction on Blue Prints or White Prints.
First use on or about Dec. 2, 1957.

SN 47,920. Frank Chesley, d. b. a. Chesco Products, Cincinnati, Ohio. Filed Feb. 13, 1958.

FORGET-NO

For Pocket Memo Pads and Files.
First use Nov. 2, 1956.

SN 49,535. A. J. Siris Products Corp., New York, N. Y. Filed Apr. 11, 1958.

"DIG"

For Pencil Bags, Notebooks, Diaries, Ring Binders, Autograph Books, Writing Portfolios or Folders Containing Note Paper, Envelopes and a Blotter, Picture Albums, Telephone and Engagement Pads.
First use Apr. 4, 1958.

SN 49,809. Arvey Corporation, Chicago, Ill. Filed Apr. 17, 1958.

TRANSO

Owner of Reg. Nos. 228,598, 252,871, and 500,740.
For Packaged Business Papers, i. e. Bond, Copy, Mimeographing, and Duplicating Papers.
First use Feb. 4, 1947.

Class 38 — Prints and Publications

SN 33,858. American Diabetes Association, Inc., New York, N. Y. Filed July 17, 1957. Sec. 2(f).

DIABETES

For Magazine.
First use in January 1952.

SN 39,030. Altrusa International, Inc., Chicago, Ill. Filed Oct. 17, 1957.

Owner of Reg. No. 382,470.
For Song Books, Printed Handbooks, and Periodicals.
First use October 1949.

SN 40,508. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Nov. 12, 1957.

S.K.FIELDERS

For Employees' Newspaper.
First use Sept. 26, 1957.

SN 40,509. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Nov. 12, 1957.

S.K.FOLKS

For Employees' Newspaper.
First use Sept. 12, 1957.

SN 44,330. Western 4 Trading Stamp Corporation, Oregon City, Oreg. Filed Jan. 20, 1958.

WESTERN 4

For Trading Stamps Which Are Given to Purchasers of Merchandise To Accumulate and Later Redeem.
First use Nov. 22, 1957.

SN 44,787. FIF Management Corporation, Denver, Colo. Filed Jan. 9, 1958.

Owner of Reg. No. 648,405.
For House Organs.
First use November 1941.

SN 39,991. Godfrey-Stone International Publications, Inc.,

SN 23,536. New York Knitting Mills, Inc., New York, N. Y.

SN 45,166. Irene Bartlett, d. b. a. American Bride Publications, Culver City, Calif. Filed Feb. 3, 1958.

Balene Selection

For Series of Booklets Made Available to Various Stores Dealing in the Merchandise Dealt With in the Publications.
First use Jan. 22, 1957.

SN 45,476. Goodren Products Corporation, Englewood, N. J. Filed Feb. 7, 1958.

Goodrich
PRODUCT
IDENTIFIERS

Applicant disclaims exclusive right to or ownership of the term "Product Identifiers," except in so far as same constitutes part of the trademark herein. Owner of Reg. Nos. 625,024 and 627,877.
For Printed Plastic Labels for Mailing, Marking Packages, Merchandise, Etc.
First use July 1, 1957.

SN 45,488. New York Herald Tribune Inc., New York, N. Y. Filed Feb. 7, 1958.

Your Family's Finances

For Syndicated Newspaper Section or Part.
First use Jan. 14, 1958.

SN 46,850. Nursing World, Passaic, N. J. Filed Feb. 28, 1958. Sec. 2(f).

NURSING WORLD

For Magazine Issued Monthly or From Time to Time.
First use July 15, 1950.

SN 47,903. Spaulding-Moss Company, Boston, Mass. Filed Mar. 17, 1958.

SM Co

Owner of Reg. No. 269,927.
For Blueprints, Diazo Prints, Photo Tracings, Chloride Contact Prints, Brown Lines, Direct Positive Prints, Diazo Foils, Diazo Intermediates, Glass Prints and Photographs.
First use July 9, 1957.

SN 49,097. Teletype Corporation, Chicago, Ill. Filed Apr. 4, 1958.

Teletype NEWS

For Publication, Published Monthly, for Distribution to Its Employees and Its Affiliated Companies Throughout the United States.
First use July 1, 1951.

SN 49,451. Marina Publications, Inc., New York, N. Y. Filed Apr. 10, 1958.

MARINA

Owner of Reg. No. 406,386.
For Periodicals, Magazines, and Trade Journals.
First use Dec. 24, 1957.

SN 49,965. Nuclear-Chicago Corporation, Chicago, Ill. Filed Apr. 18, 1958.

THE NUCLEUS

For Technical Publication Dealing With Applications of Radioactivity and Devices for Utilization and Measurement of Radioactivity, Issued From Time to Time.
First use on or about Sept. 1, 1952.

SN 49,972. The Psychological Corporation, New York, N. Y. Filed Apr. 18, 1958.

Owner of Reg. Nos. 625,027 and 659,847.
For Personnel Test Booklets.
First use on or about Feb. 4, 1958.

SN 49,973. The Psychological Corporation, New York, N. Y. Filed Apr. 18, 1958.

THE PSYCHOLOGICAL CORPORATION

Owner of Reg. Nos. 625,027 and 659,847.
For Personnel Test Booklets.
First use on or about Dec. 21, 1955.

SN 50,008. Jean Austin, New York, N. Y. Filed Apr. 21, 1958. Sec. 2(f).

GOOD VICTUALS

For Section Title Appearing in a Magazine Published Monthly.
First use March 1950.

SN 48,797. Joseph Hennessy & Sons, Co., Wilmington, Del. Filed Jan. 10, 1958.

SN 50,519. The Petty Knitting Company, Perry, N. Y. Filed

First use Apr. 4, 1956.

First use November 1941.

SN 50,891. Godfrey-Stone International Publications, Inc., Chicago, Ill. Filed May 2, 1958.

LEISURE

For Publication Published Periodically.
First use on or about Feb. 5, 1958.

SN 50,893. Haloid Xerox, Inc., Rochester, N. Y. Filed May 2, 1958.

HALOID XEROX

Owner of Reg. No. 667,294.
For Xerographic Copies.
First use Mar. 1, 1950.

SN 50,899. Docbla Greeting Cards, Incorporated, Nashua, N. H. Filed May 5, 1958.

Styled by Hampshire

For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Feb. 15, 1956.

SN 50,901. Docbla Greeting Cards, Incorporated, Nashua, N. H. Filed May 5, 1958.

hampshire

For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Feb. 15, 1956.

Class 39—Clothing

SN 9,114. Comptoir de l'Industrie Cotonniere, Etablissements Boussac, Societe a Responsabilite Limitee, Paris, France. Filed May 28, 1956.

The wording "Egyptian Jumel Cotton Guarantee" is disclaimed apart from the mark as shown. Owner of French Reg. No. 418,475, dated Mar. 5, 1952 (Seine); Natl. Inst. No. 510,383.

For Rainwear—Namely, Impregnated Coats, Jackets, Capes, Wind Jackets, Hoods Attached and Separate.

SN 23,936. New York Knitting Mills, Inc., New York, N. Y. Filed Feb. 6, 1957.

LAMPACA

For Men's Sweaters.
First use February 1955.

SN 30,967. United Shoe Machinery Corporation, Boston, Mass. Filed May 28, 1957.

Poron

For Insoles made of Cellular Plastic Material.
First use on or about Sept. 20, 1954.

SN 34,182. Slenderella Systems, Inc., Stamford, Conn. Filed July 22, 1957.

SLENDERELLA

Owner of Reg. Nos. 388,184, 436,630, and others.
For Clothing, Specifically Ladies' Slips.
First use Nov. 16, 1956.

SN 34,712. Malone Knitting Company, Springfield, Mass. Filed July 31, 1957.

malco

Owner of Reg. No. 378,815.
For Infants' and Children's Underwear, Sleeping Garments, Kimonos, and Bibs.
First use July 17, 1957.

SN 39,055. Munsingwear, Inc., Minneapolis, Minn. Filed Oct. 28, 1957.

For Golf Shirts and Other Sportswear—Namely, Sport Shirts, Bowling Shirts, Sweaters, and Beach Jackets.
First use Feb. 21, 1956.

SN 30,714. Merit Clothing Company, Mayfield, Ky. Filed

Class 42—Knitted, Netted, and Textile

SN 46,179. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Jan. 10, 1958.

The wording "Quality Garment" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 508,284 and 621,848.
For Yarn Products—Namely, Knitted Outerwear, Knitted Underwear, Hosiery; and Garments Made From Textile Fabric.
First use on or about Oct. 8, 1957, on sweaters.

SN 45,429. David E. Rambo, d. b. a. Sputkap, Copenhagen, N. Y. Filed Feb. 6, 1958.

"SPUTKAP"

For Caps.
First use Nov. 9, 1957.

SN 45,497. Sel-Good Undergarment Corp., New York, N. Y. Filed Feb. 7, 1958.

SWEETIE PANTS

The word "Pants" is disclaimed apart from the mark as shown.
For Ladies' Panties and Ladies' Bloomers.
First use July 6, 1948.

SN 46,445. Herbert Glatt, d. b. a. Magla Products, Newark, N. J. Filed Feb. 24, 1958.

POLY-U

Owner of Reg. Nos. 622,365 and 655,218.
For Precut Padding for Clothing.
First use Dec. 18, 1957.

SN 45,436. Robert Hosiery Mills, Inc., Collegeville, Pa. Filed Mar. 25, 1958.

PIXIE SLIP-ONS

No registration rights are claimed to the phrase "Slip-Ons" apart from the mark as shown.
For Knit Slippers.
First use Feb. 28, 1958.

SN 50,061. Robert Hall Clothes, Inc., New York, N. Y. Filed Apr. 21, 1958.

SUMMER COMFORT

For Men's Suits.
First use on or about Apr. 1, 1958.

SN 50,402. Sears, Roebuck and Co., Chicago, Ill. Filed Apr. 25, 1958.

SEA STARS

For Bathing Suits.
First use on or about Oct. 8, 1953.

SN 50,518. The Perry Knitting Company, Perry, N. Y. Filed Apr. 28, 1958.

Owner of Reg. Nos. 202,164, 627,900, and 657,487.
For Infants' and Children's Sleepers.
First use Apr. 9, 1958.

SN 50,521. The Perry Knitting Company, Perry, N. Y. Filed Apr. 28, 1958.

NITEY NITE

Owner of Reg. Nos. 202,164, 627,900, and 657,487.
For Infants' and Children's Sleepers.
First use Apr. 9, 1958.

SN 50,522. The Perry Knitting Company, Perry, N. Y. Filed Apr. 28, 1958.

NITEY NITE

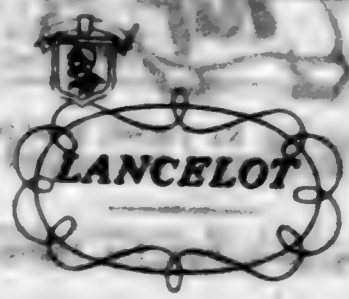
Owner of Reg. Nos. 202,164, 627,900, and 657,487.
For Infants' and Children's Sleepers.
First use Apr. 9, 1958.

SN 50,708. S. H. Kress and Company, New York, N. Y. Filed Apr. 30, 1958.

FALCON

Owner of Reg. No. 622,547.
For Men's Shirts and Ties.
First use Aug. 22, 1956, on men's shirts.

SN 50,709. S. H. Kress and Company, New York, N. Y. Filed Apr. 30, 1958.



Owner of Reg. No. 551,215.
For Men's Dress and Sport Shirts, Neck Ties, Knitted Underwear, Suspenders, Belts, and Handkerchiefs.
First use Aug. 11, 1954, on shirts.

SN 32,981. Warren Woolen Co., Post-Borough of Milford

Class 44—Dental, Medical, and Surgical

SN 50,714. Merit Clothing Company, Mayfield, Ky. Filed Apr. 30, 1956.

TIROLUX

For Men's Suits.
First use Feb. 25, 1957.

SN 50,527. Pendleton Woolen Mills, Portland, Oreg. Filed May 1, 1956.

PLAIDMASTER

For Men's and Women's Wool Jackets.
First use Apr. 3, 1956.

SN 50,528. Pendleton Woolen Mills, Portland, Oreg. Filed May 1, 1956.

WESTERLY

For Men's Wool Sweaters.
First use June 24, 1891.

SN 51,114. Alfred Dunhill, d. b. a. U. K. & South American Trading Co., New York, N. Y. Filed May 6, 1956.

VENUS SHERMA

For Women's Hosiery.
First use Apr. 3, 1956.

SN 51,212. Miss America Corporation, New York, N. Y. Filed May 7, 1956.

MISS AMERICA

For Ladies' Dresses.
First use November 1927.

SN 51,304. A-1 Manufacturing Co., Los Angeles, Calif. Filed May 9, 1956.

BEACHERS

For Men's and Boys' Trousers.
First use June 25, 1956.

SN 51,305. A-1 Manufacturing Co., Los Angeles, Calif. Filed May 9, 1956.

SEA DUCKS

For Men's and Boys' Trousers.
First use Jan. 30, 1956.

SN 51,306. Moulded Footwear Limited, Bristol, England. Filed May 9, 1956.

Owner of British Reg. No. 746,865, dated Oct. 12, 1955.
For Boots.

SN 51,402. Rose Marie Reid, Los Angeles, Calif. Filed May 12, 1956.

"SWIM-SHIFT"

For Women's Swim Suits.
First use on or about Mar. 20, 1956.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 28,478. American Silk Mills, Inc., New York, N. Y. Filed Apr. 19, 1937.

SHEPARDENE

For Textile Piece Goods Having a Uniquely Textured Pile Surface Produced by Machine Tenting.
First use fall of 1955.

SN 51,712. Vanity Fair Mills, Inc., Reading, Pa. Filed June 10, 1957.

NYLOSORB

For Fabric for Women's Underwear—Namely, Panties and Briefs.
First use May 9, 1957.

SN 52,526. Hockmeyer Bros., Inc., New York, N. Y. Filed Oct. 8, 1957.

MELOTWIST

For Textile Fabrics in the Piece Composed of Corduroy.
First use May 17, 1957.

SN 48,894. Colin S. J. McKelvey, Vancouver, British Columbia, Canada. Filed Feb. 14, 1956.

THERMO-SAN

Owner of Canadian Reg. No. 110,661, dated June 27, 1958.
For Blankets.

SN 48,772. New York Merchandise Co., Inc., New York, N. Y. Filed Mar. 21, 1956.

WALES

For Plastic Doilies.
First use Mar. 5, 1957.

SN 50,208. Beacon Manufacturing Company, Swannanoa, N. C. Filed Apr. 23, 1956. Sec. 2(f).

WINDSOR

For Blankets.
First use Sept. 23, 1953.

SN 52,037. O'Brien Textiles Corporation, Detroit, Mich. Filed May 21, 1957.

For Towels and More Particularly, Terrycloth Bath and Hand Towels.
First use Feb. 20, 1956.

SN 52,038. O'Brien Textiles Corporation, Detroit, Mich. Filed May 21, 1956.

IQ

For Towels and More Particularly, Terrycloth Bath and Hand Towels.
First use Feb. 20, 1956.

SN 14,090. Slenderella Systems, Inc., d. b. a. Slenderella

SN 40,234. J. M. Filbert, Inc., Baltimore, Md. Filed Nov.

First use on or about Oct. 8, 1953.

First use Aug. 11, 1954, on shirts.

SN 52,081. Warren Woolen Co., Post-Borough of Stafford Springs, Tolland County, Conn. Filed May 21, 1958.

MULTATONE

For Woolen Fabrics in the Piece.
First use May 1, 1957.

SN 52,089. Arkwright, Incorporated, New York, N. Y. Filed May 22, 1958.

LURON

For Fabrics in the Piece of Wool and Cotton or Rayon-Nylon Blends, Blankets, of Like Materials, Sheets, Pillow Cases, Bed Spreads, Bath Mats, Towels, and Rugs.
First use June 15, 1955.

SN 52,312. Isofoam Corporation, New York, N. Y. Filed May 26, 1958.

BRIDGETTE

For Card Table Covers Made From Various Fabrics.
First use Nov. 15, 1957.

SN 52,386. Reliable Textile Company, Inc., New York, N. Y. Filed May 26, 1958.

TORTILLA

For Textile Piece Goods of Cotton and Synthetic Fibers.
First use Oct. 4, 1957.

SN 52,392. Dan River Mills, Incorporated, Danville, Va. Filed May 27, 1958.

SLINGSHOT

For Cotton Piece Goods.
First use May 13, 1958.

SN 52,423. Monarch Rug Mills, Inc., Dalton, Ga. Filed May 27, 1958.

LAKESHORE

For Fine Textured Carpets.
First use May 1, 1958.

Class 43—Thread and Yarn

SN 39,134. Fair-Tex Distributing Co., New York, N. Y. Filed Oct. 15, 1957.

MOTTEX

For Yarns of Wool, Cotton, Silk, or Synthetics.
First use Mar. 12, 1957.

SN 48,222. Grove Silk Company, Dunmore, Pa. Filed Feb. 20, 1958.

GROVE
THROWN YARN

No claim of right of exclusive use is made to the words "Thrown Yarn" as applied to the goods identified herein. Owner of Reg. Nos. 387,790, 526,188, and others.
For Yarn of Artificial Fibers.
First use Feb. 4, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 38,237. The Scott Company, Omaha, Nebr. Filed Oct. 2, 1957.

dispos-a-glove

For Physicians' Examining Gloves.
First use May 29, 1957.

SN 43,469. Medical Accessories Co., New York, N. Y. Filed Jan. 6, 1958.

EVACU-EZE

For Attachment to a Toilet Bowl To Assist Invalids and Similar Patients.
First use June 11, 1957.

SN 47,179. Binky Baby Products Company, New York, N. Y. Filed Mar. 6, 1958.

STERI-COOL

For Pacifiers, Teethers.
First use December 1957.

Class 45—Soft Drinks and Carbonated Waters

SN 38,644. Joe A. Stanley, Jr., d. b. a. Hygeia Purified Water Company, Lubbock, Tex. Filed Oct. 9, 1957.

HYGEIA

The drawing is lined for red.
For Purified Bottle Drinking Water.
First use in October 1947.

Class 46—Foods and Ingredients of Foods

SN 7,647. Ryetto Company, St. Louis, Mo., assignee of Timely Foods, Inc., St. Louis, Mo. Filed May 2, 1956.

RYETTES

For Wafers Made Principally of White and Rye Flour.
First use Feb. 15, 1956.

SN 46,668. All American Nut Company, Inc., Downey, Calif. Filed Feb. 11, 1958.

SN 47,284. Federated Department Stores, Inc., a R. n. Ohio

SN 14,096. Slenderella Systems, Inc., d. b. a. Slenderella International, Stamford, Conn. Filed Aug. 16, 1954.

slenderella

Owner of Reg. Nos. 286,714, 628,960, and others.
For Foods for Health Purposes Consisting of a Dietary Supplement in the Form of Candy Mints Containing Vitamins and Minerals.
First use Mar. 22, 1935.

SN 28,878. National Biscuit Company, New York, N. Y. Filed July 1, 1957.

DANDY

For Biscuits—Namely, Crackers.
First use January 1902.

SN 33,406. B. Fischer & Co., Inc., Bronx, N. Y. Filed July 9, 1957.

ASTOR

Owner of Reg. Nos. 62,171, 612,296, and others.
For Frozen Vegetables and Frozen Strawberries.
First use Apr. 15, 1957.

SN 35,089. Sona Food Products Co., Los Alamitos, Calif. Filed Aug. 16, 1957.

SONA

For Vegetable Oil, Candy Bars, Nut Butter, and Soy Sauce.
First use [illegible] June 1952.

SN 38,527. Cape Cod Cooks, Inc., Sandwich, Mass. Filed Oct. 8, 1957.

For Mixture of Tomato Juice and Clam Juice.
First use 1956.

SN 38,625. National Dairy Products Corporation, New York, N. Y. Filed Oct. 9, 1957. Sec. 2(f).

BEDFORD

Owner of Reg. Nos. 378,677, 386,773, and 580,274.
For Frozen Concentrated Grape Juice.
First use in June 1952.

SN 39,006. Julius W. Young, d. b. a. Rancho de la Canada, Pena Blanca, N. Mex. Filed Oct. 31, 1957.

SPARKLING BURGUNDY

For Fruit Apples.
First use Oct. 6, 1937.

SN 40,834. J. M. Filbert, Inc., Baltimore, Md. Filed Nov. 19, 1957. Sec. 2(f) as to "Mrs. Filbert's."

Filbert's QUIK DRINK

The words "Quick Drink" are disclaimed apart from the mark as shown. Owner of Reg. No. 518,643.
For Fruit Flavored Syrups for Food Purposes.
First use Oct. 30, 1957; in September 1935, on oleomargarine as to "Mrs. Filbert's."

SN 43,676. Independent Grocers' Alliance Distributing Company, Chicago, Ill. Filed Jan. 9, 1958.

IGA

Owner of Reg. Nos. 230,959 and 256,580.
For Canned Goods—Namely, Fruits, Berries, Vegetables, Fish, Shellfish, Fowl, Meats, Fruit Juices, Vegetable Juices, Soups and Milk; Frozen Goods—Namely, Fruits, Berries, Vegetables, Fish, Shellfish, Fowl, Meats, Fruit Juices, Vegetable Juices, Soups, Fruit Pies and Fillings Therefor, Meat Pies and Fillings Therefor, Waffles and Pancakes; Dried Goods—Namely, Fruits, Vegetables, Milk, Fish, Shellfish and Meats; Fresh Goods—Namely, Fruits, Vegetables, Fish, Shellfish, Meats and Fowl; Salted, Smoked and Spiced Goods—Namely, Fish, Fowl and Meats; and Other Foods—Namely, Alimentary Pastes; Prepared, Potted and Deviled Meat and Sausage; Condiments — Namely, Pickle Relishes, Pickles, Olives, Chow Chow and Pimentos; Salt and Other Spices; Dairy Products—Namely, Cheeses, Evaporated and Malted Milk; Cheese Spreads and Sandwich Spreads; Mincemeat, Honey; Molasses; Syrups for Food Purposes; Food Flavoring Extracts and Food Colors; Fruit Pastes; Gelatine and Jelly Powders; Tapioca; Jams; Jellies; Fruit Butters, Preserves and Marmalades; Confections—Namely, Candy and Sweetmeats; Frostings for Cakes, Cookies and Rolls; Sugar; Cake and Pie Fillings; Mayonnaise; Salad Dressing; Salad Oil; Olive Oil for Culinary Use; Vegetable and Animal Shortening; Oleomargarine; Baked Goods—Namely, Bread, Cake, Rolls, Cookies and Crackers; Cereal Grains and Breakfast Cereals; Flour; Flour Mixes; Corn Starch; Cornmeal and Other Meals; Cake Mixes; Pancake Mixes and Pie Mixes; Shelled and Unshelled Nuts; Shredded Cocoanut; Peanut Butter, Coffee; Tea; Chocolate Powder for Making Hot Chocolate; Cocoa; French Fried Potatoes; and Potato Chips.
First use Nov. 1, 1926.

SN 43,822. Cullum & Jones, Del Rio, Tex. Filed Jan. 13, 1958.

Val Verde

"Val Verde" is the Spanish for "green valley."
For Fresh Vegetables—Namely, Cauliflower, Cabbage, and Onions.
First use Nov. 20, 1950.

For Yarn of Artificial Fibers.
First use Feb. 4, 1958.

For Wafers Made Principally of White and Rye Flour.
First use Feb. 15, 1956.

SN 45,668. All American Nut Company, Inc., Downey, Calif. Filed Feb. 11, 1958.

TREAT TIME

For Shelled and Unshelled Nuts, Sunflower Seeds, and Peanut Butter.
First use Dec. 5, 1957, on shelled nuts.

SN 46,024. Scott, Young & Company Limited, Glasgow, Scotland. Filed Feb. 17, 1958.

BOLERO

Owner of British Reg. No. 783,946, dated May 9, 1956.
For Candy, in Whole or in Part Comprising Chocolate.

SN 46,560. Nalley's, Inc., Tacoma, Wash. Filed Feb. 26, 1958.

Nalley's

The drawing is lined for red and yellow. Owner of Reg. Nos. 392,577, 548,435, and others.
For Mayonnaise; Salad Dressings and Sauces; Sandwich Spreads; Mustard; Flavored Syrups for Food Purposes; Mincemeat; Soup Concentrates; Pickles; Pickle Relishes; Pickled Beets; Tomato Ketchup and Tomato Puree; Peanut Butter; Horseradish; Canned Goods—Namely, Beef Stew, Chili Con Carne, Prepared Spaghetti, Egg Noodles and Beef, Spanish Rice, Beans With Chili Gravy, Corned Beef Hash, Sauerkraut, and Shoestring Potatoes; Potato Chips; Corn Chips; and Candy.
First use Oct. 21, 1957; Mar. 15, 1921, as to "Nalley's."

SN 47,173. Anclote Seafood Co., Tarpon Springs, Fla. Filed Mar. 6, 1958.

No claim of exclusive right is made to "Seafoods" as used on frozen fish.
For Frozen Fish.
First use Dec. 28, 1957.

SN 47,266. Martin Ranch, d. b. a. J. D. Martin Ranch, Fresno, Calif. Filed Mar. 7, 1958. Sec. 2(f).

J. D. MARTIN

For Fresh Citrus Fruit, Fresh Deciduous Fruit, and Fresh Grapes.
First use in or about 1920 on grapes.

SN 47,288. Federated Department Stores, Inc., a D. b. Ingalls's, New York, N. Y. Filed Mar. 10, 1958.

CROSETTE

For Canned Shrimp, Canned Vegetables, and Olive Oil.
First use Apr. 25, 1960.

SN 47,500. National Starch Products Inc., New York, N. Y. Filed Mar. 12, 1958.

COLFLO

For Dry Starch for Use as an Additive to Food Products.
First use Apr. 1, 1955.

SN 47,627. B and W Canning Company, Inc., Groveland, Fla. Filed Mar. 18, 1958.

B'n W

Owner of Reg. Nos. 568,078 and 445,961.
For Dried Citrus Pulp and Citrus Fruits for Animal Feed.
First use 1955.

SN 47,804. Standard Brands Incorporated, New York, N. Y. Filed Mar. 17, 1958.

LIVELY CUP

Owner of Reg. No. 576,995.
For Tea.
First use Feb. 19, 1952.

SN 47,805. Standard Brands Incorporated, New York, N. Y. Filed Mar. 17, 1958.

OLD TRUSTY

Owner of Reg. No. 232,280.
For Dog Food.
First use 1916.

SN 53,050. J. R. Short Milling Company, Chicago, Ill. Filed June 6, 1958.

Wytase 52

Owner of Reg. No. 280,037.
For Preparation Used as an Ingredient of Bread or Other Dough Products and as an Improver and for the Purpose of Whitening the Dough.
First use Apr. 25, 1958.

Class 47—Wines

SN 38,220. Priv. Fabbrica Maraschino "Excelsior" Girolamo Luxardo S. p. A., Padova, Italy. Filed Oct. 2, 1957.

MAGAZZIN

Priority claimed under Sec. 44(d) on Italian application filed Sept. 12, 1957; Reg. No. 136,548, dated May 28, 1958.
For Wines.

Class 48—Malt Beverages and Liquors

SN 43,428. Brading Breweries Limited, Ottawa, Ontario, Canada. Filed Jan. 6, 1958.

BRADING'S

For Ale, Beer, Porter, and Stout.
First use in September 1944; in commerce Nov. 1, 1950.

Class 50—Merchandise Not Otherwise Classified

SN 37,148. The Distributors Group Inc., Atlanta, Ga. Filed Sept. 13, 1957.

FILMAGIC

For Machine Lubricating Kits Including Lubricating Oil in Containers, Saturated Pad Lubricant Retainers for Use in the Lubrication of Thread and Film Handling Devices and the Like.
First use Sept. 2, 1954.

SN 45,327. Johnson & Johnson, New Brunswick, N. J., assignee of Le Page's Inc., Gloucester, Mass. Filed Feb. 5, 1958.

LEPAGE'S

Owner of Reg. No. 72,172.
For Kits Comprising Adhesive and Decorative Powders or Flakes.
First use Sept. 30, 1957.

Class 51—Cosmetics and Toilet Preparations

SN 38,143. Gibbs & Company, Chicago, Ill. Filed Oct. 1, 1957.

BREE

For Powder Base, Skin Refresher, Rapid Cleansing Cream, and Facial Cream for Stimulating the Skin.
First use Sept. 15, 1952.

SN 42,498. Les Parfums de Dana, Inc., d. b. a. Dana, New York, N. Y. Filed Dec. 16, 1957.

DANITA

Owner of Reg. Nos. 357,708, 283,822, and 535,218.
For Cologne, Perfume, Dusting Powder, and Bath Oil.
First use Dec. 5, 1957.

Class 52—Detergents and Soaps

SN 644,383. Dumas Milner Corporation, Jackson, Miss., by change of name from Milner Products Company, Jackson, Miss. Filed Mar. 27, 1953.

PineSola

Owner of Reg. No. 237,696.
For Cleaning Preparation With Incidental Disinfecting and Deodorizing Properties.
First use Mar. 4, 1953.

SN 14,777. Societe Anonyme Valisere, Societe Grenobloise des Gants d'Etoffes, Grenoble, Isere, France. Filed Aug. 28, 1956.

VALISÈRE

Owner of French Reg. No. 9,976, dated Mar. 23, 1954 (Grenoble); Natl. Inst. No. 28,042.
For Liquid Soaps.

SN 15,349. Calma Chemical Co., Los Angeles, Calif. Filed Sept. 10, 1956.

WOOLYN

For Cleanser and Softener for Wool, Silk, Rayon, and Synthetic Fiber Fabrics.
First use May 1, 1956.

SN 37,706. Alfred L. Young, d. b. a. Kleen-Aid Products, Bellows Falls, Vt. Filed Sept. 23, 1957.

A-BEN-A-QUI

For Paste Preparation for Cleaning Metals, Kitchenware, Enamelware, Glassware, Linoleum, Porcelain, and Tile.
First use in the year 1937.

SN 46,840. Lingner-Werke G. m. b. H., Duesseldorf, Germany. Filed Feb. 28, 1958.

bluetonic

The drawing is lined for blue. Owner of German Reg. No. 710,438, dated Jan. 28, 1956.
For Detergents and Soaps.

SN 47,187. Emma Jane Pompa, d. b. a. Sandra Cosmetiques Supreme, Los Angeles, Calif. Filed Mar. 6, 1958.

Sandra

For Kelp Soap and Kelp Shampoo.
First use Oct. 31, 1935.

SN 49,681. Chemical Service of Baltimore, Inc., Baltimore, Md. Filed Apr. 15, 1958.

ACTINITE

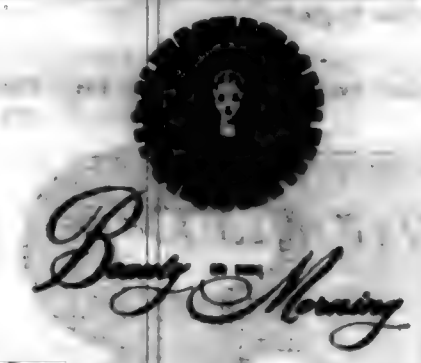
For Activating Agent Used as an Ingredient in Detergents and General Cleaners.
First use Feb. 22, 1958.

SN 50,982. American-Marietta Company, O-Cedar Division, Chicago, Ill. Filed Apr. 23, 1956.

FRY-KLEEN

For Cleaning Composition.
First use Dec. 2, 1957.

SN 52,905. Sydney Wickham, d. b. a. Sidney Wickham & Associates, Dallas, Tex. Filed May 2, 1958.



For Toilet Soap.
First use Mar. 16, 1953.

SN 54,858. Hair Strate, Inc., Fort Wayne, Ind. Filed July 7, 1958.

CRUSADER

For Hair Shampoo.
First use Apr. 1, 1958.

SN 54,854. Hair Strate, Inc., Fort Wayne, Ind. Filed July 7, 1958.

PRINCESS KITTEN

For Hair Shampoo.
First use Apr. 1, 1958.

SN 58,193. The Hallabaha Co., Chicago, Ill. Filed Sept. 2, 1958.

BANZOIL

For Concrete Cleaning Preparations.
First use Mar. 15, 1958.

SERVICE MARKS

Class 100—Miscellaneous

SN 35,411. Youth Unlimited Foundation, Eaton Rapids, Mich. Filed Aug. 12, 1957.

YOUTH UNLIMITED

For Service Providing Educational and Aptitude Testing and Evaluation of Individuals, Particularly Individuals of School and Pre-School Age; Clinical Testing, Study, and Research With Respect to Gifted Children; Mass Testing and Evaluation of School Children and Other Selected Groups; Electronic Scoring of Answer Sheets and Results Electronically Tabulated and Profiled.
First use Jan. 28, 1954.

SN 45,944. Victor J. Bergeron, San Francisco, Calif. Filed Feb. 17, 1958.

THE TRADERS

For Restaurant, Catering, and Banquet Services.
First use Mar. 15, 1958.

Class 101—Advertising and Business

SN 15,000. American Geriatric Enterprises, d. b. a. A. G. E., Inc., St. Paul, Minn. Filed Sept. 4, 1956.

A. G. E.

For Arrangement for and Production or Repair of Specialty Articles on a Contract Basis Utilizing the Employment of Elderly Persons.
First use Sept. 14, 1955.

SN 29,705. Eugene S. Tarnagren, d. b. a. "Open-Time," Chicago, Ill. Filed May 9, 1957.

"OPEN TIME"

For Recording Available Idle Machinery for Manufacturers.
First use May 8, 1957.

SN 30,114. Shattuck, Clifford & McMillan, Inc., Boston, Mass. Filed May 15, 1957.

PRESSURE POINT

For Marketing and Advertising Services—Namely, Research Into and Rendering Advice as to Marketing and Advertising Programs, Creating Advertising Material, and Placing Advertising in Magazines for Trade and General Circulation, Newspapers, Television, and Radio.
First use Apr. 6, 1953.

Class 102—Insurance and Financial

SN 38,734. California-Western States Life Insurance Company, Sacramento, Calif. Filed Oct. 11, 1957.

ALL FAMILY

For Writing Life Insurance and Supplemental Accident and Health Insurance.
First use Aug. 15, 1957.

SN 42,114. Columbian Mutual Life Insurance Company, Binghamton, N. Y. Filed Dec. 10, 1957.

Columbian Mutual

Owner of Reg. Nos. 582,099 and 582,100.
For Underwriting of Life, Health, and Accident Insurance.
First use in 1957.

Class 103—Construction and Repair

SN 24,347. Hand-Craft One Hour Cleaners, Inc., Knoxville, Tenn. Filed Feb. 13, 1957.

Lastre-craft

For Dry Cleaning and Laundry Services for Articles of Wearing Apparel.
First use in October 1955.

SN 18,025. Screen Directors Guild of America, Inc., Hollywood, Calif. Filed Dec. 26, 1956.

SN 28,982. Maglklst Service Corporation, Chicago, Ill. Filed Oct. 15, 1957.

"KISS OF BEAUTY"

Owner of Reg. Nos. 581,687 and 652,505.

For Dry Cleaning Services, including the Cleaning of Rugs, Carpets, and Drapes.

First use Jan. 1, 1933.

SN 42,702. Lawn Golf, Turfgrass Engineers, Washington, D. C. Filed Dec. 19, 1957.

Lawn Golf
TURFGRASS LG ENGINEERS

For Installing and Maintaining Lawns for Sporting Events and Ornamental Purposes.

First use Feb. 1, 1957.

SN 43,508. Jolly, Inc., Belleville, N. J. Filed Dec. 31, 1957.

JOLLY

For Dry Cleaning and Laundering.

First use Sept. 10, 1955.

SN 44,716. Kuhn, Smith & Harris, Inc., New York, N. Y. Filed Jan. 27, 1958.

The drawing is lined for blue and gray.

For Commercial and Industrial Building Construction, Modernization and Repair, Demolition Services, and Foundation Construction and Industrial Plant Construction.

First use September 1957.

Class 105—Transportation and Storage

SN 11,998. Active Trailer Service, Chicago, Ill. Filed July 12, 1956.

ACTIVE
RENT-N-DRIVE

Applicant disclaims the words "Rent-N-U-Drive" separate and apart from the mark as shown.

For Renting of Vehicles, Especially Trucks.

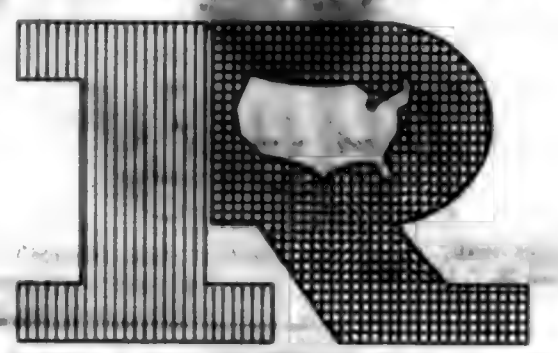
First use Apr. 1, 1956.

SN 24,878. Transcontinental Bus System, Inc., Dallas, Tex. Filed Feb. 21, 1957.

For Transporting Persons, Property, and Cargo by Highway Motor Coach.

First use on or about July 25, 1956; on or about Sept. 30, 1935, as to "Golden Eagle."

SN 31,667. Ryder System, Inc., Miami, Fla. Filed June 10, 1957.



The drawing is lined for pink and black, but color is not claimed as a feature.

For Long-Term Truck Leasing and the Motor Truck Transportation of Freight.

First use Feb. 1, 1957.

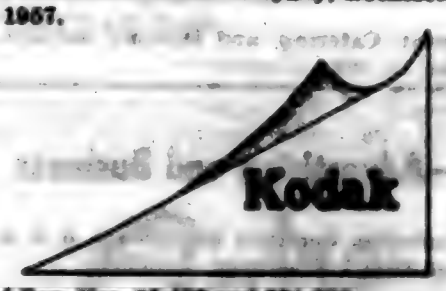
SN 35,231. Columbia Terminals Company, St. Louis, Mo. Filed Aug. 12, 1957.

For Truck Leasing.

First use June 1956; 1917 as to "Columbia."

Class 106—Material Treatment

SN 38,810. Eastman Kodak Company, Rochester, N. Y. Filed Oct. 14, 1957.



Owner of Reg. Nos. 85,423 and 291,809.

For Processing Exposed Sensitized Photographic Materials.

First use Oct. 8, 1957.

Class 107—Education and Entertainment

SN 697,998. The Todd-AO Corporation, New York, N. Y. Filed Nov. 9, 1955.

TODD-AO

For Supervising the Use of Special Systems Which Involve Special Optical and Sound Recording Equipment and Procedure for Producing and Exhibiting Sound Motion Pictures and in Providing for the Repair and Maintenance of Equipment Used in Such Systems.

First use in March 1953.

SN 18,025. Screen Directors Guild of America, Inc., Hollywood, Calif. Filed Oct. 23, 1958. Sec. 2(f).

For Title of a Series of Dramatizations Presented Through the Medium of Television.
First use Jan. 27, 1952.

SN 42,476. Grant's Bridal Shoppe, Inc., Cleveland, Ohio. Filed Dec. 16, 1957.

BRIDE TO BE

For Title of a Television Program Dealing With Matters of Interest to Prospective Brides.
First use about Apr. 7, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 41,610. Association of Diesel Specialists, Inc., Brooklyn, N. Y. Filed Dec. 2, 1957.

The words "Accredited Dependable Service" are disclaimed apart from the mark as shown.
For Indicating Membership in an Association.
First use Mar. 15, 1957.

Class 9—Explosives, Firearms, Equipments,

STYLES, TYPE AND DESIGN. Premier Products Industries,

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

670,052. AUTUMN HAZE. Mutation Mink Breeders Association. SN 682,374. COLLECTIVE MARK. Pub. 7–5–55. Filed 3–8–55.

670,053. DESERT GOLD. Mutation Mink Breeders Association. SN 682,375. COLLECTIVE MARK. Pub. 7–5–55. Filed 3–8–55.

670,054. AZURENE. Mutation Mink Breeders Association. SN 684,991. COLLECTIVE MARK. Pub. 7–5–55. Filed 4–6–55.

670,055. AMERICAN BREEDERS. John Rockefeller Prentice, d. b. a. American Breeders Service. SN 27,725. Pub. 3–4–58. Filed 4–8–57.

670,056. BROCADA. Armour and Company. SN 42,876. Pub. 9–9–58. Filed 7–1–57.

670,057. BIERSCH. Armour and Company. SN 42,881. Pub. 9–9–58. Filed 7–1–57.

670,058. NYLON BY NATIONAL AND DESIGN. The National Plastic Products Company. SN 37,970. Pub. 9–9–58. Filed 9–27–57.

670,059. KAY-BEE AND DESIGN. Kahn Bros. Co. SN 42,776. Pub. 9–9–58. Filed 12–20–57.

670,060. KORDO-FLECK. Armour and Company. SN 42,728. Pub. 9–9–58. Filed 1–10–58.

670,061. NORLITE. Northern Lightweight Aggregate, Inc. SN 53,977. Pub. 9–9–58. Filed 6–22–58.

Class 2—Receptacles

670,062. ZERO AND DESIGN. Zero Manufacturing Company. SN 28,221. Pub. 9–9–58. Filed 4–15–57.

670,063. FLIP-CLOSE. Bemis Bro. Bag Company. SN 29,781. Pub. 9–9–58. Filed 5–10–57.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

670,064. SILHOUETTE. Shwayder Brothers, Inc. SN 43,483. Pub. 9–9–58. Filed 1–6–58.

Class 4—Abrasives and Polishing Materials

670,065. DESIGN OF BEAR'S HEAD. Norton Company. SN 47,134. Pub. 9–9–58. Filed 3–5–58.

670,066. BEAR. Norton Company. SN 47,135. Pub. 9–9–58. Filed 3–5–58.

Class 5—Adhesives

670,067. ARMORTITE. Thomas L. Anastas, d. b. a. Armor Cement Manufacturing Co. SN 24,222. Pub. 3–4–58. Filed 2–11–57.

670,068. NATIONAL AND DESIGN. Union Carbide Corporation. SN 45,230. Pub. 9–9–58. Filed 3–3–58.

Class 6—Chemicals and Chemical Compositions

670,069. NC CLARSOL. The Seymour Manufacturing Company. SN 31,270. Pub. 9–9–58. Filed 6–3–57.

670,070. GENAFAST. General Aniline & Film Corporation. SN 35,582. Pub. 9–9–58. Filed 8–15–57.

670,071. SUPER CAT. Lucian L. Spellings, d. b. a. Tom-Cat Products Company. SN 35,701. Pub. 9–9–58. Filed 8–16–57.

670,072. SHU-MAK-UP. Shu-Mak-Up, Inc. SN 36,931. Pub. 9–9–58. Filed 9–9–57.

670,073. KALON. Benson-Nuen Laboratories, Inc. SN 37,128. Pub. 9–9–58. Filed 9–13–57.

670,074. DROP TOX BUG KILLER AND DESIGN. C. P. Stephenson, d. b. a. Stephenson Chemical Company. SN 38,867. Pub. 5–20–58. Filed 10–14–57.

670,075. STEAM AID. Albert C. Budavich, d. b. a. Nu-Life Chemical Company. SN 39,944. Pub. 9–9–58. Filed 11–1–57.

670,076. VIRCO-PET. Virginia-Carolina Chemical Corporation. SN 40,790. Pub. 9–9–58. Filed 11–15–57.

670,077. UOP 4 AND DESIGN. Universal Oil Products Company. SN 42,253. Pub. 9–9–58. Filed 12–11–57.

670,078. SEABOND. Sterling Drug Inc. SN 44,991. Pub. 9–9–58. Filed 1–30–58.

670,079. GLYFOAM. The General Tire & Rubber Company. SN 45,047. Pub. 9–9–58. Filed 1–31–58.

670,080. WHITEGARD. Pennsalt Chemicals Corporation. SN 45,063. Pub. 9–9–58. Filed 1–31–58.

670,081. TESCOL. Allied Colloids (Manufacturing) Company Limited. SN 45,237. Pub. 9–9–58. Filed 2–4–58.

Class 7—Cordage

670,082. GOLDEN BOW. Daybag Importers Corp. SN 37,000. Pub. 9–9–58. Filed 9–11–57.

Class 8—Smokers' Artides, Not Including Tobacco Products

670,083. HUNTER. James H. Boye Manufacturing Company. SN 40,550. Pub. 9–9–58. Filed 11–13–57.

670,084. CAPTAIN PETE. Rogers Imports Inc. SN 43,881. Pub. 9–9–58. Filed 1–13–58.

670,085. CONTINENTAL CITATION. Continental Merchandise Co. Inc. SN 44,006. Pub. 9–9–58. Filed 1–15–58.

670,086. CONTINENTAL CLASSIC. Continental Merchandise Co. Inc. SN 44,007. Pub. 9–9–58. Filed 1–15–58.

670,087. MYRIA. Cigarette Components Limited. SN 44,373. Pub. 9–9–58. Filed 1–21–58.

670,125. PABITABS. Tafen Distributors, Inc. SN 16,622. Pub. 3–26–57. Filed 9–28–56.

Class 21—Electrical Apparatus, Machines,

Class 9—Explosives, Firearms, Equipments, and Projectiles

670,008. FELA1000. Swift Fertilizer Company, Inc. SN 47,018. Pub. 9-9-58. Filed 3-3-58.

Class 10—Fertilizers

670,089. MIRACLE RAIN. Mary Diamond, d. b. a. Diamond Chemical Co. SN 31,041. Pub. 11-26-57. Filed 6-10-57.

670,090. PLANT FROD. Plant Products Corporation. SN 56,411. Pub. 9-9-58. Filed 7-16-58.

Class 12—Construction Materials

670,081. DR. GLOBE H. D. HOUSE DOCTOR. Globe Roofing Products Co., Inc. SN 22,176. Pub. 9-9-58. Filed 1-7-57.

670,082. DR. GLOBE H. D. HOUSE DOCTOR AND DESIGN. Globe Roofing Products Co., Inc. SN 22,177. Pub. 9-9-58. Filed 1-7-57.

670,083. FLAKE FLY AND DESIGN. American Parboard Corporation. SN 36,045. Pub. 9-10-57. Filed 3-13-57.

670,084. FLAKE FLI AND DESIGN. American Parboard Corporation. SN 36,046. Pub. 9-10-57. Filed 3-13-57.

670,085. MURRAY V-BAK ETC. AND DESIGN. Murray Tile Company, Inc. SN 33,563. Pub. 9-9-58. Filed 7-11-57.

670,086. PINNACLE AND DESIGN. Pinnacle Products Co., Inc. SN 37,589. Pub. 9-9-58. Filed 9-20-57.

670,087. LA ARC CO AND DESIGN. L. J. Van Dyke, d. b. a. Van Dyke Supply Company. SN 39,182. Pub. 9-9-58. Filed 10-28-57.

670,088. MIAMI STONE AND DESIGN. Miami Stone, Inc. SN 40,881. Pub. 9-9-58. Filed 11-18-57.

670,089. BON L. The William L. Bonnell Company, Inc. SN 45,380. Pub. 9-9-58. Filed 2-6-58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

670,100. E-Z-COOK. E-Z-Cook, Inc. SN 17,442. Pub. 9-9-58. Filed 10-15-56.

670,101. DUNHAM-BUSH AND DESIGN. Dunham-Bush Inc. SN 35,764. Pub. 9-9-58. Filed 2-6-57.

670,102. FLOW RACK. The Rapido-Standard Company, Inc. SN 35,899. Pub. 9-9-58. Filed 3-11-57.

670,103. BLUE DEVIL. Safety Socket Screw Company. SN 33,539. Pub. 9-9-58. Filed 7-15-57.

670,104. "QUICKIE." H. A. Gustafson, d. b. a. Gus' Hobby Shop. SN 35,570. Pub. 9-9-58. Filed 8-15-57.

670,105. LOGOTYPE DESIGN. Fluidmaster, Inc. SN 43,208. Pub. 9-9-58. Filed 1-2-58.

670,106. FLUIDMASTER. Fluidmaster, Inc. SN 43,209. Pub. 9-9-58. Filed 1-2-58.

670,107. ICORA. Wurttembergische Metallwarenfabrik. SN 43,646. Pub. 9-9-58. Filed 1-6-58.

670,108. IKORA. Wurttembergische Metallwarenfabrik. SN 43,648. Pub. 9-9-58. Filed 1-6-58.

670,109. GREENLAWN. The Gates Rubber Company. SN 44,026. Pub. 9-9-58. Filed 1-27-58.

670,110. WINMORE. Frank W. Winne & Son, Inc. SN 45,507. Pub. 9-9-58. Filed 2-7-58.

670,111. X-TRUDE. Hobart Brass Manufacturing Company, Inc. SN 45,550. Pub. 9-9-58. Filed 2-10-58.

670,112. BOA AND DESIGN. Metallschlauchfabrik A. G. SN 45,569. Pub. 9-9-58. Filed 2-10-58.

670,113. PIT AND DESIGN. Pressure Products Industries, Inc. SN 45,627. Pub. 9-9-58. Filed 2-12-58.

670,114. SI. Safety Industries, Inc. SN 46,619. Pub. 9-9-58. Filed 2-17-58.

670,115. CHEM-CLEAN. Northwestern Steel and Wire Company. SN 47,132. Pub. 9-9-58. Filed 3-5-58.

670,116. FAST LINE AND DESIGN. McDowell Manufacturing Company. SN 47,402. Pub. 9-9-58. Filed 3-10-58.

670,117. PRESSLOK. Nylon Molding Corporation. SN 47,414. Pub. 9-9-58. Filed 3-10-58.

Class 14—Metals and Metal Castings and Forgings

670,118. KUTRITE. B & W Metals, Inc. SN 30,216. Pub. 9-9-58. Filed 5-17-57.

670,119. AM AND DESIGN. American Metal Climax, Inc., by consolidation and change of name from The American Metal Company, Limited. SN 42,424. Pub. 9-9-58. Filed 12-16-57.

670,120. NIRON. Wilbur B. Driver Company. SN 42,850. Pub. 9-12-58. Filed 12-23-57.

Class 16—Protective and Decorative Coatings

670,121. WAW-KING. Linmar, Inc. SN 7,888. Pub. 11-18-58. Filed 5-4-58.

670,122. GLOE-IBOL. Walker Brothers Limited. SN 37,700. Pub. 9-9-58. Filed 9-23-57.

670,123. ATHEY'S. The C. M. Athey Paint Company. SN 47,990. Pub. 9-9-58. Filed 3-18-58.

670,124. LE PAGE'S. Johnson & Johnson, assignee of Le Page's. SN 40,591. Pub. 9-9-58. Filed 4-14-58.

670,125. BARN-X ETC. AND DESIGN. Gunnar C. F. Carlson, d. b. a. Barn-X Paint Company. SN 40,739. Pub. 9-9-58. Filed 4-18-58.

670,126. DE-SO-TEX. United Wallpaper Inc., d. b. a. De Soto Paint & Varnish Co. SN 40,887. Pub. 9-9-58. Filed 4-17-58.

670,127. TEU-VY-KOTE. Devoe & Raynolds Company, Inc. SN 50,591. Pub. 9-9-58. Filed 4-10-58.

670,128. GALVOLITE AND DESIGN. Art-Cement Manufacturing Co. SN 55,254. Pub. 9-9-58. Filed 7-2-58.

Class 17—Tobacco Products

670,129. DE NOBILI EMPIRE. De Nobili Cigar Company. SN 40,438. Pub. 9-9-58. Filed 11-12-57.

670,130. PARODI PRINCE. Parodi Cigar Company of New York. SN 40,487. Pub. 9-9-58. Filed 11-12-57.

670,131. FINEST TOBACCOS AND DESIGN. P. Lorillard Company. SN 41,656. Pub. 9-9-58. Filed 12-2-57.

670,132. THE LITTLE CIGAR ETC. AND DESIGN. DWG Cigar Corporation. SN 43,147. Pub. 9-9-58. Filed 12-30-57.

Class 18—Medicines and Pharmaceutical Preparations

670,133. COLACE. Mead Johnson & Company. SN 1,648. Pub. 10-1-57. Filed 1-20-56.

670,134. ANABUFF. Warner-Lambert Pharmaceutical Company, assignee of Hinz Pharmacal Company, Inc., d. b. a. Geneese Drug Company. SN 5,720. Pub. 8-20-57. Filed 4-3-56.

670,135. SLIM MINT. Thompson Medical Company, Inc. SN 11,513. Pub. 4-16-57. Filed 7-6-56.

670,136. BOD ROTOR AND DESIGN. Engineering Specialties (Alberta) Limited. SN 46,900. Pub. 9-9-58. Filed

Class 28—Jewelry and Precious-Metal Ware

Filed 2-11-57.

TM 156

44,373. Pub. 9-9-58. Filed 1-21-58.

670,135. FABITABS. Tafen Distributors, Inc. SN 14,622. Pub. 8-26-57. Filed 9-25-56.

670,137. DOLNIL. Warner-Lambert Pharmaceutical Company. SN 20,871. Pub. 1-7-58. Filed 12-11-56.

670,138. GIDALON. Geigy Chemical Corporation. SN 22,001. Pub. 5-28-57. Filed 1-2-57.

670,139. BANICOL. F & F Laboratories, Inc. SN 23,902. Pub. 4-8-58. Filed 2-6-57.

670,140. COEBC. Parke, Davis & Company. SN 24,966. Pub. 9-9-58. Filed 3-5-57.

670,141. GUM MEL. Sebastian J. Musica, d. b. a. VB Laboratories. SN 41,294. Pub. 9-9-58. Filed 11-25-57.

670,142. DELMAGENE AND DESIGN. Abe Baker, d. b. a. Oak Brook Co. SN 41,437. Pub. 9-9-58. Filed 11-27-57.

670,143. CARDALIN-PHEN. Irwin, Neisler and Co. SN 42,892. Pub. 9-9-58. Filed 12-23-57.

670,144. ZARPEC. The Chattanooga Medicine Company. SN 42,070. Pub. 9-9-58. Filed 12-27-57.

670,145. ARISTOCORT. American Cyanamid Company. SN 44,055. Pub. 9-9-58. Filed 1-16-58.

670,146. CAP-CHUR-SOL. Palmer Chemical & Equipment Company, Inc. SN 44,300. Pub. 9-9-58. Filed 1-20-58.

670,147. SERNYL. Parke, Davis & Company. SN 44,301. Pub. 9-9-58. Filed 1-20-58.

670,148. VACUBTT. Bristol-Myers Company. SN 44,370. Pub. 9-9-58. Filed 1-21-58.

670,149. TRIMAGMA. Jones and Vaughan Inc. SN 45,236. Pub. 9-9-58. Filed 2-4-58.

670,150. SALDRATE. Jones and Vaughan Inc. SN 45,257. Pub. 9-9-58. Filed 2-4-58.

670,151. ESVIT-M. Newton Pharmacal Co. Inc. SN 45,907. Pub. 9-9-58. Filed 2-14-58.

670,152. HOGETS. American Scientific Laboratories, Inc. SN 47,247. Pub. 9-9-58. Filed 3-12-58.

670,153. IRONETS. American Scientific Laboratories, Inc. SN 47,249. Pub. 9-9-58. Filed 3-12-58.

670,154. IRONOL. American Scientific Laboratories, Inc. SN 47,250. Pub. 9-9-58. Filed 3-12-58.

670,155. SINTHRAX. American Scientific Laboratories, Inc. SN 47,551. Pub. 9-9-58. Filed 3-12-58.

670,156. SCOURETS. American Scientific Laboratories, Inc. SN 47,709. Pub. 9-9-58. Filed 3-14-58.

Class 19—Vehicles

670,157. SHELBY. American Machine and Foundry Company. SN 36,148. Pub. 9-9-58. Filed 3-14-57.

670,158. GLASS SLIPPER. Robert M. Schulte, d. b. a. Schulte Marine Plastics. SN 32,344. Pub. 9-9-58. Filed 5-20-57.

670,159. GAR-ROLL-CART. Gar-Roll, Inc. SN 33,146. Pub. 9-9-58. Filed 7-3-57.

670,160. TRAVEL QUEEN. Travel Queen Coaches. SN 36,117. Pub. 9-9-58. Filed 9-23-57.

670,161. FLEETSIDE. General Motors Corporation. SN 41,453. Pub. 9-9-58. Filed 11-27-57.

670,162. SIMSON AND DESIGN. VEB Fahrzeug- und Gerateiwerk Simson. SN 42,641. Pub. 9-9-58. Filed 1-3-58.

670,163. AUTODOGGAN. H. C. Paul Limited. SN 42,191. Pub. 9-9-58. Filed 7-23-58.

670,164. ANTHONY "YARDBIRD" AND DESIGN. Anthony Company. SN 45,220. Pub. 9-9-58. Filed 2-4-58.

670,165. TESTMOBILE. Hewlett-Packard Company. SN 47,499. Pub. 9-9-58. Filed 3-11-58.

Class 20—Linoleum and Oiled Cloth

670,166. GLITTER. Congoleum-Nairn Inc. SN 45,453. Pub. 9-9-58. Filed 2-7-58.

670,167. SKYTONE. Congoleum-Nairn Inc. SN 45,455. Pub. 9-9-58. Filed 2-7-58.

Class 21—Electrical Apparatus, Machines, and Supplies

670,168. BE AND DESIGN. Electronic Secretary Industries, Inc. SN 42,006. Pub. 9-9-58. Filed 12-6-57.

670,169. IBOFARAD. Sprague Electric Company. SN 43,715. Pub. 9-9-58. Filed 1-6-58.

670,170. CIRCLE DOT. General Electric Company. SN 44,078. Pub. 9-9-58. Filed 1-16-58.

670,171. PYROFLEX. Cutler-Hammer, Inc. SN 44,161. Pub. 9-9-58. Filed 1-17-58.

670,172. NARADIRECT. Narragansett Wire Co. SN 44,196. Pub. 9-9-58. Filed 1-17-58.

Class 22—Games, Toys, and Sporting Goods

670,173. RADICON. Kabushiki Kaisha Masudaya Saito Boeki. SN 33,494. Pub. 9-9-58. Filed 7-10-57.

670,174. LIFEGARD. Rainbow Plastics. SN 42,040. Pub. 9-9-58. Filed 12-9-57.

670,175. TERRIE TOY. Amos Products Co. SN 43,182. Pub. 9-9-58. Filed 12-30-57.

670,176. SPORTS-MASTER. L. S. Brown Company. SN 43,296. Pub. 9-9-58. Filed 1-3-58.

670,177. NIKE-RIDE. Lester G. Gildersleeve. SN 45,048. Pub. 9-9-58. Filed 1-31-58.

670,178. SWINGOMATIC. Grago Metal Products, Inc. SN 45,251. Pub. 9-9-58. Filed 2-4-58.

670,179. AVENGER. Kilgore, Inc. SN 45,637. Pub. 9-9-58. Filed 2-11-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

670,180. GEOMETRICAL DESIGN. The Singer Manufacturing Company. SN 671,534. Pub. 9-9-58. Filed 8-31-54.

670,181. PHOTOSTAT. Photostat Corporation. SN 30,677. Pub. 9-9-58. Filed 5-24-57.

670,182. CONDENSAVER. Graver Tank & Mfg. Co., Inc. SN 32,247. Pub. 9-9-58. Filed 8-19-57.

670,183. BENTLEY-KOMET. The Bentley Engineering Company Limited. SN 32,663. Pub. 9-9-58. Filed 6-26-57.

670,184. E-Z. E-Z Packaging Corporation. SN 33,699. Pub. 9-9-58. Filed 7-15-57.

670,185. AHLMANN. Ahlmann-Carlshütte Kommanditgesellschaft. SN 38,782. Pub. 9-9-58. Filed 6-11-57.

670,186. LURGI. Lurgi Gesellschaft für Wärmetechnik m. b. H. SN 38,619. Pub. 9-9-58. Filed 10-9-57.

670,187. APPCO AND DESIGN. Aggregate Plant Products Co. SN 41,602. Pub. 9-9-58. Filed 12-2-57.

670,188. SPEED AND DESIGN. Swingline, Inc. SN 42,944. Pub. 9-9-58. Filed 12-23-57.

670,189. DESIGN OF DIAMOND AND HORSESHOE. Diamond Tool and Horseshoe Co. SN 43,428. Pub. 9-9-58. Filed 1-6-58.

670,190. GOLDCREST. Alfa International Corp. SN 45,236. Pub. 9-9-58. Filed 2-4-58.

670,191. KITCHEN PAL. Union Die Casting Company. SN 46,068. Pub. 9-9-58. Filed 2-18-58.

670,192. OPTIMOUNT. The Murray Company of Texas, Inc., d. b. a. Boston Gear Works, Division of The Murray Company of Texas, Inc. SN 46,236. Pub. 9-9-58. Filed 2-20-58.

670,193. FLEXA-SWITCH. Metzgar Conveyor Co. SN 46,745. Pub. 9-9-58. Filed 2-27-58.

670,194. HERCULES. Morey Machinery Co., Inc. SN 46,750. Pub. 9-9-58. Filed 2-27-58.

670,345. HYDROVECTOR. Hydrotherm, Inc. SN 45,978. 670,371. LADY SCOTT. Lady Scott, Inc. SN 47,196. Pub.

SN 45,588. Pub. 9-9-58. Filed 2-10-58.
TM 726 O. G.—13

TM 11,813. Pub. 4-16-57. Filed 7-9-56.

670,196. BOD ROTOR AND DESIGN. Engineering Specialties (Alberta) Limited. SN 46,000. Pub. 9-9-58. Filed 2-20-58.

670,198. CLASSIC. Brewer Sorting Supplies Company. SN 46,887. Pub. 9-9-58. Filed 3-3-58.

670,197. MULTIFILE. The Sperry Rand & Brown Company. SN 44,869. Pub. 9-9-58. Filed 8-8-58.

670,198. COALPACTOR. Sutr Iron Works Corporation. SN 47,095. Pub. 9-9-58. Filed 3-5-58.

670,199. DESIGN OF CHEVRONS. Société Anonyme Andre Citroen. SN 47,555. Pub. 9-9-58. Filed 3-11-58.

670,200. AUTOMAX. F. E. Rodington Co. SN 49,090. Pub. 9-9-58. Filed 4-4-58.

670,201. HANKSBIG AND CIRCLE DESIGN. Fletcher Hanks. SN 49,272. Pub. 9-9-58. Filed 4-8-58.

670,202. SEAL GRIP AND DESIGN. Hughes Tool Company. SN 49,433. Pub. 9-9-58. Filed 4-10-58.

670,203. TERSA FILES. Goodhew Aviation Company Limited, d. b. a. Terea File Company. SN 49,277. Pub. 9-9-58. Filed 4-14-58.

670,204. DFTH-DRIVE. Rodney Heat Machine Company. SN 49,702. Pub. 9-9-58. Filed 4-16-58.

670,205. WORCESTER. Savage Arms Corporation. SN 49,789. Pub. 9-9-58. Filed 4-16-58.

670,206. LADY BULOVA. Bulova Watch Company, Inc. SN 49,818. Pub. 9-9-58. Filed 4-17-58.

670,207. CASTAWAY. Rochester Razor, Inc. SN 49,975. Pub. 9-9-58. Filed 4-18-58.

670,208. AURELIA COMMANDER 20. Western Newspaper Union. SN 50,195. Pub. 9-9-58. Filed 4-22-58.

670,209. SHUNK. Shunk Manufacturing Company. SN 50,277. Pub. 9-9-58. Filed 4-24-58.

670,210. MULTIOPENER. Commercial Controls Corporation. SN 50,452. Pub. 9-9-58. Filed 4-28-58.

670,211. VIBRO-PRESTORATOR. Petroleum Tool Research, Inc. SN 50,523. Pub. 9-9-58. Filed 4-30-58.

Class 26—Measuring and Scientific Appliances

670,212. HEAT-TIMER. Heat-Timer Corporation. SN 8,720. Pub. 9-9-58. Filed 6-6-56.

670,213. ELECTRO JET. Ashania Regulator Company. SN 23,689. Pub. 9-9-58. Filed 2-6-57.

670,214. ELECTRO JET AND DESIGN. Ashania Regulator Company. SN 23,690. Pub. 9-9-58. Filed 2-6-57.

670,215. AEROJET-GENERAL NUCLEONICS. Aerojet-General Corporation. SN 50,542. Pub. 9-9-58. Filed 5-28-57.

670,216. MAPLE. Lear, Incorporated. SN 50,912. Pub. 9-9-58. Filed 5-28-57.

670,217. ERU-SIGHT. Chicago Pan Company. SN 51,635. Pub. 9-9-58. Filed 6-10-57.

670,218. PIEZITE. Endevco Corporation. SN 52,681. Pub. 9-9-58. Filed 6-26-57.

670,219. "INSTALITE." Charles Engelhard, Incorporated. SN 54,226. Pub. 9-9-58. Filed 7-23-57.

670,220. UNIEBC. W. & L. E. Gurley. SN 48,854. Pub. 9-9-58. Filed 12-11-57.

Class 27—Horological Instruments

670,221. SYNCHRON "WORKHORSE OF THE INDUSTRY" AND DESIGN. Hansen Manufacturing Company, Inc. SN 53,706. Pub. 9-9-58. Filed 7-15-57.

670,222. SOLARION. General Time Corporation. SN 46,441. Pub. 9-9-58. Filed 3-24-58.

Class 28—Jewelry and Precious-Metal Ware

670,222. THE CO 9TH AVE. AND DESIGN. Trabar Novelty Co., Inc. SN 40,274. Pub. 9-9-58. Filed 11-7-57.

670,224. COSTUMAKERS. Lida Brothers, Inc. SN 40,802. Pub. 9-9-58. Filed 11-19-57.

670,225. ALSAN SOPHISTICATE. Hy Fruchman, d. b. a. Alsan Manufacturing Company. SN 44,458. Pub. 9-9-58. Filed 1-22-58.

670,226. BALA. Opalite, Inc. SN 45,269. Pub. 9-9-58. Filed 2-4-58.

670,227. WOOD SONG. The International Silver Company. SN 45,325. Pub. 9-9-58. Filed 2-5-58.

670,228. OS AND DESIGN. Oneida Ltd. SN 45,520. Pub. 9-9-58. Filed 2-13-58.

670,229. ALWAYS. Oneida Ltd. SN 45,522. Pub. 9-9-58. Filed 2-13-58.

Class 29—Brooms, Brushes, and Dusters

670,230. POM-POM. The Kendall Company. SN 51,912. Pub. 9-9-58. Filed 12-6-57.

670,231. FREEWAY. American Push Broom Co. SN 43,411. Pub. 9-9-58. Filed 1-6-58.

Class 31—Filters and Refrigerators

670,232. DUNHAM-BUSH AND DESIGN. Dunham-Bush, Inc. SN 28,765. Pub. 9-9-58. Filed 3-6-57.

670,233. PORTA. Porta Water Softener Co., Inc. SN 38,949. Pub. 9-9-58. Filed 10-14-57.

670,234. CUNOLIN. The Cuno Engineering Corporation. SN 49,830. Pub. 9-9-58. Filed 4-17-58.

670,235. THRIFT-SOFT. R. T. Martin, d. b. a. R. T. Martin Company. SN 49,952. Pub. 9-9-58. Filed 4-18-58.

670,236. DICALITE. Great Lakes Carbon Corporation. SN 50,048. Pub. 9-9-58. Filed 4-21-58.

Class 32—Furniture and Upholstery

670,237. IMPERIAL. Imperial Furniture Company. SN 36,077. Pub. 9-9-58. Filed 8-22-57.

670,238. HI-CO. Hickory Springs Manufacturing Company, Inc. SN 36,296. Pub. 8-5-58. Filed 8-27-57.

670,239. DOVTAIL. Robert K. Merrison, d. b. a. The Dovtail System. SN 40,663. Pub. 9-9-58. Filed 11-18-58.

670,240. RELAX-ON-AIR STC AND DESIGN. Stein Bros. Mfg. Co. SN 44,996. Pub. 9-9-58. Filed 1-30-58.

670,241. DRY-O-PEDIC. Kolcraft Products, Inc. SN 45,645. Pub. 9-9-58. Filed 2-10-58.

670,242. Z LINE AND DESIGN. Rieder Bros. SN 46,261. Pub. 9-9-58. Filed 2-21-58.

670,243. KING'S GRANT BY DREXEL. Drexel Furniture Company. SN 49,858. Pub. 9-9-58. Filed 4-9-58.

670,244. STACOR VISIONAIRE AND DESIGN. Stacor Equipment Company. SN 49,957. Pub. 9-9-58. Filed 4-18-58.

Class 34—Heating, Lighting, and Ventilating Apparatus

670,245. DUNTUCTOR. Holman Brothers Limited. SN 7,187. Pub. 11-13-57. Filed 11-13-56.

670,246. SOTO ROASTER. Calorie Appliance Corporation. SN 27,278. Pub. 9-9-58. Filed 6-1-57.

670,247. INFINILITE. Integrated Ceilings, Inc. SN 45,666. Pub. 9-9-58. Filed 2-11-58.

Class 46—Foods and Ingredients of Foods

670,248. HYDROVECTOR. Hydrotherm, Inc. SN 45,978. Pub. 9-9-58. Filed 2-17-58.

670,249. BASMOR. Bastian-Morley Co., Inc. SN 46,096. Pub. 9-9-58. Filed 2-19-58.

670,250. LO-BLAST AND DESIGN. Mid-Continent Metal Products Company. SN 46,527. Pub. 9-9-58. Filed 3-10-58.

670,251. SMOKATRON. Sumner and Co. SN 46,673. Pub. 9-9-58. Filed 3-26-58.

670,252. MICRO-LITE. Harper-Wyman Company. SN 46,732. Pub. 9-9-58. Filed 3-27-58.

Class 36—Musical Instruments and Supplies

670,253. MARIMBA. S. S. Kresge Company. SN 37,663. Pub. 9-9-58. Filed 5-23-57.

670,254. ESTA. Gramofonove Havody, Narodni Podnik. SN 41,453. Pub. 9-9-58. Filed 11-27-57.

670,255. MUSIDISC. Nilo Santos Pinto. SN 41,927. Pub. 9-9-58. Filed 12-6-57.

Class 37—Paper and Stationery

670,256. MASTERLITH. Whitin Machine Works. SN 684,174. Pub. 12-16-58. Filed 3-24-58.

Class 38—Prints and Publications

670,257. NEXT WEEK AND DESIGN. The Scranton Times. SN 691,788. Pub. 1-21-58. Filed 7-22-58.

670,258. YANKEE. Yankee, Incorporated. SN 46,823. Pub. 9-9-58. Filed 3-12-58.

Class 39—Clothing

670,259. STRETCH-EEZ. Kickaway Garments, Inc. SN 670,051. Pub. 8-1-58. Filed 7-15-54.

670,260. ERIONI. Erioni Armando Calcani Societa a ResponsaMilita Limitata. SN 690,127. Pub. 2-11-58. Filed 8-24-55.

670,261. SQUAW VALLEY. Dede & Votaw. SN 692,207. Pub. 3-27-58. Filed 8-3-55.

670,262. DJAKARTA. Palm Beach Company. SN 6,275. Pub. 11-20-56. Filed 4-12-56.

670,263. PLAYTEX TWINKLE. International Latex Corporation. SN 13,676. Pub. 9-9-58. Filed 8-9-56.

670,264. SHIRTTAILS FOR TWO AND DESIGN. Norris Manufacturing Company. SN 21,265. Pub. 9-9-58. Filed 12-18-56.

670,265. STILETTO. Andrew Geller, Inc. SN 32,902. Pub. 9-9-58. Filed 1-23-57.

670,266. VANITY CAREER-MAN. Joseph H. Cohen & Sons, Inc. SN 29,762. Pub. 1-7-58. Filed 6-24-57.

670,267. ROYAL GRACE AND DESIGN. Grayson-Robinson Stores, Inc. SN 29,264. Pub. 9-9-58. Filed 5-2-57.

670,268. LAMB'S TOUCH. Riggs Sportswear, Inc. SN 30,261. Pub. 9-9-58. Filed 5-20-57.

670,269. EXCELSA AND DESIGN. Exceisa A. Lepantre Fils & Cie. SN 38,363. Pub. 9-9-58. Filed 8-28-57.

670,270. CO-ORD-I-KNITS. Bannon Mills, Inc. SN 38,422. Pub. 9-2-58. Filed 10-7-57.

670,271. WEEK-ENDER. Melville Shoe Corporation. SN 40,954. Pub. 8-5-58. Filed 11-19-57.

670,272. ROYAL MATCH. Sandow Manufacturing Co. SN 41,117. Pub. 9-9-58. Filed 11-21-57.

670,273. LADY SCOTT. Lady Scott, Inc. SN 42,256. Pub. 9-9-58. Filed 12-18-57.

670,274. MERMAID. Model Brassiere Corp. SN 43,185. Pub. 7-8-58. Filed 12-30-57.

670,275. DESIGN OF INFANT'S HEAD. Gerber Products Company. SN 43,261. Pub. 9-9-58. Filed 1-2-58.

670,276. ROBERT LEWIS. United Sheepskin Clothing Company, Inc. SN 44,574. Pub. 9-9-58. Filed 1-22-58.

670,277. ALEXIS. Weber Shoe Company, Inc. SN 45,804. Pub. 9-9-58. Filed 2-7-58.

670,278. COMMANDO. Itshide Rubber Company Limited. SN 45,739. Pub. 9-9-58. Filed 2-12-58.

670,279. DANIELLI. Colebrook Knitwear Inc. SN 46,200. Pub. 9-9-58. Filed 2-21-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

670,280. WOOL-O-RAMA. Homemaker Rugs, Inc. SN 10,317. Pub. 7-8-57. Filed 6-15-56.

670,281. FRESHERIZED. Crompton Company. SN 36,162. Pub. 5-6-58. Filed 3-14-57.

670,282. POUF POUF. Societe F. Ducharne S. A., assignee of The Atlantic Fabrics Corporation. SN 27,926. Pub. 9-9-58. Filed 4-11-57.

670,283. BARON AND DESIGN. Baron Fabrics, Inc. SN 30,050. Pub. 9-9-58. Filed 5-15-57.

670,284. LAUNDERESE. Armtex, Incorporated. SN 37,123. Pub. 9-9-58. Filed 9-13-57.

670,285. UNDERWOOD & HALE QUALITRON AND DESIGN. Underwood & Hale, Inc. SN 43,637. Pub. 9-9-58. Filed 1-6-58.

670,286. GLEN RAVEN. Glen Raven Cotton Mills, Inc. SN 46,122. Pub. 9-9-58. Filed 2-19-58.

670,287. VIVATONE. Glen Raven Cotton Mills, Inc. SN 46,135. Pub. 9-9-58. Filed 2-19-58.

670,288. VALLEY PARK. Monarch Rug Mills, Inc. SN 46,148. Pub. 9-9-58. Filed 2-19-58.

670,289. GLEN LANE. Monarch Rug Mills, Inc. SN 46,149. Pub. 9-9-58. Filed 2-19-58.

670,290. LAMIMAT. Fiber Glass Industries, Inc. SN 46,422. Pub. 9-9-58. Filed 2-24-58.

Class 43—Thread and Yarn

670,291. STRETCHON. Southern Silk Mills, Inc. SN 39,074. Pub. 9-9-58. Filed 10-25-57.

670,292. GLEN RAVEN. Glen Raven Cotton Mills, Inc. SN 46,134. Pub. 9-9-58. Filed 2-19-58.

Class 44—Dental, Medical, and Surgical Appliances

670,293. RED TIP. Biological Research, Inc. SN 18,702. Pub. 9-9-58. Filed 11-5-56.

670,294. BLU-TIP. Biological Research, Inc. SN 19,630. Pub. 9-9-58. Filed 11-21-56.

670,295. STERI-LECTRON. Russell W. Price, d. b. a. O-B Products Company. SN 25,662. Pub. 9-9-58. Filed 3-7-57.

670,296. VIBRA-LAXER. Vibra Laxer Corporation. SN 33,773. Pub. 9-9-58. Filed 7-15-57.

670,297. PRO-LASTIC. The Seamless Rubber Company. SN 44,310. Pub. 9-9-58. Filed 1-17-58.

670,298. GERMFIGHTER. Zylon Products Co., Inc. SN 44,342. Pub. 9-9-58. Filed 1-17-58.

670,299. FROST FOAM. Dyfoam Corporation. SN 46,804. Pub. 9-9-58. Filed 3-3-58.

Service Marks

Class 46—Foods and Ingredients of Foods

670,299. DONNIE AND DESIGN. The Burdo Company. SN 662,352. Pub. 10-4-55. Filed 3-10-54.

670,300. ANDONATO PIZZA-CHIPS AND DESIGN. Andonato Food Products. SN 662,301. Pub. 9-6-58. Filed 8-18-55.

670,301. SCOTT. Scotty Concessions Limited. SN 700,285. Pub. 9-6-58. Filed 12-19-55.

670,302. DIXIE KING. Farmers Rice Milling Company, Inc. SN 9,454. Pub. 9-6-58. Filed 6-1-56.

670,303. MEVA. Anderson, Clayton & Co. SN 11,585. Pub. 1-29-57. Filed 7-10-56.

670,304. PETER PAN. United Biscuit Company of America. SN 12,486. Pub. 9-6-58. Filed 8-6-56.

670,305. TEXANAS. King Candy Company. SN 14,568. Pub. 9-6-58. Filed 8-24-56.

670,306. VITA AND DESIGN. Vita Food Products, Inc. (Illinois corporation), assignee of Vita Food Products, Inc. (New York corporation). SN 19,838. Pub. 9-6-58. Filed 11-23-56.

670,307. AK-MAK. Soojian's Incorporated, assignee of Michael Soojian Enterprises. SN 20,220. Pub. 9-6-58. Filed 11-20-56.

670,308. HVO AND DESIGN. Queens Shortening and Shortening Corp. SN 22,535. Pub. 9-6-58. Filed 1-18-57.

670,309. DESIGN OF TWO MALES CARRYING A PEA. Beeman Canning Co., Inc. SN 23,671. Pub. 9-6-58. Filed 2-4-57.

670,310. GRAVY MASTER AND DESIGN. Gravymaster Company, Inc. SN 23,789. Pub. 9-6-58. Filed 2-5-57.

670,311. SCOT CHIPS. Ambrosia Chocolate Company. SN 24,902. Pub. 9-6-58. Filed 2-25-57.

670,312. LAMINOL. The Denver Chemical Manufacturing Company. SN 25,224. Pub. 9-6-58. Filed 3-1-57.

670,313. JACK RABBIT. The Wisbo Corporation, d. b. a. Michigan Bean Company. SN 25,469. Pub. 9-6-58. Filed 3-4-57.

670,314. QK AND DESIGN OF WOMAN. National Queen's Kitchens, Inc., d. b. a. The National Queen's Kitchen, Inc. SN 30,032. Pub. 9-6-58. Filed 5-14-57.

670,315. DAILY DIET. Daily Diet Pet Food Co. SN 33,217. Pub. 9-6-58. Filed 7-5-57.

670,316. LUER QUALITY AND DESIGN. Luer Packing Company. SN 33,626. Pub. 9-6-58. Filed 7-12-57.

670,317. EY-KLAS. Beaty Grocery Company, Inc. SN 33,678. Pub. 9-6-58. Filed 7-15-57.

670,318. FERTILAKE. Newton Crouch. SN 34,980. Pub. 9-6-58. Filed 8-6-57.

670,319. SUPERIOR. Eatington Fruit Co. SN 37,844. Pub. 9-6-58. Filed 9-23-57.

670,320. CHIQUITA'S. United Fruit Company. SN 37,919. Pub. 9-6-58. Filed 9-26-57.

670,321. ROUND UP. Jas. H. Forbes Tea & Coffee Corporation. SN 38,278. Pub. 9-6-58. Filed 10-3-57.

670,322. NANCY K. Lee & Oshita Co. SN 38,938. Pub. 9-6-58. Filed 10-15-57.

670,323. GOOF BALLS. Leaf Brands, Inc. SN 41,026. Pub. 9-6-58. Filed 11-20-57.

670,324. SCREW BALLS. Leaf Brands, Inc. SN 41,027. Pub. 9-6-58. Filed 11-20-57.

670,325. BAR-B-Q. Leaf Brands, Inc. SN 41,028. Pub. 9-6-58. Filed 11-20-57.

670,326. CURLY HEAD. Garwood L. Johns, d. b. a. Garwood L. Johns Co. SN 41,171. Pub. 9-6-58. Filed 11-25-57.

670,327. V 4er 1. East Coast Marketers, Inc. SN 41,256. Pub. 9-6-58. Filed 12-4-57.

670,328. HOME SPOT. National Food Marketers, Inc. SN 42,795. Pub. 9-6-58. Filed 12-30-57.

670,329. SATELLITE. John B. Hardwicke Co. SN 42,964. Pub. 9-6-58. Filed 12-23-57.

670,330. KRAFT. National Dairy Products Corporation. SN 43,196. Pub. 9-6-58. Filed 12-30-57.

670,331. MORRELL AND DESIGN. John Morrell & Co. SN 43,204. Pub. 9-6-58. Filed 12-31-57.

670,332. CREST EX RACK. Crest Foods Co., Inc. SN 45,069. Pub. 9-6-58. Filed 1-30-58.

670,333. ENJOY AND DESIGN. Enjoy Food Company, Inc. SN 45,282. Pub. 9-6-58. Filed 2-6-58.

670,334. DUDE RANCH. Beeman Canning Co., Inc. SN 46,413. Pub. 9-6-58. Filed 2-24-58.

670,335. A MOUNTAIN OF QUALITY AND DESIGN. Beeman Canning Co., Inc. SN 46,414. Pub. 9-6-58. Filed 2-24-58.

670,336. TREASURE CHEST. National Oats Company. SN 47,205. Pub. 9-6-58. Filed 3-6-58.

670,337. CHINESE MAID AND DESIGN. Min Sun Trading Company. SN 47,670. Pub. 9-6-58. Filed 3-13-58.

670,338. DEVON ROSE. Stephen F. Whitman & Son, Inc. SN 47,900. Pub. 9-6-58. Filed 3-14-58.

670,339. CRISP-O. Crispo Bros., Inc. SN 47,942. Pub. 9-6-58. Filed 3-18-58.

670,340. SUM MOR. The Saymore Co. SN 47,972. Pub. 9-6-58. Filed 3-18-58.

670,341. WHITE CARDOON AND DESIGN. Biel & Co., Inc. SN 47,980. Pub. 9-6-58. Filed 3-18-58.

670,342. EHLERS-G AND DESIGN. Albert Ehlers, Inc. SN 48,156. Pub. 9-6-58. Filed 3-21-58.

670,343. TEN-O'CLOCK TESTED AND DESIGN. The Cresse & Blackwell Company. SN 48,907. Pub. 9-6-58. Filed 4-2-58.

670,344. KASH. John Kashiki. SN 49,093. Pub. 9-6-58. Filed 4-4-58.

670,345. GRAND CANAL. Sun Garden Packing Company. SN 49,092. Pub. 9-6-58. Filed 4-4-58.

Class 47—Wines

670,346. COMET BY SUPREME AND DESIGN. Supreme Wine Co., Inc. SN 48,898. Pub. 9-6-58. Filed 5-12-58.

Class 48—Malt Beverages and Liquors

670,347. KRUEGER AND DESIGN. G. Krueger Brewing Company. SN 46,226. Pub. 9-6-58. Filed 2-20-58.

670,348. DESIGN OF A SHIP. Molson's Brewery Limited. SN 46,242. Pub. 9-6-58. Filed 2-21-58.

670,349. CROWN AND ANCHOR AND DESIGN. Molson's Brewery Limited, d. b. a. Molson's Crown & Anchor Lager Brewery Ltd. SN 46,244. Pub. 9-6-58. Filed 2-21-58.

Class 49—Distilled Alcoholic Liquors

670,350. ANIS AGUILA. Trigo Bros. Packing Corp. SN 18,240. Pub. 9-6-58. Filed 9-17-56.

670,351. KAMCHATKA. The Alfred Hart Company. SN 28,412. Pub. 9-6-58. Filed 10-7-57.

Class 50—Merchandise Not Otherwise Classified

670,352. THE JUNIOR PAINTER. Amerwf Paint Co. of New Jersey, Inc. SN 20,198. Pub. 9-6-58. Filed 4-30-57.

670,353. "CHALKY." Sifo Company. SN 32,021. Pub. 9-6-58. Filed 6-14-57.

670,354. PERMATONED. Durwood B. White. SN 36,374. Pub. 9-6-58. Filed 7-29-57.

670,401. LADDER. Ladder Products, Inc. SN 34,711. Pub. 9-6-58. Filed 7-31-57.

Collective Membership Mark

670,350. FROST FOAM. Dyfoam Corporation. SN 40,604. Pub. 9-9-58. Filed 10-28-57.

670,356. K-T AND DESIGN. Kaytee Imports, Inc. SN 41,705. Pub. 9-9-58. Filed 12-3-57.

Class 51 — Cosmetics and Toilet Preparations

670,347. SADECIN. Saad Murad Rishmieh. SN 668,671. Pub. 9-9-58. Filed 6-1-55.

670,356. ACTION. Richard Hudnut. SN 10,232. Pub. 9-9-58. Filed 6-14-56.

670,359. KOKURYU AND DESIGN. Kokuryu-Do Company Ltd. SN 15,899. Pub. 9-9-58. Filed 9-19-56.

670,360. CURLTITE. Nelson Dreyfuss, d. b. a. Dreyfuss Co. SN 21,997. Pub. 9-9-58. Filed 1-2-57.

670,361. JM AND DESIGN. Juliette Margien, Inc. SN 30,507. Pub. 9-9-58. Filed 5-22-57.

670,362. SKIN GUARD. Vel O Rose Corporation. SN 33,206. Pub. 9-9-58. Filed 7-5-57.

670,363. KUR-UM. Kur-Um Laboratories. SN 33,355. Pub. 9-9-58. Filed 7-8-57.

670,364. ZORTEL. Jeunesse Cosmetics, Inc. SN 33,972. Pub. 9-9-58. Filed 7-18-57.

670,365. BEAUX ART. Stephan Laboratories. SN 36,750. Pub. 9-9-58. Filed 9-5-57.

670,366. DEOCIN. The Upjohn Company. SN 38,245. Pub. 9-9-58. Filed 10-2-57.

670,367. D. O. C. Harry J. Bosworth Company. SN 40,203. Pub. 9-9-58. Filed 11-7-57.

670,368. AMBRETTOGENE. Albert Verley & Company. SN 40,284. Pub. 9-9-58. Filed 11-7-57.

670,369. TIBETTOGENE. Albert Verley & Company. SN 40,292. Pub. 9-9-58. Filed 11-7-57.

670,370. 3 ROSES AND DESIGN. George H. Weyer, Inc. SN 40,632. Pub. 9-9-58. Filed 11-12-57.

670,371. KIDDY KELLY'S FORMULA 88. Kiddy Kelly, Inc. SN 40,847. Pub. 9-9-58. Filed 11-18-57.

670,372. ABUNDA. Lehn & Fink Products Corporation. SN 40,952. Pub. 9-9-58. Filed 11-15-57.

Class 52 — Detergents and Soaps

670,373. FORMULA "B." M. S. McClelland Sons, Inc. SN 660,597. Pub. 9-30-58. Filed 7-21-58.

670,374. ARROW CHEMICAL CO. AND DESIGN. Arrow Chemical Co. SN 36,147. Pub. 9-9-58. Filed 8-26-57.

670,375. DIVIDEND. Les Parfums de Dana, Inc. SN 37,027. Pub. 9-16-58. Filed 9-11-57.

670,376. BLACK GOLD. Morris, Sewall & Co., Inc. SN 42,772. Pub. 9-9-58. Filed 1-10-58.

670,377. BRITE-VIEW. John R. Powell. SN 44,206. Pub. 9-9-58. Filed 1-30-58.

670,378. LOWE BROTHERS AND DESIGN. The Lowe Brothers Company. SN 45,381. Pub. 9-9-58. Filed 2-6-58.

670,379. N-L CONCENTRATE SPOT AND DESIGN. National Laboratories, Inc. SN 45,402. Pub. 9-9-58. Filed 2-6-58.

670,380. HAEMO-SONIC. Meinecke & Co., Inc. SN 49,378. Pub. 9-9-58. Filed 4-9-58.

670,381. SULFRAMIN. Ultra Chemical Works, Inc. SN 50,197. Pub. 9-9-58. Filed 4-22-58.

670,382. U-S-C. Wyandotte Chemicals Corporation. SN 50,695. Pub. 9-9-58. Filed 5-5-58.

670,383. VP. Valley Products Company. SN 52,681. Pub. 9-9-58. Filed 6-16-58.

670,384. BUCLEEN. Eutectic Welding Alloys Corporation. SN 52,782. Pub. 9-9-58. Filed 6-18-58.

Service Marks

Class 100 — Miscellaneous

670,385. CHAMPS. Chatterbox, Inc., d. b. a. Champs. SN 44,160. Pub. 9-9-58. Filed 1-17-58.

Class 101 — Advertising and Business

670,386. SECURITY SIMPLIFIED. Simplified Tax Records, Inc. SN 5,552. Pub. 9-9-58. Filed 3-30-56.

670,387. EC AND DESIGN. The Estimatic Corporation. SN 28,302. Pub. 9-9-58. Filed 1-28-57.

670,388. WILMORAL ADVERTISING. Worldwide Forwarders, Inc., d. b. a. Wilmoral Advertising Company, a division of Worldwide Forwarders, Inc. SN 33,850. Pub. 9-9-58. Filed 7-16-57.

670,389. MAILBAG. Youth Publications of Canada. SN 40,996. Pub. 9-9-58. Filed 11-15-57.

Class 102 — Insurance and Financial

670,390. NORTH & SLOMAN INC. INSURANCE AND DESIGN. North and Sloman, Inc. SN 18,239. Pub. 9-9-58. Filed 10-29-56.

670,391. THE MEMBERS MUTUAL ETC. AND DESIGN. The Members Mutual Insurance Company. SN 35,794. Pub. 9-9-58. Filed 8-19-57.

670,392. DESIGN OF BUILDING ETC. Atomic Development Mutual Fund, Inc. SN 38,406. Pub. 9-9-58. Filed 9-19-57.

Class 103 — Construction and Repair

670,393. SONOWELD. Aeroprojects Incorporated. SN 31,172. Pub. 9-9-58. Filed 6-3-57.

670,394. SONOBRAZE. Aeroprojects Incorporated. SN 31,175. Pub. 9-9-58. Filed 6-3-57.

670,395. LUMMUS AND DESIGN. The Lummus Company. SN 39,516. Pub. 9-9-58. Filed 10-30-57.

Class 105 — Transportation and Storage

670,396. ASK MR. FOSTER. Ask Mr. Foster Travel Service, Inc. SN 24,223. Pub. 9-9-58. Filed 2-13-57.

670,397. UNITED AND DESIGN. United Van Lines, Inc. SN 27,160. Pub. 9-9-58. Filed 3-29-57.

670,398. KEYSTONE AND DESIGN. Liberty Travel Service Inc. SN 41,707. Pub. 9-9-58. Filed 12-3-57.

Class 106 — Material Treatment

670,399. DELA-CRON. Cold Spring Bleachery. SN 21,427. Pub. 9-9-58. Filed 12-21-56.

670,400. CRITERION. Hertzberg-New Method, Inc. SN 26,819. Pub. 9-9-58. Filed 5-6-57.

670,401. RECODIZING. The Republic Chemical Company. SN 36,534. Pub. 9-9-58. Filed 8-20-57.

Class 107 — Education and Entertainment

670,402. $64,000 QUESTION AND DESIGN. Louis G. Cowan, Inc. SN 11,157. Pub. 9-9-58. Filed 6-28-56.

670,403. LADIES, Lewis Products Inc. SN 34,611. Pub. 9-9-58. Filed 7-21-57.

670,404. KING FOR A DAY, Queen for a Day, Inc. SN 35,202. Pub. 9-9-58. Filed 8-9-57.

670,405. SPORTACULAR, Pennsylvania Broadcasting Company. SN 41,475. Pub. 9-9-58. Filed 11-25-57.

Collective Membership Mark

Class 200

670,406. MEMBER AMERICAN SIGHTSEEING ASSOCIATION INC. AND DESIGN, American Sightseeing Association, Inc. SN 40,304. Pub. 9-9-58. Filed 11-8-57.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2—Receptacles

670,407. George F. Reynolds, d-b-a. Dispens-A-Pak and Reynolds Engineering Company, Teaneck, N. Y. SN 27,890. Filed P. R. 4-10-57. Am. S. R. 4-28-58.

DISPENS-A-PAK

For Boxes for Containing Cigarette Packages.
First use Apr. 1, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

670,408. Zeigler-Harris & Co., Burbank, Calif. SN 44,340. Filed P. R. 1-17-58. Am. S. R. 10-6-58.

P.S.F.L. Flange

For Stainless Steel Sink and Stove Self Sealing Rims.
First use on or about Jan. 1, 1950.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

670,409. Kenworth Manufacturing Company, Milwaukee, Wis. SN 32,861. Filed P. R. 6-24-57. Am. S. R. 10-6-58.

HANDI-KUTTER

For Razor Blade Knives.
First use June 19, 1948.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

670,410. Greene, Tweed & Co., North Wales, Pa. SN 32,894. Filed P. R. 12-30-56. Am. S. R. 9-18-58.

SEALSAVERS

For Back-Up or Stiffening Rings of Fabric-Reinforced Resinous Material for Packings Such as in Rod or Piston Applications.
First use Nov. 15, 1956.

670,411. Sure-Seal Equipment Company, Portland, Oreg. SN 26,406. Filed P. R. 3-18-57. Am. S. R. 9-19-58.

Vent-Seal

For Shaft Seals for Retaining Lubricant in Bearings of Track Rollers on Endless Track Tractors, and the Like.
First use Oct. 17, 1956.

Class 38—Prints and Publications

670,412. Commerz-Verlags A. G., Zurich, Switzerland. SN 18,626. Filed P. R. 11-2-56. Am. S. R. 4-10-58.

MAGAZIN EUROPE

The lining represents the color red. Owner of Swiss Reg. No. 182,064, dated Aug. 18, 1954.
For Monthly Magazine.

670,413. Commerz-Verlags A.-G., Zurich, Switzerland. SN 18,627. Filed P. R. 11-2-56. Am. S. R. 4-10-58.

EUROPEAN

The drawing is lined for red. Owner of Swiss Reg. No. 182,065, dated Aug. 18, 1954.
For Economic Journals.

670,414. Steel Publications, Inc., Pittsburgh, Pa. SN 34,795. Filed P. R. 3-22-57. Am. S. R. 9-11-58.

Steel Processing and Conversion

For Trade Magazine.
First use February 1947.

670,418. Gray Pharmaceutical Co., Inc., Dover, Del., assignee of Gray Pharmaceutical Co., Inc., Newton, Mass. SN 29,972. Filed P. R. 10-31-57. Am. S. R. 9-10-58.

THE NERVOUS PATIENT

For Newsletter Addressed to Physicians.
First use Jan. 14, 1957.

Class 39—Clothing

670,416. Interwoven Stocking Company, New Brunswick, N. J. SN 23,309. Filed P. R. 1-29-57. Am. S. R. 9-23-58.

CUSTOM TOP

For Men's and Boys' Hosiery.
First use Dec. 28, 1956.

670,417. Wheeler Protective Apparel, Inc., Chicago, Ill. SN 25,446. Filed P. R. 6-13-57. Am. S. R. 9-30-58.

GREENWEAR

For Industrial Safety Clothing.
First use July 9, 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

670,418. Republic Commercial Corp., New York, N. Y. SN 20,855. Filed P. R. 12-11-56. Am. S. R. 2-12-58.

bel seta

The Italian words "Bel Seta" mean "beautiful silk," when translated into English.
For Piece Goods, All Being Made Wholly or in Substantial Parts of Silk.
First use May 10, 1956.

Class 46—Foods and Ingredients of Foods

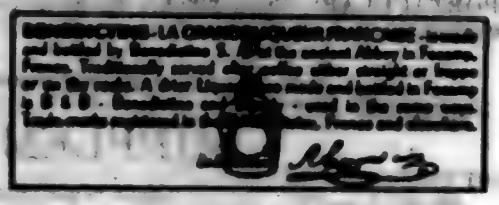
670,419. Urban H. Patman, Inc., Los Angeles, Calif. SN 26,737. Filed P. R. 9-6-57. Am. S. R. 10-2-58.
Owner of Reg. No. 564,796.

PATMAN'S PORTION PAK

For Packages Containing Individual Servings of Fresh Beef, Lamb and Pork.
First use on or about Sept. 26, 1956.

Class 49—Distilled Alcoholic Liquors

670,420. Benedictine Distillerie de la Liqueur de l'Ancienne Abbaye de Fecamp (Societe Anonyme), Fecamp, Seine Maritime, France. SN 25,977. Filed P. R. 8-23-57. Am. S. R. 9-23-58.



Owner of U. S. Reg. Nos. 29,165, 99,263, and others.
For Liqueurs.
First use July 1, 1937.

670,421. Ramon Del Collado, S. L. a. Ramon Del Collado & Co., Havana, Cuba. SN 26,696. Filed P. R. 9-5-57. Am. S. R. 9-25-58.

The drawing is lined for red.
For Rum and Cordials.
First use Dec. 12, 1954.

Class 51—Cosmetics and Toilet Preparations

670,422. Clairol, Incorporated, White Plains, N. Y. SN 23,963. Filed P. R. 7-17-57. Am. S. R. 7-7-58.

DRYZE

For Tinted Medicated Foundation Lotion for Oily Skin.
First use Jan. 28, 1957.

670,423. Boyer International Laboratories, Incorporated, d. b. a. Boyer International, Chicago, Ill. SN 29,562. Filed P. R. 10-26-57. Am. S. R. 7-17-58.

Bee Gelée

For Facial Cream.
First use May 1, 1957.

TRADEMARK REGISTRATIONS RENEWED

14,960. REMINGTON. Cl. 23. 10-23-1888.
15,961. REMINGTON STANDARD. Cl. 22. 10-23-1888.
15,962. STANDARD. Cl. 23. 10-23-1888.
123,029. SUPREME. Cl. 22. 10-9-18.
123,154. PREMIER. Cl. 11. 10-15-18.
123,284. CUTICURA. Cl. 51. 10-29-18.
123,786. FRECKLES AND HIS FRIENDS. Cl. 38. 15-10-18.
124,008. NO. 110. Cl. 15. 12-31-18.
352,559. DESIGN OF FLOWERS AND A BELL. Cl. 1. 12-7-37.
352,560. DESIGN OF A BELL. Cl. 1. 12-7-37.
359,761. OILSO. Cl. 18. 8-30-38.
360,266. PIONEER AND DESIGN. Cl. 44. 9-13-38.
360,373. NURSERY. Cl. 30. 9-13-38.
360,603. LOTIER. Cl. 51. 9-20-38.
360,646. HEIRESS OF TIME. Cl. 27. 9-20-38.
360,732. BLUE CROSS. Cl. 42. 9-27-38.
361,460. LADY IN WAITING. Cl. 39. 10-18-38.
361,506. LULL-A-BABY. Cl. 42. 10-18-38.
361,580. ZENITH. Cl. 47. 10-25-38.
361,804. WILL-BAR. Cl. 44. 11-1-38.
362,281. SLIK. Cl. 11. 11-15-38.
362,455. TAWN. Cl. 6. 11-15-38.
362,780. BLACK HAWK. Cl. 17. 11-29-38.
362,781. CHARLES DENET. Cl. 17. 11-29-38.
362,978. REPRESENTATION OF KEYSTONE. Cl. 23. 12-6-38.

363,221. RED HEART AND DESIGN. Cl. 18. 12-13-38.
363,282. TILO. Cl. 16. 12-20-38.
363,236. SYNCHROSLIDE. Cl. 23. 12-20-38.
363,405. MOTORTRON. Cl. 21. 12-27-38.
363,690. EMERY. Cl. 6. 1-3-39.
363,740. VITALON AND DESIGN. Cl. 44. 1-3-39.
363,866. RED HEART AND DESIGN. Cl. 4. 1-10-39.
363,871. SALAD TIME. Cl. 46. 1-10-39.
363,880. THE SEASONS AND DESIGN. Cl. 52. 1-10-39.
364,085. THE KLOMP AND DESIGN. Cl. 29. 1-17-39.
364,109. EXL-DIE. Cl. 14. 1-17-39.
364,229. ARGUS. Cl. 23. 1-24-39.
364,529. SANTOMERSH. Cl. 4. 2-7-39.
365,396. VUEPAK. Cl. 37. 2-7-39.
365,426. EPHYNAL. Cl. 18. 2-7-39.

TRADEMARK REGISTRATIONS CANCELED

Section 8

The following registrations issued Oct. 7, 1958

564,825. BREWERS' BEST ETC. AND DESIGN. Cl. 46.
564,826. MARKSMAN FARMS ETC. AND DESIGN. Cl. 46.
564,827. MODELL'S. Cl. 39.
564,832. SEASON AIRE AND DESIGN. Cl. 39.
564,838. OMNIPOL. Cl. 1.
564,855. MAHZEL. Cl. 47.
564,862. ANGOLA. Cl. 39.
564,864. GARCIA AND DESIGN. Cl. 47.
564,865. RULALIE. Cl. 39.
564,862. AS IN CIRCLE. Cl. 23.
564,863. ORCHID KOOL-STTE. Cl. 2.
564,866. FAS-CILAC. Cl. 18.
564,869. COMPANION COUNTRY COAT. Cl. 39.
564,871. LUSTRELITE. Cl. 51.
564,872. TRU-SHEEN. Cl. 52.
564,882. CHIPS FROM THE LISTENING POST. Cl. 23.
564,884. SHOTWELL'S AND DESIGN OF BASKET. Cl. 46.
564,893. OVER-JOYCE. Cl. 39.
564,907. KENNEL COMFORT. Cl. 6.
564,917. COMFO-SAK. Cl. 22.
564,921. ONE STEP. Cl. 51.
564,922. RE-FIT-DENT. Cl. 44.
564,934. SANI-SERV AND DESIGN. Cl. 2.
564,936. F. O. E. AND PICTURE OF EAGLE. Cl. 36.
564,937. J. O. E. AND PICTURE OF EAGLE. Cl. 36.
564,940. M'LORD. Cl. 39.
564,943. TL WITHIN DESIGN. Cl. 23.
564,944. SUIT-4-ALL AND DESIGN. Cl. 39.
564,945. BUBBLE-O-BILL AND DESIGN. Cl. 39.
564,947. "GTL." Cl. 51.
564,948. UPPERCLASSMAN. Cl. 51.
564,951. COUNTRYSIDE CASUALS. Cl. 39.
564,952. EQUIVOQUE. Cl. 51.
564,955. KNO-MR. Cl. 18.
564,957. TAKE TWO. Cl. 51.
564,958. THE FLAPDOODLES. Cl. 35.
564,959. SAY SO. Cl. 51.
564,961. CHLOR-O-CREME. Cl. 51.
564,962. TEX-LOK. Cl. 12.
564,967. THE MANNET. Cl. 39.
564,968. THE SEQUENCE. Cl. 22.
564,969. ANNIE OAKLEY. Cl. 45.
564,977. FERNDALE AND DESIGN. Cl. 39.
564,978. KINGSCOURT. Cl. 42.
564,981. NO TRUTH TO THIS! AND DESIGN. Cl. 36.
564,986. GRELLEX. Cl. 4.
564,989. FORT AQUAFOIL. Cl. 42.
564,990. KOBESHAN. Cl. 42.
564,992. MISS FRANCE. Cl. 39.
564,994. BLUELLA. Cl. 18.
564,996. BEEKMAN HILL. Cl. 42.
565,001. REVOLT. Cl. 8.
565,005. ROSAND COURAGE AND DESIGN. Cl. 36.
565,008. SPONGEX. Cl. 1.
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Hoffman-La Roche, Inc., Nutley, N. J. 563,420, ren. 5-7-58. Cl. 18.
Holbrook Pharmacal Co., Inc., New York, to The G. F. Harvey Co., Inc., Saratoga Springs, N. Y. 259,761, ren. 8-30-58. Cl. 18.
Holman Brothers Ltd., Camborne, Cornwall, England. 670,245, pub. 11-12-57. Cl. 34.
Homemaker Rugs, Inc., New York, N. Y. 670,256, pub. 7-2-57. Cl. 42.
House of Swansdown, Inc., The, New York, N. Y. 565,104, canc. Cl. 39.
Howes, Mead & Sons, Inc., New York, N. Y. 565,610, canc. Cl. 42.
Hudnut, Richard, New York, N. Y. 670,255, pub. 9-9-58. Cl. 51.
Hughes Tool Co., Houston, Tex. 670,202, pub. 9-9-58. Cl. 23.
Hunt, Rodney, Machine Co., Orange, Mass. 670,204, pub. 9-9-58. Cl. 23.
Hydrotherm, Inc., Northvale, N. J. 670,243, pub. 9-9-58. Cl. 34.
Imperial Furniture Co., Grand Rapids, Mich. 670,227, pub. 9-9-58. Cl. 32.
Integrated Cottages, Inc., Los Angeles, Calif. 670,247, pub. 9-9-58. Cl. 34.
International Latex Corp., Dover, Del. 670,262, pub. 9-9-58. Cl. 39.
International Radio Corp., Ann Arbor, Mich., to Sylvania Electric Products Inc., New York, N. Y. 564,229, ren. 1-24-59. Cl. 26.
International Shoe Co., St. Louis, Mo. 564,035, ren. 1-17-58. Cl. 39.
International Silver Co., The, Meriden, Conn. 670,227, pub. 9-9-58. Cl. 28.
Interwoven Stocking Co., New Brunswick, N. J. 670,416. Cl. 39.
Irwin, Neisler and Co., Decatur, Ill. 670,142, pub. 9-9-58. Cl. 18.
Itshide Rubber Co., Ltd., Petersfield, Hampshire, England. 670,278, pub. 9-9-58. Cl. 39.
Jeunesse Cosmetics, Inc., Dallas, Tex. 670,264, pub. 9-9-58. Cl. 51.
Johns, Garwood L., d. b. a. Garwood L. Johns Co., Glendale, Ariz. 670,326, pub. 9-9-58. Cl. 46.
Johns, Garwood L., Co.: *See*—
Johns, Garwood L.
Johnston, Everett: *See*—
Vermilion, L. E.
Johnson & Johnson, New Brunswick, N. J., from Le Page's, Gloucester, Mass. 670,124, pub. 9-9-58. Cl. 16.
Jones and Vaughan Inc., Richmond, Va. 670,148-50, pub. 9-9-58. Cl. 18.
Joyce, Inc., Pasadena, Calif. 564,883, canc. Cl. 39.
Judy Publishing Co., Chicago, Ill. 565,044, canc. Cl. 38.
Juilliard, A. D., & Co., Inc., New York, N. Y. 564,998, canc. Cl. 42.
K-M Chemical Co., Thomasville, Ga. 564,955, canc. Cl. 18.
Kabushiki Kaisha Marudaya Seito Bocki, Daito-ku, Tokyo, Japan. 670,172, pub. 9-9-58. Cl. 22.
Kahn Bros. Co., Chicago, Ill. 670,069, pub. 9-9-58. Cl. 1.
Kanegafuchi Bocki Kabushiki Kwaisha, Tokyo, Japan. 252,580, ren. 12-7-57. Cl. 1.
Kanegafuchi Bocki Kabushiki Kwaisha, Tokyo, Japan. 252,580, ren. 12-7-57. Cl. 1.
Karst-Werk Maschinen- und Metallwarenfabrik Gesellschaft m. b. H., Vienna, Austria. 566,001, canc. Cl. 8.
Kashiki, John, Parlier, Calif. 670,244, pub. 9-9-58. Cl. 46.
Kathryn, Inc., Chicago, Ill. 564,971, canc. Cl. 51.
Kayton Imports, Inc., New York, N. Y. 670,254, pub. 9-9-58. Cl. 39.
Kelly, Eddy, Inc., New York, N. Y. 670,271, pub. 9-9-58. Cl. 51.
Kendall Co., The, Boston, Mass. 670,230, pub. 9-9-58. Cl. 39.
Kennel Comfort, San Francisco, Calif. 564,907, canc. Cl. 6.
Kent-Coffey Mfg. Co., Lenoir, N. C. 564,907, canc. Cl. 50.
Kent-Coffey Mfg. Co., Lenoir, N. C. 564,908, canc. Cl. 50.
Kenworth Mfg. Co., Milwaukee, Wis. 670,409. Cl. 28.
Keystone Lubricating Co., Philadelphia, Pa. 124,068, ren. 12-21-44. Cl. 18.
Keystone Lubricating Co., Philadelphia, Pa. 262,978, ren. 12-6-58. Cl. 28.
Kickaway Garments, Inc., Chicago, Ill. 670,229, pub. 9-1-58. Cl. 39.
Kimco, Inc., Westerville, Ohio. 670,175, pub. 9-9-58. Cl. 22.
King Candy Co., Fort Worth, Tex. 670,205, pub. 9-9-58. Cl. 46.
Klug, Clarence, Los Angeles, Calif. 563,153, canc. Cl. 42.
Klug, Clarence, Los Angeles, Calif. 565,154, canc. Cl. 42.
Kobayra-Do Co. Ltd., Chuo-ku, Tokyo, Japan. 670,260, pub. 9-9-58. Cl. 51.
Kolorcraft Products, Inc., Chicago, Ill. 670,241, pub. 9-9-58. Cl. 39.
Kresge, S. S., Co., Detroit, Mich. 670,253, pub. 9-9-58. Cl. 36.
Krueger, G., Brewing Co., Newark, N. J. 670,247, pub. 9-9-58. Cl. 45.
Kur-ex Laboratories, Columbia, Miss. 670,263, pub. 9-9-58. Cl. 51.
Lady Scott, Inc., New York, N. Y. 670,273, pub. 9-9-58. Cl. 39.
Lake, Anthony R., Marion, Iowa. 564,917, canc. Cl. 52.
Lamson Buick Co., Inc., Long Island City, N. Y. 565,156, canc. Cl. 102.
Lanolin Preparens, Inc., Beverly Hills, Calif. 670,453, pub. 9-9-58. Cl. 107.
Leaf Brands, Inc., Chicago, Ill. 670,223-5, pub. 9-9-58. Cl. 46.
Lear, Inc., Santa Monica, Calif. 670,216, pub. 9-9-58. Cl. 28.
Lee & Gaskin Co., Castroville, Calif. 670,222, pub. 9-9-58. Cl. 46.
Lehrer, Fred F., d. b. a. Haymarket Coat Co., Los Angeles, Calif. 565,035, canc. Cl. 39.
Lehn & Fink Products Corp., Bloomfield, N. J. 670,272, pub. 9-9-58. Cl. 51.
Lelong, Lucien, Inc., Chicago, Ill. 564,967, canc. Cl. 61.
Le Page's: *See*—
Johnson & Johnson.
Les Parfums de Dana, Inc., New York, N. Y. 670,275, pub. 9-12-58. Cl. 52.
Levy, Theodore: *See*—
Central Grape Products Co.
Liberty Travel Service Inc., New York, N. Y. 670,232, pub. 9-9-58. Cl. 108.
Lida Brothers, Inc., New York, N. Y. 670,224, pub. 9-9-58. Cl. 26.
Lindeteves Inc., New York, N. Y. 564,942, canc. Cl. 39.
Linmar, Inc., Cambridge, Mass. 670,121, pub. 12-12-58. Cl. 16.
Lorillard, P., Co., New York, N. Y. 670,131, pub. 9-9-58. Cl. 17.
Lowe Brothers Co., The, Dayton, Ohio. 670,273, pub. 9-9-58. Cl. 52.
Luer Packing Co., Los Angeles, Calif. 670,256, pub. 9-9-58. Cl. 46.
Lummus Co., The, New York, N. Y. 670,235, pub. 9-9-58. Cl. 103.
Largi Gesellschaft fur Warmetechnik m. b. H., Frankfort am Main, Germany. 670,186, pub. 9-9-58. Cl. 23.
Lyr-Ozark, Inc., Webb City, Mo. 565,034, canc. Cl. 22.
Manhattan Soap Co., Inc.: *See*—
Haskins Brothers & Co.
Marglen, Juliette, Inc., Ridgefield, N. J. 670,261, pub. 9-9-58. Cl. 51.
Marksman Farms, Inc., New York, N. Y. 564,936, canc. Cl. 46.
Martin, R. T., d. b. a. R. T. Martin Co., Salt Lake City, Utah. 670,226, canc. Cl. 31.
Martin, R. T. Co.: *See*—
Martin, R. T.
McKesson & Robbins, Inc., Bridgeport and Fairfield, Conn., to McKesson & Robbins, Inc., New York, N. Y. 562,455, ren. 11-15-58. Cl. 6.
Mead Johnson & Co., Evansville, Ind. 670,122, pub. 10-1-57. Cl. 16.
Meinecke & Co., Inc., New York, N. Y. 670,220, pub. 9-9-58. Cl. 52.
Melville Shoe Corp., New York, N. Y. 670,271, pub. 9-9-58. Cl. 39.
Members Mutual Insurance Co., The, Dallas, Tex. 670,201, pub. 9-9-58. Cl. 102.
Merritt-Taylor Inc., New York, N. Y. 564,932, canc. Cl. 39.
Metallochlanchfabrik A. G., Lucern, Switzerland. 670,112, pub. 9-9-58. Cl. 13.
Metzgar Conveyor Co., Grand Rapids, Mich. 670,193, pub. 9-9-58. Cl. 23.
Meyercord Co., The, Chicago, Ill. 565,160, canc. Cl. 38.
Miami Stone, Inc., Miami, Okla. 670,002, pub. 9-9-58. Cl. 13.
Michigan Bean Co.: *See*—
Wickes Corp., The.
Mid-Continent Metal Products Co., Chicago, Ill. 670,250, pub. 9-9-58. Cl. 34.
Mid-Sun Trading Co., Chicago, Ill. 670,257, pub. 9-9-58. Cl. 46.
Miss France Coats, Inc., New York, N. Y. 564,981, canc. Cl. 39.
Model Brassiere Corp., Cortland, N. Y. 670,274, pub. 7-8-58. Cl. 39.
Modell, Henry, & Co., Inc., New York, N. Y. 564,937, canc. Cl. 39.
Molson's Brewery Ltd., Montreal, Quebec, Canada. 670,243, pub. 9-9-58. Cl. 45.
Molson's Brewery Ltd., d. b. a. Molson's Crown & Anchor Lager Brewery Ltd., Montreal, Quebec, Canada. 670,249, pub. 9-9-58. Cl. 45.
Molson's Crown & Anchor Lager Brewery Ltd.: *See*—
Molson's Brewery Ltd.
Monarch Rug Mills, Inc., Dalton, Ga. 670,258-9, pub. 9-9-58. Cl. 42.

Monsanto Chemical Co., St. Louis, Mo. 564,529, ren. 2-7-56. Cl. 4.
Monsanto Chemical Co., St. Louis, Mo. 565,294, ren. 2-7-56. Cl. 37.
Morey Machinery Co., Inc., New York, N. Y. 670,194, pub. 9-6-56. Cl. 23.
Morley-Stein Products, New York, N. Y. 565,119, canc. Cl. 37.
Morrell, John, & Co., Ottumwa, Iowa. 562,223, ren. 12-13-55. Cl. 15.
Morrell, John, & Co., Ottumwa, Iowa. 562,224, ren. 1-10-56. Cl. 4.
Morrell, John, & Co., Ottumwa, Iowa. 670,231, pub. 9-6-56. Cl. 46.
Morrison, Robert K., d. b. a. The Dorsett System, Jamestown, N. Y. 670,239, pub. 9-6-56. Cl. 32.
Morris, Sewall & Co., Inc., Houston, Tex. 670,276, pub. 9-6-56. Cl. 52.
Murray Co. of Texas, Inc., The, d. b. a. Boston Gear Works, Division of The Murray Co. of Texas, Inc., North Quincy, Mass. 670,192, pub. 9-6-56. Cl. 23.
Murray Tile Co., Inc., Cloverport, Ky. 670,095, pub. 9-6-56. Cl. 12.
Muzlet, Sebastian J., d. b. a. VB Laboratories, Jersey City, N. J. 670,141, pub. 9-6-56. Cl. 18.
Mutation Mink Breeders Association, Racine, Wis. 670,251-4, pub. 7-5-56. Cl. 1.
McClelland, M. R., Boss, Inc., Tacoma, Wash. 670,273, pub. 9-25-56. Cl. 52.
McDowell Mfg. Co., Millvale, Pa. 670,116, pub. 9-6-56. Cl. 12.
McGraw Electric Co., Chicago, and St. Louis, Mo., to McGraw Edison Co., Elgin, Ill. 563,405, ren. 12-27-55. Cl. 21.
McGurk, Peter J., from Brewers' Best Associates, Inc., Elizabeth, N. J., to Brewers' Best Inc. 564,825, canc. Cl. 42.
Narragansett Wire Co., Pawtucket, R. I. 670,172, pub. 9-6-56. Cl. 21.
National Dairy Products Corp., New York, N. Y. 670,130, pub. 9-6-56. Cl. 46.
National Food Marketers, Inc., Blue Anchor, N. J. 670,228, pub. 9-6-56. Cl. 46.
National Laboratories, Inc., Toledo, Ohio, 670,272 pub. 9-6-56. Cl. 52.
National Oats Co., Cedar Rapids, Iowa, 670,226, pub. 9-6-56. Cl. 46.
National Plastic Products Co., The, Odenton, Md. 670,088, pub. 9-6-56. Cl. 1.
National Queen's Kitchens, Inc., d. b. a. The National Queen's Kitchen, Inc., Mount Prospect, Ill. 670,314, pub. 9-6-56. Cl. 46.
National Queen's Kitchen, Inc., The: *See*—
National Queen's Kitchens, Inc.
National Ring Traveler Co., Pawtucket, R. I. 565,142, canc. Cl. 21.
National Sportswear Corp., Forest City, Pa. 564,940, canc. Cl. 39.
Nea Service, Inc.: *See*—
Blosser, Merrill C.
Nepera Chemical Co. Inc., Nepera Park, N. Y. 568,047, canc. Cl. 18.
Newhall, John K., Aurora, Ill. 564,863, canc. Cl. 2.
Newton Pharmacal Co. Inc., Brooklyn, N. Y. 670,151, pub. 9-6-56. Cl. 18.
Nilo Santos Pinto, Rio de Janeiro, Brazil. 670,255, pub. 9-6-56. Cl. 36.
Norris Mfg. Co., Taylors, S. C. 670,254, pub. 9-6-56. Cl. 39.
North and Sloman, Inc., White Plains, N. Y. 670,290, pub. 9-6-56. Cl. 102.
Northern Lightweight Aggregate, Inc., Cohoes, N. Y. 670,061, pub. 9-6-56. Cl. 1.
Northwestern Steel and Wire Co., Sterling, Ill. 670,115, pub. 9-6-56. Cl. 12.
Norton Co., Troy, N. Y. 670,065-6, pub. 9-6-56. Cl. 4.
Nu-Life Chemical Co.: *See*—
Duckwich, Albert C.
Nylon Molding Corp., Garwood, N. J. 670,117, pub. 9-6-56. Cl. 13.
O-B Products Co.: *See*—
Price, Russell W.
Oak Brook Co.: *See*—
Baker, Abe.
Oakley, Annie, Enterprises, Los Angeles, Calif., to Annie Oakley Enterprises, Inc. 564,959, canc. Cl. 43.
Oakley, Annie, Enterprises, Inc.: *See*—
Oakley, Annie, Enterprises.
Oklahoma Publishing Co., The, Oklahoma City, Okla. 565,072, canc. Cl. 38.
Omnipol, Ltd. Co., Prague, Czechoslovakia. 564,836, canc. Cl. 1.
Oneida Ltd., Oneida, N. Y. 670,228-9, pub. 9-6-56. Cl. 28.
Oomphies, Inc., New York, N. Y. 564,951, canc. Cl. 39.
Opalite, Inc., Philadelphia, Pa. 670,220, pub. 9-6-56. Cl. 28.
Palagari Products, Inc., New York, N. Y., Eastport, Maine, and Hastings-on-Hudson, N. Y. 565,107, canc. Cl. 46.
Palico, Inc., Livingston, N. J. 565,143, canc. Cl. 51.
Palm Beach Co., Portland, Maine. 670,262, pub. 11-20-56. Cl. 39.
Palmer Chemical & Equipment Co., Inc., Atlanta, Ga. 670,146, pub. 9-6-56. Cl. 18.
Pando Publication, Inc., New York, N. Y. 565,073, canc. Cl. 38.
Parfums Parvil & Dentifrices du Docteur Pierre Rennie, Societe Anonyme, d. b. a. Parvil, Nanterre, France. 564,962, canc. Cl. 51.
Parke, Davis & Co., Detroit, Mich. 670,140, pub. 9-6-56. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 670,147, pub. 9-6-56. Cl. 18.
Parrell Cigar Co. of New York, Scranton, Pa. 670,138, pub. 9-6-56. Cl. 17.
Patman, Urban R., Inc., Los Angeles, Calif. 670,218. Cl. 44.
Paul, H. C., Ltd., Winnipeg, Manitoba, Canada. 670,163, pub. 9-6-56. Cl. 18.
Peerless Plastics, Culver City, Calif. 565,095, canc. Cl. 12.
Penney, J. C., Co., New York, N. Y. 569,272, ren. 9-13-55. Cl. 39.
Pennsalt Chemicals Corp., Philadelphia, Pa. 670,090, pub. 9-6-56. Cl. 6.
Pennsylvania Broadcasting Co., Philadelphia, Pa. 670,105, pub. 9-6-56. Cl. 107.
Petroleum Tool Research, Inc., Fort Worth, Tex. 670,211, pub. 9-6-56. Cl. 23.
Photostat Corp., Providence, R. I. 670,161, pub. 9-6-56. Cl. 23.
Pinnacle Products Co., Inc., Newark, Ohio. 670,099, pub. 9-6-56. Cl. 12.
Plant Products Corp., Blue Point, N. Y. 670,050, pub. 9-6-56. Cl. 19.
Porta Water Softener Co., Inc., Joliet, Ill. 670,232, pub. 9-6-56. Cl. 31.
Potter Drug & Chemical Corp., Malden, Mass. 122,291, ren. 10-29-56. Cl. 51.
Powell, John H., East Chicago, Ind. 670,277, pub. 9-6-56. Cl. 52.
Prentice, John R., d. b. a. American Breeders Service, Chicago, Ill. 670,065, pub. 9-6-56. Cl. 1.
Pressure Products Industries, Inc., Hatboro, Pa. 670,113, pub. 9-6-56. Cl. 13.
Price, Russell W., d. b. a. O-B Products Co., Newton, Mass. 670,295, pub. 9-6-56. Cl. 44.
Principe, Michael, New York, N. Y. 565,093, canc. Cl. 12.
Queen for a Day, Inc., Hollywood, Calif. 670,104, pub. 9-6-56. Cl. 107.
Queens Shortening & Refining Corp., Long Island City, N. Y. 670,308, pub. 9-6-56. Cl. 46.
Rainbow Plastics, El Monte, Calif. 670,174, pub. 9-6-56. Cl. 22.
Rapids-Standard Co., Inc., The, Grand Rapids, Mich. 670,102, pub. 9-6-56. Cl. 13.
Remington, F. R., Co., Bellwood, Ill. 670,260, pub. 9-6-56. Cl. 22.
Remington Typewriter Co., Ilion and New York, to Sperry Rand Corp., New York, N. Y. 138,158, ren. 10-15-55. Cl. 11.
Repertoire, Inc., Lansing, Mich. 563,066, canc. Cl. 38.
Republic Chemical Co., The, North Hollywood, Calif. 670,091, pub. 9-6-56. Cl. 1da.
Republic Commercial Corp., New York, N. Y. 670,413. Cl. 42.
Reynolds, George F., d. b. a. Dispose-A-Pak and Reynolds Engineering Co., Yonkers, N. Y. 670,407. Cl. 2.
Richards, Wesley A., d. b. a. General Testing Laboratories, Detroit, Mich. 564,847, canc. Cl. 51.
Richards, Wesley A., d. b. a. General Testing Laboratories, Detroit, Mich. 564,948, canc. Cl. 51.
Rieder Bros., Philadelphia, Pa. 670,242, pub. 9-6-56. Cl. 32.
Riggs Sportswear, Inc., New York, N. Y. 670,288, pub. 9-6-56. Cl. 39.
Rishalish, Saad M., Sao Paulo, Brazil. 670,257, pub. 9-6-56. Cl. 51.
Rochester Resin, Inc., Rochester, N. Y. 670,207, pub. 9-6-56. Cl. 23.
Rogers Imports Inc., New York, N. Y. 670,094, pub. 9-6-56. Cl. 8.
Roosen, H. D., Co., Brooklyn, to H. D. Roosen Co., Inc., New York, N. Y. 562,231, ren. 11-15-55. Cl. 11.
Roosen, H. D., Co., Inc.: *See*—
Roosen, H. D., Co.
Rosand: *See*—
Sandler, Rose.
Safety Industries, Inc., New Haven, Conn. 670,114, pub. 9-6-56. Cl. 13.
Safety Socket Screw Co., Chicago, Ill. 670,103, pub. 9-6-56. Cl. 13.
Sandess Mfg. Co., Philadelphia, Pa. 670,272, pub. 9-6-56. Cl. 39.
Sandler, Rose, also known as Rolland, d. b. a. Courage School, Washington, D. C., and New York, N. Y. 566,068, canc. Cl. 38.
Savage Arms Corp., Chicopee Falls, Mass. 670,303, pub. 9-6-56. Cl. 22.
Saymore Co., The, Memphis, Tenn. 670,240, pub. 9-6-56. Cl. 46.
Schooley Import Corp., New York, N. Y. 561,580, ren. 10-25-55. Cl. 47.
Schulte Marine Plastics: *See*—
Schulte, Robert M.
Schulte, Robert M., d. b. a. Schulte Marine Plastics, Portland, Oreg. 670,124, pub. 9-6-56. Cl. 13.
Schwarz Bros. Plastics Inc., Los Angeles, Calif. 564,824, canc. Cl. 2.
Scientific Solutions, Inc., West Palm Beach, Fla. 564,894, canc. Cl. 18.
Scranton Times, The, Scranton, Pa. 670,287, pub. 1-31-56. Cl. 38.
Seamless Rubber Co., The, New Haven, Conn. 670,297, pub. 9-6-56. Cl. 44.
Sears, Roebuck and Co., Chicago, Ill. 565,087, canc. Cl. 39.
Seymour Mfg. Co., The, Seymour, Conn. 670,098, pub. 9-6-56. Cl. 6.
Short, J. B., Milling Co., Chicago, Ill. 565,022, canc. Cl. 46.
Shotwell Mfg. Co., The, Chicago, Ill. 564,854, canc. Cl. 46.
Shu-Mak-Up, Inc., Los Angeles, Calif. 670,075, pub. 9-6-56. Cl. 8.
Shunk Mfg. Co., Bucyrus, Ohio. 670,306, pub. 9-6-56. Cl. 28.
Shwayder Brothers, Inc., Denver, Colo. 670,304, pub. 9-6-56. Cl. 3.
Sife Co., St. Paul, Minn. 670,283, pub. 9-6-56. Cl. 50.

Simplified Tax Records, Inc., New York, N. Y. 670,286, pub. 9–9–58. Cl. 101.
Singer Mfg. Co., The, Elizabeth, N. J. 670,180, pub. 9–9–58. Cl. 23.
Sloane-Blabon Corp., Trenton, N. J., and Philadelphia, Pa. 565,089, canc. Cl. 20.
Societa Ambrosiana Riproduzioni Sacre, Milan, Italy. 564,862, canc. Cl. 38.
Societe Anonyme Andre Citroen, Paris, France. 670,189, pub. 9–9–58. Cl. 22.
Society Brand Clothes, Inc., Chicago, Ill. 564,853, canc. Cl. 39.
Soojian, Michael, Enterprises: *See*—
Soojian's Inc.
Soojian's Inc., from Michael Soojian Enterprises, Fresno, Calif. 670,207, pub. 9–9–58. Cl. 46.
Sooty Concessions Ltd., London, England. 670,201, pub. 9–9–58. Cl. 46.
Southern Silk Mills, Inc., Spring City, Tenn. 670,291, pub. 9–9–58. Cl. 43.
Spellings, Lucian L., d. b. a. Tom-Cat Products Co., Jonesboro, Ark. 670,071, pub. 9–9–58. Cl. 6.
Sperry Rand Corp.: *See*—
Standard Typewriter Mfg. Co.
Sponge Rubber Products Co., The, Shelton, Conn. 565,008, canc. Cl. 1.
Sprague Electric Co., North Adams, Mass. 670,169, pub. 9–9–58. Cl. 21.
Stacor Equipment Co., Newark, N. J. 670,244, pub. 9–9–58. Cl. 32.
Standard Typewriter Mfg. Co., to Sperry Rand Corp., New York, N. Y. 15,960, ren. 10–23–58. Cl. 23.
Standard Typewriter Mfg. Co., to Sperry Rand Corp., New York, N. Y. 15,961, ren. 10–23–58. Cl. 23.
Standard Typewriter Mfg. Co., to Sperry Rand Corp., New York, N. Y. 15,962, ren. 10–23–58. Cl. 23.
Steel Publications, Inc., Pittsburgh, Pa. 670,414. Cl. 38.
Stein Bros. Mfg. Co., Chicago, Ill. 670,240, pub. 9–9–58. Cl. 32.
Stephan Laboratories, Washington, D. C. 670,285, pub. 9–9–58. Cl. 51.
Stephenson Chemical Co.: *See*—
Stephenson, C. P.
Stephenson, C. P., d. b. a. Stephenson Chemical Co., College Park, Ga. 670,074, pub. 5–20–58. Cl. 6.
Sterling Drug Inc., New York, N. Y. 670,075, pub. 9–9–58. Cl. 6.
Suit-4-All, Inc., New York, N. Y. 564,944, canc. Cl. 39.
Summer and Co., Columbus, Ohio. 670,251, pub. 9–9–58. Cl. 24.
Sun Garden Packing Co., San Jose, Calif. 670,245, pub. 9–9–58. Cl. 46.
Supreme Wine Co., Inc., Boston, Mass. 670,246, pub. 9–9–58. Cl. 47.
Sure-Seal Equipment Co., Portland, Oreg. 670,411. Cl. 35.
Swack Fertilizer Co., Inc., Dubois, Pa. 670,065, pub. 9–9–58. Cl. 2.
Swingline, Inc., Long Island City, N. Y. 670,188, pub. 9–9–58. Cl. 23.
Sylvania Electric Products Inc.: *See*—
International Radio Corp.
Tafon Distributors, Inc., Los Angeles, Calif. 670,136, pub. 2–26–57. Cl. 13.
Tanbro Fabrics Corp., New York, N. Y. 565,103, canc. Cl. 42.
Taylor-Hall Corp., Denver, Colo. 565,146, canc. Cl. 23.
Television Guide, Inc., New York, N. Y. 565,064, canc. Cl. 38.
Texas Co., The, Dover, Del., and New York, N. Y. 564,963, canc. Cl. 12.
Travel Manufacturers, Inc., New York, N. Y. 565,014, canc. Cl. 20.
Thompson Medical Co., Inc., New York, N. Y. 670,135, pub. 8–16–57. Cl. 18.
Tilo Roofing Co., Inc., Stratford, Conn. 363,283, ren. 12–20–58. Cl. 16.
Tom-Cats Products Co.: *See*—
Spellings, Lucian L.
Travel Queen Coaches, Norco, Calif. 670,160, pub. 9–9–58. Cl. 19.
Trena Fix Co.: *See*—
Goodhew Aviation Co. Ltd.
Triangle Publications, Inc., Philadelphia, Pa. 565,042, canc. Cl. 38.
Trigo Bros. Packing Corp., San Juan, Puerto Rico. 670,350, pub. 9–9–58. Cl. 46.
Triton Mfg. Co., Inc., East Haddam, Conn. 565,145, canc. Cl. 23.
Tru-Shoen Corp., Richmond, Calif. 564,872, canc. Cl. 52.
Tucker Novelty Co., Inc., New York, N. Y. 670,223, pub. 9–9–58. Cl. 28.
Ultra Chemical Works, Inc., Paterson, N. J. 670,381, pub. 9–9–58. Cl. 52.
Underwood & Hale, Inc., Lynwood, Calif. 670,285, pub. 9–9–58. Cl. 42.
Union Carbide Corp., New York, N. Y. 670,068, pub. 9–9–58. Cl. 5.
Union Die Casting Co., Whittier, Calif. 670,191, pub. 9–9–58. Cl. 23.
United Biscuit Co. of America, Melrose Park, Ill. 670,204, pub. 9–9–58. Cl. 46.
United Fruit Co., Boston, Mass. 670,220, pub. 9–9–58. Cl. 46.
United Merchants and Manufacturers, Inc., New York, N. Y. 564,969, canc. Cl. 42.
United Sheeplined Clothing Co., Inc., New York, N. Y. 670,276, pub. 9–9–58. Cl. 39.
United Van Lines, Inc., St. Louis, Mo. 670,297, pub. 9–9–58. Cl. 105.
United Wallpaper Inc., d. b. a. DeSoto Paint & Varnish Co., Chicago, Ill. 670,136, pub. 9–9–58. Cl. 16.
Universal Oil Products Co., Des Plaines, Ill. 670,077, pub. 9–9–58. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 670,266, pub. 9–9–58. Cl. 51.
VB Laboratories: *See*—
Musico, Sebastian J.
VEB Fahrzeug- und Gerostewerk Simson, Suhl, Germany. 670,162, pub. 9–9–58. Cl. 19.
Valcourt, Inc., Boonton, N. J. 565,148, canc. Cl. 20.
Valley Products Co., Memphis, Tenn. 670,283, pub. 9–9–58. Cl. 52.
Vandomatic, Terrance, Calif. 565,129, canc. Cl. 102.
Van Dyke, L. J., d. b. a. Van Dyke Supply Co., Woonsocket, S. Dak. 670,097, pub. 9–9–58. Cl. 12.
Van Dyke Supply Co.: *See*—
Van Dyke, L. J.
Vat O Rene Corp., Montclair, N. J. 670,362, pub. 9–9–58. Cl. 51.
Vendomatic, Terrance, Calif. 565,130, canc. Cl. 102.
Vendomatic, Terrance, Calif. 565,131, canc. Cl. 102.
Verley, Albert, & Co., Linden, N. J. 670,368–9, pub. 9–9–58. Cl. 51.
Vermillion Avocado Co.: *See*—
Vermillion, L. B.
Vermillion, L. B., d. b. a. Vermillion Packing Co., and Vermillion Avocado Co., to R. Johnston, Vista, Calif. 363,871, ren. 1–10–59. Cl. 46.
Vermillion Packing Co.: *See*—
Vermillion, L. B.
Vibra Laser Corp., Sherman Oaks, Calif. 670,296, pub. 9–9–58. Cl. 44.
Virginia-Carolina Chemical Corp., Richmond, Va. 670,076, pub. 9–9–58. Cl. 6.
Vita Food Products, Inc., New York, N. Y., from Vita Food Products, Inc., Chicago, Ill. 670,306, pub. 9–9–58. Cl. 46.
Walker Brothers Ltd., Burnaby, British Columbia, Canada. 670,122, pub. 9–9–58. Cl. 16.
Warner-Lambert Pharmaceutical Co., Morris Plains, N. J., from Hine Pharmacal Co., Inc., d. b. a. Genesee Drug Co., Utica, N. Y. 670,134, pub. 3–19–57. Cl. 18.
Warner-Lambert Pharmaceutical Co., Morris Plains, N. J. 670,137, pub. 1–7–58. Cl. 18.
Weber Shoe Co., Inc., Tipton, Md. 670,277, pub. 9–9–58. Cl. 39.
Western Newspaper Union, New York, N. Y. 670,206, pub. 9–9–58. Cl. 23.
Weyer, George H., Inc., Kansas City, Mo. 670,370, pub. 9–9–58. Cl. 51.
Wheeler Protective Apparel, Inc., Chicago, Ill. 670,417. Cl. 39.
White, Bernard B., New York, N. Y. 670,354, pub. 9–9–58. Cl. 50.
Whitin Machine Works, Whitinsville, Mass. 670,256, pub. 12–13–55. Cl. 37.
Whitman, Stephen F., & Son, Inc., Philadelphia, Pa. 670,338, pub. 9–9–58. Cl. 46.
Wickes Corp., The, d. b. a. Michigan Bean Co., Saginaw, Mich. 670,313, pub. 9–9–58. Cl. 46.
Williams Gold Refining Co., Inc., Buffalo, N. Y. 360,268, ren. 9–13–58. Cl. 44.
Williams Gold Refining Co., Inc., Buffalo, N. Y. 361,894, ren. 11–1–58. Cl. 44.
Wilmoral Advertising Co., a division of Worldwide Forwarders, Inc.: *See*—
Worldwide Forwarders, Inc.
Wilmo, Frank W., & Son, Inc., Philadelphia, Pa. 670,110, pub. 9–9–58. Cl. 12.
Wirthmore Feed Co., Cleveland, Ohio. 565,045, canc. Cl. 46.
Worldwide Forwarders, Inc., d. b. a. Wilmoral Advertising Co., a division of Worldwide Forwarders, Inc., New York, N. Y. 670,368, pub. 9–9–58. Cl. 101.
Wurttembergische Metallwarenfabrik, Geislingen (Steige), Germany. 670,107–8, pub. 9–9–58. Cl. 13.
Wyandotte Chemicals Corp., Wyandotte, Mich. 670,382, pub. 9–9–58. Cl. 52.
Yankee, Inc., Dublin, N. H. 670,288, pub. 9–9–58. Cl. 38.
Youth Publications of Canada, Toronto, Ontario, Canada. 670,330, pub. 9–9–58. Cl. 101.
Zeigler-Harris & Co., Burbank, Calif. 670,408. Cl. 13.
Ziel & Co., Inc., San Francisco, Calif. 670,341, pub. 9–9–58. Cl. 46.
Ziff-Davis Publishing Co., Chicago, Ill. 565,097, canc. Cl. 38.
Zero Mfg. Co., Burbank, Calif. 670,062, pub. 9–9–58. Cl. 2.
Zylon Products Co., Inc., Pawtucket, R. I. 670,298, pub. 9–9–58. Cl. 44.

U. S. GOVERNMENT PRINTING OFFICE: 0——1959

Cl. 18.

Sifo Co., St. Paul, Minn. 670,853, pub. 9-9-58. Cl. 80.

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
December 2, 1958 Volume 737 Number 1

PATENTS

NOTICES

Foreign Patents Received in the Scientific Library as of October 31, 1958

Country	Date received	Highest number
Australia		
(*Abstracts*)	Sept. 5, 1958	24,839
(*Patents*)	Sept. 2, 1958	214,662
Austria	Oct. 13, 1958	200,001
Belgium	Oct. 2, 1958	584,500
Canada	Oct. 22, 1958	584,806
Denmark	Oct. 28, 1958	85,670
Egypt	July 17, 1956	1,185
Finland	Sept. 6, 1958	29,558
France		
(*Patents*)	Oct. 2, 1958	1,168,900
(*Additions*)	Oct. 2, 1958	68,100
Germany		
(*Auslegeschriften*)	Sept. 12, 1958	1,035,070
(*Patents*)	Sept. 10, 1958	1,022,529
Great Britain	Oct. 24, 1958	802,800
India	Oct. 9, 1958	89,241
Ireland	Oct. 1, 1958	21,600
Italy	Sept. 22, 1958	555,500
Japan	Oct. 8, 1958	7,350
Netherlands	Oct. 10, 1958	89,163
Norway	Oct. 1, 1958	93,406
Philippines	June 29, 1956	217
Poland	Oct. 1, 1958	41,481
Sweden	Oct. 20, 1958	164,657
Switzerland	Oct. 24, 1958	331,001
Yugoslavia	Feb. 17, 1955	16,461

Australia: First 2,000 incomplete
Belgium: First printed 493,079
Canada: First printed 463,746
Czechoslovakia: Latest 81,300/1952
Finland: First printed 19,428
First 500 incomplete
Hungary: First received 8,792
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Russia: Latest 2496/1928
Yugoslavia: First received 10,001

Classification Order No. 365

The following class transfer, for concurrent reclassification and examination of applications pending therein, is hereby ordered to take effect on Monday, November 10, 1958:

From Division 35 to Classification Division III
Class 271, Sheet or Web Feeding or Delivering, Subclasses 2.1 through 2.19

M. C. ROSA,
Director, Patent Examining Operation.

Classification Order No. 366

The following transfer is hereby ordered to take effect on Monday, November 10, 1958:

From Classification Division III to Division 35
Class 164, Cutting and Punching Sheets and Bars, Subclasses 111 through 115

The reclassification of this class has advanced to a stage at which concurrent examination of applications pending therein is no longer advantageous. Reclassification will continue to completion in Classification Division III.

M. C. ROSA,
Director, Patent Examining Operation.

Disclaimer

2,750,392.—*Francis E. Cielak*, Indianapolis, Ind. Phenylpyridylalkanols. Patent dated June 12, 1956. Disclaimer filed Oct. 30, 1958, by the inventor and the assignee, *Reilly Tar & Chemical Corporation.*

Hereby enter this disclaimer to claims 2 and 3 of said patent.

Patents Available for Licensing or Sale

2,854,909. Roll Film Washer. Bob B. Dodson, Post, Tex.

2,821,072. Knitting Machine. Pierre Leleu, Rennes, France. Correspondence to: Michael S. Striker, 511 Fifth Ave., New York 17, N. Y.

Air Reduction Company, Inc., is prepared to grant non-exclusive licenses under the following 28 patents on reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Manager, Patent Department, Air Reduction Company, Inc., Murray Hill, N. J.

2,260,770. Automatic Arc Welding Machine.
2,282,031. Welding Apparatus.
2,282,032. Method of Seam Welding.
2,254,851. Electric Deseaming.
2,289,979. Automatic Arc Welding System.
2,305,027. Conveyer System.
2,320,797. Conveyer System.
2,358,144. Welding Apparatus.
2,360,160. Gas-Arc Welding Apparatus.
2,393,662. Control System for Welding Heads.

New Applications Received During October 1958

Patents	6,052
Designs	409
Plant Pats	13
Reissues	24
Total	7,098

Issue

Patents	944	No. 2,862,205 to No. 2,863,148, incl.
Designs	36	No. 183,999 to No. 184,034, incl.
Plant Pats	2	No. 1,775 to No. 1,776, incl.
Reissues	1	No. 24,872
Total	983	

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

2,405,542. Fusion Welding.
2,444,767. Gas-Arc Welding Apparatus.
2,468,370. Arc Welding Machine.
2,472,822. Arc Welding.
2,473,258. Gas-Arc Torch.
2,474,023. Method of Gas-Shielded Alternating Current Arc Welding.
2,527,285. Fluid Cooled Welding Apparatus.
2,555,017. Electrode Holder for Gas Blanketed Electric Arc Weldings.
2,571,684. Gas Shielded Arc Welding Torch.
2,612,584. Inert Gas Welding Torch.
2,680,181. Arc Welding.
2,721,248. Tube Welder.
2,736,787. Arc Welding Apparatus.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION

Oldest Application

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202, 603
Total number of pending Design applications	7, 000
Total number of applications awaiting action (excluding Designs)	84, 564
Total number of Design applications awaiting action	3, 421
Date of oldest new application	Nov. 18, 1958
Date of oldest amended application	Nov. 12, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 51, 52, 53, 65, 85, 86, 89, 95, 99, 54.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	18, 38, 37, 61, 62, 64, 69, 81, 84, 99.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 13, 15, 14, 21, 24, 27, 88, 91, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 38, 35, 46.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 9, 29, 30, 32, 33, 42, 33, 60.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 33, 35, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	8, 15, 20, 28, 30, 32, 40, 44, 47.
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DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Harvesting; Planting; Plant Husbandry; Scattering; Unloaders; Harvest and Diggers; Plows	3-10-58	2-25-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	2-3-58	1-29-58
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	3-5-58	3-12-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Slides, Guides and Ways	3-19-58	3-17-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	1-17-58	12-26-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	3-3-58	3-3-58
7. (IV) GONSALVES, J. S. (ANDERSON, E. G., acting), Optics	2-17-58	3-4-58
8. (V) LEWIS, L. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	4-2-58	3-19-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	3-17-58	3-3-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-31-58	3-26-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	4-14-58	3-27-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Intervalued Clutch and Motor Controls	2-27-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	2-24-58	2-20-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-16-57	12-3-57
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17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	4-24-58	4-25-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	2-19-58	2-17-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	4-2-58	3-31-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	2-3-58	2-3-58
21. (III) MADER, R. C., Textiles	1-26-58	1-22-58
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-6-58	2-1-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-15-57	11-12-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	2-20-58	2-27-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	2-26-58	2-17-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-4-58	1-10-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	1-14-58	1-9-58
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29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	2-10-58	2-17-58
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DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-6-58	4-24-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-31-58	4-1-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	3-13-58	3-11-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	3-27-58	3-3-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding	6-2-58	6-2-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	12-6-57	12-3-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	3-10-58	1-24-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	5-5-58	6-2-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	4-18-58	4-26-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-12-58	3-12-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	3-26-58	3-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	1-13-58	1-13-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-3-58	4-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-20-58	1-8-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	3-11-58	2-28-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-17-58	3-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	4-2-58	4-3-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-12-58	2-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-3-58	2-20-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	2-3-58	2-13-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	2-13-58	2-6-58
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57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	2-17-58	2-17-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part); Selective Punching	4-24-58	5-1-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-10-58	2-13-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	4-3-58	4-1-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	3-3-58	3-3-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	4-18-58	4-17-58
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64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	2-3-58	2-3-58
66. (V) LISANN, I., Geometric Instruments; Acoustics; Building Structures	1-7-58	1-6-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	3-10-58	3-3-58
69. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	3-1-58	4-24-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	4-1-58	4-1-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	3-24-58	4-4-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Web Feeding	4-1-58	3-13-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	4-1-58	3-21-58
CLASS. DIVS. V—ANGEL, C. D., Scaffolds; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	2-10-58	2-12-58
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	2-14-58	2-17-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	4-4-58	6-2-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	1-2-58	2-26-58

*Established August 28, 1957, by order of the Commissioner—722 O. G. 315.

The following divisions have been abolished: 65 and 68

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

29. (V) FRITZ, M. M., Tools: Woodworking: Button, Barrel and Wheel Making; Baggage: Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	2-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Connections; Gate Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Cattle Handling; Refrigeration	2-14-58	3-6-58

REISSUES

DECEMBER 2, 1958

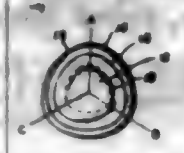
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,572
FLUTELESS SWAGING TAP

Donald P. Welles, Jr., Rockford, Ill., assignor to Besley-Welles Corporation, Beloit, Wis., a corporation of Illinois

Original No. 2,807,813, dated October 1, 1957, Serial No. 575,733, April 3, 1956. Application for reissue November 14, 1957, Serial No. 696,582

3 Claims. (Cl. 10—152)



5. A fluteless thread forming tool for threading a generally cylindrical surface, the tool having a cylindrical portion with a continuous thread formed with a series of successive radially relieved sectors circumferentially of the tool with gradually increasing outside, pitch, and root diameters merging gradually into gradually decreasing outside, pitch, and root diameters, the thread being substantially uniform in cross section and of substantially equal depth taken in all planes intersecting the axis of said tool longitudinally thereof, a tapered threaded end portion on said tool of substantially full thread depth with successive sectors having gradually varying outside, pitch, and root diameters toward the extreme end of the tool, the extreme pitch diameter of the thread on the cylindrical portion being generally of the order of the diameter of the cylindrical surface to be threaded, the crest diameter of at least one of the threads toward the extreme end of the tapered portion being substantially the same as the pitch diameter of the cylindrical portion, the threaded end portion being a non-interrupted continuation of the continuous thread on the cylindrical portion.

PLANT PATENTS

GRANTED DECEMBER 2, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,775
ROSE PLANT

Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif., a corporation of California

Application January 3, 1958, Serial No. 707,871

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by its bushy, medium-sized, vigorous and very floriferous habits of growth, its habit of bearing flowers in clusters of medium size, its double flowers of medium size, the showy, high-centered, loose, informal and open-flower form of its flowers which have their centers exposed, and the bright and relatively unfading red general color tonality of its flowers.

1,776
ROSE PLANT

Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif., a corporation of California

Application January 3, 1958, Serial No. 707,872

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid polyantha class, substantially as herein shown and described, characterized particularly as to novelty by its floriferousness and better than average continuity of bloom, its semi-double flowers of from small to medium size and their habit of being borne in clusters of from medium to large size, and the distinctive bright yellow general color tonality of its flowers which remains substantially constant until the petals drop.

Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

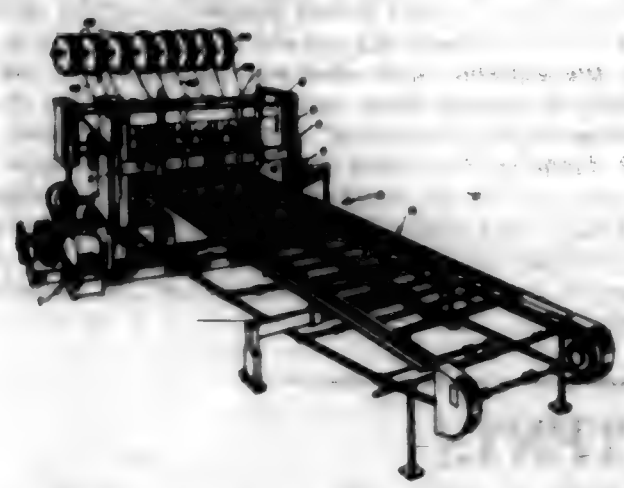
Patents	Numbers 2,284,268 to 2,288,538, inclusive
Plant Patents	Numbers 493 to 498, inclusive

PATENTS

GRANTED DECEMBER 2, 1958

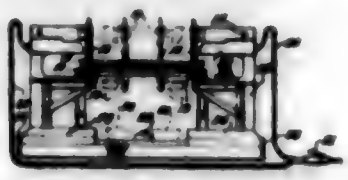
GENERAL AND MECHANICAL

2,862,285
STAPLE FORMING AND DRIVING HEAD
Walter F. Newhouse, Benton Harbor, Mich., assignor to Saranac Machine Company, Benton Harbor, Mich., a corporation of Michigan
Application March 5, 1956, Serial No. 569,584
20 Claims. (Cl. 1—2)



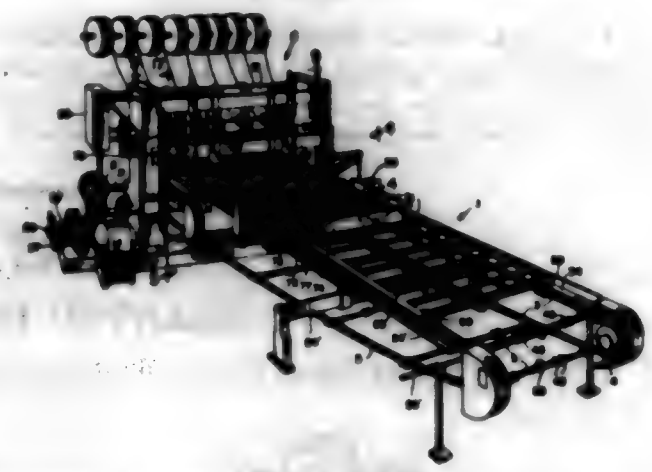
1. A staple forming and driving device comprising a casing, a wire swedging assembly in said casing, a staple forming and driving assembly, and operating means to operate both of said assemblies, said swedging assembly swedging a piece of wire to staple length upon operation of the swedging assembly in one direction, said forming and driving assembly forming a staple from said length of wire and driving said latter assembly in a direction opposite to the direction in which the swedging assembly performs the swedging operation, said swedging assembly comprising a pair of arms pivoted to said casing interiorly thereof, and swedging severing means fastened to said arms.

2,862,286
METHOD FOR ASSEMBLING HOGSHEADS
Harry Guthrie Bell, Paris, Ky., assignor to Gay-Bell Corporation, Paris, Ky., a corporation of Kentucky
Application July 18, 1955, Serial No. 522,456
1 Claim. (Cl. 1—84)



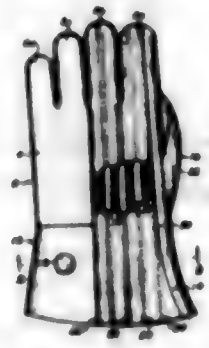
A method of securing end hoop-and-liners and intermediate hoops on hogshead panels which comprises the steps of placing a plurality of panels in flat side by side relationship, placing a first U-shaped end hoop-and-liner along the ends of said panels and a second U-shaped end hoop-and-liner along the opposite ends of said panels, placing a pair of intermediate hoops over said panels and between and parallel to said end hoop-and-liners, preliminarily securing said end hoop-and-liners and said hoops in assembled relation, moving said panels along a straight line path of travel beneath a pair of stapling devices, driving staples into two of the end hoop-and-liners and intermediate hoops, shifting said stapling devices, moving said panels back along said path of travel beneath said shifted pair of stapling devices, and driving staples into the remaining two of the end hoop-and-liners and intermediate hoops.

2,862,287
STAPLING MACHINE
Walter F. Newhouse, Oscar E. Lassfolk, and Norman J. Smith, Benton Harbor, Mich., assignors to Saranac Machine Company, Benton Harbor, Mich., a corporation of Michigan
Application March 5, 1956, Serial No. 569,612
13 Claims. (Cl. 1—147)



1. Apparatus for stopping a conveyer, said apparatus comprising a pattern chain, drive means coupled to the conveyer and to the pattern chain to drive the pattern chain synchronously with the conveyer, said pattern chain carrying a plurality of stop members spaced therealong in accordance with a pre-set pattern, a switch electrically connected to stop the conveyer, and a member supporting the electrical switch in spaced relation with the pattern chain, said member having a cam surface for engaging the stop members on the pattern chain, said member being movable upon engagement of a stop member on the cam surface thereof and being operable to hold the switch in a precise spaced relation with the stop member.

2,862,288
PROTECTIVE GLOVE
Fernando J. Castro, San Juan, Puerto Rico, assignor to the People of Puerto Rico
Application December 17, 1957, Serial No. 703,354
1 Claim. (Cl. 2—161)



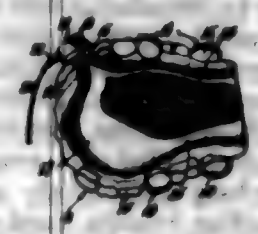
A glove for protecting the hand from a swung knife or the like when the gloved hand grasps a stalk or the

forwardly to a position on a level with and at the side of the toilet bowl, said means comprising a rod secured to a

2,862,215
MACHINE FOR FORMING THREADS WITHIN A

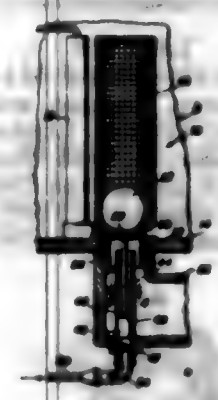
like which is to be cut, said glove comprising four finger receiving parts, a thumb receiving part, a hand part and a wrist part, a supplemental cover member formed of flexible material covering the back of the two finger receiving parts adjacent the thumb receiving part and also covering the backs of that part of the hand part and that part of the wrist part which are aligned with and below the covered part of the finger receiving parts and also covering substantially the entire thumb receiving part, said cover member being attached to the glove by spaced parallel lines of stitching extending longitudinally of the glove and defining spaced passages therebetween, and an elongated, flexible, metallic, protective member in each of said passages and extending throughout substantially the entire length thereof.

2,862,309
SPEECH AID
Herbert Kurtz Cooper, Lancaster, Pa.
Application June 24, 1957, Serial No. 667,594
6 Claims. (Cl. 3—1.3)



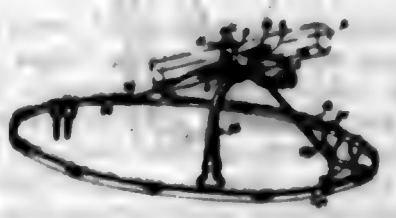
6. In a speech aid, the combination with a sound emitter, of devices generating a wave-form signal at audible frequency within the normal vocal range of frequencies, said devices being electrically connected to said emitter to energize the latter, a dental appliance for reception in the mouth, and means releasably supporting said emitter on said dental appliance, said means comprising a resilient locking element acting between said denture and said emitter.

2,862,210
FLUSH TANK CONTROL MEANS
Philip C. Traver, Far Rockaway, N. Y., assignor of one-half to Harry Forman, Forest Hills, N. Y.
Application May 14, 1957, Serial No. 659,186
2 Claims. (Cl. 4—67)



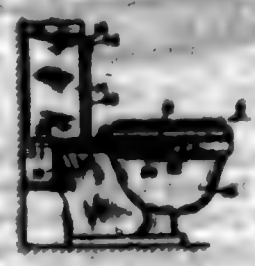
1. In combination, a flush tank provided at its bottom with a fitting having a valve seat situated in the water space of the tank, a water drainage conduit communicatively connected at one end with said fitting, the other end of said conduit being adapted to be connected to a toilet bowl to deliver water to the bowl, a ball tank valve normally resting on said seat, an openwork cage attached at a lower end thereof to the fitting and rising within the water space in said tank and serving to confine said ball valve in a manner to allow the latter to travel upwardly with the tank water and then descend to take the position on its seat in the usual way, a cylinder of a cross-section less than the cross-section of the passage through the fitting, said cylinder being removably mounted at a lower end in the conduit and extending across the passage of the conduit and having its upper end extending into a lower end portion of the fitting and concentrically arranged and spaced from the passage in the fitting, a pipe line connected with the cylinder at the lower end of the cylinder and adapted to supply water under pressure into the cylinder, a piston fitting slidably and operably in the bore of said cylinder and having an operating member operatively cooperable with said ball valve, that portion of said cylinder within the confines of the passage in said conduit having ports therein and said piston constituting a valve and cooperating in predetermined timed association with the ports.

2,862,311
PORTABLE SHOWER
Stanley Shaberman, Cleveland Heights, and William Kentrala, Cleveland, Ohio, said Shaberman assignor to said Kentrala
Application December 10, 1956, Serial No. 627,483
4 Claims. (Cl. 4—154)



1. A portable shower unit comprising a U-shaped clamp having spaced vertically extending side walls adapted to embrace the underside of a floor joist, at least one of said side walls having a threaded aperture and a threaded pointed clamping screw received in said aperture with the point extending toward the other side wall and adapted to bite into said joist, said U-shaped clamp including a connecting horizontally disposed portion having two pairs of cooperating apertures, said pairs being arranged normal to each other and a U-bolt adapted to be selectively received in either of said pairs of cooperating openings, a shower curtain support ring including a transverse bracket having its mid-portion apertured to receive the spaced extensions of said U-bolts and a shower head assembly including a tubular portion embraced by said U-bolt with the mid-portion between the horizontally disposed and tubular portions whereby when said U-bolt is drawn up tight the shower head assembly tube bears against the underside of said bracket and pulls the entire assembly tight against the underside of said U-shaped clamp.

2,862,313
FLUSHING DEVICE
Carl B. Holl, Leicester, Mass.
Application September 18, 1956, Serial No. 610,595
1 Claim. (Cl. 4—249)

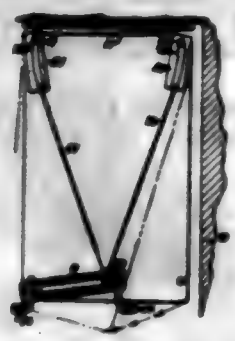


The combination of a toilet bowl having a flush tank with a pivoting handle, with an attachment comprising a lever, means pivotally mounting said lever at one end thereof to an existing portion of the toilet, and a connection between the lever intermediate the ends thereof and the flush tank handle whereby the handle is actuated upon actuation of the lever, said lever extending horizontally

of the lasted edges along the underside of the upper said gun barrel, each of said grommets having a cir-

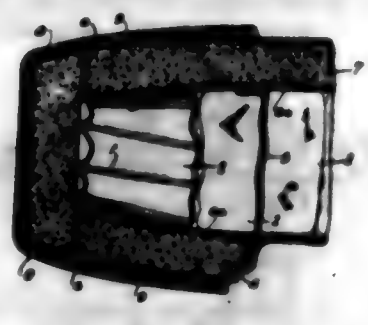
forwardly to a position on a level with and at the side of the toilet bowl, said means comprising a rod secured to a supply pipe for the tank, said lever being held in horizontal position by the flush tank handle, said lever being hollow and having a keyhole slot therein, said connection including a bead chain having an end bead in said slot, and a fixture on the flush tank handle, the other end of the bead chain being secured to the fixture.

2,862,213
BED MOVING JACK
William J. Sonnenberg, Lynwood, and Frederick W. Oestreich, Jr., Pico, Calif.
Application May 28, 1957, Serial No. 662,155
6 Claims. (Cl. 5—328)



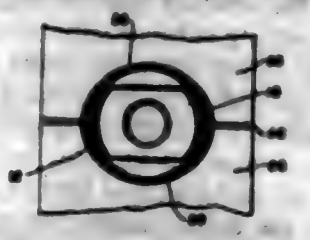
1. A bed mover comprising a pair of independently actuated jacks for use below the foot of a bed, a rail extended between the jacks, the jacks being independently actuated to elevate either end of the rail, means depending from the bed and positioned to slide on the rail, and floor plates for receiving posts at the head of the bed whereby with the foot of the bed and one end of the rail elevated by one of the jacks the foot of the bed is movable laterally.

2,862,214
CUSHION OR MATTRESS CONSTRUCTION AND METHOD OF MANUFACTURE
Lloyd W. Thompson, Inglewood, and Sidney Klein, Los Angeles, Calif., assignors to Marspring Corporation, Los Angeles, Calif., a corporation of California
Application October 4, 1956, Serial No. 613,866
4 Claims. (Cl. 5—353)



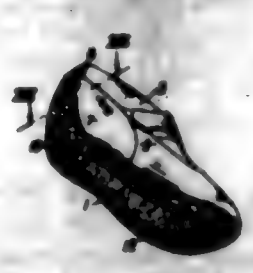
1. A cushion or mattress construction, comprising: an encasing structure having a bottom wall, top wall, and side walls defining a completely enclosed cavity, at least some of said walls being formed of panels of latex-coated hair-like material and said walls being permanently cemented together; a plurality of coil springs; and fabric casings for said coil springs, said springs and their casings completely filling said cavity for mutual support and constituting the sole content thereof, and yieldably restrained by the surrounding walls, said fabric casings being cemented at their upper and lower ends to said top and bottom walls.

2,862,215
MACHINE FOR FORMING THREADS WITHIN A METALLIC TUBE BY SWAGING
William D. Green, York, Pa., assignor to Red Lion Cabinet Company, Red Lion, Pa., a corporation of Pennsylvania
Application July 13, 1954, Serial No. 443,049
2 Claims. (Cl. 10—153)



1. A machine for swaging threads on the interior of metallic tubing comprising in combination, a plug having external threads thereon complementary in shape and pitch to and slightly smaller in diameter than those to be formed on the interior of said tubing, said plug being insertable within one end of said tubing, a swaging head having an opening extending longitudinally therethrough to receive tubing to be threaded, a pair of dies carried by said head and supported thereby for radial reciprocation within a plane transverse to said longitudinal opening within said head and said axis, said dies having smooth concave ovoid surfaces on the opposing faces thereof complementary to each other and engageable with the exterior of said tubing respectively at opposite sides thereof, means to effect relative axial rotation between said head and tubing to be threaded, and means on said swaging head engageable with said dies during such relative rotation and operable to reciprocate said dies simultaneously and radially against said tubing and swage the same against said threaded plug therein, whereby such swaging by said dies decreases the diameter of said tubing and effects an accretion which is dispersed into threads on the interior of said tubing conforming substantially with the pitch and depth of the threads of said plug, the ovality of said dies causing said tubing to become oval momentarily and progressively around the circumference thereof during engagement of said tubing with said plug to prevent freezing of said tubing to said plug and the smaller diameter of the threads of said plug permitting ready unthreading thereof from said tubing when the threading thereof has been completed.

2,862,216
SHOES AND METHODS OF MAKING SAME
Alfred Williams, London, England, assignor to Toddlers Footwear (1954) Limited, London, England
Application November 23, 1956, Serial No. 624,108
Claims priority, application Great Britain November 30, 1955
1 Claim. (Cl. 12—142)



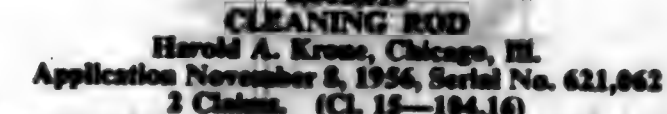
A method of making a shoe having an upper with quarters, comprising, fitting a long insole to extend to the top of the heel of the quarters of the upper, affixing said insole to the inside of the rear of said quarters solely by adhesive up the back portion thereof, inserting a last into the upper with the last in engagement with the insole and with the inner surfaces of the sides of the quarters, lasting the upper to the insole leaving a surface of the insole exposed centrally between the lasted edges of the upper, roughing-up the outer surface

der of a cross-section less than the cross-section of the

the hand tank handle whereby the handle is actuated upon actuation of the lever, said lever extending horizontally

of the lasted edges along the underside of the upper and the back of the quarters and the surface of the insole exposed between the lasted edges of the upper, and attaching solely by adhesive a long outer sole to the roughened surfaces of the upper and insole and the back of the quarters with the top of the rear part of the outer sole substantially even with the adjacent tops of the quarters and insole.

2,862,217
HOLDING MEANS FOR FRAME MEMBERS
Douglas M. Small, Springfield, and Alvin O. Johnson, Westfield, Mass., assignors to Stanley Home Products, Inc., Westfield, Mass., a corporation of Massachusetts
Application February 20, 1957, Serial No. 641,283
1 Claim. (Cl. 15—147)

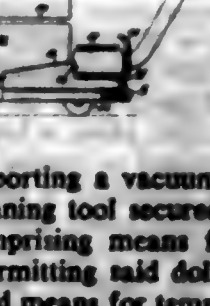


A secured together holder and pair elongated end elements of a frame for a cleaning device, said holder comprising an elongated thin-walled metal tube, said tube having a cleaning device end and a handle end, said end elements extending through said tube from the cleaning device end thereof and having spaced terminations of the handle end of said tube, said end elements being in spaced relation at the cleaning device end of said tube and converging therefrom to said spaced terminations, relatively short top and bottom longitudinal wall portions of said tube at the cleaning device end thereof being displaced inwardly into contiguous relationship between said end elements and holding said end elements against opposite side walls of said tube in spaced and fixed relation, and a relatively short longitudinal top wall portion at the handle end of said tube being displaced downwardly in generally V formation between the extremities of said end elements and into close adjacency with the wall portion of said tube at the bottom side thereof, said top wall portion at the handle end of said tube extending from upper opposite sides of the V formation inwardly and onto the extremities of said end elements and holding them in spaced relationship against spaced lower wall portions of said tube, the spacing of the extremities of said end elements being relatively less than the spacing of said end elements at the cleaning device end of said tube.

2,862,218
CLEANING ROD
Harold A. Krone, Chicago, Ill.
Application November 8, 1956, Serial No. 621,062
2 Claims. (Cl. 15—104.16)

1. An adapter for a rod for cleaning gun barrels, said adapter comprising a cylindrical disk having a threaded pin projecting from one side thereof, a plurality of cloth patches impaled on said pin, a plurality of resilient grommets interposed between said cloth patches and impaled on said pin, said grommets having a diameter greater than the diameter of said cylindrical disk and slightly smaller than the bore of the gun barrel for which the adapter is designed, each of said cloth patches having a diameter larger than said gun bore, whereby said patches are folded over said grommets and compressed between the peripheral surface of said grommets and the inner surface of said gun barrel as said patches are pulled through said gun barrel, each of said grommets having a circumferential groove in its peripheral edge to provide a reservoir for some of the oil squeezed from said patches by said compression, and a cap threaded on said pin, said cap cooperating with said cylindrical disk and said grommets to hold said cloth patches on said pin in predetermined longitudinally spaced relationship.

2,862,219
OIL CHECK TOWEL
Leonard Kaczmowski, Los Angeles, Calif.
Application October 18, 1955, Serial No. 541,119
1 Claim. (Cl. 15—131)



A wiping towel for cleaning the dip stick of an internal combustion engine comprising a wide sheet of a disposable, highly absorbent material folded intermediate its ends to provide contacting portions of said sheet over the full area of the same when the sheet is folded; a tearable container overlying one of said portions and having a quantity of an engine lubricant confined therein, said container being so disposed as to effect flow of the lubricant onto the surface of the associated sheet portion on tearing of the container; and means connecting said container to both of said portions to hold the portions in face to face contact while at the same time attaching the container thereto.

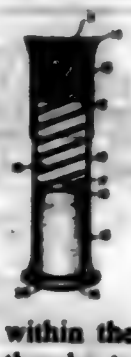
2,862,220
DOLLY FOR VACUUM CLEANER AND THE LIKE
Robert A. Orr, Fairfield, Conn., assignor to General Electric Company, a corporation of New York
Application March 18, 1955, Serial No. 497,113
7 Claims. (Cl. 15—257)

1. A dolly for supporting a vacuum cleaner having a rigid wand and a cleaning tool secured at an end of the wand, said dolly comprising means for supporting the cleaner, means for permitting said dolly to move over a supporting surface, and means for temporarily detachably receiving the cleaning tool, said cleaning tool receiving means comprising a socket having portions arranged to confine the cleaning tool on two opposite sides thereof, whereby said dolly may be pushed and steered over the surface by the wand, said movement permitting means being substantially in contact with the surface at all times during movement of said dolly over the surface.

2,862,221
SHOE POLISH HOLDER, APPLICATOR, AND BUFFING DEVICE
Gertrude B. Hume, West Newton, Mass.
Application July 1, 1953, Serial No. 369,366
1 Claim. (Cl. 15—258)

A shoe polish holder, applicator, and buffing device comprising in combination a tubular casing open at both

ends having mounted in one open end a set of outwardly extending polishing bristles, an open end outwardly flared guard, frictionally slidable, disposed about both casing and bristles tending to conform said bristles to fit in the crease of a sole and upper of a shoe, a compression spring within said tube seated against the base of said bristles and bearing against a cartridge of shoe



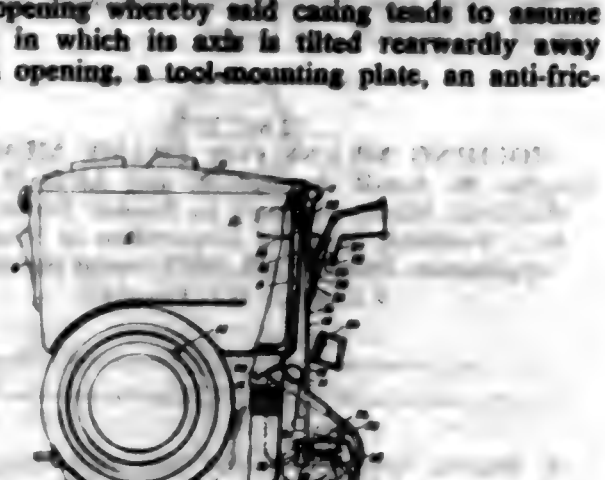
polishing paste disposed within the tube at the opposite end thereof and tending thereby to force said polish out of the open end opposite the brush, said polish being restrained by a perforated cover, permanently fixed to said opposite open end, permitting the said paste to exude as the cover is rubbed over the surface of a shoe and said cover having a detachable spring metal cap.

2,862,222
MOTOR VEHICLE LAUNDRY
Jesse S. Cockrell, Norfolk, Va.
Application December 15, 1953, Serial No. 398,261
5 Claims. (Cl. 15—302)

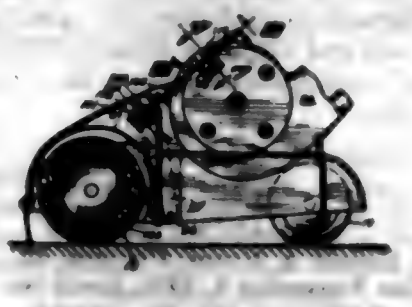
1. In a motor vehicle laundry, the combination which comprises an elongated trench, substantially V-shaped in cross section having upwardly and outwardly sloping side walls, a track carried by said side walls and positioned above the lower part of the trench, a sump in the lower part of the trench and positioned in the intermediate part thereof, a compartment divided from the sump and positioned therein, a filter positioned between the sump and compartment for filtering water from the sump for reuse, a perforated cover plate on the sump, beams positioned above the cover plate, a hopper positioned in the cover plate and adapted to receive pellets and liquid employed in cleaning a vehicle, a rotor rotatably mounted in the beams and positioned above the cover plate for feeding pellets from the trench to the hopper, an endless chain mounted in the track for moving a vehicle having wheels on the track with the wheels positioned to roll on the track, means for spraying material from the hopper over a vehicle positioned on the track, means for spraying material from the compartment in the sump over a vehicle on the track, and means for spraying clean water over a vehicle on the track for rinsing said vehicle.

2,862,223
VACUUM CLEANER ASSEMBLY AND CARRYING UNIT
Carl E. Meyerhoefer, Brooklyn, N. Y., assignor to Lewyt Corporation, Brooklyn, N. Y., a corporation of New York
Application November 24, 1954, Serial No. 470,930
5 Claims. (Cl. 15—323)

1. In combination, a vacuum cleaner comprising a vertically extending tub-shaped casing having an air-intake opening in its side wall, a pair of wheels having their axes transverse of the axis of the casing and between that axis and the intake-opening, the peripheries of such wheels extending below the lower face of the casing and the center of gravity of the vacuum cleaner being beyond that side of the wheel axis which is opposite said opening whereby said casing tends to assume a position in which its axis is tilted rearwardly away from such opening, a tool-mounting plate, an anti-friction member presenting a peripheral portion, means for securing said member to said plate adjacent the lower end of the latter, means for removably securing said plate to an outer face of the casing side wall at a point substantially opposite said opening and with its member extending below the lower face of the casing and obstruction-diverting means also secured to said plate and extending below said casing to a point short of the lower periphery of said member.

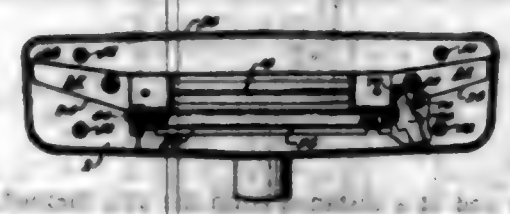


2,862,224
FLOOR SURFACING MACHINE
Albert S. Swanson and Harlie J. Klusmeier, Minneapolis, Minn., assignors to G. H. Tennant Company, Minneapolis, Minn., a corporation of Minnesota
Application October 20, 1955, Serial No. 541,559
5 Claims. (Cl. 15—328)



2. A floor maintenance machine comprising an open bottomed housing having a closed top and downwardly depending walls, wheels on the housing located so that it may be traversed in a work direction over a floor, said housing including a shaft journaled on the housing parallel to the floor and normal to the work direction, means on the shaft for detachably mounting thereon a cylindrical-shaped floor maintenance device for driven rotation with the shaft, suction fan on the exterior of the housing and having its inlet connected to a suction opening in the housing for inducing a suction in the housing, a motor on the exterior of the housing and connected to the fan and to the drive shaft for rotating both of them, and a flexible dependent skirt on at least a portion of the housing wall, said skirt being slitted upwardly through a portion of its vertical heighth so that the lower portion of the skirt is composed of a plurality of independent fingers, and apertures through the skirt at a vertical elevation above its lower portion and located so as to be intersected by said slits.

2,862,226
VACUUM CLEANER NOZZLE
Clarence E. Stevens, Cucamonga, Calif., assignor to The Filter Corporation, Los Angeles, Calif.
Application October 24, 1955, Serial No. 542,891
1 Claim. (Cl. 15—363)

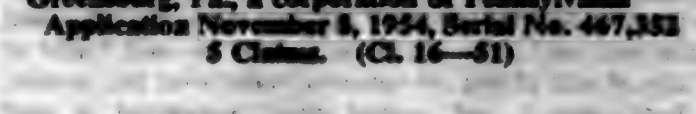


A vacuum cleaner nozzle having a lower surface adapted to slide on the surface to be cleaned, a suction chamber formed in said base within a suction chamber housing, a swivel connection attached to the top of the suction chamber housing, said suction chamber comprising front and rear walls, said front wall being inclined downwardly toward the front side of said base and intersecting said lower surface a sufficient length to retard the return of the nap of the carpet to the normal position after being compressed by the lower surface, the lower surface of said base between said suction chamber and said front side being inclined downwardly from said front side toward said suction chamber, an agitator positioned adjacent said suction chamber, a portion of said agitator extending below said lower surface and contacting the surface to be vacuumed, said agitator mounted for limited rotation in said base whereby a first portion of said agitator will be in contact with the surface of the area to be cleaned during the forward movement of said nozzle and a second portion of said agitator will be in contact during the return motion of the nozzle, a pivotally supported lever mounted on said nozzle adapted to engage positioning means carried by said agitator whereby said agitator may be locked such that said first and second portions selectively engage the surface of the area to be cleaned during both forward and return motions of the nozzle.

2,862,226
SUCTION HEAD FOR A VACUUM CLEANER
Marshall B. Peale, Harrisonburg, Va.
Application November 22, 1954, Serial No. 470,458
3 Claims. (Cl. 15—395)

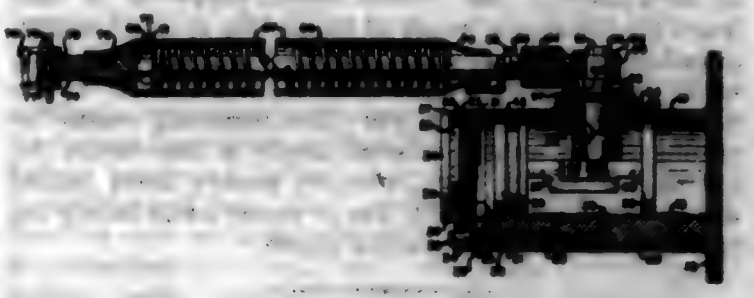
3. A vacuum hand brush tool comprising an elongated hollow element having a leading working head and trailing collar portion, said work head having a leading, work portion with top and under surfaces thereon, the under or work surface of said work portion being flat and defining a plane which passes approximately medially through said trailing collar portion; said under-surface of said work head also having a row of tufts or bristles extending outwardly, exteriorly and away from said under-surface and generally normally thereto, and disposed in a row about and just inside of the peripheral margin of the under-surface of said body portion; said hollow element having a vacuum opening in the leading end of the under-surface of said work portion; said elongated hollow element also having a vacuum opening in the collar portion disposed approximately normally to and exteriorly of, and opening onto the said work surface which is provided on the under-surface of said work portion; whereby, in turbulent manner, streams of vacuum are pulled both through the bristles and generally parallel thereto and across the bristles and generally at right angles thereto, for effectively dislodging dirt and debris which has been initially loosened by said bristles.

2,862,227
CARPET RETAINING STAPLE
Wilfred J. Larabell, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 16, 1956, Serial No. 616,159
1 Claim. (Cl. 16—4)



In a floor cover retaining device characterized by hook elements adapted to be permanently attached to and carried by the floor cover and coacting with holding means fastened to the floor, the improvement wherein each hook element comprises a staple having spaced first and second parallel arms adapted to pierce the floor cover from beneath and a straight intermediate portion between said arms, each of said arms extending perpendicularly from said intermediate portion, the first of said arms having its terminal portion bent parallel to said intermediate portion and toward the second of said arms and away from the edge of the floor cover upon which each staple is to be retained, said second arm being bent parallel to and in the same direction as the terminal portion of said first arm but at a distance somewhat further removed from said intermediate portion, whereby the first arm serves to secure each staple in place and the second arm provides a hook portion for cooperation with the holding means.

2,862,228
CHECK AND CLOSER FOR DOOR OR THE LIKE
Charles F. Zeppese and James P. Eberzberger, Greensburg, Pa., assignors to Zeppese Engineering Company, Greensburg, Pa., a corporation of Pennsylvania
Application November 8, 1954, Serial No. 467,352
5 Claims. (Cl. 16—51)



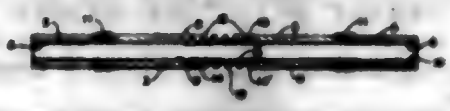
4. In a closer for a door or the like having a frame, a hydraulic liquid cylinder, a cylindrical follower movable in said cylinder, a lever extending through a side of said cylinder, said lever engaging said follower inside of said cylinder, means for permitting said lever to move said follower relatively rapidly in one direction during opening of said door and relatively slowly in the opposite direction during closing of said door, an extensible connector having at least two parts axially slidable only relative to one another, one end of said connector being pivotally connected to said door and the other end of said connector being pivotally connected to said frame, one of said ends being so connected by rigid attachment thereof to said lever, and a spring interposed between said parts to bias them toward each other to shorten the over-all length of said connector.

rial which has been preprinted with two parallel rows of

their other ends to connecting sleeves provided with ex-

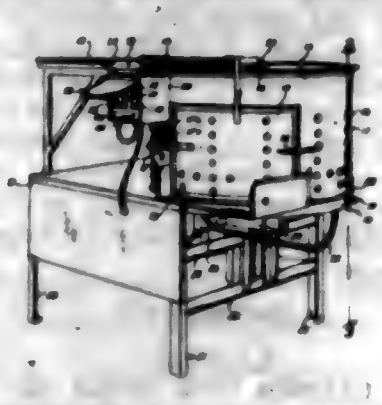
vertically extending tub-shaped casing having an air-in- vation above its lower portion and located so as to be intersected by said slits.

2,862,229
SPRING TENSIONED RADIALLY COMPRESSIBLE AND LONGITUDINALLY EXTENSIBLE SECTIONAL CLAMP SLEEVE
Charles R. Bacca, Milford, Ohio
Application February 7, 1952, Serial No. 270,450
4 Claims. (Cl. 16—140)



1. A two-part hinge connected by a pin fixed to one of the hinge parts, a frictional holding means surrounding the pin and in abutting relation with the other hinge part, said holding means comprising transversely divided longitudinally separated segmental sleeve sections having inclined exterior wall portions disposed at an angle to the longitudinal axis of the sleeve, and a compressible coiled spring disposed about the sleeve with its opposite ends seated against the inclined wall portions.

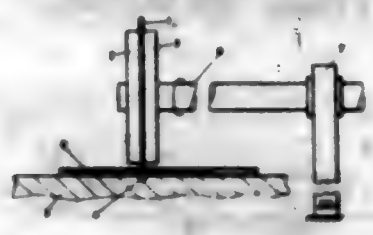
2,862,230
POULTRY PROCESSING EQUIPMENT
Flournoy Corey and Robert Donald Pitts, Cedar Rapids, Iowa, assignors to Pickwick Company, Cedar Rapids, Iowa, a corporation of Iowa
Application July 30, 1956, Serial No. 601,081
4 Claims. (Cl. 17—11.1)



1. In a device of the type described, a frame, a substantially cylindrical enclosure mounted thereon, a rotatable picking element mounted on said frame and disposed within said enclosure, means supported by said frame at the top of said casing for spraying water over the interior of the enclosure, and control means supported by said frame for timing the length of the picking cycle of poultry placed within the enclosure, said control means including valve operating means for turning on the water at the start of the picking cycle and valve operating means for turning off the water a selected length of time before the end of the picking cycle, whereby poultry being picked will be wiped substantially free of excess water before the poultry is discharged from the picker.

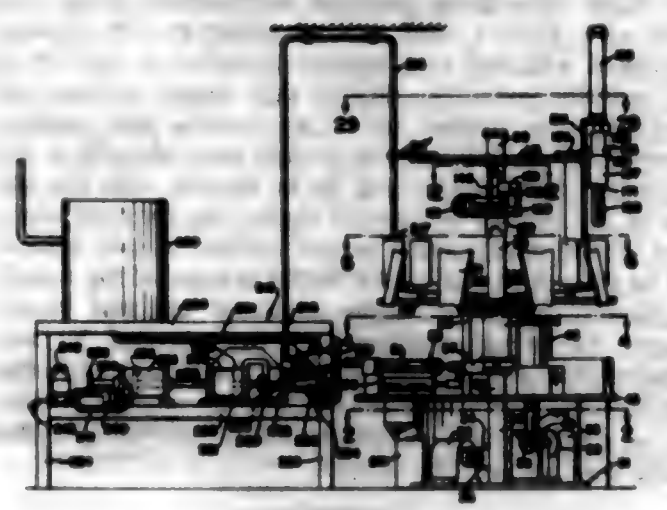
2,862,231
METHOD AND APPARATUS FOR DIVIDING THERMOPLASTIC BODIES
Wilfried Voigt, Wiesbaden-Biebrich, Germany, assignor to Leuna-Werke Eichtrochemisch Fabriken G. m. b. H., Baden, Germany
Application March 7, 1956, Serial No. 570,032
Claims priority, application Switzerland March 10, 1955
15 Claims. (Cl. 18—1)

15. In a device of the type described, in combination, support means; a shaft rotatably mounted on said support means; a thin disc of predetermined diameter and having an edge face fixedly centrally mounted on said shaft and extending perpendicularly to the axis thereof so as to rotate with the same; supporting discs fixedly mounted on said shaft on opposite sides of said thin disc and supporting the same, said supporting discs having diameters smaller than said predetermined diameter of said thin disc, and said thin disc having throughout substantially the entire portion thereof extending outwardly of said supporting discs a thickness not exceeding the width of said edge face; a support arranged parallel to



said shaft and at a distance from the axis thereof slightly smaller than the radius of said thin disc, said support being formed with a notch in which the circular edge of said thin disc is adapted to rotate.

2,862,232
APPARATUS FOR USE IN MOLDING ELASTOMERIC MATERIALS
Paul Rekettye, Akron, Ohio, assignor to The Sun Rubber Company, Barberton, Ohio, a corporation of Ohio
Application July 28, 1954, Serial No. 446,264
5 Claims. (Cl. 18—4)



1. An apparatus for use in the molding of a hollow, elastomeric article in a substantially cylindrical mold having a non-sectional body portion and a removable threaded cap, comprising a vertical center post, a circular, horizontal table rotatable around said center post, a mold detachably secured to said table, a plurality of stations fixed in spaced relation around said table, means for indexing said table to bring said mold successively to said stations, means at the first of said stations for unthreading said cap to uncap said mold, means at the next of said stations for stripping said article from said uncapped mold, means at the next of said stations for lubricating said stripped mold preparatory to receiving a fresh charge of raw elastomeric material, and means at another of said stations for charging said lubricated mold with raw elastomeric material, said cap unthreading means being located at a station following said last named station and being operable also for threading a cap upon said charged mold.

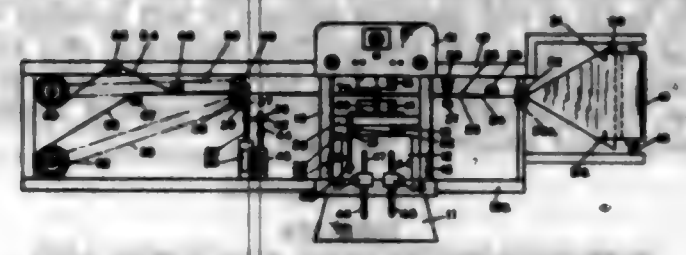
2,862,233
METHOD AND APPARATUS FOR THE MANUFACTURE OF PHONOGRAPH RECORDS
Jack G. Brown, Los Angeles, Calif.
Application April 23, 1956, Serial No. 580,110
12 Claims. (Cl. 18—5.3)

10. An apparatus for the manufacture of phonograph records having preprinted impressions thereon which comprises a pair of spaced pressure embossing means bearing record matrices, means for longitudinally folding a single sheet of at least double width thermoplastic mate-

in turbulent manner, streams of vacuum are pulled both

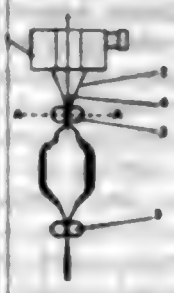
said connector.

rial which has been preprinted with two parallel rows of longitudinally spaced printed impressions into two superimposed strips of substantially equal width in which the preprinted impressions are also superimposed, means for slitting said folded sheet along the folded line to form two separate superimposed strips of sheet material while maintaining the relative superimposed position of the preprinted material on said sheets, means for drawing said



superimposed strips of sheet material between said record matrices, means for intermittently actuating said pressure embossing means while the superimposed strips are in a stationary position therebetween to simultaneously impress record grooves upon the opposite outer surfaces of said sheets, and time controlled means for deactivating said pressure embossing means and actuating said drawing means to bring successive areas of said sheet material into engagement with said embossing means.

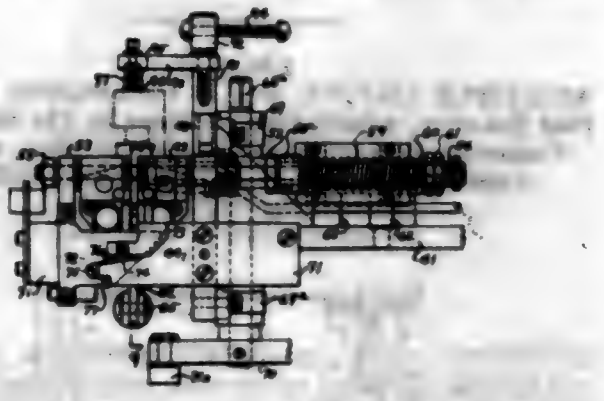
2,862,234
APPARATUS FOR INTRODUCING FLUID PRESSURE INTO CONTINUOUSLY ADVANCING TUBULAR FILM
Kenneth George Gerber, Welwyn Garden City, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application May 18, 1956, Serial No. 585,795
Claims priority, application Great Britain June 3, 1955
5 Claims. (Cl. 18—15)



1. Apparatus for the continuous treatment of tubular film including means for confining a body of fluid within a section of the continuously advancing film, said means comprising a pair of contra-rotating, substantially cylindrical nip rolls, at least one of said nip rolls having a relatively small circumferential groove therein, and a tubular probe extending between said nip rolls, said groove fitting closely about said probe.

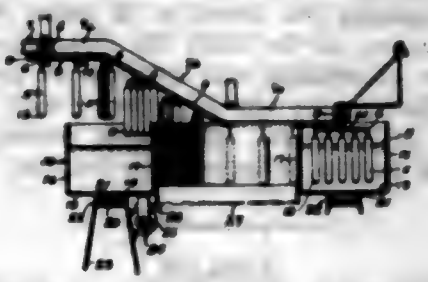
2,862,235
MOLDING APPARATUS
Andrew A. Spisak, Cleveland, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Application December 15, 1954, Serial No. 475,363
7 Claims. (Cl. 18—22)

1. A molding apparatus for molding the plastic base of a pin strip insert unit comprising a base plate, a vertical plate secured to said base plate and extending transversely of the base plate, guide sleeves extending through said vertical plate above said base plate and clamped to said vertical plate and located adjacent the opposite ends thereof, a stationary molding jaw having its opposite end secured to said guide sleeves, rods slidable in said guide sleeves and having connected thereto adjacent one of their ends a movable molding jaw, said rods being connected at their other ends to connecting sleeves provided with external shoulders, a linearly movable actuating member having portions slidable on said connecting sleeves, coil springs surrounding said conecting sleeves and having one of their ends abutting said portions of said actuating member and their other ends abutting means on said connecting sleeves and spaced axially thereof from said shoulders, and means for moving said actuating member



linearly in one direction to cause said portions of said member to act through said coil springs to move said connecting sleeves and said rods in a direction to move said movable molding jaw toward said stationary molding jaw and for moving said actuating member in the opposite direction to cause said portions to engage said external shoulders to positively move said rods and connecting sleeves and said movable molding jaw in a direction away from said stationary molding jaw.

2,862,236
APPARATUS FOR FABRICATING HOLLOW BODIES
Wallace H. Shapero, Los Angeles, Calif., assignor to Wallace Containers Company, Los Angeles, Calif.
Application October 6, 1953, Serial No. 384,494
4 Claims. (Cl. 18—24)



1. In an apparatus for dip-forming flexible hollow articles: a series of dipping mandrels; said mandrels each having an outer surface shaped to impart to a respective hollow article an internal wall of the desired contour; a circular tank for a body of liquid material adapted to form on each mandrel, when dipped therein, a film which is convertible by curing into a solid wall of the hollow article; means supporting said tank for rotation in a horizontal plane about its vertical axis; means for rotating said tank; an endless conveyor from which said mandrels are suspended; a track for supporting and guiding said conveyor, said track having elevated portions of sufficient height to dispose the mandrels at a level clearing the top of the tank, for guiding the mandrels in paths respectively approaching and receding from the tank, having inclined portions for guiding the mandrels respectively in an entering path in which the mandrels are dipped into the liquid body and a leaving path in which they are lifted out of the liquid body, and having a low level portion of circular arcuate configuration concentric with the circular path of movement of said tank at a radius inwardly of the periphery of the tank for guiding said mandrels in a substantially horizontal plane in a circular path in which the mandrels extend into the liquid

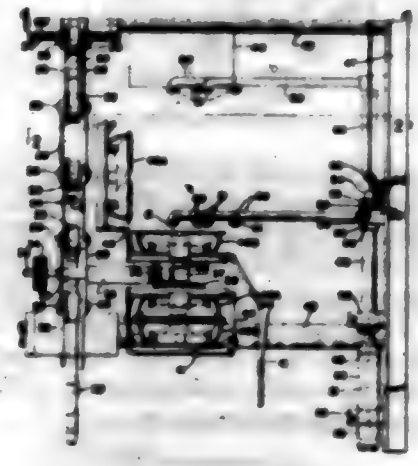
a ram mounted in said bore in sliding engagement with pliable solids, which method comprises heating a solid

diameters smaller than said predetermined diameter of

ing record matrices, means for longitudinally folding a single sheet of at least double width thermoplastic mate-

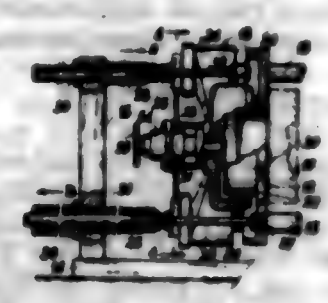
body to a substantially fixed depth; means for driving said conveyor to impart movement to the mandrels in said paths; and means for correlating the movement of said conveyor with the rotation of said tank so as to effect substantial synchronization between the movements of the mandrels in said low-level path and the circumferential movement of the liquid in the tank at the radius of contact thereof with said mandrels.

2,862,237
MULTIPLE CAVITY MOLD CHARGING DEVICE
Paul Rekettye, Akron, Ohio, assignor to The Sun Rubber Company, Barberton, Ohio, a corporation of Ohio
Application January 6, 1954, Serial No. 402,488
2 Claims. (Cl. 18—16)



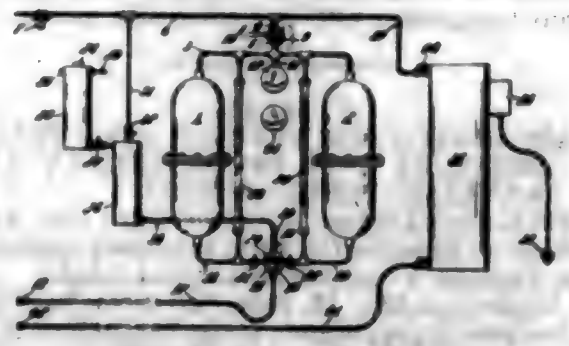
1. In a machine for casting articles in sectional molds and having a frame, a conveyer mounted on the frame, and sectional molds mounted on the conveyer at intervals, a charging device having a nozzle, means mounting the charging device on the frame for movement with the conveyer, a track section paralleling the conveyer, a carriage movable on said track section, means on the carriage for engaging the conveyer to move the carriage therewith, means on the track for disengaging the carriage, means connecting said carriage to said charging device for moving the charging device with each mold during part of its travel, and means normally holding the charging nozzle in inoperative position relative to the mold.

2,862,238
INJECTION MOLDING MACHINES
Alberto Cuzzi, Milan, Italy
Application September 7, 1955, Serial No. 532,955
Claims priority, application Italy May 12, 1955
5 Claims. (Cl. 18—30)



1. An injection molding machine comprising, in combination, a supporting frame including a plurality of parallel tie rods; a stationary die plate supported on said frame; a movable assembly including a power cylinder means movably supported on said tie rods and having a closed end and an open end facing toward said stationary die plate, a power piston means movably mounted in said power cylinder means and projecting from said open end, and a die plate fixedly secured to said power piston means and movably supported on said tie rods, said movable die plate being located opposite said stationary die plate; hydraulic moving means including stationary means secured to said frame and reciprocable means secured to said movable assembly whereby said assembly can be moved between a retracted position and an advanced position in which said die plates are closely spaced from each other; and hydraulically operated clamping means for clamping said power cylinder means in said advanced position of said assembly to said tie rods so that pressure fluid introduced into said power cylinder means further advances said power piston means whereby said movable die plate is pressed against said stationary die plate.

2,862,239
INJECTION MOULDING PROCESSES AND APPARATUS THEREFOR
Harold John Pollard and John Rees, Bristol, England, assignors, by mesne assignments, to Bristol Aircraft Limited, Bristol, England, a British company
Application November 14, 1955, Serial No. 546,699
Claims priority, application Great Britain October 25, 1955
17 Claims. (Cl. 18—30)



11. Injection moulding apparatus for injecting into a mould a moulding mixture comprising a liquid resin, a catalyst and an accelerator, which moulding mixture sets at room temperatures in a commercially acceptable time, said apparatus comprising a mixing chamber, first and second conduit means communicating with said mixing chamber for introducing into the mixing chamber the liquid resin, catalyst and accelerator to comprise said moulding mixture, a non-return valve between said first conduit means and said mixing chamber, a non-return valve between said second conduit means and said mixing chamber, third conduit means in communication with said mixing chamber, said third conduit means providing an injection passage by which resin mixture may be passed from said mixing chamber into a mould, and means for passing a cleaning solvent into said mixing chamber and through said injection passage.

2,862,240
STUFFING MECHANISM FOR INJECTION MOLDING PRESS
William Strauss, Philadelphia, Pa., assignor to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application October 22, 1956, Serial No. 617,383
3 Claims. (Cl. 18—30)

1. A stuffing mechanism which comprises a stuffing chamber including interior walls defining a bore therein,

2,862,244

axially extending recess, centering said metallic cup

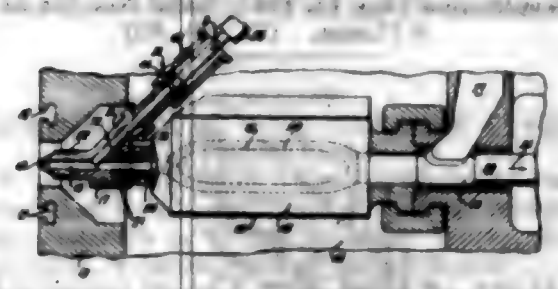
a ram mounted in said bore in sliding engagement with said walls, means defining a feed port through said walls into said bore, means for reciprocating said ram in said bore past said feed port, proportional feed means connected to said port for delivering a charge of material through said port into said bore when said ram is withdrawn in said bore past said feed port, the amount of said charge being proportional to the length of stroke of said ram in said bore, and means actuating said reciprocating means to withdraw said ram in said bore past said feed port and then to return said ram into said bore, said actuating means being responsive after a predetermined time lapse to the entry of said ram into said bore to a predetermined position.

2,862,241

APPARATUS FOR THE AUTOMATIC CONTROLLED FEEDING OF PLASTIC MATERIAL

Lawrence De Mattia, Cedar Grove, N. J., assignor to De Mattia Machine & Tool Co., Clifton, N. J., a corporation of New Jersey

Application November 30, 1956, Serial No. 625,505
3 Claims. (Cl. 18—30)



1. In a plastic molding machine operating in repeated pressure cycles, said machine having article forming molds and having a nozzle opening into said molds and having a material receiving bore opening into the nozzle and having means for filling said bore with a batch of material for filling the molds and for projecting the said batch under pressure through the nozzle and into the molds to fill the latter and for then relieving said pressure and for filling the bore with a new batch of material for the molds, thus completing a pressure cycle of the machine, and having means for successive automatic repetition of said pressure cycle, a device for relieving pressures due to the presence of any excess material in the machine bore beyond that required to fill the molds, said device comprising a chamber having an end opening into the nozzle, a bore in said chamber in line with said end opening thereof, and means in said chamber movable in said bore for closing said chamber end opening under a pressure greater than that normally exerted against the batch of material so projected through the nozzle, but of less pressure than the excess pressure set up when material beyond that required to fill the molds is so moved against said nozzle opening, so that, when a condition of such excess material is present, the chamber end opening will be open to receive said excess material in the chamber, and, when the said pressure for projecting the batch through the nozzle and into the molds is so relieved, the said excess pressure will be relieved and said material will then move out of the chamber and into the bore of the machine, for mingling with the next batch of material, for the next of such pressure cycles.

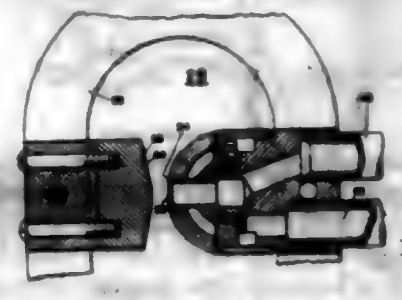
2,862,242

COMMINUTION METHOD

James B. Jones and John L. Stranglen, West Chester, Pa., assignors to Aeroprojects, Inc., West Chester, Pa., a corporation of Pennsylvania

Application September 16, 1957, Serial No. 685,361
13 Claims. (Cl. 18—47.3)

1. A method for forming finely divided solid particles within a relatively narrow size range from non-brittle pliable solids, which method comprises heating a solid of the aforesaid type above its melting temperature, contacting a rapidly moving stream of an inert gas with a coaxially enveloping stream of said molten solid, impinging the rapidly moving stream of gas upon a barrier and deflecting it at an angle to its normal direction of



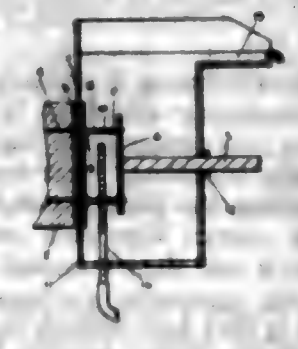
movement, said deflection of the gas stream comminuting said enveloping molten solid stream into finely divided particles within a narrow particle size range, and rapidly solidifying said particles by moving said particles through a gaseous atmosphere maintained at a temperature appreciably below the melting point of the solid.

2,862,243

PROCESS FOR FORMING GRANULES OF THERMOPLASTIC POLYMERIC MATERIALS

John William Frederick Farr, Luton, William Sermon Gilmour, Welwyn, and Alexander Kennaway, London, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Application August 27, 1954, Serial No. 452,635
Claims priority, application Great Britain September 1, 1953
10 Claims. (Cl. 18—47.5)



1. In a process for converting thermoplastic material in granules by extruding said material in molten condition as a thread or rod directly from an extrusion orifice into a body of cooling liquid and cutting the extruded material into granules while said extruded material is immersed in said cooling liquid and before it has cooled throughout to the solid state, the improvement which comprises extruding said material through a plurality of die orifices, said orifices lying in the same plane around an axis parallel to the direction of extrusion, transversely cutting said extruded material with rotary cutter means rotating about said axis, and asymmetrically and continuously introducing a supply of the cooling liquid to the region of said rotating cutter means in a direction substantially transverse to said axis of extrusion, thereby aiding the centrifugal action of said rotating cutter means in removing the cut extruded particles from the region of said orifices, and withdrawing the liquid and entrained granules driven outwardly by said cutter means.

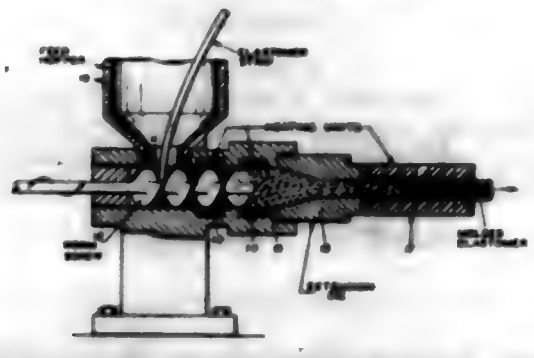
surface positioned outwardly of each rocker member, and

2,862,244

EXTRUSION MOLDING OF COPOLYMERS OF TRIFLUOROCHLOROETHYLENE AND VINYLIDENE FLUORIDE

Lester E. Robb, Westfield, N. J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application February 28, 1955, Serial No. 490,719
6 Claims. (Cl. 18—55)



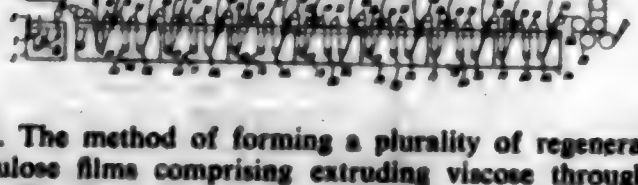
1. In a process for shaping in an extrusion machine a material comprising an elastomeric copolymer of trifluorochloroethylene and vinylidene fluoride, the steps which comprise: heating said material to a temperature between about 70° F. and about 190° F. while moving said heated material through a die land at a temperature between about 70° F. and about 190° F.

2,862,245

METHOD FOR PRODUCING FILMS

Frank H. Reichel, Villanova, Pa., and Augustus E. Craver, Fredericksburg, Va., assignors to American Viscose Corporation, Wilmington, Del., a corporation of Delaware

Application September 7, 1951, Serial No. 245,612
2 Claims. (Cl. 18—57)



2. The method of forming a plurality of regenerated cellulose films comprising extruding viscose through a plurality of nozzles into a coagulating liquid, withdrawing the at least partially coagulated films from the coagulating liquid, positioning the films together with their adjacent surfaces in contact with each other, passing the films through a first and then a second group of liquid after treating baths, separating portions of the films a plurality of times as they pass through each of the groups of liquid after treating baths, directing successive separated portions of one of the films through a plurality of paths each of greater length than the paths of the corresponding successive separated portions of the other film while passing through the first group of liquid after treating baths, directing successive separated portions of the other film through a plurality of paths each of greater length than the paths of the corresponding successive separated portions of the first film while passing through the second group of liquid after treating baths so that both films have the same length of travel while passing through the sum of the liquid after treating baths and positioning the films together with their adjacent surfaces in contact with each other after each separation.

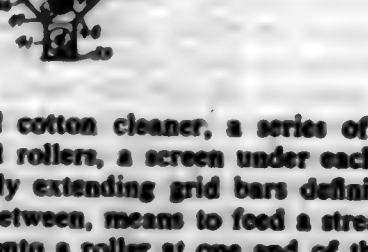
2,862,246

METHOD FOR PRODUCING A ROLLER

Harry J. Sedlar and Ernest E. Cook, Minneapolis, Minn.

Application January 25, 1956, Serial No. 561,304
6 Claims. (Cl. 18—59)

4. The method of producing a roller comprising providing one end portion of a metallic core with a generally axially extending recess, centering said metallic core within a mold by engaging the other end portion of the core by a minimum area contact and engaging the surface



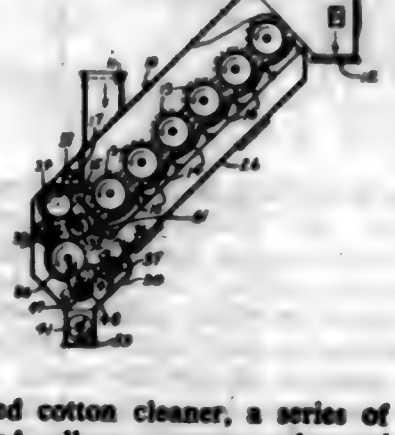
of the recess along spaced generally opposed line contacts and thereafter molding a non-metallic coating to said core, whereby the non-engaged portion of the surface of the recess will be substantially covered by said coating.

2,862,247

SEED COTTON CLEANER

Arvel L. Vandergriff and William C. Ponce III, Columbus, Ga., assignors to Lummus Cotton Gin Company, a corporation of Georgia

Application May 13, 1955, Serial No. 508,214
4 Claims. (Cl. 19—93)



1. In a seed cotton cleaner, a series of horizontally disposed spiked rollers, a screen under each roller comprised of axially extending grid bars defining elongated passages therebetween, means to feed a stream of cotton to be cleaned onto a roller at one end of the series, and means to rotate all the rollers in a direction to pull the cotton being cleaned from the end roller across the several screens and discharge it from the ultimate screen at the other end of the series, the grid bars in each screen being spaced closer together for the initial part of the movement of cotton thereover than for the latter part of said movement.

2,862,248

GILL BOX

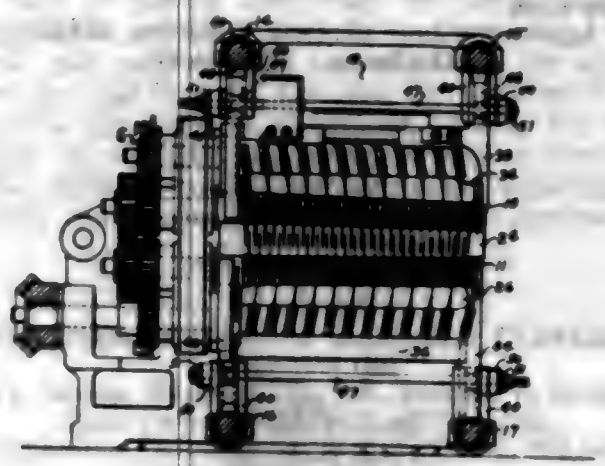
Andrew A. Spisak, Cleveland, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Application March 21, 1955, Serial No. 495,673
7 Claims. (Cl. 19—129)

2. In a gill box, a frame comprising spaced substantially parallel side plates, a series of faller bars supported transversely of said plates for movement parallel to the plates, advance means for advancing said faller bars from the entrance end to the exit end of the gill box, return means for returning the faller bars, means for transferring the faller bars between the advance means and the return means including first and second opposed rocker members for guiding the transfer of said faller bars, there being a rocker member at each end of said advance means for advancing the faller bars to guide the transfer movement of the faller bars between the advance means and the return means, a tie rod extending between and through said rocker members and having an abutment

nous means from the apertured means and to compact

surface positioned outwardly of each rocker member, and buffering and biasing means comprising a body of rubber-



like material on said tie rod intermedate each rocker member and the abutment surface outwardly thereof.

2,862,249
DRAWING FRAME AND CLEARER SYSTEM THEREFOR

John S. Dudley, Douglas, Mass., William J. Langlois, Woonsocket, R. I., and Joseph H. L. Roy, Whitinsville, Mass., assignors to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts

Application March 6, 1956, Serial No. 569,742
2 Claims. (Cl. 19—139)

1. A drawing frame comprising two axially-aligned series of drawing roll units, a supporting frame for all of said units, said frame comprising two full-height upright and spaced end frame sections and a hollow part-height upright middle frame section, said end frame sections being connected by a cross member which overlies and is supported by said middle frame section, separate roll driving mechanism in each spaced end frame section to drive the adjacent series of drawing roll units, a separate motor to drive each separate roll-driving mechanism, a separate set of pneumatic clearer apparatus for the drawing rolls of each series of units, direct exhaust connections from each set of clearer apparatus to said hollow middle frame section, a single common air-exhausting mechanism mounted adjacent one side of said hollow middle frame member and connected to exhaust air from both sets of clearer apparatus through said hollow frame member and said exhaust mechanism, a discharge outlet passage for the exhausted air, and means to screen the waste material from the air as it approaches said common air-exhaust mechanism, and said exhaust mechanism and said discharge outlet passage being located in the unobstructed space beneath the drawing roll units and between said hollow middle frame section and one of said end frame sections.

2,862,250
SLEEVE FOR ROLLERS

Goffredo Fumagalli, Milan, Italy, assignor to Sampre S. A. Meccanica Precisione, Milan, Italy

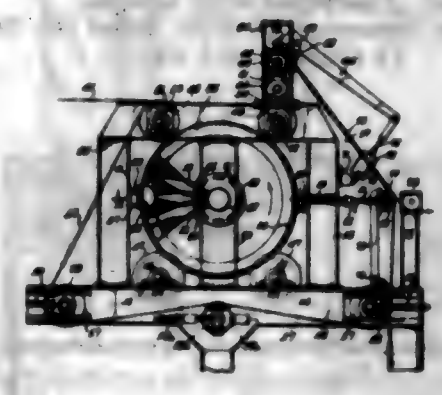
Application April 27, 1953, Serial No. 351,430
5 Claims. (Cl. 19—143)

1. A drawing roller for use in textile spinning frames comprising a cylindrical body having axially spaced apart cylindrical surfaces thereon and annular, radially outward extending surfaces facing each other at the remote edges of said cylindrical surfaces and disposed at 90 degrees relative to the latter, and a hollow, completely elastic sleeve of generally spherical configuration fitting over said body and having diametrically opposed openings through which the latter extends, the edge portions of said sleeve at said openings having cylindrical inner surfaces and radial end surfaces seating against said cylindrical surfaces and said radial surfaces, respectively, of the body so that said sleeve is supported on said body only at said edge portions and is free to elastically deform therebetween.

2,862,251
METHOD OF AND APPARATUS FOR PRODUCING NONWOVEN PRODUCT

Frank Kalwaites, Longmeadow, Mass., assignor to Chicopee Manufacturing Corporation, a corporation of Massachusetts

Application February 23, 1956, Serial No. 567,275
77 Claims. (Cl. 19—161)

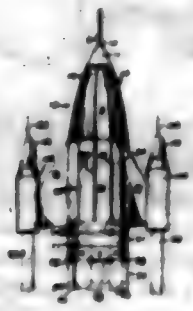


3. A machine for producing a unitary foraminous fabric from a layer of starting fibrous material the individual fibrous elements of which are capable of movement under the influence of applied fluid forces, which comprises a rotatable hollow drum defining longitudinally and transversely spaced apertures arranged in a pattern, a flexible foraminous belt having foramina smaller than the apertures in the drum adapted to pass around a portion of the periphery of said drum with said layer positioned between the drum and the belt, means located inside the drum for projecting adjacent fluid streams simultaneously against the inside surface of the drum and thence through said apertures and into the said layer, and means for rotating said drum and moving said belt without relative translatory motion between them while said fluid is being projected between said apertures.

9. The method of arranging fibers, which comprises positioning a layer of fibers between foraminous means and means defining longitudinally and transversely spaced apertures, and projecting adjacent liquid streams with force simultaneously through said longitudinally and transversely spaced apertures and then through said layer, said liquid being diverted laterally by said foraminous means and then passing therethrough to space the forami-

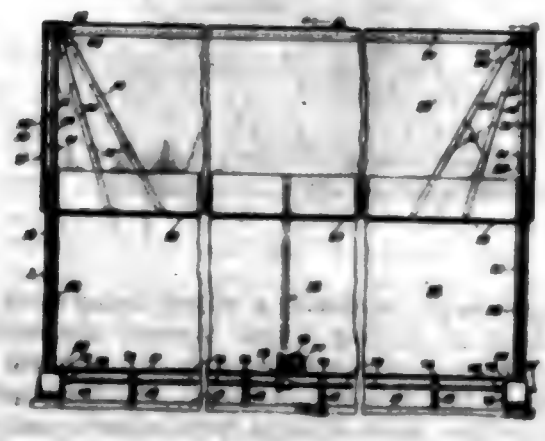
nous means from the apertured means and to compact said fibers in the portions of the spaces between said apertures.

2,862,252
VENDING BUILDING STRUCTURE
Theodore L. Beach, Jr., New Carlisle, Ohio
Application November 28, 1955, Serial No. 549,441
4 Claims. (Cl. 20—1.6)



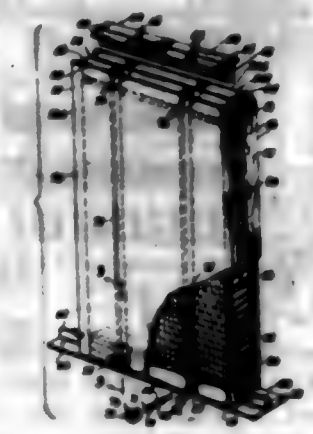
1. A vending building structure comprising a vertically extending tubular body portion having a display device incorporated therein adjacent an upper end thereof, said structure having a lower substantially ground-level vending section below the body portion, the body portion having radially extending wings, the support for the building structure consisting of wing supporting members at the outer extremity of the wings well beyond the vending section.

2,862,253
TWO-STORY TRAILER CONSTRUCTION
Reed Place, Syracuse, and Charles B. Kramer, Sr., Bremen, Ind., assignors to Liberty Coach Company, Inc., Bremen, Ind., a corporation of Indiana
Application September 15, 1950, Serial No. 184,932
12 Claims. (Cl. 20—2)



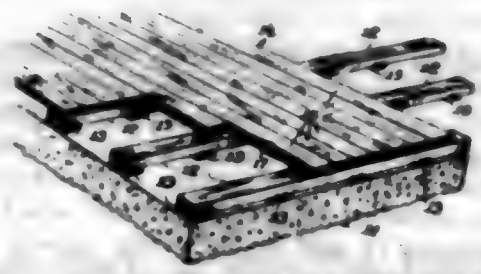
11. In a two-story trailer including upper and lower sections arranged to telescope, one section within the other, the upper section being movable in opposite directions between a predetermined upwardly extended position and a predetermined lowered position with respect to the lower section and having screw-jack means reacting between the upper and lower sections for raising and lowering said upper section with respect to the lower section, power applying means including a power transmission shaft for driving said screw-jack to move said upper section to one of said predetermined positions, and means operative upon the attainment by the upper section of said one of said predetermined positions for limiting the effective force thereafter reacting between said sections through said jack upon the continued application of power through said power applying means.

2,862,254
STRUCTURAL BUILDING PANEL CONSTRUCTION
George W. Meek, Pelham, N. Y., assignor to American W. M. B., Inc., New York, N. Y., a corporation of New York
Application June 10, 1954, Serial No. 435,826
23 Claims. (Cl. 20—4)



1. A rectangular structural building panel wall unit having two side edges and top and bottom ends comprising, in combination, a pair of spaced inside and outside rectangular sheathing plates, spacing means acting to laterally space said plates apart, said spacing means comprising top and bottom header elements interposed between and secured to top ends and bottom ends of said inside and outside plates, porous core means located between said plates, means defining in said core means adjacent to the inner face of the outside plate, a plurality of spaced vertical channels extending from end to end of said unit, said outside plate having holes in the bottom end thereof, and said bottom header element having ways in the outer side thereof communicating with said channels, with the outlet holes in the outside plate communicating with said ways.

2,862,255
FLOOR CONSTRUCTION
Sexton D. Nelson, Chicago, Ill.
Application December 3, 1953, Serial No. 395,937
2 Claims. (Cl. 20—6)

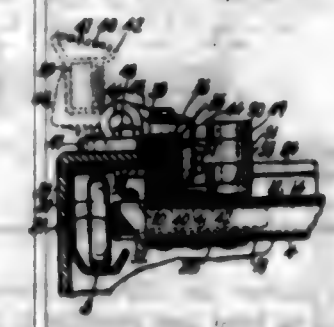


1. A free-floating wood floor construction supported upon a concrete or rigid base and devoid of any attachment to said base for use in gymnasiums, basket ball courts and the like, consisting of spaced sleepers, floor boards laid upon and arranged transversely of said sleepers and anchored thereto, a plurality of elastic rubber cushion pads anchored to and with the upper face of each pad in surface contact with the under side of a sleeper and the lower face of each pad in surface contact with and unattached to said rigid base with said pads arranged in spaced apart relation along each sleeper, each of said pads provided with a plurality of open-ended and continuous recesses extending horizontally therethrough and separated by load bearing walls, whereby said sleepers and superimposed floor are wholly and yieldably supported on said pads which absorb the shock of the impact

along the inner faces thereof, the trough on said outer

to which the floor surface is subjected in use and induce prompt recovery from said shock, the open recesses in said pads providing for the entrance and exit of air therethrough and when the floor is subjected to impact and said pads are thereby compressed and subsequently released, air is circulated beneath the sleepers and floor boards, said pads elevating and supporting the sleepers above the rigid base and providing for substantially unobstructed circulation of air between the base, the sleepers and the overlying floor boards as well as cross ventilation therebetween for preventing the collection of moisture and condensate beneath the floor construction.

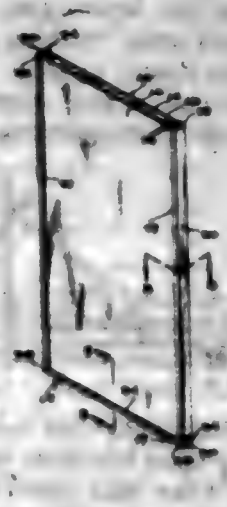
2,861,356
WEATHER SEALS FOR SLIDABLE CLOSURE ASSEMBLIES
Earl L. Stroup, Hartford City, Ind., assignor to Overhead Door Corporation, Hartford City, Ind.
Application December 12, 1955, Serial No. 552,348
16 Claims. (Cl. 20—19)



14. An upwardly acting door assembly comprising side frame members, a door comprising a plurality of hingedly connected sections, tracks comprising vertical and horizontal sections and curved intermediate sections therefor, the vertical sections being disposed at the inner sides of said frame members, said door sections being provided with rollers coacting with said track to slidably support the door including rollers disposed closely adjacent the bottom edge of the bottom section of the door, a counterbalance for said door including cables, brackets for connecting the cables to the door mounted on the lower section thereof and having laterally projecting angled arms disposed in the plane of the door section, roller spindle bearing sleeves supportedly engaged with said arms, said cables being engaged with said sleeves, and seal members swingably mounted on said frame members to engage the outer side of the door and the lateral edges of the frame members, said cables being disposed between the rollers and the seal members when the seal members are in closed door engaging position.

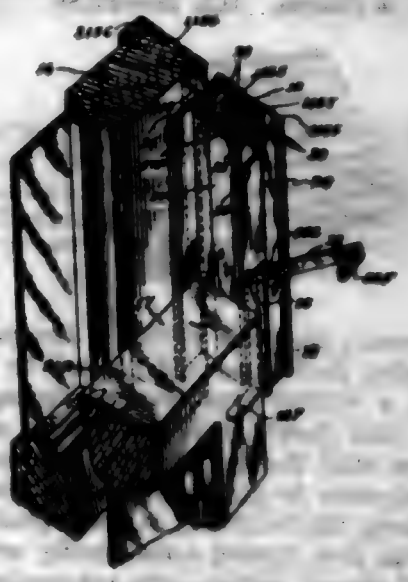
2,862,257
HOLLOW CORE PANEL
John A. Conner, San Lorenzo, Calif.
Application October 26, 1956, Serial No. 618,476
2 Claims. (Cl. 20—35)

2. A panel including laterally spaced panel members; and combined spacing and connecting strips extending along selected edges of said members, said strips each including a web extending across the space between the panel members, spacer flanges extending from said web in planes perpendicular to the plane of the web and bearing against the confronting inner surfaces of the respective panel members, retaining flanges overlying the outer surfaces of the panel members, and cover flange portions connecting the respective spacer flanges with the retaining flanges and overlying the edge surfaces of the panel members, said strips further including locking lips extending longitudinally of the spacer flanges and embedded in the confronting inner surfaces of the respective panel members, said locking lips being formed upon the edges of the spacer flanges remote from said web, the locking lips



of both spacer flanges being disposed in a common plane perpendicular to the planes of the spacer flanges.

2,862,253
REMOVABLE SASH
Robert G. Ovbiagle, Chicago, Ill.
Application February 20, 1956, Serial No. 716,319
6 Claims. (Cl. 20—52.2)

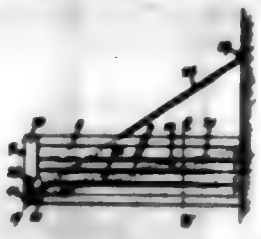


2. In a window structure having a frame with opposed sash guide means one of which comprises a primary guide groove and the other of which comprises a vertically slotted spring housing, an edge member having elongated guide means on one side slidably embracing said spring housing and having means on its other side providing a secondary sash receiving groove, a spring in said spring housing anchored at its upper end on said housing and at its lower end on said edge member, a sash having its opposite edges disposed slidably in the respective grooves, and means for interconnecting said edge member and the sash for holding said edge member releasably on said sash.

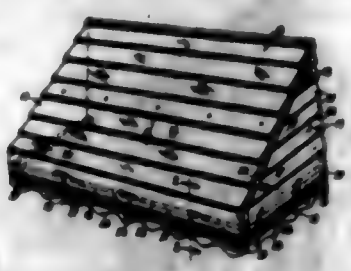
2,862,259
DOOR HOODS
Paul Rimmeir, Miami, Fla., assignor to Sunview Industries, Inc., Miami, Fla., a corporation of Florida
Application August 20, 1954, Serial No. 451,211
1 Claim. (Cl. 20—67.5)

In a door hood structure, a substantially rectangular frame comprising inner and outer side walls and spaced apart end walls, a continuous gutter projecting inwardly from said ends and the outer side of said frame and along the bottoms thereof, troughs connected to said outer side wall and to said end walls and in corner therewith

along the inner faces thereof, the trough on said outer side wall disposed immediately above and spaced from said gutter and near the lower end of said side, the troughs secured to said ends inclining downwardly from the inner end of said frame to their juncture with the trough of said outer end, a roof sheet disposed within said frame at an angle corresponding with the inclination of said end wall troughs and having its outer end and side edges resting upon the inner lips of said troughs and spaced inwardly from said outer end wall and said ends, said troughs having openings therein at the juncture of said side troughs with said end troughs disposed above said gutter, and said side wall gutter having drain openings in the ends thereof.



2,862,260
AWNING STRUCTURE
Theodore J. Bottom, Kirkwood, Mo.
Application March 28, 1957, Serial No. 649,028
4 Claims. (Cl. 20—57.5)

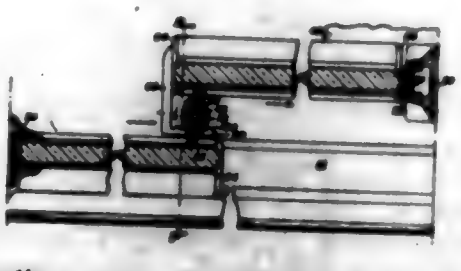


1. In an awning structure having a downwardly and forwardly sloping roof panel and adapted to be secured to a building, a vertical front wall depending from the lower end of said panel, said wall having an inturned flange, a fringe strip depending from the lower end of said wall contiguous to and in the same plane as said wall and forming therewith an uninterrupted front surface, said fringe strip having a rearwardly extending reversely bent U-shaped portion with substantially parallel sides to provide a snugly fitting flange-receiving groove, the inturned flange being located in said groove to hold and position the fringe strip incident to attachment, said U-shaped portion having an upwardly extending wall lying flat against the rear face of said front wall, and fastening means extending through said front wall and upwardly extending wall.

2,861,361
THRESHOLD WITH WEATHER SEAL
Henry N. Quass, Dallas, Tex.
Application December 7, 1956, Serial No. 626,953
3 Claims. (Cl. 20—64)

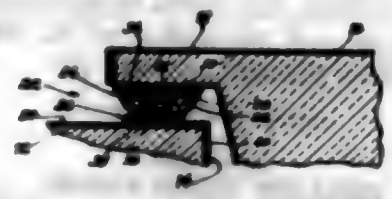
1. A combined threshold and sealing strip comprising in combination with a supporting floor structure, a threshold formed in two parts each consisting of a rigid elongated member, normally disposed horizontally and having a downwardly and outwardly inclined face along one side thereof, the elongated members being adjustably and removably secured to the floor structure with their inclined faces opposed and in spaced, parallel relation to each other, and a sealing strip, formed of molded resilient material, positioned between the threshold members, the sealing strip being arched in transverse section and having a convex upper surface, a longitudinal cavity formed in its under side, and marginal portions on opposite sides of the longitudinal cavity having substantially flat bottom faces for engagement with a supporting surface, the marginal portions having outwardly and downwardly inclined side faces for clamping engagement with the opposed faces of the threshold members whereby the sealing strip is secured to the floor structure, the arrangement being such that the effective height of the sealing strip may be varied by adjusting the spacing of the threshold members relative to each other.

2,862,262
SEALING STRIP FOR GLASS DOORS
John R. Shea, Atlanta, Ga.
Application July 3, 1957, Serial No. 669,767
10 Claims. (Cl. 20—67)



9. A sealing device for slidable closure members of the type wherein at least one member is slidable with respect to the other comprising a rotatable shaft means mounted intermediate diametrically opposed faces of the said closure members, and diametrically opposed sealing strips of flexible material secured to the said shaft means in such a fashion as to engage the said diametrically opposed faces of the closure members when the said members are drawn to a closed position, said sealing strips also being of such a width as to terminate short of the adjacent ends of said closure members when the closure members are drawn to a closed position.

2,862,263
DOOR SEAL
George Price Grieve, Glenview, Ill.
Application June 22, 1956, Serial No. 593,071
3 Claims. (Cl. 20—69)



1. A structure of the character disclosed comprising a wall member having an opening therein, a closure member fitted to said opening and mounted relative to the wall member for movement to and from a position for closing the opening, said closure member having a marginal portion thereon which overlaps a marginal portion of the wall member encompassing the opening, the marginal portion of one of said members having secured thereto a channel with outwardly converging side walls which grip and hold a mass of relatively soft heat resistant and heat insulating material in the form of a strip having substantial depth and width facing the other member, said strip of material providing a first continuous marginal sealing element on said one of the members, the marginal portion of the other member having secured thereto a resilient metal sealing strip providing

a second continuous marginal sealing element engageable with the strip of material of the said first sealing element when the closure element closes the opening to establish a separable peripheral closure seal around the opening, said resilient metal sealing strip having a portion of substantially U-shaped section, one side of which is secured against said marginal portion of the other member with the U-shaped section extending laterally of the said marginal portion and with the other side thereof spaced outwardly and free to flex relative to the said marginal portion, and said other side of the resilient metal sealing strip having a flange thereon projecting away from the marginal portion of said other member for engaging and pressing into said strip of material when the closure element closes the opening.

2,862,264

REINFORCEMENT STRIP FOR REINFORCING THE CORNERS OF DRY WALLS AND THE LIKE

Anthony Puma, South Ozone Park, N. Y.

Application April 7, 1954, Serial No. 421,519
5 Claims. (Cl. 20—74)

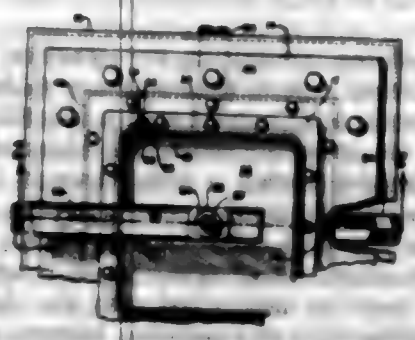
1. A reinforcing strip for the corners of dry walls and the like comprising a flexible carrier strip, a pair of spaced and parallel metallic reinforcing strips secured longitudinally and intermediate the width of said carrier strip and being laterally substantially inflexible and longitudinally reliable, the spacing of said strips being greater than the thickness of the strips, said strip being inwardly foldable along the spacing of said metallic strips to conform to the angle between contiguous walls and to form a uniform, straight, rigid and permanent corner, said carrier strip having marginal portions applicable to said walls for adhesive connection therewith so that upon wall deformation, the straight, rigid and permanent corner remains with a change of angular disposition of said metallic strips, the exposed outer side of said carrier strip being adaptable for flush wall finishing.

2,862,265

CONTINUOUS CASTING MOLD

Frank W. Vaughn, Alexandria, Va., and Harvey B. De Voe, Jr., Massena, N. Y., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 10, 1956, Serial No. 627,379
5 Claims. (Cl. 22—57.2)



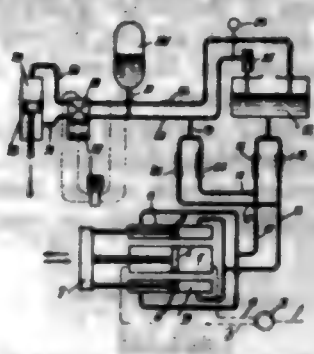
1. In a continuous casting mold unit, an open ended mold and means for cooling said mold, said means comprising a liquid coolant-containing chamber completely surrounding said mold and extending over substantially the entire length thereof, said chamber having inner and outer walls, the mold itself constituting at least a portion of the inner wall, means for supplying liquid coolant to said chamber and self adjusting means within said chamber for directing the coolant over the surface of the mold at a relatively high velocity, said coolant-directing means comprising a movable sleeve around the entire mold and parallel thereto, said sleeve being opposite at least that portion of the mold which contains the molten and solidified metal and of a length less than that of the cooling chamber, said sleeve also being supported intermediate the top and bottom thereof with freedom for limited lateral movement and spaced from the top and bottom of the chamber, and flexible separate spacing elements mounted at intervals around said sleeve on the side facing the mold, which elements when in contact with the mold define the minimum width of a narrow passageway between said sleeve and mold over at least the major length of the sleeve, said spacing elements consisting of thin elongated members detachable from the sleeve and mounted on said sleeve in a direction such that their axes are parallel to the direction of the flow of coolant through the passageway between the sleeve and mold, the upper end of said passageway being in communication with the upper portion of the coolant chamber whereby all of the coolant entering the chamber enters the passageway and is discharged therefrom after passage over the mold surface.

2,862,266

PRESSURE DIECASTING MACHINE

Lucien Perès, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

Application June 1, 1956, Serial No. 588,653
Claims priority, application France June 23, 1955
6 Claims. (Cl. 22—68)



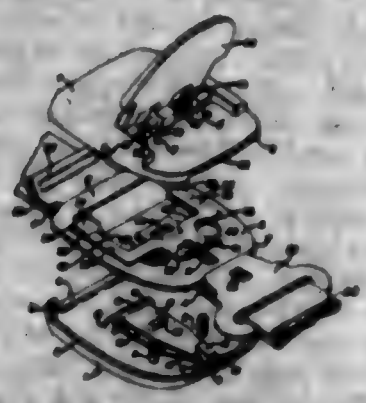
1. In a fluid operated die-casting machine having a pressure space for molding molten metal therein under pressure, in combination, a cylinder, a press piston in said cylinder and having a first operating position and a second operating position, means operable by said piston for opening and closing said pressure space when said press piston is in said first and second positions respectively, an injection cylinder, an injection piston reciprocable in said injection cylinder and being movable in a direction for injecting molten metal into said pressure space and in an opposite direction to an initial starting position, a first source of fluid under pressure, means for selectively applying fluid under pressure from said first source to the press piston to actuate it between said two operating positions, an accumulator for accumulating fluid under high pressure therein, a second source of fluid, a pressure intensifier operable by said press piston for delivering fluid from the second source of fluid to the accumulator under high pressure in response to the reciprocation of the press piston, first conduit means providing communication between the second source of fluid and the pressure intensifier and second conduit means providing communication between the pressure intensifier and the high pressure accumulator, means for controllably applying fluid under pressure to the injection piston from

the high pressure accumulator to reciprocate it in both of said directions once during closure of the pressure space by the closure means operated by the press piston.

2,862,267
FASTENERS
Leslie Parkin, Hyson Green, England, assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application February 4, 1954, Serial No. 408,992
Claims priority, application Great Britain February 16, 1953
5 Claims. (Cl. 24—73)

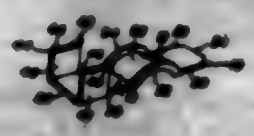
1. A fastener for removably securing parts together comprising a socket element and a resilient stud element, said stud and socket elements being separable, said socket element comprising a tubular portion closed at one end and having an outwardly directed flange at the other end, said tubular portion having an outside diameter suitable for insertion into the aperture of at least one of the parts to be secured together, said resilient stud element comprising a head portion adopted for engagement with another of the parts to be secured together and a stud portion insertable within said socket element and including resilient portions normally extending beyond the region defined by an imaginary tube concentric with the stud portion and of a diameter equal to the aforesaid outside diameter of said tubular portion, whereby upon application of the socket element into the substantially aligned apertures of one or more of the parts to be secured together and the insertion of the resilient stud into the socket element, the flange of the socket element may be caused to engage one face of the parts to be secured together while the stud will cause portions of the tubular portion of the socket element to be expanded to engage the edges of an aperture adjacent an opposite face.

2,862,268
SAFETY BELT BUCKLE
Clifford E. Cushman, Burbank, Calif., assignor to Pacific Scientific Aeroproducts, Glendale, Calif., a corporation of California
Application July 26, 1956, Serial No. 600,226
11 Claims. (Cl. 24—79)



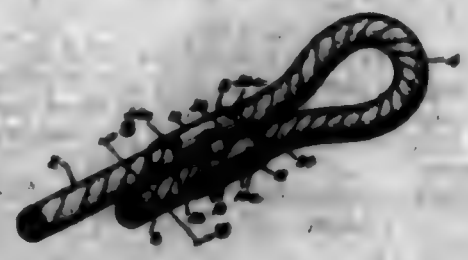
1. A safety belt buckle comprising a casing having receiving openings adapted for receiving the end portions of a pair of safety straps, a stop member within said casing, a movable cross-bar within said casing about which the end portion of one strap is adapted to pass, said cross-bar being movable to engage said stop member within said casing for locking said one strap against lengthening when said buckle is locked while still permitting the ready shortening of said strap, a detent within said casing for engaging and holding the other strap, and releasing means on said buckle operable for effecting movement of both said cross-bar and said detent to unlock said buckle and release said straps simultaneously.

2,862,269
ANCHORING CLAMP OR HOLDER FOR END STRAP OF A POCKETBOOK HANDLE
Daniel I. Ritter, New York, N. Y.
Application April 12, 1956, Serial No. 578,991
2 Claims. (Cl. 24—114.5)



1. An anchoring clamp for the end of a pocketbook handle strap, said clamp being of one-piece construction and comprising an elongated flat body portion of substantially rectangular shape and having opposing side edges and transverse end edges and upper and lower surfaces, said body portion being formed intermediate its end edges with an opening through which a strap end portion of a pocketbook handle may be passed from a position underlying the lower surface at one end of the body portion to a position overlying the upper surface at the other end of the body portion, arcuate straps disposed along the side edges of the body portion and forming the bounding side walls of the said opening, said straps upstanding from the body portion above the upper surface thereof and being disposed in confronting relation to receive the strap end portion of the pocketbook handle therebetween, and clamping arms at the other end of the body portion extending upwardly from the upper surface in confronting opposed relationship and adapted to be bent onto the strap end portion of the pocketbook handle to clamp it on the upper surface of the body portion.

2,862,270
CABLE CLAMP
William P. Fox, Newton Center, Mass., assignor to Merriman Bros., Inc., Boston, Mass., a corporation of Massachusetts
Application September 13, 1957, Serial No. 683,873
9 Claims. (Cl. 24—129)



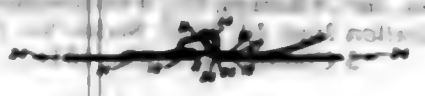
1. A cable clamp comprising two identical elements, each element being a plate formed to an S-shaped configuration about its longitudinal axis, a plurality of teeth along each of the straight longitudinal edges of said element, each element having a hole through the center thereof, each element having a slot extending from one end thereof to the said center hole, whereby said two elements when placed in reversed position with respect to each other may be interlocked with the slot of each element straddling the corresponding integral portion of the other element and the concave portions and teeth of the two elements will be in adjacent and opposed relation, and means for forcing said opposed portions

2,862,275

mold and clamped therein by said upper mold sections

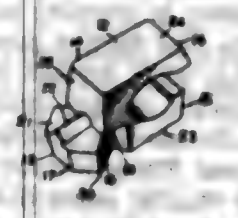
and teeth of said elements toward each other thereby to produce a clamping action on cables placed within the oppositely disposed S-shaped portions.

2,862,271
RELEASABLE BUCKLES
Frank Bernard Harley, Englefield Green, Egham, England
Original application July 17, 1950, Serial No. 174,149, now Patent No. 2,769,220, dated November 6, 1956. Divided and this application April 30, 1956, Serial No. 581,649
Claims priority, application Great Britain February 3, 1950
5 Claims. (Cl. 24—197)



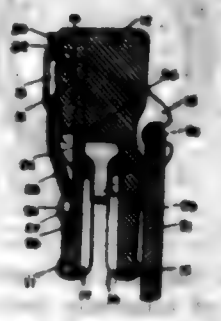
1. A releasable buckle for connecting a strap to another part, comprising a frame of sheet material consisting of two side members interconnected by three parallel transverse bars, namely a main anchorage for connection to the part to be connected to the strap, and an auxiliary anchorage and a gripping bar to hold the strap, the gripping bar being positioned over the space between the main and auxiliary anchorages on one side of the plane of tension between them, so that said strap can be held by passing its free end under the auxiliary anchorage around the gripping bar and back under the auxiliary anchorage between it and the standing end of the strap, in which each side member extends substantially straight from the auxiliary anchorage to the main anchorage and then turns back to the gripping bar, and has a portion projecting beyond the gripping bar which extends approximately perpendicularly to the plane of the anchorages and abuts against the portion of the said side member between the main and auxiliary anchorages, thereby spacing the gripping bar from the plane of the anchorages and preventing it from being pulled into said plane.

2,862,272
CENTER LEDGE SCOOP WITH MEANS RESISTING FORCIBLE MIS-MESHING
Louis H. Morin, Bronx, N. Y.
Application July 6, 1955, Serial No. 520,780
2 Claims. (Cl. 24—205.13)



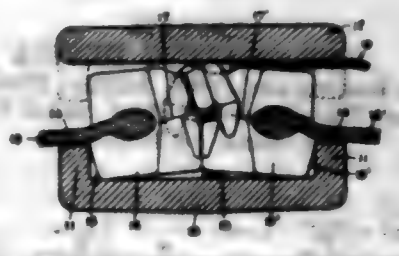
1. A scoop for separable fastener stringers of the class described, having upper and back parts, each including mounting end portions arranged upon the beaded edge of a stringer tape in securing the scoop to said tape, the upper part having a coupling end portion extending beyond the edge of the tape bead and comprising male and female coupling portions facilitating coupling engagement of scoops of companion stringers in retaining the stringers against pull-apart separation, the back part having an outwardly projecting member, including ledge sides overlying the female coupling portion of the upper part to engage the heads of scoops of a companion stringer in further retaining the scoops against separation, said member of each scoop having a wide perpendicularly straight outer surface, the coupling end portion of the scoop of one stringer overlying the complemental ledge surfaces of a pair of scoops of a companion stringer, when said stringers are coupled together, to provide means, on coupled scoops, to resist forcible mismeshing, and the lower surface of the coupling end portion of the upper part being bevelled upwardly and outwardly.

2,863,273
NON-JAMMING SLIDERS
Louis H. Morin, Bronx, N. Y.
Application May 15, 1953, Serial No. 355,203
8 Claims. (Cl. 24—205.15)



1. A slider for separable fastener stringers comprising a body defined by spaced walls having inwardly directed side flanges forming a channel between said walls, one wall including an integral web at one end portion thereof, said web including a projecting rivet portion, the other wall of said body seating on a shoulder on said web in the environment of said rivet portion, a leaf spring fixed to the rivet portion and engaging said second wall to support the second wall normally in seated position on said web, and said spring facilitating movement of the second wall relatively to said first wall.

2,863,274
JAM-FREE SLIDERS
Louis H. Morin, Bronx, N. Y.
Application May 28, 1953, Serial No. 356,224
5 Claims. (Cl. 24—205.15)

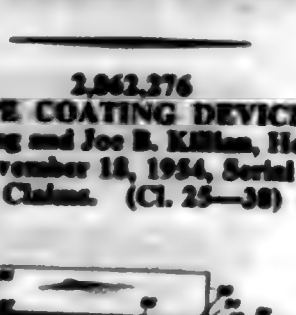


1. In a jam-free slider for separable fastener stringers having tape mounted identical scoops adapted to be coupled and uncoupled one with the other and swingable relatively to each other within the slider in a plane substantially at right angles to the plane of the slider walls in their coupling engagement, the combination of a body defined by spaced substantially flat parallel walls joined at one end portion in a connecting web, the spacing between said walls being greater than the thickness of said scoops to an extent at least equal to the thickness of an ordinary piece of fabric and yet not so great that the slider loses control of the scoops during any ordinary operation of said slider along the stringers, one wall only of the slider body having inwardly extending scoop engaging and controlling flanges defining, in conjunction with said web, the channels of the slider body, the distance between the inner edge of each said flange and the flangeless wall directly opposite thereto being less than the thickness of said scoops, said extra spacing of the body walls and said swinging movement of the scoops within the slider body facilitating passage of said ordinary piece of fabric through the slider without resisting movement of the slider along the stringers in coupling and uncoupling the scoops thereof.

ing to maintain the inner face of the second regular panel against said outwardly bent side margin of said elongated

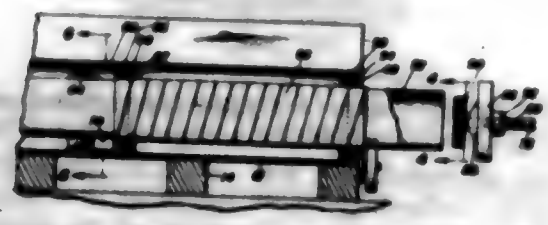
2,862,280

2,862,275
TOGGLE-TYPE CONNECTING ASSEMBLIES HAVING DETACHABLE CONNECTING BAILS
Joseph S. Kessler, Kenosha, Wis., assignor to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Application October 15, 1956, Serial No. 616,019
4 Claims. (Cl. 24—270)



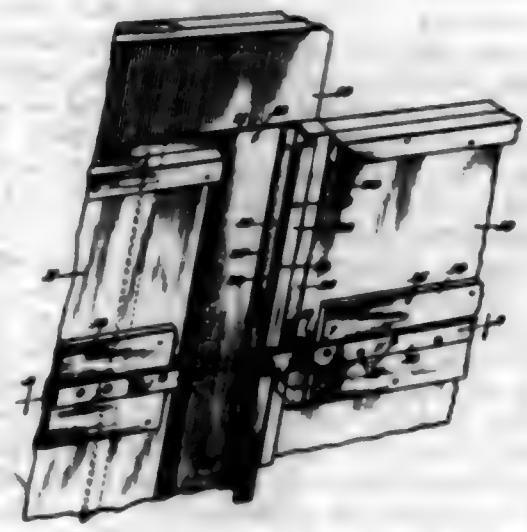
1. A toggle type connecting assembly for a clamping ring having a pair of relatively movable juxtaposed end portions adapted to be drawn and held together comprising, a lip on one of said end portions directed away from said end portion, a handle removably and pivotally engageable with the other end portion of said clamping ring, a bail pivotally connected to said handle and having a closed loop with a front portion shiftably engaged with said lip, said bail also having side portions extending transversely of said front portion and shiftable to a position under said lip when said handle is disengaged, and retaining means adjacent said lip position to normally maintain the front portion of the closed loop in engagement with the lip, one of the side portions of said bail having a notch therein normally located out of registration with said retaining means and of such size as to receive at least a portion of said retaining means when the front portion of the loop is shifted out of engagement with said lip and when said notched side portion is shifted into such engagement to permit removal of the bail.

2,862,276
PIPE COATING DEVICE
Percy B. Botting and Joe B. Killian, Houston, Tex.
Application November 18, 1954, Serial No. 469,722
3 Claims. (Cl. 25—38)



1. A pipe coating apparatus comprising a support, a semi-cylindrical base mold mounted on said support, upper sector mold sections hingedly secured to said support adapted to hinge outwardly from opposite sides of a length of pipe thereinto and to hinge inwardly over said base mold to form substantially a complete cylinder therewith but with the free upper edges of said upper mold sections spaced apart to define an open mouth therebetween, a pair of rollers journaled on said support at one end of said base mold for supporting one end of a pipe concentrically therewithin, an annular seal in said one end of the base mold for embracing a pipe and to extend therefrom into engagement with the inner surface of said base mold and said upper mold sections when closed, a combined seal and pipe supporting member positioned within said base mold and movable longitudinally therein to accommodate for different lengths of pipe, said seal and supporting member including an outer metallic sleeve snugly received in said base mold and clamped therein by said upper mold sections when closed, an annular sealing ring adapted to embrace a pipe and positioned within that end of the sleeve closest to the first mentioned seal, and rollers carried by the inner surface of said sleeve for engaging a pipe and holding the same concentrically within said mold, means for rotating a pipe within said mold, and means for delivering coating material into the open mouth of said mold.

2,862,277
CONCRETE WALL FORM WITH PREFORMED FILLER PANELS
Bror Hillberg, Chicago, Ill., assignor to Superior Concrete Accessories, Inc., Chicago, Ill., a corporation of Illinois
Application June 14, 1955, Serial No. 515,358
3 Claims. (Cl. 25—131)



1. A concrete wall form including as parts thereof: a first vertically extending rectangular regular panel; a second vertically extending rectangular regular panel positioned in spaced apart relation with, but in the same vertical plane as, the first regular panel; a preformed vertically extending filler panel interposed between, and lying in the same vertical plane as, the first and second regular panels and comprising a vertically extending and elongated bar-like member in abutting relation with the inner side edge of the first regular panel, and a vertically elongated rectangular plate formed of springy material, having one side margin thereof fitting against, and fixedly connected to, the bar-like member, having its other side margin free and fitting slidably against the inner face of the second regular panel in order that the two regular panels may be shifted towards and away from one another through an infinite number of adjusted positions to any desired extent within a limited range, and having its said other side margin bent outwards to a small extent so that it engages said inner face of the second regular panel with spring pressure; releasable means for holding the bar-like member of the filler panel in abutting relation with the inner side edge of said first regular panel, said releasable means comprising a shoulder-forming member on the bar-like member of the filler panel, a shoulder forming member on the outside face of said first regular panel, a waler-supporting bracket having a pair of spaced apart fingers adapted to straddle the shoulders provided by said shoulder-forming members and draw said shoulders toward each other to in turn clamp the bar-like member and the inner side edge of the first regular panel in such abutting relation, and a waler member supported on said bracket and in effective engagement with said regular panels and serv-

stringers are coupled together, to provide means, on sliding movement of the slider along the stringers in coupling and uncoupling the scoops thereof.

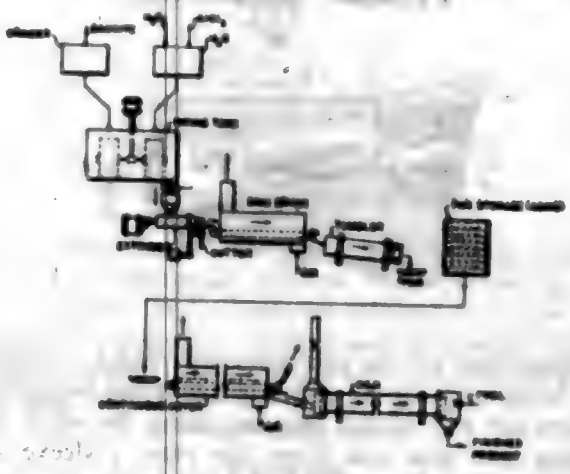
ing to maintain the inner face of the second regular panel against said outwardly bent side margin of said elongated rectangular plate.

2,862,278

PROCESS FOR PREPARING IMPROVED CATALYSTS MOULDED INTO PIECES OR CARRIERS THEREFOR

Willem Frederik Engel and Pieter Krijger, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

Application July 21, 1954, Serial No. 444,736
Claims priority, application Netherlands December 28, 1951
3 Claims. (Cl. 25—156)



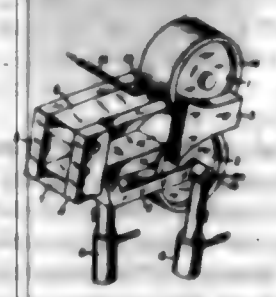
1. In the production of micro-porous pressed catalyst pellets by extrusion of a moist powdered alumina the combination of steps which comprises drying the cut green extruded sticky pellets superficially and only to the extent necessary to prevent them from sticking together upon tumbling, tumbling the superficially dried but still plastic pellets only to the extent to remove the sharp edges, aging the tumbled pellets in layers less than about 5 cm. deep for a time of at least 2 hours at about room temperature and ambient humidity, whereby substantially no change in water content occurs and internal stresses are relieved, and then drying and calcining the pellets at a temperature of about 500° C. to produce pellets having a micro-porous structure and having none of the alumina originally present therein converted to alpha alumina.

2,862,279

TOW CRIMPING APPARATUS

Harry D. Fardon, Jr., Parsippany, and Herbert J. Pike, Jr., Morristown, N. J., assignors to Allied Chemical Corporation, a corporation of New York

Application April 10, 1956, Serial No. 577,331
4 Claims. (Cl. 28—1)



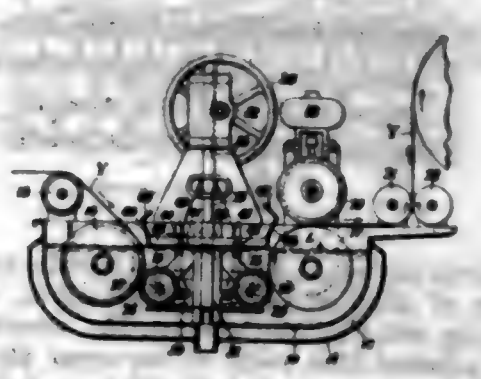
1. Process of crimping a bundle of filaments fed by cylindrical rolls into a crimping chamber, which comprises feeding such bundle at a linear speed of at least about 150 feet per minute into said chamber and spraying liquid from outside the chamber into the crevice where a surface of a feed roll meets a wall of the crimping chamber.

2,862,280

SIZE BOX

Thomas F. Suggs, Gastonia, N. C., assignor to Cocker Machine and Foundry Company, Gastonia, N. C., a corporation of North Carolina

Application March 21, 1956, Serial No. 572,984
5 Claims. (Cl. 28—28)



1. A size box comprising means forming a container for liquid size, a plurality of spaced rolls at least partially immersed in the size, means for feeding yarn around said rolls for immersion in the size, and a float freely located on the surface of the size and free of supporting contact with said container, intermediate said spaced rolls, said float being of a size and shape to cover at least a major portion of the surface located intermediate said rolls and being buoyantly supported by the liquid size alone.

2,862,281

TREATMENT OF FILAMENTARY MATERIAL

George K. Klausner, Cleveland, Ohio, assignor to Industrial Rayon Corporation, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application May 17, 1954
Serial No. 430,429
17 Claims. (Cl. 28—75)

1. A process for making filamentary products having improved adhesion to plastic, elastomeric or polymeric materials, comprising the steps, treating filamentary material in the form of continuous filaments, staple fiber, yarn, thread or cord, with an isocyanate reaction product which decomposes to an isocyanate at an elevated temperature; and thereafter maintaining the temperature of the processing thereof while in said form below the isocyanate-forming temperature of said isocyanate reaction product.

2,862,282

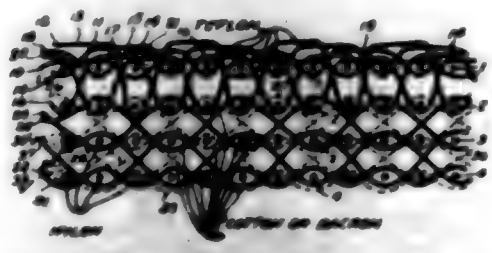
FLY CASTING LINE WITH TAPERED CELLULAR WATERPROOF PLASTIC COATING

Robert L. Beebe, Estherville, Iowa, assignor, by mesne assignments, to Soo Valley Company, Estherville, Iowa, a corporation of Iowa

Application December 27, 1954, Serial No. 477,750
2 Claims. (Cl. 28—80)

1. A line for fly-casting comprising an outer layer tapered smoothly between different outer diameters and overlying and bonded to a central inner core of a uniform diameter less than the smallest outer diameter of said outer layer, said outer layer comprising cellular waterproof plastic material and said inner layer comprising a multi-filament nylon cord.

2,862,283
ANTI-FRICTION FABRIC
Lawrence J. Rocco, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut
Application May 28, 1957, Serial No. 662,071
6 Claims. (Cl. 28—80)

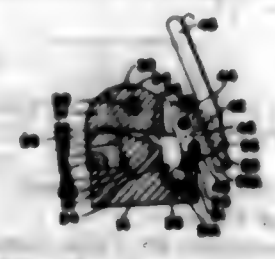


1. A fabric having an anti-friction surface comprising a plurality of plies or layers of filler yarns, warpwise yarns having anti-friction characteristics woven over at least two adjacent filler yarns of the upper ply to form surface floats, certain of said warpwise yarns being bound between floats under upper ply filler shots and other of said warpwise yarns being bound between floats under filler shots in the second ply to bind said upper ply and second ply together, and other warpwise yarns binding the filler yarns of said second ply and a third ply.

2,862,284
MODIFIED FILAMENT AND METHOD
Sol B. Wiczer, Washington, D. C.
Application May 4, 1953, Serial No. 353,003
8 Claims. (Cl. 28—82)

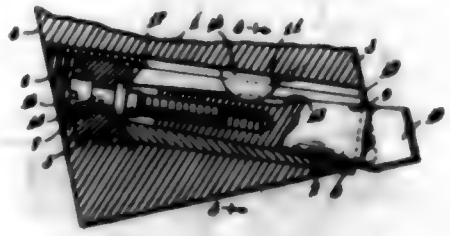
1. The method of modifying the surface texture of a synthetic organic thermoplastic extruded filament comprising incorporating a solid gas evolving agent in substantially only the surface portions of said filament and treating said filament to activate said gas evolving agent to develop pores substantially only in the surface of said filament.

2,862,285
QUICK RELEASE TOOL HOLDER
Lloyd W. Miller, Tallmadge, Ohio
Application September 23, 1955, Serial No. 536,135
7 Claims. (Cl. 29—96)



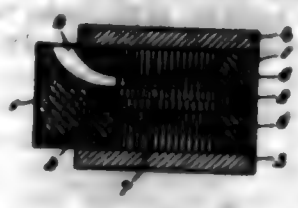
1. A cutting tool holder having a shank with a longitudinally extending head thereon, said head having a tool positioning notch opening both endwise and outwardly of one side of the head and defined by a side and bottom wall at exact right angles to each other, the opposite side of said head having a transverse recess opening both upwardly and outwardly thereof and defined by opposed sidewalls and by a bottom wall, a substantially T-shaped member pivotally fastened between the sidewalls of said transverse recess, said member having a cross-bar portion extending outwardly above said insert notch and a stem portion extending outwardly on the opposite side, a toggle link pivotally fastened at one end to the extending stem portion, and a toggle slide means, said slide means including a member pivotally fastened to the other end of said toggle link, said member having adjustably attached thereto a rounded member pivotable on the bottom wall of said recess, said toggle link and slide means being operable so as to move upwardly the stem portion of said T-shaped member and to cause the cross-bar portion of said member to engage and clamp the shank of a cutting tool positioned within said insert notch.

2,862,286
TOOL AND TOOL HOLDER
Thurston V. Williams, Milford, N. H., assignor to The O. K. Tool Company, Inc., Milford, N. H., a corporation of New Hampshire
Application June 10, 1955, Serial No. 514,502
2 Claims. (Cl. 29—105)



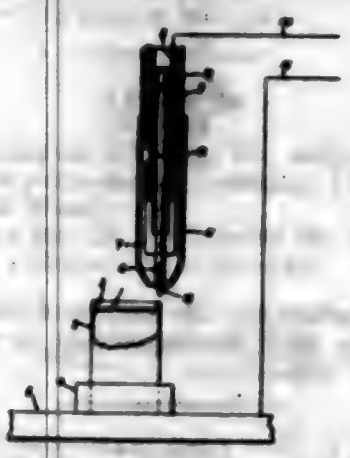
1. Apparatus of the character referred to comprising a tool holder having an opening extending therethrough, the rearward end of the opening being threaded, a plug threading into said end from the rear, a sleeve sliding into the opening from the front and seating on the forward end of the plug, the bore of the sleeve tapering rearwardly, a tool sliding into the sleeve from the front, the tool being tapered to fit the sleeve and having a threaded bore extending along its axis from its rearward end, both the sleeve and the tool being adjustable axially of the bore, and a screw extending loosely through the plug and threading into said tool bore, the head of the screw seating on the plug so as to draw the tool into the sleeve and wedge it therein.

2,862,287
METHOD OF MAKING CAST ALNICO MAGNETS
Adolf Johannes Jacobus Koch, Eduard Marie Henricus Lips and Krijn Jacobus de Vos, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application December 11, 1953, Serial No. 397,659
Claims priority, application Netherlands December 17, 1952
2 Claims. (Cl. 29—155.59)



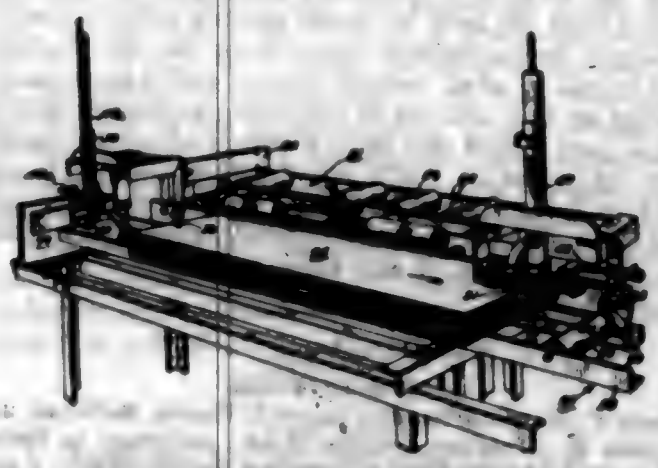
1. A method of manufacturing a magnetically anisotropic permanent magnet consisting of an iron-base alloy containing nickel, cobalt and aluminum comprising the steps, introducing said alloy while molten into a mold to form a casting, placing chill plates in thermal contact with opposite ends of said casting to withdraw heat longitudinally and to promote columnar crystal growth in the [100]-direction, retarding transverse heat-loss from a portion of the casting intermediate the ends while the ends thereof are being cooled to form a separation plane coincident with the plane of minimum heat-loss, and dividing the casting along the separation plane after cooling.

2,862,288
NON-CONSUMABLE INERT GAS WELDING ELECTRODES
Carl E. Anderson, Oakland, Calif., and Swegn D. Hansen, Ballston Lake, N. Y., assignors to General Electric Company, a corporation of New York
Application February 15, 1955, Serial No. 488,305
1 Claim. (Cl. 29—182.5)



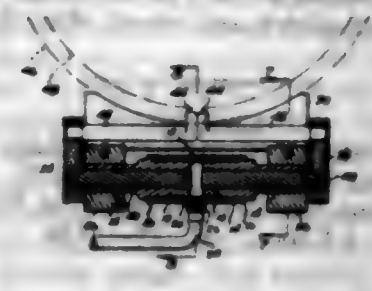
A non-consumable inert gas arc welding electrode comprising an elongated sintered body consisting essentially of tungsten and a material selected from the group consisting of zirconium carbide and zirconium diboride, the latter material comprising from 10 to 20 percent of the mixture.

2,862,289
BUNDLE CLIPPING MACHINE
Ragan M. Womack, Jacksonville, Fla., Hugh F. Swaney, Oakfield, N. Y., and Oliver E. Gibson, Chicago, Ill., assignors to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Application November 18, 1954, Serial No. 469,684
7 Claims. (Cl. 29—208)



1. A machine for applying substantially U-shaped, resilient clips to the edge of a moving bundle, the distance between the free ends of each clip, when the latter is in an unstressed condition, being less than the bundle edge thickness, said machine comprising, a pair of spreader elements arranged one above the other and adjustable into engagement with the ends of clips and for guiding the engaged ends of said clips onto opposed surfaces of the bundle edge which is moved between said spreader elements, said spreader elements being movable vertically relative to each other to permit passage of the bundle edge therebetween and to spread said clips, said spreader elements normally being urged toward each other to positions in which the ends of an unstressed clip may be engaged thereby, and a shuttle for passing individual clips seriatim, said shuttle being arranged above and in juxtaposition to the uppermost of said spreader elements whereby one end of each successive clip passed by said shuttle contacts the uppermost surface of said upper spreader element and the other end of such clip is free to swing about the contacted clip end as an axis to a substantially vertical plane whereby said lowermost spreader element is positioned in spaced relation above the free end of the suspended clip.

2,862,290
PISTON RING REMOVER
Kjell Lofstad Flaatten, San Pedro, Calif.
Application February 17, 1956, Serial No. 566,239
2 Claims. (Cl. 29—222)



1. A piston ring remover comprising an elongated, straight cylinder means having a connection to a source of pressure fluid; a pair of identical, transversely spaced plates rigidly connected to the cylinder means in position extending longitudinally of the cylinder means alongside the same, said plates having outer longitudinal outer edges arcuately, longitudinally indented for the major part of their lengths, said edges being laterally spaced from the cylinder means a distance increasing progressively in opposite directions from a location medially between the ends of said edges toward said ends of the edges; coaxial pistons working in and projecting out of the respective, opposite ends of the cylinder means; coaxial, straight rods disposed between the plates and paralleling the pistons, said rods having connections to the pistons, for straight line movement of the rods toward and away from each other into and out of end-abutting positions responsive to corresponding movement of the pistons; and hooks extending laterally from the rods and contacting each other in the end-abutting positions of the rods to extend between and engage the ends of a piston ring to be removed, said hooks having straight line movement away from each other on shifting of the rods out of their end-abutting positions to spread said ring, the hooks projecting from the rods a distance greater than the distance of said edges from the cylinder means measured at said location but less than the distance of said edges of the cylinder means measured at the ends of said edges, for movement of the hooks into and out of the space between the plates responsive to movement of the rods into and out of, respectively, their end-abutting positions.

2,862,291
APPARATUS AND METHOD FOR SEPARATING PRESSED BOARD FROM CAUL PLATES
James d'A. Clark, Longview, Wash., and Robert D. Lambert, Sandpoint, Idaho, assignors to Champeewood Corporation, Chicago, Ill., a corporation of Illinois
Application October 30, 1953, Serial No. 389,294
5 Claims. (Cl. 29—239)

1. In apparatus for separating a pair of flexible caul plates from a fibrous board interposed therebetween and adhering thereto, said plates projecting over both the sides and the forward end of the board means for supporting

said caul plates and board, a pair of spaced-apart wedges adapted to be interposed between said caul plates along the projecting longitudinal edges thereof, power means for positively advancing said caul plates and board toward said wedges whereby said wedges, when forced between said plates, are operative to pry the forward position of at least one of said caul plates from said board, a doctor blade positioned across the forward end of each caul plate and adapted to engage the edge of the board adjacent the surface of the plate guide means for guiding one of said caul plates in its path of advance toward one of said doctor blades while guiding the other of said caul plates toward the other doctor blade, and conveyor means for receiving said caul plates and board after the same are separated.

2,862,292

METHOD OF MAKING SHORT METAL ARTICLES

Ivar S. Lawson, Ashville, N. Y.

Application June 2, 1955, Serial No. 512,704
1 Claim. (Cl. 29—413)

The method of forming short metal articles from continuous strip stock comprising the steps of simultaneously transversely grooving and producing an open edged temporary projection in the strip stock at spaced intervals equal to the combined length of a plurality of finished articles and transversely grooving the strip adjacent the first groove into connected blanks of predetermined length, determined by the desired length of the finished articles, measuring a succeeding length of strip stock from the projection for a repetition of the preceeding step, then passing the groove connected blanks through successive forming stages to form the same in desired cross-section and flatten the temporary projection, and breaking the blanks into individual finished articles solely by deflecting the formed stock transversely of the length thereof, subsequent to such forming stages.

2,862,293

METHOD OF ERECTING COAXIAL ELECTRIC FEEDER

Edward Cecil Cork, Ealing, London, and Michael Bowman-Manifold, Four Marks, Alton, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Original application June 18, 1948, Serial No. 33,866, now Patent No. 2,701,864, dated February 8, 1955. Divided and this application November 4, 1954, Serial No. 466,900
Claims priority, application Great Britain June 21, 1947
1 Claim. (Cl. 29—433)

The method of constructing in place, for a transmitting station or the like, a vertical coaxial electrical feeder whose vertical length is many times its diameter, comprising the steps of hauling to the upper part of a tall supporting structure one end of a wire rope constituting the inner conductor of the feeder, suspending said inner conductor from the upper part of said structure with the remainder of said inner conductor depending therefrom, threading the lower end of said inner conductor through a tubular section of outer conductor, hauling said tubular section to the upper part of said supporting structure and suspending it therefrom, successively threading the lower end of the inner conductor through additional tubular outer conductor sections, hauling them upward and attaching them in succession to the first section and to one another to complete the outer conductor, and inserting spacing means between the successive tubular sections and the inner conductor, to provide a coaxial

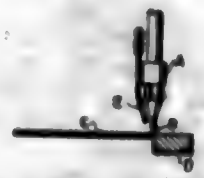
feeder whose conductors are supported substantially entirely in tension from the upper part of the supporting structure.

2,862,294

JOINING OF METALS

Thomas Bruce Philip, Effingham, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

Application November 5, 1954, Serial No. 467,179
Claims priority, application Great Britain November 17, 1953
5 Claims. (Cl. 29—487)



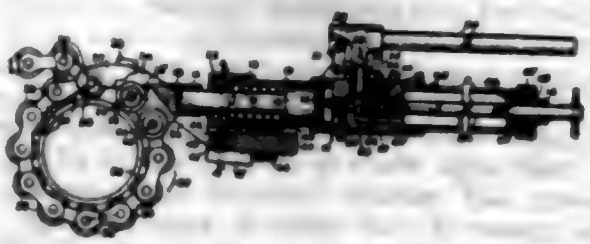
1. A process for joining metals, at least one of which is in the form of a thin sheet distortable by heat conducted from the joint, by fusion welding which comprises moving a fusion welding means along the joint between said metals to effect welding thereof and simultaneously cooling an area adjacent to that being welded by delivering at least to said thin sheet a stream of carbon dioxide from an orifice to which liquid carbon dioxide is supplied to form a layer of carbon dioxide snow on said thin sheet adjacent the joint, whereby cooling is effected due to sublimation of said snow.

2,862,295

PIPE CUTTER

Elmer C. Harding, Seattle, Jacob J. Plesko, Bellevue, and John R. Vranizan, Seattle, Wash., assignors to Spring Load Manufacturing Corporation, Seattle, Wash., a corporation of Washington

Application April 24, 1958, Serial No. 730,707
8 Claims. (Cl. 30—92)



1. In a pipe cutter, a tubular frame; a piston reciprocable in said tubular frame; a piston rod connected with said piston and extending outwardly from one end of said frame; pump means connected with said frame capable of longitudinally moving said piston and rod relative to said frame; spaced apart pipe cutting discs rotatively mounted in the outer end portion of said rod capable of

engaging with a pipe; a pipe cutting chain capable of extending around a pipe with which the pipe cutting discs carried by said rod are engaged, said chain carrying a plurality of pipe cutting discs; and means operable in connecting at least one part of said pipe cutting chain with said frame, whereby longitudinal movement of said piston and rod relative to said frame will forcibly apply all of said pipe cutting discs to said pipe.

2,862,296
KNIFE
Clarence M. Andersen, Chicago, Ill., assignor to Anderson Tool & Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application July 25, 1957, Serial No. 674,176
4 Claims. (Cl. 30—162)

1. A knife comprising, a knife blade, a pair of complementary handle elements one of which has longitudinally-disposed blade and blade-mounting guideways formed in the face thereof which is opposed to the other element, the blade-mounting guideway being deeper than the blade guideway, the one handle element also having a narrow slot formed therein for a portion of the length of the guideways and extending exteriorly to the outer face of the one handle element, a slightly bowed resilient blade-mounting reciprocatingly slidable in the blade-mounting guideway in yielding contact with the other handle element, a pair of stops for limiting the opposite reciprocation of the blade-mounting, a knife-blade means on the blade-mounting positioning "the knife blade" thereon, finger-contact means on the blade-mounting projecting outwardly through the handle-element slot for shifting the blade-mounting to project the blade from and retract it into the assembled handle elements, a third stop in the form of a depression on the inner face of the one element intermediate the pair of stops for seating the trailing end of the blade-mounting when the end of the blade-mounting is in its forwardmost position and thereby locking the blade against retraction by pressure on the cutting edge thereof, the trailing end of the blade-mounting being retractable from the third stop by the depression of the finger-contact means to permit retraction of the blade into the assembled handle elements, and a fastener securing the handle elements in superimposed assembly.

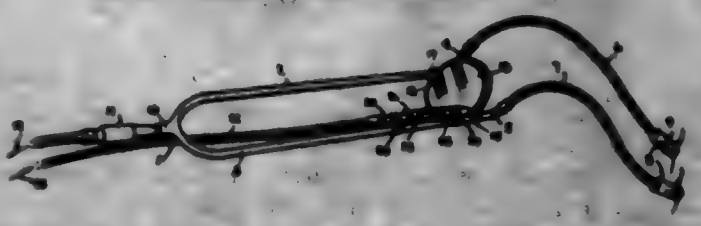
2,862,297
PORTABLE CUTTING APPARATUS
Albert Kaufmann, Solothurn, Switzerland, assignor to Scintilla Ltd., Solothurn, Switzerland
Original application April 5, 1956, Serial No. 576,685. Divided and this application August 19, 1957, Serial No. 683,563
2 Claims. (Cl. 30—375)

1. Cutting apparatus comprising, in combination, a support; cutting means mounted on said support and including an elongated blade extending downwardly from said support for reciprocation with respect to the same; handle means connected to said support to enable the same and said cutting means thereon to be carried by a hand of the operator; a guide member mounted on said support and being formed with an elongated groove of substantially square cross section extending in a direction substantially parallel to said blade; an elongated rack member of substantially square cross section slidably mounted in said groove and extending through the same; a cover plate turnably mounted on said guide member for movement to and from a position over said groove thereof to releasably hold said rack member in said groove so that said rack member may be exchanged for another rack member; a presser foot member connected to said rack member at the bottom end thereof beneath said support; an elongated lever turnably mounted intermediate its ends on said support, having a toothed free end located next to said rack member for engaging teeth thereon to hold said rack member in an adjusted position, and having another free end opposite said toothed free end thereof and located adjacent to said handle means so as to be accessible to the finger of the hand of the operator which engages said handle means; and resilient means operatively connected to said lever and urging said toothed end thereof into engagement with said rack member.

2,862,298
DENTAL GRINDING MEANS
Bruno Weigele, Frankfurt am Main, Germany
Application February 26, 1953, Serial No. 339,888
Claims priority, application Germany February 26, 1952
1 Claim. (Cl. 32—58)

An instrument for effecting an abrasive dental treatment comprising a pair of movable parts adapted for reciprocating motions in approximately parallel directions, a strip-shaped band of a flexible material, a grinding material covering at least part of said band, and bushings arranged, respectively, at the ends of said band and connected with the movable parts so as to apply to said band a reciprocating motion in the direction of said reciprocating motions of said movable parts of the dental instrument, said strip-shaped band including a portion of enlarged width and end portions extending oppositely and angularly away from the portion of enlarged width.

2,862,299
DENTAL MIRROR STRUCTURE
David Reiter, Woodside, N. Y.
Application January 24, 1956, Serial No. 560,975
1 Claim. (Cl. 32—69)

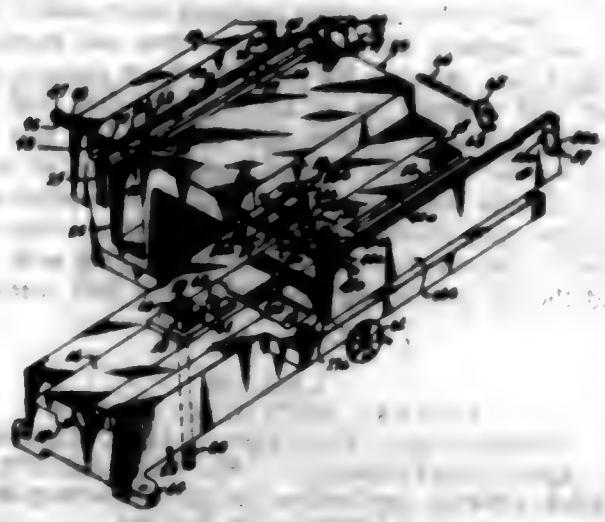


A mirror for dental and other use comprising a U-shaped rigid tube having a relatively narrow base and relatively long legs, a flexible tubular connection at said base, vacuum suction means connected to said flexible tube connection, a mirror pivotally supported on and between said legs adjacent to the ends thereof, a flexible tube on the end of at least one of said legs, a pipe connected to a source of fluid and attached to one of said legs adjacent to said mirror, an opening in said pipe adapted to direct fluid onto said mirror, a valve on said pipe adapted to vary the size of said opening to vary

electrodes between which the material to be dried is adapted to progress, a connection from one of said elec- rality of nozzle members positioned within said chamber at spaced locations along and on opposite sides of the

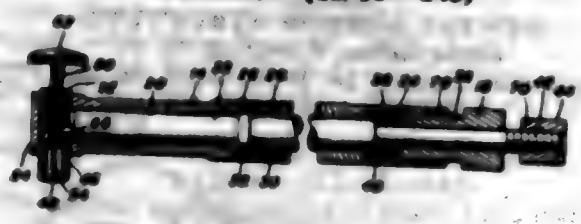
the flow of fluid over the mirror, a plurality of spaced notches in the edge of said mirror adapted to have a leg fitted thereinto to adjust the mirror into a plurality of positions along the length of said legs.

2,862,300
SCRIBING APPARATUS
Pierre Mauser, Nutley, and Joseph Di Mauro, Paterson, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application March 23, 1956, Serial No. 573,235
12 Claims. (Cl. 33—41)



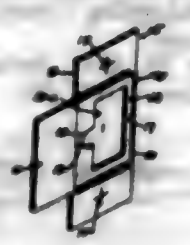
1. A machine of the kind described, comprising means to hold an article whose surface is to be scribed in parallel lines, a plurality of scribing devices for tracing said lines, means to move said article past said scribing devices, said devices being mounted in staggered columnar array, and means for selectively operating said devices into scribing relation with said surface, the last-mentioned means including a plurality of permutably settable selector bars, and means to set said bars for simultaneously selecting a desired combination of said devices whereby said surface can be scribed with equally spaced parallel lines and with the said spacing determined by the setting of said bars.

2,862,301
HOLE GAUGE WITH THREADED AND CAM ADJUSTING MEANS
Floyd A. Campbell, Springfield, Ohio
Application August 9, 1956, Serial No. 603,188
4 Claims. (Cl. 33—143)



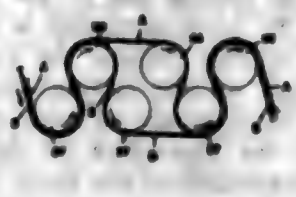
1. A gauge for measuring comprising an elongated tubular member, an elongated rod slidably and rotatably disposed in said tubular member, said tubular member having a transverse bore at the outer end thereof, a transversely adjustable member mounted in said bore, means interconnecting said adjustable member and the rod for movement of the member upon rotation of the rod and locking of the member upon longitudinal movement of the rod, handle means on the rod for rotation of the same, means for holding the rod in adjusted angular position, and means for moving said rod longitudinally for locking the adjustable transverse member in adjusted position, said adjustable member including a split bushing having an internally threaded bore, a sleeve rigid with the transverse bore at the outer end of the tubular member, said sleeve slidably receiving said bushing, a threaded stud in the split portion of said bushing, and a rounded tip on the end of said stud, said sleeve having a rounded tip for coaction with the rounded tip on the stud for contacting inner surfaces of apertures.

2,862,302
STRIKE PLATE TEMPLATE
Robert E. Lucia, West Hartford, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Application February 8, 1956, Serial No. 564,237
6 Claims. (Cl. 33—197)



1. A template for use in installing a strike plate having an opening therein for a latch bolt, said template conforming to the shape of said strike plate and being made of thin sheet material having a coating of adhesive on one side thereof and adapted to fit in the space between the edge of a door and its frame, said template having an opening therethrough adapted to receive said latch bolt, and said opening having an edge portion corresponding exactly to the edge portion of the opening in the strike plate which is engaged by said latch bolt.

2,862,303
METHOD FOR DRYING FILMS
Augustus E. Craver, Fredericksburg, Va., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Original application September 7, 1951, Serial No. 245,612. Divided and this application March 3, 1953, Serial No. 340,875
1 Claim. (Cl. 34—41)



The method of drying a plurality of films comprising directing upper and lower films together over a plurality of upper and lower drying rolls at least some of which are heated, passing the films alternately over and under upper and lower drying rolls, separating the films from each other by passing the upper film directly over a pair of adjacent upper drying rolls and the lower film in the same region directly and simultaneously under a pair of adjacent lower drying rolls, and positioning said films together after said separation with their adjacent surfaces in contact with each other.

2,862,304
APPARATUS FOR DEFINING THE PERCENTAGE OF MOISTURE CONTAINED IN ANY MATERIAL AND FOR CHECKING OR CONTROLLING MACHINES TREATING MOIST MATERIAL
Henri Eichen, dit Estienne, Lyons, France
Application July 6, 1953, Serial No. 366,242
Claims priority, application France July 8, 1952
1 Claim. (Cl. 34—52)

In a control circuit of a drying machine for the drying of moist material, the combination of a power supply including a transformer having a primary and a secondary, a rectifier fed by the secondary of said transformer, a vacuum tube including a control grid, a pair of feeler

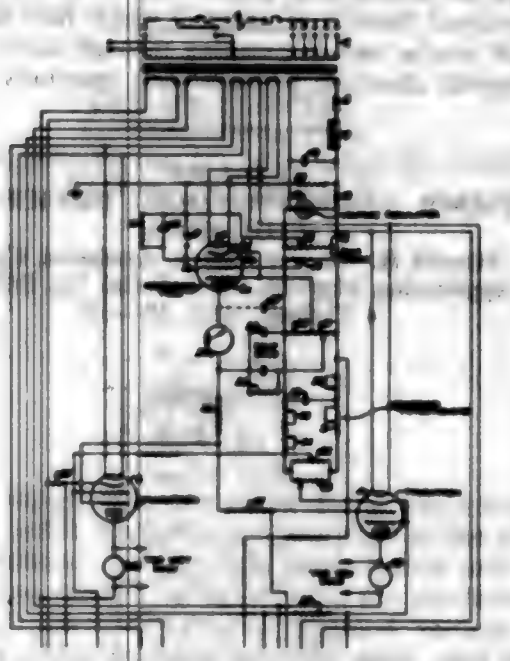
frame rigidly connected to the door adjacent said hinge and extending into the housing in the closed position of

cause said trays to travel in the longitudinal direction of

said support for reciprocation with respect to the name; handle means connected to said support to enable the

pipe adapted to vary the size of said opening to vary

electrodes between which the material to be dried is adapted to progress, a connection from one of said electrodes to said rectifier, an auxiliary circuit comprising a resistance and a condenser in parallel connected via said feeler electrodes to said power supply and to the control grid of said vacuum tube, means for adjusting the biasing voltage of said vacuum tube, a moisture indicator fed by said vacuum tube and adapted to indicate the moisture contents for the medial section of the hygrometric scale measured in values of ohmic resistances of the material, for the lower section of said scale in values of static electricity in said material, and in the upper section of the scale in values of the dielectric constant of said material, two thyratron systems fed by the moisture indicator and adapted to produce, respectively when the moisture rises above the maximum and drops underneath the minimum of the range inside which the moisture is allowed to vary, pulses in the control circuit acting on the machine to return the moisture contents into the said allowed range, witness lamps controlled by the thyratron systems, a circuit including a potentiometer, a resistance and a condenser operatively connected to ad-



just the frequency of the pulses produced by the first thyratron systems to modify the speed of operation of the machine in one direction, a further circuit including a resistance, a potentiometer and a condenser adapted to adjust the frequency of the pulses produced by the second thyratron system to modify the speed of operation of the machine in the opposite direction, two condensers and switches associated therewith and operatively connected to adjust the duration of the pulses produced by the second thyratron system, another circuit including a resistance, a potentiometer and a condenser and operatively connected to act as an adjustable delaying means controlling the second thyratron system to automatically delay the starting thereof after each stoppage of the machine, said delay depending on the type of the machine and material dried thereby and a relay controlled by the operation of the machine and controlling the connection of the second thyratron system with last mentioned delaying means.

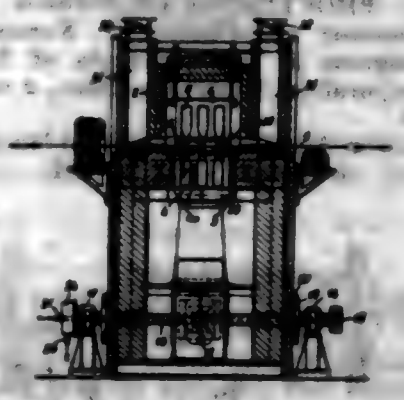
2,862,305

APPARATUS FOR DRYING STRIP MATERIAL

Julien Dunegler, Basel, Switzerland

Application July 6, 1954, Serial No. 441,337
Claims priority, application France July 29, 1953
2 Claims. (Cl. 34—68)

1. Apparatus for drying strip-like material in a continuous manner, comprising a treatment chamber through which said material is to be continuously passed, a plurality of nozzle members positioned within said chamber at spaced locations along and on opposite sides of the path of movement of said material through said chamber, a source of heated, air-free gaseous medium disposed in said chamber, means for feeding some of said medium to said nozzle members for discharge therethrough against the opposite surfaces of said material as the latter is moved along said path, the remainder of said heated gaseous medium flowing freely throughout said treatment chamber, and respective perforated means arranged substantially parallel to and spaced a small



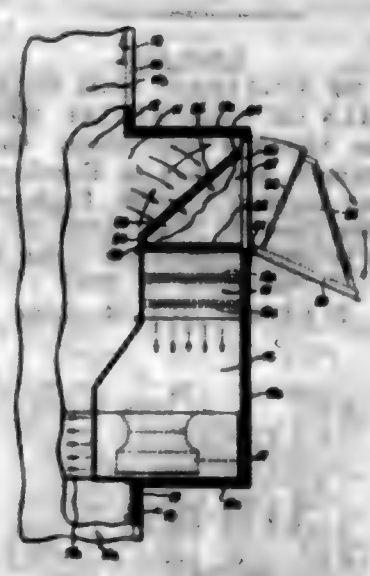
distance from said path on said opposite sides thereof between the respective nozzle members and in position to be contacted by said gaseous medium flowing within said chamber about said material, whereby both said nozzle members and said perforated means are heated to a temperature at which they radiate heat, to thereby ensure that drying heat is applied to said material both by direct contact thereof by said gaseous medium and by heat radiation emanating from said nozzle members and said perforated means due to contact thereof with said gaseous medium.

2,862,306

SCREEN FOR TEXTILE DRYERS

Frank B. Morrill, North Adams, Mass., assignor to James Hunter Machine Company, North Adams, Mass., a corporation of Massachusetts

Application November 13, 1956, Serial No. 621,699
3 Claims. (Cl. 34—82)



1. In a dryer of the type having a housing forming a chamber for the material to be dried, a heater having an inlet for a drying medium, and a blower for circulating a drying medium through said chamber by way of the heater, whereby the drying medium flows through a closed circuit path including said chamber, blower and heater, the combination of a door, a hinge connecting the door to the housing and on which the door is adapted to swing from a closed position to an open position for providing access to the interior of the housing, an open

pointed prongs depending from said rods and secured

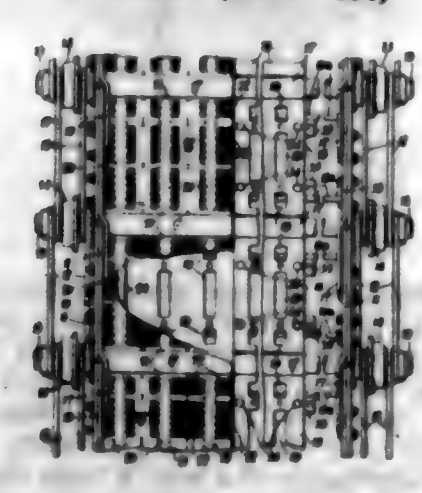
is screwed on to the mounting member, and a back up

frame rigidly connected to the door adjacent said hinge and extending into the housing in the closed position of the door, the frame having a free inner edge portion, and a screen mounted between said free edge portion and the edge portion of the door remote from said hinge, the frame in the closed position of the door holding the screen in said path between the chamber and the heater inlet and with the upstream side of the screen facing away from the door.

2,862,307
PROCESSING CHAMBER
James L. Bloomer and Charles W. Keenan, Knoxville, Tenn., assignors to The University of Tennessee Research Corporation, Knoxville, Tenn., a corporation of Tennessee
Application August 7, 1957, Serial No. 676,865
8 Claims. (Cl. 34—92)

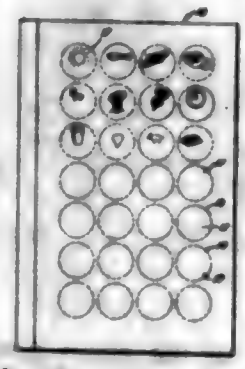
1. In an evacuation chamber, a cylindrical body section, an auxiliary section of cylindrical shape rectangularly disposed centrally of said body section and opening thereinto, slidable lids hermetically sealing the extremities of said body section and said auxiliary section, bracket means supporting the extremities of said body section and said auxiliary section and sealing said lids against the extremities thereof, rubber arm-gloves sealed into one extremity of said body section and into said auxiliary section extending into the interior thereof, valves in said body section permitting the evacuation of said chamber and its filling with gas whereby an operator may manipulate a pyrophoric material in said chamber in an atmosphere of inert gas.

2,862,308
COOLING OF SINTERED AND OTHER SOLID MATERIALS OF INDUSTRIAL PROCESSES
James William Meredith and Albert Thomas Rogers, London, England, assignors to Huntington Heberlein and Company Limited, London, England
Application June 28, 1956, Serial No. 592,627
Claims priority, application Great Britain November 22, 1955
11 Claims. (Cl. 34—236)



1. Apparatus for cooling sintered and other solid material of industrial processes, comprising a plurality of trays connected together in an endless series, means to cause said trays to travel in the longitudinal direction of said series, a grate or similar means of perforate nature disposed on, but spaced above the bottom of, each of said trays to support said solid material during said travel of the trays, said grate or similar means comprising an imperforate region as well as a perforate region, partition means disposed between said grate or similar means of each of said trays and the bottom of such tray to form immediately under said imperforate region a conduit to which gaseous cooling medium has entry through an aperture in the bottom of said tray, and an air circulating device operative to supply said gaseous cooling medium to said conduit through said aperture, said partition means presenting an aperture disposed in the upper part thereof to allow delivery of said medium laterally from said conduit to beneath said perforate region of said grate or similar means, so that said medium obtains access to the solid material through said perforate region and material that falls through that perforate region collects on the bottom of the tray substantially entirely outside of said conduit, whereby the gaseous medium for the cooling of the material is supplied in one direction through the apertures in the bottom of the trays substantially without liability of material which falls through the grate of similar means escaping through such bottom in the opposite direction through such apertures.

2,862,309
SYMBOL CORRESPONDING DEVICE FOR CHILDREN
Harold H. von der Hellen, Anaheim, Calif.
Application May 18, 1956, Serial No. 585,903
4 Claims. (Cl. 35—35)



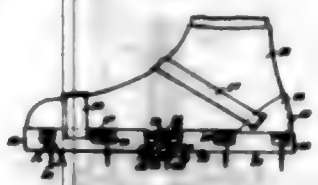
1. In an educational correspondence device for children unable to read or write but capable of identifying objects by name and sound, the combination of two sheets, one sheet having a plurality of bodily spaced, uniformly sized push-outs bearing representations of various objects or symbols, the backs of these push-outs being provided with adhesive matter for their attachment, the push-outs being bodily removable from that one sheet, while leaving intact the rest of the sheet body; the other sheet being in the form of a foldable and mailable unit having peripheral adhesive margins and spaced push-out location markings within the margins corresponding in size and spacing to that of the push-outs of that one sheet to facilitate attachment over these markings of push-outs removed from that one sheet.

2,862,310
ADJUSTABLE SHOE TRACTION DEVICE
Matt Bednaruk, Battle Lake, Alberta, Canada
Application July 3, 1957, Serial No. 669,876
1 Claim. (Cl. 36—7.6)

In a shoe article, a frame including a pair of spaced parallel longitudinally extending side members, end members extending between the end portions of said side members, there being a plurality of spaced apart recesses in said side members, bearings secured within said recesses, a plurality of spaced parallel rods extending between said bearings and journaled therein, a plurality of spaced apart

upper surface thereof with a recess and having a rigid 2,862,316

pointed prongs depending from said rods and secured thereto, links extending upwardly from said rods, a pair of spaced parallel bars pivotally connected to said links, a shoulder depending from one of the side members of the frame, a lever having its lower end pivotally connected to said shoulder, there being a slot in the upper portion of said lever, a bell crank extending from one of said rods and projecting through the slot in said lever, a spring



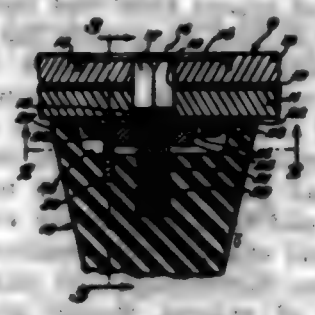
pressed lock bar having an end portion projecting through said lever, there being a plurality of spaced apart openings in one of the side members for selective engagement by the end portion of the lock bar, a plate arranged adjacent the upper ends of said side members and secured to said frame for engaging the under surface of the shoe of the user, a heel block extending upwardly from the rear of said frame, and straps connected to said frame.

2,862,311
TRY-ON SLIPPERS
Les Ellis, Akron, Ohio
Application September 13, 1954, Serial No. 455,376
1 Claim. (Cl. 36—11.5)

A try-on slipper of molded solid plastic which includes a high heel and a platform, the two sides of the slipper being symmetrical, the high heel being hollow and open at the top and molded integrally with the platform and with a single, narrow, centrally disposed vertical reinforcing web which connects only the upper part of the breast of the heel with the underside of the top portion only of the shank of the platform, an indentation around the opening in the top of the heel and a cover adhered to the heel therein over the opening, the cover being depressed to comfortably receive the heel, the platform having a single relatively wide and long depression in the top surface of the forward part thereof exposed to receive only substantially the whole of the ball of the foot of the wearer whereby the foot is deterred from slipping forwardly on the platform, and there being several small elongated and relatively widely separated openings through said platform at both margins thereof located forwardly from about the rear of the shank to the toe of the platform adapted to accommodate ribbons therethrough for tying the slipper on to the wearer's foot.

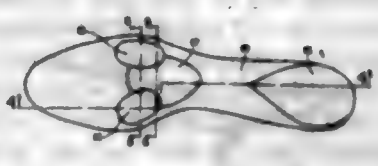
2,862,312
SPORTS SHOE
James V. Melchiona, Cincinnati, Ohio
Application January 10, 1958, Serial No. 708,131
8 Claims. (Cl. 36—59)

1. Locking means for preventing accidental loosening between a mounting member anchored on a sport shoe sole and a tread member screw threaded on said mounting member comprising a circular row of angularly spaced apart holes in one of the members disposed concentric with the screw threads, a spring finger mounted on the other member and having ratcheting engagement with the circular row of holes when the tread member is screwed on to the mounting member, and a back up lug mounted on said other member and engaging an intermediate portion of the spring finger to provide



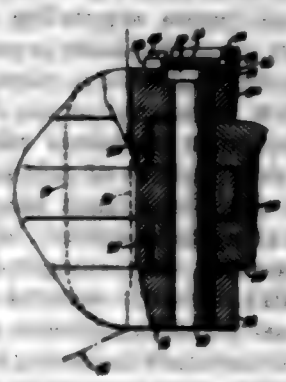
locking engagement between the members when forces tend to unscrew the tread member from the mounting member.

2,862,313
FABRICATION OF DIFFERENTIALLY DEFORMABLE INSOLES
William Henry Jones, Montreal, Quebec, Canada, assignor to Canadian Footwear Research Inc., Montreal, Quebec, Canada
Application June 3, 1957, Serial No. 663,377
2 Claims. (Cl. 36—71)



1. In a shoe having an outsole, the combination of a planar insole member formed with a pair of openings underlying the forward ends of the first and the fifth metatarsal bones of the foot, a pair of resiliently deformable insert bodies thicker than said insole member removably fitting each opening to protrude upwardly therefrom, a resilient metatarsal pad having a pair of marginal indentations registrable with said pair of insert bodies and removably secured to said insole member, said pad having an upwardly domed convex face extending between said inserts and tapering toward the heel and having a maximum height greater than the protruding height of said insert bodies.

2,862,314
DRAG HITCH ASSEMBLY
Paul V. Larsen, Portland, Oreg., assignor to Electric Steel Foundry Company, Portland, Oreg., a corporation of Oregon
Application January 10, 1956, Serial No. 558,338
5 Claims. (Cl. 37—135)



1. In an assembly of the character described, a hitch plate adapted to be rigidly secured to the cheek of a dragline bucket and having forwardly extending spaced apart legs, the uppermost leg thereof being provided in the

2,862,318

upper surface thereof with a recess and having a riser wall extending thereabove, said riser wall being provided with a channel therein adjacent the upper end of said recess and being open along one side, a clevis having a pair of spaced apart legs interposed between the spaced legs of said hitch plate and at the forward end thereof being adapted to have a drag chain connected thereto, each of said legs having a bore therethrough and all of said bores being in axial alignment, a shackle pin extending through said bores and having an enlarged head seated within said recess, a retainer plate covering said head and having edge portions received within said channel, said retainer plate having a pair of apertures therethrough and said uppermost leg having a pair of grooves therein aligned with said apertures, and a nut and bolt assembly for each of said grooves and apertures with the nuts positioned within said grooves for preventing movement of said retainer plate through the open side of said channel.

2,862,315

FRAME FOR MOUNTING BLADES, SNOW PLOUGHS, OR THE LIKE, ON TRACTORS

Hilaire Blanchet, St. Simon de Drummond, Drummondville, Quebec, Canada

Application July 8, 1957, Serial No. 670,541
5 Claims. (Cl. 37—144)

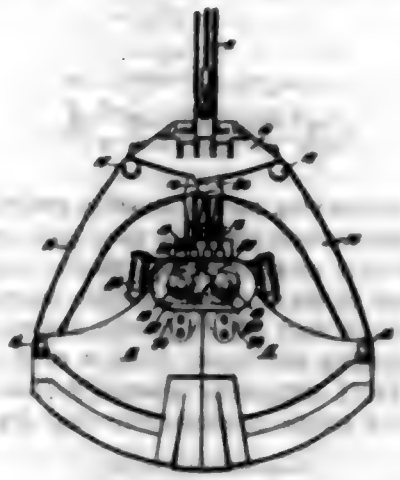
1. A frame for mounting a load device in front of a wheeled vehicle comprising a pair of independent, elongated members adapted to extend longitudinally of said wheeled vehicle in substantially close relationship, means pivotally supporting the intermediate portion of said members on said vehicle, the front and rear end portions of each of said elongated members being laterally offset with respect to the pivoted intermediate portion of said member, the front end portions of said independent, elongated members being adapted to be connected to and to support a load moving device, and the rear end portions of said independent elongated members being adapted to be connected to a lifting mechanism mounted on said wheeled vehicle, whereby operation of said lifting mechanism will cause vertical movement of said rear end portions of said elongated members and consequent rocking movement of said elongated members at their pivoted portions resulting in lowering or raising of said load moving device at the front end portions of said elongated members, said elongated members transmitting said movement to said device through torsional forces exerted on said elongated members, additional means supporting said independent elongated members on said vehicle at points intermediate their front ends and said pivoted portions, said last named means and said first mentioned means for pivotally supporting said independent members allowing transverse movement of the end portions of said independent members towards and away from each other during rocking movement of said elongated members; wherein said means for pivotally supporting said elongated members comprise a housing-like member secured underneath said wheeled vehicle and providing cavities opening laterally, outwardly, each of said cavities having top, bottom, front and back walls, knife edges secured to and laterally projecting from said elongated members and removably engageable with said cavities to bear on said bottom walls, said knife edges being free for lateral displacement within said cavities.

2,862,316

GRAB HAVING THE SHELLS CONNECTED BY ENCLOSED LUBRICATED SLIDE BARS

Frederick O. Snow, Jr., Maplewood, N. J., assignor to McKiernan-Terry Corporation, a corporation of New Jersey

Application September 21, 1956, Serial No. 611,276
4 Claims. (Cl. 37—187)



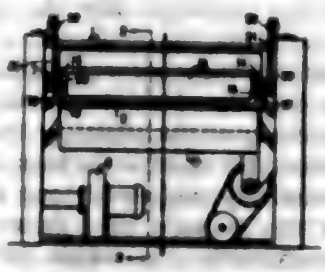
1. Grab comprising companion shell sections, spaced hinge pins pivotally supporting the same, crank pins on said shell sections offset from the hinge pin centers, a link pivotally engaged on said crank pins, connecting said shell sections and a housing enclosing said link and crank connections, said housing being supported in stationary relation on said hinge pins and said link having clearance openings for said hinge pins in the movement of said link in opening and closing of the shell sections.

2,862,317

IRONING MACHINES

Gunnar Ivar Fredholm, Bromma, Sweden

Application July 11, 1955, Serial No. 521,297
Claims priority, application Sweden April 19, 1955
3 Claims. (Cl. 38—2)



1. In an ironing machine, an ironing bed, a rotatable ironing roll for cooperation with said bed, including a perforated shell and a cylindrical air permeable ironing pad surrounding said shell, one end of said bed constituting an inlet end where material to be ironed is fed between the bed and the pad, a heating shoe having a cylindrical heating surface and means mounting said shoe for yieldable engagement with said pad adjacent said inlet end of the bed, said heating surface having openings therein directed toward the pad, conduit means including an air inlet and air outlets communicating with said openings for supplying air to said pad through the openings in said surface as the pad moves beneath said surface, means for heating said conduit means so as to heat air flowing therethrough and evacuating means communicating with the interior of the roll to establish air flow through the pad and perforations in the shell and also to establish a flow of heated air through the conduit means, the openings in said heating surface, the portion of said pad passing adjacent said surface and the underlying perforations in the shell.

with the circular row of holes when the tread member

legs, the uppermost leg thereof being provided in the

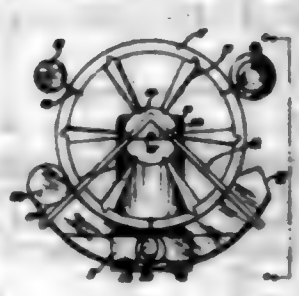
2,862,318
LABEL HOLDER
John C. Sebesky, Detroit, Mich., assignor to Office Products, Inc., Detroit, Mich., a corporation of Michigan
Application April 13, 1956, Serial No. 578,011
1 Claim. (Cl. 40—11)

A label holder having a body portion made of transparent material and sides edges reversely bent to form substantially cylindrical shaped pin receiving portions, flanges extending toward each other from the bent side edges in engagement with the rear face of the body portion toward the center part thereof, and a pair of hairpin-shaped elements having two legs each of which is bent intermediate its ends to provide a holding force to one of the legs when inserted within one of the pin receiving portions and a holding force to the other leg in relation to the outer surface of the side edge.

2,862,319
CONVERTIBLE SLIDE VIEWER AND PROJECTOR
Donald E. Lipfert, South Meriden, Conn.
Application June 28, 1955, Serial No. 516,415
5 Claims. (Cl. 40—79)

1. In a slide viewer, a housing having a magazine compartment at one end thereof and a viewing compartment at its other end, a rectangular magazine containing a stack of transparent photographic slides arranged face to face therein, said viewing compartment including a lens at one end and a translucent plate at its opposite end for receiving a source of light, a slidable opaque transfer member in the lens end of said housing for carrying slides from said one end of said stack to the lens end of said viewing compartment, a second slidable apertured transfer member at the translucent plate end of said viewing chamber for carrying said slide back to the opposite end of said stack after being viewed by a source of light through the aperture in said second transfer member, a spring finger pressing the front slide toward said translucent plate, a second spring finger pressing said rear slide against said pack, and a third spring finger mounted in the top of the lens end of said viewing chamber for gripping the upper edge of the slide while being transferred from the lens end to the translucent plate end of said viewing chamber as it is being pushed by the finger on said first transfer member.

3,862,320
BUBBLE PRODUCING DEVICE
Harold T. Mayo, Biloxi, Miss., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application January 16, 1956, Serial No. 559,350
3 Claims. (Cl. 40—106.23)

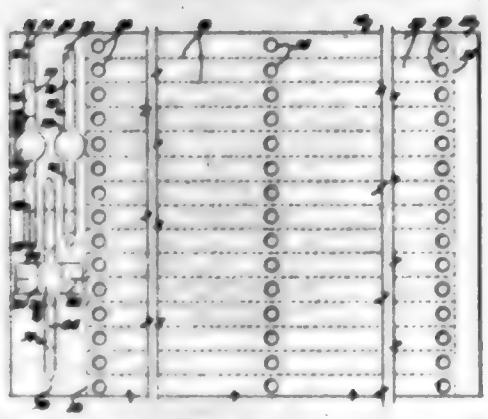


1. Fluid supply apparatus adapted to supply fluid to a bubble producing device of the type including air stream responsive multiple film-aperture means constrained for rotational displacement about a central axis fixedly disposed with respect thereto and adapted to maintain the fluid supplied to such air stream responsive multiple film-aperture means between a predetermined maximum and minimum level each exceeding the transverse dimension of any one of the apertures in such an air stream responsive multiple film-aperture means, comprising: a horizontal base member having an interiorly disposed substantially entirely horizontally directed fluid channel portion, a vertically directed fluid well receiving portion open at the top thereof and communicating with said horizontal fluid channel adjacent one end thereof and a transverse fluid outlet adjacent the other end of said fluid channel portion; a downwardly directed fluid well having a downwardly open end portion releasably secured within said upwardly open fluid well receiving portion of said base member, said downwardly directed open end portion of said fluid well protruding downwardly into one end of said fluid channel portion a discrete distance and determining a minimum level of fluid within said fluid channel portion corresponding to the horizontal level of the lower end of said downwardly opened end portion of said fluid well; and a feeder trough of substantially narrow U-shaped cross section and, in a direction perpendicular to said cross section, being of upwardly curved configuration so as to define an annular ring segment having an upwardly open interior U-shaped recess therein adapted to cooperate with and receive therethrough in succession an air stream responsive multiple film-aperture means constrained for rotational displacement about a central axis fixedly disposed above said trough, the vertical depth of the U-shaped recess within said trough at the bottom of the curvature thereof being at least as great as the vertical depth of said fluid channel portion, said feeder trough having a transverse aperture in the rear thereof adjacent the lowermost portion of the curvature of the annular ring segment and being affixed to said base member with said transverse fluid inlet in direct horizontal communication with said transverse fluid outlet of said base member and with the top of the U-shaped recess in the trough at the bottom of the curvature of said annular ring segment being positioned above the top of said fluid channel portion communication therewith whereby a maximum and a minimum level of fluid within said U-shaped recess in said feeder trough is determined and is maintained, said minimum fluid level height within said U-shaped recess in said feeder trough being greater than the vertical dimension of an individual aperture of an air stream responsive multiple film-aperture means adapted to be rotated arcuately through said curved U-shaped feeder trough.

clip, and said thumb rest projecting outwardly from said

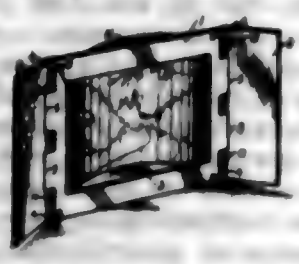
said body at the trailing edge of the latter and when a

2,862,321
ORNAMENTAL BOW AND BLANK OF COMPONENTS THEREOF
Bill Y. James, Miami, Okla.
Application June 25, 1956, Serial No. 593,547
5 Claims. (Cl. 41—10)



1. A decorative bow made entirely from an initially flat sheet of relatively flexible material and comprising a plurality of elongated strips initially contained in said sheet in side-by-side relationship separated by lines of weakness in said sheet and rebent upon themselves when removed from the sheet to present a pair of substantially elliptical loops extending oppositely from the center thereof, the strips being in superimposed interengagement at said centers with the loops radiating outwardly in all directions from the zone of interengagement; and a fastener initially contained in said sheet, defined by lines of weakness in said sheet, and adapted for interconnecting the strips at said zone when the fastener is removed from the sheet.

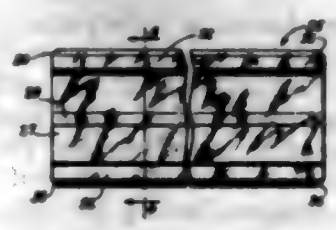
2,862,322
DISPLAY FRAME STRUCTURE
William C. Ziegler, Northridge, Calif.
Application December 23, 1954, Serial No. 477,379
11 Claims. (Cl. 40—154)



1. A display frame structure for displaying cardlike pictures, comprising a panel element constituting a frame having a display opening therethrough, vertically hinged panels at opposite sides of said opening, a tab for holding a card to be exhibited located on each opposite side of said opening but spaced therefrom and cut from said panel element along one edge of said tabs and along the top and bottom of said tabs, the opposite edge of said tabs being continuous with said panel element and with said vertical hinged panels, said tabs being adapted to project rearwardly of said panel element and rearwardly of that hinged panel next adjacent said panel element so that a card may be inserted between the tabs and the adjacent face of said panel element.

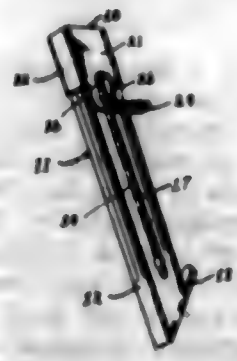
2,862,323
FILM HOLDER
Benjamin R. Muscolo, Jackson Heights, N. Y., assignor to American Kleer-Vu Plastics, Inc., Maspeth, N. Y.
Application November 24, 1954, Serial No. 470,857
1 Claim. (Cl. 40—159)

In a film holder, a first wall of transparent material, a second wall arranged in superposed relation with respect to said first wall and fabricated of flexible transparent material, a flat bonding strip interposed between the intermediate portions of said walls and secured thereto, said bonding strip being rectangular in cross section, said bonding strip being spaced centrally and inwardly from the longitudinal side edges of the first and second walls, the outer end portions of said second wall being mounted for movement towards and away from said first wall, said strip and walls defining a pair of spaces of the same size for receiving film strips therein, said spaces being arranged on opposite sides of the bonding strip, an arcuate web extending transversely from the longitudinal edge of each end of said first wall, said webs being of the same size, a flange arranged at right angles with respect to each of said webs and depending therefrom, said pair of flanges being of the same size, said pair of flanges being coplanar, an arcuate lip extending inwardly from the longi-



tudinal edge of each flange, said lips being of the same size, said lips being arranged in spaced parallel relation with respect to each other, a flap extending from each lip, said flaps being of the same size, said flaps being coplanar, said flaps being arranged in spaced parallel relation with respect to said flanges, said flaps being arranged contiguous to the ends of said second wall, the ends of said second wall being spaced inwardly from said webs, the outer edges of said flaps being flush with the adjacent outer edge of said second wall, said flanges coacting with said lips and flaps to define a pair of spaces of the same size for receiving an indicating card, the corners of said holding being chamfered; said flanges, flaps and lips also serving to prevent the film strips from accidentally falling out of their proper spaces, said second wall having a tendency to normally occupy a position contiguous to said first wall due to the inherent resiliency of the parts.

2,862,324
CLIP-SLIDE DEPRESSOR
Albert L. Ball, Worcester, Mass.
Application August 4, 1955, Serial No. 526,475
1 Claim. (Cl. 42—50)



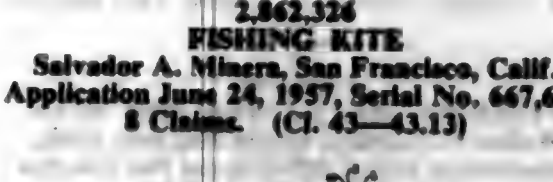
A clip-slide depressor longitudinally slidable on a cartridge clip which comprises a main portion having a front and a thumb rest, said front having a longitudinal slot therein adapted to engage and depress an outwardly projecting pin carried by the slide of a cartridge clip upon movement of said depressor longitudinally of said clip, the major portion of said main portion being above said slot and being C-shaped in cross section with sides terminating in inwardly directed flanges whereby to engage all sides of said clip and thus hold said depressor against lateral displacement from said clip in any direction and guide it during longitudinal movement thereof on said

said first transfer member.

arcuately through said curved U-shaped feeder trough.

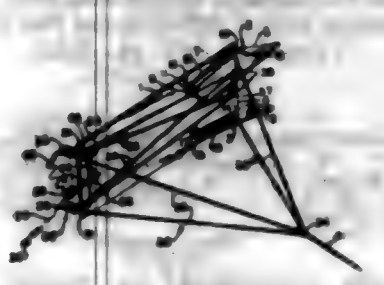
clip, and said thumb rest projecting outwardly from said depressor below said clip embracing portion and being manually engageable to move said depressor longitudinally on said clip.

2,862,325
FISHING LURES
Finn H. Magnus, Essex Fells, N. J.
Application April 4, 1955, Serial No. 498,836
2 Claims. (Cl. 43—42.22)



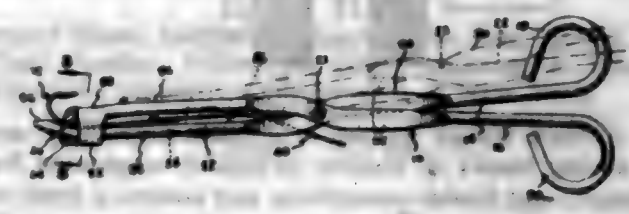
1. A fishing lure comprising an elongated tubular body, a tubular substantially frusto-conical shaped head plugged in one end of the body, said body being formed with a shoulder immediate its ends which abuts against the front end of said tubular body and being arcuately curved from said shoulder in a forward direction and terminating in a cylindrical portion, a hollow substantially frusto-conical shaped tail piece plugged into the other end of the body and having a longitudinal opening therethrough, a leader extending freely through said head, and through the body and the opening in the tail piece, a hook on the rear end of said leader adapted to be drawn tightly against the rear end of the tail piece, said tail piece being tapered from its front to its rear end and being formed with a pair of cross slots in its rear end adapted to receive a leader eye and hook respectively, two superposed complemental halves having abutting faces in an axial plane of said body, said halves each having laterally extending fin portions and the fin portions of one of said halves being superposed on the fin sections of the other half.

2,862,326
FISHING KITE
Salvador A. Minera, San Francisco, Calif.
Application June 24, 1957, Serial No. 667,624
8 Claims. (Cl. 43—43.13)



1. A fishing kite comprising: a main body of sheet material having a leading edge at one end thereof and a trailing edge at the opposite end respectively adapted to face upstream and downstream when said body is in a generally vertical plane in a current of water and has a bridle connecting it with a line, a flexible bridle for so connecting said body with a line, said bridle being at one side of said body and having a leading portion thereof connected with said body adjacent to said leading edge and also having a trailing portion, an element connected with said trailing portion and releasably connected with said body at its trailing edge, a fishing hook having a line connected therewith, a member in engagement with said element and connected with said line, said member being actuatable for movement upon the pull of a fish on said hook being transmitted by said line to said member for releasing said element from said body, means carried by said body for maintaining the latter substantially at the surface of the water when said element is connected with said body at the trailing edge of the latter and when a held line is connected with said bridle, yieldable means yieldably holding said element under tension in engagement with said body adjacent to the trailing edge of the latter, said yieldable means being connected with said body and with said element and operatively associated with said member for releasing said element upon said actuation of said member whereby said element and said hook and the line connected therewith will be released from said body upon said member being pulled by a fish on said hook.

2,862,327
FISH HOOK REMOVER
Peter Steinhauser, Brooklyn, N. Y.
Application March 26, 1957, Serial No. 648,718
1 Claim. (Cl. 43—53.5)

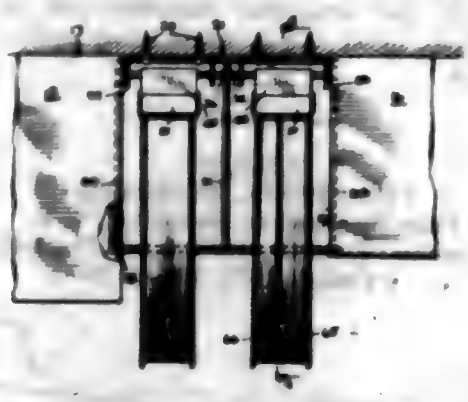


A fish hook extractor comprising a pair of handles; connecting portions integral with said handles and disposed in crossing relation; means pivotally connecting the connecting portions; shanks integral with the connecting portions, so as to move said shanks toward and away from each other responsive to movement of the handles toward and away from each other, respectively; and jaws formed upon the respective shanks, one of said jaws being formed with a deep longitudinal groove open at its opposite ends so as to receive a fish line, for guiding of the jaws along said fish line into a fish's mouth into position to receive the shank of a fish hook, the other jaw being formed as a longitudinal extension of the other shank, said longitudinal extension being movable into the groove to define between the jaws a space within which the fish hook shank may be clamped, said extension being of circular cross section, the bottom of said groove being transversely depressed complementarily to the cross sectional shape of the adjacent face of the extension, defining a substantially crescent-shaped space within which the fish hook shank will be clamped, said extension being longitudinally curved and the bottom of the groove having a longitudinal curvature complementing that of the extension so as to slightly, springably deform the shank of the fish hook when said fish hook shank is clamped between the jaws, with the fish hook shank being formed to a longitudinal curvature corresponding to that of the extension, thereby to hold the shank against slippage in a longitudinal direction relative to the jaws during manipulation of the fish hook shank for the purpose of dislodging the same.

2,862,328
ADJUSTABLE VEHICULAR DESK
Sanford I. Wadsworth, Jackson Heights, N. Y.
Application October 18, 1956, Serial No. 616,680
2 Claims. (Cl. 45—83)

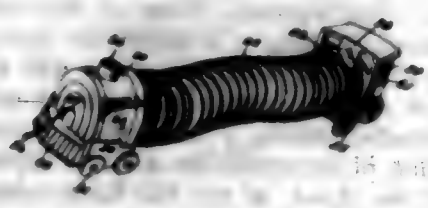
1. A vehicular desk comprising a desk pad, a tray connected to the underside of the desk pad and open from one side thereof to permit the easy insertion or withdrawal of paper sheets, and means adapted to be operated by a pencil and adapted to be projected into the opening to retain the papers within the tray.

2,862,329
BOOK BINDERS
James P. Guinane, New York, N. Y., and Raymond F. Batchelar, Hillsdale, N. J., assignors, by mesne assignments, to Hercules Loose Leaf Corp., New York, N. Y., a corporation of New York
Application June 15, 1956, Serial No. 591,760
9 Claims. (Cl. 45—85)



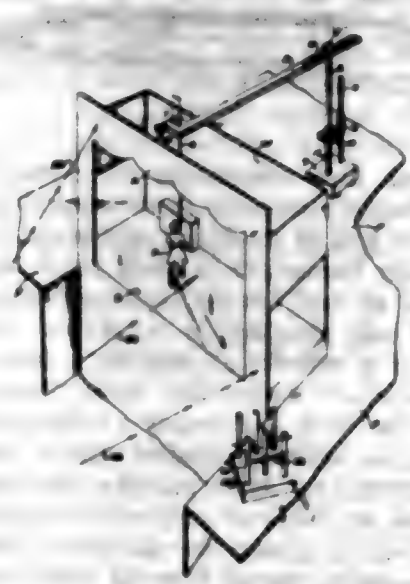
1. A book binder for use in a book supporting structure having books in binders swingably suspended from a support, said binder comprising side covers, a fixed rear plate, a rearwardly off-set extension on the upper end of said rear plate, the end of said extension being rolled to form a hinge for swingably supporting the binder from a hinge rod, a pair of mutually outwardly slidable plates at the back of said fixed plate for varying the width and capacity of the binder and a two-piece locking member disposed rearwardly of said pair of slidable plates and having one of its two pieces connected to one slidable plate and the other to the other slidable plate, each of said slidable plates including respectively aligned transverse slots, and rivet members disposed in said slots.

2,862,330
SURPRISE TOY VEHICLE
Helen H. Maloed, Seattle, Wash.
Application January 7, 1955, Serial No. 480,379
6 Claims. (Cl. 46—194)



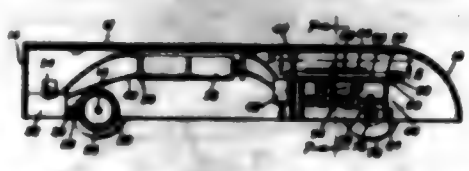
1. A toy vehicle comprising a vehicle front portion and a vehicle rear portion and a resilient coil spring extending lengthwise between said vehicle portions and having its opposite ends respectively connected with said vehicle portions, coil turns of said spring abutting each other with substantially zero lateral force in the longitudinally contracted position of the spring and said vehicle portions being adapted for movement on the floor by force applied to said vehicle front portion to the exclusion of said vehicle rear portion and said spring being free of restraint in transverse and longitudinal directions so that the amount of separation and directional deviation of said vehicle portions is determined consistent with the strength properties of said spring, said spring being sufficiently weak under load developed by the force applied to said vehicle front portion and an accompanying lagging effect of said vehicle rear portion to tolerate a considerable separation of said coil turns longitudinally of the spring and for snaking to occur when said vehicle front portion is turned from a straight-away course on the floor with respect to said vehicle rear portion, and said spring nevertheless being sufficiently strong to fully contract bringing the lagging vehicle rear portion toward the vehicle front portion, said coil turns of the spring accordingly impacting against each other as an incident to the spring recovering its fully contracted condition.

2,862,331
APPARATUS FOR OPERATING MARIONETTES AND THE LIKE
Edwin L. Oppenheimer, New York, N. Y.
Application March 15, 1954, Serial No. 416,821
5 Claims. (Cl. 46—126)



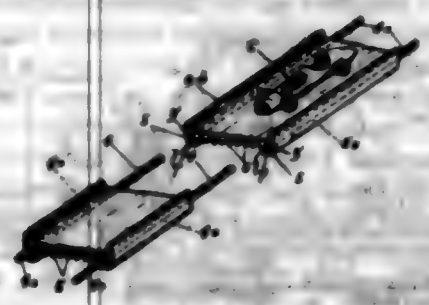
4. In an apparatus for the operation of a puppet in the field of view of an observer, operating means in the form of tongs having ends shaped for engagement with parts of a puppet extending from a point outside said field of view to a point closely adjacent the puppet, at least the visible portion of said means being of an inherently substantially rigid transparent plastic material and said means being adapted for manipulation to move a part of a puppet relative to another part thereof.

2,862,332
STEERING MECHANISM FOR TOYS
Walter H. Johnson, Grand Junction, Colo.
Application May 1, 1957, Serial No. 656,264
7 Claims. (Cl. 46—213)



1. A steering mechanism for mobile toys having propelling means comprising a supporting member pivotally supported from said toy for pivotal movement about a generally vertical axis, a transverse axle journaled in the supporting member, means on at least one end of the axle for rotating the axle responsive to linear movement of the toy, a guide member slidable on said supporting member, means interconnecting the axle and the guide member for converting the unidirectional rotation of the axle to reciprocation of the guide member, a projecting pin on said guide member, a cam plate mounted on said toy, said cam plate having a cam slot therein receiving the projecting pin on the guide member, said cam plate being stationary whereby movement of the projecting pin in the cam slot will cause pivotal movement of the supporting member about a substantially vertical axis for pivoting the transverse axle about a generally vertical axis, thereby altering the plane of the means on the outer end of the axle for altering the direction of movement of the toy.

2,862,333
DEFORMABLE TOY TRACK
Franco Gardiol, Milan, Italy
Application December 29, 1954, Serial No. 478,401
Claims priority, application Italy February 8, 1954
1 Claim. (Cl. 46—202)

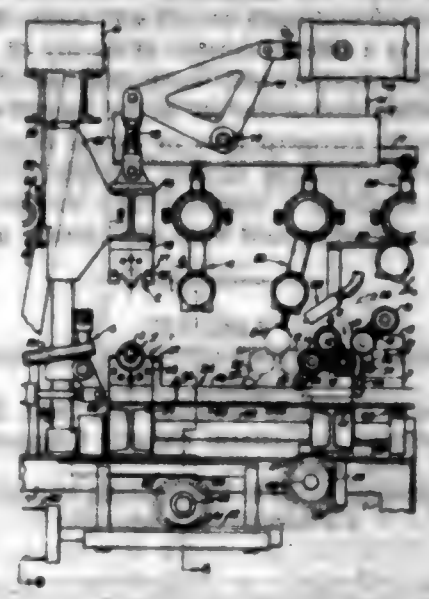


A toy comprising a movable object of determinable width and an endless track for supporting said object; said track including engaged elements each of which comprises: a solid band having an upper surface, said band being of a material capable of undergoing a three-dimensional deformation, longitudinal sides on said band to confine the width of said upper surface to a width substantially exceeding said determinable width, said sides including portions extending above and below said band, cores in the portions extending below the band for maintianing the deformation thereof, said cores extending longitudinally from said sides at corresponding ends thereof for the engagement of another of said elements, the other ends of the sides defining openings for the engagement of a further element; the movable object being freely movable on and longitudinally of the upper surface and, due to the greater width of the upper surface, laterally thereupon.

2,862,334
PLANT, VINE OR TREE HOLDER
Talbert O. Sandvig, Oswego, Oreg.
Application March 27, 1957, Serial No. 648,814
1 Claim. (Cl. 47—47)

A support member comprising a post provided with a lower pointed end for insertion in the ground, a body member mounted on the upper end of said post, said body member having a circular formation with rounded edges so as to prevent injury to the plants, vines or the like, a securing element extending through said body member and into said post, there being a plurality of radially disposed slots in said body member extending inwardly from the outer periphery thereof, lines extending through said slots and said lines being provided with a plurality of enlargements defining spaced apart stop members for engagement with said body member; there being an annular depression on the upper surface of said body member contiguous to the ends of said slots for receiving certain of said stop members; a hook connected to the lower end of each of said lines, each of said hooks including a main portion provided with an aperture for engagement with a corresponding line, said main portions having converging side edges and wherein the bottom of the main portion is wider than the upper end thereof, a finger extending from said main portion for engagement with the branch of a flower, plant, vine or the like, said fingers having a curved shape, said slots being large enough to permit the lines to pass therethrough, said slots being small enough to prevent the stop members from passing therethrough, the lines adapted to be adjusted to different lengths whereby branches at different elevations or positions can be readily supported, and whereby the length of the lines can be adjusted as the plant grows.

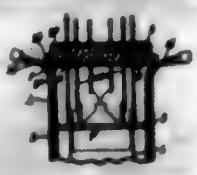
2,862,335
APPARATUS FOR RESHAPING CYLINDRICAL GLASS TUBES
Bernard Shaw, Mayfield Heights, John Sale, Euclid, and Paul Barclay, Willowick, Ohio, assignors to General Electric Company, a corporation of New York
Application June 12, 1957, Serial No. 665,261
7 Claims. (Cl. 49—7)



1. An apparatus for reshaping cylindrical glass tube blanks to provide aligned re-entrant spaced apart grooves extending longitudinally along one side of the blanks comprising a supporting frame, blank heating means mounted on said frame for heating the entire blank to a temperature slightly below the temperature at which the glass of the blank is plastic, blank reshaping means mounted for reciprocation on said frame between blank engaging and blank disengaging positions, said reshaping means being spaced from said heating means on said frame and having elongated aligned spaced apart groove forming protuberances provided with blank engaging surfaces rounded in cross section and of smaller radius of curvature than said blanks, segmented heating means mounted on said frame in fixed position between said entire blank heating means and said blank reshaping means for heating to plasticity longitudinally extending spaced apart portions on one side of the blanks for engagement by the protuberances of said reshaping means, said apparatus comprising also a blank supporting press bed mounted for movement on said frame into a blank receiving first position with respect to said entire blank heating means, a second position in which a blank is supported thereby in heat receiving relation to said segmented heating means and a third position in which a blank is supported for engagement by said reshaping means, and actuating and timing means mounted on said frame and inter-connecting said press bed and said reshaping means to move said press bed into said positions in sequence with a dwell period at said second and third

positions and to move said reshaping means from a blank disengaging to a blank engaging position and back again with said press bed in its third position.

2,862,336
IMPROVED METHODS OF MAKING ELECTRIC DISCHARGE DEVICE ENVELOPES
Monte W. Edwards and Martin O. Murphy, Owensboro, Ky., assignors to General Electric Company, a corporation of New York
Application April 25, 1956, Serial No. 580,647
2 Claims. (Cl. 49—81)



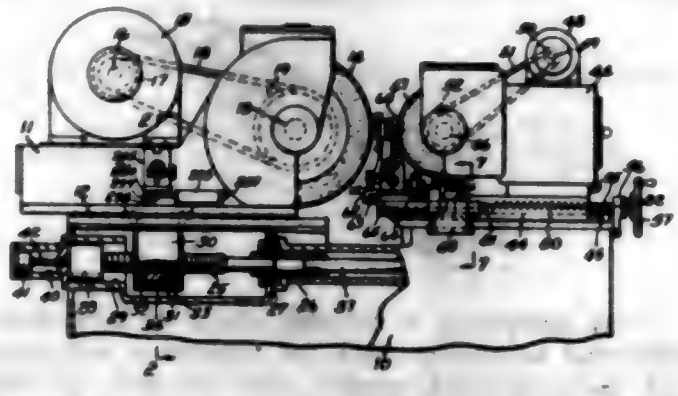
1. The method of sealing a closure member in the open end of a glass bulb comprising the steps of preforming the open end of said bulb to provide a flare, thereafter partially inserting said closure member in said flared open end of said bulb and only line contacting the internal flared surface of said open end of said bulb with said closure member at a line of contact inwardly of the edge of said bulb, then heating said flared end and closure member for effecting fusion thereof at the line of contact, and causing laterally outward flow of excess flowing material over the lateral external surface portion of said closure member by applying a longitudinally directed externally applied force between said bulb and closure member.

2,862,337
METHOD OF RESHAPING CYLINDRICAL GLASS TUBES
Bernard Shaw, Mayfield Heights, and John Salo, Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Application April 8, 1957, Serial No. 651,301
4 Claims. (Cl. 49—84)

1. The method of reshaping elongated open-ended cylindrical glass tubes which comprises the steps of heating the tube to a temperature slightly below the temperature at which the glass wall of the tube softens and becomes plastic while horizontally supporting the tube stationary on its axis along its entire length and around the lower part of its outer circumference, heating to plasticity the wall of the tube in elongated longitudinally extending spaced apart zones only of the tube and then folding the plastic wall of the tube in said spaced zones inwardly of the tube by forcing a longitudinally extending circumferentially restricted upper portion of the tube wall in each of said zones vertically downward a distance sufficient to change the cross sectional shape of the tube in each of said zones from circular to concavo-convex while retaining the cylindrical shape of the tube outside said zones including the parts thereof between said zones.

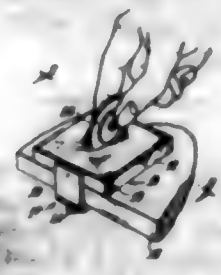
2,862,338
GRINDING MACHINE
Olva E. Hill, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application April 12, 1957, Serial No. 652,418
9 Claims. (Cl. 51—103)

1. In a grinding machine having a transversely movable rotatable grinding wheel, means including a rotatable feed screw and a rotatable nut to feed said wheel transversely in either direction, means to rotate said screw to impart a grinding feed to said wheel, means to impart a rotary motion to said feed nut so as to impart a truing feed to said grinding wheel, an oscillatable feeding unit, a pawl and ratchet mechanism on said unit to impart an



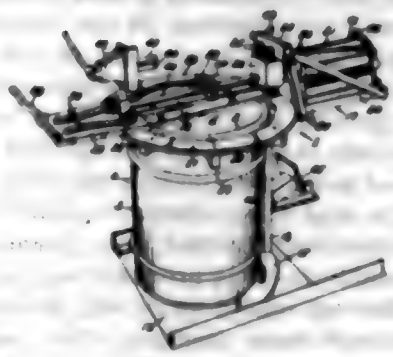
incremental rotary motion to said feed nut to advance the grinding wheel for a truing operation, and means operatively connected to oscillate said unit in timed relation with actuation of the pawl and ratchet mechanisms to impart an unwind and a wind motion to said feed nut in timed relation with the feeding movement thereon.

2,862,339
ERASER CLEANERS
Dominic V. De Cesare, Elizabeth, N. J.
Application October 11, 1957, Serial No. 689,562
1 Claim. (Cl. 51—186)



An eraser cleaner comprising a box-like holder open at the top and including a flat bottom wall having a surrounding upright wall, a pad of relatively soft rubber-like material registering in the holder within the confines of said wall, said pad having a layer of abrasive material on the top surface thereof, the height of the pad including said layer being equal to the internal depth of the holder so that the abrasive layer lies flush with the top of the wall, and means for attaching the holder in upright position to a support with said top surface uppermost.

2,862,340
CLAMP
William J. Raull, Leslie, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Application February 11, 1957, Serial No. 639,244
7 Claims. (Cl. 53—287)



1. A device for drawing a split clamping ring around the annular side wall of a barrel at the open end thereof to firmly clamp on the annular side wall a cover extend-

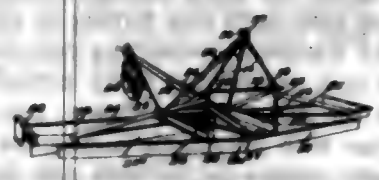
ing across the open end of the barrel, said device comprising a pair of members adapted to extend around the clamping ring at opposite sides of the split, means pivotally supporting adjacent ends of said members for movement toward and away from one another, a camming member, camming elements at the swinging ends of said first-mentioned members engageable with said camming member, and power means for reciprocating said camming member, said camming member being operative, upon movement by said power means in one direction, to swing said first-mentioned members toward one another into firm engagement with the clamping ring and operative, upon movement by said power means in the opposite direction, to swing said first-mentioned members away from one another and out of clamping engagement with the clamping ring.

2,862,341

SOIL LEVELER WITH ADJUSTABLE WHEELED FRAME

Earl W. Miller, Georgetown, Ohio

Application April 1, 1957, Serial No. 649,759
2 Claims. (Cl. 55—22)



1. A soil leveling apparatus comprising a substantially horizontal transversely elongated soil leveling frame, said frame including a plurality of spaced generally side-by-side soil leveling members disposed substantially at the same elevation, a pair of spaced longitudinal beams mounted upon and carrying said frame near the central portion of the frame, means secured to said beams and adapted for connection with a conventional three-point hitch of a tractor, a generally horizontal caster frame arranged above the soil leveling frame and disposed transversely thereof and extending longitudinally rearwardly of the soil leveling frame and positioned between said beams, the forward end of the caster frame being disposed near and above the forward side of the soil leveling frame, means forming a pivotal connection between the caster frame and said beams near the rear ends of the beams and intermediate the ends of the caster frame whereby the caster frame may swing vertically a limited amount relative to the soil leveling frame, a caster having swiveled connection with the rear end of the caster frame, and vertically adjustable means interconnecting the forward end of the caster frame with the forward side of the soil leveling frame.

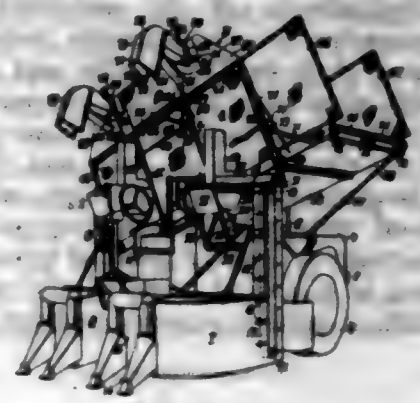
2,862,342

COTTON HARVESTER WITH SPECIFIC CONVEYING AND RECEPTACLE STRUCTURE

Rector C. Ferguson, Gadsden, Ala., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application June 21, 1956, Serial No. 592,812
18 Claims. (Cl. 56—12)

1. A harvester comprising a mobile support; a harvesting unit mounted on said support and having a harvested material elevating device presenting an outlet aperture; a receptacle having a material inlet aperture; means pivotally mounting said receptacle on said support for selective adjustment to a loading position in which said inlet is in spaced registry with said outlet, and to a tilted unloading position presenting said inlet in nonregistering relation to said outlet; a harvested material guide duct pivotally mounted on said receptacle for movement into and out of harvested material transporting relation between said outlet and inlet apertures, and means operatively interposed between said receptacle and duct for selectively positioning the latter in material transporting relation between said outlet and inlet apertures when said



receptacle is in said loading position and to a remote, nontransporting position prior to moving said receptacle to said tilted unloading position.

2,862,343

ROTARY DISC TYPE MOWER ATTACHMENT FOR TRACTORS

Mervel E. Wood, Oregon, Ill., assignor to Wood Brothers Manufacturing Co., Oregon, Ill., a corporation of Illinois

Application January 19, 1955, Serial No. 482,810
7 Claims. (Cl. 56—25.4)

1. For use with a tractor having a rearwardly extending power take-off shaft equipped with a driving sheave rotatable in a vertical plane, an implement attachment comprising, in combination, a cross bar attachable in transverse spanning relation across the rear of the tractor beneath said power take-off shaft, a pair of mounting plates rigidly fixed at spaced points on said cross bar and provided with a plurality of holes lying along a line inclined from the vertical toward the front end of the tractor, a pair of vertical guide brackets rigidly fixed to said cross bar, a frame journaling a vertical input shaft disposed centrally beneath the tractor and having rearwardly extending arms pivotally connected selectively at any one of the holes in corresponding ones of said plates, a driven sheave on the upper end of said vertical shaft, a pair of idler pulleys mounted for vertical adjustment in said guide brackets and to turn about an axis extending transversely of the tractor, said idler pulleys being located with their rear edges immediately beneath the driving sheave, and an endless flexible belt running over the driving sheave, said idler pulleys, and said driven sheave.

2,862,344

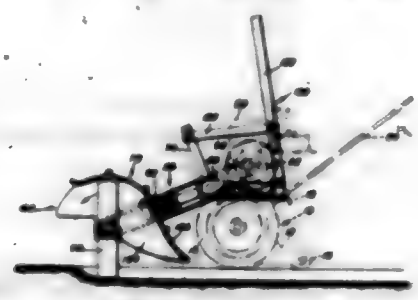
LAWNMOWER EDGER ATTACHMENT

Harold F. Caudle, Sr., and Harold F. Caudle, Jr., Miami, Fla.

Application January 15, 1957, Serial No. 634,356
1 Claim. (Cl. 56—25.4)

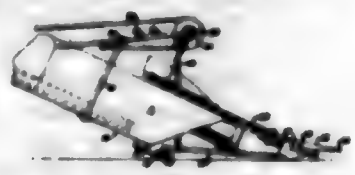
An edger attachment for lawnmowers, comprising a mounting plate for attachment to the frame of a power mower, a pair of mounting sleeves rigidly fixed to said mounting plate in spaced parallel relation to each other, a power take-off assembly including a sleeve having a shaft journaled therein and provided with a support arm at right angles thereto slidably received in one of said mounting sleeves, said shaft having pulleys fixed to its

opposite ends and said one mounting sleeve carrying means for fixing said support arm therewithin so that the power take-off shaft may be bodily moved to fixed position longitudinally of the associated lawnmower frame, a mounting bracket assembly including a yoke and a support shaft rigid therewith, said support shaft being slidably received in the other mounting sleeve and said other mounting sleeve carrying means for fixing the support shaft therewithin so that said yoke may be moved to longitudinally fixed positions relative to said power take-off shaft, an edger assembly including a support arm pivotally attached at one end to said yoke about an axis lying in a vertical plane parallel to said power take-off shaft, a tubular support member telescopically



received on the opposite end of said support arm, an edger sleeve fixed to the free end of said support member at right angles thereto, an edger shaft journaled within said edger sleeve having its opposite ends projecting therefrom and respectively carrying an edger blade and a pulley, the last mentioned pulley being aligned with one of said pulleys on said power take-off shaft, means selectively fixing said support member on said support arm to maintain a predetermined spacing between said last mentioned pulley and said one pulley on the power take-off shaft in compensation for movement of said support shaft relative to said other sleeve to effect offsetting of the pivotal axis of the edger assembly rearwardly with respect to said power take-off shaft, and means for raising and lowering said edger assembly about its pivotal axis.

2,862,345
FALLEN PLANT PICK-UP ATTACHMENT FOR COMBINES
Jack H. Wigham, Amarillo, Tex.
Application July 12, 1956, Serial No. 597,482
3 Claims. (Cl. 56—98)

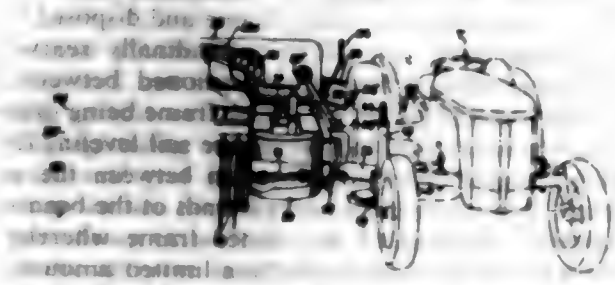


1. A plant pick-up attachment for combines including a cutter bar and a conveyor behind said cutter bar, said pickup attachment comprising a fitting including an elongated base bar secured to the upper side of said cutter bar, a pair of spaced forwardly and upwardly extending flanges integral with said base bar, an elongated enlarged portion on the upper edge of each flange, each enlarged portion having a longitudinal bore extending therethrough, a pair of elongated arms extending forwardly of said cutter bar, a pair of pivot pins extending through said arms and said bores to pivotally mount said arms for vertical swinging movement on said fitting, a pair of forwardly extending tapered pick-up units, one of said units being supported on each of said arms, a ground engaging shoe at the forward end of each of said units, a pick-up element pivotally mounted on each of said shoes for vertical swinging movement and extending forwardly therefrom, means for adjusting the height of each pick-up element relative to the ground, an endless belt carried by each of said units and having laterally directing lugs projecting from the outer sides thereof, said units diverging forwardly to permit entry of plants therebetween, an upwardly extending frame mounted on said arms, brackets mounted on the upper portion of said frame, bearings carried by said brackets, a shaft journalled in said bearings, drive means connecting said shaft and each of said belts and means for driving said shaft.

2,862,346
GRASS CATCHER FOR LAWN MOWERS
John W. Anderson, Portland, Oreg.
Application August 9, 1957, Serial No. 677,410
1 Claim. (Cl. 56—194)
(Granted under Title 35, U. S. Code (1952), sec. 266)

A grass catcher for lawn mowers comprising a receptacle including side walls and having an open side, oppositely disposed trunnions projecting outwardly from each side wall of said receptacle, a lip extending from said receptacle at the open side, a frame, said frame including a front bar with adjustable means for attachment to a lawn mower, reinforced parallel side frames attached to said front bar, said side frames each including a U-shaped support at its apex receiving said trunnions.

2,862,347
BALER STRUCTURE
Noral A. Nelson, Holland, Mich., assignor to Massey-Ferguson Inc., a corporation of Maryland
Application April 26, 1955, Serial No. 504,080
12 Claims. (Cl. 56—341)



1. In a [illegible]ving a baling chamber with a plunger reciprocab[illegible]ein, mechanism for picking up material to be baled directly from the ground and mechanism for transferring the picked up material to the baling chamber, a drive mechanism comprising a rotatably driven flywheel shaft, an intermediate shaft driven from said flywheel shaft through speed reduction gearing, a third shaft driven from said intermediate shaft through speed reduction gearing, crank means on said third shaft connected with and operative to reciprocate the plunger, means providing a drive connection from said third shaft to said pickup mechanism, and means providing a driving connection from said intermediate shaft to said transfer mechanism independently of said third shaft.

2,862,348
SIDE DELIVERY RAKING DEVICE
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N. V., Manufacturers, a Dutch limited company of Netherlands
Application August 9, 1955, Serial No. 527,397
Claims priority, application Netherlands August 10, 1954
8 Claims. (Cl. 56—377)

1. A device for laterally displacing material lying on the ground, comprising a draw-bar means, an elongated

main frame adjustably pivoted to an end portion of said draw-bar means, an elongated auxiliary frame adjustably pivoted to each end portion of said main frame, and at

least one rotary raking member operatively associated with each of said auxiliary frames, whereby said frames may be adjusted with respect to each other to provide at least two raking effects.

2,862,349

RAKE TOOTH AND MOUNTING

Edwin I. Reiten, Cooperstown, N. Dak.

Application June 10, 1955, Serial No. 514,660
4 Claims. (Cl. 56—400)

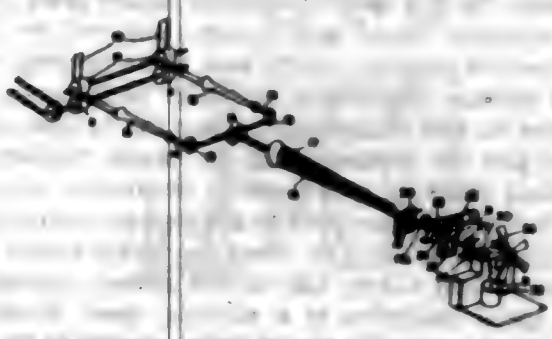
1. A sweep rake comprising first and second substantially parallel supporting bars, a plurality of teeth operatively associated with said bars, each tooth being of tubular form with a butt end and a tip end, said tip end having a penetrating tip portion, said butt end having a reinforcing and sealing insert, said butt end being bolt connected to said first supporting bar and said tooth inwardly of said butt end being connected to said second supporting bar by means of a wide saddle, whereby said teeth are rigidly connected to said bars and are free to flex.

2,862,350

PROCESS AND APPARATUS FOR PRODUCING PELLETS FROM THERMOPLASTIC SHEET MATERIAL

John Philip Henry King, Wrexham, North Wales, and Eric Pearson, Reading, England, assignors to British Celanese Limited, a corporation of Great Britain

Application May 24, 1955, Serial No. 510,638
Claims priority, application Great Britain May 26, 1954
6 Claims. (Cl. 57—34)



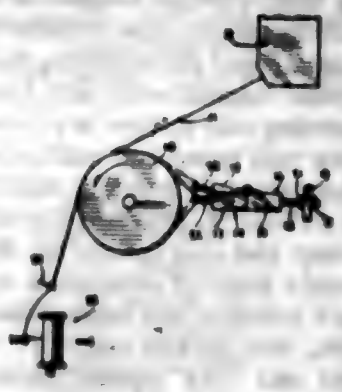
3. Apparatus for converting thermoplastic material in the form of thin narrow strips in continuous lengths into a form suitable for moulding, which comprises means for drawing two strips of the thermoplastic material simultaneously along predetermined paths, means along each of said paths for forming the strip travelling along that path into a multilayer strand, said means comprising a funnel guide having its mouth facing the direction of approach of said strip, means for bringing the said strands together and drawing them along a common path, and, situated along said common path, means for heating the material at a temperature at which it is soft, means for twisting the strands together and forming them into a substantially solid rod of substantially circular cross-section while the material is still in the heat-softened condition, and means for cutting said rod transversely into pellets when the rod is no longer soft.

2,862,351

TEXTILE APPARATUS

Jesse L. Riley, New Providence, N. J., assignor to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

Application April 6, 1956, Serial No. 576,704
3 Claims. (Cl. 57—90)



1. In a textile apparatus for continuously feeding a yarn from its source to another point, a positively driven feed roll, and a back guide comprising a hinged member having a portion mounted to rotate about an axis substantially parallel to the longitudinal axis of the feed roll, and a yarn guiding member displaced with respect to the plane in which the yarn travels from its source to the feed roll carried by the rotatable portion of said hinged member at a predetermined position in close proximity to the surface of the feed roll whereby yarn accumulating on the surface of the feed roll can rotate said portion and move the back guide away from the surface of the feed roll.

2,862,352

WATERPROOF WATCH

Louis Rodney Burghoff, Bristol, Conn., assignor to The E. Ingraham Company, Bristol, Conn., a corporation of Connecticut

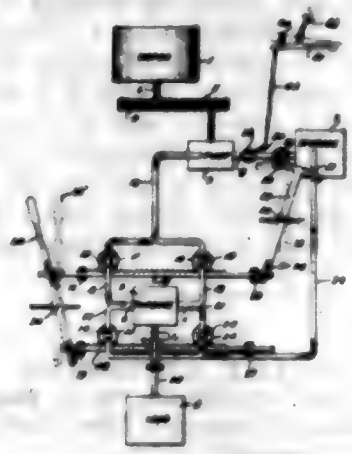
Application May 4, 1956, Serial No. 582,739
4 Claims. (Cl. 58—90)

1. In a watch, the combination with an outer case and a movement having a winding stem, of an inner case in and removable from said outer case enclosing and sealing said movement and having a resilient sleeve through which said stem extends with a sealing fit and which is externally tapered to its outer end and terminates thereat in an endless edge.

2,862,356

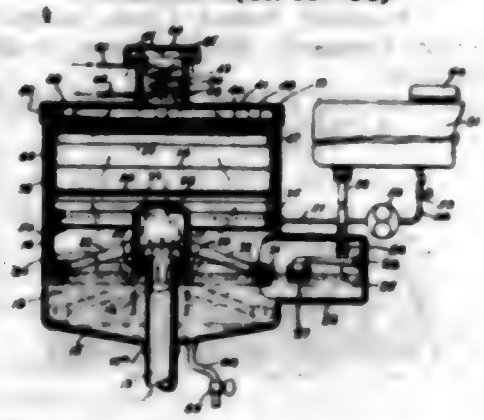
an annulus and adjustable to vary the throat areas

2,861,353
HYDRAULIC COUPLING
Jean Stoehr, Tananarive, Madagascar
Application October 7, 1954, Serial No. 460,978
5 Claims. (Cl. 60—12)



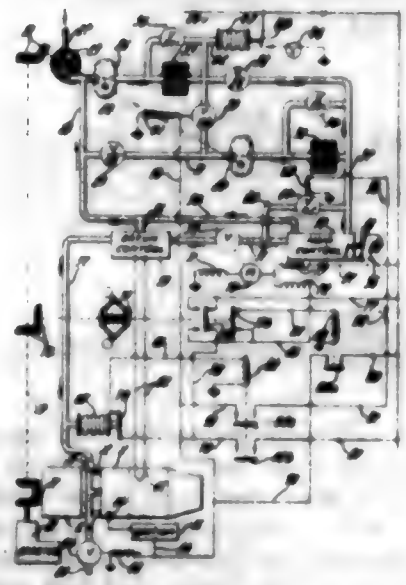
1. A hydraulic coupling between a motor and a load driven by said motor, comprising a source of non-compressible driving fluid, a pump coupled to said motor for continuous actuation thereby, first conduit means between said source and said pump for supplying fluid to the latter, a reversible turbine coupled with said load, second conduit means connecting said turbine in a forward circuit for said fluid between said pump and said source for driving said turbine in one sense of rotation, third conduit means connecting said turbine in a reverse circuit for said fluid between said pump and said source for driving said turbine in the opposite sense of rotation, a control member having a forward position, an intermediate position and a reverse position, first, second and third valve means in said first, second and third conduit means respectively, link means so connecting said control member to said first valve means as to close the latter in said intermediate position of said member, thereby shutting off the flow of said fluid from said source to said pump, said link means so connecting said control member to said second valve means as to open the latter in said forward position of said member, thereby rendering operative said forward circuit, and so connecting said lever member to said third valve means as to open the latter in said reverse position of said member, thereby rendering operative said reverse circuit.

2,861,354
ENGINE EXHAUST TREATING APPARATUS
George E. Bernhart, Altadena, Calif.
Application September 20, 1954, Serial No. 457,163
1 Claim. (Cl. 60—30)



An engine exhaust gas treating apparatus comprising, in combination: a housing; a water supply; a quantity of water disposed in a lower portion of said housing; means associated with said supply for maintaining said water at a substantially constant level in said housing; means to drain said water from said housing; an exhaust gas conducting conduit extending upwardly through said water and having a free end portion disposed above the surface of said water; an inverted cup-shaped deflector disposed over said free end of said conduit, said deflector having an open lower end; a plurality of swirl vanes carried by said deflector adjacent said lower end; a float connected with said deflector and floatable on said water for maintaining said lower end of said reflector in contact with the surface of said water; passage means for conducting said gases from said housing; a plurality of filters intermediate said passage means and the surface of said water, at least a portion of said filters being ionized to enable collection of particles having a particular electrical charge; and a condenser disposed downstream from said filters for removing entrained moisture in said exhaust gases leaving said filters.

2,861,355
TURBINE STARTING FUEL SYSTEM
Arthur W. Davis, Brownsburg, and William R. Harding, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 24, 1955, Serial No. 511,256
1 Claim. (Cl. 60—39.14)



A fuel supply system for a gas turbine engine comprising, in combination, positive-displacement fuel pumping means coupled to the engine to be driven thereby, the pumping means comprising a normally operative pump, a normally inoperative pump, and means to render both pumps operative; fuel controlling means supplied by the pumping means; an engine fuel conduit supplied by the controlling means; a fuel shutoff valve intermediate the pumping means and the fuel conduit; valve operating means for the shutoff valve; a by-pass conduit connecting the pumping means with the shutoff valve and by-passing the fuel controlling means; a normally closed by-pass valve in the by-pass conduit; opening means for the by-pass valve; ignition means for the engine; first means responsive to engine speed operable at a cranking speed of the engine, the first speed responsive means being coupled to the means to render both pumps operative, the shutoff valve operating means, the by-pass valve opening means, and the ignition means so as to render both pumps operative, open the fuel shutoff valve, open the by-pass conduit, and energize the ignition when the engine reaches a predetermined cranking speed; means responsive to pressure in the fuel conduit coupled to the by-pass valve opening means to close the by-pass when the fuel pressure attains a predetermined value; and second means responsive to engine speed operative at a running speed thereof, the second speed responsive means being coupled to the means to render both pumps operative so as to deactivate the normally inoperative pump and to the ignition means so as to deenergize the ignition means.

2,861,359

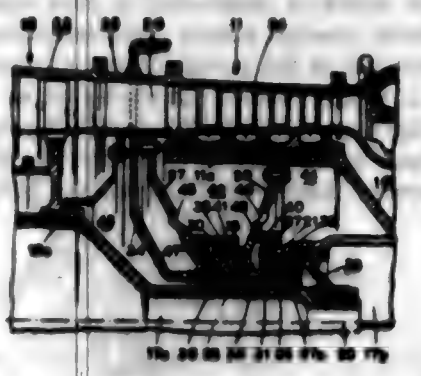
a form suitable for moulding, which comprises means in an endless edge.

2,862,356

BEARING ARRANGEMENTS FOR GAS-TURBINE ENGINES

Nelson Hector Kent, Allestree, Derby, and Frederick William Walton Morley, Castle Donington, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Application July 1, 1955, Serial No. 519,382
Claims priority, application Great Britain July 16, 1954
13 Claims. (Cl. 60—39.16)



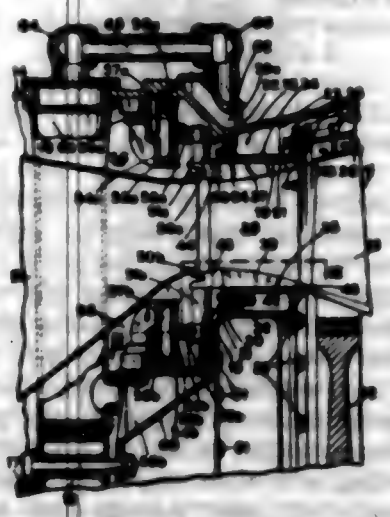
1. A gas turbine engine comprising outer stationary structure defining a working fluid passage; a rotor comprising a compressor, a turbine, and hollow shaft means interconnecting said compressor and turbine whereby said compressor is driven by said turbine; a second independently rotatable rotor comprising a second turbine and second shaft means having an upstream part and a downstream part, said downstream part being connected to said second turbine to transmit power therefrom and extending through said hollow shaft means; stationary structure extending inwardly across the working fluid passage of the engine and carried by said outer stationary structure and having an inner axially-extending portion through which said upstream part of said second shaft means extends; a first bearing mounted on said axially-extending portion and supporting said compressor; a second bearing mounted on said axially-extending portion and surrounded by and supporting said downstream part of said second shaft means, and means forming a driving connection between the upstream part and the downstream part of said second shaft.

2,862,357

TURBINES

Lionel Haworth, Littleover, and Roy Martin Heathcote, Belper, England, assignors to Rolls-Royce Limited, Derby, England

Application August 1, 1956, Serial No. 601,555
Claims priority, application Great Britain August 16, 1955
14 Claims. (Cl. 60—39.25)



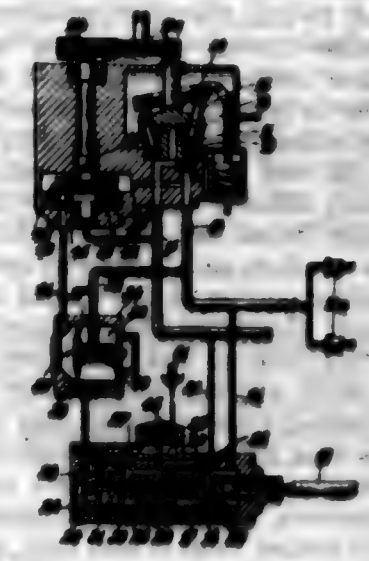
1. In a gaseous fluid turbine, in combination, turbine housing and wall structure, a plurality of curved nozzle guide vanes for the working fluid radially arranged in an annulus and adjustable to vary the throat areas between vanes, the vanes having shroud means at their inner and outer ends and each shroud means having radially spaced inner and outer parts, of which the parts farther from the vane positions are stationary and fixedly located with respect to adjacent turbine housing and wall structure, and of which the parts adjacent the vane portion of each nozzle guide vane are secured thereto and accommodated respectively in recesses in the stationary parts and are each shaped to have an apex adjacent the trailing edge of the vane which abuts against and is pivotable about a substantially radial axis on a corresponding part of the wall of the recess, the shroud part secured to each end of each vane being shaped in respect to the recess in which it is received to provide for limited rotational movement therein about said axis.

2,862,358

MECHANISMS FOR PRODUCING HYDRAULIC PRESSURE SIGNALS

Kenneth Arnold Basford, Alvaston, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Application August 23, 1955, Serial No. 529,613
Claims priority, application Great Britain September 8, 1954
14 Claims. (Cl. 60—39.29)



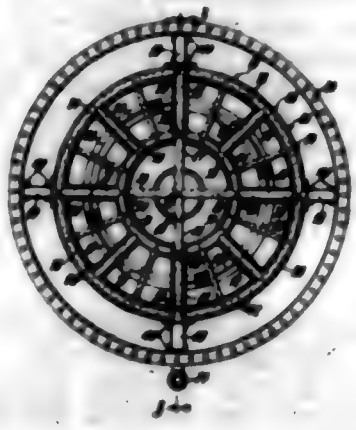
13. A control system for a gas-turbine engine comprising a hydraulic mechanism for producing a pressure signal related to the rotational speed of the engine, said mechanism comprising a source of liquid under pressure, a conduit connected to said source and leading to a region of low pressure, a pair of restrictors arranged in series in said conduit, a pressure-reducing valve in the conduit upstream of the restrictors, and means to produce a liquid pressure which exceeds the low pressure by an amount related to the rotational speed, and pressure-responsive means connected to said conduit between the pressure-reducing valve and the restrictors thereby to be loaded by the pressure in the conduit just upstream of the restrictors, said pressure-responsive means being connected to said means producing a liquid pressure exceeding the low pressure by an amount related to rotational speed to be oppositely loaded by said liquid pressure, and said pressure-responsive means being connected to the pressure-reducing valve to operate it, the load due to the pressure in the conduit upstream of the restrictors acting to close the valve and the load due to the liquid pressure which exceeds the low-pressure by an amount dependant upon rotational speed operating to open the valve.

plate carried by said driving member and having an active

2,862,363

gas conducting conduit extending upwardly through said as to deenergize the ignition means.

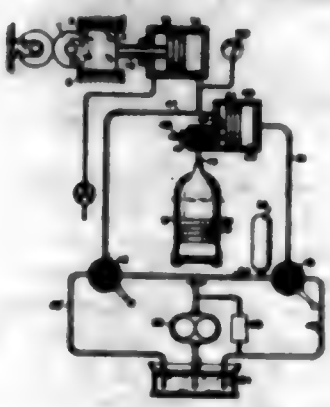
2,862,359
FUEL MANIFOLD AND FLAMEHOLDER IN COMBUSTION APPARATUS FOR JET ENGINES
Eston W. Speers, Jr., Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 28, 1952, Serial No. 317,221
2 Claims. (Cl. 60—39.72)



2. A combustion apparatus comprising, in combination, an annular duct adapted for flow of combustion-supporting gas, a fuel manifold in said duct comprising a plurality of regularly spaced radial conduits welded together for fuel transfer therebetween at their inner ends, said radial conduits being slidably supported at their outer ends by said duct for free differential thermal expansion relative thereto so that said radial conduits may expand and contract radially, said radial conduits forming a cross in said duct, at least one of said outer ends extending slidably through said duct and open for fuel introduction and the remaining outer ends being closed and being slidably supported by radial pins extending inwardly from said duct, a plurality of concentric arcuate conduits each having an open end welded to an intermediate portion of one of said radial conduits for fuel transfer therefrom and a closed end slidably supported by the next of said radial conduits in a circumferential sense whereby said arcuate conduits may expand and contract transversely of said radial conduits and thus have free differential thermal expansion relative thereto despite said rigid open end weldments with said radial conduits, said arcuate conduits forming a pair of radially spaced rings in said duct, means defining fuel outlets on each said conduits, and a flameholder in said duct immediately downstream of said fuel manifold, said flameholder being of U-shaped channel section with the closed side of said channel section facing upstream, said flameholder being aligned with said fuel manifold and of substantially the same configuration including radial channels and ring channels, said flameholder being slidably supported by straps on said radial conduits for free differential thermal expansion relative thereto so that said flameholder may expand and contract radially.

2,862,360
HYDRAULIC CONTROL OF AN ELASTIC LOAD
Pierre Ausemer, Mulhouse, Haut-Rhin, France, assignor to Societe Alsacienne de Constructions Mecaniques, Mulhouse, Haut-Rhin, France, a company of France
Application May 23, 1955, Serial No. 510,338
Claims priority, application France May 31, 1954
1 Claim. (Cl. 60—51)

The combination with a reciprocable element, a source of pressure liquid, a hydro-pneumatic accumulator having a liquid pressure chamber and a gas pressure chamber, and a hydraulic cylinder connected to said liquid pressure chamber and having a pressure piston attached to said element, of means for conducting pressure liquid from said source to one side of said piston, means for conducting pressure liquid from said source to the other side of said piston, valve means for controlling the flow of pressure liquid from said source to both sides of said piston to thereby adjust the yielding pressure in said gas pressure chamber and the position to which said piston and consequently, said element is urged by said yielding pressure, a second cylinder having a partition slidable therein to divide said second cylinder into two cylinder spaces, one of which is connected to said source of pressure liquid and the other of which is connected to said one side of the pressure piston, conduit means interconnecting said liquid pressure chamber of the accumulator and said other cylinder space, a spring loaded check valve in said conduit means having a stem engageable by said partition whereby said check valve will be unseated by said partition upon movement thereof due to pressure liquid conducted



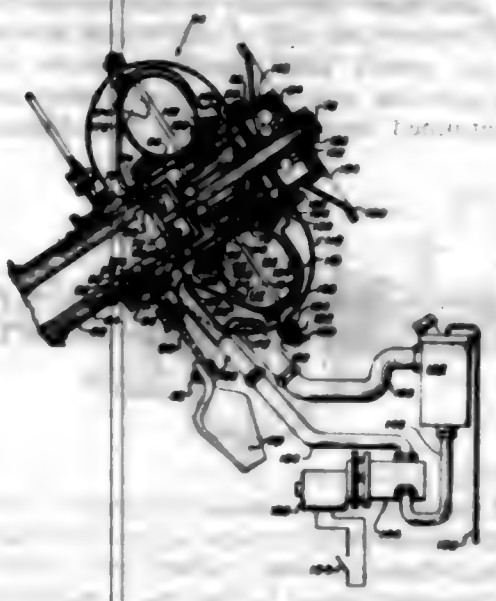
into said one cylinder space, and further valve means for controlling the flow of pressure liquid from said source to or from said one cylinder space, the arrangement being such that when said valve means for controlling the flow of pressure liquid from said source to both sides of said piston are set to interrupt the supply of pressure liquid from said source to said one side of the pressure piston and said further valve means set to allow discharge of pressure liquid from said one cylinder space, the pressure liquid in said hydraulic cylinder at said one side of the pressure piston is permitted to escape into said other cylinder space to thereby move said partition to a position in which said check valve is free to close under the combined action of its spring and of the pressure in said liquid pressure chamber so as to relieve the pressure piston from said yielding pressure.

2,862,361
FLUID COUPLING
Alfred L. Koup, Stratford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application May 16, 1952, Serial No. 288,197
2 Claims. (Cl. 60—54)

1. A fluid coupling for use in a transmission including a driving member having an axis of rotation and comprising an annular cup rotatable about said axis, said annular cup having an inner edge and an outer edge around said axis, said driving member having vanes in its cup, a driven member comprising an annular cup, said driven member having vanes in its cup, the vanes of said driven member operably opposing the vanes of said driving member, fluid inlet passageways being located in said driving member for admission of fluid into operative contact with said members, said fluid inlet passageways having discharge ends opening into said members, said members being arranged to set up a vortex therein with the fluid moving over their respective inner sides within the cups, said fluid inlet passageways being directed toward the outer circumference of said members for admitting fluid which will move in the direction of said vortex, means for introducing fluid through said fluid inlet passageways into said members including a conical slinger

anism connected between said motor and a source of power therefor, means projecting into said interengaging brakes of a vehicle, fluid displacing means movable into

plate carried by said driving member and having an active inner surface oblique with respect to the axis of rotation of said coupling and enclosing the inlet ends of said fluid inlet passageways, each fluid inlet passageway having, means for producing a venturi effect at its discharge end when fluid from the vortex passes over the end, the venturi effect acting to draw fluid through each of said fluid inlet passageways, and a conduit having its discharge end located within the confines of said plate for



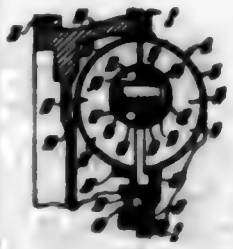
discharging fluid onto the active inner surface of said plate, said conduit having its discharge end located further from the axis of rotation of said driving member than the inner edge of the annular cup of said driving member, said active inner surface extending from the discharge end of said conduit to the inlet ends of said fluid inlet passageways so that it acts on fluid continuously from said discharge end of said conduit to the inlet ends of said fluid inlet passageways.

2,862,362

FLUID COUPLING CONSTRUCTION

Millis V. Parshall, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application May 26, 1955, Serial No. 511,276
7 Claims. (Cl. 60—54)



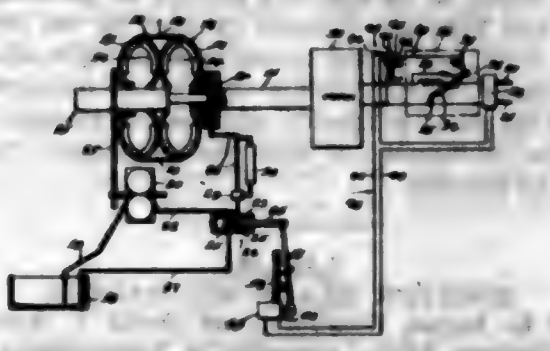
1. A hydrodynamic drive device having a rotatable impeller member, a turbine member driven by fluid delivered thereto from said impeller member, said impeller and turbine members having inner and outer shroud elements cooperating to provide a path for the circulation of fluid between said members, said inner shroud elements together defining a hollow chamber, and torque interrupting means pivotally connected at one end to said impeller member within said chamber, spring means yieldably biasing a portion of said torque interrupting means into a position across the path of the fluid to impede fluid flow between said members, said portion withdrawing from fluid impeding position in response to a centrifugal force acting on said portion per se upon rotation of said impeller member.

2,862,363

POWER TRANSMISSION

James B. Black, Rockford, and Wilbur F. Sharts, Winnebago, Ill., assignors to Twin Disc Clutch Company, Racine, Wis., a corporation of Wisconsin

Application January 17, 1956, Serial No. 559,571
5 Claims. (Cl. 60—54)



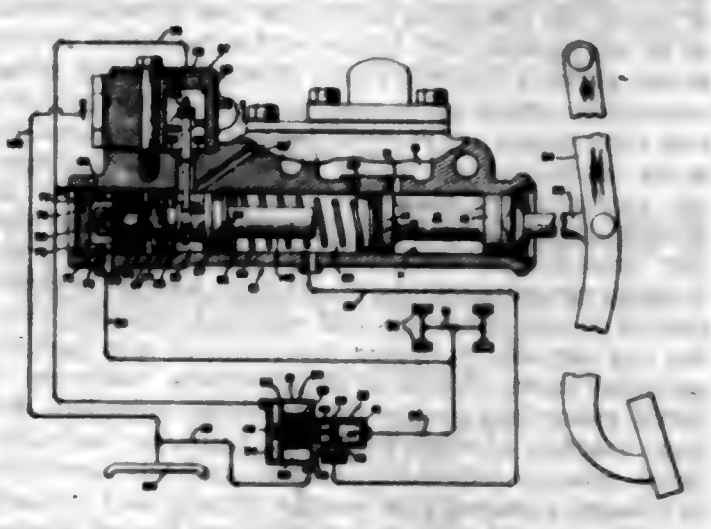
1. A power transmission comprising an electric motor, a rotary hydraulic coupling having its input connected to the motor and its output connectible to a load and including apertures for exterially discharging the working liquid whereby the coupling is substantially empty when at rest, working liquid circuit means including a sump, a pump operable with the coupling input and a control valve shiftable between positions connecting the pump outlet to the sump and coupling, respectively, and biased to a sump connecting position, first electric circuit means arranged to normally shift the valve to coupling supply position when the motor is running, and means for limiting the fill of the coupling during the starting period of the load from rest to rated speed including electric power sensing means responsive to the power demand of the motor, and a second electric circuit energized by a predetermined response of the sensing means and arranged to open the first circuit means to thereby return the valve to sump connecting position.

2,861,364

BOOSTER BRAKE MECHANISM

William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Application December 6, 1956, Serial No. 626,736
20 Claims. (Cl. 60—54.5)



18. A booster mechanism comprising a cylinder, a control plunger slidable therein, an actuating plunger slidable in said cylinder and spaced from said control plunger to form a hydraulic chamber in which pressure is generated by movement of said actuating plunger to move said control plunger, reaction plunger means in said cylinder at the end thereof opposite said actuating plunger and forming with said control plunger an intermediate chamber, means biasing said reaction plunger means to a normal position disengaged from said control plunger, a reaction chamber in the end of said cylinder adjacent said reaction plunger means, a motor, a control mech-

edges of said slabs, said brackets, wall slabs and cover members being formed of reinforced concrete, whereby to

pair of air circulating means, three air chambers formed adjacent said rear wall, the first and second of said

said source to one side of said piston, means for conduct-

passageways into said members including a conical slinger

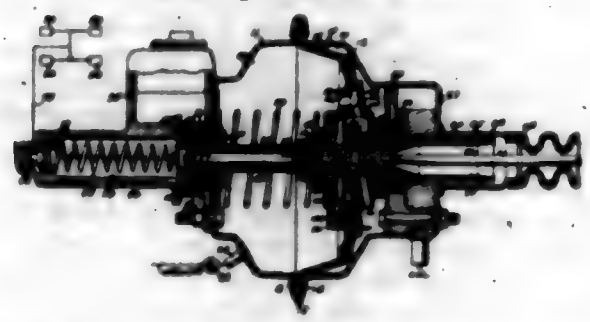
anism connected between said motor and a source of power therefor, means projecting into said intermediate chamber and engaging and operable by said control plunger, such means being connected to said control mechanism to operate it, a hydraulic pressure cylinder, a power plunger movable in such cylinder and connected to said motor to be operated thereby to generate pressure in said hydraulic pressure cylinder for the performance of work, and means connecting said hydraulic pressure cylinder to said reaction chamber to transmit pressures to the latter to operate said reaction plunger means to oppose movement of said control plunger from its normal off position.

2,862,365

BOOSTER BRAKE MECHANISM

Jeannot G. Ingres, Dearborn, and David T. Ayers, Jr., Birmingham, Mich., assignors to Kelsey-Hayes Company, a corporation of Delaware

Application November 26, 1952, Serial No. 322,662
8 Claims. (Cl. 60—54.6)



1. A fluid pressure mechanism comprising a hydraulic fluid chamber for communicating pressurized fluid to a fluid pressure operated mechanism, a motor having a differential pressure-responsive unit including a fluid displacing member extendible into said chamber, said unit defining opposed chambers in said motor, a source of power for energizing said motor, and operating-and-reaction transmitting means in said motor for operating said motor and transmitting feel characteristics to an operator in relation to energization thereof and fluid pressure developed in said chamber, said means comprising control valve means operatively connected to said source of power for energizing said motor and normally biased to an off position and supported for movement relative to said pressure-responsive unit, manually-operable means operatively connected to said valve means for operating said valve means and transmitting reaction characteristics to an operator of the motor, a hydraulic reaction member supported for movement relative to said fluid displacing member and including portions subject to pressure generated in said hydraulic fluid chamber, a differential pressure-responsive reaction member movable relative to said power unit and said fluid displacing member and operable to oppose movement of said manually operable means during a predetermined increment of initial motor energization for providing immediate first stage reaction characteristics, said hydraulic and differential pressure-responsive reaction members combining to transmit a second stage reaction force to said manually operable means during subsequent motor energization and development of hydraulic fluid pressure in said chamber.

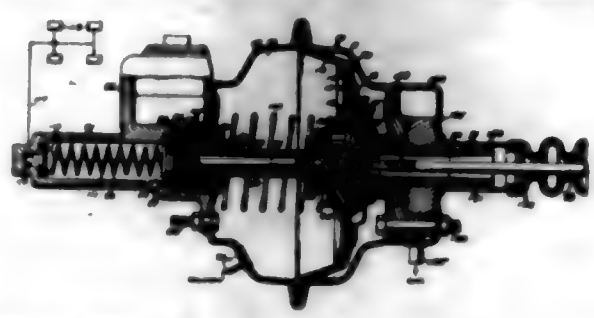
2,862,366

BOOSTER BRAKE MECHANISM

Jeannot G. Ingres, Dearborn, and David T. Ayers, Jr., Birmingham, Mich., assignors to Kelsey-Hayes Company, a corporation of Delaware

Application November 3, 1952, Serial No. 318,496
8 Claims. (Cl. 60—54.6)

8. A booster brake mechanism comprising a hydraulic fluid chamber having an outlet for connection with the brakes of a vehicle, fluid displacing means movable into said chamber, a fluid motor having a pressure movable unit therein connected with said fluid displacing means, a follow-up valve mechanism for controlling energization of said motor, a manually operable unit coaxial with said fluid displacing means, said manually operable unit being connected to said valve mechanism and normally occupying an off position in which pressures are balanced in said motor, said manually operable unit being movable from said off position to operate said valve mechanism to disconnect the ends of said motor from each other and connect one end of said motor to a source of pressure to operate said pressure movable unit, said manually operable unit having lost motion connection of predetermined length with said fluid displacing unit



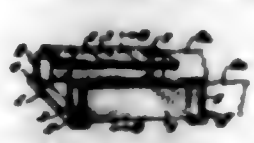
in the off position of said manually operable unit whereby the latter is movable from such position independently of said fluid displacing unit to effect energization of said motor, a reaction device having mechanical connection with said manually operable unit and with said fluid displacing means and responsive to pressures in said chamber to oppose movement of said manually operable unit to a degree proportional to pressures in said chamber, and means providing lost motion connection between said manually operable unit and said fluid displacing means when said manually operable unit is in normal position, which lost motion connection will be taken up when pressure increases to a predetermined point in said fluid chamber to establish direct mechanical connection between said manually operable unit and said fluid displacing means.

2,862,367

PRECAST CABLE TRENCH

Abe Silverstein and Clifford H. Mohn, Cincinnati, Ohio, and Keith C. Andrus, Ludlow, Ky.

Application September 27, 1956, Serial No. 612,538
3 Claims. (Cl. 61—41)



1. A precast cable trench structure comprising, in combination, a series of brackets arranged crosswise in spaced apart generally parallel relation in an open trench, each of said brackets having a horizontally disposed base and a pair of vertical posts extending upwardly from the base, said posts being of a height sufficient to support side wall slabs in vertical position and spaced inwardly from the end edges of the base to define outwardly extending slabs supporting ledges at the ends of the brackets, the bases of the said brackets being of a width sufficient to be self supporting, generally rectangular wall forming slabs extending between the approximate mid points of corresponding ledges of adjacent barckets, said slabs having the end portions of their bottom edges supported on said ledges and their inner surfaces contacting and supported by the outermost surfaces of said vertical posts, and cover members extending crosswise of the trench between opposed wall slabs, said cover members having recessed shoulders at their ends seated upon the upper

spect to the vertical and having two separate spaced apart

peller member.

said reaction plunger means, a motor, a control mech-

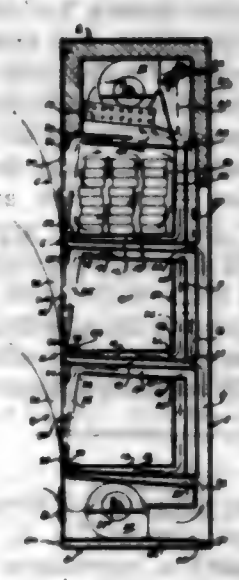
edges of said slabs, said brackets, wall slabs and cover members being formed of reinforced concrete, whereby to provide a precast cable trench in which the wall slabs and brackets may be retained in assembled relation solely by means of back-fill, and wherein the cover members are readily removable for the laying and replacement of cables therein.

2,862,368
MINE ROOF BOLT INSTALLATION
Joseph B. Dempsey, Marietta, Ohio
Application September 30, 1957, Serial No. 686,979
5 Claims. (Cl. 61—45)

1. A mine roof bolt assembly comprising: an elongated bolt having an expansible anchoring means on one end thereof insertable in an upwardly extending hole in a mine roof, anchoring means end foremost; a plate having a roof engaging surface and a central aperture therein for receiving said bolt; head means on the other end of said bolt operatively engageable with the opposite surface of said plate adjacent said aperture, during use, to retain the roof engaging surface of said plate in engagement with the mine roof to support the same with the bolt tensioned between said anchoring means and said head means; elongated reinforcing rib means formed in said plate throughout a substantial portion thereof in substantially symmetrical arrangement about said bolt receiving aperture for strengthening said plate, said elongated rib means defining elongated recess means of arcuately concave transverse cross-sectional configuration in the roof engaging surface of said plate, said elongated rib means having an opening extending therethrough in spaced relation to said bolt receiving aperture, said opening being elongated in a direction transverse to the longitudinal extent of the portion of said elongated rib means adjacent said opening; and a hanger having one end transversely elongated for insertion upwardly through said opening in transverse registry therewith and for seating within and supported by the bottom of the portion of said elongated recess means adjacent said opening upon rotation into a position of general alignment with said elongated rib means, the relative depth of said elongated recess means adjacent said opening and height of the transversely elongated end of said hanger being such that the latter is insertable upwardly through said opening and rotatable into supported relation with the bottom of the portion of said elongated recess means adjacent said opening while said plate is in supporting engagement with the mine roof, said hanger having an opposite end portion formed into a generally hook-shaped configuration for receiving and supporting a conduit or the like, during use.

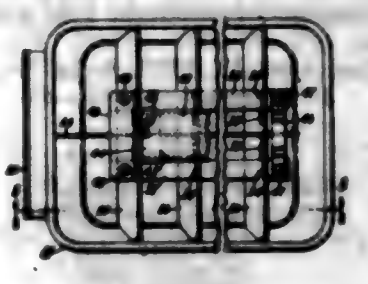
2,862,369
AIR CONDITIONED DISPLAY COMPARTMENT AND METHOD
Edward W. Simons, San Francisco, Calif.
Application August 30, 1956, Serial No. 607,112
15 Claims. (Cl. 62—89)

14. In an air conditioned, upright display case having a rear side wall, opposed end walls and top and bottom walls and an open front side opposite said rear wall, a pair of air circulating means, three air chambers formed adjacent said rear wall, the first and second of said chambers respectively communicating with the input and output sides of one of said pair of circulating means and the third said chamber communicating with the output side of the other of said circulating means the input side of which communicates with the atmosphere, air conditioning means associated with said one circulating means for conditioning the air circulated thereby, a plurality of vertically spaced, detachable shelves extending horizontally from said rear wall toward said open side, inner and outer elongated nozzles in parallel side-by-side relationship extending along the free edge of each of said shelves at said open side and directed upwardly



toward the free edge of the shelf above said nozzles for issuing inner and outer adjoining layers of air respectively across said open side, a return duct carried by each of said shelves and extending from the rear edge thereof to an opening on the underside of said shelf adjacent the free edge thereof for receiving said inner layer of air issued by said inner nozzle, inner and outer nozzle ducts carried by each of said shelves and respectively extending from the rear edge thereof to said nozzles, connecting means provided at vertically spaced locations on said rear wall for respectively connecting said first, second, and third chambers to said return, inner and outer nozzle ducts of a shelf attached thereto, and means for blocking the connecting means not attached to a shelf.

2,862,370
FREEZING DEVICE
Arthur J. Frei, Sr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 19, 1956, Serial No. 623,889
3 Claims. (Cl. 62—366)



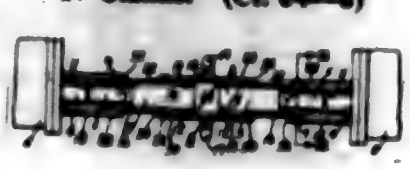
1. A freezing device comprising in combination, a tray, a unitary grid structure in said tray dividing the interior thereof into ice block compartments and removable therefrom as a unit, said grid structure including a one piece longitudinal partition and a plurality of spaced apart substantially inflexible walls movably secured to said one piece partition and extending transversely thereacross, said transverse walls being normally inclined with re-

spect to the vertical and having two separate spaced apart horizontally elongated closed walled openings therein adjacent the top thereof, a flat horizontally extending actuating bar projecting through each of said separate closed walled openings and having a part thereof interlocked with said transverse walls, said bars extending continuously over the upper portion of said plurality of transverse walls, horizontally disposed flat links secured to ends of said bars beyond and paralleling the endmost transverse walls for tying the two bars together against movement toward one another, a lever on said grid structure pivotally mounted upon said one piece longitudinal partition adjacent an end transverse wall on the side thereof opposite the side traversed by one of said links, said lever having a cam thereon for directly contacting and tilting said end transverse wall toward the vertical, the location of said one link being such that the reactive force of said cam against said end transverse wall is absorbed thereby to prevent damaging of the interlock between said end transverse wall and the actuating bars during initial operation of said lever, and continued operation of said lever causing force applied to said end transverse grid wall to be simultaneously transmitted to said bars for moving them in the same direction lengthwise of said grid structure to tilt all other of said plurality of inclined transverse walls toward said end transverse wall into a substantially vertical position.

2,862,371
CONTROL SHAFT EXTENSION
Charles E. Cady, North Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application March 31, 1958, Serial No. 725,314
5 Claims. (Cl. 64—4)

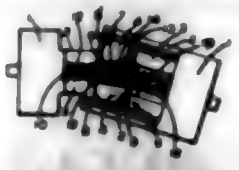
1. A control shaft extension for coupling two components together one of which has a slotted shaft comprising, a molded shaft extension having a receptacle on one end portion thereof, said receptacle having resilient sides defining an opening therein and a slot extending into said opening and a tab positioned centrically in said opening, said receptacle adapted to receive a slotted shaft, the slotted shaft being snapped into said opening through said slot with said tab registering with the slotted portion of the shaft, and means on the other end portion of said molded shaft extension for securing another component thereto.

2,862,372
SHAFT ASSEMBLY
Thomas F. Weidner, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 25, 1957, Serial No. 655,461
17 Claims. (Cl. 64—6)



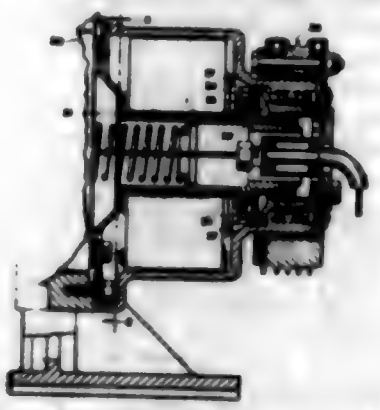
10. A drive shaft assembly comprising an elongated shaft, a coaxial tubular member surrounding said shaft, said tubular member being movable axially outward of said shaft with its outer end engaging a driven element in axial alignment therewith to drive said driven element, elongated detachable means axially encompassing a portion of said shaft with one end thereof engaging an inner portion of said tubular member and with the other end thereof engaging means to restrain said detachable means against axial movement away from said tubular member, and releasable means for holding said detachable means in engagement with said inner portion to prevent said tubular member from moving axially inward during driving of said driven element.

2,862,373
TRANSMISSION JOINT
Edward H. Gibson, Coventry, England
Application November 29, 1957, Serial No. 699,683
7 Claims. (Cl. 64—9)



2. A transmission joint of the character described comprising a pair of rotary joint members each having eccentric axially parallel projections extending therefrom, said projections of said joint members all lying on a common circle and alternately interlocating with clearance between one another whilst said projections are provided with straight ball races of part cylindrical form having their axes parallel to that of the joint member from which they extend; balls retentively disposed between adjacent races of said interlocating projections such that the axes of the part cylindrical races of each adjacent pair thereof pass substantially through the centre of the ball therebetween for a substantial extent of driving contact with each ball in order to render the joint members rotationally fast; and a cage having radial fingers extending between the interlocating projections from a hub disposed substantially within the centre of the joint, said fingers holding the balls in a substantially common radial plane whereby relative sliding movement and/or inclination of the joint members is permitted.

2,862,374
TORQUE LIMITING DEVICE
Leonard Ochtman, Ridgewood, N. J., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application April 5, 1957, Serial No. 650,981
4 Claims. (Cl. 64—27)

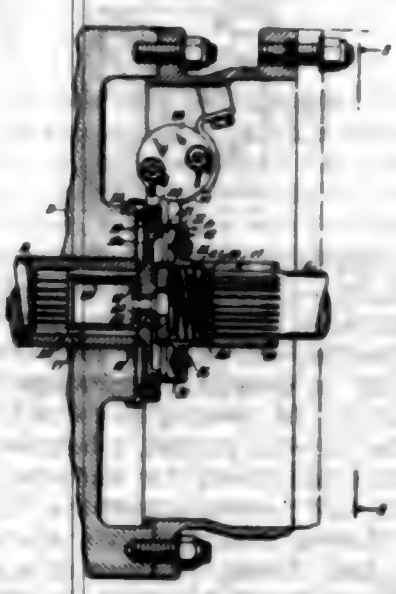


2. A torque limiter mechanism comprising an arbor, a casing rotatably mounted on the arbor, a flat torsion spring coiled about the arbor and having one end secured in the arbor and the other end secured to the casing, a driving plate affixed to the casing, a driving ring carried by the arbor and engaging the driving plate under a predetermined torque applied by the spring, a first lug projecting from the driving plate and a second lug projecting from the driving ring, the first lug being arranged in spaced relation to the second lug, a driving member rotatably mounted in the arbor, a driven member including a pulley assembly rotatably mounted on

between spaced pins and a latching portion extending rotatable within said inner shell, a key receiving member

the driving member, a first finger projecting from the driving member, a second finger projecting from the driven member, said first and second fingers operatively positioned between the first and second lugs in the space therebetween and so arranged that upon application of a torque to any one of said members in excess of the predetermined torque applied by the spring said ring and plate disengage so as to limit the torque applied therethrough.

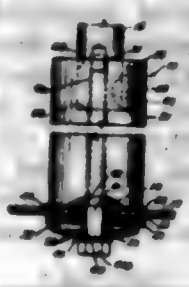
2,862,375
SEVERABLE COUPLING
Sherman B. Miller, East Norwich, N. Y., assignor to Fairchild Engine and Airplane Corporation, Bay Shore, N. Y., a corporation of Maryland
Application February 7, 1957, Serial No. 638,818
6 Claims. (Cl. 64—28)



1. A severable coupling for a drive transmission comprising an adapter member connected to the drive end of the transmission, an adapter member connected to the driven end of the transmission, said adapter members being coaxial and closely spaced to each other, one of said adapter members having a disk-like portion formed integrally therewith, the other of said adapter members having a hollow end adjacent said disk-like portion of the other adapter member, a compressed spring accommodated within said hollow end, a spring retaining disk loosely accommodated within the hollow end of the adapter member, said spring acting between the spring retaining disk and the adapter member within which it is accommodated, thereby urging the spring retaining disk into engagement with the disk-like portion of the other adapter member, the engagement therebetween retaining the spring retaining disk within the hollow end, and a severable coupling ring connecting the adapter members, the arrangement being such that upon severance of the coupling ring the compressed spring separates the severed parts of the coupling ring.

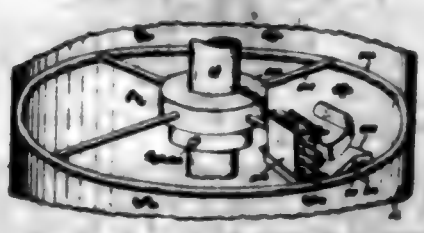
2,862,376
FRICTION DRIVE FOR LAWN MOWER BLADE
Clement J. Thelander, Sterling, Ill., assignor to Buffalo Eclipse Corporation, North Tonawanda, N. Y., a corporation of New York
Application July 11, 1955, Serial No. 520,978
6 Claims. (Cl. 64—30)

2. In an apparatus for connecting a rotary drive element to a drive shaft, the combination of a hub adapted for attachment to a drive shaft, said hub having a shank extending axially from one end thereof for rotatably receiving a driven element, clutch means for frictionally connecting a driven element on said shank to said hub, said clutch means including a drive washer slidably and non-rotatably mounted on said shank, a pressure applying member in the form of a domed resilient washer engageable with said drive washer and overlying the end of said shank adapted when drawn against the end of



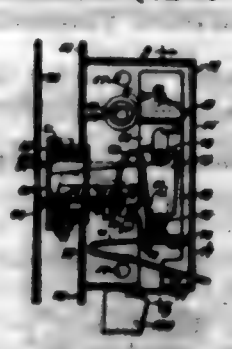
said shank to apply a predetermined pressure on said drive washer, and a cap screw extending through said member and axially into said hub and having a head thereon engageable with said member to draw the latter against the end of said shank.

2,862,377
RIB HOLE-DETECTOR FOR REVOLVING AND STATIONARY HEAD RIB KNITTING MACHINES
Edward Vossen, Malverne, N. Y., assignor to Stop-Motion Devices Corp., Brooklyn, N. Y.
Application October 18, 1954, Serial No. 462,782
6 Claims. (Cl. 66—166)



1. In a circular knitting machine having a central shaft extending vertically thereof, a support for a hole detector for detecting holes in the knitted tube made on said machine, said support comprising a hub which is adjustably secured to said vertical shaft, a plurality of radially extending arms mounted on said hub, a ring supported at the outer ends of said arms, coaxially with said vertical shaft, said ring being of a diameter to engage the inside of said knitted tube to hold it taut, a bracket which is adjustably mounted on one of said arms, and a hole detector mounted on said bracket, said bracket being adapted to support said hole detector in operative position relative to said knitted tube.

2,862,378
DOOR LATCH UNIT
Donald S. Harris, New Castle, Ind., assignor to New Castle Products, Inc., New Castle, Ind., a corporation of Indiana
Application May 11, 1956, Serial No. 584,353
12 Claims. (Cl. 70—95)

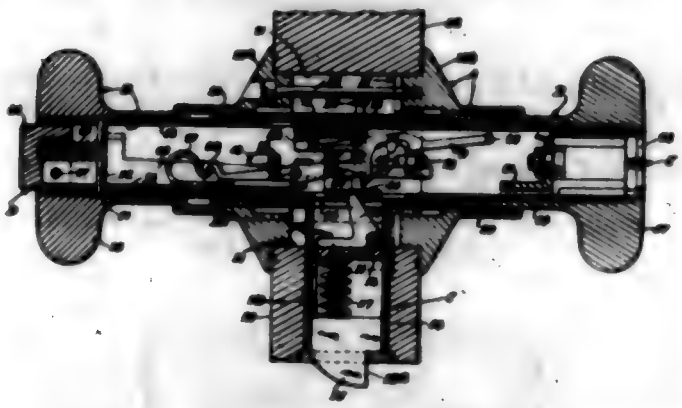


11. A door handle and latch unit including a housing carrying on an outer surface thereof a handle, a latch unit within said housing, said latch unit including a latch member formed from a body portion pivotally mounted

2,862,383
AUTOMATIC FEED CAULKING GUN
bination, a small, closed, cylindrical test container, with

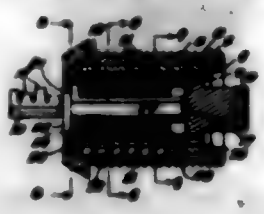
between spaced pins and a latching portion extending outwardly of said housing, a movable plate carried by said pins and having pivotal limiting means for movement into and out of pivotal limiting association with said latch member, a toggle spring associated with said plate to partially control the positioning thereof, operating means carried by said handle and connected to said plate to move the same, and an abutment means carried by said housing for movement into and out of movement limiting relation with said plate, said abutment means including an abutment finger positioned within said housing and operated by a lock member carried by said handle.

2,862,379
DOOR LATCH MECHANISM
John P. Schafer, Danville, Calif.
Application October 19, 1953, Serial No. 386,913
19 Claims. (Cl. 70—146)



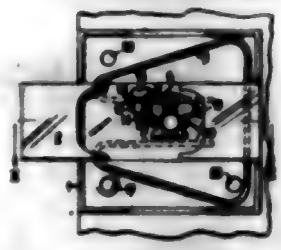
1. A push-pull type door latch mechanism comprising: a door catch movable from a latched to unlatched position; latch housing means adapted to be mounted with its longitudinal axis extending transversely through a door in the direction of its thickness; first and second elongate latch actuating members mounted for axial rectilinear reciprocal movement within and axially of said housing; said first latch actuating member connected to said door catch for moving said catch from latched to unlatched position upon reciprocation of said first member; means for releasably connecting said latch actuating members to one another for joint reciprocal movement together within said housing whereby reciprocation of either member will cause said catch to move from its latched to unlatched position; and means associated with said last named means for disconnecting said members whereby reciprocal movement of said members within said housing can occur independently of one another and whereby reciprocal movement of said second member will not operate said catch to unlatched position.

2,862,380
CYLINDER LOCK
Nicholas A. Welch, West Hartford, Conn., assignor to The American Hardware Corporation, New Britain, Conn.
Substitute for abandoned application Serial No. 268,283, January 25, 1952. This application June 28, 1957, Serial No. 669,409
14 Claims. (Cl. 70—366)



6. A lock comprising a casing, an inner shell rotatably mounted in said casing, means normally locking said inner shell to the casing including a plurality of tumblers rotatable within said inner shell, a key receiving member extending through said tumblers and rotatable relatively to said tumblers and said inner shell, said key receiving member being adapted to receive a key for moving said tumblers to unlocking position, and cooperating means on said key receiving member and said inner shell for rotating the shell after the tumblers have been moved to unlocking position.

2,862,381
LOCK HAVING A SLIDING BOLT
Marcel Frenard, Geneva, Switzerland, assignor to Mefina S. A., Fribourg, Switzerland, a Swiss company
Application May 14, 1953, Serial No. 354,996
Claims priority, application Switzerland May 20, 1952
3 Claims. (Cl. 70—462)

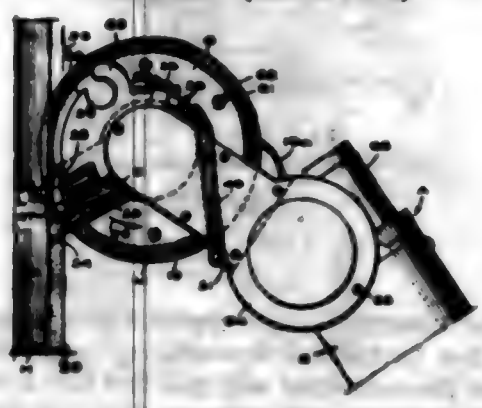


1. A lock adapted to be driven positively both in opening and in closing, comprising, in combination, a casing member, said casing member having side wall portions and top and bottom wall portions, each of said side wall portions having an opening therethrough, each opening being opposite to the opening in the side wall portion opposite to its side wall portion, a bolt member slidably mounted within said casing for movement through the respective side wall portion, at said opening thereof, said bolt member having symmetrically shaped end portions, said bolt member having an opening extending therethrough transversely of the plane in which said bolt slides, said opening being in the central portion of said bolt and having a recessed portion, the sides of said recessed portion extending toward the respective end portions of the bolt, catch means for sliding said bolt into its retracted and projected positions with respect to said casing, means for pivotally mounting said catch means between the inner surface of said top wall portion of the casing and the top surface of said bolt member, said catch means including a projection extending through said opening of said bolt member, a cylinder having a rectangularly shaped bore extending longitudinally therethrough, whereby a key may be seated therein, said cylinder being rotatably mounted with respect to said casing at the bottom wall surface thereof transversely of the plane in which said bolt slides and having at least its end portion positioned within said casing, said end portion of said cylinder having transverse grooves extending perpendicularly with respect to the major axis of said rectangularly shaped bore, a driving means for engaging said catch means at said projection thereof extending through said bolt member opening and for causing said bolt to slide into its retracted or projected position, said driving means being positioned between the bottom surface of said bolt member and the end portion of said cylinder, said driving means including a first plurality of angularly spaced projection means for engaging said projection of said catch means and positioned in a plane transversely of said catch means projection and a second plurality of angularly spaced projection means for selectively engaging the cylinder end portion at opposite portions of said longitudinally positioned bore therethrough and the said transverse grooves, whereby said driving means may be selectively secured to said cylinder for rotation therewith and whereby the lock may be mounted on any one of a plurality of doors to be opened in at least four different directions without changing the position of the key to be inserted in the cylinder for opening and closing the door.

2,862,382
AUTOMATIC FEED CAULKING GUN

Robert G. Ames, Hillsborough, Calif., assignor of one-fourth to Stanley Ames, one-sixth to Katherine A. Williams, one-sixth to Lois W. Rossbrook, and one-sixth to George W. Williams III, Hillsborough, Calif.

Application August 21, 1956, Serial No. 605,250
9 Claims. (Cl. 72—130)

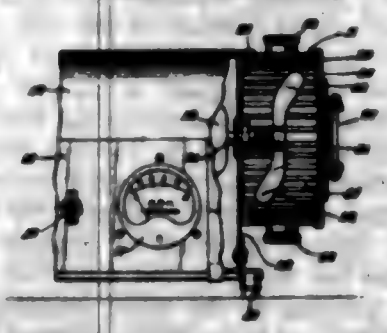


1. In an automatic feed caulking gun: a tubular handle having a bore adapted to contain a supply of mastic; a mastic-delivering nozzle arranged adjacent to one end of the handle; a mastic-feeding conduit placing the bore of the handle in communication with the nozzle, whereby mastic may be transferred from the bore to the nozzle; a piston mounted in the bore in back of the supply of mastic, and being movable toward the nozzle to advance mastic to the latter; a rotatable drum carried by the handle and having one end of a cable anchored thereto, with the other end of the cable being fastened to the piston; a traction wheel mounted adjacent to the nozzle and rotatable on an axis transverse thereto so as to be engageable with a member against which mastic is to be extruded when the gun is used; the wheel being rotatable when the operator moves the handle and advances the wheel along said member in engagement therewith; and a drive mechanism connecting the traction wheel with the drum for turning the latter when the wheel is rotated for winding the cable and moving the piston for forcing mastic out the nozzle; said drive mechanism including means operable for automatically disengaging the traction wheel when the piston reaches a predetermined point at the forward end of its stroke, thereby precluding the breaking of the cable upon further rotation of the traction wheel; said drum disengaging means including a clutch, and a clutch-operating rod arranged in the path of the advancing piston and adapted to be actuated by the piston when the latter reaches a predetermined point in its stroke for disconnecting the drum from the drive mechanism.

2,862,383
METHOD AND APPARATUS FOR TESTING FABRICS

Harold W. Stiegler, Lowell, Mass., assignor to The American Association of Textile Chemists and Colorists, Lowell, Mass., a corporation of Massachusetts

Application August 2, 1955, Serial No. 526,630
1 Claim. (Cl. 73—7)

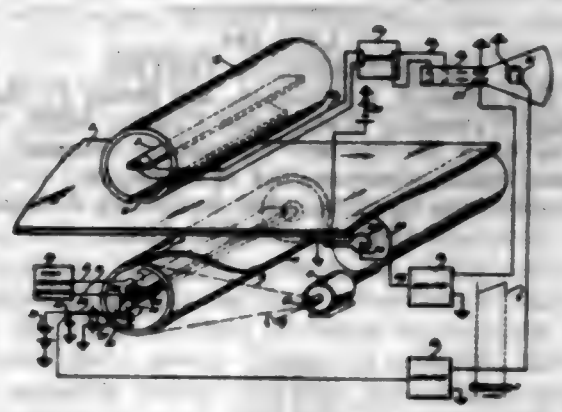


Apparatus for testing the dry wear resistance qualities of fabrics or other flexible materials comprising, in combination, a small, closed, cylindrical test container, with a removable lining sleeve of size and shape generally corresponding to the cylindrical walls of said container and adapted to be removably inserted therein, and an abrasive coating of emery cloth on the internal surfaces of said sleeve; means including an electric motor for driving a sample of material within said container and sleeve in a random, zig-zag path of movement along a generally circular orbit while causing it to repeatedly impinge the abrasive emery cloth coating within the sleeve and to be abraded by said coating and carom therefrom as it progresses.

2,862,384
APPARATUS FOR AUTOMATIC TESTING OF SHEETS AND LEAVES

Paul Renaut, Saint-Maur, France, assignor to Realisations Ultrasoniques, a corporation of France

Application August 10, 1954, Serial No. 448,956
Claims priority, application France August 20, 1953
7 Claims. (Cl. 73—67.6)



5. Apparatus of the character described comprising, in combination, means for moving an object to be treated along a predetermined path in a predetermined direction; elongated ultrasonic wave emitting means arranged on one side of said path substantially transverse and adjacent thereto for emitting a wave which impinges on one side of said object; elongated wave receiving means arranged on the other side of said path opposite and substantially parallel to said wave emitting means so as to receive waves emitted by said wave emitting means and passing through said object; and screen means movably mounted adjacent said wave emitting means and having an aperture therein at least a portion of which is arranged between said wave emitting means and said object to be tested so that a substantially pencil-shaped wave beam passes through said portion of said aperture and impinges on said object whereby when said screen means is moved different portions of said aperture are successively arranged between said wave emitting means and said object, said different portions of said aperture lying along a line substantially parallel to the length of said wave emitting means and substantially transverse to said predetermined direction of movement of said object.

2,862,385
VIBRATION TABLE

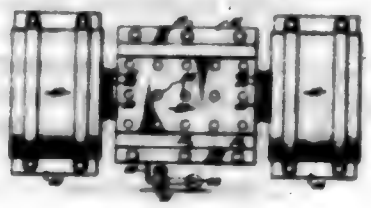
Leroy R. Woods, Whittier, Calif., assignor to International Electronic Research Corporation, Burbank, Calif., a corporation of California

Application August 8, 1955, Serial No. 527,677
5 Claims. (Cl. 73—71.6)

1. A vibration testing machine comprising a stationary base, a table mounted on the base adapted for the reception thereon of objects to be subjected to vibrations, said base having upstanding columns on opposite sides and said columns having parallel longitudinally extending slots depressed outwardly into respectively inwardly facing sides of the columns, said slots having a portion lying above a horizontal plane and a portion lying below a hori-

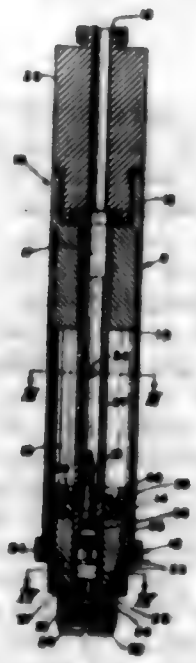
2,862,389

zontal plane, said table having outwardly extending edges fitting into the slots with a clearance of substantially a few thousandths of an inch, air passages in said columns, said passages having branches opening directly into upper



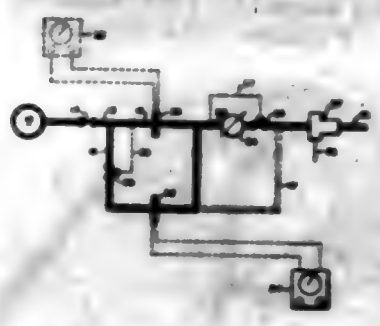
and lower portions of the slots, and a source of high pressure air communicating with said passages whereby to provide an air float for said table, and vibration-producing media in spaced relationship with the table adapted to vibrate said table in a horizontal plane.

2,862,386
COMPRESSION TESTER
Byron F. Campbell, Kalamazoo, and Henry P. Marusek, Portage Township, Kalamazoo County, Mich., assignors to Allen Electric and Equipment Company, Kalamazoo, Mich., a corporation of Michigan
Application April 16, 1956, Serial No. 578,318
3 Claims. (Cl. 73—116)



1. A device for testing pressure within a walled space having an opening communicating therewith, comprising: means defining an air-tight chamber; an expansible end member secured in fluid-tight relationship to said means at one end of said chamber and receivable into said opening, said end member having a tapered, internal opening; a hollow open ended tube extending through said chamber, one end of said tube extending through said end member, and said tube having a port communicating between its interior and said chamber; a pressure indicator and means connecting same with the other end of said tube; a tapered expansion member encircling said tube adjacent said end member and snugly receivable into said internal opening; a piston encircling said tube between said port and said expansion member, said expansion member being urged by said piston to enlarge said expansible end member in response to the flow of said gas under pressure into said chamber; and means for releasing the pressure within said chamber.

2,862,387
SHUNT LINE METERING TOTAL FLOW
George J. Webster, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 9, 1954, Serial No. 474,190
5 Claims. (Cl. 73—198)

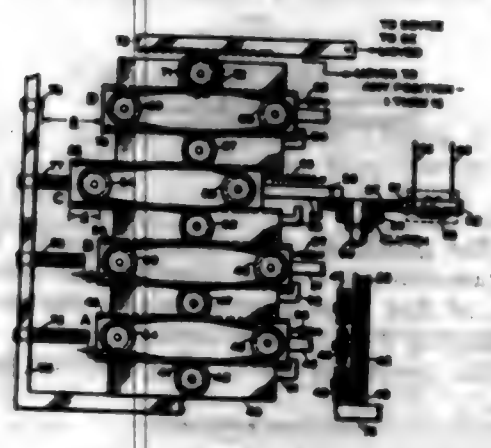


1. A flow metering system for fluid flow comprising a first flow line having a flow-restricting orifice therein; a second flow line connected with said first flow line so as to form a shunt around said orifice; a flow control valve in said first flow line upstream of said second flow line; means providing a flow-restricting orifice in said second flow line; flow-recording means connected with aforesaid means; flow control means in said second flow line upstream of the orifice therein responsive to a predetermined pressure in said first flow line intermediate the orifice and flow control valve therein being normally closed and adapted to open on increase of said pressure; a second flow control means in said first flow line downstream of said second flow line responsive to the pressure in said second flow line intermediate said second flow control means and the orifice in said second flow line and adapted to maintain a predetermined pressure therein.

2,861,363
FLUID PRESSURE GAUGES
Charles R. A. Grant, Codicote Bury, Hitchin, England, assignor to Pressure Gauges Limited, Dublin, Eire
Application August 11, 1955, Serial No. 527,733
Claims priority, application Great Britain August 13, 1954
2 Claims. (Cl. 73—412)

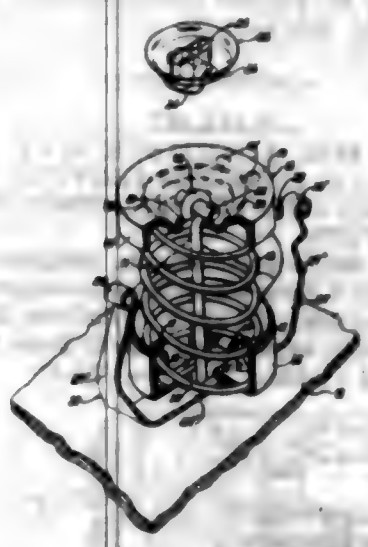
1. A fluid pressure gauge for permanent use as a test gauge; said fluid pressure gauge comprising a calibrated dial mounted for rotation, a pointer mounted for rotation about the same axis of rotation as the dial and superimposed over the face of the dial, a pair of oppositely arranged Bourdon tubes disposed in parallel planes, each tube having a free end, means connected between the free end of one tube and the dial for rotating the dial in one direction of rotation, means connected between the free end of the other tube and the pointer for rotating the pointer in the opposite direction of rotation and a common connection for the Bourdon tubes for admitting a common fluid pressure to the tubes, whereby the movement of one tube is added to the movement of the other tube in giving a pressure reading by the dial and the pointer.

2,862,389
ACCESS MECHANISM
John T. Potter, Sands Point, N. Y.
Application November 24, 1951, Serial No. 258,889
1 Claim. (Cl. 74—1)



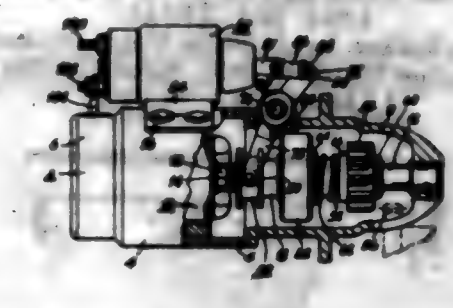
In a mechanical displacement system, the combination of, a plurality of linear displacement determining devices for determining displacements related in accordance with a predetermined series at least two steps in said series being related in accordance with the steps of a binary series and the sum of a plurality of said steps being ten, couplings between said devices to add said displacements, actuators for each of said devices and an output coupling for transmitting the sum of said displacements of actuated devices in rectilinear fashion to a utilization means.

2,862,390
LOCK AND OPERATING MECHANISM FOR DEFERRED ACTION BATTERIES
Lewis Byron Harris, Babylon, N. Y., assignor to Republic Aviation Corporation, Farmingdale, N. Y., a corporation of Delaware
Application November 7, 1955, Serial No. 545,336
10 Claims. (Cl. 74—2)



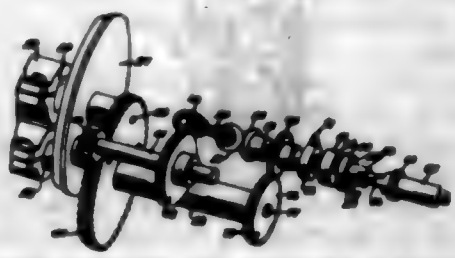
1. A lock and operating mechanism for the initiator of a power device comprising a pair of telescoping members adapted to be attached externally to said power device to overlie and enclose its initiator, engagement means carried by said initiator at the outer extremity thereof in constant abutment against one of said members to prevent movement of said one member outwardly of said initiator, means interposed between said members and operable to separate them whereby outward movement of said one member simultaneously moves said initiator to activate the power device, and a releasable lock connecting said members one to the other in the telescoped position against the action of said means.

2,862,391
ENGINE STARTING APPARATUS
Paul L. Schneider and Louis J. Raver, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 11, 1956, Serial No. 558,468
11 Claims. (Cl. 74—7)



1. Starting apparatus for internal combustion engines having, in combination, an electric starting motor having a rotatable driving shaft, a driving pinion movable axially with respect to said driving shaft into mesh with a gear of the engine to be started and rotatable by said motor after said pinion is meshed with the engine gear to effect starting of the engine, a member movable axially of the shaft to effect movement of the pinion toward the engine gear, resilient motion transmitting means between said member and the pinion, actuating means for moving said member and controlling operation of the starting motor, means for rotating the pinion relatively to said engine gear upon continued movement of said member, in the event of tooth abutment between the pinion and engine gear, means preventing sufficient movement of the actuating means to cause the starting motor to become operative until the pinion is moved into proper meshing engagement with gear, said last named means compriting cooperating stop members on said member and the pinion.

2,862,392
ROCKING BED AND CAM CONTROL MECHANISM
Floyd A. Blashfield, Evanston, Ill., assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois
Application October 15, 1953, Serial No. 386,165
4 Claims. (Cl. 74—42)



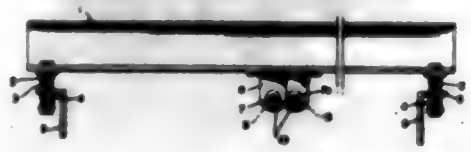
1. In element-moving mechanism, a frame, a driven shaft mounted therein, a crankshaft fixed to one end of said driven shaft and having its axis in spaced parallel relation thereto, a cam member having an eccentric mounting receiving said crankshaft and having its center alignable with said driven shaft, a ring freely receiving the peripheral portions of said cam, connecting means between said ring and said element to be moved, control means rotatably supported in general alignment with said driven shaft but longitudinally spaced therefrom, a rotatably mounted handle, said handle and control means being normally unconnected for independent rotation of said control means with reference to the handle, and selectively operable connecting means between said handle and said control means for locking said control means and handle against independent rotation, whereby, said handle may be connected with said control means by said

and including a movable actuating member, and means operatively connecting said actuating member with said

ing the outer edge surface of said third disc, the outer diameter of said third disc predetermining the pitch di-

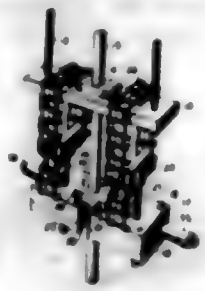
second-mentioned connecting means for rotation of said cam upon said crankshaft without interrupting rotation of said drive shaft.

2,862,393
VIBRATING APPARATUS FOR CONCRETE OR LIKE MATERIAL
Johannes Bakker, Lange Ruige Weide, Netherlands
Application March 6, 1956, Serial No. 569,791
2 Claims. (Cl. 74—61)



1. A vibrating apparatus for vibrating concrete and like hardening material comprising, in combination, a supporting frame, a plurality of spaced but closely adjacent supporting members resiliently mounted on said supporting frame and providing a supporting surface for the material to be vibrated, an eccentric mass rotatably mounted on each of said members, the eccentric masses being disposed in two parallel rows with the masses of one row arranged on alternate separate members of the supporting surface and the masses of the other row arranged on the other alternate members of said supporting surface, means comprising parallel spindles rotatably driven at the same speed in opposite directions coupling the masses in each row, the rotatable masses being coupled mutually out of phase in such a manner that they jointly transmit a multiple of the frequency of oscillation of each of the masses to said members and to the material to be vibrated.

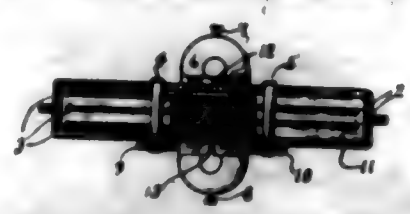
2,862,394
PUMP ROD ADJUSTING DEVICE
John Robert Lee Carl, Corsicana, Tex., assignor of one-third to Newman C. Thornton, Mexia, and one-third to Percy Ledwell, Corsicana, Tex.
Application October 11, 1957, Serial No. 689,548
6 Claims. (Cl. 74—108)



1. A device for adjusting the effective length of the rod of a well pump having a beam, a crosshead slidably engaged with the rod and a clamp overlying the crosshead for suspending the rod including a member for slidable engagement with the rod, a clamp for mounting on the rod in overlying engagement with the member, means for connecting said member to the crosshead, and gear means in said member having driving connections with the connecting means for reciprocating said member to move the same toward and away from the crosshead for raising and lowering the rod relative to the crosshead.

2,862,395
VARIABLE RATIO TRANSMISSIONS
Roland E. Gunther, Princeton Junction, N. J.
Application February 14, 1957, Serial No. 640,162
4 Claims. (Cl. 74—199)

1. In a variable ratio transmission the combination of a pair of shafts, said shafts being essentially parallel; a pair of discs, each of said discs being axially mounted on one of said shafts, said discs being spaced in close proximity to one another and said discs overlapping one another; a medium containing discrete movable paramagnetic particles, said medium surrounding said discs; a

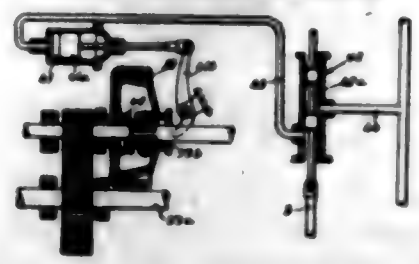


magnetic flux producing means, said magnetic flux producing means creating a small-diameter high-density concentration of flux lines perpendicularly intersecting the said overlapping discs in their area of overlap, and said magnetic flux producing means being movable parallel to said discs.

2,862,396
IDLER ROLLER
Amos Searles, Scranton, Pa.
Application June 28, 1954, Serial No. 439,587
8 Claims. (Cl. 74—230.7)

1. An apparatus adapted to insure elastic tension between a conveyor sleeve and an idler shaft which apparatus includes a radially deformable resilient inner boundary on the sleeve and expandable means disposed between said inner boundary and the shaft exerting radial gripping pressure on the shaft and on said inner boundary, said expandable means including a plurality of separate segments adapted for independent adjustable pre-selected positioning with respect to said inner boundary each segment comprising an arcuate circumferential portion and radially extending side portions.

2,862,397
MECHANISM FOR AUTOMATICALLY LIMITING THE SPEED OF TURBINES DRIVING VEHICLES BY PLACING THE TRANSMISSION IN A NEUTRAL POSITION
Leon Salves, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Application May 27, 1952, Serial No. 290,368
Claims priority, application France June 20, 1951
8 Claims. (Cl. 74—336.5)



1. In a vehicle drive, vehicle-driving means, a turbine adapted to drive the vehicle, power transmission means including a clutch coupling said turbine with said vehicle-driving means, spring means normally holding said clutch in disengaged position, fluid pressure operated means for holding said clutch in engaged position against the action of said spring means, means including a valve for supplying fluid under pressure to said clutch-engaging means, actuating means connected to and driven by the turbine, said actuating means being responsive to turbine speed

an arm pivoted to said stationary support, an adjusting screw having a screw-threaded mounting in said support

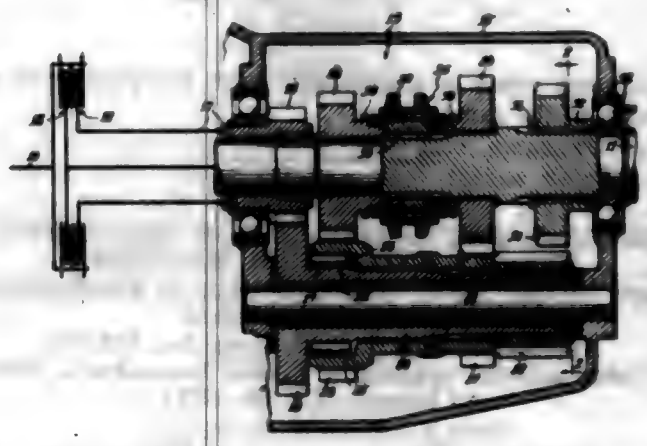
said cam for positively constraining the follower element

position against the action of said means.

handle may be connected with said control means by said

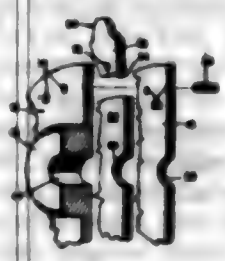
and including a movable actuating member, and means operatively connecting said actuating member with said valve to actuate said valve to relieve the fluid pressure of said clutch-engaging means and thereby disconnect the turbine from the vehicle-driving means when the speed of the turbine exceeds a predetermined value.

2,862,398
TRANSMISSION
Reinhold C. Zeidler, Detroit, and Claude N. Nickell, Dearborn, Mich., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application February 24, 1955, Serial No. 490,182
10 Claims. (Cl. 74—339)



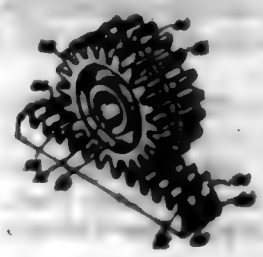
10. The combination of first and second power transmitting rotatable toothed coupling members, said first member having its axis of rotation in spaced relation and parallel to the axis of rotation of said coupling member and movable along its axis into and out of mesh with said second member; a friction braking element movable along the axis of said first member and into engagement with a friction surface on said first member and then to move said first member into mesh with said second member; means for moving said friction braking element; detent means for yieldably holding said members alternately in meshed and unmeshed positions; and other detent means for yieldably holding said moving means to prevent unwanted movement thereof in the meshed and unmeshed positions of said members.

2,862,399
PREFABRICATED GEAR ASSEMBLY
John R. Wald, Jr., Montoursville, and Rufus W. Wilson, Huntingdon, Pa., assignors to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Application January 31, 1955, Serial No. 485,898
4 Claims. (Cl. 74—448)



2. In a prefabricated gear assembly, a first disc having a hub formed thereon, said hub having a central bore formed therein, a second disc having an outer diameter corresponding to the outer diameter of said first disc a third disc located between said first disc and said second disc and having an outer diameter less than that of said first and second discs, said three discs being secured together and forming in the composite structure an annular slot in the edge thereof, a plurality of detachable gear teeth of predetermined height arranged in said slot, the bottom of said gear teeth contacting the outer edge surface of said third disc, the outer diameter of said third disc predetermining the pitch diameter of the composite gear assembly, means extending through said three discs for securing said discs and gear teeth in said gear assembly.

2,862,400
GEAR
Joseph D'Angelo, Greensboro, N. C.
Application March 19, 1957, Serial No. 647,051
6 Claims. (Cl. 74—460)



1. A gear of integral construction of the character described having a first gear portion with solid gear teeth thereon and a second gear portion with solid gear teeth thereon, said second gear portion being in spaced axial relation to said first gear portion, the teeth of said gear portions being in staggered relation to each other, and a web between said gear portions communicating with the teeth of each portion and integral therewith, said web terminating below the pitch circle of the gear teeth.

2,862,401
BICYCLE GEAR SHIFT CONTROL
Robert C. Gwin, Jr., Barrington, R. I., assignor to Arens Controls Inc., Evanston, Ill., a corporation of Illinois
Application May 2, 1957, Serial No. 656,640
4 Claims. (Cl. 74—489)

1. In a bicycle of the type comprising a frame, a drive wheel with a multispeed hub, a handle bar having hand grips thereon, and a flexible cable and sheath for controlling said multispeed hub, a push button control comprising a housing, means mounting said housing on said handle bar adjacent one of said hand grips, means connecting said sheath to said housing, a plunger reciprocably mounted in said housing and projecting therefrom in opposite directions for engagement by the thumb and a finger of a cyclist for manually reciprocating said plunger, a lever in said housing pivotally mounted between its ends and connected at one end to said cable, and a link connected to said lever at the opposite end and to said plunger for shifting said lever and said cable in response to reciprocation of said plunger.

2,862,402
TURRET AND STOP MECHANISM THEREFOR
Joseph C. Hamilton, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application October 28, 1956, Serial No. 643,840
6 Claims. (Cl. 74—826)

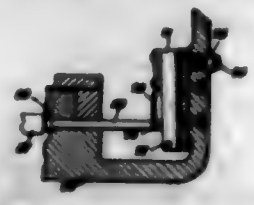
1. The combination of a rotary element, means for rotating said element to a stop position, stop mechanism for arresting said element in said stop position, said stop mechanism comprising a stationary support, a stop rod mounted for lengthwise adjustment in said support, said rod being in the path of a stop surface of said element,

the axis of each said shaft, a sun gear mounted on one said shaft, an axially extended planetary gear meshing

turret precisely at a new operating station following the movement of the turret to a position in proximity to

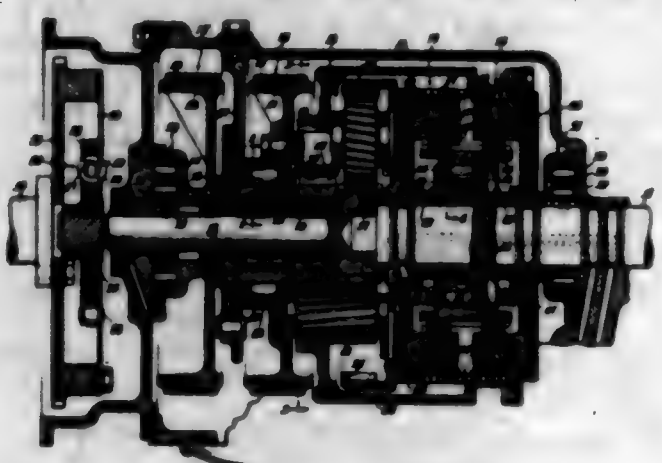
a pair of shafts, said shafts being essentially parallel; a said actuating means being responsive to turbine speed

an arm pivoted to said stationary support, an adjusting screw having a screw-threaded mounting in said support and contacting said arm, the adjusting rod being in con-



tact with said arm at the opposite side thereof from said screw and at a point intermediate said screw and pivot, and means for yieldingly holding the stop rod in contact with said arm.

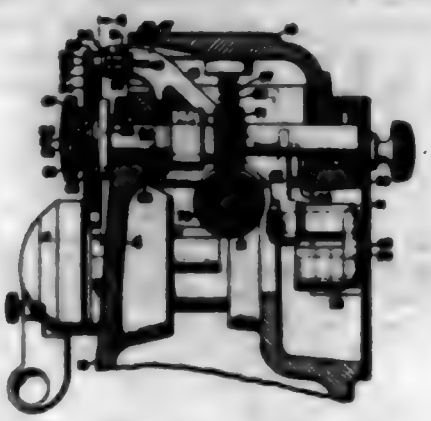
2,862,403
TRANSMISSION
James A. Miller, Grosse Pointe Park, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application January 25, 1954, Serial No. 405,833
8 Claims. (Cl. 74—763)



1. In a transmission; the combination of a drive shaft; a driven shaft; a planetary gear set having a sun gear connected and driven by said drive shaft, a first and second ring gear rotatably supported on said driven shaft, a second sun gear rotatably supported on said drive shaft, a set of planet gears and a set of elongated planet gears intermesh with one another, as well as in mesh with their respective first and second mentioned ring and sun gears and a planet gear carrier rotatably supporting the two sets of planet gears; clutch means for connecting each of the two ring gears with the driven shaft; a one-way clutch connected in parallel with one of said clutch means; brake means for both the second sun gear and the carrier; a one-way brake connected in parallel with one of said brake means; said clutch means and said brake means being engageable in different pairs for completing four different ratio power trains from said drive shaft to said driven shaft.

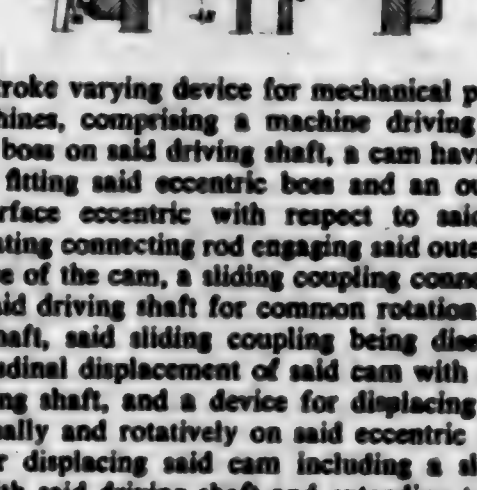
2,862,404
ORNAMENTAL STITCH SEWING MACHINES AND CAM MECHANISMS THEREFOR
Charles R. Odermann, Milford, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application August 2, 1955, Serial No. 525,985
5 Claims. (Cl. 74—567)

1. In a sewing machine having a frame, a rotary cam shaft journaled within said frame, an edge cam mounted upon said rotary shaft for rotation therewith, said cam being in the shape of a disk with an undulating pattern cam surface formed about its periphery, and a cam-follower element spring biased into engagement with the peripheral cam surface so as to be actuated thereby; the improvement which consists in means connected with said cam for positively constraining the follower element from shifting radially of said cam beyond the position



it assumes when in engagement with the peripheral extremity of the cam surface.

2,862,405
STROKE VARYING DEVICE FOR MECHANICAL PRESSES AND OTHER MACHINES
Roger Müller, Paris, France, assignor to Etablissements Grimar, Paris, France
Application May 3, 1955, Serial No. 505,789
Claims priority, application France November 4, 1954
4 Claims. (Cl. 74—571)



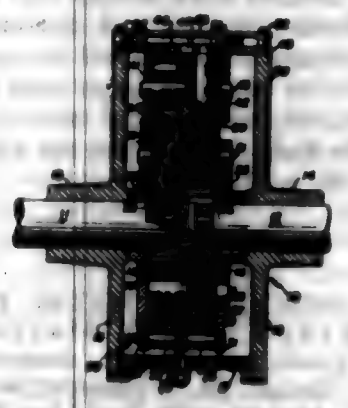
1. A stroke varying device for mechanical presses and like machines, comprising a machine driving shaft, an eccentric boss on said driving shaft, a cam having a bore rotatably fitting said eccentric boss and an outer cylindrical surface eccentric with respect to said bore, a tool-actuating connecting rod engaging said outer cylindrical surface of the cam, a sliding coupling connecting said cam to said driving shaft for common rotation with said driving shaft, said sliding coupling being disengageable by longitudinal displacement of said cam with respect to said driving shaft, and a device for displacing said cam longitudinally and rotatively on said eccentric boss, said device for displacing said cam including a sleeve concentric with said driving shaft and extending to one end of said driving shaft, radially slidable coupling means coupling said cam for common rotation and common longitudinal displacement with said sleeve, and means engaging the end of said sleeve adjacent to said end of the driving shaft for imparting to said sleeve longitudinal and rotary displacements with respect to said driving shaft.

2,862,406
HYDRAULIC TRANSMISSION AND CLUTCH ASSEMBLY
Robert V. Howell, Fort Worth, Tex.
Application June 11, 1954, Serial No. 436,110
6 Claims. (Cl. 74—768)

1. In a variable speed transmission, a pair of shafts in axial alignment with each other, a pair of orbit gears in side by side relation each having internal and external teeth, each orbit gear being positioned around

ranged in said slot, the bottom of said gear teeth contact- rod being in the path of a stop surface of said element,

the axis of each said shaft, a sun gear mounted on one said shaft, an axially extended planetary gear meshing with the teeth of said sun gear and with the internal teeth of one said orbit gear, an idler gear meshing with the internal teeth of the remaining orbit gear outwardly of the axis of the remaining said shaft and with the



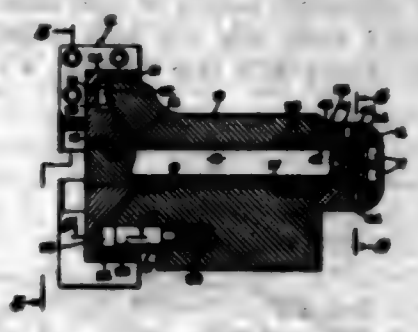
teeth of the said extended planetary gear, means rotatably mounting said planetary gear, said means being rigid with the last said shaft, a separate pump gear meshing with the external teeth of each said orbit gear, a separate fluid supply duct communicating with each said pump gear, and means selectively controlling said fluid supply.

2,862,407
CHANGE SPEED GEARS
Otto Lutz, Braunschweig-Querum, Germany
Application July 3, 1951, Serial No. 234,938
7 Claims. (Cl. 74—796)

1. A change speed gear comprising three coaxially arranged race rings, balls pressed between said race rings, the balls arranged in two planes as rows at right angles to the axis of rotation of the gear, and the balls of each row having gaps between adjacent balls, said balls of one row penetrating into the gaps between the balls of the other row, so that a ball of one row will contact adjacent balls of the other row and two of the race rings, said race rings arranged so that two of them contact only the balls of one row each and the third race ring contacts all balls of both rows, and said third race ring being movable and adjustable in the axial direction relative to the two other race rings, and means for holding one of said race rings stationary, the other race rings being connected, one to a drive member and the other to a driven member.

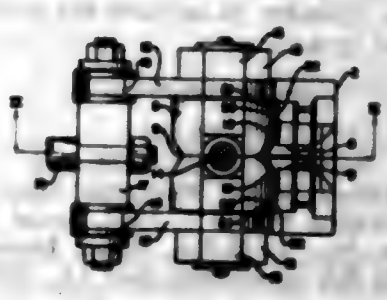
2,862,408
INDEXING TOOL POST TURRET
Robert G. Stirrett, Altadena, Calif.
Application June 16, 1955, Serial No. 515,831
5 Claims. (Cl. 74—826)

2. A manually indexed tool turret comprising a shaft having a turret secured to one end and an indexing member secured to its other end, a supporting base located between said turret and member and including a manually operable locking sleeve having a radial face cooperable with the juxtaposed face of said indexing member to lock said turret rigidly against rotation, a pair of spring-pressed detents having cammed ends adapted to seat selectively in recesses concentric with said shaft and located in the adjacent radial faces of said turret and of said indexing member respectively, one of said spring-pressed detents being operable to position said turret precisely at a new operating station following the movement of the turret to a position in proximity to said new station, and manual means for thereafter rotating said locking sleeve to a position clamping the



turret in its precisely located new station and for simultaneously moving the other of said detents to a position out of registry with any one of its associated seating recesses.

2,862,409
TOOL DRESSING MEANS
Walter P. McKain, Parkersburg, W. Va., assignor, by mesne assignments, to Fada Radio & Electric Co., Inc., Cincinnati, Ohio, a corporation of New York
Application January 11, 1956, Serial No. 558,565
7 Claims. (Cl. 76—5)

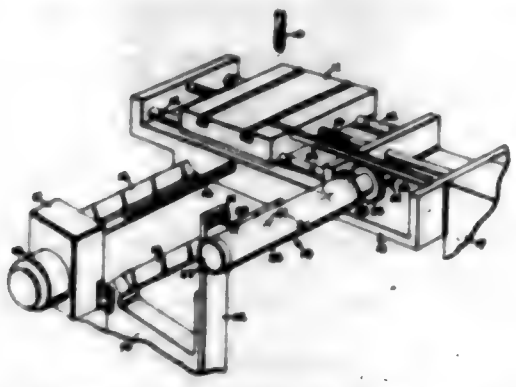


1. Tool dressing means comprising multi-part die means adapted to generally surround the heated cutting end of a tool to be dressed and having bearing portions extending transversely thereof generally parallel to and at opposite sides of the center line of the die means at which the cutting edge of the tool is disposed during dressing and a dressing member adapted to be moved over the die means to dress the heated cutting end of the tool, means for moving the dressing member back and forth over the die means to dress the heated cutting end of the tool, the dressing member having bearing portions engaging the bearing portions of the die means as the dressing member moves over the die means and the dressing member having an active portion between the bearing portions thereof adapted to engage the heated cutting end of the tool to be dressed, the die means and the active portion of the dressing member being relatively shaped to provide space therebetween when the dressing member moves past an end of the cutting edge of the tool with its bearing portions against the bearing portions of the die means to permit metal of the heated cutting end of the tool to flow into the space ahead of the dressing member while the dressing member is advancing whereby to inhibit lateral flow of metal between the die means and the dressing member.

2,862,410
POSITION INDICATING MECHANISM
Arthur A. Meyer, Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois
Application July 16, 1956, Serial No. 598,006
7 Claims. (Cl. 77—63)

1. In a machine, the combination of, a base, a slide guided on said base for rectilinear reciprocation along a first path, a support guided on said slide for rectilinear

reciprocation along a second path extending perpendicularly of said first path, a layout cylinder journaled on said slide for rotation about an axis fixed relative to the slide and paralleling said first path, said cylinder being fixed against movement axially of said slide to move in unison therewith along said first path, a pinion secured to and axially alined with said cylinder, a rack bar se-

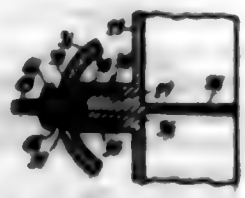


cured to said support in parallel with said second path and meshing with said pinion for rotation of said cylinder in synchroniam with movement of the support relative to said slide along said second path, and a pointer secured to said base and projecting therefrom to a position adjacent the periphery of said cylinder for cooperation with indicia on the cylinder to indicate the position of said support relative to the base.

2,862,411
SOCKET WRENCH SET
John J. Delise, Worcester, Mass.
Original application March 1, 1954, Serial No. 413,034, now Patent No. 2,775,914, dated January 1, 1957. Divided and this application July 11, 1956, Serial No. 597,165
2 Claims. (Cl. 81—114)

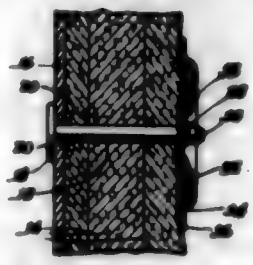
1. A socket wrench comprising a shank having a longitudinal slot at an end thereof, a head bisected by the slot at the slotted end of the shank, a reduced cylindrical step on the shank next to the head, said cylindrical step being greater in diameter than the shank, a straight, hollow cylindrical sleeve movable on the shank, said sleeve having a bellmouth at its end adjacent the step, the internal diameter of the outer end of said bellmouth being initially great enough to include the sep and decreasing inwardly to an internal diameter slightly greater than the shank but less than that of the step, said bellmouth being engageable with the step to compress the head.

2,862,412
PORTABLE XYLOPHONE BAR SUPPORT
William J. Kreinz, Hewlett Harbor, N. Y., assignor to Emenee Industries, Inc., a corporation of New York
Application December 23, 1954, Serial No. 476,920
2 Claims. (Cl. 84—403)



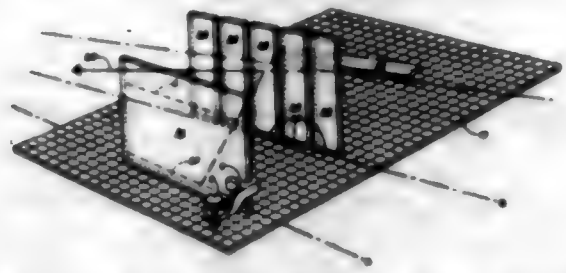
1. In a musical instrument of the type comprising a frame having a pair of spaced legs of plastic, musical bars extending transversely between said legs and of graduated pitch, and means for affixing said bars to the respective legs; the combination in which the affixing means comprises pegs unitary with the legs and rising therefrom and in which each peg mounts a unitary resilient bar support, said support compriaing a cup telescoped over the peg, with its face covering the peg, a solid, cylindrical resilient stem unitary with said cup face and coaxial therewith extending with clearance through a corresponding aperture in the musical bar and a cap unitary with the stem, of diameter larger than the stem and the aperture, whereby the musical bar is mounted resiliently about the stem and between the end of the cup and the cap of the resilient member.

2,862,413
SELF THREADING SHEET METAL FASTENER FOR RETAINING SOFT MATERIAL
Friedrich Karl Knohl, Roselle, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application May 16, 1956, Serial No. 585,287
6 Claims. (Cl. 85—36)



1. A one-piece resilient sheet material fastener for retaining a piece of relatively soft material comprising a substantially concavo-convex body of substantial radial extent having an inner margin defining a central aperture and an outer margin offset axially outwardly of said inner margin, said body presenting a substantially convex axially inner work clamping side and defining a hollow with its axially outer substantially concave side, a plurality of generally radially extending prongs spaced around an inner margin of said body and inclined axially outwardly from said inner margins, said body being of substantially greater radial extent than said prongs, said prongs being twisted about their radial axes and including generally helically disposed terminal edges for engaging a stud or the like, said edges being located within said hollow, and an annular generally axially inwardly extending flange means integral with a peripheral margin of said body and cooperating with said body to define an annular recess of considerable width at the clamping side of said body for accommodating said material when the fastener is applied against said material, said flange means terminating in a radially outwardly extending section.

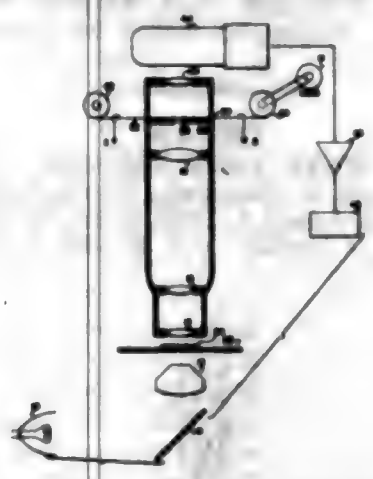
2,862,414
OPTICAL METHOD FOR ELIMINATING FALSE STRATA FROM A SEISMIC PROFILE SHEET
Lee P. Stephenson, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application July 27, 1955, Serial No. 524,796
4 Claims. (Cl. 88—1)



4. The method of preparing a seismic cross-section representative of an offshore area in which acoustic

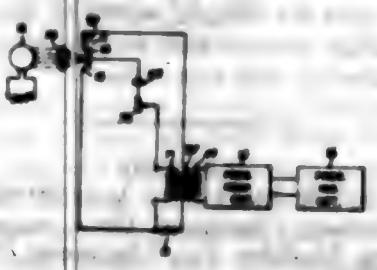
waves are multiply reflected between the ocean surface and the ocean bottom comprising the steps of plotting on cross-section paper the positions of said ocean surface and said ocean bottom if acoustic waves moved at a constant velocity, the constant velocity being that between two multiple reflecting surfaces, placing a pair of plane mirrors on the lines on the cross-section which represent the ocean surface and the ocean bottom and perpendicular to the seismic cross-section, the reflecting faces of the mirrors being orientated toward each other, and indicating on the cross-section all reflecting surfaces which coincide with virtual images of the lower edges of the mirrors as seen in one of the mirrors, said indicated reflecting surfaces corresponding to false strata from which said multiply reflected waves were apparently reflected.

2,862,415
PARTICLE COUNTING OPTICAL APPARATUS
Harry A. Kuljian, Merion, Pa.
Application August 12, 1954, Serial No. 449,467
1 Claim. (Cl. 88—14)



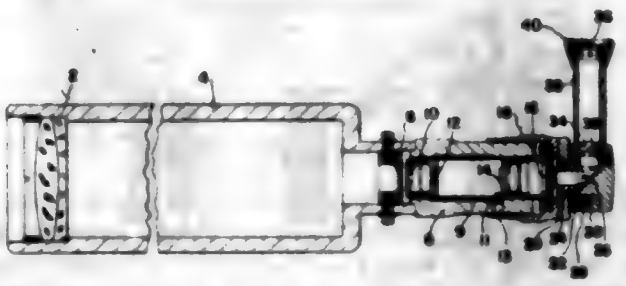
A particle counting apparatus including a stage for supporting a specimen, said specimen having a predetermined area supporting a predetermined amount of material to be scanned, a plate having a slit therein and disposed above said specimen, a tape having groups of apertures therein and movable across said slit, the diameter of each aperture being equal to the width of said slit and said apertures of each group being arranged diagonally of said tape, and means for magnifying the diameter of the particle to the diameter of said aperture whereby, when a group of apertures passes over said slit, only one of said apertures will register with said slit at one time.

2,862,416
LIGHT INTENSITY MEASURING DEVICE INCLUDING SEMICONDUCTOR TRANSLATING CIRCUIT
William Curtis Doyle, Norfolk, Va., assignor to General Electric Company, a corporation of New York
Application June 9, 1954, Serial No. 435,458
1 Claim. (Cl. 88—23)



A system for measuring the intensity of light comprising an oscillator including a semiconductor device having base, emitter, and collector electrodes, said device having a photosensitive area constructed and arranged so that said device exhibits a variation in collector current in accordance with the variations in the intensity of light supplied to said area, a transformer having a primary and a secondary winding, means connecting said primary winding between said emitter and base electrodes, means connecting said secondary winding in circuit with a direct potential source between said emitter and collector electrodes, so that oscillation is established by the regenerative coupling between said primary and secondary windings, means for supplying to said photosensitive area light varying in intensity which variation it is desired to detect so that variations in intensity of light supplied to said device cause variations in said collector current, and in the frequency of said oscillation, and means for detecting variations in the frequency of said oscillator, thereby detecting said variations in light intensity.

2,862,417
TELESCOPE EYEPIECE
Allister L. Baker, Denville, and Conway D. Hillman, Millburn, N. J., assignors to Kuffel & Esser Company, Hoboken, N. J., a corporation of New Jersey
Application November 20, 1953, Serial No. 393,334
1 Claim. (Cl. 88—33)



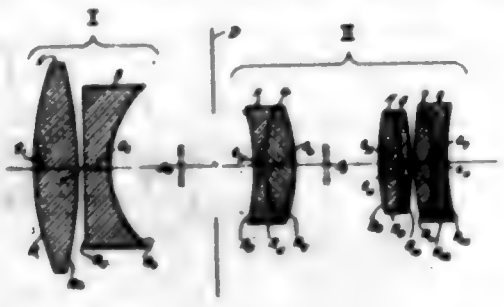
An attachment for a telescope including an eyepiece for viewing the image formed by the telescope from any direction at any predetermined constant angle to the line of sight of the telescope so that the image appears of the same size as if observed directly through the eyepiece of the telescope without the attachment, said attachment providing ample eye distance, comprising a bearing provided with means cooperating with means provided on the eyepiece of the telescope for securely attaching it to the eyepiece of the telescope, a journal mounted on said bearing for rotation about the axis of the telescope, said journal including a flange, said bearing having a recess for receiving said flange and retaining said journal and bearing on said attachment while permitting relative rotation of said attachment on said bearing, said bearing having a sleeve portion for cooperation with a cooperating sleeve portion of said telescope for mounting of said bearing on said telescope whereby said attachment may rotate about the eyepiece end of said telescope, reflecting means carried by said journal for diverting the line of sight at the predetermined constant angle, a tube carried by said journal at the predetermined constant angle to the optical axis of the telescope, a pair of identical lenses mounted in said tube positioned so that corresponding surfaces of the lenses face each other, the first focal plane of said lens nearer the eyepiece of the telescope being located at the exit pupil of the telescope and the first focal plane of the other lens coinciding with the second focal plane of said lens nearer to the eyepiece of the telescope.

2,862,418
INVERTED TELEPHOTO OBJECTIVE
Herman Lowenthal, Chicago, Ill., assignor to General Scientific Corporation, Chicago, Ill., a corporation of Illinois
Application May 27, 1957, Serial No. 661,677
4 Claims. (Cl. 88—57)

1. A photographic objective of the reversed telephoto type, said objective consisting of a front negative mem-

a tool carrying slide adjustably mounted on the [illegible]

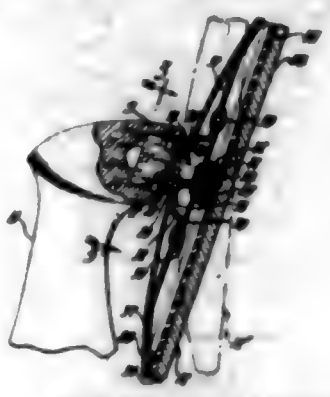
ber and a rear positive member, said two members having opposed lens components separated by a distance about equal to the focal length of the entire objective, said positive member consisting of forward and rear assemblies separated by a distance which is about equal to the focal length of the entire objective and having an overall length of substantially 1.705 times the focal length of the objective, said objective having a back focal distance which is also about equal to the focal length of the objective and having a distance between the front vertex and the focal plane of between about 3.77 and 3.96 times the focal length of the objective, said negative member consisting of two lenses, the first lens being nearest to the object and having the radius of curvature of the outer surface between 1.0 and 1.3 times the focal length of the objective, the second lens having its forward surface plano and its rear surface having a curvature of between about 0.4 and 0.5 times the focal length of the objective, said first lens having a value of N_D of 1.720 and the second lens having a value of N_D of 1.5838, said two lenses having Abbe V numbers whose difference is less than 20 with the first lens having the lower Abbe V number, the forward assembly of the rear positive member consisting of a meniscus shaped compound lens whose concave surface



faces toward the object and whose total thickness is substantially .262 times the focal length of the objective, the negative lens thereof having a value of N_D of at least 1.700 and an Abbe V value of 30.1, the positive lens thereof having the same N_D value but an Abbe V number of 47.8, said positive lens having its two faces with curvatures of radii between 0.8 and 1.0 times the focal length of the objective, the rear portion of the rear member consisting of two doublets separated by a small air space, the rear surface of the last lens being concave, the curvature of the front surfaces of each of the rear doublets having values so that the centers of curvature are substantially at the position where the object and image are assumed to be in the paraxial region, the radius of curvature of the front surface of the front doublet being substantially less than 4.0 times the focal length of the objective and the radius of curvature of the forward surface of the rear doublet being substantially 1.544 times the focal length of the objective, the thickness of each doublet being the same and being substantially .198 times the focal length of the objective, the forward lens of each doublet having an N_D value of 1.617 and an Abbe V value of 55, the rear lens of each doublet having an N_D value of 1.720 and an Abbe V value of 29.2.

2,862,419
REAR VIEW MIRROR
Lucien W. Pryor, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 22, 1954, Serial No. 477,068
4 Claims. (Cl. 88—98)

1. A rear view mirror comprising a supporting bracket having an opening therein, a bushing member press-fitted into the opening of said support bracket in frictional engagement therewith and defining a passage terminating at its inner end in a spherical socket at its outer end in a spherical socket bearing element, a ball in said socket and a threaded shank extending from said ball and through said passage, stop means on said ball and said support means to prevent relative rotation therebetween about the axis of said shank, a mirror housing including a spherical socket bearing element engaging



said spherical socket bearing element on the bushing member, a mirror supported by the housing, and threaded means non-rotatably mounted on said housing in threaded engagement with said shank whereby said ball and socket may be frictionally locked by rotation of said housing.

2,862,420
REAR VIEW MIRROR
Kenneth M. Hazelroth, Rivera, Calif.
Application August 8, 1955, Serial No. 526,947
4 Claims. (Cl. 88—98)

1. In a movable rear view mirror for the operator of a vehicle, the combination of: a housing mounting a speed reduction means, said speed reduction means having an output drive means perpendicular to a first plane and an input drive means, said first plane being approximately perpendicular to the longitudinal axis of the vehicle; a mirror having a reflecting surface, said surface occupying at least in part a second plane; means connecting said output drive means to said mirror in driving relationship, said connecting means displacing said mirror so that said second plane is not parallel to said first plane; and a fan mounted in said housing and connected to said input drive means for movement of said mirror, said fan being exposed toward the forward end of the vehicle for rotation by fluid flow past the vehicle, whereby said second plane of said reflecting surface will wobble about the rotation axis and relative to said first plane.

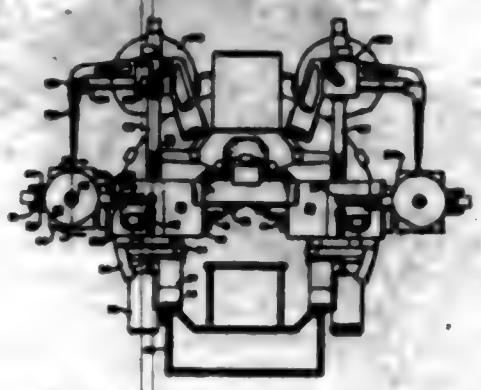
2,862,421
SPAR MILLING MACHINE
Harry G. Merhaut, Cincinnati, Ohio, assignor to Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Application July 11, 1956, Serial No. 597,121
8 Claims. (Cl. 90—13)

1. In a machine for formation of contoured work surfaces, a bed, a tool support translatable on the bed,

a photosensitive area constructed and arranged so that

type, said objective consisting of a front negative mem-

a tool carrying slide adjustably mounted on the support, a first master synchro mounted on the tool support and movable therewith relative to the bed, means for driving the first master synchro at a rate proportional to the rate of translation of the support relative to the bed, said means including a rack mounted on the bed, and a pinion coupled to the master synchro and meshing with the rack for actuation thereby upon movement of the synchro relative to the bed, a first gear train driven by the pinion for operating the first master synchro at a selected rate, an additional speed reducing gear train driven by the pinion and a second master synchro connected to said reducing gear train for operation thereby at a slower rate than said selected rate, a slave synchro



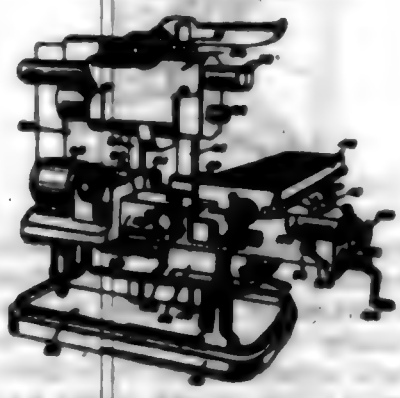
unit carried by the tool support, said unit including a primary slave synchro operable at a selected speed and a coupled secondary slave synchro simultaneously operable at a relatively slower speed, gearing interconnecting said slave servos establishing their relative rates of speed, electrical conductors connecting respectively the master synchro and primary slave synchro and the second master synchro and secondary slave synchro for actuation of the slave synchros by the master synchros, means for shifting the tool carrying slide relative to the support, and control mechanism for said slide shifting means connected to said slave synchro unit for actuation thereby and operatively associated with said shifting means for determining the operation thereof.

2,862,422

MILLING MACHINES

George B. Hirsch, Providence, R. I., assignor to Brown & Sharpe Mfg. Co., Providence, R. I., a corporation of Rhode Island

Application November 24, 1953, Serial No. 393,989
13 Claims. (Cl. 90—21)



13. In a milling machine having a machine base, and a tool supporting column mounted from said base having vertically disposed knee supporting ways formed on one side of said column, the combination of, a knee having a work load supporting portion thereof disposed forwardly from said column and a rearward portion disposed at the side of said column with and supported by said ways, means for effecting vertical adjustment of said knee with relation to said machine base and column, long and short horizontally disposed clamp bed supporting ways extending rearwardly on said knee, of which said short way is disposed in front of said machine column, and said long way is disposed at that side of said machine column with the vertical supporting ways for said knee, a clamp bed having forward and rearward portions overlying respectively the forward and rearward portions of said knee, a work supporting table mounted from said clamp bed, and driving and control devices including an electric motor variable speed gearing from said motor mounted on said rearward portion of said clamp bed between said long and short ways, and transmission means from said variable speed gearing for actuating each of said table, clamp bed, and knee carried on said clamp bed between said long and short ways.

2,862,423

POWERED DEBURRING DEVICE

Perry A. Warren, Newtown, Calif., and Mervyn W. Kelton, Castro Valley, Pa., assignors, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada

Application January 3, 1955, Serial No. 479,272
2 Claims. (Cl. 90—24)

1. In a cutting device for association with a motor having a threaded barrel, the combination of a tubular body portion internally threaded to accept the threaded motor barrel, clamping means for effectively reducing the inner circumference of said body portion over a portion of its length, a centrally apertured end portion enclosing one end of said tubular body portion, a shaft extending through the aperture in said end portion and associable with the motor, a cam on said shaft, a pair of apertured projections extending in substantially spaced parallelism with one another and integral with said end portion, a guide member engaging the apertures in said projections, a cutter slidably mounted on said guide member and having a pair of cam surfaces engaging said cam, means including said shaft, said cam and said cam surfaces for sliding said cutter on and relative to said guide member, and a pair of annular rollers rotatably mounted on said guide member adjacent said projections and extending beyond the face of said cutter.

2,862,424

BLADED BODIES

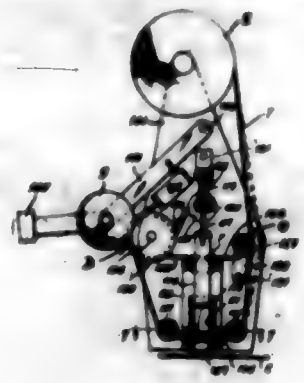
Dwight E. Jones, Pittsfield, Mass., assignor to E. D. Jones & Sons Company, Pittsfield, Mass., a corporation

Application August 12, 1955, Serial No. 528,014
4 Claims. (Cl. 92—27)

1. A bladed structure comprising a body having a series of grooves disposed side by side in spaced relationship, the side walls of each groove diverging toward the bottom of the groove, a pair of blades disposed in each groove with a space therebetween and with their outer portions projecting from the groove, the inner opposing faces of the blades being approximately parallel, key means between the blades of each pair, each key means having approximately uniform thickness and substantially bridging the space between the blades, a portion of each

key means being disposed outside the groove, the thickness of said blades increasing both inwardly and outwardly from the region of the mouth of the groove so that the outer faces of the pair of blades diverge from each other inwardly inside the groove and outwardly outside the groove, the divergence inside the groove approximating that of the side walls of the groove and the divergence outside the groove being sufficient to make the outer faces of the projecting portions of succeeding pairs of blades converge outwardly, and a wedge fitting between the converging faces of the projecting portions of succeeding pairs of blades.

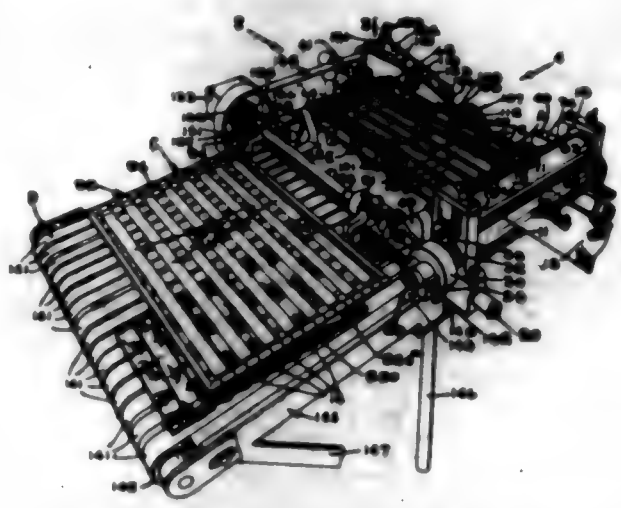
2,862,425
METHOD OF REINFORCING BOX BLANK
Marvin W. Swaim, Godfrey, Ill., and John Le Brell, Hermann, Mo., assignors to Alton Box Board Company, Alton, Ill., a corporation of Illinois
Application October 12, 1953, Serial No. 385,550
1 Claim. (Cl. 93—36)



The method of reinforcing a folding box blank along a fold line thereof, which comprises providing a roll of reinforcing tape coated on the surface thereof with pressure-sensitive adhesive, withdrawing a portion of said tape from said roll, placing a box blank opposite the coated surface of the tape with the fold line to be reinforced disposed opposite the tape, punching a tab of the width slightly less than the width of the tape from said tape directing onto the box blank, pushing upon the uncoated surface of the tape at a point between said roll and said punched portion while the tape is held during the punching step so as to strip off another portion of the tape from said roll, thereafter releasing the punched portion and taking up the scrap to position an unpunched portion of the tape opposite the punching position.

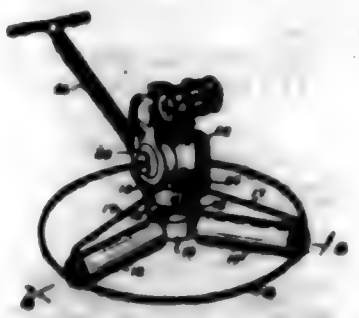
2,862,426
APPARATUS FOR HANDLING SHEET MATERIAL ARTICLES
Rene J. Gambert, Oakland, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application August 13, 1953, Serial No. 374,101
5 Claims. (Cl. 93—93)

1. Apparatus for arranging articles in stacks comprising a stacking platform including a frame, spaced rollers journalled thereon, and a belt trained around said rollers, means for depositing a succession of articles on said platform in predetermined position with relation to said frame to form a stack of the articles on the belt, and means for moving the belt upon completion of a stack containing a predetermined number of the articles including a driven clutch member operably connected to one of said rollers, a driving clutch member, one of said clutch members being movable into and out of engagement with the other clutch member, means for rotating said driving clutch member, means yieldably urging said movable clutch member into engaging relation with said other clutch member, a cam follower operably connected to said urging means for movement therewith, two substantially congruent cams adjustable with respect to each other and disposed in the path of movement of said follower to restrain movement of the follower by said urging means, each of said cams having a plurality of spaced peripheral recesses therein with the recesses on one cam having a peripheral spacing different from the peripheral spacing of the recesses on the other cam,



means for securing one of said cams to the other cam with selected recesses of the one cam registering with selected recesses of the other cam to predetermine the number of recesses remaining open for the entry of said follower thereinto, and means interconnecting the cams and the article depositing means for advancing said cams in predetermined timed relationship with said article disposing means.

2,862,427
POWER DRIVEN ROTARY SURFACING MACHINE FOR CONCRETE AND THE LIKE
David R. Talbott, Annapolis, Md.
Application March 28, 1956, Serial No. 574,468
7 Claims. (Cl. 94—45)



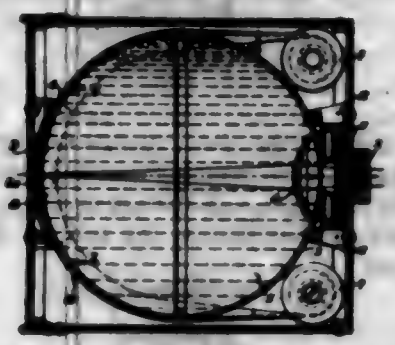
7. A rotary power driven machine for surfacing plastic concrete comprising a vertically positioned rotatable member, a support means, a plurality of elongated rollers extending radially outwardly of said member and journaled to said support means for rotation about their longitudinal axes, each of said rollers having a work engaging surface providing a horizontal line of contact between said rollers and the surface to be worked, means for rotatably driving said member and support means to produce an orbital movement of said rollers about the vertical axis of said member, and other means for positively rotating said rollers about their longitudinal axes at a greater rate of speed than their natural rolling speed and in the same direction thereof to cause relative movement of said lines of contact between the surfaces of said rollers and the engaged concrete surface.

2,862,428

CAMERA DEVICE TO PRODUCE IMPROVED THREE-DIMENSIONAL EFFECTS

Manuel Lee Sailer, New York, N. Y.

Application July 28, 1952, Serial No. 301,229
4 Claims. (Cl. 95—11)



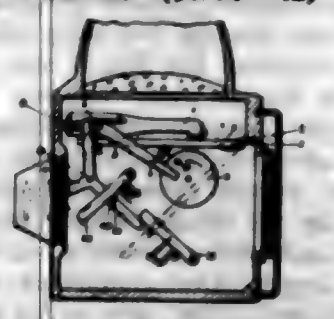
1. A camera comprising a camera casing, a lens element of substantial depth and having substantially concentric convex spherical surfaces for its object and image faces, and having light entrance and exit apertures on its object and image faces respectively, said lens element having an opaque covering over its entire surface except for said apertures, the front wall of said casing having rearwardly projecting brackets for supporting said lens element in said casing behind said entrance aperture on said object face of said lens element, a light aperture in the front wall of said casing aligned with said lens element, means forwardly of said exit aperture at the sides of said lens element for holding a curved film substantially contiguously with and across said image face over said exit aperture and a converging lens completely embedded in said deep lens, with its axis in optical alignment with said entrance and exit apertures, said converging lens having an index of refraction such that in combination with the index of refraction of the lens element it will cause a sharp image to be focused on the spherical surface in said exit aperture.

2,862,429

REFLEX CAMERAS

Paul Walter Hennig and Erich Kurt Richter, Dresden, Germany, assignors to VEB Zeiss Ikon, Dresden, Germany

Application August 16, 1955, Serial No. 528,789
15 Claims. (Cl. 95—42)



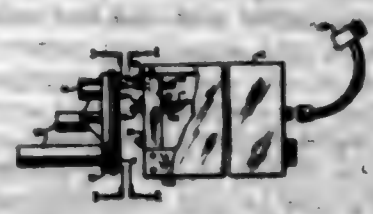
1. In a reflex camera, the combination of: a casing, a light-reflecting mirror assembly swingably mounted in said casing for movements between an inoperative position and an operative position, actuatable driving means, movable actuating means, said driving means cooperating with said actuating means for displacing same in a predetermined relationship to the actuation of said drive means, disengageable coupling means capable of operatively connecting said actuating means with said mirror assembly for a movement of the latter from its inoperative position into its operative position in dependence on an actuation of said driving means, releasable locking means for holding said mirror assembly in its operative position, said coupling means rendering said mirror assembly independent of said driving means when said coupling means are in disengaged condition, and biasing means acting on said mirror assembly for urging same into its inoperative position.

2,862,430

CAMERA LENS TURRET LOCKING DEVICE

Gordon R. Clift, Mount Kisco, and Jean J. L. Godat, Thornwood, N. Y., assignors to General Precision Laboratory Incorporated, a corporation of New York

Application August 5, 1955, Serial No. 526,724
3 Claims. (Cl. 95—45)



1. A rotatable lens turret camera comprising, a camera body, a rotatable lens turret, a motor for rotating said turret to a selected one of a plurality of lens positions, a rotary solenoid fastened to said camera body having a rotary shaft provided with a slotted end portion extending towards said lens turret, a plurality of rods each having a diameter equal to the width of the slot in said solenoid shaft and each being provided with a flattened end portion, said rods being affixed to said lens turret in such positions and orientations as to engage with the slot in said solenoid shaft at locations of said lens turret corresponding to the lens positions thereof and to freely pass through said slot in the energized angular position of said solenoid but to be held in locked embrace thereby in the deenergized angular position of said solenoid, means carried by said camera for deenergizing said solenoid only at preselected ones of said lens positions, and means energizing said motor only during the period of energization of said solenoid.

2,862,431

PHOTOGRAPHIC SHUTTER

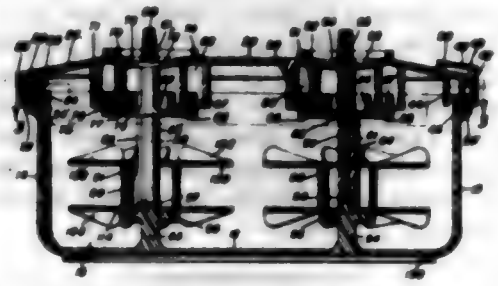
Rolf Noack and Werner Hahn, Dresden, and Karl Krömer, Radebeul, and Johannes Weise, Dresden, Germany, assignors to VEB Zeiss Ikon Dresden, Dresden, Germany

Application December 9, 1955, Serial No. 552,235
8 Claims. (Cl. 95—63)

1. In a camera shutter having a casing, an objective aperture, and a plurality of aperture-controlling sectors; first, second and third coaxial ring members rotatably supported by said casing about said aperture, an abutment member connected to said first ring member, pivot members mounting said sectors, respectively, on said first ring member at spaced peripheral locations for rocking movement substantially in a plane between said first and third ring members, a pin and slot connection between each of said sectors and said second ring member, an actuating arm connected to said third ring member, a lug on said arm and engageable with said abutment member, spring means connecting said ring members, respectively, to said casing and biasing said ring members for rotation in a first direction substantially parallel to said plane, a stop on said casing for engagement by said abutment member to limit the extent of rotation of said first ring member in said first direction, a nose on said third ring

member, a spring-biased latch mounted on said casing and engageable with said nose to lock said third ring member against rotation in said first direction subsequent to rotation of said third ring member through a predetermined angle in a second direction, an operating member for releasing said latch from said nose, a first projection on said third ring member, a stud on said second ring member engageable with said first projection, a second projection on said second ring member, a pawl pivotally mounted on said casing and engageable with said second projection upon rotation of said second ring member through a predetermined angle in said second direction to inhibit rotation of said second ring member in said first direction, and a cam on said third ring member engageable with said pawl, subsequent to release of said latch from said nose, for pivoting said pawl away from said second projection to permit rotation of said second ring member in said first direction after partial rotation of said third ring member in said first direction.

2,862,432
FILM DEVELOPING TANK
Walter F. Schiller, Hartford, Conn.
Application January 29, 1957, Serial No. 637,013
2 Claims. (Cl. 95—98.5)



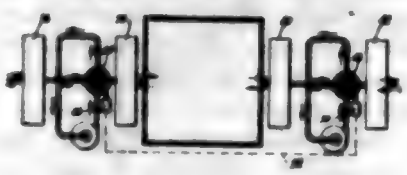
1. A film developing tank having side walls, end walls, bottom and an open top, a cover, a combined light trap and seal separably connecting the edges of said cover to the upper edges of said tank walls, funnels formed in said cover and spaced from each other, spindles mounted for rotation in said tank and separable therefrom, said funnels each having an aperture, one of said spindles extending through each aperture and having an outer end for manual rotation, liquid agitating reels, means mounting said reels in said tank for rotation, means drivingly connecting said reels to said spindles, said apertures of said funnels constituting liquid entrances, light traps carried by said cover and said spindles respectively and operatively connected with said funnels to prevent the entry of light through said funnels to the interior of said tank, a pouring spout in said tank and cover, said first mentioned light trap operatively connected with said pouring spout and including an upwardly opening pocket at one edge of one of said walls, a skirt depending from said cover and fitted loosely within said pocket so as to form a liquid passage around said skirt and through said pocket, a deflector plate carried by said cover and located adjacent to said skirt, a pouring spout on said cover, said cover having an opening through which liquid is adapted to pass and in registry with said passage and beneath said pouring spout.

2,862,433
ROD TILLING IMPLEMENT
Morris W. Guyer, Spokane, Wash., assignor to Calkins Manufacturing Company, Spokane, Wash.
Application September 22, 1955, Serial No. 535,786
15 Claims. (Cl. 97—42)

2. In a tillage implement, a soil cultivating device comprising a transverse rotary rod, a drive mechanism for the rod, a series of tillage shovels, a transverse bar supporting said shovels, spaced apart standards for supporting the rod, bearing shoes secured to said standards, said bearing shoes each having a rod receiving aperture therein, a rod supporting bearing member seated in said aperture and extending outwardly at each side of said shoe, bar supporting plates pivoted on said bearing mem-

ber at each side of the shoe, means on the shoe securing the plates against transverse movement, and at least one of the plates having a slot therein receiving and supporting the transverse bar behind the rod for limited rotation about the rod.

2,862,434
VENTILATION SYSTEM
Samuel H. Edwards, San Pablo, Calif.
Application January 4, 1954, Serial No. 401,926
1 Claim. (Cl. 98—33)



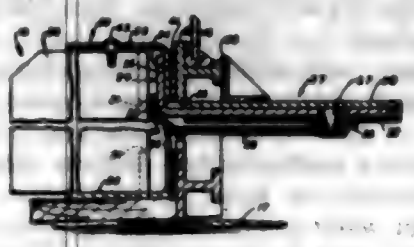
A ventilating apparatus for a room comprising an open ended casing adapted to be mounted within the wall of a room, spaced partitions mounted across the housing and forming a transverse central chamber, said partitions having rectangular central aligned openings within said housing, said openings leading therefrom to the outside atmosphere and to the interior of a room, a blower mounted within said central chamber, the inlet of the blower being in communication with the interior of the central chamber and having a duct connected to the outlet of the blower, said duct extending transversely to the housing and terminating adjacent to one side of the central openings, means for sealing the end of the duct from the central chamber, top and bottom wall plates extending between the top and bottom edges, respectively, of the central openings in the partitions forming a passage, the remaining side of the passage formed by the plates being open to the central chamber and thus to the fan inlet, a rectangular damper pivoted substantially in the center of said passage and being adapted to oscillate between two positions, the first of said positions serving to connect the blower outlet opening with the outside opening and the chamber inlet opening with the room side opening and the second of said positions serving to connect the outside opening with the chamber inlet opening and the fan outlet opening with the room side opening, a crank arm operatively connected to said damper, and toggle means comprising a spring attached to the end of said crank arm and a power-driven rotating disc whereby said damper is caused to oscillate between the two said positions, and a heat exchanger associated with at least one of the outside and room side openings through which air must pass on entering or leaving the room.

2,862,435
DEVICE FOR MOUNTING AIR CONDITIONING UNIT IN A CASEMENT WINDOW
Leroy Bochenberger, Evansville, and Joseph R. Hornbach, Hatfield, Ind., assignors, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Application October 29, 1954, Serial No. 465,625
3 Claims. (Cl. 98—94)

1. A mounting structure for supporting an air conditioning unit having an opening in one wall thereof in a window frame structure having a sash portion from

axis, and the distance between the two mountings in the

which panes of glass have been removed to provide openings for air communication between the unit's wall opening and the outside atmosphere, comprising: an adapter frame having a inwardly directed continuously extending flange whose marginal edge delimits an opening that substantially coincides and registers with the overall area of the openings in the window sash when said adapter is positioned in close association therewith; a sealing gasket interposed between proximate surfaces of said adapter frame and the window sash; a channeled member having an abutment projecting from an upper surface thereof adapted for positioning against an outer surface of the window sash; said channeled

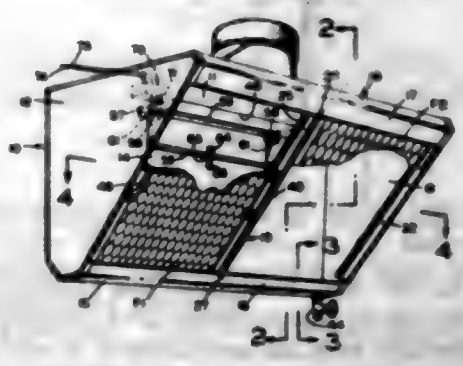


member having a gear rack fashioned along one side of the channel thereof; an angle member slidably positionable within said channeled member and adapted for positioning against an inner surface of said adapter frame flange; a gear member rotatively affixed to said angle member and disposed so as to engage the gear rack of said channeled member, and effective for urging said channeled member and said angle member toward each other upon rotation of the gear in one direction and away from each other upon rotation of the gear in the other direction; and removable means for maintaining an air conditioning unit fixedly positioned within said adapter frame.

2,862,436
VENTILATING HOOD KIT
John A. Atwood, Burbank, Calif.
Application February 24, 1956, Serial No. 567,676
3 Claims. (Cl. 98—115)

1. A ventilating hood, including: a sheet metal front panel of substantially trapezium shape having upwardly convergent, curved side edge portions provided with longitudinal tongues, and a straight, horizontally disposed top edge; a pair of sheet metal side panels each having a vertical wall engaging back edge and an upwardly sloping, curved front edge portion provided with a longitudinal tongue defining a longitudinal groove, and a straight, horizontally disposed top edge; a pair of locking strips each of right-angular cross-sectional shape, each side of the strip having inturned tongues defining a longitudinal groove, each strip being flexible and slidable onto the intersecting curved side edge portion of the front panel and the curved front edge portion of the side panel with the tongues of the strip slidable in the grooves of these edge portions; and a wall engaging back panel extending between the back edge portions of said side panels, said front and side panels having ceiling engaging, inturned mounting flanges at their top edges, the bottom edge portions of the front and side panels having inwardly and upwardly bent flanges, the hood also including a sheet metal skirt having a laterally and downwardly bent tongue defining a groove receiving said flange of said bottom edge portions so as to suspend the skirt from the front and side panels, the lower portions of said front and side panels being mitered at their intersections, and including right-angular corner elements overlying said mitered joints and secured in place by fasteners extending through aligned holes in said corner elements and said front and side panels, the upper ends of said corner elements extending above and concealing the lower ends of said locking strips.

2,862,437
VENTILATING DEVICE
Glenn O. Smith, Moline, and Dallas G. Reddick, East Moline, Ill., assignors to Smith Filter Corporation, Moline, Ill, a corporation of Illinois
Application September 24, 1956, Serial No. 611,479
5 Claims. (Cl. 98—115)



1. In a ventilating system, a cabinet having a back wall, a lower wall, a top wall, and means forming a downwardly and backwardly angled front wall having a filter-receiving opening, filter means carried in said opening, said front wall having a shoulder spaced below the lower edge of said filter-receiving opening but lying above said lower wall, said shoulder extending inwardly of the cabinet to provide a shelf below the lower edge of said opening and extending inwardly of the cabinet to receive said filter means with the lower edge of the latter above the lower wall of the cabinet and inwardly of the lower portion of said front wall, said shoulder having opening means in the lower portion lying inwardly of the inner face of the lower portion of the front wall means, whereby grease and other material may drain through said opening means but remain within the cabinet and inwardly of the filter means, so that the lower portion of the interior of the cabinet serves as a trap for grease, moisture and the like collected by the filter.

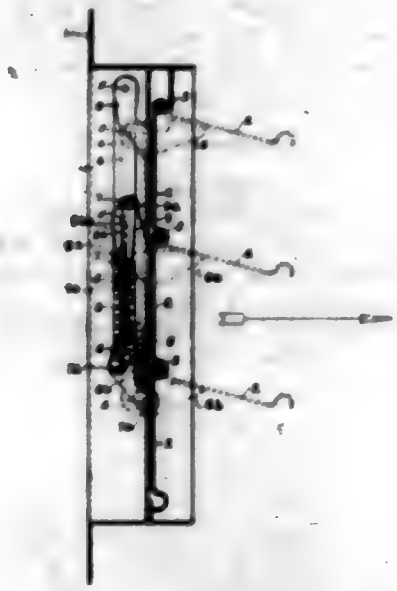
2,862,438
AUTOMATIC LOUVER CONTROL MECHANISM
Emil A. Mader, Detroit, Mich., assignor of one-half to John Spargo, Detroit, Mich.
Application March 26, 1956, Serial No. 573,759
6 Claims. (Cl. 98—116)

1. In a louver construction of the type comprising a frame having an air flow opening, a set of louvers extending across such opening and pivoted on the frame at axes disposed at corresponding margins of the louvers and substantially in a common plane whereby said louvers may swing inwardly or outwardly to cover or uncover said opening, and means interconnecting the louvers to effect their swinging travel in unison, such means including a link bar, a plurality of brackets respectively carried by and inwardly extending from the respective louvers, and means pivotally mounting such bar on the brackets, the combination with such louvers and brackets, of a coiled spring disposed inwardly from said common plane and interconnecting two of said brackets, and a pair of first and second mountings for the spring ends, such mountings being respectively carried by the respective spring-connected brackets, the first mounting being disposed on its bracket more remotely from the corresponding pivot axis than is the second mounting from its pivot

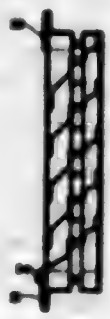
stantially only to said toasting chamber and another posi- passing from the spring over the upper and treadle pulleys

porting the rod, bearing shoes secured to said standards, window frame structure having a sash portion from

axis, and the distance between the two mountings in the closed position of the louvers materially exceeding the distance from the second mounting to the pivot axis corresponding to the first mounting, the second mounting and the pivot axis of the corresponding louver being disposed substantially in a plane transverse to said common plane when the louvers are in closed position.

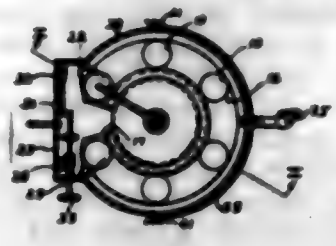


2,862,439
LOUVERS
Norman Arbetman, Queens, N. Y.
Application August 11, 1955, Serial No. 527,717
2 Claims. (Cl. 98—121)



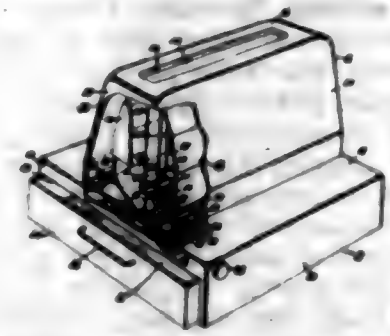
1. A louvre unit having a frame, said frame including spaced apart side members, said spaced apart side members comprising a base member forming an interior wall member of the frame, front and back exterior wall members having portions extending inwardly to the frame and perpendicularly away from said interior wall member, a substantially U shaped portion extending lengthwise of said interior wall section and forming a part of said interior wall section, a plurality of notches in parallel spaced relation and in a plane substantially perpendicular to the lengthwise plane of said U shaped portion, a plurality of louvre plates extending between oppositely positioned side members, each of said louvre plates comprising a central sloping portion lengthwise thereof, said central sloping portion including a step portion extending lengthwise thereof, and parallel disposed lengthwise sections along the lengthwise marginal extremities of said central sloping portion and extending on opposite sides thereof, a portion of said step portion passing through a slot of said U shaped portion, and one of said parallel disposed lengthwise sections having a portion thereof in contact with said front wall member, and the other of said parallel disposed lengthwise sections having a portion thereof in contact with said rear-wall member.

2,862,440
BEVERAGE BREWING APPARATUS
Gladys J. Oakes, Baton Rouge, La.
Application March 1, 1956, Serial No. 568,983
7 Claims. (Cl. 99—282)



1. Beverage brewing apparatus comprising a boiler, a heating element for heating said boiler, a hot water reservoir above said boiler, an evacuation tube connecting said boiler with said reservoir whereby hot water is evacuated to said reservoir when the pressure in the boiler reaches a predetermined amount, means supplying precise quantities of water to said boiler immediately after the hot water is evacuated therefrom, a sleeve surrounding said tube in spaced relation thereto and communicating at its upper end with said reservoir, a discharge spout communicating with said sleeve adjacent the lower end thereof, sealing means between the lower end of said sleeve and said tube causing hot water passing into the sleeve to be discharged through the spout, means for supporting beverage containers having perforated upper and lower ends in position for each to receive water discharged from said spout when the spout is positioned thereover, means rotating said spout to position it sequentially over said containers whereby the hot water passes sequentially through said containers, a beverage receptacle beneath said containers and in communication therewith for receiving the brewed beverage, means operable responsive to rotation of said spout to energize said heating element when the spout is positioned over a container, and means operable responsive to the height of water in said reservoir for de-energizing said heating element upon the hot water reaching a predetermined height in said reservoir.

2,862,441
TOASTER-OVEN COOKING APPLIANCE
Wilbur A. Schmall, Allentown, Pa., assignor to General Electric Company, a corporation of New York
Application December 9, 1954, Serial No. 474,137
12 Claims. (Cl. 99—340)



1. In an electrical cooking appliance, walls defining a toasting chamber, an oven chamber, and an opening therebetween, said chambers being in communication with each other through said opening, an electrical heater adapted to produce thermal energy when energized disposed in said opening, means in said toasting chamber for supporting food objects to be toasted, means in said oven chamber for supporting food objects to be cooked, a pair of reflector plates disposed adjacent to said opening, said reflector plates being independently hinged near opposite sides of said opening and arranged for joint pivotal movement between one position wherein they reflect the thermal energy produced by said electrical heater sub-

range of said bottom edge portions so as to suspend the ing pivot axis than is the second mounting from its pivot

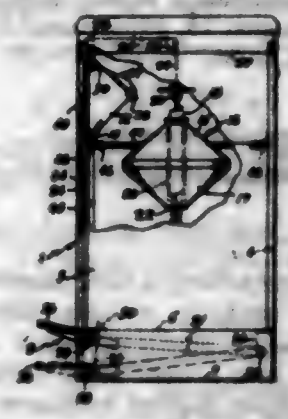
stantially only to said toasting chamber and another position wherein they reflect the thermal energy produced by said electrical heater substantially only to said oven chamber, and manually operable means for jointly moving said reflector plates into either position, whereby said appliance may be selectively utilized to either toast food objects supported in said toasting chamber or cook food objects supported in said oven chamber.

2,862,442
TYING MACHINES FOR PACKAGES AND THE LIKE
Maurice Helford Jones, Birmingham, England, assignor to Leo M. Harvey and Lawrence Harvey, trading as The Harmac Company, Los Angeles, Calif.
Application May 16, 1956, Serial No. 585,590
Claims priority, application Great Britain May 18, 1954
4 Claims. (Cl. 100—27)

3. An apparatus for tying packages with a binding ribbon, comprising: means for supporting a package to be tied; a ring structure dimensioned to circumscribe a package on said supporting means; a frame structure journaling said ring structure for movement about said package; binding ribbon guide rollers carried by said ring structure and disposed in the plane of said ring structure for looping a length of binding ribbon about said package as said ring structure is rotated; guiding means carried by said ring structure for deflecting or supplying reach of said binding ribbon approaching said ring structure in a substantially axial direction into the plane of said ring structure and guide rollers; a reel for supporting a coil of binding ribbon located in an axially offset position relative to said ring structure; means for rotating said reel about a first axis perpendicular to the plane of said coil; means for rotating said reel about a second axis extending diametrically through said coil; means for directing said binding ribbon to said second axis and outwardly from said reel to said guiding means of said ring structure; and means synchronized with rotation of said ring structure to effect corresponding rotation of said reel about said second axis.

2,862,443
TAMPER FOR WASTE PAPER CONTAINER
Clinton S. Strong, Shelton, and William C. Tifft, Seymour, Conn., assignors to Technical Design and Development Company, Incorporated, Devon, Conn., a corporation of Connecticut
Application February 7, 1957, Serial No. 638,782
7 Claims. (Cl. 100—265)

1. A container for waste material such as paper, comprising side and bottom walls forming a receptacle, one of the side walls provided with an inlet opening adjacent the top thereof, a closure for said opening spring-loaded to close automatically, a vertically movable weighted tamper in the receptacle, means for freely suspending the tamper comprising a coiled spring connected at its lower end to the tamper, a flexible cable connected to the upper end of the spring, a depressible treadle at the lower part of the receptacle, a pulley carried by the treadle, guide pulleys at the upper part of the receptacle, said cable passing from the spring over the upper and treadle pulleys and anchored at its lower free end to the receptacle, and

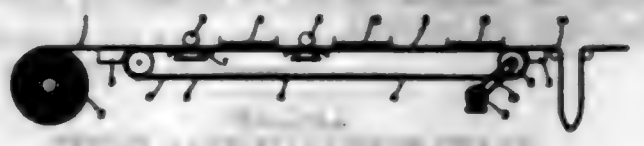


an operative connection from the cable to the closure to open the closure on depression of the treadle.

2,862,444
HECTOGRAPH PROCESS AND SOLVENT
Walter Gustav Drautz, Delmar, N. Y., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application December 14, 1954
Serial No. 638,947
6 Claims. (Cl. 101—149.4)

1. In a hectograph process wherein copies are produced by pressing a master sheet having a dyestuff image thereon against a copy sheet, at least one of said sheets being moistened with a solvent for the dyestuff on said master sheet whereby a portion of the dyestuff transfers to the copy sheet and the image on said master sheet is reproduced on the copy sheet; the improvement which comprises employing as said solvent a hectograph solvent composition having a lower alkanol base and containing butyrolactone as an essential ingredient in an amount equal to 7 to 20% of the total weight of said solvent.

2,862,445
SHEET-MOVING APPARATUS
John R. Davey, New Cumberland, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Application September 8, 1954, Serial No. 454,711
3 Claims. (Cl. 101—407)



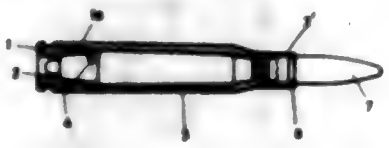
1. In a device for depositing material on a moving sheet, the combination with a treating table of two pin bands adapted to travel along the edges of said table, a plurality of band pin sockets having openings in the bases thereof mounted on the underside of said pin bands, a plurality of pointed band pins mounted in each of said sockets, a plurality of band pin springs mounted in each of said sockets and adapted to urge said band pins into an extended position, the pointed end of said pins protruding through openings in said pin bands when the pins are in an extended position, the base end of said pins protruding through openings in said sockets when the pins are in a retracted position, forcing means adapted to press the sheet to be treated against the point of said pins, and pressing means cooperating with said forcing means adapted to press against the base of said pins and press said pins from said retracted position to said extended position.

adjacent cylinders and the respective exhaust ports openly in substantially fluid tight relation in circumscribing

wall member.

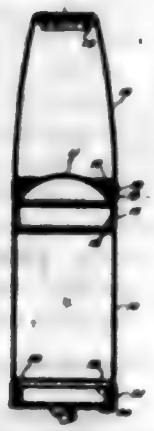
thermal energy produced by said electrical heater sub-

2,862,446
CARTRIDGE
Lars Ringdal, Oslo, Norway, assignor to Kupeg Kunststoff-Patent-Verwaltungs A.-G., Zug, Switzerland
Application August 15, 1955, Serial No. 528,256
4 Claims. (Cl. 102—38)



1. A cartridge comprising a base member, a percussion cap in the base member, a case member integrally moulded from elastic, plastic material connected with said base member with a tight fit, a radial partition wall provided as an integral part of said case member at the front end thereof, and a projectile comprising an envelope secured in front of said partition wall, said partition wall having a thickness so that it may serve as an anchoring for said envelope of the projectile, and the rear end of said envelope being flanged and embedded in said partition wall.

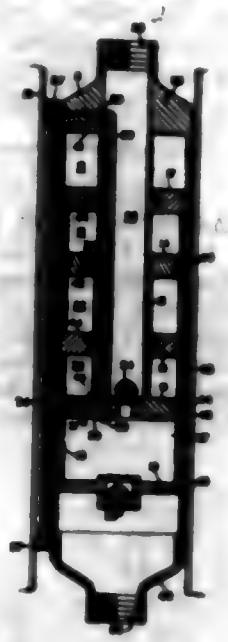
2,862,447
ROCKET STRUCTURE
George Albert Lyon, Detroit, Mich.
Application September 14, 1953, Serial No. 380,031
5 Claims. (Cl. 102—49)



1. In a projectile, a motor casing having a top bulkhead, a shell secured upon the bulkhead and the motor casing, said shell and bulkhead having interengaging thrust shoulders, the thrust shoulder of the shell comprising an indented annular rib shouldering against the margin of the bulkhead.

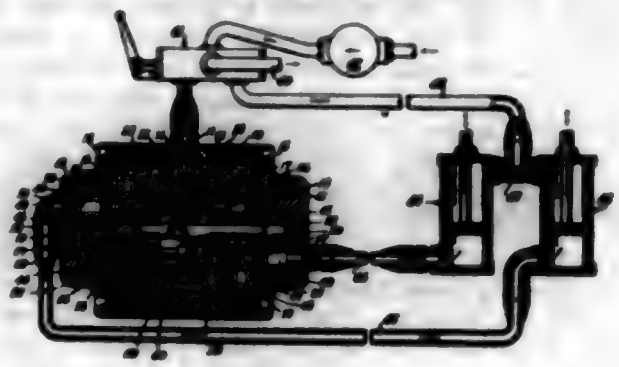
2,862,448
FLUID OPERATED WELL PUMPS
Howard F. Belding, Camarillo, Calif.
Application July 29, 1957, Serial No. 674,897
3 Claims. (Cl. 103—46)

1. A motor-pump combination comprising a housing having a cylindrical chamber therein, a stationary tube attached at one end to the upper end of the housing and extending coocentrically of the housing, a dividing plate secured to the lower end of the tube, a second dividing plate secured to the tube and spaced from the first-named dividing plate, said first-named dividing plate having an outlet valve for pumped fluid and a valve for controlling motor operating fluid, a sleeve slidably mounted within the housing, the interior of the sleeve slidably engaging the peripheries of the dividing plates, said sleeve having a plate therein and secured thereto which plate slidably engages the wall of the said tube and provides a motor piston positioned between the dividing plates, the sleeve having a plate closing its lower end and serving as pumping piston, a check valve in the last-named plate and means on the valve which controls operating fluid engageable by the motor piston at one end of its travel for moving the controlling valve to admit motor fluid to one side of the motor piston and



engageable by the pumping piston at the limit of its pumping stroke to move the controlling valve to admit motor fluid to the other side of the motor piston to reverse the stroke.

2,862,449
POSITIVE ACTION FLOW DIVIDER
Richard R. Wyland, Wichita, Kans., assignor to Boeing Airplane Company, Wichita, Kans., a corporation of Delaware
Application November 8, 1956, Serial No. 621,126
9 Claims. (Cl. 103—49)



1. A positive action fluid flow divider comprising: a housing having a fluid outlet opening at each of its opposite ends and one fluid inlet opening; a rotor journaled within said housing and having a central longitudinal opening therethrough; a concentric inclined cam within the rotor and nonrotatably secured in the housing; two axially spaced banks of respectively axially aligned open ended cylinders in said rotor, one bank arranged concentrically around each end thereof; a tandem piston assembly reciprocable in each pair of aligned cylinders in the two banks; an annular concentric cam track or groove intermediate the ends of each piston assembly receiving and cooperating with the peripheral edge portion of the inclined fixed cam to convert reciprocal movement of the pistons into rotational movement of the rotor; two valves non-rotatably secured in the housing, one in slidable sealing contact with each end face of the rotor; concentrically arranged exhaust and intake ports in each valve cooperating with the open ends of the cylinders in the respective adjacent banks, the respective intake ports openly communicating with the housing fluid inlet opening and the registering open ends of the

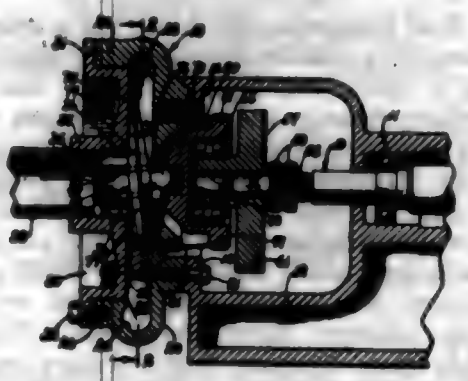
from the casing, an impeller in the casing and an impeller relative to the other members, said second member be-

adjacent cylinders, and the respective exhaust ports openly communicating with the adjacent housing fluid outlet opening and with the registering open ends of the adjacent cylinders.

2,862,450
PUMP
Joseph M. McDonnell, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 2, 1953, Serial No. 389,798
1 Claim. (Cl. 103—53)

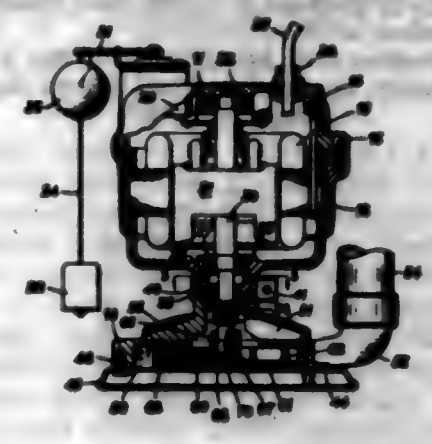
A pump having an elongated casing adapted to be immersed in a liquid fuel, a pair of solenoid coils coaxially fixed within said casing, a pair of magnets between said coils and cooperating with said casing in defining an operating cylinder, a piston in the form of a disc located in said cylinder and dividing the latter into a filling chamber and a pumping chamber, two plungers forming a unit with said piston, one of said plungers being slidable within each of said coils, one-way valve means carried by said piston, spring means abutting the ends of said unit and urging the latter toward a medial position, an inlet passage for said liquid fuel extending into one end of said casing and through one of said plungers to said filling chamber, an outlet passage for said liquid fuel extending from said pumping chamber through the other of said plungers and from said casing, one-way valve means in said outlet passage, and said solenoid coils being adapted to be energized alternately to effect pumping action through said inlet and outlet passages.

2,862,451
CENTRIFUGAL PUMP
John H. Holstein, Fresno, Calif.
Application July 16, 1956, Serial No. 598,142
10 Claims. (Cl. 103—83)



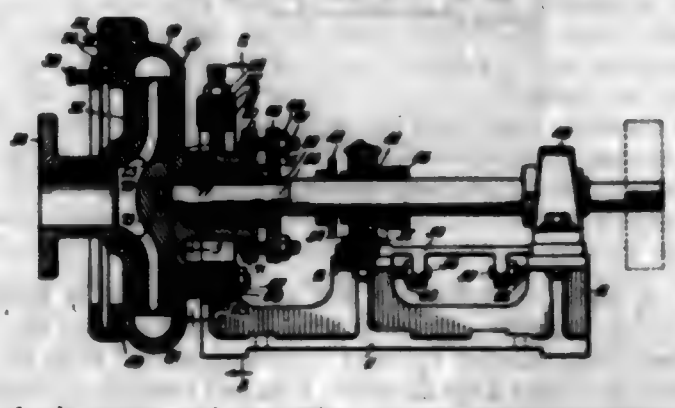
1. A centrifugal pump comprising means having an impeller chamber therein defined in part by spaced walls disposed in facing relation, one of said walls having an opening centrally thereof, an auxiliary wall mounted for substantially circular planetary movement adjacent to the opening in the wall of the chamber means, drive means connected to the auxiliary wall for imparting said circular planetary movement thereto, an impeller having opposite sides enclosed in said chamber axially swivelly engaged at one side with the auxiliary wall and at the opposite side with the wall of the chamber opposite to said opening, and a flexible wall interconnecting the auxiliary wall and said one wall of the chamber means in substantially fluid tight relation in circumscribing relation to the opening, the chamber means having a port for receiving fluid adjacent to the swivel mounting of the impeller and an outlet port outwardly spaced therefrom.

2,862,452
PUMPS
Kenneth R. Lang, Dayton, Ohio, assignor to The Tait Manufacturing Company, Dayton, Ohio, a corporation of Ohio
Application April 29, 1955, Serial No. 504,781
7 Claims. (Cl. 103—87)



1. In a pump of the character described including an impeller housing defining a pumping chamber having a bottom wall, the combination of drive means including a drive shaft extending generally vertically into said housing from above, an impeller in said housing, means forming a splined driving connection between said impeller and said shaft providing for axial movement of said impeller along said shaft, cooperating means on said shaft and said impeller fixing the upper limit position of said impeller on said shaft, said impeller including a shroud forming the bottom thereof and a plurality of vanes extending upwardly from said shroud, means normally supporting said impeller with said shroud spaced above said bottom wall to provide for the development of an upward preasure force between said impeller and said wall during operation of the pump causing initial lifting of said impeller on said shaft to said upper limit position followed by a lifting action on said shaft and any additional parts of said drive means supported on said shaft, and the total bottom area of said shroud being correlated with the weight of said shaft and said additional parts of said drive means supported thereon to provide an upward force effecting substantial balancing of said weight during operation of the pump with said impeller in said upper limit position.

2,862,453
ADJUSTABLE PUMP SUPPORT
Perry I. Nagle, Chicago Heights, Ill.
Application April 1, 1954, Serial No. 420,335
3 Claims. (Cl. 103—103)



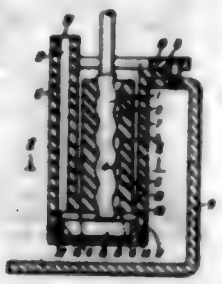
1. A pump and mounting construction comprising a pump having a casing and an integral sleeve extending

thrust sleeve on said tube and having a radial flange at

2,862,459

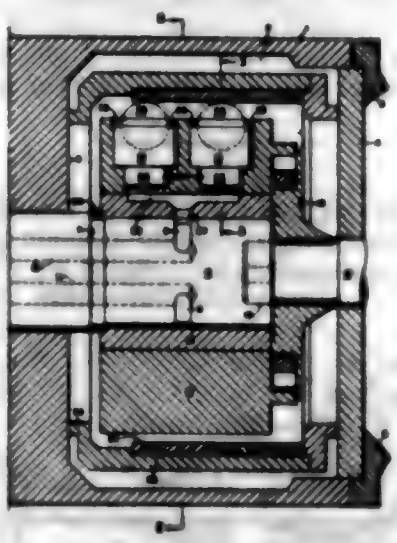
from the casing, an impeller in the casing and an impeller shaft extending through the casing sleeve, a bearing stand, said stand having a ring portion extending in spaced relation about the casing sleeve, and adjusting screws mounted in said portion, the screws extending radially of the shaft and having their inner ends engaging the casing sleeve, and axially extending means for securing the ring portion and casing together in adjusted position.

2,862,454
HELICAL GEAR PUMPS
Ernest Alcock, London, England, assignor, by mesne assignments, to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio
Application June 24, 1955, Serial No. 517,843
Claims priority, application Great Britain June 25, 1954
7 Claims. (Cl. 103—117)



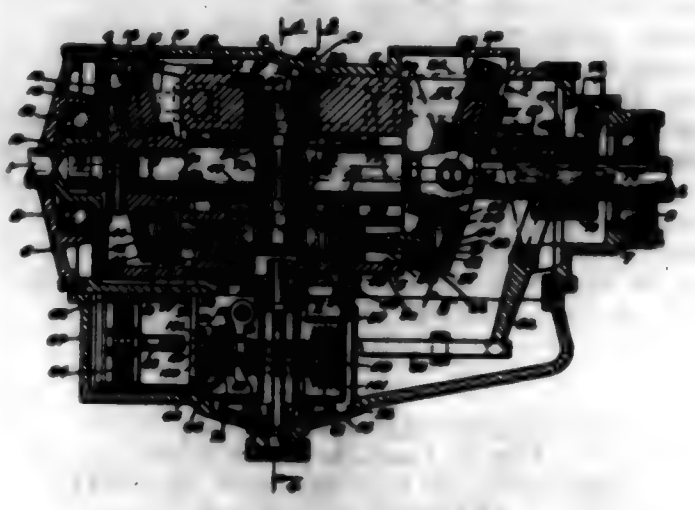
1. For use in a pump of the kind employing a helically grooved rotor in which rotation of the rotor about a fixed axis causes orbital movement of the stator, a unitary elastomeric stator comprising, an outer tubular member, a stator member disposed within said tubular member and having one end attached thereto, said stator member having a helically grooved rotor tunnel extending throughout its length, and an inlet pipe formed integrally with and extending lengthwise of said tubular member, one end of said pipe projecting beyond the unattached end of said tubular member, and the other end of said pipe communicating with a space within said tubular member beyond the end of said stator member.

2,862,455
HYDRODYNAMIC MACHINE
Walter Ferris, Milwaukee, Wis., assignor to The Oilgear Company, Milwaukee, Wis., a corporation of Wisconsin
Application September 3, 1954, Serial No. 454,124
4 Claims. (Cl. 103—161)



1. A pump comprising a first member having at least one large cylinder extending into it from an outer face thereof and a smaller cylinder extending inward from the inner end of said large cylinder, a second member located adjacent to said first member and having a surface spaced from said face, means for rotating one of said members relative to the other members, said second member being so arranged that the distance between said surface and the outer end of said large cylinder increases and decreases alternately during rotation of said one member, valve means for controlling the flow of liquid to and from said smaller cylinder, a piston having a pumping portion fitted in said smaller cylinder and a socket portion fitted in said large cylinder, said socket portion of said piston having a spherical concavity defining a ball receiving socket, a ball fitted in said socket to rotate therein and to effect reciprocation of said piston during rotation of said one member, a recess in said socket, an axial passageway extending through said piston and connecting said recess with said smaller cylinder, an annular drain in the surface of said socket and spaced from said recess to enclose a mean effective area subject to the operating pressure in said smaller cylinder and equal to the effective pumping area of said piston so that a bed of fluid is maintained between said ball and socket for varying operating pressures with a minimum of fluid flow therebetween.

2,862,456
ROTARY, WOBBLE PLATE TYPE PUMP OR MOTOR
Karl Bauer, Nurnberg-Laufamholz, Germany
Continuation of application Serial No. 190,942, October 19, 1950. This application February 17, 1955, Serial No. 488,898
Claims priority, application Germany October 19, 1949
7 Claims. (Cl. 103—162)



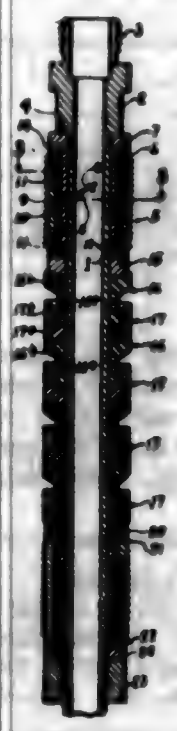
1. In a fluid translating device having a cylinder block with a plurality of bores therein and a piston for each bore with a piston rod for each piston and having a bore extending through the rod, said pistons and piston rods being reciprocable relative to the block, said device also having a valve plate and wobble plate mounted for joint rotation and a bearing ring for the wobble plate to receive the outer ends of the piston rods; a friction reducing means comprising a bearing disc provided between the bearing ring and the wobble plate and having passages therethrough, said bearing ring and wobble plate forming fluid pressure pockets and pressure spaces on opposite sides of the bearing disc, said pockets and spaces communicating with each other by said passages so that the pressure of the fluid in the piston rods will be communicated to the pressure spaces and pockets on opposite sides of the bearing disc.

2,862,457
OIL WELL PUMP PLUNGER ASSEMBLY
Roy C. Williams, Wayne, Ohio
Application April 27, 1956, Serial No. 581,196
5 Claims. (Cl. 103—238)

2. A unitary plunger and sand eliminator assembly for oil wells, comprising a tube having a shoulder thereon, a

pivot axis of said latch on said arms and said shoulder, vevors both inclined inwardly and upwardly toward each

thrust sleeve on said tube and having a radial flange at one end, a sleeve mounted on said thrust sleeve in thrust coaction at one end with said flange and having an external spiral groove, said grooved sleeve having an internal diameter larger than the external diameter of said

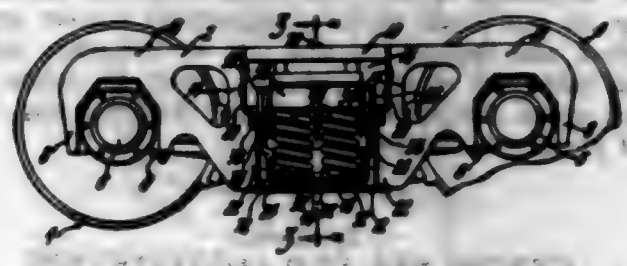


thrust sleeve to permit lateral floating movements of one on the other, and means on said tube clamping the thrust sleeve in position thereon and cooperating with the thrust sleeve flange to permit said floating movement of the grooved sleeve on the thrust sleeve.

2,862,458
RAIL CAR AXLE DRIVE
Robert P. Lewis, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Application March 31, 1955, Serial No. 498,313
3 Claims. (Cl. 105—131)

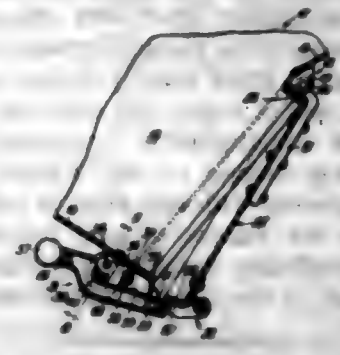
1. In combination with a rotatable axle, a drive unit including a rigid sleeve surrounding said axle in spaced relation thereto, a splined connection between said sleeve and said axle to provide a positive drive therebetween, and means for establishing a flexible connection between said sleeve and said axle, said means including a pair of axially spaced rubber bushings located outwardly of the ends of said sleeve, means including longitudinally split clamping members secured to the ends of said sleeve for confining said bushings substantially concentrically of said axis, and means for longitudinally compressing said bushings to thicken the latter into gripping engagement with said axle to locate the unit longitudinally of the axle.

2,862,459
RAILWAY VEHICLE TRUCK
Joseph P. Miller, Hinsdale, George E. Rasmussen, Chicago, and Clarence Hugo Peterle, La Grange, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 20, 1955, Serial No. 516,384
4 Claims. (Cl. 105—187)



1. A railway vehicle truck comprising a pair of oppositely disposed side frames having upper compression and lower tension members and vertical posts defining windows therein intermediate the ends thereof, wheel and axle sets supporting said side frames adjacent the ends thereof, a transverse transom frame assembly extending through said windows and supported on said tension members and having bolster spring supports adjacent opposite ends thereof, longitudinally extending abutments on said transom frame assembly engageable with opposite sides of said posts to restrict transverse movement of said transom frame assembly relative to said side frames and to maintain tram between said side frames, bolster springs seated on said supports, a bolster resiliently supported on said springs for lateral swinging movement relative to said transom frame assembly and said side frames, and limit stops on said bolster abuttable with said transom frame assembly to limit lateral swinging of said bolster relative to said transom frame assembly.

2,862,460
LATCHING MECHANISM FOR HOPPER DOOR
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Application February 25, 1952, Serial No. 273,231
8 Claims. (Cl. 105—308)



8. In a railway car having a hopper with a discharge opening, a sloping floor terminating at the bottom of said discharge opening, and a door hinged to said hopper adjacent an upper side of said opening and swingable under the effect of gravity to an open position, in combination, a keeper mounted on said door adjacent the edge of said door furthest removed from the hinge axis of said door, a shaft rotatably mounted on the under side of said sloping floor adjacent the bottom of said discharge opening and parallel to said hinge axis, a pair of arms extending radially from said shaft, a latch between and pivoted to said arms about an axis parallel to and spaced from the axis of rotation of said shaft, said latch being pivoted intermediate the ends of said latch and one end extending underneath said shaft and having a shoulder engaging said keeper and holding said door closed, the axis of rotation of said shaft being located between the

being located at the center thereof; a transverse arm pro-

2,862,466

oil well, comprising a tube having a shoulder thereon, a

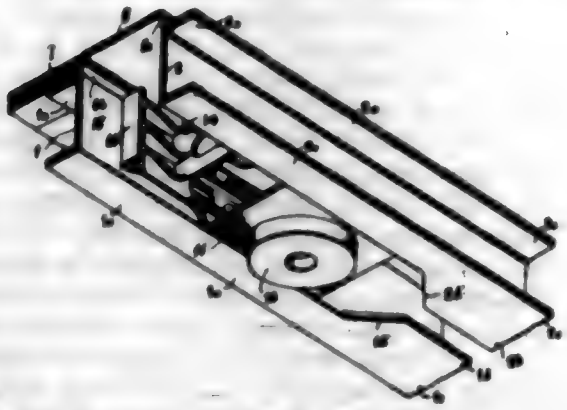
pivot axis of said latch on said arms and said shoulder on said latch when said door is closed, the other end of said latch carrying a counterweight, said latch having a cylindrical arcuate convex seating surface overlying a cylindrical arcuate concave seating surface on said shaft with the center of the seating surfaces being the pivot axis of said latch on said arms, the convex seating surface extending beyond the concave seating surface, a stop on said latch at each end of the convex seating surface and engaged by one side or the other side of said shaft on rotation of said shaft to rotate said latch about the pivot axis of said latch on said arms, and means for rotating said shaft.

2,862,461

CENTER SILL END CONSTRUCTION

Karl F. Nystrom, Chicago, Ill., assignor to International Steel Company, Evansville, Ind., a corporation of Indiana

Application April 15, 1954, Serial No. 423,454
6 Claims. (Cl. 105—418)



1. In a railway car center sill structure, a pair of I-beams each having webs connected with top and bottom flanges directed toward each other but spaced edge to edge along a longitudinal axis, said top flanges being coplanar, with the adjacent inner top flanges cut away throughout a portion of their lengths substantially to the webs of said I-beams, the inner bottom flanges of said beams being cut away throughout a portion of their lengths substantially to the webs of said I-beams, a composite bolster center filler with integral rear draft lug and body center plate located between said webs and intermediate the cut away inner portions of said top and bottom flanges, and a center sill end cap having downwardly directed longitudinally extending flanges supported by the top flanges of said I-beams substantially in coplanar alignment with the webs of said I-beams and a web between the flanges of said center sill end cap forming a longitudinally disposed load support above the cut away portion of the top flanges of said I-beam.

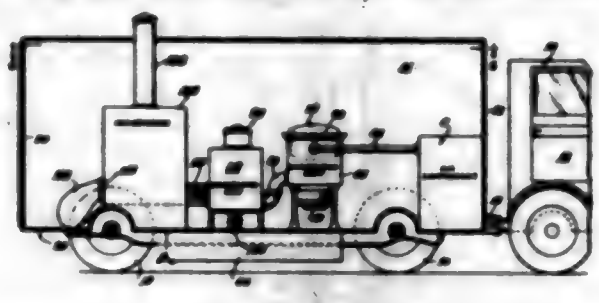
2,862,462

MOBILE INCINERATORS

John B. Brandt, Harry J. Kelly, and John J. Burns, Chicago, Ill., assignors to Mobile Incinerators, Inc., Chicago, Ill., a corporation of Illinois

Application October 6, 1953, Serial No. 384,458
7 Claims. (Cl. 110—8)

1. A mobile incinerator comprising an automotive vehicle having an enclosed truck body thereon and refuse disposal apparatus in said truck body, said apparatus comprising dump hoppers on opposite sides of said truck body extending outwardly from openings in the side walls of said truck body, two sets of angularly disposed crusher rolls, one set mounted in said truck body adjacent each of said openings, an incline conveyor mounted in said truck body in part below and parallel to each of said sets of crusher rolls, said conveyors both inclined inwardly and upwardly toward each other, a comminuting unit positioned between the upper ends of said conveyors, said comminuting unit having a top entrance to receive ground waste from the upper end of each of said conveyors, a dehydrating unit, a conduit from said comminuting unit to said dehydrating unit,



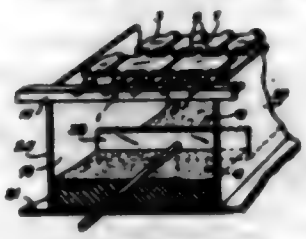
a furnace, a conduit from said dehydrating unit to said furnace, a waste fluid reservoir, a conduit from said dehydrating unit to said waste fluid reservoir and power and fuel means on said truck for operating said crusher rolls, comminuting unit, dehydrating unit and said furnace.

2,862,463

INCINERATOR

William M. Duncan, Alton, Ill.

Application December 15, 1954, Serial No. 475,472
3 Claims. (Cl. 110—170)



1. An incinerator of the character described comprising a continuous moving grate with upper and lower reaches, an upwardly-opening sheet-metal wind box disposed between said upper and lower reaches, said wind box having a floor and an openable side through which siftings may be removed, and duct means connected to the wind box at one side for establishing a draft, and a rake for removing said siftings through said openable side, said rake having a body portion, and means maintaining the body portion of the rake in spaced elevated relationship with respect to the floor of the wind box so as to maintain a bed of siftings of predetermined minimum thickness, thereby to support molten material falling into the wind box in insulated relationship from the sheet-metal floor of the wind box.

2,862,464

CIRCULAR LINKING MACHINE

Wilhelm Durandik, Hamburg, Germany

Application May 19, 1955, Serial No. 509,594
Claims priority, application Germany May 20, 1954
16 Claims. (Cl. 112—25)

1. In a machine of the type described, in combination, supporting means having a vertical axis; a plate having a smooth top surface and being mounted on said supporting means concentric with said vertical axis with said top surface extending transverse to the same; a needle supporting ring mounted on said supporting means turnable about said vertical axis; a set of needles mounted on said needle supporting ring for movement therewith, said needles projecting from said needle supporting ring and surrounding said plate; drive means for rotating said needle supporting ring about said axis and being mounted on said supporting means underneath said plate; an upright support projecting upwardly from said plate and

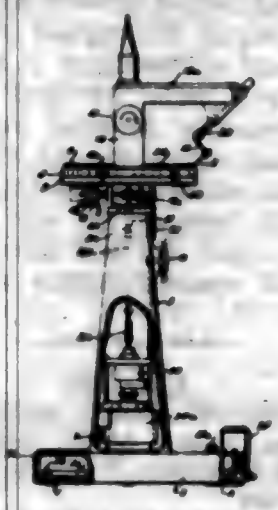
2,862,468

ORNAMENTAL STITCH SEWING MACHINES

helical path of travel for the strip metal and through

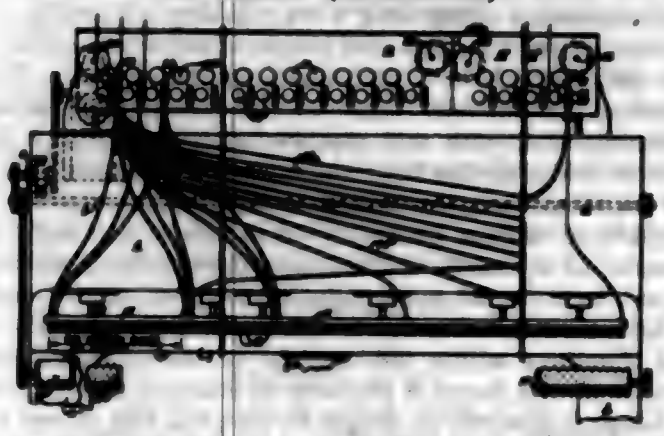
axis of rotation of said shaft being located between the

being located at the center thereof; a transverse arm projecting in radial direction from said upright support spaced from said top surface of said plate and having a free end located above said needles; first stitch-forming means mounted on said supporting means underneath said plate and adjacent said needle supporting ring; and



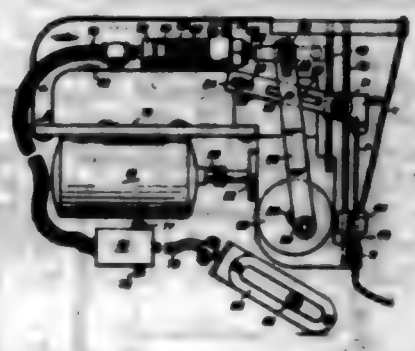
second stitch-forming means located at said free end of said arm and cooperating with said first stitch-forming means during rotation of said needle supporting ring and of said set of needles to link two work pieces mounted on said set of needles and sliding on said top surface of said plate, respectively.

2,862,465
THREAD FEED MECHANISM AND PATTERN CONTROL THEREFOR
Joseph Lewis Card, Chattanooga, Tenn.
Application May 16, 1955, Serial No. 508,484
13 Claims. (Cl. 112—79)



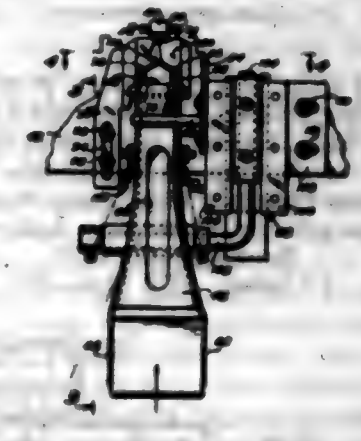
1. In a multiple needle tufting machine for inserting pile loops in a base fabric, said machine including means for feeding base fabric through the machine and a needle bank including plural needles substantially aligned transversely of the direction of feed of the base fabric, plural thread feed rolls for drawing thread from a source of thread supply and feeding the same to said needles, means for driving said feed rolls, each of said feed rolls being shorter than the transverse extent of the needle bank and positioned in relation thereto to feed thread to plural needles within the needle bank, the needles served by the thread from any one of said rolls being distributed along a greater length of the transverse extent of said needle bank than the length of said roll whereby at least some of the threads fed by said roll leave the roll at points displaced transversely of the machine with respect to the needles served by such threads, thread guide means extending substantially from the feed rolls to the needles to direct the threads to selected needles in the needle bank, and means mounting the thread guide means adjacent to the respective rolls and in position to guide the threads fed thereby across the rolls in a direction substantially perpendicular to the axes of the rolls.

2,862,466
MENDING MACHINE FOR TUFTED RUGS
Clifford Aldine Bryant, Robert F. Hackney, and Roger J. McNamara, Dalton, Ga., assignors to Cabin Crafts, Inc., Dalton, Ga., a corporation of Georgia
Application June 28, 1956, Serial No. 592,532
14 Claims. (Cl. 112—79)



13. In a machine to mend tufted rugs and the like, a reciprocatable needle for penetrating rug fabric to form a yarn loop, means to reciprocate the needle continuously, a reciprocating plunger cooperating with the needle and adapted to penetrate the fabric within the yarn loop and determining the loop height, drive means to reciprocate the plunger continuously to a depth greater than the needle penetration, and means adapted to remain stationary while the plunger is reciprocating but movable to vary the operation of said drive means during reciprocation of the plunger for changing the depth of plunger penetration to form loops of different heights.

2,862,467
BELT MAKING MACHINE
Frank Passaro, Brooklyn, and William Galya, Brewster, N. Y., assignors to Joseph Machine Co., Inc., New York, N. Y., a corporation of New York
Application May 3, 1954, Serial No. 427,232
13 Claims. (Cl. 112—152)



1. A belt making attachment for use with a double needle sewing machine, including a presser foot and a feed dog, said attachment comprising a guide for guiding a belt backing over the sewing machine bed and feed dog beneath the presser foot and needles, a downwardly sloping side edge folder mounted over said guide for receiving a strip of fabric for the front of a belt, and point forming means including a tongue having a point, said tongue extending through the edge folder so that the fabric is edge-folded about the tongue, the end of said tongue being rearwardly slotted near each side edge to clear the needles, a stationary forming plate disposed in front of said needles and having a fixed V notch for mating cooperation with said tongue, and means mounting said edge folder and tongue for movement toward and away from the needles and for up-and-down movement to an elevation beneath or above said forming plate the slotted forward end of said tongue when moved upward and forward to form the fabric into a point, clearing the forming plate for reception of the foot and needles.

the glue wheel, and said blocks being spaced apart to the slot between the free extremity of said clip and said

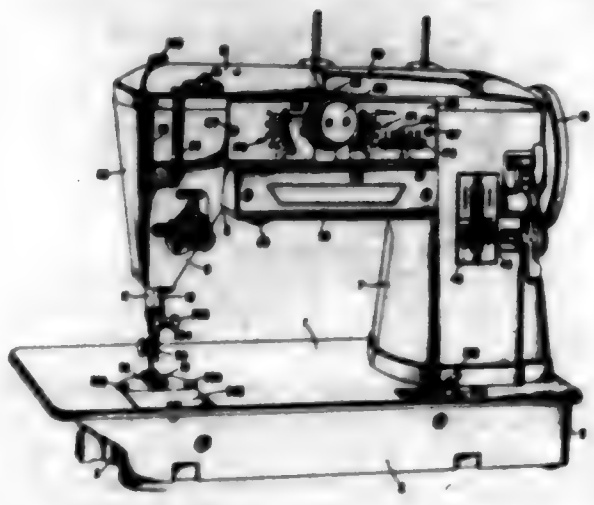
parallel to each of said sets of crusher rolls, said con- right support projecting upwardly from said plate and

2,862,468

ORNAMENTAL STITCH SEWING MACHINES

Ralph E. Johnson, Mountainside, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey

Application November 29, 1954, Serial No. 471,766
27 Claims. (Cl. 112—158)



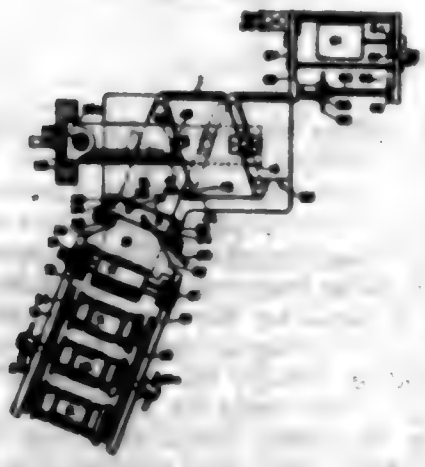
1. An ornamental stitch sewing machine comprising, a needle mounted for endwise reciprocation and for sidewise movements transversely of the direction of reciprocation, a plurality of different rotary cams, means for rotating said cams in synchronism with the needle reciprocating movements, a pair of cam-tracking elements rockably mounted upon laterally spaced axes, means biasing the cam-tracking elements against the cams whereby the elements will track and respond to a plurality of cams, operator-influenced means for selecting different combinations of cams to be tracked by said cam-tracking elements, and transmission mechanism connecting the cam-tracking elements with the needle for shifting said needle sidewise in conformance with the combined cam responses of said cam-tracking elements.

2,862,469

MACHINES FOR PRODUCING TUBING FROM CONTINUOUS STRIP METAL

Erling Jensen, Oslo, Norway, assignor to Spiro Establishment, Vaduz, Liechtenstein

Application March 1, 1956, Serial No. 568,799
Claims priority, application Switzerland December 20, 1955
8 Claims. (Cl. 113—35)



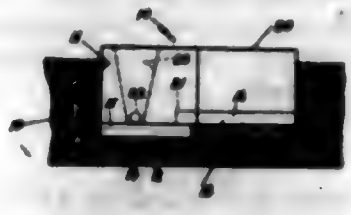
1. In a helical lock seam tubing forming machine in which the continuous strip metal is fed continuously from a supply source to the tube shaping means, idler rollers between which the continuous strip metal is drawn to form marginal parts to be interlocked to form the helical seam, a tube forming hollow head with a cylindrical bore defining the curvature radius of the helical path of travel for the strip metal and through which head the strip material passes from the rollers, guiding means incorporated with the head and which causes the strip material to traverse a helical path concentric with and inside the head with its complementary seam forming marginal parts interengaged, opposed cooperating members carried between the ends of the head and located to engage the tubular shaped strip metal both internally and externally as it negotiates the circular path of travel inside the head to fold over and pinch the interengaging marginal parts into the lock seam, and feeding rollers for the strip metal located between said idler rollers and said head and which draw the strip material between the said idler rollers and pushes the strip metal into and through the said head and between said opposed folding over and pinching members.

2,862,470

TRANSISTOR MOLD ASSEMBLIES

John R. Williams, Natick, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application November 19, 1953, Serial No. 393,209
4 Claims. (Cl. 113—99)



1. A mold assembly for forming diffused junction-type transistors comprising a tray having a plurality of recesses therein, each of said recesses comprising a chamber adapted to hold a semiconductor member of a first electrical conductivity type, and an elongated channel communicating with said chamber at a point above the level of said chamber floor and adapted to support a base tab on an end section of said semiconductor member, a plurality of cavities each adapted to hold a first body of material of a second electrical conductivity type adjacent to one face of said semiconductor member, one of each of said cavities being positioned in the floor of each of said chambers within the confines of the outside edges of each of said floors, a plurality of washers, one of each of which is adapted to snugly fit into and rest in one of each of said chambers and its respective communicating channel to hold said base tab and said semiconductor member in an immobile position, said washers each having a hole therethrough adapted to receive and position a second body of material of said second electrical conductivity type adjacent to a second face of said semiconductor member and substantially opposed to said first body of material, whereby said assembly may be utilized to simultaneously fuse said base tab and said second electrical conductivity type bodies to said semiconductor member.

2,862,471

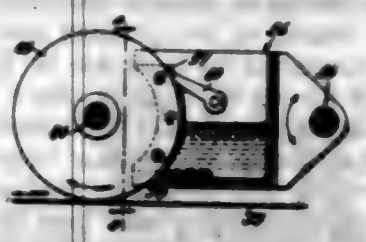
GLUE APPLYING MEANS

Melvin H. Sidebotham, Sr., Gordon L. Sidebotham, and Melvin H. Sidebotham, Jr., Winchester, Mass.

Original application January 20, 1955, Serial No. 482,931. Divided and this application February 7, 1956, Serial No. 563,896
2 Claims. (Cl. 118—259)

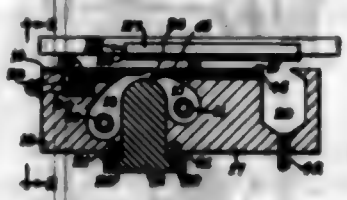
1. Glue applying means comprising a glue pot having an open end, a glue wheel rotatable through said opening, and blocks on said glue pot at the open end thereof, said blocks constituting walls for the said pot adjacent

the glue wheel, and said blocks being spaced apart to closely fit against the side surfaces of the wheel and



receive the wheel therebetween, said blocks being formed of hard, rigid, non-abrasive plastic material.

2,862,472
ELECTROSTATIC IMAGE DEVELOPMENT APPARATUS
Chester F. Carlson, Pittsford, N. Y., assignor to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Application November 29, 1956, Serial No. 625,151
14 Claims. (Cl. 118—637)



1. Developing mechanism for electrostatic images comprising, in combination, a support comprising a smooth continuous conductive surface and means to support an electrostatic image-bearing member with its image surface in closely-spaced substantially parallel relation thereto to define a thin developing zone therebetween, means for generating and blowing a powder cloud, a powder cloud conduit fed thereby, an inertial separator conduit at an angle to said powder cloud conduit for separating said powder cloud into a fine particle-bearing portion and a coarse particle-bearing portion and located at one edge of said developing zone to deliver said fine particle-bearing portion of said cloud directly to said developing zone, and an exit conduit for the coarser particle portion of said cloud also fed by said inertial separator.

2,862,473
POCKET CLIPS
Peter K. Kontier, New York, N. Y.
Application June 1, 1956, Serial No. 588,817
2 Claims. (Cl. 120—42.01)

1. In a pocket implement, in combination, an elongated barrel having a working end and a rear end, the transverse dimensions of said barrel adjacent to the working end being smaller than the transverse dimensions adjacent to the rear end thereof; a protecting cap adapted to alternately receive the ends of said barrel, said cap having a closed end, an open end and an aperture in the proximity of the open end; a pocket clip attached to the cap in the proximity of said closed end, extending therealong and having a free extremity adjacent to said aperture; and means normally located within the cap for spanning the slot between the free extremity of said clip and said cap when the rear end of said barrel is inserted in the latter, said means including a retaining member attached to the cap in such manner as to permit insertion of the working end and of the rear end of said barrel into the cap, a resilient element attached to the retaining member and, in its normal, unstressed condition, extending into the path of said barrel adjacent to the rear end thereof, and a member attached to the resilient element and adjacent to said aperture, said last named member having a first extreme position in which it extends through the aperture in said cap and toward the free extremity of said clip when the rear end of said barrel is received in the cap and engages with the resilient element, and a second extreme position in which it is fully received in the cap when the writing end of said barrel is inserted into the cap.

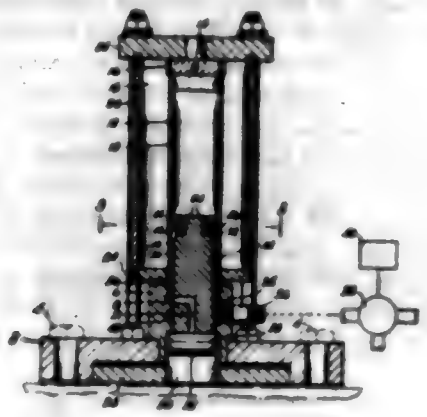
2,862,474
POCKET CLIPS
Peter K. Kontier, Forest Hills, N. Y.
Original application June 1, 1956, Serial No. 588,817. Divided and this application February 18, 1958, Serial No. 715,935
3 Claims. (Cl. 120—42.01)

1. In a pocket implement, in combination, an elongated barrel having a working end and a rear end; a protecting cap receiving one end of said barrel, said cap having a closed end, an open end, a first aperture in the proximity of the open end and a second aperture in the proximity of the closed end thereof; a pocket clip having a first extremity adjacent to the first aperture and a second extremity adjacent to the second aperture in said cap; means for pivotally connecting the clip to said cap at a point intermediate the extremities of said clip; resilient means operating between said cap and said clip for constantly urging the clip into a position in which its second extremity extends through the second aperture and into said cap; the rear end of said barrel being of such transverse dimensions as to engage the second extremity of said clip when inserted into the cap and to pivot said clip into a position in which the first extremity of the clip is at least partially received in said first aperture; and the working end of said barrel being of such transverse dimensions as to bypass, when inserted into the cap, the second extremity of said clip whereby the first extremity of the clip remains spaced from the first aperture in said cap.

2,862,475
PNEUMATIC IMPACT DEVICE
Russell C. Klasmann, Hartford, Conn., assignor to The Branford Company, New Haven, Conn., a corporation of Connecticut
Application October 5, 1955, Serial No. 538,684
9 Claims. (Cl. 121—13)

1. A pneumatic vibrator comprising a housing having means for attachment to an associated structure, an anvil supported by the housing but movable relative thereto, a cylinder supported by the housing in alignment with the anvil, a free piston in thhe cylinder, means for

alternately admitting pressurized air to the cylinder adjacent the anvil to move the piston away from the anvil and releasing the air therefrom to permit the piston to return toward the anvil, and means including a re-



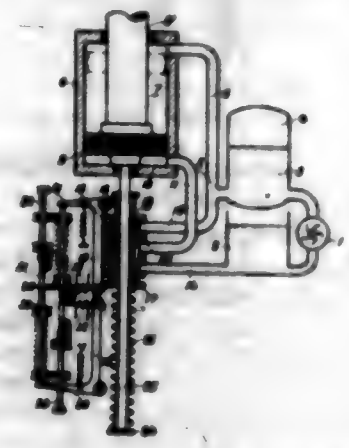
stricted passageway for by-passing a portion of the admitted air to the side of the piston, said means being effective to by-pass air to said side of the piston only when the piston is adjacent to the anvil.

2,862,476

OIL PRESSURE OPERATING DEVICE FOR ELECTRIC CIRCUIT BREAKERS

Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden

Application February 15, 1955, Serial No. 488,211
Claims priority, application Sweden February 17, 1954
4 Claims. (Cl. 121—38)



1. An oil pressure operating device for electric circuit breakers, comprising an operating piston and cylinder, an oil magazine for the delivery of oil under pressure to the cylinder, a slide valve moved in one direction by oil pressure for controlling the delivery of oil to the cylinder, spring means controlled by said piston for moving the slide valve in the other direction, means connecting one end of the cylinder in permanent fluid communication with the oil magazine, means connecting the opposite end of the cylinder in fluid communication with the said slide valve and connecting such valve in fluid communication with the oil magazine so that movement of the slide valve controls the movement imparted to the piston by the oil pressure from the magazine, and actuating means including a pawl device for retaining the slide valve in each of its end positions.

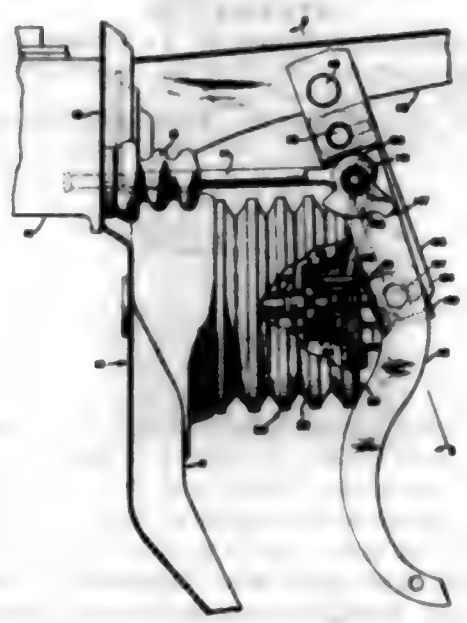
2,862,477

FLUID PRESSURE MOTOR VALVE MECHANISM

David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware

Application October 29, 1956, Serial No. 618,737
9 Claims. (Cl. 121—41)

1. A fluid pressure motor comprising a variable pressure chamber, a pressure responsive unit having one side open to said chamber and having its other side subject to a relatively constant pressure, said pressure responsive unit having an annular low pressure chamber connected to a source of low pressure and a high pressure chamber connected to a source of high pressure, an annular wall having its radially outer face forming the radially inner limit of said low pressure chamber and defining therewithin an annular control chamber, a first annular valve seat carried by said wall, an annular valve normally engaging said first seat, a spring biasing said valve into engagement with said first seat, a diaphragm having radially outer and inner edges respectively sealed relative to said pressure responsive unit and said valve and sealing said low and high pressure chambers from each other, a second annular valve seat movable in one direction into sealing engagement with



said valve to close said control chamber and said high pressure chamber from each other and to lift said valve from said first seat, a spring biasing said second valve seat to a position spaced from said valve, and means for transmitting axial movement to said second valve seat to move it in said direction, said valve including a relatively large axial opening therethrough forming a part of said high pressure chamber, said second valve seat having a pressure area subject to pressure in said high pressure chamber whereby when said second valve seat is released after said valve has been moved from said first valve seat, said second valve seat will be subject to differential pressures in said control chamber and in said high pressure chamber to subject said second valve seat to a force tending to move it back to its normal position.

2,862,478

FLUID MOTOR PISTON

William A. Staats, Ashland, Ohio, assignor to The F. E. Myers and Bro. Company, Ashland, Ohio, a corporation of Ohio

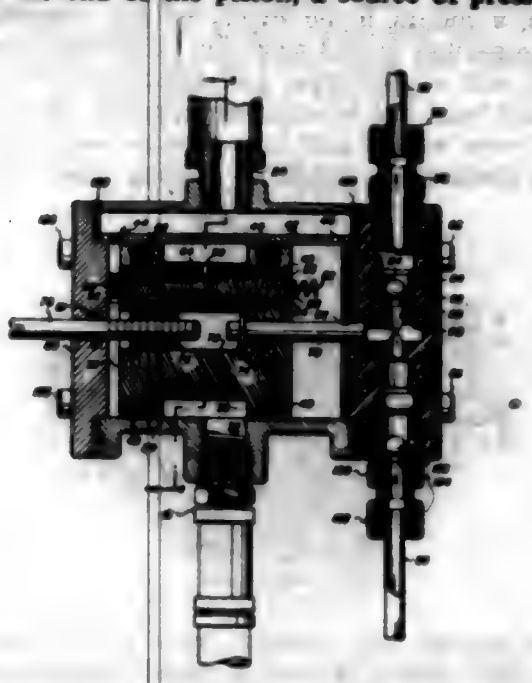
Application June 11, 1956, Serial No. 590,533
1 Claim. (Cl. 121—123)

In a fluid power device; a cylinder, a spool type piston in the cylinder, an inlet in the cylinder opening into the space between the heads of the piston, restricted outlets leading from the opposite ends of the cylinder, a bore through the piston from end to end thereof, there being an opening providing communication from said bore to between the heads of the piston, a valve member in said bore having a substantial clearance inside the bore to provide for the passage of fluid along the bore, a valve seat on said valve member for sealingly engaging said opening to provide communication from either end of said piston to between the heads thereof, said valve member

aliphatic hydrocarbon containing at least one fluorine

spaced exhaust passages formed in said head and extend-

being bored from its opposite ends, a compression spring in each bore of the valve member extending outwardly beyond the end of the piston, a source of pressure fluid

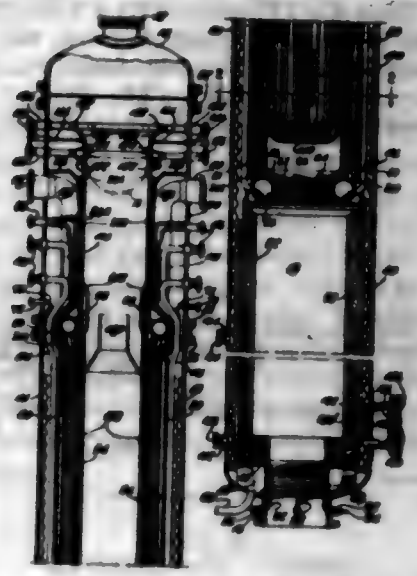


connected with said inlet, and an exhaust conduit leading from said outlets, said compression springs providing means for snap shifting said valve member as the piston approaches opposite limits of its travel in the cylinder.

2,862,479
VAPOR GENERATING UNIT
Robert U. Blaser, Alliance, Ohio, and Donald C. Schlueterberg, Lynchburg, Va., assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application April 6, 1956, Serial No. 576,729
18 Claims. (Cl. 122—34)

1. A vapor generating unit comprising wall means forming a vertically elongated pressure vessel of circular cross section arranged to operate with an upper vapor space above a body of liquid therein, a vapor outlet from said vapor space, plate means coacting with said pressure vessel wall means to form an interior vertically elongated vapor generation chamber and an annular shaped downcomer passage exterior of said chamber within the lower portion of said vessel, said plate means extending downwardly to substantially the bottom of said vapor generation chamber, said downcomer arranged for the downward flow of liquid from said body of liquid to supply said vapor generation chamber, vapor-liquid separating means arranged to separate a vapor-liquid mixture received from said vapor generation chamber said separator arranged to discharge separated liquid to said body of liquid and vapor to said vapor space, a plurality of tubes constituting a vertically elongated bundle arranged to substantially fill said vapor generation chamber, and means for passing a heating fluid through the tubes of said bundle.

2,862,480
SYNTHESIS GAS REACTOR AND HEAT EXCHANGER
James L. Oberg, Florham Park, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application September 10, 1954, Serial No. 455,322
8 Claims. (Cl. 122—379)



1. In a heat exchange unit; a vertically elongated upright pressure vessel having a gas outlet; a refractory lined reaction chamber in the lower part of the pressure vessel; means within the pressure vessel providing an upright gas pass of annular horizontal cross section conducting gases from the reaction chamber toward said outlet; a tubular heat exchanger including an annular bank of horizontally spaced upright tubes disposed within said gas pass; said last named means including a hollow closed bottom cylindrical core of forced flow heat exchanger tubes forming the inner wall of the gas pass and a ring of said upright tubes closely arranged to form the outer wall of the gass pass; said inner and outer tube-formed gas pass walls extending substantially throughout the height of said annular tube bank; a lower ring header disposed adjacent the top of the reaction chamber and having the lower ends of said upright tubes secured thereto; an upper ring header having the upper ends of said upright tubes secured thereto; and means supplying the heat exchanger with a vaporizable liquid.

2,862,481
ADDITION OF FLAME MODERATORS TO COMBUSTION CHAMBERS
Fred G. Rounds and Ralph E. Schwind, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 11, 1953, Serial No. 336,262
17 Claims. (Cl. 123—1)

1. A method of improving the performance of an internal combustion engine comprising introducing separately into the air-hydrocarbon fuel supply system of said engine a small amount of a halogenated derivative of an

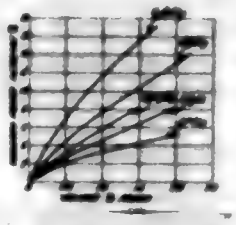
2,862,485
VALVE OPERATING LINKAGE AND METHOD OF

2,862,487
CARBURETOR THROTTLE MECHANISM

sure chamber, a pressure responsive unit having one

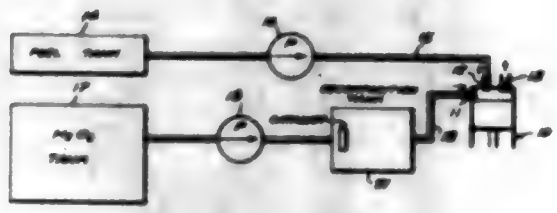
piston to between the heads thereof, said valve member

aliphatic hydrocarbon containing at least one fluorine atom and one or more chlorine atoms, said derivative



having a boiling point not substantially in excess of said hydrocarbon fuel.

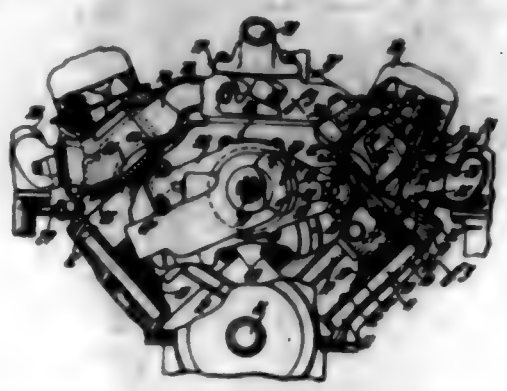
2,862,482
INTERNAL COMBUSTION ENGINE
David Kennedy Hart, Berwyn, Md.
Application September 7, 1949, Serial No. 114,447
2 Claims. (Cl. 123—25)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. The method of operating an internal combustion engine having a cylinder and piston reciprocable therein which comprises the steps of injecting a fuel into said cylinder, raising the temperature of an oxidant to a temperature above the ignition temperature of the fuel by the exothermic decomposition of the oxidant with a catalyst externally of the engine, and injecting only the decomposition products into said cylinder at said second named temperature to initiate combustion of the fuel within said cylinder simultaneously with the injection of said fuel.

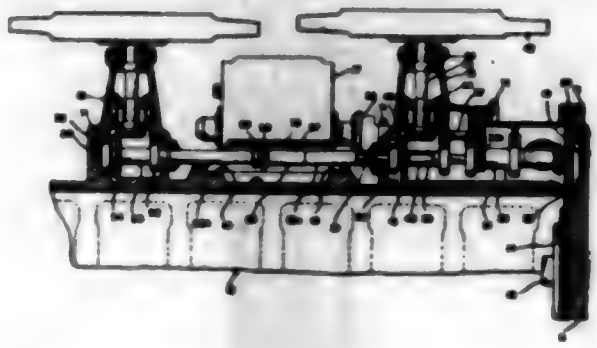
2,862,483
ENGINE COOLING SYSTEM
Earl W. Rohrbacher, Birmingham, and Adelbert E. Kolbe, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 4, 1954, Serial No. 460,285
13 Claims. (Cl. 123—41.73)

1. A cooling system for an internal combustion engine comprising an engine block having a row of cylinders formed therein and cooling liquid cavities surrounding said cylinders throughout the length of said block, a head for said cylinders secured to said block and having cooling liquid cavities formed therein, a pair of inlet passages formed in said head and extending through said cavities in said head from inlet ports leading to an adjacent pair of said cylinders and terminating in a side wall of said head, said inlet ports being disposed on adjacent sides of said pair of cylinders and said pair of inlet passages being formed from said ports to said side walls to include a common lower wall extending laterally in said head in spaced relation to the lower wall of said head, a pair of spaced exhaust passages formed in said head and extending from exhaust ports formed on opposite sides of said inlet ports and terminating in an opposite side wall of said head, a cooling liquid supply passage extending between said cavities in said head and block and formed in the lower wall of said head and adjacent said one side wall of said head and between the opposite edges of said common lower wall of said inlet passages and being positioned to discharge a stream of cooling liquid into said



head and against said common lower wall of said inlet passages, said stream of cooling liquid being directed to engage said common lower wall of said inlet passages and to be deflected by said lower wall and said one side wall to form two streams of cooling liquid flowing toward said opposite wall and outwardly from beneath said common lower wall and against the inner ends of said exhaust passages adjacent said exhaust ports, and means for exhausting said cooling liquid from said head.

2,862,484
INTERNAL COMBUSTION ENGINES
Herbert H. Haas, Royal Oak, and Emil V. Szinga, Centerline, Mich., assignors, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia
Application August 10, 1956, Serial No. 603,251
9 Claims. (Cl. 123—55)



1. An accessory mounting structure and driving means for a generally V-type internal combustion engine having a crankcase, a crankshaft carried thereby, and longitudinal banks of engine cylinders, said mounting structure comprising a plurality of separate mounting bosses integrally formed with said crankcase intermediate said banks of cylinders and having upper mounting faces disposed in a common plane and defining a parting plane between the housings and the crankcase, a plurality of spaced accessory housing structures each individually removably mounted on one of said mounting faces, driven accessory elements carried solely by said housing structures, accessory drive shaft bearings carried solely by said housing structures, said driving means comprising a single accessory drive shaft assembly supported by said bearings, the axes of said drive shaft assembly and said bearings being disposed in the plane of said mounting faces, and means operably connecting said drive shaft assembly with said crankshaft.

2,862,489

of intake ports in one side thereof

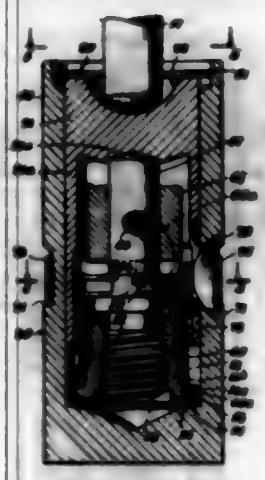
ward flow of liquid from said body of liquid to supply engine a small amount of a halogenated derivative of an

2,862,485

VALVE OPERATING LINKAGE AND METHOD OF ADJUSTING AND CONTROLLING SAME

Bronson C. Skinner, Dunedin, Fla., assignor to Brunhilde W. Skinner, Dunedin, Fla.

Application March 26, 1956, Serial No. 573,938
9 Claims. (Cl. 123—90)



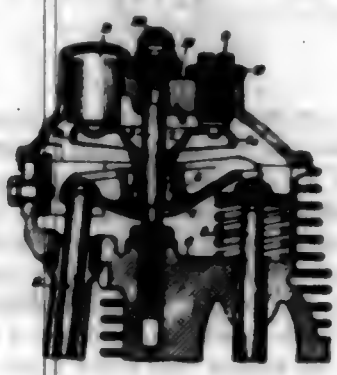
1. In an engine having a poppet type valve with a valve stem, an operating cam, and operating linkage connecting said cam and said valve stem for effecting a cycle of opening and closing of the valve, said linkage including therein an automatic length compensating device operative automatically in the operation of the engine to expand and take up the slack in the linkage when the valve is in its normally seated position, and stop means embodied in said device operative to limit the automatic expansion of said device, said stop means and the related parts being constructed, adjusted and arranged such that the overall length of the linkage is prevented from being extended by the automatic operation to an extent such as to prevent complete seating of the valve in accordance with the normal desired cycle.

2,862,486

HYDRAULIC CLEARANCE TAKING-UP MECHANISM FOR VALVE GEARS

Paul Panhard, Paris, France, assignor to Societe Anonyme des Anciens Etablissements Panhard & Levassor, Paris, France, a society of France

Application December 11, 1957, Serial No. 702,170
Claims priority, application France December 19, 1956
15 Claims. (Cl. 123—90)



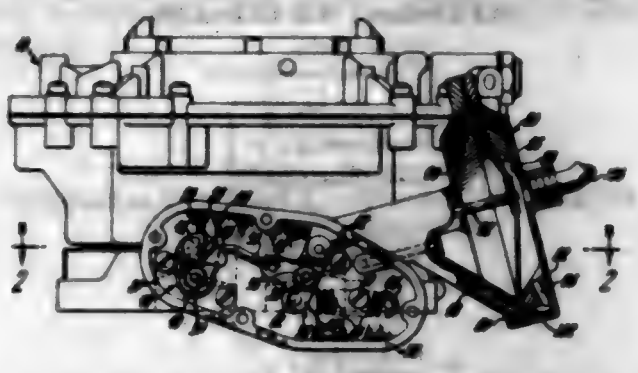
1. A clearance taking-up mechanism for a valve gear embodying an oscillating rocker, comprising a movable member adapted to form a fulcrum for said rocker; a lever on which said member bears at a point on said lever spaced from both ends thereof under the effect of the reaction of said rocker, one end of said lever being pivoted about a fixed point; and a hydraulic taking-up device adapted to support the reaction of the other end of said lever during the operative steps of said valve gear and to take-up the clearance of said valve gear during the inoperative steps thereof.

2,862,487

CARBURETOR THROTTLE MECHANISM

Elmer Olson, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 17, 1956, Serial No. 616,529
9 Claims. (Cl. 123—103)



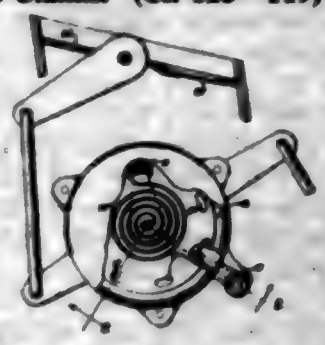
1. A compound carburetor comprising primary and secondary induction passages, throttles for respectively controlling flow through said passages, each throttle being fixed upon a rotatable shaft, first and second levers respectively fixed to the primary and secondary throttle shafts, a third lever rotatably supported upon the secondary throttle shaft, a link articulated between said first and third levers, means continuously urging said primary throttle toward open position, a lost motion connection between said second and third levers permitting a fixed amount of opening movement of said primary throttle before the secondary throttle begins to open, manually controlled means opposing the opening movement of the primary throttle, and a control device responsive to an engine operating condition for moving said first lever to close said throttles against the opening force of said resilient means.

2,862,488

AUTOMATIC CHOKE

George Nastas, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Application June 12, 1957, Serial No. 665,287
5 Claims. (Cl. 123—119)



5. An automatic choke for an internal combustion engine comprising a temperature sensitive element for actuating the choking means, an opening for discharging heated gas adjacent the temperature sensitive element, a second opening for removing heated gas adjacent the temperature sensitive element, and a control plate operated by the temperature sensitive element and interposed between the openings and the temperature sensitive element, a pair of ports through the control plate, one of said ports being adjacent the opening for the discharge of hot gas and other port of said pair being opposite the opening for the removal of hot gas when the temperature of the temperature sensitive element is below a fixed lower temperature, and a second pair of ports through the control plate, one of said second pair of ports being adjacent the opening for the discharge of hot gas and the other port of said second pair being opposite the opening for the removal of hot gas when the temperature of the temperature sensitive element is above a fixed upper temperature.

ed on said valve body, the outer end of said stem engaged by the said tracer member, axial means upon the

2,862,489
ENRICHMENT DEVICE FOR FUEL INJECTION SYSTEM

Henry E. J. Pringham, Grosse Pointe, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 28, 1957, Serial No. 680,743
13 Claims. (Cl. 123—119)

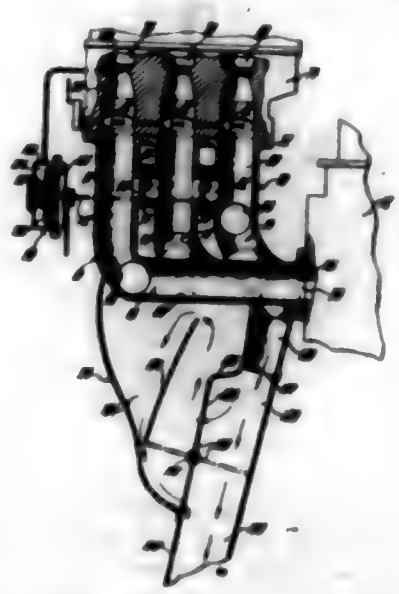
1. A charge forming device for an internal combustion engine comprising an air intake casing, an air induction passage formed in said casing, a venturi formed in said induction passage, a throttle valve rotatably mounted in said induction passage posteriorly of said venturi, a source of fuel under pressure, and conduit means for communicating said fuel source with the individual cylinders of the engine, means for metering the quantity of fuel flow through said conduit means in accordance with the mass of air flow through said venturi, each of said fuel conduit means terminating in a nozzle for supplying fuel to each cylinder of the engine, first passage means communicating said nozzle with said induction passage anteriorly of said throttle for supplying air to said fuel stream prior to its injection into said cylinder, second passage means formed in said casing for bypassing air around said throttle, a common bore intersecting said first and second passage means and communicating at one end with the induction passage posteriorly of the throttle valve, a first valve element slidably disposed in said bore and comprising a stem, a pair of axially spaced lands formed on said stem and respectively coacting with said first passage means to control the air flow therethrough, a piston slidably disposed in said bore, a portion of said stem being slidably retained in said piston, first spring means biasing said first valve element towards said piston, an engine temperature responsive means disposed adjacent one end of said slidable piston, second spring means biasing said piston into engagement with said temperature responsive means, a second valve element slidably disposed in said bore and adapted to coact with said second passage means to control the flow of air therethrough, means for connecting said second valve element to said first valve element for relative axial movement with respect thereto, spring means for biasing said second valve element toward said first valve element, said second valve element being disposed in said bore proximate said induction passage so as to be axially movable in accordance with the manifold depression posteriorly of said throttle, said first and second valve elements being adapted to be moved axially by said temperature responsive means as engine temperature increases to at least initially increase the flow of air through said first and second passage means.

2,862,490
ENGINE

Milton A. Trinler, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 20, 1954, Serial No. 463,482
16 Claims. (Cl. 123—122)

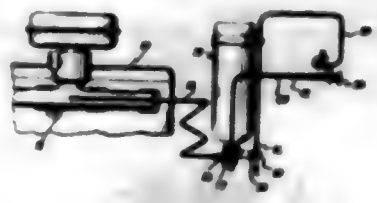
1. An intake manifold for an engine having a row of intake ports in one side thereof, said intake manifold comprising a member adapted to be secured to said side of said engine, a plurality of distribution passages extending through said member, each of said distribution passages having a center portion and a pair of end portions angularly disposed with respect to said center portion, the end portions of each of said distribution passages forming pairs of outlet ports in one side of said member, each of said pairs of outlet ports being disposed substantially symmetrically about the center of said side of said member and positioned to register with said intake ports, and a separate fuel supply passage for each of said distribution passages, each of said fuel supply passages being connected directly to only one of said center portions.



2,862,491
STARTING DEVICE FOR INTERNAL COMBUSTION ENGINES

Milton Burack, Phoenix, Ariz.

Application April 22, 1957, Serial No. 654,387
1 Claim. (Cl. 123—187.5)

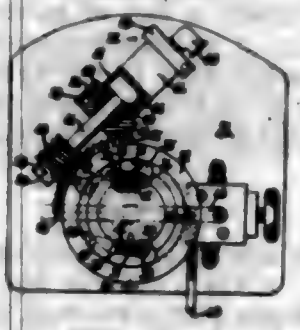


An internal combustion engine starting aid comprising a tank containing a compressed, highly volatile explosive gas and a control valve mechanism adapted to manual modulation of a continuous flow of said gas from said cylinder, said control valve mechanism comprising a valve body having a discharge port connected to the intake manifold of the internal combustion engine, a chamber in said valve body formed by a threaded bore, a restrictive passageway in said valve body interconnected between said discharge port and said chamber to limit flow therebetween, a threaded neck on said tank adapted to fit in said threaded bore to close said chamber, an inwardly deflectable normally closed check valve in the neck of said tank to retain the gas in said tank, an auxiliary slidable stem adapted to engage said check valve carried in a bore formed in said valve body having an enlarged outer end slidingly mounted in a counterbore formed in said valve body, a compression spring in said counterbore located around said stem and acting between the enlarged outer end of said stem and the bottom of said counterbore to move said stem away from said check valve, an actuating lever having one end pivotally mount-

portion, a tip portion connected to said body portion and neath the abdomen of the wearer's body, and said body

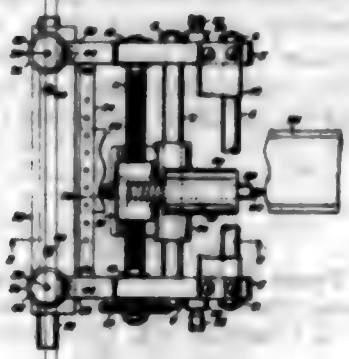
ed on said valve body, the outer end of said stem engaging an intermediate portion of said lever, a pull knob having movable control wire connected to the other end of said lever, and a spring interacting between said other end of said lever and said valve body to yieldingly urge said lever away from said stem whereby manipulation of said pull knob regulates the degree of opening of said check valve.

2,862,492
HYDRAULIC IN-FEEDING MECHANISM FOR DIAMOND TOOLS
Stanford P. Bruce and Arthur T. Kohlstrunk, Detroit, Mich., assignors to Wheel Trueing Tool Company, Detroit, Mich., a corporation of Delaware
Application May 27, 1955, Serial No. 511,491
4 Claims. (Cl. 125—11)



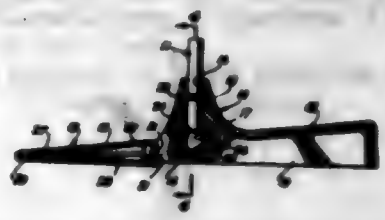
5. An incremental advancing mechanism comprising a housing, a lead screw shaft journalled in said housing, an overrunning clutch coupled to said screw shaft, a stop block in said housing, a gear segment secured to said clutch mechanism and oscillatable between positions of engagement with said stop block, comprising a reciprocable member connected to said gear segment, and means for adjusting the stroke of reciprocation of the reciprocable member to vary the increment of movement of said screw shaft upon reciprocation of said reciprocable member means to oscillatably drive said gear segment.

2,862,493
DEVICE FOR CONTOURING GRINDING WHEELS
Theodore J. Pesce, East Hartford, Conn., assignor to The Scull Machine Company, Incorporated, East Hartford, Conn., a corporation of Connecticut
Application May 24, 1957, Serial No. 661,368
4 Claims. (Cl. 125—11)



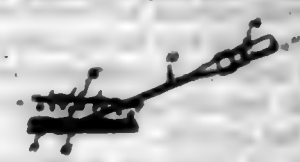
1. A grinding wheel shaping and dressing device including a frame having a pair of side members, parallel tie bars between said members, a carrier slidable on one of said tie bars, a screw bar rotatably mounted on said side members and extending therebetween parallel to the tie bars, an extension on said carrier in threaded engagement with said screw bar, a plunger slidably mounted in said carrier, a dressing tool carried at one end of said plunger and adapted to engage a grinding wheel, a tracer member at the opposite end of the said plunger, a supporting bar extending between said side members, a template secured to said supporting bar in position to be engaged by the said tracer member, axial means upon the opposite sides of said side members adapted to engage the centers of said grinding machine for mounting the said device therein in operative position relatively to the grinding wheel, clamping means for securing the said device against rotation about the axes of said centers, and means for driving said screw bar in alternately opposite directions.

2,862,494
SYRINGE
Carl M. Hardee, Whittier, Calif.
Application December 5, 1955, Serial No. 551,829
7 Claims. (Cl. 128—218)



1. A hypodermic syringe comprising: A body formed of injectable plastic material and having a substantially flat skin contacting base; a cannula mounted in said body and extending forwardly therefrom at a small acute angle to said base, said cannula having a pointed end, the tip of which lies substantially in the plane of said base; a cylinder in said body extending substantially perpendicular to said base; a piston in said cylinder; said cannula extending into said cylinder and having an opening communicating with said cylinder.

2,862,495
HYPODERMIC NEEDLE
Theodore H. Gewecke, Glenview, Ill., assignor to Baxter Laboratories, Inc.
Application May 6, 1955, Serial No. 506,448
3 Claims. (Cl. 128—221)



1. A hypodermic needle comprising a metal tubular portion and a tapered end portion, an adapter-receiving hub on the other end of said tubular portion integral with said tubular portion, said tapered portion being provided with at least two angularly opposed openings communicating with the bore of said tubular portion, the angular disposition of said openings being such that when said needle is inserted into a vein and one of said openings is blocked by the inner wall of said vein, the other of said openings is unobstructed by said vein wall.

2,862,496
PASTE DISPENSER
Weddie Howard Hamler, Memphis, Tenn., and Raymond W. Barton, Evansville, Ind.; said Barton assignor to Mead Johnson & Company, a corporation of Indiana
Application December 9, 1954, Serial No. 474,146
8 Claims. (Cl. 128—261)

4. A medicament applicator of the character described, comprising a collapsible, medicament-containing body

elastic sides that are of substantial height for engagement about the wearer's hips and that have lower front

closed band, and a longitudinally elastic auxiliary strip of material sufficiently long to extend about the front

1. An intake manifold for an engine having a row

valve, an actuating lever having one end pivotally mount-

portion, a tip portion connected to said body portion and insertable into a body opening and relatively rigid generally flat plate means extending transversely beyond the sides of said body portion and having manually engageable edge portions for effecting insertion of said tip portion into a body opening without exerting a collapsing force on said body portion.

2,862,497
URINARY CATHETER
Vito V. Pagano, Jackson Heights, N. Y.
Application February 7, 1958, Serial No. 713,815
4 Claims. (Cl. 128—349)

1. A relatively long, slender, hollow, tubular catheter having an apertured end, the other end of the tubular catheter being formed with an adjacent annular portion of reduced internal diameter and leading to a lateral communicating septum and the other being a discharge passage, a ball valve member larger than the internal diameter of said annular portion and within the tubular portion of the catheter, said ball being adapted to be manipulated through the walls of the catheter from a closed position to the lateral septum and into an open position to a position within the septum.

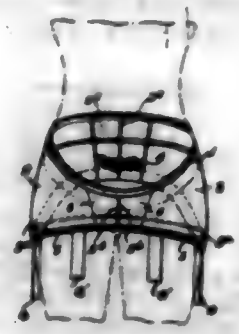
2,862,498
ENDOTRACHEAL TUBE
Don J. Weekes, Brookline, Mass.
Application June 14, 1957, Serial No. 665,732
6 Claims. (Cl. 128—351)

6. An endotracheal tube comprising an elongated tube having a distal end tapered on two opposed sides in plan elevation and terminating in a relatively narrow central strut, openings in said opposed sides communicating with the tube, said strut having a forwardly and downwardly inclined surface in side elevation terminating in a relatively small flexible extension.

2,862,499
COMBINED ABDOMEN-SUPPORTING MEANS AND GARTER BELT
Paula Blatt, Cleveland, Ohio
Application October 24, 1955, Serial No. 542,437
2 Claims. (Cl. 128—535)

1. A garter belt and abdomen-supporting means comprising a closed body of elastic material of less height in the front than in the rear thereof, said body of material in the front being adapted to engage exclusively be-

neath the abdomen of the wearer's body, and said body of material in the rear thereof being adapted to have engagement with the sacroiliac region of her body, said body of material being inclined downwardly from the front and rear thereof towards opposite points at the two



sides of the garment, a pair of garters attached to said body of material at points corresponding approximately to the front median lines of the wearer's thighs, and a garter attached to each side of said body of material at a point where said downward inclinations thereof meet.

2,862,500
COMBINED ABDOMEN-SUPPORTING MEANS AND GARTER BELT
Paula Blatt, Cleveland, Ohio
Application October 24, 1955, Serial No. 542,418
2 Claims. (Cl. 128—535)

1. A maternity garment comprising a closed band of longitudinally elastic material adapted to be inverted and reversed in its position upon the body of the wearer and having opposite portions adapted for engagement with either the abdominal region or the sacroiliac region of the body of the wearer and having side portions between said opposite portions, invertibly operative garter-attaching means provided upon said side portions of said band substantially midway of the height thereof so as to assume substantially the same position in either upright or inverted position of said band upon the wearer's body, and garters with readily attachable and detachable means of engagement with said invertible garter-attaching means.

2,862,501
GARTER BELT
Paula Blatt, Cleveland, Ohio
Application March 5, 1957, Serial No. 643,961
2 Claims. (Cl. 128—535)

1. A garment comprising a band adapted to extend about the waist and hip regions of the wearer's body and having a rear part adapted for engagement with the sacroiliac region of her body, said band having laterally

edge of said channel, said raised portion of said strip extending and sealing host to said wall for a length of

plate secured to said supporting bar in position to be en-

elastic sides that are of substantial height for engagement about the wearer's hips and that have lower front end portions spaced from each other, the lower edges of said elastic sides extending substantially horizontally when in idle condition, a longitudinally elastic inner garter strap attached to the lower part of each of said front end portions as a continuation thereof in the same substantially horizontal manner when in idle condition off of the wearer's body and adapted to extend downwardly and forwardly when the garment is in stretched condition about the hips of the wearer, and oppositely disposed longitudinally elastic outer garter straps attached to said rear part of said band and adapted to extend downwardly and forwardly in a manner substantially parallel to said inner garter straps when the garters are in position of actual use upon the body of the wearer.

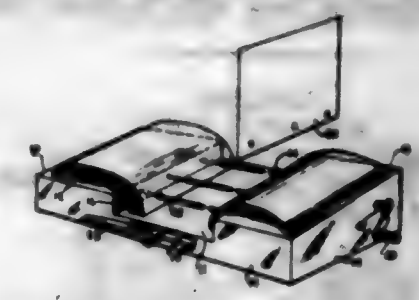
2,862,502
MATERNITY GIRDLE
Paula Blatt, Cleveland, Ohio
Application April 15, 1955, Serial No. 501,674
3 Claims. (Cl. 128—540)

1. A maternity girdle comprising a front body of elastic material adapted to cover substantially the abdominal region of the body of the wearer, a rear body of elastic material adapted to cover substantially the buttock of her body, said front and rear bodies being connected together along angularly and downwardly extending joints from points at the rear to points at the front of the wearer's body when the garment is in position thereupon, an abdomen-supporting strip of material of less vertical extent than said front body of material and having horizontal stretch and connected at its ends to the joints between said front and rear bodies of material, said abdomen-supporting strip being located upon the inside of the lower marginal portion of said front body of material in a free manner with respect thereto so as to permit vertical adjustment of said front body of material independently of said abdomen-supporting means.

2,862,503
MATERNITY GIRDLE WITH SEPARABLE GARTER-SUPPORTING ATTACHMENT
Paula Blatt, Cleveland, Ohio
Application April 15, 1955, Serial No. 501,675
5 Claims. (Cl. 128—546)

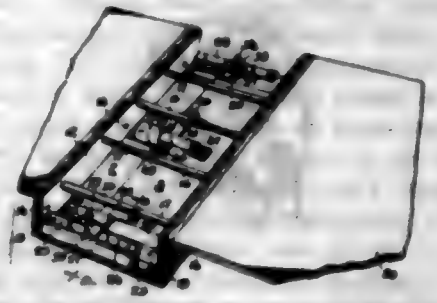
2. A maternity garment comprising a closed band of longitudinally elastic material adapted to extend in a snug manner about the body of the wearer and to have engagement with the sacroiliac region and beneath the abdomen of the wearer's body, loop form of attaching means at opposite points of the rearward part of said closed band, and a longitudinally elastic auxiliary strip of material sufficiently long to extend about the front and side portions of said band and having provided at each end thereof a companion hook form of attaching means for releasable connection to said attaching means upon said band, said auxiliary strip occupying closely overlying relation upon the outside of said band, and garter means attached to and depending from said auxiliary strip for each leg of the wearer when the garment is in position upon her body.

2,862,504
LOOSE LEAF BINDERS
Howard E. Hutzelman, Corry, Pa., assignor to Corry-Jamestown Manufacturing Corporation, Corry, Pa., a corporation of New York
Application February 11, 1954, Serial No. 409,740
7 Claims. (Cl. 129—1)



3. A binder for mounting a plurality of loose sheets or leaves that have a series of holes in their common marginal edges, said binder comprising a base having end portions provided with opposing walls defining between them a central area for receiving said sheet edges, a set of rods mounted within each end portion of said base, the rods of each set projecting through the adjacent one of said walls and in part overlying said central area and being movable with respect to said base to cause the adjacent ends of each set to abut to form continuous rods extending the full width of said central area, means connected with and operable to simultaneously move the sets of rods into and out of abutting relation to enable engagement or disengagement with the holes in said sheets, and further means connected with and operable to adjust said rods to locate said ends, when in abutment, at any desired point throughout the width of said central area.

2,862,505
LOOSE LEAF BINDER
George J. Rundblad, Wheaton, and Eremeldo Cairelli, Chicago, Ill., assignors to Wilson-Jones Company, Chicago, Ill., a corporation of Massachusetts
Original application May 5, 1950, Serial No. 160,328, now Patent No. 2,726,659, dated December 13, 1955. Divided and this application July 5, 1955, Serial No. 519,745
2 Claims. (Cl. 129—13)

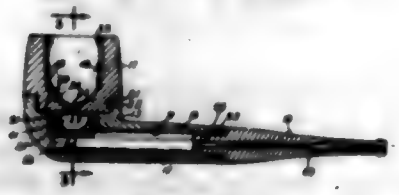


2. In a loose leaf binder, a back section having a channel extending upwardly and inwardly from one edge thereof, a second back section having an edge slidable in said channel, a ratchet bar mounted on the top of said channel, a transverse strip secured to said second back section, said strip having a raised section coplanar with the top surface of said channel adjacent the inner

for discharge from said mesh cup into the interior of

edge of said channel, said raised section of said strip having a longitudinal slot therein, a pawl, a stud rigidly secured to said pawl and extending through said longitudinal slot to provide a slidable pivotal connection between said pawl and the raised section of said strip, said pawl having an angular slot spaced from said stud, a second stud rigidly secured to the raised section of said transverse strip, said second stud projecting through said angular slot to limit the pivotal movement of said pawl, said pawl engaging said ratchet bar in one extreme position and being disengaged from said ratchet bar in its other extreme position, a projection extending upwardly from said back section below the raised section of said strip, and a tension spring having one end secured to said first mentioned stud and its other end secured to said projection to urge said first mentioned stud toward one end of said longitudinal slot with one edge of said angular slot engaging said second stud to hold said pawl against accidental displacement from either extreme position.

2,862,506
TOBACCO PIPE
Philip S. Dommitt, Portland, Oreg.
Application October 12, 1954, Serial No. 461,763
8 Claims. (Cl. 131—184)

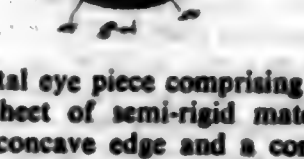


1. In a tobacco pipe comprising a bowl base, a bowl threadedly mounted on said base, a mouthpiece connected to and extending from said base, said bowl having interior side and bottom walls defining a cavity to receive tobacco, the bottom wall of said bowl having a hole extending therethrough, a scraper for said bowl including a lower portion engaging the bottom of the bowl, a central or intermediate portion occupying a position within said hole, and an upper portion occupying a position within said bowl and engaging the interior bottom and side walls thereof, said base having a slot formed therein slidably receiving the lower portion of said scraper and operable to prevent rotation of said scraper upon rotation of said bowl but to permit upward movement of said scraper with said bowl when said bowl is unthreaded from said base.

2,862,507
HAIR WAVING DEVICE
Evelyn J. Hawthorne, Philadelphia, Pa.
Application September 25, 1957, Serial No. 686,239
4 Claims. (Cl. 132—7)

1. In a hair waving method comprising placing an elongated mandrel upon the head with one end thereof seated thereagainst and the opposite end extending outwardly therefrom, wrapping a flattened tress about said mandrel commencing with the portion of said tress nearest the scalp and continuing to a point intermediate the opposite ends of said tress, whereby to ferm a compact roll from which the outer end portion of said tress extends freely outwardly, and applying heat to said roll for a length of time and to a temperature depending upon the characteristics of the hair.

2,862,508
HAIR CURLER
Edmund M. Campbell, Sacramento, Calif.
Application May 11, 1956, Serial No. 584,295
5 Claims. (Cl. 132—39)



1. A hair curler comprising a substantially U-shaped body including ends and a bight, said bight forming a bar, bearings carried by said ends, a shaft mounted for rotation within said bearings, a roller constructed of absorbent material secured on said shaft adapted to be saturated with hair treating lotion, said roller operating in parallel spaced relation with said bar clamping hair therebetween, said roller being oval in cross section providing a thick portion and a thin portion, said shaft having spirally formed grooves adjacent to one end thereof, ribs extending from the bearing at one end of said bar cooperating in said grooves adapted upon flexing of said bight to extend the legs of said U-shaped body to rotate said roller in a direction to position said thick portion adjacent said bight in order to clamp a lock of hair between said roller and bar, squeezing the lotion from said roller into the lock of hair wrapped on said roller, treating the hair and forming a curl.

2,862,509
ORNAMENTAL EYE PIECE
Violet M. Perte, New York, N. Y.
Application January 19, 1956, Serial No. 560,233
4 Claims. (Cl. 132—53)

1. An ornamental eye piece comprising a substantially crescent shaped sheet of semi-rigid material of netted texture having a concave edge and a convex edge, and pressure sensitive adhesive means provided along the said concave edge for mounting said eye piece on the upper eye lashes of the eye whereby to shade the eye in an ornamental and attractive manner.

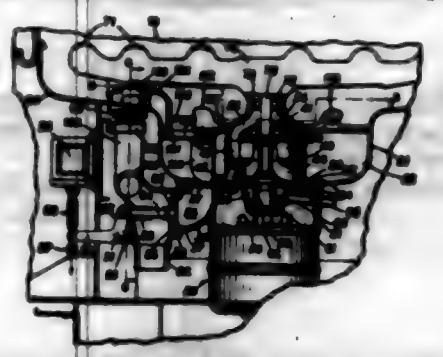
2,862,510
DISHWASHER
Russell C. Geiger and David A. Mecker, Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Application August 19, 1955, Serial No. 529,489
3 Claims. (Cl. 134—111)

1. A dishwasher of the character described comprising means including a casing defining a washing chamber having a sump adapted to be filled with liquid, a pump housing mounted centrally of the bottom of said sump and including a pumping chamber having an inlet open to said sump, a hollow wash arm mounted on the top of said pump housing for rotation on a substantially vertical axis and including a hollow hub, an impeller shaft mounted in said pump housing, means for driving said impeller shaft, an impeller mounted for rotation on said shaft in said pumping chamber, means defining passageways in said pump housing arranged to conduct the liquid from said pumping chamber to said hollow hub

2,862,513

the outlet chamber, said aspirating chamber communi-

for discharge from said wash arm into the interior of said washing chamber and drainage back into said sump, a drain outlet passageway depending from said sump at one side of said pump housing with the upper end thereof opening through the bottom wall of said sump, a drain valve controlling said passageway at a location spaced below said sump to provide space in said passageway for trapping food particles, a fine screen adapted to cover the major portion of said sump and having a centrally located aperture therein for receiving said pump housing therethrough, means supporting said fine screen on the upper portion of said sump, the periphery of said fine screen being contoured to engage the side wall of said sump along a major portion thereof but to diverge therefrom along a minor portion thereof at a location providing a



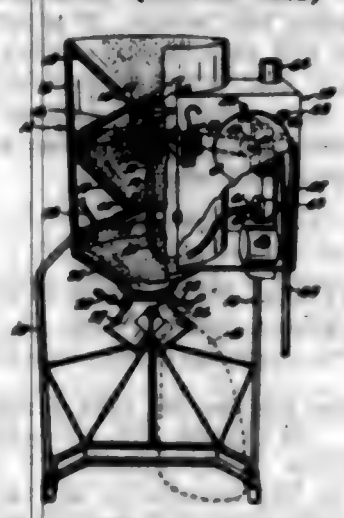
cut-out vertically overlying said passageway, a coarse screen proportioned for insertion in said cut-out in engagement with said sump side wall and said diverging portion of the periphery of said fine screen to block the passage through said cut-out of large food particles and leafy material while passing small food particles therethrough, a skirt of fine screen material depending from the portion of said coarse screen in engagement with said fine screen, and means supporting said coarse screen in said cut-out with said skirt in engagement with opposed side wall portions of said sump and with the bottom wall of said sump between said outlet passageway and said pump housing for cooperation with said sump wall portions to separate the space in said sump between said cut-out and said passageway from the remainder of said sump and thereby to prevent access to said pumping chamber inlet of food particles passing through said coarse screen and to effect the delivery of said small food particles to said trapping space in said outlet passageway.

2,862,511

APPARATUS FOR LIQUID TREATMENT OF GRANULAR MATERIAL

Arthur R. Forsberg, Thief River Falls, Minn.

Application March 20, 1956, Serial No. 572,653
3 Claims. (Cl. 134—183)



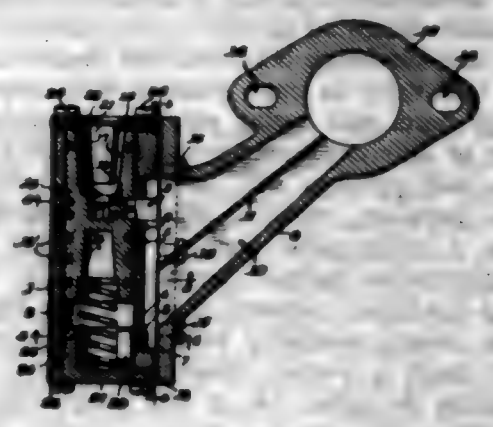
3. Apparatus for treating granular material with a liquid comprising a housing, material-carrying means delivering granular material into the upper portion of the housing, distributing means within the housing and receiving and directing the granular material outwardly in multi-directions, said distributing means being constructed and arranged to form a free-falling continuous curtain of granular material, a radially-bristled rotary brush mounted on a vertical axis within the housing and disposed below said distributing means and inwardly of the continuous curtain of granular material, and conduit means directing the treating liquid onto said brush, whereby misted treating liquid and air are impelled outwardly by the brush for thoroughly treating and agitating the free-falling curtain of granular material.

2,862,512

GASEOUS FUEL IMPROVING AND SAVING DEVICE FOR INTERNAL COMBUSTION ENGINES

Harry A. Johannesen, Chicago, Ill.

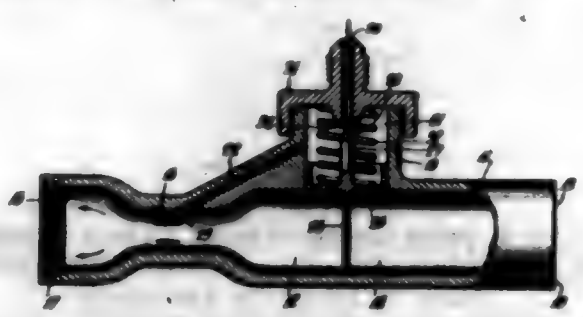
Application December 24, 1956, Serial No. 630,099
4 Claims. (Cl. 137—98)



1. A device for proportioning and delivering additional air to carbureted fuel comprising in combination with an internal combustion engine intake manifold and a carburetor communicating therewith, an arm internally channeled throughout its length, a ported fitting on one end thereof communicating with the adjacent end of the channel, said fitting being interposed between and communicating with the carbureted fuel delivery end of the carburetor and the intake manifold, a cylinder on the remaining end of said arm a side wall of which has longitudinally disposed and spaced ports therein communicating with the cylinder interior and the remaining end of said channel, certain of said ports being located to one side of the transverse axis of the cylinder and graduated in size, and another located to the opposite side of the transverse axis, a piston slideable in the cylinder having separate and coaxially disposed pockets therein opening, respectively, onto its opposite ends, said piston having longitudinally spaced circumferentially extending ways and communicating radially disposed ducts therein, the ducts opening into the inner end portion of one of said pockets whereby with sliding of said piston in the cylinder the ways therein will selectively communicate with said certain ports to regulate the volume of air flow through the ducts and ways and ports into and through the internally channeled arm to the carburetor, airflow accelerating means mounted in one end of the cylinder communicating with the last mentioned pocket, a wall having air passage opening therethrough on that end of the body in proximity to the airflow accelerating means, other means in the cylinder engaged in the remaining piston pocket and with the piston urging sliding movement of the piston in one direction in the cylinder whereby to normally register said ducts with certain of said graduated ports, and a second wall on the remaining end of the cylinder closing the same.

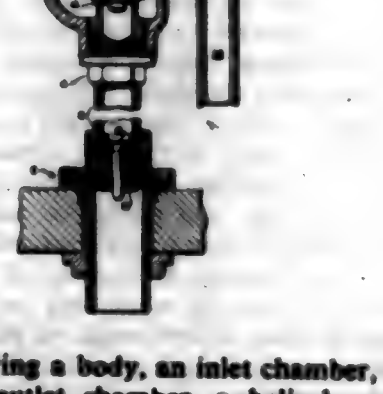
permit and prevent its flow in different positions of the respectively, and having diameters equal to each other

2,862,513
BLEEDER VALVE
Jean Mercier and Jacques H. Mercier, New York, N. Y.
Original application March 31, 1953, Serial No. 345,986, now Patent No. 2,772,690, dated December 4, 1956. Divided and this application June 1, 1956, Serial No. 588,819
4 Claims. (Cl. 137—117)



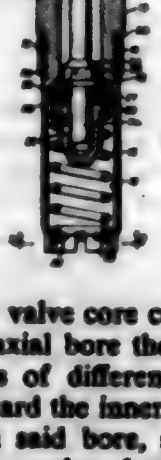
1. A bleeder valve construction comprising a casing having a passageway therethrough with a liquid inlet at one end, a liquid outlet at the other end and a bleeder section therebetween having a discharge bore of diameter smaller than that of said liquid outlet, a valve controlling said discharge bore, resilient means normally retaining said valve in open position with respect to said discharge bore, said casing passageway having adjacent portions of different diameters whereby the fluid flowing through said portions will, as the flow velocity therethrough increases, create a differential pressure in said portions, a reciprocable member controlling said valve, said reciprocable member having one side thereof exposed to the higher pressure created in the larger of said portions, means associated with the smaller of said portions to create a Venturi effect to provide a lower pressure against the other side of said reciprocable member, said reciprocable member being movable against said resilient means when the difference between said pressures exceeds a predetermined amount to overcome the force of said resilient means, thereby moving said valve to close said discharge bore.

2,862,514
BALLCOCKS
Francis G. Curtin, Medford, Mass.
Application July 20, 1954, Serial No. 444,486
1 Claim. (Cl. 137—216)



A ballcock having a body, an inlet chamber, a plunger and a seat, an outlet chamber, a helical passage surrounding the plunger and leading from the inlet chamber to the outlet chamber, a by-pass passage also leading from the inlet chamber to the outlet chamber, means for adjusting the relative flows through the passages, a horizontal partition forming an aspirating chamber above the outlet chamber, said aspirating chamber communicating with the outlet chamber, a hush tube leading downwardly from the outlet and aspirating chambers, the body having at the top a permanent aspirating opening above said partition to prevent back siphonage, the aspirating chamber extending beyond the aspirating opening to constitute an air cushion space remote from said outlet, said air cushion space having a permanent relief opening to relieve air pressure in the air cushion space under normal filling conditions, the aspirating opening being disposed nearer to the outlet than the relief opening, said adjusting means being set to cause back-up of water in the vicinity of the aspirating opening under filling conditions.

2,862,515
CHECK VALVE
Joseph Briechle, New Canaan, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a specially chartered corporation of Connecticut
Application February 21, 1956, Serial No. 566,819
2 Claims. (Cl. 137—234.5)



1. A valve check or valve core comprising a one-piece, rigid body having an axial bore therethrough, a shoulder between bore portions of different diameters providing a valve seat facing toward the inner end of the axial bore, a valve pin guided in said bore, said valve pin having intermediate its ends a valve device for engaging said valve seat, said valve device including a fixed, rigid enlargement on the pin, a deformable packing slidingly mounted on the pin adjacent the enlargement and a retainer for the packing floatingly mounted on said pin, said rigid enlargement being adapted for engagement with the valve seat after a predetermined amount of compressive deformation of the packing to limit such deformation in valve closing position, and a compression spring within the bore of the body having a force sufficient for biasing the retainer to move along the valve pin and urge said packing into sealing engagement with the valve seat, said deformable packing being formed of material having sufficient resistance to deformation to prevent said spring from causing said rigid enlargement to engage said seat.

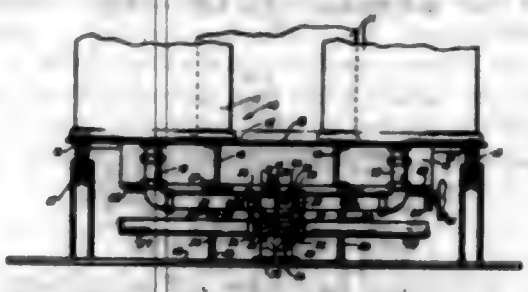
2,862,516
MATERIAL TRANSFER TURNTABLE
George M. Kovac, Lincolnwood, Ill., assignor to Rex Plastics, Inc., Lansing, Mich., a corporation of Michigan
Application January 30, 1956, Serial No. 562,124
10 Claims. (Cl. 137—257)

6. A turntable device suitable for rotatively moving a container or like member to different positions, comprising a movable support, means to impart rotative movement thereto, said support carrying a material flow conduit for rotative movement therewith, and a valve unit automatically controlling material in said conduit to

opening in said face having a vertical longitudinal axis.

2,862,531

permit and prevent its flow in different positions of the support, said unit comprising a fixed valve core of circular cross section disposed on an upright axis and provided with at least one axially extending passage therein having radial openings exposed in parallel planes to the peripheral exterior thereof at axially spaced points,



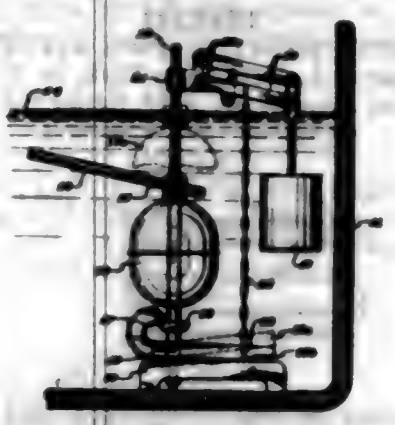
said core being radially sealed from said exterior between said openings, a rotatable valve member on said conduit in rotatively sliding engagement with said core and alternating connecting and disconnecting flow communication of said conduit with the axially uppermost of said passage openings, and a further conduit in fixed communication with said passage at the lowermost opening thereof.

2,862,517

CLOSET SHUTOFF VALVE MECHANISM

Michael Kraft, Tempe, Ariz.

Application July 12, 1956, Serial No. 597,380
3 Claims. (Cl. 137—417)



1. A device for actuating a shutoff valve mechanism for a closet having a tank, a shutoff valve operating lever, a first float ball vertically reciprocatable on said tank connected to actuate said lever to shut off position with the rising of the water in said tank, a second float pivotally mounted on said tank for vertical reciprocatory movement in response to the rise and fall of the water level therein, a latch mounted on said tank engaging a latch piece on said first float to secure said first float in lower full open position of said valve operating lever, and means including a chain between said second float and said latch to release said latch by the upward movement of said second float.

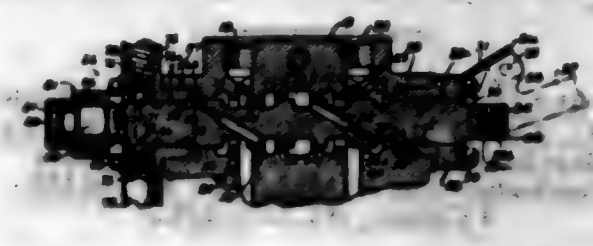
2,862,518

DIRECTIONAL FLOW CONTROL VALVE

John C. McAlvay, Racine, Wis., assignor to Webster Electric Company, Racine, Wis., a corporation of Delaware

Application March 23, 1956, Serial No. 573,483
2 Claims. (Cl. 137—625.5)

2. A valve for controlling the delivery of fluid to a fluid operated device, said valve comprising a valve body having a valve bore therein, a generally cylindrical valve plunger including a center land, first and second lands disposed on opposite sides of and equidistant from said center land and third and fourth lands spaced from said first and second lands, respectively, first and second pistons on said plunger spaced from said third and fourth lands, respectively, and having diameters equal to each other but less than the diameter of the plunger, means forming a first fluid pocket between said third land and said first piston, means forming a second fluid pocket between said fourth land and said second piston, a first passageway in said plunger extending from said first fluid pocket to the space between said first land and the center land, a second passageway in the plunger extending between the second fluid pocket and the space between the second land and the center land, first and second fluid inlet passages intersecting said bore, first and second work ports communicating with said bore at positions spaced respectively from said first and second inlet passages, first and second fluid outlet passages communicating with said bore at positions respectively spaced from said first and second work ports, said valve plunger having an "off" position in which the work ports are blocked both from the inlet



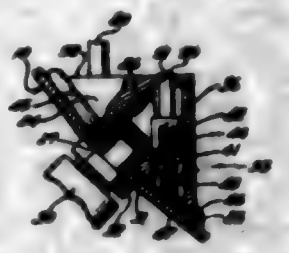
passages and the fluid outlet passages, said valve plunger being movable to a first position wherein the first fluid inlet passage is connected to the first work port, the second work port is connected to the second fluid outlet passage, said first passageway is connected to one of said outlet passages and the second passageway is connected to said second inlet passage so that a fluid force is developed on said plunger tending to return the valve plunger to said "off" position, said valve plunger being movable to a second position wherein the second fluid inlet passage is connected to the second work port, the first work port is connected to the first fluid outlet passage, the second passageway is connected to one of the outlet passages, and the first passageway is connected to the first inlet passage in order to supply fluid to said first pocket to develop a force on said plunger tending to return the plunger to said "off" position.

2,862,519

SWIRL AND SPRAY FITTING

Gilbert M. Motis, Northridge, Calif., assignor to Waste King Corporation, Los Angeles, Calif., a corporation of California

Application February 14, 1955, Serial No. 488,095
6 Claims. (Cl. 137—625.42)



3. A valve which is adapted to be mounted on the wall of a generally conical sink having a tableware receptacle therein and a cover removably positioned thereover, said valve including: a valve body having a shaped mounting face; an inlet in said face, said inlet comprising a threaded opening adapted to receive a fitting which clamps said valve body in position and also supplies liquid under pressure to said inlet; a first outlet to direct a stream of liquid outward from said valve in a first direction; a second outlet to direct a stream of liquid outward from said valve in a second direction; a plunger guide in said valve body, said guide comprising another

ber, an outlet therefrom, a valve in said chamber com-

2,862,526

horizontal partition forming an aspirating chamber above automatically controlling material in said conduit to

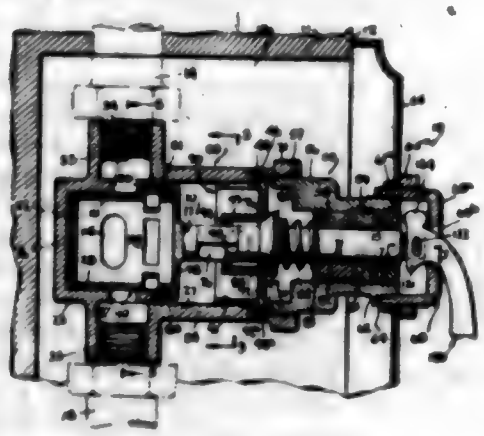
opening in said face having a vertical longitudinal axis, said other opening extending completely through said valve body and consisting of a lower section and an upper section, said upper section having less cross-sectional area than said lower section; a plunger mounted in said plunger guide, said plunger having an upper portion extending above said valve body and being movable vertically between a first position wherein it opens said first outlet and closes said second outlet and a second position wherein it closes said first outlet and opens said second outlet; gasket means of flexible, water-resistant material, said gasket means covering said face except for an aperture corresponding to said threaded opening, and having a rim resiliently holding said gasket means to said valve body; and spring means located in said plunger guide, said spring means resting against said gasket means and urging said plunger toward said first position.

2,862,520

COMPOUND VALVE FOR MIXING, DISTRIBUTING, AND VOLUME CONTROL OF FLUID

José Juan Córdova, Buenos Aires, Argentina

Application June 28, 1955, Serial No. 516,455
4 Claims. (Cl. 137—636.2)



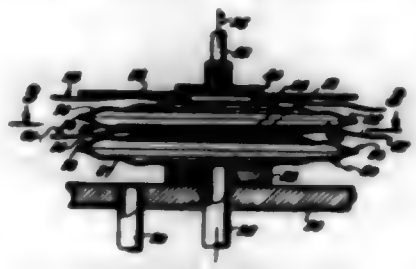
1. A valve comprising a valve casing formed with a first bore and a second bore coaxial therewith and of greater diameter and communicating therewith, said valve casing being formed with a pair of diametrically opposed fluid outlet openings communicating with the first bore and being further formed with a pair of diametrically opposed inlet fluid openings communicating with the second bore and offset from the outlet openings and disposed at right angles thereto, a valve sleeve within the first bore, a valve stem extending axially from the valve sleeve, means to support said valve stem for rotary and sliding movement, said valve sleeve being formed with a slot, a second valve sleeve rotatably and non-slidably mounted within the second bore and having a sliding, non-rotary connection to the stem, said second sleeve being formed with a pair of openings spaced apart less than 180°, one of the valve openings in the second sleeve being adapted to register with one of the inlet openings while the other inlet opening is closed, and said openings in the second sleeve being adapted to overlap said inlet openings in varying proportions, said slot in the first sleeve having an angular extent substantially equal to the combined angular extent of the openings in the second valve sleeve, the center of said slot bisecting the angle between said pair of openings in said second sleeve, said first sleeve being formed with a plurality of openings adapted to be uncovered upon slidably moving said stem, and means including a single handle for both rotating and slidably moving said stem, said second sleeve being formed with a sealing seat surrounding said stem, a sealing plug on said stem, and spring means on said stem for pressing said plug against said sealing seat.

2,862,521

VIBRATION DAMPING MEANS FOR PRESSURE SENSITIVE DEVICES

Charles Fenoglio, Pasadena, Calif., assignor to G. M. Giannini & Co. Inc., Pasadena, Calif., a corporation of New York

Application September 27, 1954, Serial No. 458,445
6 Claims. (Cl. 137—781)



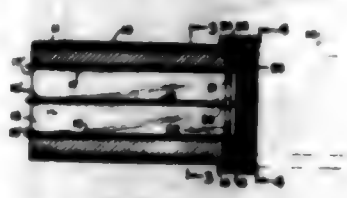
1. In combination with a pressure responsive device having a thin resilient wall that is deformable in response to differences in the pressures acting upon the opposite faces of the wall, means for damping vibration of the pressure responsive device comprising structure forming a surface in spaced relation to the wall, and a sheet-like formation of relatively pliable material loosely confined between the surface and the wall, a major portion of the formation being freely movable between a position spaced from the wall and a position lightly touching the wall.

2,862,522

FLOW-INDUCING PIPE FITTING

Oscar A. Yost, New York, N. Y.

Application January 28, 1957, Serial No. 636,679
4 Claims. (Cl. 138—37)



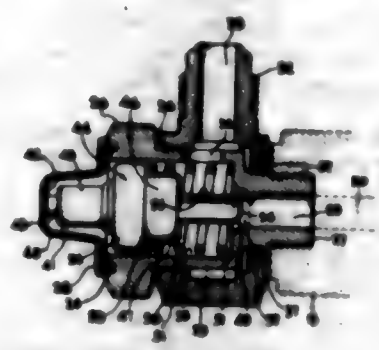
1. A flow-inducing pipe fitting comprising a cylindrical body having an internal cylindrical wall surface, means on the respective opposite ends of the fitting adapted to secure the fitting to a pipe line, angularly-adjustable, and bendable rib means anchored to the internal wall surface of the body at one location thereon and means for retaining the rib means in an angularly-adjusted position on the wall surface and angled from its anchor point.

2,862,523

THERMOSTATIC FLUID RESTRICTOR

Frank E. Obermaier, Oak Park, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois

Application April 18, 1955, Serial No. 501,988
7 Claims. (Cl. 138—46)



1. In a thermostatic fluid restrictor valve, a valve body having a valve chamber therein, an inlet into said cham-

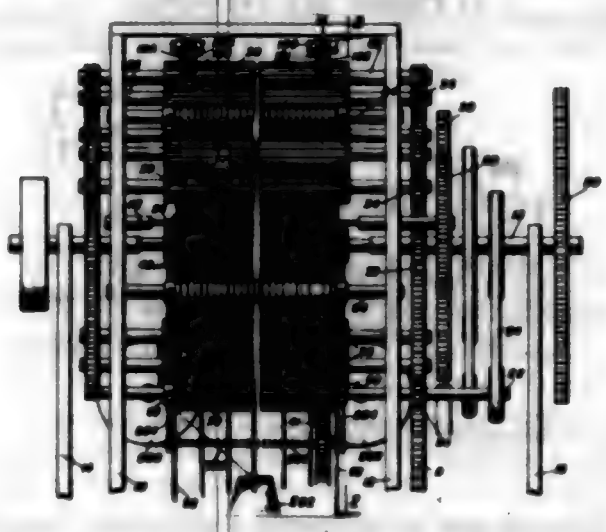
clamping means opening means, wherein said

ber, an outlet therefrom, a valve in said chamber comprising an elongated metering pin in axial alignment with said outlet and moving thereinto upon predetermined increases in temperature, a spring seated in said chamber and engaging said valve and retractibly moving said valve with respect to said outlet, and a thermal element within said chamber, mounting said valve within said chamber and having a piston extensible upon predetermined increases in temperature and reacting against an end of said chamber for moving said valve within said outlet to restrict the flow therethrough upon certain predetermined increases in temperature of the fluid flowing through said chamber.

2,862,524
REINFORCED PLASTIC ARTICLE
Robert E. Smith, Linden, N. J., assignor to Johns-Manville Corporation, New York, N. Y., a corporation of New York
Application October 5, 1954, Serial No. 460,451
11 Claims. (Cl. 138—76)

1. A hollow circular article comprising fibrous reinforcing media impregnated with a resinous binder, said media comprising a peripherally wound web of asbestos fibers having glass filaments interfelted therewith and embedded therein.

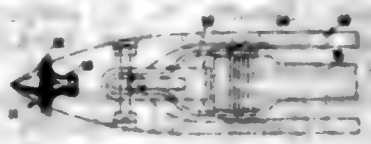
2,862,525
ROTARY WEAVING MACHINE
Thomas F. McGinley, Phillipsburg, N. J.
Application October 29, 1954, Serial No. 465,617
28 Claims. (Cl. 139—17)



8. A rotary weaving machine having warp thread bobbins, means supporting said bobbins in spaced positions about a common axis of rotation, means for causing movement of said bobbins about said common axis, means for causing during said movement relative vertical displacement of selected bobbins and the warp threads extending therefrom for providing alternate sheds, means for passing courses of filling through said sheds.

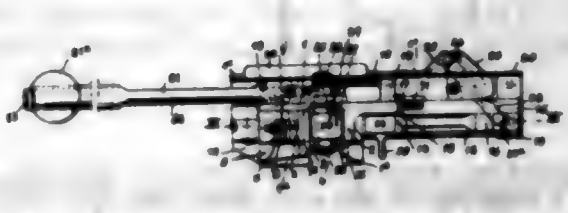
12. A method of weaving comprising holding in relatively fixed position one end of each of a plurality of warp threads, revolving the other end of each of said warp threads about a common axis to produce thereby a reciprocating shed, passing a filling thread through said shed during rotation of said other ends.

2,862,526
LOOM SHUTTLE
Paul C. Consoletti, Milford, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Application May 16, 1955, Serial No. 508,425
7 Claims. (Cl. 139—196)



7. A shuttle spur having a tip and shank, said tip being blended into the shank by a corrugated, shuttle body abutting section having alternating ridges and grooves which originate substantially at the spur shank.

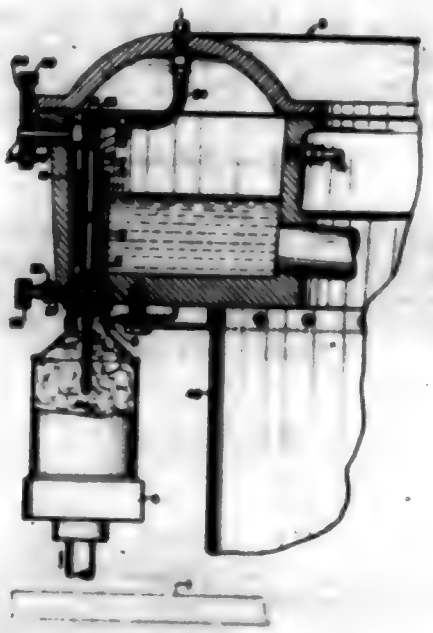
2,862,527
MACHINE FOR BINDING PARCELS
Juliette Rebichon, nee Meyronneinc, Paris, France
Application June 30, 1953, Serial No. 365,216
Claims priority, application France July 17, 1952
1 Claim. (Cl. 140—93.4)



A package binding tool comprising a frame for resting on the package to be bound, seal clamping means on said frame, a seal magazine on said frame adjacent said clamping means, tension means on said frame for engaging one end of a binding strip and drawing it taut around the package, automatically operable means on said frame for holding the strip taut with the ends of the strip in overlapping relation adjacent said clamping means, a plunger reciprocally mounted on said frame for feeding seals one at a time from said magazine to said clamping means, a bar reciprocally mounted on said frame for operating said tension means, means releasably connecting said plunger with said bar to actuate said plunger upon reciprocation of said bar to feed one seal to said clamping means and then release said plunger, a pawl pivotally mounted on said frame adjacent said plunger, said plunger having a notch for receiving said pawl when said plunger is moved to the end of its retracted stroke to lock said plunger in retracted position, cam means on said bar and engageable with said pawl when said bar is in its normal rest position to withdraw said pawl from said plunger, means on said frame for operating said clamping means, a single operating handle reciprocally mounted on said frame, and clutch means normally operatively connecting said handle with said bar and enabling reciprocation of said handle to reciprocate said bar to initially reciprocate said plunger to feed a seal and to repeatedly reciprocate said bar to tension a binding strip, said clutch means including a control member on said handle and selectively operable to disconnect said bar and to connect said handle with said

clamping means operating means, whereby said handle may be operated until the binding strip is taut and then said clutch means actuated to effect operation of said clamping means to seal the taut strip around the package.

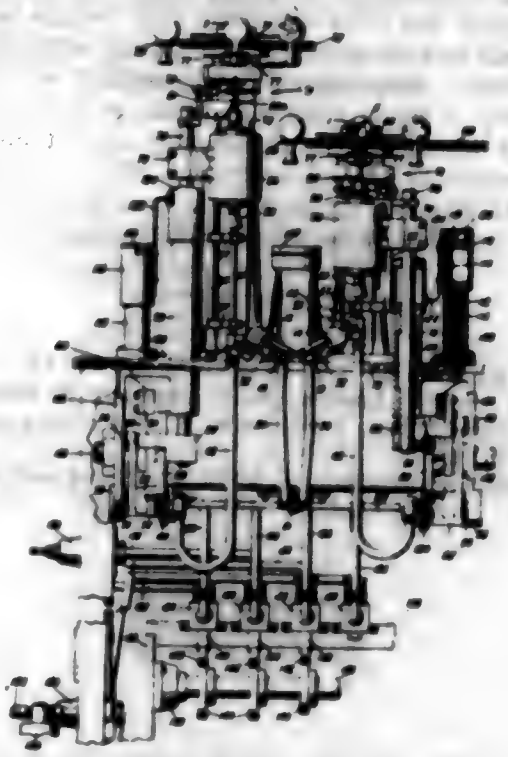
2,862,528
STERILIZING AND PACKAGING BEVERAGES
William Geisler, Tenafly, N. J., assignor to Cantrell & Cochrane Corporation, New York, N. Y., a corporation of Delaware
Application June 28, 1955, Serial No. 516,631
3 Claims. (Cl. 141—39)



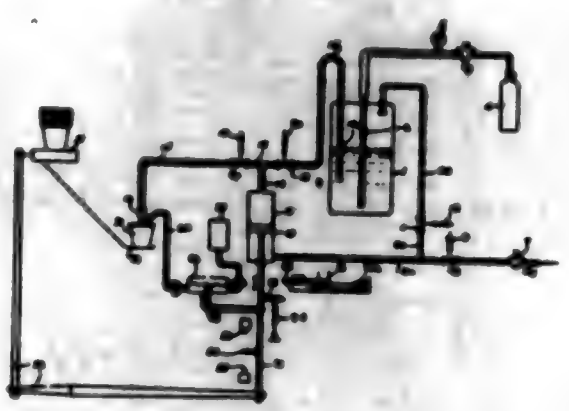
1. In a machine of the class described, the combination of a carrier for containers, a reservoir for liquid to be packaged, a series of filling spouts attached to said reservoir and positioned to discharge into containers on said carrier, means for successively bringing said containers into fluid tight contact with said filling spouts, tubular members carried by said spouts and positioned to discharge into said containers when said containers are brought into engagement with said spouts, a source of steam under sterilizing pressure, a source of inert gas under pressure, said filling spouts having valves opening to the atmosphere, valves controlling the passage of steam, gas under pressure and the liquid to be packaged to said filling spouts, means to close said first mentioned valves at the beginning of steam flow and to open said first mentioned valves after pressure is built up, and means thereafter for delivering the liquid to be packaged and gas under pressure to said filling spouts while maintaining a superatmospheric pressure in said container to prevent ingress of air.

2,862,529
APPARATUS FOR FEEDING FILAMENTARY PARTICLES
Alexander Rosenblatt and Donald H. Pfefferle, Williamsport, Pa., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application January 31, 1956, Serial No. 562,442
10 Claims. (Cl. 141—67)

1. Apparatus for providing lamp bulbs with a filling of filamentary particles comprising: a nozzle through which filamentary particles may be discharged; a conveyor disposed in operative relationship with respect to said nozzle for carrying lamp bulbs sequentially into register with said nozzle; means for reciprocating said nozzle into and out of a lamp bulb in register therewith on said conveyor; means for causing a flow of filamentary particles through said nozzle when said nozzle is in the advanced position of its reciprocating stroke; and means for rotating said nozzle when said nozzle is in the advanced position of its reciprocating stroke to effect a distribution within the lamp bulb of the filamentary particles flowing from said nozzle.



2,862,530
LIQUID DISPENSING MECHANISM
John W. Bell, Georgetown, Ontario, Canada, assignor, by mesne assignments, to Vendomatic Limited, Toronto Ontario, Canada
Application December 6, 1956, Serial No. 626,754
Claims priority, application Canada January 30, 1956
12 Claims. (Cl. 141—100)



1. A mechanism for dispensing a measured quantity of a liquid, said mechanism comprising an expansible chamber; means continuously tending to diminish the volume of said chamber; a first conduit containing first valve means connecting said chamber with a source of said liquid at a pressure sufficient to expand said chamber against the force of said means tending to diminish the volume thereof; a discharge conduit extending from said chamber; second valve means situated in said discharge conduit; and operating means for maintaining said second valve means closed while said first valve means are open to enable said expansible chamber to receive liquid from said source and expand, and for subsequently closing said first valve means while opening said second valve means to enable said means tending to diminish the volume of said chamber to expel such liquid therefrom and along said conduit.

2,862,535

2,862,537

2,862,531
BALLOON DISTRESS SIGNAL
Frank S. Walker, Framingham, Mass.
Application September 16, 1956, Serial No. 609,884
13 Claims. (Cl. 141—317)

1. A device for inflating a resilient balloon having a neck, and in combination, a cap including means to form a seal with the neck of the balloon, said cap having a circular bottom edge, a tube through said cap forming a passage, a plug having an external shape conforming to at least part of the interior of said tube and adapted to be moved into said tube from the inside of said neck to plug said passage, and a snap-on ring shaped so as to be engaged with said cap and having a portion which makes contact with said bottom edge and another portion which presses against the surface of said cap when the ring is so engaged.

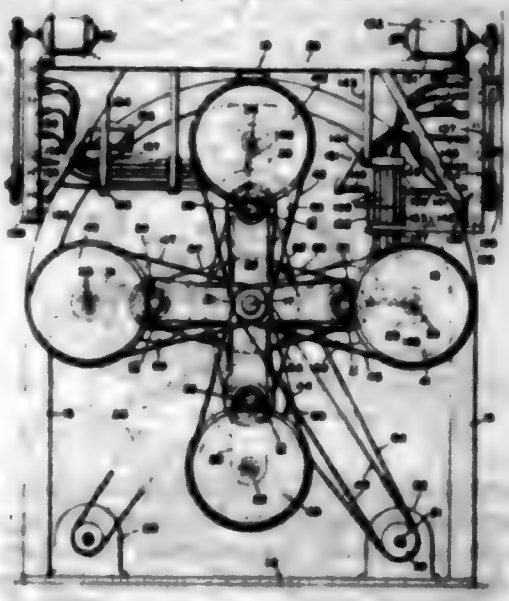
2,862,532
GANG SAWMILL
Leighton W. Johnson and August Jonas, Portland, Oreg.
Application September 23, 1955, Serial No. 536,225
8 Claims. (Cl. 143—60)

1. A portable sawmill comprising a trailer, a horizontal framework secured to said trailer and forming a portion thereof, vertical framework, vertically reciprocable saws mounted in said vertical framework, means on said vertical framework above said horizontal framework for reciprocating said saws, and hydraulic means extending between said vertical framework and said horizontal framework to move said vertical framework into a portable position substantially parallel to said horizontal framework, said hydraulic means including a lever pivotally secured to said horizontal framework, a hydraulic ram secured to said horizontal framework at one end and having the piston rod thereof secured at its outer end to said lever intermediate the opposite ends thereof, a second hydraulic ram secured to the outer end of said lever and having its piston rod secured to said vertical framework whereby said vertical framework can be partially lowered toward said horizontal framework by one of said hydraulic rams and the lowering operation completed by the other of said hydraulic rams.

2,862,533
SAW CHAIN
Arthur W. Malt, Floosmoor, Ill., assignor, by mesne assignments, to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Application August 17, 1955, Serial No. 529,035
3 Claims. (Cl. 143—135)

1. In a saw chain having links pivotally connected together, said links including cutter links separated by connecting links, each of said cutter links having forward and rearward parts projecting outwardly beyond said connecting links, a blunt depth gauge tooth on the forward part of each of said cutter links, and a saw tooth for defining the kerf comprising a flat bit carried on the rearward part of each of said cutter links behind said depth gauge tooth, said bit being declined toward the rear of said link but terminating at a spaced distance outwardly from the level of the nearest adjacent portions of said connecting links, said bits presenting a kerf bottom cutting edge on the fronts thereof extending transversely of the cutter link the full width of the kerf and kerf side cutting edges on opposite front corners of the bit angularly disposed relative to the cutting edge on the front of the bit.

2,862,534
COCONUT PARING MACHINE HAVING OVERLAPPING DISK KNIVES
Hugh C. MacDougall, Palisades Park, N. J.
Application February 23, 1955, Serial No. 489,846
8 Claims. (Cl. 146—7)

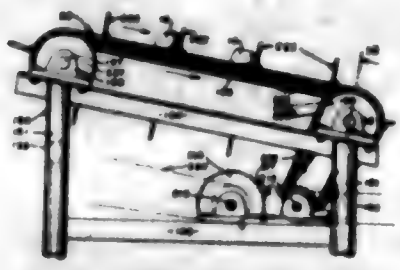


1. A paring machine for commodities shaped similarly to a coconut comprising a commodity holding device for moving a commodity past a paring station while rotating the commodity on its own axis, and paring means at said station comprising a set of circumferentially toothed disk knives overlapping one another circumferentially with their centers disposed in an arc approximating the half profile of the commodity, said set of knives being disposed in planes substantially parallel to the axis of rotation of the commodity and being resiliently mounted as a unit for yielding movement in a direction substantially at right angles to said axis of rotation.

and bead portions having annular hooks oppositely ex-

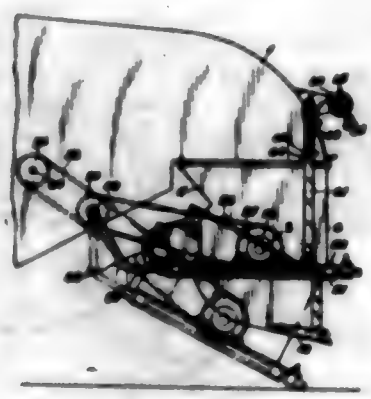
2,862,540
EXPANDING CLAMP FOR A TUBE BENDING

2,862,535
TOMATO PEELER
Clifford K. Wilson, San Jose, Calif., and Robert H. Mount and Robert O. Jabbusch, Hoopeston, Ill., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application May 28, 1954, Serial No. 433,864
4 Claims. (Cl. 146—43)



2. Apparatus for removing loosened skin from tomatoes or the like comprising a conveying surface arranged to frictionally grip the skin of a tomato resting thereon and move it along a predetermined path, a plate mounted for movement along a path closely adjacent said surface and extending transversely of the path of movement of the tomato on said conveying surface, means for advancing said plate along said adjacent path, and means for moving said conveying surface at a speed faster than the speed of said plate to move the tomato into abutting contact with said plate, said plate being arranged to retard the forward movement of the tomato on said conveying surface causing the tomato to be advanced at the speed of said plate and causing said conveying surface to move past the tomato in frictional rubbing contact therewith.

2,862,536
STRAW CUTTER FOR COMBINES
Anton B. Grönberg, Ottum, Sweden
Application August 9, 1954, Serial No. 448,462
1 Claim. (Cl. 146—117)

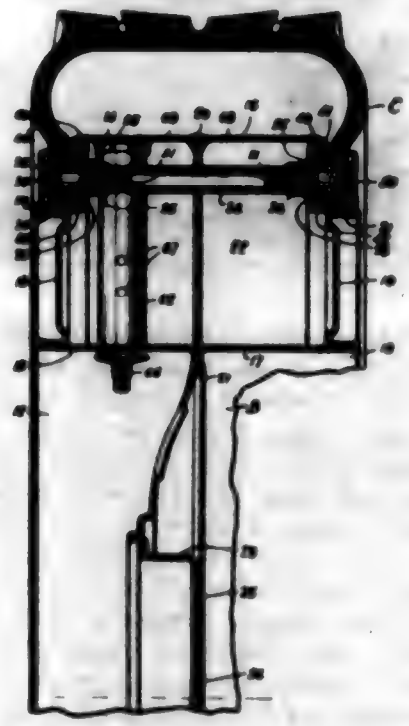


In combination with a threshing machine having a straw outlet, a cutting device having a housing communicating with said outlet for receiving the straw, a transversely disposed shaft rotatably mounted in the housing and having longitudinally spaced cutting blades, spaced grate bars extending into said housing, said blades arranged to pass between said bars when the shaft is rotated, a pair of spaced parallel arms pivotally connected to the threshing machine and extending rearwardly therefrom, said housing being positioned between said arms, and means on said housing for receiving said arms, means for securing said housing in different positions of adjustment along said arms, means operatively connected between said arms and said threshing machine for moving and maintaining the cutter carried by said arms in vertical adjusted positions, said last-mentioned means being connected to said arms at a position spaced from the pivot point of the arms.

2,862,537
SLIP ON NUT WITH BENDABLE ATTACHING HEAD
Ongijeus Jules Pospisch, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application April 12, 1954, Serial No. 422,588
2 Claims. (Cl. 151—41.72)

1. A clinch nut for application to a sheet material work piece having an opening therein with opposite edges spaced apart a predetermined distance, said clinch nut comprising a body member having a threaded axially extending aperture therethrough and oppositely and generally radially extending recesses in opposite sides thereof, said recesses each being defined by axially spaced surfaces adapted to receive one of said work piece edges therebetween, and one of said recesses being deeper than the other recess and having a bottom intersecting and interrupted by the threaded aperture and spaced from the opposite side of said body member a distance similar to said predetermined distance with said predetermined distance being slightly greater to permit application of the nut to the work piece, said body member including an entering end portion insertable through a workpiece opening and having a substantial portion of said threaded aperture therein, and said entering end portion having a recess intersecting said threaded aperture to induce inward collapsing of the body member upon the application of a screw member thereto for gripping the screw member and restraining inadvertent retrograde movement thereof.

2,862,538
SAFETY TUBELESS PNEUMATIC TIRE VEHICLE WHEEL
Frank J. McNulty, Los Angeles, Calif.
Application October 16, 1956, Serial No. 616,176
5 Claims. (Cl. 152—10)



1. A safety tubeless pneumatic tire vehicle wheel comprising: a wheel body having a rim provided with annular abutments at opposite sides extending in a radially inward direction, and annular peripheral seats projecting laterally outward from said abutments; a tire casing having bead portions engaging said seats and abutments; said rim

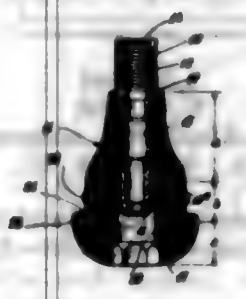
and bead portions having annular hooks oppositely extending radially to interengage; and fastening means coacting with said wheel body and bead portions to detachably secure said casing to the body with said hooks locking the casing on the body; said bead portions having means responsive to tightening of said fastening means to spread said bead portions radially between said seats and rim hooks so as to force said hooks into fluid sealing interengagement.

2,862,539

TUBELESS TIRE VALVE

Selden T. Williams, Bellerose, N. Y., assignor to Scovill Manufacturing Company, Waterbury, Conn., a specially chartered corporation of Connecticut

Application December 17, 1954, Serial No. 475,959
4 Claims. (Cl. 152—427)



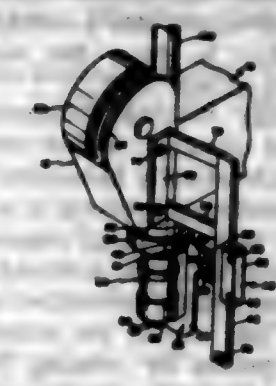
1. A snap-in valve stem for mounting in a valve stem hole in a wheel rim for a tubeless tire, said valve stem comprising a non-deformable tubular insert adapted to accommodate a valve insides or core and an elastomeric tubular housing coaxially encompassing and bonded to the insert; said housing having an enlarged base, a portion of substantially cylindrical form adjacent the base and forming therewith a shoulder, said base having an axial socket of larger diameter than the inner end of the insert and extending upwardly into the cylindrical portion and encompassing the inner end portion of the tubular insert, said cylindrical portion being of larger outer diameter than the valve stem hole in the rim and having intermediate its ends a peripheral bead, said housing also having an outer end portion which is generally tapered outwardly from its outer end with the major part of its length being of a diameter to pass freely through said valve stem hole and its inner end being of a diameter merging with the cylindrical portion, said insert having its inner end portion uninterruptedly radially spaced and unbonded to said encompassing housing portion at the region where said cylindrical portion extends through the rim hole when the valve stem is mounted on the rim; and said housing being capable of being axially tensioned or stretched in relation to the bonded portion to reduce the external diameter of the unbonded portion, whereby when the valve stem is inserted into the rim hole from the tire side of the rim and the large end of the tapered portion of the housing engages the wall of said hole and a tensioning force is applied to said unbonded portion in a direction to cause said cylindrical portion to enter the hole, said cylindrical portion and the peripheral bead thereon will have their diameters reduced and enter the hole, the emergence of the peripheral bead through the rim hole will serve as a tell-tale to indicate that the valve stem shoulder has been pressed home against the tire face of the rim and that the tensioning force may be withdrawn, so that upon withdrawing the tensioning force, the said cylindrical portion of the housing and the peripheral bead thereon will, due to the contractile force tending to return said cylindrical portion and bead to their normal diameters, lock the valve stem onto the rim within and around the hole therein to provide a fluid-tight seal therewith.

2,862,540

EXPANDING CLAMP FOR A TUBE BENDING MACHINE

Ernest F. Mellinger, San Diego, Calif., assignor to The Ryan Aeronautical Co., San Diego, Calif., a corporation of California

Application February 1, 1954, Serial No. 407,358
6 Claims. (Cl. 153—38)



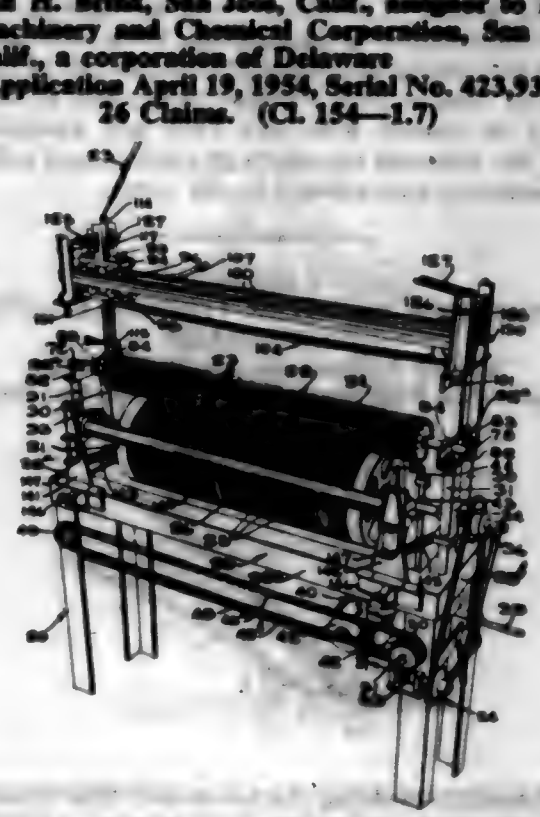
1. In a tube bending machine, separable jaws having confronting faces defining a substantially cylindrical bore therebetween, said faces having grooves therein, said grooves being spaced apart a uniform distance axially of said bore, a segmented mandrel slidable in said bore, an outwardly extending bead on said mandrel, said grooves being shaped and positioned to receive said bead, a tapered expander pin longitudinally slidable in said mandrel, traction means operatively connected to said expander pin for longitudinal movement thereof, a bracket fixed to said traction means, a guide rail mounted on one of said jaws, said bracket being slidable on said guide rail longitudinally relative to said bore, spacers between said traction means and said jaws to adjust the longitudinal position of said mandrel in said bore, said spacers having a thickness dimensionally equal to the distance between said grooves, whereby said mandrel may be held with said bead selectively aligned with said grooves.

2,862,541

METHOD OF AND APPARATUS FOR MAKING FIBER REINFORCED PLASTIC PIPE

Edwin H. Brink, San Jose, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Application April 19, 1954, Serial No. 423,939
26 Claims. (Cl. 154—1.7)



1. The method of forming a plastic pipe compriaing the steps of positioning a layer of strands of fibrous material in a longitudinal pattern on an expandable cylindrical mandrel, winding a continuous strand of fibrous material

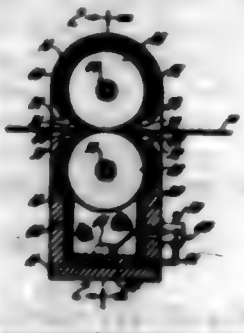
peripherally around a second cylindrical mandrel to form a second layer, impregnating both layers of fiber strands with a binder, cutting through said second layer along a line generally parallel to the axis of said second mandrel, transferring said second layer from said second mandrel to a position encircling said first layer in a peripheral direction, inserting said expandable cylindrical mandrel with said superposed layers into a curing mold, and expanding said mandrel to press the superposed layers against the inner wall of said mold.

9. A pipe forming machine comprising a support structure, a mandrel mounted in said structure for rotation about a fixed substantially horizontal axis, a carriage mounted for reciprocating movement in a direction parallel to said axis, a spreader head supported from said carriage and arranged to guide a strand of fibrous material into close proximity to the surface of said mandrel, means for securing one end of the strand of fibers onto said mandrel, and means for rotating the mandrel and moving said carriage in synchronism to arrange a peripherally wound layer of fibers on said mandrel.

2,862,542
APPARATUS AND METHOD FOR CORRUGATING RESIN-IMPREGNATED SHEET MATERIAL

James A. Norton, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 24, 1955, Serial No. 530,297
6 Claims. (Cl. 154—30)

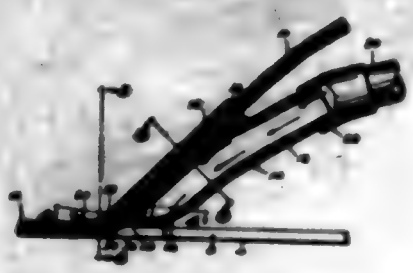


3. Apparatus for corrugating sheet material comprising a casing, a pair of meshing work corrugating rolls supported for rotation in said casing, work inlet and outlet slots in said casing in alignment with the bite of said rolls, a bath of resin solvent in said casing, and an absorbent wicking in contact with said bath and extending into spaced but adjacent relation with each of said rolls to aid in transferring said solvent to the latter.

2,862,543
TOOL FOR WELDING THERMO-PLASTIC MATERIALS

Stanley J. Kaminsky, Norwood, Mass.

Application February 18, 1957, Serial No. 640,916
6 Claims. (Cl. 154—42)

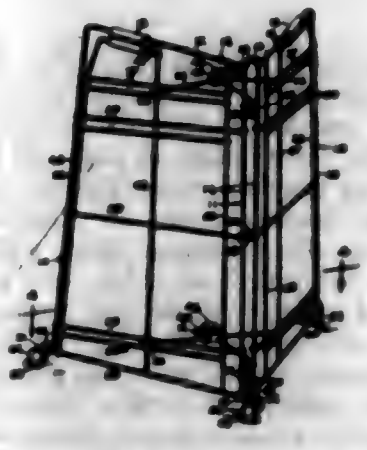


1. A tool for welding thermo-plastic base materials together, said tool comprising a guide tube, a hot air tube for receiving hot air under pressure connected to said guide tube by means capable of transmitting heat from said hot air tube to said guide tube whereby filler material positioned within said guide tube may be heated, means at the lower end of said hot air tube for directing hot air to the surfaces of the base materials to be welded at a position ahead of the welding point for the purpose of pre-heating the welding surfaces of said base materials, other means at the lower end of said hot air tube for simultaneously directing hot air directly against the said base materials and the underside only of the filler material at the immediate area of contact about to be made between said base materials and filler material as the filler material feeds downwardly from said guide tube as the tool is advanced, and a pressing and guiding element associated with said guide tube and hot air tube, said element extending above and to the rear of the position of initial contact of the said base materials and filler material as the welding proceeds, said element acting as means for guiding the tool along the line of the weld and for applying the required pressure to the filling material to produce a satisfactory weld.

2,862,544
WALKER

Oscar G. Lilja, Rockford, Ill., assignor to Commercial Wire Products Co., Rockford, Ill., a corporation of Illinois

Application July 25, 1956, Serial No. 600,835
11 Claims. (Cl. 155—22)



1. A walker comprising an upright post, a caster secured to the lower end of the post to support the latter, two upright side panels respectively hinged along their front edges to said post for swinging toward and away from each other, casters secured to the lower ends of said panels and supporting the latter at points spaced rearwardly from the post, said casters defining the corners of a supporting triangle, and handles rigid with said panels at the upper ends thereof and spaced rearwardly from said post, said handles and the upper end of said post defining a second triangle disposed within said first triangle so that the resultant of the downward pressures exerted on said handles by a user during forward pushing of the walker will be directed along a line falling within said first triangle.

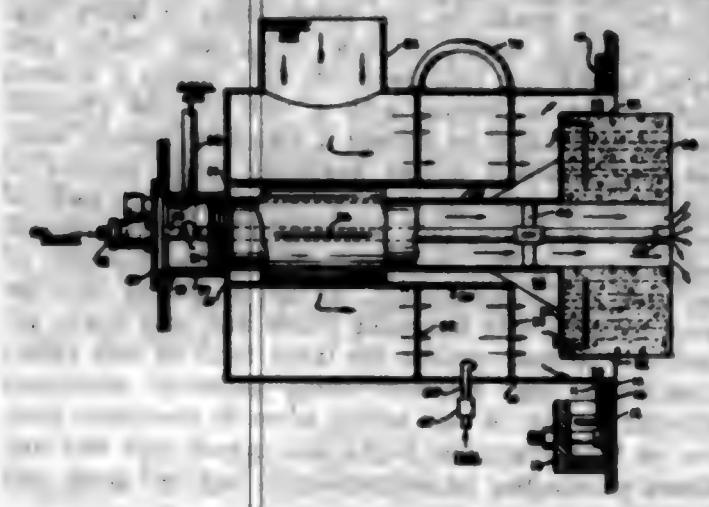
2,862,545
INJECTOR

Carl W. Snow and Arthur L. Swolgart, Borger, and George H. Smith, Shamrock, Tex., assignors to United Carbon Company, Inc. (Maryland), Charleston, W. Va., a corporation of Maryland

Application March 29, 1954, Serial No. 419,404
2 Claims. (Cl. 158—11)

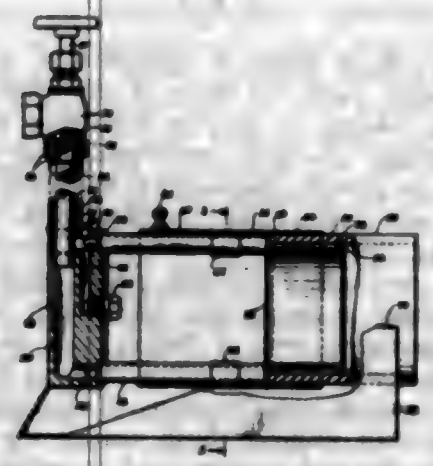
1. An injector particularly adapted for use with a carbon black furnace and comprising a hydrocarbon inlet pipe having a discharge cap on the end thereof, an axial air tube concentric with and spaced from said hydrocarbon inlet pipe, an annulus affixed to the end of said axial air tube concentric with and spaced from the discharge end of said hydrocarbon inlet pipe and said dis-

charge cap the other end of said axial air tube being connected with a source of air to provide axially directed air to mix with the hydrocarbon from the said discharge cap, a tubular sleeve disposed around said axial air tube and terminating in an open end a predetermined distance short of the end of said axial air tube, means on said



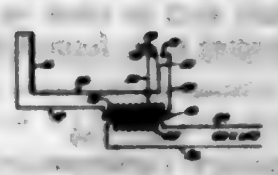
annulus to space said annulus a predetermined distance from the open end of said tubular sleeve, an outer shell open at one end and concentric with and spaced from said tubular sleeve and forming a primary air passage therebetween, a primary air inlet communicating with said primary air passage and fuel inlet means communicating with said primary air passage.

2,862,546
LIQUID GAS BURNER
Sigmund Klose, Flushing Heights, and Alexander J. Turpin, Stewart Manor, N. Y., assignors to Hauck Manufacturing Co., Brooklyn, N. Y., a corporation of New York
Application March 26, 1956, Serial No. 573,911
10 Claims. (Cl. 158—53)



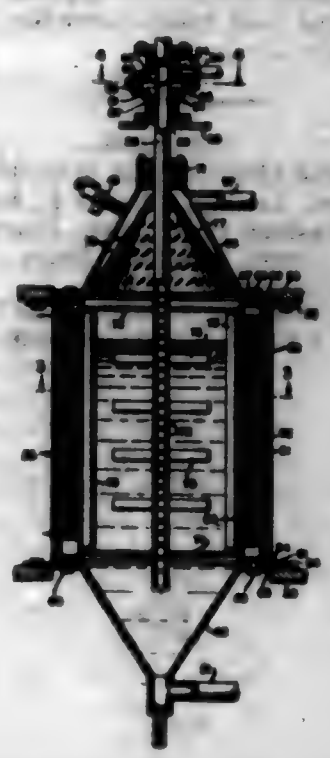
1. A liquid gas burner assembly comprising a burner including a spud, and a regenerative heating jacket disposed in front of and spaced from said spud and heated by the flame from said spud, a first pipe connected to said burner, a liquid gas expansion means having a constricted orifice located at the end of and discharging in the form of a jet into said first pipe remote from said burner, means flow-connecting said pipe to the heating jacket inlet in order to heat the already expanded gas, means connecting the outlet of said heating jacket to said spud in order to supply heated gas to said spud for combustion, means also connecting the outlet of said heating jacket to a second pipe, and means connecting said second pipe to said first pipe near the expansion means, whereby some of the heated gas is aspirated into and mixed with the expanded gas leaving the expansion means in gaseous state at a point near the expansion means and flows with the expanded gas on its way to the heating jacket, in order to help counteract the refrigerating effect of the expansion means.

2,862,547
OIL BURNER ELECTRIC IGNITER
Ray W. Qualley, Wichita, Kans., assignor to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Application October 19, 1953, Serial No. 386,836
3 Claims. (Cl. 158—91)



1. In an electrically-ignitable oil burner, a burner pot equipped with an inlet adjacent the bottom thereof for directing oil onto said bottom, means for supplying air to the lower portion of the pot, an igniter member supported in said pot and having an end equipped with an electric resistance element adjacent the oil in the bottom of the pot, means maintaining said electric resistance element under a voltage which maintains said end below an ignition temperature but at an elevated temperature for keeping said oil in a condition for ready ignition and said end substantially free of carbon encrustation, and switch-controlled means for increasing the voltage upon said element to bring it normally to ignition temperature.

2,862,548
SELF-POWERED AGITATING EVAPORATOR
Oscar A. Yost, New York, N. Y.
Application February 11, 1957, Serial No. 639,270
9 Claims. (Cl. 159—25)



1. An evaporating unit comprising top and bottom end members, a hollow shaft extending from the interior of the evaporating unit through one of the members, a combined thrust bearing and water delivery assembly surrounding said shaft and adapted to support the shaft within the evaporating unit, pipe means for delivering

feed water to the combined thrust bearing and water delivery assembly, outlet means extending from the top member, and said shaft having paddle blades thereon, and means for driving said shaft.

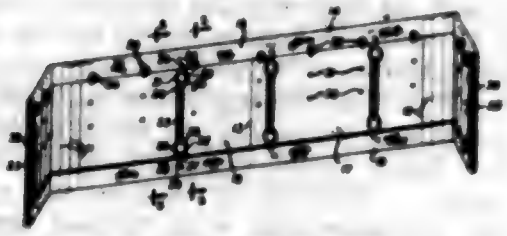
5. An evaporating unit comprising concentric inner and outer shells, heating means disposed between the inner and outer shells, top and bottom members, a hollow shaft extending through one of the members, means for driving said shaft, said driving means having a turbine-like vapor cone through which the vapor may be exposed and thereby cause rotation of the vane and the shaft, and vertically-extending members connected to said shaft to be driven thereby and adapted to sweep over the inner surface of the inner shell to break up and rid the same of any deposits tending to be formed thereon.

2,862,549

CORNICE CONSTRUCTION

Lionel Robbins, Larchmont, N. Y., assignor to Bartmann & Bixer, Inc., New York, N. Y., a corporation of New York

Application January 7, 1958, Serial No. 707,562
7 Claims. (Cl. 160—38)



1. In a cornice construction, a backing frame, a sheet of covering material having a front portion and upper and lower marginal portions, said front portion extending across the front face of said frame, said sheet being folded across the top and bottom edges of said frame whereby said marginal portions extend across correspondingly proportioned respective upper and lower marginal sections of the rear of said frame, a plurality of supporting hooks attached in spaced relation to said frame and extending rearwardly therefrom, and a plurality of spaced yieldable connecting members attached to opposed sections of said marginal portions, said hooks extending rearwardly beyond said connecting members.

2,862,550

PREFABRICATED WINDOW

John B. Zappone, Latrobe, Charles F. Zappone, Greensburg, and Alexander H. Svetahor, Derry, Pa., assignors to Keystone Alloys Company, Derry, Pa., a corporation of Pennsylvania

Application February 3, 1955, Serial No. 485,874
5 Claims. (Cl. 160—90)

4. In a prefabricated window, in combination, a frame having jambs and top and botom crossbars defining a window opening, said jambs being of opposite hands and having tracks and side walls on each thereof on the side of said window opening, said tracks being substantially in rectilinearly stepped arrangement along the inner sides of said jambs and said side walls having portions substantially normal to the plane of said window to complete said stepped arrangement in cross section, respective pairs of tracks on said jambs being in lateral registry, separate sashes to slide along said tracks, said sashes having side rails, said side rails having a channel configuration in section with a web of said channels laterally outermost to present a generally smooth outer side, and retainers having mounting plates secured to said jambs in adjacent and opposed relation to each of said pairs of tracks, said mounting plates being normal and adjacent to the innermost edge of said portions of said side walls respectively, springs projecting into the space between said mounting plates and said tracks respectively to bear against the inner faces of said sashes respectively, said retainers being generally positioned adjacent the top of said sashes when in lowermost position on their respective tracks and spaced such that any of said sashes may be independently removed from said frame.

2,862,551

ROLL-UP BLIND

Edwin T. Smythe, St. Ann, Mo., assignor to The Artcraft Venetian Blind Manufacturing Company of St. Louis, St. Louis, Mo., a corporation of Missouri

Application March 21, 1955, Serial No. 495,738
2 Claims. (Cl. 160—231)

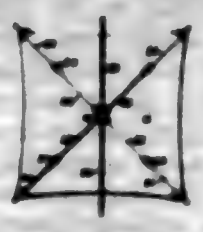
1. In a roll-up blind, in combination, a plurality of identical slats, each slat being in the form of an elongated strip having an arcuate transverse cross section, and a plurality of cords interwoven with said slats in a manner to provide longitudinal resiliency in the combination, said slats being disposed with their convex sides facing the same way and being arranged in consecutively overlapped parallel relationship, said cords being arranged in cooperating pairs, each cord of a pair passing alternately over a convex side and a concave side of the consecutively abutting slats so as to embrace individual arcuate cross sections of successive slats between one cord disposed flush against the convex surface of the slat and another cord spanning the concave surface of the same slat.

2,862,552

COLLAPSIBLE PROJECTION SCREEN

James N. Franz, Denver, Colo.

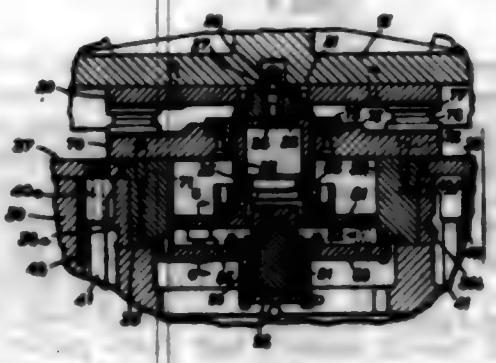
Application August 6, 1956, Serial No. 602,230
5 Claims. (Cl. 160—368)



3. In a collapsible projection screen having a rectangular flexible sheet, a foldable unitary frame assembly co-

operable with said sheet to spread, tension and support the same, said assembly comprising a rigid fitting, stiffly-resilient arms hinged to said fitting for adjustment relative thereto between dispositions substantially perpendicular to the plane of the fitting and extensions radially from and substantially in the plane of said fitting, said arms being angularly spaced when extended to register with and exceed in length the half-diagonals of the sheet, means at the free ends of said arms detachably engageable with corresponding corners of the sheet upon flexure of the extended arms, and means carried by said fitting in foldable association therewith variously manipulable for coaction with diverse available supports as a mount for the extended frame and associated sheet, wherein the means for mounting the frame in engagement with available supports includes a threaded hole centrally of the fitting and a clamp screw removable and replaceable in coaction therewith.

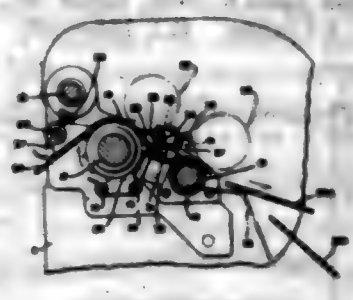
2,862,553
CUP TRIMMING APPARATUS
Charles M. Brehm, Springfield, Ohio, assignor, by mesne assignments, to The Vulcan Tool Company, Dayton, Ohio, a corporation of Ohio
Application August 18, 1955, Serial No. 529,112
6 Claims. (Cl. 164—47)



1. Apparatus for trimming shells, comprising a main frame, a pair of complementary inner and outer cutter members adapted for relative shearing movement to trim a shell, means mounting one of said cutter members on said frame for vertical reciprocating movement, a cam block mounted on said frame for movement in a plurality of directions in a substantially horizontal plane, a plurality of cams mounted for vertical movement in said frame to effect said horizontal movements of said cam block, means mounting said other cutter member on said cam block for shearing movement therewith with respect to said one cutter member, fluid pressure means for reciprocating said one cutter member to provide for insertion of successive shells between said cutter members, and mechanical drive means in said frame for effecting said vertical movement of said cams in timed relation with said reciprocating movements of said one cutter member.

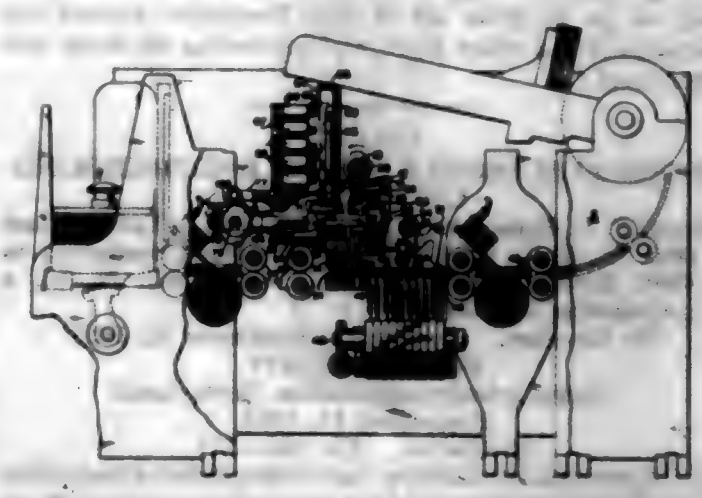
2,862,554
STRIP BURSTER
John T. Davidson, John A. Schmidt, and John H. Kroemer, Dayton, Ohio, assignors to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Application June 13, 1955, Serial No. 514,817
10 Claims. (Cl. 164—84.5)

1. Strip severing apparatus for successively detaching terminal portions of a strip along successive transverse weakened division lines, including series arranged longitudinally spaced apart strip feeding devices, the forward one of which operates intermittently and at a greater peripheral speed than the other, means for guiding the strip in a curved path between said devices, said means including a bursting blade spring urged to deflect the strip out of a straight line between said devices, operation of the forward one of said devices tending to straighten the strip against the urging of said blade,



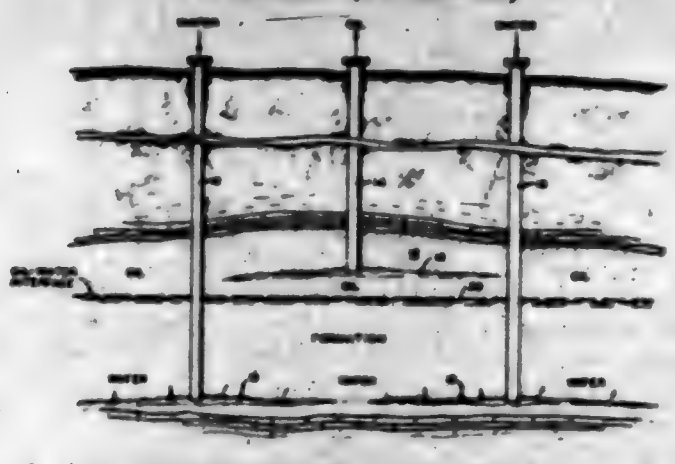
means for abruptly stopping movement of said blade under straightening influence of the strip, and means supporting said bursting blade for movement as described.

2,862,555
CARD PUNCHING MACHINES
Henry A. Jurgens, Vestal, and Donald K. Rez, Endicott, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application November 12, 1954, Serial No. 468,342
6 Claims. (Cl. 164—115)



1. In a punching machine for punching a card, a punching mechanism comprising a plurality of punches, a die plate and stripper plate between which a card to be punched passes, a power operated bar for causing the actuation of said punches, an interposer for each punch, punch selecting means for moving the interposers to connect related punches with said power operated bar, auxiliary guide plates parallel with said die and stripper plates for forming an extended aligned guide-way for said card as it is punched by said punches, a plurality of card stop plates projectible through guide slots of both guide plates to intersect the guide-way for the card and to coact with the leading edge of the card at substantially the complete edge of the card, card feeding means continually operated during the card punching operation for frictionally feeding the card, and means including a plurality of cams operable in timed relationship with respect to the operation of said power operated bar for positioning each card stop plate to intersect the guide-way and engage the leading edge of the card for stopping said card against the action of said frictional feeding means while said power operated bar actuates the punches to punch a position selected by each card stop plate, and for then positioning each card stop plate out of intersecting position in the guide-way after the operation of said punches by said power operated bar to release the card for action by the feeding means to feed the card to the next card stop plate in intersecting position to correlate a successive card position with the card punches.

2,862,556
WATER FLOODING METHOD
Mehmet R. Tek, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application April 6, 1956, Serial No. 576,574
5 Claims. (Cl. 166—10)



1. A process for applying water drive to an underground oil-bearing formation which comprises horizontally fracturing said formation at a lower level therein around at least one well; horizontally fracturing said formation at an upper level therein around at least one additional well so that the upper and lower fractures overlap; forcing water into the formation thru the fractures at one level so as to drive oil in said formation toward the fractures at the other level; and recovering oil from said other level.

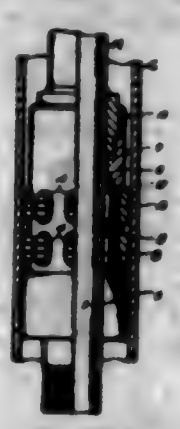
2,862,557
PETROLEUM PRODUCTION BY UNDERGROUND COMBUSTION
Gerard F. L. Beren van Utenhove, Harco J. Tadema, and Dirk C. Ketz, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
No Drawing. Application September 12, 1955
Serial No. 533,998
Claims priority, application Netherlands
September 17, 1954
10 Claims. (Cl. 166—11)

1. A method of carrying out underground combustion in an oil-bearing formation for producing petroleum from said formation, said method comprising introducing into said formation through an input well a combustible gaseous mixture at a pressure greater than that existing in the formation, effecting combustion of said mixture with a portion of the oil in said formation adjacent said input well to produce combustion products which drive the oil in said formation toward an output well which is at a lower pressure to produce a fluid flow between the wells, at least once reversing the fluid flow in said oil-bearing formation prior to the flame front reaching the output well by injecting a gas under pressure into said output well so that at least a portion of the oil in the combustion zone of said formation moves temporarily in a direction substantially opposite to that prevailing during said first injection for a period sufficient to force combustible material back to the flame front, and subsequently again reversing the fluid flow in said formation to its original condition, whereby all of the production products of said combustion are produced from said output well while the overall movement of said combustion zone is from the input well to the output well.

2,862,558
RECOVERING OILS FROM FORMATIONS
Henry O. Dixon, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application December 28, 1955
Serial No. 555,796
3 Claims. (Cl. 166—40)

1. The production of tar from Barton tar sand which comprises forming a mixture of steam and kerosene, in which the steam is in excess over the kerosene, by volume of vapors, and then injecting the mixture of vapors thus obtained at a pressure of at least about 20 pounds per square inch gage and at a temperature in the approximate range 225–500° F. into the sand and then producing tar from said sand by passing said mixture through a substantial portion of said sand.

2,862,559
CUP SEAL AND ANCHOR UNIT FOR PIPES
Cleve C. Brown, Houston, Tex.
Application March 9, 1955, Serial No. 493,193
8 Claims. (Cl. 166—121)



1. A combination seal and anchor unit for use in well pipes, comprising, a tubular metallic body connectible to a well tool for insertion in a well pipe, a seal member constructed of flexible resilient non-metallic material and comprising a cup-shaped seal portion having integrally formed therewith a cylindrically straight tubular sleeve portion, said sleeve portion being inserted in the bore of said body and fixedly secured to the wall thereof, said body having a plurality of angularly spaced radial openings in the wall thereof opposite said sleeve portion, and a pipe-gripping slip mounted in each of said openings, each slip conforming in shape to the opening in which it is mounted and having a close radial sliding fit therein, the outer end faces of said slips carrying pipe-engaging teeth distributed throughout substantially the area of said end faces, the inner ends of the slips being secured directly to said sleeve portion whereby to be movable radially in said openings by the radial expansion and contraction of the sleeve portion in response to fluid pressure interiorly of the seal member.

2,862,560
WELL TOOLS
James H. Bostock and Harry B. Schramm, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Application December 28, 1953, Serial No. 400,444
24 Claims. (Cl. 166—125)

1. A well tool adapted to be moved into and out of a selected landing nipple of a conductor provided with a plurality of landing nipples, each of said landing nipples having a selective locking groove of different configurations than the corresponding grooves of the other nipples and formed with an upwardly facing stop shoulder, said well tool including: an elongate tubular body provided with a lateral port; a lug having a selector key face corresponding in configuration to the configuration of the selective locking groove of said selected landing nipple and having a downwardly facing stop shoulder thereon, said lug being movably mounted in the lateral port in said body for movement between expanded and retracted positions and engageable with said selective locking groove of said selected landing nipple whereby the stop shoulder on the lug is engageable with the stop

shoulder of said selective locking groove for limiting downward movement of said tubular body through said landing nipple; resilient means biasing said lug outwardly of said port toward expanded position; and an expander sleeve slidably mounted in said tubular body for limited longitudinal movement therein between an upper posi-

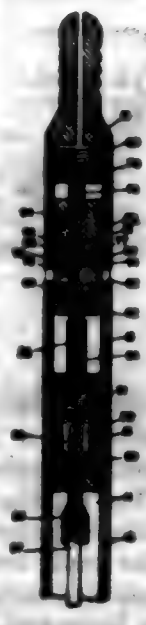
tion and a lower position, said sleeve engaging and holding said lug in expanded position when said sleeve is moved to one of said positions after the lug has moved outwardly to expanded position with its selector key face engaging with the selective locking groove of said selected landing nipple, whereby said well tool is positively locked against displacement from said landing nipple.

2,862,561

BOTTOM-HOLE SAMPLER

Wilbur G. Teubner, Dallas, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application August 3, 1954, Serial No. 447,571
3 Claims. (Cl. 166—165)



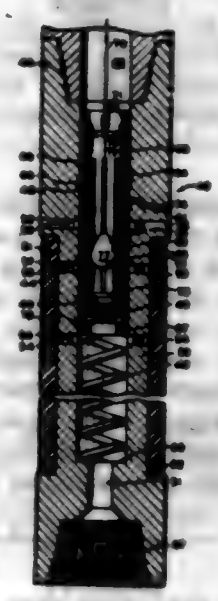
1. A device adapted to be lowered into well tubing for obtaining a fluid sample from fluid within a well comprising an elongate housing, a fluid sample receiving chamber in said housing apertured at each end for the longitudinal passage of fluid therethrough, valve plugs having longitudinal apertures therethrough adapted to communicate between the interior and exterior of the sample receiving chamber, said valve plugs connected to each other by a rod passing through the sample receiving end apertures to simultaneously open and close the end apertures in said chamber in response to vertical movement of the housing, valve plug operating means extending from said connected valve plugs into frictional engagement with the well tubing and auxiliary valve means mounted on each of the valve plugs in operating communication with the longitudinal apertures therein to control the flow of sample liquid from the sample receiving chamber through the apertures in the valve plugs.

2,861,562

DRILL STEM TEST PACKER

James H. Hughes, Alexandria, Va., assignor to Phillips Petroleum Company, a corporation of Delaware

Application February 15, 1957, Serial No. 640,453
6 Claims. (Cl. 166—187)



1. A drill stem test packer comprising in combination an upright elongated cylindrical body member having an axial passageway and means at each end for attaching same in a drill string; a flexible inflatable annular packer of a diameter no larger than said member recessed in the outer surface of said member; means in an intermediate section of said passageway for cutting off longitudinal flow of fluid thru said body member; means for introducing fluid thru said member behind said packer to inflate same; means for circulating fluid from said passageway laterally thru the wall of said member above said packer; valve means for preventing flow back into said passageway thru said circulating means; valve means for deflating said packer; and means for restoring flow thru said passageway and cutting off circulation thru the wall of said member.

2,862,563

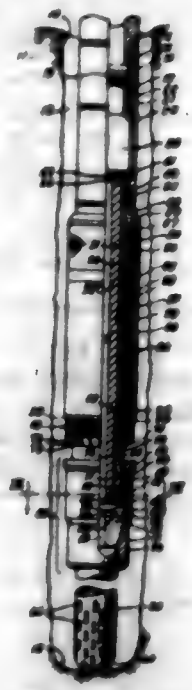
WELL PACKER ASSEMBLY FOR PACKING THE ANNULAR SPACE BETWEEN CONDUITS IN A WELL

Jennings B. Thompson, Dallas, Tex., assignor, by mesne assignments, to the Guiberson Corporation, Dallas, Tex., a corporation of Texas

Application June 30, 1954, Serial No. 440,323
11 Claims. (Cl. 166—204)

1. In a packer assembly, a mandrel; an elastic sleeve slidably disposed on the mandrel; a supporting base slidably suspended from the mandrel; a plurality of levered arms carried about and supported by the mandrel and arranged to rest on said base, said arms being initially inclined and being adapted to support the said elastic

sleeve; and means disposed at the upper end of the elastic sleeve to force said elastic sleeve against the arms to lower and extend them outwardly.



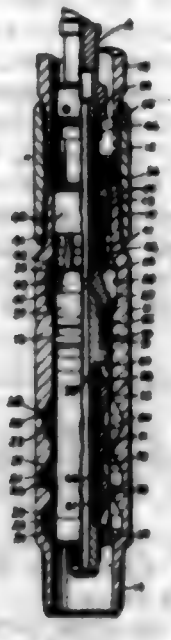
2. In a packer assembly, a mandrel; an elastic sleeve slidably disposed on the mandrel; a supporting base slidably suspended from the mandrel; a plurality of levered arms carried about and supported by the mandrel and arranged to rest on said base, said arms being initially inclined and being adapted to support the said elastic sleeve; means disposed at the upper end of the elastic sleeve to force said elastic sleeve against the arms to lower and extend them outwardly; and means to prevent relative rotation between the mandrel and the supporting base.

2,862,564

ANCHORING DEVICES FOR WELL TOOLS

James H. Bostock, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Application February 21, 1955, Serial No. 489,391
9 Claims. (Cl. 166—214)



1. As a sub-combination, a landing section adapted to be connected in a well string and having an internal recess formed therein, the surfaces of said section defining the upper and lower limits of said recess being divergent inwardly of said section, said section having an internal flange providing an upwardly facing abrupt stop shoulder formed in said recess intermediate said divergent surfaces and also having a second annular tapered flange formed therein above said stop shoulder.

2,862,565

AUTOMATIC SPRINKLER

Eugene J. Dukes, Cambria Heights, N. Y.

Application July 15, 1957, Serial No. 671,893
2 Claims. (Cl. 169—38)

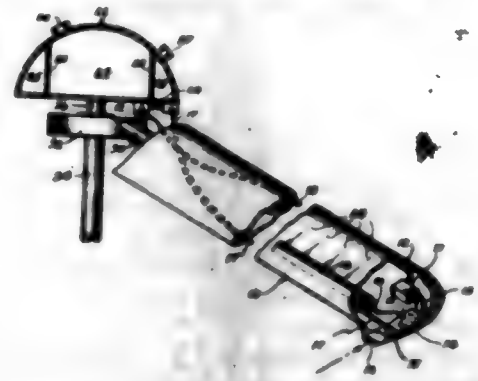
1. An automatic sprinkler head comprising, in combination, a hollow base having means for threaded engagement with a water supply pipe, said hollow base defining an upwardly opening orifice, a yoke supported upon and above said base, a deflector supported upon said yoke in alignment with said orifice, an orifice reduction ring supported upon said base with closing engagement with said defined orifice and further defining an orifice of reduced size, a cap removably closing said orifice of reduced size, and retaining means releasably securing said cap in closing engagement, said retaining means comprising a fusible strut disposed between said yoke and said cap, and destructible means securing said orifice reduction ring in said closing engagement with said defined orifice independently of said fusible strut, said destructible means comprising a fixed lug and a frangible lug carried by said yoke and acting at diametrically opposite sides of said ring.

2,862,566

ROR BOOST POWER SYSTEM PROVIDING BOUNDARY LAYER CONTROL IN COMBINATION WITH AFTERBURNING

Charles J. Fletcher, Sparta, N. J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 10, 1957, Serial No. 633,514
4 Claims. (Cl. 170—135.4)



1. In a helicopter rotor assembly including a power driven shaft rotatable about a fixed axis, an airfoil-shaped rotor blade operatively connected at the inner end thereof to said shaft for rotation therewith about said fixed axis, said airfoil-shaped rotor blade having an elongated slot therein in the outer end portion adjacent the trailing edge thereof, said slot extending substantially longitudinally of said rotor blade and having one end thereof terminating adjacent the outer tip of said rotor blade, a reaction engine carried within said rotor blade in the outer end portion thereof, an afterburner operatively connected to said reaction engine and having an exhaust aperture positioned in the trailing edge of said rotor blade

2,862,570

ACOUSTIC CAP FOR STACKS

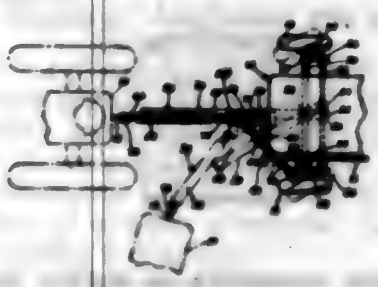
gas delivered into the housing and being arranged in

at the outer tip thereof, a fuel tank having a plurality of compartments therein carried by said power driven shaft and being rotatable therewith, conduit means connecting said reaction engine with one of said compartments in said fuel tank and thereby being operable to supply said reaction engine with fuel, conduit means connecting said afterburner and another of said compartments in said fuel tank and thereby being operable to supply said afterburner with fuel, duct means in said rotor blade communicating with said elongated slot therein, and means connecting said duct means and said afterburner for establishing a flow passage between said elongated slot and said afterburner, the combustion of fuel in said afterburner and the passage of exhaust gases therethrough being operable to remove the boundary layer of air from said rotor blade outer end portion by inspiring said boundary layer of air from said outer end portion into said elongated slot and through said duct means and said last named means into said afterburner.

2,862,567
VEHICLE SHIFTING AND PARKING DEVICE
Marshall L. Dull, Wilmington, Del., assignor to Reto-matic, Incorporated, Wilmington, Del., a corporation of Delaware
Application May 26, 1953, Serial No. 357,427
2 Claims. (Cl. 180—1)

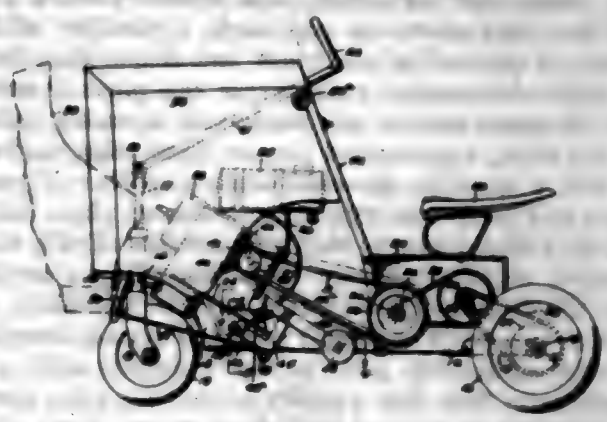
1. A shifting device for imparting lateral motion to a vehicle that has a body portion resiliently supported by wheel-and-axle assemblies while these assemblies are resiliently supported on the ground, said device having vibrating means with a vertically directed vibrating thrust of not more than about 20 pounds connected to at least one of said assemblies to cause the connected assembly to vibrate with respect to the ground at its natural vibrating frequency, and said device also including ground-engaging thrust means interconnected with the vibrating means for contacting and applying a lateral thrust against the ground while the assembly is vibrating, to cause the assembly and the body to move laterally.

2,862,568
UNIVERSAL INDEXING LINKAGE
Earl E. Koch, Mohnton, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application September 21, 1956, Serial No. 611,323
8 Claims. (Cl. 180—14)



1. An assembly operable to transmit power from the power take-off shaft of a tractor unit to the driven shaft of a trailer unit having steering mechanism for the front wheels thereof and flexibly connected to said tractor unit by draft means permitting angular relationship between said units from longitudinal alignment to a sharp angle, said assembly comprising in combination, a power shaft connected at its rearward end by a first universal joint to the forward end of the driven shaft of said trailer unit, a supporting member pivotally connected for movement about a vertical axis to the forward end of said trailer unit and supporting said shaft for axial rotation, an axially rotatable driving member, a second universal joint connecting the forward end of said power shaft adjacent the forward end of said supporting member to the rearward end of said axially rotatable driving member, a third universal member, a third universal joint connecting the forward end of said driving member to the power take-off shaft of the tractor unit, and means connected between said supporting member and the steering mechanism of said trailer unit and operable to move said supporting member and power shaft angularly relative to said trailer unit substantially less than the angle between the longitudinal axes of said tractor and trailer units, thereby substantially evenly distributing the latter angle between said three universal joints.

2,862,569
BELT GUIDE MEANS FOR TRACTOR BELT-TIGHTENING ARRANGEMENT
Leonard M. Strunk, Centerville, Pa.
Application October 4, 1954, Serial No. 460,946
2 Claims. (Cl. 180—70)



1. In a tractor, a wheel supported frame structure, a power unit on said frame structure, and power transmitting means operatively interposed between said power unit and wheels comprising an endless belt, revoluble driving and driven members associated respectively with said power unit and wheels and having said belt trained thereover, said belt being of a length and rigidity sufficient for loosely embracing said driving member while closely embracing said driven member, a belt tightener operable for taking up the slack in said belt to thereby establish a driving connection between said power unit and belt for movement of said tractor by said power unit when the latter is operating, a U-shaped guide fixed in position with a pair of arms disposed respectively on diametrically opposite sides of said driving member, said arms being convexly curved towards each other and extending toward said driven member, and an arm connecting portion disposed in spaced close embracing relation to said driving member, said arms being disposed in frictional contact with the outer surface of said belt when said belt is loosely trained about said driving member to thereby hold minor portions of said belt respectively approaching and leaving said driving member fully engaged with the same and to thereby hold the major portion of said belt intervening said U-shaped guide and driving member loosely trained over said driving member for rotation of the latter freely with respect to said belt when said power unit is operating, said arms also insuring automatic interlocking of said driving and driven members through said belt to secure said driven member and wheels against movement when said power unit is idle and said driving member is not rotating.

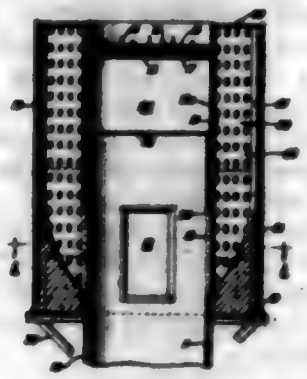
2,862,574
STEAM DRIER

serving a plurality of floors, a first control means for said first and second cars, a special service control for said

flange providing an upwardly facing abrupt stop shoulder

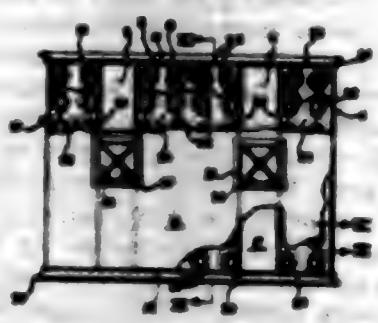
aperture positioned in the trailing edge of said rotor blade

2,862,570
ACOUSTIC CAP FOR STACKS
Robert B. Jacobs, Homewood, and Irwin Glasbergh, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application June 29, 1955, Serial No. 518,742
5 Claims. (Cl. 181—59)



1. An acoustic cap for reducing stack noises generated by venting flue gases containing finely divided solids which comprises in combination a sleeve arranged about the upper end of a stack and spaced therefrom to provide an annular chamber, plate means for closing the lower end of the annular chamber between said stack and said sleeve, means for supporting said bottom closure plate means and said sleeve on said stack, a plurality of flue gas ports in the wall of said stack and discharging therefrom into said annular chamber, a cap plate assembly across the upper end of said stack, said assembly including a cap plate, a perforated support fixed below said cap plate, and a quantity of sound absorbing fiber disposed between said perforated support and said cap plate, linings within said sleeve and on the outer surface of said stack comprising abrasive-resistant refractory sound-absorbing means, the distance between said ports in said stack and the stack cap plate assembly with its sound-absorbing fiber being sufficiently great so that entrained solids cannot impinge at their flow velocity on said cap plate assembly, a plurality of pairs of perforated spaced metal plates partitioning the said annular chamber, and an acoustic absorber means between adjacent plates in said pairs, the sub-chambers of the said annular chamber so produced being stream-lined with respect to the flow of flue gases from said ports.

2,862,571
MULTIPLE TUBE CENTRIFUGAL DUST COLLECTOR
Richard W. Coward, Birmingham, Ala.
Application September 16, 1955, Serial No. 534,778
5 Claims. (Cl. 183—34)

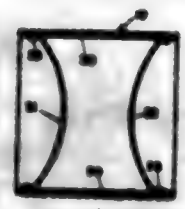


2. In a dust collector, a housing having an inlet opening for dust laden gas, a lower tube sheet connected to the housing, a plurality of rows of centrifugal tubular dust collector units mounted in the lower tube sheet and having lower end portions extending downwardly through the lower tube sheet and disposed to collect dust and discharge it through the lower ends thereof, said rows of units being disposed parallel to the direction of flow of gas delivered into the housing and being arranged in groups of rows with walkway and dust laden gas inlet spaces therebetween extending parallel to the rows, flow passage means to deliver dust laden gas from the chamber inlet into said spaces between said rows, upper tube sheets and plates connected thereto and providing within the housing separate gas chambers above the collector units, a clean gas outlet in the housing connected to said chambers, means connecting the upper end portions of the collector units to the upper tube sheets thereby to deliver cleaned gas to said chambers, and means to deliver dust laden gas from said housing inlet into said spaces between said rows of units.

2,862,572
CLEANER SILENCER ASSEMBLY
Norman J. Amiott, Grand Blanc, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 4, 1955, Serial No. 538,582
2 Claims. (Cl. 183—44)

1. A cleaner silencer assembly comprising, a casing having a plurality of combination air outlets and acoustical inlets adapted to be secured to the combination air inlets and acoustical outlets of an induction system for an internal combustion engine, a combination air inlet and acoustical outlet for said casing and having an air cleaner attached thereto for supplying cleaned air to said casing, said casing providing an acoustical expansion chamber receiving sounds transmitted from said induction system and conveying air from said casing air inlet to said casing air outlets, and a plurality of air inlet and acoustical inertance conduits connecting said casing air inlet and said casing, each of said conduits extending toward one of said casing air outlets and conveying air from said casing air inlet to said casing and said casing air outlets, said conduits also being tuned to attenuate sounds emanating from said induction system of said engine and transmitted to said acoustical expansion chamber.

2,862,573
FILTER FOR AIR CIRCULATOR
Alexander Douglas Neal Scott, London, Ontario, Canada
Application May 3, 1954, Serial No. 582,541
3 Claims. (Cl. 183—78)



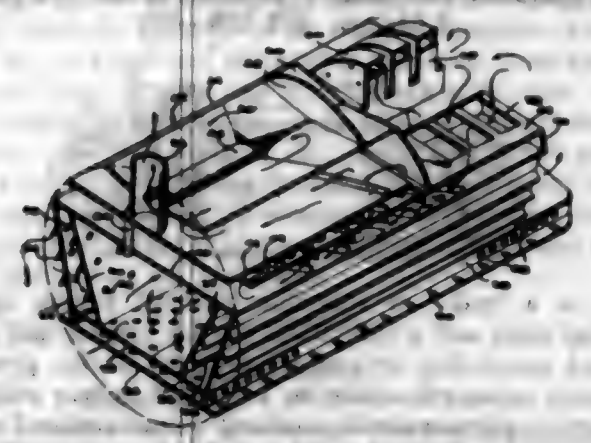
1. An air filter comprising an endless band of filter material, a frame insertable into the interior of the band to hold said band in rectangular shape, said frame being composed of a pair of end members extending the width of the material and compressible spring members between and connected to said end members for extending the end members lengthwise of the material in opposite directions to draw the material taut.

the actuating element, said control mechanism including

2,862,580

said assembly comprising in combination, a power shaft is not rotating.

2,862,574
STEAM DRIER
Robert L. Burke, Americus, Kans.
Application December 26, 1957, Serial No. 704,124
5 Claims. (Cl. 183—75)



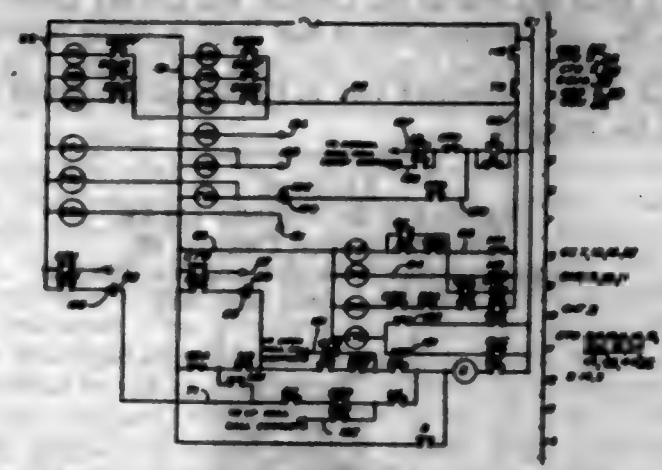
1. In a steam drier, a hollow closure having a pair of closed ends, a fixed floor in said enclosure and extending from one to the other of the closed ends, means providing at least two spaced longitudinal flues including diverging ends positioned within said enclosure and having each of the adjacent ends spaced inwardly of the adjacent closed end, the space between each of the closed ends and the adjacent ends of said flues forming a collection chamber, means providing a plurality of tortuous communicating passages arranged in superimposed relation positioned within said enclosure and extending longitudinally over the diverging ends of said flue providing means and having one end adjacent to and spaced from one of said collection chambers and having the other end adjacent to and spaced from the other of said collection chambers, and means providing a plurality of tortuous communicating passages arranged in superimposed relation positioned within said enclosure between and extending transversely of said one end of said longitudinal passages and the adjacent collection chamber and between the other end of said longitudinal passages and the other of said collection chambers, each of said transverse passages having a longitudinal duct extending through the midportion thereof and having one end in communication with the adjacent collection chamber with the intermediate portion in communication with one of the transverse passages on each side of said intermediate portion and another of the transverse passages on each side of said intermediate portion in communication with the adjacent end of said longitudinal passages.

2,862,575
A METHOD FOR THE SEPARATION OF DIBORANE FROM A GASEOUS MIXTURE
Ralph E. Birdwhistell, East Lansing, Mich., Ralph E. Johnson, Fort Worth, Tex., and Lawrence L. Quill, East Lansing, Mich., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Application July 9, 1956
Serial No. 596,416
4 Claims. (Cl. 183—115)

1. A method for the separation of diborane from a gaseous mixture consisting essentially of diborane and at least one of the gases hydrogen and nitrogen which comprises diffusing the mixture through a methyl silicone rubber membrane whereby a gaseous product enriched in diborane content is produced.

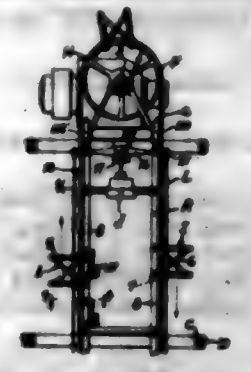
2,862,576
ELEVATOR CONTROL
Walter A. Nilsen and Paul F. De Lancster, Toledo, Ohio, assignors to Toledo Scale Corporation, a corporation of Ohio
Application August 30, 1956, Serial No. 607,178
16 Claims. (Cl. 187—29)

1. An elevator system including first and second cars serving a plurality of floors, a first control means for said first and second cars, a special service control for said second car, a first hall call registering means located at each of a plurality of floors and cooperating with said first control means, a second hall call registering means located at floors having said first hall call registering means and operating said special service control, means responsive to said second hall call registering means to



render said second car nonresponsive to said first control means and first hall call registering means, a car travel indicator for each of said cars, means disabling said indicator for said second car while said special service control is operating, means resetting said first call registering means when one of said cars responds thereto, and means preventing the operation of said resetting means by said second car while said special service control is operating.

2,862,577
CONTROL MECHANISM FOR BELT MANLIFTS
Harry Deverell, Millburn, N. J.
Application May 16, 1957, Serial No. 659,683
1 Claim. (Cl. 187—44)

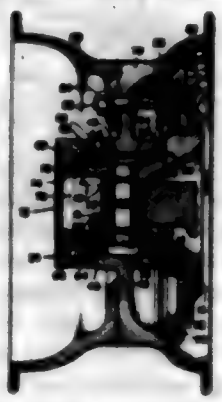


In a belt manlift, the combination of a vertical frame having belt pulleys journaled thereon in vertically spaced relation and an endless belt carrying steps running over said pulleys and having two vertical reaches, driving means for said belt including an electrical motor and a speed-reducing driving connection between said motor and one of said pulleys, control mechanism for starting and stopping said motor including a main switch having start contact points and stop contact points and spaced apart operating fingers therefor, a control rope in closely spaced parallel relation to each reach of the belt, an actuating element movably mounted on said frame and normally disposed between said fingers in neutral spaced relation to both thereof and connected to both of said control ropes so that a pull on either control rope in the direction of movement of the corresponding belt reach will move said actuating element in one direction into engagement with one of said fingers and actuate said switch to stop said motor, while a pull on either rope in the opposite direction will move said actuating element in the other direction into engagement with the other finger and actuate the switch to start said motor, and yieldable means normally biasing said actuating element into said neutral position after each said movement of

members, each of said members having a non-circular ranged inwardly of the outer panel for protection by the

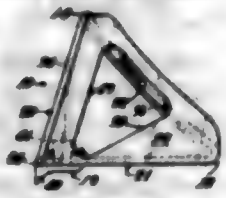
the actuating element, said control mechanism including a rocker lever pivoted intermediate its ends adjacent each of said pulleys, said control ropes being connected to the corresponding ends of said rocker levers, said actuating element comprising an arm projecting from one of said rocker levers, and the last-named means including a cylinder mounted on said frame adjacent each end of one of said levers, a piston in each cylinder having a rod extending from one end of the cylinder and flexibly connected to the corresponding end of said lever, a spring normally biasing said piston toward the other end of said cylinder, and a valve-controlled vent in the second-mentioned end of the cylinder.

2,862,578
VEHICLE RUNNING GEAR
James W. Waber, Chicago, Ill.
Application May 2, 1952, Serial No. 285,820
3 Claims. (Cl. 188—18)



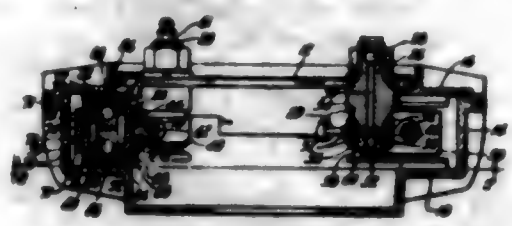
1. Vehicle running gear comprising a wheel element containing an axle receiving opening, said element having a substantially radial web and a rim integral with and diverging from said web and disposed transversely thereof, said rim terminating in a radial flange and having an outer surface for receiving a tire and an inner surface for receiving a braking member, and a brake lining poorly heat conductive as compared with metal directly secured to said inner surface.

2,862,579
WHEEL BLOCK WITH REMOVABLE TOOTHED FOOT
Walter F. Jicha and Marion C. Wilson, Hammond, Ind., assignors to Calumet Steel Castings Corporation, Hammond, Ind., a corporation of Indiana
Application May 6, 1955, Serial No. 506,588
5 Claims. (Cl. 188—32)



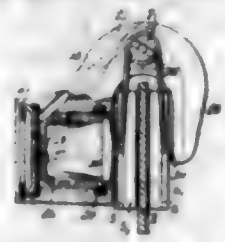
1. In a wheel block having a body which includes sidewalls and wheel engageable front wall means connecting the sidewalls and curving upwardly, the improvement which comprises bottom wall means connecting said sidewalls adjacent their rearward portions, a removable foot plate adapted to seat against the underside of said bottom wall means and having downwardly extending frictional means for engaging with a supporting surface, means adapted to interconnect said foot plate and the block, said bottom wall means having a plurality of apertures, and said foot plate having a plurality of upwardly extending anti-shear means corresponding in shape to said apertures and adapted to fit therein, one of said anti-shear means extending upwardly a greater distance than the others and having a rotatable fit with its aperture whereby it may locate said foot plate relative to the bottom wall means and, by its rotatability in said aperture, permits the other anti-shear means to be more easily directed to their respective apertures for insertion therethrough.

2,862,580
BRAKE ASSEMBLY
Richard T. Barnett, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application December 7, 1953, Serial No. 396,470
8 Claims. (Cl. 188—73)



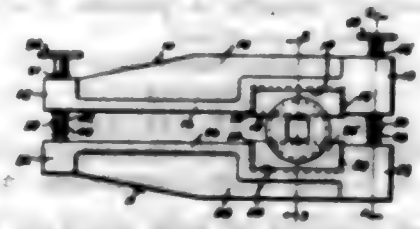
1. In a brake, a rotatable element having spaced parallel sides and a cylindrical portion joining said sides, a fixed supporting structure, a braking device pivotally mounted on said structure for frictional contact with said cylindrical portion and comprising a fluid actuated motor equipped with oppositely acting pistons having their remote ends facing said sides respectively, wear pads carried by the remote ends of said pistons for frictional contact with said sides to cause said device to pivot, and ball and socket connections between said pistons and pads.

2,862,581
DISC BRAKE FOR VEHICLE WHEEL
Rene Lucien, Neuilly sur Seine, France
Application January 5, 1956, Serial No. 557,621
Claims priority, application France September 26, 1955
8 Claims. (Cl. 188—73)



1. A disc brake for vehicle wheels comprising: a brake disc fixed for rotation with the wheel in a plane perpendicular to the axis of said wheel; a support to be fixed with respect to the vehicle; a spindle on said support perpendicular to the axis of said disc; at least one braking unit mounted on said support comprising a stirrup pivoted on said spindle and having spaced limbs positioned on either side of said disc; an operating jack forming an integral part of one of the limbs of said stirrup; two rods mounted on said support and perpendicular to said brake disc; and brake segments slidable on said rods and mounted between said jack and the other limb of the stirrup on either side of said disc, and movable with a translatory motion on said rods, while remaining parallel to said disc and fixed by said rods against rotation with said disc.

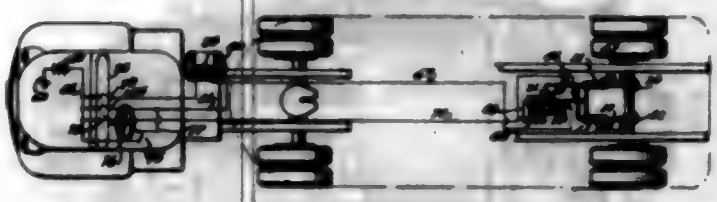
2,862,582
BRAKE DEVICE
Werner P. Rose, Oakland, and Robert E. Kahn, Saddle River, N. J.
Application May 12, 1955, Serial No. 507,909
1 Claim. (Cl. 188—75)



A brake device for resisting the rotation of a roll of a cloth treating machine comprising friction block carrying

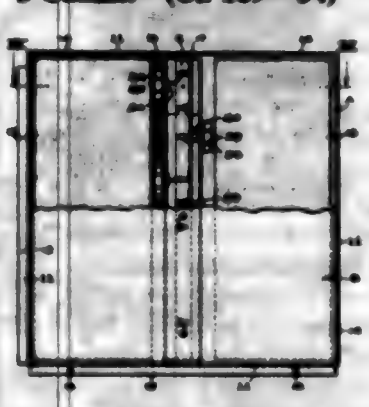
members, each of said members having a non-circular block receiving recess with a groove therein, and boss portions on the respective opposite ends of the member, the recess of the member lying adjacent to the boss at one end of the member, a friction block having a rib fitting into the groove of its carrying member and the boss at the other end lying more removed from said recess and thereby providing an extended anchor arm, a web and reinforcing ribs on the opposite sides thereof running between the boss portions and under and about the recess to provide a lightweight reinforced carrying member, and adjustable bolt assemblies disposed in the respective opposite ends of the carrying members and in the boss portions of the members.

2,862,583
EMERGENCY POWER BRAKE
Stephen R. Granche, Pittsburgh, Pa.
Application January 6, 1954, Serial No. 402,554
2 Claims. (Cl. 188—106)



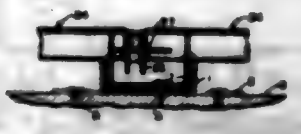
1. In combination with a first fluid actuated brake system for vehicle wheels for operating a brake provided in each wheel; an auxiliary brake system comprising a hydraulic cylinder for each wheel, means for operatively connecting each of the cylinders to an actuating element of the brake of each wheel, a motor actuated pump for supplying fluid under pressure to the cylinders, a low pressure switch in the first fluid actuated brake system automatically starting the pump when the pressure of the fluid therein drops to a predetermined amount, a tube connecting the discharge of the pump to said cylinders, a high pressure actuated switch in said tube for stopping the pump when pressure between the pump and cylinders reaches a predetermined amount, a reservoir, a second tube connecting the cylinders to the reservoir, a solenoid actuated valve in the second tube for releasing fluid pressure of the cylinders, an operator control switch for actuating said solenoid actuated valve and an operator control switch for controlling said pump motor.

2,862,584
EXPANSIBLE WALL STRUCTURE
Francis E. Allen, San Leandro, Calif.
Application October 4, 1954, Serial No. 459,987
3 Claims. (Cl. 189—34)



1. In an expansible wall structure: outer and inner metallic panels arranged in spaced-apart relation; the outer panel being adapted to be mounted on the exterior of a building, or the like, where it will be exposed to elements of the weather, and thereby subjected to considerable expansion and contraction, due to changes in temperature; the inner panel being adapted to be arranged inwardly of the outer panel for protection by the latter, and thus subjected to less expansion and contraction on account of changes in temperature; a reinforcing and supporting structural member interposed between the panels, and contacting with both panels to give support thereto; said structural member including a portion channel-shaped in cross-section, defining a web bearing against the inner panel, and further defining a pair of lateral flanges engaging with the outer panel; the channel-shaped portion and outer panel coacting to define a vertical space adapted to confine a column of insulating air; each flange having a turned-back portion projecting toward the inner panel to define a runner; the runners being disposed on opposite sides of the structural member and extending longitudinally thereof between the panels; means fixedly securing the inner panel to the web of said member; a plurality of stirrups anchored to the outer panel on opposite lateral sides of said member; and a plurality of individual clips interconnecting the outer panel with the structural member; the clips being spaced one from the other to reduce transfer of heat from the outer panel to said structural member; each clip having a foot slidably disposed in a stirrup, and further being provided with a hook slidably engaging over a runner; each foot being disposed at right angles to its respective runner; the hooks being freely slidable along the runners, when the outer panel expands and contracts longitudinally of said member; and the stirrups being movable on the feet of the clips, when the outer panel expands and contracts transversely with respect to the structural member.

2,862,585
BUILDING PANEL STRUCTURE AND CLIP THEREFOR
Henry A. McChesney, Oakland, Calif.
Application September 26, 1955, Serial No. 536,340
1 Claim. (Cl. 189—88)

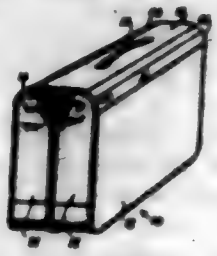


A building panel structure comprising: a vertical and outwardly facing channel section attached to a building wall; an outwardly facing clip channel nested within and secured to said channel section, said clip channel including a central web and outwardly extending flanges; upper and lower end tongues formed integral respectively with the ends of one of said flanges and overhanging said web in substantial parallelism therewith; a lug formed integral with each of said flanges intermediate the ends thereof and coplanar therewith; and a pair of contiguous, coplanar, rectangular, sheet metal panels mounted over said clip channel in substantial parallelism with its said web and with the contiguous edges of said panels in vertical alignment with said clip channel, said panels being provided along their top edges with inwardly extending horizontal flanges and along their contiguous vertical edges with inwardly extending vertical flanges formed adjacent their upper ends with vertical slots, said vertical panel flanges being accommodated within said clip channel, the said lower end tab of said clip channel being hooked through the slots of both of said vertical panel flanges and the outer ends of said intermediate lugs being in abutment with the inner faces of said sheets.

2,862,586
GARMENT BAG
Michael Davis, Little Neck, N. Y., assignor to Mayfab Inc., Brooklyn, N. Y., a corporation of New York
Application July 23, 1956, Serial No. 599,388
6 Claims. (Cl. 190—43)

1. In a collapsible frame for a garment bag having an intermediate wall and side walls, said frame comprising a

base, a pair of arms swingable on said base between active and inactive positions, a pair of flexible straps mounted on said intermediate wall, latch means on said flexible



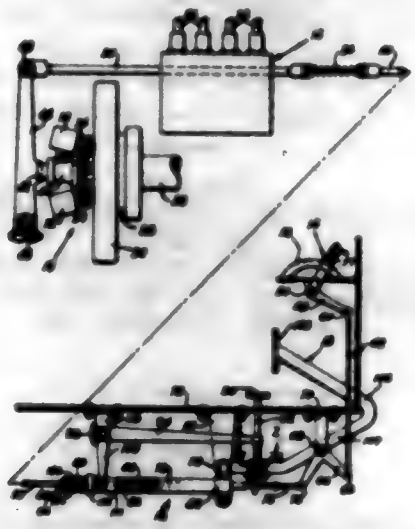
straps, and latch means on said swingable arms coperable with said latch means on said straps when said swingable arms are in said active position to latch the same to support said side wall.

2,862,587

BRAKE PEDAL ACTUATED AUXILIARY DECELERATOR FOR INTERNAL COMBUSTION ENGINES

James L. Boughman, Fairfield, Iowa, and Vilas N. Garrett, Downing, Mo.

Application October 26, 1956, Serial No. 618,510
3 Claims. (Cl. 192—3)



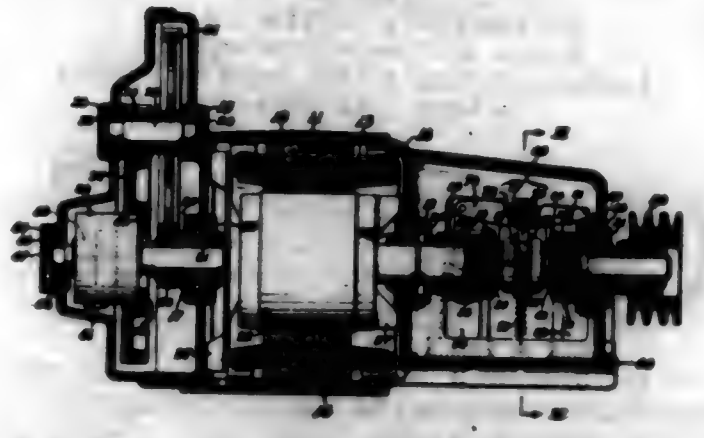
1. In combination, a vehicle floorboard an internal combustion engine governor, a fuel pump, first means operatively connecting the governor to the fuel pump, a manually settable throttle lever, decelerating means, spring tensioned means yieldably and operatively connecting said first means to said decelerating means, a brake pedal pivoted on said floorboard having a lower arm beneath said floorboard, said decelerating means comprising a cylinder having a rear end connecting to said spring tensioned means, a plunger rod having an enlarged head working in said cylinder, said cylinder having a forward end from which said plunger rod emerges, a spring compressed between said head and the forward end of the cylinder, second means operatively connecting said throttle lever to said plunger rod, a fork swingably supported from said support having legs straddling the cylinder and having noses, a fixed abutment collar on said cylinder having a forward side with which said noses are engaged, a forwardly extending lever fixed to said fork and having a forward end, a decelerator pedal above said support and having a depending rod secured to the forward end of said forwardly extending lever, a laterally extending first abutment plate secured on said lower arm of the brake pedal lever, a connecting rod having an upper end secured to said decelerator pedal rod and a lower end, a second abutment plate secured on the lower end of said connecting rod and positioned beneath said first abutment plate, said second abutment plate being unconnected to said first abutment plate and arranged so that the decelerator pedal can be depressed to swing the forwardly extending lever downwardly and cause the fork to push the cylinder rearwardly against the resistance of said spring without moving the brake pedal lever for decelerating an engine, and said brake pedal lever can be depressed independently of the decelerator pedal to engage the first abutment plate onto said second abutment plate and produce rearward movement of the cylinder for decelerating the engine.

2,862,588

VARIABLE SPEED DEVICE

William I. Tebo, Birmingham, Mich., assignor to Detroit Corporation, Detroit, Mich., a corporation of Michigan

Application February 8, 1956, Serial No. 564,295
3 Claims. (Cl. 192—4)



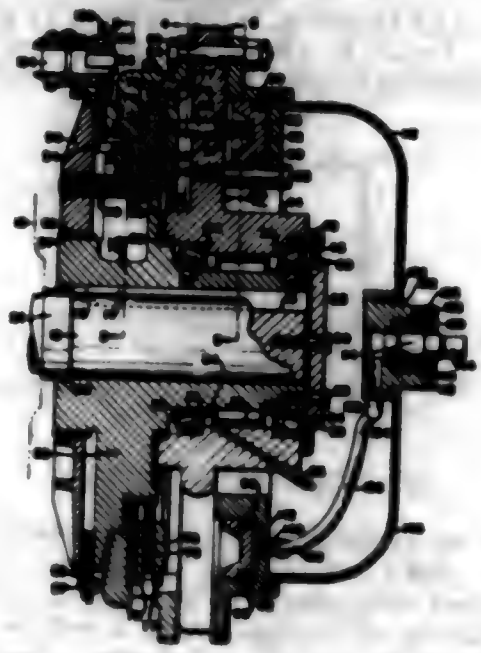
2. A variable speed device comprising a housing, a rotatable hollow shaft journalled in the housing, an electric motor having its rotor operatively connected to the hollow shaft, a second shaft mounted for rotation within said hollow shaft, gear means connected to the hollow shaft, over running clutch means connected between the gear means and the second shaft, brake means connected between the second shaft and the housing, a second clutch means for connecting the hollow shaft and the second shaft, and shipper means for actuating said second clutch means and said brake means.

2,862,589

FRICTION DRIVE MECHANISM

Frederick B. Porteous and John A. Foster, Hastings, Mich., assignors to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware

Application September 28, 1954, Serial No. 456,946
9 Claims. (Cl. 192—18)



1. In a friction drive assembly for use in a machine having a frame, a shaft journaled in said frame with an

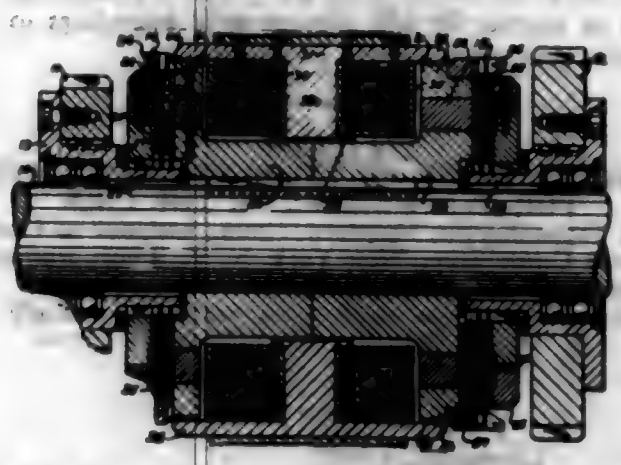
unsupported end projecting therefrom, and a flywheel rotatably carried on said unsupported end, the improvement comprising a sleeve fixed to said unsupported end, said flywheel being rotatably mounted on said sleeve, a flange carried on the inside face of the web of said flywheel, a clutch plate slidably carried on said sleeve to drivingly engage said flange, a brake plate non-rotatably secured to said frame, a flange slidably carried on said sleeve to engage said brake plate, and means to simultaneously slide said clutch plate into driving engagement with said flywheel flange and said sleeve flange out of engagement with said brake plate.

2,861,598

ELECTROMAGNETIC CLUTCH

Ralph H. Schumann, Cleveland, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Application January 13, 1955, Serial No. 481,691
3 Claims. (Cl. 192—84)



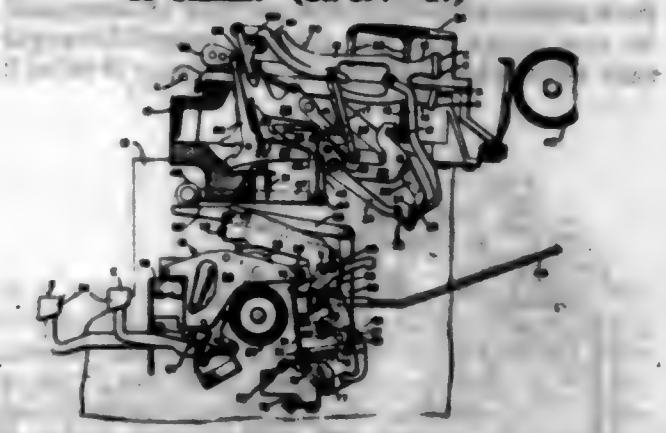
2. In a drive of the character described, first and second clutch mechanisms having separate coaxial first clutch members and a common second clutch member comprising a shaft coaxial with said first clutch members, means supporting said clutch members for rotation independently of each other, first and second electromagnetic coils for operating said first and second clutch mechanisms respectively and each positioned about one of the clutch members of the clutch mechanism operated thereby, the clutch member about which the coils are positioned extending into the center of said coils and having a radially extending flange adjacent one end of the coil member positioned thereabout, said flanges each having inner and outer annular portions of relatively low magnetic reluctance and an intermediate annular portion of relatively high reluctance, means defining a core member for each of said coils which core member is coaxial with said one clutch member for stationarily supporting said first and second coils and permitting relative rotation between the said one clutch member of said first and second clutch mechanisms and the coils, said intermediate annular portion of each flange being substantially aligned with the adjacent coil, said means defining a core member having first portions extending axially therefrom and overlying the adjacent one of said flanges in close proximity thereto with said flanges terminating radially short of said first portions and a second portion extending radially inwardly on the sides of the coils remote from said flanges to a point in closer proximity radially to said one clutch member than the axial distance between the radially innermost end of said second portion and said one clutch member, said second portion terminating axially adjacent the sides of said coils remote from said flanges, disk means adjacent the sides of said flanges remote from the electromagnetic coil positioned adjacent thereto for interconnecting the one clutch member of said first and second clutch mechanisms with the other member thereof, said disk means being coaxial with said clutch members and axially movable to clutch engaged and disengaged positions and being movable to said one of said positions upon the energization of the corresponding electromagnetic coil.

2,862,591

NOISELESS TYPEWRITER REACH ADJUSTMENT AND ESCAPEMENT MEANS

Evert G. Iaraelson, Rowayton, Conn., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application March 12, 1956, Serial No. 576,978
15 Claims. (Cl. 197—17)



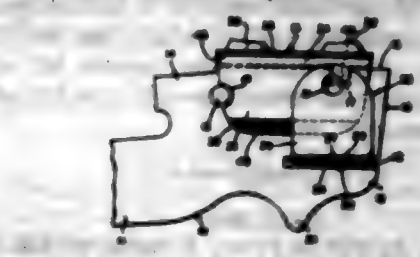
1. In a typewriter, the combination with a key controlled power means and a noisless type action operated thereby and including reach stop means for arresting the force applied to the action by said power means; of a train of parts connecting said power means and said type action, including operating link means; cam means actuated by said power means, and an adjusting means connected to said link means and operated by said cam means for varying the force arresting operation of said reach stop means.

2,862,592

TYPE BAR AND INTERCHANGEABLE TYPE THEREFOR

Carl E. Redmond, Elmira, N. Y., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application February 28, 1956, Serial No. 568,389
14 Claims. (Cl. 197—36)



1. In combination: a type bar having a striking end shaped to provide side and end edges and a slot opening inwardly from said end edge; a type element fitting over said side edge and having depending portions flanking the opposite faces of said striking end; a clip in said slot having jaw members for yieldable gripping engagement with the depending portions of said type element for holding the latter in place on the type bar; and means for securing said clip in said slot.

2,862,593

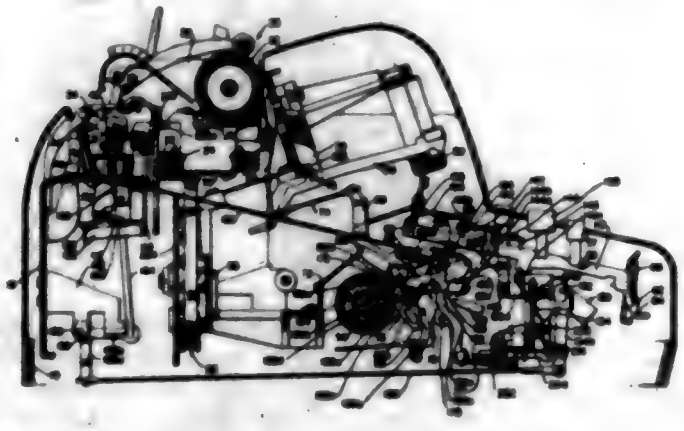
DENOMINATIONAL TABULATING MECHANISM

Eugen Bubler and John H. Nercross, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application May 8, 1953, Serial No. 355,684
21 Claims. (Cl. 197—178)

16. In a typewriting or like machine, a frame element; a carriage element mounted on said frame element for

horizontal letter spacing and return travel; mechanism for driving said carriage element in letter spacing direction; feed controlling mechanism for normally causing said carriage element to be fed by said driving mechanism in incremental letter spacing steps; a tabular stop means on one of said elements; a support on the other of said elements; a tabular stop device; cooperating guide means respectively on said tabular stop device and said support for mounting said tabular stop device for vertical movement from a normal position in which it is not engageable with said tabular stop means to an intermediate position in which it is still not engageable with said tabular stop means; an actuator mounted on said other of said elements for horizontal movement transverse to the horizontal travel of said carriage element, said tabular stop device and said actuator being disengaged from each other when said tabular stop device is in its normal



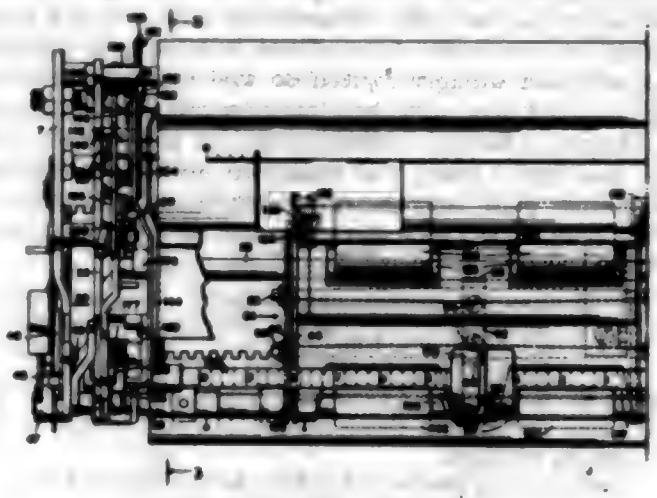
position but engaging each other when said tabular stop device is in its said intermediate position; tabular stop device moving means operable for moving said tabular stop device from its normal position to its intermediate position to effect engagement of said tabular stop device with said actuator; conditioning means operable for conditioning said feed controlling mechanism to enable the carriage element to perform a tabulating run; and key controlled means for first operating said tabular stop device moving means and then concomitantly operating said conditioning means and moving said actuator to thereby move said tabular stop device horizontally and transversely to the horizontal travel of said carriage element, whereby, at the beginning of a tabulating run of the carriage, to position said tabular stop device to be engageable with said tabular stop means for arresting said carriage element to terminate said tabulating run of said carriage element.

2,862,594
FEED ROLL SUPPORTING STRUCTURE FOR TYPEWRITERS

Leon E. Palmer, Wappingers Falls, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York.

Application October 21, 1953, Serial No. 387,416
3 Claims. (Cl. 197—138)

1. In a typewriter having a platen, a structure supporting feed rollers for cooperation with said platen, said structure comprising, in combination, a pair of elongated torsion springs extending parallel to said platen, clamping means engaging said torsion springs at spaced points for holding said springs from turning about their axes at such points, support arms fixed to said torsion springs at points spaced from said clamping means, said support arms extending from said springs to opposite sides of said platen, feed rollers carried by said support arms and engageable with said platen, cam means engageable with one of said support arms for rocking it away from said platen against the action of the one of said springs to which it is connected, and means interconnecting said support arms so that a rocking of said one of said support arms by said cam means causes a counter-rocking move-

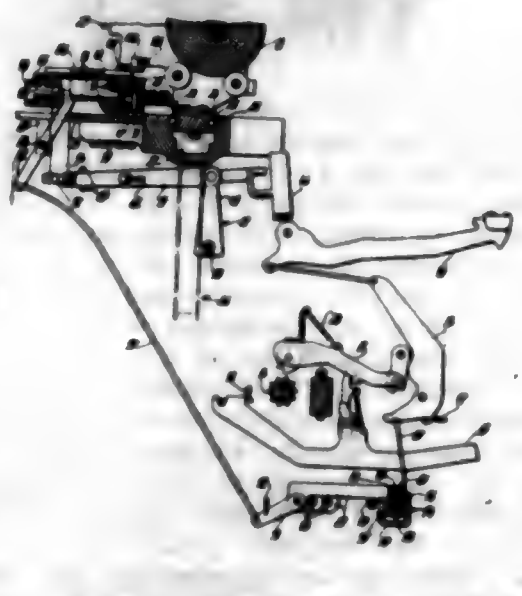


ment of another of said support arms extendings to the opposite side of said platen.

2,862,595
PROPORTIONAL LETTER-FEED MECHANISM FOR TYPEWRITERS OR THE LIKE

John Toggenburger, Hartford, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware

Application October 18, 1954, Serial No. 462,670
26 Claims. (Cl. 197—84)



1. In a machine having a typing mechanism selectively operable to type different characters and having also a carriage; a proportional letter-spacing mechanism for said carriage, comprising two devices for stepping it alternately, and means controlled by said typing mechanism at successive selective operations thereof to call alternately the two stepping devices into operation and additionally to condition that stepping device which is called into operation to determine for the carriage variedly a step-movement which is generally proportional to the width of the particular character that is being typed.

2,862,596
STRIP FEEDING DEVICE

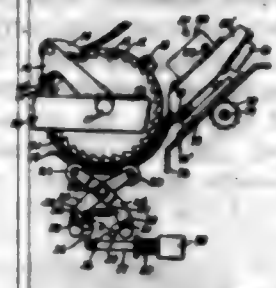
Albert W. Metzner, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a corporation of Ohio

Application May 24, 1956, Serial No. 587,013
11 Claims. (Cl. 197—133)

1. Strip feeding apparatus, including a platen, friction feed devices normally effective to hold multi-copy strip material against said platen for feeding thereof with rota-

ton results in rotational movement of said cylinder, means first group of wire elements each being formed with

tion of said platen, strip controlled means for momentarily releasing said friction feed devices at intervals in



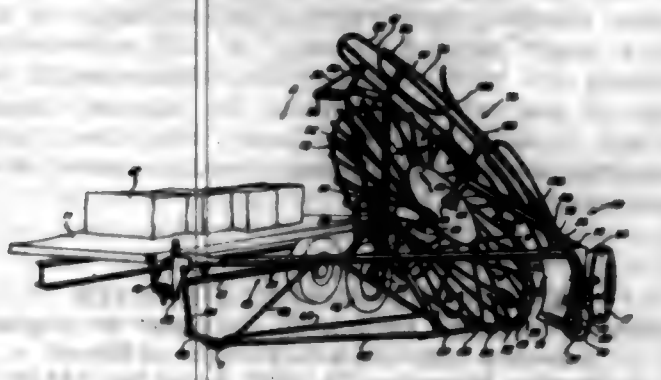
the feeding of said strip, and means for realigning the copies of said strip in said intervals.

2,862,597

APPARATUS FOR LOADING BALED FARM CROPS

Marvin J. Priefert, Belvidere, Nebr.

Application February 14, 1956, Serial No. 565,359
5 Claims. (Cl. 198—7)



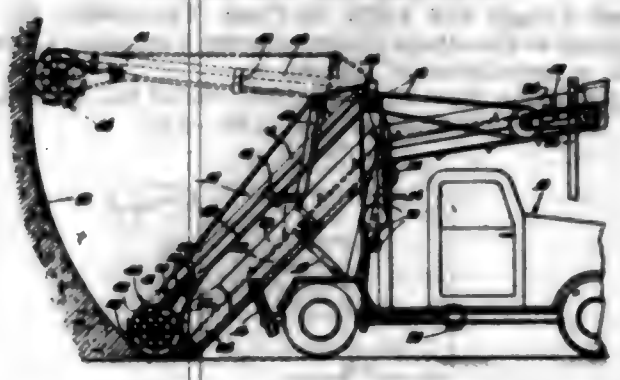
1. A bale loading machine comprising a frame, a pair of transversely spaced ground wheels for said frame, a transverse upwardly inclined bale loading wheel rotatably mounted on said frame at a position between said ground wheels, means supporting one end of said frame on one of said ground wheels, arm means pivotally connected to and extended between the other end of said frame and the other one of said ground wheels for up and down movement of said frame and loading wheel between a first position in which said loading wheel is in engagement with the ground and a second position in which said loading wheel is above the ground surface, and coacting means on said arm means and said frame for releasably locking said arm means in a position corresponding to said second position of said loading wheel.

2,862,598

ENSILAGE LOADER

Harry L. Oswalt, Garden City, Kans.

Application November 4, 1955, Serial No. 544,933
11 Claims. (Cl. 198—9)



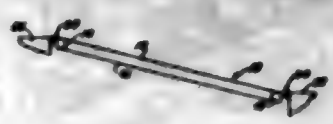
1. In an apparatus for loading material, such as ensilage and the like, the combination comprising rotatable means for removing said material from a storage pile thereof, said rotatable means being of generally elongated cylindrical construction and comprising a plurality of blades extending generally longitudinally of the rotatable means substantially at the circumference thereof, and a plurality of cutters spaced about said rotatable means, said cutters having cutting edges arranged generally diagonally of the direction of movement of the adjacent parts of the rotatable means, leading portions of said cutters being closer to the axis of rotation of said rotatable means than outer portions of said cutters are to said axis.

2,862,599

SAFETY LANDING FOR MOVING SIDEWALKS

Alfred D. Sinden, Aurora, and Robert O. Schaeffer, Elgin, Ill., assignors to Stephens-Adamson Mfg. Co., a corporation of Illinois

Application July 10, 1957, Serial No. 670,948
13 Claims. (Cl. 198—16)



3. In a conveyor system including a conveyor belt presenting a relatively smooth transport surface moving in a forward direction, and a stationary passenger platform at the forward end of the transport surface, the improvement wherein a rockable landing member is interposed between said platform and said transport surface in the area wherein the transfer between the transport surface and the platform is to be effected, said landing member extending across substantially the entire width of said transfer area and having a relatively pointed sealing edge projecting in a rearward direction over the transport surface and in close proximity thereto, and an upper substantially smooth tread surface, said landing member comprising an upper relatively hard member forming said sealing edge and said upper tread surface, and a lower resilient member in substantial wiping engagement with said transport surface across substantially the entire width of said transfer area, said resilient member having frictional characteristics that are substantially equal to or greater than those of the transport surface, said landing member being mounted for pivotal movement about a substantially horizontal axis that is located forwardly of said sealing edge, stop means limiting the upward and downward rocking motion of said sealing edge, and means yieldably biasing said sealing edge toward said transport surface.

2,862,600

CONVEYOR SYSTEMS

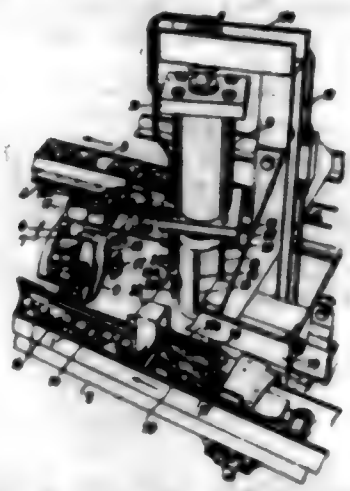
Arthur Thomas Charles Barrows, Stevenage, England, assignor to Geo. W. King Limited, Stevenage, England, a British company

Application June 16, 1954, Serial No. 437,173
Claims priority, application Great Britain June 19, 1953
8 Claims. (Cl. 198—20)

1. In a conveyor system including two separate driven chains each supporting load carriers and so arranged as to travel in side by side relationship and in relatively close proximity to each other over at least one section of their respective paths of travel; a transfer unit disposed at said one section and comprising a piston and cylinder assembly, means for directing a supply of motive fluid to said cylinder alternately at opposite sides of the piston, a screw element connected with said piston, a stationary element with which said screw element cooperates so that on axial movement of the piston a rotary motion will be imparted thereto, a sleeve like extension on said cylinder having axially directed slots therein, laterally directed projections on the said screw element slidably engaging in the slots in said sleeve like extension so that while relative axial movement between the piston and cylinder can take place rotational movement of said pis-

means extending therebetween adapted to support a belt of said trough, said walls having elongated openings ex-

which it is connected, and means interconnecting said supton results in rotational movement of said cylinder, means restraining rotation of the cylinder and hence the piston during initial supply of fluid to said cylinder thereby to cause an initial axial displacement of said cylinder, and a transfer arm operatively connected with said cylinder to move therewith so that on supply of fluid to one side of the piston the transfer arm will make an initial vertical



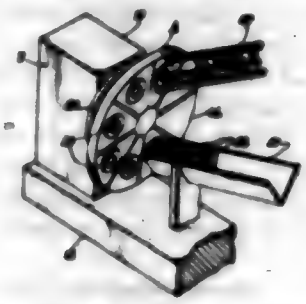
movement to engage a load carrier present on one chain and a subsequent rotary movement to transfer said carrier to the second chain, reversal of the supply of fluid to the opposite side of said piston resulting in a reverse initial vertical movement of said transfer arm out of engagement with the transferred carrier and a subsequent reverse rotary movement to restore said arm to its initial position.

2,862,601

ELECTROMAGNETIC TRANSFER APPARATUS

Arthur K. Littwin, Lincolnwood, and Donald F. Littwin, Chicago, Ill., assignors, by mesne assignments, to Robert L. Littwin, Arthur K. Littwin, and Louis W. Bier, Chicago, Ill., as trustees

Application March 7, 1956, Serial No. 570,173
24 Claims. (Cl. 198—25)



1. A magnetic article transfer apparatus comprising a rotatably mounted article transfer means for moving an article through a circular path, a first means adjacent the initial portion of said path for effecting a relatively weak magnetic force to transfer said article onto said transfer means, a second means adjacent the intermediate portion of said path for effecting a relatively strong magnetic force to hold said article on said transfer means during rotation thereof, and a third means adjacent the final portion of said path that eliminates any magnetic attraction between said article and said transfer means for releasing said article, said transfer means being operative for controlling said first and third means.

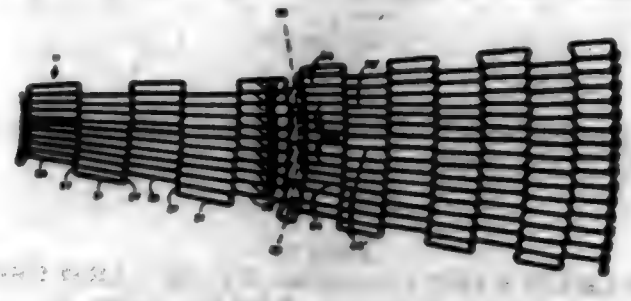
2,862,602

WIRE BELT

Don S. Greer, Winchester, and John H. Lowe, Waltham, Mass., assignors to Wire Belt Company of America, Incorporated, Cambridge, Mass., a corporation of Maryland

Application October 22, 1955, Serial No. 543,431
3 Claims. (Cl. 198—182)

1. An endless wire mesh belt to convey relatively small articles in an arcuate path, said belt including a first group of wire elements each being formed with alternate straight portions which extend at a slight angle to one another in a substantially transverse direction to said path and with a series of bent portions of gradually increasing length extending between the straight portions so as to permit divergence thereof towards the outer boundary of said path, the elements of said first group being arrayed adjacent one another, and selected non-adjacent uniformly spaced ones of said elements



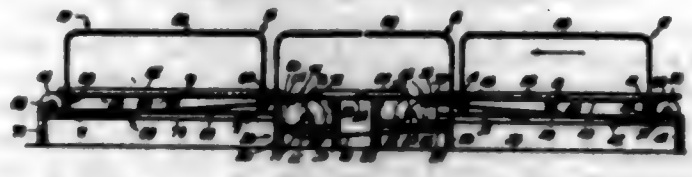
being extended beyond the remaining intermediate ones thereof for a predetermined distance; and a second group of wire elements individually formed like said first-named elements, the elements of said second group having a length substantially equal to said predetermined distance and being arrayed between the extended portions of said selected elements, the adjacent elements of each of said groups being loosely interlocked thereby permitting the belt to be drawn around a relatively small nose piece.

2,862,603

MULTI-UNIT MOVING SIDEWALK

Alfred D. Sinden, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois

Application November 28, 1955, Serial No. 549,291
9 Claims. (Cl. 198—94)



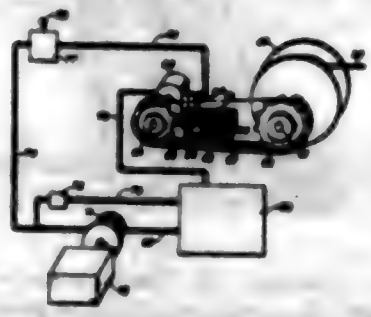
1. A high speed moving sidewalk comprising a high speed endless conveyor trained over spaced apart end pulleys, end frames at the opposite ends of said high-speed conveyor mounted adjacent each end pulley of said conveyor and having pivotal movement about axes coinciding with the axis of rotation of the respective end pulleys, an endless low speed conveyor carried by each of said end frames, and a foot guard fixed to each end frame, movable therewith, and positioned in the gap between the respective low speed conveyors and the ends of the high speed conveyor.

2,862,604

EXTENSIBLE CONVEYOR

Joseph Craggs and Keith McCann, Taylorville, Ill., assignors to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application November 23, 1955, Serial No. 549,603
20 Claims. (Cl. 198—139)



1. In an extensible rope frame conveyor, the combination of: discharge and receiving sections having strand

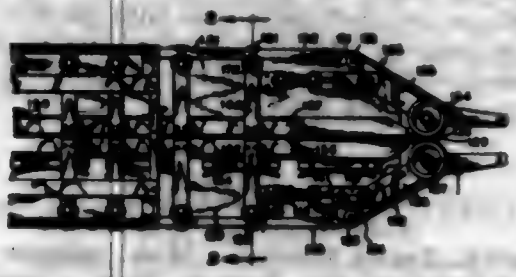
rollers, said bails being interlinked, a ball supported by portion thereof removed to provide a space conveni-

thereof, said rotatable means being of generally elon-

cylinder can take place rotational movement of said pla-

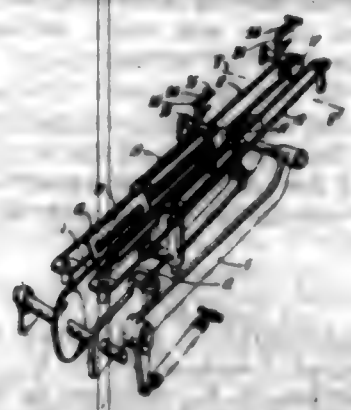
means extending therebetween adapted to support a belt trained for orbital movement between the sections and means for moving the receiving section to vary the effective length of the conveyor while concurrently paying out or drawing in strand means relative to the receiving section at a predetermined tension.

2,862,665
CONVEYOR CHAIN
John J. Grevich, St. Paul, Minn., assignor to Doughboy Industries, Inc., New Richmond, Wis., a corporation of Wisconsin
Original application July 1, 1953, Serial No. 365,426, now Patent No. 2,727,648, dated December 20, 1955. Divided and this application May 31, 1955, Serial No. 512,165
7 Claims. (Cl. 198—162)



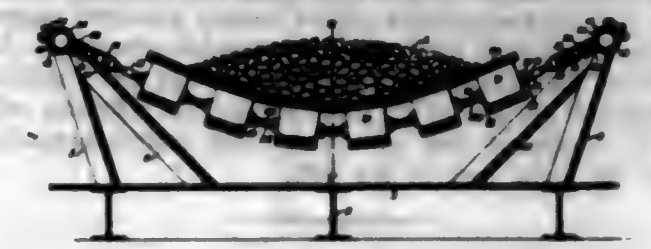
1. In a heat sealing machine, feeding means for feeding articles to be sealed, said feeding means comprising opposed silent chains driven in synchronism and receiving articles therebetween for feeding movement through said machine, each of said chains comprising a plurality of pivotally connected links, said links being substantially flat on the front edge and having teeth extending from their back edges, side plates on opposite sides of said links, said side plates extending outwardly of said links on the rear edge beyond said teeth to provide a series of transversely spaced projections, a backing bar engaging the inner run of one chain, a pressure bar engaging the inner run of the other chain, adjustable spring means for controlling the force exerted by the pressure bar on the other chain, and spaced slots forming guideways in said bars for slidably receiving said projections whereby said chains are maintained in alignment and prevented from sagging, said projections extending to the bottoms of said spaced slots thereby supporting said chain completely in said spaced slots.

2,862,666
FISH-FEEDING METHOD AND APPARATUS
Karl Friedrich Schlichting, Lubeck, Germany, assignor to Nordischer Maschinenbau Rud. Baader, Lubeck, Germany
Application November 8, 1955, Serial No. 545,782
Claims priority, application Germany November 9, 1954
5 Claims. (Cl. 198—165)



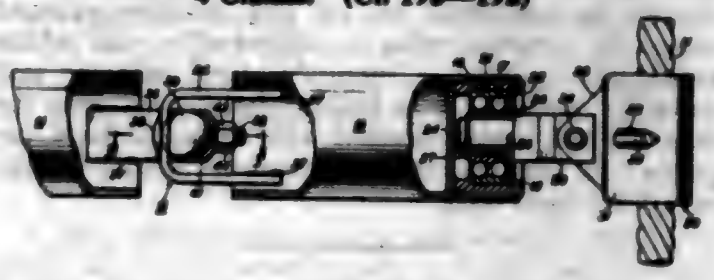
1. A fish-feeding apparatus, comprising an endless movable conveyor band, two fixed walls extending downwardly toward each other and toward said band to form a fish-receiving trough, said band constituting the bottom of said trough, said walls having elongated openings extending in the direction of said band, endless bands movable within said openings, means carried by said walls and engaging portions of the last-mentioned bands located within said openings for maintaining said band portions at a closer distance from each other than that of said openings, whereby a fish body in said trough is engaged and transported by the bands, two other endless bands constituting a continuation of said walls and extending parallel to the first-mentioned band for engaging and transporting a fish body emerging from said trough, and means located above the first-mentioned band beyond said trough and in the path of movement of the fish body for pressing the fish body against said bands.

2,862,687
SUSPENSION IDLER
Chris Simmos, Chicago, and John J. Hucy, Elmhurst, Ill., assignors to The United Electric Coal Companies, Chicago, Ill., a corporation of Delaware
Application August 28, 1953, Serial No. 377,175
2 Claims. (Cl. 198—192)



1. In an idler apparatus for a belt conveyor, opposed conveyor supporting means, a series of non-rotatable axes suspended between said means, a series of idler rolls mounted for free rotation on each of said axes, means to flexibly interconnect said rolls comprising a double pivot element joining adjacent of said axes, whereby said rolls may be suspended to form a distortable catenary curve, means to maintain said curve in plan and in section during movement of said conveyor, said last-named means including a pivot means adjacent each of said supporting means, and a micrometer adjustment means between each of said pivot means and each end of said series, whereby the depth and shape of said catenary may be varied.

2,862,688
TROUGHING ROLLER ASSEMBLY FOR BELT CONVEYORS
John S. Newton, Glen Ellyn, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application October 25, 1957, Serial No. 692,366
4 Claims. (Cl. 198—192)

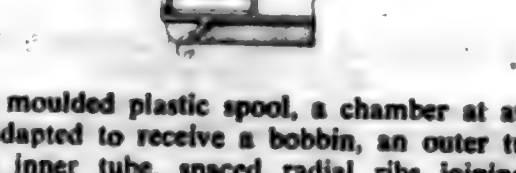


1. A troughing roller assembly adapted to support a reach of an endless belt conveyor, said troughing roller assembly comprising a plurality of elongated rollers, means for connecting each end of said troughing roller assembly to a support, means supported on said last named means for rotatably supporting an end roller of said assembly, and means for interconnecting the rollers of said assembly for rotation together but for movement in both horizontal and vertical planes comprising a bail extending from the contiguous ends of a pair of said

ber; a pressure sensitive adhesive coating firmly united intersection to provide a base sheet having a minimum

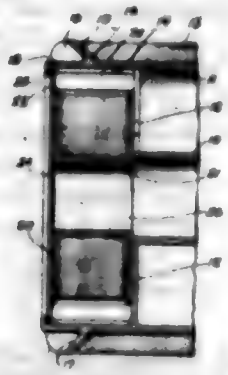
rollers, said bails being interlinked, a ball supported by one of said bails, and a ball seat on the other of said bails.

2,862,609
HEAVY DUTY FLAT WIRE CONVEYOR BELT
Alfred R. Bechtel, Jr., Portsmouth, R. I., assignor to Ashworth Bros. Inc., Fall River, Mass., a corporation of Massachusetts
Application February 28, 1956, Serial No. 568,360
2 Claims. (Cl. 198—193)



1. A flat wire conveyor belt of substantial width and comprising continuous transverse links each having a plurality of substantially U-shaped bends forming pairs of adjacent legs and said bends being disposed in parallel longitudinal series in said belt, cross-pins pivoted in said legs, and load-supporting rollers loosely mounted on successive cross-pins and uniformly spaced across the full width of the fabric, and each roller having its cylindrical peripheral portion projecting beyond the adjacent edge of its associated link, and all of said rollers projecting from the same face of the belt.

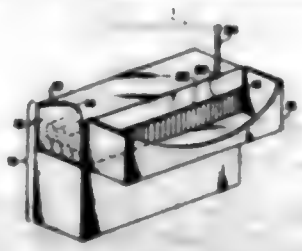
2,862,610
SPOOL AND BOBBIN COMBINATION
Louis H. Morin, Bronx, N. Y., assignor to Coats & Clark, Inc., New York, N. Y., a corporation of Delaware
Application July 8, 1954, Serial No. 442,139
4 Claims. (Cl. 206—47)



4. In a moulded plastic spool, a chamber at at least one end adapted to receive a bobbin, an outer tube, a concentric inner tube, spaced radial ribs joining said tubes at the bottom of said chamber, vertical spaced ribs on the peripheral wall of said chamber arranged around the periphery so as to snugly receive said bobbin within said chamber, a rupturable label engaging said bobbin to retain the same against displacement from the chamber, and means integral with the spool body engaging said label to retain the same in position on the end of the spool body.

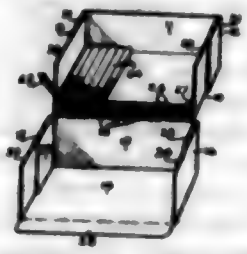
2,862,611
COMBINATION CIGARETTE AND MATCH CASE
Catherine Paidousani and Giuseppe Armenia, Brooklyn, N. Y.
Application November 22, 1957, Serial No. 698,199
3 Claims. (Cl. 206—48)

2. A cigarette and match container comprising in combination a rectangular housing including front, rear and end walls, a top wall continuous with one of said end walls, and with both of said front and rear walls, said top wall having an arcuate marginal space at the other end thereof, the other of said end walls having a top portion thereof removed to provide a space communicating with the first mentioned space, said spaces providing an opening for insertion and removal of cigarettes into and from the housing, a holder disposed on one of side walls near the top thereof for carrying matches in spaced relation, and a swingable cover member hinged



at one of its longitudinal margins to the side wall, said member having a linear part for covering the spaced matches, an end part continuous with the first mentioned part for covering said arcuate space, and an end portion continuous with said first portion for covering the aforesaid communicating spaces.

2,862,612
C-RING STRIP PACKAGE
Howard G. Brown, Worcester, Mass., assignor to Novelty Tool Company, Inc., Spencer, Mass., a corporation of Massachusetts
Application January 29, 1957, Serial No. 637,016
1 Claim. (Cl. 206—56)



A C-ring strip package comprising a scored cardboard blank folded along the scorings and forming a receptacle having a bottom, a rear wall and two side walls and which is open at the top and front, the rear wall having flaps folded over and extending forwardly through half of the length of each side wall, said blank also forming a cover portion having a front wall, a top wall and two side walls, said cover portion having the front edge of the top wall detachably secured to the upper edge of the rear wall along a scored and partially cut line so arranged that the cover may be readily torn from the receptacle, the said front wall of the cover having flaps folded over and extending throughout half the length of each adjacent side wall, said cover walls being arranged to fold over the receptacle and fully enclose its contents with the flaps aligned and forming a third wall thickness at the sides of the package, a set of separately removable separators having upstanding flanges parallel with and adjacent to the side walls, and sets of open ended C-ring strips mounted on and spaced by the separators parallel with the flanges and arranged with the C-ring prongs facing downwardly and positioned by said flanges and with the open ends of the strips exposed at the open front of the receptacle and positioned to have a guide inserted therein for lifting each strip from the receptacle.

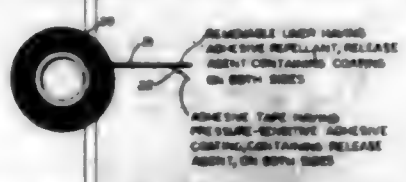
2,862,613
PRESSURE-SENSITIVE ADHESIVE TAPES
Albert John Klemka, Londonville, N. Y., and Charles Olson Pike, Newton, N. C., assignors to Norton Company, Troy, N. Y., a corporation of Massachusetts
Application October 20, 1955, Serial No. 541,831
7 Claims. (Cl. 206—59)

6. A pressure sensitive adhesive tape, wound upon itself in roll form and comprising a flexible backing mem-

indication responsive to a signal from said last named

portion extending along the top of the fixed pole to main-

ber; a pressure sensitive adhesive coating firmly united to at least one surface of said backing member; an adhesive-repellent surface in contact with said adhesive coating while said tape is in roll form; and a release agent incorporated in both said adhesive coating and said adhesive-repellent surface as initially formed, said release agent being concentrated in the outer contacting



portions of both said adhesive coating and said adhesive-repellent surface, the concentration of said release agent in said adhesive coating ranging from about 2% to about 50% of said concentration of said release agent in said backsize coating and being sufficient to retard substantial migration of release agent from the adhesive-repellent surface to the adhesive coating.

2,862,614

WRAPPER FOR WOUND FILAMENTARY PACKAGES

Orlando A. Battista, Drexel Hill, and Graeme G. Whytlaw, Swarthmore, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application April 28, 1954
Serial No. 426,298
16 Claims. (Cl. 206—64)

1. An assembly comprising an annular package of freshly prepared regenerated cellulose filamentary material and a shrinkable protective paper wrapper conformed to the contours of the package, the wrapper comprising a base sheet formed of a coherent, permeable tissue paper, the fibers of which are bonded together at their points of intersection to provide a base sheet having a minimum wet strength of 300 grams per linear inch across the grain, and, superimposed on a surface of the base sheet, continuous, parallel stripes of a substance selected from the group consisting of regenerated cellulose and alkali-soluble, water-insoluble cellulose ethers, the superimposed stripes constituting from 2% to 40% by weight of the wraper, the stripes having a width of from one-sixteenth inch to two inches and spaced apart a distance of from one to three inches from edge to edge and occupying at least 5% but not more than 40% of the area of the sheet and extending circumferentially of the wrapped package, the wrapper having a minimum air-permeability of about 117 cubic feet per minute per square foot of area as determined by the ASTM–D–737–46 air-permeability test wherein a pressure drop of about 0.5 inch of water is maintained between the opposite sides of the wrapper and being characterized by having a greater shrinkability at the areas occupied by the superimposed stripes than at the uncoated areas.

2,862,615

SHRINKABLE WRAPPERS FOR ANNULAR THREAD PACKAGES

Orlando A. Battista, Drexel Hill, and Graeme G. Whytlaw, Swarthmore, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application April 28, 1954
Serial No. 426,299
16 Claims. (Cl. 206—64)

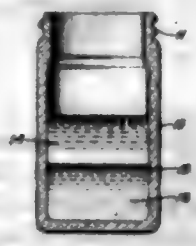
1. An assembly comprising an annular package of freshly spun regenerated cellulose filamentary material and a shrinkable protective wrapper conformed to the contours of the package, the wrapper comprising a base sheet formed of a coherent, permeable tissue paper, the fibers of which are bonded together at their points of intersection to provide a base sheet having a minimum wet strength of 300 grams per linear inch across the grain, and, superimposed on a surface of the base sheet, discrete, spaced deposits of a substance selected from the group consisting of regenerated cellulose and water-insoluble, alkali-soluble cellulose ethers, the superimposed deposits constituting from 2% to 30% by weight of the wrapper and occupying not more than 40% of the area of the wrapper, the wrapper having a minimum air-permeability of about 117 cubic feet per minute per square foot of area as determined by the ASTM–D–737–46 air-permeability test wherein a pressure drop of about 0.5 inch of water is maintained between the opposite sides of the wrapper and being characterized by having a greater shrinkability at the areas occupied by the superimposed deposits than at the uncoated areas.

2,862,616

METHOD OF PACKAGING EPOXY RESINS

Lawrence Capozzi, East Paterson, N. J., and Philip Kenner, New York, N. Y., assignors to Lancaster Chemical Corporation, Carlstadt, N. J., a corporation of New York

Application March 17, 1958, Serial No. 721,757
8 Claims. (Cl. 206—147)



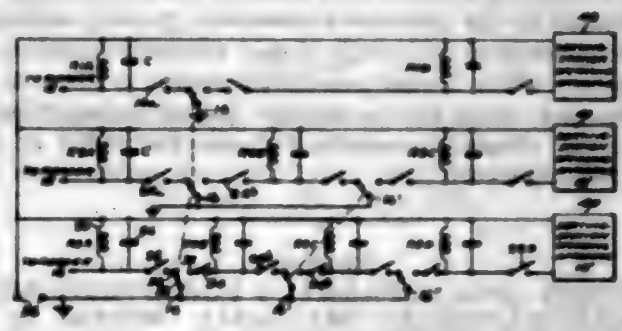
2. A package including a container, a layer of liquid epoxy resin and a layer of curing agent for said resin therein, the said layers being separated from each other by an impermeable film produced by the interaction in situ of said resin and said curing agent.

2,862,617

SHIFTING REGISTER FOR A SORTING SYSTEM

George W. Brown, Pacific Palisades, Calif., assignor, by mesne assignments, to Telemeter Magnetics, Inc., Los Angeles, Calif., a corporation of New York

Application February 21, 1955, Serial No. 489,165
8 Claims. (Cl. 209—72)



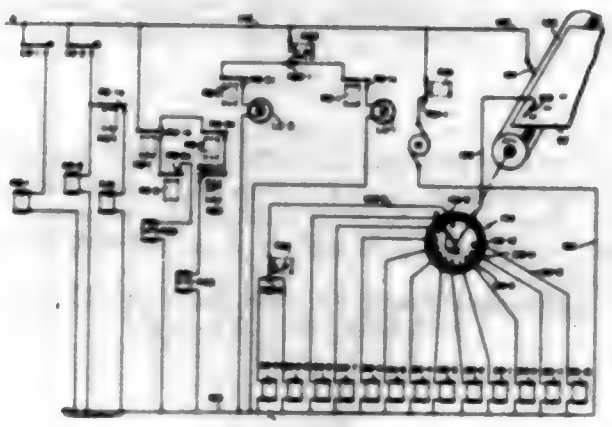
1. In a sorting system of the type wherein items to be sorted are passed serially under a reader and then are passed in sequence by a number of sorting stations at each of which there are collected those items having an identification assigned to be collected by that station, a register for said system comprising a different register channel associated with each of said sorting stations, means responsive to an identification of an item being read by said reader to store an indication of the presence of said item in a channel associated with the sorting station to collect said item, means at each sorting station to signal all said channels the approach of an item to said sorting station, means in said channels to advance a stored

2,862,621

the later of the filtered liquid; and a relief tube ex-

indication responsive to a signal from said last named means, and means at a sorting station to collect an item responsive to an indication from the associated channel that the item is one for which an indication was stored and advanced in said channel.

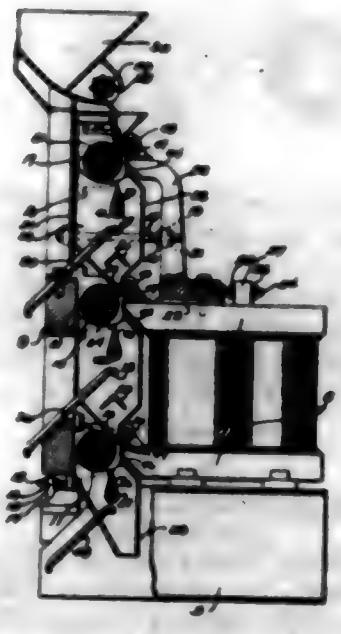
2,862,618
POCKET INDICATOR
Thomas J. Gallagher, Wappingers Falls, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application September 14, 1955, Serial No. 534,335
7 Claims. (Cl. 209—110)



1. A card handling machine comprising, in combination, a plurality of regular record card receiving pockets and at least one overflow record card receiving pocket, means operable for sensing classification indicia in a record card, means for feeding a record card past said sensing means and thereafter past said pockets, each of said regular record card receiving pockets corresponding to one of said classifications, means associated with each said pocket, both regular and overflow, and operable by said sensing means for directing said record card to a selected said pocket, in accordance with the classification indicia sensed in said card, circuit means interconnecting said associated means of two associated pockets, said associated pockets being one of said regular record card receiving pockets and said overflow record card receiving pocket, a contact means associated with each of said associated pockets operable when a said associated pocket is filled to capacity for actuating said interconnecting circuit means whereby a record card selected for said filled pocket is directed to the other said associated pocket, indicating means associated with each of said associated pockets for indicating when a said associated pocket is filled to capacity, and circuit means operable for actuating only said indicating means associated with the first filled of said associated pockets.

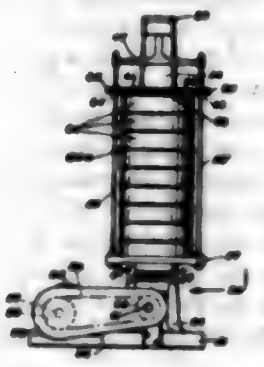
2,862,619
METHOD AND APPARATUS FOR OVERCOMING RELUCTANCE IN MATERIAL WHICH IS IN PROCESS OF MAGNETIC SEPARATION AND CONCENTRATION
Roswell H. Stearns, Wauwatosa, and Harold W. Buss, Milwaukee, Wis., assignors, by direct and mesne assignments, to The Indiana Steel Products Company, Valparaiso, Ind., a corporation of Indiana
Application July 8, 1954, Serial No. 442,058
18 Claims. (Cl. 209—216)

4. In a magnetic separator, the combintaion with a relatively fixed magnetic pole and an opposed rotatably mounted polar cylinder of opposed polarity with respect to the fixed pole, there being a gap between said poles, of a chute organization for guiding between said pole and cylinder material requiring magnetic separation, said chute organization including a baffle having a shouldered portion extending along the top of the fixed pole to maintain such material in proximity to the fixed pole for a period of dwell sufficient to overcome its magnetic reluctance and to impart substantially to such material the polarity of the fixed pole, said baffle having another portion extending from the shoulder across the face of the



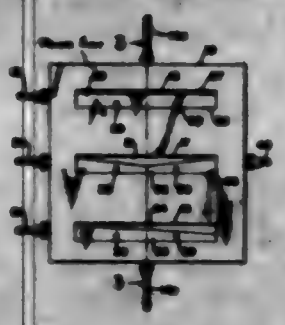
pole and laterally outwardly from the fixed pole and downwardly toward and past the cylinder, said other baffle portion spanning to a substantial extent the gap between the fixed pole and cylinder, whereby material having in substantial part magnetism of the polarity of the fixed pole is carried away from the fixed pole and exposed to the magnetism of opposite polarity of the polar cylinder.

2,862,620
SIEVE SHAKER APPARATUS
Theodore W. Van Zelst, Jr., Wilmette, Ill., assignor to Sollitest, Inc., Chicago, Ill., a corporation of Illinois
Application May 6, 1957, Serial No. 657,115
11 Claims. (Cl. 209—237)



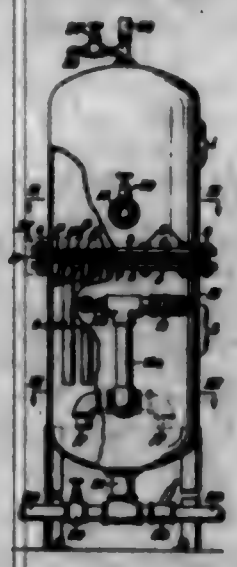
1. Apparatus for shaking a column of sieves, comprising: a platform for holding a sieve column thereon, means including a ball and socket assembly for pivotally suspending said platform, a crank arm directly below said platform, in juxtaposition thereto, and rotatable in a horizontal plane, means for rotating said arm, a crank pin carried by said arm, an endless track carried by said platform at the bottom thereof and arranged to receive said crank pin therein, said track including a plurality of interconnected sections having at the point of intersection between adjacent sections an abrupt change in track direction, whereby a predetermined path of movement is prescribed for said track and a predetermined number of tappings is imparted to said platform for each cycle of crank arm rotation.

2,862,621
PORT MEANS FOR THERMAL DIFFUSION APPARATUS
Richard W. Aarons, Cleveland, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Application December 29, 1955, Serial No. 556,226
1 Claim. (Cl. 210—176)



A thermal diffusion apparatus comprising a pair of plates adapted to accommodate the passage of a heat transfer medium therethrough uniformly spaced apart in sealed relation to provide a thermal diffusion separation chamber therebetween, reservoir means in at least one of said plates, a conduit communicating with one end of said reservoir means, port means communicating with said reservoir means and with said separation chamber, said port means comprising a section recessed to the plate containing said reservoir means so as to provide a horizontally elongated opening in the face of said plate, said opening having a width which varies uniformly along its full length, the narrowest width of said opening being nearest said conduit.

2,862,622
FILTERS
Charles E. Kircher, Jr., Detroit, and Robert J. Jones, Dearborn, Mich., assignors to Detrex Chemical Industries, Inc., a corporation of Michigan
Application August 10, 1955, Serial No. 527,513
3 Claims. (Cl. 210—333)

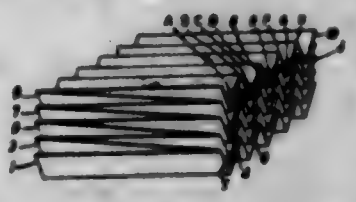


1. A filter, useful in separating suspended material such as filter aid from dry cleaning fluid or the like, comprising a hollow body; a diaphragm setting apart within the body an upper chamber and a lower chamber; screen filter tubes set into individual apertures in the diaphragm and depending therefrom into the lower chamber; an inlet adjacent the bottom of the lower chamber; an induction conduit through which the liquid to be filtered is pumped from a reservoir, said conduit extending upwardly, to a level slightly below that of the diaphragm and thence downwardly where it is connected to the inlet at the bottom of the lower chamber; an outlet adjacent the top of the upper chamber connected by a delivery conduit to the reservoir for return to the later of the filtered liquid; and a relief tube extending from the top level of the induction conduit and connecting laterally into the lower chamber at a level slightly below that of the diaphragm whereby, upon cessation of the pumping, the liquid is permitted to gravitate from the upper chamber through the diaphragm by way of the filter tubes into the lower chamber only to the level of the relief tube, with incidental prevention of subsequent syphoning through the induction tube and complete draining of the filter.

2,862,623
FILTER
Calvin J. Werner, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 18, 1955, Serial No. 509,319
2 Claims. (Cl. 210—445)

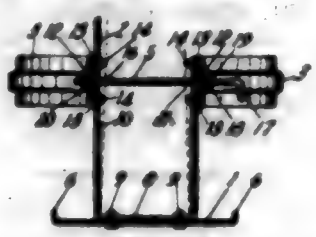
2. A filter assembly, comprising in combination; two shell members including spaced aligned apertures therethrough in opposed faces thereof, a plate-like filter element sealed around its outer periphery between said members and having a central aperture aligned with and spaced from the apertures in said members, a clamping bolt passing through said three apertures for clamping the members together with the filter element therebetween, and an elastomeric tube carried on said bolt and having a greater free length than the distance between the opposed faces of said members and of slightly less diameter than the diameter of the aperture in said element and greater than the diameter of the apertures in said members, said tube being axially compressed by the members when they are clamped together by said bolt for sealingly engaging the opposed faces and the bolt and for simultaneously peripherally engaging the aperture in said element in sealing relation thereto whereby the assembled shell members form two compartments separated by said filter element.

2,862,624
FILTER ELEMENTS
Edward Arthur Stokes, Guildford, England, assignor to Vokes Limited, Guildford, England
Application April 26, 1955, Serial No. 503,953
2 Claims. (Cl. 210—493)



1. A filter element comprised by a sheet of permeable filter material, said sheet being folded in zigzag fashion along one series of parallel straight lines and being folded in zigzag fashion along another series of alternately inclined straight lines substantially but not precisely at right angles to the said first series of lines, the aberration from rectangularity being such as to maintain pleats formed by said first folding apart from one another at minor acute angles.

2,862,625
RACK FOR HOLDING FUEL GAS BOTTLES
Harold W. Norris, Battle Creek, Mich.
Application March 18, 1957, Serial No. 646,789
4 Claims. (Cl. 211—74)

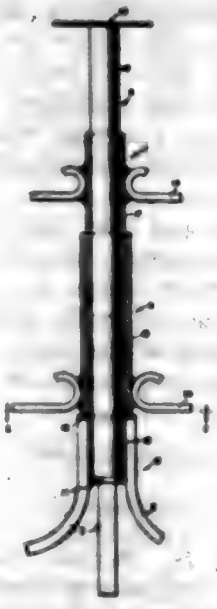


1. A gas bottle holding rack comprising a flat base plate adapted to be clamped to a support and having stiffening flanges along its front and rear edges, a support member consisting of an upwardly opening U-shaped strap of springable metal bolted to the center of said base plate with a rear arm projecting above its front arm, front and rear clamp bars bolted to the front side of said front arm and the back side of said back arm respectively and projecting laterally to each side of said support member, said clamp bars having transverse cross sections of opposed U-shape with vertically turned flanges on each edge, the connecting bolts between clamp bars and the arms passing through the flanges on the clamp bars, said clamp bars being longitudinally curved to provide opposed concave bottle gripping arms on each side of said support member, a clamp screw rotatably mounted on and extending through said clamp bars and the adjacent portions of the arms of said support member, said clamp screw being threaded on its rear end and having a handle turned laterally from its front end, a thrust member mounted on said clamp screw forwardly of the front clamp bar and engageable therewith, and a nut freely located within the U-shaped section of the rear clamp bar and behind the rear arm of said support member and threadedly engaged with the threaded rear end of said clamp screw, said nut having a larger diagonal dimension than the width of the U-section of said clamp bar whereby the U-shaped wall of the rear clamp bar functions as a non-rotational stop for the nut, said clamp bars being supported above said base plate a distance equal to the height of the medial flanges on gas bottles from the ends thereof whereby the flanges are received in the U-section of the clamp bars.

2,862,626
HOLDER FOR PENCILS, PAPER CLIPS AND THE LIKE
George Clare, Maplewood, N. J.
Application March 17, 1955, Serial No. 494,836
2 Claims. (Cl. 211—88)

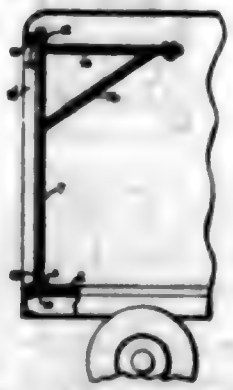
1. A plastic holder for pencils and small items consisting of two plastic parts, the first part comprising a flat back member, a multiplicity of vertical tapered partitions extending at right angles from the face of said back member, a small projecting ridge extending around the outer edge of said back member except the upper part thereof, a back plate at the lower front end of said partitions, said back plate substantially parallel to said flat back member and projecting slightly beyond the front edges of said partitions, the second part comprising a U-shaped front member comprising a housing enclosing said partitions and a projecting lower receptacle for small office items, the spaces between said housing, said back member and said partitions forming compartments for pencils and the like, the front of said front member extending from the top of said vertical partitions to the top of said back plate with the lower edge thereof resting upon the top of said back plate, said back plate forming the back of said lower receptacle, said front member attached to said back member between said small projecting ridge of said back member and means for attaching said holder to a surface.

2,862,627
TIERED SUPPORT FOR FOOD AND OTHER ARTICLES
John M. Mirasty, Carbondale, Pa.
Application November 23, 1956, Serial No. 623,939
3 Claims. (Cl. 211—163)



1. A tiered support for food and other articles including a supporting base embodying a tubular socket the bottom of which is at least partly closed, a supporting tier having a tubular sleeve slidably engaged over said socket, a second supporting tier having a tubular member slidable through the tubular sleeve of said first tier and abutting said base socket, and a top tier including a shaft which extends through said first and second tiers and into engagement with the closed inner end of the base socket.

2,862,628
LIFTING CRANE
Leroy Coates, Latonia, and Arvil Saylor, Covington, Ky.
Application May 11, 1956, Serial No. 584,261
2 Claims. (Cl. 212—65)



1. The combination of a truck and a lifting crane having a vertical mast, carrying an extended arm, having a bottom end pintle, a plate clamped by bolts to the rear corner of the truck floor provided with a recess for seating the bottom end pintle of the mast, a common washer for the bolt clamps, means for pivotally connecting the top end of the mast to a side wall of the truck, a

2,862,633
an inner projected position, said arms having thereon

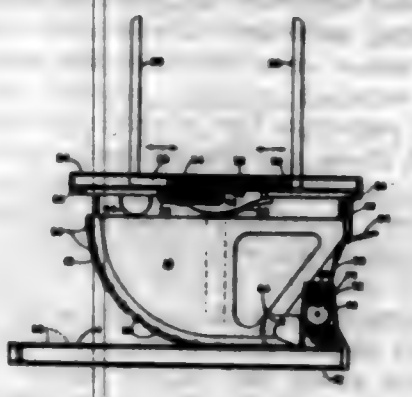
pair of latch pins mounted on the mast adjacent the plate and biased to latch into recesses formed in the plate, one of said plate recesses being in position to latch one of the latch pins when the arm of the mast is disposed inwardly parallel one side of the truck and the other plate recess being in position to latch the other latch pin when the arm of the mast is transversely disposed, and hook means mounted on the mast above the last mentioned pin for holding said pin out of latching position.

2,862,629

INVERTING MECHANISMS

Roy Aberle, Gray, Maine, assignor to Southworth Machine Company, Portland, Maine, a corporation of Maine

Application February 5, 1954, Serial No. 408,421
1 Claim. (Cl. 214—1)



An inverting mechanism including generally horizontal fixed track means, a generally quadrantal rolling frame mounted for rolling movement along said track means, supporting clamp means mounted on said frame for rotation about an axis generally perpendicular to the rolling axis of said frame, said supporting clamp means including a plate lying in a plane generally perpendicular to the axis of rotation of said supporting clamp means, means for positioning and locking said plate in only either of two selected rotary positions 180 degrees from one another, said positioning means including sockets positioned in opposite diagonal corners of said plate and a spring-urged pin mounted on said frame, and opposed clamps mounted on said plate, said clamps extending generally perpendicularly to the face of said plate and being movable toward and away from one another in a direction perpendicular to the rolling axis of said frame with said plate in either of said selected rotary positions, means for moving each said opposed clamp toward and away from one another to clamp a stack of material therebetween including opposed racks on each of said opposed clamps mounted for sliding movement on said plate means with said clamps, a pinion rotatably mounted on said plate between and engaging said opposed racks for simultaneously moving said racks, and power means mounted on said plate for driving said pinion, and means for rolling said frame along said track means to move said plate between a lowered horizontal position with one end thereof adjacent said track means and a raised vertical position generally parallel to and above said track means, said means for rolling said frame including cable means extending between said rolling frame and said fixed track means, and winch means for winding up and unwinding said cable.

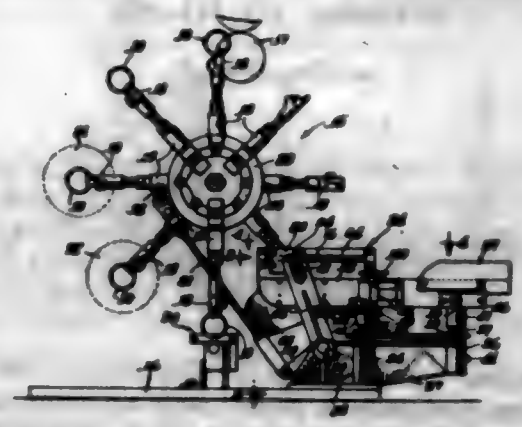
2,862,630

STACKER MECHANISM FOR COIL SPRINGS

Martin J. Nelson and Edward Turecki, Chicago, Ill., assignors to Wunderlich Spring Machinery Company, a corporation of Illinois

Application August 8, 1952, Serial No. 303,377
7 Claims. (Cl. 214—6)

1. A stacker mechanism for coil springs comprising, a pair of elongated spaced side plate members, each having a step to form a forward coil receiving portion for receiving coil springs under compression and a subsequent wider coil spring stacking portion, a slot in each side plate member extending from a point in the coil spring receiving portion to a point in the coil spring stacking portion, a pair of crosshead members longitudinally slidably mounted on the outside of the side plate members, a spring engaging member rigidly carried by each cross-



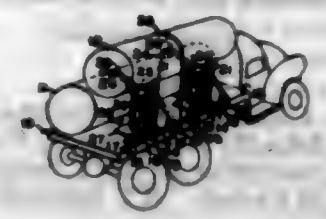
head member and extending through the slots in the side plate members and being inwardly provided with undercut spring engaging faces for partially receiving and engaging the opposite end turns of the coil springs and individually guiding and advancing the coil springs from the coil spring receiving portion over the step to the stacking portion for stacking the coil springs therein and for advancing the coil springs along the stacking portion.

2,862,631

SUPPORTS FOR CYLINDRICAL MEMBERS ON A TRANSPORT CARRIER

John R. Gamble, Kansas City, Kans., assignor to The Kaw Valley Steel Company, Kansas City, Mo., a corporation

Application December 31, 1956, Serial No. 631,697
4 Claims. (Cl. 214—10.5)



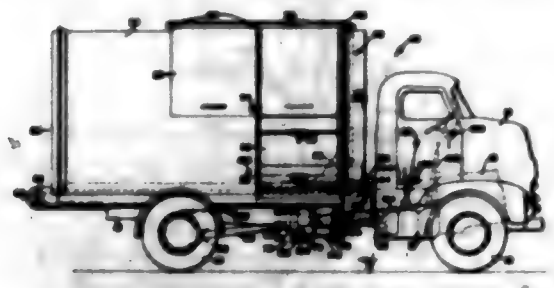
1. Support frames adapted to be spaced parallel for transverse support of cylindrical members which are thereby spaced parallel with and above a flat bed or a transport carrier, each support frame comprising: one long column, one shorter column, bracing members spacing said long and shorter columns in parallel relation, a saddle beam having substantially a uniform depth formed in the shape of an S or reverse curve, one end of the saddle beam having pivoted to the top of said long column, said long and shorter columns adapted to be supported by a flat bed of a transport carrier, said long column adapted to be located near one edge of the flat bed, said shorter column adapted to be located between a cylindrical member supported on the flat bed and said longer column, said saddle beam being extended to curve downwardly to rest the lowest portion thereof on said shorter column and be extended to curve upwardly sufficiently and adapted to be supported transversely on the cylindrical member, and said first mentioned portion of the saddle beam adapted to be a transverse support for a second cylindrical member spaced parallel with the first cylindrical member and located partially above and partially to one side of the first cylindrical member, means to anchor the base of the long column against one edge of the flat bed, and means adapted to secure the cylinders to the supports and flat bed.

cam means on the rear end of said track means, means to reciprocate said carriage forwardly and rearwardly suf-

with said post and including a base provided with a plu-

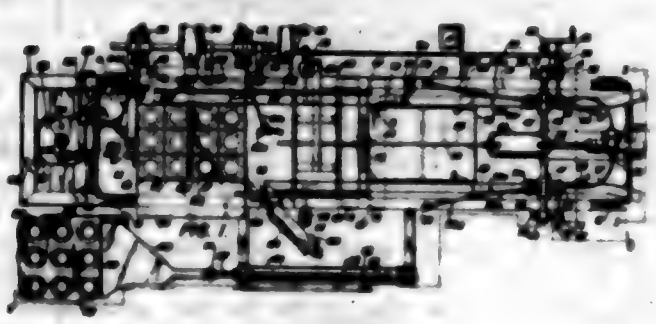
ber comprising a housing enclosing said partitions and a ing the top end of the mast to a side wall of the truck, a

2,862,632
POWER TRANSMITTING ASSEMBLY FOR REFUSE HANDLING VEHICLES
Jimmie V. Thurmond, Orin M. Anderson, and William A. Ferrari, San Antonio, and Francis H. Dean, Houston, Tex., assignors, by mesne assignments, to Pak-Mor Manufacturing Company, San Antonio, Tex., a corporation of Texas
Application January 12, 1956, Serial No. 558,673
10 Claims. (Cl. 214—82)



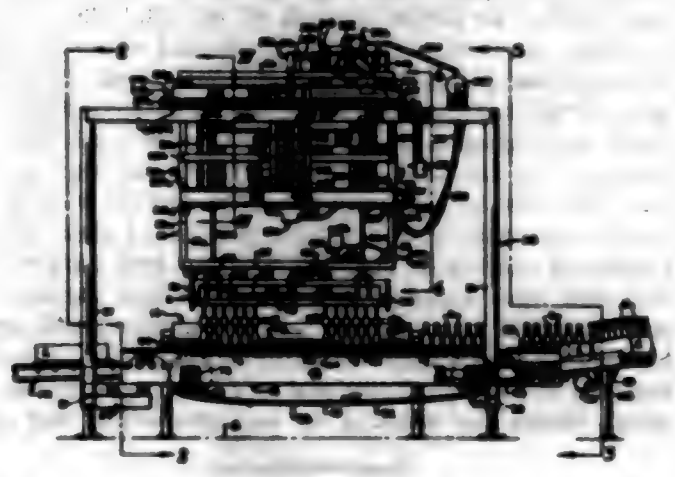
1. A refuse handling vehicle comprising a truck having a refuse receptacle, a packer plate assembly movable in said receptacle for compressing refuse deposited therein, ground wheels for propelling the truck, a motor for driving the packer plate assembly and ground wheels, a power shaft connected with said motor, a drive shaft connected with said ground wheels, movable clutch means between said shafts operable in one position to interconnect the same to drive the ground wheels and in a second position to disconnect said shafts, a driven member rotatably mounted with respect to said power shaft about the axis thereof, magnetic coupling means on said power shaft for connecting said driven member therewith, an electric circuit for actuating said magnetic coupling means including means for preventing the actuation of said magnetic coupling when said clutch means is disposed in said one position, and speed reducing means drivingly connected with said driven member and said packer assembly for moving the latter, said speed reducing means including a housing mounted adjacent the front end of said receptacle, and a non-self-locking gear train in said housing.

2,862,633
CARTON UNLOADER
John W. Stiles, Miami, Fla.
Application November 15, 1955, Serial No. 547,002
16 Claims. (Cl. 214—309)



1. In an apparatus for unloading a closed carton containing a plurality of container units therein and having overlapping inner and outer closure flaps, the combination of a first conveyor, a second conveyor in longitudinal alignment therewith, a retractable stop adjacent a predetermined first station along the path of said first conveyor and movable between a projected position above said first conveyor and a retracted position no higher than the level of said first conveyor, means to operatively actuate said stop, first suction arms adjacent said first station and movable between an outer retracted position and an inner projected position, said arms having thereon suction cups proportioned and positioned operatively to engage said outer flaps when said arms are in their said projected positions and said carton is at said first station, second suction arms disposed rearwardly beyond said first arms adjacent a predetermined second station and movable between an outer retracted position and an inner projected position, said latter arms having thereon suction cups proportioned and positioned operatively to engage said inner flaps when said arms are in their said projected positions and said carton is at said second station, a suction pipe line operatively connected with said respective arms and cups, valve means between said line and said respective arms, means to open said valve means when said respective arms are in their said projected positions and during their movements to their said respective retracted positions, whereby said cups will adhere to said respective engaged flaps during the operative retracting movement of said arms, means to close said valve means while said respective arms are in their respective retracted positions, whereby said cups will release said respective flaps, a vertically movable vacuum lifting head above said second station and movable between upper and lower limiting positions, said head containing thereon apertured portions positioned and proportioned for engagement with said container units when said head is at its said lower position and said carton is at said second station, a discharge platform adjacent said second station, said suction head being revolvable between its said position above said second station and a predetermined discharge position over said discharge platform, means to operatively actuate said suction lifting head, suction means connected to said apertured portions for creating a partial vacuum within said apertured portions while the head is in its said lower position and during its movement to its said discharge position, and means to disconnect said suction means from said apertured portions when said lifting head is in said last-mentioned position, whereby the container units will be released upon said discharge platform.

2,862,634
MEANS TO TRANSFER ARTICLES FROM CASES TO A CONVEYOR
Charles Chalich, Salisbury, N. C., assignor to Taylor Mfg. Co., Inc., Salisbury, N. C., a corporation of North Carolina
Application March 23, 1956, Serial No. 573,489
25 Claims. (Cl. 214—309)



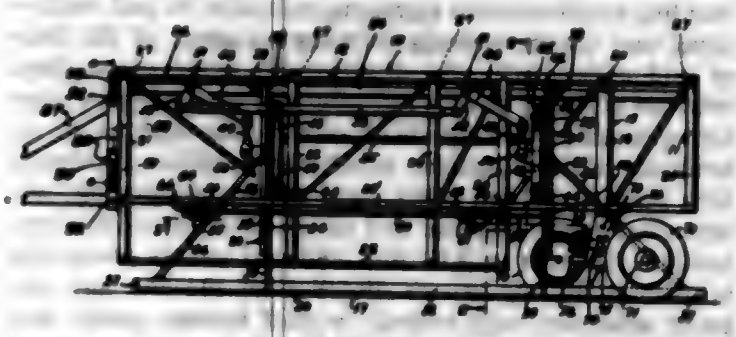
1. In an article handling machine having a carriage, article-engaging members depending from the carriage and a continuously driven rearwardly moving and substantially horizontal conveyor; in combination, track means spaced above and extending substantially parallel to said conveyor, track-engaging means on said carriage, means for, at times, resiliently urging said carriage upwardly and urging said track-engaging means against the lower surface of said track means, downwardly inclined

device to apply liquid gum to the plates alongside the abutments hold said head immediately adjacent said flanges

pair of elongated spaced side plate members, each having bed.

cam means on the rear end of said track means, means to reciprocate said carriage forwardly and rearwardly sufficient to move the track-engaging means beyond opposite ends of said track means whereby the carriage is lowered by engagement of the track-engaging means with said cam means, means to release articles from the article-engaging members when they are lowered by the cam means whereby the carriage and said track-engaging means are caused to dart upwardly by said means resiliently urging the carriage upwardly as the track-engaging means moves beyond the rear end of said cam means, said means resiliently urging the carriage upwardly causing said track-engaging means to then move above the level of said track means, said means resiliently urging said carriage upwardly also being operable to lower said carriage and to aline the upper surface of said track-engaging means with the lower surface of said track means at the end of each forward stroke of the carriage, and means to connect articles with said article-engaging members while the carriage is in forward position.

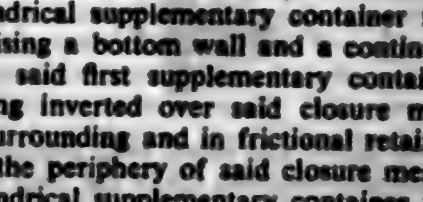
2,862,635
STRADDLE CARRIER
James Julius Christenson, Cowiche, and Frederick G. Maloney, Yakima, Wash.; said Maloney assignor to Edwards Equipment, Yakima, Wash., a corporation of Washington
Application January 2, 1958, Serial No. 706,803
16 Claims. (Cl. 214—392)



1. In a straddle carrier: a frame having top and side walls defining a chamber open at one end so that the frame may be moved over the load to be transported; wheels connected to said side walls, supporting said frame for movement over roads; vertical guide means disposed adjacent the inner faces of said side walls of said frame; hinge means connecting the upper ends of said guide means to the upper portions of said side walls so that the lower parts of said guide means may swing inwardly toward the central plane of said chamber; load lifter members vertically movable in said guide means and having means at the lower ends thereof for engaging the load; cylinder-piston motors arranged vertically on said side walls; means connecting opposite ends of said motors respectively to said side walls of said frame and to said lifter members; means for correlating the vertical movements of said lifter members; and means for moving said lifter members toward and away from the longitudinal center line of said chamber so as to bring said engagers into engagement with the load and to disengage them from the load.

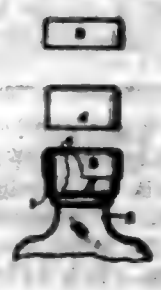
2,862,636
LOADING AND CARRYING ROLLERS FOR BOAT TRAILER
Louis E. Miller, Odessa, Tex.
Application May 22, 1957, Serial No. 660,916
4 Claims. (Cl. 214—505)

1. In a boat trailer, a wheeled frame including spaced apart crosspieces, roller assemblies connected to said crosspieces and each roller assembly including a vertically disposed post, a support member arranged in engagement with said post and including a base provided with a plurality of openings for the projection therethrough of securing elements, said support member further including an upper cylindrical portion, a securing element extending through said cylindrical portion and into engagement with said post, the upper end of said post being bifurcated



to define a pair of spaced parallel fingers, a shaft including an intermediate enlarged shoulder pivotally connected to said fingers, a pair of spaced parallel plates pivotally mounted on said shaft, a pair of spaced parallel trunnions extending inwardly from each plate, and a pair of spaced parallel rollers interposed between said plates and journaled on said trunnions.

2,862,637
SUPPLEMENTARY CONTAINER FOR USE WITH RECEPTACLE CLOSURES
Harold S. Holdford, Portland, Oreg.
Application March 23, 1956, Serial No. 573,545
5 Claims. (Cl. 215—38)



1. The combination comprising a bottle having a cylindrical closure member removably associated therewith, a first cylindrical supplementary container forming section comprising a bottom wall and a continuous peripheral flange, said first supplementary container forming section being inverted over said closure member with its flange surrounding and in frictional retaining engagement with the periphery of said closure member, and a second cylindrical supplementary container forming section comprising a bottom wall and a continuous peripheral flange, said second supplementary container forming section being inverted over said closure member with its flange surrounding and in frictional engagement with the flange of said first supplementary container forming section, said supplementary container forming sections being removable from association with said bottle, separable from each other, and capable of being telescoped one into the other with their flanges in frictional retaining engagement with each other and their bottom walls opposed to each other whereby to form a separate supplementary container.

2,862,638
LABELLING MACHINES
Sydney E. Banks, Sheffield, England, assignor to Morgan Fairest Limited, Sheffield, England
Application September 14, 1955, Serial No. 534,319
Claims priority, application Great Britain September 15, 1954
12 Claims. (Cl. 216—54)

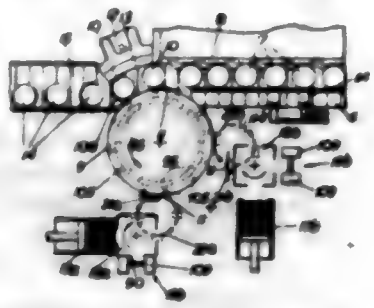
1. A labelling machine comprising a rotatable delivery drum with suction openings in its periphery, means to feed to the drum a close succession of articles to be labelled, means to guide the articles into contact with a portion of the periphery of the drum, a rotatable multi-plate pick-up member with apertured plates, a gumming

municating with the outer atmosphere; a resilient membrane of predetermined thickness and resiliency located

2,862,643
CLOSURE GATES FOR VENDING MACHINES

and movable between an outer retracted position and lower surface of said track means, downwardly inclined

device to apply liquid gum to the plates alongside the apertures, a label stack for the application of a label to a gummed pick-up plate, means to rotate the pick-up member intermittently to bring a plate carrying a label to rest near the delivery drum clear of the portion contacted by the articles, a transfer pusher movable in a circular orbit to pass through an apertured plate in such position of rest to detach the label from the plate and to carry the label into proximity with the delivery

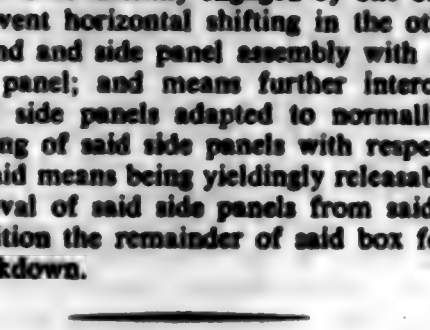


drum, section openings in the pusher to hold the detached label, means to rotate the pusher holding the label additionally about an axis parallel to the axis of its circular orbit to bring the ungummed face of the label tangential to the periphery of the drum, the pusher moving at the and means to control the suction at the pusher and the drum for the drum to take over the label from the pusher and carry it to and roll it on an article to be labelled. same speed and in the same direction as that periphery.

2,862,639
BARREL AND BARREL HEAD THEREFOR
Harry Guthrie Bell, Paris, Ky., assignor to Gay-Bell Corporation, Paris, Ky., a corporation of Kentucky
Application May 24, 1955, Serial No. 510,610
1 Claim. (Cl. 217—44)

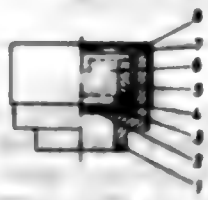
An improved barrel and barrel head comprising: a first reinforcing member disposed about the edge of said barrel, said member comprising an uninterrupted band disposed flat about the outside of said barrel, a plurality of first segments extending from said band and disposed about the extreme edge of said barrel, a plurality of flanges sloping inwardly from said first segments, flange portions extending outwardly from the innermost ends of said flanges to the inside of said barrel and perpendicular thereto, and second segments extending downwardly from said flange portions and perpendicular to said flange portions, said second segments being disposed flat about the inside of said barrel; a second reinforcing member disposed about the periphery of said barrel head, said last mentioned member comprising a U-shaped channel member having the bridge of the U engaging the extreme edge of said head and the legs of the U being disposed flat about either side of the head; first U-shaped staples passing through said band and said second segments, the inner end portions of said first U-shaped staples being return-bent and projecting inwardly of the inner surface of said second segments and presenting first abutments spaced from said second segments inwardly of said barrel; second U-shaped staples passing through the legs of said U-shaped member parallel to said second segments and presenting second abutments on the outer side of said head; said first U-shaped staples being parallel to said flange portions and spaced from said flange portions a distance slightly greater than the thickness of said head and said second reinforcing member whereby said first abutments hold said head immediately adjacent said flange portions; and said second abutments being spaced from the edge of said head so as to engage the innermost ends of said flanges when said head is in place within the barrel and engaged between said first abutments and said flange portions.

2,862,640
KNOCKDOWN BOX
José Ramon Somavia, Hollister, Calif., assignor to The Plastabox Corporation, a corporation of California
Application January 26, 1956, Serial No. 561,537
2 Claims. (Cl. 220—4)



1. A knockdown open topped plastic box comprising a bottom panel having upstanding reinforcing elements, a pair of alike end panels, and a pair of alike side panels, mortise and tenon connections between said bottom panel and said end panels comprising mortises formed in said upstanding reinforcement elements embodied in said bottom panel and tenon elements terminating short of the sides of said end panels, and mortise and tenon connections between said end panels and said side panels, and means for releasably securing all of said panels together in assembled relation against accidental relative movement with respect to each other, said means comprising: obstructions formed in one end of the mortises of the connections between said bottom and end panels preventing horizontal shifting in one direction of the end and side panel assembly with respect to said bottom panel; said end panels being further adapted to rest upon the top of said reinforcement elements and be supported thereby; at least one upwardly directed flange formed on said botttom panel adapted to be laterally engaged by one of said side panels to prevent horizontal shifting in the other direction of the end and side panel assembly with respect to said bottom panel; and means further interconnecting said end and side panels adapted to normally prevent vertical shifting of said side panels with respect to said end panels, said means being yieldingly releasable to permit the removal of said side panels from said box and thereby condition the remainder of said box for further and full knockdown.

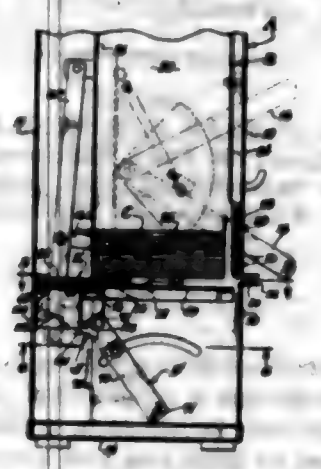
2,862,641
PRESSURE CONTROL DEVICE
Fritz Philipp, Hagen-Haspe, Germany, assignor to Accumulatoren-Fabrik Aktiengesellschaft, Hagen, Germany
Application March 7, 1956, Serial No. 570,034
2 Claims. (Cl. 220—89)



1. A pressure control device comprising, in combination, a hollow housing having two end portions and adapted to communicate at one end portion with the interior of a container adapted to having a fluid under pressure therein, the other end portion of said housing com-

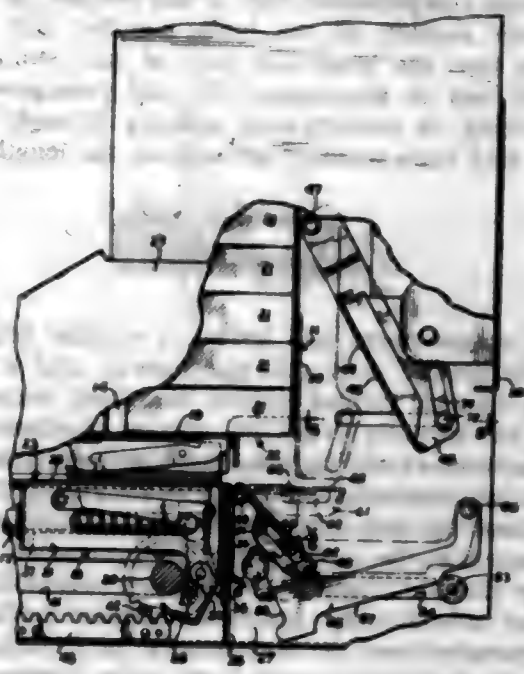
municating with the outer atmosphere; a resilient membrane of predetermined thickness and resiliency located in said housing between the ends thereof; a frangible membrane having a thickness less than said predetermined thickness and a resiliency less than said predetermined resiliency superimposed upon said resilient membrane, said frangible membrane being formed of a material possessing a hardness greater than the hardness of the material of which said resilient membrane is formed, said superimposed resilient membrane and frangible membrane both fixed to and extending across the interior of said housing and dividing the same into a first chamber including said one end portion and a second chamber including said other end portion, said resilient membrane facing said first chamber and said frangible membrane facing said second chamber, said membranes being adapted upon application of a predetermined pressure in said first chamber to bulge from said first chamber into said second chamber, and to tear upon application of a pressure greater than said predetermined pressure in said first chamber, thus permitting fluid to escape through said other end portion of said housing to the atmosphere; and sound absorbing means including a haphazardly arranged fibrous material located in said second chamber for reducing the sound produced by said fluid escaping from said container, said fibrous material containing an indicator substance adapted to change its color upon contact with said escaping fluid.

2,862,642
DISPENSING MECHANISM
Archie V. Shipman, Los Angeles, Calif.
Application August 3, 1953, Serial No. 371,775
3 Claims. (Cl. 221—36)



1. A mechanism of the character described including, an elongate vertical guide carrying a pile of envelopes with the flaps thereof downward of the bodies thereof, a platform at the lower end of the guide and supporting the pile of envelopes in the guide, an ejector carried by the platform to reciprocate horizontally in a direction transverse of the lowermost envelope, a carriage mounted on the platform to reciprocate parallel with the ejector and a finger on the carriage to project forward from the carriage, and means operating the carriage and ejector together with the finger projecting ahead of the ejector and until the finger has moved the flap of the lowermost envelope from the body thereof and the ejector extends over that flap and to then advance the ejector while the carriage is still and until the said envelope is shifted horizontally relative to the pile, said means including, a pivoted arm engaging the ejector and adapted to be swung to move the ejector, and a latch pivotally carried by the carriage and releasably connecting the arm and carriage only during initial movement of the ejector from a retracted position.

2,862,643
CLOSURE GATES FOR VENDING MACHINES
Harry B. Stoner, Edwin Parre, and Florian A. Walter, Aurora, Ill., assignors to Stoner Mfg. Corp., Aurora, Ill., a corporation of Illinois
Application September 30, 1954, Serial No. 459,251
6 Claims. (Cl. 221—248)



4. A merchandise vending machine comprising a vertical elongated container means adapted to contain in vertically stacked relation a plurality of merchandise units each having a substantially uniform predetermined dimension measured in the vertical direction when the units are in said stacked relation, said container means having an approximately horizontal bottom and an approximately vertical wall, an ejector means, means mounting said ejector means for reciprocal movement in an approximately horizontal path above and adjacent said bottom and in a direction toward and away from said wall, said bottom having a first opening therethrough extending in an approximately horizontal plane, said first opening being in all directions larger than said predetermined dimension of said merchandise units whereby the latter might pass through said first opening should the machine be jostled or tilted, said wall having a second opening therethrough extending in an approximately vertical plane, said first and second openings being in communication with each other and being continuous with each other so as to constitute a single discharge outlet for said merchandise units, a first gate, means movably mounting said first gate for alternate movement between a closed horizontal position in the plane of said first opening and an open position spaced from said last-recited plane, a second gate, means movably mounting said second gate for alternate movement between a closed vertical position in the plane of said second opening and an open position spaced from said last-recited plane, and means connecting said ejector means and said gates for moving the latter to their respective closed positions in response to movement of the ejector means in a direction away from said wall so as to prevent passage of said units through either of said openings should the machine be jostled or tilted and for moving said gates to their respective open positions in response to movement of said ejector means toward said wall.

2,862,644
PIN DISPENSING DEVICE
Walter T. Johnson, Rosemont, Pa.
Application February 11, 1955, Serial No. 487,666
1 Claim. (Cl. 221—268)

In a pin dispensing device, the combination of a body member, said body member having a rounded nose element formed at the forward end thereof and a down-

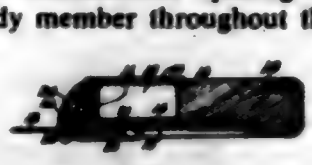
retained against the seat by the pressure of the contents

2,862,650

and said second reinforcing member whereby said first

sure therein, the other end portion of said housing com-

wardly oblique guide slot formed longitudinally in a wall thereof; a storage compartment within said body member having side walls which slope inwardly at the lower portion thereof; a passageway extending from said storage compartment through the forward end of said body member with openings at said forward end and at the storage compartment end; a slot formed in the central lower portion of the body member and opening centrally into the lowermost part of said storage compartment and in alignment with said passageway, said slot forming an unobstructed opening through the bottom of said body member throughout the length of said

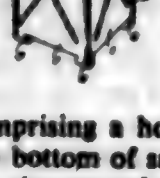


storage compartment and having a verticle height substantially greater than said passageway; and a pin dispensing element located outside said body member and having an upwardly projecting portion positioned within said slot and extending into the lower portion of said storage compartment and a downwardly projecting portion extending into the aforementioned oblique guide slot formed in the wall of said body member, said dispensing element further including a vertical portion mounted substantially against one outer wall of said body member and a horizontally projecting portion mounted substantially against the outer bottom surface of the body member.

2,862,645
CONTAINER

James H. Page, Prairieville, and Thomas B. Nix, Baton Rouge, La., and Raymond I. Reul, Westfield, N. J., assignors, by direct and mesne assignments, to Delta Tank Manufacturing Company, Inc., Baton Rouge, La., a corporation of Louisiana

Application September 14, 1955, Serial No. 534,329
16 Claims. (Cl. 222—143)



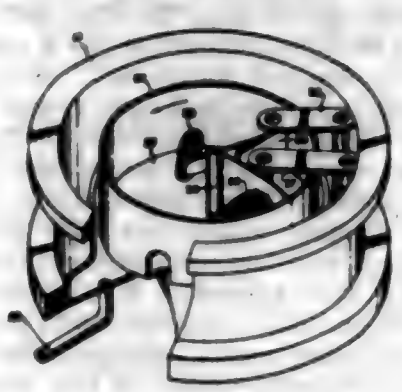
1. A container comprising a hollow body, a plurality of nesting legs on the bottom of said body, a plurality of nesting shoulders on the top of said body, the top of said body defining an aperture having securing means therearound adapted to be interchangeably secured in gas tight relation to a removable closure means and spout means, and a transition member within said body forming a delivery conduit between a portion of said body below said top and said aperture in said top.

2,862,646
POWDER PARTICLE AEROSOL GENERATOR

Richard E. Hayford, Pittsford, and Carl B. Kaiser and Herbert E. Crumrine, Rochester, N. Y., assignors to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

Application February 18, 1955, Serial No. 489,257
6 Claims. (Cl. 222—193)

1. A generator of an aerosol of powder particles comprising a housing, a support layer positioned in said housing and having thereon a substantially flat surface, drive means to rotate said layer in a predetermined path including at all times positioning at least a portion of said surface substantially in a horizontal plane while facing in an upward direction, meter means within said housing positioned along the path of movement of said surface through which said surface moves substantially in a horizontal plane adapted to meter a uniform amount of powder particles to said surface and adapted to retain on said surface against said meter means a supply of powder particles, said surface being characterized by its ability to uniformly load with powder particles as it moves beneath a supply of powder particles, said meter means being positioned at a slight distance above said surface,

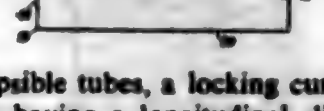


brushing means positioned along the path of movement of said surface through which said surface moves substantially in a horizontal plane adapted to agitate powder particles metered to said surface, input means adapted to supply a flow of gas into said housing, and ouput means positioned at a slight distance above said surface along the path of movement of said surface through which said surface moves in a horizontal plane, said output means being adapted to carry off a gaseous suspension of powder particles out of said housing.

2,862,647
LOCKING CURLER FOR RESILIENT TUBES

William C. F. Dietz, Cincinnati, Ohio

Application November 22, 1957, Serial No. 698,239
8 Claims. (Cl. 222—214)



1. For collapsible tubes, a locking curler comprising a curler member having a longitudinal slit hollow tubular portion adjacent one of its ends, a folded flattened tab portion adjacent its other end and a rounded intervening portion integrally connecting said tubular and tab portions, and a resilient locking member having an axially rotatable central portion coupling a pair of normally parallel arm portions extending radially therefrom and having a stop portion on at least one of said arms extending toward the other arm and spaced from said central portion, said central portion being received in cooperative pivotal relation to said tab, and said stop portion is adapted to engage said tab and limit swinging of the locking member to an angle of less than 360 degrees.

2,862,648
FLEXIBLE DISPENSING HEAD FOR PRESSURIZED CONTAINERS

Ralph D. Cooksey, Morristown, and William M. Lester, Mountainside, N. J.

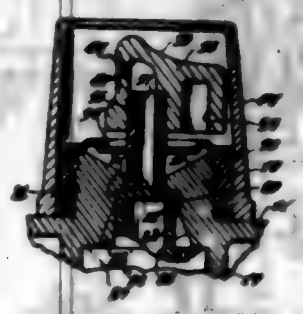
Application July 8, 1954, Serial No. 442,134
1 Claim. (Cl. 222—394)

In a pressurized container, a container assembly having an outwardly-extending nipple portion thereon, said nipple portion having a discharge opening and a seat adjacent the lower end of the discharge opening, a valve element operable in the nipple portion and normally

having central openings of approximately the area of said

2,862,653

retained against the seat by the pressure of the contents within the container, said nipple portion having a depressed conical outer end face flaring outwardly from the outer end of the discharge opening, a flexible dispensing head tightly fitted upon the nipple portion and having a depressible diaphragm overlying the conical end face, said diaphragm having an integral tubular projection depending into the discharge opening of the nipple portion and through which the contents is discharged, said tubular projection being engageable with the valve element to force the valve element from its seat, upon the dispensing head being depressed, said diaphragm normally lying away from the conical face of the nipple and seated upon the conical end face when depressed to minimize the space thereunder whereby to prevent the contents from collecting under the diaphragm when the container is used and the ultimate loss thereof.



2,862,649
SELF-FORMING POURING SPOUT FOR CONTAINERS

Frank D. Bergstein, Cincinnati, Ohio, assignor to Bergstein Packaging Trust, a trust composed of Robert Bergstein and Frank D. Bergstein, trustees

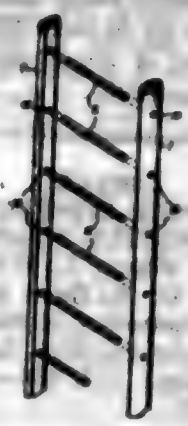
Application February 21, 1957, Serial No. 641,758
12 Claims. (Cl. 222—531)

1. In a dispensing container having a wall, a pouring opening defined in said wall by a flap which, when displaced from the plane of said wall, has free upper and side edges with its lower edge hingedly connected to said wall along a line of fold, and a pouring spout juxtaposed to the inner surface of said wall in the area of said flap, said pouring spout being formed from metal foil having dead-folding characteristics and configured to define a centrally disposed base portion of a width substantially equal to the width of said flap and foldable wing portions projecting outwardly from the opposite sides of said base portion, said base portion having an integral extension projecting downwardly beyond the lower edge of said flap and bridging the line of fold connecting said flap to said wall, the said base portion and its extension having a coating of heat sealable material thereon by means of which said base portion is secured to said flap and said extension is secured to said wall in the area immediately beneath said flap, whereby upon the outward placement of said flap the base portion of said pouring spout will be folded along a line coinciding with the fold line of said flap and the dead-folding characteristics of said metal foil will serve to maintain the spout in its outwardly displaced position, the outward displacement of the flap serving to draw the wing portions of said spout through the pouring opening with their outer surfaces in contact with the opposite side edges of the said opening.

2,862,650
LADDER

Arthur L. Scott and Stephen W. Trowbolle, Columbia, S. C., assignors to Columbia Products Company, Columbia, S. C., a corporation of South Carolina

Application July 18, 1957, Serial No. 672,592
6 Claims. (Cl. 228—53)

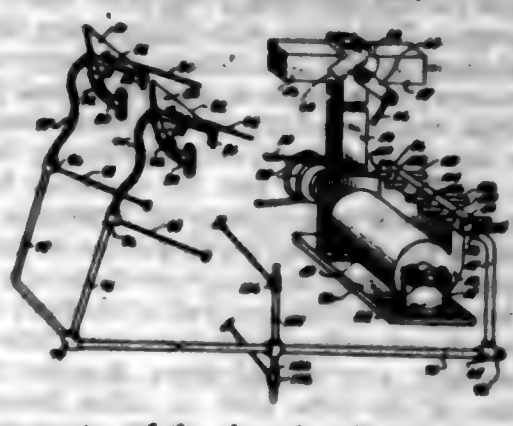


6. A ladder comprising a pair of side pieces, each consisting of an elongated boardlike member consisting of light weight porous dielectric hardened foam and having reinforcing edge members joined thereto, each consisting of a core of said lightweight porous dielectric material and a surface layer comprising glass fibers extending parallel to the axis of said reinforcing edge member and joined thereto and to one another by dielectric plastic material, an overwrap of glass fibers surrounding said boardlike member and said edge members and joined to said side member with dielectric cement, and rungs extending between said side members fitted in holes extending through said overwrap and said side member whereby said rungs are supported by said overwrap and said dielectric porous material and said side members are reinforced against bending by the glass fibers of said reinforcing edge member and said overwrap.

2,862,651
GRAVITY CONTROL APPARATUS

Willard P. Perry, near Titusville, N. J.

Application October 14, 1954, Serial No. 462,354
3 Claims. (Cl. 230—47)



1. In apparatus of the class described, a fan unit comprising, in combination, a base, an elongated cylindrical casing mounted on said base, said casing curved laterally and upwardly from its bottom thereby forming an intercommunicating volute chamber and an upwardly projecting conduit extending along the entire length of said casing a manifold closed at one end and extending the entire length of said casing and conduit, said manifold being in open communication with said conduit, an upwardly projecting air inlet duct open at its outer end and communicating at its lower end with one end of said casing, a shaft extending centrally through said casing and journaled at its ends on said base, power means for rotating said shaft, a plurality of disks fixedly mounted on said shaft, said disks being equidistantly spaced apart and of a diameter to fit closely within said casing, and

ring in coaxial relation and located to one side of the inner shafts of the guide vanes, the drive ring and hous- radially outwardly of both end surfaces of said impellers to provide an effective seal between said impellers and

surface substantially in a horizontal plane while facing element operable in the nipple portion and normally

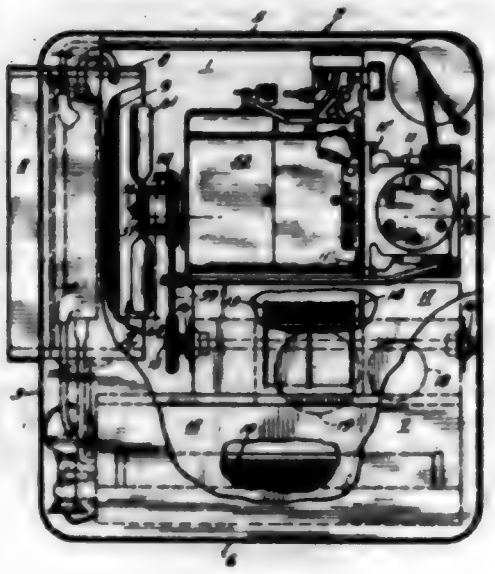
having central openings of approximately the area of said air inlet duct, a plurality of partitions in said volute chamber, said partitions being in parallel alignment with and having curved inner edges closely fitting around the adjacent edges of said disks, a plurality of blades fixedly attached to said disks between respective adjacent pairs, the outer edges of said blades being substantially coincident with the outer peripheries of said disks; and an air pressure conduit connected in communicating relation with the open end of said manifold.

2,862,652

AIR CONDITIONER CONSTRUCTION FOR AUTOMOTIVE VEHICLES

James C. Holby and Robert L. Westrum, Minneapolis, Minn., assignors to D. W. Ovan & Sons, Inc., Minneapolis, Minn., a corporation of Minnesota

Application February 14, 1956, Serial No. 565,483
1 Claim. (Cl. 230—56)



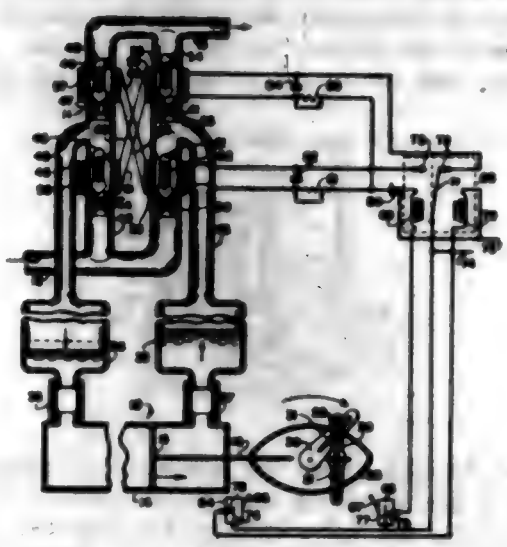
In a device of the class described, a motor including a drive shaft and a block having spaced bearings in opposed walls thereof journalling the drive shaft for rotation therein, a fluid pump including a casing defining a cylindrical chamber and a crankcase, a piston mounted for reciprocatory movements in said cylindrical chamber and a piston rod carried by the piston and extending therefrom into the crankcase, means mounting the pump casing to the motor block with the crankcase having a wall portion thereof spaced from the bearing in the adjacent wall of the block, said wall portion of the crankcase having an opening therein generally axially aligned with the bearing in the adjacent wall of the block for freely receiving an end portion of the drive shaft, said opening being concentric with and of larger diameter than the end portion of the drive shaft to define therewith an annular passage therebetween with the end portion of the drive shaft being supported only by the bearing in the adjacent wall of the block, a crank carried by the end portion of the drive shaft and disposed thereon within the crankcase and operatively coupled to the piston rod to impart reciprocatory pumping movement thereto upon rotation of the drive shaft, and an annular sealing element mounted in the opening of the wall portion of the crankcase and encompassing the end portion of the drive shaft to close said annular passage, said sealing element having one side thereof exposed to the interior of the crankcase and another side thereof which is opposed to the said one side being exposed to the interior of the motor block whereby, the opposed sides of the sealing element are positioned to receive lubricant contained within the crankcase and the motor block.

2,862,653

APPARATUS

Isadore Shapiro, Pasadena, Calif.

Application June 26, 1956, Serial No. 593,939
2 Claims. (Cl. 230—65)



1. A double-acting gas pump which comprises a pair of vertical conduits of non-magnetic material, an intake duct connected to the lower ends of said conduits, an exhaust duct connected to the upper ends of said conduits, a double-acting mechanical displacement mechanism having a constant linear rate of movement interconnected to said vertical conduits intermediate the lengths thereof, means defining an exhaust valve seat positioned in each said conduit above the connection thereof to said mechanical displacement mechanism, means defining an intake valve seat positioned in each said conduit below the connection thereof to said mechanical displacement mechanism, a valve element including a paramagnetic core positioned on each said valve seat, electromagnetic means positioned externally of each said conduit adjacent each said valve element, whereby each said valve element is rendered "weightless" by energization of the associated electromagnetic means, and means mechanically coupled to said mechanical displacement mechanism and electrically connected to each said electromagnetic means for alternatively energizing said electromagnetic means adjacent the valve elements on the exhaust valve seat in one of said conduits and on the intake valve seat of the other of said conduits in synchronism with operation of said mechanical displacement mechanism.

2,862,654

VARIABLE PITCH GUIDE VANES

Arthur W. Gardiner, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 16, 1954, Serial No. 475,749
2 Claims. (Cl. 230—114)

1. In an axial flow compressor, an annular air inlet housing, a stator casing, a rotor mounted for rotation within the casing, and a variable pitch inlet guide vane assembly in the housing comprising spaced coaxial inner and outer shroud rings mounting the assembly in the housing, an annular row of radially extending guide vanes located between the shroud rings with radial clearance for rotational and radial shifting movement, the guide vanes being more than three in number and having radially extending coaxial inner and outer shafts slidably journaled in radially extending bores in the shroud rings, a selected few of the guide vanes having their outer shafts extending through the stator casing whereby rotational effort may be applied thereto, a drive ring for transferring the rotational effort from the selected guide vanes to the remaining guide vanes and spaced within the inner shroud

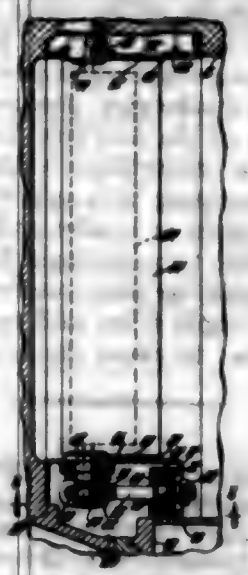
2,862,653

force and conducted by means of a channel from an

with the opposite side edges of the said opening.

and of a diameter to fit closely within said casing, and

ring in coaxial relation and located to one side of the inner shafts of the guide vanes, the drive ring and housing having sufficient clearance between them so that the drive ring is entirely free of direct support from the hous-

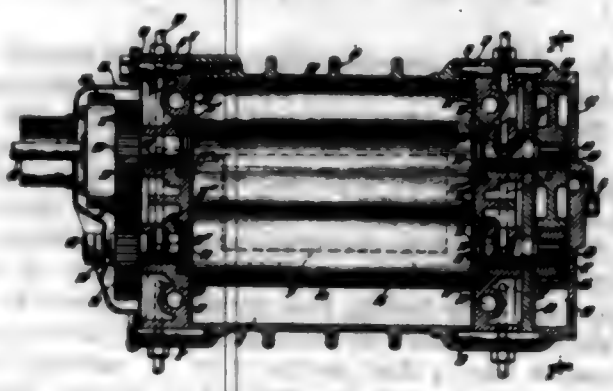


ing, and levers having one end fixed on the inner shafts of the guide vanes and having ball and socket connections at the other end to support the drive ring for rotational and axial shifting movement with rotational movement of the guide vanes.

2,862,655
PUMP

John Dickson, Huntington Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 22, 1954, Serial No. 438,558
6 Claims. (Cl. 230—141)

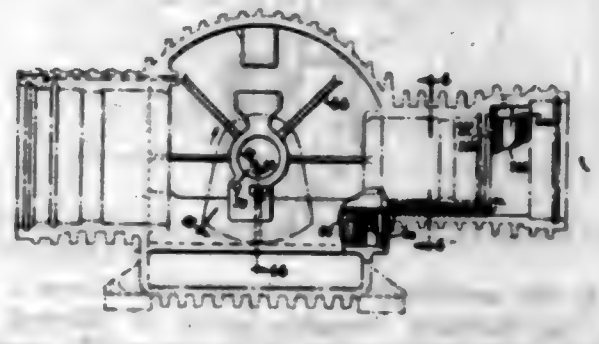


1. A combined scavenging air blower and a vacuum pump such as for supplying supercharging air to a vehicular engine and for supplying operating vacuum for vehicular accessories comprising a housing having a blower chamber and a vacuum pump chamber in axial alignment and separated by a partition wall, each of said chambers having a fluid intake port and a fluid discharge port, a pair of shaft members journaled in said partition and extending into said chambers, means for rotatably driving said shafts in phased relation to each other, cooperating impellers mounted on each of said shafts within each of said chambers and adapted to deliver fluid from said intake ports to said discharge ports upon rotation of said shafts by said driving means, a passage in said partition for supplying lubricant to the journal portions of said partition, said journal portions and the journaled surfaces of said shafts constituting means for continously metering lubricant to the adjacent end of said vacuum pump chamber adjacent the mounting of said impellers on said shafts, and passage means associated with the shaft mounting of each of said impellers for supplying portions of the metered lubricant to the opposite ends of said impellers whereby lubricant is evenly centrifuged radially outwardly of both end surfaces of said impellers to provide an effective seal between said impellers and said housing.

2,862,656
MULTI-STAGE COMPRESSOR

Milton M. Kadison, Croton-on-Hudson, N. Y., assignor of twenty-five percent to Anna Colton, Bronx, N. Y., twenty-five percent to Hyman Bettigole, New York, N. Y., and fifty percent to Robn David, Bronx, N. Y.

Application April 4, 1955, Serial No. 499,899
2 Claims. (Cl. 230—202)

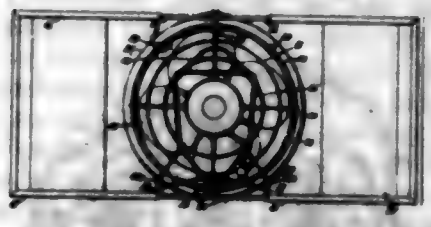


1. In a compressor including a generally horizontal cylinder having one end closed, and a piston slidable in said cylinder toward and away from said closed end, the improvement comprising a body interposed in said cylinder between said closed end and said piston to subdivide said cylinder into inner and outer chambers adjacent to said piston and closed end, respectively, there being a generally vertically disposed cylindrical cavity formed in said body and opening adjacent its upper end into said inner chamber for receiving compressed fluid from the latter, and a tube disposed in spaced relation within said cavity having its lower end opening into said cavity adjacent to the lower end of the latter and having its upper end opening through said body into said outer chamber, whereby relatively heavy dispersoid in said fluid will fall by gravity to the lower end of said cavity and relatively clean fluid will pass outwards through said tube.

2,862,657
MULTIPLE PURPOSE VENTILATOR AND AIR CIRCULATOR

William M. Copeland, Stratford, and Alfred W. Wakeman, Trumbull, Conn., assignors to General Electric Company, a corporation of New York

Application June 13, 1955, Serial No. 515,815
2 Claims. (Cl. 230—273)



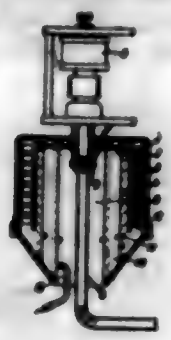
1. The combination of a mounting structure and a fan assembly, said mounting structure comprising a vertical panel having an opening therein, an orifice ring on said structure aligned with said opening, supporting means on said orifice ring detachably supporting said fan assembly, said supporting means comprising a plurality of hangers and a spring clip, said spring clip being spring biased radially outwardly away from the center of said orifice ring, means on said fan assembly cooperating with said supporting means in mounting said fan assembly on said mounting structure, said means comprising a guard ring and an aligning member, said guard ring being supported on said hangers and the inner surface of said guard ring engaging said clip, said clip having a forked guiding portion receiving said aligning member.

ond shaft inputs and a second output voltage is pro-

2,862,658
METHOD AND APPARATUS FOR CENTRIFUGAL SEPARATION OF A MIXTURE OF SOLIDS AND TWO LIQUIDS

Sven Alfred Bertil Dahlgren, Bromma, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden

Application May 15, 1953, Serial No. 355,276
Claims priority, application Sweden May 28, 1952
1 Claim. (Cl. 233—7)

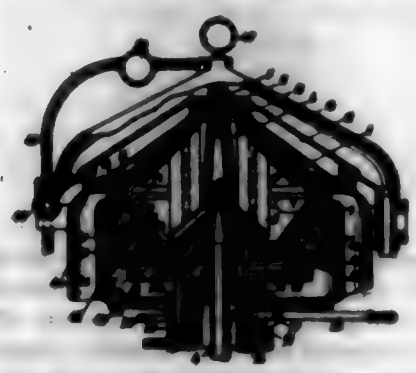


In the separation of the lighter liquid from a mixture of two mutually insoluble liquids of different specific gravity and sludge solids of higher specific gravity than the liquids, with the use of a centrifugal bowl having an imperforate peripheral wall and a centrifugal locus surrounded by said wall, the method which comprises feeding the mixture into said locus and there centrifuging the mixture to separate it into an outer layer of solids, an intermediate layer of heavier liquid and an inner layer of readily separable lighter liquid, continuously agitating said outer layer of solids with short reciprocating motions substantially parallel to the rotation axis of the bowl during the centrifuging, whereby lighter liquid entrained in the solids is released therefrom and replaced by heavier liquid while the released lighter liquid passes inward to said inner layer, paring the lighter liquid from said inner layer while retaining the solids layer with residual lighter liquid as an outer layer out of contact with said inner layer in said locus, continuing to centrifuge and reciprocatingly agitate said solids layer to separate further residual lighter liquid therefrom, paring said further residual lighter liquid from the locus, and finally discharging from the locus the solids substantially freed of lighter liquid.

2,862,659
CENTRIFUGAL SEPARATOR

Aage Nyrop, Hellerup, Denmark

Application May 31, 1956, Serial No. 588,493
4 Claims. (Cl. 233—20)

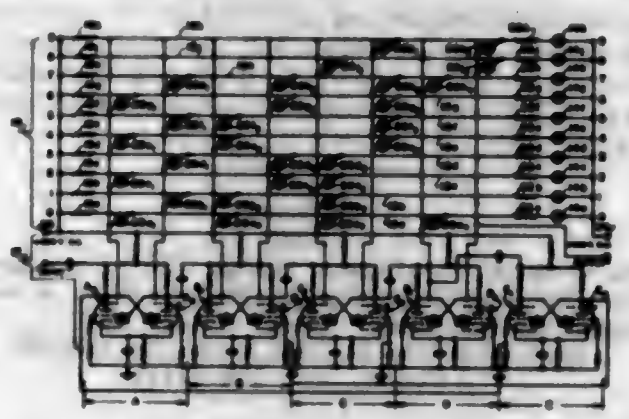


1. In a centrifugal separator, the combination of a centrifugal bowl mounted for rotation on a vertical axis to effect continuous discharge of liquid effluents and provided with peripheral sludge discharge openings for suspended solid material collected within the bowl, a sealing piston for controlling the sludge discharge through said openings and mounted for axial reciprocation within the bowl, said piston being actuated to intermittent displacement partly by pressure of the treated liquid and partly by means of an actuating liquid influenced by centrifugal force and conducted by means of a channel from an annular groove in the body of the bowl to a space below said piston, said space being connected with a discharge arrangement for the actuating liquid, this discharge arrangement comprising a valve means and hydrostatic means for displacement of the valve means to an open position to permit the discharge of the actuating liquid and the simultaneous resulting movement of said piston to its open sludge-discharging position, said hydrostatic means in the body of the said bowl comprising a second annular groove for intermittent reception of actuating liquid and communicating with said valve means, an annular reservoir adapted to receive and hold the actuating liquid for purification by centrifugal force, means to conduct actuating liquid to said reservoir and means to conduct actuating liquid from said reservoir to either of said annular grooves to cause the actions described.

2,862,660
DECIMAL CONVERTER

Robert B. Purcell, Clear Lake, Calif.

Application June 14, 1954, Serial No. 436,747
6 Claims. (Cl. 235—61)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a decimal converter for an electronic binarily operated decade counter having a plurality of binary stages, each stage having a first state and a second state, the first state occurring when the D. C. potential of one part of the stage is relatively high and the D. C. potential of a second corresponding part of the stage is relatively low, the second state occurring when the conditions of said parts are reversed, comprising; a plurality of neon lamps, each lamp having two electrodes, a control line, one electrode of each of said lamps being connected to the control line, a first source of D. C. potential connected to said control line through a current limiting resistor, a second source of D. C. potential lower than said first source, an indicator lamp, said indicator lamp being connected between said second source of potential and said control line, the second electrodes of each of said plurality of neon lamps being connected to said parts of said binary stages which are at high potential, and which uniquely identify the number associated with the states of said counter and with the indicator lamp when it is lit.

2,862,661
VECTOR SUMMER

David A. Goldman, Yorktown Heights, N. Y.

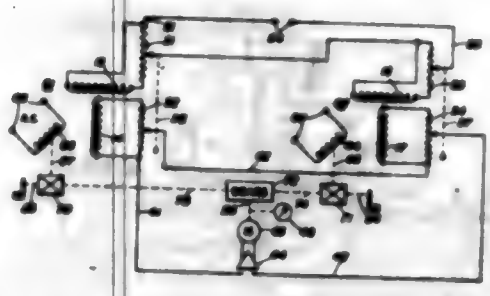
Application August 24, 1956, Serial No. 606,173
4 Claims. (Cl. 235—61)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A vector summer comprising a plurality of sine-cosine resolvers each coupled to be energized by an input voltage and having first and second differentially combined shaft inputs whereby in each resolver a first output voltage is produced proportional to the product of the input voltage and the sine of the difference between the angular displacements of said first and sec-

directly to operate said valve under the direct control

2,862,667

ond shaft inputs and a second output voltage is produced proportional to the product of said input voltage and the cosine of said angular difference; an amplifier; a motor coupled to be energized by said amplifier and having a shaft output coupled to said first resolver shaft inputs; circuit means additively coupling the sine output



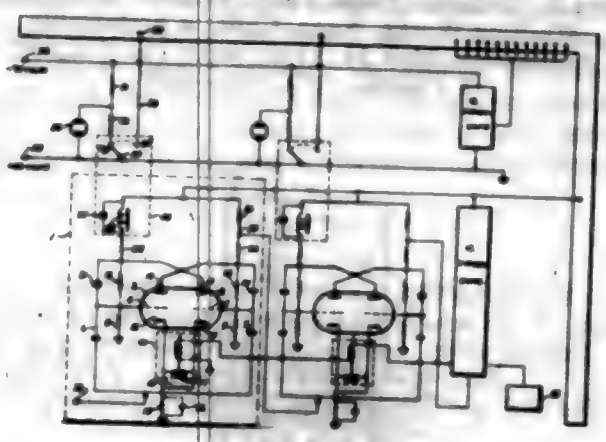
voltages from said resolvers to said amplifier; means to mutually independently vary the angular displacements of said second shaft inputs; a first indicator coupled to be actuated by the shaft output of said motor; and circuit means additively coupling the cosine output voltages from said resolvers to a second indicator.

2,862,662

DUAL CIRCUIT SIGNAL CONTROL

Henry T. Chapek and Heard S. Lowry, Jr., Manchester, Tenn., assignors to the United States of America as represented by the Secretary of the Air Force

Application December 1, 1955, Serial No. 550,508
4 Claims. (Cl. 235—92)



1. A computing system comprising a succession of two-state devices each of which devices includes a pair of anode circuits, a pair of cathode circuits, and a pair of excitation grid circuits, means for transferring signals from each of said two-state devices to the next succeeding two-state device, relay-operated switch means in each of said cathode circuits, and means controlled by said switch means for modifying the potential characteristics of the signal transfer means and thereby controlling the signal transferring operations.

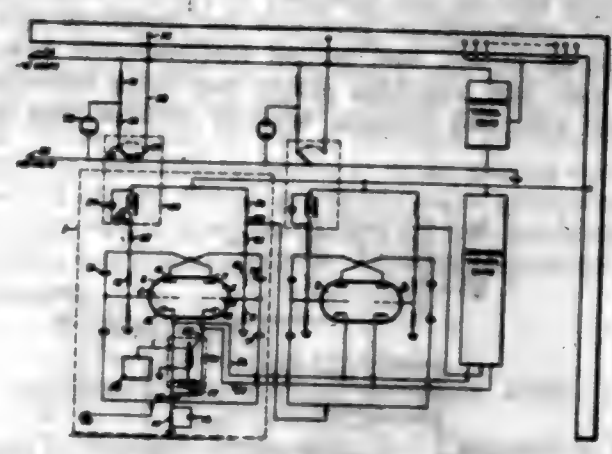
2,862,663

DUAL CIRCUIT SIGNAL CONTROL

Henry T. Chapek and Heard S. Lowry, Jr., Manchester, Tenn., assignors to the United States of America as represented by the Secretary of the Air Force

Application December 16, 1955, Serial No. 553,670
4 Claims. (Cl. 235—92)

1. A computing system comprising a succession of two-state devices having individual anode circuits, individual excitation grid circuits, and a common cathode circuit, means for transferring signals from each of said two-state devices to the next succeeding two-state device, relay-operated switch means in said common cathode circuit, and means for sending a resetting pulse through said relay



means to modify the potential characteristics of said signal transfer means.

2,862,664

ELECTRICAL KEYBOARD

Duncan N. MacDonald, Arcadia, Calif., assignor, by mesne assignments, to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application October 31, 1955, Serial No. 543,862
2 Claims. (Cl. 235—145)

1. A keyboard assembly providing a plurality of keys in rows comprising a frame adapted to rest on a horizontal surface, the frame including a pair of spaced parallel members positioned at a slight angle from the horizontal, a plurality of rods extending between the spaced parallel members of the frame and supported thereby, a plurality of keys pivotally supported by each of the rods, each of the keys including a key platform projecting above the parallel members and projecting over the adjacent rod supporting the adjacent row of keys, and a U-shaped yoke providing a pair of projecting arms, the arms being spaced apart a distance slightly wider than the key platform and having holes through their ends for receiving the supporting rod, the U-shaped yoke of each key providing a space for receiving the key platform of a key in the adjacent row when the latter key is depressed, a plurality of switch means supported by the frame below and intermediate the rods, each key including a projecting tab extending below the supporting rod and engaging said switch means positioned below the key platform of the key in an adjacent row of keys, and spring means engaging the tab portion of each key for urging the keys into their normal operating position and to resist depression of the key platforms.

2,862,665

FUEL CONTROL SYSTEM

Russell B. Matthews, Wauwatosa, Wis., assignor to Baso Inc., Milwaukee, Wis., a corporation of Wisconsin

Application January 4, 1954, Serial No. 401,816
4 Claims. (Cl. 236—9)

4. Control apparatus comprising, in combination a low resistance electrical circuit, condition responsive means having in said circuit enclosed low resistance contacts operable between open and closed positions, a main valve for directly controlling a main flow of fluid, a first thermoelectric generator for energizing said circuit, an electromagnetic operator in said circuit acting electrically and

2,862,669

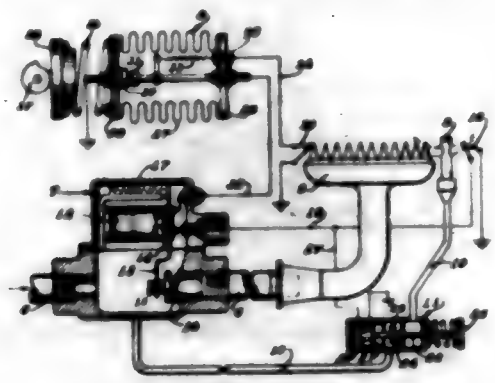
APPARATUS FOR REDUCING MATERIAL

said movable frame, said elevators being individual to

by means of an actuating liquid influenced by centrifugal

tween the angular displacements of said first and sec-

directly to operate said valve under the direct control of said condition responsive means, means for supplying artificial heat to said condition responsive means, and a second thermoelectric generator for energizing said heat supplying means, said second thermoelectric generator and said heat supplying means also being connected in circuit with said contacts, whereby artificial heat is sup-



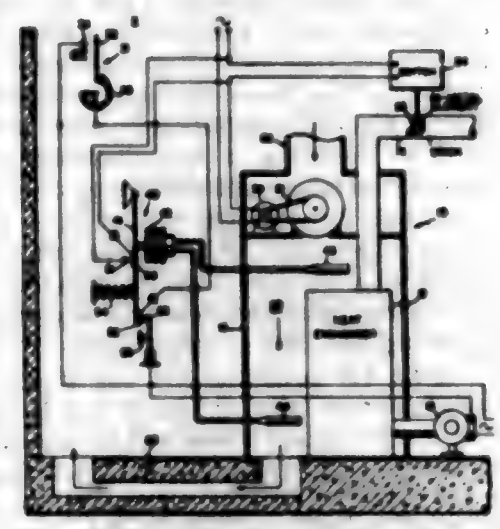
plied to said condition responsive means only when fuel is permitted to flow to said main burner, the polarity of the generators of said control and auxiliary circuits being arranged so that said generators oppose each other, and the resistance of said circuits being matched to prevent any substantial energization of one of said circuits by the generator of the other circuit.

2,862,666

FORCED AIR FURNACE CONTROL APPARATUS

John P. Kriechbaum, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application December 22, 1954, Serial No. 477,037
11 Claims. (Cl. 236—9)



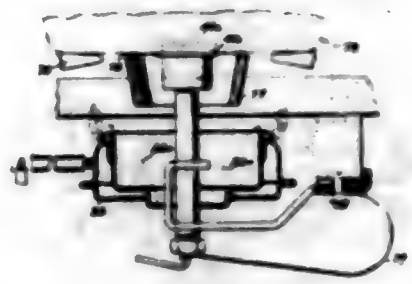
5. In control apparatus for controlling the operation of a down draft forced air furnace, first and second switch means having a liquid filled operator to which a plurality of liquid filled bulbs are connected in a closed system; a first of said bulbs being responsive to the temperature of the air in the upper portion of the plenum of the furnace, a second of said bulbs being responsive to the temperature of the air in the lower portion of the plenum, said first switch means closing when the temperature of the air exceeds a selected value and said second switch means opening when the temperature of the air exceeds a higher selected value, connection means including said first switch means for connecting a fan to a source of power, the fan forcing air downward through the furnace; and further connection means including said second switch means for connecting a source of heat for the furnace to a source of power.

2,862,667

AUTOMATIC CONTROL FOR RANGE

Earl D. Hillebrand, Kankakee, Ill., assignor to Geo. D. Roper Corporation

Application October 25, 1954, Serial No. 464,257
12 Claims. (Cl. 236—32)



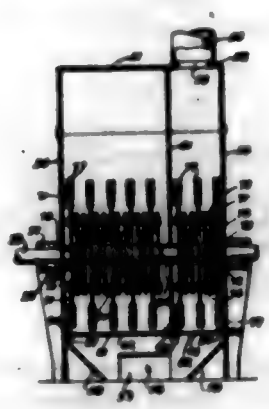
2. In a range, the combination comprising a utensil, a burner arranged below the utensil for heating the same, a settable thermostat control device for said burner, said control device having a temperature sensing bulb having a convex surface thereon, means for biasing the bulb upwardly toward said utensil, a heat conducting element interposed between said bulb and said utensil, said heat conducting element having a concave lower surface for mating with said convex surface to provide a limited amount of ball and socket movement with respect thereto, said heat conducting element further having a flat upper surface for intimately contacting the underside of said utensil.

2,862,668

COMBINATION HAY AND GRAIN MILL

Kurt K. Stohsner, Napa, Calif., assignor to Stohsner Machine Works, Napa, Calif., a partnership

Application May 31, 1955, Serial No. 512,171
4 Claims. (Cl. 241—138)



1. A hay and grain mill comprising a casing, a horizontal shaft rotatable within said casing, a plurality of hammers on said shaft, said hammers being divided into two sections with an axially extending gap between the sections, a vertical partition in the gap between said hammers having the top and side edges abutting the top, front and rear sides of said casing, and a bottom edge terminating above the bottom of said casing, a curved hay screen on one side of said partition below the path of said hammers, a curved grain screen on the opposite side of said partition below the path of said hammers, means for delivering hay to said casing above said hay screen, means for delivering grain to said casing above said grain screen, a hopper in said casing below said screens and said vertical partition to receive discharge from both said screens, and means to seal said partition to said screens and the sides and top of said casing to provide two chamber above said screen completely sealed from internal communication with each other.

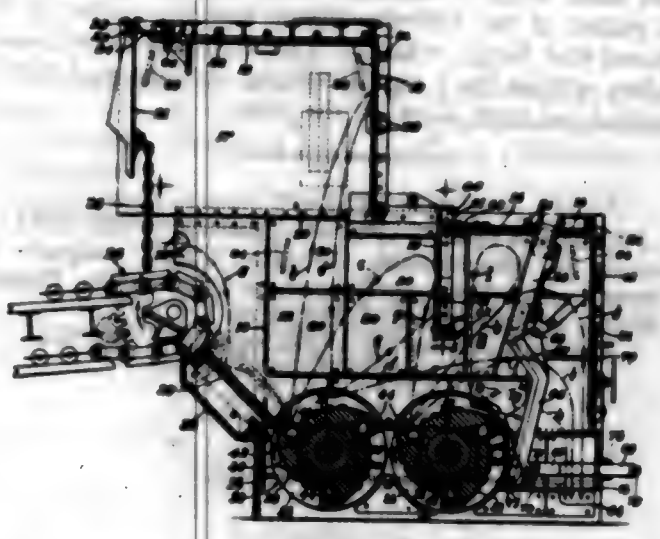
associated with said mounting for moving said package, on one end of said hub, a flange of reduced size on the

state devices to the next succeeding two-state device, relay-

737 O. G.—9

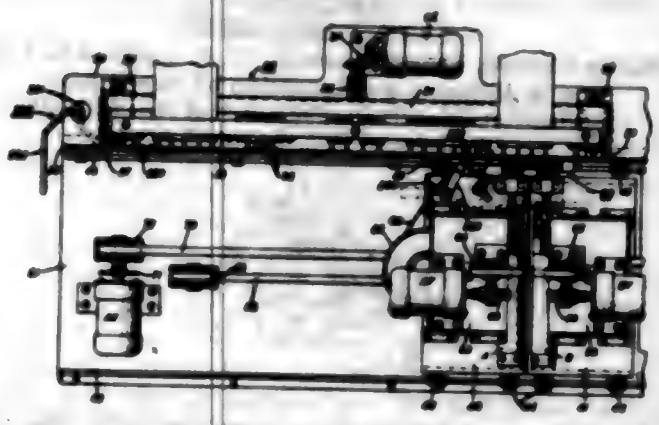
electric generator for energizing said circuit, an electromagnetic operator in said circuit acting electrically and

2,862,669
APPARATUS FOR REDUCING MATERIAL BY IMPACT
Fred W. Rollins, Danville, Pa., assignor to Kennedy Van Saun Mfg. & Eng. Corporation, New York, N. Y., a corporation of Delaware
Application March 22, 1956, Serial No. 573,248
5 Claims. (Cl. 241—154)



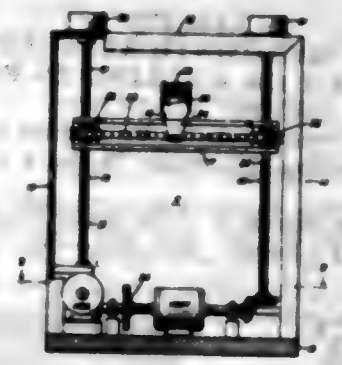
1. In apparatus for reducing material by impact, a casing having an inlet for the material to be reduced at one end and an outlet for the reduced material at the opposite end, rotors rotatably supported in the lower portion of the casing to extend parallel to each other with one rotor adjacent to the inlet of the casing, a pair of plates extended in the vertical plane of the casing and each plate of said pair of plates spaced above and in a vertical plane intersecting the path of rotation of a rotor to deflect material trajected from the rotor adjacent to the casing inlet toward both rotors, and a grate mounted in the casing to extend between the end of the casing arranged with the outlet and the rotor nearest said end to deflect insufficiently reduced material to said rotor and permit passage of reduced material of desired size to the outlet.

2,862,670
AUTOMATIC WIRING APPARATUS
Rudolph F. Mallina, Hastings on Hudson, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application July 24, 1953, Serial No. 370,147
8 Claims. (Cl. 242—7)



1. An automatic wiring apparatus for simultaneously applying and securing the opposite ends of a wire to spaced terminals on a panel comprising a movable frame suitable for supporting the panel, motor means for said movable frame, a pair of carriages spaced from and operable for horizontal movement across said movable frame, separate motor means for said carriages, elevators supported on said carriages and operable for vertical movement across said movable frame, said elevators being individual to each of said carriages, motor means for each of said elevators, wiring devices supported on said elevators and individually operable to apply and secure the opposite ends of a wire to spaced terminals, motor means in said wiring devices, means for supplying a wire simultaneously to both of said wiring devices, means for causing one wiring device to grip an end of the wire, and means for causing the other wiring device to make guiding connection with a portion of said wire; and control apparatus for said motor means operable to control the operations of said motor means in accordance with a predetermined wiring program.

2,862,671
AUTOMATIC WIRING SYSTEM AND APPARATUS
Thomas L. Dimond, Rutherford, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application July 24, 1953, Serial No. 370,148
11 Claims. (Cl. 242—7)



1. A machine for making electrical connections between selected terminals of an array of panel mounted terminals, that comprises a base, a wiring tool; a wiring tool positioning means, and a panel positioning means, both of said means being mounted on said base; and control means associated with the wiring tool and with the positioning means; the wiring tool including motor means and means operated by the motor means for sequentially connecting the respective ends of a wire to selected terminals; the wiring tool positioning means including a frame fixed to the base, a wiring tool carriage mounted on the frame, means for vertically moving said carriage, means for horizontally moving the tool along the carriage, and motor means for each of said moving means; the panel positioning means including a panel support, means for moving the support toward and from the wiring tool, and motor means; the control means including a record of commands for operations to be performed, means for reading said record, means for translating the readings into commands, and means for transmitting the commands to appropriate ones of said motor means for effectuating the commands.

2,862,672
YARN WINDING WITH MEANS TO PREVENT RIBBON WIND
William Pool and Harry Edward Bellairs Young, Spondon, near Derby, England, assignors to British Celanese Limited, a British company
Application March 29, 1956, Serial No. 574,867
Claims priority, application Great Britain April 1, 1955
13 Claims. (Cl. 242—18.1)

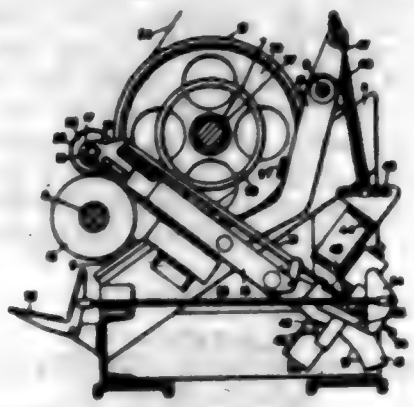
6. Apparatus for winding yarns, said apparatus comprising means for rotating a package support to wind a yarn into a package thereon, a grooved or slotted traverse drum adapted, on rotation, to traverse said yarn to-and-fro along the length of said package support, a mounting for said package support adapted to permit said package to make surface contact with said traverse drum, means

of tape adhered thereto, and a knife moveable along the ments, each of said spring elements including a radially

furnace to a source of power.

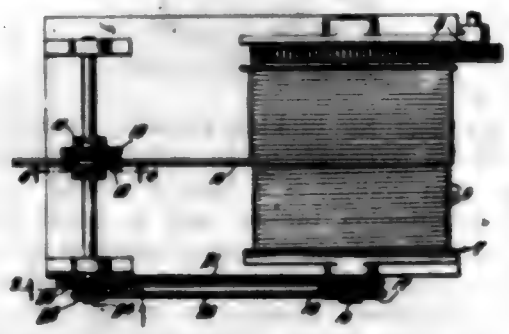
from internal communication with each other.

associated with said mounting for moving said package out of contact with said traverse drum at periods when the circumference of said drum bears a simple numerical



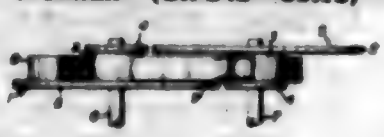
relationship to the circumference of said package and means for driving said traverse drum with a fluctuating speed when said package is out of contact therewith.

2,862,673
MEANS FOR AUTOMATICALLY TENSIONING PAYING OUT OR HAULING IN ROPE ON A HOISTING DRUM
John C. Smaltz, New York, N. Y., assignor to McKiernan-Terry Corporation, Harrison, N. J., a corporation of New Jersey
Application March 1, 1956, Serial No. 568,733
2 Claims. (Cl. 242—54)



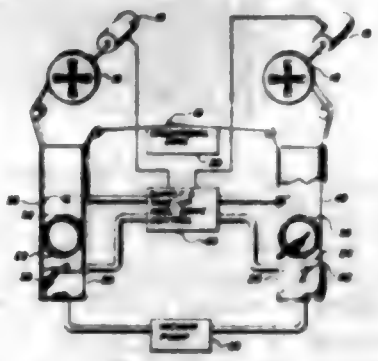
1. The combination with a hoisting drum driven at different times in opposite directions and rope spooling on and off said drum in said periods of reverse rotation, of means for automatically keeping the rope tight on the drum in both the winding on and unwinding operations, comprising companion rolls mounted in yielding grip engagement with the rope winding on and unwinding from the drum and means controlled by direction of drum rotation for automatically synchronously driving said rolls in the winding on direction at lesser linear speed than the drum rotation in the winding on periods of rotation and in the paying out, unwinding direction but at greater linear speed than the drum rotation in the unwinding, paying out periods of drum rotation.

2,862,674
SOUND TAPE WINDING REELS
Günter Herrmann, Rosenberg, Hannover, Germany, assignor to Protona Produktionsgesellschaft für elektro-akustische Geräte G. m. b. H., Hannover, Germany
Application April 5, 1955, Serial No. 499,477
Claims priority, application Germany April 8, 1954
1 Claim. (Cl. 242—55.12)



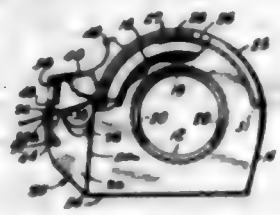
In an electro-acoustical recording apparatus using tape as a record receiving means, the combination of two tape winding reels each consisting of a hub, a full size flange on one end of said hub, a flange of reduced size on the other end of said hub, said hubs being on parallel axes and reversed 180° on said axes with respect to each other with the full size flange on the first reel being opposed to the reduced size flange on the second reel and the reduced size flange on the first reel being opposed to the full size flange on the second reel, said hubs being spaced from each other a distance only slightly greater than the radius of the full size flange and the radius of the reduced size flange, whereby a substantially continuously guiding surface for a tape extending between said hubs is provided on both sides of the tape.

2,862,675
PERFORATED TAPE TRANSPORT SYSTEM
Duncan N. MacDonald, Arcadia, Calif., assignor, by mesne assignments, to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application May 14, 1956, Serial No. 584,602
3 Claims. (Cl. 242—55.12)



1. Apparatus for providing slack loop control in a perforated tape transfer system, said apparatus comprising a hollow duct of rectangular cross-section, one cross-sectional dimension being substantially equal to the width of the perforated tape, the tape extending into and out of one end of the duct, whereby a bight portion is formed in the tape within the duct, a hollow cylindrical ring having a width slightly less than said one cross-sectional dimension of the duct and an outer diameter slightly less than the other cross-sectional dimension of the duct, the ring being positioned in and supported by the bight portion of the tape within the duct, and means for establishing a partial vacuum in the duct on the opposite side of the tape from the hollow ring, the ring having serrated edges to insure an ambient air pressure condition within the hollow ring.

2,862,676
TAPE DISPENSER
Charles Castelli, New Brunswick, N. J., assignor to Johnson & Johnson, a corporation of New Jersey
Application March 30, 1955, Serial No. 497,945
15 Claims. (Cl. 242—55.51)



6. A dispenser for a roll of normally tacky and pressure-sensitive adhesive tape comprising a pair of opposed parallel side walls spaced to accommodate a roll of such tape, a hub for rotatably supporting the roll between the side walls, a platform located more radially remote from said hub than are the peripheries of said walls and said roll and to which a dispensed length of tape pulled from the roll will adhere when the adhesive side thereof and the platform are brought into engagement, means associated with the platform to cooperate in severing a length

to make surface contact with said traverse drum, means

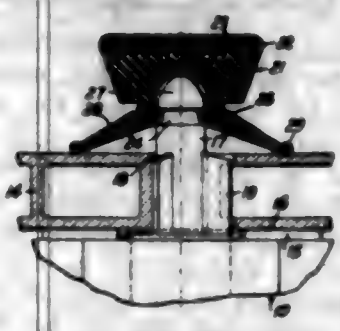
of tape adhered thereto, and a knife moveable along the dispenser in a path substantially concentric with the roll from one position permitting withdrawal of a length from the roll and its engagement with the platform to a second position, said knife, in its movement to said second position, acting in cooperation with said means on the platform to sever the tape adhered thereto.

2,862,677

MAGNETIC TAPE REEL ASSEMBLY

Walter T. Selsted, San Mateo, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Application August 11, 1954, Serial No. 449,232
4 Claims. (Cl. 242—68.3)



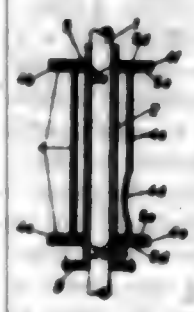
1. In a magnetic tape reel assembly for magnetic tape machines, a turntable having a flat surface adapted to engage one side of a tape reel, said turntable including a stud disposed perpendicular to said surface and adapted to extend through a central opening in the reel, said stud having an annular groove formed about the periphery of its free end portion, and a reel retainer formed of resilient rubber adapted to be removably engaged with the free end portion of the stud, said retainer having a central opening therein adapted to accommodate the free end portion of the stud and having an annular rib of resilient rubber adapted to be removably retained within said groove, said rib being distortable to permit removal from the groove, said retainer also including an annular portion of resilient rubber adapted to engage and yieldably press against the corresponding side of the reel.

2,862,678

FILM SPOOL FOR CAMERAS

Willy Kaden and Ferdinand Siefenhofer, Munich, Germany, assignors to AGFA Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Application September 27, 1954, Serial No. 458,617
Claims priority, application Germany October 2, 1953
4 Claims. (Cl. 242—71.8)



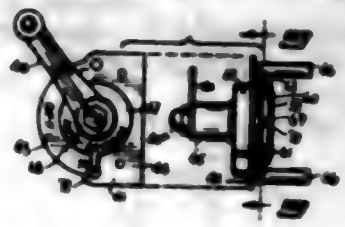
1. A film take-up device for a photographic camera comprising a cylindrical shaft rotatably mounted upon a stationary portion of said housing, two pairs of slots cut into opposite sides of said shaft with each of said pairs being disposed in a common plane perpendicular to the axis of said shaft, the roots of each said opposite pairs of slots being straight and disposed parallel to each other, a spool including a hollow cylinder having an inside diameter greater than the outside diameter of said shaft and including a pair of flanges having outwardly dished edges, a pair of disc-shaped spring elements, each of said spring elements including a radially disposed slot whose sides are disposed parallel to the roots of said slots for insertion therein, a film attaching means operatively associated with said hollow cylinder for attaching the end of a strip of film thereto, said two pairs of slots being longitudinally separated an overall distance sufficiently greater than the distance between the outside surfaces of the central portions of each of said flanges to permit insertion of said spring elements within said slots after said shaft has been inserted within said spool to longitudinally position said spool and frictionally restrain its rotational movement relative to said shaft, a gear secured to an end of said shaft extending out of said spool for transmitting film-winding motion to said shaft, and the outer edges of said spring elements being disposed in resilient contact within said outwardly dished edges of said flanges to maintain said spring elements in firm engagement with said shaft when said spool rotates relative to said shaft whereby the sides of said spring elements are maintained in steady resilient frictional contact with said flanges to permit said shaft to drive said spool for winding film upon said spool and to permit said spool to slip relative to said shaft after a predetermined amount of film is wound upon said spool.

2,862,679

SPINNING REEL

Henry Warren Denison and Lloyd E. Johnson, Mankato, Minn.; F. Evelyn Denison, special administratrix of the estate of said Henry Warren Denison, deceased

Application December 6, 1955, Serial No. 551,297
6 Claims. (Cl. 242—84.2)



1. In a fishing reel, a frame, a line spool on the frame, means for spooling a line on the spool and including a shaft and a pinion, a pair of side plates on the frame, one of said side plates having a bearing, a crank rotatable about the bearing, a drive gear operated by the crank and meshing with one side of the pinion to spool the line, an anti-reverse mechanism including a pair of opposed spring biased dogs mounted on the side plate adjacent the said drive gear, the drive gear having at least one stud facing said dogs, and a cam on the outer surface of the side plate manually adjustable from outside the reel and engaging the dogs to position either in the path of said stud and thereby limit rotation of the drive gear and crank to either one direction or the opposite direction.

2,862,680

HELICOPTER

Michel Camille Berger, Paris, France, assignor of one-fourth to Emile Auguste Bourcart, Paris, France, and one-half to Technique et Commerce, Paris, France

Application March 14, 1956, Serial No. 571,456
Claims priority, application France March 17, 1955
10 Claims. (Cl. 244—17.17)

1. A helicopter comprising a car-forming body of revolution, a support surrounding the upper portion of said body at a small distance therefrom and rotatably

spaced longitudinally downwardly of the standard from

2,862,685

winding reels each consisting of a hub, a full size flange

ated with the platform to cooperate in severing a length

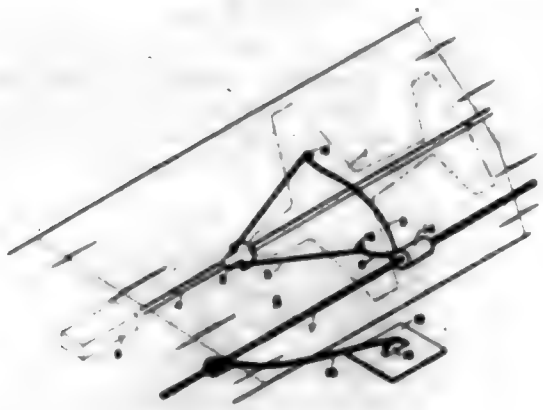
mounted thereon, a rotary shaft carrying said support and mounted in said body along the revolution axis thereof, a plurality of blades having a conventional airfoil section, pivotally mounted on said support and radially directed with respect to the rotation axis of said support, means on said body for counteracting the driving torque applied thereon by said support when rotating, conventional means for varying the general pitch and the cyclical pitch of the blades, additional means on said car-forming body for imparting a transverse motion to the helicopter, starting and propelling assemblies carried by said blades in the vicinity of their tips, and a landing gear supported by the lower portion of said car-forming body.

2,862,681

METHOD FOR ARRESTING BRIDLES AND PENDANTS

George J. Rolandelli, Wilmington, and Raymond M. Ballard, Newark, Del., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application September 18, 1956, Serial No. 610,696
5 Claims. (Cl. 244—63)



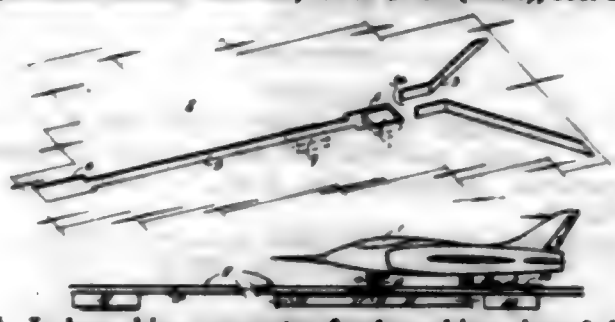
1. In a launching device for launching an aircraft from a carrier deck or the like, power driven shuttle means movable in a fixed path and predetermined direction along said deck, bridle means for connecting said shuttle means and an aircraft to be launched having the ends thereof detachably connected to said aircraft to be launched and the medial portion thereof detachably carried by said shuttle means, said bridle means becoming detached from said aircraft to be launched and said shuttle means and being movable independently thereof after said shuttle means and said aircraft to be launched have been moved through a predetermined range of movement in said fixed path, first cable means juxtaposed said deck and extending substantially parallel to said fixed path of said shuttle means, probe means slideably carried by said first cable means, lanyard means connecting said bridle means and said probe means and being operable to pull said probe means along said first cable means upon movement of said shuttle means and said aircraft to be launched along said deck in said fixed path, second cable means associated with said first cable means and having one end thereof slideably connected to said first cable means, said one end of said second cable means being engaged and moved along said first cable means by said probe means after said bridle means becomes detached from said shuttle means and said aircraft to be launched, and energy absorber means associated with said second cable means for arresting the movement of said second cable means and said probe means after the engagement of said one end of said second cable means with said probe means to thereby arrest the movement of said detached bridle means.

2,862,682

CATAPULT LAUNCHING ENGAGER FOR AIRCRAFT NOSEWHEEL GEAR

Thomas D. Davies, Villanova, Pa.

Application May 14, 1957, Serial No. 659,190
2 Claims. (Cl. 244—63)
(Granted under Title 35, U. S. Code (1952), sec. 266)



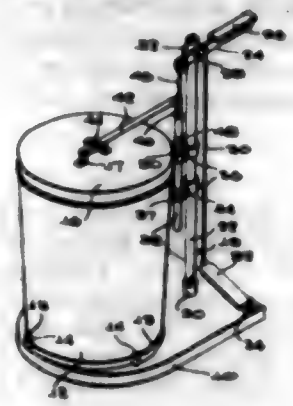
1. In launching apparatus for launching aircraft having a swivelable nose wheel, a tow bar, means on one end of said tow bar for connecting said tow bar to said nose wheel for swiveling said bar with said wheel, catapult engaging means on the other end of said tow bar for connecting said tow bar to a catapult, said catapult engaging means being transversely larger than said tow bar, a deck from which said aircraft is launched, said deck having a slot extending in the direction of launching and being larger in width than said tow bar but smaller than said catapult engaging means on said tow bar, said deck having openings at the ends of said slot so that said tow bar may be engaged with said deck at one end of said slot and disengaged at its other end as is required in launching.

2,862,683

LID-LIFTING DEVICE FOR TRASH CANS

Edgar L. Donegan, Lena P. Donegan, and Kenneth M. Donegan, Carlsbad, N. Mex.

Application August 31, 1956, Serial No. 607,415
2 Claims. (Cl. 248—147)



1. A device for lifting from a trash container a container lid, and for moving said lid laterally to one side of the container, comprising: a base adapted for supporting said container; an elongated, vertically extending standard fixedly secured to and projecting upwardly from the base adjacent the area of the base on which the container is supported; a lever pivotally connected intermediate its ends to the upper end portion of said standard for swinging movement in a vertical plane, said lever having one end in close proximity to said area though terminating outside the area, so as to be closely, laterally spaced from a container and lid supported within said area, said lever having its other end spaced outwardly a substantial distance from said area and formed as a handle, for rocking of the lever about its pivot axis between a normal position in which the lid is supported upon the container and an operative position in which the lid is elevated from the container and is shifted laterally thereof to permit access to the interior of the container; vertically spaced support elements on and projecting laterally from said standard at a location

mounted on said auxiliary casing, a main casing separable of flow of the pressure fluid to the motor through said pipe

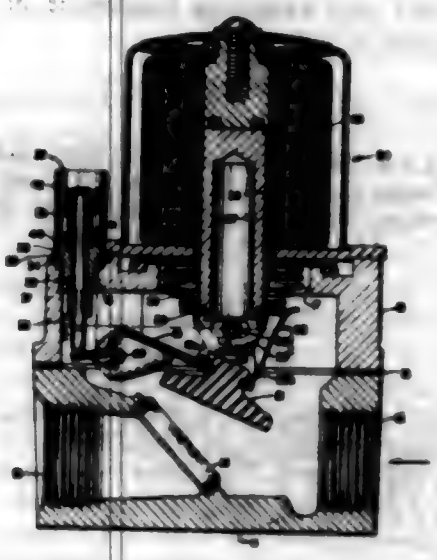
spaced longitudinally downwardly of the standard from the lever, said elements projecting from the standard toward said area and being disposed in substantial vertical alignment with the first named end of the lever; an elongated, vertical sleeve carried by said elements and rigidly connected by the elements to said standard in a position laterally spaced from the standard in the direction of said container-suppport area, said sleeve extending in substantial vertical alignment with said first named end of the lever, the sleeve being formed intermediate its ends with a spirally extending cam slot extending through substantially 90°; a lift arm of inverted L-shape including a vertical and a horizontal leg, the vertical leg being slidably, rotatably engaged in the sleeve and projecting upwardly from the sleeve to terminate below the first named end of the lever, the horizontal leg of said lift arm projecting inwardly of said area from the sleeve and having a connection to said lid remote from the vertical leg, said lift arm including a lug which is slidably engaged in the cam slot, whereby to rotate the lift arm through 90° in respectively opposite directions on raising and lowering, respectively, of the lift arm within the sleeve; and a connecting member of flexible formation over its entire length, connected between the first named end of the lever and the upper end of said vertical leg and extending in approximate longitudinal alignment with the vertical leg in the respective positions of said lever, whereby to elevate the lift arm responsive to rocking of the lever in one direction to in turn raise the lid and shift the same laterally to one side of the container, said flexible element being axially twistable for turning thereof with the vertical leg during raising and lowering, respectively, of the lift arm.

2,862,684

SOLENOID VALVE

Erle R. Ander, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application September 16, 1957, Serial No. 684,354
4 Claims. (Cl. 251—138)



1. A control device comprising a housing, a lever pivoted in said housing, a control member carried by said lever, a solenoid mounted in said housing, a plunger in said solenoid and having a slot therein extending transversely with respect to the axis of said plunger, a pivot on said lever and extending through said slot, and a leaf spring secured to said lever and having a portion that is out of engagement with said plunger when said solenoid is de-energized and is in transversely biasing engagement with the adjacent end of said plunger when said solenoid is energized.

2,862,685

FLOW CONTROL VALVES

Kurt Hugo Folke Lundberg, Upsala, Sweden, assignor to Urquhart's (1926) Limited, London, England, a British company

Application June 11, 1951, Serial No. 230,885
Claims priority, application Great Britain June 30, 1950
2 Claims. (Cl. 251—305)

1. A flow-control valve comprising a valve body having a flow passage through it and a cylindrical chamber formed transversely across it, and a rectangular plate valve member disposed diametrically in and rockable about the axis of said chamber, the flow-obstructing portions of the cylindrical wall of said cylindrical chamber being formed with ports situated in the line of flow and shaped to produce a predetermined flow control effect as the plate valve member is angularly adjusted, in combination with an end wall liner adjacent one of the end walls of the cylindrical chamber, and means for resiliently pressing one face of said liner against the adjacent flank edge of the plate valve member.

2,862,686

HOLLOW VANE WITH INTERNAL VIBRATION DAMPENER

Kenneth M. Bartlett, Lyndhurst, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio

Application August 19, 1954, Serial No. 450,920
5 Claims. (Cl. 253—77)

5. In a hollow fluid directing member, a root portion arranged for attachment to a wheel, integral side wall portions extending upwardly from said root portion to provide a continuous air foil periphery including spaced fluid directing walls merging at the chordal edges into smooth leading and trailing edges, said fluid directing walls being spaced to provide an internal void therebetween of decreasing breadth from said root upwardly in the span-wise dimension of said member, and at least one wedge member received freely at the base of said void and having a dimension sufficient to cause said wedge member to be received in wedged engagement between the walls defining said void upon movement of said wedge member in the span-wise direction of said member.

2,862,687

AXIAL FLOW TURBOMACHINE

Emile Aguet and Franz Schaer, Winterthur, Switzerland, assignors to Sulzer Freres, Société Anonyme, Winterthur, Switzerland, a corporation of Switzerland

Application October 1, 1954, Serial No. 459,757
Claims priority, application Switzerland October 9, 1953
5 Claims. (Cl. 253—78)

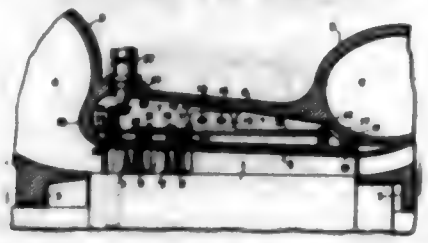
1. A multistage axial flow turbomachine comprising a rotor, buckets mounted on said rotor, a substantially cylindrical auxiliary casing extending over substantially the whole length of said rotor, guide buckets interposed between said first mentioned buckets and adjustably

third rotatable means, which carriage when moved to

by arrest the movement of said detached bridle means.

and projecting laterally from said standard at a location

mounted on said auxiliary casing, a main casing separable from said auxiliary casing and having an oblong portion forming an envelope completely enclosing said auxiliary casing, said oblong portion being radially spaced from said auxiliary casing to form a substantially cylindrical completely closed cavity, and actuating means placed in



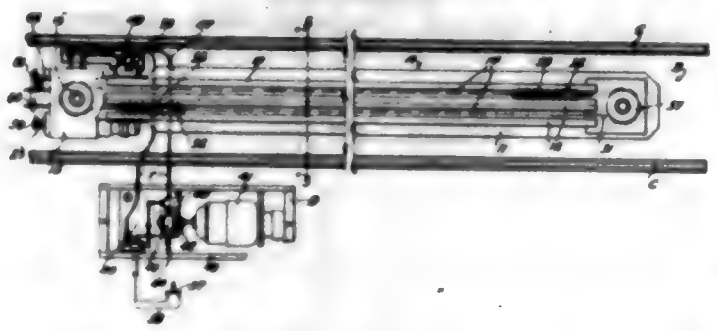
said cavity and operatively connected with said guide buckets for simultaneously adjusting the position of said guide buckets, said auxiliary casing and said main casing being interconnected by means of an annular rim and an annular groove receiving said rim for preventing axial displacement of said auxiliary casing relatively to said main casing.

2,862,688

ROTARY FLUID MOTOR DRIVEN CAR-SHIFTING APPARATUS

Glenn W. Merritt, Bowerston, Ohio, assignor to The Nolan Company, Bowerston, Ohio, a corporation of Ohio

Application February 16, 1953, Serial No. 337,205
4 Claims. (Cl. 253—97)



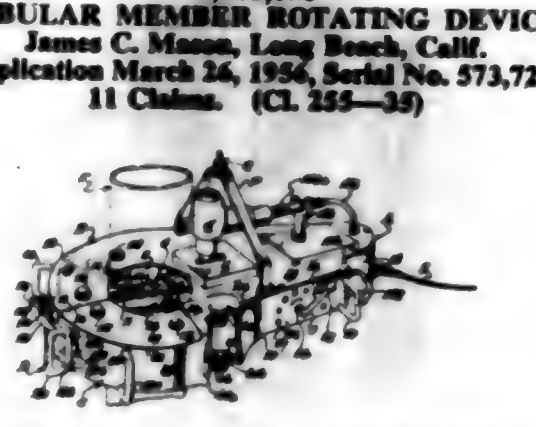
3. Fluid-actuated drive means comprising: a fluid driven motor having a housing formed with a rotor chamber; a radially bladed rotor mounted for rotation in opposite directions within said chamber; a shaft joined with said rotor projecting exteriorly of the housing, the latter being formed with peripherally disposed fluid-advancing and returning outlets; supply means for a pressure working fluid having fluid-advancing and returning outlets; pipe means uniting the outlets of said motor with those of said supply means; a distributor valve interposed in said pipe means for reversing the direction of fluid flow through said pipe means from the valve to said motor, said valve including a casing having an internal chamber; a spool valve member slidably mounted for limited movement between the operating positions in the casing chamber, said valve member including spaced heads defining between them fluid-transmitting passages, the walls of said casing including spaced ports joined with said pipe means; a driving member mounted for rotation in opposite directions; motion-transmitting means driven by said rotor shaft for imparting rotary motion to said member; a pilot valve including a turnable element; conduits extending between said distributor and pilot valves and operable when said turnable element occupies one of its working positions to transmit said fluid under pressure to one end of the chamber of the distributing valve to maintain the spool valve therein in a first working position, and when said turnable element occupies another working position, to transmit the pressure fluid to the opposite end of said valve chamber, whereby to maintain the spool valve in a second working position in which the direction of flow of the pressure fluid to the motor through said pipe means is reversed with repect to that which obtains when the spool valve occupies its first position; and means operative automatically upon predetermined rotation of said driving member in a given direction to impart movement to the turnable element of said pilot valve to transfer the same from one operating position to the other.

2,862,689

PAPER LIFT

Philip W. Dalrymple, Wellesley Hills, and James Peter Hunneker, Milton, Mass., assignors, by mesne assignments, to Southworth Machine Company, a corporation of Maine

Application November 3, 1955, Serial No. 544,745
4 Claims. (Cl. 254—8)



1. A lift comprising a base, a platform over the base, a pair of arms on each side of the base and platform interconnecting the base and platform to permit the platform to rise and fall relatively to the base, cam means for lifting the platform including cams on said arms and followers engaging the cams, a piston and cylinder for actuating said followers, one end of the cylinder being mounted at one end of the base and the piston extending from the other end of the cylinder beyond said followers, and means interconnecting the outer end of the piston with the followers, said means having arms extending lengthwise of the piston toward said end of the base and being spaced from the piston so that they overlap the cylinder when the piston is retracted into the cylinder, and said arms also extending lengthwise of the piston when the piston is advanced.

2,862,690

TUBULAR MEMBER ROTATING DEVICE

James C. Mason, Long Beach, Calif.

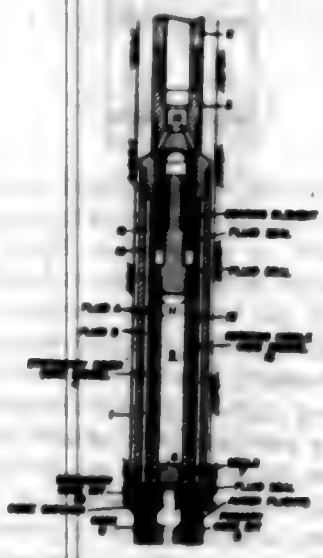
Application March 26, 1956, Serial No. 573,726
11 Claims. (Cl. 255—35)

1. A power driven device for rotating tubing or casing of various diameters, including: first and second opposing endless belts arranged in a generally triangular configuration, with first and second portions respectively of said belts being situated adjacent to one another; first rotatable means that rotatably support forwardly disposed portions of said first belt; second rotatable means that rotatably support forwardly disposed portions of said second belt; third rotatable means that rotatably support rearwardly disposed portions of both said first and second belts; a movable carriage that supports said

between said first mentioned buckets and adjustably

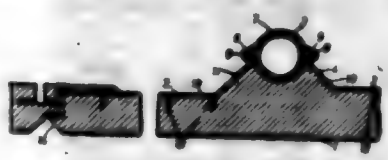
third rotatable means, which carriage when moved toward said first and second rotatable means places sufficient slack in said first and second belt portions to permit them to engage opposite and separate surface areas of said tubing or casing; first power means for moving said carriage in a direction away from said first and second rotatable means to place sufficient tension on said belts that said first and second portions thereof are in non-slipping contact with said surface areas; and second power means that rotates said third rotatable means to drive said belts and rotate tubing or casing that is engaged thereby when said belts are under tension.

2,862,691
CORING BIT ASSEMBLY
Clyde D. Cochran, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Application April 3, 1956, Serial No. 575,833
3 Claims. (Cl. 255—72)



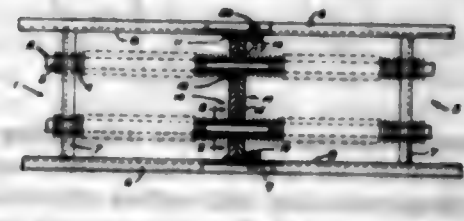
1. An improved core barrel assembly adapted to be fastened to the lower end of a drill string, comprising an inner non-rotating core-retaining barrel, a primary rotating barrel positioned about and extending below said core-retaining barrel with said core-retaining barrel and said primary rotating barrel defining an annular space, the lower end portion of said primary core barrel and the lower end of said core-retaining barrel defining an annular passageway, a primary core bit attached to the lower end of said primary rotating barrel, a secondary rotating barrel positioned about said primary rotating barrel, a secondary core bit attached to the lower end of said secondary rotating barrel, ports positioned in the upper area only of said core-retaining barrel establishing fluid communication between the inner space of said core-retaining barrel and said annular space between said core-retaining barrel and said primary rotating barrel, a seal in the top portion of said annular space between the core-retaining barrel and the primary rotating barrel and above said ports, said annular space terminating at its lower end in said annular passageway, other ports establishing fluid communication between the inner space of said drill string and the annular space between said primary rotating barrel and said secondary rotating barrel, and a movable sealed plug element at the bottom end of said inner non-rotating core-retaining barrel adapted to move farther within said core-retaining barrel in response to the entry of a core.

2,862,692
STRUCTURAL ELEMENT FOR HEATING OR COOLING ARRANGEMENTS IN BUILDINGS
Alfred Wolf, Basel, Switzerland, assignor, by mesne assignments, to Etablissements Alustra, Vaduz, Liechtenstein
Application June 16, 1953, Serial No. 362,038
Claims priority, application Switzerland June 26, 1952
10 Claims. (Cl. 257—124)



2. A structural element for cooperation with tubular heat control means, comprising a front layer of relatively poor heat-conducting material, a sheet of heat-conducting material disposed on and for contact with said front layer, said sheet including a pair of outer substantially planar end portions and an integral, elongated channel portion intermediate said planar portions and deformed to extend rearwardly of said planar portions, said channel portion defining an elongated seat conforming partially to the periphery of said tubular heat control means, and elongated clip means conforming to said tubular means and provided with a pair of laterally extending ears, said channel portion of said sheet being doubled upon itself to form an integral pair of laterally extending ears, said pairs of ears cooperating with each other, respectively, to hold said element to said tubular means, whereby when said element is operatively connected with said tubular heat control means, there is a transfer of heat between said tubular means and said seat defined by said channel portion and between the latter and said substantially planar portions.

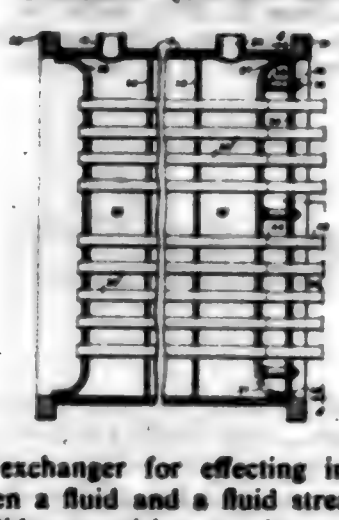
2,862,693
SUPPORT FOR FINNED TUBE TYPE HEAT EXCHANGERS
Townsend Tinker, Orchard Park, N. Y., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware
Application July 24, 1953, Serial No. 370,195
12 Claims. (Cl. 257—163)



12. In a heat exchanger the combination comprising a finned tube rigidly supported at spaced points therealong to a frame member, an additional tube support member fixed to said frame member intermediate said spaced points and having an aperture therein, a clamp member positioned between said spaced points and having an aperture therein initially aligned with said first aperture, said finned tube passing through said aligned apertures, said clamp member being adjustably secured to said frame member adjacent said tube support member to move said clamp member to clamp said finned tube against the wall of the aperture in said tube support member to suppress vibration of said finned tube and avoid metal fatigue and the disconnection of said fins from said tube.

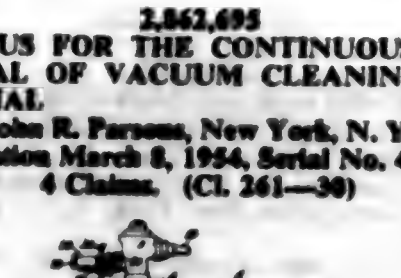
passages for the upflow of gas to engage liquid that ac- ondary bell is adapted to trap gas escaping from said

2,862,694
HEAT EXCHANGER
Russell W. Lertz, Sweeny, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application January 6, 1956, Serial No. 557,712
8 Claims. (Cl. 257—224)



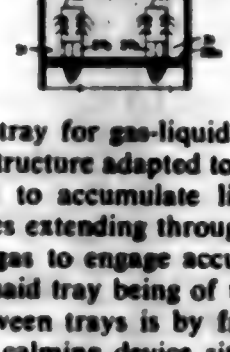
1. A heat exchanger for effecting indirect heat exchange between a fluid and a fluid stream of entrained particulate solids comprising an elongated shell; a pair of spaced-apart tube sheets enclosing a space within said shell; a plurality of tubes for transporting said stream of solids extending longitudinally of said shell thru said tube sheets in sealing relation thereto so as to provide a closed path thru said space, said tubes having inlet ends adjacent one tube sheet and outlet ends adjacent the other tube sheet; a ferrule abutting the inlet end of each of said tubes, said ferrule being of the same internal diameter as its respective tube and the ferrules being supported in axial alignment with their respective tubes by support means attached to the adjacent tube sheet; and inlet and outlet means in said shell communicating with said space for circulating a fluid heat exchange material among said tubes.

2,862,695
APPARATUS FOR THE CONTINUOUS DIRECT DISPOSAL OF VACUUM CLEANING WASTE MATERIAL
John R. Parsons, New York, N. Y.
Application March 8, 1954, Serial No. 414,747
4 Claims. (Cl. 261—30)



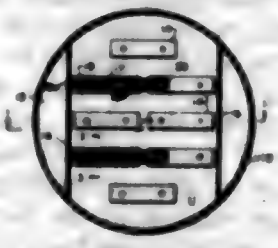
1. A vacuum cleaner apparatus comprising an electrically motivated air-suction mechanism, an electric power line interconnecting said suction mechanism to an electric power source, a U-shaped water and dust mixing chamber, a conduit interconnecting one side of said mixing chamber to the outlet of said air-suction mechanism, a water source connected to said conduit intermediate said mixing chamber and air-suction mechanism, a disposal system connected to the other side of said mixing chamber, a flush valve disposed between said water source and said conduit adapted to open quickly to interconnect said water source and said conduit and adapted to close slowly to disconnect said water source and said conduit, a control handle connected to said flush valve, an electric switch connected in the electric power line and interconnected to said flush valve control handle so that the air-suction mechanism is switched on and switched off respectively, with the initial opening and closing movement of the control handle, whereby a flow of water from said water source is assured concurrently with the activation of the air-suction mechanism and a flow of water from said water source is assured for a period of time subsequent to the deactivation of the air-suction mechanism and during operation a flow of air and dust from the air-suction mechanism and a flow of water from the water source are passed simultaneously into the mixing chamber for a turbulent intermixture of the dust and water while in continuous flow into the disposal system.

2,862,696
APPARATUS FOR CONTACTING LIQUIDS AND GASES
Frederik Johannes Zuiderweg and Hendrik Verburg, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
Application February 4, 1955, Serial No. 486,212
Claims priority, application Netherlands February 12, 1954
10 Claims. (Cl. 261—113)



1. A contacting tray for gas-liquid contacting columns comprising a tray structure adapted to extend horizontally across the column to accumulate liquid and having a plurality of passages extending through the tray structure for the upflow of gas to engage accumulated liquid and throw up a spray, said tray being of the type wherein all liquid transfer between trays is by free fall through the inter-tray space; a calming device situated near the tray level including a confining wall which extends upwards to a height above the tray level and encloses a restricted basin for the collection and retention of becalmed liquid in lateral isolation from liquid on adjoining tray regions, said basin extending over only a minor portion of the tray area, being open at the top and closed at the bottom but having at the bottom one or more restricted passageways which communicate directly with the space beneath the tray for the discharge of liquid, said passageways having an aggregate area less than the area of the basin so as to retain within the basin a body of substantially homogeneous liquid in amount to produce a hydrostatic head which exceeds that of the liquid on adjoining tray regions but large enough to permit the upflow of gas therethrough at low loading.

2,862,697
CONTACTING TRAY WITH DOWNCOMER-FEEDER
Frederik Johannes Zuiderweg, Amsterdam, Netherlands, Earl Manning, Jr., Edwardsville, Ill., and Elmond L. Claridge, Houston, Tex., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
Application November 21, 1955, Serial No. 548,187
8 Claims. (Cl. 261—114)



1. In a gas-liquid contacting column which contains trays arranged in vertically spaced relation and having

entry of a core.

vibration of said finned tube and avoid metal fatigue and the disconnection of said fins from said tube.

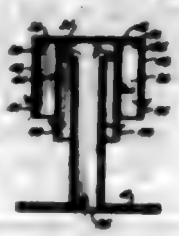
passages for the upflow of gas to engage liquid that accumulates on the trays and thereby to form a spray in the space between trays, the combination with at least one of said trays of a liquid-downcomer extending downwardly from the tray, a generally upright wall extending through a vertically elongated zone in the space immediately above said one tray so as to be engaged by liquid spray emanating from said tray and to coalesce a part of said spray, and a downcomer-feeder comprising conduit means having an inlet situated to receive coalesced liquid from said upright wall and an outlet positioned to feed all of said liquid directly into said downcomer, said conduit means being situated in spaced relation above said tray and occupying only a minor fraction of the cross sectional area of said space and leaving said space substantially open for the essentially unimpeded up-and-down passage of said spray.

2,862,698

CONTACT DEVICE

Arthur E. Howerton and Kenneth R. Dale, Corpus Christi, Tex., assignors to Columbia-Southern Chemical Corporation

Application January 13, 1956, Serial No. 558,982
2 Claims. (Cl. 261—114)



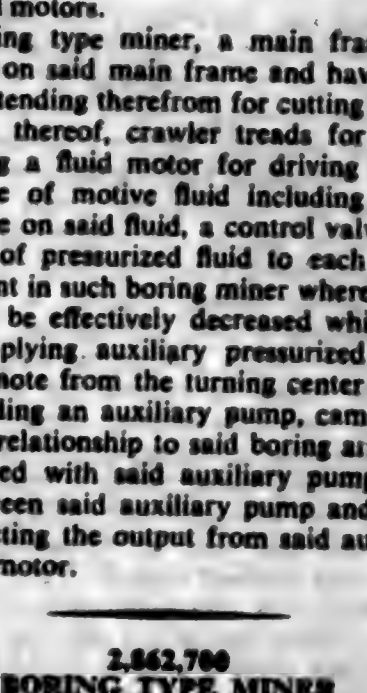
1. A fluid contact tower having vertically spaced transverse partitions, each having an inlet for liquid at one side and an outlet for liquid on the opposite side, providing for flow of a stream of liquid at a normal level at approximately the same level as the horizontal plane of the plate cap recited below across an intermediate portion of said partition from inlet to outlet, at least one of said partitions having disposed thereon a plurality of channel-type bell caps extending substantially from the partition inlet at one end to the partition outlet at the other end in the direction of liquid flow across said partition, each bell cap comprising an elongated, substantially rectangular, walled chimney member opening upwardly through said partition, having an upper end terminating above said partition in vertically spaced relation thereto, with a double bell cap disposed over said chimney member comprising gas-liquid contact means consisting of a flat, imperforate, rectangular plate cap vertically spaced over said chimney member, and a primary, substantially rectangular bell spaced from the outer periphery of said chimney member and formed by opposed, vertically disposed walls depending downwardly from said plate cap, said primary bell walls having gas distribution means therein below the normal liquid level, a secondary bell telescopically disposed with respect to said primary bell and spaced from the outer periphery thereof with the space therebetween being unobstructed, said secondary bell having vertical walls depending downwardly from said plate cap, said secondary bell walls being provided with gas distribution means therein also below the normal liquid level and vertically spaced above the gas distribution means of said primary bell, said gas distribution means comprising substantially rectangular, vertically elongated slots extending upwardly from the lower margins of their respective bell walls, said slots forming the sole perforate portion of said bell walls, and the lowermost extremity of said secondary bell cap being at the same vertical elevation as the upper extremity of the slots of said primary bell cap, whereby the secondary bell is adapted to trap gas escaping from said primary bell and then release it for a second contact with the liquid.

2,862,699

BORING TYPE MINERS WITH CUTTING PATH MODIFYING MEANS

Joseph J. Siemer, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application December 24, 1956, Serial No. 630,254
5 Claims. (Cl. 262—7)



3. In a boring type miner, a main frame, a boring head mounted on said main frame and having a pair of boring arms extending therefrom for cutting mineral from the solid seam thereof, crawler treads for moving said miner including a fluid motor for driving each crawler tread, a source of pressure fluid including a pump for pressurizing said fluid, a control valve controlling the admission of pressurized fluid to each fluid motor, the improvement in such miner for increasing the size of the bore beyond that incident to the dimensions of the boring arms which comprises means for supplying auxiliary pressurized fluid to said fluid motors in timed pulses which alternate between said fluid motors.

5. In a boring type miner, a main frame, a boring head mounted on said main frame and having a pair of boring arms extending therefrom for cutting mineral from the solid seam thereof, crawler treads for moving said miner including a fluid motor for driving each crawler tread, a source of motive fluid including a pump for placing pressure on said fluid, a control valve controlling the admission of pressurized fluid to each fluid motor, the improvement in such boring miner whereby the radius of turning can be effectively decreased which comprises means for supplying auxiliary pressurized fluid to the fluid motor remote from the turning center of the miner in pulses including an auxiliary pump, cam means operating in timed relationship to said boring arms and operatively connected with said auxiliary pump and means connected between said auxiliary pump and said remote motor for directing the output from said auxiliary pump to said remote motor.

2,862,700

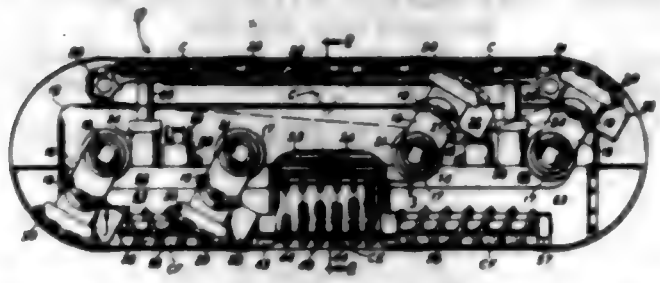
BORING TYPE MINER

Joseph Gomki, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application April 10, 1957, Serial No. 652,042
8 Claims. (Cl. 262—7)

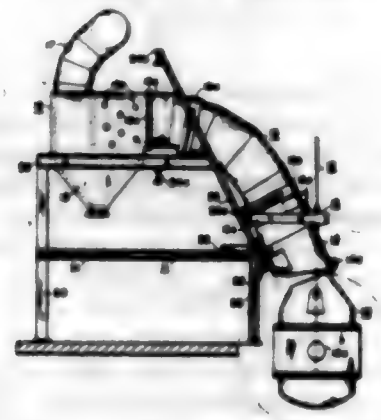
8. A boring type miner comprising a pair of boring arms arranged to cut contiguous bores in a solid seam, means for cutting an upper cusp remaining from the ac-

tion of said boring arms, a material receiving throat having a material removing conveyor therein disposed between said boring arms, and auxiliary cutting means disposed in said material receiving throat comprising a frame and a plurality of side by side endless cutter chains mov-



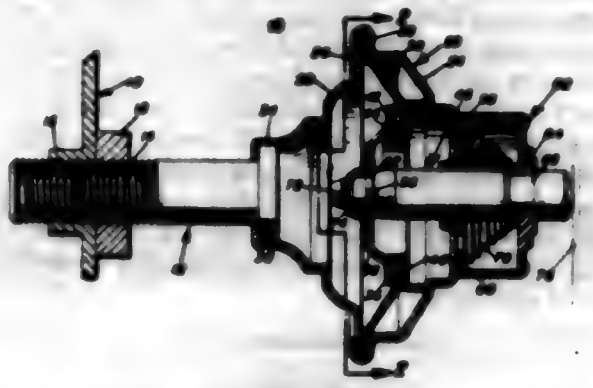
able on said frame, said endless chain cutter elements moving in the same direction as said material moving conveyor, and being so related to said throat as to cut large fragments to proper size by holding said large fragments at said throat.

2,862,701
EXHAUSTING APPARATUS
Harry L. McFeaters, New Castle, Pa., assignor to Pennsylvania Engineering Corporation, New Castle, Pa., a corporation of Pennsylvania
Application August 29, 1955, Serial No. 531,180
9 Claims. (Cl. 266—35)



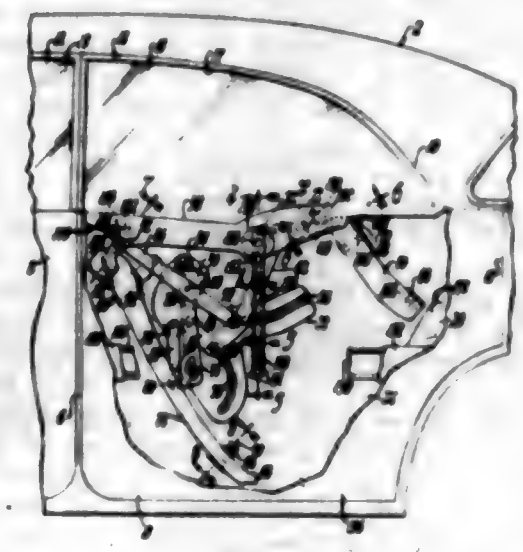
1. Apparatus for receiving a hot effluent discharge from an upwardly-open discharge mouth of a vessel such as a converter and for conducting the effluent discharge to an overhead discharge receiver which comprises, an upright support structure, an upwardly-inclined hood enclosure body defining a fluid passageway therealong and being secured to project along a side of said upright support structure, means for connecting an upper end portion of said hood enclosure body to the discharge receiver to deliver effluent thereto, a variable-position nose part defining a fluid passageway therealong and having a lower mouth portion to cooperate with the mouth of the vessel to receive the effluent discharge therefrom, an upwardly-inclined support frame carried by said support structure along said hood enclosure body and said nose part, roller means operatively positioned between said nose part and said inclined support frame to position said nose part for upwardly-inclined movement along said inclined support frame and between a lower end portion of said hood enclosure body and the mouth of the vessel, means for effecting such movement of said nose part while it is in an aligned fluid-flow relationship between the lower end portion of said hood enclosure body and the mouth of the vessel, water-jacketing means along said nose part, a water-supply header about the mouth portion of said nose part and having a water supply inlet, and a series of spraying nozzles about the mouth portion of said nose part and connected to said header to direct a water spray upwardly within the passageway of said nose part.

2,862,702
ANTI-STALL DEVICE OR DASH-POT
John R. Emerson, Flint, Mich., assignor to Fuller & Emerson Manufacturing Co., Flint, Mich., a copartnership
Application October 23, 1953, Serial No. 388,020
15 Claims. (Cl. 267—1)



1. A dash-pot assembly comprising a casing having opposed end walls, one of which is apertured for guidably receiving a spindle within the casing, a movable wall dividing the interior of said casing into two separate end chambers, said wall having a rigid central portion provided with a belled opening, said spindle having a reduced end portion received in the opening and having a tapered shoulder engageable with that part of the rigid central portion bounding the opening, when the spindle is moved in one axial direction, said shoulder being longitudinally grooved to provide a limited passage of fluid between the chambers upon movement of the spindle in said one direction, abutment means provided on the free end of said spindle permitting movement of said shoulder away from said rigid central portion when the spindle is moved in the other direction and permitting free passage of fluid between said chambers upon movement of the spindle in said other direction.

2,862,703
WINDOW REGULATOR
James D. Leslie, Birmingham, and Henry J. Wubbe, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 18, 1955, Serial No. 482,621
8 Claims. (Cl. 268—104)



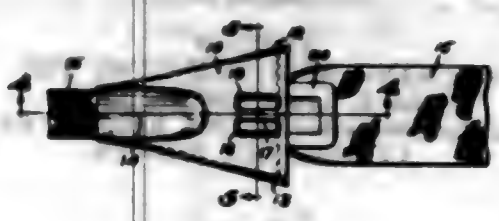
1. A window regulator mechanism for a vehicle window bodily movable into and out of a window well to open and close a window opening comprising in combination, a pair of spaced links operatively connected to said window for moving said window along a curvilinear path between open and closed positions, and support means within said window well guiding each of said links along

2,862,708

bottom blank of a stack and at least partially supporting

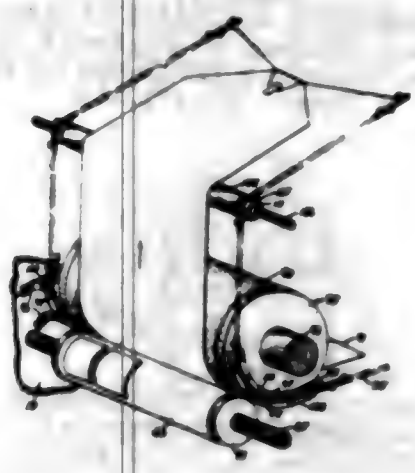
a curvilinear path independent of the curvilinear path of said window, the curvilinear path of said window being the resultant of the curvilinear paths of said links.

2,862,704
FOLDING TOOL FOR BRAIDING
Roger C. Griswold, Kingston, Mass.
Application October 11, 1956, Serial No. 615,418
6 Claims. (Cl. 270—86)



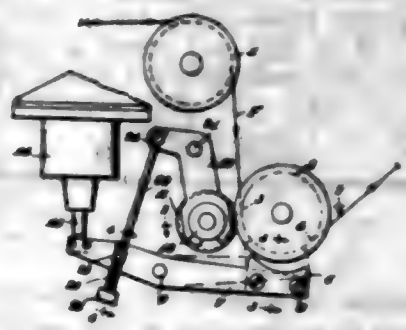
1. A tool, for folding strips in preparation for braiding to make rugs and similar articles, comprising a body having a large end opening into which the unfolded strip is inserted and a small end opening from which the folded strip emerges, folding means disposed near said small end opening, a baffle mounted on said body and covering part of said large end opening, said baffle defining with said body an arcuate slot into which the strip is inserted, and a pair of vanes mounted on said baffle, said vanes extending beyond said baffle and defining the ends of the slot and being movable to vary the length of the slot according to the width of the strip.

2,862,705
THREADING MECHANISM
Harry W. Faeber, Larchmont, N. Y., assignor to Time Incorporated, New York, N. Y., a corporation of New York
Application August 13, 1956, Serial No. 603,701
8 Claims. (Cl. 271—2.1)



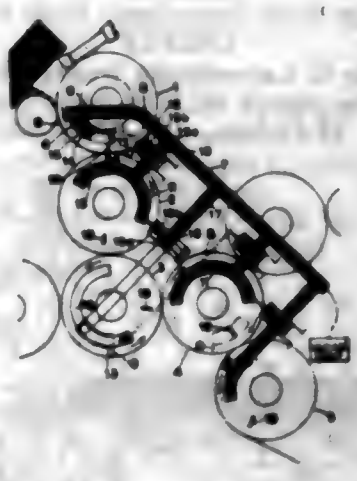
1. A mechanism for threading a machine for processing an elongated sheet of material, said machine having a series of rotatable cylinders adapted to engage said sheet and guide it through a tortuous path about said cylinders, said cylinders including a printing couple, comprising a pair of elongated elements on opposite sides of the machine movable along the path of the material, an elastic strip suspended across the space between said pair of elongated elements, means for securing said elastic strip to each of said elements traversing the machine so as to form an elastic connection between said elements that is adapted to be attached to the leading edge of the material for threading, and means to drive the elements to thread the machine.

2,862,706
CINEMATOGRAPHIC FILM BRAKE
William B. Tucker, Los Angeles, Calif., assignor to Technicolor Corporation, Hollywood, Calif., a corporation of Maine
Application June 7, 1955, Serial No. 513,703
5 Claims. (Cl. 271—2.3)



1. Cinematographic apparatus comprising a roller over which film travels throughout an arc extending around one side of the roller from the location where the film meets the roller to the location where it leaves the roller, a brake associated with the roller for retarding the film travel, a presser for pressing the film against the roller between said locations, and means for concomitantly operating the presser first and then the brake, thereby to hold the film in position on the roller while being braked.

2,862,707
SHEET TRANSFER APPARATUS
Ronald George Voysey, London, England, assignor to Peter Carmichael and Company Limited, London, England, a British company
Application November 29, 1955, Serial No. 549,762
Claims priority, application Great Britain December 1, 1954
3 Claims. (Cl. 271—3)

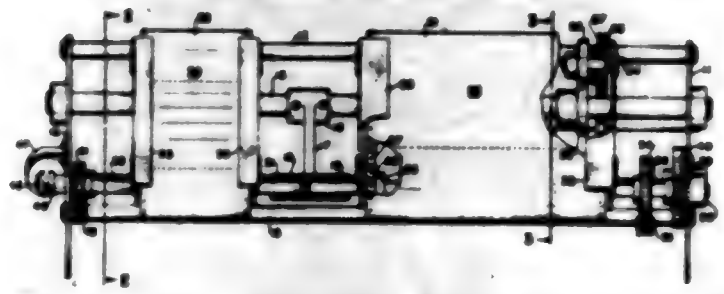


1. A blank handling apparatus comprising a series of suction-operated blank handling devices at least some of which are blank transfer members on which blanks can be held by means of suction applied to the interior of said members and acting on said blanks through orifices in said members, a source of suction, a plurality of connections each of which connects one of said handling devices directly to said source, a plurality of trigger valves one of which is located in each of said connections except the connection between said source and the first handing device in said series, each of said trigger valves normally closing one of said connections but being responsive to pressure in one of said transfer members at a previous position in said series so as to open automatically when a blank is handled by a transfer member at said previous position.

sageway of said nose part.

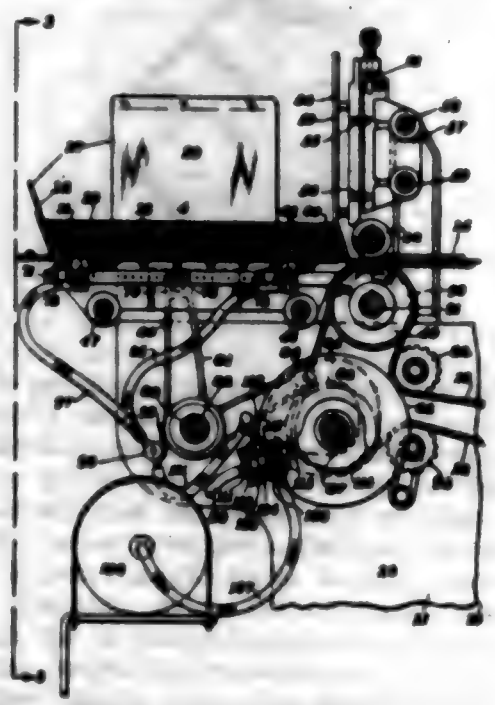
tween open and closed positions, and support means within said window well guiding each of said links along

2,862,708
MULTIPLE FORM DRIVE
Philip M. Allen, Suffern, N. Y., assignor to Avon Products, Inc., New York, N. Y., a corporation of New York
Application November 15, 1956, Serial No. 622,474
15 Claims. (Cl. 271—2.4)



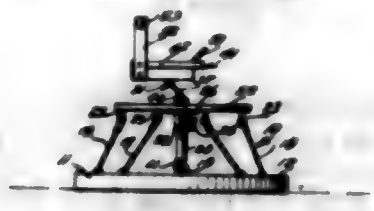
1. A multiple form drive for advancing forms of different lengths in an invoicing or like machine, comprising a first traction device for engaging a long form, a second traction device for engaging a short form having a length equal to a predetermined fraction of the length of said long form, a first drive shaft for operating said first traction device, a second drive shaft for operating said second traction device, drive means for rotating said first drive shaft in accordance with operations of said machine, a transmission shaft associated with said drive means and rotated thereby in predetermined relation to rotations of said first drive shaft, a drive gear secured to said second drive shaft, and a transmission gear secured to said transmission shaft and adapted to mesh with said drive gear, said drive and transmission gears being of a ratio such that when said gears are enmeshed said second traction device is operative to advance said short form at the same rate said long form is advanced by said first traction device, said transmission gear having a segmental effective driving face covering a portion of a complete circle equal to said predetermined fraction.

2,862,709
MACHINE AND METHOD FOR FEEDING SHEETS
Philip D. Labomberde, Nashua, N. H.
Application March 16, 1953, Serial No. 494,731
12 Claims. (Cl. 271—32)



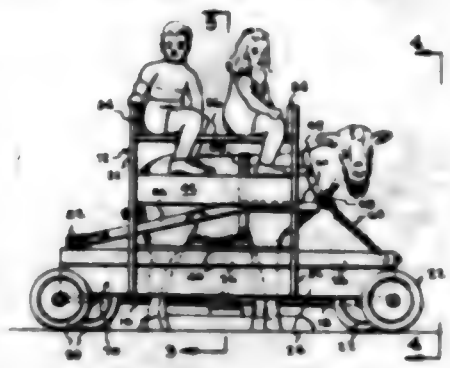
8. Blank feeding apparatus for feeding individual blanks successively from the bottom of stack of blanks, said apparatus including a plurality of spaced apart suction grippers in engagement with the underface of the bottom blank of a stack and at least partially supporting said stack; feeding mechanism supporting said suction grippers while continuously reciprocating the same in a plane parallel to the planes of said blanks; air suction means, including a control valve operated by said feed mechanism, for exhausting air at full suction, from said grippers from the beginning to near the end of the forward stroke thereof and pneumatic means including said control valve for blowing air, at full pressure, through said grippers on the entire rearward stroke thereof.

2,862,710
ROCKING AND SWINGING TOY
John A. Lewis, Lincoln, Nebr.
Application December 31, 1956, Serial No. 631,885
5 Claims. (Cl. 272—33)



5. In a device of the character described, a base including a circular rim, a plate arranged in the center of said rim, a plurality of radially disposed spokes extending between said plate and said rim and secured thereto, a sleeve adjustably mounted on each of said spokes, a post arranged above said base and having its lower end swivelly connected to said plate, a movable platform arranged above said base in circumjacent relation to said post, plurality of elastic cables extending between said sleeves and platform and connected thereto whereby the angularity between the platform and the base may be varied, a crank having an offset portion extending upwardly from said post above said platform and rotatably connected thereto, and a support member including a seat and back rest connected to said crank.

2,862,711
CHILDREN'S AMUSEMENT RIDE
William J. Quesnore, Sr., Blackwood, N. J.
Application November 8, 1957, Serial No. 695,329
3 Claims. (Cl. 272—43)



1. An amusement ride comprising a base; an arm assembly pivotally connected at one end to and extending radially from the base, said assembly including front and rear axles disposed radially of the pivotal connection of the arm assembly to the base; and a vehicle connected to said axles and proportioned to serve simultaneously as an enclosure for a draft animal and as a support for at least one rider, said vehicle including front and rear wheels carried by the respective axles for rotation of each wheel in a plane normal to a radius of said pivotal connection, said vehicle further including an open-center frame elongated in a fore-and-aft direction with its ends overlying and connected to the respective axles, said frame being adapted to extend as an enclosure for the draft animal, said vehicle further including a pair of support

traverse to one side of the three guide pins; a first pinch roller adapted to engage the tape with a first engaging

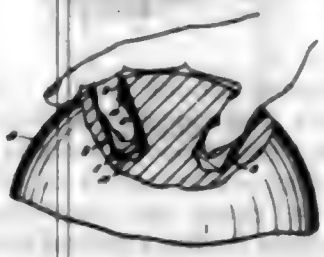
and means pivoting each of the flails at one end to the hub

frames of inverted U shape, carried by and spaced longitudinally of the first named frame, and a seat board connected between the upper ends of said last named frames, said last named frames being proportioned to bridge the confined animal with the seat board in close proximity to the back of the animal.

2,862,712
BATTING GAME
James Della, Saratoga, and Thomas C. Boltano, Santa Clara, Calif.
Application October 24, 1955, Serial No. 542,299
1 Claim. (Cl. 273—36)

A batting practice device of the type including a ball adapted to be hit by a bat, the combination therewith of a base, a standard extending upwardly from said base, a flexible ball retaining seat at the upper end of said standard, and means for evaluating the flight of the ball when struck from said seat comprising a U-shaped guide member extending from said base, a non-tangling tether cord adapted to have one end thereof loosely coiled alongside said base and its opposite end strung up through said U-shaped guide member and secured to said ball, and segmental markings along the length of said cord registerable with the bight of said U-shaped guide member for designating the value of each flight of the ball from said standard.

2,862,713
COMBINED FOAM AND RIBBED BOWLING BALL FINGER PATCH
Charles F. Mitchell, Akron, Ohio
Application April 2, 1957, Serial No. 650,115
1 Claim. (Cl. 273—63)

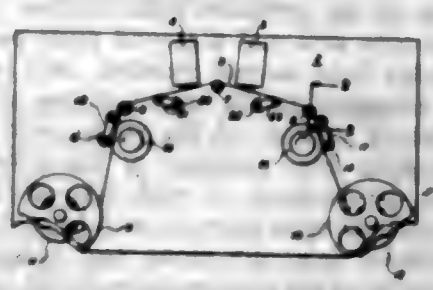


A bowling ball finger or thumb hole patch comprising a flexible backing layer for engaging a surface in a bowling ball finger hole, said backing layer having a pressure sensitive adhesive coating on both surfaces thereof, a short flexible solid rubber strip secured to and extending across the outer surface of said backing layer adjacent the top end thereof, said rubber strip having a solid rib of several times the thickness of the remainder of the strip at the maximum rib thickness section thereof extending transversely thereof adjacent the center thereof, and a sheet of resilient foam material secured to the remainder of the outer surface of said backing layer whereby a porous gripping surface is provided to contact the first section of a person's finger engaging a hole in a bowling ball and said rib will engage the finger substantially at the first joint therein, for reenforcing the finger engagement with the ball, said rubber strip having an anchor section thereon longer than the height of said rib extending axially inwardly of the patch from said rib and secured to said backing layer, said foam material being secured to the top surface of said anchor section and to the exposed pressure sensitive adhesive on the outer surface of said backing layer, said rib being firmer than said foam material.

2,862,714
GOLF TEE AND PRACTICE DEVICE
Harry A. Smith, Oak Hill, N. Y.
Application March 14, 1956, Serial No. 571,548
5 Claims. (Cl. 273—183)

1. A golf tee device for practice swings for all clubs from the putter through all the irons and woods to attain a grooved swing and adapted to be carried by a player on his person during actual play on a golf course and to be used in actual play on said course comprising a tee means, a flat tail piece extending rearwardly from said tee means and defining a base therefor, said tee means being mounted on and connected to said tail piece, said tail piece being substantially broader at its end remote from said tee means than at its point of beginning adjacent said tee means and terminating at two spaced points, the one of said spaced points farthest from said player being in coplanar alignment with the axis of said tee means and the line of flight, and the edge of said base nearest said player between the other of said spaced points and said point of beginning being curved and extending partly around the player to define, with said line of flight, an area over which a portion of said club must pass to strike said ball properly from inside said line of flight.

2,862,715
TAPE GUIDING SYSTEM
Duncan N. MacDonald, Arcadia, Calif., assignor, by mesne assignments, to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application August 15, 1955, Serial No. 528,498
1 Claim. (Cl. 274—11)



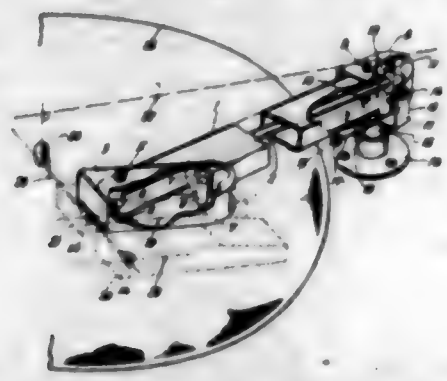
In a tape transport system, the combination of a frame; a central guide pin mounted on the frame; at least one guide pin mounted on each side of and below the central guide pin, said guide pins being adapted to cooperate to define a traverse for a tape, each of said guide pins having a fixed shoulder and a frusto-conical portion joining said shoulder; a first multiple track transducer mounted on the frame on one side of the central guide pin adjacent the traverse; a second multiple track transducer mounted on the frame on the other side of the central guide pin adjacent the traverse, the first and second transducers being arranged so that the tracks are interlaced on the tape; a first rotatable capstan located at a point along the tape

2,862,719
SNOW SLED

2,862,721
WHEEL ADJUSTMENT MEANS FOR LAWN

traverse to one side of the three guide pins; a first pinch roller adapted to engage the tape with a first capstan whereby the tape is drawn over the three frusto-conical portions of the guide pins in a forward direction in engagement with the shoulders; a second rotatable capstan located along the tape traverse at a point on the other side of the three guide pins along the tape traverse; a second pinch roller adapted to engage the tape with the second capstan whereby the tape is drawn over the frusto-conical portions of the three guide pins in a reverse direction in engagement with the shoulders; a first lift arm mounted on the frame adjacent the traverse of the tape; a first idler roller journalled in the first lift arm for engaging the tape with the first transducer; a second lift arm mounted on the frame adjacent the traverse of the tape; and a second idler roller journalled on the second lift arm for engaging the tape with the second transducer.

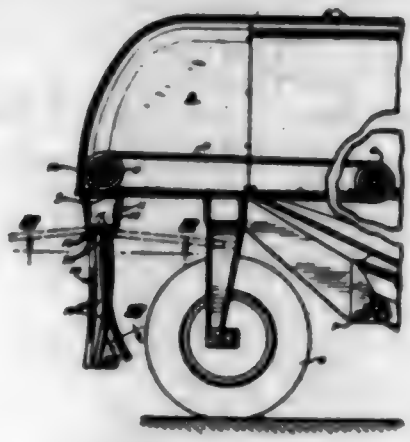
2,862,716
TONE ARM FOR SOUND REPRODUCTION
Joseph David Marks, West Orange, N. J.
Application November 13, 1953, Serial No. 391,971
12 Claims. (Cl. 274—23)



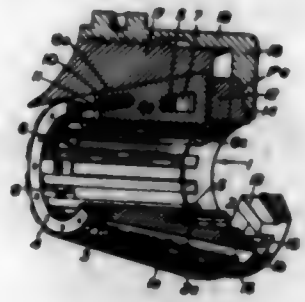
1. In combination with a phonograph record turntable mounted for rotation about a spindle axis and arranged to support a record having a spiral groove sound track, and a stylus arranged to engage the record groove and mounted for oscillation in accordance with undulations in the sound track; a tone arm mounted to swing over the turntable about a fixed pivot perpendicular to the turntable; a member pivotally mounted on the free end of said tone arm for swinging movement in a plane parallel to the turntable; said member mounting the stylus for such oscillation and the stylus, during swinging movement of the tone arm, during its oscillation, moving along an arc, and a control link swingably connected to a first pivot perpendicular to the turntable fixed relative to the fixed pivot of said tone arm and a second pivot perpendicular to the turntable fixed to said member; said second pivot intersecting a tangent to the record groove at the instantaneous point of contact of the stylus with the record groove in at least three positions of the stylus along the sound track; the location of said first pivot being the center of a circle passing through each of said tangents at points equidistant inwardly along said tangents toward said fixed pivot from the intersections of said tangents with the arc of movement of the stylus.

2,862,717
STRAW SPREADER FOR GRAIN HARVESTERS
Martin Renning, Minneapolis, Minn., assignor to Minneapolis Moline Company, Hopkins, Minn., a corporation of Minnesota
Application October 18, 1955, Serial No. 541,182
4 Claims. (Cl. 275—3)

1. For a combine having a hood and a straw discharge opening in the bottom thereof, a hub member, means rotatably supporting the said hub member below the said opening, a straw spreader which includes elongated flails and means pivoting each of the flails at one end to the hub member whereby they will normally swing downwardly of their own weight and hang bunched below the hub to offer minimum impediment to falling straw so that it will not wind upon the straw spreader, and means for rotating the hub member to cause the flails to swing apart and upward and travel in a substantially horizontal plane under the influence of centrifugal force, the said hub member having a hollow shell portion which tapers in a downward direction and the flails being pivoted to the lower end of said shell portion within the outline thereof.



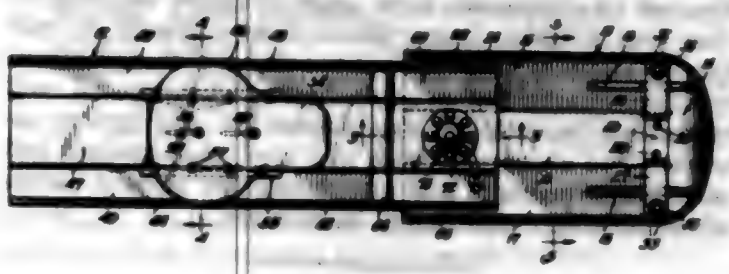
2,862,718
COLLETS
Dudley Ernest Stainton, Rickmansworth, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Application April 4, 1955, Serial No. 499,098
18 Claims. (Cl. 279—59)



1. A collet adapted for use with a conical actuating surface of a chuck and capable of being readily disassociated from said chuck as an integral unitary collet so as to allow other similar collets of different sizes to be substituted in the chuck and comprising an annularly shaped cage-like body having a central throughway work receiving space extending axially of said cage-like body, said body being formed by a plurality of inter-dependent rigid segmental members disposed relatively to one another so as to provide therebetween guideways extending longitudinally of said body and disposed circumferentially around said throughway work receiving space, a plurality of gripping members located within said guideways so as to be slidable radially therein with respect to said cage-like body and the said throughway axially extending work receiving space, spring means associated with said cage-like body tending to urge said gripping members radially outwards away from said throughway work receiving space and so away from their gripping positions, and rigid retaining means fastened to said cage-like body for limiting the extent of the radially outward sliding movement of said gripping members under the force of said spring means and positively holding said cage-like body and gripping means together into a unitary collet assembly.

rubber strip having an anchor section thereon longer first rotatable capstan located at a point along the tape

2,862,719
SNOW SLED
Edward J. Merz, Manitowoc, Wis., assignor to Mirro Aluminum Company, Manitowoc, Wis., a corporation of New Jersey
Application January 8, 1957, Serial No. 633,008
5 Claims. (Cl. 280—16)



1. In a snow sled, in combination, a front section and a rear section disposed in tandem relation and with the front end of the rear section overlapping the rear end of the front section, means in the form of a universal joint pivotally connecting the sections, said universal joint including a ball-shaped member projecting upwardly from the rear end of the front section and a cup-shaped member projecting upwardly from the front end of the rear section and which receives and rotates on the ball-shaped member, each section comprising a substantially rectangular metal member having a shape transversely thereof simulating a double channel, whereby a longitudinally extending runner is formed along each side edge of the sections respectively and wherein the runners of each section are spaced by a central portion having location in a plane above the runners, a seat support secured to the central portion of the rear section, a seat adjustably fixed to the seat support, and a pair of heel rests secured to the central portion of the front section.

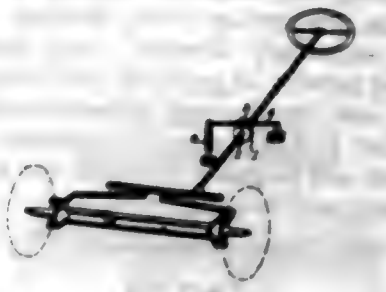
2,862,720
HAND TRUCKS
Richard H. Stone, Lathrop Village, and Ronald F. Smith, Birmingham, Mich.
Application January 14, 1957, Serial No. 633,966
2 Claims. (Cl. 280—33.99)

1. A hand truck comprising a platform, wheels disposed beneath and supporting the platform and inwardly spaced from its lateral margins, whereby the wheels of one truck may seat on the platform of an underlying truck in stacking the trucks, a pair of handle members rigidly upstanding from opposite ends of the platform and each having an approximate inverted U-shape, the upstanding portion of each handle member being spaced from the corresponding platform to afford clearance from the overlying platform when one of the trucks is stacked on another, each handle member forming a hand grip at its upper end due to said inverted U-shape, the upper portions of the two handle members diverging materially from each other, and the uprights of each handle member diverging materially from each other in extending upwardly, whereby said handle members of an upper truck may nest within such members of a lower truck in stacking such trucks, and the trucks are thus restrained from endwise or sidewise relative shifting.

2,862,721
WHEEL ADJUSTMENT MEANS FOR LAWN MOWERS
William Charles Wehner, Grosse Pointe, Mich., assignor, by mesne assignments, to Moto-Mower, Inc., a corporation of Delaware
Original application April 4, 1955, Serial No. 498,997. Divided and this application April 12, 1957, Serial No. 652,532
2 Claims. (Cl. 280—44)

1. In a lawn mower or the like, the combination of a deck having a horizontal portion and depending skirt portions, means mounting a ground cangging wheel on said deck comprising a fixed plate secured to one of said skirt portions and having an outwardly facing annular ball race formed therein, a marginal flange carried by said fixed plate having radial slots therein, a second plate rotatably secured to said fixed plate and having an inwardly facing annular ball race formed therein, a plurality of balls disposed in said races, a spring lever carried by said second plate and adapted to be engaged with one or another of said radial slots for rotatively positioning said second plate in selected position, and a wheel-axle eccentrically mounted on said second plate.

2,862,722
CENTERING DEVICE FOR STEERING AUTOMOTIVE VEHICLES
Antoine Breeder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France
Application March 6, 1956, Serial No. 569,915
Claims priority, application France March 10, 1955
1 Claim. (Cl. 280—94)

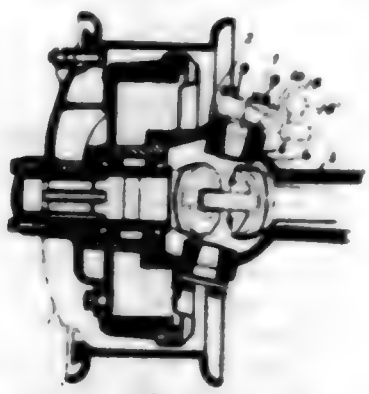


In an automotive vehicle having steerable wheels deflectable in opposite directions from a normal centered position in response to rotation of a steering shaft included in a steering control system; the combination of a radial cam secured to the steering shaft and having a periphery that includes a major portion of uniform radius and a single ceratoid cusp constituting the remainder of the periphery, a follower roller engageable with said periphery of the radial cam, the portion of said ceratoid cusp with which said roller comes in contact consisting of two symmetrical arcuate sections which are outwardly convex and meet at the center of the cusp, said sections having radius vectors progressively decreasing throughout their lengths in the direction toward said center of the cusp, means supporting said follower roller for movement in directions extending generally radially with respect to the axis of said cam, and resilient means urging said roller against said periphery of the cam, said cam being angularly disposed with respect to the steering shaft so that, when the steerable wheels are in the normal cen-

sure, and a main exhaust line connecting said three de- cally thereto, thread means formed on the

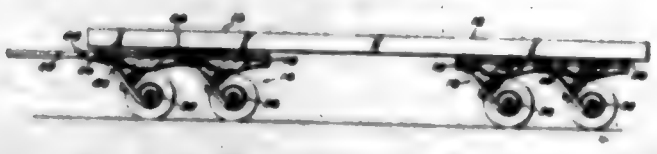
tered position, the radius of the cam passing through the center of said ceratoid cusp extends through the axis of said roller, whereby any slight deflection of the wheels from the normal centered position thereof tends to urge said roller radially outward against the opposition of said resilient means to give rise to a moment for restoring the wheels to the normal centered position.

2,862,723
STEERABLE WHEEL PIVOT ASSEMBLY
Lucien Pérus, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works
Application June 1, 1956, Serial No. 588,829
Claims priority, application France June 9, 1955
4 Claims. (Cl. 280—96.1)



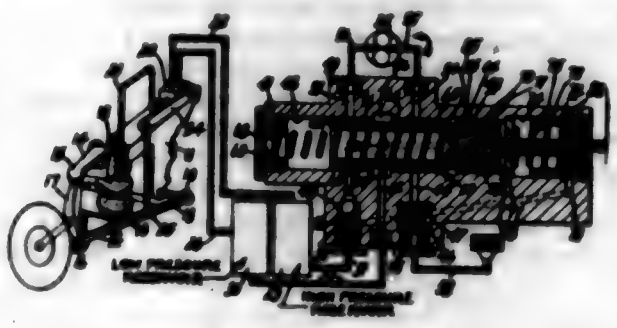
1. In a steering pivot assembly for motor vehicles the combination comprising a tapered pin of the assembly, a sleeve disposed on said pin on a tapered portion thereof and having internal surfaces corresponding to the tapered portion of the pin thereby forming bearing surfaces for said tapered portion, an axle casing, a displaceable housing for said sleeve carried by said axle casing and having inwardly directed radial surfaces bearing on one end of said sleeve for moving it axially to the pin and having other outwardly directed radial surfaces at an end opposite to said inwardly directed radial surfaces, a plurality of spaced, normally compressed springs housed in said axle casing and disposed radially to the pin and sleeve housing, the springs being disposed so as to bear against said outwardly directed radial surfaces of the sleeve housing thereby to preclude play between the bearing surfaces and the pin and automatically provide for bearing surface and pin wear, a tensioned plate carried by said swivel and disposed to thrust the pin in an axial direction toward said bearing surfaces.

2,862,724
BY-PASS ARRANGEMENT FOR VEHICLE SUSPENSION
Ancil C. Stover, Louisville, Ky., assignor to The Eisenhauer Manufacturing Company, Van Wert, Ohio, a partnership
Application May 23, 1955, Serial No. 510,162
2 Claims. (Cl. 280—124)



1. A vehicle comprising a sprung assembly, an unsprung assembly having an axle extending transversely of the vehicle, a ground engaging wheel having a tire thereon carried by said axle, a suspension including an arm having an upper portion pivotally connected to said sprung assembly for swinging movement in a vertical plane and inclined from said upper portion downwardly and rearwardly relative to the vehicle to a lower portion spaced from said upper portion and supporting said axle, resilient means interposed between said sprung assembly and said arm resisting upward and rearward swinging of said arm about its pivotal connection with said sprung assembly, said sprung assembly having a portion engageable with said tire on said ground engaging wheel in response to upward and rearward swinging of said arm through an abnormally large angle to bypass said suspension and transmit heavy shock loads directly to said sprung assembly through said tire and wheel, and means for determining the extreme bottoming range of said suspension including a stop carried by said sprung assembly and engageable with said arm upon upward and rearward swinging of said arm through an angle in excess of the aforesaid abnormally large angle.

2,862,725
AIR SUSPENSION SYSTEM WITH TWO STAGE PRESSURE SYSTEM
George W. Jackson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 18, 1956, Serial No. 592,151
14 Claims. (Cl. 280—124)



1. In a system for maintaining predetermined minimum and maximum pressure of air supplied to and exhausted from an air suspension system for a motor vehicle having an air spring supporting a sprung mass upon an unsprung mass and including a control valve responsive to clearance height changes between the sprung mass and the unsprung mass to effect supply of air under pressure to the air spring or exhaust of air from the air spring in response to clearance height changes to effect correction of such changes with air being supplied to the control valve from a high pressure reservoir and exhausted from the valve to a low pressure reservoir; a single pump to supply air under pressure to both said reservoirs; said pump being connected with said reservoirs through valve means having one position effecting connection of the intake side of the pump with atmosphere and the discharge side of the pump with the low pressure reservoir, a second position effecting connection of the intake side of the pump with a low pressure reservoir and the discharge side of the pump with the high pressure reservoir and a third position effecting connection of the intake side of the pump with the discharge side of the pump.

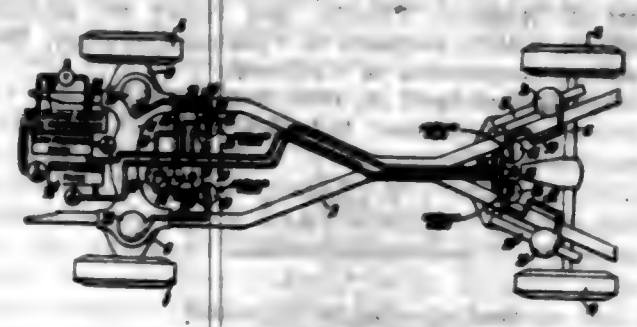
2,862,726
FLUID SUSPENSION CONTROL SYSTEM
Joseph F. Bertsch, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 12, 1957, Serial No. 652,483
9 Claims. (Cl. 280—124)

1. In a four fluid spring suspension having an independently operable intake and exhaust control device communicating with each spring, a fluid distribution organization comprising a source of fluid under pressure, a receiver for exhausted fluid, a fluid distribution network comprising a main intake line connecting three of said four control devices in parallel with said source of pres-

relative shifting.

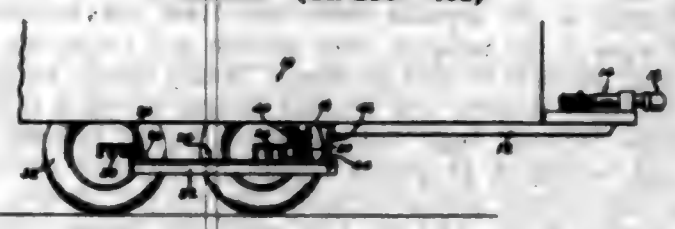
so that, when the steerable wheels are in the normal cen-

sure, and a main exhaust line connecting said three devices in parallel with said receiver, and means connecting



the fourth control device in series communication with one of the first mentioned three control devices.

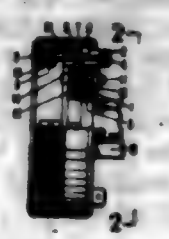
2,862,727
TRAILER WHEEL SUSPENSION WITH LOAD VARYING ADJUSTMENT
Charles J. O'Neill, Manteno, Ill.; Eugene T. O'Neill, administrator of said Charles J. O'Neill, deceased, assignor to Eugene T. O'Neill, individually
Application February 1, 1954, Serial No. 407,218
3 Claims. (Cl. 280—405)



2. In a trailing vehicle of the type having a weight sustaining draft coupling adapted to be connected to a traction vehicle for towing the trailing vehicle and transmitting a part of the weight thereof to the traction vehicle, a running gear for the trailing vehicle comprising a bolster carried by and extending transversely across the bottom of the forward half of the trailing vehicle, a V-shaped sub-frame carried by the bolster through connecting springs fixed to the sides of the V frame for rocking movement of the sub-frame in a vertical arcuate path beneath the trailing vehicle, and axle carried by the sides of the V-shaped sub-frame to the rear of said springs and extending thereacross adjacent and substantially parallel with the bolster, ground wheels carried by the axle for rotation adjacent opposite sides of the trailing vehicle, a floating axle pivotally carried on a horizontal axis by the apex of the V-shaped sub-frame in longitudinally spaced substantially parallel relation to the first mentioned axle under the rear half of the trailer vehicle, ground wheels carried by the floating axle for rotation adjacent opposite sides of the trailing vehicle and in trailing relation to the first mentioned ground wheels, and slidably adjustable rods carried by the trailing vehicle and operatively connected to the ends of the sides of the V-shaped sub-frame by cables for moving said V-shaped sub-frame in its vertical arcuate path to select the amount of the weight of the trailing vehicle to be transmitted through the draft coupling to the traction vehicle.

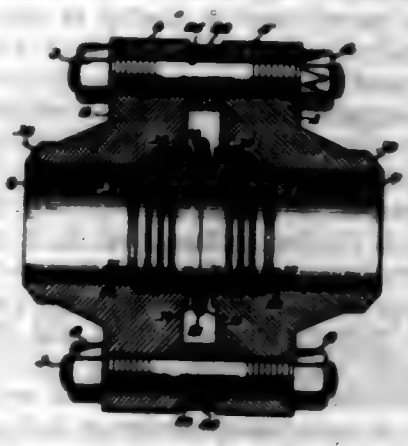
2,862,728
DETACHABLE COUPLING DEVICE WITH ALIGNMENT MEANS
Edward F. Druschel, Birdsboro, Pa., and William A. Scanga, Baltimore, Md., assignors to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Application January 25, 1955, Serial No. 483,945
1 Claim. (Cl. 285—24)

A waveguide coupling for connecting together mating waveguide elements having abutting end flanges, comprising a circular member having an opening formed centrally therein, thread means formed on the outer periphery of said circular member, means forming a plurality of slots equally spaced around said outer periphery, a pair of projections carried by said circular member at one end of each of said slots, an arm pivotally connected between each said pair of projections and extending through each said slot to project beyond the other end of said slot, an inwardly directed projection formed on the free end of each said arm, a spring engaging said arms and acting to pivot said arms in a direction radially outward from the axis of said circular member, a plurality of threaded studs attaching said base plate to one of said flanges and extending beyond the abutting face of said flange to form



aligning pins for engaging the other of said flanges to hold said flanges in alignment, a collar carried by said thread means and rotatable thereon for axial movement with respect to said circular member, and an inclined surface formed around the inner periphery of said collar for engaging said free end of each of said arms upon rotation of said collar in one direction to pivot said arms against the action of said spring whereby to cause said inwardly directed projections to engage said other of said flanges and hold both said flanges in aligned juxtaposition, rotation of said collar in the opposite direction being effective to allow said arms to be pivoted outwardly by said spring to release said other of said flanges.

2,862,729
FLEXIBLE BELLOWS SEAL FOR FLANGED PIPE JOINT
Kurt B. Breitschneider, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Application February 10, 1955, Serial No. 487,242
3 Claims. (Cl. 285—114)

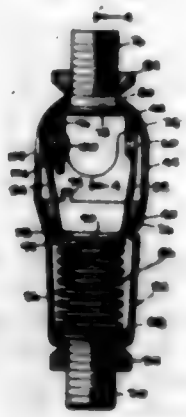


1. In a combined mechanically assembled and weld sealed joint comprising a pair of axially spaced aligned oppositely disposed recessed flanges, annularly mounted means on outer portions of said flanges to maintain said latter members in fixed assembly in said axially aligned relation, axially aligned relatively thin wall substantially cylindrical inserts of axially flexible bellows form positioned in the recesses of said flanges in end abutting connection, each of the said inserts being received and supported peripherally in said flange recesses for substantially the full length of the peripheral portions of said inserts, the outer annular end limits of the said inserts being

increasing diameter at the portions intermediate the ends, than said annular flange, whereby a radially intermediate

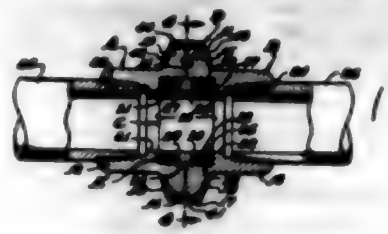
fixedly sealed to end annular limits of the flange recesses, the said inserts having enlarged annular portions lying immediatley outside of said flange recesses and between the said flanges, the latter enlarged annular portions having oppositely disposed curved lip portions joined in fluid sealing relation radially and axially outside of said recesses and in spaced apart annular relation to the end abutting connection of said inserts, the inner end adjoining limits of the inserts comprising the lip portions being substantially reduced in thickness with the adjoining limits having sharp annular corners forming feather edges for initiating a weld seal, the lip portions and weld seal forming outside of the insert end abutting connection a substantially annular chamber, the outer peripheral limits of the said chamber forming the weld seal and being defined by an annular thin weld joining the curved lip portions of the said inserts in fluid tight relation, and removable spacer means cooperating with said annularly mounted means on the flanges to hold the latter members in predetermined spaced apart axial relation when mounted in said fixed assembly.

2,862,730
SPRING-LOADED UNIVERSAL JOINT FOR CONDUITS
Kornel Berger, Kew Gardens, N. Y.
Application January 11, 1955, Serial No. 481,180
7 Claims. (Cl. 285—164)



1. A universal joint comprising a first hollow one-piece sheet metal member having at an end thereof a frustoconical divergent friction surface, a second hollow one-piece sheet metal member having a second frustoconical convergent friction surface in which the first friction surface is nested, said members defining a housing, a third one-piece sheet metal member located within the second member, said second member also having a hemispherical friction surface, said third member having a second hemispherical friction surface nested in the first hemispherical friction surface, a fourth sheet metal one-piece yoke member located within said first and second members, said yoke member having means coacting with the third member to support the third member for rotation about an axis perpendicular to and intersecting the axis of symmetry of the first and second friction surfaces, a hollow elastic member located within said housing and held under compression between said first and yoke members whereby to create frictional restraints against relative movement of said two frustoconical friction surfaces and said two hemispherical friction surfaces, said second member having a slot in its hemispherical friction surface perpendicular to the axis of rotation of the third member, said third member having an opening in the plane of said slot, and a hollow open-ended tubular element secured to said third member in alignment with said opening and extending through said slot, said slot having a portion intersected by the axis of symmetry of the frustoconical friction surfaces.

2,862,731
FLANGED, BEND-CLAMPED SWIVEL COUPLING FOR FLUID HANDLING TUBES
Robert R. Hedden, Whittier, and Henry W. Roessler, Pomona, Calif., assignors to Chikasa Company, Brea, Calif., a corporation of California
Application April 29, 1955, Serial No. 504,787
1 Claim. (Cl. 285—272)



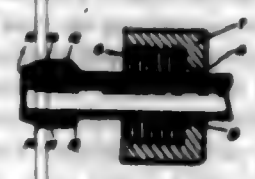
A swivel joint for rotatably interconnecting two pipes, comprising two joint sections having peripheral flanges having radial plane faces thereof disposed in abutting face-to-face arrangement and said joint sections having registering central bores and cylindrical counterbores, means on the opposite ends of said abutting joint sections for securing pipe sections thereto, an annular unitary coupling sleeve having angularly inwardly projecting resilient flanges at its opposite ends embracing the peripheral flanges of the adjacent joint sections and contacting the outer surfaces of said peripheral flanges closely adjacent the bases thereof, said resilient flanges having a slightly lesser included angle than the angle formed between the said embraced peripheral flanges to normally establish a substantially circumferential line contact between the resilient flanges and the said peripheral flanges thereby yieldably urging the peripheral flanges of the joint sections into abutting relation, a tube rotatably disposed within the counterbores of the joint sections and having a bore therethrough corresponding in diameter to that of the central bores of said joint sections, said tube having a cylindrical intermediate portion of substantially the same diameter as the diameter of the cylindrical counterbores of said joint sections and having an axial extension of reduced diameter at each end of the intermediate portion, the ends of the axial extensions remote from said intermediate portion being disposed in substantially abutting relationship with the radial walls of the counterbores, the intermediate portion of the tube extending axially of each counterbore to overlie the circumferential line of face-to-face abutment of the joint sections and spaced from the radial walls of the counterbores to define at each end of the tube an annular seal chamber of rectangular cross-section, the outer circumference and one end wall of each seal chamber being defined by a said counterbore, the other end wall of each seal chamber being defined by the adjacent end of said intermediate portion of the tube, the inner circumference of each seal chamber being defined by the outer surface of the adjacent one of said tube extensions, and an annular seal disposed within each seal chamber and maintaining sealing engagement between the cylindrical surfaces of the said counterbore of the adjacent joint section and of said adjacent tube extension.

2,862,732
TUBE COUPLING HAVING A PUSHED-WEDGE TYPE PACKING
François Guillon, Nantes, Loire-Inferieure, France
Application May 17, 1954, Serial No. 430,354
1 Claim. (Cl. 285—342)

A pressure-proof pipe coupling comprising before assembly: a pipe having a groove made in the outer surface thereof near its end; a plastically deformable integral collar made of a material of a hardness at most equal to the hardness of the material of said pipe, said collar presenting an inner surface with a diameter at its ends equal to the outer diameter of the pipe and a gradually

tapering downwardly for engagement with portions of cylindrical member having an abutment disposed at one

increasing diameter at the portions intermediate the ends, an inwardly projecting radial flange at one end, an inner rib spaced from said flange by a distance equal to the distance of said groove from the end of said pipe, and an outer surface having a frusto-conical portion at the end opposite said flange, a central generally cylindrical portion and a second frusto-conical portion at the end adjacent said flange, said second frusto-conical portion being generally parallel to a corresponding frusto-conical portion of the inner surface; an externally threaded fitting member having a bore presenting a radial annular shoulder with inner diameter smaller than the outer diameter of said pipe and with outer diameter equal to the diameter of the edge between said flange and said second frusto-conical outer surface portion of said collar, a cylindrical portion adjacent the outer edge of said annular shoulder and extending axially a distance smaller than the distance of said groove from the end of said pipe, and a divergent frusto-conical shoulder portion extending axially from said annular shoulder a distance



smaller than the distance of the end of said central outer surface portion of said collar adjacent said first frusto-conical outer surface portion of said collar from said flange; and an internally threaded collet adapted to engage said externally threaded fitting member, said collet having a bore presenting a frusto-conical portion of inclination and length generally equal to that of said frusto-conical outer surface portion of said collar, the volume of said collar being larger than the combined volumes of said bores of said fitting member and said collet exclusive of the volume of the cylindrical portions of said bores corresponding in diameter to said pipe; in assembled condition the outer face of said flange abutting said annular shoulder, said frusto-conical outer surface portion of said collar abutting the frusto-conical bore portion of said collet, said rib fitting in said groove, and the annular space between said pipe and the cylindrical and frusto-conical bore portions of said fitting member being completely filled by the deformed material of said collar.

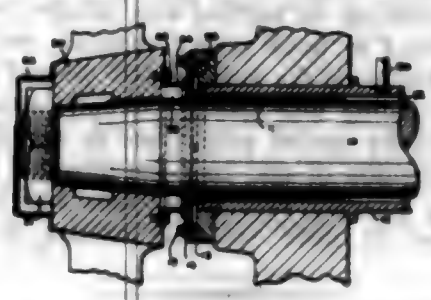
2,862,733

OUTBOARD BEARING SEAL FOR MARINE PROPELLERS

John Reiersen, Brooklyn, N. Y.

Application June 14, 1955, Serial No. 515,387

1 Claim. (Cl. 286—8)



A seal between an outboard bearing structure and a marine propeller shaft, said outboard bearing structure having an axially extending annular flange concentric with and radially spaced from said shaft, said seal comprising a flexible annular disc closely surrounding said shaft and secured to said flange, a metallic cylindrical ring attached to said shaft and extending in concentric, radially spaced relation thereto toward said flexible annular disc, said ring being radially closer to the shaft than said annular flange, whereby a radially intermediate portion of said flexible annular disc is pressed against the end of said metallic ring by its own resilience and by differential fluid pressures.

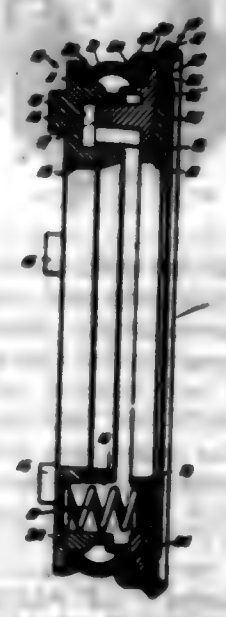
2,862,734

AUXILIARY SEAL

Harry L. Northup, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application June 26, 1956, Serial No. 593,900

7 Claims. (Cl. 286—11)



4. An expansible and compressible end-face seal for providing sealing action between a rotatable shaft and a radial surface, said seal including annular mounting members fixed against relative rotation and interconnected by an annular flexible diaphragm for limited axial relative movement, one of said mounting members having a radially outer axially extending annular surface which is axially terminated by front and rear radially inwardly directed faces, an end-face sealing ring carried by said front face radially inwardly of the outer edge thereof for sealing engagement with said radial surface, and an auxiliary annular sealing gasket received about the axially extending surface of said last named mounting member and having radially inwardly directed edge portions in gripping contact with said front and rear radial faces, said gasket being further provided with an annular flexible sealing lip directed forwardly and radially outwardly from said front face and extending axially beyond said sealing ring.

2,862,735

KELLY PACKER AND BLOWOUT PREVENTER

Granville S. Knox, Glendale, Calif., assignor to Hydril Company, Los Angeles, Calif., a corporation of California

Original application August 19, 1950, Serial No. 180,488, now Patent No. 2,731,281, dated January 17, 1956. Divided and this application May 23, 1955, Serial No. 510,456

7 Claims. (Cl. 286—16.2)

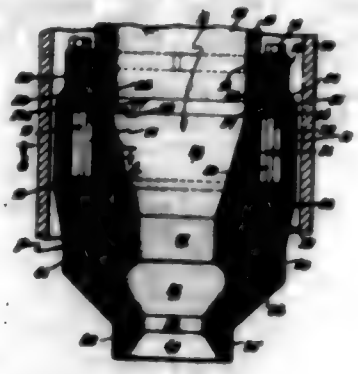
1. An oil well stripper packer assembly for packing off about a string of equipment in the well while the equipment is being moved therethrough, said assembly comprising a rigid cage structure including upper and lower rings extending about an upright axis and circularly spaced elongated bars interconnecting said rings, and an annulus of resilient plastic material embedding said cage structure and extending therebelow, said annulus being progressively radially thickened inwardly opposite the cage bars in a downward direction and forming a bore

projects, said pony rod having a cylindrical surface sized is carried by each of the furcations, each of said bearing

the frustoconical friction surfaces.

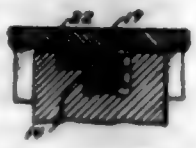
presenting an inner surface with a diameter at its ends equal to the outer diameter of the pipe and a gradually

tapering downwardly for engagement with portions of said string being moved therethrough, said annulus having a free outer surface and having continuous body extent from between said bars radially inwardly to said tapered bore and outwardly to the free outer surface of the annulus whereby well pressure exertion against said free outer surface is adapted to displace bodily some of



said material radially inwardly between said bars thereby radially inwardly collapsing said bore about the string which on being moved axially through said bore is at times adapted to expand radially said bore thereby bodily displacing some of said material radially outwardly between said bars, while said thickened material remains anchored at all times to the cage resiliently blocking upward pressural extrusion of the material therebelow.

2,862,736
SEALING ASSEMBLY OF PACKING RINGS OF DIFFERENT QUALITIES
John G. Russell, Mayfield Heights, Ohio, assignor to Parker Hannifin Corporation, a corporation of Ohio
Application September 28, 1956, Serial No. 612,601
11 Claims. (Cl. 286—26)



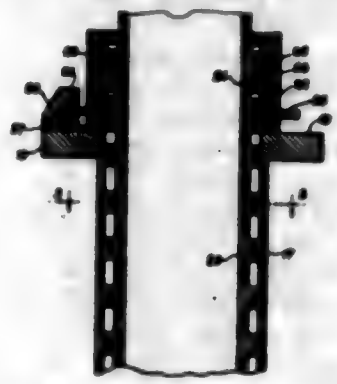
4. In a packing construction, inner and outer members, one of said members having an annular groove, said groove having side walls and a bottom wall, a rubber packing ring within said groove and adapted to make sealing contact with a portion of said groove and with the other of said members for sealing against fluids acting on opposite sides of said packing ring and axially thereof, said groove being substantially the same width as the packing so as to closely confine the packing against sideward movement within the groove, said groove being recessed to a greater depth adjacent its side walls than at a point intermediate its side walls whereby a portion of said packing ring may be deformed into one of said recesses when said packing is forced by fluid pressure to the corresponding side of said groove.

2,862,737
SAFETY ADAPTER FOR ATTACHING A MOWER BLADE TO A SHAFT
Thomas A. Pearson, Selma, Ala., assignor to Southland Mower Company, Inc., a corporation of Alabama
Application October 14, 1954, Serial No. 462,143
6 Claims. (Cl. 287—53)

1. A safety adapter for attaching a rotary element to a drive shaft, said rotary element having a centrally disposed opening therethrough, said adapter comprising a cylindrical member to be mounted on one end of the drive shaft, said cylindrical member being constructed and arranged to extend through said opening and receive said rotary element with a rotary and sliding fit, said cylindrical member having an abutment disposed at one side of said rotary element, a retainer member having at least one inwardly extending projection thereon, said projection being mounted loosely on said cylindrical member for rotatable and limited axial movement with respect thereto, said retainer member rotatably and axially slidably fitting said cylindrical member at that side of

said rotary element opposite said abutment, means limiting axial movement of said retainer member and its projection relative to said cylindrical member, and locking means to be connected to said shaft for urging said retainer member toward said abutment whereby said rotary element will be secured between said abutment and said retainer member for rotation as a unit with said cylindrical member, retainer member and locking means.

2,862,738
SUBAQUEOUS STRUCTURES FOR SUPPORTING A WORKING PLATFORM ABOVE WATER
Charles A. D. Bayley, Houston, Tex.
Application October 27, 1954, Serial No. 465,022
4 Claims. (Cl. 287—53)



1. A column for supporting a working platform above a submerged base structure which comprises a hollow vertical outer cylinder having vertical grooves spaced circumferentially about its inner periphery, a hollow inner cylinder within said outer cylinder having circumferentially spaced vertical series of spaced projections extending into said grooves to permit said inner cylinder to move vertically relative to said outer cylinder and to prevent rotation on its vertical axis relative thereto, and a ring mounted in fixed vertical position on said outer cylinder to rotate on the vertical axis thereof and having inwardly extending lugs spaced circumferentially to engage between the spaced projections of said inner cylinder in one position of said ring and movable on rotation of said ring to clear said projections and permit said inner cylinder to move vertically relative to said outer ring.

2,862,739
SHAFT COUPLING DEVICE
Clifford P. Graham, North Hollywood, and Clarence H. Leathers, Redondo Beach, Calif., assignors to Mac-Clutchio Manufacturing Company, Compton, Calif., a corporation of California
Application July 31, 1956, Serial No. 601,199
2 Claims. (Cl. 287—62)

1. The combination, comprising a prime mover having a pony rod and means through which the pony rod

projects, said pony rod having a cylindrical surface sized for reciprocation through said means and having a reduced diameter end portion, a mud pump piston rod having an externally threaded shank axially aligned with said pony rod and abutting the end thereof, a split bushing spanning and releasably joining the end portion of said rods, first and second internally threaded longitudinal portions in said split bushing, the threads within said first portion being radially undercut, said second portion of said pony rod having external threads mateable with said

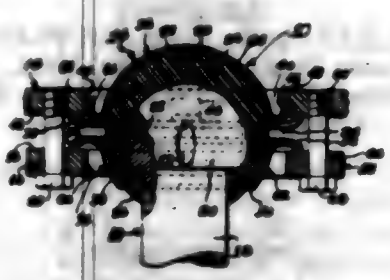
internal threads of said first portion of said bushing, both ends of said bushing being tapered convergently in the radially outward direction, one of said ends being adapted to mate with said undercut shoulder of said pony rod, said bushing and end portion of said pony rod being sized to have an outside diameter substantially equal to the outside diameter of said pony rod, and a nut threadably mounted on said mud pump piston rod, said nut having a recessed tapered wall mateable with the second tapered end of said bushing.

2,862,740

BALL JOINT

Lewis W. Alexander, Northville, Mich., assignor to Haley Corporation, Plymouth, Mich., a corporation of Michigan

Application May 21, 1956, Serial No. 586,016
13 Claims. (Cl. 287—85)



1. A ball joint for attachment to a support having an aperture with an adjoining abutment surface, said ball joint comprising a pair of cupped shells of resilient material and of sphere-segment form having concave spherical bearing surfaces facing one another and having transversely-projecting rims spaced apart from one another, one of said shells being mounted in the aperture of the support with its rim engaging the abutment surface thereof, one of said shells having an opening therein, a ball member disposed between said shells in rocking engagement with said bearing surfaces, an elongated connecting element secured to said ball member and extending outwardly through said opening, and means engageable with the rim of the other shell for urging said other shell and said ball member into yielding engagement with the support-mounted shell.

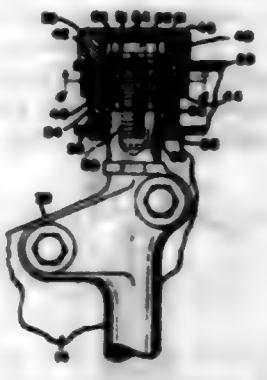
2,862,741

OSCILLATORY JOINT

Max F. Baker, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 16, 1956, Serial No. 616,268
3 Claims. (Cl. 287—85)

1. An oscillatory joint assembly, comprising in combination; a shaft member, a bifurcated support member adapted to support said shaft member between the furcations thereof, two opposed bearing means, one of which is carried by each of the furcations, each of said bearing means including a socket member having a generally spherical cavity, a pair of generally spherical ball members journalled in said cavities and each having a bore therethrough, said bores being adapted to receive opposed



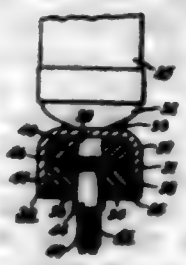
end portions of said shaft, said shaft including means on said end portions received by said bores for preventing relative rotational movement between the shaft and the spherical ball members, said shaft being slidable within the bore of at least one of said spherical ball members.

2,862,742

SHOCK ABSORBER MOUNTING

Paul J. Long, Jr., and William F. Schmaltz, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 19, 1956, Serial No. 617,044
3 Claims. (Cl. 287—85)



1. A shock absorber having a mounting device for attachment of the shock absorber to a support, comprising in combination, a shock absorber body having a mounting member, a generally cylindrical cup-shaped shell having a closed end secured on said mounting member and having the other end open, a closure member secured in the open end of said shell and having a central opening therein, a pair of rubber-like ring members positioned within said shell and sized such that when placed in said shell in a free state the ring members will have full surface engagement with one another and with the end surfaces of the cavity formed by the shell enclosure member and with the inner periphery of the shell, and a stud having a shank portion and an enlarged head portion having opposed frusto-conical surfaces, said stud being positioned in said shell with the head portion disposed between said rubber-like rings and the shank portion passing through one of said rings and projecting through said opening in said closure member to the exterior of the shell for attachment of the device to a mounting member, said head portion being sized with a volume to provide the sole displacement of the body of the rubber-like ring members under a no load condition such that the ring members are under compression just sufficient to maintain constant full surface contact with opposite sides of the head portion during axial movement of the stud within the shell and still provide for angular deflection of the stud relative to the axis of the shell with minimum load of angular deflection on the connection of the said shell with said mounting member.

2,862,747

SOCKET AND ROD COUPLING

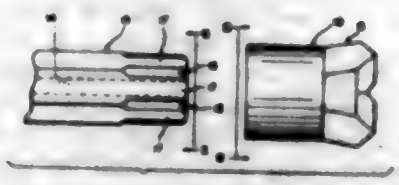
having an opening in its marginal portion, comprising:

ing a pony rod and means through which the pony rod

2,862,743
CABLE COUPLING
Robert P. Pierce and Edmond E. Buffum, Coos Bay, Oreg.
Application December 7, 1953, Serial No. 396,565
2 Claims. (Cl. 287—91)

1. In a cable coupling, a sleeve open at one end and closed at the other end except for a slot substantially as wide as the diameter of a cable therefor extending along one side and terminating in an opening at the center of the closed end to receive the cable closely therein, a cable having a plug at the end insertable in the open end and to fit closely in the sleeve as the cable is inserted through the slot to the opening in the closed end thereof, a key having a bottom to fit closely within the open end of the sleeve with an integral rectangular bar at the periphery of the bottom to fit in and substantially close the slot at the side of the sleeve and an inward integral projection at the end of the bar opposite the bottom to extend in the slot at the closed end of the sleeve and to fit about the cable extending through the opening thereof, the open end of the sleeve and the slot at one side being of a length to receive the plug at the end of the cable and the bottom, rectangular bar and inward projection of the key entirely within and flush with the outside of the sleeve, and locking means extending through the sleeve near the open end thereof and engaging the bottom of the key for holding it in place in the sleeve.

2,862,744
ROCK DRILL BIT SOCKET
John S. Edgar, St. Catharines, Ontario, Canada, assignor to Thompson Products, Ltd., St. Catharines, Ontario, Canada, a corporation of Ontario
Application June 7, 1955, Serial No. 513,798
5 Claims. (Cl. 287—126)

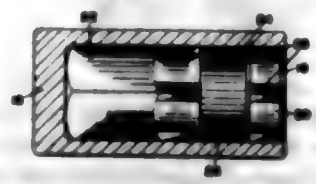


1. A drill bit assembly comprising a drill bit having a socket of circular cross-section and a mounting shank capable of being received in said socket, said shank having a cross-sectional configuration including an alternate series of flats and rounds, said rounds having a slightly larger radius than the radius of said socket so that rounds are capable of being received in press-fitted relationship within said socket and said flats being spaced from the center of said shank by a distance less than said radius of said socket, whereby forcing said shank into said socket causes the material of said socket to flow inwardly into the spaces which would normally exist between said flats and the inner wall of said socket.

2,862,745
SOCKET AND ROD COUPLING
John Delise, Worcester, Mass.
Application July 20, 1956, Serial No. 599,223
3 Claims. (Cl. 287—126)

1. A coupling comprising a socket member and a rod to be axially applied thereto and releasably secured therein, said rod having a non-circular rotatively driving portion thereon for entry into the socket member, and a corresponding non-circular rotatively driving portion in the socket for reception thereof whereby the rod or socket member is selectively used to rotatively drive the other, said rod being generally cylindrical, and longitudinally extending spring fingers on said socket member, said spring fingers being generally arranged on a circle conforming to the cylindrical portion of the rod and holding the same lightly frictionally against accidental axial uncoupling, the cylindrical portion of the rod having a diameter slightly greater than the internal diameter of the spring fingers.

2,862,746
SOCKET AND ROD COUPLING
John Delise, Worcester, Mass.
Application July 20, 1956, Serial No. 599,224
3 Claims. (Cl. 287—126)



1. A coupling comprising a socket member and a rod to be axially applied thereto and releasably secured therein merely by relatively pushing the parts together and pulling the same apart by straight, easy, manual pressure, said rod having a non-circular rotatively driving portion at its end for entry into the socket member, and a corresponding non-circular rotatively driving portion at the bottom of the socket for reception thereof whereby the rod or socket member is selectively used to rotatively drive the other, and a ring-like resilient gripping member held in the socket and frictionally gripping the rod when the rotatively driving portions are engaged, the normal internal diameter of the ring-like resilient member being slightly smaller than the effective diameter of the rod and the resilient gripping member being substantially circular and located in the socket to grip the rod at a point spaced from the rotatively driving portion thereof, said socket having a substantially circular portion with an internal groove therein to receive and hold the ring-like resilient member, said groove having a bottom of a diameter greater than the external diameter of the ring-like member, and the circular portion of the socket having an internal diameter less than the internal diameter of the ring-like resilient member.

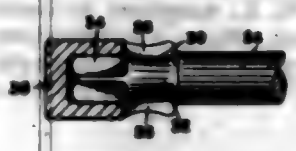
2,862,751
DOOR LOCK

pole pieces, and mounting means providing a pivot for independently pivotally securing the pole pieces to a

adapted to support said shaft member between the furcations thereof, two opposed bearing means, one of which

minimum load of angular deflection on the connection of the said shell with said mounting member.

2,862,747
SOCKET AND ROD COUPLING
John J. Delise, Worcester, Mass.
Original application July 20, 1956, Serial No. 599,223. Divided and this application June 17, 1958, Serial No. 742,631
3 Claims. (Cl. 287—126)



1. A coupling comprising a socket member and a rod to be axially applied thereto and releasably secured therein, said rod having a non-circular rotatively driving portion thereon for entry into the socket member, and a corresponding non-circular rotatively driving portion in the socket for reception thereof whereby the rod or socket member is selectively used to rotatively drive the other, said rod being otherwise generally cylindrical and having a reduced portion, and a series of integral spring fingers of relatively thin section extending from the open end of the socket, said spring fingers being arranged in cylindrical form at the interior thereof and corresponding to the reduced portion of the rod.

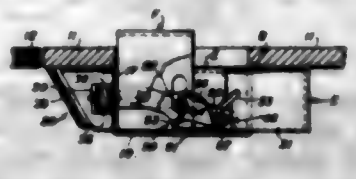
2,862,748
JOINT FOR CARBON ELECTRODES
Bruce L. Bailey and Leslie H. Juel, Lewiston, N. Y., assignors to Great Lakes Carbon Corporation, New York, N. Y., a corporation of Delaware
Application February 23, 1956, Serial No. 567,113
8 Claims. (Cl. 287—127)

1. In a continuous-type electric-furnace electrode comprising at least two coaxially aligned carbon electrodes having opposed end faces, a central threaded recess in each of said faces and a carbon connecting member threaded into each of said recesses, the improvement comprising said connecting member containing a liquefiable carbonizable composition in an amount to fill the available pores of the member from the entire surface inwardly for a depth represented by from about 10 to 75% of the total available porosity, the unfilled interior pores containing a gas.

7. A method of manufacturing a carbon connecting member for carbon electric-furnace electrodes having central threaded recesses at each end which comprises impregnating a carbon blank whose configuration conforms generally to the electrode recesses, solely by means of pressure with a liquefiable carbonizable composition in an amount to fill the available pores of said blank from the entire surface inwardly for a depth represented by from about 10 to 75% of the total available porosity while retaining entrapped gas in the interior unfilled pores of the carbon blank, and machining the resultant impregnated blank to conform to the threads of the electrode recesses.

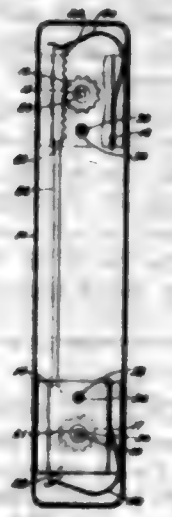
2,862,749
FLUSH LATCH
George W. Borkard, Los Angeles, Calif.
Application August 5, 1957, Serial No. 676,141
10 Claims. (Cl. 292—165)

3. A latch for latching to a marginal portion of a framing panel, an opposed marginal portion of a door panel having an opening in its marginal portion, comprising: a housing having means for mounting the same to said opening; trigger and handle parts mounted in said housing for movement in adjacent parallel paths normal to the plane of said door panel, their outer ends extending into said opening and being normally substantially flush with said plane; a rocker link, the respective ends of which are pivotally connected to said trigger and handle parts respectively, said rocker link being fulcrummed intermediate its ends in said housing for tilting movement in which one end moves inwardly in response to the pressure of said trigger part while its other end moves out-



wardly so as to project said handle part outwardly of said plane; a bolt mounted in said housing for sliding movement longitudinally thereof and having an end portion normally adjacent the margin of said door panel, said bolt being movable to a projected position engageable behind the opposed marginal portion of said framing panel; means responding to inward movement of said trigger part for retracting said bolt; means automatically operating upon retraction of said bolt to lock it in its retracted position, said means being released by inward movement of said handle part; and spring means biasing said bolt for projecting movement occuring when said locking means is thus released.

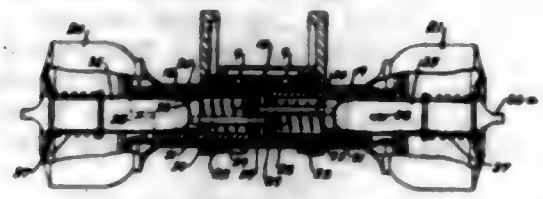
2,862,750
DOOR LATCH OPERATING MECHANISM
Robert M. Minke, Toledo, Ohio
Application March 5, 1956, Serial No. 569,561
2 Claims. (Cl. 292—172)



1. An auxiliary door latch operating unit adapted to be installed on one face of a door having a latching bolt and an operating shaft adapted to retract the latching bolt, said unit comprising an elongated casing, an aperture in said casing, a centrally apertured gear in said casing for receiving said operating shaft for rotation therewith, means for mounting said gear in said casing with the aperture therein opposite the aperture in said casing, a hand operated auxiliary knob projecting from said casing and remotely located with respect to said shaft, a second gear in said casing connected to said auxiliary knob for rotation therewith, mounting bracket means carried by said casing for said second gear, motion transmitting means interconnecting said gears for rotating said shaft from said auxiliary knob to move the latching bolt from latching position, and means associated with said motion transmitting means for biasing said motion transmitting means toward an intermediate portion to return the latching bolt to latching position.

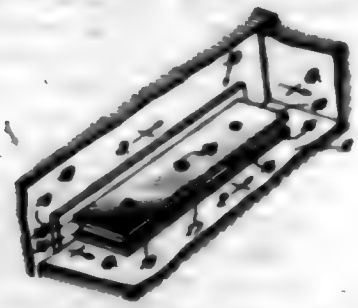
that rounds are capable of being received in press-fitted relationship within said socket and said flats being spaced having an internal diameter less than the internal diameter of the ring-like resilient member.

2,861,751
DOOR LOCK
William V. Schweitzer, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Application February 3, 1956, Serial No. 563,299
4 Claims. (Cl. 292—224)



3. In a door lock, the combination of a housing having rollback dogging abutments, a retractor movable in said housing, a latch bolt connected to said retractor, a pair of opposed tubular knob shanks mounted to rotate in said housing about a common axis and each having a knob secured to its outer end, a rollback for actuating said retractor non-rotatably connected to the inner end portion of each of said knob shanks and each having a circular hub that is axially slidable in its respective knob shank, each of said hubs having an opening extending therethrough in an axial direction and said openings being disposed on opposite sides of said common axis, a longitudinally movable pushrod contained within each of said knob shanks, said pushrods lying on opposite sides of said common axis and each extending slidably through the opening in the hub of its respective rollback and terminating inwardly of the inner end of its respective knob shank, the free end of each pushrod defining an abutment surface engageable by the hub of the opposite rollback and normally locating said opposite rollback in retractor operating position, spring means contained in each of said knob shanks and urging the rollback therein against the free end of the opposite pushrod, each pushrod, upon rotation of its respective knob shank, being carried in a circular path with the free end thereof sliding over the surface of the hub of the opposite rollback while still maintaining said opposite rollback in retractor operating position, and means contained in each knob shank and accessible for manual operation at the outer face of its knob for moving the pushrod carried thereby axially inwardly to thereby shift the rollback in the opposite knob shank axially outwardly and into engagement with said abutments on the housing to thereby dog the opposite knob shank against operation.

2,862,752
MAGNETIC DEVICE
Elmore A. Heppner, Round Lake, Ill., assignor to Heppner Sales Co., a corporation of Illinois
Application April 13, 1955, Serial No. 501,837
5 Claims. (Cl. 292—251.5)



4. A magnetic assembly comprising a pair of substantially rectangular elongated pole pieces having opposed flat surfaces, at least three substantially rectangular ferrite magnets between and spacing apart said pole pieces, each of said magnets having opposed extended surfaces in substantially complete contact with adjacent surfaces of the pole pieces, means on each of the pole pieces for retaining the magnets in position between the pole pieces, and mounting means providing a pivot for independently pivotally securing the pole pieces to a support.

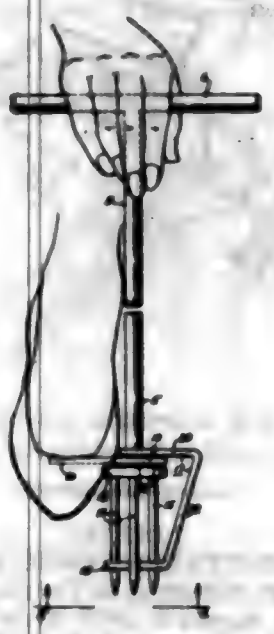
2,862,753
OUTSIDE DOOR HANDLE ASSEMBLY
Bewley D. Priestman, Livonia, Mich., and John G. Hertlein, Trenton, N. J., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 23, 1954, Serial No. 457,871
2 Claims. (Cl. 292—336.3)

1. In a door handle assembly comprising a door handle having a gripping portion and a butt portion, a chamber in said butt portion having an elliptical opening at one end thereof, an actuating rod in said chamber, and a spring in said chamber urging said rod in one direction, apparatus for mounting the spring in the chamber comprising an elongated stop member movably and non-rotatably received within said opening for seating said spring, said member having a central hub with a bore therethrough for receiving said rod, a pair of oppositely located grooves in the wall of said chamber at the minor axis of said opening, an elongated retainer member rotatably mounted on said hub and being freely receivable within said opening along the major axis thereof, said retainer being rotatable about said hub to a position along the minor axis of said opening in engagement within said grooves to limit movement of said stop member against the action of the spring and inter-engaging means on said stop member and retainer member to lock said retainer member against rotation.

2,862,754
PASTRY SERVER
Frances Forcia and Maxine A. Bunning, Eugene, Oreg.
Application August 23, 1955, Serial No. 530,116
4 Claims. (Cl. 294—1)

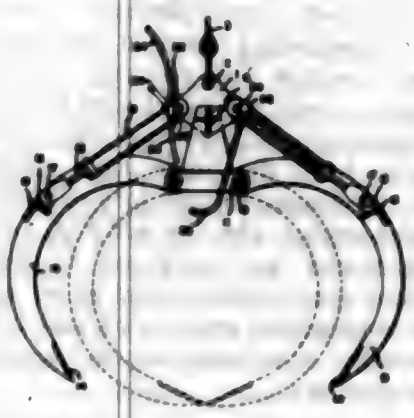
1. An implement for handling pie crust and the like including a pair of similarly formed flat members pivotally connected between their ends to provide a pair of thin coacting plates on one side of the pivot and a pair of operating handles on the opposite side of the pivot, said plates being operable for movement inwardly to a closed position or outwardly to an opened position, said plates when in their closed position having abutting edges, said edges being angularly spaced when the plates are in their opened position, the parts of the implement being constructed and arranged so that when the plates are in their closed position the ends thereof may be initially moved under the pie crust to support the same, and said plates being movable to their opened position by actuation of said handles towards each other to spread the supporting area thereof.

2,862,755
WEED EXTRACTOR
Raymond O. Guiden, Jenkintown, Pa.
Application September 26, 1956, Serial No. 612,147
8 Claims. (Cl. 294—61)



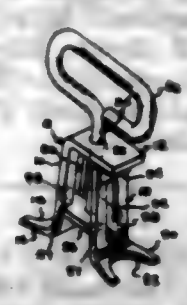
1. A weed extractor including a stem having a handle portion at its upper end, a plurality of spaced-apart prongs extending from its lower end, a stripper extending into the zone between said prongs and slidably guided thereby, an upper guide portion having a hole therein through which said stem extends for guiding it, and a connecting portion extending laterally to one side of said prongs and stem, rigidly connecting said stripper with said upper guide portion.

2,862,756
PULPWOOD GRAPPLE
Robert W. Larsen, Ely, Minn.
Application May 31, 1955, Serial No. 512,863
2 Claims. (Cl. 294—88)



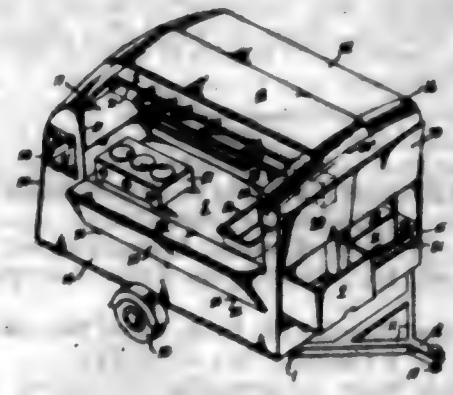
1. A pulpwood grapple comprising a support having a hoist connector, a pair of confronting jaw frames each pivotally secured to the support at a lower position thereon, power means connected with each of said jaw frames for exerting simultaneous converging force thereon, said jaw frames each having a pair of spaced arms concave toward one another to define an open-ended cooperative structure permitting the ends of pulpwood to extend therethrough and beyond each end, and each further having a transverse lip extending across the lower ends of said arms, the transverse lips each having a terminal straight-edge parallel to that of the other whereby to uniformly squeeze and gather a plurality of parallel and stacked pulpwood pieces which maintaining their parallel character.

2,862,757
GAS METER PICK-UP DEVICE
Sam Hutchinson, Roswell, N. Mex.
Application August 2, 1957, Serial No. 675,886
2 Claims. (Cl. 294—94)



2. A lifting device comprising: a support frame of inverted L-shape having a laterally projecting head and an elongated, straight leg rigid with one end of and depending from the head at an angle of slightly more than 90 degrees to the head; a movable leg spaced laterally from the first leg and hingedly connected to the other end of the head, said movable leg being swingable about its hinge axis toward and away from the first leg, said head having an opening between the legs; a spreader plate disposed between the legs and having opposite side edges in slidable contact with the respective legs, the distance between said side edges being greater than the distance between the proximal ends of the legs, for spreading the legs responsive to movement of the spreader plate toward the head from a lower to an upper position; cooperating guide means on the spreader plate and legs for guiding the spreader plate in its movement toward and away from the head; and handle means including a shank rigid at one end with the spreader plate, said shank loosely engaging in said opening for sliding movement in the direction of its length and for rocking movement about an axis parallel to that of the hinge axis of the movable leg, the shank extending perpendicularly to the head in the lower position of the spreader plate and rocking to a position out of perpendicularity to the head in the upper position of the spreader plate, said legs having outwardly projecting, article-gripping flanges on their distal ends, said guide means comprising tongues on the spreader plate, and slots formed in the legs, the tongues projecting through the slots.

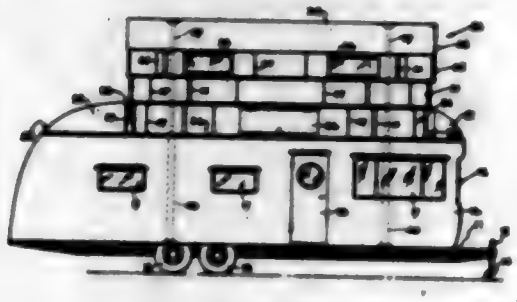
2,862,758
CAMPING EQUIPMENT TRAILERS
Ruth King Robertson, near Port Blakely, Wash.
Application June 22, 1954, Serial No. 438,565
5 Claims. (Cl. 296—23)



2. A camping equipment trailer comprising a body including a bottom, opposite sides and a roof and having a bed-housing compartment at the level of said bottom, a rear closure panel for said body hingedly connected at its lower edge to said bottom and swingable from upright position downward into a lowered position in substantially coplanar relationship with said bottom, a bed in condition

for sleeping slidable from a position on said bottom in said bed-housing compartment outward into a partially extracted position overlying and partially supported by said closure panel in lowered position, and a headboard hingedly connected to the swinging edge portion of said closure panel for movement between a stored position folded alongside said closure panel and an operative position extending edgewise upwardly from such swinging edge portion of said closure panel when the closure panel is in its lowered position.

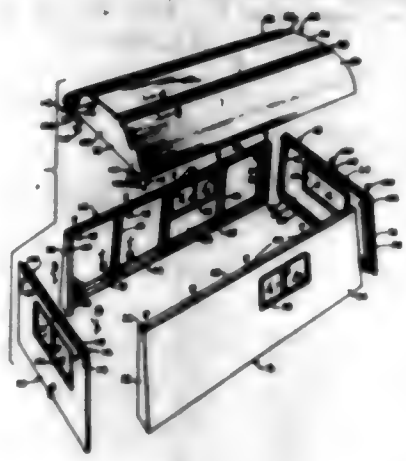
2,862,759
VERTICALLY EXPANSIBLE HOUSE TRAILER
John A. Huth, Cincinnati, Ohio, assignor to William A. Goebel, Reading, Ohio
Application March 21, 1956, Serial No. 572,956
4 Claims. (Cl. 296—23)



1. In a trailer vehicle having a main body, a vertically expansible compartment mounted on the top portion of said body and being in communication therewith, said compartment comprising a plurality of telescopic sections, the innermost of said sections being secured to the top portion of said body, a roof carried by the outermost of said sections, guide means for guiding said sections relative to one another during vertical movement of the sections, said guide means comprising an inwardly extending locking flange disposed along the lower edge of each of the moveable sections, an outwardly extending sealing flange mounted on the top edge of each of said sections except the outermost section, a plurality of vertical guide rods secured to the sealing flange of each of the sections except the outermost section and extending along the outer surface of said sections in spaced relationship therewith, the locking flange of each of said sections being provided with a plurality of spaced apertures of a diameter appreciably greater than said rods and adapted to receive said rods, a plurality of bearing strips carried by said sections and disposed for abutment with said locking flanges, a plurality of roller extending outwardly from the four corners of each of said sections except the outermost section, and cooperating vertical guide rails mounted on the inner surface of the four corners of each of said sections.

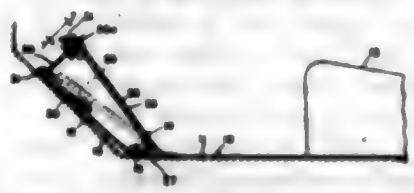
2,862,760
KNOCK-DOWN ENCLOSURE FOR OPEN VEHICLE BODIES
Theodore E. Davis, Wellington, Kans., assignor to Clarkson & Clark, Inc., Wellington, Kans., a corporation of Kansas
Application August 16, 1956, Serial No. 604,407
5 Claims. (Cl. 296—28)

3. A vehicle body construction comprising: side wall sections; a front wall section; a roof section including front and rear end plates disposed in parallel vertical planes and having curved upper edges, a central panel having its ends secured to said plates, a panel flanking each side of said central panel but spaced therefrom and each flanking panel having its ends also secured to said plates, and a flanged rib member disposed between adjacent panels and projecting upwardly through the spacing intermediate said panels, the rib members having their flanges underlying the marginal edges of said panels and



secured thereto; and respective fastening means for removably attaching said sections together.

2,862,761
ADJUSTABLE TOEBOARDS
John E. Scheidegger, Detroit, Mich.
Application August 1, 1957, Serial No. 675,696
5 Claims. (Cl. 296—75)



1. A unitary supplemental toeboard for a vehicle having a seat, a substantially horizontal fixed floorboard and a fixed toeboard upwardly inclined from said floorboard and spaced forwardly of said seat, said supplemental toeboard comprising a movable unitary frame structure having rear and forward portions disposed in a fixed angular position at all times with respect to each other and seated respectively on said fixed floorboard and fixed toeboard, whereby to firmly position said frame structure substantially relatively complementary to said fixed floorboard and fixed toeboard, a toeboard tread member hinged to said frame structure rear portion, and an adjustable support member carried by said frame structure forward portion and selectively secured to a portion of said tread member spaced from the hinge, said support member comprising a rod hinged to said forward portion, a connecting element carried solely by said rod, said connecting element constructed and arranged to be selectively clamped to said tread member and to be selectively secured at any longitudinal position on said rod to support said tread member at selected angular positions relative to said frame structure.

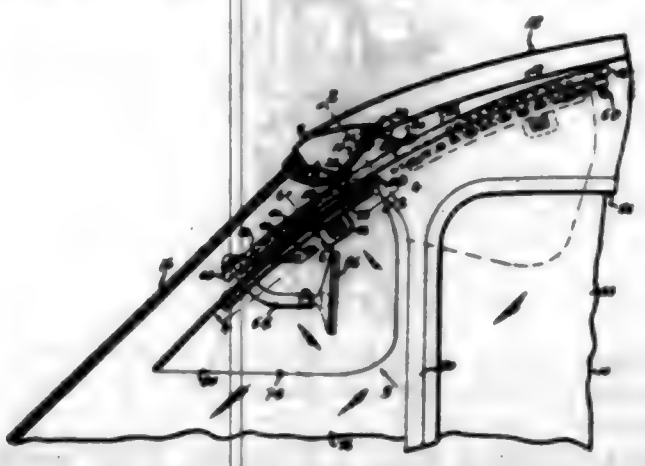
2,862,762
GLARE SHIELD FOR CURVED WINDSHIELDS
Charles E. McCormick, Dearborn, Mich.
Application June 30, 1954, Serial No. 440,327
10 Claims. (Cl. 296—97)

4. In an automobile having a window and a roof structure, a glare shield panel shaped to overlie a portion of said window, a track supported on said roof structure adjacent the upper edge of said window and extending along said roof structure in a direction generally perpendicular to said edge of the window, said track being arcuate in a longitudinal direction such that it extends generally parallel to and is spaced inwardly of said roof structure, said panel having means thereon disposed generally medially between the ends thereof engaged with said

chamber with the periphery of said valve seat member forming a seal therebetween, said valve seat member

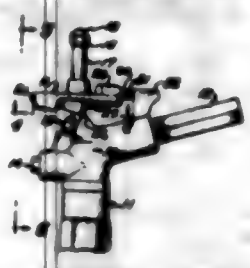
cruming engagement of said retaining ring structure por-
tion with said pair of humps while at the opposite

track and movable therealong for supporting the panel on said track and for shifting the panel to an operative position at one end of the track and overlying a portion of said window and to an inoperative position at the other end of the track where the panel is disposed adjacent and generally parallel to the roof structure, means disposed between said roof structure and said panel for



exerting pressure inwardly or downwardly from said roof structure against said panel at points spaced outwardly from and on opposite sides of said track for maintaining said panel in an arcuate tensioned condition in a direction transverely of the panel whereby stability is imparted to the panel in a direction perpendicular to the plane thereof.

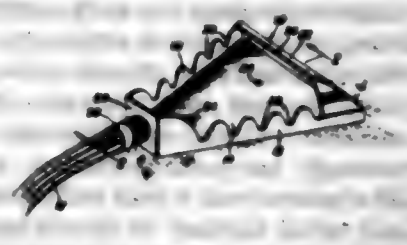
2,862,763
ROTARY LAWN SPRINKLER
Daniel O. Norland, Cypress, Calif.
Application May 14, 1956, Serial No. 584,711
3 Claims. (Cl. 299—68)



1. A rotary lawn sprinkler comprising a hose coupling, a rotatable sprinkler body member having a jet nozzle operatively associated therewith mounted on said coupling, a disc member rotatably mounted on said sprinkler body member for rotation about a substantially vertical axis and having a hammer on a peripheral portion thereof, an anvil on said sprinkler body member, a cam concentric with the axis of said disc member on one of said members and a cam rider on the other member engaged by said cam for imparting limited axial movement to said disc member, said hammer and said anvil being in the same plane when the disc member is in its uppermost axial position, and jet means on said body member operatively associated with said disc member for turning the same.

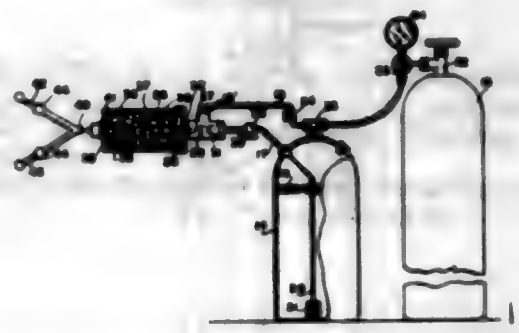
2,862,764
AERATING AND BUBBLING ATTACHMENT FOR HOSE
Albert C. Frese, Jr., San Antonio, Tex.
Application April 23, 1957, Serial No. 654,495
8 Claims. (Cl. 299—76)

1. An aerating and bubbling attachment for hoses comprising a relatively shallow and flat receptacle comprising a bottom, a pair of side walls and a pair of opposed end walls rising from said bottom, one of said end walls having an inlet means including a connection for receiving thereon the end of a hose for supplying water under pressure to said receptacle, the other end wall being upwardly concave for directing a stream of water from said inlet means back upon said bottom whereby to create



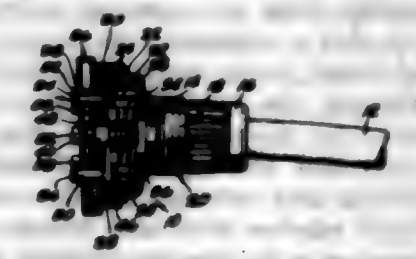
turbulence and aerate the water in said receptacle, said side walls having downwardly extending notches in their upper edges whereby to effect a gentle discharge in plural streams of the aerated water in said receptacle.

2,862,765
INSECTICIDE FOG SYSTEM
Archie L. Wing, Clearwater, Fla.
Application January 3, 1956, Serial No. 556,982
5 Claims. (Cl. 299—96)



1. An insect spraying assembly including in combination, an insecticide tank, a gas propellant tank, a housing, a fitting communicating with said housing, tubular means interconnecting the fitting with said gas tank, tubular means interconnecting the insecticide tank with said fiting means interconnecting the gas propellant tank with said insecticide tank, a discharge tubing provided with spaced fogging nozzles, said housing having spaced bronze screens therein for separating the same into compartments, each of said compartments having fibers therein for treating the insecticide as it passes therethrough, and valve means located in at least one of said tubular means for selectively controlling the flow of the propellant gas and the insecticide into said fitting so as to discharge the insecticide through said nozzles in the form of a mist.

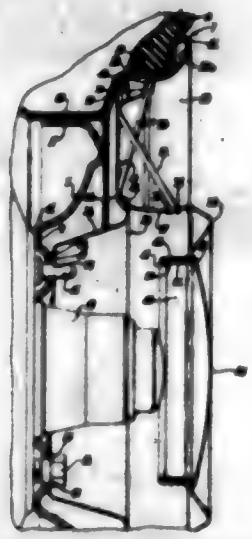
2,862,766
SELF-CLOSING SHAMPOO HEAD
Irving A. Ward, Los Angeles, Calif., assignor of twelve and one-half percent to Ernest H. Bucknell, ten percent to Ralph E. Bletcher, twelve and one-half percent to Mabel Bucknell, ten percent to Pearl White Bletcher, twenty-five percent to Marcia Bucknell Linton, ten percent to James H. Bletcher, ten percent to Hazel Bletcher Skinner, and ten percent to Charlotte R. B. Robertson
Application February 6, 1956, Serial No. 563,511
6 Claims. (Cl. 299—144)



.3. A shampoo head comprising, a housing having an open ended chamber therein, a resilient valve seat forming member within said chamber, a cap closing said

chamber with the periphery of said valve seat member forming a seal therebetween, said valve seat member having at least one aperture therethrough, said cap having an axially aligned aperture for each aperture in said valve seat member, an open ended projection formed on and aligned with each aperture of said valve seat member and projecting through said apertures in said cap, an actuating member outside said chamber having an aperture therethrough for each projection, a valve element within said chamber and a post interconnecting said actuator and said valve element to permit movement of any part of said actuator to move said valve element.

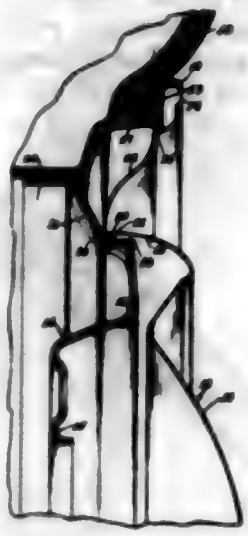
2,862,767
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application March 3, 1953, Serial No. 339,977
8 Claims. (Cl. 301—37)



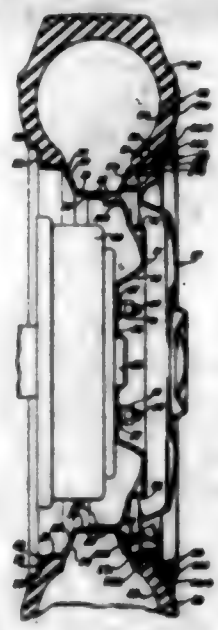
1. In a wheel structure including a tire rim and a wheel body having a central bolt-on flange, a cover assembly for the outside of the wheel comprising a first cover member of annular form for disposition opposite the tire rim and a second annular cover member for disposition opposite the bolt-on flange, said first and second cover members being connected together by spoke-like elements thereof, and a third cover member carrying and engaging both of said first and second cover members and having a bolt-on flange cooperable with the bolt-on flange of the wheel body.

2,862,768
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application June 10, 1954, Serial No. 435,724
11 Claims. (Cl. 301—37)

1. In a wheel structure including a tire rim and a wheel body of the disk spider type having an annular intermediate nose bulge between a radially inner bolt-on flange and a radially outer marginal portion attached to the tire rim, with a circumferentially spaced series of generally radially outwardly projecting cover retaining bumps on the radially outer side of the nose bulge spaced radially inwardly from the marginal extremity of the wheel body so that a substantial outer marginal portion of the wheel body facing generally axially outwardly intervenes between the bumps and said marginal extremity, a cover for disposition at the outer side of the wheel and provided with generally radially inwardly directed retaining ring structure portion engageable in snap-on, pry-off relation with said bumps, one of said portions having an inset area intermediate a pair of the retaining bumps for enabling cocked initial assembly disposition of the cover with the wheel by closely approaching disposition of said portions at said area and full-cruming engagement of said retaining ring structure portion with said pair of bumps while at the generally opposite side of the cover said retaining ring structure portion is resiliently flexed over another of the bumps in snapping the cover in place on the wheel, and enabling convenient pry-off of the cover by reversal of the assembly coaction as aforesaid.



2,862,769
TIRE TRIM-WHEEL TRIM CONSTRUCTION
Edward L. Wood, Detroit, Mich., assignor, by direct and mesne assignments, to Gar Wood Industries, Inc., a corporation of Michigan
Application July 5, 1956, Serial No. 596,859
9 Claims. (Cl. 301—37)



5. In combination with a vehicle wheel having a tire mounted thereon and wheel trim for said wheel including means securing the same onto said wheel, arcuately formed annular tire trim overlying the wall of said tire including a bead overlying the lip of the rim of said wheel, said bead having inner and outer annular grooves therein, the inner annular groove of said tire trim bead registering with the lip of the wheel rim maintaining said tire trim concentric with said wheel rim, and a tire trim securing ring including axially offset oppositely radially extending outer and inner flanges, the outer of said offset flanges of the said securing ring being formed to telescope into the outer annular groove of said tire trim bead, the said wheel trim engaging the inner of said offset flanges of the said securing ring when secured onto said wheel axially and concentrically fixing said tire trim securing ring and said tire trim onto said vehicle wheel.

2,862,770

GAS LIFT OPERATION

Richard M. Daniel, Springfield, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

Application July 19, 1951, Serial No. 237,625
8 Claims. (Cl. 302—17)

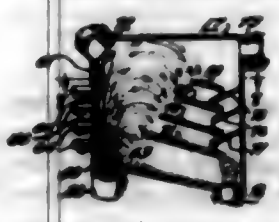
1. In a system circulating granular solids comprising an upright gas-lift conduit through which the granular solids are impelled upwardly by lift gas and an enlarged disengager vessel into which said conduit discharges solids and gas, the improvement which comprises a series of nearly horizontal to horizontal trays in said disengager vessel, at least one of which trays is located above the discharge outlet of the lift conduit, the inner edges of said trays being spaced outwardly from the axis of the lift conduit and out of contact with the rising cone of solids discharged from said conduit, each of said trays being provided with spaced apertures in the bottom and within the bounds thereof permitting passage of solids therethrough.

2,862,771

DISENGAGING SOLIDS FROM LIFT GAS

Edward H. Lebels, Jr., Media, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

Original application June 12, 1951, Serial No. 231,116. Divided and this application October 13, 1954, Serial No. 461,948
3 Claims. (Cl. 302—59)



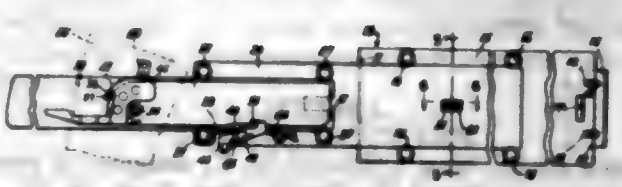
1. In a system wherein free-flowing, relatively frangible, granular solids are in substantially continuous circulation, comprising movement of the solids downwardly in a continuous stream along a downflow pass and their elevation through a confined upflow pass by momentum imparted to them by a fluid stream flowing vertically through said upflow pass at a velocity great enough to raise the solids in a continuous stream through the upflow pass, whereby the solids after leaving the upflow pass rise to a considerable height above the discharge end of the upflow pass, into an enclosed disengaging zone of greater horizontal cross-section than that of the confined upflow pass, until the momentum imparted to them is dissipated, and would then drop in uninterrupted, free fall to a level below that of the discharge end of the upflow pass and thereby cause significant attrition damage to the solids by their impact, at the velocity developed by them over the extent of their drop, against solids already on the bottom of the disengaging zone, the method of effectively reducing the maximum free fall velocity attainable by the descending granular solids by the end of their drop after disengagement from the lift fluid and thereby effectively reducing the force of their impact against the disengager bottom or other solids already on it and likewise reducing the possibility of attrition damage, which method comprises intercepting the free-falling solids by an interposed surface at each of a plurality of levels within said disengaging zone and in a plurality of areas closely adjacent to the envelope of the upwardly moving and gradually widening stream of solids discharged from said lift pass, the nearest edge of each such surface being laterally spaced further from the vertical axis of the confined upflow pass than that of the surface therebelow so that a line intersecting said edges approximates the slope of the said envelope, maintaining intercepted solids throughout each of said areas as a supported continuous layer to provide such interposed surface at an inclination to the horizontal that solids deposited thereon roll in a generally radial direction to and over an edge of said layer, and passing said solids by free-fall from at least one edge of said layer to the surface of the layer next below, whereby said solids are intercepted at each of said levels and are passed stagewise through said plurality of intercepting levels to said level below that of the discharge end of the upflow pass at the bottom of said disengaging zone.

2,862,772

MOUNTING SLIDE FOR ELECTRONIC CHASSIS

Nathan A. Genzack, Manhasset, N. Y., assignor to Grant Pulley & Hardware Corporation, Flushing, N. Y., a corporation

Application December 17, 1956, Serial No. 628,796
9 Claims. (Cl. 308—3.8)



1. A slide assembly for supporting a unit in an enclosure such as a rack or cabinet for selective supported withdrawal from the latter, said assembly comprising, in combination, a substantially flat base constructed and arranged for securement in juxtaposed relation to a vertical side surface of the enclosure; longitudinally spaced pairs of vertically spaced rollers on the outer surface of said base; a substantially flat intermediate member supported in said rollers for relative longitudinal movement in juxtaposition to said base; longitudinally spaced pairs of vertically spaced rollers on the outer surface of said intermediate member; a substantially flat slide supported in the rollers on said intermediate member for relative longitudinal movement in juxtaposition to said intermediate member, and constructed and arranged for securement to the unit; a first catch on said base automatically engageable with said intermediate member upon a predetermined extension thereof from said base to lock said intermediate member against movement relative to said base and engaged with all of the base rollers; a second catch on said intermediate member automatically engageable with said slide upon a predetermined extension

2,862,777

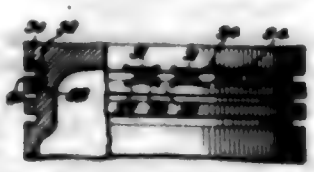
tubular leg member in locking position so as to maintain

thereof from said intermediate member, and while still engaged with all the rollers on said intermediate member, to lock said slide against movement relative to said intermediate member; said second catch being manually releasable to provide for removal of said slide or retraction thereof; and means on said slide operable on retraction thereof to release said first catch for retraction of said intermediate member.

2,862,773
BEARING ELEMENT
Thomas B. Keesling, Los Gatos, Calif., assignor of one-half to C. H. Keesling, San Jose, Calif.
Application October 14, 1954, Serial No. 462,167
2 Claims. (Cl. 308—219)

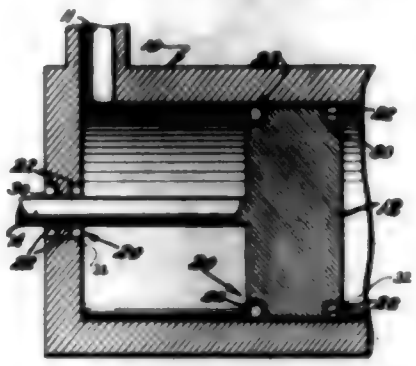
1. A bearing element comprising a substantially ball shaped member of hardened steel, said member having a spherical surface adapted to be rotatably lodged in a socket, said socket having a corresponding concave surface for slideably engaging said spherical surface, said member having a plurality of substantially circular bearing races ground in its surfaces, and a plurality of anti-friction elements positioned in each of said circular bearing races for engaging the ends of shafts, the axes of said circular bearing races being coincident with radii of said member, said bearing races being disposed in surfaces of said member such that pressure exerted on said anti-friction elements in said races is distributed among all of the anti-friction elements and presses said member against surfaces of said socket.

2,862,774
PISTON STRUCTURE
Rudolph Daub, West Caldwell, N. J., assignor of twenty percent to Frank A. Bower, New York, N. Y.
Original application May 29, 1952, Serial No. 290,738, now Patent No. 2,755,151, dated July 17, 1956. Divided and this application July 12, 1956, Serial No. 597,405
The portion of the term of the patent subsequent to July 17, 1973, has been disclaimed
4 Claims. (Cl. 309—14)



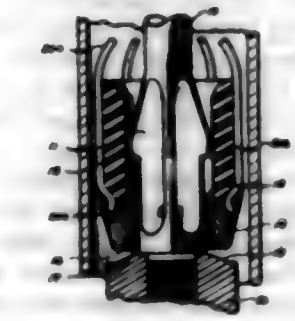
1. A piston structure comprising a generally cylindrical piston head, a piston ring groove in said head and a series of reinforcing groove-facing units of plate metal pieces independently cast in the metal of said piston as facings of groove surfaces and seated in recesses therein having unit supporting surfaces in planes normal to the axis of the piston, each unit having generally radially extending side edges with generally radially extending surfaces interlocking axially with the metal of the piston and acting to retain it against axial dislodgement or loosening in service, and radial locking means formed by a cut out portion recessed at the side edge of said metal piece and cooperating with a projection of the piston metal formed as a single piece at said piston head and having the shape of said cut out to tightly lock said metal piece against radial dislodgement.

2,862,775
PACKING GLAND AND SEALING RING
Harry P. Kapioe, Baltimore, Md.
Application July 23, 1956, Serial No. 599,483
2 Claims. (Cl. 309—23)



1. A packing gland for sealing two cylindrical shaped mating elements, one of said mating elements having a pair of grooves formed therein at the outer periphery thereof, a thin annular metallic sealing ring located in each of said grooves in said one mating element, each said ring having a semi-circular cross-section, with a flared lip scarfed to a fine edge extending outwardly from each edge of said semi-circular cross-section of said ring at approximately 5° measured from the longitudinal axis of said annular ring and arranged to engage the surface of the other mating element and the surface of said groove in the one mating element with razor blade contact, the flared lips of one of said sealing rings being positioned oppositely from the flared lip of the other sealing ring of said pair of sealing rings, whereby an effective seal is provided between said mating elements, and an integral annular projection in each said groove of said one of said mating elements of substantially the same height as the thickness of said annular ring therein for engagement by one of said flared lips of each of said sealing rings for holding said sealing rings in operative positions in said grooves between said mating elements.

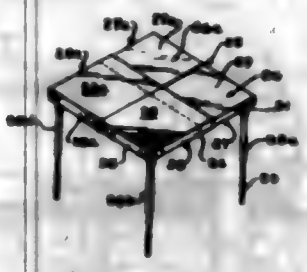
2,862,776
WELL SWAB CUPS
Hulie E. Bowerman, Arlington, Tex.
Application February 23, 1956, Serial No. 567,195
10 Claims. (Cl. 309—33)



1. A single-ended swab cup symmetrical with respect to a longitudinal axis comprising a flexible cup body, a base below said body and bonded thereto and including an outwardly extending flange having an annular series of openings therethrough, and reinforcing members for the body extending loosely through the openings from above the flange and each terminating within the axial limits of the base and offset below said flange to prevent withdrawal of the member from the opening by forces acting axially of the swab cup.

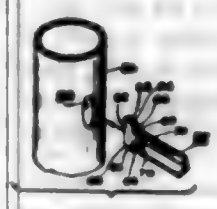
2,862,781

2,862,777
TABLES FOLDABLE INTO SUITCASE-LIKE FORM
Isaac A. Paige, Chicago, Ill.
Application August 6, 1956, Serial No. 602,271
14 Claims. (Cl. 311—98)



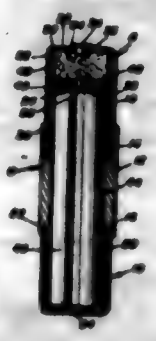
1. A foldable table having a top comprising a pair of top sections hingedly connected to each other for pivotal movement from a retracted coplanar position to a folded position, and each of said top sections comprising a pair of subsections telescopically connected to each other for sliding movement from an extended tandem position to said retracted position.

2,862,778
BRACED LEG CONSTRUCTION AND METHOD OF FORMING SAME
Isadore B. Rachman and Sidney Bobb, Philadelphia, Pa., assignors to H & L Realty Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application October 4, 1957, Serial No. 688,279
4 Claims. (Cl. 311—98)



1. A braced leg construction comprising a generally tubular leg member having an elongated hole formed therein, the major dimenison of the hole being disposed generally axially of the tubular leg member; and a brace member rigidly connected at one end to said tubular leg member in angular relationship thereto, said brace member having an elongated body portion, a relatively narrow neck portion formed at one end of the body portion, and a relatively wider head portion formed at the other end of the neck portion, said head portion being relatively thin and having a transverse dimension or width slightly less than the major dimension of the leg member hole while the neck portion has a transverse dimension or width slightly less than the minor dimension of the hole, said head portion having a pair of generally plane walls extending transversely outward from opposite sides of the neck portion juncture and terminating in relatively sharp corner edges, said head portion being insertable through the elongated hole with its transverse dimension generally along the major axis of the hole and being thereafter rotatable within the tubular leg member through generally 90 degrees into locking position wherein the corner edges of the head portion grippingly engage the concave inner surface of the tubular leg member at points oppositely circumferentially spaced from the hole and wherein the transverse dimension of the neck portion is disposed generally along the minor dimension of the hole, the brace body portion having a pair of walls extending generally transversely outward from opposite sides of the neck portion juncture, said body portion transverse walls being jammed against the convex outer surface of the tubular leg member in locking position so as to maintain gripping pressure upon the corner edges of the inserted head portion and thereby to resist inadvertent unlocking rotation of the brace member relative to the tubular leg member.

2,862,779
CIGARETTE CASE WITH HUMIDIFYING MEANS
Clarence O. Hammond, Gravette, Ark.
Application September 14, 1956, Serial No. 609,972
3 Claims. (Cl. 312—31.1)



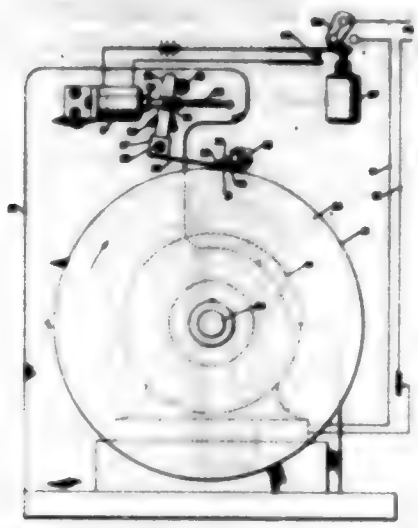
1. A pocket-size humidor-type carrying and protecting case for cigarettes or the like comprising a body tubular and rectangular in cross-section, open at its ends, and adapted to serve as an enclosing case for a pack of cigarettes, readily applicable top and bottom covers removably capped over and normally closing the top and bottom ends of said body, moistening means mounted in the closed upper portion of the top cover and situated between the respective top portions of the body and top cover respectively, a piece of blotting paper removably interposed between said moistening means and the top of said body, and said moistening means embodying a capillary wick detachably connected at one end with said blotting paper, said moistening means comprising a removable pan-like receptacle containing a filler of absorbent material and said wick being cooperable with said material.

2,862,780
TEA COZY
Fred A. Wales, Detroit, Mich.
Application April 5, 1954, Serial No. 421,146
1 Claim. (Cl. 312—214)

A tea cozy comprising a bottomless tent formed as a single upright sheet curved in horizontal directions with its upright end edges secured together and with its top edge portions turned inwardly and secured together so as to closely encircle the side and top surfaces of a tea pot; said sheet being formed of a paper backing layer faced with bright heat-reflective metal foil on both of its surfaces; said sheet being of sufficient strength to sustain the weight of the tent in upright position, and the metal foil following the contour of the backing layer; whereby to provide an economically constructed tea cozy structure for maintaining a pot of initially boiling water and tea leaves at a temperature above 200 degrees Fahrenheit for a period of approximately three minutes after the pot is positioned within the tent; the metal foil on the backing layer surfaces serving to not only reflect heat but also to provide easily cleanable surfaces and to act as moisture barriers for preventing deterioration of the backing layer.

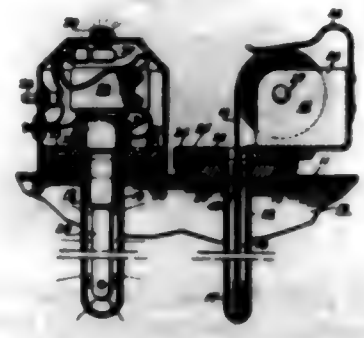
for a time sufficient to expend approximately 98 percent fluidized catalyst in a stripping zone, continuously intro-

2,862,781
RECORDING SUPPORT DEVICES
Heard K. Bemmelster, New York, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application January 27, 1954, Serial No. 406,448
9 Claims. (Cl. 346—74)



1. In a recording apparatus, a recording receiving member, means for moving said member to create a layer of fluid medium under pressure thereon, a recording element which is elongated to ride on said layer of fluid medium, means for supporting and loading said element to press it against said member and layer of fluid medium, and retracting means for withdrawing said element from said member and said layer during the time that said member moving means is starting and stopping, whereby said element is prevented from contacting said member while it is in motion at a rate of speed less than that sufficient to create said layer of fluid medium under pressure and sufficient to support the loaded element free from contact with said member.

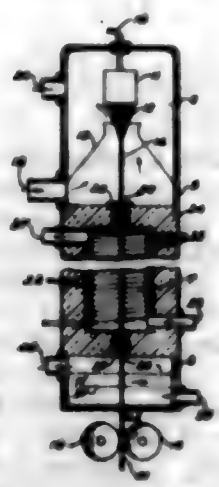
2,862,782
LIQUID LEVEL INDICATOR
Harry E. Conn, Sr., West Chester, Pa., assignor to Esco Cabinet Company, West Chester, Pa., a corporation of Pennsylvania
Application May 11, 1954, Serial No. 429,865
4 Claims. (Cl. 346—107)



4. In an indicating device for use in a container to provide an enduring record of the level of liquid in said container, the combination comprising a transparent tube having longitudinally-spaced depth-indicating opaque indicia thereon and an open upper end extending above the liquid-containing space of said container, a support associated with said tube at its upper end, a mounting member for a light sensitive element provided to furnish a record of the portion of said element exposed to light, a support for said mounting member adapted to rest upon first-mentioned support with said element and mounting member depending across and below the liquid level within said container, and a source of light within said container positioned to illuminate the portion of said element above the liquid level in said container to produce the desired record on said light sensitive element and thereby provide a visible record on said light sensitive element of the portion thereof above the liquid level, in contrast against unchanged portions of said element recording the depth-indicating indicia from said tube.

CHEMICAL

2,862,783
METHOD OF MAKING METALLIZED FIBERS
Folsom E. Drummond, Washington, D. C., assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application February 4, 1954, Serial No. 408,176
1 Claim. (Cl. 18—54)



A method of coating freshly extruded organic fibers with metal which comprises extruding a fiber as a filament of continuous length from a fiber-forming substance dissolved in volatile organic solvent, heating said fiber thus formed and which contains solvent to a temperature whereby substantially all of the volatile solvent is driven off, and thereafter subjecting said fiber to a temperature between 250° F. and 450° F. in an atmosphere containing a heat-decomposable gaseous metal compound, heating said heat-decomposable gaseous metal compound while in contact with said fiber to cause thermal decomposition of said gaseous metal compound and deposition of said metal constituent onto the fiber, the fiber being metal coated by gaseous metal deposition immediately after the solvent is removed, said metal compound being selected from the carbonyls of metal, and carbonyls of nickel, iron, chromium, molybdenum, cobalt, tin, and mixed carbonyls thereof.

2,862,784
OXIDATIVE-REDUCTIVE MULTI-STAGE BLEACHING OF GROUND WOOD PULP
Mearl A. Kise, Robert W. Burton, and Robert H. Ingwall, Portsmouth, Va., assignors to Virginia Smelting Company, West Norfolk, Va., a corporation of Maine
No Drawing. Application March 4, 1955
Serial No. 492,502
5 Claims. (Cl. 8—104)

1. A process of bleaching ground wood pulp in the form of an aqueous suspension containing approximately 11 percent by weight of pulp which comprises contacting at a temperature of from 90 to 125° F. said pulp with an oxidizing bleach medium containing from 1 to 3 percent by weight of sodium peroxide and about 5 percent by weight of sodium silicate, calculated on the dry weight of the wood pulp in said suspension, in alkaline solution

ture of less than about 35° C. for a contact time, less tents thereof are augmented and the concentration of

for a time sufficient to expend approximately 98 percent of the oxidizing material present in the solution, acidifying said suspension with sulfur dioxide to approximate neutrality and thereafter subjecting said pulp at a temperature of from 90° to 190° F. to the action of a reducing bleach medium containing about 1 percent by weight of sodium hydrosulfite and from 0.1 to 1 percent by weight of sodium tripolyphosphate, calculated on the dry weight of the wood pulp in said suspension, in a solution of a pH ranging from 8.5 to 5.0.

2,862,785

CELLULOSE TRIACETATE FABRICS OF IMPROVED SAFE IRONING TEMPERATURE AND PROCESS OF HEAT TREATMENT TO OBTAIN SAID FABRICS

Donald Flainyson and Boleslaw Krzeslaski, Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain

No Drawing. Application December 28, 1953
Serial No. 400,798
Claims priority, application Great Britain January 1, 1953
11 Claims. (Cl. 8—131)

1. Textile fabrics comprising thermoplastic fibres, said fabrics being capable of being ironed safely at a temperature between 220° and 240° C., all the said thermoplastic fibres consisting of a cellulose triacetate of acetyl value above 59% reckoned as acetic acid, said cellulose triacetate being in that crystalline state in which fibres thereof have a sticking temperature of about 220°–240° C.

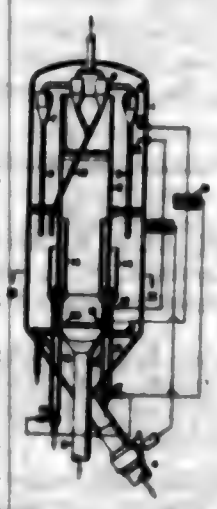
4. Process for the manufacture of textile fabrics comprising thermoplastic fibres yet capable of being ironed safely at temperatures between 220° and 240° C., which comprises heating a fabric comprising thermoplastic fibres all of which consist of a cellulose triacetate of acetyl value above 59% reckoned as acetic acid, the said cellulose triacetate being in that crystalline state in which fibres thereof have a sticking temperature of about 200° C., to a temperature between 120° and 285° C. at least until the cellulose triacetate has been converted into that crystalline state in which fibres thereof have a sticking temperature of about 220°–240° C., the tension on the fabric during the said heating being at most at a value at which the dimensions of the fabric are substantially constant during said heating.

2,862,786

FLUID CATALYST PROCESS AND APPARATUS

Richard P. Trainer, Babylon, N. Y., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

Application June 28, 1955, Serial No. 518,465
2 Claims. (Cl. 23—1)



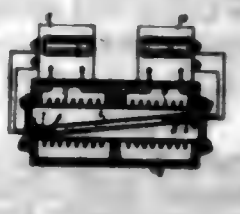
1. In the operation of an upflow fluid catalyst reactor the improvement which comprises maintaining a bed of fluidized catalyst in a reaction zone, continuously introducing reactant vapors and catalyst into the bottom of said bed in said reaction zone at fixed desired rates, continuously withdrawing reactant vapors containing suspended catalyst from the top of said reaction zone the quantity of catalyst carried in suspension being at least equal to the quantity of catalyst in suspension in said vapors introduced, separating at least the major amount of catalyst from the withdrawn suspension and collecting the separated catalyst as a dense bed separate from but contiguous to said first-mentioned fluidized catalyst bed, and maintaining the level of fluidized catalyst in said first-mentioned fluidized catalyst bed at a desired level above the equilibrium level corresponding to said fixed desired rates by transferring catalyst from said second-mentioned dense fluidized bed to said contiguous first-mentioned fluidized bed with steam, the rate of said catalyst transfer and hence the bed level being controlled by control of the steam rate.

2,862,787

PROCESS AND APPARATUS FOR THE PREPARATION OF SEMI-CONDUCTORS FROM ARSENIDES AND PHOSPHIDES AND DETECTORS FORMED THEREFROM

Paul F. Seguin and François F. Gans, Paris, France

Application July 10, 1953, Serial No. 367,334
Claims priority, application France May 27, 1953
6 Claims. (Cl. 23—14)



1. A process for the manufacture of a compound including a metalloid from the group consisting of arsenic, antimony and phosphorus and a metal from the group consisting of aluminum, gallium and indium, comprising the steps of inserting a quantity of one of said metalloids and a quantity of one of said metals into a refractory tube, exhausing and sealing said tube, disposing said tube in an inclined position with one end thereof lower than the other end thereof and with said quantities of metalloid and metal both in the lower end of said tube, heating said lower end to a temperature of substantially 1000° C., simultaneously heating the upper end of said tube to an elevated temperature not greater than 650° C., at which elevated temperature said metalloid has an equilibrium vapor pressure substantially below its equilibrium vapor pressure at 1000° C., whereby said one metalloid distills from said lower end and condenses at the upper end of said tube and exists in said tube in the gaseous state substantially at its equilibrium vapor pressure at said elevated temperature while said metal reacts with said metalloid in the gaseous state, and recovering the compound produced thereby from the tube.

2,862,788

PROCESS FOR PURIFYING IMPURE SOLID-PHASE KAINITE

William N. Stanley, Jr., and William B. Dancy, Carlsbad, N. Mex., assignors to International Minerals & Chemical Corporation, a corporation of New York

Application May 3, 1955, Serial No. 505,717
4 Claims. (Cl. 23—38)

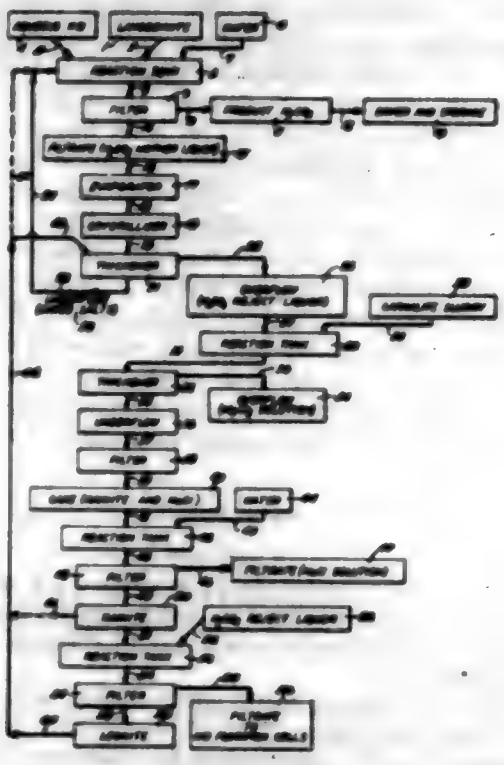
1. A process for purifying impure solid-phase kainite containing solid-phase sodium chloride as an impurity in a proportion between about 5 and about 25% by weight, based on total solids, which comprises slurrying said impure kainite with between about 25 and about 35% by weight of water, based on total solids, at a tempera-

relative to the mother liquor prior to settling are produced, subjecting at least a portion of the acid layer of

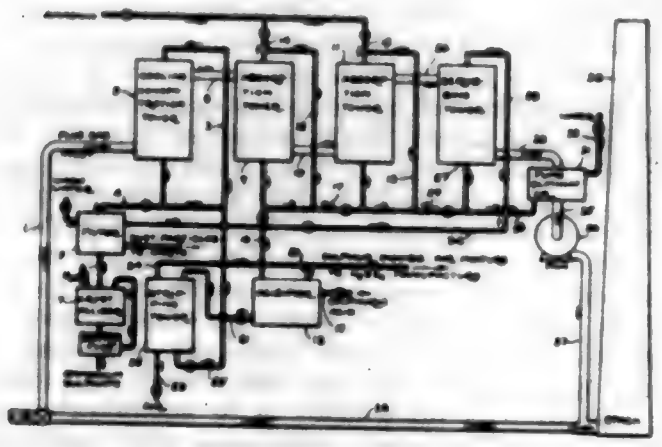
sodium sulfate with lime, the improvement which comprises carrying out the reaction in the presence of

whereby substantially all of the volatile solvent is driven of the wood pulp in said suspension, in alkaline solution

ture of less than about 35° C. for a contact time, less than about 2 minutes, sufficient to selectively dissolve at least about 75% of the solid-phase sodium chloride contained in said impure kainite, and separating solid, purified kainite from the liquid phase.

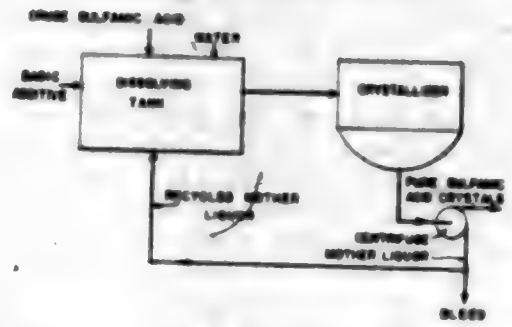


2,862,789
TREATMENT OF FLUE GASES
Wilfred Duncan Burgess, Trail, British Columbia, Canada, assignor to Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a company of Canada
Application May 17, 1954, Serial No. 430,310
4 Claims. (Cl. 23—119)



1. In a process for treating hot combustion gas which contains a finite amount but less than about 1% of sulphur dioxide in which sulphur dioxide is absorbed from the gas in an absorption step with a solution of ammonium sulphites which contains added ammonia and in which absorbent solution is withdrawn from the absorption step and acidified in an acidification step with sulphuric acid thereby releasing sulphur dioxide gas and forming an ammonium sulphate solution which contains dissolved sulphur dioxide, the improvement which comprises the steps of passing, in a cooling step, said hot combustion gas at an initial temperature above about 200° F. in direct contact with an aqueous, essentially ammonium sulphate solution at a temperature below 200° F. which contains dissolved sulphur dioxide whereby said hot combustion gas is cooled to a temperature below 200° F. and the sulphur dioxide and water vapour contents thereof are augmented and the concentration of ammonium sulphate in said aqueous essentially ammonium sulphate solution is increased; continuously withdrawing concentrated ammonium sulphate solution from said cooling step; treating part of said withdrawn ammonium sulphate solution to recover crystalline ammonium sulphate therefrom; circulating the remainder of said withdrawn ammonium sulphate solution to said cooling step for direct contact therein with hot combustion gas; passing cooled combustion gas from the cooling step to the absorption step wherein sulphur dioxide is absorbed in a dilute solution of ammonium sulphites; discharging cooled combustion gas substantially free from sulphur dioxide from the absorption step to the atmosphere; withdrawing dilute solution of ammonium sulphites from the absorption step; acidifying said withdrawn solution of ammonium sulphites with sulphuric acid thereby releasing sulphur dioxide gas and forming dilute ammonium sulphate solution which contains dissolved sulphur dioxide; recovering said released sulphur dioxide gas; and passing said dilute ammonium sulphate solution which contains dissolved sulphur dioxide to said cooling step for direct contact therein with hot combustion gas.

2,862,790
SULFAMIC ACID PURIFICATION
George A. Peirce, Westfield, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application December 27, 1955, Serial No. 555,418
7 Claims. (Cl. 23—166)



1. The process of purifying sulfamic acid comprising dissolving sufficient impure sulfamic acid containing a sulfate impurity in an aqueous liquor to prepare a substantially saturated aqueous solution of impure sulfamic acid; adding to said aqueous solution a basic compound selected from the group consisting of ammonia, ammonium hydroxide, ammonium sulfamate, alkali metal oxides, alkali metal hydroxides and alkali metal sulfamates, said basic compound being added in an effective amount and in an amount insufficient to cause crystallization out of said solution of sulfamate or sulfate of the cation of said basic compound; cooling the aqueous solution to precipitate high purity crystalline sulfamic acid; and removing the precipitated sulfamic acid from the cooled solution.

2,862,791
SULFURIC ACID PURIFICATION
Samuel R. Stiles, Cresskill, N. J., assignor to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware
Application July 8, 1955, Serial No. 520,662
9 Claims. (Cl. 23—172)

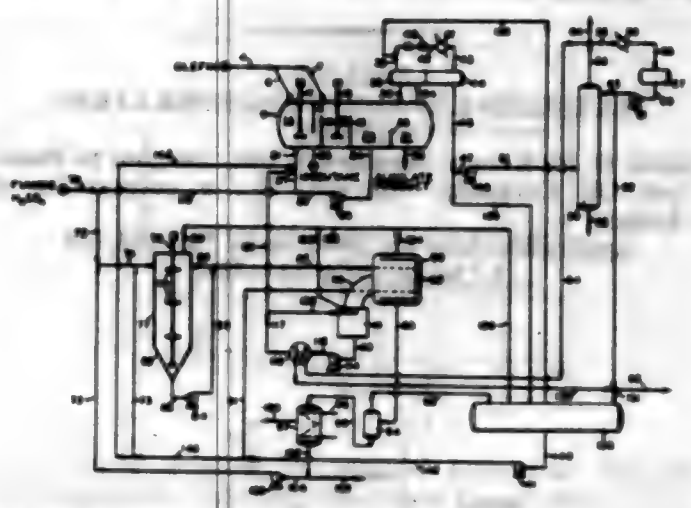
1. In a process wherein sulfuric acid containing a non-polar impurity is subjected to a crystallization temperature to produce sulfuric acid crystals and mother liquor and wherein said crystals are separated from the mother liquor, the improvement which comprises allowing the mother liquor to settle until a layer of non-polar material and a sulfuric acid layer of increased acid concentration

sity and size approximately proportional to the amount of

the improvement which comprises maintaining a bed of

by weight of water, based on total solids, at a tempera-

relative to the mother liquor prior to settling are produced, subjecting at least a portion of the acid layer of increased acid concentration to a crystallization tempera-



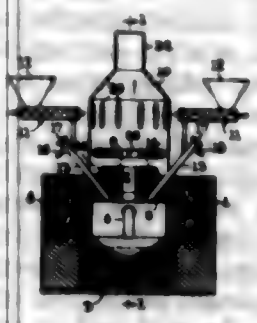
ture for further production of sulfuric acid crystals, and separating sulfuric acid crystals thus formed from said portion of the acid layer.

2,862,792

PROCESS AND APPARATUS FOR THE PRODUCTION OF FINELY DIVIDED POWDERS

Paul Rehm, Grenoble, France, assignor to "Solumeta," Paris, France, a corporation of France

Application May 16, 1955, Serial No. 508,757
Claims priority, application France May 28, 1954
12 Claims. (Cl. 23—182)



1. A continuous process for producing finely divided refractory oxides comprising the steps of: feeding a mixture of mineral oxide and a reducing agent into an enclosed electric arc furnace comprising electrodes; passing a current between the electrodes so as to produce an arc, heating of the mixture, and at least partial reduction of said mineral oxide to produce gaseous reduction products; supplying an inert gas to the furnace to continuously sweep the reduction products therefrom and into a separate oxidizing zone; automatically varying the volume of the inert sweep gas supplied to the furnace with variation in the intensity of the arc current, whereby the intensity of the current is maintained substantially constant; cooling said reduction products upon their entrance into said zone; contacting the cooled reduction products in said zone with a gaseous oxidizing medium to oxidize said reduction products and to thereby produce the refractory oxide in a finely divided, solid state suspended in combustion gases, and separating the finely divided oxide from the combustion gases.

2,862,793

METHOD OF PREPARING CAUSTIC SODA

Karl H. Lauer, Tuscaloosa, Ala., assignor to Columbia-Southern Chemical Corporation, Allegheny, Pa., a corporation of Delaware

No Drawing. Application November 16, 1956
Serial No. 622,518
3 Claims. (Cl. 23—185)

1. In the process of producing caustic soda by reacting sodium sulfate with lime, the improvement which comprises carrying out the reaction in the presence of an aliphatic polyhydric alcohol-water solvent.

2,862,794

PROCESS FOR THE MANUFACTURE OF HYDROGEN PEROXIDE

Charles Dufraisse, André Etienne, and Edmond Toromanoff, Paris, France, assignors to l'Etat Français Societe d'Electrochimie, d'Electrometallurgie et des Aciéries Electriques d'Ugine, and l'Air Liquide, Societe Anonyme pour l'Etude de l'Exploitation des Procedes Georges Claude, both of Paris, France

No Drawing. Application July 27, 1953
Serial No. 370,634
Claims priority, application France September 25, 1952
5 Claims. (Cl. 23—207)

1. A process for the manufacture of hydrogen peroxide comprising hydrogenating, then oxidizing an organic substance in a suitable solvent to form hydrogen peroxide, then extracting the hydrogen peroxide formed by washing with distilled water and recovering the organic substance, in which the organic substance is selected from the group consisting of phenazine, its alkyl derivatives and its carboxylic derivatives.

2,862,795

PROCESS OF SYNTHESIZING SILICON CARBIDE

Edwin C. Lowe, Niagara Falls, Ontario, Canada, assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Application December 4, 1953, Serial No. 396,255
8 Claims. (Cl. 23—208)

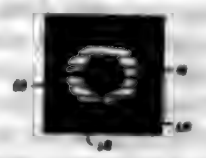
1. Process of synthesizing silicon carbide which comprises heating in a container a mixture of silica and coke both in solid phase to a reaction temperature which is below the melting point of silica for at least one hour, and never rises to the melting point of silica, thereby causing some carbon of the coke to remove the oxygen of the silica and thereby causing the resulting silicon to combine with more carbon of the coke to form silicon carbide of cubic crystallinity in a solid phase reaction.

2,862,796

METHOD AND MEANS FOR TESTING AQUEOUS SOLUTIONS FOR PRESENCE OF PROTEIN

Edward N. Gomberg, Torrance, Calif.

Application July 20, 1953, Serial No. 368,957
6 Claims. (Cl. 23—230)

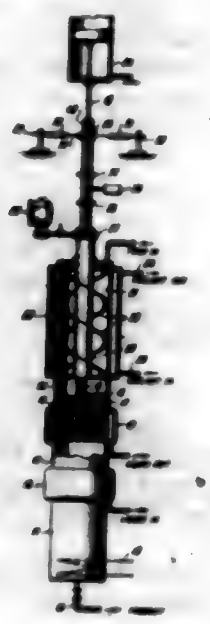


3. A method of spot testing a liquid for protein content on a porous paper which is inert to said liquid, which includes the steps of: placing a drop of said liquid at a point on said porous paper, said porous paper being impregnated with an alkaloid reagent whereby to coagulate substantially all the protein in said liquid in a restricted area within the pores of said paper; and contacting said coagulated protein with a measured amount of water-soluble acidic protein-reactive coal-tar dye solution whereby to color-delineate said restricted area of protein, the color-delineation of said restricted area having an inten-

liquid phase of said alcohol while leaving substantially

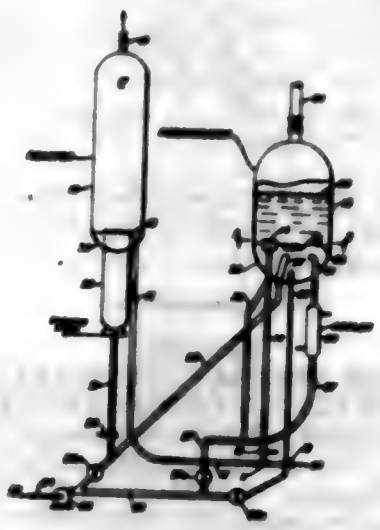
sity and size approximately proportional to the amount of protein in said restricted area thereby furnishing a semi-quantitative determination of the amount of said protein in said liquid.

2,862,797
CRYSTAL PURIFICATION APPARATUS
Dwight L. McKay, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application October 5, 1953, Serial No. 384,146
9 Claims. (Cl. 23—273)



7. Apparatus for crystallization of at least one component in a liquid mixture and purification of the crystals produced comprising an elongated column, closed at each end and having an inlet at one end and an outlet at the other end; a jacketed section of said column adjacent said inlet for circulation of coolant to freeze crystals to be purified; an auger positioned in said jacketed section to move crystals toward the outlet of said column; a first power source operatively connected to said auger so as to turn said auger; a liquid pervious, crystal impervious filter communicating between the exterior of the column and the interior of the column at a point intermediate the jacketed section and the outlet of the column; a heater positioned in said column adjacent said outlet intermediate said outlet and said filter; a valved piston assembly reciprocably positioned in said column intermediate said jacketed section and said filter in sealing contact with the column wall comprising a first piston plate having a plurality of openings communicating between the interior of the column upstream and downstream of said piston assembly with respect to the flow of crystals; a piston shaft operatively connecting said first plate to a second source of power to reciprocate said piston; a second piston plate positioned adjacent and upstream to said first plate and having openings therethrough matching those of said first plate; a tube connected to said second plate at its upstream side encircling said piston shaft and having a circumferential slot therethrough; a pin secured to said shaft and projecting through said slot; a third power source operatively connected to said tube to rotate said tube a partial turn so as to place the openings in said plates in alignment and out of alignment; a pair of projections extending from said tube and spaced apart substantially equal to the length of stroke of said reciprocating piston; a trigger positioned so as to be actuated by said projections and operatively connected to said third power source to rotate said tube so as to place the openings of said plates in alignment when the piston is travelling countercurrent to the flow of crystals and out of alignment when the piston is travelling concurrent to the flow of crystals.

2,862,798
FLUIDIZED CATALYST REGENERATION SYSTEM
Claude O. McKinney, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application June 11, 1954, Serial No. 436,148
2 Claims. (Cl. 23—288)



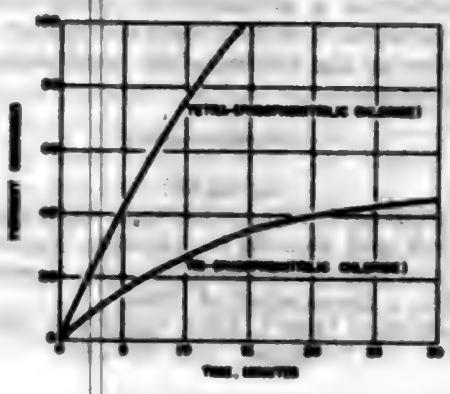
1. An improved catalyst distribution system for use in supplying spent catalyst and regenerating gases to a regenerator chamber which comprises in combination a vertically elongated contacting vessel, a distribution grid across the flow area of such vessel and vertically spaced from the bottom of said vessel thereby providing a distribution chamber below the regenerator chamber, first duct means supplying gasiform fluids and solids to said distribution chamber, said duct means comprising dual ducts projecting through the bottom of said chamber and discharging below the grid and in proximity thereto, a baffle means fixed to said grid and substantially in alignment with the said duct means, said dual ducts discharging gasiform fluids and catalyst onto said baffle, second duct means supplying auxiliary gasiform fluid to said distribution chamber near the bottom thereof and adapted to resuspend solids deflected by said baffle, said second duct and said baffle being in substantially vertical alignment, a third duct means discharging laterally into said distribution chamber in the upper part thereof below said baffle, a cooler on said third duct means, and fourth duct means conveying catalyst downwardly from said distribution chamber into said third duct means whereby catalyst is cooled and recirculated to the distribution chamber.

2,862,799
SEPARATION OF TRI-(PHOSPHONITRILIC CHLORIDE)
Harry R. Dittmar, Royal Oak, Mich., and John H. Barney, Orangeburg, S. C., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware
Application June 20, 1955, Serial No. 516,766
4 Claims. (Cl. 23—312)

1. The process of separating substantially pure tri-(phosphonitrilic chloride) from a mixture comprising tri-(phosphonitrilic chloride) and at least one higher polymer thereof which comprises contacting said mixture with a liquid alcoholate-free monohydric alcohol at a temperature from between about 0 to about 100° C. and for a period of time from about 10 to about 250 minutes thereby causing said higher polymer to pass into the

2,862,885
ly fixedly uniformly circumferentially positioning an elon-

liquid phase of said alcohol while leaving substantially pure tri-(phosphonitrilic chloride) in the solid state, and



removing as a solid by physical separation said tri-(phosphonitrilic chloride) from said liquid phase.

2,862,800
GASOLINE FUELS
Troy L. Cantrell, Drexel Hill, and Earl E. Fisher, Glenolden, Pa., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application November 6, 1956
Serial No. 620,587
6 Claims. (Cl. 44—66)

1. A gasoline fuel composition comprising a major amount of a hydrocarbon mixture that boils in the gasoline range, that has a 50 percent ASTM distillation point of not more than about 220° F., and that normally tends to promote stalling of internal combustion engines, and a small amount, sufficient to reduce the stalling tendencies of the composition, of a mixture of a fatty acid containing 12 to 24 carbon atoms and a salt of a fatty acid of the class indicated and a low molecular weight amine selected from the group consisting of dialkylol and trialkylol amines whose alkylol groups contain 2 to 4 carbon atoms each, the fatty acid:amine salt weight ratio being in the range of about 0.25:1 to 4:1, said small amount being about 0.002 to about 0.25 percent by weight of the composition.

2,862,801
GASOLINE FUELS
Earl G. De Witt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application November 5, 1953
Serial No. 390,427
10 Claims. (Cl. 44—69)

1. A fuel composition suitable for use in spark ignition internal combustion engines consisting essentially of a liquid petroleum hydrocarbon fuel of the gasoline boiling range, an antiknock quantity of an organolead antiknock agent, and β-(chloropropyl)-thionophosphate, the phosphorus-to-lead atom ratio being from about 0.1:3 to about 1:3.

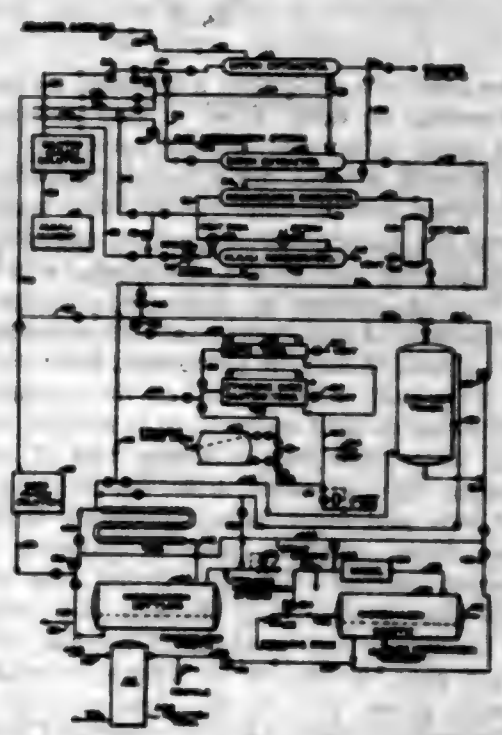
2,862,802
Johan C. D. Oosterbout, Port Arthur, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application November 18, 1954
Serial No. 469,827
9 Claims. (Cl. 44—78)

1. A composition consisting essentially of a light petroleum distillate having incorporated therein a rust inhibiting amount, oxidized macrocrystalline paraffin wax having a Neut. No. between 60 and 100, a Sap No. between 200 and 300, a Neut. No. to Sap. No. ratio between 0.25 and 0.4, and an unsaponifiable content less than about 40%.

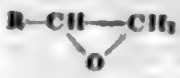
2,862,803
PREVENTION OF RUST IN PIPE LINES AND TANKERS WITH ACID-TYPE WAX OXIDATE
Johan C. D. Oosterbout, Port Arthur, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application March 7, 1955
Serial No. 492,746
5 Claims. (Cl. 44—78)

1. A composition consisting essentially of a petroleum distillate having incorporated therein a rust inhibiting amount, oxidized macrocrystalline paraffin wax having a Neut. No. between 200–300, a Sap. No. between 282–430, a Neut. No. to Sap. No. ratio above 0.6, and an unsaponifiable content less than 40%.

2,862,804
PROCESS FOR SWEETENING AND STABILIZING HYDROCARBONS WITH AN ORGANIC EPOXIDE AND AN AQUEOUS ALKALINE PHENOL
Charles O. Petty, Tyler, Tex., assignor to La Gloria Oil and Gas Company, Tyler, Tex., a corporation of Delaware
Application December 21, 1955, Serial No. 565,289
24 Claims. (Cl. 44—76)

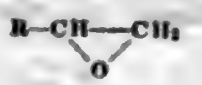


1. The process of sweetening hydrocarbon liquids comprising contacting the mercaptan-containing hydrocarbon liquid with less than about 0.05% by weight of an organic epoxide having the formula



wherein R is a member of the group consisting of hydrogen, aliphatic hydrocarbon, cycloaliphatic hydrocarbon, aromatic hydrocarbon and chloromethylene and with an aqueous alkaline phenolic solution.

21. Gasoline stabilized against oxidation in storage containing a small quantity, as a stabilizer therefor, of the reaction product of an organic epoxide having the formula

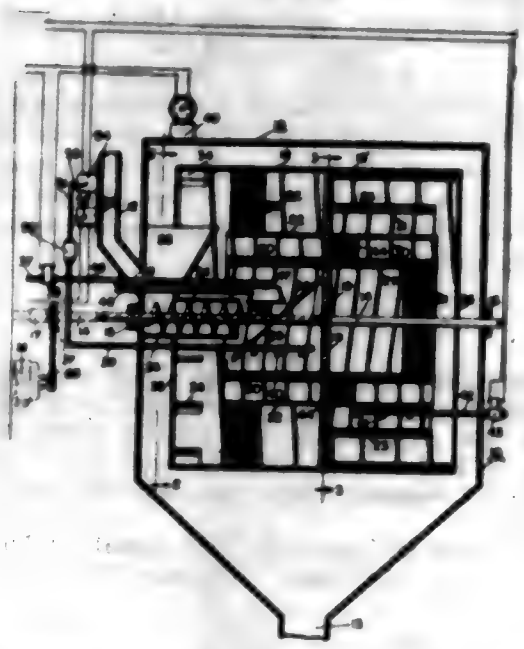


wherein R is a member of the group consisting of hydrogen, aliphatic hydrocarbon, cycloaliphatic hydrocarbon, aromatic hydrocarbon and chloromethylene with mercaptans contained as an extract in a spent caustic soda solution further containing phenols extracted from sour hydrocarbon liquid.

a shaft furnace in countercurrent to a hot current of reducing gas comprising hydrogen and nitrogen at a tem-

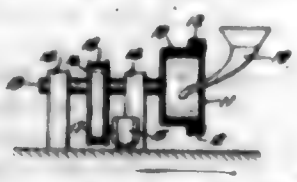
2,862,811
CONTINUOUS IRON AND STEEL MAKING PLA

2,862,805
DRY LIME ACETYLENE GENERATOR
George E. Hellig, Portland, Oreg.
Application May 6, 1957, Serial No. 657,868
9 Claims. (Cl. 48—33)



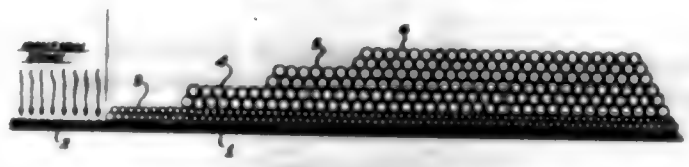
1. In an acetylene generator, a housing, an inner drum in said housing, an outer drum in said housing coaxial with said inner drum and spaced outwardly therefrom the axial length of said outer drum exceeding that of said inner drum and the ends of said outer drum extending beyond the corresponding ends of said inner drum, means for rotating said drums, a calcium carbide hopper in said housing, means for delivering calcium carbide from the bottom of said hopper into the receiving end of said inner drum, means in said inner drum for moving material from said receiving end to the opposite end of said inner drum as said inner drum is rotated, means for delivering water into said receiving end of said inner drum, means in said outer drum for moving material delivered into said outer drum oppositely from that in said inner drum, whereby material dropping off from said opposite end of said inner drum onto said outer drum will then move along through said outer drum, a screen forming a portion of the cylindrical wall of said outer drum near the end of the course of said material in said outer drum, whereby fine lime particles resulting from gas generation will, upon reaching said screen, drop through said screen into the bottom of said housing, and a series of cups on the inside of said outer drum beyond said screen, said cups passing above the top of said hopper with the rotation of said outer drum, whereby material which has not been completely utilized for gas generation when reaching said cups will be returned to said hopper for renewed travel through said drums.

2,862,806
MOLDED ROTATIVE ABRASIVE ARTICLES AND METHOD OF MAKING
Leonard R. Nestor, St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application May 2, 1955, Serial No. 505,330
11 Claims. (Cl. 51—295)



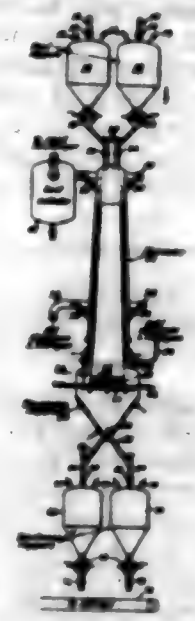
1. In a method for making accurately balanced molded rotative abrasive articles, the steps comprising centrifugally fixedly uniformly circumferentially positioning an abrasive mixture including abrasive grains and a resinous abrasive binder in liquid form within a centrifugal mold rapidly rotating at a speed above which no substantial change in position of said mixture will occur, and permanently hardening the binder while maintaining said mixture in said position.

2,862,807
UPDRAFT PELLETIZING METHOD
Louis J. Erck and Donald C. Violetta, Negaunee, Mich., assignors to The Cleveland-Cliffs Iron Company, Cleveland, Ohio, a corporation of Ohio
Application May 2, 1957, Serial No. 656,552
7 Claims. (Cl. 75—5)



1. The method of agglomerating finely-divided, raw, iron ore concentrates in which the major portion of the iron ore is present in the form of a compound selected from the group consisting of hematite and magnetite which comprises the steps of forming green balls of said concentrates in various sizes consisting essentially of diameters ranging between about −⅜ inch and +¼ inch and diameters ranging between about −½ inch and about +⅝ inch, making a constantly moving firing bed by establishing a first layer of thickness ranging between about 4 inches and about 8 inches of solid fuel-bearing green balls of the −⅜ inch to +¼ inch size on an incandescent moving bed, updraft firing the green balls in said first layer to produce indurated pellets, laying a second layer of green balls of the −½ inch to +⅝ inch size on the first said layer, the thickness of said second layer being restricted so that the green ball burden is completely indurated, and updraft firing the green balls in the second layer when firing of the green balls in the first layer has been completed.

2,862,808
APPARATUS AND METHOD FOR REDUCING IRON OXIDE PELLETS
Fredrik W. de Jahn, Scarsdale, N. Y., assignor of one-half to Alan N. Mann, Scarsdale, N. Y.
Application July 31, 1957, Serial No. 675,297
4 Claims. (Cl. 75—34)



1. A process of reducing porous pellets of iron oxide which comprises passing such pellets downwardly through

fibers requiring a lesser degree of digestion thus by-pass- comprising about 50% to about 90% by weight of lead

a shaft furnace in countercurrent to a hot current of reducing gas comprising hydrogen and nitrogen at a temperature of between 1300° F. and 1600° F. and at a pressure of between 25 and 400 pounds per square inch whereby the pellets are heated to a temperature of at least 1300° F. and reduced, and then without withdrawing such pellets from the shaft, continuing their downward movement through a rising zone of cold gas of like composition and pressure to the said hot gas whereby the pellets give up their heat to such gas which thereafter blends with the hot gas and the temperature of the pellets is lowered to below 800° F., then as the pellets emerge from the furnace and while still surrounded by the reducing gas, subjecting them to mechanical agitation to separate adhered pellets, and finally gradually cooling the pellets and withdrawing them from the reducing atmosphere.

2,862,809

SODA ASH BRIQUETTE AND ITS METHOD OF MANUFACTURE

Donald D. Threlkeld, Brandenburg, Ky., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application August 14, 1956
Serial No. 603,874
7 Claims. (Cl. 75—55)

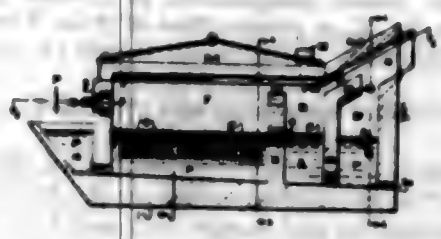
1. A method for the manufacture of briquettes which comprises admixing light soda ash and from about 0.5 to 5 percent by weight, based on the weight of the soda ash, of at least one liquid material selected from the group consisting of diethylene glycol and triethylene glycol, to form an intimate mixture, and thereafter forming the mixture into briquettes by the application of pressure.

2,862,810

PROCESS AND APPARATUS FOR REDUCING THE SILICON CONTENT AND INCREASING THE TEMPERATURE OF MOLTEN PIG IRON

Georges Alexandrovsky, New York, N. Y.

Application September 28, 1954, Serial No. 457,138
Claims priority, application France February 2, 1950
13 Claims. (Cl. 75—60)



3. A process for reducing the silicon content and increasing the temperature of molten pig iron, said process comprising forming a portion of the pig iron into a pool and while maintaining said pool free from temperature reducing additions continuously feeding the balance of the pig iron to and from said pool respectively at interspaced locations while blowing air through the pool between said locations to burn the silicon and raise the temperature of the pig iron feeding from the pool, and while controlling the rates of said feeding and blowing to maintain the temperature of the pig iron feeding from said pool at about 1400° C., the pressure of said air being sufficient to throw some of the pig iron from said pool and a space above said pool being confined by refractory material so as to force this thrown pig iron to return to said pool.

2,862,811

CONTINUOUS IRON AND STEEL MAKING IN A ROTARY VESSEL

Sven Gustav Harald Ekstorp and Sven Hjalmar Backström, Borlange, Sweden, assignors to Stora Kopparbergs Bergslags Aktiebolaget, Domnarvet, Sweden

Application September 12, 1955, Serial No. 533,663
Claims priority, application Sweden September 14, 1954
5 Claims. (Cl. 75—60)

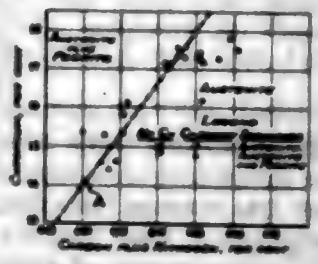
1. A method or refining molten iron which comprises supplying iron material and slag forming material to an annular body thereof in a vessel which is rotating on a vertical axis, said vessel having a charging opening at its upper end and a tapping hole at its lower end, and withdrawing refined iron and slag from said body through said tapping hole at a rate such as to maintain said body, and refining said iron material by continuously introducing oxygen into the space surrounded by said annular body.

2,862,812

SUBSTANTIALLY NICKEL-FREE AUSTENITIC AND CORROSION RESISTING Cr–Mn–N STEELS

Edward J. Dulis and Peter Payson, Pittsburgh, Pa., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey

Application May 16, 1958, Serial No. 735,988
5 Claims. (Cl. 75—125)



1. An alloy steel consisting essentially of about: 11 to under 14% manganese, 14 to 18% chromium, up to 2% copper, up to 3% silicon, 0.15 to 0.4% nitrogen, up to 0.15% carbon, the minimum carbon plus nitrogen content being related to the chromium content in accordance with the following equation, percent (C+N) min.=0.075 (percent Cr—12.5)+0.1, balance substantially iron, said alloy being characterized by an wholly austenitic structure as quenched from 2300° F. and by good corrosion resistance to atmospheric exposure.

2,862,813

SEMI-CHEMICAL PULPING PROCESS

Clarence Birdseye, Gloucester, Mass., assignor to Process Evaluation and Development Corporation, New York, N. Y., a corporation of Delaware

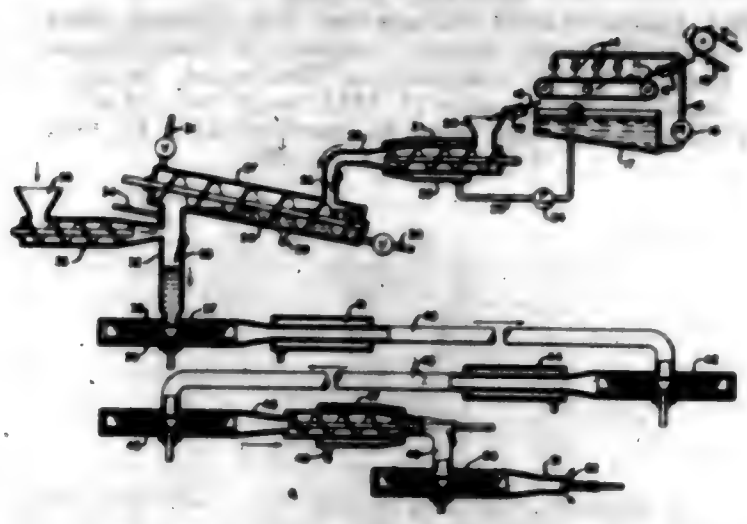
Application December 23, 1952, Serial No. 327,623
5 Claims. (Cl. 92—6)

1. In a continuous process of pulping vegetable material, the steps of wetting pieces of the raw material under atmospheric conditions with digestant solution, adding further solution to the wetted pieces at more than atmospheric pressure, advancing and simultaneously partially cooking the mixture thus formed, then adding to the partially cooked mixture additional pith and short fine

portions of a photographic base carrying photographic in the fractionating zone, removing the gas from the zone

rotative abrasive articles, the steps comprising centrifugal- which comprises passing such pellets downwardly through

fibers requiring a lesser degree of digestion thus by-passing the initial steps of the process, shredding the material



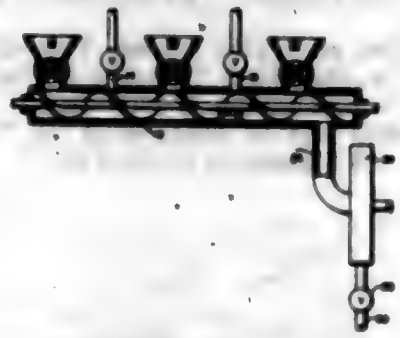
thus collected, and conducting the mixture of partially cooked and raw materials through a digesting zone.

2,862,814

UTILIZATION OF PITH IN THE MANUFACTURE OF PULP

Clarence Birdseye, Gloucester, Mass., assignor to Process Evaluation and Development Corporation, New York, N. Y., a corporation of Delaware

Application March 9, 1955, Serial No. 588,225
13 Claims. (Cl. 92—6)



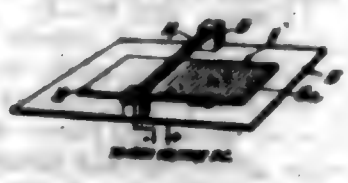
1. The process of making pulp from plants of the family Gramineae comprising separating the plants into at least two fractions, one fraction consisting predominantly of long sclerenchymatous fiber bundles and the other fraction consisting predominantly of parenchymatous material, contacting the sclerenchymatous fraction with a digestant solution under digesting conditions and then adding the parenchymatous fraction after the sclerenchymatous fraction has been partially digested, whereby the parenchymatous fraction is subjected to a differential, less intense cooking under the same pressure and in the same vessel as the sclerenchymatous fraction and simultaneously therewith.

2,862,815

ELECTROPHOTOGRAPHIC MEMBER

Meyer L. Sugarman, Jr., Princeton, and Alexander J. Moncrieff-Yeates, Princeton Junction, N. J., assignors to Radio Corporation of America, a Delaware corporation

Application October 1, 1953, Serial No. 383,678
5 Claims. (Cl. 96—1)



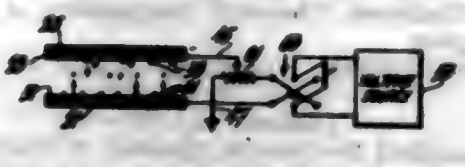
1. A process of printing which comprises providing a backing sheet having a surface coated with a composition comprising about 50% to about 90% by weight of lead iodide suspended in an electrically-insulating, film-forming, resinous, organic binder selected from the class consisting of polystyrene, silicone, phenoformaldehyde, cellulose ether and cellulose ester, said organic binder correspondingly comprising 50% to 10% by weight of said composition, said surface coating having a volume resistivity greater than said backing sheet, forming an electrostatic image on said coated surface, applying an electroscopic powder to said electrostatic image to render it visible and fixing said image to said coated surface.

2,862,816

METHOD OF AND MEANS FOR REDUCING TRIBOELECTRIC FORCES IN ELECTROPHOTOGRAPHY

Alexander J. Moncrieff-Yeates, Cranbury, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application March 26, 1954, Serial No. 419,868
3 Claims. (Cl. 96—1)



1. A method of rendering visible an electrostatic image with a developer powder which comprises positioning the electrostatic image between an upper electrode and a lower electrode having on its upper surface a coating of a material comprising a continuous film integral with said surface, said material having a position in the triboelectric series substantially the same as the position of the developer powder material and having a thin layer of said developer powder resting upon the upper surface of said coating and applying a voltage between the electrodes whereby the powder becomes charged and is attracted to and deposits upon the electrostatic image producing a visible image.

2,862,817

CRYSTALLINE SELENIUM PLATE

Carl L. Meyer and Paul G. Andrus, Columbus, Ohio, assignors, by mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

No Drawing. Application March 14, 1955
Serial No. 511,415
(Filed under Rule 47(a) and 35 U. S. C. 116)
1 Claim. (Cl. 96—1)

A xerographic plate having substantial sensitivity in the red spectral range comprising an electrically conductive backing support and pressed onto and into the surface of said electrically conductive support and in close electrical contact therewith a uniform layer of photoconductive insulating monoclinic selenium crystals firmly imbedded in said support, the plate being capable of accepting and retaining an electric charge in the absence of activating radiation and of dissipating said charge upon exposure to activating radiation including radiation in the visible red spectral range.

2,862,818

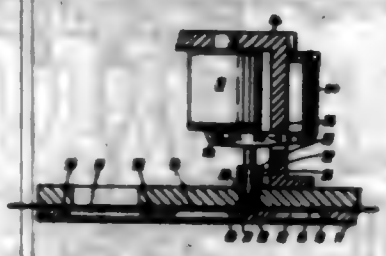
CONTINUOUS EXPOSURE-PROCESS-VIEW PROCESS WITH LIGHT SEALING MEANS

Frank Tyler, Christopher H. C. Walker and Eustace R. Townley, Glasgow, Scotland, assignors to Kelvin & Hughes Limited, Glasgow, Scotland

Application May 3, 1955, Serial No. 505,825
Claims priority, application Great Britain May 4, 1954
4 Claims. (Cl. 96—27)

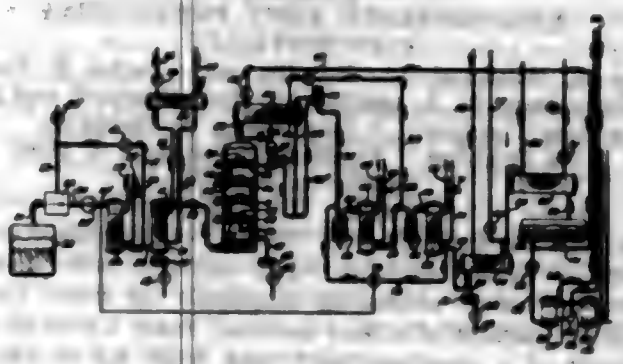
1. A photographic process comprising the steps of simultaneously exposing, processing and viewing different

portions of a photographic base carrying photographic material at different positions along its length, moving and guiding said base so that exposed portions move first to the processing position and then to the viewing position, and crimping said base at positions located between successive portions while said positions are disposed between the exposure position and the processing position, said crimping forming a valley in the strip at each such positions, the angle of the valley being selected such that the light which is required for viewing and which is transmitted along the base, is incident on the surface of the base at an angle less than the critical angle for total reflection of light in the base whereby this light is refracted out of said base before reaching the unprocessed and unexposed parts of said material.



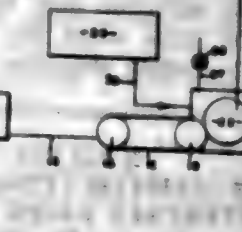
3. An apparatus for carrying out the process of claim 1, comprising upper and lower guide surfaces, means for moving the sheet base through the guide surfaces, openings in one guide surface for exposure, processing and exhibiting respectively, a crimping recess in one of said surfaces, an opening in the other of said surfaces between the said exposure and processing openings, a reciprocable member in said latter opening for pressing the film into said recess, and means for operating said member in timed relation with the sheet base moving means.

2,862,819
APPARATUS FOR AND METHOD OF REMOVING IMPURITIES FROM HIGHLY VOLATILE GAS
Olaf A. Hougen, Madison, Wis., and Aksel L. Lydersen, Trondheim, Norway, assignors to Miller Brewing Company, Milwaukee, Wis., a corporation of Wisconsin
Application August 5, 1954, Serial No. 448,074
10 Claims. (Cl. 99—49)



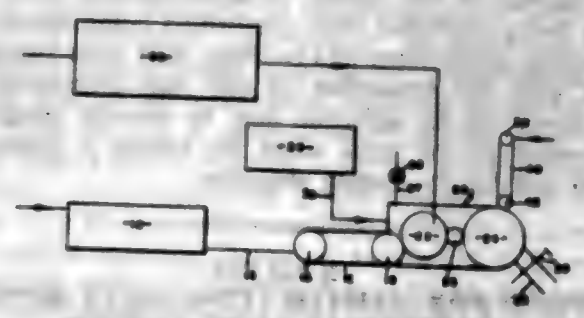
4. In a method of removing impurities including water and alcohol from evolved fermentation gases in a brewery prior to the reintroduction of said gases into the beer, the steps of collecting the fermentation gases together with their water and alcohol vapors, passing the collected gas upwardly through a fractionating zone having superimposed pools which contain alcohol in solution to thereby enrich the alcoholic content of the condensible portion of the fermentation gases, discharging said gases from the fractionating zone, thereafter cooling said gases to a low temperature substantially lower than 32° F. and condensing an aqueous condensate including a high percentage of alcohol while maintaining said cooling temperature above the freezing point of the condensate to prevent ice formation, and continuously refluxing substantially all of said condensate to an upper pool of the fractionating zone, thereby automatically maintaining the alcoholic content in the fractionating zone, removing the gas from the process in dry form, reducing said dried gas to a liquid state and storing in said state, returning said stored liquid to a gaseous state, and reintroducing the latter into the beer.

2,862,820
CONE SHELL FOR FROZEN CONFECTION
Robert Rex Dewale, Beaver Falls, Pa.
Application June 3, 1955, Serial No. 512,984
2 Claims. (Cl. 99—89)



1. A compactly nestable cone shell for frozen confection having a body whose lower portion is conical and whose upper portion is generally conical, the upper portion consisting of a connected series of at least three substantially cylindrical segments whose inside diameters vary by substantially uniform amounts; the interior of the cone shell being entirely free of any annular rings, radial ribs or other projections or reinforcements, so that the nested cone shells have a minimum of voids.

2,862,821
METHOD OF ASEPTICALLY CANNING FOOD PRODUCTS
Paul C. Wilbur, San Jose, and Robert A. Whitmore, Saratoga, Calif., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application June 22, 1954, Serial No. 438,390
8 Claims. (Cl. 99—182)



1. The method of aseptically preserving a sterile food product in a container, which comprises subjecting the container to an enclosed atmosphere of saturated steam at a sterilizing temperature for a period of time sufficient to attain sterilization of the container, introducing the sterilized container into a confined pre-sterilized space maintained in sterile condition by the continuous flow therethrough of a sterile gas at a temperature below the boiling point of water and simultaneously blocking the flow of said sterile gas from said confined space toward said steam atmosphere, filling the container while in said confined sterile space with a sterile food product at a temperature below the boiling point of water, sealing the filled container with a pre-sterilized lid while in said confined sterile space, and discharging the sealed container from said confined sterile space by gravity with and along the discharge path of the sterile gas flowing through said confined space.

2,862,826
MOLD MATERIAL FOR CASTING GROUP IVb

substance bonding together said refractory particles, said

2,862,822

METHOD FOR PRESERVING FOOD PRODUCTS IN SEALED CONTAINERS OF VITREOUS MATERIAL

Robert A. Whitmore, Saratoga, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Application July 7, 1954, Serial No. 441,764
4 Claims. (Cl. 99—182)

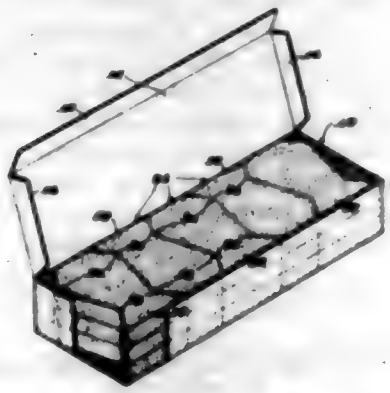
1. The method of preserving a food product in a frangible vitreous container, which comprises subjecting the container to saturated steam for a period of time sufficient to adequately sterilize its surfaces but insufficient to heat more than a thin outer stratum thereof to a sterilizing temperature, filling a relatively cool sterile product immediately thereafter within a sterile atmosphere into the container, and closing the filled container while in said sterile atmosphere with a presterilized lid.

2,862,823

FROZEN FOOD PACKAGE

Thomas S. Gorton, Jr., Cambridge, Mass.

Application March 14, 1956, Serial No. 571,526
2 Claims. (Cl. 99—195)



1. A food package comprising a flexible carton and a plurality of individual food units of fish material preformed into predetermined identical shapes, said units having vertical sides and flat top and bottom surfaces and being closely packed within and substantially filling the interior of the carton, adjacent vertical sides of the units being provided with preformed complementary interlocking projections and recesses, said units being packaged with the projection of one unit interlocked with the recess of an adjacent unit to prevent longitudinal movement of the units when the carton is subjected to blows and flexure during shipment.

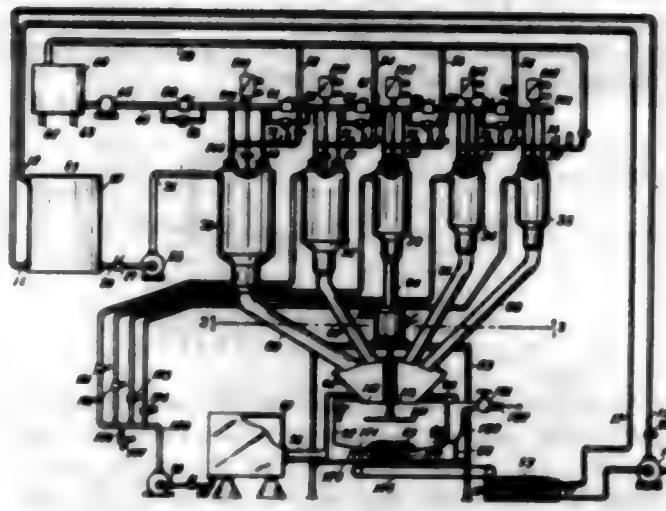
2,862,824

METHOD FOR DEHYDRATING HEAT SENSITIVE MATERIALS FROM LIQUIDS

Elwood P. Wennelberger, Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N. Y., a corporation of New York

Application September 14, 1953, Serial No. 380,971
1 Claim. (Cl. 99—205)

In a method of dehydration of a liquid fruit juice composition the steps comprising freezing the water in the composition by abstracting heat through a heat exchange area until the ice forming temperature of the composition is lowered to the temperature on the opposite side of the heat exchange area, continuously separating minute ice crystals from the heat exchange area as formed and distributing them in the composition, agitating the composition to control crystal growth and prevent agglomeration, removing the crystals grown to maximum size for the imposed cooling conditions, said separating of the ice crystals comprising collecting the resultant slushy mass of ice crystals and occluded juice in a common hopper, distributing the slushy mass evenly into a centrifuge having perforated side walls, centrifuging the same, separating the juice from the ice crystals, simultaneously draining away the juice thus separated and which juice is centrifugally thrown against the side walls of the centrifuge and flows outwardly through the perforated side walls thereof and is collected, discharging the ice crystals from the centrifuge through a discharge opening in the bottom thereof under an air blast which is directed against the perforated side walls of the centrifuge whereby said ice crystals are forced away



from said side walls and disposed centrally of the centrifuge and discharged through said opening therein, repeating the freezing of ice in the more concentrated solution by application of lower temperature, again separating minute ice crystals from the heat exchange area as formed and distributing them in the partially concentrated composition, again agitating the composition to control crystal growth, again separating crystals from the concentrated composition, and maintaining the temperature differential between the repeated freezing treatments to approximately 5 to 7° F.

2,862,825

EMULSIFIABLE RUST PREVENTIVE CONCENTRATE

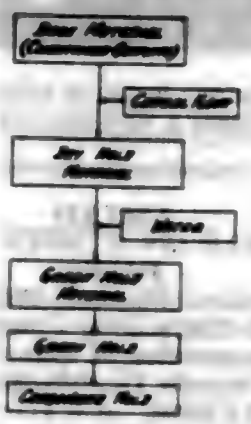
Roy A. Westlund, Jr., Roselle, and Charles E. Paxton, Jamesburg, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application February 2, 1956
Serial No. 562,928
5 Claims. (Cl. 106—14)

1. An emulsifiable rust preventive composition that forms a stable emulsion when admixed with 1 to 10 parts of water, consisting essentially of from 72.0 to 95.0 wt. percent of a base material, from 1.0 to 10.0 wt. percent of a coupling agent, and from 1.0 to 18.0 wt. percent of a balancing agent, said base material consisting essentially of from about 10.0 to 25.0 wt. percent of a mineral oil having a viscosity at 100° F. of about 90 to about 500 SUS, about 10.0 to 25.0 wt. percent of an alkali metal salt of a sulfonic acid having an average molecular weight of from about 420 to about 500 and about 20.0 to about 50.0 wt. percent of a neutral degras, said coupling agent being selected from the group consisting of glycol ethers and polyglycol ethers having from about 5 to 15 carbon atoms and said balancing agent being selected from the group consisting of a mixture of a polyhydroxy amine and water having a water/amine ratio within the range of from 4/1 to 14/1 and a mixture of a polyalkylene derivative of a fatty amine having from 10 to 18 carbon atoms and water, said last mentioned mixture having a water/amine ratio of about 1/1 to 14/1, said percentages being based on the weight of the total composition.

aggregate, consisting essentially of bituminous material the resultant coated article at a temperature of between

2,862,826
MOLD MATERIAL FOR CASTING GROUP IVb METALS AND METHOD OF MAKING SAME
Frank X. Hohn, St. Louis, and Francis H. Hohn, Webster Groves, Mo., assignors, by mesne assignments, to Universal Marion Corporation, Jacksonville, Fla., a corporation of the District of Columbia
Application August 13, 1956, Serial No. 603,663
11 Claims. (Cl. 106—38.23)



5. A cured mold for making group IV*b* metal castings comprising a substantially non-reactive facing consisting essentially of a granular graphite base and a carbonized binder of a corn flour derivative, said facing having a substantially uniform thickness of between ½ and 6 inches, and a backing of other mold material.

10. A dried metal founding mold adapted to be carbonized to remove gaseous matter therefrom for casting reactive metals without substantial contamination, consisting essentially of about 95.8% to 98.9%, by weight, of granular graphite, and about 4.2% to 1.1%, by weight, of a corn flour derivative.

2,862,827
CERAMIC BODIES AND METHODS FOR PRODUCING SAME
Joseph Boyce, Beaver Falls, and Karl Kautz, Pittsburgh, Pa., assignors to Vitro Corporation of America, Verona, N. J.
No Drawing. Application May 28, 1954
Serial No. 431,275
7 Claims. (Cl. 106—39)

1. A ceramic powder having a firing temperature within the range from 1000 to 1600° F. consisting essentially of from about 40% to about 95% by weight of a ceramic-forming inorganic compound having a melting temperature in excess of the firing temperature and from about 60% to about 5% by weight of a previously melted and solidified, finely divided flux consisting of about 5% sodium oxide, about 7% potassium oxide, about 9% zinc oxide, about 1.5% boron oxide, about 8.5% aluminum oxide, about 61% silicon dioxide, and about 7.5% calcium fluoride, the said flux having a melting temperature below the firing temperature.

2,862,828
HOT STRENGTH CORROSION RESISTANT MATERIAL AND PRODUCTION THEREOF
Frank W. Glaser, Lakewood, Ohio, assignor to Beryllite Corporation, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Application November 14, 1955
Serial No. 546,782
11 Claims. (Cl. 106—56)

1. A hard homogeneous solid body of high strength and corrosion resistance at high temperatures, consisting essentially of about 93% to about 98% of refractory diboride particles selected from the group consisting of the diborides of zirconium, titanium, vanadium, niobium, tantalum, chromium, and solid solutions of at least two of said diborides, and about 2% to about 7% of a boron substance bonding together said refractory particles, said boron substance being boron in solid solution with 4 to 33 atomic percent carbon and in the liquid state at a temperature of less than 2700° C., said hard body being free of uncombined carbon in excess of 1.5% of said body, said body having been formed by subjecting its constituents to mechanical pressure and a temperature between 1400° C. and 2700° C.

2,862,829
MANUFACTURE OF FOAMED GYPSUM AND THE LIKE
John S. Dixon, Jr., Villanova, and Edward J. Kelleems, Media, Pa., assignors to National Foam Systems, Inc., West Chester, Pa., a corporation of Delaware
No Drawing. Application July 18, 1956
Serial No. 598,502
5 Claims. (Cl. 106—86)

4. A method of producing a lightweight, cellular gypsum composition which consists in adding to a calcined gypsum-water slurry a predetermined quantity of a pre-foamed foam formed of a gas combined under super-atmospheric pressure with a proteinaceous solution of a foam-forming liquid containing as an additive thereto an alkali metal sulfate an agent for controlling the set time of the foamed slurry, the accelerating agent being present in the foam-forming solution in the approximate proportion of from 0.5 to 2.0 pounds of said agent to each 5 gallons of the solution.

2,862,830
QUICK-BREAKING BITUMINOUS EMULSIONS
Edward W. Mertens, El Cerrito, and Paul E. McCoy, Oakland, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Application July 1, 1953
Serial No. 365,516
6 Claims. (Cl. 106—277)

1. A quick-breaking oil-in-water type emulsion having improved bonding characteristics toward hydrophilic aggregate, consisting essentially of water and a bituminous material emulsified therein; and an alkali metal chromium salt selected from the group consisting of chromates and dichromates in an amount from 0.05 to 0.5% by weight sufficient to promote substantially the adhesion to hydrophilic aggregate of the asphalt coating formed from the emulsion, said amount of chromium salt normally tending to break quick-breaking emulsions; an alkali metal salt of a phosphated ricinoleic acid ester formed from a glycol selected from the group consisting of ethylene glycol, propylene glycol and glycerine in an amount from 0.02 to 1.0% by weight sufficient to counteract the tendency of said chromium salt to break the emulsion without adversely affecting the quick-breaking properties of the emulsion; and a water-soluble alkali in sufficient amount to give the aqueous phase of the emulsion an alkaline pH but less than that which, together with the chromium salt and phosphorus salt, reduces the demulsibility below 55% as measured in the ASTM D244–42 (demulsibility) test.

2,862,831
QUICK-BREAKING BITUMINOUS EMULSIONS HAVING INCREASED ADHESION TO MINERAL AGGREGATE
Edward W. Mertens, El Cerrito, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Application July 1, 1953
Serial No. 365,517
11 Claims. (Cl. 106—277)

1. A quick-breaking, oil-in-water type emulsion having improved bonding characteristics to hydrophilic

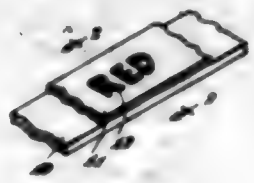
of molten metal and directing the same toward the longi- the temperature of the immersion roll, the cooled idler

resultant slushy mass of ice crystals and occluded juice in a common hopper, distributing the slushy mass evenly

1/1 to 14/1, said percentages being based on the weight of the total composition.

aggregate, consisting essentially of bituminous material emulsified therein and in combination 0.02 to 3.5% by weight of an alkali metal salt of an organo-substituted oxyphosphorus acid having at least 8 carbon atoms and a water-soluble alkali in sufficient amount to give the aqueous phase of the emulsion an alkaline pH in the range 11.0–11.8, said amount being less than that which, together with the phosphorus salt, reduces the demulsibility below 55% as measured in the ASTM D244–42 (demulsibility) test.

2,862,832
HEAT TRANSFER
Ridgley G. Shepherd, Jr., Weston, Mass., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts
Application January 9, 1956, Serial No. 558,129
6 Claims. (Cl. 117—3.2)



1. A heat transfer comprising a backing and a transfer coating thereon, said coating comprising an oxidized wax obtained as the reaction product of the oxidation of a hard, high-melting, aliphatic hydrocarbon wax, said coating having a melting point between about 50° C. and 110° C., an acid value between about 5 and 40, a saponification value between about 25 and 100, and a penetrometer hardness below about 15 as measured with 100 grams for 5 seconds at 25° C., whereby designs comprising commercial inks can be printed on the surface of the coating by conventional commercial processes and transferred to permeable or impermeable surfaces by the application of heat and pressure.

2,862,833
REGENERATED CELLULOSE FILAMENTARY MATERIAL
Robert W. Singleton, Florham Park, William B. Horbeck, Irvington, and Jesse L. Riley and Buell S. Sprague, New Providence, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware
No Drawing. Application October 27, 1955
Serial No. 543,274
9 Claims. (Cl. 117—7)

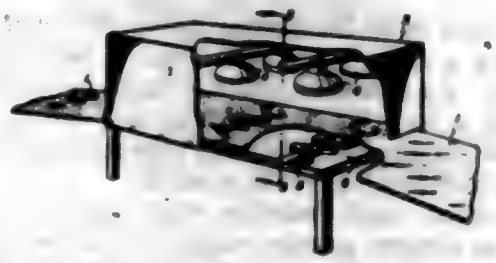
4. Process for enhancing the properties of a high tenacity filamentary material comprising a saponified stretched wet-spun cellulose acetate which comprises incorporating therein about 0.1 to 5% of resorcinol monobenzoate as an ultra-violet light stabilizer therefor.

2,862,834
METHOD OF COATING AN ARTICLE WITH A HEAT EXPANDABLE COATING COMPOSITION AND COATING COMPOSITION THEREFOR
Malvern J. Hiller, Dayton, Ohio, assignor to Midland Chemical Corporation, Dayton, Ohio, a corporation of Delaware
Application August 3, 1954, Serial No. 447,550
11 Claims. (Cl. 117—41)

10. A method of finishing an article comprising the steps of applying a coating composition thereto, which composition contains heat-expansible discrete beads containing a blowing agent and a binder therefor, to provide a film of the coating composition thereover, and baking the resultant coated article at a temperature of between about 210–275° F. for a time sufficient to expand said

heat-expansible discrete beads of resin containing a blowing agent and produce a popcorn-like texture finish.

2,862,835
EPOXY WRINKLE ON RUBBER IMPREGNATED PAPER
Burton E. Lederman, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application February 17, 1956, Serial No. 566,130
10 Claims. (Cl. 117—41)



6. In a mechanism for diverse printing of a wrinkle surface comprising means for applying a liquid wrinkle drying composition to the surface of a sheet, a printing means comprising a metallic design supported on a heat insulating material beneath the wrinkle coated sheet, a heat source above the coated side of the sheet and means for moving the sheet with reference to the design and the heat source so that successive designs of the same character may be applied on the same sheet.

2,862,836
IN SITU POLYAMIDE COATING METHOD
Johan C. D. Oosterhout, Port Arthur, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application March 14, 1955
Serial No. 494,253
5 Claims. (Cl. 117—65)

1. A method of protecting a body comprising applying to a surface thereof a layer of a salt of the formula $H_2NCH_2RCH_2NH_2 \cdot HOOCCH_2R'CH_2COOH$ derived from the reaction of a diamine of the formula

$$H_2NCH_2RCH_2NH_2$$

and a dicarboxylic acid of the formula

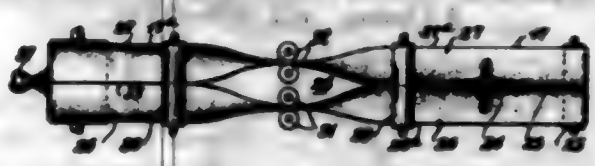
$$HOOCCH_2R'CH_2COOH$$

in which R and R' are divalent hydrocarbon radicals free from olefinic and acetylenic unsaturation and in which R has a chain length of at least two carbon atoms; and then converting said salt in situ to the corresponding polyamide by heating said salt to a temperature of 80–300° C.

2,862,837
METHOD OF PRODUCING A METAL COATING OF UNIFORM THICKNESS BY SPRAYING
Joseph B. Brennan, Cleveland, Ohio
Continuation of application Serial No. 273,594, February 27, 1952. This application September 9, 1955, Serial No. 533,414
19 Claims. (Cl. 117—4)

1. In a method of spraying metal onto a base strip the steps of, advancing a base strip, creating a spray field

of molten metal and directing the same toward the longitudinal center line of said base strip, parting said base strip along said longitudinal center line and rearranging the resulting strip elements with the original outer edges



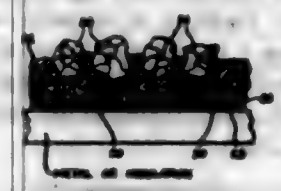
thereof in substantially longitudinally abutting relation, and directing the spray field toward the longitudinal meeting line of the rearranged strip elements of the advancing base strip.

2,862,838

ELECTRICAL APPARATUS WITH A THERMAL AND ELECTRIC INSULATION COATING

Guy R. Radley, Whitefish Bay, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Application August 24, 1953, Serial No. 375,896
2 Claims. (Cl. 117—218)



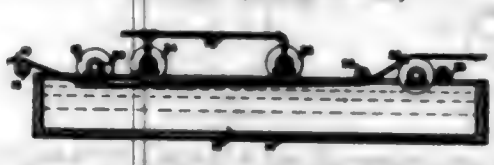
1. An article comprising electrical apparatus having formed thereon a thermal and electric insulation coating for protecting the surfaces of said apparatus against heat and the formation of continuous deposits of electrode material thereon as an incident to electrical arcing, which coating comprises a hardened layer of heat resistant insulating silicone resin material having irregularly shaped relatively large particles of quartz partially embedded therein, said particles being closely spaced in staggered relationship to one another, and substantially all of said particles each having certain portions thereof exposed and in overlying relationship to certain other exposed surfaces thereof with reference to the direction of approach of the particles of electrode material.

2,862,839

APPARATUS FOR AND METHOD OF REMOVING OXIDES FROM STRIP

Ernest C. McHenry, Leechburg, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

Application December 5, 1956, Serial No. 626,529
7 Claims. (Cl. 134—15)



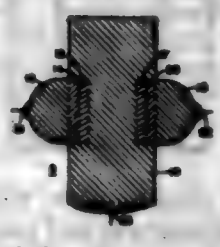
1. In apparatus for removing oxides from strip material formed from refractory metal selected from the class of titanium, titanium base alloys, zirconium and zirconium base alloys, the combination of, a tank adapted to contain a molten alkali metal caustic bath for reacting with the oxides on the strip, an immersion roll at least partially below the top of the tank and adapted to be at least partially immersed in said bath and in contact with the strip for holding the strip immersed therein, an idler roll partially below the top of the tank and adapted to be at least partially immersed in said bath out of contact with the strip, means for effecting rotation of the idler roll, and means for cooling the rotating idler roll to a temperature substantially less than the temperature of the immersion roll, the cooled idler roll cooperating in said bath to preferentially attract and receive metal oxides removed from the strip in said bath to thereby maintain the immersion roll substantially free from said metal oxides.

2,862,840

SEMICONDUCTOR DEVICES

Andrew P. Kordalewski, Fayetteville, N. Y., assignor to General Electric Company, a corporation of New York

Application September 26, 1956, Serial No. 612,131
8 Claims. (Cl. 148—1.5)



1. The method of forming an emitter in a body of semiconductor material of one conductivity type comprising alloying and recrystallizing into said body an activator material of the opposite conductivity-inducing type to form a first region of said opposite conductivity type in said body, alloying and recrystallizing another activator material having higher solid solubility in said semiconductor material and of said opposite conductivity inducing type in said first region of said body to form a second region therein of more strongly opposite conductivity type.

2,862,841

PRETREATMENT OF IRON OR STEEL BASE FOR SINGLE COAT VITREOUS ENAMELING

Leslie M. Bernick, Calumet City, and Henry M. Roelofs and James E. McFarland, Chicago, Ill., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware

No Drawing. Application September 26, 1957
Serial No. 686,287
22 Claims. (Cl. 148—6)

1. A process for preparing an iron or steel base for vitreous enameling so as to obtain satisfactory enamel adherence with a single cover coat of a light colored vitreous enamel applied directly to the base, said process comprising the steps of providing on the surface of the metal base a coating comprising at least one oxide selected from the group consisting of titanium, antimony, and tungsten oxides, and heating the oxide coated base in a substantially non-oxidizing atmosphere to a temperature at which reduction of the oxide by reaction with the iron in said base occurs.

2,862,842

PRETREATMENT OF IRON OR STEEL BASE FOR SINGLE COAT VITREOUS ENAMELING

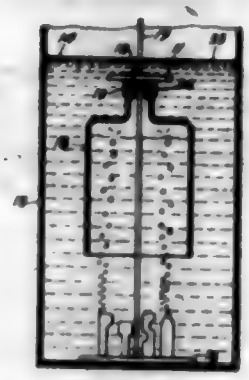
Leslie M. Bernick, Calumet City, and Henry M. Roelofs and James E. McFarland, Chicago, Ill., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware

No Drawing. Application May 9, 1958
Serial No. 734,113
20 Claims. (Cl. 148—6)

1. A process for preparing an iron or steel base for vitreous enameling so as to obtain satisfactory enamel adherence with a single cover coat of a light colored vitreous enamel applied directly to the base, said process comprising the steps of providing on the surface of the metal base a coating comprising molybdenum oxide, and heating the oxide coated base in a substantially non-oxidizing atmosphere to a temperature at which reduction of the oxide by reaction with the iron in said base occurs.

A film of the coating composition thereover, and baking the steps of, advancing a base strip, creating a spray field

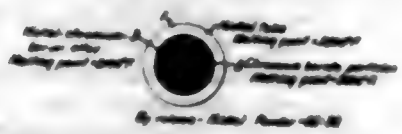
2,862,843
METHOD OF AND APPARATUS FOR HEAT TREATING PARTS
William E. Engelhard, Apalachin, N. Y.
Application June 1, 1956, Serial No. 588,866
9 Claims. (Cl. 148—21.55)



1. The method of cooling parts which have been heat treated to critical temperatures and positioned on a holder, which consists of positioning a quenching medium of substantially lower temperature than that to which the parts have been heated, in a tank, immersing said parts and holder in said tank, immersing an inverted U-shaped shield in said tank in line with said parts and holder, aligning said shield for vertical movement in said line with said parts, said parts on their said immersion in said quenching medium generating gases which rise and flow into said aligned shield, holding the shield spaced above the parts with the parts immersed in and exposed to the quenching medium in the tank, said parts then rapidly cooling, terminating their generation of gases, said shield then moving downwardly over the parts and holder, enclosing the parts and the surrounding quenching medium within the shield, and maintaining the parts and surrounding quenching medium within the shield for cooling together while thus within the shield.

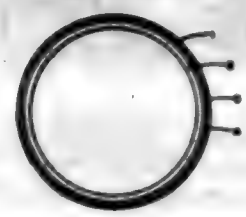
4. The method of cooling parts which have been heat treated to critical temperatures, which consists of positioning liquid quenching medium, of substantially lower temperature than that to which the parts have been so heat treated, in a tank having an open top, positioning said parts in the liquid medium in the tank, positioning a substantially inverted U-shaped shield in said tank through said open top, above and in line with the parts but below the level of the quenching medium, said parts being thus exposed to heat transfer action with the full volume of quenching medium in the tank, said shield then moving downwardly in the tank and over said parts and enclosing the parts and surrounding medium within the shield, for cooling of the parts in contact with the medium so confined within the shield, and limiting the extent of movement of the shield away from the parts, to prevent movement of the shield out of the surface of the quenching medium.

2,862,844
COMPOSITE BRAZING MATERIAL
Robert T. Luedeman, Leonia, N. J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey
Application December 9, 1954, Serial No. 474,208
5 Claims. (Cl. 148—24)



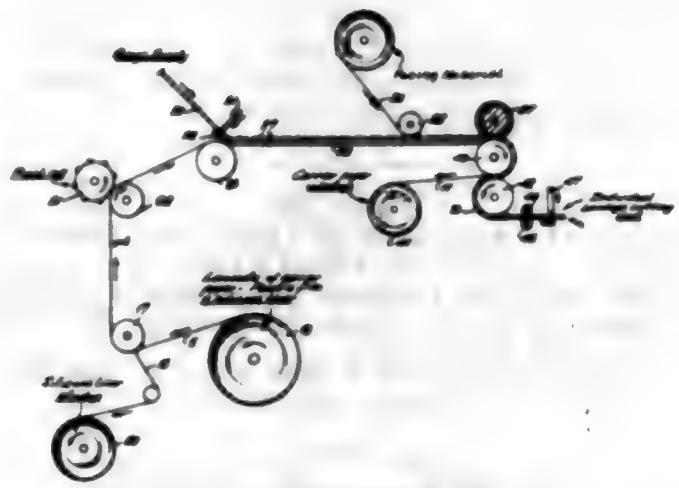
4. Composite brazing material consisting essentially of a nickel tube filled with powdered chromium boride, wherein the ratio by volume of nickel to the powdered boride is about 62:38.

2,862,845
MAGNETIZABLE BANDS
Andrew Szegvari, Akron, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Application October 25, 1954, Serial No. 464,485
5 Claims. (Cl. 154—53.6)



5. A laminated magnetizable article comprising a first relatively thin layer of chloro-sulphonated polyethylene polymers having magnetizable particles distributed througout its volume and having good wearing properties when moved relative to and against a magnetic transducer head, and a second relatively thick layer of chloroprene rubber having better elastic properties than said first layer bonded to said first layer, the exposed surface of said first layer forming a smooth, wear resistant surface for contacting a transducer head and the better elastic properties of said second layer causing said laminated article to establish good transducing contact with a magnetic transducer head.

2,862,846
METHOD OF MAKING PLASTIC STRIP ADHESIVE BANDAGES
Benjamin B. Blackford, Metuchen, and William J. Gross, Franklin Township, Somerset County, N. J., assignors to Johnson & Johnson, a corporation of New Jersey
Application November 23, 1953, Serial No. 393,718
15 Claims. (Cl. 154—118)



1. The method for making individual products having uniform dimensions from easily extensible sheet material which comprises supporting a continuous moving web of said sheet material by removable contact of one surface thereof with a substantially inextensible continuous carrier sheet, the opposite surface of said extensible sheet having pressure sensitive adhesive properties, placing a second web of substantially inextensible sheet material on said adhesive surface to form a composite layer, uniting said second inextensible web with said adhesive surface, removing said carrier sheet from said web of extensible material, and then periodically cutting said composite layer to form said individual products of extensible sheet material, said products having uniform dimension in the direction of movement of said webs.

rotating idler roll to a temperature substantially less than occurs.

2,862,847
PESTICIDAL ARENETHIOSULFONATES
W E Craig and Chien-Pen Le, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application May 4, 1956
Serial No. 582,649
8 Claims. (Cl. 167—30)

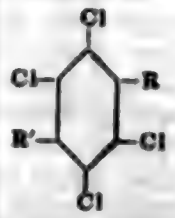
1. Salts of a metal from the group consisting of zinc, lead, mercury, and iron and an acid from the group consisting of benzenethiosulfonic, chlorobenzenethiosulfonic, and methylbenzenethiosulfonic acids.

2,862,848
EMULSIFIABLE INSECTICIDE COMPOSITIONS
Vincent J. Keenan, Ardmore, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application September 21, 1955
Serial No. 535,754
12 Claims. (Cl. 167—42)

1. A water emulsifiable insecticide composition consisting essentially of from 10 percent to 40 percent by weight of a xylene soluble insecticide, from 50 percent to 89.5 percent by weight of an aromatic hydrocarbon solvent selected from the group consisting of benzene, toluene, xylene, higher alkylated aromatic hydrocarbons and methyl naphthalene, and from 0.5 percent to 10 percent by weight of a salt of a mixture of alkyl benzene monosulfonic acids wherein the sum of the carbon atoms in the alkyl groups attached to each benzene ring ranges between 11 and 19, each benzene ring having one alkyl group attached thereto ranging between 11 and 13 carbon atoms in length, said salt being selected from the group consisting of morpholinium, pyridinium, picolinium, trialkanol ammonium, dialkyl alkanol ammonium, and tetra-alkyl ammonium, wherein the alkanol and alkyl groups contain from 2 to 4 carbon atoms.

2,862,849
METHODS OF REPELLING RODENTS EMPLOYING CHLORINATED PHENOL DERIVATIVES
Blaine O. Pray, Wadsworth, and William E. Bissinger, Akron, Ohio, assignors to Columbia-Southern Chemical Corporation
No Drawing. Application October 30, 1953
Serial No. 389,430
5 Claims. (Cl. 167—46)

1. The method of protecting property normally infested by rodents from rodents by imparting rodent repellency thereto which comprises applying to said property a compound having the following formula:



wherein radical R is selected from the group consisting of hydrogen, hydroxy and alkoxy radicals containing from 2 to 4 carbon atoms, R' is selected from the group consisting of hydrogen and NO_2— not more than one of R and R' being hydrogen.

2,862,850
DITHIOCARBAMATE RODENT REPELLENT COMPOSITIONS AND METHODS
Lyle D. Goodhue, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application July 12, 1954
Serial No. 442,889
12 Claims. (Cl. 167—46)

1. A method for protecting growing plants and other materials normally consumed as food by rodents which comprises applying to said plants and other materials, in an amount sufficient to effectively repel said rodents, a compound selected from the group consisting of N,N-dimethyl-S-tert-butylsulfenyl dithiocarbamate and N,N-dimethyl-S-methylsulfenyl dithiocarbamate, incorporated with an inert repellent adjuvant as a carrier therefor.

2,862,851
ALDOSTERONE, PROCESS FOR PREPARATION AND COMPOSITIONS THEREOF
Tadeus Reichstein and Albert Wettstein, Basel, and Robert Neher, Binningen, Switzerland
No Drawing. Application July 20, 1954
Serial No. 444,657
Claims priority, application Switzerland July 24, 1953
9 Claims. (Cl. 167—77)

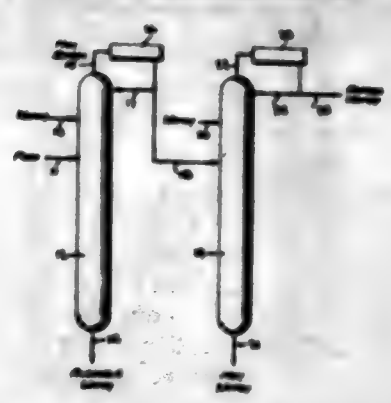
1. A process for the isolation from suprarenal glands of biologically active, chemically unitary, crystalline product of manufacture, aldosterone, which comprises the steps of separating by partition chromatography on kieselguhr between water, and benzene and petroleum ether, an extract obtained from suprarenal glands with lipoid solvents, collecting the eluates obtained with benzene-petroleum ether in the ratio from 63:35 to 90:10, evaporating the solvents, separating the residue by a second chromatography on cellulose between water-methanol (4:6) and toluene-petroleum ether, collecting the eluates obtained with toluene-petroleum ether in the ratio 3:1, evaporating the solvents, and crystallizing the residue from acetone-ether whereby crystalline aldosterone is obtained.

2. A crystalline product of manufacture, aldosterone.

2,862,852
STABILIZED VITAMIN D COMPOSITION
Marco Alfred Cannalonga, North Bergen, N. J., assignor to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey
No Drawing. Application December 29, 1955
Serial No. 556,846
3 Claims. (Cl. 167—81)

1. A stabilized vitamin D composition in dry form comprising vitamin D_3, butylated hydroxyanisole in a proportion of about 5 mg. to 20 mg. per million I. U. of vitamin D_3, 2,6-di-t-butyl-4-methylphenol in a proportion of about 5 mg. to 20 mg. per one million I. U. of vitamin D_3 and about 0.1% to 0.5% by weight of ethylenediamine tetraacetic acid.

2,862,853
RECOVERY OF METHYL ETHYL KETONE
Oren V. Luke, Jr., Summit, N. J., and George B. Ulvild, Robstown, and James S. MacKenzie, Corpus Christi, Tex., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware
Application June 3, 1954, Serial No. 434,326
1 Claim. (Cl. 202—39.5)



A process for the recovery of methyl ethyl ketone from a mixture containing on an anhydrous basis between about 30 and 60% by weight of methyl ethyl ketone, be-

obtained by oxidation of a compound of a formula of at least one of said electrodes having a blocking layer

tween about 5 and 20% by weight of lower aliphatic alcohols, and between about 10 and 60% by weight of esters of lower aliphatic alcohols with lower aliphatic acids, which comprises subjecting said mixture to a water extractive distillation by introducing said mixture into a distillation column and introducing water into the distillation column at a point above that at which the mixture is introduced at a rate such that the concentration of water in the liquid phase below the point at which the water is introduced is between about 25 and 60 weight percent whereby a cut containing the methyl ethyl ketone and the esters will pass overhead during the distillation leaving behind the alcohols, and then subjecting the methyl ethyl ketone-ester cut to a second water extractive distillation by introducing said cut into a distillation column and introducing water into the distillation column at a point above that at which the cut is introduced at a rate such that the concentration of water in the liquid phase below the point at which the water is introduced is between about 75 and 95 weight percent whereby the esters will pass overhead during the distillation leaving behind the methyl ethyl ketone.

2,862,854

PURIFICATION OF ACETIC ACID EMPLOYING HYDROXYLAMINE ACETATE AS PURIFYING AGENT

Alexander F. MacLean, Corpus Christi, Tex., assignor to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application February 1, 1956
Serial No. 562,661
1 Claim. (Cl. 202—39.5)

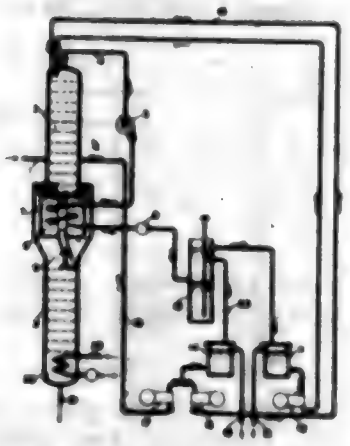
Process for the treatment of acetic acid, which comprises continuously distilling acetic acid obtained by partial oxidation, with molecular oxygen, of a lower aliphatic hydrocarbon, to produce partially purified vapors of said acetic acid, feeding a stream of said vapors, containing at most 0.1% of harmful impurities, into the bottom of a distillation column, feeding a liquid stream of a solution of hydroxylamine acetate in acetic acid into the top of said column, and recovering and condensing vapors of purified acetic acid from the top of said column, the amount of hydroxylamine acetate fed to said column being in the range of 0.01 to 1% based on the amount of acetic acid fed to said column.

2,862,855

AZEOTROPE DISTILLATION OF AROMATIC ISOPROPYL COMPOUNDS FROM PHENOL

Karl Friedrich Lang, Frankfurt am Main, Heinrich Schildwächter, Castrop-Rauxel, and Adolf Hupe, Frankfurt am Main, Germany, assignors to Rutgerswerke-Aktiengesellschaft, Frankfurt, Germany

Application November 19, 1952, Serial No. 321,394
Claims priority, application Germany November 24, 1951
7 Claims. (Cl. 202—42)



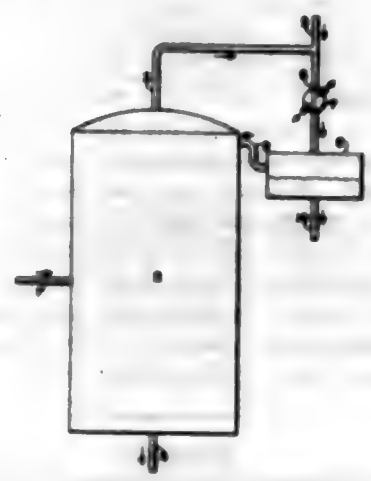
1. A method of separating an isopropyl compound containing an aromatic radical, from a phenol capable of being formed from said isopropyl compound by oxidation and decomposition of the oxidation product, in which a mixture of said isopropyl compound and phenol is subjected to continuous fractional distillation with water in a fractionating column in order to form a vaporized azeotropic mixture substantially consisting of the isopropyl compound and water, and a distillation residue containing the phenol and being free from the isopropyl compound, said azeotropic mixture being subjected to condensation and separation into isopropyl compound and water, and the separated water and part of the separated isopropyl compound being continuously reintroduced into the fractionating column, said azeotropic mixture being distilled off with a reflux ratio for the organic phase, of at 5:1.

2,862,856

PURIFYING ISOBUTYLENE

John C. Hunt, Linden, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application February 6, 1953, Serial No. 335,499
2 Claims. (Cl. 202—42)



1. In a process for the preparation of substantially pure isobutylene suitable for the preparation of rubbery polymers from isobutylene containing methyl mercaptan which comprises distilling the isobutylene in a distillation zone to separate an overhead product consisting essentially of the azeotrope of methyl mercaptan with isobutylene and a bottoms product consisting essentially of pure isobutylene, the improvement which comprises removing said azeotrope from the top of the distilling zone, forming two layers which comprises separating said azeotrope with a solution of caustic by reacting the mercaptan with the caustic to form a mercaptide which is immiscible with isobutylene and condensing, stratifying said two layers to give an upper layer of isobutylene and a lower layer comprising caustic and said mercaptide, and recycling said isobutylene layer to the distilling zone as reflux.

2,862,857

AZEOTROPIC DISTILLATION OF MONOHYDRIC AND DIHYDRIC PHENOLS

Leo J. Filar, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 1, 1954
Serial No. 443,840
5 Claims. (Cl. 202—42)

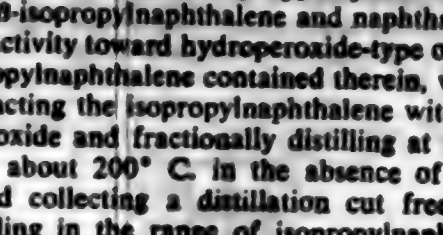
1. A process for the manufacture and recovery of dihydric and monohydric phenols which comprises subjecting to acid catalyzed decomposition a reaction mixture containing a dihydroperoxide and a monohydroperoxide

2,862,863

APPARATUS FOR ELECTROLYTIC PRODUCTION OF A METAL PRODUCT FROM FUSED SALTS

said first and third openings and with sixth and seventh openings respectively located beside said second and third

obtained by oxidation of a compound of a formula of the group consisting of



wherein R and R' represent alkyl groups having 1–2 carbon atoms and X represents a member of the group consisting of hydrogen, lower alkyl, and —CHRR', thereby producing a decomposition reaction product containing a mixture of a dihydric phenol and a monohydric phenol, distilling said mixture of phenols with an azeotroping agent for the dihydric phenol to recover a distillate containing the dihydric phenol, the monohydric phenol and the azeotroping agent, removing dihydric phenol from the distillate, extracting the residual distillate with an aqueous solution of an alkali metal hydroxide, recovering monohydric phenol from the aqueous alkaline extract, and recycling to the distillation step the azeotroping agent thus freed of dihydric and monohydric phenols.

2,862,858

PURIFICATION OF ISOPROPYLNAPHTHALENE

Joshua C. Conner, Jr. and Herman I. Enos, Jr., Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 29, 1953
Serial No. 364,973
10 Claims. (Cl. 202—57)

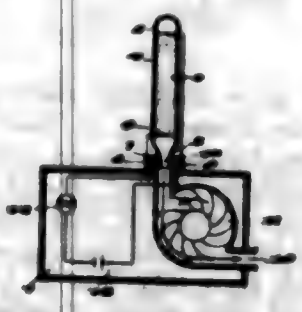
1. A process for treating isopropylnaphthalene containing α- and β-isopropylnaphthalene and naphthalene to increase the activity toward hydroperoxide-type oxidation of the β-isopropylnaphthalene contained therein, which comprises contacting the isopropylnaphthalene with an alkali metal hydroxide and fractionally distilling at a temperature below about 200° C. in the absence of molecular oxygen, and collecting a distillation cut free of naphthalene boiling in the range of isopropylnaphthalene.

2,862,859

DETECTING IMPURITIES IN GASES

Karl Grosskopf, Lubeck, Germany, assignor to Dr. Otto Heinrich Dragor, Lubeck, Germany

Application February 8, 1956, Serial No. 564,304
21 Claims. (Cl. 204—1)



1. A method for detecting impurities in a fluid by means of electrodes at least one of which has a blocking layer thereon and an electrolyte, said impurities being capable of at least partially destroying the blocking layer in the presence of the electrolyte, which comprises bringing said impurities into contact with the electrodes and electrolyte and supplying direct electric current to said electrodes in a direction to be normally blocked by said blocking layer, whereby an increase in said current indicates the presence of impurities in the liquid.

15. A device for testing impurities in fluids which comprises an electric valve cell having electrodes and an electrolyte between and in contact with the electrodes, at least one of said electrodes having a blocking layer thereon capable of being at least partially destroyed by the impurities, pump means to bring such impurities into contact with the electrodes having the blocking layer thereon, an ammeter, a circuit including said electrodes and said instruments, and means to supply direct current to said circuit in a direction to be normally blocked by said blocking layer.

2,862,860

CADMIUM ELECTROPLATING

Peppino N. Vlannes, Fort Washington Forest, Md., and Simon W. Strauss and Benjamin F. Brown, Washington, D. C.

No Drawing. Application September 5, 1957
Serial No. 682,261
8 Claims. (Cl. 204—50)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In the electrodeposition of cadmium from aqueous bath, the improvement which comprises electrodepositing cadmium from a cyanide-free aqueous ammoniacal bath of pH up to about 11.2 in which is dissolved an alkyl monoaminomonocarboxylic acid of from 2 to 5 carbon atoms and a cadmium salt in a molar ratio of from about 1:1 to 2:1.

2,862,861

COPPER CYANIDE PLATING PROCESS AND SOLUTION THEREFOR

Paul W. Moy, Gates Mills, Ohio, assignor to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application February 19, 1957
Serial No. 641,848
11 Claims. (Cl. 204—52)

1. A copper plating solution comprising an aqueous solution of copper cyanide, free cyanide of the class consisting of potassium and sodium cyanides and an added thio-substituted six-member heterocyclic ring compound wherein the members of the ring comprise from one to three nitrogen atoms and the balance carbon atoms, each nitrogen atom forming a part of a separate azomethine group and being connected to two carbon atoms, at least one carbon atom of one azomethine group carrying a substituent of the class consisting of thiol, mercaptide and alkylthiol, said alkylthiol having from one to three carbon atoms, said thio-substituted compound being dissolved in said plating solution in an amount from about 0.05 gram per liter to about 10 grams per liter.

2,862,862

FORMATION BY IRRADIATION OF AN EXPANDED, CELLULAR, POLYMERIC BODY

Arthur Charlesby, Headington, and Maurice Ross, London, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application August 12, 1953
Serial No. 373,912
1 Claim. (Cl. 204—158)

A method of treating a body of a polymeric ester of a methacrylic acid having a softening point above 40° C. to form an expanded cellular mass having a smooth skin comprising subjecting the body at a temperature below the softening point to a dose of at least 5×10^6 Roentgen of gamma radiation from a cobalt 60 source until its average molecular weight is reduced to a value within the range 3×10^5 to 10^4 and heating at a temperature within the range 0 to 10° C. above its softening point to effect expansion.

2,862,866

ing a pour point in the range of about —10 to —70° F.,

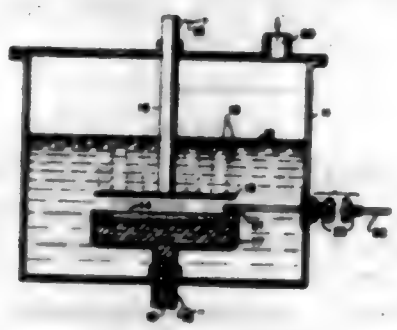
1. A method of separating an isopropyl compound containing an aromatic radical, from a phenol capable of ing to acid catalyzed decomposition a reaction mixture containing a dihydroperoxide and a monohydroperoxide

2,862,863

APPARATUS FOR ELECTROLYTIC PRODUCTION OF A METAL PRODUCT FROM FUSED SALTS

Kenneth F. Griffith, Newark, N. J.

Application September 23, 1957, Serial No. 685,754
3 Claims. (Cl. 204—227)



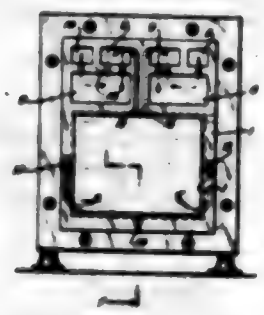
1. In an electrolytic cell for producing metal products which are less dense than the fused electrolyte the improvement comprising a substantially flat porous cathode adapted to be saturated with liquid metal product; an anode having the shape of a grid or screen permitting gaseous by-products formed on the anode to pass therethrough; said anode and said cathode extending in substantially horizontal planes immersed in the electrolyte, the anode being located over said cathode; a suction chamber tightly attached to the cathode in opposite relation to the anode, the cathode forming the top cover of said chamber; a suction piping attached to said suction chamber to suck liquid metal product deposited on and saturating the porous cathode into and from said chamber; means to create and to control the suction action; and receiving means collecting the sucked liquid metal product apart from the electrolyte and the gaseous halide products.

2,862,864

ELECTROLYTIC APPARATUS

Ewald Oberste Berghaus, Berlin, Germany, assignor to Pintsch Bamag Aktiengesellschaft, Berlin, Germany

Application August 10, 1954, Serial No. 448,793
4 Claims. (Cl. 204—256)



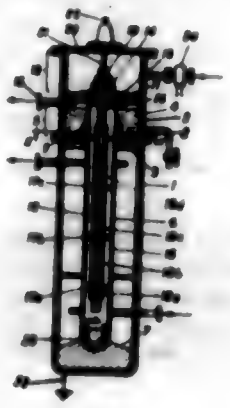
1. A bipolar electrolytic decomposer comprising, in combination, a plurality of cell frames arranged next to each other in a row with one cell frame having a side face contacting the adjacent side face of the next cell frame, each frame being formed with first, second and third openings, each pair of contacting side faces of said frames being mirror images of each other and one side face of each frame being formed with a groove extending from said first opening to said second opening while the opposite side face of each frame is formed with a groove extending from said first opening to said third opening, said first, second and third openings of said frames forming, respectively, first, second and third passages extending through said frames, each frame being formed with a fourth opening located between said first and second openings, with a fifth opening located between said first and third openings and with sixth and seventh openings respectively located beside said second and third openings, the frame at one end of the row of frames being formed with a pair of bores respectively providing communication in said one end frame between said second and fourth openings, on the one hand, and said third and fifth openings, on the other hand, and the frame at the opposite end of said row of frames being formed with a pair of bores providing communication in said opposite end frame between said fourth and sixth openings, on the one hand, and said fifth and seventh openings, on the other hand, said fourth, fifth, sixth and seventh openings of said frames respectively being aligned with each other to form fourth, fifth, sixth and seventh passages extending through said frames; a plurality of electrode sheets and diaphragm sheets extending across said first passage in said first openings of said frames, respectively, and being fixed to the latter between the side faces thereof, said electrode sheets alternating with said diaphragm sheets to form together with said frames a series of cell chambers which communicate through said grooves alternately with said second and third passages, whereby fluid located in said latter passages will flow through said bores of said one end frame respectively to said fourth and fifth passages and from the latter through said bores in said opposite end frame to said sixth and seventh passages; and means for holding said frames together in said row.

2,862,865

ELECTRICAL GLOW DISCHARGE OZONIZER

Herbert Leo Marky, Zurich, Switzerland, assignor to Kerag Kesselschmiede, Apparate- und Maschinenbau, Richterswil, Switzerland, a company of Switzerland

Application May 9, 1955, Serial No. 507,845
Claims priority, application Switzerland May 8, 1954
7 Claims. (Cl. 204—318)

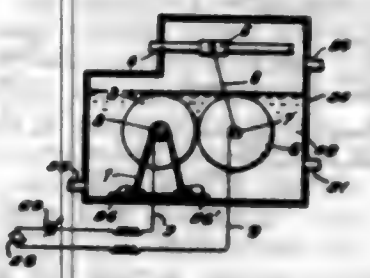


1. An electrical glow discharge working unit for the production of ozone comprising at least one vertically arranged glass tube having a closed bottom, an inner hollow electrode member located in said glass tube and spaced from the inner walls of said tube, a container enclosing said glass tube, means forming an ozone chamber on top of said glass tube and a fresh air supply chamber on top of said ozone chamber, said ozone chamber communicating with the space between the said glass tube and said inner electrode member, sealing means sealing said ozone chamber against said air chamber, said inner electrode member having an upper end projecting through said ozone chamber to conduct fresh air from said air chamber to the bottom of said tube, and a separate open-topped container located at the bottom of said tube and below the bottom end of said inner electrode member, the last-mentioned container being adapted to be filled with a small quantity of oil, whereby said oil will rise to top of said glass tube and said inner electrode in the event of water entering said glass tube to form a separating zone against the ozone atmosphere.

tion, aromatizing part of said last mentioned fraction, range which comprises contacting a mixture of such a

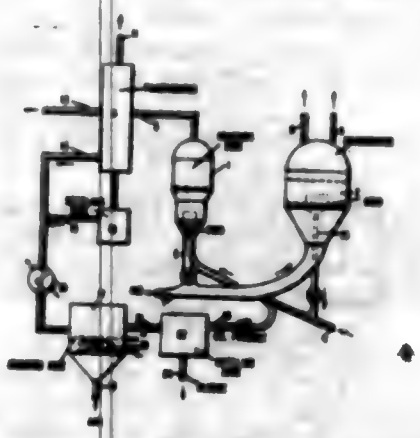
electrolyte between and in contact with the electrodes, expansion.

2,862,866
ELECTROPYROLYSIS APPARATUS
Ernst Stirnemann, Basel, and Theodor Emil Lanz, Visp, Switzerland, assignors to Lonza Electric and Chemical Works Limited, Basel, Switzerland
Application December 16, 1953, Serial No. 398,682
Claims priority, application Switzerland December 17, 1952
8 Claims. (Cl. 204—325)



1. In an electropyrolysis apparatus, in combination, a vessel adapted to receive a liquid; at least two roller electrodes; means for connecting said electrodes to a source of electric current; and mounting means for rotatably mounting both of said electrodes on substantially parallel axes in said vessel and for also mounting at least one of said electrodes for free movement into peripheral contact with and away from the other of said electrodes, but continuously urged in direction toward said other electrode.

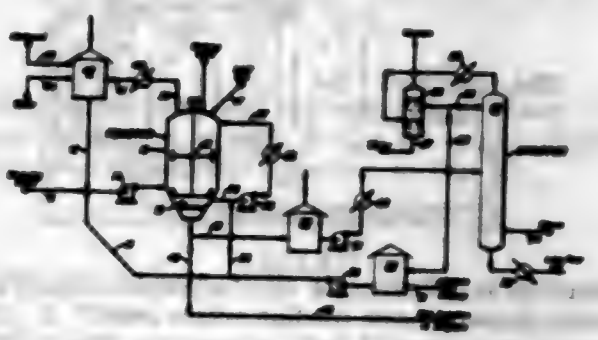
2,862,867
REDUCTION OF CARCINOGENICITY OF HIGH BOILING CATALYTICALLY CRACKED OIL BY PARTIAL OXIDATION
John Rohner, Jr., Westfield, and Lawrence T. Eby, Linden, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application June 17, 1953, Serial No. 362,279
3 Claims. (Cl. 208—3)



1. A process for reducing the carcinogenicity of a catalytically cracked petroleum oil boiling in excess of about 700° F. which comprises air-blowing said oil at a temperature of from about 200° to about 275° C. with from about 0.1 to 1.0 pound of air per barrel of oil per minute for a period of from about 2 to about 10 hours and oxidizing carcinogenic constituents in said oil to form a sludge.

2,862,868
PRODUCTION OF LOW COLD-TEST OILS
John S. Brown, Flossmoor, Ill., and Andrew T. Jancosek, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application December 18, 1954, Serial No. 474,549
4 Claims. (Cl. 208—25)

3. A method for dewaxing a wax-containing hydrocarbon oil having a viscosity between about 40 and 300 SSU at 100° F. and a pour point between about 0 and 100° F. and obtaining a low cold-test oil therefrom having a pour point in the range of about —10 to —70° F., which comprises contacting said oil with solid urea under urea-adduct forming conditions in the presence of between about 0.05 and 0.5 mole of methanol per mole of urea and between about 2 and 10 volume-percent of water



based on said methanol, whereby urea adducts are formed from the waxes contained in said oil, and separating said urea adducts and any unreacted urea from the resulting reaction mixture, whereby a low cold-test oil of the desired pour-point range is obtained.

2,862,869
PROCESS FOR MANUFACTURING ASPHALT PLASTISOLS
John C. Illman, El Cerrito, Calif., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware
No Drawing. Application June 27, 1955
Serial No. 518,393
6 Claims. (Cl. 208—45)

1. In the process for the preparation of an asphalt plastisol, the steps comprising forming a fluid body of an asphalt, said asphalt comprising more than 5% by weight of asphaltenes by dissolving one volume of the residue in 0.5–2 volumes of an aromatic solvent, said solvent predominating in aromatic hydrocarbons having less than 10 carbon atoms per molecule, introducing one volume of the asphalt into 3–50 volumes of an aliphatic hydrocarbon medium, said medium comprising predominantly straight chain paraffin hydrocarbons having from six to twelve carbon atoms per molecule and less than 25% by weight of aromatic hydrocarbons, whereby asphaltene particles having a size distribution between about 1 micron and about 200 microns precipitate and maltenes dissolve in the aliphatic hydrocarbon medium separating the precipitated asphaltenes from dissolved maltenes, and suspending the asphaltenes in a petroleum fraction having a viscosity between about 100 SUS at 100° F. and about 300 SUS at 210° F. and an aromatic content between about 15% and about 60%, whereby a stable plastisol composition containing less than about 40% by weight of asphaltenes is formed.

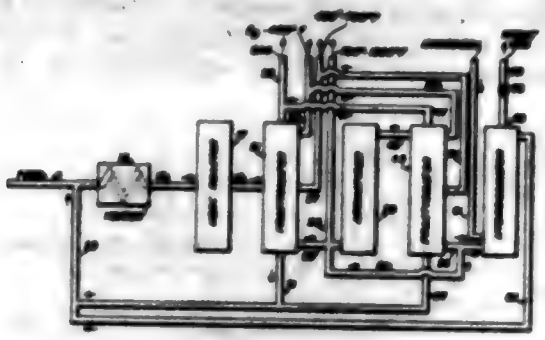
2,862,870
PROCESS FOR UPGRADING RESIDUA
Alexis Voorhies, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application November 23, 1953, Serial No. 393,617
3 Claims. (Cl. 208—56)

1. The process of upgrading heavy oil to produce lower boiling products which comprises combining with one volume of feed one to four volumes of a partially hydrogenated recycle stock obtained as described hereinafter, heating the combined feed and recycle stock to a temperature within the range of 750° to 1000° F., passing the heated mixture into a reaction zone and reacting for a sufficient time to transfer hydrogen from the recycle stock to feed and to crack the mixture, fractionating the products of the reactor to obtain a motor fuel fraction, a light gas oil fraction and a heavy gas oil frac-

said separation zone and returning the regenerated catalyst to the confined reaction path, withdrawing from in a storing zone, the improvement which comprises

to form a separating zone against the ozone atmosphere.

tion, aromatizing part of said last mentioned fraction, partially hydrogenating the aromatized and unaromatized



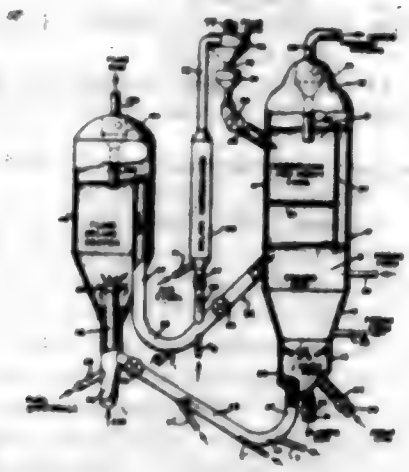
portions of said heavy gas oil fraction and recycling the partially hydrogenated fraction to the feed.

2,862,871

FLUID COKING PROCESS AND APPARATUS

Lloyd B. Smith, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application October 30, 1953, Serial No. 389,298
6 Claims. (Cl. 208—53)



1. The process of coking heavy hydrocarbon oils which comprises preheating a mass of solid particles of a size between about 20 and 400 microns to a temperature sufficient to establish a main zone coking temperature between about 900° and 1150° F. and fluidizing said mass in said main coking zone, superheating a further mass of said particles having substantially the same particle size distribution and character as said first mass, establishing a secondary coking zone having a temperature 20° to 200° F. higher than said first zone, said secondary zone being in the form of a shallow bed of fluidized superheated particles contacting said oil in liquid phase first with said main zone coking mass to produce vapor products which pass overhead carrying entrained liquid and coke, and passing said vapor products with entrained liquid rapidly through said second zone comprising said shallow bed of said superheated solids to adsorb and crack the entrained liquid whereby the time of contact in the shallow bed is sufficient substantially to absorb the entrained liquid but insufficient substantially to alter the vapor products.

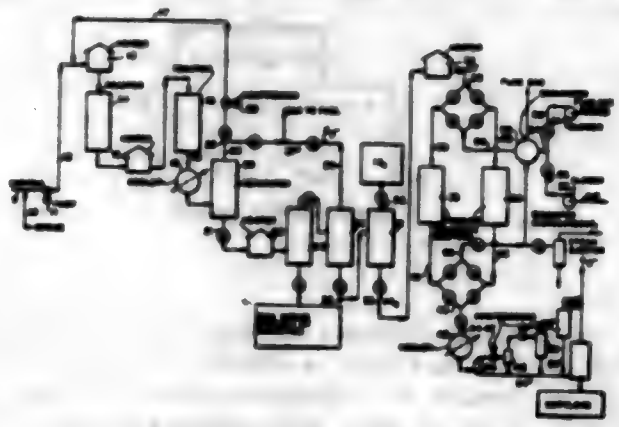
2,862,872

REFORMING AND ISOMERIZATION PROCESS, WITH DEHYDROGENATION OF UNCONVERTED LIGHT PARAFFINS

La Vern H. Beckberger, Harvey, Ill., assignor to Sinclair Refining Company, New York, N. Y., a corporation of Maine

Application February 17, 1953, Serial No. 337,356
5 Claims. (Cl. 208—65)

1. A two-stage process for the catalytic conversion of hydrocarbon feed stocks boiling within the gasoline range which comprises contacting a mixture of such a stock and a material consisting essentially of a light normally gaseous normal C_4 to C_5 paraffin fraction in a first reaction stage with a reforming catalyst in the presence of hydrogen under reforming conditions of temperature, pressure and space velocity, separating gas and liquid fractions from the reaction effluent, withdrawing the liquid fraction, separating isoparaffin from the unconverted normal paraffin in the gas fraction, withdrawing the isoparaffin fraction, contacting the unconverted normal paraffin fraction with a chromium oxide-alumina catalyst under dehydrogenation conditions of space velocity and elevated temperature including sub-atmospheric to approximately atmospheric pressure, and separating a normal olefin fraction from the second stage reaction effluent.

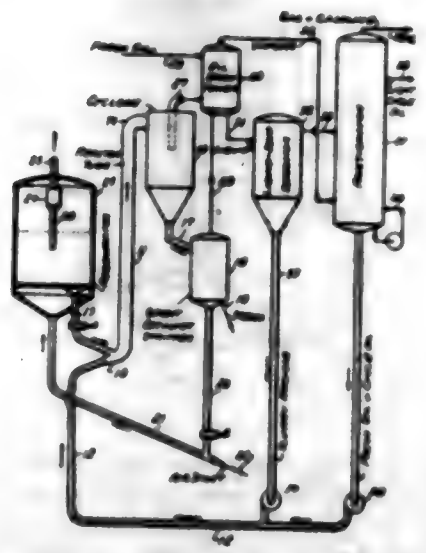


2,862,873

CATALYST RECOVERY PROCESS

Ralph E. Hall, Hammond, Ind., assignor to Sinclair Refining Company, New York, N. Y., a corporation of Maine

Application August 27, 1953, Serial No. 376,874
2 Claims. (Cl. 208—83)



1. In the conversion of petroleum hydrocarbons in the presence of a finely divided solid catalyst under flow conditions providing progressive reaction, the method which includes forming a suspension having a density of about 5 to about 10 pounds per cubic foot consisting of the finely divided catalyst in vapors of a petroleum hydrocarbon recycle stock, flowing the suspension initially at a linear velocity exceeding about 12 to 15 feet per second upwardly through an elongated, vertically extended confined reaction path, passing the effluent from the confined reaction path to a vapor-solids separation zone wherein a substantial portion of the finely divided catalyst is separated from said effluent leaving a lesser but substantial portion of the catalyst remaining in said effluent, regenerating the catalyst separated from said effluent in

2,862,879

PROCESS FOR REMOVING NITROGEN FROM

2,862,882

METAL AMIDOTHIOPHOSPHATE CORRO

100° F. and obtaining a low cold-test oil therefrom having a pour point between about 0 and

the products of the reactor to obtain a motor fuel fraction, a light gas oil fraction and a heavy gas oil frac-

said separation zone and returning the regenerated catalyst to the confined reaction path, withdrawing from said vapor-solids separation zone the effluent vapors containing the remaining portion of said catalyst, washing the withdrawn vapors and remaining catalyst by contact with said petroleum hydrocarbon charge stock to be converted, whereby said remaining catalyst is removed from said vapors in said liquid, withdrawing the liquid containing said remaining portion of catalyst from said washing zone and separately withdrawing the washed vapors from said washing zone, separating the liquid withdrawn from said washing zone into a clarified liquid petroleum fraction and an oil slurry containing the remaining portion of said catalyst, passing the withdrawn vapors from said washing zone and the clarified liquid to a common fractionation zone wherein an overhead vapor boiling lower than said charge stock is withdrawn separately from liquids boiling higher than said charge stock, recycling said higher boiling liquids from said fractionation zone together with said oil slurry containing said catalyst as said recycle stock.

2,862,874

CONVERSION OF HYDROCARBONS

Edward R. Boedeker and Saul Gerald Hindin, Wilmington, Del., assignors to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Application January 18, 1952
Serial No. 267,196
2 Claims. (Cl. 208—110)

1. The method of converting a hydrocarbon feed material boiling above the gasoline range into products characterized by a high gasoline to total gas ratio, which comprises contacting the feed with a catalyst composite comprising about 0.3 to 1.0 weight percent of the composite of a hydrogenating component selected from the group consisting of oxides of metals of group VI and metal oxides of group VIII of the periodic table incorporated in a siliceous base catalyst having a CAT-A value in the range of about 10 to 20, at a pressure above about 2500 pounds per square inch gauge, a temperature above about 900° F., a liquid hourly space velocity as low as about 0.1, and in the presence of at least 3 moles hydrogen per mole of feed.

2,862,875

CONVERSION OF HYDROCARBONS WITH THE USE OF A KAOLIN COMPOSITE CATALYST

Jacque C. Morrell, Chevy Chase, Md.

No Drawing. Application April 30, 1953
Serial No. 352,278
12 Claims. (Cl. 208—119)

1. A process for the conversion of higher boiling to lower boiling hydrocarbons of high octane value and suitable for motor fuel which comprises subjecting the said hydrocarbons to conversion conditions of temperature and space velocities in the presence of a composited catalyst comprising an intimate and integrated mixture of kaolin and said added active titanium oxide, the active titanium oxide comprising from 1% to about 10% of the said mixture.

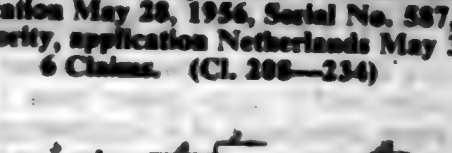
2,862,876

METHOD OF PURIFYING HEAVY FUEL OIL FOR FUELING INTERNAL COMBUSTION ENGINES

Hugo Torbjorn Wieberg, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden

Application June 5, 1956, Serial No. 589,463
Claims priority, application Sweden June 22, 1955
6 Claims. (Cl. 208—187)

1. In the purification of heavy fuel oil for use in fueling internal combustion engines, wherein the oil is subjected to centrifugal separation, the oil being stored in a storing zone, the improvement which comprises homogenizing the oil after the centrifugal separation,



whereby precipitates and agglomerates of heavy hydrocarbons which are present in the oil are mechanically disintegrated and finely dispersed in the oil.

2,862,877

HYDROCARBON OIL TREATING PROCESS

Willem J. Pieters and Adolf C. Van Beest, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application July 30, 1956
Serial No. 600,698
Claims priority, application Netherlands August 10, 1945
4 Claims. (Cl. 208—190)

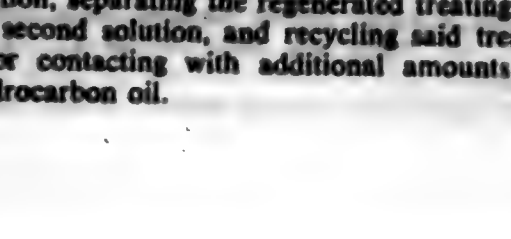
1. A process for reducing the corrosivity of a hypochlorite treated hydrocarbon oil distillate containing acidic organo-sulfur-chlorine compounds which comprises preparing a treating solution by adding a phenol to an aqueous alkali metal hydroxide solution in an amount to produce a solution containing from about 25 to about 700 grams of phenol per liter of solution and contacting said distillate with said solution.

2,862,878

SWEETENING PROCESS AND METHOD FOR REMOVING WATER OF REACTION FROM THE SWEETENING REAGENT

Cornelis D. Ten Have and Willem J. Pieters, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

Application May 28, 1956, Serial No. 587,532
Claims priority, application Netherlands May 31, 1955
6 Claims. (Cl. 208—234)



1. In a process for removing mercaptans from a light hydrocarbon oil wherein there occurs intimate liquid contacting of the oil in presence of oxygen with an aqueous treating solution of an alkali metal hydroxide and an alkali metal phenolate to effect an oxidation of the mercaptans to disulfides with an accompanying formation of water of reaction which causes an objectionable dilution of the treating solution, the improvement comprising utilizing in the process a treating solution of the foregoing description having an initial composition which permits its coexistence as a separate liquid phase in heterogeneous equilibrium with a second alkali metal hydroxide solution containing less of the alkali metal phenolate, recovering the water-diluted treating solution from the contacted light hydrocarbon oil and subjecting said treating solution to an intimate washing with said second alkali metal hydroxide solution, thereby regenerating the aqueous treating solution to substantially its original water content by transferring the water of reaction to said second solution, separating the regenerated treating solution and the second solution, and recycling said treating solution for contacting with additional amounts of said light hydrocarbon oil.

2,862,885

of hydrocarbon feed stocks boiling within the gasoline

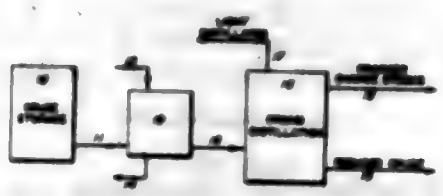
substantial portion of the catalyst remaining in said effluent, regenerating the catalyst separated from said effluent in

2,862,879

PROCESS FOR REMOVING NITROGEN FROM PETROLEUM HYDROCARBONS WITH AN ESTER OF A METABORIC ACID

Fred J. Dykstra, Detroit, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

Application May 3, 1956, Serial No. 582,627
5 Claims. (Cl. 208—254)



1. A process which comprises reacting a nitrogen-containing heavy hydrocarbon oil having a gravity heavier than about 32° API with an ester of a metaboric acid, whereby a precipitate is formed in said hydrocarbon; and separating said precipitate and said hydrocarbon.

2,862,880

METHOD OF CLARIFYING WATER BY HYDROPHOBIC POLYAMINES

Harry J. Clemens, Lyons, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application July 27, 1954
Serial No. 446,155
8 Claims. (Cl. 210—52)

1. The method of clarifying water containing a colloidal suspension of negatively-charged mineral particles, comprising introducing into said water a polyamine compound selected from the group consisting of the compounds and water-soluble salts thereof represented by the type formula:

$$R-(NH-CH_2-CH_2-CH_2)_X-NH_2$$

wherein R is a hydrophobic group containing from 8 to 22 carbon atoms and X is an integer from 1 to 3, said compound being introduced in a coagulating-concentration for said colloidal mineral particles, and thereafter removing the coagulated material.

7. The method of claim 1 in which there is also introduced in said water an inorganic coagulant.

2,862,881

WATER-IN-OIL EMULSION WELL FLUID, METHODS OF USING AND PREPARING SAME

William A. Reddie, Houston, Tex., assignor to Magnet Cove Barium Corporation, Houston, Tex., a corporation of Arkansas

No Drawing. Application August 1, 1955
Serial No. 525,799
17 Claims. (Cl. 252—8.5)

1. A stable water-in-oil emulsion fluid for use in well operations consisting essentially of from about 10 to about 70 parts by volume of water and about 90 to about 30 parts by volume of oil, from 4 to 30 lbs. per barrel of vegetable pitch consisting of a crude material obtained in the processing of vegetable oil, said material having a higher molecular weight than said vegetable oil and containing polymers of fatty acids which acids are derived from said vegetable oil, from 1 to 10 lbs. per barrel of oleophilic hydrocarbon sulfonate, from 1 to 20 lbs. per barrel of a surface-active wood resin extracted from aged wood and substantially insoluble in gasoline but soluble in furfural, from 2 to 15 lbs. per barrel of a water soluble alkaline earth metal salt and from 2 to 20 lbs. per barrel of an alkaline earth metal base.

2,862,882

METAL AMIDOPHOSPHONATE GREASES

Bruce W. Hotten, Orinda, and Frederick O. Johnson, Berkeley, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application August 6, 1956
Serial No. 602,423
10 Claims. (Cl. 252—32.5)

1. A grease composition comprising a major proportion of an oil of lubricating viscosity and, in an amount sufficient to thicken said oil to the consistency of a grease, a metal salt of an amidophosphonate of the formula

$$R_1CONHCH_2P(OH)_2$$
$$\|$$
$$O$$

wherein R_1 is an aliphatic radical containing from 6 to 24 carbon atoms, wherein said metal is a metal selected from the group consisting of alkali metals and alkaline earth metals.

2,862,883

LUBRICATING OIL COMPOSITIONS CONTAINING ACYLATED POLYAMINE SALTS

John Hughes, Ellesmere Port, Chester, and Phillip James Garner, Hooton, Wirral, England, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application January 11, 1957
Serial No. 633,518
Claims priority, application Great Britain January 18, 1956
7 Claims. (Cl. 252—33.4)

1. A lubricating oil composition comprising a major amount of a mineral lubricating oil and a minor but detergent amount of an oil-soluble mono-acylated aliphatic polyamine salt of an aromatic acidic compound wherein the acidic radical is selected from the group consisting of phenolic hydroxy group, carboxylic acid and sulfonic acid.

2,862,884

PROCESS FOR ANHYDROUS CALCIUM 12-HYDROXY STEARATE AND ESTOLIDE CONTAINING GREASE

John P. Dilworth, Fishkill, N. Y., Charles H. Culmone, Jr., Wyandotte, Mich., and Roy F. Nelson, Port Arthur, Tex., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

No Drawing. Application March 23, 1954
Serial No. 418,223
6 Claims. (Cl. 252—39)

1. The process of preparing a stable substantially anhydrous calcium base lubricating grease which comprises saponifying a hydroxy fatty acid material selected from the group consisting of substantially saturated mono- and dihydroxy fatty acids containing from about 12 to about 24 carbon atoms, and the glycerides thereof, with calcium hydroxide in the presence of a small amount equivalent to only a minor proportion of the liquid oleaginous lubricating base employed in the grease of a naphthenic distillate lubricating oil having a viscosity in the range from about 40 to about 600 seconds Saybolt Universal at 100° F., heating the saponified mass at a temperature above the melting point of the soap for a time sufficient to substantially dehydrate the said mass, and thereafter gradually adding additional lubricating oil with continuous stirring as the said mass is cooled at a temperature below the melting point of the said soap, said hydroxy fatty acid material containing 3–15 percent by weight of estolides having an average molecular weight in about the range 800–1200.

and a composition corresponding approximately to the chlorohydrin ester which is one of the class of

2,862,885

FOAM INHIBITION IN HYDROCARBON OILS

Rudolph S. Nelson, Larchmont, and Charles W. West, Kenmore, N. Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application January 18, 1955
Serial No. 482,657
11 Claims. (Cl. 252—49.6)

1. A hydrocarbon oil containing a minor amount sufficient to inhibit foam of a homopolymer of a monovinylalkoxysilane having a molecular weight of at least about 325 which had been polymerized through the vinyl group.

2,862,886

COMPOSITIONS FOR USE AS HYDRAULIC FLUIDS

Peter Laverock Davies, Higher Bebington, and Gerald David Galvin, Chester, England, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application May 2, 1955
Serial No. 505,519
7 Claims. (Cl. 252—78)

3. A substantially non-flammable composition of matter for use as a hydraulic fluid comprising

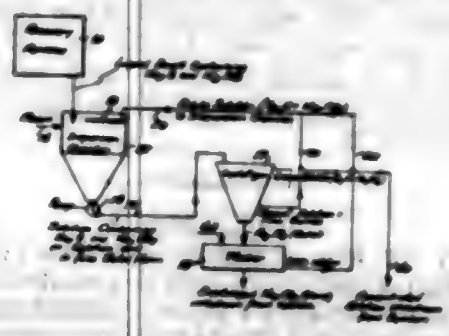
	Percent by weight
A trialkyl phosphate wherein each alkyl radical has from 4 to 9 carbon atoms	30–50
A triarylphosphate containing from 18 to 33 carbon atoms per molecule	5–35
A viscosity index-improving polymerized ester of C_6 to C_{18} aliphatic alcohols and methacrylic acid having an average molecular weight of at least about 25,000	5–10
A chloro(fluoromethyl) benzene having a boiling point above about 75° C. and a pour point below about −5° C.	30–60

2,862,887

PROCESS FOR PRODUCTION AND SEPARATION OF SODIUM SULFIDE AND SODIUM CARBONATE FROM SPENT LIQUORS

Robert Q. Boyer, Long Beach, Calif., assignor to Western Precipitation Corporation, Los Angeles, Calif., a corporation of California

Application October 3, 1955, Serial No. 538,237
8 Claims. (Cl. 252—183)



6. The process of treating smelt derived from spent liquor containing sodium carbonate and sodium sulfide to separate sodium carbonate from the sodium sulfide that includes the steps of blowing a stream of the liquid smelt with a jet of steam to break up the smelt into very finely divided form; allowing the smelt in the finely divided form to solidify; adding the finely divided solid smelt to an aqueous medium and dissolving substantially all the finely divided smelt in the aqueous medium to produce a concentrated solution of sodium sulfide and sodium carbonate; crystallizing sodium carbonate from said concentrated solution; and separating the solid crystallized sodium carbonate from the concentrated solution to leave a concentrated solution containing the sodium sulfide.

2,862,888

METHOD OF PREPARING HALOPHOSPHATE PHOSPHORS

John F. Ross, Shaker Heights, Ohio, assignor to General Electric Company, a corporation of New York

No Drawing. Application October 10, 1956
Serial No. 615,011
6 Claims. (Cl. 252—301.4)

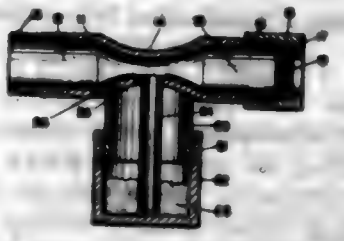
1. The method of preparing a halophosphate phosphor which comprises preliminarily preparing at a temperature of about 800–900° C. calcium chlor-apatite, substituting said calcium chlor-apatite in a ratio of about 1:1 of chlorine for the chloride ingredient in a halophosphate phosphor batch formula, blending together said calcium chlor-apatite and the ingredients of said formula and firing at a temperature and for a time sufficient to form the phosphor.

2,862,889

DEAGGLOMERATOR

Ralph I. Mitchell, Columbus, Ohio, assignor, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Application October 12, 1955, Serial No. 540,902
4 Claims. (Cl. 252—359)



1. A deagglomerator comprising a hollow tube formed with an inlet, an outlet, and an opening located between said inlet and said outlet; a second hollow tube projecting through said opening; means for providing a dry powder to said second tube; a porous metal disk covering said outlet so as to provide a deagglomerated aerosol when sufficient gas pressure is applied to said inlet to cause said powder to atomize.

2,862,890

REACTIVATION OF REFORMING CATALYSTS

James P. Daugherty, Jr., Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application October 20, 1952
Serial No. 315,853
3 Claims. (Cl. 252—412)

1. Method of reactivating a reforming catalyst comprising a metal oxide carrier and platinum in amount of 0.1–2.0% by weight and which has undergone loss in activity during prolonged use in the reforming of hydrocarbons in the presence of hydrogen, which comprises treating the deactivated catalyst, containing essentially all its platinum as obtained from such reforming operation, with a platinum-containing solution in amount to provide in the final catalyst composition 0.01–0.1% by weight additional platinum but less than one-half the amount of platinum that was present in the deactivated catalyst and calcining the treated catalyst.

2,862,891

SINTERED ELECTRICAL RESISTOR

Gerard Heinrich Jonker, Gerard Willem van Oosterhout, and Jan Heinrik van Santen, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application June 27, 1955
Serial No. 518,388
Claims priority, application Netherlands June 26, 1954
4 Claims. (Cl. 252—519)

1. A sintered electrical resistor having a conductive phase consisting of crystals having a perovskite structure

hot liquid being incapable of dissolving the said polymer

2,862,892

and a composition corresponding approximately to the formula $AB_nD_{1-n}O_3$ wherein A represents a mixture of at least one trivalent metal ion selected from the group consisting of La^{+++}, Nd^{+++} and Pr^{+++} and at least one bivalent metal ion selected from the group consisting of Ca^{++}, Sr^{++}, Ba^{++} and Pb^{++}; B represents at least one trivalent metal ion selected from the group consisting of Fe^{+++}, Cr^{+++}, and Co^{+++}, D represents at least one tetravalent metal ion selected from the group consisting of Fe^{++++}, Cr^{++++}, Co^{++++} and Mn^{++++}; Mn^{++++}, Co^{+++} and Co^{++++} being present only when at least one of the other metal ions other than the metal ions represented by A in said formula is present, the elements Co, Fe and Cr being present in both the trivalent and tetravalent states, and wherein *n* represents a numeral having a value greater than zero but less than one.

2,862,892

PREPARATION OF WEAKLY BASIC ANION-EXCHANGE RESINS FROM CHLOROHYDRIN ESTERS OF ACRYLIC TYPE ACIDS

Jesse C. H. Hwa, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application November 28, 1956
Serial No. 624,742
7 Claims. (Cl. 260—2.1)

1. A process for preparing weakly basic anion-exchange resins containing polar amino groups which comprises reacting an amino compound from the class consisting of ammonia, methylamine, dimethylamine, monobutylamines, dibutylamines, aniline, benzidine, o-, m-, and p-toluidines, xylidines, alpha-naphthylamine, beta-naphthylamine, benzylamine, dibenzylamine, phenylenediamine, benzylaniline, benzylethylamine, methylaniline, cyclohexylamine, dicyclohexylamine, diethylenetriamine, triethylenetetramine, tetraethylenepentamine, propylenediamine, ethanolamine, and diethanolamine with an insoluble, cross-linked, resinous product which is a copolymer of a mixture containing (*a*) 90 to 99.5% of a chlorohydrin ester which is one of the class of compounds designated by the formulae:

$$CH_2{=}C(R){-}COOCH_2CHOHCH_2Cl$$

$$CH_2{=}C(R){-}COOCH_2CHClCH_2OH$$

and

$$CH_2{=}C(R){-}COO\underset{\displaystyle CH_2OH}{\underset{|}{C}}HCH_2Cl$$

in which R represents a member of the class consisting of a hydrogen atom and an alkyl group containing one to four carbon atoms, and (*b*) 0.5 to 10% of a compound which is copolymerizable with said ester and which contains at least two non-conjugated vinylidene groups, $CH_2{=}C{<}$.

2,862,893

PREPARATION OF STRONGLY BASIC ANION-EXCHANGE RESINS FROM CHLOROHYDRIN ESTERS OF ACRYLIC TYPE ACIDS

Jesse C. H. Hwa, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application November 28, 1956
Serial No. 624,743
6 Claims. (Cl. 260—2.1)

1. A process for preparing strongly basic anion-exchange resins containing polar quaternary ammonium groups which comprises reacting a tertiary amine from the class consisting of trimethylamine, dimethylbenzylamine, dibenzylmethylamine, dimethylaniline, benzylphenylmethylamine, N,N-dimethylethanolamine, N-methyldiethanolamine, and triethanolamine together with an insoluble, cross-linked, resinous product which is a copolymer of a mixture containing (*a*) 90 to 99.5% of a chlorohydrin ester which is one of the class of compounds designated by the following formulae:

$$CH_2{=}C(R){-}COOCH_2CHClCH_2OH$$

$$CH_2{=}C(R){-}COO\underset{\displaystyle CH_2OH}{\underset{|}{C}}HCH_2Cl$$

and $CH_2{=}C(R){-}COOCH_2CHOHCH_2Cl$ in which R represents a member of the class consisting of a hydrogen atom and an alkyl group containing one to four carbon atoms, and (*b*) 0.5 to 10% of a compound which is copolymerizable with said ester and which contains at least two non-conjugated vinylidene groups, $CH_2{=}C{<}$.

2,862,894

PREPARATION OF ANION-EXCHANGE RESINS CONTAINING WEAKLY BASIC AND STRONGLY BASIC FUNCTIONAL GROUPS

Jesse C. H. Hwa, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application November 28, 1956
Serial No. 624,744
6 Claims. (Cl. 260—2.1)

1. A process for preparing an anion-exchange resin which contains both weakly basic anion-adsorbing groups and strongly basic quaternary ammonium anion-adsorbing groups which comprises reacting a polyamine of the general formula

$$(CH_3)_2N{-}A{-}N\begin{matrix}\diagup R'\\ \diagdown R''\end{matrix}$$

wherein R′ and R″ are each selected from the class consisting of a methyl group, an ethyl group and a hydrogen atom, and A represents an alkylene group of from two to six carbon atoms, together with an insoluble, cross-linked, resinous product which is a copolymer of a mixture containing (*a*) 90 to 99.5% of a chlorohydrin ester which is one of the class consisting of compounds designated by the following formulae:

(*a*) $CH_2{=}C(R){-}COOCH_2CHClCH_2OH$

(*b*) $CH_2{=}C(R){-}COOCH_2CHOHCH_2Cl$

(*c*) $CH_2{=}C(R){-}COO\underset{\displaystyle CH_2OH}{\underset{|}{C}}HCH_2Cl$

in which R represents a member of the class consisting of a hydrogen atom and an alkyl group containing one to four carbon atoms, and (*b*) 0.5 to 10% of a compound which is copolymerizable with said ester and which contains at least two non-conjugated vinylidene groups, $CH_2{=}C{<}$.

2,862,895

METHOD OF RECOVERING CRUMB OF A POLYMER OF A POLYMERIZED COMPOUND CONTAINING A SINGLE $CH_2{=}C{<}$ GROUPING FROM BY-PRODUCT MATERIAL SOLUTIONS

Percival W. Cummings, Jr., Cos Cob, and Allan O. Mogensen, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application October 11, 1955, Serial No. 539,753
13 Claims. (Cl. 260—2.3)

1. The method of recovering crumb of a water-insoluble polymer of a polymerizable compound containing a single $CH_2{=}C{<}$ grouping from by-product material containing at least some of the said polymer as the sole polymeric constituent and being dissolved in a liquid solvent therefor, said method comprising precipitating the said polymer from the liquid solvent in which it is dissolved by dispersing the said by-product material in a hot liquid comprising water which is at a temperature ranging between about 65° C. and about 95° C., said

hot liquid being incapable of dissolving the said polymer but being miscible with the aforesaid solvent, and whereby there is formed a slurry of polymeric solids dispersed

in the said hot liquid; subjecting the said polymeric solids while dispersed in the said hot liquid to a shearing stress; and recovering the resulting polymer crumb from the slurry.

2,862,896

LAMINATE ADHESIVE COMPRISING A PROTEIN AND A QUADRICOMPONENT INTERPOLYMER AND PROCESS FOR PREPARING SAME

Joseph B. Dedo, West Springfield, and Donald A. Watson, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 17, 1956
Serial No. 598,235
8 Claims. (Cl. 260—8)

1. An adhesive comprising an aqueous dispersion of 100 parts by weight of a protein of the group consisting of casein, soybean, blood albumin, zein, peanut protein, and mixtures thereof and 1–190 parts by weight of a quadricomponent interpolymer of (1) 35–60 parts by weight of an unsaturated ester of the group consisting of alkyl acrylates and alkyl methacrylates wherein the alkyl radical contains 5–20 carbon atoms and has 5–14 carbon atoms in the longest continuous chain thereof, (2) 3–10 parts by weight of an unsaturated nitrile of the group consisting of acrylonitrile and methacrylonitrile, (3) 2–5 parts by weight of an unsaturated monocarboxylic acid of the group consisting of acrylic acid, methacrylic acid, cinnamic acid, atropic acid, and crotonic acid, and (4) correspondingly, 60–25 parts by weight of a monovinylidene aromatic hydrocarbon of the group consisting of styrene, alkyl-substituted styrene, halogen-substituted styrene, vinyl naphthalene, and mixtures thereof, said interpolymer having been prepared by partially polymerizing all of the unsaturated nitrile component with from 1.5 to 3 times its weight of the monovinylidene aromatic hydrocarbon component and completing the interpolymerization reaction after adding all of the remaining components.

2,862,897

ADHESIVE COMPOSITION COMPRISING PHENOL ALDEHYDE RESIN AND HYDROXYALKYLCELLULOSE AND METHOD OF PREPARING SAME

Eugene M. Barrentine, Theodore S. Hodgins, and Frederic J. Shelton, Seattle, Wash., assignors to Reichhold Chemicals, Inc., Detroit, Mich.

No Drawing. Application September 16, 1954
Serial No. 456,606
11 Claims. (Cl. 260—14)

1. An adhesive composition suitable for plywood manufacture comprising predominantly a low molecular weight aqueous alkaline thermosetting phenol formaldehyde resin and a thickening agent composed of a relatively small proportion of a hydroxyalkylcellulose within the range of .05 to .33 part of hydroxyalkyl cellulose per 100 parts of 50% non-volatile content phenolic resin, added during the preparation of the resin, the condensation reaction being continued to a stage short of solidification of the mass when cooled to 25° C.

2,862,898

MODIFIED ALKYD RESINS

Earl C. Chapin, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application October 7, 1954
Serial No. 461,017
4 Claims. (Cl. 260—22)

1. In a process for modifying a glyceride drying oil modified alkyd resin the acid moiety of which contains no aliphatic unsaturation, with a mixture of ethylenically unsaturated monomeric components by reaction at 180–250° C. in solution in an inert organic solvent, the ratio of monomer components to modified alkyd resin varying from 2:1 to 1:5 on a weight basis, said monomeric components consisting of a styrene component selected from the class consisting of styrene alpha methyl styrene, ortho methyl styrene, meta methyl styrene, para methyl styrene, ortho para dimethyl styrene, alpha para dimethyl styrene and mixtures thereof and a nitrile selected from the class consisting of acrylonitrile and methacrylonitrile the ratio of styrene component to nitrile component varying between 19:1 and 1:19 on a weight basis, the improvement which comprises carrying out said reaction under a pressure of 10 to 50 atmospheres for a period of 15–60 minutes.

2,862,899

COMPOSITIONS OF POLYMERS OF PERHALOGENATED OLEFINS AND WAX

Fred William West, Paterson, N. J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application March 29, 1955
Serial No. 497,815
17 Claims. (Cl. 260—28.5)

1. A composition comprising an admixture of a hard wax component selected from the group consisting of natural waxes and oxidized microcrystalline petroleum wax, and a low molecular weight polymer of trifluorochloroethylene selected from the group consisting of the normally liquid polymers of trifluorochloroethylene and the waxy polymers of trifluorochloroethylene which melt at temperatures lower than about 40° C., the weight ratio of said polymer to said wax being from about 1:10 to about 10:1.

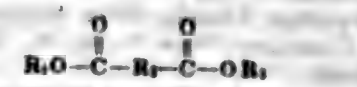
2,862,900

RESIN-FORTIFIED WAX POLISH COMPOSITIONS

Louis D. Bryant, Indianapolis, and Jerry H. Hunsucker, Carmel, Ind., assignors to J. I. Holcomb Manufacturing Company, Inc., Indianapolis, Ind., a corporation

No Drawing. Application September 26, 1955
Serial No. 536,773
5 Claims. (Cl. 260—28.5)

1. A wax polish composition comprising, in combination, a vehicle comprising a solvent of the class consisting of water and wax-dissolving organic solvents and a film-forming moiety, said film-forming moiety being comprised of a major amount of wax and a minor amount of a liquid partial polymer of an ester represented by the formula



wherein R_1O— represents the residue of a monocarbocyclic monohydric alcohol having from 5 to 6 carbon atoms in the nucleus thereof, R_2 represents the atoms which when taken together with the carbonyl groups form the residue of a dicarboxylic acid selected from the group consisting of maleic acid, itaconic acid, dichloromaleic acid, tetrahydrophthalic acid, cis-4-cyclohexene-1,2-dicarboxylic acid, succinic acid and glutaric acid; and —OR_3 represents the residue of an allylic alcohol having from 3 to 5 carbon atoms.

2,862,901
AQUEOUS SOLUTION OF AMINO-ALDEHYDE RESIN AND POLYMER HAVING FORMALDEHYDE REACTIVE CARBOXAMIDE SUBSTITUENTS AND PROCESS OF PREPARATION

Tzeng Jiueq Suen, New Canaan, and Yun Jen, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application March 26, 1956
Serial No. 573,601
11 Claims. (Cl. 260—29.4)

1. A composition of matter which comprises an aqueous solution of a water-soluble cationic thermosetting amino-aldehyde resin, and a water-soluble polymer having at least 5% formaldehyde-reactive carboxamide substituents attached to carbon atoms in a substantially linear chain obtained by the polymerization of an ethylenically unsaturated amide and wherein the resin:polymer weight ratio is between about 1:10 and 10:1.

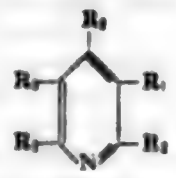
2,862,902
POLYMERIZATION OF 3-VINYLPYRIDINES AND LATEX PRODUCED THEREBY

James E. Pritchard, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

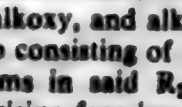
No Drawing. Application August 10, 1953
Serial No. 373,442
18 Claims. (Cl. 260—29.6)

1. The process which comprises polymerizing in aqueous solution a salt of a monomeric 3-vinylpyridine with an acidic material, said acidic material having an ionization constant at least 1.0×10^{-10} and less than 1.36×10^{-4} and a water solubility of at least 0.2 gram per 100 cc. of water at 20° C.

15. A process for polymerizing a pyridine compound of the structure



where R_1 is selected from the groups consisting of



the R_2's are selected from the group consisting of hydrogen, halogen, alkoxy, and alkyl groups, and R_3 is selected from the group consisting of R_1 and R_2, the total number of carbon atoms in said R_2 and R_3 being not greater than 12, comprising forming an aqueous solution of said compound and an acidic material having an ionization constant greater than 1.0×10^{-10} and less than 1.36×10^{-4} and a water solubility of at least 0.2 gram per 100 cc. of water at 20° C., and polymerizing the resulting salt.

2,862,903
ACETONITRILE-WATER AZEOTROPIC SOLUTIONS OF VINYLIDENE CYANIDE POLYMER AND PROCESS FOR PREPARING SAME

Gerald V. Wootton, Lorain, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application February 1, 1957
Serial No. 637,617
6 Claims. (Cl. 260—29.6)

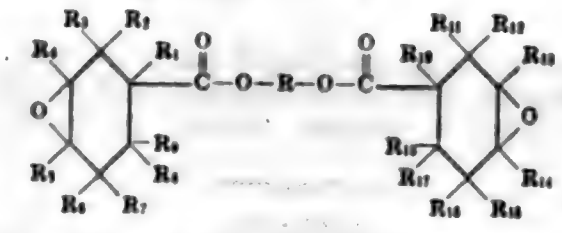
1. A spinning dope solution comprising as the solvent the azeotropic mixture of 85% by weight acetonitrile and 15% by weight of water which boils at 76.5° C. at atmospheric pressure, and, as the solute, sufficient equimolar interpolymer of vinylidene cyanide and another olefinic monomer copolymerizable therewith to form a 15 to 25 percent solution by weight of said solute in said solvent.

2,862,904
VINYL CHLORIDE RESIN PLASTICIZED WITH A BIS-(3,4 EPOXYCYCLOHEXANECARBOXYLATE) AND COMPOSITION CONTAINING SAME

Dennis H. Mullins, St. Albans, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application October 20, 1955
Serial No. 541,839
10 Claims. (Cl. 260—30.4)

1. A plasticized vinyl chloride composition which comprises a vinyl chloride resin containing intimately dispersed therein from 0.1 to 54.0 parts by weight per hundred parts of resin of a diepoxide compound represented by the general formula:



wherein R_1 through R_{18} represent members selected from the group consisting of hydrogen atoms and lower alkyl groups and R represents members selected from the group consisting of divalent aliphatic radicals and oxygen interrupted alkylene radicals.

2,862,905
PROCESS FOR PREPARING A THERMOSETTING RESIN FROM A SODIUM POLYMERIZED BUTADIENE POLYMER

Fred W. Banes, Anthony H. Gleason, and Joseph F. Nelson, Westfield, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application August 27, 1954
Serial No. 452,712
4 Claims. (Cl. 260—45.5)

1. A process for preparing a solid resin from a liquid sodium polymer selected from the group consisting of homopolymers of butadiene and copolymers of butadiene with up to 50% styrene which comprises grinding a polymeric resin selected from the group consisting of homopolymers of butadiene and copolymers of butadiene with styrene prepared by the sodium polymerization of the aforesaid monomers to the oil polymeric form and subsequent resinification with ditertiary butyl peroxide to a fine powder, mixing 10 to 50% of said powder with said sodium polymer and heating the mixture at a temperature between 110° C. and 175° C. in the presence of 2.0 to 4.0% of ditertiary butyl peroxide.

2,862,906
SUSPENSION PROCESS FOR THE POLYMERIZATION OF VINYLIDENE AROMATIC HYDROCARBONS

Alvin Stein and Robert L. Walter, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 1, 1957
Serial No. 649,595
9 Claims. (Cl. 260—45.5)

1. In a process for preparing polymerization products in granular form, the step which comprises polymerizing an aqueous dispersion of a polymerizable material containing a vinylidene monomer of the group consisting of vinylidene aromatic hydrocarbon monomer, a ring-halogenated vinylidene aromatic hydrocarbon monomer and mixtures thereof in the presence of, as a dispersing agent, a mixture of (1) a water-soluble interpolymer consisting of 93.5–98.5 mol percent of an acidic monomer of the group consisting of acrylic acid, methacrylic acid, and mixtures thereof, and, correspondingly, 6.5–1.5 mol percent of a monomer of the group consisting of 2-ethyl-

hexyl acrylate, 2-ethylhexyl methacrylate and mixtures thereof, and (2) a material from the group consisting of bis(sulfoaryl) alkanes and water soluble salts thereof.

2,862,907

SUSPENSION PROCESS FOR THE POLYMERIZATION OF VINYLIDENE AROMATIC HYDROCARBONS HAVING RUBBERY CONJUGATED 1,3-DIENE POLYMERS DISSOLVED THEREIN

Alvin Stein and Robert L. Walter, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 1, 1957
Serial No. 649,596
6 Claims. (Cl. 260—45.5)

1. A process for preparing polymerization products in granular form which comprises (1) agitating and heating a mixture of at least about 35 parts of water and 100 parts of a partially polymerized solution of a rubbery conjugated 1,3-diene polymer in a vinylidene monomer of the group consisting of a vinylidene aromatic hydrocarbon monomer, a ring-halogenated vinylidene aromatic hydrocarbon monomer and mixtures thereof to a temperature of at least about 110° C., in absence of a dispersing agent, (2) adding to said mixture of water and partially polymerized vinylidene aromatic hydrocarbon monomer solution, as a dispersing agent, a water-soluble interpolymer consisting of 93.5–98.5 mol percent of an acidic monomer of the group consisting of acrylic acid, methacrylic acid and mixtures thereof, and, correspondingly, 6.5–1.5 mol percent of a monomer of the group consisting of 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate and mixtures thereof, and (3) continuing to agitate and heat said water and partially polymerized vinylidene aromatic hydrocarbon monomer solution until said vinylidene aromatic hydrocarbon monomer is substantially completely polymerized; the vinylidene aromatic hydrocarbon monomer solution employed in step (1) being characterized by the fact that at least about 15% of the monomeric constituents of the vinylidene aromatic hydrocarbon monomer solution have been polymerized and that said partially polymerized vinylidene aromatic hydrocarbon monomer solution has a viscosity of at least about 40 poises at 40° C.

2,862,908

POLYVINYL ACETALS

Wilford Donald Jones, Summit, Henry P. Marshall, New Providence, Richard E. Davies, Ridgewood, and Walter D. Paist, Berkeley Heights, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application December 15, 1954
Serial No. 475,560
12 Claims. (Cl. 260—45.95)

1. In the process for the production of polyvinyl formal which comprises reacting polyvinyl acetate and formaldehyde in solution in aqueous acetic acid containing an acid catalyst for said reaction, the improvement which comprises carrying out the reaction in the presence of 0.5 to 4%, based on the polyvinyl acetate, of sodium sulfoxylate formaldehyde.

2,862,909

DI-(3 ME, 4-OH PHENYL)METHYL METHANE ANTIOXIDANT FOR ETHYLENE POLYMERS

Eric B. Hotelling and Martin B. Neuworth, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application March 12, 1957. Serial No. 645,613
2 Claims. (Cl. 260—45.95)

1. A composition comprising solidified polyethylene polymer having uniformly dispersed throughout an anti-

oxidant quantity of di-(3-methyl-4-hydroxyphenyl) methyl methane.

2,862,910

LIQUID PHENOLIC RESINS

Louis M. Higashi and Reino A. Jarvi, San Jose, Calif., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 9, 1955
Serial No. 545,998
3 Claims. (Cl. 260—60)

1. A process for preparing a liquid phenolic resin which comprises (1) condensing 1 mol of a monohydric phenol with from 0.8 to 3 mols of formaldehyde in the presence of 0.002 to 0.10 mol of a catalyst taken from the group consisting of lithium oxide, lithium hydroxide, lithium hydroxide monohydrate and lithium carbonate and in the presence of sufficient water to yield a 50–70% solids end-product, said condensation being carried out under reflux at temperatures of 30–90° C. at reduced pressure, until the free formaldehyde content is less than 5% by weight, (2) thereafter cooling the reaction medium rapidly to less than 30° C., (3) neutralizing the cooled reaction medium with orthophosphoric acid to a pH of 7.0–7.2, whereby a crystalline precipitate is formed, and (4) filtering the reaction medium.

2,862,911

ALKYL VINYL KETONE-STYRENE COPOLYMER HYDROXYLATED BY REDUCING CARBONYL GROUP

Joseph A. Blanchette, East Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 19, 1956
Serial No. 610,703
5 Claims. (Cl. 260—63)

1. A reduced copolymer of an alkyl vinyl ketone wherein the alkyl radical contains 1–5 carbon atoms and a monovinylidene aromatic compound of the group consisting of styrene, alpha-methyl styrene, and ar-substituted derivatives thereof wherein the ar-substituent is a member of the group consisting of aliphatic hydrocarbon radicals containing 1–4 carbon atoms, halo, hydroxyl, and carboxyl substituents, said copolymer being reduced at the carbonyl groups to form hydroxyl groups.

2,862,912

VINYL HALIDE POLYMERIZATION PROCESS

John B. Ott, Northampton, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 22, 1956
Serial No. 573,068
13 Claims. (Cl. 260—78.5)

1. In a process for preparing polymerization products in granular form, the step which comprises polymerizing an aqueous dispersion of a polymerizable material containing a vinyl halide from the group consisting of vinyl fluoride, vinyl chloride, vinyl bromide and mixtures thereof in the presence of, as a dispersing agent, a water-soluble interpolymer consisting of 94.5–98.5 mol percent of an acidic monomer of the group consisting of acrylic acid, methacrylic acid and mixtures thereof and, correspondingly, 5.5–1.5 mol percent of a monomer of the group consisting of 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate and mixtures thereof.

2,862,913

GLUCOSIDE ESTERS AS SUSPENDING AGENTS IN VINYL HALIDE POLYMERIZATION PROCESS

Robert O. L. Lynn, Jr., Springfield, and Harold W. Mohrman, Longmeadow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 1, 1957
Serial No. 649,638
11 Claims. (Cl. 260—78.5)

1. In a process for the suspension polymerization of a vinyl halide of the group consisting of vinyl fluoride, vinyl chloride and vinyl bromide in which the vinyl halide is suspended and polymerized in water containing a water-soluble interpolymer of a maleic compound of the group consisting of maleic anhydride, maleic acid and maleinimide and an interpolymerizable vinylidene monomer as a suspending agent for the vinyl halide polymer; the improvement which comprises incorporating in the polymerization system, as an auxiliary suspending agent, an alkyl glucoside diester of a monobasic fatty acid containing 10–20 carbon atoms, the alkyl group of said alkyl glucoside containing 1–4 carbon atoms.

2,862,914

PROCESS FOR PREPARING AROMATIC HYDROCARBON RESIN

Robert F. Leary, Cranford, and James V. Fusco, Fanwood, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application May 2, 1955, Serial No. 505,210
7 Claims. (Cl. 260—82)

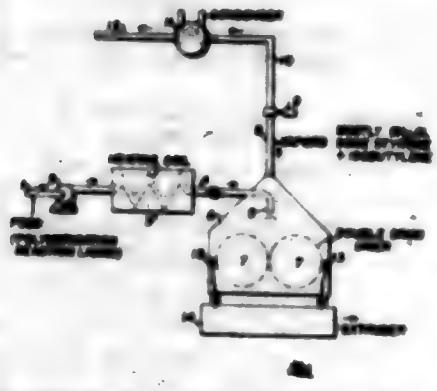
3. A process for preparing a highly aromatic hydrocarbon resin which comprises: recovering the liquid polymer by-product from the Friedel-Crafts polymerization of a steam-cracked petroleum fraction boiling between about 20° C. and 140° C., said liquid polymer boiling between about 350° and 800° F. and containing about 20 to 50 wt. percent aromatic hydrocarbons; steam-cracking said liquid polymer at conditions adapted to yield a cracked fraction boiling between about 250° and 500° F.; recovering said cracked fraction boiling between about 250° and 500° F.; contacting said cracked fraction with a Friedel-Crafts polymerization catalyst at a temperature between about −50° C. and +200° C.; and recovering the resulting highly aromatic resin.

2,862,915

DRY RECOVERY OF ISOBUTYLENE-STYRENE COPOLYMER

Joseph F. Nelson, Westfield, and Robert F. Leary, Cranford, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application September 17, 1953, Serial No. 380,748
8 Claims. (Cl. 260—88.1)



1. A non-aqueous process of recovering high molecular weight thermoplastic styrene-isobutylene copolymers having a combined styrene content of about 40 to 70% and having an intrinsic viscosity above 0.5, from the cold methyl chloride solution in which said copolymers were polymerized at a temperature below −70° C. with a Friedel-Crafts catalyst, which comprises heating the cold polymerization reaction liquid, containing 10–30% of said copolymers dissolved therein under a pressure of at least 50 p. s. i. g. to a temperature of at least 50° F. and flashing it into a closed flash chamber from which about 15–90% of the methyl chloride and other volatile vapors are withdrawn, condensed and recycled for use in further polymerization reactions, and in which the desolventized copolymer is collected on the hot rotating metal surfaces of a double drum drier having a temperature above 212° F., and removing substantially solvent-free copolymer in a hot, thermoplastic condition from said drum drier.

2,862,916

PRODUCTION OF POLYVINYL ALCOHOL

John C. Lukman, Morris Plains, and Orville G. Lowe, Summit, N. J., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

No Drawing. Application August 22, 1955
Serial No. 529,930
3 Claims. (Cl. 260—91.3)

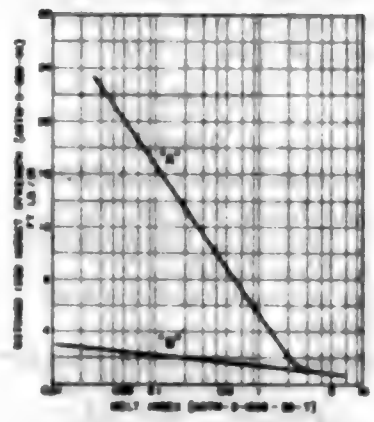
1. A process for the production of polyvinyl alcohol which comprises alcoholizing polyvinyl acetate dissolved in ethanol in the presence of an alkaline alcoholysis catalyst and a basic nitrogenous compound selected from the group consisting of hydrazine, hydroxylamine, butylamine and ethylene diamine that will react with aldehydes under the conditions of the reaction to form a colorless product.

2,862,917

POLYMERIZATION OF ETHYLENE

Arthur William Anderson, Wilmington, John MacMillan Bruce, Jr., Claymont, and Ernest Lynwood Fallwell, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application December 6, 1955, Serial No. 551,265
17 Claims. (Cl. 260—94.9)



1. The process of polymerizing ethylene to a solid polymer having a melt index value within the range of 0.005 to 10 and a steady state compliance within the range of 3 to 7 which comprises introducing ethylene and an inert non-polymerizable solvent therefor into a reaction zone, polymerizing said ethylene in said reaction zone with a catalyst formed by admixing a titanium compound of the class consisting of titanium salts and titanium alkoxides with a compound having at least one metal-to-hydrocarbon bond, maintaining said reaction zone at a temperature above the melting point temperature of said polymer of ethylene, and maintaining in said reaction zone an excess of ethylene in said solvent, and recovering a polymer of ethylene having a steady state compliance of 3 to 7 and a melt index within the range of 0.005 to 10.

2,862,924

2,862,918

ACYLATED, ISOLATED, PARTIALLY-HYDROLYZED, SOYA PROTEIN AND PROCESS

Edwin W. Meyer and Sidney J. Circle, Chicago, Ill., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

Application March 12, 1956, Serial No. 570,970

7 Claims. (Cl. 260—123.5)

1. The method of acylating isolated acid-precipitable soya protein which has been partially hydrolyzed to a state beyond the initial gel stage whereby to prepare a modified protein exhibiting lower viscosity when made into an aqueous alkaline dispersion, said process consisting of reacting carboxylic acid anhydride selected from the group consisting of acetic anhydride, propionic anhydride, benzoic acid anhydride and dicarboxylic acid anhydrides with a dilute aqueous dispersion of said isolated partially-hydrolyzed protein while continuously maintaining the reaction menstruum alkaline.

2,862,919

DISAZO DYESTUFFS

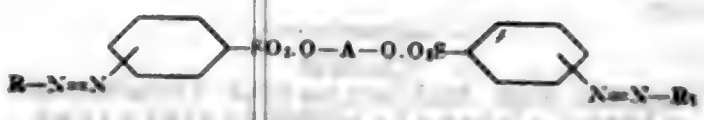
Herbert-Joachim Exner, Koln-Stammheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application March 7, 1957
Serial No. 644,464

Claims priority, application Germany May 19, 1956

7 Claims. (Cl. 260—160)

1. A disazo dyestuff corresponding to the general formula



wherein R means a radical selected from the group consisting of 1-sulfophenyl-3-methyl-5-aminopyrazole and 1-sulfonaphthyl-3-methyl-5-aminopyrazole, R_1 stands for a radical selected from the group consisting of 1-sulfophenyl-3-methyl-5-aminopyrazole, 1-sulfonaphthyl-3-methyl-5-aminopyrazole, 2-aminonaphthalene-sulfonic acid and 2-aminonaphthol-sulfonic acid, the pyrazolyl radicals being coupled in the 4-position and the naphthyl radicals being coupled in o-position to the amino group, and A stands for a divalvent radical selected from the group consisting of members of the phenylene, diphenylene, diphenylene-sulfone, and the dimethyl-diphenylene-methane series.

2,862,920

FERROUS CARBOXYMETHYL DEXTRAN

Carl Berger and Leo J. Novak, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

No Drawing. Application June 7, 1956
Serial No. 589,885

2 Claims. (Cl. 260—209)

1. A method for producing a ferrous carboxymethyl dextran complex which is insoluble in aqueous acid solution but readily soluble in aqueous alkaline solution at pH 8.0 to 8.5, comprising slowly adding an aqueous dispersion of a carboxymethyl ether of water-dispersible dextran having a molecular weight between 2000 and that of native, unhydrolyzed, microbiologically produced dextran containing an average of about 1.0 to 3.0 carboxymethyl groups per anhydroglucose unit, which dispersion has the consistency of a jelly, to an aqueous solution of ferrous chloride with vigorous stirring and the passage of carbon dioxide gas through the reaction medium to inhibit oxidation of ferrous ion, the relative proportions by weight of the carboxymethyl dextran and ferrous chloride being from 1:5 to 1:10, holding the resulting fluid mass at room temperature until a gelatinous precipitate comprising the ferrous complex forms and settles, separating the gelatinous precipitate from the supernatant, reprecipitating the complex by mixing the gelatinous precipitate with methanol with vigorous stirring, separating the precipitate, and repeating the reprecipitation from methanol until the supernatant is substantially colorless and a brown colored ferrous carboxymethyl dextran complex is obtained in granular condition.

2,862,921

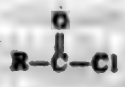
ERYTHROMYCIN ESTERS

Roger E. Booth, Kalamazoo Township, Kalamazoo County, Jack K. Dale, Kalamazoo, and Maxton F. Murray, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application August 13, 1953
Serial No. 374,114

19 Claims. (Cl. 260—210)

1. A process which comprises reacting erythromycin with a pharmacologically acceptable acid chloride of the formula



wherein R represents a monovalent radical selected from the group consisting of alkyl, cycloalkanealkyl and alkenyl radicals containing at least seven and not more than seventeen carbon atoms to produce the corresponding erythromycin ester.

2,862,922

METHOD OF MAKING SODIUM CELLULOSE SULFATE

Donald B. Sparrow, Moylan, Pa., and William R. Powers, Penns Grove, N. J., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania

No Drawing. Application July 20, 1954
Serial No. 444,668

4 Claims. (Cl. 260—215)

1. The method of making sodium cellulose sulfate which comprises reacting cellulose with sodium chlorsulfonate in an anhydrous medium consisting of a mixture of acetic anhydride and glacial acetic acid.

2,862,923

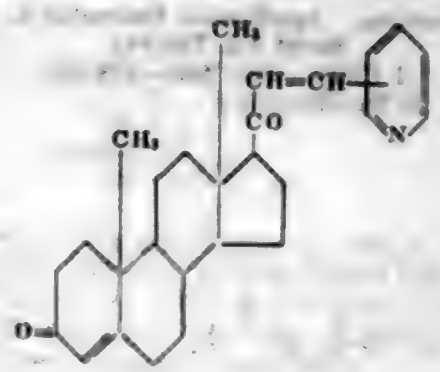
17-(PYRIDINEACRYLYL)-4-ANDROSTEN-3-ONES

Raymond M. Dodson, Park Ridge, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application April 2, 1956
Serial No. 575,333

4 Claims. (Cl. 260—239.5)

1. A compound of the structural formula



4. A process for the chlorination of an aliphatic

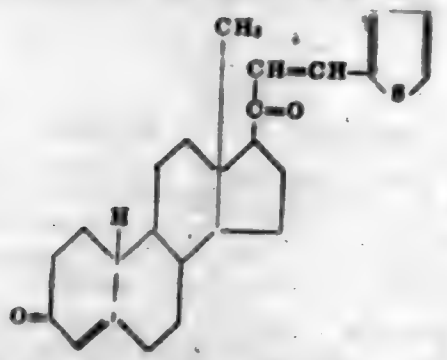
2,862,924

21-FURFURYLIDENE AND 21-THENYLIDENE DERIVATIVES OF PROGESTERONE AND 19-NOR-PROGESTERONE

Raymond M. Dodson, Park Ridge, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application April 12, 1956
Serial No. 577,646
5 Claims. (Cl. 260—239.5)

1. A compound of the structural formula



wherein X is a member of the class consisting of oxygen and sulfur and R is a member of the class consisting of hydrogen and methyl radicals.

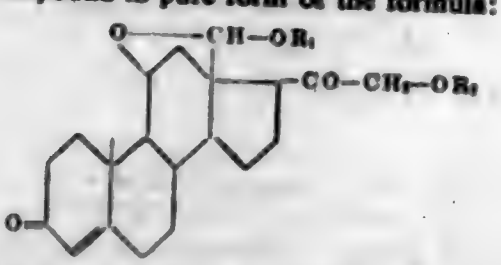
2,862,925

DERIVATIVES OF ALDOSTERONE

Tadeus Reichstein and Albert Wettstein, Basel, and Robert Neher, Binningen, Switzerland

No Drawing. Application September 8, 1954
Serial No. 454,834
Claims priority, application Switzerland September 11, 1953
23 Claims. (Cl. 260—239.55)

1. A compound in pure form of the formula:



in which R_1 is a member selected from the group consisting of hydrogen, an acyl- and a hydrocarbon radical and R_2 is a member selected from the group consisting of hydrogen and an acyl radical, the acyl radicals of said groups being a member selected from the group consisting of alkanoyl, aralkanoyl, aroyl, cycloalkyl-alkanoyl and cyclo-alkanoyl having less than 20 carbon atoms and the hydrocarbon radicals having less than 8 carbon atoms, and in which at least one of the groups R_1 and R_2 are carbon containing radicals.

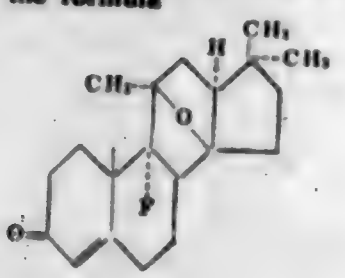
2,862,926

SYNTHESIS OF STEROIDS

Gordon H. Thomas, New Brunswick, and Josef Fried, Princeton, N. J., assignors to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application December 6, 1957
Serial No. 700,943
1 Claim. (Cl. 260—239.55)

A steroid of the formula



2,862,927

HETEROCYCLIC NITROGEN COMPOUND POLYMER INHIBITORS

Harold R. Snyder, Urbana, Ill., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application June 16, 1955
Serial No. 516,039
13 Claims. (Cl. 260—290)

1. A method of stabilizing a vinylpyridine, selected from the group consisting of vinyl and alpha-methyl-vinylpyridines and alkyl substituents thereof wherein the total carbon atoms in such alkyl substituents do not exceed 12, against polymer formation which comprises incorporating therewith a stabilizing amount of at least one compound selected from the group consisting of 2,4-dinitro-1-naphthol, 2,4-dinitro-1-naphthol-7-sulfonic acid, 2,4-dinitro-1-naphthol-8-sulfonic acid, 2,4-dinitro-1-naphthol-5-sulfonic acid, 2,4-dinitro-5-methyl-1-naphthol, 2,4-dinitro-6-propyl-1-naphthol, 2,4-dinitro-5-methoxy-1-naphthol and sodium salt of 2,4-dinitro-1-naphthol-7-sulfonic acid.

2,862,928

NEW QUATERNARY COMPOUNDS OF PYRIDINE ALDEHYDE ACETALS

Adolf Christian Josef Opfermann, Bergisch-Gladbach, Germany

No Drawing. Application February 18, 1957
Serial No. 640,623
Claims priority, application Germany February 23, 1956
2 Claims. (Cl. 260—297)

1. N-methyl-pyridinium-3-aldehyde - dimethyl - acetal-iodide.

2. N-methyl-pyridinium-4-aldehyde - dimethyl - acetal-iodide.

2,862,929

PROCESS FOR HALOGENATING COMPOUNDS HAVING A TETRAZA-PORPHIN STRUCTURE

Armin Calleri, Basel, Walter Kern, Stanch, and Theodor Holbro, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application March 12, 1956
Serial No. 570,694
Claims priority, application Switzerland March 18, 1955
11 Claims. (Cl. 260—314.5)

1. A process for the halogenation of a phthalocyanine which comprises heating the said phthalocyanine in an anhydrous halogenating agent which consists essentially of on the one hand a compound of the Friedel-Crafts' type and on the other hand a compound hexavalent sulfur selected from the group consisting of sulfur trioxide, sulfuric acid, $HO.SO_2$-halogen, metal-$O.SO_2$-halogen and lower alkyl-$O.SO_2$-halogen, at least one mol of aluminum chloride being used per mol of phthalocyanine and per mol of chlorosulfonic acid.

2,862,930

HALOGENATION OF VAT DYESTUFFS

Armin Calleri, Basel, Walter Kern, Stanch, and Theodor Holbro, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application March 12, 1956
Serial No. 570,695
Claims priority, application Switzerland March 18, 1955
9 Claims. (Cl. 260—324)

1. A process for the chlorination of an anthraquinone compound containing at most 7 benzene nuclei which comprises heating said compound at temperatures between 80–200° C. in an anhydrous chlorinating agent which contains anhydrous aluminium chloride and a compound of hexavalent sulfur selected from the group consisting of sulfur trioxide, anhydrous sulfuric acid, chlorosulfonic acid and fluorosulfonic acid and the metal salts thereof, and lower alkane sulfonic acids, at least one mol of aluminium chloride being used per mol of the sulfur compound.

4. A process for the chlorination of an indigoid compound which comprises heating said compound at a temperature between 80 and 200° in an anhydrous halogenation agent, which contains anhydrous aluminium chloride and chlorosulfonic acid in presence of an alkali halide, at least one mol of aluminium chloride being used per mol of halogen sulfonic acid.

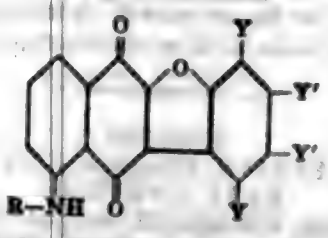
2,862,931

HETEROCYCLIC VAT DYESTUFFS

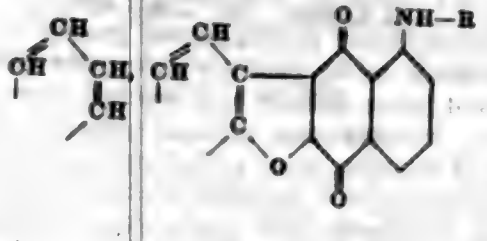
Wilhelm Schmidt-Nickels, Little York, and David I. Randall, New Vernon, N. J., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 30, 1955
Serial No. 556,415
12 Claims. (Cl. 260—346.2)

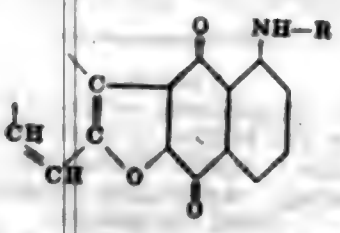
1. Compounds having the formula



wherein one pair Y—Y' is hydrogen, the other pair Y—Y' is selected from the group consisting of



and



and R is a nuclearly bonded residue of a vattable polycyclic ketone selected from the group consisting of dibenzopyrenequinone, anthanthrone, pyranthrone, dibenzanthrone and isodibenzanthrone.

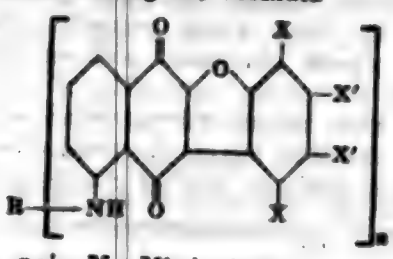
2,862,932

HETEROCYCLIC VAT DYESTUFFS

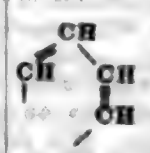
Wilhelm Schmidt-Nickels, Little York, N. J., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 30, 1955
Serial No. 556,474
12 Claims. (Cl. 260—346.2)

1. Compounds having the formula



wherein one pair X—X' is hydrogen, the other pair X—X' is



n has a value of 2 or 3, and R is selected from the group consisting of phenyl, lower alkyl phenyl, lower alkoxy phenyl, diphenyl, lower alkyl diphenyl and lower alkoxy diphenyl.

2,862,933

PROCESS OF PREPARING CHOLENIC ACID DERIVATIVES

Wolter Smit and Pieter Modderman, Oss, Netherlands, assignors to Organon Inc., Orange, N. J., a corporation of New Jersey

No Drawing. Application February 27, 1957
Serial No. 642,644
Claims priority, application Netherlands March 2, 1956
4 Claims. (Cl. 260—397.1)

1. A method of preparing compounds selected from the group consisting of $\Delta^{9(11)}$-3α,12-dihydroxy-cholenic acid, lower alkyl esters and esterified 3α-hydroxy derivatives thereof, which comprises reducing a compound selected from the group consisting of $\Delta^{9(11)}$-3α-hydroxy-12-oxo-cholenic acid, lower alkyl esters and esterified 3α-hydroxy derivatives thereof with an alkali metal borohydride.

2,862,934

METHOD OF PRODUCING TACHYSTEROL AND DIHYDROTACHYSTEROL

Arie Lambertus Koevoet and Arie Verloop, Leiden, and Jan Anne Keverling Buisman and Pieter Westerhof, Weesp, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application February 10, 1956
Serial No. 564,624
Claims priority, application Netherlands June 14, 1955
10 Claims. (Cl. 260—397.2)

1. A method of producing a tachysterol comprising the steps of adding to a solution containing pre-calciferol and having an alkalinity extending from neutral to slightly alkaline, a catalyst capable of transforming cis-isomers to trans-isomers and selected from the group consisting of iodine and eosine, and exposing said solution to the action of actinic light to convert the pre-calciferol to a tachysterol.

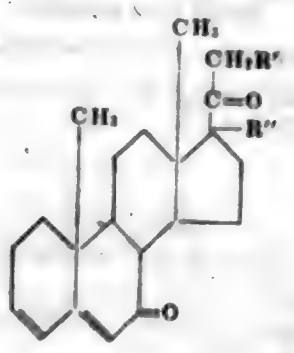
2,862,935

3,5-DIENIC-7-OXOPREGNANE DERIVATIVES AND PROCESSES

Charles W. Marshall, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application November 29, 1956
Serial No. 624,957
8 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein one of the substituents R' and R'' is selected from the group consisting of hydroxy and lower alkanoyloxy radicals, and the other of these two substituents is selected from the group consisting of hydrogen and hydroxy and lower alkanoyloxy radicals.

2,862,936

21-FLUORO-STEROIDS AND METHOD OF MAKING SAME

Frank H. Lincoln, Jr., and William P. Schneider, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 4, 1956
Serial No. 582,666
5 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of 11β,17α - dihydroxy - 21 - fluoro - 1,4 - pregnadiene - 3,20-dione and 17α-hydroxy-21-fluoro-1,4-pregnadiene-3,11,20-trione.

2,862,937

HYDROCORTISONE AND CORTISONE 21-(2-CHLORO-4-NITROBENZOATES)

Melvin A. Rebenstorf, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 10, 1956
Serial No. 583,909
3 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of 11β,17α,21-trihydroxy- 4 - pregnene - 3,20 - dione 21 - (2 - chloro-4-nitrobenzoate) and 17α,21-dihydroxy-4-pregnene-3,11,20-trione 21-(2-chloro-4-nitrobenzoate).

2,862,938

21-(2-CHLORO-4-NITROBENZOATE) OF PREDNISOLONE AND PREDNISONE

Melvin A. Rebenstorf, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 10, 1956
Serial No. 583,910
3 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of 11β,17α,21 - trihydroxy - 1,4 - pregnadiene - 3,20 - dione 21 - (2 - chloro - 4 - nitrobenzoate) and 17α,21 - dihydroxy - 1,4 - pregnadiene - 3,11,20 - trione 21 - (2 - chloro-4-nitrobenzoate).

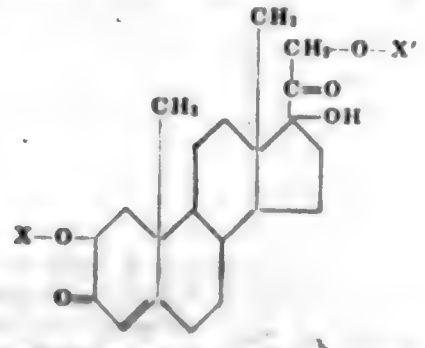
2,862,939

ESTERS OF 2,17,21-TRIHYDROXY-4-PREGNENE-3,20-DIONE

Raymond M. Dodson, Park Ridge, and Robert W. Hamilton, Wilmette, Ill., assignors, by mesne assignments, to G. D. Searle & Co., Skokie, Ill., a corporation of Delaware

No Drawing. Application August 12, 1954
Serial No. 449,508
5 Claims. (Cl. 260—397.47)

1. A compound having the structural formula



wherein X and X' are acyl radicals derived from lower alkanoic acids containing up to six carbon atoms.

2,862,940

PROCESS FOR THE PRODUCTION OF OMEGA-AMINO ACIDS

Hiroshi Otsuki and Hideya Fumihashi, Tokyo-to, Japan

No Drawing. Application November 24, 1953
Serial No. 394,284
Claims priority, application Japan November 27, 1952
4 Claims. (Cl. 260—404)

1. In a process for the production of ω-amino acid, the synthetic combination of the steps of converting a starting substance selected from the group of unsaturated fatty acids into ozonide by introducing ozone therethrough, subjecting said ozonide to a decomposition, said decomposition of the ozonide being carried out by steam distillation, converting the acid aldehyde derived from said decomposition of said ozonide to aldehyde ammonia by addition of ammonia and then reducing said converted aldehyde ammonia by catalytic hydrogenation in the presence of Raney nickel to obtain a product of the group of ω-amino acid as the final product.

2,862,941

NON-SELECTIVE HYDROGENATION OF FATS AND OILS

Dwight R. Merker, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application August 11, 1955
Serial No. 527,859
12 Claims. (Cl. 260—409)

1. A non-selective hydrogenation process for hardening a glyceride oil to produce a partially hardened fat of improved flavor stability and wide plastic range which comprises: incorporating in said glyceride oil in the presence of moisture prior to hydrogenation a small but effective amount of a material selected from the group consisting of mineral acids and aliphatic hydroxy acids.

2,862,942

METHOD OF OXIDIZING AND CLEAVING COMPOUNDS TO FORM ACIDIC PRODUCTS

Jordan P. Snyder, Philadelphia, Pa.

No Drawing. Application October 1, 1957
Serial No. 687,592
46 Claims. (Cl. 260—413)

1. In a method of producing acids from an organic carbon compound, said compound being selected from the group which consists of (1) the olefins wherein at least one of the olefinic carbon atoms carries a hydrogen atom, (2) the aliphatic and cycloaliphatic compounds having a pair of adjacent carbon atoms one of which carries a group selected from the class which consists of the hydroxy group and the ketonic oxygen group, and the other of which carries at least two hydrogen atoms, (3) the organic compounds selected from the group consisting of aliphatic and cycloaliphatic having a saturated paraffin chain having a chain length of from 2 to 200 carbon atoms and (4) the organic alkyl aromatic compounds wherein the alkyl group is attached to the ring, the steps which comprise contacting and reacting said organic compound with an oxidizing agent selected from the group consisting of nitric acid and the oxidizing nitric oxides, mixing alkali with the oxidation product, and then mixing the product with oxidizing agent in an acid medium, thereby oxidizing said material.

2,862,943

PURIFICATION OF FATTY ACIDS

Donald H. Wheeler, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

No Drawing. Application October 7, 1954
Serial No. 461,035
7 Claims. (Cl. 260—419)

1. Process of improving the color of fatty acids which

comprises distilling fatty acids in the presence of boric acid said fatty acids being substantially free from neutral oil.

2,862,944

PROCESS FOR THE PREPARATION OF HIGH PURITY ALKYLTIN COMPOUNDS

Carl R. Gloskey, Avenel, N. J., assignor to Metal & Thermit Corporation, New York, N. Y., a corporation of New Jersey

No Drawing. Application December 7, 1955
Serial No. 551,518

11 Claims. (Cl. 260—429.7)

1. The process which comprises reacting an impure mixture comprising a trialkyltin chloride and tetraalkyltin with an aqueous solution consisting essentially of an alkali metal hydroxide dissolved in water, to form an aqueous phase and an organic phase, separating the aqueous phase from the organic phase, and distilling the organic phase to separate trialkyltin oxide from tetraalkyltin.

2,862,945

NICKEL CYCLOPENTADIENIDES AND PROCESS FOR PREPARING SAME

Eddie G. Lindstrom and Maurice R. Barusch, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application January 28, 1953
Serial No. 333,848

5 Claims. (Cl. 260—439)

1. A process for the preparation of a nickel cyclopentadienide which comprises reacting a metal cyclopentadienide of the class consisting of alkali and alkaline earth metals with an anhydrous nickel salt in the presence of liquid ammonia.

2,862,946

ESTERS OF SULFENIC ACIDS AND THEIR PREPARATION

Norman Kharasch, Culver City, Calif., assignor to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Application April 2, 1956
Serial No. 575,356

18 Claims. (Cl. 260—456)

1. Chemical compounds having the formula:

$$CCl_3SOR_1$$

wherein R_1 is selected from the group consisting of lower alkyl, chloro-substituted lower alkyl, allyl, tetrahydrofurfuryl, beta-methoxyethyl and beta-phenoxyethyl radicals.

7. The process of preparing an ester of sulfenic acid which comprises reacting a sulfenyl halide selected from the group consisting of an aromatic sulfenyl halide and an aliphatic sulfenyl halide with an alcohol in the presence of a tertiary amine.

2,862,947

CONTINUOUS PROCESS FOR THE PREPARATION OF DITHIOPHOSPHATE ACID ESTERS

Fred Corwin Goldsmith, Painesville, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

Application December 20, 1951, Serial No. 262,600

4 Claims. (Cl. 260—461)

2. In the process of reacting a phosphorus sulfide and an alcoholic body to form a dithiophosphate acid ester and hydrogen sulfide, the steps of continuously circulating in a closed system a slurry of said phosphorus sulfide, the major portion of the liquid phase of said slurry being the dithiophosphate acid ester, introducing into said closed system said phosphorus sulfide and alcoholic body at rates so as to maintain said phosphorus sulfide at every point in said system in amounts greatly in excess of the minimum amounts required for a complete reaction with the amount of organic hydroxy compound present at that point, maintaining the temperature of the continuously circulating stream of slurry for a substantial portion of its circulating cycle at a temperature favorable to the desired reaction and drawing off from the system the liquid dithiophosphate acid ester at about its rate of formation.

2,862,948

PRODUCTION OF DIALKYL HYDROGEN PHOSPHITES

Jesse Roger Mangham, Chesterfield County, Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

No Drawing. Application September 22, 1953
Serial No. 381,743

10 Claims. (Cl. 260—461)

1. Process for the production of a dialkyl hydrogen phosphite which comprises reacting an alcohol containing from 1 to 3 carbon atoms with PCl_3 in the presence of a volume of an inert solvent which is at least 5 times the sum of the volumes of the alcohol and the PCl_3, said solvent being selected from the group consisting of hexane, commercial tetradecane having a boiling range of from 238° C. to 250° C., mineral oil having a boiling range of from 380° C. to 450° C., paraffin oil having a boiling range of from 317° C. to 360° C. and hexyl ether, and maintaining the reaction mixture at a temperature within the range from 5° C. to 50° C. by external refrigeration.

2,862,949

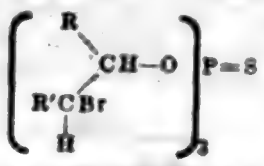
ORGANIC PHOSPHORUS COMPOUNDS

Earl G. De Witt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application November 16, 1953
Serial No. 392,453

2 Claims. (Cl. 260—461)

1. As a composition of matter, a tri(β-bromo-aliphatic) thionophosphate having the formula



wherein R and R' are selected from the group consisting of hydrogen atoms and lower alkyl radicals.

2,862,950

THIONOPHOSPHATES

Earl G. De Witt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Original application November 5, 1953, Serial No. 390,427. Divided and this application February 6, 1957, Serial No. 638,446

5 Claims. (Cl. 260—461)

1. A tri-(β-chloropropyl)-thionophosphate.

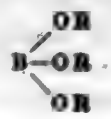
2,862,951

PREPARATION OF ESTERS OF AN OXY ACID OF BORON

Stanley F. Stafiej, Stamford, Conn., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application August 26, 1957
Serial No. 680,388
8 Claims. (Cl. 260—462)

1. In a method of preparing an ester of a hydrocarbon-substituted boronic acid by reaction between (1) a boron triester represented by the formula



wherein each R represents a hydrocarbon radical wherein any unsaturation between adjacent carbon atoms is a double bond, and (2) a member of the class consisting of (*a*) Grignard reagents containing a hydrocarbon radical wherein any unsaturation between adjacent carbon atoms is a double bond, and (*b*) metallic magnesium physically associated with a hydrocarbon halide represented by the formula R'—X where R' represents a hydrocarbon radical wherein any unsaturation between adjacent carbon atoms is a double bond, and X represents a halogen selected from the class consisting of chlorine, bromine and iodine, the improvement which comprises decomposing the Grignard complex obtained as an intermediate product of the reaction by treating the reaction mass containing the same with a saturated aqueous solution of an acidic ammonium salt of an acid having a pK value of less than 4.75, and isolating the aforesaid ester of a hydrocarbon-substituted boronic acid from the resulting reaction mass.

2,862,952

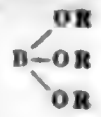
METHOD OF PREPARING B-HYDROCARBON-SUBSTITUTED BORON COMPOUNDS

Stephen J. Groszos, Darien, Conn., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

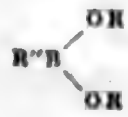
No Drawing. Application August 26, 1957
Serial No. 680,394
10 Claims. (Cl. 260—462)

1. The method which comprises reacting together, while in intimate contact with metallic magnesium, (1) a halide represented by the general formula (*a*) R'''X wherein R''' has the meaning hereinafter given, and X represents a halogen selected from the class consisting of chlorine, bromine and iodine, and (2) an ester of an oxy acid of boron selected from the class consisting of those represented by the general formulas

(*b*)



(*c*)



and

(*d*)

wherein R''' in formula (*a*), and R, R' and R'' where they appear in formulas (*b*), (*c*) and (*d*) represent a hydrocarbon radical wherein any unsaturation between adjacent carbon atoms is a double bond, said reaction being effected under anhydrous conditions and at a temperature of from about 100° C. up to a temperature corresponding to the reflux temperature of the reaction mass.

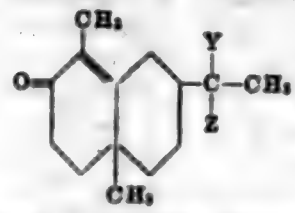
2,862,953

DERIVATIVES OF 2-KETO-2,3,4,5,6,7,8,10-OCTAHYDRONAPHTHYL-(7)-METHANE AND A PROCESS FOR PREPARING THEM

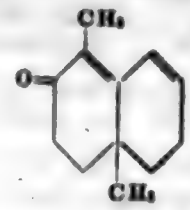
Yasuo Abe, Ikeda, Osaka, Tadatsugu Harukawa, Sakyo-ku, Kyoto, Hisashi Ishikawa, Higashinada-ku, Kobe, Takuichi Miki, Amagasaki, Hyogo, Masao Sasai, Ikeda, Osaka, and Tadashi Toga, Ashiya, Hyogo, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Doshomachi, Higashi-ku, Osaka, Japan

No Drawing. Application November 2, 1953
Serial No. 389,838
14 Claims. (Cl. 260—464)

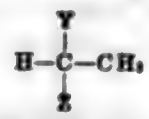
1. A process for preparing a compound corresponding to the formula



wherein Y represents a member selected from the group consisting of hydrogen and the COOH, lower carbalkoxy, $CONH_2$, carboxylic acid acyl and nitrile groups, and Z represents a member selected from the group consisting of hydrogen and COOH, lower carbalkoxy, nitro, carboxylic acid acyl and nitrile groups, which comprises reacting the compound of the formula

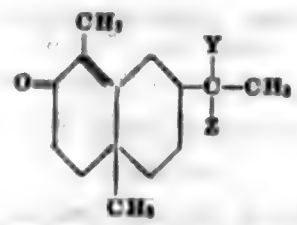


with a compound corresponding to the formula

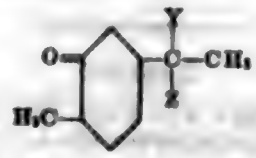


wherein Y and Z have the precedingly-recited significances, in an inert organic solvent in the presence of a member selected from the group consisting of organic bases, inorganic bases, base-forming metals and anion exchange resin.

2. A process for preparing a compound corresponding to the formula

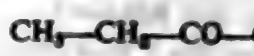


wherein Y represents a member selected from the group consisting of hydrogen and the COOH, lower carbalkoxy, $CONH_2$, carboxylic acid acyl and nitrile groups, and Z represents a member selected from the group consisting of hydrogen and COOH, lower carbalkoxy, nitro, carboxylic acid acyl and nitrile groups, which comprises reacting the compound of the formula



wherein Y and Z have the precedingly-recited significances, with a compound selected from the group consisting of compounds corresponding to the formulas

and



and the halides and quaternary ammonium compounds of

whereby the volume resistivity of said ester is improved

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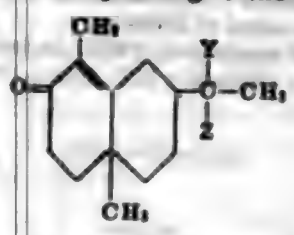
the latter, in an inert organic solvent in the presence of a member selected from the group consisting of organic bases, inorganic bases, base-forming metals and anion exchange resin.

3. A compound corresponding to the formula



wherein Y represents a member selected from the group consisting of hydrogen, and the COOH, lower carbalkoxy, $CONH_2$, carboxylic acid acyl and nitrile groups, and Z represents a member selected from the group consisting of hydrogen and COOH, lower carbalkoxy, nitro, carboxylic acid acyl and nitrile groups.

2,862,954

PROCESS FOR PREPARING ω-CYANOCARBOXYLIC ACID AMIDES

Clau Berther, Chur, Switzerland, assignor to Inventa A. G. Fuer Forschung und Patentverwertung, Zurich, Switzerland

Application May 22, 1956, Serial No. 586,567

Claims priority, application Switzerland May 26, 1955

4 Claims. (Cl. 260—465.4)

1. A process for preparing ω-cyanocarboxylic acid amides which comprises saponifying saturated aliphatic ω,ω'-dinitriles, whose nitrile groups are separated by at least 2 carbon atoms, by means of an anion exchanger in an aqueous medium at temperatures ranging from 20–100° C., the concentration of the dinitriles being from 15–25%.

2,862,955

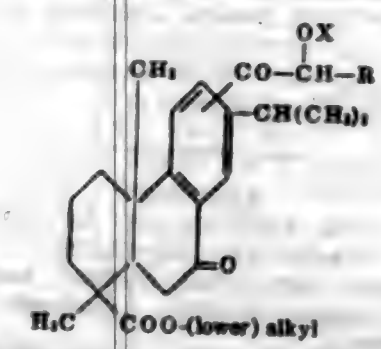
ESTERS OF HYDROXYACYL-9-OXODEHYDROABIETIC ACID

Willard M. Hoehn, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois

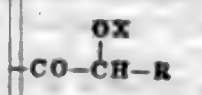
No Drawing. Application August 17, 1955
Serial No. 529,084

8 Claims. (Cl. 260—468.5)

1. A compound having the structural formula



wherein R is a member of the group consisting of hydrogen and lower alkyl radicals; X is a member of the group consisting of hydrogen, the acyl radicals of hydrocarbon carboxylic acids having fewer than 9 carbon atoms, and the salicyloyl radicals; and wherein the group



is attached to one of the positions 6 and 8.

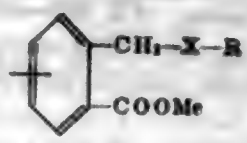
2,862,956

AROMATIC ETHER AND THIOETHER o-METHYLENE BENZOIC ACIDS AND THEIR SALTS AND ESTERS, AND A PROCESS OF PRODUCING SAME

Wolfgang Gündel, Duesseldorf, Oberkassel, and Heinz Linden, Duesseldorf, Germany, assignors to Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, Germany, a corporation of Germany

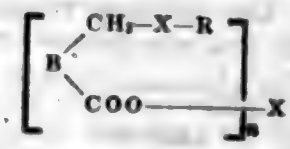
No Drawing. Application March 2, 1954
Serial No. 413,704
Claims priority, application Germany March 13, 1953
15 Claims. (Cl. 260—470)

1. In a process of producing 2-hydroxy methyl benzoic acid compounds of the formula:



wherein X is a member selected from the group consisting of oxygen and sulfur, R is an aromatic hydrocarbon radical, and Me is a member of the group consisting of hydrogen and a salt forming cation, the step comprising reacting a compound selected from the group consisting of o-hydroxyl methyl benzoic acid, an o-hydroxy methyl benzoate and an inner ester of o-hydroxy methyl benzoic acid in the presence of a compound selected from the group consisting of mono-, di- and tri-valent metal hydroxides with an organic compound selected from the group consisting of aromatic hydrocarbon alcohols and aromatic mercaptans at a temperature of at least 100° C.

12. An ester of an etherified o-hydroxy methyl benzoic acid of the following formula:



2,862,957

METHOD OF MANUFACTURING ALKYL, HYDROXYALKYL ESTERS OF TEREPHTHALIC ACID

Erhard Siggel, Landenbach (Main), and Karl Macura, Obernburg (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken A. G., Wuppertal-Elberfeld, Germany, a corporation of Germany

No Drawing. Application August 2, 1954
Serial No. 447,382
Claims priority, application Germany August 3, 1953
9 Claims. (Cl. 260—475)

1. Method of manufacturing esters of terephthalic acid having two different alcoholic components, one of said components being a member of the group consisting of methanol and ethanol and the other component being ethylene glycol, which comprises reacting a monoester of a monohydric alcohol aforesaid and terephthalic acid dissolved in an inert non-aqueous solvent with ethylene oxide at a temperature in the range of about 80° to 110° C.

2,862,958

METHOD OF IMPROVING ELECTRICAL PROPERTIES OF PLASTICIZERS BY TREATMENT WITH MAGNESIUM SILICATE

Theodore N. Goreau, Hampton, S. C., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 13, 1955
Serial No. 540,324
3 Claims. (Cl. 260—475)

1. The process which comprises contacting a dialkyl ester of an acid selected from the group consisting of isophthalic and terephthalic acids with a synthetic hydrous magnesium silicate in the amount of at least 0.1% by weight of said ester at a temperature from about 20 to 175° C. and for a time of at least about one minute.

2,862,965

2,862,968

whereby the volume resistivity of said ester is improved thereby rendering it more useful as a plasticizer for synthetic resins.

2,862,959

PRODUCTION OF MIXED ESTERS OF PHTHALIC ACID

Tracy M. Patrick, Jr., Kirkwood, and Louis O. Raether, Webster Groves, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 6, 1956
Serial No. 563,416
9 Claims. (Cl. 260—475)

1. In a process for the manufacture of a mixed ester of phthalic acid of the general formula,

wherein R represents a radical selected from the group consisting of alkyl and cycloalkyl radicals having from 4 to 9 carbon atoms and R' represents an alkyl radical containing from 6 to 14 carbon atoms and always contains at least 2 more carbon atoms than R, the steps which consist of heating phthalic anhydride with a stoichiometric quantity of ROH and then heating the resulting phthalic half ester with a slight excess of R'OH (where R and R' have the same meaning as above) in the presence of an acid esterification catalyst.

2,862,960

PROCESS FOR PREPARING ALPHA-CHLORO-ACRYLIC COMPOUNDS

Maxwell A. Pollack, Morris Plains, N. J.

No Drawing. Application January 16, 1956
Serial No. 559,113
12 Claims. (Cl. 260—486)

1. In making an alpha-chloroacrylic product, the process which comprises heating, at a temperature of 50°–300° C. and in substantially anhydrous condition, an alpha-beta dichloropropiono compound selected from the group consisting of propionic acid and the esters, amides, nitrile, and acid chloride thereof and a sulphonic acid compound selected from the group consisting of sulfonic acid resins and sulfonic acids and continuing the heating until approximately one molecule of hydrogen chloride is removed from the dichloro product used, the process giving the alpha-monochloro-2,3-unsaturated product corresponding essentially to the said compound originally selected less the chlorine in the beta position and less one hydrogen atom.

2,862,961

IMPROVING THE ELECTRICAL PROPERTIES OF PENTAERYTHRITOL ESTERS BY TREATMENT WITH MAGNESIUM SILICATE

Theodore N. Goreau, Hampton, S. C., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 13, 1955
Serial No. 540,323
4 Claims. (Cl. 260—488)

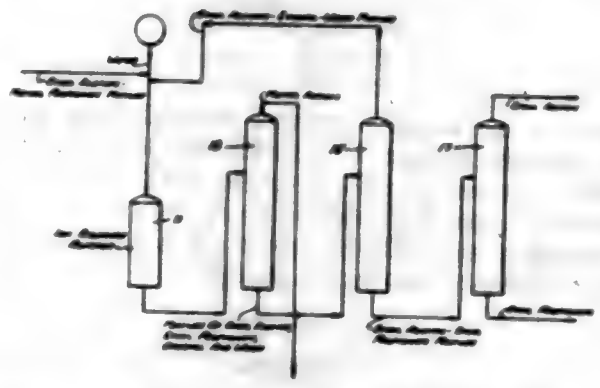
1. The process which comprises contacting a synthetic tetraester of pentaerythritol and an alkanoic acid containing from 4 to 12 carbon atoms with synthetic hydrous magnesium silicate for at least about one minute to increase the volume resistivity of said ester.

2,862,962

ESTER EXCHANGE CATALYZED BY CATION-EXCHANGE MATERIALS

George B. Ulvild, Robstown, and Hopkins W. Tatum and Winfield C. Hopkins, Corpus Christi, Tex., assignors to Celanese Corporation of America, New York, N. Y., a corporation of Delaware

Application February 6, 1956, Serial No. 563,591
14 Claims. (Cl. 260—491)



1. Process for the treatment of a mixture of esters, which comprises continuously passing a mixture of esters comprising an ester of a lower alkanol and a lower alkanoic acid and an ester of another lower alkanol and another lower alkanoic acid, together with an hydroxyl compound, selected from the group consisting of a lower alkanol and water, the amount of said hydroxyl compound being a minor fraction of the stoichiometric amount necessary to effect complete splitting of said esters, into a reaction zone comprising a bed of an acidic cation-exchange material to effect an ester-exchange reaction between said esters, said hydroxyl compound acting to maintain the activity for ester interchange of said cationic exchange material.

2,862,963

PROCESS OF PURIFYING TEREPHTHALIC ACID

Otto Fuchs, Hofheim (Taunus), and Helmut Jockusch, Bad Soden (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main Hoechst, Germany, a company of Germany

No Drawing. Application May 29, 1956
Serial No. 587,970
8 Claims. (Cl. 260—525)

1. In a process for separating terephthalic acid from a mixture containing terephthalic acid and toluic acid, the improvement which comprises suspending said mixture in a substantially anhydrous liquid medium composed essentially of an alcohol containing up to four carbon atoms and up to three hydroxyl groups, saturating the suspension with ammonia at an elevated temperature up to about 130° C., and separating undissolved ammonium terephthalate from the saturated suspension.

2,862,964

PROCESS FOR PRODUCING MONOCHLORO ACETYL CHLORIDE

Richard Norman Lacey, Hull, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Application June 22, 1956
Serial No. 593,062
Claims priority, application Great Britain July 12, 1955
6 Claims. (Cl. 260—544)

1. In a process for the production of chloroacetyl chloride which comprises interacting chlorine and ketene, the improvement wherein the reaction takes place in the liquid phase in an alkyl acetate, the alkyl group of the latter containing less than 6 carbon atoms, whereby production of dichloroacetyl chloride is suppressed.

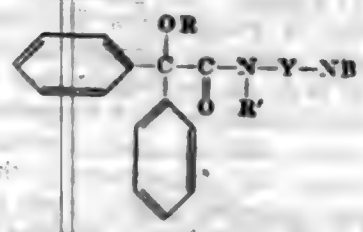
hydrocarbon radical selected from the group consisting of

2,862,965
PHARMACEUTICAL COMPOUNDS

William A. Lott, Maplewood, and John Krupcho, New Brunswick, N. J., assignors to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application August 30, 1956
Serial No. 606,948
8 Claims. (Cl. 260—559)

1. Compounds of the class consisting of: free bases having the general formula



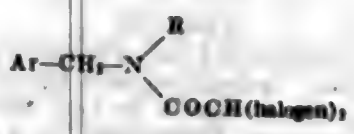
wherein R is a lower alkyl radical of less than four carbon atoms, R′ is selected from the class consisting of lower alkyl and lower alkenyl, Y is a lower alkylene radical separating the nitrogen atoms by at least two carbon atoms, and NB is a radical selected from the class consisting of dimethylamino, piperidino, pyrrolidino, morpholino and N′-methylpiperazino; and the pharmacologically acceptable acid-addition salts thereof.

2,862,966
N-ALKYL-N-(SUBSTITUTED-BENZYL)DIHALOACETAMIDES AND THEIR PREPARATION

Alexander R. Surrey, Albany, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application December 9, 1955
Serial No. 551,975
16 Claims. (Cl. 260—562)

1. An N-(lower alkyl)-N-(substituted-benzyl)dihaloacetamide having the formula



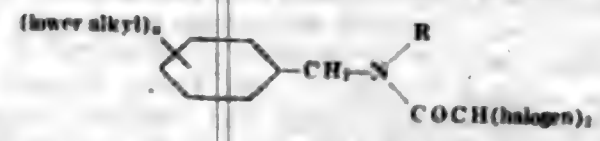
where Ar is the phenyl radical substituted at one to three of its five available positions only by from one to three radicals selected from the group consisting of halogen, lower alkoxy, lower alkylmercapto, lower alkylsulfonyl and nitro, and R is a lower alkyl radical.

2,862,967
N-ALKYL-N-(ALKYLATED-BENZYL)DIHALOACETAMIDES AND PREPARATION THEREOF

Alexander R. Surrey, Albany, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application December 9, 1955
Serial No. 551,999
9 Claims. (Cl. 260—562)

1. An N-alkyl-N-(alkylbenzyl)dihaloacetamide having the formula



where *n* is an integer from 1 to 3 and R is a lower alkyl radical.

2,862,968
METHADONE N-OXIDE AND THE ACID ADDITION SALTS THEREOF

Burris D. Tiffany, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application August 16, 1955
Serial No. 528,891
4 Claims. (260—570)

1. A compound selected from the class consisting of 6-dimethylamino-4,4-diphenyl-3-heptanone N-oxide and the acid addition salts thereof with pharmacologically acceptable acids.

2,862,969
PROCESS FOR THE PRODUCTION OF DIBENZYL ETHYLENEDIAMINE

George Parker, Gateacre, Liverpool, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Application August 19, 1954
Serial No. 451,070
Claims priority, application Great Britain August 25, 1953
4 Claims. (Cl. 260—570.9)

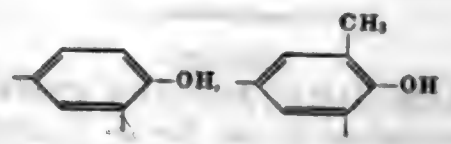
1. A process for the production of dibenzyl ethylenediamine, which comprises hydrogenating dibenzylidene ethylenediamine with hydrogen in an inert solvent at a pressure in the range 0 to 300 pounds per square inch gauge at a temperature between 20° and 45° C. in the presence of a palladium-on-alumina present in an amount between 0.25% and 1% by weight of palladium with respect to the dibenzylidene ethylenediamine initially present.

2,862,970
PHENOLIC BIS(TRIPHENYLPHOSPHONIUM HALIDES) AND PROCESSES

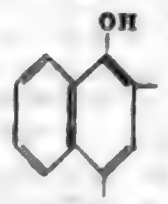
Lawrence E. Thielen, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois

No Drawing. Application September 9, 1955
Serial No. 533,529
5 Claims. (Cl. 260—606.5)

1. A compound of the formula $R_3P^+—Z—P^+R_3\ \ 2X^-$ wherein R is a phenyl radical; Z is a hydroxyarylene radical selected from the group consisting of



and



radicals; and X is a member of the group consisting of bromine and chlorine.

2,862,971
ARYL AND ARALKYL BISTRIPHENYLPHOSPHONIUM COMPOUNDS AND PROCESSES

Lawrence E. Thielen, Chicago, and Clinton A. Dornfeld, Glenview, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois

No Drawing. Application September 26, 1955
Serial No. 536,732
6 Claims. (Cl. 260—606.5)

1. A compound of the formula

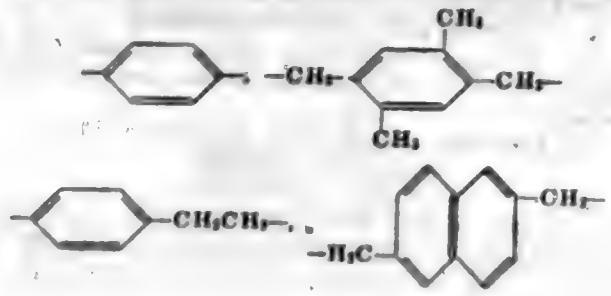
$$R_3P^+—Z—P^+R_3\ \ 2X^-$$

wherein R is a phenyl radical; Z is a bivalent, aromatic,

2,862,977
HYDROGENATION OF PERFLUOROALKANOIC

trifluoride whereby to direct the chloromethylation to-

hydrocarbon radical selected from the group consisting of



and

radicals; and X is halogen of atomic number greater than 9 and less than 53.

2,862,972

THIOETHER CONDENSATION PROCESS AND PRODUCT

Hans Holtschmidt, Koln-Stammheim, and Otto Bayer, Günther Nischk, and Karl Erwin Müller, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 23, 1957
Serial No. 635,613
Claims priority, application Germany February 8, 1956
8 Claims. (Cl. 260—609)

1. A method for making hydroxy polythioethers having sulfur-ether bridges, comprising mixing an hydroxyalkylated thioether glycol with a thioether glycol and heating the resulting mixture to a temperature of at least about 100° C. to effect condensation of the hydroxyl groups of said glycols with the accompanying release of water and linkage of the glycols together.

2,862,973

DI-TERTIARY-ALKYL PEROXIDE PRODUCTION

De Loss E. Winkler, Orinda, George W. Hearne, Lafayette, and William E. Vaughan, Berkeley, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application April 27, 1956
Serial No. 580,992
18 Claims. (Cl. 260—610)

1. The process for the direct conversion of molecular oxygen and isobutane to reaction products consisting essentially of di-tert-butyl peroxide in a continuous unitary operation which comprises, reacting said molecular oxygen non-catalytically with said isobutane in the liquid phase at tert-butyl hydroperoxide- and tert-butyl alcohol-forming conditions at a temperature above about 100° C. but not substantially above about 150° C., at a pressure above about 400 p. s. i. g. in a substantially metal ion-free initially added reaction medium consisting essentially of isobutane, tert-butyl hydroperoxide and tert-butyl alcohol, thereby reacting molecular oxygen with isobutane with the formation of an oxidation reaction mixture containing tert-butyl alcohol and tert-butyl hydroperoxide, contacting the resulting oxidation reaction mixture with a mineral acid at a temperature of from about 10 to about 75° C., thereby reacting tert-butyl alcohol with tert-butyl hydroperoxide with the formation of a reaction mixture containing di-tert-butyl peroxide, and separating di-tert-butyl peroxide from the resulting reaction mixture.

2,862,974

NEW AROMATIC COMPOUNDS CONTAINING TETRAFLUORETHYL SIDE CHAINS AND A PROCESS FOR PREPARING THEM

Adolf Siegitz, Bad Soden (Taunus), Herbert Bestian, Frankfurt am Main Hochst, and Karl Rehn, Hofheim (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application September 7, 1955
Serial No. 533,806
Claims priority, application Germany September 11, 1954
11 Claims. (Cl. 260—612)

1. The process of preparing a fluorinated aromatic compound, which comprises reacting an aromatic compound having at least one hydrogen atom bound to the nucleus with tetrafluorethylene at temperatures between about 50 and about 300° C. and at pressures between about 20 and about 400 atmospheres in the presence of carbon monoxide, hydrogen and a cobalt carbonyl compound consisting of cobalt and a member selected from the group consisting of carbon monoxide alone and carbon monoxide plus hydrogen.

9. A process as defined in claim 1, wherein the aromatic compound to be reacted is anisol.

2,862,975

TREATMENT OF WOOD TAR DISTILLATE

John G. Gatsis, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application December 10, 1956
Serial No. 627,127
5 Claims. (Cl. 260—613)

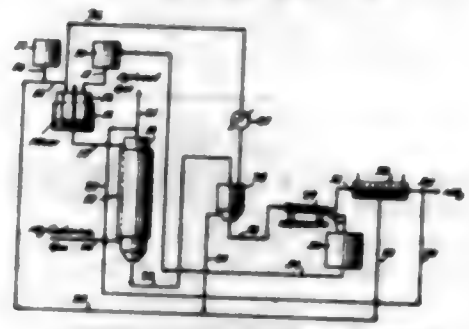
1. A method of concentrating the dialkyl ethers of 5-alkyl-pyrogallols present in wood tar distillate which comprises treating said wood tar distillate with an excess of monoethanolamine to form a precipitate comprising the ethanolamine salts of the dialkyl ethers of 5-alkyl-pyrogallols, separating the precipitate, and treating the same to recover a concentrate of said dialkyl ethers of 5-alkyl-pyrogallols.

2,862,976

PURIFICATION PROCESS

Arthur C. Dubbs, Springdale, and Donald R. Stevens, Wilkinsburg, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application October 14, 1953, Serial No. 386,032
12 Claims. (Cl. 260—619)



1. The process of purifying a gem-bis(hydroxyphenyl) alkane containing as an impurity a small amount of a compound selected from the group consisting of phenol and alkylated phenol which comprises dissolving the gem-bis(hydroxyphenyl)alkane and said impurity in an organic solvent, contacting the solution thus formed with anhydrous ammonia at about 0° to about 30° C. for a time sufficient to form a solid adduct between the gem-bis(hydroxyphenyl)alkane and ammonia, separating the solid adduct thus formed from the reaction mass, and dissociating the solid adduct into ammonia and a substantially pure gem-bis(hydroxyphenyl)alkane.

2,862,977

HYDROGENATION OF PERFLUOROALKANOIC ACIDS TO 1,1-DIHYDROPERFLUOROALKYL ALCOHOLS OVER RUTHENIUM CATALYST

Ralph Courtenay Schreyer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 21, 1956
Serial No. 629,799
3 Claims. (Cl. 260—633)

1. A process for the preparation of 1,1-dihydroperfluoroalkyl alcohols having the formula:

$$C_nF_{2n+1}CH_2OH$$

wherein n is a number greater than one which comprises contacting a perfluoroalkanoic acid with hydrogen at a pressure of at least 1000 p. s. i. in the presence of a finely divided ruthenium catalyst at a temperature above 150° C.

2,862,978

SYNTHETIC GLYCERINE PRODUCTION WITH INTERMEDIATE REMOVAL OF ACROLEIN

John R. Skinner, Oakland, Charles H. Wilcoxen, Jr., San Lorenzo, and George J. Carlson, Berkeley, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

Application April 25, 1957, Serial No. 655,061
8 Claims. (Cl. 260—635)

1. A process of producing glycerine which comprises reacting allyl alcohol with hydrogen peroxide in an aqueous medium in the presence of a hydroxylation catalyst at about 15° to 70° C. using a mole ratio of allyl alcohol to peroxide of about 1:1 to 5:1, a mole ratio of water to peroxide of about 5:1 to 70:1 and a concentration of catalyst of about 0.01 to 5% by weight of the mixture for a time at which substantially complete reaction of the hydrogen peroxide takes place with formation of a minor amount of by-product acrolein but hydroxylation is incomplete, substantially separating said acrolein from the reaction mixture and heating the reaction mixture until hydroxylation is complete.

2,862,979

PRODUCTION OF OXO DIMER ALCOHOLS

Neville Leverne Cull and Clyde Lee Aldridge, Baker, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application January 23, 1957, Serial No. 635,890
5 Claims. (Cl. 260—638)

1. A process for producing an alcohol which comprises hydrogenating an aldehyde mixture obtained by carbonylating an olefinic compound with H_2 and CO in the presence of a carbonylation catalyst at an elevated temperature and pressure to produce an aldehyde-containing reaction mixture and by contacting said reaction mixture with a modifier comprising an organic weakly acidic cation exchange resin, said modifier being employed in amounts sufficient to produce upon said subsequent hydrogenation increased yields of dimer alcohol.

2,862,980

PROCESS FOR THE CHLOROMETHYLATING OF MONOSUBSTITUTED AROMATIC HYDROCARBONS

Werner Muench, Cesano Maderno, Luigi Neterbartolo, Milan, and Cesare Coen, Cesano Maderno, Italy, assignors to Perfogit Societa per Azioni, Milan, Italy

No Drawing. Application May 9, 1955
Serial No. 507,174
Claims priority, application Italy June 3, 1954
3 Claims. (Cl. 260—651)

1. A process for chloromethylating an aromatic hydrocarbon chosen from the group consisting of toluene and ethyl benzene by treating the same with hydrochloric acid and formaldehyde in the presence of a hydrate of boron trifluoride whereby to direct the chloromethylation towards the production of para-substituted isomers, wherein the chloromethylation is carried out at a temperature between −10° and +100° C. and wherein the mol ratio of boron trifluoride to the hydrocarbon to be chloromethylated is between about 0.5 and 0.9.

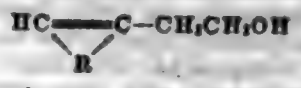
2,862,981

PREPARATION OF METHYLENIC COMPOUNDS

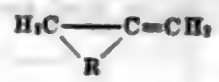
Joseph P. Bain and Robert L. Webb, Jacksonville, Fla., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application August 27, 1953
Serial No. 376,999
7 Claims. (Cl. 260—666)

1. The process which consists of heating a monocyclic compound of the structural formula



wherein R is a divalent radical forming the rest of a carbocyclic ring, under non-acidic conditions for a prolonged time at a temperature above 225° C. whereby formaldehyde is split off and there is formed a compound of the structural formula



2,862,982

REMOVAL OF ALKALI METALS FROM VISCOUS HYDROCARBON LIQUIDS

Neville Leverne Cull, Baker, and Joseph Kern Mertzweiller and Marnell Albia Segura, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application December 10, 1954
Serial No. 474,614
12 Claims. (Cl. 260—669)

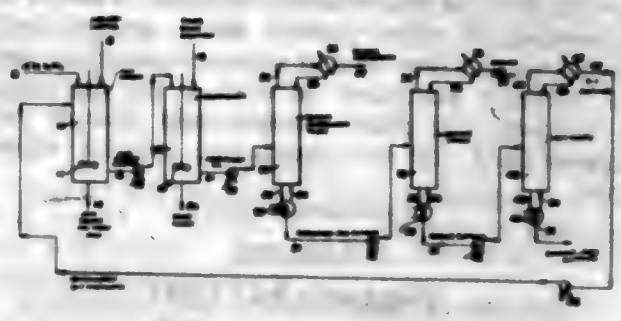
1. A process for removing alkali metal from a liquid oily hydrocarbon polymer containing it in suspension which comprises intimately contacting said hydrocarbon with an acid clay containing 1–25% by weight of bound water.

2,862,983

SULFURIC ACID REFINING OF BENZENE

Sol Nord, East Orange, N. J.

Application May 17, 1957, Serial No. 659,829
3 Claims. (Cl. 260—674)



1. In a process for producing benzene of high purity, in which a benzene-containing charge mixture is contacted with concentrated sulfuric acid to react with impurities, treated with alkali to neutralize the remaining acid, and then subjected to fractional distillation to produce pure benzene and other products, the novel steps comprising: producing by fractional distillation an overhead fraction comprising primarily benzene and being substantially free of heavier components, and a residual comprising substantially all the components heavier than benzene together with a predetermined quantity of benzene which is sufficient to contain the major portion of the remaining impurities boiling in the benzene range; producing by fur-

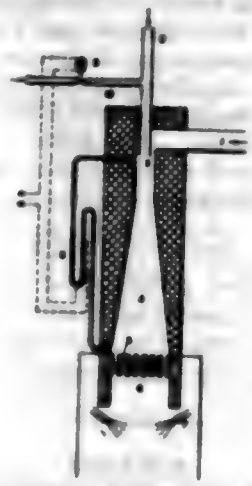
ther fractional distillation of said residual an intermediate overhead fraction containing substantially all the remaining material boiling in the benzene range together with some higher-boiling material, and a residual substantially comprising components heavier than benzene; and recycling said intermediate overhead fraction for further contacting with sulfuric acid and re-fractionation.

2,862,984
PROCESS OF INTERACTING HYDROCARBONS WITH OXYGEN

Ernst Bartholomé, Ludwigshafen (Rhine), Erwin Lehrer, Bad Duerkheim (Pfalz), and Helmut Nonnenmacher and Otto Frey, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Application September 20, 1955, Serial No. 535,326
Claims priority, application Germany
September 22, 1954
9 Claims. (Cl. 260—679)

1. In a process for the production of acetylene by interacting methane with a limited amount of oxygen which is insufficient for the complete combustion of the methane wherein the methane and the oxygen are separately preheated, mixed in a mixing zone and interacted in a reaction zone with the formation of a flame and the reaction gases are quenched with water, the improvement which comprises stopping a premature reaction of the methane-



oxygen mixture in the mixing zone while continuing the flow of methane and oxygen into said mixing zone by introducing into the oxygen stream for a period shorter than 4 seconds at least 40% by volume of nitrogen with reference to the volume of the oxygen.

ELECTRICAL

2,862,985
ELECTRIC BATTERY PLATE

Robert F. Scheuerle and Gerald T. Mahon, Philadelphia, Pa., assignors to The Electric Storage Battery Company, a corporation of New Jersey

Application October 13, 1954, Serial No. 461,996
3 Claims. (Cl. 136—21)

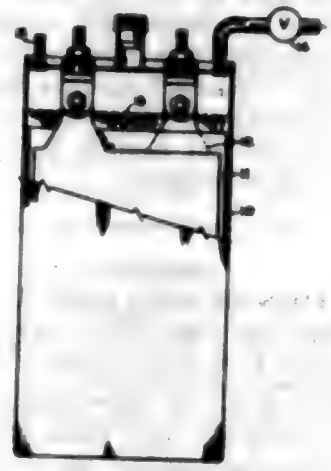
1. A method of producing a positive plate for silver zinc batteries comprising the steps of heat treating unconsolidated silver powder in the absence of applied pressure at from about 850° F. to about 1400° F. for a period of 10 to 20 minutes thereby forming a plate of about 80% of the original thickness of said powder, the particles of silver powder being sintered together, applying to one face of said plate a conducting member of a thickness equivalent to that of the final product, and pressing said plate whereby said sintered powder is consolidated and said conducting member embedded therein.

2,862,986
STORAGE BATTERY

Howard J. Strauss, Elkins Park, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey

Application October 6, 1954, Serial No. 460,679
1 Claim. (Cl. 136—34)

The method of minimizing gas pressures within a gas-tight battery cell of the nickel-cadmium alkaline type, which comprises placing in a container an alkaline electrolyte together with a positive nickel electrode and a negative cadmium electrode having an excess of negative material as compared with the positive material, introducing oxygen into the container prior to sealing the same to increase the partial pressure of oxygen within the container to a value approaching as a limit the total gas pressure within the container, hermetically closing

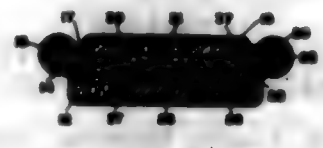


the container with an oxygen atmosphere above the electrolyte therein, and applying charging current to said cell.

2,862,987
PRIMARY CELL

Harold S. Morgan, Columbia, Pa.

Application October 11, 1956, Serial No. 615,409
5 Claims. (Cl. 136—111)



5. A primary cell comprising a casing, a metal cap, said cap being formed with a central annular inwardly open depression, a cathode and an electrolyte in said casing, a sealing washer attached to said cap and extending from the outer edge to the rim of the depression, an anode fitting within said depression and a soldering medium firmly affixing said anode to said cap and coating the exposed portions of said cap not covered by said sealing washer.

2,862,988
STORAGE BATTERY SEPARATOR
Edward R. Dilcheay, Glen Ellyn, and Gordon H. Fernald, Geneva, Ill.
No Drawing. Original application August 11, 1948, Serial No. 43,767. Divided and this application May 17, 1954, Serial No. 432,904
1 Claim. (Cl. 136—146)

A storage battery separator which is a sheet-like, highly porous body consisting of the following ingredients in substantially the proportions indicated:

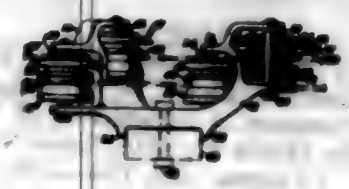
	Parts
Vinylite resin	150
Phenol furfural resin	50
Commercial sulfonated castor oil	50

the parts being by weight.

2,862,989
ALKALINE CELLS AND METHODS OF STORING THEM
Howard J. Strauss, Philadelphia, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
No Drawing. Application February 17, 1955 Serial No. 488,985
1 Claim. (Cl. 136—161)

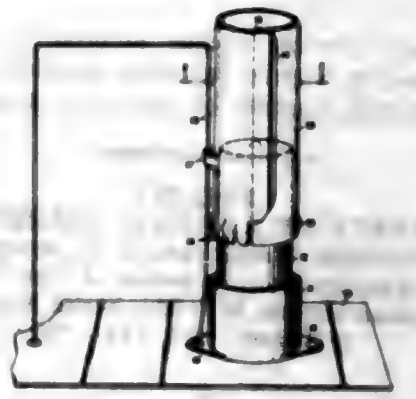
In the storage of sealed electric batteries of the silver-zinc type in a charged wet condition, the method which comprises introducing oxygen into the container prior to sealing the same to increase the partial pressure of oxygen within the container to a value approaching as a limit the total gas pressure within the container, sealing the container with an oxygen atmosphere above the electrolyte therein, and passing through said battery in a charging direction a current sufficient to just maintain the battery in a charged condition.

2,862,990
COMBINATION POINT AND SPAN TRANSPOSITION BRACKET
Rogers Case, Jr., Orange, N. J.
Application August 10, 1955, Serial No. 527,552
9 Claims. (Cl. 174—33)



1. A combined span and cross arm transposition bracket comprising an integral one-piece frame having a relatively narrow substantially rectangular elongated central base portion terminating at each end in upstanding arms diverging forwardly of said base portion, a pair of vertically spaced ears on the forward side of one arm with the lower ear spaced above said base portion, an insulator disposed between said ears and removably secured thereto, an enlargement on said lower ear, an aperture in said enlargement substantially in alignment with the longitudinal center line of said base portion to facilitate attachment of a towing cable, a second pair of vertically spaced ears on the rear side of the other arm with the lower ear of said second pair in substantially the same plane as the lower ear of said first pair, a second insulator disposed between said second pair of ears and removably secured thereto, a third pair of vertically spaced ears on the rear side of said one arm with the lower ear of said third pair in substantially the same plane as the upper surface of said base portion, a third insulator disposed between said third pair of ears and removably secured thereto, a fourth pair of vertically spaced ears on the forward side of said other arm with the lower ear of said fourth pair in substantially the same plane as the upper surface of said base portion, a fourth insulator disposed between said fourth pair of ears and removably secured thereto whereby a line wire may be trained over said first and second insulators and a second line wire trained over said third and fourth insulators to transpose said line wires and maintain the same in spaced relation, spaced lugs depending from the lower surface of said base portion operable when said bracket is used as a cross arm bracket to engage and partially embrace a support member and a fastener receiving aperture in said base portion to facilitate securing said bracket to said support.

2,862,991
TUBE SHIELD
Edward P. Reardon, Oak Park, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application December 10, 1954, Serial No. 474,485
2 Claims. (Cl. 174—35)

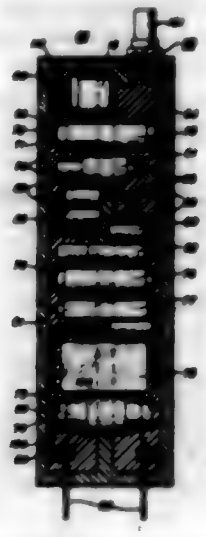


1. A shield assembly for use with an electron-discharge device having a cylindrical envelope of a predetermined nominal diameter comprising: a metal saddle adapted to encompass the base of said device and provided with a plurality of bearing regions disposed in a cylindrical locus; and a cylindrical resilient sheet metal shield having tightly overlapping paraxial edges and a diameter normally less than said predetermined nominal diameter but expandable upon insertion of said device whereby said shield is maintained in intimate physical contact with said envelope, the outermost of said overlapping edges being rolled in to contact the body of said shield throughout substantially its entire axial length and said shield comprising a plurality of integral spring fingers at one end thereof adapted to engage said bearing regions upon insertion of said shield in said saddle for providing extended-area electrical and thermal contact between said shield and said saddle.

2,862,993
ELECTRICAL NETWORK ASSEMBLY
Erwin E. Franz, Cranford, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application May 3, 1954, Serial No. 427,130
7 Claims. (Cl. 174—52)

1. An electrical network assembly comprising a unitary insulating matrix including a plurality of recesses in one major face thereof and extending substantially perpendicular to said major face, each of said recesses being shaped to conform to the body portion of a circuit component and having a length correlated to the length of said body portion, apertures communicating between the recesses and a second major face and a series of channels in said second major face joining certain of said apertures in a predetermined circuit arrangement, a plurality of electrical components positioned each within a respective recess in said matrix with electrical leads extending through the aperture in said recess, filaments

of conducting material in said series of channels, electrically connecting said components into an electrical



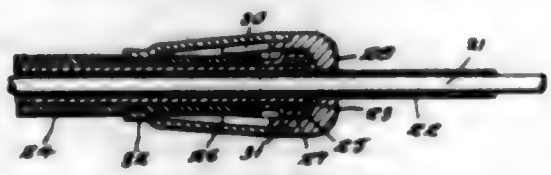
network, and terminal means secured by embedment in said insulating matrix including portions in electrical contact with said filament of conductive material.

2,862,993

ELECTRIC CABLE SHIELD TERMINATION

Albert M. Schmidt, Washington, D. C., assignor to AMP Incorporated, a corporation of New Jersey

Application August 31, 1953, Serial No. 377,413
4 Claims. (Cl. 174—75)



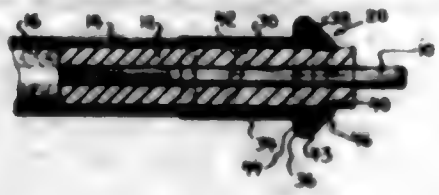
1. In a cable having a central conductor, an insulating sheath about said conductor, a stranded metal shield about said sheath; a terminator for said shield comprising: a ring surrounding the shield, said shield being reverted over said ring, a cylindrical cap encompassing said ring and reverted shield, said cap having an opening at one end through which the conductor and the sheath extend, and an opening at the other end through which the complete cable extends, a plurality of resilient fingers extending from the other end of the cap to engage the outside surface of the cable in a tight, clamping relationship therewith, and a conical shell surrounding the fingers, with the l: ger end securely engaging the cap and the smaller end constricted onto the outside surface of the cable.

2,862,994

ELECTRICAL CONNECTOR

Leon K. Yeiser, Lebanon, Pa., assignor to Aircraft-Marine Products, Inc., Harrisburg, Pa.

Application December 14, 1955, Serial No. 553,071
3 Claims. (Cl. 174—75)



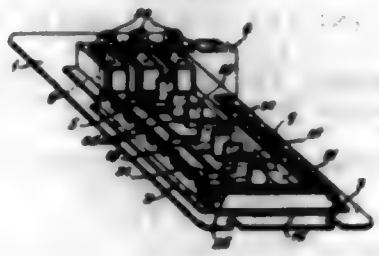
1. An electrical connection between a connector and the shielding of a shielded cable including: an inner ferrule, and an outer ferrule, with the shielding gripped therebetween, a retroverted flange on one end of the inner ferrule surrounding one end of the outer ferrule and also surrounding one end of the shielding, a bulge at said one end of the outer ferrule adjacent to the retroverted flange and defining a space between the outer and inner ferrules, said shielding extending outwardly into the space formed by the bulge being keyed therein and means for locking the retroverted flange to the outer ferrule.

2,862,995

MOUNTING BACK FOR ELECTRICAL SWITCHING DEVICES

Lester A. Hercules, St. Louis, Mo., assignor to Frank Adam Electric Company, St. Louis, Mo., a corporation of Missouri

Application May 11, 1953, Serial No. 354,054
3 Claims. (Cl. 174—99)



1. In a mounting back for a row of electrical plug-on devices, the improvement that comprises at least two bus bars arranged in spaced parallel generally-coplanar relationship, an apertured strip of insulating material overlying one of said bus bars, said underlying bus bar having terminal blades projecting through the apertures of said insulating strip, the edge of said insulating strip terminating outwardly of said first bus bar and short of said other bus bar, and said other bus bar having terminal arm portions extending therefrom over the insulating strip and between the terminal blades associated with said first bus bar, said terminal arm portions having upstanding blade portions aligned with the blades of said first bus bar and said terminal arm portions lying in planes perpendicular to the plane of the bus bars.

2,862,996

STRAIN RELIEF DEVICE

Robert G. Holmes, Asheboro, N. C., assignor to General Electric Company, a corporation of New York

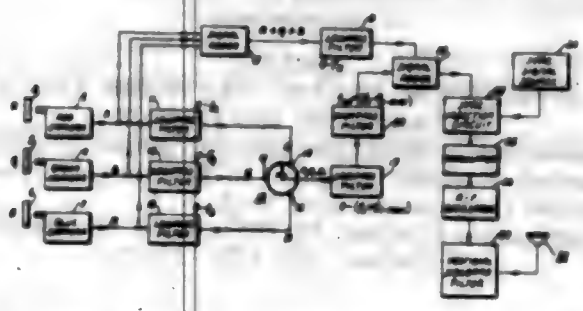
Application March 27, 1956, Serial No. 574,141
7 Claims. (Cl. 174—135)

1. Strain relief means for anchoring an electric cord to a housing comprising means defining an elongated aperture in the housing having a long dimension and a short dimension, a strain relief member secured on the conductor, said strain relief member including first and second body portions adapted to extend on opposite sides of the walls of said housing, flange means on each of said body portions engageable respectively with opposite sides of the walls of said housing, said body portions being dimensioned to pass through said aperture when oriented with the long dimension thereof corresponding with the long dimension of said aperture and to engage said flanges to anchor said body portions on opposite sides of the housing walls when disposed with respective long dimensions in angular relation, thereby to secure said strain relief device to the housing.

2,862,997
INSULATING GUARD
Albert H. Veitch and Joseph F. Johnson, Plainville, Conn., assignors to General Electric Company, a corporation of New York
Application April 27, 1955, Serial No. 504,219
6 Claims. (Cl. 174—138)

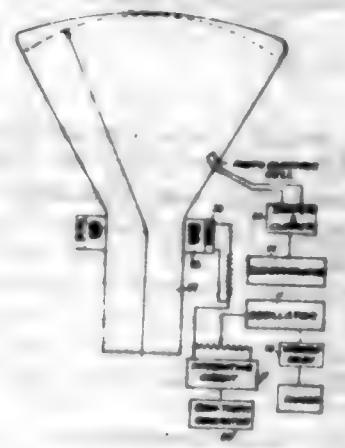
1. In combination, an electrical device having a body of insulating material, an electrical terminal strap mounted on said device and projecting therefrom, a terminal connector mounted on the projecting portion of said terminal strap and including a clamping screw, a guard of insulating material for said terminal connector and said projecting portion of said terminal strap comprising an elongated strip of relatively wide thin flexible insulating material having an aperture at one end thereof through which said terminal strap extends, the said end being located between said insulating body and said terminal connector whereby said end is trapped in place on said strap, said guard having an intermediate portion extending over said terminal connector and over the end of said terminal strap remote from said device, and an aperture in said intermediate portion affording access to the said clamping screw of said terminal connector when said guard is in mounted position.

2,862,998
COLOR TELEVISION SYSTEM
William E. Bradley, New Hope, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application September 14, 1951, Serial No. 246,566
7 Claims. (Cl. 178—5.2)



1. A color television system, comprising: means for producing a brightness signal representative of variations in the brightnesses of successively-scanned regions of a televised scene; modulation means for producing at the output terminals thereof a modulated subcarrier signal representative of the chromaticity of said regions and having values, during predetermined, successive time-spaced intervals, indicative respectively of differences between said brightnesses and the intensities required of a plurality of predetermined color primaries in order to match the colors of said regions, the lower sideband of said subcarrier signal having a bandwidth differing substantially from the bandwidth of said brightness signal; first frequency-selective means for limiting said brightness signal to a frequency band substantially exclusive of that occupied by said subcarrier signal; means for transmitting said band-limited brightness and subcarrier signals to a receiver; second frequency-selective means at said receiver responsive to said transmitted signals to separate said brightness signal from said subcarrier signal; a color-image reproducing device comprising a plurality of sources of light of respectively different chromaticities, said device being responsive to signals supplied thereto to vary the intensities of said colored-light sources, thereby to vary the color of the combined light emission of said sources; and means responsive to said separated brightness signal and to said separated subcarrier signal for varying the intensities of said colored-light sources in such manner that the color of said combined light emission therefrom substantially matches that of corresponding scanned regions of said televised scene.

2,862,999
ELECTRON BEAM CONTROLLING SYSTEM
Harold Alfred Fairhurst, Welwyn Garden City, England, assignor to Murphy Radio Limited, London, England, a British corporation
Application December 19, 1955, Serial No. 553,782
Claims priority, application Great Britain December 24, 1954
3 Claims. (Cl. 178—5.4)

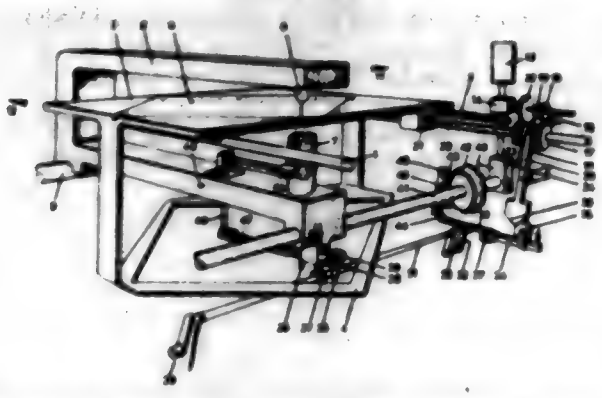


1. Apparatus adapted to modulate a beam of electrons with one of a plurality of signals depending on the position of the beam, comprising in combination a target differentiated into parallel strips responding differently to the impact of an electron beam, an electron gun for projecting an electron beam upon said target, a sawtooth field generator adapted to cause said beam to scan said target at a nearly constant speed in a direction transverse to the target strips, a controlling electrode governing the intensity of the electron beam, a plurality of sources of signals for determining the intensity of the electron beam, gating circuits all connected to said control electrode and each to a source of signals for admitting signals from any one source at a time to said control electrode, an oscillator controlling said gating circuits to pass signals from each source in turn, means for collecting synchronising signals from the response of said target strips and applying them to govern the frequency of said oscillator, means for generating a voltage proportional to the rate of change of the sawtooth field generated by said sawtooth field generator, and means for applying the alternating component thereof to said oscillator to vary its frequency.

2,863,000
DEVICE FOR MAKING PRINTING BLOCKS
Rudolf Hell, Kiel-Dietrichsdorf, Germany, assignor to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, Kiel-Dietrichsdorf, Germany, a company of Germany
Application May 5, 1953, Serial No. 353,212
Claims priority, applications Germany May 9, 1952, Sweden, July 14, 1952, and Netherlands September 9, 1952
11 Claims. (Cl. 178—6.6)

1. An engraving machine for making printing plates, comprising a single unitary reciprocable engraving table, means for mounting on one side of said table a copy carrying an image which is to be reproduced, means for mounting on the opposite side of said table a flat plate

blank a side of which is to be engraved in accordance with the contents of the image on said copy, a single carriage having two arms straddling said table along opposite sides thereof, a photoelectric scanning system carried by one of said arms and facing the image on said copy, an engraving system including an engraving tool carried by the other arm and facing the surface of the side of said plate blank which is to be engraved, means for reciprocating said table in positive operating and return strokes relative to said photoelectric scanning



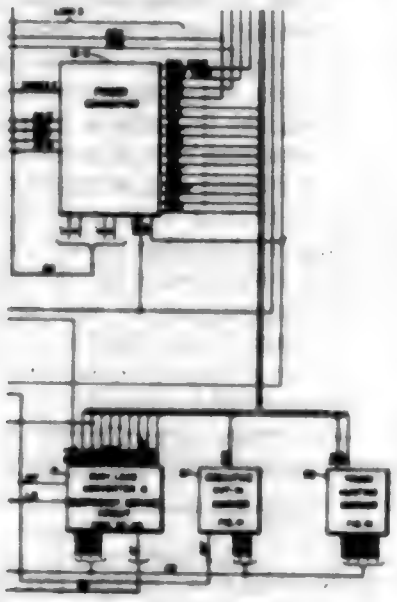
and engraving systems, means for stepwise moving said carriage and therewith the image on said scanning and engraving systems after each operating stroke of said table in a direction perpendicular to the reciprocating motion of said table, and means governed by said photoelectric scanning system for operatively controlling said engraving system during each operating stroke of said table so as to cause said engraving tool to engrave on said plate blank along successive lines the contents of said copy.

2,863,001

ELECTRONIC TELEPHONE SYSTEM

Robert B. Treusdale, Webster, and George Elliott and Paul F. Walz, Rochester, N. Y., assignors to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application May 16, 1956, Serial No. 585,185
15 Claims. (Cl. 179—15)



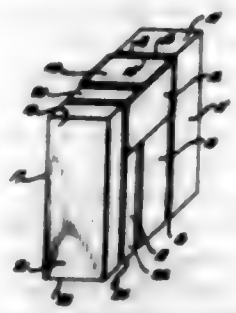
1. In a telephone system, a plurality of lines having individually assigned thereto different time positions which recur in repetitive time position frames, said lines being divided into first and second classes, a plurality of directively controllable line selecting links common to said lines for controlling the establishment of communication connections between calling and called ones of said lines, each of said links including means for marking calling and called ones of said lines busy as said lines are taken into use, and time position controlled means responsive when one of said links is controlled by a calling line of said first class to select a busy called line for forcibly releasing the link handling a previously established connection involving the selected called line.

2,863,002

MAGNETIC TRANSDUCER

David F. Brower, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application September 7, 1954, Serial No. 454,551
15 Claims. (Cl. 179—100.2)



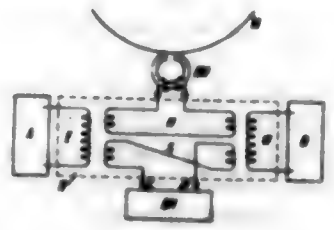
1. A magnetic transducer comprising a first unitary core piece, a secondary unitary core piece, each of said core pieces being of ferrite material and having a substantially rectangular parallelepiped shape and having a pole face, said pole faces having adjacent edges spaced from each other and disposed in a common plane; a single flat ribbon conductor substantially encircling one of said core pieces and having a portion disposed between said core pieces, said ribbon conductor having a thickness considerably less than that of said core pieces, said ribbon conductor further having an outer edge diposed in said common plane, said core pieces being spaced apart near the pole faces at least by the thickness of said ribbon conductor, and means providing electrical connections to the ends of said ribbon conductor.

2,863,003

HYBRID BALANCING NETWORK FOR A MAGNETIC RECORDER

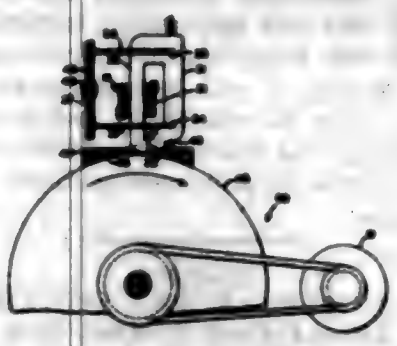
Desmond Sydney Ridler and Donald Gordon Neal Hunter, London, England, assignors to International Standard Electric Corporation, New York, N. Y.

Application February 16, 1955, Serial No. 488,638
7 Claims. (Cl. 179—100.2)



1. An electrical network having substantially equivalent electrical characteristics to a magnetic recording and/or reading head mounted adjacent a magnetic recording medium and comprising a pair of terminals, a resistor and an inductor connected in series across said terminals, said resistor being substantially equal in value to the direct current resistance of said head and said inductor having a remanent flux substantially equal to that of said head, and a closed loop comprising a resistor and an inductor, said inductors being magnetically coupled, said closed loop inductor and resistor having such values that the inductance of the circuit containing said first-mentioned resistor and inductor has the same inductance as said head and the eddy currents of said head are balanced out.

2,863,004
APPARATUS FOR MANIFESTING INTELLIGENCE ON RECORD MEDIA
William R. Maclay and George W. Scott, Endicott, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 9, 1955, Serial No. 552,895
12 Claims. (Cl. 179—100.2)

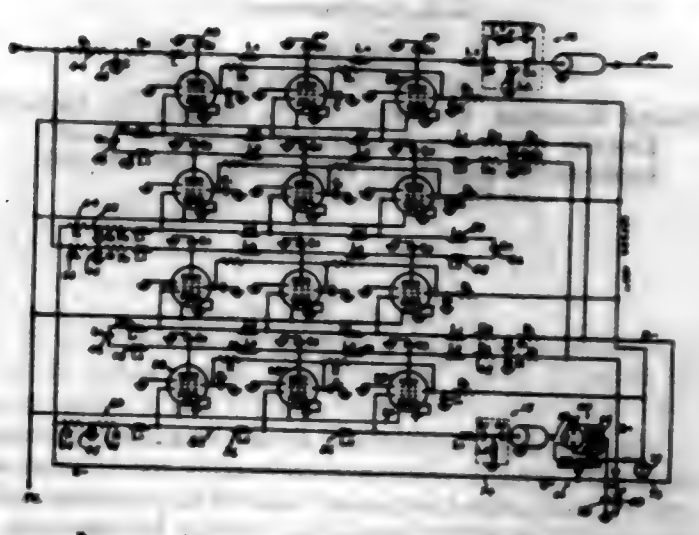


1. Apparatus for reading or writing manifestations of intelligence on a record medium, said apparatus comprising a housing which is adapted to be positioned adjacent the path of movement of said record medium, a coil assembly fixedly secured within said housing, a core operatively associated with said coil assembly, said core comprising first and second legs having a gap therebetween, means mounting said core within said housing so that said core is afforded movement relative to said coil assembly, and shoe means in engagement with said core in a manner to support said gap closely adjacent said record medium during periods of relatively rapid movement of said record medium past said gap, said shoe means having a surface which conforms to the surface of said record medium and which is supported above said record medium by the laminar fluid boundary which adheres to the surface of said record medium during said relatively rapid movement.

2,863,005
MAGNETIC INSERT EARPHONE AND INSERTS THEREFOR
William F. Knauert, Yonkers, N. Y., assignor to Sonotone Corporation, Elmsford, N. Y., a corporation of New York
Application October 24, 1956, Serial No. 617,995
2 Claims. (Cl. 179—107)

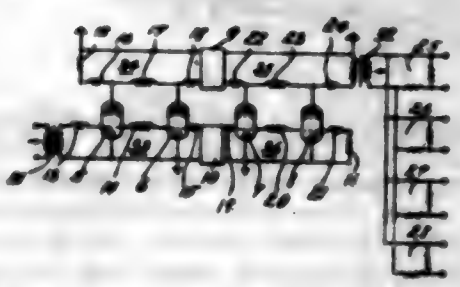
1. In an earphone for use as a hearing aid: a vibratory diaphragm and an electromagnetic driving structure therefor having an electrically energizing coil, coil terminal elements on a relatively fixed portion of said driving structure, said driving structure having a perforation, said coil having gossamer leads extending through said perforation and connected to said terminal elements, and a relatively stiff member extending from said coil and projecting through said perforation for guiding said gossamer leads through said perforation when said coil is assembled on said driving structure.

2,863,006
EQUALIZED LINE AMPLIFICATION SYSTEM
Henry M. Diambra, Washington, D. C., and George G. Edlen, Silver Spring, Md., assignors, by mesne assignments, to Citizens Bank of Maryland, Riverdale, Md., and Small Business Administration, Richmond, Va.
Application March 17, 1954, Serial No. 416,836
8 Claims. (Cl. 179—171)



1. A line unit for transmission of a restricted band of high frequency signals comprising a length of signal transmission and distribution line having a frequency attenuation characteristic decreasing with respect to frequency over said restricted band, an amplifier connected to one end of said line and comprising a plurality of cascaded amplifier stages more than two in number, each stage comprising a distributed amplifier having a grid artificial transmission input line and a matched plate artificial transmission output line; said amplifier having an overall frequency-gain characteristic inversely corresponding to the frequency-attenuation characteristic of said length of line; coupling means connecting the plate line of each stage to the grid line of a succeeding stage, said coupling means comprising means matching said respective plate and grid lines at the high frequency end of said restricted band and having a progressively greater mismatch toward the low frequency end of said band for each stage, whereby the frequency characteristic of each stage output is substantially the same at the high frequency end, but is progressively lower than the preceding stage at the low frequency end.

2,863,007
DISTRIBUTED AMPLIFIER ARRANGEMENT
Karl Fischer, Neu-Ulm, Germany
Application June 23, 1954, Serial No. 438,807
Claims priority, application Germany June 26, 1953
6 Claims. (Cl. 179—171)

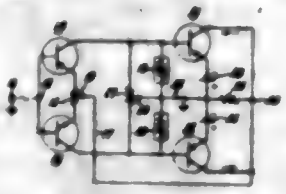


1. In a distributed amplifier arrangement, in combination, a plurality of amplifier vacuum tubes; an artificial

mary current comprising a fixed support structure; first the bolt being located interiorly of the door in position

grid transmission line and an artificial anode transmission line interconnecting said tubes, each of said transmission lines being formed by an inductive impedance coil between the grids and anodes, respectively, of adjacent tubes connected thereby, cooperating with the electrode capacity of each particular tube; and separate phase inverter means connected in said grid and anode transmission lines, respectively, at the respective midpoints thereof for establishing an inverted phase relationship between the voltages appearing in said transmission lines on opposite sides of said phase inverter means, whereby the effects of distortion due to even harmonics developed in the amplifier arrangement are eliminated.

2,863,008
STABILIZED AMPLIFIER
Edward Keonjian, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application August 27, 1954, Serial No. 452,607
8 Claims. (Cl. 179—171)



1. In combination, first and second transistors of complementary type, a resistance connecting the emitters of said first and second transistors and having an adjustable intermediate point of connection, means for applying a signal between the base electrodes of said first and second transistors and a common point, a third transistor of type complementary to said first transistor having its base connected with the collector of said first transistor, a fourth transistor of type complementary to said second transistor having its base connected with the collector of said second transistor, an output device including a power supply having at least one terminal connected with the collectors of said third and fourth transistors, said output device having another terminal connected to said common point, a second resistance diminishing in magnitude with increasing temperature connected between the base members of said third and fourth transistors, said second resistance having an intermediate point thereon connected to said common point, and a connection linking said at least one terminal of said output device with said intermediate point of connection on said first resistance.

2,863,009
JUNCTION MEANS FOR SECTIONAL DUCT
Donald B. Robinson, Russell S. Davis, and Darwin H. Crall, Detroit, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application June 7, 1954, Serial No. 434,872
5 Claims. (Cl. 191—23)

1. A junction means in combination with a sectional duct type electrical distribution system having bus bar conductors for distributing electrical current to a trolley collector movable along said duct; said junction means being operatively positioned between and concentric with adjacent sections of said duct system; said junction means being comprised of a locking member and a coupling means; said coupling means being operatively positioned on the exterior and concentric with sections of said duct system; said locking member being operatively positioned on the exterior and concentric with respect to said coupling means; said coupling means containing a terminal connection on the interior thereof for electrical joining bus bars of one duct section to another; said locking member containing a resilient member and a manually operable lock positioned on the interior thereof; said resilient member being operatively positioned between said manually operable lock and said locking member; said manually operable lock being operatively positioned with respect to an opening in said locking member to permit access thereof from the exterior of said locking member to thereby permit said manually operable lock to secure said locking member to said coupling means through said resilient member.

2,863,010
MULTIPLE ELECTRIC SWITCHES
Alfred J. Riedl, Portland, Oreg.
Application April 27, 1956, Serial No. 581,051
1 Claim. (Cl. 200—5)

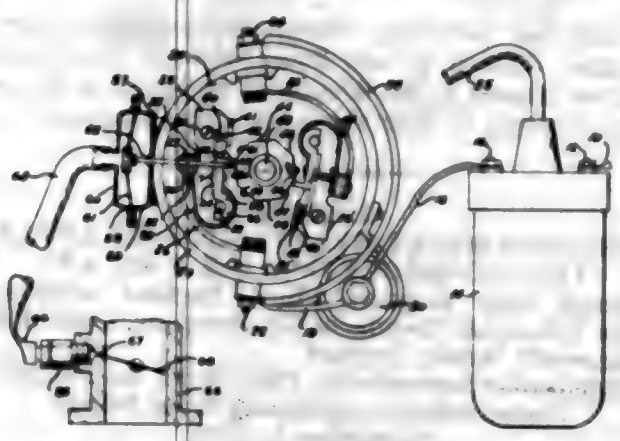
A switching mechanism of the class described, comprising a circular supporting plate adapted for attachment to a support, a plurality of circumferentially spaced apart pressure-actuated electrical switches attached to said supporting plate, each switch having a fixed contact and a flat spring contact finger for cooperation therewith, a circular push plate, means for slidably and yieldingly attaching the push plate to the supporting plate concentrically therewith, whereby the push plate is tiltable toward the supporting plate upon application of inward pressure at any point over its entire area radially from its center, said means comprising a threaded bolt slidably and rockably extending through a central opening in the supporting plate and held against rotation, a nut carried by the opposite threaded end of the bolt and embedded in the push plate at the center thereof, an adjusting nut carried by the threaded end of the bolt, a compression spring surrounding the bolt and having one of its ends bearing against the supporting plate and its opposite end against said adjusting nut, a concentric inwardly extending annulus formed on said push plate at all times in contact with the spring contact fingers of said switches whereby all of said switches may be closed simultaneously by evenly distributed inward pressure on the push plate or any two switches may be closed simultaneously by inward pressure on the push plate at a point in the proximity of a half-way point between them or whereby an individual switch may be closed by inward pressure on the push plate in the proximity of a selected individual switch.

2,863,011
DUAL POINT CIRCUIT BREAKER HAVING SIMPLIFIED SPARK ADVANCE MECHANISM
Marion Mallory, Detroit, Mich., assignor to The Mallory Research Company, Detroit, Mich., a corporation of Michigan
Application August 28, 1957, Serial No. 680,847
5 Claims. (Cl. 200—37)

1. In an ignition timing system for an internal combustion engine mechanism for interrupting spark coil pri-

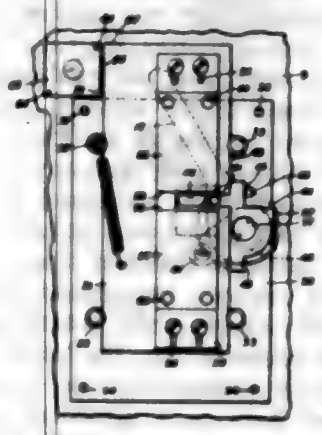
struments required for operating the vehicle while driving

mary current comprising a fixed support structure; first and second fixed contacts carried by said support structure; first and second breaker arms movably carried on said support structure; third and fourth contacts carried by the breaker arms in registry with respective ones of the first and second contacts; spring means urging the breaker arms to positions wherein the two sets of contacts are closed; a distributor shaft having cam surfaces engaged with the breaker arms for sequentially opening the contacts; a fixed casing having a movable wall; con-



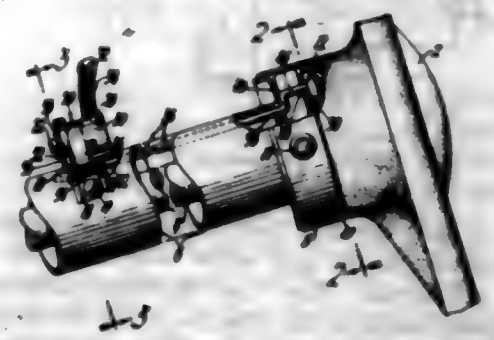
duit means putting the interior of said casing in communication with engine intake vacuum to as to put the movable wall under control of the vacuum force; and an arm extending from the movable wall to a releasable pressure connection with one of the breaker arms, whereby at high intake vacuum said one breaker arm is open and at low intake vacuum said one breaker arm is positioned in accordance with the rotated position of the distributor shaft, so as to decrease coil saturation time and increase timing at light engine load.

2,863,012
SAFETY DEVICE FOR CIRCUIT CONTROLLERS
Charles H. Hopkins and Hugh Mathis, Cincinnati, Ohio
Application March 5, 1958, Serial No. 719,327
12 Claims. (Cl. 200—50)



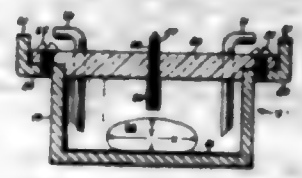
1. An electric circuit controller comprising in combination, a cabinet having side walls and a door hinged to one of said walls for opening and closing movements, control means within the cabinet including a circuit breaker having a forwardly extending actuator stud movable substantially linearly to closed and open circuit positions, a shifter plate, means on the inner face of the door supporting the shifter plate for reciprocation in the direction of movement of the circuit breaker actuator stud, a socket member fixed to the shifter plate and receptive of said stud when the door is closed, means including a handle accessible exteriorly of the door for reciprocating the shifter plate, the socket member, and the actuator stud associated therewith, and a key-operated lock at the inner face of the door, including a bolt and a keyhole, the key-hole being accessible exteriorly of the door, and the bolt being located interiorly of the door in position to intercept the shifter plate in moving the circuit breaker stud from the open-circuit position toward the closed-circuit position.

2,863,013
DIRECTION SIGNAL
William E. Brown, Anderson, Ind., and David M. Gurney, Fosters, and Ernest A. Leavengood, Lansing, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 14, 1955, Serial No. 534,353
13 Claims. (Cl. 200—61.34)



1. In combination, a vehicle steering column, a direction signal switch operating mechanism disposed concentrically in said column adjacent the upper end thereof, a circuit controlling electrical switch disposed remotely from said mechanism, and a motion translating member disposed eccentrically to the axis of said column and extending between said mechanism and said switch for actuating the latter responsive to movement of the former.

2,863,014
GRAVITY VERTICAL SENSING SWITCH
James W. Deer and Harley T. Lyman, Portland, Oreg., assignors to Iron Fireman Manufacturing Company, Portland, Oreg., a corporation of Oregon
Application September 23, 1957, Serial No. 685,608
10 Claims. (Cl. 200—61.47)



2. For use in selectively connecting the windings of a pair of torquer motors to a source of electric power, said torquer motors being applied to a gyro vertical for erecting the spin axis of said gyro vertical in either direction about either or both of two mutually perpendicular axes other than said spin axis towards the gravity vertical position of said spin axis, a single pole four throw gravity sensing electric switch secured to said case with all throws of said switch open when said spin axis is in its gravity vertical position and with a respective one of said throws of said switch closed when said spin axis is tilted away from its gravity vertical position in the direction of said respective one of said throws of said switch.

2,863,015
STEERING WHEEL
Hermann H. F. Ahrens, Sindelfingen, Kreis Boblingen, Germany
Application May 23, 1955, Serial No. 510,326
In Germany October 13, 1948
Public Law 619, August 23, 1954
Patent expires October 13, 1968
5 Claims. (Cl. 200—61.54)

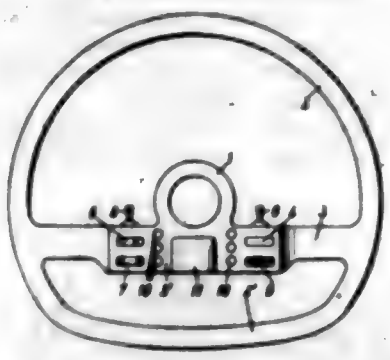
1. A steering wheel for motor vehicles having a rim, a hub, one normally horizontal spoke, and electrical in-

relay and interconnected mechanical means controlled

2,863,021

on the exterior and concentric with sections of said duct bustion engine mechanism for interrupting spark coil pri-

struments required for operating the vehicle while driving, said electrical instruments being mounted on said hub and said spoke, said rim having a substantially flattened portion extending substantially parallel with said spoke on the side of said rim normally adjacent the driver, said spoke forming a secant of said rim portion and being



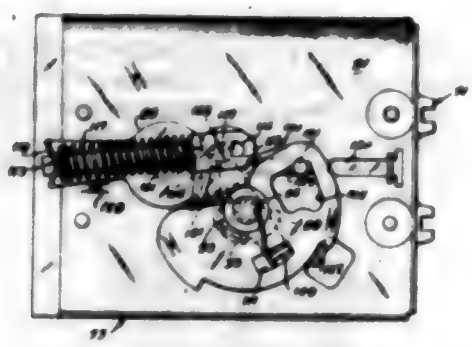
disposed on a part of said hub nearest the driver, said electrical instruments on said spoke and said hub being disposed at a distance from said flattened portion substantially within reach of the fingers of the driver's hand gripping said flattened portion without requiring removal of said hand therefrom.

2,863,016

SWITCH ASSEMBLIES

Lester A. Hercules, St. Louis, Mo., assignor to Frank Adam Electric Company, St. Louis, Mo., a corporation of Missouri

Application March 19, 1956, Serial No. 572,291
3 Claims. (Cl. 200—67)



1. In a switch of the character set forth having a base panel and a movable contact mounted for movement across the panel; the improvement comprising the operating plate pivoted on said panel for swinging movement, a contact-actuating element mounted for movement along a substantially rectilinear path between switch-open and switch-closed positions, said element being driven by said pivoted operating plate over said rectilinear path between switch-open and switch-closed positions, said operating plate being disposed with its rotational axis on one side of said rectilinear path opposite the switch-closed end thereof, whereby the plate develops increasing leverage with respect to the element adjacent the switch-closed position decreasing leverage adjacent the switch-open position.

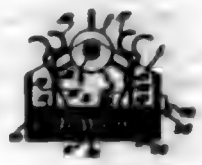
2,863,017

SPEED RESPONSIVE ELECTRIC SWITCH

Lewis E. Thatcher, Chicago, Ill., assignor to Gaylord Products, Incorporated, Chicago, Ill., a corporation of Delaware

Application July 24, 1956, Serial No. 599,795
8 Claims. (Cl. 200—80)

1. An electric switch which is operable in response to rotary speed of a rotating body which comprises, a housing, a body of insulating liquid carried in said housing, a pair of cooperating electric switch actuating arms pivotally mounted in said housing and normally biased to a stable position in said housing, a rotatable body journaled in said housing between said arms, means carried by said body for alternately rocking said arms as the body rotates to displace said arms from their stable position to actuate



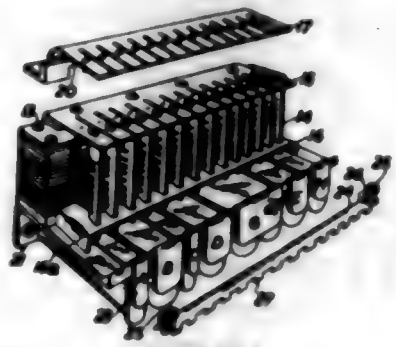
the respective switches, corresponding end portions of said arms dipping in said liquid whereby the displaced arms are delayed by the friction of the liquid in the housing in returning to their respective stable positions.

2,863,018

ELECTROMAGNET RELAYS AND TO APPARATUS INCORPORATING SUCH RELAYS

Frederick Emil Rommel, Ilford, England, assignor to The Telephone Manufacturing Company, Limited, Hollingsworth Works, England

Application September 6, 1955, Serial No. 532,626
Claims priority, application Great Britain September 7, 1954
6 Claims. (Cl. 200—98)



1. An electromagnetic relay including a contact assembly comprising a plurality of series of fixed contact carriers and a plurality of series of moving contact carriers arranged to co-act with said fixed carriers, an actuating member associated with the moving contact carriers of each series, each actuating member having surfaces thereon serving to determine the positions of the contact ends of at least some of the moving contact carriers of the associated series relative to the fixed contact carriers of such series, a plurality of armatures each having an individual operating magnet and being arranged to move at least one but not all of said actuating members to effect co-action between different ones of said moving and fixed contact carriers, the operating magnets of the individual magnets having coils producing different ampere-turns when energized by the same voltage, spring means for applying pressure to the actuating members tending to move them in a direction opposite that in which the members are moved by the armatures when the relay is operated, and means for individually adjusting the spring pressure applied to at least some of said members.

2,863,019

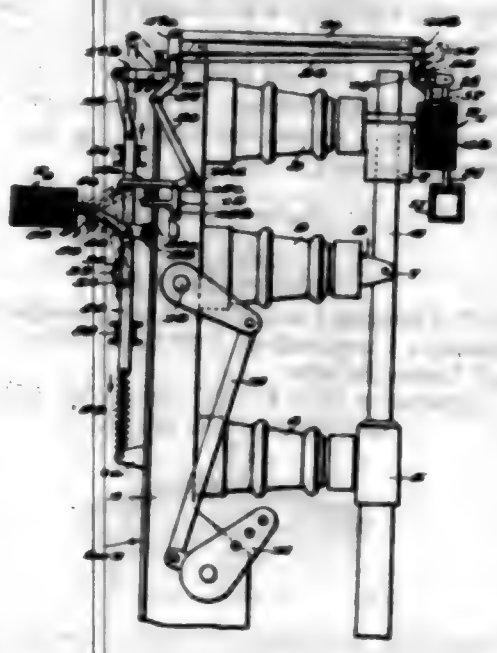
RELAY SYSTEM CONTROLLING RELEASE OF ISOLATING SWITCHES

Alfred Klimesch, Gmunden, Austria, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Application March 15, 1956, Serial No. 571,631
Claims priority, application Austria March 16, 1955
8 Claims. (Cl. 200—102)

1. In an electrical switching device including a pair of relatively movable contact members and means including a tripping member for effecting disengagement of said contact members, a short-circuit current relay, a voltage

relay and interconnected mechanical means controlled conjointly by said relays and actuated upon termination of a predetermined time delay period subsequent to cessa-



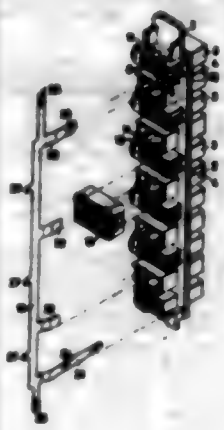
tion of the current flow in said current relay and in the absence of a voltage applied to said voltage relay for operating said tripping member.

2,863,020

PLURAL RELAY-RELAY BAR

Gündokar Braümann, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany

Application September 4, 1957, Serial No. 681,992
Claims priority, application Germany September 7, 1956
30 Claims. (Cl. 200—104)



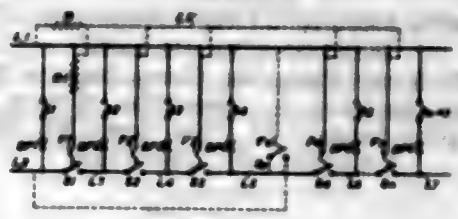
1. In a multiple relay bar comprising a plurality of electromagnetic relays, a generally E-shaped magnetic flux element for each relay, a generally U-shaped core element for each relay which supplements said flux element to provide for two iron circuits, an armature for each relay overlying the central leg of said flux element, means for respectively energizing said armatures to effect repulsion thereof from the respective legs of said flux element and simultaneous attraction by the corresponding leg of said core element, thereby closing the corresponding iron circuits, means for establishing an electrical circuit extending over part of at least one of said iron circuits, the legs of said flux elements and of said core elements of all relays forming respectively comblike structures assembled side by side with the legs belonging to mutually adjacent relays forming a common leg.

2,863,021

ELECTRIC SWITCHING DEVICES

Harry Norman Green, Farnborough, England, assignor to The Minister of Supply in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

Application February 2, 1955, Serial No. 488,002
4 Claims. (Cl. 200—114)



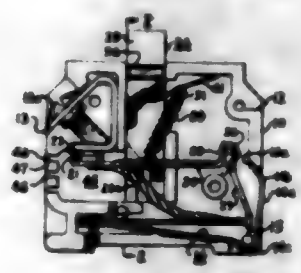
1. An electric switching device comprising essentially a plurality of switches, a plurality of fusible elements holding them open against a spring influence, wherein each switch comprises a springy arm mounted rigidly at one end, and wherein each fusible element comprises a piece of fuse wire which the corresponding springy arm engages at its free end and by which said arm is held bowed or deflected in the open position; said fuse wire extending in a series of sinusoidal or zigzag loops between anchorages on the body of the device and the springy switch arms, each arm extending at its free end through a corresponding loop clear of the body of the device, alternate anchored loops on the body being connected together and the intervening anchored loops being severed and left unconnected; and connections such that, upon establishment of connection with a battery or other source, the first fusible element fuses and so allows the first switch to close and thus connect to the source the second fusible element which in turn then fuses and so allows the second switch to close and thus connect the third fusible element through the already closed first switch to the source, and so on, depending upon the number of switches in any particular case.

2,863,022

CIRCUIT BREAKER

David B. Powell, Bristol, Conn., assignor to General Electric Company, a corporation of New York

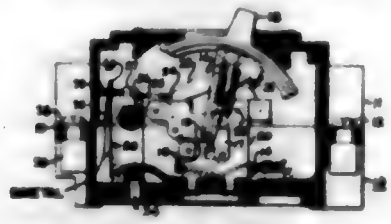
Application April 20, 1955, Serial No. 502,693
13 Claims. (Cl. 200—116)



1. An electric circuit breaker comprising a manually operable member having a cam surface and an operating surface and being movable back and forth along a predetermined path, a latch, a movable contact member having a latched position in which a portion thereof is in engagement with and restrained by said latch and a tripped position in which said portion thereof is out of engagement with said latch, said contact member having a portion located in the path of movement of said cam surface when said contact member is in said latched position whereby movement of said manually operable member along said path in a first direction when said contact member is in said latched position causes said cam surface to engage said portion of said contact member and to disengage said contact member from said latch, and said contact member having a portion located in the path of movement of said operating surface when said contact

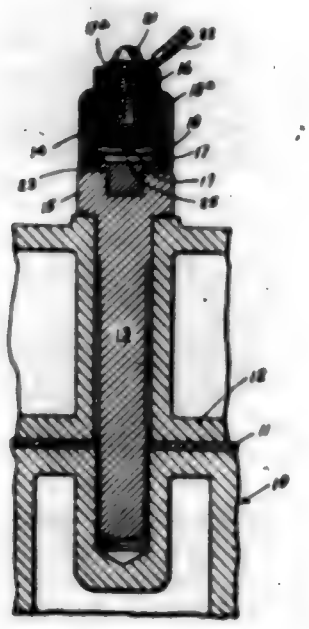
member is in said tripped position whereby movement of said manually operable member along said path in said first direction when said contact member is in said tripped position causes said operating surface to engage said portion of said operating member and to reengage it with said latch.

2,863,023
BIMETALLIC STRIP THERMALLY RESPONSIVE DEVICE
Raymond N. Rowe, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Application January 27, 1956, Serial No. 561,849
5 Claims. (Cl. 200—116)



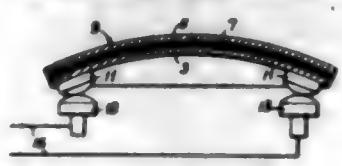
1. A thermally responsive device comprising a support, a first bimetallic strip portion having one end thereof pivotally mounted on said support and having its other end spaced away from said support, a second bimetallic strip portion having one end thereof pivotally mounted on said support and having its other end connected directly to the said other end of said first bimetallic strip portion, said first and second strip portions extending in the same general direction from the point of connection of said connected ends, and means for passing electric current through both of said strip portions in series.

2,863,024
SIGNAL CONNECTING BOLT
Lee W. Romine, Indianapolis, Ind.
Application April 18, 1957, Serial No. 653,685
4 Claims. (Cl. 200—138)



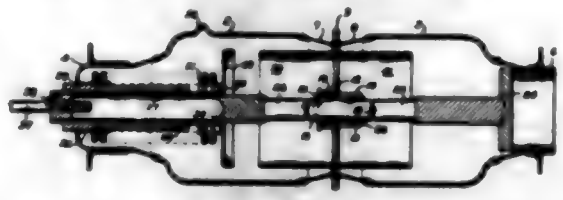
1. A combined signal and connector bolt of the type which is inserted in standard threaded openings in a cylinder head and block to thereby join the same comprising a threaded shank portion for insertion into the cylinder head and block, a head portion including a metallic cup-shaped member secured in good thermal conductive relation at its base to the shank portion, a switch contact block formed of electrical insulating material closing the open end of said cup-shaped member, an electrically conductive sleeve extending axially through the block and carrying a terminal screw threaded into its outer end, a switch contact forming screw threaded into its inner end, said contact screw extending into the cup-shaped member, a bimetallic thermally responsive member mounted within the cup-shaped member in thermal conductive relation therewith, and a movable switch contact carried by said thermally responsive member and cooperating with the inner end of said switch contact forming screw to provide a warning signal when the temperature at said shank portion reaches a predetermined value, adjustment of said contact forming screw within the sleeve providing a means for calibrating the response of said thermally responsive member.

2,863,025
THERMOSTATS
Charles D. Flanagan, Attleboro, Mass., assignor to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application May 3, 1957, Serial No. 656,868
10 Claims. (Cl. 200—138)



1. Composite thermostat material comprising a layer of a relatively high expansion metal and a layer of a relatively low expansion metal bonded together by an intermediate flexible layer of a high-temperature high-strength metal-to-metal adhesive, the bond between said adhesive layer and the metal layers and the shear strength of the adhesive layer being such as to resist differential expansion of the bonded-together faces of the metal layers.

2,863,026
VACUUM SWITCH
Jo Emmett Jennings, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California
Application March 26, 1956, Serial No. 573,882
11 Claims. (Cl. 200—144)

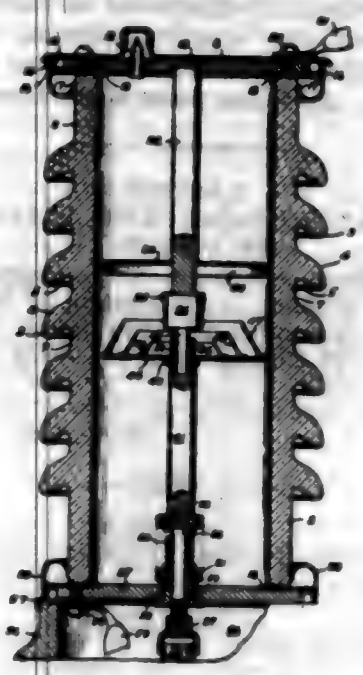


1. A vacuum switch comprising an evacuated envelope having a metallic end cap hermetically closing each end, a mobile contact rod movably mounted on one of the end caps and extending into the envelope, a fixed contact rod mounted on the other end cap and extending into the envelope to a point spaced from said mobile rod, a connector contact movably mounted within the envelope to engage with and disengage from said contact rods, means including a transverse plate fixed within the envelope to slidably support said connector contact and to isolate each said contact rod and an associated end of said connector contact from the other contact rod and the other end of the connector contact associated therewith, and means external the envelope for moving said mobile rod to effect said engagement and disengagement.

2,863,027
VACUUM SWITCH
Jo Emmett Jennings, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California
Application March 30, 1956, Serial No. 575,232
12 Claims. (Cl. 200—144)

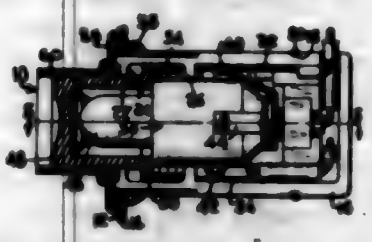
1. An hermetic seal between the metalized edge zone of a hollow ceramic cylinder and a circular metal end

plate, comprising an annular sealing ring having a radial section substantially the shape of a capital J, the long



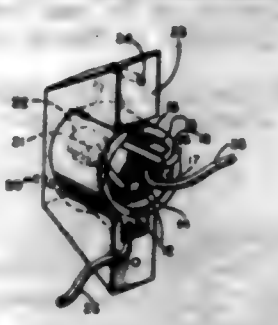
stem of the J integrally united to the periphery of the end plate and the short stem integrally united to the edge zone of the ceramic cylinder.

2,863,028
ELECTRICAL SWITCH ASSEMBLY AND INDICATOR
Robert W. Fraser and Vincent R. Herterick, Waltham, Mass., assignors to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Application March 21, 1955, Serial No. 495,380
1 Claim. (Cl. 200—167)



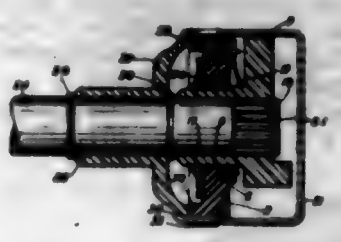
A push button switch assembly comprising a housing, said housing having a central aperture at the forward end thereof and a pair of circumferentially extending internal ribs positioned inwardly from said aperture and in longitudinally spaced relation with respect to one another, a bulb carrier disposed in said housing, said carrier having a bulb receiving socket adjacent its innermost end, a plunger assembled to the opposite end of said bulb carrier and protruding from the aperture of said housing, said plunger enclosing a bulb to be positioned within said bulb receiving socket, said plunger and said bulb carrier having cooperating, radially extending, interlocking flange portions disposed between said pair of circumferentially extending rib portions of said housing and lying normally against the inner face of the forward circumferential rib, said plunger and bulb carrier being longitudinally movable in non-rotating relationship with respect to said housing and within said spaced circumferential ribs, a spring disposed around said bulb and between said interlocking flange portions and the rear circumferential rib of said housing biasing said bulb carrier and said plunger forwardly, a first pair of contacts secured to said housing adjacent the end remote from said apertured end for connection to an external circuit, a second pair of contacts secured to said housing adjacent the end remote from said apertured end and in spaced relation to said first pair of contacts for connection to an external circuit, and a third pair of contacts secured to said bulb receiving socket of said bulb carrier, said third pair of contacts being in sliding engagement with said second pair of contacts at all times whereby upon the rearward movement of said plunger and bulb carrier said third pair of contacts will engage said first pair of contacts to close a common external electrical circuit between each of said pairs of contacts thereby concurrently activating a cyclic operation of external electrical apparatus and the bulb when positioned in the bulb receiving socket, said circuit remaining energized when the plunger is released and until the predetermined cycle is completed.

2,863,029
RHEOSTAT
James R. Wholly, Cambridge, Mass.
Application October 6, 1955, Serial No. 538,894
5 Claims. (Cl. 201—48)



1. A rheostat completely exterior to and mountable on an outer panel of an electric device, consisting of a U-shaped mounting bracket of insulating material having flat ends on its legs, being exteriorly and removably attachable to such panel, and having an integral central shaft perpendicular to said leg ends; a holder made of insulating material, rotatably positioned on said shaft and provided on its inside wall with a recess; an arcuate resistance band positioned in said holder recess; and a stationary yielding tongue contact positioned within a slot provided in said bracket continuous with a longitudinal slot provided in said shaft and having one end in contact with said band; the rheostat being connectible to interiorly positioned electrical components through an aperture in said panel.

2,863,030
VARIABLE RESISTORS AND POTENTIOMETERS
Victor Arthur William Page, Rockley, Marlborough, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Application February 4, 1957, Serial No. 655,456
Claims priority, application Great Britain February 16, 1956
5 Claims. (Cl. 201—55)



1. A variable resistor device, comprising a base member of insulating material having two parallel surfaces, a guide bore extending therethrough to interconnect said surfaces, and a resistor track and a contact track both arranged at one of said surfaces, substantially concentrically with said bore, a bush of insulating material extending through said bore and having an end projecting from the surface containing said tracks, said end being formed with a circumferential shoulder in

synthetic polyamide resins separating said electrical con-

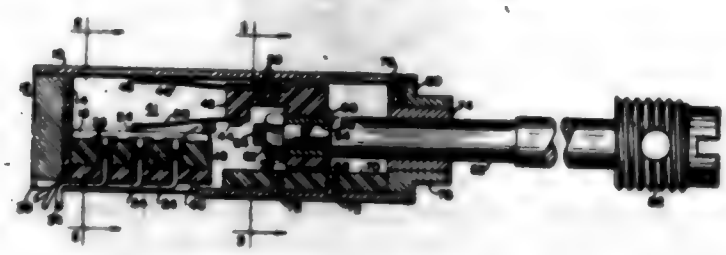
contact with said surface and with an abutment flange spaced from said surface and extending radially beyond said shoulder, a movable contact element rotatably guided on said bush between said shoulder and said abutment flange and having two contact points and a support point, said contact points respectively resting on said contact track and on said resistance track, and said support point resting against said abutment flange and being resiliently movable axially of the bush towards and away from said contact points, and a thrust collar co-operating with the other said surface of the base member and having resilient locking legs extending from said collar into resilient self-locking engagement with said bush outside the base member adjacent said other surface thereof.

2,863,031

PRECISION POTENTIOMETERS

Herbert A. Gottschall, Nutley, N. J., S. Frederic Guggenheim, Riverdale, N. Y., and Arnold S. Louis, Teaneck, N. J., assignors to Myron A. Coler, Scarsdale, N. Y.

Application March 23, 1956, Serial No. 573,567
4 Claims. (Cl. 201—62)



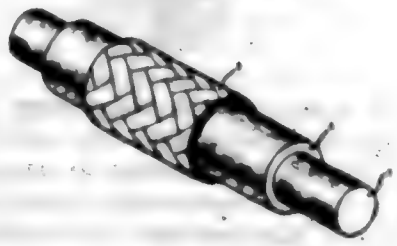
1. In a variable resistance device including a casing member; a straight line resistance element supported in said casing member; means for making electrical connection from an external circuit to fixed portions of said straight line resistance element; a shaft supported by said casing member and adapted to be actuated rectilinearly parallel to said resistance element; a brush block positioned on said shaft member and adapted to move therewith; and means for making electrical connection from an external circuit to a selected portion of said resistance element including spring loaded contact making means carried by said brush block; the improvement comprising: a fixed surface located within said casing member substantially opposite and parallel to said resistance element; an electrically isolated spring member carried by said brush block and arranged to act against said fixed surface so as to apply to said brush block a force substantially equal and opposite to the force exerted on said brush block by said spring loaded contact making means.

2,863,032

FLEXIBLE GLASS INSULATED HEATER WIRE

William Warder Morris, Haddam, Conn., assignor of one-half to Carlos B. Ellis, Middletown, and one-half to Jean K. Morris, Haddam, Conn.

Application July 19, 1954, Serial No. 444,295
1 Claim. (Cl. 201—63)



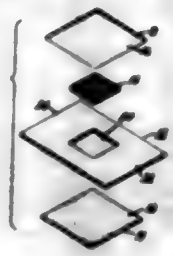
In a resistor wire, an electrically conducting heater wire strand, a dielectric cover over the wire strand including a mass of glass fibers, and a physically strengthening and heat-dissipating cover of thermally conducting metallic filaments directly over the glass fibers, said filaments being of flattened cross section to provide maximum contact with the glass fibers for dissipation of heat therefrom by conduction, and the metallic filaments being tightly braided to inhibit dislocation of the glass fibers at temperatures above the fusion point of the fibers.

2,863,033

TEMPERATURE DETECTOR AND METHOD OF MAKING

Henry W. Wallace, Asheboro, N. C., assignor to General Electric Company, a corporation of New York

Application November 29, 1954, Serial No. 471,582
19 Claims. (Cl. 201—63)



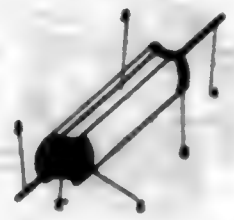
7. In a temperature detector, a temperature sensitive element comprising an apertured insulator plate, a tablet of a thermo-sensitive electrolyte in said aperture, and a pair of electricity conducting foils, one of said foils being disposed on each side of said tablet with a portion thereof bonded to said plate.

2,863,034

ELECTRIC RESISTANCE ELEMENT

Luigi Tassara, Milan, Italy

Application May 10, 1955, Serial No. 507,381
Claims priority, application Italy May 10, 1954
4 Claims. (Cl. 201—63)



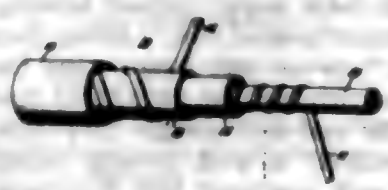
1. An electric resistance element comprising a rod of insulating material having at least one longitudinal groove in the surface thereof, conductive coatings on the opposite end portions of said rod, terminal conductors extending from said conductive coatings, and a layer of metal in said groove extending between said conductive coatings and determining the electric resistance of the element.

2,863,035

HEATING AND TEMPERATURE SENSITIVE CONTROL WIRE

William D. Vinson and Joseph F. Jacoby, Asheboro, N. C., assignors to General Electric Company, a corporation of New York

Application January 3, 1956, Serial No. 557,019
4 Claims. (Cl. 201—63)



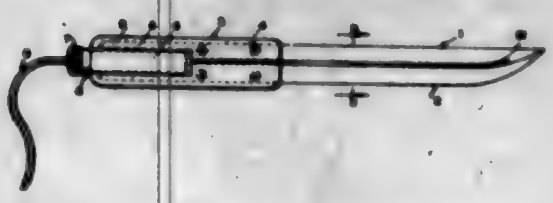
1. A heater and temperature sensitive control wire for electrically-heated fabrics comprising first and second bare electrical conductors, multiple layers of flexible

male connectors on said housing adapted to supply energy

member pendant therefrom, the improvement in a releas-

synthetic polyamide resins separating said electrical conductors, said layers having temperature impedance coefficients to insulate electrically said bare conductors one from the other at a temperature of around 105° F., and to provide a conductive path between said bare conductors to pass an electrical current of controlling magnitude at elevated control temperatures materially in excess of about 105° F. but materially less than 500° F. and which temperatures vary inversely with the length of said polyamide layers which are heated to said elevated temperatures, one of said layers being selected from those polyamide resins providing substantially constant electrical characteristics over prolonged temperature cycling, another of said layers being selected from those polyamide resins which maintain substantially constant electrical characteristics over a wide range of humidity, and a flexible electrically insulating jacket encompassing said conductors and layers.

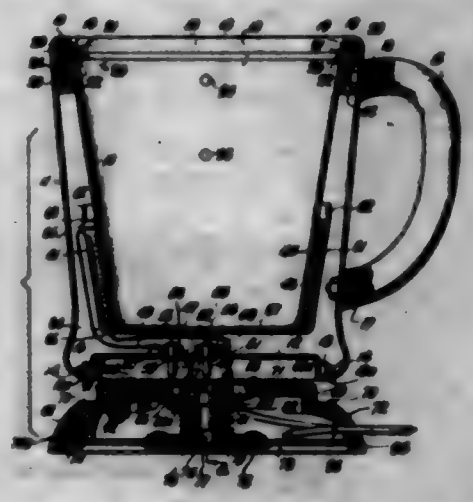
2,863,036
ELECTRICALLY HEATED BUTCHERING KNIVES
Donald O. Mitchell and Ronald A. Carbery, Portland, Oreg.
Application June 19, 1957, Serial No. 666,571
1 Claim. (Cl. 219—21)



A knife of the character described including a handle having a bore extending inwardly from one of its ends and thereby adapted to receive a rheostat, a knife blade bifurcated at one of its ends and thereby secured within said handle with the bifurcation straddling said bore, said knife blade extending outwardly from the handle and having an opening therethrough near its end opposite from the handle, said blade having a groove along each of its sides substantially throughout its length, both of said grooves being in communication with each other through said opening, heat-radiating dielectric material embedded within said grooves and within said opening, a continuous heating element encased within said dielectric material throughout the length thereof on both sides of the blade through said opening and terminating within said bore in the handle and thereby adapted for electrical connection to a source of electrical energy.

2,863,037
ELECTRIC COFFEE CUP
Cyrus E. Johnstone, St. Joseph, Mo.
Application April 18, 1956, Serial No. 579,056
5 Claims. (Cl. 219—43)

1. A drinking cup assembly comprising a double-walled vessel having an inner wall formed to receive a quantity of fluid therein, an outer wall enclosing at least the lower portion of the outer surface of said inner wall, said outer wall spaced away from the lower portion of the inner wall and out of contact therewith, insulating means joining the outer and inner walls whereby the upper outside surface of the cup, the topmost edge thereof, and at least a portion of the inside upper surface of the cup has no uninsulated contact with said inner wall, means for electrically heating said inner wall attached thereto, electrical connections to said heating means extending outwardly from said outer wall, the bottom portion of the outer wall being inwardly dished and the electrical connections extending outwardly from said dished portion, the dished portion being essentially circular and one electrical contact being positioned centrally of the dished portion, a base for said cup comprising a rounded bottom portion of greater diameter than the dished portion of the cup bottom, an upwardly extending circular portion on said bottom portion of slightly lesser diameter than the diameter of the dished cup bottom portion, a central orifice in the upper base portion to receive the central lead in the cup bottom, a track in the upwardly extending base portion circumferential to the central orifice to receive the noncentral lead in the cup bottom, a post in said central base orifice having a single electrical connection thereto, resilient means in said base maintaining said post in said orifice at a level below the mouth of the orifice less than the length of the central electrical connection extension below the outer wall of the dished



portion in the cup bottom, a plate in said base forming the bottom of said track having another electrical connection thereto, the level of said plate in said track and base being below that of the top of said post, the electrical connections extending from the bottom of the cup being essentially of the same length, the noncentral electrical connection in the cup being diametrically opposed to the handle of said cup, the handle weight being sufficient, when the cup is empty, to tip the cup, when supported only by the central electrical connection, to the side of the handle, the strength of the spring under the central post in the base being sufficient to support the weight of the cup plus some additional weight without depression of said post against its supporting resilient means.

2,863,038
AUXILIARY OUTLET WITH EMERGENCY LIGHT
Dominick A. Lombardo, New Canaan, Conn.
Application October 15, 1956, Serial No. 616,087
3 Claims. (Cl. 240—37.1)

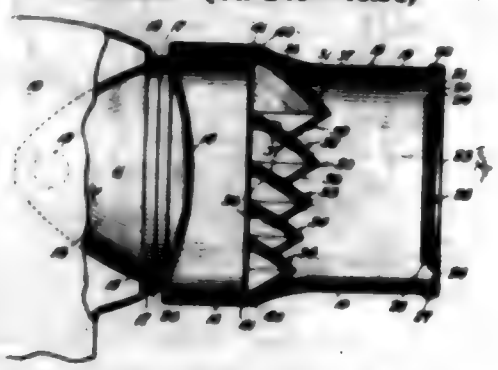
1. A portable auxiliary electrical outlet and combined lighting unit, capable of being plugged into and supported by a conventional electrical outlet and adapted to supply night light while so supported and to supply emergency light upon failure of power in said conventional outlet or while disconnected from and being carried away from said outlet, comprising a small block shaped housing conforming in shape and size to a conventional electrical outlet receptacle, at least one light transparent window in said housing, male connectors extending from said housing and adapted to be plugged into a conventional power source outlet for energization and support of the unit, fe-

magic tee to one side arm of said second magic tee, a con-

2,863,044

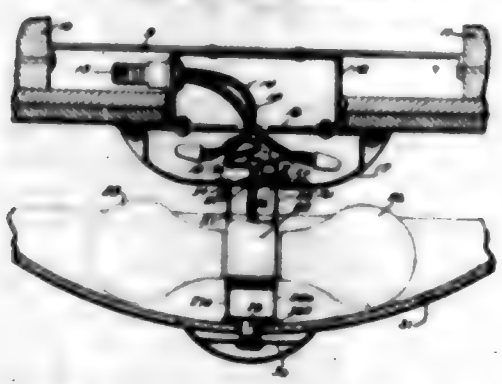
male connectors on said housing adapted to supply energy to electrical devices to which they may be connected, jumpers within said housing connecting said male and female connectors in substantial alignment, a lamp in said housing for night illumination connected across said jumpers for projecting light through said window, a second window in said casing, an emergency lamp in said housing to supply emergency illumination through said second window, and an emergency lamp circuit including a battery power source within said housing, said circuit including means responsive to electrical energization of said male and female connectors by said conventional power source to automatically open said emergency lamp circuit.

2,863,039
LAMP ATTACHMENT
John M. Ruschell, Clairton, Pa., assignor to The Ruschell Lens Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application December 12, 1956, Serial No. 627,906
5 Claims. (Cl. 240—46.31)



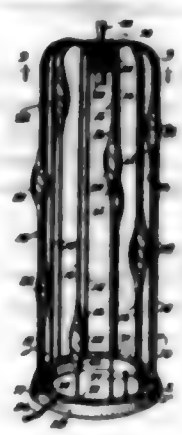
1. A device of the type described, including, in combination, a source of projected beams of light, an elongated housing enclosing said light source and extending from it in parallel relationship to the direction of focus of said light beams, the outer end of said housing having an end closure including transparent means for the egress of light from the housing, the inner periphery of said housing being uniformly provided with a light reflecting surface area, and a lens mounted in said housing relatively adjacent said source of light and relatively remote from said end closure leaving a substantial area of light reflecting surface area between said lens and said end closure, said lens being composed of a plurality of slats having inner reflecting surfaces, said slats being placed in overlapped position and at sufficient angles with respect to said light beams to intercept substantially all light beams directed at said end closure and reflect them onto said inner reflecting surfaces of said housing.

2,863,040
LAMP FIXTURE AND SHADE SUPPORT
Frank J. Marriett, Louisville, Ky., assignor to Thomas Industries Inc., Fort Atkinson, Wis., a corporation of Delaware
Application December 20, 1955, Serial No. 554,273
9 Claims. (Cl. 240—78)



5. In a device of the character described, the combination with a canopy member and a lighting fixture socket member pendant therefrom, the improvement in a releasable connection between said canopy member and socket member which comprises dissimilar sets of arms and releasable arm couplings respectively connected to said members, one of said sets comprising part means relatively movable in one direction for releasably coupling said members and the other of said sets comprising part means relatively movable in a different direction for releasably coupling said members whereby concurrent interaction of the parts of said sets is precluded and said sets require to be coupled and uncoupled in sequence.

2,863,041
LIGHTING FIXTURE
Thomas M. Steinbach, Park Ridge, Ill., assignor to The Stiffel Company, Chicago, Ill., a corporation of Illinois
Application January 8, 1957, Serial No. 633,153
4 Claims. (Cl. 240—81)

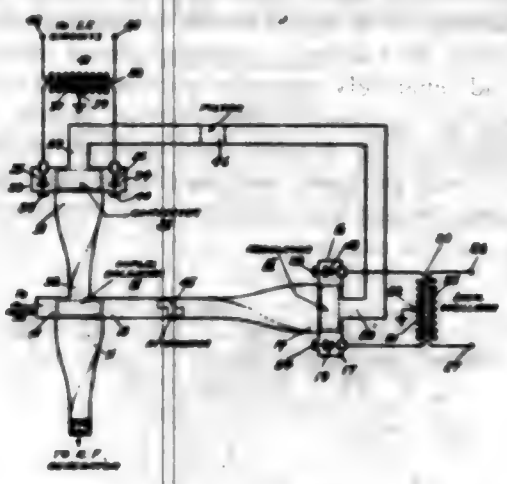


1. A lighting fixture comprising a base, a plurality of spaced light fixture supporting rods secured to said base, said light fixture supporting rods each formed of an upper and lower section with the lower section supporting an electrical socket, means between said upper and lower sections for spacing said sections from each other a distance sufficient to accommodate a light bulb therebetween in said socket and to support said light bulb on said lower section in vertical alignment with the upper and lower sections, a cap member secured to each of the spaced ends of said upper and lower sections with the open ends of said cap members spaced from and facing each other, and a globe adapted to surround said light bulb with the opposite ends of said globe supported in the open ends of said cap members to form a continuous enclosure extending between the spaced upper and lower sections so that from an outward appearance the upper and lower sections of each supporting rod appear as a single continuing rod with a bulbous illuminating portion in direct alignment therewith.

2,863,042
ECHO TRANSMITTER AND RECEIVER HAVING MEANS TO PRODUCE STABLE INTERMEDIATE FREQUENCY DESPITE TRANSMITTER FREQUENCY DRIFT
Royden C. Sanders, Jr., Nashua, N. H., and William R. Mercer, Belmont, Mass., assignors to Raytheon Manufacturing Company, Newton, Mass., a corporation of Delaware
Continuation of application Serial No. 186,420, September 23, 1950. This application August 9, 1956, Serial No. 603,131
12 Claims. (Cl. 250—13)

1. A wave-guide configuration comprising means for coupling electromagnetic energy to said configuration, a first magic tee, a wave-guide modulator including a second magic tee having nonlinear impedance means in each of its main arms, a wave-guide converter including a third magic tee having nonlinear impedance means in each of its main arms, a connection from a main arm of said first

magic tee to one side arm of said second magic tee, a connection from the second side arm of said second magic tee



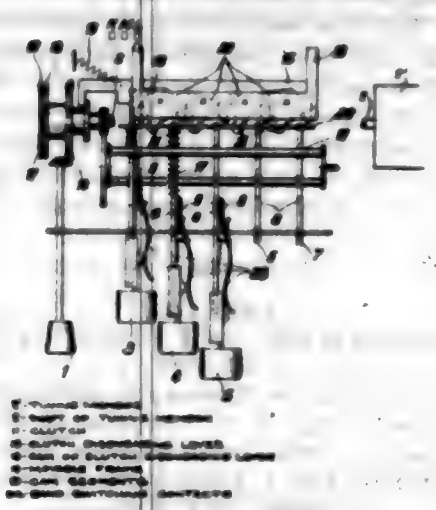
to a first side arm of said third magic tee, and a connection from the second side arm of said third magic tee to a first side arm of said first magic tee.

2,863,043

PUSH BUTTON RADIO TUNING MECHANISM WITH BAND SWITCHING CONTACTS

Ommo Schmidt, Josef Thrien, and Rudolf Klimke, Hildesheim, Germany, assignors to Blaupunkt-Werke Gesellschaft mit beschränkter Haftung, Hildesheim, Germany

Application March 18, 1954, Serial No. 417,152
Claims priority, application Germany April 23, 1953
1 Claim. (Cl. 250—20)



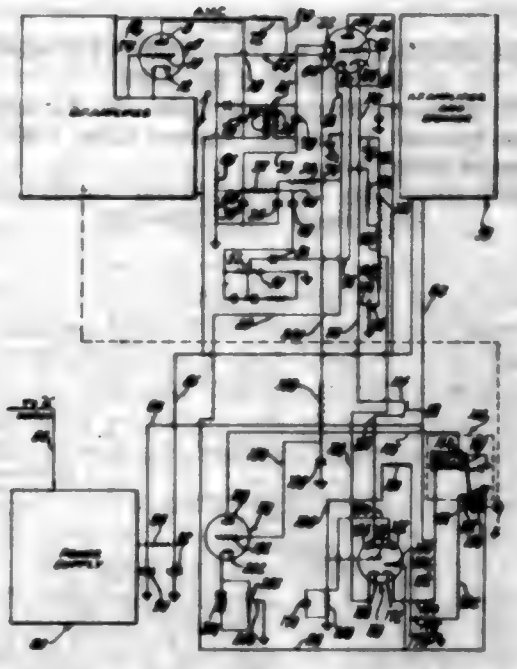
In a tuning structure for radio frequency apparatus having a plurality of ranges in combination a tuning member, a tuning knob for continuously tuning said tuning member, a clutch between said tuning knob and the shaft of said tuning member, a push button mechanism for selecting desired fixed frequencies, each push button actuating a bar on which said push button is mounted, said bar being operable by said push button axially of the push button, a stationary frame wherein said bars are guided, a movable frame for actuating said wave range switch, a positioning member connected by means of a gear to the tuning member, means for disengaging said clutch at depression of any one of said push buttons, means for subsequent positioning of said positioning member to a position corresponding to the desired position of said tuning member, cam segments pivotally mounted in said movable frame, said cam segments having projections engaging slots provided in said stationary frame, each said bar engaging with its end one of the sides of a corresponding said cam segment at depression of the respective button, whereby said tuning member and said wave range switch will be brought into its desired position by one single depression of a respective push button.

2,863,044

SENSITIVITY CONTROL FOR SIGNAL SEEKING TUNERS

James H. Guyton, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application April 21, 1954, Serial No. 424,662
4 Claims. (Cl. 250—20)



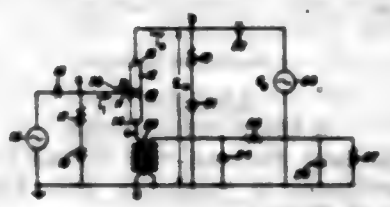
1. In radio receiving means, adjustable means for tuning the receiving means over a predetermined band of frequencies, driving means coupled to said tuning means, indexing means engageable with the driving means to stop and lock the driving means, electronic tube means connected in circuit with the indexing means to control the energization thereof, a control grid in the tube, a conductive line from the receiving means upon which a pulse is developed upon the tuning in of a station said line being connected to said control grid, a second electronic tube connected in shunt to the first, a control grid for the second tube, a second conductive line upon which a similar control voltage proportional to the signal strength is developed as the receiving means is tuned into a station said second conductive line being connected to said control grid in the second tube, the current flow through said combined tubes controlling the energization of the indexing relay.

2,863,045

SEMICONDUCTOR MIXING CIRCUITS

Vernon P. Mathis and Jerome J. Suran, Syracuse, N. Y., assignors to General Electric Company, a corporation of New York

Application April 29, 1955, Serial No. 504,958
5 Claims. (Cl. 250—20)



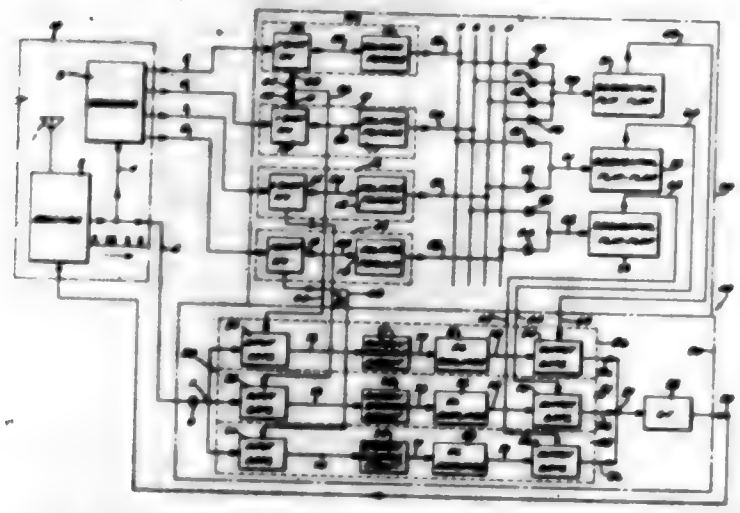
2. In combination, a three electrode semiconductor device having a bar of semiconductor material of one type having first and second ohmic electrodes at spaced points thereon, and a region of opposite conductivity type intermediate said ohmic electrodes forming a single semiconductor junction with said bar, means for applying a biasing potential to said bar connected between said ohmic electrodes, means for applying a first signal between said junction and one of said ohmic electrodes, a second sig-

nal supply source, said second signal being of a frequency other than that of said first signal and means for applying said second signal between said ohmic electrodes, and output means providing the modulation product signal generated by the mixing of said first and said second signals by said semiconductor device.

2,863,046
SEQUENTIAL GATED AUTOMATIC GAIN CONTROL CIRCUIT

Marcus C. Ellason, Packanack Lake, N. J., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application May 26, 1955, Serial No. 511,148
15 Claims. (Cl. 250—20)



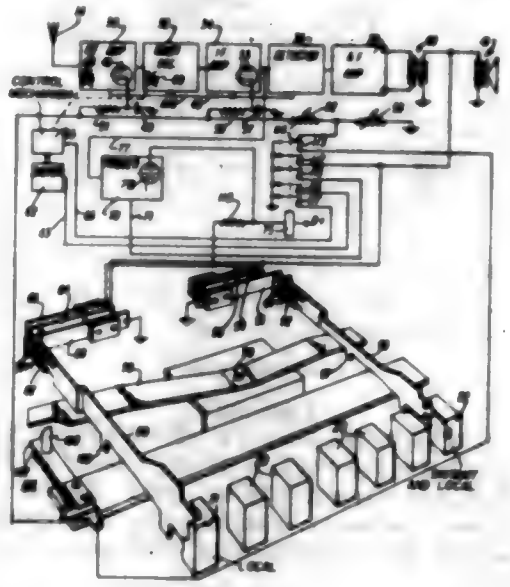
1. A sequential automatic gain control for receiving output signals developed by a radio receiving system subject to N sequentially received carrier transmission signal groups of varying amplitude radiated by N corresponding co-channel transmitter stations, where N is an integer greater than 1 and for developing a biasing voltage for application to the receiving system to maintain substantially constant the amplitude of said output signals; said sequential automatic gain control comprising: first means responsive to the output signals for identifying each of the N sequentially received transmission signal groups and for producing N corresponding pairs of control signals, each of said pairs of control signals being developed during the reception of a corresponding one of said N sequentially received transmission signal groups; second means coupled to said first means and to the receiving system and responsive to the output signals and said N pairs of control signals for producing N corresponding constituent voltages, each of said N constituent voltages being produced when a corresponding one of said signal groups is received; and third means coupled to said second means and responsive to said N constituent voltages for combining said N constituent voltages to produce the desired biasing voltage for application to the receiving system.

2,863,047
RADIO RECEIVER

Robert G. Hartfield, Berwyn, and Alfred J. Clark, Palatine, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application July 22, 1955, Serial No. 523,745
8 Claims. (Cl. 250—20)

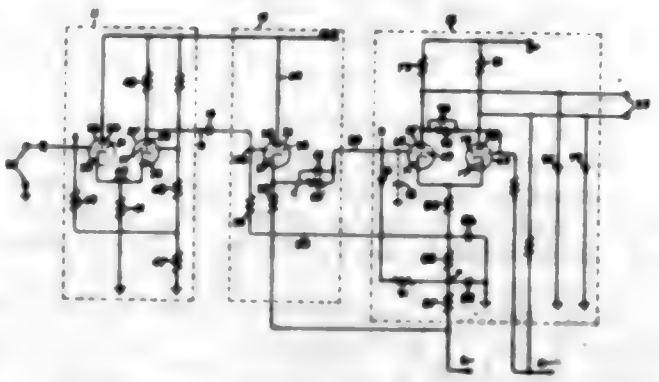
1. In a wave signal receiver having variable tuning apparatus adapted to select stations and having high amplification and sensitivity in response to a control applied thereto and low amplification and sensitivity in the absence of such control, the tuning system of such a receiver for automatically selecting signals of high and low strength and selecting signals of only high strength, including in combination, driving means adapted to operate the tuning apparatus so that the same tunes across a frequency band, a control circuit adapted to deenergize said driving means and stop the tuning apparatus on application of a signal above a predetermined level thereto from the receiver, switching means including first and second separately operative sections each having portions adapted to render said control circuit operative immediately and to energize said driving means on operation of such portions, said second section including a further operative portion interlocked to be released by operation of said first section and having a single pair of contacts adapted to be closed to apply the control to the receiver so that the same has high sensitivity and signals of high and low strength in said frequency band are applied to said control circuit above the predetermined level to deenergize said driving means, and so that only a signal of high strength is applied to said control circuit above said predetermined level when said first section is operated and said second section is released.



2,863,048
CLIPPER-AMPLIFIER AND PULSE GENERATOR CIRCUIT

Charles Earle Theall, Jr., Liverpool, and Curtis D. Cockburn, Baldwinsville, N. Y., assignors to General Electric Company, a corporation of New York

Application July 6, 1953, Serial No. 366,158
3 Claims. (Cl. 250—27)



1. In combination with a voltage discriminator circuit including a pair of electron discharge devices with mutual coupling means for maintaining said discharge devices in opposite states of conduction relative to one another, said mutual coupling means including a common-cathode resistor, driving means for said discriminator including a cathode-follower stage including a control grid, means for varying the bias of said control grid of said cathode-follower stage directly in accordance with the current flowing through said common-cathode resistor of said voltage discriminator circuit, and means for clipping the

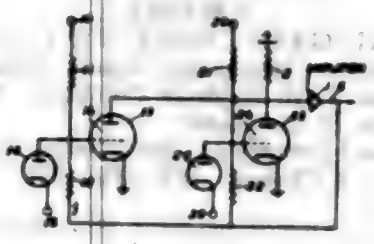
negative swing of a voltage fed from said cathode-follower stage to a control grid of said voltage discriminator circuit at a level varying directly with the magnitude of the current flowing through said common cathode resistor.

2,863,049

ELECTRIC CIRCUIT ARRANGEMENTS FOR REPEATING THE OUTPUT OF A SELECTION OF A PLURALITY OF SOURCE CIRCUITS

David Frederick Lee, Uxbridge, and Eric Lawrence Casling White, Iver, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Application August 31, 1953, Serial No. 377,658
Claims priority, application Great Britain September 17, 1952
2 Claims. (Cl. 250—27)



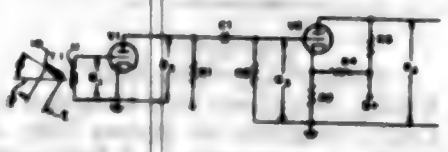
1. An electric circuit arrangement for repeating the output of a selection of a plurality of source circuits, comprising transfer devices one for each source circuit and each having an input electrode and two other electrodes, one of which is an output electrode and the other of which is a common input and output electrode, an impedance connected from each source circuit to the input electrode of the corresponding transfer device, an amplifier common to the transfer devices and having an input circuit and an output circuit, a coupling from one of the said other electrodes of each transfer device to said amplifier input circuit, a feedback impedance connected from the amplifier output circuit to the input electrode of each transfer device, and unilaterally conductive paths one for each transfer device connected at one end to the input electrode of the respective transfer device, whereby selective transfer from said sources to said amplifier output circuit can be produced by the selective application of switching signals to the other ends of said paths to render said paths selectively conducting and non-conducting.

2,863,050

ELECTRONIC SERVO AMPLIFIER

Stanley John Rusk, Hatboro, Pa.

Application April 16, 1954, Serial No. 423,862
2 Claims. (Cl. 250—27)
(Granted under Title 35, U. S. Code (1952), sec. 266)



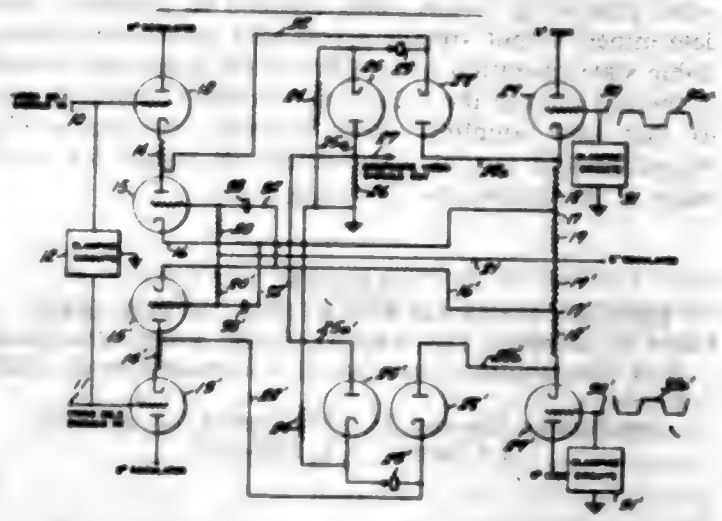
1. An electronic servo amplifier for use with servo mechanisms providing signal amplification and a modified derivative control effective to suppress oscillations of sensitive servo systems comprising an input synchro transformer having a rotor and a stator, a first vacuum tube having a plate, a control electrode and a cathode, said first vacuum tube being designed for relatively undistorted amplification when at a negative bias, the cathode of said triode being grounded, the stator of said input synchro being disposed between the control electrode of said triode and ground, a B+ voltage supply source, a plate load resistor having one end tied to the plate of said triode and having its other end connected to the B+ voltage supply source, a second triode having a plate, a control electrode and a cathode, a resistor disposed between the cathode of said second triode and ground, a plate load resistor having one end connected to the anode of said second triode and having its other end connected to the B+ positive voltage source, a resistor disposed between the cathode of said second triode and the B+ voltage source, differentiating means disposed between the first triode and the second triode, said differentiating means comprising a capacitor having one end connected to the plate of said first triode and having its other end connected to the control electrode of said second triode and a resistor having one end connected to the control electrode of said second triode and having its other end connected to ground, the values of the resistor and the capacitor being such as to provide approximately 90° phase shift of the signal coupled between the first triode and the second triode, the cathode resistor and the resistor disposed between the cathode and the B+ supply serving to provide bias so as to allow positive values of input voltage to be amplified more than negative ones, the second triode having the characteristic of increased gain with increased input amplitude and means to take output between the plate of said second triode and ground.

2,863,051

ELECTRONIC SWITCH

Benson F. Ackerman, Leonia, N. J., and Joseph Geiger, Levittown, N. Y., assignors to Columbia Broadcasting System, Inc., New York, N. Y., a corporation of New York

Application July 14, 1954, Serial No. 443,392
16 Claims. (Cl. 250—27)



1. An electronic switch comprising a first junction adapted to be coupled to a source of signals, means including first unidirectional conducting means and a load impedance for coupling said first junction to a reference potential, a second junction adapted to be coupled to a source of keying signals, means including second unidirectional conducting means for coupling said first junction to said second junction, means including an electron tube for varying the potential of said first junction, and means to couple the second junction to the input circuit of the electron tube to vary its conductivity in accordance with the potential of said second junction.

2,863,052

ELECTRONIC PULSE TIMING SYSTEM

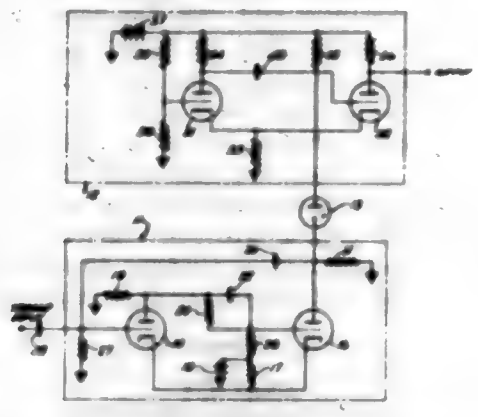
Robert T. Frieer, Huntington Station, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application September 24, 1954, Serial No. 458,236
13 Claims. (Cl. 250—27)

9. An electronic pulse timing system, comprising a first monostable pulse generating means having a quasi-stable operating state of first duration, a second monostable pulse generating means having a quasi-stable oper-

the synchronizing channel control signal; and output splitter circuit comprising a discharge device having a

ating state of second duration appreciably longer than said first duration, said first pulse generating means having an output load, said second pulse generating means having a resistor-capacitor timing circuit for regulating the duration of the quasi-stable operating state of said second pulse generating means, and unidirectional coupling means having one end connected to said load and another end connected to the junction of said resistor and said capacitor of said timing circuit for providing a discharge path for said capacitor during a conductive condition for said coupling means, said first and second



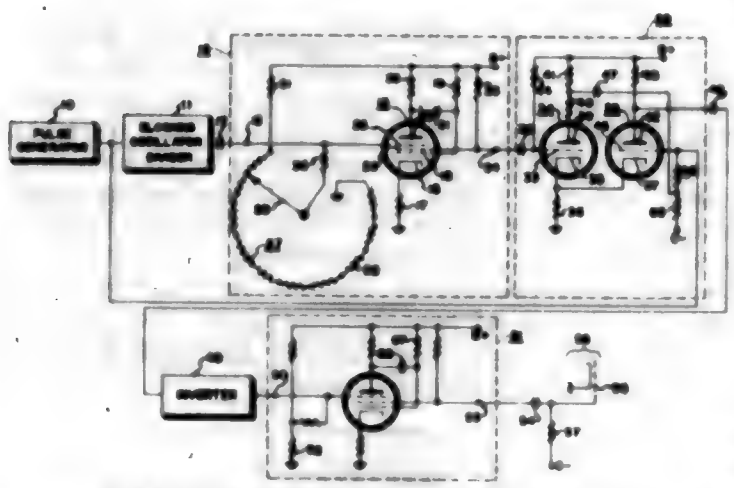
pulse generating means being adapted to provide a predetermined voltage across said unidirectional coupling means for maintaining said coupling means in a nonconductive condition coextensively with the stable operating state of said first pulse generating means, said first pulse generating means being adapted to provide a predetermined output voltage across said load during quasi-stable state operation of said first pulse generating means to thereby change the voltage across said coupling means so that said coupling means becomes conductive for triggering said second pulse generating means for operation in its quasi-stable operating state.

2,863,053

HEIGHT GATE GENERATORS OR THE LIKE

Lloyd C. Downes, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Application October 26, 1954, Serial No. 464,770
2 Claims. (Cl. 250—27)



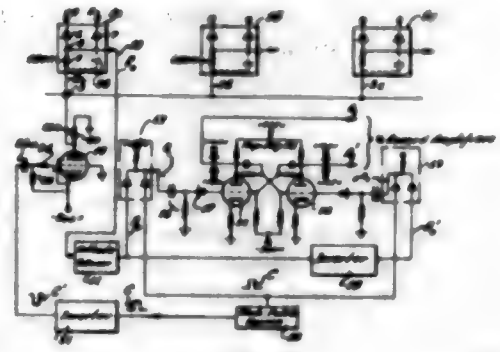
1. A pulse train source, a blocking oscillator divider coupled to said source, a square wave signal producing time base generator coupled to said blocking oscillator divider and having adjustable means for controlling the trailing edge occurrence of said square wave signal from said generator, signal differentiating means coupled to said generator for producing a control pulse having a time of occurrence equivalent to the time-occurrence of said trailing edge of said square wave signal, a cathode-coupled gate circuit coupled to said differentiating means, said cathode-coupled gate circuit having first and second vacuum tubes with anode, cathode, and control electrodes, a resistance-capacitance charging circuit intercoupling said anode of said first vacuum tube with said control electrode of said second vacuum tube, said control electrodes of said first vacuum tube being coupled to said differentiating means, a source of below cut-off negative bias voltage coupled to said control electrode of said second vacuum tube, said pulse train source also being coupled to said control electrode of said second vacuum tube, and an output terminal coupled to said anode of said second vacuum tube.

2,863,054

LOGICAL GATE CORRECTING CIRCUIT

Willis E. Dobbins, Manhattan Beach, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Application February 23, 1955, Serial No. 490,028
8 Claims. (Cl. 250—27)



1. A pulse forming circuit comprising a plurality of logical gating networks each having a load, and an output connected to one end of the load to derive signals from across the load in response to input signals applied to the respective gating network; a common junction to which the other end of each of the gating network loads is connected; a driving circuit connected to said common junction; and a timing signal source providing an input for controlling said driving circuit, whereby said driving circuit periodically provides, in response to signals from said timing source, a supplementary current path for minimizing the effect of distributed capacity associated with said logical gating networks, thereby improving the shape of the signals on the outputs therefrom.

2,863,055

SWEEP GENERATOR

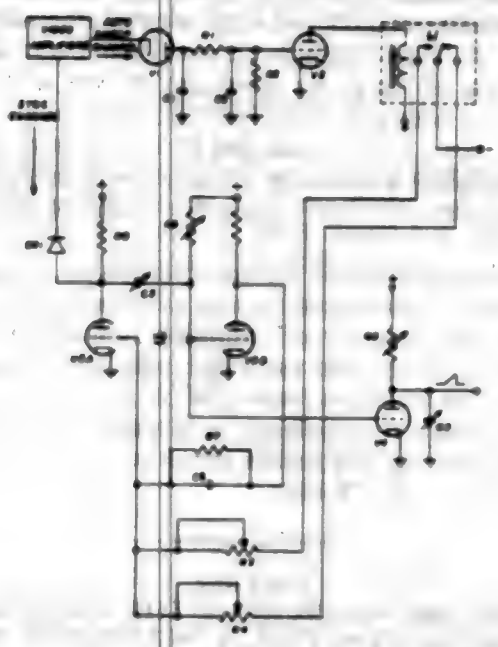
Rudolph L. Kuehn, Pasadena, and Clarence J. Munsey, Whittier, Calif., assignors to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware

Application July 11, 1956, Serial No. 597,238
17 Claims. (Cl. 250—37)

1. A sweep generator, comprising: means forming an auto sweep channel and a synchronizing channel; means for deriving a control signal respectively for each said channels from an input signal to be observed; a gate generator capable of astable and monostable operation connected to said auto sweep channel, said gate generator being responsive in astable operation for one condition of the auto sweep channel control signal and in monostable operation for another condition of the auto sweep channel control signal; means connecting said synchronizing channel to said gate generator, said gate generator being triggerable in monostable operation by

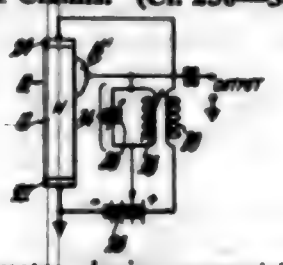
of the carriage, a biased pulley system operably engage- trodes, means for applying an alternating current poten-

the synchronizing channel control signal; and output means operatively responsive to each operation cycle of



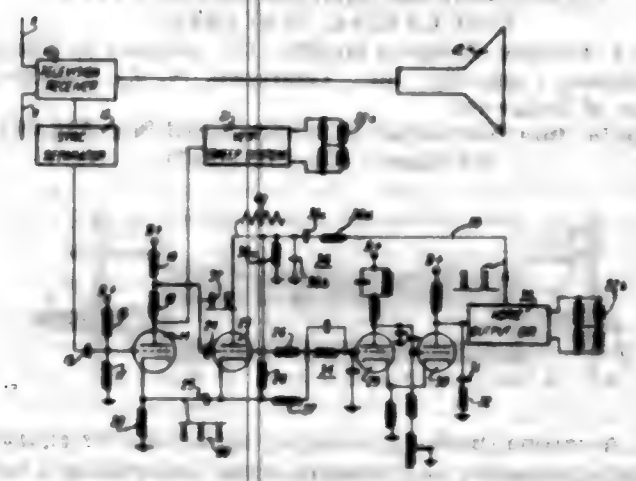
said gate generator for forming a sweep control output signal.

2,863,056
SEMICONDUCTOR DEVICES
Jacques I. Pankove, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application February 1, 1954, Serial No. 407,397
11 Claims. (Cl. 250—36)



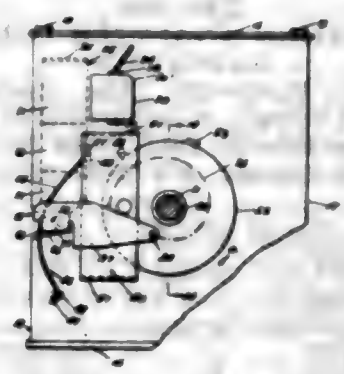
1. A semiconductor device comprising a filamentary body of semiconductor material, a first ohmic contact electrode in contact with one portion of said body, a second ohmic contact electrode in contact with another portion of said body, and a rectifying electrode in contact with said body and axially aligned along a common axis with said second ohmic electrode said common axis being transverse to the longitudinal axis of said body.

2,863,057
TELEVISION RECEIVER
Richard A. Kraft, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application October 10, 1955, Serial No. 539,485
5 Claims. (Cl. 250—36)



1. A system for synchronizing a signal generator with a synchronizing signal including in combination, a phase splitter circuit comprising a discharge device having a first electrode connected through first resistance means to a unidirectional potential source and further having a second electrode connected through second resistance means to a point of reference potential, an electron control valve having input, output and common electrodes, first capacitor means coupling said first electrode of said phase splitter discharge device to said input electrode of said valve, second capacitor means coupling said second electrode of said phase splitter discharge device to said common electrode of said valve, third resistance means interconnecting said input and common electrodes of said valve, fourth resistance means isolated from said point of reference potential connecting said common electrode of said valve to said output electrode thereof, means for deriving an output signal from the signal generator and for applying said output signal to said output electrode of said valve, and means coupled to an intermediate point on said third resistance means for deriving a control voltage for the signal generator.

2,863,058
TELEVISION TUNER MECHANISMS
Edwin P. Thiss, Los Angeles, Calif., assignor to Standard Coil Products Co., Inc., Los Angeles, Calif., a corporation of Illinois
Application July 11, 1955, Serial No. 521,205
6 Claims. (Cl. 250—20)



1. In a television tuner, a housing including a front panel, a metallic tuner control shaft extending through said front panel and terminating just inside said front panel, an insulated drive shaft extending from said control shaft, a fine tuner shaft co-axial with said control shaft and exterior of said front panel, a detent disc mounted on the front exterior of said front panel and having a first hub portion secured to said control shaft and extending to and contiguous with the end of said fine tuner shaft and having a second hub portion connecting said control shaft and drive shaft, a fine tuner disc having a spiral groove and mounted on and rotatable with said fine tuner shaft, a condenser mounted interior of said panel, a lever having one end engaging said spiral groove and operable thereby as said fine tuner disc rotates, said lever being pivotally mounted on said front panel and carrying one plate of said condenser at its other end for movement in accordance with the movement of said fine tuner disc, and spring means including the inherent spring material of said lever for maintaining said lever and condenser plate in predetermined relation.

2,863,059
TUNING CONTROL FOR RADIO
Edward F. Andrews, Bellair Beach, Fla., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 13, 1953, Serial No. 367,675
6 Claims. (Cl. 250—40)

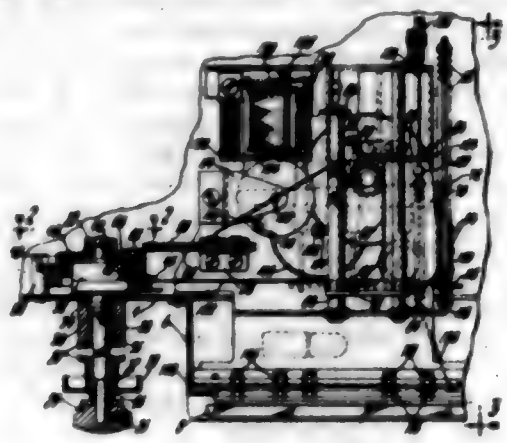
1. In radio apparatus having tuning means therefor, a movable carriage upon which the tuning means is mounted, spring biasing means to bias the carriage toward one limit of travel, locking means to stop the travel

member whereby said tubular member protects said corona

a second diode connected in series between said con-

said generator, signal differentiating means coupled to said generator being triggerable in monostable operation by

of the carriage, a biased pulley system operably engageable with the carriage to reload the spring when it has reached one limit of travel or at intermediate points but permit independent movement of the carriage with respect to the pulley system, rotatable manual means for



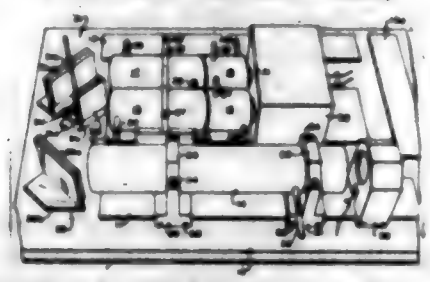
energizing the pulley system said rotatable manual means also being axially movable, and switching means connected to and controlling the locking means operatively associated with said rotatable manual means to be actuated by said axial movement thereof to control initiation of tuning movement.

2,863,060

COMPOSITION ANALYZER UTILIZING RADIATION

Joseph B. Willis, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application June 20, 1955, Serial No. 516,406
11 Claims. (Cl. 250—43.5)



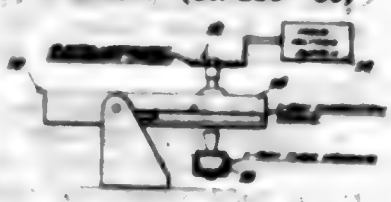
2. In an infrared radiation analyzer, in combination, a source of focused infrared radiation, a first mirror arranged to intercept and reflect part of said infrared radiation, a second mirror arranged to intercept and reflect the rest of said infrared radiation, a pair of infrared radiation detectors arranged to receive infrared radiation reflected from the respective mirrors, means for placing a sample to be analyzed in the path of said infrared radiation, means for sensitizing one of the reflected beams to changes in concentration of a selected component in said sample, and means for effecting relative movement between said mirrors to adjust the relative proportions of infrared radiation present in the reflected beams.

2,863,061

X-RAY FLUOROSCOPIC DEVICE

Georges Destriau, Caudéran, France, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application May 28, 1954, Serial No. 433,185
7 Claims. (Cl. 250—80)



3. A fluoroscopic device comprising, a luminescent material and a dielectric sandwiched between two electrodes, means for applying an alternating current potential between said electrodes, means for irradiating said luminescent material with X-rays, said luminescent material consisting of ZnS and CdS wherein the molar ratio Zn to Cd is from 9 Zn:1 Cd to 3 Zn:7 Cd and activated by one of the group consisting of Mn, and Mn and Ag, said Mn activator being present in amounts of from 0.3×10^{-3} to 1.1×10^{-3} mole per mole of luminescent material, and said Ag activator being present in amounts of from traces to 1.0×10^{-3} mole per mole of Mn activator.

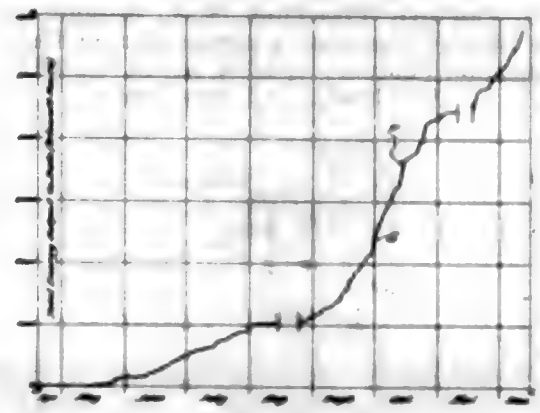
5. An X-ray sensitive device comprising, a screen of dielectric and luminescent means, said luminescent means exhibiting the property of sustained luminescence under excitation by X-rays and sustained enhanced luminescence under the simultaneous influence of an alternating electric field, means for applying an alternating electric field across said screen, and means for simultaneously irradiating said screen with X-rays.

2,863,062

METHOD OF MEASURING THE INTEGRATED ENERGY OUTPUT OF A NEUTRONIC CHAIN REACTOR

William J. Sturm, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application June 10, 1946, Serial No. 675,791
2 Claims. (Cl. 250—83)



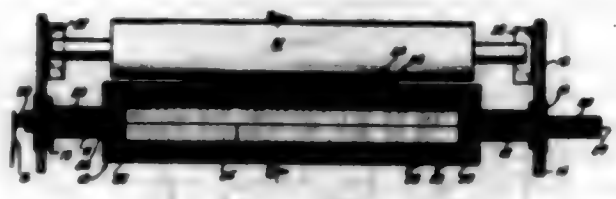
1. In a method of measuring the integrated energy output of a neutronic chain reactor, the steps of successively irradiating calibrated thin foils of an element which is rendered radioactive by exposure to neutron flux for periods of time not greater than one-fifth the mean life of the induced radioactivity, and producing an indication of the radioactivity induced in each foil, each foil being introduced into the reactor immediately upon removal of its predecessor.

2,863,063

CHARGING OF PHOTO-CONDUCTIVE INSULATING MATERIAL

John J. Schulze, Prospect Heights, Ill., assignor to Charles Bruning Company, Inc., Teterboro, N. J., a corporation of Delaware

Application November 21, 1955, Serial No. 548,084
6 Claims. (Cl. 250—217)



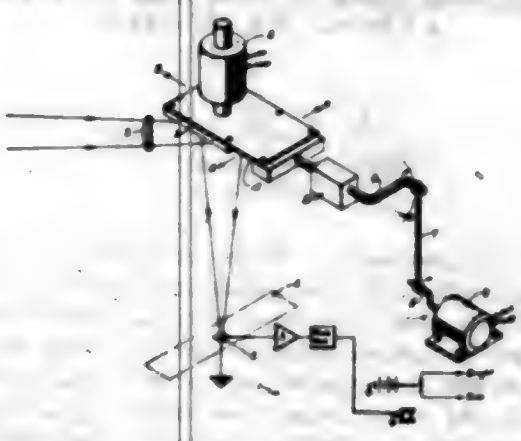
1. A corona discharge charging apparatus for charging a photo-conductive insulating material, comprising a tubular member having a peripheral wall of electrically conductive material, a corona discharge wire in said tubular

to only one of said tuned tank circuits to compensate for

electrodes, means providing a source of direct current

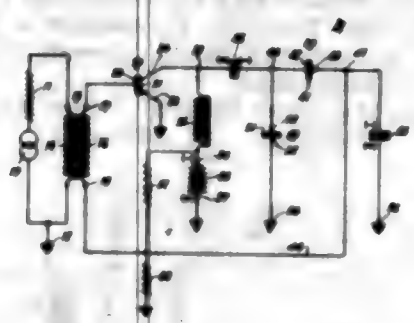
member whereby said tubular member protects said corona wire against accidental injury and means for passing the photo-conductive insulating material in close proximity with the outer periphery of said tubular member to charge said photo-conductive insulating material.

2,863,864
SCANNING TYPE HEADLIGHT DIMMER
Jacob Rabinow, Takoma Park, Md.
Application October 28, 1953, Serial No. 388,801
6 Claims. (Cl. 250—235)



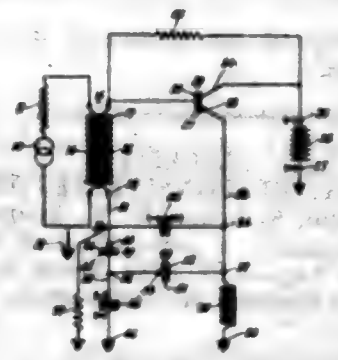
1. A vehicle headlight dimmer comprising optical means to produce an image of a desired portion of a field of view illuminated by the headlights of the vehicle, photoelectric means located in the plane of said image, means for cyclically moving said optical means relative to said photoelectric means so as to move said image relative to said photoelectric means so that successive portions of the entire image are scanned by said photoelectric means, and peak detector means responsive to the output of said photoelectric means to dim said headlights when the light brightness of any portion of the said image exceeds a predetermined value.

2,863,865
REFLEX CIRCUIT SYSTEM
David De Witt, Northport, Harold Sandler, Whitestone, and Roland C. Wittenberg, New Hyde Park, N. Y., assignors to Radio Receptor Company, Inc., Brooklyn, N. Y., a corporation of New York
Application May 28, 1954, Serial No. 433,189
2 Claims. (Cl. 307—88.5)



1. A reflex circuit comprising, in combination, a transistor triode including a semi-conductor block, a base electrode, a collector electrode, and a grounded emitter electrode; a source of direct current having a grounded positive terminal; a direct current responsive load connected in series between the negative terminal of said source and said collector electrode; coupling means operable to couple an alternating current input signal to said base electrode to produce an amplified alternating current signal potential across said load; a rectifying and voltage doubling network including a first condenser connected to said collector electrode, a diode having a grounded negativet terminal, connected in charging relation with said first condenser, a grounded condenser, and a second diode connected in series between said condensers in charging relation with said grounded condenser; and means connecting the junction of said second diode and said grounded condenser in circuit relation with said base electrode for amplification of the rectified direct current, by said transistor triode operating as a grounded emitter amplification stage, to provide an operating current through said load.

2,863,866
REFLEX CIRCUIT SYSTEM
David De Witt, Northport, Harold Sandler, Whitestone, and Roland C. Wittenberg, New Hyde Park, N. Y., assignors to Radio Receptor Company, Inc., Brooklyn, N. Y., a corporation of New York
Application May 28, 1954, Serial No. 433,190
2 Claims. (Cl. 307—88.5)



1. A reflex circuit comprising, in combination, a transistor triode including a semi-conductor block, a base electrode, a collector electrode, and an emitter electrode connected to ground; a grounded source of direct current connected in series circuit relation between said collector electrode and its ground; a direct current responsive load connected in series between said emitter electrode and ground; grounded coupling means operable to couple an alternating current input signal to said base electrode for amplification by said transistor triode, operating as a grounded emitter base input amplification stage, to provide an amplified alternating current potential across said load; and a rectifying and voltage doubling network including a first condenser connected in series between said coupling means and ground, a first diode connected in charging relation between said first condenser and said load, a second condenser connected between said emitter electrode and said coupling means, and a second diode connected in charging relation between said second condenser and the junction between said first condenser and said first diode, to deliver a direct current to said base electrode through said coupling means for amplification by said transistor triode, operating as a grounded collector amplification stage, to provide a direct operating current through said load.

2,863,867
ALTERNATED CONTROL SYSTEM WITH TEMPERATURE COMPENSATED FREQUENCY DISCRIMINATOR
Kurt Seidner, Cleveland, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application August 24, 1954, Serial No. 451,928
6 Claims. (Cl. 307—88.5)

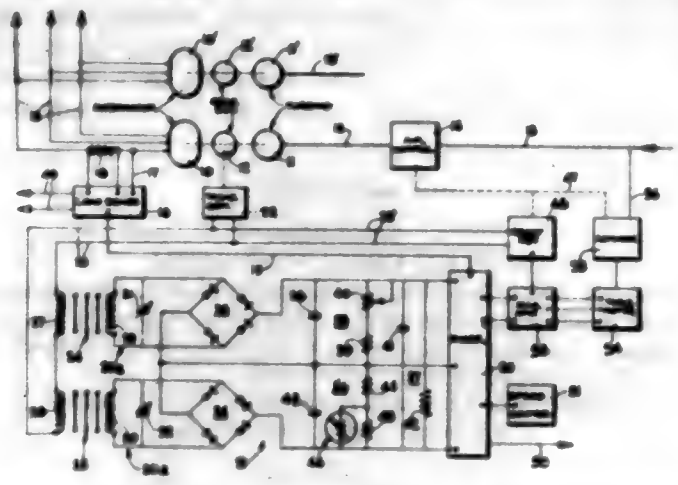
1. In combination in a frequency discriminator network wherein a pair of tuned tank circuits are respectively tuned to frequencies substantially equally and oppositely different from a preselected null frequency and wherein elements of each of said tuned tank circuits vary with temperature changes, rectifier means connected across said tank circuits to derive a direct current output signal from said tank circuits, circuit element means connected

2,863,872
PULSE GENERATOR

necting said auxiliary relays to said stationary contacts

material and a dielectric sandwiched between two electrodes, means providing a source of direct current bias connected in series with said two electrodes across said unilaterally conducting device, and pulse signal input means connected with said third electrode for applying pulse signals thereto.

to only one of said tuned tank circuits to compensate for temperature change variations and to maintain the pre-



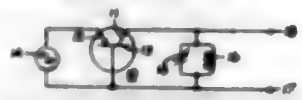
selected frequency of the frequency discriminator substantially constant.

2,863,068

SIGNAL RESPONSIVE NETWORK

Sorab K. Ghandhi, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York

Application August 27, 1954, Serial No. 452,667
2 Claims. (Cl. 307—88.5)



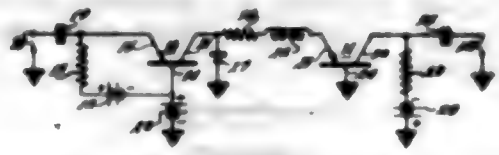
2. In combination, a semiconductor device having input and output electrodes associated with a common base electrode, signal means supplying an input signal of periodically varying energy and having output terminal connections directly connected between said input electrode and said common electrode, said connections providing the sole means for applying power to said transistor, an oscillatory network comprising a capacitor and inductor connected in parallel, said network being directly connected between said output and said common electrodes, and means for connecting a load device between said base and collector electrodes.

2,863,069

TRANSISTOR SWEEP CIRCUIT

Matthew J. Campanella, Hammonton, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application November 26, 1954, Serial No. 471,307
17 Claims. (Cl. 307—88.5)



1. A sweep wave signal generating circuit responsive to signal pulses comprising in combination, a first semiconductor device having an input electrode and an output electrode, a control circuit connected with said input electrode, a signal output circuit connected with said output electrode, said device providing an output current which is proportional to current flow in said control circuit, an inductor and a diode connected in series arrangement in said control circuit, said diode being poled to provide a high impedance to current flow in a predetermined direction in said control circuit, a second semiconductor device including three electrodes and having an impedance between two of said three electrodes which is a function of current applied to the third of said three

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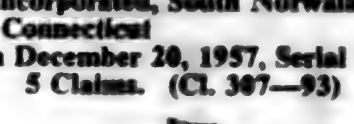
2,863,070

DOUBLE-BASE DIODE GATED AMPLIFIER

Jerome J. Suran and Vernon P. Mathis, Syracuse, N. Y., assignors to General Electric Company, a corporation of New York

Application March 21, 1956, Serial No. 572,985
6 Claims. (Cl. 307—88.5)



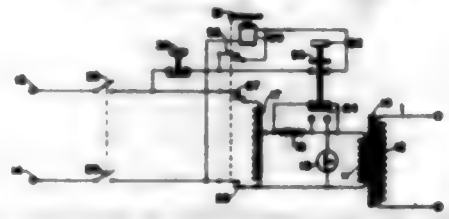
1. In combination, a three terminal semiconductor device having a body of semiconductor material, a pair of spaced ohmic connections on said body, one connection serving as an output terminal, and the other as a common terminal, and a rectifying junction placed intermediately of said ohmic connections providing an input terminal, said device exhibiting a voltage-current input characteristic which rises to a peak, then descends to a minimum in a valley region, and then rises slowly, said device having current gain in said valley region, biasing means for establishing two points of stable operation for said device, said first point being in said first rising region, and said second point lying in said valley region, gating means coupled between said input terminal and said common terminal supplying a pulse of a first polarity for transferring said device from said first point to said second point of operation and a pulse of an opposite polarity for transferring said device from said second point to said first point of operation a source of input signals coupled between said input and common terminals, supplying signals which are ineffective to transfer said device from one of said points to the other, and output means coupled to said semiconductor device adapted to supply a modified input signal as developed in said device during the time said device is in said second point of operation.

2,863,071

VARIABLE RESISTANCE STARTING CIRCUIT

Victor Wenk, New York, N. Y., assignor to Sorensen & Company, Incorporated, South Norwalk, Conn., a corporation of Connecticut

Application December 20, 1957, Serial No. 704,118
5 Claims. (Cl. 307—93)



2. A variable resistance starting circuit for reducing transient currents in the primary winding of a high voltage transformer comprising; a metal filament connected in parallel with said primary winding, a first switching means for connecting both the primary winding and the filament to a source of alternating current power in series with a current limiting resistor, said power adapted to heat the filament to a temperature of more than 500 degrees centigrade, said filament having a cold resistance substantially less than its resistance when passing steady current from said power source, and a second switching means which disconnects said filament when a steady current is flowing.

2,863,072
PULSE GENERATOR

Matthew Arnold Alexander, Los Angeles, Calif., assignor to Telemeter Magnetics, Inc., Los Angeles, Calif., a corporation of New York

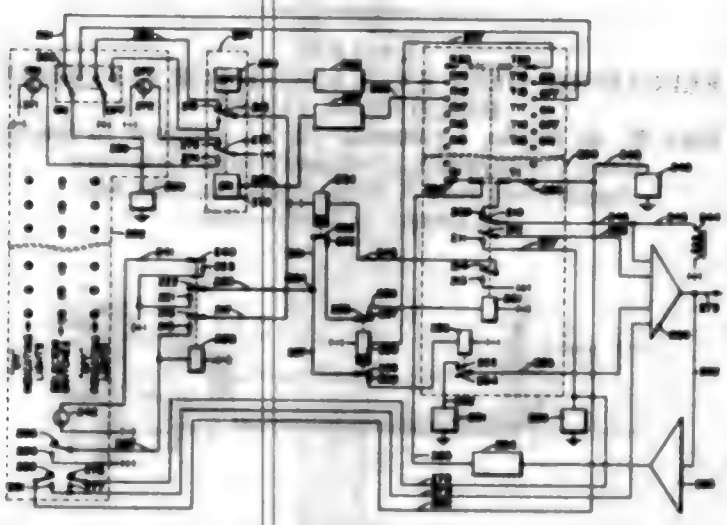
Application August 27, 1956, Serial No. 606,256
4 Claims. (Cl. 307—106)

1. An improved pulse-generating network comprising a first delay network having input and output ends, a second delay network substantially identical to said first delay network, switch means coupling said first delay network output to said second delay network input, an impedance having one end connected to the output of said second delay network, said impedance having substantially the same value as said first and second delay networks, means to apply voltage to the input of said first delay network and the other end of said impedance, and means to derive an output pulse from the input to said second delay network.

2,863,073
REMOTE SUPERVISORY CONTROL SYSTEM

Angus W. Blow, Adolph A. Baker, and George H. Clark, Rochester, N. Y., assignors to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application July 26, 1957, Serial No. 674,452
20 Claims. (Cl. 307—140)

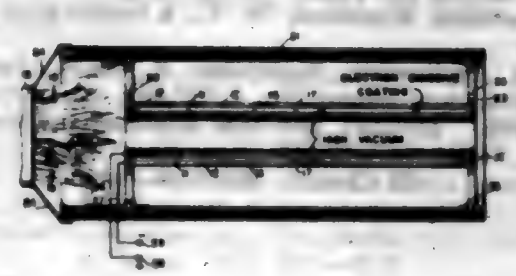


20. A remote supervisory control system comprising, a controlling station, auxiliary relays at said controlling station, a controlled station, working devices at said controlled station, a first step switch having a plurality of stationary contacts and first and second movable contacts each in cooperative relation with certain of said stationary contacts at said controlling station, a second step switch having a plurality of stationary contacts and first and second movable contacts each in cooperative relation with certain of said stationary contacts at said controlled station, means for electrically interconnecting said controlling and controlled stations, means for connecting said movable contacts of said first and second step switches to each other through said interconnecting means, means for operating said working devices, means for operating said auxiliary relays, means for selectively connecting said working devices operating means to said stationary contacts which are in cooperative relation with said second movable contact of said first step switch, means for connecting said auxiliary relays to said stationary contacts which are in cooperative relation with said first movable contact of said first step switch, means for connecting said working devices to said stationary contacts which are in cooperative relation with said second movable contact of said second step switch, means for connecting said auxiliary relays operating means to said stationary contacts which are in cooperative relation with said first movable contact of said second step switch, means for simultaneously stepping said first and second step switches through a stepping sequence, means for restraining said movable contacts of said step switches from returning to their respective start positions until the completion of said stepping sequence, means at said controlling station for operating said restraining means at said controlled station, and means for rendering said working devices operating means ineffective unless the movable contacts of the respective step switches are at their respective start positions with the beginning of each step sequence.

2,863,074
THERMO-ELECTRIC GENERATOR

David Malcolm Johnstone, London, England

Application August 26, 1955, Serial No. 530,761
16 Claims. (Cl. 310—4)



1. An electric generator, comprising: mutually confronting anode and cathode structures, the surface of said anode structure being of a conductive metal and the surface of said cathode structure being of another material having a relatively very high thermionic emission property at elevated temperatures; means for sealing the space between said anode and cathode structures and for maintaining said space substantially free from substances retarding electron propagation thereacross; means for continuously heating both of said anode and cathode structures to elevated temperatures while maintaining said anode surface at approximately the same temperature as that of said cathode surface; and circuit connections to said anode and cathode structures for utilizing the electromotive force developed therebetween at said elevated temperatures as a result of the net electron flow from said highly emissive surface of said cathode structure to said anode structure.

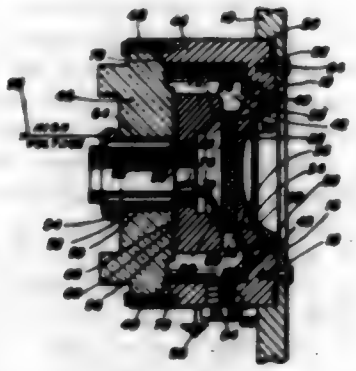
2,863,075
ULTRASONIC TRANSDUCER

Francis J. Fry, Champaign, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application December 15, 1953, Serial No. 398,441
5 Claims. (Cl. 310—8.1)

1. In an ultrasonic transducer, a pair of outer and inner annular clamping members having mutually facing outer and inner annular clamping gaskets, a piezoelectric disc crystal, film electrodes plated on the faces of the crystal and marginally confronting the respective gaskets, means clamping the members toward each other to securely support the crystal marginally, a retainer ring, a lens inward of the crystal and marginally disposed between the ring and the inner clamping member, a good-sound-transmitting liquid film separating the lens from the crystal, an annular gasket between the ring and the inner juncture

of the lens with the inner clamping member, and means including the ring for clamping the last-mentioned gasket

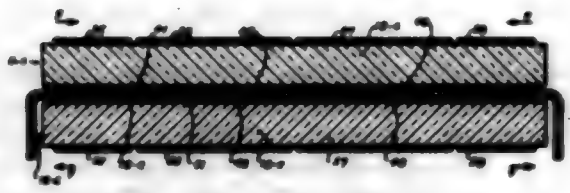


against the juncture and clamping the lens between the inner clamping member and the ring.

2,863,076
DIELECTROSTRICTIVE SIGNAL AND ENERGY TRANSDUCERS

Helman W. Koren, Bronxville, N. Y., and Joseph W. Crownover, La Jolla, Calif., assignors to Sonotone Corporation, Elmsford, N. Y., a corporation of New York

Original application September 9, 1947, Serial No. 772,934, now Patent No. 2,769,867, dated November 6, 1956. Divided and this application October 19, 1956, Serial No. 617,158
18 Claims. (Cl. 310—8.6)



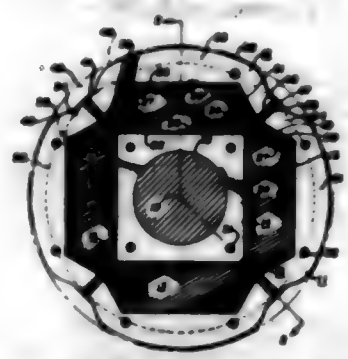
13. In a signal transducer operating with a predetermined mechanical mode for transducing mechanical signals into electric signals and vice versa, a transducing element including a solid polycrystalline body having at least one major bounding surface and in which a large number of random-oriented minute crystal particles are bonded together, which particles may be rendered piezoelectric in a common selected direction, said body having permanent piezoelectric properties imparted by temporary application of electric polarization to said body, said body comprising a plurality of elemental body portions along said surface, the directions of the piezoelectric axis in alternate ones of said body portions being substantially identical relatively to each other, and the direction of the piezoelectric axis in adjacent body portions being substantially opposite relatively to each other for transducing with distinct electric signals in the different body portions.

16. The process of producing a piezoelectric effect in a solid polycrystalline body having at least one major bounding surface and in which individual random-oriented crystals are bonded together, which crystals may be rendered piezoelectric in a common selected direction, said process including producing a unidirectional electrostatic polarizing field the direction of which varies at a non-uniform rate from body portion to body portion along at least one major surface of said body, and thereby imparting to said portions piezoelectric properties varying at such non-uniform rate, and maintaining said field for a substantial period of time at least approaching that necessary for saturation of said effect.

2,863,077
DYNAMOELECTRIC FIELD STRUCTURE

Wayne J. Morrill, Garrett, Ind.

Application May 2, 1956, Serial No. 582,277
14 Claims. (Cl. 310—156)

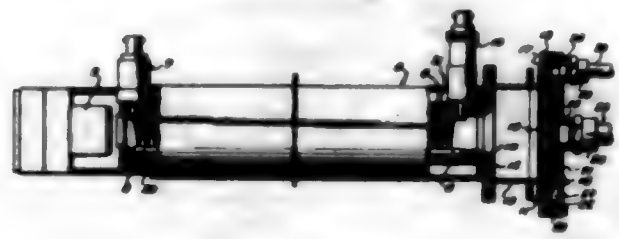


1. A permanent magnet field structure for a dynamoelectric machine comprising, a stack of annular ring laminations having an axis and an unbroken outer surface, each of said ring laminations having four projecting pole face portions integrally joined by yoke portions recessed inwardly from a first cylindrical arc concentric with said axis and defining the outer surface of said pole face portions, an inner surface on each pole face portion, permanent magnet means in contact with said inner surfaces to establish said pole face portions as magnetic poles, a surface defining a narrow open slot deeper than the width thereof extending from the inside toward the outside of the ring centrally in each yoke portion, an integral magnetic bridge at the bottom of each said slot along the outermost periphery of said yoke portion, and a short circuiting winding for each pole face portion including conductors within the space inboard of said yoke portions.

2,863,078
ELECTRODE HEAT EXCHANGER FOR ELECTRON DISCHARGE TUBES

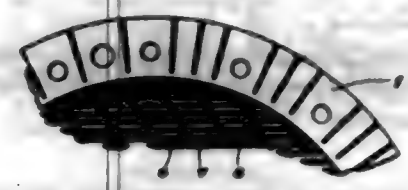
John R. de Prado, Lynbrook, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application July 7, 1955, Serial No. 520,445
3 Claims. (Cl. 313—24)



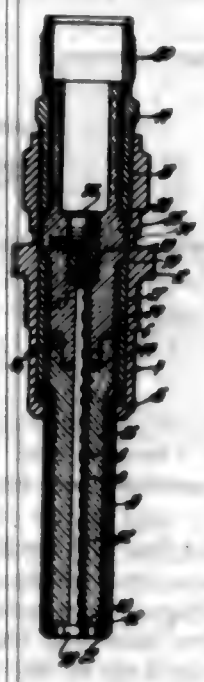
1. An electron discharge tube having an electrode element forming a body portion of said tube and adapted to receive the bulk of electrons discharged in said tube on a planar surface of said electrode element exposed to the interior of said tube, said electrode element having an outer surface provided with a multitude of outwardly-projecting spines, a fluid-tight container equidistant from and closely fitted over the outer ends of substantially all of said spines and secured to said tube, first conduit means for introducing fluid into said container to disperse in the interstices among said spines, said first conduit means being disposed adjacent a portion of said outer surface that is equidistant from the spined extremities of said outer surface, said container including a manifold-like chamber surrounding said extremities for receiving fluid that has passed among said spines, and second conduit means for removing fluid from said chamber whereby fluid flow paths of equal resistance and high turbulence are provided.

2,863,079
MASKING DEVICES FOR COLOR TELEVISION SCREEN OR THE LIKE
Warren J. Oestreicher, Flushing, N. Y., assignor to Kendon Electronics, Inc., a corporation of New York
Application May 27, 1955, Serial No. 511,660
4 Claims. (Cl. 313—85)



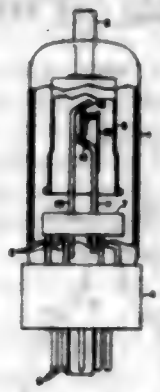
3. In a color television tube, a multi-element color screen and in alignment therewith a mask having a number of parallel longitudinal arrays of longitudinal slots, adjacent arrays being staggered with respect to each other, and the small sides of the slots being parallel to each other and forming an angle other than of about 20° with the long sides of the slots, which are also parallel, as to form substantially uninterrupted straight lines, and means for mounting said mask along its periphery, with slots extending into a direction substantially parallel to the direction of horizontal scanning.

2,863,080
SPARK PLUG AND METHOD FOR MAKING SAME
Wilfred A. Bychinsky, Ann Arbor, and Michael Skunda, Davison, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 15, 1955, Serial No. 501,633
8 Claims. (Cl. 313—137)



1. A spark plug comprising an elongated tubular metal shell provided with a ground electrode at one end thereof, an elongated tubular ceramic insulator secured within and enclosed along its entire length by said shell, said insulator comprising two elongated sections of substantially the same ceramic composition, one of said sections having a recess at one end thereof defined by a generally cylindrical wall and the other of said sections having a cylindrical mating surface extending into said recess and permanently bonded to said wall to thereby form a joint between said sections, said joint providing substantial alignment of the extremities of said insulator with the extremities of said shell, and a centerwire fixedly secured within said insulator sections having an end portion in spaced relation to said ground electrode to form a spark gap therewith.

2,863,081
ELECTRIC DISCHARGE DEVICE STRUCTURE
William E. Polster, Evanston, Ind., assignor to General Electric Company, a corporation of New York
Application November 21, 1955, Serial No. 548,128
9 Claims. (Cl. 313—238)



1. An electric discharge device comprising an envelope, a hollow electrode in said envelope, a filamentary electrode in said envelope and disposed in said hollow electrode, and a high-refractory metal element supported in said hollow electrode and extending on only one side of said filamentary electrode in substantially parallel spaced relation to and for approximately the full length of said filamentary electrode.

2,863,082
ELECTRIC INCANDESCENT LAMP
Frederick S. Lamb, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Application September 24, 1956, Serial No. 611,577
4 Claims. (Cl. 313—278)

1. An electric incandescent lamp comprising an elongated sealed bulb, a filament extending longitudinally of said bulb, and support means for said filament comprising means to maintain longitudinal tension on the filament and to minimize lateral vibration and including a flexible spring member bent to arcuate form and located in a plane substantially transverse to the filament and having its ends secured fixedly to portions of said supporting means, and means fixedly connecting the spring member at approximately its midpoint to one end of the filament whereby to dampen vibration of said filament in directions transversely of its length while allowing longitudinal expansion and contraction of the filament.

2,863,083
X-RAY GENERATOR TUBES
Antoine Schram, Montgeron, France, assignor to Compagnie Generale de Radiologie, Paris, France, a corporation of France
Application March 25, 1957, Serial No. 648,383
Claims priority, application France March 30, 1956
16 Claims. (Cl. 313—330)

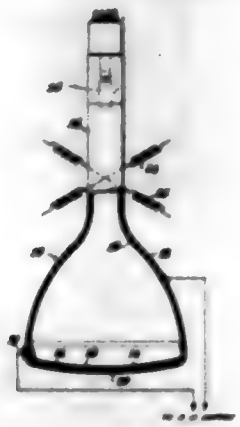
6. An anode for an X-ray generator tube consisting of a core of a refractory material, a layer of tungsten covering at least a part of the surface of the refractory material and a layer of rhenium over said layer of tungsten and covering at least the focal area of the anode, to a depth of at least ten microns.

by said system and from secondary emission of said layer, axis, a plane metallic plate in contact with one of said

2,863,084
CATHODE-RAY DEVICE

Edward G. F. Arnott, Upper Montclair, and Henry F. Ivey, Bloomfield, N. J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 27, 1955, Serial No. 518,321
5 Claims. (Cl. 315—1)

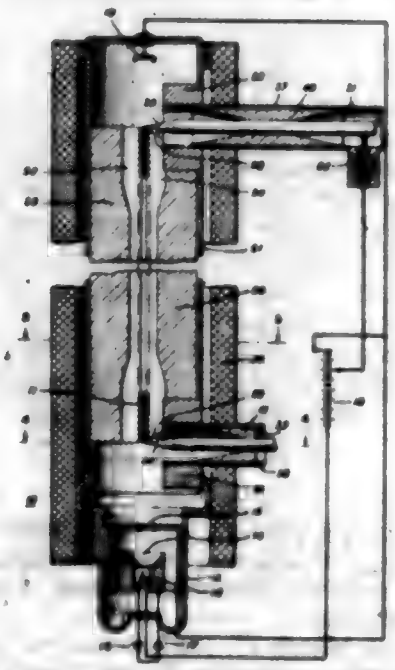


1. A cathode-ray device comprising, a screen comprising finely divided phosphor material of one of the group consisting of zinc sulfide and zinc-cadmium sulfide and activated by one of the group consisting of manganese and manganese-silver, means for applying an alternating electric field across said phosphor screen, and means for simultaneously bombarding said phosphor screen with cathode rays.

2,863,085
TRAVELING WAVE TUBE STRUCTURE

Sloan D. Robertson, Fair Haven, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 11, 1952, Serial No. 325,304
6 Claims. (Cl. 315—3.5)

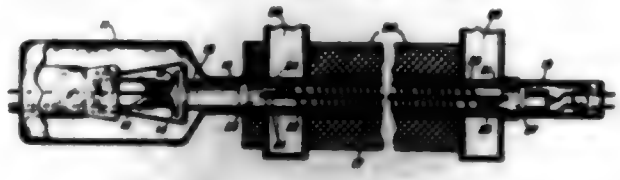


1. In combination, electrode means for forming an electron stream, a helical slow wave transmission structure paralleling said electron stream, elongated slotted dielectric elements supporting said structure, the slots being of varying depth and being relatively shallower near the center than at the ends of said transmission structure, said dielectric elements together forming a supporting structure having a cruciform central aperture, with the helix supported on the inwardly projecting edges of the dielectric members, and a coating of high frequency loss material located on the surfaces of the slots farthest removed from the center of said aperture.

2,863,086
TRAVELING WAVE TUBE

John S. Cook, New Providence, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application February 9, 1954, Serial No. 409,043
5 Claims. (Cl. 315—3.5)

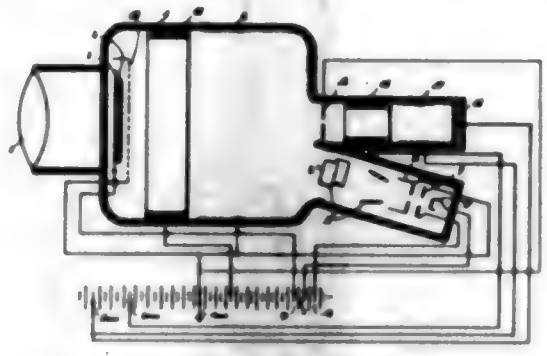


4. A traveling wave tube comprising means for forming an electron beam, means for establishing a uniform magnetic field parallel to and in the direction of flow of said beam for minimizing transverse components in said beam, means for propagating an electromagnetic wave in coupling proximity with said electron beam, said last mentioned means including a helical conductor of magnetic material and having a coercive force less than .2 oersted positioned in said magnetic field and surrounding said electron beam, said helical conductor further comprising a material of high conductivity selectively distributed therealong.

2,863,087
PHOTO-CONDUCTIVE ELECTRON DISCHARGE TUBE

Marcel Barbier, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, Paris, France

Application May 19, 1953, Serial No. 356,067
Claims priority, application France May 27, 1952
6 Claims. (Cl. 315—11)



1. An electron discharge tube comprising, in combination, a vacuum-tight envelope and, inside the envelope: a semi-transparent metallic blade having a first free face and a second face at least partly covered with a photo-conducting layer, said first and second faces being parallel; an electron optical system directed toward said second face and including at least an emissive cathode, an electron gun having at least one anode, said gun having its axis inclined to the axis of the tube and means for deflecting the electron beam emitted by the cathode and for defining a center of deflection thereby to scan at least part of said second face; means for applying to the anodes of said gun substantial positive potentials relatively to said cathode; means for applying to said blade a low positive potential relatively to said cathode; a planar close-meshed grid of conducting material in the immediate vicinity of said photo-conducting layer and disposed parallel thereto; means for applying to said grid a potential substantially equal to that of one of the anodes of said gun; means for projecting an optical image through said blade onto said layer; an electron lens between said blade and said gun, said lens being coaxial with said blade and defining a focal plane containing said center of deflection; and means for collecting at least one of the two streams of electrons resulting respectively from reflection off said second face of the electron beam emitted

2,863,091
FLAT TRI-COLOR KINESCOPE

2,863,093

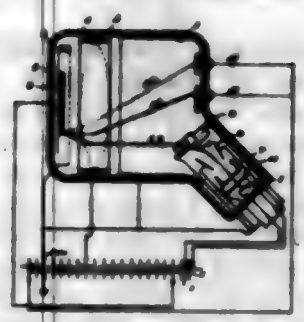
by said system and from secondary emission of said layer under the impact of said beam and for generating a reading signal.

2,863,088

ELECTRON SIGNAL STORAGE TUBES

Marcel Barbier, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France

Application April 6, 1953, Serial No. 347,019
Claims priority, application France April 25, 1952
8 Claims. (Cl. 315—12)



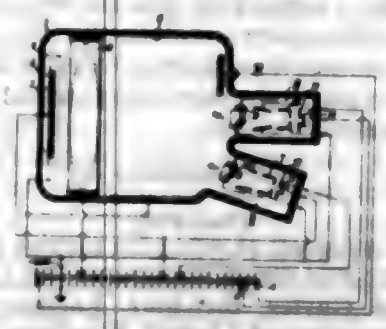
1. An electron signal apparatus adapted to store a series of electric signals by accumulation of electric charges at discrete points on a dielectric target plate comprising, in combination in a vacuum-tight envelope, a planar dielectric target plate in contact over at least a part of one of its sides with a conducting back plate parallel thereto, an electron gun system having a cathode, the axis of the gun being inclined in relation to the axis of the target plate, and said gun being pointed to project a beam of primary electrons towards the side of the target plate remote from the back plate, means for deflecting the beam of primary electrons, a planar metal grid electrode situated on the gun side of said target plate and parallel thereto, means outside said envelope for maintaining said grid at a high potential relative to the cathode and to the back plate, an electronic lens situated between said grid electrode and said electron gun, said lens having its optical axis in the axis of the target plate, at least one planar collector electrode within said envelope outside the axis of the target plate and in the focal plane of the lens for the collection of reflected primary electrons, means for maintaining said collector electrode at a higher potential than the neighboring walls of said envelope and another planar electrode in said envelope intersecting the axis of the target plate in a position wherein secondary emission electrons from the target may be focused thereon by said lens.

2,863,089

ELECTRON MEMORY TUBE

Marcel Barbier, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, Paris, France

Application April 24, 1953, Serial No. 350,869
Claims priority, application France May 10, 1952
9 Claims. (Cl. 315—12)



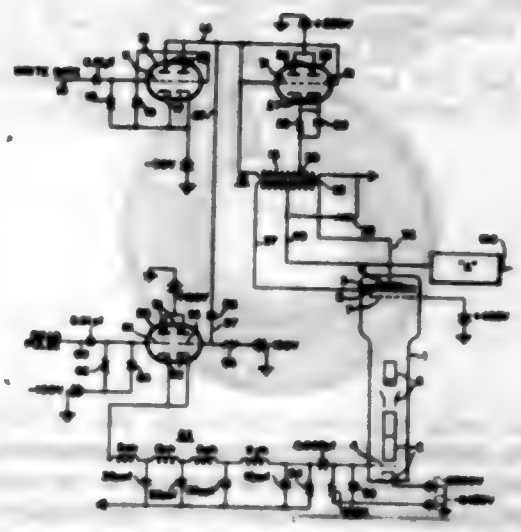
1. Electron memory storage apparatus including a memory tube having a vacuum tight enclosure and comprising, inside the enclosure: a plane laminar element of dielectric material having two parallel faces and an axis, a plane metallic plate in contact with one of said faces and the other face being free; a first electron optical system including an emissive cathode, a control grid and an electron gun, the axis of said system being inclined to the axis of said laminar element, and said system being directed toward said free face; means for maintaining at substantially the same fixed potential both the cathode of said system and said metallic plate; a second electron optical system comprising electron emitting means including a cathode, having its axis coincident with the axis of said laminar element, said emitting means being directed toward said free face; means for maintaining the cathode of said emitting means at a fixed potential below that of said plate, said last named means being so dimensioned that the bombardment of said laminar element by electrons emitted from said emitting means gives rise to a secondary emission rate having a value greater than unity; means for deflecting the electron beam emitted from each said system and for defining a center of deflection for each said beam about which said beam scans said laminar element; a plane metal screen in close proximity to said free face of said laminar element; means for raising the potential of said metal screen to a high positive value relatively to the potential of said plate; an electron lens occupying an intermediate position between said metal screen and said electron optical systems, said lens being co-axial with said plate and defining a focal plane containing the respective centers of said systems; means for raising said lens to a potential slightly below that of said metal screen relatively to said plate; a collector electrode spaced from the axis of said lens and positioned in the focal plane thereof; and means for applying to said collector electrode substantially the same potential as said metal screen.

2,863,090

R. F. MODULATION SYSTEM FOR BARRIER GRID STORAGE TUBES

Donald R. Young, Ralph B. De Lano, Jr., and Gerald L. Shultz, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application May 26, 1953, Serial No. 357,542
5 Claims. (Cl. 315—12)



1. A cathode ray tube storage system comprising in combination, an electrostatic memory tube having an electron gun, beam control grid, dielectric target and capacitatively coupled backing plate, means for modulating said backing plate including an R. F. oscillator and coupling transformer, means coupling said oscillator and control grid so as to modulate the cathode beam in synchronism with modulation of said backing plate, a signal amplifier circuit and means connecting said signal amplifier circuit to said coupling transformer.

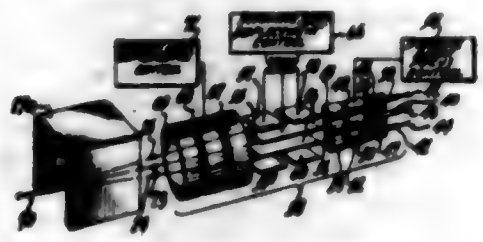
made of electrically insulating material and detachably

2,863,097

removed from the center of said aperture.

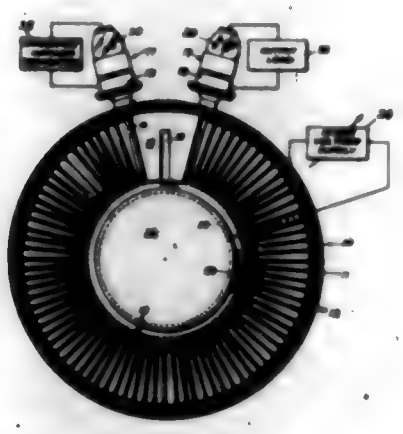
reflection off said second face of the electron beam emitted

2,863,091
FLAT TRI-COLOR KINESCOPES
David W. Epstein, Princeton, N. J., and Edward G. Ramberg, Upper Southampton Township, Bucks, County, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Application March 7, 1956, Serial No. 570,074
11 Claims. (Cl. 315—13)



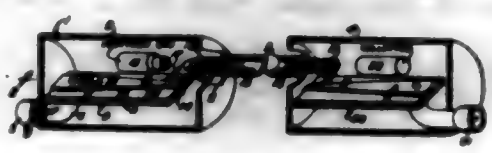
1. An electron beam tube comprising an electron responsive light transducing screen, means to develop a tri-section electron scanning beam with the sections variably displaceable with respect to an axis of symmetry, means to focus the beam sections, means to control the relative displacements of said beam sections with respect to said axis, means to converge the displaced sections to a common cross-over point which is movable in accordance with the regions of the screen being scanned by said beam sections, means to bend the initial part of the focused beams with the point of bending being signal controllable, which point is movable in a scanning direction substantially parallel to one dimension of the screen, means to bend a final section of the focused beams in a direction substantially transverse to the screen, and means to move the second mentioned bending point in a scanning direction substantially perpendicular to the first mentioned dimension of the screen.

2,863,092
MAGNETRON OSCILLATORS
Edward C. Dench, Needham, Mass., assignor to Raytheon Manufacturing Company, Newton, Mass., a corporation of Delaware
Application August 5, 1953, Serial No. 372,522
3 Claims. (Cl. 315—39.3)



1. An electron discharge oscillation generating device comprising a signal wave transmission network having first and second ends, means for electrically isolating said ends from each other at high frequencies, a source of electrons spaced from and substantially coextensive with said network, said means for isolating being spaced from said source substantially the same distance as said network, means for directing a stream of electrons from said source along paths adjacent said network, signal output means coupled to said device adjacent the end thereof away from which electrons move along said paths, and means coupled to said network adjacent the end toward which electrons move along said paths for absorbing incident energy over a wide range of frequencies.

2,863,093
TRAVELING WAVE ELECTRON DISCHARGE DEVICES
Maurice Ardiff, Clifton, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application September 4, 1953, Serial No. 378,455
18 Claims. (Cl. 315—39.3)



1. In a traveling wave electron discharge device having a helical line of relatively high characteristic impedance and a radio frequency line of relatively low characteristic impedance, a transition section coupling said low impedance line to said helical line, comprising first and second conductors, a layer of dielectric material disposed therebetween to maintain said conductors in closely spaced substantially parallel relation, said first conductor having a planar surface over which said second conductor extends, said second conductor having a tapered portion to increase the impedance of said section from a low impedance at one end thereof to a high impedance at the other end thereof, means coupling said helical line to said second conductor at an impedance point matching substantially the impedance of the helical line, means coupling said low impedance line to said transition section at an impedance point matching substantially the impedance of said low impedance line, and susceptance means disposed on said second conductor and extending beyond a peripheral edge thereof a given distance from each of said coupling means to tune out any mismatch that may be present in each of said coupling means.

2,863,094
ELECTRIC GASEOUS DISCHARGE DEVICE CONSTRUCTION
Joseph R. Morin, Ipswich, and Hector E. Theriault, Salem, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application December 28, 1955, Serial No. 555,887
5 Claims. (Cl. 315—60)

1. In an electric gaseous discharge device having an arc tube disposed within a light-transmitting envelope, the combination of: a support for said arc tube; and a resistor disposed on said support and through which said support extends, said resistor having lead-wires extending therefrom, one of said lead-wires being wound around said support and welded thereto.

2,863,095
ELECTRIC WIRING INSTALLATIONS FOR ELECTRIC EQUIPMENT ON VEHICLES
George Alfred Gayler, Bletchley, England, assignor to Wipac Development Limited, Bletchley, England
Application May 16, 1955, Serial No. 508,679
Claims priority, application Great Britain May 18, 1954
4 Claims. (Cl. 315—82)

1. A vehicle headlamp, comprising a headlamp casing formed with an open bottomed cylindrical recess; a plug

of dielectric material having two parallel faces and an amplifier circuit to said coupling transformer.

made of electrically insulating material and detachably engaged in the bottom of said recess; terminal pin sockets carried in said plug; switch leads connected to said termi-

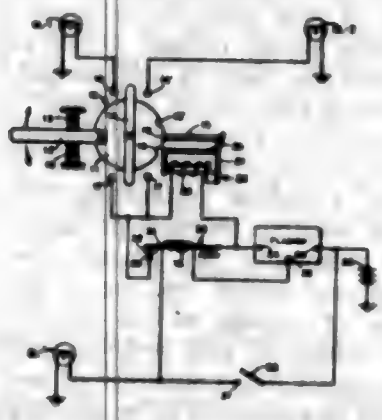
nal pin sockets; contact members connected to the ends of said switch leads remote from said plug; and a removable electric switch having terminal pins detachably engaged in the terminal pin sockets carried in said plug.

2,863,096

AUTOMOTIVE VEHICLE SIGNALING SYSTEM AND SELECTOR SWITCH THEREFOR

Jesse R. Hollins, Brooklyn, N. Y., assignor, by mesne assignments, to Abraham Hollins and Jesse R. Hollins, Brooklyn, Lewis S. Hollins, Great Neck, and Theodore D. Davidson, New York, N. Y.

Application September 6, 1956, Serial No. 608,377
7 Claims. (Cl. 315—83)



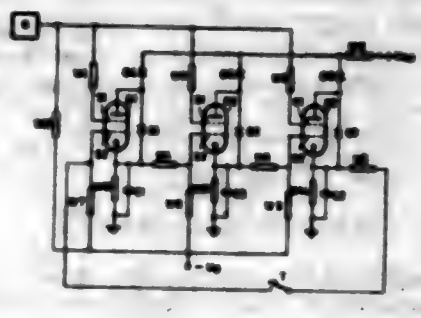
1. In combination; a switch movable between an off position and an operated position; means biasing said switch to the off position; a latch engageable with said switch in the operated position; spring means biasing said latch to the latching position; a relay having a core, a winding on said core, and an armature movable relatively to said core; said armature, when said coil is energized, striking said spring means to release said latch from said switch; a first circuit closed in the operated position of said switch and including a source of electric potential, a cyclically operable circuit interrupter, a thermostatic switch, said first-named switch and said load, in series; said thermostatic switch opening after a pre-set heating interval thereof; and an electric heating means for said thermostatic switch connected to said source upon movement of said first-named switch to the operated position; said relay coil being connected in shunt with said thermostatic switch whereby, after a pre-set interval following movement of said first switch to the operated position, said thermostatic switch will open to remove the shunt from said coil for intermittent effective energization of the latter through said circuit interrupter to repetitively reciprocate said armature to strike said spring means to release said latch for movement of said first-named switch to the off position.

2,863,097

CIRCUIT ARRANGEMENT FOR REDUCING THE WEAR OF GAS DISCHARGE TUBES

Kurt Hagenhaus, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany

Application May 20, 1955, Serial No. 509,965
4 Claims. (Cl. 315—84.5)



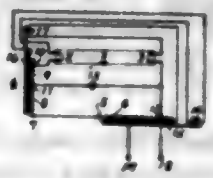
1. A circuit arrangement for reducing the wear of gaseous discharge tubes incident to extinguishing as a result of coincident potential displacement to opposite values at the plate-cathode path, comprising a gaseous discharge tube having a plurality of operating electrodes including an anode element and a cathode element between which current flows during conductance of said tube, a circuit including a resistor and capacitor in parallel having a common terminal connected to said cathode element, a tapped voltage divider having an intermediate point to which one of said elements is operatively connected and from which its operating potential is derived, one leg of said voltage divider including rectifier means operative to pass current during tube conductance and restrict current in the opposite direction, another leg of said voltage divider including an operative resistance means of such value that during the extinguishing of said tube, part of the voltage causing potential displacement will decay at said rectifier means, one of said means being connected in parallel with said anode and cathode elements.

2,863,098

DEVICE FOR STARTING AND OPERATING GLOW DISCHARGE LAMP

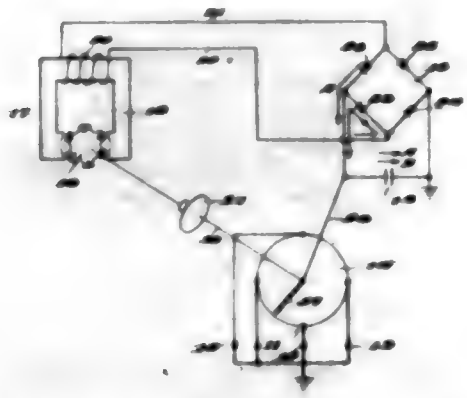
Kyoichi Nagata, Amagasaki-shi, Hyogo-ken, Japan, assignor to Matsushita Denki Sangyo Kabushiki Kaisha, Osaka-fu, Japan, a corporation of Japan

Application October 26, 1954, Serial No. 464,701
Claims priority, application Japan November 11, 1953
9 Claims. (Cl. 315—98)



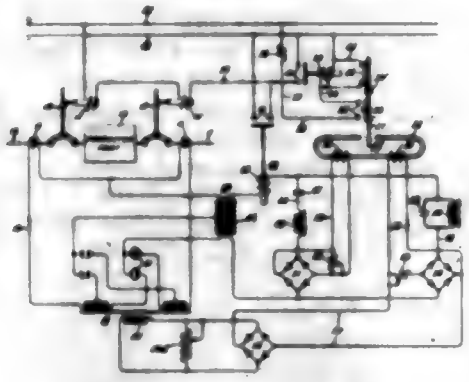
1. A starting and operating device for glow discharge lamps comprising two hot filament electrodes, a source transformer, a choke coil wound on an iron core and having an intermediate tap and being connected between one of the said electrodes and one terminal of the secondary of said source transformer, the other of said electrodes being connected to the other terminal of said source transformer, a condenser connected between the said intermediate tap and the other of said electrodes, coils for heating of said electrodes wound on the core of the said transformer, and coils for each of said electrodes wound on the iron core of the said choke coil, one of the said coils wound on the core of said transformer and one of said coils wound on the core of said choke coil being connected in series with each of the said hot filament electrodes.

2,863,099
LOW TENSION IGNITION SYSTEM INCLUDING LIGHT WEIGHT MAGNETO
Wytze Beye Smits, Voorburg, Netherlands, assignor to Smitsvonk, N. V., Leidschendam, Netherlands, a company
Application July 21, 1954, Serial No. 444,760
3 Claims. (Cl. 315—218)



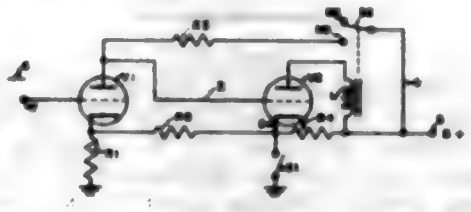
1. In a low tension ignition system comprising a condenser, a magneto producing only $1/n$ part of the energy required to charge said condenser each half cycle, at least one spark plug, a distributor periodically connecting said condenser across said spark plug including a mechanical linkage between said magneto and said distributor for driving said magneto through at least n half cycles for each connection of a spark plug with said condenser, and means connecting said magneto output to said condenser to charge said condenser in the same direction for each pole change.

2,863,100
PROTECTIVE RELAYING EQUIPMENT
Neil O. Rice, Guatemala, Guatemala, assignor to General Electric Company, a corporation of New York
Application November 23, 1955, Serial No. 548,791
(Filed under Rule 47(b) and 35 U. S. C. 118)
8 Claims. (Cl. 317—27)



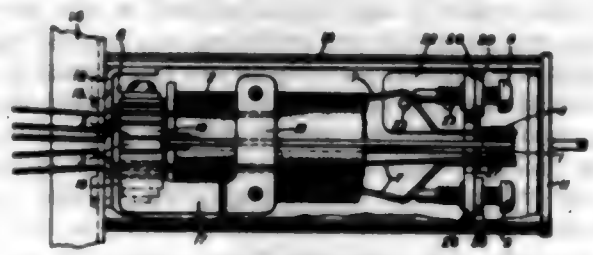
1. Relaying equipment for protecting apparatus connected in an alternating current power system and subject to inrush currents of a predetermined maximum value, said equipment comprising means for deriving from said system a varying current dependent upon the currents flowing into and out of said apparatus, said varying current containing fundamental, harmonic, and direct current components, a current transformer having a primary connected to be energized by said derived current and operable within a predetermined time interval to effectively block the flow of said direct current component in the current transformer secondary, the parallel combination of two circuits connected across the secondary of the current transformer, the electrical constants of one of said circuits being proportioned to pass substantially only the fundamental of said derived current and the electrical constants of the other of said currents being proportioned to pass the harmonics of said derived current, a first electro-responsive device having a pair of oppositely-acting control windings respectively connected to be energized in accordance with the currents in said circuits, a second electroresponsive device comprising a coil connected to be energized from said secondary and arranged in series circuit relationship with said parallel combination, contact means operable in response to energization of said coil by overcurrents exceeding a preselected value for a period of time which is greater than the time interval required for the differential current transformer to effectively block said direct current component, said preselected value being greater than the effective value of the A. C. component of secondary current which flows during the first few cycles of maximum inrush current.

2,863,101
RELAY TRIGGER CIRCUIT
Frederick E. Churchill, Severna Park, and Matthew A. Staats, Owings Mills, Md., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware
Application August 9, 1957, Serial No. 677,310
7 Claims. (Cl. 317—149)



1. A circuit for triggering the deenergization of a relay coil comprising: a pair of electron tubes each having a plate, a cathode and a control grid, means coupling the plate of a first of said tubes to the control grid of the second, a source of supply voltage, means connecting said coil in series with the plate of said second tube and the positive terminal of said source, a resistor connecting the cathodes of said tubes, a resistor connecting the cathode of said first tube to the negative terminal of said source, means including a resistor connecting the plate of said first tube to the positive terminal of said source, means connecting the cathode of said second tube to the negative terminal of said source, and means applying a positive-going pulse of voltage to the control grid of said first tube, the values of said resistors being so related that said pulse causes the conduction of said second tube to be terminated and said coil to be deenergized.

2,863,102
RELAY MOUNTING
Frank A. Zupa, New York, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application November 27, 1953, Serial No. 394,818
7 Claims. (Cl. 317—165)



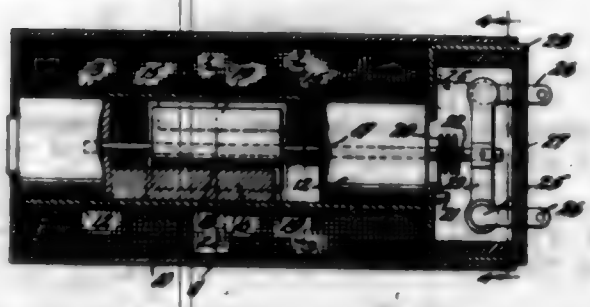
1. In combination with a mounting channel and a relay having a core, a cover for said relay, means for affixing said cover to said mounting channel, a support bracket affixed to each side of said relay at one end thereof and affixed to said cover, and an amplitude limiting bracket affixed to said cover and loosely engaging said relay at the other end thereof.

2,863,103

RELAY

William L. Tancred, Hartford, Conn., assignor to The W. N. Borg Corporation, Hartford, Conn., a corporation of Connecticut

Application September 24, 1954, Serial No. 458,165
5 Claims. (Cl. 317—197)



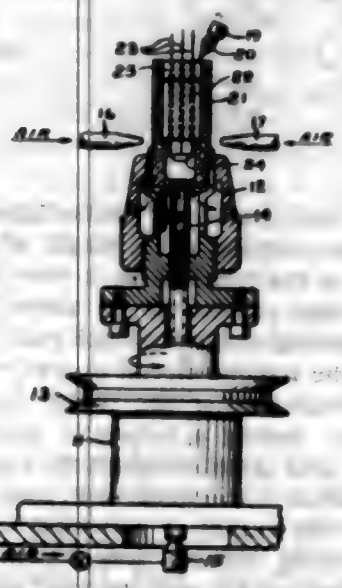
1. An electromagnetic relay comprising an actuating solenoid having a substantially linear axis, a pair of axially spaced magnetic cores rigidly fixed within said solenoid, a relatively long and narrow pole piece projecting from the inner face of each of said core members to at least the centermost portion of said solenoid with the inner pole faces thereof lying generally in parallel planes and being displaced in these planes with no more than a portion of the faces of each pole piece overlapping with respect to one another, a non-magnetic spacer separating said cores one from the other and holding said pole pieces in the afore-mentioned position, a rotatable shaft aligned with the longitudinal axis of said solenoid and loosely supported by said core members and passing through said spacer and one of said core members, a balanced armature having equal depending wings rotatably positioned on said shaft in the space gap between said pole pieces, a bias spring coupled to the end of said shaft projecting through said core member and forcing said armature wings to contact said spacer, a contact arm rigidly coupled to the projecting end of said shaft and actuating a contact load when said solenoid is energized thereby driving said armature in opposition to the force of said spring bias until said armature wings contact the faces of said pole pieces.

2,863,104

SEMICONDUCTOR COMPONENTS AND THEIR MANUFACTURE

Rafael Landron, Jr., Corning, N. Y., assignor to Corning Glass Works, Corning, N. Y., a corporation of New York

Application June 18, 1954, Serial No. 437,759
7 Claims. (Cl. 317—234)



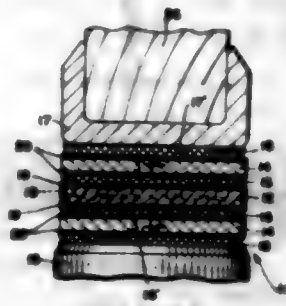
1. A transistor comprising a housing of vitreous material having a cavity closed at one end and containing a vitreous member having a plurality of conductors passing therethrough and anchored thereto, one end of such conductors terminating outside the cavity and their other ends terminating short of the closed end of such cavity, a crystal secured to and supported by said conductors at such other ends thereof, and a vitreous member occupying the open end portion of the housing cavity and through which such conductors pass, said latter vitreous member being joined along a continuous perimeter portion to said housing and sealed about each conductor passing therethrough to hermetically seal the interior of the housing from the exterior atmosphere.

2,863,105

RECTIFYING DEVICE

Bernd Ross, Chicago, Ill., assignor to Hoffman Electronics Corporation, Los Angeles, Calif., a corporation of California

Application November 10, 1955, Serial No. 546,223
4 Claims. (Cl. 317—234)



1. An electrical rectifier comprising a plate-like body of semi-conductor material activated on opposite sides of a plane medially of said body respectively with atomic particles of electron acceptor and electron donor substances, distributed throughout said body portions, whereby to provide a P—N junction along said plane and P-type and N-type complementary zones disposed upon each side of said junction, respectively, a support plate disposed in stacked relationship with respect to one of said zones of said plate-like body, and a bonding layer of relatively soft flowable material interposed between and electrically interconnecting said plate-like body and said support plate, the layer facing surfaces of said plate-like body being coated with a thin film of nickel, the layer facing surface of said support plate being coated with a thin film of silver, whereby to promote the bonding of the material of said layer with the nickel and silver coated surfaces of the plate-like body and of said support plate.

2,863,106

CRYSTAL RECTIFIER AND MANUFACTURE THEREOF

Paul E. Lighty, Lafayette, John J. Albanes, Bayonne, and John H. Gesell, Clifton, N. J., assignors to International Telephone and Telegraph Corporation, a corporation of Maryland

Application July 9, 1953, Serial No. 367,958
13 Claims. (Cl. 317—236)

1. A crystal rectifier comprising a rigid housing of electrically insulating material, the inner surface of which defines a right circular cylinder, a crystal plug assembly and a whisker plug assembly in which said whisker plug assembly comprises a whisker electrode and a support pin, a body of metal embedding one

end of said whisker electrode and one end of said support pin, said body of metal being shaped so that a

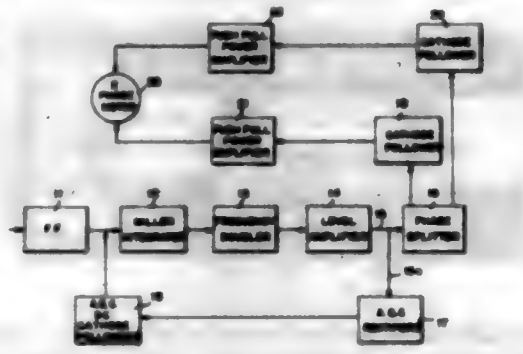
part of it is spaced from and tapers with respect to said inner surface.

2,863,106

MOTOR DRIVE CIRCUIT

Maurice J. Raffensperger, Redondo Beach, Calif., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application March 15, 1956, Serial No. 571,803
12 Claims. (Cl. 318—171)



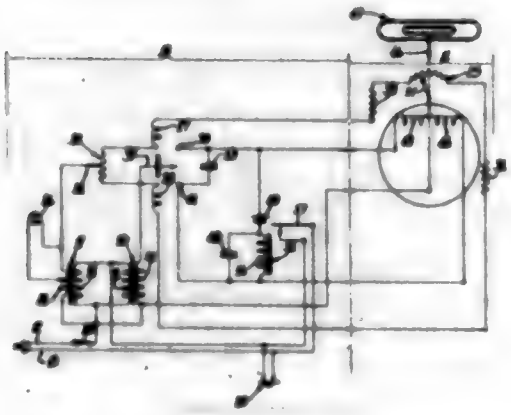
1. A pulse responsive motor control circuit adapted to synchronize the rotation of a motor with a succession of pulses applied thereto comprising means responsive to said pulses for generating a first signal having a repetition rate which is a function of the repetition rate of said pulses, means responsive to said first signal for generating a second signal having a repetition rate which corresponds to the repetition rate of said pulses, a motor, means responsive to said second signal for generating a plurality of phase displaced signals to energize said motor whereby said motor is controlled to rotate in synchronism with said pulse source.

2,863,107

SERVOMOTOR SYSTEM FOR REMOTE CONTROL

Ralph C. Blauvelt, Willoughby, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio

Application January 28, 1956, Serial No. 560,348
3 Claims. (Cl. 318—28)



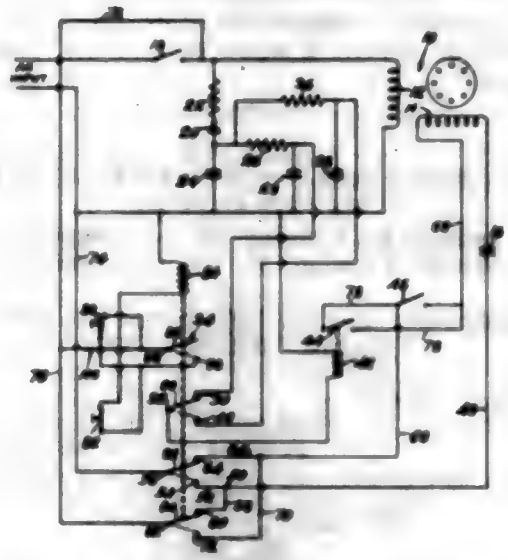
1. A rotation control system comprising a phase sensitive motor, a first potentiometer operated by said motor, a second potentiometer and a pair of relays including a pair of relay coils, both said potentiometers and said pair of relay coils being combined into a bridge circuit, means for applying a potential across opposed branches of said bridge circuit, each of said relays being selectively operable by unbalance in said bridge circuit, a switch controlling application of said potential, a phase shifting circuit actuated by an unbalance in said bridge circuit and connected by operation of said relays to said motor to drive said motor in one or the other direction of rotation, and a time delay means in parallel with said switch arranged to maintain current flow in said bridge circuit for a predetermined short interval after deenergization of said relays.

2,863,109

MOTOR REVERSING CIRCUITS

Edward P. Meyer, Boulder, Colo.

Application January 17, 1957, Serial No. 634,766
7 Claims. (Cl. 318—207)



1. An electrical circuit for instantaneously reversing the direction of rotation of a single phase alternating current motor of the type having a running winding and a starting winding adapted to be connected in parallel across an alternating current source and a speed responsive switch in the starting circuit operative to de-energize the starting winding after the motor has started comprising: a relay having a normally open contact connected across said speed responsive switch, a pair of condensers, means for connecting said condensers in parallel across the output of a rectifier circuit energized by said alternating current source whereby said condensers are charged by said rectifier circuit, a reversing switch connected into said starting winding circuit to effect a reversal of the direction of current flow therethrough, and means including switch means operated

simultaneously with said reversing switch for selectively connecting said condensers across said relay whereby the selected condenser will discharge through said relay and momentarily close said normally open contact thereof to immediately energize said starting winding upon operation of said reversing switch regardless of the position of the speed responsive switch.

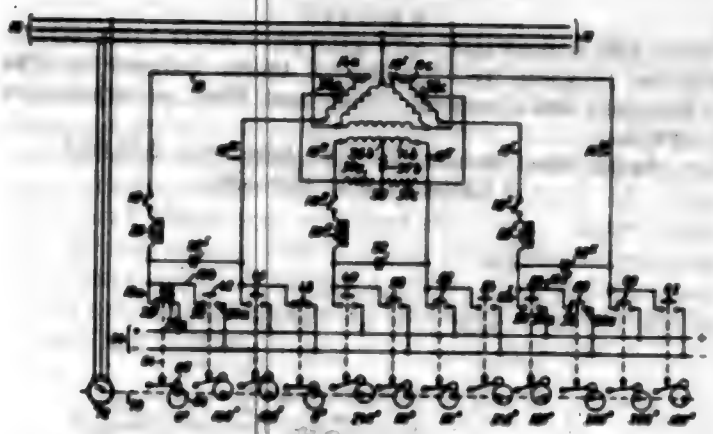
2,863,110
MECHANICAL CONVERTERS

Floris Koppelmann, Berlin-Reinickendorf, Germany, assignor to Licentia Patent-Verwaltungs, G. m. b. H., Berlin, Germany, a corporation of Germany

Original application April 13, 1950, Serial No. 155,585, now Patent No. 2,666,102, dated January 12, 1954. Divided and this application October 21, 1952, Serial No. 315,893

Claims priority, application Germany November 4, 1949

11 Claims. (Cl. 321—48)



1. An arrangement for mechanically converting an alternating current into direct current comprising, in combination, a transformer having primary windings connected in polyphase and secondary windings connected in single phase, each of said secondary windings respectively having two opposite end terminals; electrical impedance means connected in circuit with at least a portion of each of said secondary windings to form a six-phase bridge connection; a plurality of pairs of switches, each of said switches being movable between circuit opening position and circuit closing position, each of said end terminals of said secondary windings being respectively connected to one side of a different pair of said plurality of pairs of switches; a plurality of saturable reactors, each of said reactors being connected respectively, between one of said end terminals of each of said secondary windings and its respective pair of switches; means for moving each of said switches between circuit opening and circuit closing positions in synchronism with said alternating current to be rectified and the respective phase position of the secondary winding to which the respective switch is connected, one of said switches of each of said pairs of switches being moved into circuit closing position when the other switch of its respective pair is in circuit opening position and vice versa; a pair of direct current output terminals; and means for connecting the other side of one switch of each of said pairs of switches to one of said output terminals and the other side of the other switch of said pairs of switches to said other output terminal.

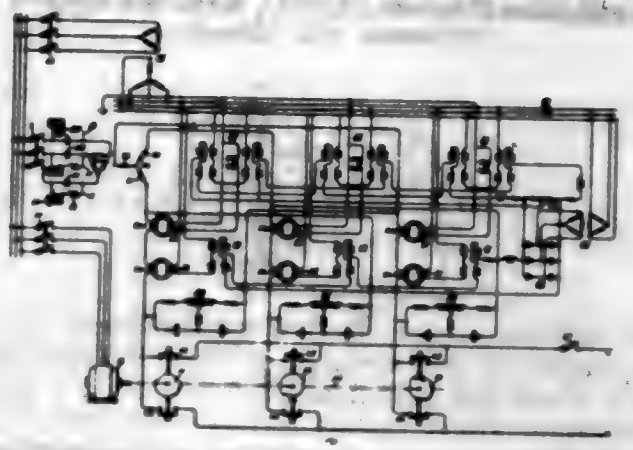
2,863,111
SERIES CAPACITOR SATURABLE TRANSFORMER CIRCUIT PROTECTIVE SYSTEM

Burnice D. Bedford, Scotia, N. Y., assignor to General Electric Company, a corporation of New York

Application June 28, 1954, Serial No. 439,614

8 Claims. (Cl. 321—48)

6. A mechanical rectifier having in combination an alternating current transformer having synchronously operated contacts for commutating the load current and series capacitors oppositely charged proportional to the load current for providing commutating voltages and damped discharge circuits for the capacitors including



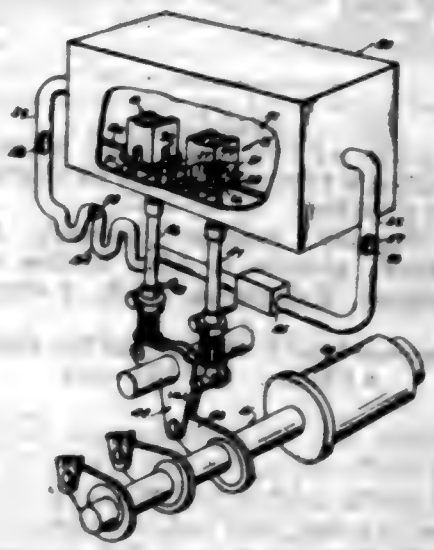
reactors saturable only in response to asymmetrical capacitor voltages and having a relatively lower saturating voltage than the transformer for discharging the capacitors before saturation of the transformer occurs upon a sudden substantial decrease of the load current.

2,863,112
COOLING SYSTEM FOR MECHANICAL RECTIFIER CONTACTS

Hans-Joachim Kleinvogel, Berlin-Siemensstadt, Germany, assignor to Siemens-Schuckertwerke A. G., Berlin, Germany, a corporation of Germany

Application December 2, 1955, Serial No. 550,715

6 Claims. (Cl. 321—48)



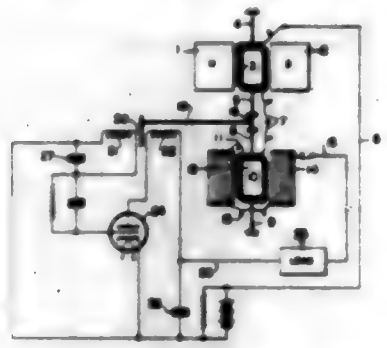
1. A cooling system for mechanical rectifiers; said mechanical rectifier comprising a pair of cooperable contacts movable into and out of engagement with one another and means to synchronously move said cooperable contacts into and out of engagement with one another, an exposed contact surface of at least one of said cooperable contacts being at least partially constructed of silver, said cooling system being constructed to direct an air flow on said cooperable contacts for cooling thereof; said cooling system including a means for circulating air and air passages for conducting air from said circulating means to said cooperable contacts; at least a portion of the inner surface of said air passages being copper whereby substantially all impurities in said cooling air which are combinable with both copper and silver will combine with said copper surface, said silver surface of said cooperable contacts being substantially uncontaminated by said impurities.

2,863,113

CURRENT CONTROL APPARATUS

Robert J. Ehret, Los Altos, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application February 13, 1957, Serial No. 639,874
5 Claims. (Cl. 323—4)



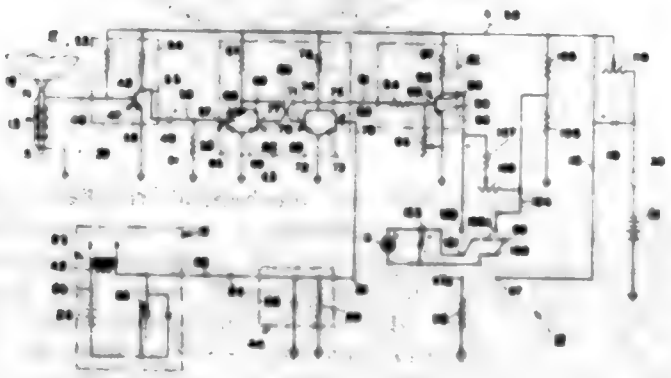
1. A control apparatus comprising a permanent magnet moving coil galvanometer having a coil movable responsively to an input current, a permanent magnet having a gap between its poles in which said coil is disposed, and mounting means for said coil, said mounting means constraining said coil to rotate in said gap while exerting substantially no restoring torque on said coil, a dynamometer having a coil movable responsively to said input current, a moving coil, stationary coils, and mounting means for said dynamometer coil, said mounting means constraining said dynamometer coil to rotate between said stationary coils while exerting substantially no restoring torque on said moving coil, a circuit through which the input current is adapted to flow including in series said galvanometer coil, said dynamometer movable coil and said dynamometer stationary coils, and output means coupled to each of said moving coils, said output means being responsive to the differential of the torques of said moving coils.

2,863,114

METHOD AND APPARATUS FOR MONITORING THE IGNITION TIMING OF AN INTERNAL COMBUSTION ENGINE

Arthur G. Murphy, Pavilion Township, Kalamazoo County, Mich., assignor to Allen Electric and Equipment Company, Kalamazoo, Mich., a corporation of Michigan

Application May 7, 1956, Serial No. 583,055
6 Claims. (Cl. 324—16)



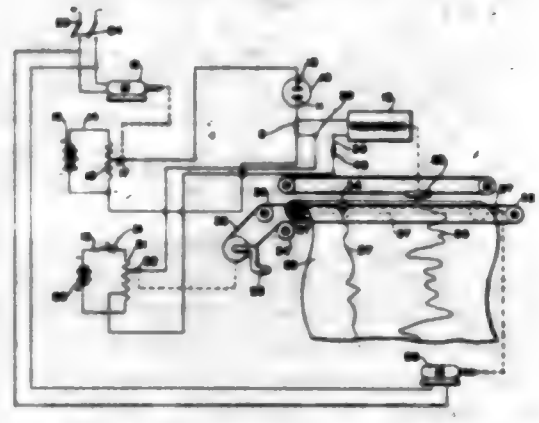
1. In an electrical circuit for monitoring the ignition system of an internal combustion engine having a rotatable element thereon, the combination comprising: a pair of detector circuits, one of said detector circuits being adapted to transmit a pulse in response to movement of said rotatable element through a predetermined position and the other of said detector circuits being adapted to transmit a pulse corresponding to an ignition pulse in said ignition system; a triggering circuit having a pair of input terminals and an output terminal; means connecting the detector circuits to the input terminals of said triggering circuit, said triggering circuit being adapted to transmit an energy output in response to a pulse from one of said detector circuits, said energy output being changed when a pulse from the other detector circuit is applied to said triggering circuit; a transistor having a base, an emitter and a collector; means connecting said base to the output terminal of said triggering circuit; means connecting said emitter to ground; means connecting said collector through a load resistance to a source of potential; a meter; means connecting said collector to one terminal of said meter and means connecting the other terminal of said meter to a voltage divider and thence to said source whereby said meter will provide a steady indication determined by the ratio existing between the time representing the duration of one of successive energy outputs from said triggering circuit and the time between the beginning of successive pulses of output energy therefrom.

2,863,115

POLAROGRAPHIC APPARATUS AND METHOD

Warren Jackson, Jr., Lyndhurst, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

Application October 3, 1955, Serial No. 538,081
3 Claims. (Cl. 324—30)



1. A polarographic apparatus comprising means for containing a solution to be analyzed, a pair of electrodes adapted to contact said solution, first electrical energy source means electrically connected to said electrodes so as to impress a substantially linear voltage sweep across said electrodes giving rise to a varying flow of current therebetween, current sensing means electrically connected with said electrodes so as to sense the flow of current therebetween, recording means connected with said sensing means to record the current values measured by said sensing means comprising a movable chart and stylus, second electrical energy source means removably connected in electrical circuit with said recording means, indicator means adapted to follow in one direction a pre traced curve on said movable chart as said chart moves in another direction, means linking said indicator means with said second electrical energy source means so as to vary the voltage impressed on said recording means by said second energy source means in accordance with the movements of said indicator means.

2,863,116

METHOD AND APPARATUS FOR AUTOMATIC RECORDING OF THE LOGARITHMIC DECREMENT AND THE FREQUENCY OF OSCILLATIONS WITH INCREASING OR DECREASING AMPLITUDE

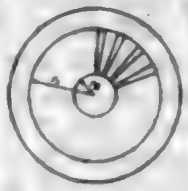
Carl Olof Olsson, Sthlm-Vallingby, and Kazimierz Orlik-Rückemann, Hagersten, Sweden

Application February 8, 1955, Serial No. 486,938
Claims priority, application Sweden February 22, 1954
5 Claims. (Cl. 324—78)

5. A system for indicating the logarithmic decrement and the frequency of a damped oscillatory signal com-

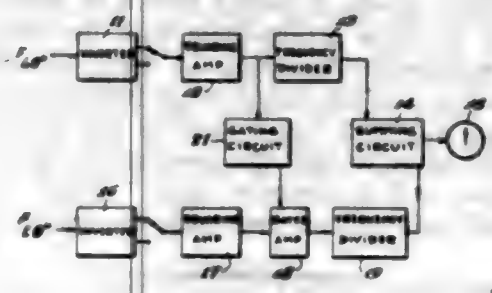
magnetrostrictive line magnetically coupled to both of cluding an anode, a cathode and a control grid, a second

prising, a cathode ray tube having a pair of vertical and a pair of horizontal deflection plates, input circuit means including an amplifier and a phase shifting network connected to said pairs of plates for feeding a damped oscillatory signal thereto thereby developing a spirally shaped trace on the screen of said tube, said trace having a radius length proportional to the envelope amplitude of said signal, a disk conformingly disposed on said screen and having a plurality of equidistant radial slots of identical size formed thereon for cyclically interrupting the



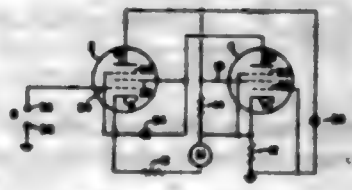
emanations of said trace, means including a photo cell exposed to said screen for producing electrical impulses correlative to said interrupted trace emanations, a first electronic counter actuable in response to said electrical impulses for indicating the number of said interrupted trace emanations, an oscillatory signal source of a predetermined frequency, a second electronic counter actuable by said source, and a gating circuit interconnecting said source and said second counter for effecting actuation of said second counter by said source upon actuation of said first counter.

2,863,117
PHASE MEASURING SYSTEM
Walter W. Granstein, Jr., Watertown, Mass., assignor, by mesne assignments, to Acton Laboratories, Inc., Acton, Mass.
Application February 2, 1954, Serial No. 407,641
8 Claims. (Cl. 324—85)



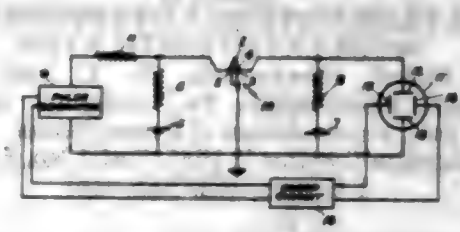
8. A system for phase angle measurement of two signals of the same frequency irrespective of the amplitudes thereof comprising a first channel having a first limiting amplifier, means for applying one of said two signals to said first limiting amplifier, and a first frequency divider connected to said first limiting amplifier for producing a first output signal of predetermined amplitude in response to the output of said first limiting amplifier, a second channel comprising a second limiting amplifier, means for applying the other of said two signals to said second limiting amplifier, and a second frequency divider connected to said second limiting amplifier for producing a second output signal in response to the output of said second limiting amplifier, said second output signal having the same amplitude as said first output signal, means responsive to the output of said first limiting amplifier for initiating operation of said first frequency divider before the operation of said second frequency divider, a circuit connected to said first and second frequency dividers for algebraically combining said first and second output signals to produce a third output signal, and means connected to said circuit for producing an indication proportional to said third output signal.

2,863,118
VACUUM TUBE VOLTMETER
George E. Pihl, Abington, Mass., assignor to Acton Laboratories, Inc., Acton, Mass., a corporation of Massachusetts
Application May 29, 1957, Serial No. 662,484
8 Claims. (Cl. 324—123)



3. A measuring circuit comprising a two-stage feedback amplifier, each stage comprising a vacuum tube having a plate, a cathode, a control grid and a screen grid, a first direct current voltage source connected in its positive side to the plate of one tube and the screen grid of the other tube and on its negative side to the cathode of said other tube, a second direct current voltage source connected on its positive side of the plate of said other tube and the screen grid of said one tube and on its negative side to ground, a first resistor connected between the cathode of said one tube and ground, means connecting the control grid of said one tube to ground, a meter connected on one side to the cathode of said one tube, a second resistor connected on one side to the cathode of said other tube and on the other side to the other side of said meter, and means for applying a signal voltage to be measured between the control grid of said other tube and ground.

2,863,119
TRANSISTOR TESTING SYSTEMS
Luther Davis, Jr., Belmont, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application September 30, 1954, Serial No. 459,339
5 Claims. (Cl. 324—158)



1. A system for measuring the base width of a junction type transistor having an emitter region, a collector region, and a base region comprising means connected to said emitter region and said base region for injecting current carriers into said base region, said current carriers requiring a finite time to diffuse across said base region to said collector region, and means connected to said collector region and said base region for determining said diffusion time whereby a measure of the width of said base region is obtained.

2,863,120
MAGNETOSTRICTIVE PULSE-TIME MODULATION
Albert E. Powell, Chatham, N. J., assignor to Byford Labs, Inc., Mamaroneck, N. Y., a corporation of New York
Application February 21, 1957, Serial No. 641,506
6 Claims. (Cl. 332—9)

1. A modulator of the class described comprising a magnetrostrictive system including a transmitting winding connected to a generator which produces a train of electrical pulses, a receiving winding connected to a transmitting circuit for transmitting a train of received pulses, a

varying the relative flux strengths in said paths to oscil- phase delay characteristic which is complementary with

magnetrostrictive line magnetically coupled to both of said windings, and a modulation transducer secured to one

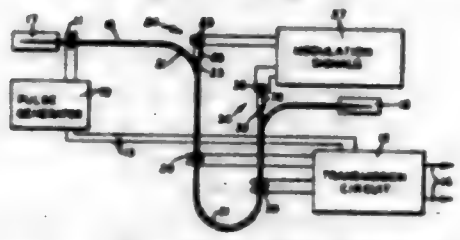
of said windings, said transducer adapted to produce a vibrating movement of the winding along said line.

2,863,121

MAGNETOSTRICTIVE PULSE-TIME MODULATOR

Albert E. Powell, Chatham, N. J., assignor to Byford Labs, Inc., Mamaroneck, N. Y., a corporation of New York

Application June 25, 1957, Serial No. 667,932
9 Claims. (Cl. 332—9)



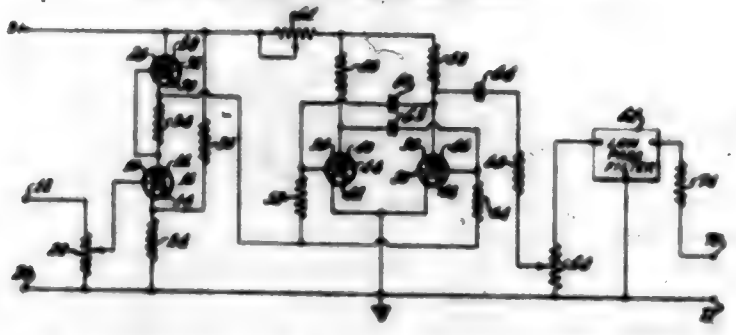
1. A modulator of the class described comprising, a magnetostrictive system including a transmitting winding connected to a pulse generator, a receiving winding connected to a transmitting circuit, an aperiodic magnetostrictive line magnetically coupled to both of said windings, and a modulation transducer coupled to said line, said transducer to produce a longitudinal movement of a portion of the line through said receiving winding in response to a modulation signal.

2,863,122

VOLTAGE CONTROLLED FREQUENCY MODULATED OSCILLATOR

Leonard Finkel, Haddonfield, N. J., and Irving P. Magasiny, Philadelphia, Pa., assignors to Tele-Dynamics Inc., a corporation of Pennsylvania

Application October 7, 1955, Serial No. 539,119
1 Claim. (Cl. 332—16)



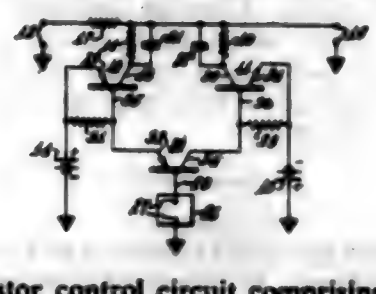
In combination with a multivibrator circuit, adapted to be linearly modulated by a source of modulating signals, a direct current voltage amplifier, said amplifier comprising a first electron discharge device including an anode, a cathode and a control grid, a resistor connected between said cathode and a point of reference potential, means for applying said modulating signals to said control grid, means for compensating for variations in filament voltages associated with said amplifier, said last-named means including a second electron discharge device having its space current path serially connected with the space current path of said first electron discharge device, said second electron discharge device providing a relatively high output impedance for said first electron discharge device, said second electron discharge device including an anode, a cathode and a control grid, a second resistor connected between said cathode of said second electron discharge device and said anode of said first electron discharge device, means connecting said control grid of said second electron discharge device to said anode of said first electron discharge device, means connecting said cathode of said second electron discharge device to said multivibrator circuit to provide a relatively low impedance for said multivibrator circuit, means for applying operating potentials to said first electron discharge device, said second electron discharge device and said multivibrator circuit, and a third resistor for varying the linearity characteristics of said direct current amplifier connected between said means for applying operating potentials and said cathode of said first electron discharge device, said third resistor also providing additional compensating means for variations in the operating potentials of said first and second electron discharge devices.

2,863,123

TRANSISTOR CONTROL CIRCUIT

Winfield R. Koch, Burlington, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application November 8, 1954, Serial No. 467,373
13 Claims. (Cl. 332—31)



1. A transistor control circuit comprising in combination, signal supply means, a pair of semiconductor devices of opposite conductivity types, a first source of energizing bias connected in series arrangement with one of said pair of semiconductor devices in shunt with said signal supply means, a second source of energizing bias connected in series arrangement with the other of said pair of semiconductor devices in shunt with said signal supply means, control means connected for simultaneously applying a control bias to each of said pair of devices in opposite sense to vary the conductivity of each in the same sense, and a common signal output circuit connected with said pair of semiconductor devices.

2,863,124

ELECTROMAGNETIC MODULATOR

Victor A. Misek, Nashua, and Kenneth Dollinger, Derry, N. H., assignors, by mesne assignments, to Sanders Associates, Inc., Nashua, N. H., a corporation of Delaware

Application October 20, 1954, Serial No. 463,412
6 Claims. (Cl. 332—51)

1. A magnetic modulator comprising: an annular core of magnetic material; magnetizing means fixedly positioned in close physical but spaced relation to said core and having a pair of magnetic poles for inducing in said core a pair of parallel and opposing flux paths for developing a flux null in the vicinity of each of said poles; a modulation-signal winding on said core in the vicinity of one of said poles for applying a modulation-signal for

said form having first and second opposite cylindrical

2,863,131

varying the relative flux strengths in said paths to oscillate said flux nulls; an output winding on said core in the vicinity of the other of said poles and responsive to said variations of said flux strengths and, particularly to the motion of the flux null at said other of said poles resulting from said variations; and a carrier-signal winding on said core intermediate said modulation-signal and output windings for applying a carrier-wave signal to further vary said flux strengths, whereby the variations of flux strengths cause said flux nulls to oscillate at frequencies which are the algebraic sum of the modulation and carrier-wave signals resulting in the developing of modulation sidebands of said carrier-wave signal in said output winding.

2,863,125

COUPLING CIRCUITS OR THE LIKE

James H. Doyle, Inglewood, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Application December 28, 1954, Serial No. 476,335
4 Claims. (Cl. 333—12)

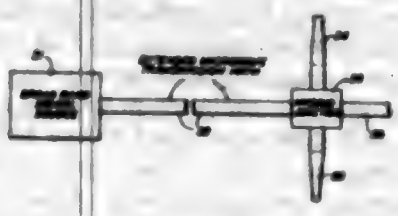
1. A coupling circuit including, in combination, first and second parallel resonant circuits having a first and a second inductor, respectively, and being resonant at substantially the same frequency, first and second terminals having at least a portion of said first inductor therebetween, third and fourth terminals having at least a portion of said second inductor therebetween, said first and second terminals exhibiting less inductance therebetween than the inductance exhibited between said third and fourth terminals, a diode coupling together said first and third terminals, and a D.-C. voltage source coupling together said second and fourth terminals and being poled to bias said diode against conduction in the absence of an instantaneous voltage between said third and fourth terminals of opposite polarity and greater magnitude than the instantaneous voltage across the series combination of said D.-C. voltage source and said inductance between said first and second terminals.

2,863,126

TAPERED WAVE GUIDE DELAY EQUALIZER

John R. Pierce, Berkeley Heights, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 31, 1953, Serial No. 401,448
8 Claims. (Cl. 333—28)



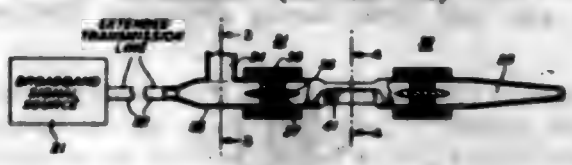
1. In a broad band high frequency system, a reflecting tapered section of wave guide, means for applying a broad band signal to said tapered wave guide section, said tapered section having a width that successively reflects frequency components of said broadband signal with a phase delay proportional to the depth of penetration into said taper thereby introducing a predetermined reflection frequency versus phase delay characteristic, means for coupling with the signal which is reflected from said tapered wave guide section, and a high frequency electrical component having a frequency versus phase delay characteristic which is complementary with said predetermined characteristic coupled to one of said above-mentioned means.

2,863,127

ELECTROMAGNETIC WAVE EQUALIZATION SYSTEM

Walter J. Albersheim, Madison, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 31, 1953, Serial No. 401,544
10 Claims. (Cl. 333—28)



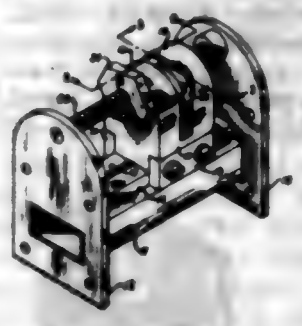
1. In a non-reciprocal Faraday effect microwave system, two spaced Faraday effect wave guide units, each said Faraday effect unit comprising means including a magnetically polarized nonconducting medium for rotating the electromagnetic field pattern of applied electromagnetic wave energy substantially 45 degrees, wave guide means for transmitting electromagnetic waves of only one polarization and for reflecting an orthogonal polarization interconnecting said Faraday units, and substantially lossless means for reflecting electromagnetic waves of all polarizations coupled to one of said Faraday effect units so that wave energy transmitted from the other of said Faraday effect units by said interconnecting wave guide means in said one polarization is multiply reflected between said wave guide means and said reflecting means until it is rotated by said one Faraday effect unit back into said one polarization.

2,863,128

WAVEGUIDE TUNER

Harry C. Gilchrist, Pleasantville, and John F. Zaleski, Valhalla, N. Y., assignors to General Precision Laboratory Incorporated, a corporation of New York

Application September 19, 1956, Serial No. 610,863
2 Claims. (Cl. 333—98)



1. A tuner comprising a section of waveguide having a longitudinal slot in the wall, a carriage slidable along the outer wall, a conductive rod mounted on said carriage in alignment with said slot, a cam mounted on said carriage and cooperating with said rod for varying the amount by which said rod projects through said slot into the interior of said waveguide, and screw and nut means for simultaneously actuating said cam and sliding said carriage along said waveguide.

2,863,129

RADIO-FREQUENCY TUNING DEVICE

Harold T. Lyman, Milford, Conn., and Lester E. Hill, Nashville, Tenn., assignors to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois

Application February 9, 1954, Serial No. 409,628
2 Claims. (Cl. 336—75)

1. A radio frequency tuning device, comprising a generally cylindrical coil form made of insulating material,

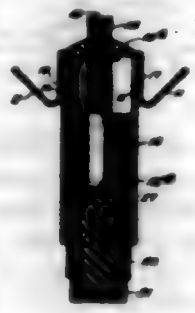
2,863,133

NON-DESTRUCTIVE SENSING OF MAGNETIC

put winding on said storage core, an input winding on said temporary storage core, a bucking magnetic core having

discharge device, said second electron discharge device in- of one of said poles for applying a modulation-signal for

said form having first and second opposite cylindrical end portions with a step therebetween, said second portion being reduced in diameter relative to said first portion, a coil wound on said second portion of said form, said coil having a diameter corresponding generally to that of said first portion of said form, a conductive metal generally cylindrical inductance varying sleeve slidably receiving said form and coil, said first portion of said form being closely received within said sleeve to guide said sleeve, said form being slidable axially into and out of said sleeve so that said sleeve will selectively envelop said coil and thereby vary the inductance thereof, said sleeve and said form having respective interengaging



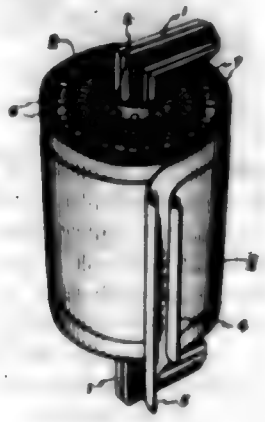
elements restraining said sleeve and form against relative rotation while permitting relative axial movement thereof, an elongated rod, said form having an axial aperture therein rotatably receiving one end of said rod, said rod and said form having respective interengaging shoulder elements restraining said rod and form against relative axial movement while permitting relative rotation thereof, said rod having an externally threaded portion on its opposite end, and an internally threaded closure element on one end of said sleeve threadedly receiving said externally threaded portion of said rod whereby rotation of said rod will effect relative axial movement of said coil and said sleeve and thereby will vary the inductance of said coil.

2,863,130

COIL CONSTRUCTION FOR ELECTROMAGNETIC INDUCTION APPARATUS

Willard F. M. Gray, Pittsfield, Mass., and Russell D. Wheeler, Mellenville, N. Y., assignors to General Electric Company, a corporation of New York

Application March 21, 1957, Serial No. 647,597
9 Claims. (Cl. 336—207)



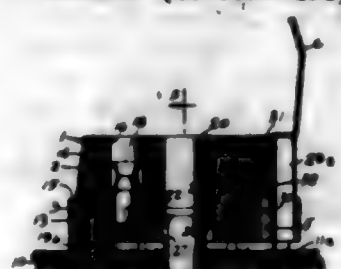
1. A foil-wound coil comprising a concentric winding of insulated foil means, spacer members arranged between certain turns of said concentric winding defining duct means extending through said coil, a portion of said insulated foil means crossing from one side of said spacer members to the other side through said duct means, and supporting means arranged in said duct means for protecting said portion of said insulated foil means.

2,863,131

TUBE SOCKET

Carl F. Carlzen, Buffalo, and William L. Lehner, Snyder, N. Y., and Howard A. Wagner, North Warren, Pa., assignors to Sylvania Electric Products, Inc., a corporation of Massachusetts

Application January 3, 1955, Serial No. 479,518
8 Claims. (Cl. 339—193)



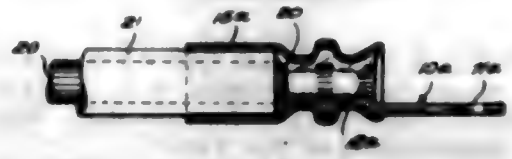
6. A tube socket comprising a socket housing formed to provide a plurality of receptacle receiving recesses, an integrally formed base portion terminating in a bottom surface and a substantially frustro-conical upper portion terminating in a top surface and including an indexing channel of generally T-shaped cross section extending substantially vertically along the outer periphery of the base and upper portions of said housing, said indexing channel being adapted to receive a tube shield ground strap, a separate tube pin receiving receptacle for each of one or more receiving recess having a tube pin contact portion relatively loosely mounted internal the receiving recess with a lug portion extending from a slot in the base portion of said housing, said lug portion extending radially adjacent the bottom housing surface and downwardly to terminate external the horizontal projection of the top surface and beneath the bottom surface of the socket housing.

2,863,132

ELECTRICAL CONNECTOR WITH INSULATED FERRULE

Frank J. Sowa, Cranford, N. J., assignor to AMP Incorporated, a corporation of New Jersey

Original application October 28, 1944, Serial No. 560,785. Divided and this application October 1, 1951, Serial No. 254,515
1 Claim. (Cl. 339—213)



The combination, in an electrical connector, of: a metallic conducting member having a portion thereof adapted to be pressed into permanent contact and engagement with an electrical conductor, and an insulating sleeve surrounding and engaging said conducting member; said sleeve and conducting member providing an opening for reception of said conductor, said sleeve being of a tough insulating plastic material of the type which is moldable under pressure at room temperature whereby it is molded by the crimping but with toughness whereby it transmits localized crimping pressure to produce said permanent contact and engagement without puncture or shearing through of the plastic material, said sleeve being characterized by an elastic memory of a previous condition in which its periphery was substantially less whereby it has a tendency to shrinkage exerting a constrictive force on the connector, said sleeve containing therein a substantial amount of vaporizable material of the class consisting of plasticizers and solvents and swelling agents, whereby said plastic is capable of slow shrinkage during slow evaporation of said vaporizable material therefrom.

counts based on their past activity recorded in activity regions on a second tape comprising means for moving

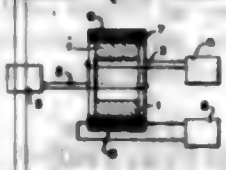
shunt with its associated transfer loop and a high impedance path for said other capacitor in shunt with its

2,863,133

NON-DESTRUCTIVE SENSING OF MAGNETIC CORES

Maxwell C. Andrews, Poughkeepsie, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application November 23, 1954, Serial No. 470,564
5 Claims. (Cl. 340—174)



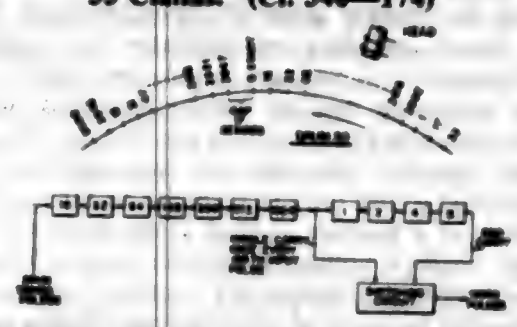
5. In a pulse responsive system, a magnetic body capable of assuming alternate states of magnetic remanence in representing binary information, said body comprising a toroidal core of ferrite material, winding means inductively related with said body and adapted to be energized to cause said body to assume a representative remanence state, and means comprising a barium titanate element rigidly mechanically coupled with said body and comprising a ceramic material bonded to the external circumference of said core and having electrodes between which an electric field may be established to develop mechanical stress operable on said magnetic body, and further winding means inductively related with said body wherein signals are developed in response to operation of said barium titanate element, said signals being indicative of the remanence state of said body.

2,863,134

ADDRESS SELECTION SYSTEM FOR A MAGNETIC DRUM

Werner Buchholz, Poughkeepsie, Cecil A. Deutschle, Verbank, and David J. Crawford, Poughkeepsie, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application October 25, 1952, Serial No. 316,914
35 Claims. (Cl. 340—174)



29. In a data storage system for computers and the like, a rotatable drum having a magnetizable periphery, means to rotate said drum, a track extending circumferentially about said drum and containing a number of locations for storing data represented by varying magnetic status, means providing timing signals, one for each of said locations, means providing an index system to provide a manifestation of the presence of a certain location at a prechosen rotative position of said drum, a single read-write means for said track, means for addressing said drum to thereby select any one of said locations as a chosen location and subsequently other chosen locations to be written upon or read from, and means controlled by said index signal for altering the operation of said addressing means whereby successive addresses chosen are processed about the periphery of said drum.

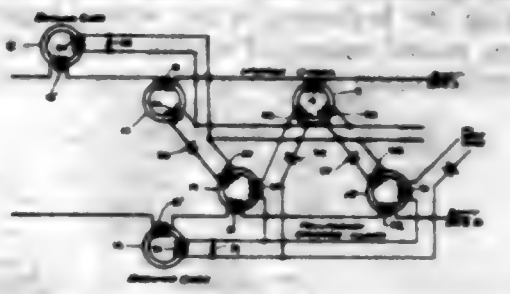
2,863,135

MAGNETIC MEMORY CIRCUITS

Norman B. Saunders, Weston, Mass., assignor to American Machine & Foundry Company, a corporation of New Jersey

Application January 29, 1953, Serial No. 333,857
11 Claims. (Cl. 340—174)

3. A magnetic memory circuit comprising a magnetic storage core, a magnetic temporary storage core, an output winding on said storage core, an input winding on said temporary storage core, a bucking magnetic core having a bucking winding thereon connected in series with said windings, and means associated with said bucking core and operative only when a "zero" or a "one" stored in



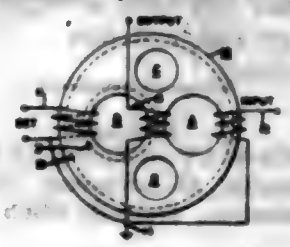
said storage core is shifted to said temporary storage core, to generate in said bucking winding a voltage opposite in polarity to the voltage induced in said output winding, said voltage being sufficient only to substantially cancel the voltage induced when a "zero" is shifted.

2,863,136

SIGNAL TRANSLATING DEVICE

Harold W. Abbott, Cohoes, and Jerome J. Suran, Syracuse, N. Y., assignors to General Electric Company, a corporation of New York

Application January 3, 1957, Serial No. 632,342
9 Claims. (Cl. 340—174)



1. A signal translating device comprising, a nine-legged core having four separate mutually contiguous apertures formed therein and being constructed of material having a substantially rectangular magnetic hysteresis characteristic; the material between any two of the four separate mutually contiguous apertures in said core forming one of five interior legs of said nine-legged core; the material between any one of said apertures in said core and the periphery of said core forming one of four peripheral legs of said nine-legged core; the smallest cross-sectional area of a first of said peripheral legs being at least equal to twice the smallest cross-sectional area of any one of the other eight legs of said core; a control winding on said first peripheral leg, a first signal translating winding on the peripheral leg most remote from said first peripheral leg, and a second signal translating winding on at least one of the interior legs adjoining the same aperture that is adjoined by said remote peripheral leg; said control winding being adapted to control the passage of alternating current signal between said signal translating windings by varying the flux in the legs of said core through at least two separate magnetic circuits, a first of said magnetic circuits including said first peripheral leg and the interior legs adjoining the same aperture that is adjoined by said first peripheral leg and a second of said magnetic circuits including all four of said peripheral legs of said core.

2,863,137

TAPE-SPACING SYSTEM

Bonnar Cox and Jacob Goldberg, Palo Alto, Calif., assignors, by mesne assignments, to General Electric Company, New York, N. Y., a corporation of New York

Application February 5, 1957, Serial No. 638,292
11 Claims. (Cl. 340—174)

4. A system for allotting space on a first tape for recording future activity of a plurality of different ac-

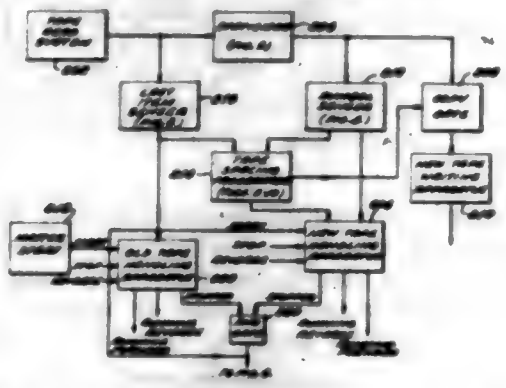
indicating device and float to ground when said auxiliary

the datum position in accordance with a demanded bank

means.

tion of said vaporizable material therefrom.

counts based on their past activity recorded in activity regions on a second tape comprising means for moving both tapes forward, first means for sensing the beginning of an activity region for an account on said second tape, means responsive to said first means for sensing for identifying the beginning of an activity region on said first tape, second means for sensing the end of activity in said activity region on said second tape, means activated



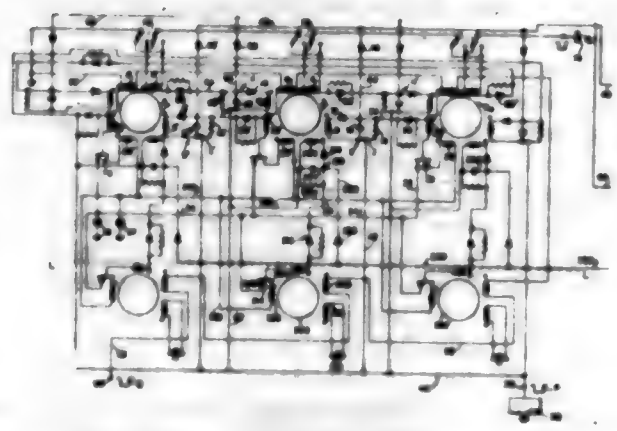
responsive to said first sensing means and inactivated responsive to said second means for sensing to generate a number representative of the interval between activation and inactivation, means for periodically reducing said number by a predetermined factor, and means responsive to said number being reduced below a zero value to stop said first tape to establish the end of an activity region on said first tape.

2,863,138

TWO-WAY SHIFT REGISTER

Francis A. Hemphill, Honeybrook, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application March 5, 1957, Serial No. 644,083
8 Claims. (Cl. 340—174)



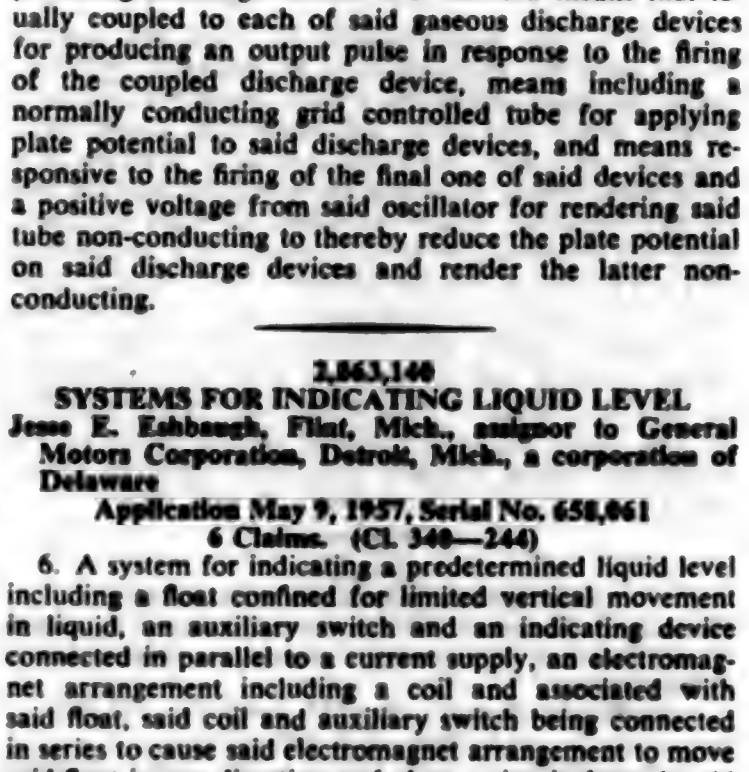
5. A reversible one core per bit shift register comprising a plurality of bistable magnetic cores, each core having two stable states of magnetic remanence to represent the storage of binary information, a pair of transfer loops associated with a selected bistable core wherein the first transfer loop of said pair couples said selected core with a core immediately to its right in said shift register and the second transfer loop couples said selected core with a core immediately to its left in said shift register, means for sensing the magnetic remanent state of said selected core so as to tend to create transfer current flow through both transfer loops when said selected core is switched from a preselected stable state towards its other stable state, a normally disabled regenerative switching circuit lying in each transfer loop and providing, when operating, switching energy to its associated core, a capacitor in each transfer loop and adapted to store such transfer currents as electrical charges thereon, means for supplying during the sensing of said selected core a low impedance path for one capacitor in shunt with its associated transfer loop and a high impedance path for said other capacitor in shunt with its associated transfer loop, and inhibiting means for preventing discharge of said capacitor having the high impedance shunt path until said sensing means is withdrawn, whereby when said sensing means and inhibiting means are withdrawn said capacitor having the high impedance shunt path discharges to trigger said normally disabled regenerative switching circuit into operation to supply switching energy to its associated core.

2,863,139

HIGH SPEED ELECTRONIC SCANNER

Louis Michelson, Middletown, R. I.

Application April 25, 1952, Serial No. 284,460
9 Claims. (Cl. 340—183)
(Granted under Title 35, U. S. Code (1952), sec. 266)



3. A rapid sequence pulse producing circuit comprising a plurality of grid controlled gaseous discharge devices, means connecting said discharge devices in cascade to thereby apply a positive voltage produced by firing of one device to the control grids of the subsequent discharge device, means including an oscillator for applying oppositely phased A.-C. voltages to the control grids of series adjacent discharge devices, means including said oscillator for initiating conduction in the first of said cascaded discharge devices, the other of said discharge devices being adapted to fire only in response to the simultaneous application of a positive voltage from said oscillator and a further positive voltage produced by the firing of the preceding discharge device R-C network means individually coupled to each of said gaseous discharge devices for producing an output pulse in response to the firing of the coupled discharge device, means including a normally conducting grid controlled tube for applying plate potential to said discharge devices, and means responsive to the firing of the final one of said devices and a positive voltage from said oscillator for rendering said tube non-conducting to thereby reduce the plate potential on said discharge devices and render the latter non-conducting.

2,863,140

SYSTEMS FOR INDICATING LIQUID LEVEL

Jesse E. Eshbaugh, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

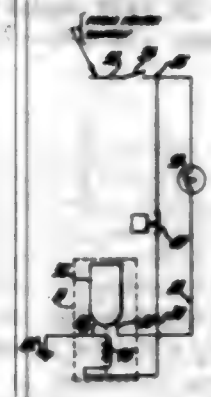
Application May 9, 1957, Serial No. 658,861
6 Claims. (Cl. 340—244)

6. A system for indicating a predetermined liquid level including a float confined for limited vertical movement in liquid, an auxiliary switch and an indicating device connected in parallel to a current supply, an electromagnet arrangement including a coil and associated with said float, said coil and auxiliary switch being connected in series to cause said electromagnet arrangement to move said float in one direction and close a circuit through said

varying the intensity of said field; a second wave guide

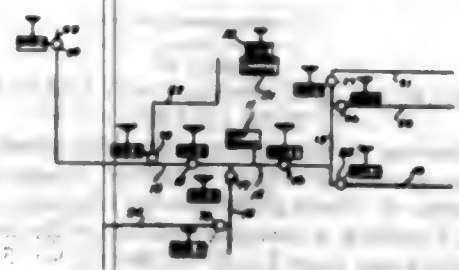
2,863,147

indicating device and float to ground when said auxiliary switch is closed and said liquid level is not established,



and said indicating device and float being connected in series to ground when said liquid level is attained and said auxiliary switch is open.

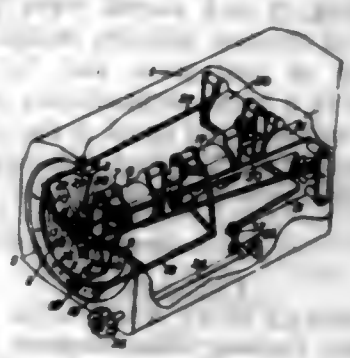
2,863,141
TRANSMISSION SYSTEM OUTAGE LOCATOR
William C. Maeser and John E. McAdam, Baton Rouge, La., assignors, by mesne assignments, to Lotran Incorporated, Baton Rouge, La., a corporation of Delaware
Application December 26, 1956, Serial No. 630,597
5 Claims. (Cl. 340—253)



1. For use in combination with a power transmission system including a plurality of branch lines and an overload circuit breaker in each line operable to open the line on overload and including a member automatically movable from a normal to an abnormal position when the circuit breaker is opened, apparatus for signalling the location of open branch lines including a plurality of radio transmitters each located adjacent one of said circuit breakers, each of said transmitters including a different distinctive signalling means operable to modulate the output of the transmitter when the transmitter is energized, an energizing circuit for each transmitter including a normally-open switch, said member of each circuit breaker being operable to close its adjacent normally-open switch when the member moves to its abnormal position, and a radio receiver positioned at a central location operable to receive radiation from each of said transmitters.

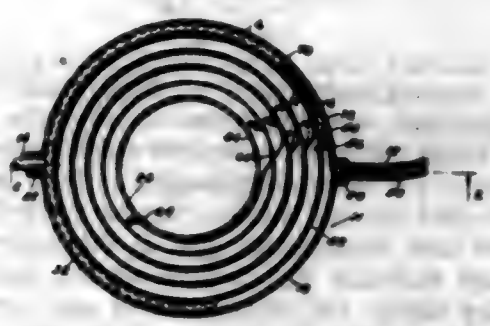
2,863,142
NAVIGATIONAL INSTRUMENTS
Frederick William Meredith, Cheltenham, and Alastair Michael Adair Majendie, Cookham Dean, England, assignors to Smiths America Corporation, Ruxton, Md.
Application July 13, 1955, Serial No. 521,857
Claims priority, application Great Britain July 16, 1954
19 Claims. (Cl. 343—107)

1. An instrument for use upon an aircraft comprising first and second indices, means to rotate the first index in a plane about an axis normal to that plane in accordance with bank of the aircraft, the said first and second indices being so shaped and disposed that their relative angular position provides a representation of the bank attitude of the aircraft relative to the horizon, a first pointer linked to the first index and thus displaced from a datum position in accordance with bank, a second pointer, and means to displace the second pointer from the datum position in accordance with a demanded bank attitude, the displacements of the first and second pointers



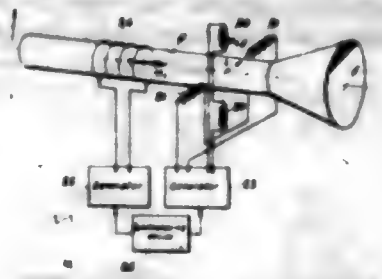
being such that when they are coincident the desired bank attitude is attained.

2,863,143
RADIO ANTENNA
Charles E. Berlin, Highland Park, Mich.
Application September 3, 1953, Serial No. 378,261
22 Claims. (Cl. 343—717)



9. An antenna assembly for radio reception and the like adapted for use particularly on moving vehicles which comprises a closed, relatively flat, annular container formed of relatively thin material and having spaced concentric, axially extending walls and spaced annular walls extending between said axially extending walls to provide a substantially annular chamber, a lead cable extending into said chamber, and a plurality of windings supported by the walls of said chamber, one of said windings comprising a toroidal coil of helically wound conductive ribbon supported in substantially parallel relation to at least one of the axially extending walls.

2,863,144
DEVICES FOR VARYING THE DIRECTION OF AN ELECTROMAGNETIC WAVE RADIATION
Stelian Herscovici and Jean Robieux, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Application July 1, 1957, Serial No. 668,949
Claims priority, application France July 13, 1956
4 Claims. (Cl. 343—756)



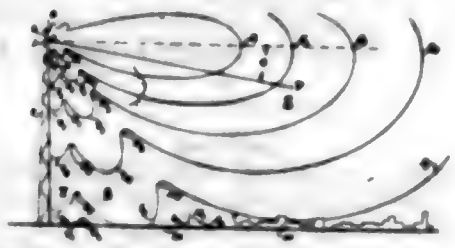
1. A system for varying the propagation direction of a rectilinear polarization wave, comprising: a first wave guide portion having an input for receiving said wave; means for creating in said wave guide portion a first uniform magnetic field directed along the propagation direction of said wave therein; means for periodically

varying the intensity of said field; a second wave guide portion in continuation of said first wave guide portion; means for creating in said second wave guide portion a magnetic field of constant intensity normal to the propagation direction of said wave and for varying the direction thereof in a plane perpendicular to said propagation direction with a period equal to the intensity variation period of said first field; and radiating means coupled to said second wave guide portion.

2,863,145
SPIRAL SLOT ANTENNA
Edwin M. Turner, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application October 19, 1955, Serial No. 541,551
3 Claims. (Cl. 343—767)
(Granted under Title 35, U. S. Code (1952), sec. 266)

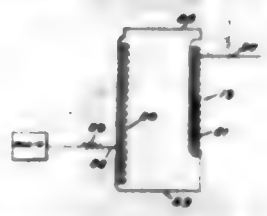
1. An antenna comprising a plural conductor open transmission line, the conductors of said open transmission line being coiled in concentric Archimedien spirals, an essentially flat dielectric mounting surface, said spirals being mounted on said surface, means to feed the conductors of said transmission line at the center of said spirals, said dielectric surface forming the front wall of a reflecting cavity, the other walls of said cavity being constructed of a material which reflects electromagnetic radiation.

2,863,146
ANTENNA ARRAY EXCITED BY VOLTAGES OF VARYING AMPLITUDE
John Ruze, Cambridge, Mass., assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio
Application March 9, 1953, Serial No. 341,231
22 Claims. (Cl. 343—770)



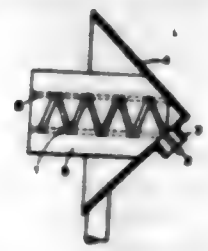
1. A vertically oriented substantially co-planar array of antennas disposed above the ground having means for exciting the antennas with the same radio-frequency voltage and means for varying the amplitude of the voltage in successively increasing steps along successive sets of the antennas of the array, from the bottom thereof to the top.

2,863,147
RADIO ANTENNA
Charles E. Berlin, Highland Park, Mich.
Application May 17, 1955, Serial No. 508,977
24 Claims. (Cl. 343—787)



1. A radio antenna for vehicles such as automobiles and the like comprising a hollow casing, a toroid coil of helically wound ribbon mounted in said casing, said toroid coil ribbon having the ends thereof spaced apart, a ferrite piece positioned in and connected to one end of said helically wound ribbon, a pair of coils electrically connected in series with said helically wound ribbon, said coils being random wound and comprising a plurality of juxtaposed loops of wire positioned adjacent said toroid coil, a tap connected between said coils and projecting through said casing, and a second tap connected near the end of said toroid coil opposite the end in which the ferrite piece is positioned and projecting through the casing, said coils and taps being electrically insulated from said casing.

2,863,148
HELICAL ANTENNA ENCLOSED IN A DIELECTRIC
Michael Morley Johnston Gammon, Kingston, and Trevor Gordon Hame, Fulham, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application June 13, 1955, Serial No. 515,158
Claims priority, application Great Britain June 17, 1954
5 Claims. (Cl. 343—895)



1. A helical aerial for the propagation or reception of a circularly polarised wave of a predetermined frequency, comprising a helical conductor enclosed within a dielectric material of which the cross section normal to the axis of said helical conductor is dimensioned to cause the phase velocity of propagation in the direction of said axis of radiation of said predetermined frequency in said material to approximate the velocity of a plane wave in an unbounded medium of said material, and said helical conductor is dimensioned taking account of said dielectric material for the propagation or reception of a circularly polarised wave of said frequency directed along said axis.

184,006
CAN PUNCH OR THE LIKE

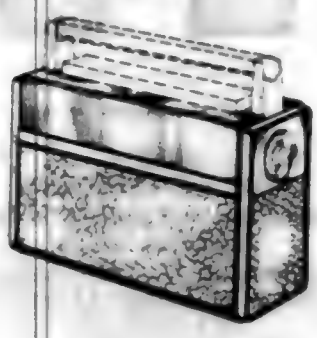
184,010

pointer, and means to displace the second pointer from direction of said wave therein; means for periodically

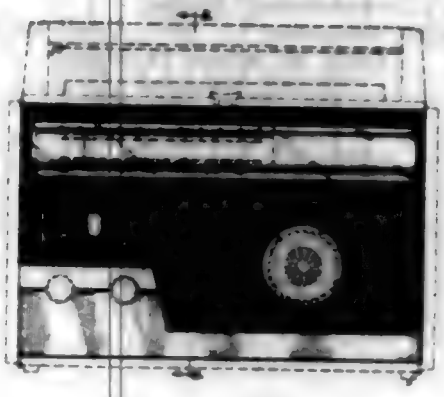
DESIGNS

DECEMBER 2, 1958

183,999
PORTABLE RADIO CABINET
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application January 24, 1958, Serial No. 49,389
Term of patent 14 years
(Cl. D56—4)

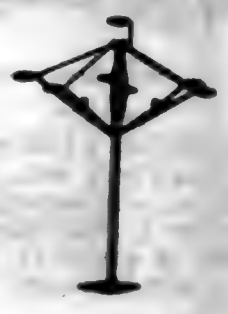


184,000
RADIO CABINET FRONT UNIT
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application January 24, 1958, Serial No. 49,390
Term of patent 14 years
(Cl. D56—4)

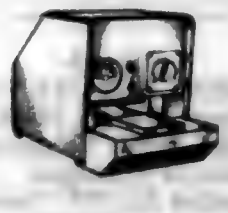


184,001
CIGARETTE LIGHTER
Sidney H. Bradd, Jr., New York, and Robert J. Harper, Scarsdale, N. Y., and John C. Lockwood, Atlanta, Ga.
Application March 14, 1958, Serial No. 50,024
Term of patent 14 years
(Cl. D48—27)

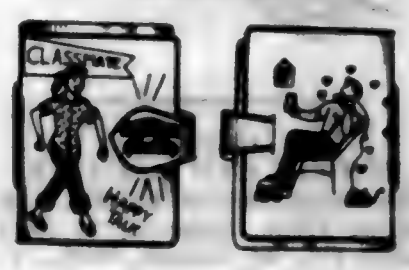
184,002
MULTIPLE PLANT SUPPORT
George A. Canning, South Deerfield, Mass.
Application August 12, 1957, Serial No. 47,337
Term of patent 7 years
(Cl. D35—3)



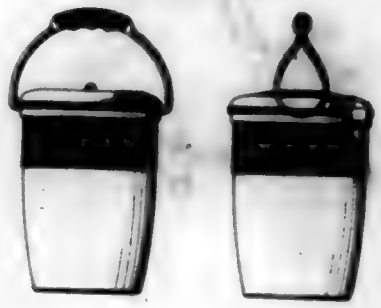
184,003
LAMINATING PRESS FOR IDENTIFICATION CARDS OR THE LIKE
Robert W. Carver, Chatham, N. J.
Application September 20, 1957, Serial No. 47,802
Term of patent 7 years
(Cl. D63—1)



184,004
LOOSE LEAF CLASP BINDER
Herbert S. Chase, Woodmere, N. Y., assignor to Bernard Cahn Co., Inc., New York, N. Y.
Application May 26, 1958, Serial No. 51,079
Term of patent 7 years
(Cl. D6—2)

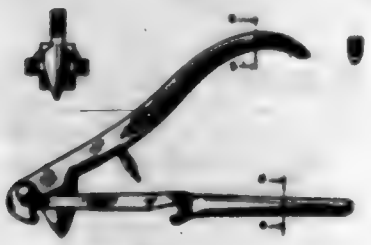


184,005
INSULATED PAIL
Lancaster P. Clark, Jr., Fairfield, Conn., assignor to Bridgeport Moulded Products, Inc., Fairfield, Conn., a corporation of Connecticut
Application July 7, 1958, Serial No. 51,680
Term of patent 7 years
(Cl. D58—17)



184,014

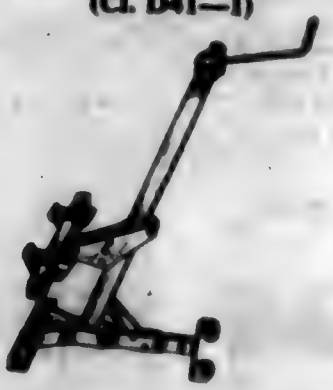
184,006
CAN PUNCH OR THE LIKE
George Coplen, Cripple Creek, Colo.
Application May 27, 1957, Serial No. 46,369
Term of patent 7 years
(Cl. D44—29)



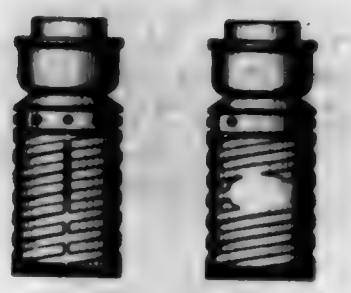
184,007
STREET LIGHTING LUMINAIRE HOOD
Alfred W. Corwin, Oak Creek, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application July 5, 1956, Serial No. 42,153
Term of patent 14 years
(Cl. D48—31)

184,008
MARINE BOW HANDLE
Jack De Young, Grand Haven, Mich., assignor to Aqua Flair Marine Equipment Company, Grand Rapids, Mich., a corporation of Michigan
Application August 20, 1957, Serial No. 47,460
Term of patent 14 years
(Cl. D71—1)

184,009
VEHICLE END LIFT JACK
Richard S. Graafsma, Benton Harbor, and Claude R. Myers, Galien, Mich., assignors to Auto Specialties Manufacturing Co., St. Joseph, Mich., a corporation of Michigan
Application January 23, 1957, Serial No. 44,576
Term of patent 14 years
(Cl. D41—1)

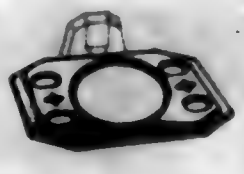


184,010
COMBINATION COIN AND RAZOR BLADE HOLDER, OR SIMILAR ARTICLE
Morris Greenblatt, New York, N. Y.
Application May 1, 1958, Serial No. 58,688
Term of patent 7 years
(Cl. D58—26)

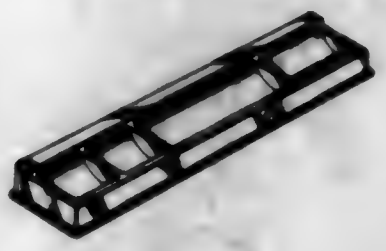


184,011
PAIR OF GOGGLES
Jack B. Hirschmann and Jack B. Hirschmann, Jr., Fairhaven, Mass.
Application February 12, 1958, Serial No. 49,610
Term of patent 14 years
(Cl. D57—1)

184,012
COMBINED TOOTHBRUSH AND TUMBLER HOLDER
James L. Hvale, Chicago, and William F. Mears, Oak Park, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Application November 15, 1957, Serial No. 48,477
Term of patent 14 years
(Cl. D4—3)

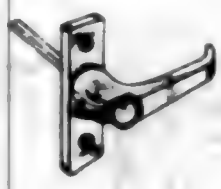


184,013
DESK TRAY
Carl W. Jarvi, Wexford, Pa., assignor to Haskell Manufacturing Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application November 13, 1956, Serial No. 43,742
Term of patent 14 years
(Cl. D74—1)

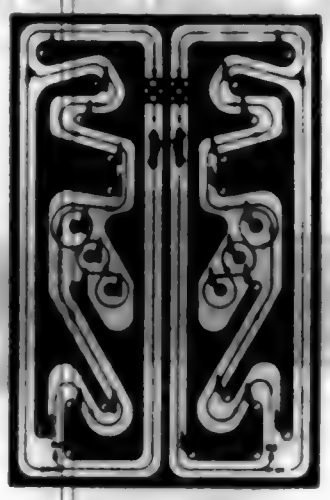


184,021

184,014
COMBINED DOOR LOCK AND ESCUTCHEON PLATE
Fred Kaiser, New York, N. Y.
Application November 7, 1957, Serial No. 48,369
Term of patent 14 years
(Cl. D10—8)



184,015
GAME BOARD
Squire Knowles, San Francisco, Calif.
Application June 10, 1958, Serial No. 51,292
Term of patent 14 years
(Cl. D34—5)

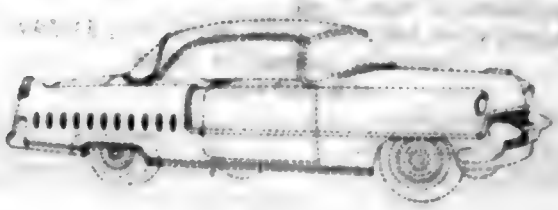


184,016
OUTRIGGER CLIP
Charles W. Kravitch, Pittsburgh, Pa.
Application April 1, 1957, Serial No. 45,519
Term of patent 14 years
(Cl. D31—4)

184,017
COMBINATION TOOTHPASTE DISPENSING CABINET AND TOOTHBRUSH HOLDER
Reuben B. Lambert, Terryville, Conn.
Application September 24, 1956, Serial No. 43,055
Term of patent 3½ years
(Cl. D4—3)

184,018
AUTOMOBILE OR SIMILAR ARTICLE
Dallas R. Lamont, New York, N. Y.
Application July 18, 1955, Serial No. 37,021
Term of patent 14 years
(Cl. D14—3)

184,019
AUTOMOBILE OR SIMILAR ARTICLE
Dallas R. Lamont, New York, N. Y.
Application July 18, 1955, Serial No. 37,022
Term of patent 14 years
(Cl. D14—3)

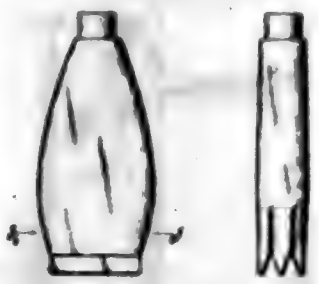


184,020
FLEXIBLE DISPENSING BOTTLE
Louis L. Lerner, Chicago, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Application January 6, 1958, Serial No. 49,137
Term of patent 14 years
(Cl. D58—6)

184,027
COMBINED MEASURING SPOON SET AND

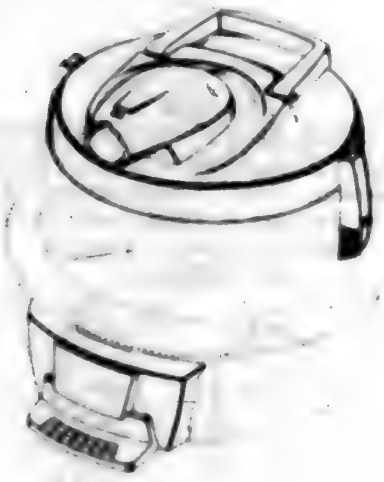
184,030
LACE

184,021
FLEXIBLE DISPENSING BOTTLE
Louis L. Lerner, Chicago, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Application January 6, 1958, Serial No. 49,145
Term of patent 14 years
(Cl. D58—6)

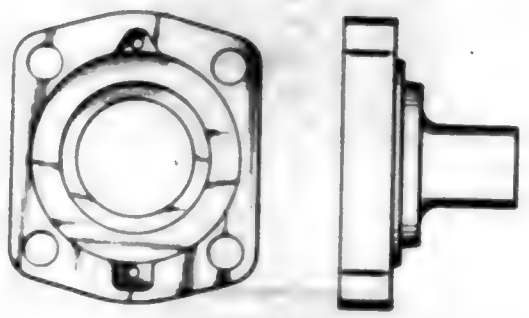


184,022
DRILL UNIT
John B. Long, Oak Hill, and Jeff C. Clay, Fayetteville, W. Va., assignors to The Long Company, Oak Hill, W. Va., a corporation of West Virginia
Application August 5, 1957, Serial No. 47,229
Term of patent 14 years
(Cl. D54—14)

184,023
VACUUM CLEANER OR SIMILAR ARTICLE
Walter E. Moore, Trumbull, and Rudolph H. Koepf, Orange, Conn., assignors to General Electric Company, a corporation of New York
Application June 30, 1958, Serial No. 51,599
Term of patent 14 years
(Cl. D9—2)

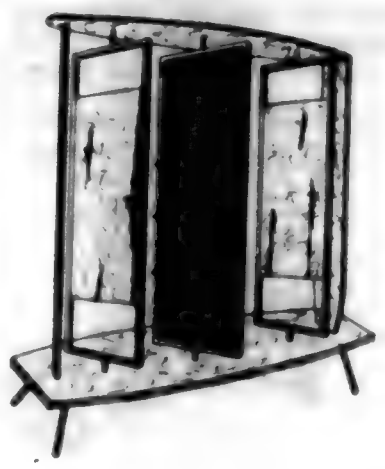


184,024
LIQUID LEVEL GAUGE HEAD OR SIMILAR ARTICLE
Robert W. Morgan, Warren W. Hastings, and Clarence A. Mass, Rochester, N. Y., assignors to Rochester Manufacturing Company, Inc., Rochester, N. Y., a corporation of New York
Application November 14, 1956, Serial No. 43,757
Term of patent 14 years
(Cl. D52—1)

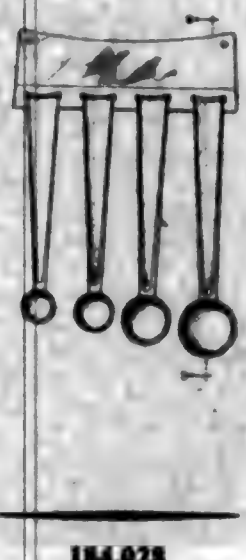


184,025
AUTOMOBILE
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application January 24, 1956, Serial No. 39,906
Claims priority, application Germany July 28, 1955
Term of patent 7 years
(Cl. D14—3)

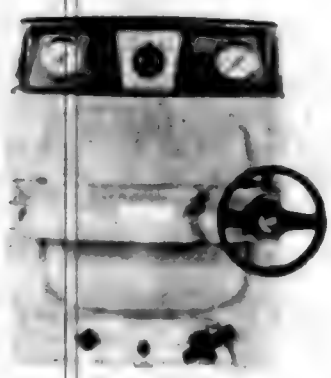
184,026
ROOM DIVIDER
Fred J. Piotraschke, Clayton, Mo.
Application May 22, 1957, Serial No. 46,291
Term of patent 3½ years
(Cl. D33—1)



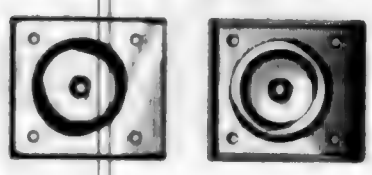
184,027
COMBINED MEASURING SPOON SET AND HOLDER THEREFOR
James R. Reichow, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn.
Application July 22, 1957, Serial No. 47,018
Term of patent 7 years
(Cl. D44—29)



184,028
STERILIZER
John A. Salvia, Rochester, N. Y., assignor to Wilmot Castle Company, Rochester, N. Y., a corporation of New York
Application November 2, 1956, Serial No. 43,646
Term of patent 14 years
(Cl. D83—1)



184,029
FURNITURE LEG BRACKET
Edward E. Schaefer, River Forest, Ill.
Application March 15, 1956, Serial No. 40,620
Term of patent 14 years
(Cl. D33—14)

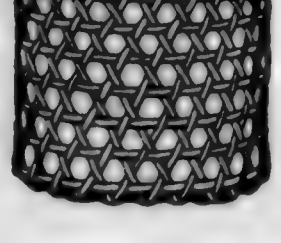


184,030
LACE
Aaron S. Staff, New York, N. Y., assignor to Texagon Mills, Incorporated, Ridgefield, N. J., a corporation of New Jersey
Application December 31, 1957, Serial No. 49,088
Term of patent 14 years
(Cl. D47—6)

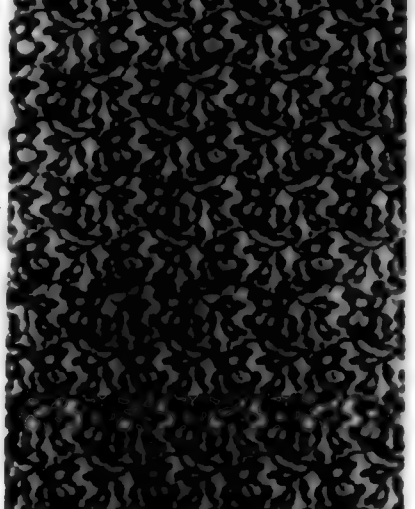
184,031
DESK BASE FOR A WRITING IMPLEMENT
Harold E. Steinberg, Philadelphia, Pa., assignor to The Esterbrook Pen Company, Camden, N. J., a corporation of New Jersey
Application January 19, 1956, Serial No. 39,842
Term of patent 14 years
(Cl. D74—1)

184,032
FIGURINE
James A. Unwin, Saugatuck, Mich., assignor to Hopkins Syndicate Inc., Chicago, Ill., a corporation of Illinois
Application November 15, 1957, Serial No. 48,495
Term of patent 14 years
(Cl. D29—23)

184,033
POWDER BOX UNIT
John McD. Webb, Saint Thomas, Virgin Islands, assignor to West Indies Bay Company, Minneapolis, Minn., a corporation of Minnesota
Application April 26, 1957, Serial No. 45,895
Term of patent 14 years
(Cl. D58—17)



184,034
LACE FABRIC
William N. Woodhouse, White Plains, N. Y., assignor to New Jersey Lace Corporation, Fairview, N. J.
Application June 3, 1958, Serial No. 51,174
Term of patent 3½ years
(Cl. D47—4)



LIST OF REISSUE PATENTEES

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PATENTS WERE ISSUED ON THE 2ND DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Besley-Welles Corp.: *See*—
Welles, Donald P., Jr. Re. 24,572.

Welles, Donald P., Jr., to Besley-Welles Corp. Fluteless swaging tap. Re. 24,572, 12-2-58, Cl. 10—152.

LIST OF PLANT PATENTEES

Armstrong Nurseries, Inc.: *See*—
Swim, Herbert C. 1,775.
Swim, Herbert C. 1,776.

Swim, Herbert C., to Armstrong Nurseries, Inc. Rose plant. 1,775, 12-2-58, Cl. 47—61.

Swim, Herbert C., to Armstrong Nurseries, Inc. Rose plant. 1,776, 12-2-58, Cl. 47—61.

LIST OF DESIGN PATENTEES

Aqua Flair Marine Equipment Co.: *See*—
De Young, Jack. 184,008.

Auto Specialties Mfg. Co.: *See*—
Graafsma, Richard S., and Myers. 184,009.

Boldt, Melvin H., to Zenith Radio Corp. Portable radio cabinet. 183,999, 12-2-58, Cl. D56—4.

Boldt, Melvin H., to Zenith Radio Corp. Radio cabinet front unit. 184,000, 12-2-58, Cl. D56—4.

Bradd, Sidney H., Jr., R. J. Harper, and J. C. Lockwood. Cigarette lighter. 184,001, 12-2-58, Cl. D48—27.

Bridgeport Moulded Products, Inc.: *See*—
Clark, Lancaster P., Jr. 184,005.

Brown & Bigelow: *See*—
Reichow, James R. 184,027.

Cahn, Bernard, Co., Inc.: *See*—
Chase, Herbert S. 184,004.

Canning, George A. Multiple plant support. 184,002, 12-2-58, Cl. D35—3.

Carver, Robert W. Laminating press for identification cards or the like. 184,003, 12-2-58, Cl. D63—1.

Chase, Herbert S., to Bernard Cahn Co., Inc. Loose leaf clasp binder. 184,004, 12-2-58, Cl. D6—2.

Clark, Lancaster P., Jr., to Bridgeport Moulded Products, Inc. Insulated pail. 184,005, 12-2-58, Cl. D58—17.

Clay, Jeff C.: *See*—
Long, John B., and Clay. 184,022.

Copien, George. Can punch or the like. 184,006, 12-2-58, Cl. D44—29.

Corwin, Alfred W., to McGraw-Edison Co. Street lighting luminaire hood. 184,007, 12-2-58, Cl. D48—31.

Daimler-Benz Aktiengesellschaft: *See*—
Nallinger, Friedrich K. H. 184,025.

De Young, Jack, to Aqua Flair Marine Equipment Co. Marine bow handle. 184,008, 12-2-58, Cl. D71—1.

Ekco Products Co.: *See*—
Hvale, James L., and Mears. 184,012.

Esterbrook Pen Co., The: *See*—
Steinberg, Harold E. 184,031.

General Electric Co.: *See*—
Moore, Walter E., and Koepf. 184,023.

Gillette Co., The: *See*—
Lerner, Louis L. 184,020.
Lerner, Louis L. 184,021.

Graafsma, Richard S., and C. R. Myers, to Auto Specialties Mfg. Co. Vehicle end lift jack. 184,009, 12-2-58, Cl. D41—1.

Greenblatt, Morris. Combination coin and razor blade holder, or similar article. 184,010, 12-2-58, Cl. D58—26.

Harper, Robert J.: *See*—
Bradd, Sidney H., Jr., Harper, and Lockwood. 184,001.

Haskell Mfg. Co., Inc.: *See*—
Jarvi, Carl W. 184,013.

Hastings, Warren: *See*—
Morgan, Robert W., Hastings, and Mass. 184,024.

Hirschmann, Jack B., and J. B. Hirschmann, Jr. Pair of goggles. 184,011, 12-2-58, Cl. D67—1.

Hirschmann, Jack B., Jr.: *See*—
Hirschmann, Jack B., and J. B. Hirschmann, Jr. 184,011.

Hopkins Syndicate Inc.: *See*—
Unwin, James A. 184,032.

Hvale, James L., and W. F. Mears, to Ekco Products Co. Combined toothbrush and tumbler holder. 184,012, 12-2-58, Cl. D4—3.

Jarvi, Carl W., to Haskell Mfg. Co., Inc. Desk tray. 184,013, 12-2-58, Cl. D74—1.

Kaiser, Fred. Combined door lock and escutcheon plate. 184,014, 12-2-58, Cl. D10—5.

Knowles, Squire. Game board. 184,015, 12-2-58, Cl. D34—5.

Koepf, Rudolph H.: *See*—
Moore, Walter E., and Koepf. 184,023.

Kravitch, Charles W. Outrigger clip. 184,016, 12-2-58, Cl. D31—4.

Lambert, Reuben B. Combination toothpaste dispensing cabinet and toothbrush holder. 184,017, 12-2-58, Cl. D4—3.

Lamont, Dallas R. Automobile or similar article. 184,018, 12-2-58, Cl. D14—3.

Lamont, Dallas R. Automobile or similar article. 184,019, 12-2-58, Cl. D14—3.

Lerner, Louis L., to The Gillette Co. Flexible dispensing bottle. 184,020, 12-2-58, Cl. D58—6.

Lerner, Louis L., to The Gillette Co. Flexible dispensing bottle. 184,021, 12-2-58, Cl. D58—6.

Lockwood, John C.: *See*—
Bradd, Sidney H., Jr., Harper, and Lockwood. 184,001.

Long Co., The: *See*—
Long, John B., and Clay. 184,022.

Long, John B., and J. C. Clay, to The Long Co. Drill unit. 184,022, 12-2-58, Cl. D54—14.

Mass, Clarence A.: *See*—
Morgan, Robert W., Hastings, and Mass. 184,024.

McGraw-Edison Co.: *See*—
Corwin, Alfred W. 184,007.

Mears, William F.: *See*—
Hvale, James L., and Mears. 184,012.

Moore, Walter E., and R. H. Koepf, to General Electric Co. Vacuum cleaner or similar article. 184,023, 12-2-58, Cl. D9—2.

Morgan, Robert W., W. W. Hastings, and C. A. Mass, to Rochester Mfg. Co., Inc. Liquid level gauge head or similar article. 184,024, 12-2-58, Cl. D52—1.

Myers, Claude R.: *See*—
Graafsma, Richard S., and Myers. 184,009.

Nallinger, Friedrich K. H., to Daimler-Benz Aktiengesellschaft. Automobile. 184,025, 12-2-58, Cl. D14—3.

New Jersey Lace Corp.: *See*—
Woodhouse, William N. 184,034.

Piotraschke, Fred J. Room divider. 184,026, 12-2-58, Cl. D33—1.

Reichow, James R., to Brown & Bigelow. Combined measuring spoon set and holder therefor. 184,027, 12-2-58, Cl. D44—29.

Rochester Mfg. Co., Inc.: *See*—
Morgan, Robert W., Hastings, and Mass. 184,024.

Salvia, John A., to Wilmot Castle Co. Steriliner. 184,028, 12-2-58, Cl. D63—1.

Schaefer, Edward E. Furniture leg bracket. 184,029, 12-2-58, Cl. D33—14.

Staff, Aaron S., to Texagon Mills, Inc. Lace. 184,030, 12-2-58, Cl. D47—6.

Steinberg, Harold E., to The Esterbrook Pen Co. Desk base for a writing implement. 184,031, 12-2-58, Cl. D74—1.

Texagon Mills, Inc.: *See*—
Staff, Aaron S. 184,030.

Unwin, James A., to Hopkins Syndicate Inc. Figurine. 184,032, 12-2-58, Cl. D29—23.

Webb, John McD., to West Indies Bag Co. Powder box unit. 184,033, 12-2-58, Cl. D58—17.

West Indies Bag Co.: *See*—
Webb, John McD. 184,033.

Wilmot Castle Co.: *See*—
Salvia, John A. 184,028.

Woodhouse, William N., to New Jersey Lace Corp. Lace fabric. 184,034, 12-2-58, Cl. D47—6.

Zenith Radio Corp.: *See*—
Boldt, Melvin H. 183,999.
Boldt, Melvin H. 184,000.

Bailey, Bruce L., and L. H. Inel, to Great Lakes Carbon Bell, Henry G., to Gar Bell Corp.

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TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AGFA Akt. : *See*—
Kaden, Willy, and Stiefenhofer. 2,862,678.

AMP Inc. : *See*—
Schmidt, Albert M. 2,862,993.
Sowa, Frank J. 2,863,132.

Abbott, Harold W., and J. J. Suran, to General Electric Co. Signal translating device. 2,863,136, 12–2–58, Cl. 340—174.

Abe, Yasuo, T. Harukawa, H. Ishikawa, T. Miki, M. Sumi, and T. Toga, to Takeda Pharmaceutical Industries, Ltd. Derivatives of 2-keto-2,3,4,5,6,7,8,10-octahydronaphthyl-(17-methane and a process for preparing them. 2,862,953, 12–2–58, Cl. 260—464.

Aberle, Roy, to Southworth Machine Co. Inverting mechanisms. 2,862,629, 12–2–58, Cl. 214—1.

Accumulatoren-Fabrik Akt. : *See*—
Philipp, Fritz. 2,862,641.

Ackerman, Benson F., and J. Geiger, to Columbia Broadcasting System, Inc. Electronic switch. 2,863,051, 12–2–58, Cl. 250—27.

Acton Laboratories, Inc. : *See*—
Graustein, Walter W., Jr. 2,863,117.
Pihl, George E. 2,863,118.

Adam, Frank, Electric Co. : *See*—
Hercules, Lester A. 2,862,995.
Hercules, Lester A. 2,863,016.

Aeroprojects, Inc. : *See*—
Jones, James B., and Straughn. 2,862,242.

Aguet, Emile, and F. Schaer, to Sulzer Freres, Societe Anonyme. Axial flow turbomachine. 2,862,687, 12–2–58, Cl. 253—78.

Ahrens, Hermann H. F. Steering wheel. 2,863,013, 12–2–58, Cl. 200—61.54.

Aircraft Armaments, Inc. : *See*—
Druschel, Edward F., and Scanga. 2,862,728.

Aircraft-Marine Products, Inc. : *See*—
Yeiser, Leon K. 2,862,994.

Akt. Brown, Boveri & Cie : *See*—
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Aktiebolaget Separator : *See*—
Dahlgren, Sven A. B. 2,862,658.
Winberg, Hugo T. 2,862,876.

Aladdin Industries, Inc. : *See*—
Lyman, Harold T., and Hill. 2,863,129.

Albanese, John J. : *See*—
Lighty, Paul E., Albanese, and Gesell. 2,863,106.

Albersheim, Walter J., to Bell Telephone Laboratories, Inc. Electromagnetic wave equalization system. 2,863,127, 12–2–58, Cl. 333—28.

Alcock, Ernest, to Robbins & Myers, Inc. Helical gear pumps. 2,862,454, 12–2–58, Cl. 103—117.

Aldridge, Clyde L. : *See*—
Cull, Neville L., and Aldridge. 2,862,979.

Alexander, Lewis W., to Halex Corp. Ball joint. 2,862,740, 12–2–58, Cl. 287—85.

Alexander, Matthew A., to Telemeter Magnetics, Inc. Pulse generator. 2,863,072, 12–2–58, Cl. 307—106.

Alexandrovsky, Georges. Process and apparatus for reducing the silicon content and increasing the temperature of molten pig iron. 2,862,810, 12–2–58, Cl. 75—60.

Allegheny Ludlum Steel Corp. : *See*—
McHenry, Ernest C. 2,862,839.

Allen Electric and Equipment Co. : *See*—
Campbell, Byron F., and Marusek. 2,862,386.
Murphy, Arthur G. 2,863,114.

Allen, Francis E. Expansible wall structure. 2,862,584, 12–2–58, Cl. 189—34.

Allen, Philip M., to Avon Products, Inc. Multiple form drive. 2,862,708, 12–2–58, Cl. 271—2.4.

Allied Chemical Corp. : *See*—
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Allis-Chalmers Mfg. Co. : *See*—
Ferguson, Rector C. 2,862,342.

Allmanna Svenska Elektriska Aktiebolaget : *See*—
Forwald, Haakon. 2,862,476.

Alton Box Board Co. : *See*—
Swaim, Marvin W., and Le Brell. 2,862,425.

Aluminum Co. of America : *See*—
Vaughn, Frank W., and De Vee. 2,862,265.

American Association of Textile Chemists and Colorists, The : *See*—
Steigler, Harold W. 2,862,383.

American Cyanamid Co. : *See*—
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Groszos, Stephen J. 2,862,952.
Staffel, Stanley F. 2,862,951.
Suen, Tzeng J., and Jen. 2,862,901.

American Hardware Corp., The : *See*—
Lucia, Robert E. 2,862,302.
Schweitzer, William V. 2,862,751.
Welch, Nicholas A. 2,862,380.

American Hospital Supply Corp. : *See*—
Blashfield, Floyd A. 2,862,392.

American Kleer-Vu Plastics, Inc. : *See*—
Mascolo, Benjamin R. 2,862,323.

American Machine & Foundry Co. : *See*—
Saunders, Norman B. 2,863,135.

American Radiator & Standard Sanitary Corp. : *See*—
Tinker, Townsend. 2,862,693.

American Viscose Corp. : *See*—
Battista, Orlando A., and Whytlaw. 2,862,614.
Battista, Orlando A., and Whytlaw. 2,862,615.
Craver, Augustus E. 2,862,303.
Reichel, Frank H., and Craver. 2,862,245.

American W. M. B., Inc. : *See*—
Meek, George W. 2,862,254.

Ames, Robert G., ¼ to S. Ames, ⅜ to K. A. Williams, ⅜ to L. W. Rosebrook, and ⅛ to G. W. Williams III. Automatic feed caulking gun. 2,862,382, 12–2–58, Cl. 72—130.

Ames, Stanley : *See*—
Ames, Robert G. 2,862,382.

Amlott, Norman J., to General Motors Corp. Cleaner silencer assembly. 2,862,572, 12–2–58, Cl. 183—44.

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Selsted, Walter T. 2,862,677.

Ander, Eric B., to Minneapolis-Honeywell Regulator Co. Solenoid valve. 2,862,084, 12–2–58, Cl. 251—130.

Anderson, Arthur W., J. M. Bruce, Jr., and E. L. Fallwell, to E. I. du Pont de Nemours and Co. Polymerization of ethylene. 2,862,917, 12–2–58, Cl. 260—94.9.

Anderson, Carl E., and S. D. Hamren, to General Electric Co. Non-consumable inert gas welding electrodes. 2,862,288, 12–2–58, Cl. 29—182.5.

Anderson, Clarence M., to Anderson Tool & Mfg. Co. Knife. 2,862,296, 12–2–58, Cl. 30—162.

Anderson, John W. Grass catcher for lawn mowers. 2,862,346, 2,862,346, 12–2–58, Cl. 56—194.

Anderson, Orin M. : *See*—
Thurmond, Jimmie V., Anderson, Ferrari, and Dean. 2,862,632.

Anderson Tool & Mfg. Co. : *See*—
Anderson, Clarence M. 2,862,296.

Andrews, Edward F., to General Motors Corp. Tuning control for radio. 2,863,059, 12–2–58, Cl. 250—40.

Andrews, Maxwell C., to International Business Machines Corp. Non-destructive sensing of magnetic cores. 2,863,133, 12–2–58, Cl. 340—174.

Andrus, Keith C. : *See*—
Silverstein, Abe, Mohs, and Adrus. 2,862,367.

Andrus, Paul G. : *See*—
Meyer, Carl L., and Andrus. 2,862,817.

Arbetman, Norman. Louvers. 2,862,439, 12–2–58, Cl. 98—121.

Arditi, Maurice, to International Telephone and Telegraph Corp. Traveling wave electron discharge devices. 2,863,093, 12–2–58, Cl. 315—39.3.

Arena Controls, Inc. : *See*—
Gwin, Robert C., Jr. 2,862,401.

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Poidomani, Catherine, and Armenia. 2,862,611.

Armour and Co. : *See*—
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Armstrong Cork Co. : *See*—
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Smythe, Edwin T. 2,862,551.

Ashworth Bros. Inc. : *See*—
Bechtel, Alfred R., Jr. 2,862,609.

Asmus, Richard W., to The Standard Oil Co. Port means for thermal diffusion apparatus. 2,862,621, 12–2–58, Cl. 210—176.

Atlantic Refining Co., The : *See*—
Keenan, Vincent J. 2,862,848.

Atwood, John A. Ventilating hood kit. 2,862,436, 12–2–58, Cl. 98—115.

Audemar, Pierre, to Societe Alsacienne de Constructions Mecaniques. Hydraulic control of an elastic load. 2,862,360, 12–2–58, Cl. 60—51.

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Ingres, Jeannot G., and Ayers. 2,862,366.

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Blaser, Robert U., and Schluderberg. 2,862,479.
Oberg, James L. 2,862,480.

Bacca, Charles R. Spring tensioned radially compressible and longitudinally extensible sectional clamp sleeve. 2,862,229, 12–2–58, Cl. 16—140.

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Bleasner, James L., and C. W. Keenan, to The University of Rochester, Clifford A. Bell, Hoffman, and Paul Hoffman. Method and apparatus for measuring the thickness of a film. 2,862,380, 12–2–58, Cl. 73—71.6.

Bailey, Bruce L., and L. H. Juel, to Great Lakes Carbon Corp. Joint for carbon electrodes. 2,862,748, 12-2-58, Cl. 287—127.

Bain, Joseph P., and R. L. Webb, to The Glidden Co. Preparation of methylenic compounds. 2,862,981, 12-2-58, Cl. 260—666.

Baker, Adolph A.: *See*—
Blow, Angus W., Baker, and Clark. 2,863,073.

Baker, Allister L., and C. D. Hillman, to Keuffel & Esser Co. Telescope eyepiece. 2,862,417, 12-2-58, Cl. 88—33.

Baker, Max P., to General Motors Corp. Oscillatory joint. 2,862,741, 12-2-58, Cl. 287—85.

Bakker, Johannes. Vibrating apparatus for concrete or like material. 2,862,393, 12-2-58, Cl. 74—61.

Ball, Albert L. Clip-slide depressor. 2,862,324, 12-2-58, Cl. 42—30.

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Banes, Fred W., A. H. Gleason, and J. F. Nelson, to Esso Research and Engineering Co. Process for preparing a thermosetting resin from a sodium polymerized butadiene polymer. 2,862,905, 12-2-58, Cl. 260—45.5.

Banks, Sydney E., to Morgan Fairest Ltd. Labelling machines. 2,862,638, 12-2-58, Cl. 216—54.

Barbier, Marcel, to Compagnie Generale de Telegraphie Sans Fil. Photo-conductive electron discharge tube. 2,863,087, 12-2-58, Cl. 315—11.

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Shaw, Bernard, Salo, and Barclay. 2,862,335.

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Barrentine, Eugene M., T. S. Hodgins, and F. J. Shelton, to Reichhold Chemicals, Inc. Adhesive composition comprising phenol aldehyde resin and hydroxyalkylcellulose and method of preparing same. 2,862,897, 12-2-58, Cl. 260—14.

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Barton, Raymond W.: *See*—
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Lindstrom, Eddie G., and Barusch. 2,862,945.

Basford, Kenneth A., to Rolls-Royce Ltd. Mechanisms for producing hydraulic pressure signals. 2,862,358, 12-2-58, Cl. 60—39.29.

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Bauer, Karl. Rotary, wobble plate type pump or motor. 2,862,456, 12-2-58, Cl. 103—162.

Baughman, James L., and V. N. Garrett. Brake pedal actuated auxiliary decelerator for internal combustion engines. 2,862,587, 12-2-58, Cl. 192—3.

Baumeister, Heard K., to International Business Machines Corp. Recording support devices. 2,862,781, 12-2-58, Cl. 346—74.

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Bayley, Charles A. D. Subaqueous structures for supporting a working platform above water. 2,862,738, 12-2-58, Cl. 287—58.

Beach, Theodore L., Jr. Vending building structure. 2,862,252, 12-2-58, Cl. 20—1.6.

Bechtel, Alfred R., Jr., to Ashworth Bros. Inc. Heavy duty flat wire conveyor belt. 2,862,609, 12-2-58, Cl. 198—193.

Beckberger, La Vern H., to Sinclair Refining Co. Reforming and isomerization process with dehydrogenation of unconverted light paraffins. 2,862,872, 12-2-58, Cl. 208—65.

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Bergstein, Frank D., to Bergstein Packaging Trust. Self-forming pouring spout for containers. 2,862,640, 12-2-58, Cl. 222—531.

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Berther, Clau, to Inventa A. G. Fuer Forschung und Patentverwertung. Process for preparing ω-cyano-carboxylic acid amides. 2,862,954 12-2-58, Cl. 260—465.4.

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Blackford, Benjamin B., and W. J. Gross, to Johnson & Johnson. Method of making plastic strip adhesive bandages. 2,862,846, 12-2-58, Cl. 154—118.

Blanchet, Hilaire. Frame for mounting blades, snow ploughs, or the like, on tractors. 2,862,315, 12-2-58, Cl. 37—144.

Blanchette, Joseph A., to Monsanto Chemical Co. Alkyl vinyl ketone-styrene copolymer hydroxylated by reducing carbonyl group. 2,862,911, 12-2-58, Cl. 260—63.

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Blashfield, Floyd A., to American Hospital Supply Corp. Rocking bed and cam control mechanism. 2,862,392, 12-2-58. Cl. 74—42.

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Bostock, James H., to Otis Engineering Corp. Anchoring devices for well tools. 2,862,564, 12-2-58, Cl. 166—214.

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Bottom, Theodore J. Awning structure. 2,862,260, 12-2-58, Cl. 20—57.5.

Bourcart, Emile A.: *See*—
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Brehm, Charles M., to The Vulcan Tool Co. Cup trimming apparatus. 2,862,553. 12-2-58, Cl. 164—47.

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Brown, Jack G. Method and apparatus for the manufacture of phonograph records. 2,862,239, 12-2-58, Cl. 18—5.3.

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Bryant, Louis D., and J. H. Hunsucker, to J. L. Holcomb Mfg. Co., Inc. Resin-fortified wax polish compositions. 2,862,900, 12-2-58, Cl. 260—28.5.

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Ward, Irving A. 2,862,766.

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Forcia, Frances, and Bunning. 2,862,754.

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California Research Corp.: *See*—
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Castro, Fernando J., to People of Puerto Rico. Protective glove. 2,862,208, 12–2–58, Cl. 2—161.

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Clark, James d'A., and Lambert. 2,862,291.

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Chicago Rawhide Mfg. Co.: *See*—
Northup, Harry L. 2,862,734.

Chicopee Mfg. Corp.: *See*—
Kalwaites, Frank. 2,862,251.

Chikaan Co.: *See*—
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Christenson, James J., and F. G. Maloney; said Maloney assor. to Edwards Equipment. Straddle carrier. 2,862,635, 12–2–58, Cl. 214—392.

Churchill, Frederick E., and M. A. Staats, to Bendix Aviation Corp. Relay trigger circuit. 2,863,101, 12–2–58, Cl. 317—149.

Ciba Ltd.: *See*—
Calliezi, Armin, Kern, and Holbro. 2,862,929.
Calliezi, Armin, Kern, and Holbro. 2,862,930.

Cincinnati Milling Machine Co.: *See*—
Merhaut, Harry G. 2,862,421.

Circle, Sidney J.: *See*—
Meyer, Edwin W., and Circle. 2,862,918.

Citizens Bank of Maryland: *See*—
Diambra, Henry M., and Edlen. 2,863,006.

Clare, George. Holder for pencils, paper clips and the like. 2,862,626, 12–2–58, Cl. 211—88.

Claridge, Elmond L.: *See*—
Zuiderweg, Frederik J., Manning, and Claridge. 2,862,667.

Clark, Alfred J.: *See*—
Hartfield, Robert G., and Clark. 2,863,047.

Clark, George H.: *See*—
Blow, Angus W., Baker, and Clark. 2,863,073.

Clark, James D., and R. D. Lambert, to Changewood Corp. Apparatus and method for separating pressed board from caul plates. 2,862,291, 12–2–58, Cl. 29—239.

Clarkson & Clarke, Inc.: *See*—
Davis, Theodore E. 2,862,760.

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Cleveland-Cliffs Iron Co., The: *See*—
Erck, Louis J., and Violetta. 2,862,807.

Clevite Corp.: *See*—
Szegvari, Andrew. 2,862,845.

Clift, Gordon R., and J. J. L. Godat, to General Precision Laboratory Inc. Camera lens turret locking device. 2,862,430, 12–2–58, Cl. 95—45.

Coates, Leroy, and A. Sayler. Lifting crane. 2,862,628, 12–2–58, Cl. 212—65.

Coats & Clark, Inc.: *See*—
Morin, Louis H. 2,862,610.

Cochran, Clyde D., to Jersey Production Research Co. Coring bit assembly. 2,862,891, 12–2–58, Cl. 255—72.

Cockburn, Curtis D.: *See*—
Theall, Charles E., Jr., and Cockburn. 2,862,048.

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Cockrell, Jesse S. Motor vehicle laundry. 2,862,322, 12–2–58, Cl. 15—302.

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Qualley, Ray W. 2,862,547.

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Gottschall, Herbert A., Guggenheim, and Louis. 2,863,031.

Colton, Anna: *See*—
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Columbia Broadcasting System, Inc.: *See*—
Ackerman, Benson F., and Geiger. 2,863,051.

Columbia Products Co.: *See*—
Scott, Arthur L., and Trowbella. 2,862,650.

Columbia-Southern Chemical Corp.: *See*—
Howerton, Arthur R., and Dale. 2,862,698.
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Pray, Blaine O., and Bissinger. 2,862,849.

Comer, John A. Hollow core panel. 2,862,257, 12–2–58, Cl. 20—35.

Commercial Wire Products Co.: *See*—
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Commonwealth Engineering Co. of Ohio, The: *See*—
Berger, Carl, and Novak. 2,862,920.
Drummond, Folsom R. 2,862,782.
Lederman, Burton E. 2,862,835.

Compagnie Generale de Radiologie: *See*—
Schram, Antoine. 2,863,053.

Compagnie Generale de Telegraphie Sans Fil: *See*—
Barbier, Marcel. 2,863,087.
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Conner, Joshua C., Jr., and H. I. Enos, Jr., to Hercules Powder Co. Purification of isopropylnaphthalene. 2,862,858, 12–2–58, Cl. 202—57.

Consoletti, Paul C., to Draper Corp. Loom shuttle. 2,862,526, 12–2–58, Cl. 139—196.

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Sadler, Harry J., and Cook. 2,862,246.

Cook, John S., to Bell Telephone Laboratories, Inc. Traveling wave tube. 2,863,086, 12–2–58, Cl. 315—3.5.

Cooksley, Ralph D., and W. M. Lester. Flexible dispensing head for pressurized containers. 2,862,048, 12–2–58, Cl. 222—394.

Cooper, Herbert K. Speech aid. 2,862,209, 12–2–58, Cl. 3—1.3.

Copeland, William M., and A. W. Wakeman, to General Electric Co. Multiple purpose ventilator and air circulator. 2,862,657, 12–2–58, Cl. 230—273.

Córdova, José J. Compound valve for mixing, distributing, and volume control of fluid. 2,862,520, 12–2–58, Cl. 137—636.2.

Corey, Flournoy, and R. D. Pitts, to Pickwick Co. Poultry processing equipment. 2,862,230, 12–2–58, Cl. 17—11.1.

Cork, Edward C., and M. Bowman-Manifold, to Electric & Musical Industries Ltd. Method of erecting coaxial electric feeder. 2,862,293, 12–2–58, Cl. 29—433.

Corning Glass Works: *See*—
Landron, Rafael, Jr. 2,863,104.

Corry-Jamestown Mfg. Corp.: *See*—
Hutzelman, Howard E. 2,862,504.

Coward, Richard W. Multiple tube centrifugal dust collector. 2,862,571, 12–2–58, Cl. 183—34.

Cox, Bonnar, and J. Goldberg, to General Electric Co. Tape spacing system. 2,863,137, 12–2–58, Cl. 340—174.

Craggs, Joseph, and K. McCann, to Goodman Mfg. Co. Extensible conveyor. 2,862,604, 12–2–58, Cl. 198—139.

Craig, W. E., and C. Lo, to Rohm & Haas Co. Pesticidal arenethiosulfonates. 2,862,847, 12–2–58, Cl. 167—30.

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Robinson, Donald B., Davis, and Crail. 2,863,009.

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Reichel, Frank H., and Craver. 2,862,245.

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Buchholz, Werner, Deutschle, and Crawford. 2,863,134.

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Crumrine, Herbert E.: *See*—
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Cull, Neville L., and C. L. Aldridge, to Esso Research and Engineering Co. Production of oxo dimer alcohols. 2,862,979, 12–2–58, Cl. 260—638.

Cull, Neville L., J. K. Mertzweiller, and M. A. Segura, to Esso Research and Engineering Co. Removal of alkali metals from viscous hydrocarbon liquids. 2,862,982, 12–2–58, Cl. 260—669.

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Dilworth, John P., Culnane, and Nelson. 2,862,684.

Cummings, Percival W., Jr., and A. O. Mogensen, to American Cyanamid Co. Method of recovering crumb of a polymer of a polymerized compound containing a single $CH_2{=}C<$ grouping from by-product material solutions. 2,862,895, 12–2–58, Cl. 260—2.3.

Curtis, Francis G. Ballcocks. 2,862,514, 12–2–58, Cl. 137—216.

Cushman, Clifford E., to Pacific Scientific Aeroproducts. Safety belt buckle. 2,862,268, 12–2–58, Cl. 24—75.

Cutler-Hammer, Inc.: *See*—
Radley, Guy R. 2,862,838.

Dufraisse, Charles, A. Etienne, and E. Terzmanoff, to l'Etat Francais, Societe d'Electrochimie, d'Electrometallurgie et

Estienne, Henri: *See*—
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Cuzzi, Alberto. Injection molding machines. 2,862,238, 12–2–58, Cl. 18—30.

Dahlgren, Sven A. B., to Aktiebolaget Separator. Method and apparatus for centrifugal separation of a mixture of solids and two liquids. 2,862,658, 12–2–58, Cl. 233—7.

Dale, Jack K.: *See*—
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D'Angelo, Joseph. Gear. 2,862,400, 12–2–58, Cl. 74—460.

Daniel, Richard M., to Houdry Process Corp. Gas lift operation. 2,862,770, 12–2–58, Cl. 302—17.

Darandik, Wilhelm. Circular linking machine. 2,862,464, 12–2–58, Cl. 112—25.

Daugherty, James P., Jr., to Sun Oil Co. Reactivation of reforming catalysts. 2,862,890, 12–2–58, Cl. 252—412.

Davey, John R., to Armstrong Cork Co. Sheet-moving apparatus. 2,862,445, 12–2–58, Cl. 101—407.

David, Reba: *See*—
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Davidson, John T., J. A. Schmidt, and J. H. Kroemer, to The Standard Register Co. Strip burster. 2,862,554, 12–2–58, Cl. 164—84.5.

Davidson, Theodore D.: *See*—
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Davies, Peter L., and G. D. Galvin, to Shell Development Co. Compositions for use as hydraulic fluids. 2,862,886, 12–2–58, Cl. 252—78.

Davies, Richard E.: *See*—
Jones, Wilford D., Marshall, Davies, and Paist. 2,862,908.

Davies, Thomas D. Catapult launching engager for aircraft nosewheel gear. 2,862,682, 12–2–58, Cl. 244—63.

Davis, Arthur W., and W. R. Harding, to General Motors Corp. Turbine starting fuel system. 2,862,355, 12–2–58, Cl. 60—39.14.

Davis, Luther, Jr., to Raytheon Mfg. Co. Transistor testing systems. 2,863,119, 12–2–58, Cl. 324—158.

Davis, Michael, to Mayfab Inc. Garment bag. 2,862,586, 12–2–58, Cl. 190—43.

Davis, Russell S.: *See*—
Robinson, Donald B., Davis, and Crall. 2,863,009.

Davis, Theodore E., to Clarkson & Clark, Inc. Knock-down enclosure for open vehicle bodies. 2,862,760, 12–2–58, Cl. 296—28.

Daystrom, Inc.: *See*—
Luedeman, Robert T. 2,862,844.

Dean, Francis H.: *See*—
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De Cesare, Dominic V. Eraser cleaners. 2,862,339, 12–2–58, Cl. 51—186.

Dede, Joseph B., and D. A. Watson, to Monsanto Chemical Co. Laminate adhesive comprising a protein and a quadricomponent interpolymer and process for preparing same. 2,862,896, 12–2–58, Cl. 260—8.

Deer, James W., and H. T. Lyman, to Iron Fireman Mfg. Co. Gravity vertical sensing switch. 2,863,014, 12–2–58, Cl. 200—61.47.

De Jahn, Fredrik W., ½ to A. N. Mann. Apparatus and method for reducing iron oxide pellets. 2,862,808, 12–2–58, Cl. 75—34.

De Lamater, Paul F.: *See*—
Nikasy, Walter A., and De Lamater. 2,862,576.

De Lano, Ralph B., Jr.: *See*—
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Delia, James, and T. C. Boltano. Batting game. 2,862,712. 12–2–58, Cl. 273—26.

Deliso, John. Socket and rod coupling. 2,862,745, 12–2–58, Cl. 287—126.

Deliso, John. Socket and rod coupling. 2,862,746, 12–2–58, Cl. 287—126.

Deliso, John J. Socket wrench set. 2,862,411, 12–2–58, Cl. 81—114.

Deliso, John J. Socket and rod coupling. 2,862,747, Cl. 287—126.

Delta Tank Mfg. Co., Inc.: *See*—
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De Mattia, Lawrence, to De Mattia Machine & Tool Co. Apparatus for the automatic controlled feeding of plastic material. 2,862,241, 12–2–58, Cl. 18—30.

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Dempsey, Joseph S. Mine roof bolt installation. 2,862,368, 12–2–58, Cl. 61—[illegible].

Dench, Edward C., to Raytheon Mfg. Co. Magnetron oscillators. 2,863,092, 12–2–58, Cl. 315—39.3.

Denison, F. Evelyn: *See*—
Denison, Henry W., and Johnson. 2,862,679.

Denison, Henry W., deceased (F. E. Denison, administratrix), and L. E. Johnson. Spinning reel. 2,862,679, 12–2–58, Cl. 242—84.2.

Dennison Mfg. Co.: *See*—
Shepherd, Ridgley G., Jr. 2,862,832.

De Prado, John R., to Sperry Rand Corp. Electrode heat exchanger for electron discharge tubes. 2,863,078, 12–2–58, Cl. 313—24.

Deutriau, Georges, to Westinghouse Electric Corp. X-ray fluoroscopic device. 2,863,061, 12–2–58, Cl. 250—80.

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Detrex Corp.: *See*—
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Devereil, Harry. Control mechanism for belt manlifts. 2,862,577, 12–2–58, Cl. 187—44.

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Vaughn, Frank W., and De Voe. 2,862,265.

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De Witt, David, H. Sandler, and R. C. Wittenberg, to Radio Receptor Co., Inc. Reflex circuit system. 2,863,065, 12–2–58, Cl. 307—88.5.

De Witt, David, H. Sandler, and R. C. Wittenberg, to Radio Receptor Co., Inc. Reflex circuit system. 2,863,066, 12–2–58, Cl. 307—88.5.

De Witt, Earl G., to Ethyl Corp. Gasoline fuels. 2,862,801, 12–2–58, Cl. 44—69.

De Witt, Earl G., to Ethyl Corp. Organic phosphorus compounds. 2,862,949, 12–2–58, Cl. 260—461.

De Witt, Earl G., to Ethyl Corp. Thionophosphates. 2,862,950, 12–2–58, Cl. 260—461.

Diambra, Henry M., and G. G. Edlen, to Citizens Bank of Maryland, and Small Business Administration. Equalized line amplification system. 2,863,006, 12–2–58, Cl. 179—171.

Dickson, John, to General Motors Corp. Pump. 2,862,655, 12–2–58, Cl. 230—141.

Dietz, William C. F. Locking curler for resilient tubes. 2,862,647, 12–2–58, Cl. 222—214.

Dillehay, Edward R., and G. H. Fernald. Storage battery separator. 2,862,988, 12–2–58, Cl. 136—146.

Dilworth, John P., C. H. Culnane, Jr., and R. F. Nelson, to The Texas Co. Process for anhydrous calcium 12-hydroxy stearate and estolide containing grease. 2,862,884, 12–2–58, Cl. 252—39.

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Dimond, Thomas L., to Bell Telephone Laboratories, Inc. Automatic wiring system and apparatus. 2,862,671, 12–2–58, Cl. 242—7.

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Dittmar, Harry R., and J. H. Burney, to Ethyl Corp. Separation of tri-(phosphonitrilic chloride). 2,862,709, 12–2–58, Cl. 23—312.

Dixon, Henry O., to Phillips Petroleum Co. Recovering oils from formations. 2,862,558, 12–2–58, Cl. 166—40.

Dixon, John S., Jr., and E. J. Koloseus, to National Foam Systems, Inc. Manufacture of foamed gypsum and the like. 2,862,829, 12–2–58, Cl. 106—88.

Dobbins, Willis E., to The National Cash Register Co. Logical gate correcting circuit. 2,863,054, 12–2–58, Cl. 250—27.

Dodson, Raymond M., to G. D. Searle & Co. 17-(pyridineacrylyl)-4-androsten-3-ones. 2,862,923, 12–2–58, Cl. 260—239.5.

Dodson, Raymond M., to G. D. Searle, & Co. 21-furfurylidene and 21-thenylidene derivatives of progesterone and 19-nor-progesterone. 2,862,924, 12–2–58, Cl. 260—239.5.

Dodson, Raymond M., and R. W. Hamilton, to G. D. Searle & Co. Esters of 2,17,21-trihydroxy-4-pregnene-3,20-dione. 2,862,939, 12–2–58, Cl. 260—397.47.

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Misek, Victor A., and Dollinger. 2,863,124.

Dorey, George B., to Enterprise Railway Equipment Co. Latching mechanism for hopper door. 2,862,460, 12–2–58, Cl. 105—308.

Dornfeld, Clinton A.: *See*—
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Doughboy Industries, Inc.: *See*—
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Doumitt, Philip S. Tobacco pipe. 2,862,506, 12–2–58, Cl. 131—184.

Downes, Lloyd C., to Hoffman Electronics Corp. Height gate generators or the like. 2,863,053, 12–2–58, Cl. 250—27.

Downie, Robert R. Cone shell for frozen confection. 2,862,820, 12–2–58, Cl. 99—89.

Doyle, James H., to Hoffman Electronics Corp. Coupling circuits or the like. 2,863,125, 12–2–58, Cl. 333—12.

Doyle, William C., to General Electric Co. Light intensity measuring device including semi-conductor translating circuit. 2,862,416, 12–2–58, Cl. 88—23.

Dr.-Ing. Rudolf Hell Kommanditgesellschaft: *See*—
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Drautz, Walter G., to General Aniline & Film Corp. Hectograph process and solvent. 2,862,444, 12–2–58, Cl. 101—149.4.

Drummond, Folsom E., to The Commonwealth Engineering Co. of Ohio. Method of making metallized fibers. 2,862,783, 12–2–58, Cl. 18—54.

Druschel, Edward F., and W. A. Scanga, to Aircraft Armaments, Inc. Detachable coupling device with alignment means. 2,862,728, 12–2–58, Cl. 285—24.

Dubbs, Arthur C., and D. R. Stevens, to Gulf Research & Development Co. Purification process. 2,862,076, 12–2–58, Cl. 260—619.

Dudley, John S., W. J. Langlois, and J. H. L. Roy, to Whitin Machine Works. Drawing frame and clearer system therefor. 2,862,249, 12–2–58, Cl. 19—139.

Frei, Arthur J., Sr., to General Motors Corp. Freezing device. 2,862,370, 12–2–58, Cl. 62—366.

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Dufraisse, Charles, A. Etienne, and R. Toromanoff, to l'Etat Francais, Societe d'Electrochimie, d'Electrometallurgie et des Acieries Electriques d'Ugine, and l'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude. Process for the manufacture of hydrogen peroxide. 2,862,794, 12–2–58, Cl. 23—207.
Dukes, Eugene J. Automatic sprinkler. 2,862,565, 12–2–58, Cl. 169—38.
Dulis, Edward J., and P. Payson, to Crucible Steel Co. of America. Substantially nickel-free austenitic and corrosion resisting Cr-Mn-N steels. 2,862,812, 12–2–58, Cl. 75—125.
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Dunagan, Edgar L., L. P., and K. M. Lid-lifting device for trash cans. 2,862,683, 12–2–58, Cl. 248—147.
Dunagan, Kenneth M.: *See*—
Dunagan, Edgar L., L. P., and K. M. 2,862,683.
Dunagan, Lena P.: *See*—
Dunagan, Edgar L., L. P., and K. M. 2,862,683.
Duncan, William M. Incinerator. 2,862,463, 12–2–58, Cl. 110—170.
Dungler, Julien. Apparatus for drying strip material. 2,862,305, 12–2–58, Cl. 34—68.
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Anderson, Arthur W., Bruce, and Fallwell. 2,862,917.
Petree, George A. 2,862,790.
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Dykstra, Fred J., to Ethyl Corp. Process for removing nitrogen from petroleum hydrocarbons with an ester of a metaboric acid. 2,862,878, 12–2–58, Cl. 208—254.
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Zappone, Charles F., and Ebersberger. 2,862,228.
Eby, Lawrence T.: *See*—
Rehner, John, Jr., and Eby. 2,862,867.
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Edlen, George G.: *See*—
Diambra, Henry M., and Edlen. 2,863,006.
Edwards Equipment: *See*—
Christenson, James J., and Maloney. 2,862,685.
Edwards, Monte W., and M. O. Murphy, to General Electric Co. Improved methods of making electric discharge device envelopes. 2,862,336, 12–2–58, Cl. 49—81.
Edwards, Samuel H. Ventilation system. 2,862,434, 12–2–58, Cl. 98—33.
Ehret, Robert J., to Minneapolis-Honeywell Regulator Co. Current control apparatus. 2,863,113, 12–2–58, Cl. 323—4.
Eicken, Henri, dit Estienne. Apparatus for defining the percentage of moisture contained in any material and for checking or controlling machines treating moist material. 2,862,304, 12–2–58, Cl. 34—52.
Eisenhauer Mfg. Co., The: *See*—
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Eketorp, Sven G. H., and S. H. Backström, to Stora Kopparbergs Bergslags Aktiebolaget. Continuous iron and steel making in a rotary vessel. 2,862,811, 12–2–58, Cl. 75—60.
Electric & Musical Industries Ltd.: *See*—
Cork, Edward C., and Bowman-Manifold. 2,862,793.
Gammon, Michael M. J., and Hame. 2,863,148.
Lee, David F., and White. 2,863,049.
Electric Steel Foundry Co.: *See*—
Larsen, Paul V. 2,862,314.
Electric Storage Battery Co., The: *See*—
Scheuerle, Robert F., and Mahon. 2,862,985.
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Strauss, Howard J. 2,862,989.
Eliason, Marcus C., to Hughes Aircraft Co. Sequential gated automatic gain control circuit. 2,863,046, 12–2–58, Cl. 250—20.
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Trousdale, Robert B., Elliott, and Walz. 2,863,001.
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Morris, William W., and Ellis. 2,863,032.
Ellis, Lee. Try-on slippers. 2,862,311, 12–2–58, Cl. 36—11.5.
Emenee Industries, Inc.: *See*—
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Emerson, John R., to Fuller & Emerson Mfg. Co. Anti-stall device or dash-pot. 2,862,702, 12–2–58, Cl. 267—1.
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Engelhard, William E. Method of and apparatus for heat treating parts. 2,862,843, 12–2–58, Cl. 148—21.55.
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Conner, Joshua C., Jr., and Enos. 2,862,858.
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Dorey, George B. 2,862,460.
Epstein, David W., and R. G. Ramberg, to Radio Corp. of America. Flat tri-color kinescopes. 2,863,091, 12–2–58, Cl. 315—13.
Erck, Louis J., and D. C. Violetta, to The Cleveland-Cliffs Iron Co. Updraft pelletizing method. 2,862,907, 12–2–58, Cl. 75—5.
Esco Cabinet Co.: *See*—
Cann, Harry E., Sr. 2,862,782.
Eshbaugh, Jesse E., to General Motors Corp. Systems for indicating liquid level. 2,863,140, 12–2–58, Cl. 340—244.
Esso Research and Engineering Co.: *See*—
Banes, Fred W., Gleason, and Nelson. 2,862,905.
Cull, Neville L., and Aldridge. 2,862,979.
Cull, Neville L., Mertzweiller, and Segura. 2,862,982.
Hunt, John C. 2,862,856.
Leary, Robert F., and Fusco. 2,862,914.
Nelson, Joseph F., and Leary. 2,862,918.
Rehner, John, Jr., and Eby. 2,862,867.
Smith, Lloyd B. 2,862,871.
Voorhies, Alexis, Jr. 2,862,870.
Westlund, Roy A., Jr., and Paxton. 2,862,825.
Estienne, Henri: *See*—
Eicken, Henri. 2,862,304.
Etablissements Alustra: *See*—
Wolf, Alfred. 2,862,692.
Etablissements Grimar: *See*—
Muller, Roger. 2,862,405.
Ethyl Corp.: *See*—
De Witt, Earl G. 2,862,801.
De Witt, Earl G. 2,862,949.
De Witt, Earl G. 2,862,950.
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Dykstra, Fred J. 2,862,879.
Etienne, André: *See*—
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Exner, Herbert-Joachim, to Farbenfabriken Bayer Akt. Disazo dyestuffs. 2,862,919, 12–2–58, Cl. 260—160.
Fada Radio & Electric Co., Inc.: *See*—
McKain, Walter P. 2,862,409.
Faeber, Harry W., to Time Inc. Threading mechanism. 2,862,705, 12–2–58, Cl. 271—2.1.
Fairchild Engine and Airplane Corp.: *See*—
Miller, Sherman B. 2,862,375.
Fairhurst, Harold A., to Murphy Radio Ltd. Electron beam controlling system. 2,862,999, 12–2–58, Cl. 178—5.4.
Fallwell, Ernest L.: *See*—
Anderson, Arthur W., Bruce, and Fallwell. 2,862,917.
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Exner, Herbert-Joachim. 2,862,919.
Holtschmidt, Hans, Bayer, Nischk, and Müller. 2,862,972.
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Fuchs, Otto, and Jockusch. 2,862,963.
Siegitz, Adolf, Bestian, and Rehn. 2,862,974.
Fardon, Harry D., Jr., and H. J. Pike, Jr., to Allied Chemical Corp. Tow crimping apparatus. 2,862,279, 12–2–58, Cl. 28—1.
Farr, John W. F., W. S. Gilmour, and A. Kennaway, to Imperial Chemical Industries Ltd. Process for forming granules of thermoplastic polymeric materials. 2,862,243, 12–2–58, Cl. 18—47.5.
Fenoglio Charles, to G. M. Giannini & Co. Inc. Vibration damping means for pressure sensitive devices. 2,862,321, 12–2–58, Cl. 137—781.
Ferguson, Hector C., to Allis-Chalmers Mfg. Co. Cotton harvester with specific conveying and receptacle structure. 2,862,342, 12–2–58, Cl. 56—12.
Fernald, Gordon H.: *See*—
Dillehay, Edward R., and Fernald. 2,862,988.
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Thurmond, Jimmie V., Anderson, Ferrari, and Dean. 2,862,632.
Ferris, Walter, to The Oilgear Co. Hydrodynamic machine. 2,862,455, 12–2–58, Cl. 103—161.
Filar, Leo J., to Hercules Powder Co. Azeotropic distillation of monohydric and dihydric phenols. 2,862,857, 12–2–58, Cl. 202—42.
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Stevens, Clarence E. 2,862,225.
Finkel, Leonard, and I. P. Magasiny, to Tele-Dynamics Inc. Voltage controlled frequency modulated oscillator. 2,863,122 12–2–58, Cl. 332—16.
Finlayson, Donald, and B. Krzesinski, to British Celanese Ltd. Cellulose triacetate fabrics of improved safe ironing temperature and process of heat treatment to obtain said fabrics. 2,862,785, 12–2–58, Cl. 8—131.
Fischer, Karl. Distributed amplifier arrangement. 2,863,007, 12–2–58, Cl. 179—171.
Fisher, Karl E.: *See*—
Cantrell, Troy L., and Fisher. 2,862,800.
Flaatten, Kjell L. Piston ring remover. 2,862,290, 12–2–58, Cl. 29—222.
Flanagan, Charles D., to Metals & Controls Corp. Thermostats. 2,863,025, 12–2–58, Cl. 200—138.
Fletcher, Charles J., to United States of America, Navy. ROR boost power system providing boundary layer control in combination with afterburning. 2,862,366, 12–2–58, Cl. 170—135.4.
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Brink Edwin H. 2,862,541.
Guibert, Rene J. 2,862,426.
Whitmore, Robert A. 2,862,822.
Wilbur, Paul C., and Whitmore. 2,862,821.
Wilson, Clifford K., Mount, and Jabbusch. 2,862,533.
Forcia, Frances, and M. A. Bunning. Pastry server. 2,862,754, 12–2–58, Cl. 294—1.
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Forman, Harry: *See*—
Traver Philip C. 2,862,210.
Forsberg Arthur R. Apparatus for liquid treatment of granular material. 2,862,511, 12–2–58, Cl. 134—183.
Forwald, Haakon, to Allmanna Svenska Elektriska Aktiebolaget. Oil pressure operating device for electric circuit breakers. 2,862,476, 12–2–58, Cl. 121—38.
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Fox, William P., to Merriman Bros., Inc. Cable clamp. 2,862,270, 12–2–58, Cl. 24—125.
Franz, Erwin E., to Bell Telephone Laboratories, Inc. Electrical network assembly. 2,862,992, 12–2–58, Cl. 174—52.
Franz, James N. Collapsible projection screen. 2,862,532, 12–2–58, Cl. 160—368.
Fraser, Robert T., to Sperry Rand Corp. Electronic pulse timing system. 2,863,052, 12–2–58, Cl. 250—27.
Fraser, Robert W., and V. R. Herterick, to United-Carr Fastener Corp. Electrical switch assembly and indicator. 2,863,028 12–2–58, Cl. 200—167.
Fredholm, Gunnar I. Ironing machines. 2,862,817, 12–2–58, Cl. 38—2.

Granche, Stephen R. Emergency power brake. 2,862,583, 12–2–58, Cl. 188—106.
Grant, Charles R. A., to Pressure Gauges Ltd. Fluid pressure
Harmac Co., The: *See*—
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Frei, Arthur J., Sr., to General Motors Corp. Freezing device. 2,862,370, 12–2–58, Cl. 62—366.

Fresard, Marcel, to Mefina S. A. Lock having a sliding bolt. 2,862,381 12–2–58, Cl. 70—462.

Frese, Albert C., Jr. Aerating and bubbling attachment for hose. 2,862,764, 12–2–58, Cl. 299—76.

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Fried, Josef: *See*—
Thomas, Gordon H., and Fried. 2,862,926.

Fry, Francis J., to United States of America, Navy. Ultrasonic transducer. 2,863,075, 12–2–58, Cl. 310—8.1.

Fuchs, Otto, and H. Jockusch, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Process of purifying terephthalic acid. 2,862,963, 12–2–58, Cl. 260—525.

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Emerson, John R. 2,862,702.

Funahashi, Hideya: *See*—
Otsuki, Hiroshi, and Funahashi. 2,862,940.

Fusaroli, Goffredo, to Sampre S. A. Meccanica Precisione. Sleeve for rollers. 2,862,250, 12–2–58, Cl. 19—143.

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Leary, Robert F., and Fusco. 2,862,914.

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Gadget-Of-The-Month Club, Inc.: *See*—
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Gamble, John R., to The Kan Valley Steel Co. Supports for cylindrical members on a transport carrier. 2,862,631, 12–2–58 Cl. 214—10.5.

Gammon, Michael M. J., and T. G. Hame, to Electric & Musical Industries Ltd. Helical antenna enclosed in a dielectric. 2,863,148. 12–2–58, Cl. 343—895.

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Seguin, Paul F., and Gans. 2,862,787.

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Gardiol, Franco. Deformable toy track. 2,862,338, 12–2–58, Cl. 46—202.

Garner, Phillip J.: *See*—
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Gatsis, John G., to Universal Oil Products Co. Treatment of wood tar distillate. 2,862,975, 12–2–58, Cl. 260—613.

Gaubert Rene J., to Food Machinery and Chemical Corp. Apparatus for handling sheet material articles. 2,862,426, 12–2–58, Cl. 93—93.

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Bell, Harry G. 2,862,206.
Bell Harry G. 2,862,639.

Gayler, George A., to Wipac Development Ltd. Electric wiring installations for electric equipment on vehicles. 2,863,095, 12–2–58, Cl. 315—82.

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Thatcher, Lewis E. 2,863,017.

Geiger, Joseph: *See*—
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Geiger, Russell C., and D. A. Meeker, to The Hobart Mfg. Co. Dishwasher. 2,862,510, 12–2–58, Cl. 134—111.

Geisler, William, to Cantrell & Cockrane Corp. Sterilizing and packaging beverages. 2,862,528, 12–2–58, Cl. 141—39.

General Aniline & Film Corp.: *See*—
Drautz Walter G. 2,862,444.
Schmidt-Nickels, Wilhelm. 2,862,932.
Schmidt-Nickels, Wilhelm, and Randall. 2,862,931.

General Dynamics Corp.: *See*—
Blow, Angus W., Baker, and Clark. 2,863,073.
Trousdale, Robert B., Elliott, and Walz. 2,863,001.

General Electric Co.: *See*—
Abbott, Harold W., and Suran. 2,863,130.
Anderson, Carl E., and Hamren. 2,862,288.
Bedford, Burnice D. 2,863,111.
Cady, Charles E. 2,862,371.
Copeland, William M., and Wakeman. 2,862,657.
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Doyle, William C. 2,862,416.
Edwards, Monte W., and Murphy. 2,862,336.
Ghandhi, Sorab K. 2,863,068.
Gray, Willard F. M., and Wheeler. 2,863,130.
Holmes, Robert G. 2,862,996.
Keonjian, Edward. 2,863,008.
Kordalewski, Andrew P. 2,862,840.
Lamb, Frederick S. 2,863,082.
Mathis, Vernon P., and Suran. 2,863,045.
Orr, Robert A. 2,862,220.
Polster, William E. 2,863,081.
Powell, David B. 2,863,022.
Rice, Neil O. 2,863,100.
Ross, John P. 2,862,888.
Rowe, Raymond N. 2,863,023.
Schmall, Wilbur A. 2,862,441.
Shaw, Bernard, and Salo. 2,862,337.
Shaw, Bernard, Salo, and Barclay. 2,862,335.
Suran, Jerome J., and Mathis. 2,863,070.
Theall, Charles E., Jr., and Cockburn. 2,863,048.
Veitch, Albert H., and Johnson. 2,862,997.
Vinson, William D., and Jacoby. 2,863,035.
Wallace, Henry W. 2,863,033.

General Mills, Inc.: *See*—
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General Motors Corp.: *See*—
Amiott, Norman J. 2,862,572.
Andrews, Edward F. 2,863,039.
Baker, Max P. 2,862,741.
Bertsch, Joseph F. 2,862,726.
Brown, William E., Gurney, and Leavengood. 2,863,013.
Bychinsky, Wilfred A., and Skunda. 2,863,090.
Davis, Arthur W., and Harding. 2,862,335.
Dickson, John. 2,862,655.
Eshbaugh, Jesse E. 2,863,140.
Frei, Arthur J., Sr. 2,862,370.
Gardiner, Arthur W. 2,862,654.
Guyton, James H. 2,863,044.
Jackson, George W. 2,862,725.
Larabell, Wilfred J. 2,862,227.
Leslie, James D., and Wubbe. 2,862,703.
Long, Paul J., Jr., and Schmitz. 2,862,742.
McDonnell, Joseph M. 2,862,450.
Miller, Joseph P., Rasmussen, and Patrie. 2,862,459.
Norton, James A. 2,862,542.
Olson, Elmer. 2,862,487.
Parshall, Millis V. 2,862,862.
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Pringham, Henry E. J. 2,862,489.
Pryor, Lucien W. 2,862,419.
Rounds, Fred G., and Schwind. 2,862,481.
Schneider, Paul L., and Raver. 2,862,391.
Spears, Esten W., Jr. 2,862,339.
Trisler, Milton A. 2,862,490.
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General Precision Laboratory Inc.: *See*—
Clift, Gordon R., and Godat. 2,862,430.
Gilchrist, Harry C., and Zaleski. 2,863,128.

General Scientific Corp.: *See*—
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Gerber, Kenneth G., to Imperial Chemical Industries Ltd. Apparatus for introducing fluid pressure into continuously advancing tubular film. 2,862,234, 12–2–58, Cl. 18—15.

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Lighty, Paul E., Albanes, and Gesell. 2,863,106.

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Ghandhi, Sorab K., to General Electric Co. Signal responsive network. 2,863,068, 12–2–58, Cl. 307—88.5.

Giannini, G. M., & Co. Inc.: *See*—
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Gibson, Edward H. Transmission joint. 2,862,373, 12–2–58, Cl. 64—9.

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Gilchrist, Harry C., and J. F. Zaleski, to General Precision Laboratory Inc. Waveguide tuner. 2,863,128, 12–2–58. Cl. 333—98.

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Farr, John W. F., Gilmour, and Kennaway. 2,862,243.

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Glaser, Frank W., to Boroilte Corp. Hot strength corrosion resistant material and production thereof. 2,862,828. 12–2–58, Cl. 106—56.

Gleason, Anthony H.: *See*—
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Meyer, Edwin W., and Circle. 2,862,918.

Gloskey, Carl R., to Metal & Thermit Corp. Process for the preparation of high purity alkyltin compounds. 2,862,944, 12–2–58, Cl. 260—429.7.

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Clift, Gordon R., and Godat. 2,862,430.

Goebel, William A.: *See*—
Huth, John A., and Goebel. 2,862,759.

Goldberg, Jacob: *See*—
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Goldman, David A. Vector summer. 2,862,661, 12–2–58, Cl. 235—61.

Goldsmith, Fred C., to The Lubrizol Corp. Continuous process for the preparation of dithiophosphate acid esters. 2,862,947, 12–2–58, Cl. 260—461.

Gomberg, Edward N. Method and means for testing aqueous solutions for presence of protein. 2,862,706, 12–2–58, Cl. 23—230.

Gonski, Joseph, to Goodman Mfg. Co. Boring type miner. 2,862,700, 12–2–58, Cl. 262—7.

Goodhue, Lyle D., to Phillips Petroleum Co. Dithiocarbamate rodent repellent composition and methods. 2,862,850, 12–2–58, Cl. 167—46.

Goodman Mfg. Co.: *See*—
Craggs, Joseph, and McCann. 2,862,604.
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Newton, John S. 2,862,608.
Sloman, Joseph J. 2,862,609.

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Goreau, Theodore N., to Hercules Powder Co. Method of improving electrical properties of plasticizers by treatment with magnesium silicate. 2,862,958. 12–2–58, Cl. 260—475.

Goreau, Theodore N., to Hercules Powder Co. Improving the electrical properties of pentaerythritol esters by treatment with magnesium silicate. 2,862,961, 12–2–58, Cl. 260—488.

Gorton, Thomas S., Jr. Frozen food package. 2,862,823, 12–2–58, Cl. 99—195.

Gottschall, Herbert A., S. P. Guggenheim, and A. S. Louis, to M. A. Coler. Precision potentiometers. 2,863,031, 12–2–58, Cl. 201—62.

Graham, Clifford P., and C. H. Leathers, to MacClatchie Mfg. Co. Shaft coupling device. 2,862,739, 12–2–58, Cl. 287—62.

Hoffman Electronics Corp.: *See*—

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Granche, Stephen R. Emergency power brake. 2,862,583, 12-2-58, Cl. 188—106.
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Graustein, Walter W., Jr., to Acton Laboratories, Inc. Phase measuring system. 2,863,117, 12-2-58, Cl. 324—85.
Gray, Willard F. M., and R. D. Wheeler, to General Electric Co. Coil construction for electromagnetic induction apparatus. 2,863,120, 12-2-58, Cl. 336—207.
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Green, Harry N., to The Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Electric switching devices. 2,863,021, 12-2-58, Cl. 200—114.
Greer, Don S., and J. H. Lowe, to Wire Belt Co. of America, Inc. Wire belt. 2,862,602, 12-2-58, Cl. 198—42.
Grevich, John J., to Doughboy Industries, Inc. Conveyor chain. 2,862,005, 12-2-58, Cl. 198—162.
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Griffith, Kenneth F. Apparatus for electrolytic production of a metal product from fused salts. 2,862,863, 12-2-58, Cl. 204—227.
Griswold, Roger C. Folding tool for braiding. 2,862,704, 12-2-58, Cl. 270—66.
Grönberg, Anton B. Straw cutter for combines. 2,862,536, 12-2-58, Cl. 146—117.
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Thompson, Jennings B. 2,862,563.
Guillou, Francois. Tube coupling having a pushed-wedge type packing. 2,862,732, 12-2-58, Cl. 285—342.
Guinane, James P., and R. F. Batchelar, to Herculox Loose Leaf Corp. Book binders. 2,862,329, 12-2-58, Cl. 45—85.
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Gulf Research & Development Co.: *See*—
Dubbs, Arthur C., and Stevens. 2,862,976.
Gündel, Wolfgang, and H. Linden, to Henkel & Cie. G. m. b. H. Aromatic ether and thioether o-methylenebenzoic acids and their salts and esters, and a process of producing same. 2,862,956, 12-2-58, Cl. 260—470.
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Guyton, James H., to General Motors Corp. Sensitivity control for signal seeking tuners. 2,863,044, 12-2-58, Cl. 250—20.
Gwin, Robert C., Jr., to Arens Controls Inc. Bicycle gear shift control. 2,862,401, 12-2-58, Cl. 74—489.
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Rachman, Isadore B., and Bobb. 2,862,778.
Haas, Herbert H., and E. V. Szlaga, to Continental Motors Corp. Internal combustion engines. 2,862,484, 12-2-58, Cl. 123—55.
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Harding, Elmer C., J. J. Pleako, and J. R. Vranizan, to Spring Load Mfg. Corp. Pipe cutter. 2,862,295, 12-2-58, Cl. 30—92.
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Harley, Frank B. Releasable buckles. 2,862,271, 12-2-58, Cl. 24—197.
Harmac Co., The: *See*—
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Harris, Donald S., to New Castle Products, Inc. Door latch unit. 2,862,378, 12-2-58, Cl. 70—95.
Harris, Lewis B., to Republic Aviation Corp. Lock and operating mechanism for deferred action batteries. 2,862,390, 12-2-58, Cl. 74—2.
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Hart, David K. Internal combustion engine. 2,862,482, 12-2-58, Cl. 123—25.
Hartfield, Robert G., and A. J. Clark, to Motorola, Inc. Radio receiver. 2,863,047, 12-2-58, Cl. 250—20.
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Jones, Maurice H. 2,862,442.
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Hawthorne, Evelyn J. Hair waving device. 2,862,507, 12-2-58, Cl. 132—7.
Hayford, Richard E., C. B. Kaiser, and H. E. Crumrine, to Haloid Xerox Inc. Powder particle aerosol generator. 2,862,646, 12-2-58, Cl. 222—193.
Haselroth, Kenneth M. Rear view mirror. 2,862,420, 12-2-58, Cl. 88—98.
Hearne, George W.: *See*—
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Heathcote, Roy M.: *See*—
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Hedden, Robert R., and H. W. Roessler, to Chikaan Co. Flanged, band-clamped swivel coupling for fluid handling tubes. 2,862,731, 12-2-58, Cl. 285—272.
Heilig, George E. Dry lime acetylene generator. 2,862,605, 12-2-58, Cl. 48—33.
Heldfond, Harold S. Supplementary container for use with receptacle closures. 2,862,637, 12-2-58, Cl. 215—38.
Hell, Rudolf, to Dr.-Ing. Rudolf Hell Kommanditgesellschaft. Device for making printing blocks. 2,863,000, 12-2-58, Cl. 178—6.6.
Hemphill, Francis A., to Burroughs Corp. Two-way shift register. 2,863,138, 12-2-58, Cl. 340—174.
Henkel & Cie. G. m. b. H.: *See*—
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Hennig, Paul W., and E. K. Richter, to VEB Zeiss Ikon. Reflex cameras. 2,862,429, 12-2-58, Cl. 95—42.
Heppner, Elmore A., to Heppner Sales Co. Magnetic device 2,862,752, 12-2-58, Cl. 292—251.5.
Heppner Sales Co.: *See*—
Heppner, Elmore A. 2,862,752.
Hercules, Lester A., to Frank Adam Electric Co. Mounting back for electrical switching devices. 2,862,995, 12-2-58, Cl. 174—99.
Hercules, Lester A., to Frank Adam Electric Co. Switch assemblies. 2,863,016, 12-2-58, Cl. 200—67.
Hercules Powder Co.: *See*—
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Goreau, Theodore N. 2,862,956.
Goreau, Theodore N. 2,862,961.
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Herrmann, Günter, to Protona Produktionsgesellschaft fur elektroakustische Gerate G. m. b. H. Sound tape winding reels. 2,862,674, 12-2-58, Cl. 242—55.12.
Herscovici, Stelian, and J. Robieux, to Compagnie Generale de Telegraphie Sans Fil. Devices for varying the direction of an electromagnetic wave radiation. 2,863,144, 12-2-58, Cl. 343—756.
Herterick, Vincent R.: *See*—
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Hertlein, John G.: *See*—
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Hill, Oiva E., to Norton Co. Grinding machine. 2,862,838, 12-2-58, Cl. 51—103.
Hillberg, Bror, to Superior Concrete Accessories, Inc. Concrete wall form with preformed filler panels. 2,862,277, 12-2-58, Cl. 25—131.
Hillebrand, Earl D., to Geo. D. Roper Corp. Automatic control for range. 2,862,667, 12-2-58, Cl. 236—32.
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Johnson, Ralph E.: *See*—
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Doyle, James H. 2,863,125.
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Hohn, Francis H.: *See*—
Hohn, Frank X. and F. H. 2,862,826.

Hohn, Frank X. and F. H., to Universal Marion Corp. Mold material for casting group IVb metals and method of making same. 2,862,820, 12–2–58, Cl. 106—38.23.

Holby, James C., and R. L. Westrum, to D. W. Ovan & Sons, Inc. Air conditioner construction for automotive vehicles. 2,862,652, 12–2–58, Cl. 230—56.

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Caliezi, Armin, Kern, and Holbro. 2,862,930.

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Hollins, Jesse R. 2,863,096.

Hollins, Jesse R., to A., J. R., and L. S. Hollins, and T. D. Davidson. Automotive vehicle signaling system and selector switch therefor. 2,863,096, 12–2–58, Cl. 315—83.

Hollins, Lewis S.: *See*—
Hollins, Jesse R. 2,863,096.

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Holstein, John H. Centrifugal pump. 2,862,451, 12–2–58, Cl. 103—83.

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Hopkins, Charles H., and H. Mathis. Safety device for circuit controllers. 2,863,012, 12–2–58, Cl. 200—50.

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Singleton, Robert W., Horback, Riley, and Sprague. 2,862,833.

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Hotten, Bruce W., and F. O. Johnson, to California Research Corp. Metal amidophosphonate greases. 2,862,882, 12–2–58, Cl. 252—32.5.

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Hougen, Olaf A., and A. L. Lydersen, to Miller Brewing Co. Apparatus for and method of removing impurities from highly volatile gas. 2,862,819, 12–2–58, Cl. 99—49.

Howell, Robert V. Hydraulic transmission and clutch assembly. 2,862,406, 12–2–58, Cl. 74—768.

Howerton, Arthur E., and K. R. Dale, to Columbia-Southern Chemical Corp. Contact device. 2,862,698, 12–2–58, Cl. 261—114.

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Hughes, James H., to Phillips Petroleum Co. Drill stem test packer. 2,862,562, 12–2–58, Cl. 166—187.

Hughes, John, and P. J. Garner, to Shell Development Co. Lubricating oil compositions containing acylated polyamine salts. 2,862,883, 12–2–58, Cl. 252—33.4.

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Hupe, Adolf: *See*—
Lang, Karl F., Schildwächter, and Hupe. 2,862,855.

Hutchinson, Sam. Gas meter pick-up device. 2,862,737, 12–2–58, Cl. 294—94.

Huth, John A., to W. A. Goebel. Vertically expansible house trailer. 2,862,750, 12–2–58, Cl. 296—23.

Hutselman, Howard E., to Corry-Jamestown Mfg. Corp. Loose leaf binders. 2,862,504, 12–2–58, Cl. 129—1.

Hwa, Jesse C. H., to Rohm & Haas Co. Preparation of weakly basic anion-exchange resins from chlorohydrin esters of acrylic-type acids. 2,862,892, 12–2–58, Cl. 260—2.1.

Hwa, Jesse C. H., to Rohm & Haas Co. Preparation of strongly basic anion-exchange resins from chlorohydrin esters of acrylic type acids. 2,862,893, 12–2–58, Cl. 260—2.1.

Hwa, Jesse C. H., to Rohm & Haas Co. Preparation of anion-exchange resins containing weakly basic and strongly basic functional groups. 2,862,894, 12–2–58, Cl. 260—2.1.

Hycon Mfg. Co.: *See*—
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Hydril Co.: *See*—
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I-T-E Circuit Breaker Co.: *See*—
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Ingres, Jeannot G., and D. T. Ayers, Jr., to Kelsey-Hayes Co. Booster brake mechanism. 2,862,366, 12–2–58, Cl. 60—54.6.

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Bernick, Leslie M., Roelofs, and McFarland. 2,862,842.

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Palmer, Leon E. 2,862,594.
Raffensperger, Maurice J. 2,863,108.
Young, Donald R., De Lano, and Shultz. 2,863,090.

International Electronic Research Corp.: *See*—
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International Minerals & Chemical Corp.: *See*—
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International Standard Electric Corp.: *See*—
Ridler, Desmond S., and Hunter. 2,863,003.

International Steel Co.: *See*—
Nystrom, Karl F. 2,862,461.

International Telephone and Telegraph Corp.: *See*—
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Inventa A. G. Fuer Forschung und Patentverwertung: *See*—
Berther, Clau. 2,862,954.

Iron Fireman Mfg. Co.: *See*—
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Jennings, Jo E., to Jennings Radio Mfg. Corp. Vacuum switch. 2,863,037, 12–2–58, Cl. 200—144.

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Johnson, Walter H. Steering mechanism for toys. 2,862,332, 12–2–58, Cl. 46—213.
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Johnstone, Cyrus E. Electric coffee cup. 2,863,037, 12–2–58, Cl. 219—43.
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Kadison, Milton M., 25% to A. Colton, 25% to H. Bettigole, and 50% to R. David. Multi-stage compressor. 2,862,656, 12–2–58, Cl. 230—202.
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Ingres, Jeannot G., and Ayers. 2,862,366.
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Callesi, Armin, Kern, and Holbro. 2,862,930.
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King, John P. H., and E. Pearson, to British Celanese Ltd. Process and apparatus for producing pellets from thermoplastic sheet material. 2,862,350, 12–2–58, Cl. 57—34.
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Kircher, Charles E., Jr., and R. J. Jones, to Detrex Chemical Industries, Inc. Filters. 2,862,622, 12–2–58, Cl. 210—333.
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MacDonald, Duncan N., to Burroughs Corp. Perforated tape transport system. 2,862,675, 12–2–58, Cl. 242—55.12.

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McHenry, Ernest C., to Allegheny Ludlum Steel Corp. Apparatus for and method of removing oxides from strip. 2,862,839, 12–2–58, Cl. 134—15.

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Mercier, Jean and J. H. Bleeder valve. 2,862,513, 12–2–58, Cl. 137—117.

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Mertens, Edward W., and P. E. McCoy, to California Research Corp. Quick-breaking bituminous emulsions. 2,862,830, 12–2–58, Cl. 106—277.

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Metzner, Albert W., to The Standard Register Co. Strip feeding device. 2,862,596, 12–2–58, Cl. 197—133.

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Miller, Lloyd W. Quick release tool holder. 2,862,285, 12–2–58, Cl. 29—96.

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Mitchell, Ralph I., to The Battelle Development Corp. Deagglomerator. 2,862,859, 12–2–58, Cl. 252—359.
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Blanchette, Joseph A. 2,862,911.
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Higashi, Louis M., and Jarvi. 2,862,910.
Lynn, Robert O. L., Jr., and Mohrman. 2,862,913.
Ott, John B. 2,862,912.
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Stein, Alvin, and Walter. 2,862,907.
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Morgan, Harold S. Primary cell. 2,862,987, 12–2–58, Cl. 136—111.
Morin, Joseph R., and H. E. Theriault, to Sylvania Electric Products Inc. Electric gaseous discharge device construction. 2,863,094, 12–2–58, Cl. 315—60.
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Morin, Louis H. Jam-free sliders. 2,862,274, 12–2–58, Cl. 24—205.15.
Morin, Louis H., to Coats & Clark, Inc. Spool and bobbin combination. 2,862,610, 12–2–58, Cl. 206—47.
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Morrill, Wayne J. Dynamoelectric field structure. 2,863,077, 12–2–58, Cl. 310—156.
Morris, Jean K.: *See*—
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Mors, Edward J., to Mirro Aluminum Co. Snow sled. 2,862,719, 12–2–58, Cl. 280—16.
Motis, Gilbert M., to Waste King Corp. Swirl and spray fitting. 2,862,519, 12–2–58, Cl. 137—625.42.
Moto-Mower, Inc.: *See*—
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Hartfield, Robert G., and Clark. 2,863,047.
Kraft, Richard A. 2,863,057.
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Moy, Paul W., to The Harshaw Chemical Co. Copper cyanide plating process and solution therefor. 2,862,861, 12–2–58, Cl. 204—52.
Muench, Werner, L. Notarbartolo, and C. Coen, to Perfogit Societa per Azioni. Process for the chloromethylating of monosubstituted aromatic hydrocarbons. 2,862,980, 12–2–58, Cl. 260—651.
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Muller, Roger, to Etablissements Grimar. Stroke varying device for mechanical presses and other machines. 2,862,405, 12–2–58, Cl. 74—571.
Mullins, Dennis H., to Union Carbide Corp. Vinyl chloride resin plasticized with a bis-(3,4 epoxycyclohexanecarboxylate) and composition containing same. 2,862,904, 12–2–58, Cl. 260—30.4.
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Nagata, Kyoichi, to Matsushita Denki Sangyo Kabushiki Kaisha. Device for starting and operating glow discharge lamp. 2,863,082, 12–2–58, Cl. 315—96.
Nagle, Perry I. Adjustable pump support. 2,862,453, 12–2–58, Cl. 103—103.
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Nelson, Noral A., to Massey-Ferguson Inc. Baler structure. 2,862,347, 12–2–58, Cl. 56—341.
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Nelson, Sexton D. Floor construction. 2,862,255, 12–2–58, Cl. 20—6.
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Odermann, Charles E., to The Singer Mfg. Co. Ornamental stitch sewing machines and cam mechanisms therefor. 2,862,404, 12–2–58, Cl. 74—567.

Oehmig, Robert G. Removable sash. 2,862,258, 12–2–58, Cl. 20—52.2.

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Lott, William A., and Krapcho. 2,862,965.
Thomas, Gordon H., and Fried. 2,862,926.
Threlkeld, Donald D. 2,862,809.

Olson, Elmer, to General Motors Corp. Carburetor throttle mechanism. 2,862,487, 12–2–58, Cl. 123—103.

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O'Neill, Charles J., deceased; E. T. O'Neill, administrator, to E. T. O'Neill. Trailer wheel suspension with load varying adjustment. 2,862,727, 12–2–58, Cl. 280—405.

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Oosterhout, Johan C. D., to The Texas Co. Prevention of rust in pipe lines and tankers with acid-type wax oxidate. 2,862,803, 12–2–58, Cl. 44—70.

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Opfermann, Adolf C. J. New quaternary compounds of pyridine aldehyde acetals. 2,862,928, 12–2–58, Cl. 260—297.

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Bostock, James H., and Schramm. 2,862,560.

Otsuki, Hiroshi, and H. Funahashi. Process for the production of omega-amino acids. 2,862,940, 12–2–58, Cl. 260—404.

Ott, John B., to Monsanto Chemical Co. Vinyl halide polymerization process. 2,862,912, 12–2–58, Cl. 260—78.5.

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Page, Victor A. W., to The Plessey Co. Ltd. Variable resistors and potentiometers. 2,863,030, 12–2–58, Cl. 201—55.

Paige, Isaac A. Tables foldable into suitcase-like form. 2,862,777, 12–2–58, Cl. 311—90.

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Panhard, Paul, to Societe Anonyme des Anciens Etablissements Panhard & Levassor. Hydraulic clearance taking-up mechanism for valve gears. 2,862,486, 12–2–58, Cl. 123—90.

Pankove, Jacques I., to Radio Corp. of America. Semiconductor devices. 2,863,056, 12–2–58, Cl. 250—36.

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Parsons, John R. Apparatus for the continuous direct disposal of vacuum cleaning waste material. 2,862,695, 12–2–58, Cl. 261—30.

Passaro, Frank, and W. Galya, to Joseph Machine Co., Inc. Belt making machine. 2,862,467, 12–2–58, Cl. 112—152.

Patrick, Tracy M., Jr., and L. O. Raether, to Monsanto Chemical Co. Production of mixed esters of phthalic acid. 2,862,959, 12–2–58, Cl. 260—475.

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Perry, Willard P. Gravity control apparatus. 2,862,651, 12–2–58, Cl. 230—47.

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Pollack, Maxwell A. Process for preparing alpha-chloroacrylic compounds. 2,862,960, 12–2–58, Cl. 260—486.

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Polster, William E., to General Electric Co. Electric discharge device structure. 2,863,081, 12–2–58, Cl. 313—236.

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Porte, Violet M. Ornamental eye piece. 2,862,809, 12–2–58, Cl. 132—53.

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Powell, Albert E., to Byford Labs, Inc. Magnetostrictive pulse-time modulator. 2,863,121, 12–2–58, Cl. 332—9.

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Quoss, Henry N. Threshold with weather seal. 2,862,261, 12–2–58, Cl. 20—64.

Rabinow, Jacob. Scanning type headlight dimmer. 2,863,064, 12–2–58, Cl. 250—235.

Rachman, Isadore B., and S. Bobb, to H & L Realty Corp. Braced leg construction and method of forming same. 2,862,778, 12–2–58, Cl. 311—98.

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De Witt, David, Sandler, and Wittenberg. 2,863,066.

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Rebenstorf, Melvin A., to The Upjohn Co. 21-(2-chloro-4-nitrobenzoate) of prednisolone and prednisone. 2,862,938, 12–2–58, Cl. 260—397.45.

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De Witt, David, Sandler, and Wittenberg. 2,863,066.

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Schlichting, Karl F., to Nordtischer Maschinenbau Rud. Baader. Fish-feeding method and apparatus. 2,862,606, 12–2–58, Cl. 198—165.

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Brueder, Antoine. 2,862,723.
Societe Anonyme des Anciens Etablissements Panhard & Levassor: *See*—
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Soiltest, Inc.: *See*—
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"Solumeta": *See*—
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Somavia, José R., to The Plastabox Corp. Knockdown box. 2,862,640, 12–2–58, Cl. 220—4.
Sonnenburg, William J., and F. W. Oestreich, Jr. Bed moving jack. 2,862,213, 12–2–58, Cl. 5—328.
Sonotone Corp.: *See*—
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Koren, Heiman W., and Crownover. 2,863,076.
Soo Valley Co.: *See*—
Beebe, Robert L. 2,862,282.
Sorensen & Co., Inc.: *See*—
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Southland Mower Co., Inc.: *See*—
Pearson, Thomas A. 2,862,737.
Southworth Machine Co.: *See*—
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Dalrymple, Philip W., and Hunsaker. 2,862,680.
Sowa, Frank J., to AMP Inc. Electrical connector with insulated ferrule. 2,863,132, 12–2–58, Cl. 339—213.
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Sparrow, Donald B., and W. E. Powers, to Scott Paper Co. Method of making sodium cellulose sulfate. 2,862,922, 12–2–58, Cl. 260—215.
Spears, Esten W., Jr., to General Motors Corp. Fuel manifold and flameholder in combustion apparatus for jet engines. 2,862,360, 12–2–58, Cl. 60—39.72.
Sperry Rand Corp.: *See*—
De Prado, John R. 2,863,078.
Fraser, Robert T. 2,863,062.
Israelson, Evert G. 2,862,501.
Koch, Earl E. 2,862,563.
Redmond, Carl E. 2,862,502.
Spiro Establishment: *See*—
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Spisak, Andrew A., to The Warner & Swasey Co. Molding apparatus. 2,862,235, 12–2–58, Cl. 18—22.
Spisak, Andrew A., to The Warner & Swasey Co. Gill box. 2,862,248, 12–2–58, Cl. 19—129.
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Singleton, Robert W., Horback, Riley, and Sprague. 2,862,833.
Spring Load Mfg. Corp.: *See*—
Harding, Elmer C., Pleske, and Vranisan. 2,862,295.
Staats, William A., to The F. E. Myers and Bros. Co. Fluid motor piston. 2,862,478, 12–2–58, Cl. 121—123.
Stafej, Stanley F., to American Cyanamid Co. Preparation of esters of an oxy acid of boron. 2,862,951, 12–2–58, Cl. 260—462.
Stainton, Dudley E., to National Research Development Corp. Colletts. 2,862,718, 12–2–58, Cl. 279—50.
Stamos, Chris, and J. J. Huey, to The United Electric Coal Companies. Suspension idler. 2,862,607, 12–2–58, Cl. 198—192.
Standard Coil Products Co., Inc.: *See*—
Thias, Edwin P. 2,863,058.
Standard Oil Co. (Indiana): *See*—
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Jacobs, Robert B., and Ginsburgh. 2,862,570.
McKinney, Claude O. 2,862,798.
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Jackson, Warren, Jr. 2,863,115.
Standard Register Co., The: *See*—
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Metzner, Albert W. 2,862,506.
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Stanley, William N., Jr., and W. B. Dancy, to International Minerals & Chemical Corp. Process for purifying impure solid-phase kainite. 2,862,788, 12–2–58, Cl. 23—58.
Stauffer Chemical Co.: *See*—
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Stearns, Roswell H., and H. W. Buus, to The Indiana Steel Products Co. Method and apparatus for overcoming reluctance in material which is in process of magnetic separation and concentration. 2,862,619, 12–2–58, Cl. 209—216.
Stein, Aivis, and R. L. Walter, to Monsanto Chemical Co. Suspension process for the polymerization of vinylidene aromatic hydrocarbons. 2,862,906, 12–2–58, Cl. 260—45.5.

Thompson, Jennings B., to Guiberson Corp. Well packer assembly for packing the annular space between conduits
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Zuiderweg, Frederik J., and Verburg. 2,862,696.

Stein, Alvin, and R. L. Walter, to Monsanto Chemical Co. Suspension process for the polymerization of vinylidene aromatic hydrocarbons having rubbery conjugated 1,3-diene polymers dissolved therein. 2,862,907, 12-2-58, Cl. 260—45.5.
Steinbach, Thomas M., to The Stiffel Co. Lighting fixture. 2,863,041, 12-2-58, Cl. 240—81.
Steinhauser, Peter. Fish hook remover. 2,862,327, 12-2-58, Cl. 43—53.5.
Steiner, William, to Kelsey-Hayes Co. Booster brake mechanism. 2,862,364, 12-2-58, Cl. 60—54.5.
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  Sinden, Alfred D. 2,862,603.
  Sinden, Alfred D., and Schaeffer. 2,862,599.
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  Surrey, Alexander R. 2,862,967.
Stevens, Clarence E., to The Filter Corp. Vacuum cleaner nozzle. 2,862,225, 12-2-58, Cl. 15—365.
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  Dubbs, Arthur C., and Stevens. 2,862,976.
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  Kaden, Willy, and Stiefenhofer. 2,862,678.
Stiegler, Harold W., to The American Association of Textile Chemists and Colorists. Method and apparatus for testing fabrics. 2,862,383, 12-2-58, Cl. 73—7.
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  Steinbach, Thomas M. 2,863,041.
Stiles, John W. Carton unloader. 2,862,633, 12-2-58, Cl. 214—309.
Stiles, Samuel R., to The M. W. Kellogg Co. Sulfuric acid purification. 2,862,791, 12-2-58, Cl. 23—172.
Stirnemann, Ernst, and T. E. Lana, to Lonza Electric and Chemical Works. Electropyrolysis apparatus. 2,862,866, 12-2-58, Cl. 204—325.
Stirrett, Robert G. Indexing tool post turret. 2,862,408, 12-2-58, Cl. 74—826.
Stoehr, Jean. Hydraulic coupling. 2,862,353, 12-2-58, Cl. 60—12.
Stohsner, Kurt K., to Stohsner Machine Works. Combination hay and grain mill. 2,862,668, 12-2-58, Cl. 241—138.
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  Stohsner, Kurt K. 2,862,668.
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  Strauss, William. 2,862,240.
Stone, Richard H., and R. F. Smith. Hand trucks. 2,862,720, 12-2-58, Cl. 280—33.99.
Stoner, Harry B., E. Parre, and F. A. Walter, to Stoner Mfg. Corp. Closure gates for vending machines. 2,862,643, 12-2-58, Cl. 221—248.
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  Stoner, Harry B., Parre, and Walter. 2,862,643.
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  Eketorp, Sven G. H., and Backström. 2,862,811.
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Strauss, Howard J., to The Electric Storage Battery Co. Alkaline cells and methods of storing them. 2,862,989, 12-2-58, Cl. 136—161.
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Strauss, William, to F. J. Stokes Corp. Stuffing mechanism for injection molding press. 2,862,240, 12-2-58, Cl. 18—30.
Strong, Clinton S., and W. C. Tifft, to Technical Design and Development Co., Inc. Tamper for waste paper container. 2,862,443, 12-2-58, Cl. 100—265.
Stroup, Karl L., to Overhead Door Corporation. Weather seals for slidable closure assemblies. 2,862,256, 12-2-58, Cl. 20—19.
Strunk, Leonard M. Belt guide means for tractor belt-tightening arrangement. 2,862,569, 12-2-58, Cl. 180—70.
Sturm, William J., to United States of America, Atomic Energy Commission. Method of measuring the integrated energy output of a neutronic chain reactor. 2,863,062, 12-2-58, Cl. 250—83.
Suen, Tzeng J., and Y. Jen, to American Cyanamid Co. Aqueous solution of amino-aldehyde resin and polymer having formaldehyde reactive carboxamide substituents and processes of preparation. 2,862,901, 12-2-58, Cl. 260—29.4.
Sugarman, Meyer L., Jr., and A. J. Moncrieff-Yeates, to Radio Corp. of America. Electrophotographic member. 2,862,815, 12-2-58, Cl. 96—1.
Suggs, Thomas F., to Cocker Machine and Foundry Co. Size box. 2,862,280, 12-2-58, Cl. 28—28.
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  Abe, Yasuo, Harukawa, Ishikawa, Miki, Sumi, and Toga. 2,862,953.
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  Teubner, Wilbur G. 2,862,561.
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  Hillberg, Bror. 2,862,277.
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  Abbott, Harold W., and Suran. 2,863,136.
  Mathis, Vernon P., and Suran. 2,863,045.
Suran, Jerome J., and V. P. Mathis, to General Electric Co. Double-base diode gated amplifier. 2,863,070, 12-2-58, Cl. 307—88.5.
Surrey, Alexander R., to Sterling Drug Inc. N-alkyl-N-(substituted-benzyl)dihaloacetamides and their preparation. 2,862,966, 12-2-58, Cl. 260—562.
Surrey, Alexander R., to Sterling Drug Inc. N-alkyl-N-(alkylated-benzyl) dihaloacetamides and preparation thereof. 2,862,967, 12-2-58, Cl. 260—562.
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  Merker, Dwight R. 2,862,941.
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  Morin, Joseph R., and Theriault. 2,863,004.
  Rosenblatt, Alexander, and Pfefferle. 2,862,529.
Szegvari, Andrew, to Clevite Corp. Magnetizable bands. 2,862,845, 12-2-58, Cl. 154—53.6.
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Tancred, William L., to The W. N. Borg Corp. Relay. 2,863,103, 12-2-58, Cl. 317—197.
Tassara, Luigi. Electric resistance element. 2,863,034, 12-2-58, Cl. 201—63.
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  Ulvild, George B., Tatum, and Hopkins. 2,862,962.
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Tebo, William L., to Detrex Corp. Variable speed device. 2,862,588, 12-2-58, Cl. 192—4.
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  Alexander, Matthew A. 2,863,072.
  Brown, George W. 2,862,617.
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  Rommel, Frederick E. 2,863,018.
Ten Have, Cornelis D., and W. J. Pieters, to Shell Development Co. Sweetening process and method for removing water of reaction from the sweetening reagent. 2,862,878, 12-2-58, Cl. 208—234.
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  Oosterhout, Johan C. D. 2,862,802.
  Oosterhout, Johan C. D. 2,862,803.
  Oosterhout, Johan C. D. 2,862,836.
Thatcher, Lewis E., to Gaylord Products, Inc. Speed responsive electric switch. 2,863,017, 12-2-58, Cl. 200—80.
Theall, Charles E., Jr., and C. D. Cockburn, to General Electric Co. Clipper-amplifier and pulse generator circuit. 2,863,048, 12-2-58, Cl. 250—27.
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Thielen, Lawrence E., and C. A. Dornfeld, to G. D. Searle & Co. Aryl and aralkyl bistriphenylphosphonium compounds and processes. 2,862,971, 12-2-58, Cl. 260—606.5.
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Voigt, Wilfried, to Lonza-Werke Elektrochemisch Fabriken G. m. b. H. Method and apparatus for dividing thermoplastic bodies. 2,862,231, 12-2-58, Cl. 18—1.

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
December 2, 1958 Volume 737 Number 1

TRADEMARKS

CONDITION OF TRADEMARK APPLICATIONS AS OF OCTOBER 31, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,019
Date of oldest new application	March 10, 1958
Date of oldest amended application	July 2, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 18, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	4-15-58	7-7-58
(II) R. F. SHRYOCK, Classes 6, 15, 27, 28, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	3-10-58	7-2-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	4-15-58	7-3-58
Renewals (All Classes)	10-6-58	10-27-58
Sec. 12 (c) Publications (All Classes)	10-13-58	10-27-58

Applications Filed During the Month of October 1958—1,888

Registrations Issued	373—No. 670,424 to No. 670,796
Renewals Issued	51

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

SN 46,209. The Globe-Wernicke Co., Norwood, Cincinnati, Ohio. Filed Feb. 21, 1958.

SN 50,346. A. Cohen & Sons Corp., New York, N. Y. Filed Apr. 25, 1958. Sec. 2(f).

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 674,216. Milton C. Baillie, d. b. a. Duchessblu Chinchilla Ranch, New Hyde Park, N. Y. Filed Oct. 4, 1954.

DUCHESS-BLU

For Live Chinchillas.
First use June 1, 1954.

SN 34,277. Anchor Plastics Company, Inc., Long Island City, N. Y. Filed July 24, 1957.

PLASTI-GOLD

For Extruded Decorative Strips of U-, Angle-, Round- or Channel-Shaped Cross Section, Made of Transparent or Translucent Plastic Materials and Containing Metal Foil Embedded Therein.
First use Dec. 1, 1956.

SN 37,056. Turfcraft, Incorporated, Gainesville, Fla. Filed Sept. 11, 1957.

Turf-Craft

For Grass Seed.
First use Feb. 24, 1956.

SN 39,860. Cornell Seed Company, St. Louis, Mo. Filed Oct. 31, 1957.

KEYSTONE

Owner of Reg. Nos. 352,573, 505,069, and 585,061.
For Vegetable, Garden, Flower, Farm, Field, and Lawn Seeds.
First use July 28, 1926.

SN 40,811. Godfrey L. Cabot, Inc., Boston, Mass. Filed Nov. 18, 1957.

CAB-O-LITE

Owner of Reg. Nos. 595,746 and 651,096.
For Wollastonite.
First use Oct. 25, 1957.

SN 47,764. Hercules Powder Company, Wilmington, Del. Filed Mar. 14, 1958.

HERCULES

Owner of Reg. Nos. 201,858 and 546,315.
For Plastics—Namely, Ethyl Cellulose, Chlorinated Polyether Polymers, Polyethylene, and Polypropylene.
First use in or before September 1936 on ethyl cellulose.

SN 47,765. Hercules Powder Company, Wilmington, Del. Filed Mar. 14, 1958.

Owner of Reg. Nos. 201,858 and 546,315.
For Plastics—Namely, Ethyl Cellulose, Chlorinated Polyether Polymers, Polyethylene and Polypropylene.
First use in or before September 1936 on ethyl cellulose.

SN 49,361. Geilich Tanning Company, Taunton, Mass. Filed Apr. 9, 1958.

CAMBI-HOOK-'N-EYE

Owner of Reg. No. 638,618.
For Leather.
First use in March 1958.

SN 49,605. Northrup, King & Co., Minneapolis, Minn. Filed Apr. 14, 1958.

NORTHRUP KING

For Field Seeds Including Seed Corn, Grass Seeds, Flower Seeds, and Vegetable Seeds.
First use in 1896.

SN 50,700. Harte & Company, Inc., New York, N. Y. Filed Apr. 30, 1958.

GAUCHO

For Vinyl Material in Sheet Form Used for Upholstery Purposes.
First use Apr. 8, 1958.

Class 2—Receptacles

SN 11,250. The Greif Bros. Cooperage Corporation, Delaware, Ohio. Filed June 29, 1956.

ECONOMY

For Fibre Shipping Drums.
First use on or about Oct. 30, 1936.

SN 43,075. Continental Can Company, Inc., New York, N. Y. Filed Dec. 27, 1957.

LIQUI-LINER

For Plastic Lined Metal Containers Such as Pails or Drums.
First use Nov. 19, 1957.

SN 44,648. R. S. Precision Products, Floral Park, N. Y. Filed Jan. 24, 1958.

MEDI-LOCK

For Containers for Medicines, Drugs, and Cosmetics.
First use Dec. 4, 1957.

SN 51,941. Quickey Sales Company, Akron, Ohio. Filed

SN 48,435. Theodore Riedeburg, d. b. a. Theodore Riedeburg

SN 46,309. The Globe-Wernicke Co., Norwood, Cincinnati, Ohio. Filed Feb. 21, 1958.

FIBERLITE

For Wastebaskets.
First use Feb. 10, 1958.

SN 46,347. The Pantasote Company, Passaic, N. J. Filed Feb. 21, 1958.

PANTA-PAK

For Plastic Tray-Like Containers for Packaging Fruits, Pharmaceuticals, Electronic Parts or Other Fragile Objects.
First use Jan. 11, 1958.

SN 46,637. Plastic Productions Company, Redwood City, Calif. Filed Feb. 26, 1958.

GRAINWARE

For Molded Plastic Products—Namely, Serving Forks and Spoons, Dishes, Platters, Plates, Trays, Bowls, and Planters.
First use May 1, 1952.

SN 46,994. Wedge Pac, Inc., Medford, Oreg., assignee of Dewey V. Bikard, Medford, Oreg. Filed Mar. 3, 1958.

WEDGE PAC

For Canvas Bags To Carry Loggers' Wedges.
First use Aug. 11, 1952.

SN 47,585. International Manufacturing Co., Roxbury, Mass. Filed S. R. Mar. 12, 1958; am. P. R. Oct. 15, 1958.

TIDY TRAVELER

For Portable Waste Basket.
First use Sept. 28, 1956.

SN 48,014. Coyne Cylinder Company, San Francisco, Calif. Filed Mar. 19, 1958.

COYNE

For Cylinders for Packaging Compressed Gases.
First use about April 1948.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 49,290. Morris Moskowitz Corp., New York, N. Y. Filed Apr. 8, 1958.

MALAMA

Owner of Reg. No. 584,287.
For Ladies' Handbags.
First use Mar. 14, 1958.

SN 50,846. A. Cohen & Sons Corp., New York, N. Y. Filed Apr. 25, 1958. Sec. 2(f).

CROSBY

For Billfolds, Travelling Bags, Handbags, and Pocketbooks.
First use Mar. 12, 1937.

SN 50,842. Mack Bennett Smith, d. b. a. Speedy Stirrup Pin Company, Salt Lake City, Utah. Filed May 1, 1958.

For Stirrup Pins.
First use April 1949.

SN 51,092. Morris White Fashions, Inc., New York, N. Y. Filed May 5, 1958.

Sugarcane

For Handbags.
First use Feb. 8, 1958.

SN 51,137. Nash Inc., Jersey City, N. J. Filed May 6, 1958.

ENTRE NOUS

For Billfolds and Wallets.
First use Mar. 1, 1958.

SN 51,514. Spincraft, Inc., Milwaukee, Wis. Filed May 12, 1958.

Vip

For Dog Feeding Dishes.
First use Oct. 15, 1957.

SN 51,516. Harry Steiner, New York, N. Y. Filed May 12, 1958.

THE VERSATEER

For Utility Handbags.
First use Mar. 13, 1958.

SN 51,216. Olin Mathieson Chemical Corporation, East

SN 22,455. The Mosaic Tile Company, Zanesville, Ohio

SN 51,941. Quickey Sales Company, Akron, Ohio. Filed May 19, 1958.

Key-sac

For Plastic Key Cases.
First use May 2, 1958.

SN 52,430. Rexbilt Leather Goods, Inc., New York, N. Y. Filed May 27, 1958.

TOP BRASS

For Luggage, Including Handbags, Suitcases, and the Like.
First use Jan. 10, 1957.

Class 4—Abrasives and Polishing Materials

SN 48,064. Charles H. Tatham, d. b. a. Pocket Porter Co., Grosse Pointe, Mich. Filed Mar. 19, 1958.

POCKET PORTER

For Disposable Shoe Shine Kit Comprising Polish and Applicator.
First use on or about Mar. 5, 1958.

SN 49,491. Easy Glitter Wax Company, West Palm Beach, Fla. Filed Apr. 11, 1958.

EASY GLITTER

Owner of Reg. No. 657,426.
For Shoe Wax.
First use Mar. 25, 1955.

SN 51,956. Vanguard Abrasive Corporation, Leroy, N. Y. Filed May 19, 1958.

VANGUARD

For Abrasive Tools, Particularly Grinding Wheels.
First use Feb. 26, 1958.

Class 6—Chemicals and Chemical Compositions

SN 39,648. Krieger Color & Chemical Co., Inc., Los Angeles, Calif. Filed Oct. 28, 1957.

GREEN STUFF

The word "Green" is disclaimed apart from the mark as shown.
For Lawn Colorant.
First use Oct. 1, 1957.

SN 47,996. American Finish & Chemical Company, Chelsea, Mass. Filed Mar. 19, 1958.

P7

For Oil for Treating Sole Leather.
First use Jan. 15, 1958.

SN 48,313. N. V. Chemische Industrie "Synres," d. b. a. Synres Works-Hoek of Holland, Hoek van Holland, Netherlands. Filed Mar. 24, 1958.

SYNOTEX

For Synthetic Resins for the Manufacture of Protective Coatings and for the Manufacturing of Printing Inks.
First use Oct. 31, 1957.

SN 48,435. Theodore Riedeburg, d. b. a. Theodore Riedeburg Associates, New York, N. Y. Filed Mar. 25, 1958.

AGREM

For Agricultural Emulsifiers, Chemical Wetting Agents, and Suspending Agents.
First use Jan. 6, 1958.

SN 48,658. Polychrome Corporation, Yonkers, N. Y. Filed Mar. 28, 1958.

PC

For Chemical Solutions for Treating Offset Plates.
First use July 1952.

SN 48,976. Farbwerke Hoechst Aktiengesellschaft, vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Apr. 3, 1958.

ALODAN

Owner of German Reg. No. 704,127, dated July 4, 1957.
For Agents for the Destruction of Animals and Plants, Plant Protection Agents.

Class 8—Smokers' Artides, Not Including Tobacco Products

SN 30,618. Thorens S. A., Sainte-Croix, Switzerland. Filed Apr. 29, 1957.

MUSICAL Companion

Priority claimed under Sec. 44(d) on Swiss Reg. No. 164,238, dated Feb. 18, 1957.
For Cigar or Cigarette Lighters.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 10,636. Aerojet-General Corporation, Azusa, Calif. Filed June 21, 1956.

AEREX

For Liquid Explosives Useful as Blasting Agents.
First use March 1954.

SN 49,228. Western Fire Equipment Co., San Francisco, Calif. Filed Apr. 7, 1958.

FORESTER

Owner of Reg. No. 364,351.
For Flame Drip Torches, Flame Throwers, Fusees, and Flares.
First use Sept. 18, 1947.

SN 45,852. R. H. Newmark, Inc., New York, N. Y. Filed Feb. 5, 1958.

SN 48,904. Continental Oil Company, Ponca City, Okla. Filed Apr. 2, 1958.

SN 51,216. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed May 7, 1958.

OMAX

For Propellants Formed of Solid Combustible Gas-Generating Material for the Production of Power.
First use on or about Apr. 2, 1958.

SN 54,472. Alcan Shells, Inc., Alton, Ill. Filed June 30, 1958.

SKEETMAX

Owner of Reg. Nos. 662,422 and 662,423.
For Shotgun Shells.
First use June 18, 1958.

SN 57,960. The Marlin Firearms Company, New Haven, Conn. Filed Aug. 27, 1958.

CROWN PRINCE

For Firearms—Namely, Rifles, Shotguns, and Parts Thereof.
First use Aug. 1, 1958.

SN 60,014. Atlas Powder Company, Wilmington, Del. Filed Oct. 3, 1958.

RENDEX

For Explosives.
First use Aug. 29, 1958.

Class 10—Fertilizers

SN 38,332. Bandini Fertilizer Company, Los Angeles, Calif. Filed Oct. 4, 1957.

BANDINI

For Fertilizer.
First use on or about July 19, 1927.

SN 57,796. W. R. Grace & Co., New York, N. Y. Filed Aug. 25, 1958.

Dav-Gro

For Soluble Plant Food.
First use Mar. 5, 1957.

SN 58,305. International Minerals & Chemical Corporation, Skokie, Ill. Filed Sept. 3, 1958.

SPURT

For Fertilizers.
First use Aug. 18, 1958.

Class 12—Construction Materials

SN 22,454. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

MECCA

For Floor, Wall, and Ceiling Ceramic Tile.
First use in June 1936.

SN 22,455. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

ORIENTAL

For Floor, Wall, and Ceiling Ceramic Tile.
First use June 1936.

SN 22,456. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

CHEROKEE

For Floor, Wall, and Ceiling Ceramic Tile.
First use April 1948.

SN 39,266. Peshastin Lumber & Box, Inc., Peshastin, Wash. Filed Oct. 21, 1957.

LUMBERJACK

For Finished Lumber Products, Such as Interior and Exterior Trim, Door Jambs, Window Frame Components and the Like.
First use May 2, 1957.

SN 42,715. Nuside Metal Products, Inc., Sharon, Pa. Filed Dec. 19, 1957.

NUSIDE

Owner of Reg. Nos. 651,362 and 584,731.
For Metal Prefabricated Buildings Sold in the Knock-Down Form.
First use Apr. 30, 1954.

SN 46,300. Ehret Magnesia Manufacturing Company, Inc., Valley Forge, Pa. Filed Feb. 21, 1958.

FIBRELITE

For Pipe and Wall Insulation and Insulating Cement Made of Mineral Fibers and Resins.
First use during November 1955.

SN 48,200. Panel Structures, Inc., East Orange, N. J. Filed Mar. 21, 1958.

SANPAN

For Prefabricated Building Panels Constructed From Extruded Aluminum and Fiber Glass Reinforced Plastic.
First use Mar. 10, 1958.

SN 48,241. Osbern A. Clark, Casa Grande, Ariz. Filed Mar. 24, 1958.

ROPE CRETE

For Packaged Wire Rope Fragments for Reinforcing Concrete.
First use Jan. 25, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 44,101. Clayton Mark & Company, Evanston, Ill. Filed Jan. 16, 1958.

CLAYTON MARK

For Tubing, Pipe, Unions for Connecting Pipes or Rods, and Filters.
First use in 1925.

SN 57,707. Oil Specialties & Refining Co. Inc., Brooklyn, N. Y. Filed Aug. 22, 1958.

SN 45,829. Root Chemicals Incorporated, Roosevelt, Puerto Rico. Filed Feb. 13, 1958.

SN 45,652. R. H. Newmark, Inc., New York, N. Y. Filed Feb. 5, 1958.

C

For Malleable, Iron Hanger, Support or Clamp for Use With Sprinkler Systems and the Like.
First use June 3, 1957.

SN 49,796. Edgar J. Weaver, d. b. a. Weaver Machine Company, Barberton, Ohio. Filed Apr. 16, 1958.

FILL EZY

For Gas Tank Hardware Adapter Kit for Adapting Portable Outboard Motor Gas Tanks Into a Semi-Permanent Installation.
First use Mar. 15, 1958.

SN 52,129. Kurdon, Inc., Chicago, Ill. Filed May 22, 1958.

TRIM KING

For Paint Brush Guards.
First use Mar. 1, 1958.

SN 52,494. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 28, 1958.

ROTO-SPRAY

For Nozzles for Sprayers.
First use Feb. 1, 1957.

Class 14—Metals and Metal Castings and Forgings

SN 23,971. American Smelting and Refining Company, New York, N. Y. Filed Feb. 7, 1957. Sec. 2(f).

NO-SET

Owner of Reg. No. 345,797.
For Non-Ferrous Metals, Particularly Copper Wire Bars.
First use Feb. 28, 1936.

SN 25,370. Vanadium-Alloys Steel Company, Latrobe, Pa. Filed Mar. 1, 1957.

8-N-2

For Tool Steel in the Form of Billets, Bars, Sheets, Plates, Wire and Rod for Use in Fabricating Into Such Articles as Circular Saws, Drills, Reamers, Broaches, End Mills, Punches, and the Like; and Disc and Ring Forgings Forged on a Steam Hammer, Drop Hammer, or Press From Rolled or Preforged Stock, for Use in Fabricating Into Milling Cutters, Hobs, Blanking Dies, Drawing Dies, and the Like.
First use Aug. 1, 1944.

Class 15—Oils and Greases

SN 46,837. Maurice E. Lindsay, d. b. a. Spindle Specialty Co., Bakersfield, Calif. Filed Feb. 28, 1958.

HI-PICK

For Cream for Use With Cotton Picking Machines, That Is, a Highgrade Light Oil With Additives for Solubility in Water.
First use August 1955.

SN 48,440. The Standard Oil Company, Cleveland, Ohio. Filed Mar. 25, 1958.

EXTRON

For Gasoline.
First use Mar. 21, 1958.

SN 48,904. Continental Oil Company, Ponca City, Okla. Filed Apr. 2, 1958.

SPRAY-N-STAY

For Gear Lubricant.
First use Oct. 14, 1957.

SN 49,472. Clarence M. Wynn, d. b. a. Dri-Powr Co., Azusa, Calif. Filed Apr. 10, 1958.

QUICK

For Additives for Internal Combustion Engine Fuels and Lubricating Oils.
First use in July 1957.

SN 49,650. Clarence M. Wynn, d. b. a. Dri-Powr Co., Azusa, Calif. Filed Apr. 14, 1958.

STOPOIL

For Additives for Lubricants for Use in Internal Combustion Engines, Which Additives Aid in Lubricating the Engine.
First use in March 1957.

Class 16—Protective and Decorative Coatings

SN 53,222. Colorificio Italiano Max Meyer, S. p. A., Milan, Italy. Filed June 9, 1958.

VULKEOL-GEL

Owner of Italian Reg. No. 135,449, dated May 22, 1958.
For Coating Agents as Paints, Varnishes and Enamels Made of Synthetic Substances.

SN 54,331. Seidlitz Paint and Varnish Company, Kansas City, Mo. Filed June 26, 1958.

RUST-X

For Paint.
First use May 29, 1958.

SN 56,742. The Sherwin-Williams Company, Cleveland, Ohio. Filed Aug. 6, 1958.

WOODCRAFT

For Furniture Finishes Comprising Stains, Fillers, Lacquers, Toners, Sealers, Varnishes, Waxes, Rubbing Compounds, and Polishes.
First use July 29, 1958.

SN 56,813. Robert R. Umhoefer, Inc., d. b. a. Mayco Colors, North Hollywood, Calif. Filed Aug. 7, 1958.

MAYCO

For Ceramic Glaze for Decorative and Protective Coatings.
First use Apr. 22, 1952.

SN 57,247. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed Aug. 18, 1958.

TRUSCON

Owner of Reg. No. 124,057.
For Primers, Paints, Enamels, Stains and Varnishes, and Other Protective Coatings; Metallic and Concrete Floor Hardeners, Concrete Re-Surfacings, Roof Cements, and Roof Coatings; Waterproofing Pastes and Liquids, and Concrete Bonding Agents; Lacquers, Sealers, Paint and Varnish Thinners and Reducers; and Mastics, Fillers, and Wood Floor Preservatives.
First use 1906.

SN 53,472. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed June 13, 1958.

Class 21—Electrical Apparatus, Machines

SN 87,707. Oil Specialties & Refining Co. Inc., Brooklyn, N. Y. Filed Aug. 22, 1958.

SAFITE

For Floor Finish.
First use Oct. 23, 1953.

Class 18—Medicines and Pharmaceutical Preparations

SN 22,444. Pharmaceuticals, Incorporated, New York, N. Y., by change of name from Lifetime Living, Inc., New York, N. Y. Filed Jan. 11, 1957.

DEVAREX

For Aid to Relaxation, and for the Relief of Nervousness, Worry, Irritability and Anxiety Due to Nervous Tension.
First use Dec. 14, 1956.

SN 23,466. Hefa G. m. b. H. Chemisch-Pharmaceutische Fabrik, Werne an der Lippe, Germany. Filed Jan. 30, 1957.

Asthma FRENONA

The word "Asthma" apart from the word "Frenona" is hereby disclaimed.
For Chemical and Pharmaceutical Preparations for Use in the Treatment of Asthma.
First use May 15, 1956; in commerce June 15, 1956.

SN 38,799. Carter Products, Inc., New York, N. Y. Filed Oct. 14, 1957.

RELAXATRON

For Sedative.
First use Aug. 29, 1957.

SN 40,455. Harts Mountain Products Corp., New York, N. Y. Filed Nov. 12, 1957.

KEET-LIFE

For Medicated Seed for the Treatment and Prevention of Various Diseases in Birds.
First use Oct. 30, 1957.

SN 42,200. Docteur Albert René Joseph Castaigne, Toulouse, Haute-Garonne, France. Filed Dec. 11, 1957.

SOLVOSTEROL

Owner of French Reg. No. 5,145, dated Apr. 8, 1956 (Toulouse); Natl. Inst. No. 88,877.
For Pharmaceutical Preparation Which Is Active in All Syndromes Accompanied by Hypercholesterolemia.

SN 43,764. Dr. L. D. Le Gear Medicine Company, St. Louis, Mo. Filed Jan. 10, 1958.

CORTA-CLEAR

For Medicinal Preparation for Veterinary Use Only for the Treatment of Mastitis.
First use Nov. 19, 1957.

SN 45,829. Root Chemicals Incorporated, Roosevelt, Puerto Rico. Filed Feb. 13, 1958.

METHYPREGNON

For Pharmaceutical Preparation With Progestational and Other Hormonal Properties.
First use Nov. 27, 1957.

SN 46,074. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

TRIGATAN

Owner of German Reg. No. 661,469, dated Aug. 13, 1954.
For Anti-Neuralgic Agent.

SN 46,077. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

TERSIGAT

Owner of German Reg. No. 619,068, dated Apr. 16, 1952.
For Diuretic Preparation.

SN 46,079. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

APOCITAL

Owner of German Reg. No. 679,301, dated July 20, 1955.
For Analgesic Preparation.

SN 46,422. Commercial Solvents Corporation, New York, N. Y. Filed Feb. 24, 1958.

SOLUFERM

For Vitamin Supplement of Dried Corn Fermentation Solubles With Grain for Incorporation in Poultry and Livestock Feeds.
First use May 24, 1957.

SN 47,146. Rowa-Wagner K. G., Arzneimittelfabrik, Bensberg, near Koeln, Germany. Filed Mar. 5, 1958.

ROWAMYELIN

Owner of German Reg. No. 657,445, dated May 12, 1954.
For Pharmaceutical Preparation for the Treatment of Migraine, Cephalgia, Trigeminal Neuralgia, Meniere's Syndrome, and Neurasthenic Syndrome.

SN 48,750. Kaldun Products, Inc., Long Island City, N. Y. Filed Mar. 31, 1958.

POREGIENE

For Medication To Be Mixed in Warm Water for the Treatment of Minor Skin Irritations, Itching, Chafing, and Diaper Rash.
First use Mar. 1, 1958.

SN 53,043. Olin Mathieson Chemical Corporation, New York, N. Y. Filed June 6, 1958.

ALBUMOTOPE

For Pharmaceutical Preparations Containing Radioactive Serum Albumin.
First use Jan. 3, 1958.

SN 53,265. The Iso-Sol Company, Inc., Lindenhurst, N. Y. Filed June 10, 1958.

SULFA-STATIN

For Sterile Ophthalmic Solution.
First use on or about Nov. 1, 1957.

SN 40,784. Thermoseal, Incorporated, Stamford, Conn. SN 49,370. The Hobart Manufacturing Company, Troy, Ohio.

First use Mar. 21, 1958.

First use 1906.

SN 53,472. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed June 13, 1958.

PARACEFAN

Owner of German Reg. No. 396,932, dated Jan. 14, 1929.
For Analgesic, Antipyretic, and Antineuralgic Preparation.

SN 53,473. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed June 13, 1958.

TABLONGETS

Owner of German Reg. No. 712,741, dated Apr. 10, 1958.
For Sustained Release Pharmaceutical Preparation in Tablet Form.

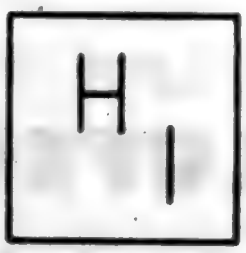
SN 53,653. Dr. Salsbury's Laboratories, Charles City, Iowa. Filed June 16, 1958. Sec. 2(f).

HOG-GAIN

For Veterinary Preparation for the Control of Deficiency and Contagious Diseases and the Stimulation of Growth in Farm Livestock.
First use Nov. 30, 1950.

Class 19 — Vehicles

SN 33,243. Houdaille Industries, Inc., Buffalo, N. Y. Filed July 5, 1957.



For Automobile Bumper and Bumper Hangers.
First use Feb. 26, 1956.

SN 39,286. Sierra Precision, Inc., Monrovia, Calif. Filed Oct. 21, 1957.

RBI

For Multiple Lamp Indicator for Showing Whether or Not a Fluid Brake Actuator Has Sufficient Available Travel Distance Remaining To Be Depended Upon To Set the Brakes of an Automotive Vehicle or Trailer.
First use Mar. 1, 1957.

SN 49,545. Auto Lamp Manufacturing Company, Chicago, Ill. Filed Apr. 14, 1958.

ALCO

For Light Reflectors and Mirrors for Use on Vehicles.
First use Sept. 1, 1950.

SN 51,681. Air-O-Matic Power Steer Corporation, Cleveland, Ohio. Filed May 15, 1958.

AIR-O-MATIC

For Power Steering Systems and Component Parts.
First use in or about September 1945.

Class 20 — Linoleum and Oiled Cloth

SN 52,292. Fibreboard Paper Products Corporation, San Francisco, Calif. Filed May 26, 1958.

AMERICAN ARTISTS

For Flexible, Hard Surface Floor Coverings.
First use Dec. 11, 1957.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 13,842. Hogan Laboratories, Inc., New York, N. Y. Filed Aug. 13, 1956.

Owner of Reg. No. 617,705.
For Transmitters and Recorders for Transmitting and Recording Facsimile Signals by Electric Current on or in an Appropriate Record Medium, Parts Thereof and Supplies.
First use Mar. 26, 1956.

SN 21,019. National Plumbing Stores Corporation, Columbus, Ohio. Filed Dec. 13, 1956.

Owner of Reg. Nos. 595,083, 647,783, and others.
For Indoor and Outdoor Electric Lighting Fixtures; Electric Motors and Transformers; Conductor Wires and Cables; Portable Extension Cords; Electric Conduits; Service Entrance and Disconnect Switches; Wiring Devices—Namely, Junction and Outlet Boxes, Wall Receptacles, Switches, Wiring Plugs and Plates; Fuses; Motor Controls; Signalling Equipment—Namely, Door Bells, Buzzers, and Chimes; and Fittings and Connectors for Such Electrical Apparatus.
First use June 14, 1954.

SN 33,280. Panelit, Inc., Skokie, Ill. Filed July 5, 1957.

For Annunciator Equipment for Indicating the On, Off and Defective Operating Conditions of Electric Motors.
First use Apr. 30, 1957.

SN 33,738. Packard Bell Electronics Corporation, Los Angeles, Calif. Filed July 15, 1957.

CONTROL MASTER

The word "Control" is disclaimed apart from the mark as a whole.
For Remote Control Tuning Devices for Television Sets.
First use June 24, 1957.

SN 35,935. Hoffman Electronics Corporation, Los Angeles, Calif. Filed Aug. 21, 1957.

The term "Scan" is disclaimed apart from the mark as shown.
For Television Receiving Sets.
First use Mar. 3, 1949.

SN 45,543. Roy F. Dohn, d. b. a. Hi-Ball Co., Montreal, Quebec, Canada. Filed Feb. 10, 1958.

SN 50,925. William H. Realy, d. b. a. Voo Doo Lure Com-

SN 40,784. Thermonen, Incorporated, Stamford, Conn. Filed Nov. 15, 1957.

Silotron

Owner of Reg. No. 594,142.
For Silicon Rectifiers.
First use Oct. 30, 1957.

SN 42,046. Moloney Electric Company, St. Louis, Mo. Filed Dec. 9, 1957.

SELECT-AMP

For Transformers.
First use Nov. 26, 1957.

SN 45,344. Penn-Union Electric Corporation, Erie, Pa. Filed Feb. 5, 1958.

PENN-SEAL

For Insulating and Protecting Material for Use Over Electrical Connections.
First use Sept. 25, 1957.

SN 45,888. Lektron, Inc., Chelsea, Mass. Filed Feb. 14, 1958.

POLY-PAK

For Electronic Parts and Supplies Sold in Polyethylene Kit Bags—Namely, Resistors, Transformers, Microphones, Condensers, Sockets, Wire, Volume Controls, Knobs, Switches, Radio Parts, Plugs, Electrical Plug Receptacles, Terminal Strips and Posts, Radio Kits, Solenoids, Motors, Diodes, and Pilot Light Assemblies.
First use Sept. 12, 1957.

SN 46,852. The R. L. A. Corporation, New York, N. Y. Filed Feb. 28, 1958.

Satel-Lite

For Electric Lamps and Electric Lighting Fixtures.
First use Feb. 24, 1958.

SN 47,799. Walker Electrical Company, Inc., Atlanta, Ga. Filed Mar. 14, 1958.

WALKER Uni-Pak

For Fusible Electric Service Entrance or Distribution Equipment—Namely, Fuse Panels, Switches, Circuit Breaker Devices, Boxes and Covers.
First use June 1957; Nov. 9, 1955, as to "Uni-Pak."

SN 47,860. International Resistance Company, Philadelphia, Pa. Filed Mar. 17, 1958.

POLYSTRIP

For Multi-Conductor, Insulated Electrical Cable.
First use in January 1958.

SN 49,370. The Hobart Manufacturing Company, Troy, Ohio. Filed Apr. 9, 1958.

SaniQuik

For Electric Glasswashers.
First use Feb. 14, 1958.

SN 49,408. Belden Manufacturing Company, Chicago, Ill. Filed Apr. 10, 1958.

FORMBOND

For Electrical Wire.
First use Aug. 1, 1954.

SN 50,806. Kelamp Developments, Inc., Beverly Hills, Calif. Filed May 1, 1958.

PORTA MARK

For Completely Portable Electronic Chemical Etch Unit Having Self-Contained Power With an Automatic Wand for Permanent Nondestructive Markings of Metals Using a Stencil and Fluid Electrolyte.
First use Nov. 6, 1957.

SN 50,832. Raylite Electric Corp., New York, N. Y. Filed May 1, 1958.

WINK-O-LITES

Owner of Reg. No. 660,812.
For Decorative Lighting Outfits for Indoor and Outdoor Use on Christmas Trees, in Showrooms, Windows, and for Other Similar Display Purposes and Electric Lamps for Such Outfits.
First use in April 1937.

Class 22—Games, Toys, and Sporting Goods

SN 39,435. The Howard Zink Corporation, d. b. a. Howard Zink, Fremont, Ohio. Filed Oct. 23, 1957.

Yacht Club

The word "Brand" is disclaimed apart from the mark as shown.
For Marine Products, i. e., Life Preserver Cushions and Life Jackets.
First use Feb. 15, 1957.

SN 45,400. John L. A. Mayo, d. b. a. Mayo Brothers, Fairport, N. Y. Filed Feb. 6, 1958.

BUCKBOARD'N BUGGY

For Racer-Style Vehicle for Children.
First use Apr. 5, 1957.

SN 44,366. The W. E. Bassett Company, Derby, Conn. Filed Jan. 21, 1958.

SN 52,249. Toro Manufacturing Corporation, Minneapolis,

SN 45,543. Roy F. Dohn, d. b. a. Hi-Ball Co., Montreal, Quebec, Canada. Filed Feb. 10, 1958.

HI-BALL

For Board, Dice, Cards, Toy Money, and Game Pieces Comprising Locomotives, Tenders, and Cars for Playing a Board Game.
First use Dec. 14, 1957; in commerce Dec. 20, 1957.

SN 46,501. Starnold Corporation, New York, N. Y. Filed Feb. 24, 1958.

No claim is made to the word "Quality" apart from the mark as shown.
For Toy Stuffed Animals.
First use on or about Nov. 12, 1957.

SN 47,489. R. G. Barry Corporation, Columbus, Ohio. Filed Mar. 11, 1958.

EXCERMAT

For Foam Rubber Mats for Floor Exercising Purposes.
First use Feb. 21, 1958.

SN 48,047. Penn Fishing Tackle Mfg. Co., Philadelphia, Pa. Filed Mar. 19, 1958. Sec. 2(f).

PENN

For Fishing Reels.
First use July 1931.

SN 48,587. Seron Mfg. Co., Joliet, Ill. Filed Mar. 27, 1958.

CALL-GARD

For Lanyard Type Game Call Holder.
First use Feb. 4, 1958.

SN 49,223. Paul N. Vincent, d. b. a. Zip Grip Company, East Lansing, Mich. Filed Apr. 7, 1958.

ZIP GRIP

No claim of exclusive right is made to "Grip" as used on bowling ball finger and thumb hole inserts or patches.
For Bowling Accessories—Namely, Bowling Ball Finger and Thumb Hole Inserts or Patches.
First use Jan. 1, 1958.

SN 49,738. Burr & Nichols Machine Co., Inc., Keene, N. H. Filed Apr. 16, 1958.

IRONDOC

For Golf Club Blade Scraping and Cleaning Tool.
First use Mar. 15, 1958.

SN 50,366. Knickerbocker Toy Co. Inc., Brooklyn, N. Y. Filed Apr. 25, 1958.

Knick

For Stuffed Clowns, Dolls, and Animals.
First use Oct. 15, 1957.

SN 50,925. William H. Reely, d. b. a. Voo Doo Lure Company, San Francisco, Calif. Filed May 2, 1958.

Voo Doo

For Artificial Fishing Lures.
First use Jan. 15, 1948.

SN 51,904. Gorman Golf Products, Inc., Birmingham, Mich. Filed May 19, 1958.

POWERMASTER

For Golf Clubs.
First use Apr. 1, 1955.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 36,079. Johnson Motors, Inc., Pasadena, Calif. Filed Aug. 23, 1957.

JO-MO

For Parts, Tools, and Accessories for Motorcycles.
First use Jan. 1, 1947.

SN 39,300. Clair J. Verway, d. b. a. C. J. Verway Company, Grand Rapids, Mich. Filed Oct. 21, 1957.

UNIMIST

For Industrial and Machine Tool Lubricating and Cooling Systems.
First use Aug. 27, 1957.

SN 42,567. Albert Edward Zeumer, Barnet, Hertfordshire, England. Filed Dec. 16, 1957.

FUMIDISER

Owner of British Reg. Nos. 758,234 and 771,585, dated Oct. 5, 1956, and Nov. 27, 1957, respectively.
For Automatically Operated Spray Cabinets for Fumigating Articles Such as Books.

SN 44,026. Kirk's Ltd., New York, N. Y. Filed Jan. 15, 1958.

The words "Forged Stainless" and "Sheffield England" are disclaimed apart from the mark as shown.
For Table Cutlery With Stainless Steel Blades.
First use during January 1955; during January 1952 as to "Kirk's."

SN 32,994. Zenith Products Company, West Newton, Mass. Filed June 5, 1958.

SN 37,604. Dille & McGuire Manufacturing Company, Richmond, Ind. Filed Aug. 21, 1958.

SN 44,366. The W. E. Bassett Company, Derby, Conn. Filed Jan. 21, 1958.

KEYPER

For Combined Pocket Knife and Key Case.
First use in September 1957.

SN 44,367. The W. E. Bassett Company, Derby, Conn. Filed Jan. 21, 1958.

KUSTOM KEYPER

For Combined Pocket Knife and Key Case.
First use in September 1957.

SN 48,291. Albert Karelius & Sons Inc., Alhambra, Calif. Filed Mar. 24, 1958.

KARELIUS HOISTER

The drawing is lined for red.
For Pumps for Pumping Fluids Such as Plaster and/or Cement Mortar Through Long Hoses or Pipes.
First use Nov. 7, 1957.

SN 49,578. Thomas J. Gore, d. b. a. Kurley Kut Hair Shaper Co., South Bend, Ind. Filed Apr. 14, 1958.

KURLEY KUT

For Hair Shaping Device, Consisting of Blade Carrier, Cutting Blades, and Assemblies Consisting of a Carrier and a Blade.
First use June 1, 1955.

SN 51,822. Schield Bantam Company, Waverly, Iowa. Filed May 16, 1958.

"Schield Bantam Company Waverly Iowa" is disclaimed.
Owner of Reg. Nos. 426,054, 532,009, and others.
For Cranes and Motorized Earth Moving and Material Handling Equipment, Accessories, Attachments and Parts Therefor; Back Hoes; Shovels; Blades; Buckets; Teeth; Drive Mechanisms; Crawlers; Bulldozers; Loaders; Grapples; Pile Drivers; Trenchers; Power Plants; Power Operated Hoist and Winch Mechanisms Mounted on Stationary or Mobile Swing Platforms and Attachments Therefor; Magnets; Hoists; Winches; Fairleads; Clutches; Booms; Motorized Carriers of the Wheel and Crawler Type; and Tractors.
First use June 16, 1946, except on tractors.

SN 52,187. Ariens Company, Brillion, Wis. Filed May 23, 1958.

Ariens JET

Owner of Reg. Nos. 510,552 and 631,261.
For Wheeled, Motor Operated Garden and Agricultural Tiller.
First use December 1957; 1932 as to "Ariens."

SN 52,249. Toro Manufacturing Corporation, Minneapolis, Minn. Filed May 23, 1958.

GOLFMASTER

For Lawnmowers.
First use Apr. 4, 1958.

SN 52,319. Major Slicing Machine Corp., Walden, N. Y. Filed May 26, 1958.

MAJOR

For Food Slicing and Food Grinding Machines.
First use on or about Mar. 6, 1958.

SN 52,427. Oxy-Dry Sprayer Corporation, Chicago, Ill. Filed May 27, 1958.

Atom Jet

For Anti-Offset Sprayer for Use With Printing Equipment.
First use Oct. 21, 1955.

SN 52,495. Hudson Automatic Machine & Tool Co., Union City, N. J. Filed May 28, 1958.

Strohm

For Swiss Type Automatic Screw Machines.
First use July 9, 1951.

SN 52,732. Earle M. Jorgensen Co., Los Angeles, Calif. Filed June 2, 1958.

GOLDEDGE

Owner of Reg. No. 410,757.
For Cutting Edges for Earth Moving Equipment.
First use Sept. 15, 1957.

SN 52,735. Keelavite Rotary Pumps & Motors Limited, Coventry, England. Filed June 2, 1958.

KEELATITE

Owner of British Reg. Nos. 771,913, 771,914, dated Dec. 5, 1957; and U. S. Reg. No. 582,183.
For Hydraulic Pumps, Hydraulic Motors, Hydraulic Machinery, and Hydraulic Rams, Including Parts of Same.

SN 52,977. Powermatic Machine Company, McMinnville, Tenn. Filed June 5, 1958.

POWERMATIC

Owner of Reg. No. 644,702.
For Metal Working Machines, Including Drill Presses, Metal Cutting Bandsaws, and Metal Working Lathes.
First use Sept. 6, 1957.

SN 34,875. Unimark Photo, Inc., New York, N. Y. Filed Aug. 2, 1957.

SN 46,166. Ruf-Buchhaltung Aktiengesellschaft, Zurich, Switzerland. Filed Feb. 19, 1958.

SN 52,994. Zenith Products Company, West Newton, Mass. Filed June 5, 1958.

ZENITH

For Spinning Pumps for Synthetic Textiles.
First use in 1926.

SN 54,686. Imperial International Corp., New York, N. Y. Filed July 2, 1958.

RADIANCE

For Scissors, Shears, Knives, Forks, and Spoons of All Kinds, Ladles, Spatulas, Pancake Turnovers, Potato Mashers, Egg Beaters, Slicers, and Serving Sets.
First use Jan. 10, 1958.

SN 55,220. Ettore Bonalumi and Ada Bonalumi, d. b. a. Società Italiana Cardpen, Bergamo, Italy. Filed July 14, 1958.

CARDPEN

Owner of Italian Reg. No. 133,638, dated Oct. 18, 1957.
For Carding Machines, Drawing Machines, as Well the Components Thereof.

SN 56,729. John Kinsella, d. b. a. Scattergrain Company, Merna, Ill. Filed Aug. 6, 1958.

scattergrain

For Grain Distributing Machine.
First use June 19, 1958.

SN 57,044. Wright Power Saw and Tool Corporation, Sheboygan, Wis. Filed Aug. 11, 1958.

SUPER REBEL

Owner of Reg. Nos. 655,780 and 656,784.
For Power Saws.
First use June 23, 1958.

SN 57,045. Wright Power Saw and Tool Corporation, Sheboygan, Wis. Filed Aug. 11, 1958.

Owner of Reg. Nos. 655,780 and 656,784.
For Power Saws.
First use June 23, 1958.

SN 57,046. Univator, Inc., Berkeley, Calif. Filed Aug. 8, 1958.

For Garden Cultivators and Accessories Therefor.
First use May 15, 1946.

SN 57,604. Dille & McGuire Manufacturing Company, Richmond, Ind. Filed Aug. 21, 1958.

Banner

For Lawn Mowers.
First use in 1934.

Class 24—Laundry Appliances and Machines

SN 11,402. Ward Industries Corporation, Syracuse, N. Y. Filed July 2, 1956.

IMPERIAL 60

The numeral "60" is disclaimed apart from the mark as shown.
For Commercial Synthetic Dry Cleaning Unit.
First use May 14, 1956.

SN 44,840. Quality Products Company, Chicago, Ill. Filed Jan. 28, 1958.

SUN GLOW

For Covers and Pads for Ironing Machines, Pressing Machines, Puff Irons Steam Boards, Steam Finishers, and Ironing Boards.
First use Nov. 21, 1957.

SN 47,400. Transamerican Match Corporation, New York, N. Y. Filed Mar. 10, 1958.

VICTORIA

For Clothes Pins.
First use Feb. 14, 1958.

SN 49,488. Cook Machinery Co., Inc., Dallas, Tex. Filed Apr. 11, 1958.

TUMBLETTE

For Clothes Dryers.
First use Dec. 5, 1957.

Class 26—Measuring and Scientific Appliances

SN 27,754. Telemeter Magnetics, Inc., Los Angeles, Calif. Filed Apr. 8, 1957.

0/1

For Electrical Data Storage System for Data Processing and Computing.
First use June 28, 1956.

SN 49,195. Robinair Manufacturing Corporation, Edgerton, Ohio. Filed Mar. 3, 1958.

SN 51,520. Taco Heaters, Incorporated, Cranston, R. I. Filed May 26, 1958.

SN 34,875. Unimark Photo, Inc., New York, N. Y. Filed Aug. 2, 1957.

UNIMARK

For Photographic Equipment—Namely, Still Cameras, Moving Picture Cameras, Moving Picture Projectors, and All Accessories to Both the Cameras and Projectors, Including Lenses, Filters, Lens Caps, Splicers, Reels, Carrying Cases for Cameras.

First use Apr. 1, 1957.

SN 37,821. Southern Instruments Limited, Camberley, Surrey, England. Filed Sept. 25, 1957.

POLAROTRACE

Owner of British Reg. No. 756,481, dated Aug. 9, 1956.

For Cathode-Ray Type Instruments for Performing Chemical Analyses by Electrolysis.

SN 38,952. Swift & Anderson, Inc., Boston, Mass. Filed Oct. 15, 1957.

SWIFT

For Barometers, Thermometers, Hygrometers, Binoculars, Field Glasses and Magnifiers.

First use Dec. 1, 1950.

SN 39,337. Manson Laboratories, Inc., Stamford, Conn. Filed Oct. 22, 1957.

manson

For Crystal Oscillators, Frequency Standards, Precise Variable Frequency Oscillators, Crystal Temperature Control Ovens, Frequency Generators, Frequency Synthesizers, Receivers, Transmitters, Remote Control Devices for Frequency Selection, Harmonic Generators, Soft Tube Modulators, Hard Tube Modulators, Tube Testing Equipment, Power Supplies, High Potential Test Sets, Trigger and Pulse Generators and Wire Cable Testing Equipment.

First use Jan. 16, 1951.

SN 40,706. Rinco, Inc., Portland, Oreg., by change of name from Research Instrument Corp., Portland, Oreg. Filed Nov. 14, 1957.

RINCO

For Apparatus and Components Thereof for Supplying and/or Measuring Electrical Characteristics—Namely, Resistance, Capacitance, Inductance, Reactance, Dissipation Factor and the Reciprocals Thereof, Voltage, Current, Phase Angle, Frequency, Power and Power Factor.

First use Feb. 19, 1957.

SN 46,166. Ruf-Buchhaltung Aktiengesellschaft, Zurich, Switzerland. Filed Feb. 19, 1958.

INTROMAT

Owner of Swiss Reg. No. 182,238, dated Jan. 31, 1950.

For Accounting Machines and Parts Thereof, Bookkeeping Machines—Namely, Dispositives for Insertion Into Bookkeeping Forms.

SN 47,230. Charles Bruning Company, Inc., Mount Prospect, Ill. Filed Mar. 7, 1958.

SURE-SCALE

For Sensitized Cloths and Films for Drawing, Tracing, and Reproduction Purposes.

First use Mar. 31, 1956.

SN 48,103. Medigraphics, Inc., New York, N. Y. Filed Mar. 20, 1958.

VIS-ORGAN

For Anatomical Model for Instruction Concerning and the Display of Anatomical Features of the Human Body.

First use July 8, 1957.

SN 48,104. Medigraphics, Inc., New York, N. Y. Filed Mar. 20, 1958.

VISIBODY

For Anatomical Model for Instruction Concerning and the Display of Anatomical Features of the Human Body.

First use July 8, 1957.

SN 48,921. Laboratory Furniture Company, Inc., Mineola, N. Y. Filed Apr. 2, 1958.

WOODLAB

Owner of Reg. Nos. 535,497 and 541,676.

For Tables, Desks, Benches, and Cabinets Specifically Designed and Constructed for Laboratory and Scientific Purposes.

First use June 1951; Feb. 1, 1942, as to "Woodlab" and design.

SN 48,924. Laboratory Furniture Company, Inc., Mineola, N. Y. Filed Apr. 2, 1958.

STEELAB

Owner of Reg. Nos. 519,856, 529,056, and 558,608.

For Tables, Desks, Benches, and Cabinets Specifically Designed and Constructed for Laboratory and Scientific Purposes.

First use in June 1951; July 1, 1925, as to "Steelab" and a design.

SN 49,143. Electro-Voice, Incorporated, Buchanan, Mich. Filed Apr. 7, 1958.

Owner of Reg. Nos. 433,507 and 597,559.

For Laboratory Instruments—Namely, Devices for Amplifying Electrical Potentials To Be Measured and for Producing an Output Related to an Input by a Mathematical Function, Calibrated and Standard Microphones, and Laboratory Magnetizers for Precision Control of Magnetic Polarization and Accessories Therefor.

First use Jan. 9, 1958.

Class 28—Jewelry and Precious-Metal Ware

SN 47,999. Anro Products Company, Inc., Montgomery, Ill.

SN 49,195. Robinair Manufacturing Corporation, Edgerton, Ohio. Filed Apr. 7, 1958.

ROBINAIR

For Gauges, Measuring, Metering, Detecting and Testing Devices for Use in Testing and Determining the Efficiency and Functioning of Household and Industrial Appliances—Namely, Refrigerators, Washers, Stoves, and Ranges, Ironers, and Air Conditioning Apparatus.
First use about September 1956.

SN 49,586. Jay Zee Mfg. Co., Oak Lawn, Ill. Filed Apr. 14, 1958.

CLEARITE

For Portable Testing Device for Use in Connection With Servicing and Repair of Oil Burning Systems Such as, Furnaces, Oil-Fired Boilers and the Like, Said Device Operable To Enable Clearing, Bleeding and Checking of Fuel Lines, Fuel Pumps, and Fuel Burners of Such Systems.
First use Sept. 1, 1955.

SN 50,207. Barkley & Dexter Laboratories, Inc., Fitchburg, Mass. Filed Apr. 23, 1958.

TALLY-PACK

For Electronic Counting Device.
First use on or about Feb. 10, 1957.

SN 50,377. N. V. Lichtdrukpapierfabriek "De Atlas," Delft, Netherlands. Filed Apr. 25, 1958.

RADEX

Owner of Dutch Reg. No. 125,502, dated July 24, 1956.
For Sensitized Reproduction Materials in the Nature of Paper Covered With a Sensitized Layer.

SN 50,434. Allen Electric and Equipment Company, Kalamazoo, Mich. Filed Apr. 28, 1958.

DIAL-CHEK

For Device for Identifying Characteristic Oscilloscope Patterns Associated With Internal Combustion Engine Operation and Indicating Remedy for Defective Operation, if Any, Thereby Identified.
First use Apr. 17, 1958.

SN 50,549. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 28, 1958.

rectilinite

Owner of Reg. No. 660,542.
For Pen Linkage Systems Providing Rectilinear Movement of the Recording Pens in Galvanometric Strip Chart Recorders.
First use on or about Sept. 1, 1956.

SN 51,089. Weber Costello Company, Chicago Heights, Ill. Filed May 5, 1958.

TRI-GRAPHIC

For Globes.
First use Mar. 21, 1958.

SN 51,520. Taco Heaters, Incorporated, Cranston, R. I. Filed May 12, 1958.

Taco

Owner of Reg. Nos. 441,726, 546,532, and others.
For Thermostatically Operated Valves for Hot Water Heating Systems.
First use in 1940.

Class 27—Horological Instruments

SN 50,268. Louis Aisenstein & Bros., New York, N. Y. Filed Apr. 23, 1958. Sec. 2(f).

RALEIGH

Owner of Reg. No. 356,644.
For Watches, Watch Movements, Clocks, Clock Movements, and Watchcases.
First use Feb. 10, 1937.

SN 53,420. Montres Rolex S. A. (Rolex Uhren AG.) (Rolex Watch Co. Ltd.), Geneva, Switzerland. Filed June 12, 1958.

DATEJUST

For Time-Pieces and Parts Thereof.
First use in 1953.

SN 53,510. Jefferson Electric Company, Bellwood, Ill. Filed June 13, 1958.

SUSPENSE

For Electric Clocks.
First use May 8, 1958.

SN 54,539. Marshall Watch Corporation, New York, N. Y. Filed June 30, 1958.

AVOVA

For Watches, Clocks and Cases and Parts Therefor.
First use June 17, 1958, on watches.

SN 54,642. Sovereign Watch Company, Inc., New York, N. Y. Filed July 1, 1958.

S

For Watches.
First use May 14, 1958.

SN 55,676. Jewel-Smiths, Inc., Boston, Mass. Filed July 21, 1958.

SLENDERFELLA

For Watches.
First use June 16, 1958.

SN 49,407. Atlas Corrugated Case Co., Inc., Maspeth, N. Y. Filed Apr. 10, 1958.

SN 52,019. Dockson Corporation, Detroit, Mich. Filed June

Class 28 — Jewelry and Precious-Metal Ware

SN 36,007. Anne Loehnert, Rutherford, N. J. Filed Aug. 22, 1957.

POCKA-CHIEF

For Pocket Handkerchief Holder for Use in the Pocket of a Suit Coat or Other Garment and Carrying an Initial, Monogram, Insignia or Other Design or Device.
First use Mar. 1, 1957.

SN 36,008. Anne Loehnert, Rutherford, N. J. Filed Aug. 22, 1957.

POCKA-CHIEF HOLDER

Applicant disclaims the word "Holder" apart from the mark shown.
For Pocket Handkerchief Holder for Use in the Pocket of a Suit Coat or Other Garment and Carrying an Initial, Monogram, Insignia or Other Design or Device.
First use Mar. 1, 1957.

SN 36,059. Cotillion Inc., New York, N. Y. Filed Aug. 23, 1957.

COTILLION

Owner of Reg. No. 409,556.
For Costume Jewelry of Plastic and Non-Precious Metals—Namely, Bracelets, Pins, Rings, Necklaces, Earrings, and Clips.
First use January 1943.

SN 46,536. Everwed Co. Inc., New York, N. Y. Filed Feb. 25, 1958.

EVERWED ALL-IN-ONE

Applicant disclaims apart from its use in connection with the entire mark, the words "All-In-One."
For Combined Engagement and Wedding Ring.
First use Oct. 10, 1957.

SN 55,685. Joseph H. Meyer Bros., Brooklyn, N. Y. Filed July 21, 1958.

BIBETTE

For Necklaces.
First use June 27, 1958.

Class 29—Brooms, Brushes, and Dusters

SN 36,113. John V. Shepherd, d. b. a. Dust Queen of Silver Spring, Md., Takoma Park, Md. Filed Aug. 23, 1957.

DUST QUEEN

For Mops.
First use Oct. 5, 1956.

SN 47,998. Anro Products Company, Inc., Montgomery, Ill. Filed Mar. 19, 1958.

SUDSY SAL

Owner of Reg. No. 640,318.
For Brushes With Hollow Handles for Dispensing Detergent.
First use December 1957.

SN 47,999. Anro Products Company, Inc., Montgomery, Ill. Filed Mar. 19, 1958.

SUDSY TWINS

Owner of Reg. No. 640,318.
For Brushes With Hollow Handles for Dispensing Detergent.
First use December 1957.

SN 48,965. Cadie Chemical Products, Inc., New York, N. Y. Filed Apr. 8, 1958.

SILVER SHEEN

For Polishing and Dusting Cloths.
First use July 1, 1957.

SN 49,720. B. E. Turner, d. b. a. Arcadia Mfg. Co., Arcadia, Calif. Filed Apr. 15, 1958.

poli-duster

For Mop-Type Duster.
First use Mar. 3, 1958.

Class 31—Filters and Refrigerators

SN 43,107. Mealpack Corporation, Evanston, Ill. Filed Dec. 27, 1957.

FREEZ-A-TRAY

For Refrigerator Shelf.
First use Dec. 5, 1957.

Class 32—Furniture and Upholstery

SN 43,782. Simplex Electric Company Limited, Oldbury, England. Filed Jan. 10, 1958.

CREDA

Owner of British Reg. Nos. 766,407 and 768,408, both dated Aug. 16, 1957.
For Kitchen Furniture; Heated Drying Cabinets and Heated Drying Cupboards, Both for Storage Purposes.

SN 44,401. Main Machine Co., Inc., Stamford, Conn. Filed Jan. 21, 1958.

"STAR BRITE"

For Metal Chairs, Chaises, and Tables.
First use Dec. 16, 1957.

SN 48,677. Horton and Horton Custom Works, Inc., Fort Worth, Tex. Filed Mar. 21, 1958.

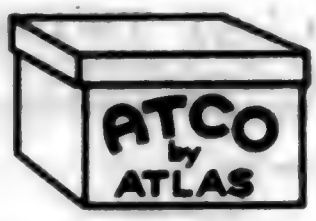
GOLD CREST

For Aircraft Interiors, Including Wall and Ceiling Surface Shapes and Coverings, Floor Coverings.
First use Aug. 15, 1957.

SN 49,942. Lynwood Giacomini, New York, N. Y. Filed

SN 50,997. Electrol Incorporated, Kingston, N. Y. Filed

SN 49,407. Atlas Corrugated Case Co., Inc., Maspeth, N. Y. Filed Apr. 10, 1958.



The representation of the bench is disclaimed apart from the mark as shown.
For Mourner's Bench or Seat.
First use Apr. 4, 1958.

SN 56,502. The Stendley Company, Carthage, Mo. Filed Aug. 1, 1958.

POWERAMIC

For Inner Spring Constructions for Mattresses and Box Springs.
First use July 8, 1958.

SN 56,734. Pullman Couch Company, Chicago, Ill. Filed Aug. 6, 1958.

"UNDER-COVER"

For Upholstered Living Room Furniture.
First use in March 1953.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 46,359. Rheem Manufacturing Company, Richmond, Calif. Filed Feb. 21, 1958.

RICHMOND

Owner of Reg. No. 142,720.
For Warm Air Furnaces and Heating Boilers.
First use in 1867.

SN 48,864. Niagara Blower Company, New York, N. Y. Filed Apr. 1, 1958.

HYGROL

For Apparatus for Dehumidifying Air and Other Gases and for Reconcentrating the Hygroscopic Liquid Used in Such Apparatus.
First use September 1949.

SN 50,282. Coen Company, San Francisco, Calif. Filed Apr. 24, 1958. Sec. 2(f).

COEN

Owner of Reg. No. 667,108.
For Oil and Gas Fired Industrial Boiler-Burner Apparatus and Electric-Mechanical Controls Therefor.
First use in or about July 1912 on oil fired boiler-burner apparatus.

SN 52,781. United States Rubber Company, New York, N. Y. Filed June 2, 1958.

UNI-FLAME

For Wicking.
First use Mar. 5, 1958.

SN 53,019. Dockson Corporation, Detroit, Mich. Filed June 6, 1958.

LEVERMATIC

For Welding Torches.
First use Mar. 28, 1958.

SN 53,134. Elgen Manufacturing Corporation, Long Island City, N. Y. Filed June 9, 1958.

ELGEN

For Sheet Metal Products and Fittings for Heating, Ventilating and Air Conditioning Apparatus.
First use Nov. 9, 1953.

SN 53,434. Sears, Roebuck and Co., Chicago, Ill. Filed June 12, 1958.

HARMONY HOUSE

For Andirons, Fireplace Grates.
First use on or about June 15, 1954.

Class 36—Musical Instruments and Supplies

SN 46,155. Pacific Enterprises, Inc., Hollywood, Calif. Filed Feb. 19, 1958.

Applicant claims no exclusive rights in the word "Records" as the name of the goods identified herein.
For Grooved Phonograph Records.
First use Sept. 15, 1957.

SN 50,269. Castle Record Co. Inc. of N. J., Boonton, N. J. Filed Apr. 23, 1958.

For Phonograph Records.
First use Apr. 1, 1958.

Class 37—Paper and Stationery

SN 42,771. Gulf States Paper Corporation, Tuscaloosa, Ala., assignee of E-Z Opener Bag Company, Tuscaloosa, Ala. Filed Dec. 20, 1957.

E-Z WRAP

Applicant disclaims the word "Wrap" apart from the mark as shown. Owner of Reg. Nos. 227,095, 631,342, and others.
For Kraft Wrapping Paper.
First use June 2, 1954.

SN 37,473. Armored Hosiery Corp., New York, N. Y. Filed Sept. 19, 1957.

SN 46,139. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Feb. 19, 1958.

SN 49,842. Lynwood Giacomini, New York, N. Y. Filed Apr. 17, 1958.

ITALIC

For Fountain Pen Nibs.
First use Aug. 26, 1957.

SN 49,843. Lynwood Giacomini, New York, N. Y. Filed Apr. 17, 1958.

CHANCERY

For Fountain Pen Nibs.
First use Aug. 26, 1957.

SN 49,915. The Esterbrook Pen Company, Camden, N. J. Filed Apr. 18, 1958.

WORDATHON

For Ball Point Refills.
First use Mar. 25, 1958.

Class 38—Prints and Publications

SN 38,456. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Oct. 7, 1957.

HALL OF FAME

For Albums Containing Personal Greeting Cards, Assortment of Greeting Cards.
First use in January 1952.

SN 42,166. Technicolor Corporation, Hollywood, Calif. Filed Dec. 10, 1957.

TELECOLOR

Owner of Reg. Nos. 267,288, 640,388, and others.
For Motion Picture Films.
First use Nov. 15, 1957.

SN 44,614. General Office Service, Inc., Washington, D. C. Filed Jan. 24, 1958.

SEN BAK

For Prepared Advertising—Namely, Compound Mailing Pieces, Comprising a Letter Sheet With a Return Card, Envelope or Similar Element Attached Thereto.
First use in October 1954.

SN 47,778. John Howard Payne, Inc., La Plata, Md. Filed Mar. 14, 1958.

PAYNE'S PAYOMETER

For Series of Booklets Primarily for Use in Payroll Work.
First use Mar. 1, 1958.

SN 48,773. Newcomers Service, Portland, Oreg. Filed Mar. 31, 1958.

NEWCOMERS SERVICE

Owner of Reg. No. 601,764.
For Booklets.
First use in May 1925.

SN 50,997. Electrol Incorporated, Kingston, N. Y. Filed May 5, 1958. Sec. 2(f).

The HYDRAULIC ENGINEER

Owner of Reg. No. 569,829.
For Magazine Published Bi-Monthly.
First use May 11, 1951.

SN 51,090. Weber Costello Company, Chicago Heights, Ill. Filed May 5, 1958.

TRI-GRAPHIC

For Maps.
First use Jan. 30, 1952.

SN 51,119. Florida Trucking Association, Inc., Jacksonville, Fla. Filed May 6, 1958. Sec. 2(f).

FLORIDA TRUCK NEWS

For Official Monthly Magazine Publication.
First use in September 1947.

Class 39—Clothing

SN 697,874. Edward A. Weil, Chicago, Ill. Filed Nov. 7, 1955.

SUGAR-N-SPICE

For Women's Hosiery.
First use July 18, 1950.

SN 36,156. Bulluck Hosiery, Inc., d. b. a. Musketeer, New York, N. Y. Filed Aug. 26, 1957.

For Hosiery for Men, Women, and Children.
First use July 12, 1954.

SN 37,116. Edward S. Wagner Co., Inc., New York, N. Y. Filed Sept. 12, 1957.

"GLO-KNIT"

For Handmade Sweater Sets, Sacque Sets, Booties, Moccasins, Caps, Bonnets, and Christening Shoes for Infants.
First use Aug. 1, 1957.

SN 37,210. Charles H. Bacon Company, New York, N. Y. Filed Sept. 16, 1957.

TOP DRAWER

Owner of Reg. No. 574,602.
For Hosiery for Men and Boys.
First use Sept. 4, 1957.

SN 52,098. Wyotheville Knitting Mills, Inc., Reading, Pa.,

Class 40—Fancy Goods, Furnishings, and

SN 37,473. Armored Hosiery Corp., New York, N. Y. Filed Sept. 19, 1957.

mr. INFLUENTIAL

For Hosiery for Boys and Men.
First use Sept. 12, 1957.

SN 37,518. Piedmont Shirt Company, Greenville, S. C. Filed Sept. 19, 1957.

Wings

FLIGHT-WEAVE

Owner of Reg. Nos. 253,701, 395,806, and 429,691.
For Men's and Boys' Shirts, Undershirts, Under-Shorts, Pajamas and Jackets.
First use Aug. 21, 1957.

SN 37,631. Canterbury Belts Ltd., New York, N. Y. Filed Sept. 23, 1957.

CANTERBURY

For Men's and Women's Belts for Wearing Apparel.
First use in January 1956.

SN 37,910. R. Saffan & Co., New York, N. Y. Filed Sept. 26, 1957.

Slumber-Ease

For Ladies' Pajama Sets.
First use Nov. 28, 1956.

SN 41,776. Peter Pan Foundations, Inc., New York, N. Y. Filed Dec. 4, 1957.

BARE HUG

For Brassieres.
First use Nov. 6, 1957.

SN 45,261. Harry Lubovsky Co., Boston, Mass. Filed Feb. 4, 1958.

CORSELLI CREATION

The words "Creation" is disclaimed apart from the mark as shown.
For Women's Shoes.
First use in January 1955.

SN 45,262. Harry Lubovsky Co., Boston, Mass. Filed Feb. 4, 1958.

MAZERIO CREATION

The word "Creation" is disclaimed apart from the mark as shown.
For Women's Shoes.
First use in January 1955.

SN 46,139. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Feb. 19, 1958.

COBRA

For Rubber Heels and Soles.
First use Jan. 2, 1958.

SN 48,437. Robert Hosiery Mills, Inc., Collegeville, Pa. Filed Mar. 25, 1958.

RONDO SLIPPENS

Owner of Reg. Nos. 268,340 and 597,417.
For Knitted Slippers.
First use June 18, 1957.

SN 48,490. Little Miss Hi-Heels, Inc., South Miami, Fla. Filed Mar. 26, 1958.

LITTLE MISS

For Children's Novelty Items—Namely, High Heel Slippers.
First use Feb. 25, 1957.

SN 49,053. Duofold Inc., Mohawk, N. Y. Filed Apr. 4, 1958.

NORSE-NET

For T-Shirts for Men and Women.
First use Mar. 21, 1958.

SN 49,111. Argo Knitting Mills, Inc., Schuylkill Haven, Pa. Filed Apr. 7, 1958.

BOB BRENT

For Boys' Knitted Polo Shirts and Boys' Knitted Pajamas.
First use Feb. 28, 1958.

SN 50,254. Smoler Bros., Inc., Chicago, Ill. Filed Apr. 23, 1958.

VANDALIA

For Women's and Misses' Clothing—Namely, Dusters, Robes, and Dresses.
First use in or about May 1957.

SN 51,557. Esskee Products Company, Inc., Corona, N. Y. Filed May 13, 1958.

Esskee

For Rainwear.
First use Apr. 20, 1953.

SN 51,595. Shoe Corporation of America, Columbus, Ohio. Filed May 13, 1958.

Cloud Puffs

For Women's Shoes.
First use Apr. 18, 1958.

SN 45,892. Joseph Bancroft & Sons Co., Wilmington, Del. (II) 19,250. Filed Feb. 19, 1958.

SN 52,098. Wytheville Knitting Mills, Inc., Reading, Pa., assignee of U. B. Buchanan, New York, N. Y. Filed May 22, 1958.

STUNNING STEMS

For Ladies' Hosiery.
First use Nov. 1, 1957.

SN 52,131. Linker & Herbert, Inc., New York, N. Y. Filed May 22, 1958.

Petite-Aire

For Coats for Women.
First use May 1, 1958.

SN 52,193. Judy Bond, Inc., New York, N. Y. Filed May 23, 1958.

Judy Bond

Owner of Reg. Nos. 508,780 and 394,394.
For Dresses, Sweaters, Brassieres, Slips, Panties, Girdles, Pajamas, Nightgowns, Hosiery, and Scarfs.
First use March 1954 on dresses.

SN 52,212. Fitts Cotton Goods Company, Atlanta, Ga. Filed May 23, 1958.

CHARMSPUN

For Infants' Diapers.
First use Apr. 5, 1958.

SN 52,214. Fitts Cotton Goods Company, Atlanta, Ga. Filed May 23, 1958.

LUCKY BABE

For Infants' Diapers.
First use Apr. 10, 1958.

SN 52,353. Arthur I. Stephens, Chicago, Ill. Filed May 26, 1958.

ARTSTEP

For Men's, Women's, and Children's Hosiery.
First use May 2, 1958.

SN 52,644. Morris L. Slimovitz, d. b. a. Morris Manufacturing Company, Newbern, Tenn. Filed May 23, 1958.

2 IN 1

For Gloves.
First use Jan. 24, 1958.

SN 52,933. Huntington Mfg. Co., Inc., Chicago, Ill. Filed May 19, 1958.

CAREER GIRL

Owner of Reg. No. 366,420.
For Women's, Misses', and Girls' Dresses.
First use Oct. 24, 1938.

Class 40—Fancy Goods, Furnishings, and Notions

SN 52,519. Scolding Locks Corporation, Appleton, Wis. Filed May 28, 1958.

BEAUTY MAID

For Bob Pins.
First use Apr. 27, 1932.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 27,182. Checker Fabrics & Net Company, New York, N. Y. Filed Mar. 29, 1957.

SATIN MARQUETTE

Applicant disclaims the word "Satin" apart from the mark as shown.
For Fabrics in the Piece Having a Satin Stripe.
First use June 15, 1956.

SN 38,539. Hockmeyer Bros., Inc., New York, N. Y. Filed Oct. 8, 1957.

DON TWIST

For Textile Fabrics in the Piece Composed of Corduroy.
First use May 17, 1957.

SN 49,803. Harold Weinberg, Inc., New York, N. Y. Filed Apr. 14, 1958.

LOVIT

For Woolen Fabrics.
First use Oct. 28, 1957.

SN 49,944. Cyril Johnson Woolen Company, Stafford Springs, Conn. Filed Apr. 18, 1958.

newate

For Textile Fabrics in the Piece Consisting of a Mixture of Wool and Synthetic Fibres.
First use Sept. 9, 1957.

Class 43—Thread and Yarn

SN 28,157. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed Jan. 24, 1957.

TURBINIZED

For Yarn, Which Has Undergone a High Bulking Treatment for Use and Sale in Finished Garments Only—Namely, Sweaters and the Like.
First use Aug. 6, 1956.

SN 46,180. The American Thread Company, New York, N. Y. Filed Feb. 20, 1958.

STAR ULTRA DEE

Owner of Reg. Nos. 25,632 and 63,245.
For Thread.
First use Aug. 1, 1957.

SN 48,892. Joseph Bancroft & Sons Co., Wilmington, Del. Filed Mar. 25, 1958.

TEXTRALIZED

Owner of Reg. Nos. 619,697 and 601,773.
For Artificially Crimped Continuous Filament Synthetic Material—Namely, Nylon.
First use Oct. 9, 1952.

Class 44—Dental, Medical, and Surgical Appliances

SN 25,473. Bernard H. Stauffer, Los Angeles, Calif. Filed Mar. 4, 1957.

METABOL'AID

For Passive Exercise Mechanism of the Type Which Applies an Oscillating Applicator to a Zone of the Human Body for Manipulating the Same Through a Controlled Arc of Movement.
First use Nov. 10, 1955.

SN 45,558. Globe Industries, Inc., Dayton, Ohio. Filed Feb. 10, 1958.

DUALIFE

For Portable Breathing Equipment.
First use on or about Sept. 1, 1957.

Class 45—Soft Drinks and Carbonated Waters

SN 50,686. Citrus Products Company, Chicago, Ill. Filed Apr. 30, 1958.

PANIC

For Nonalcoholic, Noncereal, Maltless Beverages Sold as Soft Drinks and Liquid Concentrates From Which Such Soft Drinks Are Made.
First use Apr. 3, 1958.

Class 46—Foods and Ingredients of Foods

SN 225. Wisconsin Alumni Research Foundation, Madison, Wis. Filed Jan. 5, 1956.

10 protein

The word "Protein" is disclaimed apart from the mark as shown.
For Bread Mix.
First use Nov. 11, 1955.

SN 4,603. Armour and Company, Chicago, Ill. Filed Mar. 15, 1956.

ASCONIC

For Compositions Containing Ascorbic and Nicotinic Acid Used for Improving and Maintaining the Color of Meat.
First use Sept. 15, 1952.

SN 19,250. George W. Johnson, d. b. a. The Grist Mill, Los Angeles, Calif. Filed Nov. 14, 1956.

GRIST MILL

For Cereals, Both Prepared and Unprepared; Baked Goods—Namely, Bread, Cookies, Crackers, Rolls and Cakes; Candies; Dietary Foods—Namely, Canned Fruits, Vegetables, and Meat Substitutes; Dried Milk and Milk Substitutes; Salad Dressings; Spice and Seasoning Preparations; Yeast; Honey; and Flour.
First use in 1917.

SN 35,596. The Nestlé Company, Inc., White Plains, N. Y. Filed Aug. 15, 1957.

NESCAFÉ

Owner of Reg. Nos. 364,017 and 379,117.
For Instant Coffee.
First use June 23, 1938.

SN 37,707. Estes Candy Company, Inc., New York, N. Y. Filed Sept. 23, 1957.

Chanté

The word "Chanté" apparently is derived from the French and means "to sing."
For Swiss Miniature Chocolates.
First use Sept. 1, 1956.

SN 38,078. North American Mushroom Co., Tinley Park, Ill. Filed Sept. 30, 1957.

COUNTRY FRESH

Owner of Reg. No. 567,413.
For Canned Steak Sauce Containing Sliced Mushrooms, and Fresh Mushrooms.
First use Mar. 15, 1951, on canned steak sauce containing sliced mushrooms.

SN 39,961. Gleasons Drive In Restaurants, Inc., Rochester, N. Y. Filed Nov. 1, 1957.

HI-BURGER

For Sauce for Hamburgers.
First use June 4, 1957.

SN 49,567. Jas. H. Forbes Tea & Coffee Corporation, SN 51,264. E. B. Evans, Inc. Philadelphia, Pa. Filed Mar

SN 40,156. Tavener Rutledge Limited, Liverpool, England. Filed Nov. 5, 1957.

No claim is made to the words "Fruit Flavored Drops" and the trade name "Tavener Rutledge Ltd., Liverpool, England."
For Fruit Flavored Drops.
First use Oct. 7, 1947; in commerce 1947.

SN 40,947. Ida Mae Salads, Inc., Brentwood, Md. Filed Nov. 19, 1957.

Ida Mae

Owner of Reg. No. 561,949.
For Packaged Fresh Salads—Namely, Potato, Cole Slaw, Macaroni, Pepper Hash, and Fruit and Vegetable in Gelatine Bases, All Sold as Refrigerated Items; Packaged Frozen and Refrigerated Pizza Pie and Pizza Pie Crusts; and Packaged Refrigerated Cooked Corn Meal and Hominy Grits.
First use May 1951.

SN 42,065. Charles A. Sayous, Inc., New York, N. Y. Filed Dec. 9, 1957.

Bravo

For Canned Goods—Namely, Corned Beef, Roast Beef, Corned Beef Hash, and Beef Stew.
First use Oct. 10, 1958.

SN 42,905. On-Cor Food Products, Chicago, Ill. Filed Dec. 23, 1957.

For Frozen Food Products—Namely, Prepared Meat Cuts, Bar-B-Q Sauce and Sliced Beef, Sandwich Beef Steaks, Buttered Beef Steaks, Ground Beef Patties, Beef Chop Suey, Breaded Veal Choplets, Breaded Pork Choplets.
First use as early as 1947.

SN 42,906. On-Cor Food Products, Chicago, Ill. Filed Dec. 23, 1957.

ON-COR

For Frozen Food Products—Namely, Prepared Meat Cuts, Bar-B-Q Sauce and Sliced Beef, Sandwich Beef Steaks, Buttered Beef Steaks, Ground Beef Patties, Beef Chop Suey, Breaded Veal Choplets, Breaded Pork Choplets.
First use 1947.

SN 44,095. Institutional Service Company, Atlantic City, N. J. Filed Jan. 16, 1958.

ISCO

For Dehydrated Packaged Foods—Namely, Chow Mein, Green Pea-Soup Mix, Italian Spaghetti Sauce Mix, Mexican Chile Con Carne, French Onion Soup, and Old Fashioned Rice Pudding Mix.
First use on or about Sept. 1, 1957.

SN 46,508. Temple Frosted Foods Inc., Brooklyn, N. Y. Filed Feb. 24, 1958.

For Quick Frozen Foods—Namely, Chicken Chow Mein, Shrimp Chow Mein, Shrimp Rolls, Chinese Fried Rice, Chinese Egg Rolls, Chinese Dinner Consisting of Egg Roll, Fried Rice, Chicken Chow Mein.
First use Oct. 4, 1956.

SN 47,615. Wesson Oil & Snowdrift Co., Inc., New Orleans, La. Filed Mar. 12, 1958.

Owner of Reg. Nos. 67,061, 136,036, and others.
For Shortening Made From Hydrogenated Vegetable Oil.
First use July 15, 1956.

SN 48,010. Central Canning Co., Inc., Cedarville, N. J. Filed Mar. 19, 1958.

SLIM-TRIM

For Dietetic Fruit Beverage in a Sealed Container.
First use Dec. 17, 1957.

SN 48,254. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 24, 1958.

IMPEDEX

Owner of Reg. No. 423,319.
For Sodium Propionate Formulation To Inhibit the Growth of Mold and To Retard Heating in Animal Feeds.
First use Dec. 2, 1957.

SN 48,980. Louis Furth, Inc., New York, N. Y. Filed Apr. 3, 1958.

Star Fire

For Canned Meats.
First use Feb. 11, 1958.

SN 49,567. Jas. H. Forbes Tea & Coffee Corporation, St. Louis, Mo. Filed Apr. 14, 1958.

QUICK

Owner of Reg. No. 640,022.
For Instant Tea.
First use Mar. 26, 1958.

SN 49,765. Longlife Fish Food Products, Union City, N. J. Filed Apr. 16, 1958.

LONGLIFE

Owner of Reg. No. 380,987.
For Pet Foods—Namely, Aquarium Foods and Bird Foods.
First use Feb. 1, 1933, on aquarium foods.

SN 50,086. McGarvey-Atwood Coffee Co., Minneapolis, Minn. Filed Apr. 21, 1958.

FLAME ROOM

For Coffee and Tea.
First use in 1926.

SN 50,087. McGarvey-Atwood Coffee Co., Minneapolis, Minn. Filed Apr. 21, 1958.

MOUNTAIN RIDGE

For Coffee.
First use in 1935.

SN 50,274. American Chewing Products Corp., Newark, N. J. Filed Apr. 24, 1958.

OUTER SPACE
THE BIG "O" BUBBLE GUM

Applicant disclaims the wording "Bubble Gum."
For Bubble Chewing Gum.
First use Feb. 3, 1958.

SN 50,842. A. W. Bodine, d. b. a. Bodine Produce Company, Phoenix, Aria. Filed Apr. 25, 1958. Sec. 2(f).

BODINE

For Fresh Vegetables.
First use Nov. 1, 1944.

SN 51,149. Stella D'Oro Biscuit Co. Inc., New York, N. Y. Filed May 6, 1958.

GEMELLI

The English translation of the term "Gemelli" is "twins."
For Cookies and Biscuits.
First use Apr. 3, 1957.

SN 51,223. Pros, S. A., Mexico City, Mexico. Filed May 7, 1958.

Owner of Mexican Reg. No. 90,111, dated Sept. 28, 1956.
For Foods and Its Ingredients, Particularly Candies, Cakes, and Pastry Goods.

SN 51,264. E. B. Evans, Inc., Philadelphia, Pa. Filed May 8, 1958.

The lining on the drawing indicates the color red but no claim is made to color. The word "Topping" is disclaimed.
For Toppings for Sundaes, Cakes, Puddings, Etc.
First use Apr. 17, 1958.

SN 51,348. Gulf Stream Quick Frozen Foods, Inc., Miami, Fla. Filed May 9, 1958.

TREASURE CHEST

For Frozen Prepared Shrimp.
First use Feb. 28, 1950.

SN 51,538. George E. Abbott & Co., Inc., Brooklyn, N. Y. Filed May 13, 1958. Sec. 2(f).

ABBOTT

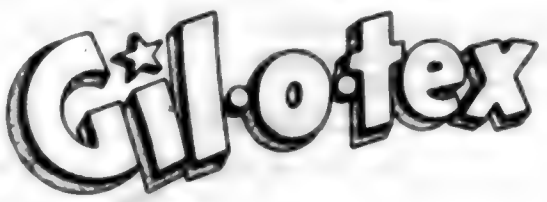
Owner of Reg. No. 557,441.
For Pickles, Oven Baked Beans, Bottled and Canned Olives, Bottled and Canned Maraschino Cherries, Bottled and Canned Edible Olive Oil.
First use Oct. 8, 1950, on pickles.

SN 52,143. North Pacific Canners & Packers, Inc., Portland, Oreg. Filed May 22, 1958.

PEARL'S QUALITY

For Canned Fruits and Vegetables, Including Boysenberries, Youngberries, Loganberries, Blackberries, Purple Plums, Green Beans, Carrots, and Beets.
First use in April 1942.

SN 52,709. R. Paul Gilmore, d. b. a. Gilmore Produce Company, Brownsville, Tex. Filed June 2, 1958.



For Fresh Vegetables.
First use May 15, 1955.

SN 52,820. T. Marsetti Company, Columbus, Ohio. Filed June 3, 1958.

For Flavoring Sauces for Use on Meats, Fish, and Poultry.
First use May 15, 1958.

SN 52,926. Wisconsin Malting Co., Milwaukee, Wis. Filed June 4, 1958.

CHAR-ZYME

For Smoke Flavored Malt Seasoning.
First use May 16, 1958.

SN 45,019. Cotton Goods Manufacturing Company, Chicago, SN 49,975. Rosl Corporation, Bernardsville, N. J. Filed

SN 53,340. Henry Kroog, d. b. a. Orange Mountain Bee Farm, North Bergen, N. J. Filed June 11, 1958.

Orange Mountain
Number 1 since 1901

For Honey.
First use Mar. 4, 1958.

SN 53,482. Continental Specialties Co., Inc., Cicero, Ill. Filed June 13, 1958.

BERRY HILL

For Table Syrups, Jams, and Jellies.
First use May 20, 1958.

SN 53,809. McCormick & Company, Incorporated, Baltimore, Md. Filed June 18, 1958.

McCormick

Owner of Reg. Nos. 46,036, 656,861, and others.
For Instant Dry Milk Crystals.
First use May 16, 1958.

SN 53,827. Safeway Stores, Incorporated, Oakland, Calif. Filed June 18, 1958.

LUNCH BOX

Owner of Reg. No. 623,648.
For Peanut Butter.
First use June 4, 1958.

SN 53,845. Van Camp Sea Food Company, Inc., Terminal Island, Calif. Filed June 18, 1958. Sec. 2(f).

VAN CAMP'S

Owner of Reg. Nos. 230,834, 431,127, and others.
For Canned Fish.
First use Dec. 1, 1914.

Class 47—Wines

SN 34,701. Julius L. Horowitz, d. b. a. J. L. Horowitz, Brooklyn, N. Y. Filed July 31, 1957.

MIZRACH

The mark may be translated as "East."
For Wines.
First use Mar. 1, 1917.

Class 48—Malt Beverages and Liquors

SN 43,150. Thomas E. Ferguson, Portland, Oreg. Filed Dec. 30, 1957.

"600" BRAND

The word "Brand" is disclaimed.
For Malt Liquor.
First use Apr. 11, 1957.

SN 50,368. Lone Star Brewing Co., San Antonio, Tex. Filed Apr. 25, 1958.

LONE STAR

For Beer.
First use Feb. 1, 1940.

Class 49—Distilled Alcoholic Liquors

SN 47,973. Schenley Distillers, Inc., d. b. a. Number One Distilling Company, New York, N. Y. Filed Mar. 18, 1958.

INDIANA GENTLEMAN

Owner of Reg. No. 381,068.
For Whiskey.
First use Mar. 6, 1958.

SN 49,856. Kennaway & Co., Ltd., Exeter, England. Filed Apr. 17, 1958.

KENNAWAY'S 1743

For Scotch Whisky.
First use June 1955; in commerce June 1955.

SN 50,647. Schenley Industries, Inc., New York, N. Y. Filed Apr. 29, 1958.

THE GOLDEN RECTANGLE

For Blended Whiskey.
First use Apr. 10, 1958.

SN 50,648. Schenley Industries, Inc., New York, N. Y. Filed Apr. 29, 1958.

THE GOLDEN CIRCLE

For Blended Whiskey.
First use Apr. 10, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 29,620. Norman Dine, New York, N. Y. Filed May 8, 1957.

BEDUCATION KIT

Applicant disclaims the descriptive word "Kit" apart from the mark as shown.
For Kit Comprising a Book on Bed Manners, a Device To Prevent Snoring, a Pillow Case Inscribed "Gather Ye Rosebuds While Ye May," and a Box of Sedatives.
First use Mar. 14, 1957.

SN 45,019. Cotton Goods Manufacturing Company, Chicago, Ill. Filed Jan. 31, 1958.

FITE RITE

For Fire Blanket and Storage Container Therefor.
First use Oct. 20, 1955.

SN 46,901. Coast Maid Paper Products Co., Los Angeles, Calif. Filed Mar. 3, 1958.

COAST MAID

For Drinking Straws.
First use about Nov. 8, 1946.

SN 48,769. Milprint, Inc., Milwaukee, Wis. Filed Mar. 31, 1958.

Polly-Weed-Less

For covering for Plant Growth and Lawns.
First use on or about Jan. 7, 1958.

Class 51 — Cosmetics and Toilet Preparations

SN 50,163. Haering & Co., Odol-Fabrik, Kosmetische Produkte, Goldach, Canton of St. Gall, Switzerland. Filed Apr. 22, 1958.

MILAIR

Owner of Swiss Reg. No. 166,341, dated July 19, 1957.
For Cosmetics—Namely, Perfumes, Colognes, and Toilet Waters, Lipstick, Skin Creams and Lotions, Face and Body Powders, Dentifrices, Eye Make-Up, Manicuring Finger Nail Preparations, Body Deodorants, Bath Oils, Depilatories, Hair Preparations—Namely, Hair Tint, Hair Dressing, Creams and Lotions, Hair Tonics and Hair Conditioners; Shaving Creams, Lotions, and Powders.

Class 52 — Detergents and Soaps

SN 40,024. Brookfield Laboratories, Brookfield, Ill. Filed Nov. 4, 1957.

SUPERBATH

For Domestic Animal Shampoo.
First use Apr. 10, 1956.

SN 42,221. Les Parfums de Dana, Inc., d. b. a. Dana, New York, N. Y. Filed Dec. 11, 1957.

DANITA

For Toilet Soap and a Bubble-Forming Detergent Preparation for Use in the Bath.
First use Dec. 5, 1957.

SN 47,986. The J. R. Watkins Company, Winona, Minn. Filed Mar. 18, 1958.

Watkins

Owner of Reg. Nos. 207,525 and 364,537.
For Soap, Hair Shampoo, Spot Removers, Detergent Used To Sanitize, Disinfect and Deodorize, for Household and Farm Use, and Concentrated Liquid All-Purpose Cleaner.
First use Feb. 17, 1958.

SN 49,975. Rosl Corporation, Bernardsville, N. J. Filed Apr. 18, 1958.

SRO

For Rust Remover and Metal Cleaning Composition.
First use Mar. 29, 1958.

SN 50,556. Texize Chemicals, Inc., Greenville, S. C. Filed Apr. 28, 1958.

TEXIZE

Owner of Reg. Nos. 444,672, 642,423, and others.
For Concentrated Cleaner for Cleaning Washable Surfaces; Wax Stripper; Liquid Hand Soap for Commercial Use; Detergent for Dishes; Floor Cleaner; Household Cleaner; and Rug Cleaner.
First use in 1946 on concentrated cleaner for cleaning washable surfaces.

SN 50,574. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 28, 1958.

INDUSTRIAL D

For Alkaline Cleaner, Particularly Useful in Spray Washers.
First use Feb. 17, 1953.

SN 50,594. Acqua Lina Manufacturing Co., Inc., Brooklyn, N. Y. Filed Apr. 29, 1958.

ACQUA

Owner of Reg. Nos. 234,849 and 594,082.
For Detergent for Household Use.
First use in December 1955.

SN 51,023. S. C. Johnson & Son, Inc., Racine, Wis. Filed May 5, 1958.

BLUE CHIP

For All Purpose Cleaner.
First use Apr. 24, 1958.

SN 51,097. Zwik Corporation, Elkin, N. C. Filed May 5, 1958.

ZWIK

For Tire Cleaner and Detergent.
First use Feb. 14, 1950.

SN 55,785. Demert & Dougherty, Inc., Chicago, Ill. Filed July 22, 1958.

DRY-MURIC

For Crystalline Acid Cleaning Composition for Cleaning Brick, Mortar, Concrete, Masonry, and Other Services.
First use on or about Apr. 2, 1958.

SN 36,040. Porcelain Enamel Institute, Inc., Washington, D. C. Filed Aug. 2, 1957.

SN 43,388. Hudson Blue & Photo Print Co., Inc., New York, N. Y. Filed Jan. 2, 1958.

SERVICE MARKS

Class 100 — Miscellaneous

SN 697,059. United Geophysical Corporation, Pasadena, Calif. Filed Oct. 24, 1955.

UNITED

For Services Performed for Others—Namely, Geophysical Exploration; Analysis and Interpretation of Data Respecting the Physical Properties of the Earth; Logging Wells; and Design, Installation, Testing, and Development of Environmental Techniques for Testing Instruments, Devices, and Equipment Having Electrical, Electronic, Hydraulic, Mechanical, Optical, and Pneumatic Components.

First use on or about June 28, 1950, on geophysical exploration services employing seismographs.

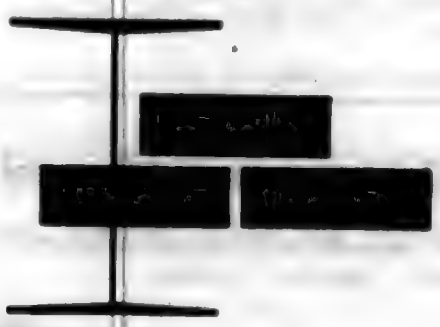
SN 23,924. Jesse A. Jesse, Wichita, Kans. Filed Feb. 6, 1957.

FHS

For Consultation Services to Sandwich Shop Owners in All Phases of Management.

First use in January 1953.

SN 36,581. Virginius H. Goodman, Richmond, Va. Filed Sept. 3, 1957.



The drawing is lined for red.

For Designing Building Structures and Writing Specifications in Connection Therewith.

First use Dec. 22, 1954.

SN 39,080. William A. Goodman, d. b. a. Associates Research and Development Company, Los Angeles, Calif. Filed Dec. 6, 1957.

Ψ

The mark consists of the Greek letter "Psi."

For Consultant Services in the Field of Business and Industrial Management.

First use Apr. 25, 1952.

SN 40,910. American Hydrotherm Corporation, Long Island City, N. Y. Filed Nov. 19, 1957.

HYDROTHERM

Owner of Reg. Nos. 556,424, 523,426, and 549,486.

For Engineering Services—Namely, Mechanical, Thermal, and Electrical Engineering Services.

First use on or about Jan. 2, 1953.

SN 47,158. Technical Operations, Inc., Burlington, Mass. Filed Mar. 5, 1958.

TECH OPS

For Research, Developmental, Advanced Theoretical, and Experimental Work for Industry and Government in Such Fields as: Operations Research, Physics, Chemistry, Nucleonics, Electronics, and Applied Mechanics.

First use Apr. 26, 1957.

Class 101 — Advertising and Business

SN 17,951. National Cash Discount Card Company Inc., Fayetteville, Ark. Filed Oct. 22, 1956.

For Promoting the Sale of the Goods of Others by the Issuance of Cash Discount Cards Which Are Honored by Certain Designated Merchants.

First use Aug. 3, 1956.

SN 25,424. Vondrak Publications, d. b. a. Gold Nugget Gift Stamp Plan, Chicago, Ill. Filed Mar. 4, 1957.

GOLD NUGGET

For Promoting the Sales of the Goods and Services of Others Through the Medium of Trading Stamps Redeemable in Merchandise.

First use on or about Sept. 29, 1955.

SN 28,051. Marits, Inc., d. b. a. Marits Sales Builders, St. Louis, Mo. Filed Apr. 12, 1957.

NATIONAL BANK OF PRIZES

For Sales Promotion Program—Namely, the Issuance of Prize Points in the Form of Checks and the Redemption of These in Merchandise.

First use June 21, 1952.

SN 47,469. United Fire & Casualty Company, Cedar Rapids,

SN 37,907. Railway Express Agency, Incorporated, New

SN 36,040. Porcelain Enamel Institute, Inc., Washington, D. C. Filed Aug. 2, 1957.

Penny Edwards

For Advertising and Trade Promotion of Porcelain Enamel in the Home Economics and Appliance Training Area by Means of Publication Advertisements, Special Literature, Correspondence, News Releases, and Other Public Relations Media.

First use Mar. 26, 1957.

SN 36,041. Porcelain Enamel Institute, Inc., Washington, D. C. Filed Aug. 2, 1957.

For Advertising and Trade Promotion of Porcelain Enamel in the Home Economics and Appliance Training Area by Means of Publication Advertisements, Special Literature, Correspondence, News Releases, and Other Public Relations Media.

First use Apr. 22, 1957.

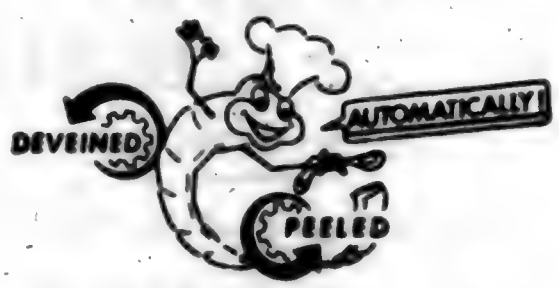
SN 39,570. Ads for Action, Inc., Hollywood, Calif. Filed Oct. 28, 1957.

Ads for Action

For Advertising Services by Leasing Space to Advertisers on a Motorized Revolving Bulletin Board.

First use Oct. 1, 1957.

SN 40,602. The Peelers Company, New Orleans, La. Filed Nov. 13, 1957.



All wording appearing on the drawing is disclaimed apart from the mark as a whole without waiving any common law rights thereto. Owner of Reg. No. 626,890.

For Promoting the Sale of the Goods of Its Shrimp Processing Machinery Lessees by Means of Advertising on Radio and Television and in Newspapers and Magazines.

First use Dec. 16, 1954.

SN 42,388. Hudson Blue & Photo Print Co., Inc., New York, N. Y. Filed Jan. 3, 1958.

The words "Quality Service" are disclaimed apart from the mark as shown.

For Making Blue Prints, Photoprints, and Other Reproductions.

First use in 1950.

SN 45,951. Claster Enterprises, Inc., Baltimore, Md. Filed Feb. 17, 1958.

PIN BUSTERS

For Title of a Bowling Television Show.

First use Jan. 25, 1958.

SN 46,728. E. C. Hall Company, Brockton, Mass. Filed Feb. 27, 1958.

The drawing is lined for red, pink, black, blue, and yellow, but color forms no part of the mark.

For Retail Grocery Services Rendered by Applicant's Members.

First use Mar. 11, 1940.

Class 102 — Insurance and Financial

SN 17,743. Mercury International Transurance, Inc., Torrance, Calif. Filed Oct. 18, 1956.

For Underwriting Management Service for Insurers Comprising the Furnishing of Management Services for the Promotion and Sale of Ground Surface Common Carrier Trip Insurance Policies Through the Medium of Insurance Policy Dispensing Machines Located at Common Carrier Terminals and Stations Located Throughout the United States, the Provision of Such Machines, Development and Printing of Policies Vended in Such Machines, Placement and Servicing of Such Machines, and Collection and Holding in Trust of Money Therefrom.

First use on or about Feb. 18, 1956.

SN 25,372. Van Valkenburgh, Nooger & Neville, Inc., New York, N. Y. Filed Mar. 1, 1957.

SN 31,575. The Wm. S. Merrell Company, Cincinnati, Ohio. Filed June 7, 1957.

SN 47,469. United Fire & Casualty Company, Cedar Rapids, Iowa. Filed Mar. 10, 1958.

MULTI-PAK

For Underwriting a Combined Package Policy Insurance Plan Covering the Home and the Automobile.
First use at least as early as August 1956.

SN 48,117. Talman Federal Savings and Loan Association of Chicago, Chicago, Ill. Filed Mar. 20, 1958.

TALMAN

For Savings and Loan Services.
First use June 1936.

Class 103—Construction and Repair

SN 24,294. "3 in 1" Permanent Well Completions, Inc., Dallas, Tex. Filed Feb. 12, 1957.

The words "Permanent Well Completions, Inc." are disclaimed apart from the mark as shown. The drawing is lined to indicate shading only.
For Construction of Permanent Oil Wells in the Final Phase of Building the Wells and Remedial Work on Oil Wells.
First use Apr. 10, 1956.

SN 47,071. Petroleum Tool Research, Inc., Fort Worth, Tex. Filed Mar. 4, 1958.

VIBRO-FRAC

For Well Casing Perforating and Formation Fracturing in Well Bore Holes.
First use Feb. 21, 1958.

Class 105—Transportation and Storage

SN 37,906. Railway Express Agency, Incorporated, New York, N. Y. Filed Sept. 26, 1957. Sec. 2(f).

The drawing is lined for red.
For Shipping of Freight by Rail, Air, Truck, and Waterway.
First use Mar. 1, 1928.

SN 37,907. Railway Express Agency, Incorporated, New York, N. Y. Filed Sept. 26, 1957. Sec. 2(f).

The drawing is lined for red. No claim is made to the words "Safe," "Swift" and "Sure" apart from the mark.
For Shipping of Freight by Rail, Air, Truck, and Waterway.
First use January 1956.

SN 40,892. V. J. Tovatt, d. b. a. V. J. Tovatt Co., Lynwood, Calif. Filed Nov. 18, 1957.

RED DEVIL

For Truck Transportation and Storage of the Goods of Others.
First use Mar. 5, 1954.

Class 106—Material Treatment

SN 37,421. Etched Products Corporation, Long Island City, N. Y. Filed Sept. 18, 1957.

Kolfor

For Fabricating Coined Letters, Emblems and Script Letters in Metal or the Like, to the Order of Customers.
First use Aug. 1, 1956.

SN 37,422. Etched Products Corporation, Long Island City, N. Y. Filed Sept. 18, 1957.

Rolbos

For Fabricating Metal Embossings for the Trade, to the Order of Customers.
First use Aug. 1, 1956.

Class 107—Education and Entertainment

SN 20,535. Carl William Leech, Staten Island, N. Y. Filed Dec. 6, 1956.

TROUBADORS OF SONG

For Television and Radio Entertainment in the Form of Male Choral Singing.
First use Sept. 26, 1956.

SN 25,372. Van Valkenburgh, Nooger & Neville, Inc., New York, N. Y. Filed Mar. 1, 1957.

SYNTHETIC SIMULATION

For Engineering Consulting Services of Analyzing Equipment Design of Others for Industrial, Business, and Personal Use and Correlating Equipment and Machine Requirements With the Human Element.

First use July 13, 1956.

SN 21,575. The Wm. S. Merrell Company, Cincinnati, Ohio. Filed June 7, 1957.

VISAFAX

For Services Incident to Educating the Medical Profession in the Use of Pharmaceutical Preparations Manufactured and Sold by Applicant, Said Services Including; Calling on Physicians and Displaying to Them, by Means of a Viewer, Slides Illustrating the Background, Dosage and Use of Applicant's Preparations, the Modes of Treatment and the Results Obtained Therefrom.

First use Mar. 27, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 51,346. Grand Aerie Fraternal Order of Eagles, Milwaukee, Wis. Filed May 9, 1958.

Owner of Reg. Nos. 557,627, 589,631, and others.

For Indicating Membership in the Applicant Corporation.

First use Oct. 24, 1947.

SN 51,347. Grand Aerie Fraternal Order of Eagles, Milwaukee, Wis. Filed May 9, 1958.

Owner of Reg. Nos. 564,926, 610,178, and others.

For Indicating Membership in the Applicant Corporation.

First use Oct. 24, 1947.

CERTIFICATION MARKS

Class A—Goods

SN 29,512. The Lace & Embroidery Association of America, Inc., New York, N. Y. Filed Apr. 17, 1957.

STABI-LUXE FINISH

The mark certifies that the lace has been treated with a finish which causes it to dry quickly and to retain its original shape, and eliminates ironing.

For Cotton Lace.

First use Mar. 1, 1957.

SN 45,872. General Electric Company, Schenectady, N. Y. Filed Feb. 14, 1958.

The mark certifies that the home to which the mark is applied, or the plans and specifications therefor, conforms to minimum standards set by applicant as to home electrification: that is, lighting, wiring, and number of major electrical appliances.

For Homes.

First use in October 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

670,424. ARGENTA. Mutation Mink Breeders Association. SN 662,372. COLLECTIVE MARK. Pub. 7–5–55. Filed 3–8–55.

670,425. FLF. Leon Falk, Jr., d. b. a. Falklands Farm. SN 28,440. Pub. 9–16–58. Filed 4–18–57.

670,426. PERLEY OAK. Perlstein Leather Co. Inc. SN 41,042. Pub. 9–16–58. Filed 11–20–57.

670,427. COSSO-FLECK. Armour and Company. SN 43,804. Pub. 9–16–58. Filed 1–13–58.

670,428. ARAVIN. Asher & Boretz, Inc. SN 43,918. Pub. 9–16–58. Filed 1–16–58.

670,429. FOAMOTHETIC. Rubber Fabrics Company. SN 44,118. Pub. 9–16–58. Filed 1–16–58.

670,430. ARMOFOAM. Armour and Company. SN 44,585. Pub. 9–16–58. Filed 1–24–58.

670,431. SANI-PET. Suburban Life Products Co. SN 44,935. Pub. 9–16–58. Filed 1–29–58.

Class 2—Receptacles

670,432. ZIP TOP. The Dow Chemical Company, assignee by mesne assignments of Arkell and Smiths. SN 3,138. Pub. 10–2–56. Filed 2–23–56.

670,433. SNAP UP. Retail Packaging Corporation. SN 15,906. Pub. 9–16–58. Filed 9–18–56.

670,434. EDIFILM. Davis Lacquer Products Proprietary Limited. SN 18,396. Pub. 9–16–58. Filed 11–7–56.

670,435. EDIPAC. Davis Lacquer Products Proprietary Limited. SN 18,397. Pub. 9–16–58. Filed 11–7–56.

670,436. POLYDROP. Chase Bottle & Supply Corp. SN 25,829. Pub. 10–8–57. Filed 3–11–57.

670,437. DIAL-A-DRILL. Keystone Ferrule & Nut Co. SN 29,541. Pub. 9–16–58. Filed 5–8–57.

670,438. WASTAINER. Wallace Silversmiths, Inc. SN 33,590. Pub. 9–16–58. Filed 7–11–57.

670,439. FRUIT-SHEL. Diamond Gardner Corporation. SN 44,444. Pub. 9–16–58. Filed 1–22–58.

670,440. HEDLINER. Hedwin Corporation. SN 45,380. Pub. 9–16–58. Filed 2–6–58.

670,441. PIK-A-STIK. Sutherland Paper Company. SN 45,627. Pub. 9–16–58. Filed 2–10–58.

670,442. CHATHAM WARE. Bridgeport Moulded Products, Inc. SN 45,674. Pub. 9–16–58. Filed 2–11–58.

670,443. LITTLE ROYALTY AND DESIGN. North American Plastics Company. SN 45,752. Pub. 9–16–58. Filed 2–12–58.

Class 4—Abrasives and Polishing Materials

670,444. DESIGN OF THREE POINTED STAR IN CIRCLE. Daimler-Benz Aktiengesellschaft. SN 45,025. Pub. 9–16–58. Filed 1–31–58.

670,445. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,132. Pub. 9–16–58. Filed 2–3–58.

Class 5—Adhesives

670,446. ALOMET. Jerome Swimmer, d. b. a. The Alomet Company. SN 22,037. Pub. 9–16–58. Filed 1–2–57.

670,447. METRO. Metro-Atlantic, Inc. SN 32,396. Pub. 9–16–58. Filed 6–21–57.

670,448. MAX-TIC. McCarten Industries, Inc. SN 45,588. Pub. 9–16–58. Filed 2–10–58.

Class 6—Chemicals and Chemical Compositions

670,449. SUPER PH-IX. Associated Chemists, Inc. SN 30,549. Pub. 9–16–58. Filed 5–23–57.

670,450. KORLAN. The Dow Chemical Company. SN 34,781. Pub. 9–16–58. Filed 8–1–57.

670,451. KYRAX. Air Reduction Company, Incorporated. SN 35,613. Pub. 9–16–58. Filed 8–16–57.

670,452. ORBIT AND DESIGN. National Kaolin Products Co. SN 41,110. Pub. 9–16–58. Filed 11–21–57.

670,453. VALVOLINE. Ashland Oil & Refining Company. SN 42,627. Pub. 9–16–58. Filed 12–18–57.

670,454. KOPR-PLUS. Chemco Photoproducts Company, Inc. SN 42,831. Pub. 9–16–58. Filed 12–23–57.

670,455. PLUTOFORM. General Aniline & Film Corporation. SN 43,084. Pub. 9–16–58. Filed 12–27–57.

670,456. KOLLAMINE. General Aniline & Film Corporation. SN 43,085. Pub. 9–16–58. Filed 12–27–57.

670,457. THERMALAIR AND DESIGN. James Madison Laird, d. b. a. Laird Engineering Company. SN 44,029. Pub. 9–16–58. Filed 1–15–58.

670,458. PRESPERSION. The Ware Chemical Corporation. SN 44,141. Pub. 9–16–58. Filed 1–16–58.

670,459. SEPTO-BAC. W. B. McGay, d. b. a. W. B. McGay Company. SN 44,191. Pub. 9–16–58. Filed 1–17–58.

670,460. SEAMCO AND DESIGN. The Seamless Rubber Company, d. b. a. Seamco Chemical Company. SN 44,209. Pub. 9–16–58. Filed 1–17–58.

670,461. IGA. Independent Grocers' Alliance Distributing Company. SN 45,390. Pub. 9–16–58. Filed 2–6–58.

670,462. BUTRON. Ronson Corporation. SN 45,613. Pub. 9–16–58. Filed 2–10–58.

670,463. TEKO. Wyandotte Chemicals Corporation. SN 45,837. Pub. 9–16–58. Filed 2–13–58.

670,464. PASTURITE. Wyandotte Chemicals Corporation. SN 46,040. Pub. 9–16–58. Filed 2–17–58.

Class 7—Cordage

670,465. THOROUGHBRAID. Rochester Ropes, Inc. SN 43,710. Pub. 9–16–58. Filed 1–9–58.

670,466. NATURALAY. Rochester Ropes, Inc. SN 43,711. Pub. 9–16–58. Filed 1–9–58.

670,467. SECO. Theron V. Moss, d. b. a. South-Eastern Cordage. SN 48,646. Pub. 9–16–58. Filed 3–28–58.

670,468. DESIGN OF COLUMN AND OVAL. Dan H. Shield Cordage Co. SN 48,666. Pub. 9–16–58. Filed 3–28–58.

670,469. REDMULE. United-Hagie Hybrids, Inc. SN 50,125. Pub. 9–16–58. Filed 4–21–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

670,470. KANITE. Hercules Powder Company. SN 43,099. Pub. 9–16–58. Filed 12–27–57.

670,519. WHITE DIAMOND. International Latex Corpora- 670,546. ENCO TINY TITAN AND DESIGN. Enco Manu-

670,471. KANEX. Hercules Powder Company. SN 43,100. Pub. 9–16–58. Filed 12–27–57.

Class 10 — Fertilizers

670,472. SOUTHERN N & N NITROGEN. Southern Nitrogen Company, Inc. SN 17,676. Pub. 9–16–58. Filed 10–17–56.

670,473. H-11D. Cerbini Research Corporation. SN 36,695. Pub. 9–16–58. Filed 9–5–57.

Class 11 — Inks and Inking Materials

670,474. SPECTRA-INK. Organic Development Corporation. SN 46,477. Pub. 9–16–58. Filed 2–24–58.

670,475. API AND DESIGN. The American Printing Ink Co. SN 48,134. Pub. 9–16–58. Filed 3–21–58.

Class 12 — Construction Materials

670,476. RANDOM WALL. Atlas Plywood Corporation. SN 26,527. Pub. 10–1–57. Filed 3–20–57.

670,477. VESTIPORT. Q-Panel Corporation, d. b. a. Q-Panel Corporation of Rhode Island. SN 42,396. Pub. 9–16–58. Filed 12–13–57.

670,478. "WHIP-LASH." Walter B. Mercer. SN 44,147. Pub. 9–16–58. Filed 1–15–58.

670,479. PATCH-CRETE. Camp Chemical Co. Inc. SN 44,872. Pub. 9–16–58. Filed 1–29–58.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

670,480. STANPART. The Standard Motor Company Limited. SN 30,847. Pub. 9–16–58. Filed 5–27–57.

670,481. HANDI-ROL. The Colorado Fuel and Iron Corporation. SN 31,545. Pub. 9–16–58. Filed 6–7–57.

670,482. ANACO. Anaheim Foundry Company. SN 31,622. Pub. 9–16–58. Filed 6–10–57.

670,483. SURE SEAL. Miller and Poston Manufacturing Company. SN 43,178. Pub. 7–15–58. Filed 12–30–57.

670,484. PETRECO. Petrolite Corporation. SN 44752. Pub. 9–16–58. Filed 1–27–58.

670,485. CADET. Continental Steel Corporation. SN 46,109. Pub. 9–16–58. Filed 2–19–58.

670,486. RELIANCE. American Meter Company. SN 47,318. Pub. 9–16–58. Filed 3–10–58.

670,487. WEDGESEAL. Eclipse Fuel Engineering Co. SN 47,356. Pub. 9–16–58. Filed 3–10–58.

670,488. HAVEG. Haveg Industries, Inc. SN 47,655. Pub. 9–16–58. Filed 3–13–58.

670,489. CAPT. JOHN'S. John Garofalo, d. b. a. Capt. John's Marine Hardware. SN 47,759. Pub. 9–16–58. Filed 3–14–58.

Class 14 — Metals and Metal Castings and Forgings

670,490. VISCOUNT 20. Latrobe Steel Company. SN 26,365. Pub. 9–16–58. Filed 3–19–57.

670,491. VISCOUNT 44. Latrobe Steel Company. SN 26,366. Pub. 9–16–58. Filed 3–19–57.

670,492. ZIPPALLOY. The Seymour Manufacturing Company. SN 28,880. Pub. 9–16–58. Filed 3–25–57.

670,493. EXTRA "L." Vanadium-Alloys Steel Company. SN 31,437. Pub. 9–16–58. Filed 6–5–57.

670,494. IDEAL AND DESIGN. Vanadium-Alloys Steel Company. SN 31,438. Pub. 9–16–58. Filed 6–5–57.

670,495. HC–250. American Brake Shoe Company. SN 32,278. Pub. 9–16–58. Filed 6–20–57.

Class 15 — Oils and Greases

670,496. SUNGARD. Sun Oil Company. SN 33,002. Pub. 9–16–58. Filed 7–1–57.

670,497. JET-FLITE. Ashland Oil & Refining Company. SN 36,990. Pub. 9–16–58. Filed 9–11–57.

670,498. SCREWLOOSE. Petroleum Solvents Corporation. SN 45,702. Pub. 9–16–58. Filed 2–11–58.

670,499. KENSPRAY. Kendall Refining Company. SN 45,809. Pub. 9–16–58. Filed 2–13–58.

670,500. CUT-EASE. American Grease Stick Company. SN 45,843. Pub. 9–16–58. Filed 2–14–58.

Class 16 — Protective and Decorative Coatings

670,501. VEP. Gulf States Paint Co. SN 48,740. Pub. 8–26–58. Filed 3–31–58.

670,502. UNITANE. American Cyanamid Company. SN 50,663. Pub. 9–16–58. Filed 4–30–58.

670,503. WD–40. Rocket Chemical Co., Inc. SN 50,730. Pub. 9–16–58. Filed 4–30–58.

670,504. POLY-FLOW. The Martin-Senour Company. SN 50,815. Pub. 9–16–58. Filed 5–1–58.

670,505. MULTA-ROLL. United Lacquer Mfg. Corp. SN 51,235. Pub. 9–16–58. Filed 5–7–58.

Class 17 — Tobacco Products

670,506. MARTINI. Philip Morris Incorporated. SN 41,829. Pub. 8–12–58. Filed 12–5–57.

Class 18 — Medicines and Pharmaceutical Preparations

670,507. KOKURYU AND DESIGN. Kokuryu-Do Company Limited. SN 15,890. Pub. 9–16–58. Filed 9–18–56.

670,508. POND'S. Chesebrough-Pond's Inc. SN 24,567. Pub. 9–16–58. Filed 2–18–57.

670,509. SWEETFLOW. Nutrena Mills, Inc. SN 27,967. Pub. 9–16–58. Filed 4–11–57.

670,510. LAMCO AND DESIGN. L. A. Mosher Company. SN 28,627. Pub. 9–16–58. Filed 4–22–57.

670,511. CHOLARACH. Warner-Lambert Pharmaceutical Company. SN 28,793. Pub. 9–16–58. Filed 4–24–57.

670,512. FEMMEX. Miles Laboratories, Inc. SN 30,347. Pub. 9–16–58. Filed 5–20–57.

670,513. DEXIMER. Johnson & Johnson. SN 33,974. Pub. 9–16–58. Filed 7–18–57.

670,514. PARACALCIN. Warner-Lambert Pharmaceutical Company. SN 34,270. Pub. 9–16–58. Filed 7–28–57.

670,515. ISAYODINE. International Latex Corporation, assignee of Herman Feis, d. b. a. Rumeldine Co. SN 34,412. Pub. 9–16–58. Filed 7–26–57.

670,516. ANACARDIOL. Loredana Lorentini Cremisini, d. b. a. Instituto Biochimico Italiano. SN 34,514. Pub. 9–16–58. Filed 7–29–57.

670,517. FUNGI-BAN. Chatham Pharmaceuticals, Inc. SN 42,761. Pub. 9–16–58. Filed 12–20–57.

670,518. MIRACLE HIST. George McCall, d. b. a. Miracle Hist Co. SN 44,402. Pub. 9–16–58. Filed 1–21–58.

Company. SN 22,037. Pub. 9–16–58. Filed 1–2–57.

Pub. 9–16–58. Filed 12–27–57.

670,519. WHITE DIAMOND. International Latex Corporation. SN 45,806. Pub. 9–16–58. Filed 2–13–58.

670,520. PSEUDOPHAGE. Biofarma, Societe Anonyme. SN 45,852. Pub. 9–16–58. Filed 2–14–58.

670,521. HYDROSARPAN. Biofarma, Societe Anonyme. SN 45,853. Pub. 9–16–58. Filed 2–14–58.

670,522. FLAVOTUSS. U. S. Vitamin Corporation. SN 46,784. Pub. 9–16–58. Filed 2–27–58.

670,523. BRONKOMULSION. Imperial Relampago Corp. SN 46,948. Pub. 9–16–58. Filed 3–3–58.

670,524. RAPADYNE. Knoll Pharmaceutical Company. SN 47,054. Pub. 9–16–58. Filed 3–4–58.

670,525. DEXRAX. Chas. Pfizer & Co., Inc. SN 47,073. Pub. 9–16–58. Filed 3–4–58.

670,526. DELABEN. Schering Corporation. SN 47,147. Pub. 9–16–58. Filed 3–5–58.

670,527. PRODESYL. Schering Corporation. SN 47,150. Pub. 9–16–58. Filed 3–5–58.

670,528. ARNIOL. Schering Corporation. SN 47,151. Pub. 9–16–58. Filed 3–5–58.

670,529. TRILAMET. Schering Corporation. SN 47,152. Pub. 9–16–58. Filed 3–5–58.

670,530. AMPHENOX. The Upjohn Company. SN 47,472. Pub. 9–16–58. Filed 3–10–58.

670,531. PREDOTOL. Organon Inc. SN 48,044. Pub. 9–16–58. Filed 3–19–58.

670,532. BOLVIDON. Organon Inc. SN 48,045. Pub. 9–16–58. Filed 3–19–58.

670,533. SOLUCAPS. Nysco Laboratories, Inc. SN 48,497. Pub. 9–16–58. Filed 3–26–58.

670,534. DIABINESE. Chas. Pfizer & Co., Inc. SN 48,784. Pub. 9–16–58. Filed 3–31–58.

670,535. DRAMAMINE-D. G. D. Searle & Co. SN 49,031. Pub. 9–16–58. Filed 4–3–58.

Class 19—Vehicles

670,536. POWER MASTER AND DESIGN. Powermaster Corporation. SN 45,196. Pub. 9–16–58. Filed 2–3–58.

670,537. CICLOMOTORE VIVI VIBERTI AND DESIGN. Officine Viberti Società per Azioni. SN 45,268. Pub. 9–16–58. Filed 2–4–58.

670,538. ESKIMO. Eskimo Radiator Mfg. Co. SN 45,681. Pub. 9–16–58. Filed 2–11–58.

670,539. DESIGN OF ESKIMO AND RADIATOR. Eskimo Radiator Mfg. Co. SN 45,682. Pub. 9–16–58. Filed 2–11–58.

670,540. TALBERT CHALLENGER AND DESIGN. Talbert Construction Equipment Company. SN 47,293. Pub. 9–16–58. Filed 3–7–58.

Class 20—Linoleum and Oiled Cloth

670,541. ECONOLAST. Vinyl Plastics, Inc. SN 46,862. Pub. 9–16–58. Filed 2–28–58.

670,542. VINYLAST. Vinyl Plastics Inc. SN 46,863. Pub. 9–16–58. Filed 2–28–58.

Class 21—Electrical Apparatus, Machines, and Supplies

670,543. POWER-LITE DURO-TEST AND DESIGN. Duro-Test Corporation. SN 19,560. Pub. 9–16–58. Filed 11–20–56.

670,544. SENTRY. The Electric Storage Battery Company, assignee of Ray-O-Vac Company. SN 32,123. Pub. 9–16–58. Filed 6–17–57.

670,545. AIWA AND DESIGN. Aiko Electric Company, Limited. SN 40,795. Pub. 9–16–58. Filed 11–16–57.

670,546. ENCO TINY TITAN AND DESIGN. Enco Manufacturing Company. SN 43,650. Pub. 7–22–58. Filed 12–16–57.

Class 22—Games, Toys, and Sporting Goods

670,547. LITTLE DIAMOND. Diamond Calk Horseshoe Company. SN 42,000. Pub. 9–16–58. Filed 12–9–57.

670,548. MAGIC MINNOW AND DESIGN. Lakeside Manufacturing Inc., d. b. a. Jardier Co. SN 42,652. Pub. 9–16–58. Filed 12–18–57.

670,549. KIDDYBIRD. Hamilton Steel Products, Inc. SN 45,878. Pub. 9–16–58. Filed 2–14–58.

670,550. LADY-LIKE AND DESIGN. Consolidated Productions, Inc. SN 45,953. Pub. 9–16–58. Filed 2–17–58.

670,551. SKIPPER. Hiawatha Wood Products. SN 46,620. Pub. 9–16–58. Filed 2–26–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

670,552. DESIGN OF WING. Eatwing Manufacturing Company, Incorporated. SN 13,972. Pub. 9–16–58. Filed 5–15–56.

670,553. HJ. Herb J. Hawthorne, Inc. SN 46,829. Pub. 9–16–58. Filed 2–28–58.

670,554. BECK-HILL DRILL WELL ETC. AND DESIGN. J. E. Hill. SN 46,831. Pub. 9–16–58. Filed 2–28–58.

670,555. CLIK-STOP. Pendleton Tool Industries, Inc., d. b. a. Proto Tool Company. SN 47,417. Pub. 9–16–58. Filed 3–10–58.

670,556. VIBROTO. The Rawlplug Company Limited. SN 47,432. Pub. 9–16–58. Filed 3–10–58.

670,557. BLUE TIP. Simonds Saw and Steel Company. SN 47,901. Pub. 9–16–58. Filed 3–17–58.

670,558. BAY CITY CRANEWAGON. Bay City Shovels, Inc. SN 48,231. Pub. 9–16–58. Filed 3–24–58.

670,559. MULTISEALER. Commercial Controls Corporation. SN 50,454. Pub. 9–16–58. Filed 4–28–58.

670,560. SELECTA CUT AND DESIGN. The Porter-Cable Machine Company. SN 50,921. Pub. 9–16–58. Filed 5–2–58.

670,561. W WHITIN UNITROL AND DESIGN. Whitin Machine Works. SN 50,949. Pub. 9–16–58. Filed 5–2–58.

670,562. SPRUNGER. Sprunger Brothers, Inc. SN 51,073. Pub. 9–16–58. Filed 5–5–58.

670,563. HELMSMAN. Teleflex Incorporated. SN 51,077. Pub. 9–16–58. Filed 5–5–58.

670,564. WINGED ANCHOR DESIGN. Teleflex Incorporated. SN 51,080. Pub. 9–16–58. Filed 5–5–58.

670,565. DESIGN TWO. H. E. Lauffer Co., Inc. SN 51,196. Pub. 9–16–58. Filed 5–7–58.

670,566. BOBCAT. Sherman Products, Inc. SN 51,227. Pub. 9–16–58. Filed 5–7–58.

670,567. WRAPAPRINTA. Adolph Gottscho, Inc. SN 51,271. Pub. 9–16–58. Filed 5–8–58.

670,568. RAYCO GO POWER. Rayco Mfg. Co. SN 51,288. Pub. 9–16–58. Filed 5–8–58.

Class 26—Measuring and Scientific Appliances

670,569. ELMAR. Ernst Leitz, G. m. b. H. SN 22,372. Pub. 9–16–58. Filed 1–10–57.

670,570. RAINBOW. Kino Camera Company, Inc. SN 27,864. Pub. 9–16–58. Filed 4–10–57.

670,571. GUEST NAVICHRON AND DESIGN. Guest Products Corporation. SN 30,770. Pub. 9–16–58. Filed 5–27–57.

670,572. SMOOTHERATOR. The Barden Corporation. SN 31,742. Pub. 9–16–58. Filed 6–11–57.

670,573. MOVIECHROME. General Aniline & Film Corporation. SN 32,179. Pub. 9–16–58. Filed 6–18–57.

670,574. OPAL. Eastman Kodak Company. SN 32,742. Pub. 9–16–58. Filed 6–27–57.

670,575. DYNA-QUIK. B & K Manufacturing Company. SN 32,897. Pub. 9–16–58. Filed 7–1–57.

670,576. DEKATRON. Baird-Atomic, Inc. SN 34,112. Pub. 9–16–58. Filed 7–22–57.

670,577. PACITRON. Simmonds Aerocessories, Inc. SN 41,845. Pub. 9–16–58. Filed 12–5–57.

670,578. EXACT. Exact Level & Tool Mfg. Co., Inc. SN 42,367. Pub. 9–16–58. Filed 12–13–57.

670,579. MEOFLEX. Meopta, Narodni Podnik. SN 42,704. Pub. 9–16–58. Filed 12–19–57.

670,580. MEOPTON. Meopta, Narodni Podnik. SN 42,705. Pub. 9–16–58. Filed 12–19–57.

670,581. FLEXPAR. Meopta, Narodni Podnik. SN 42,706. Pub. 9–16–58. Filed 12–19–57.

670,582. UNIT-LAB AND DESIGN. Laboratory Furniture Co., Inc. SN 43,034. Pub. 9–16–58. Filed 12–26–57.

670,583. NEONON. Durst S. A., Bolzano. SN 43,250. Pub. 9–16–58. Filed 12–31–57.

670,584. EXAX. Kimble Glass Company, assignee of Owens-Illinois Glass Company. SN 43,334. Pub. 9–16–58. Filed 1–2–58.

670,585. STEP-VALVE. Milton Roy Company. SN 43,769. Pub. 9–16–58. Filed 1–10–58.

670,586. ATROTEST. Pitanco Instruments Limited. SN 44,500. Pub. 9–16–58. Filed 1–23–58.

670,587. ATROMETER. Pitanco Instruments Limited. SN 44,561. Pub. 9–16–58. Filed 1–23–58.

670,588. PACER. Da-Lite Screen Company, Inc. SN 44,883. Pub. 9–16–58. Filed 1–29–58.

670,589. QUARTECTOR. Trans-Sonics, Inc. SN 45,227. Pub. 9–16–58. Filed 2–3–58.

670,590. HEAT-SPY. Justin Sturm. SN 45,420. Pub. 9–16–58. Filed 2–4–58.

670,591. NORWOOD. Helio-Tech, Inc. SN 45,478. Pub. 9–16–58. Filed 2–7–58.

670,592. BAL-GUARD. Bausch & Lomb Optical Company. SN 45,515. Pub. 9–16–58. Filed 2–10–58.

670,593. FG AND DESIGN. Foster Grant Co., Inc. SN 45,555. Pub. 9–16–58. Filed 2–10–58.

670,594. POLAROID. Polaroid Corporation. SN 45,605. Pub. 9–16–58. Filed 2–10–58.

670,595. THERMISTEMP. Yellow Springs Instrument Co., Inc. SN 45,838. Pub. 9–16–58. Filed 2–13–58.

670,596. SIGNALATOR. Kay Electric Company. SN 46,553. Pub. 9–16–58. Filed 2–25–58.

Class 29—Brooms, Brushes, and Dusters

670,597. SCRUBBY BOBBY. Marian E. Wark, d. b. a. Scrubby Bobby. SN 44,232. Pub. 9–16–58. Filed 1–17–58.

670,598. BABY FLO. The Wooster Brush Company. SN 44,332. Pub. 9–16–58. Filed 1–20–58.

670,599. SOFTIP. The Wooster Brush Company. SN 44,333. Pub. 9–16–58. Filed 1–20–58.

Class 30—Crockery, Earthenware, and Porcelain

670,600. PLANTATION COLONIAL. Carl Forslund, Inc. SN 43,381. Pub. 9–16–58. Filed 1–3–58.

Class 31—Filters and Refrigerators

670,601. PORT-A-CHILLER. W. E. Stone & Co., Inc. SN 38,868. Pub. 9–16–58. Filed 10–14–57.

670,602. VISI-KOOL. Leitner Equipment Company. SN 51,197. Pub. 9–16–58. Filed 5–7–58.

670,603. FOIBOS. General Engineering Co. Aktiebolag. SN 51,241. Pub. 9–16–58. Filed 5–9–58.

Class 32—Furniture and Upholstery

670,604. FIRM-O-LOC. Comfort Spring Corporation. SN 21,879. Pub. 7–2–57. Filed 12–31–56.

670,605. EVANS AND DESIGN. Evans Specialty Company Inc. SN 31,097. Pub. 9–16–58. Filed S. R. 5–31–57. Am. P. R. 7–3–58.

670,606. X-L. No-Sag Spring Company. SN 48,317. Pub. 9–16–58. Filed 3–24–58.

670,607. BAN-TAX. No-Sag Spring Company. SN 48,318. Pub. 9–16–58. Filed 3–24–58.

670,608. UNITEMP. No-Sag Spring Company. SN 48,319. Pub. 9–16–58. Filed 3–24–58.

670,609. VINYLINE. No-Sag Spring Company. SN 48,320. Pub. 9–16–58. Filed 3–24–58.

670,610. TC THAYER COGGIN AND DESIGN. Thayer Coggin, Inc. SN 49,990. Pub. 9–16–58. Filed 4–18–58.

670,611. SELECTRAY. Le Febure Corporation. SN 51,030. Pub. 9–16–58. Filed 5–5–58.

670,612. A. Arvin Industries, Inc. SN 51,314. Pub. 9–16–58. Filed 5–9–58.

670,613. GOLDEN WEB. Castro Convertible Corporation. SN 51,549. Pub. 9–16–58. Filed 5–13–58.

670,614. WORLEY AND DESIGN. Worley & Co. SN 51,602. Pub. 9–16–58. Filed 5–13–58.

Class 33—Glassware

670,615. 81-R. Libbey-Owens-Ford Glass Company. SN 699,809. Pub. 3–11–58. Filed 12–12–55.

Class 34—Heating, Lighting, and Ventilating Apparatus

670,616. AIRE-VAC. Austin B. Smith and Mack B. Smith. SN 31,418. Pub. 9–16–58. Filed 6–5–57.

670,617. VERTIJET. Hartzell Industries, Inc. SN 46,447. Pub. 9–16–58. Filed 2–24–58.

670,618. FLIPPER-ETTE. Seidelhuber Steel Rolling Mill Corporation. SN 46,882. Pub. 9–16–58. Filed 3–3–58.

670,619. MOR-SUN. Morrison Steel Products, Inc. SN 47,128. Pub. 9–16–58. Filed 3–5–58.

670,620. DYNACURVE. Clarage Fan Company. SN 47,630. Pub. 9–16–58. Filed 3–13–58.

670,621. TENT'N TRAIL. R. E. Dietz Company. SN 48,253. Pub. 9–16–58. Filed 3–24–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

670,622. WETZELL AND DESIGN. Wetzell Gummiwerke Aktiengesellschaft. SN 37,836. Pub. 9–16–58. Filed 9–25–57.

670,623. PERMA SPARE. The Firestone Tire & Rubber Company. SN 45,807. Pub. 9–16–58. Filed 2–14–58.

670,624. SAFETY SENTRY. Western Auto Supply Company. SN 46,385. Pub. 9–16–58. Filed 2–21–58.

670,625. LOX-SEAL. Fluorocarbon Co. SN 46,924. Pub. 9–16–58. Filed 3–3–58.

Class 38 — Prints and Publications

670,626. THE BLUE CROSS HEALTH DIGEST. American Hospital Association. SN 33,113. Pub. 9–16–58. Filed 7–3–57.

670,627. VIEW. Dickinson Publishing Corporation. SN 39,792. Pub. 9–16–58. Filed 10–30–57.

670,628. WARFRONT. Harvey Features Syndicate. SN 41,095. Pub. 9–16–58. Filed 11–21–57.

670,629. NEWSETTE. Newsette Publishing Co., Inc. SN 41,662. Pub. 9–16–58. Filed 12–2–57.

670,630. EMMY LOU. United Feature Syndicate, Inc. SN 46,032. Pub. 9–16–58. Filed 2–17–58.

670,631. PHOTOFLASHES. General Electric Company. SN 46,439. Pub. 9–16–58. Filed 2–24–58.

670,632. TV SKETCHBOOK. William M. Kurty, d. b. a. Bill Kurty. SN 46,536. Pub. 9–16–58. Filed 2–25–58.

Class 39 — Clothing

670,633. SORORITY DEBS. Wohl Shoe Company. SN 673,707. Pub. 5–10–55. Filed 9–23–54.

670,634. "WEEKENDER." Stahl-Urban Company. SN 699,532. Pub. 8–12–58. Filed 12–6–55.

670,635. ALESSANDRO DI ROMA. France Neckwear Co., Inc. SN 21,062. Pub. 9–16–58. Filed 12–14–56.

670,636. RED-WHITE-BLUE AND DESIGN. Shreveport Garment Manufacturers. SN 30,841. Pub. 9–16–58. Filed 5–27–57.

670,637. MISS BEHAVE. Kops Bros., Inc. SN 31,327. Pub. 9–16–58. Filed 6–4–57.

670,638. TINY LAD. International Latex Corporation. SN 32,087. Pub. 9–16–58. Filed 6–17–57.

670,639. SKAMPERETTE. The Skamperettes Co., Inc. SN 33,645. Pub. 9–16–58. Filed 7–12–57.

670,640. FUR SCULPTURE. Fur Sculpture Corp., assignee of David Grossman Fur Corporation. SN 33,707. Pub. 9–16–58. Filed 7–15–57.

670,641. FAMILY FAIR. Loblaw, Inc. SN 36,600. Pub. 5–20–58. Filed 9–3–57.

670,642. EMPERADA. Fishel-Cohen, Inc. SN 37,154. Pub. 9–16–58. Filed 9–13–57.

670,643. RO-CROFT. Rose Brothers, Inc. SN 43,910. Pub. 9–16–58. Filed 10–18–57.

670,644. TEE-RIFIC. Alpha Mills Corporation. SN 44,673. Pub. 9–16–58. Filed 1–27–58.

670,645. COAST-LINER. Surplus Merchandise Corporation. SN 45,355. Pub. 9–16–58. Filed 2–5–58.

670,646. AIRMAN. The Shirtcraft Company, Inc. SN 45,416. Pub. 9–16–58. Filed 2–6–58.

670,647. YACHTSMAN. The Associated Merchandising Corp. SN 45,443. Pub. 9–16–58. Filed 2–7–58.

670,648. MR. HERBERT. Harry Weiss, Inc. SN 45,766. Pub. 9–16–58. Filed 2–12–58.

670,649. VALGARDE. The Joseph & Feiss Company. SN 45,981. Pub. 9–16–58. Filed 2–17–58.

670,650. QUEEN'S RANSOM. M. Cohen & Son Coats & Suits, Inc. SN 47,102. Pub. 9–16–58. Filed 3–5–58.

670,651. SHAN-TEX. William Morgan Neal. SN 47,204. Pub. 9–16–58. Filed 3–6–58.

670,652. WILLIE S. Schwartz Sportswear Company. SN 47,217. Pub. 9–16–58. Filed 3–6–58.

670,653. LINARIA. Arid, Inc. SN 47,320. Pub. 9–16–58. Filed 3–10–58.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

670,654. TARENTO SILK. Palm Beach Company. SN 16,482. Pub. 9–16–58. Filed 9–26–56.

670,655. BARLETTA SILK. Palm Beach Company. SN 16,484. Pub. 9–16–58. Filed 9–26–56.

670,656. BRINDISI SILK. Palm Beach Company. SN 16,485. Pub. 9–16–58. Filed 9–26–56.

670,657. DEL RAY COTTON. Palm Beach Company. SN 16,486. Pub. 9–16–58. Filed 9–26–56.

670,658. ABC SPLENDORA AND DESIGN. Arthur Beir & Co., Inc. SN 35,234. Pub. 9–16–58. Filed 8–9–57.

670,659. DE VILLE. E. T. Barwick Mills, Inc. SN 38,725. Pub. 9–16–58. Filed 10–11–57.

670,660. STEVENS FINE FABRICS SINCE 1813. J. P. Stevens & Co., Inc. SN 45,932. Pub. 9–16–58. Filed 2–5–58.

670,661. TASTEMAKER. J. P. Stevens & Co., Inc. SN 46,170. Pub. 9–16–58. Filed 2–19–58.

670,662. LOOM BLOSSOM. Chicago Weaving Corp. SN 47,100. Pub. 9–16–58. Filed 3–5–58.

670,663. GLOBE AND DESIGN. Kishin Kewalram, d. b. a. Lekhraj & Sons. SN 47,198. Pub. 9–16–58. Filed 3–6–58.

Class 43 — Thread and Yarn

670,664. MELOFIL. The Duplan Corporation. SN 45,464. Pub. 9–16–58. Filed 2–7–58.

670,665. 'VIYELLON'. William Hollins & Company Limited. SN 46,545. Pub. 9–16–58. Filed 2–25–58.

670,666. VYRENE. United States Rubber Company. SN 47,083. Pub. 9–16–58. Filed 3–4–58.

Class 44 — Dental, Medical, and Surgical Appliances

670,667. STEROX-O-MATIC. Wilmot Castle Company. SN 28,217. Pub. 9–16–58. Filed 4–15–57.

670,668. TEENY. W. R. Sweeney Mfr., Inc. SN 41,728. Pub. 9–16–58. Filed 12–3–57.

670,669. BENNETT AND DESIGN. Bennett Respiration Products, Inc. SN 43,136. Pub. 9–16–58. Filed 12–30–57.

670,670. AURA-TIP. Otarion Listener Corporation. SN 44,644. Pub. 9–16–58. Filed 1–24–58.

670,671. FADS. The Hospital Specialty Company. SN 44,821. Pub. 9–16–58. Filed 1–28–58.

670,672. ANIMED. Animal Research Products, Inc. SN 45,306. Pub. 9–16–58. Filed 2–6–58.

Class 46 — Foods and Ingredients of Foods

670,673. TABLE PRIDE. Soule-Gibbs & Co., d. b. a. Ideal Distributing Co. SN 677,178. Pub. 5–3–55. Filed 11–23–54.

670,674. TASTE TREATS. Brock Candy Company. SN 692,898. Pub. 8–13–56. Filed 8–12–55.

670,675. LPC. The Great Western Sugar Company. SN 699,147. Pub. 9–16–58. Filed 11–30–55.

670,676. MARGARET. Sardinha do Algarve, Lda. SN 2,577. Pub. 9–16–58. Filed 2–13–56.

670,677. 'VERA-SHARP'. The Borden Company. SN 10,125. Pub. 9–16–58. Filed 6–13–56.

670,678. BLUE MOON AND DESIGN. Foremost Dairies, Inc. SN 12,611. Pub. 9–16–58. Filed 7–23–56.

670,679. PLANTATION DAINTIES. Plantation Chocolate Company. SN 14,168. Pub. 9–16–58. Filed 8–17–56.

670,680. KHAINAN. Kurt Reiss. SN 20,056. Pub. 9–16–58. Filed 11–28–56.

670,681. FLORIDA CRYSTALS. Fellsmere Sugar Producers Association. SN 21,800. Pub. 9–16–58. Filed 12–28–56.

670,682. PEACE AND DESIGN. Royal Trading Company Ltd. SN 22,137. Pub. 9–16–58. Filed 1–4–57.

670,683. DESIGN OF TWO MEN CARRYING A POTATO. Bozeman Canning Co., Inc. SN 23,072. Pub. 9–16–58. Filed 2–4–57.

670,684. MRS. CLAUS' KITCHEN. Santa's Village. SN 26,393. Pub. 9–16–58. Filed 3–18–57.

670,685. WILNO. Wilno Kosher Sausage Company. SN 28,475. Pub. 9–16–58. Filed 4–18–57.

670,686. TEKNIKAN. Foremost Dairies, Inc., d. b. a. Western Condensing Company. SN 28,690. Pub. 9–16–58. Filed 4–23–57.

670,687. BLUE STAR AND DESIGN. Blue Star Foods, Inc. SN 28,919. Pub. 9–16–58. Filed 4–26–57.

670,688. RUTH'S OVEN. Sumner R. Wickersham, d. b. a. Ruth's Oven Food Products, and Ruth's Oven. SN 31,531. Pub. 9–16–58. Filed 6–6–57.

670,689. CHEF AND DESIGN. Chef Pet Foods, Inc., assignee of Garry E. Devereaux. SN 32,066. Pub. 9–16–58. Filed 6–17–57.

670,690. SUNKIST. Sunkist Growers, Inc. SN 32,141. Pub. 9–16–58. Filed 6–17–57.

670,691. DANDY. Patrick Cudahy Inc., by change of name from Cudahy Brothers Co. SN 32,926. Pub. 9–16–58. Filed 7–1–57.

670,692. FLASH-O-FREEZ. Flash-O-Frees Meats Inc. SN 35,256. Pub. 9–16–58. Filed 8–9–57.

670,693. ALBA. Weldon Farm Products, Inc. SN 36,263. Pub. 9–16–58. Filed 8–26–57.

670,694. FRENCH-BOY. ABC Popcorn Co., Inc. SN 36,946. Pub. 9–16–58. Filed 9–10–57.

670,695. LIGHTNING-MAID AND DESIGN. Instant Made Tomato Products Co., Inc. SN 36,962. Pub. 9–16–58. Filed 9–10–57.

670,696. KOKO-FREEZE. H. P. Hood & Sons, Inc. SN 37,956. Pub. 9–16–58. Filed 9–27–57.

670,697. TANG. Buenaventura Lemon Co., Inc. SN 38,977. Pub. 9–16–58. Filed 10–16–57.

670,698. SUGAR BABIES. James O. Welch Company. SN 39,561. Pub. 9–16–58. Filed 10–25–57.

670,699. SEGARD'S AND DESIGN. Serge Segard, d. b. a. Serge Segard Baking Co. SN 41,404. Pub. 9–16–58. Filed 11–26–57.

670,700. DINKY LINKS. Fin 'N Feather Farm, Inc. SN 41,530. Pub. 9–16–58. Filed 11–29–57.

670,701. GAYMONT. G. P. Gundlach & Co., Inc. SN 41,811. Pub. 9–16–58. Filed 12–5–57.

670,702. KING SIZE. Royal Packing Company. SN 42,609. Pub. 9–16–58. Filed 12–17–57.

670,703. MORRELL AND DESIGN. John Morrell & Co. SN 43,472. Pub. 9–16–58. Filed 1–6–58.

670,704. GENERAL MILLS AND DESIGN. General Mills, Inc. SN 44,525. Pub. 9–16–58. Filed 1–23–58.

670,705. ROYAL SCOT. The Miami Margarine Company. SN 46,236. Pub. 9–16–58. Filed 2–20–58.

670,706. HI-FLAKE. Patrick Cudahy Inc. SN 46,604. Pub. 9–16–58. Filed 2–26–58.

670,707. HAYDEN'S AND DESIGN. Hayden's Hollandaise, Inc. SN 46,619. Pub. 9–16–58. Filed 2–26–58.

670,708. EXPLORER. John B. Hardwicke Co. SN 46,828. Pub. 9–16–58. Filed 2–28–58.

670,709. SUCRENT. American Molasses Company. SN 46,873. Pub. 9–16–58. Filed 3–3–58.

670,710. SUCRENT AND DESIGN. American Molasses Company. SN 46,874. Pub. 9–16–58. Filed 3–3–58.

670,711. POPEYE! Manteca Canning Company. SN 46,902. Pub. 9–16–58. Filed 3–3–58.

670,712. EHLERS L AND DESIGN. Albert Ehlers, Inc. SN 48,021. Pub. 9–16–58. Filed 3–19–58.

670,713. EHLERS V AND DESIGN. Albert Ehlers, Inc. SN 48,022. Pub. 9–16–58. Filed 3–19–58.

670,714. EHLERS R AND DESIGN. Albert Ehlers, Inc. SN 48,023. Pub. 9–16–58. Filed 3–19–58.

670,715. EHLERS T AND DESIGN. Albert Ehlers, Inc. SN 48,153. Pub. 9–16–58. Filed 3–21–58.

670,716. EHLERS N AND DESIGN. Albert Ehlers, Inc. SN 48,154. Pub. 9–16–58. Filed 3–21–58.

670,717. EHLERS A AND DESIGN. Albert Ehlers, Inc. SN 48,155. Pub. 9–16–58. Filed 3–21–58.

670,718. EHLERS C AND DESIGN. Albert Ehlers, Inc. SN 48,157. Pub. 9–16–58. Filed 3–21–58.

670,719. SPRING LOAF. Gooch Milling & Elevator Company. SN 48,988. Pub. 9–16–58. Filed 4–3–58.

670,720. CHEF'S DELIGHT. Wesley Crawford Foundation, d. b. a. Wesley Crawford & Son. SN 49,133. Pub. 9–16–58. Filed 4–7–58.

Class 47—Wines

670,721. SPITFIRE. Ambrose & Company. SN 47,214. Pub. 9–16–58. Filed 3–10–58.

Class 48—Malt Beverages and Liquors

670,722. STUBS. Schwabenbräu Aktiengesellschaft. SN 46,647. Pub. 9–16–58. Filed 2–26–58.

Class 49—Distilled Alcoholic Liquors

670,723. DESIGN OF BOTTLE. Haig & Haig Limited. SN 14,450. Pub. 9–16–58. Filed 8–23–56.

670,724. OLD NEWBURYPORT. Felton & Son, Incorporated, assignee of A. & G. J. Caldwell, Inc. SN 19,739. Pub. 9–16–58. Filed 11–23–56.

670,725. "21" BRANDS CLUB SPECIAL. "21" Brands, Inc. SN 20,498. Pub. 9–16–58. Filed 12–5–56.

670,726. PROFESSIONAL. Schenley Distillers, Inc. SN 41,401. Pub. 9–16–58. Filed 11–26–57.

670,727. NORTH STAR. Distillers Corporation Limited. SN 47,104. Pub. 9–16–58. Filed 3–5–58.

Class 50—Merchandise Not Otherwise Classified

670,728. TECO AND DESIGN. E. W. Bender, Jr., d. b. a. Technical Products Company. SN 9,333. Pub. 9–16–58. Filed 5–31–56.

670,729. FIBERFORM. Fiberlay, Inc. SN 30,321. Pub. 9–16–58. Filed 5–20–57.

670,730. AIRSECO. Airseco, Inc. SN 30,463. Pub. 9–16–58. Filed 5–22–57.

670,731. COLOR CROWN. Midwest Hanger Co. SN 40,242. Pub. 9–16–58. Filed 11–7–57.

670,732. SIGNET. Rock of Ages Corporation. SN 41,481. Pub. 9–16–58. Filed 11–27–57.

Class 51—Cosmetics and Toilet Preparations

670,733. BABY SWEET. Joseph W. Simoneau, d. b. a. House of Simoneau and J. W. Simoneau and Sons. SN 700,671. Pub. 9–16–58. Filed 12–27–55.

670,734. 'TOP BRASS'. Revlon Inc., d. b. a. Revlon. SN 3,456. Pub. 9–16–58. Filed 2–27–56.

670,735. ODORGONE AND DESIGN. P–M Laboratories, Inc. SN 7,106. Pub. 9–3–57. Filed 4–25–56.

Company. SN 14,168. Pub. 9–16–58. Filed 8–17–56.

670,736. GREEN MINT. Block Drug Company, Inc., doing business through its division, Hudson Products, assignee of Wernet Dental Mfg. Co., Inc., d. b. a. Hudson Products. SN 14,606. Pub. 9–16–58. Filed 8–24–56.

670,737. MEN PREFER. Swank, Inc. SN 34,019. Pub. 9–16–58. Filed 7–18–57.

670,738. LIQUI COLOR. Noreen, Inc., d. b. a. Beauty Products, Ltd., and Noreen Distributors. SN 36,615. Pub. 9–16–58. Filed 9–3–57.

670,739. QUI-CURL. Helene Curtis Industries, Inc. SN 37,146. Pub. 9–16–58. Filed 9–13–57.

670,740. TOP-NOTE. Sears, Roebuck and Co. SN 40,267. Pub. 9–16–58. Filed 11–7–57.

Class 52—Detergents and Soaps

670,741. ST. JOHNS BAY ETC. AND DESIGN. West Indies Bay Company. SN 28,563. Pub. 9–16–58. Filed 4–19–57.

670,742. SHOW COAT. Ben Richter Co., Inc. SN 35,205. Pub. 9–16–58. Filed 8–8–57.

670,743. PIPELINE POWDR PLUS. Lazarus Laboratories, Inc., division of West Chemical Products Inc. SN 42,702. Pub. 9–16–58. Filed 12–19–57.

670,744. BLACK GOLD AND DESIGN. Morris, Sewall & Co., Inc. SN 43,769. Pub. 9–16–58. Filed 1–10–58.

670,745. HOST AND DESIGN. Racine Industrial Plant, Inc. SN 44,758. Pub. 9–16–58. Filed 1–27–58.

670,746. N-ZYME. Van Arsdale Laboratories, Inc. SN 47,294. Pub. 9–16–58. Filed 3–7–58.

670,747. TIMA. Pyramid Chemical Company, Incorporated. SN 47,429. Pub. 9–16–58. Filed 3–10–58.

Service Marks

Class 100—Miscellaneous

670,748. BUDD. The Budd Company. SN 692,570. Pub. 9–16–58. Filed 8–8–55.

670,749. COLORTECH. Alfred Belok. SN 699,125. Pub. 8–12–58. Filed 11–30–55.

670,750. MARBETT'S. White Tower Management Corporation. SN 16,574. Pub. 9–16–58. Filed 9–27–56.

670,751. SI AND DESIGN. Systems Incorporated. SN 25,905. Pub. 9–16–58. Filed 3–11–57.

Class 101—Advertising and Business

670,752. JD. John Diebold & Associates, Inc. SN 26,337. Pub. 9–16–58. Filed 3–18–57.

670,753. WILLING WORKERS AND DESIGN. Workman for Workmen, Inc. SN 31,060. Pub. 9–16–58. Filed 5–29–57.

Class 102—Insurance and Financial

670,754. AMERICAN GLOBAL INSURANCE CO., INC, AND DESIGN. American Global Insurance Co., Inc. SN 10,385. Pub. 2–19–57. Filed 6–18–56.

670,755. BANK-A-COUNT AND DESIGN. Bank-A-Count Corporation. SN 25,840. Pub. 2–4–58. Filed 3–11–57.

Class 104—Communication

670,756. PETER MARTIN SHOW. KXOK Broadcasting, Inc. SN 39,471. Pub. 9–16–58. Filed 10–24–57.

Class 105—Transportation and Storage

670,757. AMERICAN ABROAD. World Wide Travel, Inc. SN 31,710. Pub. 9–16–58. Filed 6–10–57.

670,758. DOWNTOWN PARK AND SHOP AND DESIGN. Downtown Park and Shop Inc. SN 37,080. Pub. 9–16–58. Filed 9–12–57.

Class 106—Material Treatment

670,759. BIRDWELL. Birdwell, Inc., assignee of James M. Bird, d. b. a. Bird Well Surveys. SN 21,773. Pub. 9–16–58. Filed 12–28–56.

Class 107—Education and Entertainment

670,760. THE $64,000 QUESTION. Louis G. Cowan, Inc. SN 4,101. Pub. 9–16–58. Filed 3–8–56.

670,761. BEAT THE CLOCK. Beat the Clock, Inc. SN 28,997. Pub. 9–16–58. Filed 4–29–57.

670,762. TELEPOSIUM. American Cyanamid Company. SN 33,822. Pub. 9–16–58. Filed 7–8–57.

Collective Membership Mark

Class 200

670,763. MEMBER DOWNTOWN PARK AND SHOP INC. AND DESIGN. Downtown Park and Shop Inc. SN 37,079. Pub. 9–16–58. Filed 9–12–57.

Certification Marks

Class A—Goods

670,764. CERTI-SPLIT ETC. AND DESIGN. Red Cedar Shingle Bureau. SN 367. Pub. 9–16–58. Filed 1–8–58.

Class B—Services

670,765. A GOOD PRACTICES STATION ETC. AND DESIGN. National Association of Broadcasters. SN 52,141. Pub. 9–16–58. Filed 5–22–58.

670,773. United Vintners, Inc., d. b. a. Petri Cigar Company, San Francisco, Calif. SN 23,186. Filed P. R. 1–24–57.

Class 21—Electrical Apparatus, Machines

670,712. EHLERS L AND DESIGN. Albert Ehlers, Inc. SN 48,021. Pub. 9-16-58. Filed 3-19-58.

670,735. ODORGONE AND DESIGN. P-M Laboratories, Inc. SN 7,106. Pub. 9-3-57. Filed 4-25-56.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

670,766. P. H. B. Sales Corp., Boston, Mass. SN 41,111. Filed P. R. 11-21-57. Am. S. R. 10-1-58.

SOFTEE-CREPE

For Shoe Sole Stock Made of Closed Cellular Rubber.
First use Apr. 10, 1957.

Class 2—Receptacles

670,767. Henry A. Enrich and Co., Inc., New York, N. Y. SN 38,135. Filed P. R. 10-1-57. Am. S. R. 10-15-58.

ROLL-OUT

For Garment Bags.
First use Aug. 5, 1957.

670,768. Appleton Electric Company, Chicago, Ill. SN 48,451. Filed 3-26-58.

APPLETON
THE STANDARD FOR BETTER REELS

For Reels for Electric Cables, Grounding Cables, Air Hose, and Fluid Hose.
First use Feb. 3, 1957.

670,769. Supplee-Biddle-Steitz Company, Philadelphia, Pa. SN 49,312. Filed 4-8-58.

TRUSTWORTHY

For Galvanized Ware Consisting of Galvanized Pails, Tubs, Garbage Cans, Baskets, and Measures.
First use in March 1953.

Class 8—Smokers' Articles, Not Including Tobacco Products

670,770. Process Co. of America, Inc., Cincinnati, Ohio. SN 12,294. Filed P. R. 7-17-56. Am. S. R. 9-29-58.

For Ash Trays.
First use Jan. 1, 1956.

TM 36

Class 11—Inks and Inking Materials

670,771. Kores Manufacturing Corporation, New York, N. Y., by change of name from Kores Carbon Paper & Ribbons Mfg. Corp., New York, N. Y. SN 10,171. Filed P. R. 6-13-56. Am. S. R. 10-9-58.

TWINCOTE

For Carbon Paper.
First use May 1, 1956.

Class 14—Metals and Metal Castings and Forgings

670,772. W. J. Ruscoe Company, Akron, Ohio. SN 38,912. Filed P. R. 7-17-57. Am. S. R. 10-6-58.

MET-L-FIL

For Air-Hardening Plastic Adhesive Heavily Pigmented With Metal Particles and Used as a Metal Repairing Material Particularly for Sheet Metal Parts of Automobiles and Other Vehicles.
First use June 1, 1952.

Class 16—Protective and Decorative Coatings

670,773. Lustre Products Corporation, Lansing, Mich. SN 36,010. Filed P. R. 8-22-57. Am. S. R. 9-4-58.

For Protective Coating for Chrome Surfaces and Other Metals of a Similar Nature.
First use July 15, 1957.

Class 17—Tobacco Products

670,774. R. B. Crabtree Company, Minneapolis, Minn. SN 7,571. Filed P. R. 5-2-56. Am. S. R. 9-30-58.

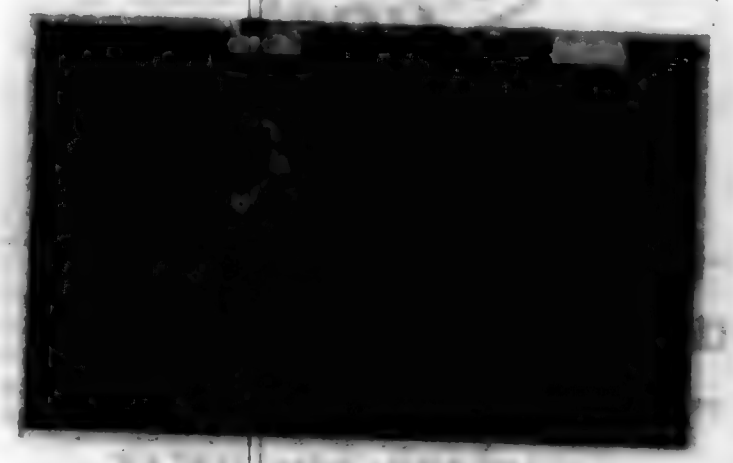
MINNESOTA 18

For Cigars.
First use Sept. 12, 1955.

670,775. United Vintners, Inc., d. b. a. Petri Cigar Company, San Francisco, Calif. SN 23,186. Filed P. R. 1-24-57. Am. S. R. 8-11-58.

For Cigars.
First use Aug. 14, 1936.

670,776. Reemtsma Cigarettenfabriken G. m. b. H., Hamburg-Othmarschen, Germany. SN 48,930. Filed 4-2-58.



Priority claimed under Sec. 44(d) on German application, filed Oct. 25, 1957, Reg. No. 710,439, dated Jan. 28, 1958.
For Filter Cigarettes With Cork Tips.

Class 18—Medicines and Pharmaceutical Preparations

670,777. Evans Medical Supplies Limited, Liverpool, England. SN 17,892. Filed P. R. 10-22-56. Am. S. R. 7-22-58.

PRESCOTED

Priority claimed under Sec. 44(d) on British Reg. No. 757,781, dated Sept. 20, 1956.
For Pharmaceutical Preparations in Tablet Form.

670,778. Joseph Balassa, d. b. a. Balassa Laboratories, Newark, N. J. SN 51,687. Filed 5-15-58.

For Preparation for Treating Corns, Callouses, and Warts.
First use June 17, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

670,779. Kelek Company, Norwood, Mass. SN 18,081. Filed P. R. 10-24-56. Am. S. R. 7-7-58.

KAM-LOK

For Electrical Pressure Switches.
First use in January 1956.

670,780. Raylite Electric Corp., Bronx, N. Y. SN 49,180. Filed P. R. 4-7-58. Am. S. R. 10-15-58.

STAYZ-LIT

For Decorative Lighting Outfits for Christmas Trees and Electric Lamps for Such Outfits.
First use in April 1957.

Class 22—Games, Toys, and Sporting Goods

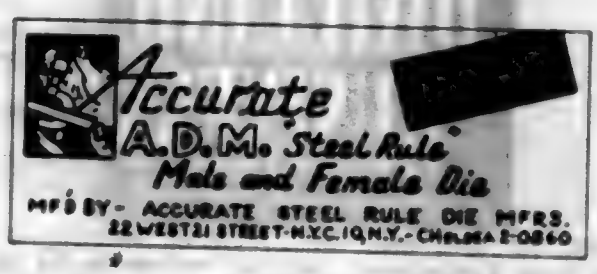
670,781. Howard F. Roebken, West Bend, Wis. SN 48,054. Filed P. R. 8-17-58. Am. S. R. 10-9-58.

Water-Sled

For Buoyant Float for Water Sports.
First use February 1950.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

670,782. Accurate Steel Rule Die Mfrs., New York, N. Y. SN 25,064. Filed P. R. 2-26-57. Am. S. R. 10-6-58.



For Steel Rule Type Male and Female Dies.
First use August 1956.

Class 25—Locks and Safes

670,783. Crew's Manufacturing Co., Detroit, Mich. SN 36,080. Filed P. R. 8-23-57. Am. S. R. 10-9-58.

Snap Lock

For Combination Door Handle and Door Latch Operating and Locking Mechanism.
First use June 30, 1956.

Class 32—Furniture and Upholstery

670,784. Contour Chair-Lounge Co., Inc., St. Louis, Mo. SN 56,925. Filed 8–11–58.

THE PAUSE THAT RELAXES

For Lounge Chairs.
First use Aug. 18, 1955.

Class 34—Heating, Lighting, and Ventilating Apparatus

670,785. The Webster Engineering Company, Tulsa, Okla. SN 18,380. Filed 10–29–56.

WEBSTER RECTILINEAR

For Gas Burners.
First use Oct. 2, 1950.

670,786. Peerless Manufacturing Division of Dover Corporation, Louisville, Ky. SN 33,742. Filed P. R. 7–15–57. Am. S. R. 10–15–58.

LEVER LOCK

For Fireplace Screens.
First use Apr. 17, 1957.

Class 38—Prints and Publications

670,787. Lofland Brothers Company, Tulsa, Okla. SN 36,966. Filed P. R. 9–10–57. Am. S. R. 10–6–58.

DRILLING BUSINESS

For Trade Publications, Including Periodicals, for the Dissemination of Information of Interest to the Oil Well Business.
First use May 15, 1957.

Class 39—Clothing

670,788. Edmont Manufacturing Company, Coshocton, Ohio. SN 12,607. Filed P. R. 7–23–56. Am. S. R. 10–10–56.

Try-on

For Package of Utility Gloves in Which the Glove-Container is of Open-End, Flexible, Transparent Form.
First use on or about Nov. 15, 1955.

670,789. Plymouth Hosiery Mills, Inc., High Point, N. C. SN 37,519. Filed P. R. 9–19–57. Am. S. R. 10–7–58.

McKenzie

For Hosiery.
First use May 30, 1955.

670,790. Byer-Rolnick Hat Corporation, Garland, Tex. SN 41,234. Filed P. R. 11–25–57. Am. S. R. 9–8–58.

KRUSHABLE

For Men's Hats.
First use June 6, 1957.

670,791. The Goodyear Tire & Rubber Company, Akron, Ohio. SN 46,138. Filed P. R. 2–19–58. Am. S. R. 10–12–58.

Super Cushion

For Rubber Heels.
First use Aug. 7, 1957.

Class 46—Feeds and Ingredients of Feeds

670,792. Henry J. Schnakenberg, d. b. a. Henry's, Westfield, N. J. SN 692,430. Filed P. R. 8–3–55. Am. S. R. 4–18–58.

HENRY'S ORIGINAL COFFEE-CHIP

For Ice Cream.
First use June 1955.

Class 51—Cosmetics and Toilet Preparations

670,793. Ingram Menthol Company, Inc., New York, N. Y., assignee, by mesne assignments, of Churchill Drug Company, Rye, N. Y. SN 2,755. Filed P. R. 2–10–56. Am. S. R. 7–10–58.

INGRAM

For Shaving Cream.
First use Jan. 20, 1956.

Service Marks

Class 101—Advertising and Business

670,794. J. Arthur Turner, d. b. a. Hollywood Movie Money, Eugene, Oreg. SN 24,669. Filed P. R. 2–19–57. Am. S. R. 9–4–58.

HOLLYWOOD MOVIE MONEY

For Promotional Advertising and Sale of the Goods and Services of Others Through the Issuance of Redeemable Certificates.
First use Aug. 3, 1956.

365,246. UNI-MARK FABRICATED LEATHER. Cl. 50. 365,373. AMIGO. Cl. 7.

Class 104—Communication

670,795. Dutcher Realty Company, Grand Rapids, Mich. SN 24,143. Filed P. R. 2-11-57. Am. S. R. 8-25-58.

For Real Estate Brokerage Services.
First use Jan. 15, 1957.

Class 106—Material Treatment

670,796. Bradford Dyeing Association (U. S. A.), New York, N. Y., and Westerly, R. I. SN 31,810. Filed P. R. 6-12-57. Am. S. R. 5-22-58.

For Services in Applying Various Finishes to the Industrial Fabrics of Others.
First use Feb. 7, 1957.

TRADEMARK REGISTRATIONS RENEWED

123,410. ACFAD. Cl. 37. 11-12-18.
123,512. VICTOR. Cl. 22. 11-12-18.
358,180. CEVEX. Cl. 18. 6-28-38.
358,481. KELTON. Cl. 27. 7-12-38.
358,714. SWANK SHIRTS. Cl. 39. 7-19-38.
359,342. BELLE OF SCOTLAND. Cl. 49. 8-16-38.
360,231. PEDIGREED. Cl. 37. 9-13-38.
360,512. PEPPERIDGE FARM. Cl. 46. 9-20-38.
360,576. I-SEDRIN COMPOUND. Cl. 18. 9-20-38.
360,577. I-SEDRIN PLAIN. Cl. 18. 9-20-38.
360,609. SELECT-O-POINT. Cl. 37. 9-20-38.
360,778. ROTO SHAVER. Cl. 23. 9-27-38.
360,790. QUEEN VICTORIA. Cl. 23. 9-27-38.
361,182. ZERO. Cl. 46. 10-11-38.
361,266. STAYCAL. Cl. 6. 10-11-38.
361,514. SURETY. Cl. 42. 10-18-38.
362,150. SEAL-KAP AND DESIGN. Cl. 50. 11-15-38.
362,367. BREEZERS. Cl. 39. 11-15-38.
362,387. TWINWAY. Cl. 39. 11-15-38.
362,800. AIRAM. Cl. 12. 11-29-38.
362,802. HIAC. Cl. 12. 11-29-38.
362,850. SPEAR MINT GUM AND DESIGN. Cl. 46. 12-6-38.
363,067. TWIN MINT GUM AND DESIGN. Cl. 46. 12-13-38.
363,068. DOUBLE MINT GUM AND DESIGN. Cl. 46. 12-13-38.
363,347. LITTLE FARMER. Cl. 46. 12-20-38.
363,460. TEMPO-TONE. Cl. 21. 12-27-38.
363,703. 20TH CENTURY BLAST ETC. AND DESIGN. Cl. 4. 1-3-39.
363,733. ANDEKER. Cl. 48. 1-3-39.
363,926. ORCHARD GOLD. Cl. 46. 1-10-39.
364,221. TOWER. Cl. 34. 1-24-39.
364,287. WELDBORD. Cl. 12. 1-24-39.
364,306. UNIFOLD. Cl. 2. 1-24-39.
364,430. NY-BISMA. Cl. 18. 1-31-39.
364,465. KOLPON. Cl. 18. 1-31-39.
364,579. ECONOBAKE. Cl. 46. 2-7-39.
364,714. REIS-CLIX. Cl. 39. 2-14-39.
364,874. BULL DOG. Cl. 50. 2-14-39.
365,057. DELTAGRIP. Cl. 37. 2-21-39.
365,177. CASTLE. Cl. 50. 2-28-39.
365,406. HI-FELLA. Cl. 39. 3-7-39.
365,407. SHAGGER. Cl. 39. 3-7-39.
365,408. SCOTS-GUARD. Cl. 39. 3-7-39.
365,440. MENFORMON. Cl. 18. 3-7-39.
365,441. AMBINON. Cl. 18. 3-7-39.
365,442. PERNAEMON. Cl. 18. 3-7-39.
365,443. PREGNYL. Cl. 18. 3-7-39.
365,444. BINAEMON. Cl. 18. 3-7-39.
365,445. DIMENFORMON. Cl. 18. 3-7-39.
365,446. NEO-HOMBREOL. Cl. 18. 3-7-39.
365,447. THYRANON. Cl. 18. 3-7-39.
365,463. TRUFECT. Cl. 37. 3-7-39.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

298,238. ISCHROME. Cl. 26. 10-18-32.
603,218. P PERMITE AND DESIGN. Cl. 16. 3-15-55.
617,277. FROSTY SNOW. Cl. 50. 12-6-55.
661,784. LUTHER BURBANK. Cl. 1. 5-20-58.
664,102. "THE HAPPY FELLA." Cl. 39. 7-8-58.

Section 8

290,809. SUPER-GYRO. Cl. 34. 1-19-32.
292,431. "IVO" AND DESIGN. Cl. 23. 3-15-32.
295,652. LUXURA. Cl. 10. 7-5-32.
427,960. DANCEMASTER. Cl. 22. 3-4-47.
429,822. SPEEDMASTER. Cl. 22. 5-20-47.

The following registrations issued Oct. 14, 1958

565,160. JEEPTRUK. Cl. 19.
565,161. FASHION APPROVED ETC. AND DESIGN. Cl. 43.
565,173. PICTURE OF A SHIP SAILING. Cl. 9.
565,174. MERRIMAC STERLING AND DESIGN. Cl. 39.
565,175. CHURCHEY DURABLE PRODUCTS AND DESIGN. Cl. 4.
565,176. REPRESENTATION OF RED HEX. IN CIRCLE. Cl. 52.
565,177. EDDY'S THE BETTER BAKERS. Cl. 46.
565,186. VINALURE. Cl. 50.
565,187. FLEX-ROCK. Cl. 2.
565,190. LA CINA POBLANA AND REPRESENTATION OF A GIRL. Cl. 46.
565,194. FLEXALUM. Cl. 12.
565,196. WILLSTICK. Cl. 5.
565,206. GRO-GUN. Cl. 23.
565,212. WALTER WILSON. Cl. 30.
565,213. ROLL-LIFT. Cl. 12.
565,215. TRIC-TRAC. Cl. 46.
565,216. CHEM-CONS AND DESIGN. Cl. 51.
565,217. SOAVE AND DESIGN. Cl. 46.
565,219. FLORAL FOLD. Cl. 39.
565,220. TRUSTY TRUCKS AND DESIGN. Cl. 19.
565,225. PLURAJET. Cl. 9.
565,226. TEAGARETS. Cl. 46.
565,230. MULTINEEDLE RIB. Cl. 39.
565,234. ESQUIMAUX DESIGN. Cl. 46.
565,240. CHEESECAKE. Cl. 39.

565,246. UNI-MARK FABRICATED LEATHER. Cl. 50.
565,250. ESQUIMAUX AND DESIGN. Cl. 46.
565,253. PENNSORB. Cl. 52.
565,255. MIN-U-TERIORS. Cl. 50.
565,260. JX–27 MACHINELESS. Cl. 44.
565,261. "DIAPER JEANS." Cl. 39.
565,263. MAID OF HONOR. Cl. 52.
565,264. AUTOSPARE. Cl. 5.
565,265. SALAMINE. Cl. 46.
565,266. TINTAGLASS. Cl. 33.
565,269. TUBERIZED QUALITY. Cl. 42.
565,270. ROY INSTANT CARPET CLEANER. Cl. 52.
565,279. TERRIES. Cl. 46.
565,280. DARREL'S. Cl. 46.
565,281. JET-CRETE. Cl. 9.
565,289. FLYING SAUCER. Cl. 46.
565,293. ADVANCE WITHIN FLAG AND DESIGN. Cl. 2.
565,294. SIMPLISYN. Cl. 5.
565,307. CAMPO-MAT. Cl. 50.
565,321. DYCA NET. Cl. 42.
565,322. KAY NET. Cl. 42.
565,326. THE LITTLE RED HEN. Cl. 46.
565,328. GRAND POP. Cl. 9.
565,330. "400." Cl. 36.
565,333. PENDULUM. Cl. 39.
565,334. FROST-BAR. Cl. 42.
565,337. FAIRFIELD. Cl. 42.
565,341. TEX TALES BY "OPPY BRAND." Cl. 42.
565,345. HICORIA. Cl. 1.
565,347. MONEY BAGS. Cl. 39.
565,348. PENNY AUNTIE. Cl. 39.
565,350. SWIVL. Cl. 51.
565,352. LISA'S. Cl. 46.
565,353. BABY-DRI. Cl. 39.
565,360. OO' LA LA. Cl. 39.
565,363. JUNIOR GAL. Cl. 39.
565,367. AQUADOW. Cl. 10.
565,369. DAFOYLE. Cl. 43.
565,372. AMIGO. Cl. 7.
565,374. THE DOORBELLE. Cl. 39.
565,375. B8Z–301. Cl. 6.
565,376. PRIME-METALAKE. Cl. 52.
565,377. EVENETTE. Cl. 39.
565,378. WINCORD. Cl. 7.
565,384. MIRITSA. Cl. 42.
565,390. MULTICAM SYSTEM. Cl. 107.
565,392. REX REXONIZE AND DESIGN. Cl. 106.
565,393. REXONIZE. Cl. 106.
565,397. EASTERN SHORE. Cl. 46.
565,398. NILE VALLEY. Cl. 46.
565,399. DESIGN OF HAND HOLDING DEODORANT. Cl. 51.
565,407. KNIGHTON AND DESIGN. Cl. 12.
565,411. FUSON. Cl. 38.
565,412. CARPET YARNS. Cl. 38.
565,413. NU-SEAL. Cl. 12.
565,414. MIDWEST FISHERMAN. Cl. 38.
565,415. ODORBAN. Cl. 18.
565,416. KNIGHT CRAFT K C AND DESIGN. Cl. 28.
565,421. TASTI-FUDGE. Cl. 46.
565,426. PUSH-LITE. Cl. 21.
565,427. CALIFORNIA ORIGINAL. Cl. 16.
565,434. TALENT SCOUTS. Cl. 104.
565,435. SANNER FINE PRINTING AND ENGRAVING. Cl. 101.
565,436. VERNON'S "4–WAY HAIRCUT" AND DESIGN. Cl. 100.

Section 18

405,000. MITTS AND REPRESENTATION OF HAND. Cl. 6. 1–4–44.
438,676. SIGNA. Cl. 6. 5–11–48.
444,374. GARDENEER. Cl. 23. 12–26–50.
612,228. BRIONI CONTINENTAL. Cl. 39. 9–13–55.
629,747. THE CERTIFIED GEMOLOGIST. Cl. 38. 6–26–56.
641,506. TAVERN. Cl. 46. 2–12–57.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

289,970. HI-SPEED. Cl. 22. 12–15–31. Nestor Johnson Manufacturing Company, Chicago, Ill. Amended: In the statement, column 1, lines 8 through 10, "Ice skates and skate outfits, the latter consisting of attached shoes and skates," is deleted and *Ice Skates* is inserted.

405,572. MAGIC SLATE. Cl. 22. 2–8–44. The Strathmore Company. The Watkins-Strathmore Company, Aurora, Ill. Amended to appear:

MAGIC SLATE

444,725. BRIDGEPORT ETC. AND DESIGN. Cl. 6. 10–21–52. Bridgeport Brass Company. Shulton, Inc., Clifton, N. J. Amended to appear:

Bridgeport

505,692. FRONTIER. Cl. 15. 1–18–49. Frontier Oil Refining Corporation (Ashland Oil & Refining Company, assignee substituted), Ashland, Ky. Restricted under the provisions of Sec. 18, of the Trademark Act of 1946 to that area of the United States excluding the States of Wyoming, Colorado, Nebraska, Utah, South Dakota, Nevada, Idaho, Kansas, Montana, Iowa and New Mexico, by order of the Commissioner dated September 25, 1958 following decision on Concurrent Use Proceeding No. 178, *The Frontier Refining Company v. Frontier Oil Refining Corporation (Ashland Oil & Refining Company, assignee substituted)*.

570,985. DEARSOL AND DESIGN. Cl. 15. 2–24–53. Dearborn Chemical Company, Chicago, Ill. Amended to appear:

DEARSOL

580,781. G P L AND DESIGN. Cl. 26. 10–6–53. General Precision Laboratory Incorporated, Pleasantville, N. Y. Amended: In the statement, column 1, lines 8 through 11, "motion picture film processors for developing, fixing, washing, and drying motion picture film," is deleted.

582,259. G P L AND DESIGN. Cl. 21. 11–10–53. General Precision Laboratory Incorporated, Pleasantville, N. Y. Amended: In the statement, column 1, lines 7 and 8, "electrical generators of ultrasonic waves," is deleted.

619,216. BRIDGEPORT ETC. AND DESIGN. Cl. 6. 1–10–56. Bridgeport Brass Company. Shulton, Inc., Clifton, N. J. Amended to appear:

Bridgeport

639,770. FROSTIE AND DESIGN. Cl. 45. 1–8–57. The Frostie Company, Baltimore, Md. Amended to appear:

Frostie

Class 10—Fertilizers

Class 16—Protective and Decorative Coatings

664,735. KOH-I-BALL. Cl. 37. 7-22-58. L. & C. Hardtmuth, Inc., Bloomsbury, N. J. Corrected: In the certificate, column 1, line 1 "L. Hardtmuth & Co., Inc." should be deleted and *L. & C. Hardtmuth, Inc.* should be inserted.

665,532. MAP-VISOR. Cl. 19. 8-5-58. Rockford Engineered Products Co., Rockford, Ill. Corrected: In the certificate, column 1, line 2, "St." should be deleted and *Ave.* should be inserted.

666,582. ADD-TRACTOR. Cl. 26. 9-2-58. Victor Adding Machine Co., Chicago, Ill. Corrected: In column 2, line 1, "Electric" should be deleted and *Electronic* should be inserted.

667,062. FIDELIPAC. Cl. 21. 9-30-58. The Toledo Trust Company, trustee under George H. Poulsen's Trust No. 2732, doing business as Geo. H. Poulsen & Co., Toledo, Ohio. Corrected: In the certificate, column 1, line 2, "Paulsen's" should be deleted and *Poulsen's* should be inserted and line 3 "Paulsen" should be deleted and *Poulsen* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

32,516. BLUE RIBBON BRAND AND DESIGN. Cl. 46. Oakford & Fahnestock. 2-21-1899. New Cert. Sec. 7(c), to Blue Ribbon Products Co., Inc., San Francisco, Calif., 12-2-58.

378,978. SAILOR BOY AND DESIGN. Cl. 46. F. F. East Co. Inc. 6-25-40. New Cert. Sec. 7(c), to Greenwich Oyster Company, Bridgeton, N. J., 12-2-58.

444,725. BRIDGEPORT AND DESIGN. Cl. 6. Bridgeport Brass Company. 10-21-52. New Cert. Sec. 7(c), to Shulton, Inc., Clifton, N. J., 12-2-58.

565,705. BEST O GLAS. Cl. 29. National Automotive Fibres, Inc., by merger with California Cotton Mills Company. 10-21-52. New Cert. Sec. 7(c), to California Cotton Mills Company, Oakland, Calif., 12-2-58.

585,409. SUNBURST. Cl. 45. Chocolate Products Company. 2-9-54. New Cert. Sec. 7(c), to The Grapette Company, Incorporated, Camden, Ark., 12-2-58.

587,247. PENTAX. Cl. 26. Ercona Camera Corporation. 3-23-54. New Cert. Sec. 7(c), to Asahi Optical Co., Ltd., Tokyo, Japan, 12-2-58.

619,216. BRIDGEPORT AND DESIGN. Cl. 6. Bridgeport Brass Company. 1-10-56. New Cert. Sec. 7(c), to Shulton, Inc., Clifton, N. J., 12-2-58.

622,257. MERCURY AND DESIGN. Cl. 29. National Automotive Fibres, Inc. 2-28-56. New Cert. Sec. 7(c), to California Cotton Mills Company, Oakland, Calif., 12-2-58.

639,999. RALON. Cl. 29. National Automotive Fibres, Inc. 1-15-57. New Cert. Sec. 7(c), to California Cotton Mills Company, Oakland, Calif., 12-2-58.

652,969. PETITE. Cl. 16. The Richards & Conover Hardware Company. 10-15-57. New Cert. Sec. 7(c), to Southwestern Paint Company, Oklahoma City, Okla., 12-2-58.

666,845. PEEROTAR. Cl. 26. Peerless Camera Stores, Inc. 9-9-58. New Cert. Sec. 7(c), to Peerless Camera Stores Corp., New York, N. Y., 12-2-58.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 4—Abrasives and Polishing Materials

361,443. Oct. 18, 1938. United Chemical Company, Inc., Kansas City, Mo. Pub. by registrant.

U-SEE

For Preparation for Cleaning and Polishing Windows.

Class 5—Adhesives

300,855. Sept. 27, 1938. E. F. Houghton & Co., Philadelphia, Pa. Pub. by registrant.

HY-TEN CORE OIL

For Core Oil To Be Mixed With Core Sand for Foundry Purposes.

Class 6—Chemicals and Chemical Compositions

122,383. July 30, 1918. E. F. Houghton & Co., Philadelphia, Pa. Pub. by registrant.

SULFOL

For Oil for Use in the Softening, Strengthening, and Dyeing of Textiles.

164,682. Feb. 27, 1923. Theodor Leonhard Wax Co., Paterson, N. J. Pub. by registrant.

T. L.

For Beeswax.

Class 28—Jewelry and Precious-Metal Ware

388,736. July 26, 1938. Cutler Shoe Company, Inc., Chicago, Ill. Pub. by A. S. Beck Shoe Corporation, New York, N. Y.

Class 10 — Fertilizers

202,300. Aug. 18, 1925. Plant Products Company, Baltimore, Md. Pub. by Plantabbs Corporation, Baltimore, Md.

PLANTABBS

For Odorless Fertilizers (Tablet, Powder, and Liquid).

Class 12 — Construction Materials

357,207. May 24, 1938. Pecora Paint Company, Philadelphia, Pa. Pub. by Pecora, Inc., Philadelphia, Pa.

PECOMASTIC

For Plastic Compositions Employed as Cements and Calking Compounds in Building Installations Including Structural Glass.

Class 14 — Metals and Metal Castings and Forgings

356,146. Apr. 12, 1938. Mackintosh-Hemphill Company, Pittsburgh, Pa. Pub. by E. W. Bliss Company, Canton, Ohio.

TECHNALLOY

For Cast Rolls of Ferrous Metal for Metal Working.

356,148. Apr. 12, 1938. Mackintosh-Hemphill Company, Pittsburgh, Pa. Pub. by E. W. Bliss Company, Canton, Ohio.

TECHNIGRAIN

For Cast Rolls of Ferrous Metal for Metal Working.

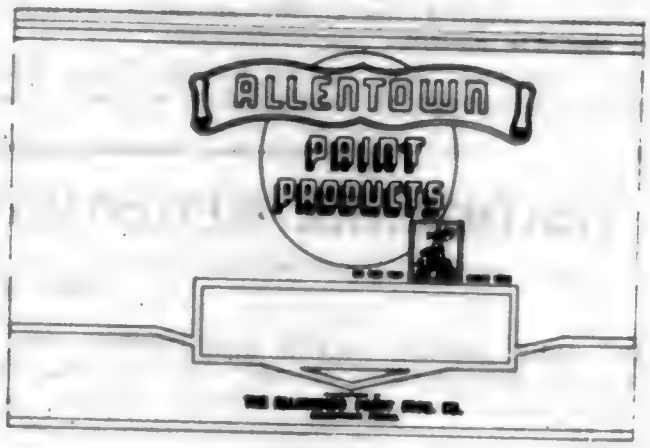
356,149. Apr. 12, 1938. Mackintosh-Hemphill Company, Pittsburgh, Pa. Pub. by E. W. Bliss Company, Canton, Ohio.

TECHNISAND

For Cast Rolls of Ferrous Metal for Metal Working.

Class 16 — Protective and Decorative Coatings

360,528. Sept. 20, 1938. The Allentown Paint Manufacturing Company, Allentown, Pa. Pub. by registrant.



For Paste and Ready-Mixed Outside House Paints, Ready-Mixed Inside and Outside Flat Paints, Gloss and Semi-Gloss Inside and Outside Paint Enamels, Ready-Mixed and Paste Metallic Oxide Paints, Ready-Mixed Concrete and Brick Paints, Putties, Bronze Paints, Paint and Varnish Removers, Paste and Ready-Mixed Fillers, Driers, Prepared Shellac, Stains, Varnishes, and Oil-Colors.

362,198. Nov. 15, 1938. Standard Enamel and Paint Corporation, Indianapolis, Ind. Pub. by registrant.

WONDER WALL

For Ready Mixed Paint.

Class 18 — Medicines and Pharmaceutical Preparations

363,201. Dec. 13, 1938. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

VIBEX

For Pharmaceutical Preparations of Vitamin B in Liquid Form for Oral Use and in Ampoules for Parenteral Administration.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

362,571. Nov. 22, 1938. Iowa Manufacturing Company of Cedar Rapids, Iowa, Cedar Rapids, Iowa. Pub. by registrant.

IMCO
MANGA

For Road Building Machinery—Namely, Road Plants, Crushers and Crusher Parts, Including Roll Shells, Crusher Jaws, Key Plates, and Wedges.

Class 44 — Dental, Medical, and Surgical

363,278. Dec. 20, 1938. Peanut Products Company, Des Moines, Iowa. Pub. by Peanut Corporation of America

Class 28—Jewelry and Precious-Metal Ware

362,253. Nov. 15, 1938. Towle Manufacturing Company, Newburyport, Mass. Pub. by registrant.

CHASED DIANA

For Silver and Silver Mounted Flatware (Implements With a Handle or Finger Hold for Culinary, Feeding, Serving or Personal Use).

Class 37—Paper and Stationery

392,712. Jan. 13, 1942. Bankers Development Corporation, New York, N. Y. Pub. by Thrifticheck Service Corporation, New York, N. Y.

THRIFTICHECK

For Joint Signature Cards, Single Signature Cards, Combination Account Statements, Deposit Tickets, Combination Coupon Forms, Reference Records, Account Records, Account Closed Tickets, Account Opened Tickets, Check Book Orders, Depositor's Receipts, Depositor's Business and Employment Records and Advertising Checks for Banks, Record N. G. Checks Returned Unpaid, Special Cash Deposit Tickets for Credit to Account Balance Same Day Deposit Is Made, Daily Reports, Account Opened and Re-Order Check Fillers Sold to Depositors, Check Book Reorder Forms, Deposit by Mail Envelopes, Checks With Customer's Name Imprinted, Pass Books, and Statement Envelopes, All in the Nature of Blank Forms To Be Filled In.

Class 38—Prints and Publications

358,774. July 26, 1938. Chicago Tribune-New York News Syndicate, Inc., New York, N. Y. Pub. by registrant.

KITTY HIGGINS

For Series of Cartoons.

358,879. July 26, 1938. Indiana State Teachers' Association, Indianapolis, Ind. Pub. by registrant.

The INDIANA TEACHER

For Periodical.

Class 39—Clothing

123,210. Oct. 22, 1918. Crown Glove Company, New York, N. Y. Pub. by Julius Kayser & Co., New York, N. Y.

Doubletex

For Fabric Gloves.

358,736. July 26, 1938. Cutler Shoe Company, Inc., Chicago, Ill. Pub. by A. S. Beck Shoe Corporation, New York, N. Y.

VEL-TEX SUEDE

For Footwear—Namely, Ladies' Shoes, Slippers, and Sandals, Made With Leather or Fabric or Combinations of Leather and Fabric.

360,789. Sept. 27, 1938. Cohen-Fein Company, Wilkes-Barre, Pa. Pub. by registrant.

The BRAVE-MAN Americas Best TRADE MARK

For Men's Flannel Shirts; Men's, Women's, Misses', and Children's Jackets, Mackinaws; Men's Sport Shirts; Men's, Women's, and Children's Ski Pants, Snow Suits, Work Pants, Slacks; Men's and Youths' Dress Pants; and Men's and Youths' Sport Coats.

362,590. Nov. 22, 1938. H. C. Cohn & Co., Rochester, N. Y. Pub. by Superba Cravats, Inc., Rochester, N. Y.

SUGAR AND SPICE

For Neckties, Mufflers, and Handkerchiefs.

415,803. Aug. 14, 1945. I. Schneierson & Sons, Inc., New York, N. Y. Pub. by registrant.

LOOMCRAFT

For Ladies' Slips, Ladies' Nightgowns, Children's Slips, and Children's Nightgowns.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

358,771. July 26, 1938. Thurston Cutting Corporation, New York, N. Y. Pub. by Reeves Brothers, Inc., New York, N. Y.

For Piece Goods of Cotton, Cotton Mixture, Wool, and Rayon.

Class 44—Dental, Medical, and Surgical Appliances

420,501. Apr. 16, 1946. Fraser Hair Fashions, St. Paul, Minn. Pub. by The Gillette Company, Boston, Mass.

CHARM-KURL

For Home Permanent Waving Kits, Consisting of Cold Wave Waving Preparation Used in Permanent Waving of the Hair, and End Tissues.

Class 45—Soft Drinks and Carbonated Waters

358,381. July 12, 1938. Wm. Scheele & Sons Co., Inc., Fort Wayne, Ind. Pub. by registrant.

Waymo

For Non-Alcoholic Beverages, Particularly Pop.

Class 46—Foods and Ingredients of Foods

229,548. June 28, 1927. Pacific Northwest Canning Company, Puyallup, Wash. Pub. by Dwight Paulhamus, Oakland, Calif.

Skookum

For Jams, Jellies, Fruit Butters, Canned Fruits, and Canned Vegetables.

320,102. Dec. 18, 1934. Woodward & Lothrop, Washington, D. C. Pub. by registrant.

For Jellies, Fruit Preserves, Pickles, Coffee, Olives, and Mayonnaise.

363,278. Dec. 20, 1938. Peanut Products Company, Des Moines, Iowa. Pub. by Peanut Corporation of America, Des Moines, Iowa.

For Salted Peanuts.

Class 51—Cosmetics and Toilet Preparations

363,089. Dec. 13, 1938. Associated Distributors, Inc., Chicago, Ill. Pub. by Associated Products, Inc., New York, N. Y.

5 DAY

For Anti-Perspirants and Deodorants.

395,901. June 16, 1942. Charm-Kurl Company, St. Paul, Minn. Pub. by The Gillette Company, Boston, Mass.

CHARM-KURL

For Permanent Wave Preparations.

429,261. Apr. 29, 1947. Fraser Hair Fashions, St. Paul, Minn. Pub. by Gillette Company, Boston, Mass.

CHARM-KURL

For Permanent Wave and Cold Wave Curling and Hair Setting Preparation Adapted for Use in Producing Cold Waves for Personal Use.

Class 52—Detergents and Soaps

360,734. Sept. 27, 1938. George S. Brown, Jr., d. b. a. Coastal Chemical Company, Savannah, Ga. Pub. by registrant.

NU SPARKLE

For Liquid Preparation for Cleaning Window Glass.

California Cotton Mills Co.: *See*—
Diamond Gardner Corp., New York, N. Y. 670,439, pub.

INDEX OF REGISTRANTS

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(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

ABC Popcorn Co., Inc., Chicago, Ill. 670,694, pub. 9–16–58. Cl. 46.
Aberfoyle Mfg. Co., Philadelphia, Pa. 565,369, canc. Cl. 42.
Accurate Steel Rule Die Mfrs., New York, N. Y. 670,782. Cl. 23.
Adam Hat Stores, Inc., to Miller Bros. Hat Co. Inc., New York, N. Y. 365,406, ren. 2–7–59. Cl. 39.
Adam Hat Stores, Inc., to Miller Bros. Hat Co. Inc., New York, N. Y. 365,407, ren. 2–7–59. Cl. 39.
Adam Hat Stores, Inc., to Miller Bros. Hat Co. Inc., New York, N. Y. 365,408, ren. 2–7–59. Cl. 39.
Adams, Cushing & Foster, Inc., Boston, Mass. 123,410, ren. 11–12–58. Cl. 37.
Agfa Ansco Corp., Binghamton, N. Y. 298,238, canc. Cl. 26.
Aiko Electric Co., Ltd., Chiyodaku, Tokyo, Japan. 670,545, pub. 9–16–58. Cl. 21.
Air Reduction Co., Inc., New York, N. Y. 670,451, pub. 9–16–58. Cl. 6.
Airseco, Inc., Jamaica, N. Y. 670,730, pub. 9–16–58. Cl. 50.
Alderson Candy Shop : *See*—
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Alderson, Rolla, d. b. a. Alderson Candy Shop, Denver, Colo. 565,269, canc. Cl. 46.
Allentown Paint Mfg. Co., The, Allentown, Pa. 360,528, 12(c) pub. 12–2–58. Cl. 16.
Alomet Co., The : *See*—
Swimmer, Jerome.
Alpha Mills Corp., Schuylkill Haven, Pa. 670,644, pub. 9–16–58. Cl. 39.
Aluminum Industries, Inc., Cincinnati, Ohio. 603,218, canc. Cl. 16.
Ambrose & Co., Kansas City, Mo. 670,721, pub. 9–16–58. Cl. 47.
American Biltrite Rubber Co., Inc. : *See*—
Boston Woven Hose and Rubber Co.
American Brake Shoe Co., New York, N. Y. 670,495, pub. 9–16–58. Cl. 14.
American Cyanamid Co., New York, N. Y. 670,502, pub. 9–16–58. Cl. 16.
American Cyanamid Co., New York, N. Y. 670,762, pub. 9–16–58. Cl. 107.
American Enka Corp., Enka, N. C. 565,161, canc. Cl. 43.
American Global Insurance Co., Inc., Agana, Guam. 670,754, pub. 2–19–57. Cl. 102.
American Grease Stick Co., Muskegon Heights, Mich. 670,500, pub. 9–16–58. Cl. 15.
American Hair & Felt Co., Chicago, Ill. 365,177, ren. 2–28–59. Cl. 50.
American Hospital Association, Chicago, Ill. 670,626, pub. 9–16–58. Cl. 38.
American Meter Co., Philadelphia, Pa. 670,486, pub. 9–16–58. Cl. 13.
American Molasses Co., New York, N. Y. 670,709–10, pub. 9–16–58. Cl. 46.
American Printing Ink Co., The, Cincinnati, Ohio. 670,475, pub. 9–16–58. Cl. 11.
American Seal-Kap Corp. of Delaware, The, Long Island City, N. Y. 362,150, ren. 11–15–58. Cl. 50.
American Window Glass Co., Pittsburgh, Pa. 565,266, canc. Cl. 33.
Anaheim Foundry Co., Anaheim, Calif. 670,482, pub. 9–16–58. Cl. 13.
Animal Research Products, Inc., Newton Lower Falls, Mass. 670,672, pub. 9–16–58. Cl. 44.
Appleton Electric Co., Chicago, Ill. 670,768. Cl. 2.
Arkell and Smiths : *See*—
Dow Chemical Co., The.
Arle, Inc., New York, N. Y. 670,653, pub. 9–16–58. Cl. 39.
Armour and Co., Chicago, Ill. 670,427, pub. 9–16–58. Cl. 1.
Armour and Co., Chicago, Ill. 670,430, pub. 9–16–58. Cl. 1.
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Arvin Industries, Inc., Columbus, Ind. 670,612, pub. 9–16–58. Cl. 32.
Asahi Optical Co., Ltd. : *See*—
Ercona Camera Corp.
Asher & Boretz, Inc., New York, N. Y. 670,428, pub. 9–16–58. Cl. 1.
Ashland Oil & Refining Co., Ashland, Ky. 670,433, pub. 9–16–58. Cl. 6.
Ashland Oil & Refining Co., Ashland, Ky. 670,497, pub. 9–16–58. Cl. 15.
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Frontier Oil Refining Corp.
Associated Chemists, Inc., Cleveland, Ohio. 670,449, pub. 9–16–58. Cl. 6.
Associated Distributors, Inc., Chicago, Ill., by Associated Products, Inc., New York, N. Y. 363,089, 12(c) pub. 12–2–58. Cl. 51.
Associated Merchandising Corp., The, New York, N. Y. 670,647, pub. 9–16–58. Cl. 39.
Associated Products, Inc. : *See*—
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Atlas Plywood Corp., Boston, Mass. 670,470, pub. 10–1–57. Cl. 12.
Autospare Mfg. Corp., Brooklyn, N. Y. 565,264, canc. Cl. 5.
B & K Mfg. Co., Chicago, Ill. 670,575, pub. 9–16–58. Cl. 26.
Baird-Atomic, Inc., Cambridge, Mass. 670,576, pub. 9–16–58. Cl. 23.
Balassa, Joseph, d. b. a. Balassa Laboratories, Newark, N. J. 670,778. Cl. 18.
Balassa Laboratories : *See*—
Balassa, Joseph.
Balfour, Guthrie & Co., Ltd., San Francisco, Calif. 565,328, canc. Cl. 9.
Bank-A-Count, Corp., Wisconsin Rapids, Wis. 670,755, pub. 2–4–58. Cl. 102.
Bankers Development Corp., by Thriftcheck Service Corp., New York, N. Y. 392,712, 12(c) pub. 12–2–58. Cl. 37.
Barden Corp., The, Danbury, Conn. 670,572, pub. 9–16–58. Cl. 26.
Barker Bros. Corp., Los Angeles, Calif. 363,460, ren. 12–27–58. Cl. 21.
Barwick, R. T., Mills, Inc., Chamblee, Ga. 670,659, pub. 9–16–58. Cl. 42.
Bausch & Lomb Optical Co., Rochester, N. Y. 670,593, pub. 9–16–58. Cl. 26.
Bay City Shovels, Inc., Bay City, Mich. 670,558, pub. 9–16–58. Cl. 23.
Beat The Clock, Inc., New York, N. Y. 670,761, pub. 9–16–58. Cl. 107.
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Beir, Arthur, & Co., Inc., New York, N. Y. 670,658, pub. 9–16–58. Cl. 42.
Belok, Alfred, New York, N. Y. 670,749, pub. 8–12–58. Cl. 100.
Bemis Bro. Bag Co., St. Louis, Mo. 365,057, ren. 2–21–59. Cl. 37.
Bender, H. W., Jr., d. b. a. Technical Products Co., Upper Darby, Pa. 670,728, pub. 9–16–58. Cl. 50.
Bennett Respiration Products, Inc., Los Angeles, Calif. 670,669, pub. 9–16–58. Cl. 44.
Bigelow-Sanford Carpet Co., Inc., Thompsonville, Conn., to Bigelow-Sanford Carpet Co., Inc., New York, N. Y. 565,412, canc. Cl. 38.
Bing & Bing, Inc., New York, N. Y. 565,255, canc. Cl. 50.
Biofarma, Societe Anonyme, Neuilly-sur-Seine (Seine), France. 670,520–1, pub. 9–16–58. Cl. 18.
Bird, James M. : *See*—
Birdwell, Inc.
Birdwell, Inc., from J. M. Bird, d. b. a. Birdwell Surveys, Bradford, Pa. 670,759, pub. 9–16–59. Cl. 106.
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Block Drug Co., Inc., d. b. through Its Division, Hudson Products, from Wernet Dental Mfg. Co., Inc. d. b. a. Hudson Products, Jersey City, N. J. 670,736, pub. 9–16–58. Cl. 51.
Blue Ribbon Products Co. : *See*—
Oakford & Fahnestock.
Blue Star Foods, Inc., Council Bluffs, Iowa. 670,687, pub. 9–16–58. Cl. 46.
Borden Co., The, New York, N. Y. 670,677, pub. 9–16–58. Cl. 46.
Boston Woven Hose and Rubber Co., Cambridge, to American Biltrite Rubber Co., Inc., Chelsea, Mass. 364,874, ren. 2–14–59. Cl. 50.
Bozeman Canning Co., Inc., Bozeman, Mont. 670,683, pub. 9–16–58. Cl. 46.
Bradford Dyeing Association (U. S. A.), New York, N. Y., and Westerly, R. I. 670,795. Cl. 106.
Bradson Co., The, North Hollywood, Calif. 565,206, canc. Cl. 23.
Brand & Oppenheimer Inc., New York, N. Y. 565,341, canc. Cl. 42.
Bridgeport Brass Co. Shulton, Inc., Clifton, N. J. 444,725. Am. 7(d). Cl. 6.
Bridgeport Brass Co., to Shulton, Inc., Clifton, N. J. 444,725. new cert. Cl. 6.
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Bridgeport Brass Co., to Shulton, Inc., Clifton, N. J. 619,216. new cert. Cl. 6.
Bridgeport Moulded Products, Inc., Fairfield, Conn. 670,442, pub. 9–16–58. Cl. 2.
Brock Candy Co., Chattanooga, Tenn. 670,674, pub. 3–13–56. Cl. 46.
Brown, George S., Jr., d. b. a. Costal Chemical Co., Savannah, Ga. 360,734, 12(c) pub. 12–2–58. Cl. 52.
Budd Co., The, Philadelphia, Pa. 670,748, pub. 9–16–58. Cl. 100.
Buenaventura Lemon Co., Inc., Saticoy, Calif. 670,697, pub. 9–16–58. Cl. 46.
Burpee, W. Atlee Co., Philadelphia, Pa. 661,784, canc. Cl. 1.
Byer-Rolnick Hat Corp., Garland, Tex. 670,790. Cl. 39.
Caldwell, A. & G. J., Inc. : *See*—
Felton & Son, Inc.

France Neckwear Co., Inc., New York, N. Y. 670,635, pub. 9–16–58. Cl. 39.
Hollins, William, & Co. Ltd., Nottingham, Nottinghamshire,

California Cotton Mills Co.: *See*—
National Automotive Fibres, Inc.
Camp Chemical Co. Inc., Brooklyn, N. Y. 670,479, pub. 9–16–58. Cl. 12.
Campomat Rubber Co., Inc., The, Brooklyn, N. Y. 565,307, canc. Cl. 50.
Capt. John's Marine Hardware: *See*—
Garofalo, John.
Castro Convertible Corp., New Hyde Park, N. Y. 670,613, pub. 9–16–58. Cl. 32.
Cerbini Research Corp., New York, N. Y. 670,473, pub. 9–16–58. Cl. 10.
Certified Gemologists Publishing Co., The: *See*—
Woodruff, Harry L.
Charm-Kurl Co., St. Paul, Minn., by The Gillette Co., Boston, Mass. 395,901, 12(c) pub. 12–2–58. Cl. 51.
Chase Bottle & Supply Corp., New York, N. Y. 670,436, pub. 10–8–57. Cl. 2.
Chatham Pharmaceuticals, Inc., Newark, N. J. 670,517, pub. 9–16–58. Cl. 18.
Chef Pet Foods, Inc., Delavan, Wis., from G. B. Devereaux, Kansas City, Kans. 670,689, pub. 9–16–58. Cl. 46.
Chemco Photoproducts Co., Inc., Glen Cove, N. Y. 670,454, pub. 9–16–58. Cl. 6.
Chemical Concentrates, Inc., New York, N. Y. 565,216, canc. Cl. 51.
Chesebrough-Pond's Inc., New York, N. Y. 670,508, pub. 9–16–58. Cl. 18.
Chicago Tribune-New York News Syndicate, Inc., New York, N. Y. 358,774, 12(c) pub. 12–2–58. Cl. 38.
Chicago Weaving Corp., Chicago, Ill. 670,662, pub. 9–16–58. Cl. 42.
Chocolate Products Co., to The Grapette Co., Inc., Camden, Ark. 585,408, new cert. Cl. 45.
Churchey Products Co.: *See*—
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Churchey, Theodore, d. b. a. Churchey Products Co., Brockton, Mass. 565,175, canc. Cl. 4.
Churchill Drug Co.: *See*—
Ingram Methol Co., Inc.
Clarage Fan Co., Kalamazoo, Mich. 670,620, pub. 9–16–58. Cl. 34.
Cleveland Metal Abrasive Co., The, Cleveland, Ohio. 363,703, ren. 1–3–59. Cl. 4.
Clinton Foods, Inc., Clinton, Iowa. 565,217, canc. Cl. 46.
Coggin, Thayer, Inc., High Point, N. C. 670,610, pub. 9–16–58. Cl. 32.
Cohen-Fein Co., Wilkes-Barre, Pa. 360,789, 12(c) pub. 12–2–58. Cl. 39.
Cohen, M., & Son Coats & Suits, Inc., New York, N. Y. 670,630, pub. 9–16–58. Cl. 39.
Cohn, H. C. & Co., by Superba Cravats, Inc., Rochester, N. Y. 362,500, 12(c) pub. 12–2–58. Cl. 39.
Colorado Fuel and Iron Corp., The, Denver, Colo. 670,481, pub. 8–16–58. Cl. 13.
Columbia Broadcasting System, Inc., New York, N. Y. 565,434, canc. Cl. 104.
Columbia River Packers Association, Inc., Astoria, Oreg. 565,234, canc. Cl. 46.
Columbia River Packers Association, Inc., Astoria, Oreg. 565,250, canc. Cl. 46.
Comfort Spring Corp., Baltimore, Md. 670,604, pub. 7–2–57. Cl. 32.
Commercial Controls Corp., Rochester, N. Y. 670,559, pub. 9–16–58. Cl. 23.
Consolidated Productions, Inc., Fort Lauderdale, Fla. 670,550, pub. 9–16–58. Cl. 22.
Consumers Cooperative Association, Kansas City, Mo. 565,398, canc. Cl. 46.
Continental Steel Corp., Kokomo, Ind. 670,485, pub. 9–16–58. Cl. 13.
Contour Chair-Lounge Co., Inc., St. Louis, Mo. 670,784. Cl. 32.
Cordeleria Santa Ines, S. A., Merida, Mexico. 565,372, canc. Cl. 7.
Costal Chemical Co.: *See*—
Brown, George S., Jr.
Cowan, Louis G., Inc., New York, N. Y. 670,760, pub. 9–16–58. Cl. 107.
Crabtree, E. B., Co., Minneapolis, Minn. 670,774. Cl. 17.
Crawford, Wesley, & Son: *See*—
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Crawford, Wesley, Foundation, d. b. a. Wesley Crawford & Son, Tacoma, Wash. 670,720, pub. 9–16–58. Cl. 46.
Crew's Mfg. Co., Detroit, Mich. 670,753. Cl. 25.
Crown Glove Co., by Julius Rayser & Co., New York, N. Y. 123,210, 12(c) pub. 12–2–58. Cl. 39.
Cudahy Brothers Co.: *See*—
Cudahy, Patrick, Inc.
Cudahy, Patrick, Inc., by change of name from Cudahy Brothers Co., Cudahy, Wis. 670,691, pub. 9–16–58. Cl. 46.
Cudahy, Patrick, Inc., Cudahy, Wis. 670,706, pub. 9–16–58. Cl. 46.
Curtis, Helene, Industries, Inc., Chicago, Ill. 670,739, pub. 9–16–58. Cl. 51.
Cutler Shoe Co., Inc., Chicago, Ill., by A. S. Beck Shoe Corp., New York, N. Y. 358,735, 12(c) pub. 12–2–58. Cl. 39.
Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. 670,444–5, pub. 9–16–58. Cl. 4.
Da-Lite Screen Co., Inc., Warsaw, Ind. 670,588, pub. 9–16–58. Cl. 26.
Davis Lacquer Products Proprietary Ltd., Abbotsford, Victoria, Australia. 670,434–5, pub. 9–16–58. Cl. 2.
Dearborn Chemical Co., Chicago, Ill. 570,985. Am. 7(d). Cl. 15.
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Diamond Gardner Corp.: *See*—
Gardner-Richardson Co., The.
Diamond Gardner Corp., New York, N. Y. 670,439, pub. 9–16–58. Cl. 2.
Diamond Calk Horseshoe Co., Duluth, Minn. 670,547, pub. 9–16–58. Cl. 22.
Dickinson Publishing Corp., New York, N. Y. 670,627, pub. 9–16–58. Cl. 38.
Diebold, John, & Associates, Inc., New York, N. Y. 670,752, pub. 9–16–58. Cl. 101.
Dietz, R. E., Co., Syracuse, N. Y. 670,621, pub. 9–16–58. Cl. 24.
Distillers Corp., Ltd., Montreal, Quebec, Canada. 670,727, pub. 9–16–58. Cl. 49.
Division of West Chemical Products Inc.: *See*—
Lazarus Laboratories, Inc.
Dodge, Inc., Los Angeles, Calif. 360,790, ren. 9–27–58. Cl. 28.
Donovan Enterprises, Saugatuck, Conn. 565,347, canc. Cl. 39.
Donovan Enterprises, Saugatuck, Conn. 565,348, canc. Cl. 39.
Dow Chemical Co., The, Midland, Mich. 565,367, canc. Cl. 10.
Dow Chemical Co., The, Midland, Mich., from Arkell and Smiths, Canajoharie, N. Y. 670,432, pub. 10–2–58. Cl. 2.
Dow Chemical Co., The, Midland, Mich. 670,450, pub. 9–16–58. Cl. 6.
Downtown Park and Shop Inc., Washington, D. C. 670,758, pub. 9–16–58. Cl. 105.
Downtown Park and Shop Inc., Washington, D. C. 670,763, pub. 9–16–58. Cl. 200.
Duplan Corp., The, New York, N. Y. 565,334, canc. Cl. 42.
Duplan Corp., The, Winston-Salem, N. C. 670,664, pub. 9–16–58. Cl. 43.
Duro-Test Corp., North Bergen, N. J. 670,543, pub. 9–16–58. Cl. 21.
Durst S. A., Bolzano, Bolzano, Italy. 670,583, pub. 9–16–58, Cl. 26.
Dutcher Realty Co., Grand Rapids, Mich. 670,795. Cl. 104.
Dy-Co Mills, Inc., Norwood, N. J. 565,321, canc. Cl. 42.
Dy-Co Mills, Inc., Norwood, N. J. 565,322, canc. Cl. 42.
East, F. F., Co. Inc., to Greenwich Oyster Co., Bridgeton, N. J. 378,978, new cert. Cl. 46.
Eastern Shore Canning Co., Inc., Machipongo, Va. 565,397, canc. Cl. 46.
Eastman Kodak Co., Rochester, N. Y. 670,574, pub. 9–16–58. Cl. 26.
Eclipse Fuel Engineering Co., Rockford, Ill. 670,487, pub. 9–16–58. Cl. 13.
Eddy Bakeries, Inc., Helena, Mont. 565,177, canc. Cl. 46.
Edmont Mfg. Co., Coshocton, Ohio. 670,788. Cl. 39.
Ehlers, Albert, Inc., Brooklyn, N. Y. 670,712–18, pub. 9–16–58. Cl. 46.
Electric Storage Battery Co., The, Philadelphia, Pa., from Ray-O-Vac Co., Madison, Wis. 670,544, pub. 9–16–58. Cl. 21.
Enco Mfg. Co., Chicago, Ill. 670,546, pub. 7–22–58. Cl. 21.
Enrich, Henry A., and Co., Inc., New York, N. Y. 670,767. Cl. 2.
Ercona Camera Corp., to Asahi Optical Co., Ltd., Tokyo, Japan. 587,247, new cert. Cl. 26.
Eskimo Radiator Mfg. Co., Los Angeles, Calif. 670,538–9, pub. 9–16–58. Cl. 19.
Batwing Mfg. Co., Inc., Rockford, Ill. 670,552, pub. 9–16–58. Cl. 23.
Evans Medical Supplies Ltd., Liverpool, England. 670,777. Cl. 18.
Evans Specialty Co. Inc., Richmond, Va. 670,605, pub. 9–16–58. Cl. 32.
Even-Pul Foundations, Inc., New York, N. Y. 565,377, canc. Cl. 39.
Exact Level & Tool Mfg. Co., Inc., High Bridge, N. J. 670,578, pub. 9–16–58. Cl. 26.
Fairbanks, Jerry, Inc., Hollywood, Calif. 565,390, canc. Cl. 107.
Falk, Leon, Jr., d. b. a. Falklands Farm, Pittsburgh, Pa. 670,425, pub. 9–16–58. Cl. 1.
Falklands Farm: *See*—
Falk, Leon, Jr.
Fellsmere Sugar Producers Association, Fellsmere, Fla. 670,681, pub. 9–16–58. Cl. 46.
Fels, Herman: *See*—
International Latex Corp.
Felton & Son, Inc., South Boston, from A. & G. J. Caldwell, Inc., Newburyport, Mass. 670,724, pub. 9–16–58. Cl. 49.
Fiberlay, Inc., Seattle, Wash. 670,729, pub. 9–16–58. Cl. 50.
Finger Lakes Chemical Co., Inc., Etna, N. Y. 565,376, canc. Cl. 52.
Fin 'N Feather Farm, Inc., Dundee, Ill. 670,700, pub. 9–16–58. Cl. 46.
Firestone Tire & Rubber Co., The, Akron, Ohio. 670,623, pub. 9–16–58. Cl. 35.
Fishel-Cohen, Inc., New York, N. Y. 670,642, pub. 9–16–58. Cl. 39.
Fisherman Press, Inc., by change of name from Midwest Fisherman, Inc., Oxford, Ohio. 565,414, canc. Cl. 38.
Flash-O-Frees Meats Inc., Pittsburgh, Pa. 670,692, pub. 9–16–58. Cl. 46.
Fluorocarbon Co., Fullerton, Calif. 670,625, pub. 9–16–58. Cl. 35.
Foremost Dairies, Inc.: *See*—
Golden State Co. Ltd.
Foremost Dairies, Inc., San Francisco, Calif. 670,678, pub. 9–16–58. Cl. 46.
Foremost Dairies, Inc., d. b. a. Western Condensing Co., San Francisco, Calif. 670,686, pub. 9–16–58. Cl. 46.
Forslund, Carl, Inc., Grand Rapids, Mich. 670,609, pub. 9–16–58. Cl. 30.
Foster Grant Co., Inc., Leominster, Mass. 670,593, pub. 9–16–58. Cl. 26.
Foundry Equipment Co., The, Cleveland, Ohio. 364,221, ren. 1–24–59. Cl. 34.
"400" Records, Inc., New York, N. Y. 565,330, canc. Cl. 38.

Laurus Laboratories, Inc., Division of West Chemical, National Automotive Fibres, Inc., to California Cotton Mills

France Neckwear Co., Inc., New York, N. Y. 670,635, pub. 9–16–58. Cl. 39.
Fraser Hair Fashions, St. Paul, Minn., by The Gillette Co., Boston, Mass. 429,501, 12(c) pub. 12–2–58. Cl. 44.
Fraser Hair Fashions, St. Paul, Minn., by The Gillette Co., Boston, Mass. 429,261, 12(c) pub. 12–2–58. Cl. 51.
Frontier Oil Refining Corp. (Ashland Oil & Refining Co., assignee substituted), Ashland, Ky. 505,692, restricted. Cl. 15.
Frostie Co., The, Baltimore, Md. 639,770. Am. 7(d). Cl. 45.
Fur Sculpture Corp., from David Grossman Fur Corp., New York, N. Y. 670,640, pub. 9–16–58. Cl. 39.
Gardeneer, Inc., Minneapolis, Minn. 444,374, cane. Cl. 22.
Gardner-Richardson Co., The, Middletown, Ohio, to Diamond Gardner Corp., New York, N. Y. 364,306, ren. 1–24–59. Cl. 2.
Garofalo, John, d. b. a. Capt. John's Marine Hardware, Wethersfield, Conn. 670,489, pub. 9–16–58. Cl. 13.
General Aniline & Film Corp., New York, N. Y. 670,455–6, pub. 9–16–58. Cl. 6.
General Aniline & Film Corp., New York, N. Y. 670,573, pub. 9–16–58. Cl. 26.
General Electric Co., Schenectady, N. Y. 670,631, pub. 9–16–58. Cl. 38.
General Engineering Co. Aktiebolag, Stocksund, Sweden. 670,603, pub. 9–16–58. Cl. 31.
General Mills, Inc., Minneapolis, Minn. 670,704, pub. 9–16–58. Cl. 46.
General Precision Laboratory Inc., Pleasantville, N. Y. 580,781. Am. 7(d). Cl. 26.
General Precision Laboratory Inc., Pleasantville, N. Y. 582,259. Am. 7(d). Cl. 21.
General Refractories Co., Philadelphia, Pa. 362,800, ren. 11–29–58. Cl. 12.
General Refractories Co., Philadelphia, Pa. 362,802, ren. 11–29–58. Cl. 12.
General Tire & Rubber Co., The, Akron, Ohio. 565,281, canc. Cl. 9.
Gillette Co., The: *See*—
Charm-Kurl Co.
Fraser Hair Fashions.
Golden State Co., Ltd., to Foremost Dairies, Inc., San Francisco, Calif. 364,579, ren. 2–7–59. Cl. 46.
Golding Bros. Co., Inc., New York, N. Y. 565,186, canc. Cl. 50.
Gooch Milling & Elevator Co., Lincoln, Nebr. 670,719, pub. 9–16–58. Cl. 46.
Goodman, Gerson, Tuteiman Co., Philadelphia, Pa., to Swank Inc., Attleboro, Mass. 358,714, ren. 7–19–58. Cl. 39.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 670,791. Cl. 39.
Gotham Hosiery Co., Inc., New York, N. Y. 565,240, canc. Cl. 39.
Gottscho, Adolph, Inc., Hillside, N. J. 670,567, pub. 9–16–58. Cl. 23.
Graded Egg Co.: *See*—
Marriott, Roy G.
Grapette Co., Inc., The: *See*—
Chocolate Products Co.
Great Western Sugar Co., The, Denver, Colo. 670,675, pub. 9–16–58. Cl. 46.
Greenwich Oyster Co.: *See*—
East, F. F., Co. Inc.
Griffith Laboratories: *See*—
Griffith Laboratories, Inc., The.
Griffith Laboratories, Inc., The, d. b. a. Griffith Laboratories, Chicago, Ill. 361,182, ren. 10–11–58. Cl. 46.
Grossman, David, Fur Corp.: *See*—
Fur Sculpture Corp.
Guest Products Corp., New York, N. Y. 670,571, pub. 9–16–58. Cl. 26.
Gulf States Paint Co., Houston, Tex. 670,501, pub. 8–26–58. Cl. 16.
Gundlach, G. P., & Co., Inc., Cincinnati, Ohio. 670,701, pub. 9–16–58. Cl. 46.
Hahn Department Stores, Inc., Wilmington, Del. 290,809, canc. Cl. 24.
Haig & Haig, Ltd., Markinch, Scotland. 670,723, pub. 9–16–58. Cl. 49.
Hamilton Steel Products, Inc., Chicago, Ill. 670,549, pub. 9–16–58. Cl. 22.
Hanson-Van Winkle-Munning Co., Matawan, N. J. 565,375, canc. Cl. 6.
Hardtmuth, L. & C., Inc., Bloomsbury, N. J. 664,785, cor. Cl. 37.
Hardwicke, John B., Co., Raymondville, Tex. 670,708, pub. 9–16–58. Cl. 46.
Hartzell Industries, Inc., Piqua, Ohio. 670,617, pub. 9–16–58. Cl. 34.
Harvey Features Syndicate, New York, N. Y. 670,628, pub. 9–16–58. Cl. 38.
Haveg Industries, Inc., Wilmington, Del. 670,498, pub. 9–16–58. Cl. 13.
Hawthorne, Herb J., Inc., Houston, Tex. 670,553, pub. 9–16–58. Cl. 23.
Hayden's Hollandaise, Inc., College Point, N. Y. 670,707, pub. 9–16–58. Cl. 46.
Hedwin Corp., Baltimore, Md. 670,440, pub. 9–16–58. Cl. 2.
Hello-Tech, Inc., Pasadena, Calif. 670,591, pub. 9–16–58. Cl. 26.
Henry's: *See*—
Schnakenberg, Henry J.
Hercules Powder Co., Wilmington, Del. 670,470–1, pub. 9–16–58. Cl. 9.
Hiawatha Wood Products, Winona, Minn. 670,551, pub. 9–16–58. Cl. 22.
Hickoria Hickory Co.: *See*—
Jolliffe, Glenn A.
Hill, J. E., Fort Worth, Tex. 670,554, pub. 9–16–58. Cl. 23.
Hollins, William, & Co. Ltd., Nottingham, Nottinghamshire, England. 670,665, pub. 9–16–58. Cl. 43.
Hollywood Movie Money: *See*—
Turner, J. Arthur.
Hood, H. P., & Sons, Inc., Boston, Mass. 670,696, pub. 9–16–58. Cl. 46.
Hospital Specialty Co., The, Cleveland, Ohio. 670,671, pub. 9–16–58. Cl. 44.
Houghton, E. F., & Co., Philadelphia, Pa. 122,263, 12(c) pub. 12–2–58. Cl. 6.
Houghton, E. F., & Co., Philadelphia, Pa. 360,855, 12(c) pub. 12–2–58. Cl. 5.
House of Simoneau: *See*—
Simoneau, Joseph W.
Howard Mfg. Corp., Council Bluffs, Iowa. 427,900, canc. Cl. 22.
Howard Mfg. Corp., Council Bluffs, Iowa. 429,822, canc. Cl. 22.
Hudson Products: *See*—
Block Drug Co., Inc.
Hunter Douglas Corp., New York, N. Y. 565,194, canc. Cl. 12.
Huttig Sash & Door Co., St. Louis, Mo. 565,213, canc. Cl. 12.
Ideal Distributing Co.: *See*—
Soule-Gibbs & Co.
Imperial Relampago Corp., New York, N. Y. 670,523, pub. 9–16–58. Cl. 18.
Independent Grocers' Alliance Distributing Co., Chicago, Ill. 670,461, pub. 9–16–58. Cl. 6.
Indiana State Teachers' Association, Indianapolis, Ind. 358,879, 12(c) pub. 12–2–58. Cl. 38.
Ingram Methol Co., Inc., New York, from Churchill Drug Co., Rye, N. Y. 670,793. Cl. 51.
Instant Made Tomato Products Co., Inc., Stockton, Calif. 670,695, pub. 9–16–58. Cl. 46.
Instituto Biochimico Italiano: *See*—
Loredana Loresini Cremisini.
International Latex Corp., Dover, Del., from H. Fels, d. b. a. Rumeidine Co., Brooklyn, N. Y. 670,515, pub. 9–16–58. Cl. 18.
International Latex Corp., Dover, Del. 670,519, pub. 9–16–58. Cl. 18.
International Latex Corp., Playtex Park, Dover, Del. 670,638, pub. 9–16–58. Cl. 39.
International Minerals & Chemical Corp., Chicago, Ill. 565,265, canc. Cl. 46.
Iowa Mfg. Co. of Cedar Rapids, Iowa, Cedar Rapids, Iowa. 362,571, 12(c) pub. 12–2–58. Cl. 23.
Isbell, Bernon, Forth Worth, Tex. 565,436, canc. Cl. 100.
Jardier Co.: *See*—
Lakeside Mfg. Inc.
Johnson & Johnson, New Brunswick, N. J. 670,513, pub. 9–16–58. Cl. 18.
Jolliffe, Glenn A., d. b. a. Hickoria Hickory Co., Knob Fork, W. Va. 565,345, canc. Cl. 1.
Joseph & Feiss Co., The, Cleveland, Ohio. 670,649, pub. 9–16–58. Cl. 39.
KXOK Broadcasting, Inc., St. Louis, Mo. 670,756, pub. 9–16–58. Cl. 104.
Kaufmann Department Stores, Inc., Pittsburgh, Pa. 292,431, canc. Cl. 23.
Kay Electric Co., Pine Brook, N. J. 670,596, pub. 9–16–58. Cl. 26.
Kayser, Julius, & Co.: *See*—
Crown Glove Co.
Kelek Co., Norwood, Mass. 670,770. Cl. 21.
Kendall Refining Co., Bradford, Pa. 670,499, pub. 9–16–58. Cl. 15.
Kewalram, Kishin, d. b. a. Lekhraj & Sons, Singapore. 670,663, pub. 9–16–58. Cl. 42.
Keystone Ferrule & Nut Co., Burlington, Wis. 670,437, pub. 9–16–58. Cl. 2.
Kimberly-Clark Corp., Neenah, Wis. 365,463, ren. 3–7–59. Cl. 37.
Kimble Glass Co., from Owens-Illinois Glass Co., Toledo, Ohio. 670,584, pub. 9–16–58. Cl. 16.
Kine Camera Co., Inc., New York, N. Y. 670,670, pub. 9–16–58. Cl. 26.
Knighton Franchise Distributing Co., Birmingham, Ala. 565,407, canc. Cl. 12.
Knoll Pharmaceutical Co., Orange, N. J. 670,524, pub. 9–16–58. Cl. 18.
Kokuryu-Do Co. Ltd., Chuo-ku, Tokyo, Japan. 670,507, pub. 9–16–58. Cl. 18.
Kops Bros., Inc., New York, N. Y. 670,657, pub. 9–16–58. Cl. 39.
Kores Carbon Paper & Ribbons Mfg. Corp.: *See*—
Kores Mfg. Corp.
Kores Mfg. Corp., by change of name from Kores Carbon Paper & Ribbons Mfg. Corp., New York, N. Y. 670,771. Cl. 11.
Kurty, Bill: *See*—
Kurty, William M.
Kurty, William M., d. b. a. Bill Kurty, Roebling, N. J. 670,632, pub. 9–16–58. Cl. 38.
Laboratory Furniture Co., Inc., Mineola, N. Y. 670,582, pub. 9–16–58. Cl. 20.
Laird Engineering Co.: *See*—
Laird, James M.
Laird, James M., d. b. a. Laird Engineering Co., Lewisburg, W. Va. 670,457, pub. 9–16–58. Cl. 6.
Lakeside Mfg. Inc., d. b. a. Jardier Co., Milwaukee, Wis. 670,548, pub. 9–16–58. Cl. 23.
Landau, Sam, New York, N. Y. 565,374, canc. Cl. 39.
Latrobe Steel Co., Latrobe, Pa. 670,490–1, pub. 9–16–58. Cl. 14.
Lauffer, H. E., Co., Inc., New York, N. Y. 670,565, pub. 9–16–58. Cl. 23.

Pillsbury Mills, Inc., Minneapolis, Minn. 565,190, canc. Cl. 46.
Royal Trading Co. Ltd., Honolulu, Hawaii. 670,682, pub. 9–16–58. Cl. 46.

Lazarus Laboratories, Inc., Division of West Chemical Products Inc., Buffalo, N. Y. 670,743, pub. 9–16–58. Cl. 52.
Lee Fabric Corp., Cleveland, Ohio. 565,269, canc. Cl. 42.
Le Febure Corp., Cedar Rapids, Iowa. 670,611, pub. 9–16–58. Cl. 32.
Leitner Equipment Co., Franklin Park, Ill. 670,602, pub. 9–16–58. Cl. 31.
Leitz, Ernst, G. m. b. H., Wetzlar (Lahn), Germany. 670,569, pub. 9–16–58. Cl. 26.
Lekhraj & Sons: *See*— Kewalram, Kishin.
Leonard; Theodor, Wax Co., Paterson, N. J. 164,682, 12(c) pub. 12–2–58. Cl. 6.
Lerch, Benjamin F., New York, N. Y. 565,226, canc. Cl. 46.
Lerner, Joseph, & Sons, Inc., Brooklyn, N. Y. 565,416, canc. Cl. 28.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 670,615, pub. 9–11–58. Cl. 33.
Lilly, Eli, and Co., Indianapolis, Ind. 360,576, ren. 9–20–58. Cl. 18.
Lilly, Eli, and Co., Indianapolis, Ind. 360,577, ren. 9–20–58. Cl. 18.
Lisa's Food Product Co., Hollywood, Fla. 565,352, canc. Cl. 46.
Little Men, Inc., New York, N. Y. 664,102, canc. Cl. 39.
Loblaw, Inc., Buffalo, N. Y. 670,641, pub. 5–20–58. Cl. 39.
Lockport Mills, Inc., Lockport, N. Y. 617,277, canc. Cl. 50.
Lofland Brothers Co., Tulsa, Okla. 670,787. Cl. 38.
Loredana Lorenzini Cremisini, d. b. a. Institute Biochimico Italiano, Milan, Italy. 670,516, pub. 9–16–58. Cl. 18.
Lowe, Joe, Corp., New York, N. Y. 565,421, canc. Cl. 46.
Lustre Products Corp., Lansing, Mich. 670,773. Cl. 16.
MacKintosh-Hemphill Co., Pittsburgh, Pa., by E. W. Bliss Co., Canton, Ohio. 356,146, 12(c) pub. 12–2–58. Cl. 14.
MacKintosh-Hemphill Co., Pittsburgh, Pa., by E. W. Bliss Co., Canton, Ohio. 356,148, 12(c) pub. 12–2–58. Cl. 14.
MacKintosh-Hemphill Co., Pittsburgh, Pa., by E. W. Bliss Co., Canton, Ohio. 356,149, 12(c) pub. 12–2–58. Cl. 14.
Manteca Canning Co., Manteca, Calif. 670,711, pub. 9–16–58. Cl. 46.
Many, Blanc & Co., Inc., Chicago, Ill., to Schenley Industries, Inc., New York, N. Y., and Wilmington, Del. 359,342, ren. 8–16–58. Cl. 49.
Marlboro Shirt Co., Inc., Baltimore, Md. 612,228, canc. Cl. 39.
Marriott, Roy G., d. b. a. Graded Egg Co., Perry, Okla. 565,326, canc. Cl. 46.
Martin-Senour Co., The, Chicago, Ill. 670,504, pub. 9–16–58. Cl. 16.
May Department Stores Co., The, St. Louis, Mo. 361,514, ren. 10–18–58. Cl. 42.
McCall, George, d. b. a. Miracle Hist Co., St. Paul, Minn. 670,518, pub. 9–16–58. Cl. 18.
McCann, E. S., and Son, Inc., New York, N. Y., to McCann-Roy, Inc. 565,270, canc. Cl. 52.
McCann-Roy, Inc.: *See*— McCann, E. S., and Son, Inc.
McCarten Industries, Inc., Chagrin Falls, Ohio. 670,448, pub. 9–16–58. Cl. 5.
McGay, W. B., d. b. a. W. B. McGay Co., Owosso, Mich. 670,459, pub. 9–16–58. Cl. 6.
McGay, W. B., Co.: *See*— McGay, W. B.
Meopta, Narodni Podnik, Prerov, Czechoslovakia. 670,579–81, pub. 9–16–58. Cl. 20.
Mercer, Walter R., Danville, Ill. 670,478, pub. 9–16–58. Cl. 12.
Merrimac Hat Corp., Amesbury, Mass. 565,174, canc. Cl. 39.
Metro-Atlantic, Inc., Centredale, R. I. 670,447, pub. 9–16–58. Cl. 5.
Meyercord Co., The, Chicago, Ill. 565,411, canc. Cl. 38.
Miami Margarine Co., The, Cincinnati, Ohio. 670,705, pub. 9–16–58. Cl. 46.
Midwest Fisherman, Inc.: *See*— Fisherman Press, Inc.
Midwest Hanger Co., Kansas City, Mo. 670,781, pub. 9–16–58. Cl. 50.
Miles Laboratories, Inc., Elkhart, Ind. 670,512, pub. 9–16–58. Cl. 18.
Miller Bros. Hat Co. Inc.: *See*— Adam Hat Stores, Inc.
Miller and Poston Mfg. Co., Spokane, Wash. 670,483, pub. 7–15–58. Cl. 13.
Mills, Miron, Inc., Clinton, Mass. 565,384, canc. Cl. 42.
Miracle Hist Co.: *See*— McCall, George.
Mitts Mfg. Co., Inc., Brooklyn, N. Y. 405,000, canc. Cl. 6.
Montenier, Jules, Chicago, Ill. 565,350, canc. Cl. 51.
Montenier, Jules, Inc., Chicago, Ill. 565,399, canc. Cl. 51.
Morrell, John, & Co., Ottumwa, Iowa. 670,703, pub. 9–16–58. Cl. 46.
Morris, Philip, Inc., New York, N. Y. 670,506, pub. 8–12–58. Cl. 17.
Morris, Newall & Co., Inc., Houston, Tex. 670,764, pub. 9–16–58. Cl. 52.
Morrison Steel Products, Inc., Buffalo, N. Y. 670,619, pub. 9–16–58. Cl. 34.
Mosher, L. A., Co., Atlanta, Ga. 670,510, pub. 9–16–58. Cl. 18.
Moss, Theron V., d. b. a. South-Eastern Cordage, Cleveland, Ohio. 670,467, pub. 9–16–58. Cl. 7.
Moulton, Lee L., Minneapolis, Minn. 565,280, canc. Cl. 46.
Mutation Mink Breeders Association, Racine, Wis. 670,424, pub. 7–5–55. Cl. 1.
National Association of Broadcasters, Washington, D. C. 670,765, pub. 9–16–58. Cl. B.
National Automotive Fibres, Inc., by merger with California Cotton Mills Co., to California Cotton Mills Co., Oakland, Calif. 565,765, new cert. Cl. 29.
National Automotive Fibres, Inc., to California Cotton Mills Co., Oakland, Calif. 622,257, new cert. Cl. 29.
National Automotive Fibres, Inc., to California Cotton Mills Co., Oakland, Calif. 639,999, new cert. Cl. 29.
National Kaolin Products Co., Aiken, S. C. 670,452, pub. 9–16–58. Cl. 6.
Neal, William M., Los Angeles, Calif. 670,651, pub. 9–16–58. Cl. 39.
Nester Johnson Mfg. Co., Chicago, Ill. 289,970. Am. 7(d). Cl. 22.
Newsette Publishing Co., Inc., Washington, D. C. 670,629, pub. 9–16–58. Cl. 38.
Noreen Distributors: *See*— Noreen, Inc.
Noreen, Inc., d. b. a. Beauty Products, Ltd., and Noreen Distributors, Denver, Colo. 670,738, pub. 9–16–58. Cl. 51.
Norman Aluminum Window Co. Inc., Jamaica, N. Y. 565,413, canc. Cl. 12.
Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway. 565,173, canc. Cl. 9.
North American Plastics Co., Paterson, N. J. 670,443, pub. 9–16–58. Cl. 2.
Northwest Paper Co., The, Cloquet, Minn. 360,231, ren. 9–13–58. Cl. 37.
No-Sag Spring Co., Detroit, Mich. 670,606–9, pub. 9–16–58. Cl. 32.
Nutone, Inc., Cincinnati, Ohio. 565,426, canc. Cl. 21.
Nutrena Mills, Inc., Minneapolis, Minn. 670,509, pub. 9–16–58. Cl. 18.
Nyal Co., Detroit, Mich., to Nyal Co., Inc., New York, N. Y. 364,430, ren. 1–31–59. Cl. 18.
Nyal Co., Inc.: *See*— Nyal Co.
Nysco Laboratories, Inc., Long Island City, N. Y. 670,533, pub. 9–16–58. Cl. 18.
Oakford & Fahnestock, to Blue Ribbon Products Co., Inc., San Francisco, Calif. 32,516, new cert. Cl. 46.
Officine Viberti Societa' per Azioni, Turin, Italy. 670,537, pub. 9–16–58. Cl. 19.
Olds & Whipple, Inc., Hartford, Conn. 295,652, canc. Cl. 10.
Opperman, Clarence E., d. b. a. L. R. Opperman & Son, to Clarence Opperman, Jr., d. b. a. Opperman Fruit Products Co., Birmingham, Ohio. 363,926, ren. 1–10–59. Cl. 46.
Opperman, Clarence, Jr.: *See*— Opperman, Clarence E.
Opperman Fruit Products Co.: *See*— Opperman, Clarence E.
Opperman, L. R., & Son: *See*— Opperman, Clarence E.
Organic Development Corp., Garden Grove, Calif. 670,474, pub. 9–16–58. Cl. 11.
Organon Inc.: *See*— Roche-Organon, Inc.
Organon Inc., Orange, N. J. 670,531–2, pub. 9–16–58. Cl. 18.
Otarion Listener Corp., Ossining, N. Y. 670,670, pub. 9–16–58. Cl. 44.
Owens-Illinois Glass Co.: *See*— Kimble Glass Co.
P. H. B. Sales Corp., Boston, Mass. 670,766. Cl. 1.
P-M Laboratories, Inc., Hampton, Iowa. 670,735, pub. 9–3–57. Cl. 51.
Pabco Products Inc., San Francisco, Calif. 565,427, canc. Cl. 16.
Pabst Brewing Co.: *See*— Premier-Pabst Corp.
Pacific Northwest Canning Co., Puyallup, Wash., by D. Paulhamus, Oakland, Calif. 229,548, 12(c) pub. 12–2–58. Cl. 46.
Packard Motor Car Co., Detroit, Mich. 565,176, canc. Cl. 52.
Palm Beach Co., Portland, Maine. 670,654–7, pub. 9–16–58. Cl. 42.
Parke, Davis & Co., Detroit, Mich. 363,201, 12(c) pub. 12–2–58. Cl. 18.
Parker Pen Co., The: *See*— Wahl Co., The.
Paulhamus, Dwight: *See*— Pacific Northwest Canning Co.
Peanut Corp. of America: *See*— Peanut Products Co.
Peanut Products Co., by Peanut Corp. of America, Des Moines, Iowa. 363,278, new cert. Cl. 46.
Pecora, Inc.: *See*— Pecora Paint Co.
Pecora Paint Co., by Pecora, Inc., Philadelphia, Pa. 357,207, 12(c) pub. 12–2–58. Cl. 12.
Peerless Camera Stores Corp.: *See*— Peerless Camera Stores, Inc.
Peerless Camera Stores, Inc., to Peerless Camera Stores Corp., New York, N. Y. 666,848, new cert. Cl. 26.
Peerless Mfg. Division of Dover Corp., Louisville, Ky. 670,786. Cl. 34.
Pendleton Tool Industries, Inc., d. b. a. Proto Tool Co., Los Angeles, Calif. 670,555, pub. 9–16–58. Cl. 23.
Pennsylvania Salt Mfg. Co., The, Philadelphia, Pa. 565,253, canc. Cl. 52.
Pepperidge Farm Inc.: *See*— Rudkin, Margaret F.
Perfect Bloomer Co., Brooklyn, N. Y. 565,353, canc. Cl. 39.
Perlstein Leather Co. Inc., New York, N. Y. 670,426, pub. 9–16–58. Cl. 1.
Petroleum Solvents Corp., New York, N. Y. 670,498, pub. 9–16–58. Cl. 15.
Petrolite Corp., St. Louis, Mo. 670,484, pub. 9–16–58. Cl. 13.
Pfizer, Chas., & Co., Inc., Brooklyn, N. Y. 670,525, pub. 9–16–58. Cl. 18.
Pfizer, Chas., & Co., Inc., Brooklyn, N. Y. 670,534, pub. 9–16–58. Cl. 18.

Spalding, A. G., & Bros., Inc.: *See*— Wright & Ditson.
Sprunger Brothers, Inc., Topeka, Ind. 670,562, pub. 9–16–58.
United Vintners, Inc., d. b. a. Petri Cigar Co., San Francisco, Calif. 670,775. Cl. 17.
Upjohn Co., The, Kalamazoo, Mich.

Pillsbury Mills, Inc., Minneapolis, Minn. 565,190, canc. Cl. 46.
Pitanco Instruments Ltd., Mount Royal, Quebec, Canada. 670,586-7, pub. 9-16-58. Cl. 26.
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Plantation Chocolate Co., Philadelphia, Pa. 670,679, pub. 9-16-58. Cl. 46.
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Polaroid Corp., Cambridge, Mass. 670,594, pub. 9-16-58. Cl. 26.
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Porter-Cable Machine Co., The, Syracuse, N. Y. 670,560, pub. 9-16-58. Cl. 23.
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Poulsen's, George H., Trust No. 2732: *See*— Toledo Trust Co., The.
Powermaster Corp., Portland, Oreg. 670,538, pub. 9-16-58. Cl. 19.
Premier-Pabst Corp., Peoria Heights, to Pabst Brewing Co., Chicago, Ill. 363,733, ren. 1-3-59. Cl. 48.
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Rawlplug Co. Ltd., The, London, England. 670,556, pub. 9-16-58. Cl. 23.
Rayco Mfg. Co., Paterson, N. J. 670,568, pub. 9-16-58. Cl. 23.
Raylite Electric Corp., Bronx, N. Y. 670,780. Cl. 21.
Ray-O-Vac Co.: *See*— Electric Storage Battery Co., The.
Red Cedar Shingle Bureau, Seattle, Wash. 670,764, pub. 9-16-58. Cl. A.
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Rex Hosiery Finishers, Inc., Philadelphia, Pa. 565,393, canc. Cl. 106.
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Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,442, ren. 3-7-59. Cl. 18.
Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,443, ren. 3-7-59. Cl. 18.
Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,444, ren. 3-7-59. Cl. 18.
Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,445, ren. 3-7-59. Cl. 18.
Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,446, ren. 3-7-59. Cl. 18.
Roche-Organon, Inc., Nutley, to Organon Inc., Orange, N. J. 365,447, ren. 3-7-59. Cl. 18.
Rochester Ropes, Inc., Culpeper, Va. 670,465-6, pub. 9-16-58. Cl. 7.
Rocket Chemical Co., Inc., San Diego, Calif. 670,503, pub. 9-16-58. Cl. 16.
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Rock of Ages Corp., Burlington, Vt. 670,732, pub. 9-16-58. Cl. 50.
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Royal Trading Co. Ltd., Honolulu, Hawaii. 670,682, pub. 9-16-58. Cl. 46.
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Searle, G. D., & Co., Skokie, Ill. 670,536, pub. 9-16-58. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 565,263, canc. Cl. 52.
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Segard, Serge, d. b. a. Serge Segard Baking Co., Aurora, Ill. 670,699, pub. 9-16-58. Cl. 46.
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Seidelhuber Steel Rolling Mill Corp., Burbank, Calif. 670,618, pub. 9-16-58. Cl. 34.
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Seinsheimer, H. A., Co., The, Cincinnati, Ohio. 362,387, ren. 11-15-58. Cl. 39.
Sergeant & Nicholoy, Inc., Butler, Wis. 368,347, ren. 12-20-58. Cl. 46.
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Shield, Dan H., Cordage Co., Chicago, Ill. 670,468, pub. 9-16-58. Cl. 7.
Shirtcraft Co., Inc., The, Harleton, Pa. 670,646, pub. 9-16-58. Cl. 39.
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Spalding, A. G., & Bros., Inc.: *See*—
Wright & Ditson.

Sprunger Brothers, Inc., Topeka, Ind. 670,562, pub. 9–16–58. Cl. 23.

Stahl-Urban Co., Brookhaven, Miss. 670,634, pub. 9–12–58. Cl. 30.

Staley, A. E., Mfg. Co., Decatur, Ill. 361,266, ren. 10–11–58. Cl. 6.

Standard Enamel and Paint Corp., Indianapolis, Ind. 362,198, 12(c) pub. 12–2–58. Cl. 16.

Standard Motor Co. Ltd., The, Coventry, Warwickshire, England. 670,480, pub. 9–16–58. Cl. 13.

Stettheimer Co., San Francisco, Calif. 565,230, canc. Cl. 30.

Stevens, J. P., & Co., Inc., New York, N. Y. 670,660–1, pub. 9–16–58. Cl. 42.

Stillman Hosiery Mills Co., Philadelphia, Pa. 565,333, canc. Cl. 39.

Stone, W. E., & Co., Inc., Seattle, Wash. 670,601, pub. 9–16–58. Cl. 31.

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Strauss, Leon, to The Roto-Shaver Inc., to The Roto-Shaver Inc., New York, N. Y. 360,778, ren. 9–27–58. Cl. 23.

Sturm, Justin, Westport, Conn. 670,590, pub. 9–16–58. Cl. 26.

Suburban Life Products Co., Chicago, Ill. 670,431, pub. 9–16–58. Cl. 1.

Sun Oil Co., Philadelphia, Pa. 670,496, pub. 9–16–58. Cl. 15.

Sunkist Growers, Inc., Los Angeles, Calif. 670,690, pub. 9–16–58. Cl. 46.

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Supplee-Biddle-Stelts Co., Philadelphia, Pa. 670,709. Cl. 2.

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Sutherland Paper Co., Kalamazoo, Mich. 670,441, pub. 9–16–58. Cl. 2.

Swank Inc.: *See*—
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Swank, Inc., Attleboro, Mass. 670,737, pub. 9–16–58. Cl. 51.

Sweeney, W. R., Mfr., Inc., Salisbury, Mo. 670,668, pub. 9–16–58. Cl. 44.

Swimmer, Jerome, d. b. a. The Alomet Co., Chicago, Ill. 670,446, pub. 9–16–58. Cl. 5.

Systems Inc., Orlando, Fla. 670,751, pub. 9–16–58. Cl. 100.

Talbert Construction Equipment Co., Lyons, Ill. 670,540, pub. 9–16–58. Cl. 19.

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Thurston Cutting Corp., by Reeves Brothers, Inc., New York, N. Y. 358,771, 12(c) pub. 12–2–58. Cl. 42.

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"21" Brands, Inc., New York, N. Y. 670,725, pub. 9–16–58. Cl. 49.

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United Chemical Co., Inc., Kansas City, Mo. 361,443, 12(c) pub. 12–2–58. Cl. 4.

United Feature Syndicate, Inc., New York, N. Y. 670,630, pub. 9–16–58. Cl. 38.

United-Hagie Hybrids, Inc., Des Moines, Iowa. 670,469, pub. 9–16–58. Cl. 7.

United Lacquer Mfg. Corp., Linden, N. J. 670,505, pub. 9–16–58. Cl. 16.

United States Plywood Corp., New York, N. Y. 364,287, ren. 1–24–59. Cl. 12.

United States Rubber Co., New York, N. Y. 670,666, pub. 9–16–58. Cl. 43.

United States Time Corp., The: *See*—
Waterbury Clock Co.

U. S. Vitamin Corp., New York, N. Y. 670,522, pub. 9–16–58. Cl. 18.

United Vintners, Inc., d. b. a. Petri Cigar Co., San Francisco, Calif. 670,775. Cl. 17.

Upjohn Co., The, Kalamazoo, Mich. 670,530, pub. 9–16–58. Cl. 18.

Vanadium-Alloys Steel Co., Latrobe, Pa. 670,493–4, pub. 9–16–58. Cl. 14.

Van Arsdale Laboratories, Inc., Minneapolis, Minn. 670,746, pub. 9–16–58. Cl. 52.

Van Melle's Biscuits- en Toffeefabrieken N. V., Rotterdam, Netherlands. 565,215, canc. Cl. 46.

Victor Adding Machine Co., Chicago, Ill. 660,582, cor. Cl. 26.

Vienna Beauty Products Co., Chicago, Ill. 565,260, canc. Cl. 44.

Vinyl Plastics Inc., Sheboygan, Wis. 670,541–2, pub. 9–16–58. Cl. 20.

Wahl Co., The, Chicago, Ill., to The Parker Pen Co., Janesville, Wis. 360,609, ren. 9–20–58. Cl. 37.

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Wallace Silversmiths, Inc., Wallingford, Conn. 670,488, pub. 9–16–58. Cl. 2.

Ware Chemical Corp., The, Westport, Conn. 670,458, pub. 9–16–58. Cl. 6.

Wark, Marian E., d. b. a. Scrubby Bobby, Grand Rapids, Mich. 670,597, pub. 9–16–58. Cl. 29.

Warner-Lambert Pharmaceutical Co., Morris Plains, N. J. 670,511, pub. 9–16–58. Cl. 18.

Warner-Lambert Pharmaceutical Co., Morris Plains, N. J. 670,514, pub. 9–16–58. Cl. 18.

Waterbury Clock Co., to The United States Time Corp., Waterbury, Conn. 358,481, ren. 7–12–58. Cl. 27.

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Webster Engineering Co., The, Tulsa, Okla. 670,785. Cl. 84.

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Welch, James O., Co., Cambridge, Mass. 670,698, pub. 9–16–58. Cl. 46.

Weldon Farm Products, Inc., New York, N. Y. 670,698, pub. 9–16–58. Cl. 46.

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Wetzell Gummiwerke Aktiengesellschaft, Hildesheim, Germany. 670,622, pub. 9–16–58. Cl. 35.

White Tower Management Corp., Stamford, Conn. 670,750, pub. 9–16–58. Cl. 100.

Whitin Machine Works, Whitinsville, Mass. 670,561, pub. 9–16–58. Cl. 23.

Wickersham, Sumner R., d. b. a. Ruth's Oven Food Products, and Ruth's Oven, Colorado Springs, Colo. 670,688, pub. 9–16–58. Cl. 46.

Willys-Overland Motors, Inc., Toledo, Ohio. 565,160, canc. Cl. 19.

Wilmot Castle Co., Rochester, N. Y. 670,667, pub. 9–16–58. Cl. 44.

Wilno Kosher Sausage Co., Chicago, Ill. 670,685, pub. 9–16–58. Cl. 46.

Wilson, Walter, Pasadena, Calif. 565,212, canc. Cl. 30.

Winne, Frank W., & Son, Inc., Philadelphia, Pa. 565,378, canc. Cl. 7.

Wohl Shoe Co., St. Louis, Mo. 670,633, pub. 5–10–55. Cl. 39.

Woodruff, Harry L., d. b. a. The Certified Gemologist Publishing Co., Washington, D. C. 629,747, canc. Cl. 38.

Woodward & Lothrop, Washington, D. C. 320,102, 12(c) pub. 12–2–58. Cl. 46.

Wooster Brush Co., The, Wooster, Ohio. 670,598–9, pub. 9–16–58. Cl. 29.

Workman for Workmen, Inc., Chicago, Ill. 670,753, pub. 9–16–58. Cl. 101.

World Wide Travel, Inc., Chicago, Ill. 670,757, pub. 9–16–58. Cl. 105.

Worley & Co., Pico, Calif. 670,614, pub. 9–16–58. Cl. 32.

Wright & Ditson, Boston, to A. G. Spalding & Bros., Inc., Chicopee, Mass. 128,512, ren. 11–12–58. Cl. 22.

Wrigley, Wm., Jr. Co., Chicago, Ill. 362,880, ren. 12–6–58. Cl. 46.

Wrigley, Wm., Jr. Co., Chicago, Ill. 363,067–8, ren. 12–13–58. Cl. 46.

Wyandotte Chemical Corp., Wyandotte, Mich. 670,463–4, pub. 9–16–58. Cl. 6.

Yellow Springs Instrument Co., Inc., Yellow Springs, Ohio. 670,595, pub. 9–16–58. Cl. 26.

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CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs) 200,402

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NOTICES

Specimens Re Trademark Applications

Storage space considerations require rigid enforcement of Trademark Rules 2.56 and 2.57. Failure to comply with these rules may result in delay in receiving a filing date.

The Rules are as follows:

"2.56 SPECIMENS. The five specimens of a trademark shall be specimens of the trademark as actually used on or in connection with the goods in commerce, and shall be duplicates of the actually used labels, tags, or containers, or the displays associated therewith or portions thereof, *when made of suitable material and capable of being arranged flat and of a size not larger than the size of the drawing.*"

"2.57 FACSIMILES. When, due to the mode of applying or affixing the trademark to the goods, or to the manner of using the mark on the goods, or to the nature of the mark, specimens as above stated cannot be furnished, *five copies of a suitable photograph or other acceptable reproduction, not larger than the size specified for the drawing and clearly and legibly showing the mark and all matter used in connection therewith, shall be furnished.*"

Nov. 13, 1958.

DAPHNE LEEDS,
Assistant Commissioner.

Patents Available for Licensing or Sale

California Research Corporation of San Francisco, California, is prepared to grant on reasonable terms non-exclusive licenses to manufacture fuel oils under the following patent.

Applications for license may be addressed to: W. H. Clausen, California Research Corporation, 200 Bush St., San Francisco, Calif.

2,786,745. Fuel Oil.

2,794,090. Electromagnetic Switch Relays. Uher & Co. Gesellschaft fur Apparatebau. Correspondence to: Michael S. Striker, 511 Fifth Ave., New York 17, N. Y.

2,817,257. Ratchet Wrench With Supplemental Head Turning Means. Thomas J. Kaiser, 2625 Greyling Drive, San Diego 11, Calif.

2,831,903. Mud Pump Piston Rod Wearing Sleeve. Amos Norris, Bob Norris, Herman Erlich, and assignee Dalton Marten, Box 1, Gainesville, Tex.

2,856,018. Pack (Cart Portable Game Carrier). Martin J. Fegel, Route 3, Box 220, Boring, Oreg.

General Electric Company is prepared to grant non-exclusive licenses under the following 9 patents on reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Measurements and Industrial Products Division, 620 Western Ave., West Lynn 3, Mass.

2,799,046. Continuous Rod or Tube Forming Press.

2,849,551. Control Switch.

Applications for license under the following patent may be addressed to: General Electric Company, Aircraft Gas Turbine Division, Cincinnati 15, Ohio, Attention: Patent Counsel.

2,849,209. Nozzle Construction for Turbines.

Applications for license under the following 6 patents may be addressed to: General Electric Company, Motor and Generator Division, 1 River Road, Schenectady 5, N. Y.

2,814,368. Gear Case Seal.

2,819,415. Motor Bearing Cooling.

2,822,486. Dynamoelectric Machine Brush Holder.

2,828,432. Sparking Detector for Dynamoelectric Machines.

2,829,289. Commutator Lead Supports.

2,836,779. Regulating Machines for Controlling the Speed of Induction Motors.

New Applications Received During October 1958

Patents	6,652
Designs	409
Plant Pats	13
Reissues	24
Total	7,098

Issues

Patents	936	No. 2,863,149 to No. 2,864,084, incl.
Designs	43	No. 184,035 to No. 184,077, incl.
Plant Pats	4	No. 1,777 to No. 1,780, incl.
Reissues	2	No. 24,573 to No. 24,574, incl.
Total	985	

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION

Oldest Application

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202, 603
Total number of pending Design applications	7, 000
Total number of applications awaiting action (excluding Designs)	84, 564
Total number of Design applications awaiting action	3, 421
Date of oldest new application	Nov. 13, 1958
Date of oldest amended application	Nov. 12, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 42, 46, 50, 58, 59, 60, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 55, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 25, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows.	3-10-58	2-25-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	3-3-58	1-29-58
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	5-5-58	5-12-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	3-19-58	3-17-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	1-17-58	12-26-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	3-3-58	3-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	3-17-58	3-4-58
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	4-2-58	3-19-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	3-17-58	3-3-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-31-58	3-28-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	4-14-58	3-27-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	3-27-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	3-24-58	3-20-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-16-57	12-3-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	2-4-58	2-7-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	2-26-58	1-29-58
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	4-24-58	4-25-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	2-19-58	2-17-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	4-2-58	3-31-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	3-3-58	3-3-58
21. (III) MADER, R. C., Textiles	1-24-58	1-23-58
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-6-58	2-1-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-13-57	11-12-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	3-20-58	3-27-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	3-25-58	3-17-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	4-4-58	4-10-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	4-14-58	4-9-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	1-28-58	12-19-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-9-58	4-24-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-31-58	4-1-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	3-13-58	3-11-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	1-27-58	3-3-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding	6-3-58	6-3-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	12-5-57	12-5-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	2-10-58	1-24-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	5-5-58	6-3-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	4-15-58	4-29-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-13-58	3-13-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	3-24-58	3-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	1-15-58	1-13-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles		
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	4-3-58	4-3-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	1-29-58	1-6-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	2-11-58	2-25-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	3-17-58	3-4-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	4-3-58	4-3-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-12-58	2-10-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	2-3-58	2-26-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	2-3-58	2-13-58
52. (V) NEFF, P. R., Supports and Racks	2-13-58	3-6-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	2-26-58	2-27-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	5-23-58	5-5-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	5-23-58	5-16-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-26-57	12-19-57
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	3-20-58	4-11-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part); Selective Punching	3-17-58	3-17-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	4-24-58	5-1-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	2-10-58	2-13-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-9-58	4-1-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	3-3-58	3-3-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	4-18-58	4-17-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	2-12-58	2-20-58
66. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	2-3-58	2-3-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	1-7-58	1-6-58
69. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	3-10-58	3-3-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	5-1-58	4-24-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	4-1-58	4-1-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Web Feeding	3-26-58	4-4-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	4-1-58	3-13-58
CLASS. DIVS. V—ANGEL, C. D., Scaffolds; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	4-1-58	3-21-58
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	2-10-58	2-13-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	2-14-58	2-17-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	4-4-58	4-3-58
	1-2-58	2-25-58

*Established August 22, 1957, by order of the Commissioner—722 O. G. 218.

The following divisions have been abolished: 55 and 68

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958.*

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminuters; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office

Commissioner's Decision

YOUNG *v.* YOUNG ET AL. *v.* GIFFARD

Interference No. 88,361. Decided August 11, 1958

1. INTERFERENCE—REQUIREMENT FOR ELECTION BY AN ASSIGNEE OF TWO PARTIES—*Armitage* v. *Archea*, 1932 C. D. 12, 424 O. G. 329, 15 USPQ 153, STATED CURRENT PRACTICE.

"The decision *Armitage* v. *Archea*, • • • has been accepted as stating the current practice as to election by an assignee of two parties to an interference."

2. SAME—SAME—*Sprague* v. *Howe* v. *Work*, 1925 C. D. 115, 340 O. G. 555, CONSTRUED.

In regard to petitioner's reliance upon the decision *Sprague* v. *Howe* v. *Work*, 1925 C. D. 115, 340 O. G. 555, to support the position that an assignee of two parties to an interference should not be forced to make an election between applications of the two parties when the status of one of them is under attack by an adversary, *Held* that the "decision was based upon peculiar circumstances involving a demonstrated inability of the assignee to obtain facts upon which to base his election."

3. SAME—SAME—PETITION.

A petition to "review and vacate" an order of the Examiner of Interferences holding insufficient a showing as to why an election should not be made between commonly assigned applications of two parties to an interference and dissolving the interference as to one of the two parties, where a pending motion to shift the burden of proof raised the issue of whether or not the other party was entitled to the date of his British provisional application, is denied.

ON PETITION.

DENIED.

Morris A. Rabkin for Young.

Daniel I. Mayne for Young et al.

Stevens, Davis, Miller & Mosher for Giffard.

WATSON, *Commissioner of Patents:*

International Business Machines Corporation, assignee of the application of John Anthony Hardinge Giffard, involved in this interference, and also of the application of William C. Dersch, Jr., previously involved as the juniormost party of this interference, petitions that the Commissioner, in the exercise of his supervisory authority, "review and vacate the order of the Examiner of Interferences, dated April 18, 1955, holding insufficient the showing made by said International Business Machines Corporation as to why election between the aforementioned applications should not be made at this time, and dissolving the interference as to the party Dersch."

This interference as declared involved the application of William C. Dersch, Jr., assigned to the petitioner, the application of Charles J. Young, originally the senior party, and the application of John Anthony Hardinge Giffard, then assigned to National Research Development Corporation.

As the result of a decision upon Giffard's motion to shift, Giffard was made the senior party in this interference upon the basis of Giffard's provisional application in Great Britain. Subsequently, the application of Earl A. Young, Ambrose D. Baker and Roscoe H. Canaday was added to this interference, *Dersch* v. *C. J. Young* v. *E. A. Young, Baker and Canaday* v. *Giffard*, and a restricted motion period set.

During this second motion period, Young, Baker and Canaday brought a motion to shift the burden of proof on the ground that Giffard is not entitled to the benefit of the filing date of his provisional specification filed in Great Britain. Before a hearing could be set upon this motion to shift and other motions presented, the International Business Machines Corporation, already assignee of Dersch, Jr., gave notice that it had received a complete assignment of the application of Giffard, the senior party. The Patent Interference Examiner thereupon required the International Business Machines Corporation to show cause why the interference should not be dissolved as to one of the assigned applications.

In response to this requirement, the petitioner corporation requested that the Patent Interference Examiner stay the requirement to elect because it, the International Business Machines Corporation, did not have a fair basis for making an election in view of the motion of the party Young, Baker and Canaday to shift the burden of proof. In a subsequent and supplementary statement this corporation indicated that it elected to stand on the Giffard application if its request to stay the requirement should be denied. The Patent Interference Examiner then held that no sufficient cause had been shown for staying the requirement for an election and dissolved the interference as to the party Dersch.

It is the burden of the petitioner's argument that the fact that an opponent raised the issue of whether or not Giffard is entitled to the date of his British provisional application makes inapplicable the decision of the Assistant Commissioner in *Armitage* v. *Archea*, 1932 C. D. 12, 424 O. G. 329, cited by the Patent Interference Examiner. Petitioner relies upon the decision *Sprague* v. *Howe* v. *Work*, 1925 C. D. 115, 340 O. G. 555, to support his position that the assignee should not be forced to make an election between one of two applications when the status of one of them is under attack by an adversary.

[1] The decision *Armitage* v. *Archea*, supra, has been accepted as stating the current practice as to election by an assignee of two parties to an interference. [2] The decision in *Sprague* v. *Howe* v. *Work*, supra, was based upon peculiar circumstances involving a demonstrated inability of the assignee to obtain facts upon which to base his election.

It is not seen that the possibility of an adverse decision by the Primary Examiner on the right of the party Giffard to rely upon the date of a British provisional application creates a problem any different in kind from the problem of determining in any assigned application whether the evidence will sustain a decision that the applicant in that application is in law the first inventor. Whether or not a specific motion has been made to challenge the right of a party to a record date, a challenge to the party's right to be termed the first inventor is implicit in the fact that an interference exists.

[3] The petition is denied.

DENIED.

Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

REISSUES

DECEMBER 9, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,573
ACID NEUTRALIZING ABRASIVE CHLOROPHYLL DENTIFRICE

Benjamin Gruskin, Atlantic City, N. J., deceased, by Rystan Company, Mount Vernon, N. Y., assignee

No Drawing. Original No. 2,773,802, dated December 11, 1956, Serial No. 214,628, March 8, 1951. Application for reissue August 29, 1957, Serial No. 682,561

9 Claims. (Cl. 167—93)

1. An acid-stabilized dentifrice composition, substantially free of water-insoluble precipitated chlorophyll both in storage and in use, therapeutically effective in the treatment of gingival conditions containing as essential ingredients an inorganic acid neutralizing salt of relatively low solubility in water and 0.02 to 3% by weight of a water soluble chlorophyll, said salt being in an amount sufficient to impart an abrasive action to said composition and at the same time to maintain the pH of said composition sufficiently high to maintain said water soluble chlorophyll in its water soluble and therapeutically effective form.

5. A composition as defined in claim 1 in which the inorganic [acid] salt is selected from the group consisting of calcium carbonate [,] *and* magnesium carbonate [and insoluble sodium metaphosphate].

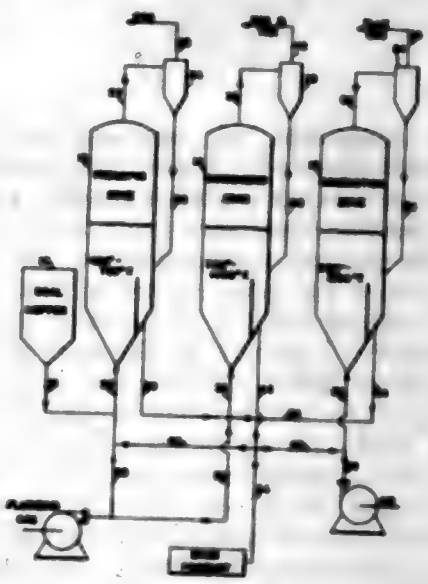
24,574
CARBONIZATION OF AGGLOMERATIVE COALS

Irving H. Wellinsky, Pittsburgh, Pa., assignor to Consolidation Coal Company, a corporation of Pennsylvania

Original No. 2,677,656, dated May 4, 1954, Serial No. 85,304, April 4, 1949. Application for reissue April 18, 1956, Serial No. 579,124

5 Claims. (Cl. 202—14)

1. The method of carbonizing an agglomerative coal which comprises feeding said coal in finely divided condition and finely divided carbonaceous residue from previously carbonized coal to a carbonization zone, said residue being at a temperature sufficiently high and in sufficient quantity to maintain said zone above the carbonizing temperature of the coal but below 1400° F., agitating said coal and said residue in direct heat transfer relationship in said zone until the coal is carbonized to volatile hydrocarbonaceous products and carbonaceous solid residue, removing solid residue from said zone, conducting a portion thereof to a combustion zone which is maintained at a temperature between 850° and 1800° F. by burning a part of said residue, the temperature of



said combustion zone being at least 50° F. above the temperature in the carbonization zone, conveying the resulting heated portion to the carbonization zone, and mixing another portion of said residue from the carbonization zone while still at an elevated temperature with the coal, before the latter is fed to the carbonization zone, in sufficient quantity to raise the temperature of the coal to between 450° and 750° F. but below the carbonizing temperature of the coal.

PLANT PATENTS

GRANTED DECEMBER 9, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,777
APPLE TREE

Anna Morris Daniels, Abilene, Tex., assignor to Stark Bro's Nurseries and Orchards Company, Louisiana, Mo., a corporation of Missouri

Application March 3, 1958, Serial No. 718,934

1 Claim. (Cl. 47—62)

A new and distinct variety of apple tree, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of good color, size, quality and flavor of the fruit, with a general resemblance of the fruit to the variety "Starking Delicious," but differing therefrom by a more globose form, a more acid flavor somewhat resembling that of the variety "Jonathan," and an earlier maturity substantially corresponding to the ripening season of the "Jonathan" variety aforesaid.

1,778
ROSE PLANT

Wilhelm Kordes, near Elmshorn in Holstein, Sparrieshoop, Germany, assignor to Jackson & Perkins Company, Newark, N. Y., a corporation of New York

Application April 3, 1958, Serial No. 726,301

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of vigorous and upright habits of growth, free-flowering habit, bright-colored thorns, high-colored young shoots, high-colored flowers corresponding to Scarlet Red, lightly overcast with Scarlet in general color tonality, and eminent suitability for greenhouse pot forcing use.

DENIED.

1,779
POINSETTIA PLANT
Paul Ecke, Encinitas, Calif.
Application April 10, 1958, Serial No. 727,759
1 Claim. (Cl. 47—60)

A new and distinct variety of poinsettia plant substantially as illustrated and described, characterized by an involucre of bracts which are prolately ovate-acuminate in plane, having a rich, pink-tinted red color, the bracts being sufficiently numerous to overlie in layers and sufficiently wide to overlap at adjacent edges, the petioles of the bracts being of a length to position the bracts relatively closely to an inflorescence centrally thereof, said new variety having the further characteristic of maturing to optimum substantially ten days later than known varieties of red poinsettias.

1,780
POINSETTIA PLANT
Paul Ecke, Encinitas, Calif.
Application April 14, 1958, Serial No. 728,503
1 Claim. (Cl. 47—60)

A new and distinct variety of poinsettia plant substantially as illustrated and described, characterized principally by an involucre of bracts of deep rich rose-tinted red color, and a variation in the shape of the planar contour of individual bracts in the involucre, the bracts having close grouping by relatively short petioles around the inflorescence, and the bracts being sufficiently numerous and of sufficient width to overlap at adjacent edges, whereby a wreath-like involucre of bracts is formed around the inflorescence.

2,863,153

whereby to permit the body to float at the water surface

PATENTS

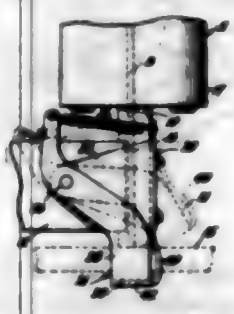
GRANTED DECEMBER 9, 1958

GENERAL AND MECHANICAL

2,863,149
APPARATUS FOR SECURING HANGERS WITH EXPLOSIVELY-ACTUATED TOOLS
Rowland J. Kopf, Rocky River, and Roger Marsh, Hudson, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application April 18, 1955, Serial No. 502,068
1 Claim. (Cl. 1—44.5)

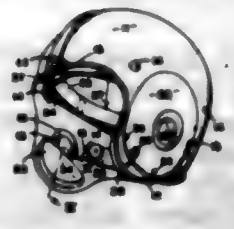
In a powder-actuated tool for securing a supporting bracket by a penetrating fastener; the improvement comprising a barrel, a barrel housing surrounding said barrel, a muzzle shield slidably mounted on the barrel to extend outwardly therefrom ahead of said housing and biased forwardly thereof, a muzzle cap threaded over the muzzle of said barrel in laterally over-hanging relationship with the muzzle of the barrel, and a bracket-holding fixture block formed with a bore, said fixture block being in surrounding relationship with the muzzle end of the barrel and being held against the muzzle cap by the forwardly-biased muzzle shield, an opening being formed in the forward end of said fixture block to accommodate said muzzle cap, and the said fixture block being configurated with respect to at least one of its faces to releasably hold said bracket ahead of said muzzle in centered relationship with respect to the bore of the barrel.

2,863,150
SAFETY DEVICES FOR STAPLING MACHINES
Fred W. Yancey, Winston-Salem, N. C., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application November 26, 1956, Serial No. 624,382
5 Claims. (Cl. 1—49)



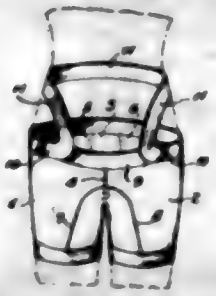
1. A safety device for a stapling machine having a staple driving plunger, comprising a plate attachable to the stapling machine, a guard member pivoted on said plate, and resilient means urging said guard member into the path of a staple driven by said plunger to block accidental discharge of a staple from the machine whereby the member may be moved against the bias of the resilient means out of the path of a staple driven by the plunger when the machine is engaged with a workpiece to be stapled.

2,863,151
PROTECTIVE PAD
Gerard E. Morgan, Jr., Glenview, Ill., assignor to John T. Riddell, Inc., Chicago, Ill., a corporation of Illinois
Application April 30, 1956, Serial No. 581,531
1 Claim. (Cl. 2—3)



In a body-protecting pad, the combination including: a shaped, compressible, resilient shock-absorbing element of substantially uniform thickness throughout and having substantially parallel upper and lower surfaces and edge walls substantially normal thereto; incasing elements secured to one another and incasing the shock-absorbing element between them, one of said incasing elements being of flexible material and having a substantially flat surface abutting the inner surface of said shock-absorbing element and the other of said incasing elements being of soft, flexible material and having preformed therein a pocket of substantially the same configuration as that of the shock-absorbing element, said pocket snugly receiving said compressible shock-absorbing element without compressing it; and means securing the adjacent edge portions of the incasing elements together in the plane of the lower surface of the pad; the arrangement being such that the shock-absorbing element has an essentially constant resistance to compression over its entire area.

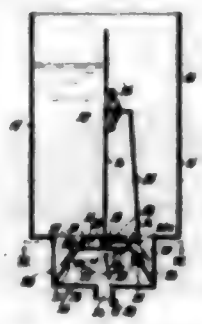
2,863,152
PANTY
Paula Blatt, Cleveland, Ohio
Application April 29, 1957, Serial No. 655,711
3 Claims. (Cl. 2—224)



1. A garment comprising a panty having a body of elastic material adapted to fit entirely and snugly about and above the buttock of the wearer's body and having individual full leg portions adapted to fit completely and snugly about the upper parts of her thighs, and a band connected to the opposite front top parts of the panty and being adapted to fit snugly about the rear waist region of the wearer's body for supporting engagement therewith, the upper rear part of the panty being free from said band between the points of attachment of said band thereto, whereby the rear part of the panty may be lowered and raised, in turn, for personal use while said band may remain in position about the waist of the wearer's body.

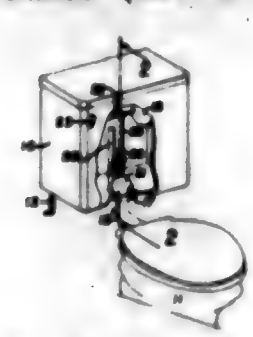
said base for receiving between the box spring and mat, said tool comprising

2,863,153
WATER CLOSET FLUSHING APPARATUS
Hendrikus J. H. Gerritsen, Venlo, Netherlands
Application June 8, 1954, Serial No. 435,266
4 Claims. (Cl. 4—39)



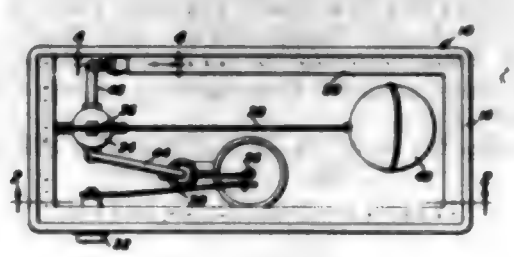
1. A water closet flushing apparatus comprising a tank provided with a hand-operated water discharge valve for opening and closing a water discharge pipe, said tank having a water inlet opening, a water inlet valve in said tank cooperable with said water inlet opening to open and close the same and means to operate said water inlet valve including a deformable diaphragm means being disposed in the tank and arranged substantially at the height of the highest water level in said tank, one side of said diaphragm means being engaged and actuated by the water when it reaches the highest level, the other side being in constant communication with the atmosphere, rod means connected between the diaphragm means and the water inlet valve to operate said inlet valve in response to movements of the diaphragm means so that said inlet valve is closed when the tank is filled up with water to the desired level and opened when the water is below said level, said deformable diaphragm means being pressed inwards by the water in the tank when the water reaches the desired level and the water inlet valve being opened by the pressure of the inlet water when the water level in the tank is below said desired level.

2,863,154
BALL FLUSH VALVE
Orvan J. Bennett, Fort Lupton, Colo.
Application June 25, 1956, Serial No. 593,771
6 Claims. (Cl. 4—57)



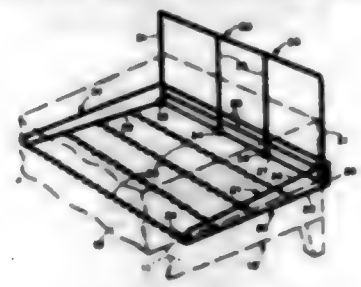
1. The combination with a water closet tank having a discharge pipe from its bottom with the upper rim of the pipe terminating as an annular seat within the tank and near the bottom thereof, a lifting lever over the seat within the tank a substantial distance above the seat and an upstanding overflow pipe within the tank adjacent to the seat; of a spherical surfaced floatable seating body adapted to be positioned upon the seat for closure of the discharge pipe, a pliable non-stretchable cord interconnecting the body and lever whereby to lift the body from the seat responsive to upward movement of the lever and a resilient laterally stiffened restraining arm having one end vertically affixed to the overflow pipe to outstand therefrom and having the other end arched over in a bend and attached to the cord above the body to provide for a cord reach between the arm and body whereby to permit the body to float at the water surface above the seat and above the arm when the tank is being drained and to hold the floating body at the water surface above the seat as the water surface lowers to the bottom of the tank.

2,863,155
VALVE AND FILLER RIM FOR TOILET TANKS
Andrew W. Harkness, South Glens Falls, N. Y.
Application April 16, 1954, Serial No. 423,694
3 Claims. (Cl. 4—60)



1. A device for filling a receptacle with liquid having a bottom and side walls, an overflow tube communicating with the interior of the receptacle above the bottom, a discharge outlet in the bottom, a liquid supply line extending into the tank, and a float controlled valve in the supply line, said device comprising a horizontally disposed hollow passage on the side walls and projecting inwardly therefrom with a plurality of mutually spaced apertures in the bottom portion for discharging liquid downwardly alongside the side walls, said passage being disposed above the overflow tube for preventing back siphonage of liquid from the receptacle, one end of said passage being closed, and means connecting the other end of the passage to the supply control valve for conducting liquid into the passage, said means including a rigid pipe freely telescopically extending into the open end of the passage, a seal gasket having a generally circular cross-section longitudinally movable on said pipe and including a portion disposed between the open end of the passage and the pipe for sealing the juncture between the pipe and passage, and a clamp nut threaded on said pipe for clampingly urging the gasket into the open end of the passage and retaining the gasket in sealing position.

2,863,156
COLLAPSIBLE PILLOW SUPPORT
Leo G. Hoexter, New York, N. Y.
Application October 26, 1955, Serial No. 542,948
6 Claims. (Cl. 5—325)

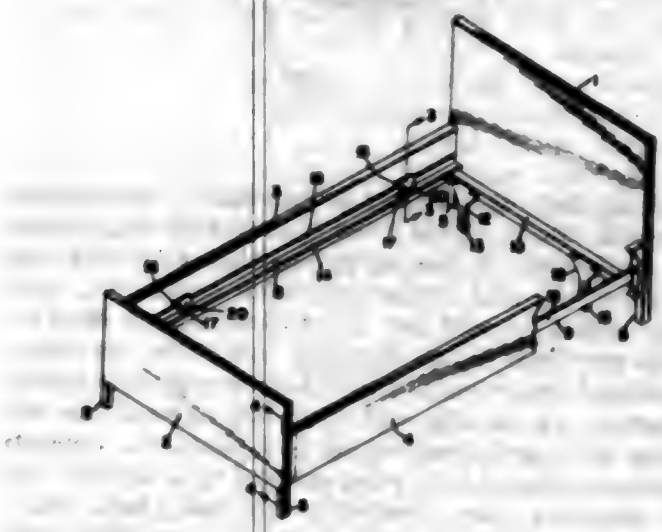


1. A collapsible back rest for studio couches or the like comprising, in combination, an anchoring section including a substantially flat base arranged to be interposed between the box spring and mattress of a studio couch, side wall portions substantially perpendicular to said base arranged to embrace the side edges of the mattress, and an end wall portion joining said side wall portions and arranged to engage the end edges of the mattress; and a substantially flat back support section hingedly connected at its lower edge to the outer end edge of said anchoring section and, in the erect position lying inside said end wall portion and between the latter and the end edge of the mattress; said back support section folding flat against

a thread cutting tool in alignment with the said axis and portions of each sleeve being turned downwardly with

said base for reception between the box spring and mattress; each of said sections being formed of lengths of wire bent to appropriate shape, with the lengths forming each section being integrally united to each other; said side wall portions being generally trapezoidal in elevation, and said base including cross wires extending between the lower edges of the side wall portions; said end wall portion including cross wires extending between the outer upright ends of said side wall portions outwardly thereof, and a cross wire extending between the inside corners of the outer ends of said side wall portions; said back section being hinged to said last-named cross wire.

2,863,157
BEDSTEAD CARRIAGE
John D. Martin, Cleveland, Ohio
Application April 9, 1957, Serial No. 651,697
5 Claims. (Cl. 5—328)

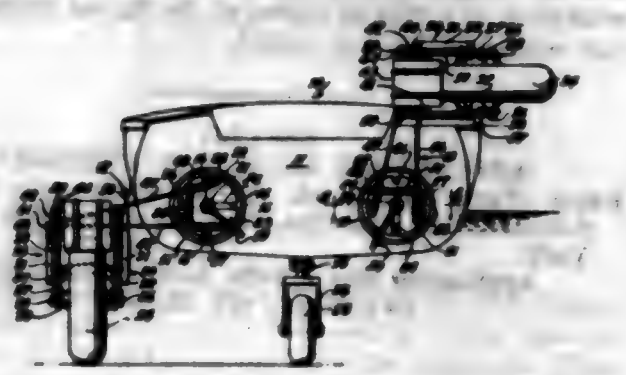


1. In combination, a bedstead comprising a headboard, footboard and side rails, brackets secured to the inner surfaces of said side rails and provided with flanges extending downwardly from the upper edges of the brackets, a caster-supported frame for supporting said bedstead in spaced relation to the floor of a room, said frame comprising angle members having vertical flanges in parallel spaced relation to said side rails, said bracket flanges engaged with said angle member flanges, whereby said bedstead is supported by the upper edges of the angle member flanges.

2,863,158
WIRE CUTTING AND STRIPPING TOOL
Kenneth T. Miller, Longmeadow, Mass.
Application December 16, 1957, Serial No. 702,978
3 Claims. (Cl. 7—5.3)

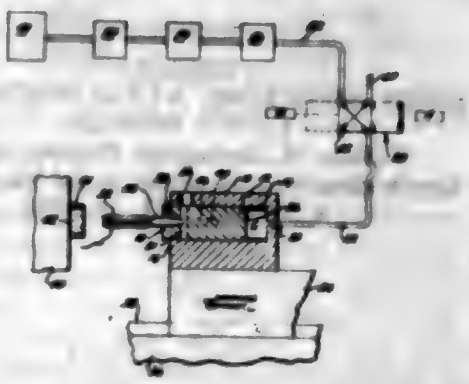
1. A tool for cutting off the end of insulated wire and stripping insulation from an end portion of the wire, said tool comprising a pair of handles pivoted for movements between open and closed positions and having upper jaw portions, a pair of relatively movable upper insulation severing plates carried by the jaw portion of one handle, a pair of lower relatively movable cut-off blades, means mounting said cut-off blades on one of said handles, said upper plates and said blades being actuated as said handles are moved to closed position.

2,863,159
RETRACTABLE WHEEL ASSEMBLY FOR BOATS
Joe Bear, Denison, Tex.
Application October 10, 1955, Serial No. 539,565
6 Claims. (Cl. 9—1)



2. In combination with a boat having a transom, a pair of wheel assemblies each comprising a stationary mounting plate affixed to said boat transom, a threaded bolt affixed to and extending outwardly from said plate, a stud adjacent the perimeter of said plate, a disc rotatable on said bolt having a pair of relatively spaced peripheral slots adapted for selective engagement with said stud, a wheel carrying frame, means affixed to and extending laterally from said disc for supporting said wheel carrying frame, said disc being movable axially on said bolt to adjust the same rotatably in relation to said plate and means for securing said disc in adjusted positions to hold said wheel frame in raised and lowered positions.

2,863,160
THREADING TOOL SPINDLE FEED MEANS RECIPROCABLE AT A RATE IN EXCESS OF THE LEAD OF THE THREADING TOOL
Herbert C. Ovshinsky, Detroit, Mich.
Application April 14, 1955, Serial No. 501,242
6 Claims. (Cl. 10—139)



1. In a thread cutting tool holder for a machine tool of the type having means for supporting a workpiece, means for supporting a tool holder, and means for effecting relative rotation between the workpiece and the tool holder while one is reciprocated with respect to the other parallel to the axis of rotation, the combination comprising a support block having a bore substantially parallel to the said axis which bore has a closed end and an open end facing toward the workpiece, a piston reciprocable in said bore, means on said piston for supporting

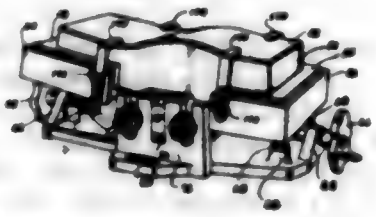
2,863,165
SUPPORT FOR SCALING FISH
Victor J. Kuzma, Cleveland, Ohio
Application December 16, 1957, Serial No. 703,000
3 Claims. (Cl. 17—1)

2,863,167
STUFFING MECHANISM FOR SAUSAGE AND

provide for a cord reach between the arm and body the mattress; said back support section folding flat against

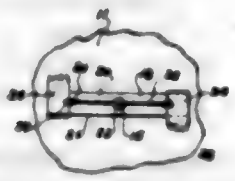
a thread cutting tool in alignment with the said axis and extending toward the workpiece, means in said bore for limiting the movement of the said piston toward the open end and toward the closed end of the bore and for preventing rotation of the piston in the bore, a source of compressed fluid, means defining a passageway connecting said source and said closed end of the bore to admit fluid under pressure thereto whereby to resiliently bias said piston toward the open end of the bore, and a valve disposed in said passageway, said valve being selectively operable to introduce compressed fluid to said bore or to vent said bore and said support block being movable toward the workpiece at a rate in excess of the thread cutting pitch rate while compressed fluid is in the bore and the support block being movable away from the workpiece at a rate in excess of the thread cutting pitch rate while the bore is vented.

2,863,161
ADJUSTABLE SHOE PAD ASSEMBLY
Edgar Haas, New York, N. Y., assignor to Herman Schwabe, Inc., Brooklyn, N. Y., a corporation of New York
Application May 4, 1956, Serial No. 582,684
14 Claims. (Cl. 12—38)



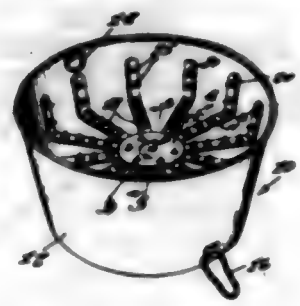
9. An adjustable shoe pad holder comprising a base, a toe plate, a shank support which is movable vertically independently of the toe plate, a heel plate, a stationary vertically slotted bearing support at each side of the base forming a part of the base at the end of the shank support, a horizontal pivot rod pivotally supporting the end of the heel plate adjacent the shank support but without pivotal connection to the shank support, said pivot rod being received in externally threaded bushings which are vertically adjustable in the vertically slotted bearing supports, means including clamp nuts on said threaded bushings for locking the bushings in said supports at a desired height, and adjustable screw means supporting the heel end of the heel plate, said latter means being adjustable independently of the adjustment of the pivot rod.

2,863,162
SNOW SWEEPING ATTACHMENT FOR LAWN MOWER
William H. Draughon, Detroit, Mich.
Application May 16, 1956, Serial No. 585,229
4 Claims. (Cl. 15—79)



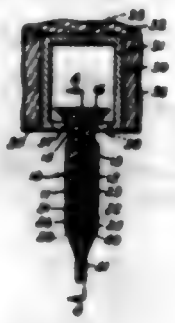
4. In combination, a hollow lawnmower casing, an upright power driven rotary shaft therein, a snow sweeper comprising a flattened elongated support mounted on said shaft, a pair of narrow elongated horizontally disposed sleeves projected over and secured to opposite outer ends of said support, transversely of its longitudinal axis and extending to opposite sides thereof, outer portions of each sleeve being turned downwardly with their lower opposite ends defining a clamp, an elongated brush within each clamp depending downwardly and adapted to engage the ground surface, said brushes being parallel to and on opposite sides of said support axis, and means securing said sleeves to said support.

2,863,163
DRY MOP DUST CLEANER
Abraham Haas, Long Island City, N. Y.
Application July 15, 1957, Serial No. 671,894
2 Claims. (Cl. 15—142)



1. A dry mop dust cleaner comprising, in combination, an inverted frusto conical chute open at both longitudinal ends, a plurality of intersecting radially extending bars concentric with and supported within said chute, teeth means carried by said bars for striking a mop head rotated in proximity therewith within said chute, one end of each of said bars being provided with an angularly related securement leg at one end extending toward the end opening of largest diameter of said chute, the opposite end of each of said bars being secured to a common circular mounting plate concentric with said chute, and a support plate rotatably carried by said mounting plate in close proximity therewith.

2,863,164
CURTAIN CLIP
Orland S. Schevold, Los Angeles, Calif., assignor to Curtilon Corporation, Los Angeles, Calif., a corporation of California
Application December 12, 1955, Serial No. 552,647
2 Claims. (Cl. 16—87.4)



2. In combination: a sheet of material for positioning in a vertical plate, said sheet being flexible at least along spaced vertical axes, said sheet having a plurality of horizontally aligned openings adjacent the upper edge thereof; and a plurality of sheet supporting clips removably disposed along said upper edge, each of said clips having an inverted U-shaped body and means for supporting said body from an overhead track, with a portion of said sheet including at least one of said openings positioned in the space between the arms of said U, each of the arms having a shoulder projecting horizontally therefrom toward the opposite arm across said space for entering one of said openings, said shoulders being in horizontal alignment.

the panel's embossed surface promptly after it passes

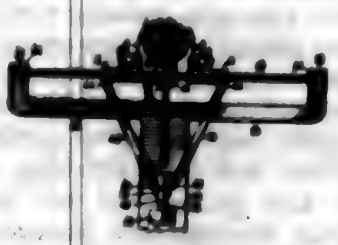
tapered bore, an extrusion barrel and a passage extend-

stripping insulation from an end portion of the wire, cable in said bore, means on said piston for supporting

2,863,165
SUPPORT FOR SCALING FISH
Harvey L. Hartman, Cleveland, Ohio
Application June 12, 1957, Serial No. 665,193
1 Claim. (Cl. 17—8)

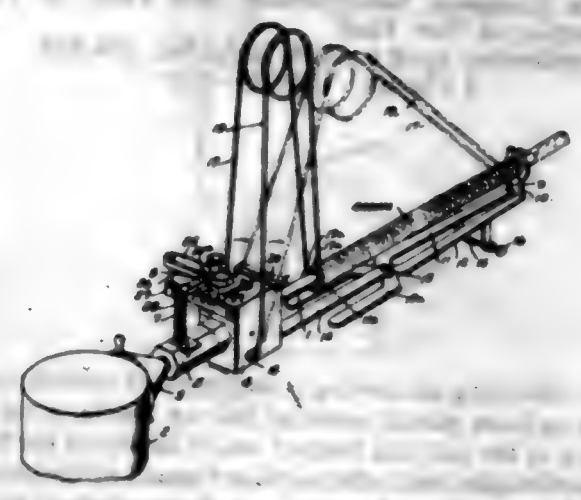
A hand manipulated fish carcass supporting tool comprising a straight tubular member having an unobstructed bore, a lever having a gripping end and a handle end and a portion intermediate said ends extending angularly across said tubular member, a pivotal connection between said lever intermediate portion and said tubular member including a yoke on said lever portion embracing said tubular member and aligned pivot pins in said yoke engaging said tubular member on opposite sides of the latter and stopping short of the bore thereof so as to leave the bore unobstructed, the handle end of said lever lying opposite a portion of said tubular member so that the operator's hand may grip them simultaneously, the gripping end of said lever being in position to close against said tubular member and to grip a cheek of a fish there, said lever having a portion adjacent the gripping end thereof extending laterally away from said tubular member to protect a hand grasping said handle end during a scaling operation, a stiffening rod longer than said tubular member and slidable within said member to enter the body of a fish, and interengaging means operatively connected between said tubular member and said rod to hold said rod in various adjusted positions relative to said tubular member.

2,863,166
HIDE PULLER
Carl Oscar Schmidt, Jr., Wyoming, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio
Application May 31, 1956, Serial No. 588,306
10 Claims. (Cl. 17—21)



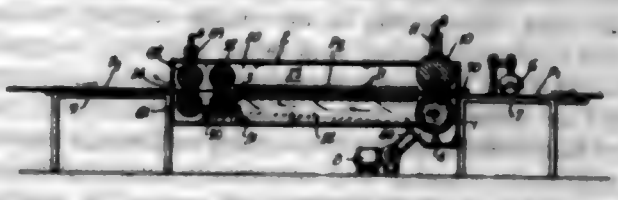
1. Apparatus for stripping the hide from an animal carcass suspended vertically by its legs, and having the hide preliminarily severed vertically along a belly slit to provide hide flaps at opposite sides of the slit, said apparatus comprising in combination, a frame including an elongate guide bar supported substantially horizontally upon the frame, a back rest secured to, carried by and located intermediate the ends of the guide bar to support the backbone area of the carcass, a pair of hide pullers secured to, carried by and slidable lengthwise along the guide bar, each including a clamp for attachment of a hide flap to each puller, and power actuated means having mechanical connection with the pullers for forcing the latter apart independently of the back rest, and simultaneously in opposite directions along the guide bar, for stripping the hide off the carcass from the belly slit toward the backbone of the carcass.

2,863,167
STUFFING MECHANISM FOR SAUSAGE AND LIKE CASINGS
Henry Randolph Nordin, Concord, Ontario, Canada, assignor to Canada Packers Limited, Toronto, Ontario, Canada
Application August 1, 1956, Serial No. 601,589
11 Claims. (Cl. 17—41)



1. Stuffing mechanism for sausage and the like casings, comprising a horn through which casing filling material may pass, the horn having an inlet into which the filling material may be fed and an end through which said filling material may be discharged, the horn being adapted to receive over it a length of casing folded accordion style, and apparatus for controlling the passage of the casing along and off the horn, said apparatus comprising first means embracing the horn adjacent its discharge end and adapted to engage the casing adjacent one end of its folded portion to regulate the passage of the casing off the horn during operation of the mechanism, second means at least partially encircling the horn and adapted to engage the casing at a position spaced from said discharge end, and means operatively associated with said second means and adapted to move said second means longitudinally of the horn to urge the casing along the horn towards said first means.

2,863,168
EMBOSSING HARDBOARD
John L. Buckley and Lawrence G. Buckley, Seattle, Wash.
Application July 28, 1953, Serial No. 368,854
9 Claims. (Cl. 18—16)



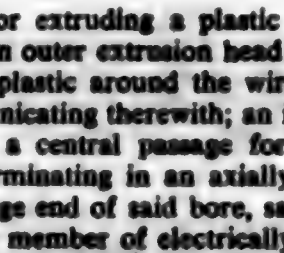
1. A method for embossing a single surface of a thick, dense, and substantially rigid panel of hardboard such as contains a previously set binder, which method comprises continuously advancing successive panels endwise in a single plane, applying a liquid thermosetting resinous moistening and penetrating agent to the surface to be embossed, passing the panel, at a distance in its path from the liquid-applying station, between a patterned embossing roller applied to the moistened surface, and a paired backing roller applied to its opposite surface thereby embossing said moistened surface, continuously subjecting the surface to be embossed, from a point in the vicinity of the liquid-applying station to a point in the vicinity of the embossing station, to temperatures which progressively increase as any given point on that surface approaches the embossing station, to effect penetration of the panel by the applied liquid, and cooling

in said film of voids surrounding discrete particles of, introducing into said flow stream and into contact with

being in horizontal alignment.

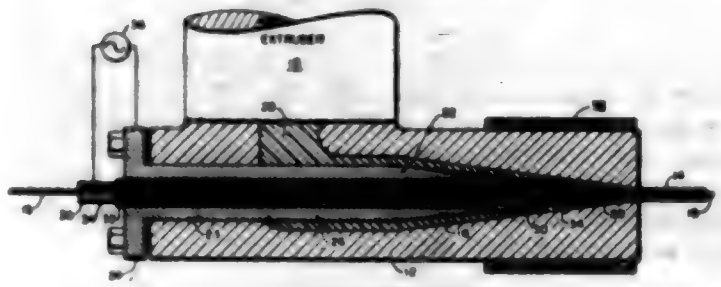
the panel's embossed surface promptly after it passes the embossing station, to set the applied resinous moistening agent.

2,863,169
EXTRUDING DIES
Arthur G. Foster, Towson, Md., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application April 4, 1956, Serial No. 576,015
5 Claims. (Cl. 18—12)



5. An extruding die having a bore formed therethrough designed to form plastic material into an article, a curved outer face at the exit end thereof which intersects the bore at an acute angle, and a flat surface formed in the curved face so that a point is formed at each intersection of the flat surface, the curved face and the bore.

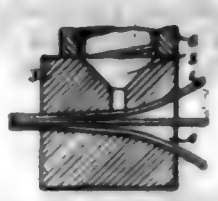
2,863,170
EXTRUSION HEAD
Philip W. Foss, Melrose, Mass., assignor to The Rex Corporation, West Acton, Mass., a corporation of Massachusetts
Application November 28, 1955, Serial No. 549,232
3 Claims. (Cl. 18—13)



1. Apparatus for extruding a plastic coating upon a wire comprising an outer extrusion head having a central bore for feeding plastic around the wire and a passage for plastic communicating therewith; an inner core within said bore having a central passage for feeding a wire into said bore terminating in an axially aligned section within the discharge end of said bore, said core comprising an outer body member of electrically conductive material and an inner conductor extending substantially the length of said body member electrically connected thereto within said body member and electrically insulated therefrom over the rest of its length; and means for making electrical connection to said body member and to said inner conductor whereby an electric current may be passed through said body member.

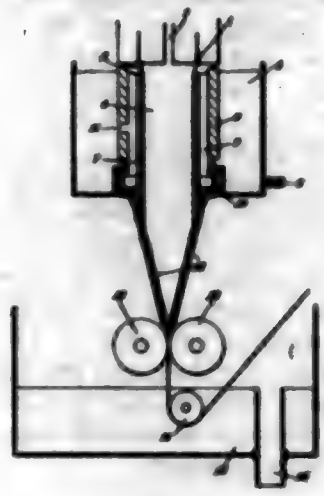
2,863,171
APPARATUS FOR COATING STRANDED CONDUCTORS FOR ELECTRIC CABLES
Edward Peter von Bergen, London, England, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application February 29, 1956, Serial No. 568,658
Claims priority, application Great Britain March 18, 1955
5 Claims. (Cl. 18—13)

1. Apparatus for manufacturing a multi-strand electric cable consisting of a plurality of conductors provided in the interstices therebetween with a barrier of insulating material, comprising a closing die formed with a tapered bore, an extrusion barrel and a passage extending through the wall of said die intermediate the ends



of said tapered bore and connecting said bore with said extrusion barrel.

2,863,172
APPARATUS FOR PRODUCTION OF FILMS
Richard Harold Barclay Bateur, Welwyn Garden City, and Jack Witherington Cornforth, Harpenden, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application July 27, 1954, Serial No. 446,124
Claims priority, application Great Britain July 31, 1953
1 Claim. (Cl. 18—14)



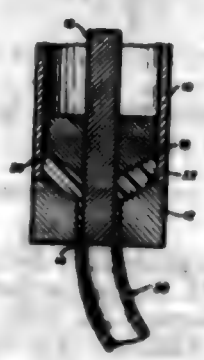
Apparatus for the production of thin walled tubing and tubular film that comprises an extruder adapted to extrude molten organic thermoplastic material through an annular orifice, means for drawing the tubing so extruded downwardly in a substantially vertical direction from the extruder, means for introducing and maintaining a volume of gas within the tubing, means forming a passageway for cooling the tubing and situated between said annular orifice and said drawing means, said last-named means being defined by a first annular wall, means including a second annular wall disposed outwardly of said first wall and defining therewith an annular reservoir for cooling liquid, said second wall being of greater height than said first wall thus providing that cooling liquid retained by said second wall will flow over said first wall and down through said passageway, and an intermediate annular wall of greater height than said first wall and provided between said first and second walls, said intermediate wall defining an annular space with said first wall, and means located below the top of said first wall for establishing communication between said annular space and the rest of said reservoir.

2,863,173
PROCESS FOR CLARIFYING ORIENTED VINYLIDENE CHLORIDE POLYMER FILMS
Carl P. Zapic, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application March 26, 1956
Serial No. 573,590
3 Claims. (Cl. 18—48)

1. A process for clarifying oriented thermoplastic polymer films of a normally crystalline vinylidene chloride polymer having an inherent haze due to the presence

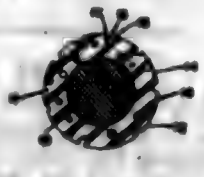
in said film of voids surrounding discrete particles of an incompatible, inert, inorganic compound comprising subjecting said film while under tension sufficient to maintain said orientation to an applied pressure of from 300 to 800 pounds per square inch at a temperature of from 30° to 100° C., thereby to force said polymer into intimate engagement with said particles of said incompatible compound.

2,863,174
PRODUCTION OF PREFORMS AND LONGITUDINALLY CURVED ARTICLES OF POLYTETRAFLUOROETHYLENE RESIN
Paul D. Schumann, Sayreville, and Edward J. Chu, Belleville, N. J., assignors to Resistoflex Corporation, Roselland, N. J., a corporation of New York
Application September 5, 1956, Serial No. 608,135
14 Claims. (Cl. 18—55)



8. The method of producing curved tubing of polytetrafluoroethylene resin having a substantially uniform wall thickness which comprises forming particles of said resin admixed with an extrusion aid into a hollow cylindrical preform having a first percentile concentration of said extrusion aid throughout a longitudinal segment occupying 180° of arc or less and a different percentile concentration of said extrusion aid throughout the remainder of the cylinder, and thereafter forcing said preform in the axial direction through a circular forming die about a mandrel for producing a tubular cross-section so that said segment will extrude at a different rate than said remainder simultaneously through the opening between the mandrel and the die causing the tubular extrude to curve as it leaves the die.

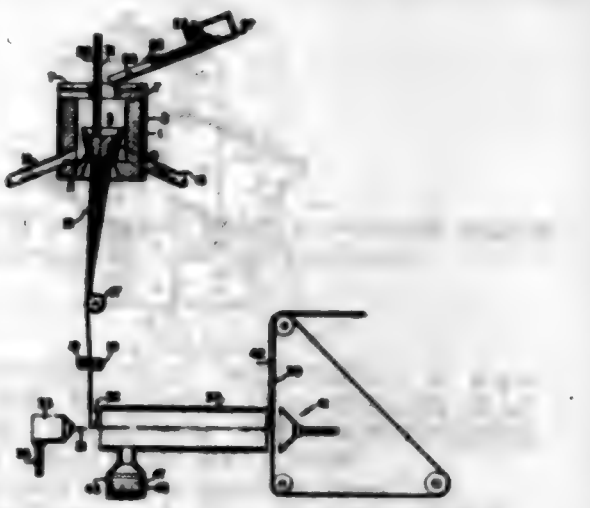
2,863,175
TEXTILE WORKING UNITS
Daniel A. Meyer, Dayton, Ohio, assignor to The Dayton Rubber Company, a corporation of Ohio
Application April 22, 1954, Serial No. 424,810
7 Claims. (Cl. 19—143)



1. A roll of synthetic oil-resistant rubber-like composition containing a plurality of small, smooth-surfaced, hollow, frangible particles interspersed therein.

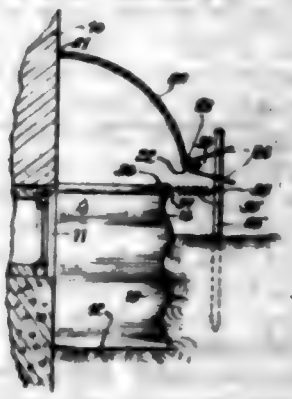
2,863,176
PROCESS OF PRODUCING MATS OF GLASS FIBERS
Dominick Labino, Toledo, Ohio, assignor, by mesne assignments, to L. O. F. Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
Application April 7, 1954, Serial No. 421,524
14 Claims. (Cl. 19—156)

1. The process of producing fibrous mats having substantially fuzz-free surfaces comprising the steps of, providing a gaseous flow stream of suspended siliceous fibers, introducing into said flow stream and into contact with the surfaces of the suspended siliceous fibers the vapors of an inorganic salt which fuses and vaporizes without



decomposition selected from the group of alkali metal halides, alkali metal phosphates, and alkali metal nitrates, and collecting the coated fibers as a mat.

2,863,177
WINDOW WELL HOODS
Raider E. Nelson and Raymond E. Koa, Chicago, Ill.
Application February 4, 1957, Serial No. 637,915
8 Claims. (Cl. 20—1)

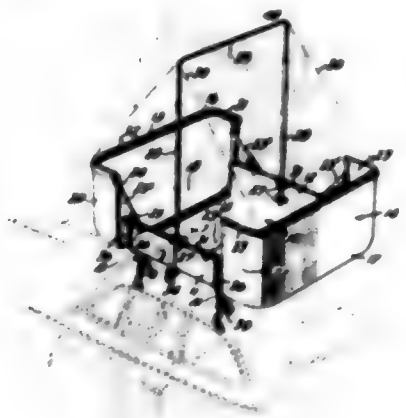


1. A protector for a window well comprising a hood formed with an outward base flange, a series of fixed members surrounding the hood, and elements carried by such members engaging said flange for supporting the hood, said members being stakes partly driven into the ground, said elements being clips perforated for the passage of the upper portions of the stakes, and such clips being adjustable along the stakes to support the hood at a desired height.

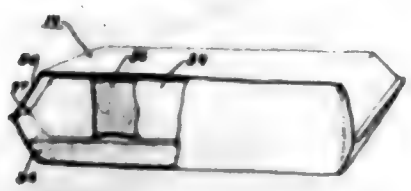
2,863,178
COLLAPSIBLE ROOF-TOP STRUCTURE
Erling M. Hagen, Roseland, N. J., assignor to Roy C. Hopgood, Glen Ridge, N. J.
Application October 26, 1953, Serial No. 388,118
13 Claims. (Cl. 20—2)

12. In a device of the character indicated, a rectangular base with opposed open longitudinal ends, first and second covers hinged to said base along said respective longitudinal ends, each cover including an upper face of substantially half the longitudinal extent of said base and of substantially the full transverse extent of said base, each cover also including a closure face spacing the longitudinal end of each cover from the hinge axis thereof, said closure faces being substantially flush with said base when in open position, side panels for the transverse ends of each cover and rigidly secured to the closure face and to the upper face thereof; whereby when said covers are

in closed position with both upper faces contiguous, said side panels may effectively close the transverse ends of said device, and means for detachably securing the side panels of one of said covers directly to adjacent parts of said base.



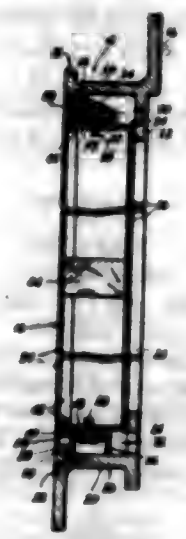
2,863,179
REFRIGERATING APPARATUS
Richard S. Gaugler, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 23, 1955, Serial No. 517,581
5 Claims. (Cl. 20—4)



1. In a refrigerator, an outer wall, an inner wall spaced from said outer wall, insulation between said walls supported by said walls, said insulation comprising flexible bag means snugly engaging said walls, filler material within said bag means having voids therein, and a gas filling said voids, said gas having a coefficient of thermal conductivity less than that of air, said bag means comprising a plastic film having a vapor deposited metallic coating thereon not more than .00001 inch thick forming a barrier to the passage of said gas, air and moisture.

2,863,180
SELF-LOCKING PANEL
Benjamin F. Birdwell, Connersville, Ind., and Will A. Schwalm, St. Louis, Mo.
Application January 30, 1957, Serial No. 637,131
8 Claims. (Cl. 20—4)

1. A panel construction comprising, in combination, a frame having a first planar flange defining an opening and a second planar flange defining an open space of greater area than said opening, said flanges being in spaced parallel relation to each other, a panel having an area greater than that of the opening defined by said first planar flange, yieldable means at the peripheral edge of said panel adapted to occupy at least a portion of the space separating said flanges and extending the overall area of the panel to a size exceeding that of the open space defined by the second planar flange so as to retain the panel closing relation with said opening, resilient compressible means engaging said yieldable means so as to bias the latter into interlocking engagement with said second planar flange, and a seal strip of resilient compressible material interposed between the panel and the first planar flange.



2,863,181
HANGER DOOR
Myrton M. Josephson, Asheville, N. C.
Application February 20, 1956, Serial No. 566,466
3 Claims. (Cl. 20—16)

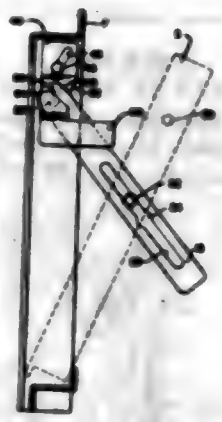
1. An overhead type door comprising a framework of a plurality of spaced vertical ribs on the front side of the door, a plurality of spaced vertical ribs on the rear side of the door, each of said vertical ribs on the rear side occupying the same vertical plane as one of said ribs on the front side, a plurality of spaced horizontal members disposed between said ribs on the front side and said ribs on the rear side and connected thereto, a plurality of shaft receiving members disposed between said ribs on the front side and said ribs on the rear side near the upper part of said framework and connected to said ribs, a horizontal shaft extending throughout the length of the door and excess weight means connected to said door near the upper part of said framework, each of said shaft receiving members being provided with an aperture for said shaft.

2,863,182
VENTILATOR CONSTRUCTIONS
Eldon D. Gaber, Detroit, Mich.
Application March 18, 1957, Serial No. 646,866
1 Claim. (Cl. 20—53)

In a ventilator construction comprising a stationary frame, a movable sash pivotally mounted therein to swing on the lower horizontal edge of the sash as an axis to and from the frame, the improvement which comprises automatically operating latches in the vertical side spaces between the vertical side members of the sash and frame, with such latches having angular mounting slots slanting down and towards the frame, the frame members having pins in such angular mounting slots which cooperate so that the latches slide up and down obliquely in such spaces, down towards and up away from the frame, the latches also having angular latching slots slanting and opening downwardly and towards the sash, the latter having pins on the vertical side sash members positioned to enter such latching slots and be biased to-

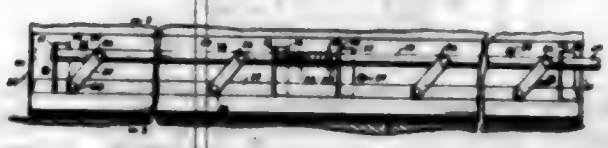
gether into edge-to-edge abutting relation and the lines ing a large clear area for workmen and equipment on

wards the frame when the latches are moved down for latching action, and for retaining the sash in and sealed against the frame, and handles on such latches exposed



to enable the latches to be moved manually down for latching and up for releasing, the mounting slots and the latching slots being at angles to true vertical and to one another to slant oppositely.

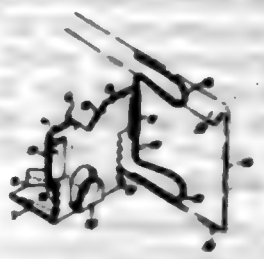
2,863,183
FOUR-IN-ONE DO IT YOURSELF AUTOMATIC DOOR SEAL
Albert Carlson, Brooklyn, N. Y.
Application June 21, 1956, Serial No. 592,840
6 Claims. (Cl. 20—68)



1. In combination with a door, a threshold for said door and a frame to which said door is hinged, a casing mounted on said door adjacent to the threshold end thereof, the lower end of said casing having an elongated opening, a support carrying a sealing element normally spaced apart from the lower end of said casing and movable therein on a vertical plane, a push-rod provided with spring biasing means horizontally disposed within said casing and having one end extending through the end of said casing adjacent to the portion of the frame upon which said door is hinged and adapted to be moved reciprocally therein as the door is being closed or opened, and connecting elements or links between said push-rod and the sealing element support, each link having one end pivotally connected to said push-rod and its other end pivotally connected to said sealing element support, so that as the door is being closed and the extending end of the push-rod engages said frame the sealing element is forced down against said threshold by said links, said spring means consisting of a coil spring encircling the push-rod intermediate of said push-rod so as to balance the downward movement of the sealing member.

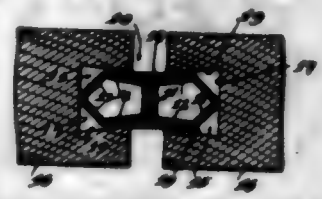
2,863,184
ADJUSTABLE BASE CLIP
John K. Hovind, Williamsville, N. Y., assignor to National Gypsum Company, Buffalo, N. Y., a corporation of Delaware
Application June 7, 1957, Serial No. 664,207
4 Claims. (Cl. 20—74)

1. A base clip for use in wall constructions comprising in combination a generally L-shaped article the first leg of which is arranged for affixing the clip to a floor, the second leg of which has a bent lug and a saw-tooth edge extending downwardly from the lug, and a spring wire clip slidably maintained by the bent lug and adapted to be in compressive engagement with a baseboard to hold the baseboard against the wall, one edge of the



baseboard being engageable with the saw-tooth edge to prevent upward movement of the baseboard.

2,863,185
JOINT CONSTRUCTION INCLUDING A FASTENER FOR SECURING TWO STRUCTURAL MEMBERS TOGETHER IN EDGE-TO-EDGE CLOSELY ABUTTING RELATION
Arnold T. Riedl, Dubuque, Iowa
Application February 16, 1954, Serial No. 410,689
2 Claims. (Cl. 20—92)

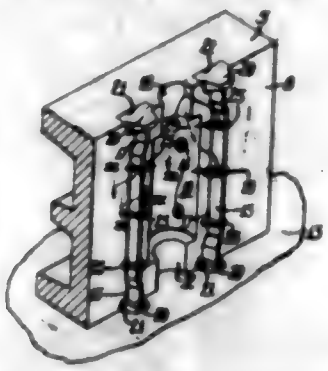


1. A joint construction comprising two structural members secured together in edge-to-edge closely abutting relation, each of said members having along their abutting edges opposed, complemental, aligned, longitudinally-extending slots of dovetailed transverse cross section; and a unitary, double-ended fastener of deformable metal disposed within and extending between said slots, said fastener having its opposite end portions deformed in said slots into locking engagement with the base and side walls of each slot, said fastener being dimensioned in conformity with the dimensions of said slots and comprising a cross member of substantial length and of a width approximately equal to the width of the open mouths of said slots, a first pair of side wall members integral with said cross member at one side thereof, a second pair of side wall members integral with said cross member at the opposite side thereof, each of said side wall members being of a width substantially equal to the depth of the side walls of said slots and the side wall members of each pair extending from the cross member, prior to deformation of the fastener, in spaced, parallel relation to each other and disposed at right angles to said cross member, with the side wall members of one pair in alignment with the corresponding side wall members of the other pair at the opposite side of said cross member, each pair of said side wall members having their edges which are remote from said cross member connected by an end wall member comprising two sections of a combined width substantially equal to the width of the bases of said slots, said two sections having their edges remote from said side wall members integrally joined together and being disposed in angular relation to each other to converge inwardly towards each other with their line of junction disposed beyond the ends of the side wall members of each pair thereof, said cross member, said side wall members and said end wall members defining a pair of hollow shells on opposite sides of said cross member, which hollow shells, prior to deformation of the fastener, are of a width corresponding substantially to the width of the mouths of the slots, the angular relation between said two sections of each of said end wall members, prior to deformation of the fastener, enabling said sections, upon the application of pressure to said lines of junction as the two structural members are progressively forced to-

valve head seats, an annular flange surrounding the lower forated support means whereby said material assumes an

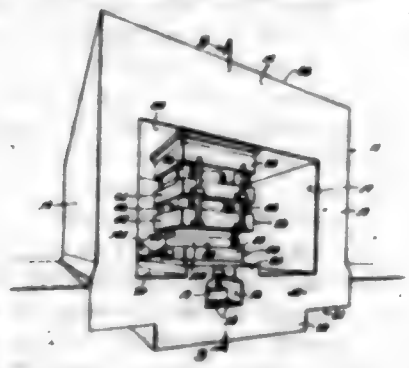
gether into edge-to-edge abutting relation and the lines of junction are forced into contact with the adjacent bases of the slots, to move progressively into aligned position and into flat engagement with the adjacent bases of the slots and to simultaneously spread apart the side wall members of each pair thereof into engagement with the side walls of each slot to thereby lock the fastener in said slots and to secure the structural members in edge-to-edge closely abutting relation.

2,863,186
PREVENTION OF BLOW-BY IN CAVITATED ASSEMBLIES
Richard L. Olson, Chicago, Ill.
Application May 23, 1956, Serial No. 586,738
11 Claims. (Cl. 22—10)



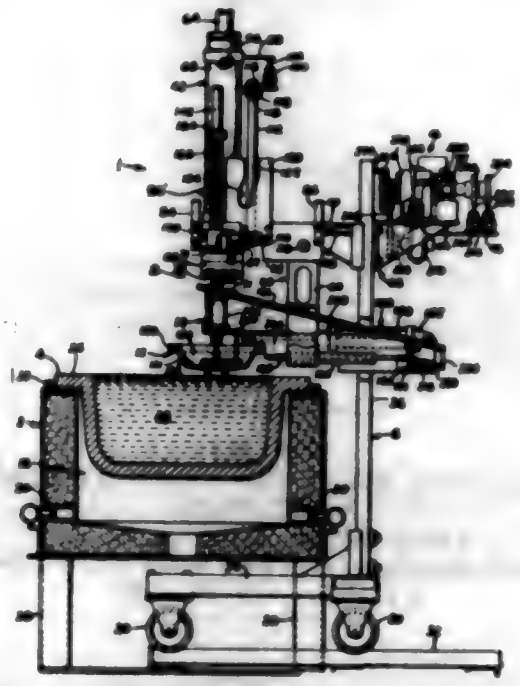
5. In a cavitated assembly including a pair of members for face-to-face abutment with opposed cavity recesses in the members, the opposed faces of the members having blow-by seal grooves therein adjacent the cavity recesses and with the opposed grooves defining a seal chamber, said grooves having lateral pocket-like matching recesses therefrom, and an elastic seal filling said grooves and said lateral recesses, with that portion of the seal in said lateral recesses providing a barrier fin projecting integrally laterally therefrom for interrupting longitudinal travel of pressure fluid along the seal.

2,863,187
DIE CASTING MACHINE
Charles A. Van Dusen and Joseph Jacquet, Escondido, Calif., assignors to Van Dusen Engineering Company, Escondido, Calif., a co-partnership
Application May 31, 1956, Serial No. 588,422
14 Claims. (Cl. 22—68)



1. In a die casting machine, a frame having a base, side walls and a top slab, said top slab being a substantially monolithic structural mass, said frame defining an opening; an upper machine component including an upper platen carried by said top slab; a lower machine component including a lower platen on said base; means on said lower platen for supporting a die; means for injecting molten metal into a die supported on said lower platen; means for relatively reciprocating said platens toward and away from each other; the size of said machine components being considerably less than the area of said base to thus establish a wide throat machine having a large clear area for workmen and equipment on all sides of said components within said frame, and the weight of said top slab and upper component exceeding the total force capabilities of said relative reciprocation means.

2,863,188
METHOD AND MEANS FOR CASTING SLUGS
George Harrison, Chicago, Ill.
Application November 23, 1953, Serial No. 393,537
17 Claims. (Cl. 22—73)



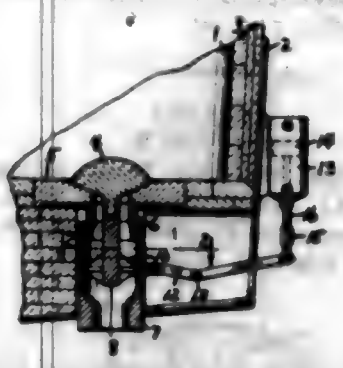
1. Casting apparatus comprising a die assembly having separable upper and lower die elements adapted, when brought together into confronting relation, to define a mold cavity which conforms in shape to the article to be cast, means for supporting said die assembly above an open top container which holds a body of molten material to be cast, said lower die element being an open top, dish-shaped element with a flat bottom and upstanding side walls and having at least one aperture extending through the bottom thereof forming a mold cavity entry-way, said upper die element having a mold cavity portion open at the bottom and shaped to enable the ready removal of the article to be cast through the open bottom thereof, means for moving said upper die element into engagement with said lower die element with the open bottom of said upper die element abutting the bottom of said lower die element, with said entry-way communicating therewith, and for depressing said lower die element into the molten material in the container with the top of the side walls thereof being above the level of the molten material in the container, said last-mentioned means being adapted to move said upper die element out of engagement with said lower die element following the solidification of the molten material in said mold cavity, means for moving one of said die elements laterally with respect to the other to shear the slug in said entry-way from the remainder of the casting, means for retaining the solid casting in said upper die element following the separation of the upper and lower die elements, and means for removing the casting from the open bottom of the upper die element.

2,863,189
LADLE NOZZLE CONSTRUCTION
Harold S. Beck, Granite City, Ill.
Application February 3, 1958, Serial No. 712,986
1 Claim. (Cl. 22—85)

A ladle nozzle construction consisting of a stopper valve head, a seat of tamped fire clay against which said

the improvement which comprises: an annular rabbet being substantially longer than the other leg, said one leg

valve head seats, an annular flange surrounding the lower portion of said valve head and provided with a central opening through which said lower portion projects, a post member threadably disposed upon said valve head



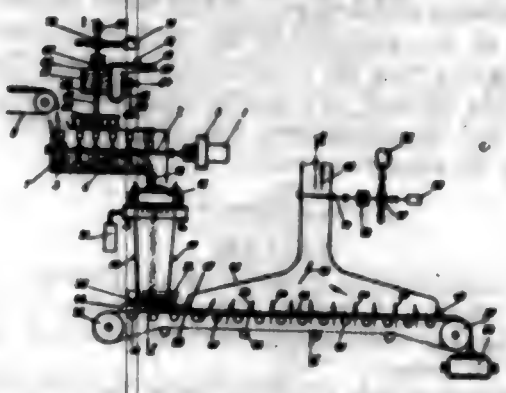
and provided with vanes, a sleeve member integral with said vanes and post member, and a cylinder and power piston assembly to actuate movement of said valve head and sleeve with respect to said seat.

2,863,190

METHOD AND MEANS FOR COOLING GRANULAR MASSES CONTAINING EVAPORABLE LIQUID

Erwin Bührer, Schaffhausen, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland, a Swiss company

Application January 24, 1955, Serial No. 483,703
Claims priority, application Switzerland October 20, 1954
22 Claims. (Cl. 22—89)



1. In a plant for conditioning molding sand and like granular material preparatory to molding operations; means for agitating said material to thereby mix the latter to assume a relatively loose state of compaction, means communicating with said agitating means for uniformly and evenly distributing said material when received from said first mentioned means, supporting means provided with perforations and positioned below said distributing means for receiving said material therefrom, means for directing compressed air through said perforations and through said material from therebelow while resting on said supporting means, whereby said material is aerated prior to its delivery to a mold, said distributing means including spaced apart funnel-shaped tube means, weighing means for said material and positioned intermediate said agitating means and said tube means, and control means cooperable with said weighing means for regulating the quantity of material to be released by said distributing means.

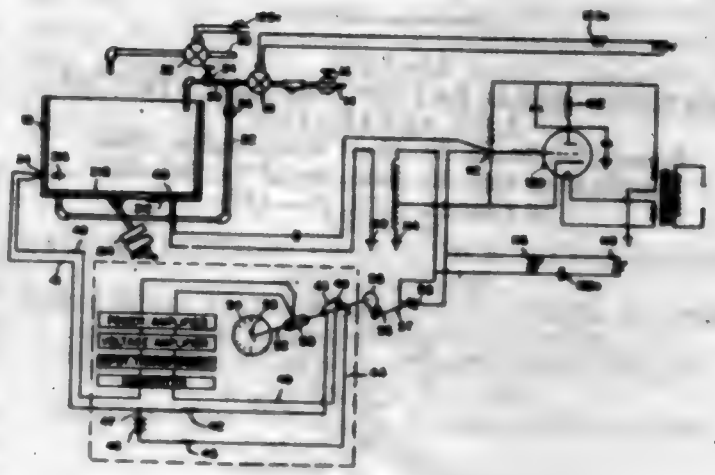
22. The process of continuously preparing molding sand and like granular material for foundry use; comprising the steps of delivering said material in a relatively loose state to one location, subjecting the material at said one location to mixing action with fluid spray, continuously weighing said material for regulating supply of said fluid spray proportional to the quantity of said material, to thereby condition the material prior to arrival at another station, thereafter substantially evenly and uniformly distributing said material from said other station onto perforated support means whereby said material assumes on the latter layer formation of equal height throughout, forcing sufficient air from below said support means and said material positioned thereon so that the latter remains substantially stationary on said support means, and then exhausting said air upon penetration of said material substantially without removing any solid constituents from said material.

2,863,191

SAND CONDITIONING EQUIPMENT

Harry W. Dietert and Randolph L. Dietert, Detroit, Mich., assignors to Harry W. Dietert Company, Detroit, Mich., a corporation of Michigan

Application October 1, 1956, Serial No. 613,075
8 Claims. (Cl. 22—69)



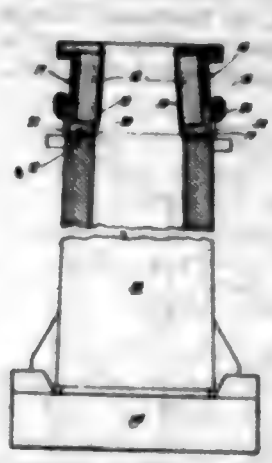
1. Tempering equipment for granular material comprising a container for said material, moisture sensitive means at an inner wall of said container, means for measuring the temperature of material in the container, means for adding water to the material in the container, means for periodically compressing a moist specimen of material against said moisture sensitive means, means operable between successive specimen comprising operations to remove the compressed specimen from said moisture sensitive means, and control means responsive to the temperature and moisture content of the material for controlling the means for adding water to the material.

2,863,192

HOT TOP AND MOULD ASSEMBLY

Edmund J. Kaufman, Sr., Girard, Ohio, assignor to Valley Mould and Iron Corporation, Hubbard, Ohio, a corporation of New York

Application December 30, 1954, Serial No. 478,848
13 Claims. (Cl. 22—147)

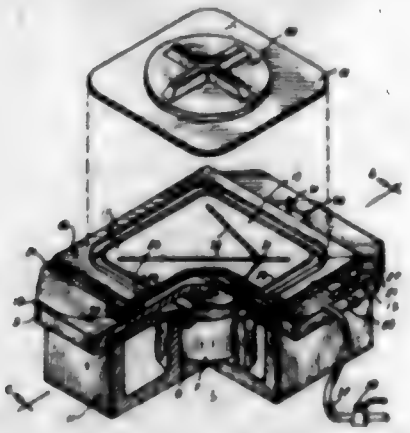


1. In a superimposed-type hot top for ingot moulds, in which the hot top has a hollow metal shell provided at the bottom with an inwardly-extending annular flange, the shell being lined with refractory above the flange;

2,863,197

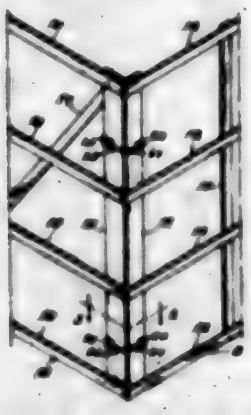
the improvement which comprises: an annular rabbet at the inner lower corner of the inwardly-extending flange, and an annular gasket positioned in the rabbet and composed at least in part of material which disintegrates when subjected to the heat of the poured ingot, the gasket extending below the bottom surface of the flange and initially having sufficient compressive strength to support the hot top on an ingot mould with the bottom surface of said flange in spaced relation to the mould, and the durability of the gasket under the influence of the heat of the poured ingot being coordinated with the rate of skin formation on the ingot whereby, upon formation of the skin on the ingot, the heat of the ingot saps the hot-top-supporting strength of the gasket, thereby allowing the hot top to descend towards the mould as the ingot solidifies.

2,863,193
CASTING-MOLD PATTERN-BOARD FIXTURE AND APPARATUS
Francis Le Baron, Jr., West Bridgewater, Mass.
Application May 22, 1956, Serial No. 586,585
18 Claims. (Cl. 22—157)



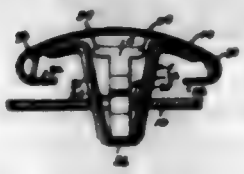
5. A casting-mold pattern-board fixture comprising a base, a frame substantially L-shaped in transverse cross-section disposed upon and peripherally bounding the base with the included angle of the L facing inward of the base to define an air space in which a pattern board may be received with the peripheral edges of the pattern board resting adjacent the vertex of the said included angle, aperture means communicating between the air space and a point external to the base and frame, and means operable at the external point for applying suction to the air space through the aperture means.

2,863,194
CRATE ASSEMBLY CLIP
George E. W. Benson, Chicago, Ill.
Application June 30, 1954, Serial No. 440,429
8 Claims. (Cl. 24—73)



1. A crate assembly clip comprising a generally U-shaped member of rigid stock, one leg of said member being substantially longer than the other leg, said one leg having a central aperture spaced inwardly from the free end, the portion of said one leg between the aperture and the free end of the leg being outwardly offset, the stock displaced to form said aperture being disposed on the outward face of said offset portion.

2,863,195
FASTENER
Edwin F. Elms, Roseville, Mich., assignor to Robert L. Brown, Ferndale, Mich.
Application December 22, 1955, Serial No. 554,776
2 Claims. (Cl. 24—73)

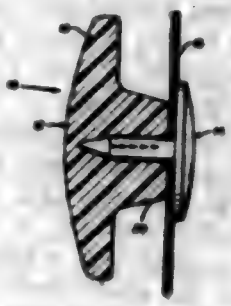


1. A spring steel metal fastener for reception in a supporting panel comprising, a four sided connecting portion, legs arranged at each of the sides of said connecting portion, said legs extending upwardly from said connecting portion, one pair of oppositely disposed legs having outwardly extending V shaped projections formed intermediate their length, outwardly extending flanges in the plane of said legs and at the outer free ends of said legs, the other pair of oppositely disposed legs having outwardly extending molding engaging portions of a width to be on opposite sides of said V are in engagement with the received between said first pair of legs when the side faces side edges of the aperture in the supporting panel, but greater in width than the distance between said flanges at the free ends of said first named legs when the apexes of said V are in engagement with the side edges of the aperture in the supporting panel.

2,863,196
ADJUSTABLE BELT FASTENER
Stuart T. Shears, Belmont, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application July 12, 1956, Serial No. 597,555
1 Claim. (Cl. 24—73)

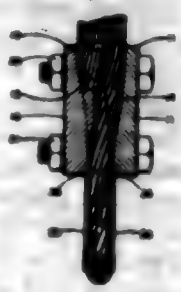
A clasp of the type described comprising a strip of springy material having a large substantially annular fold to form a pair of arms pivotable toward and away from each other about said large substantially annular fold, one of said arms being longer than the other, said longer arm being bowed inwardly and the said arm, adjacent its free end, being bent back toward the large annular fold and terminating in a forwardly rolled end, said bent back part defining a resilient bight, said shorter arm having its free end portion curled inwardly, said curled end portion adapted to snugly fit within and have substantial surface contact with said bight portion, whereby the curled end of the shorter arm may be held under the rolled end of the longer arm to releasably interlock therewith, the shorter arm having a pair of flanges along its opposite edges, respectively, said flanges extending obliquely towards the longer arm, and extending in the interlocked position of the arms, beyond the corresponding edges of the longer arm, and co-acting with said edges to effect a snubbing action upon a fabric strap clasped between the arms, the flanges of the shorter arm and the bowed central portion of the longer arm being adapted to clamp a fabric strap tightly therebetween.

2,863,197
AUTOMATIC PLASTIC BUTTON ATTACHMENT
Noel Statham, New Canaan, Conn.
Application November 8, 1956, Serial No. 621,179
2 Claims. (Cl. 24—90)



1. A button comprising, in combination, a body of deformable plastic material including a head, a neck unitary with the head, which terminates in a flat face at the end remote from the head, and a flat-headed metallic fastener having a barbed shank driven through the neck and into the head and retained therein by a ratchet effect exerted by the barbs, said neck being formed with a diametrical cross-bore of substantially larger diameter than the fastener shank, said bore serving to accommodate the burred plastic displaced by the driving in of the fastener shank, and to permit a portion, at least, of the barbs to spring outward to an unstrained condition in which they overlie marginal portions surrounding the passage through which they entered the button body.

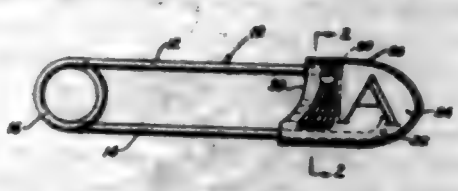
2,863,198
CABLE CLAMP
Herbert E. White, Cleveland Heights, Ohio
Application July 15, 1954, Serial No. 443,471
8 Claims. (Cl. 24—123)



8. A cable clamp for the doubled back end of a single cable comprising in combination, two substantially identical plates each having a cable groove in one major face extending from one edge to another so that when the two plates are assembled with said grooved faces thereof in face-to-face relationship, two grooves are formed which grooves are adapted to receive two portions of said cable to be clamped, said two grooves terminating at one edge of said plates at spaced apart locations, and each of said plates having one half of a thimble receiving and supporting socket located between said spaced apart groove termination locations whereby a looped end of said cable outside of said clamp may pass around a thimble the spaced apart ends of which are received and supported in the said socket, and means securing said two plates together to clamp said thimble and said cable portions with said thimble positoning the cable portions to lie in said grooves.

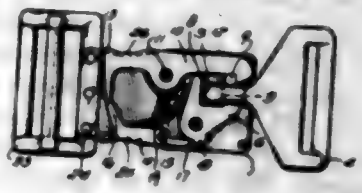
2,863,199
SAFETY PIN
Emile Schoenmehr, Howard, R. I.
Application August 31, 1956, Serial No. 607,350
3 Claims. (Cl. 24—156)

1. A safety pin comprising straight front and back legs having forward and rearward ends, a resilient helix spacing and connecting the rearward ends of the legs and urging the legs away from each other, said front leg having a point on its forward end, a head having opposite sides and front and back longitudinal edges and a rearward end, the forward end of the back leg being secured in the head along and near said back edge, a retaining slot in the head on the point of the front leg opening through said rearward end of the head, said slot



comprising a long straight portion close to and paralleling one side of the head and opening at one end through said front edge of the head, the other end of said straight portion continuing in a laterally inwardly directed reverse bend arcuate portion, said slot further comprising a pocket portion located in the central plane of the head, into which said arcuate portion opens.

2,863,200
LATCH EJECTION TYPE, QUICK ATTACHMENT AND RELEASE
Joshua Miller, Drexel Hill, Robert B. Cadman, Jr., Philadelphia, and Adolph J. Borowski, Colwyn, Pa.
Application September 14, 1954, Serial No. 456,087
1 Claim. (Cl. 24—230)
(Granted under Title 35, U. S. Code (1952), sec. 266)



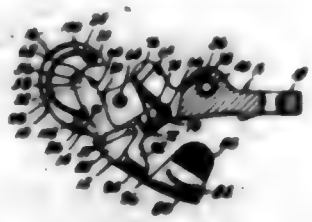
An ejection type latch device comprising a body member, said body member having a slot disposed therein into which an apertured load engaging link is adapted to be positioned; a U-shaped latch pivoted on said body member such that one leg passes through the apertured link when the latch device occupies its latched position; a first latch operating lever pivoted on said body member, said first lever having an L-shaped extension adjacent one extremity thereof adapted to engage one leg of the latch in its latched position, said first lever also having a right-angle extension adjacent the other extremity thereof; spring means mounted on the body member engaging the latch and biasing it toward its unlatched position; a second latch operating lever pivoted on said body member, one extremity of the said second lever being constructed to engage the right-angle extension of the first lever when the latch occupies its latched position and no other portion of the said first lever at any time; a lug disposed on the latch for engagement with the other extremity of the second lever when the latch occupies its latched position and for delaying return of the second lever to its latched position during a latching operation; and spring means mounted on the body member engaging the first and second levers biasing them toward their latched positions.

2,863,201
EJECTOR SNAP HOOK
Wilbur J. Craven, East Hartford, and Alden Y. Warner, Farmington, Conn., assignors to The Capewell Manufacturing Company, Hartford, Conn., a Connecticut corporation
Application July 7, 1953, Serial No. 366,483
8 Claims. (Cl. 24—233)

1. An ejector snap hook comprising a body member provided at one end with means for attachment to a

said path, and power means for selectively propelling

harness and the like and at the other end with a hook comprising a shank and a curved nose, an elongated handle pivotally connected to the shank at a locus approximately opposite the end of the nose and movable between a first position alongside said shank and a second angularly related position, and an ejector extending from



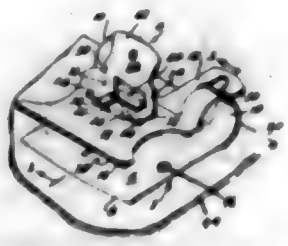
the handle and movable therewith to eject an element received in said hook during pivoting of the handle out of said first position and relative to the body member, said ejector being disposed in registry with said nose in the first position of said handle and extending between the end of the nose and the shank in the second position of the handle.

2,863,202

PAPER CLAMP OR THE LIKE

Atto N. Hamm, Atlantic Highlands, N. J.

Application October 21, 1957, Serial No. 691,290
8 Claims. (Cl. 24—258)



1. A paper clamp comprising a base, a clamping member positioned above said base, movable between positions relatively close to and remote from said base, and connected to said base by a resilient arm biasing it to its position remote from said base, said clamping member having an opening spaced rearwardly from the forward edge thereof, said base having a finger extending up therefrom through said opening, said finger comprising a loop above said clamping member, and an operating element articulately mounted on said finger above said clamping member, operatively connected to said clamping member and effective when moved to cause said clamping member to move from one position thereof to the other, said operating element comprising a part rotatably received within said loop, an actuating portion extending from said part into engagement with said clamping member, and a manually graspable portion extending from said part at an angle to said actuating portion.

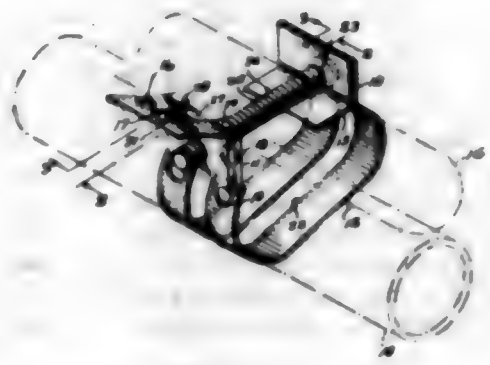
2,863,283

CLAMP

Albert J. Dalpiaz, Dennison, Ohio

Application November 18, 1955, Serial No. 547,697
1 Claim. (Cl. 24—279)

A clamp for affixing a pair of members in side by side relation comprising a vertically-disposed rigid arm, a vertically-disposed resilient arm arranged in spaced relation with respect to said rigid arm, a resilient strap connecting the lower ends of said arms together, a shelf projecting inwardly of said rigid arm and fixedly secured to the lower end of the latter, said strap being adapted to embracingly engage a pair of members arranged in side by side relation with said rigid shelf resting upon one of said members and with the portion of said strap adjacent the resilient arm resting upon the other of said members, said resilient arm having a plurality of pairs of openings extending in spaced relation from the upper end thereof to a point adjacent the lower end thereof, the openings of each of said pairs of openings being spaced from each other and positioned transversely of said resilient arm, there being a slot having a closed end and an open end extending longitudinally of said resilient arm with the closed end positioned inwardly of the upper end of said resilient arm and another slot having a closed end and an open end extending longitudinally of said strap with the closed end adjacent said rigid arm, the open ends of said slots being connected together, a fastening element including a threaded shank and a head on one end thereof positioned so that the shank rests upon said rigid shelf and extends through said rigid arm with the head bearing



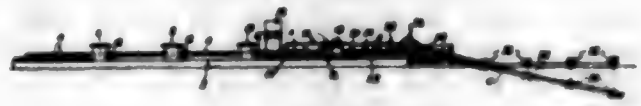
against the exterior face of said rigid arm, the portion of the shank adjacent the other end extending slidably through the slot in said resilient arm, a vertically-disposed nut positioned exteriorly of and bearing against the exterior face of said resilient arm and having its lower end bearing against the adjacent portion of said strap, said nut being threadedly secured to said shank portion, a pair of lugs arranged in spaced relation projecting perpendicularly from the upper end of said nut, said resilient arm having a portion adjacent its upper end bent outwardly along a line extending transversely of said resilient arm adjacent to and inwardly of a selected one pair of said pairs of openings to form a second shelf with said lugs receivably engaged in said one pair of openings for locking said nut to said resilient arm.

2,863,284

PIPE COATING METHOD AND APPARATUS

Patrick H. Timothy, New Orleans, La., and Clarence W. Shaw, Picayune, Miss., assignors, by mesne assignments, to Southern Natural Gas Company, Birmingham, Ala., a corporation of Delaware

Application March 8, 1955, Serial No. 492,931
34 Claims. (Cl. 25—38)



1. Apparatus for coating continuous longitudinally immovable pipe, comprising: a vehicle adapted to be moved over a supporting medium in the direction of length of said pipe, means on said vehicle for supporting a portion of said continuous pipe thereover, a carriage movable along a fixed path on said vehicle in said direction and adjacent said pipe, coating means on said carriage arranged to surround said pipe and apply a protective coating thereto as said carriage moves along

2,863,285

thereof and a blade mounted therein for adjustment ra-

said path, and power means for selectively propelling said carriage along said path.

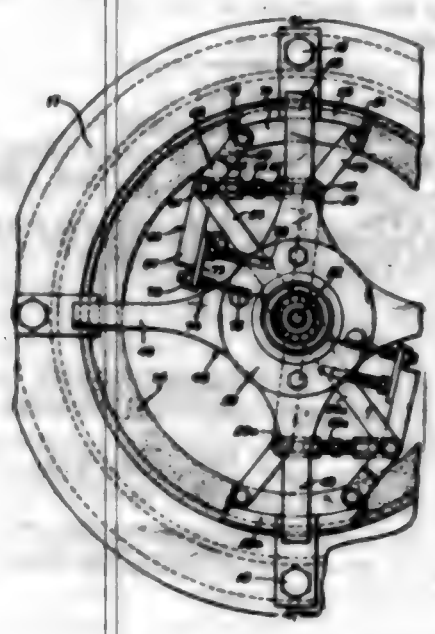
29. A method of coating pipe with a thick coating of heavy mastic comprising, the steps of; maintaining a body of mastic material under slight and substantially uniform pressure around said pipe, causing said pressure to extrude a thick concentric layer of said material around said pipe while relatively moving said body and said pipe in the direction of length of said pipe, and varying the rate of said relative movement between said body and said pipe in accordance with changes in the flow characteristics of said material, by increasing or decreasing said rate as the fluidity of said material respectively increases or decreases whereby said substantially uniform pressure extrudes a layer of substantially uniform thickness on said pipe.

2,863,205

APPARATUS FOR FORMING CONCRETE PIPES

Francis Eugene Seaman, Wharton, and Rudolf C. Gottschalk, Dover, N. J., assignors to Lock Joint Pipe Company, East Orange, N. J., a corporation of New Jersey

Application August 6, 1953, Serial No. 372,742
2 Claims. (Cl. 25—39)



1. In apparatus for forming the interior of a bell of a concrete pipe, a pipe mould, means for finishing the face of a circular recess at one end of the main body of a concrete pipe contained in said mould to form a joint socket having a mean diameter greater than the diameter of the bore of said pipe, said finishing means comprising a shoe having an outer finishing surface shaped laterally to conform to the contour desired for the interior surface of said bell, means for moving said shoe over said surface in a plane normal to the axis of said mould, said means including a rotatable shaft, means supporting said shaft at the axis of said mould, an arm fixed to said shaft, a second arm loosely mounted on said shaft and angularly disposed with respect to said fixed arm, means connecting said fixed and loosely mounted arms, a link connecting said fixed arm to the toe of said shoe, a link connecting said loose arm to the heel of said shoe, and resilient means for pivoting said shoe and said links for pressing said shoe against said surface of revolution, said last-named means including a member connected to and movable with one of said links and a spring connecting between said member and one of said arms.

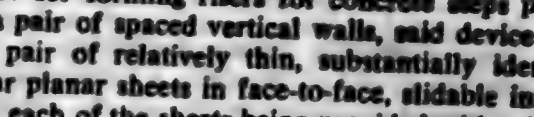
2,863,206

APPARATUS FOR PRESTRESSING REINFORCING WIRES FOR REINFORCED CONCRETE PARTS IN MASS PRODUCTION

Ignatz Adolf Kirchner, Vienna, Austria

Application March 11, 1953, Serial No. 341,712
Claims priority, application Austria August 27, 1952
4 Claims. (Cl. 25—118)

4. A device for pretensioning reinforcing wires for incorporation in concrete means to be poured in a row, which comprises in combination: a stationarily mounted wire support provided with means arranged to allow the passing of wires therethrough for incorporation in said concrete means; a movable wire support arranged to move from said stationarily mounted wire support along said row over a distance nearly equalling the length of said row, a first plurality of rotatable holding means associated with said stationarily mounted wire support and arranged respectively to be passed around by said wires, a second plurality of rotatable holding means associated with said movable wire support and arranged respectively to be passed around by said wires, arresting means ar-



ranged for cooperation with said first and second plurality of rotatable holding means for arresting the same in their respective positions, means for further spacing said movable wire support from said stationary wire support to thereby effect pretensioning of said wires, said rotatable holding means being provided with an axial bore and with passages extending from said axial bore toward the outside of said rotatable holding means, each of said rotatable holding means comprising a member movably mounted in said axial bore and movable relative to said rotatable holding means for selectively firmly holding wires passing through said passages.

2,863,207

DEVICE FOR FORMING RISERS FOR CONCRETE STEPS

Harold W. Davis, Hickman Mills, and Orville H. Meritz, Liberty, Mo.

Application May 31, 1955, Serial No. 512,287
1 Claim. (Cl. 25—118)

A device for forming risers for concrete steps poured between a pair of spaced vertical walls, said device comprising a pair of relatively thin, substantially identical, rectangular planar sheets in face-to-face, slidable interengagement, each of the sheets being provided with a lateral extension on its outermost end and extending throughout the length of said end to thereby present normally vertical, outwardly facing, rectangular surfaces disposed perpendicularly to said sheets; a rectangular, resilient pad secured to each of said surfaces respectively and coextensive in length therewith in substantially covering relationship to the same; an elongated tube secured longitudinally on each sheet respectively and disposed on a common longitudinal line substantially intermediate the longitudinal edges of the sheets; a bolt rotatable in the tubes; a nut secured to one of the tubes therewithin in mesh with the bolt; spaced bearings within the other tube for rotatably supporting the bolt; outwardly extending heads secured to the bolt and disposed for holding the bolt against longitudinal movement in said other tube; and wrench-receiving flats on the bolt and disposed intermediate the tubes whereby, when the bolt is rotated by a wrench in one direction the sheets may be extended into the resilient pads to tightly clamp the device between said walls.

2,863,212

APPARATUS FOR ASSEMBLY OF CUSHIONING

bases of the triangles defining edges for receiving and supporting the cutting edges of a razor blade, the apex

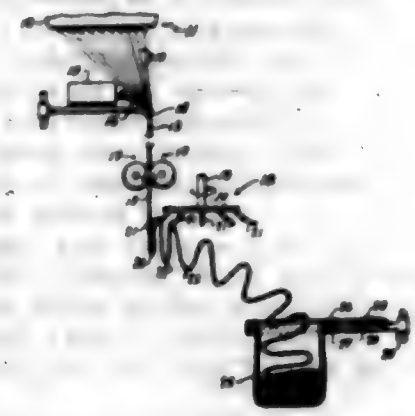
by side relation with said rigid shelf resting upon one of said members and with the portion of said strap adja-

carriage arranged to surround said pipe and apply a protective coating thereto as said carriage moves along

2,863,208
METHOD FOR PACKAGING A CONTINUOUS STRAND

Warren Wendell Drummond, Anderson, S. C., and William R. Seitz, Hebron, Ohio, assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

Application December 29, 1953, Serial No. 400,932
2 Claims. (Cl. 28—72)



1. A method for accumulating a mass of a continuous flexible strand that comprises feeding said strand longitudinally along a substantially linear path, interrupting the longitudinal movement of said strand by laterally displacing progressively spaced portions of said strand while continuing the feeding of said strand along such path beyond the point of displacement thereby forming serially connected loops, moving said serially connected loops along a new path and depositing said loops in substantially the order of their formation in a fluid permeable, fabric container having a diameter substantially equal to the maximum dimension of one of said loops.

2,863,209
BORE CALIBRATING STAMP

Karl Klopfer, Wil, St. Gallen, Switzerland, assignor to K. Klopfer A.-G. Werkzeug- und Maschinenfabrik, Bronschhofen, St. Gallen, Switzerland

Application April 19, 1955, Serial No. 502,361
Claims priority, application Switzerland April 28, 1954
2 Claims. (Cl. 29—90)

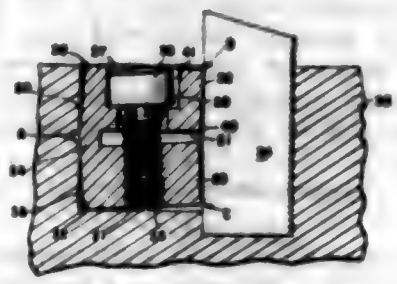
1. A bore calibrating stamp comprising a shaft, a cutting head on an end of the shaft, a cylindrical calibrating face arranged circumferentially on the cutting head, a tapered annular face adjacent one end of the calibrating face, a corrugated cutting edge situated intermediate the said cylindrical calibrating face and said tapered annular face, a second tapered annular face adjacent the other end of the calibrating face, and a circular cutting edge situated intermediate the said cylindrical calibrating face and said second tapered annular face, said corrugated cutting edge and said circular cutting edge being respectively effective upon movement of the stamp into and out of the bore for cutting and smoothing action.

2,863,210
LOCKING DEVICES

Charles D. Tucker, Cochranton, Pa., assignor to McCrosky Tool Corporation, Meadville, Pa., a corporation of Pennsylvania

Application July 30, 1952, Serial No. 301,636
2 Claims. (Cl. 29—105)

1. The combination with a cylindrical tool body having a recess extending inwardly from the periphery thereof and a blade mounted therein for adjustment radially of the tool body; of a blade locking device comprising a resilient metallic block fitted endwise into said recess between said blade and a wall of said recess, said block having a deep slot located between its ends in a plane transversely of said direction of adjustment to form a pair of spaced superposed integrally joined lever arms, and means carried by said arms and adapted to cause relative movement between said arms for moving the free

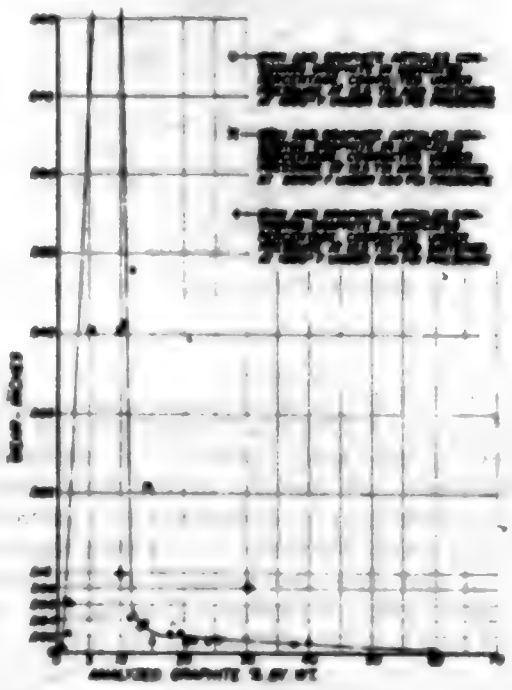


ends of the arms in substantially arcuate paths extending in the general direction in which the blade is adjustable, whereby said block is expanded to cause at least one edge of the free end of each arm and an opposite portion of the block to wedge between said wall of said recess and said blade with substantially line contacts to lock the blade in the tool body, said line contacts extending in a direction normal to the direction of adjustment of the blade in the tool body.

2,863,211
FRICTION ASSEMBLY

Samuel K. Wellman, Cleveland Heights, Ohio, assignor to The S. K. Wellman Company, Bedford, Ohio, a corporation of Ohio

Application November 29, 1955, Serial No. 549,727
3 Claims. (Cl. 29—182.3)

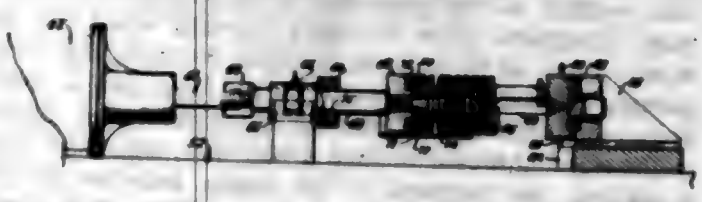


1. A brake friction member comprising a metal backing and a friction facing, said facing consisting essentially of about 80 percent by weight of iron powder forming a substantially continuous sintered iron network, and the balance being substantially all graphite particles disposed in said network to generate and maintain a substantially continuous graphitic film on a friction surface of said facing upon rubbing contact with another surface under a pressure of more than about 30 pounds per square inch, said film being generated and maintained by the comminution and smearing of the graphite particles progressively exposed on said friction surface.

tween said member and one of said arms.

said walls.

2,863,212
APPARATUS FOR ASSEMBLY OF CUSHIONING DEVICES
Bertil E. Peterson, Chicago, Ill., assignor to Cardwell Westinghouse Company, a corporation of Delaware
Application October 19, 1954, Serial No. 463,163
1 Claim. (Cl. 29—227)

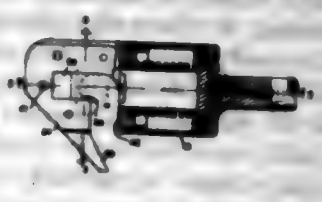


Compression apparatus for assembling a cushioning unit of the type which includes a system of friction devices enclosed within a coil spring and which, when the unit is compressed by applying closing pressures to both ends thereof, develops lateral friction forces against the internal surface of said spring, said unit including a friction post and a pair of friction members longitudinally spaced therefrom, said post and friction members having shoulders interengaging within said spring to limit longitudinal separation of the friction post and friction members while under the expansive force of the spring, said apparatus comprising opposed spaced apart supports, a cradle extending between said supports, said cradle including an arcuate carrier adapted for lateral supporting engagement with the external surface of said spring intermediately along the length of the spring, and a generally U-shaped yoke having a base and arms at the opposite sides of said base and extending generally endwise between said supports, said arms having cooperating abutments intermediately therealong and facing said base, said abutments being adapted for seating engagement with one end of said spring, the support means adjacent said base including a rod rotatably supporting said base and extending therethrough for endwise slidable movement relative thereto, a head member within said yoke and rotatably mounted on said rod and adapted for engagement with the other end of said spring while said post is in place therein, a bearing mounted on the other of said supports for rotation about the axis of said rod and fixed to said arms at the free ends thereof, with the portions of said arms between said abutments and said bearing establishing a clearance space endwise of said one end of said spring for accommodating application of said friction members through said one end of said spring, and means engageable with at least one of said supports for varying the endwise spacing of said rod and said bearing to compress said spring.

2,863,213
MULTI-EDGE RAZOR BLADE HAVING VARIOUS SHAPES AND SIZES OF CUTTING EDGES
Albert J. Rypyst, Chicopee, Mass.
Application January 31, 1957, Serial No. 637,453
1 Claim. (Cl. 30—74.1)

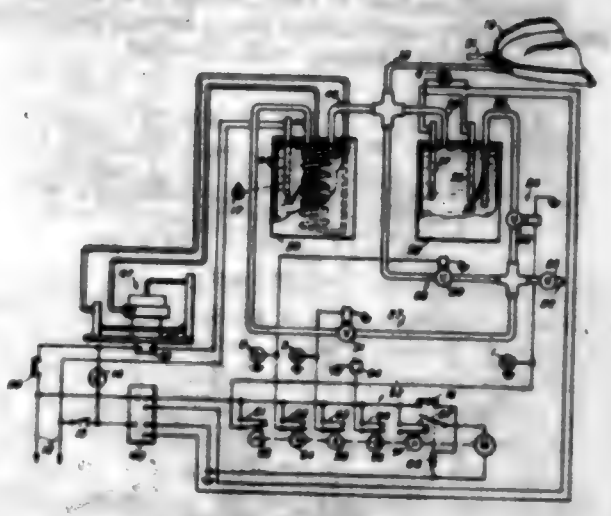
In a razor assembly, a handle having a reduced screw portion formed on the outermost end thereof, a blade support defined by three relatively large inclined surfaces and a relatively small inclined surface, the small inclined surface positioned between two of said large inclined surfaces, and adapted to enter shaving areas that are inaccessible to the large inclined surfaces, each of said inclined surfaces having a triangular configuration, the bases of the triangles defining edges for receiving and supporting the cutting edges of a razor blade, the apices of said triangles terminating at an opening, said screw portion extending through said opening for mounting said blade support on said handle, a cap having a configuration similar to said blade support and including three relatively large triangularly shaped inclined surfaces, and a relatively small triangularly shaped inclined surface, the bases of said cap inclined surfaces terminating adjacent said blade support edges and the apices of said cap inclined surfaces terminating at an apex that defines the outermost end of said razor assembly, an internally threaded projection formed on the underside of said cap for receiving said reduced screw portion therein, said blade support secured between said cap and handle and cooperating with said cap to secure a flat blade therebetween, said blade adapted to be bent from its flat position to correspond to the inclined surfaces of said blade support as said screw portion is tightened in said projection.

2,863,214
WIRE CUTTER
Alexander Szappanyos, Detroit, Mich., assignor to The Detroit Edison Company, Detroit, Mich., a corporation of New York
Application June 11, 1956, Serial No. 590,463
21 Claims. (Cl. 30—131)



1. An insulated wire cutter for cutting high voltage wires comprising a cutter head including a rigid element engageable over a wire, a movable element movable toward said rigid element to cut the wire, an elongated handle of insulating material, a container for gas under pressure carried at the end of said handle remote from said head, a piston and cylinder device connected to said movable element, a passage connecting said piston and cylinder device to said container, and valve means for controlling said passage.

2,863,215
HYDROCOLLOID IMPRESSION COOLER
Albert K. Lane, Palm Springs, Calif.
Application February 11, 1957, Serial No. 639,398
6 Claims. (Cl. 32—17)



3. A hydrocolloid impression cooler comprising at least two paths for circulating cooling fluids of various temperatures through an impression tray having a soft pliable impression material therein, means for sequen-

2,863,219
LINE SIGHTING AND LEVELING DEVICE

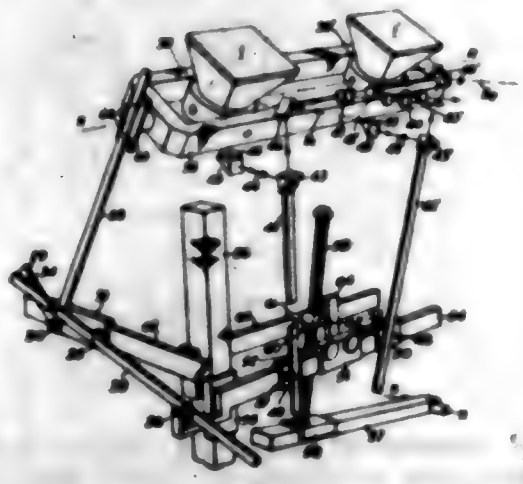
the distance scale to total a given circumference figure,

tially connecting said paths to said tray for circulating fluid therethrough from paths of highest temperature successively to paths of lowest temperature thereby gradually cooling said material to a cool hardened state.

2,863,216
BITE CORRECTORS
Irving S. Lichtman and Seymour L. Jeffe, Washington, D. C.
Application January 27, 1955, Serial No. 484,350
3 Claims. (Cl. 32—19)

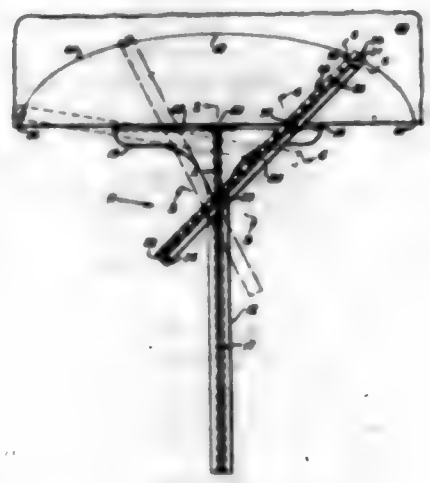
1. An occlusal equilibrator for natural dentitions comprising a matrix of hardened plastic material conforming to the facial surfaces only of the maxillary teeth of a patient, a second matrix of hardened plastic material conforming to the facial surfaces only of the mandibular teeth of the patient, a bifurcated clamp in engagement with the exterior surface of said first matrix and a second pivoted bifurcated clamp in engagement with the exterior surface of said second matrix, a single bearing plate only on said last-mentioned clamp disposed above the pivot of said clamp extraorally and anteriorly to the mandibular central incisors in a plane substantially parallel to the plane of occlusion, a single stylus only on said first-mentioned clamp disposed extraorally anteriorly of the maxillary central incisors in the medial sagittal plane overlying said bearing plate, and substantially perpendicularly to the plane of occlusion, and means for advancing said stylus towards said bearing plate so far as to prevent contact between the opposed maxillary and mandibular teeth and incrementally withdrawing the stylus to successively mark tooth prematurities for elimination by grinding until substantially complete and balanced occlusion between the maxillary and mandibular teeth is attained.

2,863,217
PHOTOGRAMMETRIC PLOTTER
Edgar H. Thompson, Ripley, England
Application July 3, 1952, Serial No. 297,153
Claims priority, application Great Britain July 6, 1951
11 Claims. (Cl. 33—20)



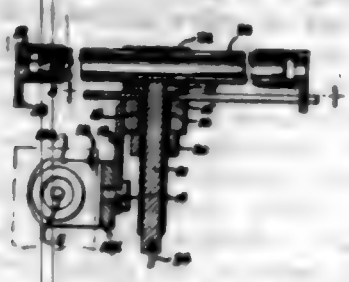
1. Apparatus for using a pair of photographs to determine the position of a point in space, each photograph being taken from a different position in space and an image of the said point appearing on each photograph: the said apparatus comprising a pair of projectors adapted to receive the said photographs and to rotate as a unit about a common axis; sighting means for viewing the said image on the photographs within the projectors; a link coupled to the projectors so as to receive a movement dependent upon the angle through which the projectors have to be rotated in order to sight the image; plotting mechanism connected to the link; and a pair of links connected to the plotting mechanism and coupled to the sighting means in such a way that, when the image is sighted, the tangents of the angles between the pair of links and lines through the links parallel to the common axis of the projectors are always equal, respectively, to the products of the tangents of the angles between the respective lines of sight and the said common axis and the cosine of the angle between a selected basal plane and a basal plane containing the said point and the positions from which the photographs were taken.

2,863,218
ELLIPTICAL ARCH TOOL
John E. Weaver, Boulder, Colo.
Application October 30, 1956, Serial No. 619,219
1 Claim. (Cl. 33—31)



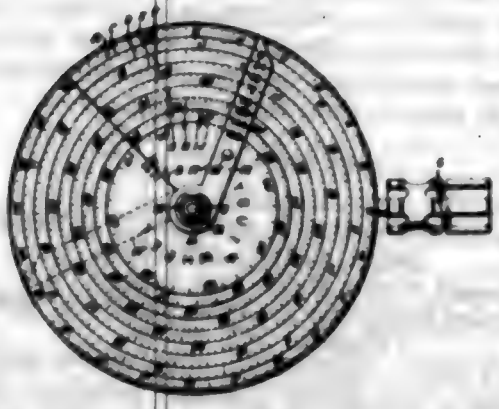
In combination, a table having a straight edge, a vertical sleeve-like bracket member secured to said straight edge, an elongated main bar, a transverse head rigidly secured to one end of said main bar, said head being formed at its edge with a first guide groove, said main bar being formed with a second guide groove extending longitudinally thereof, said second guide groove being substantially coextensive in length with said main bar and terminating at and communicating with said first guide groove, a scribing bar formed with a longitudinal slot and overlying said main bar and head, a first stud element adjustably secured to said scribing bar in said slot and being slidably engageable in said first guide groove, a second stud element adjustably secured to said scribing bar in said slot and being slidably engageable in said second guide groove, said scribing bar being formed with an aperture at its end to receive a scribing implement and to support said implement for movement with said scribing bar, and a depending leg secured to the bottom surface of said main bar and extending perpendicular thereto, the outer surface of said leg being flush with the edge of said head, said depending leg being slidably received in said sleeve-like bracket member, whereby the edge of said head is supported for vertical adjustment and for engagement with the edge of a workpiece supported on the table adjacent the table edge.

2,863,219
LINE SIGHTING AND LEVELING DEVICE
George M. Whelan, Bothell, Wash.
Application November 25, 1957, Serial No. 698,445
5 Claims. (Cl. 33—73)



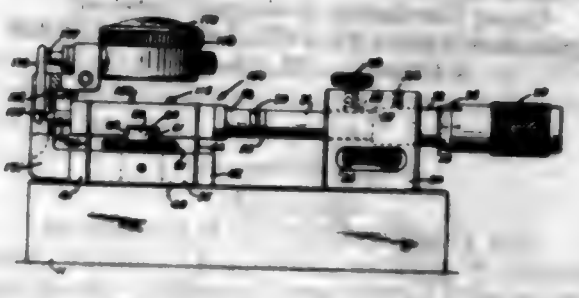
1. A device of the character described comprising, in combination, a mounting clamp, a plate adjustably fixed to said clamp, a block fixed to said plate; said block having a flat top surface and formed centrally of said surface and perpendicular thereto with a bore leading through the block, a tubular bolt extended through and rotatably fitted in said bore and formed at its upper end with a clamping flange adapted to coact with said flat top surface of the block, a carpenter's square disposed with its corner forming portion clamped between the flat top surface of said block and the clamping flange of said tubular member with the inside edges of its blades engaged against said tubular member, a clamping nut threaded onto the lower end portion of said tubular bolt for tightening against the underside of said block to clamp and hold said square in a plane perpendicular to the axis of the bolt, a stem rotatably fitted in said tubular bolt and extended from its upper end, and a line sighting tube fixedly mounted on the upper end of said stem with its axis at a right angle to the axis of said stem, and means on said tube for engaging with the inner edges of the blades of the fixed square to limit the arc through which the sighting tube as mounted by said stem can swing to the angle established by the blades of the square.

2,863,220
LAYOUT WHEEL FOR TUBULAR CONSTRUCTIONS
James D. Staples, Bell, Calif., assignor, by Decree of Distribution, to Marguerite G. Staples
Application January 23, 1956, Serial No. 560,667
3 Claims. (Cl. 33—1)



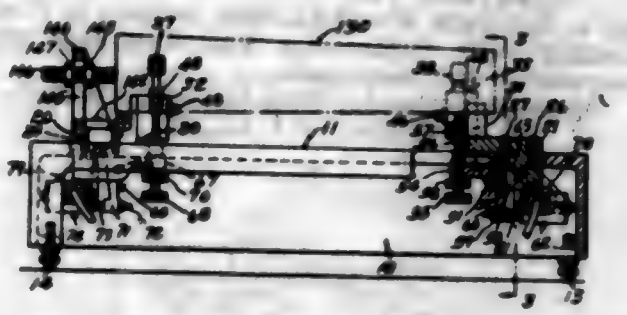
1. A layout wheel for tubular constructions comprising a wheel rotatably supported by a handle, a distance measuring scale on the circumference of said wheel, a plurality of concentric circles on the face of said wheel graduated into consecutive diameter figures, and an index pointer rotatably mounted about the axis of said wheel, said index pointer carrying a numeral opposite each of the concentric circles, each of said numerals being multiples of the distance measured by one complete revolution of the wheel and the numeral opposite each circle representing the quantity to be added on the reading on the distance scale to total a given circumference figure, the diameter to the given circumference figure being read on the circle opposite the added quantity.

2,863,221
MICROMETER COMPARATOR
Rene H. Toubbeau, San Leandro, Calif.
Application May 31, 1957, Serial No. 662,663
6 Claims. (Cl. 33—147)



1. A micrometer-comparator for reading variances from a desired dimension, comprising; a main base; a tailstock supported on said base and having a reciprocatable spindle extending longitudinally therethrough, said spindle having an anvil on one end thereof; and a headstock having a base member mounted on said main base; a pair of flat spring bearings mounted parallel to each other, widthwise of said base member and extending upwardly therefrom; a body member supported on an upper portion of said pair of spring bearings generally parallel to and above said base member, said body member having an anvil at one end facing said tailstock anvil, retracting means mounted on said base for moving said body member relatively to said base member on said spring bearings; and gauge means for indicating the displacement of said headstock anvil from a given position relative to said tailstock anvil, whereby a set gauge may be placed between said anvils with said headstock anvil in the position to which it is normally urged by said spring bearings and subsequent parts can be compared with said set gauge by leaving said tailstock anvil stationary and noting the displacement necessary to position said headstock gauge thereagainst.

2,863,222
TAPER GAUGING DEVICE
George E. Comstock 3rd, Princeton, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application November 4, 1955, Serial No. 544,979
6 Claims. (Cl. 33—174)



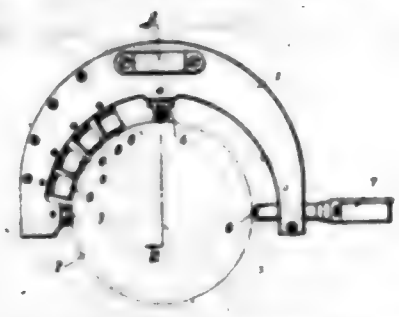
1. A taper gauge comprising a base, a pair of spaced adjustable supports on said base to support a work piece to be gauged, a movable work engaging plunger associated with each of said supports, means to adjust the position of said supports longitudinally relative to said base, means to adjust the position of said supports vertically relative to said base to position the axis of the taper to be gauged so that the supports and plungers lie in planes substantially normal to the axis of the work piece to be gauged, electro-mechanical position sensitive modulation means including a pair of spaced linear variable differential transformers each having movable cores,

ings on said answer element, associated with the said a reinforcing layer coextensive with the body layer and

termine the position of a point in space, each photograph ported on the table adjacent the table edge.

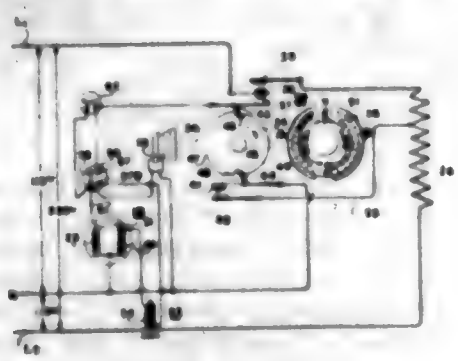
adjustable connections between said plungers and said cores, and a meter operatively connected therewith to indicate movement of said plungers so as to produce a visible indication of taper on said meter.

2,863,223
GAUGE FOR TESTING THE ROUNDNESS AND THE DIAMETER OF CYLINDRICAL WORK PIECES
Georg Reicherter, Esslingen, Germany
Application March 13, 1956, Serial No. 571,258
2 Claims. (Cl. 33—178)



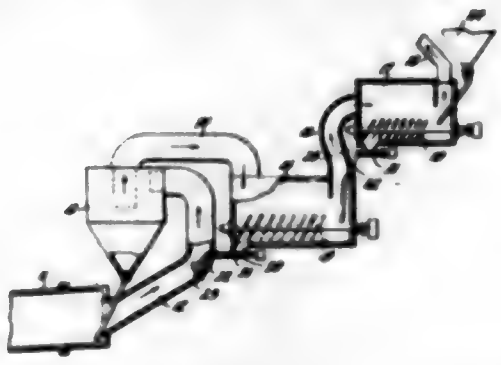
2. A gauge for testing the roundness and the diameter of cylindrical work pieces, comprising, in combination, a gauge body, a lateral feeler member, an upper feeler member, said lateral and said upper feeler members being adapted to engage, respectively, a lateral and an upper part of the surface of said work piece to be tested, at least one of said feeler members being so constructed as to facilitate a sliding or turning movement of said gauge body around said surface of said work piece to be tested, an additional feeler member arranged opposite said lateral feeler member and adapted to engage a portion of said surface of said work piece to be tested which is opposite to said lateral part of the surface of said work piece to be tested, dial means mounted on said gauge body and engaging said additional feeler member so as to be operated by movement thereof radially with respect to said work piece to be tested, and permanent magnetic means connected to the surface of said gauge body facing said work piece to be tested and arranged on an arc of a circle between said upper feeler member and said lateral feeler member, said magnetic means being so arranged that between them and the work piece to be tested on which said gauge rests only a small air gap exists.

2,863,224
CONTROL FOR CLOTHES DRYER
Edgar L. Zehrbach, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 23, 1956, Serial No. 586,852
4 Claims. (Cl. 34—45)



1. In a dryer, the combination of means defining a drying chamber, means for translating air through said drying chamber, means for heating the air, a timing mechanism controlling operation of the air translating means and the air heating means, said timing mechanism being manually adjustable, selectively, from an inactive station wherein the air translating and air heating means are deenergized, into first and second active ranges of operation, said timing mechanism including means for returning it to its inactive station at the conclusion of a period of active operation determined by the position in the active range to which the timing mechanism is adjusted, means responsive to adjustment of the timing mechanism into either of its active ranges of operation for actuating the air translating means, means responsive to adjustment of the timing mechanism into its first active range of operation for energizing the heating means at a relatively high rate and means responsive to adjustment of the timing mechanism into its second active range of operation for energizing the heating means at relatively low rate.

2,863,225
APPARATUS FOR THE PREHEATING OF POWDERED MATERIAL PARTICULARLY CEMENT RAW MIX
Georg Curt Prüssing, Beckum, and Bernd Hermann Heiming, Neubeckum, Germany
Application January 15, 1957, Serial No. 634,336
4 Claims. (Cl. 34—68)



1. Apparatus for preheating powdered material prior to introduction in a kiln which comprises a cyclone, means for feeding the material into the cyclone in parallel flow with hot flue gases from the kiln, means for discharging the material from the cyclone into the kiln, a chamber of large volume compared to said cyclone, having an ingress and egress end, means for feeding said material into said ingress end, means for discharging said material from said egress end into said cyclone feeding means, means for passing said flue gases from said cyclone into said egress end, means for discharging said flue gases from said chamber, and means in said chamber for throwing said material up into the stream of flue gas.

2,863,226
QUIZ DEVICE WITH CORRECT ANSWER INDICATING MEANS
Gerard Walter Kelly, East Orange, N. J.
Application September 29, 1954, Serial No. 459,117
3 Claims. (Cl. 35—9)

1. A quiz device comprising a chart having intelligence matter thereon formulating questions, an answer detector element comprising a separate instrumentality, and cooperative means on said chart and said element for determining and visually indicating the correct answer to each question, said cooperative means comprising: spaced similar, symbolic indicia on said chart having a predetermined and fixed spaced relation to each other, said indicia being located without respect to the locations of said intelligence matter, a larger plurality of spaced similar, symbolic indicia on the answer element, at least two of said larger plurality being capable of matching with said spaced indicia of the chart when the answer element is brought into juxtaposition with the chart, and mark-

ings on said answer element, associated with the said larger plurality of indicia thereof, for designating a plu-

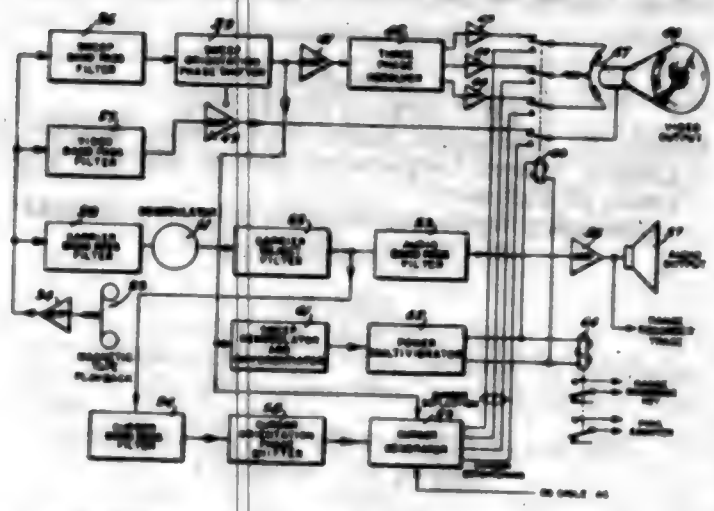
rality of different possible answers to the said intelligence matter.

2,863,227

TRAINING APPARATUS REPRODUCING THE VISUAL AND AUDIBLE PRESENTATIONS OF AN ELECTRONIC SCANNING SYSTEM

Howard E. Chubb, San Diego, and Zack D. Reynolds, La Mesa, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Application July 19, 1954, Serial No. 444,406
8 Claims. (Cl. 35—10.4)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. Apparatus for reproducing visual and audio presentations of an electronic system comprising means for recording a plurality of individual signals representative of said presentations on a single recording medium, one of said signals being a replica of one phase of the three phase sweep supply of said system, a second signal being a replica of the video supply of said system, a third signal being a replica of the audio signals in said system, means for reproducing said individual signals from said medium, means for developing three phase sweep voltages from said one phase sweep signal corresponding to the sweep voltages in said system, means for applying said developed sweep voltages to the deflection elements of a display device, means for applying the video signal to the intensity control of said display device, and means for reproducing the audio from said audio signals.

2,863,228

RIBBED INSOLES FOR WELT SHOES

Stanley M. Griswold, Newton, Mass., assignor to B. B. Chemical Co., Boston, Mass., a corporation of Massachusetts

Original application July 1, 1953, Serial No. 365,490. Divided and this application July 24, 1956, Serial No. 599,811
3 Claims. (Cl. 36—22)

1. An insole for welt shoes comprising a body layer, a reinforcing layer coextensive with the body layer and having therein a rib receiving slot of a contour generally corresponding to that of the insole, and a prefabricated ribbed strip having oppositely extending flanges at the base of the rib cemented to the side of said reinforcing

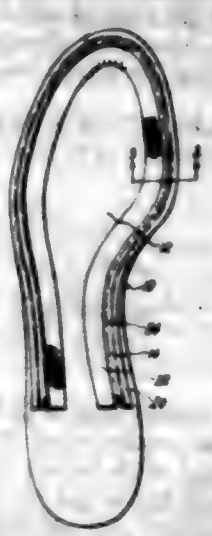
layer which faces the body layer, the rib of said strip extending through the slot of said reinforcing layer, and the flanges extending between said body layer and said reinforcing layer.

2,863,229

INNERSOLE WITH STUCK-ON RIB

Hubert J. Vachon, Lynn, Mass., assignor to Boston Machine Works Company, Lynn, Mass., a corporation of Massachusetts

Application October 8, 1956, Serial No. 614,429
1 Claim. (Cl. 36—22)



An innersole having an inseam rib secured to a portion of the margin thereof, said rib comprising a strip of tape having spaced marginal portions in a common plane and a mid portion in the form of a ridge with an inverted V cross section, said ridge having inner and outer walls both of which slope inward away from the adjacent edge of the sole, and a reinforcing strip having an inverted V cross section adhesively joined solely to the inner surfaces of said walls, the edges of said reinforcing strip being spaced apart.

2,863,230

CUSHIONED SOLE AND HEEL FOR SHOES

Joseph Cortina, New York, N. Y.

Application March 15, 1957, Serial No. 646,328
3 Claims. (Cl. 36—29)

1. A cushioned shoe comprising a shoe upper, an inner sole connected thereto, an outer sole underlying the inner sole, means interposed between the outer and inner soles providing an air cushion between the same, a heel assembly underlying and secured to the outer sole, and a flexible connection between the outer and inner soles yielding responsive to compression of the air cushion resulting from movement of the outer sole toward the inner sole, said means comprising an inflatable bladder, said bladder having an outer configuration corresponding to the outer configuration of each of the outer and inner soles, the periphery of the bladder being offset inwardly

independently of the supply to one of said steering valves,

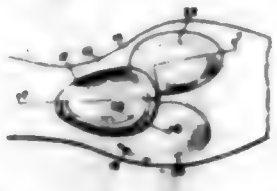
from the periphery of the outer sole, said flexible connection comprising a strip extending through the full periphery of the shoe upper and connected at its opposite edges to the shoe upper and outer sole respectively, the heel assembly including a compressible heel cushion normally projecting downwardly for engagement against the supporting surface, the outer sole having a flexible tongue overlying the heel cushion so as to be flexed upwardly into engagement with the bladder responsive to compression of the heel cushion, said heel assembly further including upper and lower, superposed heel members of comparatively rigid material, having registering openings receiving the heel cushion, the heel assembly additionally including an edge cushioning strip of resilient material extending about the edge of the upper heel member and having a channelled cross section so as to receive the edge of the upper heel member and cushion the same above and below the upper heel member.

2,863,231

FABRICATION OF FOOTWEAR HAVING DIFFERENTIALLY DEFORMABLE INSOLES

William Henry Jones, Montreal, Quebec, Canada, assignor to Canadian Footwear Research Inc., Montreal, Quebec, Canada

Application January 17, 1958, Serial No. 709,545
3 Claims. (Cl. 36—71)



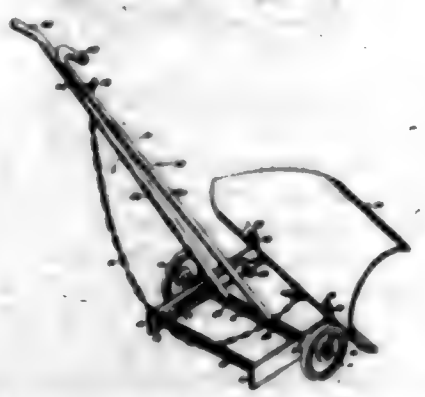
1. A shoe insole comprising a flexible sheet of a shoe construction material conforming in outline to the sole of a shoe and formed with a pair of elliptical apertures substantially centered under the forward ends of the first and the fifth metatarsals and aligned with the length of the respective bones, a resilient cushion plug thicker than the insole positioned within each aperture and secured to the sole, each plug having marginal upper portions tapering to the edges extending beyond the apertures and secured to the upper surface of said insole, and a resilient pad domed upwards and thicker than the cushions having an elliptical outline and flat under side secured upon the insole to underlie the second, third, and fourth metatarsal shafts rearwardly of a line joining the centers of the apertures, forward tapering marginal portions of said pad overlapping rearward tapering marginal portions of the plugs.

2,863,232

SNOW PLOW

Harold F. Steinbach, Kaukauna, and Herbert C. Stanelle, Appleton, Wis.

Application January 23, 1956, Serial No. 560,625
5 Claims. (Cl. 37—53)



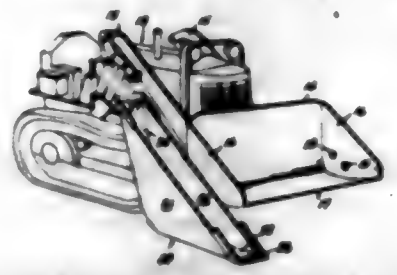
1. A snow plow, comprising: frame means having a first side, and a second side having guide means thereon; axle means mounted on said first side, and received in said guide means; spaced wheels mounted on said axle means; shift bar means connected to said axle; means for securing said shift bar to said frame means; and a plow blade operably mounted on said frame means.

2,863,233

FOUNDATION FOOTER DIGGING DEVICE

James A. Johnson, Elizabethtown, Ky.

Application May 17, 1956, Serial No. 585,427
3 Claims. (Cl. 37—117.5)



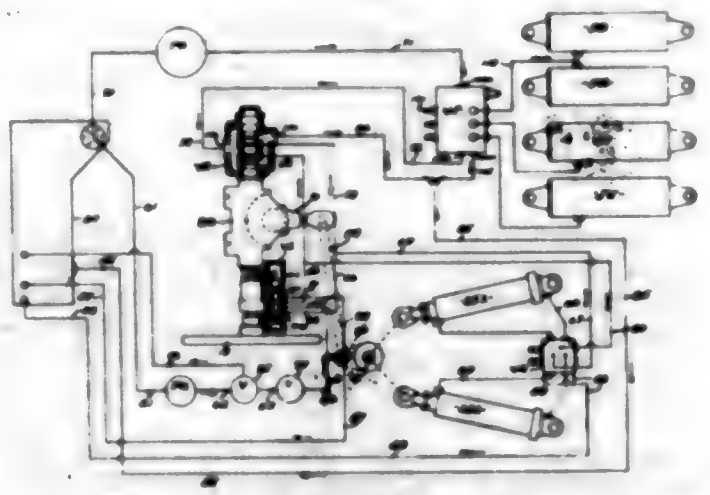
1. For use with the standard bucket of a bulldozer or excavating tractor, a foundation footer digging device comprising a supplemental bucket having side walls, end walls and a connecting wall connecting the end walls and the side walls, and means on one side wall for the attachment of the supplemental bucket to the standard bucket at either side of the latter, said supplemental bucket having cutting edges at opposite ends thereof.

2,863,234

TWO SPEED STEERING

George E. Armington, Gates Mills, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 14, 1954, Serial No. 455,882
35 Claims. (Cl. 37—126)



1. In a digging and carrying scraper, a pressure fluid actuated steering motor operatively connected to steerable wheels on said scraper for providing slow and fast speed steering, a pressure fluid actuated jack on the scraper, a fluid pressure source, fluid control valves operatively connected with said source and said motor and said jack for independently supplying or cutting off fluid from said source to the scraper jack and to the motor for each steering speed, said control valves including two steering valves operatively connected with said source and said motor and including a scraper jack actuating valve operatively connected with said source and jack, control means for controlling both steering valves to provide said slow and fast steering, at least one steering valve and the scraper jack actuating valve being in the same fluid pressure circuit from said source, and supply means for supplying pressure fluid to the scraper jack actuating valve

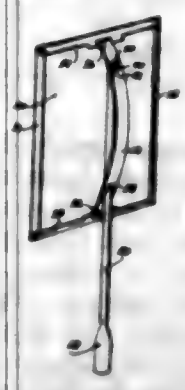
of dark-colored material that fill the island of said

independently of the supply to one of said steering valves, whereby scraper actuation and steering may occur simultaneously.

2,863,235
IDENTIFICATION TAG
Wayne C. Krause, Oakland, Iowa
Application May 16, 1957, Serial No. 659,588
2 Claims. (Cl. 40—1.5)

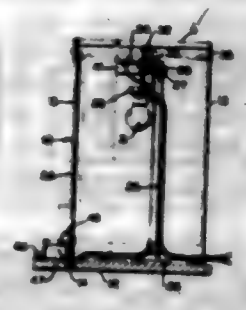
1. An identification tag comprising, in combination, a main body portion having a segmental spherical wall, a flat circular flexible card having a surface for inserting identifying indicia thereon, a flat circular transparent window, means for securing said card and window in assembly with said main body portion in said flat condition, and means for fastening said main body portion to an article, said segmental spherical wall having a convex surface on one side and a concave surface on the opposite side, a circular flange integral with the periphery of said wall extending outwardly in the direction toward said convex surface, and said securing means comprising a beaded edge integral with the outer edge of said flange extending radially inwardly therefrom in overlapping relationship with the marginal edges of said flat flexible card and flat transparent window.

2,863,236
DISPLAY MOUNTING
Elmer L. Stein, Milwaukee, Wis., assignor to Eye-Beam Displays, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application May 15, 1957, Serial No. 659,410
5 Claims. (Cl. 40—4)



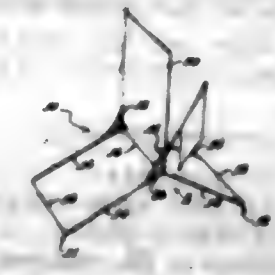
5. The combination with a generally upright display panel, of an elongated cardboard tube having its upper end disposed behind the panel, means for supporting the panel from the upper end portion of the tube, and a base for the tube comprising a container provided with a crown cap having a periphery from which prongs project, the lower end portion of the tube being sleeved over and tightly fitted to the crown cap and engaged at its lower end with the container, the prongs of the crown cap being imbedded in the tube in spaced relation to the lower end of the tube, the tube being thereby centered in an erect position to extend above the container for the support of said panel.

2,863,237
PUSH BUTTON DIRECTORY
Meredith Matthews, San Jose, Calif.
Application June 27, 1957, Serial No. 668,513
2 Claims. (Cl. 40—77)



1. In a supermarket directory of the type including a housing mounted on a base and having a light source concentrically thereof and a sight opening through which one face of a drum-like multi-faced translucent sign bearing rotor is visible; a vertical standard extending upwardly from said base within said housing and offset relative to center of said housing diametrically opposite the sight opening therein to by-pass the light source therein, a bracket secured to the upper end of said standard traversing the vertical axis of said housing, a motor secured to the underside of said bracket and having a drive shaft extending upwardly therethrough concentric to the vertical axis of said housing, a multi-sided drum-like frame bearing translucent signs on its several faces for presentation to the sight opening in said housing in succession, said frame having a diametric arm on its upper end drivingly connected to the drive shaft of said motor and having bearing support on said bracket for suspending the drum-like frame for rotation concentrically within said housing.

2,863,238
SIGN STANDARD
Dana E. Keech, Los Angeles, Calif.
Application January 16, 1956, Serial No. 559,250
22 Claims. (Cl. 40—125)



9. In a standard for a sign made of stiff sheet material, the combination of: a pair of rigid frames each of which includes a pair of co-planar long arms and a pair of co-planar short arms, the latter being united with said long arms at one end of said frame to form equal obtuse angles with said long arms; and means for assembling said frames and pivotally relating the same about an axis which is symmetrically related to said frames and lies at the intersection of planes bisecting said obtuse angles.

2,863,239
ANIMATED INDICIA BY COLOR OCCLUSION
Bernard R. Glaiot, North Hollywood, Calif.
Application October 11, 1954, Serial No. 461,317
13 Claims. (Cl. 40—132)

13. An animated indicia system comprising sources of differently colored lights, a source of white light, means for energizing said light sources at predetermined mutually exclusive intervals, light transmission indicia with elements having colors complementary to the colors of said colored light sources to appear black when said

2,863,244

sources are alternately energized, said transmission indicia having a white light transmission element to take on the color of any energized light source, and means for diffusing the light passing through all elements of said indicia, said system including a light transmitting

plate on one side of which the light transmitting elements are painted, and said means for diffusing the light being painted to cover said light transmitting elements, said light diffusing paint being between said elements and the light impressed thereon.

2,863,240
BALANCED COLOR ILLUMINATION SYSTEM
Bernard R. Glukes, North Hollywood, Calif.
Application June 8, 1956, Serial No. 590,242
4 Claims. (Cl. 40—132)

1. An animated indicia device comprising a pair of substantially complementary colored incandescent light sources having different wave lengths, means for energizing said sources at predetermined intervals and simultaneously and light transmission indicia illuminated by light from said sources and having at least one color element, the same as one of said light sources, the illuminating intensity of the shorter wave length light source being more than two and less than five times greater than the illuminating intensity of the longer wave length light source.

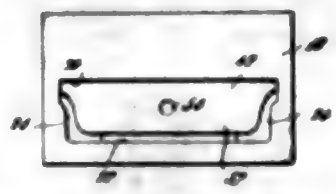
2,863,241
MOLDED ARTICLES AND METHODS OF MAKING SAME
Jules P. Gits, River Forest, Ill., assignor of one-half to Joseph A. Gits, River Forest, Ill.
Application June 21, 1957, Serial No. 667,078
8 Claims. (Cl. 40—136)

1. An indicia-bearing molded article that includes a support of light-colored material providing a high degree of light diffusion, said support having indicia thereon which extend forwardly from said support, at least one of said indicia being closed, a mass of dark-colored material bonded to and overlying the front of said support, said mass of dark-colored material engaging and being bonded to the peripheries of any open indicia and to the outer periphery of said closed indicia, said mass of dark-colored material filling the island of said closed indicia, a runner of said dark-colored material that abuts the rear of said support and that underlies a part of said closed indicia, and portions of said dark-colored material that connect said runner with those portions of said mass of dark-colored material that fill the island of said closed indicia and that surround said closed indicia, said support spacing said runner rearwardly from the plane of the rear faces of the indicia, said runner having a thickness that is less than one half the thickness of said support, said runner being shallow.

2,863,242
DISPLAY SIGNS
Ralph Steven Britton, New York, N. Y., assignor to Inco Industries Manufacturing Corp., New York, N. Y., a corporation of New York
Application December 30, 1957, Serial No. 705,849
7 Claims. (Cl. 40—140)

1. A display sign comprising a plurality of discrete interchangeable members detachably connected together in a row in side by side relationship, each of said members having a front face and rearwardly disposed complementary male and female portions, the male portions of each one of said members being releasably frictionally engageable with the complementary female portion of the next adjacent member, at least one of said male fastening portions having a headed pin extended therethrough for securing said sign upon a stationary object, and said female portion of the member next adjacent to said one male fastening portion overlying the front of and masking the head of said securing means.

2,863,243
EASEL MOUNT WITH POCKET AND MEANS FOR EJECTING AN INSERT THEREFROM
Gordon E. Nichols, Middleboro, Mass., assignor to Winthrop-Atkins Co., Inc., Middleboro, Mass., a corporation of Massachusetts
Application April 12, 1957, Serial No. 652,450
8 Claims. (Cl. 40—152.1)



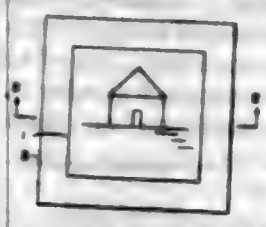
1. An easel-type mount comprising front, back and intermediate plies, the latter being situated between and holding the front and back plies spaced so as to provide a pocket therebetween, said front ply having an opening through it defining a window at the front of the pocket, the lower and opposite sides of which overlap the pocket and the upper side of which coincides with the top of the pocket, so that an insert placed in the pocket is confined along its three sides and unconfined along the fourth side, said pocket being adapted to receive a flexible insert, a tongue extending from a portion of the intermediate ply into the pocket behind the window opening, said back ply containing an opening through it behind the tongue, a leg hinged to the back ply, a brace connected to the leg at one end, said brace having another end arranged to be engaged with the tongue through said opening in the back ply and operable by pressure brought to bear on the leg in a direction to fold it to displace the tongue forwardly, relative to the plane of the pocket to displace the upper edge of the insert occupying the pocket from the top of the pocket through the window opening.

2,863,247

to said spindle and yieldably urged out of the frame to

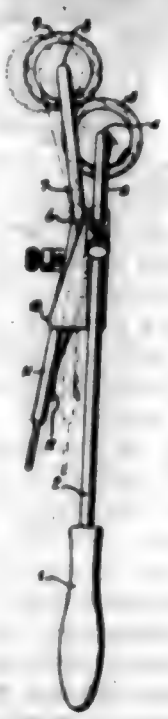
of said colored light sources to appear black when said

2,863,244
PROTECTIVE MEANS FOR FILM MOUNTS
Floyd A. Lyon, Brookville, and Theodore F. Aronson, Glen Cove, N. Y.
Application May 24, 1957, Serial No. 661,437
5 Claims. (Cl. 40—158)



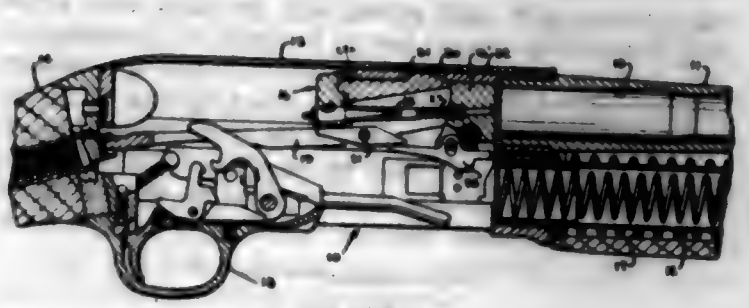
1. Protective means for film mounts comprising a pair of transparent members attached to said mount around the edges thereof, and means to locate and support said film comprising indented portions of said members in contact with said film.

2,863,245
DESIGN ROLLER
Stephen Knapp, Jr., Cleveland Heights, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
Application September 16, 1954, Serial No. 456,454
3 Claims. (Cl. 41—5.5)



1. A roller for unguided manual application of a design to a substantially flat surface, comprising a handle, and a roll rotatably mounted on the handle, said roll comprising raised printing areas forming a design pattern and separated by recessed areas, said printing areas being in the form of separate, disconnected design units having a common motif, with angular orientations differing over a range substantially wider than the range of angular orientations commonly encountered between passes of the roll over a surface due to the applier's errors, said design units being distributed over the roll surface with a sufficient irregularity of density so that the design unit density appearing at certain of the central portions of the roll approximates the design unit density at overlapping portions of adjacent passes of the roll, and the design unit density appearing at certain other central portions of the roll approximates the design unit density at laterally spaced portions of adjacent passes of the roll, said irregularity of density formed in the original development of the roller surface from subdivision of the developed surface of the design roller into a first group comprising a plurality of sub-areas having the same general shape, irregularly spaced apart and ranging in size from about 1% to about 8% of the total area of the developed surface, the variation in the area of said sub-areas ranging from about 1:1 to about 2:1, covering an area of about 20% of the entire developed surface, only small portions of said sub-areas extending into marginal areas corresponding to the edges of the roll and ranging in width from 0.25 to 0.5 inch; further sub-division of the remaining area of said developed surface into a second group comprising a plurality of sub-areas having substantially the same size and shape as the sub-areas of the first group, said second group of sub-areas being irregularly spaced apart within the remaining developed area and having a substantially greater concentration of said second sub-areas within the aforesaid marginal areas, said second sub-areas covering substantially the same proportion of area as that covered by the first group of sub-areas, and application of said design units having a common motif to said two groups of sub-areas and in the free spaces not covered by said sub-areas, the design unit density in the sub-areas of the first group of said sub-areas ranging from 20% to 60%, the design unit density in the sub-areas of the second group amounting to approximately 0 to 10%, and the remainder of the surface within the developed area having a design unit density at an intermediate value between 10% and 20%.

2,863,246
BOLT ASSEMBLY FOR A FIREARM
Edward C. Lee, Detroit, Mich., assignor to Ithaca Gun Company, Incorporated, Ithaca, N. Y.
Application April 16, 1954, Serial No. 423,553
1 Claim. (Cl. 42—16)



In a recoil operated firearm having a receiver, a barrel with a magazine tube, and a stock, the improvement comprising a barrel extension having an opening therein, said extension being slidable into the receiver, a breech block slidable longitudinally of the barrel in the receiver, said breech block having a longitudinally slotted bottom therein, straight smooth and parallel interior slot side walls, an interior slot arcuate front wall and a rear end wall, a locking block supported for up and down pivotal swinging movement in the breech block and having straight smooth and parallel side walls to fit into the slotted portion of the breech block, and being slidable on the side walls thereof, said rear end wall having an overlapping upper portion and a horizontally and circularly recessed portion, the latter portion forming a pivot for the locking block, said locking block having a rearward circularly arcuate projection pivoted in said recessed portion about a transverse axis thereat and a forward arcuate portion slidable on the arcuate front wall of the breech block in an arc concentric with said axis, said overlapping portion of the breech block being adapted to prevent dropping out of the locking block, said locking block having a tongue at its upper forward portion adapted to fit in the opening of the barrel extension of the firearm and engage the rear portion thereof, a firing pin extending through the breech block, and a transverse pin through said breech block for said firing pin.

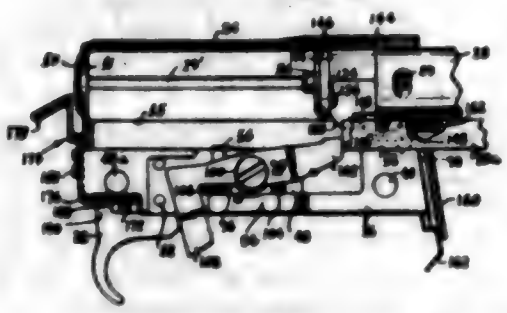
member adapted to cooperate therewith, leg members carried by said U-shaped bracket, and a sheave assembly forming a portion of the base, the upper end portion of

that connect said runner with those portions of said mass through the window opening.

2,863,247
SLIDE-ACTION FIREARM WITH HAMMER RELEASABLE ACTION LOCK

Carl H. Benson, New Haven, Conn., assignor to O. F. Mossberg & Sons, Inc., New Haven, Conn., a corporation of Connecticut

Application August 31, 1955, Serial No. 531,798
8 Claims. (Cl. 42—28)

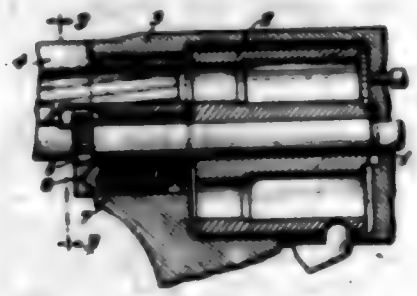


1. A slide-action firearm comprising a receiver; a breech bolt reciprocable in the receiver; a latchable and releasable hammer; a reciprocable action slide arranged to drive said breech bolt; manual operating means arranged to reciprocate said action slide to move said breech bolt to and from breech closing position in said receiver; an action lock arranged normally to extend into the path of movement of said action slide when in breech closing position so as to prevent movement thereof rearwardly in said receiver by said manual operating means; unlocking means effective in response to release of said hammer to urge said action lock in a direction out of the path of movement of said action slide; and resilient means acting between said action slide and said receiver normally to urge said action slide rearwardly into frictional engagement with said action lock to deter said action lock from being moved out of the path of movement of said carriage by said unlocking means in spite of hammer release, said resilient means also being capable of deflection upon movement of said manual operating means forwardly relative to said receiver to release said frictional engagement and thereby to give effect to the urging of said unlocking means whereby to unlock said action slide.

2,863,248
REMOVABLE CYLINDER SPINDLE OF CYLINDER REVOLVERS

Josef Koucký and František Koucký, Prague, Czechoslovakia, assignors to Konstrukta Praha, narodni podnik, Prague, Czechoslovakia

Application October 17, 1956, Serial No. 616,489
2 Claims. (Cl. 42—59)



1. In a cylinder revolver, the combination of a frame, a barrel extending forwardly from said frame, a cartridge cylinder fitting in said frame, a spindle received in said frame to rotatably support said cylinder within the latter, said spindle being removable axially forward from said frame below said barrel, a segment head on the forward end of said spindle, said barrel having a laterally opening recess in which said segment head engages to resist axial removal of said spindle, said head being movable laterally out of said recess in response to swinging of the head and spindle about the axis of the latter, a spring loaded pin slidably carried in said frame parallel to said spindle and yieldably urged out of the frame to bear against the back face of said segment head, and said back face of the segment head having a detent recess therein positioned to receive said pin when said head engages in said laterally opening recess of the barrel so that said pin normally yieldably resists swinging of said segment head out of said recess of the barrel and so that, after movement of said head out of said laterally opening recess, said pin urges said spindle forward to facilitate removal of the latter from said frame.

2,863,249
SAFETY FOR REVOLVERS

Josef Koucký and František Koucký, Prague, Czechoslovakia, assignors to Konstrukta Praha, narodni podnik, Prague, Czechoslovakia

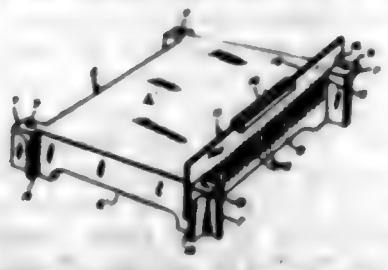
Application October 17, 1956, Serial No. 616,411
2 Claims. (Cl. 42—66)

1. In a revolver having a rotatable cartridge cylinder, a pivoted latch normally engaged with the cylinder to prevent rotation of the latter and movable to a released position for permitting rotation of the cylinder, a trigger and a pin pivotally supporting the trigger; the combination of a breech block having a rotatable bearing pin by which the block is pivotally mounted for swinging between opened and closed positions, a pivotally mounted hammer having an arcuate slot therein concentric with the axis of pivoting of the hammer and a radially directed entry opening into said arcuate slot, a projection on said bearing pin disposed eccentrically with respect to the pivoting axis of said breech block, said projection being received in said arcuate slot to permit pivoting of said hammer when said block is in said closed position thereof, and said projection moving into said radially directed entry to arrest pivoting of the hammer when said block is in said opened position, an independent control element rockably mounted on the pin supporting the trigger and engageable with the latch for movement of the latter toward its released position, and means on said breech block actuating said control element to release the latch in response to movement of the breech block to said opened position of the latter.

2,863,250
ARTIFICIAL FLY WING MAKER

George L. Herter, Waseca, Minn.

Application July 9, 1956, Serial No. 596,735
7 Claims. (Cl. 43—1)

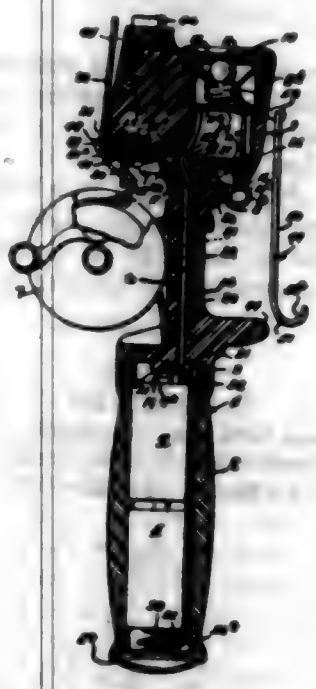


1. An artificial fishing fly wing maker comprising a base member having a flat upper surface and a comb

into a first group comprising a plurality of sub-areas pin.

member adapted to cooperate therewith, leg members forming a portion of the base, the upper end portion of said leg member being flush with the upper flat surface of the base and constructed and arranged to afford guides for vertical movement of the cooperating comb member, said comb member comprising a backing member and a row of longitudinally spaced teeth projecting downwardly of said backing member and said comb member having a transverse slot therein inwardly disposed relative to each of the end portions thereof, said slots having a relatively loose working fit with the guide-forming leg members so as to provide for movement and withdrawal of the comb member from the base member in a vertical plane.

2,863,251
FISHING POLE ILLUMINATING DEVICE
Chester W. Ackerman, Mansfield, Ohio, assignor to Lloyd W. Fierbaugh, Daniel S. Webster, and William F. Rice, all of Ashland, Ohio
Application March 25, 1953, Serial No. 344,537
2 Claims. (Cl. 43—17)



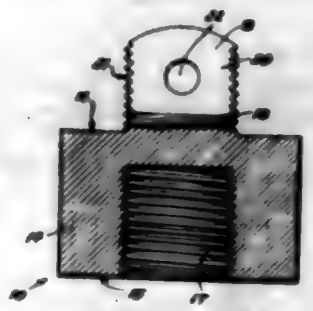
1. A fishing rod handle comprising a handle portion, a head portion, said portions being recessed on one side to provide a substantially U-shaped reel seal, a reel received by said recess, a lamp on said head portion extending into and disposed wholly within the confines of said recess inwardly of said reel for illuminating said reel, said portions being recessed on the opposite side to provide a second substantially U-shaped recess, a second lamp on said head portion extending into and disposed wholly within said second recess, said head portion having a hollow part, a third lamp disposed wholly within said hollow part, means for lighting said lamps, the outer part of said second recess being defined by said head portion, the inner part of said second recess being defined by a finger grip on the handle portion, and a supporting bracket movably mounted on said head portion and extending over said second recess and said second lamp to protect the second lamp.

2,863,252
EYELET WITH SHEAVE FOR FISHING ROD
Charles F. Hettinger, Merchantville, N. J.
Application December 13, 1955, Serial No. 552,741
1 Claim. (Cl. 43—24)

In combination, a ferrule having a bore adapted to receive the tip of a fishing rod, a U-shaped bracket outstanding from the free end of said ferrule, an eyelet carried by said U-shaped bracket, and a sheave assembly mounted in said eyelet, said sheave assembly comprising a pair of spaced discs secured to said eyelet, a shaft extending between and journaled in said discs, a sheave

drivably mounted on said shaft, and bearings interposed between said discs and shaft, with the sheave being formed with an annular groove adapted to receive a line passing through said eyelet.

2,863,253
COMPOUND SINKER FOR FISHING LINES
Charles F. Hettinger, Merchantville, N. J.
Application November 29, 1955, Serial No. 549,799
1 Claim. (Cl. 43—43.14)



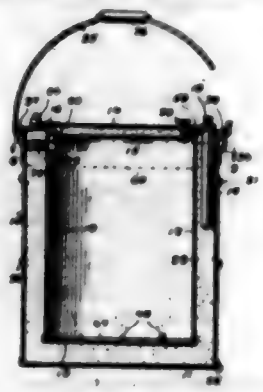
In a compound sinker for fish lines, a plurality of units in assembled relation, each of said units comprising a cylindrical body having open end faces, said body being formed with a threaded socket entering thereinto from one end face, a circular exteriorly threaded pedestal on the other end face, and an ear having opposed flat faces projecting from said pedestal and formed with an aperture extending between said flat faces, said ear having curved side edges formed with threads that are continuations of the threads on said pedestal.

2,863,254
FISHING LINE BOBBER
Frank C. Kercher, Sr., Indianapolis, Ind.
Application December 16, 1957, Serial No. 703,861
3 Claims. (Cl. 43—44.94)

1. A bobber having free running line attaching means comprising in combination a float body having upper and lower stem portions extending therefrom and having free ends, an elastic wire member for each of said stem portions comprising a major length lying along and in approximate parallelism with each of their respective stem portions, a transverse length extending from one end of the major length approximately diametrically through their respective stem from one side and terminating in a foot at the opposite side of their respective stem and retaining the major length along the stem; each of said wire members having an arm outturned therefrom adjacent the free end of their respective stem portion, each of said arms merging into a loop and thence toward their respective stem into a second arm spaced from the first arm, each of said second arms

extending back toward their respective stem portion, through a rounded bend and finally into a foot extending along their respective stem portion parallel to said major length; and a coil spring for each of said stem portions, each of said coil springs surrounding their respective stem portion and fixedly engaged at one end to their respective stem portion between one end of said wire member major length and said float body, and normally overlying their respective wire member major length and said foot; and a line connected to said attaching means; each foot being adapted to be yieldingly lifted from their respective stem portion upon their respective spring being retracted from over the foot to receive said line thereunder for entrance between the two arms into said loop to travel freely therethrough; said line having an abutment limiting said travel.

2,863,255
INSULATED MINNOW PAIL
Mabel Slipka, New Richmond, Wis.
Application March 16, 1956, Serial No. 572,105
1 Claim. (Cl. 43—57)



A minnow pail comprising an outer shell having a cylindrical wall provided with relatively spaced annular reinforcing ribs and with a bottom providing a closure for the lower end, an inner container also having a cylindrical wall with a bottom providing a closure for the lower end, the wall of the inner container and also the bottom thereof being spaced from corresponding parts of the outer shell, a cover having an upper panel and a lower panel providing space therebetween in which insulation is positioned, an annular ring connecting upper edges of the cylindrical walls of the inner container and outer shell, said cover being hinged to said annular ring, a manually actuated pump mounted on the annular ring and extended into an area between the inner container and outer shell, a relief valve also mounted on the annular ring to vent the area between the outer shell and the inner container, a needle valve extended through an opening in the wall of the inner container into a strainer positioned between the outer shell and inner container and adapted to admit air from the area between the inner container and outer shell into the inner container, a perforated tube extended from said needle valve downwardly within the inner container in contact with the inner surface thereof and across the bottom thereof in contact therewith to terminate in the lower part of the inner container, insulation positioned between the inner container and outer shell, and a bale providing a handle pivotally mounted in brackets secured to the upper end of the outer shell.

2,863,256
COMBINED SUPPORT AND RECEPTACLE FOR BOOKS AND THE LIKE
Marie Hegarty, Sidmonton, Bray, Ireland
Application March 8, 1957, Serial No. 644,852
3 Claims. (Cl. 45—59)

1. A book rest attachable to the body of a person comprising, in combination, a pair of similar substantially rectangular rigid panels; side walls connected to each of said panels and defining therewith a pair of shallow trays; hinge means for pivotally connecting two adjacent side walls of said panels in such a manner that said panels may be moved in a first position in a common plane and in a second position in which said panels are spaced from each other with said side walls there-

between, whereby said panels and said side walls define a closed receptacle; a book supporting ledge; means for detachably connecting said ledge to a major surface of said book rest when said panels are in a common plane in such position that said ledge is substantially at right angles to said two adjacent side walls; a flexible strap harness attachable to the body of a person; and means for removably connecting said harness to said book rest.

2,863,257
FLYING TOY
Patrick Gribben, Westside, N. Y.
Application November 5, 1956, Serial No. 620,364
1 Claim. (Cl. 46—83)

A helicopter toy comprising a launching handle with an extended spindle shank, a propeller having a hub rotatably and freely removably mounted on the shank, a tubular winding member rotatably mounted on the shank between the handle and the propeller, said winding member having end flanges said propeller having a trailing edge with a spinning notch, and launching means releasably to engage in said notch and encircle the tubular winding member for rotating said member and spinning the propeller into launched flight from the shank, one end flange of said tubular winding member having a propeller seating recess removably to hold the propeller, and a releasable clamp rotatably to hold the tubular winding member on the shank, said clamp including opposed spring fingers on the handle and rollers on the free ends of the fingers engaging the other flange of the winding member.

2,863,258
DIGGING APPARATUS
Marvin E. Gish, near Tipp City, Ohio, assignor of one-half to Charles J. Dester, Clayton, Ohio
Application July 24, 1957, Serial No. 673,897
10 Claims. (Cl. 47—37)

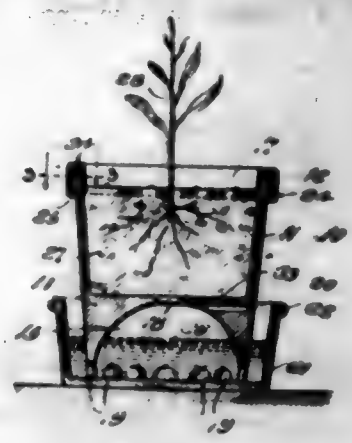
1. In a bailing machine, support structure, a horizontal rail carried by the support structure, a shoe movably

carried by the rail along the length thereof, an elongate support body attached at one end thereof to the shoe and extending downwardly therefrom, the support body having a cavity therein open at the lower end thereof and extending a portion of the length of the body, a bar slidably movable within the cavity and extending downwardly from the body through the open end thereof, an elongate frame attached to the bar adjacent the lower end thereof, the frame slidably extending along opposite sides of the support body, means attached to said opposite sides of the support body guiding sliding movement of the frame, a first fluid motor, the first fluid motor being attached to the support body, the first fluid motor having

an actuator member extending therefrom, means attaching the actuator member to the bar and frame, a vertically extending hollow cylindrical knife attached to the bar and frame, the knife thus being movable with movement of the bar and frame, a second fluid motor, the second fluid motor being pivotally attached to the frame adjacent the upper end thereof, the second fluid motor having an actuator rod movably extending therefrom, an arm pivotally attached to said knife and to the actuator rod of the second fluid motor, a cutter member attached to the arm and movable therewith, the cutter member being movable to a position below the cylindrical knife upon pivotal movement of the arm by operation of the second fluid motor.

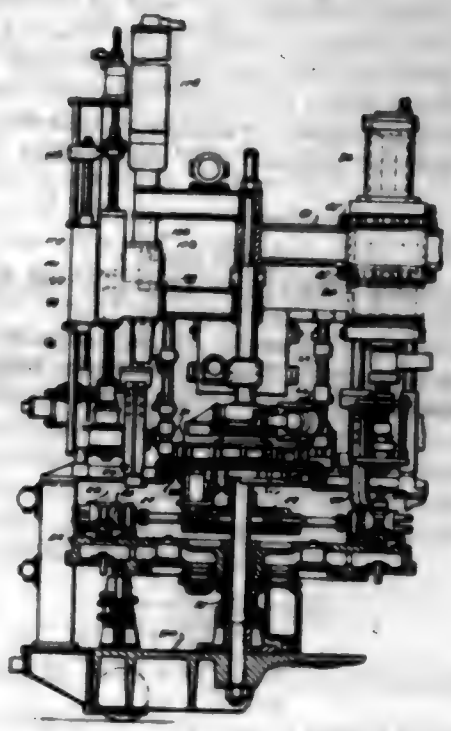
2,863,259
FLOWER POT
Stephen Radford, Washington, D. C.
Application November 5, 1953, Serial No. 390,361
1 Claim. (Cl. 47—38)

A device of the character described comprising a pot formed of porous material and having a relatively thick bottom, an integrally formed upwardly extending circular wall defining with said bottom a soil-receiving chamber, said bottom having an upwardly extending relatively large substantially semi-spherical opening therein defining a solid bottom wall of upwardly increasing thickness, said bottom wall having a plurality of circumferentially spaced water inlet openings extending radially through said bottom wall at the lower end of said relatively large opening, said bottom wall having an air vent extending radially therethrough at the upper end portion of said relatively large opening in juxtaposition to the bottom of said soil-receiving chamber, whereby said bottom wall is adapted to transmit moisture by capillary action from its lower edge portion substantially uniformly to the bottom and sides of said soil-receiving chamber, a substantially cylindrical lip formed integrally with the upper end of said



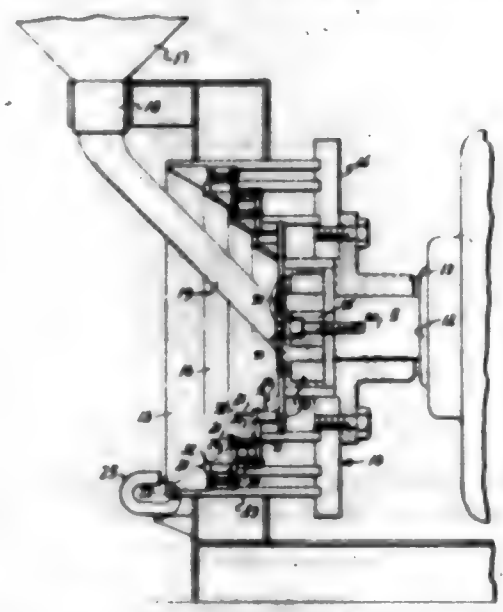
pot, and a coating of water-impervious glaze material upon the sides and upper edge of said lip.

2,863,260
MACHINE FOR MOLDING GLASS ARTICLES
Walter J. Toepfer and William A. Stutzke, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Application October 6, 1954, Serial No. 468,526
8 Claims. (Cl. 49—36)



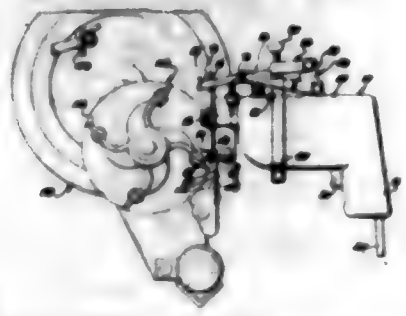
6. A machine for molding glass articles comprising molds, a press plunger for press molding the articles within the molds, molding elements adapted to be introduced into the molds, a circular carrier for the molding elements, means for rotating the carrier about a horizontal axis, a plurality of holding devices on the carrier, each of said holding devices comprising a pair of radially disposed arms projecting outwardly beyond the periphery of the carrier, spring means for operating said arms and gripping a molding element when the latter is moved between the projecting portions of said arms, and transfer means comprising transfer arms by which the molding elements are transferred from the carrier to the molds and returned to the said holding devices on the carrier, and means for actuating said transfer arms.

2,863,261
WHEEL-TYPE ABRASIVE-IMPELLING DEVICE
William H. Mead, Oakland, Calif.
Application October 15, 1956, Serial No. 615,856
8 Claims. (Cl. 51—9)



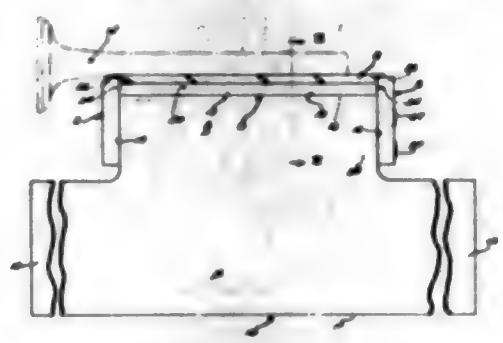
1. A rotating cup-type of abrasive wheel having a series of graduated annular substantially concentric steps foreshortening the distance between the cup and the discharge lip of the cup, and a device for gravity feed of abrasive material into the cup adjacent the axis of its radial wall, whereby the gravity feed can be inserted into the foreshortened cup and whereby the wear of abrasive particles on the cup surface is reduced by the building up of substantially static abrasive particles at an angle of equilibrium forming a series of conical frustums, over the surface of which subsequent particles of abrasive move substantially without contact with the surface of the cup itself.

2,863,262
BED KNIFE GRINDER AND GUIDE MEANS THEREFOR
Charles L. Turner, Pocatello, Idaho, assignor of one-half to Marjory C. Turner, Pocatello, Idaho
Application March 23, 1956, Serial No. 573,424
3 Claims. (Cl. 51—173)



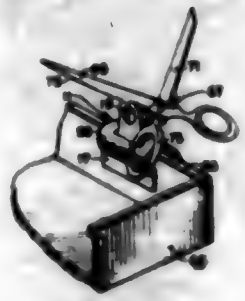
1. In a grinder for the bed knife of a reel-type lawn mower, the bed knife having upper and lower surfaces and a front edge, the combination of: a motor having a housing and a shaft projecting from said housing; a grinding wheel on said shaft; a frame mounted on said housing; first guide means mounted on said frame adjacent the periphery of said grinding wheel and engageable with the front edge of the bed knife for guiding the grinder along the bed knife with said grinding wheel in engagement with the upper surface of the bed knife; second guide means mounted on said frame adjacent the periphery of said grinding wheel and substantially diametrically opposite said first guide means and engageable with the lower surface of the bed knife for guiding the grinder along the bed knife with said grinding wheel in engagement with the front edge of the bed knife; first reel displacing means carried by said frame adjacent said first guide means and engageable with a blade of the reel to displace the reel during movement of the grinder along the bed knife with said first guide means in engagement with the front edge of the bed knife, said first reel displacing means including at least one finger on said first guide means and projecting axially away from said housing and located alongside the periphery of said grinding wheel; and second reel displacing means mounted on said frame adjacent said second guide means and engageable with a blade of the reel to displace the reel during movement of the grinder along the bed knife with said second guide means in engagement with the lower surface of the bed knife, said second reel displacing means including a finger pivotally connected to said frame.

2,863,263
WORK SUPPORT
Fred T. Perkes, Willoughby, and Joseph M. Vernon, Euclid, Ohio, assignors to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application January 16, 1957, Serial No. 634,452
8 Claims. (Cl. 51—238)



1. A work support assembly adapted for use with a centerless grinder, or the like, comprising a base, an upstanding support member carried by said base, a bearing bar having an axial hemispherical recess formed therein carried by said supporting member, a generally cylindrical roll having a helical cleansing groove formed in its outer surface journaled in said bearing bar for rotation with an associated workpiece, said groove being cooperable with said bearing bar to cleanse the outer surface of said roll of foreign particles during a grinding operation, and detachable roll support means maintaining said roll journaled in said bearing bar.

2,863,264
HOLDER FOR SHARPENING SCISSORS
George B. Canada, Sr., Shelby County, Tenn., assignor of one-fourth to John R. Walker III, Memphis, Tenn.
Application December 2, 1957, Serial No. 699,980
6 Claims. (Cl. 51—238)



5. A holder for sharpening scissors comprising a pair of clamp halves disposed in side-by-side relationship, each of said clamp halves including a clamping portion and an upstanding ear integrally formed therewith, resilient means coupled to said clamp halves for urging said clamping portions towards one another whereby the holder is

adapted to be mounted on an upstanding supporting member with the clamping portions being urged into clamping disposition with the supporting member therebetween and with said ears extending upwardly, at least one of said ears being twisted and being provided with a notch through the upper edge thereof for holding one of the blades of a pair of scissors during the sharpening thereof.

2,863,265
MEANS FOR APPLYING COOLANT DURING GRINDING OPERATIONS

Frederick George Ault, West Bromwich, England, assignor to George Salter & Co. Limited, West Bromwich, England, a British company

Application October 24, 1957, Serial No. 692,173
Claims priority, application Great Britain January 15, 1957
6 Claims. (Cl. 51—267)

1. A device for applying liquid coolant medium to grinding wheels during the operation of grinding workpieces comprising a body composed of a plurality of flat plates stacked together transversely across the peripheral grinding face of the grinding wheel, clamping means for holding together said plates in assembled relationship, an interior main coolant supply passage formed by a tube passed through aligned openings in said plates and adapted to be connected with an external supply of liquid coolant medium, and branch passages formed by channels provided in alternate plates of the assembled stack forming the body, said branch passages being in communication with the interior main coolant supply passage and leading to outlet apertures in the respective edges of said alternate plates which are opposed to the grinding face of the grinding wheel during use, said outlet apertures being below the level of the tops of said alternate plates which tops are lower than the top edges of the intermediate plates so as to leave gaps for the escape of coolant liquid, the said top edges of the intermediate plates forming a surface for supporting the workpiece during the grinding operation.

2,863,266
AIR EXTRACTOR DEVICE

George Arlington Moore, New York, N. Y.

Application July 27, 1956, Serial No. 600,550
15 Claims. (Cl. 53—22)

10. The method of extracting air from product filled containers, the container characterized as being provided with a pair of marginally opposed flaring lips defining the mouth thereof adapted to engage upon coincident wall surface portions of an air extracting device, the method comprising engaging the containers with said device and effecting a temporary seal of said lips of the container upon the device by the effects of air suction openings arranged through said coincident wall surfaces thereof thereby sealing the engaging mouth of the container upon said device while air suction through other openings in the device are arranged to be exposed to the interior of said container and co-act to substantially extract the air contents therefrom and sealing the mouth of the air evacuated container progressively during its removal from the air suction device.

2,863,267
AIR EXTRACTOR AND SEALING DEVICE

George Arlington Moore, New York, N. Y.

Application August 14, 1956, Serial No. 604,005
14 Claims. (Cl. 53—22)

13. The method of extracting air from commodity packed heat-sealable containers characterized as being provided with marginally opposed wall portions defining flaring lips with open opposite ends at the mouth thereof adapted to fit over and be temporarily sealed upon an air evacuating body member of apparatus parts, the method comprising bringing the flared lips of the container into registry position upon said body member, the member being provided with air suction means adapted to co-act in two stages, whereby said registered lips are first brought into sealing relation upon the exterior surface portions of said member to exclude atmospheric air from entering into the container while effecting the second stage of air suction to extract air from the interior thereof, and dwelling the container upon the exterior surface portions of the air evacuating member while bringing a pair of jaw-type heat-sealing irons into clamping engagement upon a marginal portion of the contained adjacent a longitudinal end edge of said member through which the second stage of air suction takes place, thereby sealing the air evacuated container permanently prior to its withdrawal from its temporarily sealed relationship upon said member.

2,863,268
MACHINES FOR PACKING CONTAINERS IN CASES

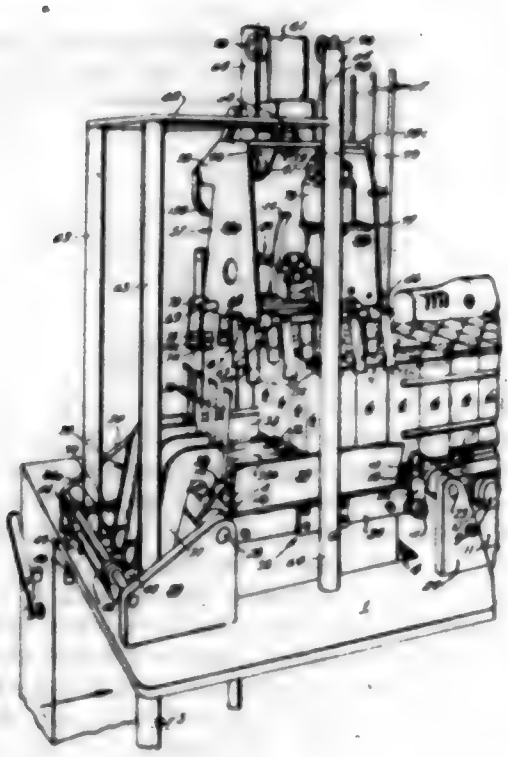
Kaye B. Holstebroe, Portland, and Leander H. Lippincott, Middletown, Conn., assignors to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware

Application August 15, 1955, Serial No. 528,465
12 Claims. (Cl. 53—62)

9. In a machine for packing fiber milk containers or the like, a platform having a loading opening therein through which a load-group of such containers may pass vertically, a trap door comprising a plurality of normally raised and horizontal pivoted sections mounted on the platform to receive and temporarily support a load-group consisting of a plurality of rows each containing a plurality of the containers so that containers of different rows of said load-group are supported at different levels, said load-group being supported in a position directly above and in line with the loading opening, said trap door sections being swingable downwardly about horizontal pivotal axes to open a space between them through which the load-group may descend, a dead plate operatively

on said housing and overlying said

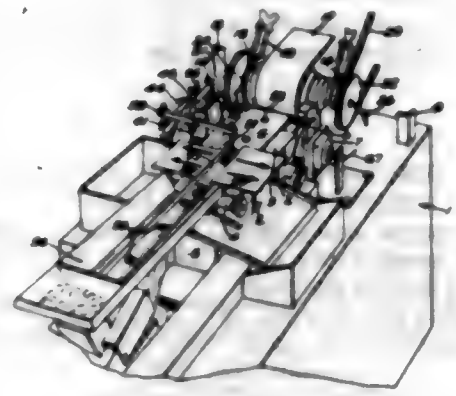
associated with the trap door and an intermittent acting conveyor for the containers operable to feed containers in said rows over the dead plate onto said trap door, said dead plate being formed and arranged to guide the containers of said different rows passing thereover onto said trap door at said different levels, a vertically movable load-group lowering mechanism normally occupying a relatively raised position directly above the load-group on the trap door, said lowering mechanism being operable to grip all the containers of said load-group when



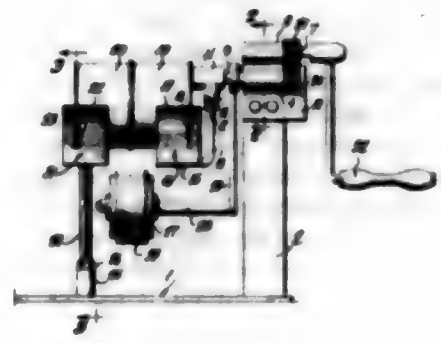
the trap door sections are raised so as to suspend said load-group therefrom when the trap door sections are opened downwardly and further operable to lower the suspended load-group between the open trap door sections and through the loading opening, and a plurality of pivoted load-group row detectors corresponding in number with the rows of said load-group and arranged to be actuated when said rows have been filled with containers on the trap door to initiate operations of said load-group lowering mechanism.

2,863,269
PACKAGING MACHINE
Harry Pokras, Los Angeles, Calif., assignor to Product Packaging Engineering, Culver City, Calif., a corporation of California
Application August 5, 1955, Serial No. 526,743
10 Claims. (Cl. 53—180)

1. A packaging machine, comprising: a pair of heated drums disposed in substantial tangency, each of said drums having a ring of recesses, each surrounded by sealing surfaces; means for rotating the drums, the recesses and sealing surfaces of said drums adapted to register as said drums are rotated; means for passing between said drums a pair of ribbons having heat-sealable surfaces, whereby said drums seal the ribbons together to form a series of sealed pockets; a table in advance of one of said drums over which one of said ribbons is adapted to pass; means for depositing at random a series of ring-like elements on the ribbon as it passes along said table; a spacing pin mounted above said table; means for raising and lowering said pin in timed relation with rotation of said drums to cause said pin to enter each of said ring-like elements in sequence, thereby to space said elements for registry with the recesses of said drums as said elements are carried therebetween.



2,863,270
TAPE APPLYING DEVICE
Augustus Elmer, Jr., New Orleans, La., assignor to Elmer Candy Company, Inc., New Orleans, La., a corporation of Louisiana
Application May 15, 1956, Serial No. 584,969
3 Claims. (Cl. 53—198)



1. A device for applying tape around adjacent edge portions of articles in abutting relation comprising, a base, a pair of horizontally spaced article holding means supported above said base, said article-holding means being V-shaped to form article-receiving and locating troughs, said troughs having means to prevent endwise movement of articles seated therein, said troughs being spaced apart a distance sufficient to hold articles seated therein in end abutting relation with the plane of abutment intermediate the article holding means, and means to receive a tape roll mounted for rotation in a vertical plane intermediate the article holding means to move the tape roll in an orbit about articles seated in the article holding means.

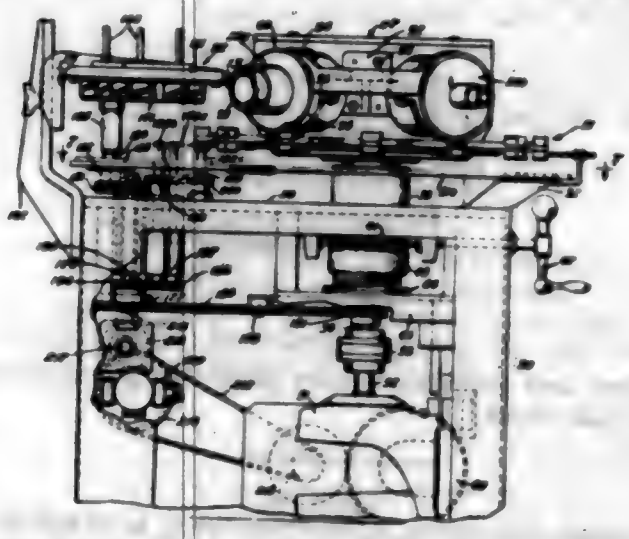
2,863,271
CUP FILLER AND CAPPER
Ralph F. Anderson and Marvin Helfetz, Rockford, Ill., assignors to Ralph F. Anderson
Application November 16, 1956, Serial No. 622,677
20 Claims. (Cl. 53—276)

1. A filling machine comprising an annular conveyor, an enclosed housing disposed centrally of said conveyor and extending thereabove, a filler and a cover applying mechanism mounted at circumferentially spaced points

of material into said space comprising a pair of cooperative, overlapping guard members, means fixedly con-

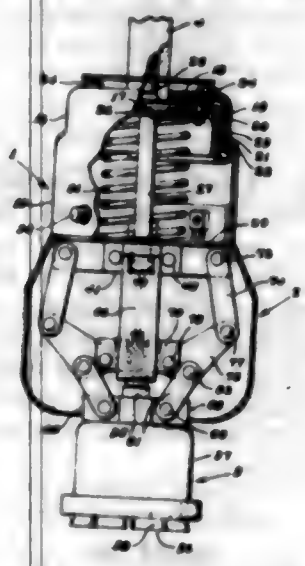
of the output end of said shaft forwardly and having an outer end portion smoothly interconnecting said side

on said housing and overlying said conveyor, means for rotating said conveyor, and means disposed within said



housing for operating said filler and said cover applying mechanism in timed relation with said conveyor.

2,863,272
CAPSEAL APPLYING TOOL
John W. Shera, Westfield, N. J., assignor to American Flange & Manufacturing Co., Inc., New York, N. Y., a corporation of Delaware
Application December 4, 1953, Serial No. 396,118
7 Claims. (Cl. 53—348)



1. In sealing tool construction in combination, a sealing head to be actuated, a diaphragm type fluid responsive actuating member including a hollow housing, a diaphragm within said housing and in spaced relation with respect to the wall thereof, a flexible sleeve extending between said diaphragm and said wall for the flexible mounting of said diaphragm with respect thereto and an actuating stem carried by said diaphragm and extending outwardly from said housing free to move laterally with respect to a fixed line of movement, and mechanism for applying the action of said stem to actuate said sealing head, said mechanism including guiding means having a portion engaged with said stem for limiting the reciprocating action thereof to straight line movement and linkage means connected with said stem and with said sealing head to actuate said head in response to the action of said stem.

2,863,273
MOWER ATTACHMENT
Peter Turner, Spokane, Wash.
Application March 12, 1956, Serial No. 570,854
5 Claims. (Cl. 56—25)

1. In combination with a tractor having a frame; lifting structure having a rearmost end pivotally mounted on said frame for swinging movement about a horizontal axis traversing the normal path of travel of the tractor, and a forwardmost end normally disposed forwardly of said tractor; power means interconnecting said frame and said lifting structure for swinging the latter; a cutter bar and sickle assembly disposed forwardly of said forwardmost end of the lifting structure; means mounting

the assembly on said structure for swinging movement about an axis parallel with said horizontal axis; and power means including a reciprocable element, said power means being carried by the lifting structure for swinging movement therewith; and flexible, substantially non-extensible means interconnecting said element and said assembly for swinging the latter relative to the lifting structure.

2,863,274
LAWN EDGER WITH VIBRATORY BLADE
Cadwallader W. Kelsey, Troy, N. Y.
Application April 13, 1956, Serial No. 577,881
6 Claims. (Cl. 56—26.5)

1. A vibratory tool including a main frame and a vibrator plate to which a tool may be connected, a drive shaft rotatably mounted on and extending into said frame, an offset extension on the end of said shaft in said frame and disposed at an acute angle to said shaft, a bearing mounted for rotation on said offset extension, a wobble element mounted on said bearing, said vibrator plate being disposed at an angle to said shaft adjacent said wobble element, a driving connection between said vibrator plate and said wobble element and an elastic connector enclosing said driving connection, and to which said frame and said vibrator plate are connected, and a blade secured to said vibrator plate.

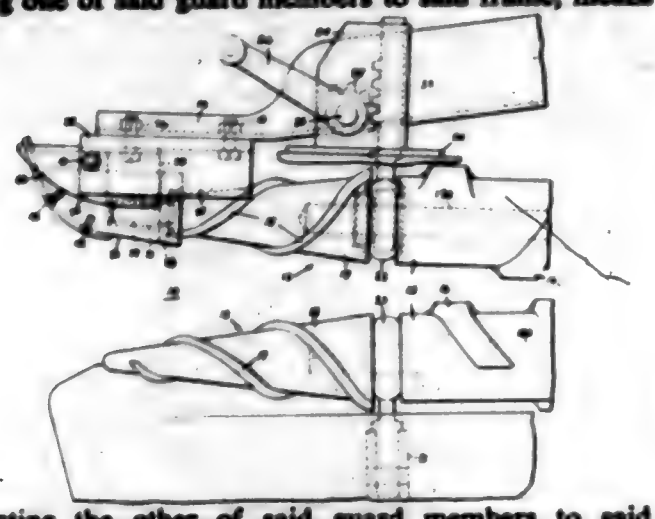
2,863,275
CORN PICKER
William G. Searles, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application December 29, 1955, Serial No. 556,189
3 Claims. (Cl. 56—112)

1. In a corn picker, a frame, a snapping roll rotatably mounted on said frame, a point at one end of said roll and spaced from said frame, means carried on said frame and connected to said roll for laterally adjusting the roll whereby said point is moved toward or away from said frame and the space between the point and frame is varied, and means for closing off said space regardless of the position of adjustment of said roll to prevent the entry

strand including an even number of wires half of which have a larger diameter than the other half and each two being arranged to partially unwind during driving move-

means for raising and lowering said pin in timed rela- mechanism mounted at circumferentially spaced points

of material into said space comprising a pair of cooperative, overlapping guard members, means fixedly connecting one of said guard members to said frame, means



connecting the other of said guard members to said point for movement therewith, said movable guard member being slidably supported on said fixed guard member.

2,863,276
INDICATION OF THREAD BREAKS IN TEXTILE MACHINES

Ernst Breuning, Gerlingen Kreis Leonberg, Germany, assignor to Pneumafil Corporation, Charlotte, N. C., a corporation of Delaware

Application June 17, 1953, Serial No. 362,331
Claims priority, application Germany June 19, 1952
12 Claims. (Cl. 57—34.5)

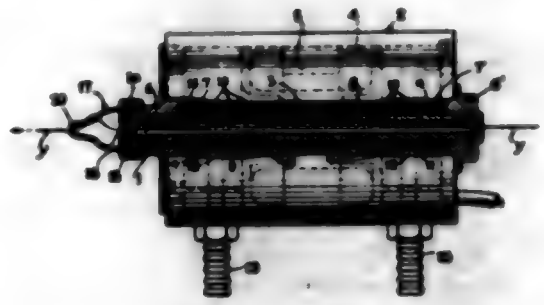
1. In a device for the supervision and control of textile machinery having a thread sieve positioned in the pipeline of a thread suction arrangement, the improvement which comprises said thread sieve comprising a rake having a multiple number of substantially parallel, free-ended bar members movably mounted in said pipeline for movement between a closed position with said bar members extending substantially across the entire cross section of said pipeline and an open position with said bar members extending substantially in the direction of the flow axis of said pipeline said rake having at least a portion thereof of magnetic material and an electromagnet positioned for the magnetic attraction of said magnetic material to maintain said rake in said closed position with a predetermined force.

2,863,277
YARN TWISTER

Philippe Bolliat and Reinhard Rohrer, Biel, Switzerland, assignors, by mesne assignments, to Heberlein Patent Corporation, New York, N. Y., a corporation of New York

Application February 2, 1954, Serial No. 407,725
Claims priority, application Switzerland June 23, 1953
6 Claims. (Cl. 57—77.3)

1. In a yarn twister the combination of a rotatable shaft having an axial bore for the passage of yarn along an axis of linear feed, said bore being substantially reduced in diameter for a limited axial extent immediately adjacent the output end of said shaft to thereby provide a throat, and a closed loop having side portions disposed on respectively opposite sides of and spaced outwardly of said throat and extending from the face of the output end of said shaft forwardly and having an outer end portion smoothly interconnecting said side

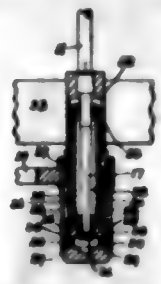


portions and providing a yarn guide in axial alignment with said throat.

2,863,278
YARN WINDING AND TWISTING MACHINE SPINDLES

Frederick Scragg, Macclesfield, England, assignor to Ernest Scragg & Sons Limited, Macclesfield, England, a corporation of England

Application April 6, 1956, Serial No. 576,614
1 Claim. (Cl. 57—135)



A mounting for a belt driven spindle comprising a pivoted arm, a cup on the outer end thereof, a sleeve in the cup, a foot step bearing at the lower end of the sleeve and an antifriction bearing at the upper end of the sleeve to carry the spindle, a flange on the lower end of the sleeve, resilient washers above and below the flange, said cup having a portion providing a seat for the lower washer, a retaining sleeve to screw into the cup and down on the uppermost resilient washer, and a damping washer between the two sleeves.

2,863,279
WIRE ROPE

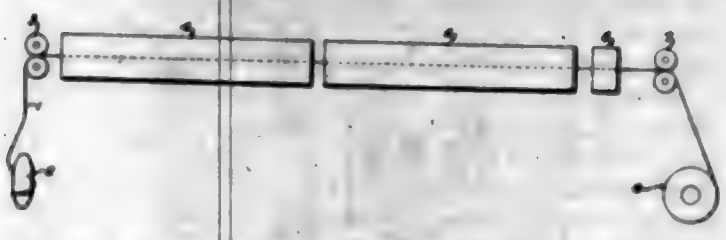
Gerhard Fritz Dietz, Moschroden, Coburg, Germany

Application February 9, 1955, Serial No. 487,135
Claims priority, application Germany February 10, 1954
6 Claims. (Cl. 57—147)

1. A wire rope comprising at least one layer of strands being alternately laid in cross lay and Lang's lay, each

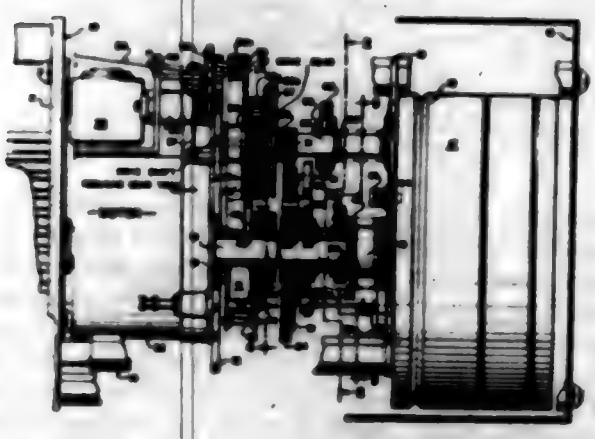
strand including an even number of wires half of which have a larger diameter than the other half and each two adjacent ones of said larger diameter wires defining a circumferential recess with the small diameter wire therebetween, and a larger diameter wire of one of said strands engaging a circumferential recess of an adjacent strand so as to interlock the strands.

2,863,280
METHOD OF CRIMPING FILAMENTS
Leo Ubbelohde, Duesseldorf, Germany
Application April 16, 1953, Serial No. 349,285
Claims priority, application Germany May 23, 1952
8 Claims. (Cl. 57—157)



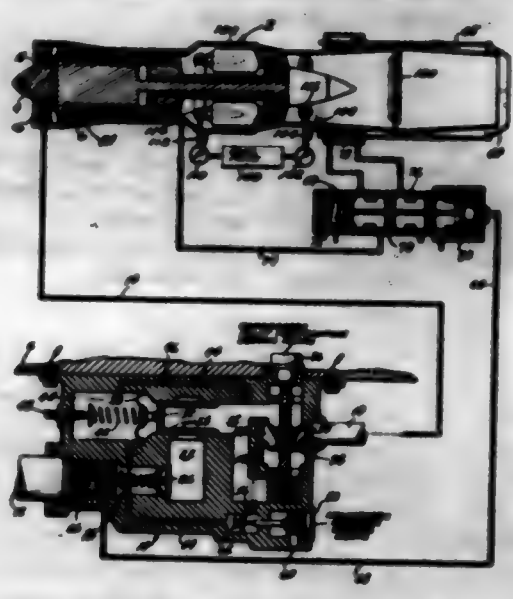
1. A method of crimping filaments of synthetic thermoplastic polyamides comprising passing a traveling continuous bundle of said filaments through a heating zone to render said filaments plastic, cooling said plasticized filaments below the softening point, so as to remove the plasticity imparted in the preceding step and to solidify the filaments applying a false twist to said solidified filaments in a twist inserting zone, which false twist runs backwardly along said solidified filaments against the direction of their travel from said twist inserting zone into said heating zone where it is received by said filaments while plastic, and continuing the travel of the bundle after said twist inserting zone for a length sufficient to allow untwisting of said inserted false twist.

2,863,281
RESETTABLE DRIVE MECHANISM FOR POTENTIOMETER OR THE LIKE
Arthur W. Haydon, Milford, and William D. Donovan, Waterbury, Conn., assignors to Consolidated Electronics Industries Corp., New York, N. Y., a corporation of Delaware
Application January 31, 1956, Serial No. 562,396
10 Claims. (Cl. 60—7)



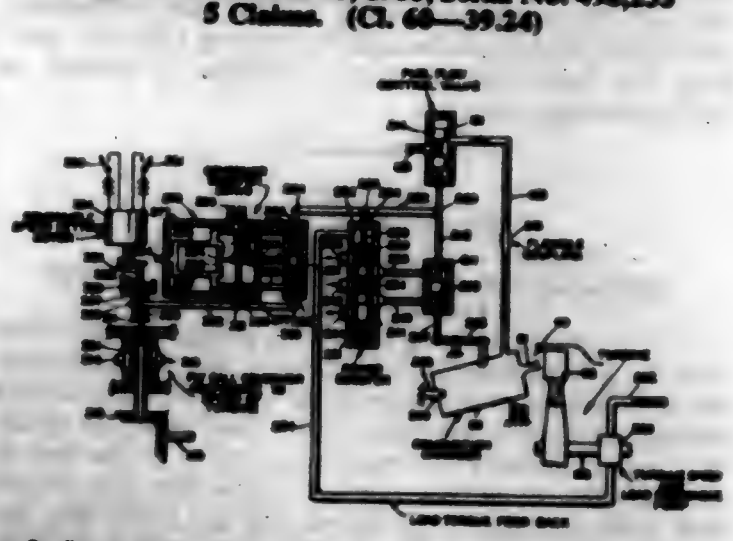
4. In a precision control device, the combination of a rotatable control member, a drive motor and gear train connected to the control member for rotating the same in a first direction, a return spring urging the control member in the opposite direction, the gear train including a driven gear in driving connection with the control member and a driving gear drivingly connected to the driven gear and to the motor, and an anti-backlash spring connected to the driving gear and urging the same to rotate in a driving direction to maintain the teeth of the respective gears in driving engagement, the anti-backlash spring being arranged to partially unwind during driving movements and to rewind during return movements of the control member.

2,863,282
WATER INJECTION SYSTEM FOR GAS TURBINE POWER PLANT
Bruce N. Torell, Wethersfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application January 9, 1953, Serial No. 330,430
4 Claims. (Cl. 60—35.6)



4. Apparatus for controlling the injection of coolant into a power plant, including a control valve, a power plant inlet temperature sensing element positioning said control valve and opening said control valve as said power plant inlet temperature increases, a regulating valve in series with said control valve and regulating the pressure drop thereacross, and an ambient atmospheric pressure sensing element positioning said regulating valve, the position of said control valve being determined directly by said temperature sensing element and the pressure drop across said control valve being determined by said regulating valve such that the coolant to be injected into said power plant is metered as a function of power plant inlet temperature and ambient atmospheric pressure.

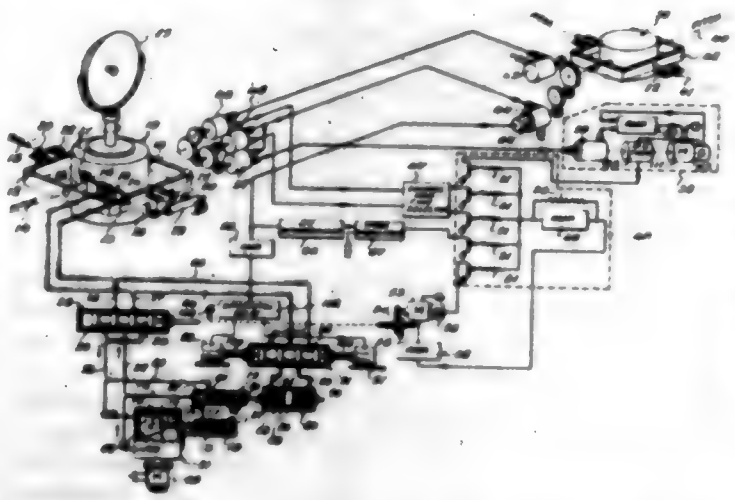
2,863,283
SPEED CONTROL SYSTEM FOR GAS TURBINE ENGINES
Henry R. Schneider, Clifton, N. J., Edward C. Palmenberg, Nanuet, N. Y., and William J. Dietz, Jr., Hillsdale, N. J., assignors to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application March 31, 1955, Serial No. 498,235
5 Claims. (Cl. 60—39.24)



3. In an internal combustion engine, the combination comprising a combustion chamber having an exhaust gas

nozzle, a turbine driven by exhaust gases from said nozzle, a fluid fuel inlet conduit to said combustion chamber, valve means to control said fuel conduit, servomotor means including a piston having an actuating rod operatively connected to said valve means, means pivotally mounting said combustion chamber for adjustment of said chamber and exhaust gas nozzle relative to said turbine to vary the impingement of exhaust gases on said turbine, said motor means having another actuating rod operatively connecting said piston to said combustion chamber for the adjustment thereof, and turbine speed responsive means for controlling said piston so as to regulate the speed of the turbine.

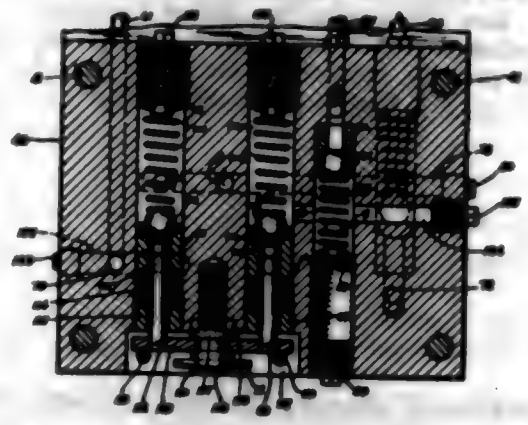
2,863,284
HYDRAULIC SERVO SYSTEM
Richard Schelb, Jr., New Hyde Park, and Rowland N. Crowemeyer, Seaford, N. Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Application November 21, 1952, Serial No. 322,464
16 Claims. (Cl. 60—52)



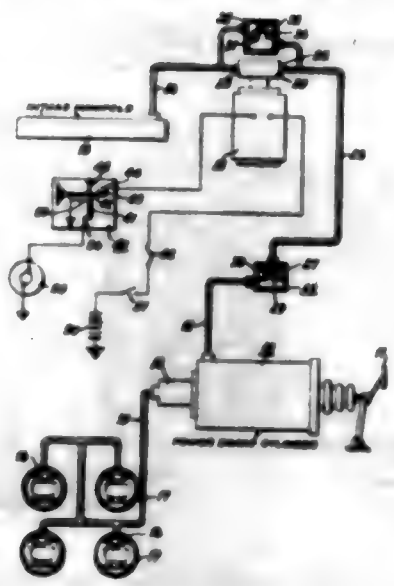
3. A servo system for stabilizing a controlled member from a controlling member comprising hydraulic motor means associated with the controlled member for imparting movement thereto, an hydraulic pump, means for varying the rate and direction of flow of fluid from the pump to the motor in response to errors in the relative position and movement of the controlling and controlled member, means for regulating the fluid delivery pressure of the pump, a spring-centered hydraulic ram mechanically linked to said pressure regulating means for adjusting the pump delivery pressure, a solenoid-actuated reversing valve hydraulically coupling the ram in parallel across the hydraulic motor, and signal generating means responsive to movement of the controlling member, the signal generating means being electrically coupled to the solenoid-actuated reversing valve for actuating the valve with change in direction of motion of the controlling member.

2,863,285
HYDRAULIC JACK
Timothy C. Pomeroy, Saratoga, Calif.
Application February 18, 1957, Serial No. 640,384
9 Claims. (Cl. 60—52)

1. In a hydraulic jack, a cylinder; a plunger reciprocable therein; a fluid reservoir; a pump; a first passage connecting the bottom of the reservoir to the pump, a second passage connecting the pump to the bottom of the cylinder, a third passage connecting the pump to the top of the cylinder, a by-pass passage connecting the second and third passages, and a fourth passage connecting the top of the cylinder to the reservoir; an inelastic fluid in said reservoir, cylinder and passages; a check valve in said first passage to permit one-way flow of fluid from the bottom of the reservoir on the suction stroke of the pump, a check valve in said second passage to permit one-way flow of fluid from the pump to the bottom of the cylinder in the pressure stroke of the pump, a check valve in said third passage to prevent back-flow of fluid from the top of said cylinder and a check valve having a manually displaceable valving element in said third passage to normally prevent flow of fluid from the pump to the top of the cylinder, a check valve in said by-pass passage to permit one-way by-pass flow of fluid from said second passage to said third passage and a check valve having a manually displaceable valving element in said third passage to normally prevent by-pass flow of fluid from said second passage to said third passage, and a check valve in said fourth passage to permit one-way flow of fluid from the top of said cylinder to said reservoir; and a pressure release mechanism to simultaneously manually displace the valving elements in both of said manually displaceable check valves.



2,863,286
CONTROL SYSTEM FOR POWER BRAKE SYSTEM UTILIZING AUXILIARY VACUUM PUMP
Harry C. Deane, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 7, 1954, Serial No. 434,694
3 Claims. (Cl. 60—60)



1. In a power braking system for a motor vehicle, the combination of, a vacuum regulated power unit adapted for connection with and operation of the brakes of a motor vehicle, a primary source of vacuum power connected with said power unit normally to effect operation thereof, an electrically operated secondary source of vacuum power connected with said power unit to operate the same, a motor vehicle electric generator driven by the engine of the vehicle with resultant variation in voltage

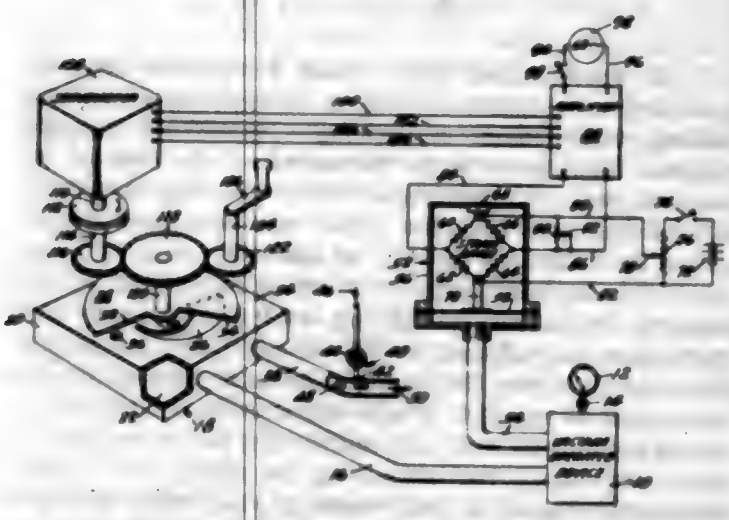
output dependent upon the increase and decrease of speed of the engine of the vehicle, a battery, electrical conductor means for connecting said battery to ground, an electrical operating means for operating said secondary source of vacuum, an electrical conductor means for connecting the opposite side of said battery to said electrical operating means, an electrically inactivated switch means, an electrical conductor means connecting said electrical operating means with said electrically inactivated switch means, an electrical conductor connecting the opposite side of said electrically inactivated switch means to ground, electrical inactivating means for inactivating said switch, electrical conductor means connecting said electrical inactivating means to ground, electrical conductor means for connecting said electrical inactivating means to said generator, electrical conductor means connecting the opposite side of said generator to ground, said electrical inactivating means thereby rendering said switch means inoperative by generator voltage only representative of engine speed of a predetermined value to render ineffective said secondary source at all engine speeds above said predetermined value, said switch inactivating means being responsive to and rendered insufficiently operative to hold open said switch when a drop in generator voltage representative of an engine speed below said predetermined value and thereby permit closing of said switch means and render said secondary source effective at all engine speeds below said predetermined value.

2,863,287

VACUUM CONTROL SYSTEM

John W. Berkman, Binghamton, N. Y., assignor to Research Corporation, New York, N. Y., a corporation of New York

Application November 9, 1956, Serial No. 621,380
3 Claims. (Cl. 60—60)



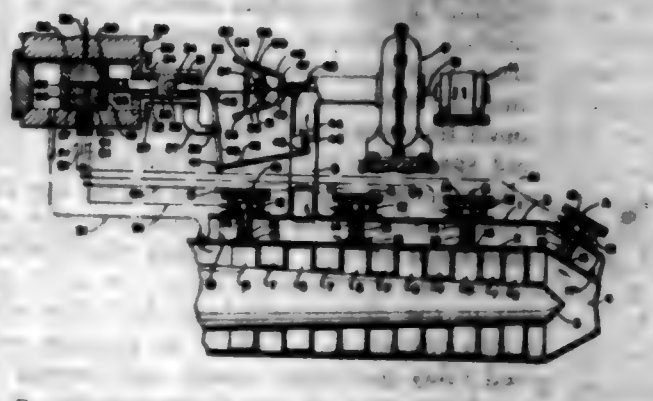
1. A vacuum control system comprising vacuum producing means, a device requiring a regulated vacuum for its proper functioning, valve means including a chamber connected to said vacuum producing means and said device, said valve means having an opening leading to atmosphere and a shiftable closure member with respect to said opening to thereby vary the area of said opening, a servo-motor connected to said shiftable closure member, said servo-motor having a control winding and a reference winding, a pressure sensitive diaphragm having one side thereof subjected to vacuum conditions prevailing in said device, strain gauge means situated at the other side of said diaphragm and actuatable by flexure of said diaphragm to generate an error signal when said vacuum conditions deviate from a predetermined value, means for amplifying said error signal to produce a control signal, and circuit means for applying said control signal to said control winding and circuit means for energizing said reference winding, whereby said servo-motor is operated to position said closure member so as to permit entrance of air into said chamber to the extent necessary to maintain said predetermined value of vacuum.

2,863,288

AIR PRESSURE CONTROL MEANS FOR AIR TURBINE DRIVE SYSTEMS

Cecil G. Martin, Cleveland, Ohio, assignor to Jack & Heintz, Inc., Cleveland, Ohio, a corporation of Delaware

Application November 19, 1954, Serial No. 470,051
4 Claims. (Cl. 60—62)



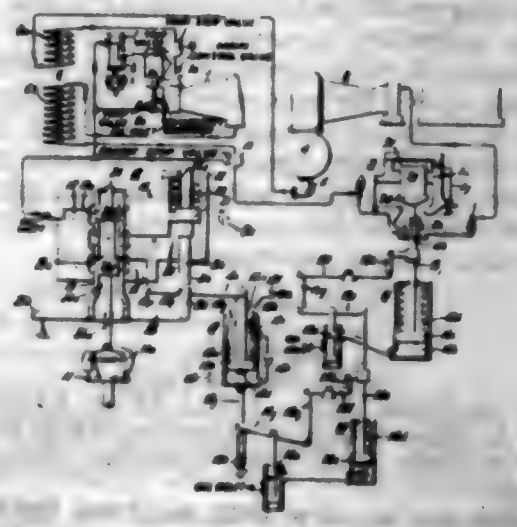
1. In combination with an axial-flow air compressor having a plurality of compression stages and an inlet and an outlet, an outer casing surrounding said compressor between said inlet and said outlet, an air turbine for supplying shaft power to a load, an air conduit extending between said outer casing and said air turbine for delivering air from said outer casing to said air turbine, a plurality of valves arranged in longitudinally spaced relationship along the length of and communicating with said compressor within said outer casing to provide air at a plurality of compression stages from said compressor to said outer casing, and valve control means responsive to the speed of said air turbine operatively connected to said valves on said compressor for selectively opening said valves whereby the selective opening of said valves in response to said air turbine speed supplies air at different stages of compression to said air turbine from said compressor to regulate and control the speed of said air turbine.

2,863,289

HYDRAULIC SERVO-MECHANISM FOR STEAM TURBINE INTERCEPT VALVE

Markus A. Eggenberger, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application August 4, 1955, Serial No. 526,523
9 Claims. (Cl. 60—73)



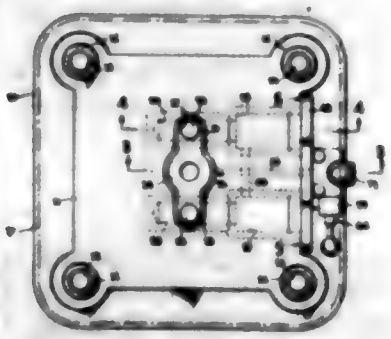
6. In a reheat steam turbine powerplant having at least one high pressure turbine and one lower pressure turbine with reheater means in series between the turbines

iel to each other, a plurality of shoe means carried by said lower ends adapted to rest on the bottom when said

overlapping sequence first through a first series of paths

and inlet valve means controlling the admission of motive fluid to the high pressure turbine and adapted to shut down the unit completely in the event rotor speed rises to a pre-selected emergency condition, and intercept valve means adapted to throttle the supply of motive fluid from the reheater to the lower pressure turbine in the event rotor speed rises to a pre-emergency speed below said emergency condition, the combination of servo mechanism for positioning the intercept valve comprising a speed relay responsive to turbine rotor speed and having an output member positioned as a function of speed, servo-motor means for positioning the intercept valve and including a servo output member and a pilot member connected to position said output member, first stop means limiting movement of said servo pilot in the direction to open the intercept valve, and linkage means connecting said speed relay output member to the servo pilot and including dashpot means comprising a piston and cylinder with restricted fluid bypass means for communicating fluid from one side of the piston to the other and spring means for biasing the dashpot piston relative to the cylinder in the direction to cause the servo pilot to be biased into engagement with said first stop means when the speed relay piston is below the position corresponding to said pre-emergency speed, and second stop means limiting movement of the dashpot piston in the dashpot cylinder in the direction to move the servo pilot away from said first stop member, said second stop means causing the dashpot piston to reach the end of its travel and move the servo pilot away from the first stop when the pre-emergency speed is exceeded.

2,863,290
PNEUMATIC CLAMPING DEVICE WITH MECHANICAL ADVANTAGE
Joseph Verderber, Cleveland, Ohio
Application April 26, 1952, Serial No. 284,667
2 Claims. (Cl. 60—97)



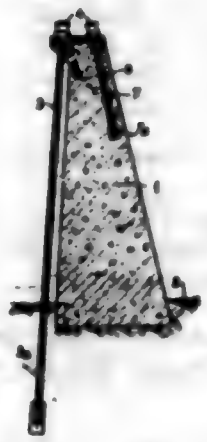
1. In a fluid-actuated device, the combination of a fluid motor including a piston, a load-engaging member fixedly connected to said piston for movement therewith, a second fluid motor including a second piston, control means for selectively actuating both said fluid motors, and a linearly movable camming element connected to said second piston for movement in a direction which traverses the path of movement of said load engaging member, said camming element being movable into motion-producing engagement with said load-engaging member in response to predetermined movement of said first-named piston toward load-engaging position.

2,863,291
REINFORCED DAM
Wilhelm Mermann, Kleve, Lower Rhine, Germany, assignor to Firma Hochtief Aktiengesellschaft für Hoch- und Tiefbauten, vorm. Gebr. Helfmann, Essen (Ruhr), Germany
Application March 9, 1954, Serial No. 415,127
Claims priority, application Germany March 11, 1953
7 Claims. (Cl. 61—31)

1. A dam structure comprising, in combination, an elongated dam body of loose material; and an elongated reinforcing structure entirely embedded in said dam body spaced from the top thereof and extending in longitudinal direction and only in the upper portion of the same, said reinforcing structure including a plurality of wall ele-

ments connected to each other for relative movement, each of said wall elements comprising on each face thereof at least two transversely projecting wings forming together with the wall elements open cells.

2,863,292
REINFORCED AND STABILIZED DAM STRUCTURE
André Coyne and Jean Bellier, Paris, France
Application January 27, 1953, Serial No. 333,551
2 Claims. (Cl. 61—33)



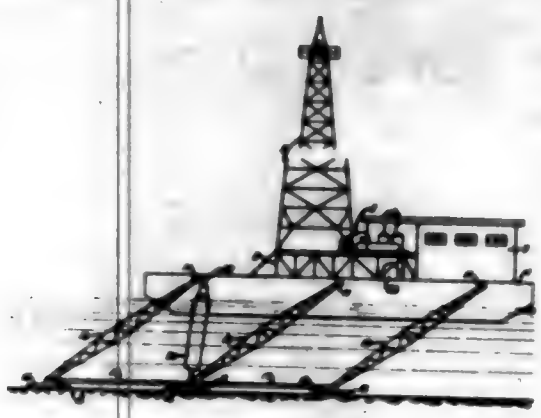
1. In combination with a dam having an upstream face and a downstream face, a strengthening and stabilizing arrangement comprising a reinforced concrete element forming a lever fulcrumed at the top of the dam, at least one tensioned brace extending externally of said dam and adjacent to the upstream face thereof, means for anchoring one end of said brace in the ground, means for anchoring the other end of said brace in said element, tensioned reinforcing means associated with said brace and adjacent to the downstream face of said dam, for opposing the bending moment exerted on the upper part of the dam by the tensioned brace, means for anchoring one end of said reinforcing means within the dam, and means for anchoring the other end of said reinforcing means in said element, said brace and said reinforcing means being anchored in said element on both sides of the fulcrum of said lever and said fulcrum being nearer the brace than the reinforcing means.

2,863,293
MARINE DRILLING RIG
Harold V. Plenner, Tulsa, Okla., assignor to Noble Drilling Corporation, Tulsa, Okla., a corporation of Delaware
Application September 21, 1954, Serial No. 457,524
7 Claims. (Cl. 61—46.5)

1. A floatable marine drilling rig comprising a derrick-carrying barge adapted to float in the sea and having front and rear ends, at least two columns on each side of the barge, means pivotally connecting the upper ends of the columns to the barge at widely spaced points, the columns being inclined downward and forward from said means and suspended from the barge while it is floating, spacing means carried by the lower ends of the columns on each side of the barge and holding the columns paral-

branches of said same first path in said warmer heat ex- last-mentioned means including provisions for supplying

lel to each other, a plurality of shoe means carried by said lower ends adapted to rest on sea bottom when said lower ends are lowered, a hydraulically actuated lifting member on each side of the barge, means pivotally connecting one end of each lifting member with one of said



shoe means and pivotally connecting the opposite end of the member with the barge, and means for delivering hydraulic pressure to said members to actuate them in order to apply a lifting force to the barge and to swing the columns upright with the barge.

2,863,294

COOLING AIR PREPARATORY TO LOW TEMPERATURE RECTIFICATION

George H. Zenner, Kenmore, and Vladimir Hwoschinsky, Buffalo, N. Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application March 31, 1954
Serial No. 420,451
2 Claims. (Cl. 62—13)

1. In combination with a short regenerator column for cooling air to approximately air rectification temperatures, a stationary bed of non-fragile, heat-accumulating hard and well rounded, rock-like pellet material supportably retained in said regenerator and adapted to minimize the flow of axial heat conduction therethrough, said pellet material having a high degree of voids for the flow of air therethrough and wherein deposition and revaporization of the moisture and carbon dioxide in the air occur solely during its passage through the bed of pellets, said pellet material being characterized by substantial inertness to said air flow, said regenerator being filled with said pellet material in sizes ranging between ⅛ and ⅝ inch in diameter to a depth between about 30 inches and 120 inches, the depth of bed and diameter of pellets being adjusted to balance the gas flow pressure drop to the mean temperature difference conditions of the gases, whereby maximum heat exchange efficiency in the cooling of said air and optimum pressure drop conditions in the regenerator are effected, and means of supporting and retaining said bed in the regenerator, said bed being maintained packed between said supporting and retaining means sufficiently to hold the pellets in the bed stationary and substantially immovable.

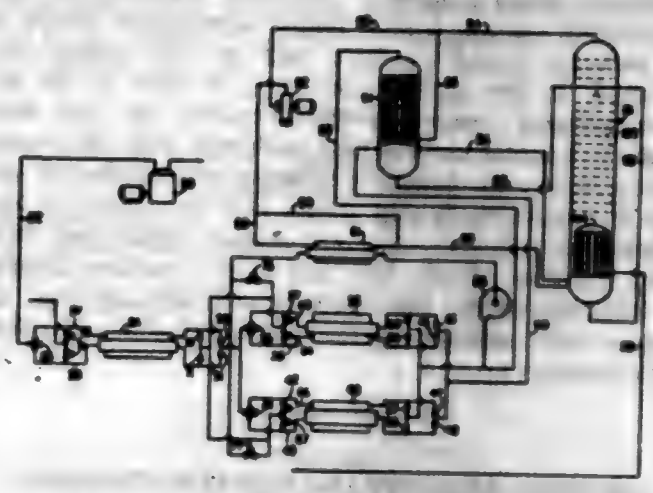
2,863,295

PROCESS FOR SEPARATING A GAS MIXTURE INTO ITS COMPONENTS

Charles L. Newton, Columbus, Ohio, assignor to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio

Application July 19, 1955, Serial No. 522,924
9 Claims. (Cl. 62—13)

9. The method of freeing higher boiling point components from a gaseous mixture in a parallel combination of a plurality of reversing heat exchangers each having two paths comprising: routing portions of a stream of said gaseous mixture in one direction in repetitive timed overlapping sequence first through a first series of paths in said heat exchangers and then through a second series of paths in said heat exchangers, so that the flow of one portion of said mixture in any path occurs for a predetermined period and the flows of said mixture in the next succeeding paths begin at intervals equal to a fraction of said period, said fraction having two as its numerator and the number of paths as its denominator,



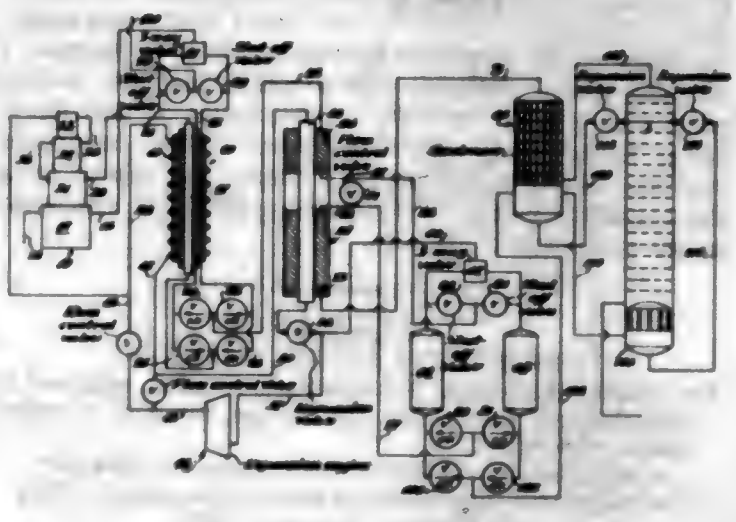
and routing portions of a cold separation product stream in the opposite direction in like repetitive timed overlapping sequence first through said second series of paths and then through said first series of paths so that the flow of one portion of said separation product in any path occurs for a predetermined period and the flows of said product in other paths begin at intervals equal to the same fraction of said period.

2,863,296

HIGH PRESSURE CYCLE FOR THE CONTINUOUS SEPARATION OF A GAS MIXTURE INTO ITS COMPONENTS

Charles L. Newton, Columbus, Ohio, assignor to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio

Application July 19, 1955, Serial No. 522,925
13 Claims. (Cl. 62—14)



12. A method for the separation of a gas mixture into its components wherein a gaseous stream of said mixture, the components of which differ in boiling points in their liquid states, is passed in one direction of flow through a heat exchange means including a warmer heat exchanger and a colder heat exchanger, said warmer heat exchanger including a first path having two branches and progressively decreasing in temperature from end to end to effect cooling of the stream and resultant precipitation of a component of higher boiling point in said first path, and wherein a second gaseous stream free of the last-mentioned component is alternately passed through the

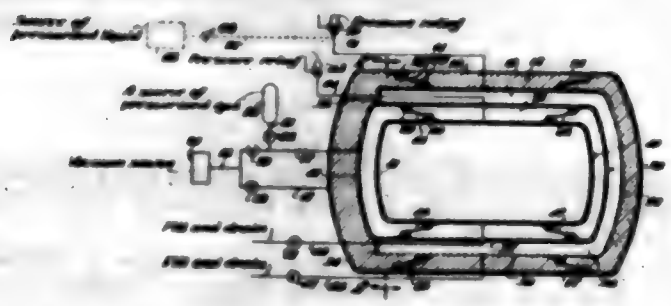
and to said tank, and switch means within said elec- from said low pressure side, a valve for controlling said

elongated dam body of loose material; and an elongated

on each side of the barge and holding the columns paral-

branches of said same first path in said warmer heat exchanger in the opposite direction of flow after the first stream has ceased flow through alternate branches of said first path, which method comprises: passing the first-mentioned stream through said first path in said warmer heat exchanger; passing said first-mentioned stream through a second path in said warmer heat exchanger in the same direction of flow as the second-mentioned stream, thereby effecting warming of said first stream; passing a third highly compressed stream of said mixture through a third path in said warmer heat exchanger in the opposite direction of flow to the second-mentioned stream to effect cooling of said third stream by counter current heat exchange with the second-mentioned stream; passing a downstream portion of said third stream through said colder heat exchanger in heat exchange relationship with said second stream; and alternating the flow of said first and second streams through the branches of the first path in said warmer heat exchanger while maintaining the paths of flow in said colder heat exchanger.

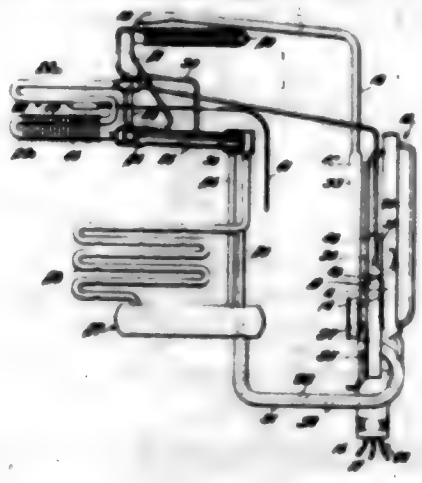
2,863,297
METHOD AND APPARATUS FOR STORING LIQUIFIED GASES
Herrick L. Johnston, Columbus, Ohio, assignor to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio
Application March 29, 1955, Serial No. 497,778
9 Claims. (Cl. 62—45)



9. An apparatus for no-loss storage of liquid fluorine, having a boiling point temperature materially below 273° K. at atmospheric pressure, comprising, in combination, container means for the liquid fluorine; a jacket surrounding the container means; and means forming a nitrogen-cooled radiation shield colder than the boiling point and warmer than the melting point of said liquid being stored, said radiation shield being interposed between said container and the jacket, and spaced from the container means by a chamber, which is evacuated below atmospheric pressure.

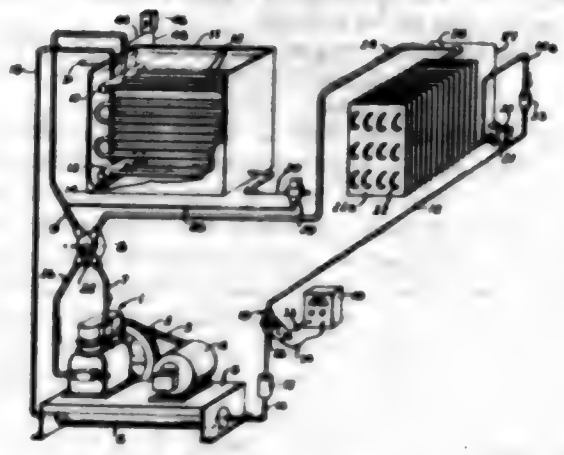
2,863,298
ABSORPTION REFRIGERATION
Axel Gosta Hellstrom, Johanneshov, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden
Application November 1, 1955, Serial No. 544,307
Claims priority, application Sweden November 8, 1954
12 Claims. (Cl. 62—148)

1. Absorption refrigeration apparatus comprising an absorption liquid circuit including a first vapor-liquid lift pump for normally effecting circulation of liquid in said circuit, means including a second vapor-liquid lift pump for raising absorption liquid from said circuit to a level in the apparatus normally free of such liquid, means including a first electrical heating element for operating said first lift pump, means including a second electrical heating element for operating said second lift pump, means including a first switch for controlling said first electrical heating element, and means including a second switch for controlling said second electrical heating element, said last-mentioned means including provisions for completing a circuit for the first electrical heating element whenever a circuit is completed for the second electrical heating



element, thereby completing a circuit for the first electrical heating element even when said first switch is rendered ineffective to complete a circuit for said first electrical heating element.

2,863,299
REFRIGERATION SYSTEMS
Joseph L. Ammons, Amarillo, Tex.
Application April 28, 1955, Serial No. 504,567
5 Claims. (Cl. 62—157)



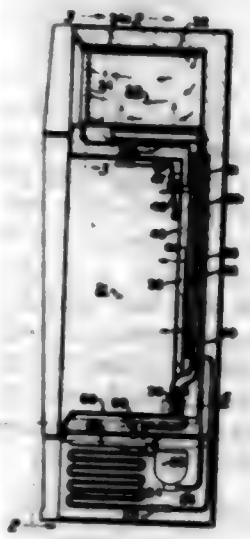
1. In a condenser unit for a refrigeration system having a compressor therein, a condenser coil tank, a condenser coil in said tank, said condenser coil being connected to said compressor in fluid communication to admit refrigerant gas from said compressor into said condenser coil in said tank near the top and at a side thereof, said condenser coil having a downwardly meandering path to a point near the bottom of said tank, a refrigerant outlet pipe connected to said condenser coil near the discharge end thereof, a receiver tank, said refrigerant pipe interconnecting said condenser coil with said receiver tank of said refrigeration system, a water outlet pipe connected in fluid communication to said condenser tank near the top thereof adjacent said inlet pipe for said refrigerant gas, a water inlet pipe connected in fluid communication with said condenser coil tank on the side thereof opposite said water outlet and near the bottom of said tank, a valve within said water inlet pipe, a pipe connected with the pipe leading from said compressor to said condenser coil and to a pressure responsive element of said water inlet valve so as to admit water into said tank in direct proportion to the pressure within said pipe leading from said compressor to said condenser coil, said condenser coil being in spaced relation from and out of electrical metallic contact with said condenser coil tank, and electrical conductor means connected to said coil

forged multiple plate unit forming the bottom and at least one side wall of a refrigerated compartment and

2,863,306
COMBINATION BROOCH AND EARRING WITH

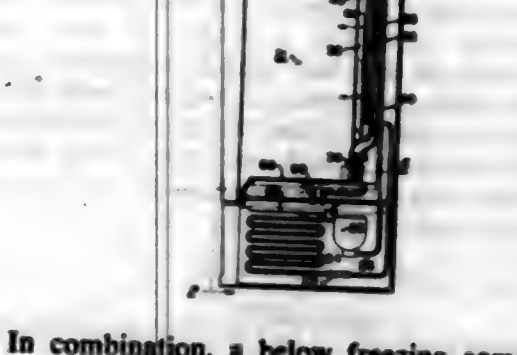
and to said tank, and switch means within said electrical conductor for selectively interrupting the passage of electrical current through said electrical conductor.

2,863,300
REFRIGERATING APPARATUS
John M. Murphy and Leonard J. Mann, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 28, 1955, Serial No. 543,420
7 Claims. (Cl. 62—187)



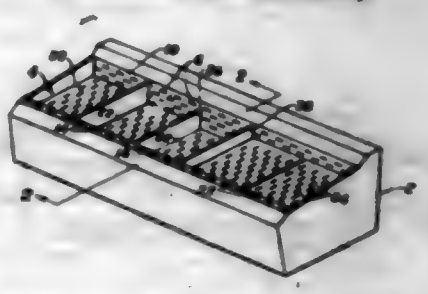
1. In combination, a below freezing compartment; a refrigerating above freezing compartment; a refrigeration system including an evaporator and refrigerant liquefier in refrigerant circulating relationship; air circulating means; air conduit means extending from said below freezing compartment first to said evaporator and thence to said below and above freezing compartments for circulating air from said air circulating means first into thermal exchange with said evaporator, thence into said below freezing compartment and adjacent and outside of but in thermal exchange with said above freezing compartment; defrosting means for defrosting said evaporator; means for adjustably bleeding refrigerated air from said air conduit means into said refrigerating above freezing compartment to regulate the temperature in said above freezing compartment; and a controller establishing a defrost period for operation of said defrosting means and a refrigerating period for establishing a refrigeration maintaining condition of said refrigerating system.

2,863,301
LUBRICANT CIRCULATION IN REFRIGERATING APPARATUS
Lawrence A. Philipp, Detroit, Mich., assignor to American Motors Corporation, Detroit, Mich., a corporation of Maryland
Application March 2, 1956, Serial No. 569,067
7 Claims. (Cl. 62—193)



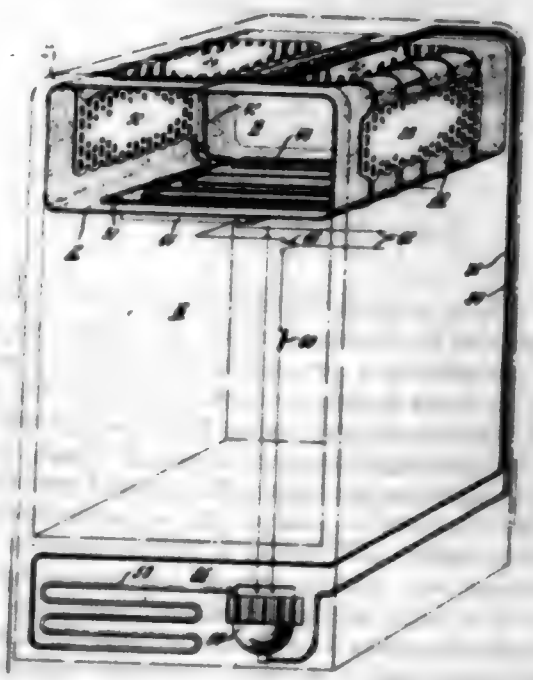
1. A refrigerating system having a low pressure side and a high pressure side, said system including a refrigerant compressor for withdrawing low pressure refrigerant from said low pressure side, a valve for controlling said withdrawal, a chamber for lubricant within said refrigerant compressor, said chamber being in communication with said low pressure side and having means for restricting communication therebetween when the pressure in said chamber is greater than in said low pressure side, a pump means for circulating said lubricant under pressure, a by-pass means around said valve arranged for restricted withdrawal of refrigerant by said refrigerant compressor when said valve is closed to maintain with said pump means a pressure in said chamber at above atmospheric pressure.

2,863,302
DISPLAY CASE
Harry A. Morris, Trenton, N. J., assignor to C. V. Hill Company, Incorporated, Trenton, N. J., a corporation of New Jersey
Application June 7, 1955, Serial No. 513,749
9 Claims. (Cl. 62—256)



1. A refrigerated display case comprising a display chamber, means for cooling air in said display case, means for forcing said cold air into said chamber adjacent the bottom thereof, a perforated article supporting shelf adjustably positioned within said chamber above the bottom thereof to support articles to be displayed and a deflecting vane pivotally secured to said shelf and inclined downwardly and rearwardly from said shelf to direct cold air upwardly through said shelf and about the articles on said shelf.

2,863,303
REFRIGERATING APPARATUS
Clifford H. Wurtz, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 7, 1954, Serial No. 473,545
4 Claims. (Cl. 62—276)



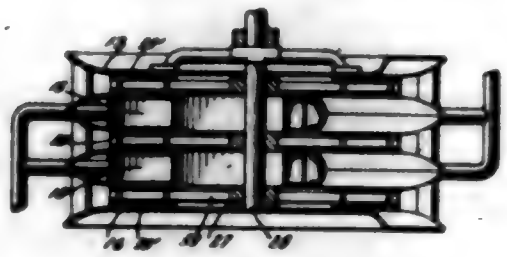
4. In a refrigerating system, an evaporator, a compressor, a condenser, said evaporator comprising a roll

2,863,308
COUPLING DEVICE FOR SMALL MOTORS
David P. Flood, Natick, Mass.

2,863,310
YARN SEVERING MEANS FOR KNITTING

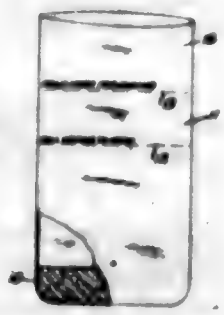
forged multiple plate unit forming the bottom and at least one side wall of a refrigerated compartment and having first refrigerant passages formed between a first pair of said plates and having a second refrigerant passage formed between another pair of said plates, refrigerant flow connections between said compressor, condenser, and first refrigerant passages, and means for applying heat to a portion of said refrigerant passage, said first refrigerant passages including passages arranged adjacent the inner walls of said compartment; said second passage including passages distributed throughout the major portion of the outer walls of said compartment and means for activating said heat applying means for defrosting said evaporator.

2,863,304
BLADE MEANS FOR HEAT EXCHANGE ANNULI
William H. Taylor, Chicago, Ill.
Application July 11, 1955, Serial No. 521,690
13 Claims. (Cl. 62—284)



1. The combination with a pair of opposed surfaces of annular form and a shaft extending therethrough, of generally radial arms extending from the shaft between such surfaces and blade means mounted on such arms, the blade means of each arm having axially opposed marginal elements at the same side of the shaft in substantially balanced pressure engagement with the opposed surfaces.

2,863,305
REFRIGERANT ARTICLE AND COMPOSITION
John C. Shepherd, Monrovia, Calif.
Application August 18, 1953, Serial No. 373,249
13 Claims. (Cl. 62—530)

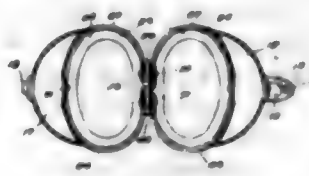


1. An article of manufacture from which a packaged refrigerant can be prepared by simply adding water and shaking, comprising a pregelatinized starch mixed with borax and a water-hating agent; and an oversized flexible open-end transparent bag made from waterproof material and able to hold between 3 and 20 times as much water by weight as the starch therein and marked with a first indicating line to indicate the correct proportion of water to be added and having a flexible portion beyond said marking line, with a second line indicating a fold line able to provide the void space necessary for mixing, whereby the container can be folded over at the second line and closed tightly enough to prevent leakage therefrom, while shaking the package with the addition of water, and can later be folded over to the first line for permanent holding of the gel.

2,863,306
COMBINATION BROOCH AND EARRING WITH COVER MEANS FOR THE BROOCH PIN
Ralph C. Bangs, Providence, and Edwin S. Donis, Edgewood, R. I., assignors to Coro, Inc., a corporation of Rhode Island
Application April 27, 1956, Serial No. 581,147
7 Claims. (Cl. 63—1)

1. A combination brooch and earring comprising a support plate, a bracket extending rearwardly therefrom, a brooch pin and a clamping arm pivotally associated with said bracket on the same axis but independent with respect to each other, and means carried by said clamping arm movable to receive a portion of said brooch pin whereby said pin and said arm may pivot as a unit, said movable means comprising a longitudinally slidable extension on said clamping arm having a protective enclosure at its extremity, said enclosure being adapted to receive therein the point of said brooch pin, when said extension is in pin receiving position.

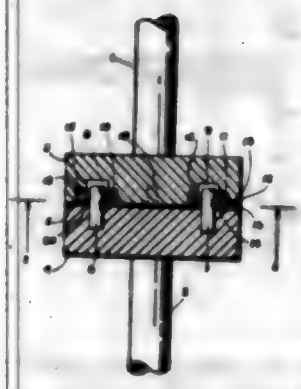
2,863,307
LOCKET HAVING ENCLOSED PIVOTED FRAME MEMBERS
Edwin S. Donis, Providence, R. I., assignor to Coro, Inc., a corporation of Rhode Island
Application April 3, 1956, Serial No. 575,868
1 Claim. (Cl. 63—19)



In a locket construction, a front case section, a rear case section hingedly joined to said front case section by a hinge assembly, a latch formed on the outer peripheral edge of one of said sections, a finger formed on the outer peripheral edge of the other section and cooperating with said latch to releasably secure said sections together, a pair of frame members pivotally mounted on said hinge assembly between said case sections, each of said frame members having spaced hinge rolls formed thereon, the outermost of which form the end members of said hinge assembly and the innermost of which are disposed in side-by-side relation and form the center members of said hinge assembly, each of said frame members having an annular seat terminating in an annular rim, said rim having a linear portion adjacent said hinge assembly and having inwardly extending lock tabs in the linear portion and an integral inwardly extending lock tab in diametrically opposite relation to the linear portion lock tabs formed thereon, said annular seat including a dished portion for receiving a pair of circular photographs in back-to-back relation and a pair of transparent circular shields covering the outer face of said photographs, the outer edge of the inwardly positioned shield engaging said annular seat, and a bezel engaging the outer edge of the outwardly positioned shield and snap seated beneath said lock tabs to lock said photographs and shields in said pivotally mounted frame member, each of said photographs in said frame members thereby being exposed for view upon pivotal movement of said frame members with respect to said case sections.

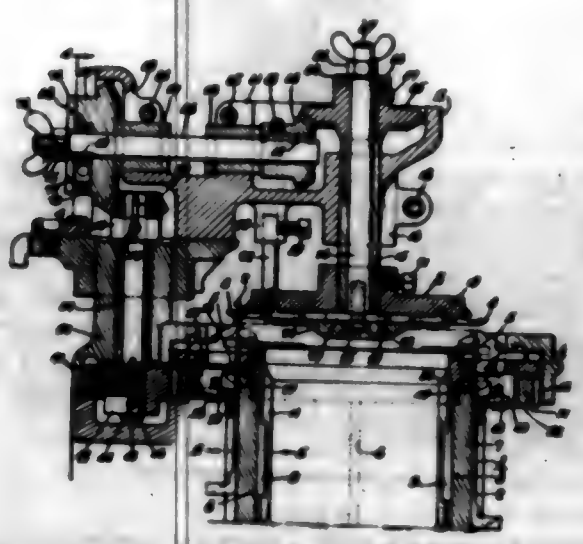
being offset from said closed end, a series of slots in said terior of said anchor beyond the extremity of said anchor

2,863,308
COUPLING DEVICE FOR SMALL MOTORS
David P. Flood, Natick, Mass.
Application June 27, 1955, Serial No. 518,170
5 Claims. (Cl. 64—16)



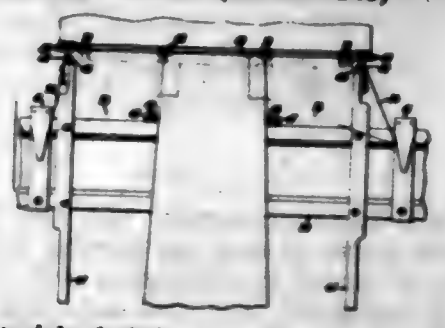
1. A coupling device of the type described comprising facing driving and driven coupling plates, a plurality of pins projecting from one of said plates, means forming recesses in the other of said plates positioned to receive said pins, said recesses having a shoulder section formed at the mouth of the recess, and O rings positioned in said shoulder sections with their inner diameters extending within the inner edge of the shoulder and adapted to snugly engage the side walls of said pins.

2,863,309
SYNCHRONIZED DRIVE MEANS FOR CIRCULAR KNITTING MACHINES
Walter Larkin, Norristown, Pa., assignor to Fidelity Machine Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application September 20, 1955, Serial No. 535,479
2 Claims. (Cl. 66—95)



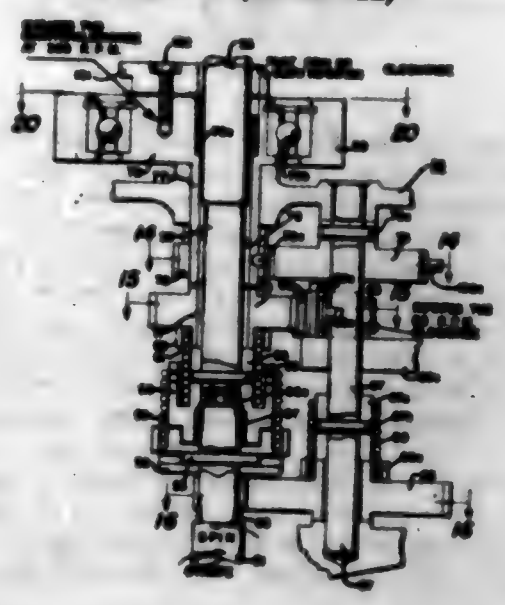
1. A knitting machine having a rotary cylinder including a cylindrical needle-carrying member and needles axially movable in said member, a sinker ring secured directly to said needle-carrying member, sinker elements radially movable in the ring and coactive with the said needles, a rotary dial co-axial with said cylinder and instrumentalities radially movable in said dial and coactive with the needles, a gear element adjustably attached directly to the cylindrical member in proximity to but independent of the sinker ring, and transmission mechanism extending directly from said gear element to the dial for synchronized rotation of said dial and member.

2,863,310
YARN SEVERING MEANS FOR KNITTING MACHINES
Clifford F. Miller, Hamburg, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Application April 26, 1957, Serial No. 655,223
10 Claims. (Cl. 66—145)



1. In a straight knitting machine having knitting elements and carriers for feeding yarns to said knitting elements to be formed into fabric thereby, means for holding the ends of yarns extending from said carriers, and means for severing said yarns comprising outer severing units for intercepting and severing yarns between the selvages at a wide portion of the fabric and said holding means, inner severing units for intercepting and severing yarns between the selvages of a narrow portion of the fabric and said holding means, and means for moving both outer and inner sets of units to positions in which one of the sets of units intercepts yarns while the other set of units is below the point of interception with yarns, and additional means for moving said other set of units to position to intercept yarns.

2,863,311
GYRATION AND ROTATION MECHANISM FOR DOMESTIC APPLIANCE
Byron L. Bracken, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 29, 1954, Serial No. 439,989
11 Claims. (Cl. 68—12)



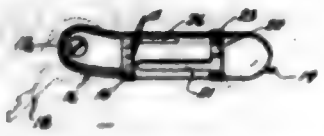
1. In combination: a tub; means to produce gyration of the axis of said tub in one direction to produce an agitating action; and means for simultaneously rotating said tub about said axis in the opposite direction.

2,863,312
KEY HOLDER
Paul Emile Grenier, Hull, Quebec, Canada
Application October 24, 1955, Serial No. 542,306
4 Claims. (Cl. 70—456)

1. A key holder comprising an elongated body member having an open end and a closed end, said open end

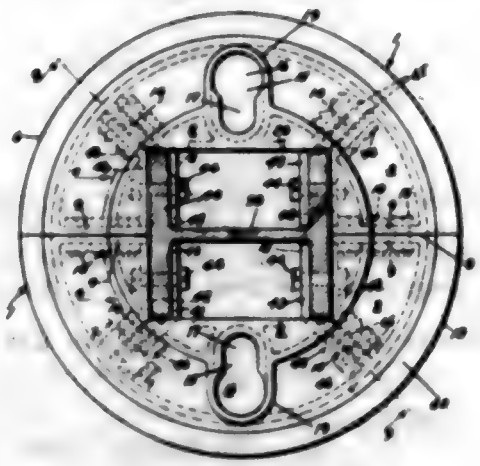
material therethrough, means still further along the path bination, a tubular means including a venturi tube-shaped

being offset from said closed end, a series of slots in said member to receive keys therein, and means for pivotally mounting said keys in said slots, a ridge formed on said member and disposed at close proximity to the open end thereof, a sleeve having an open end and a closed end slidably and rotatably mounted over the closed end of said member whereby the open end will abut said ridge,



means on said sleeve engageable with said member for retaining the sleeve thereon, an opening in said sleeve adapted to be placed in registration with one of said slots, means associated with said slots and engageable with said keys to forcibly eject a key from said holder upon sliding movement of said sleeve, and means on said sleeve adapted to coact with means on said ridge to select a key to be ejected.

2,863,313
LIFT-SLAB FLOOR-TO-COLUMN CONNECTOR
Philip N. Youtz, Yorktown Heights, N. Y.
Application April 13, 1955, Serial No. 501,159
4 Claims. (Cl. 72—1)



1. The combination with a wide flange column, of a concrete floor slab, a floor supporting collar embedded therein and provided with a top plate portion and an annular skirt portion extending downwardly and outwardly from said top plate portion, said top plate portion having a rectangular opening of a size to receive said column and through which the column extends, said collar having webs depending from the top plate portion and skirt portion and extending radially from each corner of said opening, and attaching plates for attaching the collar to the column, each attaching plate having one end portion lying flatly against a flange of said column and the other end lying flatly against one of the webs and bolts securing one end of each attaching plate to said flange of the column and the other end to one of the webs.

2,863,314
FACED WALL AND CONNECTING DEVICE THEREFOR
Johannes Arnoldus van Voorden, Rotterdam, Netherlands
Application August 31, 1953, Serial No. 377,467
6 Claims. (Cl. 72—19)

1. In combination with a wall structure, a connecting device adapted to support a facing opposite the outer surface of the wall structure, said device including a plate for attachment to the facing, a hollow anchor extending through said wall structure, a tie rod connected to said plate at one end and extending through the hollow interior of said anchor beyond the extremity of said anchor at the opposite end thereof, said tie rod and said anchor being secured in position to the inner surface of the wall structure, a spacer member freely abutting against said

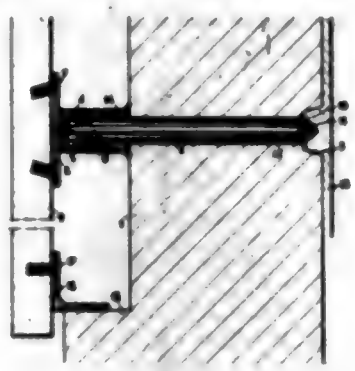
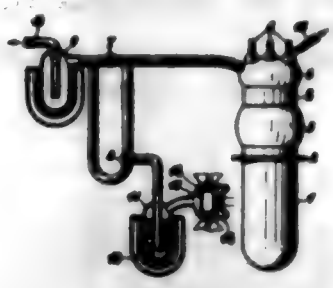


plate for movement thereon and connected to said anchor and adjustably axially with respect to the opposite end of said anchor whereby the facing is positioned a predetermined distance from the outer surface of the wall structure.

2,863,315
APPARATUS FOR DETECTING LEAKS IN VACUUM SYSTEMS
Frans Michel Penning, deceased, late of Emmasingel, Eindhoven, Netherlands, by Joris Daniel Heijligers, executor, Emmasingel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application December 6, 1954, Serial No. 473,396
Claims priority, application Netherlands January 6, 1954
2 Claims. (Cl. 73—40.7)

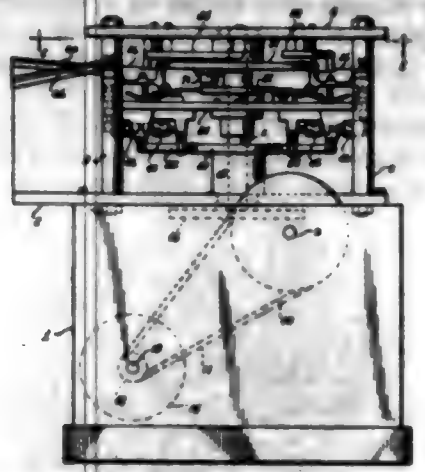


1. A leak-detecting apparatus for vacuum systems comprising means for spraying said system with an indicating gas, a relatively sensitive manometer of the magnetic field type for measuring the pressure in said system, a duct arrangement communicating said vacuum system with the manometer, a quantity of absorbing material in said duct arrangement which permits at least a major portion of said indicating gas to pass therethrough while other gases are absorbed.

2,863,316
VALVE TESTER FOR AEROSOL DISPENSING UNITS
Robert H. Abplanalp, Bronx, N. Y., assignor, by direct and mesne assignments, of one-half to John J. Bessler, Yonkers, N. Y.
Application January 21, 1955, Serial No. 483,194
14 Claims. (Cl. 73—45)

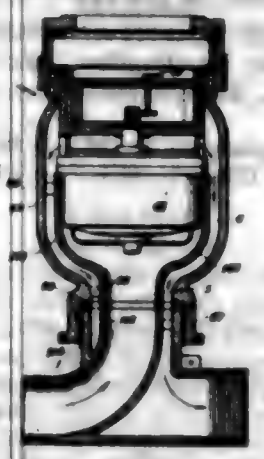
1. A valve tester for aerosol units comprising: means for moving units in succession along a predetermined path, means for applying suction to the valves of said units as they travel to individually test the ability of said valves to hold pneumatic pressure, means positioned along said path to discard units with leaky valves, means further along said path to open the leak-proof valves of the remaining units to individually test the capability of such units to properly control the discharge of aerosol

material therethrough, means still further along the path to individually select the good from the defective units



and separately remove the units of both kinds from said path of travel.

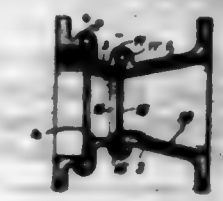
2,863,317
CONCENTRIC INLET AND OUTLET CASINGS FOR WATER METERS AND THE LIKE
Franz Ringe, Nahne, near Osnabruck, Germany, assignor to G. Kromschroder Aktiengesellschaft, Nahne, near Osnabruck, Germany
Application July 28, 1954, Serial No. 446,207
Claims priority, application Germany May 7, 1953
2 Claims. (Cl. 73—201)



1. A fluid handling device comprising an integral generally cylindrical open-ended outer casing having a relatively large diameter upper portion and a relatively small diameter lower portion, a generally cylindrical open-ended inner casing arranged coaxially within said outer casing and spaced therefrom to form an annular passageway between said inner and outer casings and completely surrounding said inner casing, said inner casing having a relatively large diameter upper portion and terminating short of the top of said outer casing, supporting elements extending between said inner and outer casings providing the exclusive means of support for said inner housing, a fluid handling mechanism mounted within said inner casing at the upper end thereof and occupying the entire top opening of said inner casing, and a closure for the top of said outer casing, the lower extremities of said inner and outer casings having outwardly facing annular seats lying in a plane normal to the axis of said casings for abutting connection with a cooperating socket.

2,863,318
DIFFERENTIAL PRESSURE PRODUCER
Edgar Schröder, Mannheim, Germany, assignor to Firma Bopp & Reuther G. m. b. H., Mannheim-Waldhof, Germany
Application June 10, 1954, Serial No. 435,895
Claims priority, application Germany June 15, 1953
10 Claims. (Cl. 73—213)

1. In a flow measuring arrangement, a differential pressure producer for flowing fluids and comprising, in combination, a tubular means including a venturi tube-shaped inner surface section having a throat portion in which the flow velocity of all the fluid flowing therethrough is increased; a high pressure tapping means in said tubular means located upstream of said throat portion; at least one streamlined deflecting body in said tubular means located substantially at the downstream end of said throat portion and having an outer streamlined surface portion extending for a short distance in flow direction for locally reducing the cross-section of the same at least in flow



direction so that the flow velocity of the part of the fluid flowing along said surface portion of said body is further increased, said body having port means located in said surface portion thereof; and low pressure tapping means in said tubular means and communicating with said port means in said body so that the fluid pressure in said low pressure tapping means only depends on the flow velocity of said part of the fluid and is smaller than the fluid pressure of the fluid flowing in said throat portion spaced from said surface portion of said body.

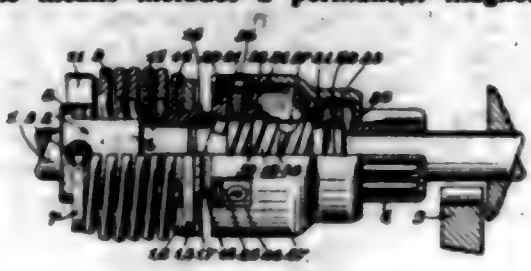
2,863,319
CAPILLARY PIPETTE
Marvin Hampton McLin, Batesburg, S. C.
Application February 4, 1958, Serial No. 713,156
3 Claims. (Cl. 73—425.4)

1. In a specimen holder for receiving a test sample the combination of a frame, a separator plate secured to said frame and extending therebelow, clamping means secured to said frame, to either side of said separator plate, and a pair of plates positioned to either side of said separator plate and held in position by said clamping means, said plates extending downwardly beyond the terminus of said separator plate in a spaced relationship proportional to the thickness of said separator plate, the spaced relationship of said plates below said separator plate providing an aperture for the reception of a test sample.

2,863,320
ENGINE STARTER GEARING
Charles A. Mendenhall, Horseheads, N. Y., assignor to Bendix Aviation Corporation, Elmira Heights, N. Y., a corporation of Delaware
Application October 17, 1956, Serial No. 616,537
3 Claims. (Cl. 74—6)

1. In an engine starter drive a power shaft, a screw shaft, means including an overrunning clutch for rotating the screw shaft from the power shaft, a pinion slidably journalled on the power shaft for movement into and out of mesh with a gear of an engine to be started, a control nut threaded on the screw shaft, a barrel member connecting the control nut and pinion, a latch member slidably mounted in the control nut for radial movement into and out of contact with the screw shaft, and magnetic means for holding the latch member in contact

with the screw shaft until the screw shaft and control nut are rotated above a predetermined speed; in which the magnetic means includes a permanent magnet fixedly



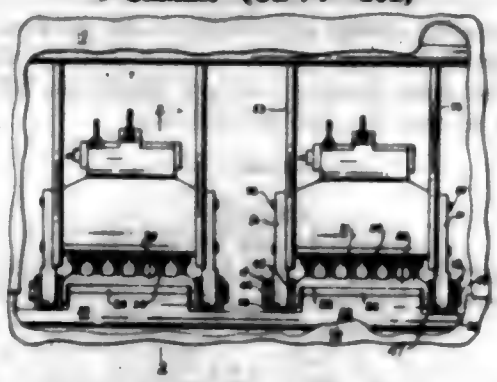
mounted in said latch member with one of its poles adjacent to the screw shaft, and said magnet is mounted in a non-magnetic carrier which encloses the magnet except for the pole adjacent the screw shaft.

2,863,321

TORQUE TRANSMITTING MECHANISM

Richard H. Welland, Seattle, Wash., assignor to Boeing Airplane Company, Wichita, Kans., a corporation of Delaware

Application November 4, 1957, Serial No. 694,217
9 Claims. (Cl. 74—102)



1. In a device of the class wherein a rigid member mounted on a fixed pivot axis has extremely high resistance to pivotal movement about said axis away from a neutral position, and the length of moment arm which may be employed to transmit torque to the member is extremely limited, mechanism for transmitting adequate torque to the rigid member to move it away from its neutral position comprising: a thrust receiving element rigidly carried by said rigid member, said element being elongated in a radial plane common to the pivot axis of the member and positioned parallel to such axis, and having a longitudinally extending rolling contact surface; a similarly elongated thrust transmitting element in juxtaposition with the thrust receiving element in a location spaced to one side of the mentioned radial plane, said thrust transmitting element also having a longitudinally extending rolling contact surface, at least one of said surfaces being convexly curved in cross section, the two said rolling contact surfaces being in tangential contact throughout the length of at least one of them; and power means operably connected to the thrust transmitting element for moving it toward the thrust receiving element along a plane perpendicular to said fixed pivot axis to force the rigid member to move away from its neutral position, the two surfaces in contact undergoing a relative rolling movement during pivotal movement of the rigid member away from said neutral position.

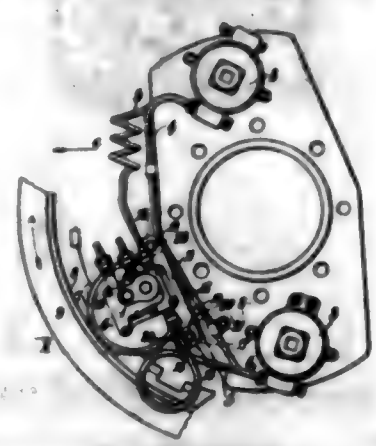
2,863,322

MOUNTING FOR A WHEEL DRIVEN ROTARY INERTIA DEVICE

Frank Radcliffe Mortimer, Styvechale, Coventry, England, assignor to Dunlop Rubber Company Limited, London County, England, a British company

Application July 16, 1956, Serial No. 598,113
Claims priority, application Great Britain July 28, 1955
6 Claims. (Cl. 74—209)

1. A mounting for a rotary inertia brake control device comprising a tire to be driven by a wheel, a non-rotatable casing mounting said tire, a fixed support and means securing said casing to said support and comprising a spring biasing said casing in a direction to press said tire against a rotating surface of a wheel and wherein said casing has a pair of lugs extending from each



end thereof, pivot blocks rotatable in co-axial eyes in each said pair of lugs and means passing through each pivot block at right angles to the axis of said co-axial holes for securing said base to said fixed support, at least one of said securing means including said spring whereby to urge said casing away from said fixed support.

2,863,323

SPROCKET TOOTH AND ASSEMBLY

William R. Sheffer, Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania

Application September 4, 1957, Serial No. 682,003
18 Claims. (Cl. 74—243)

1. A sprocket tooth which comprises a tooth edge portion, two tooth surface portions which extend downwardly from each side of said tooth edge portion, one pair of side faces extending downwardly from the lower extremity of one of said tooth surface portions, and another pair of side faces extending downwardly from the lower extremity of the other tooth surface portion, the side faces in each pair diverging away from each other in a downward direction, the side faces in each pair having a thickness which is less than the maximum thickness of said tooth edge portion, side sections associated with the outermost side face of each of said pairs of side faces, the bulk of each of said side sections being positioned in different planes with respect to each other, each of said side sections containing at least one elongated slot, the elongated slots in each of said side sections converging toward each other in a downward direction.

2,863,324

REDUCTION GEARING SYSTEM

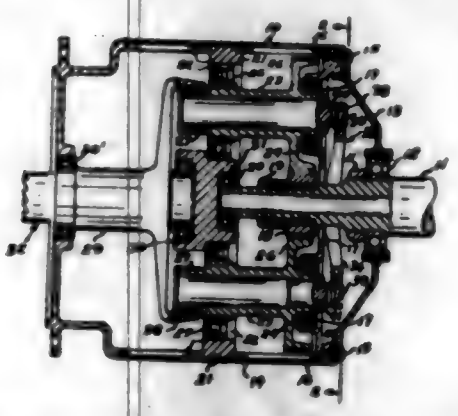
Dallas Ellsworth Cain, Scotia, and George H. Fry, Jr., Schenectady, N. Y., assignors to the United States of America as represented by the Secretary of the Air Force

Application April 2, 1956, Serial No. 575,690
5 Claims. (Cl. 74—410)

1. In a reduction gearing system, a supporting plate, an input shaft bearing mounted in said plate, an output shaft

de-clutch said electromagnetic clutch when said shift lever ... necting said upper and lower portions to permit said ...

in axial alignment with said input shaft, at least one helical pinion on said input shaft, a plurality of offset shafts spaced around said input shaft, a helical gear on each of said offset shafts meshed with said helical pinion, a gear on said output shaft and a pinion on each of said offset shafts meshed therewith, said offset shafts mounted in roller bearings for axial movement imparted thereto by thrust loads in response to torque loads imposed on said helical gears by said output shaft, and thrust bal-

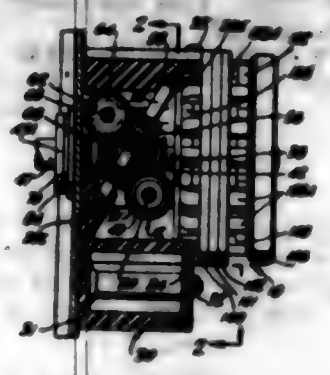


ancing lever means pivotally mounted on said supporting plate coaxially of said input shaft helical pinion and said output shaft gear including spaced bearing means between said thrust balancing lever means and said offset shafts at the ends thereof adjacent thereto, said bearing means incorporating a curved element complementally engaged with the ends of said offset shafts for readjusting the axial position of each of said offset shafts to balance the thrust loads thereon thereby equalizing the torque loads on said pinions.

2,863,325
GEAR TRAIN

Irwin Weinman Eisenberg and Clarence H. Dibble, Pasadena, Lee Burdell Armstrong, Jr., Rosemead, Kenneth Timothy Alfred Love, Azusa, and Chester Ray Rhodes, Whittier, Calif., assignors to Phaostron Instrument and Electronic Company, South Pasadena, Calif., a corporation of California

Application May 4, 1956, Serial No. 582,769
5 Claims. (Cl. 74—425)

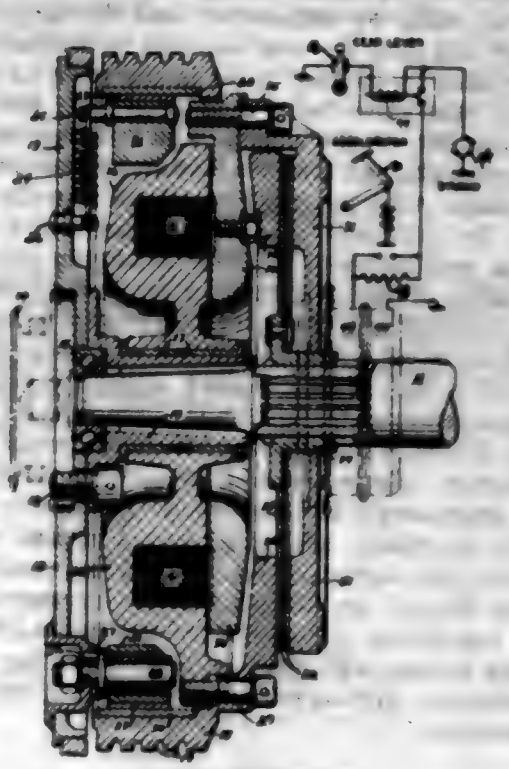


1. In a time clock wherein a synchronous clock motor drives a rotatable member with reduced speed, the combination comprising, a cylindrical hollow casing of size sufficiently small to fit inside of a conventional household outlet box, said casing having a closed front end and an open back end, a driven shaft rotatably mounted on said closed front end with its rotational axis aligned with said cylindrical casing, a motor mounted in the open back end of said casing and having its shaft aligned with the axis of said driven shaft, three worm type gear sets mounted in said casing and serving as the sole means for coupling said motor shaft to said driven shaft, said gear sets including a first shaft, a second shaft and a third shaft, said first shaft having a first worm type pinion and a first worm type gear, said second shaft having a second worm type pinion and a second worm type gear, said third shaft having a third worm type pinion and a third worm type gear, said motor shaft having a worm type pinion thereon meshing with said first worm type gear, said first shaft being rotatably mounted in a first pair of open slots in said casing which have their openings facing toward said back end of said casing to allow the ends of said first shaft to be inserted in said slots from said back end, said second first shaft having said first worm type pinion meshing with said second worm type gear on said second shaft, said second shaft being rotatably mounted in a second pair of open slots in said casing which have their openings facing toward said back end of said casing to allow the ends of said second shaft to be inserted in said second pair of slots from said back end, said second worm type pinion meshing with said third worm type gear on said third shaft, said third shaft being rotatably mounted in a third pair of open slots in said casing which have their openings facing toward the back end of said casing to allow the ends of said third shaft to be inserted in said third pair of slots from said back end, said driven shaft having a worm type gear thereon which meshes with said third worm type pinion on said third shaft, said first and third shafts each having its axis extending perpendicular to the aligned axes of said motor shaft and said driven shaft, and said second shaft having its axis inclined with respect to the axis of said motor shaft and being disposed between said first and third shafts.

2,863,326
ELECTROCENTRIFUGAL CLUTCHES

Jean Maurice, Ablon, and Michel Rist, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France

Application May 17, 1955, Serial No. 509,038
Claims priority, application France May 20, 1954
13 Claims. (Cl. 74—472)



1. An electro-centrifugal clutch for motor vehicles having a shift-lever for changing gears, comprising a driving shaft, a driven shaft, an intermediate member, a centrifugal friction clutch for automatically coupling said driving shaft and said intermediate member in dependence upon the rotational speed of the driving shaft, an electromagnetic clutch for selectively coupling said intermediate member and said driven shaft, an electric circuit for controllably electrically energizing said electromagnetic clutch, a switch in said circuit sensitive to the shift-lever, said switch being adapted to be opened to

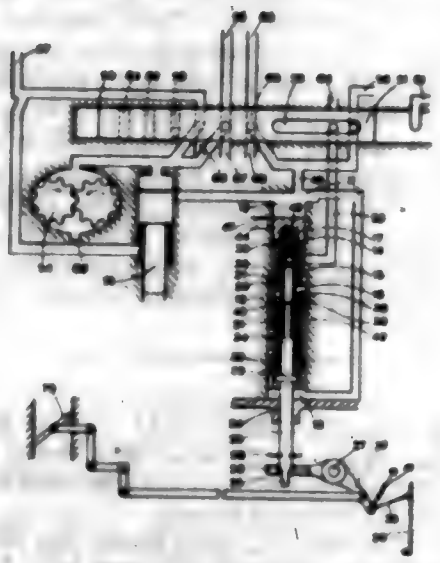
de-clutch said electromagnetic clutch when said shift lever is actuated and being closed to engage said electromagnetic clutch when said shift lever is released, said electromagnetic clutch having a magnetic element rotatably mounted with respect to one of said shafts, said intermediate member being disposed concentrically with and rigidly secured to said magnetic element.

2,863,327

POWER TRANSMISSION APPARATUS

Howard F. Hobbs, Leamington Spa, England, assignor to Hobbs Transmission Limited, Leamington Spa, England, a British company

Application May 4, 1956, Serial No. 582,883
Claims priority, application Great Britain June 13, 1955
6 Claims. (Cl. 74—472)



1. In a power transmission apparatus in which changes in ratio are made by engagement and disengagement of frictionally engaging devices operated by hydraulic pressure controlled by a relief valve in the form of a piston in a bore, said valve being associated with the throttle control member of the engine which drives the transmission apparatus so that the hydraulic pressure varies in accordance with the position of the throttle control member; the provision of a first spring which acts on the piston and provides a given minimum pressure, a second spring of higher rate than the first spring, a pin operatively connected to the throttle control member and arranged to effect compression of said second spring, said second spring being mounted within the relief valve piston and retained therein under compression and arranged to be ineffective when the throttle control member is completely released, but owing to its initial compression increasingly effective when the throttle opening is slightly increased, additional spring means of lower rating than the second spring, said spring means being carried by the pin so that when a given compression of the high rate spring is obtained by movement of the pin, the spring means will yield thereby providing a lower rate of increase with increased movement of the throttle control member.

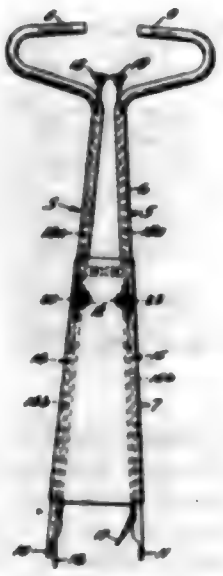
2,863,328

GUIDING AND CONTROL STRUCTURE FOR POWERED GROUND TRAVERSING IMPLEMENTS

Stanley V. Sommore, Minneapolis, Minn., assignor to Toro Manufacturing Corporation of Minnesota, Minneapolis, Minn., a corporation of Minnesota

Application June 9, 1955, Serial No. 514,361
6 Claims. (Cl. 74—488)

4. In guiding and control structure for a ground traversing implement, an elongated handle tubular having an upper and a lower portion, connector means pivotally connecting said upper and lower portions to permit said upper portion to be swung downwardly about a transverse axis to substantially parallel and contiguous position in order to collapse said handle into small compass for storage, a Bowden-type control wire extending lengthwise of and within said handle and having longitudinally spaced upper and lower portions, and a link member interposed between and being pivotally connected at its end



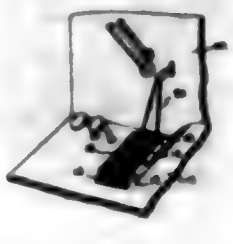
portions to said upper and lower portions of said control wire adjacent said connector means and holding said portions in spaced relation, said link bearing against said connector means and utilizing the same as a fulcrum during downward pivotal movement of said upper portion of said handle and thereby adjusting said control wire whereby said handle may be collapsed without kinking damage to said control wire.

2,863,329

GAS FEED FOR MOTOR VEHICLES

Lawrence C. Montgomery, Seneca, Mo.

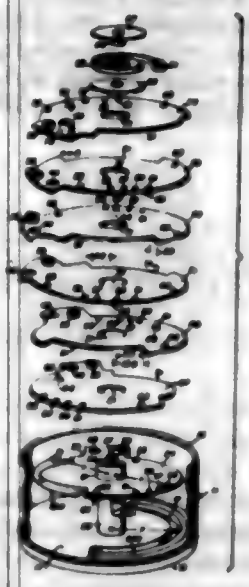
Substituted for abandoned application Serial No. 322,448, November 25, 1952. This application November 13, 1957, Serial No. 696,875
1 Claim. (Cl. 74—513)



In a fuel accelerator pedal for motor vehicles, a lever rockably mounted in the dash of a motor vehicle, one end having a lever and link connections associated with the throttle lever of a carburetor, a guide channel mounted on the floor board of the vehicle, a roller rotatably mounted transversely of said channel and positioned intermediate the length thereof, a foot treadle disposed within the guide channel in contacting engagement with said roller, said treadle being rockable on said roller upon application of pressure at the forward end thereof, and rearwardly slidable upon application of rearward pressure on said treadle and a yoke member connected between the forward end of said treadle and the other end of the first named lever.

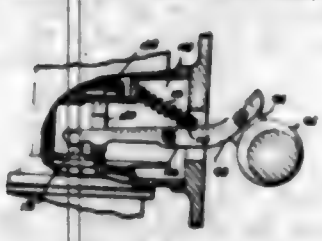
disposed between the lever hub and the shipper means move said pinion relative to said set of rotatable disks in

2,863,330
ROTATIONAL SETTING MECHANISM
John C. Moorhead, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army
Application April 5, 1957, Serial No. 651,119
4 Claims. (Cl. 74—526)
(Granted under Title 35, U. S. Code (1952), sec. 266)



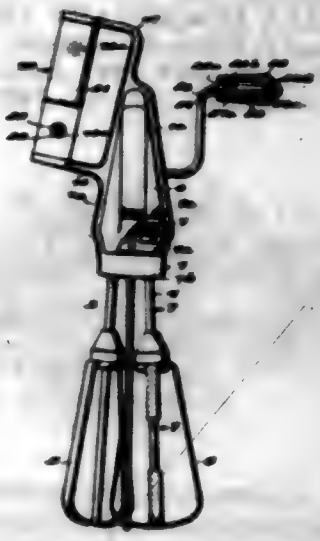
1. Means for producing selectively any of a plurality of discrete rotational displacements, said means comprising: a shaft; a base immovably fastened to one end of said shaft; a plurality of plates rotatably mounted on said shaft; releasable locking means holding the bottommost of said plates to said base in such manner as to prevent rotation of said plate in relation to said base; a plurality of additional releasable locking means holding each subsequent plate to the plate below it in such manner as to prevent the rotation of each plate in relation to the plate below it; means for selectively releasing said locking means; stop means for limiting the travel of said bottommost plate upon the release of the locking means holding it to said base; a plurality of additional stop means for limiting the travel of each subsequent plate in relation to the plate below it upon the release of the associated locking means; and spring means for applying a torque to the uppermost of said plates, so that upon selective release of said locking means said uppermost plate is displaced rotationally through a predetermined angle in relation to said shaft and said base.

2,863,331
FUEL PUMP ACTUATING LEVER
Morris Kutcher, New York, N. Y.
Application June 30, 1954, Serial No. 440,445
4 Claims. (Cl. 74—569)



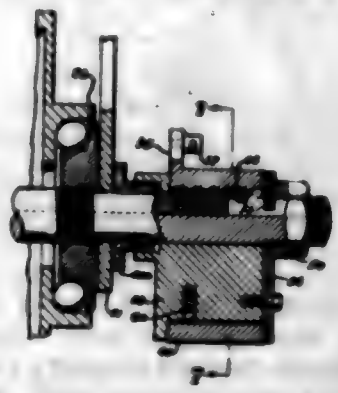
1. In a fuel pump operating mechanism, a rockable lever having a channel portion comprising a pair of spaced edges; a saddle carried by said lever having a rib disposed in said channel portion engaging a cam, means securing said saddle to said lever operable to permit sliding with respect thereto in a direction substantially parallel to a tangent to the curved area of said saddle, said saddle having shoulder means extending in said tangent direction, and slidably engageable with respective edges of said channel portion.

2,863,332
HAND OPERATED MIXER
Mark K. Maynard, Glendale, Calif.
Continuation of application Serial No. 135,696, December 27, 1949. This application March 11, 1955, Serial No. 493,751
4 Claims. (Cl. 74—665)



1. In a hand operated beater, a frame including a mounting base with passages for the extension of shafts therethrough from the outer face thereof providing mountings with a close bearing fit for the shafts, spaced side members for the frame extending from said mounting base on the side thereof opposite to said outer face, an operating handle having a portion extending between and mounted on both frame side members, driving connection means positioned between said frame side members and operatively connecting said operating handle to the shafts, an enclosure means for the driving connection means comprising two complementary casing members each formed with an open side and positioned with the open sides facing each other and arranged in snug engagement with inner sides of said frame, and means within said enclosure means for securing said casing members together in enclosing relationship.

2,863,333
SHIPPER OPERATING MECHANISMS FOR THREE SPEED BICYCLE TRANSMISSIONS
Albert R. Gelrick, Cleveland Heights, Ohio, assignor to The Murray-Ohio Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application June 8, 1953, Serial No. 360,177
6 Claims. (Cl. 74—750)



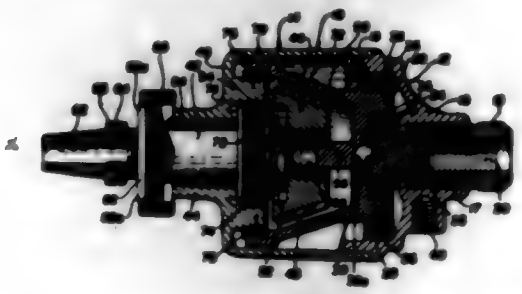
1. In a bicycle transmission of the planetary gear type having a shiftable gear cage supported on a bicycle axle, a non-rotating shipper means supported by the axle and operatively connected to the cage to shift the cage while permitting rotation of the cage: a shipper operating means comprising a rockable lever having a hub eccentrically surrounding and mounted on the axle with its rocking center line parallel to the axle and the non-rotating shipper means, and a motion multiplying means operatively

ing on a magnetically permeable workpiece, a magnetically permeable tool support plate mounted transversely

2,863,340
COMBINATION PILOT AND COUNTERSINK

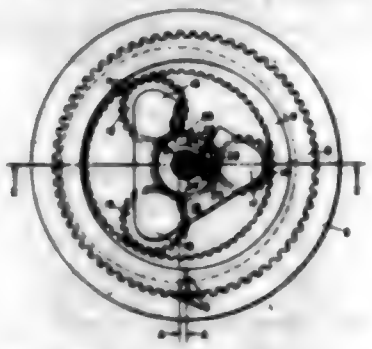
disposed between the lever hub and the shipper means for axially shifting the shipper means and gear cage when the lever is rocked.

2,863,334
REVERSIBLE POWER TRANSMISSION, ESPECIALLY FOR ROTARY TOOLS
William J. Babcock, Oakland, Calif.
Application September 27, 1957, Serial No. 686,700
9 Claims. (Cl. 74—788)



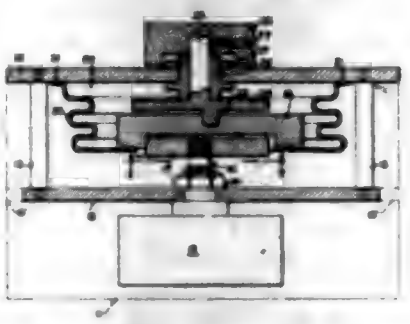
1. A power transmission arrangement, comprising a shaft, a friction clutch having relatively movable female and male clutch members, said male clutch member being firmly mounted upon said shaft for rotation therewith, means for applying rotary power to said female clutch member to apply rotary power through said male clutch member in a forward direction to said shaft, a planetary gear train including a ring gear secured to said female clutch member, an annular sun gear loosely mounted upon said shaft, and planetary gears interposed between said ring gear and said sun gear, ratchet teeth on the edge of said sun gear, and corresponding ratchet teeth on said male clutch member adapted to engage the ratchet teeth on said annular sun gear when said male clutch member is removed from said female clutch member, so as to apply the rotary power of said female clutch member through said planetary gear train in reverse direction and at a changed rate of speed to said shaft.

2,863,335
TORQUE LIMITER
Carl David Miller, Columbus, Ohio, assignor, by mesne assignments, to Jack & Heintz, Inc., Cleveland, Ohio, a corporation of Delaware
Application May 10, 1955, Serial No. 507,260
12 Claims. (Cl. 74—801)



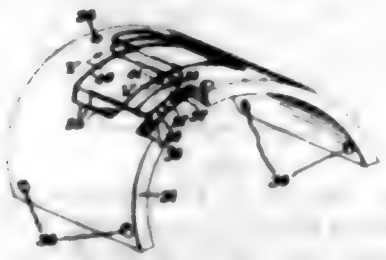
1. In combination: a housing having splines on its inner surface; a planetary gear train comprising a sun gear and an externally toothed planetary pinion mounted in said housing, a driving input shaft linked to said sun gear, a driven output shaft, and a carrying arm linking said pinion with said output shaft; a multiple friction disk torque-limiting device having alternately arranged sets of nonrotatable and rotatable disks normally spring pressed to frictional engagement, said nonrotatable disks being peripherally toothed to engage said splines on the inner surface of said housing, and said rotatable disks having internal teeth to mate with the external teeth of said pinion; said planetary gear train being arranged to move said pinion relative to said set of rotatable disks in such a manner that said pinion forces a continuous translating motion of said set of rotatable disks with respect to said set of nonrotatable disks.

2,863,336
APPARATUS FOR ACTUATING SEALED INSTRUMENTS
John Parstorfer, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application September 7, 1956, Serial No. 608,590
7 Claims. (Cl. 74—804)



3. Apparatus for transmitting rotary motion into a sealed casing comprising, a first shaft, means rotatably mounting said first shaft within said casing, a second shaft rotatably mounted exteriorly of said casing and axially aligned with said first shaft, a wobble gear comprising intermeshing internal and external gears, said external gear being secured to said first shaft, a flexible metallic bellows sealed at one end to said casing and at its other end to said internal gear to support the latter, eccentric means interconnecting said second shaft and said internal gear whereby rotation of said shaft will shift said internal gear bodily in a planar circle thus to cause rotation of said external gear and said first shaft.

2,863,337
METHOD OF MAKING A CURVED DIE
Edward M. Achley, North Wales, Pa., assignor to R. W. Hartnett Company, Philadelphia, Pa., a corporation of Pennsylvania
Application May 11, 1953, Serial No. 354,348
6 Claims. (Cl. 76—107)



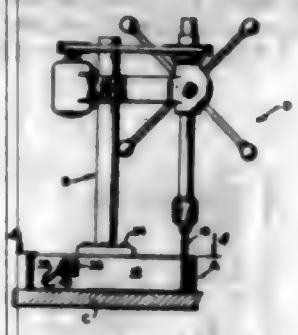
1. In a method of making a die the steps which comprise contacting a rule with a liquid metal which has a melting point lower than the melting point of the rule, said liquid metal having a substantially flat substantially horizontal upper surface, said rule having an upper edge which extends generally along and adjacent said surface, and said rule having a body portion which extends below said surface, solidifying the metal thereby bonding it to said rule below said surface, and bending the combined rule and solidified metal converting the flat upper surface to a curved surface.

2,863,338
MAGNETIC BASE TOOL SUPPORT
Donald F. Stewart, San Jose, Calif.
Application January 31, 1957, Serial No. 637,470
7 Claims. (Cl. 77—7)

1. A magnetic base for a tool comprising an enclosing wall, the lower edge of which defines a plane for mount-

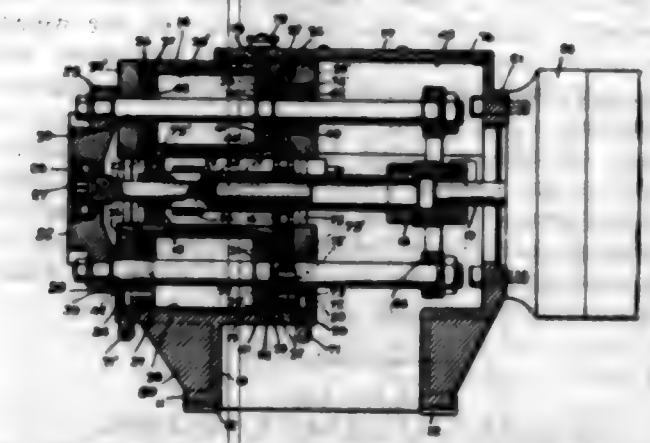
rotating workpiece, a hollow cylindrical headpiece, both ends of all said identical [illegible]

ing on a magnetically permeable workpiece, a magnetically permeable tool support plate mounted transversely within said wall and spaced marginally therefrom, guide means retaining said plate against vertical displacement while leaving it free for lateral adjustment within the limits provided by its marginal clearance from the wall, a first electromagnet in said housing spaced downwardly from said tool support plate and terminating substantially flush with the bottom of said housing for anchoring the housing securely to a magnetically permeable workpiece



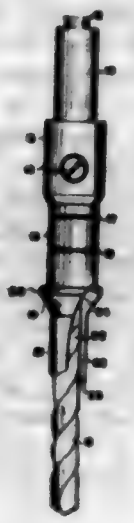
upon which the housing is positioned, a second electromagnet mounted co-axially above the first magnet and terminating closely beneath the tool support plate, and switch means for sequentially connecting the two electromagnets to a predetermined source of electrical current, thereby energizing first the first electro-magnet and secondly both first and second magnets, thereby first to magnetically attach the base to a magnetically permeable workpiece upon which the latter is mounted, and secondly to magnetically anchor the tool support plate in adjusted condition in the housing.

2,863,339
HYDRAULIC AIR DRILLING UNIT
Melvin H. Emrick, Manhasset, N. Y.; Dorothea A. Emrick, executrix of said Melvin H. Emrick, deceased
Application January 26, 1956, Serial No. 561,542
15 Claims. (Cl. 77—33.5)



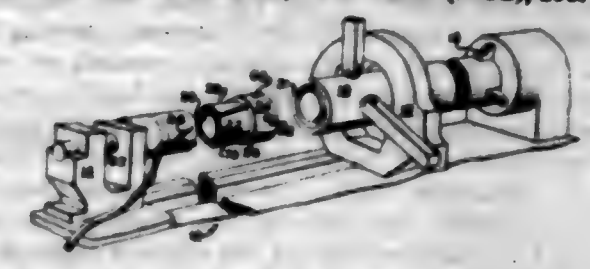
1. A drilling unit of the character described, comprising a casing, a base for supporting said casing, a pair of air cylinders at one end portion of the casing, pistons in said cylinders, the pistons having rods protruding through inner and outer ends of the cylinders, means coupling the rods at the outer ends of the cylinders, means coupling the inner ends of the rods within said casing, an elongated tubular drive shaft supported intermediate said cylinders and having key means, a driven shaft mounted in and movable longitudinally of the drive shaft and including a keyway receiving the key means of said drive shaft, said driven shaft being supported in the first named means substantially in alinement with the outer ends of said rods and including means for coupling a tool therewith, and means comprising an hydraulic cylinder in operative engagement with a part on said first named means for controlling the speed of operation of said tool.

2,863,340
COMBINATION PILOT AND COUNTERSINK DRILL
Maxwell Ingram, Dumont, N. J.
Application June 11, 1956, Serial No. 590,448
1 Claim. (Cl. 77—66)



A combination pilot hole, shank clearance, countersink and counterbore drill comprising a generally cylindrical body provided with a channel of circular cross-section extending therethrough adapted to receive a drill bit and including a shank portion at the upper end of said cylindrical body adapted to be received within the chuck of a drilling machine for securement therein during the operation thereof, a cylindrical collar disposed below said shank portion and concentric therewith, said cylindrical collar being provided with a threaded recess extending radially through said collar, a set screen disposed within said recess for engagement with the shank of said drill, a counterbore shaft portion disposed below said collar, said shaft portion being of smaller diameter than said collar portion and being provided with circumferential grooves at axially spaced intervals forming depth indicia therefor, a small cylindrical portion of larger diameter than said counterbore shaft disposed below said shaft and a generally conical countersink element disposed below said cylindrical portion, a cylindrical clearance drilling element disposed at the frustum of said conical countersink element, said counterbore shaft, countersink element and shank clearance drilling element being concentric with respect to said channel and having a vertical slot, one wall of said slot comprising a cutting edge extending in a plane through the center of said channel and the other wall of said slot being spirally disposed with respect to said channel, said slot extending into said counterbore shaft.

2,863,341
TREPANNING APPARATUS
Nicola P. Renato, Hyde Park, and Sven E. Siemon, Roxbero, Mass., assignors to the United States of America as represented by the Secretary of the Army
Application April 29, 1955, Serial No. 505,872
3 Claims. (Cl. 77—69)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A device for boring by trepanning a rotating workpiece including a cylindrical bar actuatable against the

force members, and cam means adapted to flexibly a member

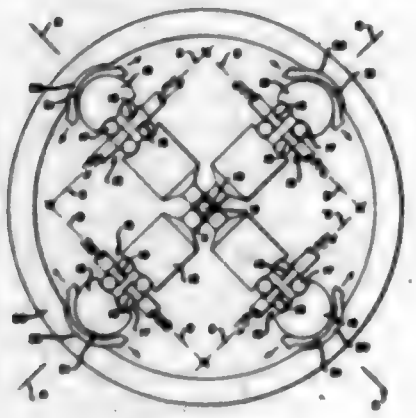
rotating workpiece, a hollow cylindrical headpiece mounted on one end of said bar for engagement with the workpiece, said headpiece being of larger diameter than said bar to form an annular shoulder at the junction thereof, a cutting tool having a channel terminated by a spoonlike depression in the leading face thereof normal to a cutting edge of said tool, said cutting tool being replaceably mounted in the forward end of said headpiece for cutting an annular groove in said workpiece to receive said headpiece, a well in said bar for receiving without circumferential engagement the core produced by said groove, a pair of rollers rotatably mounted in said headpiece on axles parallel with the axis of the workpiece, said rollers being disposed to take the thrust imposed against said headpiece by said cutting tool, a forked passageway in said headpiece leading from said shoulder for communication with said rollers, a hole leading from said shoulder to said channel in said cutting tool, and tubes disposed along said bar for communication with said hole and said passageway for supplying oil at more than 2000 p. s. i. pressure to said rollers and to said channel to lubricate and cool the working areas of said cutting tool.

2,863,342

STROKE ADJUSTMENT MEANS FOR FORMING MACHINES

Gerhard H. Appel and Erich Tlaker, Windsor, Ontario, Canada, assignors to Appel Process, Ltd., Windsor, Ontario, Canada, a corporation of Canada

Application August 16, 1956, Serial No. 604,372
4 Claims. (Cl. 78—20)



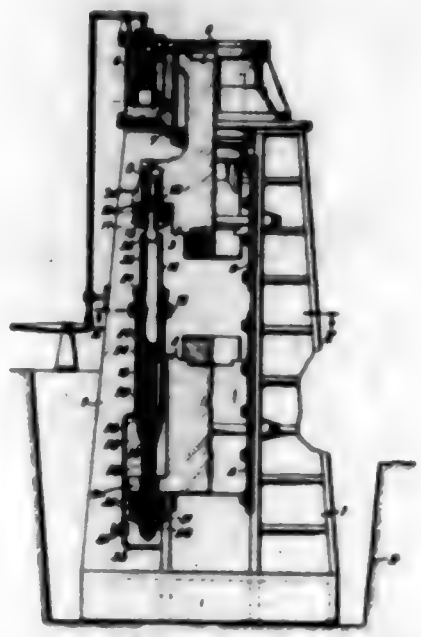
1. In a forming machine, a plurality of dies arranged radially and symmetrically about a longitudinal axis and having facing surfaces which define a die throat, each die having a die moving means comprising two opposed and oppositely reciprocating driver rods, the rods being interconnected at their ends so that they and their dies all move simultaneously, the machine having fixed structure, and a backing means at each die radially arranged between the fixed structure and the driver rods, the improvement which comprises a means for adjusting the positions of the strokes of all the dies, said adjusting means including a means for simultaneously moving the backing means for all the dies radially towards or away from the dies, the means for moving the backing means comprising, for each die, a pair of opposed and oppositely moving overlapping curved wedges which may be separated or telescoped, means for moving corresponding wedges of all pairs separately of one another, and also separately and independently of the other wedges of all the pairs, whereby any or all of the wedges may be moved circularly as desired for adjusting them transversely of the radial axes, and means for simultaneously moving both wedges of all pairs identically for adjusting all pairs along the radial axes simultaneously and identically.

2,863,343

COUNTERBLOW HAMMERS

Josef Stelnfort, Duisburg-Hochfeld, Eugen Kreutz, Duesseldorf-Unterrath, and Erich Holstein, Duisburg, Germany, assignors to Schloemann A. G., Duesseldorf, Germany

Application April 11, 1955, Serial No. 500,572
Claims priority, application Germany April 15, 1954
3 Claims. (Cl. 78—42)



1. A counterblow hammer including an upper ram, a hydraulic motor for moving said upper ram upwardly and downwardly, a lower ram movable upwardly and downwardly relative to the upper ram, with the weight of the lower ram effecting its downward movement, and means operatively interconnecting said rams, the interconnecting means comprising a lateral lug on each ram, a pressure cylinder arranged between said lugs, pistons movable in the pressure cylinder, a piston rod for each piston and means connecting each rod to each lug whereby the downward movement of the upper ram transmits an upward movement to the lower ram to move the lower ram toward the upper ram.

2,863,344

APPARATUS FOR BUTT WELDING

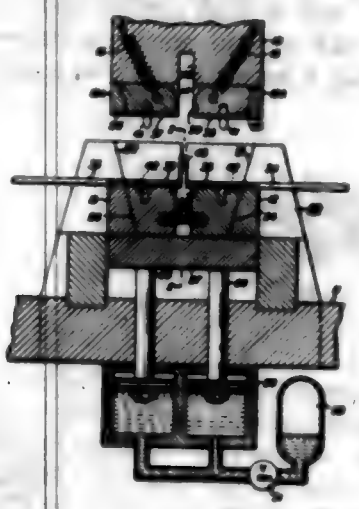
William A. Barnes, Utica, N. Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware

Application January 13, 1955, Serial No. 481,596
5 Claims. (Cl. 78—82)

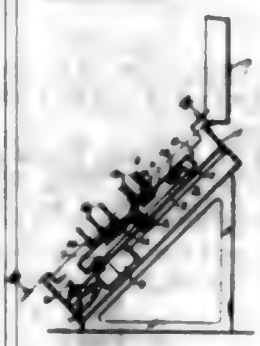
1. Apparatus for forming workpieces, comprising first and second opposed force members adapted to close together in a work portion of a work cycle, first and second opposed die members positioned between said first and second force members, said first die member having a lock surface member projecting therefrom, said second die member having a recess socket to receive said lock surface, said lock surface member and said recess socket having a close guide interfitting relationship, said first and second die members having first and second cooperating die surfaces aligned with respect to one another from said lock surface and recess socket as a reference location, said first and second die members having a work cycle path transverse to the path of closing movement of said

disposed in a spiral, the slope of said spiral increasing at

force members, and cam means adapted to develop a transverse force component upon said die members from the closing movement of the force members in the direction of the work cycle path of said die members.



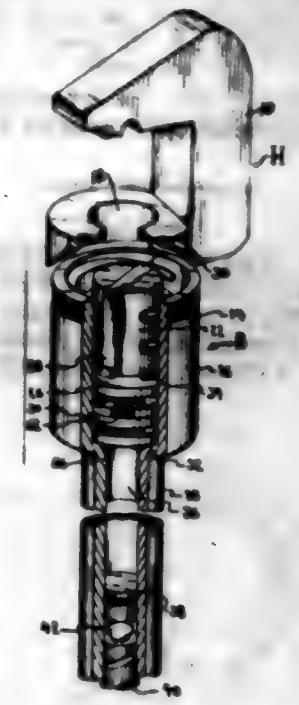
2,863,345
WATCH WINDING MACHINE
René A. Flechter, Douglaston, N. Y.
Application August 12, 1955, Serial No. 527,985
7 Claims. (Cl. 81—75)



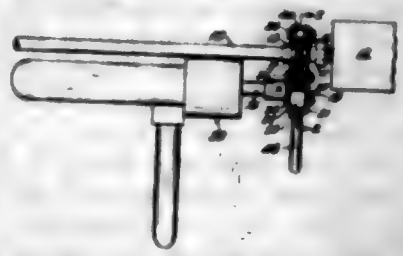
1. A machine of the character described comprising a rotatable support, driving means for rotating said support continuously in a single direction about its axis, an article-supporting stand rotatably mounted on said support through an axle parallel to the axis of said support and radially spaced therefrom, a friction wheel secured to said axle, a relatively fixed surface mounted in position to be frictionally engaged by said friction wheel at a point between the axle of said wheel and the axis of the support and another relatively fixed surface mounted in position to be frictionally engaged by said wheel at a point farther from said axis than the distance from said axis to said axle, said fixed surfaces being angularly spaced apart around said axis and said friction wheel being disengaged from said surfaces through a substantial part of its path of travel, whereby said wheel and stand are free to rotate about said axle while so disengaged.

2,863,346
HAND OPERATED CRIMPING TOOL
Robert F. Cebenigh, Harrisburg, and Martin L. Klingler, Hershey, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Application January 17, 1957, Serial No. 634,756
10 Claims. (Cl. 81—15)

1. A device for crimping electrical connectors onto conductors in two stages including a first fluid operated crimping die member, a second fluid operated crimping die member, and a single fluid system for operating both die members including means for operating both die members simultaneously until the first die member reaches the limit of its travel and then permits the second die member to continue its travel, until the connector is crimped to the conductor.



2,863,347
TORQUE-TRANSMITTING TOOL FOR COUPLING NUTS AND THE LIKE
Gorman R. Nelson, Sioux Falls, S. Dak.
Application April 26, 1956, Serial No. 580,746
6 Claims. (Cl. 81—52.4)



3. A tool for applying torque to a nut having a substantially circular periphery with a plurality of teeth formed therein, said tool comprising a frame, an externally toothed rotary driving wheel on the frame with the teeth thereof adapted for meshing with the teeth of the nut, a cradle structure on the frame and including spaced nut-engaging portions for holding the nut and wheel teeth in meshed driving relation, said nut-engaging portions being disposed within a semi-circular arc which includes the driving wheel and which substantially subscribes the peripheral contour of the nut, whereby the wheel and cradle structure engage only one side of the nut periphery and whereby when torque is applied in one direction by the wheel, the nut is positively gripped by the wheel and cradle structure, and torque applying means connected with the wheel to facilitate application of torque to the nut.

2,863,348
EXTRACTOR
David L. Conger, Middle Haddam, Conn.
Application December 6, 1955, Serial No. 551,378
2 Claims. (Cl. 81—71)

1. In a twist extractor, a wrench engageable shank portion, a working portion extending axially of said shank and having a triangular cross section, and a plurality of work engaging ribs on said working portion formed by the juncture of adjacent sides of said working portion, said working portion having a twist whereby said ribs are

2,863,353

2,863,354

disposed in a spiral, the slope of said spiral increasing from the end of said ribs opposite said shank to the

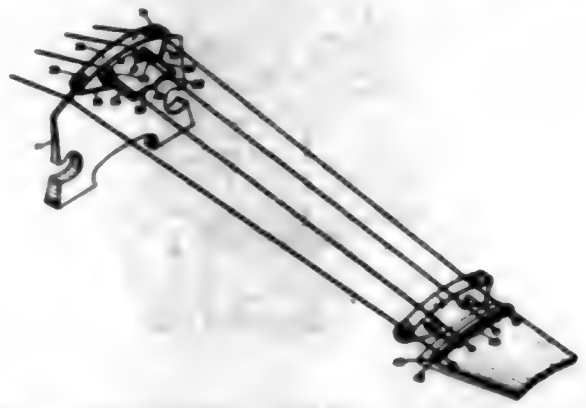
approximate longitudinal mid-point of said working portion.

2,863,349
PIVOTAL-JAW WRENCH FOR TURNING CYLINDRICAL OBJECTS HAVING BEVELED CORNERS
Eric Clifford Turner, Hampton, England
Application October 25, 1954, Serial No. 464,538
1 Claim. (Cl. 81—99)

For turning about a turning axis a rotatable object having a cylindrical periphery which merges into oppositely beveled surfaces and which is coaxial with its turning axis, a wrench comprising, in combination, first and second arcuate gripping members each being formed with interior, oppositely sloping arcuate gripping surfaces that complement such beveled surfaces of a rotatable object, and with an interior cylindrically shaped surface disposed between said gripping surfaces, said interior cylindrically shaped surface having an axial extent smaller than that of such cylindrical periphery of a rotatable object, whereby only said oppositely sloping gripping surfaces contact such rotatable object, said first gripping member having an arcuate length approaching but not exceeding 180° and said second gripping member having an arcuate length at least slightly exceeding the difference between 180° and the arcuate length of said first gripping member, said gripping members being connected to each other at one of their respective ends for movement relative to each other about a pivot axis into and out of an operative position wherein the gripping surfaces of both of said gripping members together form a composite arcuate gripping surface having an arcuate length at least slightly exceeding 180° so that when said gripping members are in their operative position, they may grip such beveled surfaces of a rotatable object throughout an arcuate length at least slightly exceeding 180°; and means connected to one of said gripping members at the end thereof nearest said pivot axis for applying thereto, while said gripping members are in their operative position, a turning force about said pivot axis in a direction which will urge said gripping members toward each other, whereby a rotatable object will be clamped between said gripping members and will simultaneously have a force applied thereto which will tend to rotate such object about its turning axis.

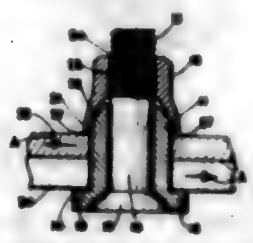
2,863,350
MUTE FOR A STRINGED INSTRUMENT
Si-hon Ma, Cleveland, Ohio
Application November 12, 1954, Serial No. 468,184
7 Claims. (Cl. 84—310)

1. A mute for a stringed musical instrument having a bridge curved along its top edge comprising: a length of soft, flexible tubing adapted to lie along the top edge of and conform to the curvature of said bridge when in muting position, thereby being perpendicular to the instrument strings; a bearing member mounted within and engaging each end of said tubing; and mounting means connected to each of said bearing members, said mounting means being a length of wire extending out of each



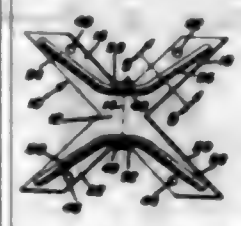
end of said tubing bent back upon itself to form a transverse section which passes under and engages the underneath surface of a string of the instrument and bent to form an end section extending in a direction away from said tubing, each of said end sections having a portion adapted to lie above and in engagement with the top surface of a string of the instrument.

2,863,351
EXPANDING FASTENER HAVING THREADS OF OPPOSITE HAND TO MAINTAIN THE PARTS IN ENGAGEMENT
Rudolph M. Vaughn, Santa Ana, Calif.
Application February 20, 1956, Serial No. 566,442
5 Claims. (Cl. 85—1.4)



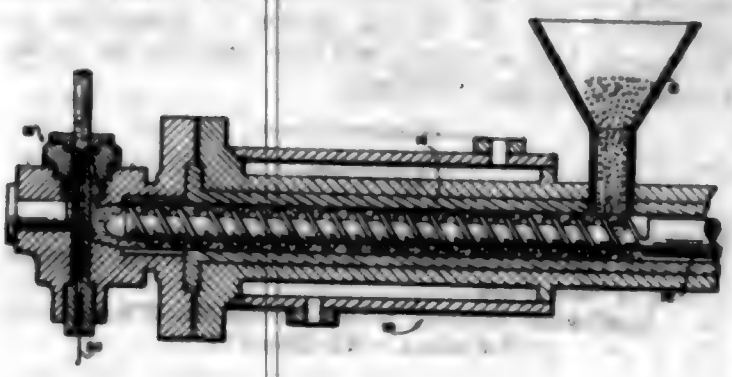
1. A blind fastener adapted to be passed through registered openings in members to enable securement of the members together from one side thereof, comprising: a threaded screw having a head; a sleeve adapted to receive said screw and said head, the end of said screw extending beyond the end of said sleeve; an expandable nut having threads in threaded engagement with the end of said screw such that turning of said screw in one direction moves said nut axially towards said end of said sleeve, said nut being of a material softer than the material of said sleeve; and external secondary threads on said end of said sleeve for engagement with the internal adjacent end portion of said nut, said secondary threads having a pitch greater than zero and opposite to the pitch of said threads on said nut so that said secondary threads are inclined with respect to the axis of said nut and exert a component of force on said nut to drive said nut axially over said end of said sleeve when said screw is turned in said one direction, said nut including a recessed portion extending interiorly from said adjacent end of greater inside diameter than the outside diameter of said screw, said recessed portion receiving said end of said sleeve whereby said nut will radially expand over said end of said sleeve upon continued turning of said screw.

2,863,353
CLIP
Frank J. Mikesic, Johnstown, Pa.
Application March 11, 1957, Serial No. 645,857
5 Claims. (Cl. 85—11)



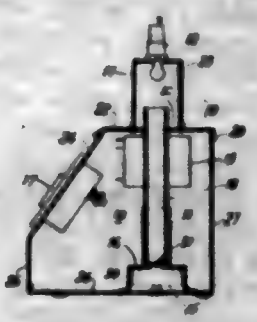
1. A building wall corner clip for attachment to adjacent lath panels in order to connect said panels but enable them to shift slightly with respect to each other in response to expansion and contraction of the walls, said corner clip comprising an elastic metal body having a pair of parallel edges spaced from each other, said body having parts joined to include an obtuse dihedral angle, a pair of coplanar arms protruding from one side edge of one of said parts of said body, a second pair of coplanar arms protruding from the opposite side edge of the other of said parts of said body, each of said arms having a prong at the outer extremity thereof to grip the lath panels, and ribs extending across said body and having parts which are parallel to said parallel edges to increase the elasticity of said body.

2,863,353
MANUFACTURE OF PLASTIC INCENDIARY MATERIALS
Kenneth John Brimley, Stevenston, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application March 26, 1956, Serial No. 574,038
Claims priority, application Great Britain June 8, 1955
1 Claim. (Cl. 86—1)



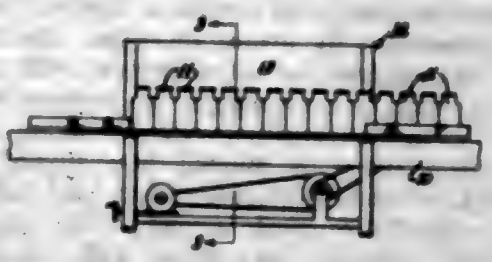
A process for the production of thermoplastic extruded incendiary cords comprising at least one oxidising agent, at least one reducing agent and at least one thermoplastic binder which comprises forming substantially in the absence of any reducing agent at least one mixture comprising at least one oxidising agent and a thermoplastic binder and substantially in the absence of any oxidising agent at least one other mixture comprising at least one reducing agent and a thermoplastic binder, reducing the said mixtures to chip form by cutting or grinding, forming an intimate admixture of said agents and binder by feeding them into a heated extrusion machine of the worm type and hot working them together into said admixture and extruding the admixture from said machine.

2,863,354
TURBIDIMETER
Eric K. Diehl, William T. Hage, and Robert E. Matty, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey
Application September 29, 1953, Serial No. 383,698
1 Claim. (Cl. 88—14)



A portable turbidimeter comprising a light impervious casing having a bottom wall, enclosing side walls and a top wall having an aperture therein, a photo-electric cell attached to the bottom wall in axial alignment with said aperture, a removable light impervious cover box enclosing said aperture to prevent any extraneous light from entering into said casing, a light source mounted in said cover box in axial alignment with said aperture and photo-electric cell, the light from said light source being the sole light arranged to be incident upon said photo-electric cell, a variable resistor mounted in said casing and connected in series with said light source to vary the intensity of the light source, an elongated open top receptacle for containing a test substance arranged to be removably mounted in said casing, said receptacle being positioned between said photo-electric cell and light source in light intercepting relationship therewith, a stand positioned above the photo-electric cell for receiving and positioning said receptacle in said casing in axial alignment with said photo-electric cell, aperture and light source, said receptacle when positioned in said stand projecting upwardly through said aperture so that the top of said receptacle extends into said cover box whereby the light rays from the sole light source pass vertically through the top of the receptacle and longitudinally through the entire body of the test substance, which is predominantly disposed in said light impervious casing, to be incident on said photo-electric cell, a cell battery positioned within the casing and disposed in the light circuit to provide said circuit with a steady current flow at constant voltage to insure a light of constant intensity to be passed through the body of the test substance and an energy output indicator mounted on said casing and connected to said photo-electric cell to accurately measure the amount of current generated by the light passing through the substance to the said photo-electric cell.

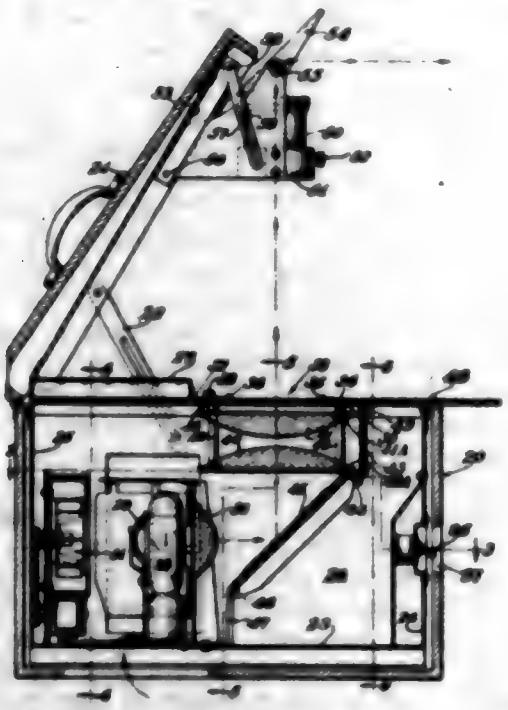
2,863,355
OPTICAL INSPECTION UNITS FOR BOTTLED GOODS
Harold A. Ledingham and Cornelius E. Smith, Godfrey, Ill.
Application March 29, 1955, Serial No. 497,568
2 Claims. (Cl. 88—14)



1. For use with a main bottle conveyor an inspection device for bottled goods comprising a support for sup-

porting the conveyor, a light inspection station on said support spaced from the main conveyor, a secondary conveyor positioned on said support between the main conveyor and the light inspection station, an inspector's table carried by said support and positioned to overlie the portion of the main conveyor in front of said light inspection station, bottle deflecting means carried by said support to guide the bottles from the main conveyor on to said secondary conveyor past the light inspection station between said station and said table so that the light from the station will fall on the sides of the bottles opposite to the bottle sides exposed to the eyes of the inspector positioned at said table, and power means for driving the secondary conveyor at a speed less than the speed of the main conveyor for causing the bottles to pass the station in bottle to bottle contact to prevent the direct passage of light rays from said station to the eyes of the inspector.

2,863,356
SHIFTABLE FILM BED AND OPTICAL SYSTEM FOR PROJECTORS
Ernest W. Goldberg, Wilmette, Ill.
Application August 30, 1951, Serial No. 244,298
11 Claims. (Cl. 88—24)

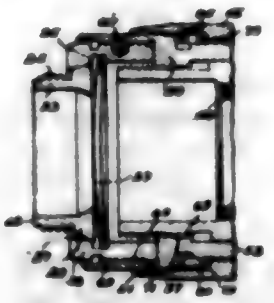


1. In a picture projection apparatus, in combination, a housing having a top opening, a cover for said opening, a horizontally extensive trackway close to said top opening, a film bed slidable in said trackway from a stowed position near the back region of the housing to a projecting position near to the front thereof, a light source in the housing underlying said trackway near said back region and underlying said bed when the latter is moved to said stowed position, projection lens means on said cover and disposed in optical alignment with said bed when the cover is in a predetermined open position and said bed is moved into said projecting position, and light-reflecting means pivotally attached to said bed to move therewith and having a relatively stationary pivoting connection by means of which said reflecting means is pivoted into optical alignment with said light source and said bed responsive to movement of the latter into projecting position, and by means of which said reflecting means is pivoted into stowed position closely adjacent said light source when said bed overlies the latter, whereby to create a void in said housing underlying said projecting lens means such that the latter will fit into said void when said cover is closed upon the housing.

2,863,357
METHOD FOR ASSEMBLY OF CUSHIONING DEVICES
Bertil E. Peterson, Chicago, Ill., assignor to Cardwell Westinghouse Company, a corporation of Delaware
Original application October 19, 1954, Serial No. 463,163. Divided and this application September 12, 1955, Serial No. 533,721
1 Claim. (Cl. 29—446)

The method of assembling a cushioning unit of the type which includes a system of friction devices enclosed within a helical spring and which, when the unit is compressed by applying closing forces to both ends thereof, develops lateral friction forces within the system and against the internal surface of said spring, said friction system including a friction post having wedge surfaces thereon, a plurality of friction shoes having outwardly extending bottom flanges, said shoes being positioned around the post and having wedge surfaces cooperating with those on the friction post for developing lateral forces upon relative longitudinal movement between the post and said friction shoes, a spring seat telescopically mounted over said friction shoes and resting on said bottom flanges, and a plurality of friction members longitudinally spaced from said friction post and having locking shoulders interengageable with oppositely facing shoulders on said friction post for limiting longitudinal separation of the post and friction members, said friction members having outwardly extending top flanges with said helical spring extending between and bearing against said top flanges and said spring seat, respectively, said method comprising the steps of assembling the friction shoes on said post, applying the spring seat thereover, telescopically placing said helical spring over said post and shoes with the spring bearing against said spring seat, then compressing the spring by applying a closing force to both ends thereof while maintaining freedom of movement of said post and shoes, then applying said friction members while the spring is thus compressed and the friction system is inoperative to interengage said shoulders, and then releasing the spring to complete the assembled unit.

2,863,358
PHOTOGRAPHIC LENS MOUNT
George K. Czarnikow, Brighton, N. Y., assignor to Wollensak Optical Company, Rochester, N. Y., a corporation of New York
Application January 3, 1955, Serial No. 479,443
5 Claims. (Cl. 88—57)



1. A lens mount adapted to be screwed onto a threaded part of a photographic camera and capable of easy orientation with respect to the camera so that a scale carried by the lens mount may be brought to a visually accessible position, said mount comprising a ring shaped first member having a screw thread adapted to be screwed onto a threaded part of a photographic camera, a tubular sec-

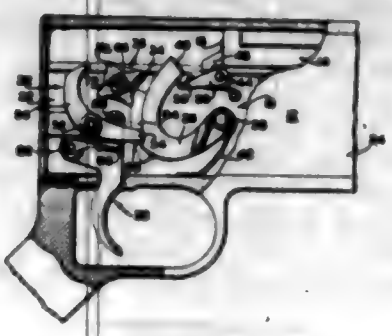
ond member supported from said first member and serving in turn to support a lens and a scale index mark, said second member being rotatable relative to the first member substantially about the optical axis of the lens as a center of rotation, so that by turning one of said members relative to the other the scale index mark may be oriented to the side of the second member which is most conveniently visible when said first member is screwed home relative to the camera, separable complementary interlocking inclined tapered surface parts on the first and second members, respectively, for preventing relative rotation of said two members, said interlocking parts being released for rotation by axial movement of one of said members relative to the other in one direction, and a spring tending to move said two members relative to each other axially in the opposite direction, to tend to hold said complementary parts in effective interlocked non-rotary condition by increasing the degree of friction between said inclined tapered parts, said two parts being capable of rotary orientation relative to each other when moved axially relative to each other against the force of said spring.

2,843,359

FIRE CONTROL MECHANISM FOR AUTOMATIC FIREARMS

William R. Kunz, Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army

Application July 25, 1957, Serial No. 674,264
4 Claims. (Cl. 89—131)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. For automatic firearms provided with a reciprocal bolt and a hammer pivoted from a firing to a retracted position by the bolt during movement from a battery to a recoil position, a fire control mechanism comprising a selector sear for releasably holding the hammer in a cocked position between the retracted and firing positions, a trigger for manually actuating said selector sear to release the hammer, rotary means engageably interposed between said selector sear and the hammer to cooperate with said trigger in releasably blocking movement of the hammer from the retracted to the cocked position to automatically stop operation of the firearm after a predetermined number of rounds have been fired when said selector sear is held by said trigger in a hammer-release position, and means rotated through alternate engagement by the hammer and the bolt for rotating said rotary means one revolution during the firing of such predetermined number of rounds.

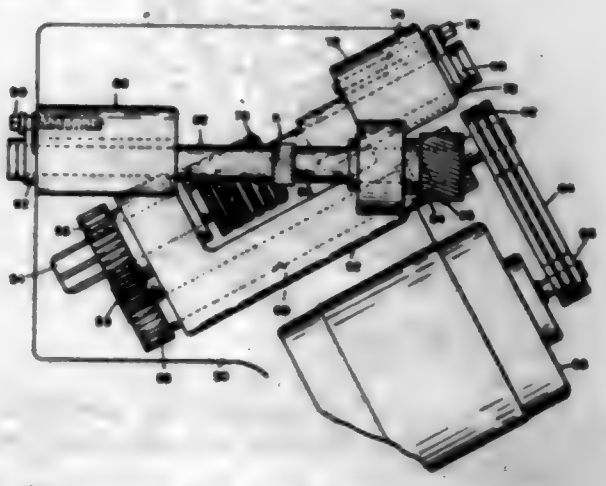
2,843,360

MACHINE AND METHOD FOR PRODUCING GEARS

Walter S. Praeg, Detroit, Mich.

Application August 23, 1954, Serial No. 451,555
21 Claims. (Cl. 90—1.6)

5. A machine for producing gears comprising a rotary gear support and a rotary tool support disposed with their axes non-intersecting and crossing at an angle between 5 degrees and 45 degrees, drive means for driving said supports in rotation in accurately timed relation, feed means for advancing said tool support in a roughing stroke parallel to its axis and for arresting said tool support in predetermined axially advanced position, and means for thereafter advancing said work support in a finishing stroke parallel to its axis to a predetermined axially advanced position.



15. The method of making gears which comprises positioning a gear blank and a cutter having a plurality of axially spaced sets of cutting teeth, each set being disposed in a plane perpendicular to the axis of the cutter, and the sets being progressively stepped longitudinally of the cutter, with the axes of said gear blank and cutter crossed at an angle between 5 degrees and 45 degrees, driving the gear blank and cutter in timed relation, relatively feeding the gear blank and cutter in a direction parallel to the axis of the cutter to rough-cut teeth in the gear blank, and thereafter relatively feeding the gear blank and cutter in a direction parallel to the axis of the gear blank to move the gear blank fully through a plane containing a single set of cutting teeth to finish cut the gear teeth.

19. A rotary cutter for use in generating a gear from a solid blank by rotation at cutting speed in engagement at crossed axes therewith while being fed axially, said cutter comprising an elongated cylindrical body having axially spaced stepped sets of generating teeth, the teeth of each set being disposed in a plane perpendicular to the axis of the cutter, the corresponding teeth of the several sets being disposed in longitudinally aligned series, the teeth of each series consisting of roughing teeth for cutting tooth spaces in the solid blank and at least one finishing tooth, adjacent longitudinally aligned roughing teeth being progressively stepped in height by an amount which precludes the use of the tool as a broach, the amount of the steps between adjacent teeth being several hundredths of an inch.

2,863,361

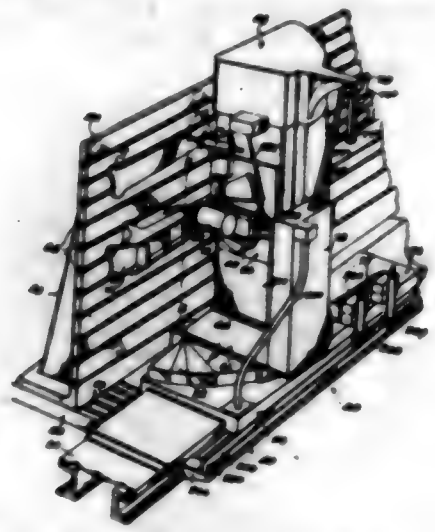
HIGH-SPEED FLOOR TYPE CONTOUR MILLING MACHINE

Jesse Daugherty, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin

Application November 9, 1954, Serial No. 467,771
9 Claims. (Cl. 90—13)

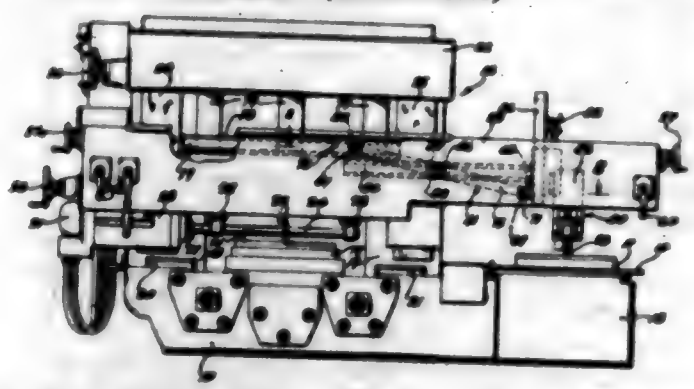
1. A floor type contour milling machine comprising, in combination a relatively long fixed base, a sliding base mounted on said fixed base for reciprocation therealong and having an upper horizontally extending surface, a horizontal swivel base mounted on said upper surface and movable in an arcuate path thereon relative to said sliding base, an upstanding column fixed to said swivel base, a vertical saddle mounted on said column for reciprocation vertically thereof, a vertical swivel saddle mounted on said vertical saddle and movable in an arcuate path thereon, a headstock mounted on said vertical

swivel saddle, a profiling tracer assembly for controlling the reciprocation of said sliding base and of said vertical



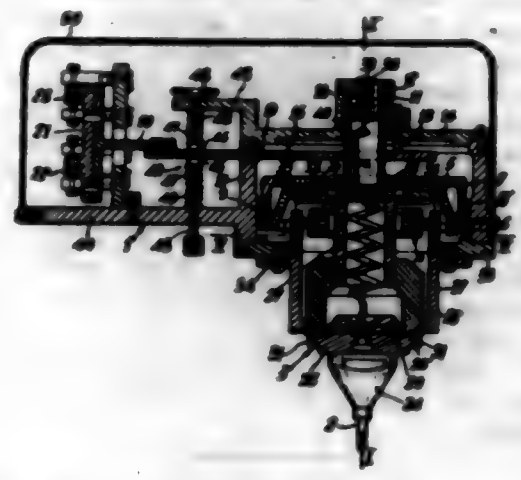
saddle, and a swivel tracer assembly for controlling the arcuate movement of said swivel base and of said vertical swivel saddle.

2,863,362
TRACER MECHANISM
Theodore A. Wetzel and Joseph R. Roubik, Milwaukee, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Application November 10, 1955, Serial No. 546,197
5 Claims. (Cl. 90—13.1)



1. In an automatic pattern controlled machine tool; a frame; a movable member supported by said frame; a cutter operably carried by said movable member for bodily movement with it in position to operate upon a workpiece on said frame; a tracer mechanism slidably supported by said movable member for movement in the same direction as the movement of said movable member; a follower carried by said tracer mechanism in position to engage the pattern and connected to control the movement of said movable member in accordance with the contour of the pattern to thereby effect movement of said cutter relative to the workpiece so that said cutter will reproduce the pattern in the workpiece; a first slide slidably supported by said movable member for movement relative to said movable member in the plane of movement of said movable member but in a different direction; a second slide slidably supported by said frame for movement in a path of travel parallel to the path of travel of said first slide; and a bar pivotally connected at one end to said tracer mechanism and at its opposite end to said second slide, said bar being also pivotally connected at a point intermediate its ends to said first slide; whereby said tracer mechanism will move with said movable member in response to the contour of the pattern as detected by said follower, and said bar will also cause a proportional movement of said tracer mechanism relative to said movable member in the same direction as the movement of said movable member so that the reproduction in the workpiece will differ from the pattern in size.

2,863,363
FEELER ARRANGEMENT FOR AUTOMATIC COPYING MACHINE
Wolfgang Schmid, Gagny, France
Application March 21, 1957, Serial No. 647,687
Claims priority, application France August 31, 1951
14 Claims. (Cl. 90—62)



1. A tracing device, comprising in combination, a support means; a spindle member having a contact feeler at one end and being mounted at its other end on said support means for universal lateral oscillation relative thereto; a first transverse member at said other end of said spindle member movable therewith and extending transverse the longitudinal axis of said spindle member, and having supporting portions spaced radially from and arranged circumferentially around said spindle member; a second transverse member having bearing portions resting on the supporting portions of said first transverse member and being movable thereby during movement of said first transverse member; and guide means for guiding said second transverse member in a direction along the axis of said spindle member, whereby when said spindle member is laterally deflected, said second transverse member is displaced axially of said spindle member.

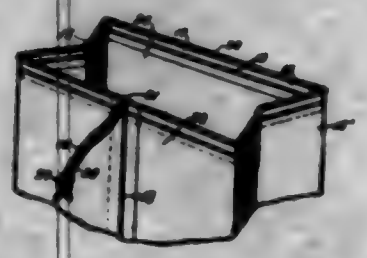
2,863,364
PROCESS FOR MANUFACTURING FORM BOARD FOR CASTING CONCRETE
John Holger Rosenquist, Alfredsberg, and Anders Wilhelm Westling, Enebyberg, Sweden, assignors to Aktiebolaget Statens Skogsindustrier, Stockholm, Sweden, a corporation of Sweden
No Drawing. Application January 21, 1955
Serial No. 483,438
Claims priority, application Sweden January 26, 1954
6 Claims. (Cl. 92—40)

1. A process for the manufacture of oil-hardened wood fibre board suitable for use as form board in the casting of concrete wherein the wood fibre material after it is formed into a fibre felt and is still wet is treated with an impregnating agent and is then subjected to a pressing against a polished plate, which comprises: (*a*) applying to one face only of the wet fibre felt an impregnating agent consisting of a dispersion of a hardenable oil and an alkali resistant thermosetting plastic, (*b*) hot pressing the impregnated felt against a polished plate on the side of the felt provided with said agent at a temperature sufficiently elevated to harden the impregnated pressed board, (*c*) the side of the felt facing the polished plate being made acid in reaction at least prior to completion of the pressing step, (*d*) the viscosity of the hardenable oil in the dispersion being from about 200 to 800 cp. at 20° C., (*e*) the viscosity of the thermosetting plastic being over-5000 cp. at 20° C., (*f*) whereby the hardenable oil in said dispersion penetrates the felt and is distributed substantially homogeneously throughout while the thermosetting plastic forms a cohesive water-impermeable alkali-resistant

and thereby pulling the cylindrical portion of the cup into like container which is fabricated from a blank of paper-

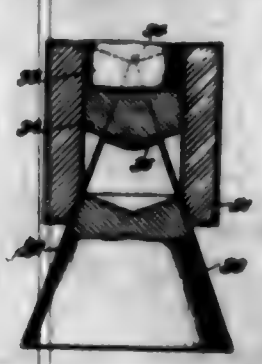
costing on the polished face of the fibre board, thereby producing a board containing from about 3 to 12% of the hardenable oil and from about 0.5 to 10.0% of the thermosetting plastic based on the weight of the dry fibre material in the finished fibre board.

2,863,365
METHOD OF FORMING BAGS
Thomas E. Flynn, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application October 28, 1955, Serial No. 543,411
5 Claims. (Cl. 93—36)



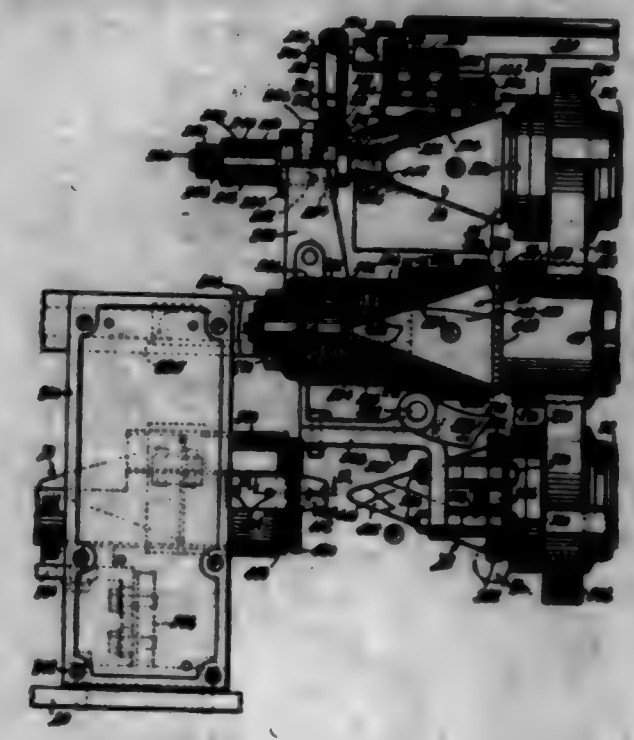
2. A method of forming a drawstring closure in the end of a flexible tubular bag section which comprises providing apertures adjacent the end of a flattened end of the tubular section in oppositely disposed side wall portions thereof, passing one end of a drawstring in looped formation through the apertures so that the opposite ends of the looped drawstring extend outside of the same, shaping the end of the tubular section while it is on the drawstring by bringing end wall portions thereof into oppositely disposed relation, folding the end marginal portions of the tubular section in an axial direction inwardly of the tubular section between the portions of the looped draw string which extend between said apertures and securing said infolded portions to the inner walls of the tubular section in inwardly spaced relation to the drawstring to enclose the same in the hem which is formed thereby with a looped end of the drawstring extending through each of the apertures.

2,863,366
APPARATUS FOR TRUNCATING CUPS
Elmer T. Aldington, Bethlehem, Pa., assignor, by mesne assignments, to American Can Company, New York, N. Y., a corporation of New Jersey
Application November 22, 1955, Serial No. 548,339
1 Claim. (Cl. 93—36.1)



In combination, means for clamping a conical paper cup in such a manner as to avoid buckling of the paper wall during a truncating process, said clamping means having a conical clamping surface with the apex of the cup projecting beyond the clamping surface, a punch having an axis aligned with the axis of the clamping means and having a depending conical surface adapted to engage the apex of a cup and said conical surface being at substantially right angles to the wall of a cup during a truncating operation.

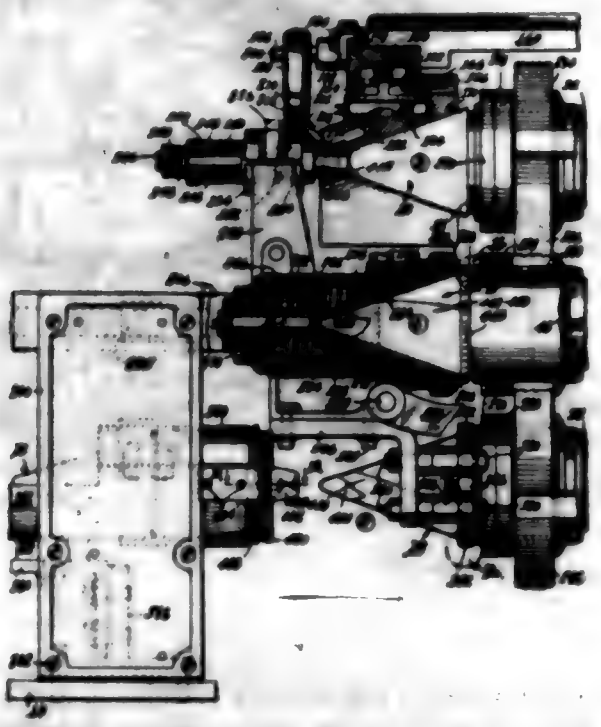
2,863,367
CONE CUP MACHINE
Eugene Theodore Thiem, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Original application December 10, 1949, Serial No. 132,257, now Patent No. 2,703,514, dated March 8, 1955. Divided and this application January 10, 1955, Serial No. 480,739
9 Claims. (Cl. 93—36.1)



1. For use with a cup forming machine having a mandrel with a tapered portion and a cylindrical portion and movable into and out of a rimming station of the machine, a rim forming die reciprocably mounted on said mandrel, said die having a rimming groove therein, a cone for engaging and holding the cup to the tapered portion of said mandrel with a portion of the cup near its free end projecting beyond said tapered portion and overhanging said cylindrical portion, and a cylinder carried by said cone and reciprocal thereover for bending the free end of the cone into a cylindrical portion surrounding the cylindrical portion of the mandrel and forming a reinforced rim thereon; the improvement comprising means for rotating and reciprocating said rimming die relative to said mandrel while at said rimming station, said means comprising a rotating friction wheel at said station to engage the periphery of said rimming die from the time it enters until the time it leaves said station, a shoe at said station, the periphery of said rimming die having a depression therein to receive said shoe while the rimming die is at said station, stationary means received by said depression when said rimming die is away from said station to prevent reciprocation of said rimming die relative to said mandrel, means for moving said shoe to reciprocate said rimming die relative to said mandrel while the die is at said station and while being rotated by said friction wheel for thereby moving said rimming groove toward the upper edge of the cylindrical portion of the cup to engage it, form it into a bead-like rim and iron the upper edge of the rim to smooth it, the rim after being partially formed engaging the end of said cylinder, said cylinder having a tucking lip closely adjacent the cylindrical portion of the cup and projecting axially from said cylinder end toward said rimming groove to cooperate therewith in forming the cup rim, and said cylinder and rimming die thereupon being simultaneously reciprocated toward the apex of the cup while the rimming die is still rotating for completing the rimming of the cup

and thereby rolling the cylindrical portion of the cup into a reinforced rim and further smoothing it during such simultaneous reciprocating movement.

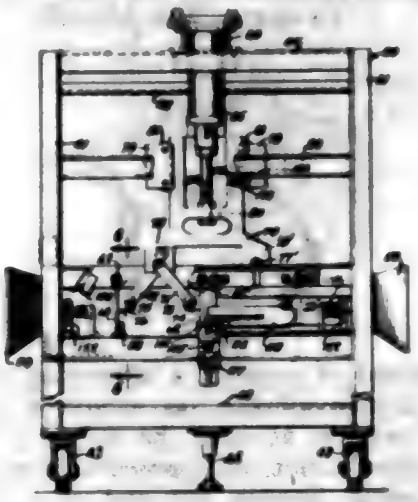
2,863,368
CONE CUP MACHINE
Eugene T. Thiem, Des Plaines, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Original application December 10, 1949, Serial No. 132,257, now Patent No. 2,703,514, dated March 8, 1955. Divided and this application March 2, 1955, Serial No. 491,691
6 Claims. (Cl. 93—36.2)



1. In a cup forming machine of the character disclosed, a rotary head, a plurality of cone mandrels carried by said head and each rotatable relative thereto, means for driving said rotary head intermittently and said mandrels intermittently only while said head is rotating, rimming mechanism for the cup at one station of the machine, and removing and stacking mechanism at a further station thereof, said removing and stacking mechanism comprising a pair of arms for removing the cup from the mandrel, said arms being pivotally mounted on an axis substantially parallel to the cup axis and biased to engage over the rim of a cup on a mandrel at said further station, said arms being arcuate and each having a ratchet-like bead to engage over a substantial portion of the periphery of said rim, said arms being reciprocably mounted for effecting such engagement and for then carrying the cup away from the mandrel, a stacking tube to receive the cup so carried, said stacking tube having, between the ends of said arcuate arms when they approach said stacking tube, fixed and rigid rim engaging holding catches past which said arms carry the cup and cause the cup to deform to oval shape and snap into position behind shoulders of said holding catches so that the cup is thereby held as the arms return to transfer another cup from a mandrel to the stacking tube.

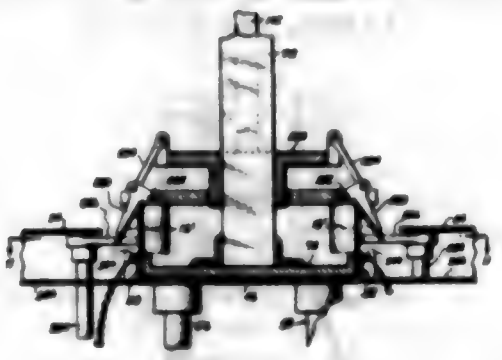
2,863,369
SET UP MACHINE
Walton B. Crane, South Pasadena, Calif., assignor to Allied Plastics Company, Los Angeles, Calif., a corporation of California
Application March 7, 1957, Serial No. 644,513
12 Claims. (Cl. 93—37)

1. A machine for folding into wall forming position cross partition and end wall forming panels of a tray-like container which is fabricated from a blank of paperboard material cut and creased to provide a series of connected wall forming panels, the container being initially set up in the form of a tube with the panels which are to be folded being located in the plane of the uppermost wall of the tube, said machine comprising an upright main supporting frame having means forming a folding compartment which is open on at least one end for receiving the tube, said compartment forming means including a pair of top folder plates extending transversely in the top wall of said compartment, said folder plates



being swingably mounted for movement inwardly of the compartment and into engagement with the cross partition and end wall forming panels in the top of the tube when the latter is positioned in the folding compartment, a vertically reciprocating operating member supported on said frame above said compartment and connected to said folder plates to swing the latter into and out of the folding compartment, means to actuate said reciprocating member, and means to eject said container from said folding compartment when said folder plates are swung out of said folding compartment.

2,863,370
BOX FORMING MACHINE
Oskar Derfman, North Bergen, N. J., assignor to Federal Carton Corporation, a corporation of New York
Application May 25, 1955, Serial No. 511,871
7 Claims. (Cl. 93—49)

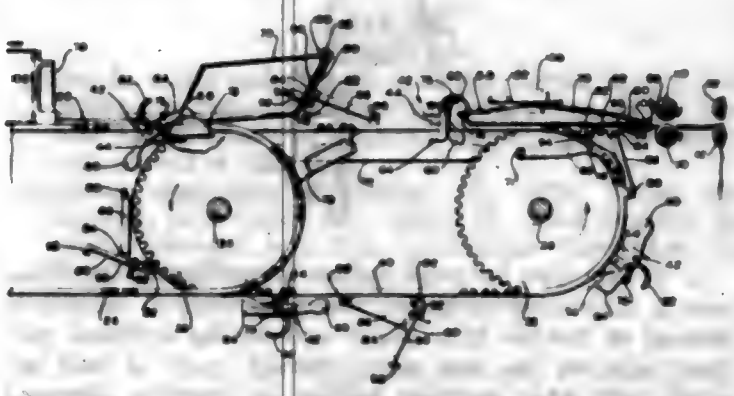


1. A machine for folding a box blank into a box, comprising a normally flat female die having a central plate and four side plates hinged to the respective sides of said central plate, means including a ram for moving said side plates to right angle relation with said central plate to form a box blank held between said ram and central plate into a box having double-ply corner flaps, means adjacent each corner of said central plate for folding the double-ply corners of the folded blank against the adjacent end faces of the formed box, and means for folding a marginal extension of each end wall of the box outwardly to overlie said folded corners.

rod for operating a plurality of said blades in unison, said

2,863,376

2,863,371
CARTON BLANK UNFOLDING MACHINE
Arthur J. Temme, San Francisco, Calif., assignor to Burgermeister Brewing Corporation, San Francisco, Calif., a corporation of California
Application April 14, 1958, Serial No. 728,431
9 Claims. (Cl. 93—53)

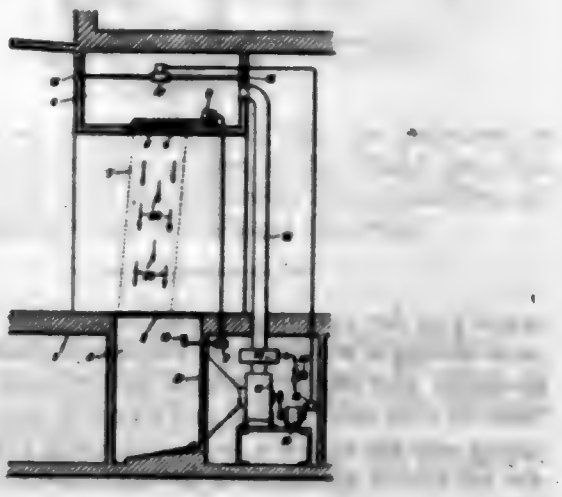


1. A carton blank unfolding machine comprising in combination, conveyor means, carton blank feed means, carton blank hook means carried by the conveyor means, lift and pusher means carried by the conveyor means, restraining means, means disposed to actuate the respective conveyor, feed, and restraining means in sequential relationship such that a carton blank is fed in flat condition from the feeder means, firmly gripped at its forward end by the hook means, engaged at its after end and lifted from the underside by the lift and pusher means to break the carton blank into a substantially unfolded condition, the restraining means permitting but limited upward movement of the carton blank during the initial breaking thereof and the hook means being subsequently released from the blank after substantial unfolding thereof.

2,863,372
TRACTOR SAFETY HITCHES
Raymond H. Bergerson, Northfield, Wis.
Application August 12, 1955, Serial No. 528,065
3 Claims. (Cl. 97—47.89)

1. A safety device for permitting swinging of a tractor mounted tool out of the ground when an obstruction is encountered comprising a tool frame mounted for rotation about an intermediate point, a coulter wheel mounted near the forward end of said tool frame and normally in engagement with the ground when the tool is in use, a skid shoe mounted on said tool frame forwardly of and adjacent said coulter wheel, said skid shoe being positioned to be out of engagement with the ground during normal operation, and releasable means permitting rotation of said tool frame about said intermediate point when an obstruction is encountered, said coulter wheel being positioned to leave normal contact with the ground when such rotation of the tool frame occurs and said skid shoe being positioned to engage the ground to take over the support from said coulter wheel, the position of the coulter wheel being such that its axis of rotation is forwardly of said intermediate point of rotation of the tool frame when the coulter wheel is on the ground and rearwardly of said intermediate point of rotation when the coulter wheel is out of engagement with the ground and after the skid shoe has taken over the support.

2,863,373
DEVICE FOR PRODUCING A ROOM-CLOSING AIR CURTAIN
Ernst Steiner, Zurich, Switzerland, assignor to Sifrag Spezialapparatebau & Ingenieurbureau Frei A. G., Bern, Switzerland
Application October 29, 1954, Serial No. 465,689
12 Claims. (Cl. 98—36)



1. A device that can direct air across an opening to form an air screen of substantial depth for filling a substantial portion of said opening and that comprises an air inlet chamber at one side of said opening, an air outlet chamber at the opposite side of said opening, an air passage extending from said air inlet chamber to said air outlet chamber, an air-moving element to draw air into said air inlet chamber and to move said air through said air passage to said air outlet chamber and across said opening to said air inlet chamber, a motor that drives said air-moving element to cause said air to enter said air inlet chamber and to pass through said air passage to said air outlet chamber and to move across said opening to said air inlet chamber, a plurality of closely adjacent, elongated elements that are spaced apart depthwise of said opening in the direction of traffic through said opening and that are adjacent the exit of said air outlet chamber, means movably mounting said elongated elements in said chamber exit, a mechanism for moving said elongated elements and thereby directing the air issuing from said air outlet chamber toward said air inlet chamber or outwardly of said opening, and a control device that varies the velocity of the said air issuing from said air outlet chamber and passing between said elongated elements, said control device normally maintaining the velocity of the said air issuing from said air outlet chamber at low value and said mechanism normally positioning said elongated elements for directing the said air issuing from said air outlet chamber toward said air inlet chamber, said control device increasing the velocity of the said air issuing from said air outlet chamber and said mechanism positioning said elongated elements for directing the said air issuing from said air outlet chamber outwardly of said opening whenever a wind capable of deflecting said air screen impinges upon said air screen.

2,863,374
DAMPER ACTUATING CONSTRUCTION
Milton Hinden, East Meadows, N. Y.
Application January 21, 1955, Serial No. 483,368
10 Claims. (Cl. 98—110)

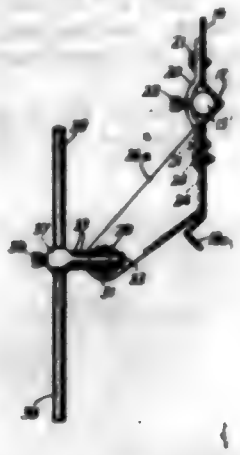
1. A bracket for damper blades arranged to be connected to said damper blades and coupled by a connecting

ing means; means to close said last elements when the bread carrier is in lowered position to initiate a toasting

ends of said arms, means for rotating said shaft; said shaft, arms and blades being arranged so that on rotation

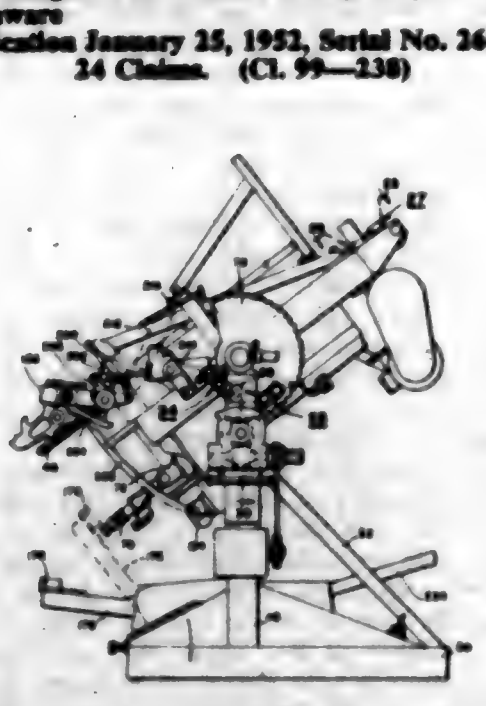
cross partition and end wall forming panels of a tray- overlie said folded corners.

rod for operating a plurality of said blades in unison, said bracket having a base for extending the same from said blade, a pair of spaced arms extended from said base, bearings adjacent the end of said arms, a pivotal and slidable trunnion pin supported in said bearings, a reach arm mounted in said trunnion and a connecting eye on said



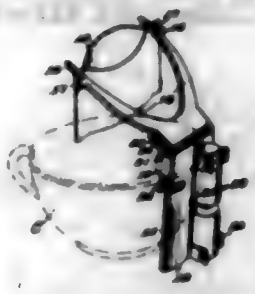
reach arm for coupling to said connecting rod, said trunnion having a bearing into which said reach arm extends pivotally and slidably, means to limit the sliding movement of said reach rod in said trunnion and a compression spring spaced between said connecting eye and trunnion pin for taking up the slack between said eye and trunnion pin.

2,863,375
AUTOMATIC PUFFING GUN
George Long and Joseph J. Von Edenkuty, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Application January 25, 1952, Serial No. 268,196
24 Claims. (Cl. 99—238)



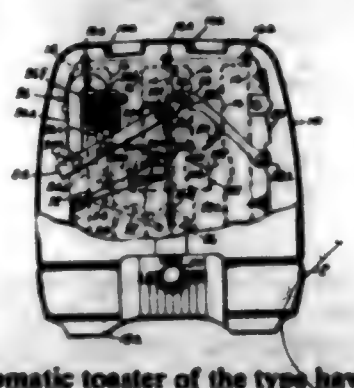
7. An apparatus for puffing cereals comprising a pressure chamber for heating cereal grains and subjecting to pressure, a cover positioned over an opening in one end of the pressure chamber to seal it, latch means holding the cover in position over the chamber opening, means for applying heat to the chamber to heat the cereal grains therein and increase the pressure within the chamber, pressure responsive means operative at a predetermined pressure to tilt the pressure chamber to discharge position with the opening pointing downwardly, and means responsive to the position of the chamber and being operative when the chamber reaches tilt position to release said latch means to cause the chamber to fire to expose the cereal grains to atmosphere and cause them to puff up to an enlarged size.

2,863,376
DRIP COFFEE MAKER
John E. Gross, Washington, D. C.
Application August 20, 1954, Serial No. 451,249
3 Claims. (Cl. 99—316)



2. A drip type beverage maker comprising in combination a disposable normally flat open topped receptacle formed of flexible filter paper and having stiffened portions adjacent the side edges thereof, each of said opposite side edge portions having an aperture disposed within the stiffened portions thereof, and a holder for said receptacle including a support having means removably engageable with the side wall of a cup for supporting said holder on the cup, and laterally diverging arms extending at an angle from said support and overlying the mouth of the cup when said means are engaged with the cup, said arms each terminating in a shoulder with a lug extending therefrom, the lugs of said arms being respectively receivable within said apertures for supporting the receptacle above the cup with the shoulders abuttable by the receptacle, the distance between said apertures being greater than the distance between said lugs whereby engagement of said lugs in said apertures compresses the side edge portions toward each other and spreads the open top of the normally flat receptacle for the reception of beverage grounds and liquid.

2,863,377
POP-UP TOASTER WITH AUTOMATIC LOWERING AND RAISING OF BREAD CARRIER
Alfred J. Huck, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Application October 4, 1954, Serial No. 460,852
10 Claims. (Cl. 99—329)



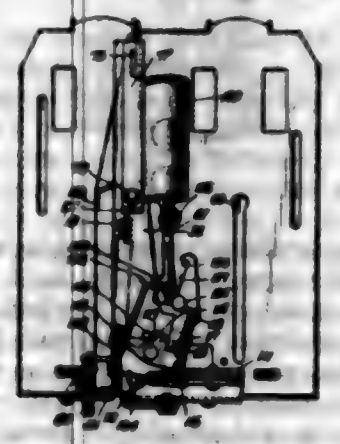
1. In an automatic toaster of the type having a housing, a vertically reciprocable bread carrier therein, and bread toasting means therein, the improvement comprising: an arm pivoted at one end to the housing and also pivoted to the bread carrier to swing as the bread carrier is raised and lowered, the other end of the arm being spaced from the points of pivot; a cam having a concave face to receive said other end of the arm when the carriage is in up position, the cam being biased to a seating engagement with the arm; a lift means including a force producing means operable when energized momentarily to initiate upward accelerated movement of the arm and inertia means to maintain subsequent upward non-accelerated movement of said arm to cam engaging position, thus lifting the carrier and sustaining the same in up position; normally open switch elements connected in circuit with the bread toast-

2,863,381

said two arms of said triple armed drive-transmitting

ing means; means to close said last elements when the bread carrier is in lowered position to initiate a toasting operation; and a thermostatic element operable to energize momentarily the force producing means of said lift means and thereby effect raising of the bread carrier upon completion of the toasting operation.

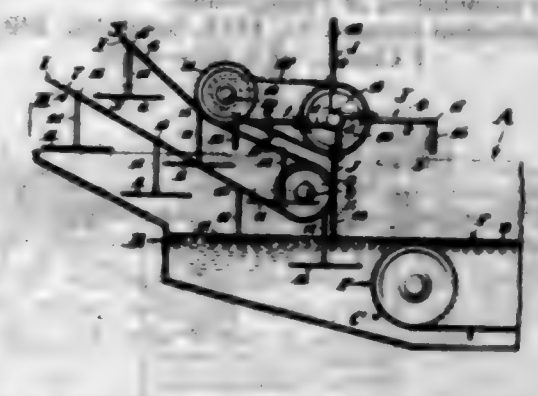
2,863,378
TOASTERS
Henry L. Olson and Robert A. Miller, Grand Haven, and William F. Hale, Spring Lake, Mich., assignors to Camfield Manufacturing Company, Grand Haven, Mich., a corporation of Michigan
Original application December 15, 1951, Serial No. 261,802, now Patent No. 2,692,549, dated October 26, 1954. Divided and this application November 23, 1953, Serial No. 393,642
3 Claims. (Cl. 99—391)



1. In an automatic toaster or the like, a toasting oven, a movable carrier means for supporting bread in the oven including an operating lever adapted to move the carrier means into toasting position manually, said carrier means being biased into non-toasting position, a latch movable to its release position mounted in said toaster for pivotal movement into latching relationship with said carrier means by downward movement of said carrier means into toasting position, a locking lever pivotally mounted to lock said latch in said latching relationship, said latch and said locking lever having resilient connection means for effecting said movement of said locking lever, a release lever movable by said operating lever in a direction tensioning said resilient connecting means to urge the latch to its release position and to pivot said locking lever to its latch release position, said release lever having secured thereto an overcenter operating spring adapted to dispose said release lever in position to engage said locking lever to effect said pivotal movement thereof or in position to bypass said locking lever selectively.

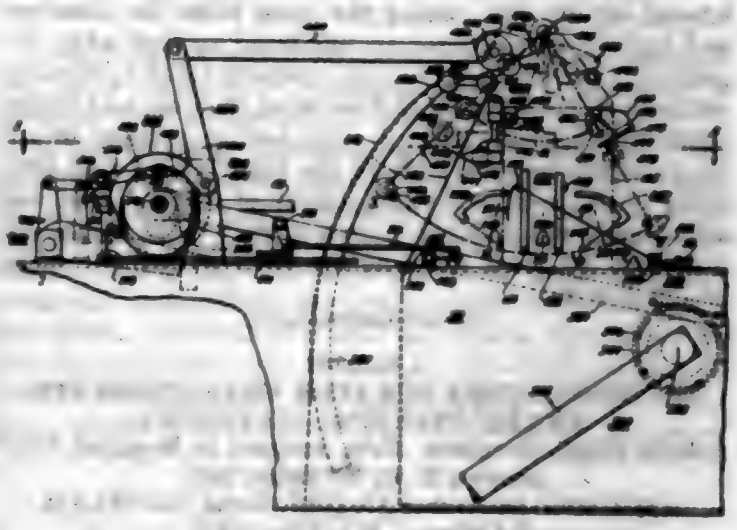
2,863,379
MEANS FOR DELIVERING BODIES OF RAW DOUGH TO A BODY OF HOT FAT IN A DOUGH FRYING MACHINE
Virgil E. Arides, Los Angeles, Calif.
Application March 19, 1956, Serial No. 572,497
3 Claims. (Cl. 99—405)

1. In a dough body cooking machine of the type embodying an open topped tank containing a body of cooking liquid, a slatted endless conveyor in said tank arranged and operable to advance floating dough bodies on the surface of said liquid, a second endless conveyor fitted with a series of dependent dough carrying trays arranged to be successively submerged in the liquid to deliver dough bodies carried thereon to the surface of such liquid; a rotary shaft extending horizontally across said tank, a series of substantially radial arms on said shaft, a series of dependent blades pivotally suspended from the outer ends of said arms, means for rotating said shaft; said shaft, arms and blades being arranged so that on rotation of said shaft said blades will be brought into abutting con-



tact with floating dough bodies as they are delivered by said trays to the surface of the frying liquid and then effect advance of said dough bodies into a position for operative engagement by said slatted conveyor.

2,863,380
BARREL KNOT TIER FOR WIRE AND TWINE
John P. Tarbox, Philadelphia, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application September 29, 1954, Serial No. 459,038
40 Claims. (Cl. 100—23)



1. In a hay baler of the class in which bales of hay are formed in and moved longitudinally through a bale case, the combination with said bale case of a radially slotted tying element having a radially outwardly opening mouth and rotatable about a longitudinal axis on said bale case, strand laying mechanism moveable longitudinally past said element to engage a strand loop positioned on one longitudinal side thereof and lay one side of said loop in the radial slot of said element, said laying mechanism including strand guides relatively spaced in the plane of said slot, one of said guides being located to travel on a path which presents said one side to the mouth of said slot for reception therein and another of said guides being located to travel on a path removed from the mouth of said slot, said one guide being moveable to release said loop, a latch normally retaining said one guide in strand engaging position, and trip means positioned on the path of the one guide to disengage the latch and release said loop after said one side of the loop has been presented for reception in the slot and prior to termination of the movement of the laying mechanism, whereby the tension of the loop will draw said one side radially into the slot toward said other guide.

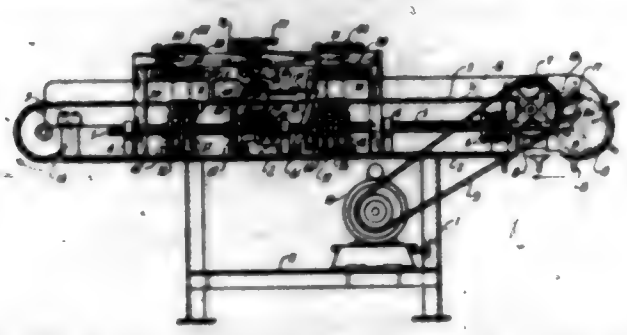
2,863,385

platen supported side thereof as the strip continuously

to puff up to an enlarged size.

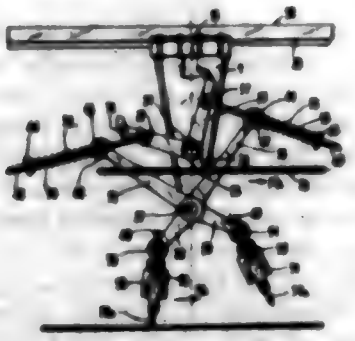
switch elements connected in circuit with the bread toast-

2,863,381
WARE DECORATING MACHINE
Arch L. Stock and Maurice E. Huth, Oil City, Pa., assignors, by mesne assignments, of one-half to said Stock and one-half to Knox Glass Bottle Company, Knox, Pa., a corporation of Pennsylvania
Application January 13, 1953, Serial No. 330,987
1 Claim. (Cl. 101—123)



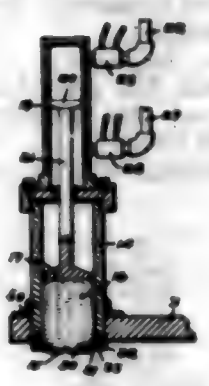
In a color screen labeling apparatus an endless chain conveyor movable in a horizontal plane having spaced lugs constituting cradles for receiving ware to be decorated, drive mechanism for moving said conveyor intermittently in increments corresponding to the spacing of said lugs, a plurality of decorating stations in the path of movement of said conveyor each consisting of a label screen and a squeegee for displacing color through the screen to the surface of the ware, a chucking device for engaging the ware below the screen, said chucking device, screen and squeegee actuated in timed relation with the movements of the conveyor, and means between the decorating stations for engaging the ware after it is labeled on on side, raising the same from the conveyor and turning it to expose an unlabeled surface while depositing it on the conveyor for receiving color as it passes underneath the succeeding decorating stations, said means consisting of a plurality of arms having gripping means for engaging opposite ends of the ware, one of said arms being movable in a direction axially of the ware and said arms being mounted on a rocker shaft with means for actuating the shaft to swing the arms through an angle of 180 degrees.

2,863,382
RECIPROCATORY SCRAPER MECHANISM FOR FRAME PRINTING MACHINES
Adolfo Giani, Bergamo, Italy, assignor to Reggiani Meccanotex S. A., Bergamo, Italy
Application December 17, 1957, Serial No. 703,376
3 Claims. (Cl. 101—123)



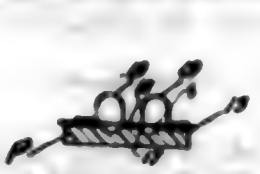
1. Reciprocatory scraper mechanism for frame printing machines comprising in combination: a cruciform change-over lever journaled in a pillar adapted for reciprocation transversely of a surface to be scraped; two scrapers connected respectively to one of two lower arms of said change-over lever; a triple armed drive-transmitting lever journalled in said pillar; two arms of said triple armed drive-transmitting lever extending respectively to opposite sides of a stop fixed to and projecting from said pillar; the remaining arm of said triple armed drive-transmitting lever being connected to driving reciprocation means; elastic connection means between said two arms of said triple armed drive-transmitting lever and the upper arms of said cruciform change-over lever.

2,863,383
PRINTING MACHINE
Carl R. Johnson, Keene, N. H., assignor to F. A. Putnam Mfg. Co., Inc., Keene, N. H., a corporation of New Hampshire
Application March 31, 1955, Serial No. 498,145
3 Claims. (Cl. 101—126)



1. A printing machine comprising a work support to support a work piece, a printing head having an ink reservoir adapted to contain ink, the bottom of said reservoir being constituted by an imprint forming stencil, a plunger in the ink reservoir resting on the ink therein, an air cylinder mounted on and located above the reservoir, a piston in said cylinder, a piston rod connecting the piston and plunger and extending through the top of the reservoir, printing head moving means to move the printing head into and out of printing position, means actuated by the printing head moving means as the stencil is making an imprint to admit momentarily compressed air to the cylinder above the piston, thereby to subject the piston and the plunger to downward pressure to force ink through the stencil, and immediately thereafter to admit compressed air into the cylinder below the piston, thereby to subject said piston and plunger to an upward impulsion to effect a quick breaking from the work piece after the imprint has been made.

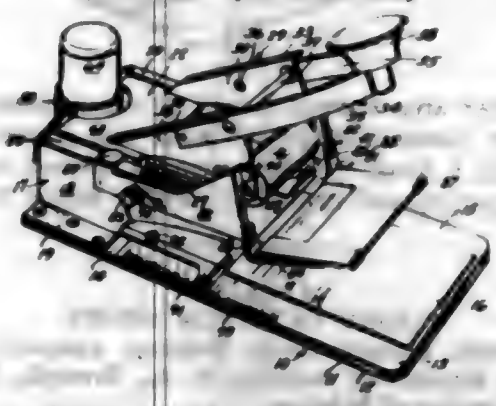
2,863,384
PAINT SPRAYING MASKS AND METHOD OF MAKING SAME
Edward L. Rich, Bay City, Mich.
Application January 15, 1954, Serial No. 404,343
7 Claims. (Cl. 101—127)



6. A spray shield for masking out certain areas of an indented, configured, portion of a surface, which portion includes areas at different levels, comprising; a very thin, ductile sheet for mounting on said surface over said areas, with portions of said sheet drawn into the depressed areas so that said sheet presents an indented surface with areas at different levels conforming to said portion of the first mentioned configured surface, said latter portions being stiff and having a cold working developed resiliency which returns them to said indented shape if they become dented or bent; said sheet having openings therein conforming to certain areas of said surface which are to remain exposed.

supporting it for free rotation on a surface, a frame con- and comprising, a flat rectangular shaped plate of enve-

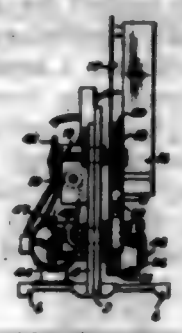
2,863,385
PRINTING MACHINE
Ansel J. Wright, Minneapolis, Minn., assignor to Master Addresser Company, Minneapolis, Minn., a partnership
Application August 24, 1956, Serial No. 606,886
9 Claims. (Cl. 101—133)



1. In a printing machine utilizing the spirit transfer process and a master element having material to be reproduced imprinted thereon, a normally generally horizontally disposed base portion which defines a printing bed, frame structure rigidly anchored to said base portion and defining generally horizontally disposed guideways spaced from said base portion, a carriage element mounted in said guideways for limited longitudinal movement alternately in opposite directions between a retracted position and an advanced position, a generally horizontally disposed impression roller adapted for pressing the master element into engagement with a copy sheet resting on the printing bed, mounting means connecting said roller to said carriage element for longitudinal movements therewith over said printing bed and for movements toward and away from said bed between an operative position adjacent the bed and a normal position upwardly spaced therefrom, a moistening device comprising a longitudinally extended spirit transfer element adapted to engage the copy sheet, said spirit transfer element being mounted in laterally spaced parallel relationship with said roller for longitudinal movement with said carriage element and for movements toward and away from said printing bed between an operative copy sheet engaging position and a normal position upwardly spaced therefrom, said spirit transfer element at its normal position being downwardly spaced from said roller at its normal position, master element supporting means connected to said frame structure for limited movements between a raised position and a lowered position, and resilient means yieldably biasing said supporting means to its raised position, said supporting means at its lowered position supporting said master element adjacent the copy sheet in position to be pressed into engagement with said copy sheet by said roller and said supporting means at its raised position supporting said master element to pass between said roller and said spirit transfer element when they are in their normal positions.

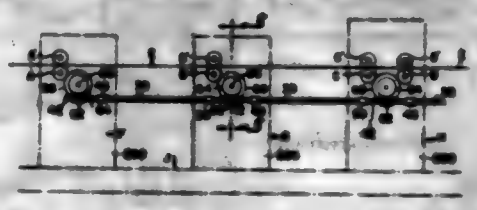
2,863,386
PRINTING MACHINE
Clarence S. Burtchaell, Ross, Calif.
Application January 31, 1958, Serial No. 485,261
3 Claims. (Cl. 101—212)

1. A machine for printing a legend on a strip, comprising a journal frame, a platen mounted on the journal frame on one side thereof for supporting the strip to be printed, a drive wheel journaled on the journal frame on the platen side thereof, means for adjusting the position of the drive wheel to continuously frictionally engage and resiliently press the strip against the platen and propel it therealong, a printing disk having thereon means for printing a legend and journaled on the journal frame in position to press the printing means on the strip on the platen supported side thereof as the strip continuously moves along the platen, and means including a motor



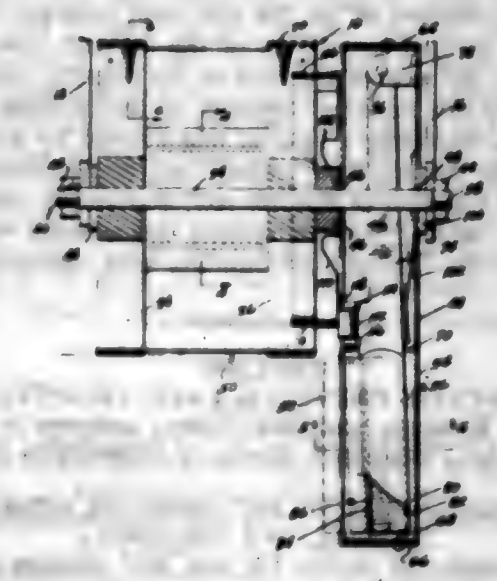
mounted on the journal frame on the side thereof opposite the platen and said drive wheel for driving the printing disk and drive wheel in synchronism.

2,863,387
MEANS FOR VARYING THE PHASE RELATIONSHIP OF THE CYLINDERS OF A PRINTING PRESS
Harold W. Huffman, Hamilton, Ohio, assignor to The Hamilton Tool Company, Hamilton, Ohio, a corporation of Ohio
Application March 26, 1954, Serial No. 418,912
12 Claims. (Cl. 101—248)



1. A drive for individually altering the phase relationship of a plurality of rotatable members driven by a common shaft comprising, in combination, a plurality of drive shafts, means mounting each of said shafts for free rotational and limited endwise axial movement, means slidably coupling said individual shafts in endwise axial alignment, a worm gear in fixed, driven relationship with and carried by each of said shafts for duplicating the rotational and endwise axial movements of their respective shafts, independently operable means for imparting endwise axial movement to each of said shafts, and worm wheels in continuously driven relationship with the worm gears during rotational and axial movement of said gears.

2,863,388
MARKING MEASURING INSTRUMENT
Frank J. P. Schleemer, San Bernardino, Calif.
Application June 7, 1957, Serial No. 664,437
5 Claims. (Cl. 101—327)



1. A marking measuring device comprising a cylinder, a shaft transversely extending through said cylinder and

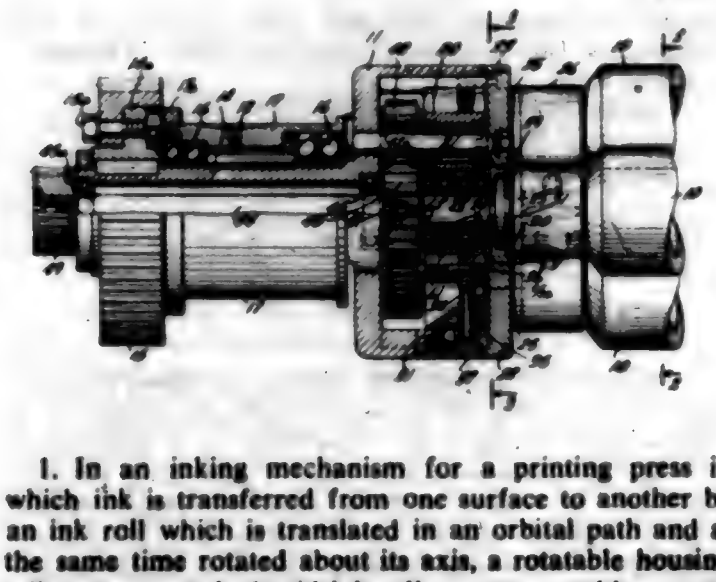
supporting it for free rotation on a surface, a frame connected to the shaft for moving the cylinder over the surface, a housing freely carried by and suspended from the shaft at one side of the cylinder and extending below the periphery of the cylinder, a marking element carried by the housing and extendable through the side of the housing facing the cylinder, spring means constantly urging the marking element through the side of the housing and means carried by the cylinder and the marking element for retaining the marking element within the housing except at certain intervals of the rotational movement of the cylinder.

2,863,389

ROTARY DUCTOR SPIDER

Harry W. Faeber, Larchmont, N. Y., assignor to Time, Incorporated, New York, N. Y., a corporation of New York

Application January 10, 1955, Serial No. 480,725
5 Claims. (Cl. 101—348)



1. In an inking mechanism for a printing press in which ink is transferred from one surface to another by an ink roll which is translated in an orbital path and at the same time rotated about its axis, a rotatable housing adjacent one end of said ink roll, means movably mounted within the housing for supporting the ink roll at one end, permitting movement of the ink roll toward and away from the axis of rotation of the housing, a stop determining the maximum position of the ink roll away from the axis of rotation of the housing, spring means for normally urging the ink roll in a direction away from the axis of rotation of the support but yielding when the ink roll comes into engagement with one of said surfaces, a gear transmission system within the housing for rotating the ink roll about its own axis, an enlarged opening in the housing for the connection between the end of the ink roll and the means movably mounted within the housing for the support of the ink roll, said enlarged opening permitting limited movement of the ink roll toward and away from the axis of rotation of the housing, means for maintaining the enlarged opening in the housing sealed, said means including a sealing ring carried by said movable support means, said sealing ring being coaxial with the axis of rotation of the ink roll, and spring means for urging the sealing ring in sealing engagement with the portion of the housing surrounding said enlarged opening.

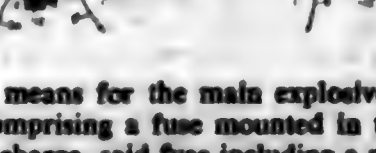
2,863,390

POSTAGE PRINTING TAPE ADAPTER

Joseph V. Kubovy, Stamford, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware

Application May 17, 1957, Serial No. 659,949
2 Claims. (Cl. 101—407)

1. A stamp pad device for use in a postage printing machine to receive postage impressions as an envelope would when passed through the postage printing machine and comprising, a flat rectangular shaped plate of envelope dimensions, ways forming a permanent part of the plate and located within the postage printing upper right



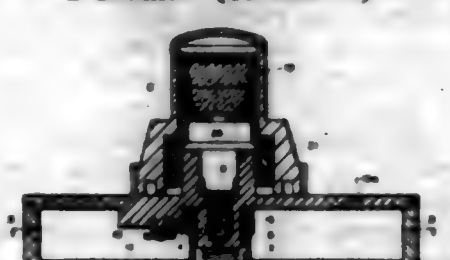
hand corner area thereof, a pad of superimposed strips removably mounted within the ways, and a base for said pad having a flange portion extended beyond each side of the superimposed strips and slidable within the ways.

2,863,391

BOOBY TRAP FOR MINES

Albert Diels, Brussels-Uccle, Belgium, assignor to Poudreries Reunies de Belgique S. A., Brussels, Belgium, a corporation of Belgium

Application May 18, 1956, Serial No. 585,745
Claims priority, application Germany May 20, 1955
2 Claims. (Cl. 102—8)



1. Ignition means for the main explosive charge of a land mine, comprising a fuse mounted in the bottom of the explosive charge, said fuse including a primer charge, a spring-controlled striker means mounted for horizontal movement adjacent the primer, a retaining member for holding the spring-controlled striker means in cocked position out of contact with the primer in a normal, upper position of the retaining member, the retaining member being vertically movably mounted below the explosive charge and having aperture means positioned above the primer in said upper position, biasing means for urging the retaining member downwardly, at least one member pivotably mounted on said bottom in engagement with said retaining member to secure it in said upper position, and removable means for securing the pivotable member in engagement with the retaining member, removal of said removable means enabling downward swinging of the pivotable member and concomitant downward movement of the retaining member whereby the aperture means permits propulsion of the striker means therethrough into contact with the primer.

2,863,392

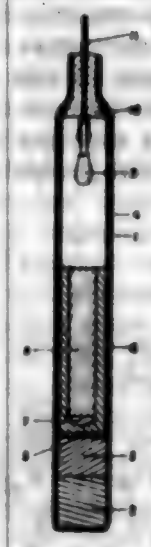
DELAY ELECTRIC INITIATORS

Royston Arthur Walter Hill and Robert Walter Moody, West Kilbride, Scotland, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

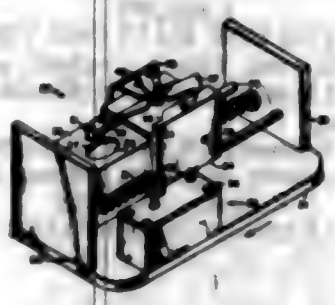
Application July 18, 1956, Serial No. 598,584
Claims priority, application Great Britain August 15, 1955
7 Claims. (Cl. 102—28)

1. A ventless delay electric detonator comprising a metallic casing containing therein a fusehead, a base charge of a secondary explosive composition and a superimposed charge of a primary explosive composition and having a delay element including a metal tube containing therein a delay fuse composition, said delay element being interposed between said primary explosive composi-

tion and said fusehead, said delay fuse composition being of the gasless type and said metal tube having its lower end nonrupturably sealed against the reaction of its contents and secured so as to be retained in the detonator casing on firing of the detonator, and a small charge of primary explosive composition being disposed within said metal tube between the gasless delay composition and the closed end of the tube.

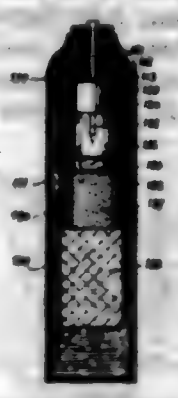


2,863,393
SAFETY AND ARMING MECHANISM
Eugene N. Shooley, Washington, D. C., assignor to the United States of America as represented by the Secretary of the Army
Application June 9, 1955, Serial No. 514,483
1 Claim. (Cl. 102—78)
(Granted under Title 35, U. S. Code (1952), sec. 266)



In a fuze for ordnance missiles, a safety and arming mechanism comprising a body member, a setback sensitive weight member slidably mounted within said body member and adapted to move rapidly from a first position to a second position, spring means adapted to bias the weight member toward the first position, detent means adapted to lock said weight member in said second position, an arming member slidably mounted within said body member, the arming member being provided with a guide groove on the surface thereof, spring means urging said arming member to move with said weight member from an unarmed position to an armed position, clock escapement means adapted to retard and regulate the rate of movement of the arming member, a spring biased lever rotatably mounted upon said body member, the lever being provided with a finger at one end thereof and a butt end at the other end thereof, said finger adapted to move within the guide groove of said arming member, said lever adapted to rotate clear of the path of said arming member provided said arming member is moving at the regulated rate so that said finger can "snap" out of said groove and provided said weight member is in said second position so that said weight member does not engage said butt end, the weight member becoming locked in the second position as said arming member continues to move toward the armed position.

2,863,394
PROJECTILE AND CARTRIDGE
André Loufeld, Tourcoing, France
Application July 1, 1954, Serial No. 440,745
4 Claims. (Cl. 102—90)



1. A smoke-generating cartridge for the projectile comprising a body having at its rearward extremity a nozzle member provided with a delayed charge adapted to be ignited by the propellent gases at the moment of firing of the projectile, said delay charge filling only a portion of said nozzle member, a firing pin anchored in said delay charge, a detonator disposed at the internal extremity of said nozzle member, and a spring disposed between said detonator and said firing pin, said firing pin comprising a percussion point, a body portion and a tail portion, said tail portion being adapted to anchor the firing pin in non-operative position in the delay charge.

2,863,395
TWO STAGE AIR TURBINE DRIVEN FUEL PUMP
John F. Di Stefano, Lyndhurst, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application August 25, 1953, Serial No. 376,499
3 Claims. (Cl. 103—87)

1. A two-stage aircraft fuel pump comprising a single casing means having a pump inlet and a pump outlet, a turbine wheel in said casing means and exhibiting speed characteristics which are the function of delivered hydraulic horsepower and driving fluid horsepower and which vary accordingly in response to changes in altitude of the fuel pump, a first pumping unit at said inlet having rotary, low-speed, vapor-separating fluid impelling means receiving fluid from said inlet, a second pumping unit in said casing means having rotary, high speed centrifugal fluid impelling means receiving fluid from said first pumping unit and discharging to said outlet, a direct mechanical connection between said turbine and said high speed second pumping unit, an hydrodynamic speed proportioning control means in said casing means interconnecting said first and second pumping units to maintain a constant speed ratio between said pumping units irrespective of load on said turbine wheel to obtain optimum altitude performance of said fuel pump.

2,863,396
LUBRICATING PUMP DEVICE
Clarence T. Heintz, Elyria, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio
Application March 9, 1955, Serial No. 493,977
12 Claims. (Cl. 103—178)

1. A lubricating device comprising a reservoir arranged to hold a supply of lubricant, means connected to said reservoir operable to selectively direct said lubricant to

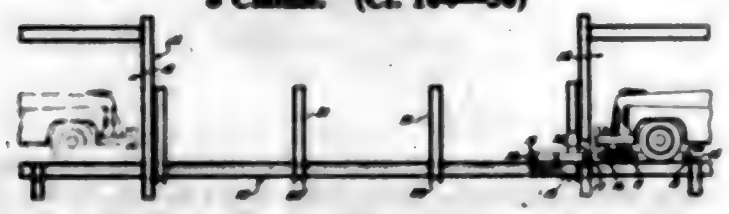
engaged with said wheel engaging means, said first and

2,863,401

a receiving area or surface external to said device comprising a lubricating gun member having a chamber formed centrally therein, piston means slidably disposed in said chamber, means connected to said piston means and gun member and movable with respect thereto to slide said piston means into said chamber to an extreme inward position with respect to said chamber, means disposed within said chamber engaging said piston means and arranged to slide said piston means to an extreme

outward position with respect to said chamber, means in said gun member disposed on opposite ends of said chamber and alternately operable by said piston means, when said piston means is moved from its extreme outward position to its extreme inward position and back to its extreme outward position, to shut-off said chamber from said reservoir of said external area or surface, and means within said reservoir connected between said lubricant supply and said gun member to alternately shutoff or connect said lubricant supply to said lubricating gun member during the operation thereof.

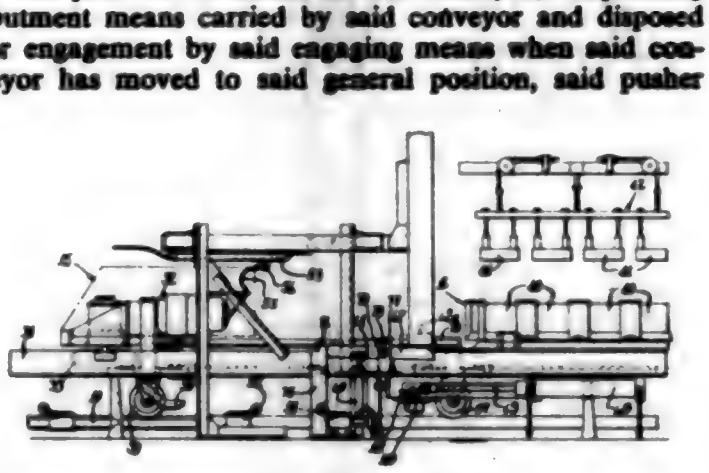
2,863,397
APPARATUS FOR HANDLING AUTOMOBILES
Roy O. Billings, Milwaukee, Wis.
Application May 28, 1953, Serial No. 356,144
8 Claims. (Cl. 104—50)



1. An automobile handling apparatus comprising a main carrying structure, a wheeled carriage guided for longitudinal movement on said structure, cooperating fixed and movable driving means on said structure and carriage, power driven means for actuating said movable driving means to effect movement of said carriage on said structure, a wheeled dolly supported for longitudinal movement on said structure, a coupling member on said carriage, a plurality of longitudinally spaced coupling receiving members on said dolly, said coupling receiving members being adapted to selectively receive said coupling member to establish a preselected relative coupled relationship between said carriage and said dolly, and automobile engaging means on said dolly to effect the transfer of an engaged automobile to or from said main carrying structure when said coupled carriage and dolly are moved.

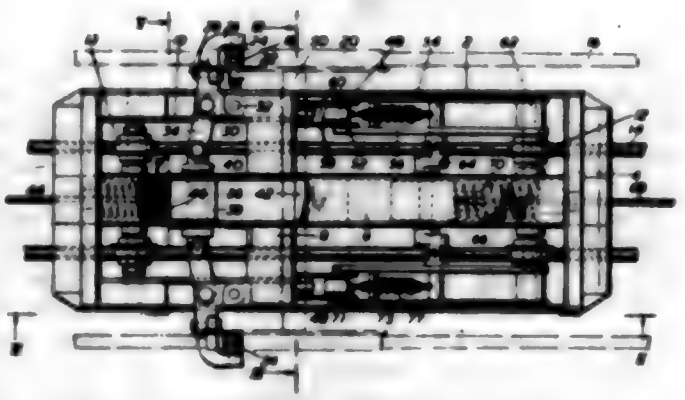
2,863,398
INDEXING AND CONVEYING SYSTEM FOR FOUNDRIES
Axel G. Granath, Chicago, Ill., assignor to Herbert Simpson Corporation, Chicago, Ill., a corporation of Illinois
Application August 2, 1954, Serial No. 447,050
21 Claims. (Cl. 104—162)

1. A mold conveying system comprising a conveyor movable along a predetermined path for transporting molds toward a predetermined station, means for moving said conveyor to a general position in the region of said predetermined station, pusher means operable separately from said moving means and reciprocably mounted adjacent said path of movement, engaging means carried by said pusher means and movable from a retracted position out of said path of movement to an extended position in said path of movement of said conveyor, cooperating abutment means carried by said conveyor and disposed for engagement by said engaging means when said conveyor has moved to said general position, said pusher



means being movable toward an extended position to move said engagement means into engagement with said abutment means and thereby to move said conveyor along said predetermined path toward said predetermined station, means for rendering the moving means ineffective and the pusher means effective as the conveyor reaches said general position, and stop means movable into the path of movement of said conveyor and operative to engage said conveyor when the conveyor has reached said predetermined station to precisely position said conveyor at said predetermined station.

2,863,399
APPARATUS FOR HAULING VEHICLES
Allan Maurice Howard, Tipton, England, assignor to Norton-Tividale Limited, Tipton, Staffordshire, England, a British company
Application February 20, 1956, Serial No. 566,598
Claims priority, application Great Britain
February 21, 1955
2 Claims. (Cl. 104—176)



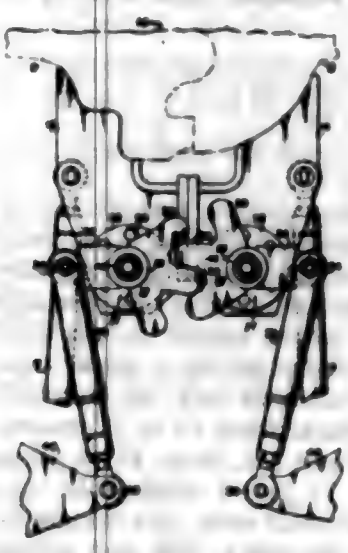
1. A wagon haulage apparatus comprising a bogie adapted to run on a narrow track between rails for wagons, said bogie including wagon wheel and axle engaging means, a first linkage means including a first pivoted arm connecting said wheel engaging means to said bogie to move said wheel engaging means laterally outwardly of the bogie to engage a wheel of a wagon on one side only of the point of engagement of the wheel with the track therefor, a second linkage means including a second pivoted arm connecting said axle engaging means to said bogie to move said axle engaging means vertically of the bogie to engage an axle of the wagon on the side of said axle opposite to the side on which the wheel is

2,863,403

extrusion openings, the conveyer is provided with rack

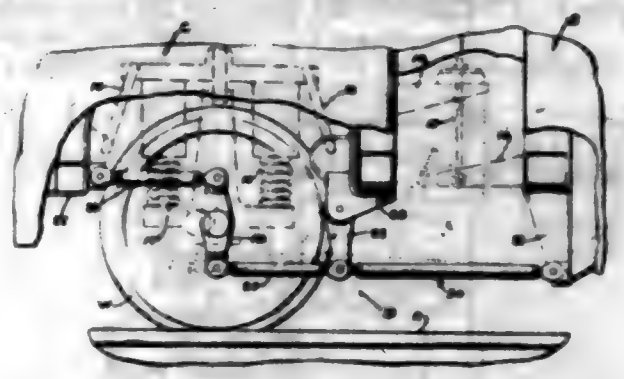
engaged with said wheel engaging means, said first and second linkage means being spaced longitudinally of the bogie and movable independently of one another, said wheel and axle engaging means being connected to said first and second arms respectively and said arms mounted on said bogie for pivotal movement between inoperative positions wherein the wheel and axle engaging means clears the wheel and axle respectively of the wagon and operative positions wherein the wheel and axle engaging means engage the wheel and axle respectively of the wagon, first control means slidably mounted in said bogie and connected to said first linkage means for normally maintaining said wheel engaging means in an inner inoperative position and adapted to be shifted longitudinally of said bogie to move said wheel engaging means to the outer operative position thereof, second control means slidably mounted in said bogie and connected to said second linkage means for normally maintaining said axle engaging means in a lower inoperative position and adapted to be shifted longitudinally of said bogie to move said axle engaging means to the upper operative position thereof, said second control means being movable independently of said first control means, a pull member connected to said first and second control means and means connected with said pull member for tensioning said pull member for moving said wheel engaging means to the outer position and subsequently moving said axle engaging means to the upper position thereof.

2,863,400
VEHICLE LATERAL MOTION CONTROL
Gerd Runken, Cold Spring, N. Y., assignor to ACF Industries, Incorporated, New York, N. Y., a corporation of New Jersey
Application June 21, 1955, Serial No. 516,958
6 Claims. (Cl. 105—3)



1. In a railway train comprising two adjacent cars, each car comprising a car body having an end portion, wheel and axle means operatively connected to said car body adjacent and inwardly of said end portion and a coupler pivotally connected to said car body inwardly of said end portion, the couplers of said two cars when interengaged forming a substantially rigid bar, the improvement consisting of means for controlling relative lateral motion between adjacent car end portions and comprising a gear segment pivotally mounted on said coupler of each car, said gear segments facing outwardly of said end portions of the respective cars and interengaging when said couplers interengage, each said segment further having an inwardly extending arm connected thereto, each said car body further having a bracket extending outwardly toward the other of said cars, and each bracket being connected to the inner end of the said inwardly extending arm of the same car.

2,863,401
RAILWAY TRAIN WITH COUPLER STEERED AXLES
John R. Furrer, Bronxville, N. Y., assignor to ACF Industries, Incorporated, New York, N. Y., a corporation of New Jersey
Application May 11, 1955, Serial No. 507,618
11 Claims. (Cl. 105—4)



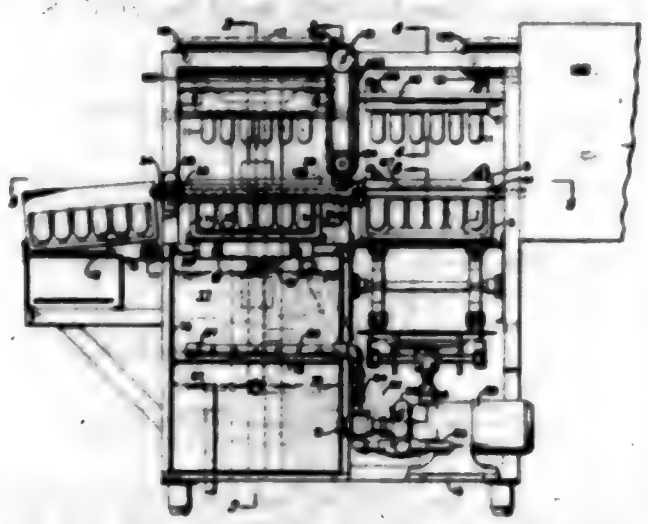
1. In a railway train having two cars, each car having a body and a wheel and axle assembly at each end of said body operatively connected thereto for rotation in a horizontal plane, each body further having side and end walls and a coupler pivotally connected to said body inwardly of said end walls and interengaged at its outer end with the coupler of the other car to form a substantially rigid bar connecting together adjacent ends of said bodies, the improvement constituting axle steering means for said cars and comprising on each of said cars a laterally swingable arm pivotally mounted on an adjacent end wall and displaced from the car center line, a substantially laterally extending link pivotally connected to said coupler and to said arm and laterally swingingly actuating the latter in unison with said coupler, a longitudinally swingable arm pivotally mounted on said body, a link pivotally connected to said last mentioned arm and to said wheel and axle assembly adjacent a wheel thereof, and means interconnecting said two arms and translating outward lateral motion of said first mentioned arm into inward longitudinal motion of said second mentioned arm.

2,863,402
WEDGE SEALING OF CAR DOORS
Barton H. Ford, Omaha, Nebr.
Application May 29, 1956, Serial No. 588,031
3 Claims. (Cl. 105—424)

3. In combination with a drop-bottom car adapted for the handling of granular commodities, said car having a hopper defined by a stationary door frame panel, generally triangular side walls, and a hinged door panel cooperating therewith to form a downwardly-directed, bottom-openable V-shaped chamber, the inner face of said door panel adapted to abut an edge of said frame panel, an elongated sealing wedge member formed of corrugated board having inner and outer liners and a crushable core therebetween with the flutes thereof running transversely of the wedge, the core being compressed along a longitudinal line to form a pair of wings disposed in a V relation and resiliently urged apart, said wedge member having its V-point extending outwardly downwardly between said panels and removably lodged therebetween and with one of said wings bearing against the inside face of the said door panel.

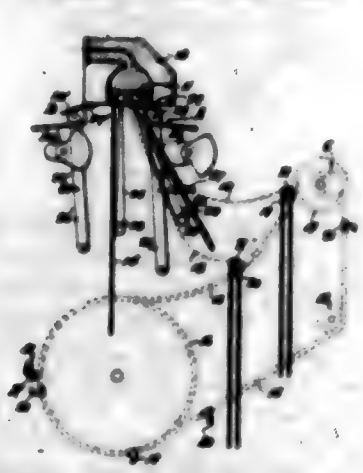
body section is introduced into the top of said body sec- cacillates and the work-advancing arm correspondingly

2,863,483
AUTOMATIC DEFROSTER
Marlin E. Rasmussen, Sacramento, Calif.
Application October 17, 1955, Serial No. 541,013
7 Claims. (Cl. 107—8)



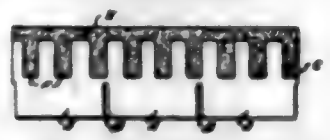
1. An automatic defroster comprising a frame, an elevator platform, means on said frame for moving said elevator platform between a central position and a lower position below said central position, means on said frame for moving said elevator platform between said central position and an upper position above said central position, means on said frame for advancing a combined mold and stick holder onto said platform in said central position, means for retaining said mold on said platform against vertical dislodgement, a hot water tank fixed on said frame in a position to receive said elevator platform with a combined mold and stick holder thereon with said mold at least partly submerged when said elevator platform and said combined mold and stick holder are in said lower position, means on said frame for retaining said stick holder against vertical dislodgement when said elevator platform and said combined mold and stick holder are in said upper position, and means on said frame for horizontally advancing said stick holder from said retaining means.

2,863,484
ALIMENTARY PASTE PRODUCING APPARATUS
Conrad Ambrette and Paul Ambrette, Westbury, N. Y.
Application May 11, 1956, Serial No. 584,345
2 Claims. (Cl. 107—14)



1. In apparatus for loading paste strings extruded from a die onto rack rods advanced by a driven conveyer passing beneath the die, cut off mechanism being provided for cutting away the paste strings dependent from the die, and means to actuate the cut off mechanism and the conveyer means in coordinated timed relation, the combination therewith wherein the die is provided with at least three parallel, closely spaced rows of paste string extrusion openings, the conveyer is provided with rack rod pick-up means to support and advance leading rack rods, which are spaced apart a distance substantially greater than the distance separating the first and second rows of paste strings at the die extrusion openings, and a trailing rack rod spaced behind said leading rack rods, and the cut off mechanism comprises a first cut off mechanism operative upon the forward first and second rows of extruded paste strings and a second cut off mechanism operative upon the rearward third row of extruded paste strings, a stationary deflector plate inclining downwardly and forwardly toward the conveyer from a point adjacent the die and intermediate the first and second rows of paste strings extruded therefrom, whereby to guide the descending first row of paste strings to a position spaced forwardly of the second row of paste strings a distance approximating the spaced apart relation of the leading rack rods advanced by the conveyer, thus to dispose midportions of the paste strings of respective first and second rows thereof across the paths of advance by the conveyer of respective leading rack rods, while the rearward third row of paste strings will be positioned to lie across the path of advance by the conveyer of the trailing rack rod, and means for successively operating said first and second paste string cut off mechanisms, the widely spaced relation of the leading rack rods being such as to provide clearance for drop of the cut ends of the first row of paste strings between the leading rack rods.

2,863,485
ASPHALT SHINGLE WITH SEALING ELEMENTS
Walton V. Lelbrook, Wyoming, and George Arthur Fascold, Mount Healthy, Ohio, assignors to The Philip Carey Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Application January 17, 1957, Serial No. 634,708
4 Claims. (Cl. 108—7)



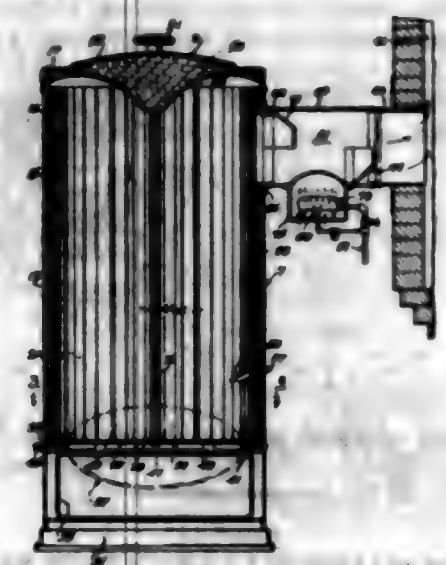
1. A self sealing asphalt granule coated strip shingle having an unexposed area and an exposure area which is divided with vertical slots to simulate individual shingles and having a band of pressure sensitive adhesive overlaying the granule coated shingle surface in the unexposed portion, said adhesive having a rubber component which furnishes an initial quick tack and in which the adhesive composition contains from 15 to 35 percent rubber, from 8 to 20 percent soft tar, from 15 to 30 percent asphalt flux and from 35 to 50 percent air oxydized pliable asphalt, and associated with said shingle in such manner as to maintain the quick tack and adhesive properties of the band of adhesive until the time of laying the shingle in a roof, a pliable strip having high edge tear resistance, resistance to delamination when wet, and said strip being coated with a film forming coating which is incompatible with the adhesive.

2,863,486
INCINERATOR
Kader George Anderson, Hollywood, Fla., and Samuel Close, Fort Wayne, Ind.; said Close assignor to said Anderson
Application June 10, 1957, Serial No. 664,583
3 Claims. (Cl. 110—18)

1. An incinerator comprising, in combination, a vertically extending body section having an outer wall and a liner, said liner comprising a corrugated section, said outer wall and said liner defining a passageway therebetween, said passageway communicating with the top of said body section whereby air from the bottom of said

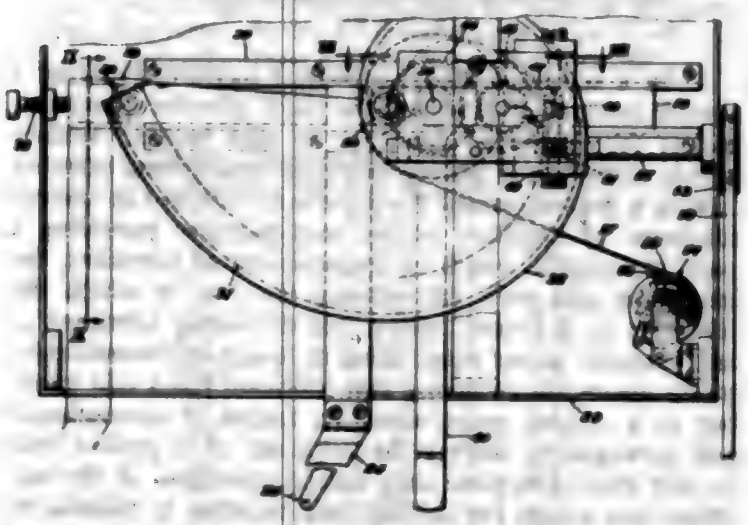
said first planes, and follower means movable in a di- said driving element, and means for selectively restrain-

body section is introduced into the top of said body section, said liner extending upwardly from a plate section having openings therein for feeding air into the corrugations on opposite sides of said liner, a lid on said body



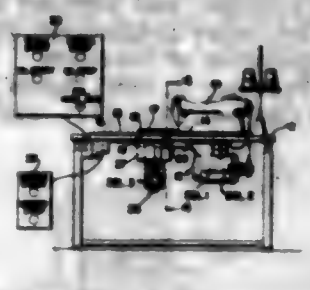
section having an inner side formed in the shape of an inverted cone to direct smoke and air from said passageway into the central portion of said body section, and air guide means for directing air from said passageway toward the underside of said lid.

2,863,407
SPIRAL SEWING MACHINE
Henry George, Corona, N. Y., assignor to Automatic Designing Corp., Flushing, N. Y., a corporation of New York
Application October 28, 1950, Serial No. 191,221
7 Claims. (Cl. 112—2)



5. A sewing machine attachment of the character described, comprising a work-advancing arm having a centering pin for the work, a cam having operative driving connection with said arm for moving said arm in a forward direction, a drive having a releasable clutch making driving connection to said cam and said drive being continuously in one rotative direction to the clutch, means operatively connected to the clutch automatically releasing the clutch and discontinuing forward driving force to the cam from said drive as the arm reaches a predetermined position of forward movement, and cam-return means operatively connected to the cam applying reverse rotative force to said cam during forward rotation of the cam and effectively and instantly operative on said cam to return the cam to initial position upon release of said clutch, whereby the cam rotatively oscillates and the work-advancing arm correspondingly advances and retracts in a complete cycle, and manual means for re-engaging the clutch and repeating the cycle.

2,863,408
CONTOUR SEWING MACHINES
Georges J. Abel, Watchung, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application March 5, 1956, Serial No. 569,638
9 Claims. (Cl. 112—3)



1. A sewing machine for forming a seam automatically in a predetermined path of compound curvature, comprising stitch-forming and work-feeding instrumentalities, a horizontal work support fixed adjacent the stitch-forming instrumentalities, two separate cam grooves formed in the surface of said work support, a work-holder having clamp means for holding the work, and a pair of rollers mounted in fixed spaced relation on said work-holder and each in engagement with a respective one of the cam grooves in the work support to guide the work-holder as it is propelled over the work support by the action of the work-feeding instrumentalities on the work.

2,863,409
SEWING MACHINES
Herbert Schumann, Hermann Zink, and Herbert Wenz, Kaiserslautern, Germany, assignors to G. M. Pfaff A.-G., Kaiserslautern, Germany, a corporation of Germany
Application February 9, 1955, Serial No. 487,176
Claims priority, application Germany February 10, 1954
21 Claims. (Cl. 112—158)

1. In an ornamental stitching mechanism, for use in connection with a zig-zag sewing machine having a power drive and means operable to change the position of the stitch and to change the width of the stitch, in combination, two rotatable control discs, means operable for releasably coupling said discs coupling with said power drive, said discs including a plurality of pins parallel of the axis of disc rotation and each pin being shiftable axially between an active position and an inactive position all of said pins in the active position extending between two parallel first planes, and all of said pins in the inactive position extending between two other parallel planes offset axially of said axis with reference to

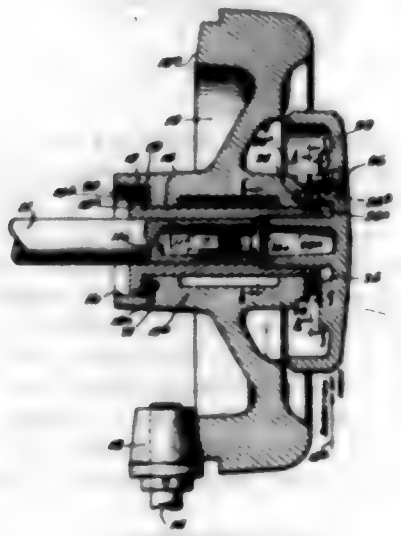
paratus and in pressing engagement with said operating wheel, whereby upon an operative actuation of said ap-

the door wheels when the door is in its fully closed position over the opening, selectively actuatable means

least three parallel, closely spaced rows of paste string of said body section whereby air from the bottom of said

said first places, and follower means movable in a direction at an angle to the axis of said discs and having a member of said pins disposed in the paths of said pins in the active position and operable to be engaged thereby for movement at an angle to the longitudinal direction of said pins, for actuating said changing means of the stitching position and of the stitching width.

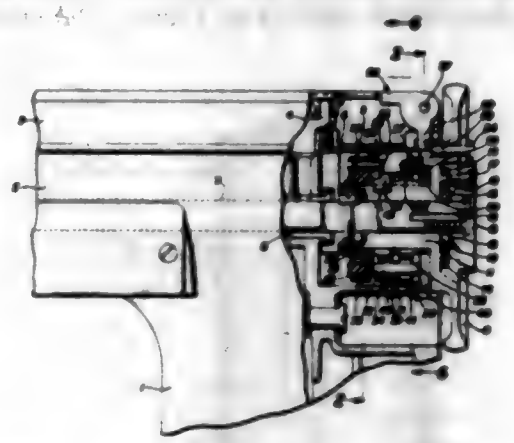
2,863,410
CLUTCH MECHANISM FOR A SEWING MACHINE DRIVE
Fred W. Lange, Chicago, and Michael E. Shaw, Cicero, Ill., assignors, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Application February 3, 1955, Serial No. 485,859
3 Claims. (Cl. 112—220)



1. In a sewing machine, apparatus comprising: a drive shaft rotatable about its axis; an elongated bearing member on said shaft for rotation therewith having an annular flange on its inner end; a drive wheel rotatable on said bearing member and slidable axially thereon; a first clutch member attached to said flange; a second clutch member attached to said wheel, the clutch members including cooperating engageable locking portions of shallow depth for releasably attaching together said clutch members; a knob threaded to said shaft positioned on the side thereof opposite to said flange, the knob selectively moving said wheel toward and away from said flange on rotation of the knob to engage and disengage said clutch members; an annular first bearing concentric to said shaft adjacent to the outer side of said wheel and attached thereto; an annular second bearing concentric to said shaft between said first bearing and said knob and attached to said bearing member, said second bearing having spaced stop means thereon; and means on said knob engaging said stop means for limiting the extent of said rotation of said knob.

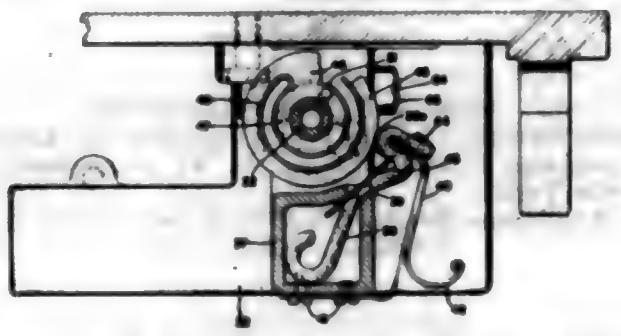
2,863,411
SEWING MACHINE DRIVES
Wilbur J. Poets, Watchung, N. J., assignor to The Singer Manufacturing Company, Elizabeth, N. J., a corporation of New Jersey
Application November 14, 1955, Serial No. 546,571
7 Claims. (Cl. 112—220)

1. In a sewing machine having a frame, a main shaft journaled in said frame, a hand wheel journaled on said main shaft and having an elongated hub, a clutch for connecting said hand wheel to said main shaft for rotation, and a planetary gear unit mounted upon said hub and comprising driving, driven and reaction elements, operative connection between said driven element and said hand wheel for rotating the same, means for rotating said driving element, and means for selectively restraining rotation of said reaction element and for clutching



said reaction element to said hand wheel for unitary rotation.

2,863,412
SEWING MACHINE LUBRICATION SYSTEMS
John G. Attwood, Oak Park, Clarence C. Smith, Chicago, and John N. Covert, Park Forest, Ill., assignors to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Application December 9, 1954, Serial No. 474,142
13 Claims. (Cl. 112—256)



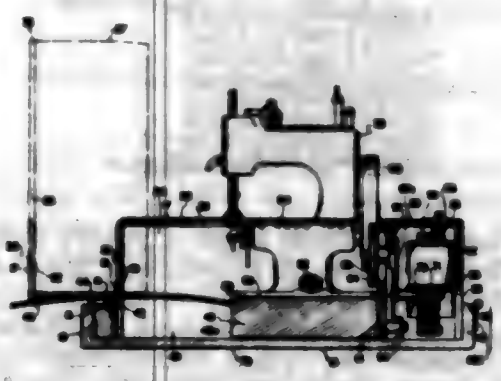
1. In a sewing machine a bearing surface requiring a precise amount of lubricant for most effective operation, means for delivering lubricant to said bearing surface which comprises a porous lubricant conducting member having a predetermined fixed porosity adapted to convey lubricant by capillary action, said member providing a path of variable length of transmission of lubricant, the length of said path determining the rate at which the lubricant is delivered, means for delivering lubricant to said member at one point along its length of transmission, pump means for receiving said lubricant from said member at a second point along its length of transmission and arranged to deliver the lubricant at a desired rate to said bearing surface only during operation of the machine, and means for shifting said member in relation to at least one of said two last-mentioned means to vary the distance between said two points and thereby vary the length of said path through which said lubricant must be transmitted through said member from said first point to said second point.

2,863,413
MOTORIZED CABINET STRUCTURE
Gene Streeco, Whitestone, N. Y.
Application November 9, 1956, Serial No. 621,457
13 Claims. (Cl. 112—260)

1. In a motorized cabinet structure for accommodating a machine having an operating wheel thereon, the combination of a casing, a base within the casing for operatively supporting said machine in a predetermined operative position, a motor apparatus within said casing, a driving wheel operatively connected to said motor ap-

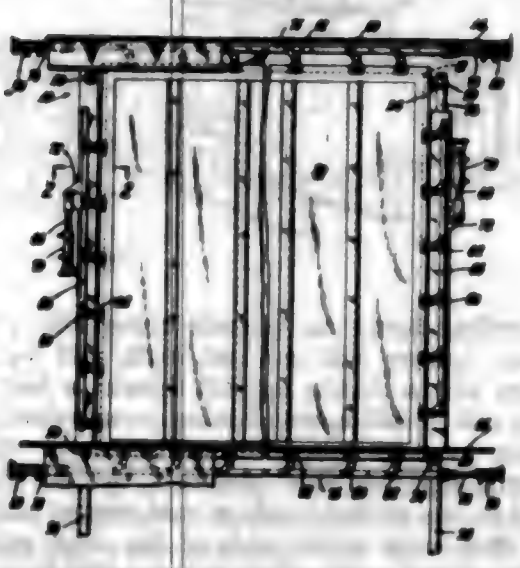
upon release of said clutch, whereby the cam rotatively allel planes offset axially of said axis with reference to

paratus and in pressing engagement with said operating wheel, whereby upon an operative actuation of said apparatus said operating wheel will be rotated to cause said machine to operate, a partition member movably disposed on said casing and positioned and proportioned for placement in a closure position over the upper portion of the casing, and a cover member for said casing proportioned to envelop said partition member when the latter is in its said closure position, said partition member having an upper wall which, when the partition member is in



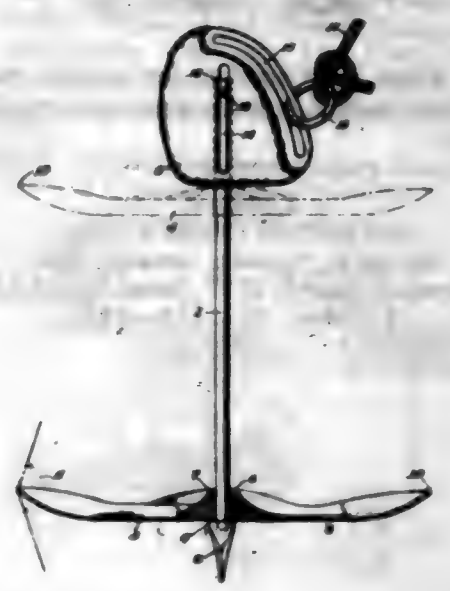
its said closure position, is in spaced relation to the bottom of the casing to form an inner chamber, and positioned below the top of the machine when the latter is in its operative position, whereby the machine is partly in said chamber and partly above said upper wall, said upper wall having an apertured portion therein proportioned and positioned to permit the machine to extend therethrough when the partition member is in its said closure position, said chamber being proportioned to receive said machine when in a predetermined inoperative prone position below said upper wall.

2,863,414
CLOSURE FOR SHIP PORT
Clifford E. Hoitt, Greenwich, Conn., and Cyril T. Kreuzer, Churchville, N. Y., assignors to Walz & Kreuzer, Inc., Rochester, N. Y., a corporation of New York
Application June 6, 1956, Serial No. 589,750
7 Claims. (Cl. 114—173)



1. A door construction for closing a side opening in the hull of a ship comprising, in combination, a slidable door panel having wheels along two opposite sides, selectively actuatable means connected to said door for sliding the door across the opening on said wheels, means defining guideways substantially parallel to the plane of said opening for confining the wheels during movement of the door from its open position adjacent the opening to its closed position across the opening, said guideways being substantially spaced from said plane and said guideways having portions movable toward the plane of the opening, said portions being positioned to receive the door wheels when the door is in its fully closed position over the opening, selectively actuatable means connected to said door for moving the movable portions toward the plane of the opening, and gasket means positioned to be brought into water-tight sealing relationship between the door edges and the edges of the opening when the movable portions are moved toward the opening to carry the door toward the opening.

2,863,415
ANCHOR
Bernard R. Schofield, Williams Bay, Wis.
Application August 5, 1954, Serial No. 448,824
9 Claims. (Cl. 114—207)



1. As a new article of manufacture, an anchor designed releasably to secure a boat to the bed of a body of water and comprising a base having materially greater width than height, adapted when the anchor is dropped into the body of water to come flatly to rest on the bed, and embodying a substantially vertical open ended bore, a normally upstanding shaft having a pointed lower end, extending through the bore in the base in such manner that it is free to slide upwards and downwards with respect to the base while at the same time it is prevented from tilting laterally to any appreciable extent relatively to said base, and provided at its upper portion with stop means, coacting means between the base and the lower end of the shaft for limiting upward sliding movement of the shaft relatively to said base, a weight mounted to slide up and down on the upper end of the shaft and arranged so to coact with the stop means that in connection with repeated downward sliding movement thereof it operates through the medium of said stop means to impart downward hammer blows to the shaft and drive the latter into the bed, and a flexible element having one end thereof connected to the weight and its other end adapted to be connected to the boat, said element being adapted when moved up and down to impart up and down sliding movement to said weight.

2,863,416
VEHICLE ROAD SIGNAL
Morris Frankel, Teaneck, N. J.
Application December 30, 1955, Serial No. 556,730
1 Claim. (Cl. 116—63)

A device of the character described, comprising a hollow body of predetermined irregular peripheral contour, the body being formed from two similar thin sheets of flexible and inflatable plastic material, peripheral edges of said sheets being secured together in the form of a thin flange at edge portions bordering the sides and top only of the body, said edge portions having luminous

ably mounted within said trough, the bottom of said, or said retracted position, said tongue having

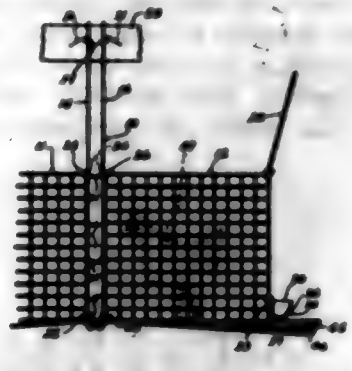
material thereon to render said peripheral edges of the body readily noticeable, the body having a flared base portion, weighting means, within the peripheral portion

only of the flared base portion, for holding the inflated body in upright position, and an inflating element attached to said body.

2,863,417
GRADING INDICATOR
Joseph L. Newton, Arcadia, Fla.
Application June 4, 1957, Serial No. 663,389
1 Claim. (Cl. 116—133)

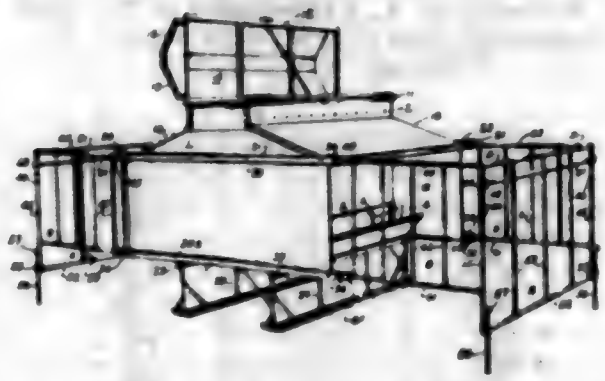
In an indicator for indicating the depth of fill or levelling required in grading, the combination of a flat post having a transverse point adapted for vertical insertion in the ground, a dial secured to the upper end of the post, identical indicia on opposite faces of said dial, said post and dial having aligned horizontal bores therethrough, a bolt having a head extended through said bores, lock nuts on said bolt intermediate its length, one abutting said dial and the other abutting said post, clamping said bolt in fixed relation to said post, a dial adjacent the head of said bolt but spaced from the adjacent lock nut, a long hand and a superposed, overlying short hand between said head and the adjacent lock nut, said hands having apertures through which said bolt extends, a compression spring surrounding said bolt between said head and said short hand, said hands being rotatable to designate incline on one face of said dial, a second long hand and a second superposed short hand, each having an aperture therein mounted on the end of the bolt opposite said head, a second compression spring surrounding said bolt abutting said second short hand, and a clamping nut on said bolt biasing said second spring towards said second short hand, said second long and short hands designating indicia on the corresponding opposite faces of said dial, whereby all four of said hands may be individually set in selected positions without rotation of the hands adjacent one face of the dial disturbing the position of the hands adjacent the other face of said dial, each of said hands being provided with an elongated portion having parallel sides, a pointed indicating portion and a rounded end adjacent said post.

2,863,418
POULTRY LAYING CAGES
Lloyd A. Peckmann, Decatur, Ala.
Application May 25, 1953, Serial No. 357,818
2 Claims. (Cl. 119—18)



1. The combination with a pair of poultry laying cages arranged back to back, of an overhead frame member, a pair of substantially parallel vertical wire members spaced apart to receive a water trough therebetween and disposed between the cages, horizontally extending trough support member secured rigidly to said vertical wire members, a water trough resting on said support member and fitting snugly between said vertical wire members, upper and lower outwardly and upwardly extending members on said vertical wire members disposed outwardly of the adjacent vertical wire member engaging the cages and supporting the same, and means attaching the upper ends of said vertical wires to said overhead frame member with the lower ends of the wires depending freely.

2,863,419
CREEP FEEDERS
Merwyn C. Murrell, Durant, Okla., assignor to Excel Body Corporation, Durant, Okla.
Application November 1, 1955, Serial No. 544,106
9 Claims. (Cl. 119—20)



1. A feeding device for animals comprising a hopper having top, bottom, side and end walls, said top having an opening with a closure applied thereto, a feed trough along one side of said hopper having communication with the interior of said hopper, a pen structure including three animal-retaining panel members, two of which are connected at one of their ends to said hopper and at the other of their ends to the ends of the third panel, the dimensions of said panel members being slightly in excess of those of corresponding sides of said hopper, whereby the same may be placed in embracing position about the hopper for storage purposes.

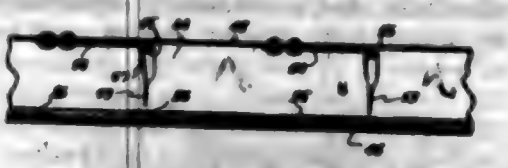
2,863,420
AUTOMATIC POULTRY FEEDER
Reed S. Kolford, Van Nuys, Calif.
Application January 22, 1957, Serial No. 635,253
4 Claims. (Cl. 119—52)

1. In an automatic poultry feeder, an elongated stationary trough, an elongated substantially flat bar slid-

2,863,423

cluding a row of vertical steam generating tubes arranged

ably mounted within said trough, the bottom of said feed bar slidably engaging said trough, means for sliding said feed bar longitudinally along said trough with oscillating forward and backward movements, a plurality of pivotal paddles transversely mounted across and spaced along said trough, the distance between each pair of said paddles being less than the distance of oscillatory movement of said feed bar, means for supplying feed to the upper surface of said feed bar, each



of said paddles being mounted for limited pivotal movement whereby said paddles are disposed toward a horizontal position with respect to said trough when said feed bar is moved in a forward direction to permit the feed to be carried by said feed bar beneath said paddles along said trough in a forward direction and said paddles are disposed toward a vertical position with respect to said trough when said feed bar is moved in a backward direction to prevent the backward movement of said feed beneath said paddles.

2,863,421

WRITING INSTRUMENT

Rosario J. Rizzo, Elmont, N. Y., assignor to Ferber Corporation, Bergen County, N. J., a corporation of New Jersey

Application February 28, 1955, Serial No. 490,739
5 Claims. (Cl. 120—42.03)

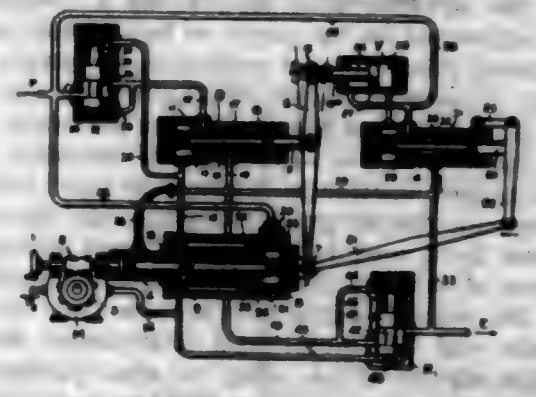
4. In a writing instrument, in combination, an elongated sleeve provided at opposite ends with a first and a second opening communicating with its interior, a cartridge axially movable in said interior between an extended and a retracted position, said cartridge having a writing point projecting from said first opening in said extended position, resilient means urging said cartridge into said retracted position, a button non-rotatably held in said second opening for axial displacement relative to said sleeve, and a tongue pivoted to said button, said sleeve being provided in its interior with two axially spaced shoulders on opposite sides of said tongue, said cartridge terminating opposite said writing point in a catch laterally displaceable for engagement with either of said shoulders whereby said cartridge occupies either said extended or said retracted position, said tongue having formations laterally offset from its pivot on either side thereof and alternately engageable with said catch, upon inward displacement of said button against the action of said resilient means, whereby engagement of a formation on one side of the pivot to exert a force on said catch for movement away from said pivot effecting dislodgement of said catch from the shoulder engaged thereby, said tongue and said resilient means being jointly effective to move said catch sideways toward the other shoulder for engagement therewith upon subsequent release of said button.

2,863,422

HYDRAULIC FOLLOW UP SYSTEMS

Jean Mercier, New York, N. Y., and Pierre Guillaume Joseph Marie Ambonnay, La Garenne-Colombes, France

Original application January 14, 1948, Serial No. 2,286, now Patent No. 2,787,255, dated April 2, 1957. Divided and this application February 19, 1954, Serial No. 413,022
Claims priority, application Luxembourg January 22, 1947
2 Claims. (Cl. 121—41)



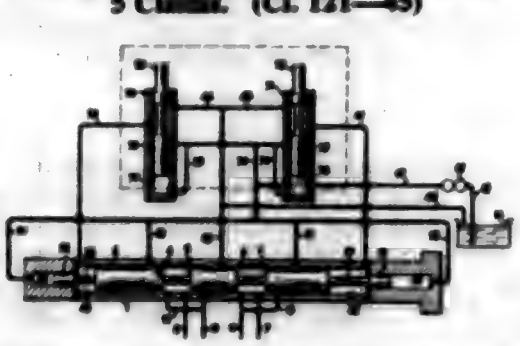
1. In a hydraulic follow-up system, the combination with a displaceable controlling element, a displaceable controlled element, a liquid pressure responsive servomotor connected to said elements to move said controlled element in positional correspondence with displacements of said controlling element, a duct adapted to be connected to a source of pressure liquid, said duct being connected to said servomotor for operation thereof, said main valve means connected to said duct to control the flow of pressure liquid to said servomotor, said main valve means being connected for control by said elements to cause operation of said servomotor in accordance with the amount of positional disagreement between said controlling and controlled elements, of liquid pressure responsive main adjusting means for said main valve means, auxiliary valve means for controlling the flow of pressure liquid to said main adjusting means and having a valve operating member connected to said controlling element and to said controlled element whereby movement of said controlling element will determine an initial flow rate through said auxiliary valve means and thereby cause an initial adjustment of said main valve means in accordance with said positional disagreement, auxiliary adjusting means operatively associated with said main adjusting means and with said auxiliary valve means so as to adjust the latter in response to said initial adjustment of the main valve means to a position in which said initial flow rate through said auxiliary valve means, and consequently the speed of displacement of said controlled element, is increased in order to minimize any lag of said controlled element with respect to said controlling element due to said positional disagreement, and means arranged for yieldingly opposing motion of said auxiliary adjusting means and tending to restore the latter to neutral position with a predetermined delay corresponding to reduction of said lag to zero so as to maintain a flow rate through said main valve means with said lag reduced to zero which corresponds to the speed of displacement of said controlling element.

ably mounted on said shaft in said central chamber, a confronting portions of said stem and said collar, said

2,863,423
HYDRAULIC CONTROL INSTALLATIONS FOR MACHINE TOOLS AND OPERATING MEANS THEREFOR

Robert Moll, Geneva, Switzerland, assignor, by mesne assignments, to Societe Anonyme Mipsa, Geneva, Switzerland, a corporation of Switzerland

Application April 1, 1957, Serial No. 650,041
Claims priority, application Switzerland April 11, 1956
5 Claims. (Cl. 121—45)



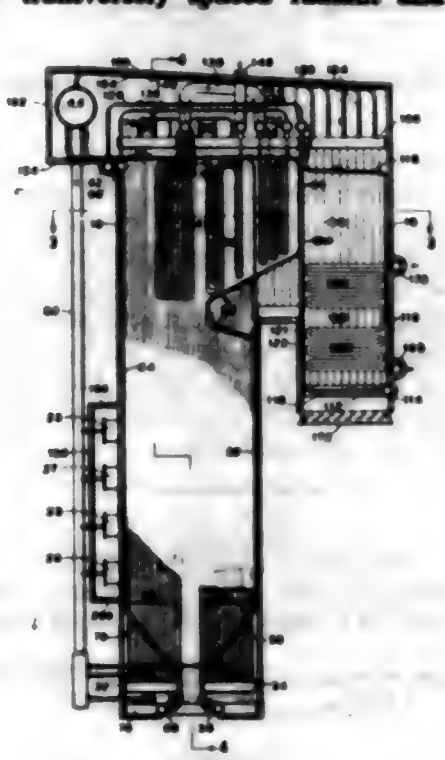
1. A hydraulic control installation, particularly for controlling the advance of a member of a machine tool, comprising means for the supply of liquid under pressure, an automatic distributor for controlling the supply of said liquid to a hydraulic motor, said distributor being actuated in such a manner as to ensure an automatic control of said motor in the two directions of operation thereof, an intermediate distributor, located on pipes connecting said automatic distributor to said motor, said intermediate distributor being capable of taking up three different positions, one of said positions being a neutral position, ensuring the normal connection between said automatic distributor and said motor, said intermediate distributor being also capable of taking up two other positions interrupting the connection between said automatic distributor and said motor, and also controlling respectively the motor in its two directions of operation independently of the position of said automatic distributor, said automatic distributor controlling two pipes connected to said motor for ensuring the supply of liquid under pressure and the connection to exhaust and inversely, of said latter, said intermediate distributor comprising a slide constituted by three pistons connected together, two spaces being comprised between said three pistons, said spaces forming two chambers limited externally by the body of said distributor, the two pipes coming from the automatic distributor leading into said two chambers when the distributor is in its neutral position, said two pipes then communicating respectively, through said two chambers, with two further pipes leading to said motor, the position of ports in said intermediate distributor, which correspond with said two pipes coming from the automatic distributor, being so located as to be closed by said central piston and by one of the two end pistons respectively when said slide is moved into one or other of its other two positions, said latter positions being located respectively on one side and the other relatively to the neutral position, whereby each of said positions permits placing the pipes leading to the motor under pressure and exhaust respectively.

2,863,424
STEAM GENERATING, SUPERHEATING AND REHEATING UNIT WITH DUAL FURNACES AND PARALLEL GAS PASSES

Paul H. Koch, Bernardsville, N. J., assignor to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

Application November 30, 1955, Serial No. 550,064
2 Claims. (Cl. 122—240)

1. A high capacity high pressure steam generating, superheating and reheating unit comprising front, rear and opposite side walls forming a vertically elongated setting of rectangular cross-section, division wall means including a row of vertical steam generating tubes arranged to divide said setting into side-by-side superheater and reheater furnace chambers each having a heating gas pass opening through the rear wall thereof, burner means in said front wall arranged for independently firing said superheater and reheater furnace chambers, a high temperature steam superheating system comprising a radiantly heated primary superheater section formed by tubes lining the front walls of said superheater and reheater furnace chambers, and a secondary superheater section formed by transversely spaced radiant and convection

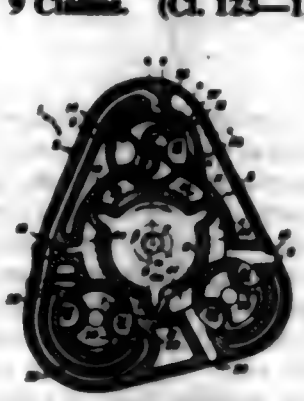


heated vertical tube platens at the entrance to said superheater furnace heating gas pass, and a high temperature steam reheating system comprising a radiantly heated primary reheater section formed by vertically extending tubes lining the side wall of said reheater furnace chamber opposite said division wall means, and a secondary reheater section serially connected to said primary reheater section and formed by transversely spaced radiant and convection heated vertical tube platens at the entrance to said reheater furnace heating gas pass.

2,863,425
SCAVENGING AND SUPERCHARGING SYSTEM FOR ROTARY ENGINES

Yves Brocile, Rueil-Malmaison, France, assignor to Institut Français du Petrole, des Carburants et Lubrifiants, Paris, France

Application December 19, 1957, Serial No. 703,804
Claims priority, application France December 19, 1956
9 Claims. (Cl. 123—13)



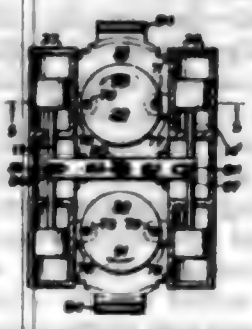
1. In a rotary internal combustion engine of the type described and having a stator, a central chamber therein and a number of cavities peripherally opening into said chamber, a power shaft extending through said central chamber, a central rotor, said central rotor being rotat-

chamber, a cylinder extension connected to said inlet

position and depressible to valve open position by the

ably mounted on said shaft in said central chamber, a plurality of pistons projecting from the peripheral wall of said central rotor and adapted for taking in, compressing, and releasing gaseous fluid in a normal work cycle, a number of gate rotors peripherally disposed about said central rotor and having wells for the passage of said pistons therethrough, and each housed with its rotary axis parallel with said power shaft in one of said stator cavities, a combustion space in said engine comprising at least one combustion chamber, one of said gate rotors being associated with said combustion chamber for controlling the admission of gaseous fluid thereto; the improvement of a supercharging and scavenging system comprising, in combination, an auxiliary gate rotor for controlling a second, separate compression of fluid for supercharging and scavenging purposes, apart separately from the compression of gaseous fluid in said normal work cycle, said auxiliary gate rotor being housed in one of said cavities; and channel means leading from said cavity housing said auxiliary gate rotor to the cavity housing said rotor associated with said combustion chamber, all of said peripheral gate rotors including said auxiliary gate rotor being distributed at determined angles taken at said power shaft, about the periphery of said central rotor.

2,863,426
INTERNAL COMBUSTION ENGINES
Frederick Arthur Summerlin, Isleworth, England
Application August 18, 1954, Serial No. 448,846
Claims priority, application Great Britain August 14, 1953
12 Claims. (Cl. 123—80)



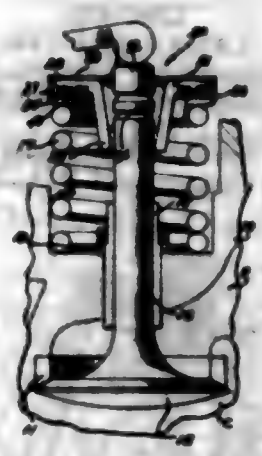
1. An internal combustion engine comprising a first free wheel the driven part of which is connected to an output shaft; a second free wheel the driven part of which is coupled to said output shaft through a reversing gear; a first pair of coaxial cylinders rigidly connected together and mounted on the driving members of said first and second free wheels so that axial movement of said first pair of cylinders in one direction tends to rotate said output shaft; a second pair of coaxial cylinders rigidly connected together and mounted on the driving members of said first and second free wheels so that axial movement of said second pair of cylinders in the direction opposite to said one direction tends to rotate said output shaft; a first pair of coaxial pistons rigidly connected together and slidable in said first pair of cylinders; a second pair of coaxial pistons rigidly connected together and slidable in said second pair of cylinders; and a lever pivoted on the frame of the engine and interconnecting said first pair of pistons and said second pair of pistons.

2,863,427
VALVE ROTATING DEVICE
John A. Newton, Painesville, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application May 27, 1954, Serial No. 432,684
15 Claims. (Cl. 123—90)

1. A valve rotating device consisting of a valve stem, a valve spring collar concentrically disposed relative to said valve stem and antifriction means interposed between and engaging said stem and said collar at adjoining confronting portions of said stem and said collar, said antifriction means together with said confronting portions coupling said stem and said collar to one another

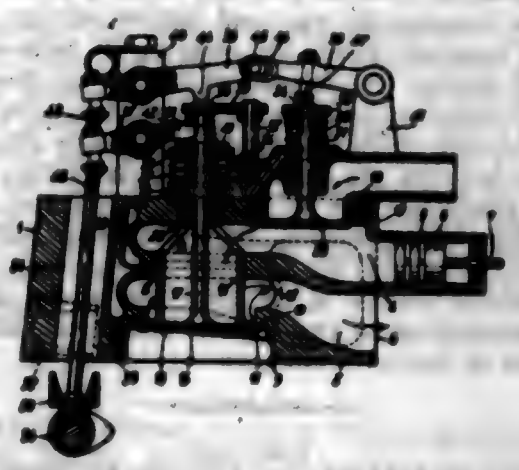
for unison longitudinal displacement when assembled and accommodating relative rotative displacement between said stem and said collar during the valve operating cycle.

2,863,428
VALVE ROTATING DEVICE
Samuel Harry Norton, University Heights, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application July 13, 1955, Serial No. 521,763
9 Claims. (Cl. 123—90)



1. A valve rotating device comprising inner and outer relatively rotatable parts, deformable resilient means connecting said parts, and ratchet means interposed between and engaging said resilient means and one of said parts having circumferentially overlapped axially inclined opposed ratchet surfaces to effect relative rotation between the parts upon deformation of said resilient means.

2,863,429
CYLINDER-HEAD FOR INTERNAL COMBUSTION ENGINE
René Bonteloux, Rouen, France
Application July 29, 1955, Serial No. 525,309
4 Claims. (Cl. 123—90)



1. A cylinder head for internal combustion engines, comprising a cylinder head having a chamber therein, a partition connected to said head and extending within said chamber forming an exhaust chamber and an inlet

side paired relationship, upstanding poppet valves sealing said ports, means for actuating said valves in a

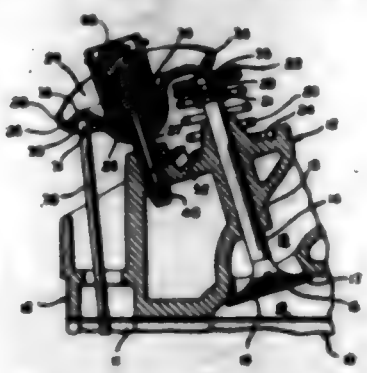
ing therethrough, a mixture valve in said passage between said nozzle and said pump and unit, means connecting

ting of rectangular cross-section, division wall means in-

chamber, a central rotor, said central rotor being rotat-

chamber, a cylinder extension connected to said inlet chamber, an inlet pipe leading into said inlet chamber, said head and said partition having concentric bores, a tubular valve slidably mounted through said bores and having a flange for being seated against one side of said head closing said bores, a poppet valve slidably extending through said tubular valve with the head of said poppet valve seatable against said valve flange closing said tubular valve, said tubular valve having openings capable of being in communication with one of said chambers, a pre-compression piston slidably and tightly mounted in said cylinder extension, a pre-inlet valve being slidably mounted in said head and adapted to close said inlet pipe, a plurality of resilient means tending to independently urged said valves in their closed position, a driven camshaft, a plurality of push-rods operable by said camshaft, a plurality of rocker arms pivotally mounted on said head for being pivoted by said push-rods and for sliding and opening said valves, and synchronizing means for operating said pre-inlet valve in proper time with respect to said poppet valve.

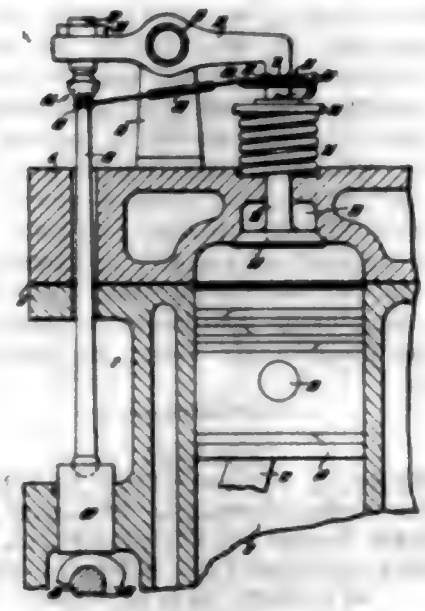
2,863,430
LASH ADJUSTER
Achilles Charles Sempietro, Detroit, Mich., assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application April 5, 1956, Serial No. 576,339
17 Claims. (Cl. 123—90)



1. A valve lash adjuster for a valve linkage including a rocker arm for operating a valve for an engine having a pressurized oil system, the lash adjuster comprising a supporting post adapted to be mounted on the engine and having an axially extending oil bore through said post, means connecting the oil bore to the pressurized oil system of the engine, a bearing member pivotally carrying the valve rocker arm and having a bore for slidably fitting the bearing member on the post, said bearing member having a cylindrically hollow interior axially parallel with the post and defining an oil pressure chamber between the post and hollow interior, a piston slidably mounted within the cylindrically hollow bearing member interior and secured to the post to close the oil pressure chamber, an oil conduit communicating between the axial bore of the post and the pressure chamber, an oil seal between the outer wall of the piston and the inner cylindrical wall of the bearing member, and an oil passageway extending from the outer wall of the piston between the oil seal and the pressure chamber to the piston surface at the other side of the oil seal to permit leakage of oil past the seal to lubricate the operating parts of the valve linkage.

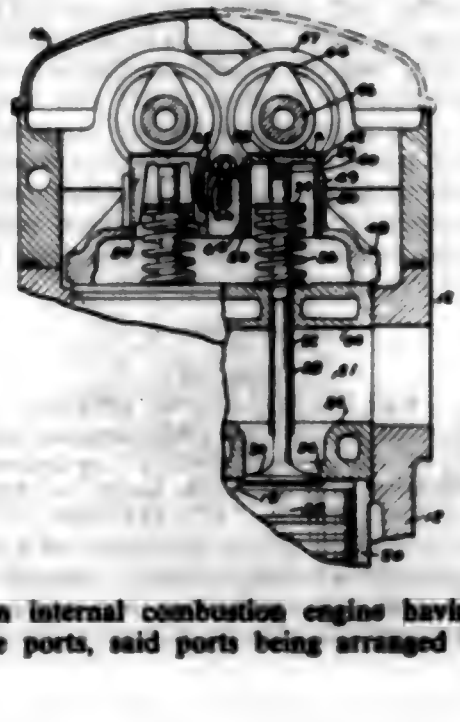
2,863,431
INTERNAL COMBUSTION ENGINE
Primo Marietti, Springfield, Mass.
Application May 24, 1957, Serial No. 661,418
1 Claim. (Cl. 123—90)

In an internal combustion engine the combination with the reciprocable stem of a valve spring actuated to closed position and depressible to valve open position by the crowned face at one end of a rocker arm for acting on the end of said stem and lifter means for the other end of said arm of means interposed between the crowned face of the rocker arm and end of the valve stem for eliminating clearance therebetween comprising, an elongated relatively rigid wedge member having a longitudinal groove on the under side thereof provided with an elongated flat lower face on the said end of the stem and being arranged for guiding the wedge member in sliding movements on



said end in opposite directions in a plane at right angles to a plane extending through the longitudinal axis of said stem, said member having an elongated flat uninterrupted upper face for the crowned end of the rocker arm diverging in one direction from one end thereof relative to the lower flat face of said groove to the opposite end thereof, and separate spring means connecting said one end of the wedge member and lifter means urging the wedge member in an opposite direction whereby the upper and lower faces thereof operate with a wedging action between the crowned end of the rocker arm and end of the valve stem.

2,863,432
VALVE TAPPET MECHANISM
James H. O'Brien, Detroit, Mich., assignor to Curtiss-Wright Corporation, Utica, Mich., a corporation of Delaware
Application July 18, 1957, Serial No. 674,269
5 Claims. (Cl. 123—90)



1. In an internal combustion engine having exhaust and intake ports, said ports being arranged in side by

tween and engaging said stem and said collar at adjoining

said chamber forming an exhaust chamber and an inlet

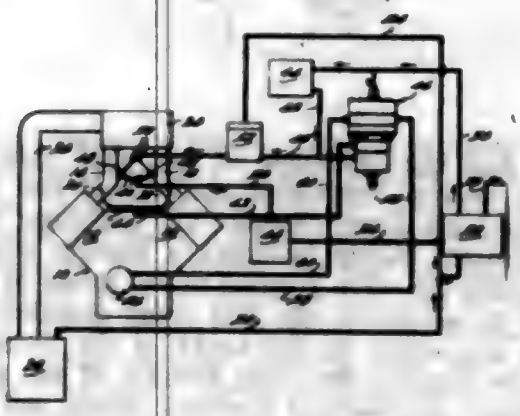
side paired relationship, upstanding poppet valves sealing said ports, means for actuating said valves in a reciprocatory manner, said means including cam carrying shafts disposed above said valves, spacer elements and cam followers disposed between said shafts and said valves, said cam followers having parallel vertical sides slidably engaging a portion of said engine structure, a detachable guide member disposed between adjacent cam followers, said guide member slidably engaging said followers and restricting their motion to vertical oscillation.

2,863,433

LOW PRESSURE FUEL INJECTION SYSTEM

Jorma O. Sarto, Walled Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application October 6, 1954, Serial No. 460,668
38 Claims. (Cl. 123—119)



1. In a fuel injection system for an internal combustion engine, said engine having a plurality of engine cylinders and individual manifold conduits communicating with each cylinder; a plurality of air atomizing nozzles, individual ones of said nozzles having discharge portions communicating with each of said manifold conduits, a fuel and air pumping unit, first conduit means for conducting fuel from said pumping unit to said nozzles, second conduit means for conducting atomizing air from said pumping unit to said nozzles, and a fuel metering mechanism disposed in said first conduit means for regulating the rate of flow of fuel from said pumping unit to said nozzles, said metering mechanism being operative in response to variations in certain of the operating parameters of said engine to provide a controlled flow of fuel to said nozzles to compensate for corresponding variations in the fuel requirements of the engine.

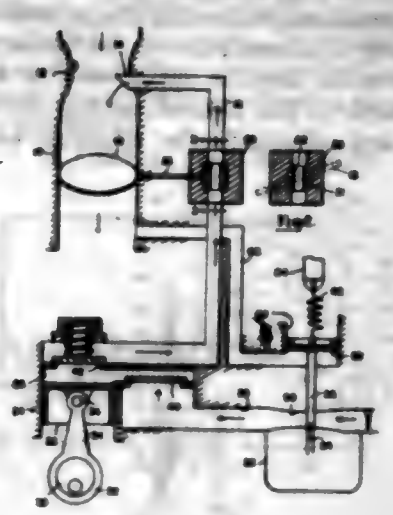
2,863,434

FUEL INJECTION SYSTEM

George M. Holley, Sr., Grosse Pointe Farms, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Application December 9, 1955, Serial No. 552,146
15 Claims. (Cl. 123—119)

1. A fuel injection system for an internal combustion engine having a manifold comprising an induction tube having a throttle therein, a nozzle for injecting a rich fuel-air mixture into said tube, a fuel-air pump, a passage of which said pump forms a part extending to said nozzle, a carbureting unit including a fuel metering valve connected to said passage for supplying fuel to air passing therethrough, a mixture valve in said passage between said nozzle and said pump and unit, means connecting



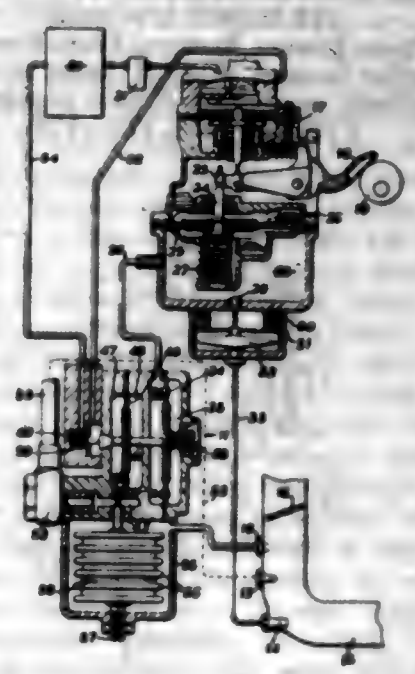
said throttle and mixture valve, and means responsive to load on the engine controlling said metering valve.

2,863,435

FUEL SUPPLY SYSTEMS FOR ENGINES

Richard Henry Syson, Milton, Ontario, Canada, assignor to Engineering Research and Application Limited, a corporation of Great Britain

Application May 1, 1956, Serial No. 581,928
7 Claims. (Cl. 123—119)



1. A device for controlling the supply of fuel to the induction tract of an engine comprising a fuel pump, a valve for controlling flow of fuel from the pump to the engine, a movable device for actuating said valve, an air chamber independent from the air supply to the engine, an air pump controlling the pressure of air in said chamber, a cam member driven by the engine, means for driving both the fuel pump and the air pump from said cam member, and means for applying the pressure in said chamber to said device.

2,863,436

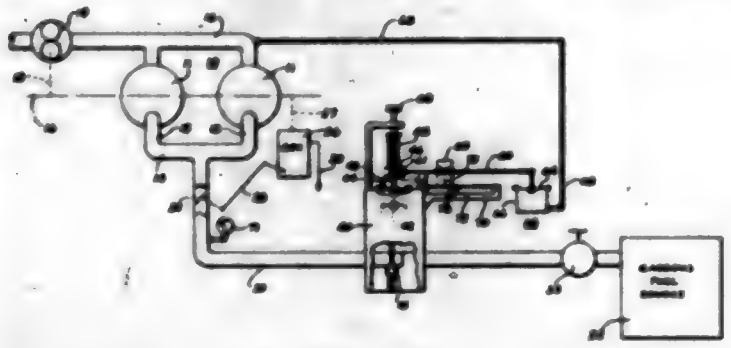
FUEL REGULATING MEANS FOR GAS ENGINES

Robert H. Beadle, Beloit, Wis., assignor to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois

Application April 16, 1956, Serial No. 579,551
3 Claims. (Cl. 123—128)

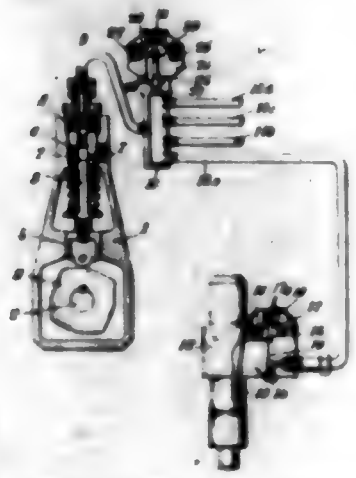
3. In a fuel supply system for a variable speed internal combustion engine operable on gas fuel and having an engine governor controlled throttle valve for controlling

gas fuel delivery to the engine, means for supplying gas fuel under pressure to the throttle valve, said means including a pressure regulator having a control adjustable for conditioning the regulator to determine the pressure of gas supply to the throttle valve variably in accordance with adjustments of the control, spring means acting on said control and adjustable for effecting adjustments of



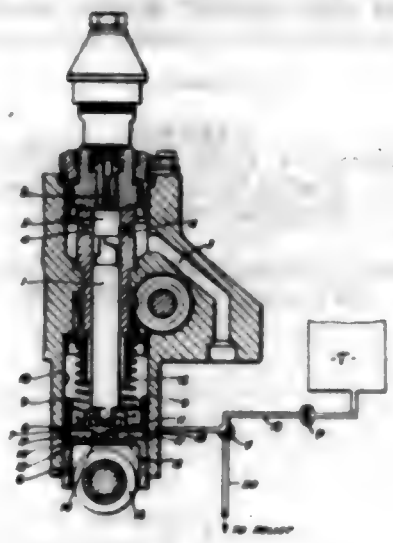
the control, and additional means for effecting adjustments of said control, the last said means comprising a pivotal lever in operative connection to said control, lever pivot means adjustably positionable intermediate the ends of the lever, and lever operating means connected to the lever and operable automatically in accordance with speed conditions of the engine.

2,863,437
FUEL INJECTION DEVICES FOR MULTI-CYLINDER ENGINES
Pierre Etienne Bessiere, Paris, France
Application January 22, 1957, Serial No. 635,219
Claims priority, application France January 31, 1956
5 Claims. (Cl. 123—139)



1. For use in connection with an internal combustion engine having at least two cylinders the working cycles of which have a phase difference between them, a fuel injection device which comprises, in combination, a reciprocating action fuel feed pump including a single cylinder, an injector mounted on each of said engine cylinders respectively, individual conduits extending each between the output of said pump and one of said injectors respectively, a valve in each of said conduits upstream of the injector located at the end of said conduit, said valve being arranged to cut off, when it is closed, the flow of fuel through said last mentioned conduit, said valve being arranged to be urged toward opening position by the pressure of fuel in said last mentioned conduit upstream of said valve, an electro-magnet mounted to cooperate with each of said valves to hold it normally in closed position, electric means for normally holding said electro-magnets operative for said purpose and means operatively connected with said pump for making each of said electro-magnets in its turn inoperative for a period of time during one delivery stroke of said pump.

2,863,438
TIMING OF FUEL INJECTION PUMPS
Kenneth E. Challis, Shepperton, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Application July 5, 1957, Serial No. 670,104
Claims priority, application Great Britain July 9, 1956
3 Claims. (Cl. 123—139)

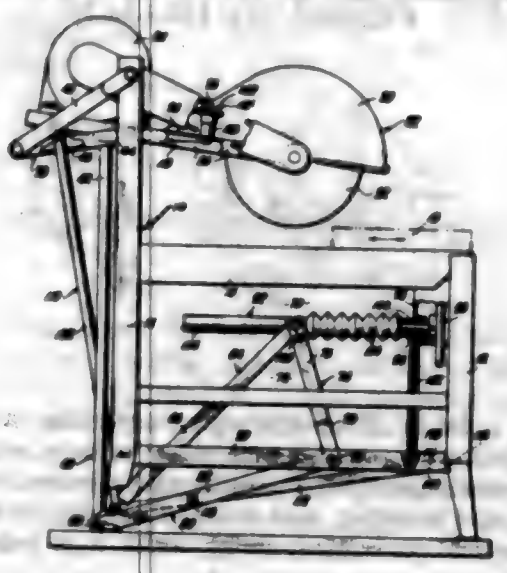


1. A fuel injection pump of the "spill" type for use with an internal combustion engine said fuel injection pump having a pump chamber and a plunger arranged to reciprocate therein including a plunger control device to vary the mean position of the stroke of the said plunger in relation to the said pump chamber without altering the length of the stroke of the plunger, said means for varying the mean position of the stroke of the plunger comprising a hydraulic piston and cylinder assembly, one side of which is connected to the stem of the plunger, and the other side of which is connected to the plunger operating mechanism, said assembly being disposed with the common cylindrical axes of said cylinder and said piston extending between the said plunger stem and the said operating mechanism, whereby admission or exhaust of hydraulic fluid to or from said cylinder will change the axial length of said assembly.

2,863,439
INTERNAL COMBUSTION ENGINES
Joseph Bischel, Mannheim, Germany, assignor to Motoren-Werke Mannheim A. G. vorm. Benz Abt. Stat. Motorenbau, Mannheim, Germany, a German company
Application February 12, 1958, Serial No. 714,818
Claims priority, application Germany February 28, 1957
9 Claims. (Cl. 123—193)

1. In an internal combustion engine a heavy metal cylinder, a light metal cylinder head, an annular ridge-like rim on said cylinder defining an opening into said cylinder, an annular sealing surface of said cylinder disposed outside and around said rim, an annular heavy metal ring set into said cylinder head and forming a collar fitting around said rim and defining an opening into said cylinder head and a sealing surface on said ring for bearing against said cylinder sealing surface.

2,863,440
MASONRY SAW
John Robert Harclerode, Kansas City, Mo., assignor to Clipper Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Application May 14, 1956, Serial No. 584,702
17 Claims. (Cl. 125—13)

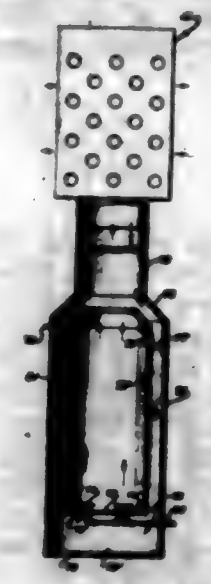


1. In a cutting machine, a frame; a vertically reciprocable standard having a support secured to the uppermost end thereof; means pivotally interconnecting the support and the frame; a cutting assembly; means swingably mounting the assembly on said support; structure having means pivotally mounting the same on the frame for swinging movement relative to the frame; means pivotally connecting said structure with the lowermost end of said standard; a device shiftable on the frame and pivotally connected with said structure for swinging the structure to reciprocate said standard and thereby raise and lower the cutting assembly; mechanism swingably mounted on said structure for movement therewith; and means operably coupling said mechanism with the assembly for swinging the latter.

2,863,441
MATERIAL CONVEYOR CART FOR MASONRY SAWS
John Robert Harclerode, Kansas City, Mo., assignor to Clipper Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Application February 4, 1957, Serial No. 637,949
4 Claims. (Cl. 125—13)

1. For a masonry saw having a pair of bed rails and a vertically swingable cutting disc rotatable about a horizontal axis, a conveyor cart adapted for reciprocation along said rails beneath the disc and including an open frame having a pair of end elements parallel with the path of reciprocation of the cart, a front channel and a rear channel, each having a pair of horizontal legs and a vertical bight; a work-supporting platform mounted on the frame; and a pair of spaced supports secured to the platform therebeneath and interconnecting said bights of the channels, said supports embracing the disc when the latter severs the platform and cuts into said channels, whereby to hold the cart against sagging between said rails.

2,863,442
VERTICAL FURNACE WITH POSITIVE DRAFT CONTROLLER
William O. Morse, Tulsa, Okla.
Original application November 5, 1954, Serial No. 468,852, now Patent No. 2,811,895, dated October 29, 1957. Divided and this application March 20, 1957, Serial No. 650,889
2 Claims. (Cl. 126—85)

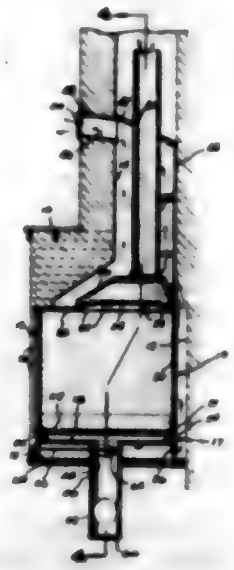


1. A vertically disposed furnace having a vertically extending tubular outer casing closed at the bottom, a tubular liner disposed within said outer casing in spaced relation therewith and forming an elongated annular combustion air supply passage with said outer casing, a burner assembly in spaced relation to the bottom of said furnace and in communication with said elongated annular air supply passage, a tubular stack attached to said outer tubular furnace casing and a positive draft controller attached to the top of said stack for furnishing a positive draft to and exhausting exhaust gases from said furnace, said positive draft controller having a plurality of interconnected upwardly extending planar sides forming a casing in communication with the top of said tubular stack, an imperforate end attached to and connecting the upper ends of said planar sides, said planar sides having a plurality of uniformly spaced apart rows of spaced apart apertures extending therethrough, said apertures in each of the rows being of uniform size and permitting free flow of air therethrough to supply a minimum to maximum air draft demand in said furnace equivalent to conditions of a still-day existing outside said draft controller regardless of outside wind conditions acting on said planar sides, each row of apertures lying in a common plane normal to said planar sides, some of said apertures in the planar sides also furnishing an exit passage for said exhaust gases from said furnace.

2,863,443
FIRE PLACE CONVERSION UNIT
John Hoffmann, Ocean Grove, N. J.
Application July 8, 1955, Serial No. 520,757
3 Claims. (Cl. 126—121)

1. A heating unit comprising a firebox adapted to be installed in a space having a communicating flue, said box including a lower section embodying a horizontal bottom wall having a rear edge, a pair of side edges and a front edge, a back wall extending along the rear edge of said bottom wall and a side wall extending along each of the side edges of said bottom wall, each of said back and side walls being provided with a shoulder extending therealong adjacent the upper end thereof, an upper section embodying a top wall having a rear edge, a pair of side edges and a front edge, a back wall extend-

ing along the rear edge of said top wall and a side wall extending along each of the side edges of said top wall, said upper section being positioned so that the lower ends of said back and side walls thereof abut and rest upon the shoulders of the back and side walls of said lower section with the top wall in spaced parallel relation with respect to the bottom wall of said lower section, means detachably securing the portions of the back and side walls of said upper section adjacent the lower ends of the adjacent portions of the back and side walls of said lower section, a vertically disposed frame plate ex-

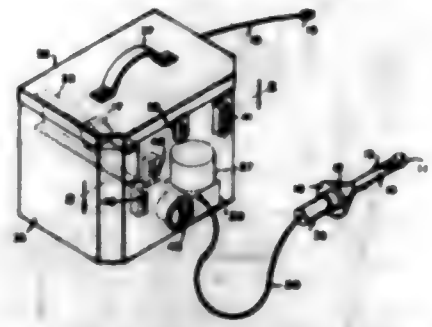


tending between and abutting the front edges of the wall of said lower section and the top wall of said upper section and detachably secured to the adjacent edges of the side walls of said lower and upper sections, there being a closed slot in said frame plate, a closure slidably mounted on said plate and movable over said slot, a chamber rising from the top wall of said upper section, a neck in said chamber, and a shelf positioned above and spaced from said neck and adapted to be arranged in an inclined direction in a communicating flue of a space in which said firebox is installed.

2,863,444
LIVER RETRACTOR FOR CHOLECYSTECTOMIES
Joseph Winston, Fresh Meadows, N. Y.
Application August 21, 1956, Serial No. 605,264
4 Claims. (Cl. 128—20)

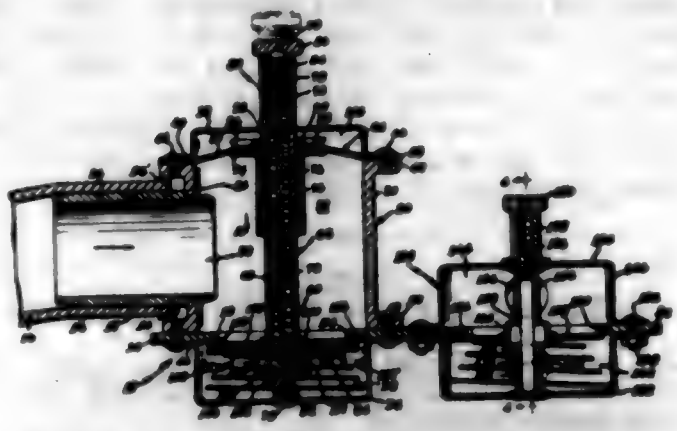
1. A retractor comprising a pair of integrally formed spaced arms disposed in an inverted U-shape, an integral shank portion joining the upper ends of said arms and bent at right angles thereto, said shank tapering to form a narrow portion, and a handle mounted on the narrow portion of said shank, and means for extending the effective length of either of said arms, said means comprising an extender element for the free end of each arm, each extender element comprising a flat body portion having a rounded bent tip at one end and integral reentrantly bent side portions adjacent the other end forming a slot adapted to frictionally engage the end portion of said arm.

2,863,445
PROSTATE GLAND MASSAGER
Emmett W. Johnson, Hot Springs, Ark.
Application May 29, 1957, Serial No. 662,476
6 Claims. (Cl. 128—24.2)



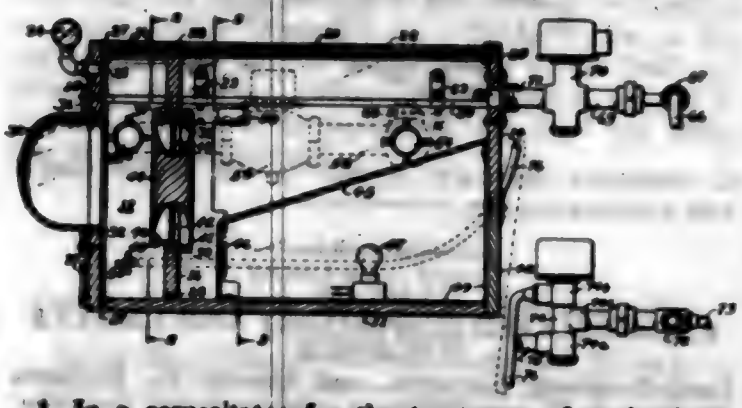
6. A prostate gland massager comprising a generally cylindrical rotary member having a bulbous end portion, power means for slowly rotating said member, means for heating said member, and means by which said member may be held and manipulated while it is being slowly rotated.

2,863,446
PRESSURE REGULATOR DEVICE FOR RESPIRATORS
Thomas C. Huxley III, Manhasset, and Nelson G. Kling, Roslyn, N. Y., assignors to Comitech, Ltd., New York, N. Y., a corporation of New York
Application July 8, 1953, Serial No. 383,562
16 Claims. (Cl. 128—29)



1. A vacuum regulator device comprising a casing having a vacuum chamber, an inlet port for said chamber, an outlet port for said chamber in fluid communication with said inlet port, and valve means for controlling the opening and closing of said outlet port, said valve means comprising an axially movable member disposed in said chamber and supporting a valve member and a diaphragm in laterally spaced relation, said valve member being operatively associated with said outlet port and said diaphragm defining a wall portion of said chamber, said outlet port and said diaphragm being of different areas whereby when the vacuum in said chamber reaches a predetermined amount said movable member will be moved in one direction to concomitantly move said valve member in said direction and thereby open said port, said valve member comprising a pair of companion valve discs, one of said discs having an opening, said discs being movable in unison when said movable member moves in said one direction to open said outlet port and the other of said discs being movable independently of said one disc in said one direction whereby to provide a passage between said discs in communication with said chamber through said opening.

2,863,447
RESUSCITATOR
Ancil L. Lindley, Macon, Miss., and John E. Lindley, Houston, Tex.
Application September 7, 1955, Serial No. 532,866
13 Claims. (Cl. 128—30)

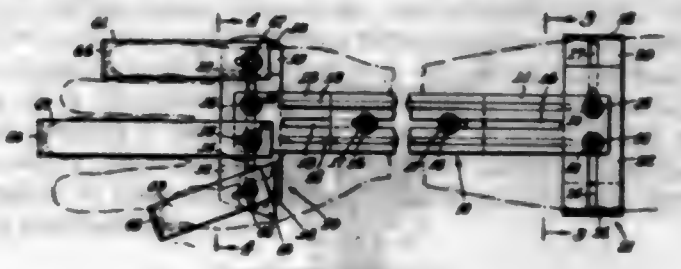


1. In a resuscitator for the treatment of asphyxia, a pressure chamber having separate, adjacent, gas-tight head and body compartments, a neck receiving aperture between said head and body compartments, neck engaging sealing means for said aperture, means for supplying gas under pressure to said resuscitator, means for admitting an expiratory gas pressure to said body compartment for a given time interval, means for discharging said pressure at the end of said interval, means for admitting a sudden, relatively heavy inspiratory gas pressure to said head compartment simultaneously with the discharge of gas in said body compartment, means for subsequently admitting a steady, reduced gas pressure to said head compartment for a given time interval, and means for exhausting the gases in said head compartment as the pressure is again built up in said body compartment.

2,863,448
WRINKLE REMOVING DEVICES
Jeanne Ghazi, Reno, Nev.
Application March 14, 1956, Serial No. 571,501
3 Claims. (Cl. 128—76)

1. A wrinkle-removing device comprising a first barrette formed from a single piece of resilient metal deformed to define a back; a hook integral with and at one end of the back; and a curved tongue portion integral with the other end of the back and arranged when interlocked with said hook to cause the back to be biased to conform to the general configuration of said tongue, said tongue and back when in the locked position arranged to positively grip a lock of hair therebetween; at least one eye on said back between the ends thereof; a second barrette formed from a single piece of resilient metal deformed to define a back, a hook integral with one end of said back and a curved tongue integral with the other end of the back and arranged when interlocked with said book to cause the back to be biased to conform to the general configuration of said tongue, said tongue and back when in the locked position arranged to positively grip a lock of hair therebetween; an eye on one end of said second barrette; elastic means between said eyes and means for positively interlocking said elastic means with said barrettes.

2,863,449
SURGICAL SPLINT
Leon O. Spencer, Milford, Conn.
Application June 28, 1956, Serial No. 594,512
12 Claims. (Cl. 128—87)



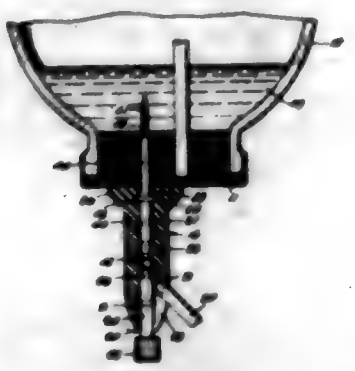
1. A surgical splint having an elongate main portion adapted to extend along the forearm, said main portion comprising a pair of elongate parts and releasable means for adjustably securing said parts in extended and retracted positions, said splint having a pair of transverse portions for engagement with the arm and hand respectively, each of said transverse portions comprising a pair of elongate, slotted relatively-movable parts; and a pair of means for adjustably securing the said parts of the transverse portions to each other in different adjusted relation and for adjustably securing said transverse portions to the ends of the said main portion, said means each comprising releasable fasteners passing through the slots of the said parts and through said main portion.

9. A surgical splint having a transverse portion adapted to extend across the hand, said portion comprising two, elongate, relatively-movable slotted parts and means for adjustably securing said parts together in different relative positions; a finger splint strip; and means for adjustably securing said strip to said transverse portion, both said means passing through the slots of the said parts.

2,863,450
SAFETY HARNESS FOR CHILDREN
Phyllis M. Johnson, Cooper Township, Kalamazoo County, Mich.
Application August 9, 1955, Serial No. 527,239
4 Claims. (Cl. 128—134)

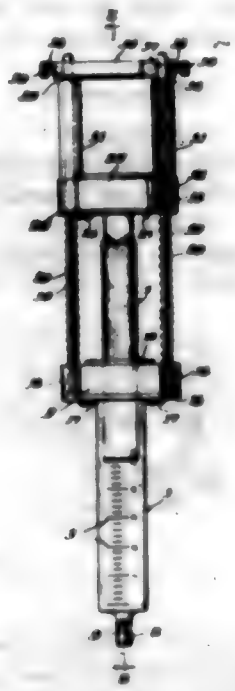
2. A safety harness for children comprising an elongated tie strap of flexible material and of such length that it may be disposed and secured upon the bedding of a bed, a jacket-like body member having armholes, and a pair of holder straps of flexible material and of approximately the same length, one attached at one end to one side of the body member below the armhole thereof and the other similarly attached to the other side of the body member, the other ends of the holder straps being attached to the tie strap in longitudinally spaced relation to each other, said holder straps being of such length that they have substantial slack when the wearer of the body member is in a recumbent position permitting the wearer substantial freedom to assume various recumbent positions and also permitting the wearer to sit up and while sitting up have substantial freedom of body movement and assume various positions relative to the tie strap.

2,863,451
BLOOD TRANSFUSION ASSEMBLY
Courtland H. Barr, Sr., Courtland H. Barr, Jr., and John W. Barr, Los Angeles, Calif.
Application January 10, 1955, Serial No. 480,988
9 Claims. (Cl. 128—214)



4. In blood transfusion apparatus, a flexible tube, a valve assembly including a housing having a central bore and an inclined bore communicating with said central bore, said tube extending into said inclined bore, and a valve element reciprocable in said central bore and adapted to contact said tube to pinch the walls thereof together.

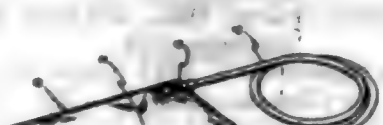
2,863,452
SYRINGE WITH ADJUSTABLE ASPIRATING MEANS
Leighton Ogle, Sr., deceased, late of Chicago, Ill., by Edna Ogle, administratrix, Chicago, Ill.
Application June 22, 1954, Serial No. 438,562
8 Claims. (Cl. 128—218)



1. In a syringe, the combination of a syringe barrel, a syringe plunger reciprocably associated with said barrel, a pair of guide members operatively related to said barrel and plunger, resilient means associated with said guide members for urging said plunger outwardly from said barrel, and an adjustable stop member carried by said guide members for limiting such outward movement of said plunger.

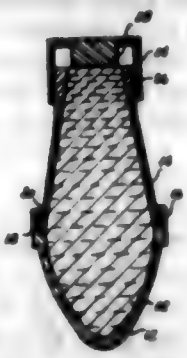
2,863,453
SYRINGE NOZZLE
Theodore H. Gewecke, Glenview, Ill., assignor to Baxter Laboratories, Inc.
Application December 4, 1956, Serial No. 626,263
3 Claims. (Cl. 128—227)

2. A nozzle syringe constructed of an extrudable, thermoplastic resin and mineral oil whereby the mineral



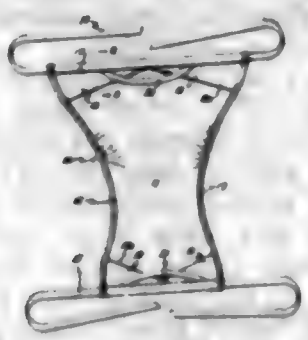
oil maintains the outer surface of said nozzle coated with a lubricating film.

2,863,454
ENCAPSULATED SUPPOSITORY AND CAPSULE THEREFOR
Emil Davidson, Scarsdale, and Harold W. Williams, Pawling, N. Y.; said Williams assignor to said Davidson
Application May 24, 1955, Serial No. 510,681
2 Claims. (Cl. 128—271)



1. An encapsulated suppository including in combination a capsule nose section, a capsule body section, means forming a joint assembling said capsule nose section with said capsule body section, a suppository disposed within said assembled nose and body sections, a cap carried by said body section, a plunger carried by said cap for movement therewith, said body section being formed with a bore tapering from said joint toward said cap and means mounting said cap on said body section for relative movement with respect to said body section to permit the suppository to be ejected from said body section when said nose section is removed.

2,863,455
DIAPER HOLDER COVER
Edna H. Heice, Walla Walla, Wash.
Application March 26, 1956, Serial No. 573,795
7 Claims. (Cl. 128—284)



1. A diaper holder and cover comprising a sheet of waterproof flexible washable material having front and back portions and being of hour-glass formation in plan and widest at the end edges, the ends of said sheet having its ends folded over and turned under the fold, elongated ties extending through the folded over ends and projecting therefrom, doubled reenforcing strips across said ends having their raw edges beneath the folded over ends, diaper holding strips overlying the reenforcing strips and having their ends inserted between the folded over ends

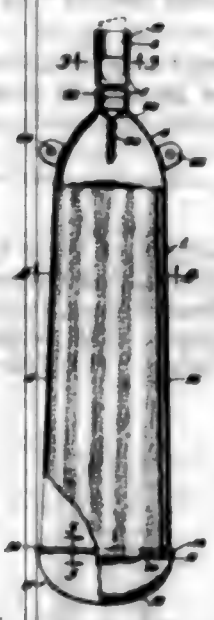
spectively, for connection to each other about the wearer, a pair of diametrically opposed arms extending to opposite

and the reenforcing strips, the folded over ends, the reenforcing strips and the diaper holding strips being sewed together and to the sheet with the ties enclosed within the folded over ends, the side edges of the sheet being covered with bias tape, the back portion being wider than the front portion at the end and overlapping the front portion when tied on a child, the ties at the end of the front portion tying together at the back and being free of the back portion, and the ties at the end of the back portion tying together at the front and being free of the front portion.

2,863,456
SANITARY BELT
Curt Walter Leupold, Nurnberg, and Lorenz Hupfauf, Furth, Germany
Application February 17, 1953, Serial No. 337,413
Claims priority, application Germany June 21, 1952
4 Claims. (Cl. 128—291)

3. A sanitary belt of the character described, said belt consisting of a woven elastic fabric, the threads of which are covered with a textile which is roughened to produce a fluffiness on the interior surface of the belt which lies against the body of the wearer.

2,863,457
COLLAPSIBLE CONTAINERS
Irving L. Barach, Chicago, Ill.
Application December 28, 1956, Serial No. 631,283
3 Claims. (Cl. 128—295)

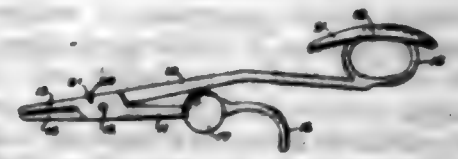


1. A collapsible container for fluids which comprises, a principal body made of rubber or similar elastic material and including a substantially cylindrical large diameter portion terminating at one end with an opening rimmed by a bead and next adjacent said bead having an inner peripheral recess, a cylindrical small diameter portion at the other end of said large diameter portion and constituting a neck for the container, an intermediate portion merging said large diameter portion with said small diameter portion, a closure for capping said large diameter portion opening which comprises a concavely recessed member terminating with a beaded perimetric flange, a ring element of relatively inelastic material adapted to be lodged under distension of said closure member next adjacent said principal body member rim bead for maintaining both said principal body member terminating opening and said closure member under fluid tight sealing contact thereabout, and a unidirectional valvular member secured within said container neck which comprises a brief length of elastic tubular material hanging in a direction toward said large diameter portion and forming a collapsed-wall tubular section trained to assume a generally sinuous condition normally but distensible to fluid passing in a direction toward said storage compartment.

2,863,458
VEIN STRIPPER AND A METHOD OF STRIPPING VEINS
Michael T. Modny, Glen Ridge, and John P. Barabara, Bloomfield, N. J.
Application September 4, 1957, Serial No. 681,947
4 Claims. (Cl. 128—303)

1. A vein stripper comprising a stripper, a magnetically attractable plumb, a cord connected to the vein stripper and the plumb.

2,863,459
INSTRUMENT FOR HOLDING SURGICAL NEEDLE
Ervin J. Casper, Vallejo, Calif.
Application May 29, 1956, Serial No. 588,163
3 Claims. (Cl. 128—321)



1. In a forceps for surgical use having the usual crossed levers forming a jaw end and a handle end, a finger loop for the reception of the little finger on the handle end of one lever, the other lever being shorter than the first and having means to facilitate its manipulation by the thumb and first finger, said means including a concave plate positioned for the reception of the thumb while said finger loop is held in the palm of the hand.

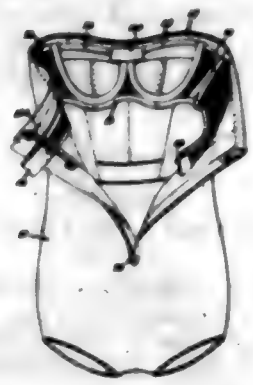
2,863,460
BATHING SUIT AND BRASSIERE THEREFOR
Mayer G. Monree, Oswego, Oreg., assignor to Jantzen, Inc., Portland, Oreg., a corporation of Nevada
Application September 25, 1956, Serial No. 612,005
8 Claims. (Cl. 128—435)

8. A lady's garment comprising a bathing suit extending substantially from the bust area to the hips of the wearer and having a portion to cover the bust area, and a strapless brassiere detachably secured to said suit so as to underlie said bust portion thereof, said brassiere comprising a pair of breast cups, a panel interconnecting said cups, and bands extending outwardly from said cups, re-

of cylindrical chambers aligned with and disposed below relative angular rotation in a single plane, the outer ar-

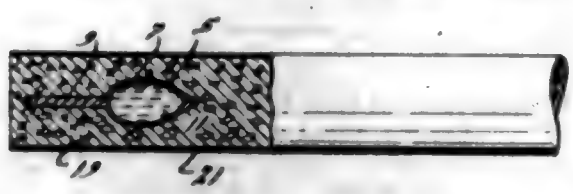
2. A nozzle syringe constructed of an extrudable, having their ends inserted between the folded over ends

spectively, for connection to each other about the wearer, each cup being formed by an outer and inner layer of fabric secured together along their peripheries to define a pad receiving pocket therein, said inner layer having a lower portion which extends upwardly of the cups and terminates substantially at the nipple area thereof and an upper portion which extends from and upwardly of said lower portion, and an access opening for said pocket defined in said inner layer and comprising a vertically



extending slit in said lower portion which terminates at its upper end at said upper portion, said bust portion having means releasably engageable with said bands for detachably securing said brassiere within said suit to underlie said bust portion thereof, said means comprising loops provided at the inner surface of said suit through which said bands extend in sliding relation therewith whereby said brassiere may be tightened independently of said bathing suit.

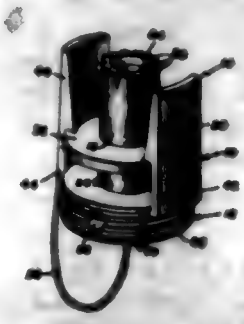
2,863,461
CIGARETTE FILTER CONSTRUCTION
Harry W. Frost, Jr., Grosse Pointe, Mich.
Application December 5, 1955, Serial No. 551,851
4 Claims. (Cl. 131—10)



2. A tobacco article comprising a wrapper, tobacco in said wrapper forming a conventional shaped cigarette having one end adapted to be lighted and an opposite end, an easily rupturable liquid-containing capsule embedded in said tobacco near said opposite end, said capsule being rupturable by the application of slight finger pressure to said wrapper whereby said liquid is released in the vicinity of said capsule to produce a zone of moistened tobacco to thereby improve the filtration effectiveness of the tobacco in said zone as smoke passes therethrough, said insert having an elongated insert-positioning projection, said projection having a length at least equal to the maximum diameter of said insert and disposed intermediate the said insert and the mouth piece end.

2,863,462
APPARATUS FOR FORMING PIN CURL PERMANENT WAVE
Samuel E. Lawson, Tulsa, Okla.
Application August 10, 1955, Serial No. 527,511
3 Claims. (Cl. 132—40)

1. A pin curl permanent wave device comprising a rod member having an annular base on one end, said base radially extending from the rod member and having grooves in its periphery and spaced apart axially of the base, a pressure disc having a central hole receiving the rod, the pressure disc being slidable on the rod to compress a strand of hair wound on the rod against the base, a pair of diametrically opposed arms extending to opposite faces of the disc and disposed in parallel confronting relation, said arms including upper and lower end portions disposed above and below the opposite faces of the disc, the lower end portions being positionable over the periph-

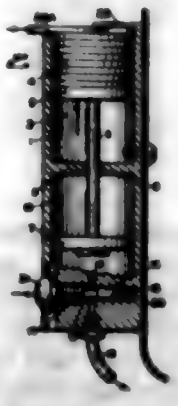


ery of the base and having inwardly disposed beads adapted to fit in the grooves to lock the pressure disc on the rod member and said pressure disc being inherently resilient and flexible to be flexed by a compressing of the upper end portions to spread the lower end portions apart.

2,863,463
PACKET CONSTRUCTION
Thomas F. Winters, Evergreen Park, and James J. Lavin, Chicago, Ill.
Application November 2, 1955, Serial No. 544,428
2 Claims. (Cl. 132—73.5)

1. In a packet construction, the combination comprising a flexible cover, a folded over cover end portion defining a retaining flap for the remaining cover free end limit, strip means disposed in said folded over cover end portion, securing means affixing said strip means in said folded over cover portion to said cover, nail-cleaning means pivotally engaging said securing means, and abrasive means for filing fingernails disposed on said cover portion exterior surface oppositely disposed to said retaining flap.

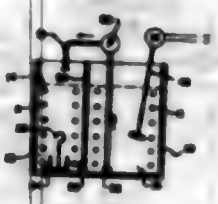
2,863,464
COIN DISPENSER FOR VEHICLES
Oren Justus Hewitt and James V. Sheridan, Sweet Home, Oreg.
Application June 8, 1955, Serial No. 513,974
3 Claims. (Cl. 133—1)



3. A vacuum coin dispenser for vehicles comprising, a casing having a plurality of tubular coin storage compartments each provided with a coin discharge opening, said compartments being of different diameters to accommodate coins of different denomination, a plurality

of cylindrical chambers aligned with and disposed below said coin storage compartments, vents through said casing to atmosphere communicating with each of said chambers at their lower ends, a piston slidably received in each of said chambers, a coin support resting at the bottom of each of said coin storage compartments and connected by a rod to the piston in the chamber below, ports communicating with the upper ends of each of said chambers and with a common vacuum supply passage in said casing, a valve normally biased to close said passage and being manually operable to open said passage, and means for connecting said vacuum supply passage to the inlet manifold of a vehicle.

2,863,465
APPARATUS FOR METAL CLEANING BY MOLTEN SALT BATHS
Robert H. Shoemaker and John A. Faler, Detroit, Mich., assignors to Kolene Corporation, Detroit, Mich.
Application January 10, 1955, Serial No. 480,862
3 Claims. (Cl. 134—104)



1. A molten salt bath apparatus for cleaning metals of surface impurities comprising a pot having a work zone and having to one side of said work zone a settling basin, with said work zone and settling basin being relatively separated and barriered, heater tubes in said work zone and settling basin, means in the work zone for agitating said bath and for pumping said bath from said work zone to said basin, and an overflow means for permitting overflow from said basin to flow over it back to said work zone, and mechanical means for removing from said basin impurities settled therein as a sludge.

2,863,466
TILTABLE GARDEN UMBRELLA
Samuel N. Small, Valley Stream, N. Y., assignor to Alfred G. Cohen and Paul Weiss, Flushing, N. Y.
Application December 26, 1956, Serial No. 630,679
7 Claims. (Cl. 135—20)

1. In a collapsible canopy having a sectional support pole, and a flexible cable operator means for moving said canopy between an open and a closed position; a hinged joint for pivotally connecting the sections of said support pole comprising, in combination, an upper and lower member pivotally connected at their inner extremities for relative angular rotation in a single plane, the outer extremities of each of said members having means for integrally engaging with a support pole section, one of said members having a projecting tongue and the other having a pair of legs between which the tongue is pivotally secured, latch means for lockingly securing the tongue and the legs in a plurality of adjusted angularly related positions and each of said members having a longitudinal flexible cable receiving bore extending therethrough, but isolated from the pivot means and from moving parts of the latch means the inner extremities of said bores communicating with each other in all of said adjusted relative positions of said members.

2,863,467
COMBINATION SHELTERS
Fred E. Hearell, Roswell, Ga.
Application January 7, 1957, Serial No. 632,790
1 Claim. (Cl. 135—20)

An umbrella including a staff and a top on said staff including inner and outer walls of air and water impervious material having outer edges connected together, said inner wall being smaller than said outer wall and said outer wall having radial creases therein between said walls gradually deepening from said edges toward the center of said top to render said top hollow for inflation and crescent shaped in cross-section when inflated, and an air valve in one wall for introducing air into said top to inflate said top, said top having a center socket for said staff of a depth substantially the same as the thickness of said top, the material which forms the top also forming the socket, said creases being grouped around said socket and spaced therefrom.

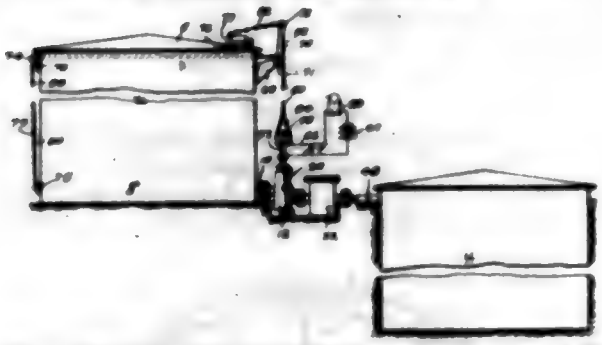
2,863,468
MECHANISM FOR TILTING AND SUPPORTING UMBRELLA TOPS
Samuel N. Small, Valley Stream, N. Y., assignor to Alfred G. Cohen and Paul Weiss, Flushing, N. Y.
Application May 8, 1957, Serial No. 657,943
14 Claims. (Cl. 135—20)

13. An umbrella comprising a single elongated tubular post, umbrella top supporting means tiltably mounted on the upper end portion of the post and extending to the upper end of the post, interengaging means between the

cluding electric indicating means and a switch connected balancing of the effect of pressure in said valve chamber

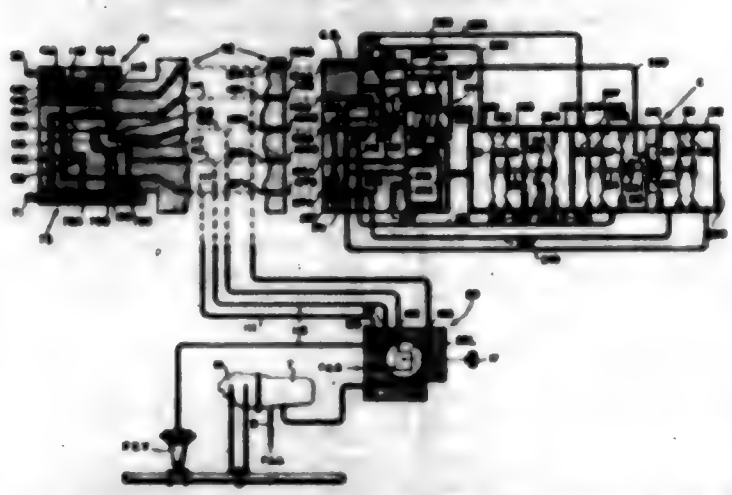
post and member to normally retain said member in position lying against the post, an umbrella top supported on said member, and said top having a direct bearing upon the upper end of the post when said member is in position lying against the post.

2,863,469
OIL TANK SAFETY VALVE
John W. Casey, Harlingen, Tex.
Application June 12, 1956, Serial No. 590,908
5 Claims. (Cl. 137—72)



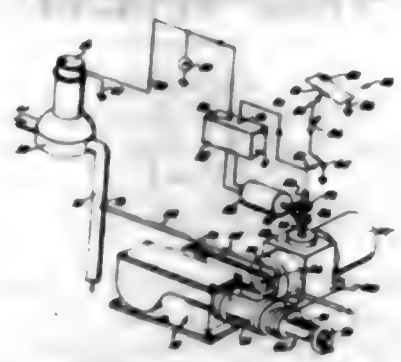
1. An oil tank safety drainage system comprising an oil tank having an upright side wall, a cover for said tank, a drain line secured to said tank at the bottom of said side wall, a valve housing detachably secured to said drain line, a valve in said valve housing, a trap, a conduit connecting said valve housing to said trap, a conduit connecting said trap to an underground storage tank, a chain extending across said tank under said cover, said chain having a plurality of fusible links therein with at least a portion of said fusible links in said chain being positioned in said tank under said cover, said chain being anchored at one end to said tank and supporting at its opposite end means for operating said valve, a vent through the top of said tank, a valve normally closing said vent, and means associated with said chain for opening said vent valve simultaneously upon opening said first named valve.

2,863,470
VALVE HAVING MANUAL AND AUTOMATIC MEANS FOR OPERATING IT
James S. McChesney, Jenkintown, and George Robert Brown, Oreland, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application May 27, 1955, Serial No. 511,606
4 Claims. (Cl. 137—82)



1. Means for operating an industrial process including, a final control valve, an air-operated motor actuating said final control valve, a manual control station including a manually operable handle, an air-pressure-regulator actuated by said handle, a measuring element, an air-operated transmitter actuated by said measuring element, a controller actuated through said transmitter by said measuring element, a conduit between said controller and said motor, a conduit between said regulator and said motor, check valves one located in each of said conduits, a check-valve-actuating plate pivotally mounted adjacent said check valves and adapted to engage and actuate them to open or closed position, a plate-actuating cam adapted to engage and actuate said plate, a manually-operable handle for actuating said cam, a screw mounted on said cam, a holding cam located adjacent said screw and having faces including a detent portion adapted to receive and hold said screw when said cam is in one of said positions, and a spring biasing said screw against the faces of said holding cam.

2,863,471
PROPORTIONER
Benjamin H. Thurman, New York, N. Y., assignor to Benjamin Clayton, doing business as Refining, Unincorporated, a sole proprietorship
Application October 11, 1955, Serial No. 539,780
4 Claims. (Cl. 137—101.21)

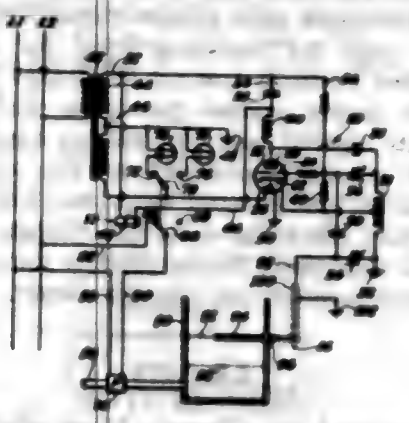


1. In an apparatus for mixing a first fluid with a second fluid in a fixed small proportion while the rate of flow of the second fluid varies between zero and a maximum, the combination of: a meter for measuring the rate of flow of the second fluid, said meter including means for producing a metering signal that is a function of the flow rate; a reference signal source producing a reference signal; a comparison unit; means coupling said signals to said comparison unit, said comparison unit including means for producing a control signal which is a function of the difference between said metering signal and said reference signal; a variable output power unit actuated by said control signal to vary the output of said power unit between zero and a maximum; pump means for producing a flow of a small quantity of the first fluid; means connecting said power unit to said pump means in driving relationship; and means connecting said power unit to said reference signal source, said means varying said reference signal as the output of said power unit varies.

2,863,472
CAPACITY SENSITIVE RELAYS
Ralph V. Coles, Radnor, and Michael Bagley, Philadelphia, Pa., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application September 8, 1954, Serial No. 454,746
5 Claims. (Cl. 137—392)

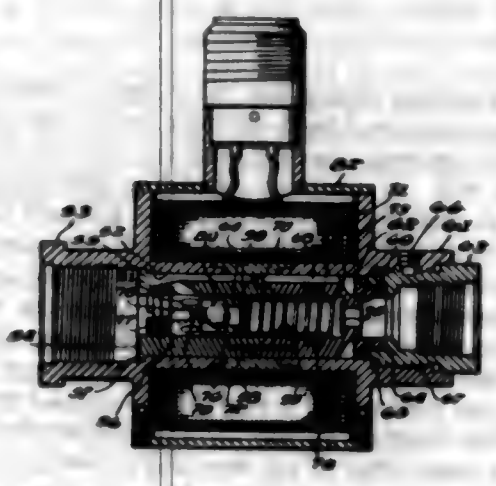
1. In a device for controlling the level of flowable material in a container, the combination comprising an oscillator circuit including an anode, a cathode, a grid and a tank circuit, a source of voltage connected to said anode, a probe capacitor operatively connected to said tank circuit and sensitive to variations in the level of said flowable material to decrease the conductivity of said tube with increase in the level of said flowable material in said container, a relay circuit connected to said anode and including a control switch operable to a closed position for supplying flowable material to said container in response to an increase in conductivity of said tube, an indicating circuit connected to said source in-

cluding electric indicating means and a switch connected to control energization of said indicating means, and



means including said relay circuit for actuating the last said switch to energize said indicating means.

2,863,473
BALANCED VALVE
Jack L. Gantz, Encino, Calif., assignor, by mesne assignments, to Vincent W. Eckel, Northridge, Calif.
Application February 28, 1955, Serial No. 490,810
15 Claims. (Cl. 137—599.2)

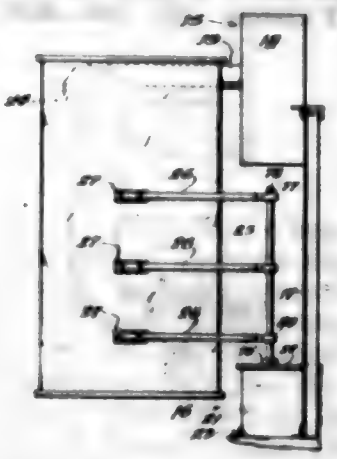


1. In a balanced valve, a valve body structure having a valve chamber, a valve seat at one end of said valve chamber, a first port communicating with the opposite end of said valve chamber, a second port communicating with the side of said valve seat opposite said valve chamber, a poppet mounted for reciprocation in said valve chamber into and out of engagement with said valve seat, fluid flow conducting means extending between said first port and said valve seat including a passageway in said poppet, said passageway having one of its ends in communication with said first port and the other one of its ends in communication with said valve seat and serving to conduct fluid between said second port and said first port when said poppet is moved out of engagement with said valve seat, spring means normally moving said poppet into engagement with said valve seat, separate pressure balancing means reacting on said poppet; said means including a pressure responsive area within said poppet exposed to pressure from said second port and having the same area as the area of the portion of the end face of said poppet exposed to pressure from said second port; said pressure areas being opposed to each other with resultant balancing of the effect of pressure in said second port on said poppet, and other means at the opposite end of said poppet reducing the area of said opposite end to the same area as that portion of the valve seat engaging end of said poppet disposed within the valve chamber when the poppet is engaging the valve seat with resultant balancing of the effect of pressure in said valve chamber on said poppet, and means for moving said poppet away from said valve seat in opposition to said spring means.

2,863,474
DUCTING FOR HIGH TEMPERATURE FLUIDS
Leslie Thomas Whitehead, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Application June 21, 1954, Serial No. 438,164
Claims priority, application Great Britain June 26, 1953
3 Claims. (Cl. 138—47)

1. In combination, a ducting for a high temperature fluid flow system having a tubular wall, structure relative to which said wall is free to move longitudinally and an interconnection between said wall and said structure comprising a continuous annular band extending peripherally of the wall, the band having two annular flanges secured to said wall at longitudinally spaced positions therealong, an annular intermediate section attached to the structure and extending longitudinally adjacent said wall and radially spaced therefrom, and two annular bellows sections, each flexible longitudinally of the wall and one attached to one flange and to one end of the intermediate section and the other bellows-section attached to the other flange and the other end of the intermediate section.

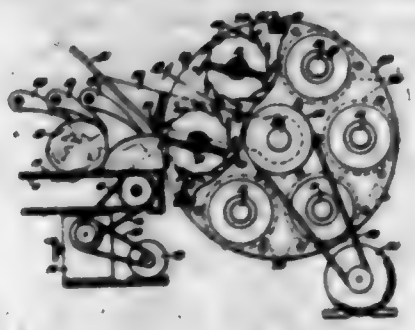
2,863,475
BAG SETTLING DEVICE
Erwin M. Lee, Dolton, Ill., assignor to Black Products Co., Chicago, Ill., a corporation of Illinois
Application May 14, 1954, Serial No. 429,867
3 Claims. (Cl. 141—77)



1. A bag settling device comprising a pair of laterally spaced vertical shafts, a horizontally extending slapper arm secured to each shaft, means to oscillate said arms, and means to cause said arms to be retracted when said arm oscillating means is inoperative so that a bag disposed between said arms may be withdrawn, said arm oscillating means comprising a motor, an eccentric driven by said motor, a yoke arm secured to each shaft, a link connecting each yoke arm and eccentric, and means for mounting said eccentric for displacement toward and away from said shafts, and said arm retracting means including a governor driven by said motor and connected to said eccentric for determining the displaced position thereof.

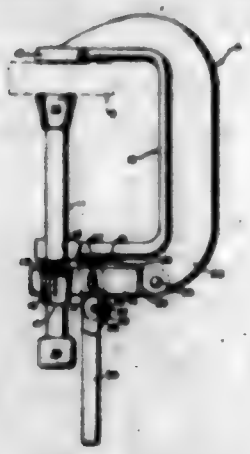
2,863,480

2,863,476
APPARATUS FOR PRODUCING FIBROUS ELEMENTS
James d'A. Clark, Longview, Wash., assignor to Chemagwood Corporation, Chicago, Ill., a corporation of Illinois
Application October 2, 1953, Serial No. 383,893
8 Claims. (Cl. 144—172)



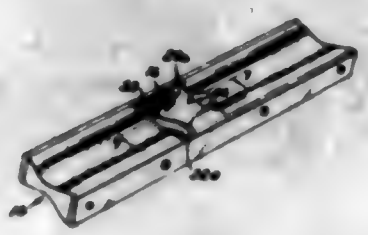
1. Apparatus for reducing blocks of wood into fibrous elements tapered at both ends and cut substantially parallel to the grain of the wood comprising a supporting frame mounted for rotational movement about an axis, a plurality of spaced cutting cylinders mounted for independent rotational movement in said frame about a parallel axis and positioned in equally spaced relation from the frame axis, a plurality of cutting blades extending crosswise from the periphery of the cylinder, driving means for rotating the frame and for rotating the cutting cylinders independently of the frame but in the same direction thereof, means for feeding blocks of wood with the grain of the wood parallel to the axis in the direction toward the frame into engagement with the cutting blades for severing fibrous elements from the blocks, and scoring members positioned on the frame intermediate the cutting cylinders and spaced from the axis of the frame to extend slightly beyond the blades on the cutting cylinders.

2,863,477
C-CLAMP WITH SLIDABLE PLUNGER
Leonard D. Sagerty, Campbell, Calif.
Application March 7, 1956, Serial No. 570,200
2 Claims. (Cl. 144—305)



1. A quick-acting clamp comprising a C-shaped frame, a plunger slidably mounted in a hole in one frame extremity for axial slidable movement toward the other frame extremity, a clamping lever pivotally mounted exteriorly of the frame extremity having the plunger mounted thereon, said lever having a tapered hole therein with its larger end toward the frame, stop means limiting outward pivotal movement of the clamping lever to a position axially aligning the tapered hole with the plunger, an externally tapered split collar fitted into the tapered hole and mounted co-axially, and normally slidably, on the plunger, a compression spring mounted between the frame and the split collar to urge the clamping lever outwardly, said spring being free from pressure on the collar in the outward limit of movement of the clamping lever, and cam means mounted for operative engagement with the clamping lever for swinging the clamping lever inwardly toward the frame thereby compressing the spring against the collar and forcing the collar into its tapered hole for binding engagement with the plunger, pivotal movement of the clamping lever urging the collar out of axial alignment with the plunger to further bind the collar onto the plunger for forcible inward axial movement of the plunger during an inward swinging movement of the clamping lever.

2,863,478
CORN CUTTER
John S. Drybread, Sr., Clawson, Mich., assignor of one-half to Berniece L. Drybread, Clawson, Mich.
Application April 27, 1956, Serial No. 581,130
1 Claim. (Cl. 146—4)



A corn cutting device for the purpose described comprising: an elongated body member having opposite longitudinally extending concave surfaces, said body member provided with an aperture extending therethrough and opening at opposite ends through said concave surfaces, a pair of double-edge blades adjustably supported within said aperture in the body member in spaced-apart relation at opposite sides of the aperture with the blades extending transversely of the concave surfaces, one cutting edge of one of the blades being continuous and the other cutting edge comprising a plurality of spaced-apart teeth, said blades disposed in the body member such that the toothed cutting edge of the one and a continuous cutting edge of the other project beyond one concave surface of the body with the blades adjustable to project the opposite cutting edges beyond the other concave surface of the body member, and means connecting said blades to the body member for adjustable movement.

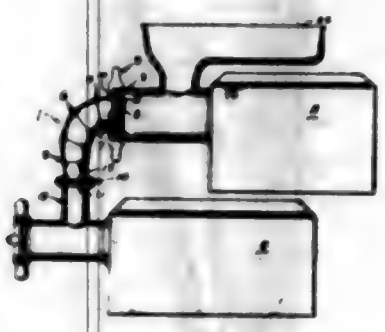
2,863,479
CUTTER AND MANIPULATOR FOR MAKING LAYER CAKES
Emil G. Macnin, Cleveland, Ohio
Application May 11, 1956, Serial No. 584,361
7 Claims. (Cl. 146—72)

1. A manipulator for supporting, cutting, and turning cake, comprising, a support having an upstanding cake-stop flange along at least a portion of its periphery, said support having a pivot spindle spaced outwardly from said support and extending normally with respect thereto, and an inverting plate cutter supported on said pivot spindle, overlying and spaced from said support.

the other side, means forming a pocket upon the inner

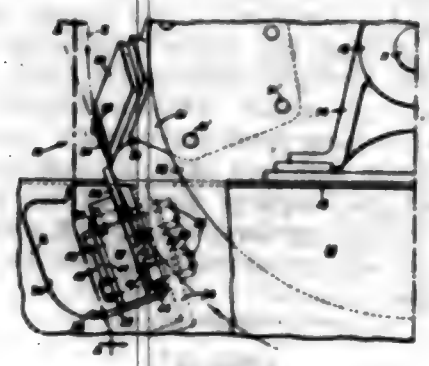
2,863,486

2,863,480
MEAT GRINDING APPARATUS
Douglas V. Comins, Fairborn, Ohio
Application November 27, 1956, Serial No. 624,689
6 Claims. (Cl. 146—78)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In combination with a pair of meat grinders, each having means defining a feed inlet thereto and an outlet therefrom, an adapter for connecting said grinders in series relation, said adapter including means at one end nesting in sealing relation about the outlet of one of said grinders to receive ground meat processed therethrough, means mounting the other end of said adapter in nested relation to the feed inlet of said other grinder, means engaging said mounting means and said means defining the feed inlet of said other grinder to provide a seal therebetween, said adapter being formed to diminish in cross sectional area adjacent the feed inlet of said other grinder whereby meat may be processed for table use in a single pass through said grinders.

2,863,481
SHEAR BAR MOUNTING
James R. West, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application September 17, 1956, Serial No. 610,302
3 Claims. (Cl. 146—117)

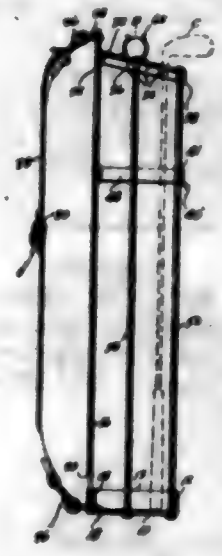


1. A cutting mechanism comprising a frame, a reel mounted on said frame, a knife mounted on said reel and facing in the direction of rotation of the reel, said knife generating a theoretical circle on rotation of said reel, a fixed shear bar having a cutting edge cooperative with said knife, said shear bar having a side facing said theoretical circle and said cutting edge being on one edge of said side, and means for mounting such shear bar on said frame with said side extending in a plane which at no point crosses said theoretical circle and being closest to the circle at a point approximate to but spaced from said cutting edge toward the edge of said side opposite said one edge.

2,863,482
PROCESS FOR SEED-CELLING APPLES AND THE LIKE
William L. Keller, Lyons, N. Y., assignor to Comstock Foods, Inc., Newark, N. Y., a corporation of New York
Original application July 12, 1956, Serial No. 597,433, now Patent No. 2,820,496, dated January 21, 1958. Divided and this application November 18, 1957, Serial No. 697,896
3 Claims. (Cl. 146—238)

1. A method of separating seed-cells from previously cored fruit comprising cutting a circular transverse open path in the seed-cell portion of said fruit, then severing the seed-cell portion from said fruit by a cutting movement encompassing said seed-cell portion and the circular transverse open path therein.

2,863,483
GOLF CLUB RACK
Wells Fargo, Michigan City, Ind.
Application January 24, 1958, Serial No. 711,087
6 Claims. (Cl. 150—1.5)



1. A golf club rack comprising a bottom plate, a top plate having a plurality of openings adapted to receive the shafts of golf clubs supported upon the bottom plate; and a plurality of longitudinally extending members fixedly connected between the respective plates, one of said members comprising a back bar, the other members being disposed at the sides and front of the respective plates, said top and bottom plates having peripheral walls extending toward one another, the top plate declining in a direction forwardly from the back bar, so as to progresively decrease the distance between the plates in said direction for accommodating shafts of different lengths, said back bar having cross members integrally formed thereon, one of which is secured to the top plate and the other of which is secured to the bottom plate.

2,863,484
FOLDER AND POCKET CONSTRUCTIONS
Henry M. Herbener, Thomasville, Ga.
Application January 19, 1956, Serial No. 560,235
15 Claims. (Cl. 150—35)

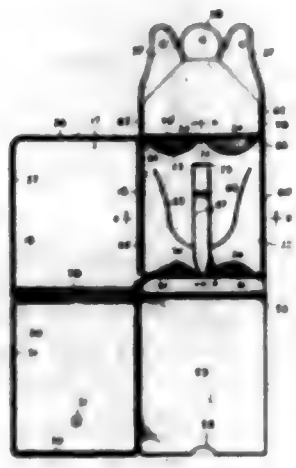
4. A folder comprising a body portion including body portion sides, one side being foldable transversely over

ply being of a thickness at least approximately that of folded spectacles at the site of the nose-seat thereof and

of rod-like material for defining a substantially triangular

the plunger, a compression spring mounted between the pivot spindle, overlying and spaced from said support.

the other side, means forming a pocket upon the inner face of one body portion side, said pocket being closed at its inner end adjacent to the line of folding of the body portion sides, a partition carried by the body portion side which is not provided with the pocket and foldable longitudinally over such body portion side, means forming a coin receiving pocket upon said partition, means forming a coin receiving cup upon said partition and arranged adjacent to the open end of the coin receiving

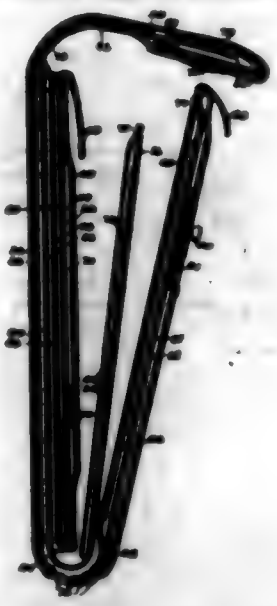


pocket, the coin receiving cup being foldable transversely over said partition and the folded body portion side provided with said pocket, means detachably connecting the coin cup with the body portion side provided with the pocket, and means cooperating with said partition to form therewith a pocket secured to the inner end of said partition, said last-named pocket being foldable transversely over said partition to be arranged between said partition and the folded body portion side provided with the pocket first-named.

2,863,485
BILL FOLDERS
Henry M. Herbener, Thomasville, Ga.
Application March 20, 1956, Serial No. 572,693
20 Claims. (Cl. 150—35)

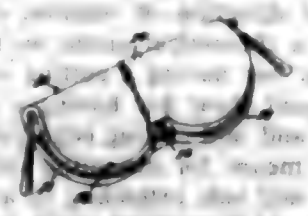
2. A blank of flexible sheet material for use in making a bill folder, comprising a rectangular body portion including rectangular sides foldable upon each other, a pocket forming side secured to one body portion side and foldable over certain of the body portion sides after folding of such body portion sides, a generally L-shaped partition portion including rectangular sides foldable upon each other, said partition portion being secured to one body portion side and free from attachment to the pocket forming side, means for securing certain of the body portion sides to each other and certain of the body portion sides to the pocket forming side and certain of the partition portion sides to each other, and coin cup extension means carried by one end of said blank.

2,863,486
BILLFOLDER
Henry M. Herbener, Thomasville, Ga.
Application April 25, 1958, Serial No. 731,823
15 Claims. (Cl. 150—35)



1. A billfolder formed of weldable sheet plastics material comprising an elongated body portion having two thicknesses of the plastics material throughout its length and having longitudinal folded edges, a pocket forming panel welded to one thickness of said body portion to form therewith a side opening pocket between said panel and one thickness of the body portion, one end of said body portion being open to form an end opening pocket between the two thicknesses of said body portion, means forming a coin cup upon the other end of said body portion and constituting an extension of the body portion and being inwardly open relative to the body portion, a partition hinged to one side of the body portion throughout substantially one-half the length of the body portion, said partition having means forming an end opening coin pocket opposed to the coin cup so that coins may slide from the coin pocket into the coin cup and vice-versa, said partition having means forming a plurality of end opening key pockets therein, said partition having means forming an end opening secret pocket opening in a direction opposite to the opening of the coin pocket, means forming a pocket extension carried by said partition at its end remote from the coin cup and having an end opening pocket arranged opposite the open end of the secret pocket, said pocket extension disposed adjacent to the pocket forming panel and foldable therewith into overlying relation with said partition when the billfolder is closed, and snap fastener means carried by the coin cup and by the end portion of said body portion remote from the coin cup for securing the billfolder in folded closed position.

2,863,487
SPECTACLE CASE
Lawrence R. Shiner, Allentown, Pa.
Application May 24, 1956, Serial No. 587,073
1 Claim. (Cl. 150—52)



As a new article of manufacture, a spectacle case comprising a flexible two ply sheet form body, the outer ply being of thin wear resisting flexible material, the inner

said one edge.

737 O. G.—23

4. A folder comprising a body portion including body portion sides, one side being foldable transversely over

ply being of a thickness at least approximately that of folded spectacles at the site of the nose-seat thereof and being of springy foam rubber-like cushioning material, the width of said body somewhat exceeding spectacles length at the site of the lenses thereof and its depth being more than twice spectacle depth from lens top to lens bottom, said inner ply having a rectangular fold area-defining cutout located midway between the upper and lower edges of the body and terminating short of each side of the latter, said cutout providing yielding end walls and being of a length less than spectacle length at the site of the lenses thereof, said body transversely foldable at the fold area to define a base flap and a cover flap, the inner ply of said base flap having a spectacle nose-seat receiving cutout, the cover flap foldable to overlie the spectacles on said base flap and to effect seating of the intermediate upper spectacle lens portions in the fold area-defining cutout whereby the yielding end walls of the latter cutout engage outer upper lens portions to cooperate with the nose seat-receiving cutout to retain the spectacles in the case, and fastening means securing the flaps in overlying case-defining relationship.

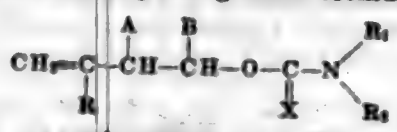
2,863,488

POLYMERS FROM CARBAMATES OF ARYL-SUBSTITUTED BUTENYL ALCOHOLS AND CORRESPONDING THIONO CARBAMATES

James N. Short, Alvin C. Rothlisberger, and Archie E. Follett, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application May 12, 1955
Serial No. 507,996
27 Claims. (Cl. 152—330)

19. As a new composition of matter, a polymer of (1) a compound having the general formula



wherein R is an aryl radical, A and B are radicals selected from the group consisting of hydrogen, methyl and ethyl, X is a radical selected from the group consisting of oxygen and sulfur, and wherein R_1 and R_2 are radicals selected from the group consisting of hydrogen, saturated and mono-olefinic cyclic hydrocarbon, saturated and mono-olefinic acyclic hydrocarbon, and aromatic, and wherein the total number of carbon atoms in R, and the sum of carbon atoms in R_1 and R_2, each does not exceed 12, and (2) a copolymerizable compound comprising a conjugated diene.

2,863,489

PULLING TOOL FOR STRAIGHTENING FENDERS AND BODIES

George D. Priest, Del City, Okla.

Application December 3, 1956, Serial No. 625,894
6 Claims. (Cl. 153—38)

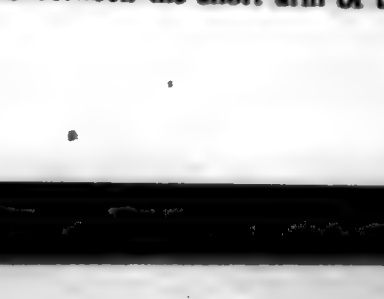
1. A sheet metal straightening hand tool, comprising: an A-frame having the legs thereof pivotally joined together at the apex of the frame, each of said legs formed of rod-like material for defining a substantially triangular shaped leg-frame converging upwardly from the base thereof toward the juncture of the legs, the base side of said triangular shaped leg-frames forming parallel panel engaging surfaces; a first brace-member extending transversely between and rigidly connected to the sides of one of said triangular shaped leg-frames; a second brace-member extending transversely between and pivotally connected to the sides of the other one of said triangular shaped leg-frames; a perforated ear integrally carried laterally by said second brace-member intermediate its ends; a cross member pivotally connected at one end to said first brace-member, the free end portion of said cross member slidably disposed within the perforation of said ear, said cross member having a series of longitudinally spaced-apart recesses in its periphery forming a like series of transverse shoulders engageable with the outwardly disposed surface of said ear for rigidly holding the legs of said A-frame in predetermined spaced-apart relation; a shaft bisecting said A-frame and slidably connected to said legs adjacent their juncture and projecting outwardly therefrom, the length of said shaft being greater than the height of the A-frame, whereby the inwardly disposed end of said shaft may extend beyond the plane of the lower end of said legs, the inwardly disposed end of said shaft having a recess adapted for receiving a screw head; and a crank wheel threadedly engaged with the outwardly extended end of said shaft and frictionally contacting the apex of said A-frame, whereby manual rotation of said crank wheel in one direction draws the inwardly disposed end of said shaft toward the apex of said A-frame.

2,863,490

BELL CRANK ACTUATED PIVOTED SWEEP ARM BENDER

Morton L. Bank, Malverne, N. Y.

Application May 13, 1957, Serial No. 658,589
1 Claim. (Cl. 153—45)



A pipe bending machine comprising a generally rectangular base frame, a reversible motor mounted on one end of the frame, upright bars disposed perpendicularly to the base frame, plates across the top of the bars, an anvil mounted on the plates, said anvil having one end enlarged and having a curved groove therein, a spoked gear wheel supported by the upright bars, a lever pivotally supported at one end on the gear wheel near the periphery thereof, a lever bracket pivotally secured at one end of said lever, said lever bracket having a hooked end, a shaft carried by said hooked end, a roller rotatably mounted on said shaft in the plane of the curved groove, said bracket having its other end pivotally mounted on said anvil, an L-shaped platform supported on the plates below and in register with the groove and roller, and switching means for automatically breaking the circuit through the motor to stop the turning of the gear wheel including a switch device on one of said upright bars, device having a projecting switch actuating member, a generally L-shaped bell crank lever pivotally mounted on said upright bar, one arm of the bell crank lever having an opening therein, an upright rod slidably mounted in the opening in said arm and connected at its bottom end to said switch actuating member, and a spring sleeved around said rod between the short arm of the lever and

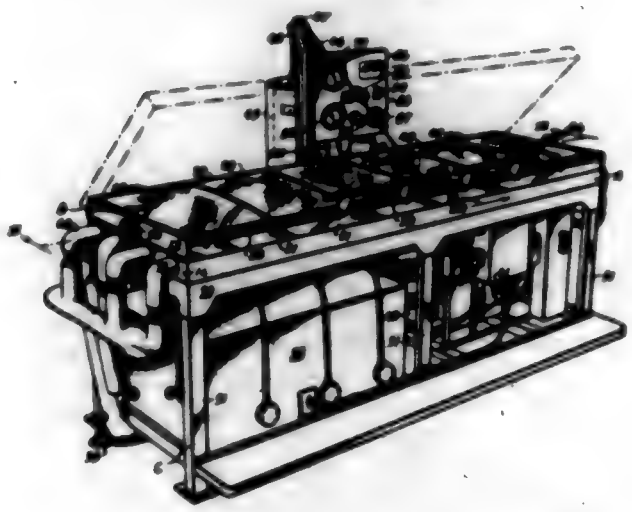
lateral projection or knob; and a clip secured to and

the switch actuating member, the other arm of the bell crank lever extending in the path of movement of a pin carried by a spoke of the gear wheel for tilting said lever to actuate the rod to open the switch after the pipe is bent.

2,863,491
BONDING PRESS

George S. Adams, Jr., Fort Worth, Tex., assignor, by mesne assignments, to General Dynamics Corporation, a corporation of Delaware

Application June 14, 1951, Serial No. 231,614
2 Claims. (Cl. 154—1)



1. A self-contained bonding press comprising a hollow platen having a work-supporting surface, a frame adapted to support said platen, an insulated cover operatively associated with said platen adapted to be superimposed on said work-supporting surface, said insulated cover comprising a frame and plurality of layers of insulating material supported by said frame. an impervious flexible blanket adapted to be interposed between said platen and said cover, sealing means on said platen adapted to form a sealed space between said blanket and said platen when said cover is in closed position on said platen, a fluid reservoir having a supply means and a return means with said platen, heating means associated with said reservoir for heating a transfer fluid therein, a fluid pump for circulating fluid through said platen and said reservoir, a vacuum pump, first conduit means connected to said vacuum pump communicating with the work-supporting surface of said platen, second conduit means connected to said vacuum pump communicating with the side of said blanket opposing said platen, and means for independently controlling the pressures in said first and second conduit means.

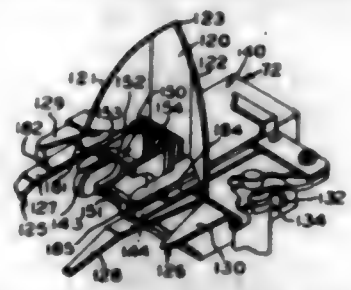
2,863,492
METHOD AND APPARATUS FOR BONDING YARNS AND THREADS

Nai Choong Chang, Warwick, and Roland E. Langlois, West Warwick, R. I., assignors, by mesne assignments, to A. B. Carter, Incorporated, Gastonia, N. C., a corporation of North Carolina

Application July 14, 1955, Serial No. 521,980
29 Claims. (Cl. 154—1.7)

1. The method of connecting the ends of two yarns by a process of bonding together both yarn strands comprising the steps of coating the ends of the strands with a fluent bonding material by drawing them across an applicator element, guiding and orienting the ends thus coated to dispose them into contiguous lapped positions, and setting the bonding material while the coated ends are so positioned.

5. A bonding device for connecting the ends of two yarns comprising electrical heating means arranged to form a heating area, and means in proximity to said heating area arranged to apply a fluent bond forming material to one of the joint forming portions of the two

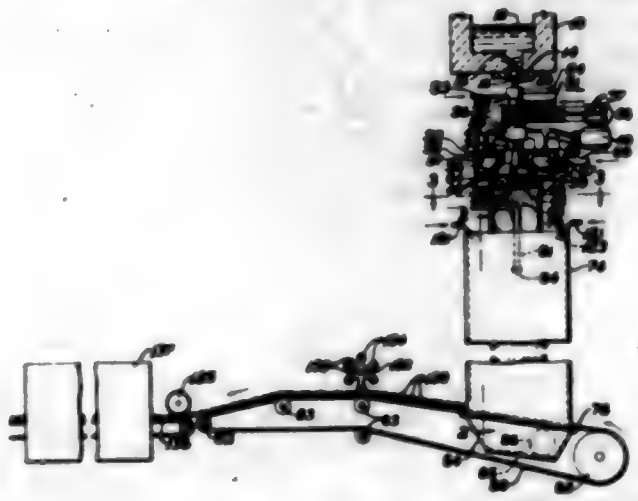


yarn ends required to be united as both of said joint forming portions thereof are placed together in the heating area.

2,863,493
METHOD AND APPARATUS OF FORMING AND PROCESSING FIBERS

Henry J. Snow and Robert W. Kendrick, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Application May 25, 1955, Serial No. 510,946
19 Claims. (Cl. 154—39)



19. Apparatus of the character disclosed, in combination with means for forming fibers into a tubular beam moving in the direction of its length, an enclosure surrounding the tubular beam, nozzles disposed within the enclosure and adjacent the beam of fibers, means for intermittently projecting blasts of air from the nozzles in lateral directions toward the beam of fibers to cause undulating movement of the beam in a direction normal to its length over a width greater than the diameter of the beam, a fiber collecting surface and means for advancing the fiber collecting surface whereby the fibers of the undulating beam are collected to form a mat of a width greater than the diameter of the beam.

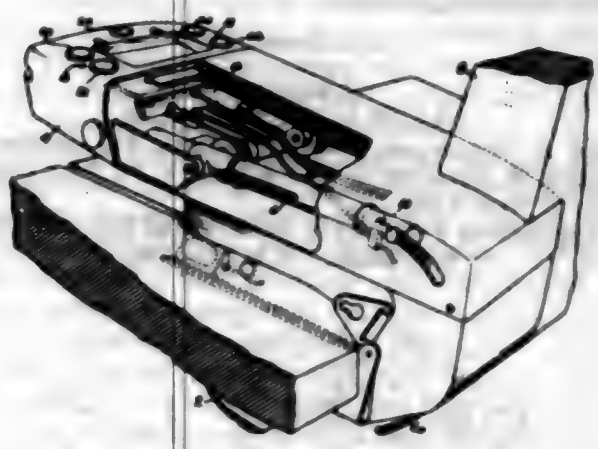
2,863,494
SEATS

Roger A. Lautier, Litchfield, and James F. Spielman, Torrington, Conn., assignors to The Aerotherm Corporation, Bantam, Conn., a corporation of Connecticut

Application February 1, 1957, Serial No. 637,767
1 Claim. (Cl. 155—112)

A seat comprising, in combination, a seat frame; an armrest for the seat mounted on and slidably interlocked with said frame; a seat back or backrest carried by the seat frame and tiltable relatively thereto to various angles; locking mechanism mounted on and secured to said armrest for locking the seat back at various tilted positions rearwardly of erect position, said locking mechanism comprising an axially movable tube provided with a

lateral projection or knob; and a clip secured to and moving with the seat back as the latter is tilted, said clip being closed at one end and open at the other and said knob normally lying within the clip so that its closed end will engage said knob to move the said axially movable tube rearwardly of the seat frame as the seat back



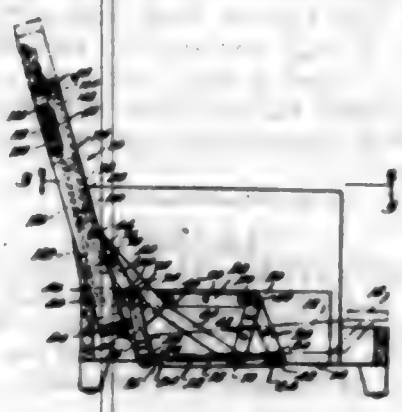
is tilted rearwardly from erect position to accommodate the locking mechanism to the various angles of recline of the seat back, movement of the seat back forward from erect position carrying the clip in the same direction until the said knob is outside the clip and the armrest and locking mechanism may be slid as a unit from or on to the said frame.

2,863,495

RECLINING CHAIR WITH ADJUSTABLE BACK

Edward M. Knabusch and Edwin J. Shoemaker, Monroe, Mich., assignors to La-Z-Boy Chair Company, Monroe, Mich., a corporation of Michigan

Application March 1, 1955, Serial No. 491,292
11 Claims. (Cl. 155—116)



6. In a chair, a base, a rotatable and translatable back, a movable seat, means supporting said back for primarily translational motion relative to said base between two limit positions independently of concurrent movement in rotation, means supporting said back for rotational motion relative to said base between two limit positions independently of concurrent movement in translation, means for preventing rotational motion of said back to one of said limit positions when said back is in one of its limit positions of translational motion, and means intercoupling said back and seat for causing rotational movement of said back from a generally upright position to a reclining position to accompany forward movement of said seat relative to said base and for causing rotational movement of said back from the reclining position to the generally upright position to accompany rearward movement of said seat relative to said base.

2,863,496

ADJUSTABLE CRASH RESISTANT SEAT

Isadore I. Pinkel, Cleveland, Ohio

Original application April 25, 1955, Serial No. 503,848. Divided and this application November 12, 1957, Serial No. 695,999
3 Claims. (Cl. 155—151)
(Granted under Title 35, U. S. Code (1952), sec. 266)

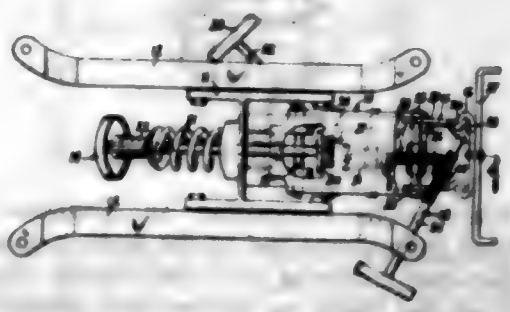
1. In a chair, a seat and a back, and means to obtain adjustment of said back relative to said seat comprising a longitudinally extending envelope having apertures therein, said envelope being attached to said back, a tongue member in said envelope having teeth thereon adapted to engage in said apertures, said tongue also having a surface thereon with lands and grooves, a slide lock in said envelope having lands and grooves therein corresponding to said first mentioned land and grooves, and means to move said slide lock, said slide lock in one position engaging its lands with the lands of said tongue to thereby force said teeth into said apertures and in another position engaging its lands with the grooves of said tongue to thereby permit withdrawal of said teeth from said apertures, said tongue being attached to said seat.

2,863,497

BACK ADJUSTMENT FOR OFFICE CHAIRS

Henry Wheeler Parrott, Shelton, and Sidney Albert Ericson, Bridgeport, Conn., assignors to The Bassick Company, Bridgeport, Conn., a corporation of Connecticut

Application March 5, 1957, Serial No. 644,946
5 Claims. (Cl. 155—157)

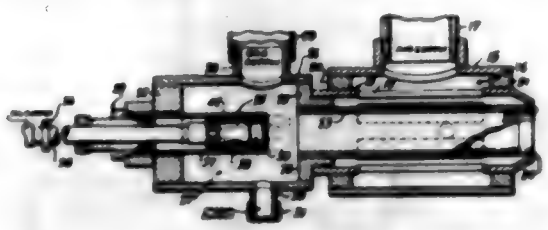


1. In a chair iron, a post-supported frame, a two-part bracket member extending laterally from said frame having forward and rear bracket parts, the rear bracket part being tiltable in a vertical plane relatively to the forward bracket part, a back-supporting element movable vertically on said rear bracket part and forming in conjunction with one side of said rear bracket part an elongated acute angle or socket formation, a rotary clamping screw extending through an aperture in a side wall of said rear bracket part and having a pointed extremity to engage in the angle or socket of said formation, said screw lying in a substantially horizontal plane and ex-

evaporator including a heating element and provided metal-filler equivalent between the

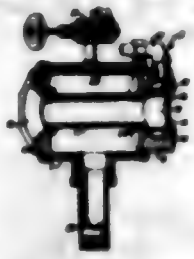
tending outwardly of said bracket part and the aperture through which said screw passes allowing clearance for lateral movement of said screw, a nut in threaded engagement with said screw having a movable mounting within said bracket part to permit accurate lining up of the screw with said angle or socket and a hand stem disposed outwardly of said rear bracket part and fixed to said screw.

2,863,498
DUAL FUEL BURNER
Ernest W. Rogers and Robert C. Beal, Kansas City, Kans., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Application October 8, 1952, Serial No. 313,662
3 Claims. (Cl. 158—11)



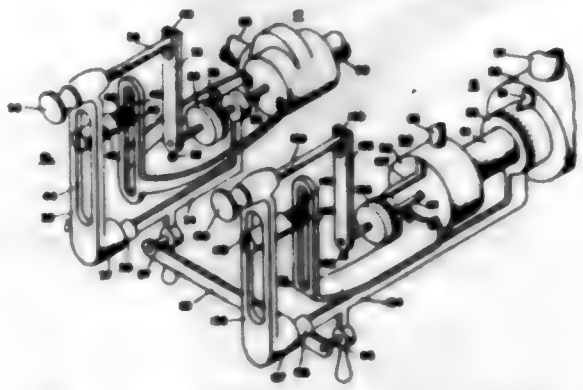
1. A burner for alternatively combusting a gaseous fuel and a liquid fuel, comprising, in combination, a chamber, a tubular fuel conduit extending straight forwardly from said chamber, said conduit having an open forward end, a tubular air manifold having an open forward end surrounding the forward end of said fuel conduit and forming an annular orifice therewith, a gaseous fuel line connected to said chamber, and a liquid fuel pipe extending through the wall of said chamber in axial alignment with said fuel conduit, said pipe having a burner jet on its forward end and being mounted in the wall of said chamber for axial sliding movement between a rear position with said burner jet wholly within said chamber and not obstructing said fuel conduit and a forward position with said pipe extending through said conduit and said burner jet in said annular orifice.

2,863,499
FUEL BURNERS
George W. Jackson and William G. Daugherty, Salt Lake City, Utah
Application December 1, 1955, Serial No. 550,298
3 Claims. (Cl. 158—74)



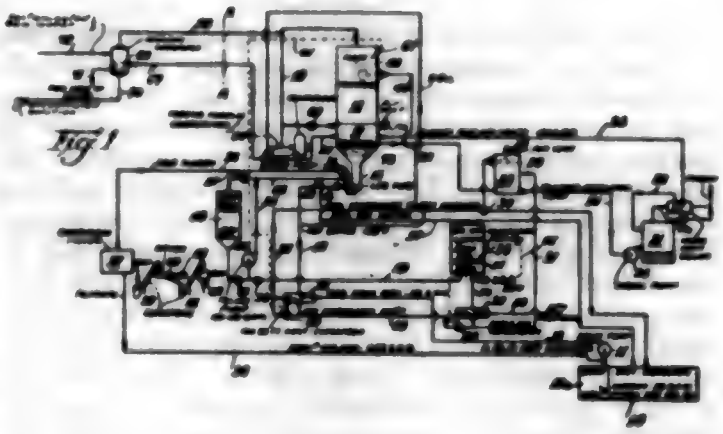
1. A fuel burner comprising an elongated hollow body, a head closing one end of the body, a nozzle having an open-ended mixing chamber therein closing the other end of the body, an open-ended relatively small air tube within said body and extending from said head to the inner end of the mixing chamber, the space in said body around the air tube forming a relatively large steam chamber having a superheated steam inlet thereto, said steam chamber at its inner end having restricted opening means surrounding said air tube for the discharge of steam into the inner end of the mixing chamber, said enlarged steam chamber providing for a large residue of superheated steam substantially to preheat the column of air in said relatively small air tube, said nozzle having a fuel chamber with a fuel inlet therein surrounding said mixing chamber, said fuel chamber having restricted opening means surrounding the mixing chamber at the outer end thereof for the discharge of fuel thereto, whereby steam passing from said steam chamber through said steam discharge means will cause a vacuum in said air tube drawing air therein and will mix with the air in the mixing chamber and air and steam passing out of said mixing chamber will draw fuel out to the discharge end of the mixing chamber.

2,863,500
FLUID FUEL BURNERS
Alfred F. Schumann, Lower Merion, Pa., assignor to Hauck Manufacturing Co., Brooklyn, N. Y., a corporation of New York
Application February 4, 1953, Serial No. 269,739
14 Claims. (Cl. 158—76)



1. A burner comprising an outer air nozzle, an inner air nozzle rotatably mounted within said outer nozzle, a fuel nozzle within said inner air nozzle, a valve controlling supply of fuel to said fuel nozzle and having an element rotatable about the axis of rotation of said inner air nozzle, a sleeve slidable axially of said inner air nozzle upon rotation thereof for varying the discharge of air from said outer air nozzle, a pair of actuating arms respectively attached to said inner air nozzle and said valve element, a link interconnecting said arms for concurrent angular adjustment thereof, and an adjustable fulcrum for said link, said fulcrum being adjustably preset in a line extending through said axis and substantially bisecting the angular ranges through which said arms are concurrently adjustable for selectively changing the relative movement when concurrently adjusting said sleeve and valve element.

2,863,501
METHOD AND APPARATUS FOR EVAPORATING SALT BRINE OR THE LIKE
William H. Farnsworth, Manistee, Mich.
Application August 24, 1951, Serial No. 243,565
26 Claims. (Cl. 159—24)

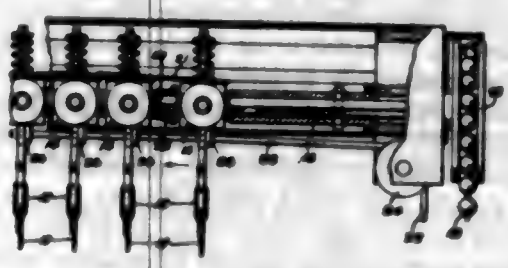


1. The method of producing solids from a solution including solids in suspension by evaporation within an

lower flange, and an arcuate front flange extending through said upper flange and loosely and guidingly with the tire, each tire trimmer including a pair of support plates, means retaining said support plates in spaced

evaporator including a heating element and provided with a vapor space, which comprises the steps: boiling a solution of the solids to be separated, thus causing the vapors of the solution to be liberated, compressing the vapors within a predetermined range of compression ratio, thereby raising the temperature of the vapors from within the vapor space of the evaporator by compression means operatively driven by a heat engine and thereby causing the liberated vapors to be superheated within a predetermined temperature range, said engine including a waste heat recovery system in heat exchange relationship with the heating element of the evaporator in order for the heat engine to be cooled, discharging the superheated and compressed vapors to the heating element of the evaporator, thus causing the superheated and compressed vapors to be condensed by giving up their latent heat to the boiling solution in heat exchange relationship with said heating element, bleeding away from the heating element of the evaporator the non-condensible gases and any excess heat, thereby causing the solids to be separated from the solution with the solids in suspension, and reducing the temperature of the superheated vapors during compression by spraying a condensate from the heating side of the heating element of the evaporator into the suction side of the compression means which in vaporizing continuously removes the heat of compression throughout the compression cycle so as to produce a compressed vapor at substantially its saturated temperature.

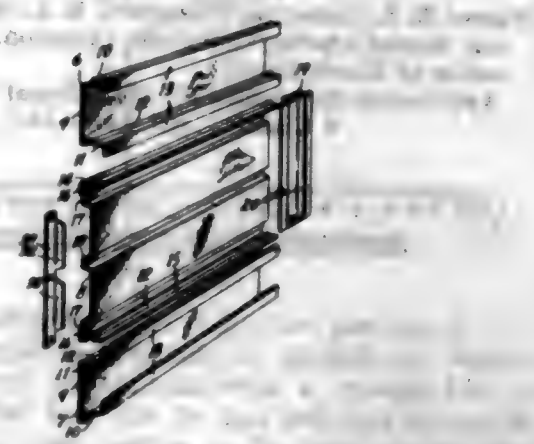
2,863,502
VERTICAL BLIND CONTROL MECHANISM
Robert J. Cayten, Los Angeles, Calif.
Application December 18, 1957, Serial No. 703,579
3 Claims. (Cl. 160—173)



1. In a vertical blind of the type described the combination of: a non-circular rod, a truck slidably mounted upon said rod, a slat suspended from said truck, means within said truck rotating said slat upon rotation of said rod and a friction washer upon said rod slidable thereon bearing against said truck and resisting movement thereof along said rod.

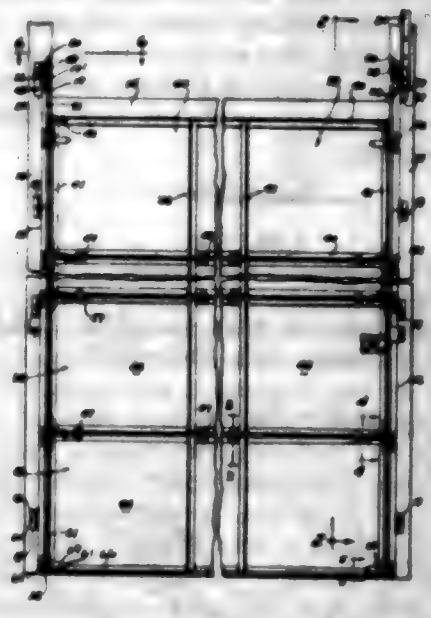
2,863,503
SECTIONAL DOOR OF THE VERTICALLY OPENING HORIZONTALLY HINGED TYPE
Earl L. Stroup, Hartford City, Ind., assignor to Overhead Door Corporation, Hartford City, Ind.
Application August 27, 1956, Serial No. 606,442
10 Claims. (Cl. 160—201)

7. A sectional door of the vertically opening horizontally hinged type comprising a plurality of horizontally elongated sections, each section including upper and lower rails of rolled sheet metal having exterior flanges of complementary angled section and having interiorly turned terminal strips on their inner edges, interior flanges on said rails having other terminal strips on their inner edges turned interiorly of the door section in the plane of said first terminal strips, an integral center panel of rolled sheet metal positioned between said rails having inwardly turned flanges complimentary to the interior flanges on the rails and having upper and lower face strips, said center panel having inwardly offset shoulders along the interior edges of said face strips and stiffening and decorative ribs rolled along the length of its center portion, metal stiles positioned between the inturned flanges of said center panel and having laterally turned inner flanges lapped behind and welded to the interiorly turned interior terminal strips on said rails, hinge plates welded to the terminal strips on said rails and extending thereacross and welded through said other terminal strips to the ends of said stiles, the exterior edges of the hinge plates having knuckles thereon in the plane of the inner edges of



the exterior flanges of said rails, hinge pins connecting the knuckles of adjacent hinge plates of said sections, ears projecting inwardly on some of said hinge plates to support roller axles at the sides of said sections, and filler strips secured to the ends of said center panels and having inturned closure flanges conformed at their inner edges to the contour of the center portion of said center panels.

2,863,504
MULTI-SECTION DOOR HINGE AND MOUNTING
Charles E. Schlytera, Buffalo, N. Y.
Application February 21, 1957, Serial No. 641,538
5 Claims. (Cl. 160—201)



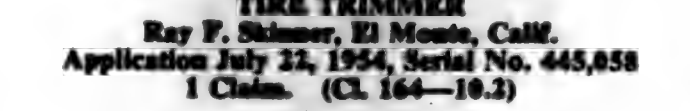
1. In a door comprising a plurality of sections adapted to slidably move between upright formed tracks in a building opening; a pair of vertically aligned door sections, each section including a frame comprising angle frame members, each frame having horizontal flanges at the upper and lower edges, with the upper horizontal flange on one frame in overlapped engaging relation with the lower horizontal flange on the frame immediately above, and a series of horizontally spaced hinge means interconnecting said flanges, each hinge means consisting of a formed plate of substantial C-shape in cross section including a flat top central portion secured to the upper of said engaging flanges, an acute angularly related rear flange extending past the edge of the upper flange and loosely and retainingly engaging the rear edge of the

ber, a compressible liquid filling said bore and said sleeve, said sleeve being movable downwardly into said chamber, and a piston reciprocable in said bore to com- enlarged diameter portion and separated from

rounding said mixing chamber, said fuel chamber having cluding solids in suspension by evaporation within an

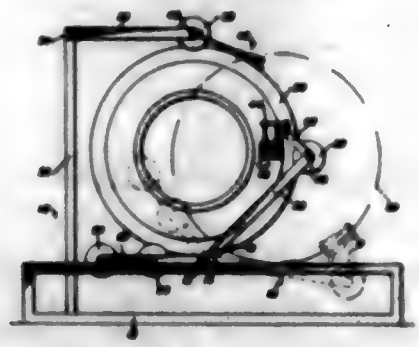
lower flange, and an arcuate front flange extending through said upper flange and loosely and guidingly through a corresponding slot in the lower flange and in a direction toward said rear flange.

2,863,585
TRAVERSE ROD AND DRAW CORD COMBINATION
Warren B. S. Cameron, Hillsgrove, R. I., assignor to Kenney Manufacturing Company, Cranston, R. I., a corporation of Rhode Island
Application September 27, 1955, Serial No. 536,983
4 Claims. (Cl. 160—345)



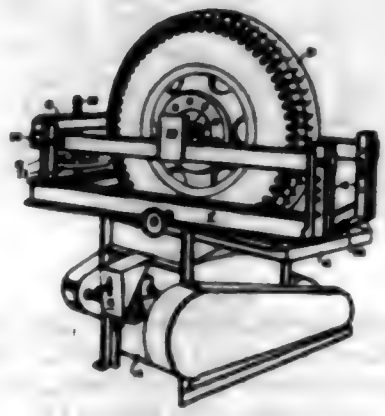
1. A traverse rod and cord combination comprising a hollow rod defining an elongated passageway from end to end thereof; a draw cord having free ends; joining means for said free ends of said cord for rendering said cord in the form of an endless loop; cord supporting means at each end of said rod; a portion of said endless loop extending from end to end of said rod through said elongated passageway; said cord encompassing within its endless loop said cord supporting means at each end of said rod; walls forming openings into said passageway at each end of said rod adjacent to said cord supporting means; a master carrier having a portion slidable in said elongated passageway and releasable locking means operatively associated with said master carrier for connecting said master carrier to one side of said endless loop of said cord within said elongated passageway; and said elongated passageway, said openings, said master carrier, and said locking means when in a released state, each dimensioned to form a space for said cord greater in width than the maximum traverse dimension of said cord end joining means; whereby said cord and cord end joining means may be drawn through and out either end of said rod without obstruction from said rod, said cord supporting means, said locking means or said master carrier.

2,863,586
TIRE TRIMMER
Ray F. Skinner, El Monte, Calif.
Application July 22, 1954, Serial No. 445,058
1 Claim. (Cl. 164—10.2)



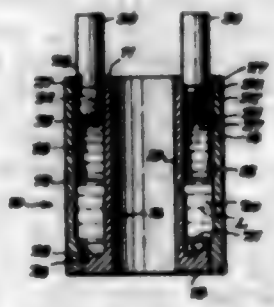
A tire trimming machine comprising a supporting frame, drive means carried by said frame freely rotatably supporting a tire, support arms carried by said frame on opposite sides of said tire, guide means carried by said support arms for retaining a tire in place on said drive means, said support arms being pivotally mounted on said supporting frame to ensure engagement of said guide means with a tire, at least one tire trimmer carried by each of said support arms, each of said tire trimmers being engageable with a tire carried by said drive means and driven in response to rotation of a tire by engagement with the tire, each tire trimmer including a pair of support plates, means retaining said support plates in spaced relation, journal blocks carried by said support plates, shafts rotatably journaled in said journal blocks, rotatable blades carried by said shafts in overlapping cooperation relation, one of said shafts being longitudinally fixed, the other of said shafts being resiliently mounted relative to its journal block for movement therethrough, whereby separation of said blades when striking an obstacle is permitted.

2,863,587
MACHINE AND PROCESS FOR SLITTING OR SIPING TIRES
Forrest Clayton Meserve, North Andover, and Minot F. Smith, Wellesley Hills, Mass., assignors to Micro Machinery Products, Inc., Winchester, Mass., a corporation of Massachusetts
Application August 21, 1956, Serial No. 605,298
8 Claims. (Cl. 164—10.2)



1. A tire slitting machine comprising a continuously rotated spirally threaded drum having threads of a height and nature temporarily to indent and feed a tire forwardly but not to cut the same, a continuously driven slitting knife located between the ends of the drum, conforming to the spiral shape of the threads and projecting beyond them to slit the tire, and a frame having means for supporting the tire on said drum so as to be driven thereby and having provision for angular adjustment with respect to the axis of the drum to determine different angles of slitting the tire.

2,863,588
BALANCED-FORCE LIQUID SPRING
Paul H. Taylor, Grand Island, N. Y., assignor to Wales-Strippit Corporation, North Tonawanda, N. Y., a corporation of New York
Application March 28, 1955, Serial No. 497,009
11 Claims. (Cl. 164—94)



2. A liquid spring comprising concentric inner and outer tubular members disposed one within the other, said inner member having fixed fluid-tight connections around its periphery to said outer member at both ends, said outer member having an internal recess intermediate its ends which is closed by said inner member to form a chamber, said outer member having a bore eccentric of the axis of said members communicating with said cham-

blade stresses in the plane thereof, filler wood pieces supplementing said web component to complete the desired

of each of said wheel carrying frames, wheels mounted on said housings, and means in said housings for driv-

orative ribs rolled along the length of its center portion, hinge extending past the edge of the upper flange and loosely and retainingly engaging the rear edge of the

ber, a compressible liquid filling said bore and said chamber, and a piston reciprocable in said bore to compress said liquid.

2,863,509

TREATMENT OF WELLS

Joseph U. Messenger, William R. Foster, and Sherrod A. Williams, Jr., Dallas, and Lawrence M. Hermes, Jr., Houston, Tex.; said Messenger and said Foster assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Application October 22, 1953
Serial No. 387,796
17 Claims. (Cl. 166—29)

1. A composition for use in the treatment of a well bore hole in the earth comprising alkali metal montmorillonite which has been heated at a temperature between 400° F. and 1000° F. for a time between several minutes and 24 hours such that at least a portion of the interlaminar water has been removed therefrom and the value of the quantity $[B(t, T)-B(0)]$ is at least 40 in which quantity B is a number characteristic of said alkali metal montmorillonite in a water slurry and has a value given by the expression $u_p=u_m e^{BC_v}$, wherein u_p is the plastic viscosity of said slurry, u_m is the viscosity of the water in said slurry, C_v is the volume fraction of said alkali metal montmorillonite in said slurry, and e is the base of the natural logarithms, and B(0) is the value of said number initially upon formation of said slurry and B(t, T) is the value of said number after said slurry has aged for 16 hours at 170° F.

2,863,510

PROCESS FOR IGNITING HYDROCARBON MATERIALS PRESENT WITHIN OIL-BEARING FORMATIONS

Harco J. Tadema and Johannes T. Quant, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application July 25, 1955
Serial No. 524,304
Claims priority, application Netherlands July 30, 1954
6 Claims. (Cl. 166—38)

1. In the production of petroleum by means of underground combustion of combustible hydrocarbon material present in an oil-bearing formation penetrated by a borehole, the method of igniting said combustible material comprising the steps of introducing into said borehole and contacting with said combustible material an amount of a readily oxidizable material which is normally a liquid and a gaseous oxidant which reacts spontaneously at borehole conditions with said liquid to raise the temperature at said combustible materdial to its ignition point with combustion taking place while the oxidizable liquid is in liquid form.

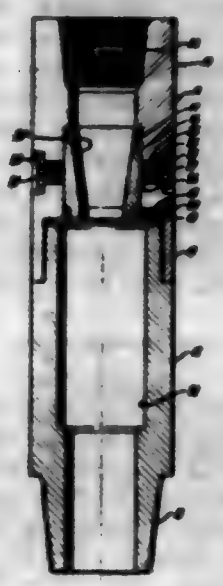
2,863,511

BACK CIRCULATING VALVE

Jack A. Mecomson, Glendale, Calif., assignor, by mesne assignments, to Johnston Testers, Inc., Houston, Tex., a corporation of Texas

Application August 16, 1955, Serial No. 528,585
7 Claims. (Cl. 166—224)

1. A back circulating apparatus comprising a tubular sub adapted to be inserted in a well string, said sub having a smaller diameter portion and an enlarged diameter portion therebelow defining a downwardly facing shoulder therebetween, a sleeve slidably mounted in said smaller diameter portion, releasable means normally retaining said sleeve in said smaller diameter portion, at least one lateral port in said sub adjacent said sleeve, and a substantially cylindrical plug of elastic material in each port, the inner end of each plug being against said sleeve, said sleeve being movable downwardly into said enlarged diameter portion and prevented from re-entry



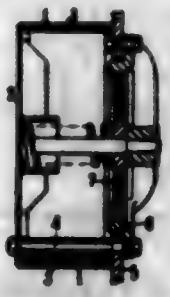
into said smaller diameter portion by engagement with said downwardly facing shoulder.

2,863,512

FLAME-TRAP MEANS FOR LIMITING THE EFFECTS OF EXPLOSIONS

Wilfred Percival Mansfield, Slough, England, assignor to The British Internal Combustion Engine Research Association, Slough, England

Application April 17, 1956, Serial No. 578,692
Claims priority, application Great Britain April 18, 1955
12 Claims. (Cl. 169—1)



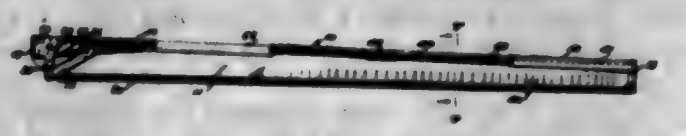
1. Flame-trap comprising a non-inflammable structure forming a portion of the boundary of an enclosed space, said structure being perforated for the passage of hot gases produced by the combustion of air/fuel mixtures within said space, the combined area of the passageway provided by said perforations being that necessary to relieve rising pressure of the gases in said space at a rate which prevents them reaching a pressure which will damage the boundaries of said space, the said perforated structure being coated with a vapourisable substance which, when vapourised by a flame, quenches the latter and thus prevents its passage by way of said perforations.

2,863,513

HELICOPTER ROTOR BLADE

Robert W. Metzger, Dallas, Tex., assignor to Bell Aircraft Corporation, Wheatfield, N. Y.

Application December 12, 1955, Serial No. 552,482
3 Claims. (Cl. 170—159)



1. A rotor blade comprising leading and trailing edge spar components formed of laminated relatively strong wood interconnected by a web component resistant to

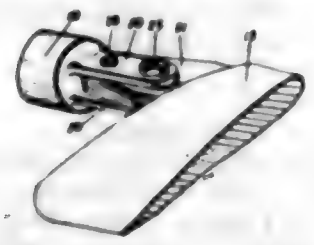
two positions, and a manually movable cam member and follower means on each of said pins engaged with said

ing through said housing to enable manual shifting of said control rods, a combination lock comprising a plu-

and driven in response to rotation of a tire by engagement of the axis of said members communicating with said cham-

blade stresses in the plane thereof, filler wood pieces supplementing said web component to complete the desired sectional profile, a plurality of metal ballasts inlaid in the leading edge portion of the blade in the outboard end portion only thereof and adhesively bonded to the leading edge spar component, a metal sheath covering the leading edge of the blade and enclosing said ballasts and a portion of the wooden structure therebehind, and rotor hub grip means arranged on each side of the blade at the root portion thereof and fixed to the root end of said leading edge spar component, said spar components and web component and filler wood pieces and metal ballasts and said metal sheath all being adhesively bonded together.

2,863,514
ROTARY WING WITH SHEAR PIN MOUNTING
Peter Rowland Payne, Rearsby, England, assignor to Auster Aircraft Limited, Rearsby, England
Application January 18, 1955, Serial No. 482,597
Claims priority, application Great Britain January 18, 1954
4 Claims. (Cl. 170—160.56)

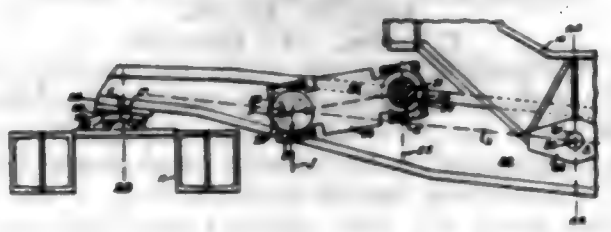


1. In a rotary wing aircraft, a rotor head, a plurality of rotor blade stems extending radially therefrom, means securing each stem to the rotor head for hinging movement about an axis at right angles to the axis of the rotor head, rotor blades, one for each stem, drag hinge pins securing the rotor blades pivotally to the stems, and shear members coupling the blades to the stems to positively prevent movement of the blades about their drag hinge pins until the drag forces set up are sufficient to fracture the shear pins.

2,863,515
VEHICLE PARKING DEVICE
Raimundo Ferrer, Kohly, Marianao, Cuba
Application July 9, 1957, Serial No. 670,687
5 Claims. (Cl. 180—1)

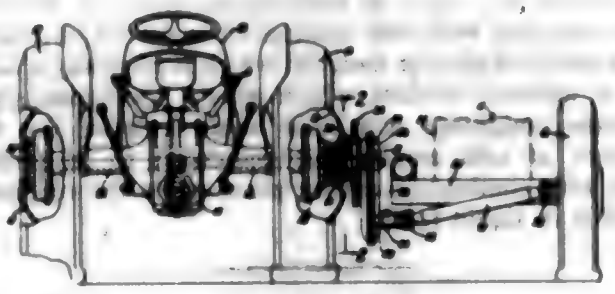
1. A device for raising a wheeled vehicle from its wheels and mounted underneath at least one end of the wheeled vehicle, comprising two rotatable aligned threaded spindles, means between said spindles and connected thereto for driving said spindles in opposite directions, a fork member threadedly mounted on each of said spindles projecting downwardly therefrom, two pairs of cam means, the cam means of each pair mounted on opposite sides of each corresponding spindle, two wheel carrying frames, each of said wheel carrying frames being positioned between a corresponding pair of cam means and below the corresponding one of said spindles, a plurality of cam wheels on each of said wheel carrying frames, each cam wheel engaging the corresponding one of said cam means, a bearing roller on each of said wheel carrying frames, one bearing roller engaged with each of said fork members, wheel housings on the ends of each of said wheel carrying frames, wheels mounted on said housings, and means in said housings for driving said last mentioned wheels, whereby when said spindles are rotated, said fork members move along said spindles and said cam means guide said wheel carrying frames into their downwardly extended position.

2,863,516
TRACK CONTROL MECHANISM FOR TRACTOR
Robert A. Peterson, San Leandro, Calif.
Application May 21, 1956, Serial No. 586,064
7 Claims. (Cl. 180—9.1)



3. In a track-type tractor having a main frame, a pair of track frames, one on each side of and parallel to said main frame and pivoted near one end to said main frame with the other end free to rise and fall relative to said main frame, the improvement comprising the combination therewith of a stiff beam extending laterally of said main frame and pivotally secured thereto for movement in a vertical plane, the outer ends of said beam being slidably mounted on said track frames; and a drag link generally parallel to said stiff beam and connecting each said track frame to said stiff beam, each drag link being connected at a first pivot point to said track frame and at a second pivot point, outboard from said first pivot point to said stiff beam, said second pivot point being so located thereon that said first point moves substantially vertically parallel to said track frame between given maximum limits while said second pivot point moves with said stiff beam.

2,863,517
CLUTCH KIT FOR TRACTOR DRIVE WHEELS
Melville J. Mitchell, Birmingham, Mich., assignor, by mesne assignments, to Massey-Ferguson Inc., a corporation of Maryland
Application January 25, 1954, Serial No. 405,703
8 Claims. (Cl. 180—75)



2. For use with a tractor having a power axle and a rear wheel, and an implement side mounted on said tractor and having a ground wheel, a selective drive mechanism comprising the combination of a coaxial extension shaft secured to the end of the axle in lieu of the tractor wheel, a hub journaled on said shaft, means for mounting the wheel on said hub, a removable drive connection between said extension shaft and said ground wheel, a first flange fast on said hub having openings therethrough, a second flange fast on said shaft having openings therethrough adapted to register with said first flange openings, a plurality of detent pins carried in a first position in the openings of one of said flanges and axially movable to a second position to enter said openings in the other of said flanges, means for biasing said pins to one of said

each port, the inner end of each plug being against said

spar components formed of laminated relatively strong wood interconnected by a web component resistant to

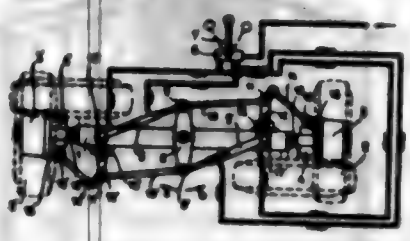
two positions, and a manually movable cam member and follower means on each of said pins engaged with said cam member for moving said pins to the other of said two positions to selectively cause said wheel to be free-wheeled on or power-driven by said shaft.

2,863,518

MOTOR VEHICLE EQUIPPED WITH WHEELS CAPABLE OF STEERING SUBSTANTIALLY THROUGH 90° FROM THEIR STRAIGHT DRIVE POSITION

Italo Pellizzetti, Turin, Italy

Application June 25, 1957, Serial No. 667,836
1 Claim. (Cl. 180—79.2)



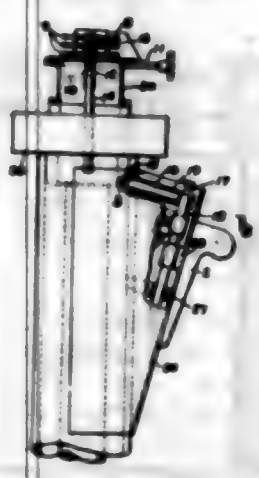
In a motor vehicle, a pair of rigid axles, a pair of wheels on opposite ends of each axle steerable each through substantially 90° from its straight drive position, and means on each axle for steering the wheels through said defined angle, comprising a beam pivoted about a vertical axis extending substantially through the middle of the axle, a pair of levers fulcrumed at one end about vertical axes adjacent the ends of the axle and projecting forward and backward, respectively, of the axle, a steering arm associated with each of the wheels, a first pair of tie rods each hinged at one end to an intermediate point on a respective lever and at the opposite end to a respective end of the beam, a further pair of tie rods each hinged at one end to the free end of a respective lever and at its other end to the adjacent steering arm, and at least one fluid pressure operated jack anchored at one end to the axle and at its opposite end to one end of the beam thereby to rock the beam for steering the wheels.

2,863,519

AUTOMOBILE IGNITION, HOOD, TRUNK AND DOOR LOCK

Russell E. McNamara, Riverside, Ontario, Canada

Application August 16, 1955, Serial No. 528,575
16 Claims. (Cl. 180—82)



1. In an automotive vehicle, means for remotely controlling the operation of latches such as employed on the doors, trunk lid and hood comprising a housing, a plurality of control rods shiftable axially in said housing, said control rods, when shifted axially, actuating said latches, means connected to said control rods and extending through said housing to enable manual shifting of said control rods, a combination lock comprising a plurality of discs each provided with a notch at the periphery thereof, a master key which is movable into the slot provided by said notches when vertically aligned, a cam member operably connected with said master key, lock means engageable with said control rods to prevent axial movement thereof to thereby maintain the latches in latched condition, a cam follower associated with said last mentioned means and actuated by said cam to lock said control rods against axial movement when said key is retracted out of said aligned notches.

2,863,520

LOUDSPEAKER CONE RIM TREATMENT

Fred A. Manley, Irondequoit, and Paul W. Ankermann, Rochester, N. Y., assignors, by mesne assignments, to General Dynamics Corporation, a corporation of Delaware

Application March 11, 1955, Serial No. 493,601
13 Claims. (Cl. 181—31)

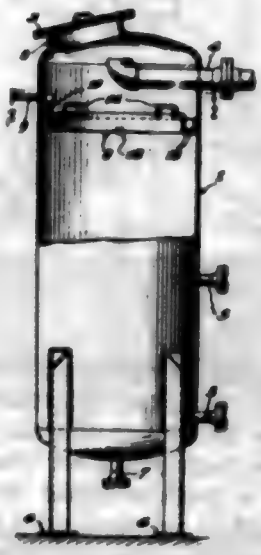
8. A loudspeaker comprising vibratile means having a particular degree of stiffness, means for supporting said vibratile means adjacent the outer periphery thereof, and means comprising a mixture of a massive ingredient and a flexible, adhesive vehicle circumferentially and uniformly distributed adjacent said periphery, said ingredient comprising a plurality of particles, the flexibility of said adhesive vehicle being such that said particular degree of stiffness is maintained.

2,863,531

CONTINUOUS DEAERATION APPARATUS

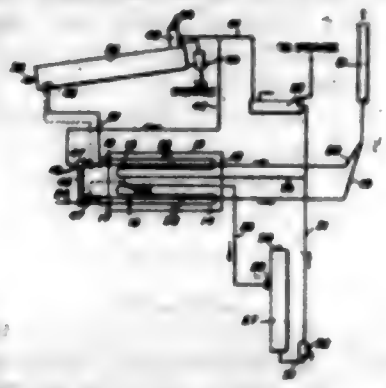
Charles J. Davis, Jr., Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Illinois

Application February 27, 1956, Serial No. 568,034
5 Claims. (Cl. 183—2.5)



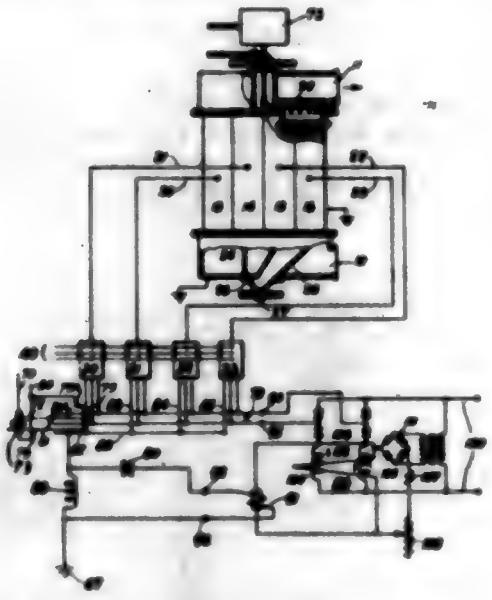
1. In an apparatus for the continuous deaeration of animal and vegetable fats and oils, the improvement which comprises a deaeration chamber, a trough fixedly positioned inside and adjacent to the periphery of said deaeration chamber, said trough having perforations on only one side thereof, said side being that side of said trough which is adjacent to the inner periphery of said deaeration chamber, said perforations being adapted to discharge oil on said inner periphery of said deaeration chamber, and means for introducing oil into said trough.

2,863,522
OIL AND GAS TREATER
James Bernard Smith, Aztec, N. Mex.
Application January 13, 1958, Serial No. 708,564
8 Claims. (Cl. 183—2.7)



1. Apparatus for separating oil and gas from a free flowing stream thereof containing water comprising a firebox, tube means therein for heating said stream to a predetermined temperature, an expander connected to said tube means for effecting separation of gas therefrom, second tube means extending through the firebox for conducting liquid from the expander and maintaining the same at a predetermined temperature, and a separator connected to said second tube means for effecting gravity separation of the oil and water in said liquid.

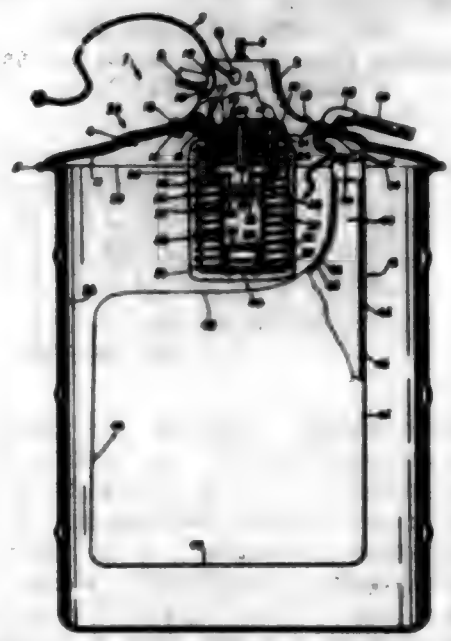
2,863,523
ELECTROSTATIC PRECIPITATOR
Hans Klemperer, Belmont, Mass., assignor to APRA Precipitator Corporation, New York, N. Y., a corporation of Delaware
Application March 6, 1956, Serial No. 569,759
11 Claims. (Cl. 183—7)



1. In an electrostatic precipitator; energy storage means responsive to transient voltage fluctuations in the precipitator produced by flashovers therein; means associated with said energy storage means for dissipating the energy stored therein at a predetermined rate; and means responsive to the residual energy stored in said energy storage means for controlling the operation of said precipitator.

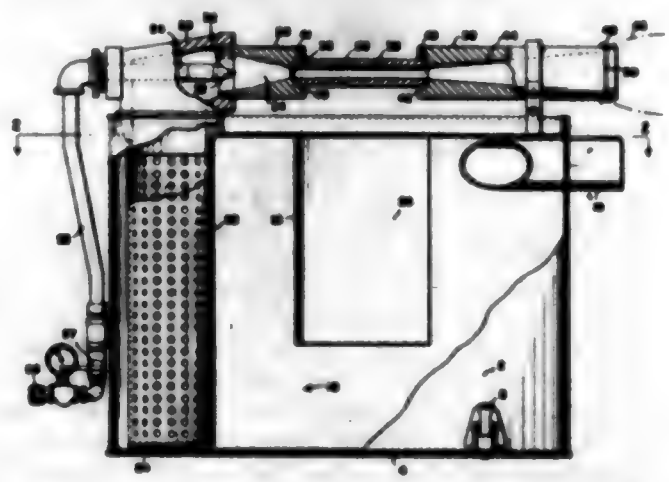
2,863,524
VACUUM CLEANER
Salvatore Buda, Brooklyn, N. Y., assignor to Sirapvac Corporation, Brooklyn, N. Y., a corporation of New York
Application February 21, 1955, Serial No. 489,646
2 Claims. (Cl. 183—37)

1. In a vacuum cleaning device, a cover member adapted to fit over open-ended containers of various sizes and comprising a center section, means extending across the bottom of the center section for supporting a motor, an opening formed in and extending through said means, a peripheral apron extending outwardly from the bottom of the center section, a band of gasket material on the lower surface of the apron and adapted to lie against the edges of the open ends of containers of various sizes, an open-ended cylinder depending from the opening in said means, an exhaust fan disposed in said cylinder and adapted to direct air through said opening, a second



cylinder having openings near the upper end of its side wall and secured immediately beneath the first-named cylinder and registering with its open lower end, a floatable piston positioned within the second cylinder for closing the said open lower end of the first-named cylinder, an inlet tube extending through the apron adjacent the center section and a bag secured to the tube below the apron for receiving dirt collected by the cleaner and preventing the dirt from entering the second cylinder, the exhaust fan and the center section.

2,863,525
VACUUM CLEANER
Arsene N. Lucien, Manasquan, N. J.
Continuation of application Serial No. 335,105, February 4, 1953. This application June 1, 1956, Serial No. 588,918
5 Claims. (Cl. 183—37)



1. Apparatus for creating suction to move fluid materials comprising a receptacle including an upper member and a lower member providing a closed chamber, said upper member having an inlet in direct communication with said chamber and an outlet opposite said inlet, the effective area of said outlet being more than double

2,863,530
PORTABLE OIL WELL DERRICK

tower section, means supported by the base member for detachably connecting the bottom of a tower section to

that of said inlet; a filter within said chamber surrounding said outlet and extending directly across said outlet and being supported by said upper receptacle member and being adapted for removing entrained matter from a flow of air through said chamber; an ejector pump being mounted externally on said upper receptacle member and including a nozzle, a suction inlet in direct fluid flow communication with said chamber outlet and a mixing venturi, and means for supplying high pressure operating air to said nozzle; said venturi having a converging passage communicating with said suction inlet and said nozzle being arranged to discharge into said suction inlet and having means providing a diverging passage for receiving air from said converging passage and discharging air exteriorly of said chamber, said apparatus being constructed and arranged so that it has a minimum of impedance to air flow.

2,863,526
METHOD OF SEPARATING HYDROGEN ISOTOPES

Oliver N. Salmon, Schenectady, N. Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

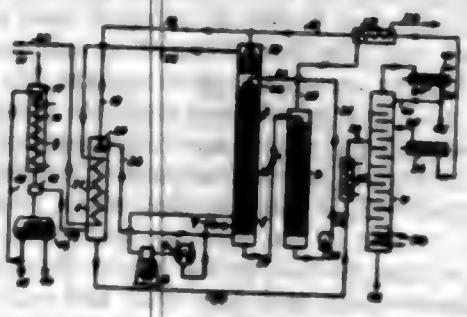
No Drawing. Application October 17, 1956
Serial No. 616,581
1 Claim. (Cl. 183—114.2)

A process of separating a gaseous mixture of hydrogen and tritium, comprising contacting finely divided palladium with said mixture whereby the gaseous mixture is taken up by sorption, gradually heating the palladium whereby a fraction rich in tritium is first given off and collecting the evolved fractions as they are formed.

2,863,527
PROCESS FOR THE PURIFICATION OF GASES

Wilhelm Herbert, Frankfurt am Main, Hans-Ulrich Kohrt, Bad Homburg vor der Hohe, Rudolf Becker, Munich-Solln, and Friedrich Dannöst, deceased, late of Frankfurt am Main, Germany, by Hedwig Gertrud Dannöst, Ilse Dannöst, Hans Friedrich Dannöst and Dieter Dannöst, administrators, Frankfurt am Main, Germany, assignors to Metallgesellschaft, Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany

Application July 27, 1955, Serial No. 524,694
Claims priority, application Germany September 15, 1949
19 Claims. (Cl. 183—115)

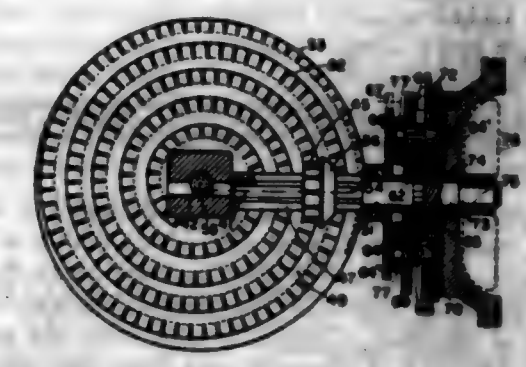


1. Process for the purification of combustible gases comprising a member selected from the group consisting of carbon monoxide, hydrogen, methane and mixtures thereof, and containing as impurities hydrogen sulfide with a member of the group consisting of organic sulfur compounds, gum and resin formers, cyanogen compounds, carbon dioxide, and mixtures thereof, which comprises contacting such a gas at a temperature of below about —10° C. at a pressure of at least 2 atmospheres with a polar organic washing liquid substantially chemically non-reactive with the gas components and having a freezing point below said contacting temperature to thereby remove a substantial portion of said hydrogen sulfide and said second mentioned group member, and recovering a purified gas having a substantially reduced content of said impurities.

2,863,528
SPRING-MECHANISM

Ernest Wildhaber, Brighton, N. Y.

Application April 26, 1954, Serial No. 425,698
13 Claims. (Cl. 185—37)

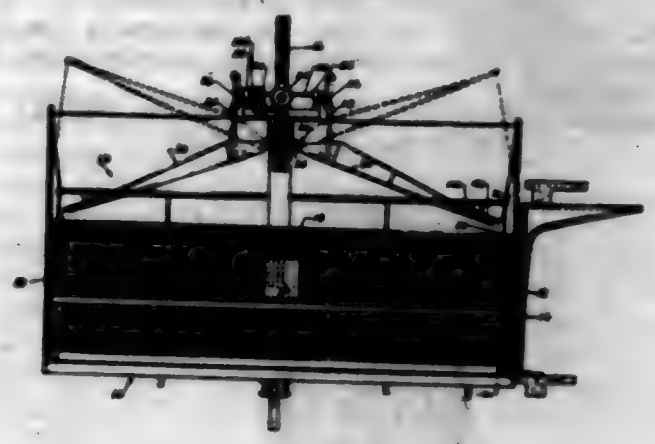


1. A spring-actuated mechanism for transmitting torque to a rotatable shaft in accordance with a predetermined pattern, comprising means for holding said shaft in axially fixed position, a spiral spring, a rotatable part to which one end of said spring is attached, said part having its axis at right angles to the axis of said shaft, a face gear rigid with said part and having teeth arranged along a spiral of constant pitch, a cylindrical pinion meshing with said teeth, said pinion being slidably secured to said shaft to rotate therewith, and guide means for moving said pinion bodily along said shaft as it rotates, to follow the spiral of the teeth of said gear.

2,863,529
ELEVATOR GATE

Virgil C. Bowser, Des Moines, Iowa, assignor to The Bowser Parking System, Inc., Des Moines, Iowa, a corporation of Iowa

Application November 23, 1956, Serial No. 624,019
12 Claims. (Cl. 187—68)



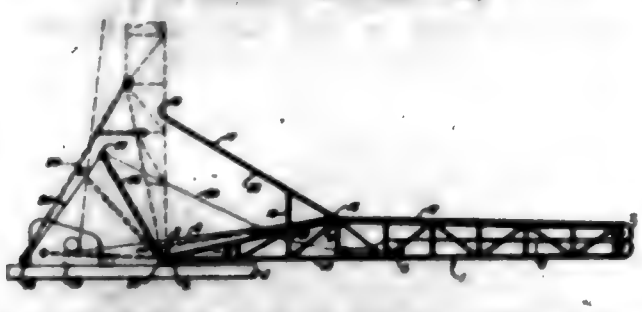
1. In combination, an elevator, means for moving the elevator, an elevator door slidably connected to said elevator for up and down movement, retractable up dog means adapted to be extended to engage and lift a hatchway door in the upward movement of said elevator door, said up dog means being operative to render inoperative said elevator moving means, a retractable down dog adapted to engage said hatchway door in the downward movement of said elevator door, said down dog being retractable and extendible by means including a cam operable through movement of said elevator door.

and lower tubular rails, a reinforcing brace connecting said rails, one end of one of the rails being open-ended

plate, a cap closing the upper end of said housing, an operating rod disposed axially in said housing having a

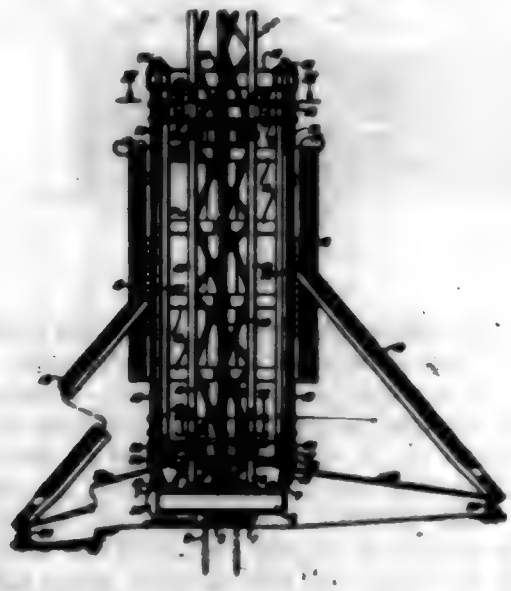
1. In a vacuum cleaning device, a cover member adapted to fit over open-ended containers of various sizes with said chamber and an outlet opposite said inlet, the effective area of said outlet being more than double

2,863,530
PORTABLE OIL WELL DERRICK
Homer J. Woolslayer, Cecil Jenkins, and Calvin L. Turner, Tulsa, Okla., and Erwin A. Campbell, Wexford, Pa., assignors to Lee C. Moore Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application February 3, 1954, Serial No. 407,906
5 Claims. (Cl. 189—11)



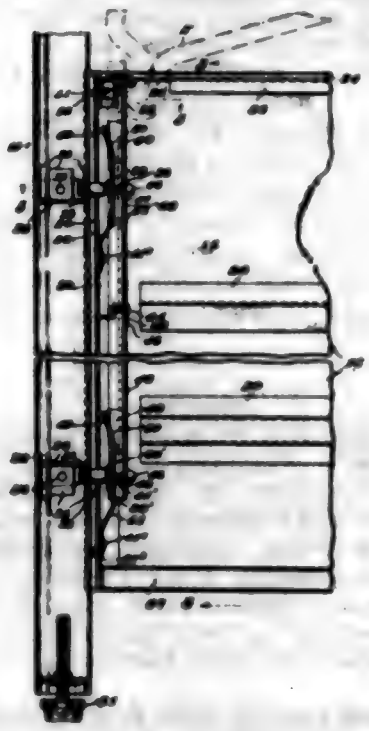
1. A portable oil well derrick comprising a base, a reclining mast having a head and a foot which is hinged to the base, the mast extending forward away from the base, a traveling block in the mast, a crown block at the head of the mast, a line extending from the traveling block to the head of the mast and then over the crown block and back over said base, the rear end of the line being adapted to be pulled to pull the traveling block toward the head of the mast, a prop secured to the upper side of the reclining mast a considerable distance from its foot and inclined upward and backward therefrom, means bracing the prop in said inclined position, a gin pole much shorter than said prop and supported by the base adjacent the hinged foot of the mast and extending upward therefrom, tension means connecting the upper end of the gin pole with the base at the side of the pole opposite to the mast, a line connected to the upper end of the pole and extending forward into the mast for connection to the traveling block, whereby when the block is pulled toward the head of the mast the latter is swung upward and backward until it is erect, means on the base behind the gin pole for supporting the lower end of the prop when the mast is erect, and means for detachably connecting the upper end of the gin pole to said prop several feet below the upper end of the prop when the mast is erect, to thereby brace the prop.

2,863,531
TOWER ERECTING APPARATUS
Erwin A. Campbell, Wexford, Pa., assignor to Lee C. Moore Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application November 19, 1956, Serial No. 623,223
12 Claims. (Cl. 189—12)



1. Tower erection apparatus comprising a base member, an upright frame removably mounted on the base member and having an open side for receiving an upright tower section, means supported by the base member for detachably connecting the bottom of a tower section to the base member, a plurality of vertical jack screws rotatably mounted in the frame, means for rotating the screws, lifting means threaded on the screws for vertical travel when they are rotated, inclined outrigger legs beside the frame, means pivotally connecting the upper ends of said legs to the frame, said connecting means being connectable to the legs in a plurality of different vertically spaced positions, and means adapted to support the tower section from said lifting means after it has been disconnected from the base member, whereby the tower section can be raised to make room for a similar tower section below it in the frame.

2,863,532
PORTABLE PARTITION STRUCTURES AND LOCKING MEANS THEREFOR
William G. French, Jamestown, N. Y., assignor to Aetna Steel Products Corporation, New York, N. Y.
Application December 9, 1954, Serial No. 474,200
7 Claims. (Cl. 189—34)



1. In a partition-forming structure wherein a panel unit having a vertical edge wall of a transverse configuration to substantially conform to an abutted portion of a post fixedly carrying a stud having an enlarged head insertable in said panel unit, the improvement in said panel unit comprising locking means for interengaging the enlarged head of the stud and including a shiftable member concealed within said panel unit for rendering said locking means operative and inoperative, said shiftable member being provided with a keyhole slot which receives the head in one portion of the member and locks the head in another portion thereof, spring means disposed within the panel intermediate said edge wall and said shiftable member, and cam means carried by the shiftable member and operative to tension the spring means upon movement of the member to locking position to bias the edge wall and post together.

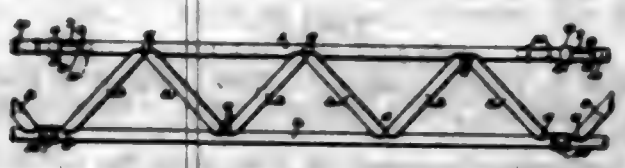
2,863,533
SECTIONAL OPEN-WEB BEAM
Merton L. Clevett, Jr., East Natick, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application April 22, 1955, Serial No. 503,361
2 Claims. (Cl. 189—37)
(Granted under Title 35, U. S. Code (1952), sec. 266)
1. An open-web beam composed of a plurality of lightweight detachable sections, each section including upper

unit mounted for movement axially of said driven shaft, said rise portions and said air ways to provide a mechani-

thereby remove a substantial portion of said hydrogen sul-

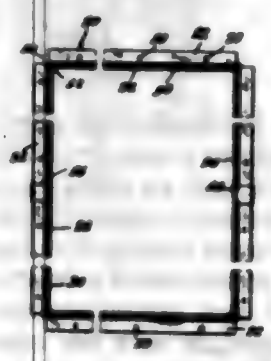
ing a cam operable through movement of said elevator door.

and lower tubular rails, a reinforcing brace connecting said rails, one end of one of the rails being open-ended and provided with a bayonet slot, a reduced portion on the other end of said rail, a laterally extending pin on



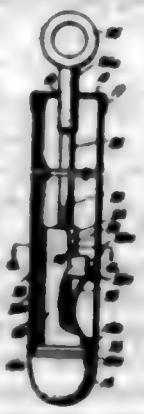
said reduced portion for cooperation with the bayonet slot on the juxtaposed section, and latching means on the ends of the other rail for fixedly securing the sections against relative rotation.

2,863,534
METAL WINDOW
Russell A. Gillespie, Indianapolis, Ind., assignor of one-third to Carl F. Spickelmier, one-third to Edith S. Greer, and one-third to Betty S. Spickelmire, all of Indianapolis, Ind.
Application January 13, 1956, Serial No. 559,037
8 Claims. (Cl. 189—75)



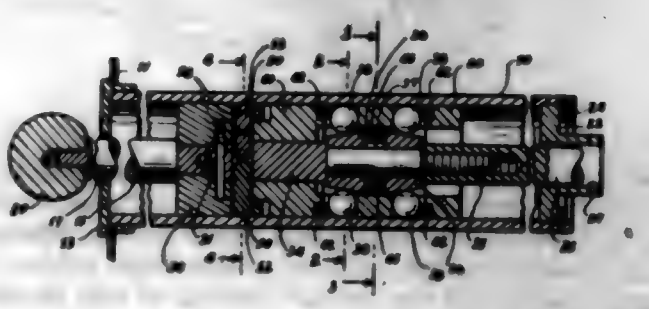
1. In combination with a metal window frame having a peripheral flange; a nailing strip for securing the frame in a wall opening, said strip comprising a locating flange overlying the rear face of said peripheral flange, a web projecting forwardly from said locating flange and engaging the edge of the peripheral flange, and a nailing fin projecting from said web to overlie and be secured to a face of a wall, said nailing fin being spaced forwardly from the rear edge of said web to provide a shoulder; and removable means engaging said shoulder and acting between said strip and frame for firmly holding said locating flange against the face of the peripheral flange and said web against the edge of the peripheral flange.

2,863,535
ANCHOR STAKE
Clyde E. Clapper, Blue Springs, Mo.
Application November 5, 1956, Serial No. 620,442
11 Claims. (Cl. 189—92)



1. An anchor stake comprising a housing, a base plate fixed relative the lower end of said housing, an end fitting fixed relative the lower end of said housing and base plate, a cap closing the upper end of said housing, an operating rod disposed axially in said housing having a lower portion thereof threaded in one direction and an upper portion thereof threaded in another direction, the upper end of the rod extending through an opening in said cap, the lower threaded portion of the rod engaging the base plate, thread engaging means mounted on the upper threaded portion of said rod, at least one pair of carrying arms attached to the thread engaging means and movable therewith, means preventing rotation of the thread engaging means within the casing relative said base plate and casing whereby rotation of the operating rod moves the thread engaging means vertically relative the base plate, at least one curved fluke engaged at one end with one pair of said carrying arms, and at least one opening in said casing opposite said fluke to permit extrusion of the fluke laterally relative said casing.

2,863,536
SELF-LOCKING STRAIGHT LINE ACTUATOR WITH LOAD RELEASE RE-ACTION
Howard W. Cole, Jr., Mountain Lakes, N. J.
Application April 14, 1955, Serial No. 501,326
13 Claims. (Cl. 192—8)



1. A self-locking straight line actuator comprising a primary operating element for reciprocating movement by an operator, a secondary operated element for connection with a load, two overrunning clutches oriented in opposite directions, each of the clutches including a fixed clutch member, a movable clutch member, cam means on the movable clutch member, and a group of clutch elements between the clutch members of each clutch and movable into engagement with the fixed clutch element to lock that clutch, a carrier for the clutch elements of both clutches, a connection between the movable clutch member and the secondary operated element, and motion-transmitting connections through which the primary operating element is connected with both the movable clutch element and the carrier, at least a part of said connections having lost motion therein, and said motion-transmitting connections including means that extend from the primary operating element and between the carrier and the movable clutch element in positions where the thrust of said means against the carrier is in the opposite direction from the thrust of said means against the movable clutch in response to the initiation of movement of the primary actuator in either direction to unlock either of the clutches.

2,863,537
HEAVY DUTY FRICTION CLUTCH
Robert S. Root, Westvale, N. Y., assignor to Lipe-Rollway Corporation, Syracuse, N. Y., a corporation of New York
Application March 4, 1957, Serial No. 643,664
4 Claims. (Cl. 192—13)

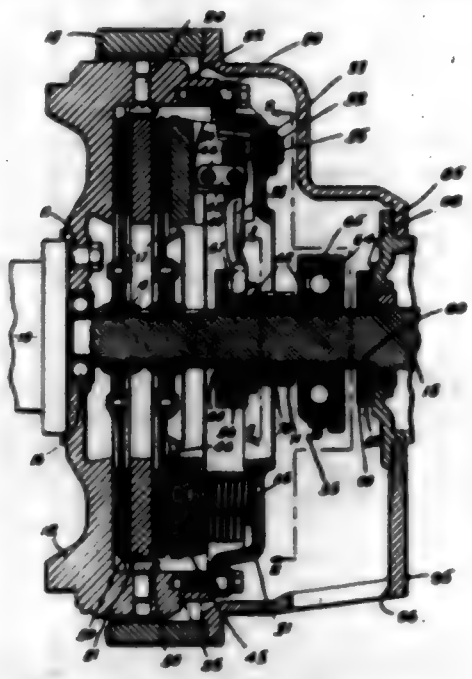
1. A friction clutch for connecting driving and driven shafts having means for normally effecting a driving connection between said shafts and clutch throw-out means for disengaging said driving connection, means for moving said clutch throw-out means including a clutch throw-out

2,863,541

by stoppage of the driven element, the liquid becomes

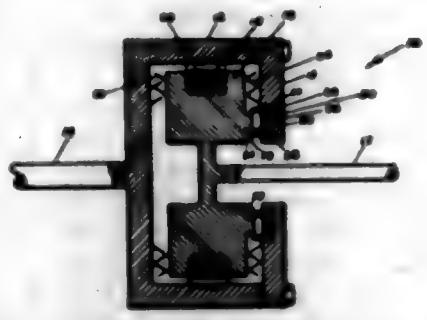
member and having an open side for receiving an upright weight detachable sections, each section including upper

unit mounted for movement axially of said driven shaft, said unit comprising a sleeve threaded at one end, a throw-out collar on said one end and engageable with said clutch throw-out means to effect movement thereof upon axial movement of said unit, a yoke member axially fixed on the other end of said sleeve, inertia brake means operative between a fixed member and a driven member



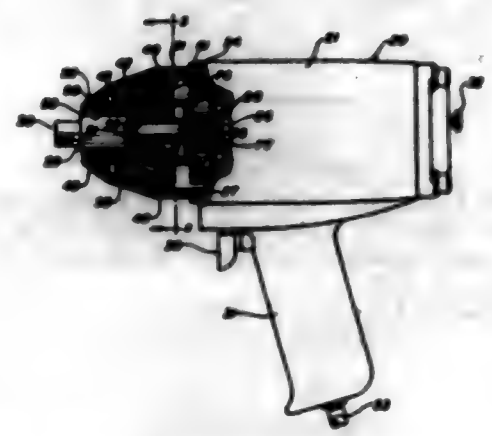
and engaged by movement of said throw-out unit to disengage said clutch driving connection, and means mounted on said sleeve for moving said sleeve axially relative to said throw-out collar, whereby as the clutch driving connection wears and the normal position of said throw-out unit is shifted axially, said unit may be adjusted to ensure full engagement of said inertia brake means.

2,863,538
PERMANENT MAGNET SEAL
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application October 22, 1954, Serial No. 463,878
2 Claims. (Cl. 192—21.5)



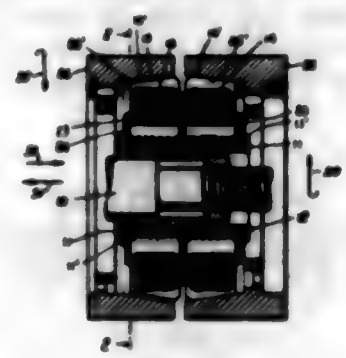
1. In an electromagnetic apparatus comprising a pair of relatively rotatable members having a powdered magnetic material located therebetween, means providing a magnetic field between said members, sealing means between said members including a pair of spaced magnetic rings mounted on one of said members and defining an annular space therebetween, permanent magnet means disposed in said annular space and carried by said one member contiguous to said spaced rings and forming a base portion of a U-shaped flux path in said spaced rings and said magnet means, a pair of spaced magnetizable ring portions on the other of said members and disposed in overlapping relationship with said magnetic rings and forming air gaps therebetween, said permanent magnet means providing a magnetic flux traversing said rings, said ring portions and said air gaps to provide a mechanical and a magnetic seal, thus preventing escape of the powdered magnetic material from within the apparatus.

2,863,539
IMPACT MECHANISM
Marvin L. Yeager, Columbus, Ohio, assignor to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio
Application December 10, 1956, Serial No. 627,376
12 Claims. (Cl. 192—30.5)



1. In an impact mechanism the combination of: a rotatably mounted spindle means; rotatably mounted hammer means provided with an impact surface; transversely reciprocally movable anvil means carried by said spindle means, said anvil means including an impact surface; said hammer and anvil means being formed with cam surfaces for moving one of said impact surfaces into a position of impacting engagement with the other of said impact surfaces; and radially extending lever arm means for moving said one surface away from said position of impacting engagement.

2,863,540
WEDGE-TYPE CLUTCHES
Melvin H. Emrick, Manhasset, N. Y.; Dorothea A. Emrick, executrix of said Melvin H. Emrick, deceased
Application December 4, 1956, Serial No. 626,258
13 Claims. (Cl. 192—43)



1. A forward and reverse drive wedge clutch, comprising a drive shaft, a hub mounted on said shaft, a pair of forward and reverse drive wedge units mounted on the hub, forwardly and reversely driven conical clutch devices encircling said forward and reverse drive units and adapted to be engaged thereby in axial movement of said drive shaft, each unit comprising a plurality of circumferentially spaced independent wedge elements and intermediate coupling members of yieldable material spacing said wedge elements circumferentially of the hub, and interengaging means, on opposed surfaces of adjacent elements and on ends of said coupling members, for retaining the elements and members in assembled relationship with each other.

2,863,544

and clutch throw-out means including a clutch throw-out

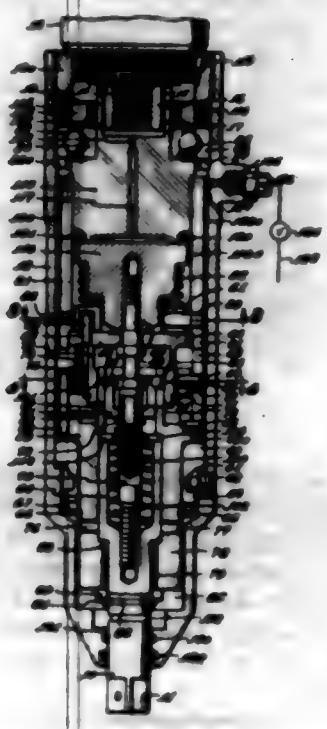
2,863,541

RELEASABLE TORQUE TRANSMITTING APPARATUS

Henry T. M. Rice, San Gabriel, Robert T. Stevens, Altadena, and Dillon Stevens, deceased, late of Los Angeles, Calif., by Adele M. Stevens, executrix, Los Angeles, Calif.

Original application October 16, 1950, Serial No. 190,344, now Patent No. 2,741,352, dated April 10, 1956. Divided and this application December 5, 1955, Serial No. 550,889

20 Claims. (Cl. 192—56)



1. In torque transmitting apparatus: driving and driven members; coengageable clutch elements on said members effecting a rotatable driving connection between said members, said elements comprising cam means responsive to the torque transmitted through said members and tending to shift said elements axially from each other; fluid pressure operated means for holding said clutch elements in driving engagement with each other; means for relieving the fluid pressure differential acting on said fluid pressure operated means upon initial slight axial separating movement between said elements in response to the torque transmitted through said elements exceeding a predetermined value; releasable latch means including a mechanical holding member that engages one of said members to maintain said clutch elements disengaged; and means for engaging said clutch elements upon release of said latch means.

2,863,542

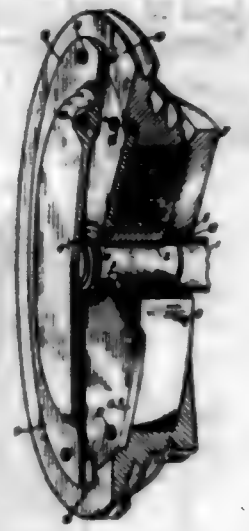
FLUID SAFETY DRIVE DEVICE

Cadwallader W. Kelsey, Troy, N. Y.

Application December 13, 1955, Serial No. 552,736

1 Claim. (Cl. 192—58)

A safety drive connection for use on a machine such as a tilling device normally subjected to a high torque and which may be subjected to sudden shock by stoppage of a driven element, said connection including coaxial driving and driven means, a plurality of spaced coaxial webs rigidly mounted on and secured for rotation with said driving means, a plurality of complementary spaced coaxial webs mounted on said driven means and rigidly secured thereto interleaved but out of contact with the webs on said driving means, and a viscous silicone liquid having a high resistance to mechanical shearing filling the spaces between the interleaved webs, said liquid being characterized in that it acts as a liquid shear pin in as much as when subjected to a predetermined stress caused by stoppage of the driven element, the liquid becomes incapable of carrying substantially any part of the load, and which load must be reduced substantially to zero before the liquid is again capable of carrying a load.



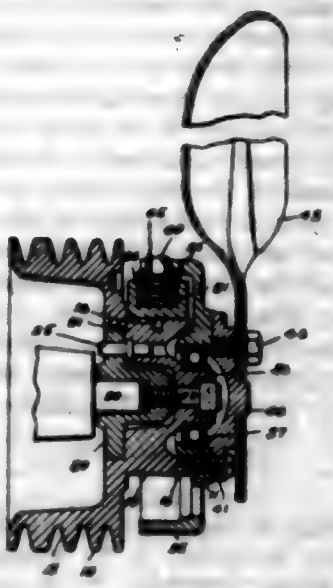
2,863,543

TORQUE METERING CLUTCH

Charles B. Spase, Syracuse, N. Y., assignor to Lipe-Rollway Corporation, Syracuse, N. Y., a corporation of New York

Application February 14, 1957, Serial No. 640,233

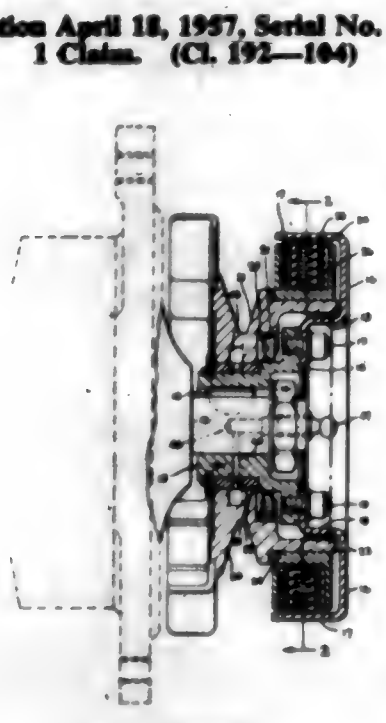
6 Claims. (Cl. 192—104)



1. A torque metering clutch comprising driving and driven members, said driving member having a hub formed with a drum surface thereon, said driven member having an annular flange encircling said drum in spaced relation thereto, a circular series of friction shoes positioned between said drum and flange and each of said shoes being formed with a recess, a drive member associated with each of said shoes, said drive member being formed with an inner expansible portion slidably mounted in the recess of the shoe and having an outer portion mounted in said flange and a compression spring mounted in each of said drive members for yieldingly urging said shoes into frictional engagement with the surface of said drum portion.

in said operating coil of rectified current from said sec- switch to effect movement thereof from open circuit

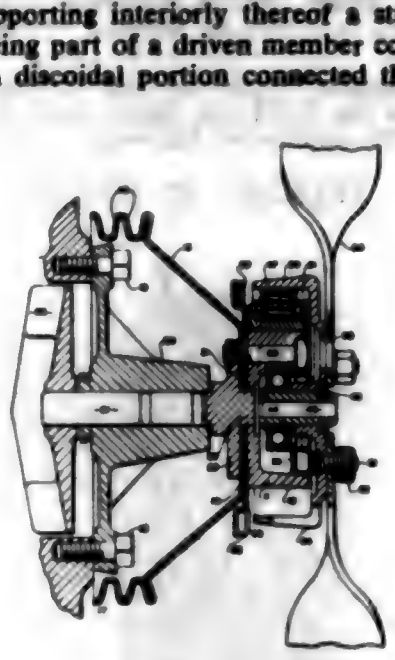
2,863,544
TORQUE METERING CLUTCH
Charles B. Spase, Syracuse, N. Y., assignor to Lipe-Rollway Corporation, Syracuse, N. Y., a corporation of New York
Application April 18, 1957, Serial No. 653,685
1 Claim. (Cl. 192—104)



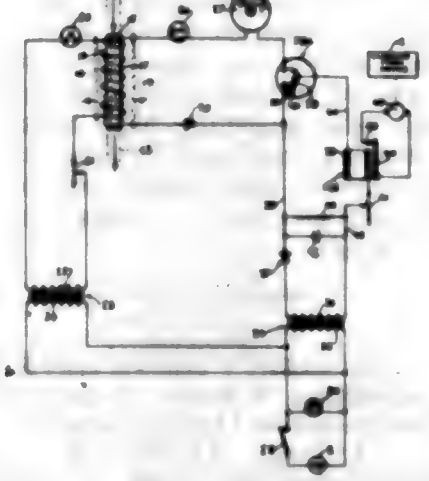
A torque metering clutch comprising a driving member having a friction drum surface, a driven member having an annular flange in spaced outwardly concentric relation to said driving member drum surface, a first series of friction shoes in the space between said drum surface and said flange in which each shoe is of the same weight, springs urging the shoes of said first series into frictional engagement with said friction drum surface, means to transmit rotary motion of the shoes of said first series to said driven member, a second series of friction shoes in the space between said drum surface and said flange in which each of the shoes is of the same weight, the weight of the shoes of the second series being different from the weight of the shoes in the first series, the shoes of the second series being alternately interposed between the shoes of the first series, springs urging the shoes of said second series into frictional engagement with said friction drum surface, and means to transmit rotary motion of the shoes of the second series to said driven member, whereby to provide a torque metering clutch in which either one or two series of shoes are in frictional engagement and whereby the clutch is in dynamic balance during both conditions of engagement.

2,863,545
TORQUE METERING CLUTCH
Charles B. Spase, Syracuse, N. Y., assignor to Lipe-Rollway Corporation, Syracuse, N. Y., a corporation of New York
Application September 5, 1957, Serial No. 682,244
5 Claims. (Cl. 192—104)

1. In combination, a water pump shaft adapted to have its outer end closely spaced behind a radiator and having a plate thereon and a locator hub extending forwardly of said plate, a sheave having a discoidal portion with a central hole placed over said locator hub with said discoidal portion in contact with the plate of the water pump shaft, a clutch assembly comprising a driving member having a discoidal portion with a hole centrally thereof placed on the locator hub with the discoidal portion in contact with the plate and an annular flange forming an exterior friction drum surface, radially inwardly extending boss means interiorly of said annular flange forming a bearing surface, said boss means and discoidal portion having an axially extending hole therethrough, a fastening member extending through said hole and aligned holes in the plate of the water pump shaft and the discoidal portion of the sheave and the driving member, a bearing carried by said bearing surface and supporting interiorly thereof a stub shaft, said stub shaft being part of a driven member comprising said stub shaft, a discoidal portion connected thereto and an annular flange in spaced concentric relation to the friction drum surface of the driving member, friction shoes in the space between said flanges and urged towards said friction drum by spring means bearing thereagainst and against the annular flange of said driven member, fastening means extending from the discoidal portion of the driven member and a fan secured thereto by said fastening means.



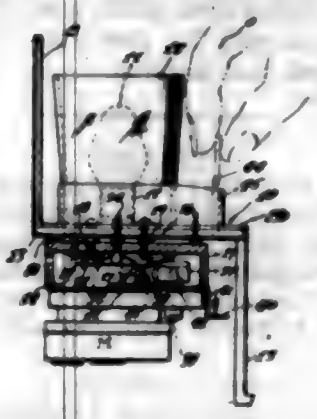
2,863,546
MAGNETIC FLUX MONITORING APPARATUS
Edmund L. Jezefowicz, Bayonne, N. J., assignor to The Best Foods, Inc., New York, N. Y., a corporation of New Jersey
Application March 19, 1956, Serial No. 572,161
2 Claims. (Cl. 193—32)



1. Apparatus for controlling feed of metallic members from a feeding device to a runway for delivery via the latter for use as required, comprising a pair of inductively coupled coils surrounding a portion of said runway and through which the members must pass in transit through the runway, an alternating current source connected to energize one of shid coils with a determined current, and provide an induced current in the second of said coils, a galvanometer type relay having an operating coil, a potentiometer and a rectifier series connected to said second coil, galvanometer relay contacts normally in circuit closed condition whose separation occurs on flow

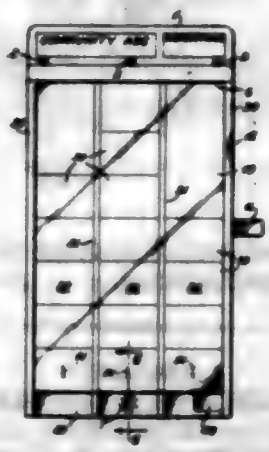
in said operating coil of rectified current from said second coil above a selected value as determined by said potentiometer, a power relay having an energizing coil and power relay contacts that are normally separated when the latter coil is de-energized, a rectifier, and a potentiometer, an electric circuit serially connecting said galvanometer relay contacts, said last-named rectifier, said last-named potentiometer and said energizing coil to said alternating current source, and an independent control circuit connected to said power relay contacts and maintained in closed condition while the latter contacts are engaged, said energizing coil being energized from said source only as long as said galvanometer relay contacts remain closed by flow of current through said galvanometer operating coil below a selected value, and said galvanometer relay contacts separating when current flow through said operating coil exceeds said selected value and thereby interrupting flow of current from said source through said power relay energizing coil thus effecting separation of said power relay contacts and a break in said control circuit, the exceeding current flow through said galvanometer relay operating coil resulting from the inductive effect of the presence of closures within said runway portion above a selected number.

2,863,547
COIN OPERATED INTERMITTENT LIGHTING DEVICE—AUTOMATIC ELECTRIC CANDLE
Charles G. Cavalieri, Brooklyn, N. Y.
Application June 14, 1954, Serial No. 436,468
1 Claim. (Cl. 194—9)



A coin operated apparatus forming a source of intermittent light, including the combination of an electric lamp, a supporting bracket therefor having electric terminals connected to an electric supply circuit, an elongated switch in the circuit movable between open and closed circuit positions for controlling the supply of electric current to the lamp, the switch having self-contained bias means for resisting movement of said switch from either position to the other position, an electric prime mover connected in said circuit and having one terminal thereof in common with one terminal of said lamp, the other terminals of the prime mover and lamp being connected to ground, a cam shaft with a wheel thereon mounted for rotation adjacent to one end of said switch, a cam projecting rigidly upon the periphery of the wheel in effective position to extend and make contact beneath said one end of said switch solely during the latter half of each revolution of said cam to raise said one end of the switch so that said switch will snap to open position when the cam has passed from beneath the switch, said prime mover angularly rotating said cam shaft; a portion upon said coin operated apparatus having a coin slot therein, and coin operated means for closing said switch and energizing said prime mover and effecting illumination of said lamp, comprising a rockable lever with one arm underlying said coin slot and another arm having a knob thereon located in such proximate association with said switch to effect movement thereof from open circuit position to closed circuit position in response to rocking movement of said lever communicated thereto from external means.

2,863,548
COIN OPERATED DEVICE
Daniel S. Elliott, Bristol, Pa.
Application December 21, 1954, Serial No. 476,750
1 Claim. (Cl. 194—79)

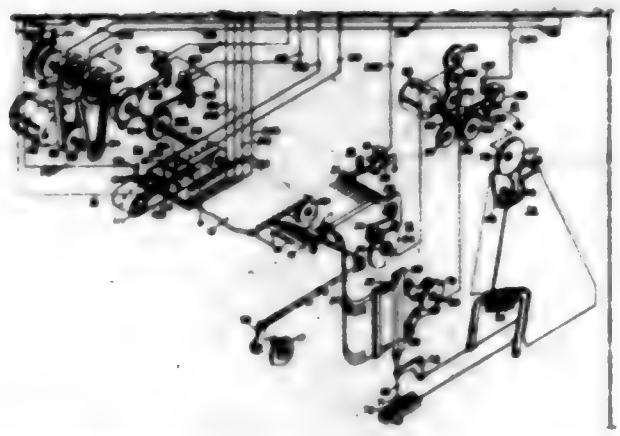


A coin operated device to dispense and display cards, comprising a base frame adapted to be mounted removably on a structure, a coin receiving channel formed in said base frame, a coin storage channel formed in said base frame, a coin return channel formed in said base frame and a card chamber formed in said base frame, said card chamber intersecting said coin return channel, said coin receiving channel and said coin storage channel, said coin storage channel extending downwardly from said card chamber to a point adjacent the lower edge of said base frame, removable coin arresting means near the bottom of said coin storage channel to stop passage of coins out of said coin storage channel, coin retention means at the bottom of said coin receiving channel, a coin displacement plunger adjacent said coin retention means, retaining means to hold said plunger slidably to said base frame in a position adjacent said card chamber, positioning means in said card chamber to hold cards in position for dispensing, said positioning means including a backing member and means urging said backing member against cards in said card chamber, said backing member defining a recess, which, when all cards are removed from said chamber, aligns with said coin receiving channel and said coin return channel, whereby a coin moved into said card chamber after all cards have been removed from said card chamber falls into said recess and is thereby routed into said coin return channel, a cover member associated with said base frame, and means to support and display cards.

2,863,549
SUBCYCLE CONTROL FOR SERIAL-PARALLEL PRINTER
Martin J. Kelly, Endwell, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application May 22, 1956, Serial No. 586,468
18 Claims. (Cl. 197—133)

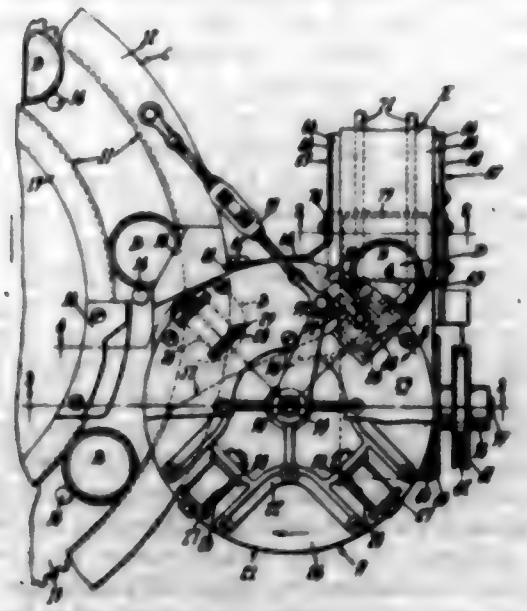
1. A record feeding and printing device of the kind wherein printing is effected by recording in serial order a plurality of impressions side by side on a single line and having, in combination, means for line spacing said record after each set of a plurality of recording operations, means for long feeding said record after a set of a plurality of recording operations, means for selecting a long feeding operation, means responsive to a long feed selection to initiate operation of the long feeding means, and

means under control of said long feed selecting means for delaying the resumption of recording by one or more



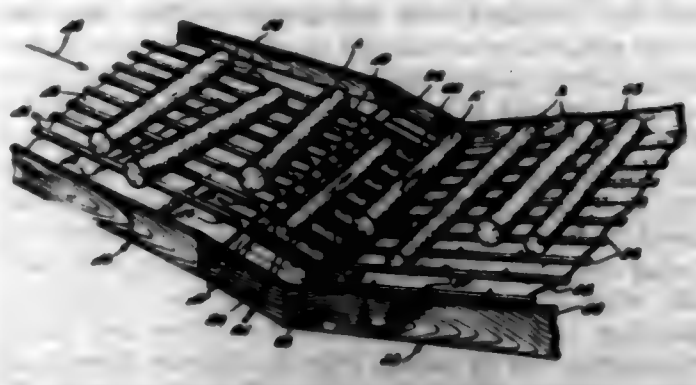
serial recording portions of a cycle in accordance with the length of the feed selected.

2,863,550
TRANSFER MECHANISM FOR MAGNETIZABLE ARTICLES
William B. Hommel, Penn Yan, N. Y., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application April 25, 1955, Serial No. 503,515
11 Claims. (Cl. 198—25)



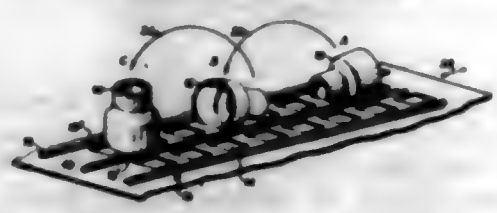
1. A transfer mechanism for magnetizable articles, comprising in combination a rotatable turret, means for rotating said turret, a nonmagnetic disc secured to the bottom of said turret, a plurality of circumferentially spaced magnets mounted on said turret above said magnetizable disc which thus maintains a normally nonmagnetic gap between said magnets and the underside of said disc, said magnets and disc being movable with said turret between a pick-up station and a delivery station, said magnets setting up magnetic fields which extend through and below said nonmagnetic disc, means timed with the rotation of said turret for moving magnetic articles into said magnetic fields below the disc at said pick-up station so that said articles are pulled against the underside of said disc by said magnetic fields and carried through a circular path of travel by said turret to said delivery station, and a stationary shunt device disposed above the path of said nonmagnetic disc at said delivery station for shunting the magnetic field of each magnet away from said nonmagnetic disc and the article in said field to release said articles successively from said turret at said delivery station.

2,863,551
ALIGNING CONVEYOR SYSTEM
Georges Albert Blocq, Pierrefonds, Quebec, Canada, assignor to Ferranti Limitee, Pierrefonds, Quebec, Canada
Application March 21, 1957, Serial No. 647,589
14 Claims. (Cl. 198—39)



1. In a conveyor system for elongated articles, having an infeed portion and an outgoing conveyor; an intermediate aligning section comprising a conveyor driven in a direction transverse to the conveying direction of the outgoing conveyor and having a top surface downwardly inclined towards the outgoing conveyor, first abutting means parallel to the direction of said transverse conveyor and positioned between said transverse conveyor and the outgoing conveyor and adapted to abut said articles lengthwise, second abutting means parallel to the direction of said outgoing conveyor, and adapted to abut said articles endwise, said transverse conveyor cooperating with its inclined top surface to convey an elongated article to a position where the article is lengthwise and endwise abutted by said first and second abutting means, and means on said outgoing conveyor for removing said articles when they have reached said position.

2,863,552
APPARATUS FOR DELIVERING ARTICLES WITH A PREDETERMINED ORIENTATION
Edward Ernest Bailey, London, England, assignor to Lamp Prosecops Limited, London, England
Application September 9, 1954, Serial No. 455,850
4 Claims. (Cl. 198—33)



1. Apparatus for delivering articles having ends of different dimensions in a desired orientation in which the articles stand upon their ends of larger dimension, said apparatus comprising an elongated table inclined at a small angle downward from one end, the table having a floor portion, a pair of guide rails upstanding from the floor portion, running parallel to the length of the table, and having between them a space less than said larger dimension, and means upon said floor portion to engage said articles in undesired orientations thereof but not in desired orientations thereof and means for reciprocating the table in its own plane in the direction of its length.

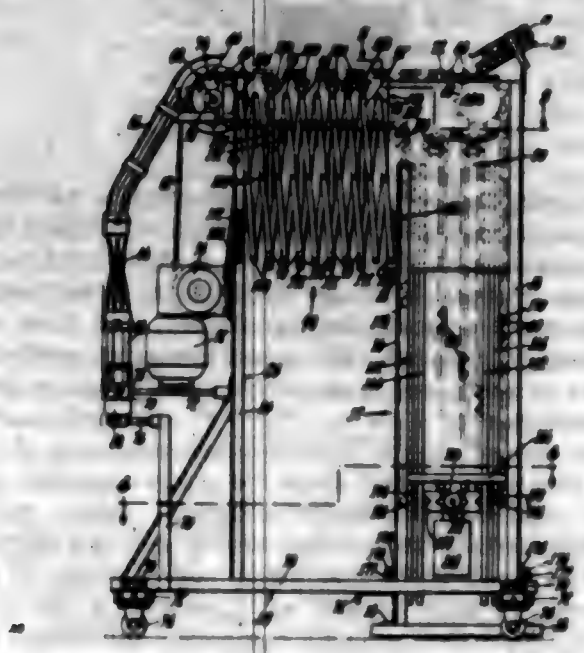
2,863,553
CAN LOADING APPARATUS
Ronald E. J. Nordquist, Summit, N. J., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application December 29, 1954, Serial No. 478,373
5 Claims. (Cl. 198—139)

1. An apparatus for conveying cans in a storage enclosure, comprising a stationary vertical frame disposed

aperture extending downwardly from the body seating un-

thereby maintain a constant temperature of said material

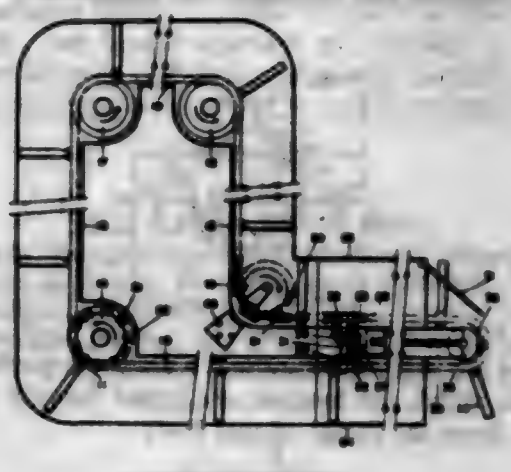
adjacent the enclosure entrance, a second vertical frame movable between said stationary frame and a far end of said enclosure, an endless conveyor mounted at its ends adjacent the upper ends of both of said frames for movement therebetween for delivering cans from said stationary frame to said movable frame, the effective operating length of said conveyor being automatically controlled by the relative movement between said frames, automatically extensible and collapsible supporting means disposed between said frames and secured at each end thereto for supporting said conveyor intermediate its ends, means for maintaining said conveyor under constant tension to permit variations of its effective operating length



as said movable frame is moved away from and toward said stationary frame and to constantly bias said movable frame for easy movement toward said stationary frame, said tensioning means comprising a plurality of sprockets fixedly mounted adjacent the top of one of said frames and a plurality of movable sprockets carried by a weighted slide mounted for vertical movement in said same frame below said fixedly mounted sprockets, said endless conveyor operating vertically between said fixed sprockets and said vertically movable sprockets, and means for temporarily mounting said stationary frame on said movable frame to provide a compact unitary assembly to facilitate movement through said storage enclosure entrance into and out of operating position.

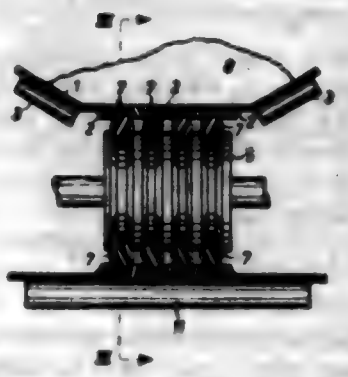
2,863,554
UNITARY OPEN-TOP CHANNEL-TYPE CONVEYOR AND ELEVATOR
Nat Cordis, Silver Lake, Wis.
Application November 2, 1953, Serial No. 389,717
21 Claims. (Cl. 198—171)

1. A combination barn cleaner and refuse elevator comprising a trough forming an open loop in the barn floor and terminating in substantially parallel inclined chutes aligned with the open ends of said trough loop, an endless chain disposed within said trough and chutes for travel around the loop and around said chutes, a plurality of paddles secured to and extending outwardly from said endless chain across said trough, a place of discharge at the upper end of said inclined parallel chutes, and a motor-driven sprocket mechanism at the junction of the ends of said trough loop onto the inclined parallel chutes engaging said chain to hold the chain within the trough and chutes and for driving said endless chain around said trough loop and around said chutes in succession, said sprocket mechanism including a pair of



oppositely rotating sprockets driving parallel flights of chain in said chutes in opposite directions.

2,863,555
BELT CONVEYOR
Berthold Jaritz, Puttlingen (Saar), Saar Territory
Application July 15, 1955, Serial No. 522,342
Claims priority, application Germany July 21, 1954
6 Claims. (Cl. 198—203)



1. A belt-conveyor comprising an endless conveyor belt, driven endless band means underneath at least a part of said belt in frictional engagement with the opposite belt surface of said part for supporting said belt and driving it, said belt being formed on said surface with a plurality of projecting ledges of substantially trapezoidal cross section and grooves of trapezoidal cross sections therebetween, said band means having a belt engaging surface with grooves and ledges therebetween having cross sections complementary to said belt surface and being respectively engaged with said ledges and said grooves of said belt surface, a driving roller for said band means frictionally engaging and driving it, said driving roller having a band means engaging surface with a plurality of trapezoidal grooves, and said band means having a roller engaging surface of complementary cross section to said roller surface.

2,863,556
FASTENING DEVICE
William A. Bedford, Jr., North Scituate, Mass., assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application November 26, 1954, Serial No. 471,317
1 Claim. (Cl. 206—65)

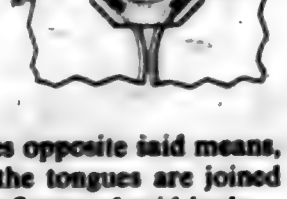
A fastening device and a group of cylindrical containers having peripheral beads at the ends, said device being adapted for assembly into a multi-cupped space at the end of said group of containers uniformly spaced about a point, said device comprising a body portion with a central aperture, said body having a flange for resting on the beads of said cylindrical containers, means about the

treated water, said inlet manifold having relatively wide slots for free passage therethrough of the entering un-

to each other but being relatively movable upon development of a predetermined torque therebetween, said

closure, comprising a stationary vertical frame disposed

aperture extending downwardly from the body seating under the can beads, said flange having a series of tongues formed thereon and arranged for engagement with said



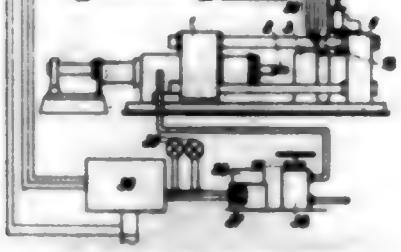
beads on the sides opposite said means, the portion of the flange to which the tongues are joined bearing obliquely upward from the flange of said body.

2,863,557

APPARATUS WHICH CONTROLS TEMPERATURE AND SPEED OF EXTRUDED PRODUCT

Theodor Münker, Lengenberg, Germany

Application February 10, 1953, Serial No. 336,037
Claims priority, application Germany February 15, 1952
2 Claims. (Cl. 207—2)



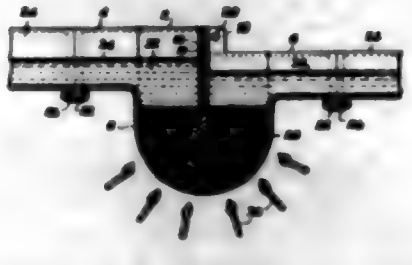
1. An apparatus for regulating the extrusion of a length of a multifaced body made of extrudable material and passed through die means; comprising ram means for extruding said material through said die means to obtain said multifaced body, a spherical-shaped chamber positioned beyond said die means and remote from said ram means, said spherical-shaped chamber being provided with passageways for directing said multifaced body through the interior of said chamber, said chamber being located directly in contact with said die means and having an inner surface highly reflective of heat radiation, said inner surface being constructed to reflect the total radiation emanating from all the faces of said multifaced body during the course of the passage of the latter through the interior of said chamber, channel means extending from said chamber and communicating therewith, heat radiation responsive means communicating with said channel means for receiving heat radiation from said chamber, a standard body disposed adjacent said radiation responsive means, means for heating said standard body to thereby cause the latter to emit heat radiations in the direction of said radiation responsive means, interrupter means disposed in the paths of said heat radiations emanating from said standard body and from said chamber directed to said radiation responsive means, said interrupter means alternately permitting heat radiations to arrive at said radiation responsive means from said body when within said chamber and from said standard body when heated, and power means operatively connected with said radiation responsive means and said ram means, whereby when said standard body assumes a predetermined temperature the rate of extrusion of said material of said body from said die means is automatically adjusted in accordance with the difference in the heat radiations from said standard body and from said body of material located within said chamber, to thereby maintain a constant temperature of said material during extrusion thereof so that the body thus extruded remains homogeneous throughout.

2,863,558

FILTERING MOLTEN ALUMINOUS METAL

Kenneth J. Brondyke, Oakmont, and Philip T. Stroup, New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Application April 29, 1957, Serial No. 655,746
5 Claims. (Cl. 210—69)



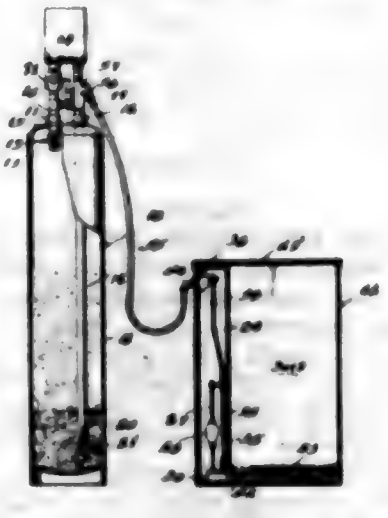
2. The method of removing solid non-metallic particles of impurities from molten aluminous metal comprising the steps of providing an initial body of molten metal at a temperature between 1200 and 1400° F. in a container having an outlet adjacent the top thereof, said body of molten metal only partially filling said container, preheating a mass of refractory granules of 3 to 8 mesh in size to a temperature of 1200 to 1500° F., said refractory being inert toward molten aluminum and consisting of at least one substance selected from the group composed of chromite, corundum, forsterite, magnesia spinel, periclase, silicon carbide and zircon, adding said hot refractory to said body of molten metal and allowing it to settle therein in such amount as to provide a bed between 8 and 36 inches in length completely submerged in said molten metal, and thereafter passing molten metal through said bed while maintaining it at 1200 to 1400° F.

2,863,559

AUTOMATIC SERVICE UNIT FOR SOFTENING AND CONDITIONING WATER

Robert E. Schulze, Deerfield, Ill., assignor to Culligan, Inc., Northbrook, Ill., a corporation of Delaware

Application December 13, 1955, Serial No. 552,845
2 Claims. (Cl. 216—126)



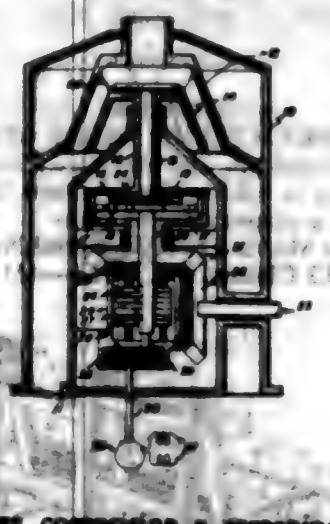
1. In apparatus for conditioning raw or untreated water and supplying it to a service line for use, a portable and readily removable service tank containing a bed of minerals through which the untreated water is directed and which minerals require periodic regeneration, said service tank having an inlet manifold for the untreated water and an outlet manifold for the discharge of the

apparent density corresponding to about 50% to 80% of the extension arm along the wall of the tank and inde-

trough and chutes and for driving said endless chain beads of said cylindrical containers, means about the

treated water, said inlet manifold having relatively wide slots for free passage therethrough of the entering untreated water into the tank during service operation and for the free passage therethrough of turbidity and agglomerated, filtered-out insolubles during backwashing, a brine tank having a chamber for receiving a supply of dry, bulk salt sufficient to repeatedly regenerate the minerals of the service tank and over a long period of time, a chamber in the brine tank for salt, a float chamber in said brine tank, a float-actuated valve in said float chamber for controlling the quantity of water fed to the brine tank for dissolving salt therein, a valve unit having multiple ports one of which is connected to the untreated water supply and another to the service connection for supplying the treated water to the service line for use, other ports in said valve unit one of which is connected to the brine in the float chamber, a port connected to drain and ports connected to the inlet and outlet manifolds of the service tank, a conduit connecting the float chamber to said valve unit providing both a filling tube for water entering the brine tank and a brine tube for supplying brine from the brine tank to the service tank during regeneration, and an air check valve for said conduit for stopping the flow of air through said conduit into said service tank when the brine has been withdrawn from the brine tank and thereby prevent turbulence and air agitation of the contents of the tank, timing means and a pilot valve actuated by said timing means for operating said valve unit for regeneration of said minerals at a designated time period.

2,863,560
CENTRIFUGE
Gerhard Linke, Mulheim (Ruhr), and Hans-Heinrich Hülsen, Duisburg, Germany, assignors to Siebtechnik G. m. b. H., Mulheim (Ruhr), Germany
Application May 23, 1955, Serial No. 510,406
In Germany September 16, 1949
Public Law 619, August 23, 1954
Patent expires September 16, 1969
12 Claims. (Cl. 210—147)



1. A centrifuge comprising a screening drum, a discharge member cooperating with said screening drum, and a transmission drive comprising a first and a second shaft connected with said screening drum and said discharge member respectively, said transmission drive including an input shaft adapted for being driven to impart rotation at different speeds to said screening drum and said discharge member; a third shaft operatively interconnected with said screening drum and said discharge member and forming a reaction member which remains stationary during rotation of said screening drum and said discharge member at different speeds and rotates if said screening drum and said discharge member rotate at equal speeds; a centrifuge frame; and a brake having a first and a second member normally stationary relative to each other but being relatively movable upon development of a predetermined torque therebetween, said first member being rigidly mounted in said frame, said second member being attached to the free end of said third shaft, and means operable in response to relative movement between said first and second members for interrupting the supply of power to said input shaft.

2,863,561
STACKED DISK FILTER
Raymond H. Just and Albert Griffith May, Caldwell, N. J., assignors to Screen Products, Inc., Caldwell, N. J., a corporation of New Jersey
Application January 20, 1955, Serial No. 482,923
18 Claims. (Cl. 210—347)

1. A filtering member comprising a pair of fine-mesh annular filtering screens disposed in superposed relation; a spacing member interposed between and adapted to engage the screens; means securing together one set of the peripheral edges of the filtering screens and spacing member; annular rigid, screen-gripping and supporting sealing means attached to the other peripheral edge of each filtering screen, said spacing member comprising a substantially flat sheet metal annulus having openings therein, having radial portions of tapered effective thickness, and having a crimped peripheral portion spacing apart the adjacent other peripheral edges of the filtering screens.

2,863,562
CORROSION RESISTANT SINTERED IRON-SILICON FILTER
Claus G. Goetzel, Yonkers, and John L. Ellis, White Plains, N. Y., assignors to Sintercast Corporation of America, Yonkers, N. Y.
Application June 26, 1953, Serial No. 364,232
11 Claims. (Cl. 210—496)

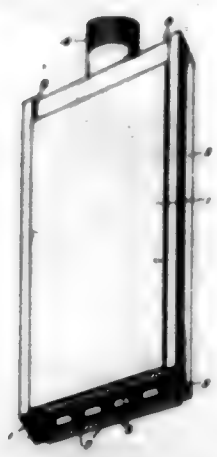
8. A hollow structural filter assembly characterized by improved resistance to corrosion by sulfur-containing atmospheres at about 950° F. and formed of a plurality of porous filter elements comprising sintered iron-silicon powder of size less than 60 mesh containing 10% to 60% silicon and the balance substantially iron, and having an

thereof in said brackets, said section being movable from tion being relatively blunt at its bottom and having a

said body of material located within said chamber, to

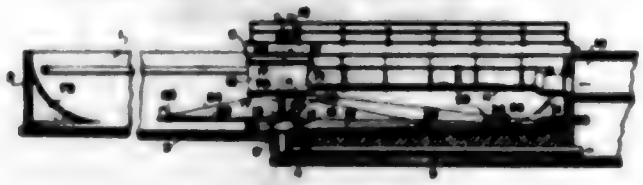
apparent density corresponding to about 50% to 80% of the iron-silicon alloy, said filter elements being held in end to end abutting relationship by means of a heat resistant metal framework characterized by an average coefficient of linear thermal expansion over the temperature range of 0° to 1200° F. of at least about 5 but not exceeding 7.5 microinches per inch per degree F.

2,863,563
FILTER
John L. Ellis, White Plains, and Claus G. Goetzel, Yonkers, N. Y., assignors to Sintercast Corporation of America, Yonkers, N. Y.
Application June 26, 1953, Serial No. 364,284
12 Claims. (Cl. 210—496)



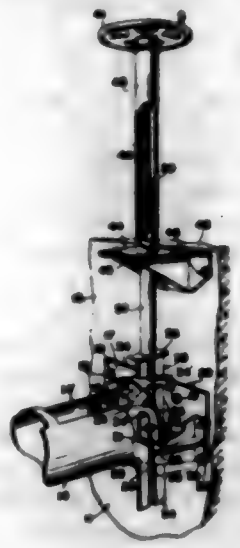
1. A method for producing a porous body from a powdered metal containing at least 80% chromium which comprises nitrogen-stabilizing said powder and hot pressing said stabilized powder to a predetermined volume at a pressure at least sufficient to overcome the resistance of the powder to packing at a temperature of at least about 1300° C. for a time sufficient to obtain a coherent porous body characterized by improved resistance to heat shock.

2,863,564
EXTENSIBLE HEADER FOR CLARIFICATION TANKS
Arthur C. Lind, Wauwatosa, Gilbert W. Quast, Brookfield, and Tom J. Kooske, Milwaukee, Wis., assignors to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Application August 2, 1956, Serial No. 601,826
11 Claims. (Cl. 210—529)



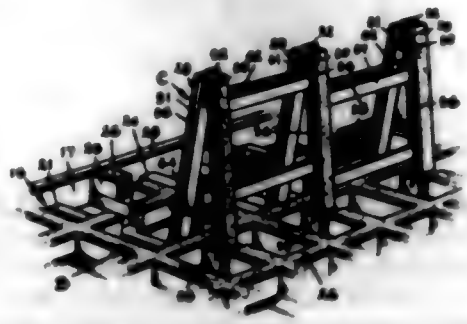
1. In combination with a header for the removal of a given liquid or suspended solid from a settling tank, which header comprises a tube having a series of openings along the length thereof and supporting means at one end thereof and providing movement of the header about the center of the tank in a generally horizontal plane, an extension arm comprising a tube having a series of holes along the length thereof, spaced, parallel arms pivotally supported by and near the other end of said header and pivotally supporting said extension arm for movement relative to the header, hydraulic means connecting said arm and the end of said header opposite said one end thereof for withdrawal of said given liquid or suspended solid, and guide means extending along the walls of the tank and engaged by said extension arm to effect movement of the arm relative to the header and for operation of the extension arm along the wall of the tank and independently of the operation of the header within the circular area reached by the header.

2,863,565
SCUM PIPE REVOLVING MECHANISM
Gilbert W. Quast, Brookfield, and Tom J. Kooske, Milwaukee, Wis., assignors to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Application August 20, 1956, Serial No. 605,167
4 Claims. (Cl. 210—540)



1. Apparatus for actuating a scum pipe rotatably journalled in a settling basin comprising a bracket having an outer end mounted on the basin and guide means spaced from the outer end of the bracket, a plate secured to the scum pipe having a slot extending from the outer edge of the plate radially inwardly with respect to the axis of rotation of the pipe, a clevis arranged to move rectilinearly within the guide means of said bracket with its leg portions straddling said plate, a pin extending between said leg portions within said slot, and means for moving the clevis back and forth within said guide means to cause oscillation of said scum pipe.

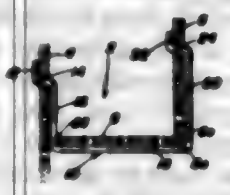
2,863,566
SUPPORT DEVICE FOR SHEET MATERIALS
Gerald White, Rossford, and Alfred L. Moore, Maumee, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application March 12, 1954, Serial No. 415,874
13 Claims. (Cl. 211—41)



1. In a transfer device for sheet materials, a substantially rectangular frame, a floor carried by the frame and formed by structural members arranged in spaced parallel relation both transversely and longitudinally within said frame, the structural members having padded upper surfaces disposed in a common substantially horizontal plane, the floor having stationary and movable sections, brackets affixed to alternate longitudinally arranged structural members, a section of the floor being formed substantially U-shaped and pivotally mounted by the legs

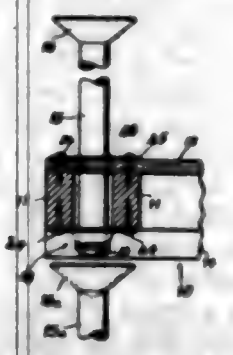
thereof in said brackets, said section being movable from a horizontal position, in which it is disposed in a common substantially horizontal plane with the stationary floor sections, to a substantially vertical position for supporting thereagainst sheets disposed on edge on the stationary floor sections, a pair of hingedly connected links, one link of each pair being pivotally mounted on said movable section, the second link of each pair being pivotally mounted on the frame, and means for releasably securing each pair of links in alignment to maintain the movable section in substantial vertical position.

2,863,567
ENCLOSED SHELVES FOR PERFORATED PANELS
Grace A. Frisz, New Canaan, Conn.
Application December 28, 1955, Serial No. 555,895
7 Claims. (Cl. 211—90)



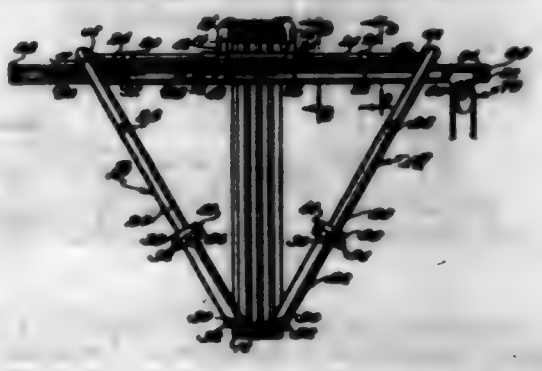
1. A shelf attached to a panel comprising, in combination, a plurality of substantially U-shaped brackets, each of said brackets comprising a bottom portion with two end portions extending upwardly therefrom, the upper end of each of said end portions having a peg portion formed thereon, the peg portion on one end portion of each of said brackets being inserted into a perforation in said panel with its associated end portion resting thereagainst, thereby to attach said brackets to said panel; a shelf bottom piece supported on said bottom portions; and a separate shelf front closure having perforations engaging the peg portions on the other end portions and resting against said other end portions to be supported in a substantially vertical position thereby.

2,863,568
BEARING SUPPORTS FOR PALLET STACKING
Leroy F. Skubic, Beverly Shores, Ind., assignor to The Pattin Corporation, Michigan City, Ind., a corporation of Illinois
Application March 4, 1954, Serial No. 413,999
2 Claims. (Cl. 211—148)



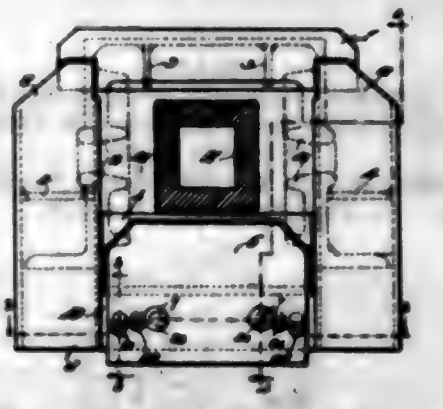
1. In a load-carrying platform structure having a supporting pallet with a plurality of pairs of axially aligned vertical posts one post of each pair extending above the pallet, the other post of each pair being disposed in supporting relation below the pallet and provided at its upper end with a general conical upwardly-concave socket member terminating in a circular upper edge which lies a considerable distance laterally outward beyond the cross-sectional area of said other post; a post-receiving member comprising, in combination, a central tubular socket portion of substantial length into which a substantial length of the post at its lower end fits snugly; a nose portion on the underside of said socket portion and closing said socket portion at the bottom thereof; said nose portion being relatively blunt at its bottom and having a frusto-conical side area; an outwardly-flaring skirt portion extending axially from the upper end of said socket portion; a radially out-turned flange at the outer end of said skirt portion which extends substantially at right angles to the axis of said socket portion, said flange having means formed thereon for facilitating attachment of said post-receiving member to the pallet; said flange also contacting the circular upper edge of the post-receiving member with the conical, upwardly concave socket member providing an aligning surface for the aforesaid nose portion and said frusto-conical side area contacting a portion of the conical upwardly concave surface.

2,863,569
PORTABLE LIFTING DEVICE
Abraham Landskroner and Samuel Landskroner, Baltimore, Md.
Application October 21, 1956, Serial No. 617,331
5 Claims. (Cl. 212—71)



1. A lifting device, comprising, structure defining at least two telescopic frameworks, each said framework including a pair of spaced legs with a V-shaped section secured to the upper ends of said pair of legs, means including a cross member having its ends secured to the upper ends of said V-shaped sections, the lower ends of said frameworks being spaced from each other, said frameworks being arranged so that the distance between the upper ends of said V-shaped sections is greater than the distance between the lower ends of said frameworks, means including a track extending below said cross member and extending on past said V-shaped sections, a carriage arranged for movement on said track, and block and tackle means secured to said carriage.

2,863,570
DRAFT DEVICE FOR RAILWAY ROLLING STOCK
Harold H. Hicks, Evansville, Ind., assignor to International Steel Company, Evansville, Ind., a corporation of Indiana
Application March 28, 1956, Serial No. 574,453
7 Claims. (Cl. 213—40)



1. A striking casting including a draft gear device, a wearing member supporting said draft gear device, an anchor member independent of said wearing member and extending transversely of the striking casting and fixed thereto, and means depending downwardly from said

tively actuated according to said characteristics for trans- screw conveyor and admit material to said hopper, said

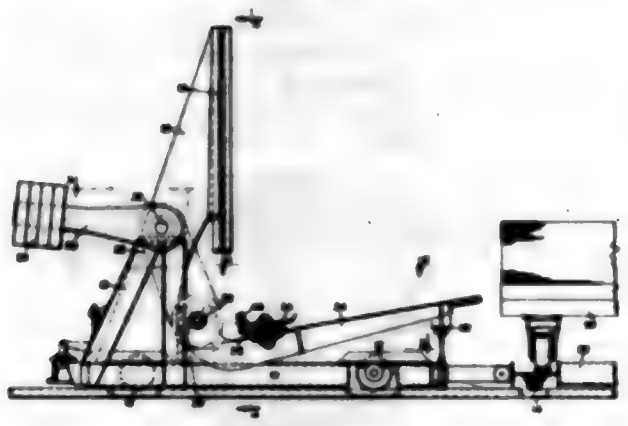
wearing member and detachably connectible with opposite sides of said anchor member for raising or lowering said wearing member uniformly at each end thereof for adjustably supporting said wearing member above said anchor member and beneath said draft gear device for supporting said draft gear device in a predetermined position.

2,863,571

SHEET HANDLING APPARATUS

Edward A. Foley, Laurel, Miss., and George J. Detko, Huntsville, Ala., assignors to Masonite Corporation, Laurel, Miss., a corporation of Delaware

Application October 2, 1953, Serial No. 383,735
7 Claims. (Cl. 214—1)



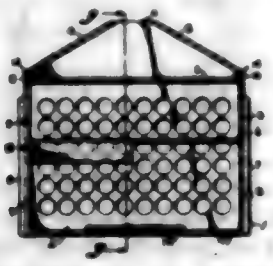
1. Apparatus for handling self-supporting sheets and adapted to transfer said sheets from a horizontally stacked position to a spaced apart vertical and parallel relationship comprising the combination of a carriage mounted on track-borne wheels, vertical frame members mounted on said carriage, a vertically positioned sheet guide attached to the vertical frame members, a sheet-supporting member pivotally attached to a main shaft extending between upright supporting members mounted at the sides of said carriage, means for travelling said sheet-supporting member through approximately an 80° arc from a near horizontal position to a vertical position, said sheet-supporting member positioned so as to be slightly spaced apart from, and parallel to, said sheet guide when in its vertical position, a sprocket-driven chain conveyor mounted on said sheet-supporting member adjacent to the pivotal support thereof, said chain conveyor being in substantial alignment with, and immediately beneath, said vertical sheet guide when said sheet-supporting member is moved into its vertical position, lugs mounted on said conveyor and adapted to engage the supporting edge of a sheet in vertical position, means to drive said conveyor to move the sheet in a direction transverse to the direction of travel of the apparatus, and means for travelling said carriage intermittently for predetermined fixed distances.

2,863,572

DEVICE FOR COUNTING PILLS

William F. Bethard and Henry W. Halligan, La Jolla, Calif.

Application July 23, 1957, Serial No. 673,630
3 Claims. (Cl. 214—1)



1. A device adapted to count a number of pills or the like comprising, in combination: a one-piece base having a rectangular imperforate front portion and an imperforate rear portion with converging sides, the top face of said base being flat; a pair of parallel side walls projecting up from the opposite sides of said front portion and integral therewith; a pair of converging side walls projecting up from said converging sides and integral therewith, the front ends of said converging side walls merging with the rear ends of said parallel side walls and the rear ends of said converging side walls being spaced apart to provide a discharge opening therebetween, said parallel side walls being provided with a plurality of pairs of aligned vertical grooves; a rectangular detachable counting plate whose thickness is substantially equal to the thickness of the pills to be counted, said counting plate being adapted to freely slide along said parallel side walls as it is lowered between said side walls onto the rectangular portion of said base, said counting plate being provided with a plurality of similar sized openings extending from top to bottom therethrough, said openings being arranged in rows of ten and the openings in each row being in alignment with each other in a vertical plane normal to said side walls; a detachable plate resting on the front portion of said base and in contact with the rear face of said counting plate and having its ends in contact with the inner faces of said parallel side walls, said plate extending a substantial distance above the top face of said counting plate; and a thin fence whose ends are adapted to be lowered into two aligned grooves of either of said pairs of grooves to guide said fence downward until it rests on top of said counting plate.

2,863,573

SIZING PLANT FOR LUMBER

Arne Alvar von Sneidern, Johannesbov, Sweden

Application October 17, 1955, Serial No. 541,091
Claims priority, application Sweden October 19, 1954
6 Claims. (Cl. 214—11)

1. In a sizing plant for lumber comprising an endless, positively driven conveying belt supported on a frame, from which belt trunks of the same kind are discharged at the same of a number of spaced places along the longitudinal direction of the frame, members corresponding to the number of discharge places being disposed in spaced relation along said belt and adapted upon actuation from an impulse giving device to be moved and thereupon to discharge the individual trunks at the predetermined place alongside the frame with the aid of the force producing the advance movement of said belt, said members comprising tilting arms adapted normally to be kept clear of the upper path of said belt but upon release to be turned upwardly into a position where they are caught to follow the advancing belt while continuing their turning movement.

2,863,574

MAIL SEPARATOR

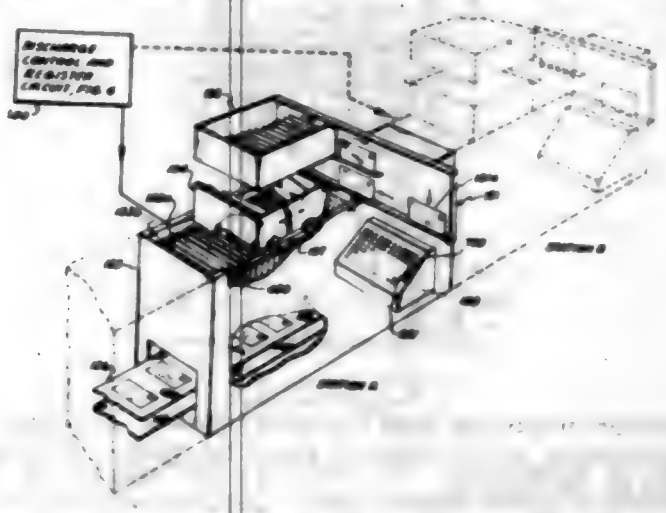
Seymour Honig, Kensington, Md., assignor to the United States of America as represented by the Secretary of Commerce

Application September 23, 1957, Serial No. 685,767
23 Claims. (Cl. 214—11)

1. A mechanism for segregating randomly arranged articles according to predetermined groups corresponding to a characteristic common to each group comprising: a plurality of sorting compartments, means selec-

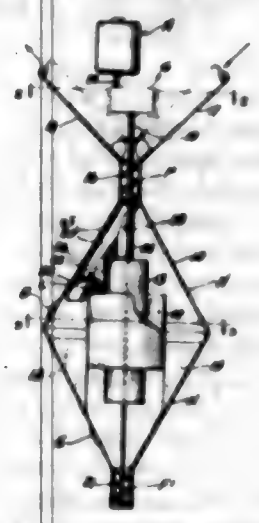
greater than the area of the discharge opening in the plunger for controlling the operation of the gripper ele-

tively actuated according to said characteristics for transporting articles from a supply source to each of said compartments in sequence, means in said compartments responsive to deposit of an article therein for generating a compartment identifying signal, first coincidence means jointly responsive to said selectively actuated means and said compartment identifying signals for generating article location control signals, means for storing said con-



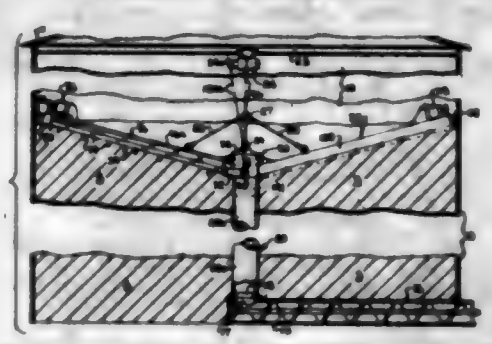
trol signals, adjustable group characteristic selection means, and second coincidence means jointly responsive to said control signal storing means and a selected adjustment of said group selection means for generating an article discharge control signal and means responsive to said article discharge control signal for discharging articles from said sorting compartments according to a desired group characteristic.

2,863,575
STORAGE HOPPERS
Samuel H. Vasold, Bridgeport, Mich.
Application December 31, 1952, Serial No. 328,977
20 Claims. (Cl. 214—17)



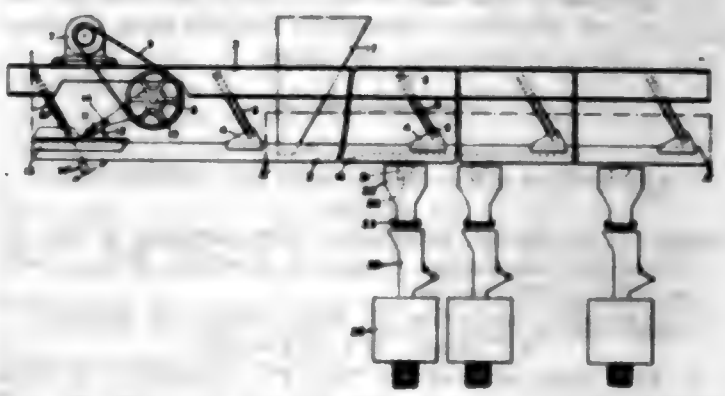
9. In a storage hopper, an upright casing comprising conical shells having open ends, the shells being secured together at their base ends to form a unitary casing structure with upper and lower reduced sections forming an extension of the open ends, spaced-apart, vertically disposed, cylindrical shells concentrically mounted within said hopper and spaced from the ends to form compartments, baffles connecting said cylindrical shells and the outer cylindrical shell and lower portion of the casing, a vertical sleeve in the upper reduced section, a vertically disposed shaft in said sleeve and extending from end-to-end of said hopper, a screw conveyor on said sleeve, and a screw conveyor on the lower end of said shaft, means for selectively driving said sleeve and shaft to feed material into and discharge material from said hopper, a feed unit mounted to rotate with said screw conveyor and admit material to said hopper, said feeder unit being formed with a spout leading into the innermost compartment, a branch leg angling outwardly therefrom and leading to the outer compartment, and a center spout leg interjacent said branch leading to the middle compartment so that said compartments are filled consecutively, the inner cylindrical shell terminating at a point below the outer cylindrical shell, and the compartments discharging consecutively in the order in which they are filled.

2,863,576
METHOD AND APPARATUS FOR UNLOADING A SILO
Neil W. Trask, Sr., Calhoun Falls, S. C., assignor of one-sixth to Annie Leith Trask and one-sixth to Leith Paul Trask, both of Calhoun Falls, one-sixth to Annie Trask Wright and one-sixth to Margaret Trask Hughes, both of Anderson, and one-sixth to Neil W. Trask, Jr., Burton, S. C.
Application May 13, 1955, Serial No. 508,132
18 Claims. (Cl. 214—17)



4. Apparatus for unloading silage from a silo comprising a tube forming a vertically arranged passageway through the silage at substantially the mid point of the silo, a housing supported on said tube, means for rotating said housing, means secured to said housing for feeding silage into said tube, and means for automatically cutting away the upper edge of the tube as said housing rotates whereby the housing will automatically be lowered as the silage decreases in the silo.

2,863,577
BIN-FILLING DEVICE
Joseph H. Kyle, Lancaster, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Application October 28, 1955, Serial No. 543,492
4 Claims. (Cl. 214—17)



4. In a vibrating conveyor, the combination of a conveyor trough with a discharge opening therein, means imparting a vibratory motion to said conveyor trough at a predetermined angle to move material along the length of said trough, a rigid delivery spout attached to said trough and movable therewith and leading from said discharge opening, a hopper into which said spout extends below the upper rim of said hopper to direct material from said conveyor into said hopper, the area of said hopper surrounding said spout being substantially

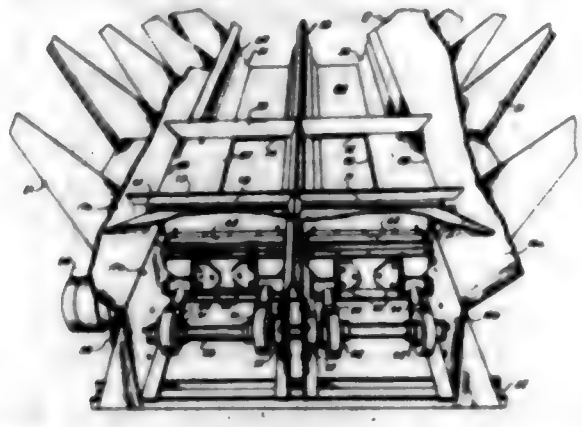
2,863,581

clear transparent indicia, such as designs and lettering,

like comprising, in combination: a one-piece base having ing: a plurality of sorting compartments, means selec-

greater than the area of the discharge opening in the spout to permit unrestricted vibratory motion of said spout and normally free delivery of material therefrom, a vibratory feeder disposed to receive material from said hopper to deliver the same therefrom, the terminal edge of said spout defining an opening which is disposed at an angle to the horizontal which is substantially parallel to the plane of motion of said trough, whereby upon inactivation of said vibratory feeder, material will build up in said hopper to a predetermined level only therein, below said upper rim, and thereafter said spout will be filled with material and excess material will thereupon pass over said discharge opening.

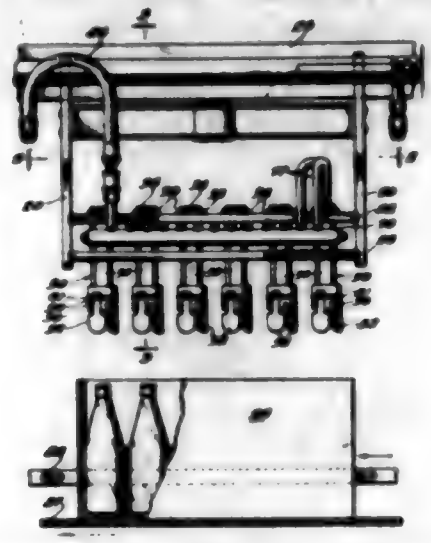
2,863,578
BULK MATERIALS HANDLING BODY
Roy C. Gaddis, Cedar Rapids, Iowa
Application September 21, 1956, Serial No. 611,293
1 Claim. (Cl. 214—83.3)



In a bulk materials handling body, a hopper having inwardly and downwardly converging side walls terminating at their lower edges with substantially vertical flange portions to form an elongated discharge opening, a splitter guard extending longitudinally and centrally of said opening and having spaced flange portions, conveyor pans having upwardly extending side walls disposed between the vertical flange portions and the spaced flange portions, shields affixed to the said flange portions sloping inwardly and downwardly over the adjacent side walls of the pans to prevent leakage of material between the walls of the pans and the said flanged portions, a plurality of support links pivotally secured to the pans at their lower ends and pivotally supported at their upper ends between the spaced flange portions of the splitter and adjacent the outer surface of the said vertical flange portions of the hopper, and means for alternately reciprocating the conveyor pans in a discharge direction.

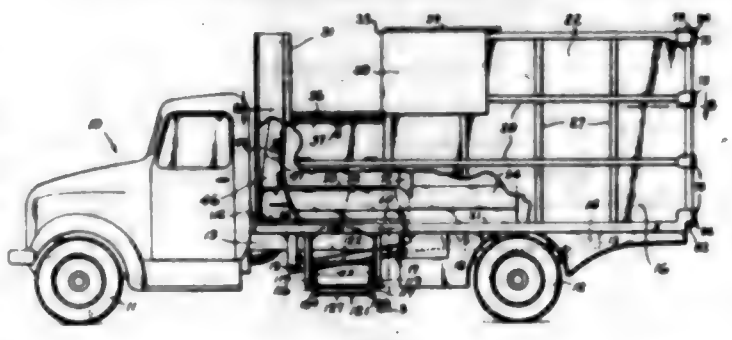
2,863,579
CASE UNLOADER WITH BOTTLE REJECTING HEAD
George L. N. Meyer, Milwaukee, Wis., assignor to Geo. J. Meyer Manufacturing Company, Cudahy, Wis., a corporation of Wisconsin
Application December 29, 1955, Serial No. 556,203
6 Claims. (Cl. 214—309)

1. In a case unloader, a support, a plurality of fluid actuated bottle gripper units slidably mounted in said support and spaced apart thereon to engage bottles in said case, each of said bottle gripper units including a cylinder and piston, means for limiting the movement of the cylinder relative to said support, a hollow sleeve member carried by the lower extremity of the cylinder, a plunger member carried by said piston and extending within said sleeve and projecting from the lower portion thereof, bottle gripping elements pivotally mounted in the lower portion of said sleeve, longitudinally spaced apart shoulder means formed at the lower portion of the plunger for controlling the operation of the gripper elements to engage and disengage bottles, and a detector



member projecting from the lower shoulder to engage an obstruction in the bottle to move the gripper unit relative to the support.

2,863,580
REFUSE COLLECTION APPARATUS
Ernest F. Kamin, Portland, Oreg.
Application October 15, 1956, Serial No. 616,010
8 Claims. (Cl. 214—504)



1. Refuse collection apparatus for a refuse vehicle comprising a hollow body having side walls, a floor, and forward and rear end openings for the reception and ejection of refuse, respectively; packer means movable longitudinally within said body between a retracted position and a compression position located rearwardly in said body of said retracted position; means for moving said packer means between said positions; said packer means having a curved compression face extending transversely of said body with its bottom edge adjacent the floor of said body and a top edge spaced a substantial distance above said bottom edge and forwardly in said body of said bottom edge; said compression face being formed upon a substantially unbroken curve which is indented toward the forward end of said body with its maximum indentation spaced vertically from said bottom edge a distance of from between about one-third to one-fourth the distance from said bottom to said top edge, and forwardly in said body of said bottom edge a distance equal to about one-fourth or less the distance of said maximum indentation from said bottom edge; said compression face compacting refuse placed thereagainst in a direction moving upwardly and toward the rear of said body; and arresting means operable to offer a greater resistance to the movement of refuse forwardly in said body than is encountered by the movement of refuse rearwardly in said body, said arresting means comprising a pair of elongated members, one on each side of said body and each presenting forwardly a deflection surface and rearwardly a retention surface.

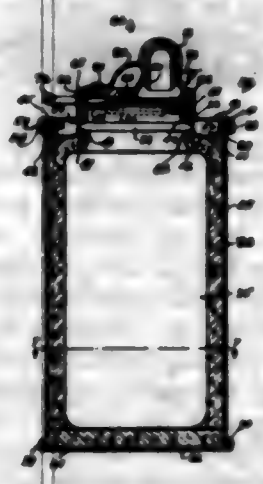
outer container surrounding said inner container and

2,863,586

2,863,581
CONTAINER AND A LID OR COVER THEREFOR

Herbert M. Pilser, Wyoming, and Alvin J. Schultheiss, Hamilton, Ohio, assignors to Hamilton-Sketch Corporation, a corporation of Ohio

Application August 16, 1955, Serial No. 528,639
3 Claims. (Cl. 215—13)



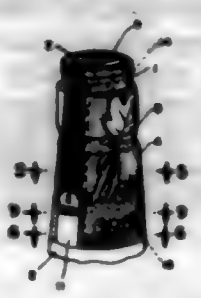
3. In an insulated container the combination of an outer container including a body portion having its upper end open and an outwardly and downwardly extending angular flange, an inner container including a centrally apertured neck, a radially extending flange intermediate the ends of said neck, and means for suspending the inner container substantially central of and within the outer container and including a first member having a body portion of an area substantially equal to the area of the open upper end of the outer container, said suspending means first member having an upwardly extending channel at the periphery of its body member formed by an upwardly extending flange at the periphery of the suspending means first member body portion, an outwardly disposed depending skirt and a channel base joining said cover body portion flange and depending skirt adapted to receive the container upper end and its angular flange and cooperating with one another in securing the inner container suspending means and outer container to one another, said suspending means first member having an aperture substantially centrally thereof receiving the neck of the inner container and underlying the neck radial flange, an inner container suspending means second member telescoped with the suspending means first member, having a body portion with an aperture substantially centrally thereof for said inner container neck and overlying said inner container radial flange for clamping said inner container radial flange between the suspending means first and second members, said inner container neck above the suspending means second member having formed thereon exteriorly thereof a screw thread, and a closure cap removably secured to the inner container through screw threads thereof.

2,863,582
ORNAMENTAL BOTTLE SEAL AND METHOD

Edward W. Owens, Muscatine, Iowa, assignor to The Colen Company, Madison, Wis., a corporation of Wisconsin

Application June 28, 1955, Serial No. 518,527
2 Claims. (Cl. 215—38)

2. In combination with a bottle having a neck and a closure thereon, a stamp extending upwardly along one side of the neck across the top of the closure and downwardly along the opposite side of the neck, a shrinkable open-ended tubular seal arranged over the neck and closure, said seal having a clear transparent portion at each side thereof overlying said stamp and having reverse printing thereon between the top and bottom edges of the seal and on at least one side of the seal between the clear transparent portions, said reverse printing defining clear transparent indicia, such as designs and lettering, and a sheet of bright shiny foil material arranged on the neck between the adjacent vertical edges of the

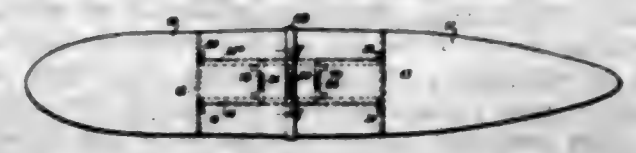


stamp and behind the reversely printed portion of the seal so that the clear indicia will show the foil material therethrough and thus simulate bright shiny indicia on the bottle neck.

2,863,583
TANK

Frederic L. Trump, Roslyn Estates, N. Y., assignor to Republic Aviation Corporation, near Farmingdale, N. Y., a corporation of Delaware

Application May 3, 1954, Serial No. 427,246
3 Claims. (Cl. 220—5)



1. In an external tank for aircraft, said tank being adapted to be shipped and stored when dismantled and to be assembled prior to use, the combination comprising a pair of shells consisting of a forward shell and a rear shell, each shell being open at one end and closed at the other, the forward shell being flared outwardly from a point inwardly of its open end whereby a plurality of said forward shells may be nested partly one within the other and the rear shell being flared outwardly from a point inwardly of its open end at a different degree of flare than the flare of the forward shell whereby a plurality of said rear shells may be nested partly one within the other and a nested group of rear shells may be disposed partly within a nested group of forward shells, a rigid frame assembly comprising a pair of circular bulkheads each having a peripheral flange, the flange of one of said bulkheads conforming to the interior surface of the forward shell at the point where it flares outwardly and the flange of the other bulkhead conforming to the interior surface of the rear shell at the point where it flares outwardly, a plurality of longitudinal beams secured at their opposite ends to said bulkheads to thereby connect and retain the same in spaced parallel relation, each of said longitudinal beams having a flange disposed to rest flush against the adjacent interior surface of said shells, said forward and rear shells being telescoped over said rigid frame assembly with their open ends in substantial abutment and their interior surfaces resting flush against the flanges of said bulkheads and beams as aforesaid, means to secure said shells to and support such shells on the portions of the longitudinal beam flanges disposed therein, and means secured to said frame assembly for attaching the assembled tank to an aircraft.

2,863,584
EVACUATING A MASS OF POWDERY INSULATION

Allen Latham, Jr., Jamaica Plain, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Application July 5, 1955, Serial No. 519,935
8 Claims. (Cl. 220—9)

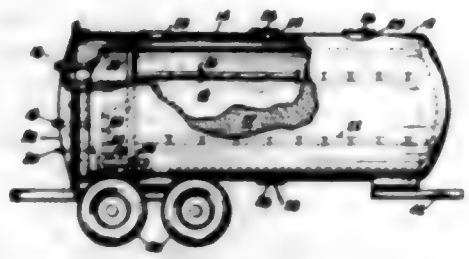
1. A device for holding a body of liquefied gas comprising an inner container for said liquefied gas, an

closed position to prevent access to said article from the

ment of the weighing device on both sides of its balanced

apart shoulder means formed at the lower portion of the

outer container surrounding said inner container and spaced therefrom to provide an evacuatable insulation space completely surrounding said inner container, finely-divided heat-insulating material substantially filling said space, elongated tubing extending in said space, the walls of said tubing being non-collapsible under the pressure conditions imposed thereon and pervious to gas and substantially impervious to the passage of said insulating material, passage means communicating between said tubing and the outside of said outer container and being



adapted to be connected to a source of high vacuum whereby said space may be evacuated to an absolute pressure of less than about one millimeter of mercury by passing the air from said space through the pervious walls of said tubing and thence along and within said tubing to said passage means, and means for sealing said outer container against the passage of gas between said space and the outside, said tubing being so distributed throughout said space that no point within said space is more than approximately two feet distant from at least one point on said tubing.

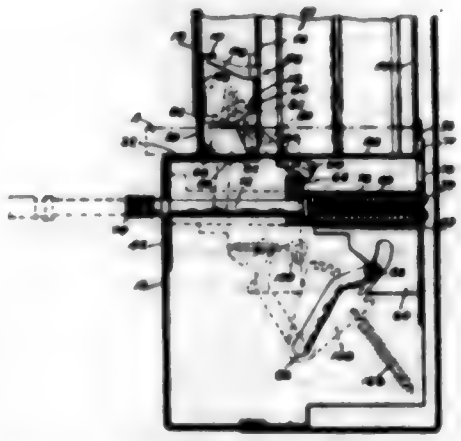
2,863,585
INSULATED TUMBLER
Philip Meshberg, Fairfield, Conn.
Application February 6, 1956, Serial No. 563,613
5 Claims. (Cl. 220—15)

5. A double walled drinking vessel comprising an inner shell having the upper end thereof flaring upwardly and outwardly, an outer shell surrounding and spaced from said inner shell, said outer shell having an outwardly, flared upper end portion terminating with a gripping edge, said gripping edge projecting slightly higher than said upper, flared end of said inner shell, an insulating material disposed in the space formed between said shells to increase the resistance to heat transfer between said shells, and a resilient, annular, heat-resisting rim member disposed between the flared ends of said shells having a portion thereof projecting beyond the upper edges thereof to provide a lip-engaging rim, said gripping edge being inwardly bent to form a bead overlying the edge of the inner shell and wedge and frictionally secure the rim member between the flared ends of said shells forming a sealed connection whereby said shells are maintained in spacial assembled relationship.

2,863,586
BLADE DISPENSER
Nicholas Testi, New York, N. Y., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Application October 29, 1953, Serial No. 389,005
4 Claims. (Cl. 221—162)

1. A blade dispenser comprising a bottom section having a fixed inwardly offset partition provided with a rectangular centrally located aperture, aligned guide lugs projecting from one face of said partition at opposite sides of the aperture, an unattached compression spring disposed in said aperture and extending therefrom into contact with a stack of longitudinally slotted blades maintained by said lugs in position spanning said aperture, a top section forming with the bottom section an enclosure for the blade stack with an exit opening at one end, and a bottom cover having legs providing means for attachment to the bottom section, said bottom section having means for receiving said legs and engaging said attachment means, the cover being spaced from said partition and forming therewith a used blade compartment and at the same time receiving the thrust of said spring and thereby locating the uppermost blade of the stack in line with said exit opening.

2,863,587
DISPENSING MACHINES
Henry L. Schinzel, Washington, D. C., assignor of one-fourth to Richard P. Schulze, Bethesda, Md.
Application September 18, 1951, Serial No. 247,135
1 Claim. (Cl. 221—191)



An article vending machine comprising, a housing, a hinged front closure for said housing, means carried by the interior face of said closure for supporting a column of articles, an inwardly extending shelf carried by said closure in substantial alignment with the lowermost of said articles, a platform provided on the exterior face of said closure in substantial alignment with said inwardly extending shelf, a communicating opening in said closure, discharge means carried by said closure for engaging said lowermost article and sliding the same forwardly along said shelf and through said opening upon said platform, leaf spring means depending from above said shelf in the path of movement of said article, the said spring means being operable to permit passage of the article to said platform and, upon removal of said article from said platform to return abruptly to normal position preventing access to said column from the front exterior of the machine, a gate hinged above said shelf forwardly of said leaf spring and means securing said gate to said discharge means whereby said gate is normally held in

clear transparent portions, said reverse printing defining prising an inner container for said liquefied gas, an

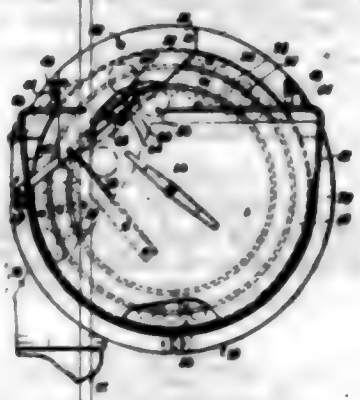
closed position to prevent access to said article from the front exterior of the machine and, upon forward actuation of said discharge means, said gate is released to provide an opening for passage of said article to said platform.

2,863,588

DEVICE FOR FEEDING CLOSURE CAPS

Harry E. Stover, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Application October 27, 1954, Serial No. 465,107
2 Claims. (Cl. 221—212)



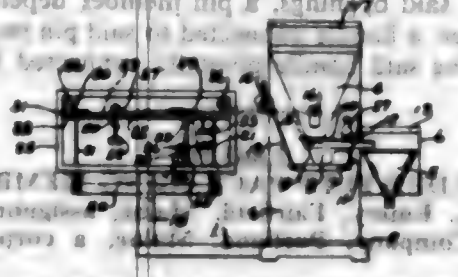
1. In a magnetic cap feed mechanism for continuously feeding metal caps into a cap chute, the combination of a rotatably mounted nonmagnetic disc, drive means for continuously rotating said disc, a pair of spaced rings of magnetic material positioned concentrically of and embedded in one face of said disc, a plurality of permanent magnets mounted on said disc, one of said spaced rings contacting the north pole of each magnet and the other of said spaced rings contacting the south pole of each magnet whereby continuous magnetic fields are created concentrically of said disc, a cap hopper at least partially enclosing said one face of said disc outwardly of said rings whereby caps in said hopper engage said spaced rings as said disc is rotated by said drive means, a cap chute having a narrow cap conveying channel therein adjacent to said one face of said disc and aligned substantially tangentially with said spaced rings whereby caps magnetically attracted to said rings and lying flat against said one face of said disc are fed into said chute by the rotation of said disc.

2,863,589

GRAVIMETRIC BATCH FEEDER

Joachim Wolfgang Philippovic, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware

Application September 24, 1956, Serial No. 611,680
13 Claims. (Cl. 222—55)



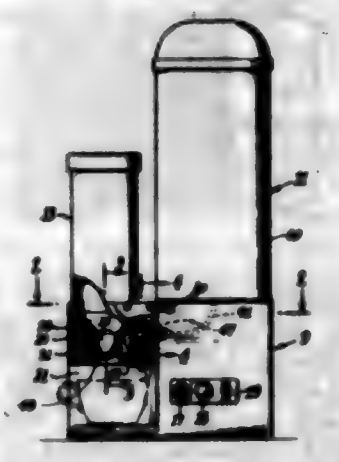
1. A control for feeding a batch of material comprising a weighing device carrying a batch of material to be fed, a feeder for discharging material from the batch, a balancing poise on the weighing device movable commensurate with the material remaining in the batch, a motor for moving the poise at the rate the material is to be fed from the batch, a pickup generator mounted adjacent said weighing device and operative upon movement of the weighing device on both sides of its balanced condition, and a circuit controlled by said pickup generator to vary the rate of feed of material commensurate with the balanced condition of the moving poise.

2,863,590

COFFEE MAKER

Robert C. Giesse, Palo Alto, Calif., assignor to Tri-Tek Inc., a corporation of California

Application November 2, 1955, Serial No. 544,533
2 Claims. (Cl. 222—129.4)



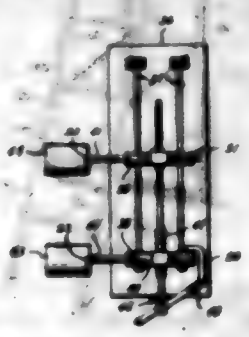
1. In a dispenser for a powdered water soluble food material wherein separate powder and hot water reservoirs are provided, the improvements comprising: a dispensing head mounted below said powder reservoir, said dispensing head having a frusto-conical chamber therein and an orifice on the underside thereof communicating with said chamber; a rotatable frusto-conical plug mounted within said frusto-conical chamber; means for urging said frusto-conical plug into intimate contact with the walls of said chamber, said plug having a chamber therein beneath said powder reservoir and normally in communication with the interior thereof whereby when said chamber is in an upright position, said chamber will be filled with a measured amount of said water soluble powder; a drive shaft secured to one end of said plug; means for turning said drive shaft and thereby rotating said plug; a conduit terminating at a point adjacent said dispensing head orifice and communicating with said hot water reservoir; a valve positioned in said conduit; and means for opening said valve for a predetermined period of time at a point after said plug has been rotated sufficiently to discharge through said dispensing head orifice said measured quantity of powder from said plug chamber.

2,863,591

MEANS FOR CUFFING TROUSERS AND PREPARING SAME THEREFOR

James G. Butler, Van Buren, Ark.

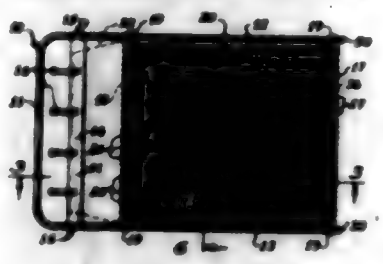
Application November 30, 1955, Serial No. 550,048
10 Claims. (Cl. 223—2)



1. Apparatus for cuffing trousers comprising a base, a substantially hollow cylinder fixedly mounted on the base, a second such cylinder mounted on the base and slideable therealong away from and toward said fixed

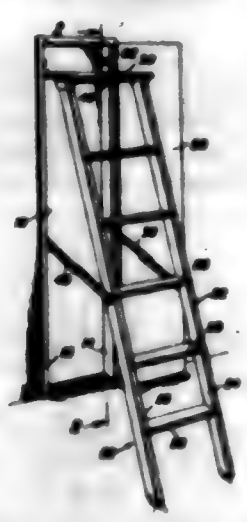
cylinder, said cylinders each having attached thereto one end of a rod, the other end of each rod extending through uprights on the base, said uprights also serving as gauges for determining where to fold the trousers.

2,863,592
CLOTH PLEATER
Jack M. Terry, Grand Canyon, Ariz.
Application November 21, 1957, Serial No. 697,914
2 Claims. (Cl. 223—33)



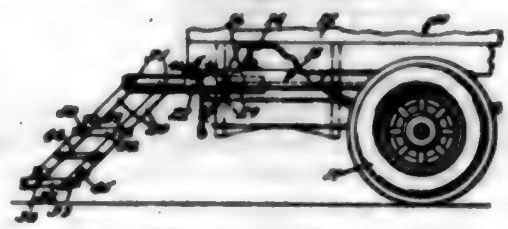
1. A cloth pleater adapted for use on a table top having a table surface, said pleater comprising a U-shaped frame having a transverse member and integral laterally spaced side members, a clip bar extending laterally between and secured to said side members and spaced from said transverse member to provide means to support the waist band of a skirt to be pleated, an outer guide rod extending laterally between and secured to the outer ends of said side members, an inner guide rod extending laterally between and secured to the side members intermediate said outer guide rod and said clip bar, a series of flat laterally spaced parallel pleating slats having clearance holes formed in each end thereof slidingly and tiltingly mounted on said outer and inner guide rods, spacing collar means slidably mounted on said inner guide rod and located between each of said slats to provide means for initially spacing the inner ends of said slats, said slats being so arranged that a folded double skirt with its waist band secured to said clip bar may be progressively inserted between said slats beginning at the inner end of said slats and working toward the outer ends thereof with the pleats of said skirt toward the lower edge thereof engaging the table surface during the pleating operation.

2,863,593
BUILT-IN LADDER
Edward E. Nelman, Lompoc, Calif.
Application August 2, 1955, Serial No. 526,827
3 Claims. (Cl. 228—45)



1. In combination with a door frame, a ladder having side rails, steps rigidly fixed to and extending between said side rails, a spreader hinge extending between said ladder and said frame and located intermediate the ends of said ladder, a platform pivoted to the upper ends of said rails and disposed therebetween, said platform being generally parallel to said rails when said ladder is disposed within said frame, said frame having slots in opposite sides thereof, a hinge pin secured to said platform and having ends captive in said slots to thereby constrain the movement of said platform, said slots having lateral offsets in which said hinge pin ends are disposed when said ladder is separated from said frame and said spreader hinge is extended and said platform is in the approximately horizontal position, said platform constituting the top step of said ladder and having a front portion on the front side of the pivot between the platform and said side rails wider than the inside dimension of the ladder in order to come to rest upon the upper ends of said side rails when the platform is in the generally horizontal position.

2,863,594
FOLD UP AND ROLLAWAY STEP
John Frederick Shafer, Greenville, Pa.
Application September 1, 1955, Serial No. 532,062
1 Claim. (Cl. 228—48)



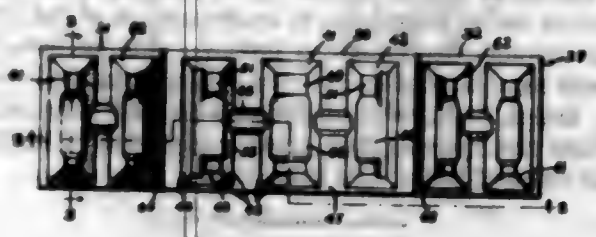
A device of the character described, comprising a pair of spaced parallel horizontally disposed channel members each embodying a horizontally disposed top wall, spaced parallel vertically disposed side walls, horizontally disposed bottom walls and upwardly extending flanges; said flanges, bottom walls and side walls coacting to define therebetween trackways, an L-shaped body member adjustably connected to each of said channel members, each body member including a horizontal leg and a vertical leg, a post extending upwardly from each of the horizontal legs of the body members, a threaded stud depending from each post, a securing element arranged in threaded engagement with each stud for maintaining the post connected to the body member, a plate secured to the upper end of each of said posts, rollers journalled in said plate and movably mounted in said trackways, a pair of bars having their ends pivotally connected to each body member, braces connected to said bars, brackets pivotally connected to said bars, steps secured to said brackets, a casing secured to one of said body members, there being openings in said body member and the adjacent channel member, a plunger mounted for movement into and out of engagement with said openings, a coil spring for normally urging the plunger into engagement with said openings, a pin member depending from said plunger, a handle connected to said pin member, and a lug having said handle pivotally connected thereto.

2,863,595
MOLDED PULP PACKAGING MEMBERS
Richard L. Emery, Fairfield, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application November 23, 1953, Serial No. 393,670
3 Claims. (Cl. 229—2.5)

1. A molded pulp packing device comprising a substantially flat sheet divided into a plurality of panels hingedly connected to each other, a stepped rib extending upwardly from the face of each panel, each stepped rib comprising a relatively low horizontal supporting surface and a lateral supporting surface extending upwardly from said horizontal supporting surface, said

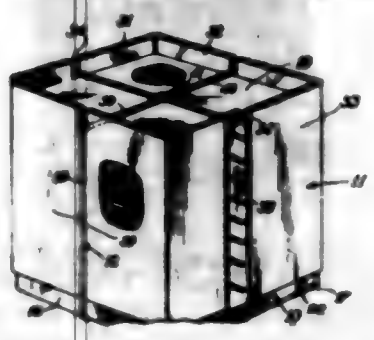
the opposite sides thereof, the flap extending from an end member adapted to float upon the liquid in the supply

horizontal supporting surface forming a first cushioning surface adapted to resiliently support a packaged article in one plane and said lateral supporting surface forming a second cushioning surface in a second plane which is substantially perpendicular to the plane of said horizontal



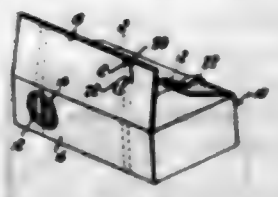
supporting surface and adapted to resiliently support said article in said second plane, said panels being each adapted to be hingedly folded into substantially perpendicular positions relative to each adjacent panel to provide double-surface peripheral support for the article.

2,863,596
FIBERBOARD CONTAINER
Henry Harrison, Port Washington, N. Y., assignor to The Greif Bros. Cooperage Corporation, Delaware, Ohio, a corporation of Delaware
Application August 18, 1953, Serial No. 374,919
5 Claims. (Cl. 229—23)



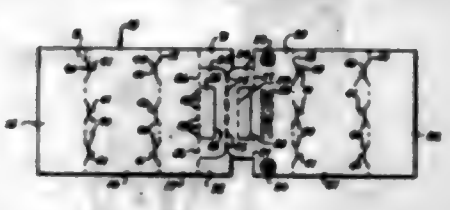
2. A reinforced fibreboard container comprising: an inner casing having four corrugated fibreboard side panels with their edges arranged in abutting relationship forming a complete enclosure for the sides of the casing, top closure flaps integral with and hingedly connected to at least some of the side panels and cooperable to provide a plurality of superimposed fibreboard layers extending across the top of the casing and a plurality of bottom panels cooperable to extend completely across the bottom of the casing in superimposed relationship with one bottom panel integral with and hingedly connected to two opposite side panels and another bottom panel integral with and hingedly connected to the other two opposite side panels; and an outer casing in the form of a tubular sleeve having four corrugated fibreboard panels corresponding in shape to the shape of the inner casing and disposed around the inner casing and embracing substantially the entire area of the side panels thereof, said outer casing being of substantially the same length as the inner casing and being disposed in offset relationship with respect thereto so that the lower end of the outer casing is disposed a short distance above the lower end of the inner casing and the upper end of the outer casing projects a corresponding distance above the corresponding end of the inner casing and slots are provided in the projecting portion of the outer casing and a wire harness is provided around the assembled container in tightly binding relationship with portions extending across the bottom and side panels and through the aforesaid slots across the top of the container.

2,863,597
REINFORCED CORRUGATED PAPERBOARD CONTAINER AND JOINT THEREFOR
Philip C. Strine, Chatham, N. J., assignor to International Paper Company, New York, N. Y., a corporation of New York
Application August 10, 1956, Serial No. 603,296
3 Claims. (Cl. 229—47)



3. A container made from corrugated paperboard, laminated fibreboard or the like comprising a tubular body portion, two closure panels having overlapped edges and hingedly connected to said body portion, said body portion and panels consisting of layers of material, a flat reinforcing strap held between said layers of material encircling said body portion and closure panels and normally confined in extent by the respective overlapped edges of said closure panels, the material of each panel overlying a short length of each said strap adjacent its end being raised from the strap to expose the end of said strap, the exposed ends of the straps being in overlapping relationship, and fastening means to secure said overlapping ends of said straps together.

2,863,598
CARTON FOR CYLINDRICAL OBJECTS
Grover C. Carrie, Charlotte, N. C., assignor to Decora Corporation, Charlotte, N. C., a corporation of North Carolina
Application May 4, 1953, Serial No. 352,850
2 Claims. (Cl. 229—52)



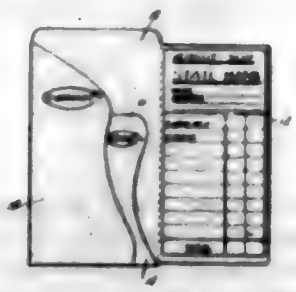
1. In a carton having at least one pair of side walls, a bottom wall and a top wall panel formed of component panel portions each foldably joined to one of said side walls; a handle portion formed integral with the top wall panel and comprising a pair of handle panels foldably joined together at adjacent edges and each of said handle panels being foldably joined at its opposite edge to one of said component panel portions, at least one reinforcing and securing tab cut from one of said handle panels and extending from one of said component panel portions, a handle flap cut from another of said handle panels and foldably joined thereto, the reinforcing and securing tab being permanently secured to the underside of the other component panel portion to unite the component panel portions and bring the handle panels into facing relation with each other, and said handle flap being foldable at its juncture with its handle panel through the other handle panel to form a hand hold.

2,863,599
BANKING ENVELOPE
Harlan M. Whitman, Minneapolis, Minn., assignor to Curtis 1000, Incorporated, St. Paul, Minn., a corporation of Minnesota
Application March 26, 1956, Serial No. 573,637
2 Claims. (Cl. 229—72)

1. A banking envelope having a central elongated rectangular panel and flaps extending only from one end and

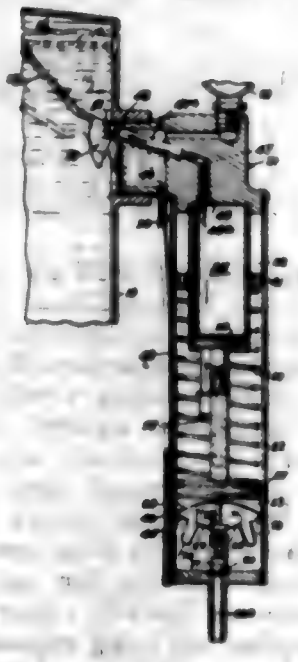
only whereby to provide a sealing effect from pressure notation by serial pulse trains, comprising three pulse

the opposite sides thereof, the flap extending from an end of the panel being substantially rectangular and having its free end gummed to a transverse intermediate portion of the panel to form a coin pocket, the free longitudinal edges thereof being unattached and adjacent the opposite side edges of said panel, a generally triangular flap extending from a side edge of said panel and having one edge substantially coextensive therewith and folded



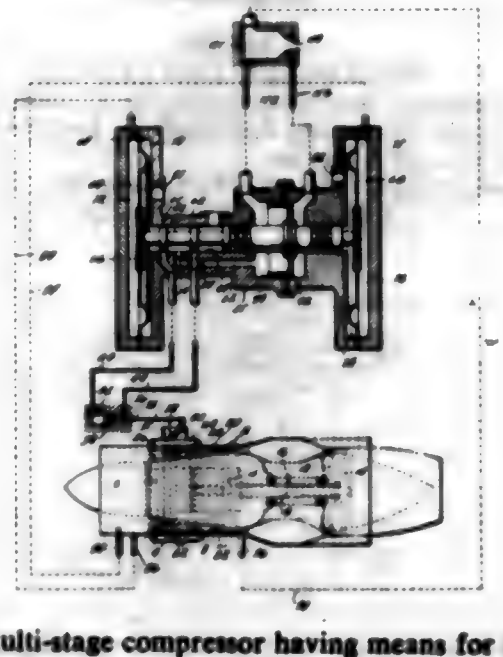
over said coin pocket forming flap, said substantially triangular flap having one of its edges extending along the fold line between said panel and coin pocket forming flap and adhesively attached thereto to form a bill receiving recess, and a full length substantially rectangular flap extending from the side edge of the panel opposite said bill recess forming flap and foldable freely over said coin pocket forming flap and said bill recess forming flap.

2,863,600
AIR PRESSURE CONTROL DEVICES FOR SUPPLYING AIR TO LIQUID TANKS
Edward H. Pedrois, Monte Rio, and William H. Palmer, Duncan Mills, Calif.
Application February 18, 1957, Serial No. 640,835
14 Claims. (Cl. 230—52)



1. A control apparatus for supplying air to an air chamber over liquid in a liquid supply tank, including an air cylinder and a co-axial hydraulic cylinder having a greater diameter than the air cylinder, a unitary piston assembly comprising an air piston in the air cylinder and a hydraulic piston in the hydraulic cylinder, the said pistons having means therebetween for relatively connecting them in spaced relation for unison reciprocation, said pistons providing respective air-pressure and hydraulic-pressure chambers in said cylinders, said air chamber having a valve-controlled air outlet vent communicating with the liquid tank, valve means for admitting atmospheric air into the air chamber, the hydraulic chamber having a valve controlled discharge outlet for discharge of water therefrom, a pivotally mounted float member adapted to float upon the liquid in the supply tank and rise and fall with the level of the liquid for controlling the flow of air from the air chamber into the tank, a feed tube for liquid adapted for communicating between the tank and the hydraulic pressure chamber, spring means for urging the hydraulic piston towards said discharge outlet, means for opening and closing the discharge outlet responsive to reciprocation of the pistons, an air cylinder head member having a tubular bore therethrough communicating between said air vent and with the tank, and a float valve at the end of said tube adjacent the float the opening and closing of which is controlled by the rise and fall of said tank float.

2,863,601
COMPRESSOR AIR BLEED CONTROL
Bruce N. Torell, Wethersfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application May 3, 1954, Serial No. 427,304
6 Claims. (Cl. 230—114)



1. A multi-stage compressor having means for bleeding an intermediate stage thereof and means for varying the area of said bleeding means in combination with a bleed control comprising valve means, means connecting said compressor and said bleed control for actuating said valve as a function of absolute compressor discharge pressure, means connecting said compressor and said bleed control for actuating said valve as a function of compressor inlet total pressure, means connecting said compressor and said bleed control for actuating said valve as a function of compressor inlet static pressure, and means operatively connected with and controlled by the actuation of said valve to regulate said area varying means.

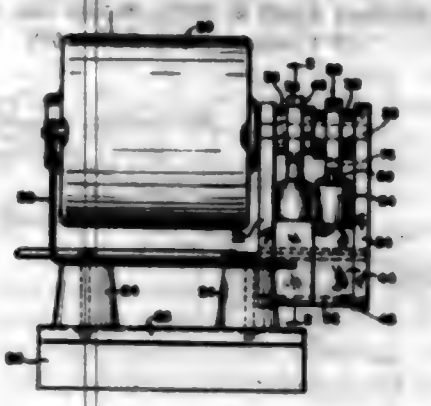
2,863,602
EXPANSIBLE CHAMBER APPARATUS
Bryan W. Chapin, Truxton Township, Cortland County, N. Y.
Application June 13, 1955, Serial No. 515,132
6 Claims. (Cl. 230—175)

1. In a device of the character described, in combination, a shaft, an eccentric crank thereon, a frame journalled on said shaft and freely suspended therefrom, said frame having a bar extending parallel with said shaft and spaced laterally from the crank thereof, said bar having a cylindrical surface facing said shaft, a cylinder and piston assembly having a member oscillatably mounted on said bar and a member journalled on said eccentric crank, inlet and outlet ports in said bar having radial branches extending to the cylindrical surface thereof, said ports extending toward said eccentric crank

said pulse source for continuously comparing to 1 the

2,863,606

only whereby to provide a sealing effect from pressure within the cylinder, and port means in said oscillatory mounted member adapted to alternately connect with



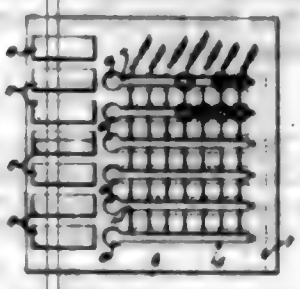
said branches upon oscillatory movement of said oscillatable member between the limits of oscillation, said shaft forming the sole support for said frame and cylinder and piston assembly.

2,863,683

CHILDREN'S EDUCATIONAL COIN-SAVING DEVICE

Frank A. Dompnik, Piedmont, Calif.

Application May 12, 1955, Serial No. 507,759
3 Claims. (Cl. 232—5)



2. A children's educational coin-saving device comprising a rigid backboard, a spacing-layer of substantially the thickness of the coins to be used affixed to said backboard in overlying face-to-face relation thereto, said spacing-layer being provided with a plurality of parallel slots intermediate its sides and of a width adapted to receive the diameter of said coins and terminating at one end in a semicircular arc, said spacing-layer having a slot therein of a width equal to said parallel slots defining a discharge passage for said coins moving therethrough, said discharge passage slot being normal to said parallel slots and in communication with the other ends of the parallel slots and opening through the bottom of said spacing-layer, and a cover-layer overlying said spacing-layer secured in face-to-face relation thereto and provided with parallel slots intermediate its ends and narrower than said spacing-layer slots and in register therewith, said cover-layer parallel slots terminating at one end in an aperture of a diameter to receive said coins and the other end short of the junction of said parallel spacing-layer slots with said coin discharge passage.

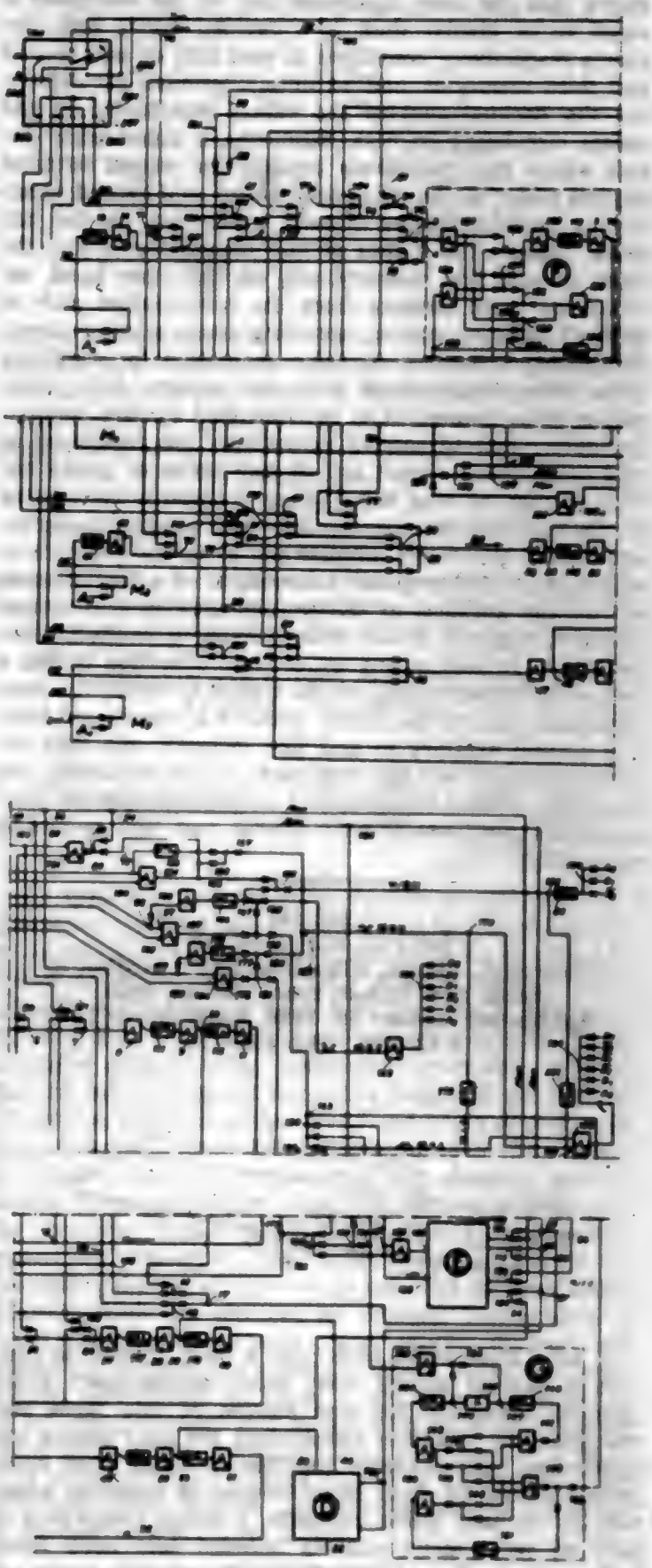
2,863,604

ELECTRONIC CALCULATOR FOR MULTIPLICATION AND DIVISION

Bruno M. J. Leclerc, Fontenay-aux-Bois, and Henri Gérard Felstal and Pierre Jacques Charles Chouca, Paris, France, assignors to Compagnie des Machines Bull (Societe Anonyme), Paris, France

Application September 23, 1952, Serial No. 311,872
Claims priority, application France October 4, 1951
10 Claims. (Cl. 235—61)

1. Electronic digital computer for calculating the product of a multiplicand by a multiplier, these product and factors being represented in the binary-coded decimal notation by serial pulse trains, comprising three pulse circulating memories, the first initially storing a multiplier, the second for constituting a product, the third initially storing a multiplicand, each of said memories including pulse regenerator devices and delay networks adjusted to a pulse travel time, or "memory cycle" which corresponds to n coded decimal digits, an input terminal and an output terminal, a tap substantially one decimal-



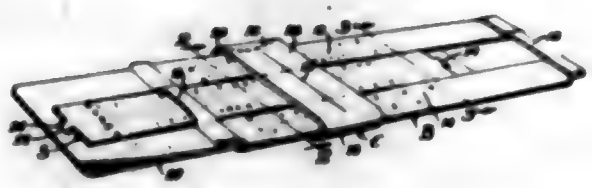
digit position before said output terminal said first and second memories having each an input element whose travel time corresponds to one decimal digit period, said input element of said first memory being formed by a binary 1-subtracting device with a separately accessible input; a pulse source for supplying timed pulses of value 1; a comparing device including a pulse circulating loop and connected to said tap of said first memory and to

other, said mating male joint member comprising a section of predetermined magnitude and phase; an electronic de-

charge of water therefrom, a pivotally mounted float thereof, said ports extending toward said eccentric crank

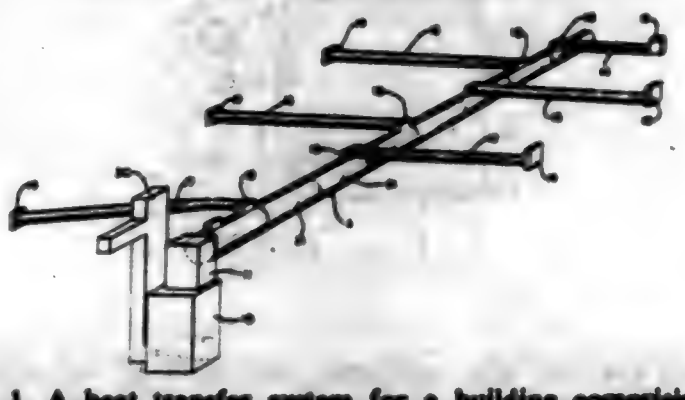
said pulse source for continuously comparing to 1 the successive digits of the multiplier from the pulses circulating in the first memory, the comparing device having an output for delivering at the end of a memory cycle a control signal when the least significant digit of the multiplier is smaller than 1 or causing a 1-representing pulse to be applied from said source to said separately accessible input of said 1-subtractor device when it has detected that the least significant digit of the multiplier is equal to or greater than 1; a decimal adder with two inputs respectively connected to said taps of said second and third memories, and an output terminal for delivering the decimal sum of the values represented by the pulses circulating in both memories; a coincidence circuit which can operatively connect the output terminal of said adder to the input terminal of said second memory, a series of gating circuits which can, on the one hand, connect the output of said second memory to the input of said first memory, and on the other hand, exclude the input element from the recirculation path of each of these memories; operating phase selector means comprising a number of pulse generators for supplying pulse trains synchronized with said memory cycle, these means being connected to be controlled by said comparing device and to control accordingly the conditions of said coincidence circuit and of said series of gating circuits so that, as long as said control signal is not emitted at the end of a memory cycle by the comparing device, one of said generators supplies one or several pulse trains which cause the progressive formation of a partial product by the addition of the multiplicand in said second memory, whereas if said control signal is emitted, other generators in said means are set into operation during a following memory cycle in the course of which the least significant digit of the partial product is transferred from said second memory to said first memory, and then the partial product and the multiplier, or its remainder, are each time shifted by a decimal position toward the least significant positions in said second and first memories respectively.

2,863,685
METAL SLIDE RULE
Roswell C. Pickett, Alhambra, Calif., assignor to Susan Ann Pickett, Santa Monica, Calif.
Application January 30, 1956, Serial No. 562,142
6 Claims. (Cl. 235—70)



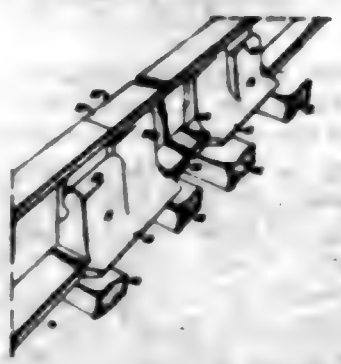
1. In a sheet metal slide rule, a body formed to provide a pair of spaced body faces, spaced-apart guide channels along the top and bottom of said faces and marginal end members constituting the only means for connecting said channels together, a slider base comprising a strip of sheet metal having its marginal edges slidably in said guide channels, a slider comprising a strip of sheet metal slidable between said body faces and coacting edge to edge therewith whereby scales on said body faces may coact with scales on said slider, and means to loosely connect said slider to said slider base for floating relationship therewith and for propulsion of said slider by manipulating said slider base, said means comprising tongues at the ends of said slider, said slider base having openings to loosely receive said tongues and said tongues being projected there-through and bent over to retain said slider on said slider base.

2,863,686
SLIP TOGETHER-SNAP TOGETHER CONVECTOR AND CONDUCTIVE CONDUIT MEANS
Richard Taisch, Silver City, N. Mex.
Application April 4, 1955, Serial No. 499,818
10 Claims. (Cl. 237—69)



1. A heat transfer system for a building comprising in combination air heating and circulating means, an air supply conduit connected to said circulating means, a continuous slot formed therein and extending longitudinally of said conduit, a plurality of heat transmitting panels closing said slot whereby heat is transmitted to a floor, wall, or ceiling of said building whence heat is radiated to the space to be heated, insulating material applied to said heat transmitting panels, the insulating material of the panels most proximate to the heat circulating means having substantially greater thermal insulation quality than the subsequent panels more remote from said circulating means.

2,863,687
QUICK DETACHABLE RAIL JOINT
Thomas Jack Knapp, Bloomington, Ind.
Application April 11, 1958, Serial No. 727,958
8 Claims. (Cl. 238—187)



1. A quick detachable joint for coupling together the adjacent ends of railway rails, said joint including a combined rail chair and female joint member and mating male joint members on the opposite ends of each rail, said chair and female joint member comprising an elongated block having side flanges to facilitate securing said block to a cross tie, an upwardly opening longitudinal recess in said block extending from each end to a point substantially midway of the length thereof, one sidewall of said recess terminating at the upper edge in a longitudinal inwardly projecting bead overhanging said recess, a curved bottom wall in said recess merging into said one sidewall and terminating at the lower surface of said bead to provide an abutment, the opposite sidewall having a substantially flat inner surface with the upper edge disposed above said bead, said flat inner surface merging into said bottom wall and a longitudinal inwardly projecting ridge between said flat surface and said bottom wall, a transverse groove in said bottom wall, said one sidewall and a portion of said flat surface, a drain hole communicating with said groove and extending through the bottom of said block and a rail web engaging shoulder on each end of said block below said recess, the recesses in each end of said block having the same cross sectional configuration but being reversed with respect to each

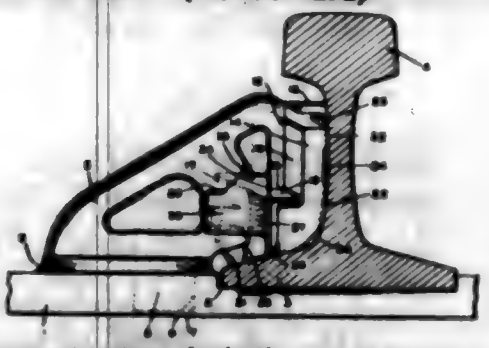
in winders and like machines having a wind off bobbin, second tube while both tubes are positioned in slanting

other, said mating male joint member comprising a section projecting downwardly from the upper flange of the rail at each end, said section having a configuration complementary to that of said recess with a portion for engaging said transverse groove and a longitudinal indentation in said section for receiving said ridge, the web of said rail extending outwardly of the lower flange for engaging said web engaging shoulder, whereby upon insertion of said section through the top opening of said recess at an angle and upon rotation of said rail, said section will be urged into mating engagement by the action of said ridge and upon complete engagement of said section with said recess, said ridge will be received in said indentation and together with said web engaging shoulder and the engagement of the lower rail flange with the cross ties will provide a self-locking quick detachable rail joint.

2,863,608
RAIL BRACE

Wesley A. Harper, Tatamy, Pa., assignor to Harsco Corporation, Harrisburg, Pa., a corporation of Delaware

Application April 30, 1956, Serial No. 581,449
6 Claims. (Cl. 238—292)



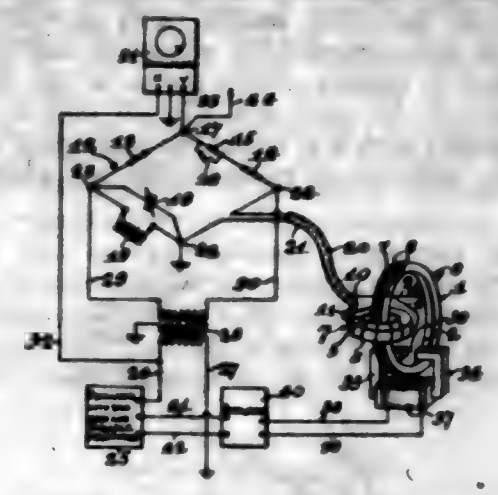
1. A rail brace structure, including a rail having a base flange and a vertical web, comprising a rail-supporting plate receiving the base flange, a brace mounted on said plate and having vertical and horizontal sloping wedge surfaces opening toward the rail, a wedge movable relative to and between said brace and the rail to wedged position between said brace and rail and having correspondingly sloping surfaces for engagement with the wedge surfaces of said brace, locking means on said brace for holding said wedge in wedged position, rail-engaging elements proximate the ends of said wedge projecting laterally and downwardly beyond said wedge for engagement respectively with the vertical web of the rail and with the base flange of the rail at longitudinally spaced points and an intermediate portion of said wedge between said rail-engaging elements normally free of engagement with said rail but in engagement with said brace.

2,863,609
COIL WINDING MECHANISM

William T. Lisk, Montreal, Quebec, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada

Application May 19, 1955, Serial No. 509,607
4 Claims. (Cl. 242—4)

1. Apparatus adapted for use with a ring type coil winding mechanism having a driving means therefor, the mechanism including a rotatable electrical conducting shuttle in which a predetermined number of turns of strand has been inserted, the shuttle being arranged to interlink a core and to superimpose the strand thereon to form a coil, which apparatus includes in combination therewith: a null Wheatstone bridge arrangement; means for including the strand being wound in the unknown arm of the bridge; a standard inductance element, having the desired inductance, inserted in the balancing arm of the bridge; oscillating means to energize the bridge circuit; inductive correction device interlinking the shuttle; means for applying to the inductive correction device a current of predetermined magnitude and phase; an electronic device; biasing means associated with the bridge circuit for developing a biasing potential in proportion to the unbalance condition of the bridge circuit, said biasing means

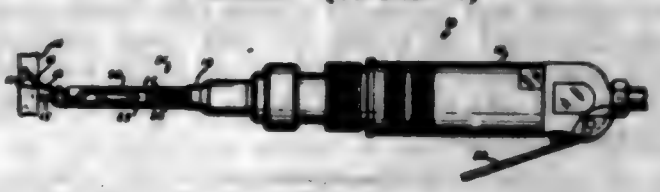


normally rendering the electronic device non-conductive but making it conductive upon the balancing of the bridge circuit; motor control means in association with the electronic device so arranged that the said driving means is deenergized upon said device becoming conductive.

2,863,610
APPARATUS FOR WRAPPING STRANDS ON ARTICLES

Edwin G. Chambers, Towson, Md., and Edward A. Temple, Wyomissing, Pa., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application June 8, 1953, Serial No. 360,912
9 Claims. (Cl. 243—7)



1. Apparatus for wrapping strands on articles, which comprises rotatable means designed to be placed adjacent to an article upon which a strand is to be wound, said means having a strand-receiving channel formed therein adjacent to the outer periphery on the forward end thereof, extending longitudinally and circumferentially of said rotatable means, being completely accessible laterally thereof and throughout the entire length of the channel for lateral insertion of the strand and being of such configuration as to cause a strand positioned in the channel to follow a tortuous path within said channel, said rotatable means having at least one lobe extending over the tortuous channel circumferentially of the rotatable means and adjacent to the outer periphery thereof for preventing the strand from being removed unintentionally laterally from the channel by inherent forces such as gravitational or centrifugal forces exerted thereon, and means for rotating the rotatable means about the longitudinal axis thereof to cause a strand so positioned to be advanced through said tortuous channel and wrapped about such article, the strand being tensioned by a snubbing action resulting from its following the tortuous path while advancing through said channel whereby the strand is wrapped tightly on the article.

2,863,611
DUST AND FLUFF EXHAUSTING DEVICE ON WINDERS

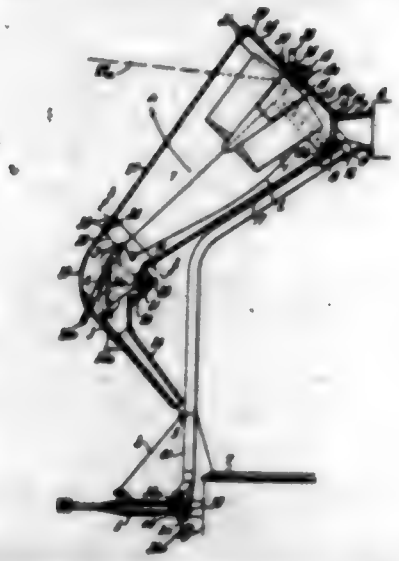
Walter Schweiter and Karl Marx, Horgen, Switzerland, assignors to Maschinenfabrik Schweiter AG., Horgen, Switzerland, a Swiss company

Application August 18, 1954, Serial No. 450,616
Claims priority, application Switzerland August 24, 1953
14 Claims. (Cl. 242—18)

1. A device for removing dust, fluff and like matter

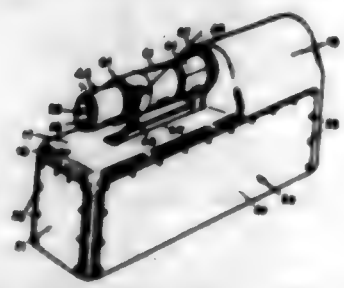
duced end portion, said body having a driving slot extend-

in winders and like machines having a wind off bobbin from which a thread runs to a take up bobbin; comprising an enclosure provided with two complementary sections, one of said sections being provided with a stationary wall, the other section being provided with a transparent wall arranged for movement relative to said one section to thereby obtain access to the interior of said enclosure, the stationary wall of said one section being provided with first means for supporting said wind off bobbin, with second means within said enclosure for



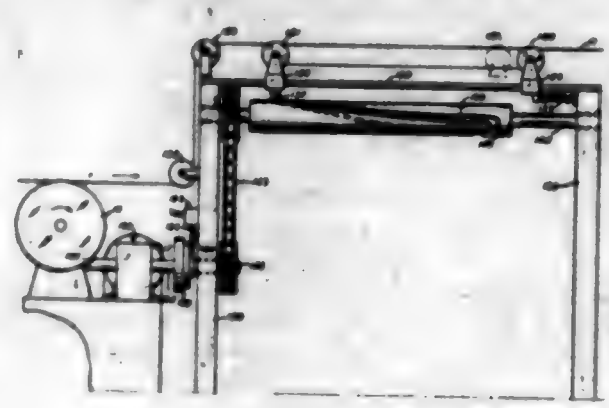
mounting a thread brake mechanism, with third means establishing connection between said enclosure and air line suction means and positioned to thereby direct a suction air stream from the interior of said enclosure therewithout, and means for guiding said thread running from said wind off bobbin via said brake mechanism when disposed on said second means within said enclosure to said take up bobbin and in counter-direction to said suction stream.

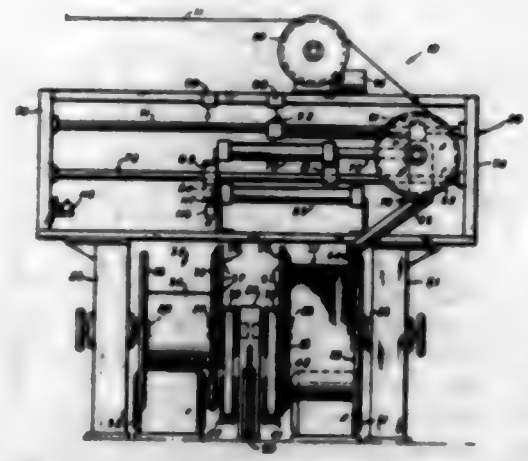
2,863,612
CONTINUOUS FIBER WINDING APPARATUS
Ralph J. Sherwin, Whitehouse, Ohio, assignor, by mesne assignments, to L-O-F Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
Application August 26, 1954, Serial No. 452,263
10 Claims. (Cl. 242—18)



9. The process of winding a continuous strand comprising, positioning an empty tube in frictional engagement upon a freely rotatable mandrel, sliding said tube from said freely rotatable mandrel into frictional engagement upon a driven mandrel coaxially aligned with the freely rotatable mandrel, positioning a second empty tube upon said freely rotatable mandrel and transferring said second tube from said freely rotatable mandrel onto the driven mandrel to concomitantly move the first tube into a winding position on the driven mandrel, winding a strand upon said first tube, positioning a third empty tube upon said freely rotatable mandrel and transferring said third tube from said freely rotatable mandrel onto the driven mandrel whereby movement of the tubes is effective to transfer the strand from the first tube to the second tube while both tubes are positioned in abutting end-to-end relation upon the driven mandrel, and repeating the cycle.

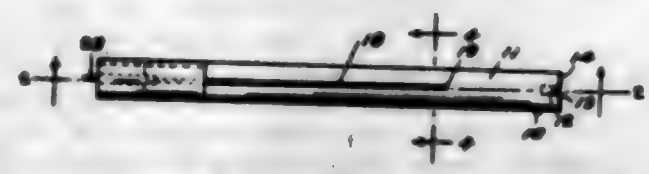
2,863,613
STRAND REELING APPARATUS
Tillman T. Bunch, near Ashland, Md., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application October 10, 1955, Serial No. 539,343
9 Claims. (Cl. 242—25)





1. Strand reeling apparatus for winding a strand, being delivered at a substantially constant predetermined linear speed, upon a takeup reel including a winding surface having a peripheral speed somewhat greater than the linear speed of the strand, which apparatus comprises means for accumulating a length of the advancing strand at a position removed from the reel, means for attaching the strand to the winding surface of the takeup reel, and means actuated simultaneously with said attaching means for dispensing at least a portion of the accumulated length of the strand at a rate such as to match substantially the linear speed of the strand as it approaches the reel with the peripheral speed of the winding surface.

2,863,614
CHART SPOOL
Eugene W. Dove, Boulder, Colo.
Application May 23, 1956, Serial No. 586,597
1 Claim. (Cl. 242—74)



A chart spool comprising an elongated solid cylindrical body, a cylindrical reduced end portion formed on one end of said body, said body having a short shaft receiving bore formed axially in the end thereof opposite said re-

for applying to the inductive correction device a current

14 Claims. (Cl. 242—18)

1. A device for removing dust, fluff and like matter

duced end portion, said body having a driving slot extending transversely of the end of said body having said axial bore, said body having an elongated bifurcating slot extending inwardly from the end thereof having said reduced end portion and terminating adjacent to but spaced from the end of said body having said axial bore, said bifurcating slot being adapted to receive the end portion of a chart therein to be wound on said spool, said reduced end portion of said body having an axial bore formed therein, a cylindrical sleeve telescopically engaged over said reduced end portion closing the open end of said bifurcating slot, a bushing supported in the outer end of said sleeve, and a shaft having the intermediate portion thereof supported in said bushing with the inner end thereof engaging in the axial bore in said reduced end portion of said body to maintain the sides of said bifurcating slot in spaced relation.

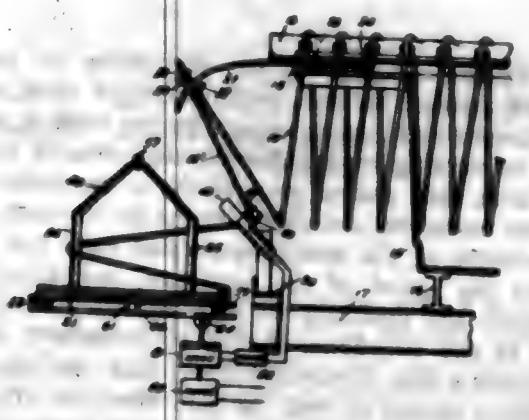
2,863,615

WIRE REELING APPARATUS

Herbert Kenmore, Jersey City, and Walter J. Manson, West Orange, N. J., assignors, by mesne assignments, to National-Standard Company, Niles, Mich., a corporation of Delaware

Application October 18, 1955, Serial No. 541,179

2 Claims. (Cl. 242—83)



1. In a device for treating wire while being continuously fed and supported in the form of a rotating helix with a horizontal axis along a horizontal supporting means, the improved device for collecting the wire as it reaches the end of the horizontal supporting means, comprising a rotatable collecting device having a substantially vertical axis, means for rotating said collecting device at approximately the speed of travel of the wire of said helix, support means for movably supporting at least one turn of the wire helix position between the end of the horizontal supporting means and the axis of the collecting device, said support means including at least one arm containing rotating elements adapted to position a top portion of the said helical coil, guide means adjacent the lower portion of the horizontally supported portion of the helix adapted to hold away from the collecting device the lower portion of said one or more turns of the helix held by said support means.

2,863,616

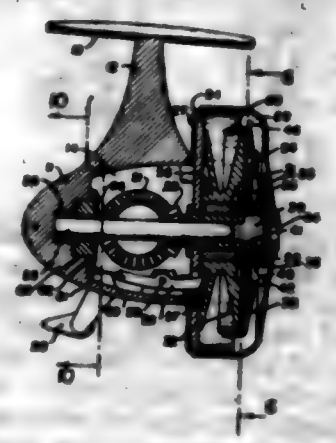
SPINNING REEL

Donald F. Hutchison and John M. Sweeney, Denver, Colo., assignors to Wright & McGill Co., Denver, Colo., a corporation of Colorado

Application August 2, 1954, Serial No. 447,935

5 Claims. (Cl. 242—84.2)

1. A fishing reel comprising: a housing having an internal cavity open to one end and one side of said housing; a face plate closing said open side; a bearing sleeve carried by said face plate; a crank shaft journalled in said bearing sleeve and extending into said cavity through the open side of the latter; a line-winding shaft journalled in the closed end of said cavity and extending forwardly through the open end of the latter; bevel gears within said cavity transmitting rotation from said crank shaft to said winding shaft; a backing disc secured to said housing about said winding shaft and closing the open end of said cavity, said backing disc extending outwardly about the forward extremity of the housing to form a circular flange thereabout; a bearing bushing mounted in said backing disc and extending forwardly along said winding shaft to provide a bearing therefor; a tubular trunnion member fixedly mounted on and surrounding said bearing bushing; a grooved line spool rotatably mounted on said trunnion; a head formed on said winding shaft substantially equal in diameter to the diameter of said bushing; a circular flyer positioned about said head in proximity to the outer face of said



line spool; a withdrawable latch member on said flyer engaging a socket in said head to retain said flyer fixedly thereon; a flange extending from said flyer about said spool, said flange terminating approximately at the center of the peripheral groove in said spool; a radially-projectable line-winding finger slidably mounted on the inner face of said flyer positioned so that when projected, it will engage and wind a fishing line in the groove of said spool as said winding shaft is rotated, a cup-shaped casing fitted about the backing disc and extending about said spool; an enclosing hood fitted over said casing and provided with a line opening in axial alignment with said winding shaft; an actuating button mounted on said line winding finger and extending through an elongated opening in said flyer to the outer face of the latter so as to be accessible through openings formed in said hood.

2,863,617

SPINNING TYPE FISHING REEL

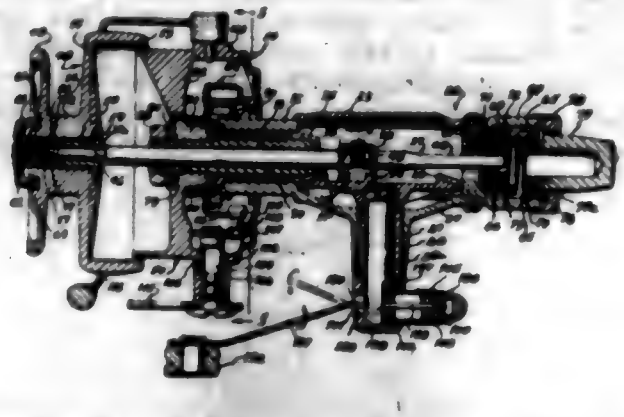
Howard R. Chapin, Park Ridge, and Freddie E. Kintzmer, Chicago, Ill., assignors, by mesne assignments, to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York

Application July 20, 1955, Serial No. 523,190

8 Claims. (Cl. 242—84.21)

2. A fishing reel comprising a housing adapted to be secured to a fishing rod and having a neck portion receiving a bearing member, said neck portion having an abutment thereon, a tubular driven shaft journalled in said bearing member, a spool shaft mounted for rotation and axial reciprocation within said driven shaft, a line-carrying spool fixed on said spool shaft, a manually actuated driving shaft, an operating crank connected to said driving shaft, said driving shaft having driving connections with said driven shaft and said spool shaft whereby said spool shaft is reciprocated as said driven shaft is rotated, a flyer keyed to said driven shaft and having a hub portion adjacent the neck portion of said housing, an actuating member rockably supported on said hub portion, a

shaft member journalled in said flyer, a line-engaging member pivotally supported on said flyer and having one end fixed to said shaft member, a crank arm supported on said shaft member, said crank arm having spaced shoulders arranged alternately to engage an abutment on said flyer to limit the throw of said crank in opposite directions, means operatively connecting said crank arm to said actuating member, a pawl pivotally supported on said actuating member and adapted to engage the abutment on said neck portion when said flyer is caused to be rotated in a reverse direction, means associated with



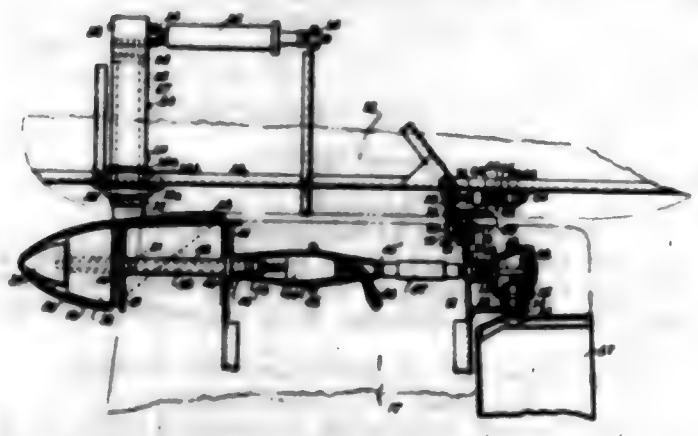
said pawl and in frictional contact with said neck portion for rocking said pawl to cause the same to engage the abutment on said neck portion, said engagement arresting movement of said actuating member but permitting relative rotation of said flyer, thereby effecting rocking of said shaft member and simultaneous rocking of said line-engaging member to retracted position, spring means normally biasing said line-engaging member to line-winding position, and latch means arranged to releasably lock said actuating member in a position to correspond to the retracted position of said line-engaging member.

2,863,618

AIRPLANE COUPLING MEANS

William H. Doyle, Oyster Bay, and William J. O'Donnell, Freeport, N. Y., assignors to Republic Aviation Corporation, near Farmingdale, Suffolk County, N. Y., a corporation of Delaware

Application April 29, 1954, Serial No. 426,589
15 Claims. (Cl. 244—3)



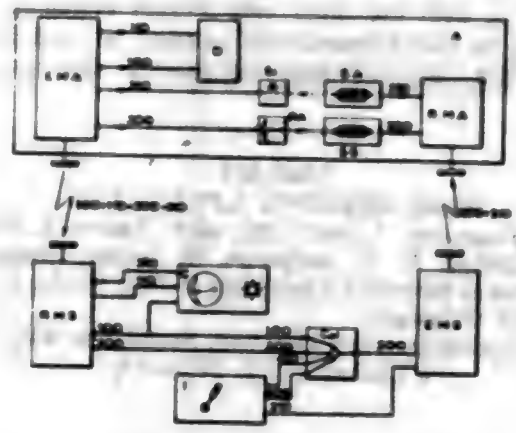
1. A coupling for connecting a plurality of airplanes by their wings during flight for unified flight, said coupling comprising primary interlocking means carried by a wing tip of each airplane adjacent the leading edge thereof and organized and arranged for releasable engagement with each other during flight, secondary interlocking means carried by the wing tip of each airplane aft of said primary interlocking means and organized and arranged for releasable engagement with each other during flight, and means carried by the wing tip of one of said airplanes and operatively connected between the control surfaces of that wing and said primary interlocking means to actuate the control surfaces in response to rolling movements of said airplanes relative to each other.

2,863,619

AERODYNE REMOTE CONTROL SYSTEM

Lucien Servanty, Paris, France, assignor to Societe Nationale de Constructions Aeronautiques du Sud-Ouest, Paris, France

Application January 16, 1956, Serial No. 559,380
Claims priority, application France January 21, 1955
19 Claims. (Cl. 244—14)



1. A remote control system permitting of remotely stabilizing, around its roll, pitch and yaw axes, along a predetermined path, an aerodyne having control surfaces capable of varying its angular position around each one of said axes, said system comprising, in combination: on board the aerodyne, detecting means to measure the angular velocity of the aerodyne around each one of said axes and the speed of the aerodyne, indicating means to measure the positions of said control surfaces with respect to the aerodyne, means to transform the said measurements into electrical effects and multiplex radio transmitting means to emit the said electrical effects separately; outside the aerodyne, a remote control station incorporating multiplex radio receiving means to pick up the said electrical effects separately, a computer including reference means to determine the theoretical positions of the control surfaces required for ensuring said aerodyne stabilization, means to compare the said theoretical positions with the actual positions of said control surfaces as read by said indicating means, means to elaborate, in the shape of electrical effects, corresponding correction orders, allowance being made for the readings of said detecting means, and multiplex radio transmitting means to emit the said correction order electrical effects separately; and, on board the aerodyne, multiplex radio receiving means to pick up said correction order electrical effects separately and a plurality of servo-mechanisms adapted to transform the said correction order electrical effects, without any interpretation or correction, into corresponding angular displacements of said control surfaces.

2,863,625

JET-PROPELLED AIRCRAFT

André Charles René Vautier, Paris, France, assignor to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France

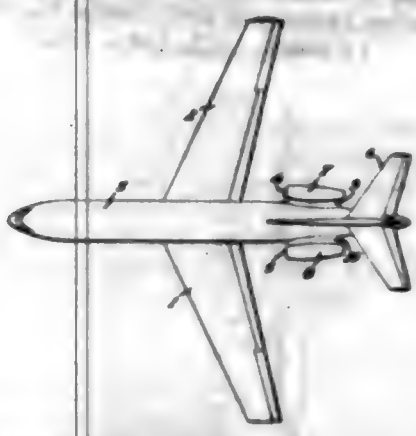
Application January 2, 1953, Serial No. 329,163
Claims priority, application France October 4, 1952
11 Claims. (Cl. 244—15)

1. A monoplane aircraft comprising, in combination, a fuselage, wings fixed on said fuselage, horizontal tail-surfaces mounted aft on said fuselage at a level higher than that of said wings, two jet engines positioned laterally on the outside of said fuselage on either side thereof, at an intermediate level with respect to those of said wings

of the fuselage comprising at least two shock absorbing

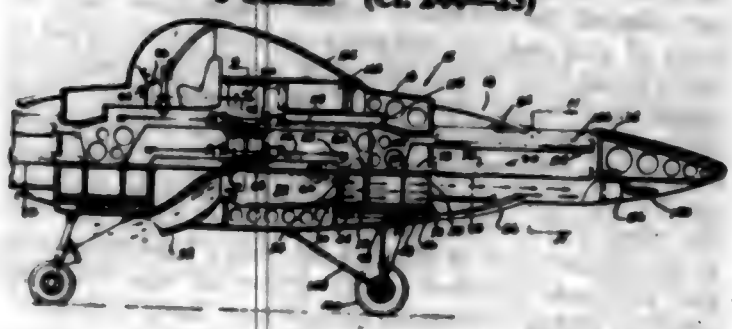
2,863,626

and horizontal tail-surfaces and in the longitudinal direction at an intermediate position between said wings and



horizontal tail-surfaces, and supporting structures respectively connecting said jet engines to the fuselage.

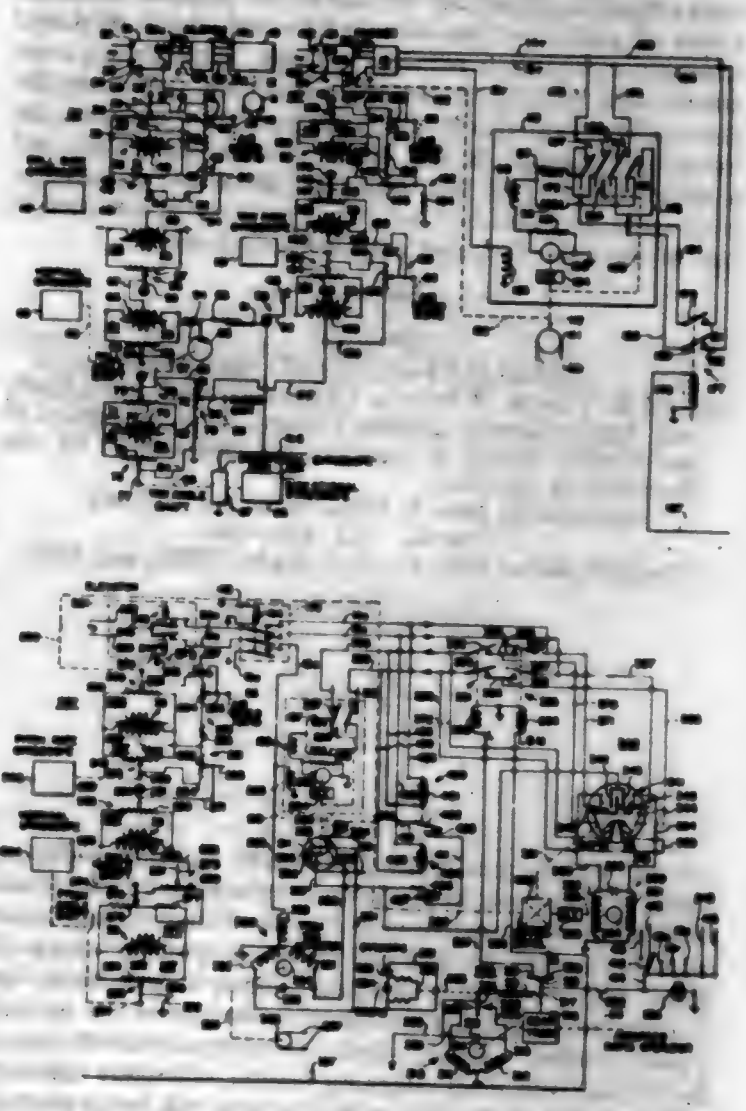
2,863,621
VERTICAL AND HORIZONTAL FLIGHT AIRCRAFT
John W. Davis, El Paso, Tex.
Application April 12, 1957, Serial No. 652,552
5 Claims. (Cl. 244—23)



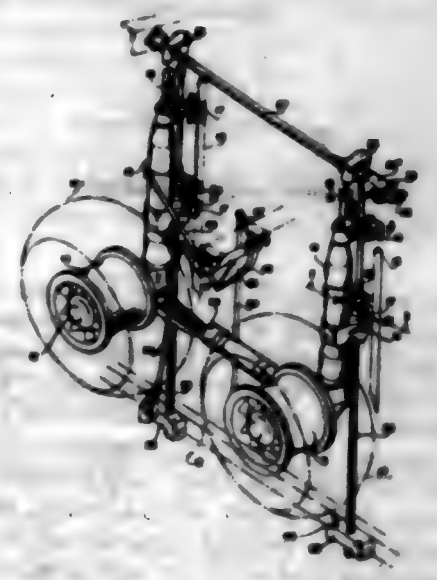
1. In an aircraft, the combination with a horizontally disposed fuselage provided with an annular opening extending vertically therethrough, a first propeller assembly positioned within said opening so as to extend across and about said opening and connected to said fuselage for rotational movement about a vertical axis in one direction, a second propeller assembly positioned within said opening and spaced from said first propeller assembly and arranged so as to extend across and about said opening and connected to said fuselage for rotational movement about said vertical axis in an opposite direction, of a reaction motor having a nozzle for the ejection of exhaust gases therefrom positioned horizontally within said fuselage inwardly of said opening with the nozzle facing rearward, a turbine blade assembly positioned so that it is exteriorly of and adjacent said nozzle and connected to said fuselage for rotational movement about said vertical axis responsive to impingement of gases when ejected from said nozzle, and means operatively connecting said first and second propeller assemblies to said turbine blade assembly for rotation with the latter.

2,863,622
AUTOMATIC STEERING MECHANISM
Benjamin H. Cecil, Minnetonka Mills, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application January 8, 1951, Serial No. 204,924
17 Claims. (Cl. 244—77)

9. Control apparatus for an aircraft having aileron and rudder, said apparatus comprising: a motor adapted to operate said aileron; a motor adapted to operate said rudder; a balanceable network means connected to the first motor for operating said aileron motor on network unbalance; a balanceable network means connected to the second motor for operating said rudder motor on network unbalance; directional stabilizing control means connected to both networks for unbalancing simultaneously both networks to operate both motors; follow-up means driven by each motor for rebalancing its respective network; and means responsive to the speed of said aircraft and connected to the directional control means for relatively varying the extent of unbalance of said aileron and rudder motor networks from said directional control means.



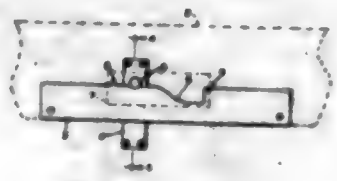
2,863,623
RETRACTABLE LANDING GEAR
Jack W. Lebold, Los Angeles, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Application September 9, 1953, Serial No. 379,112
5 Claims. (Cl. 244—102)



5. A tandem type landing gear for an airplane fuselage arranged for vertical extension and retraction at a side

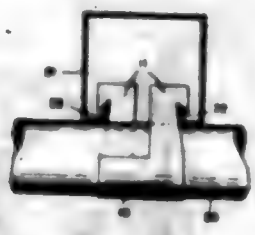
of the fuselage comprising at least two shock absorbing struts spaced fore and aft from one another at the side of the fuselage and each carrying ground engaging means, separate vertical tracks for each shock strut, said tracks being mounted on the side of the airplane fuselage, a pair of guide brackets attached to each shock strut and slideably engaging its respective tracks; screw means associated with each strut for extending and retracting the same along said tracks comprising screws mounted between and parallel to the tracks guiding said struts and a recirculating ball nut engaging the screw means for each strut, and said ball nut being universally mounted in one of the guide brackets carried by each strut.

2,863,624
DETACHABLE PANEL MOUNT
Harold R. Florea, Wantagh, Edward Bokiini, New York, and Arthur Braun, Queens Village, N. Y., assignors to the United States of America as represented by the Secretary of the Navy
Application May 4, 1954, Serial No. 427,682
7 Claims. (Cl. 248—34)
(Granted under Title 35, U. S. Code (1952), sec. 266)



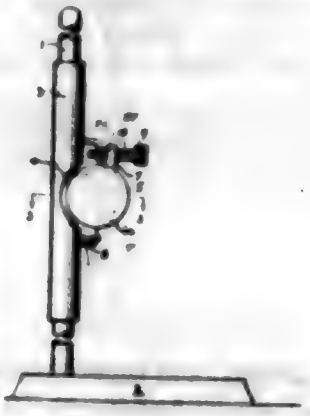
1. Mounting means for removably securing a display panel to a support comprising a substantially horizontal cross member, a plate member secured thereto, said plate member having an inclined cut-away portion along its upper edge to form a trackway and a stop member on its upper edge in spaced relation to the top of the incline, a panel having a headed stud extending outwardly therefrom, said stud head engaging behind said plate member with the neck of the stud movable from the lower portion of the incline to the upper edge of the plate member and into engagement with the stop member, said cross member being cut away behind a portion of said plate member to receive said stud.

2,863,625
PIPE OR TUBING SUPPORT OR HANGER
James W. Attwood, Wayne, Mich.
Application April 16, 1954, Serial No. 423,687
4 Claims. (Cl. 248—62)



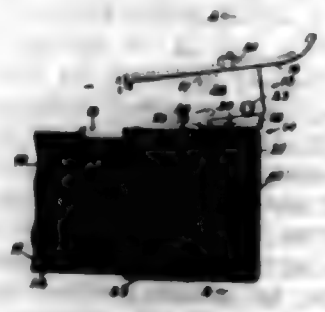
2. Means for supporting a tube or pipe, consisting of a fixed support having a longitudinal slot and having inwardly projecting flanges at the sides of said slot and a hanger consisting of a strip of sheet metal having a central rectangular pad portion provided with longitudinally extending tongues at diagonally opposite corners of said pad portion, said tongues being each provided in its outer edge adjacent the free end, with a notch, the outer wall of said notch being inclined inwardly of the notch, said tongues extending into said slot with said notches engaging said flanges, with the pad portion providing a loop embracing said tube or pipe.

2,863,626
ADJUSTABLE SUPPORT
Ralph A. Anderson, Perth Amboy, N. J.
Application January 4, 1955, Serial No. 479,792
2 Claims. (Cl. 248—125)



2. In an adjustable support, a base, a vertical support rod of circular cross-section, a close-fitting tubular element adapted for sliding movement along and around said rod, a cut-out at the front of said tube and between the ends thereof, a rotatable grooved wheel in said cut-out adapted for frictional rolling engagement with the front of said rod, an elongated member at the front of said cut-out and in the groove of said wheel, means for urging said wheel frictionally against the support rod, said means including a pivotal connection from one end of said elongated member to the front of said tube at one end of said cut-out, adjustable spring-tensioning means at the other end of said member connected with said tube at the opposite end of said cut-out, and a fixed bearing on said elongated member in the groove of said wheel for effecting sliding movement of said tube along said rod.

2,863,627
MOUNTING FOR TISSUE DISPENSERS IN AUTOMOBILES
Robert G. Bode and Charles A. Gelb, Chicago, Ill., assignors, by mesne assignments, to Gantner Industries, Inc., Morton Grove, Ill., a corporation of Illinois
Application November 24, 1954, Serial No. 471,823
1 Claim. (Cl. 248—278)



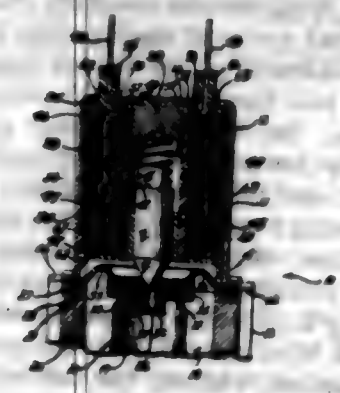
A mounting device for safely but swingably and removably holding a dispensing carton for disposable tissues under automobile dashes comprising a pair of laterally spaced L-shaped clip members each having a first leg and a second leg, the first leg of each member being adapted to be secured to the underside of the dash, a horizontal metal strap formed at each end with a pair of vertical ears extending in a common direction and embracing the second legs of said clip members, means pivotally connecting said ears one to each of said second legs to allow angular adjustment of the strap relative to the clip members in a vertical plane, each ear having an arcuate slot therein concentric with the pivot means, means carried by each second leg one engageable in each slot to limit such angular adjustment and to secure the strap adjusted, a bracket for a cartonholder, and a pin carried by and projecting from the strap

net element covering said opening, said bonnet element also having a flange, the periphery of said diaphragm being clamped between said flanges, said bonnet includ-

axially spaced from said first group to define an annular chamber therebetween, each group of sealing rings in-

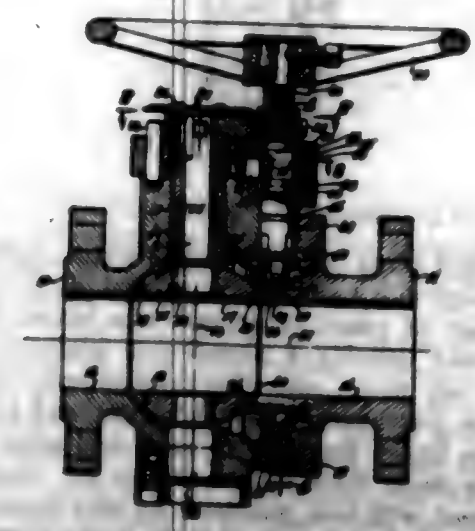
in a direction opposed to the ears interconnecting the bracket with the horizontal strap so that the bracket can swing in a horizontal plane.

2,863,628
INTEGRAL SOLENOID VALVE
Victor E. Rincho and James A. Kenal, Chicago, Frank E. Cerveny, Berwyn, and Forrest E. Wolf, Arlington Heights, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application March 14, 1955, Serial No. 494,138
3 Claims. (Cl. 251—30)



1. In an integral solenoid valve assembly, a housing having a partitioning member therein forming a pair of fluid passages and having an aperture therein for fluid communication between said passages, a valve seat surrounding said aperture, a valve closure block of resilient material having a pressure relief aperture therein, a solenoid assembly secured to said housing and cooperating therewith to secure said block in operative association with said valve seat, said solenoid assembly comprising a housing can having apertures therein, a coil form wound on a hollow spindle spool substantially sealed in said can, plug-in type terminals secured to said spool and extending through the apertures in said can, and an armature axially reciprocable in said hollow spool and arranged to close said pressure relief aperture in said block and to open the same whereby fluid pressures on said block are effective to move said block against said seat and away therefrom.

2,863,629
VALVE
Granville S. Knox, Glendale, Calif., assignor to Hydril Company, Los Angeles, Calif., a corporation of Ohio
Application August 2, 1956, Serial No. 601,771
18 Claims. (Cl. 251—171)



1. In a valve, an assembly including a body member forming a chamber having inlet and outlet passages for flowing fluid therethrough and a stopper member movable into and out of flow blanking closed position within the chamber, one of said members forming a cavity extending about a chamber flow zone and being blanked by said other member when the stopper is in said closed position, internally tenacious packing material in the cavity, means including a thrust ring movable to transmit pressure acting against one face of the packing for thrusting the packing opposite face toward and into sealing engagement with said other member when the stopper is in said closed position, and a control actuable to move the stopper to closed position and thereafter to move said first means to transmit said pressure in response to actuation of said control.

2,863,630
VALVE CONSTRUCTION
Albert F. Broz, Long Beach, Calif., assignor to Idaho Maryland Mines Corporation, San Francisco, Calif., a corporation of Nevada
Application May 6, 1957, Serial No. 657,264
8 Claims. (Cl. 251—173)

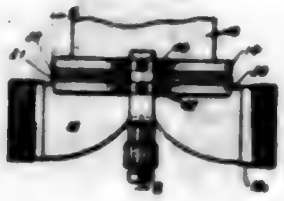
1. A valve for use in controlling the flow therethrough of either high or low pressure fluid, comprising: a tubular housing; a resilient cylindrical liner having a plurality of circumferentially spaced apertures formed therein positioned within said housing, which liner is of such external diameter that an annulus-shaped space is defined between said liner and housing; means that hold said liner and housing in said spaced relationship and close the ends of said annulus-shaped space; a transversely disposed shaft rotatably supported in said housing and extending through said liner; a circumferentially extending backing ring situated within the confines of said housing that is sufficiently wide to completely cover said apertures; a circular valve plate of greater thickness than the individual diameter of said apertures, which plate is rigidly affixed to said shaft and is of such diameter that when it is normally disposed relative to said liner the circumferentially extending face thereof, together with said backing ring, cooperatively compress a circumferentially extending portion of said liner to obstruct the flow of said low pressure fluid through said liner and when the pressure on said fluid rises sufficiently to cause seepage thereof between said plate and liner to enter said apertures and flow into said space on the downstream side of said plate said fluid in said space urges at least a portion of said liner inwardly on the downstream side of said plate with sufficient force thereagainst to completely obstruct fluid flow from the upstream to the downstream side of said plate; and means for rotating said shaft and plate to place said plate in or remove it from the position wherein it is disposed substantially normal relative to said longitudinal axis of said housing.

2,863,631
DIAPHRAGM VALVE
Henry W. Botsler, East Greenwich, R. I., assignor to Grinnell Corporation, Providence, R. I., a corporation of Delaware
Application October 29, 1956, Serial No. 619,824
9 Claims. (Cl. 251—331)

1. A diaphragm valve assembly including: a valve body element having substantially cylindrical end portions and having an opening at the center and on one side thereof, said opening being surrounded by a flange; a diaphragm disposed across said opening; a valve bon-

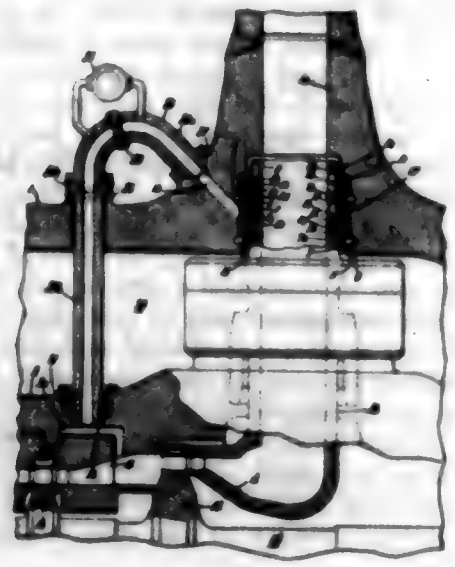
2,863,634

net element covering said opening, said bonnet element also having a flange, the periphery of said diaphragm being clamped between said flanges, said bonnet including abutment portions and alignment portions on opposite sides of said valve body opening; alignment portions on said body also on opposite sides of said opening; a clamping member having ends which are spaced apart by an amount greater than the outside diameter of said cylindrical end portions, said ends overlying and abutting the said bonnet abutment portions; a force exerting element between said clamping member and said valve body engaging the latter on its side thereof opposite said open-



ing, said force exerting element moving said clamping member with respect to said body to thereby clamp the bonnet element to the body element; and aligning portions carried by the clamping member cooperating with the said bonnet and body alignment portions to align the said bonnet and body elements, said alignment portions on the bonnet, body and clamping member constituting a bayonet-type connection, whereby said clamping member is movable in a direction towards one of the said cylindrical end portions only after it has been moved a predetermined distance in a direction substantially transversely of the plane of the said diaphragm.

2,863,632
SLIP RING EXPANSION JOINT
Edward H. Miller, Rexford, N. Y., assignor to General Electric Company, a corporation of New York
Application December 17, 1956, Serial No. 628,843
4 Claims. (Cl. 253—39)



4. In a turbine assembly comprising a first casing, a second casing disposed within said first casing and defining an intermediate chamber therebetween, the first casing having a wall defining an opening for receiving a high pressure inlet conduit and defining therewith a cylindrical recess, a sealing assembly for preventing the leakage of fluid through said cylindrical recess from said conduit to said intermediate chamber, the sealing assembly comprising a first group of sealing rings disposed in said recess and exposed to the fluid in said conduit, a second group of sealing rings disposed in said recess and axially spaced from said first group to define an annular chamber therebetween, each group of sealing rings including at least one ring having an inner circumferential surface sealingly engaging the outer surface of the conduit and an outer circumferential surface defining a first radial clearance space with the wall of the recess, and a second sealing ring disposed in the recess adjacent the first ring and having an internal circumferential surface forming a radial clearance space with the outer surface of the conduit and an outer circumferential surface in sealing engagement with the wall of the recess, first retaining means cooperating with the first group of sealing rings and casing for limiting axial movement of the first group of sealing rings, second retaining means cooperating with the second group of sealing rings and casing for limiting axial movement of the second group of sealing rings, a rotor in said inner casing and containing at least one bucket wheel, the wall of the inner casing defining a second opening downstream of said bucket wheel, the inner portion of said inlet conduit located in said inner housing and defining a nozzle opening for directing motive fluid to said bucket wheel, second conduit means interconnecting said second opening and said annular chamber for supplying fluid under a pressure intermediate the pressure in said inlet conduit and the pressure in said intermediate chamber, whereby the first group of sealing rings is subject to the differential pressure existing between the inlet conduit and said inner casing downstream of said first stage bucket wheel, and the second group of sealing rings is subject to the differential pressure existing between the pressure in the annular chamber and said intermediate chamber, and flow responsive means in said second conduit means for indicating the flow of fluid therein to readily detect excessive leakage past the sealing rings.

2,863,633
HOLLOW BLADES AND MANUFACTURE THEREOF
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Development Company, Bay City, Mich., a corporation of Michigan
Application April 19, 1952, Serial No. 283,160
8 Claims. (Cl. 253—39.15)

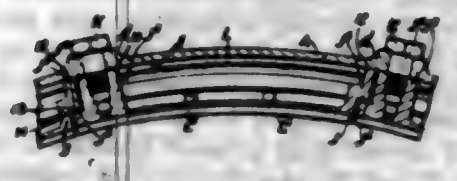
1. A hollow blade for use in compressors, turbines and the like comprising a pair of sheet metal plates each having a pattern of generally arcuate slits intermediate the length thereof defining a plurality of platelets in each plate with said plates extending continuously from each side of said platelets forming the upper and lower surfaces of the blade, the body of each said plate laterally of said slits being formed generally to the shape of the blade contour with said platelets and slits located at the nose portion of the blade, said plates being superimposed with the platelets of one plate projecting through said slits of the other plate and alternating with the platelets thereof forming passages for the flow of a fluid therethrough.

means for maintaining a constant tension in a winch cable said valve member to shift into its second-mentioned al-

2,863,634
SHROUD RING CONSTRUCTION FOR TURBINES AND COMPRESSORS

Reginald Henry Douglas Chamberlin, Ealing, London, and Jack Vallis Blyth, Ewell, England, assignors to D. Napier & Son Limited, London, England, a British company

Application December 7, 1955, Serial No. 551,583
Claims priority, application Great Britain December 16, 1954
5 Claims. (Cl. 253—78)

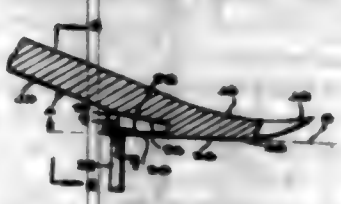


1. A shroud ring assembly for an axial flow turbine comprising a tubular cylindrical outer casing having an inner circumferential wall, and an annular shroud ring disposed coaxially within the outer casing, said shroud ring comprising a plurality of separate circumferentially aligned arcuate sections, each section having a fixed end formed with a circumferentially extending surface and a free end at its opposite circumferential extremity, means fixedly and immovably securing the fixed end of each said section in said casing with said circumferentially extending surface flush against said inner circumferential wall of the casing, the remainder of each said section, including its free end, being disconnected from said casing, the free end of each said section being in circumferentially spaced relation to said fixed end of an adjoining section, and having a portion normally abutting radially against the said inner circumferential wall of the casing and having a further circumferentially extending portion radially inwardly spaced from said first mentioned portion, and a circumferential sliding connection between each free end and the said fixed end of an adjoining section, said connection being provided by disposition of said further portion of the free end in slidable overlapping relation to said fixed end in a circumferential direction, thereby permitting circumferential expansion of said free ends but preventing radial inward deflection of said free end.

2,863,635
SURE GRIP COMBINATION BAR

Fred B. Fandrich, Jamestown, N. Dak.

Application June 8, 1956, Serial No. 590,236
1 Claim. (Cl. 254—25)

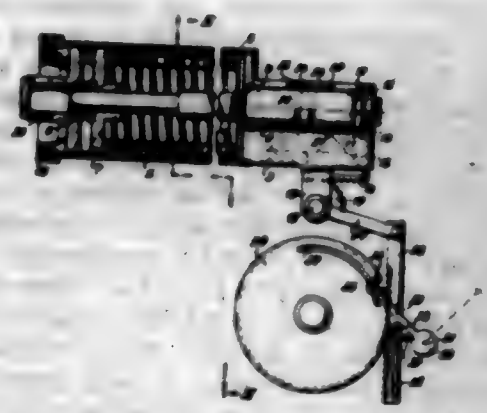


A tool of the class described comprising an elongated shank; a work-engaging end portion integrally formed upon at least one end of the shank and having a longitudinally curved, beveled, work-engaging tip at its outer end; and a lateral projection formed upon the shank at the inner end of said end portion, having a generally triangular configuration when viewed in side elevation, said projection being hollowly formed to define therein a recess and said recess being tapered in the sense of the direction of its length correspondingly to the generally triangular configuration of the projection, the recess opening upon the larger end of the projection and including a wall in confronting relation to the surface of said shank for engaging a supporting surface from which a nail is to be pulled, said wall of the projection being formed with a V-shaped slot opening at its larger end upon the larger end of the projection, the slot having walls extending into full convergence at the inner end of the slot in the sense of extension of the slots in the direction of their lengths, thus to provide a progressively reduced nail-receiving space between the walls of the slots in which space the shanks of nails may be engaged with the heads of the nails in the recess, said walls of the slot being convergent, when the projection is seen in cross section, in a direction away from the outer surface of the wall of the recess and toward the adjacent, confronting surface of the shank whereby the width of the slot at any location along the length thereof is greater where the slot walls intersect with the inner surface of said wall of the recess than where the slot walls intersect the outer surface of said wall, thus defining undercut jaws at opposite sides of the slot engagable under the head of a nail and disposed to engage a maximum area of the underside of the nail head to distribute to the maximum extent the pressure exerted against the head during the extraction of the nail, said convergence of the slot walls further defining blade-like edges where the slot walls intersect with the inner surface of the wall of said recess, said blade-like edges lying in the plane of the underside of the nail head on engagement of a nail head by the jaws, to penetrate the shank of the nail at opposite sides thereof, said inner and outer surfaces of said wall of the recess being wholly planiform, and lying in parallel planes, over the full length of the slot, said end portion of the shank having an elongated, work-engaging face which is wholly planiform for the major part of the length of said end portion, fully from said projection to said tip, said face being coplanar with and constituting an extension of said outer surface of the wall of the recess, said face merging into the curved, corresponding face of the tip for requiring rocking of the projection only about axes falling upon the curved face of the tip.

2,863,636
WINCH WITH CABLE TENSION DEVICE

Martin Herrmann Emil Pape, deceased, late of Hamburg, Germany; Margarete M. J. Stollein, heir of two-thirds and Edda M. E. Stollein, heir of one-third of the estate of said Pape, assignors to Will Baensch, Hamburg-Altona, Germany, a firm

Application February 23, 1955, Serial No. 490,165
Claims priority, application Germany February 23, 1954
3 Claims. (Cl. 254—172)



1. In a hydraulic winch employing a cable drum and having a primary or pump part drivingly communicating with a secondary or motor part for rotating the cable drum and a control member for regulating the output of the primary part over a controlling range from maximum winding-up over a neutral setting to maximum unwinding, the improvement comprising automatic control

faces, said first resilient means being subjected to axial compression by said first pair of bearing surfaces when

other of said arms, said web having a slope greater than

means for maintaining a constant tension in a winch cable wound on the cable drum when winding-up or unwinding under load, said means comprising a housing structure defining first and second adjacent parallel cylinder spaces, said first of said cylinder spaces being in fluid communication with the outlet fluid pressure of the primary part, first and second interconnected pistons reciprocable in said first and second cylinder spaces, respectively, and operatively connected to the control member for correlated movement, spring means acting on said pistons urging the control member toward the maximum wind-up position, adjustable means adapted to pre-determine the force produced by said spring, a passage disposed in said housing communicating said first cylinder space with said second cylinder space at the position of said first piston corresponding to the neutral setting of the control member and said second cylinder space having means of communication for discharge of the fluid pressure within said second cylinder space only during movement of said pistons corresponding to the winding-up range of the control member.

2,863,637

FLUID-OPERATED SPUDDING MECHANISM

Herbert W. Thornburg, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Application March 28, 1956, Serial No. 574,410
6 Claims. (Cl. 255—10)

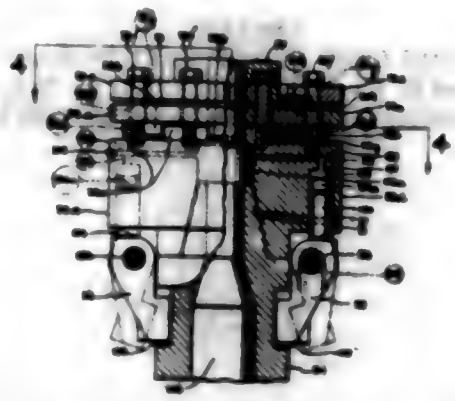
1. In a spudding mechanism, the combination of: a reciprocating spudder member adapted to impart vertical reciprocating motion to a tool; a pressure-fluid actuated cylinder-piston assembly connected to the spudder member to impart tool-raising motion thereto and including a main pressure-fluid chamber for tool-raising actuation of said assembly; a pressure-fluid source; a sump; a double-acting pilot pressure-fluid actuated reversing spudder valve; a pressure-fluid conduit connecting the spudder valve to the source; an exhaust conduit connecting the spudder valve to the sump; a cylinder conduit connecting the spudder valve to the main pressure-fluid chamber; said spudder valve having a pilot pressure-fluid actuated valve member shiftable alternatively (1) to connect the exhaust conduit to the cylinder conduit to exhaust the main pressure-fluid chamber, and (2) to block the connection of the exhaust conduit to the cylinder conduit and connect the pressure-fluid conduit to the cylinder conduit to actuate the cylinder-piston assembly to raise the tool; a first pilot pressure-fluid chamber in said spudder valve for actuating said valve member to shift onto its first-mentioned alternative setting; a second pilot pressure-fluid chamber in said spudder valve for actuating said valve member to shift into its second-mentioned alternative setting; a shiftable reversing pilot valve; means responsive to movement of the spudder member to shift the pilot valve; a first pilot conduit connecting the pilot valve to the first pilot chamber of the spudder valve; a second pilot conduit connecting the pilot valve to the second pilot chamber of the spudder valve; a pilot pressure-fluid conduit for supplying pressure fluid to the pilot valve; a first pilot exhaust conduit connected to the pilot valve to exhaust pressure fluid therefrom; a second pilot exhaust conduit connected to the pilot valve to exhaust pressure fluid therefrom; a throttle valve interposed in the second pilot exhaust conduit; said pilot valve having a valve member shiftable alternatively (1) to connect the pilot pressure-fluid conduit to the first pilot conduit and connect the second pilot exhaust conduit to the second pilot conduit and thereby direct pilot pressure fluid to the first pilot chamber of the spudder valve to shift the spudder valve member into its first-mentioned alternative setting and direct exhaust pilot pressure fluid from the second pilot chamber of the spudder valve through said throttle valve thereby retarding and controlling the rate of said shift of the spudder valve and controlling the length of stroke of the tool, and (2) to connect the pilot pressure-fluid conduit to the second pilot conduit and connect the first pilot exhaust conduit to the first pilot conduit and thereby direct pilot pressure fluid to the second pilot chamber of the spudder valve to shift the spudder valve into its second-mentioned alternative setting and direct flow of exhaust pilot pressure fluid from the first pilot chamber of the spudder valve unretarded by said throttle valve thereby achieving a rapid rate of shift of the spudder valve into said second mentioned setting.

2,863,638

ROTARY DRILL STRING APPARATUS

Herbert W. Thornburg, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

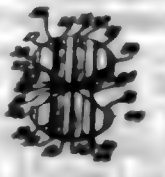
Original application August 14, 1953, Serial No. 374,364. Divided and this application April 19, 1955, Serial No. 502,397
6 Claims. (Cl. 255—19)



1. In a detachable torque-drive coupling device for coupling a rotary drive power means and the uppermost tubular drill-pipe section of a rotary drill string for transmitting rotation thereto and absorbing lateral and axial vibrations, the combination of: a rotary drive member associated with said rotary drive power means; a driven member having a detachable rotary-drive connection with the upper end of said uppermost drill-pipe section; interlock means providing a loose laterally flexible rotary-drive connection between said driving member and said driven member; a first pair of axially-opposed lateral bearing surfaces located one on and adjacent the lower end and the other on and adjacent the upper end of the driving and driven members respectively; first resilient means interposed between said first pair of bearing sur-

faces, said first resilient means being subjected to axial compression by said first pair of bearing surfaces when said driving and driven members are in mutual compression; a coupling member detachably connected in axially-fixed relation to one of said driven and driving members; a second pair of axially-opposed lateral bearing surfaces located one on said coupling member and the other on the other of said driven and driving members; second resilient means interposed between said second pair of bearing surfaces, said second resilient means being subjected to compression by said second pair of bearing surfaces when said driving and driven members are in mutual axial tension; a longitudinal hollow core for the passage of pressure fluid extending longitudinally through said driving member, said driven member, and said coupling member, to said uppermost drill-pipe section; said first resilient means forming a seal between the driving and driven members to prevent the escape of pressure fluid from said longitudinal hollow core.

2,863,639
CONCAVE MULTIPLE CUTTING EDGE ROCK DRILL BIT AND DIE
Leo Erodeson, Greenwood, Wis.
Application August 9, 1955, Serial No. 527,349
1 Claim. (Cl. 255—64)



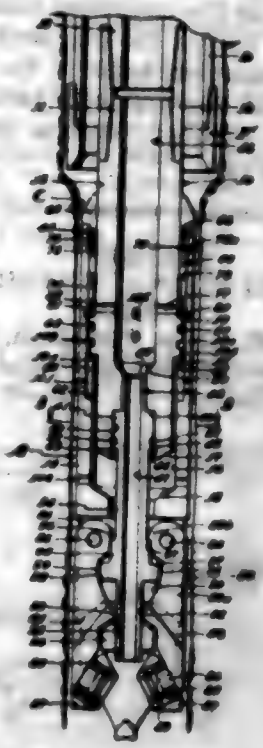
In a rock drill, the combination which comprises a cylindrical body providing a head having a rock drilling face on one end and a shank, the diameter of which is less than that of the head extended from the opposite end, the cylindrical head and shank having oppositely disposed substantially semi-circular shaped chip carrying channels extended longitudinally therethrough, the chip carrying channels being positioned in a longitudinally disposed plane extended through the axis of the drill head, the end of the chip carrying channels at the tip of the drill head blending into triangular-shaped grooves the vertexes of which terminate on the axis of the drill head, the cutting face of the drill head including a V-shaped ridge extended across the end surface of the head and through the longitudinal axis thereof, and additional V-shaped ridges spaced from the ridge extended through the longitudinal axis of the head and parallel thereto, the said triangular-shaped grooves at the ends of the chip carrying channels separating inner ends of the said additional V-shaped ridges, the vertexes of the V-shaped ridges being inclined inwardly from the periphery of the drill head to a point at the center or on the longitudinal axis providing a concave end surface on the cutting end of the drill head whereby the striking force is applied at the peripheral edge of the drill head thereby relieving the force at the center.

2,863,640
OFFSET BORING HEAD FOR AUGER
Gerald A. M. Petersen, Santa Clara, Calif.
Application November 18, 1955, Serial No. 547,698
6 Claims. (Cl. 255—69)

1. An auger comprising a drive shaft, a helical blade extending spirally upward from its lower end about said drive shaft, a pair of balanced cutting arms of substantially equal length extending substantially diametrically from said shaft below the lower end of the blade, and a ramp-like web attached to one of said arms having its upper end secured to the lower end of the blade in a plane substantially higher than the upper edge of the other of said arms, said web having a slope greater than that of the blade, thereby providing greater than one-half

pitch clearance between the upper edge of said other arm and that portion of the blade directly above it.

2,863,641
ROTARY EXPANSIBLE DRILL BITS
Archer W. Kammerer, Fullerton, Calif., assignor of one-fifth to Archer W. Kammerer, Jr., and one-fifth to Jean K. Lamphere, both of Fullerton, Calif.
Application January 24, 1956, Serial No. 561,898
14 Claims. (Cl. 255—76)

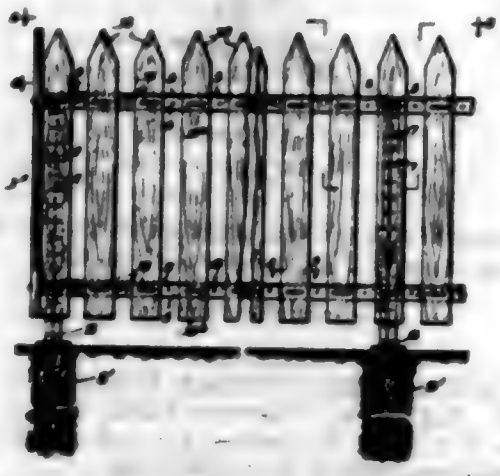


1. In a rotary drill bit: a main body; cutter means mounted on said body for expansion laterally outward of said body; means for expanding and holding said cutter means laterally outward, comprising a mandrel connectible to a drill string and having a central passage communicable with the drill string, and a cylinder on said body; said mandrel having an upper passage for feeding fluid under pressure from said central passage to said cylinder to elevate said body along said mandrel, and said mandrel having a lower passage opening into said cylinder and into said central passage below said upper passage and below the point of communication of said lower passage with said cylinder.

2,863,642
FENCE CONSTRUCTION
Louis W. Paget, Chicago, Ill.
Application May 10, 1955, Serial No. 507,245
11 Claims. (Cl. 256—22)

1. In a knockdown fence structure, the combination of a plurality of rails arranged in vertically spaced paral-

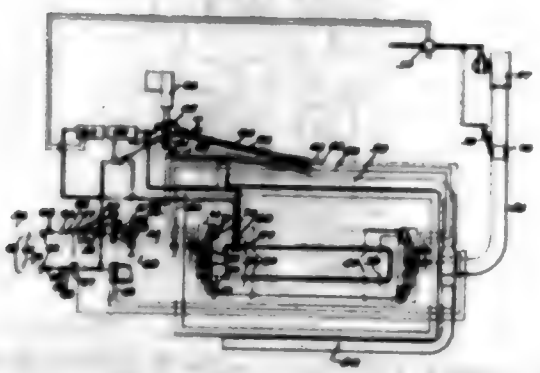
lel relation with their corresponding ends secured to horizontally spaced vertically extending fence posts, said rails each having a plurality of equally spaced transverse holes therethrough, a plurality of vertically extending fence members mounted on said rails in longitudinally spaced relation, said fence members having a plurality of pairs of holes therein, the holes of each pair being lateral-



ly spaced the same distance as adjacent pairs of holes in the rails, and said pairs being vertically aligned with corresponding holes in the respective rails, and U-shaped staples, each staple having the leg portions thereof extending through cooperable holes in the fence members and in the rails, with the free end portions of each of the staples having a clinch thereon for securing the fence members to the rails.

2,863,643
GALVANIZING FURNACE TEMPERATURE CONTROL

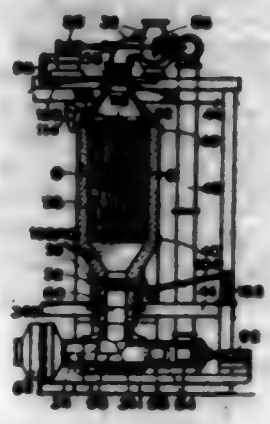
Oscar R. Olson, Pittsburgh, Pa.
Application September 6, 1952, Serial No. 308,268
5 Claims. (Cl. 257—4)



1. A kettle furnace control comprising operating burner means to deliver a combustible mixture to the combustion chamber heating the exterior of the kettle in said furnace, a line to deliver fuel under pressure to said burner means, a second line to deliver air under pressure to said burner means to support combustion, independent nozzle means to supply air to the combustion chamber in said furnace to cool the same, control means actuated by the temperature of the bath in said furnace to regulate the supply of heat to said combustion chamber and to shut off the supply of fuel and independent control means operated by the temperature of the bath to turn on the supply of air to said independent nozzle means to cool said furnace when it reaches a predetermined temperature, means actuated by said fuel control means to supply steam through the fuel line to said burner when the fuel is shut off thereto to heat said line and purge the same of fuel, and to shut off said steam when fuel is again supplied through said line to said burner means.

2,863,644
REGENERATIVE HEAT EXCHANGE APPARATUS

John Thomas Fallon, Olton, Birmingham, England
Application December 4, 1956, Serial No. 626,109
Claims priority, application Great Britain
December 5, 1955
6 Claims. (Cl. 257—6)



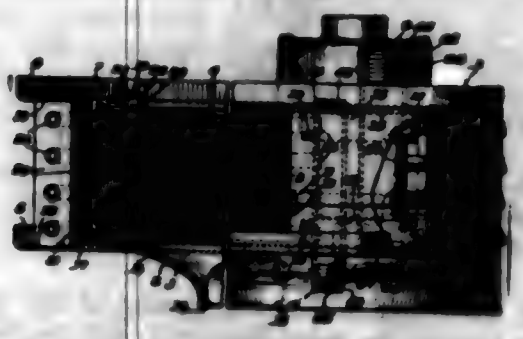
1. Regenerative heat exchange apparatus for transferring heat from a continuously flowing stream of hot gas to a continuously flowing stream of initially colder gaseous fluid, said apparatus comprising a rotatable structure; means for intermittently rotating said structure through half a revolution between a first and a second rest position; two identically similar regenerative heat exchangers, each comprising a casing containing heat-retentive elements and having an opening at each end, said exchangers being so symmetrically mounted on said structure as to interchange their positions exactly at each half revolution of said rotatable structure; a first fixed pipe for conveying said gaseous fluid to one heat exchanger, a second fixed pipe for conveying therefrom the fluid heated thereby, a third fixed pipe for conveying hot gas to the other heat exchanger, and a fourth fixed pipe for conveying spent gas therefrom, said pipes terminating in open ends which, when said structure is in a rest position, register respectively with each of the openings of said heat exchangers, so that hot gas and fluid to be heated flow through one and the other of said heat exchangers in counter-current; a first by-pass interconnecting said first and second pipes; a second by-pass interconnecting said third and fourth pipes; valve means operative to connect and disconnect said first by-pass and to close the open ends of said first and second pipes when said first by-pass is so connected; other valve means operative to connect and disconnect said fourth pipe to and from said second by-pass and to close the open end of said fourth pipe when said second by-pass is so connected; and means for so synchronizing the operation of all said valve means with the intermittent rotation of said structure that said by-passes are in circuit only when said structure is moving from one rest position to the other.

2,863,645
HEAT EXCHANGER MOUNTING

Benjamin Spieth, Racine, Wis., assignor to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Application November 16, 1953, Serial No. 392,301
3 Claims. (Cl. 257—137)

1. In a unit heater, the combination of a pair of opposed housing members having uniformly spaced annularly shaped planar portions adjacent their peripheral edges, a heat exchange structure of generally annular shape comprising inlet and outlet headers, fluid conducting tubes operatively connecting the respective headers, and fin elements carried by said tubes, spaced plate members affixed to said inlet and outlet headers for affixing the free ends of said heat exchanger structure together,

said fin elements having their corresponding end edges positioned in respective planes and engaged with the respective planar portions of the housing members, securing means connecting said housing members, operative to exert clamping forces on the heat exchange structure therebetween, spacing means for limiting such clamping forces



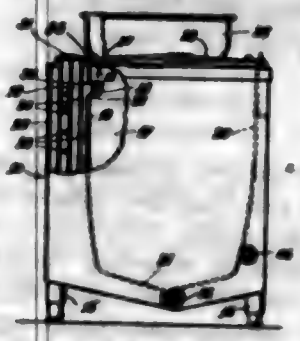
to a predetermined maximum, and certain of said securing means and spacing means operatively mounted with respect to said spaced plate members for affixing the heat exchanger to the opposed housing members at a predetermined location at which the inlet and outlet headers extend through the opposed housing members.

2,863,646

DISTRIBUTOR TROUGH FOR MILK HOLDING VATS

Eugene K. Nelson and Harold H. Nelson, Cedar Rapids, Iowa, assignors to Cherry-Burrell Corporation, Chicago, Ill., a corporation of Delaware

Application June 24, 1955, Serial No. 517,884
6 Claims. (Cl. 257—196)



2. The combination with a tank having a vertical plane-surfaced wall of a liquid distributor adapted to be mounted against said wall, said distributor comprising an elongated shelf-like member having a longitudinal edge adapted to be engaged against said wall to form a trough therewith, said member having a downwardly depending skirt along said longitudinal edge, said skirt being provided with a plurality of closely-spaced relatively-shallow lateral concavities with laterally disposed wall-engaging portions therebetween, said concavities and wall-engaging portions being of undulating contour to provide a smooth, easily cleanable surface.

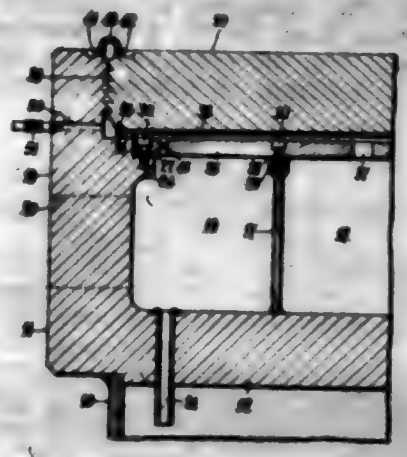
2,863,647

HIGH PRESSURE CLOSURE

Townsend Tinker, Orchard Park, N. Y., assignor to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware

Application December 2, 1955, Serial No. 550,646
6 Claims. (Cl. 257—221)

1. In a high pressure closure for vessels, a head member having inlet and outlet chambers, a cover member for said chambers, an outer cover member and means acting between the outer cover member and said vessel to transmit outward pressure forces acting against the outer cover member to said vessel, and a diaphragm between said cover members and abutting the inner surface of the outer cover member, said inner cover member having an opening therethrough at said inlet chamber whereby substantially equal fluid pressures prevail in said inlet chamber and between the first cover member and the diaphragm,



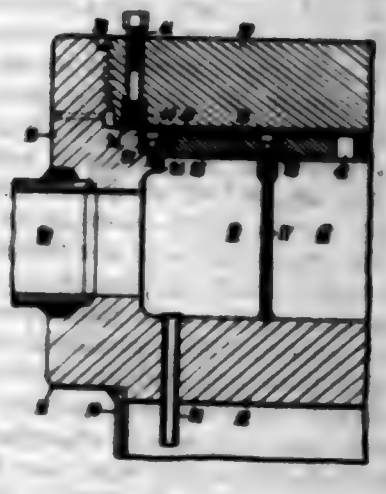
and a relatively restricted opening in said inner cover member at said outlet chamber to establish a restricted fluid flow in the space between said cover members from the first mentioned opening to said relatively restricted opening.

2,863,648

HIGH PRESSURE CLOSURE

Townsend Tinker, Orchard Park, N. Y., assignor to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware

Application December 2, 1955, Serial No. 550,648
3 Claims. (Cl. 257—221)



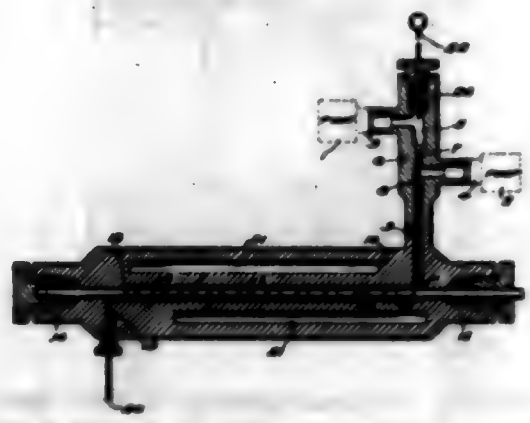
1. In a closure for vessels containing fluid under pressure, a head member having an outwardly opening cylindrical portion comprising inlet and outlet pass portions and a pair of coaxial stepped internal annular ledges at the outer ends of said pass portions, said cylindrical head portion being internally threaded outwardly of said ledges, an outer cover member having peripheral threads for engagement with said internal threads, an inner pass cover member seating on the inner of said ledges in sealing relation therewith, a diaphragm having a free annular outer marginal portion seating on the outer of said ledges and a compression ring seating against the outer surface of said annular marginal portion, and screw means acting on said compression ring to clamp said outer marginal diaphragm portion against said outer ledge in sealing relation therewith, the portion of said diaphragm radially inwardly of said annular marginal portion being in surface abutment with said outer cover member whereby outward fluid pressure against said inner diaphragm portion is transferred directly to said outer cover member.

2,863,649

EQUIPMENT FOR THE ACCURATE METERING, PROPORTIONAL BLENDING, THOROUGH MIXING AND DISPENSING OF MULTI-COMPONENT RESIN MIXTURES

Robert James Grubb and Lemuel Ellsworth Sentz, Jr., New Castle, Pa., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application June 30, 1955, Serial No. 519,087
1 Claim. (Cl. 259—9)



An apparatus for accurately proportionating, mixing, and metering compositions of short pot life comprising mixtures of several different resins whose individual component mixtures are stable until mixed which comprises, in combination, a proportionating structure comprising two vertical concentric tubes; flow passageways separately entering each of said tubes from the side; a reciprocating pump connected to each of said flow passageways, said pumps being accurately dimensioned and controlled to deliver predetermined quantities per unit time; a movable rod positioned at the top of the inner of said concentric tubes capable of moving along the central axis of said tube and being dimensioned so as to fill the said tube completely when moved into it in order to block said tube completely to the flow of one of said resin components; said flow passageways and concentric tubes being dimensioned in proportion to said predetermined quantities; a horizontal cylindrical mixing chamber into one end of which said concentric tubes open; a stirrer means filling most of said cylindrical mixing chamber and comprising a cylindrical rod journalled at the ends of said mixing chamber, said cylindrical rod having a periodically interrupted spiral ridge along its outer surface; said cylindrical rod being rotatable in a direction such that the motion of the said spiral ridge impels compositions injected through said concentric tubes into said mixing chamber back toward the exit from said concentric tubes and hence opposes the flow through the mixing chamber, the said flow being caused solely by said pumps; said mixing chamber being tapered at the end opposite the opening of said concentric tubes into a small horizontal passageway; said horizontal passageway having an exit passageway leading therefrom at an angle.

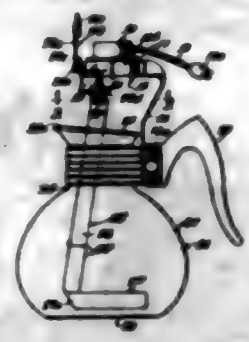
2,863,650

BEVERAGE AGITATOR

Harvey R. Karlen, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware

Application January 4, 1955, Serial No. 479,321
8 Claims. (Cl. 259—108)

1. For use in a beverage container, means for agitating beverage contained therein, comprising: motor drive means provided with a drive shaft; an agitator blade provided with a blade portion having an end connected to the drive shaft and arranged to extend the blade portion in a plane spaced from and parallel to the axis of the drive shaft, and a paddle portion extending angularly from the blade portion and arranged to extend in a plane parallel to the axis of the drive shaft and through the plane of the blade portion and be spaced from the drive shaft axis to produce an asymmetrical motion of beverage surrounding the paddle relative to



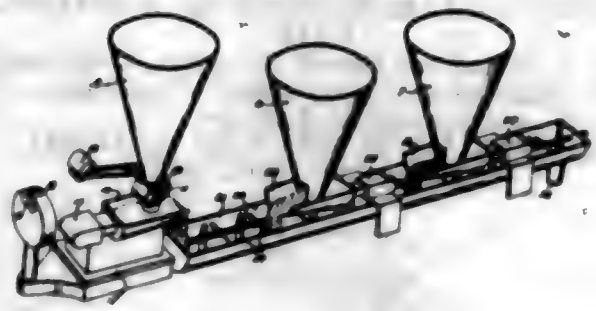
the drive shaft axis, whereby a portion of the beverage is moved toward the drive shaft axis, and another portion of the beverage is moved away from the drive shaft axis.

2,863,651

SOLIDS PROPORTIONING AND MIXING SYSTEM

Robert J. McBride, Milwaukee, Wis.

Application October 31, 1957, Serial No. 693,740
4 Claims. (Cl. 259—154)



1. In a system for the proportional mixing of solids including at least one free-flow solid and a solid having varying-flow characteristics, a bin for each of the solids, an electrically operated vibrating feeder receiving and discharging the free-flow solid only during energization of said feeder, a rotary vane feeder receiving and discharging the varying-flow solid, an electric motor operating the vane feeder, an electrically operated vibrating feeder receiving the varying-flow solid from the vane feeder and discharging upon energization of the vibrating feeder only, a single balance having a plurality of stationary contacts and a contact movable responsive only to the weight of the varying-flow solid on the vibrating feeder therefor, the movable contact engaging one stationary contact to open the motor circuit when such weight exceeds and engaging another stationary contact to open the circuit of all vibrating feeders when such weight falls below a given value, and a mixing conveyor receiving the solids from all vibrating feeders.

2,863,652

COMBINATION MECHANICAL EQUIPMENT SUPPORT AND INTERNAL WATER DISTRIBUTION PIPING SYSTEM FOR COOLING TOWERS

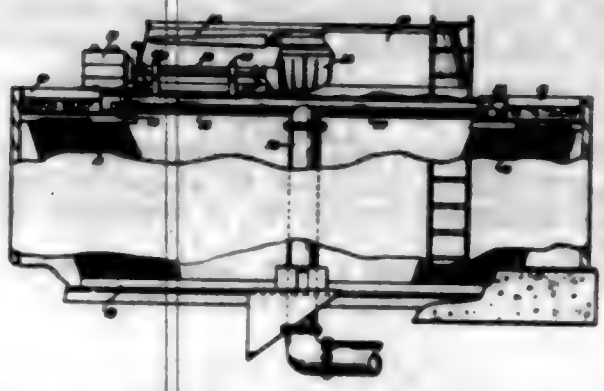
Leon T. Mart, Mission Township, Johnson County, Kans., assignor to The Marley Company, Kansas City, Mo., a corporation of Delaware

Application February 6, 1956, Serial No. 563,552
1 Claim. (Cl. 261—34)

Combination mechanical equipment and internal hot water distribution apparatus for use in hot water cooling structure provided with an upright tower having an air inlet, a pair of horizontally spaced supports in the upper part of the tower, an upwardly fanning air outlet between

retracted position substantially within said housing, and projection with the coolant inlet conduit and for th

said supports, a horizontal hot water distribution basin adjacent at least one of said supports, a cold water sump and a fill assembly in the tower between the basin and the sump, said apparatus being adapted to be hoisted from the ground as a complete unit and mounted in place in the upper part of the tower, and comprising an elongated, cylindrical lateral having load bearing characteristics and of somewhat greater length than the distance between said supports; a pair of longitudinally spaced mounting plates secured to the lateral in perpendicular relationship to the longitudinal axis of the same and spaced apart a distance substantially equal to that between the supports whereby the plates may be rigidly secured directly to respective supports with said lateral bridging the distance therebetween, at least one end of



the lateral extending outwardly from a respective plate, adapted to be positioned in overlying relationship to said basin and provided with an opening for discharging hot water directly from the lateral into the basin; a gear box rigidly mounted on, supported by and extending away from the lateral in axial alignment with said outlet medianly between said plates and adapted to rotatably mount a horizontal fan; a motor rigidly mounted on and supported by the lateral adjacent one of the plates; shaft means carried by the lateral operably interconnecting the gear box and said motor; and an elongated, upright supply riser serving to bear some of the load of the apparatus, disposed within the tower and communicating with the lateral substantially medianly between said plates for supplying hot water to the lateral.

2,863,653

APPARATUS FOR INTRODUCING GAS INTO WATER

Charles R. Cummings, Drexel Hill, Pa.

Application May 8, 1957, Serial No. 657,901
3 Claims. (Cl. 261—36)

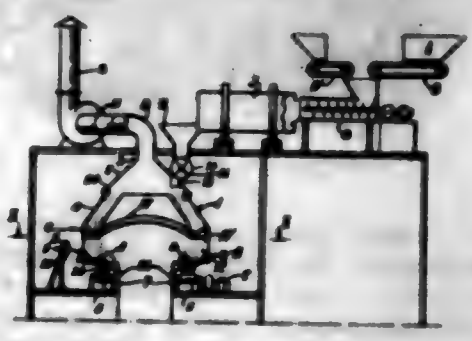
1. Apparatus for introducing gas into water, comprising an upstanding casing including a first bottom, said bottom having an inner opening, said casing having water inlet opening means arranged above said bottom, a second bottom arranged beneath the first bottom in spaced relation, an upstanding wall arranged between the first and second bottoms and connected therewith, said wall having a substantially circularly curved portion and an involute portion forming therewith a nozzle, said wall forming a suction chamber having communication with the opening in the first bottom, said suction chamber having communication with said nozzle, a centrifugal fan operating within the suction chamber, means to drive the fan, a gas supply chamber arranged outwardly of and near the nozzle and having its outlet opening facing in the same direction with the discharge of the nozzle, a gas supply pipe leading into the gas supply chamber, and a foraminous element surrounding the wall in spaced relation and forming therewith an outer chamber.

2,863,654

MANUFACTURE OF PORTLAND CEMENT, LIME AND THE LIKE

Reginald Vernon Bosi, Strood, and Lewis Henry Bisbey, Shoreham-by-Sea, England, assignors to The Associated Portland Cement Manufacturers Limited, London, England, a British company

Application June 18, 1956, Serial No. 592,145
Claims priority, application Great Britain August 29, 1955
8 Claims. (Cl. 263—32)



1. Heat treatment apparatus comprising an annular heat treatment chamber having openings at the top and bottom thereof respectively to permit through-flow of hot gases; means mounting said chamber to revolve bodily about a vertical axis; an annular shelf located in the base portion of said chamber and upon which material to be heat treated may build up into an annular bed extending up through said chamber; stationary feed means located above said chamber for charging discrete modular material into the top of said chamber to deposit said material uniformly on the top of said annular bed during bodily rotation of said chamber; an inlet for hot gas communicating with said opening in the bottom of the chamber; an exhaust hood connected to said opening in the top of the chamber for removal of exhaust gases therefrom; a discharge outlet for treated material in the base of said chamber; and discharge means for positively discharging treated material through said discharge outlet, said discharge means comprising a plurality of discharge members mounted at the bottom of said chamber to revolve with said chamber and to move relatively to said chamber, and means automatically operable upon revolution of said chamber to actuate said discharge members in succession so as to effect continuous discharge of treated material through said discharge outlet.

2,863,655

CENTRIFUGALLY RESPONSIVE ACTUATOR

Harold M. Frederick, Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application May 17, 1956, Serial No. 585,567
1 Claim. (Cl. 264—17)

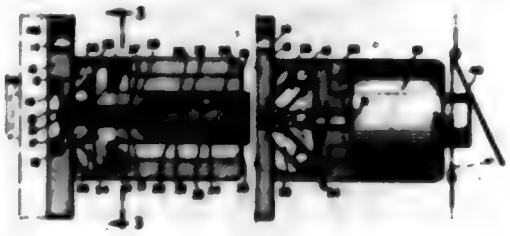
A centrifugally responsive actuator comprising: an annular base, said base having means for attachment thereof to a rotating element, an axial bore, a plurality of slots radiating from said bore, and grooves in the walls defining said slots, said grooves forming ball races extending angularly outward from said bore; a ball mounted in each of said ball races; a tubular housing telescopically and snugly fitted over said base; a plunger axially mounted in said housing for slidable movement between a normal

tion and its second concealed position, a second window a cylinder having a forward end and a rear end provided element pivotally mounted on a horizontal axis on said with

larly from the blade portion and arranged to extend in

part of the tower, an upwardly flowing air outlet between

retracted position substantially within said housing, and an extended position in which a portion projects from the outer end of said housing, said plunger having a stepped axial bore therethrough, the walls forming the enlarged portion at the outer end thereof being threaded; radially disposed projections on said plunger and positioned in said slots against said balls; a coil spring extending through the smaller portion of the bore of said plunger, and having one end fixed to said base and the other end secured to said plunger for urging said plunger to its retracted position against said balls; and means for adjusting the tension of said spring whereby, in response to the centrifugal action of said balls at a preselected speed of rotation of the rotating element, said plunger may be projected axially from its retracted to its extended position, said adjusting means comprising a screw threadedly received within the threaded portion of the bore of said plunger and having a stepped axial bore therethrough, a flanged plug element extending through the bore of said screw, the flange of said plug seating on said step preventing it from passing completely through said screw, said plug element having a slotted projection extending towards said base, and a pin by which the end of said spring is secured to said plunger within said slot, said pin extending transversely through said projection and into longitudinal slots provided in the walls of said plunger, whereby said plug element is prevented from rotating during turning of said screw for presetting the tension of said spring thereby to adjust the speed at which said plunger will respond to the centrifugal force of said balls, and a lock screw threadedly received within the threaded portion of the bore of said plunger from the outer end thereof and having a conical portion engaging the rim of the axial bore in said adjusting screw in a manner to hold said adjusting screw against rotation during operation of the actuator.



2,863,656

INJECTORS FOR FURNACES

Isaac Eugene Cox, Kirkwood, Mo., assignor to American Brake Shoe Company, New York, N. Y., a corporation of Delaware

Application September 20, 1955, Serial No. 535,501
6 Claims. (Cl. 266—41)

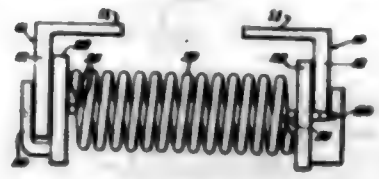
1. An injector for discharging fluid into a combustion area comprising, means affording an inlet conduit for coolant, means affording an inlet conduit for said fluid outwardly concentric to said inlet means for coolant, means affording a return conduit for coolant outwardly concentric to said fluid inlet means, and a cap on the end of the injector that is to be disposed toward the combustion area, said cap including a head having a front face that is to be exposed to the combustion area and having spaced fluid discharge passages therein, means affording a central coolant chamber in said cap in communication with the coolant inlet conduit and for directing coolant forwardly against the center portion of the head of the cap, a chamber for said fluid in said cap surrounding the coolant chamber and adapted to receive fluid from said fluid inlet conduit, means affording spaced apart nozzles for supplying fluid from said fluid chamber to the spaced passages in the head of the cap, means on the cap for causing coolant directed centrally against said head as aforesaid to flow toward the outer portions of said head and then rearwardly past said nozzles to the return conduit means for the coolant, a stuffing box tightly coupled to said return conduit and slideably mounted concentrically on said fluid inlet conduit and affording an outlet chamber for return coolant concentric to said fluid inlet conduit, and another stuffing box tightly coupled to said fluid inlet conduit and slideably mounted concentrically on said coolant inlet conduit and affording an inlet chamber for said fluid.

2,863,657

TORSION SPRING SUSPENSION

Russell G. Altherr, Hazelcrest, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application April 5, 1955, Serial No. 499,365
19 Claims. (Cl. 267—58)



1. In a torsion spring suspension for vehicles, a vehicle support structure having depending arms, axially aligned bearing means carried by said arms, spring clips pivotally mounted on said bearing means, each of said clips having a pair of oppositely facing abutments extending inwardly therefrom and angularly displaced from each other at least about 90 degrees, a spring between said clips in engagement with said abutments, each of said spring clips having associated therewith a crank arm, said crank arms extending in opposite directions for opposed pivotal movement with a load is placed on the vehicle, a plurality of pins within aligned holes of each clip and its associated crank arm to anchor them in a fixed position relative to each other, the longitudinal axes of said pins being approximately radial to the rotational axes of the related clips, an annular recess in each clip radially inwardly of the related pins to receive the latter upon the removal thereof.

2,863,658

AUTOMOBILE WINDOW MECHANISM

James Moyes, Pleasant Ridge, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

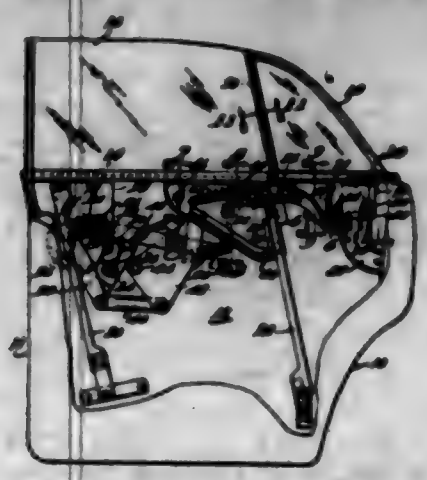
Application October 4, 1955, Serial No. 538,366
1 Claim. (Cl. 268—104)

In a vehicle body having lower body structure and a top structure cooperating with said lower body structure to define a window opening having a leading and a trailing portion, said lower body structure having a window well with an upper entrant portion formed therein; a first substantially vertical rectangularly shaped window element movable between a first exposed position in which it closes a leading portion of the window opening to a second concealed position in which it is retracted through said upper entrant portion and is positioned in said window well, guiding mechanism carried by said lower body structure, said first window element including cooperating means operatively connected to said guiding mechanism to guide said first window element in a generally vertical path for movement between its first exposed posi-

combination of: a block member; a hardened metal in-

2,863,662

tion and its second concealed position, a second window element pivotally mounted on a horizontal axis on said lower body structure in the vicinity of the trailing edge of the window opening for rotary movement between an exposed position in which it closes a trailing portion of the window opening and a concealed position in which it is retracted through said upper outrunt portion and is positioned in said window well, said second window element having a sector shape with a leading straight edge in alignment with a trailing edge of said rectangularly shaped first window element when said window elements are positioned to close said window opening and with a curved trailing edge which extends from the upper trailing corner of said first window element to a lower rear corner of said window opening when the window elements are in their respective raised, exposed positions, said second window element being located in a plane parallel to the plane of said first window element so that an overlapping relationship is maintained between said window elements as said second window element is rotated about its horizontal axis, linkage operatively connecting said second window element and said first window element to induce rotary movement of said second window element toward its concealed position as an incident to movement of said first window element in its above



mentioned generally vertical path, said linkage inducing such rotary movement of said second window element at a rate relative to movement of said first window element such that as said first window element is retracted into said window well a progression of points on the above mentioned curved trailing edge of said second window element register in an overlapping relationship with the upper trailing corner of said first window element, said curved trailing edge of said second window element having a curvature preselected so that as each point thereon registers in an overlapping relationship with the upper trailing corner of said first window element every other point on said curved trailing edge is, at that time, located at an elevation lower than the elevation of said upper trailing corner of said first window element thereby to define a visible upper margin of said windows which is of gentle, uninterrupted curvature, said linkage also serving as an interlocking means to prevent lowering of said window elements at any other relative rate whereby registry at all times of one point on said curved trailing edge of said second window element with the upper trailing corner of said first window element is assured, and operating mechanism operatively connected to said first window element and adapted to selectively impart movement to said first window element in its said path.

2,863,689

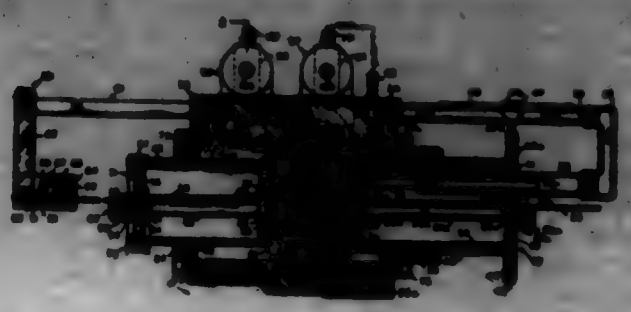
STEP-BY-STEP STOCK FEEDER

Nicholas Chuy, Detroit, Mich.

Application August 5, 1957, Serial No. 676,286

10 Claims. (Cl. 271—2.5)

1. In a stock feeder for use with an automatic material processing machine comprising, in combination with a cylinder having a forward end and a rear end provided with aligned openings, hollow shafts extending reciprocably through said openings of the cylinder ends, a piston reciprocably mounted in said cylinder and interposed between and connected to adjacent ends of said hollow shafts, fluid pressure actuated gripping dogs reciprocably mounted radially in said piston in opposed relation to one another, spring means urging said gripping dogs away from one another toward released positions, said piston having an opening extending therethrough and disposed crosswise of the gripping dogs forming a passage for stock in strip form, spring means connected to and disposed externally of the cylinder and connected to the hollow shaft which extends through the forward cylinder end for urging the piston toward a retracted position adjacent the rear cylinder end, and stock locking means supported by said cylinder and disposed in advance of the forwardmost position of movement of the hollow shaft which extends through the front cylinder end, said stock locking means including a slot through which the stock is fed and gripping means permitting the stock to be fed through the stock locking means away from the cylinder and preventing movement of the stock through the stock locking means toward the cylinder; means for supplying a fluid medium under pressure to the piston for moving said gripping dogs into gripping engagement with the stock, and means for subsequently supplying a fluid medium under pressure to the cylinder between the piston and the rear cylinder end for moving the piston and the stock forwardly in a direction toward the front cylinder end.



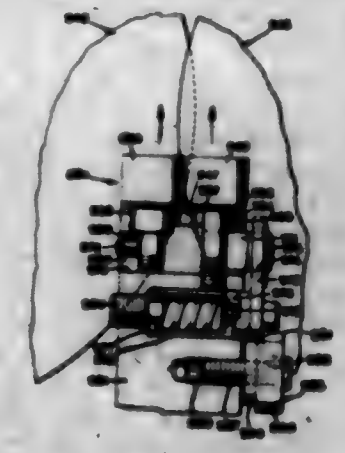
2,863,660

STRIP SHARPENING MACHINE

Charles Delafontaine, North Hollywood, Calif., assignor to The Bank of America National Trust and Savings Association, Los Angeles, Calif., a national banking corporation

Original application March 12, 1951, Serial No. 215,127, now Patent No. 2,709,874, dated June 7, 1955. Divided and this application April 29, 1955, Serial No. 504,913

4 Claims. (Cl. 271—2.6)

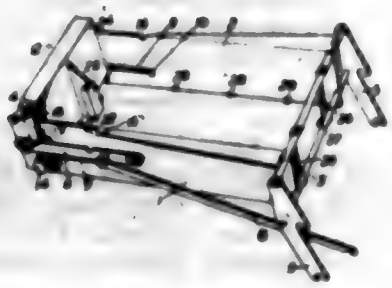


1. In a strip sharpening machine, means for guiding a moving strip having a sharpened edge and an unsharpened edge and for holding the same against a bearing surface as the strip travels thereacross, comprising the

supporting means, a first set of numbers on said first selecting member, a second set of numbers on said first pieces in transit, said game pieces being of various shapes

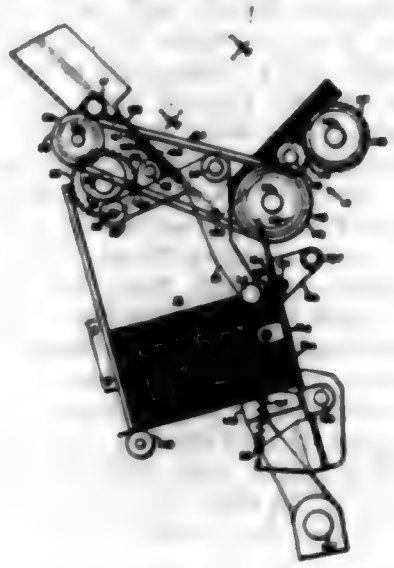
combination of: a block member; a hardened metal insert in the block member providing a plane bearing surface across which the unsharpened edge of the strip travels; a pair of shafts mounted on said block member in parallel relation, the axes of the shafts being canted on an angle with respect to the plane surface of the metal insert, the first of said shafts being rigidly secured to the block member; resilient mounting means for the second of said shafts, said means including a pin transversely slidable in a bore in the block member and carrying the said second shaft with the axes of the pin and the shaft in mutually perpendicular relation, the pin having a central longitudinal groove through which the first shaft passes, an arm secured to one end of the pin, a plunger secured to the arm and slidable in a second bore in said block member parallel to said first bore, a spring element compressed in a central bore extending axially in said plunger, so that the plunger, arm, pin and second shaft are normally urged in a direction towards said first shaft; and a roller journaled on each of said shafts forming a bite therebetween through which the strip is passed, the angular inclination of the shafts and of the rollers being such as to apply a component of force to the strip in a direction towards the plane surface of the metal insert to hold the unsharpened edge of the strip in contact therewith.

2,863,661
INTERLEAVING DEVICE FOR A DUPLICATING MACHINE
Henry John Picking, Chingford, England, assignor to Gestetner Limited, London, England, a British company
Application June 27, 1956, Serial No. 594,222
Claims priority, application Great Britain May 31, 1956
18 Claims. (Cl. 271—44)



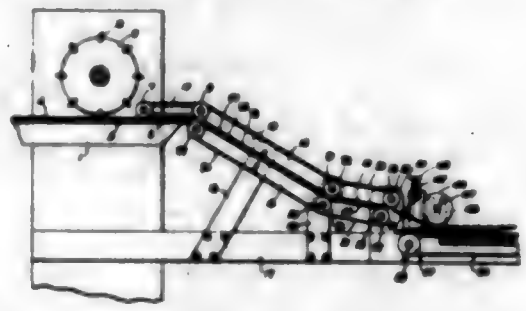
1. An interleaving device for use with notched cards of different lengths comprising a box-like main frame open at the bottom; a plurality of stationary spaced card support means projecting inwardly of said main frame and adapted to support a stack of cards; a secondary frame mounted in said main frame so as to constitute an end wall thereof and positionable in a plurality of fixed spaced positions in said main frame whereby to accommodate cards of different lengths; means for retaining the secondary frame in each of said spaced positions; a horizontally movable card-engaging slide mounted in said secondary frame and adapted to engage and move the lowermost card of said stack to a position in which notches in the lowermost card align with said card support means; means carried by said device cooperating with a notch in said cards for holding the upper cards of a stack of cards disposed in said main frame against horizontal movement as successive bottom cards are removed from the bottom of said stack by said slide; and means, operable when the secondary frame is in any of the said spaced positions, for reciprocating the slide horizontally.

2,863,662
SHEET FEEDING AND HANDLING DEVICE
Michael Fiehl, Endicott, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application October 12, 1956, Serial No. 615,688
20 Claims. (Cl. 271—61)



1. Apparatus of the class described comprising record card storage means, a card hopper, feed means associated with said storage means for feeding cards contained in said storage means to said hopper, card aligning means disposed adjacent said hopper and operative to engage the cards therein to align the same, and sensing means carried by said card aligning means and responsive to the quantity of cards fed to said hopper for controlling said feed means.

2,863,663
DELIVERY END MECHANISM
Augustus J. Richards, Cleveland, Ohio, assignor to Bonar-Vawter, Incorporated, Cleveland, Ohio, a corporation of Ohio
Application December 1, 1955, Serial No. 550,343
4 Claims. (Cl. 271—69)



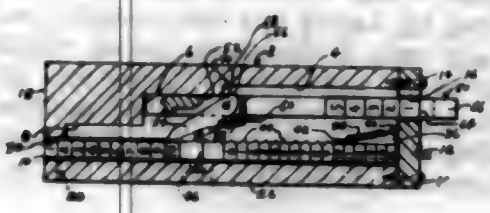
2. In delivery end mechanism of the class described, in combination, form pack feeding devices operable to deliver form packs, form pack group separating and carry-off instrumentalities to receive form packs from the devices, said instrumentalities being spaced a sufficient distance from the devices to enable the form packs to be entirely out of contact with the devices, and air blast means directed from above the packs for guiding form packs from said devices downwardly to said instrumentalities.

2,863,664
GAME
Lloyd T. Jones, Detroit, Mich.
Application April 29, 1955, Serial No. 504,779
18 Claims. (Cl. 273—1)

1. In a device of the class described, a supporting means, a first selecting member slidably mounted on said

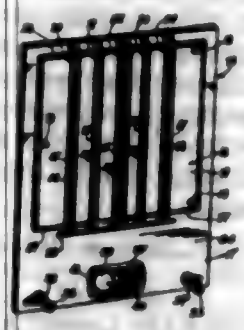
prising, in combination, means for supporting and rotat- laterally spaced generally parallel relation to each other

supporting means, a first set of numbers on said first selecting member, a second set of numbers on said first selecting member, a sighting means disposed adjacent said second set of numbers, a second selecting member slidably mounted on said supporting means, and a latch



pivotally mounted on said second selecting member for releasably engaging said first selecting member, whereby said second selecting member may actuate said first selecting member to move the second set of numbers on said first selecting member to a position opposite said sighting means.

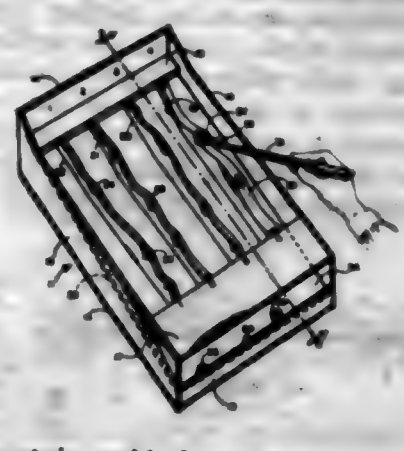
2,863,665
MAGNETIC THROW DART ELECTRIC SIGNAL
Salvatore R. Geraccitano, Brooklyn, N. Y.
Application April 29, 1957, Serial No. 655,792
1 Claim. (Cl. 273—102.2)



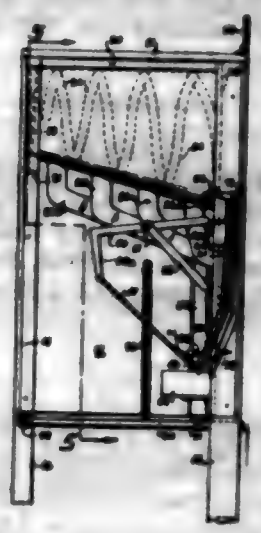
A magnetic throw dart game, comprising an electrically non-conductive flat board, a target sheet formed of magnetically susceptible material secured to the board, said sheet having a layer of insulation material thereon, a plurality of electric wires mounted on the board in a single plane in mutually spaced flat parallel coplanar array, said plane being parallel to the plane of the board, a flange encircling said target sheet and supporting said wires resiliently and tautly parallel to said sheet and spaced therefrom, a signal device carried by the board, a source of alternating electric current having opposite terminals connected in circuit with alternate ones of said wires and said signal device, and a magnetized dart adapted to contact an adjacent coplanar pair of said wires simultaneously to close said circuit and operate said signal device while adhering to said sheet by magnetic attraction thereto.

2,863,666
GAME APPARATUS
George L. Aronson, Winthrop, Mass.
Application December 8, 1955, Serial No. 551,955
7 Claims. (Cl. 273—108)

1. A game of manipulative skill comprising a common starting zone, a common finishing zone, a plurality of spaced courses spanning said zones, the longitudinal playing surfaces of said zones and courses being continuous, a plurality of movable game pieces and a separate manipulating instrumentality, said courses being of various widths and grades, said surfaces supporting said game pieces in transit, said game pieces being of various shapes, sizes, and dimensions, said instrumentality providing manual means for moving said pieces from zone to zone over said courses and for holding said pieces on said courses.



2,863,667
GAME DEVICE
Willard E. Betts, Rocky Mount, N. C.
Application April 25, 1955, Serial No. 503,679
2 Claims. (Cl. 273—125)



1. In a coin operated game device having a substantially rectangular enclosure, a playing area divided into a plurality of scoring portions, means for receiving the playing balls to be scored and means connecting the scoring portions with the ball receiving means; the combination of coin actuated means for releasing playing balls from the ball receiving means, elevator means for lifting the balls one at a time, a chute provided to receive the balls lifted by said elevator means, a starting zone adjacent said chute means for receiving the ball, said starting zone comprising a vertically disposed passageway having a confined lower end defining an aperture, the upper end of said passageway connecting the front end portion of said playing area, said playing area comprising a horizontally disposed cone-like barrel member, resiliently urged means for penetrating said aperture in the passageway whereby a ball positioned therein is driven upwardly through said passageway into one end of said cone-like barrel member, and a mirror to close the end of said barrel member remote from the ball entering end.

2,863,668
APPARATUS FOR ESTABLISHING CONCENTRIC OPERATION OF PHONOGRAPH SOUND GROOVES
Robert P. Lathrop, Chevy Chase, Md.
Application April 21, 1953, Serial No. 350,195
14 Claims. (Cl. 274—9)

1. Apparatus for effecting concentric operation of the sound track grooves in phonograph record disks com-

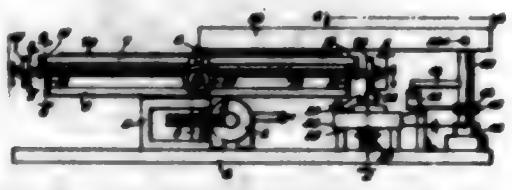
2,863,671
METHOD AND DEVICES OF HORIZONTAL

2,863,674
ASSEMBLY FOR FIFTH-WHEEL CONNECTION

slide horizontally.

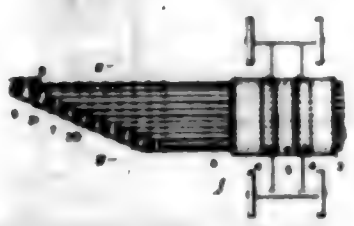
means, a first selecting member slidably mounted on said

prising, in combination, means for supporting and rotating a phonograph record disk in a given plane about the axis of rotation, means for shifting a record radially in any direction relative to such axis so that eccentricity of the sound track grooves may be reduced, detecting means controlled by the motion of the record grooves so as to respond to eccentricity of the grooves only when the direction of eccentricity during the course of rotation of the record disk is in a predetermined fixed rotative



relation to said detecting means, and actuating means in fixed rotative relation to said detecting means and controlled thereby for actuating said shifting means so that said shifting means is selectively actuated in accordance with the rotative position of the disk supporting means corresponding to the rotative position of the eccentricity of the record disk to which the detecting means is responsive thus introducing an eccentricity in the disk supporting means which compensates for the eccentricity of the grooves of the record disk.

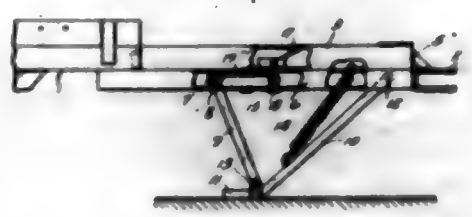
2,863,669
VEHICLE PROVIDED WITH ROTARY DISTRIBUTING DEVICE
Bartold Pieter Allerman, Den Andel, Netherlands
Application December 28, 1954, Serial No. 476,515
2 Claims. (Cl. 275—2)



1. In a vehicle provided with a distributing device for powdered or granulated materials arranged below the discharge opening of a container and extending across the vehicle and comprising support means, a plurality of pulley shafts carried thereon, belts and pulleys carried by said shafts, said belts being disposed one after another in the direction of travel of the vehicle and having their inner pulleys generally in line and their outer pulleys in stepped relation whereby to provide belts of mutually different distributing ranges, means to rotate the pulleys at the inner ends of said belts for causing movement thereof, a deflecting device for the discharge end of each distributing belt comprising a vertically disposed blade wheel and a plurality of blades arranged thereon and rotating with the wheel, the axis of one belt outer pulley being in line with the axis of the next adjacent blade wheel, and means operatively connected to the outer pulley of one belt and to the blade wheel of the adjacent belt to drive said blade wheel.

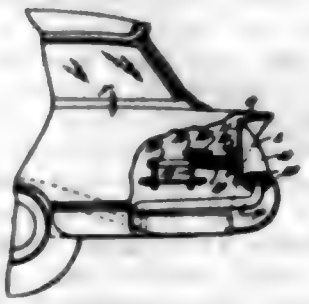
2,863,670
RETRACTABLE SUPPORT FOR TRAILER DRAWBAR
Walter N. Larson, Grove City, Minn.
Application August 16, 1957, Serial No. 678,476
1 Claim. (Cl. 280—150.5)

A pair of opposed cross-sectionally channel-shaped guide rails rigidly secured to the frame of a trailer in laterally spaced generally parallel relation to each other and extending generally longitudinally of said trailer rearwardly of and in general longitudinal alignment with the hitching tongue thereof, a roller-equipped head mounted on said rails and movable longitudinally thereof, an arm carried at its inner end by said head for swinging movements about an axis extending transversely of said rails, a supporting leg having one end pivotally secured intermediate said rails in forwardly spaced relation to said head and on an axis parallel to the axis of swinging movement of said arm for swinging movements from a depending operative position to a rearwardly and upwardly retracted inoperative position, said leg adjacent



its free end being provided with a rearwardly projecting skid, means pivotally securing the outer end of said arm to said leg adjacent said skid, a winding drum journalled in and extending transversely of said rails intermediate said head and the pivotal connection of said leg to said rails, an elongated flexible cable on said drum connected to said head, a coil tension spring biasing said leg toward a retracted inoperative position, rotation of said drum in one direction causing said leg to swing downwardly and forwardly toward its extended supporting position against the bias of said spring, and manually operating pawl and ratchet mechanism associated with said drum for releasably locking said drum against rotation in the opposite leg-retracting direction.

2,863,671
COMBINATION TAIL LAMP AND FUEL TANK INLET ASSEMBLY
David E. Scott, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application March 9, 1956, Serial No. 570,653
6 Claims. (Cl. 280—152)



1. A vehicle body member having an opening therein adapted to receive a lamp assembly, means slidably mounting a lamp assembly on said body member to permit movement of the lamp assembly from a first position normally closing said body member opening to a second position interiorly of said body member whereby access may be had to the interior of the body member through said opening, resilient means resisting movement of said lamp assembly from said first to said second position, and means to latch said slidably mounted lamp assembly in said second position, said latch means including an over-center spring mechanism to retain the latch means in both a predetermined latched and an unlatched position.

comprising a port opening into said chamber, a valve

registering apertures in said coupling rings to bring said

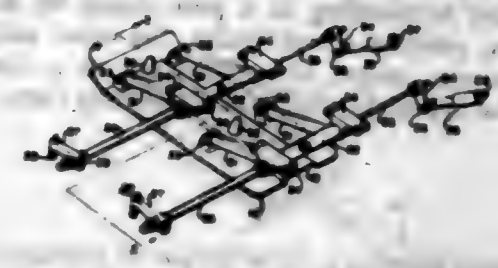
2,863,672
METHOD AND DEVICES OF HORIZONTAL ABSORBING OF SHOCK ON VEHICLES
Yoshimune Murata, Tottori-shi, Tottori, Japan
Application May 23, 1956, Serial No. 586,879
Claims priority, application Japan February 16, 1956
8 Claims. (Cl. 280—283)

1. In a two-wheel cycle provided with a front wheel suspension member and a rear wheel cargo supporting suspension member; a rigid main frame having a forward portion and a rearward portion, said forward portion of the rigid frame being pivotably secured to said front wheel suspension member, a flexible link rearward frame pivotably secured to said rearward portion of said rigid main frame and to said rear wheel suspension member, shock absorbing means extending from said rigid main frame to said deformable link rearward frame, said shock absorbing means further comprising first means for absorbing substantially horizontal shocks and second means for absorbing substantially vertical shocks relative to the plane of travel of said cycle, said rigid main frame further including a first horizontally disposed spindle pivotally secured to said front wheel suspension member, a first pair of substantially horizontal spaced bars having their forward ends secured to said first spindle, a second, horizontally disposed spindle secured to the rearward ends of said horizontal spaced bars, a second pair of substantially vertically spaced bars secured at their upper ends to said second spindle, a third, horizontally disposed spindle secured to the lower ends of said second pair of bars, and a third pair of curved spaced bars connecting said first spindle and said third spindle, said flexible link rear frame being pivotally secured to said second and third spindles.

2,863,673
TRAILER HITCH
Edward Lisota, Patterson, Calif., assignor, by mesne assignments to Hamlin, Henderson and Johnson, Incorporated, Modesto, Calif., a corporation of California
Application May 21, 1956, Serial No. 586,146
4 Claims. (Cl. 280—496)

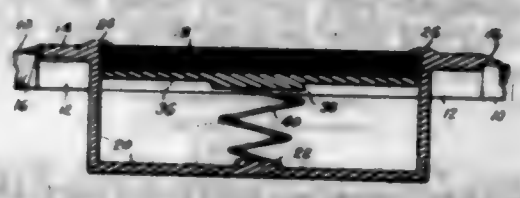
1. In a trailer hitch which includes one draft portion on a towing vehicle at the rear, another draft portion on a trailer at the front, and a universal disengageable coupling detachably connecting adjacent ends of said portions; a member pivoted in connection with said one portion for swinging about an axis vertically alined with said universal coupling, the member being formed with a rearwardly opening socket, a leaf spring slidably and removably fitted at its forward end in the socket and immovable relative thereto when the coupling is engaged and extending rearwardly therefrom, and a suspension element between the rear end of the spring and said other portion.

2,863,674
ASSEMBLY FOR FIFTH-WHEEL CONNECTION
Henry Bende, East Cleveland, Ohio, assignor to Curtis Manufacturing Company, a corporation of Missouri
Application October 28, 1957, Serial No. 693,593
25 Claims. (Cl. 280—439)



10. In a fifth-wheel assembly for connection between a tractor and trailer having the lower part of the fifth-wheel mounted on said tractor and the upper part of the fifth-wheel mounted on the trailer comprising in combination parallelogram link means pivotally connecting said trailer and said upper fifth-wheel part to provide for movement of said upper fifth-wheel part toward and away from said trailer and maintained in a plane parallel to said trailer, and torsion rod means operatively connected to said link means for resiliently restraining movement of said upper fifth-wheel part and trailer toward each other.

2,863,675
MEMORANDUM CARD HOLDER
Raymond L. Otte, Rainier, Oreg.
Application June 1, 1956, Serial No. 588,865
1 Claim. (Cl. 281—44)



A memorandum card holder comprising a plate, the plate having a central aperture therein, flanges extending inwardly from opposite side edges of the aperture at the top thereof, a U-shaped bracket depending from said plate and underlying said plate aperture, said bracket being dimensioned to receive a plurality of memorandum cards, a follower plate in said bracket upon which are seated a plurality of memorandum cards, spring means interposed between said bracket and said follower plate to bias said follower plate upwardly and urge the uppermost card into engagement with said flanges, a depending circular guide shoulder on said plate adapted to be received freely within a circular opening in the top of a table or the like for guiding the rotation of the plate, and a peripheral flange on said plate extending laterally of said circular shoulder and being dimensioned to rest slidably on the top surface of a table top surrounding an opening therein for rotatably supporting the plate with the bracket depending freely through the opening.

2,863,676
MULTIPLE BREAKAWAY SLIDE SEAL COUPLING
Theodore E. Upham, Jackson, Mich., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Application March 8, 1956, Serial No. 569,520
4 Claims. (Cl. 284—2)

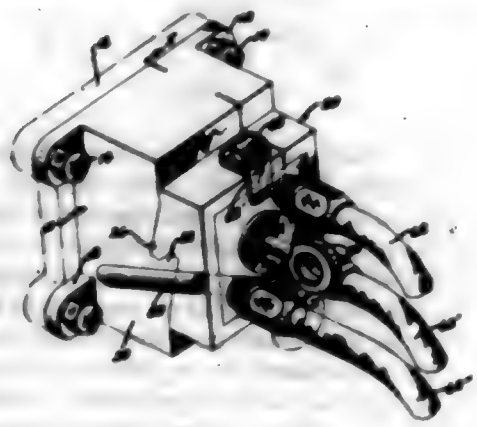
1. A coupling comprising in combination, a pair of opposed body parts, each having an interior chamber, one said body part having means for rigidly mounting this body part upon a relatively fixed structure, said rigidly mountable body part having at least one fluid conduit therethrough, one end of said fluid conduit

provided with annular end recesses having bottom walls

2,863,681

guide rails rigidly secured to the frame of a trailer in a predetermined latched and an unlatched position.

comprising a port opening into said chamber, a valve block slidably mounted in said chamber for movement from one position opposite said port and another position clear of said port, said other body part having a valve block slidable in the chamber thereof, said valve block having at least one fluid conduit therethrough, said conduit terminating in a port closed by said body part in one position of said valve, the other end of said conduit having means for connection to a hose, portions on the opposed body parts for holding them in inter-



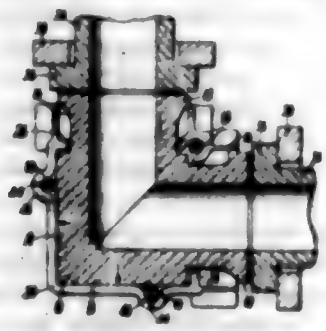
locked relation, portions on said valve block for holding them in interlocked relation whereby they are slidable together relative to said body parts, means on said other body part engageable with the valve block therein for holding the interlocked valve blocks in an extreme position in which the port in the valve block of the other body part is in register with the port in said rigidly mountable body part and means on said portions for releasing said body parts and their valve blocks after movement of said valve blocks to their other extreme position.

2,863,677

SEPARABLE CASING FITTING FOR CARBON PIPE

Albert F. Hauch, Cleveland, and Samuel H. S. Raub, Bay Village, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Application August 5, 1957, Serial No. 676,243
2 Claims. (Cl. 285—45)



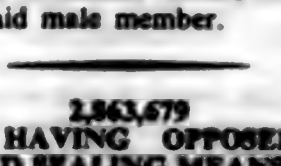
1. An armored fitting for connecting pipe of carbon composition having terminal flanges with gasket faces, comprising a solid walled hollow insert of carbon composition having angularly disposed outlet necks provided with gasket faces to mate with said pipe flange faces, a housing comprising complementary casing halves loosely surrounding said hollow insert and engaging the outer portions of said insert opposite said gasket faces, said housing having terminal annular flanges concentric with said outlet necks, carriage bolts out of contact with said carbon composition hollow insert securing said halves together, coupling rings surrounding the pipe outside of their terminal flanges, and means comprising take-up bolts perpendicular to said carriage bolts and having heads engaging the inner sides of said armor flanges and bridging over outside of said pipe flanges and passing through registering apertures in said coupling rings to bring said gasket faces together upon a gasket in fluid-tight relation and to place said core of carbon composition in compression between the gasket faces and the far inner walls of said armor housing.

2,863,678

COUPLING FOR DOUBLE-FLARED TUBES

Benjamin Gordon and Lyle E. Somers, Los Angeles, Calif.

Application December 27, 1955, Serial No. 555,610
4 Claims. (Cl. 285—332.1)



4. A coupling for effecting multiple independent fluid seals with a preformed compound flare formed in an end portion of a metallic resilient tube defined by a first inwardly disposed frusto-conical section and a second outwardly disposed frusto-conical section that progressively increase in internal diameter and are separated by a first circumferentially extending junction line, comprising: a tubular coupling body which includes a first male tubular member defined by first and second frusto-conical exterior surface portions that are separated by a second circumferentially extending junction line of slightly greater diameter than said first junction line, said first surface portion being of substantially the same configuration as the interior surface of said first section but slightly greater in length, said second surface portion being of substantially the same configuration as the interior surface of said second section but disposed at a slightly wider angle relative to the longitudinal axis of said body than that of the interior surface of said second section relative to the longitudinal axis of said tubing, with said body having first threads formed on the exterior thereof inwardly from said second surface portion; and a sleeve having second threads formed on one interior end portion thereof, a first frusto-conical face formed on the opposite interior end portion of said sleeve that tapers at substantially the same angle as that of the exterior surface of said first section and adapted to engage same, but the maximum diameter of said face being substantially less than that of said first junction line, with a second circumferentially extending face formed on the interior of said sleeve that extends between the inwardly disposed extremities of said first face and said threaded end portion a greater distance than the length of said second surface portion, with said sleeve when said flare is disposed within the confines thereof and engagingly rotated relative to said first threads moving said first section by contact with said first face into fluid sealing contact with said first surface portion, with continued rotation of said sleeve stretching said first section within the elastic limits of said metal defining same to dispose said first and second junction lines in a common plane with said second section during said stretching and contacting said second surface portion to deform outwardly and fully contact said second surface and act as a second fluid seal and stop to further inward movement of said flare relative to said male member.

2,863,679

PIPE JOINT HAVING OPPOSED PACKING GROOVES AND SEALING MEANS THEREFOR

Calvin D. Dunbar, Houston, Tex.

Application September 10, 1954, Serial No. 455,336
2 Claims. (Cl. 285—336)

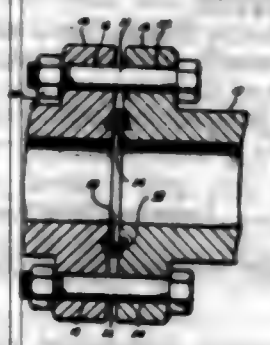
1. The combination with pipe sections disposed in end-to-end relation and having adjacent end portions

dially of the arcuate surface thereof to engage the sur- mediate the ends thereof and having the upper end fixed

other portion.

rigidly mountable body part having at least one fluid conduit therethrough, one end of said fluid conduit

provided with annular end recesses having bottom walls which converge radially outwardly and inner annular side walls, of a seal ring positioned between said end portions and having annular surface portions facing said bottom walls and which converge radially outwardly at an angle less than the angle between said bottom walls and also having inner annular surface portions facing said side walls and which diverge radially outwardly at an angle



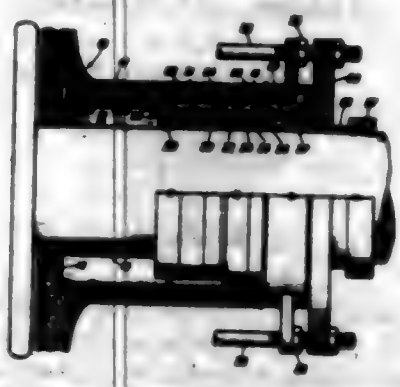
less than the angle between the said side walls, the difference between the angle between the bottom walls and the angle between said surface portions facing said bottom walls being less than the difference between the angle between said side walls and the angle between said surface portions facing said side walls and said surface portions facing said bottom wall being engageable with the bottom walls to limit movement of said end portions toward each other.

2,863,680

MECHANICAL SEAL FOR PUMPS

John A. Taltavall, Jr., Morgan, N. J., assignor to National Lead Company, New York, N. Y., a corporation of New Jersey

Application August 17, 1955, Serial No. 529,861
4 Claims. (Cl. 286—11.15)



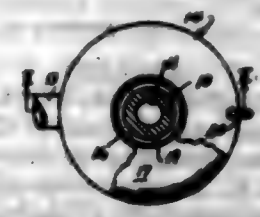
1. A mechanical seal for the rotating shaft of a fluid pump comprising in combination: a pump shaft housing having a sealed end wall and a pump shaft extending through said housing and said sealed end wall, adjustable sealing means for providing a fluid-tight joint between said shaft and the sealed end wall of said housing, said adjustable sealing means comprising a wear plate secured on the inner face of the sealed end wall of said housing, a sleeve mounted on said shaft, a sealing ring at the inboard end of said sleeve between said sleeve and said shaft, and a sealing ring assembly arranged to be mounted on the inboard end of said sleeve for rotation therewith, said sealing ring assembly comprising a second sealing ring and an adaptor, said adaptor being constructed and arranged to be removably secured to said sleeve to hold said second sealing ring adjacent the wear plate on the sealed end wall of said housing, said sleeve being constructed and arranged to be rotated by said shaft and to be movable longitudinally thereof to engage and releasably hold the second sealing ring of said sealing ring assembly in sealing engagement with the wear plate on the sealed end wall of said housing to form a fluid-tight joint therewith.

2,863,681

INFLATABLE SEAL FOR ROTATING SHAFTS

Davis Robbins, Ozarenta, Ala., assignor to Robbins Machine & Mfg. Co., Inc., a corporation of Alabama

Application October 4, 1955, Serial No. 538,413
3 Claims. (Cl. 286—26)



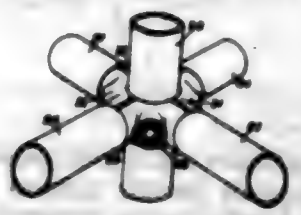
1. In a packing for a dust hood, a toroidal shaped housing secured to the dust hood in fluid tight relation, a hollow rotary shaft passing through the housing into the dust hood, said housing having an annular opening therein facing the shaft, means to introduce fluid under pressure into the hood, an annular inflatable tube mounted in the housing with at least a portion thereof extending through the annular opening in the housing, a solid annular sealing lip on the inner side of said tube terminating in a relatively thin inner edge facing inwardly toward the dust hood and adjacent the shaft, an inwardly facing surface of said lip being arcuate and forming a smooth continuation of the outer circumference of said annular tube, an outwardly facing surface of said lip forming an arcuate groove on the side of the tube facing the dust hood, said inwardly facing surface contacting the shaft when the tube is inflated with the force of fluid under pressure in said hood being exerted against the outwardly facing surface of said lip to press the inwardly facing surface tightly against the shaft and thereby prevent the escape of fluid around the shaft, a dust outlet in a side of the dust hood, and means to inflate and deflate the tube.

2,863,682

EXPANSION JOINT APT TO CONNECT FOUR OR MORE TUBULAR ELEMENTS LYING IN PLANES ORTHOGONAL TO EACH OTHER, ONE OF THEM BEING A CONTINUOUS TUBULAR ELEMENT PASSING THROUGH THE JOINT

Agostino Canepa, Milan, Italy

Application April 13, 1955, Serial No. 501,866
Claims priority, application Italy May 11, 1954
8 Claims. (Cl. 287—54)

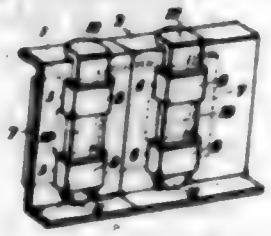


1. An expansion joint for connecting an intermediate portion of one continuous tubular member to an end of at least one other tubular member with the axes of the tubular members intersecting each other at a common point; said expansion joint comprising, in combination, at least two joint elements constructed to be disposed in end to end relation around an intermediate portion of a continuous tubular member and having circumferentially extending arcuate inner surfaces arranged to embrace substantially the entire circumferential periphery of such intermediate portion, and conjointly providing an unobstructed passageway for the continuous tubular element to extend completely through and to each side of the expansion joint; said members having relatively elongated wings extending from their adjacent ends in parallel relation to each other for insertion into an end of another tubular member to be joined to such continuous tubular member; and a pressure element threaded through at least one of said elements substantially ra-

a fan in said fan housing, motor means connectable to latching direction into holding engagement with said

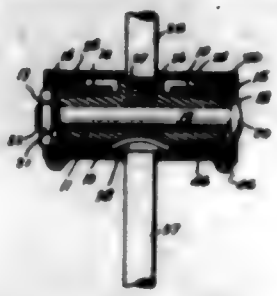
dially of the arcuate surface thereof to engage the surface of such continuous tubular member to force said one element away from such surface to force said wings apart and into pressure engagement with the inner surface of such other tubular member to pressure lock said tubular members together.

2,863,683
CONNECTING MEANS
Walter B. Peterson and Frederick G. W. Ullberg, Jr., Philadelphia, Pa., assignors to Rome Cable Corporation, Rome, N. Y., a corporation of New York
Application December 28, 1955, Serial No. 554,265
3 Claims. (Cl. 287—54)



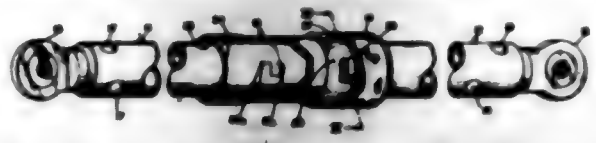
1. Means for detachably connecting together two bar lengths or the like in abutting relation, comprising a plate-like element adapted to be placed against the two bar lengths at one side across the region of their juncture, said connecting element having at least one laterally off-set loop projection adjacent each end thereof to fit through prelocated openings respectively adjacent the abutted ends of the two bar lengths; and retaining key elements passed, with a force fit, respectively through the loop projections of the connecting element at the opposite side faces of the two bar lengths.

2,863,684
ARTIFICIAL LIMB ANKLE JOINT ASSEMBLY
Howard M. Carroll, Forest City, N. C.
Application October 5, 1956, Serial No. 614,280
3 Claims. (Cl. 287—97)



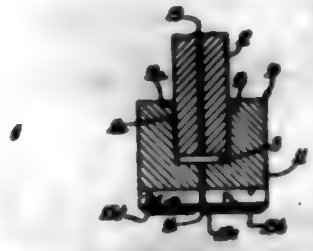
1. An artificial limb ankle joint assembly comprising a horizontally disposed spindle support member having a bore extending longitudinally therethrough, said support member having a tapered bearing surface extending inwardly from each end thereof, a bearing element rotatably supported on each of said bearing surfaces and having a portion adjacent one end projecting beyond the adjacent end of said support member, a take-up mounting bolt extending through the bore of said support member and having a head on one end abuttingly engaging the projecting end portion of one of said bearing elements, a lock nut abuttingly engaging the projecting end portion of the other of said bearing elements and threadably attached to the other end of said bolt, a sleeve circumposed about and embracingly engaging said bearing elements, said sleeve having a closed slot therein, an upright angle bolt extending perpendicularly through said sleeve slot and between said bearing surfaces and having the lower end fixed to said support member, means on the upper end of said ankle bolt for securing said ankle bolt to the ankle portion of an artificial limb, an upright heel bolt extending perpendicularly from said sleeve intermediate the ends thereof and having the upper end fixed to said sleeve, and means on the lower end of said heel bolt for securing the latter to the heel portion of an artificial limb.

2,863,685
HIGH-STRENGTH LIGHT-WEIGHT QUICK-DISCONNECT COUPLING FOR A LINKAGE SYSTEM
William C. Boyce, Dallas, Tex., assignor to Chance Vought Aircraft, Incorporated, Dallas, Tex., a corporation of Delaware
Application January 30, 1956, Serial No. 560,378
12 Claims. (Cl. 287—104)



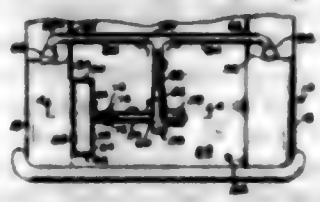
1. A high-strength light-weight quick-disconnect coupling for transmission of tensional, compressional, and torsional forces comprising, two rod segments having detachably interlocked hooked ends for transmitting tensional forces, two sleeve members, both of said sleeve members being axially slideable on said segments and telescopic with respect to each other, one of said sleeve members having a locking slot therein, and the other of said sleeve members and one of said rod segments having locking pin members cooperative with said slot to lock one of said sleeve members over said interlocked ends.

2,863,686
ROCK DRILL BIT
John Stanley Edgar, Saint Catharines, Ontario, Canada, assignor to Thompson Products, Ltd., Saint Catharines, Ontario, Canada, a corporation of Ontario
Application April 27, 1954, Serial No. 425,938
2 Claims. (Cl. 287—126)



1. A drill assembly comprising a metal drill bit body having a wall portion defining a shank-receiving socket therein, a metal shank press-fit into said socket and having a wall portion engaging the socket wall portion, and a thin crystalline coherent lubricant coating of a metallic phosphate salt chemically bonded to at least one of said wall portions in the area of engagement therebetween.

2,863,687
NON SKID SAFETY DEVICE
Isak Bonis and William Trumpeter, Bronx, N. Y.
Application December 6, 1954, Serial No. 473,300
1 Claim. (Cl. 291—3)



A non-skid particle dispensing device comprising an upwardly open hopper for containing particles to be dispensed, and having a discharge outlet at a lower portion thereof, a delivery duct engaging at one end said discharge outlet for receiving particles therefrom, a fan housing connected to another end of said delivery duct,

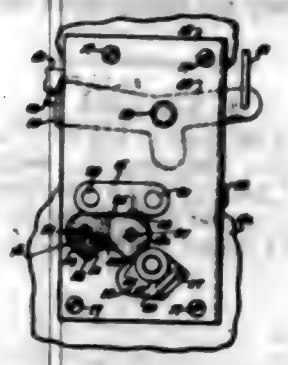
a fan in said fan housing, motor means connectable to a power source for rotating said fan so as to induce suction in said fan housing and in said delivery duct, supplementary air induction intake means constructed and arranged in said delivery duct intermediate its ends for allowing air induction into said delivery duct and said fan housing upon operation of said fan and for inducing movement of particles from said hopper through said delivery duct into said fan housing, the said fan being constructed and arranged with impeller blades engageable with said particles as they enter said fan housing, discharge pipe means connected at one end to said fan housing for receiving said particles as they are engaged by said fan impeller blades and impelled thereby out of said fan housing into said discharge pipe means, and discharge nozzle means connected to said discharge pipe means for discharging said particles under the ultimate impulsion of said fan impeller blades.

2,863,688

DOOR LATCHING MECHANISM

Waldemar A. Endter, Long Beach, Calif.

Application June 14, 1954, Serial No. 436,459
1 Claim. (Cl. 292—221)



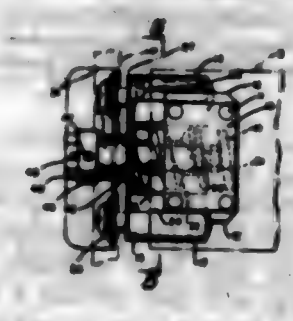
A dovetail latch mechanism comprising a keeper adapted to be mounted to a support member, and a bolt structure to be mounted to a door which is mounted for horizontal swinging movement relative to said member in opening and closing directions; said keeper having a generally upwardly facing first bearing surface at its upper side having a portion disposed essentially parallel to the direction of essentially horizontal closing movement of the door; said keeper having a second surface facing generally downwardly at its underside, said bolt structure including an essentially vertically extending mounting plate adapted to be mounted on the free edge of the door and containing a slot, means forming a projected downwardly facing bearing surface on said plate at the outer side thereof and engageable downwardly against said first keeper surface, a swinging plate-like arm pivotally attached to the inner side of said mounting plate for swinging movement parallel to the mounting plate about an essentially horizontal axis which remains continuously fixed relative to the mounting plate, a bolt projecting horizontally from said arm and through said slot at a level spaced substantially below the level of said axis and substantially below the level of said downwardly facing projected bearing surface and carried by the arm for swinging movement therewith in latching and antilatching directions about said fixed axis, said keeper being adapted to pass vertically between said projected bearing surface and said bolt upon door closing movement with said first and second bearing surfaces on the keeper engaging said projected bearing surface and said bolt respectively, said second keeper surface having one portion inclined in a first direction and adapted upon door closing movement to initially engage the bolt and deflect it in antilatching direction and away from said projected bearing surface, said second keeper surface having a second portion inclined in the opposite direction and along which the bolt will then advance in latching direction into holding engagement with said second inclined portion to retain the door closed, said bolt having a surface facing at an upward inclination substantially directly toward said fixed axis and which bears toward said axis against said second inclined portion of said second keeper surface in latched position of the bolt, said second inclined portion of said second keeper surface being curved essentially arcuately in correspondence with the path of pivotal movement of the engaged bolt surface about said fixed axis, and a spring continuously urging said arm and bolt in latching direction to yieldingly resist said deflection thereof in antilatching direction and then latch the bolt in holding engagement with said second inclined portion of said second keeper surface, said bolt in its fully latched position creating a direct pull at an upward inclination toward said axis and against said second inclined portion of the second keeper surface to resist opening movement of the door and at the same time hold said projected bearing surface of the mounting plate tightly against said first keeper surface in a tight dovetail relation, said fixed pivotal axis of the bolt, in all conditions of the mechanism, being spaced above the level of said projected bearing surface and said first keeper surface, and said projected bearing surface and the engaging first keeper surface, in latched condition of the mechanism, having engaging portions intersecting a line extending directly between said axis and the keeper engaging portion of the bolt so that the bolt pulls the keeper at an upward inclination directly toward and into tight engagement with said projected bearing surface.

2,863,689

EJECT-INJECT LOCK MECHANISM

Richard W. Grant and Milton H. Rosengard, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application December 31, 1956, Serial No. 631,967
6 Claims. (Cl. 292—251)



1. An inject-eject latch mechanism comprising, in combination: a strike plate adapted for disposition on a stationary structure; a latch carried by a movable structure; a plurality of grooves in said strike plate; a housing for said latch; a worm gear carried by said housing and adapted for cooperation with said grooves; tongue and groove means on said plate and said housing respectively for maintaining lateral engagement between said worm gear and said grooves; means for rotating said worm gear whereby to effect engagement between said gear and said grooves; and releasable means carried by said rotating means and cooperable with said housing for locking said gear against rotation.

2,863,690

FITTINGS FOR COUPLED WINDOWS

Gunnar Eric Werner Lewin, Viggobyholm, Sweden, assignor to Aktiebolaget Atvidaberga Bestlagsredningar, Stockholm, Sweden, a company of Sweden

Application September 6, 1956, Serial No. 608,299
Claims priority, application Sweden November 4, 1955
5 Claims. (Cl. 292—302)

1. A double detachable window sash and sill comprising a first window sash member, a second window sash

member, a sill, and a latch comprising a first fixture for attachment to said first window sash, said first fixture including a fixed member having a hole therein, a locking plate slidably supported against said fixed member, said locking plate having a hole therein corresponding to the first said hole, a lever having an actuating arm and pivotally mounted on said fixed member and means coupling said lever to said locking plate to cause sliding movement of said locking plate in response to rotation of said lever, the actuating arm of said lever extending outwardly of the edge of said fixture when the two said holes

in said fixture are in alignment and said arm being arranged to rotate to a position within the projection of the outline of said fixture; and a second fixture for attachment to said second window sash, said second fixture comprising a pin having a transverse groove therein, said pin being adapted to fit in the holes in said first fixture, said latch being placed in the edge of said double window sash to fasten said two sash members together with said arm extending from an edge of said first sash member in such a way that the closing of said sash will cause the window sill to depress the actuating arm of the latch thereby locking the window sash together.

2,863,691
CHICKEN COOP
Ose F. Carpenter, Brightwood, Va.
Application June 25, 1956, Serial No. 593,728
1 Claim. (Cl. 292—348)

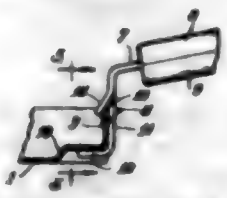
In a chicken coop of the type having an access opening normally closed by a door having sliding and swinging movement toward its closed position, automatic latching means for said door comprising a cam latch fixedly mounted on said body adjacent to one edge of said access opening, said door having a bore in one edge thereof, a U-shaped keeper plate extending into said bore, said U-shaped keeper plate including a pair of spaced parallel legs integrally connected by a bight with said bight positioned innermost in said bore and a wing integrally formed on the end of each of said legs opposite said bight, each of said wings being outwardly reverted to lie in spaced generally parallel relation to said legs, said wings and said legs engaging over and clamping portions of said frame member therebetween to secure said keeper on said frame member, said cam latch engaging said keeper plate during closing movement of said door and being received between said keeper plate legs when said door is in closed position, and spring means biasing said door and said keeper plate for sliding movement of said door toward its closed position.

2,863,692
ADJUSTOR FOR THE RECEPTION OF LOCK CATCHES
Oswald Wyndham Mann, Montreal, Quebec, Canada
Application August 23, 1956, Serial No. 605,879
1 Claim. (Cl. 292—341.18)

In an adjustor for the reception of a lock catch, a door jamb having a recess forming a catch chamber, a strike plate secured to said door jamb and encircling the recess formed therein and having an offset portion, a strike plate adjustor formed of a flat strip having one end turned outwards to form a lip with a slight bevel and provided with a vertical slot adjacent to the lip, said strike plate adjustor adapted to be introduced at any desired vertical location between the offset portion of said strike plate and said door jamb in such a way that the lip portion thereof will be wholly and the slot portion at least partially located in the catch chamber, and adjusting self locking inserts formed of flat pieces of

stiff material of varying thicknesses, each insert having a vertical section provided with an integral lateral strip set at an angle from the vertical section, said inserts adapted to be introduced into the slot of said strike plate adjustor and to be self locked therein and to come into abutment with the lip portion of said strike plate adjustor and the edge of the strike plate so as to form adjustable holding spacers between the lip and the strike plate, the lip portion of the strike plate adjustor forming a contact surface for engagement with said lock catch at all times.

2,863,693
COOKING UTENSIL
Fred C. Schwaneke, Chicago, Ill., assignor to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois
Application August 4, 1953, Serial No. 372,359
2 Claims. (Cl. 294—29)



1. A detachable handle for a flat bottomed utensil having upwardly extending sidewalls, comprising a metal stamping having an elongate hand grip portion, an angularly projecting tongue at one end of and wider than said hand grip portion, a flat forwardly projecting foot at the remote end of said tongue and having substantially the same width as said tongue, the included angle between the tongue and foot being substantially 90°, a pair of laterally spaced short fingers at a predetermined distance above said foot integral with said tongue, said fingers projecting forwardly and downward from the side margins of said tongue toward said foot at an acute angle to said tongue in a plane intersecting said foot, said fingers cooperating with said foot and tongue to permit insertion of the upper edge of a utensil sidewall in the fork defined by said tongue and fingers and to permit free pivotal movement of said foot through an arc defined by said fork to carry said foot from a position substantially outside the utensil to a position snugly engaging the utensil in underlying relation thereto.

2,863,694
(SEMI) AUTOMATIC PARACHUTE DETACH DEVICE
Reinhold Gross, Dayton, Ohio
Application February 6, 1956, Serial No. 563,815
9 Claims. (Cl. 294—83)
(Granted under Title 35, U. S. Code (1952), sec. 266)

5. A parachute detach device comprising a container having a hingedly mounted cover, two side walls, an open end wall and a closed end wall, a bottom wall having a longitudinal slot having a second transverse slot in connection therewith, a rotatable latch mounted in said con-

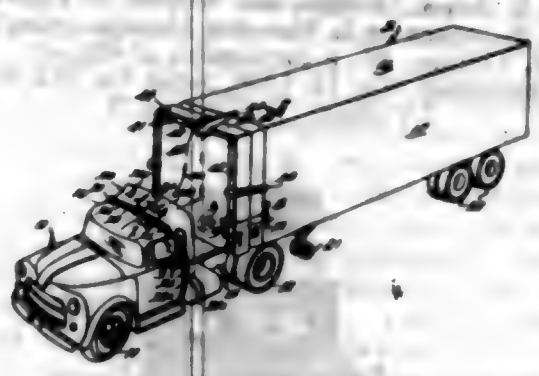
2,863,696

apart and radially opposed walls, the innermost of said

tainer, an adapter extending into the open end of said container and having a hook portion in engagement with said latch and connected to the parachute suspension lines, said latch having one portion engaged in said transverse slot, and a hole in said portion extending in a direction parallel to said longitudinal slot and in alignment therewith when said latch is engaged with said transverse slot, said container having a plurality of safety devices to prevent premature disengagement of said latch and said adapter, one of said safety devices including a safety wire rotatably mounted on the side walls of said container and having

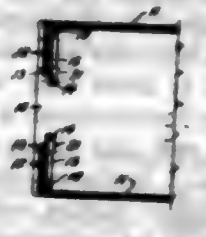
a flat spring extending across the end of said cover remote from its hinged mount, the second of said safety devices including a U-shaped spring attached to the underside of said cover and having a pair of projections in engagement with openings in said side walls and manually operable means in engagement with said projections to disengage the latter from said openings to release the cover, and the latch of said safety device including a safety pin frictionally held in the aligned longitudinal slot and transverse opening to retain said latch in its locked position and a pull cable and pull ring attached to said safety pin to remove the latter from its latch retaining position.

2,863,695
TRACTOR-TRAILER AIRSTREAM CONTROL KIT
Alexander F. Stamm, Rochester, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application November 19, 1954, Serial No. 469,913
2 Claims. (Cl. 296—1)

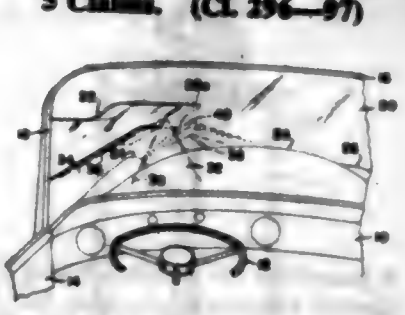


1. In a tractor-trailer combination vehicle having the tractor cab spaced forwardly of the trailer body, a first open-ended, conduit type, airflow control means mounted on the rearwardly located top and side peripheral surface portions of the tractor cab to receive and guidingly discharge the airstream passing rearwardly over the tractor body during forward motion thereof, said first airflow control means being arranged to discharge the said airstream towards top and side peripheral portions of the front end of the rearwardly positioned trailer, said top and side peripheral portions of the trailer front end being depressed to provide airflow guiding formations, and a second open-ended, conduit, type, airflow control means mounted on the depressed peripheral surface portions of the front end of the trailer to receive the airstream discharged by the tractor mounted airflow control means and to guidingly discharge said airstream rearwardly along the peripheral surface portions of the trailer, said airflow means each comprising an inverted U-shaped, frame member composed of a plurality of adjustably interconnected frame elements.

2,863,696
GUIDE GATES FOR CATTLE TRUCKS
Morris Sigmon, Denver, Colo.
Application January 2, 1957, Serial No. 632,211
2 Claims. (Cl. 296—51)



1. A combined cattle guide and end gate for a truck body of the type having side walls and a rear wall provided with a restricted rear gate opening outlined by two vertical jamb members spaced apart less than the width of said body, comprising: a vertical, rotatable hinge post positioned within and at each side of said gate opening, said hinge posts being spaced apart a distance less than the width of said opening; and a longitudinally expansible gate structure secured to and extending from each of said hinge posts, each of said gate structures being sufficiently longitudinally contractible to be swung through said rear gate opening and expanded to form flaring guide structures either interiorly or exteriorly of said opening for guiding cattle either into or out of said opening, and being sufficiently expansible so that they may overlap said hinge posts to form a closure for said opening when desired.

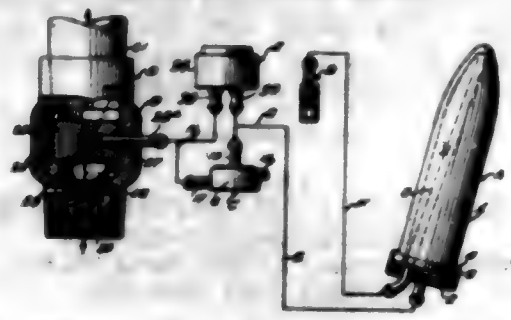
2,863,697
VEHICLE GLARE SHIELD
James R. Watkins, Lexington, Ky.
Application January 8, 1957, Serial No. 633,071
5 Claims. (Cl. 296—97)

5. A road vehicle anti-glare visor, comprising a cut-shape of material of reduced light transmitting qualities having a generally horizontally extending body portion, there being a top salient portion of the visor body having an edge forming part of the leading edge of the visor, said leading edge extending generally diagonally to the visor body and having another portion adapted to coincide with the center line of the road, said center line portion and the first said part of the leading edge intersecting one another to form a reentrant angle, and a lower curve in the leading edge of the visor body presenting portions including a horizontal edge portion intersecting the center line portion of the leading edge to form an outwardly pointing angle and a moderately horizontal edge portion adapted to coincide with the curbline.

of said axial opening, a hub part including a cylindrical body closed at one end and telescoped into one end of said concentric with the axle thereof, an auxiliary wheel of

door jamb having a recess forming a catch chamber, a

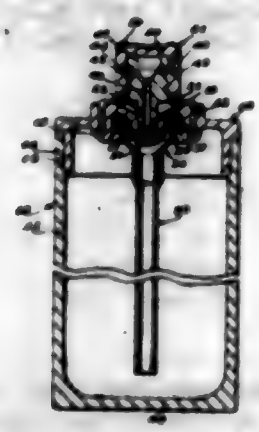
section therewith, a rotatable latch mounted in said con-

2,863,698
SOIL MOISTURE SENSITIVE AUTOMATIC IRRIGATION SYSTEM
Lorenzo A. Richards, Riverside, Calif.
Application September 24, 1953, Serial No. 382,331
24 Claims. (Cl. 299—35)



1. An automatic means for reconditioning a moisture sensing unit employed in connection with an irrigation apparatus, wherein said unit is a closed porous cell which, whenever the cell is filled with water and its exterior exposed to a moist environment, a low suction condition obtains within the cell and whenever the exterior of the cell is exposed to a moisture deficient environment a correspondingly higher suction condition obtains within the cell, and wherein an irrigation initiating element responsive to a predetermined high suction condition within said cell causes operation of the irrigation apparatus, said automatic reconditioning means comprising: valve means controlling ingress and egress of water to and from said cell at a pressure in excess of atmospheric pressure; and an automatic device subject to operation of said irrigation apparatus for momentarily opening and then closing said valve means to cause outflow from said cell of gases which may have accumulated therein and to refill said cell with water above atmospheric pressure whereby said cell is automatically reconditioned to cause reoperation of said irrigation initiating element in the event of re-exposure of said cell to said moisture deficient environment.

2,863,699
RESILIENT VALVE MOUNTING ASSEMBLY
William F. Elser, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application August 23, 1955, Serial No. 530,113
4 Claims. (Cl. 299—95)



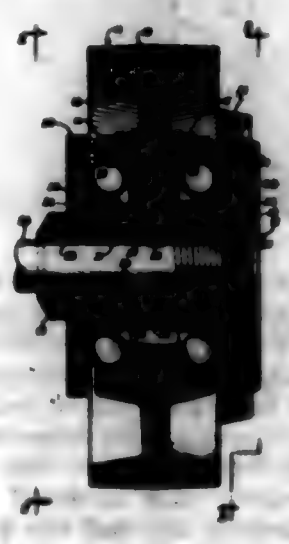
1. The combination with an aerosol-type container having a filling and dispensing end, and a resilient disc-shaped control valve for regulating the dispensation of the container's pressurized contents, in which said control valve includes an imperforate central portion and a thickened rim portion inter-connected by a perforate radial skirt, of an improved valve mounting assembly comprising: a discharge head on said filling and dispensing end of said container, said discharge head defining a vertical fluid passage and an annular groove encompassing the inner end of said fluid passage, the groove defining portion of said head portion including spaced-

apart and radially opposed walls, the innermost of said walls having a tubular configuration adapted to axially abut said valve central portion in sealing relationship, an annular retainer having a peripheral portion generally N-shaped in radial cross-section partially surrounding said valve rim portion and confining same within said annular groove, said peripheral portion including an inner rib and a radially spaced flexible outer rib interconnected by an inclined web wall, whereby a vertical opening force exterted on the central portion of said valve produces a radially outward force urging said outer rib against the outermost wall of said groove.

2,863,700
LIQUID FUEL NOZZLE
William A. Zlemke, Jr., Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application June 4, 1954, Serial No. 434,448
8 Claims. (Cl. 299—146)

1. An air atomizing nozzle comprising a nozzle body, a nozzle element received within said body, a fuel passage system located between said element and said body, said nozzle element having an endwise tapered terminal portion extending externally of said body and having grooves formed in its outer surface, said grooves being in communication with said fuel passage system adjacent the large end of said tapered portion to conduct fuel to the exterior of said body, said body extending beyond said large end and closely overlying said grooves adjacent said large end to direct fuel along said grooves, and air passage means extending within said element and terminating in portions intersecting said grooves at locations externally of said body.

2,863,701
WHEEL ASSEMBLY
Charles E. Jones, Chicago, and William G. Crowle, Berwyn, Ill., assignors to Manning Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application May 11, 1956, Serial No. 584,341
2 Claims. (Cl. 301—5.7)



1. A wheel assembly comprising a wheel including a rim and an axial boss having an axial opening therethrough, outer bearing raceways in said boss at each end

end being depressed to provide airflow guiding forma- warply pointing angle and a moderately horizontal edge portion adapted to coincide with the curbline.

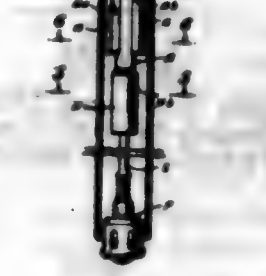
of said axial opening, a hub part including a cylindrical body closed at one end and telescoped into one end of said axial opening, an external annular flange on the closed end of said cylindrical body, said flange overlying the axial boss, an inner bearing raceway at the juncture of the body with the flange to coact with one of the outer raceways to retain anti-friction elements in place, a second hub part including a cylindrical body open at both ends telescoped into the other end of the axial opening, said second cylindrical body having an outside cylindrical surface corresponding substantially to the inside cylindrical surface of the first cylindrical body so as to be received snugly therein, the complemental faces of the interfitting parts being tapered, an external annular flange on the outermost end of said second hub part overlying the axial boss, an inner bearing raceway on the second hub part complemental to the other outer raceway to retain antifriction elements in place, said hub parts being rotatable relative to the wheel as a single unit, and means in said joined hub parts for securing the assembly on an axle.

2,863,702
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application April 6, 1955, Serial No. 499,582
7 Claims. (Cl. 301—37)

1. In a cover for a wheel including a multi-flanged drop center tire rim member and a supporting body member therefor and one of said members having radially projecting protuberance means, a circular dished wheel cover for telescoping nested engagement with one of said members having a peripheral turned margin provided with a generally axially rearwardly extending continuous circular axial flange having arcuately curved spaced cutaway sections alternating with rearwardly extending arcuately curved yieldable cover retaining portions, said flange being engaged and bottomed at one end on said margin generally opposite the protuberance means to minimize axial movement of the cover and retaining portions while in assembly with the wheel and with the generally circular flange extending generally parallel to said axial rim flange and spaced therefrom, each of said retaining portions terminating in a radially turned stiff edge and being of relatively narrow width in a radial direction, each of said retaining portions being resiliently yieldable rearwardly of said margin in a radial direction upon its stiff edge engaging one of said wheel members and when thus stressed applying resilient pressure to wedge said edge in resilient gripping engagement with said protuberance means.

2,863,703
AUXILIARY WHEEL
Clement R. Noll, Olney, Ill.
Application July 31, 1957, Serial No. 675,327
2 Claims. (Cl. 301—36)

1. In an auxiliary wheel for a pneumatic tired vehicle, a fastening member secured to a wheel of a vehicle and concentric with the axle thereof, an auxiliary wheel of substantially the same diameter as said vehicle wheel, said auxiliary wheel including a tire, a flanged rim and a pair of spaced parallel flat struts extending transversely across said rim, a plate having reverted end flanges extending around the outer sides of said struts slidably mounted on said struts, means securing said plate to said



fastening member, shoulders formed on the outer sides of said struts engaging said vertical end flanges for limiting the movement of said slidable plate in one direction, shoulders formed on the inner opposed surfaces of said struts, and dogs pivoted on said plate engageable with said last mentioned shoulders for releasably locking said slidable plate against movement in the other direction.

2,863,704
COMBINATION SUCKER ROD GUIDE AND SAND PURGING DEVICE
Carl James Hillman, Houston, Tex.
Application January 4, 1957, Serial No. 632,589
14 Claims. (Cl. 308—4)

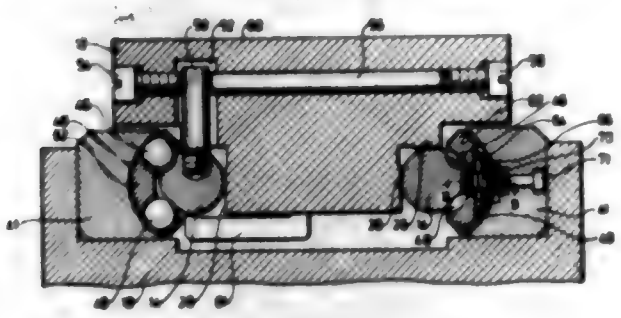
1. In a well pump installation including a tubing string and a sucker rod string reciprocable therein, a combination sucker rod guide and sand purging device, comprising, a sleeve-like body mountable on the rod string, said body carrying at least two sets of angularly spaced radially extending centering ribs constructed of flexible resilient material and slidably engageable with the wall of the tubing string, the sets of ribs being longitudinally spaced a short distance apart and angularly oriented with respect to each other so that the ends of the ribs of one set will be in registration with the spaces between the ribs of the next adjacent set, the upper end surfaces of the several ribs being shaped to trap sand settling downwardly in the tubing string, each rib having a cross-sectional shape defining an angular segment of the annulus between the sucker rod string and the tubing string, and the combined cross-sectional area of the ribs comprising the several sets being at least equal to the area of said annulus.

the support bars to connect the same for joint sliding movement, a hammer suspended from the support bars manually operable means, and means responsive to the

2,863,705
GUIDE MEANS FOR MACHINE PARTS

German Glechowicz, Hagersten, Sweden, assignor to Ulvsunda Verkstader Aktiebolag, Bromma, Sweden, a joint-stock company of Sweden

Application April 4, 1956, Serial No. 576,850
Claims priority, application Sweden April 7, 1955
10 Claims. (Cl. 308—6)

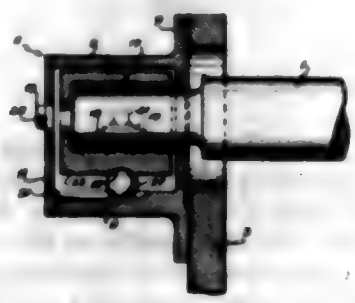


1. In a machine, a base member and a slide member reciprocable thereon, one of said members having two bearing surfaces disposed at an angle to each other, both said bearing surfaces extending longitudinally in the direction of reciprocation of said slide member, a rotatable rod and a set of anti-friction bearings interposed between said bearing surfaces and the other of said members, said rod and said set of anti-friction bearings extending in the direction of reciprocation of said slide member, said rod having peripheral curved portions which extend in the direction of reciprocation of said slide member and which engage, respectively, said two bearing surfaces, and said rod having another portion around its periphery formed as an inner raceway for said set of anti-friction bearings, said raceway extending in the direction of reciprocation of said slide member and being curved about an axis extending in the direction of reciprocation of said slide member but eccentric of the axis of rotation of said rod, and means on said other member extending in the direction of reciprocation of said slide member and constituting the outer raceway for said set of anti-friction bearings, said rod being adjustable about its axis of rotation to adjust the position of said slide member on said base member.

2,863,706
BEARING

William M. Duncan, Alton, Ill.

Application January 18, 1957, Serial No. 635,033
3 Claims. (Cl. 308—72)

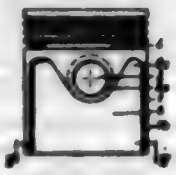


1. A bearing unit of the character described comprising a hollow housing, a block loosely contained within said housing, said block having interior bearing means for journalling a shaft, a ball partially seated in the lower portion of said block, and an elongate slot formed in the bottom of the housing for also seating said ball, said slot extending to one side of the housing, means permitting insertion at said end of said slot, and said ball being of such size in relation to its respective seats that the block is spaced from the interior top and bottom walls of the housing.

2,863,707
PISTON, PARTICULARLY FOR INTERNAL COMBUSTION ENGINES

George F. W. Lengnick, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany

Application March 2, 1954, Serial No. 413,657
Claims priority, application Germany March 16, 1953
12 Claims. (Cl. 309—10)

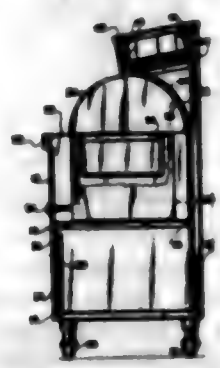


1. A slipper piston with a piston crown, a continuous skirt extending over the whole circumference of the piston, a transverse hole for a gudgeon pin, a recessed wall portion of predetermined and uniform depth being provided only in the bearing surface of the skirt of the piston each on sides of the piston opposite one another, each recessed wall portion extending from the bottom edge of the piston and forming a portion of the circumference of the piston skirt on both sides of a plane passing through the axis of the gudgeon pin hole in the direction of the piston axis, said piston skirt with said recessed wall portions shielding the interior of said piston substantially over the entire length of said skirt.

2,863,708
DOUBLE DECK FOOD SERVING UNIT

Robert L. Cahn, Rockville Centre, N. Y.

Application April 18, 1957, Serial No. 653,638
1 Claim. (Cl. 312—236)



A double-decked food serving unit comprising a storage container having a table-like cover plate formed with at least one food-receiving recess, said container including a back wall projecting above the cover plate, a support wall extending upwardly from the cover plate in back of said recess, and food support means mounted between said walls in a position elevated above the cover plate, said unit further including cover means for at least said food-receiving recess of the cover plate, said cover means including a transversely curved, stationary, rear cover section disposed between the cover plate and food support means and a transversely curved, pivoted front cover section adapted to move into telescoping relation to the rear section.

2,863,709
BATHROOM TOILET TABLE AND HAMPER

Charlotte Sharetta Hammon, New York, N. Y.

Application October 15, 1956, Serial No. 616,054
5 Claims. (Cl. 312—321)

5. A combination dressing table and hamper comprising a horizontally extending cabinet providing a dressing table, means supporting the cabinet in an elevated position, guides at the underside of the cabinet, support bars sliding in the guides, a crossbar connected between

material that is electrically conductive, magnetically film feeding spool, said spool being operatively connected

a fastening member secured to a wheel of a vehicle and

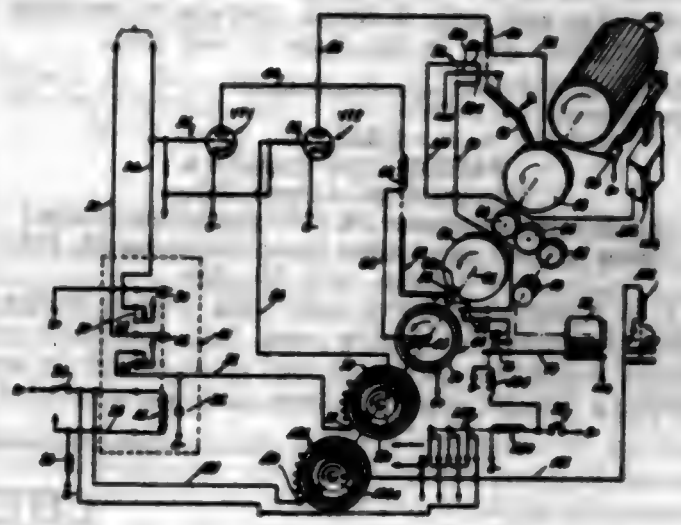
being at least equal to the area of said annulus.

the support bars to connect the same for joint sliding movement, a hamper suspended from the support bars for adjustment of the hamper between recessed and extended positions responsive to sliding movement of the support bars inwardly and outwardly of the guides, and means on the support bars engageable with the guides to limit outward movement of the support bars, the guides being formed with end-to-end bores and with longitudinal bottom slots communicating with said bores, said guide-engaging means of the support bars being slidably disposed within the slots with the support bars being slidably engaged in the bores of the guides, said slots of the respective support bars having side walls formed with elongated recesses communicating with the slots, said recesses having front end walls defining abutments, said means engaging against said abutments on outward movement of the support bars to limit said outward movement, said means on the support bars comprising leaf spring elements formed with laterally, oppositely projecting wings disposed for engaging the abutments on outward movement of the support bars each leaf spring having an angular portion slidably disposed in the slot of the associated support bar, said wings being formed upon the angular portion, each spring further

including a tongue portion projecting forwardly from the angular portion within the support bar and terminating at its forward end in an upturned extremity, the associated support bar having a slot through which said extremity of the tongue projects on outward movement of the support bars, said extremities of the tongues being adapted for depression by a user to shift the springs downwardly to locate the wings out of position for engaging the abutments, whereby to free the support bars for outward movement fully out of the guides, said extremities of the tongues being disposed for engagement by the guides on inward movement of the support bars, and being extended obliquely to the path of movement of the respective support bars, for camming of the tongues inwardly of the support bars by the guides, said tongues when cammed inwardly shifting the wings out of position for engaging the abutments, the tongues being spring tensioned to move upwardly out of the support bars on outward movement of the support bars, whereby to locate the wings in the abutment-engaging positions thereof, the tongues being formed inwardly from the extremities thereof with upwardly bowed portions engageable against the support bars to limit upward movement of the tongues beyond a position in which the wings are disposed for engaging the abutments.

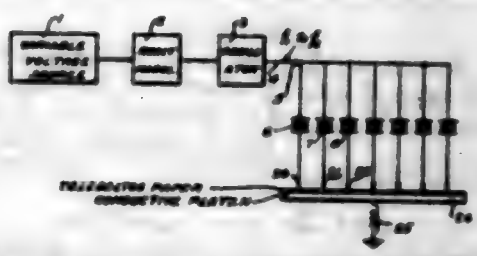
2,863,710
DATA RECORDER
Benjamin Cooper, Joseph S. Wagner and John G. Reback, Brooklyn, N. Y.; said Wagner and said Reback assignors to said Cooper
Application April 21, 1953, Serial No. 350,137
1 Claim. (Cl. 346—34)

In combination, a plurality of detecting devices, means to independently actuate and deactuate said devices, a plurality of data representations, each corresponding to a respective detecting device, means controlled by actuation or deactuation of one of said detecting devices to automatically select a corresponding data representation, manually operable means, and means responsive to the actuation of said manually operable means to successively select only those data representations of the plurality of data representations that are actuated, a second manually operable means, and means responsive to



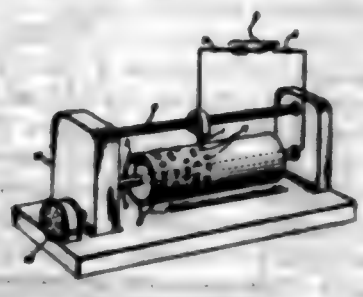
the actuation of said second manually operable means to successively select only those data representations corresponding to all of the detecting devices irrespective of whether they are deactuated or actuated, and means to differentiate between the actuated and deactuated detecting devices.

2,863,711
RECORDING
Hyman Hurvitz, Washington, D. C.
Application April 18, 1955, Serial No. 501,891
15 Claims. (Cl. 346—74)



1. A recorder for recording on a voltage sensitive recording medium, said recorder including a plurality of stationary styli in contact with said medium, a separate piezo-electric filter consisting of a piezo-electric crystal and electrodes therefor in series with each of said styli, and means for applying a frequency varying signal in parallel to said piezo-electric filters, said piezo-electric filters each series resonant to a different frequency.

2,863,712
ELECTRIC PRINTER FOR MAGNETIC CODES
Ralph K. Potter, Brookside, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application December 29, 1955, Serial No. 556,199
7 Claims. (Cl. 346—74)



7. Apparatus for forming a space pattern record of the signal from a source which comprises a sheet of

leach solution, adjusting the pH of the leach solution to about 1.25 and precipitating uranium from said solution

temporaneously with the production of said carrier pre-

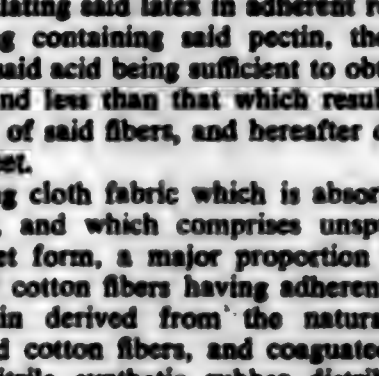
is spaced from the interior top and bottom walls of the housing.

sition, guides at the underside of the chamber, support bars sliding in the guides, a crossbar connected between

material that is electrically conductive, magnetically sensitive and magnetically retentive, a conductive stylus in contact with one portion of said sheet, an electrode in contact with another portion of said sheet, said portions being speced apart, and means for generating a current flow from said source through said sheet between said stylus and said electrode, thereby to establish a magnetic flux lying in the plane of said sheet.

2,863,713
PANORAMA CAMERA
Hiroshi Mito, Akigun, Japan
Application December 19, 1955, Serial No. 554,062
Claims priority, application Japan December 22, 1954
3 Claims. (Cl. 95—16)

1. A panoramic camera comprising a body having a rotor and means for driving same, lens, diaphragm and shutter mechanism carried by said rotor, means for supporting a film for exposure about said rotor including a film feeding spool, said spool being operatively connected to said rotor driving means, means for disconnecting said

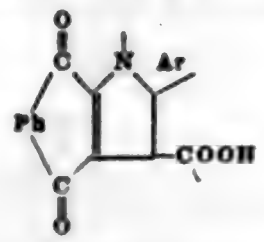


spool from said driving means, a closure for said lens hinged to said rotor, and a reflector on said closure adapted to direct an image to said lens when the closure is spaced from said lens.

CHEMICAL

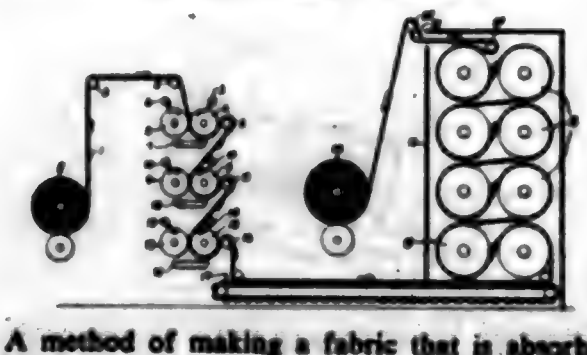
2,863,714
PYRROCOLINE DYES FOR POLYESTER MATERIALS
Robert S. Long and Richard J. Boyle, Bound Brook, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Original application June 2, 1955, Serial No. 512,838. Divided and this application August 22, 1956, Serial No. 605,435
16 Claims. (Cl. 8—55)

14. The process of dyeing synthetic organic fibers selected from superpolyesters and cellulose esters with amides derived from acids of the structure:



in which Ph is a six-membered mononuclear carbocyclic aromatic ring and Ar is a fused aromatic ring system of less than three six-membered rings in which the nitrogen atom shown is the only hetero-atom, and a primary aromatic amine of less than three rings, the dye molecule being free from water solubilizing groups, which comprises heating an aqueous dispersion of the dye with the synthetic organic fiber until the fiber is dyed.

2,863,715
WIPING CLOTH AND THE MANUFACTURE THEREOF
Maurice A. Goldman, Woburn, Mass., assignor to Fibre Products Laboratories, Inc., Newark, N. J., a corporation of New Jersey
Application September 11, 1952, Serial No. 309,838
9 Claims. (Cl. 8—115.6)



1. A method of making a fabric that is absorbent to liquid hydrocarbons comprising the steps of impregnating a bibulous sheet of loose, unspun, natural cotton fibers carrying a substantial amount of the naturally occurring cutose coating, containing pectose, with a butadiene-acrylonitrile synthetic rubber latex, applying to said impregnated sheet in the presence of said latex a strong mineral acid having a dissociation constant greater than about 2×10^{-1} capable of converting pectose in said cutose coating to pectin by reaction therewith and capable of coagulating said latex in adherent relation to said cutose coating containing said pectin, the duration of contact with said acid being sufficient to obtain the aforesaid results and less than that which results in substantial tendering of said fibers, and hereafter drying the impregnated sheet.

7. A wiping cloth fabric which is absorbent to liquid hydrocarbons, and which comprises unspun fibers disposed in sheet form, a major proportion of said fibers being natural cotton fibers having adherent thereto in a coating, pectin derived from the naturally occurring cutose of said cotton fibers, and coaguated, dried butadiene-acrylonitrile synthetic rubber distributed on and among said cotton fibers as a coating therefor in adherent relation to said pectin, said fibers being bonded together by said coating in porous absorptive relation in said fabric.

2,863,716
SULPHUR DIOXIDE LEACHING OF URANIUM CONTAINING MATERIAL
Arvid Thunaes, Fred Thomas Rabbitts, Kenneth Donald Hester, and Harold William Smith, Ottawa, Ontario, Canada, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application March 30, 1954
Serial No. 419,904
5 Claims. (Cl. 23—14.5)

1. A process for extracting uranium from uranium containing material at least part of the uranium of which is tetravalent comprising the steps of comminuting said material, magnetically separating metallic iron produced during said comminuting from said material, leaching said material with an aqueous solution containing sulphur dioxide and with aeration to an extent sufficient to form a proportion of oxy-sulphur acids to give a pH of about 1 to 2 but insufficient to give excessive removal of sulphur dioxide gas and containing a substance selected from the group consisting of soluble ferric iron in an amount of 1 to 2 grams of iron to a litre of solution and manganese in an amount of 0.5 to 1 gram of manganese to a litre of solution and mixtures thereof to provide a

leach solution, adjusting the pH of the leach solution to about 1.25 and precipitating uranium from said solution by adding metallic iron powder in the presence of a precipitant selected from the group consisting of soluble phosphates, arsenates and fluorides and mixtures thereof.

2,863,717

RECOVERY OF URANIUM VALUES FROM COPPER-BEARING SOLUTIONS

Robert Kunin, Trenton, N. J., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application April 7, 1954
Serial No. 421,668
8 Claims. (Cl. 23—14.5)

1. A method of recovering uranium values from an aqueous solution containing dissolved salts of metals including uranium and copper which comprises bringing said solution in contact with an insoluble ion exchange resin the ion-adsorbing functional groups of which are enolizable 1,3-diketo groups, adsorbing said uranium and copper salts on said resin, first eluting said adsorbed copper salt by means of an aqueous solution of an alkali metal cyanide and thereafter eluting said adsorbed uranium salt by means of an aqueous solution of an alkali metal carbonate.

2,863,718

PLUTONIUM CONCENTRATION AND DECONTAMINATION METHOD

Donald C. Overholt, Putnam County, W. Va., and Frank W. Tober, Aiken, S. C., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 28, 1955
Serial No. 543,629
11 Claims. (Cl. 23—14.5)

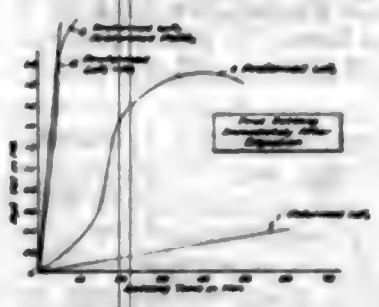
1. A process for concentrating and decontaminating plutonium from an aqueous mineral acid solution containing same in small concentration, together with extraneous impurities, which comprises adjusting said solution to a fractional-normal mineral acid concentration and said plutonium to Pu^{+3} oxidation state, contacting the resulting adjusted solution with a comminuted bed of a cation exchanger, and thereafter eluting the resulting adsorbed plutonium, while maintaining said plutonium in Pu^{+3} oxidation state, with an aqueous nitric acid solution of a concentration at least as great as approximately 4 molar nitric acid.

2,863,719

METHOD OF IMPROVING THE CARRIER PRECIPITATION OF PLUTONIUM

Harry J. Kamack, Richland, Wash., and Joseph H. Balthis, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application February 3, 1945, Serial No. 576,127
11 Claims. (Cl. 23—14.5)



1. In a process for the recovery of plutonium values from an acidic solution containing the same comprising adding components which will by interaction produce a carrier precipitate, the method for improving the operation which comprises precipitating in said solution, contemporaneously with the production of said carrier precipitate, a lead compound, in amount sufficient to improve the separation characteristics of the carrier precipitate.

2,863,720

PROCESS FOR PREPARING SYNTHETIC MICA PRODUCT

Francis A. Barr, Merrick, N. Y., assignor to Sylvania Electric Products, Inc., a corporation of Massachusetts

No Drawing. Application April 26, 1956
Serial No. 580,711
5 Claims. (Cl. 23—110)

1. A method for producing recrystallized hot pressed sheet of reconstituted synthetic mica which comprises the steps of saturating the surfaces of an unfired reconstituted synthetic mica sheet of the fluorine type with a liquid media containing a plurality of inorganic compounds selected from the class of mineralizers composed of a first group of fluorine compounds which, when the saturated sheet is hot pressed, decompose to produce silicon tetrafluoride vapor and a second group of fluorine compounds which, when the saturated sheet is hot pressed, react with the silica contained in the sheet to produce silicon tetrafluoride vapor, each compound in said plurality having a different volatization temperature which does not exceed 1340° C., said first group consisting of the fluosilicates of magnesium, potassium, calcium, nickel, lithium and copper, and the fluorides of potassium and cadmium said second group consisting of the fluorides of aluminum and ammonium, the acid fluorides of ammonium, barium and sodium, and fluotitanates of sodium and potassium; and hot pressing said saturated sheet at a temperature falling within the approximate range 1200° C.–1340° C. to produce said recrystallized sheet.

2,863,721

METHOD OF TREATING MICA

Harold S. Endicott, Schenectady, and George E. Ledgus, Dryden, N. Y., assignors to General Electric Company, a corporation of New York

No Drawing. Application September 16, 1957
Serial No. 683,955
5 Claims. (Cl. 23—110)

1. A method of treating phlogopite mica for use as a dielectric material which comprises heating said mica to a temperature between 850° C. and 1050° C. for a period between one hour and seven hours.

2,863,722

CHLORINE DIOXIDE PRODUCTION

William Howard Rapson, Toronto, Ontario, Canada, assignor to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application March 8, 1955
Serial No. 493,059
4 Claims. (Cl. 23—152)

1. A continuous process for producing gaseous chlorine dioxide and chlorine in an approximate two to one molar ratio by the reaction of a chlorate and a chloride in a strong acid solution, which comprises: maintaining a constant level in a single reactor containing a generating solution selected from the group consisting of (A) a solution which is 3.5 to 6.5 molar in sulfuric acid, 0.5 to 0.01 molar in chlorate and 0.3 to 0.001 molar in chloride, and (B) a solution which is 7.5 to 15 molar in phosphoric acid, 0.5 to 0.01 molar in chlorate, and 0.3 to 0.001 molar in chloride; continuously adding a substantially equimolar ratio of chlorate and chloride ions, in a molar concentration greater than the maximum in the generating solution and at a rate stoichiometrically equivalent to the amount of chlorine dioxide and chlorine produced; continuously adding an appropriate acid, selected from the group consisting of sulfuric acid and phosphoric acid, in

sulfate-containing raw material, a source of alumina and

2,863,729

liquid hydrocarbons comprising the steps of impregnating to a litre of solution and mixtures thereof to provide a

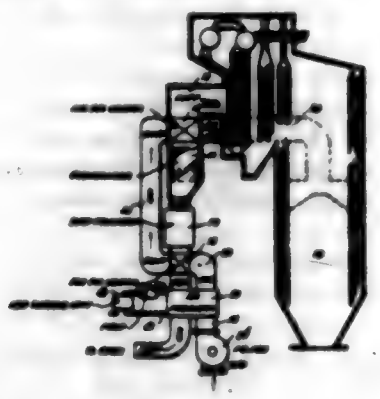
a molar concentration greater than that of the acid in the generating solution and at a rate such that the concentration of acid in the generating solution remains relatively constant, thereby maintaining the composition of the generating solution within the reactor relatively constant; continuously removing the excess solution from the reactor, thus maintaining the level of the solution within the reactor constant; and, continuously removing the chlorine dioxide and chlorine thus produced.

2,863,723

METHOD OF RECOVERING HEAT AND SULFUR COMPOUNDS FROM HOT GASEOUS PRODUCTS OF COMBUSTION

Alexander J. Tigges, New York, N. Y., assignor, by mesne assignments, to The Air Preheater Corporation, New York, N. Y., a corporation of New York

Continuation of application Serial No. 135,869, December 30, 1949. This application October 21, 1954, Serial No. 463,654
3 Claims. (Cl. 23—168)



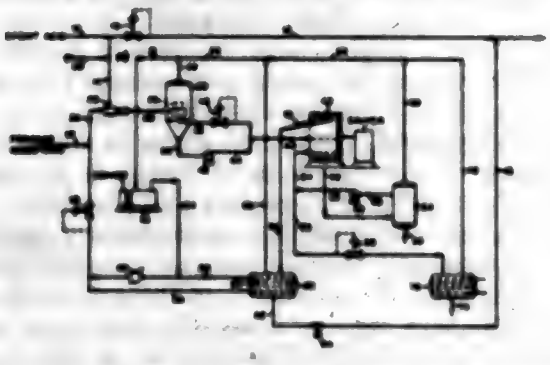
1. The method of recovering heat and sulphur compounds from the products of combustion of fuels containing corrosive constituents producing gases including sulphur compounds such as SO_3 which comprises; absorbing heat from said gases by heat exchange surfaces of a material normally attacked by corrosive substances so as to reduce the temperature of the gases to a point considerably below their dewpoint and thereby cause condensation on said surfaces of moisture from said gases in the presence of said sulphur compounds; washing said surfaces with a noncorrosive solution of sulphuric acid of a concentration of approximately 70% in order to carry off said condensed moisture and SO_3; recovering said acid and condensed moisture; purifying the acid wash liquid to obtain acid for reuse; and recycling part of the reclaimed acid to wash said surfaces.

2,863,724

METHOD OF PURIFYING SULFURIC ACID

Joseph F. Skelly, New York, N. Y., and Samuel R. Stiles, Crenshill, N. J., assignors to The M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware

Application July 8, 1955, Serial No. 520,822
5 Claims. (Cl. 23—172)



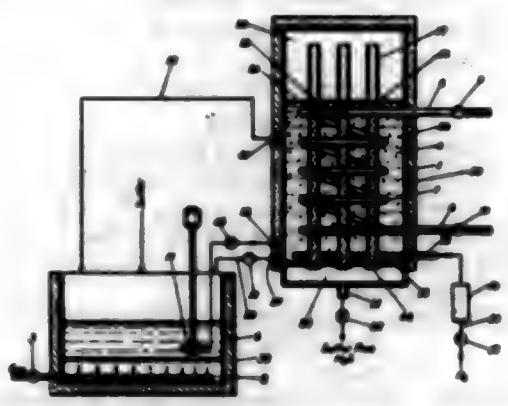
1. In a process for purifying sulfuric acid contaminated with at least one impurity selected from polar and non-polar impurities wherein a low viscosity organic liquid which is chemically inert and immiscible with sulfuric acid is passed to a crystallization zone to form a liquid body therein, contaminated acid is passed to the crystallization zone, said contaminated acid is dispersed into the liquid body in the crystallization zone which is maintained at a temperature sufficient to crystallize sulfuric acid, and a slurry of acid crystals and liquid is withdrawn from the crystallization zone, the improvements which comprise recycling a portion of said slurry to the crystallization zone, separating acid crystals from the remaining portion of said slurry, and melting said separated crystals to produce an acid of improved purity.

2,863,725

PROCESS FOR MAKING SULFUR FREE HYDROGEN SULFIDE

Aylmer H. Maude and Donald E. MacFadyen, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

Application April 24, 1953, Serial No. 350,864
3 Claims. (Cl. 23—181)



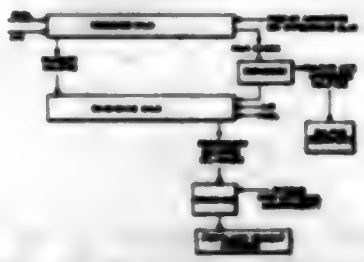
1. In a continuous process for making hydrogen sulfide by reacting elemental hydrogen with sulfur the steps comprising: introducing sulfur into a bath of molten sulfur; bubbling hydrogen into the molten sulfur bath, regulating the amount of hydrogen entering the sulfur bath and regulating the temperature at the top of said bath so that the vaporous mixture emerging from the top of the bath into the vapor zone contains hydrogen and sulfur in a ratio of at least ten percent more than two atoms of hydrogen per atom of sulfur; passing the vaporous mixture into a packed catalytic reaction zone containing a catalyst consisting of molybdenum sulfide deposited on a carrier of activated bauxite; maintaining the catalyst bed at about 330 degrees centigrade, and continuously recovering substantially sulfur free hydrogen sulfide of uniform quality directly from the catalytic reaction zone at a high rate of production.

2,863,726

PROCESS FOR THE JOINT MANUFACTURE OF PORTLAND CEMENT AND SULFUR

Jonas Kamlet, New York, N. Y.

Application March 31, 1955, Serial No. 498,449
18 Claims. (Cl. 23—181)



1. A process for the joint manufacture of Portland cement clinker, sulfur and hydrogen sulfide which comprises the steps of: (*a*) feeding a mixture of a calcium

um values in the slag to the alkali metal selenite state, non-fat material which comprises adding to a measured

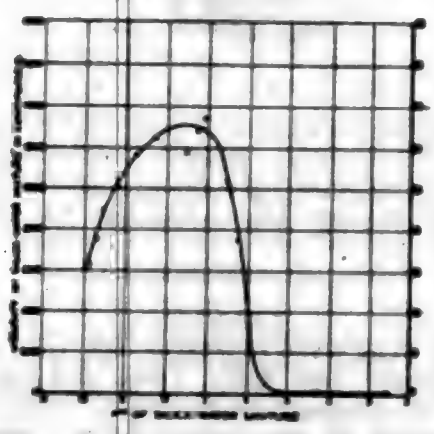
sulfate-containing raw material, a source of alumina and a source of silica, in proportions to produce Portland cement clinker, to a rotary kiln and burning said mixture in a reducing atmosphere containing carbon monoxide to produce a calcine containing calcium sulfide and kiln gases containing sulfur and hydrogen sulfide; (*b*) recovering sulfur and hydrogen sulfide from the kiln gases of said burning; and (*c*) burning the calcine from step (*a*) in a second rotary kiln in an oxidizing atmosphere to a state of incipient fusion to oxidize the calcium sulfide to calcium sulfate and to obtain a Portland cement clinker.

2,863,727

TREATMENT OF SILICA

Fred S. Thornhill, Bourg-la-Reine, France, and James E. Morgan, Barberton, Ohio, assignors to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware

Application January 28, 1957, Serial No. 636,816
4 Claims. (Cl. 23—182)



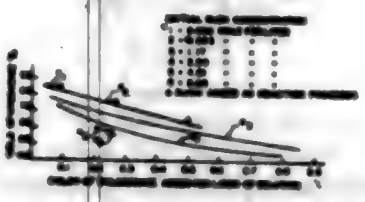
1. A method of removing water from a silica slurry in a finely divided filterable form which comprises filtering the slurry while the pH thereof is above 5 to produce a filter cake containing at least 12 percent by weight of solids and thereby to produce a filter cake having a pH of at least 6, and adjusting the pH of the filter cake below 5.75 while maintaining the solids content of the resulting product at least 12 percent by weight and thereby producing a fluid slurry.

2,863,728

PRODUCTION OF HYDRAZINE

Harry H. Sisler, Columbus, Ohio, and Russell S. Drago, Champaign, Ill., assignors to The Ohio State University Research Foundation, Columbus, Ohio

Application October 17, 1955, Serial No. 540,864
6 Claims. (Cl. 23—190)



1. A method of producing hydrazine comprising providing a liquid reaction mixture consisting essentially of an aqueous solution of ammonia, a material selected from the group consisting of glue, gelatin and albumin, and an alkali metal hydroxide, adding simultaneously about 0.03 to 0.2 mol of chloramine per liter of said solution while maintaining therein a large numerical excess of moles of ammonia to moles of chloramine and additional quantities of said metal hydroxide to said reaction mixture sufficient to maintain therein a quantity of said metal hydroxide slightly in excess of the unreacted chloramine in said reaction mixture, separating out and recovering the hydrazine thus formed.

2,863,729

COMBINATION OF HYDROGEN AND OXYGEN

Harold F. McDuffie, Oak Ridge, and Charles H. Secoy, Kingston, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 27, 1953
Serial No. 339,486
12 Claims. (Cl. 23—204)

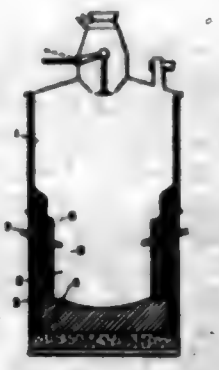
1. A method of combining hydrogen with oxygen which comprises providing copper ions in an aqueous solution of said hydrogen and oxygen under superatmospheric pressure and at a temperature above approximately 150° C.

2,863,730

METHOD OF CARRYING OUT HIGH TEMPERATURE REACTIONS IN SHAFT FURNACES

Geonther Hansprecht, Limburgerhof, Pfalz, and Adam Immel and Hans Gettert, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Application February 14, 1955, Serial No. 487,966
Claims priority, application Germany February 16, 1954
8 Claims. (Cl. 23—288)



1. In a process for reacting a solid charge material at a high temperature in a shaft furnace with oxygen introduced through nozzles extending inwardly from the wall of said furnace into said charge material to supply the heat of reaction in a central reaction space, the improvement comprising: inserting a preformed temperary casing around said central reaction space, said casing being positioned inwardly from said furnace wall a distance less than the mouth of each of said nozzles to provide an insulating space between said casing and said furnace wall, said casing adapted to melt under the heat of reaction; introducing a finely divided material of poor thermal conductivity into said insulating space; and introducing said charge material into said central reaction space.

2,863,731

CONTROL OF THE STATE OF THE SELENIUM IN ALKALI SLAGS

Carroll B. Porter, Metuchen, Armand L. Labbe, Jr., Plainfield, and Kenneth N. Pike, Matawan, N. J., assignors to American Smelting and Refining Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application December 20, 1952
Serial No. 327,164
4 Claims. (Cl. 23—209)

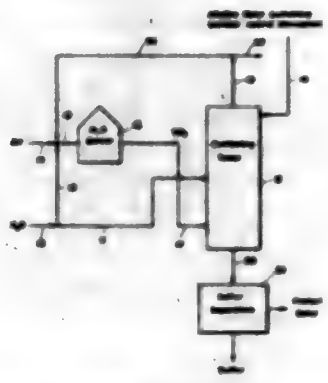
1. A process for recovering selenium values from a selenium-containing material which comprises fusing said material with an alkaline compound of an alkali metal to obtain a molten selenium-containing slag, oxidizing the molten slag with a sufficient amount of an oxidizing agent to form a yellow to a yellowish-green colored slag as determined by a solidified slag sample, thereafter introducing a sufficient amount of a reducing agent into the yellow colored slag to form a bluish-gray colored slag as determined by a solidified slag sample, thereby insuring the conversion of substantially all of the seleni-

with at least one impurity selected from polar and non-

prises the steps of: (a) feeding a mixture of a calcium

um values in the slag to the alkali metal selenite state, leaching the bluish-gray colored slag, and recovering selenium values from the leach solution.

2,863,733
WATER TREATMENT
Rolland G. Bowers and Edward F. Mobley, Jr., Toledo, Ohio, assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Application February 4, 1955, Serial No. 486,165
7 Claims. (Cl. 23—224)



1. In petroleum refinery processes where water contacts petroleum fractions containing inorganic materials formed by decomposition of organic sulfur and nitrogen compounds, and where alkaline water containing ammonium sulfide and ammonium bisulfide is separated from the petroleum fractions, the improvement which comprises contacting said alkaline water with sulfur dioxide as substantially the sole neutralizing agent, thereby to convert substantially all of said ammonium sulfide and ammonium bisulfide to materials including free sulfur and to reduce the pH of the water to below 6, and separating by settling from the treated water at pH below 6 a material consisting essentially of substantially all of said free sulfur.

2,863,733
METHOD OF PRESERVING AND PRESENTING A BLOOD SAMPLE FOR ANALYSIS THEREOF
Norman W. Drey, University City, Mo., assignor, by mesne assignments, to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Original application March 10, 1949, Serial No. 80,762, now Patent No. 2,652,314, dated September 15, 1953. Divided and this application July 22, 1953, Serial No. 369,710
9 Claims. (Cl. 23—230)

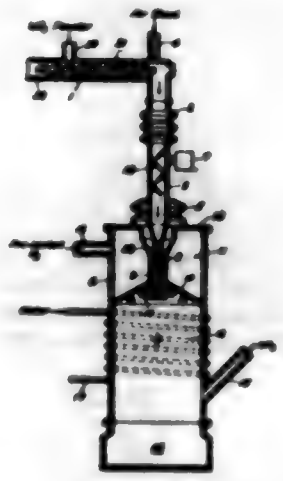
1. The method of collecting, preserving, and presenting for ultimate analysis a blood specimen for determination of sugar content thereof, which comprises providing a section of absorbent material, impregnating said absorbent material with an agent for inhibiting the decomposition by enzymatic or bacterial action of sugar contained in blood collected on said absorbent material, depositing a quantity of a liquid blood specimen on said material under atmospheric conditions, preserving the thus treated absorbent material for any selected period of time under atmospheric conditions, and ultimately subjecting the thus treated absorbent material to the indicated reagent for determining the sugar present in the absorbed specimen.

2,863,734
METHOD AND REAGENTS FOR FAT DETERMINATION
Philip Schain, New York, N. Y.
Application October 16, 1950, Serial No. 190,437
20 Claims. (Cl. 23—231)

1. The method of determining fat in a fluid dairy product containing emulsified fat globules and dispersed non-fat material which comprises adding to a measured amount of the product a concentrated solution of surface-active agents in a lower alcohol, said agents comprising tetradecylideneoxypolyethylene glycol and dioctyl sodium phosphate, whereby the fat globules are destabi-

lized, heating the mixture at a temperature not substantially above the boiling point of water whereby the menstruum is clarified, permitting the fat globules to coalesce and stratify, and measuring the resulting fat layer.

2,863,735
SYSTEM FOR CONVERSION OF UF_4 TO UF_6
Donald C. Brater, Oak Ridge, Tenn., and John W. Pike, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application February 19, 1954, Serial No. 411,592
1 Claim. (Cl. 23—252)



A system for reacting a solid with a gas comprising an elongated tubular reactor, a partition having walls that converge towards the interior disposed within the reactor dividing it into an upper supply chamber and a lower reaction chamber, a tube extending through the wall of the reactor at its upper extremity and through the partition to terminate in the interior of the reaction chamber to introduce a solid, means for movably joining the tube to the wall of the reactor to provide a seal, a vibrator for vibrating the tube to release the solid in a finely divided dispersed state, an inlet for supplying gas to the gas supply chamber, and openings in the converging partition for directing the gas into the interior of the reaction chamber to contact it with the dispersed solid as it falls by gravity to react them.

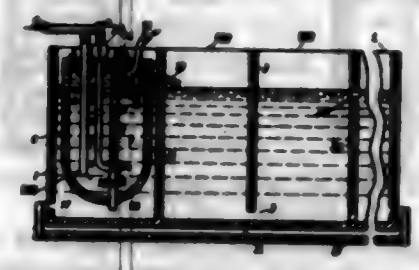
and intimately kneading the melt with an excess of face coating of paraffin wax, a flare comprising oxygen

2,863,736

DEVICE FOR ANALYSIS OF GASEOUS MIXTURES

Günter Axt, Karlsruhe, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany

Application March 27, 1956, Serial No. 574,311
Claims priority, application Germany April 1, 1955
16 Claims. (Cl. 23—254)



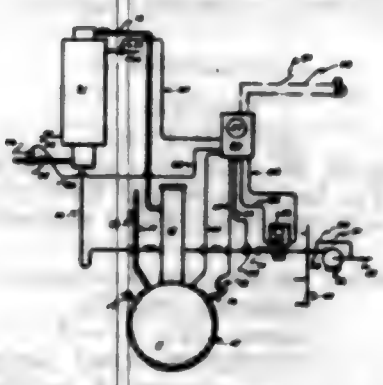
1. In a gas analyser, a tube member having a U-shaped portion including legs and a yoke part, the legs being vertical; a liquid inlet member for one leg at the yoke part above the lowest point of said portion and in communication with the interior of said leg; means connecting the second leg of the tube to a source of the gas to be analysed, for gas lift action in the said one leg above said point; said member having an open end below said point for dipping into a reactive liquid; means for detecting a physical change in the liquid as it passes upwardly through said one leg, and a container surrounding the tube member and the two mentioned means and containing a second liquid for tending to prevent differences between the incoming and outgoing reaction liquid in at least one physical aspect as the liquid passes through the one leg, said liquid inlet member passing liquid-tight downwardly through said container.

2,863,737

CHEMICAL REACTION APPARATUS

Warren E. Green, Baton Rouge, La., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

Application September 11, 1956, Serial No. 609,315
5 Claims. (Cl. 23—263)



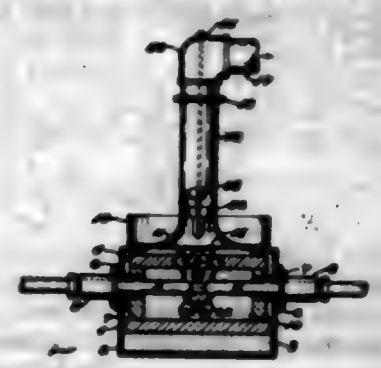
1. An apparatus for the controlled reaction of comminuted solids and a volatile liquid reagent, comprising a reaction chamber, a reflux condenser, a vapor line and a liquid reflux line both connecting the said reaction chamber and reflux condenser, a vent line communicating with the reaction chamber for venting gases therefrom, a motored vent valve therein for control of venting, a liquid reagent feed line communicating with the reaction chamber for feed of reagent thereto and a motored valve therein for control of liquid reagent feed, a pressure gauge connected to the reaction space for measuring the pressure therein and a primary control means operatively connected to the pressure gauge, said control means including a pressure set point mechanism and a pressure rise timer engagable therewith and adapted to raise the pressure set point through a rising pressure path to a preselected pressure during an initial time period, and a hold timer adapted to maintain the pressure set point mechanism at said preselected pressure following the said initial time period, and a controller responsive to any difference between the set point pressure and the actual pressure measured by the pressure gauge and operatively connected to the motored valve in the liquid reagent feed line for opening said valve when the set point pressure exceeds the actual pressure and closing the valve when the actual pressure exceeds the set point pressure.

2,863,738

APPARATUS FOR CONDUCTING CHEMICAL REACTIONS

Arthur E. Van Antwerp, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

Application October 28, 1954, Serial No. 465,370
7 Claims. (Cl. 23—277)



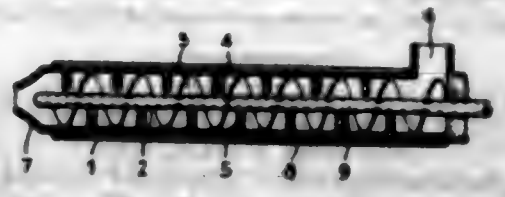
1. An apparatus useful in mixing gases comprising, in combination, a container partitioned in section to provide a mutual wall separating two chambers, one of said chambers having inlet and outlet means for the circulation of a coolant, the other of said chambers being in heat exchange relationship with said first named chamber, having inlet means for receiving a gas and having an inner wall defining a generally cylindrical centrally disposed passageway through said second named chamber, and an annular baffle disposed in said second named chamber to distribute gas throughout said second named chamber, said inner wall of said second named chamber having a generally circumferential outlet in communication with said second named chamber and with said passageway, and said circumferential outlet extending through said wall being at an angle sufficient to the transverse axis of said passageway to direct gas from said outlet to converge at about the same point adjacent said passageway and to mix with a stream of gas conducted by said passageway without causing an appreciable change in the pressure of the gas entering said passageway.

2,863,739

PROCESS FOR THE CONTINUOUS PRODUCTION OF CRYSTALLINE SUBSTANCES

Friedrich Erbe and Michael Alexander Malkowski, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Application July 12, 1955, Serial No. 521,519
Claims priority, application Germany July 16, 1954
3 Claims. (Cl. 23—295)



1. A process for the continuous production of crystalline material ranging from powdered to granulated form from crystallizable melts, which comprises continuously

amount normally tending to cause preignition of said

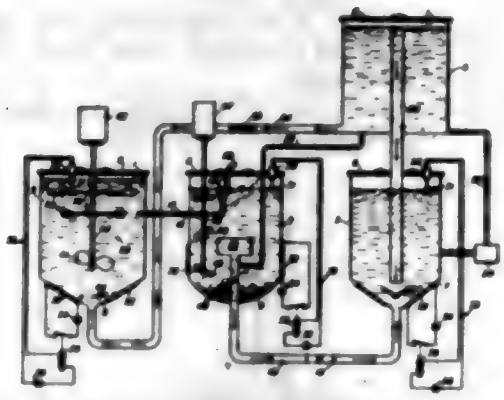
2,863,748

PRODUCTION OF FUEL GASES

product containing emulsified fat globules and dispersed to react them.

and intimately kneading the melt with an excess of crystals of said material which have already formed and with the crystals forming, while dissipating the liberated heat of crystallization.

2,863,740
CRYSTAL GROWING SYSTEM
Carl J. Christensen, Salt Lake City, Utah, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application April 25, 1957, Serial No. 655,163
9 Claims. (Cl. 23—301)



7. The method of growing crystals from nutrient solution circulating in contact with excess solid salt disposed at a point along the path of travel of the solution passing successively through a saturator stage, an unsaturator stage, a feed stage and a crystallizer stage comprising the steps of circulating the solution cyclically in a continuous path of travel passing successively from the saturator stage to the unsaturator stage, from the unsaturator stage to the feed stage, from the feed stage to the crystallizer stage and from the crystallizer stage back to the saturator stage, moving the solution in contact with the excess solid salt in the saturator stage, heating the solution in the saturator stage to a temperature value sufficiently above its saturation point temperature to render it sufficiently unsaturated to add additional salt solute thereto from the excess solid salt therein, heating the solution in the unsaturator stage to a different temperature value above said temperature value in the saturator stage and sufficiently above its saturation point temperature to render it sufficiently unsaturated with respect to the solute therein to dissolve crystalline material, moving the heated solution from the unsaturator stage to the feed stage, moving the heated solution from the feed stage into the bottom of the crystallizer stage at a rate of flow sufficient to replenish used solute removed from the solution by crystallization in the crystallizer stage, moving a portion of the heated solution in the feed stage into the path of travel of the solution between the saturator stage and the unsaturator stage to curtail spurious crystal growth therein, heating the lowest part of the body of solution in the crystallizer stage at a temperature suitable to maintain the lowest part only thereof unsaturated at a temperature value sufficiently above saturation point temperature to curtail crystallization and suitable simultaneously to maintain the upper part thereof saturated at a temperature value sufficiently below saturation point temperature to permit crystallization and growth of crystals, and moving the crystals in contact with the saturated upper part of the solution in the crystallizer stage.

2,863,741
PYROTECHNIC DEVICE
Jim Sorgi, Hudson, Ohio
Application March 31, 1951, Serial No. 218,646
5 Claims. (Cl. 44—40)

1. A self-igniting and self-kindling fuel cartridge comprising a cardboard container filled with an impacted agglomeration of charcoal lumps which have fused surface coating of paraffin wax, a flare comprising oxygen liberating substances imbedded as a core within said charcoal agglomeration and adapted to ignite the wax

thereon, a combustible fuse connecting said core with a point on the surface of said container, and a friction stimulated igniter secured to said container at said point on the surface and physically in contact with said fuse.

2,863,742
GASOLINE FUEL COMPOSITIONS
Troy L. Cantrell, Drexel Hill, Josiah French, Lansdowne, and Paul K. Kuhse, Upper St. Clair Township, Allegheny County, Pa., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application October 4, 1954
Serial No. 460,238
5 Claims. (Cl. 44—58)

1. A gasoline fuel composition comprising a major amount of a hydrocarbon mixture boiling in the gasoline range, having a 50 percent ASTM distillation point of not greater than about 220° F., and tending to promote stalling of internal combustion engines, said hydrocarbon mixture having incorporated therein a small amount, sufficient to reduce the engine stalling tendencies of the composition, of a combination of about 0.001 to 0.03 percent by weight of a salt of a primary, aliphatic monoamine that contains 6 to 18 carbon atoms, and a dialkyl ester of o-phosphoric acid whose alkyl substituents each contain 3 to 10 carbon atoms, and about 0.25 to about 0.75 percent by volume of the composition of a light lubricating distillate oil having a viscosity at 100° F. of from about 50 to about 500 Saybolt Universal seconds.

2,863,743
MOTOR FUEL
John P. Pellegrini, Jr., Blawnox, and Helen L. Thayer, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Application November 27, 1953
Serial No. 394,871
5 Claims. (Cl. 44—69)

1. A motor fuel having improved preignition qualities comprising a major amount of gasoline containing about 1 to about 3 cubic centimeters of tetraethyl lead per gallon of gasoline, a lead scavenging amount of a halo-hydrocarbon and between about 0.1 and 1.5 times the theoretical amount of an alkyl-phosphoramide required to convert the lead to lead phosphate, wherein the alkyl group in said alkyl-phosphoramide contains from 1 to 4 carbon atoms.

2,863,744
MOTOR FUEL
Troy L. Cantrell, Drexel Hill, Pa., and John G. Peters, Audubon, N. J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application October 4, 1954
Serial No. 460,237
4 Claims. (Cl. 44—69)

1. A motor fuel consisting essentially of a gasoline containing tetraethyl lead and an ethylene halide in an

737 O. G.—28

amount normally tending to cause preignition of said gasoline in the combustion chamber of a spark ignition engine and at least 0.3 times the theoretical amount required to convert the lead to lead phosphate of the cyclohexylamine salt of 3-methylbutyl,2-ethylhexyl acid orthophosphate.

2,863,745

MOTOR FUEL

Troy L. Cantrell, Drexel Hill, and Albert S. Orr, Pittsburgh, Pa., and John G. Peters, Audubon, N. J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application October 4, 1954
Serial No. 460,263
2 Claims. (Cl. 44—69)

1. A motor fuel consisting essentially of a gasoline containing tetraethyl lead and an ethylene halide in an amount normally tending to cause preignition of said gasoline in the combustion chamber of a spark ignition engine and at least 0.3 times the theoretical amount required to convert the lead to lead phosphate of the cocoamine salt of 3-methylbutyl,2-ethylhexyl acid orthophosphate.

2,863,746

AVIATION GRADE GASOLINES CONTAINING N-ALKYL AMINE SALTS OF DIALKYL ACID ORTHOPHOSPHATES

Troy L. Cantrell, Drexel Hill, and Paul K. Kuhns, Upper St. Clair Township, Allegheny County, Pa., and John G. Peters, Audubon, N. J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application May 9, 1955
Serial No. 507,127
3 Claims. (Cl. 44—69)

1. An aviation grade gasoline comprising a major amount of a hydrocarbon mixture boiling in the aviation gasoline range and having an aviation lean mixture anti-knock rating of at least 100 and an aviation rich mixture anti-knock rating of at least 130, and containing about 3 to 20 lbs./1000 bbls. of gasoline of a substantially neutral addition salt of (a) mixed primary, n-alkyl amines containing 8 to 18 carbon atoms per molecule, the amine present in the largest proportion containing 12 carbon atoms, and (b) a dialkyl acid orthophosphate whose alkyl groups are selected from the class consisting of branched chain octyl and amyl radicals, the amount of said salt being sufficient to impart rust inhibiting properties to the gasoline during storage, said gasoline being substantially free from any tendency to deposit solids in aviation engine intake systems.

2,863,747

MARINE WHITE GASOLINE COMPOSITIONS CONTAINING OIL-SOLUBLE ALKYLAMMONIUM DIALKYL ORTHOPHOSPHATES

Troy L. Cantrell, Drexel Hill, and Paul K. Kuhns, Upper St. Clair Township, Allegheny County, Pa., and John G. Peters, Audubon, N. J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application July 13, 1955
Serial No. 521,886
3 Claims. (Cl. 44—72)

3. A gasoline composition suitable for marine use consisting essentially of a major amount of an unleaded, substantially olefinic hydrocarbon-free gasoline having an octane rating less than isooctane and 10 to 20 pounds per thousand barrels of the substantially neutral addition salt of cocoamine and 3-methylbutyl, 2-ethylhexyl acid orthophosphate.

2,863,748

PRODUCTION OF FUEL GASES

Ernst Bartholomé, Heidelberg, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Continuation of application Serial No. 329,151, December 31, 1952. This application February 26, 1957, Serial No. 643,367
Claims priority, application Germany January 5, 1953
9 Claims. (Cl. 48—197)

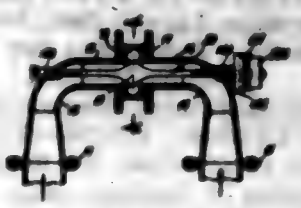
1. A process for producing a carbon monoxide- and hydrogen-containing fuel gas which comprises: gasifying a fluid hydrocarbon fuel by partial oxidation with an oxygen-containing gas in a flame reaction in the presence of a dispersed finely divided catalyst to produce principally carbon monoxide and hydrogen, said catalyst being adapted to suppress the formation of carbon black; passing the resulting hot gases containing said finely divided catalyst through and in contact with a solid carbonaceous fuel arranged in a fixed bed and undergoing gasification with the formation of liquid slag for the production of additional carbon monoxide and hydrogen and for the removal of said catalyst from said hot gases; and withdrawing said liquid slag containing said catalyst.

2,863,749

PROCESS FOR THE PRODUCTION OF SYNTHESIS GAS WITHOUT CATALYSTS

Guido Greco, Milan, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Application January 19, 1956, Serial No. 560,263
Claims priority, application Italy January 28, 1955
4 Claims. (Cl. 48—212)



2. The process of producing synthesis gas containing CO and H_2 by a partial combustion, in the absence of any catalyst and steam, of a normally liquid hydrocarbon fraction that volatilizes without decomposition and formation of free carbon upon heating to a temperature up to 300–350° C., said process comprising volatilizing said hydrocarbon fraction, intimately pre-mixing the volatilized hydrocarbon fraction with oxygen immediately prior to introduction into the burner of a reaction chamber by impinging upon each other streams of oxygen and of the volatilized hydrocarbon fraction at an oxygen : hydrocarbon molar ratio of between 0.5 to 0.8 and at kinetic energies whose respective opposite effective directional components are substantially equal and equivalent to 100–200 kgm./Nm.^{3} of gas, based on methane, each of the streams of oxygen and hydrocarbon being individually deflected and spread into a thinned, diverging, conical stream, and the said diverging conical streams being symmetrically and coaxially impinged upon each other to obtain said intimate pre-mixing, introducing the linearly moving so pre-mixed gases into the burner and maintaining a reaction temperature not exceeding 1000° C. in the reaction zone.

2,863,750

METHOD, COMPOSITION AND APPARATUS FOR MECHANICALLY SETTING OR RESETTING DIAMOND PARTICLES IN A WORKING SURFACE

Sheldon M. Booth, South Haven, Mich.

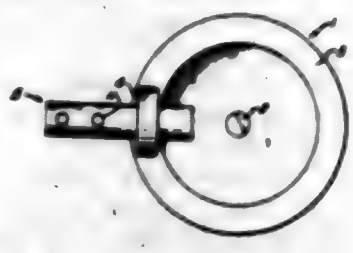
Application October 18, 1954, Serial No. 462,857
7 Claims. (Cl. 51—293)

3. A method of mechanically setting diamond particles in and renewing, the solid working surface of a metal

30 to 55% of oxygen, wherein a slag is used selected intimate mixture of a sub-divided oxidic zirconiferous ma-

agglomeration of charcoal lumps which have fused sur- containing tetraethyl lead and an ethylene halide in an

diamond-abrasive wheel consisting essentially of the steps: applying a mixture, comprising diamond particles, glass particles of a size larger than said diamond particles and being from about 80 screen to about 120 screen and a carrier selected from the group consisting of petroleum jelly and a heavy grease, to the working surface of said wheel; rotating said wheel at a speed in excess of about 300 R. P. M.; urging a freely rotatable roller against said



working surface while said wheel is rotating under a pressure sufficient to cause said glass particles to cut said working surface of said wheel and to loosen previously set diamond particles in said working surface; and thereafter urging said roller against said working surface while the wheel is rotating under a pressure sufficient to crush said glass particles to a size smaller than said diamond particles and to force said diamond particles into the interstices of said working surface.

2,863,751

IGNITION COMPOSITIONS FOR MATCHES, STRIKING SURFACES AND THE LIKE

Tore Björn Ledani, Oslo, Norway

No Drawing. Application July 28, 1955
Serial No. 525,062
Claims priority, application Norway August 18, 1954
3 Claims. (Cl. 52—27)

1. An ignition composition for matches and striking surfaces, comprising a binding agent consisting essentially of about ⅓ each of (*a*) a product selected from the group consisting of B-stage melamine-formaldehyde and B-stage urea-formaldehyde, (*b*) at least one non-hardening water dispersible binding agent selected from the group consisting of (1) a thermoplastic polymerization product consisting of (CM_2CHR) units wherein R is a member selected from the group consisting of H, OH, Cl, CH_3COO and C_6H_5, and (2) dextrine, and (*c*) an ammonium hydrogen sulfite cellulose waste liquor product.

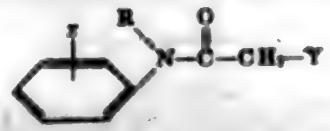
2,863,752

HERBICIDES

Phillip C. Hamm, Webster Groves, and Angelo J. Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,740
18 Claims. (Cl. 71—2.3)

7. A composition for inhibiting the germination of seeds and the growth of plants which comprises a herbicide conditioning agent and in an amount sufficient to exert a herbicidal action a compound of the structure



wherein Y is a halogen atom, wherein R is a radical selected from the group of alkyl radicals having up to six carbon atoms, the alkenyl radicals having up to six carbon atoms, the alkynyl radicals having up to six carbon atoms, the halo-alkyl radicals having up to six carbon atoms, the halo-alkenyl radicals having up to six carbon atoms, and the halo-alkynyl radicals having up to six carbon atoms; and wherein *x* is selected from the group consisting of a hydrogen atom, the halogen atoms, a nitro radical, and the alkyl radicals having up to four carbon atoms.

2,863,753

METHOD OF WEED CONTROL

Ralph Louis Wain, near Ashford, England, assignor to National Research Development Corporation, London, England, a British company

No Drawing. Application April 22, 1955
Serial No. 503,321
Claims priority, application Great Britain July 6, 1954
10 Claims. (Cl. 71—2.6)

1. A method for the control of weeds in crops selected from the class consisting of clover, celery, carrot, parsnip and pea which comprises applying to the crop area at a rate sufficient to kill the weeds without significant damage to the crop a herbicide of the class consisting of the ω-(2-methyl-4-chlorophenoxy)-butyric and caproic acids, their salts, esters, amides and nitriles.

2,863,754

METHOD OF WEED CONTROL

Ralph Louis Wain, near Ashford, England, assignor to National Research Development Corporation, London, England, a British company

No Drawing. Application April 22, 1955
Serial No. 503,322
Claims priority, application Great Britain July 6, 1954
10 Claims. (Cl. 71—2.6)

1. A method for eradicating weeds from crop areas containing a growing crop selected from celery, parsnip, pea and leguminous fodder crops of the genera Trifolium and medicago which comprises applying to the crop areas a herbicide of the class consisting of the ω-(2:4-dichlorophenoxy)-butyric and caproic acids, their salts, esters, nitriles and amides, at a rate sufficient to kill the weeds without significant damage to the crop.

2,863,755

OIL-TREATED CALCIUM CARBIDE FOR DESULFURIZATION OF IRON

Edward F. Kurzinski, Cranford, N. J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application April 22, 1957
Serial No. 654,869
9 Claims. (Cl. 75—53)

6. In the treatment of a sulfur-containing ferrous melt wherein finely divided calcium carbide is introduced into said melt as a desulfurizing agent, the improvement of increasing the reactive surface area of said calcium carbide, said improvement comprising disintegrating the finely divided calcium carbide in the melt by oil treating said calcium prior to its introduction.

2,863,756

PROCESS FOR THE PRODUCTION OF HIGH-GRADE THOMAS STEEL

Johannes Koenidar, Hagen-Haspe, Westphalia, Germany, assignor to Hoettenwerk Haspe A. G., Hagen-Haspe, Germany

Application October 22, 1956, Serial No. 617,418
7 Claims. (Cl. 75—60)

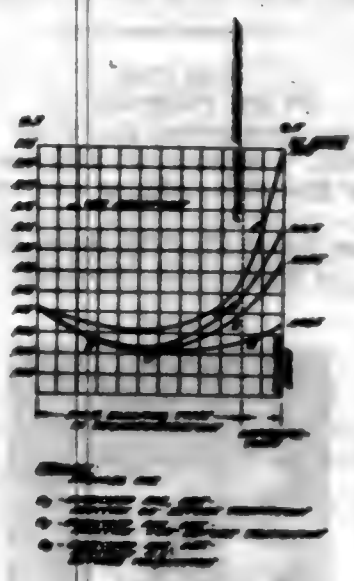
1. A process for the production of high-grade Thomas steel, which comprises blowing pig iron containing 1–2% of phosphorus and 3.8–4% of carbon with a blast of

2,863,761

RECOVERY OF PLATINUM FROM ALUMINA-

neath the surface of the molten iron by an inert gas,

30 to 55% of oxygen, wherein a slag is used selected from the group consisting of soda, lime-soda, and lime;



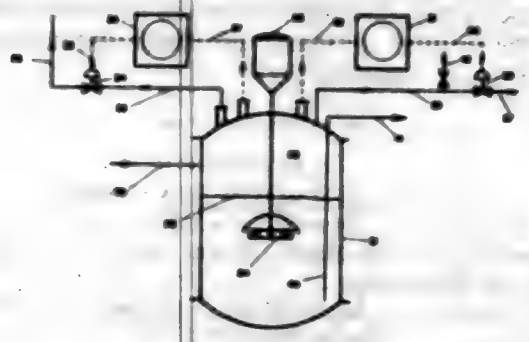
and adding ore 3–4 minutes before the end of the decarbonizing period.

2,863,757

PROCESS FOR THE REMOVAL OF CALCIUM FROM SODIUM

David F. Altimier and Charles H. Lemke, Niagara Falls, N. Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application December 3, 1956, Serial No. 625,645
5 Claims. (Cl. 75—66)



1. In the process for removing calcium from sodium the steps comprising intimately mixing a gas mixture with molten sodium at a temperature below 300° C., said gas mixture comprising upwards of about 98% by volume of a gas inert to sodium at temperatures below 300° C. and less than about 2% by volume of oxygen, recirculating said gas mixture and replenishing the oxygen in said gas mixture to maintain the oxygen therein at a concentration below about 2% and above about 0.1% and continuing said recirculation until at least all the calcium above 25 p. p. m. of the sodium is separable therefrom by physical means.

2,863,758

METHOD OF FORMING METALLURGICAL BRIQUETTES OF ZINCIFEROUS MATERIAL

Roland G. Crane, Swarthmore, N. J., and Othon J. Cerna, Nueva Rosita, San Juan de Sabinas, Mexico, assignors to American Smelting and Refining Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application August 19, 1954
Serial No. 451,071
3 Claims. (Cl. 75—4)

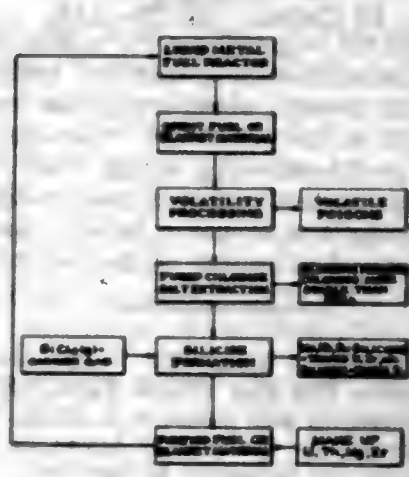
1. In a zinc smelting process involving the steps of forming green metallurgical briquettes comprised of an intimate mixture of a sub-divided oxidic zinciferous material, a ground bituminous coking coal and a binder material, coking the green briquettes, passing a vertical column of the coked briquettes downwardly through a smelting zone in a vertical retort and smelting the coked briquettes in said smelting zone to remove zinc values from the coked briquettes as metallic zinc vapor, the improvement comprising the step of forming said green briquettes with a binder material comprising a plastic kaolinitic-base clay having a softening point in excess of 2000° F. and a mineral oil having a viscosity of about 200 to 1000 seconds, Saybold-Furol, at 122° F., whereby coked briquettes of enhanced strength are obtained in said coking step and a reduced amount of fines are formed during said smelting step.

2,863,759

PURIFICATION OF LIQUID METAL REACTOR COMPOSITIONS

Morris A. Steinberg, University Heights, Ohio, assignor to Horizons Incorporated, a corporation of New Jersey

Application July 2, 1957, Serial No. 669,434
1 Claim. (Cl. 75—78)



In a method of processing bismuth compositions from which volatile fission products and fission products whose chlorides are more stable than uranium chloride have been removed by preliminary treatment, the improvement which comprises: removing those remaining fission products which form silicides by passing silicon tetrachloride and hydrogen into the treated bismuth composition and separating the solid silicides formed therein from the remaining liquid metal composition.

2,863,760

RECOVERY OF PLATINUM FROM PLATINUM-ALUMINUM CATALYST

Kenneth D. Ashley and Malden W. Michael, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application September 24, 1953
Serial No. 382,188
9 Claims. (Cl. 75—108)

1. A method of recovering platinum from alumina-platinum-containing catalytic material which comprises digesting said catalytic material with a stoichiometric excess of sulfuric acid whereby the alumina goes into solution and platinum remains in suspension, passing hydrogen sulfide through said solution to precipitate any soluble platinum therein, flocculating the platinum in suspension and the precipitated platinum sulfide, and separating the flocculated platinum-containing materials from the solution.

ing accelerating recovery before repeating an operational covering the resulting precipitated chemical complex of

bon atoms, the halo-alkyl radicals having up to six carbon atoms, the halo-alkenyl radicals having up to six

of phosphorus and 3.8–4% of carbon with a blast of

2,863,761

RECOVERY OF PLATINUM FROM ALUMINA-PLATINUM-CONTAINING CATALYTIC MATERIALS

Kenneth D. Ashley and George J. Bruni, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application July 26, 1955
Serial No. 524,618
3 Claims. (Cl. 75—108)

1. A method of recovering platinum from an alumina-platinum catalyst which comprises digesting said catalyst with aqueous hydrochloric acid and thereby forming a suspension of finely divided metallic platinum in an aqueous aluminum chloride solution, adding a flocculating agent to said suspension and thereby flocculating the finely divided platinum particles suspended therein, and separating the flocculated platinum from the solution.

2,863,762

RECOVERY OF NOBLE METALS

Joseph B. Pullen, Mount Prospect, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application December 28, 1956
Serial No. 631,847
14 Claims. (Cl. 75—121)

1. A method for recovering noble metals from deactivated noble metal-containing catalytic composites contaminated with arsenic which comprises reacting said composite with an inorganic acid, separating the undissolved noble metal-containing sludge from the resulting mixture, dissolving said noble metal-containing sludge, adding hydrochloric acid and a ferrous salt to the resulting solution and subjecting the mixture to distillation.

2,863,763

DUCTILE AND TOUGH HIGH STRENGTH STEEL

Samuel J. Rosenberg and Carolyn R. Irish, Washington, D. C., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Application March 19, 1957
Serial No. 647,167
8 Claims. (Cl. 75—128)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A low-alloy, high-strength steel for structural application characterized by great hardness, good ductility and toughness when heat treated by quenching from above the upper critical temperature, and double tempered in the 400° F. to 500° F. range, said steel comprising about: 0.35 to 0.45% carbon, 0.50 to 1.50% manganese, 1.30 to 2.00% silicon, 1.50 to 2.50% nickel, 0.70 to 0.90% chromium, 0.20 to 0.40% molybdenum, 0.04 to 0.20% titanium, 0.000 to 0.0025% boron, and the balance of said steel being essentially iron.

2,863,764

COATED MAGNESIUM IRON TREATMENT

Grant E. Spengler, Philadelphia, Pa., and James W. Estes, New Brunswick, N. J., assignors to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York

No Drawing. Application July 23, 1956
Serial No. 599,289
11 Claims. (Cl. 75—130)

1. A method of improving the physical properties of an as-cast gray cast iron comprising establishing a molten quantity of gray cast iron containing more than 0.03% sulphur, injecting into said molten cast iron sufficient calcium carbide so that the quantity of the sulphur is reduced to less than about 0.03% sulphur, injecting a mixture comprising about 5% to 20% magnesium chips, 2.0% to 10% calcium oxide, and 70% to 93.0% finely divided calcium carbide, said mixture being carried beneath the surface of the molten iron by an inert gas, and the stream of gas and mixture containing from about ¼ to 2 cubic feet of gas per pound of solids injected.

2,863,765

PURE CHROMIUM

Reginald S. Dean, Hyattsville, and Frank X. McCawley, Cheverly, Md., assignors to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware

Application March 27, 1957, Serial No. 648,888
1 Claim. (Cl. 75—176)

As an article of manufacture, macroscopic idiomorphic crystal intergrowths of chromium hexagonal as formed at above 750° C. and containing as formed less than 0.01% O_2 and substantially no other impurity, said crystal intergrowths being pseudomorphs after the hexagonal form but having the crystal structure of alpha chromium when cooled to room temperature.

2,863,766

EDM ELECTRODE MATERIAL

John S. Larkins, Jr., Birmingham, Mich., assignor to Elox Corporation of Michigan, Royal Oak, Mich., a corporation of Michigan

No Drawing. Application September 20, 1957
Serial No. 685,076
2 Claims. (Cl. 75—178)

1. An electrical-discharge-machining electrode composed of zinc and tin in the proportions of 90% to 50% zinc and 10% to 50% tin.

2,863,767

XEROGRAPHIC METHOD

Robert G. Vyverberg, Pittsford, and James H. Neyhart, Rochester, N. Y., assignors to Haloid Xerox Inc., a corporation of New York

No Drawing. Application January 17, 1955
Serial No. 482,364
2 Claims. (Cl. 96—1)

1. In a method of xerographic reproduction wherein a xerographic plate comprising a layer of photoconductive vitreous selenium in continuous electrically coupled relation with an electroconductive backing member is repeatedly subjected to an operational cycle which comprises imposing an electrostatic charge on its surface to sensitize the plate, exposing the sensitive plate to produce an electrostatic latent image thereon of electrostatic charges in image formation and taking off an image corresponding to said electrostatic latent image with the resultant occurrence of fatigue of said plate upon completion of an operational cycle, the improvement compris-

outside the same and condensing it, returning the condensed spirit to the bed and thence to the batch and re-

2,863,775

METHOD OF PRODUCTION OF TEA CONCEN-

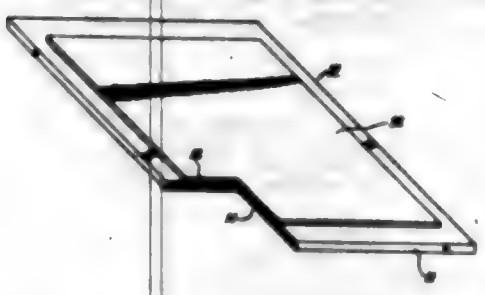
ing accelerating recovery before repeating an operational cycle of the fatigued xerographic plate comprising between said operational cycles heating said plate to bring it to a temperature in the range from about 110° F. to about 140° F. in not greater than about one minute and maintaining said layer at a temperature within said range from about ¾ to 3 minutes until substantial recovery of said layer has been effected, and then in not greater than about one minute cooling said plate to at least about 80° F., the heat to which said layer is subjected to bring it up to said temperature within said range being substantially greater than any heat to which said layer is subjected to maintain its temperature within said range.

2,863,768

XEROGRAPHIC PLATE

Roland M. Schaffert, Columbus, Ohio, assignor, by mesne assignments, to Haloid Xerox Inc., Rochester, N. Y., a corporation of New York

Application July 5, 1955, Serial No. 520,078
12 Claims. (Cl. 96—1)



1. As an article of manufacture a xerographic plate comprising an electrically conductive backing member having on at least one surface a layer of photoconductive insulating material consisting essentially of a substantially uniform mixture of between about 0.5% and about 20% by weight of arsenic trisulfide and the remainder substantially vitreous selenium.

2,863,769

PROCESS OF PREPARING SILVER HALIDE DISPERSIONS

Jerome Albert Mourè, Rochester, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 3, 1954, Serial No. 454,213
8 Claims. (Cl. 96—114)

1. A process which comprises admixing (1) an aqueous dispersion of light-sensitive silver halide in a synthetic water-permeable amphoteric addition polymer of high molecular weight having protective colloid properties and containing acid groups and groups taken from the class consisting of amine and quaternary ammonium groups, and (2) an aqueous solution having dissolved therein from 3% to 20% by weight based on said amphoteric polymer of a water-soluble, acid-soluble anionic organic polymer of high molecular weight having periodically occurring groups taken from the class consisting of free acid groups and salts thereof, said anionic polymer being taken from the group consisting of polyvinyl acetals, carrageenin, alkyl vinyl ether/maleic anhydride copolymers, polystyrene sulfonates, polyvinyl phosphates and phosphates of polyglycidyl methacrylates, which anionic polymers are soluble both in water and 1% nitric acid to the extent of at least 1% by weight, and (3) then adding an acid in an amount sufficient to lower the pH below the isoelectric point of such amphoteric polymer, and recovering the resulting precipitated chemical complex of said acid-soluble anionic polymer and said amphoteric polymer containing dispersed silver halide.

2,863,770

METHOD OF PRODUCING A FOODSTUFF

Louis Spieser, Zurich, Switzerland, assignor to Nibbit Products Association Ltd., Zurich, Switzerland

No Drawing. Application December 5, 1955 Serial No. 550,862
Claims priority, application Switzerland December 22, 1954
8 Claims. (Cl. 99—1)

1. The method of producing a formed foodstuff from starch-containing flour comprising mixing pre-swelled and dried starch powder derived from an edible tuber with an amount of water such that the resulting mixture contains between about 30% and about 40% of water, extruding the so-produced mixture under a pressure of at least six atmospheres to form a coherent band, and drying the latter to a water-content of less than 10% and more than 6%.

2,863,771

PRODUCTION OF DRY, VITAL GLUTEN

Peter J. Ferrara, New York, N. Y.

No Drawing. Application December 16, 1955 Serial No. 553,438
6 Claims. (Cl. 99—14)

3. Method of producing a dry vital gluten from wet gluten derived from wheat flour, which comprises forming a stable dispersion of such wet gluten by admixing it with an aqueous solution of formic acid of from 2–4.5 pH, thereby forming a homogeneous aqueous dispersion and drying said dispersion by dispersing it in the form of droplets into contact with heated air, thereby heating it to a temperature not exceeding 120° C., said drying being completed within 5 seconds.

2,863,772

CHOCOLATE PRODUCT AND PROCESS

Norman W. Kempf, Auburndale, Mass., assignor to General Foods Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application April 9, 1956 Serial No. 576,806
14 Claims. (Cl. 99—23)

1. A process of making a heat resistant chocolate which is self-sustaining at temperatures above the melting point of cocoa butter, comprising incorporating milk protein and sucrose coated with moisture and invertase into the chocolate, shaping the final chocolate product and then exposing said final shaped chocolate product to a humid atmosphere.

2,863,773

METHOD AND APPARATUS FOR PURIFYING RAW DISTILLED SPIRIT

Cecilio Martinez Dalmau, Vedado, Havana, Cuba, assignor of ten percent to John L. Henderson, Cincinnati, Ohio, and forty-five percent to Fernando Herrera, Norwood, Ohio

Application October 7, 1954, Serial No. 461,951
6 Claims. (Cl. 99—48)

4. A method of purifying raw, distilled spirit that consists in providing a batch of raw spirit, heating the batch to vaporize the same, passing all the spirit vapor into a bed of vegetable charcoal, conducting vapor from the bed

2,863,778

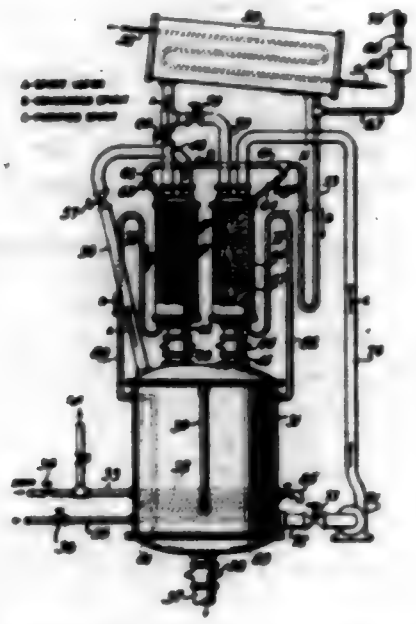
FOOD CONTAINER AND VITAMIN PACKET

tion to the acid solution of a small amount of a lignin amine sufficient to effect a substantial measure of coa-

divided calcium carbide, said mixture being carried be-

tion of an operational cycle, the improvement compris-

outside the same and condensing it, returning the condensed spirit to the bed and thence to the batch and re-



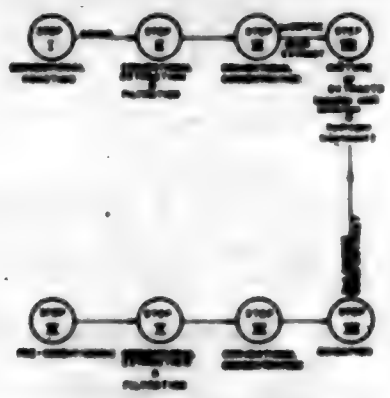
peating the foregoing steps until the spirit has been purified to the quality desired.

2,863,774

COFFEE BEAN PRODUCTS AND METHODS FOR PRODUCING SUCH PRODUCTS

Michele Bonotto, Princeton, N. J., assignor of one-half to McCormick & Company, Incorporated, Baltimore, Md., a corporation of Maryland, and one-half to Reginald M. Webster and Joseph Gois, Jr., both of New York, N. Y., and to said Bonotto

Application October 4, 1956, Serial No. 614,666
9 Claims. (Cl. 99—71)



1. The method of producing an aqueous, fully flavored, highly concentrated fluid coffee extract from green coffee beans which comprises providing a quantity of green coffee beans, subjecting a first portion of said green coffee beans to a pre-conditioning step comprising the application of elevated temperature below the roasting temperature of green coffee beans, until the odor of roasted coffee can be detected, subjecting the second portion of said green coffee beans to a roasting temperature, extracting a first and second coffee bean extract from said first and second portions respectively, and separately concentrating each of said extracts in aqueous solution, reacting said first coffee bean aqueous extract with an oxygen-containing agent selected from the group consisting of oxygen, air, and mixtures thereof and at a temperature substantially lower than conventional coffee bean roasting temperature to develop and enhance the more volatile coffee flavors and aromas, and combining said first and second coffee bean extracts thereby obtaining an aqueous, highly concentrated, fully flavored coffee extract with more complete development and retention of flavors and aromas.

2,863,775

METHOD OF PRODUCTION OF TEA CONCENTRATE DIRECTLY FROM TEA LEAVES WHEN THE LEAVES ARE IN A GREEN STATE, AND PRODUCT OF SAID METHOD

Ramon Perech, New York, N. Y., assignor to Transcontinental Development Company, Vaduz, Liechtenstein, a trust of Liechtenstein

No Drawing. Application January 28, 1957
Serial No. 636,472
Claims priority, application Great Britain
September 9, 1954
18 Claims. (Cl. 99—77)

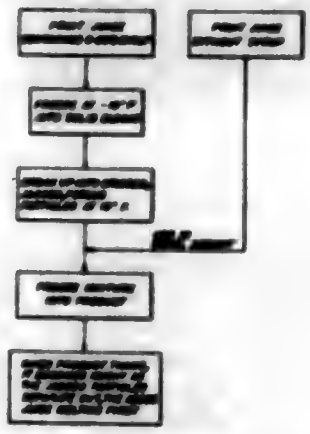
1. A process for producing an improved water soluble oxidized tea extract, which comprises preparing a water extract from tea leaves and heating the aqueous extract at an elevated temperature below the boiling point of water in contact with an oxygenous atmosphere for at least one hour so that water soluble constituents are oxidized in the aqueous extract medium.

2,863,776

FROZEN BEVERAGE AND METHOD FOR MAKING THE SAME

Velma E. Lieber, Berkeley, Calif.

Application August 4, 1954, Serial No. 447,720
10 Claims. (Cl. 99—136)



1. A beverage-product preparing process comprising the steps of mixing a quantity of fresh fruit juice with simple syrup in quantity not in excess of 20% of the juices, hard-freezing the mixture to a block form, mechanically reducing the frozen mixture to a mass of icy particles while maintaining the mass under low-temperature conditions, mixing the mass with a substantially equal quantity of chilled but unfrozen juice, and refreezing the resultant mixture to a solid state.

2,863,777

MEAT COLOR PRESERVING COMPOSITION

Adriana Dekker, Deventer, Netherlands, assignor, by mesne assignments, to Vasco Industries Corp., New York, N. Y., a corporation

No Drawing. Application April 6, 1956
Serial No. 576,536
Claims priority, application Netherlands April 7, 1955
7 Claims. (Cl. 99—157)

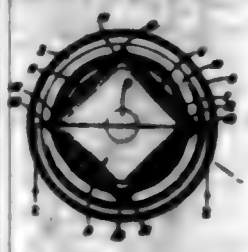
1. A meat color preserving composition comprising at least one reducing sugar, a β-substituted pyridine derivative, and ascorbic acid, the amount of reducing sugar in said composition being at least equal to the combined amounts of β-substituted pyridine derivative and ascorbic acid, and the latter two components being present in an approximate molar ratio of about 0.8:1 to 2:1, thereby prolonging the preservation of the natural red color of the meat treated with said composition to more than 12 hours.

2,863,778

FOOD CONTAINER AND VITAMIN PACKET COMBINATION

Allan D. Lynn, Sacramento, Calif., assignor to Bonnie Dog Food Co., Sacramento, Calif., a corporation of California

Application February 27, 1956, Serial No. 567,836
4 Claims. (Cl. 99—182)



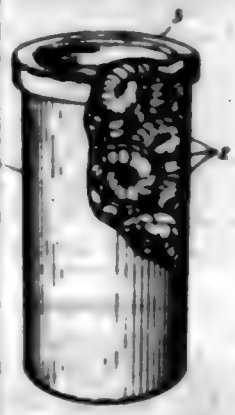
1. In the combination of a container having a product therein, and a separate packet having an additive therein for such product; the container including an end, a rim flange projecting outwardly from said end to form a countersink, the packet being relatively flat and disposed entirely in said countersink in face to face relation to said end, there being a rib extending outwardly from said end laterally of the center thereof but spaced from the rim flange, at least one free edge portion of the packet extending over the high point of the rib and having a part projecting therebeyond in the direction but terminating short of said rim flange, said projecting part overhanging said end between the rib and the rim flange for finger access, and means detachably securing the packet to said end clear of said free edge portion.

2,863,779

METHOD OF PREPARING SHRIMP IN FROZEN CONDITION

Karl C. Enevoldsen, Lakewood, Ohio

Application August 20, 1954, Serial No. 451,167
5 Claims. (Cl. 99—195)



1. A method for packaging shrimp so that it can be stored under ordinary refrigeration conditions for substantial periods, said method comprising cooking the shrimp, rapidly cooling it and packing it into rigid air-impermeable containers having strength sufficient to withstand substantially reduced pressure, subjecting said containers and said shrimp to a vacuum so that the pressure on the shrimp is reduced to a pressure not in excess of 10 inches of mercury, sealing the container to maintain the shrimp under such reduced pressure, and storing said containers under refrigerated conditions.

2,863,780

INHIBITION OF CORROSION OF IRON IN ACIDS

John Corning Bell, Jr., Summerville, S. C., assignor to West Virginia Pulp and Paper Company, New York, N. Y., a corporation of Delaware

No Drawing. Application March 4, 1957
Serial No. 643,497
10 Claims. (Cl. 106—14)

3. A process for inhibiting the corrosion of iron in acid solutions, which consists essentially in the addition to the acid solution of a small amount of a lignin amine sufficient to effect a substantial measure of corrosion inhibition, said lignin amine being prepared by the reaction of the following ingredients: (*a*) an ingredient chosen from the group consisting of lignin, sulfonated lignin and alkali metal salts of lignin and sulfonated lignin, (*b*) an aldehyde, and (*c*) an amine chosen from the group consisting of the primary and secondary amines, and maintaining the so modified acid solution in contact with iron.

2,863,781

BINDERS FOR FOUNDRY MOLDS AND CORES

Burgess P. Wallace, Brooklyn, Van Dyke Ramsey, Meier's Corners, and Heinz H. Becker, Forest Hills, N. Y., assignors to Whitehead Brothers Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application May 5, 1955
Serial No. 506,378
6 Claims. (Cl. 106—38.8)

1. The method of making a bituminous binder for foundry molds and cores, which comprises forming a mix consisting essentially of 40 to 60 percent of petroleum asphalt resin, by weight, 30 to 55 percent of coal tar pitch, by weight, 3 to 8 percent of resorcinol, by weight, and 3 to 10 percent of the solid content of bisulphite waste liquor, by weight, maintaining the resultant mix at a temperature of between 300° and 325° F. for at least ½ hour, then allowing the resultant mass to cool and reducing the same to a powder.

2,863,782

LOW-MELTING HIGH-EXPANSION GLASS

William R. Eubank, Troy Township, St. Croix County, Wis., and Warren R. Beck, Mahtomedi, Minn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application July 22, 1955
Serial No. 523,930
29 Claims. (Cl. 106—47)

1. A durable glass having high thermal expansion and pourable as a fluid melt at raised temperatures below approximately 800° C. consisting essentially of between 60 and 98% by weight of low temperature glassformers and between 40 and 2% by weight of compatible durability imparting inorganic oxides, said compatible oxides being inorganic oxides capable of going into solution with said low temperature glassformers to form a homogeneous glass melt at raised temperatures below approximately 800° C., and said low temperature glassformers being inorganic oxides having a compositional analysis which satisfies the requirements of the following table wherein approximate amounts are specified in weight percent:

Sb_2O_3	25–98
As_2O_3	0–70
$Sb_2O_3+As_2O_3$	60–98
B_2O_3	0–30
$Sb_2O_3+As_2O_3+B_2O_3$	60–98

2,863,783

NACREOUS MATERIAL FROM GLASS

Leon M. Greenstein, New York, N. Y., assignor to Francis Earle Laboratories, Inc., Peekskill, N. Y., a corporation of New York

No Drawing. Application November 15, 1956
Serial No. 622,288
14 Claims. (Cl. 106—148)

3. A nacreous composition having, as a nacre-producing substance therein, glass platelets of a thickness

not greater than 2 microns, lengths between 2 and 100 microns, an average ratio of length to thickness of at least four, and an index of refraction of at least 1.70.

2,863,784
HYDROXYLATED CONJUGATED DIOLEFIN POLYMERS IN DRYING OIL COMPOSITIONS AND A METHOD OF PREPARING THE SAME
John C. Hillyer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application July 3, 1952
Serial No. 297,165
27 Claims. (Cl. 106—252)

1. As a new drying oil composition, a heat-treated mixture of at least one hydroxylated conjugated diolefin polymer and glyceride oils of the drying and semi-drying types.

2,863,785
THERMALLY STABLE BITUMINOUS BONDING MATERIALS
Murray Jelling, Whitestone, N. Y.
No Drawing. Application November 19, 1953
Serial No. 393,243
22 Claims. (Cl. 106—273)

12. A bituminous composition containing a thermally stable bonding agent that is a salt of an N-dialkylaminoalkylamide having the general formula:

$$RCO—NR'—A—NR''_2 \cdot HO—OCR$$

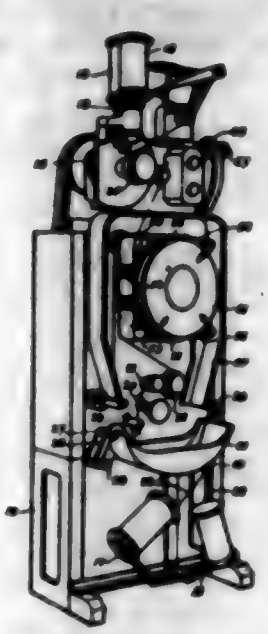
where one of the RCO groups is a naphthenyl radical and the other RCO group is an acyl radical of an acid selected from the group consisting of C_{12}–C_{20} fatty acids, rosin acids and naphthenic acids; A is an alkylene radical containing from 2 to 6 carbon atoms; R' is selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 4 carbon atoms; and R'' is an alkyl radical containing from 1 to 4 carbon atoms.

2,863,786
ODOR-FREE LIQUID CONJUGATED DIENE POLYMERS
Eugene D. Guth and Homer M. Fox, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application December 4, 1956
Serial No. 626,079
15 Claims. (Cl. 106—285)

1. A composition of matter comprising a liquid polymer of a conjugated diene containing 4 to 8 carbon atoms and a compound selected from the group consisting of hydrazine and methyl and ethyl derivatives thereof, the amount of said hydrazine or derivative thereof being sufficient to eliminate the odor of the liquid polymer but insufficient to produce an objectionable hydrazine odor.

2,863,787
SIZING AND POLISHING OF YARNS
Frank Osborne, Nun Bield, Adlington, England, assignor to Firma Wm. Ayrton & Co. Limited and Frank Osborne
Application December 8, 1954, Serial No. 473,987
Claims priority, application Great Britain December 9, 1953
7 Claims. (Cl. 117—7)

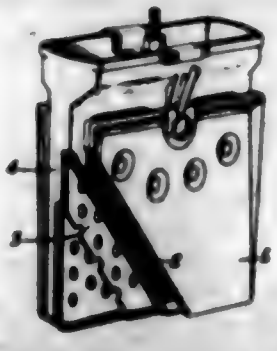
2. In a method of producing polished yarns, in combination, the successive steps of applying wet sizing material to the yarn; transporting said wet sized yarn to be polished while simultaneously maintaining the tension of said wet sized yarn at a predetermined level so that said wet sized yarn is transported at a first predetermined speed; polishing said wet sized yarn in polishing means while said yarn is being transported at a second speed higher than said first predetermined speed; and tensioning said polished yarn so that it is removed from the polishing means at a speed higher than said second speed.



2,863,788
AN AQUEOUS PIGMENT-AMINOPLAST RESIN EMULSION AND METHOD OF TREATING FABRIC THEREWITH
Richard D. Vartanian, Bound Brook, and William F. Herbes, Somerville, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application November 17, 1954
Serial No. 469,562
8 Claims. (Cl. 117—33.3)

1. A method of decreasing the infrared transmission of a fabric which comprises printing on one side of said fabric a water-in-oil emulsion which has associated in the discontinuous inner phase a leafing metallic pigment, and a water-soluble resin selected from the group consisting of methylated methylol urea and methylated methylol melamine resins and an alcohol of less than 4 carbon atoms, said dispersed phase being characterized by a pH between 6 and 9, the oil phase of said emulsion consisting of a hydrocarbon solvent free of aminoplast solids.

2,863,789
ELECTROLYTE FOR AN AIR-DEPOLARIZED CELL
Erwin A. Schumacher, Parma, and George W. Heise, Fairview Park, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Application January 13, 1954, Serial No. 403,926
4 Claims. (Cl. 136—154)



1. The combination in an air-depolarized cell of a plastic-bonded carbon electrode of granular, air-depolarizable carbon and an alkaline electrolyte comprising an aqueous solution of potassium hydroxide and sodium hydroxide, said potassium hydroxide and sodium hydroxide

being present in such proportions that the potassium hydroxide is the source of from 30% to 80% of the hydroxyl ion concentration in the electrolyte.

2,863,790
METHOD OF MAKING STEEL SHOT
Paul C. Chen, Mishawaka, Ind., assignor to American Wheelabrator & Equipment Corporation, Mishawaka, Ind.
Application June 17, 1953, Serial No. 362,263
3 Claims. (Cl. 148—3)

1. The method of making round and solid steel shot reasonably free from cracks and hollows and containing carbon, manganese, silicon, and iron, which comprises melting the above materials in an open bath furnace while it is in an oxidized state throughout the heat, boiling the molten bath at a temperature of approximately 2700–2750° F. to remove gases and inclusions of metallic oxides, maintaining the silicon content below 0.10% until the final silicon alloying, controlling the composition of the slag, deoxidizing the bath and alloying the bath to 1.20 to 1.40% carbon, 1.00 to 1.50% manganese and 0.40 to 0.90% silicon then adding at least one strengthening alloy metal selected from the group consisting of chromium not exceeding 5.0%, molybdenum not exceeding 5.0%, vanadium not exceeding 0.4%, nickel not exceeding 2.5%, and copper not exceeding 1.0% and the balance substantially iron, pouring the metal, disintegrating it into particles of less than 0.1" diameter, initially quenching the disintegrated particles in a mild quenching medium, drying the disintegrated particles, and then heat treating the particles at a temperature close to the Acm line on the FeC diagram, to produce a tempered martensite micro-structure.

2,863,791
PRODUCTION OF OXALATE COATINGS ON IRON AND STEEL
Paolo de Cerma, Milan, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy
No Drawing. Application April 5, 1956
Serial No. 576,238
Claims priority, application Italy April 8, 1955
4 Claims. (Cl. 148—6.14)

1. The process of forming oxalate coatings on iron and steel which comprises applying to the body to be coated an aqueous solution of oxalic acid and sodium nitrite, and maintaining the nitrite concentration between 0.2 and 4 grams per litre.

2,863,792
PROCESS FOR ASSISTING IN THE REMOVAL OF SCALE FROM ALLOY STEEL
Hoyt H. Todd, Whittier, Calif., assignor to Superweld Corp., North Hollywood, Calif., a corporation of California
No Drawing. Application August 23, 1957
Serial No. 680,006
9 Claims. (Cl. 148—6.14)

1. In the processing of metals containing at least one steel-alloying element that forms an acidic oxide, which processing includes a step of heat treating the metal in an oxidizing atmosphere, the improvement for preventing the formation of dense, firmly adherent oxides on the surface of the metal during the heat treating step, which improvement consists in coating the metal prior to the heat treating step with an oxygen-containing metal compound which forms an alkaline reacting substance on thermal decomposition, said compound being selected from a group consisting of alkali metal hydroxides, alkaline earth hydroxides and oxygen-containing alkali metal salts, whereby the heat treating step in the oxidizing environment causes the acidic oxide of the steel-alloying metal to be converted into a compound capable of solution in an acid pickling solution and then pickling the thus processed metal in an aqueous inorganic acid pickling solution after the heat treating step.

2,863,793
METHOD OF MAINTAINING THE EFFICIENCY OF PHOSPHATE COATING BATHS USED AT ROOM TEMPERATURE
Paolo de Cerma, Milan, Italy, assignor to Montecatini, Società Generale per l'Industria Mineraria e Chimica, a corporation of Italy
No Drawing. Application April 17, 1956
Serial No. 578,592
Claims priority, application April 20, 1955
4 Claims. (Cl. 148—6.15)

1. The method of maintaining the efficiency of phosphate coating baths used to coat a metallic surface in the cold, comprising preparing, as coating bath, an aqueous solution of zinc phosphate and at least one nitrate selected from the group consisting of alkali metal nitrates and zinc nitrate, and during the metal coating process maintaining in said coating bath a P_2O_5/NO_3 ratio ranging from about 1:2.5 to about 1:1 by replenishing the coating bath depleted in the coating operations with a feed liquor comprising an aqueous solution of zinc phosphate, at least one nitrate selected from the group consisting of alkali metal nitrates and zinc nitrate, the P_2O_5/NO_3 ratio of the feed liquor being within a range from about 1:1 to about 1:0.5, and also adding sodium nitrite as oxidizing agent in an amount not more than about one tenth of the weight of NO_3 contained in the feed liquor.

2,863,794
POLYMERIZABLE MIXTURE OF VINYLIDENE MONOMER AND UNSATURATED POLYESTER CONTAINING A POLYCARBOXYLIC ADDUCT OF HEXAHALOCYCLOPENTADIENE AND LAMINATE CONTAINING SAME
Paul Robitschek, Wilson, and Claude Thomas Bean, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York
No Drawing. Application January 24, 1957
Serial No. 635,948
19 Claims. (Cl. 154—43)

1. A polymerizable mixture comprising (A) a polymerizable linear polyester of ingredients comprising (1) a polyhydric alcohol containing aliphatic carbon to carbon unsaturation, and (2) an adduct of hexahalocyclopentadiene and a polycarboxylic compound selected from the group consisting of polycarboxylic acids, acid anhydrides, acid halides and acid esters containing aliphatic carbon to carbon unsaturation wherein the halogen is selected from the group consisting of chlorine, bromine, fluorine and mixtures thereof, and (B) a polymerizable monomer containing a $CH_2{=}C{=}$ group.

8. A laminated article comprising a plurality of sheets of glass fibrous material and as a binder therefor, an infusible, insoluble, resinous composition resulting from the polymerization of a composition defined in claim 1.

2,863,795
POLYMERIZABLE MIXTURE OF VINYLIDENE MONOMER AND UNSATURATED POLYESTER CONTAINING A POLYHYDRIC ADDUCT OF HEXAHALOCYCLOPENTADIENE AND LAMINATE CONTAINING SAME

Paul Robitschek, Wilson, and Claude Thomas Bean, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application January 24, 1957
Serial No. 635,958
20 Claims. (Cl. 154—43)

1. A polymerizable mixture comprising (A) a polymerizable linear polyester of ingredients comprising (1) an adduct of hexahalocyclopentadiene and a polyhydric alcohol containing aliphatic carbon to carbon unsaturation, wherein the halogen is selected from the group consisting of chlorine, bromine, fluorine, and mixtures thereof, (2) a polycarboxylic compound selected from the group consisting of polycarboxylic acids and acid anhydrides and (3) a polyhydric alcohol containing aliphatic carbon to carbon unsaturation, and (B) a polymerizable monomer containing a $CH_2=C=$ group.

8. A laminated article comprising a plurality of sheets of glass fibrous material and as a binder therefor, an infusible, insoluble, resinous composition resulting from the polymerization of a mixture defined in claim 1.

2,863,796
ELECTRIC COIL MANUFACTURE

James Theodoropoulos, Ipswich, and Albert Zack, Danvers, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

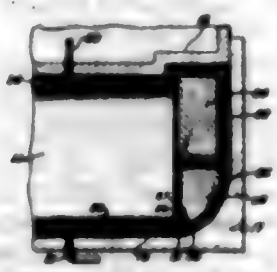
No Drawing. Application April 15, 1955
Serial No. 501,749
6 Claims. (Cl. 154—89)

1. In the manufacture of impregnated coils formed of overlying turns of metal foil separated by interleaved turns of insulating material, in which the edges of the turns of foil are burred to bridge between adjacent turns, the method of removing the burrs and cleaning the impregnant from the edges of the turns comprising immersing the coils for from 10 to 30 seconds in a concentrated aqueous solution of an acid which is reactive with the metal, at a temperature between 50° C. and 70° C., the time and temperature conditions being such that the impregnant is not melted within the coil, then rinsing the acid from the coils and drying them.

2,863,797
ART OF MANUFACTURING REINFORCED PLASTIC ARTICLES

Arnold F. Meyer, Pewaukee, Wis., assignor to The Heil Co., Milwaukee, Wis., a corporation of Wisconsin

Application May 22, 1956, Serial No. 586,423
2 Claims. (Cl. 154—83)



1. In a method of applying a reinforced fabric coating to an article which is to have a curved surface over a filled-in space which curved surface is to match a curved portion of a mold cavity, the steps of laying reinforced fabric over said curved portion of the mold cavity to cover said curved portion, laying inherently resilient cured foam material against said reinforcing fabric to cover the latter, preparing wooden filler blocks having an external shape to substantially conform to the curvature of the mold cavity, filling the space between the article and said resilient foam material with said blocks, partially compressing the resilient foam material between said filler blocks and the fabric-covered curved portions of the mold cavity so that the tendency of the resilient foam material to return to original condition exerts a pressure which maintains the fabric in firm contact with the curved portion of the mold cavity, and causing a hardenable liquid plastic material to flow into the mold cavity between the filler blocks and foam material and between the latter and the mold with sufficient pressure to impregnate said fabric and thereby form a fabric-reinforced external coating, the pressure exerted by the compressed foam material being at least as great as the pressure exerted by the liquid plastic material to prevent concentrations of the latter between the outer side of the skin and the mold, and said filler blocks being relatively rigid as compared with the inherently resilient foam material.

2,863,798
IODINE CHLORIDE PREPARATION FOR CONTROLLING MICROORGANISMS

Morris V. Sheluski, Atlantic City, N. J., and Murray W. Winicov, Philadelphia, Pa., assignors to West Laboratories, Inc., Long Island City, N. Y., a corporation of New York

No Drawing. Application November 5, 1956
Serial No. 620,169
7 Claims. (Cl. 167—17)

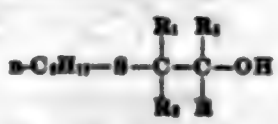
1. A preparation for the control of microorganisms consisting essentially of iodine chloride and in major proportion a surface-active compound from the group consisting of aliphatic fatty acid alkylene oxide condensates in which the aliphatic fatty acids contain from 6 to 26 carbon atoms and from 4 to 60 mols of alkylene oxide are condensed per mol of fatty acid, and alkyl aryl sulfonates in which the alkyl group contains from 4 to 30 carbon atoms, and the aryl radical is from the group consisting of phenyl and naphthyl, said preparation containing from 0.1% to 30% iodine and from 0.1% to 10% chlorine.

2,863,799
REPELLENTS FOR STABLE FLIES

Lyle D. Goodhue, Bartlesville, and Kenneth E. Cantrell, Dewey, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application July 28, 1955
Serial No. 525,677
17 Claims. (Cl. 167—22)

1. A method of repelling stable flies from a place frequented by said flies which comprises applying at said place, in an amount sufficient to effectively repel said flies, a mono-condensation product of an alkylene oxide and a mercaptan, said product being characterized by the following structural formula



wherein: R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, methyl, ethyl, propyl, isopropyl, n-butyl, isobutyl, and tert-butyl radicals; and the total number of carbon atoms in R_1, R_2, R_3, and R_4 does not exceed four.

2,863,800
1,3-DICHLORO-5,5-DIMETHYL HYDANTOIN COMPOSITIONS

Paul M. Gottfried, Washington, D. C.

No Drawing. Application September 16, 1952
Serial No. 309,298
7 Claims. (Cl. 167—33)

5. A process for increasing the solution rate of 1,3-dichloro-5,5-dimethylhydantoin which comprises, admixing

vertical flues in said heating walls; and horizontal rich-, substantially transversely across the chamber of said

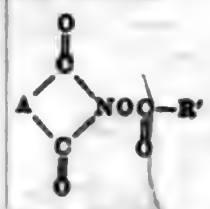
the chlorinated hydantoin with a wetting agent, a soluble inorganic salt which does not react with water to form crystalline hydrates and a soluble inorganic anhydrous salt, said wetting agent, inorganic salt and anhydrous salt being normally solid and being chemically inert with respect to said chlorinated hydantoin, and frictionally comminuting the mixture to a maximum average particle size not greater than about 10 microns.

2,863,801
FUNGICIDAL COMPOSITION COMPRISING AN O-CARBOXYLIC ACID ESTER OF A CYCLIC OXIMIDE

Engelbert Kühle, Koln-Stammheim, Richard Wegler, Leverkusen, and Ferdinand Grewe, Koln-Flittard, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 23, 1956
Serial No. 560,855
Claims priority, application Germany January 28, 1955
12 Claims. (Cl. 167—33)

7. The process of controlling fungus on living plants which comprises applying to the plant a fungicidal composition having as an active ingredient an O-carboxylic acid ester of the general formula



in which A is the residue of an organic dicarboxylic acid, and R' is a member selected from the group consisting of an aliphatic, aromatic, alkoxy and aryloxy radical.

2,863,802
TREATING PLANTS WITH THE SYSTEMICALLY ACTIVE FUNGICIDE, LOWER ALKYL, 2(3,3,3-TRIHALO-2-HYDROXYPROPYL)-PYRIDINE

William J. Pyne, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application April 11, 1957
Serial No. 652,094
2 Claims. (Cl. 167—33)

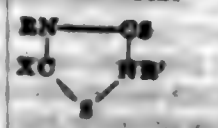
1. The method of treating plants which comprises applying as a systemically active material, a composition containing as an essential active ingredient a lower alkyl - substituted - 2 - (3,3,3 - trihalo - 2 - hydroxypropyl)-pyridine.

2,863,803
PROTECTING MATERIALS AGAINST FUNGI BY APPLYING SUBSTITUTED DITHIONO AND THIONO-OXO-THIADIAZOLIDINES

Isaac Benghiat, Bronx, N. Y., James B. Bowers, Mountain View, Calif., and George E. Lukes, Irvington, and Silvio L. Giolito, Whitestone, N. Y., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Application May 13, 1957
Serial No. 658,492
6 Claims. (Cl. 167—33)

1. A method of protecting material from attack by fungus comprising applying thereto a small amount of the compound having the formula:



wherein R is a member of the class consisting of phenyl and alkyl groups, wherein R' is a member of the class consisting of phenyl and alkyl groups, and wherein X is a member of the class consisting of S and O.

2. A method of protecting material from fungus attack comprising applying thereto a small amount of 2,4-dimethyl-3,5-dithiono-1,4-thiadiazolidine.

3. A method of protecting material from fungus attack comprising applying thereto a small amount of 2,4-dimethyl-3-thiono-5-oxo-1,2,4-thiadiazolidine.

2,863,804
METHOD OF TREATING MANGE WITH EXTRACT OF CEDAR LEAF

Alex M. Fegan, Brewton, Ala.

No Drawing. Application September 11, 1956
Serial No. 609,857
1 Claim. (Cl. 167—53.2)

A method of treating mange in dogs which consists of boiling small foliage of the red cedar (*Juniperus virginiana*) in water in the proportion of 3 lbs. cedar leaf foliage, 1 gallon of water, during 45 minutes, cooling and straining the liquid and applying the strained liquid by means of a brush to the mange infected skin of the animal until the skin is saturated with the liquid, and then allowing the liquid to dry in air on the body of the animal.

2,863,805
PROCESS FOR THE PRODUCTION OF OLEORESIN

Eric E. Todd, Malibu, Calif., assignor to Ventura Farms Frozen Foods, Incorporated, Oxnard, Calif., a corporation of California

Application December 6, 1954, Serial No. 473,099
15 Claims. (Cl. 195—4)

1. A process for the production of color bodies from fresh vegetables selected from the group consisting of peppers, pimientoes, paprika, tomatoes and carrots comprising the steps of extracting the juice and pulp therefrom, heating said juice and pulp to a temperature between about 70° and 120° F. to bring about fermentation and the formation of a curd by insolubilization of the proteins, fatty constituents and color bodies present, and removing the water and water soluble constituents from said curd.

2,863,806
17α HYDROXYLATION OF STEROIDS BY TRICHODERMA VIRIDE

Eugene L. Dulaney, Saskatoon, Saskatchewan, Canada, and William J. McAleer, Roselle, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application December 27, 1955
Serial No. 555,279
8 Claims. (Cl. 195—51)

1. A process for the production of 17α-hydroxy steroids, which comprises subjecting a 17-desoxy steroid selected from the group consisting of pregnadienes, pregnanes and allopregnanes under aerobic conditions to the action of an oxygenating enzyme produced by an oxygenating strain of the species *Trichoderma viride*.

2,863,807
COKE OVEN STRUCTURE

Joseph Van Acheren, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

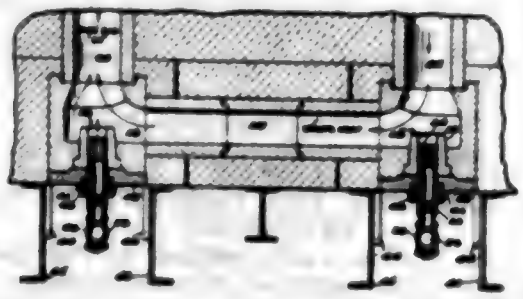
Application October 2, 1955, Serial No. 538,168
9 Claims. (Cl. 202—142)

1. In a regeneratively heated coke oven battery formed of silica masonry comprising horizontal coking chambers each having heating walls on opposite sides thereof with vertical flues disposed in a row alongside the coking chambers and operatively disposed for upflow combustion and downflow of combustion products in alternation; regenerators at a level below the bottoms of the coking chambers and heating walls and communicating with the

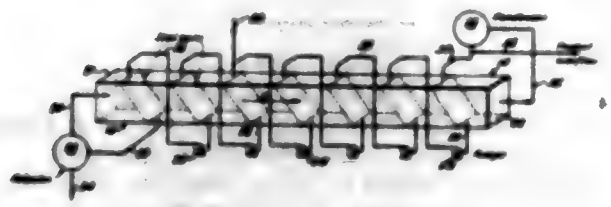
2,863,811
METHOD OF ETCHING CAPACITOR ELECTRODES

electrolyte solution through the concentrating chambers

vertical flues in said heating walls; and horizontal rich-fuel gas gun conduits extending from the side face of the battery lengthwise of the heating walls under the heating flues, in the masonry between the bottom of the flues and the uppermost portions of the regenerators, said gas gun conduits communicating through masonry riser conduits and ports distributed longitudinally of said gas gun conduits, and being operably disposed in pairs for inflow in each conduit of a pair in alternation with the other conduit of a pair; and jet means for each gas gun conduit of a pair disposed along the side face of the battery, at the outer end of the heating walls, operatively connect each gas gun conduit of a pair with a fuel gas supply main, along the outside of said side face of the battery, in alternation with the connection of the jet means of the other conduit of the same pair, for effecting inflow of rich gas from said fuel gas main to the rich gas gun conduits of the same pair in alternation with each other, for upflow combustion in the flues served by the respective conduits of a pair in alternation with each other; the improvement comprising, induction ducts disposed lengthwise alongside the aforesaid side face of the battery, in the masonry at the region between the bottoms of the ends of the heating walls and coking chambers and the uppermost parts of the regenerators, said induction ducts communicably connecting each rich gas gun conduit of a said pair with the other at their jet connected ends, for flow of combustion products from the flues served by the respective rich gas gun conduits, when said flues are operable for downflow of combustion products, through their aforesaid masonry riser conduits and ports and rich gas gun conduits, by way of said induction ducts, to combine with the rich fuel gas from the jet means then operable for inflow of rich gas and through the other rich gas gun conduit of the same pair and its masonry riser conduits and ports and their vertical flues, then operable for upflow combustion, under the jet action of the rich gas from said fuel gas main at the side face of the battery as the rich gas leaves the jet means to enter the other rich gas gun conduit then operable for inflow.

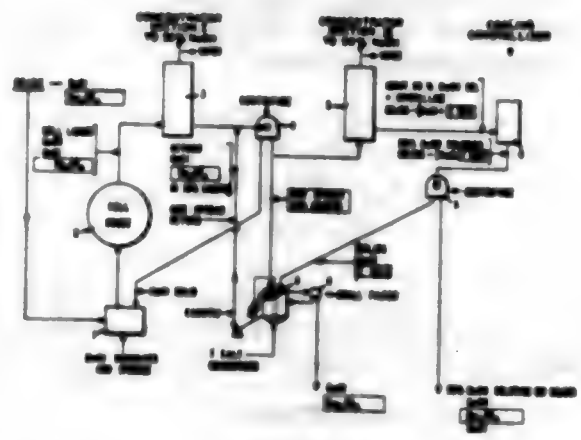


2,863,808
APPARATUS FOR HORIZONTAL DISTILLATION
Michael Markels, Jr., New York, N. Y.
Application May 21, 1956, Serial No. 586,046
3 Claims. (Cl. 202—158)



1. A distillation apparatus for separating a liquid mixture of liquids of low and of high boiling points comprising a horizontal longitudinal tube; an apertured vapor inlet closure secured in air-tight manner to one end of said tube; an apertured vapor outlet closure secured in air-tight manner to the other end of said tube; a plurality of spaced-apart foraminous bats completely and substantially transversely across the chamber of said horizontal tube; a plurality of pumps disposed between respective successive bats for conveying liquid toward said inlet closure and from the bottom of one bat to the top of the adjacent bat; boiler means connected to said inlet closure for conveying vapors of said liquid mixture into said tube, a condenser secured to said outlet closure for condensing vapors of the separated low boiling liquid, a liquid mixture feed inlet disposed intermediate said closure ends, conduit means for returning a portion of the condensate to the tube and adjacent said outlet closure and conduit means for conveying the liquid in said tube adjacent the inlet closure to said boiler means.

2,863,809
PROCESS FOR CONCENTRATION OF CAUSTIC CELL LIQUOR
Hans Svanoe, Warren, Pa., assignor to Struthers Wells Corporation, Warren, Pa., a corporation of Maryland
Application April 5, 1956, Serial No. 576,314
4 Claims. (Cl. 204—98)



4. In a process for the separation of sodium chloride and sodium sulfate from caustic cell liquor brine the steps which comprise concentrating caustic cell liquor brine to about 30% to 35% NaOH by weight, removing the crystalline sodium chloride produced by filtration, concentrating further the filtered liquor to about 55% NaOH by weight whereby the solid phases will contain the crystalline salts, sodium chloride and the triple salt, sodium hydroxide-sodium chloride-sodium sulfate, separating the salts by filtration, decomposing the triple salt by suspending the salts in a sodium hydroxide solution of less than 35% NaOH, and separating by the difference in buoyancy the sodium chloride from the sodium sulfate crystals of said decomposition.

2,863,810
PROCESS FOR ELECTROWINNING ZINC
John J. Henderson and Harry L. Montague, Corpus Christi, Tex., assignors to American Smelting and Refining Company, New York, N. Y., a corporation of New Jersey
No Drawing. Application March 26, 1957
Serial No. 648,490
4 Claims. (Cl. 204—119)

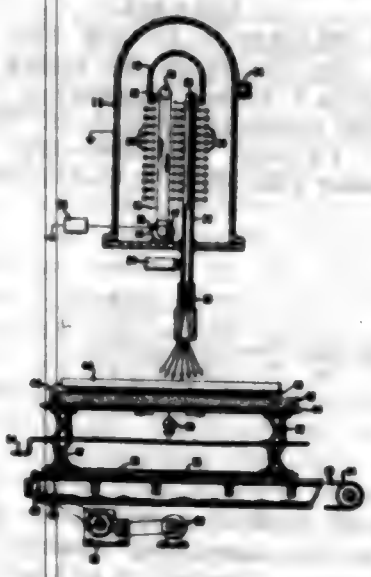
1. In a process for electrowinning zinc by electrodepositing zinc from a zinc electrolyte, the major non-aqueous constituents of said electrolyte being substantial quantities of sulfuric acid and zinc sulfate, and which involves the use of insoluble anodes comprised of lead, the improvement which comprises coating anodes for the process with a coating of manganese dioxide prior to their use in the zinc electrodeposition step, said coating being a layer of manganese dioxide applied at least on that portion of the anode surface which is to be immersed in said electrolyte during said zinc electrodeposition step.

element channels symmetrically arranged as a regular lat- elements positioned within the coolant tube to rest on

2,863,811
METHOD OF ETCHING CAPACITOR ELECTRODES
Ralph A. Ruscetta and Alfred L. Jenny, Glens Falls, N. Y., assignors to General Electric Company, a corporation of New York
Application May 9, 1955, Serial No. 507,810
15 Claims. (Cl. 204—141)

1. The method of electrolytically etching tantalum which comprises making the tantalum the anode in an electrolyte solution consisting essentially of from 6.5 to 99% by weight of methanol, from about 87 to 0% by weight of an organic liquid miscible with methanol and from 3000 to 135,000 p. p. m. of water, and at least one methanol-soluble inorganic salt dissolved therein producing a solution having a conductivity capable of passing a current therethrough and being incapable of producing a film on the metal when current is passed through the electrolyte solution, said organic liquid forming with said methanol and water a combined solvent for said inorganic salt.

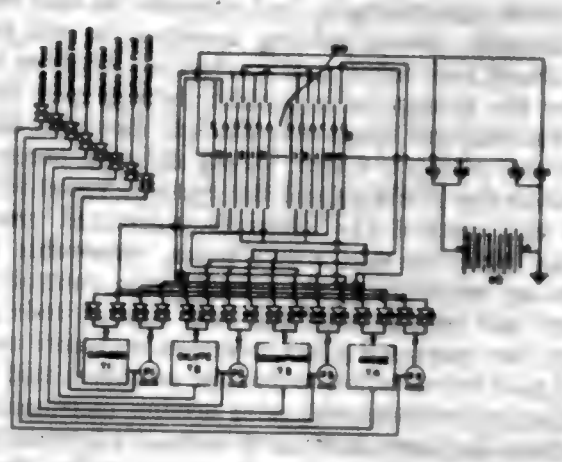
2,863,812
IRRADIATION PROCESS
Boynton Graham, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application May 22, 1956, Serial No. 586,487
10 Claims. (Cl. 204—154)



1. In a process utilizing the energy of a high-speed electron beam from an electron accelerator for inducing a chemical reaction in a substrate, the step improving the utilization of said energy which comprises interposing a grounded, electrically-conductive shield in the path of the electron beam between the electron accelerator and the substrate and not more than about 2 cm. from the latter.

2,863,813
METHOD OF ELECTRODIALYZING AQUEOUS SOLUTIONS
Walter Juda, Lexington, and Wayne A. McRae, Arlington, Mass., assignors to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts
Application September 14, 1956, Serial No. 610,033
9 Claims. (Cl. 204—180)

1. The method of demineralizing aqueous solutions containing relatively minor components of electrolytes to be removed therefrom comprising: the steps of passing a first aqueous solution through the dilute chambers of a multi-chamber electric membrane demineralizer having a plurality of alternating concentrating and diluting chambers between two end electrode chambers, said concentrating and diluting chambers being free of electrodes, all of said chambers being defined between alternate anion and cation permselective membranes, passing a second aqueous electrolyte solution through the concentrating chambers of said demineralizer, passing a third electrolyte solution through the end electrode chambers, passing a direct electric current in series across the alternating concentrating

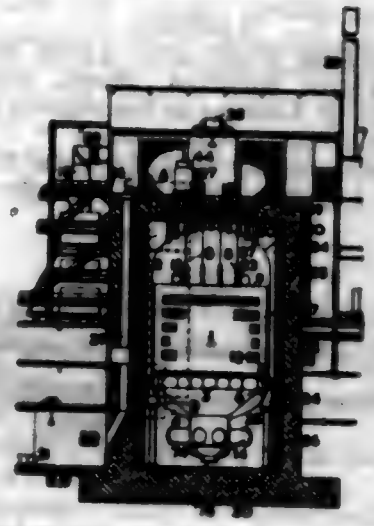


and diluting chambers and membranes, periodically reversing the direction of passage of said electric current and simultaneously therewith interchanging the first and second solutions between their respective chambers.

2,863,814
NEUTRONIC REACTOR FUEL ELEMENT
Kenneth A. Kesselring, Schenectady, and Alan U. Seybolt, Scotia, N. Y., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application September 26, 1952, Serial No. 311,574
5 Claims. (Cl. 204—193.2)

1. A fuel element comprising a fluid-tight jacket of a metal of the group consisting of titanium, zirconium, and molybdenum, and a coating of U^{235}-enriched uranium on the inner surface of the jacket.

2,863,815
NUCLEAR REACTOR
Richard Valentine Moore, Appleton, and John Henry Bowen and Kenneth Henry Dent, Culcheth, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application July 22, 1954, Serial No. 444,964
2 Claims. (Cl. 204—193.2)



1. A nuclear reactor comprising a pressure vessel containing a moderator structure formed with vertical fuel

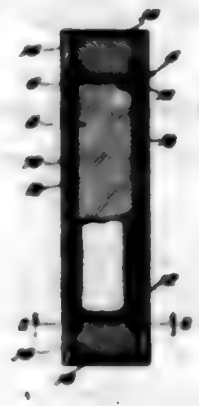
2,863,821
PREVENTION OF COKING REACTOR CYCLONE DIPLEG PLUGGING

vailing in the succeeding reactors and periodically changing the course of the travel path of the said naphtha and

rality of spaced-apart foraminous bats completely and tion of the anode surface which is to be immersed in said electrolyte during said zinc electrodeposition step.

element channels symmetrically arranged as a regular lattice in groups and with control rod channels also arranged on a regular lattice so that each control rod channel is centered on one of said groups, control rods movable in said control rod channels, fuel elements in said fuel element channels, means defining apertures in said pressure vessel above and below said moderator structure to provide for the passage of a coolant through said fuel element channels and hence over the fuel elements, shielding around the pressure vessel, means defining access holes penetrating the shielding and the pressure vessel vertically above said control rod channels, apertured removable shielding plugs in said access holes, removable control rod driving mechanisms above said plugs, control rod ties between said mechanisms and said control rods passing through the apertured plugs, removable closure members sealing said access holes, means for removing said closure members and withdrawing said driving mechanisms and plugs from the access holes and means for introducing fuel element charging chutes into the access holes, the chutes being adapted to service said groups of fuel element channels when located in control rod channels.

2,863,816
NEUTRONIC REACTOR FUEL ELEMENT
John T. Stacy, Columbus, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
Application October 21, 1955, Serial No. 542,119
11 Claims. (Cl. 204—193.2)



1. A fuel element for a neutronic reactor comprising a cylindrical core of a molybdenum-uranium alloy containing 7 to 10% by weight molybdenum, a tight-fitting jacket of stainless steel on the core, and a barrier coat interposed between the core and the jacket, said coat being a metal of the group consisting of tungsten, tantalum, molybdenum, columbium and silver.

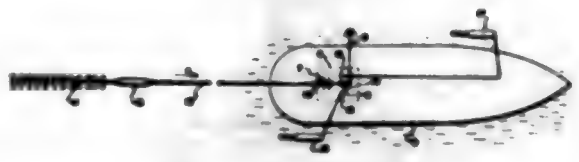
2,863,817
REACTOR COOLANT TUBE SEAL
William J. Morris, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application November 16, 1956, Serial No. 622,719
4 Claims. (Cl. 204—193.2)

1. The combination with a coolant tube having internal longitudinal ribs, and end member fastened to the coolant tube, and a plurality of jacketed nuclear-fuel elements positioned within the coolant tube to rest on the ribs thereof; of a flexible control element formed of a flattened tube and a neutron-absorbing filling therein and extending between the fuel elements and the coolant tube and a seal of resilient material having a longitudinal slot tightly receiving the control element, the seal being held by the end member so as to extend within the end of the coolant tube in spaced relation to the interior thereof, whereby the coolant around the seal collapses the slot to prevent escape of coolant from the coolant tube when the control element is withdrawn from the seal.

2,863,818
JACKETED REACTOR FUEL ELEMENT
Karl F. Smith, Downers Grove, and Ray J. Van Thyne, Oak Lawn, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application November 5, 1957
Serial No. 695,470
3 Claims. (Cl. 204—193.2)

1. A fuel element for fast neutronic reactors, comprising a core of uranium metal-containing material and a jacket around said core, said jacket consisting of from 2.5 to 15 percent by weight of titanium, from 1 to 5 percent of niobium and from 80 to 96.5 percent of vanadium.

2,863,819
INSOLUBLE TRAILING ANODE FOR CATHODIC PROTECTION OF SHIPS
Herman S. Preiser, Washington, D. C.
Application August 25, 1955, Serial No. 530,647
2 Claims. (Cl. 204—196)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A cathodic protection system for preventing corrosion of ship hulls comprising a current source having a negative terminal connected to said hull and a positive terminal, an insulated electric cable having one end connected to said positive terminal and adapted to be trailed in the water behind said hull, a streamlined, electrochemically insoluble electrode rod connected to the trailing end of said cable having a weight per unit length equal to said cable whereby the electrode will trail smoothly through said water, and a streamlined, oxychlorine resistant insulating and sealing means molded around the connection between said electrode rod and said cable.

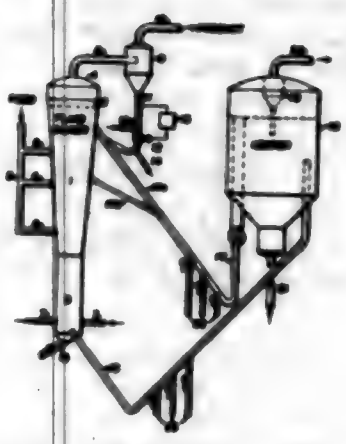
2,863,820
DECOLORIZATION OF WAXES
Henry C. Beck, Swarthmore, and Robert N. Finn, Media, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Application August 16, 1956
Serial No. 604,310
1 Claim. (Cl. 208—24)

Method of decolorizing petroleum waxes which comprises treating a distillate wax with an adsorptive clay to obtain a distillate wax product of improved color with a resultant loss of decolorizing ability of the clay toward said distillate wax, and then directly utilizing the used clay as the decolorizing adsorbent for treating a microcrystalline wax to obtain a microcrystalline wax product of improved color.

ion permselective membranes, passing a second aqueous

1. A nuclear reactor comprising a pressure vessel containing a moderator structure formed with vertical fuel

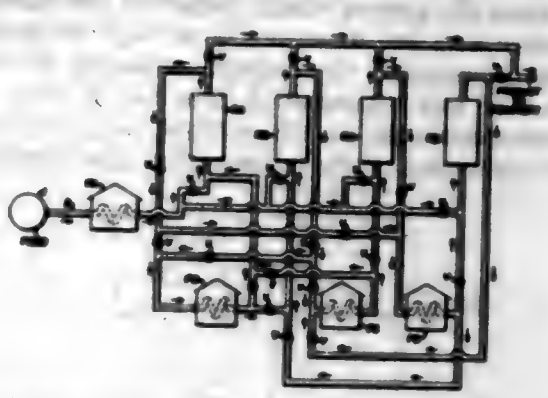
2,863,821
PREVENTION OF COKING REACTOR CYCLONE DIPLEG PLUGGING
Donald D. Dunlop and William B. Segraves, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application February 3, 1954, Serial No. 407,896
2 Claims. (Cl. 208—48)



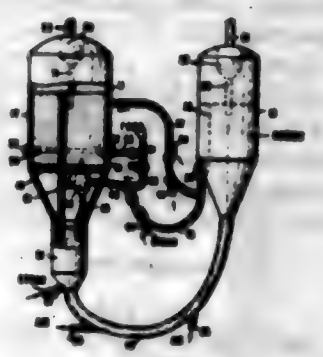
1. In a heavy hydrocarbon oil fluid coking process wherein heavy hydrocarbon oil is separately injected into a dense fluidized turbulent bed of high temperature coke particles in a coking zone and coke particles are continuously withdrawn and at least partially burned in an external burning zone and the coke particles heated to a temperature of about 100° F. to 200° F. higher than the coke particles in said turbulent fluid coking bed are continuously recycled to said coking zone to maintain a coking temperature in said fluidized turbulent bed therein and gaseous products are passed overhead through a gas-solids separation zone to remove entrained solids from said gaseous products and the separated solids are returned to said dense fluidized turbulent bed as a generally downwardly moving confined column maintained in a fluid condition and coking and plugging and partial stoppage of the moving confined column may occur due to hydrocarbon-wet solids therein, the improvement which consists in admixing heated coke particles consisting essentially of at least part of the heated coke particles being recycled to said coking zone with said moving confined column before the heated coke particles being recycled are discharged into said coking zone to heat the coke particles in said moving confined column to a drying temperature to avoid coking of the particles in said moving confined column and to maintain steadily flowing heated coke particles being recycled to said coking zone and so preventing back surging from said turbulent fluid coking bed to said moving confined column and using the heated coke particles being recycled in an amount of about 5 to 10 times greater than the amount of coke particles being returned to said fluid coking bed as said moving confined column from said gas-solids separation zone.

2,863,822
HYDROFORMING USING A SERIES OF REACTORS
Richard W. Sage, Fanwood, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application April 26, 1955, Serial No. 503,989
8 Claims. (Cl. 208—65)

1. The method of operating a non-regenerative hydroforming process employing a platinum group metal catalyst which comprises providing a plurality of reactors containing the said catalyst, causing a naphtha naturally containing halogen and a hydrogen-rich gas to flow in series through the reactors the lead reactor of said series being maintained at a temperature lower than that prevailing in the succeeding reactors and periodically changing the course of the travel path of the said naphtha and hydrogen through the reactors responsive to the activity of the catalyst in the several reactors by rotating each reactor into the lead position in the series, whereby the halogen content of the catalyst in each reactor is periodically replenished by halogen naturally contained in the feed naphtha.



2,863,823
COMBINATION TRANSFER LINE AND FLUID BED COKING SYSTEM
John F. Moser, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application November 10, 1953, Serial No. 391,214
7 Claims. (Cl. 208—92)



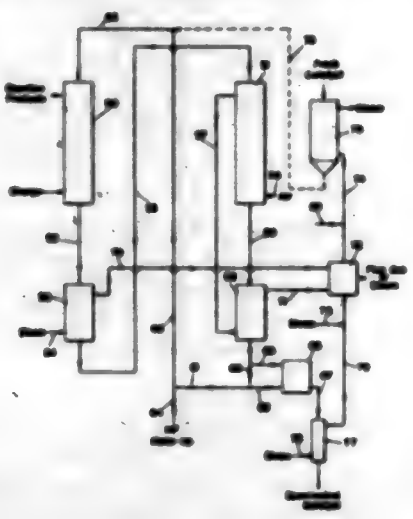
1. A fluidized solid process of coking heavy hydrocarbon oil which comprises feeding at least a major portion of the oil into a relatively dispersed flowing stream of catalytically inert solid particles at a temperature above 1000° F., contacting said oil with said particles for a period of time sufficient to evaporate substantial fractions of the feed but not sufficient to substantially crack the vapors, separating the vapors from said solids, passing the vapors into a fluid bed of catalytically inert solids at a temperature below 1000° F., contacting said vapors with said bed for a period of time sufficient to substantially crack said vapors, passing the solids from both said bed and said stream to a stripping zone, stripping occluded hydrocarbon vapors from the solids in said zone and passing said stripped vapors through said bed, transferring said solids to a heating zone and reheating said solids and returning them to said stream and said bed to continue the process.

2,863,824
HYDROCARBON CONVERSION PROCESSES WITH RECOVERY OF FLUORINE CONTAINING GASES
Aristid V. Grosse, Haverford, and Edward A. Nodiff, Philadelphia, Pa.
Application December 14, 1953, Serial No. 398,052
4 Claims. (Cl. 208—115)

1. In a hydrocarbon conversion process wherein a hydrocarbon charge stock is contacted under catalytic conversion conditions with a particle-form cracking catalyst

bons with said contact material in a

containing fluorine in amount effective to promote the conversion reaction and the used catalyst is regenerated by contacting it with oxygen-containing gas to burn off carbonaceous deposits, the method of reducing loss of fluorine from the system which comprises gravitating the used catalyst as a bed downwardly through the regeneration zone, introducing the oxygen-containing gas into a lower part of said regeneration zone and flowing it upwardly countercurrent to the catalyst bed, withdrawing from an upper part of the regeneration zone combustion



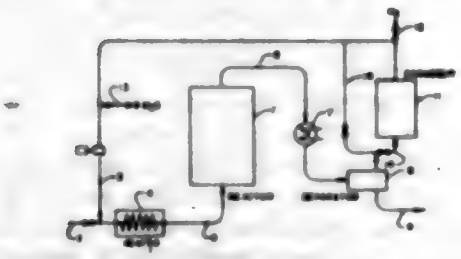
gas containing fluorine removed from the catalyst, passing the catalyst having reduced fluorine content directly into a third contact zone and gravitating it downwardly therein as a moving bed, introducing said combustion gas containing fluorine into a lower part of the third contact zone and flowing it upwardly countercurrent to the catalyst bed whereby the catalyst absorbs fluorine from the combustion gas, and separately withdrawing catalyst and combustion gas from the lower and upper parts of said third contact zone, respectively.

2,863,825

CATALYTIC REFORMING OF HYDROCARBON OILS

Willem Frederik Engel, Amsterdam, Netherlands, assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

Application August 29, 1955, Serial No. 530,988
Claims priority, application Netherlands September 24, 1954
6 Claims. (Cl. 208—138)



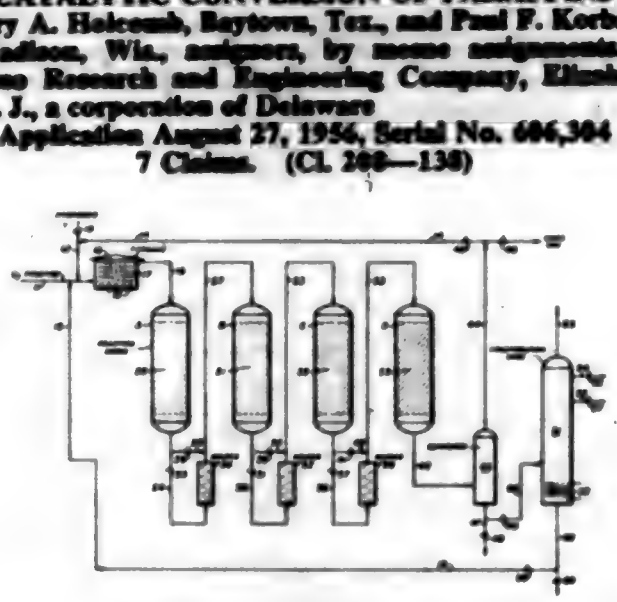
1. A process for the catalytic reforming of naphtha by contact with a catalyst consisting of platinum supported on an aluminous carrier material, which comprises heating an active portion of said catalyst in a reactor while passing hydrogen therethrough, treating said catalyst, when it has been brought to an elevated temperature, with hydrogen containing a compound selected from the group consisting of hydrogen sulfide and sulfur compounds which yield hydrogen sulfide under the prevailing conditions, at a concentration of between 0.005 and 5% by volume of hydrogen sulfide, and then passing said naphtha into contact with said catalyst after the catalyst is at the desired reaction temperature while recycling substantially sulfur-free hydrogen to said catalyst.

2,863,826

CATALYTIC CONVERSION OF PARAFFINS

Henry A. Holcomb, Baytown, Tex., and Paul F. Korbach, Madison, Wis., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application August 27, 1956, Serial No. 606,304
7 Claims. (Cl. 208—138)



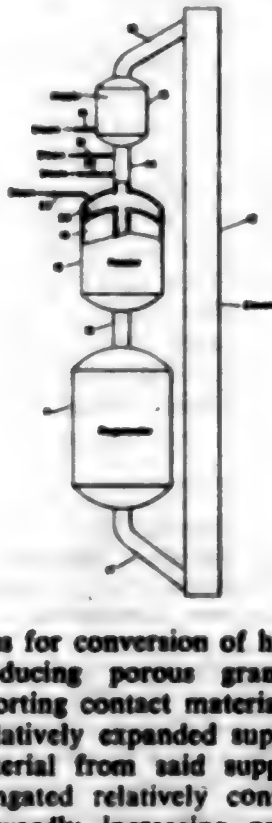
1. A method for producing high yields of high octane number hydrocarbons which comprises contacting a paraffinic hydrocarbon fraction boiling in the range from about 105° to about 180° F. with a platinum catalyst at a temperature of 950° F. in the presence of a free hydrogen-containing gas and at a pressure in the range from about 200 to about 500 pounds per square inch gauge and a space velocity in the range from about 0.5 to about 5.0 volumes of said hydrocarbon per volume of catalyst per hour to form a converted product containing a major amount of high octane number components, and recovering said components.

2,863,827

CATALYTIC CONVERSION SYSTEM

William L. McClure, Toledo, Ohio, assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application August 19, 1953, Serial No. 375,110
3 Claims. (Cl. 208—165)



1. In a process for conversion of hydrocarbons which comprises introducing porous granular hydrocarbon conversion supporting contact material unsaturated with steam into a relatively expanded supply zone, gravitating contact material from said supply zone into and through an elongated relatively confined zone against gradually downwardly increasing pressure, gravitating contact material from said confined zone into a sealing zone, introducing contact material from said sealing zone into a conversion zone, and contacting hydrocar-

the form of a lyophobic sol of positively charged colloidal

drated sodium tripolyphosphate, the proportions on the

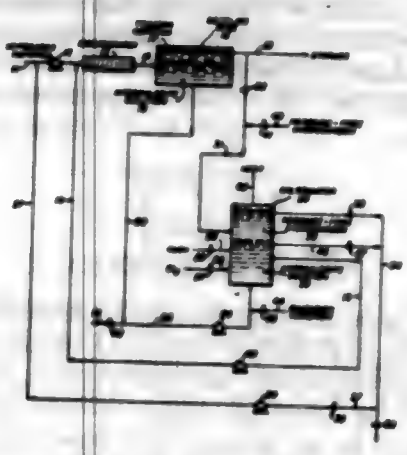
bons with said contact material in said conversion zone under conversion conditions, the improvement which comprises: introducing steam into said supply zone to substantially saturate said contact material with steam at the pressure in said supply zone; introducing additional steam into said confined zone to further increase the adsorbed steam content of said contact material, substantially all of the contact material which is contacted with said additional steam being subsequently introduced into said sealing zone; introducing steam into said sealing zone; and passing steam upwardly from said sealing zone into and through said confined zone.

2,863,828

METHOD OF REMOVING ORGANIC PEROXIDES FROM ALKALI HYPOCHLORITE TREATING SYSTEM

Prentiss S. Viles, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application November 21, 1955, Serial No. 548,152
12 Claims. (Cl. 208—196)



5. In a chlorinating vessel of an alkaline hypochlorite system for treating petroleum distillate susceptible to peroxide formation in which said petroleum distillate accumulates on the surface of said hypochlorite solution in said vessel, the method for preventing spontaneous explosions in said vessel which comprises replacing the accumulated petroleum distillate with a peroxide-free hydrocarbon whereby the organic peroxides content of the contents of said vessel is maintained below about 10 milliequivalents of active oxygen per liter.

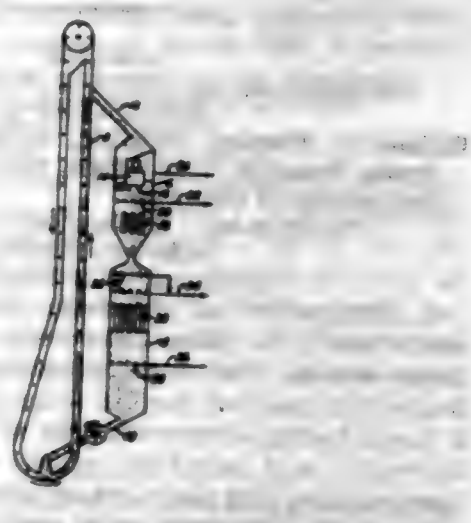
2,863,829

PROCESS AND APPARATUS FOR SELECTIVE ADSORPTION

Alfred M. Henke, Springdale, and Allen E. Somers, Aspinwall, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application August 9, 1956, Serial No. 603,866
3 Claims. (Cl. 218—26)

1. A continuous process for separating a liquid mixture by selective adsorption which comprises causing a body of solid adsorbent particles to flow continuously through adsorption, centrifugal and desorption zones, introducing a liquid feed mixture into the adsorption zone in countercurrent flow to the adsorbent particles whereby a portion of the feed mixture is adsorbed by and carried with said adsorbent particles to be recovered as adsorbed product rich in one component of the feed mixture and another portion of the feed mixture passes through said adsorbent particles to be recovered as non-adsorbed product rich in another component of the feed mixture, subjecting the adsorbent particles after they have been thus contacted with the feed mixture to centrifugal force to remove occluded liquid, introducing the centrifuged solid adsorbent partices into the desorption zone, heating the centrifuged adsorbent particles as they pass through the desorption zone to vaporize the adsorbed component, continuously withdrawing the vaporized adsorbed material from the desorption zone as the adsorbed product, and



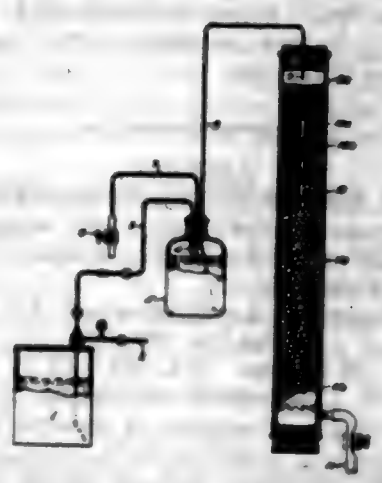
introducing the adsorbent particles freed of occluded and adsorbed material into contact with additional feed mixture in the adsorption zone.

2,863,830

PROCESS FOR DECONTAMINATING LIQUID FLUOROCARBONS OF OIL SUSPENDED THEREIN

Harry Schneider, Brooklyn, N. Y., and Byron J. Mauney, Charleston, W. Va., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application September 24, 1945, Serial No. 618,358
6 Claims. (Cl. 210—41)



1. A process for decontaminating a bulk of liquid fluorocarbon contaminated with oil suspended therein which comprises passing said contaminated bulk of fluorocarbon through a body of at least one adsorbent material chosen from the group thereof consisting of silica gel, activated alumina, and activated carbon, thereby effecting stripping of suspended oil contamination from the fluorocarbon by the adsorbent, and thereafter recovering said fluorocarbon in consequently decontaminated form.

2,863,831

WELL DRILLING COMPOSITION AND METHOD

William E. Thompson, Wallingford, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application December 7, 1955
Serial No. 551,511
5 Claims. (Cl. 252—8.5)

1. An aqueous drilling fluid comprising a hydratable clay of the group consisting of alkali metal and alkaline earth metal clays in amount of 0.3–5% by weight of the drilling fluid and a water-insoluble inorganic material in

which comprises the steps of fusing a mixture containing up to 10% vanadium as vanadium pentoxide, 30 to 60%

2,863,842

PROCESS FOR THE PREPARATION OF SUL-

the form of a lyophobic sol of positively charged colloidal particles in amount sufficient to orient about the clay particles and thereby substantially increase viscosity.

2,863,832
METHOD OF ACIDIZING PETROLIFEROUS FORMATIONS

Richard L. Perrine, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application May 14, 1954
Serial No. 429,993
11 Claims. (Cl. 252—8.55)

1. The method of increasing the productivity of a subterranean formation containing connate water and penetrated by a well bore comprising the steps of introducing into said well bore in contact with said formation a liquid hydrocarbon containing in solution an organic carboxylic acid anhydride capable of forming an acid upon reaction with said connate water at formation conditions, said anhydride being present in an amount to produce sufficient acid to increase substantially the productivity of the subterranean formation by reaction therewith, and contacting the solution with said connate water to release said anhydride from said solution to acidize said formation.

2,863,833
FLANGE LUBRICANT

Hugh H. Jones and Frank E. Davidson, Jr., Birmingham, Ala.

No Drawing. Application May 24, 1957
Serial No. 661,279
6 Claims. (Cl. 252—27)

1. A lubricant consisting essentially by weight; sulphur from 54% to 70%; hydrated magnesium silicate from 10% to 22%; graphite from 10% to 22%; and chlorinated diphenyl from 2% to 10%.

2,863,834
HIGH V. I. DETERGENT LUBRICATING OILS

John P. Buckmann, Yorba Linda, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Application June 25, 1956
Serial No. 593,382
16 Claims. (Cl. 252—32.5)

7. A high V. I. detergent lubricating oil composition comprising a major proportion of mineral lubricating oil and a small amount sufficient to impart detergency and high V. I. characteristics to said oil of an oil-soluble metal salt of the product obtained by reacting an olefin-diolefin copolymer having a molecular weight between 5,000 and 200,000 with a dialkyl hydrogen phosphite in which the alkyl groups each contain 1 to 4 carbon atoms at a temperature between 75° C. and 225° C. in the presence of an organic peroxide catalyst and hydrolyzing the reaction product said copolymer being a copolymer of a C_2 to C_4 olefin with a C_4 to C_8 diolefin.

2,863,835
PERBORATE COMPOSITION

Henry A. Goldsmith, Detroit, Mich., and Morton Goldberg, Hillside, N. J., assignors to The Theobald Industries, a corporation of New Jersey

No Drawing. Application October 8, 1957
Serial No. 688,818
3 Claims. (Cl. 252—99)

1. A stabilized perborate composition of improved resistance to caking together and deliquescence of the particles, the composition being in the form of fine, hollow, free flowing, spray dried particles comprising partially hydrated sodium perborate and partially hydrated sodium tripolyphosphate, the proportions on the anhydrous basis being at least about 50 parts of the tripolyphosphate for 100 parts of the perborate

$(NaBO_2.H_2O_2)$

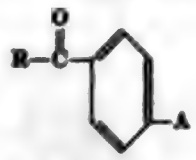
the perborate and tripolyphosphate being in intimate association and codried condition throughout the said particles, and the total water content in the spray dried particles being about 2.5–4 moles for each atom of available oxygen in the perborate.

2,863,836
DETERGENT COMPOSITION OF IMPROVED FOAM PERFORMANCE

Richard D. Stayner, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application September 23, 1955
Serial No. 536,265
3 Claims. (Cl. 252—152)

1. A detergent composition of improved foam performance consisting essentially of, by weight, 15 to 50 parts of a saturated normal C_{14}–C_{18} alkyl sulfate detergent, 50 to 85 parts of a C_9–C_{18} monoalkyl benzene sulfonate detergent, and, as foam-improving material, about ½ to 2 parts of saturated normal C_{14}–C_{18} fatty acid amide per one part of a para-acylphenoxy compound of the formula



wherein R is a straight C_9–C_{13} saturated hydrocarbon chain and A is a radical from the group consisting of hydroxy, oxyethanol and oxyethoxy-ethanol radicals, said foam-improving material being present in an amount from about 5% to about 75% based on the sulfate detergent.

3. A built detergent composition consisting essentially of, by weight, 10 to 40 percent of the composition as defined in claim 1, and 60 to 90 percent of water-soluble inorganic salt builders.

2,863,837
CORROSION INHIBITING BATH

Bernhard Kewald, Opladen-Lutzenkirchen, and Gunther Tischbirek, Duesseldorf-Holthausen, Germany, assignors to Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, Germany

No Drawing. Application May 4, 1956
Serial No. 582,658
Claims priority, application Germany May 7, 1955
2 Claims. (Cl. 252—394)

1. A bath for treating metals in order to protect them against corrosion, wherein the metals treated are selected from the group consisting of iron, zinc, aluminum and the alloys of said metals, said bath containing an aqueous solution of a substance capable of evolving hydrogen in the presence of said metals and as an anticorrosive a sulfonation product of a nitrile of a fatty acid having from 10–19 C atoms per molecule.

2,863,838
PRODUCTION OF CATALYSTS CONTAINING VANADIUM

George Clarkson Vincent, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application August 8, 1955
Serial No. 527,119
Claims priority, application Great Britain August 25, 1954
6 Claims. (Cl. 252—432)

1. A process for the production of a skeletal glass catalyst containing as an essential constituent vanadium

and alkoxy of 1 to 3 carbon atoms, and wherein said

2,863,847

centrifuged adsorbent particles as they pass through the drilling fluid and a water-insoluble inorganic material in

which comprises the steps of fusing a mixture containing up to 10% vanadium as vanadium pentoxide, 30 to 60% silica, 10 to 50% boric oxide and alkali metal equivalent to an alkali metal oxide Me_2O/vanadium pentoxide ratio of 1.5:1 to 3:1 to produce a glass, subjecting the glass to a temperature within the range 400 to 700° C. to cause separation of phases at least one of which is soluble in an extraction medium selected from the group consisting of caustic alkalies and mineral acids and extracting at least part of at least one soluble phase.

2,863,839

CLAY CATALYSTS

George Alexander Mills, Swarthmore, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 15, 1955
Serial No. 515,762
7 Claims. (Cl. 252—450)

1. The method of improving active magnesia-containing clay catalysts which comprises treating the same in substantially dry form for at least about one hour with a gas mixture comprising oxygen and at least 1 mol percent SO_3 at a temperature above 1300° F. but below the sintering temperature of the clay.

2,863,840

ELECTRICAL RESISTOR

Aris Bol, Christiaan Alfons Maria Klaassen, and Pieter Johannes Wilhelmus Jochems, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application January 25, 1957, Serial No. 636,316
Claims priority, application Netherlands January 31, 1956
4 Claims. (Cl. 252—519)

3. A method of manufacturing a sintered electrical resistor having a negative temperature coefficient comprising forming a mixture of the oxides of Ni, Li and Cu in amounts such that from about 0.1 to 10 mol. percent of lithium oxide, about 1 to 30 mol. percent of copper oxide calculated as CuO, and the remainder nickel oxide is present, shaping said mixture into a body, and sintering said body at a temperature between about 1100° C. and 1300° C. in an oxidizing atmosphere.

2,863,841

PAVING MIXTURE COMPRISING VERMICULITE, RUBBER, SAND, AND BITUMINOUS BINDER

Napoleon M. Bernier, Belmont, and Nathan Wiseblood, Malden, Mass.; said Bernier assignor to California Stucco Products of New England, Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Application January 31, 1956
Serial No. 562,591
3 Claims. (Cl. 260—28.5)

1. A paving mixture comprising by weight 2 to 8% exfoliated vermiculite, 6 to 18% granulated rubber, 45 to 80% sand, and 12 to 28% of a bituminous binder selected from the group consisting of tar and asphalt, said vermiculite having a particle size in the range of approximately .04 inch to approximately 5/16 inch, said granulated rubber having a particle size in the range of approximately .04 inch to approximately 1/4 inch, and said sand having a maximum particle size of approximately 1/8 inch.

2,863,842

PROCESS FOR THE PREPARATION OF SULFITE MODIFIED MELAMINE-FORMALDEHYDE RESIN AND PRODUCT OBTAINED

Francis A. Bonnagni, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application May 23, 1956
Serial No. 586,655
8 Claims. (Cl. 260—29.4)

1. An aqueous solution of a thermosetting colloidal, water-dispersed, acid-aged, cationic, sulfite-modified, melamine-formaldehyde resin having a pH of 0.5–3.5, said resin, before acid aging, containing 2.5–4.5 mols of formaldehyde and up to 0.2 mol of sulfonate groups per mol of melamine and having a viscosity of at least about 300 centipoises when measured in a 55% aqueous solution at 25° C.

2,863,843

FILM FORMING AQUEOUS COLLOIDAL DISPERSIONS CONTAINING NITROGENOUS CONDENSATION PRODUCTS AND PROCESS FOR PREPARING SAME

Charles R. Scott and Paul A. Wolf, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 27, 1955
Serial No. 543,253
10 Claims. (Cl. 260—29.6)

1. An aqueous colloidal dispersion comprising (1) a synthetic latex containing in the disperse phase a polymer obtained by polymerizing an olefinically unsaturated monomer containing in its structure at least one ethylenic group having the $CH_2=CH-$ linkage wherein said ethylenic group is joined to an atom selected from the group consisting of carbon and oxygen and (2) from about 0.25 to 5 percent by weight based on the weight of solids present in the synthetic latex of a water-soluble condensation product of from 1.5 to 3.5 molecular proportions of formaldehyde with one molecular proportion of an aliphatic polyamine having the general formula

$$H_2N-(-C_nH_{2n}NH-)_x-H$$

wherein n is an integer of from 2 to 3, inclusive, and x is an integer of from 1 to 4, inclusive, wherein the condensation is carried out while maintaining the temperature of the reaction mixture below about 50° C.

2,863,844

SOLUTIONS OF POLYTRIFLUOROCHLORETHYLENE

Otto Fuchs, Frankfurt am Main Hochst, Anton Staller, Frankfurt am Main Sindlingen, and Rudolf Schiff, Frankfurt am Main Hochst, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main Hochst, Germany, a company of Germany

No Drawing. Application June 8, 1953
Serial No. 360,385
Claims priority, application Germany June 10, 1952
7 Claims. (Cl. 260—30.2)

1. Solution of from substantially 5 to 11% polytrifluorochlorethylene in a mixture of from 19 to 80% of 1:1:2:2-tetrafluoro-3:3:4:4-tetrachlorocyclobutane with from substantially 15 to 70% of another organic compound selected from the group consisting of benzene, substituted benzene, dioxane, naphthalene, tetrahydronaphthalene, 1:2:3-trifluoropentachloropropane, 1:1:2:2-tetrachlorethane, 1:1-dimethoxy-1-ethoxy-ethane, perchlorethylene, 2-methyl-pyridine, and 2:4:6-trimethylpyridine, wherein said substituted benzene compound may contain from 1 to 4 substituents selected from the group consisting of chloro, alkyl of 1 to 3 carbon atoms

2,863,850

and alkoxy of 1 to 3 carbon atoms, and wherein said substituted benzene compound is free from other substituents.

2,863,845

VINYL CHLORIDE POLYMERS PLASTICIZED WITH MORPHOLIDE MIXTURE

Frank C. Magne, Evald L. Skau, and Robert R. Mod, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application August 19, 1955
Serial No. 529,599
3 Claims. (Cl. 260—30.4)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A plastic composition which is stable against exudation of plasticizer comprising a mixture containing a vinyl chloride polymer selected from the group consisting of polyvinyl chloride and a vinyl chloride-vinyl acetate copolymer which contains a predominant amount of vinyl chloride, and a plasticizer therefor comprising a morpholide mixture of the morpholides of saturated vegetable oil fatty acids (S) and the morpholides of unsaturated vegetable oil fatty acids consisting of monoolefinic fatty acids (M), polyolefinic fatty acids (P), and epoxy-group-containing monoolefinic acids (E), in which morpholide mixture the proportion of the saturated acids is such that

$$\frac{S}{S+M+P+E}$$

is about from

$$\frac{1 \text{ to } 9}{100}$$

by weight, and the proportion of the polyolefinic fatty acids, based on the total unsaturated acids is such that

$$\frac{P}{M+P+E}$$

is less than about $\frac{1}{10}$ by weight, the value of E being zero when no epoxidized acids are present, said morpholide mixture being present in the proportion of about from 10 to 80 parts per 100 parts of the vinyl chloride polymer.

2,863,846

ORGANO SILYL-SILICA FILLED SILOXANE ELASTOMERS AND PROCESS FOR PRODUCING SAME

Leslie J. Tyler, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application May 4, 1950
Serial No. 160,100
11 Claims. (Cl. 260—37)

3. A heat curable composition of matter composed of a benzene soluble organopolysiloxane having a viscosity of at least 10,000 cs. at 25° C. in which siloxane the organic radicals are selected from the group consisting of methyl, ethyl, phenyl, trifluoromethylphenyl and siliconeopentyl radicals, at least 50 percent of said radicals being alkyl and there being from 1.98 to 2 of said organic radicals per silicon atom and from 10 to 100 parts by weight of a filler based upon 100 parts by weight siloxane, said filler having a pore volume of at least 3 ccs. per gram and being composed of SiO_2 and organosilyl units selected from the group consisting of $RR'Si=$ and $R_2R'Si$ where R is an alkyl radical of less than 5 carbon atoms and R' is selected from the group consisting of alkyl radicals of less than 5 carbon atoms and phenyl radicals, in amount such that the molar ratio of said organosilyl units to SiO_2 is from .06 to .6, said organosilyl units being attached to the silicon atoms of the SiO_2 through SiOSi linkages.

2,863,847

LUBRICATING OILS THICKENED TO A GREASE WITH HYDROUS METAL SALTS AND PROCESS FOR FORMING SAME

Arnold J. Morway, Clark, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 1, 1955
Serial No. 498,741
12 Claims. (Cl. 252—37.2)

1. A lubricating grease composition which comprises a lubricating oil base stock thickened to grease consistency with from 5 to 30 weight percent of a hydrous mixture of a metal salt of a low molecular weight monocarboxylic acid having from about 1 to 3 carbon atoms per molecule and a metal salt of an intermediate molecular weight monocarboxylic acid having from about 7 to 10 carbon atoms per molecule, in which the mol ratio of low to intermediate molecular weight carboxylic acids is between 2:1 and 40:1, wherein said hydrous composition contains 0.5 to 15.0 weight percent water and said metal is selected from the group consisting of alkali metals, alkaline earth metals and heavy metals of groups I, II, IV and VIII of the periodic system.

2,863,848

POLYMERS CONTAINING HEXACHLOROCYCLOPENTADIENE AND PROCESS OF MAKING SAME

Paul Robitschek, Wilson, and Claude Thomas Bean, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application August 9, 1956
Serial No. 603,175
19 Claims. (Cl. 260—45.4)

1. The process which comprises reacting hexahalocyclopentadiene wherein the halogen is selected from the group consisting of chlorine, bromine, fluorine and mixtures thereof with a material selected from the group consisting of (1) aliphatic unsaturated linear polyesters of a polyhydric alcohol and a polycarboxylic compound selected from the group consisting of polycarboxylic acids and polycarboxylic anhydrides, and (2) glyceride drying oils.

2,863,849

BUTADIENE-STYRENE COPOLYMER-MODIFIED POLYSTYRENE MOLDING COMPOSITIONS

James W. L. Fordham, Painesville, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application May 5, 1958
Serial No. 732,821
7 Claims. (Cl. 260—45.5)

1. A molding composition containing as the sole resinous component an intimate binary blend of (*a*) 100 parts by weight of polystyrene having an average molecular weight of about 40,000–100,000, as determined by the Staudinger equation, and (*b*) 1–50 parts by weight of a copolymer of about 30–90% butadiene with, correspondingly, about 70–10% styrene, such copolymer having been prepared by an aqueous emulsion copolymerization reaction wherein (1) all of one monomer is emulsified in water, (2) polymerization of said first monomer is initiated with a free-radical generating polymerization initiator, (3) 10–60% of the second monomer is added to the polymerization system before more than 10% of the first monomer is polymerized, (4) polymerization of the first monomer is continued in the continuous presence of the second monomer until 40–60% of the first monomer is polymerized, (5) the balance of at least 40% of the second monomer is added to the polymerization system before more than 60% of the first monomer is polymerized and (6) polymerization is continued until substantially all of the monomers are polymerized.

and sulfur, Y is selected from the group consisting of leaving the adduct, passing the adduct to the upper end

2,863,850
POLYETHYLENE COMPOSITION

James W. Ragsdale, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 21, 1955
Serial No. 489,785
2 Claims. (Cl. 260—45.7)

1. A process for improving the environmental stress-cracking resistance of polyethylene which comprises homogeneously mixing a homopolymer of polyethylene having a molecular weight above 22,000 with 0.5 to 2% by weight of an oily liquid hydrocarbon mixture by-product of the mass polymerization of ethylene at elevated temperatures and pressures in the presence of oxygen as the polymerization catalyst, said liquid having a density of about 0.800 at 25° C., a viscosity of about 3–4 centipoises at 25° C., from 4 to 6% unconjugated ethylenic unsaturation and substantially no combined oxygen.

2,863,851
STABILIZATION OF POLYMERIZABLE MATERIALS

Joseph L. O'Brien, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application June 27, 1955
Serial No. 518,402
13 Claims. (Cl. 260—45.9)

1. A composition comprising a polymerizable ester of acrylic acid and, as a stabilizer therefor, from 0.005% to about 1%, based on the weight of said ester, of the compound, N,N'-di-2-(1,4-naphthoquinonyl)-p-phenylenediamine.

2,863,852
EPOXY RESINS CURED WITH MIXTURES OF POLYCARBOXYLIC ACID ANHYDRIDES

Ridgley G. Shepherd, Jr., Weston, and Elizabeth C. Dearborn, Boston, Mass., assignors to United States Testing Company, Inc., Hoboken, N. J., a corporation of New York

No Drawing. Application June 8, 1954
Serial No. 435,356
6 Claims. (Cl. 260—47)

1. As novel products the resins resulting from the heat curing of (1) polyglycidyl ethers of polyhydric compounds of the class consisting of polyhydric phenols and polyhydric aliphatic alcohols with (2) a dicarboxylic acid anhydride of the class consisting of maleic and phthalic anhydrides and (3) a small amount of 1,2,3,4,5,6,6a,7,8,9,10,11,12,12a-tetradecahydrochrysene-5,6,11,12 - tetracarboxylic acid dianhydride.

2,863,853
EPOXY RESIN COMPOSITIONS

Frank Eric Pschorr, Phoenixville, Pa., assignor to Ciba Company Inc., New York, N. Y., a corporation of New York

No Drawing. Application April 12, 1957
Serial No. 652,357
3 Claims. (Cl. 260—47)

1. A composition of matter comprising (*a*) a liquid polyglycidyl ether of 4,4'-dihydroxydiphenyldimethylmethane, (*b*) methyl-endomethylene-tetrahydrophthalic anhydride, and (*c*) 2,4,6-tri(dimethylaminomethyl)phenol, wherein the ratio of components (*a*), (*b*) and (*c*) is about 100:70–90:1–3 parts by weight, said composition when subjected to heat at an elevated temperature forming an insoluble and infusible resin having a high heat distortion temperature.

2,863,854
REDUCING ACIDITY OF POLYESTERS BY TREATMENT WITH ALKYLENE CARBONATE

Christopher L. Wilson, Sloatsburg, N. Y., assignor to Hudson Foam Plastics Corporation

No Drawing. Application December 7, 1954
Serial No. 473,745
5 Claims. (Cl. 260—75)

1. A method which comprises reacting a polyester having a molecular weight of at least approximately 1000 and an acid number greater than about 16 and less than about 49.5, said polyester being predominantly the product of esterification reaction between an organic dicarboxylic acid selected from the group consisting of adipic, azelaic, fumaric, succinic, phthalic and terephthalic acids and a glycol selected from the group consisting of ethylene glycol, diethylene glycol, triethylene glycol, propylene glycol and dipropylene glycol, with an alkylene carbonate in an amount ranging from about 100% to 268% of the theoretical stoichiometric amount for completely reacting with the carboxyl groups of said polyester and at a temperature from approximately 200° C. to approximately 250° C. thereby effecting esterification of the carboxyl groups with formation of hydroxyalkyl ester groups, and continuing said reaction until the acid number of the polyester is reduced substantially below 16, said reaction being discontinued while limited substantially to said esterification.

2,863,855
METHOD OF MAKING POLYESTER COMPOSITION

Christopher L. Wilson, Cranberry Lake, N. Y., and Calvin J. Benning, Mahwah, N. J., assignors to Hudson Foam Plastics Corporation, Yonkers, N. Y.

No Drawing. Application July 25, 1955
Serial No. 524,282
7 Claims. (Cl. 260—75)

1. A method which comprises reacting a liquid polyester having a molecular weight of at least 1000 and an acid number substantially above 10 and not substantially above 100, said polyester being predominantly the product of esterification reaction between an organic dicarboxylic acid and a glycol, with an alkylene oxide selected from the group consisting of ethylene, propylene, butylene, cyclohexene, styrene and hydroxy methylethylene oxides in an amount ranging from about 80% to about 230% of the theoretical stoichiometric amount for completely reacting with the carboxyl groups of said polyester and at a temperature between about 50° C. and about 275° C., thereby effecting esterification of the carboxyl groups with formation of hydroxyalkyl ester groups, and continuing said reaction until the acid number of the polyester is reduced substantially below 10, the said reaction being discontinued while limited substantially to said esterification.

2,863,856
CARBAMATES MODIFIED WITH NAPHTHENIC ACIDS

Stanford J. Hetzel, Cheltenham, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application December 13, 1955
Serial No. 552,733
6 Claims. (Cl. 260—77.5)

1. A new composition of matter comprising an ester of (1) an acid selected from the group consisting of dicarbamic acids and dithiocarbamic acids and containing a hydrocarbon radical between the two nitrogen-containing acid groups in said acid and (2) a compound having the formula

where X is selected from the group consisting of oxygen

hydroxyethyl and R_1 is selected from the group consisting of hydrogen, methyl, ethyl, hydroxyethyl, cyclohexyl and

droxy, halo, acyloxy groups derived from aliphatic hydrocarbon monocarboxylic acids of more than one carbon

silicon atoms of the SiO_2 through SiOSi linkages.

stantially all of the monomers are polymerized.

and sulfur, Y is selected from the group consisting of hydrogen and —XH radicals, R' is a hydrocarbon radical, and R is a cycloaliphatic radical naturally occurring in petroleum naphthenic acids and connected to the carboxyl group in said naphthenic acids.

2,863,857

TRIMESIC ACID MODIFIED POLYAMIDE

Winston Costain, Norman Fletcher, and Bernard James Habgood, Blackley, England, assignors to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application October 6, 1954
Serial No. 460,771
Claims priority, application Great Britain October 7, 1953
4 Claims. (Cl. 260—78)

1. A fibre-forming polyamide formed by heat reacting a composition comprising a reactant from at least the first two of the following three groups of polyamide-forming reactants: (1) diamines and amide-forming derivatives thereof; (2) dicarboxylic acids and amide-forming derivatives thereof; and (3) amino-carboxylic acids and amide-forming derivatives thereof, the reactants of groups (1) and (2) being present in essentially equimolecular proportions; a modifier selected from the group consisting of trimesic acid and amide-forming derivatives thereof and wherein said amide-forming derivatives are selected from the group consisting of esters, amides and preformed salts of said acid with diamines present in an amount between 0.3 to 3.18 molar percent of the total dicarboxylic acid and amino-carboxylic acid content of said composition, and a corresponding essentially equivalent proportion of diamine.

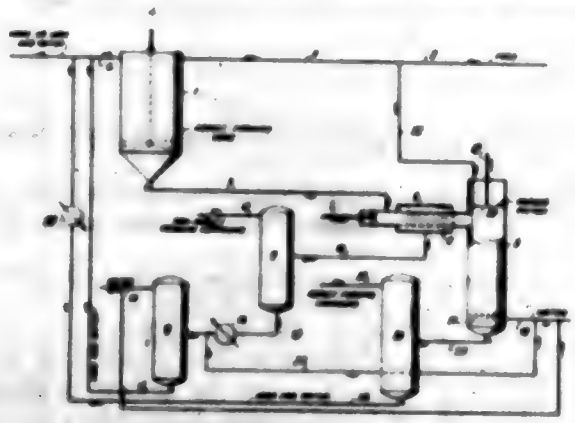
2,863,858

SEPARATING ORGANIC COMPOUNDS

Gardner C. Ray and Herold J. Hepp, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application July 6, 1954, Serial No. 441,282
3 Claims. (Cl. 260—96.5)

1. A process for separating organic compounds comprising adduct-forming compounds in admixture with non-adduct-forming compounds said process comprising contacting in an adduct-forming zone the said admixture with an aqueous solution of an amide selected from the group consisting of urea and thiourea under adduct-forming conditions to produce an adduct of the adduct-forming compound and a portion of the amide, said amide solution being of greater density than said adduct forming compound passing the resulting mixture to a filtration zone wherein the water containing non-adducted amide and the non-adduct-forming compound are filtered off leaving the adduct, passing the adduct to the upper end of a decomposition column wherein a contiguous mass of adduct is formed, passing the water containing amide and non-adduct-forming compound to a separation zone, withdrawing the non-adduct-forming compound from said separation zone, heating the water containing amide and passing the hot solution to a flash zone wherein a portion of the water is flashed free of amide, passing the remaining water and amide to the adduct-forming zone, condensing the flashed water and passing it at a temperature sufficiently high to decompose adduct to the lower end of said decomposition column thereby decomposing adduct entering the lower level of said column and releasing the adduct-forming compound and the amide, maintaining a temperature gradient in said column so as to decompose adduct only in the lower level of said column, successively applying a compression and filtering means to the top of said contiguous mass thereby gently compressing said mass, allowing a portion of said released adduct-forming compound to pass upward through said compression and filtering means thereby washing said contiguous mass of adduct free of occluded impurities, withdrawing the wash liquid and occluded material from upper level of said column, passing said withdrawn liquid to the adduct-forming zone, withdrawing the remaining liquid material from the lower level of said column, passing last said withdrawn liquid to a separation zone, withdrawing adduct-forming compound from last said separation zone, and withdrawing remaining liquid from last said separation zone and passing it to the adduct-forming zone.



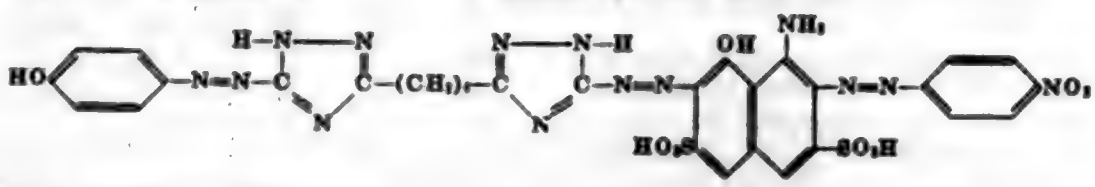
2,863,859

BIS-(TRIAZOLYL)-AZO DYES

Randolph Norris Shreve, West Lafayette, Ind., and Robert Koridon Charlesworth, Walnut Creek, Calif., assignors, by mesne assignments, to Research Corporation, New York, N. Y., a corporation of New York

No Drawing. Application August 9, 1954
Serial No. 448,756
3 Claims. (Cl. 260—157)

2. A dye having the formula:



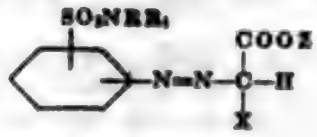
2,863,860

NEW MONOAZO COMPOUNDS

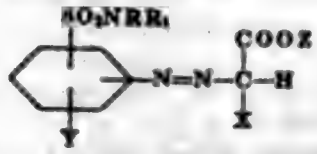
John Mitchell and Harry James Twitchett, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application June 26, 1956
Serial No. 593,790
Claims priority, application Great Britain June 29, 1955
6 Claims. (Cl. 260—193)

1. A monoazo compound selected from the group consisting of compounds having the formula



and compounds having the formula



wherein Y is a carboxylic acid substituent, R is selected from the group consisting of hydrogen, methyl, ethyl and

(a) compounds having the following general structural formula:

2. The calcium acid salt of the mono-β-morpholino-

hydroxyethyl and R_1 is selected from the group consisting of hydrogen, methyl, ethyl, hydroxyethyl, cyclohexyl and phenyl, and X is selected from the group consisting of —COOZ and —CN where Z is an alkyl group containing 1 to 4 carbon atoms.

2,863,861
PROCESS FOR PURIFYING CITRUS OILS
William C. Platt, Glendora, Calif., assignor to Ventura Processors, Ventura, Calif., a corporation of California
No Drawing. Application June 25, 1956
Serial No. 593,361
6 Claims. (Cl. 260—236.6)

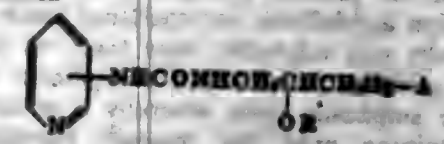
1. The process for destroying wax crystallization inhibitors in impure citrus oils which comprises the steps of subjecting said impure citrus oils to a washing treatment with a buffered aqueous dispersion of pH range from 4.0 to 4.5 of a pectase enzyme capable of enzymatic destruction of the contained inhibitor in said citrus oil while maintaining a temperature within a range substantially above the freezing point of the aqueous dispersion but below the inactivating temperature of the said enzyme, for a period of time sufficient to allow enzymic action by said enzyme upon said inhibitor; and then separating the aqueous portion from the oily portion of the mixture of said enzyme aqueous dispersion and citrus oil.

2,863,862
1-METHYL STEROID DERIVATIVES AND METHOD FOR THE PRODUCTION THEREOF
Carl Djerassi, Birmingham, Mich., Gilbert Stork, Leonia, N. J., and Franz Sondheimer and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S. A., Mexico City, Mexico, a corporation of Mexico
No Drawing. Application November 30, 1955
Serial No. 550,211
Claims priority, application Mexico December 10, 1954
14 Claims. (Cl. 260—239.55)

1. A process for the preparation of 1-methyl-19-nor-Δ^4-pregnene-17α-ol-3,20-dione comprising oxidizing a compound selected from the class consisting of 1-methyl-3-hydroxy-17β-acetyl-1,3,5(10),6,16-estrapentaene and its 3-esters of hydrocarbon carboxylic acids of less than 10 carbon atoms with hydrogen peroxide in an alkaline medium to form the corresponding 16,17-epoxide, treating the epoxide with alkyl sulfate to form a 16,17-epoxido-1-methyl-3-alkoxy-17β-acetyl-1,3,5(10),6-estratetraene, treating the 3-alkoxy derivative thus formed with hydrogen bromide to form the corresponding bromohydrin and debrominating the bromohydrin with hydrogen in the presence of a palladium catalyst to form 1-methyl-3-alkoxy-17α-hydroxy-17β-acetyl-1,3,5(10)-estratriene, reacting the last-mentioned compound with ethylene glycol to form the corresponding ethyleneketal thereof, reducing the ethyleneketal with an alkali metal of the class consisting of sodium and lithium to form the ketal of 1-methyl-19-nor-3-alkoxy-$\Delta^{2,5(10)}$-pregnadiene-17α-ol-20-one and subjecting this last-mentioned compound to rearrangement in an acid medium.

2,863,863
MERCURATION PRODUCTS OF 1-PYRIDYL-3-ALLYLUREAS
John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., a corporation of Wisconsin
No Drawing. Application June 4, 1956
Serial No. 588,999
9 Claims. (Cl. 260—242)

1. A member of the group consisting of compounds of the formula

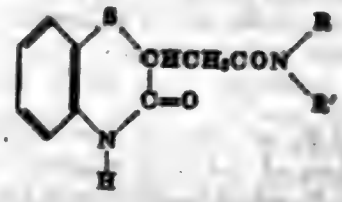


wherein A is a member of the group consisting of hydroxy, halo, acyloxy groups derived from aliphatic hydrocarbon monocarboxylic acids of more than one carbon and less than six carbons and groups derived from the acidic nitrogen compounds theobromine, theophylline, succinimide and phthalimide by removal of the hydrogen on the nitrogen atom, R is a member of the group consisting of hydrogen and lower alkyl groups, and stable non-toxic acid addition and quaternary ammonium salts thereof.

8. 1 - pyridyl - 3 - [gamma - (7 - theophyllino) - mercuri-beta-lower alkoxy-propyl]-urea.

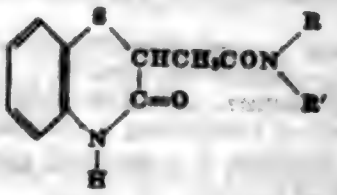
2,863,864
3-OXO - 3,4 - DIHYDRO - 1,4,2 - BENZOTHIAZINE-2-ACETIC ACID AMIDES AND PREPARATION THEREOF
Frederick K. Kirchner, Delmar, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware
No Drawing. Application June 28, 1956
Serial No. 592,489
13 Claims. (Cl. 260—243)

1. A compound having the formula

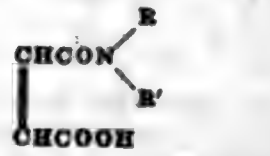


wherein R is a member selected from the group consisting of hydrogen, alkyl and cycloalkyl; and R' is a member selected from the group consisting of hydrogen, alkyl, unsubstituted phenyl and phenyl substituted by from one to three lower-alkyl, lower-alkoxy, lower-alkylmercapto, lower-alkylsulfonyl, carbo-lower-alkoxy, carbohydrazido and halogen.

6. The process for preparing a compound having the formula



wherein R is a member selected from the group consisting of hydrogen, alkyl and cycloalkyl; and R' is a member selected from the group consisting of hydrogen, alkyl, unsubstituted phenyl and phenyl substituted by from one to three lower-alkyl, lower-alkoxy, lower-alkylmercapto, lower-alkylsulfonyl, carbo-lower-alkoxy, carbohydrazido and halogen, which comprises heating a compound having the formula



with 2-aminobenzenethiol in an inert solvent at a temperature between about 50° C. and 150° C.

2,863,868
ORGANIC COMPOUNDS
Brooke D. Aspergren, Kalamazoo, and Richard V. Holmeshaw, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application November 2, 1956
Serial No. 619,927
3 Claims. (Cl. 260—243)

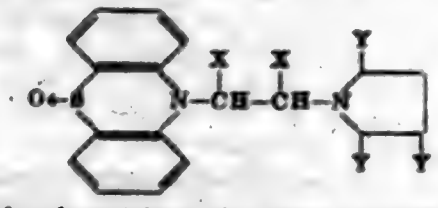
1. The sulfoxide of a 10-(2-pyrrolidinoalkyl)phenothiazine derivative selected from the group consisting of

2,863,871
PROCESS FOR THE MANUFACTURE OF VAT DYESTUFFS

2,863,874

and the non-adduct-forming compound are filtered off from the group consisting of hydrogen, methyl, ethyl and

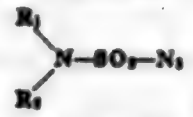
(*a*) compounds having the following general structural formula:



wherein X is selected from the group consisting of hydrogen and lower alkyl and Y is selected from the group consisting of hydrogen and methyl and (*b*) pharmacologically acceptable acid addition, and alkyl and aralkyl quaternary ammonium salts thereof.

2,863,866
ORGANIC SULFAMOYL AZIDES
William B. Hardy and Frederic H. Adams, Bound Brook, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application November 15, 1956
Serial No. 622,258
6 Claims. (Cl. 260—247.1)

1. A compound of the formula

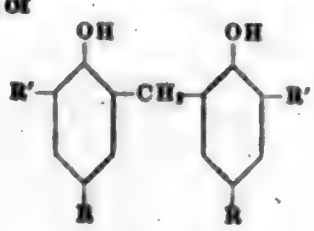


in which R_1 and R_2 are radicals selected from the group consisting of alkyls of 1–6 carbon atoms; cycloalkyl; and in which R_1 and R_2 taken together with the nitrogen form a heterocyclic radical selected from the group consisting of pyrrolidyl, piperidyl and morpholyl.

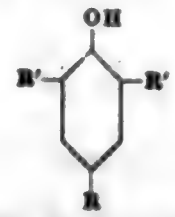
4. Oxy-diethylene-sulfamoyl azide.

2,863,867
STABILIZATION OF SULFENAMIDES
Herman Cherlow, Plainfield, N. J., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application November 6, 1957
Serial No. 694,712
16 Claims. (Cl. 260—247.1)

1. A composition comprising a sulfenamide and as a decomposition inhibitor a compound selected from the group consisting of



and

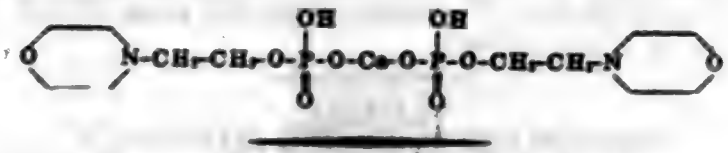


in which R is a lower alkyl radical and R′ is a t-alkyl radical.

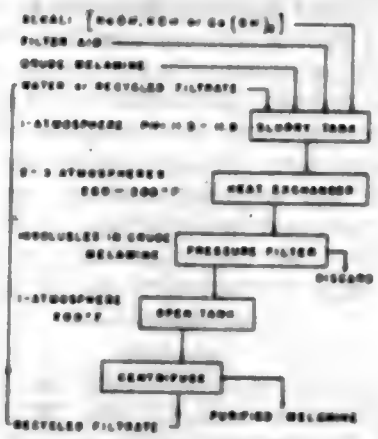
2,863,868
MONO ORTHOPHOSPHORIC ESTERS AND SALTS THEREOF
Pierre Chabrier and André E. G. Desjobert, Paris, France, assignors to Jan M. D. Arce-Soumoi, Suresnes, France
No Drawing. Application December 21, 1953
Serial No. 399,594
Claims priority, application France May 30, 1949
4 Claims. (Cl. 260—247.7)

1. A calcium salt of the mono β-morpholino-ethyl ester of orthophosphoric acid.

2. The calcium acid salt of the mono-β-morpholino-ethyl ester of orthophosphoric acid, said salt having the following formula



2,863,869
MELAMINE PURIFICATION PROCESS
Curtis Elsner, Springfield, and Clarence R. Stanley, Boston, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Application May 21, 1956, Serial No. 586,133
3 Claims. (Cl. 260—249.7)



1. In a recycle recrystallization process for the purification of crude melamine in which crude melamine is dissolved in water at an elevated temperature, the heated aqueous melamine solution is filtered, the filtered aqueous melamine solution is cooled to precipitate purified melamine therefrom, the purified melamine is separated from the filtrate and the filtrate is recycled and employed as the solvent for the dissolution of additional crude melamine; the improvement which consists essentially of heating the aqueous solution of crude melamine to a temperature of 265–285° F. under a pressure of 2–3 atmospheres, adjusting the pH of the aqueous crude melamine solution to 11.5–11.9 with an alkali taken from the group consisting of sodium hydroxide, potassium hydroxide, and calcium hydroxide, adding a diatomaceous earth filter aid to the heated aqueous crude melamine solution and immediately thereafter passing the aqueous crude melamine solution through a pressure filter without a substantial loss of temperature or pressure, delivering the filtered melamine solution to a cool, open vessel to crystallize the melamine and separating the purified melamine crystals from the filtrate.

2,863,870
PURIFICATION OF THIAMIN COMPOUNDS
Carmine Ciriello, Naples, Italy, assignor to S. p. A. Prod. Farmaceutici Specialmenti Dott. M. Calosi & F.°, Florence, Italy, a company of Italy
No Drawing. Application September 17, 1956
Serial No. 610,419
Claims priority, application Italy October 19, 1955
5 Claims. (Cl. 260—256.6)

1. A process for preparing the chloride of thiamin phosphoric acid esters from an impure mixture of thiamin hydrochloride and thiamin phosphoric acid ester, which comprises dissolving in water a mixture of the thiamin chloride and the thiamin phosphoric acid ester, adding to the solution a sulphonic ion-exchange resin in sodium form, whereby said sulphonic resin takes up the thiamin leaving in solution the thiamin phosphoric acid ester, filtering the sulphonic resin whereby a solution is obtained containing only the thiamin phosphoric acid ester.

2,863,876
5-ALKYL-2-(TRICHLOROMETHYL)-5-m-DIOXANE-

an oxygen-containing gas at linear velocities of about 0.2–2 feet per second through a bed of finished catalyst

2,863,871

PROCESS FOR THE MANUFACTURE OF VAT DYESTUFFS

Francis Irving and Alistair Livingston, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application February 25, 1957
Serial No. 641,846
Claims priority, application Great Britain March 7, 1956
10 Claims. (Cl. 260—274)

1. A process for the manufacture of a vat dyestuff which comprises admixing 3-α-anthraquinonylamino-benzanthroneanthraquinoneacridine and an oxidizing agent with aluminium chloride and heating the resulting mixture at a temperature between 100° and 200° C., the oxidizing agent being admixed with the aluminium chloride at least so later than the 3-α-anthraquinonyl-amino-benzanthroneanthraquinoneacridine.

10. The vat dyestuff obtained by the process of claim 1.

2,863,872

CATALYTIC CYCLIZATION

Gerald A. Silverstone, Blackley, Manchester, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application December 6, 1954
Serial No. 473,471
Claims priority, application Great Britain
December 16, 1953
5 Claims. (Cl. 260—290)

1. Process for the manufacture of piperidine which comprises contacting pentamethylene diamine in the vapor state with an acidic heterogeneous catalyst of the type used for promoting alkylation of aromatic compounds, wherein said catalyst is selected from the group consisting of silica gel, alumina-silica beads, and boron phosphate.

3. A one-step process for the manufacture of pyridine from pentamethylene diamine which comprises contacting pentamethylene diamine in the vapor state with an acidic heterogeneous catalyst of the type used for promoting alkylation of aromatic compounds and selected from the group consisting of silica gel, alumina-silica beads, and boron phosphate, admixed with a dehydrogenation catalyst selected from the group consisting of platinum and palladium whereby said pentamethylene diamine is cyclized to form piperidine and said piperidine is substantially simultaneously dehydrogenated to said pyridine.

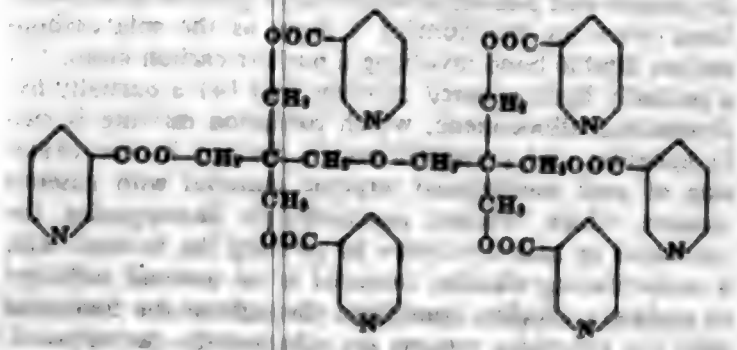
2,863,873

ESTERS OF NICOTINIC ACID

Bo Thuresson of Ekenstam, Bofors, and Nils Evald Natanael Johansson, Karlskoga, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a Swedish corporation

No Drawing. Application August 27, 1957
Serial No. 680,636
Claims priority, application Sweden August 29, 1956
4 Claims. (Cl. 260—295.5)

1. The dipentaerythritol hexanicotinic acid ester having the formula



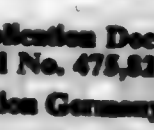
2,863,874

PROCESS OF PREPARING 2-AMINOTHIAZOLES

James T. Gregory, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application May 26, 1955
Serial No. 511,433
10 Claims. (Cl. 260—306.8)

10. A method of preparing 2-aminosubstituted thiazoles comprising reacting a compound having the structure



wherein R and R_1 is each selected from the class consisting of hydrogen and aliphatic hydrocarbon radicals having from 1 to 5 carbon atoms, a phenyl group and phenyl substituted lower alkyl groups, with a primary amine having from 1 to 2 primary amino groups selected from the class consisting of unsubstituted primary amines and substituted derivatives thereof in which the substituent is a member of the class consisting of carboxy, hydroxy, lower alkoxy, phenyl sulfonic acid and dilower alkyl tertiary amino groups, said primary amine having from 1 to 15 carbon atoms said reaction being carried out at a temperature of from about 50° C. to about 110° C. in the presence of water and from 0.001 to about 2.0 moles of mineral acid for each primary amino group, and continuing the reaction until a 2-aminosubstituted thiazole is formed.

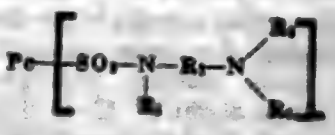
2,863,875

PROCESS FOR THE PRODUCTION OF BASIC DYESTUFFS

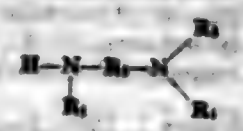
Berthold Bienert and Fritz Baumann, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application December 16, 1954
Serial No. 475,821
Claims priority, application Germany December 21, 1953
6 Claims. (Cl. 260—314.5)

1. A process for the production of a dyestuff of the general formula



wherein Pc is a phthalocyanine radical, R_1 is a member selected from the group consisting of hydrogen and a lower alkyl radical, R_2 is a lower alkylene radical, R_3 and R_4 are monovalent radicals selected from the group consisting of lower alkyl and hydroxy lower alkyl and n is an integer from 1 to 8, which comprises reacting a sulfochloride-substituted phthalocyanine dyestuff with an aliphatic tertiary amine of the general formula



wherein R_1, R_2, R_3, and R_4 have the above meaning, and recovering the dyestuff formed.

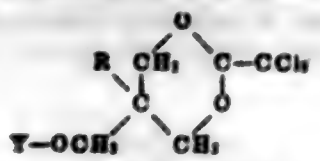
2,863,883

2,863,876
5-ALKYL-2-(TRICHLOROMETHYL)-5-m-DIOXANE-METHANOL AND ITS CARBAMIC ACID ESTER

William A. Lott, Maplewood, and Edward J. Prilyl, Metuchen, N. J., assignors to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application October 3, 1956
Serial No. 613,616
4 Claims. (Cl. 260—340.7)

1. Compounds of the general formula



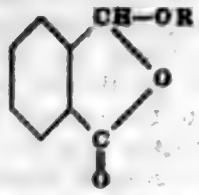
wherein R is a lower alkyl, and Y is a member of the class consisting of hydrogen and carbamyl.

2,863,877
3-ALKOXYPHTHALIDES

Donald D. Wheeler and David C. Young, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 30, 1956
Serial No. 581,337
4 Claims. (Cl. 260—343.3)

1. The phthalide having the formula



wherein R represents a higher aliphatic radical containing from 12 to 18 carbon atoms, inclusive, and selected from the group consisting of alkyl and alkenyl.

2,863,878
SYNTHESIS OF α-α-DIMETHYL-β-HYDROXY-PROPIONALDEHYDE AND α-HYDROXY-β-β-DIMETHYL-γ-BUTYROLACTONE

John W. Lynn, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 27, 1954
Serial No. 432,948
6 Claims. (Cl. 260—343.6)

6. A process for producing alpha-hydroxy-beta-dimethyl-gamma-butyrolactone comprising reacting isobutyraldehyde with formaldehyde at a temperature of from about 0° C. to about 30° C. in the presence of from about 0.5 to about 5.0 percent by weight of a basic catalyst to produce alpha,alpha-dimethyl-beta-hydroxypropionaldehyde, neutralizing the basic catalyst with a lower monocarboxylic acid, reacting hydrogen cyanide at a temperature of from about 0° C. to about 30° C. with the resulting mixture in the presence of from about 0.5 to about 5.0 percent by weight of a basic catalyst to produce alpha,gamma-dihydroxy-beta-dimethylbutyronitrile, neutralizing the basic catalyst, reacting the resulting mixture with aqueous hydrochloric acid to produce alpha-hydroxy-beta,beta-dimethyl-gamma-butyrolactone, and recovering said lactone from the reaction mixture.

2,863,879
OXIDATION OF NAPHTHALENE WITH A VANADIUM CATALYST OF CONTROLLED VALENCE

Samuel W. Tribit, Hawthorne, N. Y., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application February 7, 1956, Serial No. 563,922
8 Claims. (Cl. 260—346.4)

1. A method of producing phthalic anhydride which comprises passing a mixture of naphthalene vapor and an oxygen-containing gas at linear velocities of about 0.2–2 feet per second through a bed of fluidized catalyst particles containing as the principal active catalyst a mixture of V_2O_4 and V_2O_5 at a temperature within the range of about 320°–420° C. and a naphthalene-to-oxygen ratio such that upon continued operation the ratio of V_2O_4 to V_2O_5 in the catalyst would exceed 70:30 and maintaining said ratio between the limits of 70:30 and 20:80 by continuously withdrawing catalyst from said bed, continuously partially oxidizing it to a V_2O_4 to V_2O_5 ratio within said limits and returning it to said catalyst bed.

2,863,880
CONTINUOUS DEHYDRATION OF AQUEOUS SOLUTIONS OF CRUDE MALEIC ACID

Gustave K. Kohn, Oakland, Calif., assignor to California Spray-Chemical Corporation, Richmond, Calif., a corporation of Delaware

Application July 23, 1957, Serial No. 674,994
10 Claims. (Cl. 260—346.8)

1. A process for dehydrating maleic acid associated with at least 50 p. p. m. of alkali metal cation to maleic anhydride without appreciable decomposition of maleic anhydride, which comprises incorporating with said maleic acid a minor proportion of an oxygen acid of pentavalent phosphorus in amounts of at least one equivalent acid group per atomic equivalent of alkali metal cation, and subjecting the compounded maleic acid to dehydrating conditions and recovering the resultant maleic anhydride.

2,863,881
DIEPOXIDES

Benjamin Phillips and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Original application January 5, 1954, Serial No. 402,396, now Patent No. 2,750,395, dated June 12, 1956. Divided and this application November 29, 1955, Serial No. 549,864
4 Claims. (Cl. 260—348)

1. As a new compound, bis-(3,4-epoxycyclohexylmethyl) oxalate.

2,863,882
PRODUCING AND RECOVERING TERPENIC OXIDATION PRODUCTS

Joseph P. Bain, Albert B. Boodi, and Eugene A. Klein, Jacksonville, Fla., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application September 8, 1953
Serial No. 379,870
29 Claims. (Cl. 260—348.5)

2. The process for treating a gaseous oxygen oxidation mixture of an unsaturated terpenic material selected from the class consisting of (1) a mono-unsaturated compound possessing the carbon-carbon system of pinane in which the double bond involves the number 2 carbon atom, (2) an unsaturated p-menthane derivative possessing a double bond involving the number 2 atom as the sole carbon-carbon double bond involving a nuclear carbon atom, (3) a partially hydrogenated myrcene and (4) a partially hydrogenated alloocimene, which oxidation mixture is rich in epoxides and peroxides and is formed by the oxidation of such unsaturated terpenic material with gaseous oxygen, which consists essentially in decomposing the peroxides in such a mixture by treating the mixture with a non-reducing alkaline material in an amount sufficient to maintain alkaline conditions throughout the treatment until the peroxides present are substantially decomposed.

2,863,883

ANTHRAQUINONE CHLOROALDAZINES AND PRODUCTION THEREOF

Erwin Klingsberg, Mountainside, N. J., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

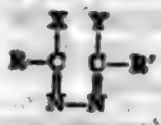
No Drawing. Application November 18, 1957
Serial No. 696,908

12 Claims. (Cl. 260—367)

1. The process of preparing an anthraquinonyl chloroaldazine which comprises heating an unaminated, unhydroxylated 2-anthraquinonyl aldazine with a chlorinating agent in nitrobenzene at temperatures above 60° C.

5. The process of preparing a diaryl dichloro aldazine which comprises heating an N,N'-diaroyl hydrazine, in which one of the aryl groups is an anthraquinonyl carbonyl radical, with phosphorus pentachloride above 100° C.

8. Chloroaldazines of the structure:



in which X and Y are selected from the group consisting of chlorine and hydrogen, at least one of X and Y being chlorine, and R and R' are aryl groups, at least one of which is a 2-anthraquinonyl radical.

2,863,884

PRODUCTION OF 1,4-NAPHTHOQUINONE WITH VANADIUM CATALYSTS OF CONTROLLED VALENCE

Samuel W. Tribit, Hawthorne, N. Y., and Wesley O. Fugate, Old Greenwich, and James Kenneth Dixon, Riverside, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application March 7, 1956, Serial No. 569,991

4 Claims. (Cl. 260—396)

1. A method of producing 1,4-naphthoquinone which comprises passing a mixture of naphthalene vapor and an oxygen-containing gas having a ratio of naphthalene to oxygen of about 5 to 20 mol percent through a bed of fluidized catalytic material containing a V_2O_4—V_2O_5 mixture as the principal active catalyst at reaction temperatures within the range of about 250°–400° C. and maintaining the ratio of V_2O_4 to V_2O_5 in the catalyst within the range of from about 75:25 to 95:5.

2,863,885

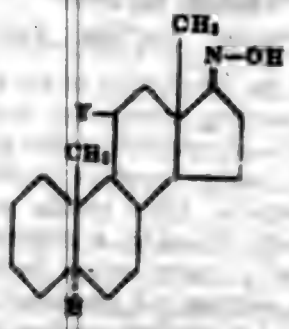
17-ISONITROSOANDROSTANES

John C. Babcock, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application February 10, 1958
Serial No. 714,974

6 Claims. (Cl. 260—397)

1. 17-isonitroso androstane of the formula:



wherein Y is selected from the group consisting of hydrogen, α-hydroxy, β-hydroxy and keto.

2,863,886

PROCESS FOR THE PRODUCTION 17α-ETHINYL DERIVATIVES OF ANDROSTANE SERIES OF COMPOUNDS

Octavio Mancera, Franz Sondheimer, and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S. A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application January 16, 1955
Serial No. 481,036

Claims priority, application Mexico January 26, 1954

2 Claims. (Cl. 260—397.5)

1. A process for the production of androstene C–17 ethinyl derivatives which comprises reacting an androstene C–17 ketone with acetylene-di-magnesium bromide in tetrahydrofurane to form an intermediate product highly insoluble in the tetrahydrofurane and thereafter subjecting the product to cleavage in an acid medium.

2,863,887

METHOD FOR PURIFYING SYNTHETIC ORGANIC DETERGENTS

Paul Bocher, Murray Hill, N. J., assignor to Colgate-Palmolive Company, New York, N. Y., a corporation of Delaware

No Drawing. Application March 26, 1957
Serial No. 648,493

12 Claims. (Cl. 260—400)

1. In the method of preparing synthetic organic detergents wherein sulfated partial esters of glycerol and relatively high molecular weight fatty acids and excess sulfating reagent are neutralized with an inorganic salt-forming reagent resulting in a synthetic organic detergent and an inorganic sulfate, and extracting the detergent with alcohol resulting in a mixture comprising detergent, alcohol and undesirable inorganic sulfate, the improvement comprising adding a quantity of a substance capable of forming a double salt with the inorganic sulfate and selected from the group consisting of magnesium sulfate and potassium chloride and mixtures thereof, and thereafter separating a substantial portion of the inorganic sulfate together with the added substance from the synthetic organic detergent-alcohol mixture.

2,863,888

PROCESS FOR THE PRODUCTION OF FATTY ACID HYDROXY AMIDES

Jack Vair Scheurman, Caldwell, N. J., assignor to Colgate-Palmolive Company, Jersey City, N. J., a corporation of Delaware

Application September 28, 1954, Serial No. 458,784

10 Claims. (Cl. 260—404)

1. A continuous process for the preparation of fatty acid hydroxy amides of low ester-amide content which comprises mixing liquid fatty acid ester of an alcohol containing up to about 5 carbon atoms with liquid hydroxy-alkyl amine, reacting said ester and amine in the presence of from 0.05% to 1% by weight based on alkali metal a catalyst selected from the group consisting of alkali metals, alkali metal alkoxides, and alkali metal amides at temperatures within the range from about 70° C. to 175° C., and immediately cooling the reaction product to a temperature below about 55° C., said cooled product containing at least about 0.05% by weight free catalyst calculated as alkali metal.

2,863,895

with the higher molecular weight olefin in said olefinic

2,863,889

METHOD FOR RECOVERING FLUORINATED STABILIZER

Bernard Mitchel Marks, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

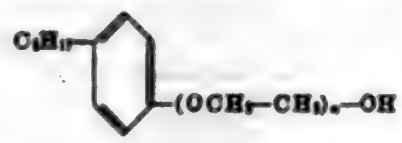
No Drawing. Application September 18, 1956
Serial No. 610,461

3 Claims. (Cl. 260—488)

1. A process for separating the ammonium salt of a fluoroalkanoic acid having the general formula

$$X—(CF_2)_n—COOH$$

wherein X is a member of the class consisting of hydrogen and fluorine and n is a number from 4 to 12, from a p-octyl phenoxypolyether having the general formula:



where n varies from 8 to 14, which comprises heating an aqueous solution of said components, at a pH of greater than 9, to 85° to 90° C., and thereafter removing at said temperature as separate liquids a solution of said salt of a fluoroalkanoic acid and said phenoxypolyether.

2,863,890

REFINING GLYCERIDE OILS WITH SULPHONATED PHENOL-ALDEHYDE RESIN

Samuel S. Gitlin, Plainfield, N. J., assignor to Falk & Company, Carnegie, Pa., a corporation of Pennsylvania

No Drawing. Continuation of abandoned application Serial No. 274,497, March 1, 1952. This application June 28, 1956, Serial No. 594,378

3 Claims. (Cl. 260—424)

2. The method of treating glyceride oils for the removal of free fatty acids and other organic impurities from such an oil by bringing the said glyceride oil into contact with a solid particulate synthetic organic ion exchange resin which is a sulphonated phenol-aldehyde resin under approximately anhydrous conditions and at approximately room temperature, in substantial entirety to remove organic "break" impurities and in large measure to remove free fatty acids from the oil subjected to treatment.

2,863,891

METAL ORGANO-SILYL ESTERS

Felix E. Granchelli, Cambridge, and George B. Walker, Jr., South Acton, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

No Drawing. Application March 18, 1955
Serial No. 495,332

8 Claims. (Cl. 260—429)

1. A process for making tris(triphenylsilyl) vanadate which comprises refluxing tertiary-butyl vanadate with triphenylchlorosilane in a waterfree, aromatic hydrocarbon liquid, filtering out unreacted components and removing said liquid from the tris(triphenylsilyl) vanadate thus formed, said liquid being at least a partial solvent for at least one of the reactants and unreactive therewith, said refluxing being carried out at a temperature between about 30° and 130° C. and below that temperature at which decomposition of said reactants takes place, and for a time sufficient to effect formation of said tris(triphenylsilyl) vanadate.

2,863,892

SEPARATION OF PLUTONIUM FROM LANTHANUM BY CHELATION-EXTRACTION

Ralph A. James and Stanley G. Thompson, Richmond, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application May 5, 1947
Serial No. 746,160

11 Claims. (Cl. 260—429.1)

1. A process for the separation of plutonium from a mixture of plutonium and lanthanum in which the lanthanum-to-plutonium molal ratio is at least 5, which comprises adding a compound from the group consisting of N-nitrosoarylhydroxylamines and ammonium salts of N-nitrosoarylhydroxylamines, to an aqueous solution having a pH between about 3 and 0.2 and containing in said molal ratio a lanthanum mineral acid salt and a plutonium mineral acid salt, said plutonium salt containing plutonium in a valence state of at least +3 and separating the resultant plutonium chelate compound of N-nitrosoarylhydroxylamine.

2,863,893

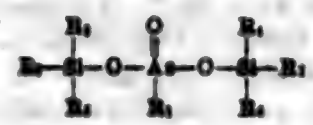
ARSONOSILOXANES AND THEIR PREPARATION

Roland M. Kary, Metuchen, N. J., and Kurt C. Frisch, Wyandotte, Mich., assignors to American Smelting and Refining Company, New York, N. Y., a corporation of New Jersey, and E. F. Houghton and Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application February 1, 1957
Serial No. 637,845

9 Claims. (Cl. 260—442)

1. An organosilylarsonate having the following structure:



in which Si represents silicon, As represents arsenic, O represents oxygen, R_1 is an organic substituent selected from the group consisting of alkyl, aryl, alkenyl, aralkyl, alkaryl, and heterocyclic aromatic radicals, and R_2 through R_7 are substituents selected from the group consisting of hydrogen, halogen, alkyl, aryl, alkenyl, aralkyl, alkaryl, cycloaliphatic, and heterocyclic pentacyclic radicals.

2,863,894

PRODUCTION OF ALUMINIUM ALKYLS

Peter Smith, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application January 10, 1955
Serial No. 481,039

Claims priority, application Great Britain
January 22, 1954

11 Claims. (Cl. 260—448)

1. A process for the production of an aluminium alkyl which comprises reacting aluminium with at least one primary alkyl halide selected from the group consisting of methyl chloride, methyl bromide, methyl iodide, ethyl chloride, ethyl bromide, ethyl iodide, propyl bromide, propyl iodide, n-butyl bromide, n-butyl iodide, and isobutyl iodide, in the presence of an inert aromatic-free solvent to form a solution of sesquihalide dissolved in said inert solvent and thereafter reacting said sesquihalide with an alkali metal, without isolating said sesquihalide from said solution, to form said aluminium alkyl.

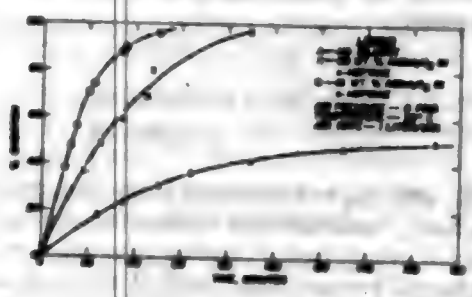
catalyst calculated as alkali metal.

2,863,895

METHOD OF OXIDIZING ALUMINUM ALKYLS

Isidor Kirshenbaum, Union, Stanley B. Mirviss, Roselle, and Theodore Lesiuskis, Rahway, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application June 12, 1956, Serial No. 590,863
10 Claims. (Cl. 260—448)



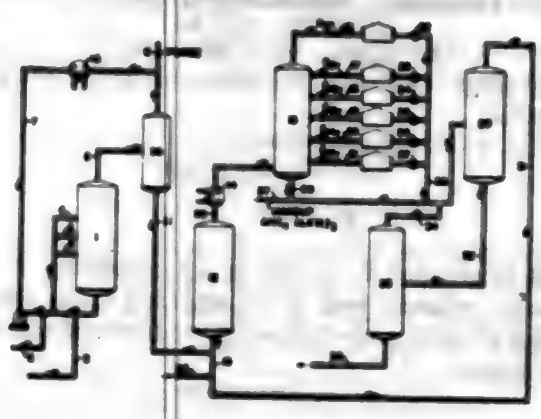
1. A process of oxidizing an aluminum trialkyl which comprises contacting a mixture comprising at least 80 wt. percent of an inert hydrocarbon solvent and an aluminum trialkyl wherein each alkyl radical contains from 2–20 carbon atoms with an oxygen containing gas for a period of time sufficient to substantially completely oxidize said aluminum alkyl to the corresponding aluminum alcoholate.

2,863,896

PREPARATION OF PURE ALUMINUM ALKYLS

John F. Johnson, Plainfield, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application July 11, 1956, Serial No. 597,181
5 Claims. (Cl. 260—448)



1. A method of preparing an extremely pure aluminum trialkyl having from 6 to 20 carbon atoms per alkyl group which comprises reacting in a first zone a low molecular weight olefin containing 2 to 4 carbon atoms per molecule with a low molecular weight aluminum alkyl selected from the group consisting of aluminum trialkyls, aluminum dialkyl hydrides and aluminum alkyl dihydrides at elevated temperatures and pressures to produce higher molecular weight aluminum alkyls wherein the alkyl radicals contain from 6 to 20 carbon atoms per radical, passing the product mixture from said first zone into a second zone and introducing a low molecular weight olefin having from 4 to 6 carbon atoms per molecule, displacing the alkyl radicals of the higher molecular weight aluminum aluminum alkyls with said low molecular weight olefin having from 4 to 6 carbon atoms per molecule, displacing the alkyl radicals of the higher molecular weight aluminum alkyls with said low molecular weight olefin having from 4 to 6 carbon atoms per molecule, fractionating the resulting higher molecular weight olefins into olefinic fractions having different carbon chain lengths and reacting at least one of said olefinic fractions with a low molecular weight aluminum trialkyl to displace the alkyl radicals of the low molecular weight aluminum trialkyl with the higher molecular weight olefin in said olefinic fraction and separating substantially olefin-free higher molecular weight aluminum trialkyl product.

2,863,897

METHOD OF PREPARING HYDROXYL END-BLOCKED ORGANOPOLYSILOXANE FLUIDS

Jack R. Wehrly, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application June 23, 1955
Serial No. 517,660
8 Claims. (Cl. 260—448.2)

1. A method which comprises heating in a closed system a mixture of (1) an organosiloxane of the unit formula

$$R_nSiO_{\frac{4-n}{2}}$$

in which R is a monovalent hydrocarbon radical and n has an average value from 1.9 to 2 inclusive, (2) water, (3) a nitrile of the formula R'CN where R' is an alkyl radical of less than 4 carbon atoms, in amount of at least 1% by weight based on the weight of the organosiloxane and (4) a catalyst selected from the group consisting of alkali metal salts of organosilanols, alkali metal hydroxides, quaternary ammonium hydroxides and quaternary ammonium salts of organosilanols, in amount such that there is from 1 alkali molecule per 60,000 silicon atoms to 1 alkali molecule per 100 silicon atoms, at a temperature below 175° C. whereby an hydroxylated organosiloxane fluid of desired viscosity is obtained.

2,863,898

PENTACHLOROBENZENETHIOLMETHYL SUBSTITUTED ORGANOSILOXANES

Robert L. Merker, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application July 5, 1957
Serial No. 669,939
7 Claims. (Cl. 260—448.2)

1. A pentachlorobenzenethiolmethyl substituted organosiloxane in which at least 0.1 molar percent of the siloxane units present are of the formula

$$(Cl_5C_6SCH_2)R_xSiO_{\frac{3-x}{2}}$$

where x is an integer of from 1 to 2 inclusive and R is a radical selected from the group consisting of alkyl and aryl radicals, any other siloxane units present in the organosiloxane being of the formula

$$R'_ySiO_{\frac{4-y}{2}}$$

where y is an integer of from 1 to 3 inclusive and R' is a radical selected from the group consisting of alkyl, aryl, haloalkyl, and haloaryl radicals, said organosiloxane having an average of from 1.9 to 3 inclusive total organic groups attached to silicon per silicon atom.

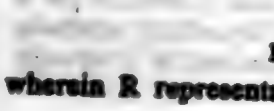
2,863,899

SUBSTITUTED THIOLCARBANILIC ESTERS

Guy H. Harris, Concord, Calif.

No Drawing. Application February 20, 1956
Serial No. 566,373
6 Claims. (Cl. 260—455)

1. A thiolcarbanilic ester having the formula



wherein R represents a haloaryl radical of the benzene

series, R′ represents a member of the group consisting of hydrogen and methyl, and R″ represents a member of the group consisting of the lower-alkyl and lower-alkenyl radicals.

2,863,900

SYNTHESIS OF ORGANIC PHOSPHORUS COMPOUNDS

Leland K. Beach, Mountainside, and Robert Drogin, Linden, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 8, 1953
Serial No. 347,622

10 Claims. (Cl. 260—461)

1. A catalyst which consists in a complex of dimethyl hydrogen phosphite with boron trifluoride.

2. A catalytic process for producing methane phosphonic acid derivatives which comprises heating dimethyl hydrogen phosphite in the presence of BF_3 catalyst at temperatures in the range of 160° to 250° C.

2,863,901

BASIC ESTERS OF DIALKYLTHIOLO PHOSPHONIC ACID

Ranajit Ghosh, Blackley, Manchester, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application November 9, 1953
Serial No. 391,121

Claims priority, application Great Britain November 19, 1952

11 Claims. (Cl. 260—461)

2. Basic esters of phosphorothiolic acid of the general formula

$$O{=}P(OR_1)(OR_2)\text{-}S\text{-}LX$$

in which R_1 and R_2 stand for lower alkyl radicals, L stands for a member of the group consisting of divalent saturated aliphatic hydrocarbon radicals of up to 6 carbon atoms and divalent saturated aliphatic hydrocarbon radicals of up to 6 carbon atoms in which the carbon atoms are interrupted by a linkage selected from the group consisting of an oxygen atom, a sulphur atom and a nitrogen atom carrying a lower alkyl substituent, and X stands for a member of the group consisting of secondary aliphatic amines, piperidine and morpholine attached to L through the amino nitrogen atom.

10. Process for the production of the esters claimed in claim 2 which comprises heating a metal salt of a thiophosphoric acid of the general formula

$$S{=}P(OR_1)(OR_2)\text{-}OMe$$

in which R_1, R_2 stand for lower alkyl radicals and Me stands for a metal with an aminoalkylhalide of the general formula

$$YLX$$

in which Y stands for a halogen atom, L stands for a member of the group consisting of saturated aliphatic hydrocarbon radicals containing up to 6 carbon atoms and saturated aliphatic hydrocarbon radicals containing up to 6 carbon atoms in which the carbon atoms are interrupted by a linkage selected from the group consisting of an oxygen atom, a sulphur atom and a nitrogen atom carrying a lower alkyl substituent and X stands for a member of the group consisting of secondary aliphatic amines, piperidine and morpholine attached to L through the amino nitrogen atom.

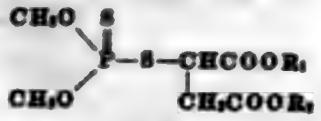
2,863,902

PREPARATION OF PHOSPHATE ESTERS

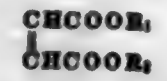
William Sweeny, Irvington, N. J., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application September 8, 1954
Serial No. 454,830
8 Claims. (Cl. 260—461)

1. A method of preparing a phosphate ester of the general formula:



in which R_1 and R_2 are selected from the group consisting of aliphatic hydrocarbon and aromatic hydrocarbon radicals which comprises: bringing into reactive combination phosphorus pentasulfide, methyl alcohol and an unsaturated compound of the general formula:



in which R_1 and R_2 are selected from the group consisting of aliphatic hydrocarbon and aromatic hydrocarbon radicals, maintaining the reaction mixture at a temperature of from about 20° to about 100° C. until reaction substantially ceases, and recovering said phosphate ester.

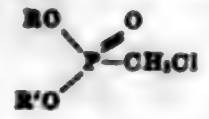
2,863,903

ALKYL ARYL MONOCHLOROMETHANE-PHOSPHONATE ESTERS

Arthur Dock Fen Toy, Park Forest, and Kenneth H. Rattenbury, Chicago Heights, Ill., assignors to Victor Chemical Works, a corporation of Illinois

No Drawing. Application October 7, 1954
Serial No. 461,847
5 Claims. (Cl. 260—461)

1. An alkyl aryl monochloromethanephosphonate of the formula,



where R is selected from the group consisting of phenyl and cresyl radicals, and R′ is selected from the group consisting of alkyl and chloroalkyl radicals of one to eight carbon atoms.

2,863,904

AMINE SALTS OF DI OXO-OCTYL ORTHOPHOSPHATES

Troy L. Cantrell, Drexel Hill, Pa., and John G. Peters, Audubon, N. J., assignors to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application May 9, 1955
Serial No. 507,128
3 Claims. (Cl. 260—461)

1. A substantially neutral salt of a primary n-alkyl amine containing 8 to 18 carbon atoms per molecule and di oxo-octyl acid orthophosphate.

2,863,905

RECOVERY AND PURIFICATION OF TRIALKYL PHOSPHITES

Theodor Reetz, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application June 20, 1956
Serial No. 592,486
5 Claims. (Cl. 260—461)

1. In a process of preparing trialkyl phosphites normally susceptible to hydrolysis by reacting a low molecular weight alcohol with a phosphorus halide in substantially stoichiometric amounts in the presence of an inert

2,863,911

heated under the reaction conditions, to a temperature

organic solvent while maintaining the reaction system substantially neutral by the addition thereto of anhydrous ammonia, the step which comprises subjecting the crude reaction mass so obtained to the washing action of an aqueous solution of ammonium carbamate.

2,863,906

α,β-DICHLORO-γ,γ,γ-TRIFLUOROCROTONIC ACID AND DERIVATIVES THEREOF

Charles F. Baranauckas and William E. Ashton, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application June 17, 1955
Serial No. 516,304

6 Claims. (Cl. 260—465.7)

1. Compounds selected from the group consisting of: α,β-dichloro-γ,γ,γ-trifluorocrotonic acid; the acid anhydride thereof; the acid halide thereof; the alkali and alkaline earth metal salts thereof; the nitrile thereof; the $N(R)_2$ amides thereof wherein R is selected from the group consisting of hydrogen, lower alkyl, phenyl, phenyl-lower alkyl and ethyleneamino N-α,β-dichloro-γ,γ,γ-trifluorocrotonyl; and esters of said acid and mono and dihydric alcohols wherein the alcohol portion of said esters contains from 1 to 8 carbon atoms and wherein the elements of the alcohol portion of said esters are selected from the groups consisting of fluorine, carbon, hydrogen and oxygen; and carbon, hydrogen and oxygen.

2,863,907

ALKYLARYLOXY ALKANOIC ACID ESTERS AND THEIR HYDROARYL ANALOGS

Louis Schmerling, Riverside, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application September 4, 1953
Serial No. 378,660

6 Claims. (Cl. 260—473)

1. A nuclearly mono-alkyl-substituted aryloxyalkanoic acid ester of a poly-(oxyethylene) glycol, in which the alkyl group contains from 4 to about 18 carbon atoms, the aryl radical is selected from the group consisting of phenyl and naphthyl, and the number of oxyethylene units per molecule is from about 10 to about 50.

6. An ester having the empirical formula:

$$R—Ar—O—(CH_2)_xCOO(ZO)_mH$$

wherein Ar is an aryl hydrocarbon radical selected from the group consisting of phenyl and naphthyl, R is an alkyl group containing at least 4 carbon atoms, *x* is a whole number having a value of from 1 to 3, Z is an alkylene group containing from 2 to 5 carbon atoms and *m* is a number having a value of from 2 to about 150.

2,863,908

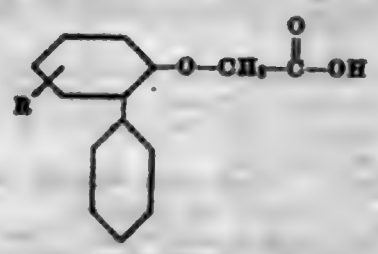
WATER-SOLUBLE ESTERS OF ALKYL ORTHO-XENOXY ACETIC ACID AND POLYOXYALKYL-OLAMINES

Alfred F. Steinhauer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application February 19, 1957
Serial No. 641,015

9 Claims. (Cl. 260—473)

1. A composition of matter having surface active properties, comprising a water-soluble ester corresponding to the reaction of from one to three gram molecular proportions of an alkyl ortho-xenoxy acetic acid having the general formula:



wherein R represents an alkyl radical containing from 9 to 15 carbon atoms, with one gram molecular equivalent proportion of a polyoxyalkylolamine having the general formula:

$$N[(RO)_x—H]_3$$

wherein RO represents an oxyalkylene radical selected from the group consisting of the oxyethylene radical and the oxy-1,2-propylene radical and *n* is an integer from 8 to 36, and in which polyoxyalkylolamine at least one-third of the RO radicals are oxyethylene radicals.

2,863,909

PROCESS OF EXTRACTING 1,4-DICAFFEYL-QUINIC ACID

Luigi Panizzi, Maria Luisa Scarpati, and Giovanna Oriente, Rome, Italy, assignors to Società Farmaceutici Italia, a corporation of Italy

No Drawing. Application September 4, 1957
Serial No. 681,895

Claims priority, application Italy May 28, 1954

9 Claims. (Cl. 260—473)

1. The process for obtaining 1,4-dicaffeylquinic acid from plants taken from the group consisting of *Cynara cardunculus, Cynara scolymus, Onopordon illyricum, Scolymus hispanicus, Lupsia galactites, Foeniculum vulgare* and *Foeniculum piperitum*, which comprises treating a decoction liquor obtained from one of said plants containing said 1,4-dicaffeylquinic acid with an excess of a salt taken from the group consisting of aqueously soluble barium and lead salts, and separating said 1,4-dicaffeylquinic acid from the resulting voluminous precipitate by adding an acid taken from the group of acids consisting of sulfuric, nitric and acetic acids.

2,863,910

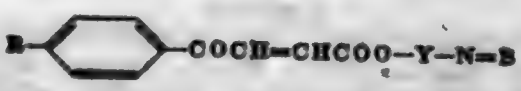
BASIC ESTERS OF SUBSTITUTED β-BENZOYL-ACRYLIC ACIDS

Chester J. Cavallito, Decatur, Ill., and Frederick K. Kirchner, Albany, N. Y., assignors to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application March 23, 1956
Serial No. 573,321

8 Claims. (Cl. 260—477)

1. A compound selected from the group consisting of alkamine esters of β-benzoylacrylic acids having the formula



wherein N=B is a member of the group consisting of lower dialkylamino, 1-piperidyl, (lower alkylated)-1-piperidyl, 1-pyrrolidyl, (lower alkylated)-1-pyrrolidyl and 4-morpholinyl radicals; R is a member of the group consisting of lower alkoxy and alkyl groups wherein the alkyl group contains from 6 to 12 carbon atoms; Y is a lower alkylene group having from 2 to 4 carbon atoms; and the acid addition and quaternary ammonium salts thereof.

4. 2-diethylaminoethyl β-(4-n-hexylbenzoyl) acrylate hydrochloride.

acetic acid and dichloroacetic acid which comprises: introducing hydrogen gas into the liquid mixture main-

2,863,921

1-DIMETHYLAMINO-2-PHENYL-3-

2,863,911

PRODUCTION OF ORGANIC OXYGENATED COMPOUNDS FROM UNSATURATED HYDROCARBONS

Karl Büchner, Oberhausen-Sterkrade, and Otto Roelen, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Application January 28, 1955
Serial No. 484,848
Claims priority, application Germany January 30, 1954
2 Claims. (Cl. 260—497)

1. Process for the catalytic addition of carbon monoxide and an olefinic hydrocarbon for the production of organic oxygenated compounds which comprises contacting a hydrocarbon selected from the group consisting of ethylene, propylene and butylene with carbon monoxide in the presence of a diluent selected from the group consisting of benzene and toluene and an aqueous catalyst solution of cobalt sulfate, free of metallic halogen compounds and containing an additional sulfate selected from the group consisting of iron sulfate, magnesium sulfate and zinc sulfate, at a temperature between 190° and 200° C. and at a pressure between 200 and 250 kilograms per square centimeter and recovering the oxygenated compounds formed.

2,863,912

PROCESS OF SULFONATING ALKYL ARYL HYDROCARBONS

John H. Smith, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Application October 10, 1956, Serial No. 615,082
7 Claims. (Cl. 260—505)

1. An improved process for sulfonating an alkyl aryl hydrocarbon formed by alkylating an aromatic hydrocarbon of the benzene series containing from 6 to 9 carbon atoms with sulfur trioxide which comprises dissolving said alkyl aryl hydrocarbon in sulfur dioxide, adding the resulting solution of alkyl aryl hydrocarbon and sulfur dioxide to a first compartment of a multiple compartment sulfonator, adding sulfur trioxide diluted with sulfur dioxide to said alkyl aryl hydrocarbon-sulfur dioxide solution contained in said first compartment under sulfonating conditions and in an amount that is insufficient to sulfonate completely said alkyl aryl hydrocarbon, allowing the resulting partially sulfonated alkyl aryl hydrocarbon to flow from said first compartment through the succeeding compartments of said multiple compartment sulfonator wherein the partially sulfonated alkyl aryl hydrocarbon is contacted with an additional quantity of sulfur trioxide diluted with sulfur dioxide in each of the succeeding compartments whereby the unsulfonated alkyl aryl hydrocarbon content in said partially sulfonated alkyl aryl hydrocarbon is progressively decreased, and the unsulfonated alkyl aryl hydrocarbon contained therein is completely sulfonated in the last compartment of said multiple compartment sulfonator.

2,863,913

PROCESS FOR PRODUCING TEREPHTHALIC ACID

Bernhard Raecke, Bruno Binser, Werner Stein, and Hubert Schirp, Duesseldorf, Germany, assignors to Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application January 7, 1955
Serial No. 480,620
Claims priority, application Germany January 13, 1954
22 Claims. (Cl. 260—515)

1. A process for the production of terephthalic acid which comprises heating at least one material selected from the group consisting of alkali metal salts of benzene dicarboxylic acids wherein the carboxyl groups stand in other than para-position relative to each other and mixtures of compounds yielding such alkali metal salts when heated under the reaction conditions, to a temperature between 340° and 550° C. in an atmosphere substantially free from oxygen, and in the presence of a substance selected from the group consisting of cadmium, zinc, cadmium compounds and zinc compounds, transforming the alkali metal salt of terephthalic acid formed thereby into terephthalic acid, and separating the terephthalic acid from the reaction mass.

2,863,914

PROCESS FOR CONVERTING PHTHALIC ACID INTO TEREPHTHALIC ACID

Bernhard Raecke, Duesseldorf, Germany, assignor to Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application January 24, 1957
Serial No. 635,945
Claims priority, application Germany November 21, 1953
14 Claims. (Cl. 260—515)

1. In a process of converting compounds of the group consisting of phthalic acid and isophthalic acid into terephthalic acid, the step of heating a dialkali metal salt of a compound of the group consisting of phthalic acid and isophthalic acid to a temperature between 340° C. and 500° C., in a substantially oxygen-free inert atmosphere, thereby causing rearrangement of a portion of the phthalic acid radicals of said salts into terephthalic acid radicals.

2,863,915

PREPARATION OF DIALKOXYPHENYL THIOPYRUVIC ACIDS

Oliver H. Emerson, Orinda, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application January 22, 1958
Serial No. 710,587
3 Claims. (Cl. 260—516)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A process for preparing a 2,4-dialkoxyphenyl thiopyruvic acid which comprises reacting a 2,4-dialkoxybenzal rhodanine with aqueous alkali in the presence of an alkali metal sulphide to produce the 2,4-dialkoxyphenyl thiopyruvic acid.

2,863,916

PROCESS FOR MAKING PERHALOACYLHALIDES

Jared W. Clark, Charleston, and Charles E. Rectenwald, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application July 15, 1953
Serial No. 368,224
2 Claims. (Cl. 260—539)

1. Process for making perhaloacylfluorides which comprises heating polymeric chlorotrifluoroethylene to between 250° C. and 375° C. to form a body of molten polymer, passing a stream of gases containing oxygen through said molten polymer and continuously removing from the zone of oxidation a gaseous mixture substantially free of monomeric chlorotrifluoroethylene and containing unreacted oxygen and oxidation products of said polymer, and recovering perhaloacylfluorides from said oxidation products.

2,863,917

METHOD FOR REDUCING DICHLOROACETIC ACID IN THE PRESENCE OF MONOCHLOROACETIC ACID

John T. Rucker, Lewiston, and James S. Sconce, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application March 31, 1954
Serial No. 420,188
9 Claims. (Cl. 260—539)

1. The process for selectively reducing the dichloroacetic acid content of a mixture comprising monochloro-

gases and returning the condensate to the reaction vessel, and continuing said chlorination until a major portion

2,863,928

HYDROGENOLYSIS OF ALIPHATIC ACIDS AND

acetic acid and dichloroacetic acid which comprises: introducing hydrogen gas into the liquid mixture maintained at a temperature between about 60 and about 170 degrees centigrade in the absence of a solvent while in the presence of a catalytic amount of a group VIII noble metal hydrogenation catalyst having an atomic number greater than 43, and recovering the resulting product therefrom.

2,863,918

STABILIZATION OF ACRYLAMIDE

Norbert M. Bikales, Stamford, and Robert J. Munch, Greenwich, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application May 21, 1956
Serial No. 585,937
6 Claims. (Cl. 260—561)

1. A method of inhibiting the polymerization of a solution of an amide selected from the group consisting of acrylamide and lower α-alkyl acrylamide which comprises incorporating therein t-butyl hydroxyanisole as a polymerization inhibitor.

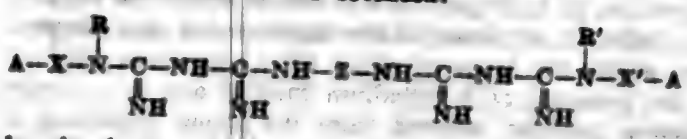
2,863,919

BIGUANIDES

Stanley Birtwell and Francis Leslie Rose, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application February 3, 1956
Serial No. 563,209
Claims priority, application Great Britain February 10, 1955
9 Claims. (Cl. 260—565)

1. Biabiguanides of the formula:



wherein the A substituents are selected from the group consisting of phenyl, alkyl phenyl, alkoxy phenyl, nitrophenyl and halophenyl; X and X′ are alkylene radicals containing up to 3 carbon atoms; R and R′ are selected from the group consisting of hydrogen, methyl and benzyl; and Z is selected from the group consisting of $(CH_2)_n$, $(CH_2)_n$ interrupted with oxygen and $(CH_2)_n$ interrupted with phenylene nucleus, wherein *n* is an integer from 2 to 12, inclusive, and the salts thereof.

2,863,920

PROCESS OF PREPARING HYDROBENZAMIDE

Eldred V. Welch, North Plainfield, N. J., assignor to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application July 26, 1956
Serial No. 600,155
4 Claims. (Cl. 260—566)

1. A process of preparing hydrobenzamide which comprises mixing, by vigorous agitation, liquid benzaldehyde with an amount of anhydrous gaseous ammonia at least sufficient to react with all of the benzaldehyde present, whereby an exothermic reaction takes place, cooling the mixture to a temperature between about 0° and 100° C. and maintaining said temperature during the agitation and until the reaction is complete, the agitation of the mixture being sufficiently vigorous to break up the solid hydrobenzamide formed by the reaction into small particles.

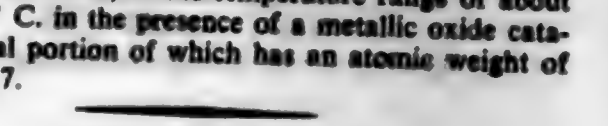
2,863,921

1-DIMETHYLAMINO-2-PHENYL-3-METHYLPENTANE

Werner Stühmer, Eldagsen, near Hannover, and Siegfried Funke, Hannover, Germany, assignors to Kali-Chemie Aktiengesellschaft, Hannover, Germany

No Drawing. Application March 19, 1956
Serial No. 572,217
Claims priority, application Germany March 21, 1955
2 Claims. (Cl. 260—570.8)

1. As new compounds, 1-dimethylamino-2-phenyl-3-methyl pentane of the formula



and the pharmacologically acceptable acid addition salts thereof.

2,863,922

PREPARATION OF KETENE

August Sturzenegger, Allwood, Clifton, N. J., assignor to Hoffmann-La Roche Inc., Nutley, N. J., a corporation of New Jersey

Application October 2, 1956, Serial No. 613,572
3 Claims. (Cl. 260—585.5)

1. In a process for making ketene by thermal decomposition of acetone, the improvement which comprises decomposing the acetone in a reaction vessel the inner surface of which is constructed of a steel having essentially the composition: from about 14% to about 18% chromium, a maximum of about 0.12% carbon, balance iron.

2,863,923

PROCESS FOR THE PREPARATION OF 2,5-DIMETHYLCYCLOPENTANONE

Newman M. Bortnick, Oreland, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application October 20, 1955
Serial No. 541,852
6 Claims. (Cl. 260—586)

1. A continuous catalytic method for the vapor phase preparation of 2,5-dimethylcyclopentanone which comprises heating in a reaction zone a dialkyl 2,5-dimethyladipate, in which each of the alkyl groups has from one to four carbon atoms, in the temperature range of about 350° to 600° C. in the presence of a metallic oxide catalyst, the metal portion of which has an atomic weight of about 7 to 137.

2,863,924

METHOD OF PRODUCING POLYCHLORINATED ACETALDEHYDES

John A. Pianfetti, South Charleston, W. Va., and David J. Porter, Painesville, Ohio, assignors to Food Machinery and Chemical Corporation, New York, N. Y., a corporation of Delaware

Application October 16, 1952, Serial No. 315,132
6 Claims. (Cl. 260—601)

1. The method of producing substantially anhydrous chloral from acetaldehyde and its reversible polymers which comprises introducing anhydrous acetaldehyde and its reversible polymers into a closed reaction vessel, introducing chlorine into said aldehyde at a rate in excess of the rate of consumption of chlorine in reaction with said aldehyde, periodically determining the free chlorine in the reaction mixture and regulating the relative amount of chlorine introduced into the reaction mixture to maintain a free chlorine concentration in the reaction mixture between .07 and .50 weight percent, completing the chlorination in the presence of a catalyst, passing gaseous hydrogen chloride and unused chlorine from said reaction vessel, condensing acetaldehyde and partially chlorinated acetaldehyde from said

about 150° C. to about 170° C. and separating [illegible]

gases and returning the condensate to the reaction vessel, and continuing said chlorination until a major portion of the acetaldehyde has been converted to chloral.

2,863,925

PRODUCTION OF CYCLOHEXENYLMETHYL AND ALKYL SUBSTITUTED CYCLOHEXENYLMETHYL 2-ALKENYL ETHERS

Paul S. Starcher, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 31, 1956
Serial No. 588,244
7 Claims. (Cl. 260—611)

1. A method for producing cyclohexenylmethyl and alkyl substituted cyclohexenylmethyl 2-alkenyl ethers which comprises forming a mixture of a member selected from the group consisting of 3-cyclohexenemethanol, 3-methyl-3-cyclohexenemethanol, 4-methyl-3-cyclohexenemethanol, 6-methyl-3-cyclohexenemethanol, 2-methyl-3-cyclohexenemethanol, 5-methyl-3-cyclohexenemethanol, 1-methyl-3-cyclohexenemethanol, 3,6-dimethyl-3-cyclohexenemethanol, 3,4-dimethylcyclohexenemethanol, 3-methyl-6-ethyl-3-cyclohexenemethanol, 4-methyl-6-ethyl-3-cyclohexenemethanol, and 1-ethyl-6-propyl-3-cyclohexenemethanol together with an alcohol containing a carbon-to-carbon double bond between the carbon atoms adjacent to the hydroxy containing carbon and a catalyst selected from the group consisting of boron trifluoride and mercuric oxide, mercuric methoxyfluoborate, monoaquomonohydrofluoromercury (I) fluoborate, mercuric fluoborate, mercuric dihydroxyfluoborate, the addition compound of mercuric dihydroxyfluoborate and boron trifluoride, and the addition compound of boro trifluoride etherate, mercuric oxide and trichloroacetic acid.

2,863,926

MONO-ADDUCTS OF ETHYLENE OXIDE AND ACETYLENIC GLYCOLS

Gilbert B. Carpenter, Mountain Lakes, Morton W. Leeds, Union, and Sidney Gluter, Bound Brook, N. J., assignors to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York

No Drawing. Application February 21, 1955
Serial No. 489,796
4 Claims. (Cl. 260—615)

1. 2,5-dimethyl-2,5-di(2'-hydroxyethoxy)-3-hexyne.

2,863,927

RECOVERY OF PURIFIED DI-TERTIARY-BUTYL-PARA-CRESOL

Louis L. Parlane, Oil City, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Application June 13, 1955
Serial No. 515,223
10 Claims. (Cl. 260—624)

1. Process for separating and recovering di-tertiary-butyl-para-cresol from crude mixture containing impurities including mono-t-butyl-p-cresol, mono- and di-t-butyl-m-cresol, sulfonic acids and sulfones, which comprises heating to a temperature of at least about 80° C. the crude di-tertiary-butyl-para-cresol-containing mixture with a polyhydric material selected from the group consisting of liquid glycols, glycerine and mixtures thereof to form a solution, cooling to about 20° C. to crystallize di-tertiary-butyl-para-cresol, and separating said crystallized di-tertiary-butyl-para-cresol from said polyhydric material and said crude mixture, the proportions of said polyhydric material to said di-tertiary-butyl-para-cresol-containing mixture being from about 1:1 to about 4:1 on a weight basis.

2,863,928

HYDROGENOLYSIS OF ALIPHATIC ACIDS AND ESTERS OVER Cu-Zn-Al CATALYSTS

Heinz Indest, Erlenbach (Main), Germany, assignor to Vereinigte Glanzstoff-Fabriken A. G., Wuppertal-Elberfeld, Germany

No Drawing. Application July 2, 1956
Serial No. 595,979
Claims priority, application Germany July 8, 1955
11 Claims. (Cl. 260—635)

1. In a method for producing aliphatic monohydric and dihydric alcohols by hydrogenolysis, at a pressure between 100 and 500 atmospheres gauge and a temperature between 180° C. and 350° C., of a member from the group consisting of monocarboxylic, aliphatic acids having at least two carbons, dicarboxylic, aliphatic acids having 2–12 carbons, and esters of the aforesaid acids, the improvement which comprises: effecting hydrogenolysis in the presence of small, alkali-corroded particles of an alloy consisting essentially of by weight 5–40% zinc, 30–60% copper and 30–60% aluminum.

2,863,929

PREPARATION OF SATURATED CARBINOLS BY THE HYDROGENATION AND HYDROGENOLYSIS OF ACETYLENIC GLYCOLS

Arthur I. Lowell, Plainfield, N. J., assignor to Air Reduction, Incorporated, New York, N. Y., a corporation of New York

No Drawing. Application January 12, 1955
Serial No. 481,481
17 Claims. (Cl. 260—642)

1. A process for the selective hydrogenation and hydrogenolysis of an aliphatic symmetrical ditertiary monoacetylenic glycol wherein the reaction is primarily directed to the formation of the corresponding saturated mono-hydric carbinol which comprises subjecting an aliphatic symmetrical ditertiary mono-acetylenic glycol to the action of hydrogen, at a pressure within the range of from about 1 to about 10 atmospheres and at a temperature within the range of about 17° C. to about 160° C., in the presence of a palladium catalyst and in a solvent reaction medium selected from the group consisting of isopropyl alcohol, n-butyl alcohol, sec.-butyl alcohol, tert.-butyl alcohol, and mixtures thereof.

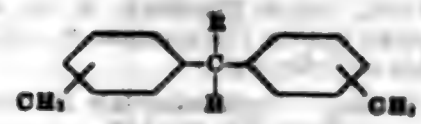
2,863,930

ALKYLATION OF DITOLYLALKANES

William Frank Marshall and Harry Addison Smith, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

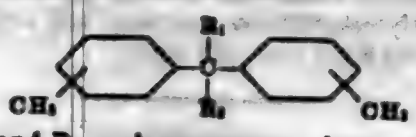
No Drawing. Application February 28, 1956
Serial No. 568,182
13 Claims. (Cl. 260—668)

1. In a process for reacting a ditolylalkane characterized by the general formula:



wherein R is a radical selected from the group consisting of hydrogen and lower alkyl, with an olefinic hydrocarbon of from 2 to 6 carbon atoms in the presence of an alkali metal catalyst, the improvement therein which comprises: heating said ditolylalkane in the presence of a catalyst consisting of an alkali metal at a temperature between 200° C. and 250° C. for at least ten minutes but not more than about two hours, cooling the resultant mixture comprising the heated ditolylalkane and alkali metal catalyst to below about 170° C., reacting the latter cooled mixture with a non-conjugated olefinic hydrocarbon of from 2 to 6 carbon atoms under superatmospheric pressure and at a temperature ranging from

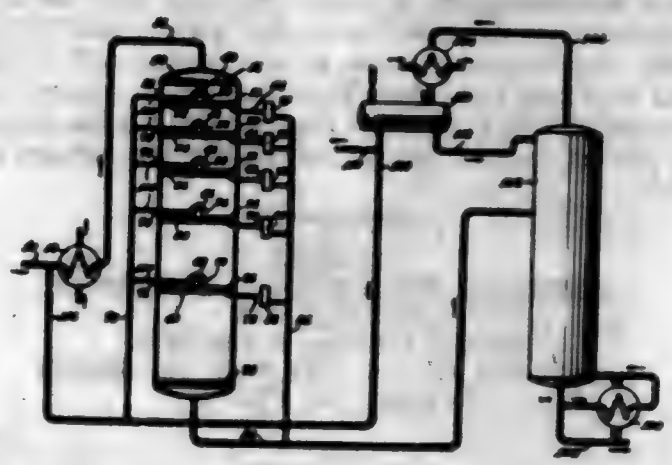
about 150° C. to about 170° C., and recovering an alkylated product of the general formula:



wherein R_1 and R_2 each represents a lower alkyl radical.

2,863,931
POLYMERIZATION OF OLEFINS
Claude R. Summers, Jr., Havertown, Pa., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application February 28, 1955, Serial No. 491,866
6 Claims. (Cl. 260—683.15)

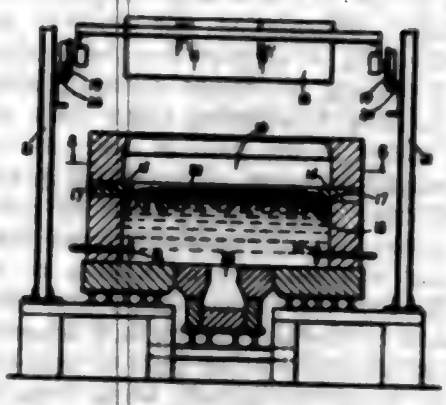
1. A process for the polymerization of C_3 and C_4 olefins to form a liquid polymerized product comprising passing the olefins in a gaseous mixture of hydrocarbons having an olefin content of about 30 to 70 percent downwardly through a series of beds of a solid polymerization catalyst in a single vertical cylindrical reactor, collecting polymerized liquid product at the bottom of each of the catalyst beds, withdrawing the collected polymerized liquid product from the reactor at each of the catalyst beds, passing unpolymerized gases through a restricted passage from one catalyst bed to the next lower catalyst



bed in the series, and introducing a liquid hydrocarbon quenching medium gaseous at the conditions existing in the reactor into the restricted passage to cool the unpolymerized gases.

ELECTRICAL

2,863,932
METHOD OF AND FURNACE FOR MELTING OR REFINING GLASS
Phillip Anthony Maxwell Gell, Cayton, near Skipton, and Douglas Graeme Hann, Beckbury, near Shifnal, England, assignors to Elemelt Limited, Bilston, England, a British company
Application November 6, 1956, Serial No. 620,619
8 Claims. (Cl. 13—6)

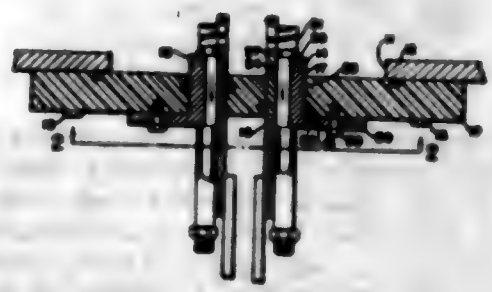


1. In a glass melting furnace comprising a furnace chamber having side and end and bottom walls for containing a body of glass melt, and spaced opposed electrodes for passing an electric current through the melt to heat it to the required temperature; the provision in combination of means for depositing glass batch materials in divided solid form onto the upper surface of the glass melt in a succession of zones spanning said surface so as to cover substantially the whole area of said surface with a crust of said materials, and, means for shielding physically and thermally a relatively narrow margin of said upper surface at the boundaries thereof from deposition thereon of said materials and from heat loss from said surface, whereby while said batch crust is maintained in being above a main centrally disposed portion of said upper surface to conserve heat in the glass melt surfaces, layers of glass in said margin are maintained at least partly molten.

2,863,933
ELECTRIC CURRENT PRODUCING CELL AND METHOD OF PRODUCING CURRENT USING THE SAME
Leonard John Minnick, Cheltenham, and Cyril Prengrave, Gwynedd Valley, Pa., assignors to G. and W. H. Corson, Inc., Plymouth Meeting, Pa., a corporation of Delaware
No Drawing. Application October 27, 1953
Serial No. 387,136
20 Claims. (Cl. 136—6)

1. An electric current-producing cell comprising an anode comprising an electropositive metal and a cathode; an anolyte comprising a salt dissolved in an anhydrous liquid comprising anhydrous liquid ammonia the cation of which is a metal corresponding to the electropositive metal of the anode, and a catholyte comprising a salt dissolved in an anhydrous liquid comprising anhydrous liquid ammonia the cation of which is selected from the group consisting of ammonium and metals which develop an electrolytic potential in liquid ammonia at least 0.75 volt less than that developed by the metal of said anode in liquid ammonia.

2,863,934
DEVICE FOR CONDUCTING HIGH-FREQUENCY CURRENT INTO A VACUUM TANK
Chester A. Tadbury, Cleveland, Ohio, assignor to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Application May 9, 1956, Serial No. 583,857
7 Claims. (Cl. 174—18)



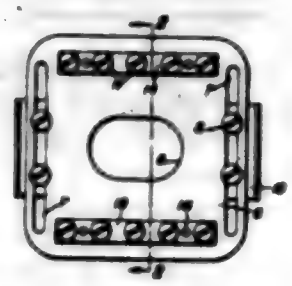
1. A device for conducting high-frequency current into a vacuum tank comprising, a pair of high-frequency bus bars having large surface areas facing each other, a plate of insulation material supporting said bus bars, and a vacuum seal between each bus bar and said plate, each

2,863,938
PRINTING TIMER
William E. Bowers, Mesa, Ariz., assignor to Bowers Research Laboratories, Inc., Mesa, Ariz., a corporation of Arizona

2,863,940
COUPLING CIRCUIT

of said bus bars having opposite flat side surfaces and semi-circular edge surfaces merging with the side surfaces, said plate having a pair of internal wall surfaces, each complementary with the side and edge surfaces, and encircling its respective bus bar, each of said vacuum seals consisting of a groove in said internal wall surface and encircling its respective bus bar, and a vacuum sealing ring in said groove and engaging the bus bar surface to prevent vacuum leakage between the bus bar and the plate.

2,863,935
TERMINAL BOARD FOR JUNCTION OR OUTLET BOX
Edward J. Barina, Racine, Wis.
Application May 15, 1956, Serial No. 584,910
1 Claim. (Cl. 174—59)

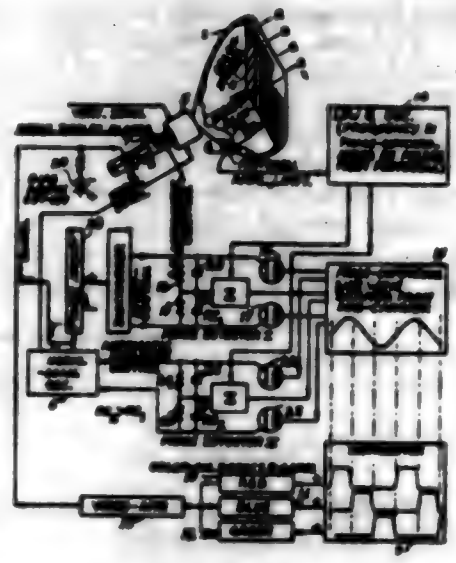


A terminal board comprising a flat base member of insulation material and polygonal shape for fitting in a junction box, a pair of elongated angle brackets attached to two opposite sides of the base member and having upstanding flanges extending above said base member, a pair of conductor strips secured on top of the base member at the two other sides of said base member, at a right angle to said brackets, said base member having a central opening therein to receive wires leading into said box, said flanges having notches therein above said base member extending inwardly of the flanges from the ends of the flanges for receiving therein conductors in said junction box, said brackets being slidably attached to said base member for adjustment along said two opposite sides of the base member.

2,863,936
TELETYPEWRITER EXCHANGE SYSTEM
George A. Locke, Glen Head, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 10, 1953, Serial No. 360,694
10 Claims. (Cl. 178—2)

8. In a communication system, a plurality of subscriber stations each having a line, a switching center having for each of said lines at least one connection facility adapted for manual establishment of a transmission connection with the line only upon origination of a call at the station served by the line, a plurality of intraoffice communication channels in a ratio of one channel to several of said lines and each channel having in said switching center at least one connection facility adapted for manual establishment of a transmission connection with the channel only for extending a call thereover, and signal responsive switching means at the terminal at said channels remote from their manual connection facilities for selectively establishing outgoing call connections between said channels and said lines.

2,863,937
COLOR TELEVISION IMAGE TUBE AND SYSTEM THEREFOR
Megner V. Kalfaian, Los Angeles, Calif.
Application September 14, 1953, Serial No. 379,783
7 Claims. (Cl. 178—5.4)

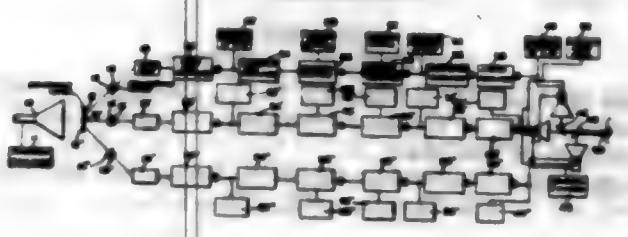


1. In a color television system where the frequency of the highest number of image elements to be conveyed per second is predetermined, a form of color image reproducing cathode ray tube which provides the system of selecting and luminescing elemental primary-color component areas of a multi-color luminescing screen in synchronism and in proportion corresponding to a source of repeating groups of pre-arranged sequence of primary-color component information, one group to each image element, comprising in combination the following parts: means for producing an image forming scanning ray; means for forming a scanning raster with said ray; a luminescing screen in the path of said ray, comprising in a pre-arranged sequence of repeating groups of adjacently positioned stripe-like sections of primary-color component areas that substantially cross the lines of the raster, and wherein each color area of a group is adapted to produce one of a primary-color illumination when impacted by the ray during said scanning; means for deriving an electrical pulse from at least one of last-said areas, or a portion thereof, when impacted by the ray, whereby producing output pulses at the periodic rate of above mentioned image elements; a source of repeating groups of primary-color component signals at aforementioned sequence; means for modulating the intensity of said ray by said signals; means for producing a wave at above named predetermined frequency; means for measuring and deriving first and second proportional quantities representative of the differences of frequency and phase between last named wave and said pulses, whereby said quantities representing forward or backward misalignments of component color illuminations with that of primary-color modulations said first quantity having larger time constant than the second quantity; means for adjusting the width-amplitude of said scanning raster by said first quantity until said misalignment approximately subsides, thereby effecting amplitude correction; and means for simultaneously adjusting the ray position parallel to the scanning lines by said second quantity until said misalignment is substantially nullified, thereby effecting correction of said geometric distortion.

tained at least partly molten.

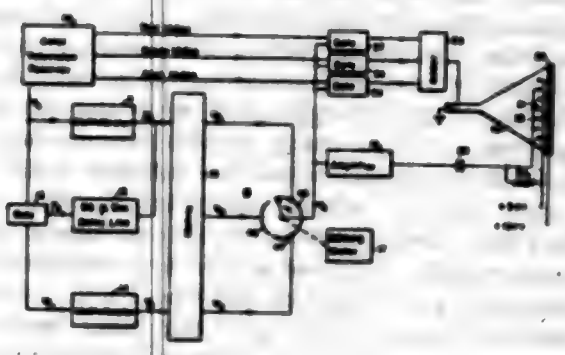
of insulation material supporting said bus bars, and a vacuum seal between each bus bar and said plate, each

2,863,938
PRINTING TIMER
William E. Evans, Menlo Park, and Wadsworth E. Pohl and Thomas P. Dixon, Los Angeles, and Edgar Warner Hopf, deceased, late of Palo Alto, Calif., by Maria Isabel Hopf, administratrix, Palo Alto, Calif., assignors to Technicolor Motion Picture Corporation, Hollywood, Calif., a corporation of Maine
Application June 16, 1954, Serial No. 437,258
21 Claims. (Cl. 178—5.4)



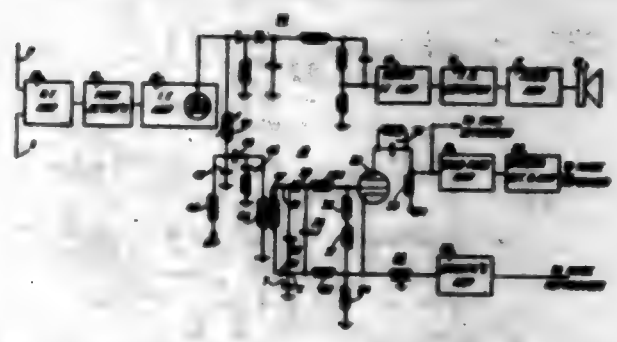
1. An image translating system comprising means to generate electrical signals representative of the light transmission of discrete areas of a photographic negative, electronic means responsive to said electrical signals to present the corresponding positive picture of said image, means to control the contrast of said positive picture, and means to control the brightness of said positive picture.

2,863,939
COLOR RECEIVER
Charles H. Jones, Churchill, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 14, 1955, Serial No. 487,888
15 Claims. (Cl. 178—5.4)



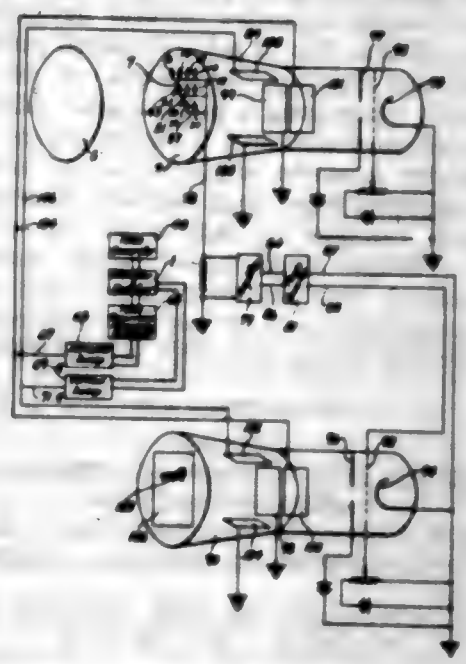
1. A color television receiver having horizontal and vertical sync pulse generators for providing pulses for sychronizing horizontal and vertical sweeps comprising: a color tube of the line sequential type having a control electrode, a cathode, a phosphor screen having primary color phosphor lines, and means for controlling the passage of the electron beam from said cathode to said phosphor lines; a plurality of gates connected to said control electrode; means for applying primary color signals to said gates; means including means initiated by sync pulses from said horizontal generator for generating a plurality of voltages in synchoronism with said generator, and means including switching means operable at the field rate of said receiver for applying said voltages to said gates and to said control means to thereby provide a line sequential display in which the number of phosphor lines of a particular primary color impinged by the electron beam during a predetermined field is equal to the number of phosphor lines of the other primary colors impinged by the electron beam during said predetermined field, and phosphor lines of a different particular primary color are impinged by the electron beam in successive fields.

2,863,940
COUPLING CIRCUIT
Martin G. Kroger, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application February 6, 1956, Serial No. 563,590
7 Claims. (Cl. 178—5.4)



1. In a superheterodyne television receiver which includes an intermediate frequency amplifier having an output circuit, the combination including a second detector circuit having first and second input terminals both of which are floating with respect to ground, a network for coupling the intermediate frequency amplifier to said second detector circuit including, first inductive impedance means included in the output circuit of the intermediate frequency amplifier, second inductive impedance means having one side connected to a point of reference potential, means intercoupling said first inductive impedance means and the other side of said second inductive impedance means, said intercoupling means having a coupling portion extending to said point of reference potential, and third inductive impedance means inductively coupled to said second inductive impedance means and having a first and a second side respectively coupled to the first and second input terminals of said second detector circuit.

2,863,941
RADIO PICTURE SYSTEM AND APPARATUS
Robert Harvey Rines, Brookline, Mass.
Application March 18, 1944, Serial No. 527,375
47 Claims. (Cl. 178—6.8)

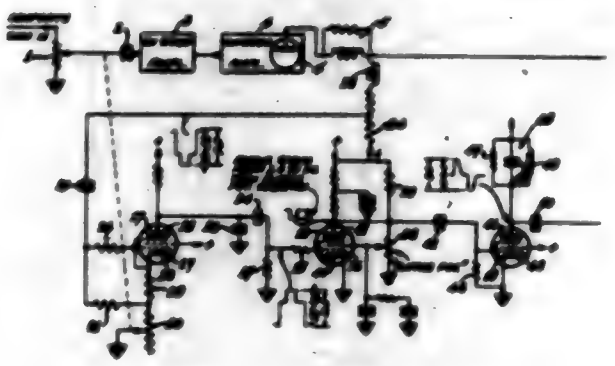


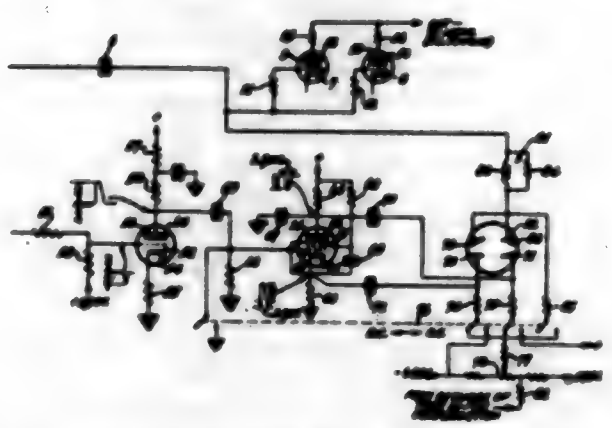
1. An electric system having in combination, an oscilloscope-like member having a mosaic of absorbing-and-rectifying radio-receiving elements and means for producing an electron stream for impinging on the mosaic, means for focusing radio energy on the mosaic, means for causing the electron stream to scan the mosaic, and means controlled by the electron stream, as it scans the mosaic, for indicating variations in resistance or potential of the elements in response to the action of the focused radio waves.

data storing means individual to said extending means, call means governed by said control relay for discon-

with the channel only for extending a call thereover, and thereby effecting correction of said geometric distortion.

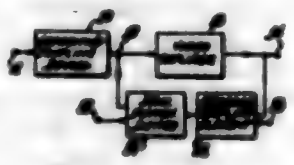
2,863,942
PULSE GENERATOR
Robert S. Jose, Moorestown, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application July 28, 1955, Serial No. 524,994
6 Claims. (Cl. 178—7.1)





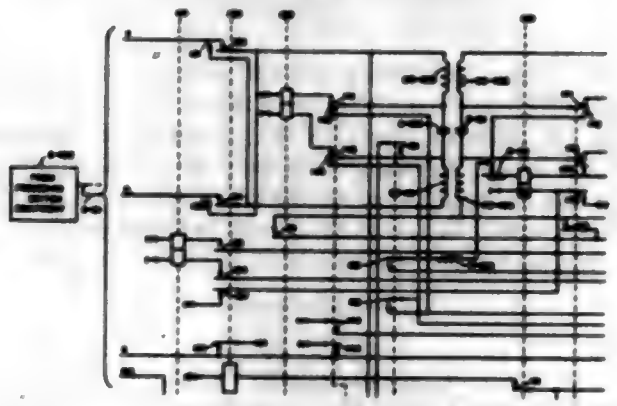
1. In a television transmitter, a clamp system comprising a multi-electrode electron discharge device having an anode electrode; a critically-damped resonant circuit connected to said anode electrode, means for applying a television synchronizing pulse to said device to vary the anode current flow therein, the transient variations of anode current in response to the leading and trailing edges of said pulse causing two corresponding pulses of opposite polarities to be developed across said resonant circuit, means receptive of said developed pulses for clipping off that one of said developed pulses having a predetermined polarity, the output of said clipping means thereby comprising a pulse whose polarity is opposite to said predetermined polarity, means including a phase splitter receptive of the output of said clipping means for deriving from said opposite polarity pulse a pair of pulses similar to each other but of opposite polarities; a double diode keyed clamp circuit operatively associated with said transmitter, and means for utilizing concurrently both of said last-mentioned pair of pulses as the two keying pulses for said clamp circuit.

2,863,943
FEEDBACK CLAMPING CIRCUIT ARRANGEMENTS
Arch Clinton Luther, Jr., Merchantville, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application November 30, 1954, Serial No. 472,021
12 Claims. (Cl. 178—7.3)



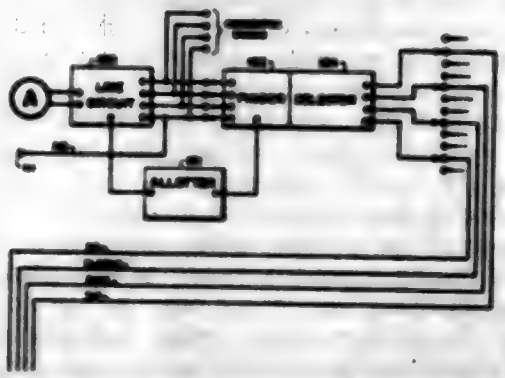
1. A feedback clamping circuit arrangement for an electric wave signal translating device having an input circuit, an output circuit, and a capacitive coupling device connected to said input circuit, including a feedback coupling element connected to said output circuit, means to apply reference potential to said feedback coupling element, an electronic switching device connected between said coupling element and said input circuit, and means to apply pulse energy to said switching device, thereby to clamp the junction between said input circuit and said capacitive device to a value proportional to said reference potential during application of said applied pulse energy.

2,863,944
TELEPHONE SYSTEM
Ernest H. Gebert, Rochester, N. Y., assignor, by mesne assignments, to General Dynamics Corporation, a corporation of Delaware
Application November 16, 1954, Serial No. 469,133
12 Claims. (Cl. 179—7.1)



1. A telephone system comprising, a local two way trunk circuit, local incoming and outgoing circuits associated with said local trunk circuit, a remote two way trunk circuit, remote incoming and outgoing circuits associated with said remote trunk circuit, a trunk line interconnecting said trunk circuits, means for connecting an associated outgoing circuit with one of said trunk circuits and an associated incoming circuit with the other of said trunk circuits depending upon the direction of the call, one of said trunk circuits having first means operative to break the connection between either one of said trunk circuits and its associated incoming circuit, and said one trunk circuit having second means operative in response to the operation of said first means to prevent a subsequent connection of the one trunk circuit with an associated circuit until after the other trunk circuit has been disconnected from its associated circuits.

2,863,945
TEST JACK TESTING OF TOLL TICKETING TRUNK CIRCUIT
Richard K. Boyd, Rochester, N. Y., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware
Application August 3, 1956, Serial No. 601,869
10 Claims. (Cl. 179—9)



3. In an automatic toll ticketing system, a subscriber line, means for extending connections from said line,

outgoing circuit, switch-through means, means to oper- second switch to a set of contacts leading to a desired

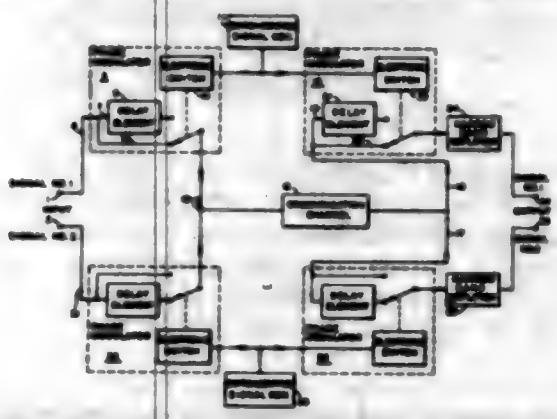
data storing means individual to said extending means, control means normally operative in accordance with pulses received from said line to store data in said storing means pertaining to a call placed from said line and including automatic calling line identifying means for storing data in said storing means providing an identification of said calling line, test means for supplying pulses for controlling said control means to store data pertaining to a test call in said storage means, and means controlled by said test means for operating said calling line identifying means to supply a fixed calling line identification to said storage device.

2,863,946

MULTIPLEX COMMUNICATION SYSTEM

Robert M. Page, Camp Springs, Md., assignor to the United States of America as represented by the Secretary of the Navy

Application May 31, 1956, Serial No. 588,593
4 Claims. (Cl. 179—15)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. Means for distinguishing signals from a plurality of separate sources for simultaneous processing in a common communication channel and separate recovery thereafter comprising an input channel for the signal from each respective signal source, means for modulating the phase of the signals in said respective input channels at different respective selected rates, means connecting all of said input channels to said common communication channel, a plurality of output channels connected to said common communication channel, means for unmodulating the phase of signals in each respective output channel at one of said respective selected rates, and respective signal phase coherency responsive means terminating each of said output channels.

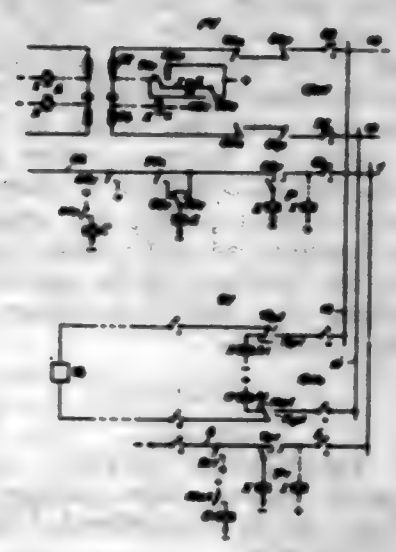
2,863,947

TELEPHONE SYSTEM WITH LOCAL AND TOLL CALL SWITCHING OVER IDENTICAL CONNECTORS

Alfred Schennert, Berlin-Siemensstadt, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany

Application June 21, 1956, Serial No. 592,791
Claims priority, application Germany June 30, 1955
14 Claims. (Cl. 179—18)

1. A telephone system having a connector for extending local calls and also toll calls, said connector comprising line conductors and a private conductor, switching means for seizing said connector over said conductors to extend local and toll calls, respectively, a potential being required on said private conductor to maintain a connection extended over said connector, and a circuit arrangement for controlling the connection of said potential, said arrangement comprising relay means in said connector for connecting said potential to said private conductor upon seizure of said connector, a control relay, means for energizing said control relay over one of said line conductors only upon extending a toll call, means governed by said control relay for disconnecting said potential from said private conductor in



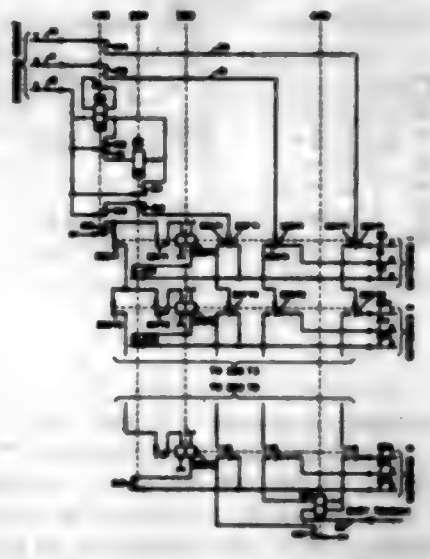
said connector, and means disposed in a switching device preceding said connector to connect said potential to said private conductor.

2,863,948

RELAY SELECTOR CIRCUIT

Ben A. Harris, Rochester, N. Y., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application April 19, 1957, Serial No. 653,941
4 Claims. (Cl. 179—18)



1. A connector for extending an incoming circuit to an idle one of a plurality of outgoing circuits wherein said incoming and outgoing circuits are each provided with at least one utilization conductor and also a busy guarding conductor to be marked with a potential when the respective circuit is seized or busy comprising, at least one transfer utilization conductor and transfer busy guarding conductor, seizure means to be operated in response to the application of seizure potential on the incoming circuit busy conductor, transfer means for each of said outgoing circuits, the operation of said seizure means effecting the connection of each of said transfer means to the busy guarding conductor of the respective outgoing circuit to cause each of said transfer means to be operated by the busy guarding potential on the busy guarding conductor of the respective outgoing circuit when busy, means responsive to the operation of each transfer means for extending said transfer utilization and busy conductors in a chain circuit from the utilization and busy conductors of the busy outgoing circuit to the utilization and busy conductors of the next successive

outgoing circuit, switch-through means, means to operate said switch-through means in response to the operation of said seizure means for thereby connecting the utilization and busy guarding conductors of said incoming circuit to the transfer utilization and busy conductors, means responsive to the operation of said switch-through means for thereby maintaining said switch-through means operated by the seizure potential on the incoming circuit busy guarding conductor, means to restore said seizure means to its unoperated condition in response to the operation of said transfer means, and means also responsive to the operation of said switch-through means for maintaining the operation of the operated ones of said transfer means after said seizure means is restored to its unoperated condition.

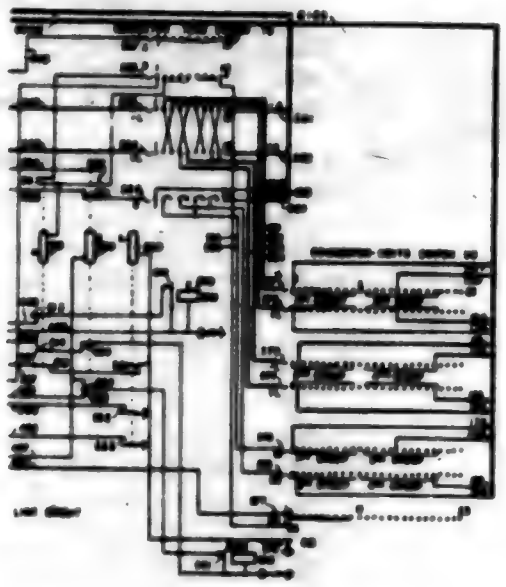
2,863,949

TELEPHONE SYSTEM

Clarence E. Lomax, Hastings, Nebr., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware

Original application September 13, 1952, Serial No. 309,476. Divided and this application May 28, 1957, Serial No. 662,892

10 Claims. (Cl. 179—18)



1. In a telephone system a trunk line, a plurality of subscribers' lines including party lines of the side-of-line signaling type, a connector responsive to digital impulses sent under the control of a calling line to extend a call from the calling line to said trunk line or to a called subscriber's line, said connector comprising a first and second switch each having a stepping magnet and a set of wipers and contact rows, at least said first switch being a single motion switch, said trunk line being connected to a predetermined set of contacts of said first switch and the contact rows of said second switch giving access to a plurality of subscribers' lines, switching means for connecting said calling line to the wipers of said first switch, circuit connections between the wipers of said second switch and contacts of said first switch other than those of said predetermined set, control means effective upon said first switch being set on said predetermined set of contacts to connect said switching means to said trunk line by way of said wipers and contacts of said first switch only, and effective upon said first switch being set on one of said other sets of contacts to connect said switching means by way of the wipers and contacts of said first switch and said circuit connections with the wipers of said second switch and prepare a digital impulsing circuit for the magnet of said second switch, said last mentioned magnet being responsive to a succeeding series of digital impulses to advance the wipers of said second switch to a set of contacts leading to a desired subscriber's line, and means for applying ringing current to one of the talking wipers of said first switch, the talking wipers of said second switch being connected by way of said circuit connections to the talking contacts of said first switch in a straightforward or reverse way depending on the position of said first switch whereby party selection is effected in accordance with the setting of said first switch.

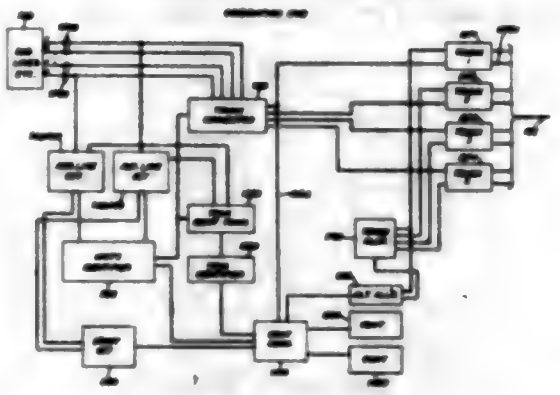
2,863,950

TELEPHONE SERVICE CONCENTRATOR

Sanford F. Dunning, Wheaton, Ill., and Donald H. MacPherson, Freeport, N. Y.; said Dunning assignor to American Telephone and Telegraph Company, a corporation of New York, and said MacPherson assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application May 27, 1954, Serial No. 432,770

31 Claims. (Cl. 179—27)



22. A scanning and concentrating system comprising a plurality of conductive lines; means for applying a varying potential to any one of said lines; a line scanner for detecting the occurrence of a varying potential on any one of said lines; a plurality of channels less in number than said plurality of lines; means responsive upon the detection of a varying potential by said scanner for alloting one of said channels; and a concentrator controlled by said scanner for connecting said line having the varying potential thereon to said allotted channel.

2,863,951

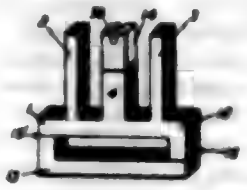
COMBINED TELEPHONE RINGING AND INDUCTION COIL ARRANGEMENT

Dante Tini, Milan, Italy, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application December 19, 1955, Serial No. 561,706

Claims priority, application Italy December 24, 1954

13 Claims. (Cl. 179—81)

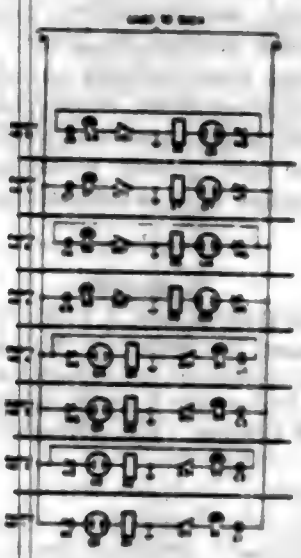


1. A telephone sub-set comprising signal receiving means and inductive coupling means for coupling said sub-set to a line, said signal receiving means comprising first ferromagnetic core means, said inductive coupling means comprising additional ferromagnetic core means, means interconnecting both said core means at a given angle to provide a common flux path for both said signal receiving means and said inductive coupling means while maintaining maximum inductive de-coupling therebetween.

2,863,954

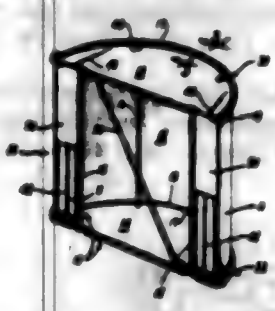
interconnecting said second and third transistors and

2,863,952
ELECTRIC SELECTIVE SIGNALLING SYSTEMS
John Scowcroft and John Henry Beesley, Coventry, England, assignors to The General Electric Company Limited, London, England
Application September 28, 1954, Serial No. 458,938
2 Claims. (Cl. 179—86)



1. A subscriber's instrument circuit having two terminals for connection to the line wires of a two-wire multi-party telephone line and including a signalling circuit which comprises a signalling device responsive to alternating potential, an electro-magnetic relay, a gas discharge tube and a rectifier element, the relay, the gas tube and the rectifier element being connected in series with one another between one of the terminals and an earth point, the said relay responding upon the application between said one of the terminals and earth of a potential of at least a predetermined value and polarity such as to render conducting both the said gas tube and the rectifier element and having contacts which act when the said relay responds to connect the signalling device between one of the terminals and an earth point, the signalling device responding to only one characteristic combination of said potential and alternating potential occurring simultaneously between the terminals and earth.

2,863,953
TRANSDUCER
Wilbur B. Reed, Havertown, and Henry E. Johnston, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application July 30, 1956, Serial No. 600,896
11 Claims. (Cl. 179—111)

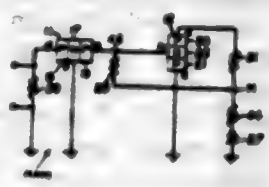


1. An electrostatic loud-speaker comprising: a pair of metallic support plates of generally segmental shape; a metallic foraminous plate of arcuate shape, coaxial with the support plates; means for mechanically interconnecting said plates to form a substantially rigid and distortion-resisting structure; a thin membrane overlying the foraminous plate and very slightly spaced therefrom; and electro-mechanical connector means extending along the ends of the foraminous plate and adapted to maintain uniform electrical potential and uniformly tensioned form throughout the membrane.

2,863,954
TELEPHONE HAND SET SUPPORTS
Herman H. Remmeker, Palm Springs, Calif., assignor to H. H. Remmeker Co., Inc., San Diego, Calif, a corporation of California
Application January 23, 1957, Serial No. 635,698
11 Claims. (Cl. 179—157)

1. In a telephone hand set support, a shoulder rest part; a hand set attaching part securable to a hand set, one of said parts being provided with a rectangular recess having four walls and the other of said parts being provided with a rectangular projection having four sides receivable in said recess selectively in either of only two different positions with the four sides of said projection respectively adjacent to the four walls of said recess for positioning said attaching part selectively in either of only two different dispositions relative to said shoulder rest part, one of said dispositions being substantially 180° displaced from the other of said dispositions; and means extending through said recess and said projection parallel to said walls and said sides for securing said parts together in the selected disposition of said attaching part.

2,863,955
DIRECT-COUPLED AMPLIFIERS
Edward Keonjian, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application March 9, 1953, Serial No. 341,817
2 Claims. (Cl. 179—171)

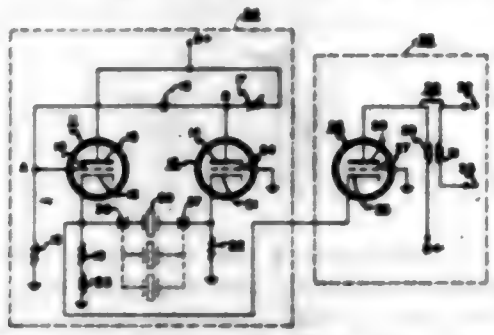


1. A direct-coupled semiconductor amplifier comprising first and second junction semiconductor devices each having base, emitter, and collector electrodes, the back collector current of said devices varying with ambient temperature, thus normally causing changes in the output current thereof an input resistor connected between the emitter electrode of said first device and ground, means connecting the base electrode of said first device to ground, means for conductively connecting the collector electrode of said first device and the base electrode of said second device, a source of direct voltage for establishing current flow among the electrodes of said devices and having grounded and ungrounded terminals, means for connecting the emitter electrode of said second device to ground, a first and second load resistor, and a current distributing resistor, said first load resistor for said first device being connected between the collector electrode of said first device and one terminal of said second load resistor, said second load resistor having its other terminal connected to the collector electrode of said second device, and said current-distributing resistor having one terminal connected to the joined terminals of said load resistors and having its other terminal connected to said ungrounded terminal of said source of direct voltage said resistors being proportioned to cause the portion of the temperature induced changes in output current of said first device fed to the base electrode of said second device to substantially offset the changes in output current of said second device.

in a direction substantially transverse to said switch mechanism to actuate the same and tiltable about an axis substantially perpendicular to the direction of sliding to

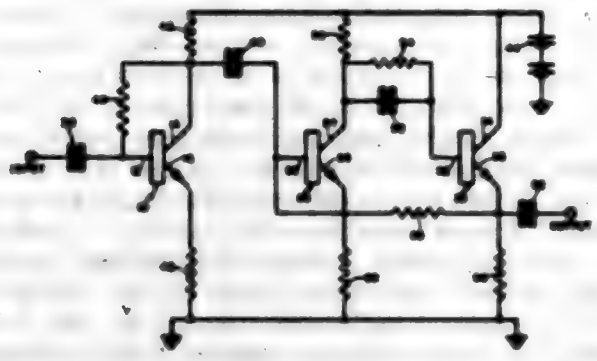
erations having components in either direction along said axis; spring means continuously opposing move-

2,863,956
CRYSTAL OSCILLATOR AND BUFFER AMPLIFIER CIRCUITS OR THE LIKE
Fred W. Schmidt, Whittier, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Application November 14, 1955, Serial No. 546,667
2 Claims. (Cl. 179—171)



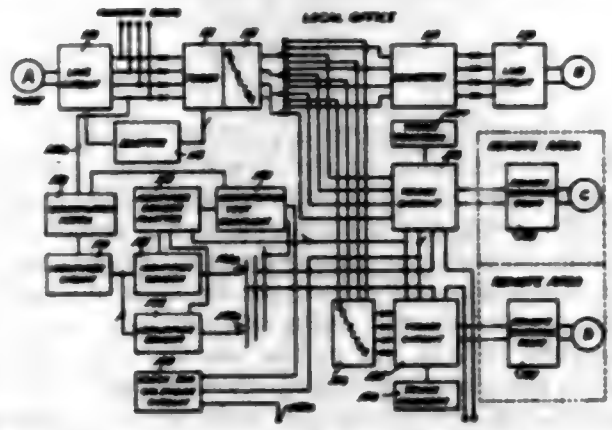
1. In combination, first, second and third vacuum tubes each having anode, cathode and control electrodes; a first resistor coupled between said control electrode of said first tube and a common reference potential; a first capacitor coupled between said anode of said second tube and said control electrode of said first tube; said anode of said first tube being coupled to a source of potential which is positive with respect to said common reference potential; a conductive path including a resistive impedance between said cathode of said first tube and said common reference potential; an impedance coupled between said cathode of said second tube and said common reference potential; said control electrodes of said second and third tubes being coupled to said common reference potential; said cathode of said third tube being directly coupled to said cathode of said first tube; a plurality of crystals resonant at different predetermined frequencies of a band of frequencies, switch means coupled between said cathodes of said first and second tubes for selectable individual insertion of said crystals between said cathodes; a low-Q parallel resonant circuit including an inductor coupled between said anode of said second tube and said positive potential source, said resonant circuit being resonant at the highest of said different frequencies and having a bandwidth which includes the lowest of said different frequencies; and an output circuit coupled to said anode of said third tube.

2,863,957
TRIAD TRANSISTOR AMPLIFIER
Robert B. Hamilton, La Mesa, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Application March 10, 1953, Serial No. 720,328
6 Claims. (Cl. 179—171)



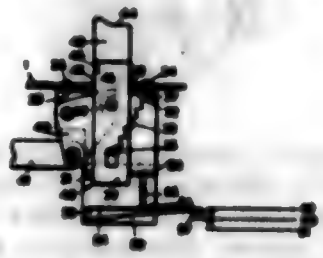
1. In a transistor amplifier: a first transistor, a second transistor and a third transistor, each of said transistors having a base electrode, a collector electrode and an emitter electrode; a source of input voltage connected to said first transistor base electrode; bias voltage means connected to each of said collector electrodes; coupling means connecting said first transistor collector electrode to said second transistor base electrode; a closed loop interconnecting said second and third transistors and including a D. C. and A. C. coupling means connecting said second transistor collector electrode to said third transistor base electrode, and D. C. and A. C. feedback means connecting said third transistor emitter electrode to said second transistor base electrode; said first and second transistor emitter electrodes being connected to a common ground; and an output circuit connected to said third transistor emitter electrode; whereby the amplifier is stabilized since voltage variations at said second transistor base electrode cause proportional voltage variations at said third transistor emitter electrode and are fed back to said second transistor base electrode to nullify the initial voltage variations.

2,863,958
TELEPHONE IDENTIFICATION TEST SYSTEM
Milton A. Clement, Rochester, N. Y., assignor to General Dynamics Corporation, a corporation of Delaware
Application December 2, 1955, Serial No. 550,595
25 Claims. (Cl. 179—175.2)



23. In a telephone system, subscriber identifying means controlled by an applied signal for automatically determining the designation of a subscriber, test means connected to said identifying means for supplying a test signal to said identifying means representing a known designation, and means controlled by said test means and said identifying means for providing an indication when said identifying means fails to correctly determine the known designation represented by the test signal applied to said identifying means.

2,863,959
DEVICE COMPRISING ONE OR MORE PUSH BUTTONS
Friedrich Lampe and Friedrich Lea, Vienna, Austria, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application July 20, 1955, Serial No. 523,247
Claims priority, application Austria September 10, 1954
5 Claims. (Cl. 200—18)



1. A push-button device comprising a carrier plate, a frame member secured to said carrier plate, at least one switching element having a locking portion and slidable in said frame member, a switch mechanism associated with said push-button device and controlled by the movement of said switching element, the latter being slidable

supported on said insulating casing, a projection carried

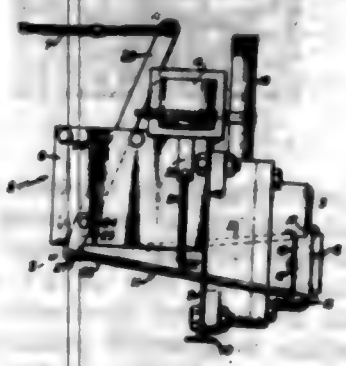
2,863,965

throughout the membrane.

stantially offset the changes in output current of said second device.

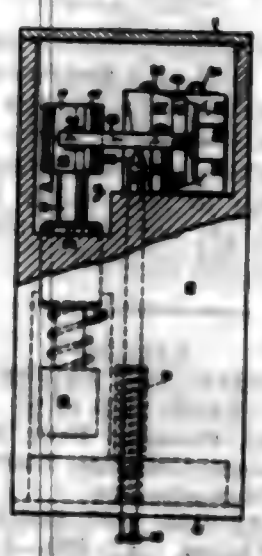
in a direction substantially transverse to said switch mechanism to actuate the same and tiltable about an axis substantially perpendicular to the direction of sliding to further actuate said switch mechanism while said switching element is locked against further sliding movement by said locking portion.

2,863,960
CONTROL FOR ELECTRICAL START AND STOP SWITCH
Thomas A. Martin, Fort Worth, Tex.
Application July 1, 1957, Serial No. 669,221
3 Claims. (Cl. 200—18)



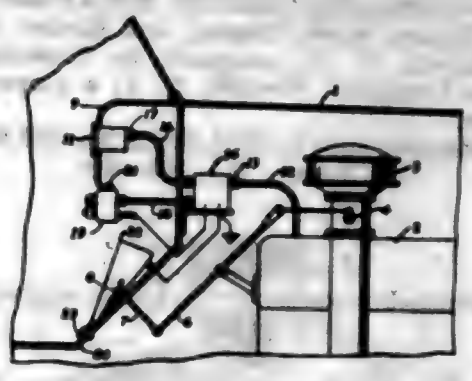
1. A control for an electrical start and stop switch having a switch rocker arm shaft, said control comprising a frame mounted on one side of said switch, a lever pivotally mounted on said frame, a generally vertical operating plate mounted intermediate its ends on said shaft, a generally horizontal push rod pivotally connected at one end thereof with said lever, the remaining end of said rod being in sliding contact with a face of said operating plate, a solenoid mounted above said push rod, said solenoid having a depending armature, means connecting said armature with said push rod, means limiting the up and down movement of said push rod, and means actuating said solenoid when said switch is in a closed position.

2,863,961
ACCELERATION RESPONSIVE SWITCH
Charles R. Botsford, Columbia Heights, Minn., and James S. Fink, El Paso, Tex., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application December 3, 1954, Serial No. 472,886
8 Claims. (Cl. 200—61.45)



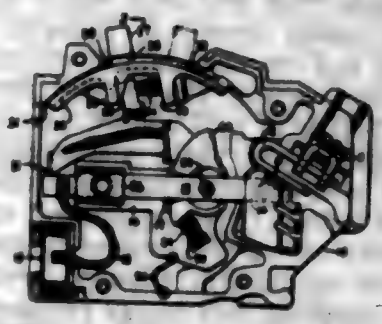
4. An acceleration responsive device comprising, in combination: a mass having a longitudinal axis and a limited camming surface extending in the direction of said axis; bearing means supporting said mass for movement in the direction of said axis in response to accelerations having components in either direction along said axis; spring means continuously opposing movement said mass in either direction from a predetermined position relative to the supporting means; a cam follower normally engaging said camming surface; and switch means actuated when said camming surface moves beyond said cam follower.

2,863,962
VEHICLE SPEED CONTROL SYSTEM
John A. Lettensy, North Lancaster, Mass., assignor, by mesne assignments, to John A. Lettensy, North Lancaster, Mass., and Hyman L. Federman, New Rochelle, N. Y.
Application August 25, 1955, Serial No. 530,519
9 Claims. (Cl. 200—61.89)



2. In combination with a motor vehicle having a driver's compartment including a floorboard, a throttle control linkage having an end extending through said floor board into said compartment, a shaft driven in accordance with the speed of the vehicle, a speed-responsive element driven by said shaft, an electric switch actuated by said speed-responsive element for operation at a definite speed, means for setting the operating speed of said switch at a desired value, a foot-pedal on said floorboard, a mechanical connection entirely in said compartment between said pedal and the said end of said throttle control linkage for transmitting motion from said pedal to said linkage, and electrically actuated means controlled by said electric switch for disabling said mechanical connection when said definite speed is attained.

2,863,963
ELECTRIC CIRCUIT BREAKER
Joseph F. Johnson, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Application October 18, 1957, Serial No. 689,419
3 Claims. (Cl. 200—67)

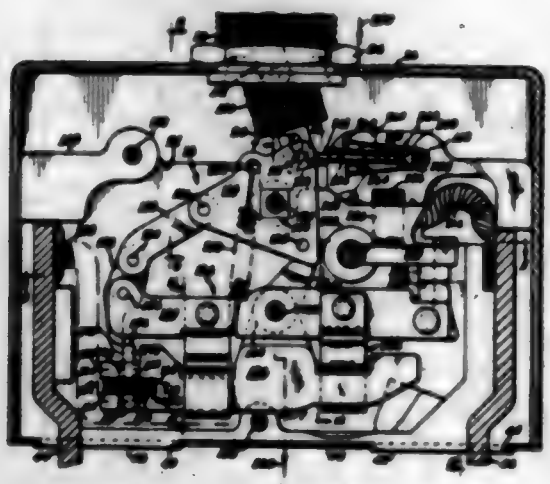


1. An electric circuit breaker comprising an insulating casing, a switch member pivotally supported in said insulating casing and movable between open and closed circuit positions, a contact carried by said switch member and normally fixed with relation thereto, an over-center spring between said switch member and said insulating casing, manually operable means for operating said switch member between said open and closed circuit positions comprising an insulating handle slidably

Fuses," a pair of connecting contacts projecting from the slot compresses the legs toward each other when they

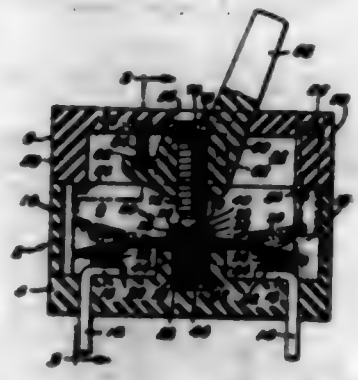
supported on said insulating casing, a projection carried by said manually operable handle portion, and spring means between said insulating handle and said switch member biasing said projection of said handle member in contact-opening direction normally into engagement with said switch member, said handle member being movable at least a short distance in contact-closing direction against the bias of said spring means without movement of said switch member whereby said contact moves to said closed circuit position with a snap action at a speed independent of the speed of movement of said handle and moves away from said closed circuit position at a speed dependent on the speed of movement of said handle.

2,863,964
AUTOMATIC CIRCUIT BREAKERS
Tracy B. Taylor, South Orange, and Gustav A. Dove, Hackettstown, N. J., assignors to Federal Electric Products Company, Newark, N. J., a corporation of Delaware
Application June 9, 1953, Serial No. 360,522
27 Claims. (Cl. 200—88)



1. In a circuit breaker having relatively movable contacts engageable with and disengageable from each other for making and breaking the circuit, movable switch means carrying one of said contacts and mechanism, including actuating means and latch means releasably engaged therewith in predetermined relation, for actuating said movable switch means to make and break the circuit; a current responsive flexible bimetallic control element operatively engaging said movable switch means and operable on said movable switch means upon the occurence of an abnormal current condition to release said actuating means from said latch means for opening the breaker, and means operatively engaging said movable switch means and operable on said switch means in opposition to said control element for substantially preventing the flexing of said control element in response to energy variations to which said circuit breaker may be subjected, whereby to substantially neutralize the effects of said energy variations on said control element for maintaining said predetermined actuating and latch means relation substantially constant through a range of said energy variations, said energy variations being variations in mechanical energy, said movable switch means being mounted in substantially balanced disposition, said control element being disposed to operate on said movable switch means at one side of the balanced mounting thereof, and said preventing means being disposed to operate on said movable switch means at the other side of said balanced mounting with substantially the same degree of force as said control element in response to the variations in mechanical energy to which the circuit breaker is subjected.

2,863,965
SWITCH
Wilfred W. Cardin, Attleboro, and Henry David Epstein, Boston, Mass., assignors to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application May 22, 1956, Serial No. 586,547
12 Claims. (Cl. 200—116)



1. A device comprising a first electrical contact and a second electrical contact, a snap-acting thermostatic element responsive to temperature change, said thermostatic element carrying said first contact, means biasing said thermostatic element for movement along a path from a first position to a second position with respect to said second contact whereby in said first position the thermostatic element, when it responds to said temperature change, biases said first contact in a direction from engaging to disengaging position with respect to said second contact; said first contact, with said thermostatic element in said second position, being disengaged from said second contact; additional means operatively associated with said thermostatic element for moving said element from said second position to said first position and for retention of said element in said first position until released, said additional means including a member accessible from the exterior of the device for adjustment of the extent of movement of the thermostatic element from said second position to said first position.

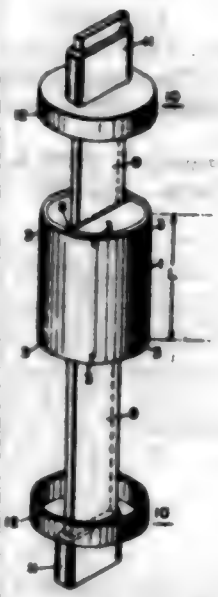
2,863,966
REPEATER FUSE
Henry Greber, New York, N. Y.
Application July 16, 1954, Serial No. 443,936
7 Claims. (Cl. 200—124)

1. Repeater fuse with horizontally mounted tube having one contact in form of a ferrule on one of its ends, and on its opposite end two contacts in form of half-ferrules being insulated one from the other to provide separate contact areas, said tube being turnable around its longitudinal axis in fuse holder jaws, said ferrule being connected to any one of the two half-ferrules by means of a fusible link of metal.

2,863,967
CURRENT-LIMITING POWER FUSES OF REDUCED SIZE
Kenneth W. Swain, Hampton Falls, N. H., assignor to The Chase-Shawmut Company, Essex County, Mass., a corporation of Massachusetts
Application April 26, 1957, Serial No. 655,288
3 Claims. (Cl. 200—131)

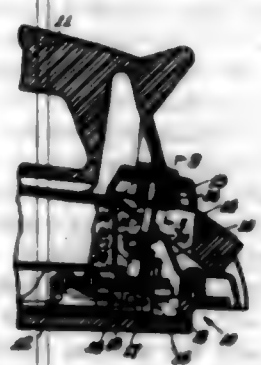
1. A current-limiting fuse having electrical ratings conforming to the Underwriter Laboratories "Standard for Fuses," said fuse comprising a substantially tubular casing of insulating material having a shorter length than twice the "minimum distance from mid-point of fuse to nearest live part" as specified in said "Standard for

Fuses," a pair of connecting contacts projecting from opposite ends of said casing, a pair of pre-fabricated caps of insulating material each mounted on one end of said casing, each of said pair of caps having a first tubular extension overlapping a portion of one of said pair of connecting contacts and extending to a point at least as re-



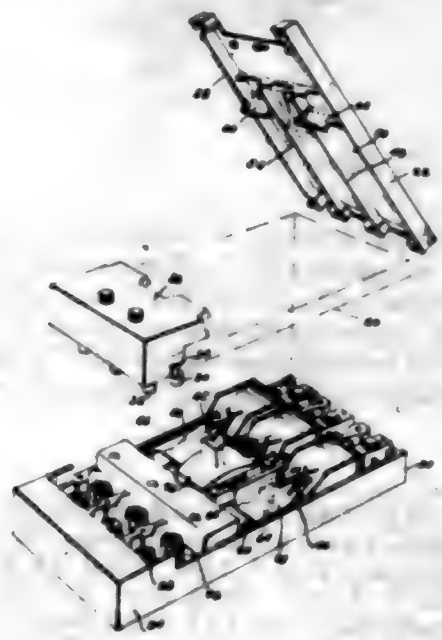
mote from the median plane of said casing as said "minimum distance from mid-point of fuse to nearest live part," and each of said pair of caps having a second extension overlapping a portion of said casing and being substantially shorter in length than one half of said length of said casing.

2,863,968
KNOB AND SHAFT ASSEMBLY
Walter C. Trautman, Bridgeport, Conn., assignor to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut
Application June 8, 1956, Serial No. 590,133
10 Claims. (Cl. 200—139)



7. An adjustable thermostatic switch assembly comprising a first contact; temperature sensitive means on which the contact is mounted for causing movement thereof in response to temperature changes; a second contact; means mounting the second contact and biasing it away from the first; adjusting means in engagement with the mounting means of the second contact for moving the contact toward and away from the first contact; a manually operable member; connecting means having resilient portions for creating friction to secure the adjusting means to the manually operable member and enabling the adjusting means to be positioned on the shaft at only one angular position relative to the shaft; in which the adjusting means includes a threaded rotatable shaft and a nut; in which the manually operable member is a knob having a slot; and in which the resilient portions consist of two legs with the maximum distance between the legs being slightly greater than the length of the slot, whereby the slot compresses the legs toward each other when they are in the slot thereby providing a frictional engagement between the interconnecting means and the knob.

2,863,969
BARRIERS FOR ISOLATION OF CIRCUIT BREAKER PHASES
William Harold Edmunds, Havertown, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application November 19, 1956, Serial No. 622,952
12 Claims. (Cl. 200—144)



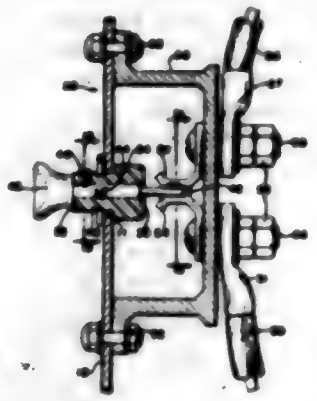
1. In a multi-phase molded case circuit breaker having a base and a cover connectible to said base, a pair of cooperating contacts for each phase of said molded phase circuit breaker, one of said pairs of cooperating contacts for each phase being mounted on a contact arm, each of said contact arms being pivoted on a common contact arm shaft, each of said contact arms being constructed to move one contact of said last mentioned pair of cooperating contacts into and out of engagement with its cooperating contact; operating means common to each of said contact arms for moving each of said contact arms to an engaged position; said base having a channel therein for each phase of said multi-phase circuit breaker, each of said channels being substantially enclosed when said cover is connected to said base, each of said pairs of cooperating contacts and corresponding contact arms being mounted in a respective channel; a barrier; said common contact arm shaft extending through openings in the sides of each of said channels; said barrier extending across one of said channels and being positioned between said cooperating contacts and said operating shaft; said barrier substantially preventing circulation of ionized gas from its channel to the other said channels to thereby prevent phase to phase flashover during current interruption.

2,863,970
CIRCUIT BREAKER
Eugene A. Miller, Seattle, Wash.
Application November 4, 1957, Serial No. 694,370
2 Claims. (Cl. 200—163)

1. In combination with the firewall of an internal-combustion engine-driven vehicle, said firewall having a port therethrough, a non-conductive tubular guide member disposed in said port to close the same, means to retain said guide member in said port, a non-conductive push-pull member slidably fitted to and disposed within said tubular member to close the same, said push-pull member having a metallic blade extending away from

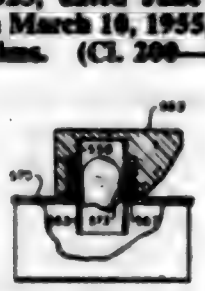
tion of the cylindrical surface of said resistor and the of said lower heating element, a bi-metallic strip having

said firewall on the engine side thereof, said push-pull member also including a handle means on the other side of said firewall for manual manipulation of said push-pull member, non-conductive means forming a bridge on the engine side of said firewall spanning said guide member



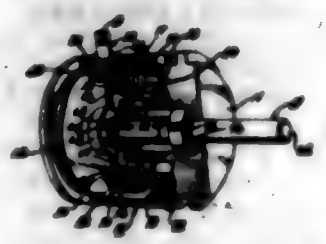
and blade, a pair of metallic jaw members mounted on said bridge in spaced apart relation to each other less than the thickness of said blade and facing said firewall in a position to receive and make a circuit through said blade upon its being pushed toward said bridge, and an electric conductor associated with each said jaw member.

2,863,971
ELECTRIC BURNER SWITCH
John Lewis Andrews, Chicago, Ill.
Original application June 6, 1949, Serial No. 97,425, now Patent No. 2,710,323, dated June 7, 1955. Divided and this application March 10, 1955, Serial No. 493,467
16 Claims. (Cl. 200—167)



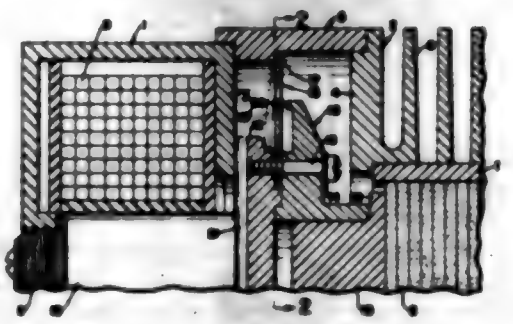
4. In a rotary switch mechanism, a housing, an actuating element rotatively mounted in said housing and comprising a circular cam having an axial opening, a lamp base in said opening, a color filter co-axial with said lamp base, a tubular shaft keyed to said cam axially thereof and having an aperture therethrough disposed beyond said lamp base for alignment with a lamp filament, and a transparent knob secured to said shaft and having an internal reflecting surface disposed in relationship to said aperture for reflecting rays therefrom in a generally axial direction.

2,863,972
POTENTIOMETER
Dean M. Barton, Los Angeles, Calif., assignor, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Application October 4, 1954, Serial No. 459,890
14 Claims. (Cl. 201—48)



1. In a rotary variable resistance device, the combination of: a casing; insulating means having two concentric mounting surfaces, said insulating means being removably positioned within said casing and having each of said mounting surfaces concentric with the longitudinal axis of said casing; a curved resistor mounted on one of said mounting surfaces; and a contact ring of electrically conducting material mounted on the second of said concentric mounting surfaces.

2,863,973
CARBON PILE REGULATOR
Russell F. Thielman, Cleveland, Ohio, assignor to Jack & Heintz, Inc., Cleveland, Ohio, a corporation of Delaware
Application November 7, 1955, Serial No. 545,371
1 Claim. (Cl. 201—51)



In an electric regulator including a variable resistance carbon pile disc assembly, an electromagnet assembly including an armature, a spring carried by said armature to resist magnet pull in one axial direction and apply axial pressure in the other direction on said carbon pile, a spring support ring, a spring support member secured to said armature against relative movement to secure the central portion of said spring between said armature and said support ring with the support ring being on the axially opposite side of said spring from said armature, the radial outer portion of said spring being free and unattached to any part of the regulator, a stationary fulcrum member against which one axial side of the radial outer portion of said spring rests to apply in one direction a resilient axial compressive force upon said carbon pile and to resist magnet pull axially upon said armature in the other direction, a second fulcrum element carried by said support ring and spaced substantially from said fulcrum member and from said secured portion, and on the opposite axial side of said spring from said first fulcrum member, said second fulcrum member, upon continued progressively increasing magnet pull upon said armature, being adapted to be pulled axially to engage said spring intermediate of its radial dimensions in such a manner that said two fulcrums cause a continued deflection of said spring by movement of said armature toward said magnet to produce a spring deflection force curve consisting in two successive linear portions of different spring rates, with the second spring rate being the greater, the portion of said spring between the secured portion thereof and the zone of engagement with said second fulcrum member being out of contact with said spring support member.

2,863,974
HEAT DISSIPATING ELECTRICAL CIRCUIT COMPONENT
Harold H. Zabel, Milwaukee, and Daniel S. W. Kelly, Whitefish Bay, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Application February 7, 1955, Serial No. 486,313
2 Claims. (Cl. 201—63)

1. In an electrical circuit component the combination of a composition resistor unit having a cylindrical outer surface and stripes of color thereon indicative of resistance value; and a heat conductive metallic bracket formed of a strip bent upon itself to provide an attachment portion and having one end curved to present a first clamp element with a surface that closely conforms with a por-

casing having side walls, end walls and a top, a jet stack mounted within said casing and extending from

the open top of the side walls of said box being in spaced

tion of the cylindrical surface of said resistor and the opposite end curved to present a second clamp element with a surface that closely conforms with a portion of

the cylindrical surface of said resistor opposite that to which the first element conforms, said elements clampingly engaging said resistor with the ends of the strip being spaced to retain visibility of said stripes of color.

2,863,975

HEAT DETECTING CABLE

Lester V. Hebenstreit, Bloomfield, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey

Application March 15, 1955, Serial No. 494,517
1 Claim. (Cl. 201—63)

A bendable cable-like structure of indefinite continuous length for use in the detection of abnormal temperature conditions at any location along its length, comprising an inner electrically conductive uninsulated bendable tubular wire-like element, an outer electrically conductive bendable tubular element formed of material having relatively high heat conductivity and surrounding said inner element in spaced relation therewith, said inner and outer elements being co-extensive with each other and said inner element extending outwardly beyond said outer element at the ends thereof to adapt the same for electrical connection exteriorly of said outer element and a mass of thermistor material acting as an insulator at normal temperatures and being adapted to be rendered electrically conductive at abnormal temperatures disposed between said inner and outer elements to co-axially position said inner element within said outer element, the diameter of said outer element being reduced along its entire length after assembly thereof in the foregoing manner to exert pressure on said mass and thereby position and maintain said mass in close fitting engagement and in electrically conductive contact with said inner and outer elements so that electrical current can flow between said elements through a path of minimum radial dimension at any point along the length of said elements, said inner element being under compression to further establish and maintain electrically conductive contact between said mass and said elements.

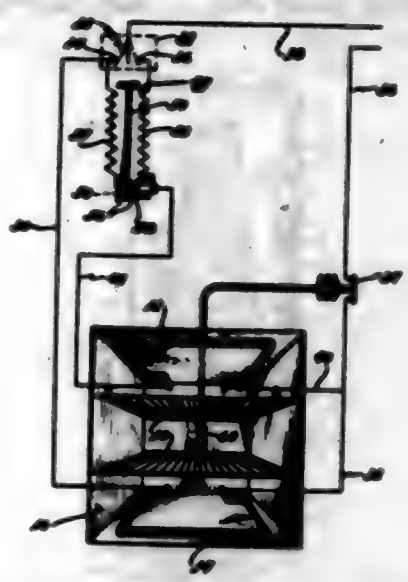
2,863,976

RANGE

Thomas E. Dadson, Franklin, Mich., assignor to American Motors Corporation, Detroit, Mich., a corporation of Maryland

Application July 18, 1956, Serial No. 597,043
3 Claims. (Cl. 219—38)

1. An electric oven heating system comprising a lower heating element, an upper heating element, power mains, circuit connections connecting one terminal of said lower heating element to said power mains, a selector switch connected to said power mains, said selector switch having a first contact and a second contact, circuit connections connecting said first contact with the other terminal of said lower heating element, a bi-metallic strip having a fixed end and a movable end movable upon application of heat to said strip, a stationary contact, a movable contact in engagement with said stationary contact and carried by the movable end of said strip, a heater coil positioned in heat exchange relation with said bi-metallic strip, circuit connections connecting one end of said heater coil to said movable contact providing a series circuit connection between said stationary and mov-



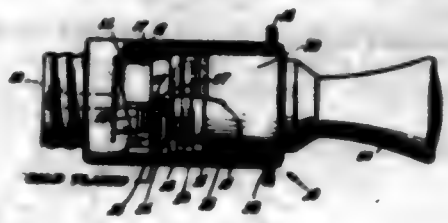
able contacts, circuit connections connecting the other end of said heater coil to said first contact, a second heater coil connecting said stationary contact with said second contact, said second heater coil being positioned in heat exchange relation with said strip, circuit connections connecting one terminal of said upper heating element to said stationary contact and circuit connections connecting the other terminal of said upper heating element to said power mains.

2,863,977

CIGAR LIGHTER

Lawrence G. Herwitt, New Haven, Conn., assignor to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut

Application June 4, 1957, Serial No. 663,458
2 Claims. (Cl. 219—32)



1. In an electric cigar lighter having a socket having at least one electric current carrying leg, a plug removably positioned in said socket and having at one end a retaining cup in which is mounted a coil of resistance wire which upon being heated to incandescence is utilized to ignite tobacco, the cup engaging the leg to permit passage of electricity from the leg through the cup to the coil to heat the coil and the leg also serving to provide a frictional lock with the cup to maintain contact therewith until the coil is headed for use; the improvement which comprises the cup being formed of steel and having a base plating of nickel and a final plating of gold.

2,863,978

ELECTRICAL SPACE HEATER

Richard B. Young, Albion, Mich.

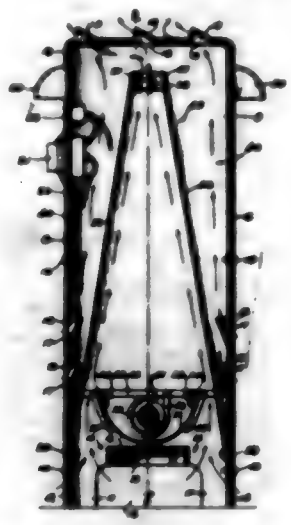
Application January 21, 1955, Serial No. 483,300
6 Claims. (Cl. 219—34)

1. An electric heater comprising a horizontally elongated casing of much greater height than width, said

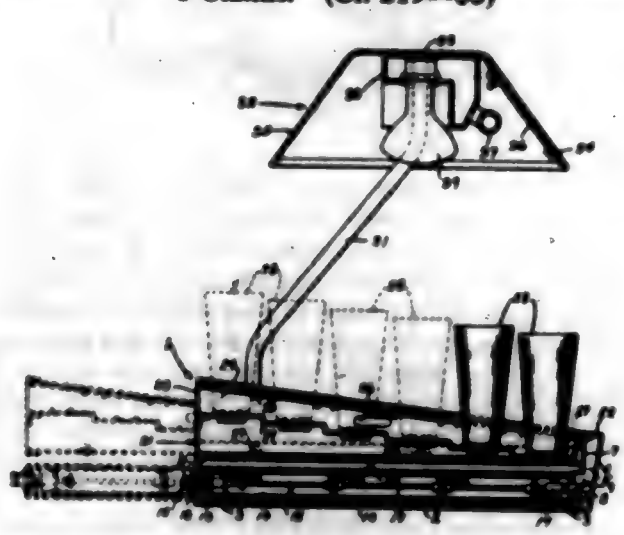
trode containing residual deoxidizers that is composed of other power-operated means positioned to act upon an

mounting surfaces, said insulating means being removable with a surface that closely conforms with a por-

casing having side walls, end walls and a top, a jet stack mounted within said casing and extending substantially from end to end thereof, said jet stack being open at its upper and lower ends and having the former spaced downwardly from the casing top, said jet stack having upwardly converging side walls mounted by and cooperating with the casing side walls to form air heating chambers therebetween, said casing having air inlet openings below the lower end of said stack and air inlet openings into the lower ends of said chambers, the casing top being provided with hot air outlet openings, an elongated heating element mounted centrally in the lower portion of said jet stack and extending substantially from end to end of said casing, and a trough-like reflector, having a cross-section of substantially less than 180° curvature, suspended under said heating element and extending substantially from end to end thereof, the longitudinal edges of said reflector being inwardly spaced from the side walls of said jet stack and the bottom of the reflector trough being spaced not more than half the radius of curvature of said cross section.

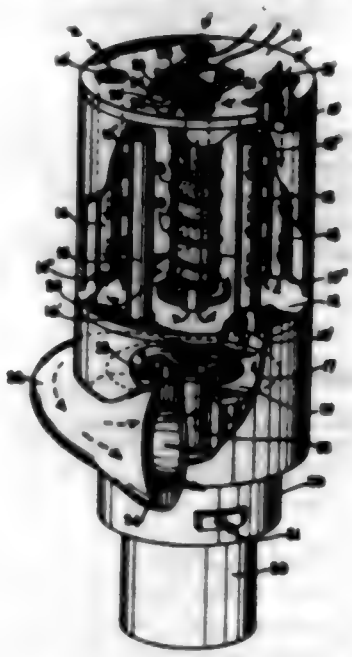


2,863,979
FOOD WARMER
Harold J. Fitzgerald, Whitefish Bay, Wis., assignor to Superdisplay, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application February 27, 1957, Serial No. 642,895
6 Claims. (Cl. 219—35)



1. In a food warmer the combination comprising a base having a bottom and side walls to present a box open at the top; an open grid in said box adapted to support a plurality of cups without any material blocking of the interior of the box from the exterior, said grid including a base portion defining a series of supporting steps adapted to support the bottoms of said cups in tiered relationship, the marginal edge defining the open top of the side walls of said box being in spaced vertical relationship relative to and above an adjacent supporting step of said grid; a heater within the box to heat the interior thereof; a supporting structure rising above the box; and radiant heat means carried by the supporting structure positioned to direct radiant energy through the grid toward the interior of the box.

2,863,980
ELECTRIC AIR HEATER
Malcolm Logan, Laguna Beach, Calif.
Application August 8, 1957, Serial No. 676,997
3 Claims. (Cl. 219—39)

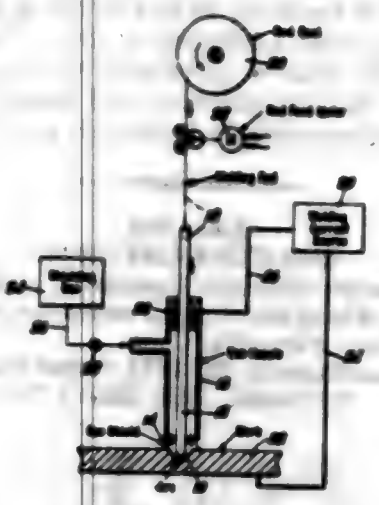


2. An electric air heater comprising, in combination: a cylindrical casing; upper and lower end plates secured to said casing; a first plurality of separated, individual open ended tubes secured to said upper end plate at their upper ends and depending downwardly into said casing to terminate short of said lower end plate at their lower ends whereby air may be introduced into the lower interior of said casing, the axes of said tubes being respectively radially spaced from the axis of said cylindrical casing and circumferentially spaced from each other; a second plurality of separated, individual open ended tubes secured to said lower end plate at their lower ends and projecting upwardly into said casing to terminate short of said upper end plate at their upper ends whereby air from the upper interior of said casing may pass down said second plurality of tubes and out of the lower end plate on said casing, the axes of said second plurality of tubes being respectively radially spaced from the axis of said cylindrical casing and circumferentially spaced from each other; electric heating coils in said cylindrical casing for heating air passing from the lower ends of said first plurality of tubes into the upper ends of said second plurality of tubes; a suction chamber below said casing in communication with the end openings in the lower ends of said second plurality of tubes; a suction fan in said chamber; and a cowling defining an outlet duct from said chamber for passing air circulated through said tubes in said casing to the environment.

2,863,981
METAL ARC WELDING
Kenneth L. Thomas, Kenmore, Robert J. Wickham, Tonawanda, and George M. Skinner, Kenmore, N. Y., assignors to Union Carbide Corporation, a corporation of New York
Application September 1, 1954, Serial No. 453,476
1 Claim. (Cl. 219—74)

Sigma welding low carbon steel in an annular stream of carbon dioxide gas with a bare deoxidized metal elec-

trode containing residual deoxidizers that is composed of 0.12–.15% C, 0.25–0.35% Cr, 1.00–1.20% Mn, 0.20–

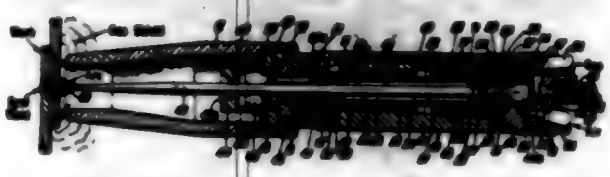


0.30% Si, trace to 0.015% S, trace to 0.04% P, and the balance iron.

2,863,982
ARC WELDING
Thomas Thorley, Coventry, and Raymond Robinson, Sutton Coldfield, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application July 31, 1956, Serial No. 601,169
Claims priority, application Great Britain August 4, 1955
11 Claims. (Cl. 219—74)

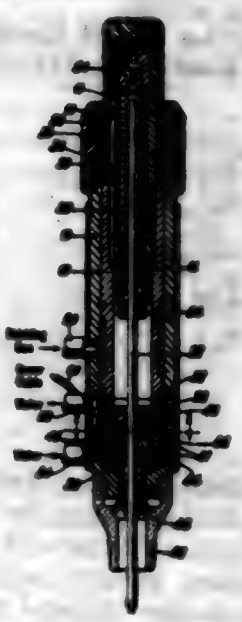
1. A method of arc welding reactive metals and alloys in an inert atmosphere in which the joint being welded is chilled by means of thin, ductile, fluid-cooled metal chills, shaped to make close contact with the surface of the parts being joined adjacent to the weld, the inert atmosphere being maintained by gas shrouds on the chills, and by ductile backing strips which are shaped to make close contact with the surface of the parts at the back of the joint.

2,863,983
GAS SHIELDED ARC WELDING TORCH
John S. Kane, Watchung, and Frank J. Pilia, West Orange, N. J., assignors to Union Carbide Corporation, a corporation of New York
Application January 19, 1956, Serial No. 560,117
11 Claims. (Cl. 219—75)



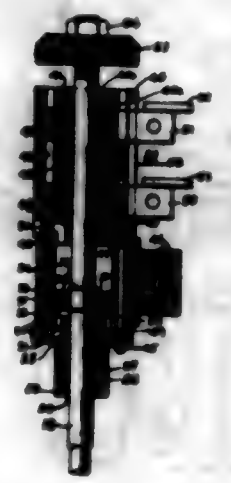
1. A gas shielded arc torch comprising an elongated body having an axially extending cavity formed therein, an electrode holder formed to telescopically receive an electrode and being movable in said cavity between a first position gripping an electrode in the holder and a second position at which an electrode in the holder is released, yieldable means for applying a force urging the holder toward one of said positions, power-operated means connected with said holder for applying a force overbalancing the force of said yieldable means so as to urge the holder toward the other of said positions, and other power-operated means positioned to act upon an electrode in the holder for moving it relative to the holder when the latter is in said second position.

2,863,984
GAS SHIELDED ARC TORCHES
Peter R. Schaefer, Newark, and John S. Kane, Watchung, N. J., assignors to Union Carbide Corporation, a corporation of New York
Application May 31, 1957, Serial No. 662,747
8 Claims. (Cl. 219—75)



1. In a gas shielded arc welding torch, a barrel, an electrode holder axially slidably keyed in said barrel, a collet screwed into the bottom of said holder for gripping an electrode depending therefrom, a screw threaded in the top of said holder for raising and lowering said collet gripped electrode, a gas directing nozzle below said barrel, and spring pressed coacting jaws in the bottom of said barrel slidably engaging the depending electrode gripped by said collet for supplying welding current to said electrode while it is being raised or lowered by said screw.

2,863,985
MAGNETIC FORCE WELDERS
Arthur W. Schaefer, Cincinnati, Ohio, assignor to Precision Welder & Machine Company, Cincinnati, Ohio, a corporation of Ohio
Application September 30, 1957, Serial No. 687,044
14 Claims. (Cl. 219—86)



1. An electrode positioner and magnetic force producing mechanism for resistance welders, said electromagnet comprising a reciprocable electrode actuating member, a stator comprising spaced concentric, coaxial core members, one of said core members having a bore that is

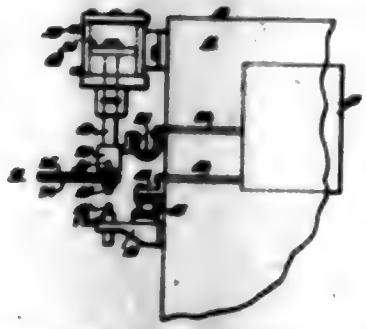
mount casting and said base casting and having resilient moves from said

coaxial with said core members for accommodating said reciprocable member, a coil winding energizable by weld current, located in the space between said core members and embracing one of them, and an armature on said reciprocable member located adjacent one end of said magnetic stator.

2,863,986
REPULSION MAGNETIC FORCE RESISTANCE WELDERS

Lawrence W. Mechlenborg, Cincinnati, Ohio, assignor to Precision Welder & Machine Company, Cincinnati, Ohio, a corporation of Ohio

Application October 4, 1957, Serial No. 688,165
16 Claims. (Cl. 219—89)

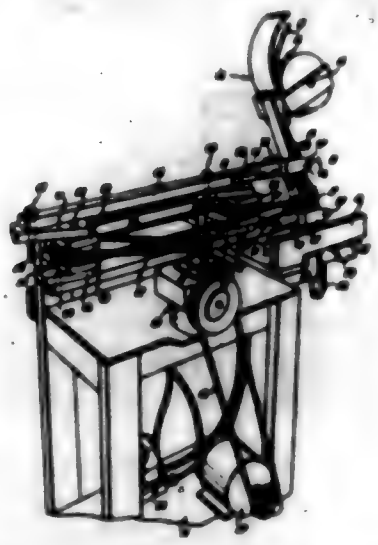


1. A magnetic repulsion force developing device for resistance welders having means for relatively moving the welder electrodes to or from work engaging position, said device comprising parallel, substantially touching and coextensive conductors having a relatively thin layer of insulation between them and connected to each other so as to carry the weld current through them in opposite directions, one of said conductors having means for connecting the device to said electrode moving means and the other conductor having one of the welder electrodes secured thereto, the conductors separating by magnetic repulsion to exert weld pressure through the electrode on the work.

2,863,987
SPUD AND LIKE FITTING WELDING APPARATUS AND METHOD

Halvard Lintvedt, Kalamazoo, Mich., assignor to Rund Manufacturing Company, Kalamazoo, Mich., a corporation of Delaware

Application June 7, 1956, Serial No. 589,979
13 Claims. (Cl. 219—124)

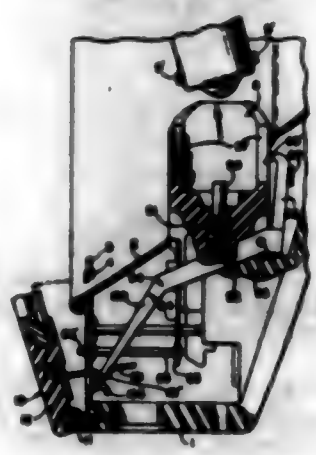


1. Apparatus for welding a conduit attachment spud within an aperture in the sheet metal sidewall of a tank and wherein the spud is preliminarily mounted in said aperture comprising a support for said tank, a welding electrode holder on said support, means for continuously moving said electrode holder so that the welding tip thereof continuously and repeatedly moves in a closed path corresponding to the desired weld region, means in said support for receiving an end of the tank, clamping it under pressure and advancing it toward said electrode holder until the spud is operatively within said path for welding it to the tank sidewall, and means for releasing the tank and moving it away from said path after welding.

2,863,988
PHOTOFLASH UNIT

Morris Schwartz, William Castedello, and Edward K. Kaprelian, Plainville, Conn., assignors to The Kalart Company Inc., Plainville, Conn.

Application January 22, 1954, Serial No. 405,596
9 Claims. (Cl. 240—1.3)

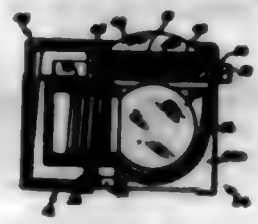


1. A photoflash unit comprising a casing, a photoflash lamp socket supported by the casing, a reflector fixedly supported by the casing, ejecting means associated with said socket for ejecting a flash lamp therefrom, said ejecting means including an actuating means for releasing the ejecting means, a shield supported by the casing movable between a shielding position in front of the socket and the reflector to define in conjunction with the reflector a substantially closed space including the socket and an open position uncovering the socket and the reflector, the said shield engaging said actuating means to actuate the same for release of the ejecting means upon movement of the shield out of its shielding position.

2,863,989
MICROSCOPE ILLUMINATOR

Norman A. Wrigglesworth, Buffalo, N. Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application September 23, 1957, Serial No. 685,500
3 Claims. (Cl. 240—41.3)



1. A microscope illuminator comprising a lamp base casting, a lamp housing casting and a lens mount casting, said castings each being made of synthetic resin plastic, said base casting having an open bottom to permit access to and insertion of electrical connections for the supply of electric current for the lamp, said base casting having in addition a slot for receiving a locking tab of said lamp housing, said lens mount casting having a plate-like extension at right angles thereto for underlying and closing the open bottom of said base casting, a resiliant member clamped between said lens

layout, and an auxiliary transfer means responsive to a ments on an insulation base, a pliant air-impervious bag

mount casting and said base casting and having resilient portions for seating said lamp housing casting on said base casting, said lamp housing casting having rests engaged by said resilient portions and a locking tab for engaging in said slot in the base casting when seated under pressure of said resilient member, and means for clamping said lens mount casting to said base casting with said plate-like extension closing the bottom of said base casting.

2,863,990

LIGHTING FIXTURES

Vearl S. Wisco, Newark, Ohio, assignor to Holophane Company, Inc., New York, N. Y., a corporation of Delaware

Application August 15, 1955, Serial No. 528,263
6 Claims. (Cl. 240—78)

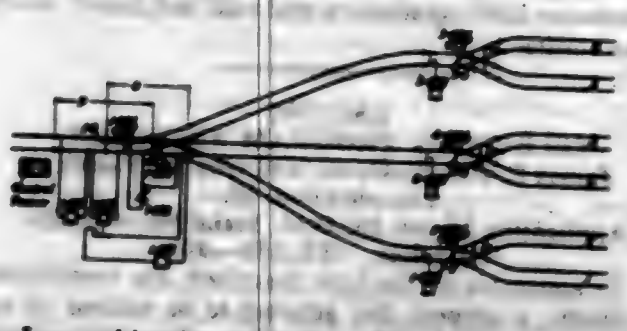
1. A lighting fixture in the form of a unitary, preassembled structure adapted for recessed mounting in a ceiling and for connection to house wiring and including a downwardly opening combination rough-in box and lamp box with the walls thereof forming the walls of the lighting fixture and having a large opening in the top thereof through which a workman can reach to splice wires, a flange on the top periphery of said combination rough-in box and lamp box; an outlet box means for removably mounting the outlet box on the lamp box when the lamp box is mounted in the ceiling, said outlet box having a removable cover facing the upper lamp box opening so that one can reach through the opening in the top of the lamp box and into the outlet box to make splices, a local lamp circuit including a lamp socket and wiring extending from the outlet box to the lamp socket, and a downwardly removable closure member for the upper lamp box opening secured to said flange which when in position, closes the top of the lamp box, the lamp socket being so located that a lamp carried thereby projects into the lamp box.

2,863,991

AUTOMATIC CONTROL OF RAILWAY CLASSIFICATION YARD TRACK SWITCHES

Benjamin Miskovich, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application May 15, 1953, Serial No. 355,281
6 Claims. (Cl. 246—2)



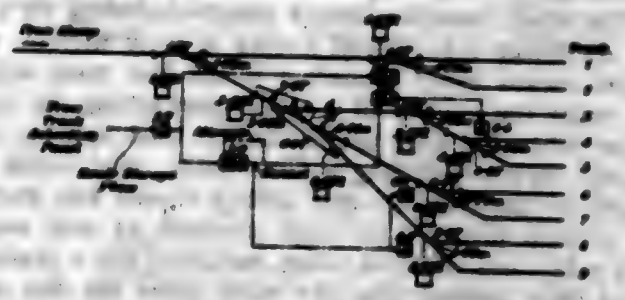
1. In combination, a first and a second track switch diverging from a common lead track, said first track switch having a normal position in which traffic moves from said lead track to a first track without traversing said second switch and having a reverse position in which traffic moves from said common lead track over said first and said second track switches in sequence, said first and said second track switches having overlapped detector track circuits including a first detector track relay associated with said first track switch and a second detector track relay associated with said second track switch, said detector track relays being released when the associated detector track circuit is occupied, a first and a second switch machine associated with said first and second track switches respectively, for operating said track switches between their normal and their reverse positions, a first and a second normal switch repeater relay associated with said first and second track switches, respectively, and arranged to be picked up when the associated track switch is in its normal position, a first and a second reverse switch repeater relay associated with said first and second track switches respectively, and arranged to be picked up when the associated track switch is in its reverse position, a route storage unit for controlling said track switches including at least a first and a second bank of storage relays, control circuits including contacts of said storage relays in said second bank for said switch machines for operating said switch machine in accordance with the route description stored in said storage unit, said control circuits for said first and said second switch machines including contacts of said first and said second detector track relays closed when said track relays are energized, an auxiliary relay, a control circuit for said auxiliary relay including a contact of said first reverse switch repeater relay and a contact of the storage relay in said first storage bank associated with said first track switch, and a contact of said auxiliary relay interposed in the control circuit for said first switch machine whereby said first switch machine is governed by the storage relays in said first bank when said auxiliary relay is picked up and is governed by the storage relays in said second bank when said auxiliary relay is released.

2,863,992

AUTOMATIC CONTROL OF RAILWAY CLASSIFICATION YARD TRACK SWITCHES

John R. George, Concord, Mass., and Sih Hsuin Tsiang, Morristown, N. J., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application June 18, 1956, Serial No. 592,198
14 Claims. (Cl. 246—2)



14. In an automatic switching system for a railway classification yard including a lap switch layout, said system comprising a storage unit associated with each track switch location including said lap switch layout, selected information describing the cuts of cars moving through said yard being transferred from storage unit to storage unit as the corresponding cuts traverse the associated switch locations, in combination with the lap switch storage unit, a transfer control means responsive initially to the transfer to another storage unit of the information describing a particular cut and subsequently to the passage of said particular cut through said lap switch layout to prevent the transfer to said other storage unit of the descriptive information for another cut while said particular cut is traversing said lap switch

against the force of said bias means in any one of a plural-

2,863,998

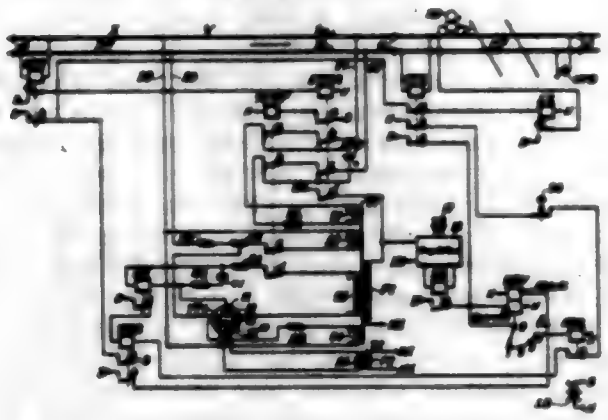
layout, and an auxiliary transfer means responsive to a second descriptive information stored in the associated storage unit for a following cut which will traverse only the lead switch of said lap switch layout and to the passage of a preceding cut traversing both switches to effect an immediate transfer to a different storage unit of the descriptive information for said following cut if the transfer to said other storage unit of the information for said preceding cut is delayed beyond the arrival of said following cut.

2,863,993

ELECTRONIC RAILWAY TRACK CIRCUIT

John E. Hilig, Philadelphia, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application January 28, 1954, Serial No. 406,627
2 Claims. (Cl. 246—130)



1. In combination, a stretch of railway track formed into at least two track sections and intersected by a highway at the second of said section, a first track circuit for the first section including a first track relay having front and back contacts, a second track circuit for the second section including a second track relay having a plurality of front contacts, a crossing signal, a signal relay for said signal, means for energizing said signal relay through a front contact of said first track relay and one of said plurality of front contacts of said second track relay, said signal relay causing operation of the signal when a train approaching the intersection enters the first track section, control means including an electron discharge tube circuit having a relay therein, said control means being connected to the first track section and under the control of a train approaching the intersection when the train enters the first track section, time element means including a time delay relay under the control of the relay in said control means and another one of said plurality of front contacts of said second track relay and effective when energized for a predetermined time interval after the train enters the first track section to operate said signal relay to discontinue the operation of said signal, and sound-operated means controlled by the back contact of said first track relay and effective when energized by a sound signal of predetermined characteristics to operate said signal relay to restore said signal to operation.

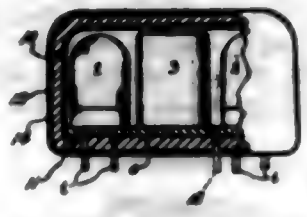
2,863,994

SEALED ELECTRONIC UNIT AS FOR PROJECTILE DETONATION MEANS, ETC.

Wilbur M. Kohring, Lakewood, Ohio

Application March 3, 1953, Serial No. 340,131
3 Claims. (Cl. 250—16)

2. A unit of the character described, comprising transmitter and receiver electronic tubes and associated elements on an insulation base, a pliant air-impervious bag enclosing the assemblage, a permanently fluid insulative



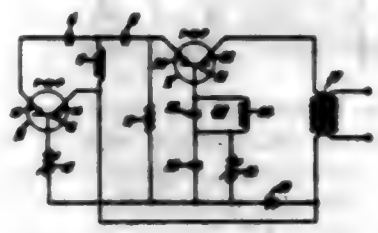
material within, and an encasement layer of insulation outside.

2,863,995

SUPERREGENERATIVE DETECTOR CIRCUIT USING TRANSISTORS

Woo F. Chow, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York

Application January 31, 1955, Serial No. 484,941
1 Claim. (Cl. 250—20)



A super-regenerative detector circuit comprising a quench frequency oscillator, a detector, and a single D.-C. source having a first and a second source terminal, said quench frequency oscillator comprising a first transistor having a current amplification greater than unity and having a first base, a first collector, and a first emitter electrode, a capacitance and an inductance serially connected betwen said first emitter and said first collector electrodes, first resistance means connected from said first base to said first source terminal, means connecting said first collector to said second source terminal; said detector comprising a second transistor having a current amplification greater than unity and having a second base, a second collector, and a second emitter electrode, second resistance means connected from said second emitter to said first source terminal, an output load impedance connected between said second collector and said second source terminal, means for providing a detected output signal coupled to said output load impedance, a tuned parallel resonant circuit, means connecting said tuned parallel resonant circuit between said second base and said first source terminal; means coupling the output of said quench frequency oscillator to said detector comprising a capacitance connected from a junction between said capacitance and said inductance to said second emitter.

2,863,996

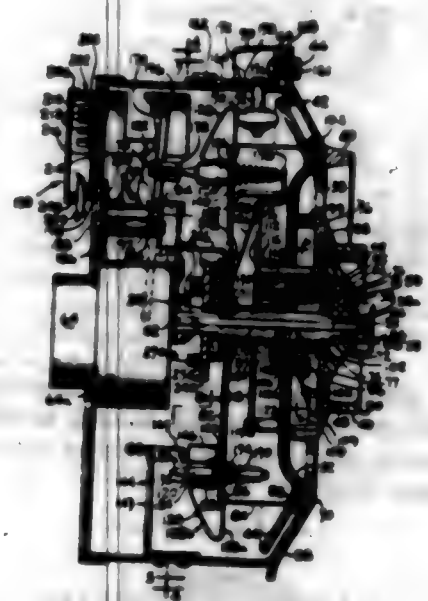
TELEVISION PROGRAM SELECTOR

James E. Hill, Oaklawn, and Guy M. Farrell, Lincolnwood, Ill.

Application March 28, 1955, Serial No. 497,226
7 Claims. (Cl. 250—20)

1. In apparatus of the type described, the combination of a motor, a support disk adapted to be rotated by said motor and provided with a plurality of spaced apertures arranged near the outer periphery thereof, a plurality of pins respectively arranged in each of said apertures, spring bias means for urging said pins along the respective longitudinal axes thereof, means for holding each of said pins

against the force of said bias means in any one of a plurality of selectable positions, and means for manually set-



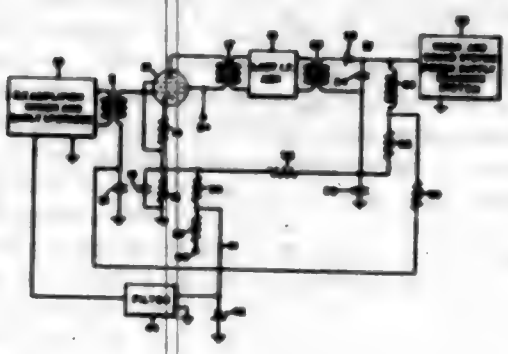
ting selected ones of said pins at selected ones of said selectable positions along the longitudinal axes thereof.

2,863,997

AUTOMATIC GAIN CONTROL AMPLIFIER

Robert B. Dome, Geddes Township, Onondaga County, N. Y., assignor to General Electric Company, a corporation of New York

Application March 21, 1957, Serial No. 647,624
1 Claim. (Cl. 250—20)



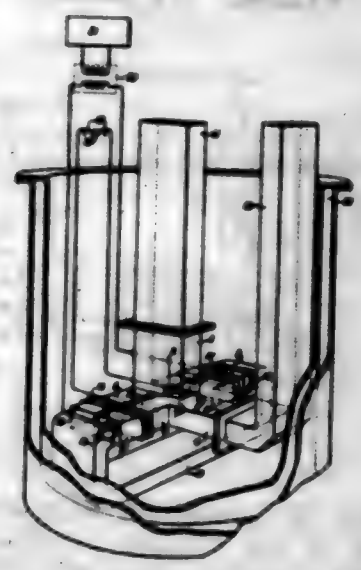
An automatic gain control amplifier for use in a receiver having a plurality of intermediate frequency amplifiers followed by a detector, wherein said detector has a resistor across which is developed the direct current component of the voltage output from said second detector, said amplifier comprising, means for connecting one end of the resistor of said detector to the grid of one of said intermediate frequency amplifiers, a ground bus, a biasing resistor and a load resistor serially connected in the order named between the cathode of said intermediate frequency amplifier and ground, a voltage divider having a connection thereon for providing automatic gain control voltage, a source of negative potential, means for connecting said voltage divider between the junction of said biasing resistor and said load resistor and said source of negative potential, and a unilateral conducting device connected between the connection on said voltage divider and ground, said unilateral conducting device being poled so as to conduct on the application of a positive voltage thereto.

2,863,998

FREQUENCY CONVERTER COMPRISING RESONANT CAVITY HAVING THIN SUPRACONDUCTIVE WALLS AND DIRECT MAGNETIC FIELD

Georges Robert Pierre Martí, Paris, France

Application October 14, 1957, Serial No. 689,865
Claims priority, application France October 22, 1956
14 Claims. (Cl. 250—20)



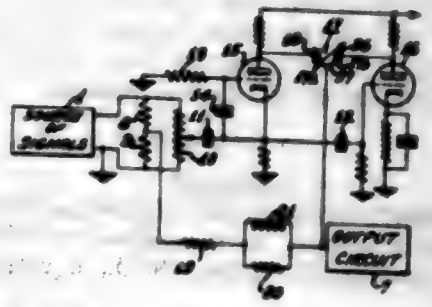
1. A frequency changer for receiving ultra-high frequency signals of a given frequency, comprising a plurality of resonant cavities at least a part of the walls of which are very thin, cooling means for keeping the walls at a temperature near absolute zero to make the same supraconductive, means for creating constant magnetic fields perpendicular to said part of said walls, first coupling means for introducing the energy of said signals into said cavities, second coupling means for introducing the energy of a local ultra-high frequency wave having a frequency different from said given frequency into said cavities, and third coupling means inductively coupled to said part of said walls and receiving an alternating electromotive force having a frequency equal to the difference of the frequencies of said signals and local wave.

2,863,999

WAVE SHAPER

Hubert French, Brooklyn, N. Y., assignor to Radio Corporation of America, a corporation of Delaware

Application April 21, 1953, Serial No. 350,090
11 Claims. (Cl. 250—27)



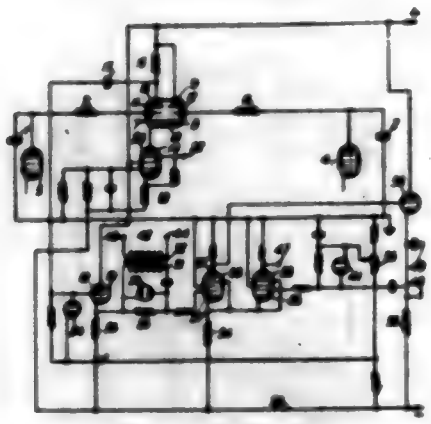
1. Wave shaping apparatus comprising in combination a signal source, means coupled to said source for inverting a portion of said signal, means coupled to said source for differentiating a portion of said signal, means coupled to said inverting means for differentiating said inverted portion of said signal, means in cascade with one of said differentiating means for changing the relative time phase of said differentiated signal portions, and means coupled to both said differentiating means and to said source for adding the resulting differently time phased differentiated signal portions to said signal.

2,864,888

APPARATUS FOR COMPARING THE INSTANTANEOUS VALUES OF TWO VOLTAGES

David William Elson, Buckhurst Hill, England, assignor to The General Electric Company Limited, London, England

Application March 3, 1954, Serial No. 413,909
Claims priority, application Great Britain March 5, 1953
6 Claims. (Cl. 250—37)



1. Apparatus for periodically comparing the instantaneous value of two voltages comprising comparison means to derive a control voltage which at any instant is dependent upon the difference between the instantaneous value of the two voltages to be compared and which has a value that lies within a range of values that is small compared with the range of possible values of the voltages to be compared and means responsive to the control voltage having a value beyond a predetermined value, the means responsive to the control voltage comprising a circuit having two stable states that is formed by a pair of thermionic valves each of which has a cathode, a control grid and an anode and a cathode circuit which is common to the two valves of this pair and which includes resistance, in each of the stable states of this circuit one of the valves of this pair being conducting and the other cut off, a path to supply the control voltage to the control grid of one of the valves of the said pair, means to supply a steady bias voltage to the control grid of the other valve of the said pair, means operable periodically and for a time immediately before each comparison of the instantaneous value of the two voltages to be compared to cause the circuit having two stable states to take up a predetermined one of the two states so that at the end of such a time the circuit either remains in that state or changes over to the other state in dependence upon the magnitude of the control voltage relative to the said bias voltage, and resistance connected in the anode circuit of one of the valves of the said pair, the anode voltage of that valve of the said pair that has the said resistance in its anode circuit having one of two values dependent upon the magnitude of the control voltage.

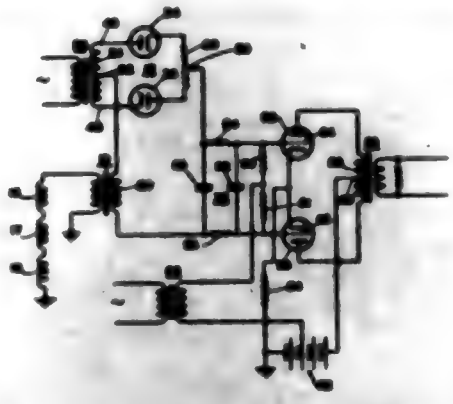
2,864,891

DIRECT CURRENT MODULATOR

Frank Praplo, Paterson, N. J., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware

Original application September 23, 1949, Serial No. 117,476. Divided and this application October 29, 1954, Serial No. 465,515
7 Claims. (Cl. 250—27)

1. A modulator having a limited output comprising a pair of electron tubes each having a plate, control electrode and a cathode, said plates being connected to opposite ends of the primary of an output transformer, a direct current supply connected to a center tap of said transformer, said cathodes being connected to ground potential through a common cathode resistor, means for applying an alternating current potential to said grids from a source of alternating current power, and means for applying a direct current signal to said grids of equal and opposite potential for providing an alternating cur-



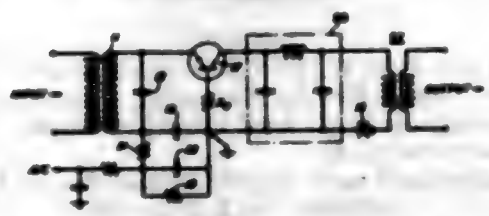
rent signal across the output transformer proportional to said direct current signal but limited in amplitude by the degenerating action of said common cathode resistor for large input signals.

2,864,892

TRANSISTOR DETECTOR

Harold M. Straube, Mendham, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application September 16, 1953, Serial No. 380,554
1 Claim. (Cl. 250—31)



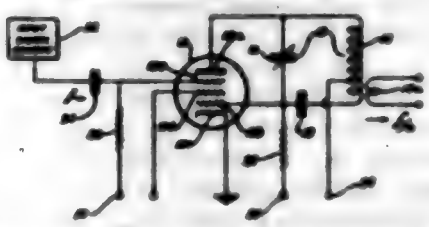
A large-signal detector for modulated carrier waves comprising a transistor having emitter, base, and collector electrodes and a current amplification factor exceeding unity, input circuit means for applying said waves between said emitter and base electrodes, said base and emitter electrodes having a bias potential thereacross of substantially zero volts, output circuit means connected between said collector and base electrodes, said output circuit means comprising filter means for transmitting low frequency modulation signals and attenuating the high frequency carrier, means for regeneratively coupling said collector and emitter electrodes to a degree slightly less than the instability threshold of said transistor comprising an impedance element connected in series with said base electrode and common to a first circuit interconnecting said emitter and base electrodes and a second circuit interconnecting said collector and base electrodes, said first circuit including a capacitor shunted by a resistor.

2,864,893

GATING FREQUENCY DIVIDER

Lloyd A. Addleman, Los Altos, Calif., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

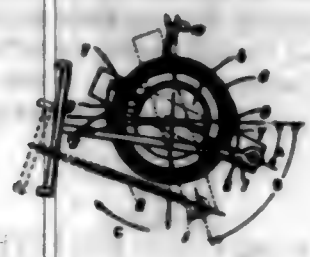
Application September 19, 1955, Serial No. 535,120
2 Claims. (Cl. 250—36)



1. A frequency divider including a multi-grid vacuum tube, said tube having an anode, a cathode, and multiple

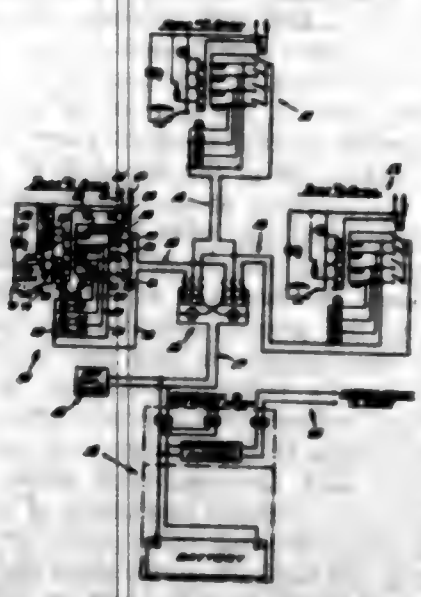
control grids between said anode and said cathode, a resonant circuit having connections at opposite terminals thereof to said anode and to one of said control grids respectively, and a signal connection from said cathode to a signal point in the resonant circuit between said terminals, cut-off bias means for the other of said grids, and a signal input source connected to said other grid, the natural frequency of said resonant circuit being a submultiple of said input signal.

2,864,884
BUCKY-GRID X-RAY APPARATUS
Anthony Antal Nemet, Richmond, William Frederick Cox, London, and Colin Leslie Bennett, Wallington, England, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application October 29, 1954, Serial No. 465,676
Claims priority, application Great Britain November 2, 1953
4 Claims. (Cl. 250—62)



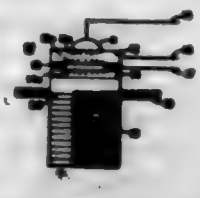
1. An X-ray photographic device including a Bucky grid diaphragm comprising a source of electrical energy, a system comprising a driving mechanism for applying at least approximately sinusoidal reciprocating motion to the Bucky grid, a phasing control means including a rotating part operatively connected to said driving mechanism, a pair of contacts in series with the source of electrical energy for producing the X-ray tube discharge current to be initiated, and a housing mounted for limited rotation about said rotating part, said housing carrying at least one contact of said pair of contacts.

2,864,885
STANDBY ELECTRICAL SYSTEM
Carmelo Ippolito, Seymour, Conn., assignor to Dual-Lite Company, Inc., Bridgeport, Conn., a corporation of Connecticut
Application November 28, 1956, Serial No. 624,932
11 Claims. (Cl. 307—64)



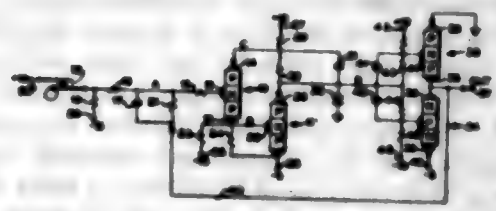
1. In a standby electrical system, a main power source; an auxiliary power source; a standby electrical circuit for energization from said auxiliary source; a circuit control means rendered closed in response to failure of said main power source, for connecting the standby circuit to the auxiliary source; signal means operable from said main source; and means responsive to an open circuit in said standby circuit, for causing energization of said signal means during intervals that the said circuit-control means are open.

2,864,886
COOLING STRUCTURE FOR SEMICONDUCTOR DEVICES
Edwin O. Vandeven, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application July 6, 1956, Serial No. 596,175
8 Claims. (Cl. 307—88.5)



1. A semiconductor structure for removing self-generated heat from a semiconductor device comprising a body of semiconductor material having a first and second region of one conductivity type separated by a third region of opposite conductivity type to form a first junction with said first region and a second junction with said second region, a second body of semiconductor material of said opposite conductivity type having a region of said one conductivity type forming a junction within said second body, means for connecting the region of said second body of said one conductivity type to said second region, and a heat conductive stud secured to said second body of semiconductor material.

2,864,887
TRANSISTOR TRIGGER CIRCUIT
Gerung L. Clapper, Vestal, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 4, 1957, Serial No. 700,668
7 Claims. (Cl. 307—88.5)



1. In a trigger circuit the combination comprising, a first transistor, input filtering means for said transistor, input signal means connected to said filtering means for controlling the conductivity of said transistor, a second transistor controlled by said first transistor to assume a state of conductivity opposite to that of said first transistor, inverter driver means connected to the output of said second transistor, and means for feeding the output from said inverter driver means back to said input filtering means to integrate said input signal.

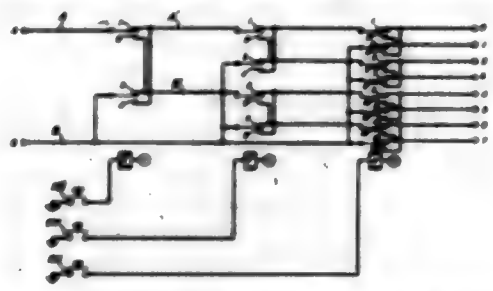
2,864,888
RELAY SELECTING CIRCUIT
Edward F. Moore, Chatham, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application December 28, 1955, Serial No. 555,853
21 Claims. (Cl. 307—112)

20. A relay system having two relays, a contact group having a total of six sets of transfer contacts on said relays, two conductors, numbered 1 and 2, connectable through said contacts to four conductors, numbered 3,

arms to sense the polarity of a direct current voltage

2,864,914

4, 5 and 6, means for controlling said relays in four permutative combinations at four different times, means repsonsive to said controlling for arranging said contacts in four different manners at four different times, means responsive to said arranging for selectively con-



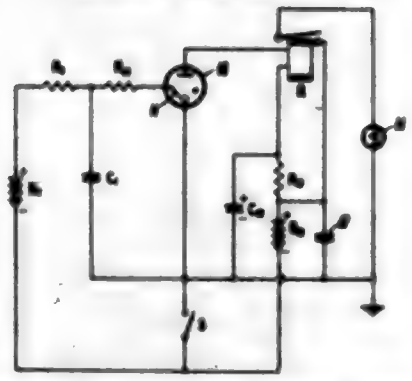
necting said conductor 1, singly, to any desired different one of said contacts 3, 4, 5 and 6 at said four different times, and means responsive to said arranging and dependent upon each said single selection for connecting all of the non-selected conductors, of the group 3, 4, 5 and 6, simultaneously to said conductor 2, at each of said times.

2,864,009

CONSTANT FREQUENCY BATTERY OPERATED RELAXATION OSCILLATOR

Paul A. Marsal and Norman M. Potter, Rocky River, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Application November 20, 1956, Serial No. 623,452
4 Claims. (Cl. 307—132)



3. A device of the character described which comprises a relaxation oscillator including a gaseous discharge tube having a control grid, cathode, and plate, self-sustaining means in the grid circuit comprising a first battery and an associated resistance-capacitance network for controlling the oscillations of the circuit and maintain them constant over a wide range of plate voltage, a plate circuit including a condenser and a relay coil in series with the tube, a second battery connected to charge the condenser, a resistance in series with said second battery and condenser for controlling the time required to charge the condenser, a pair of contacts associated with the relay coil, said second contacts being adapted to complete a relatively high current load circuit which is connected to the two terminals of said second battery, the combination therewith of a second condenser placed in shunt across said second battery to extend the operating range of voltage from said second battery within which the frequency of discharge from said tube is constant.

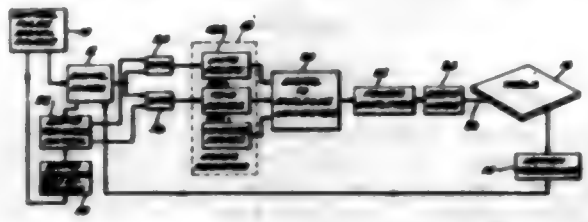
2,864,010

RAPID TRAVERSE SYSTEM

Jack Rosenberg, Pacific Palisades, and Norman L. Olson, Los Angeles, Calif., assignors, by mesne assignments, to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application October 7, 1957, Serial No. 688,714
7 Claims. (Cl. 307—149)

7. A digital servoloop arrangement having provision for enlarging or reducing its response characteristics comprising a reversible counter having a plurality of serially connected stages of increasing order, a source of motion-command pulses, means for selectively applying said motion-command pulses to the lowest-order stage of said counter when no enlargement of servoloop response characteristics is desired and to a higher-order stage of said counter when an enlargement of response characteristics is desired, a digital-to-analog converter coupled to said



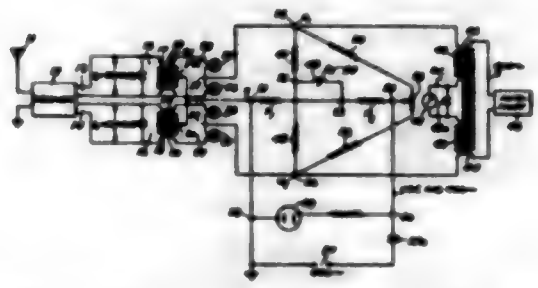
counter to convert its output to an analog value, servomotor means to effectuate motion in response to said analog value, transducer means to provide a response pulse responsive to an increment of motion, and means for selectively applying said response pulse to the lowest order stage of said counter when no reduction of servoloop response is desired and to a higher order stage of said counter when a reduction of response characteristics is desired.

2,864,011

AIRCRAFT NAVIGATION RECEIVER CIRCUITS

Robert T. Adams, Short Hills, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application October 14, 1957, Serial No. 690,054
12 Claims. (Cl. 307—149)



9. An indicating control circuit for automatically controlling an alternating current phase responsive mechanism by detecting information from first and second input signals comprising a bridge circuit having a first and second arm, a first and second input transformer each having a primary winding and a center tap secondary winding respectively serially coupled in each of said first and second arms, a first and second pair of thermal resistance elements serially connected across an associated secondary winding, one of the terminals of each of said arms being the junction of the corresponding pair of thermal elements and the other terminal thereof being the center tap of the corresponding secondary winding, means to couple the first and the second input signals respectively to the primary windings of said first and second input transformers, a third and fourth arm each including at least a resistance element, an alternating current exciting voltage source serially connected with a condenser, a current rectifier means, said rectifier means coupled across said last-mentioned series connection, means coupling the common conections of said last-mentioned series connection and said rectifier means between the junction of said first and second arms and the junction of said third and fourth arms to apply an exciting voltage across said bridge circuit having alternating current and direct current components, direct current sensitive indicating means coupled between the junction of said first and third arms and the junction of said second fourth

2,864,016

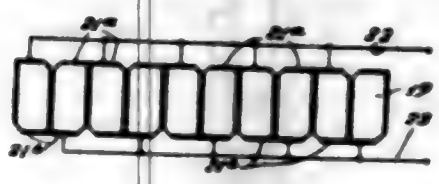
2,864,018

arms to sense the polarity of a direct current voltage unbalance of said bridge circuit, and alternating current phase responsive means coupled between said last-mentioned junctions to respond to an alternating current phase unbalance across said bridge circuit.

2,864,012
MEANS FOR GENERATING ELECTRICAL ENERGY FROM A RADIOACTIVE SOURCE
Alexander Thomas, Weston, and Roger Sweetser, South Acton, Mass., assignors to Tracerlab, Inc., Boston, Mass., a corporation of Massachusetts
Application October 12, 1953, Serial No. 385,612
7 Claims. (Cl. 310—3)

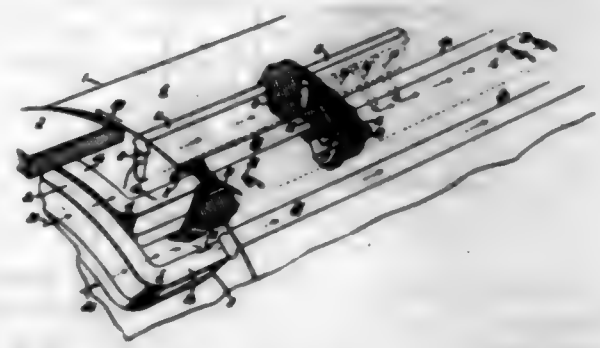
1. Apparatus for primarily generating electrical energy comprising a plurality of spaced, parallel, planar electrodes each constituted by two contacting materials having appreciably different work functions, a like plurality of annular insulating spacers separating said electrodes, means including said spacers confining an ionizable gas in the spaces between said electrodes whereby said gas is in contact with said electrodes, and a source of beta radiation consisting of tritium disposed in each of the spaces between electrodes, the spacing between said electrodes and the disposition of said tritium being such that substantially all of the energy of the beta radiation from the tritium is expended in ionizing said gas.

2,864,013
SENSITIVE STRAIN RESPONSIVE TRANSDUCER AND METHOD OF CONSTRUCTION
John F. Wood, Buchanan, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich.
Application June 29, 1953, Serial No. 364,679
2 Claims. (Cl. 310—8.3)



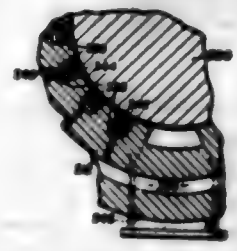
2. A strain sensitive bender type transducer comprising a plurality of piezoelectric elements having six surfaces parallel to the axis thereof, the first and second surfaces and third and fourth surfaces being parallel to each other, respectively, and the first and third and second and fourth surfaces being joined by the fifth and sixth surfaces, respectively, a coating of electrically conducting material disposed on the first, second, third, and fourth surfaces, the fifth and sixth surfaces being uncoated, said elements being secured to each other in a stack with the coating of one element bonded to the coating of the adjacent element and the uncoated surfaces of said elements confronting each other.

2,864,014
VENTILATION OF THE INNERMOST COIL OF A GENERATOR ROTOR WINDING
Nickolas Schmitt, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application August 7, 1957, Serial No. 676,830
4 Claims. (Cl. 310—61)



1. A dynamoelectric machine rotor core member having winding slots, a distributed hollow conductor field winding disposed in said slots, each pole of the field winding having a plurality of concentric coils spanning the pole center, the pole center portion of the rotor defining first axial passage means opening through the end of the rotor, the rotor and portions of the innermost coil immediately surrounding the pole center defining second passage means interconnecting the first passage means and said innermost coil for admitting cooling gas therein to cool the axial end portions of the innermost coil, and outlet passage means defined by the rotor for venting the cooling gas from said innermost hollow conductor after it has cooled the axially extending end portions of the innermost coil.

2,864,015
ELIMINATION OF COOLING LIQUID DRAG IN EDDY CURRENT DEVICES
William F. King, Wauwatosa, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application January 24, 1956, Serial No. 561,039
3 Claims. (Cl. 310—93)



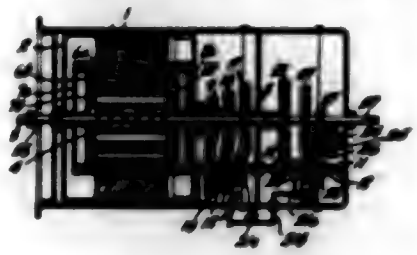
1. An eddy current dynamometer comprising a rotor member, a pole carrying member mounted for limited rotation and having axially extending, radially directed pole teeth spaced equidistantly from said rotor member, said pole teeth having spaces between said teeth, means provided in said spaces to form an arcuately smooth, continuous surface between adjacent pole teeth, said means being formed to provide a space between said means and the base of the said openings between said teeth and extending axially throughout the length of said teeth, said means being provided with axially spaced apertures which provide a communication between said rotor and said space adjacent said base of said openings, liquid coolant inlet means, further apertures providing communication between said space adjacent said base of said openings and said liquid coolant inlet means to provide for the passage of liquid coolant from said liquid coolant inlet means through said further apertures then through said apertures and onto the surface of said rotor member.

2,864,020
ELECTRON DISCHARGE DEVICE

municate; a laterally extending compartment communi-

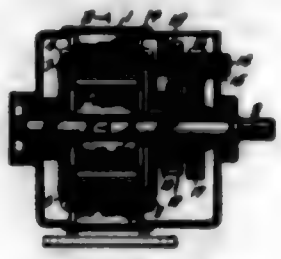
for enlarging or reducing its response characteristics com- and third arms and the junction of said second fourth

2,864,016
ELECTROMAGNETIC TRANSMISSION TORQUE CONVERTER
Dimo Dimitroff Waltscheff, New York, N. Y.
Application November 28, 1955, Serial No. 549,470
17 Claims. (Cl. 310—102)



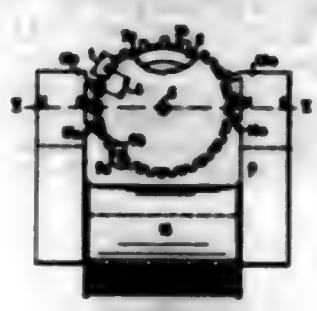
1. An electromagnetic transmission torque converter comprising an input shaft to be driven by a prime mover, inductive impeller means coupled with said input shaft and adapted to produce a rotating magnetic field upon rotation of said input shaft, a plurality of rotors coaxial with said impeller means arranged to be impelled directly by said field, rotatable output means, torque converting members providing driving connections between said rotors and said output means with different speed ratios between the respective rotors and said output means, said rotors having electrically conductive components and magnetically permeable components arranged to provide paths with progressively proportioned path-to-path reluctance and regressively proportioned path-to-path magnetic reactance.

2,864,017
INDUCTO-MOTIVE POWER APPARATUS WITH A PLURALITY OF ROTORS
Dimo Dimitroff Waltscheff, New York, N. Y.
Application November 28, 1955, Serial No. 549,331
22 Claims. (Cl. 310—126)



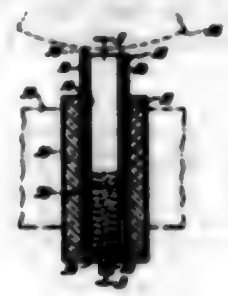
1. Inducto-motive power apparatus comprising means for producing a rotating magnetic field, a plurailty of rotors coaxial with said field-producing means, said rotors being disposed in said field to be impelled directly by said field, output means, torque-converting members providing driving connections between said rotors and said output means with progressively proportioned speed ratios between the respective rotors and said output means, said rotors having magnetically permeable components and electrically conductive components providing paths with progressively proportioned path-to-path reluctance and regressively proportioned path-to-path magnetic reactance, whereby at low rotor speeds when the frequencies induced in the rotors are relatively high the flux of said rotating magnetic field concentrates in paths of highest reluctance and lowest magnetic reactance and thereby concentrates the impelling force of the field in the rotor which is connected to the output means with highest speed ratio delivering lowest output speed and highest output torque and a high rotor speeds when the frequencies induced in the rotors are relatively low the flux of said rotating field concentrates in paths of lowest reluctance and highest magnetic reactance and thereby concentrates the impelling force of the field in the rotor which is connected to the output means with lowest speed ratio.

2,864,018
IMPULSE MOTOR
Nicolas Aeschimann, Bienne, Switzerland, assignor to Complications S. A., Neuchatel, Switzerland, a limited liability stock company of Switzerland
Application June 15, 1956, Serial No. 591,739
Claims priority, application Switzerland July 19, 1955
5 Claims. (Cl. 310—163)



3. In an impulse motor comprising a stator and a rotor, in which said stator comprises two permanent magnets, a horseshoe like core magnetically connecting said permanent magnets, an excitation coil carried by said core, the stator having armatures made of ferromagnetic material and carried by said permanent magnets, said armatures constituting poleshoes disposed on both sides of said rotor, substantially symmetrically with respect to a diametrical plan of said rotor, teeth made in said stator armatures, said teeth being located along arcs of a circle concentric to said rotor and facing said rotor, and in which said rotor comprises a ring-shaped permanent magnet magnetized in the direction of the revolving axis of said rotor, at least one rotor armature fastened to a front face of said ring-shaped permanent magnet, rotor teeth made in said rotor armature and located at the circumference of said rotor armature, whereby the pitch of said rotor's teeth is equal to the pitch of said stator's teeth, and in which said stator teeth comprises each a foot and a head carried by said foot, said head having the general shape of a triangle extending only on one side of said foot, and said rotor teeth having the general shape of a rectangle.

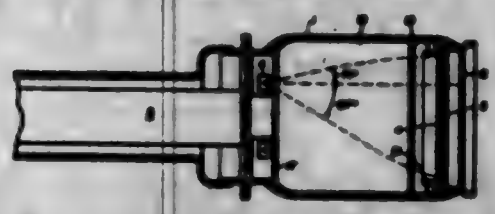
2,864,019
ELECTRICAL BRUSH HOLDER
James Gordon, Chicago, Ill.
Application May 10, 1957, Serial No. 658,395
6 Claims. (Cl. 310—247)



1. An electrical brush holder device, comprising, a shell of thermoplastic material, a metallic sleeve received within the shell, notches in opposite walls of said sleeve opening into its inner end each having a mouth of smaller diameter than the diameter of the notch spaced from its mouth, lugs on the inner walls of the shell registering with the notches and having an axial length greater than the length of the notch, whereby when the sleeve is pushed into the shell with the notches over the lugs and pressed home into the end of the shell, said lugs spread to fill the notches to provide positive interlock between the shell and the sleeve.

a cold cathode, a layer of alkaline-earth oxides on said 6 to 12 volts, said electron tubes comprising a cathode

2,864,020
ELECTRON DISCHARGE DEVICE
Paul Rudnick and Michael F. Tooley, Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation
Application October 16, 1956, Serial No. 616,294
2 Claims. (Cl. 313—71)



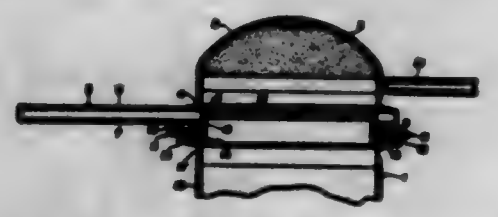
1. A cathode ray tube comprising: a planar electrode; a ring flood gun parallel to and facing said planar electrode, said ring gun comprising an annular anode shell enclosing an annular cathode, a sleeve electrode concentric inside of said shell, an annular electrode concentric outside of said shell and approximately in the plane of the forward edge thereof; and a pair of spaced apart accelerating and forming electrode sleeves arranged end-to-end between said annular electrode and said planar electrode, said annular electrode being connected to the adjacent one of said accelerating and forming electrodes, said accelerating and forming electrodes cooperating with said ring gun and said annular and sleeve electrodes to distribute the electron emission from each elemental segment of said ring cathode over the entire area of said planar electrode.

2,864,021
COLOR KINESCOPE ADJUNCT
Angelo G. Lazzery, Oaklyn, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application September 1, 1955, Serial No. 531,940
6 Claims. (Cl. 313—77)

1. Electromagnetic convergence apparatus for a cathode ray tube, which apparatus comprises: a plurality of magnets and means for holding said magnets in spaced relationship, said means comprising a foot member for each of said magnets, said foot members being arranged around such tube and having mating means at their extremities for slidably engaging the extremities of adjacent foot members, said mating means being arranged to permit substantially only radial movement of said foot members.

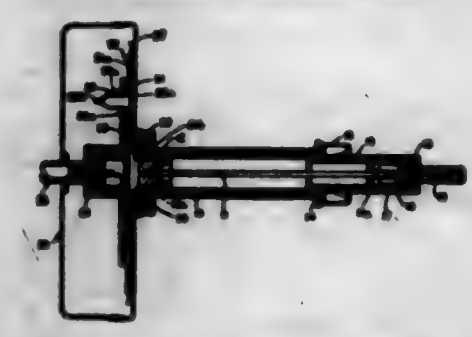
2,864,022
ELECTRON DISCHARGE DEVICE
Cyril L. Day, Huntington, Ind., assignor to International Telephone and Telegraph Corporation
Application December 20, 1956, Serial No. 629,726
1 Claim. (Cl. 313—94)

In an electron discharge tube: an evacuated envelope having first and second spaced apart sections, one of said envelope sections having a photoelectric cathode therein; first and second spaced apart clamping ring members secured respectively to the adjacent ends of said envelope sections; an annular bellows connecting said first and second clamping ring members whereby said first and second envelope sections normally communicate; a laterally extending compartment communicating with the interior of said envelope intermediate said clamping ring members; and a thin flat shutter member transversely slidable between a first position in said compartment in which said first and second envelope sections are in communication and a second position in which said shutter extends across said envelope between said clamping ring members thereby isolating said first and second envelope sections; said clamping ring members respectively having first and second annu-



lar portions, said first clamping ring portions extending outwardly from the exterior of the respective envelope section, said second clamping ring portions being respectively arranged annularly to engage the opposite faces of said shutter member in its second position responsive to clamping of said first clamping ring portions around their peripheries thereby clamping said shutter member in its second position and sealing said envelope sections from each other to permit activation of said photo-cathode without contaminating elements in the other envelope section.

2,864,023
VOLTAGE REGULATOR TUBE
Arthur J. Stokes, Hudson, and Frederic W. Reuter, Jr., Cleveland, Ohio, assignors to The Victoreen Instrument Company, Cleveland, Ohio
Application August 22, 1956, Serial No. 605,556
7 Claims. (Cl. 313—148)



1. A voltage regulator tube comprising an envelope which defines a gas chamber having spaced electrodes and containing ionizable gas, a plate secured to one end of said envelope and extending transversely thereof, a substantially planar diaphragm secured around its periphery to said plate and away from its periphery extending in closely spaced confronting relation to said plate and defining therewith a pressure chamber, and means for adjusting said diaphragm toward or away from said plate to vary the volume of said pressure chamber and thereby vary the gas pressure in said gas chamber.

2,864,024
GLOW-DISCHARGE TUBE
Gerardus Josephus Marie Ahsmann, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application October 28, 1955, Serial No. 543,563
Claims priority, application Netherlands
November 16, 1954
1 Claim. (Cl. 313—188)

A glow-discharge tube containing an inert gas filling in said tube at a pressure of about 18 mms. of mercury,

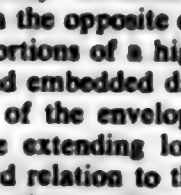
2,864,029

terial in accordance with an input signal to cause said

output means with lowest speed ratio.

lock between the shell and the sleeve.

a cold cathode, a layer of alkaline-earth oxides on said cathode for enhancing the emission thereof, an anode spaced from said cathode, and a layer of the element



selected from the group consisting of gold, silver and thorium covering said anode for reducing the electron emission therefrom.

2,864,025

INFRARED RAY GENERATING DEVICE

Alton G. Foote, Wickliffe, and William F. Hodge, Lyndhurst, Ohio, assignors to General Electric Company, a corporation of New York

Application August 24, 1953, Serial No. 376,842
5 Claims. (Cl. 313—279)

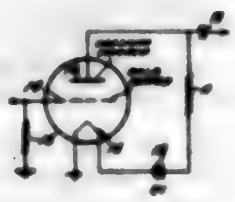
1. An infrared ray generating device of incandescible filament type comprising a hermetically sealed tubular envelope of small diameter of the order of 10 millimeters and consisting essentially of fused silica, lead-in conductors sealed through the opposite ends of said envelope and having foliated portions of a highly refractory metal hermetically sealed and embedded directly in compressed integral end portions of the envelope, a coiled filament of bare tungsten wire extending longitudinally through said envelope in spaced relation to the inner wall thereof and connected at its ends to said conductors, and a plurality of combined filament support and getter members of tantalum engaging the filament at spaced points therealong and engageable with the inner wall of the envelope and supporting the filament in spaced relation thereto, the filament being of a diameter and length to be heated to a temperature in the range of 2400–3000° K. at design voltage and the envelope diameter and filament size being correlated to provide a wall wattage loading in excess of about 7 watts per square centimeter of envelope surface area.

2,864,026

ELECTRIC DISCHARGE TUBE

Johan Lodewijk Hendrik Jonker and Hendrik Groendijk, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application March 22, 1954, Serial No. 417,776
Claims priority, application Netherlands March 26, 1953
2 Claims. (Cl. 313—293)



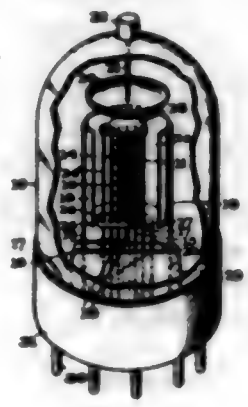
1. An electron tube circuit in which the plate voltage supplied to the electron tubes thereof is in the range of 6 to 12 volts, said electron tubes comprising a cathode, a control electrode having a conductive core and coating thereover of a high-work function material for obtaining a negative contact potential for said electrode and thereby rendering said electrode more negative with respect to said cathode, and an anode having a surface coating of a low-work function material for obtaining a positive contact potential thereby making said electrode more positive with respect to said cathode.

2,864,027

GRID-CONTROLLED SPACE DISCHARGE DEVICE

William R. Aiken, Berkeley, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada

Application June 21, 1954, Serial No. 437,981
15 Claims. (Cl. 313—296)



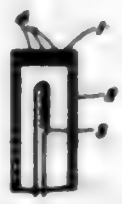
1. An electron discharge device comprising an envelope, and within said envelope a cathode, a control grid adjacent said cathode, electrostatic means surrounding and in substantially co-extensive relation with said control grid and said cathode establishing a positive field relative to said cathode to attract the electrons from said cathode and through said control grid to a zone adjacent thereto, an anode positioned to attract said electrons from the zone adjacent said electrostatic means and shielding means interposed between said anode and said cathode to prevent a direct electron flow therebetween.

2,864,028

THERMIONIC DISPENSER CATHODE

Patrick P. Coppola, Dobbs Ferry, N. Y., assignor to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

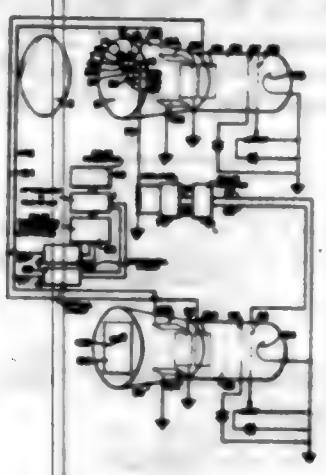
Application August 15, 1955, Serial No. 528,296
3 Claims. (Cl. 313—346)



1. A dispenser cathode comprising a porous sintered tungsten body, a supply of a fused mixture of barium oxide and aluminum oxide containing a molar excess of barium oxide within the pores of said body, and a plurality of spaced apart molybdenum strips embedded in a surface of the body constituting the emissive surface of that body, said strips being integrally united with the sintered body to provide zones in which surface pores are completely closed, said strips having a width not substantially exceeding the migration distance of barium over molybdenum.

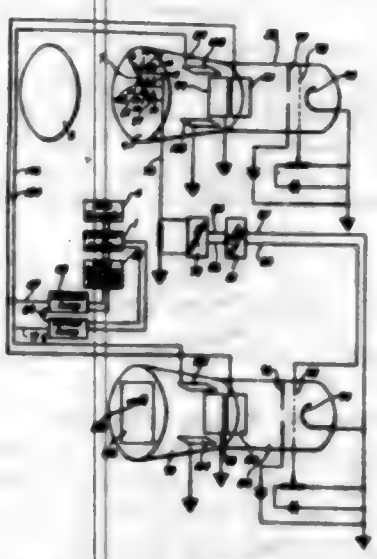
jacent and spaced from said target electrode, and means disposed adjacent and parallel to said target electrode for variable in the intensity of illumination over a range from full brilliance to dim-out and comprising a fluorescent

2,864,029
ELECTRIC SYSTEM
Robert Harvey Rines, Brookline, Mass.
Original application March 18, 1944, Serial No. 527,375. Divided and this application May 23, 1947, Serial No. 750,021
27 Claims. (Cl. 315—1)



1. A mosaic of absorbing and rectifying radio-receiving elements having negative temperature coefficients of resistance, the resistance of the elements varying in accordance with the radio waves received thereby.

2,864,030
RADIO-RECEIVING AND SCANNING SYSTEM
Robert Harvey Rines, Brookline, Mass.
Original application March 18, 1944, Serial No. 527,375. Divided and this application May 23, 1947, Serial No. 750,022
35 Claims. (Cl. 315—1)

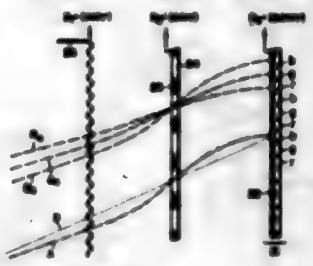


1. An electric system having, in combination, an oscilloscope-like member having a mosaic of radio-receiving elements for absorbing radio waves and means for producing an electron stream for impinging directly upon the elements, and means for causing said stream to scan the elements.

2,864,031
ELECTRICAL STORAGE TUBE
Roland Wright Smith, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application December 30, 1950, Serial No. 203,705
5 Claims. (Cl. 315—12)

1. A cathode ray device comprising an evacuated envelope containing a storage electrode which comprises a phosphor layer, a photo-conductive layer, and an interposed light-transparent electrically conductive layer; a first source of electrons for exciting said phosphor material in accordance with an input signal to cause said phosphor material to emit light upon said photo-conductive material; and a second source of electrons for creating an electrical charge between a surface of said photo-conductive material and said electrical conductor when said phosphor is not emitting light.

2,864,032
METHOD AND APPARATUS FOR COLOR TELEVISION
Mark E. Andersky, Northbrook, Theodore S. Noakowicz, Wooddale, and Constantin S. Szegho, Chicago, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Application May 23, 1955, Serial No. 510,186
10 Claims. (Cl. 315—13)



1. A color television image reproducer comprising: electron gun means, including electron-emissive cathode means, for projecting a plurality of electron beams through a common deflection space along a corresponding plurality of reference paths; a multi-color luminescent target disposed transversely of said reference paths in spaced relation to said electron gun means; a direction-sensitive color-selection barrier comprising a parallax mask disposed transversely of said reference paths intermediate said target and said electron gun means to form with said luminescent target, a direction-sensitive composite target structure; a field-compensation electrode encompassing substantially all of the portions of said reference paths intermediate said color-selection barrier and said deflection space; means for maintaining said color-selection barrier at a first predetermined potential positive with respect to said cathode means; means for maintaining said luminescent target at a second predetermined potential positive with respect to said cathode means, said second potential being very much higher than said first potential; and means for maintaining said field-compensation electrode at a third predetermined potential at least double said first potential and less than said second potential and of a magnitude to establish an effective electronic color center for said image reproducer which corresponds to the optical color center thereof.

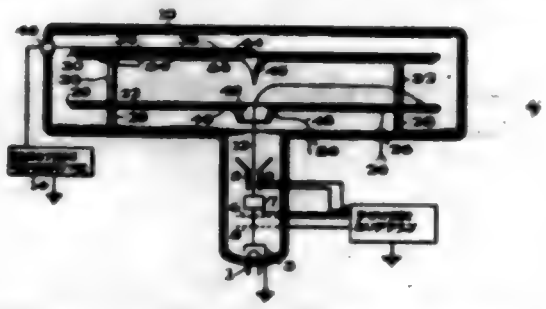
2,864,033
POLAR COORDINATE TUBE
William R. Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Application March 18, 1955, Serial No. 495,316
22 Claims. (Cl. 315—21)

1. A cathode ray tube comprising means for delivering a beam of electrons along a path, a planar target electrode, means for simultaneously rotating said beam; and bending said beam from said path to different paths ad-

nent of the system voltage comprising a first voltage meable wall portions magnetically insulated from each

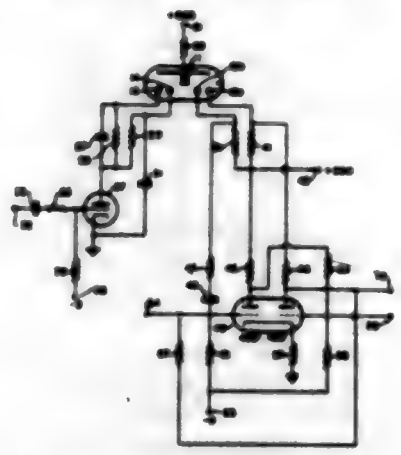
supplied to the electron tubes thereof is in the range of molybdenum.

jacent and spaced from said target electrode, and means disposed adjacent and parallel to said target electrode for



effecting deflection of said beam from said paths into registration with said target electrode.

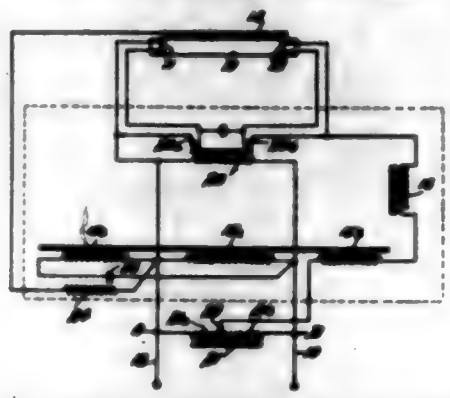
2,864,034
GATE RESET CIRCUIT
John E. Adams, Newtonville, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application January 11, 1957, Serial No. 633,590
10 Claims. (Cl. 315—84.6)



1. In combination a glow-discharge transfer counting tube having at least a zero cathode and a final cathode, means for applying pulses to be counted to said counting tube, a bistable circuit connected to said zero cathode and to said final cathode, said bistable circuit having a first condition of operation during which said zero cathode is held at a first potential and a second condition of operation at which said zero cathode is held at a second potential more positive than said first potential, means for applying a count-initiating pulse to said bistable circuit to switch the same from said first to said second condition of operation, said pulses to be counted being of sufficient amplitude to transfer said glow discharge during said second condition of operation and of insufficient amplitude to transfer said glow discharge during said first condition of operation, said counting tube being operative upon application of a predetermined number of said pulses to be counted to cause said glow discharge to be transferred from said final cathode, and means connecting said final cathode to said bistable circuit operative in response to the transfer of said discharge from said final cathode to return said bistable circuit to said first condition of operation to transfer said glow discharge to said zero cathode to said bistable circuit final cathode being connected to said bistable circuit.

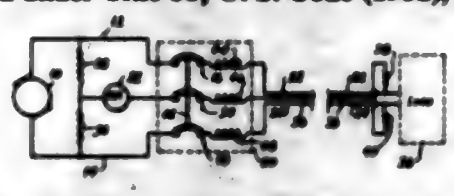
2,864,035
FLUORESCENT LIGHT DIMMING
Ariel R. Davis, Salt Lake City, Utah
Application December 23, 1955, Serial No. 555,139
2 Claims. (Cl. 315—97)

1. An illuminating apparatus operable from a low frequency alternating voltage supply having two lines and variable in the intensity of illumination over a range from full brilliance to dim-out and comprising a fluorescent lamp having a sealed glass tube containing an inert gas with small quantities of mercury and having first and second heated electrodes at respective ends of the tube, conductive means adjacent the electrodes, a variable transformer connected to one of the lines, means for connecting the first electrode to the other line, a transformer means having a ferromagnetic core with a high leakage flux, a first winding wound thereon and a second winding wound thereon to balance the lamp with changes in current



through the lamp, said first winding connected between said first electrode at one end and at the other end connected to the line connected to said variable transformer, said second winding connected at one end to said second electrode and at the other end to said variable transformer to connect said second winding and said lamp in series to vary the voltage thereacross and a high resistance connecting said conductive means to said first winding at the electrode end to provide from said first winding a potential between said second electrode and said conductive means to sustain an arc current through said lamp over the range of illumination.

2,864,036
PROTECTION SYSTEM FOR ELECTRIC WIRING
Rudolf Steiner, Levittown, Pa.
Application January 30, 1953, Serial No. 334,385
5 Claims. (Cl. 317—44)
(Granted under Title 35, U. S. Code (1952), sec. 266)

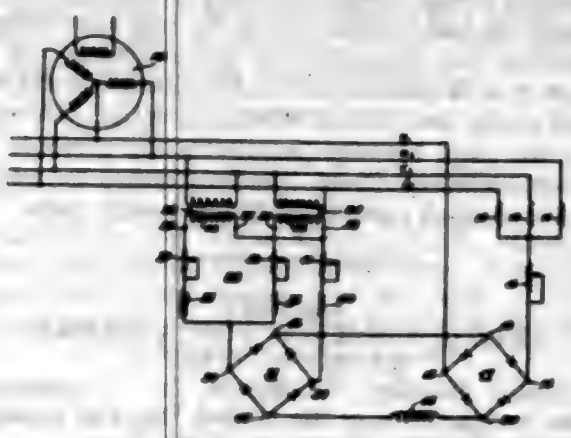


1. In an electrical system supplying a load from a source of electrical power through an insulated feeder line, a protection system comprising a shunt circuit coupling the source and the load electrically, said circuit including an exposed conductor physically coextensive with said feeder line throughout at least a portion of its critical length, the surface of said exposed conductor being tangent to the surface of the insulation of said feeder line throughout said coextensive portion, the shunt circuit further including fault-sensing electrical means in the line of the exposed conductor, breakdown of said insulation of said feeder line resulting in flow of current through at least part of said exposed conductor and said fault-sensing means.

2,864,037
FAULT DETECTOR FOR POLYPHASE CIRCUITS
Howard M. McConnell and Robert J. Lusk, Chagrin Falls, Ohio, assignors to Jack & Heintz, Inc., Cleveland, Ohio, a corporation of Delaware
Application September 10, 1956, Serial No. 608,793
3 Claims. (Cl. 317—47)

1. In a three phase distribution system, a first sensing network for sensing the negative sequence compo-

nent of the system voltage comprising a first voltage transformer having a primary connected across first and second phases of the system, a second voltage transformer having a primary connected across the second and third phases of the system, and a sequence segregation network connected to the transformer secondaries, a second sensing network for sensing the zero sequence



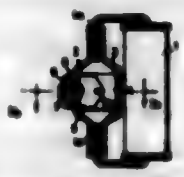
component of the system voltage, a first rectifier bridge connected to the output of the sequence segregation network, a second rectifier bridge connected to the output of said second sensing network, said rectifier bridges being connected for additively combining the outputs of said networks, and means responsive to the combined output of said bridges for performing a control function.

2,864,038

ELECTROMAGNETIC DEVICE

Alois Rubland and Josef Fischer, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany

Application September 12, 1955, Serial No. 533,866
Claims priority, application Germany September 15, 1954
6 Claims. (Cl. 317—171)



1. A polarized magnetic system comprising a stator having two pole shoes extending therefrom, an armature comprising a permanent magnet carrying two platelike members each forming two pole pieces one for magnetic cooperation with each of said stator pole shoes, and a device for rotatably mounting said armature, said device comprising a cross-sectionally U-shaped carrier made of non-magnetic material, adjusting means for adjustably connecting one of said platelike members with the base of said carrier, means for rotatably mounting the arms of said carrier, and spring means tending to hold said armature away from said carrier.

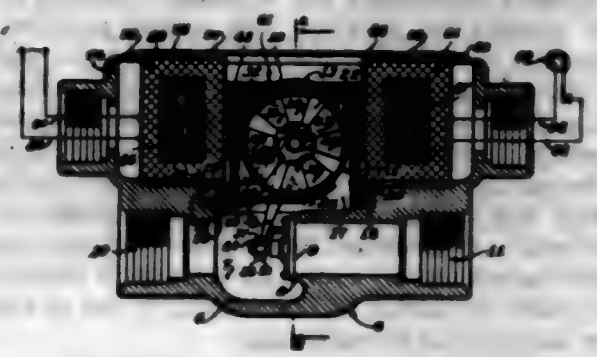
2,864,039

ELECTROMAGNETIC CONTROL DEVICE

Russell B. Matthews, Wauwatosa, Wis.

Application December 14, 1953, Serial No. 397,821
12 Claims. (Cl. 317—197)

1. An electromagnetically operated control device, comprising: a control body, an electromagnetic operator comprising a first unit within said body energizable by flux flow therethrough and including an actuatable member movable from a first position to a second position in response to such energization, said operator further comprising a flux-generating second unit outside of said control body, said control body having magnetically permeable wall portions magnetically insulated from each other and in flux conducting engagement with said first and second units to afford low reluctance flux paths be-



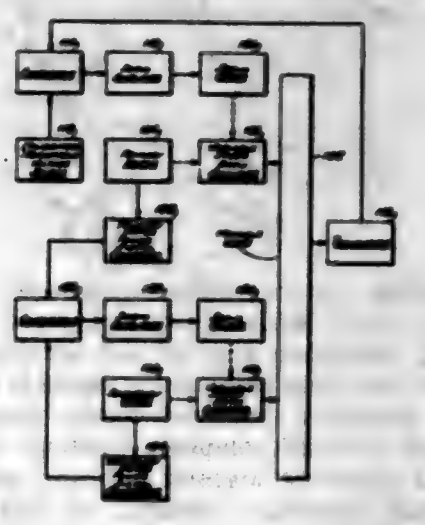
tween said operator units, said wall portions providing for energization of said first unit by magnetic flux from said second unit.

2,864,040

MULTIPLE ELECTRIC MOTOR DRIVE SYSTEM

David M. Trotsky, Webster, Mass.

Application February 1, 1955, Serial No. 485,629
11 Claims. (Cl. 318—8)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A system for operating a movable load by a plurality of power elements operating simultaneously, which comprises primary and secondary drives coupled to said load to operate it by joint effort, and each employing a three phase motor, first means for providing a first signal proportional to the power consumed by said primary drive in operating said load, second means for providing a second signal proportional to a desired ratio of the power consumed by said secondary drive in operating said load, servo means responsive to said signals for varying the power coupled from the secondary drive to said load in accordance with the difference between said first and second signals, each of said first and second means comprising a first transformer having a primary winding and first and second secondary windings; means for connecting the primary winding of said first transformer across two of the three-phase inputs to a respective one of said motors; an electron discharge device having at least first and second anodes, a control electrode and a cathode; means connecting one end of the first secondary winding of said first transformer to said first anode; means connecting one end of the second secondary winding of said first transformer to said second anode; first and second serially connected resistors; means connecting said serially connected first and second resistors between the other end of the first secondary winding and the other end of the secondary winding of said first transformer; a third resistor connected between said cathode and the junction of said first and second resistors; a second transformer having a primary winding and a secondary wind-

control either of two potentials to said reversible rotary

in each phase of the controlling machine to cause the

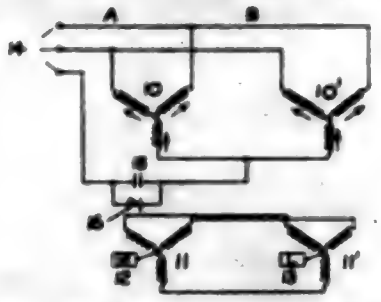
ing; means connecting the primary winding of said second transformer in series with the third of the three-phase inputs to said respective one of said motors, and a phase-shift network connecting the secondary winding of said second transformer between said control electrode and the junction of said first and second resistors, said network providing a phase shift such that the voltage between said control electrode and the junction of said first and second resistors is substantially in phase quadrature with the voltage between said anodes and the junction of said first and second resistors when said respective one of said motors is unloaded, whereby the voltage across said first and second serially connected resistors is proportional to the power consumed by said respective one of said motors in moving said movable load.

2,864,841

OPERATION OF DYNAMO-ELECTRIC MACHINES IN MUTUAL SYNCHRONISM

Shafi-uddin Ahmed Choudhury, Rugby, England, assignor to The British Thomson-Houston Company Limited, London, England, a British company

Application April 17, 1956, Serial No. 578,666
Claims priority, application Great Britain April 21, 1955
3 Claims. (Cl. 318—24)



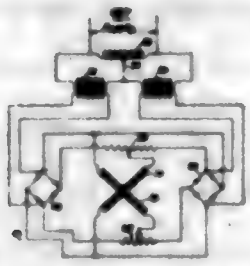
1. A system for operating in mutual synchronism transmitting and receiving dynamo-electric machines each having polyphase primary and secondary windings on relatively rotatable parts of the machine comprising a source of polyphase voltages, means connecting said source to the primary polyphase windings of said transmitting and receiving machines, means interconnecting the polyphase secondary windings on said transmitting and receiving machines, means for effecting relative rotation of said primary and secondary windings on said transmitting machines, rectifier means included in the connection between one of the phases of said source and the primary windings of said transmitting and receiving machines whereby to introduce into said primary windings a direct component of current derived from said source and impedance means shunting said rectifier means to permit the flow of alternating current from said source into said primary windings.

2,864,842

SERVOMOTOR CONTROL SYSTEM

Stephen M. MacNeille, Oak Ridge, Tenn., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application January 9, 1946, Serial No. 640,102
5 Claims. (Cl. 318—25)



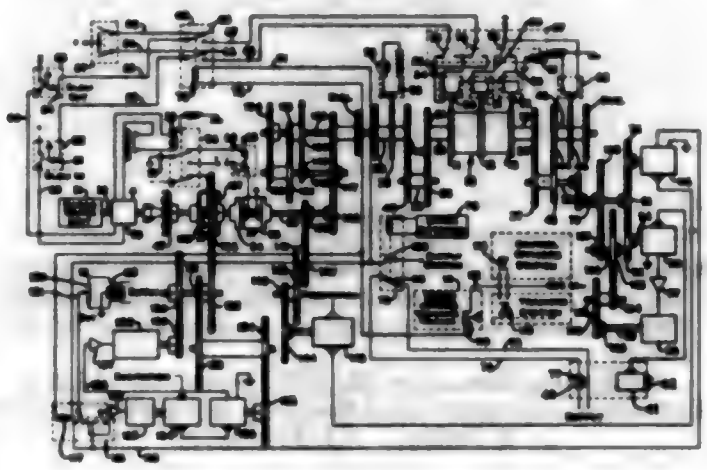
4. In an apparatus for controlling the angular position in a magnetic field of a rotor comprising two coils mounted mutually perpendicular, comprising a first source of alternating current connected to one of the rotor coils, a full wave rectifier between said first source and the other of the rotor coils, a second source of alternating current opposite in phase to said first source and connected to said other of the rotor coils, a full wave rectifier between said second source and said one of the rotor coils, and a power supply including a winding having an adjustable tap and connections to the said alternating current sources, the connection to the adjustable tap being common to both sources so that by adjusting it the energy supplied to the two current sources is varied differentially to vary the ratio between the alternating currents in the two rotor coils and in an inverse manner the ratio between the rectified currents in the two rotor coils.

2,864,843

MOTOR CONTROL FOR A RADAR RANGING UNIT

John Houck Hershey, Burlington, N. C., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application November 18, 1955, Serial No. 546,298
11 Claims. (Cl. 318—28)



11. A differential circuit switching comparative slew follow-up device comprising; a drum supporting a slew sense cam and two sector cams annularly therealong; a slew drive shaft driven by a reversible rotary motor, said shaft being mechanically coupled through a differential gear system to said drum to cause drum positioning in correspondence to angular positions of said slew drive shaft representative of range distance; a range designator shaft rotatable to angular positions representative of range distance, said designator shaft being mechanically coupled through said drum to cause drum positioning in correspondence to angular positions of said designator shaft; a supply voltage for said reversible rotary motor; an electro-magnetic brake on said slew drive shaft electrically associated with said supply voltage to energize said brake when said motor is inoperative; a transfer cam rotated by said designator shaft; electrical switches actuatable by said cams, the slew sense cam switch being single-pole-double-throw and the sector cam switches and transfer cam switch being single-pole-single-throw, the single pole of said slew sense cam switch and sector cam switches being connected in common; a relay unit actuatable by a circuit through said transfer cam switch, said relay unit having a reversing switch and a selector switch therein, the selector switch being adaptable to selectively switch a voltage source to either of said sector cam switches and the reversing switch being adaptable to reverse the voltage source for either throw position of said slew sense cam switch; and relay switch means controlled from the voltage source through said relay selector switch, said sector cam switches, said slew sense cam switch, and said relay reversing switch to

2,864,847

any voltage induced in said pick-up winding as by virtue

trol body, said control body having magnetically per-

former having a primary winding and a secondary wind-

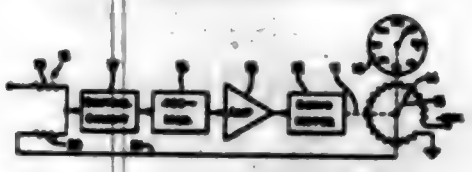
control either of two potentials to said reversible rotary motor to produce either of the rotary directions thereof, the slew sense cam and the transfer cam being constructed and arranged to cause reversible rotary motor rotation in a rotative direction of least revolutions to bring said slew drive shaft into representative range correspondence with that of said range designator shaft, and said sector cams being constructed and arranged to cause interruption of said reversible rotary motor operation when said slew drive shaft and said designator shaft are in representative angular coincidence.

2,864,044

SERVO SYSTEM DIRECTIONAL BEARING CONVERTER

Schuyler Pardee, Jr., New Vernon, N. J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 11, 1956, Serial No. 558,601
10 Claims. (Cl. 318—28)



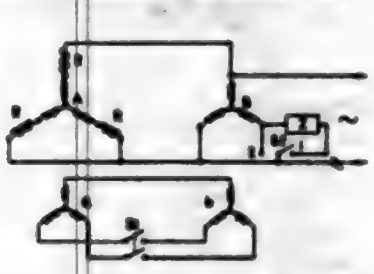
1. In an electrical-mechanical converter system comprising, motive means for reversibly driving throughout 360 degrees, a potentiometer of a character providing for relative rotation between the resistance element and the tap thereof coupled to said motive means to provide relative drive between the tap and resistance element thereof, a negative voltage placed across said potentiometer, a positive signal voltage input, means coupled to said potentiometer tap and to said signal voltage input for summing said voltages, circuit means coupling the summed voltage across a load to said motive means, means responsive to a summed voltage of a predetermined positive amount for adding thereto a relatively larger negative voltage, and means responsive to a summed voltage of a predetermined negative amount for adding thereto a relatively larger positive voltage, whereby said summed voltage is limited in magnitude and changed in polarity within predetermined limits.

2,864,045

SINGLE PHASE POWER SELSYN DRIVE

Shafi-uddin Ahmed Choudhury, Rugby, England, assignor to The British Thomson-Houston Company Limited, a British company

Application March 1, 1955, Serial No. 491,426
Claims priority, application Great Britain March 28, 1954
5 Claims. (Cl. 318—44)



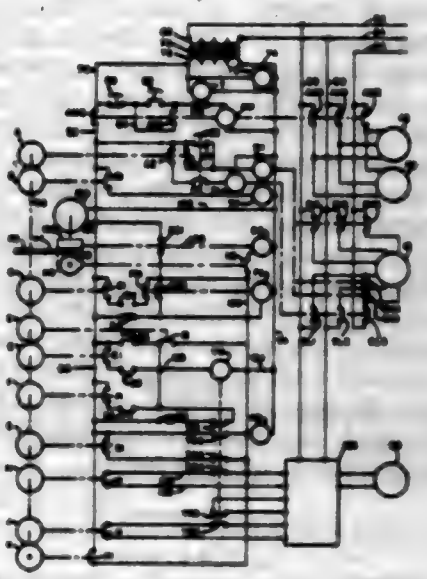
4. An arrangement for synchronising with a running controlling dynamo-electric machine having 3-phase star-connected primary and secondary windings, at least one other similar controlled machine, two phases of the primary windings of the controlling machine being connected at their outer ends to form a loop connection for circulating currents, said loop connection and remaining phase winding connection being connected to a single-phase supply, comprising impedance connected in series in each phase of the controlling machine to cause the ratio of the synchronised torque to the motoring torque of the controlled machine to be maintained high during the accelerating period, means for completing connections between the secondary windings of the machine, and means for interconnecting the primary windings of the controlled machine with those of the controlling machine, said means connecting the windings on the controlled machine corresponding with the loop connected windings of the controlling machine initially through a phase-splitting impedance which is short-circuited when the controlled machine is synchronised with the controlling machine.

2,864,046

ELECTRICAL CONTROL SYSTEM

Wayne B. Allen, Pemberton, Ohio, assignor to The Monarch Machine Tool Company, Sidney, Ohio, a corporation of Ohio

Application August 29, 1955, Serial No. 530,963
3 Claims. (Cl. 318—102)



1. In an electrical circuit for controlling a plurality of electrical devices, a plurality of predetermined control devices, motor means to actuate said predetermined control devices, said motor means driving an intermittent mechanism and said intermittent mechanism being connected to actuate said predetermined control devices, a solenoid connected to said intermittent mechanism to permit said motor to intermittently actuate said predetermined control devices; a control circuit for controlling the energization of said solenoid, said control circuit including first and second control power lines and a switch having normally open and normally closed contacts, a relay connected to said first control power line and having first and second normally open contacts, a normally closed contactor opened by energization of said solenoid connected to said second control power line and said second normally open relay contact, the normally closed contacts of said switch being connected to said second control power line and to said relay to energize said relay when said switch is not actuated, said solenoid-operated contactor and said second normally open relay contact being serially connected in parallel with said normally closed switch, said normally open contact and said first normally open relay contact being serially connected to said second power line and to said solenoid and said solenoid being connected to said first control power line to energize said solenoid whereby continuous actuation of said switch does not cause continued operation of said solenoid to prevent said predetermined control devices from moving continuously.

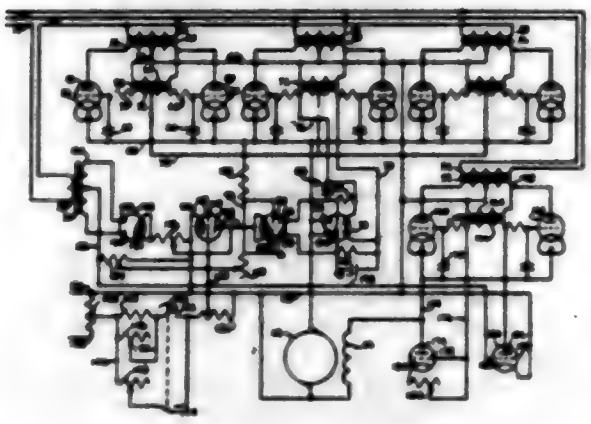
for positioning a control surface of the aircraft to con-trol the flight thereof, circuit means for controlling the

2,864,052

AUTOMATIC REGULATORS

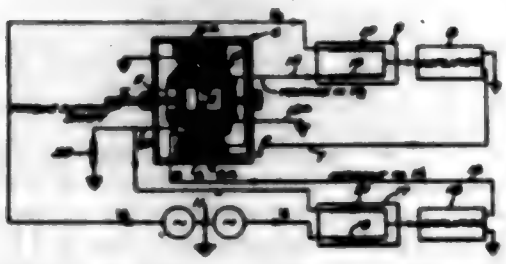
4. In an apparatus for controlling the angular position in a magnetic field of a rotor comprising two coils relay selector switch, said sector cam switches, said sense cam switch, and said relay reversing switch to

2,864,847
MOTOR CONTROL SYSTEM
Claude E. Greene and Wayne H. Ulman, Sidney, Ohio, assignors to The Monarch Machine Tool Co., Sidney, Ohio, a corporation of Ohio
Application January 6, 1955, Serial No. 480,101
7 Claims. (Cl. 318—338)



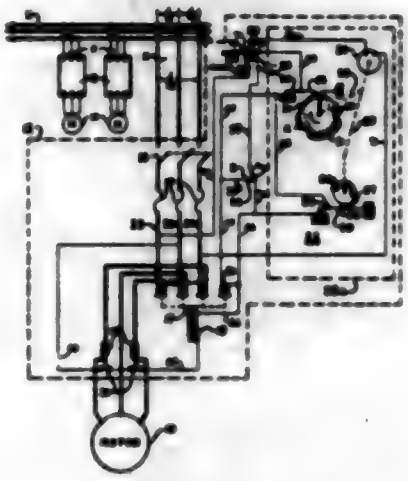
5. In a motor control system having an alternating current power supply and a thermionic grid controlled rectifier having a plate, a grid and a cathode, a motor supplied by said rectifier, means for shifting the phase of the rectifier grid relative to said supply, means to regulate the voltage of said grid with respect to said cathode to regulate the point at which the rectifier transmits current, said means including a main control tube having a plate, a grid, and a cathode, said plate being connected to said rectifier grid, said grid being connected to a resistance connected to a said rectifier cathode and said cathode being connected to the said rectifier plate whereby changes in voltage of said rectifier cathode with respect to said rectifier plate changes the main control tube grid voltage with respect to the main control tube cathode whereby the control system is self-regulating.

2,864,848
PRECISION TORQUE MOTOR
William H. Newell, Mount Vernon, N. Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N. Y., a corporation of Delaware
Application June 9, 1955, Serial No. 514,239
3 Claims. (Cl. 318—436)



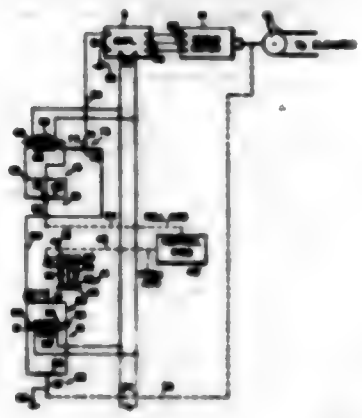
1. A precision torque motor comprising a torque unit having stator and rotor elements, a pick-up and rotor winding on one of said elements and a field winding on the other of said elements, a source of reference voltage arranged to apply a voltage across said field and rotor windings, said source being connected thereto by means of field and rotor circuits, respectively, a comparison network having a pair of resistive elements, one of said resistive elements being connected to said reference voltage source, a current regulating amplifier disposed in said field circuit and connected to the output of said comparison network, said pick-up winding being connected to the other of said resistive elements in said comparison network as a negative feed-back therefor whereby said comparison network is adapted to compare the voltage produced by said reference voltage source with any voltage induced in said pick-up winding as by virtue of change in field flux so that the field flux will be maintained in proportion to the voltage applied to the field circuit by said voltage source.

2,864,849
UNDERVOLTAGE PROTECTING CONTROL SYSTEM
Jack Sheets, Randolph, Ill., assignor to General Electric Company, a corporation of New York
Application June 3, 1955, Serial No. 512,939
9 Claims. (Cl. 318—453)



1. A protective starting circuit for an electric motor comprising, a magnetic contactor having principal contacts connected in circuit with the motor, auxiliary contacts and an energizing coil for closing said contacts, a switch connected in parallel with said auxiliary contacts and in series with said coil for connection across a voltage source, a continuously operating electric timer energized separately from said contactor and means operative in response to movement of said timer for periodically closing said switch for very brief time intervals insufficient to damage said contactor or motor upon undervoltage of said source.

2,864,850
FLIGHT CONTROL APPARATUS
Willis H. Gille, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application September 17, 1953, Serial No. 380,725
11 Claims. (Cl. 318—489)



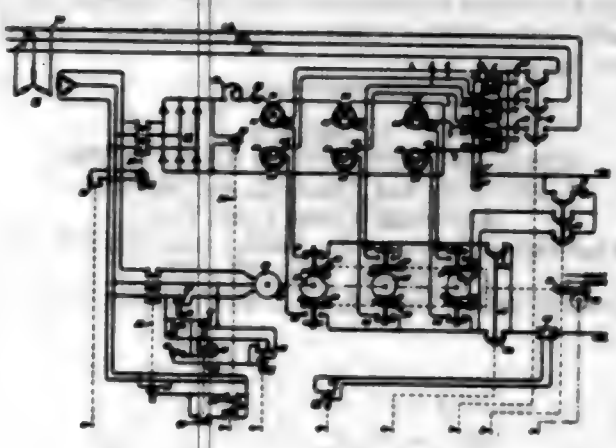
1. Apparatus for automatically controlling the flight of an aircraft, a vertical reference member including means sensing the force of gravity and means controlled by said gravity sensing means for maintaining said reference member in a vertical position, controlled means

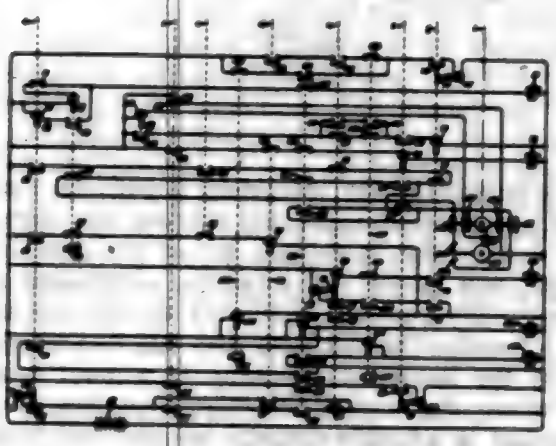
and polarity of the output voltage between said first and beginning and end of a predetermined duration within

phase supply, comprising impedance connected in series tinuously.

for positioning a control surface of the aircraft to control the flight thereof, circuit means for controlling the energization of said controlled means, signal generator means included in said circuit means and controlled by relative displacement between said vertical reference member and the aircraft, means coupling said signal generator to said vertical reference member for operation thereby, said coupling means including a pair of bimetal members and heaters associated therewith, said heaters being energized upon operation of said gravity sensing means to operate said coupling means and modify the operation of said signal generating means.

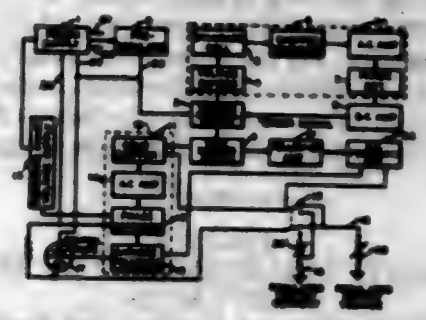
2,864,851
CONTROL SYSTEM FOR STARTING ELECTRIC CURRENT RECTIFYING APPARATUS
Daniel C. Hoffmann and Clyde G. Dewey, Lansdowne, Pa., assignors to General Electric Company, a corporation of New York
Application December 28, 1955, Serial No. 555,821
9 Claims. (Cl. 321—48)





1. In electric current rectifying apparatus, a supply circuit having input terminals adapted to be connected to a source of alternating current and including a cyclically operable circuit opening and closing contact, a contact operating mechanism, a synchronous motor connected to actuate said mechanism and including an armature circuit, switching means to connect said armature circuit to said terminals, a voltage relay, a current relay connected in said armature circuit and actuated in response to armature inrush current to connect said voltage relay for energization from said armature circuit, said current relay being deactuated upon decay of armature current to a normal running value, means for retaining said voltage relay energized from said armature circuit independent of said current relay, and control means actuable in response to deactuation of said current relay while said voltage relay is energized, whereby said control means is actuated when said motor attains normal running speed in starting operation.

2,864,852
AUTOMATIC REGULATORS
John Holden Searcy, Melbourne, Fla., assignor to Radiation, Inc., Melbourne, Fla., a corporation of Florida
Application February 1, 1956, Serial No. 562,678
10 Claims. (Cl. 323—4)



1. In a current regulator, a source of electric power, a regulator tube, having a cathode and a control grid, connected in series with said source of current, a standard resistance connected in series between said cathode and a point of reference potential, means for connecting a current load between said cathode and said standard resistance, a source of regulated voltage, vibrating switch means for generating an A. C. error signal having a phase and magnitude determined by the relative magnitudes of said regulated voltage and the voltage developed across said standard resistance by flow of current therethrough, rectifying phase detector means for generating a D. C. error voltage having a sense and magnitude determined by the phase and magnitude of said A. C. error voltage and means for applying said D. C. error voltage to said control grid of said regulator device to reduce said A. C. error voltage.

2,864,853
SILICON DIODE ERROR DETECTOR
William H. Woodworth, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Application September 23, 1955, Serial No. 536,322
4 Claims. (Cl. 323—69)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. An error detector consisting of a bridge circuit composed of a first arm comprising a silicon diode, a second arm comprising a first resistance, one end of said second arm being connected to one end of said first arm at a first junction, a third arm comprising a second resistance, one end of said third arm being connected to the other end of said second arm at a second junction, a fourth arm comprising third, fourth and fifth resistances, said fourth and fifth resistances being connected in parallel and said third resistance being connected in series with said parallel fourth and fifth resistances, said first, second, third and fourth resistances being precision zero temperature coefficient resistors, and said fifth resistance being a temperature compensating resistor, one end of said fourth arm being connected to the other end of said third arm at a third junction and the other end of said fourth arm being connected to the other end of said first arm at a fourth junction; output terminals being connected to said first and third junctions; a variable D. C. input voltage source connected across said second and fourth junctions, said silicon diode connected in said first arm so as to oppose the flow of current when said input voltage is applied, and the values of the resistors in the second, third and fourth arms being such that the magnitude

block assemblies enclosing electrical circuit components, said screw threaded connectors operating to mount said

diagonally-opposite terminals of said bridge, and terminals connected to said controlled winding for coupling the

voltage produced by said reference voltage source with ence member in a vertical position, controlled means

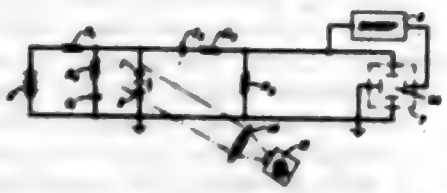
and polarity of the output voltage between said first and third junctions is a function of the direction and magnitude of deviation of the input voltage from a preselected value, said error detector being temperature compensated to within plus or minus .05 percent variance in input voltage for zero output voltage over the temperature range of minus 100 degrees Fahrenheit to plus 200 degrees Fahrenheit, the output of said bridge circuit being null for only one value of input voltage, any other value of input voltage other than said one value of input voltage causing an output which is an error signal.

2,864,054

VELOCITY MEASUREMENT OF RELAY CONTACTS

Willard S. Boyle, Berkeley Heights, and James L. Smith, Basking Ridge, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application March 19, 1957, Serial No. 647,148
9 Claims. (Cl. 324—28)



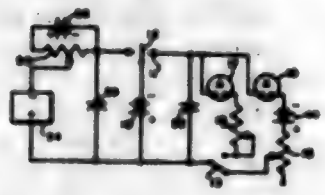
1. A system for measuring the velocity of approach of a pair of metal members from positions spaced apart to a position of metallic contact, which comprises in combination a capacitor connectable to said metal members so that the air gap between said members is in the discharge path of said capacitor, means including a source of substantially fixed potential for charging said capacitor to a preselected voltage at which an arc discharge is initiated at a preselected separation of said members, a source of a beam of radiant energy focused on said members and the included air gap simultaneously with said arc discharge, and means comprising a time-recording circuit connectable to said metal members in combination with said capacitor, said time-recording circuit including means responsive to the step in current resulting from said initial arc discharge across said air gap to initiate the measurement of a time interval, and means responsive to a second step in the discharge current of said capacitor upon actual contact of said metallic members to terminate the measurement of said time interval.

2,864,055

APPARATUS FOR AND METHOD OF BATTERY CAPACITY MEASUREMENT

Karl Kordesch and Friedrich Korufeli, Long Branch, N. J., assignors to the United States of America as represented by the Secretary of the Army

Application May 5, 1954, Serial No. 427,892
23 Claims. (Cl. 324—29.5)
(Granted under Title 35, U. S. Code (1952), sec. 266)



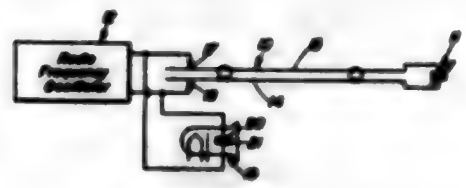
13. A method for determining the uniformity of constituent cells of a battery comprising periodically charging a plurality of batteries of a chosen type and having respective known different remaining capacities and consisting of cells of uniform capacity at a rapid rate with a first constant current for a first short period, indicating the differences in the voltages of these batteries at the beginning and end of a predetermined duration within said period, periodically discharging said batteries at a rapid rate with a second constant current for a second short period, indicating the differences in voltages of these batteries at the beginning and end of a predetermined duration within said second period, periodically charging a battery of said type and consisting of cells of unknown capacity and unknown uniformity with said first current at said first rate for said first period, indicating the difference in voltage of said battery at the beginning and end of said predetermined duration within said first period, periodically discharging said unknown battery with said second current at said rapid rate for said second period, indicating the difference in voltage of said battery at the beginning and end of said predetermined duration within said second period whereby the capacity of the unknown battery may be determined by the relationship which exists between the voltage difference indication of the battery of unknown capacity and the voltage difference indications of the batteries of known capacity and whereby significant deviations of the voltage difference indications of said battery of unknown uniformity from the voltage difference indications of uniform batteries of equal capacity demonstrates a lack of cell uniformity in said unknown battery.

2,864,056

REMOTE IMPEDANCE INDICATORS

Walter H. Barkas, Oakland, and Alfred B. C. Anderson, China Lake, Calif.

Application February 11, 1953, Serial No. 336,458
1 Claim. (Cl. 324—57)
(Granted under Title 35, U. S. Code (1952), sec. 266)



An arrangement for indicating impedance variations comprising a transmission line adapted for termination at one end by the impedance whose variation is to be indicated, and means for supplying alternating current of substantially constant frequency to said transmission line at a position thereon such that said line when terminated by the impedance operates at a point near resonance where the sending impedance of the line varies linearly and in a highly sensitive manner with variations in the impedance terminating said line, said operating point being defined as that point where the sending impedance is substantially in the ratio of $\sqrt{3}/2$ to the maximum sending impedance of said transmission line when terminated by the variable impedance.

2,864,057

METHOD OF POTTING INSTRUMENT ASSEMBLIES AND CONSTRUCTION THEREOF

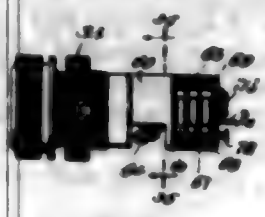
John F. Connelly and Leon E. Thomas, Jr., New Haven, Conn.

Application April 15, 1954, Serial No. 423,486
5 Claims. (Cl. 324—156)

4. An electric meter assembly comprising an indicator unit having a calibrated indicating scale associated therewith, screw threaded connectors extending rearwardly from said unit, a pair of block assemblies of insulation material substantially conforming in peripheral contour with the contour of said unit, one of said block assemblies enclosing a light source focussed upon said calibrated indicating scale in said unit and the other of said

antennae each fed by an outgoing wavelet, and output coupling means between said antennae and the other said coil having a pair of leads, a first staple inserted in the wafer so as to have an intermediate section on one

block assemblies enclosing electrical circuit components, said screw threaded connectors operating to mount said block assemblies with respect to said unit and establish



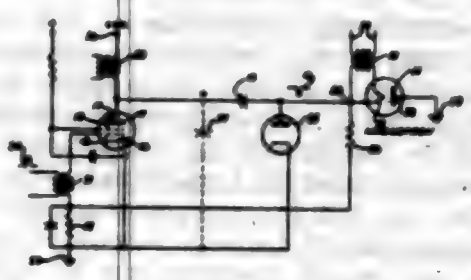
electrical connection with the electrical circuit components in said last mentioned block assembly, said screw threaded connectors extending on opposite sides of the light source in said first mentioned block assembly.

2,864,058

PROTECTIVE CIRCUIT FOR PULSED MICROWAVE GENERATOR

Arden H. Fredrick, Mount Kisco, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

Application October 3, 1955, Serial No. 538,018
3 Claims. (Cl. 332—5)



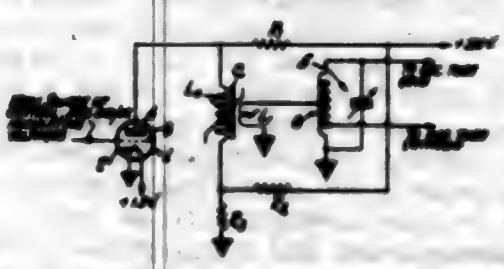
1. In combination in a circuit for a magnetron having a cathode and an anode, a modulator tube having an anode, cathode and a control grid, an input circuit for said modulator tube including a self-biasing resistor between said control grid and its associated cathode, a source of high voltage direct current for the anode of said modulator tube, a modulation inductor between said source and the anode of said modulator tube, a coupling condenser between the anode of said modulator tube and the cathode of said magnetron; a protective resistor connected between the cathode of said magnetron and the grid end of said biasing resistor for increasing the voltage across said self-biasing resistor toward cut-off to reduce the output voltage pulses from said modulator.

2,864,059

FREQUENCY CONTROL CIRCUIT

Thomas T. N. Bucher, Moorestown, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application August 17, 1955, Serial No. 529,006
3 Claims. (Cl. 332—29)



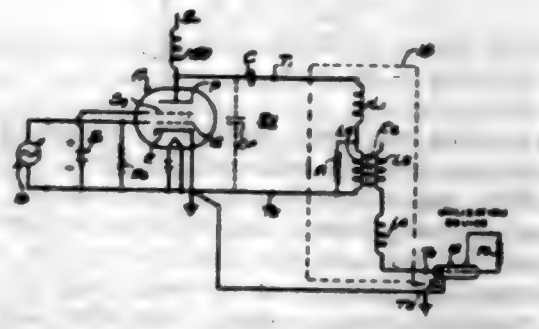
1. A frequency control circuit comprising a saturable reactor with a control winding and a controlled winding, a four-arm impedance bridge having four terminals, the impedance of one of said arms being variable in response to a signal, means coupling said control winding across one pair of diagonally-opposite terminals of said bridge, means coupling a source of power across the other pair of diagonally-opposite terminals of said bridge, and terminals connected to said controlled winding for coupling the same to an oscillatory circuit whose resonant frequency is to be controlled.

2,864,060

ELECTRICAL COUPLING DEVICE

Joseph B. Batchelor, Jr., Monroe, Ga., assignor, by mesne assignments, to Patronix Inc., Chicago, Ill., a corporation of Delaware

Application August 9, 1955, Serial No. 527,363
7 Claims. (Cl. 333—32)



1. A three-terminal coupling device for providing a substantially linear transmission response between relatively high and low impedance circuits over a predetermined frequency range of electrical signals, said device comprising, in combination, first and second windings connected in series to present first and second terminals and mounted to have inductive coupling therebetween, third and fourth windings connected in series and mounted to have inductive coupling therebetween, said second and third windings being intimately associated physically to have both high inductive coupling and high stray capacity coupling therebetween, said third winding having an extremity remote from its connection to said fourth winding and which is unconnected, and said fourth winding having an extremity remote from its connection to said third winding and forming a third terminal for paired connection with said second terminal.

2,864,061

MULTICHANNEL FILTER

Pierre G. Marié, Paris, France

Application December 10, 1954, Serial No. 474,407
Claims priority, application France December 14, 1953
6 Claims. (Cl. 333—73)

1. A multichannel filter for spreading in different directions partial bandwidth outgoing wavelets contained in a total large bandwidth incoming wave comprising in combination a dielectric plate the shape of a crown segment of arcuate configuration having radial, parallel and curved sides, means for spreading in different direction said large band width incoming wave into a plurality of said partial bandwidth outgoing wavelets, said means consisting of dielectric projecting portions on one of said parallel sides and integral with said plate, a directional transmitting antenna radiating said large bandwidth incoming wave, input coupling means between said antenna and one radial side of said plate, a plurality of directional receiving

2,864,067

BASE FOR ADJUSTABLE DOUBLE-ENDED

2,864,069

QUICK-DISCONNECT CONNECTOR

the differences in the voltages of these batteries at the

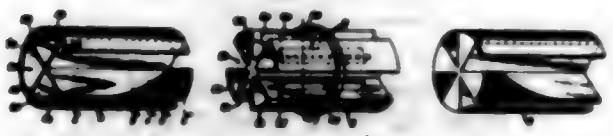
brated indicating scale in said unit and the other of said

antennae each fed by an outgoing wavelet, and output coupling means between said antennae and the other radial side of said plate.

2,864,062
NEGATIVE RESISTANCE USING TRANSISTORS
Johannes S. Schaffner, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application February 15, 1955, Serial No. 488,310
2 Claims. (Cl. 333—80)

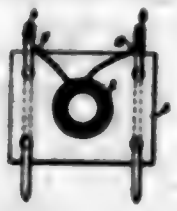
1. A negative resistance network for obtaining a negative resistance over an extended frequency range comprising first and second junction-type transistor devices each having base, emitter and collector electrodes, said first transistor being of one conductivity type and said second transistor being of an opposite conductivity type, circuit terminal means, means connecting said circuit terminal means to the emitter electrodes of said first and second transistors, means connecting the base electrodes of said first and second transistors to collector electrodes of said second and first transistors, respectively, and a source of potential, a resistance, and an inductance serially connected between the collector and emitter electrodes of said second transistor, said source of potential being oriented in the reverse direction in respect to the direction of easy current flow from the collector of said second transistor.

2,864,063
MICROWAVE CONTROL DEVICES
Leopold B. Felsen, Flushing, and Walter K. Kahn, Brooklyn, N. Y., assignors to Polytechnic Institute of Brooklyn, Brooklyn, N. Y., a corporation of New York
Application December 20, 1957, Serial No. 704,042
7 Claims. (Cl. 333—98)



1. A wave control device comprising two circular wave guide sections arranged in alignment and having radial arranged partitioned walls dividing said sections into a number of sectoral guides having a given angular span at the outer ends of said sections, and a smaller angular span at the inner ends of said sections, and adjustable means interposed between the inner ends of said circular sections for controlling the energy transmitted from one section to the other.

2,864,064
COIL MOUNT
Henry T. Heaton, Syracuse, N. Y., assignor to General Electric Company, a corporation of New York
Application July 30, 1956, Serial No. 600,915
3 Claims. (Cl. 336—65)

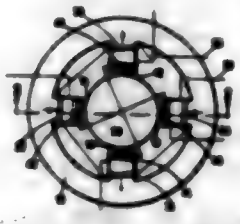


1. A coil mount comprising a wafer of electrical insulating material, a coil adhered to one side of said wafer, said coil having a pair of leads, a first staple inserted in the wafer so as to have an intermediate section on one side of said wafer and end portions on the other, a second staple inserted in the wafer so as to have in intermediate section on one side of said wafer and end portions on the other, said end portions protruding beyond the periphery of said wafer on at least one side, one of said coil leads being wrapped around a protruding end portion of one of said staples and the other of said coil leads being wrapped around a protruding end portion of the other of said staples.

2,864,065
CORE CONSTRUCTION FOR TRANSFORMERS
Arnold L. Horelick, Bridgeville, and John R. Smith, Venetia, Pa., assignors to McGraw-Edison Company, a corporation of Delaware
Application August 5, 1955, Serial No. 526,629
4 Claims. (Cl. 336—100)

1. In a transformer construction, a tank, a body of oil in said tank, a core construction immersed in said oil and comprising a plurality of elongated laminations of magnetic material, and sealing means extending longitudinally of the laminations and having transversely extending portions joining the longitudinally extending portions and forming with the laminations completely sealed cushioning gas pockets between successive laminations, cushioning and energy absorbing gas in said pockets, said sealing means preventing the entrance of oil into the spaces between successive laminations, whereby the transmission of sound energy from the laminations through the oil to the tank is reduced.

2,864,066
TRANSDUCER
John E. Egbert, Natick, and John A. Maynard, Winchester, Mass., assignors, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Application September 29, 1954, Serial No. 459,058
3 Claims. (Cl. 336—134)

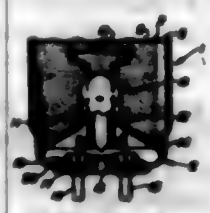


1. An electro-mechanical transducer comprising a generally annular core having four radially inwardly extending spaced poles arranged 90° apart, a magnetizable member disposed within said core having a null position in which said member is symmetrically disposed in spaced relation to said poles, said core and said member being mounted for translational movement toward and away from each other to vary the spacing between said member and each said pole, a primary winding on each pole, all the primary windings being connected in series and arranged to provide a magnetic flux directed inwardly in one pair of opposing poles and outwardly in the remaining pair when a current is passed through the windings, and a secondary winding on each pole, the secondary winding on each pole being connected in series opposition with the secondary winding on the opposing pole.

2,864,071
CLAMPING DEVICE FOR ELECTRIC WIRES

time relationship from that in which it was recorded to return the time sequence to that of the original seismic

2,864,067
BASE FOR ADJUSTABLE DOUBLE-ENDED DIRECTIONAL LAMP
Dale A. Grovenstine, Euclid, and Joe Lee Elam, East Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Application October 31, 1956, Serial No. 619,485
8 Claims. (Cl. 339—2)



1. A lamp base comprising a cylindrical shell having a rim portion for attachment anti-turningly to an end of a lamp envelope and an integral circular web at the end thereof opposite said rim, a contact pin assembly comprising a pair of mutually insulated contact pins, a support holding said pins in spaced parallel positions and a rivet means at the center of said web and said support fastening said assembly to said shell for pivotal movement on said shell with its pivotal axis coincident with the longitudinal axis of said shell, said pins being symmetrically arranged with respect to the longitudinal axis and in a diametral plane of said shell, said pin support and the web of said shell having interengageable parts constituting positive stop means for limiting the relative rotation of said contact pin assembly and said shell.

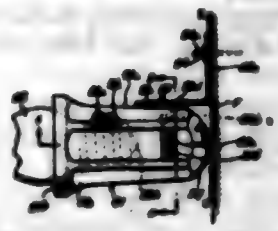
2,864,069
QUICK-DISCONNECT CONNECTOR
Neil D. Bingham, Inglewood, and Rene J. Beauregard, Los Angeles, Calif., assignors to Radio Corporation of America, a corporation of Delaware
Application January 27, 1956, Serial No. 561,835
3 Claims. (Cl. 339—75)

1. An electrical connector comprising a pair of sleeves dimensioned for telescopic engagement, a member fixed in one of said sleeves having at least one conductive plug extending therefrom in a direction parallel to the axis of said one sleeve, a member fixed in the other of said sleeves having a conductive socket in register with said plug, the larger of said sleeves having a longitudinal extension comprising substantially one half of the circumference of said sleeve, an arcuate member, means for interlocking one end of said arcuate member with one edge of said extension to form a hinged clamp, means associated with the ends of said extension and said arcuate member opposite from said interlocking means for adjustably maintaining said ends in substantial abutting relationship, the smaller of said sleeves having an annular groove in its external surface adjacent to the end thereof, and said hinged clamp having means on its internal surfaces defining an annular rib adapted to be received in said annular groove.

2,864,068
ADAPTOR FOR INTERCONNECTING ELECTRICAL ELEMENTS WHILE PROVIDING EXPOSED CONTACTS
Julius Roth, Acton, Mass., assignor to Earl H. Krohn and George Hite, doing business as Krohn-Hite Instrument Company, a partnership, Cambridge, Mass.
Application March 23, 1954, Serial No. 418,094
5 Claims. (Cl. 339—64)

1. An adaptor for interconnecting electrical elements, said adaptor comprising an integral, electrically insulating base having an upper face, a lower face and a plurality of elongated openings joining said faces, and a plurality of electrically conducting connectors floating in said openings, each of said connectors being formed from an elongated sheet metal blank having, in longitudinal sequence, a relatively narrow lower portion, a relatively wide medial portion and a relatively narrow upper portion, said lower portion being rolled until its longitudinal edges are substantially in contact with each other and the lower edge of said lower portion being inwardly tapered to provide a rigid pin, the lower edge of said medial portion being provided with a bead, said medial portion being rolled until its longitudinal edges are spaced apart and said bead is directed outwardly, said longitudinal edges of said medial portion facing inwardly, said bead being positioned at said lower face, said upper portion being flared outwardly to provide a tab for electrical contact, said tab being positioned at said upper face.

2,864,070
ELECTRIC SOCKET AND SUPPORT HOLDER FOR PORTABLE DISPLAY LIGHTING OUTFITS
Abraham Abramson, New York, N. Y., assignor to Ray-Bin Electric Corp., Bronx, N. Y., a corporation of New York
Application May 23, 1955, Serial No. 510,436
6 Claims. (Cl. 339—99)



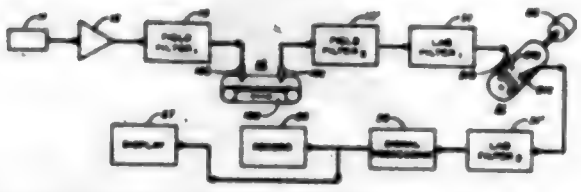
1. An electric light socket of portable lighting outfits constructed with a support holder for removably attaching to a support comprising a husk having an open end forming a casing for lamp current carrying contacts thereof into which opening a lamp base is inserted to connect with said contacts, said husk having a bottom end opposite said open end formed with a rim edge and a bracing rib extending within the husk adjacent said rim edge, a cap secured as a closure over said bottom end forming a joint thereat with a side-to-side through-passageway, insulation covered lead wires extending through said passageway, said lamp contacts provided with current carrying insulation piercing prongs extending into said lead wires for making a solderless tapped electric connection therewith, said support holder having a fitment end anchored in said socket at said closure joint between said husk rim edge and the cap, the other end of said holder being provided with a surface attachment means, and fastener means retaining said closure joint and rigidly clamping said fitment end between the husk and cap.

dition, a parking signal visibly carried by said auto- cluding a winding coupled to said element, for switching

2,864,871
CLAMPING DEVICE FOR ELECTRIC WIRES
Frank E. Johnson, Jr., New Orleans, La.
Application February 11, 1954, Serial No. 409,717
3 Claims. (Cl. 339—109)

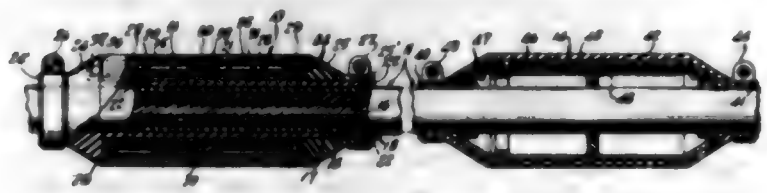
1. The combination in a wire clamping device, of a frame having a fixed jaw and a tubular bore, a second jaw mounted on said frame for relative movement with respect to said first jaw, said second jaw having an aperture therethrough, a plunger slidably mounted in said aperture and extending into said bore, a lever pivoted on said plunger and having a part adapted to actuate said second jaw, and a spring mounted in said bore between a part carried by said plunger and a part carried by said frame and actuated by said plunger for causing said lever to exert a resilient pressure on said second jaw.

2,864,872
METHOD AND APPARATUS FOR ELIMINATING PHASE DISTORTION IN SEISMIC SIGNALS
Francis G. Blake, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application June 16, 1954, Serial No. 437,264
1 Claim. (Cl. 340—15)



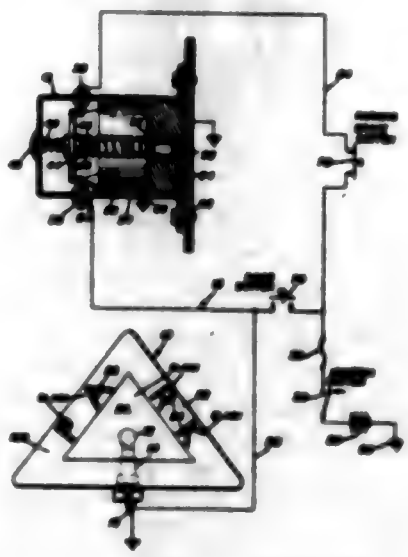
Apparatus for recording seismic vibrations comprising a seismic detector operable to translate vibrations into a seismic electric signal, a magnetic recorder, a field filter having its input connected to said seismic detector and its output connected directly to said magnetic recorder, said field filter being operable to restrict the frequency band of the seismic signal which is actually recorded and simultaneously to distort the seismic signal, means for reproducing the recorded signal in the laboratory in reverse time relationship from that in which it was recorded, a second and a third filter, said second filter being connected directly between said reproducing means and said third filter and having distortion and frequency passband characteristics substantially the same as said field filter to remove the distortion introduced thereby, said third filter having a different frequency characteristic than said second filter and being operable to distort the signal, a second magnetic recorder connected to the output of said third filter, means for reproducing the signal recorder by said second recorder in reverse time relationship from that in which it was recorded to return the time sequence to that of the original seismic signal, a fourth filter, and an optical recorder, said fourth filter having its input connected directly to said last-named reproducing means and its output connected to said optical recorder and being the only filter between said last-named reproducing means and said optical recorder and having distortion and frequency characteristics substantially the same as said third filter to remove the distortion introduced thereby.

2,864,873
DEMOUNTABLE CABLE HYDROPHONE
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Application September 7, 1955, Serial No. 532,872
13 Claims. (Cl. 340—17)



1. A hydrophone construction, comprising an elongated annular cup of yieldable sound-transmitting material having inner and outer tubular walls and open at one longitudinal end and closed at the other and defining an annular space between said inner and outer walls, a generally cylindrical radially strictive hydrophone member within said space, a potting of sound-transmitting material filling the remainder of said space and bonding said member to said inner and outer walls, said potting completely encasing said member and serving to close the open end of said cup, said cup having an elongated continuous bore coaxial with said space, an elongated tension cable passing through said bore, and means removably securing said cup to said cable.

2,864,874
AUTOMOBILE PARKING INDICATOR
Wheatley McGowan, Joliet, Ill.
Application September 14, 1956, Serial No. 609,843
2 Claims. (Cl. 340—74)



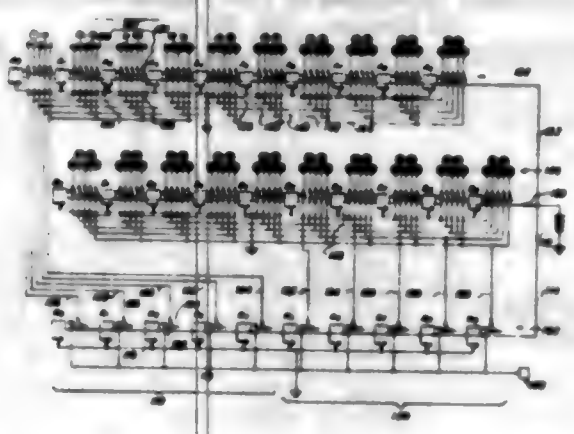
1. A parking indicator signal system for an automobile comprising in combination with a source of electrical energy, a normally closed parking brake switch, a gapped pair of electrical contacts, a manually movable contact plate operable in advance of parking said automobile and adapted to electrically bridge said contacts, solenoid holding means for maintaining said bridged con-

for switching from one of said generators to the other whenever the said sensing means encounters data where-

pulse groups, the time of occurrence of each bearing pulse group being a function of the azimuthal position of said

dition, a parking signal visibly carried by said automobile, a visual indicator lamp for lighting said signal, said source, brake switch, contacts, and lamp being electrically series connected to energize said lamp.

2,864,075
SWITCHING NETWORK
Robert E. Sandford, Temple City, Calif., assignor to Consolidated Electrodynamics Corporation
Application January 3, 1956, Serial No. 557,024
4 Claims. (Cl. 340—147)



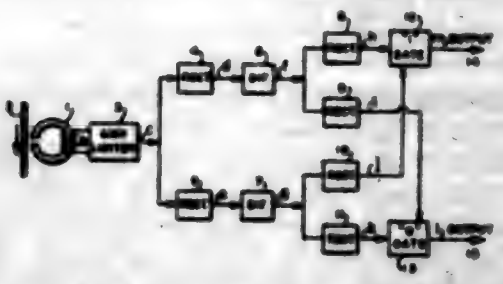
4. In a switching network, the combination which comprises at least two groups of switches, each group including a plurality of multiple switches with each multiple switch having a predetermined number of separate switching channels adapted to switch together, each group also having a plurality of single channel switches corresponding in number to said predetermined number of switching channels for one multiple switch, corresponding switching channels of the multiple switches in each group being separately coupled together in parallel sets with each parallel set of switching channels being coupled to a separate one of the single channel switches in the group, a common output for all of the single channel switches included in both groups, means for actuating the single channel switches one at a time in rapid consecutive order and cyclically going through all of the single channel switches in the first group and then through all of the single channel switches in the second group before starting again with the first group, means for actuating the multiple switches in the first group one at a time and operating to make the change from one multiple switch to the next during each interval when the single channel switches in the second group are being actuated, and means for actuating the multiple switches in the second group one at a time and operating to make the change from one multiple switch to the next during each interval when the single channel switches in the first group are being actuated.

2,864,076
LOGICAL CIRCUITS
Robert William Avery, Clifton Heights, Pa., assignor to Burroughs Corporation, a corporation of Michigan
Application December 4, 1952, Serial No. 324,118
5 Claims. (Cl. 340—174)

2. Apparatus for performing the logical "not" function, said apparatus comprising in combination: a static magnetic element capable of assuming either a first or a second state of magnetic remanence, said states being of opposite polarities; means, including a winding coupled to said element, for presetting the core to said first state of magnetic remanence; input means, including at least one winding coupled to said element, for applying one or more input signals to said element during an input-signal period, each input signal being of a magnitude and sense to switch said element from said first to said second state of magnetic remanence; read-out means, including a winding coupled to said element, for switching or tending to switch said element from said first to said second state of magnetic remanence, the actual switching of said element in response to said read-out means occurring only in the absence of said input signals during

said input-signal period; and means responsive to the actual switching of said element in response to said read-out means for developing an output signal signifying that no input signal was received during said input-signal period.

2,864,077
MEANS FOR DISTINGUISHING POSITIVE AND NEGATIVE PULSES IN MAGNETIC TAPE RECORDING
John E. De Turk, Ann Arbor, Mich., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application March 10, 1954, Serial No. 415,455
7 Claims. (Cl. 340—174)



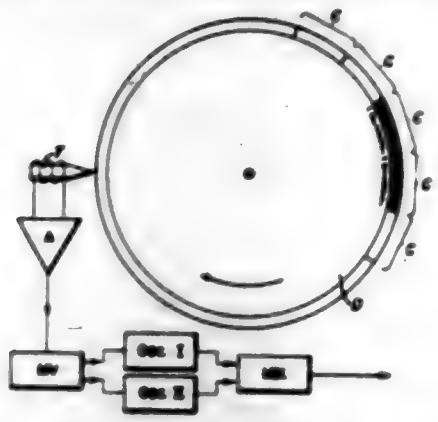
1. In combination with a magnetic storage member having finite areas of its surface magnetically polarized in a first or second direction to represent binary code elements, means for scanning said surface to produce full wave voltage pulses, said full wave voltage pulses commencing with either positive or negative half cycles depending upon the direction of magnetic polarization of the area being scanned, means for separating the positive half cycles of said full wave pulses from their complementary negative half cycles, means for differentiating said positive and negative half cycles whereby positive peaked pulses occurring at the leading edges of said positive half cycles and the trailing edges of said negative half cycles and negative peaked pulses occurring at the trailing edges of said positive half cycles and the leading edges of said negative half cycles are produced and means responsive to the simultaneous occurrence of two positive peaked pulses or two negative peaked pulses for generating a single output signal.

2,864,078
PHASED, TIMED PULSE GENERATOR
Leonard D. Seader, Santa Clara, Calif., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application September 28, 1955, Serial No. 537,260
13 Claims. (Cl. 340—174)

1. In a recording device wherein data is recorded and reproduced selectively under control of timed pulses, means for sensing said data, a pair of generators of timed pulses, and means under control of the said sensing means

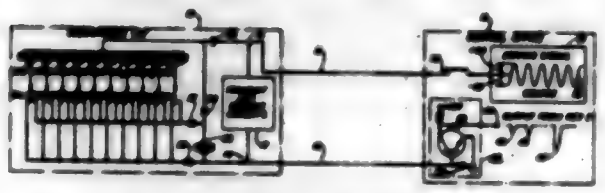
two parallel paths, a low power aural transmitter having tive to said energy and producing, thereby a resultant

for switching from one of said generators to the other whenever the said sensing means encounters data where-



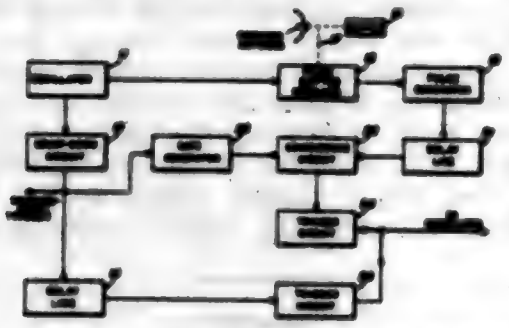
by timed pulses are emitted alternatively from the said generators precisely phased with the occurrence of the said data.

2,864,879
PULSE SIGNALING CIRCUIT
John R. Anderson, Kettering, Ohio, assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 10, 1957, Serial No. 664,680
20 Claims. (Cl. 340—359)



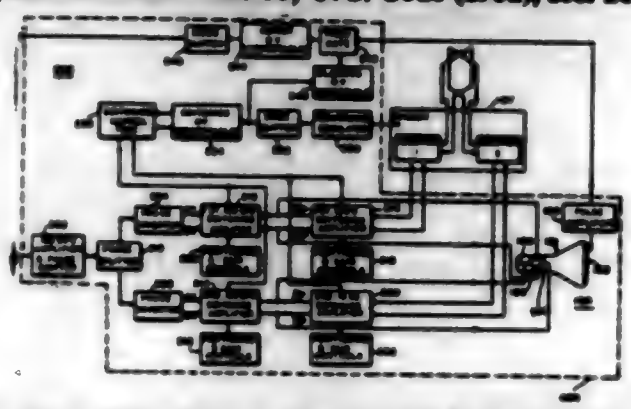
1. A signaling circuit for selectively delivering digit-indicating pulses comprising a first and a second terminal, a plurality of ferroelectric capacitors having graduated electrode areas and connected in parallel between said terminals, a charge-metering ferroelectric capacitor connected to one of said terminals, and means for selectively connecting said digit-indicating capacitors to said charge-metering capacitor.

2,864,080
AZIMUTH INDICATING SYSTEM
George Victor Rodgers, California, Md., assignor to the United States of America as represented by the Secretary of the Navy
Application March 30, 1956, Serial No. 575,290
13 Claims. (Cl. 343—106)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a transmitting system having a rotating antenna, a pulsing circuit for providing an input train of pulse groups to the modulator in said transmitting system, said circuit comprising: a sine wave source; means for utilizing the output of said sine wave source to produce reference pulse groups whose group frequency is a submultiple of the frequency of the sine wave source output; phase shifting means connected to said sine wave source and said rotating antenna for producing bearing pulse groups, the time of occurrence of each bearing pulse group being a function of the aximuthal position of said antenna; and means for combining said reference pulse groups with said bearing pulse groups for feeding into said modulator.

2,864,881
TELEMETERING SYSTEM
Kenneth C. Stockman, Wanamassa, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application November 5, 1957, Serial No. 694,685
10 Claims. (Cl. 343—112)
(Granted under Title 35, U. S. Code (1952), sec. 266)

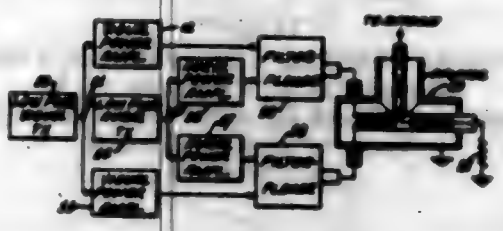


2. In combination: a direction finder apparatus for providing two in-phase damped sine-wave signals of a prescribed frequency and a trigger signal coincident with the initial half-cycle of said sine-wave signals when a signal having a given azimuth is detected by said apparatus; a storage tube including a mosaic type target at one end thereof, a cathode-ray beam producing means at the other end thereof, and cathode-ray beam deflecting means; means in circuit with the beam deflecting means whereby said beam is cyclically scanned on said mosaic target in a circular path at a prescribed rate, zero circular time scan being coincident with a reference azimuth position; means for generating a prescribed number of time increment signals for each circular scan cycle; means in circuit with said beam deflecting means and responsive to relative amplitudes of the in-phase signal outputs from said direction finder apparatus whereby said cathode-ray beam is caused to trace a linear path from the center of said target when a signal is detected, the angle formed by said linear trace and a line extending from the center of said mosaic target to zero circular scan time being a measure of the azimuth of the detected signal; means responsive to said trigger signal for simultaneously switching off said circular scan means and switching on said linear trace producing means upon the detection of the given azimuth signal whereby said circular scan is interrupted and said linear trace appears on said mosaic target only for a short duration relative to the circular scan cycle, and said circular scan is again applied after said short duration; and means responsive to the signal derived from said mosaic target at the instant the circular scan intercepts the point where said linear trace had appeared on said target whereby the azimuth angle is converted to a period of time which includes a number of said time increment signals proportional to the given azimuth angle.

2,864,062
TELEVISION TRANSMITTER SYSTEM EMPLOYING COMPONENTS IN PARALLEL
Owen O. Fiet, Oaklyn, and Thomas U. Foley, Magnolia, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application May 18, 1955, Serial No. 509,197
14 Claims. (Cl. 343—207)

1. A television transmitting system comprising a low power visual transmitter having an output divided into

two parallel paths, a low power aural transmitter having an output divided into two parallel paths, power amplifiers in at least two of said paths, a first diplexer combining the outputs of one visual path and one aural



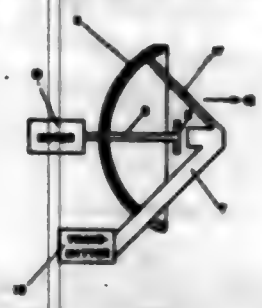
path, a second diplexer combining the outputs of the other visual path and the other aural path, and a third diplexer combining the outputs of said first and second diplexers.

2,864,083

DIRECTIONAL ANTENNA WITH CONICAL SCANNING

Jesse L. Butler, Nashua, N. H., assignor, by mesne assignments to Sanders Associates, Incorporated, Nashua, N. H., a corporation of Delaware

Application April 22, 1954, Serial No. 424,893
7 Claims. (Cl. 343—756)



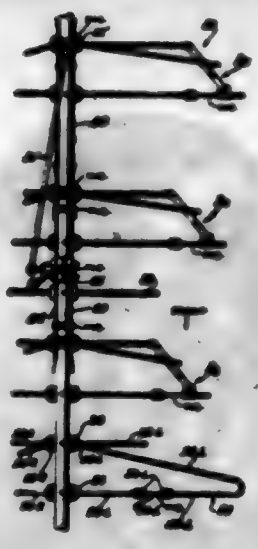
1. In a conical scanning antenna system, the combination of a source of plane-polarized electromagnetic energy characterized by an electric vector having a predetermined direction of polarization; a radiating means having three radiating elements arranged substantially in the form of an equilateral triangle; means directing said polarized energy through said radiating means, with its plane of polarization parallel to the plane of said elements; and means for rotating said radiating means relative to said energy and producing, thereby a resultant conical scanning beam at three times the frequency of rotation of said radiating means.

2,864,084

PARASITIC ANTENNA ASSEMBLAGE

John F. Guernsey, Griggsville, Ill., assignor to Trio Manufacturing Co., Griggsville, Ill., a corporation of Illinois

Continuation of application Serial No. 616,710, October 18, 1956, now abandoned, which is a division of application Serial No. 575,153, March 30, 1956. This application November 6, 1957, Serial No. 695,480
11 Claims. (Cl. 343—815)



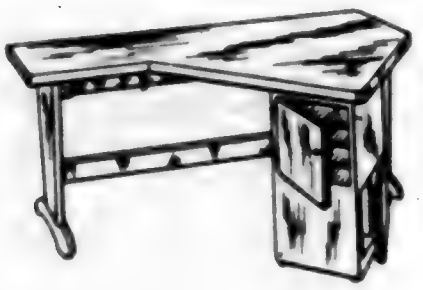
1. A parasitic assemblage for an antenna comprising a symmetrical triangular wing configuration, the base of the triangle having a first center radiating element and outer collinear radiating elements each of substantially half the length of the said first center element, integral reverse-bent slanted extensions of said outer element meeting at the center to form the apex of said triangular wing configuration and being spaced from said base, and a second center radiating element at said apex having a length substantially that of the said first center radiating element and being substantially parallel therewith.

DESIGNS

DECEMBER 9, 1958

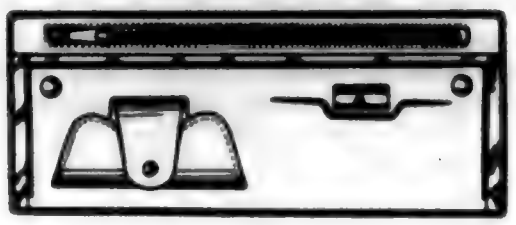
184,035
TIRE
William F. Billingsley, Silver Lake, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
Application February 26, 1957, Serial No. 45,009
Term of patent 14 years
(Cl. D90—10)

184,036
COMBINED TABLE AND CABINET
Arthur W. Carlson, Muskegon, Mich., assignor to E. H. Sheldon & Co., Muskegon, Mich., a corporation of Michigan
Application October 1, 1957, Serial No. 47,940
Term of patent 14 years
(Cl. D33—14)

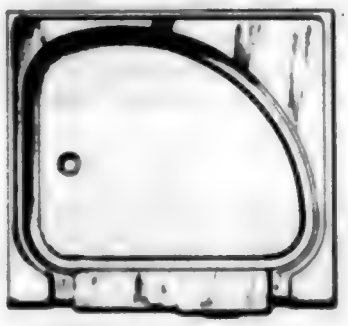


184,037
VENDING VEHICLE FOR SOFT ICE CREAM
Thomas Carvel, Chauncey, N. Y.
Application March 20, 1958, Serial No. 58,113
Term of patent 14 years
(Cl. D14—3)

184,038
ARTICLE HOLDER FOR VEHICLE SUN VISORS
Herbert S. Chase, Woodmere, N. Y.
Application December 20, 1956, Serial No. 44,287
Term of patent 14 years
(Cl. D14—6)



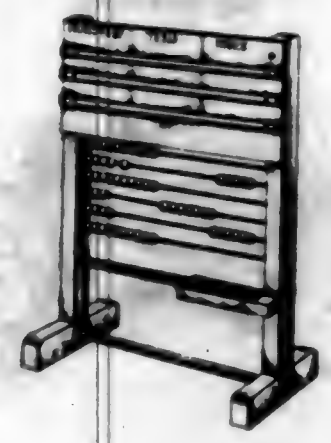
184,039
BATHTUB
Arnold J. Cornelissen, McKeesport, Pa.
Application August 14, 1957, Serial No. 47,366
Term of patent 14 years
(Cl. D4—4)



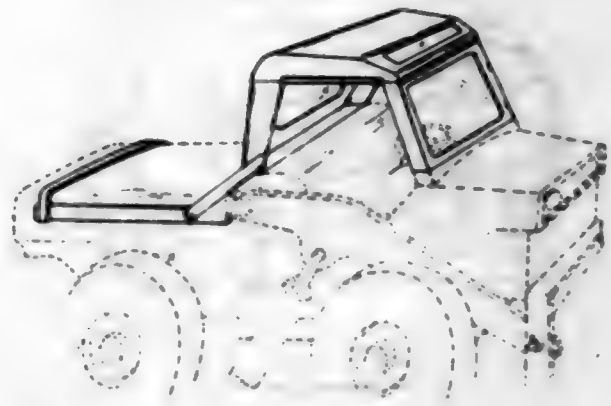
184,040
ASTHMATIC'S WHEEL CHAIR
Janette C. Crockett, Los Angeles, Calif.
Application July 22, 1957, Serial No. 47,026
Term of patent 14 years
(Cl. D15—1)

184,041
TEXTILE FABRIC
Virginia C. Dick, Islip, N. Y., assignor to Vanity Fair Mills, Inc., Reading, Pa., a corporation of Pennsylvania
Application February 28, 1957, Serial No. 44,925
Term of patent 14 years
(Cl. D92—1)

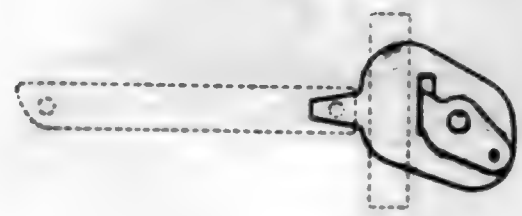
184,042
ABACUS
Audrey G. Dochterman and Earl R. Dochterman, Pleasant Hill, Calif.
Application April 18, 1958, Serial No. 50,510
Term of patent 14 years
(Cl. D25—1)



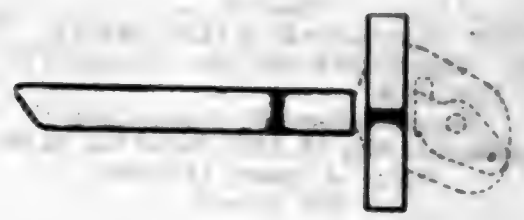
184,043
CAB FOR TRACTORS OR THE LIKE
Robert W. Dodge, Wenham, Mass.
Application November 14, 1957, Serial No. 48,456
Term of patent 3½ years
(Cl. D14—27)



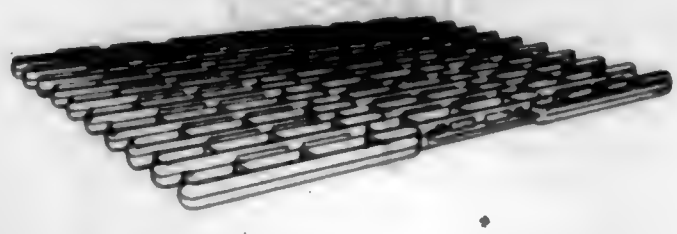
184,044
CAN OPENER OR THE LIKE
Walter W. Edlund, Burlington, Vt., assignor to Edlund Company, Inc., Burlington, Vt.
Application January 14, 1958, Serial No. 49,254
Term of patent 14 years
(Cl. D22—3)



184,045
CAN OPENER OR THE LIKE
Walter W. Edlund, Burlington, Vt., assignor to Edlund Company, Inc., Burlington, Vt.
Application January 14, 1958, Serial No. 49,255
Term of patent 14 years
(Cl. D22—2)



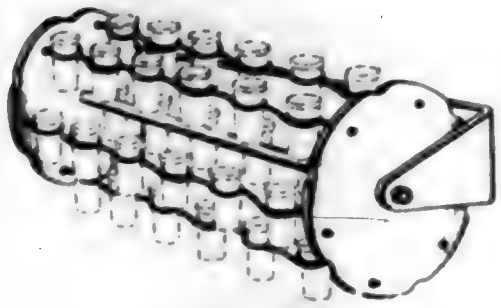
184,046
DOOR MAT
Erik E. Erikson, Mount Clemens, Mich.
Application December 30, 1957, Serial No. 49,056
Term of patent 3½ years
(Cl. D9—6)



184,053
TELEVISION RECEIVER

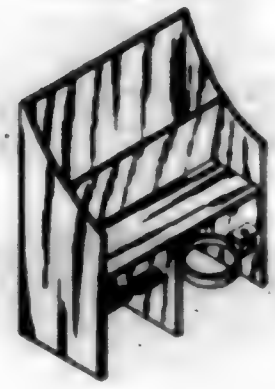
184,056
COVER FOR ELECTRIC KITCHEN UTENSILS

184,847
STORAGE RACK FOR JARS OR THE LIKE
Thomas Francaville, Vestal, N. Y.
Application September 25, 1956, Serial No. 43,884
Term of patent 3½ years
(Cl. D33—3)

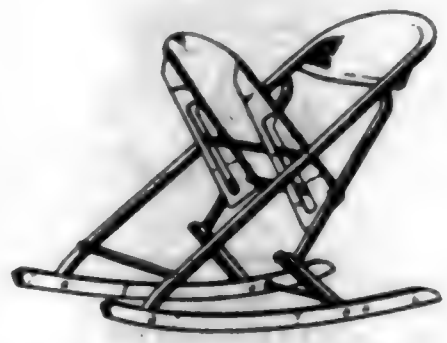


184,848
COMPUTER CONSOLE
Walter Furlani, Endicott, and William H. Harkins, Vestal, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 12, 1957, Serial No. 48,878
Term of patent 14 years
(Cl. D26—5)

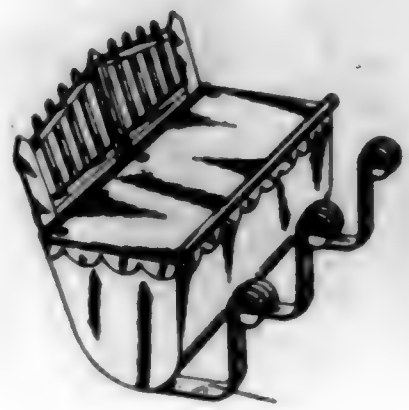
184,849
COMBINED MAGAZINE RACK, SHELF, TOILET PAPER DISPENSER AND CIGARETTE ASH TRAY HOLDER
Eugene Gillard, El Cajon, Calif.
Application May 10, 1957, Serial No. 46,102
Term of patent 14 years
(Cl. D4—3)



184,850
FOLDING ROCKING CHAIR
Edward Gingerich and Edna S. Gingerich, De Queen, Ark.
Application July 8, 1957, Serial No. 46,862
Term of patent 14 years
(Cl. D15—6)



184,851
MAIL BOX
George Grafton, Jr., Kent, Ohio
Application September 9, 1957, Serial No. 47,665
Term of patent 3½ years
(Cl. D74—9)

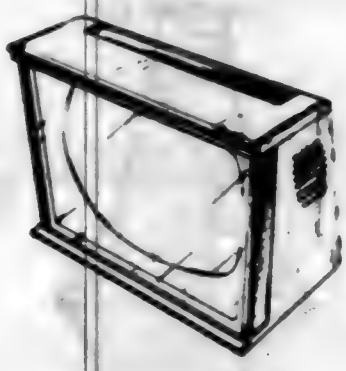


184,852
DISH
Robert J. Hahn, Sidney, Ohio, assignor to Hahn Originals, Sidney, Ohio
Application February 10, 1958, Serial No. 49,567
Term of patent 14 years
(Cl. D44—15)

184,059
POWERED RIDING LAWN MOWER

184,062
LAMP BASE OR SIMILAR ARTICLE

184,053
TELEVISION RECEIVER
Emil I. Herman, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application November 19, 1957, Serial No. 48,549
Term of patent 14 years
(Cl. D6—4)

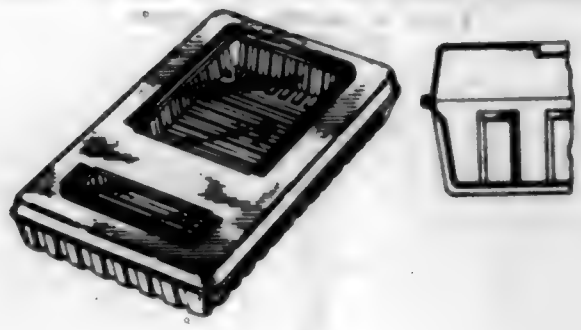


184,054
GOLF CLUB HEAD
Charles K. Hutheing, Sr., Culver City, Calif.
Application December 5, 1957, Serial No. 48,789
Term of patent 3½ years
(Cl. D34—5)

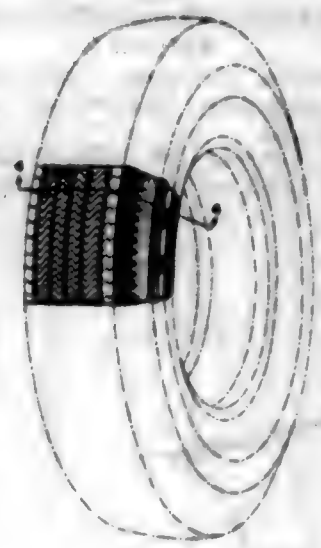
184,055
COMBINATION ADVERTISING DISPLAY AND CALENDAR FOR COUNTING THE DAYS UNTIL CHRISTMAS
Julius S. Johnson, Richland, Wash.
Application July 8, 1957, Serial No. 46,861
Term of patent 14 years
(Cl. D1—2)

184,056
COVER FOR ELECTRIC KITCHEN UTENSILS
Bess Kaye, New York, N. Y.
Application January 31, 1958, Serial No. 49,461
Term of patent 7 years
(Cl. D61—10)

184,057
BOX FOR STORING AND PRESERVING GARMENTS OR SIMILAR ARTICLES
Joseph J. Kearn, San Francisco, Calif.
Application January 13, 1958, Serial No. 49,208
Term of patent 7 years
(Cl. D58—12.6)

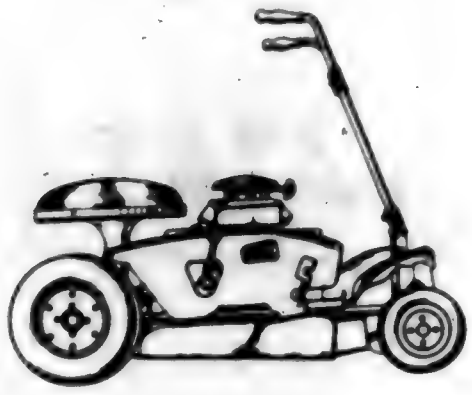


184,058
TIRE
Milton A. Klotz, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application December 10, 1957, Serial No. 48,852
Term of patent 14 years
(Cl. D90—20)



184,065

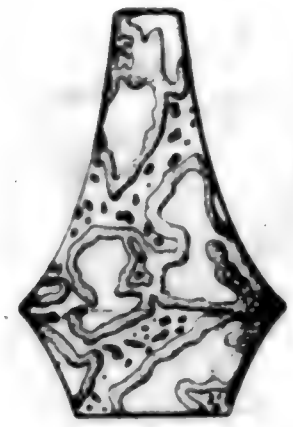
184,059
POWERED RIDING LAWN MOWER
Robert J. McKnight, Springfield, Ohio, assignor to Orly Musgrave, Springfield, Ohio
Application September 23, 1957, Serial No. 47,822
Term of patent 14 years
(Cl. D40—1)



184,060
COMBINED DART AND PROJECTOR THEREFOR OR SIMILAR ARTICLE
Sidney Jay Mehr, New York, N. Y.
Application September 13, 1956, Serial No. 42,926
Term of patent 3½ years
(Cl. D34—15)

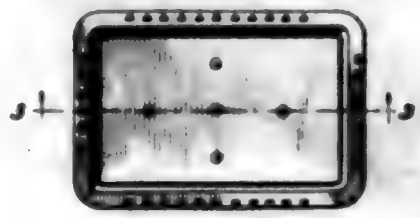
184,061
PHOTOMETRIC INSTRUMENT OR SIMILAR ARTICLE
Kenneth A. Milette, La Puente, Calif., assignor to Photo Research Corporation, Hollywood, Calif., a corporation of California
Application February 18, 1958, Serial No. 49,692
Term of patent 14 years
(Cl. D61—1)

184,062
LAMP BASE OR SIMILAR ARTICLE
Catherine Miller, Antioch, Ill.
Application April 25, 1957, Serial No. 45,894
Term of patent 3½ years
(Cl. D48—20)

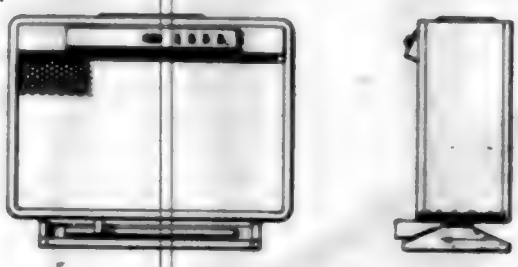


184,063
COMPUTER CONSOLE UNIT
David G. Moore, Johnson City, and Walter Furlani, Endicott, N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 26, 1957, Serial No. 49,035
Term of patent 14 years
(Cl. D26—5)

184,064
PROTECTOR FOR A CAKE OF SOAP
Alfonso Munoz Arjona, Havana, Cuba
Application September 30, 1957, Serial No. 47,914
Term of patent 14 years
(Cl. D4—3)



184,065
PORTABLE ELECTRIC SPACE HEATER OR THE LIKE
David L. Painter, Evanston, Ill., assignor to Titan Manufacturing Co., Inc., Buffalo, N. Y., a corporation of New York
Application November 20, 1957, Serial No. 48,558
Term of patent 3½ years
(Cl. D81—10)



184,066
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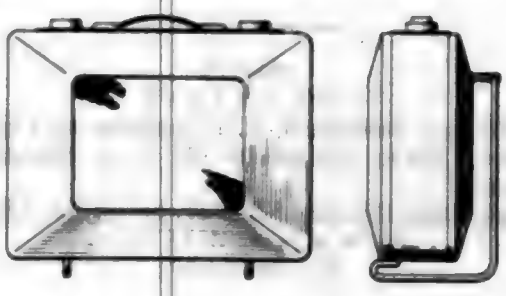
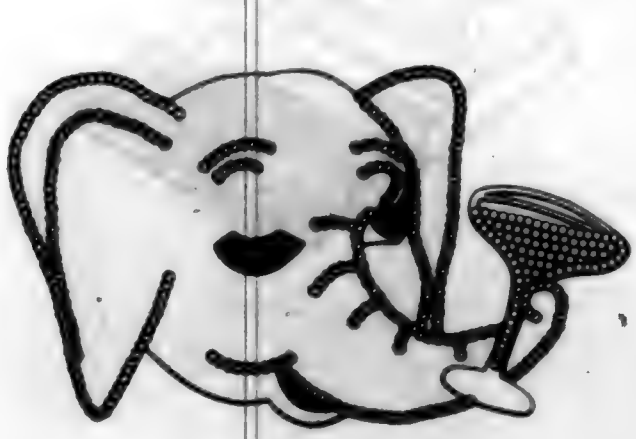


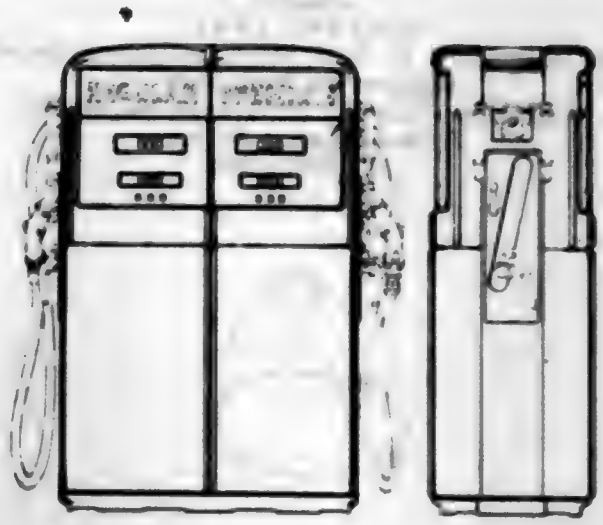
184,067
APPLIQUE EMBLEM OR THE LIKE
Irene B. Pavlik, Cincinnati, Ohio
Application November 2, 1956, Serial No. 43,653
Term of patent 3½ years
(Cl. D3—9)



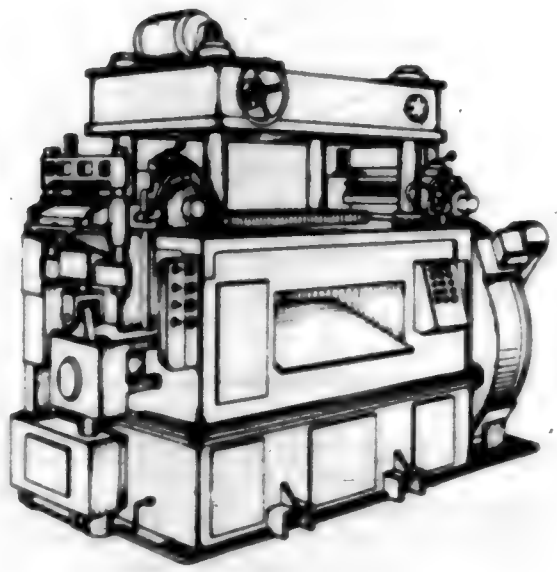
184,068
WATCH DIAL
Nicholas Petrelli, Brooklyn, N. Y.
Application March 20, 1957, Serial No. 45,340
Term of patent 14 years
(Cl. D42—1)

184,069
COMBINED DIAL AND HANDS FOR A CLOCK OR SIMILAR ARTICLE
John W. Rademacker, Humboldt, Iowa
Application April 15, 1957, Serial No. 45,735
Term of patent 14 years
(Cl. D42—1)

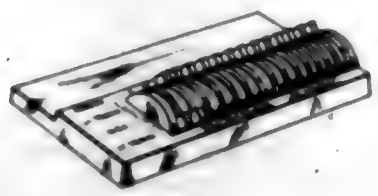
184,070
DUAL GASOLINE DISPENSING PUMP
Edward D. Rapisarda, Agawam, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a corporation of Massachusetts
Application May 1, 1957, Serial No. 45,969
Term of patent 14 years
(Cl. D52—2)



184,071
POWER PRESS
Llewellyn Cyril Reeves, Wethersfield, Conn., assignor, by mesne assignments, to Kochring Company, Milwaukee, Wis., a corporation of Wisconsin
Application June 19, 1957, Serial No. 46,646
Term of patent 14 years
(Cl. D63—1)

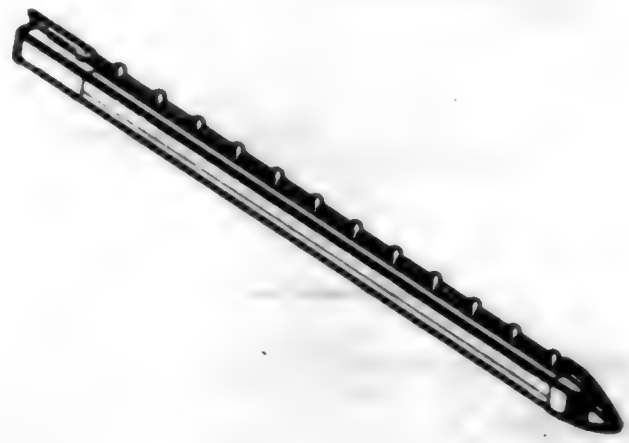


184,072
BOXING ROUND TALLY
August G. Reibling, Edgewood, R. I., assignor to Lloyd Plastics and Mold Co., Warwick, R. I., a corporation of Rhode Island
Application June 26, 1957, Serial No. 46,754
Term of patent 14 years
(Cl. D34—5)

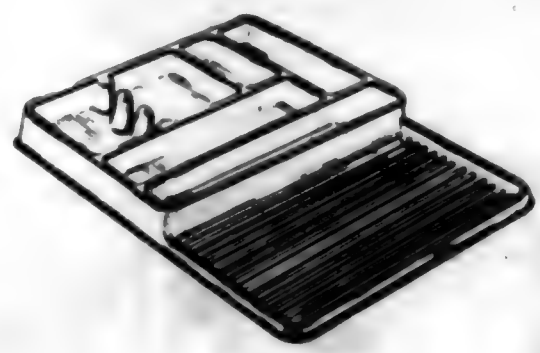


184,073
SERVING TRAY
James R. Raichow, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn.
Application May 28, 1957, Serial No. 46,387
Term of patent 14 years
(Cl. D44—10)

184,074
ELECTRIC FLASHING SIGN
Clint E. Thomas, Lemon Grove, Calif.
Application December 10, 1956, Serial No. 44,127
Term of patent 14 years
(Cl. D1—12)

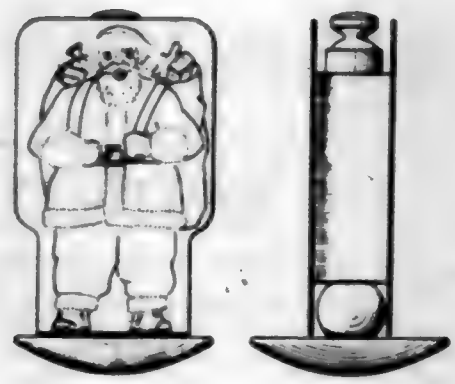


184,075
UTILITY TRAY
Earl S. Tupper, Smithfield, R. I., assignor to Tupper Corporation, North Smithfield, R. I., a corporation of Delaware
Application October 17, 1957, Serial No. 48,142
Term of patent 14 years
(Cl. D44—10)



184,876
ICE CREAM DIPPER
Estel O. Wheaton, Maumee, Ohio, assignor to Roll Dippers, Inc., Maumee, Ohio, a corporation of Ohio
Application January 18, 1957, Serial No. 44,519
Term of patent 14 years
(Cl. D44—29)

184,877
ROCKING TOY
Paul G. White, Toronto, Ontario, Canada
Application August 13, 1958, Serial No. 52,194
Term of patent 7 years
(Cl. D34—15)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Gruskin, Benjamin, deceased, to Rystan Co. Acid neutralising abrasive chlorophyll dentifrice. Re. 24,573, 12–9–58, Cl. 167—83.

Pittsburgh Consolidation Coal Co.: *See*—
Wellnsky, Irving H. Re. 24,574.

Rystan Co.: *See*—
Gruskin, Benjamin. Re. 24,573.

Wellnsky, Irving H., to Pittsburgh Consolidation Coal Co. Carbonisation of agglomerative coals. Re. 24,574, 12–9–58, Cl. 202—14.

LIST OF PLANT PATENTEES

Daniels, Anna M., to Stark Bro's Nurseries and Orchards Co. Apple tree. 1,777, 12–9–58, Cl. 47—62.

Ecke, Paul. Poinsettia plant. 1,779, 12–9–58, Cl. 47—60.

Ecke, Paul. Poinsettia plant. 1,780, 12–9–58, Cl. 47—60.

Jackson & Perkins Co.: *See*—
Kordes, Wilhelm. 1,778.

Kordes, Wilhelm, to Jackson & Perkins Co. Rose plant. 1,778, 12–9–58, Cl. 47—61.

Stark Bro's Nurseries and Orchards Co.: *See*—
Daniels, Anna M. 1,777.

LIST OF DESIGN PATENTEES

Billingsley, William F., to The B. F. Goodrich Co. Tire. 184,035, 12–9–58, Cl. D90—20.

Brown & Bigelow: *See*—
Reichow, James R. 184,073.

Carlson, Arthur W., to E. H. Sheldon & Co. Combined table and cabinet. 184,036, 12–9–58, Cl. D32—14.

Carvel, Thomas. Vending vehicle for soft ice cream. 184,037, 12–9–58, Cl. D14—3.

Chase, Herbert S. Article holder for vehicle sun visors. 184,038, 12–9–58, Cl. D14—6.

Cornelissen, Arnold J. Bathtub. 184,039, 12–9–58, Cl. D4—4.

Crockett, Janetta C. Asthmatic's wheel chair. 184,040, 12–9–58, Cl. D15—1.

Dick, Virginia C., to Vanity Fair Mills, Inc. Textile fabric. 184,041, 12–9–58, Cl. D92—1.

Dochterman, Audrey G. and E. R. Abacus. 184,042, 12–9–58, Cl. D25—1.

Dochterman, Earl R.: *See*—
Dochterman, Audrey G. and E. R. 184,042.

Dodge, Robert W. Cab for tractors or the like. 184,043, 12–9–58, Cl. D14—27.

Edlund Co., Inc.: *See*—
Edlund, Walter W. 184,044.
Edlund, Walter W. 184,045.

Edlund, Walter W., to Edlund Co., Inc. Can opener or the like. 184,044, 12–9–58, Cl. D22—2.

Edlund, Walter W., to Edlund Co., Inc. Can opener or the like. 184,045, 12–9–58, Cl. D22—2.

Eriksen, Erik E. Door mat. 184,046, 12–9–58, Cl. D9—6.

Francavillo, Thomas. Storage rack for jars or the like. 184,047, 12–9–58, Cl. D33—3.

Furiani, Walter: *See*—
Moore, David G., and Furiani. 184,063.

Furiani, Walter, and W. H. Harkins, to International Business Machines Corp. Computer console. 184,048, 12–9–58, Cl. D26—5.

Gilbert & Barker Mfg. Co.: *See*—
Rapisarda, Edward D. 184,070.

Gillard, Eugene. Combined magazine rack, shelf, toilet paper dispenser and cigarette ash tray holder. 184,049, 12–9–58, Cl. D4—3.

Gingerich, Edna S.: *See*—
Gingerich, Edward and E. S. 184,050.

Gingerich, Edward and E. S. Folding rocking chair. 184,050, 12–9–58, Cl. D15—6.

Goodrich, B. F., Co., The: *See*—
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Goodyear Tire & Rubber Co., The: *See*—
Klotz, Milton A. 184,058.

Grafton, George, Jr. Mail box. 184,051, 12–9–58, Cl. D74—9.

Hahn Originals: *See*—
Hahn, Robert J. 184,052.

Hahn, Robert J., to Hahn Originals. Dish. 184,052, 12–9–58, Cl. D44—15.

Harkins, William H.: *See*—
Furiani, Walter, and Harkins. 184,048

Harman, Emil I., to Philco Corp. Television receiver. 184,053, 12–9–58, Cl. D56—4.

Hutheing, Charles K., Sr. Golf club head. 184,054, 12–9–58, Cl. D34—5.

International Business Machines Corp.: *See*—
Furiani, Walter, and Harkins. 184,048.
Moore, David G., and Furiani. 184,063.

Johnson, Julius S. Combination advertising display and calendar for counting the days until Christmas. 184,055, 12–9–58, Cl. D1—2.

Kaye, Bess. Cover for electric kitchen utensils. 184,056, 12–9–58, Cl. D61—10.

Kearn, Joseph J. Box for storing and preserving garments or similar articles. 184,057, 12–9–58, Cl. D58—12.6.

Klotz, Milton A., to The Goodyear Tire & Rubber Co. Tire. 184,058, 12–9–58, Cl. D90—20.

Koehring Co.: *See*—
Reeves, Lewellyn C. 184,071.

Lloyd Plastics and Mold Co.: *See*—
Reibling, August G. 184,072.

McKnight, Robert J., to O. Musgrave. Powered riding lawn mower. 184,059, 12–9–58, Cl. D40—1.

Mehr, Sidney J. Combined dart and projector therefor or similar article. 184,060, 12–9–58, Cl. D24—15.

Milette, Kenneth A., to Photo Research Corp. Photometric instrument or similar article. 184,061, 12–9–58, Cl. D61—1.

Miller, Catherine. Lamp base or similar article. 184,062, 12–9–58, Cl. D48—20.

Moore, David G., and W. Furiani, to International Business Machines Corp. Computer console unit. 184,063, 12–9–58, Cl. D26—5.

Munos Arjona, Alfonso. Protector for a cake of soap. 184,064, 12–9–58, Cl. D4—3.

Musgrave, Orly: *See*—
McKnight, Robert J. 184,059.

Painter, David L., to Titan Mfg. Co., Inc. Portable electric space heater or the like. 184,065, 12–9–58, Cl. D61—10.

Painter, David L., to Titan Mfg. Co., Inc. Portable electric space heater or the like. 184,066, 12–9–58, Cl. D61—10.

Pavlik, Irene B. Applique emblem or the like. 184,067, 12–9–58, Cl. D3—9.

Philco Corp.: *See*—
Harman, Emil I. 184,053.

Photo Research Corp.: *See*—
Milette, Kenneth A. 184,061.

Pitrelli, Nicholas. Watch dial. 184,068, 12–9–58, Cl. D42—1.

Rademacker, John W. Combined dial and hands for a clock or similar article. 184,069, 12–9–58, Cl. D42—1.

Rapisarda, Edward D., to Gilbert & Barker Mfg. Co. Dual gasoline dispensing pump. 184,070, 12–9–58, Cl. D62—2.

Reeves, Lewellyn C., to Koehring Co. Power press. 184,071, 12–9–58, Cl. D63—1.

Reibling, August G., to Lloyd Plastics and Mold Co. Boxing round tally. 184,072, 12–9–58, Cl. D34—5.

Reichow, James R., to Brown & Bigelow. Serving tray. 184,073, 12–9–58, Cl. D44—10.

Roll Dippers, Inc.: *See*—
Wheaton, Estel O. 184,076.

Sheldon, E. H., & Co.: *See*—
Carlson, Arthur W. 184,036.

Thomas, Clint E. Electric flashing sign. 184,074, 12–9–58, Cl. D1—12.

Titan Mfg. Co., Inc.: *See*—
Painter, David L. 184,065.
Painter, David L. 184,066.

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Tupper, Earl S. 184,075.

Tupper, Earl S., to Tupper Corp. Utility tray. 184,075, 12–9–58, Cl. D44—10.

Vanity Fair Mills, Inc.: *See*—
Dick, Virginia C. 184,041.

Wheaton, Estel O., to Roll Dippers, Inc. Ice cream dipper. 184,076, 12–9–58, Cl. D44—23.

White, Paul G. Rocking toy. 184,077, 12–9–58, Cl. D34—15.

Audemar, Pierre G. J. M.: *See*—

LIST OF PATENTEES

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PATENTS WERE ISSUED ON THE 9TH DAY OF DECEMBER, 1958

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ACF Industries, Inc. : *See*—
  Furrer, John R. 2,863,401.
  Runken, Gerd. 2,863,400.
AMP Inc. : *See*—
  Cobaugh, Robert F., and Klingler. 2,863,346.
APRA Precipitator Corp. : *See*—
  Klemperer, Hans. 2,863,523.
Abel, George J., to The Singer Mfg. Co. Contour sewing machines. 2,863,408, 12–9–58, Cl. 112—2.
Abplanalp, Robert H., ½ to J. J. Baessler. Valve tester for aerosol dispensing units. 2,863,316, 12–9–58, Cl. 73—45.
Abramson, Abraham, to Raylite Electric Corp. Electric socket and support holder for portable display lighting outfits. 2,864,070, 12–9–58, Cl. 339—90.
Ackerman, Chester W., to L. W. Fierbaugh, D. S. Webster, and W. F. Rice. Fishing pole illuminating device. 2,863,251, 12–9–58, Cl. 43—17.
Ackles, Virgil E. Means for delivering bodies of raw dough to a body of hot fat in a dough frying machine. 2,863,379, 12–9–58, Cl. 99—405.
Ackley, Edward M., to R. W. Hortnett Co. Method of making a curved die. 2,863,337, 12–9–58, Cl. 76—107.
Adams, Frederic H. : *See*—
  Hardy, William B., and Adams. 2,863,866.
Adams, George S., Jr., to General Dynamics Corp. Bonding press. 2,863,491, 12–9–58, Cl. 154—1.
Adams, John E., to Sylvania Electric Products Inc. Gate reset circuit. 2,864,034, 12–9–58, Cl. 315—84.6.
Adams, Robert T., to International Telephone and Telegraph Corp. Aircraft navigation receiver circuits. 2,864,011, 12–9–58, Cl. 307—149.
Addleman, Lloyd A., to Sylvania Electric Products Inc. Gating frequency divider. 2,864,003, 12–9–58, Cl. 250—36.
Aeroquip Corp. : *See*—
  Upham, Theadore E. 2,863,676.
Aerotherm Corp. : *See*—
  Lautier, Roger A., and J. F. Spielman. 2,863,494.
Aetna Steel Products Corp. : *See*—
  French, William G. 2,863,532.
Aeschmann, Nicolas, to Complications S. A. Impulse motor. 2,864,016, 12–9–58, Cl. 310—163.
Af Ekenstam, Bo T., and N. E. N. Johansson, to Aktiebolaget Bofors. Esters of nicotinic acid. 2,863,873, 12–9–58, Cl. 260—295.5.
Ahsmann, Gerardus J. M., to North American Philips Co., Inc. Glow-discharge tube. 2,864,024, 12–9–58, Cl. 313—185.
Aiken, William R., to Kaiser Industries Corp. Grid-controlled space discharge device. 2,864,027, 12–9–58, Cl. 313—296.
Aiken, William R., to Kaiser Industries Corp. Polar coordinate tube. 2,864,033, 12–9–58, Cl. 315—21.
Ailes, Wayne H., to The Monarch Machine Tool Co. Electrical control system. 2,864,046, 12–9–58, 318—102.
Air Preheater Corp., The : *See*—
  Tigges, Alexander J. 2,863,723.
Air Reduction Co., Inc. : *See*—
  Carpenter, Gilbert H., Leeds, and Gister. 2,863,920.
  Lowell, Arthur I. 2,863,929.
  Spangler, Grant E., and Estes. 2,863,764.
Aktiebolaget Atvidabergs Butiksinredningar : *See*—
  Lewin, Gunnar E. W. 2,863,690.
Aktiebolaget Bofors : *See*—
  Af Ekenstam, Bo T., and Johansson. 2,863,873.
Aktiebolaget Elektrolux : *See*—
  Hellstrom, Axel G. 2,863,298.
Aktiebolaget Statens Skogsindustrier : *See*—
  Rosenquist, John H., and Westling. 2,863,364.
Aldington, Elmer T., to American Can Co. Apparatus for truncating cups. 2,863,366. 12–9–58, Cl. 93—36.1.
Allersma, Barteld P. Vehicle provided with rotary distributing device. 2,863,[illegible]09, 12–9–58, Cl. 275—2.
Allied Plastics Co. : *See*—
  Crane, Walton B. 2,863,369.
Altherr, Russell G., to American Steel Foundries. Torsion spring suspension. 2,863,657, 12–9–58, Cl. 267—58.
Altimier, David F., and C. H. Lemke, to E. I. du Pont de Nemours and Co. Process for the removal of calcium from sodium. 2,863,757, 12–9–58, Cl. 75—66.
Aluminum Co. of America : *See*—
  Brandyke, Kenneth J., and Stroup. 2,863,558.
Ambrette, Conrad and Paul. Alimentary paste producing apparatus. 2,863,404, 12–9–58, Cl. 107—14.
Ambrette, Paul : *See*—
  Ambrette, Conrad and Paul. 2,863,404.
Amdursky, Mark E., T. S. Noskowicz, and C. S. Szegho, to Zenith Radio Corp. Method and apparatus for color television. 2,864,032, 12–9–58, Cl. 315—13.
American Brake Shoe Co. : *See*—
  Cox, Isaac E. 2,863,656.
American Can Co. : *See*—
  Aldington, Elmer T. 2,863,366.
  Hommel, William B. 2,863,550.
  Nordquist, Ronald E. J. 2,863,553.
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  Ashley, Kenneth D., and Bruni. 2,863,761.
  Ashley, Kenneth D., and Michael. 2,863,760.
  Bikales, Norbert M., and Munch. 2,863,918.
  Cherlow, Herman. 2,863,867.
  Grubb, Robert J., and Sentz. 2,863,649.
  Hardy, William B., and Adams. 2,863,866.
  Klingsberg, Erwin. 2,863,883.
  Long, Robert S., and Boyle. 2,863,714.
  Marsluff, William F., and Smith. 2,863,930.
  Santay, William. 2,863,902.
  Tribit, Samuel W. 2,863,879.
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  Vartanian, Richard D., and Herbes. 2,863,788.
American Flange & Mfg. Co., Inc. : *See*—
  Shera, John W. 2,863,272.
American Motors Corp. : *See*—
  Dadson, Thomas E. 2,863,976.
  Philipp, Lawrence A. 2,863,301.
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  Wrigglesworth, Norman A. 2,863,969.
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  Tinker, Townsend. 2,863,647.
  Tinker, Townsend. 2,863,648.
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  Crane, Roland G., and Cerna. 2,863,758.
  Henderson, John J., and Montague. 2,863,810.
  Kary, Roland M., and Frisch. 2,863,893.
  Porter, Carroll B., Labbe, and Pike. 2,863,731.
American Steel Foundries : *See*—
  Altherr, Russell G. 2,863,657.
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  Dunning, Sanford F., and MacPherson. 2,863,950.
American Wheelabrator & Equipment Corp. : *See*—
  Chen, Paul C. 2,863,790.
Ammons, Joseph L. Refrigeration systems. 2,863,299, 12–9–58, Cl. 62—157.
Anchor Hocking Glass Corp. : *See*—
  Stover, Harry E. 2,863,588.
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  Barkas, Walter H., and Anderson. 2,864,056.
Anderson, John R., to Bell Telephone Laboratories, Inc. Pulse signaling circuit. 2,864,079, 12–9–58, Cl. 340—259.
Anderson, Kador G., and S. Close; said Close assor. to said Anderson. Incinerator. 2,863,406, 12–9–58, Cl. 110—18.
Anderson, Ralph A. Adjustable support. 2,863,626, 12–9–58, Cl. 248—125.
Anderson, Ralph F. : *See*—
  Anderson, Ralph F., and Heifetz. 2,863,271.
Anderson, Ralph F., and M. Heifetz, to R. F. Anderson. Cup filler and capper. 2,863,271, 12–9–58, Cl. 53—276.
Andrews, John L. Electric burner switch. 2,863,971, 12–9–58, Cl. 200—167.
Ankerman, Paul W. : *See*—
  Manley, Fred A., and Ankerman. 2,863,520.
Appel, Gerhard H., and E. Tisker, to Appel Process, Ltd. Stroke adjustment means for forming machines. 2,863,342, 12–9–48, Cl. 78—20.
Appel Process, Ltd. : *See*—
  Appel, Gerhard H., and Tisker. 2,863,342.
Armington, George E., to General Motors Corp. Two speed steering. 2,863,234, 12–9–58, Cl. 37—126.
Armour and Co. : *See*—
  Davis, Charles J., Jr. 2,863,521.
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  Kyle, Joseph H. 2,863,577.
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Aronson, Theodore F. : *See*—
  Lyon, Floyd A., and Aronson. 2,863,344.
Ashley, Kenneth D., and M. W. Michael, to American Cyanamid Co. Recovery of platinum from platinum aluminum catalyst. 2,863,760, 12–9–58, Cl. 75—108.
Ashley, Kenneth D., and G. J. Bruni, to American Cyanamid Co. Recovery of platinum from alumina-platinum-containing catalytic materials. 2,863,761, 12–9–58, Cl. 75—108.
Ashton, William E. : *See*—
  Baranauckas, Charles F., and Ashton. 2,863,906.
Aspergren, Brooke D., and R. V. Heinzelman, to The Upjohn Co. Organic compounds. 2,863,865, 12–9–58, Cl. 260—243.
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  Beal, Reginald V., and Bishop. 2,863,654.
Attwood, James W. Pipe or tubing support or hanger. 2,863,625, 12–9–58, Cl. 248—62.
Attwood, John G., C. C. Smith, and J. N. Covert, to Union Special Machine Co. Sewing machine lubrication systems. 2,863,412, 12–9–58, Cl. 112—256.

Andemar, Pierre G. J. M.: *See*—
Mercier, Jean, and Andemar. 2,863,422.
Ault, Frederick G., to George Salter & Co. Ltd. Means for applying coolant during grinding operations. 2,863,265, 12–9–58. Cl. 51—267.
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Automatic Designing Corp.: *See*—
George, Henry. 2,863,407.
Avery, Robert W., to Burroughs Corp. Logical circuits. 2,864,076, 12–9–58. Cl. 240—174.
Axt, Gunter, to Hartmann & Braun Akt. Device for analysis of gaseous mixtures. 2,863,736, 12–9–58, Cl. 23—254.
B. B. Chemical Co.: *See*—
Griswold, Stanley M. 2,863,228.
Baade, Henry, to Curtis Mfg. Co. Assembly for fifth-wheel connection. 2,863,674, 12–9–58, Cl. 280—439.
Babcock, John C., to The Upjohn Co. 17-isonitrosoandrostanes. 2,863,885, 12–9–58, Cl. 260—397.
Babcock & Wilcox Co., The: *See*—
Diehl, Erle K., Hage, and Matty. 2,863,354.
Koch, Paul H. 2,863,424.
Babcock, William J. Reversible power transmission, especially for rotary tools. 2,863,334, 12–9–58, Cl. 74—788.
Badische Anilin- & Soda-Fabrik Akt.: *See*—
Bartholome, Ernst. 2,863,748.
Hamprecht, Guenther, Immel, and Geitert. 2,863,730.
Baensch, Willi: *See*—
Pape, Martin H. R. 2,863,636.
Baessler, John J.: *See*—
Abplanalp, Robert H. 2,863,316.
Bagley, Michael: *See*—
Coles, Ralph V., and Bagley. 2,863,472.
Bailey, Edward E., to Lamp Presscaps Ltd. Apparatus for delivering articles with a predetermined orientation. 2,863,552, 12–9–58, Cl. 198—32.
Baia, Joseph P., A. B. Booth, and E. A. Kleta, to The Glidden Co. Producing and recovering terpenic oxidation products. 2,863,882, 12–9–58, Cl. 260—348.5.
Baklini, Edward: *See*—
Florea, Harold R., Baklini, and Braun. 2,863,624.
Ball, John C., Jr., to West Virginia Pulp and Paper Co. Inhibition of corrosion of iron in acids. 2,863,780, 12–9–58, Cl. 106—14.
Balthis, Joseph H.: *See*—
Kamack, Harry J., and Balthis. 2,863,719.
Bambara, John P.: *See*—
Mosny, Michael T., and Bambara. 2,863,458.
Bangs, Ralph C., and E. S. Donle, to Coro, Inc. Combination brooch and earring with cover means for the brooch pin. 2,863,306, 12–9–58, Cl. 63—1.
Bank, Morton L. Bell crank actuated pivoted sweep arm bender. 2,863,490, 12–9–58, Cl. 153—45.
Bank of America National Trust and Savings Assn., The: *See*—
Delafontaine, Charles. 2,863,660.
Barach, Irving L. Collapsible containers. 2,863,457, 12–9–58, Cl. 128—295.
Baranauckas, Charles F., and W. E. Ashton, to Hooker Chemical Corp. α,β-dichloro-4,4,4-trifluorocrotonic acid and derivatives thereof. 2,863,906, 12–9–58, Cl. 260—465.7.
Barina, Edward J. Terminal board for junction or outlet box. 2,863,935, 12–9–58, Cl. 174—59.
Barkas, Walter H., and A. B. C. Anderson. Remote impedance indicators. 2,864,054, 12–9–58, Cl. 324—57.
Barnes, William A., to Kelsey-Hayes Co. Apparatus for butt welding. 2,863,344, 12–9–58, Cl. 78—82.
Barr, Courtland H., Jr.: *See*—
Barr, Courtland H., Sr., C. H., Jr., and J. W. 2,863,451.
Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. Barr. Blood transfusion assembly. 2,863,451, 12–9–58, Cl. 128—214.
Barr, Francis A., to Sylvania Electric Products Inc. Process for preparing synthetic mica product. 2,863,720, 12–9–58, Cl. 23—110.
Barr, John W.: *See*—
Barr, Courtland H., Sr., C. H., Jr., and J. W. 2,863,451.
Barthelome, Ernst, to Badische Anilin- & Soda-Fabrik Akt. Production of fuel gases. 2,863,748, 12–9–58, Cl. 48—197.
Barton, Dean M., to Beckman Instruments, Inc. Potentiometer. 2,863,972, 12–9–58, Cl. 201—48.
Bassick Co., The: *See*—
Parrott, Henry W., and Ericson. 2,863,497.
Batchelor, Joseph B., Jr., to Patronix Inc. Electrical coupling device. 2,864,060, 12–9–58, Cl. 333—32.
Batts, Willard E. Game device. 2,863,667, 12–9–58, Cl. 273—125.
Baumann, Fritz: *See*—
Bienert, Berthold, and Baumann. 2,863,875.
Baxter Laboratories, Inc.: *See*—
Gewecke, Theodore H. 2,863,458.
Beach, Leland K., and R. Drogin, to Esso Research and Engineering Co. Synthesis of organic phosphorus compounds. 2,863,900, 12–9–58, Cl. 260—461.
Beadle, Robert H., to Fairbanks, Morse & Co. Fuel regulating means for gas engines. 2,863,426, 12–9–58, Cl. 123—120.
Beal, Reginald V., and L. H. Bishop, to The Associated Portland Cement Manufacturers Ltd. Manufacture of portland cement, lime and the like. 2,863,654, 12–9–58, Cl. 262—32.
Beal, Robert C.: *See*—
Rogers, Ernest W., and Beal. 2,863,498.
Bean, Claude T.: *See*—
Robitschek, Paul, and Bean. 2,863,794.
Robitschek, Paul, and Bean. 2,863,795.
Robitschek, Paul, and Bean. 2,863,848.
Bear, Joe. Retractable wheel assembly for boats. 2,863,159, 12–9–58, Cl. 9—1.
Beauregard, Rene J.: *See*—
Bingham, Neil D., and Beauregard. 2,864,069.
Becher, Paul, to Colgate-Palmolive Co. Method for purifying synthetic organic detergents. 2,863,837, 12–9–58, Cl. 260—400.
Beck, Harold S. Ladle nozzle construction. 2,863,189, 12–9–58, Cl. 22—65.
Beck, Henry C., and R. N. Pim, to Sun Oil Co. Deodorization of waxes. 2,863,820, 12–9–58, Cl. 208—26.
Beck, Warren R.: *See*—
Eubank, William R., and Beck. 2,863,782.
Becker, Heins H.: *See*—
Wallace, Burgess P., Romney, and Becker. 2,863,781.
Becker, Rudolf: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Beckman Instruments, Inc.: *See*—
Barton, Dean M. 2,863,972.
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Beesley, John H.: *See*—
Scowcroft, John, and Beesley. 2,863,862.
Bell Aircraft Corp.: *See*—
Metzger, Robert W. 2,863,518.
Bell Telephone Laboratories, Inc.: *See*—
Anderson, John R. 2,864,079.
Boyle, Willard S., and Smith. 2,864,054.
Dunning, Sanford F., and MacPherson. 2,863,950.
Locke, George A. 2,863,936.
Moore, Edward F. 2,864,008.
Potter, Ralph K. 2,863,712.
Straube, Harold M. 2,864,002.
Bellier, Jean: *See*—
Coyne, André, and Bellier. 2,863,292.
Bendix Aviation Corp.: *See*—
Mendenhall, Charles A. 2,863,220.
Prapis, Frank. 2,864,001.
Schmider, Henry R., Palmenberg, and Dietz. 2,863,223.
Benghiat, Isaac, J. R. Bowers, G. E. Lukes, and S. L. Giolito, to Stauffer Chemical Co. Protecting materials against fungi by applying substituted dithiono and thione-oxo-thiadiazolidines. 2,863,902, 12–9–58, Cl. 167—33.
Benis, Isak, and W. Trompeter. Non skid safety device. 2,863,687, 12–9–58, Cl. 291—3.
Bennett, Colin L.: *See*—
Nemet, Anthony A., Cox, and Bennett. 2,864,004.
Bennett, Orvan J. Ball flush valve. 2,863,154, 12–9–58, Cl. 4—67.
Benning, Calvin J.: *See*—
Wilson, Christopher L., and Benning. 2,863,635.
Benson, Carl H., to O. F. Mossberg & Sons, Inc. Slide-action firearm with hammer releasable action lock. 2,863,247, 12–9–58, Cl. 42—20.
Benson, George E. W. Crate assembly clip. 2,863,194, 12–9–58, Cl. 24—72.
Bergerson, Raymond H. Tractor safety hitches. 2,863,272, 12–9–58, Cl. 97—47.39.
Berkman, John W., to Research Corp. Vacuum control system. 2,863,287, 12–9–58, Cl. 60—50.
Bernier, Napoleon M., and N. Wiseblood; said Bernier assor. to California Stucco Products of New England, Inc. Paving mixture comprising vermiculite, rubber, sand and bituminous binder. 2,863,541, 12–9–58, Cl. 260—28.5.
Bessiere, Pierre E. Fuel injection devices for multi-cylinder engines. 2,863,437, 12–9–58, Cl. 123—139.
Best Foods, Inc., The: *See*—
Josefowicz, Edmund L. 2,863,546.
Bethard, William F., and H. W. Halligan. Device for counting pills. 2,863,572, 12–9–58, Cl. 214—1.
Biel, John H., to Lakeside Laboratories, Inc. Metarsuation products of 1-pyridyl-3-allylureas. 2,863,863, 12–9–58, Cl. 260—242.
Bienert, Berthold, and F. Baumann, to Farbenfabriken Bayer Akt. Process for the production of basic dyestuffs. 2,863,875, 12–9–58, Cl. 260—314.5.
Bikales, Norbert M., and E. J. Munch, to American Cyanamid Co. Stabilization of acrylamide. 2,863,918, 12–9–58, Cl. 260—561.
Billings, Roy O. Apparatus for handling automobiles. 2,863,397, 12–9–58, Cl. 104—50.
Bilocq, Georges A., to Forano Limitee. Aligning conveyor system. 2,863,551, 12–9–58, Cl. 198—39.
Bingham, Neil D., and R. J. Beauregard, to Radio Corp. of America. Quick-disconnect connector. 2,864,069, 12–9–58, Cl. 339—75.
Birdwell, Benjamin F., and W. A. Schwehr. Self-locking panel. 2,863,180, 12–9–58, Cl. 20—4.
Birtwell, Stanley, and F. L. Rose, to Imperial Chemical Industries Ltd. Biguanides. 2,863,919, 12–9–58, Cl. 260—565.
Biechel, Joseph, to Motoren-Werke Mannheim A. G. vorm. Benz Abt. Stat. Motorenbau. Internal combustion engines. 2,863,439, 12–9–58, Cl. 123—193.
Bishop, Lewis H.: *See*—
Beal, Reginald V., and Bishop. 2,863,654.
Black Products Co.: *See*—
Lau, Erwin M. 2,863,475.
Blake, Francis G., to California Research Corp. Method and apparatus for eliminating phase distortion in seismic signals. 2,864,072, 12–9–58, Cl. 340—15.
Blaser, Bruno: *See*—
Raecke, Bernhard, Blaser, Stein, and Schirp. 2,863,913.
Blatt, Paula, Panty. 2,863,152, 12–9–58, Cl. 2—224.
Blyth, Jack V.: *See*—
Chamberlin, Reginald H. D., and Blyth. 2,863,634.
Bode, Robert G., and C. A. Geib, to Gantner Industries, Inc. Mounting for tissue dispensers in automobiles. 2,863,627, 12–9–58, Cl. 248—278.
Boeing Airplane Co.: *See*—
Weiland, Richard H. 2,863,821.
Bolliat, Philippe, and R. Rohrer, to Heberlein Patent Corp. Yarn twister. 2,863,277, 12–9–58, Cl. 57—77.3.

Cavallito, Chester J., and F. K. Kirchner, to Sterling Drug Inc. Basic esters of substituted β-benzoylacrylic acids.
Cobaugh, Robert F., and M. L. Klingler, to A M P Inc. Hand operated crimping tool.

Boi, Arie, C. A. M. Klaassen, and P. J. W. Jochems, to North American Philips Co., Inc. Electrical resistor. 2,863,840, 12–9–58, Cl. 252—519.

Bonnar-Vawter, Inc.: *See*—
Richards, Augustus J. 2,863,663.

Bonnell, Charles R., and J. S. Fink, to Minneapolis-Honeywell Regulator Co. Acceleration responsive switch. 2,863,961, 12–9–58, Cl. 200—61.45.

Bonnie Dog Food Co.: *See*—
Lynn, Allan D. 2,863,778.

Bonotto, Michele, ½ to McCormick & Co., Inc., and ½ to R. M. Webster, J. Gola, Jr., and said Bonotto. Coffee bean products and methods for producing such products. 2,863,774, 12–9–58, Cl. 99—71.

Bonzagni, Francis A., to Monsanto Chemical Co. Process for the preparation of sulfite modified melamine-formaldehyde resin and product obtained. 2,863,842, 12–9–58, Cl. 260—29.4.

Booth, Albert E.: *See*—
Bain, Joseph P., Booth, and Klein. 2,863,862.

Booth, Sheldon M. Method, composition and apparatus for mechanically setting or resetting diamond particles in a working surface. 2,863,780, 12–9–58, Cl. 51—293.

Borowski, Adolph J.: *See*—
Miller, Joshua, Cadman, and Borowski. 2,863,200.

Bortnick, Newman M., to Rohm & Haas Co. Process for the preparation of 2,5-dimethylcyclopentanone. 2,863,923, 12–9–58, Cl. 260—586.

Boston Machine Works Co.: *See*—
Vachon, Hubert J. 2,863,229.

Boteler, Henry W., to Grinnell Corp. Diaphragm valve. 2,863,631, 12–9–58, Cl. 251—331.

Bouteleux, René. Cylinder-head for internal combustion engine. 2,863,429, 12–9–58, Cl. 123—90.

Bowen, John H.: *See*—
Moore, Richard V., Bowen, and Deal. 2,863,815.

Bowers, James E.: *See*—
Benghiat, Isaac, Bowers, Lukes, and Giolito. 2,863,803.

Bowers, Rolland G., and R. F. Mohler, Jr., to Sun Oil Co. Water treatment. 2,863,732, 12–9–58, Cl. 23—234.

Bowser Parking System, Inc., The: *See*—
Bowser, Virgil C. 2,863,520.

Bowser, Virgil C., to The Bowser Parking System, Inc. Elevator gate. 2,863,529, 12–9–58, Cl. 187—60.

Boyce, William C., to Chance Vought Aircraft Inc. High-strength light-weight quick-disconnect coupling for a linkage system. 2,863,685, 12–9–58, Cl. 287—104.

Boyd, Richard K., to General Dynamics Corp. Test jack testing of toll ticketing trunk circuit. 2,863,948, 12–9–58, Cl. 179—9.

Boyle, Richard J.: *See*—
Long, Robert S., and Boyle. 2,863,714.

Boyle, Willard S., and J. L. Smith, to Bell Telephone Laboratories, Inc. Velocity measurement of relay contacts. 2,864,054, 12–9–58, Cl. 324—28.

Brater, Donald C., and J. W. Pike, to United States of America, Atomic Energy Commission. System for conversion of UF_4 to UF_6. 2,863,725, 12–9–58, Cl. 23—232.

Braun, Arthur: *See*—
Pierce, Harold R., Baklint, and Braun. 2,863,624.

Bredesen, Leo. Concave multiple cutting edge rock drill bit and die. 2,863,639, 12–9–58, Cl. 255—64.

Brewile, Yves, to Institut Francais du Petrole des Carburants et Lubrifiants. Scavenging and supercharging system for rotary engines. 2,863,425, 12–9–58, Cl. 123—12.

Breuning, Ernst, to Pneumafil Corp. Indication of thread breaks in textile machines. 2,863,276, 12–9–58, Cl. 57—34.5.

Brimley, Kenneth J., to Imperial Chemical Industries Ltd. Manufacture of plastic incendiary materials. 2,863,353, 12–9–58, Cl. 86—1.

British Internal Combustion Engine Research Assn.: *See*—
Mansfield, Wilfred P. 2,863,512.

British Thomson-Houston Co. Ltd., The: *See*—
Choudhury, Shafi-uddin A. 2,864,041.
Choudhury, Shafi-uddin A. 2,864,045.

Britton, Ralph S., to Inco Industries Mfg. Corp. Display signs. 2,863,242, 12–9–58, Cl. 40—140.

Brondyke, Kenneth J., and P. T. Streep, to Aluminum Co. of America. Filtering molten aluminous metal. 2,863,558, 12–9–58, Cl. 210—60.

Brown, George E.: *See*—
McChesney, James S., and Brown. 2,863,470.

Brown, Robert L.: *See*—
Elms, Edwin F. 2,863,196.

Brog, Albert F. Valve construction. 2,863,630, 12–9–58, Cl. 251—173.

Bracken, Byron L., to General Motors Corp. Gyration and rotation mechanism for domestic appliance. 2,863,311, 12–9–58, Cl. 68—12.

Bruni, Gorgo J.: *See*—
Ashley, Kenneth D., and Bruni. 2,863,761.

Bucher, Thomas T. N., to Radio Corp. of America. Frequency control circuit. 2,864,059, 12–9–58, Cl. 332—29.

Buchner, Karl, and O. Roelen, to Ruhrchemie Akt. Production of organic oxygenated compounds from unsaturated hydrocarbons. 2,863,911, 12–9–58, Cl. 260—497.

Buckley, John L. and L. G. Embossing hardboard. 2,863,168, 12–9–58, Cl. 18—10.

Buckley, Lawrence G.: *See*—
Buckley, John L. and L. G. 2,863,168.

Buckmann, John F., to Union Oil Co. of California. High V. I. detergent lubricating oils. 2,863,824, 12–9–58, Cl. 252—32.5.

Bucyrus-Erie Co.: *See*—
Thornburg, Herbert W. 2,863,637.
Thornburg, Herbert W. 2,863,638.

Buda, Salvatore, to Strapavac Corp. Vacuum cleaner. 2,863,594, 12–9–58, Cl. 183—57.

Bührer, Erwin, to Georg Fischer Akt. Method and means for cooling granular masses containing evaporable liquid. 2,863,190, 12–9–58, Cl. 22—99.

Bunch, Tillman T., to Western Electric Co., Inc. Strand reeling apparatus. 2,863,613, 12–9–58, Cl. 242—25.

Burgermeister Brewing Corp.: *See*—
Tonna, Arthur J. 2,863,371.

Burroughs Corp.: *See*—
Avery, Robert W. 2,864,078.
Frederick, Harold M. 2,863,658.
Parsterfer, John. 2,863,226.

Burtchaell, Clarence S. Printing machine. 2,863,396, 12–9–58, Cl. 101—212.

Buteux, Richard H. B., and J. W. Cornforth, to Imperial Chemical Industries Ltd. Apparatus for production of films. 2,863,172, 12–9–58, Cl. 18—14.

Butler, James G. Means for cutting trousers and preparing same therefor. 2,863,501, 12–9–58, Cl. 223—2.

Butler, Jesse L., to Sanders Associates, Inc. Directional antenna with conical scanning. 2,864,083, 12–9–58, Cl. 343—756.

Cadman, Robert B., Jr.: *See*—
Miller, Joshua, Cadman, and Borowski. 2,863,200.

Cahn, Robert L. Double deck food serving unit. 2,863,706, 12–9–58, Cl. 312—236.

Cain, Dallas E., and G. H. Fry, Jr., to United States of America, Air Force. Reduction gearing system. 2,863,324, 12–9–58, Cl. 74—410.

California Research Corp.: *See*—
Blake, Francis G. 2,864,072.
Perrine, Richard L. 2,863,832.
Stayner, Richard D. 2,863,836.

California Spray-Chemical Corp.: *See*—
Kohn, Gustave K. 2,863,580.

California Stucco Products of New England, Inc.: *See*—
Bernier, Napoleon M., and Wiseblood. 2,863,841.

Cameron, Warren B. S., to Kenney Mfg. Co. Traverse rod and draw cord combination. 2,863,506, 12–9–58, Cl. 160—345.

Camfield Mfg. Co.: *See*—
Olson, Henry L., Miller, and Hale. 2,863,378.

Campbell, Erwin A.: *See*—
Woolslayer, Homer J., Jenkins, Turner, and Campbell. 2,863,530.

Campbell, Erwin A., to Lee C. Moore Corp. Tower erecting apparatus. 2,863,531, 12–9–58, Cl. 189—12.

Canada, George B., Sr., ¼ to J. R. Walker III. Holder for sharpening scissors. 2,863,264, 12–9–58, Cl. 51—238.

Canada Packers Ltd.: *See*—
Nordin, Henry R. 2,863,167.

Canadian Footwear Research Inc.: *See*—
Jones, William H. 2,863,231.

Canepa, Agostino. Expansion joint apt to connect four or more tubular elements lying in planes orthogonal to each other, one of them being a continuous tubular element passing through the joint. 2,863,682, 12–9–58, Cl. 287—54.

Cantrel, Kenneth E.: *See*—
Goodhue, Lyle D., and Cantrel. 2,863,799.

Cantrell, Troy L., J. French, and P. K. Kuhne, to Gulf Oil Corp. Gasoline fuel compositions. 2,863,742, 12–9–58, Cl. 44—58.

Cantrell, Troy L., and J. G. Peters, to Gulf Oil Corp. Motor fuel. 2,863,744, 12–9–58, Cl. 44—69.

Cantrell, Troy L., A. S. Orr, and J. G. Peters, to Gulf Oil Corp. Motor fuel. 2,863,745, 12–9–58, Cl. 44—58.

Cantrell, Troy L., P. K. Kuhne, and J. G. Peters, to Gulf Oil Corp. Aviation grade gasolines containing N-alkyl amine salts of dialkyl acid orthophosphates. 2,863,746, 12–9–58, Cl. 44—69.

Cantrell, Troy L., P. K. Kuhne, and J. G. Peters, to Gulf Oil Corp. Marine white gasoline compositions containing oil-soluble alkylammonium dialkyl orthophosphates. 2,863,747, 12–9–58, Cl. 44—72.

Cantrell, Troy L., and J. G. Peters, to Gulf Oil Corp. Amine salts of di oxo-octyl orthophosphates. 2,863,904, 12–9–58, Cl. 260—461.

Cardwell Westinghouse Co.: *See*—
Peterson, Bertil E. 2,863,257.

Capewell Mfg. Co., The: *See*—
Craven, Wilbur J., and Warner. 2,863,201.

Cardin, Wilfred W., and H. D. Epstein, to Metals & Controls Corp. Switch. 2,863,963, 12–9–58, Cl. 200—116.

Cardwell Westinghouse Co.: *See*—
Peterson, Bertil E. 2,863,212.

Carey, Philip, Mfg. Co., The: *See*—
Leibrock, Walton V., and Fascold. 2,863,405.

Carlson, Albert. Four-in-one do it yourself automatic door seal. 2,863,183, 12–9–58, Cl. 20—69.

Carpenter, Gilbert B., M. W. Leeds, and S. Ginter, to Air Reduction Co., Inc. Mono-adducts of ethylene oxide and acetylenic glycols. 2,863,926, 12–9–58, Cl. 260—615.

Carpenter, Ose F. Chicken coop. 2,863,691, 12–9–58, Cl. 292—340.

Carroll, Howard M. Artificial limb ankle joint assembly. 2,863,684, 12–9–58, Cl. 287—97.

Carter, A. E., Inc.: *See*—
Chang, Nai C., and Langlois. 2,863,492.

Casco Products Corp.: *See*—
Horwitt, Laurence G. 2,863,977.
Trautman, Walter C. 2,863,968.

Casey, John W. Oil tank safety valve. 2,863,469, 12–9–58, Cl. 137—72.

Casper, Ervin J. Instrument for holding surgical needle. 2,863,459, 12–9–58, Cl. 128—321.

Castedello, William: *See*—
Schwartz, Morris, Castedello, and Kapreilan. 2,863,968.

Cavalieri, Charles G. Coin operated intermittent lighting device-automatic electric candle. 2,863,647, 12–9–58, Cl. 194—9.

Cavallito, Chester J., and F. K. Kirchner, to Sterling Drug Inc. Basic esters of substituted β-benzoylacrylic acids. 2,863,910, 12-9-58, Cl. 260—477.
Cayton, Robert J. Vertical blind control mechanism. 2,863,502, 12-9-58, Cl. 160—173.
Celco Co., The: *See*—
Owens, Edward W. 2,863,582.
Cerna, Othon J.: *See*—
Crane, Roland G., and Cerna. 2,862,758.
Cerveny, Frank E.: *See*—
Rimsha, Victor E., Kosel, Cerveny, and Wolf. 2,863,628.
Chabrier, Pierre, and A. E. G. Desjobert, to J. M. D. Aron-Samuel. Mono orthophosphoric esters and salts thereof. 2,862,862, 12-9-58, Cl. 260—247.7.
Chain Belt Co.: *See*—
Lind, Arthur C., Quast, and Koesis. 2,863,544.
Quast, Gilbert W., and Koesis. 2,863,565.
Challis, Kenneth E., to D. Napier & Son Ltd. Timing of fuel injection pumps. 2,863,436, 12-9-58 Cl. 123—139.
Chamberlin, Reginald H. D., and J. V. Blyth, to D. Napier & Son Ltd. Shroud ring construction for turbines and compressors. 2,863,634, 12-9-58, Cl. 253—78.
Chambers, Edwin G., and E. A. Temple, to Western Electric Co., Inc. Apparatus for wrapping strands on articles. 2,863,610, 12-9-58, Cl. 242—7.
Chance Vought Aircraft Inc.: *See*—
Boyce, William C. 2,863,655.
Chang, Nai C., and R. R. Langlois, to A. B. Carter, Inc. Method and apparatus for bending yarns and threads. 2,863,492, 12-9-58, Cl. 154—1.7.
Changewood Corp.: *See*—
Clark, James d'A. 2,863,476.
Chapin, Bryan W. Expansible chamber apparatus. 2,863,602, 12-9-58, Cl. 230—175.
Chapin, Howard R., and F. R. Kintanar, to Sears, Roebuck and Co. Spinning type fishing reel. 2,863,617, 12-9-58, Cl. 242—84.21.
Charlesworth, Robert K.: *See*—
Shreve, Randolph N., and Charlesworth. 2,863,559.
Chase-Shawmut Co., The: *See*—
Swain, Kenneth W. 2,863,967.
Chen, Paul C., to American Wheelabrator & Equipment Corp. Method of making steel shot. 2,863,790, 12-9-58, Cl. 148—3.
Cherlow, Herman, to American Cyanamid Co. Stabilization of sulfonamides. 2,863,867, 12-9-58, Cl. 260—247.1.
Cherry-Burrell Corp.: *See*—
Nelson, Eugene K. and H. H. 2,863,646.
Chicago Development Corp.: *See*—
Dean, Reginald S., and McCawley. 2,863,785.
Choudhury, Shafi-uddin A., to The British Thomson-Houston Co. Ltd. Operation of dynamo-electric machines in mutual synchronism. 2,864,041, 12-9-58, Cl. 318—24.
Choudhury, Shafi-uddin A., to The British Thomson-Houston Co. Ltd. Single phase power selsyn drive. 2,864,045, 12-9-58, Cl. 318—34.
Chow, Wee F., to General Electric Co. Superregenerative detector circuit using transistors. 2,863,995, 12-9-58, Cl. 250—20.
Christensen, Carl J., to United States of America, Navy. Crystal growing system. 2,863,740, 12-9-58, Cl. 23—301.
Chrysler Corp.: *See*—
Moyes, James. 2,863,658.
Sarto, Jorma O. 2,863,423.
Scott, David E. 2,863,671.
Stamm, Alexander F. 2,863,695.
Ziemke, William A., Jr. 2,863,700.
Chu, Edward J.: *See*—
Schuman, Paul D., and Chu. 2,863,174.
Chubb, Howard E., and Z. D. Reynolds, to United States of America, Navy. Training apparatus reproducing the visual and audible presentations of an electronic scanning system. 2,863,227, 12-9-58, Cl. 35—10.4.
Chuy, Nicholas. Step-by-step stock feeder. 2,863,650, 12-9-58, Cl. 271—2.5.
Ciba Co. Inc.: *See*—
Pschorr, Frank E. 2,863,533.
Cincinnati Butchers' Supply Co., The: *See*—
Schmidt, Carl O., Jr. 2,863,168.
Cirjelio, Carmine, to S. p. A. Prod. Farmaceutici Specialmati Dott. M. Calozi & F. Purification of thiamin compounds. 2,863,870, 12-9-58, Cl. 260—256.6.
Clacel, Benjamin H., to Minneapolis-Honeywell Regulator Co. Automatic steering mechanism. 2,863,622, 12-9-58, Cl. 244—77.
Clapper, Clyde E. Anchor stake. 2,863,535, 12-9-58, Cl. 189—82.
Clapper, Gerung L., to International Business Machines Corp. Transistor trigger circuit. 2,864,007, 12-9-58, Cl. 307—88.5.
Clark, James d'A., to Changewood Corp. Apparatus for producing fibrous elements. 2,863,476, 12-9-58, Cl. 144—172.
Clark, Jared W., and C. E. Rectenwald, to Union Carbide Corp. Process for making perhalocyihalides. 2,863,916, 12-9-58, Cl. 260—539.
Clayton, Benjamin: *See*—
Thurman, Benjamin H. 2,863,671.
Clement, Milton A., to General Dynamics Corp. Telephone identification test system. 2,863,958, 12-9-58, Cl. 179—175.2.
Clevett, Merton L., Jr., to United States of America, Army. Sectional open-web beam. 2,863,532, 12-9-58, Cl. 189—37.
Clipper Mfg. Co.: *See*—
Harclerode, John R. 2,863,440.
Harclerode, John R. 2,863,441.
Close, Samuel: *See*—
Anderson, Kader G., and Close. 2,863,404.

Cobaugh, Robert F., and M. L. Klingler, to A M P Inc. Hand operated crimping tool. 2,863,346, 12-9-58, Cl. 81—15.
Cohen, Alfred G.: *See*—
Small, Samuel N. 2,863,466.
Small, Samuel N. 2,863,468.
Cole, Howard W., Jr. Self-locking straight line actuator with lead release re-action. 2,863,536, 12-9-58, Cl. 192—8.
Coles, Ralph V., and M. Bagley, to Robertshaw-Fulton Controls Co. Capacity sensitive relays. 2,863,472, 12-9-58, Cl. 137—392.
Colgate-Palmolive Co.: *See*—
Becher, Paul. 2,863,857.
Schurman, Jack V. 2,863,883.
Columbia-Southern Chemical Corp.: *See*—
Thornhill, Fred S., and Morgan. 2,863,727.
Combs, Douglas V. Meat grinding apparatus. 2,863,480, 12-9-58, Cl. 146—78.
Compagnie des Machines Bull (Societe Anonyme): *See*—
Leclerc, Bruno M. J., Feissel, and Chenus. 2,863,604.
Complications S. A.: *See*—
Aeschmann, Nicolas. 2,864,018.
Comstock Foods, Inc.: *See*—
Keifer, William L. 2,863,482.
Comstock, George E., 3rd, to Norton Co. Taper gauging device. 2,863,222, 12-9-58, Cl. 33—174.
Conger, David L. Extractor. 2,863,848, 12-9-58, Cl. 81—71.
Comitech, Ltd.: *See*—
Hurley, Thomas C., III, and Kling. 2,863,446.
Connelly, John F., and L. E. Thomas, Jr. Method of potting instrument assemblies and construction thereof. 2,864,057, 12-9-58, Cl. 324—156.
Consolidated Electrodynamics Corp.: *See*—
Sandiford, Robert E. 2,864,070.
Consolidated Electronics Industries Corp.: *See*—
Haydon, Arthur W., and Donovan. 2,863,231.
Continental Can Co., Inc.: *See*—
Pierce, Thomas E. 2,863,365.
Thiem, Eugene T. 2,863,367.
Thiem, Eugene T. 2,863,368.
Continental Oil Co.: *See*—
Smith, John H. 2,863,912.
Cooper, Benjamin, J. S. Wapner, and J. G. Reback; said Wapner and said Reback assors. to said Cooper. Data recorder. 2,863,710, 12-9-58, Cl. 346—34.
Coppola, Patrick P., to North American Philips Co., Inc. Thermionic dispenser cathode. 2,864,028, 12-9-58, Cl. 313—346.1.
Cordis, Nat. Unitary open-top channel-type conveyor and elevator. 2,863,554, 12-9-58, Cl. 198—171.
Cornforth, Jack W.: *See*—
Bateux, Richard H. B., and Cornforth. 2,863,172.
Coro, Inc.: *See*—
Bangs, Ralph C., and Doole. 2,863,306.
Doole, Edwin S. 2,863,307.
Corson, G. and W. H., Inc.: *See*—
Minnick, Leonard J., and Presgrave. 2,863,933.
Cortina, Joseph. Cushioned sole and heel for shoes. 2,863,230, 12-9-58, Cl. 36—29.
Cory Corp.: *See*—
Karlen, Harvey R. 2,863,650.
Costain, Winston, N. Fletcher, and B. J. Habgood, to Imperial Chemical Industries Ltd. Trimesic acid modified polyamide. 2,863,857, 12-9-58, Cl. 260—78.
Covert, John N.: *See*—
Attwood, John G., Smith, and Covert. 2,863,412.
Cox, Isaac E., to American Brake Shoe Co. Injectors for furnaces. 2,863,656, 12-9-58, Cl. 266—41.
Cox, William P.: *See*—
Nemet, Anthony A., Cox, and Bennett. 2,864,084.
Coyne, André, and J. Bellier. Reinforced and stabilized dam structure. 2,863,292, 12-9-58, Cl. 61—33.
Crane, Roland G., and O. J. Cerna, to American Smelting and Refining Co. Method of forming metallurgical briquettes of sinciferous material. 2,863,758, 12-9-58, Cl. 75—4.
Crane, Walton R., to Allied Plastics Co. Set up machine. 2,863,389, 12-9-58, Cl. 93—57.
Craven, Wilbur J., and A. Y. Warner, to The Capewell Mfg. Co. Ejecter snap hook. 2,863,201, 12-9-58, Cl. 24—233.
Cronemeyer, Rowland N.: *See*—
Scheib, Richard, Jr., and Cronemeyer. 2,863,224.
Crowle, William G.: *See*—
Jones, Charles R., and Crowle. 2,862,701.
Culligan, Inc.: *See*—
Schulze, Robert R. 2,863,559.
Cummings, Charles E. Apparatus for introducing gas into water. 2,863,653, 12-9-58, Cl. 261—36.
Currie, Grover C., to Ducam Corp. Carton for cylindrical objects. 2,863,598, 12-9-58, Cl. 229—52.
Curtis Mfg. Co.: *See*—
Beade, Henry. 2,863,674.
Curtis 1000, Inc.: *See*—
Whitman, H. M. 2,863,559.
Curtiss-Wright Corp.: *See*—
O'Brien, James H. 2,862,432.
Curtition Corp.: *See*—
Scheevold, Orland S. 2,863,164.
Csarnikow, George K., to Wollensak Optical Co. Photographic lens mount. 2,863,358, 12-9-58, Cl. 88—57.
Ducam Corp.: *See*—
Currie, Grover C. 2,863,598.
Dadson, Thomas E., to American Meters Corp. Range. 2,863,976, 12-9-58, Cl. 219—20.
Daimler-Benz Akt.: *See*—
Langnick, George F. W. 2,862,707.

Dalmau, Cecilio M., 10% to J. L. Henderson, and 45% to F. Herrera. Method and apparatus for purifying raw distilled spirit. 2,863,773, 12–9–58, Cl. 99—48.
Dalpias, Albert J. Clamp. 2,863,203, 12–9–58, Cl. 24—279.
Danulat, Dieter: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Danulat, Friedrich: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Danulat, Hans F.: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Danulat, Hedwig G.: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Danulat, Ilse: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Danulat. 2,863,527.
Daugherty, Jesse, to Giddings & Lewis Machine Tool Co. High-speed floor type contour milling machine. 2,863,861, 12–9–58, Cl. 90—13.
Daugherty, William G.: *See*—
Jackson, George W., and Daugherty. 2,863,499.
Davidson, Emil, and H. W. Williams, said Williams assignor to said Davidson. Encapsulated suppository and capsule therefor. 2,863,454, 12–9–58, Cl. 128—271.
Davidson, Frank E., Jr.: *See*—
Jones, Hugh H., and Davidson. 2,863,833.
Davis, Ariel R. Fluorescent light dimming. 2,864,035. 12–9–58, Cl. 315—97.
Davis, Charles J., Jr., to Armour and Co. Continuous desalination apparatus. 2,863,521, 12–9–58, Cl. 183—2.5.
Davis, Harold W., and O. H. Meritz. Device for forming risers for concrete steps. 2,863,207, 12–9–58, Cl. 25—118.
Davis, John W. Vertical and horizontal flight aircraft. 2,863,621, 12–9–58, Cl. 244—23.
Day, Cyril L., to International Telephone and Telegraph Corp. Electron discharge device. 2,864,022, 12–9–58, Cl. 313—94.
Dayton Rubber Co., The: *See*—
Meyer, Daniel A. 2,863,175.
Dean, Reginald S., and F. X. McCawley, to Chicago Development Corp. Pure chromium. 2,863,765, 12–9–58, Cl. 25—176.
Dearborn, Elizabeth C.: *See*—
Shepherd, Ridgley G., Jr., and Dearborn. 2,863,852.
De Cerma, Paolo, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Production of oxalate coatings on iron and steel. 2,863,791, 12–9–58, Cl. 148—6.14.
De Cerma, Paolo, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Method of maintaining the efficiency of phosphate coating baths used at room temperature. 2,863,793, 12–9–58, Cl. 148—6.15.
Deeter, Charles J.: *See*—
Gish, Marvin E. 2,863,258.
Dekker, Adriaan, to Vasco Industries Corp. Meat color preserving composition. 2,863,777, 12–9–58, Cl. 99—157.
Delafontaine, Charles, to The Bank of America National Trust and Savings Association. Strip sharpening machine. 2,863,660, 12–9–58, Cl. 271—2.6.
Dent, Kenneth H.: *See*—
Moore, Richard V., Bowen, and Dent. 2,863,815.
Desjobert, Andre E. G.: *See*—
Chabrier, Pierre, and Desjobert. 2,863,868.
Detko, George J.: *See*—
Foley, Edward A., and Detko. 2,863,371.
Detroit Edison Co., The: *See*—
Szappanyos, Alexander. 2,863,214.
De Turk, John E., to United States of America, Navy. Means for distinguishing positive and negative pulses in magnetic tape recording. 2,864,077, 12–9–58, Cl. 340—174.
Dewey, Clyde G.: *See*—
Hoffmann, Daniel C., and Dewey. 2,864,051.
Diamond Alkali Co.: *See*—
Pyne, William J. 2,863,802.
Dibble, Clarence H.: *See*—
Eisenberg, I. W., Dibble, Armstrong, Love, and Rhodes. 2,863,325.
Diehl, Erle K., W. T. Hage, and E. E. Matty, to The Babcock & Wilcox Co. Turbidimeter. 2,863,354, 12–9–58, Cl. 88—14.
Diels, Albert, to Poudreries Reunies de Belgique S. A. Booby trap for mines. 2,863,391, 12–9–58, Cl. 102—8.
Dietert, Harry W. and R. L., to Harry W. Dietert Co. Sand conditioning equipment. 2,863,191, 12–9–58, Cl. 22—60.
Dietert, Harry W., Co.: *See*—
Dietert, Harry W. and R. L. 2,863,191.
Dietert, Randolph L.: *See*—
Dietert, Harry W. and R. L. 2,863,191.
Dietz, Gerhard F. Wire rope. 2,863,279, 12–9–58, Cl. 57—147.
Dietz, William J., Jr.: *See*—
Schmider, Henry R., Palmenberg, and Dietz. 2,863,283.
Di Stefano, John F., to Thompson Products, Inc. Two stage air turbine driven fuel pump. 2,863,295, 12–9–58, Cl. 103—87.
Dixon, James K.: *See*—
Tribit, Samuel W., Fugate, and Dixon. 2,863,884.
Dixon, Thomas P.: *See*—
Evans, William E., Pohl, Dixon and Hopf. 2,863,938.
Djerassi, Carl, G. Stork, F. Sandheimer, and G. Rosenkrans, to Syntex S. A. 1-methyl steroid derivatives and method for the production thereof. 2,863,862, 12–9–58, Cl. 260—239.55.
Doane, Harry C., to General Motors Corp. Control system for power brake system utilizing auxiliary vacuum pump. 2,863,286, 12–9–58, Cl. 60—60.
Dole Valve Co., The: *See*—
Rimsha, Victor E., Kosel, Cerveny, and Wolf. 2,863,628.
Dome, Robert B., to General Electric Co. Automatic gain control amplifier. 2,863,997, 12–9–58, Cl. 250—20.
Donle, Edwin S.: *See*—
Hange, Ralph C., and Donle. 2,863,306.
Donle, Edwin S., to Coro, Inc. Locket having enclosed pivoted frame members. 2,863,307, 12–9–58, Cl. 63—19.
Donovan, William D.: *See*—
Haydon, Arthur W., and Donovan. 2,863,281.
Dorfman, Oskar, to Federal Carton Corp. Box forming machine. 2,863,370, 12–9–58, Cl. 93—49.
Dormeyer Corp.: *See*—
Schwaneke, Fred C. 2,863,693.
Doupnik, Frank A. Children's educational coin-saving device. 2,863,603, 12–9–58, Cl. 232—5.
Dove, Eugene W. Chart spool. 2,863,614, 12–9–58, Cl. 242—74.
Dow Chemical Co., The:
Scott, Charles R., and Wolf. 2,863,843.
Steinhauer, Alfred F. 2,863,908.
Wheeler, Donald D., and Young. 2,863,877.
Zupic, Carl P. 2,863,173.
Dow Corning Corp.: *See*—
Merker, Robert L. 2,863,898.
Tyler, Leslie J. 2,863,846.
Wehrly, Jack R. 2,863,897.
Doyle, William H., and W. J. O'Donnell, to Republic Aviation Corp. Airplane coupling means. 2,863,618, 12–9–58, Cl. 244—2.
Drago, Russell S.: *See*—
Slaler, Harry H., and Drago. 2,863,728.
Draughon, William H. Snow sweeping attachment for lawn mower. 2,863,162, 12–9–58, Cl. 15—79.
Drez, Norman W., to Miles Laboratories, Inc. Method of preserving and presenting a blood sample for analysis thereof. 2,863,733. 12–9–58, Cl. 23—230.
Drogin, Robert: *See*—
Beach, Leland K., and Drogin. 2,863,900.
Drummond, Warren W., and W. R. Steitz, to Owens-Corning Fiberglas Corp. Method for packaging a continuous strand. 2,863,208, 12–9–58, Cl. 28—72.
Drybread, Berniece L.: *See*—
Drybread, John S., Sr. 2,863,478.
Drybread, John S., Sr., ½ to B. L. Drybread. Corn cutter. 2,863,478, 12–9–58, Cl. 146—4.
Dual-Lite Co., Inc.: *See*—
Ippolito, Carmelo. 2,864,005.
Dulaney, Eugene L., and W. J. McAleer, to Merck & Co., Inc. 17ahydroxylation of steroids by trichoderma viride. 2,863,806, 12–9–58, Cl. 195—51.
Dunbar, Calvin D. Pipe joint having opposed packing groves and sealing means therefor. 2,863,679, 12–9–58, Cl. 285—336.
Duncan, William M. Bearing. 2,863,706, 12–9–58, Cl. 308—72.
Dunlop, Donald D., and W. B. Segraves, to Esso Research and Engineering Co. Prevention of coking reactor cyclone dipleg plugging. 2,863,821, 12–9–58, Cl. 208—48.
Dunning, Sanford F., and D. H. MacPherson; said Dunning assor. to American Telephone and Telegraph Co., and said MacPherson assor. to Bell Telephone Laboratories, Inc. Telephone service concentrator. 2,863,950, 12–9–58, Cl. 179—27.
Du Pont de Nemours, E. I., and Co.: *See*—
Altimier, David F., and Lemke. 2,863,757.
Graham, Boynton. 2,863,812.
Marks, Barnard M. 2,863,889.
Moede, Jerome A. 2,863,769.
Duve, Gustav A.: *See*—
Taylor, Tracy B., and Duve. 2,863,964.
Earle, Francis, Laboratories, Inc.: *See*—
Greenstein, Leon M. 2,863,783.
Eaton Mfg. Co.: *See*—
Jaeschke, Ralph L. 2,863,538.
King, William F. 2,864,015.
Eckel, Vincent W.: *See*—
Gantz, Jack L. 2,863,472.
Edgar, John S., to Thompson Products, Ltd. Rock drill bit. 2,863,686, 12–9–58, Cl. 287—126.
Edmunds, William H., to I-T-E Circuit Breaker Co. Barriers for isolation of circuit breaker phases. 2,863,969, 12–9–58, Cl. 200—144.
Egbert, John E., and J. A. Maynard, to Minneapolis-Honeywell Regulator Co. Transducer. 2,864,066, 12–9–58, Cl. 336—134.
Eggenberger, Markus A., to General Electric Co. Hydraulic servo-mechanism for steam turbine intercept valve. 2,863,289, 12–9–58, Cl. 60—73.
Eisenberg, Irwin W., C. H. Dibble, L. B. Armstrong, Jr., K. T. A. Love, and C. R. Rhodes, to Phaostron Instrument and Electronic Co. Gear train. 2,863,325, 12–9–58, Cl. 74—425.
Elam, Joe L.: *See*—
Grovemiller, Dale A., and Elam. 2,864,067.
Electro-Voice, Inc.: *See*—
Wood, John F. 2,864,013.
Elemelt Ltd.: *See*—
Gell, Philip A. M., and Hann. 2,863,932.
Elliott, Daniel S. Coin operated device. 2,863,548, 12–9–58, Cl. 194—79.
Ellis, John L.: *See*—
Goetzel, Claus G., and Ellis. 2,863,562.
Elmer, Augustus, Jr., to Elmer Candy Co., Inc. Tape applying device. 2,863,270, 12–9–58, Cl. 53—198.
Elmer Candy Co., Inc.: *See*—
Elmer, Augustus, Jr. 2,863,270.
Elmer, Curtis, and C. R. Stanley, to Monsanto Chemical Co. Melamine purification process. 2,863,869, 12–9–58, Cl. 260—249.7.
Elms, Edwin F., to R. L. Brown. Fastener. 2,863,195, 12–9–58, Cl. 24—73.
Elox Corp. of Michigan: *See*—
Larkins, John S., Jr. 2,863,706.
Eser, William F., to Owens-Illinois Glass Co. Resilient valve mounting assembly. 2,863,609, 12–9–58, Cl. 299—95.

Elson, David W., to The General Electric Co. Ltd. Apparatus for comparing the instantaneous values of two voltages. 2,864,000, 12–9–58, Cl. 250—27.

Emerson, Oliver H., to United States of America, Agriculture. Preparation of dialkoxyphenyl thiopyruvic acids. 2,863,915, 12–9–58, Cl. 260—516.

Emery, Richard L., to Keyes Fibre Co. Molded pulp packaging members. 2,863,595, 12–9–58, Cl. 229—2.5.

Emhart Mfg. Co.: *See*—
Holstebroe, Kaye B., and Lippincott. 2,863,208.

Emrick, Dorothea A.: *See*—
Emrick, Melvin H. 2,863,339.

Emrick, Melvin H., deceased; D. A. Emrick, executrix. Hydraulic air drilling unit. 2,863,339, 12–9–58, Cl. 77—33.5.

Endicott, Harold S., and G. E. Ledgus, to General Electric Co. Method of treating mica. 2,863,721, 12–9–58, Cl. 23—110.

Endter, Waldemar A. Door latching mechanism. 2,863,688, 12–9–58, Cl. 292—221.

Engel, Willem F., to Shell Development Co. Catalytic reforming of hydrocarbon oils. 2,863,826, 12–9–58, Cl. 208—138.

English Racing Automobiles Ltd.: *See*—
Syson, Richard H. 2,863,425.

Enveldsen, Karl C. Method of preparing shrimp in frozen condition. 2,863,779, 12–9–58, Cl. 99—196.

Erbe, Friedrich, and M. A. Maikowski, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Process for the continuous production of crystalline substances. 2,863,739, 12–9–58, Cl. 23—295.

Ericson, Sidney A.: *See*—
Parrott, Henry W., and Ericson. 2,863,497.

Esso Research and Engineering Co.: *See*—
Beach, Leland K., and Drogin. 2,863,900.
Dunlop, Donald D., and Segraves. 2,863,821.
Holcomb, Henry A., and Korbach. 2,863,828.
Johnson, John F. 2,863,896.
Kirshenbaum, Isidor, Mirviss, and Lemiszka. 2,863,894.
Morway, Arnold J. 2,863,847.
Moser, John F., Jr. 2,863,823.
Sage, Richard W. 2,863,822.
Viles, Prentiss S. 2,863,828.

Estes, James W.: *See*—
Spangler, Grant E., and Estes. 2,863,764.

Ethyl Corp.: *See*—
Green, Warren E. 2,863,737.

Eubank, William R., and W. R. Beck, to Minnesota Mining & Mfg. Co. Low-melting high-expansion glass. 2,863,752, 12–9–58, Cl. 106—47.

Evans, William R., W. E. Pohl, T. P. Dixon, and E. W. Hopf, deceased (by M. L. Hopf, administratrix), to Technicolor Motion Picture Corp. Printing timer. 2,863,938, 12–9–58, Cl. 178—5.4.

Excel Body Corp.: *See*—
Murrell, Merwyn C. 2,863,419.

Eye-Beam Displays, Inc.: *See*—
Stein, Elmer L. 2,863,736.

Faeber, Harry W., to Time, Inc. Rotary ductor spider. 2,863,389, 12–9–58, Cl. 101—348.

Fairbanks, Morse & Co.: *See*—
Beadle, Robert H. 2,863,436.

Faler, John A.: *See*—
Shoemaker, Robert H., and Faler. 2,863,465.

Falk & Co.: *See*—
Gutkin, Samuel S. 2,863,890.

Fallon, John T. Regenerative heat exchange apparatus. 2,863,644, 12–9–58, Cl. 257—6.

Fandrich, Fred B. Sure grip combination bar. 2,863,635, 12–9–58, Cl. 254—25.

Farbenfabriken Bayer Akt.: *See*—
Bienert, Berthold, and Baumann. 2,863,875.
Kühle, Engelbert, Wegler, and Grewe. 2,863,801.

Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning: *See*—
Erbe, Friedrich, and Maikowski. 2,863,739.
Fuchs, Otto, Staller, and Schäff. 2,863,844.

Fargo, Wells. Golf club rack. 2,863,483, 12–9–58, Cl. 150—1.5.

Farnsworth, William M. Method and apparatus for evaporating salt brine or the like. 2,863,501, 12–9–58, Cl. 159—24.

Farrell, Guy M.: *See*—
Hill, James E., and Farrell. 2,863,996.

Fasold, George A.: *See*—
Leibrook, Walton V., and Fasold. 2,863,405.

Federal Carton Corp.: *See*—
Dorfman, Oskar. 2,863,370.

Federal Electric Products Co.: *See*—
Taylor, Tracy E., and Duve. 2,863,964.

Federman, Hyman L.: *See*—
Letteney, John A. 2,863,962.

Feissel, Henri G.: *See*—
Leclerc, Bruno M. J., Feissel, and Chenus. 2,863,804.

Feisen, Leopold B., and W. K. Kahn, to Polytechnic Institute of Brooklyn. Microwave control devices. 2,864,063, 12–9–58, Cl. 333—98.

Ferber Corp.: *See*—
Rimo, Rosario J. 2,863,421.

Ferrara, Peter J. Production of dry, vital gluten. 2,863,771, 12–9–58, Cl. 99—14.

Ferrer, Raimundo. Vehicle parking device. 2,863,515, 12–9–58, Cl. 180—1.

Fibre Products Laboratories, Inc.: *See*—
Goldman, Maurice A. 2,863,715.

Fidelity Machine Co., Inc.: *See*—
Larkin, Walter. 2,863,209.

Fiechter, René A. Watch winding machine. 2,863,345, 12–9–58, Cl. 51—7.5.

Fiehl, Michael, to International Business Machines Corp. Sheet feeding and handling device. 2,863,662, 12–9–58, Cl. 271—64.

Fierbaugh, Lloyd W.: *See*—
Ackerman, Chester W. 2,863,251.

Fiet, Owen O., and T. U. Foley, to Radio Corp. of America. Television transmitter system employing components in parallel. 2,864,062, 12–9–58, Cl. 343—207.

Fink, James S.: *See*—
Bonnell, Charles R., and Fink. 2,863,961.

Firma Bopp & Reuther G. m. b. H.: *See*—
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Firma Hochtief Akt. fur Hoch-und Tiefbauten, vorm. Gebr. Helfmann: *See*—
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Firma Wm. Ayrton & Co. Ltd.: *See*—
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Fitzgerald, Harold J., to Superdisplay, Inc. Food warmer. 2,863,979, 12–9–58, Cl. 219—35.

Flam, Abraham. Dry mop dust cleaner. 2,863,168, 12–9–58, Cl. 15—142.

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Flood, David P. Coupling device for small meters. 2,863,308, 12–9–58, Cl. 64—10.

Flores, Harold R., R. Baldini, and A. Braun, to United States of America, Navy. Detachable panel mount. 2,863,624, 12–9–58, Cl. 248—34.

Foley, Edward A., and G. J. Detko, to Masonite Corp. Sheet handling apparatus. 2,863,571, 12–9–58, Cl. 214—1.

Foley, Thomas U.: *See*—
Fiet, Owen O., and Foley. 2,864,062.

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Short, James N., Rothlisberger, and Follett. 2,863,488.

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Foster, Arthur G., to Western Electric Co., Inc. Extruding dies. 2,863,169, 12–9–58, Cl. 18—12.

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Guth, Eugene D., and Fox. 2,863,786.

Frankel, Morris. Vehicle road signal. 2,863,416, 12–9–58, Cl. 116—63.

Frederick, Harold M., to Burroughs Corp. Centrifugally responsive actuator. 2,863,655, 12–9–58, Cl. 264—17.

Fredrick, Arden H., to General Precision Laboratory Inc. Protective circuit for pulsed microwave generator. 2,864,058, 12–9–58, Cl. 332—5.

French, Hubert, to Radio Corp. of America. Wave shaper. 2,863,999, 12–9–58, Cl. 250—27.

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Fuqua, Alex M. Method of treating mange with extract of cedar leaf. 2,863,604, 12–9–58, Cl. 167—33.2.

Furrer, John E., to A C F Industries, Inc. Railway train with coupler steered axles. 2,863,401, 12–9–58, Cl. 105—4.

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Gaugler, Richard S., to General Motors Corp. Refrigerating apparatus. 2,863,179, 12–9–58, Cl. 20—4.

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George, John E., and S. H. Tsiang, to Westinghouse Air Brake Co. Automatic control of railway classification yard track switches. 2,863,992, 12-9-58, Cl. 246—2.
Geroscolina, Salvatore E. Magnetic throw dart electric signal. 2,863,665, 12-9-58, Cl. 273—102.2.
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Giani, Adolfo, to Reggiani Meccanotex S. A. Reciprocatory scraper mechanism for frame printing machines. 2,863,382, 12-9-58, Cl. 101—123.
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Giesse, Robert C., to Tri-Tek Inc. Coffee maker. 2,863,590, 12-9-58, Cl. 212—129.4.
Gille, Willis H., to Minneapolis-Honeywell Regulator Co. Flight control apparatus. 2,864,060, 12-9-58, Cl. 318—489.
Gillespie, Russell A., ½ to C. F. Spickelmier, ½ to E. S. Greer, and ½ to B. S. Spickelmire. Metal window. 2,863,524, 12-9-58, Cl. 189—75.
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Glidden Co., The: See—
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Gluhot, Bernard B. Animated indicia by color occlusion. 2,863,239, 12-9-58, Cl. 40—132.
Gluhot, Bernard B. Balanced color illumination system. 2,863,240, 12-9-58, Cl. 40—132.
Goetzel, Claus G.: See—
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Goetzel, Claus G., and J. L. Ellis, to Statecrest Corp. of America. Corrosion resistant sintered iron-silicon filter. 2,863,562, 12-9-58, Cl. 210—496.
Gois, Joseph, Jr.: See—
Benecto, Michele. 2,863,774.
Goldberg, Ernest W. Shiftable film bed and optical system for projectors. 2,863,234, 12-9-58, Cl. 88—24.
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Goldsmith, Henry A., and Goldberg. 2,863,825.
Goldman, Maurice A., to Fibre Products Laboratories, Inc. Wiping cloth and the manufacture thereof. 2,863,715, 12-9-58, Cl. 8—116.6.
Goldsmith, Henry A., and M. Goldberg, to The Theofield Industries. Perborate composition. 2,863,825, 12-9-58, Cl. 252—99.
Golrick, Albert R., to The Murray-Ohio Mfg. Co. Shipper operating mechanisms for three speed bicycle transmissions. 2,863,333, 12-9-58, Cl. 74—750.
Goodbue, Lyle D., and K. R. Cantrel, to Phillips Petroleum Co. Repellents for stable flies. 2,863,799, 12-9-58, Cl. 167—22.
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Gordon, Benjamin, and L. E. Somers. Coupling for double-flared tubes. 2,863,678, 12-9-58, Cl. 285—332.1.
Gordon, James. Electrical brush holder. 2,864,019, 12-9-58, Cl. 310—247.
Gottfried, Paul M. 1,3-dichloro-5,5-dimethyl hydantoin compositions. 2,863,800, 12-9-58, Cl. 167—33.
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Granath, Axel G., to Herbert Simpson Corp. Indexing and conveying system for foundries. 2,863,206, 12-9-58, Cl. 104—162.
Granchelli, Felix E., and G. B. Walker, Jr., to Arthur D. Little, Inc. Metal organo-silyl esters. 2,863,891, 12-9-58, Cl. 260—429.
Grant, Richard W., and M. H. Rosengard, to Hughes Aircraft Co. Eject-inject lock mechanism. 2,863,689, 12-9-58, Cl. 292—39.
Greber, Henry. Repeater fuse. 2,863,966, 12-9-58, Cl. 200—124.
Greco, Guido, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Process for the production of synthesis gas without catalysts. 2,863,749, 12-9-58, Cl. 48—212.
Green, Warren E., to Ethyl Corp. Chemical reaction apparatus. 2,863,737, 12-9-58, Cl. 23—283.
Greene, Claude E., and W. H. Ulman, to The Monarch Machine Tool Co. Motor control system. 2,864,047, 12-9-58, Cl. 318—338.
Greenstein, Leon M., to Francis Earle Laboratories, Inc. Nacreous material from glass. 2,863,783, 12-9-58, Cl. 106—144.
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Grosse, Aristid V., and E. A. Nodiff. Hydrocarbon conversion processes with recovery of fluorine containing gases. 2,863,824, 12-9-58, Cl. 208—118.
Groulx, Paul E. Key holder. 2,863,313, 12-9-58, Cl. 70—456.
Grovesmiller, Dale A., and J. L. Hiam, to General Electric Co. Base for adjustable double-ended directional lamp. 2,864,067, 12-9-58, Cl. 339—2.
Grubb, Robert J., and L. E. Seatz, Jr., to American Cyanamid Co. Equipment for the accurate metering, proportional blending, thorough mixing and dispensing of multi-component resin mixtures. 2,863,649, 12-9-58, Cl. 259—9.
Guernsey, John F., to Trio Mfg. Co. Parasitic antenna assemblage. 2,864,094, 12-9-58, Cl. 343—815.
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Cantrell, Trey L., Orr, and Peters. 2,863,745.
Cantrell, Trey L., and Peters. 2,863,744.
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Henke, Alfred M., and Somers. 2,863,829.
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Guth, Eugene D., and H. M. Fox, to Phillips Petroleum Co. Odor-free liquid conjugated diene polymers. 2,863,755, 12-9-58, Cl. 106—288.
Gutkin, Samuel S., to Falk & Co. Refining glyceride oils with sulphonated phenolaldehyde resin. 2,863,890, 12-9-58, Cl. 260—424.
Haas, Edgar, to Herman Schwabe, Inc. Adjustable shoe pad assembly. 2,863,161, 12-9-58, Cl. 12—58.
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Hage, William T.: See—
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Hamprecht, Guenther, A. Immel, and H. Gettert, to Badische Anilin- & Soda-Fabrik Akt. Method of carrying out high temperature reactions in shaft furnaces. 2,863,720, 12-9-58, Cl. 23—208.
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Harclerode, John R., to Clipper Mfg. Co. Material conveyor cart for masonry saws. 2,863,441, 12-9-58, Cl. 125—13.
Hardy, William B., and F. H. Adams, to American Cyanamid Co. Organic sulfamoyl azides. 2,863,866, 12-9-58, Cl. 260—247.1.
Harkness, Andrew W. Valve and filler rim for toilet tanks. 2,863,155, 12-9-58, Cl. 4—58.
Harper, Wesley A., to Hareco Corp. Rail brace. 2,863,608, 12-9-58, Cl. 238—292.
Harris, Ben A., to General Dynamics Corp. Relay selector circuit. 2,863,948, 12-9-58, Cl. 179—18.
Harris, Guy H. Substituted thiolcarbanilic esters. 3,863,899, 12-9-58, Cl. 260—455.
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Harris, Wilbur T. 2,864,073.
Harris, Wilbur T., to The Harris Transducer Corp. Demountable cable hydrophone. 2,864,073, 12-9-58, Cl. 340—17.
Harrison, George. Method and means for casting slugs. 2,863,188, 12-9-58, Cl. 22—73.
Harrison, Henry, to The Greif Bros. Cooperage Corp. Fiberboard container. 2,863,596, 12-9-58, Cl. 229—23.
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Hartman, Harvey L. Support for scaling fish. 2,863,165, 12-9-58, Cl. 17—6.
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Hauch, Albert F., and S. H. S. Raub, to Union Carbide Corp. Separable casing fitting for carbon pipe. 2,863,677, 12-9-58, Cl. 285—45.
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Hausman, Charlotte S. Bathroom toilet table and hamper. 2,863,709, 12-9-58, Cl. 312—321.
Haydon, Arthur W., and W. D. Donovan, to Consolidated Electronics Industries Corp. Resettable drive mechanism for potentiometer or the like. 2,863,281, 12-9-58, Cl. 60—7.
Hearell, Fred E. Combination shelters. 2,863,467, 12-9-58, Cl. 135—20.
Heaton, Henry T., to General Electric Co. Coil mount. 2,864,064, 12-9-58, Cl. 336—65.
Hebenstreit, Lester V., to Specialties Development Corp. Heat detecting cable. 2,863,975, 12-9-58, Cl. 201—63.
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Henig, Seymour, to United States of America, Commerce. Mail separator. 2,863,574, 12-9-58, Cl. 214—11.
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Raecke, Bernhard. 2,863,914.
Raecke, Bernhard, Blaser, Stein, and Schirp. 2,863,913.
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Ray, Gardner C., and Hepp. 2,863,838.
Herbener, Henry M. Folder and pocket constructions. 2,863,494, 12-9-58, Cl. 150—36.
Herbener, Henry M. Billfolders. 2,863,495, 12-9-58, Cl. 150—33.
Herbener, Henry M. Billfolder. 2,863,496, 12-9-58, Cl. 150—36.
Herbert, Wilhelm, H. Kohrt, R. Becker, and F. Danulat (deceased): H. G., I., H. F., and D. Danulat, administrators, to Metallgesellschaft Akt. Process for the purification of gases. 2,863,527, 12-9-58, Cl. 183—115.
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Vartanian, Richard D., and Herbes. 2,863,782.
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Messenger, Joseph U., Foster, Williams, and Hermes. 2,863,809.
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Hershey, John H., to United States of America, Navy. Motor control for a radar ranging unit. 2,864,043, 12-9-58, Cl. 318—28.
Herter, George L. Artificial fly wing maker. 2,863,260, 12-9-58, Cl. 43—1.
Hettinger, Charles F. Mylet with sheave for fishing rod. 2,863,252, 12-9-58, Cl. 43—24.
Hettinger, Charles F. Compound sinker for fishing lines. 2,863,253, 12-9-58, Cl. 43—43.14.
Hetzel, Stanford J., to Sun Oil Co. Carbamates modified with naphthenic acids. 2,863,856, 12-9-58, Cl. 260—77.5.
Hewitt, Oren J., and J. V. Sheridan. Coin dispenser for vehicles. 2,863,464, 12-9-58, Cl. 122—1.
Hicks, Harold H., to International Steel Co. Draft device for railway rolling stock. 2,863,570, 12-9-58, Cl. 213—60.
Hill, C. V., Co., Inc.: *See*—
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Hill, James E., and G. M. Farrell. Television program selector. 2,863,956, 12-9-58, Cl. 250—20.
Hill, Royston A. W., and R. W. Moody, to Imperial Chemical Industries, Ltd. Delay electric initiators. 2,863,392, 12-9-58, Cl. 102—28.
Hillig, John E., to Westinghouse Air Brake Co. Electronic railway track circuit. 2,863,993, 12-9-58, Cl. 246—130.
Hillman, Carl J. Combination sucker rod guide and sand purging device. 2,863,704, 12-9-58, Cl. 308—4.
Hillyer, John C., to Phillips Petroleum Co. Hydroxylated conjugated dieledn polymers in drying oil compositions and a method of preparing the same. 2,863,784, 12-9-58, Cl. 106—252.
Hinden, Milton. Damper actuating construction. 2,863,374, 12-9-58, Cl. 98—110.
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Hobbs, Howard F., to Hobbs Transmission Ltd. Power transmission apparatus. 2,863,327, 12-9-58, Cl. 74—472.
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Hobbs, Howard F. 2,863,327.
Hodge, William F.: *See*—
Foote, Alton G., and Hodge. 2,864,025.
Hoexter, Lee G. Collapsible pillow support. 2,863,156, 12-9-58, Cl. 5—325.
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Hoffman, John. Fire place conversion unit. 2,863,442, 12-9-58, Cl. 126—121.
Hoffmann, Daniel C., and C. G. Dewey, to General Electric Co. Control system for starting electric current rectifying apparatus. 2,864,051, 12-9-58, Cl. 321—45.
Hoffmann-La Roche Inc.: *See*—
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Heitt, Clifford E., and C. T. Krenzer, to Walz & Krenzer, Inc. Closure for ship port. 2,863,414, 12-9-58, Cl. 114—178.
Holce, Edna H. Diaper holder cover. 2,863,455, 12-9-58, Cl. 128—284.
Holcomb, Henry A., and P. F. Kerbach, to Esso Research and Engineering Co. Catalytic conversion of paraffins. 2,863,826, 12-9-58, Cl. 208—138.
Holley Carburetor Co.: *See*—
Holley, George M., Sr. 2,863,434.
Holley, George M., Sr., to Holley Carburetor Co. Fuel injection system. 2,863,434, 12-9-58, Cl. 123—119.
Holophane Co., Inc.: *See*—
Wince, Veari S. 2,863,990.
Holstebroe, Kaye B., and L. H. Lippincott, to Embert Mfg. Co. Machines for packing containers in cases. 2,863,268, 12-9-58, Cl. 53—62.
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Maude, Aylmer H., and MacFadyen. 2,863,725.
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Robitschek, Paul, and Bean. 2,863,794.
Robitschek, Paul, and Bean. 2,863,795.
Robitschek, Paul, and Bean. 2,863,846.
Rucker, John T., and Scenes. 2,863,917.
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Evans, William E., Pohl, Dixon, and Hopf. 2,863,938.
Hopf, Maria I.: *See*—
Evans, William E., Pohl, Dixon, and Hopf. 2,863,938.
Hopgood, Roy C.: *See*—
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Horelick, Arnold L., and J. R. Smith, to McGraw-Edison Co. Core construction for transformers. 2,864,065, 12-9-58, Cl. 336—100.
Horizons Inc.: *See*—
Steinberg, Morris A. 2,863,739.

Katcher, Morris. Fuel pump actuating lever. 2,863,331, Kaiser Corp.: *See*—

Hartnett, R. W., Co.: *See*—
Ackley, Edward M. 2,863,227.
Horwitt, Laurence G., to Casco Products Corp. Cigar lighter. 2,863,977, 12–9–58, Cl. 219—32.
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Mills, George A. 2,863,830.
Hovind, John K., to National Gypsum Co. Adjustable base clip. 2,863,184, 12–9–58, Cl. 20—74.
Howard, Allan M., to Nortons-Trividale Ltd. Apparatus for hauling vehicles. 2,863,309, 12–9–58, Cl. 104—170.
Hudson Foam Plastics Corp.: *See*—
Wilson, Christopher L. 2,863,854.
Wilson, Christopher L., and Benning. 2,863,855.
Huck, Alfred J., to Knapp-Monarch Co. Pop-up toaster with automatic lowering and raising of bread carrier. 2,863,377, 12–9–58, Cl. 99—329.
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Huffman, Harold W., to The Hamilton Tool Co. Means for varying the phase relationship of the cylinders of a printing press. 2,863,387, 12–9–58, Cl. 101—248.
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Grant, Richard W., and Rosengard. 2,863,689.
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Hulsen, Hans-Heinrich: *See*—
Linke, Gerhard, and Hulsen. 2,863,560.
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Leupold, Curt W., and Hupfauf. 2,863,456.
Hurvitz, Hyman. Recording. 2,863,711, 12–9–58, Cl. 346—74.
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I-T-E Circuit Breaker Co.: *See*—
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Immel, Adam: *See*—
Hamprecht, Guenther, Immel, and Gettert. 2,863,730.
Imperial Chemical Industries Ltd.: *See*—
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Brimley, Kenneth J. 2,863,353.
Buteux, Richard H. B., and Cornforth. 2,863,172.
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Ingram, Maxwell. Combination pilot and countersink drill. 2,863,340, 12–9–58, Cl. 77—66.
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International Business Machines Corp.: *See*—
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International Telephone and Telegraph Corp.: *See*—
Adams, Robert T. 2,864,011.
Day, Cyril L. 2,864,022.
Rodnick, Paul, and Toohig. 2,864,020.
Ionics, Inc.: *See*—
Juda, Walter, and McRae. 2,863,813.
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Irving, Francis, and A. Livingston, to Imperial Chemical Industries Ltd. Process for the manufacture of vat dyestuffs. 2,863,871, 12–9–58, Cl. 260—274.
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Miller, Carl D. 2,863,335.
Thielman, Russell F. 2,863,983.
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Jantsen, Inc.: *See*—
Monroe, Mayer G. 2,863,460.
Jaritz, Berthold. Belt conveyor. 2,863,555, 12–9–58, Cl. 198—203.
Jelling, Murray. Thermally stable bituminous bonding materials. 2,863,785, 12–9–58, Cl. 106—273.
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Johnson, Emmett W. Prostate gland massager. 2,863,445, 12–9–58, Cl. 128—24.2.
Johnson, Frank E., Jr. Clamping device for electric wires. 2,864,071, 12–9–58, Cl. 339—109.
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Johnson, James A. Foundation footer digging device. 2,863,233, 12–9–58, Cl. 37—117.5.
Johnson, John F., to Esso Research and Engineering Co. Preparation of pure aluminum alkyls. 2,863,896, 12–9–58, Cl. 260—448.
Johnson, Joseph F., to General Electric Co. Electric circuit breaker. 2,863,903, 12–9–58, Cl. 200—67.
Johnson, Phyllis M. Safety harness for children. 2,863,450, 12–9–58, Cl. 128—134.
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Jones, Charles E., and W. G. Crowle, to Manning Mfg. Corp. Wheel assembly. 2,863,701, 12–9–58, Cl. 301—5.7.
Jones, Charles H., to Westinghouse Electric Corp. Color receiver. 2,863,939, 12–9–58, Cl. 178—5.4.
Jones, Hugh H., and F. B. Davidson, Jr. Flange lubricant. 2,863,833, 12–9–58, Cl. 252—27.
Jones, Lloyd T. Game. 2,863,864, 12–9–58, Cl. 273—1.
Jones, William H., to Canadian Footwear Research Inc. Fabrication of footwear having differentially deformable insoles. 2,863,231, 12–9–58, Cl. 36—71.
Jonker, Johan L. H., and H. Groendijk, to North American Philips Co., Inc. Electric discharge tube. 2,864,026, 12–9–58, Cl. 313—293.
Jose, Robert S., to Radio Corp. of America. Pulse generator. 2,863,942, 12–9–58, Cl. 178—7.1.
Josefowicz, Edmund L., to The Best Foods, Inc. Magnetic flux monitoring apparatus. 2,863,546, 12–9–58, Cl. 194—32.
Josephson, Myrton M. Hanger door. 2,863,181, 12–9–58, Cl. 20—16.
Juda, Walter, and W. A. McRae, to Ionics, Inc. Method of electrodialyzing aqueous solutions. 2,863,813, 12–9–58, Cl. 204—180.
Just, Raymond H., and A. G. May, to Screen Products, Inc. Stacked disk filter. 2,863,561, 12–9–58, Cl. 210—247.
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Kalart Co. Inc., The: *See*—
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Stühmer, Werner, and Funke. 2,863,921.
Kamack, Harry J., and J. H. Balthis, to United States of America, Atomic Energy Commission. Method of improving the carrier precipitation of plutonium. 2,863,719, 12–9–58, Cl. 23—14.5.
Kamin, Ernest F. Refuse collection apparatus. 2,863,580, 12–9–58, Cl. 214—504.
Kamlet, Jonas. Process for the joint manufacture of Portland cement and sulfur. 2,863,726, 12–9–58, Cl. 23—181.
Kammerer, Archer W., ½ to A. W. Kammerer, Jr., and ½ to J. K. Lamphere. Rotary expansible drill bits. 2,863,641, 12–9–58, Cl. 255—76.
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Latham, Allen, Jr., to Arthur D. Little, Inc. Evacuating
Lott, William A., and E. J. Pribyl, to Olin Mathieson

Katcher, Morris. Fuel pump actuating lever. 2,863,331, 12–9–58, Cl. 74—569.
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Zabel, Harold H., and Kelly. 2,863,974.
Kelly, Gerard W. Quiz device with correct answer indicating means. 2,863,226, 12–9–58, Cl. 35—9.
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Kelsey, Cadwallader W. Lawn edger with vibratory blade. 2,863,274, 12–9–58, Cl. 56—26.5.
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Kesselring, Kenneth A., and A. U. Seybolt, to United States of America, Atomic Energy Commission. Neutronic reactor fuel element. 2,863,814, 12–9–58, Cl. 204—193.2.
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Kirshenbaum, Isidor, S. B. Mirviss, and T. Lemiszka, to Esso Research and Engineering Co. Method of oxidizing aluminum alkyls. 2,863,894, 12–9–58, Cl. 260—448.
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Koch, Paul H., to The Babcock & Wilcox Co. Steam generating, superheating and reheating unit with dual furnaces and parallel gas passes. 2,863,424, 12–9–58, Cl. 122—240.
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Kohring, Wilbur H. Sealed electronic unit as for projectile detonation means, etc. 2,863,994, 12–9–58, Cl. 250—16.
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Koucky, Josef and F. 2,863,249.
Koucky, Josef and F., to Konstrukta Praha, narodni podnik. Removable cylinder spindle of cylinder revolvers. 2,863,248, 12–9–58, Cl. 42—69.
Koucky, Josef and F., to Konstrukta Praha, narodni podnik. Safety for revolvers. 2,863,249, 12–9–58, Cl. 42—69.
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Cantrell, Troy L., Kuhne, and Peters. 2,863,747.
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Kunz, William R., to United States of America, Army. Fire control mechanism for automatic firearms. 2,863,359, 12–9–58, Cl. 89—13.
Kurzinski, Edward F., to Union Carbide Corp. Oil-treated calcium carbide for desulfurization of iron. 2,863,755, 12–9–58, Cl. 75—53.
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Landskroner, Abraham and S. 2,863,569.
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Lau, Erwin M., to Black Products Co. Bag settling device. 2,863,478, 12-9-58, Cl. 141—77.

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Winters, Thomas F., and Lavin. 2,863,462.

Lawson, Samuel E. Apparatus for forming pin curl permanent wave. 2,863,462, 12-9-58, Cl. 132—40.

La-Z-Boy Chair Co.: *See*—
Knabusch, Edward M., and Shoemaker. 2,863,495.

Lazzery, Angelo G., to Radio Corp. of America. Color kinescope adjunct. 2,864,021, 12-9-58, Cl. 313—77.

Le Baron, Francis, Jr. Casting-mold pattern-board fixture and apparatus. 2,863,193, 12-9-58, Cl. 22—157.

Lebold, Jack W., to Lockheed Aircraft Corp. Retractable landing gear. 2,863,623, 12-9-58, Cl. 244—102.

Leclerc, Bruno M. J., H. G. Feissel, and P. J. C. Chenus, to Compagnie des Machines Bull (Societe Anonyme). Electronic calculator for multiplication and division. 2,863,604, 12-9-58, Cl. 235—61.

Ledaal, Tore B. Ignition compositions for matches, striking surfaces and the like. 2,863,751, 12-9-58, Cl. 52—27.

Ledges, George E.: *See*—
Endicott, Harold S., and Ledges. 2,863,721.

Ledingham, Harold A., and C. E. Smith. Optical inspection units for bottled goods. 2,863,355, 12-9-58, Cl. 88—14.

Lee, Edward C., to Ithaca Gun Co., Inc. Bolt assembly for a firearm. 2,863,246, 12-9-58, Cl. 42—16.

Leeds, Morton W.: *See*—
Carpenter, Gilbert B., Leeds, and Gister. 2,863,926.

Leibrook, Walton V., and G. A. Fasold, to The Philip Carey Mfg. Co. Asphalt shingle with sealing elements. 2,863,405, 12-9-58, Cl. 108—7.

Lemiszka, Theodore: *See*—
Kirshenbaum, Isidor, Mirvise, and Lemiszka. 2,863,894.

Lemke, Charles H.: *See*—
Altimier, David F., and Lemke. 2,863,757.

Lengnick, George F. W., to Daimler-Benz Akt. Piston, particularly for internal combustion engines. 2,863,707, 12-9-58, Cl. 309—10.

Letteney, John A., to J. A. Letteney and H. L. Federman. Vehicle speed control system. 2,863,962, 12-9-58, Cl. 200—61.59.

Leupold, Curt W., and L. Hupfauf. Sanitary belt. 2,863,456, 12-9-58, Cl. 128—291.

Lewin, Gunnar E. W., to Aktiebolaget Atvidabergs Butiksinagredningar. Fittings for coupled windows. 2,863,690, 12-9-58, Cl. 292—302.

Libbey-Owens-Ford Glass Co.: *See*—
White, Gerald, and Moore. 2,863,566.

Lichtman, Irving S., and S. L. Joffe. Bite correctors. 2,863,216, 12-9-58, Cl. 32—10.

Lind, Arthur C., G. W. Quast, and T. J. Koeske, to Chain Belt Co. Extensible header for clarification tanks. 2,863,564, 12-9-58, Cl. 210—529.

Lindley, Ancil L. and J. E. Resuscitator. 2,863,447, 12-9-58, Cl. 128—30.

Lindley, John E.: *See*—
Lindley, Ancil L. and J. E. 2,863,447.

Link, William T., to Northern Electric Co., Ltd. Coil winding mechanism. 2,863,609, 12-9-58, Cl. 242—4.

Linke, Gerhard, and H.-H. Hulsen, to Siebtechnik G. m. b. H. Centrifuge. 2,863,560, 12-9-58, Cl. 210—147.

Lintvedt, Halvard, to Ruud Mfg. Co. Spud and like fitting welding apparatus and method. 2,863,987, 12-9-58, Cl. 219—124.

Lipe-Rollway Corp.: *See*—
Root, Robert S. 2,863,587.
Spase, Charles B. 2,863,543.
Spase, Charles B. 2,863,544.
Spase, Charles B. 2,863,545.

Lippincott, Leander H.: *See*—
Holstebroe, Kaye B., and Lippincott. 2,863,268.

Lisher, Velma E. Frozen beverage and method for making the same. 2,863,778, 12-9-58, Cl. 99—136.

Lisota, Edward, to Harsha, Henderson and Johnson, Inc. Trailer hitch. 2,863,672, 12-9-58, Cl. 280—406.

Little, Arthur D., Inc.: *See*—
Granchelli, Felix R., and Walker. 2,863,891.
Latham, Allen, Jr. 2,863,584.

Livingston, Alistair: *See*—
Irving, Francis, and Livingston. 2,863,871.

Lock Joint Pipe Co.: *See*—
Seaman, Francis E., and Gottschalk. 2,863,205.

Locke, George A., to Bell Telephone Laboratories, Inc. Teletypewriter exchange system. 2,863,936, 12-9-58, Cl. 178—2.

Lockheed Aircraft Corp.: *See*—
Lebold, Jack W. 2,863,623.

Logan, Malcolm. Electric air heater. 2,863,960, 12-9-58, Cl. 219—39.

Lomax, Clarence E., to General Telephone Laboratories, Inc. Telephone system. 2,863,949, 12-9-58, Cl. 179—16.

Long, George, and J. J. Van Edenkuty, to General Mills, Inc. Automatic puffing gun. 2,863,378, 12-9-58, Cl. 89—28.

Long, Robert S., and R. J. Boyle, to American Cyanamid Co. Pyrrocoline dyes for polyester materials. 2,863,714, 12-9-58, Cl. 8—55.

Longfold, Andre. Projectile and cartridge. 2,863,294, 12-9-58, Cl. 102—96.

Lott, William A., and E. J. Pribyl, to Olin Mathieson Chemical Corp. 5-alkyl-2-(trichloromethyl)-5-m-dioxanemethanol and its carbamic acid ester. 2,863,876, 12-9-58, Cl. 260—340.7.

Love, Kenneth T. A.: *See*—
Eisenberg, Irwin W., Dibble, Armstrong, Love, and Rhodes. 2,863,225.

Lowell, Arthur L., to Air Reduction Co., Inc. Preparation of saturated carbinols by the hydrogenation and hydrogenolysis of acetylenic glycols. 2,863,929, 12-9-58, Cl. 260—642.

Lucian, Arsene N. Vacuum cleaner. 2,863,535, 12-9-58, Cl. 183—57.

Lukes, George E.: *See*—
Benghiat, Isaac, Bowers, Lukes, and Giolito. 2,863,803.

Lusk, Robert J.: *See*—
McConnell, Howard M., and Lusk. 2,864,037.

Luther, Arch C., Jr., to Radio Corp. of America. Feedback clamping circuit arrangements. 2,863,943, 12-9-58, Cl. 178—7.3.

Lynn, Allan D., to Bonnie Dog Food Co. Food container and vitamin packet combination. 2,863,778, 12-9-58, Cl. 99—182.

Lynn, John W., to Union Carbide Corp. Synthesis of α-α-dimethyl-β-hydroxypropionaldehyde and α-hydroxy-ββ-dimethyl-γ-butyrolactone. 2,863,878, 12-9-58, Cl. 260—345.6.

Lyon, Floyd A., and T. F. Aronson. Protective means for film mounts. 2,863,244, 12-9-58, Cl. 40—158.

Lyon, George A. Wheel cover. 2,863,702, 12-9-58, Cl. 301—37.

Ma, Si-hon. Mute for a stringed instrument. 2,863,350, 12-9-58, Cl. 84—310.

Macala, Emil G. Cutter and manipulator for making layer cakes. 2,863,479, 12-9-58, Cl. 146—72.

MacFadyen, Donald E.: *See*—
Maude, Aylmer H., and MacFadyen. 2,863,725.

MacNeille, Stephen M., to United States of America, Atomic Energy Commission. Servomotor control system. 2,864,042, 12-9-58, Cl. 318—25.

MacPherson, Donald H.: *See*—
Dunning, Sanford F., and MacPherson. 2,863,950.

Magne, Frank C., E. L. Skau, and R. R. Mod, to United States of America, Agriculture. Vinyl chloride polymers plasticized with morpholide mixture. 2,863,845, 12-9-58, Cl. 260—30.4.

Maikowski, Michael A.: *See*—
Erbe, Friedrich, and Maikowski. 2,863,739.

Mancera, Octavio, F. Sondheimer, and G. Rosenkranz, to Syntex S. A. Process for the production of 17α-ethinyl derivatives of androstane series of compounds. 2,863,880, 12-9-58, Cl. 260—397.5.

Manley, Fred A., and P. W. Ankerman, to General Dynamics Corp. Loudspeaker cone rim treatment. 2,863,920, 12-9-58, Cl. 181—31.

Mann, Leonard J.: *See*—
Murphy, John M., and Mann. 2,863,300.

Mann, Oswald W. Adjustor for the reception of lock catches. 2,863,692, 12-9-58, Cl. 292—341.18.

Manning Mfg. Corp.: *See*—
Jones, Charles E., and Crowle. 2,863,701.

Mansfield, Wilfred P., to British Internal Combustion Engine Research Association. Flame-trap means for limiting the effects of explosions. 2,863,512, 12-9-58, Cl. 169—1.

Manson, Walter J.: *See*—
Kenmore, Herbert, and Manson. 2,863,615.

Marie, Georges R. P. Frequency converter comprising resonant cavity having thin superconductive walls and direct magnetic field. 2,863,996, 12-9-58, Cl. 250—20.

Marie, Pierre G. Multichannel filter. 2,864,061, 12-9-58, Cl. 333—73.

Mariotti, Primo. Internal combustion engine. 2,863,431, 12-9-58, Cl. 123—80.

Markels, Michael, Jr. Apparatus for horizontal distillation. 2,863,806, 12-9-58, Cl. 202—158.

Marks, Barnard M., to E. I. du Pont de Nemours and Company. Method for recovering fluorinated stabilizer. 2,863,889, 12-9-58, Cl. 260—408.

Marsh, Roger: *See*—
Kopf, Rowland J., and Marsh. 2,863,149.

Marley Co., The: *See*—
Mart, Leon T. 2,863,652.

Marsal, Paul A. and N. M. Potter to Union Carbide Corp. Constant frequency battery operated relaxation oscillator. 2,864,009, 12-9-58, Cl. 307—132.

Mart, Leon T., to The Marley Co. Combination mechanical equipment support and internal water distribution piping system for cooling towers. 2,863,652, 12-9-58, Cl. 261—24.

Martin, Cecil G., to Jack & Heintz, Inc. Air pressure control means for air turbine drive systems. 2,863,268, 12-9-58, Cl. 60—52.

Martin, John D. Bedstead carriage. 2,863,157, 12-9-58, Cl. 5—325.

Martin, Thomas A. Control for electrical start and stop switch. 2,863,960, 12-9-58, Cl. 200—18.

Marx, Karl: *See*—
Schweiter, Walter, and Marx. 2,863,611.

Maruluff, William F., and H. A. Smith, to American Cyanamid Co. Alkylation of ditolylalkanes. 2,863,930, 12-9-58, Cl. 260—652.

Maschinenfabrik Schweiter A.G.: *See*—
Schweiter, Walter, and Marx. 2,863,611.

Masonite Corp.: *See*—
Foley, Edward A., and Detho. 2,863,571.

Massey, Byron J.: *See*—
Schneider, Harry, and Massey. 2,863,630.

Massey-Ferguson Inc.: *See*—
Mitchell, Melville J. 2,863,517.

Master Addresser Co.: *See*—
Wright, Ansel J. 2,863,265.

Motoren-Werke Mannheim A. G. vorm. Benz Abt. Stat. Motor

Ogle, Leighten, Sr., deceased; E. Ogle, administratrix.

Matthews, Meredith. Push button directory. 2,863,237, 12–9–58, Cl. 40—77.
Matthews, Russell B. Electromagnetic control device. 2,864,039, 12–9–58, Cl. 317—197.
Matty, Robert E.: *See*—
Diehl, Erle K., Hage, and Matty. 2,863,254.
Maude, Aylmer H., and D. E. MacFadyen, to Hooker Chemical Corp. Process for making sulfur free hydrogen sulfide. 2,863,725, 12–9–58, Cl. 23—181.
Maurice, Jean, and M. Rist, to Societe Anonyme Francaise du Ferodo. Electrocentrifugal clutches. 2,863,326, 12–9–58, Cl. 74—472.
May, Albert G.: *See*—
Just, Raymond H., and May. 2,863,561.
Maynard, John A.: *See*—
Egbert, John E., and Maynard. 2,864,066.
Maynard, Mark K. Hand operated mixer. 2,863,352, 12–9–58, Cl. 74—665.
McAleer, William J.: *See*—
Dulaney, Eugene L., and McAleer. 2,863,806.
McBride, Robert J. Solids proportioning and mixing system. 2,863,651, 12–9–58, Cl. 259—154.
McCawley, Frank X.: *See*—
Dean, Reginald S., and McCawley. 2,863,765.
McChesney, James E., and G. R. Brown, to Minneapolis-Honeywell Regulator Co. Valve having manual and automatic means for operating it. 2,863,470, 12–9–58, Cl. 137—82.
McClure, William L., to Sun Oil Co. Catalytic conversion system. 2,863,827, 12–9–58, Cl. 208—165.
McConnell, Howard M., and R. J. Lusk, to Jack & Heints, Inc. Fault detector for polyphase circuits. 2,864,087, 12–9–58, Cl. 317—47.
McCormick & Co, Inc.: *See*—
Bonotto, Michele. 2,863,774.
McCrosky Tool Corp.: *See*—
Tucker, Charles D. 2,863,210.
McDuffie, Harold F., and C. H. Secoy, to United States of America, Atomic Energy Commission. Combination of hydrogen and oxygen. 2,863,729, 12–9–58, Cl. 23—204.
McGowan, Wheatley. Automobile parking indicator. 2,864,074, 12–9–58, Cl. 340—74.
McGraw-Edison Co.: *See*—
Horelick, Arnold L., and Smith. 2,864,065.
McLin, Marvin H. Capillary pipette. 2,863,319, 12–9–58, Cl. 73—425.4.
McNamara, Russell E. Automobile ignition hood, trunk and 3 door lock. 2,863,519, 12–9–58, Cl. 180—82.
McRae, Wayne A.: *See*—
Juda, Walter, and McRae. 2,863,813.
Mead, William H. Wheel-type abrasive-impelling device. 2,863,261, 12–9–58, Cl. 51—9.
Mecklenborg, Lawrence W., to Precision Welder & Machine Co. Repulsion magnetic force resistance welders. 2,863,986, 12–9–58, Cl. 219—89.
Mendehall, Charles A., to Bendix Aviation Corp. Engine starter gearing. 2,863,330, 12–9–58, Cl. 74—6.
Mercier, Jean, and P. G. J. M. Audemar. Hydraulic follow up systems. 2,863,422, 12–9–58, Cl. 121—41.
Merck & Co., Inc.: *See*—
Dulaney, Eugene L., and McAleer. 2,863,806.
Merker, Robert L., to Dow Corning Corp. Pentachlorobenzenethiolmethyl substituted organosiloxanes. 2,863,898, 12–9–58, Cl. 260—448.2.
Meserve, Forrest C., and M. F. Smith, to Micro Machinery Products, Inc. Machine and process for slitting or siping tires. 2,863,507, 12–9–58, Cl. 164—10.2.
Meshberg, Philip. Insulated tumbler. 2,863,565, 12–9–58, Cl. 220—15.
Messenger, Joseph U., W. R. Foster, S. A. Williams, Jr., and L. M. Hermes, Jr., said Messenger and said Foster assignors to Socony Mobil Oil Co., Inc. Treatment of wells. 2,863,509, 12–9–58, Cl. 166—20.
Metallgesellschaft, Akt.: *See*—
Herbert, Wilhelm, Kohrt, Becker, and Daunlat. 2,863,527.
Metals & Controls Corp.: *See*—
Cardin, Wilfred W., and Epstein. 2,863,965.
Metzger, Robert W., to Bell Aircraft Corp. Helicopter rotor blade. 2,863,315, 12–9–58, Cl. 17—159.
Meyer, Arnold F., to The Heil Co. Art of manufacturing reinforced plastic articles. 2,863,797, 12–9–58, Cl. 154—83.
Meyer, Daniel A., to The Dayton Rubber Co. Textile working units. 2,863,175, 12–9–58, Cl. 19—148.
Meyer, Geo. J., Mfg. Co.: *See*—
Meyer, George L. N. 2,863,579.
Meyer, George L. N., to Geo. J. Meyer Mfg. Co. Case unloader with bottle rejecting head. 2,863,579, 12–9–58, Cl. 214—309.
Michael, Maldon W.: *See*—
Ashley, Kenneth D., and Michael. 2,863,760.
Micro Machinery Products, Inc.: *See*—
Meserve, Forrest C., and Smith. 2,863,507.
Mihesic, Frank J. Clip. 2,863,352, 12–9–58, Cl. 85—11.
Miles Laboratories, Inc.: *See*—
Drey, Norman W. 2,863,723.
Miller, Carl D., to Jack & Heints, Inc. Torque limiter. 2,863,325, 12–9–58, Cl. 74—801.
Miller, Clifford F., to Textile Machine Works. Yarn severing means for knitting machines. 2,863,310, 12–9–58, Cl. 66—145.
Miller, Edward H., to General Electric Co. Slip ring expansion joint. 2,863,632, 12–9–58, Cl. 253—39.
Miller, Eugene A. Circuit breaker. 2,863,970, 12–9–58, Cl. 200—163.
Miller, Joshua, B. B. Cadman, Jr., and A. J. Borowski. Latch ejection type, quick attachment and release. 2,863,200, 12–9–58, Cl. 24—230.
Miller, Kenneth T. Wire cutting and stripping tool. 2,863,156, 12–9–58, Cl. 7—5.2.
Miller, Robert A.: *See*—
Olson, Henry L., Miller, and Hale. 2,863,378.
Mills, George A., to Houdry Process Corp. Clay catalysts. 2,863,839, 12–9–58, Cl. 252—450.
Minneapolis-Honeywell Regulator Co.: *See*—
Bennell, Charles E., and Fink. 2,863,961.
Clecel, Benjamin H. 2,863,622.
Egbert, John E., and Maynard. 2,864,066.
Gille, Willis H. 2,864,050.
McChesney, James E., and Brown. 2,863,470.
Minnesota Mining & Mfg. Co.: *See*—
Eubank, William R., and Beck. 2,863,782.
Minnick, Leonard J., and Preegrave, to G. and W. H. Corson, Inc. Electric current producing cell and method of producing current using the same. 2,863,983, 12–9–58, Cl. 136—6.
Mirvias, Stanley E.: *See*—
Kirshenbaum, Isidor, Mirvias, and Lemiesks. 2,863,804.
Mishulevich, Benjamin, to Westinghouse Air Brake Co. Automatic control of railway classification yard track switches. 2,863,991, 12–9–58, Cl. 246—2.
Mitchell, John, and H. J. Twitchett, to Imperial Industries Ltd. New monoazo compounds. 2,863,860, 12–9–58, Cl. 260—193.
Mitchell, Melville J., to Massey-Ferguson Inc. Clutch kit for tractor drive wheels. 2,863,517, 12–9–58, Cl. 180—75.
Mito, Hiroshi. Panorama camera. 2,863,713, 12–9–58, Cl. 95—16.
Mod, Robert R.: *See*—
Magne, Frank C., Skau, and Mod. 2,863,845.
Modine Mfg. Co.: *See*—
Spieth, Benjamin. 2,863,645.
Moduy, Michael T., and J. P. Bambara. Vein stripper and a method of stripping veins. 2,863,458, 12–9–58, Cl. 128—303.
Moede, Jerome A., to E. I. du Pont de Nemours and Co. Process of preparing silver halide dispersions. 2,863,769, 12–9–58, Cl. 96—114.
Mohler, Edward F., Jr.: *See*—
Bowers, Rolland G., and Mohler. 2,863,732.
Moll, Robert, to Societe Anonyme Mipea. Hydraulic control installations for machine tools and operating means therefor. 2,863,422, 12–9–58, Cl. 121—45.
Monarch Machine Tool Co., The: *See*—
Alles, Wayne B. 2,864,046.
Greene, Claude E., and Ulman. 2,864,047.
Monroe, Mayer G., to Jantzen, Inc. Bathing suit and brassiere therefor. 2,863,460, 12–9–58, Cl. 128—435.
Monsanto Chemical Co.: *See*—
Bonsagni, Francis A. 2,863,842.
Elmer, Curtis, and Stanley. 2,863,869.
Fordham, James W. L. 2,863,849.
Hamm, Philip C., and Speziale. 2,863,752.
Ragsdale, James W. 2,863,850.
Reetz, Theodor. 2,863,905.
Montague, Harry L.: *See*—
Henderson, John J., and Montague. 2,863,810.
Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
De Cerma, Paolo. 2,863,791.
De Cerma, Paolo. 2,863,793.
Greco, Guido. 2,863,749.
Montgomery, Lawrence C. Gas feed for motor vehicles. 2,863,329, 12–9–58, Cl. 74—513.
Moody, Robert W.: *See*—
Hill, Royston A. W., and Moody. 2,863,392.
Moore, Alfred L.: *See*—
White, Gerald, and Moore. 2,863,568.
Moore, Edward F., to Bell Telephone Laboratories, Inc. Relay selecting circuit. 2,864,008, 12–9–58, Cl. 307—112.
Moore, George A. Air extractor device. 2,863,266, 12–9–58, Cl. 53—22.
Moore, George A. Air extractor and sealing device. 2,863,267, 12–9–58, Cl. 53—22.
Moore, Lee C., Corp.: *See*—
Campbell, Erwin A. 2,863,531.
Woolslayer, Homer J., Jenkins, Turner, and Campbell. 2,863,530.
Moore, Richard V., J. H. Bowen, and K. H. Dant, to United States of America, Atomic Energy Commission. Nuclear reactor. 2,863,815, 12–9–58, Cl. 204—193.2.
Moorhead, John G., to United States of America, Army. Rotational setting mechanism. 2,863,330, 12–9–58, Cl. 74—526.
Moosman, Jack A., to Johnston Testers, Inc. Back circulating valve. 2,863,511, 12–9–58, Cl. 166—224.
Moran, William O. Vertical furnace with positive draft controller. 2,863,442, 12–9–58, Cl. 126—85.
Morgan, Gerard E., Jr., to John T. Riddell, Inc. Protective pad. 2,863,151, 12–9–58, Cl. 2—8.
Morgan, James E.: *See*—
Thornhill, Fred S., and Morgan. 2,863,727.
Moritz, Orville H.: *See*—
Davis, Harold W., and Moritz. 2,863,307.
Morris, Harry A., to C. V. Hill Co., Inc. Display case. 2,863,202, 12–9–58, Cl. 62—256.
Morris, William J., to United States of America, Atomic Energy Commission. Reactor coolant tube seal. 2,863,817, 12–9–58, Cl. 204—193.2.
Morway, Arnold J., to Esso Research and Engineering Co. Lubricating oils thickened to a grease with hydrous metal salts and process for forming same. 2,863,847, 12–9–58, Cl. 252—37.2.
Moser, John F., Jr., to Esso Research and Engineering Co. Combination transfer line and fluid bed coking system. 2,863,823, 12–9–58, Cl. 208—92.
Mossberg, O. F., & Sons, Inc.: *See*—
Benson, Carl H. 2,863,247.

Peterson, Bertil E., to Cardwell Westinghouse Co. Apparatus for assembly of cushioning devices. 2,863,212, 12–9–58
Pullan, Joseph B., to Universal Oil Products Co. Recovery

Motoren-Werke Mannheim A. G. vorm. Benz Abt. Stat. Motorenbau: *See*—
Biechel, Joseph. 2,863,439.

Motorola, Inc.: *See*—
Kroger, Marlin G. 2,863,940.

Moyes, James, to Chrysler Corp. Automobile window mechanism. 2,862,858, 12–9–58, Cl. 268—104.

Munch, Robert J.: *See*—
Bikales, Norbert M., and Munch. 2,863,918.

Münker, Theodor. Apparatus which controls temperature and speed of extruded product. 2,863,557, 12–9–58, Cl. 207—2.

Murata, Yorimasa. Method and devices of horizontal absorbing of shock on vehicles. 2,863,672, 12–9–58, Cl. 280—283.

Murmann, Wilhelm, to Firma Hochtief Akt. fur Hoch-und Tiefbauten, vorm. Gebr. Helfmann. Reinforced dam. 2,863,291, 12–9–58, Cl. 61—31.

Murphy, John M., and L. J. Mann, to General Motors Corp. Refrigerating apparatus. 2,863,300, 12–9–58, Cl. 62—187.

Murray-Ohio Mfg. Co., The: *See*—
Golrick, Albert R. 2,863,223.

Murrell, Merwyn C., to Excel Body Corp. Creep feeders. 2,863,419, 12–9–58, Cl. 119—20.

Napier, D. & Son Ltd.: *See*—
Challis, Kenneth E. 2,863,438.
Chamberlin, Reginald H. D., and Blyth. 2,863,634.

National Gypsum Co.: *See*—
Hovind, John K. 2,863,184.

National Lead Co.: *See*—
Taltavall, John A., Jr. 2,863,680.

National Research Development Corp.: *See*—
Wain, Ralph L. 2,863,653.
Wain, Ralph L. 2,863,754.

National-Standard Co.: *See*—
Kenmore, Herbert, and Manson. 2,863,615.

Neiman, Edward E. Built-in ladder. 2,863,593, 12–9–58, Cl. 228—45.

Nelson, Eugene K. and H. H., to Cherry-Burrell Corp. Distributor trough for milk holding vats. 2,863,646, 12–9–58, Cl. 257—190.

Nelson, Gorman R. Torque-transmitting tool for coupling nuts and the like. 2,863,347, 12–9–58, Cl. 81—52.4.

Nelson, Harold H.: *See*—
Nelson, Eugene K. and H. H. 2,863,646.

Nelson, Ralder E. and R. E. Kon. Window well hoods. 2,863,177, 12–9–58, Cl. 20—1.

Nemet, Anthony A., W. F. Cox, and C. L. Bennett, to North American Philips Co., Inc. Bucky-grid X-ray apparatus. 2,864,004, 12–9–58, Cl. 250—62.

Newell, William H., to Sperry Rand Corp., Ford Instrument Co. Division. Precision torque motor. 2,864,048, 12–9–58, Cl. 318—430.

Newton, Charles L., to Herrick L. Johnston, Inc. Process for separating a gas mixture into its components. 2,863,295, 12–9–58, Cl. 62—13.

Newton, Charles L., to Herrick L. Johnston, Inc. High pressure cycle for the continuous separation of a gas mixture into its components. 2,863,296, 12–9–58, Cl. 62—14.

Newton, John A., to Thompson Products, Inc. Valve rotating device. 2,863,427, 12–9–58, Cl. 123—90.

Newton, Joseph L. Grading indicator. 2,863,417, 12–9–58, Cl. 116—133.

Neyhart, James H.: *See*—
Vyverberg, Robert G., and Neyhart. 2,863,767.

Nibbit Products Association Ltd.: *See*—
Spieser, Louis. 2,863,770.

Nichols, Gordon R., to Winthrop-Atkins Co., Inc. Easel mount with pocket and means for ejecting an insert therefrom. 2,863,243, 12–9–58, Cl. 40—152.1.

Noble Drilling Corp.: *See*—
Plumer, Harold V. 2,863,293.

Nodiff, Edward A.: *See*—
Grosse, Aristid V., and Nodiff. 2,863,824.

Nordin, Henry R., to Canada Packers Ltd. Stuffing mechanism for sausage and like casings. 2,863,167, 12–9–58, Cl. 17—41.

Nordquist, Ronald E. J., to American Can Co. Can loading apparatus. 2,863,553, 12–9–58, Cl. 198—139.

North American Philips Co., Inc.: *See*—
Ahsmann, Gerardus J. M. 2,864,024.
Bol, Arie, Klaassen, and Jochems. 2,863,840.
Coppola, Patrick P. 2,864,028.
Jonker, Johan L. H., and Groendijk. 2,864,026.
Lampe, Friedrich, and Laa. 2,863,959.
Nemet, Anthony A., Cox, and Bennett. 2,864,004.
Penning, Frans M. 2,863,315.

Northern Electric Co., Ltd.: *See*—
Link, William T. 2,863,609.

Norton Co.: *See*—
Comstock, George R., 3rd. 2,863,222.

Norton, Samuel H., to Thompson Products, Inc. Valve rotating device. 2,863,428, 12–9–58, Cl. 123—90.

Nortons-Tividale Ltd.: *See*—
Howard, Allan M. 2,863,390.

Noskowicz, Theodore S.: *See*—
Amdursky, Mark E., Noskowicz, and Seegho. 2,864,032.

Nutt, Clement R. Auxiliary wheel. 2,863,703, 12–9–58, Cl. 301—38.

O'Brien, James H., to Curtiss-Wright Corp. Valve tappet mechanism. 2,863,432, 12–9–58, Cl. 123—90.

O'Brien, Joseph L., to Rohm & Haas Co. Stabilization of polymerizable materials. 2,863,851, 12–9–58, Cl. 260—45.9.

O'Donnell, William J.: *See*—
Doyle, William H., and O'Donnell. 2,863,618.

Ogle, Edna: *See*—
Ogle, Leighten, Sr. 2,863,452.

Ogle, Leighten, Sr., deceased; E. Ogle, administratrix. Syringe with adjustable aspirating means. 2,863,452, 12–9–58, Cl. 128—218.

Ohio Crankshaft Co., The: *See*—
Tadbury, Chester A. 2,863,934.

Ohio State University Research Foundation, The: *See*—
Sisler, Harry H., and Drago. 2,863,728.

Olin Mathieson Chemical Corp.: *See*—
Kopf, Rowland J., and Marsh. 2,863,140.
Lott, William A., and Pribyl. 2,863,876.

Olson, Henry L., R. A. Miller, and W. F. Hale, to Camfield Mfg. Co. Toasters. 2,863,378, 12–9–58, Cl. 99—391.

Olson, Norman L.: *See*—
Rosenberg, Jack, and Olson. 2,864,010.

Olson, Oscar R. Galvanizing furnace temperature control. 2,863,643, 12–9–58, Cl. 257—4.

Olson, Richard L. Prevention of blow-by in cavitated assemblies. 2,863,186, 12–9–58, Cl. 22—10.

Oriente, Giovanna: *See*—
Panizzi, Luigi, Scarpati, and Oriente. 2,863,909.

Orr, Albert S.: *See*—
Cantrell, Troy L., Orr, and Peters. 2,863,745.

Osborne, Frank, to Firma Wm. Ayrton & Co. Ltd., and F. Osborne. Sising and polishing of yarns. 2,863,787, 12–9–58, Cl. 117—7.

Otto, Raymond L. Memorandum card holder. 2,863,675, 12–9–58, Cl. 281—44.

Overhead Door Corp.: *See*—
Stroup, Earl L. 2,863,503.

Overholt, Donald C., and F. W. Tober, to United States of America, Atomic Energy Commission. Plutonium concentration and decontamination method. 2,863,718, 12–9–58, Cl. 23—14.5.

Ovshinsky, Herbert C. Threading tool spindle feed means reciprocable at a rate in excess of the lead of the threading tool. 2,863,160, 12–9–58, Cl. 10—139.

Owens-Corning Fiberglas Corp.: *See*—
Drummond, Warren W., and Steitz. 2,863,208.
Rogers, Ernest W., and Beal. 2,863,498.
Snow, Henry J., and Kendrick. 2,863,493.

Owens-Illinois Glass Co.: *See*—
Elser, William F. 2,863,699.
Toepfer, Walter J., and Stutzke. 2,863,260.

Owens, Edward W., to The Celon Co. Ornamental bottle seal and method. 2,863,552, 12–9–58, Cl. 215—38.

Page, Robert M., to United States of America, Navy. Multiplex communication system. 2,863,946, 12–9–58, Cl. 179—15.

Pagett, Louis W. Fence construction. 2,863,642, 12–9–58, Cl. 256—22.

Palmenberg, Edward C.: *See*—
Schmider, Henry R., Palmenberg, and Dietz. 2,863,283.

Palmer, William H.: *See*—
Pedrola, Edward H., and Palmer. 2,863,600.

Paltier Corp., The: *See*—
Skubic, Leroy F. 2,863,568.

Panizzi, Luigi, M. L. Scarpati, and G. Oriente, to Societa Farmaceutici Italia. Process of extracting 1,4-dicaffeylquinic acid. 2,863,909, 12–9–58, Cl. 260—473.

Pape, Martin H. E., deceased; ⅜ to M. M. J. Stollcis, and ⅛ to E. M. E. Stollcis, of the estate of said Pape, to W. Baensch. Winch with cable tension device. 2,863,636, 12–9–58, Cl. 254—172.

Pardee, Schuyler, Jr., to United States of America, Navy. Servo system directional bearing converter. 2,864,044, 12–9–58, Cl. 318—28.

Parisse, Louis L., to Koppers Co., Inc. Recovery of purified di-tertiary-butyl-para-cresol. 2,863,927, 12–9–58, Cl. 260—624.

Parrott, Henry W., and S. A. Ericson, to The Bassick Co. Back adjustment for office chairs. 2,863,497, 12–9–58, Cl. 155—157.

Parstorfer, John, to Burroughs Corp. Apparatus for actuating sealed instruments. 2,863,336, 12–9–58, Cl. 74—804.

Patronix Inc.: *See*—
Batchelor, Joseph B., Jr. 2,864,060.

Payne, Peter R., to Auster Aircraft Ltd. Rotary wing with shear pin mounting. 2,863,514, 12–9–58, Cl. 170—160.56.

Pedrola, Edward H., and W. H. Palmer. Air pressure control devices for supplying air to liquid tanks. 2,863,600, 12–9–58, Cl. 230—52.

Peets, Wilbur J., to The Singer Mfg. Co. Sewing machine drives. 2,863,411, 12–9–58, Cl. 112—220.

Pellegrini, John P., Jr., and H. I. Thayer, to Gulf Research & Development Co. Motor fuel. 2,863,743, 12–9–58, Cl. 44—69.

Pellizzetti, Italo. Motor vehicle equipped with wheels capable of steering substantially through 90° from their straight drive position. 2,863,518, 12–9–58, Cl. 180—79.2.

Penning, Frans M., deceased; J. D. Heijligers, executor, to North American Philips Co., Inc. Apparatus for detecting leaks in vacuum systems. 2,863,315, 12–9–58, Cl. 23—40.7.

Perech, Ramon, to Transcontinental Development Co. Method of production of tea concentrate directly from tea leaves when the leaves are in a green state, and product of said method. 2,863,775, 12–9–58, Cl. 99—77.

Perkes, Fred T., and J. M. Vernon, to Thompson Products, Inc. Work support. 2,863,263, 12–9–58, Cl. 51—238.

Perrine, Richard L., to California Research Corp. Method of acidizing petroliferous formations. 2,863,832, 12–9–58, Cl. 252—8.55.

Peters, John G.: *See*—
Cantrell, Troy L., Kuhns, and Peters. 2,863,746.
Cantrell, Troy L., Kuhns, and Peters. 2,863,747.
Cantrell, Troy L., Orr, and Peters. 2,863,745.
Cantrell, Troy L., and Peters. 2,863,744.
Cantrell, Troy L., and Peters. 2,863,904.

Petersen, Gerald A. M. Offset boring head for auger. 2,863,040, 12–9–58, Cl. 255—69.

Wright, Ansel J. 2,863,365.

Peterson, Bertil E., to Cardwell Westinghouse Co. Apparatus for assembly of cushioning devices. 2,863,212, 12–9–58, Cl. 29—227.

Peterson, Bertil E., to Cardwell Westinghouse Co. Method for assembly of cushioning devices. 2,863,357, 12–9–58, Cl. 29—446.

Peterson, Robert A. Track control mechanism for tractor. 2,863,516, 12–9–58, Cl. 180—9.1.

Peterson, Walter B., and F. G. W. Ulberg, Jr., to Rome Cable Corp. Connecting means. 2,863,683, 12–9–58, Cl. 287—54.

Pfaff, G. M., A.-G.: *See*—
Schumann, Herbert, Zink, and Wenz. 2,863,409.

Phaostron Instrument and Electronic Co.: *See*—
Eisenberg, Irwin W., Dibble, Armstrong, Love, and Rhodes. 2,863,325.

Phileo Corp.: *See*—
Reed, Wilbur B., and Johnston. 2,863,953.

Philipp, Lawrence A., to American Motors Corp. Lubricant circulation in refrigerating apparatus. 2,863,301, 12–9–58, Cl. 62—193.

Philippovic, Joachim W., to Syntron Co. Gravimetric batch feeder. 2,863,589, 12–9–58, Cl. 222—65.

Phillips, Benjamin, and P. E. Starcher, to Union Carbide Corp. Diepoxides. 2,863,861, 12–9–58, Cl. 260—348.

Phillips Petroleum Co.: *See*—
Goodhue, Lyle D., and Cantrel. 2,863,790.
Guth, Eugene D., and Fox. 2,863,786.
Hillyer, John C. 2,863,784.
Ray, Gardner C., and Hepp. 2,863,858.
Short, James N., Rothlisberger, and Follett. 2,863,488.

Pianfetti, John A., and D. J. Porter, to Food Machinery and Chemical Corp. Method of producing polychlorinated acetaldehydes. 2,863,924, 12–9–58, Cl. 260—601.

Piazze, Thomas E., to Continental Can Co., Inc. Method of forming bags. 2,863,365, 12–9–58, Cl. 93—35.

Pickett, Roswell C., to S. A. Pickett. Metal slide rule. 2,863,605, 12–9–58, Cl. 235—70.

Pickett, Susan A.: *See*—
Pickett, Roswell C. 2,863,605.

Picking, Henry J., to Geotetner Ltd. Interleaving device for a duplicating machine. 2,863,661, 12–9–58, Cl. 271—44.

Pike, John W.: *See*—
Brater, Donald C., and Pike. 2,863,735.

Pike, Kenneth N.: *See*—
Porter, Carroll B., Labbe, and Pike. 2,863,731.

Piker, Herbert M., and A. J. Schultheiss, to Hamilton-Skotch Corp. Container and a lid or cover therefor. 2,863,581, 12–9–58, Cl. 215—13.

Pilia, Frank J.: *See*—
Kane, John S., and Pilia. 2,863,963.

Pim, Robert N.: *See*—
Beck, Henry C., and Pim. 2,863,820.

Pinkel, Isadore I. Adjustable crash resistant seat. 2,863,496, 12–9–58, Cl. 155—152.

Pitney-Bowes, Inc.: *See*—
Kubovy, Joseph V. 2,863,390.

Platt, William C., to Ventura Processors. Process for purifying citrus oils. 2,863,861, 12–9–58, Cl. 260—236.6.

Plumer, Harold V., to Noble Drilling Corp. Marine drilling rig. 2,863,293, 12–9–58, Cl. 61—46.5.

Pneumafil Corp.: *See*—
Breuning, Ernst. 2,863,776.

Pockman, Lloyd A. Poultry laying cages. 2,863,418, 12–9–58, Cl. 119—18.

Pohl, Wadsworth E.: *See*—
Evans, William E., Pohl, Dixon, and Hopf. 2,863,936.

Pokras, Harry, to Product Packaging Engineering. Packaging machine. 2,863,269, 12–9–58, Cl. 53—180.

Polytechnic Institute of Brooklyn: *See*—
Felsen, Leopold B., and Kahn. 2,864,063.

Pomeroy, Timothy C. Hydraulic jack. 2,863,285, 12–9–58, Cl. 60—52.

Porter, Carroll B., A. L. Labbe, Jr., and K. N. Pike, to American Smelting and Refining Co. Control of the state of the selenium in alkali slags. 2,863,731, 12–9–58, Cl. 23—209.

Porter, David J.: *See*—
Pianfetti, John A., and Porter. 2,863,924.

Potter, Norman M.: *See*—
Marsal, Paul A., and Potter. 2,864,009.

Potter, Ralph K., to Bell Telephone Laboratories, Inc. Electric printer for magnetic codes. 2,863,712, 12–9–58, Cl. 346—74.

Poudreries Reunies De Belgique S. A.: *See*—
Diels, Albert. 2,863,891.

Power Jets (Research and Development) Ltd.: *See*—
Whitehead, Leslie T. 2,863,474.

Praeg, Walter S. Machine and method for producing gears. 2,863,360, 12–9–58, Cl. 90—1.6.

Prapis, Frank, to Bendix Aviation Corp. Direct current modulator. 2,864,001, 12–9–58, Cl. 250—27.

Precision Welder & Machine Co.: *See*—
Mecklenborg, Lawrence W. 2,863,986.
Schueler, Arthur W. 2,863,985.

Preiser, Herman S. Insoluble trailing anode for cathodic protection of ships. 2,863,819, 12–9–58, Cl. 204—196.

Preagrave, Cyril: *See*—
Minnick, Leonard J., and Preagrave. 2,863,983.

Pribyl, Edward J.: *See*—
Lott, William A., and Pribyl. 2,863,876.

Priest, George D. Pulling tool for straightening fenders and bodies. 2,863,469, 12–9–58, Cl. 153—38.

Product Packaging Engineering: *See*—
Pokras, Harry. 2,863,269.

Prüssing, Georg C., and B. H. Heiming. Apparatus for the preheating of powdered material particularly cement raw mix. 2,863,825, 12–9–58, Cl. 34—68.

Pschorr, Frank E., to Ciba Co., Inc. Epoxy resin compositions. 2,863,853, 12–9–58, Cl. 260—47.

Pullen, Joseph B., to Universal Oil Products Co. Recovery of noble metals. 2,863,762, 12–9–58, Cl. 75—121.

Putnam, F. A., Mfg. Co., Inc.: *See*—
Johnson, Carl R. 2,863,283.

Pyne, William J., to Diamond Alkali Co. Treating plants with the systemically active fungicide, lower alkyl 2(2,3,3-trihalo-2-hydroxypropyl)-pyridine. 2,863,802, 12–9–58, Cl. 167—33.

Quant, Johannes T.: *See*—
Tadema, Harco J., and Quant. 2,863,510.

Quast, Gilbert W.: *See*—
Lind, Arthur C., Quast, and Koeske. 2,863,564.

Quast, Gilbert W., and T. J. Koeske, to Chain Belt Co. Scum pipe revolving mechanism. 2,863,565, 12–9–58, Cl. 210—540.

Rabbitts, Fred T.: *See*—
Thunaes, Arvid, Rabbitts, Hester, and Smith. 2,863,716.

Radford, Stephen. Flower pot. 2,863,259, 12–9–58, Cl. 47—38.

Radiation, Inc.: *See*—
Searcy, John H.

Radio Corp. of America: *See*—
Bingham, Neil D., and Beauregard. 2,864,069.
Bucher, Thomas T. N. 2,864,059.
Fiet, Owen O., and Foley. 2,864,082.
French, Hubert. 2,863,999.
Jose, Robert S. 2,863,942.
Lazzery, Angelo G. 2,864,021.
Luther, Arch C., Jr. 2,863,943.
Smith, Roland W. 2,864,051.

Raecke, Bernhard, B. Blaser, W. Stein, and H. Schirp, to Henkel & Cie. G. m. b. H. Process for producing terephthalic acid. 2,863,913, 12–9–58, Cl. 260—515.

Raecke, Bernhard, to Henkel & Cie. G. m. b. H. Process for converting phthalic acid into terephthalic acid. 2,863,914, 12–9–58, Cl. 260—515.

Ragsdale, James W., to Monsanto Chemical Co. Polyethylene composition. 2,863,850, 12–9–58, Cl. 260—45.7.

Rapson, William H., to Hooker Chemical Corp. Chlorine dioxide production. 2,863,722, 12–9–58, Cl. 23—152.

Rasmusson, Marlin B. Automatic defroster. 2,863,403, 12–9–58, Cl. 107—8.

Rattenbury, Kenneth H.: *See*—
Toy, Arthur D. F., and Rattenbury. 2,863,903.

Raub, Samuel H. S.: *See*—
Hauch, Albert F., and Raub. 2,863,677.

Ray, Gardner C., and H. J. Hepp, to Phillips Petroleum Co. Separating organic compounds. 2,863,858, 12–9–58, Cl. 260—96.5.

Raylite Electric Corp.: *See*—
Abramson, Abraham. 2,864,070.

Rectenwald, Charles E.: *See*—
Clark, Jared W., and Rectenwald. 2,863,916.

Reed, Wilbur B., and H. E. Johnston, to Philco Corp. Transducer. 2,863,953, 12–9–58, Cl. 179—111.

Reetz, Theodor, to Monsanto Chemical Co. Recovery and purification of trialkyl phosphites. 2,863,905, 12–9–58, Cl. 260—461.

Reggiani Meccanotex S. A.: *See*—
Giani, Adolfo. 2,863,382.

Reicherter, Georg. Gauge for testing the roundness and the diameter of cylindrical work pieces. 2,863,223, 12–9–58, Cl. 33—178.

Renneker, H. H., Co., Inc.: *See*—
Renneker, Herman H. 2,863,954.

Renneker, Herman H., to H. H. Renneker Co., Inc. Telephone hand set supports. 2,863,954, 12–9–58, Cl. 179—157.

Republic Aviation Corp.: *See*—
Doyle, William H., and O'Donnell. 2,863,618.
Trump, Frederic L. 2,863,583.

Research Corp.: *See*—
Berkman, John W. 2,863,287.
Shreve, Randolph N., and Charlesworth. 2,863,859.

Resistoflex Corp.: *See*—
Schuman, Paul D., and Chu. 2,863,174.

Reuter, Frederic W., Jr.: *See*—
Stokes, Arthur J., and Reuter. 2,864,023.

Rex Corp., The: *See*—
Foss, Philip W. 2,863,170.

Reynolds, Zack D.: *See*—
Chubb, Howard E., and Reynolds. 2,863,227.

Rhodes, Chester B.: *See*—
Eisenberg, Irwin W., Dibble, Armstrong, Love, and Rhodes. 2,863,325.

Rice, Henry T. M., R. T. Stevens, and D. Stevens, deceased (by A. M. Stevens, executrix). Releasable torque transmitting apparatus. 2,863,541, 12–9–58, Cl. 192—56.

Rice, William F.: *See*—
Ackerman, Chester W. 2,863,251.

Rich, Edward L. Paint spraying masks and method of making same. 2,863,284, 12–9–58, Cl. 101—127.

Richards, Augustus J., to Bonnar-Vawter, Inc. Delivery end mechanism. 2,863,863, 12–9–58, Cl. 271—69.

Richards, Lorenzo A. Soil moisture sensitive automatic irrigation system. 2,863,698, 12–9–58, Cl. 299—26.

Riddell, John T., Inc.: *See*—
Morgan, Gerard E., Jr. 2,863,151.

Ridge Tool Co., The: *See*—
Heintz, Clarence T. 2,863,396.

Riedl, Arnold T. Joint construction including a fastener for securing two structural members together in edge-to-edge closely abutting relation. 2,863,185, 12–9–58, Cl. 20—82.

Rimsha, Victor E., J. A. Kosai, F. E. Cerveny, and F. R. Wolf, to The Dole Valve Co. Integral solenoid valve. 2,863,628, 12–9–58, Cl. 251—30.

Rines, Robert H. Radio picture system and apparatus. 2,863,941, 12–9–58, Cl. 178—6.8.

Rines, Robert H. Electric system. 2,864,029, 12–9–58, Cl. 315—1.

Rines, Robert H. Radio-receiving and scanning system. 2,864,020, 12–9–58, Cl. 315—1.

Rings, Franz, to G. Kromacznrode Akt. Concentric inlet and outlet casings for water meters and the like. 2,863,317, 12–9–58, Cl. 73—201.

Rist, Michel: *See*—
Maurice, Jean, and Rist. 2,863,326.

Risso, Rosario J., to Perber Corp. Writing instrument. 2,863,421, 12–9–58, Cl. 120—42.2.

Roback, John G.: *See*—
Cooper, Benjamin, Wapner, and Roback. 2,863,710.

Robbins, Davis, to Robbins Machine & Mfg. Co., Inc. Inflatable seal for rotating shafts. 2,863,681, 12–9–58, Cl. 286—26.

Robertshaw-Fulton Controls Co.: *See*—
Coles, Ralph V., and Bagley. 2,863,472.

Robinson, Raymond: *See*—
Thorley, Thomas, and Robinson. 2,863,982.

Robitschek, Paul, and C. T. Bean, to Hooker Chemical Corp. Polymerizable mixture of vinylidene monomer and unsaturated polyester containing a polycarboxylic adduct of hexahalocyclopentadiene and laminate containing same. 2,863,794, 12–9–58, Cl. 154—43.

Robitschek, Paul, and C. T. Bean, to Hooker Chemical Corp. Polymerizable mixture of vinylidene monomer and unsaturated polyester containing a polyhydric adduct of hexahalocyclopentadiene and laminate containing same. 2,863,795, 12–9–58, Cl. 154—43.

Robitschek, Paul, and C. T. Bean, to Hooker Chemical Corp. Polymers containing hexachlorocyclopentadiene and process of making same. 2,863,848, 12–9–58, Cl. 260—45.4.

Rodgers, George V., to United States of America, Navy. Azimuth indicating system. 2,864,080, 12–9–58, Cl. 343—106.

Roelen, Otto: *See*—
Buchner, Karl, and Roelen. 2,863,911.

Rogers, Ernest W., and R. C. Beal, to Owens-Corning Fiberglas Corp. Dual fuel burner. 2,863,498, 12–9–58, Cl. 158—11.

Rohm & Haas Co.: *See*—
Bortnick, Newman M. 2,863,923.
O'Brien, Joseph L. 2,863,851.

Rohrer, Reinhard: *See*—
Bolliat, Philippe, and Rohrer. 2,863,277.

Rome Cable Corp.: *See*—
Peterson, Walter B., and Ullberg. 2,863,683.

Romney, Van Dyke: *See*—
Wallace, Burgess P., Romney, and Becker. 2,863,781.

Root, Robert S., to Lipe-Rollway Corp. Heavy duty friction clutch. 2,863,537, 12–9–58, Cl. 192—13.

Rosato, Nicola P., and S. E. Siemon, to United States of America, Army. Trepanning apparatus. 2,863,341, 2,863,341, 12–9–58, Cl. 77—60.

Rose, Francis L.: *See*—
Birtwell, Stanley, and Rose. 2,863,919.

Rosenberg, Jack, and N. L. Olson, to General Dynamics Corp. Rapid traverse system. 2,864,010, 12–9–58, Cl. 307—149.

Rosenberg, Samuel J., and C. R. Irish, to United States of America, Navy. Ductile and tough high strength steel. 2,863,763, 12–9–58, Cl. 75—128.

Rosengard, Milton H.: *See*—
Grant, Richard W., and Rosengard. 2,863,689.

Rosenkrans, George: *See*—
Djerassi, Carl, Stork, Sondheimer, and Rosenkrans. 2,863,862.
Mancera, Octavio, Sondheimer, and Rosenkrans. 2,863,866.

Rosenquist, John H., and A. W. Westling, to Aktiebolaget Statens Skogsindustrier. Process for manufacturing form board for casting concrete. 2,863,864, 12–9–58, Cl. 92—40.

Roth, Julius, to R. H. Krohn and G. Hite, d. b. a. Krohn-Hite Instrument Co. Adaptor for interconnecting electrical elements while providing exposed contacts. 2,864,068, 12–9–58, Cl. 339—64.

Rothlisberger, Alvin C.: *See*—
Short, James N., Rothlisberger, and Follett. 2,863,488.

Roublk, Joseph R.: *See*—
Wetzel, Theodore A., and Roublk. 2,863,362.

Rucker, John T., and J. S. Scence, to Hooker Chemical Corp. Method for reducing dichloroacetic acid in the presence of monochloroacetic acid. 2,863,917, 12–9–58, Cl. 260—539.

Rudnick, Paul, and M. F. Tsohig, to International Telephone and Telegraph Corp. Electron discharge device. 2,864,020, 12–9–58, Cl. 313—71.

Ruhland, Alois, and J. Fischer, to Siemens & Halske Akt. Electromagnetic device. 2,864,038, 12–9–58, Cl. 317—171.

Ruhrchemie Akt.: *See*—
Buchner, Karl, and Roelen. 2,863,911.

Runkan, Gerd, to ACF Industries, Inc. Vehicle lateral motion control. 2,863,400, 12–9–58, Cl. 105—3.

Ruscetta, Ralph A., and A. L. Jenny, to General Electric Co. Method of etching capacitor electrodes. 2,863,811, 12–9–58, Cl. 204—141.

Ruud Mfg. Co.: *See*—
Lintvedt, Halvard. 2,863,987.

Ryan Aeronautical Co.: *See*—
Hamilton, Robert B. 2,863,937.

Rypyac, Albert J. Multi-edge razor blade having various shapes and sizes of cutting edges. 2,863,212, 12–9–58, Cl. 30—74.1.

S. p. A. Prod. Farmaceutici Specialisati Dott. M. Calosi & F.: *See*—
Cirisiio, Carmine. 2,863,870.

Sage, Richard W., to Esso Research and Engineering Co. Hydroforming using a series of reactors. 2,863,822, 12–9–58, Cl. 208—65.

Sagerty, Leonard D. C-clamp with slidable plunger. 2,863,477, 12–9–58, Cl. 144—300.

Salmon, Oliver N., to United States of America, Atomic Energy Commission. Method of separating hydrogen isotopes. 2,863,526, 12–9–58, Cl. 183—114.2.

Salter, George, & Co. Ltd.: *See*—
Ault, Frederick G. 2,863,265.

Sampietro, Achilles C., to Thompson Products, Inc. Lash adjuster. 2,863,430, 12–9–58, Cl. 123—90.

Sanders Associates, Inc.: *See*—
Butler, Jesse L. 2,864,063.

Sandiford, Robert E., to Consolidated Electrodynamics Corp. Switching network. 2,864,075, 12–9–58, Cl. 340—147.

Santay, William, to American Cyanamid Co. Preparation of phosphate esters. 2,863,902, 12–9–58, Cl. 260—461.

Sarto, Jorma O., to Chrysler Corp. Low pressure fuel injection system. 2,863,433, 12–9–58, Cl. 123—119.

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Schain, Philip. Method and reagents for fat determination. 2,863,734, 12–9–58, Cl. 23—231.

Scheemaeker, Emile. Safety pin. 2,863,190, 12–9–58, Cl. 24—156.

Scheib, Richard, Jr., and R. N. Cronemeyer, to Sperry Rand Corp. Hydraulic servo system. 2,863,284, 12–9–58, Cl. 60—52.

Schesvold, Orland S., to Curtition Corp. Curtain clip. 2,863,164, 12–9–58, Cl. 16—87.4.

Scheunert, Alfred, to Siemens & Halske Akt. Telephone system with local and toll call switching over identical connectors. 2,863,947, 12–9–58, Cl. 179—18.

Schinzel, Henry L. ¼ to R. P. Schulze. Dispensing machines. 2,863,587, 12–9–58, Cl. 221—191.

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Steinfort, Josef, Kreutz, and Holstein. 2,863,342.

Schloemer, Frank J. P. Marking measuring instrument. 2,863,338, 12–9–58, Cl. 101—327.

Schlytern, Charles E. Multi-section door hinge and mounting. 2,863,504, 12–9–58, Cl. 160—201.

Schmerling, Louis, to Universal Oil Products Co. Alkylaryloxy alkanoic acid esters and their hydroaryl analogs. 2,863,907, 12–9–58, Cl. 260—473.

Schmid, Wolfgang. Feeler arrangement for automatic copying machine. 2,863,362, 12–9–58, Cl. 90—62.

Schmider, Henry E., E. C. Palmenberg, and W. J. Dietz, Jr., to Bendix Aviation Corp. Speed control system for gas turbine engines. 2,863,283, 12–9–58, Cl. 60—39.24.

Schmidt, Carl O., Jr., to The Cincinnati Butchers' Supply Co. Hide puller. 2,863,166, 12–9–58, Cl. 17—21.

Schmidt, Fred W., to Hoffman Electronics Corp. Crystal oscillator and buffer amplifier circuits or the like. 2,863,956, 12–9–58, Cl. 179—171.

Schmitt, Nicholas, to General Electric Co. Ventilation of the innermost coil of a generator rotor winding. 2,864,014, 12–9–58, Cl. 310—61.

Schneider, Harry, and B. J. Massey, to United States of America, Atomic Energy Commission. Process for decontaminating liquid fluorocarbons of oil suspended therein. 2,863,830, 12–9–58, Cl. 210—41.

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Schröder, Edgar, to Firma Bopp & Reuther G. m. b. H. Differential pressure producer. 2,863,318, 12–9–58, Cl. 73—212.

Schueler, Arthur W., to Precision Welder & Machine Co. Magnetic force welders. 2,863,965, 12–9–58, Cl. 219—86.

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Schulze, Robert E., to Culligan, Inc. Automatic service unit for softening and conditioning water. 2,863,559, 12–9–58, Cl. 210—128.

Schumacher, Erwin A., and G. W. Heise, to Union Carbide Corp. Electrolyte for an air-depolarized cell. 2,863,789, 12–9–58, Cl. 136—154.

Schuman, Paul D., and E. J. Chu, to Resistoflex Corp. Production of preforms and longitudinally curved articles of polytetrafluoroethylene resin. 2,863,174, 12–9–58, Cl. 18—55.

Schumann, Alfred F., to Hauck Mfg. Co. Fluid fuel burners. 2,863,500, 12–9–58, Cl. 158—76.

Schumann, Herbert, H. Ziak, and H. Wens, to G. M. Pfaff A.-G. Sewing machines. 2,863,409, 12–9–58, Cl. 112—158.

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Scoggin, James S.: *See*—
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Scott, David R., to Chrysler Corp. Combination tail lamp and fuel tank inlet assembly. 2,863,671, 12-9-58, Cl. 280—152.
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Searcy, John H., to Radiation, Inc. Automatic regulators. 2,864,052, 12-9-58, Cl. 323—4.
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Shears, Stuart T., to United-Carr Fastener Corp. Adjustable belt fastener. 2,863,196, 12-9-58, Cl. 24—73.
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Sheets, Jack, to General Electric Co. Undervoltage protecting control system. 2,864,049, 12-9-58, Cl. 318—453.
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Tadema, Harco J., and Quant. 2,863,510.
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Shepherd, Ridgley G., Jr., and R. C. Dearborn, to United States Testing Co., Inc. Epoxy resins cured with mixtures of polycarboxylic acid anhydrides. 2,863,852, 12-9-58, Cl. 260—47.
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Small, Samuel N., to A. G. Cohen and P. Weiss. Tiltable garden umbrella. 2,863,466, 12-9-58, Cl. 135—20.
Small, Samuel N., to A. G. Cohen and P. Weiss. Mechanism for tilting and supporting umbrella tops. 2,863,468, 12-9-58, Cl. 135—20.
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Societe Anonyme Mipsa: *See*—
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Spase, Charles B., to Lipe-Rollway Corp. Torque metering clutch. 2,863,544, 12-9-58, Cl. 192—104.
Spase, Charles B., to Lipe-Rollway Corp. Torque metering clutch. 2,863,545, 12-9-58, Cl. 192—104.
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Stayner, Richard D., to California Research Corp. Detergent composition of improved foam performance. 2,863,836, 12–9–58, Cl. 252—152.
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Steelman, Kenneth C., to United States of America, Army. Telemetering system. 2,864,081, 12–9–58, Cl. 343—112.
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CLASSIFICATION OF PATENTS

ISSUED DECEMBER 9, 1958

NOTE.—First number=class, second number=subclass, third number=patent number

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296— 1: 2,863,778
51: 2,863,779
97: 2,863,780
299— 25: 2,863,781
95: 2,863,782
140: 2,863,783
301— 5.7: 2,863,784
87: 2,863,785
88: 2,863,786
307— 64: 2,864,005
68.5: 2,864,006
2,864,007
112: 2,864,008
122: 2,864,009
149: 2,864,010
2,864,011
308— 4: 2,863,704
6: 2,863,705
72: 2,863,706
309— 10: 2,863,707
310— 3: 2,864,012
8.3: 2,864,013
61: 2,864,014
93: 2,864,015
102: 2,864,016
126: 2,864,017
163: 2,864,018
247: 2,864,019
312— 220: 2,863,708
221: 2,863,709
313— 71: 2,864,020
77: 2,864,021
94: 2,864,022
148: 2,864,023
185: 2,864,024

312— 279: 2,864,025
286: 2,864,026
296: 2,864,027
346: 2,864,028
315— 1: 2,864,029
2,864,030
12: 2,864,031
13: 2,864,032
21: 2,864,033
84.6: 2,864,034
97: 2,864,035
317— 44: 2,864,036
67: 2,864,037
171: 2,864,038
197: 2,864,039
318— 3: 2,864,040
24: 2,864,041
25: 2,864,042
26: 2,864,043
2,864,044
44: 2,864,045
102: 2,864,046
338: 2,864,047
426: 2,864,048
453: 2,864,049
489: 2,864,050
321— 42: 2,864,051
322— 4: 2,864,052
66: 2,864,053
324— 28: 2,864,054
29.5: 2,864,055
87: 2,864,056
186: 2,864,057
332— 5: 2,864,058
29: 2,864,059
333— 32: 2,864,060
73: 2,864,061
80: 2,864,062
98: 2,864,063
336— 65: 2,864,064
100: 2,864,065
134: 2,864,066
339— 2: 2,864,067
64: 2,864,068
76: 2,864,069
99: 2,864,070
109: 2,864,071
340— 16: 2,864,072
17: 2,864,073
74: 2,864,074
147: 2,864,075
174: 2,864,076
2,864,077
2,864,078
359: 2,864,079
343— 109: 2,864,080
112: 2,864,081
207: 2,864,082
750: 2,864,083
815: 2,864,084
348— 84: 2,863,710
74: 2,863,711
2,863,712

Classification of Designs

D 1— 2: Des. 184,055
12: Des. 184,074
D 3— 9: Des. 184,057
D 4— 3: Des. 184,049
Des. 184,064
4: Des. 184,059
D 9— 6: Des. 184,066

D14— 3: Des. 184,057
6: Des. 184,058
27: Des. 184,045
D15— 1: Des. 184,040
6: Des. 184,050
D22— 2: Des. 184,044
Des. 184,045

D26— 1: Des. 184,042
D26— 8: Des. 184,048
Des. 184,053
D32— 3: Des. 184,047
14: Des. 184,035
D34— 5: Des. 184,064
Des. 184,072

D34—15: Des. 184,060
Des. 184,077
D40— 1: Des. 184,039
D42— 1: Des. 184,068
Des. 184,069
D44—10: Des. 184,073
Des. 184,075

D44—18: Des. 184,032
29: Des. 184,076
D48—20: Des. 184,062
D53— 2: Des. 184,070
D56— 4: Des. 184,053
D58—12.6: Des. 184,057
D61— 1: Des. 184,061

D63— 1: Des. 184,071
D74— 9: Des. 184,051
D91—10: Des. 184,056
Des. 184,054
Des. 184,055
D90—30: Des. 184,033
Des. 184,058
D92— 1: Des. 184,041

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
December 9, 1958 Volume 737 Number 2

TRADEMARKS

Specimens Re Trademark Applications

Storage space considerations require rigid enforcement of Trademark Rules 2.56 and 2.57. Failure to comply with these rules may result in delay in receiving a filing date.

The Rules are as follows:

"2.56 SPECIMENS. The five specimens of a trademark shall be specimens of the trademark as actually used on or in connection with the goods in commerce, and shall be duplicates of the actually used labels, tags, or containers, or the displays associated therewith or portions thereof, *when made of suitable material and capable of being arranged flat and of a size not larger than the size of the drawing.*"

"2.57 FACSIMILES. When, due to the mode of applying or affixing the trademark to the goods, or to the manner of using the mark on the goods, or to the nature of the mark, specimens as above stated cannot be furnished, *five copies of a suitable photograph or other acceptable reproduction, not larger than the size specified for the drawing and clearly and legibly showing the mark and all matter used in connection therewith, shall be furnished.*"

Nov. 13, 1958.

DAPHNE LEEDS,
Assistant Commissioner.

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the post office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

American Hoist & Derrick Company, St. Paul, Minn., Reg. No. 419,674, Canc. No. 7127.

Rickerfor & Saladino, d. b. a. Rickey-Sal All-In-One, New Orleans, La., Reg. No. 417,680, Canc. No. 7154.

All-Bright Electric Products Company, Chicago, Ill., Reg. No. 397,863, Canc. No. 7157.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF OCTOBER 31, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,019
Date of oldest new application	March 10, 1958
Date of oldest amended application	July 2, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	4-15-58	7-7-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	3-10-58	7-2-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks.	4-15-58	7-3-58
Renewals (All Classes)	10-5-58	10-27-58
Sec. 12 (c) Publications (All Classes)	10-13-58	10-27-58

Applications Filed During the Month of October 1958—1,888

Registrations Issued	239—No. 670,797 to No. 671,035
Renewals Issued	61

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

SN 47,266. Georgia E. Liebendorfer, d. b. a. Gee Lee Products, Portola Valley, Calif. Filed Apr. 9, 1958.

Class 4—Abrasives and Polishing Materials

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 698,896. Mutation Mink Breeders Association, Racine, Wis. Filed Aug. 19, 1955. COLLECTIVE MARK.

DIADEM

For Mink Fur Pelts.
First use May 27, 1955.

SN 26,898. Triple H Ranch, Burlington, Iowa. Filed Mar. 25, 1957.

HHH

For Registered Polled Hereford and Horned Hereford Cattle.
First use Sept. 12, 1956.

SN 27,695. United States Rubber Company, New York, N. Y. Filed Sept. 23, 1957.

ENSOLEX

Owner of Reg. No. 569,399.
For Cellular Plastic Sheet Material Resembling Sponge Rubber.
First use Aug. 20, 1957.

SN 39,565. Plymouth Cordage Company, Plymouth, Mass. Filed Oct. 25, 1957.

PLYMCORD

For Plastic Weltings and Bindings—Namely, Welting for Furniture.
First use Oct. 11, 1957.

SN 43,613. High Splint Coal Company, Williamsburg, Ky. Filed Jan. 8, 1958.

No claim of exclusive right is made to "High in Heat, Low in Ash" as used on coal. Owner of Reg. No. 167,599.
For Coal.
First use Jan. 1, 1921.

SN 47,625. American Colloid Company, Skokie, Ill. Filed Mar. 13, 1958.

CELLFLO

For Ground Oat Hulls for Use as an Additive to Molding Sand.
First use Feb. 5, 1958.

SN 50,669. Armour and Company, Chicago, Ill. Filed Apr. 30, 1958.

SILBEAU

For Leather.
First use Mar. 28, 1958.

Class 2—Receptacles

SN 4,467. Philip Morris Incorporated, New York, N. Y. Filed Mar. 13, 1956.

FLIP-TOP

For Cardboard Cigarette Boxes.
First use October 1954.

SN 17,033. Diamond Gardner Corporation, New York, N. Y., assignee of The Gardner Board and Carton Co., Middletown, Ohio. Filed Oct. 17, 1956.

SNAPTOP

For Paperboard Cartons.
First use Oct. 5, 1956.

SN 38,848. Pic-Ko Products Company, Speedway City, Ind. Filed Oct. 14, 1957.

DIPEE-CHIP

For Plastic Dishes.
First use Sept. 23, 1957.

SN 41,348. Atlantic Stamping Company, Rochester, N. Y. Filed Nov. 26, 1957.

Owner of Reg. No. 121,187.
For Metal Shipping Cans, Cheese Shipping Cans, Milk Bottle Cases, and Milk Bottle Crates of Various Sizes and Types.
First use in January 1908.

SN 44,941. Rheem Manufacturing Company, Richmond, Calif. Filed Jan. 28, 1958. Sec. 2(f).

QUIK-LOX

Owner of Reg. Nos. 346,977 and 347,036.
For Metal Shipping and Storing Drums and Barrels of the Removable Head Type, Including Head Clamping Rings Therefor.
First use Jan. 26, 1935.

SN 35,579. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

SN 46,687. American Can Company, New York, N. Y. Filed

SN 47,266. Georgia R. Liebensdorfer, d. b. a. Gee Lee Products, Portola Valley, Calif. Filed Apr. 9, 1958.

EASYHOLD

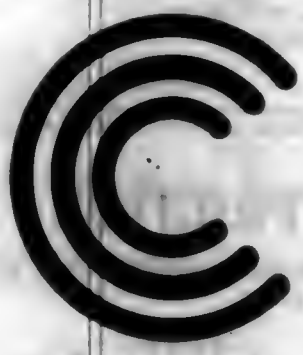
For Nursing Bottle Holders.
First use Dec. 27, 1957.

SN 49,452. Marvel Plastics Manufacturing Corporation, Brooklyn, N. Y. Filed Apr. 10, 1958.

Thermo-Temp

For Insulated Containers Including Tumblers and Pitchers, Bowls, Ice Buckets, Cocktail Shakers, Serving Trays.
First use Apr. 1, 1958.

SN 49,487. Continental Can Company, Inc., New York, N. Y. Filed Apr. 11, 1958.



Owner of Reg. Nos. 416,922, 536,340, and others.
For Paperboard and Corrugated Paperboard Boxes.
First use Jan. 21, 1958.

SN 49,607. Leo D. Collins, d. b. a. Collins Paper Company, Owatonna, Minn. Filed Apr. 14, 1958.

TRAVEL-BEST

For Egg Cases.
First use Mar. 20, 1956.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 44,403. Hartmann Luggage Company, Racine, Wis. Filed Jan. 22, 1958.

AMERICAN GIRL

For Hand Luggage—Namely, Overnight Cases, Pullman Cases, Hat Boxes, Cosmetic Cases and Wardrobe Cases.
First use Jan. 7, 1958.

SN 44,404. Hartmann Luggage Company, Racine, Wis. Filed Jan. 22, 1958.

AMERICAN BEAUTY

For Hand Luggage—Namely, Overnight Cases, Pullman Cases, Hat Boxes, Cosmetic Cases, and Wardrobe Cases.
First use Jan. 7, 1958.

SN 52,503. Licht & Kaplan, Inc., Newburgh, N. Y. Filed May 28, 1958.

"CAPETTO"

For Ladies' Handbags.
First use on or about May 22, 1958.

Class 4 — Abrasives and Polishing Materials

SN 34,015. Lois R. Schmidt, d. b. a. Pittsburgh Chemical Laboratory, Pittsburgh, Pa. Filed July 18, 1957. Sec. 2(f).

LUSTRETILE

For Compound for Cleaning and Polishing Tile, Porcelain, Enamelware, Linoleum, Woodwork, Floors, Walls, Concrete, Venetian Blinds, Leather, Plastics, Metal Surfaces, Glass, and for Removing Wax and Grease From Surfaces.
First use Dec. 17, 1945.

SN 38,195. Ralph A. Burke, San Francisco, Calif. Filed Oct. 2, 1957.

NUBA-WAX

For Shoe Polishes.
First use Mar. 1, 1944.

SN 43,905. Wonder Products Mfg. Co., Bellflower, Calif. Filed Jan. 13, 1958.

FAST REE-NOO

For Preparations for Use on Automobiles To Restore the Finish.
First use Jan. 2, 1958.

Class 5 — Adhesives

SN 27,641. Templar Oil Products Co., Inc., Brooklyn, N. Y. Filed Apr. 5, 1957.

The term "Linoleum Paste" is disclaimed apart from the mark as shown.
For Adhesive Linoleum Paste for Permanently Bonding Linoleum to Floor Surfaces.
First use November 1929.

Class 6 — Chemicals and Chemical Compositions

SN 35,572. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

RESOLAKE

Owner of Reg. No. 505,236.
For Dyes, Dyestuffs, and Pigments.
First use on or about Apr. 30, 1957, on pigments.

SN 35,574. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

PHENAMINE

Owner of Reg. No. 404,004.
For Dyestuffs.
First use on or about Dec. 4, 1926.

SN 58,740. The Marlin Firearms Company, New Haven,

Class 12 — Construction Materials

SN 35,579. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

SULPHOFLAVINE

Owner of Reg. No. 241,917.
For Dyestuffs.
First use on or about June 5, 1929.

SN 35,581. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

CELLINEROL

Owner of Reg. No. 227,300.
For Dyestuffs.
First use on or about May 20, 1947.

SN 35,585. General Aniline & Film Corporation, New York, N. Y. Filed Aug. 15, 1957.

INDOCYANINE

Owner of Reg. Nos. 226,492 and 506,438.
For Dyestuffs.
First use on or about Dec. 31, 1920.

SN 36,947. Avon Products, Inc., New York, N. Y. Filed Sept. 10, 1957.

AVON

Owner of Reg. Nos. 297,127, 402,664, and 633,318.
For Mothproofing and Mothkilling Preparations and Room Deodorizing Preparations.
First use in September 1929.

SN 39,067. Heyden Newport Chemical Corporation, New York, N. Y. Filed Oct. 17, 1957.

HEYDEN NEWPORT

Owner of Reg. Nos. 556,284 and 72,247.
For Chemicals and Chemical Preparations Comprising: Acids; Esters and Salts; Chlorides; Chlorinated Toluenes and Benzoic Acids; Aldehydes; Alcohols; Benzil; Benzoin; Dibenzyl Ether; Hexamethylenetetramine; Resorcinol; Guaiacol; Guaiacol Carbonate; Potassium and Calcium Guaiacolsulfonate; Ichthammol; Saccharin; Salicylamide; Creosote; Calcium Creosote; Potassium Creosote Sulfonate; Colloidal Silver; Colloidal Sulfur; and Copper, Silver and Tin Protein.
First use on or about Feb. 28, 1957.

SN 45,513. Ames Company, Inc., Elkhart, Ind. Filed Feb. 10, 1958.

FREESCRIPTION

Owner of Reg. No. 570,632.
For Preparation Not for Internal Use for Determining the Presence or Absence of Sugar in Body Fluids.
First use Feb. 25, 1956.

SN 46,687. American Can Company, New York, N. Y. Filed Feb. 27, 1958.

NORLIG

For Concentrated or Dried Spent Sulfite Liquor.
First use Apr. 13, 1954.

SN 46,832. Hoffmann-La Roche Inc., Nutley, N. J. Filed Feb. 28, 1958.

PENTIONE

For Aromatic Scent Chemical Substance for General Industrial Use.
First use Feb. 11, 1958.

SN 47,717. Beckwith-Arden Inc., Watertown, Mass. Filed Mar. 14, 1958.

HEATOLITE

For Polymerizable Resinous Stiffening Composition for Use in Stiffening the Uppers of Shoes.
First use Mar. 6, 1958.

SN 49,493. The Firestone Tire & Rubber Company, Akron, Ohio. Filed Apr. 11, 1958.

FRIGITOL

For Anti-Freeze Solution for Automobile Radiators.
First use Nov. 1, 1951.

SN 53,358. Raybestos-Manhattan, Inc., Passaic, N. J. Filed June 11, 1958.

PYROLOY

For High Temperature Synthetic Resins.
First use Apr. 1, 1958.

SN 54,534. Lancaster Chemical Corporation, Carlstadt, N. J. Filed June 30, 1958.

LANCAST-A

For Hardening and/or Curing Agent for Epoxy Resins.
First use Aug. 12, 1957.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 52,024. American Cyanamid Company, New York, N. Y. Filed May 21, 1958.

AJAX

For Dynamite.
First use May 3, 1929.

SN 52,026. American Cyanamid Company, New York, N. Y. Filed May 21, 1958.

POWERTOL

For Dynamite.
First use Apr. 27, 1928.

SN 52,353. Atlas Powder Company, Wilmington, Del. Filed May 29, 1958.

GIANITE

For Blasting Agent—Namely, Nitro Carbo Nitrate.
First use May 14, 1958.

SN 39,413. Sealview Plastics, Inc., West Conshohocken, Pa. Filed Oct. 23, 1957.

SN 47,927. Anchor Sales Corporation, Brooklyn, N. Y. Filed Mar. 18, 1958.

SN 56,740. The Marlin Firearms Company, New Haven, Conn. Filed Sept. 10, 1958.

Clipper King

For Firearms—Namely, Rifles and Shotguns.
First use Aug. 15, 1958.

Class 10 — Fertilizers

SN 59,640. Thomas H. Plummer, Jr., d. b. a. T. P. Laboratories, Cleveland, Ohio. Filed Sept. 26, 1958.

For Plant Growth Stimulant.
First use Aug. 13, 1958.

Class 11 — Inks and Inking Materials

SN 39,444. The Henry Bicking Company, Inc., New York, N. Y. Filed Oct. 24, 1957.

Better Bicking Copy Company

For Carbon Papers, Inked Ribbons, Carbon Paper Rolls, and Duplicating Inks.
First use in October 1936.

SN 51,344. Goldsmith Bros., New York, N. Y. Filed May 9, 1958.

STAMPRITE

Owner of Reg. No. 388,710.
For Stamp Pads.
First use May 22, 1937.

SN 53,015. Claremont Pigment Dispersion Corporation, Roslyn Heights, N. Y. Filed June 6, 1958.

KRAFTONE

For Printing Inks.
First use May 19, 1958.

SN 53,537. Scripto, Inc., Atlanta, Ga. Filed June 13, 1958.

KINGSMARK

For Inks.
First use Mar. 13, 1958.

SN 54,145. Commonwealth Scientific and Industrial Research Organisation, East Melbourne, Victoria, Australia. Filed June 24, 1958.

SI-RO-MARK

Owner of Australian Reg. No. 121,839, dated Feb. 11, 1958.
For Sheep Marking Fluids.

Class 12 — Construction Materials

SN 22,453. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

GREYTONE

For Floor, Wall and Ceiling Ceramic Tile.
First use June 1936.

SN 22,457. The Mosaic Tile Company, Zanesville, Ohio. Filed Jan. 11, 1957.

BLUEGRASS GREEN

For Floor, Wall and Ceiling Ceramic Tile.
First use Oct. 20, 1954.

SN 26,224. Graver Tank & Mfg. Co., Inc., East Chicago, Ind. Filed Apr. 8, 1957. Sec. 2(f).

The wording "Expansion Roof" is disclaimed apart from the mark as shown. Owner of Reg. No. 388,939.
For Metal Roofs for Storage Tanks.
First use on or about Sept. 26, 1939.

SN 36,880. Gladding, McBean & Company, Los Angeles, Calif. Filed Sept. 9, 1957.

GMcB

For Clay Products and Clay Compositions—Namely, Structural Clay Hollow Tile, Roof Tile, Sewer Pipe, Drain Pipe, Chimney Pipe, Flue Lining, Conduit, Wall Coping, Fire Brick, Arch Shapes, Plastic Clay Compositions for Refractory Brick and Refractory Compositions Capable of Being Rammed Into Shapes Including Refractory Fire Clay and Grog, Mortar, Floor and Wall Tile, and Tile Accessories.
First use about 1928 on fire brick; January 1920 as to "Dura Clay" in association with "GMcB" within an ellipse.

SN 37,305. Tilo Roofing Company, Inc., Stratford, Conn. Filed Sept. 16, 1957.

COLORSTONE

For Asbestos-Cement Siding Used in Building Construction and Repair.
First use Feb. 15, 1955.

SN 38,830. The Mosaic Tile Company, Zanesville, Ohio. Filed Oct. 14, 1957.

MOSAIC

BYZANTILE

Owner of Reg. No. 545,201.
For Assemblies of Small Size Glazed or Unglazed Ceramic Mosaics in the Form of Ceramic Tiles of a Series of Colors and Positioned So as to Produce Decorative Patterns for Use on Floors, Walls and Ceilings.
First use June 12, 1957.

SN 45,201. Rheem Manufacturing Company, Richmond, Calif. Filed Feb. 3, 1958.

SN 45,888. Závody V. I. Lenina Plzeň Národní Podnik, Plzeň, Czechoslovakia. Filed Feb. 5, 1958.

First use Feb. 25, 1956.

First use May 14, 1956.

SN 29,413. Sealview Plastics, Inc., West Conshohocken, Pa. Filed Oct. 23, 1957.

VINYLUX

For Corrguated or Formed Plastic Sheets or Panels To Be Used in the Construction of a Ceiling as Its Surface.
First use Sept. 15, 1957.

SN 43,114. Rainier Plywood Company, Tacoma, Wash. Filed Dec. 27, 1957.

RICHLITE

For Fibrous Base Such as Paper Impregnated With a Synthetic Resin for Overlay Upon Plywood or Hardboard.
First use Nov. 19, 1957.

SN 43,351. Sunmaster Aluminum Awning Company, Haskell, N. J. Filed Jan. 2, 1958.

SUNMASTER

Owner of Reg. No. 621,995.
For Metal Awnings.
First use on or about Feb. 1, 1953.

SN 46,823. Giant Portland Cement Company, Philadelphia, Pa. Filed Feb. 28, 1958.

The lining indicates shading for red color. Owner of Reg. Nos. 48,614, 617,065, and others.
For Masonry Cement.
First use Dec. 16, 1957.

SN 46,827. Gulf States Asphalt Company, Inc., Houston, Tex. Filed Feb. 28, 1958.

ROOT-SEAL

For Joint Sealing Compound.
First use Aug. 1, 1955.

SN 47,160. United States Plywood Corporation, New York, N. Y. Filed Mar. 5, 1958.

FORMTEX

For Wood and Lumber Products, Such as Plywood.
First use Nov. 19, 1957.

SN 47,818. Armstrong Cork Company, Lancaster, Pa. Filed Mar. 17, 1958.

GRIDTONE

For Acoustical Insulation.
First use Jan. 6, 1958.

SN 47,871. Raymond E. Kon and Raider E. Nelson, d. b. a. Accro Plastics, Chicago, Ill. Filed Mar. 17, 1958.

ACCRO-DOME

For Plastic Protective Dome for Basement Window Wells.
First use Mar. 1, 1957.

SN 47,927. Anchor Sales Corporation, Brooklyn, N. Y. Filed Mar. 18, 1958.

ANCHOR-PLANK

For Plywood.
First use Oct. 3, 1955.

SN 48,175. Johns-Manville Corporation, New York, N. Y. Filed Mar. 21, 1958.

AQUAPATCH

For Asbestos Roof Putty.
First use July 11, 1956.

SN 48,358. Splicedwood Corporation, Mellen, Wis. Filed Mar. 24, 1958.

PEN-PLANK

For Plywood.
First use Apr. 20, 1955.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 15,494. The Shelby Metal Products Company, Shelby, Ohio. Filed Sept. 11, 1956.

STANDARD

For Hinges, Barrel Bolts, Knobs, Turn Buttons, Catches, Door Checks, Apparel Hooks, Turns, Screen Hangers, Rod Holders, Door Stops and Holders, Latches and Latch Sets, Screen Door Hardware Sets, Sash Lifts, Catches, Sash Locks, Roll Holders, Drawer and Door Pulls, Window Safety Locks, Hasps, Braces, Mending Plates, Door Guards and Locks; and Display Card Mountings Thereof Complete With Screw Fasteners.
First use at least as early as Dec. 31, 1920.

SN 35,082. The William L. Bonnell Company, Inc., Newnan, Ga. Filed Aug. 7, 1957.

BON-DEE Lifetime

Owner of Reg. No. 643,479.
For Preformed Sink Frames.
First use Oct. 18, 1956.

SN 38,520. R. H. Baker and Company, Incorporated, Los Angeles, Calif. Filed Oct. 8, 1957.

CIRCLSEAL

For Pipe Clamps Particularly for Sub-Soil Pipelines.
First use Feb. 1, 1951.

SN 38,971. The Bastian-Blessing Company, Chicago, Ill. Filed Oct. 16, 1957.

CHEK-LOK

For Excess Flow and Shut-Off Valves and Liquid Transfer Connections and Parts Therefor.
First use Apr. 22, 1957.

SN 38,968. Armour and Company, Chicago, Ill. Filed Oct. 16, 1957.

SN 39,117. Admixtures, Inc., Upper Darby, Pa. Filed Oct. 18, 1957.

For Sheep Marking Fluids.

First use June 12, 1957.

SN 45,201. Rheem Manufacturing Company, Richmond, Calif. Filed Feb. 2, 1958.

RR

For Plumbing Fixtures—Namely, Bathtubs, Lavatories, Urinals, Sinks, Laundry Trays and Sink and Tray Combinations, Drinking Fountains, Water Cooler Tops, Eye Baths, Bidets, and Shower Bath Receptors.

First use Dec. 12, 1938.

SN 47,008. Selwyn-Pacific Company, Gardena, Calif. Filed Mar. 3, 1958.

SEL-PAC

For Valves Including Check, Back Check, Bottle, Cylinder, Equalizing, Excess Flow Check, External Relief, Filler, Filler Valves With Excess Flow Check, Hose Line, Spring Relief, Outage, Pol, Relief, Service, Spray Filler, Vent, Vapor Return, Globe, Fire Extinguisher, High Pressure Packed Type, High Pressure Diaphragm Packless Type, and Station Line Valves; Valve Fittings; Regulators; Gauges; Connectors; Couplings; Manifolds; Safety Devices for High Pressure Gases; and Sundry Accessories and Fittings for Liquified Petroleum Gas Installations.

First use August 1954 on valves.

Class 14—Metals and Metal Castings and Forgings

SN 28,904. Vanadium-Alloys Steel Company, Latrobe, Pa. Filed Apr. 25, 1957.

VASCO M-2

Owner of Reg. No. 81,928.

For High Speed Tool Steel in the Form of Billets, Bars, Drill Rod and Tool Bits, Also Sheets, Plates and Circles Stamped or Cut From Plates or Sheets for Use in Fabricating Into Such Articles as Circular Saws, Circular Knives, Slitting Cutters, Thin Milling Cutters, Drills, Taps, Reamers, End Mills, Broaches, Punches, and the Like; and Disc and Ring Forgings Forged on a Steam Hammer, Drop Hammer or Press From Rolled or Preforged Stock, for Use in Fabricating Into Milling Cutters, Hobs, Blanking Dies, Drawing Dies, and the Like.

First use Oct. 9, 1944.

SN 31,433. Vanadium-Alloys Steel Company, Latrobe, Pa. Filed June 5, 1957.

C. M. TAP STEEL

No claim is made to the word "Steel" except as used in a combination with "C. M." and "Tap."

For Tool Steel in the Form of Billets, Bars, Sheets and Plates, Circles Stamped or Cut From Plates or Sheets, and Disk and Ring Forgings Forged on a Steam Hammer, Drop Hammer, or Press From Rolled or Preforged Stock for Use in Fabricating Into Taps, Reamers, Broaches, Cutting Tools, Blanking Dies, Punches, Machinery Parts, Drills, Threading Dies, Gages and Hand Tools.

First use Nov. 22, 1930.

SN 45,858. Zavody V. I. Lenina Plzen Narodni Podnik, Plzen, Czechoslovakia. Filed Feb. 5, 1958.

ŠKODA

The word "škoda" is a common word in the Czech language and is approximately equivalent to the English words "loss" or "damage." Owner of Czechoslovakian Reg. No. 152,674, dated June 26, 1956.

For Castings, Forgings and Pressings of Ferrous and Non-Ferrous Metals; Armour Plates.

SN 46,528. Nassau Smelting and Refining Company, Inc., Tottenville, N. Y. Filed Feb. 26, 1958.

Nada

For Bronze Metals.

First use June 2, 1933.

SN 47,554. Associated Spring Corporation, Bristol, Conn. Filed Mar. 12, 1958.

BARTEMP

For Steel.

First use Sept. 6, 1957.

SN 48,096. Hoeganaes Sponge Iron Corporation, New York, N. Y. Filed Mar. 20, 1958.

ANCOR

Owner of Reg. Nos. 585,787 and 605,017.

For Iron Powder.

First use September 1953.

SN 49,500. Latrobe Steel Company, Latrobe, Pa. Filed Apr. 11, 1958.

HEDERVAN

For Die Steel.

First use October 1956.

SN 49,625. The Sherwin-Williams Company, Cleveland, Ohio. Filed Apr. 14, 1958.

kem-weld

Owner of Reg. Nos. 275,775, 606,089, and others.

For Metal Plastic Filler/Bonder and Hardener for Repairing Dents and Holes in Metal.

First use on or about July 15, 1957.

Class 15—Oils and Greases

SN 24,403. Cromwell and Company, Inc., d. b. a. Cromwell Oil Company, Beverly Hills, Calif. Filed Feb. 14, 1957.

CROMWELL X3

The drawing is lined for red and blue.

For Additive for Lubricating Oil for Affecting the Viscosity Index Thereof.

First use May 1, 1956.

SN 36,913. Pasadena Research Laboratories, Inc., Pasadena, Calif. Filed Sept. 9, 1957.

SN 40,045. Geigy Chemical Corporation, Ardsley, N. Y.

First use Mar. 1, 1937.

First use Apr. 22, 1937.

SN 38,966. Armour and Company, Chicago, Ill. Filed Oct. 16, 1957.

ARMOLAD

For Industrial Aliphatic Chemicals for Addition to Hydrocarbon Fuel Compositions.
First use Oct. 1, 1957.

SN 47,479. Wahl Clipper Corporation, Sterling, Ill. Filed Mar. 10, 1958. Sec. 2(f).

WAHL

Owner of Reg. Nos. 527,562 and 539,711.
For Lubricating Oil.
First use Feb. 1, 1936.

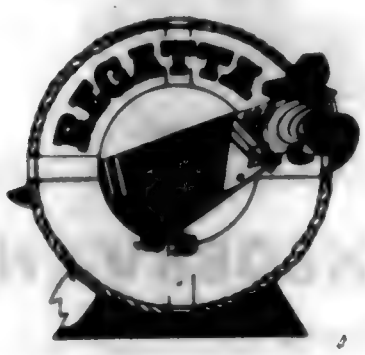
SN 48,463. Continental Oil Company, Ponca City, Okla. Filed Mar. 26, 1958.

RAMOL

For White Mineral Oil.
First use Oct. 28, 1936.

Class 16—Protective and Decorative Coatings

SN 12,666. Oliver Reeder & Son, Incorporated, d. b. a. Baltimore Copper Paint Company, Baltimore, Md. Filed July 23, 1956.



Owner of Reg. No. 170,510.
For Anti-Corrosive and Anti-Fouling Ship and Boat Bottom Paints; Prepared Paints, Ready-Mixed Cabin, Hull and Deck Paints, Machinery and Engine Enamels; Lacquers, Varnishes, Driers, Paint Remover, Paint Colors Ground in Oil; Caulking, Sealing, and Surface Preparation Compounds.
First use December 1953.

SN 37,311. Tilo Roofing Company, Inc., Stratford, Conn. Filed Sept. 16, 1957.

TK-33

For Pigmented Coatings of the Resin-Solvent Type for Exterior Application to Asbestos-Cement Siding Used in Building Construction and Repair.
First use Jan. 11, 1952.

SN 37,362. Dixie Paint & Varnish Company, Inc., Brunswick, Ga. Filed Sept. 20, 1957.

DURAFLEX

For Mildew Resistant Paint for Stucco, Concrete Block, Asbestos Siding, Brick and Other Masonry of a Non-Turpentine or Oil Type for Application Within Specified Temperature Limits of 60–85° F.
First use June 30, 1954.

SN 39,117. Admixtures, Inc., Upper Darby, Pa. Filed Oct. 18, 1957.

BC

For Concrete Floor Sealers, Concrete Floor Hardeners, and Silica Resurfacers and Finishers for Concrete Floors.
First use June 1, 1957, on concrete floor sealers.

SN 39,936. American Can Company, Easton, Pa. Filed Nov. 1, 1957.

DIXIELITE

Owner of Reg. Nos. 120,264, 646,956, and others.
For Liquid Resistant Plastic Coating for Paper Cups and Round Nestable Paper Containers.
First use before July 23, 1957.

SN 40,497. Protection Products Manufacturing Company, Kalamazoo, Mich. Filed Nov. 12, 1957.

R.A.R.

For Water Repellent Wood Treating Material, Either Pigmented or Unpigmented, Intended for Penetration Into the Wood.
First use Dec. 20, 1949.

SN 46,959. Johnson & Johnson, New Brunswick, N. J., assignee of Le Page's Inc., Gloucester, Mass. Filed Mar. 3, 1958. Sec. 2(f).

LEPAGE'S

Owner of Reg. Nos. 72,172 and 72,173.
For Masking Liquid Coating for Use in the Electric and Graphic Industries.
First use July 31, 1957.

SN 57,718. Tom Sawyer Paints, Inc., Brunswick, Ga. Filed Aug. 22, 1958.

Owner of Reg. No. 633,666.
For Paints.
First use May 15, 1958; Oct. 1, 1956, as to "TSP."

Class 18—Medicines and Pharmaceutical Preparations

SN 23,517. Hans Schwarzkopf, Hamburg-Altona, Germany. Filed Jan. 30, 1957.

SCHWARZKOPF

Owner of German Reg. No. 85,675, dated Feb. 26, 1906.
For Medicinal Preparations for the Treatment of the Hair and Scalp.

SN 27,703. Macleans Limited, Brentford, England. Filed Apr. 8, 1957.

MACPRIN

For Medicinal Compound in Tablet Form for Relief of Pain and Discomfort.
First use on or about July 22, 1954; in commerce on or about Jan. 4, 1955.

SN 44,911. The Mentholatum Company, Buffalo, N. Y. Filed Mar. 27, 1958.

SN 47,603. Abbott Laboratories, North Chicago, Ill. Filed Mar. 17, 1958.

SN 36,913. Pasadena Research Laboratories, Inc., Pasadena, Calif. Filed Sept. 9, 1957.

VIATRIC

For Pharmaceutical Preparation Containing Vitamins and Hormones.
First use on or about Nov. 25, 1953.

SN 37,032. Edward J. Moore Sons, Inc., Long Island City, N. Y. Filed Sept. 11, 1957.

Ombre

For Medicinal Preparation Indicated for Use as a Tonic, Stimulant, and Stomachic.
First use in April 1949.

SN 37,809. Curtis Laboratories, Inc., Kansas City, Kans. Filed Sept. 26, 1957.

BOVIDOTE

For Veterinary Medicine Described as: a Detoxicant, Antacid, Stimulant, Laxative Medication for Ruminants.
First use Mar. 17, 1951.

SN 38,768. Salus-Haus Dr. Med. Otto Greither G. m. b. H., Munich, Germany. Filed Oct. 11, 1957.

Owner of German Reg. No. 693,456, dated Aug. 2, 1956.
For Pharmaceutical Preparations and Medicinal Herbs.

SN 39,398. Norman Darteil, d. b. a. Darteil Laboratories, Los Angeles, Calif. Filed Oct. 28, 1957.

VI-CHLORO-MINT MIST

The word "Mist" is disclaimed apart from the mark as shown.
For Nasal Spray and Drops.
First use on or about June 28, 1950.

SN 39,857. Carter Products, Inc., New York, N. Y. Filed Oct. 31, 1957.

MEPROTABS

Owner of Reg. No. 528,325.
For Pharmaceutical Preparation for Use in the Treatment of Tension as a Muscular Relaxant, Anti-Convulsant and as a Sleep Inducer.
First use Oct. 1, 1957.

SN 40,025. Brookfield Laboratories, Brookfield, Ill. Filed Nov. 4, 1957.

SCRATCHEX

For Medicinal Preparations for External Application in the Treatment of Skin Infections in Domestic Animals.
First use Apr. 30, 1953.

SN 40,045. Geigy Chemical Corporation, Ardsley, N. Y. Filed Nov. 4, 1957.

GEIMARONE

For Hypnotics.
First use Oct. 24, 1957.

SN 40,602. Norgine Laboratories, Inc., New York, N. Y. Filed Nov. 14, 1957.

GIVALEX

For Medicinal Preparation in Liquid Form To Be Used in the Treatment of the Throat, Mouth and Gums.
First use Nov. 7, 1957.

SN 40,738. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Nov. 15, 1957.

ISCASON

Owner of German Reg. No. 706,352, dated Sept. 13, 1957.
For Preparation for the Treatment of Dermatosis.

SN 41,233. The Purdue Frederick Company, New York, N. Y., assignee of Blair Laboratories, Inc., Short Hills, N. J. Filed Nov. 25, 1957.

CERUMENEX

For Preparation for the Removal of Ear Wax.
First use Sept. 11, 1957.

SN 43,425. Botany Mills, Inc., South San Francisco, Calif. Filed Jan. 6, 1958.

Rolley

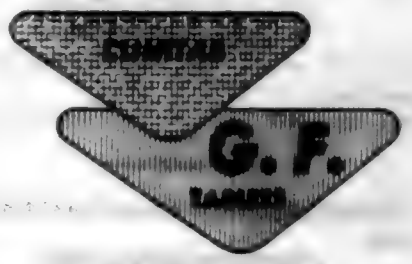
For Preventative for Chapping, Relief of Skin Irritations and Diaper Rash.
First use about Feb. 1, 1946.

SN 43,510. Imperial Chemical Industries Limited, London, England. Filed Jan. 2, 1958.

SAVLON

Owner of British Reg. Nos. 727,615 and 733,289, dated Mar. 4, 1954, and Aug. 20, 1954, respectively.
For Antiseptics and Preparations for the Protection of the Skin.

SN 44,027. John V. Knight, d. b. a. Clinic Vitamins, Rochester, Minn. Filed Jan. 15, 1958.



The drawing is lined for yellow and red. The word "Tablets" is disclaimed apart from the mark as shown.
For Multi-Vitamin Preparations in Tablet Form.
First use Nov. 25, 1957.

SN 50,361. General Developments Corporation, Milwaukee, Wis. Filed Apr. 25, 1958.

SN 53,214. The Wander Company, d. b. a. Smith-Dorsey, Chicago, Ill. Filed June 9, 1958.

SN 44,911. The Mentholatum Company, Buffalo, N. Y. Filed Jan. 29, 1958.

Mentholatum

COLBAN

Owner of Reg. Nos. 27,260, 248,543, and others.
For Medicinal Preparations for the Treatment of Colds and Coughs.
First use Oct. 21, 1957.

SN 45,209. Rougier Inc., Montreal, Quebec, Canada. Filed Feb. 3, 1958.

GYNOVULES

Owner of Canadian Reg. No. 100,140, dated Jan. 28, 1955.
For Vaginal Suppository.

SN 45,407. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Feb. 6, 1958.

COSA-TETRACYN

Owner of Reg. Nos. 598,390, 599,891, and 626,810.
For Antibiotic Preparation.
First use Dec. 10, 1957.

SN 45,533. Corn States Laboratories, Inc., Omaha, Nebr. Filed Feb. 10, 1958.

STATOMYCIN

For Antibiotic Used in the Treatment of Infections in Animals.
First use Apr. 8, 1957.

SN 46,367. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Feb. 21, 1958.

SINOGAN

Priority claimed under Sec. 44(d) on French Reg. No. 469,220, dated Jan. 2, 1958 (Paris); Natl. Inst. No. 100,619.
For Preparations Used in Psychiatrics and as Sedative.

SN 46,736. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Feb. 27, 1958.

UROMYCIN

Owner of Reg. Nos. 615,180 and 616,096.
For Antibiotic Preparation.
First use Sept. 29, 1954.

SN 47,675. Pharmacrest, Inc., Dawson, Ga. Filed Mar. 13, 1958.

VERATON

For Vitamin Tonic.
First use Oct. 23, 1957.

SN 47,729. Chesebrough-Pond's Inc., New York, N. Y. Filed Mar. 14, 1958.

CURISONE

For Medicated Skin Cream Which Aids in Healing Externally Caused Skin Blemishes.
First use Nov. 22, 1957.

SN 47,803. Abbott Laboratories, North Chicago, Ill. Filed Mar. 17, 1958.

ACRIZANE

For Chloro and Methyl Ether Derivatives of Phenylacridine, Having Germicidal Properties Suitable for External and Internal Use in Humans and Animals.
First use Oct. 5, 1949.

SN 48,271. Usines Chimiques d'Ivry la Bataille Dite U. C. I. B., Société à Responsabilité Limitée, Ivry-la-Bataille (Eure), France. Filed Mar. 24, 1958.

LAMBARENE

Owner of French Reg. No. 1,071, dated Sept. 12, 1952 (Evreux); Natl. Inst. No. 521,624.
For Pharmaceutical Preparations for the Treatment of Debility, Fatigue, and Alcoholic-Nicotinic Neuritis, and Anti-Depressive.

SN 48,661. Rexall Drug Company, Los Angeles, Calif. Filed Mar. 28, 1958.

SERU-CHOL

For Dietary Supplement Containing Vitamins.
First use Feb. 5, 1958.

SN 48,929. Pharmacrest, Inc., Dawson, Ga. Filed Apr. 2, 1958.

MELLS

For Pharmaceutical Preparation for Relief of Discomforts Accompanying Menstruation.
First use Mar. 7, 1958.

SN 49,289. The Mentholatum Company, Buffalo, N. Y. Filed Apr. 8, 1958.

MENTHOLATUM

CHAPROL

Owner of Reg. Nos. 27,260, 248,543, and others.
For Medicinal Preparations for the Prevention and Treatment of Chapped Skin.
First use Feb. 28, 1958.

SN 49,998. Aveeno Corporation, New York, N. Y. Filed Apr. 18, 1958.

PULVAPIX

For Juniper Tar Compound for Use as an Antipruritic.
First use on or about Feb. 18, 1958.

SN 50,101. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Apr. 21, 1958.

TAO

For Antibiotic Preparation.
First use Apr. 16, 1958.

SN 50,263. V-M Nutri-Food, Inc., Evanston, Ill. Filed Apr. 23, 1958.

VENUS

For Protein-Concentrate Food Supplement Affording Essential Amino Acids.
First use Mar. 13, 1958.

SN 53,763. John H. Andrews, Wichita, Kans. Filed June 18, 1958.

SN 54,172. Merck & Co., Inc., Rahway, N. J. Filed June 24, 1958.

SN 50,361. General Developments Corporation, Milwaukee, Wis. Filed Apr. 25, 1958.

TROPI-CURE

For Medication for Treatment for Diseases of Bacterial, Fungicidal and Parasitic Origin of Tropical Fish.
First use Apr. 9, 1958.

SN 50,460. Lucille K. de Vries, d. b. a. L. de Vries Co., Alhambra, Calif. Filed Apr. 28, 1958.

ACNE-MINS

For Vitamin and Food Supplement.
First use Apr. 9, 1958.

SN 50,947. Warner-Lambert Pharmaceutical Company, Morris Plains, N. J. Filed May 2, 1958.

STIGMONENE

For Drug Having Physostigmine-Like Action.
First use Feb. 21, 1951.

SN 51,117. Etablissements Clin-Byla, Société Anonyme, Paris, France. Filed May 6, 1958.

DETRAINE

Owner of French Reg. No. 437,887, dated Dec. 30, 1953 (Paris); Natl. Inst. No. 26,274.
For Analgesic and Antipruritic Ointment.

SN 51,487. The Norwich Pharmacal Company, Norwich, N. Y. Filed May 12, 1958.

CEES

Owner of Reg. No. 563,790.
For Preparation for the Treatment of Coughs Due to Colds.
First use May 8, 1957.

SN 51,605. American Cyanamid Company, New York, N. Y. Filed May 14, 1958.

ARISTOMOL

Owner of Reg. No. 653,218.
For Topical Steroid Preparation.
First use Apr. 30, 1958.

SN 51,609. American Cyanamid Company, New York, N. Y. Filed May 14, 1958.

ARISTOGUENT

Owner of Reg. No. 653,218.
For Topical Steroid Preparation.
First use Apr. 30, 1958.

SN 51,610. American Cyanamid Company, New York, N. Y. Filed May 14, 1958.

ARISTOMYCIN

Owner of Reg. No. 653,218.
For Topical Steroid Preparation.
First use Apr. 30, 1958.

SN 51,817. Revlon, Inc., New York, N. Y. Filed May 16, 1958.

SILICARE

For Medicated Lotions and Powders for the Prevention of Diaper Rash and the Healing of Skin Irritations.
First use Dec. 15, 1953.

SN 53,214. The Wander Company, d. b. a. Smith-Dorsey, Chicago, Ill. Filed June 9, 1958.

FERRO-STETRIC

Owner of Reg. No. 656,351.
For Prenatal Dietary Supplement.
First use May 28, 1958.

SN 53,244. Drug Research Corporation, New York, N. Y. Filed June 10, 1958.

jandReX

For Sleeping Aid Preparation.
First use June 3, 1958.

SN 53,293. SchenLabs Pharmaceuticals, Inc., New York, N. Y. Filed June 10, 1958.

ANTICOR

For Cold Tablets.
First use May 13, 1958.

SN 53,294. SchenLabs Pharmaceuticals, Inc., New York, N. Y. Filed June 10, 1958.

SURFAMOL

For Evacuant.
First use May 13, 1958.

SN 53,325. G and G Pharmacal Co., Inc., South Bend, Ind. Filed June 11, 1958.

CHEWEEZ

For Vitamin Tablets.
First use Jan. 11, 1957.

SN 53,396. Dome Chemicals, Inc., New York, N. Y. Filed June 12, 1958.

CORT-DOME
DOME

Owner of Reg. No. 383,764.
For Medicinal Preparations for External Use in the Treatment of Skin Infections and Other Skin Irritations.
First use in November 1954.

SN 53,581. Carter Products, Inc., New York, N. Y. Filed June 16, 1958.

MILTRATE

For Pharmaceutical Preparation for the Treatment of Pain and Tension.
First use May 26, 1958.

SN 53,743. Stanlabs, Inc., Portland, Oreg. Filed June 17, 1958.

STANLABS

For Hydrogen Peroxide, Vitamin A Capsules, Ephedrine Sulfate Syrup.
First use May 2, 1958.

SN 54,296. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

Class 19—Vehicles

First use Nov. 22, 1957.

First use Mar. 13, 1958.

SN 53,763. John H. Andrews, Wichita, Kans. Filed June 16, 1958.

VIM VITE

For Vitamin and Mineral Tablets.
First use Apr. 29, 1958.

SN 53,829. Julius Schmid, Inc., New York, N. Y. Filed June 18, 1958.

Ramses

Owner of Reg. Nos. 247,841, 580,812, and others.
For Vaginal Jelly.
First use on or about Dec. 29, 1932.

SN 53,944. National Chemical Company, Paterson, N. J. Filed June 20, 1958.

HAR-DROX

For Vitamin Preparation.
First use May 19, 1958.

SN 54,019. Dome Chemicals, Inc., New York, N. Y. Filed June 23, 1958.

ACNE-DOME

Owner of Reg. No. 383,764.
For Medicinal Preparations for External Use in the Treatment of Skin Infections and Other Skin Irritations.
First use in January 1958.

SN 54,020. Dome Chemicals, Inc., New York, N. Y. Filed June 23, 1958.

SOYBORO

For Antiseptic Preparations for External Use in the Treatment of Skin Infections and Other Skin Irritations.
First use in June 1957.

SN 54,043. Horton & Converse, Los Angeles, Calif. Filed June 23, 1958.

TRI-HISTAPACQ

Owner of Reg. No. 530,225.
For Cold Remedy Tablets.
First use on or about Sept. 1, 1957.

SN 54,044. Horton & Converse, Los Angeles, Calif. Filed June 23, 1958.

VANESIA

For Antacid Preparation.
First use on or about Oct. 1, 1954.

SN 54,108. Standard Brands Incorporated, New York, N. Y. Filed June 23, 1958.

STAMS

Owner of Reg. No. 416,188.
For Multiple-Vitamin and Mineral Capsules.
First use Dec. 3, 1942.

SN 54,172. Merck & Co., Inc., Rahway, N. J. Filed June 24, 1958.

ANILERIN

For Compound Having Analgesic, Sedative, Hypnotic and Antispasmodic Properties.
First use May 15, 1958.

SN 54,177. The E. L. Patch Company, Stoneham, Mass. Filed June 24, 1958.

SUITRATE

For Sedative.
First use June 16, 1958.

SN 54,206. The Chemdrug Corporation, New York, N. Y. Filed June 25, 1958.

LACTOLAXINE

For Laxative Preparation.
First use June 18, 1958.

SN 54,247. Myzon, Inc., Chicago, Ill. Filed June 25, 1958.
Owner of Reg. Nos. 562,224, 636,960, and others.

MYZON

For Mineral and Vitamin Compound Used as a Supplementary Dietary Preparation in Animal and Poultry Feeds.
First use Aug. 3, 1950.

SN 54,273. Vick Chemical Company, New York, N. Y. Filed June 25, 1958.

Theracin*

For Cold Tablet.
First use June 4, 1958.

SN 54,291. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

PURGICIN

For Veterinary Medicine Described as: a Laxative and/or Purgative Medication for Oral Use in Animals.
First use Sept. 11, 1952.

SN 54,292. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

PYRINISTOL

For Veterinary Medicine Described as: an Antihistamine Preparation for Parenteral Use in Animals.
First use Oct. 3, 1952.

SN 54,293. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

HEXADIN

For Veterinary Medicine Described as: an Organic Iodine Compound for Oral Medication of Animals.
First use Mar. 1, 1938.

SN 54,296. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

MINERON

For Veterinary Medicine Described as: a Mixture of Minerals and Vitamins for Oral Use in the Correction of Deficiencies in Animals.
First use Jan. 5, 1948.

SN 54,297. Curtis Laboratories, Inc., Kansas City, Kans. Filed June 26, 1958.

MASTYN

For Veterinary Medicine Described as: a Preparation for Infusing Udders of Dairy Animals for the Treatment of Mastitis.
First use Mar. 13, 1953.

SN 54,521. Harker Stagg Limited, London, England. Filed June 30, 1958.

CELEVAC

Owner of British Reg. No. 690,125, dated June 22, 1950.
For Pharmaceutical Preparations of Methyl Cellulose for the Treatment of Colostomies, Ileostomies and Intestinal Affections.

SN 54,611. Endo Laboratories Inc., Richmond Hill, N. Y. Filed July 1, 1958.

ENDOCIDIN

Owner of Reg. Nos. 213,724, 315,029, and others.
For Medicinal Preparation Used for the Relief of Pain and the Symptoms Accompanying a Cold.
First use May 1, 1958.

SN 54,632. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1958.

HYBOGAINE

For Psychic Energizer.
First use May 9, 1958.

SN 54,634. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1958.

IBOGOID

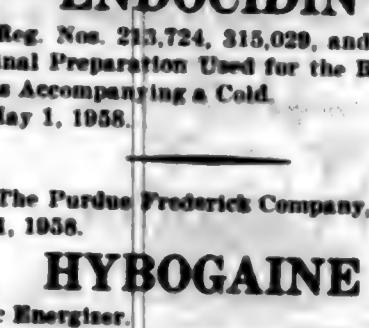
For Psychic Energizer.
First use May 9, 1958.

SN 54,661. American Cyanamid Company, New York, N. Y. Filed July 2, 1958.

AUTRIN

Owner of Reg. No. 638,238.
For Vitamin Preparation.
First use June 20, 1958.

SN 54,888. The Purdue Frederick Company, New York, N. Y. Filed July 7, 1958.



Owner of Reg. No. 573,826.
For Line of Pharmaceuticals.
First use Sept. 16, 1955.

Class 19—Vehicles

SN 25,811. The Bada Company, Pasadena, Calif., assignee of Bada Manufacturing Company, d. b. a. Bada Company, Pasadena, Calif. Filed Mar. 11, 1957.

Owner of Reg. No. 615,732.
For Vehicle Wheel Balancing Weights.
First use Nov. 8, 1956.

SN 37,817. Vanderbilt Tire & Rubber Corp., New York, N. Y. Filed Sept. 16, 1957. Sec. 2(f).

VANDERBILT

For Automobile Seat Covers.
First use June 6, 1950.

SN 46,091. Pullman-Standard Car Manufacturing Company, Chicago, Ill. Filed Mar. 3, 1958.

PAT

For Highway, Railway and Marine Transportation Apparatus—Namely, Containers and Demountable Bodies, Truck Trailers and Semi-Trailers, and Railway Flat Cars.
First use Dec. 4, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 383. Sunbeam Corporation, Chicago, Ill. Filed Jan. 9, 1956.

LIQUI-THERM

For Electric Blankets.
First use Nov. 28, 1955.

SN 30,188. Peerless Manufacturing Division of Dover Corporation, Louisville, Ky. Filed May 16, 1957.

PEERLESS

For Wall-Type Electric Heaters.
First use in the year 1935.

SN 38,975. The Brown-Brockmeyer Company, Dayton, Ohio. Filed Oct. 16, 1957.

AUTO-BED

For Electrical Motor for Adjusting the Posture of a Bed.
First use May 1, 1957.

SN 40,814. Berkeley Enterprises, Inc., Newtonville, Mass. Class 22—[illegible]

SN 39,174. The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Alliance, Ohio. Filed Oct. 21, 1957.

TENNA ROTOR

Owner of Reg. No. 560,377.
For Antenna Rotators and Remote Control Antenna Positioners.
First use on or about Jan. 3, 1949.

SN 40,132. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Nov. 5, 1957.

TAN-SOL

For Electrical Capacitors.
First use Sept. 10, 1957.

SN 40,689. Naamlooze Vennootschap "Splendor" Gloeilampenfabrieken, Nijmegen, Netherlands. Filed Nov. 14, 1957.

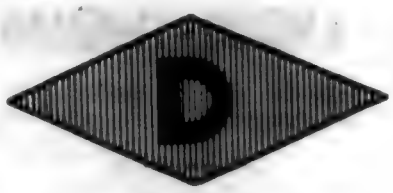
BRILLANTA

Owner of Dutch Reg. No. 58,050, dated July 17, 1929.
For Electrical Incandescent Lamps.

SN 40,772. Pacific Semiconductors, Inc., Culver City, Calif. Filed Nov. 15, 1957.

The drawing is lined for orange, but color is not an essential feature of the mark.
For Semiconductor Crystal Capacitors, Rectifiers and Diodes.
First use Oct. 24, 1957.

SN 41,082. Diamond Wire & Cable Company, Sycamore, Ill. Filed Nov. 21, 1957.



The shaded area represents the color red which is not claimed and not considered an important part of the mark. Owner of Reg. Nos. 601,587, 639,605, and others.
For Electrical Plugs, Cord Sets, Electrical Wire Harnesses, Electric Wire, Electric Cable, and Insulation Therefor.
First use on or about Nov. 18, 1957.

SN 41,148. The Cincinnati Milling Machine Co., Cincinnati, Ohio. Filed Nov. 22, 1957.

inductron

For Induction Heating Machine for the Heat-Treating of Metal Parts.
First use July 9, 1957.

SN 41,300. Nic-L-Silver Battery Co., Santa Ana, Calif. Filed Nov. 25, 1957.

ELDORADO

For Storage Batteries.
First use on or about June 1957.

SN 43,330. Morphy-Richards Limited, St. Mary Cray, Kent, England. Filed Jan. 2, 1958.

Owner of British Reg. Nos. 722,713, 722,714, 722,715, and 722,716, all dated Oct. 15, 1953.
For Electric Domestic Cleaning Appliances—Namely, Vacuum Cleaners and Floor Scrubbing Machines; Domestic Electric Heating Appliances—Namely, Toasters, Space Heaters, Pokers, Warming Pads, Electric Irons, and Flexibles, Flex Supports and Stands Therefor; Transformers for Such Appliances; Chimes for Doors and Transformers Therefor.
First use in the year 1946; in commerce in the year 1953.

SN 44,051. Van Norman Industries, Inc., Manchester, N. H. Filed Jan. 15, 1958.

VANTRON

For Electronic Equipment—Namely, Radio Transmission and Receiving Equipment, Single Side Band Transmission and Receiving Apparatus, Micro Wave Transmission and Receiving Apparatus, Audio, Radio, and Micro Wave Amplifiers, Hi-Fi Equipment With Electrodynamic and Electro-Static Speakers, and Accessories, Such as Preamplifiers.
First use on or about July 1, 1957.

SN 47,117. KSM Products, Inc., Merchantville, N. J. Filed Mar. 5, 1958.

KSM

For Stud Welding Guns, Stud Welding Controls, Power Converters for Stud Welding, and Miscellaneous Tools and Accessories, Such as Arc Shield Holders and Stud Chucks, To Be Used With Stud Welding Equipment.
First use the fall of 1947.

SN 49,464. Solar Electric Corporation, Warren, Pa. Filed Apr. 10, 1958. Sec. 2(f).

For Electric Incandescent Lamps.
First use November 1934.

Class 23—Cutlery, Machinery, and Tools,

Planes, Crowbars, Screwdrivers, Scissors, Shears, Tinner's Snips, Anvils, Jewelers' Anvils, Ratchet Bit Braces, Power

SN 49,814. Berkeley Enterprises, Inc., Newtonville, Mass. Filed Apr. 17, 1958.

BRAINIAC

For Electric Construction Kit Including Switches, Panels and Conductors, and Connectors for Constructing Electric Circuits.
First use Sept. 15, 1957.

SN 49,921. Globe American Corporation, d. b. a. Vulcan-Hart Manufacturing Company, Kokomo, Ind. Filed Apr. 18, 1958.

VULCAN

Owner of Reg. Nos. 666,878 and 666,879.
For Electric Cooking Ranges, Deep Fat Fryers, Food Warmers, Kettles, Meat Roasters, Coffee Urns, and Mixers.
First use in June 1952.

SN 50,618. General Transistor Corp., Jamaica, N. Y. Filed Apr. 29, 1958.

TWINSISTOR

For Electrical Resistance and Semi-Conductor Devices.
First use Jan. 22, 1958.

SN 51,043. New Jersey Wood Finishing Company, Woodbridge, N. J. Filed May 5, 1958.

Owner of Reg. No. 281,286.
For Electrical Insulation Tape.
First use Dec. 23, 1957.

SN 51,135. Kelman Electric and Manufacturing Company, Los Angeles, Calif. Filed May 6, 1958.

The legend "Since 1908" is claimed only in connection with the mark as shown.
For Electrical Switch Gear, Circuit Breakers and Components and Accessories Therefor.
First use July 1, 1957; in the year 1908 as to "Kelman."

SN 51,276. International Rectifier Corporation, El Segundo, Calif. Filed May 8, 1958.

ASTRO-POWER

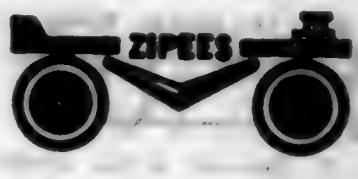
For Solar Batteries and Solar-Powered Auxiliary Power Supply Devices.
First use Apr. 9, 1958.

Class 22—Games, Toys, and Sporting Goods

SN 8,625. Vicente Lilnares Castelar, Barcelona, Spain. Filed May 21, 1956.

Owner of Spanish Reg. No. 281,247, dated Dec. 30, 1954.
For Toy Musical Instruments—Namely, Toy Pianofortes, Toy Pipe Organs, and Toy Harmoniums.

SN 28,580. Manning Manufacturing Corporation, Chicago, Ill. Filed Apr. 19, 1957.



Insofar as the two circles and the cross bar represent the goods, they are disclaimed apart from the composite mark.
Owner of Reg. No. 640,289.
For Roller Skates.
First use Aug. 8, 1956; Jan. 15, 1956, as to "Zipees and design of wide 'V.'"

SN 37,130. Boreva Sportswear Company, Chicago, Ill. Filed Sept. 13, 1957.

DOLL SKORT

No claim of exclusive right is made to "Doll" as used on clothing for toy dolls.
For Clothing for Toy Dolls.
First use Aug. 30, 1957.

SN 45,384. Fortin Plastics, Inc., Van Nuys, Calif. Filed Mar. 11, 1958.

ULTRA-GLAS

For Water Skis.
First use Feb. 6, 1956.

SN 49,768. Claude J. Newman, d. b. a. Blue Seal Archery Products, Minneapolis, Minn. Filed Apr. 16, 1958.

The drawing is lined for blue.
For Archery Products and Accessories—Namely, Arrowheads, Arrow Nocks, Bow Sights, Bowstrings, Bowstring Wax, and Arrow Fletchers.
First use Mar. 21, 1958.

SN 39,621. Albert L. Harman, d. b. a. The Twistick Co., Seattle, Wash. Filed Oct. 28, 1957.

SN 56,996. Outboard Marine Corporation, Waukegan, Ill. Filed Aug. 11, 1958.

First use July 9, 1937.

First use November 1934.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 17,146. Alpine Aktiengesellschaft Maschinenfabrik und Eisengiesserei, Augsburg, Germany. Filed Oct. 9, 1956.

ALPINE

MIKROPLEX

For Classifiers and Parts Thereof.
First use December 1953 on classifiers.

SN 23,564. P. R. Myers & Company, Mamaroneck, N. Y. Filed Jan. 31, 1957.

SATIN CLOUD

For Carving Sets, and Knives, Forks and Spoons, Made of Base Metal.
First use Dec. 7, 1956.

SN 30,373. A. W. Thresher & Son, Gridley, Calif. Filed May 20, 1957.

TURN-A-BOX

For Dumper.
First use May 8, 1956.

SN 34,601. Friden Inc., San Leandro, Calif., by change of name from Friden Calculating Machine Co., Inc., San Leandro, Calif. Filed July 30, 1957.

For Electrically, Electronically, and Manually Operated Office Machines, and Combinations of the Same, and Parts Thereof.
First use Feb. 16, 1957.

SN 37,622. James S. Baker (Imports) Co., Inc., San Francisco, Calif. Filed Sept. 23, 1957.

JSB

For Hand Tools Comprising Lineman's Cutting Pliers, Pliers, End Nippers, Diagonal Nippers, Comb Cutting Nippers, Oblique Nippers, Slip Joint Pliers, Telephone Pliers, Round Nose Pliers, Bent Nose Pliers, Flat Nose Pliers, Jewelers' Pliers, Angle Wrenches, Open End Wrenches, Socket Wrenches, Hand Saws, Coping Saws, Wood Levels, Boat Levels, Pointing Brick Trowels, Margin Trowels, Block Planes, Crowbars, Screwdrivers, Scissors, Shears, Tinner's Snips, Anvils, Jewelers' Anvils, Ratchet Bit Braces, Power Bits, Auger Bits, Twist Drills, Sledge Hammers, Axes, Hatchets/ Ball Peen Hammers, Pipe Wrenches, Oilers and Vises, and Hand Garden and Agricultural Tools Comprising Shovels, Cultivators, Hoes, Turf Edgers, Rakes, Pruning Saws, Pruning Shears, Grape Shears, Garden Shears, and Agricultural Knives.
First use Aug. 7, 1956, on ratchet bit braces.

SN 37,703. Peter Willems, Lucerne, Switzerland. Filed Sept. 23, 1957.

REACTRON

Owner of Swiss Reg. No. 161,272, dated July 5, 1956.
For Machines, Apparatus and Equipment for Chemical, Physical and Related Industries and Research and for Uses in the Home and in Agriculture; Machines, Apparatus, Equipment and Appliances for Chemical and Physical Processing and Treatment of Substances and Mixtures Thereof and for Carrying Out Chemical Reactions; Devices, Accessories and Spare Parts to All Said Machines, Apparatus, Equipment and Appliances.

SN 37,704. Peter Willems, Lucerne, Switzerland. Filed Sept. 23, 1957.

FIBROTOM

Owner of Swiss Reg. No. 136,886, dated July 28, 1955.
For Machines, Apparatus and Equipment for Chemical, Physical and Related Industries and Research; Dispersers; Homogenizers; Apparatus and Appliances for Dissolving and Extracting Purposes; Apparatus and Equipment for Carrying Out Chemical Reactions; Accessories and Spare Parts to All Said Machines, Apparatus, Equipment and Appliances.

SN 37,705. Peter Willems, Lucerne, Switzerland. Filed Sept. 23, 1957.

PALLASTRON

Priority claimed under Sec. 44(d) on Swiss application filed Apr. 9, 1957; Reg. No. 165,460, dated June 19, 1957.
For Machines, Apparatus and Equipment for the Physical and Chemical Treatment and Processing of Substances and Mixtures Thereof; Machines, Apparatus, Equipment and Appliances for Comminuting, Dispersing, Mixing, and Homogenizing, Adapted for Use in Research, Technology, in the Home and in Agriculture; Machines, Apparatus and Equipment for Use in the Fields of Food and Chemical Processing and in Laboratories; Accessories and Spare Parts to All Said Machines, Apparatus, Equipment and Appliances.

SN 37,813. Ride-A-Mower Company, Hannibal, Mo. Filed Sept. 25, 1957.

RIDE-N-CUT

For Lawn Mowing Machines.
First use in June 1956.

SN 37,814. Ride-A-Mower Company, Hannibal, Mo. Filed Sept. 25, 1957.

RIDE-A-MOWER

For Lawn Mowing Machines.
First use in March 1949.

SN 37,856. Bijur Lubricating Corporation, Rochelle Park, N. J. Filed Sept. 26, 1957.

SPRAYMIST

For Liquid and Oil Pressure Sources and Pressure Supply Devices, Such as Lubricant Pumps and Compressed Air and Lubricant Containers by Means of Which Lubricant and Liquid Coolant Are Propelled Under Pressure.
First use July 10, 1950.

SN 37,828. W. F. Ohear & Son, Inc., Inglewood, Calif. Filed SN 41,448.

SN 39,021. Albert L. Harman, d. b. a. The Twistick Co., Seattle, Wash. Filed Oct. 28, 1957.

SWEEP STEAK

For Power-Driven Hand Brush for Cleaning Meat.
First use Oct. 8, 1957.

SN 41,245. Continental Motors Corporation, Muskegon, Mich. Filed Nov. 23, 1957.

HYPERCYCLE

Owner of Reg. No. 405,575.
For Internal Combustion Engines Including Diesel Engines for General Power Application Including Automotive, Marine and Industrial Power Plants, Mechanical Power Plants for Lighting and Industrial Power Application, Mechanical Drive Units for Generators, Fuel Pressure Pumps and Fuel Distributing Mechanisms for Such Engines and Power Plants, Fuel Injectors, Fuel Nozzles for Said Fuel Injectors, Engine Shields, and Cooling Baffles Mounted on Such Engines and Power Plants, and Base Structures and Frame Supports for Said Engines and Power Plants.
First use May 29, 1957.

SN 51,173. Consolidated Sewing Machine Corp., New York, N. Y. Filed May 7, 1958.

SHUT-L-KLEEN

For Shuttle Race Wiper.
First use Dec. 1, 1957.

SN 51,372. Little Beaver Industries, Inc., Willoughby, Ohio. Filed May 13, 1958.

FLUO-MATIC

For Torque Converters.
First use Mar. 21, 1958.

SN 52,547. Aldens, Inc., Chicago, Ill. Filed May 29, 1958. Sec. 2(f).

ALDENS

For Sewing Machines.
First use Dec. 10, 1952.

SN 52,628. Gillett & Eaton, Inc., Lake City, Minn. Filed May 21, 1958.

LUB-RE-TEN

Owner of Reg. No. 642,898.
For Pistons.
First use Nov. 12, 1957.

SN 52,631. Universal Oil Products Company, Des Plaines, Ill. Filed May 21, 1958.

PENEX

For Apparatus, in the Nature of a Plant, for the Conversion of Hydrocarbons.
First use Apr. 21, 1958.

SN 56,996. Outboard Marine Corporation, Waukegan, Ill. Filed Aug. 11, 1958.

SOVEREIGN

For Outboard Motors.
First use Apr. 24, 1958.

SN 57,309. Web Wilson Oil Tools, Inc., Gardena, Calif. Filed Aug. 15, 1958.

Sabre-tooth

For Tong Dies.
First use July 16, 1958.

SN 57,369. Gulbert Steel Company, Pittsburgh, Pa. Filed Aug. 18, 1958.

SUP-R

Owner of Reg. Nos. 523,749 and 523,750.
For Safety Turn Bars, Tow Cranes, Lift Loaders, Concrete Mixers and Machines for Drilling, Countersinking, Reaming, Grinding, and Polishing.
First use January 1958.

SN 57,520. Wallace Silversmiths, Inc., Wallingford, Conn. Filed Aug. 19, 1958.

VENUS

For Tableware Including Knives, Forks, and Spoons.
First use June 10, 1958.

SN 57,679. The Delsam Co., Wilmington, Del. Filed Aug. 22, 1958.

Cook Out

For Multi-Purpose Kitchen Implement.
First use Aug. 1, 1958.

SN 57,728. John W. Wallace, Wichita, Kans. Filed Aug. 22, 1958.

KENO

For Power Driven Sharpeners for Sharpening Hypodermic Needle Points.
First use July 10, 1958.

SN 57,763. Brown & Sharpe Manufacturing Company, Providence, R. I. Filed Aug. 25, 1958.

BS

For Machine Tools.
First use July 28, 1955.

SN 47,848. Electronic Instrument Co., Inc., Long Island City, N. Y. Filed Mar. 17, 1958.

SN 46,293. Caro, Inc., New York, N. Y. Filed Feb. 21, 1958.

SN 37,828. W. F. Obear & Son, Inc., Inglewood, Calif. Filed Aug. 25, 1958.

For Abrasive Cut-Off Saws, Pipe and Tube-Rolling Cutters, Pipe Threading Machines, Machines for Making Up Fittings on Pipe and Hydraulic Pipe Benders.
First use on or about Apr. 1, 1945.

SN 37,846. Sheldon Machine Company, Inc., Chicago, Ill. Filed Aug. 25, 1958. Sec. 2(f).

SHELDON

For Lathes, Milling Machines, Shapers, and Parts and Accessories Therefor.
First use in 1919.

SN 37,896. General Foundry Service Corporation, Oakland, Calif. Filed Aug. 26, 1958.

HUGGAMOLD

For Casting-Mold Jackets.
First use June 14, 1957.

Class 26—Measuring and Scientific Appliances

SN 36,992. Bobrich Products Corp., New York, N. Y. Filed Sept. 11, 1957.

Minitherm

For Thermostats for Use in Electric Redecovering and Electric Pads.
First use July 31, 1957.

SN 38,042. Guardian Electric Manufacturing Company, Chicago, Ill. Filed Sept. 30, 1957.

PROGRAMATION

For Electro-Mechanical and Electronic Data Processing Equipment and Related Control Devices—Namely, Simulators, Recorders, Sequencers, Computers, Readout Devices, and Automatic Electrical and Electronic Circuit Testing and Checking Apparatus.
First use Aug. 20, 1957.

SN 39,677. Superior Machine and Engineering Company, Detroit, Mich. Filed Oct. 28, 1957.

OMNIDEX

For Electronic Indexing Table, Electronic Control Panel for the Table.
First use Oct. 23, 1956.

SN 41,442. Andre Victor Leon Clement Debrie, Paris, France. Filed Nov. 27, 1957.

MULTIPODE

Owner of French Reg. No. 464,886, dated May 14, 1957 (Seine); Natl. Inst. No. 90,268.
For Stand for Photographic, Cinematographic and All Optical Apparatus.

SN 42,218. M. Hensoldt & Söhne, Optische Werke A.-G., Wetzlar, Germany. Filed Dec. 11, 1957.

VARIO-DIALYT

Owner of German Reg. No. 706,628, dated Sept. 19, 1957, and U. S. Reg. No. 361,952.
For Optical Instruments and Parts Thereof—Namely, Microscopes, Magnifying and Reading Glasses, Telescopes and Binoculars, Spectacles, Magnifying Spectacles, Protective Glasses, Spectacle Lenses Including Colored Lenses; Magnifying Objectives; Interference and Polarization Filters, Supplementary Lenses, Condensers, Mirrors and Prisms; Measuring Instruments, Measuring Apparatus and Parts Thereof, Especially for Surveying and Nautical Purposes; Precision Gauges and Optical Parts for Reflectors.

SN 46,490. Schauer Manufacturing Corporation, Cincinnati, Ohio. Filed Feb. 24, 1958. Sec. 2(f).

SCHAUER

For Automotive Test Instruments—Namely, Exhaust Gas Analyzers, Voltmeters, Ampere Meters, Vacuum and Fuel Pump Test Instruments, Cylinder Compression Test Instruments and Motor Timing Instruments.
First use in 1949.

SN 46,916. J. M. Developments, Inc., New York, N. Y. Filed Mar. 3, 1958.

The drawing is lined for shading.
For Photographic Sound Film Recorders, Photographic Sound Film Re-Recorders, Photographic Sound Film Printers and Photographic Sound Film Duplicating Apparatus.
First use Jan. 20, 1958.

SN 47,173. Baird-Atomic, Inc., Cambridge, Mass. Filed Mar. 6, 1958.

Owner of Reg. Nos. 621,031 and 609,353.
For Electronic, Spectrochemical and Nuclear Instruments—Namely, Accumulators, Amplifiers, Bolometers, Dosimeters, Electro-Medical Equipment, Paging Receivers, Photometers, Transistor Test Instruments, Turbidity Indicators: Densitometers, Emission Spectrophotometers, Evapographs, Gas Analyzers, Infrared Spectrophotometers, Interferometers, Spectrographs: Analyzers, Counters, Rate and Survey Meters, and Scalers.
First use on or about Dec. 30, 1957, on scalers.

SN 47,419. Petlin Corporation, Temple City, Calif. Filed Mar. 10, 1958.

BUSY BOY

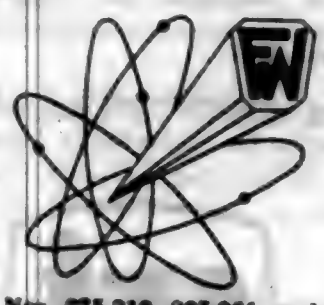
For Apparatus for Testing Telephone Lines Including an Indicator Device and a Signal Producing Device Adapted To Be Coupled to a Line.
First use Dec. 26, 1957.

SN 47,848. Electronic Instrument Co., Inc., Long Island City, N. Y. Filed Mar. 17, 1958.

EYE-TRONIC

For Electronic Ray Tuning Indicators.
First use Mar. 7, 1958.

SN 47,947. Foster Wheeler Corporation, New York, N. Y. Filed Mar. 18, 1958.



Owner of Reg. Nos. 275,219, 285,961, and others.
For Equipment and Apparatus Utilizing Nuclear Energy: for Example, Nuclear Reactors and Components Thereof, Such as, Reactor Pressure Vessels, Pressurizers, Steam Generators, Heat Exchangers, Steam Drums, and the Like.
First use Nov. 26, 1957.

SN 49,868. Norwalk Thermostat Company, Norwalk, Ohio. Filed Apr. 17, 1958.

NORSTAT

For Thermostats.
First use Feb. 7, 1958.

SN 50,548. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 28, 1958.

Owner of Reg. No. 590,542.
For Pen Linkage Systems Providing Rectilinear Movement of the Recording Pens in Galvanometric Strip Chart Recorders.
First use on or about Sept. 1, 1956.

Class 28 — Jewelry and Precious-Metal Ware

SN 33,309. Viners Limited, Sheffield, England. Filed July 5, 1957.

VINERS LTD

For Table Ware Composed of or Plated With Precious Metal.
First use Nov. 1, 1956; in commerce Nov. 1, 1956.

SN 41,814. The Hilsinger Corporation, Attleboro, Mass. Filed Dec. 5, 1957.

EYECESSORIES

For Optical Chains Made Wholly or in Part of Precious Metal.
First use Oct. 30, 1957.

SN 46,293. Coro, Inc., New York, N. Y. Filed Feb. 21, 1958.

TEEN-O-GRAMS

For Jewelry Initials.
First use Feb. 8, 1958.

SN 46,322. Kaspar & Esh, Inc., New York, N. Y. Filed Feb. 21, 1958.

CHAINDEARS

For Diamond Necklaces.
First use Feb. 7, 1958.

SN 47,951. Eddie Jacobs, Ltd., Baltimore, Md. Filed Mar. 18, 1958.

FOBULOUS-FOB

For Watch Fobs.
First use Feb. 26, 1958.

SN 48,810. Weidlich, Inc., Bridgeport, Conn. Filed Mar. 31, 1958.

For Trophies, Consisting of Loving Cups, Sport Statuette Figures and Plaques and the Like and Made or Plated With Precious Metal.
First use Feb. 17, 1931.

SN 49,489. Creative Rings, Inc., New York, N. Y. Filed Apr. 11, 1958.

Love Set

For Finger Rings.
First use Mar. 14, 1958.

SN 55,455. Coro, Inc., New York, N. Y. Filed July 17, 1958.

Maharani

For Charm Bracelets, Charms, Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Pearl Bracelets, Pearl Necklaces, Pearl Earrings, Pearl Brooches, Pearl Lockets, Pearl Jewelry Clips, Pearl Charms, Finger Rings, Pearl Finger Rings, and the Following Goods Made in Whole or in Part of Precious Metals or Plated With the Same: Beads, Pins and Jewelry Initials.
First use Apr. 20, 1935.

Class 29 — Brooms, Brushes, and Dusters

SN 49,028. The Wooster Brush Company, Wooster, Ohio. Filed Apr. 3, 1958.

DUO-WAY

For Paint Roller Covers.
First use Mar. 27, 1958.

SN 52,866. Dazi-Lite Products, Kansas City, Mo. Filed

Class 31—Filters and Refrigerators

SN 37,534. Whirlpool Corporation, St. Joseph, Mich. Filed Sept. 19, 1957.

FSP

For Ice Cube Makers.
First use Aug. 8, 1957.

SN 37,404. National Aluminate Corporation, Chicago, Ill. Filed Aug. 18, 1958.

HCR-W

Owner of Reg. No. 552,315.
For Ion Exchange Resins.
First use Apr. 30, 1958.

SN 57,441. Swimquip, Inc., El Monte, Calif. Filed Aug. 18, 1958.

ULTRA-MITE

For Filters for Swimming Pools.
First use May 2, 1958.

SN 57,895. Flanders Filters, Inc., Riverhead, N. Y. Filed Aug. 26, 1958.

SPANDURE

For Filters.
First use on or about Apr. 1, 1958.

Class 32—Furniture and Upholstery

SN 43,686. Le Febure Corporation, Cedar Rapids, Iowa. Filed Jan. 9, 1958.

control-a-matic

For Compartmented Filing Tray.
First use Nov. 12, 1957.

SN 56,689. B. T. Crump Company, Inc., Richmond, Va. Filed Aug. 6, 1958.

MASTER-MADE

For Hassocks.
First use January 1947.

SN 57,026. Charles H. Storrs, d. b. a. C. H. Storrs and Associates, Pittsburgh, Pa. Filed Aug. 11, 1958.

DATA-SKED

For Card-Receiving Boards for Work Scheduling and Production Control.
First use June 23, 1958.

SN 57,213. Joanna Western Mills Company, Chicago, Ill. Filed Aug. 14, 1958.

MULTI-STOP

For Window Shade Rollers.
First use in November 1955.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 38,033. Edwards Engineering Corporation, Pompton Plains, N. J. Filed Sept. 30, 1957.

AIRVEC

For Connection Condensers and Condensers of the Air Cooled Type.
First use in April 1957.

SN 38,095. Spi-Rol-Fin Corporation, Pequannock, N. J. Filed Sept. 30, 1957.

srf

For Boiler Burners, and Parts Thereof, and Baseboard Radiation Units.
First use January 1957.

SN 46,358. Rheem Manufacturing Company, Richmond, Calif. Filed Feb. 21, 1958.

RR

For Gas-Fired Winter Air Conditioners—Namely, Warm Air Furnaces and House Heating Boilers.
First use in 1938 on house heating boilers.

SN 49,922. Globe American Corporation, d. b. a. Vulcan-Hart Manufacturing Company, Kokomo, Ind. Filed Apr. 18, 1958.

VULCAN-HART

Owner of Reg. Nos. 666,878 and 666,879.
For Steam-Heated and Gas-Fired Kitchen Equipment—Namely, Coffee Urns, Kettles, Meat Roasters, Pasteurizers, Griddles, Counter Fryers, Food Warmers, and Deep Fat Fryers.
First use in 1949.

SN 51,639. L. P. G. Equipment Company, Inc., Orlando, Fla. Filed May 14, 1958.

SUNLAN

For Gas Ranges.
First use July 8, 1955.

SN 51,830. Tec Torch Company, Inc., Carlstadt, N. J. Filed May 16, 1958.

TEC SPOT

The drawing is lined for red.
For Welding Torches and Controls.
First use on or about Apr. 29, 1958.

SN 51,903. Continental Can Company, Inc., New York, N. Y.

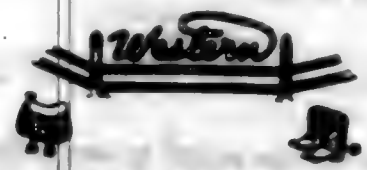
SN 52,866. Dazi-Lite Products, Kansas City, Mo. Filed June 4, 1958.

DAZI-LITE

For Animated Lights.
First use Mar. 3, 1958.

Class 36—Musical Instruments and Supplies

SN 38,756. Robert Edward Lawrence, d. b. a. Western Records, Sunburst, Mont. Filed Oct. 11, 1957.



The lining represents shading.
For Phonograph Records.
First use June 17, 1957.

SN 50,501. McLean's Band Shop, Inc., Kansas City, Mo. Filed Apr. 28, 1958. Sec. 2(f).

DUBL-REED-KLEEN

For Elongated Brush-Like Cloth Swabs for Cleaning the Upper Joints of Oboes and English Horns and the Bocal (Mouth Pipe) of Bassoons.
First use June 11, 1948.

SN 51,116. Electric & Musical Industries Limited, Hayes, Middlesex, England. Filed May 6, 1958.

EMIFILM

Owner of British Reg. No. 756,249, dated Aug. 2, 1956; and U. S. Reg. Nos. 585,999, 576,975, and others.
For Magnetisable Film for Use as Recording Media, and Such Film Bearing Recorded Matter.

Class 37—Paper and Stationery

SN 21,688. Takaji Funabashi, Nishi-ku, Nagoya, Japan. Filed Dec. 27, 1956.

CHEMIRAC
ケミラック

The Japanese phonetic characters found at the bottom of the trademark are pronounced as "Chemirac" and this word mark has no meaning. Owner of Japanese Reg. No. 463,144, dated Mar. 26, 1955.
For Stationery—Namely, Fountain Pens, Ball-Point Pens, Marking Pens, Pencils, Cartridges for Ball-Point Pens.

SN 28,612. L. G. Lenkoff, d. b. a. Stry-Lenkoff Co., Louisville, Ky. Filed Apr. 22, 1957.

"SAFTAG"

For Paper Tag Stock Used in the Manufacture of Laundry and Dry Cleaning Identification Tags.
First use Sept. 15, 1950.

SN 28,663. Union Bag-Camp Paper Corporation, New York, N. Y. Filed Apr. 22, 1957.

FRANKLIN

For Kraft Paper and Board, Including Bleached and Unbleached.
First use Oct. 22, 1955, on bleached paper.

SN 37,392. Riegel Paper Corporation, New York, N. Y. Filed Sept. 20, 1957.

POUCH-FLEX

Owner of Reg. No. 613,180.
For Laminated Packaging Paper.
First use on or about Sept. 9, 1957.

SN 38,107. United States Envelope Company, Springfield, Mass. Filed Sept. 30, 1957.

HOMELINE

For Envelopes, Writing Paper, Writing Tablets, Notebooks, and Packaged Filler and Typewriter Paper.
First use on or about Aug. 15, 1954.

SN 38,165. Riegel Paper Corporation, New York, N. Y. Filed Oct. 1, 1957.

POLYFANE

For Polyethylene Laminated Paper.
First use on or about Aug. 23, 1957.

SN 39,491. Pest-Guard Products, Inc., Dallas, Tex. Filed Oct. 24, 1957.

PEST-GUARD

Owner of Reg. Nos. 637,572 and 650,998.
For Shelf and Lining Paper, Kitchen Can Pads, and Bug Control Pads.
First use June 19, 1954.

SN 44,941. Visirecord, Inc., Copiague, N. Y. Filed Jan. 29, 1958.

VISItab

For Notched Tabulating Cards for Use in Record Keeping Equipment.
First use Mar. 15, 1955.

SN 47,101. Clover Farm Stores Corporation, Cleveland, Ohio. Filed Mar. 5, 1958.

CLOVERETTE

Owner of Reg. No. 513,828.
For Toilet Tissue.
First use Jan. 15, 1958.

SN 47,747. A. W. Faber-Castell Pencil Co., Inc., Newark, N. J. Filed Mar. 14, 1958.

TRACINK

For Rubber Erasers.
First use Oct. 18, 1943.

SN 28,196. Peter Pan Foundations, Inc., New York, N. Y. SN 44,558. Peter Pan Foundations, Inc., New York, N. Y.

SN 48,414. Imperial Methods Co., Forest Park, Ill. Filed Mar. 25, 1958.

pic-a-pack

For Index Cards, Guide Cards, Filing Folders, and Filing Guides.
First use Feb. 27, 1958.

SN 49,531. Swingline, Inc., Long Island City, N. Y. Filed Apr. 11, 1958.

Swingline

Owner of Reg. Nos. 641,731, 358,506, and others.
For Binder Clips, Index Tabs, Rubber Finger Tips, Paper Fasteners, File Fasteners and Folders for Binding and Holding Papers Together.
First use 1937.

SN 50,363. Ralph J. Haerr, San Diego, Calif. Filed Apr. 25, 1958.

PERMA MARK

For Laundry Marking Pen.
First use Jan. 13, 1958.

SN 50,444. Bagcraft Corporation of America, Chicago, Ill. Filed Apr. 28, 1958.

SANI Shield

For Disposable Bags for Drinking Glasses.
First use Apr. 9, 1958.

SN 50,679. Blackstone Stationers Inc., New York, N. Y. Filed Apr. 30, 1958.

CORPORAID

For Corporation Outfits, Including Minute Book, Stock Book, Stock Transfer Book and Seal.
First use May 1952.

SN 50,874. Continental Can Company, Inc., New York, N. Y. Filed May 2, 1958.

CONVAN

For Wrapping Paper and Paperboard.
First use Jan. 5, 1958.

SN 51,257. Bemis Bro. Bag Company, St. Louis, Mo. Filed May 8, 1958. Sec. 2(f).

SHUR-SEAL

Owner of Reg. No. 603,414.
For Paper Bags.
First use Apr. 1, 1953.

SN 51,603. Continental Can Company, Inc., New York, N. Y. Filed May 15, 1958.

CONOWRAP

Owner of Reg. Nos. 553,791, 650,161, and 651,679.
For Plastic Wrapping Material in Sheet and Roll Form.
First use Mar. 17, 1958.

Class 38—Prints and Publications

SN 30,747. Dell Publishing Company, Inc., New York, N. Y. Filed May 27, 1957.

LAUREL

For Series of Books.
First use May 28, 1957.

SN 38,458. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Oct. 7, 1957.

"WHEN YOU CARE ENOUGH TO SEND THE VERY BEST"

For Greeting Cards.
First use Oct. 22, 1944.

SN 45,334. Insurance Company of North America, Philadelphia, Pa. Filed Feb. 5, 1958.

TELE-SELLER

For Visual Sales Presentation in Booklet Form, the Pages of Which Simulate Television Screens Used in Connection With the Sale of Insurance.
First use Mar. 23, 1956.

SN 46,849. New Business, Incorporated, d. b. a. The Kip Club, Greenwich, Conn. Filed Feb. 28, 1958.

the KIP club

For Magazine Published Monthly.
First use Dec. 1, 1957.

SN 51,457. The International Nickel Company, Inc., New York, N. Y. Filed May 12, 1958.

MECHANICAL TOPICS

For Magazine.
First use in January 1937.

SN 51,786. General Features Corporation, New York, N. Y. Filed May 16, 1958.

JOSEPHINE

For Syndicated Comic Feature Published in Daily Newspapers.
First use Nov. 8, 1948.

Class 39—Clothing

SN 25,083. Cambridge Rubber Company, Cambridge, Mass. Filed Mar. 7, 1957.

RAYNETTE

For Boots Made of Plastic, Rubber, Leather, Fabric and/or Any Combinations Thereof, for Men, Women, and Children.
First use Jan. 25, 1957.

SN 52,087. Anvil Brand, Incorporated, High Point, N. C.

SN 26,198. Peter Pan Foundations, Inc., New York, N. Y. Filed Mar. 14, 1957.

TALL X

Owner of Reg. No. 649,773.
For Girdles.
First use Feb. 13, 1957.

SN 28,482. Bergdorf & Goodman Company, New York, N. Y. Filed Apr. 19, 1957. Sec. 2(f).

BERGDORF GOODMAN

For Ladies' Coats, Suits, and Dresses.
First use in and about the year 1901.

SN 38,710. The Quiltex Company, New York, N. Y. Filed Oct. 10, 1957.

Quiltex

Owner of Reg. No. 330,752.
For Sleeping Bags in the Nature of Garments, Pram Suits, Buntings for Infants, Bathrobes and Snow Suits.
First use June 1, 1933.

SN 38,755. Jacob Finkelstein & Sons Inc., Woonsocket, R. I. Filed Oct. 11, 1957.

CARDA-JAC

For Men's Outer Coats and Jackets.
First use Aug. 1, 1957.

SN 39,048. H. H. Cutler Company, Grand Rapids, Mich. Filed Oct. 17, 1957. Sec. 2(f).

CUVVER-UPS

Owner of Reg. Nos. 562,677 and 577,443.
For Adults' and Children's Aprons and Baby Clothing—Namely, Bibs, Pants, Suits, Shirts, Blouses, Sleepers, and Pajamas.
First use Jan. 30, 1950.

SN 39,158. Ridgemoor, Inc., St. Louis, Mo. Filed Oct. 18, 1957.

Bel-jambs

For Women's Sportswear Slacks, Tights, Bermuda Shorts, Jamaica Shorts, Pedal Pushers, Short Shorts, Skirts and Separate Tops.
First use Oct. 3, 1957.

SN 43,960. Peter Pan Foundations, Inc., New York, N. Y. Filed Jan. 14, 1958.

CARRIAGE TRADE

For Girdles, Corsets, and Brassieres.
First use Nov. 10, 1956.

SN 44,538. Peter Pan Foundations, Inc., New York, N. Y. Filed Jan. 23, 1958.

LADY X

Owner of Reg. No. 645,147.
For Girdles.
First use Dec. 2, 1957.

SN 44,646. Lester Pincus Shoe Corporation, New York, N. Y. Filed Jan. 24, 1958.

MAGI-CONE

For Shoes, Slippers, and Boots.
First use Oct. 23, 1957.

SN 44,829. Knoll and Company, Three Oaks, Mich. Filed Jan. 28, 1958.

knoll's Tiny TOT Togs

The words "Tiny Tot Togs" are disclaimed apart from the mark as shown.
For Infants' and Children's Clothing—Namely, Baby Pants, Shirts, Training Pants, Pajamas, Gowns, and Bibs.
First use Dec. 4, 1957.

SN 45,832. Robert Schechner Fur Co., Inc., New York, N. Y. Filed Feb. 13, 1958.

Cezanné Furs

No claim is made to the exclusive right of the word "Furs" as used on the goods.
For Fur Apparel—Namely, Coats, Jackets, Stoles, Scarves, Collars, and Muffs.
First use June 6, 1957.

SN 47,277. Peter Pan Foundations, Inc., New York, N. Y. Filed Mar. 7, 1958.

BACK TALK

For Brassieres, Girdles, and Panty Girdles.
First use Oct. 1, 1956.

SN 47,666. Charles Komar & Sons, Inc., New York, N. Y. Filed Mar. 13, 1958.

"STRAP NEWS"

For Ladies' Slips.
First use Dec. 13, 1957.

SN 47,706. Air Reduction Company, Incorporated, New York, N. Y. Filed Mar. 14, 1958.

ALUMIHAT

For Electrically Non-Conductive Safety Hat.
First use Mar. 7, 1958.

SN 48,276. Goodheim Glove Co., Inc., Gloversville, N. Y. Filed Mar. 24, 1958.

GOODI-MADE

For Gloves.
First use on or about Jan. 1, 1935.

SN 60,370. Chester H. Roth Co., Inc., New York, N. Y.

Class 44—Dental, Medical, and Surgical

8N 49,199. J. Schoeneman, Incorporated, Baltimore, Md. Filed Apr. 7, 1958.

CUSTOM COMFORT

Owner of Reg. No. 643,943.
For Suits, Coats, Vests, and Trousers for Men.
First use Feb. 27, 1958.

8N 50,659. Young Juniors, Inc., Boston, Mass. Filed Apr. 29, 1958.

SEATON HALL

For Misses' Jackets, Slacks, Outer Shorts, Skirts, and Blouses.
First use Sept. 6, 1957.

8N 51,120. Fortuna Foundations, Inc., New York, N. Y. Filed May 6, 1958.

SUN-SPOTS

For Girdles.
First use Apr. 1, 1958.

8N 51,481. Marx & Haas-Korrekt Company, St. Louis, Mo. Filed May 12, 1958.

MONOFOB

For Men's and Boys' Slacks.
First use May 1, 1958.

8N 51,615. Jay Bucknell, Inc., New York, N. Y. Filed May 14, 1958.

Lady Bucknell

Owner of Reg. No. 588,691.
For Ladies' Sport Shirts, Blouses, Suits, Bermuda Shorts, Slacks, Pants, Outer Shorts, and Jackets.
First use May 1956.

8N 51,672. Sun 'N Snow Sportswear, Incorporated, Elizabeth, N. J. Filed May 14, 1958.

Sun 'n Snow

For Men's and Boys' Slacks, Sports Shirts, and Jackets.
First use Apr. 10, 1958.

8N 51,747. Sea B's, Inc., New York, N. Y. Filed May 15, 1958.

SHAPEMAKER

For Bathing Suits and Beach Wear.
First use Mar. 20, 1958.

8N 51,796. Pearl Isenberg, d. b. a. Shirlbee Co., New York, N. Y. Filed May 16, 1958.

SHIRLBEE

For Sweaters, Plain and Beaded.
First use December 1957.

8N 51,948. Southland Sportswear, Inc., Birmingham, Ala. Filed May 19, 1958.

SKEE-SIS

For Women's, Misses', and Girls' Shorts, Slacks, Pedal Pushers, and Pants.
First use Apr. 25, 1958.

8N 52,087. Anvil Brand, Incorporated, High Point, N. C. Filed May 22, 1958.

2 FISTED

For Men's and Boys' Pants, Shirts, and Dungarees.
First use on or about Feb. 1, 1958; July 2, 1955, as to "Two-Fisted."

8N 52,213. Fitts Cotton Goods Company, Atlanta, Ga. Filed May 23, 1958.

HAPPY BABY

For Infants' Diapers.
First use in May 1954.

8N 52,218. L. Greif & Bro. Inc., Baltimore, Md. Filed May 23, 1958.

SOLARION

For Suits, Top Coats, Overcoats, Slacks, Sport Coats and Jackets for Men, Boys, and Youths.
First use Apr. 14, 1958.

8N 52,393. Daroson Sportswear, Inc., Brooklyn, N. Y. Filed May 27, 1958.

DAROWEAR

For Outer Wear—Namely, Coats, Raincoats, Mackinaws, and Jackets.
First use Mar. 1, 1958.

8N 52,407. Exbrook, Inc., New York, N. Y. Filed May 27, 1958.

Picasso

For Men's and Boys' Sport Shirts.
First use on or about Feb. 1, 1958.

8N 52,415. Huth-James Shoe, Inc., Milwaukee, Wis. Filed May 27, 1958.

LETTERMAN

Owner of Reg. No. 595,731.
For Men's and Boys' Shoes of Leather, Rubber or Plastic Materials or Combinations Thereof.
First use May 22, 1953.

8N 52,595. F. W. Woolworth Co., New York, N. Y. Filed May 29, 1958.

TOPSALL

Owner of Reg. No. 267,020.
For Men's Ties.
First use May 24, 1957.

8N 55,433. F. W. Woolworth Co., New York, N. Y. Filed July 16, 1958.

TOPSALL

Owner of Reg. No. 267,020.
For Men's Stretch Hose.
First use May 10, 1958.

8N 48,214. Vesna Ltd., Guildford, England. Filed Mar. 21, 1958.

8N 55,648. Chr. Hansen's Laboratory, Inc., Little Falls, N. Y. Filed Aug. 16, 1957.

SN 60,370. Chester H. Roth Co., Inc., New York, N. Y. Filed Oct. 9, 1958.

COLORWEB

For Hosiery.
First use in March 1934.

Class 40—Fancy Goods, Furnishings, and Notions

SN 38,066. Missouri Valley Plastics, Inc., Kansas City, Mo. Filed Sept. 30, 1957.

SWEETHEART

For Corsage-Holding Bracelets Made of Plastic.
First use Apr. 29, 1957.

SN 51,721. The Lander Co. Inc., d. b. a. Elizabeth Post, New York, N. Y. Filed May 15, 1958.

ELIZABETH POST

The name "Elizabeth Post" is that of a living individual, whose consent is on file.
For Combs.
First use Feb. 10, 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 30,399. Carol Modes Coat & Suit Co., New York, N. Y. Filed May 21, 1957.

PRECIOUS PEARL

For Textile Fabrics in the Piece, Composed of Wool, Cashmere, Synthetic Fibers and Combinations Thereof.
First use Mar. 18, 1957.

SN 32,210. Raeford Worsted Corporation, New York, N. Y. Filed June 18, 1957. Sec. 2(f).

RAEFORD 2/80's

For Piece Goods Consisting of Natural and Synthetic Fibers.
First use Mar. 22, 1957.

SN 42,177. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Dec. 10, 1957.

U. M. FENO

For Finish With Which Applicant Has Treated Its Industrial and Decorative Fabrics Made From Glass Yarns To Enhance Fabric Life and Strength.
First use on or about Sept. 21, 1956.

SN 42,671. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Dec. 18, 1957.

HIGH TIDE

For Piece Goods of Rayon and Acetate Solution Dyed Boucle Adapted To Be Made Up Into Curtains and Draperies.
First use on or about Nov. 14, 1957.

SN 42,952. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Dec. 23, 1957.

PUSH BUTTON

For "Wash and Wear" Finish With Which Applicant Has Treated Its Broadcloth and Batiste Fabrics.
First use on or about Nov. 1, 1957.

Class 44—Dental, Medical, and Surgical Appliances

SN 24,905. The American White Cross Laboratories, Inc., New Rochelle, N. Y. Filed Feb. 25, 1957.

STIKIT

For Prepared Cut Bandages.
First use July 1, 1945.

SN 38,575. Herman J. Windolph, Portland, Oreg. Filed Oct. 8, 1957.

Comfy Pads

The drawing is lined for the color blue.
For Arch Supports.
First use Aug. 20, 1957.

SN 43,140. Fastel Corporation, Inc., Los Angeles, Calif. Filed Dec. 30, 1957.

Silent Panda

The drawing is lined for gray or silver.
For Electrical Vibrator for Therapeutic Purposes.
First use Apr. 15, 1957.

SN 45,857. The L. D. Caulk Company, Milford, Del. Filed Feb. 14, 1958.

TENACIN

The drawing is lined for blue.
For Oxyphosphate of Zinc Dental Cement.
First use Sept. 16, 1935.

SN 40,086. Abbott Laboratories, North Chicago, Ill. Filed Feb. 19, 1958.

MICRODRIP

For Drop-Forming Nozzle as Part of a Venoclysis Set.
First use Feb. 10, 1958.

SN 48,005. Louis A. Boettiger Co., Inc., Hewlett, N. Y. Filed Mar. 19, 1958.

BABY JOY

For Pacifiers and Teething Rings.
First use at least as early as January 1936.

Canned and Frozen Spaghetti and Meat Balls; Canned and

SN 40,394. Lo-Sodium Dairy Products Corp., d. b. a. Lo-

First use Apr. 25, 1958.

SN 48,214. Vessa Ltd., Guildford, England. Filed Mar. 21, 1958.

VESSA

Owner of British Reg. No. 766,811, dated June 24, 1957.
For Artificial Limbs and Orthopaedic Appliances.

SN 49,201. Shampaine Company, St. Louis, Mo. Filed Apr. 7, 1958.

SURG-A-MATIC

For Surgical Operating Tables.
First use Mar. 14, 1958.

SN 50,411. J. H. Smith Co., Inc., Greenfield, Mass. Filed Apr. 25, 1958.

SLIM-CYCLE

For Portable Exercising Device for Use by an Operator Seated in an Ordinary Chair To Simulate Bicycle Action.
First use on or about June 28, 1957.
Subj. to Intf. with SN 40,921.

Class 46—Foods and Ingredients of Foods

SN 13,534. Harry and David, Medford, Oreg. Filed Aug. 7, 1956.

ROYAL ROGUE PLUMS

No claim of exclusive right is made to the word "Plums."
For Fresh Plums.
First use July 27, 1956.

SN 24,106. American Tea & Coffee Company, Inc., Nashville, Tenn. Filed Feb. 11, 1957.

Hilton Club

For Coffee and Tea.
First use Nov. 1, 1956.

SN 24,735. Monroe Boston Strauss, San Diego, Calif. Filed Feb. 19, 1957.

BAK-A-PIE

For Prepared Pie and Cake Fillings and Spreads.
First use May 1, 1954.

SN 32,122. F. Ritter & Co., Los Angeles, Calif. Filed June 17, 1957.

CALYPSO

For Food Flavoring Extracts.
First use Apr. 11, 1957.
Subj. to Intf. with SN 43,020.

SN 35,648. Chr. Hansen's Laboratory, Inc., Little Falls, N. Y. Filed Aug. 16, 1957.

RENNETENA

The word "Tena" appears at the bottom of the portrait shown in the drawing.
For Precooked Cereal for Babies.
First use May 20, 1957.

SN 35,816. L. D. Schreiber & Co., Inc., d. b. a. Stella Cheese Company, Division of L. D. Schreiber & Co. Inc., Chicago, Ill. Filed Aug. 19, 1957.

PIZZARELLA

For Cheese.
First use June 4, 1957.

SN 36,638. Viggo Ostergaard A/S, Aarhus, Denmark. Filed Sept. 3, 1957.

VIGO

Applicant does not claim exclusive right in the word "Brand." Owner of Danish Reg. No. 899–1951, dated July 7, 1951.
For Canned, Fresh, Frozen, Cured, Smoked or Cooked Meats, and Prepared Meat Products.

SN 36,751. Stephanson's, Washington, D. C. Filed Sept. 5, 1957. Sec. 2(f).

STEPHANSON'S

For Bakery Products—Namely, Pies, Cakes, Tea Cakes, Pastries, Cheese Cake and Tea Breads, and for Ice Cream and Fresh Eggs.
First use on or about Sept. 1, 1925.

SN 39,479. Maplewood Packing Co., Belfast, Maine. Filed Oct. 24, 1957.

MAPCO

For Fresh Dressed and Frozen Poultry.
First use July 1, 1949.

SN 41,469. Sweet Life Brands, Inc., Schenectady, N. Y. Filed Nov. 27, 1957.

SWEET LIFE

Owner of Reg. Nos. 370,217 and 552,146.
For Canned, Bottled, Frozen, Fresh and Dried Vegetables and Canned and Frozen Pumpkin; Canned, Bottled, Frozen, Fresh and Dried Fruits; Canned, Bottled and Frozen Fruit and Vegetable Juices; Canned and Bottled Fruit Sauces; Canned and Bottled Pimento; Canned and Bottled Tomato Puree and Tomato Paste; Canned and Frozen Fish and Shellfish; Canned, Frozen, Fresh and Dried Meat; Canned, Frozen and Fresh Poultry; Apple Butter, Honey, Jams, Jellies, Marmalade and Fruit Preserves; Canned and Bottled Olives; Canned and Frozen Ravioli, With and Without Meat Balls;

SN 54,421. McCormick & Company, Incorporated, Baltimore,

SN 49,045. Chetley Products, Inc., New York, N. Y. Filed

Canned and Frozen Spaghetti and Meat Balls; Canned and Frozen Rice Dinner Consisting Mainly of Rice and Vegetables; Canned, Bottled and Frozen Chicken Noodle Dinner Consisting Mainly of Chicken and Noodles; Canned Brown Bread; Cheese; Grated Cheese; Butter; Evaporated Milk; Fluid Milk; Fresh Eggs; Ice Cream; Catsup; Chili Sauce; Macaroni Salad; Coffee; Mayonnaise; Mustard; Olive Oil for Culinary Use; Peanut Butter; Pickles; Piccalilli; Potato Salad; Salad Dressing; Vinegar; Table and Food Flavoring Syrups; Fruit, Berry, Nut, Butterscotch and Chocolate Fudge Toppings.

First use June 15, 1916.

SN 43,020. Food Fashions, Inc., New York, N. Y. Filed Dec. 26, 1957.

CALYPSO

For Fruit Juices, Fruit Juice Concentrates, Preserves, Marmalade, Honey, Jelly and Jam.

First use June 7, 1957.

Subj. to Intf. with SN 82,122.

SN 46,389. John N. Wright, Jr., Federalsburg, Md. Filed Feb. 21, 1958. Sec. 2(f).

Wright's BEST

For Canned Vegetables.

First use 1932.

SN 47,982. The J. R. Watkins Company, Winona, Minn. Filed Mar. 18, 1958.

Watkins

Owner of Reg. Nos. 207,040 and 371,798.

For Baking Powder, Cream of Tartar, Preparations for Making Puddings and Pie Fillings, Food Coloring Preparations, Food Flavoring Extracts, Spices, Salt, Dry Mustard and Food Seasoning Preparations—Namely, Garlic, Onion and Poultry Seasonings; and Salt Blocks Fortified With Minerals Used for Livestock.

First use Feb. 17, 1958.

SN 48,357. Spicene Company of America, Inc., North Bergen, N. J. Filed Mar. 24, 1958.

SPICENT

For Spices and Blends and Mixtures of Spices.

First use July 8, 1957.

SN 48,462. Comet Rice Mills, Houston, Tex. Filed Mar. 26, 1958.

DRAGON

For Rice.

First use Oct. 12, 1946.

SN 49,510. Pearson Pharmacal Company, Miami, Fla. Filed Apr. 11, 1958.

BIXOL

For Edible Food Colorings.

First use Sept. 12, 1957.

SN 49,494. Lo-Sodium Dairy Products Corp., d. b. a. Lo-Sodium Dairy Products Corporation, Venice, Calif. Filed Apr. 14, 1958.

L S M

The drawing is lined for the colors blue, grey, and pink.

For Canned Low Sodium Milk.

First use Mar. 22, 1958.

SN 50,875. M. S. Cowen Company, San Francisco, Calif. Filed May 2, 1958.

PERLITA

The mark may be translated into English as "a small pearl."

Owner of Reg. No. 563,380.

For Canned Fish, Frozen Fish, Frozen Shellfish, and Frozen Frog Legs.

First use Mar. 6, 1951, on canned fish.

SN 50,987. Standard Brands Incorporated, New York, N. Y. Filed May 2, 1958.

For Dog Food.

First use Apr. 6, 1958.

SN 52,290. Dundas Associates, San Francisco, Calif. Filed May 27, 1958.

TRIM-EZE

For Blenderizing Food in Powder Form Containing Vitamins and Minerals and Made From Soy Protein, Non-Fat Milk Solids and Other Ingredients.

First use on or about May 1, 1958.

SN 53,481. Continental Specialties Co., Inc., Cicero, Ill. Filed June 13, 1958.

DIET CLUB

For Dietetic Table Syrups, Jams, Jellies and a Food Sweetener.

First use May 20, 1958.

SN 53,720. Morse & Skinner, Lodi, Calif. Filed June 17, 1958.

MT. TALLAC

For Fresh Grapes.

First use Mar. 8, 1948.

SN 54,049. Lanco Products Corporation, New York, N. Y. Filed June 23, 1958.

LANCO

For Ice Cream Stabilizers and Combination Stabilizer-Emulsifiers.

First use in January 1953.

SN 29,516. Better Brushes, Inc., Palmer, Mass. Filed May

SN 54,421. McCormick & Company, Incorporated, Baltimore, Md. Filed June 27, 1958.

TEA HOUSE

For Tea.
First use in 1951.

SN 54,454. Westgate-California Corporation, San Diego, Calif. Filed June 27, 1958.

SUNSET

For Canned Tuna.
First use in or about January 1895.

SN 54,754. Fritzsche Brothers, Inc., New York, N. Y. Filed July 3, 1958.

VANARINE

For Flavors for Food.
First use June 23, 1958.

SN 54,755. Fritzsche Brothers, Inc., New York, N. Y. Filed July 3, 1958.

VANATONE

For Flavors for Food.
First use June 23, 1958.

SN 54,770. Louisiana State Rice Milling Company, Inc., Abbeville, La. Filed July 3, 1958.

PAISANA

The word mark is the Spanish language equivalent of "peasant girl."
For Rice.
First use Feb. 12, 1958.

SN 54,939. Fritzsche Brothers, Inc., New York, N. Y. Filed July 8, 1958.

CRYSTAVAN

For Flavors for Food.
First use June 27, 1958.

SN 54,940. Fritzsche Brothers, Inc., New York, N. Y. Filed July 8, 1958.

DI-FRASOL

For Flavors for Food.
First use June 26, 1958.

SN 54,941. Fritzsche Brothers, Inc., New York, N. Y. Filed July 8, 1958.

FRASOL

For Flavors for Food.
First use June 26, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 46,416. Burnham Industries, Watertown, Conn. Filed Feb. 24, 1958.

"POP-STOP"

For Bottle Stoppers.
First use about Aug. 19, 1957.

SN 49,045. Chetley Products, Inc., New York, N. Y. Filed Apr. 4, 1958.

MILADY

For Plastic Table Pads.
First use Feb. 1, 1958.

SN 49,046. Chetley Products, Inc., New York, N. Y. Filed Apr. 4, 1958.

EMPRESS

For Plastic Table Pads.
First use Feb. 1, 1958.

Class 51—Cosmetics and Toilet Preparations

SN 18,767. N. I. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

CLEARLAN

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use Dec. 3, 1954.

SN 18,769. N. I. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

SPARKLELAN

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use Sept. 10, 1954.

SN 18,770. N. I. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

NIMLESTEROL

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use Apr. 7, 1955.

SN 18,771. N. I. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

GLOSSYLAN

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use Sept. 22, 1955.

SN 18,772. N. I. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

LESTROL

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use Feb. 21, 1956.

SN 27,078. Louis Bender, d. b. a. Elbee Sales, Westfield, N. J. Filed Mar. 28, 1957.

POISE

Owner of Reg. No. 576,253.
For Body Deodorants.
First use latter half of 1952.

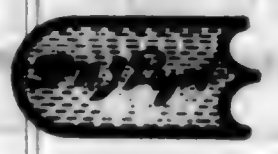
SN 30,824. Emanuel Nathanson, d. b. a. E. I. K. Co., Beth-

SN 29,510. Better Brushes, Inc., Palmer, Mass. Filed May 7, 1957.

MAGIC WAND

For Perfume Cream Sachet for Use as a Cosmetic.
First use Apr. 17, 1957.

SN 31,033. Societe Anonyme Laboratoires du Dr. N. G. Payot, Bois Colombes, Seine, France. Filed May 29, 1957.



"Dr. N. G. Payot" is the name of Nadine Rackhat, whose consent is of record. The drawing is lined for violet and gold. Owner of Reg. No. 443,780.
For Beauty Lotion, Sun Tan Oil, Toilet Water, Perfume, Hair Tonic, Hair Oil, Nail Polish, Eau de Cologne, Beauty Cream, Rouge and Powder for the Face, and Lipstick.
First use January 1948; in commerce November 1951.

SN 31,035. Societe Anonyme Laboratoires du Dr. N. G. Payot, Bois Colombes, Seine, France. Filed May 29, 1957.

The drawing is lined for red. "Dr. N. G. Payot" is the commerical name of Nadine Rackhat, a founder of applicant, whose consent is of record. Owner of Reg. No. 443,780.
For Beauty Creams and Lipstick.
First use January 1948; in commerce November 1951.

SN 34,842. Carlos Blasini, New York, N. Y. Filed Aug. 2, 1957.

GOTAS D'OR

The word "Gotas" is Spanish for "drops"; the words "d'Or" is French for "of gold," the expression "Gotas d'Or" means "drops of gold."
For Perfume and Toilet Water Preparation.
First use July 25, 1957.

SN 41,386. The House of Stuart, Inc., Newark, N. Y. Filed Nov. 26, 1957.

MATINEE

For Perfume and Cologne.
First use Oct. 31, 1957.

SN 42,767. Del Russo Enterprises, Miami, Fla. Filed Dec. 20, 1957.

pink dew

For Liquid Facial Cleansing Lotion.
First use in 1950.

SN 43,725. Amazing Products, Inc., Coral Gables, Fla. Filed Jan. 10, 1958.

Amazing!

For Nail Hardener, Being a Liquid Rinse in Which the Nails of the Body Are Dipped so That the Nails Are Strengthened and Hardened.
First use in June 1957.

SN 44,074. Gabrieleen Co., Inc., Chicago, Ill. Filed Jan. 16, 1958.

WONDERFUL WORLD

For Instant Neutralizer and Penetrant and Cold Wave Lotion.
First use Apr. 11, 1945.

SN 45,854. Botany Mills, Inc., d. b. a. Rolley Co., South San Francisco, Calif. Filed Feb. 14, 1958.

BABY SEA AND SKI

Owner of Reg. Nos. 586,288 and 636,263.
For Suntan Lotion for Babies.
First use Dec. 20, 1957.

SN 46,035. Albert Verley & Company, Linden, N. J. Filed Feb. 17, 1958.

CORDULAN

For Lanolin Base for Use in the Manufacture of Cosmetic Preparations.
First use August 1957.

SN 47,115. F. Hoffmann-La Roche & Co. Aktiengesellschaft, Basel, Switzerland. Filed Mar. 5, 1958.

XYRENE

Owner of Swiss Reg. No. 167,673, dated Oct. 29, 1957.
For Shaving Lotion.

SN 47,987. The J. R. Watkins Company, Winona, Minn. Filed Mar. 18, 1958.

Watkins

Owner of Reg. Nos. 640,815, 207,525, and 209,940.
For Cosmetics—Namely, Skin Creams, Hand Creams, Liquid and/or Cream Preparations Used as Powder Base, Face Powder, Skin Lotions, Skin Freshener, Lipstick, Perfume, Colognes, Rouge, Sachets; Hair Grooming Preparations, Hair Pomade, Hair Pressing Oil, Preparation for Relief From Dandruff and Itching Scalp, Creme Hair Rinse, Body Deodorants and Anti-Perspirants, Bath Oil, Bath Salts, Perfumed Talcum Powder; Shaving Cream, Shaving Soap, Toothpaste, Tooth Powder and Home Permanent Preparations.
First use Feb. 17, 1958.

SN 49,949. Lusier Incorporated, Kansas City, Mo. Filed Apr. 18, 1958.

SI-BELLA

For Perfumes.
First use Apr. 1, 1958.

SN 43,721. Trust Company of Georgia, Atlanta, Ga. Filed

SN 50,701. The House of Stuart, Inc., Newark, N. Y. Filed Apr. 30, 1958.

SILILAN

For Hand Cream.
First use Feb. 12, 1958.

SN 50,703. The House of Stuart, Inc., Newark, N. Y. Filed Apr. 30, 1958.

CADDENZA

For Bath Oil, Cologne, and Perfume.
First use Nov. 15, 1944.

SN 50,704. The House of Stuart, Inc., Newark, N. Y. Filed Apr. 30, 1958.

GLO-GENT

For Skin Freshener.
First use June 24, 1942.

SN 50,770. Carter Products, Inc., New York, N. Y. Filed May 1, 1958.

PERSTOP

Owner of Reg. Nos. 309,996 and 653,880.
For Polyoxyethylated Hydroxy Surfactant Used as an Ingredient in a Personal Deodorant.
First use Sept. 18, 1957.

SN 50,824. Emanuel Nathanson, d. b. a. K. I. K. Co., Bethlehem, Pa. Filed May 1, 1958.

K.I.K.

Owner of Reg. No. 596,892.
For Brushless Denture Cleaner.
First use on or about July 1, 1953; May 1, 1958, in another display.

Class 52—Detergents and Soaps

SN 51,683. Alconox, Inc., New York, N. Y. Filed May 15, 1958.

ALCOTABS

For Cleaning and Detergent Compound for Washing and Cleaning Pipettes.
First use July 12, 1957.

SN 52,416. Hyrol Chemical Co., Chicago, Ill. Filed May 27, 1958.

FOCUS

For Eye Glass Cleaner and Anti-Fogger.
First use May 23, 1958.

SERVICE MARKS

Class 100—Miscellaneous

SN 4,405. Tower of Pizza, Jersey City, N. J. Filed Mar. 12, 1956.

Owner of Reg. No. 569,132.
For Catering Service.
First use May 4, 1951.

Class 101—Advertising and Business

SN 10,756. College Linen Supply, Inc., Utica, N. Y. Filed June 22, 1956. Sec. 2(f).

For Renting Bed Linens and Towels to Institutions and Individuals.
First use July 1, 1952.

SN 22,165. Decision, Inc., Cincinnati, Ohio. Filed Jan. 7, 1957.

Owner of Reg. No. 595,326.
For Management Consulting in the Field of Industrial Labor Relations and Employee Recruiting Services for Business and Industry.
First use January 1950.

SN 25,249. Groene, Willard Le Blond Machine Tools, Scottsdale, Ariz. Filed Feb. 28, 1957.

EVERYTHING WILL "G" IF YOU BUY FROM GRO"NEE"

For Services as Manufacturers' Representative in the Field of Machine Tools.
First use Feb. 11, 1957.

SN 26,707. Buccaneer Stamp Company, Waco, Tex. Filed Mar. 25, 1957.

BUCCANEER

For Promoting Sale of Goods of Others Through the Use of Trading Stamps Which Are Redeemed for Merchandise or Money.
First use Feb. 1, 1957.

SN 27,013. The Association of Kinsmen Clubs, Toronto, On-

SN 42,721. Trust Company of Georgia, Atlanta, Ga. Filed Jan. 8, 1958.

STEADI-SAVE

For Automatic Savings Plan.
First use Feb. 1, 1957.

SN 44,801. Chester Enterprises, Inc., Baltimore, Md. Filed Jan. 28, 1958.

IT'S IN THE NAME.

For Title of an Audience Participation Television Show.
First use Jan. 9, 1958.

Class 102 — Insurance and Financial

SN 21,494. American Credit Indemnity Company of New York, Baltimore, Md. Filed Dec. 24, 1956. Sec. 2(f).

AMERICAN CREDIT INSURANCE

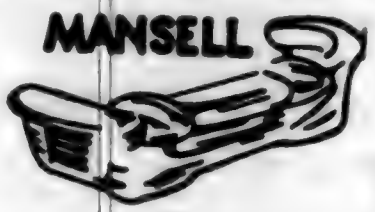
Applicant disclaims its right in the words "Credit Insurance" except when the same are used in the service mark "American Credit Insurance."
For Underwriting Credit Insurance.
First use Feb. 18, 1944.

SN 40,874. Security Bank, Lincoln Park, Mich. Filed Apr. 17, 1958.

For Banking Services.
First use July 25, 1950.

Class 103 — Construction and Repair

SN 31,509. J. C. Robinson Company, Detroit, Mich. Filed June 6, 1957.

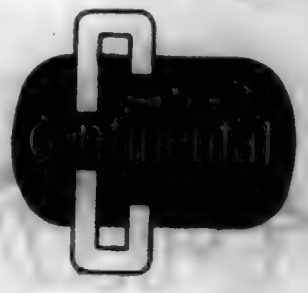


For Automobile Bumper Repairing and Replating.
First use Mar. 1, 1956.

SN 33,593. The Women's Housing Congress, Inc., Washington, D. C. Filed July 11, 1957.

For Construction and Advisory Services Relative to Domicile Construction and Repair.
First use May 3, 1957.

SN 43,667. Continental Boiler and Sheet Iron Works, St. Louis, Mo. Filed Jan. 9, 1958.



Owner of Reg. Nos. 616,429 and 653,036.
For Designing, Engineering, and Fabricating of Industrial Equipment in Accordance With the Designs and Specifications of Others.
First use in 1903.

Class 104 — Communication

SN 35,960. Westinghouse Broadcasting Company, Inc., New York, N. Y. Filed Aug. 21, 1957.

For Television Broadcasting Services of Certain of Applicant's Television Broadcasting Stations.
First use on or about May 31, 1956.

Class 105 — Transportation and Storage

SN 39,231. Illinois-California Express, Inc., Denver, Colo. Filed Oct. 21, 1957.

ILLINOIS-CALIFORNIA EXPRESS

For Transportation of Cargo and Freight by Motor Vehicle.
First use January 1948.

SN 45,061. Nametra, Inc., New York, N. Y. Filed Jan. 31, 1958.

MAGICRUISE

For Conducted and Non-Conducted All-Expenses Tours in Foreign Countries, Including All Land, Air and Steamer Arrangements.
First use Sept. 8, 1955.

Class 106—Material Treatment

SN 43,735. Bradford Dyeing Association (U. S. A.), Westerly, R. I. Filed Jan. 10, 1958.

Owner of Reg. Nos. 191,216, 643,088, and others.

For Services Rendered Manufacturers of All Types of Cotton Fabrics and Mixtures Thereof, Which Services Consist of Rendering Said Fabrics Chlorine Resistant and Crease Resistant and Further Rendering Said Fabrics Shrunk to Within Two Percent Average Residual Shrinkage by Government Test Methods.

First use Apr. 11, 1957.

Class 107—Education and Entertainment

SN 15,240. Telemissions, Inc., Chagrin Falls, Ohio. Filed Sept. 6, 1956.

TELEMISSIONS

For Distribution of Religious Films to Television Stations, Church Organizations, and Other Public Viewing Agencies and Companies.

First use on or about Nov. 9, 1954.

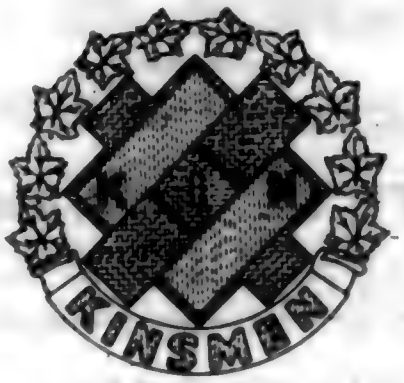
SN 28,286. Albert F. Ruckes, Jr., Hubbard, Ohio. Filed Apr. 16, 1957.

RUMPUS ROOM

For Title of a Television Program—Namely, a Variety Show.

First use Aug. 24, 1953.

SN 37,613. The Association of Kinsmen Clubs, Toronto, Ontario, Canada. Filed Sept. 23, 1957.



The drawing is lined for the colors yellow and purple.

For Promotion and Direction of Philanthropic Work and Fellowship Among Men of Good Character Both in Canada and in Association With Corresponding Organizations in the United States and Other Parts of the World

First use in August 1951.

SN 38,459. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Oct. 7, 1957.

Hallmark
Hall of Fame

For Title of Television and Radio Programs—Namely, Entertainment in the Form of Plays or Drama.

First use in January 1952.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 60,456. American Society of Safety Engineers, Chicago, Ill. Filed Oct. 15, 1958.

The drawing is lined for green and gold.

For Indicating Membership in the Applicant Organization.

First use Apr. 23, 1920.

Class 18—Medicines and Pharmaceutical

670,858. ALUMALYTIC. General Electric Company. SN

First use Sept. 8, 1955.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

670,797. VERDE ISSORIE. Montecatini Societa Generale per l'Industria Mineraria e Chimica. SN 10,791. Pub. 9-23-58. Filed 6-23-56.

670,798. FOAMALON. Foamalon Company Inc. SN 25,606. Pub. 9-23-58. Filed 3-6-57.

670,799. DEERHEAD. Southwest Commodity Corporation. SN 39,675. Pub. 9-23-58. Filed 10-28-57.

670,800. CIPCO-FOAM. Essex Wire Corporation, d. b. a. Carolina Industrial Plastics Corporation. SN 40,568. Pub. 9-23-58. Filed 11-13-57.

670,801. DORIX. Farbenfabriken Bayer Aktiengesellschaft. SN 41,700. Pub. 9-23-58. Filed 12-3-57.

670,802. CELAIR. Celanese Corporation of America. SN 46,284. Pub. 9-23-58. Filed 2-21-58.

670,803. TAY-GLO. Excel Potting Soil, Inc. SN 46,422. Pub. 9-23-58. Filed 2-24-58.

Class 2—Receptacles

670,804. MULLEN. Mullen Container Corporation. SN 45,750. Pub. 9-23-58. Filed 2-12-58.

Class 4—Abrasives and Polishing Materials

670,805. DESIGN OF SMALL MAN. The Martindale Electric Co. CONSOLIDATED CERTIFICATE. SN 40,478, pub. 8-5-58, filed 11-12-57, Cl. 4; SN 40,476, pub. 8-19-58, filed 11-12-57, Cl. 21; SN 40,477, pub. 9-16-58, filed 11-12-57, Cl. 26.

Class 6—Chemicals and Chemical Compositions

670,806. STA-FINE. A. E. Staley Manufacturing Company. SN 43,800. Pub. 9-23-58. Filed 1-13-58.

670,807. SPENSOL GREEEN. Spencer Chemical Company. SN 44,763. Pub. 9-23-58. Filed 1-27-58.

Class 7—Cordage

670,808. JEWEL-TYE. Artistic Ribbon Mfg. Corp. SN 41,685. Pub. 9-23-58. Filed 12-3-57.

Class 12—Construction Materials

670,809. SAFE-T-LIFT S-T-L AND DESIGN. North Main Lumber Company, Inc. SN 23,168. Pub. 9-23-58. Filed 1-24-57.

670,810. NATCO. Natco Corporation. SN 26,224. Pub. 9-23-58. Filed 3-8-57.

670,811. KRETEFORM. Detroit Macoid Corporation. SN 31,907. Pub. 9-23-58. Filed 6-13-57.

670,812. CECOROLL. Cece Steel Products Corporation. SN 32,732. Pub. 9-23-58. Filed 6-27-57.

670,813. CENTER-RITE. The Gilbert & Bennett Manufacturing Company, Inc. SN 33,147. Pub. 9-23-58. Filed 7-3-57.

670,814. PERSPEC. Aetna Steel Products Corporation. SN 37,396. Pub. 9-23-58. Filed 9-18-57.

670,815. STYLTONE AND DESIGN. Baldwin-Hill Company. SN 38,523. Pub. 9-23-58. Filed 10-8-57.

670,816. MURALON. National Aluminum Company. SN 39,656. Pub. 9-23-58. Filed 10-28-57.

670,817. ALLITE. Allied Chemical Corporation, by change of name from Allied Chemical & Dye Corporation. SN 40,797. Pub. 9-23-58. Filed 11-18-57.

670,818. DEEP-TEX. National Gypsum Company. SN 41,472. Pub. 9-23-58. Filed 11-27-57.

670,819. DOWMAN'S. Dowman Products, Inc. SN 41,630. Pub. 9-23-58. Filed 12-2-57.

670,820. HOMCO. Houston Oil Field Material Company, Inc. SN 42,024. Pub. 9-23-58. Filed 12-6-57.

670,821. ECONO-RAIL. Newman Brothers, Incorporated. SN 42,657. Pub. 9-23-58. Filed 12-18-57.

670,822. SAMASTONE. Louis M. Polak, Jr. SN 43,047. Pub. 9-23-58. Filed 12-26-57.

670,823. NOVODOR. United States Plywood Corporation. SN 43,792. Pub. 9-23-58. Filed 1-10-58.

670,824. CHAFCO AND DESIGN. Chas. H. Anderson Floors, Inc. SN 46,068. Pub. 9-23-58. Filed 2-19-58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

670,825. S AND DESIGN OF GLOBE. Sesstrom Manufacturing Co. SN 29,493. Pub. 9-23-58. Filed 5-6-57.

670,826. SPRING FLOW. Associated Spring Corporation. SN 45,307. Pub. 9-23-58. Filed 2-6-58.

670,827. DESIGN OF TRIANGULAR FIGURE. Associated Spring Corporation. SN 47,553. Pub. 9-23-58. Filed 3-12-58.

Class 14—Metals and Metal Castings and Forgings

670,828. ACCRA-CORE. Consolidated Foundries and Mfg. Corp. SN 11,051. Pub. 9-23-58. Filed 6-13-56.

670,829. AERON. Metallgesellschaft Aktiengesellschaft. SN 34,971. Pub. 9-23-58. Filed 8-5-57.

670,830. GLOBE AND DESIGN. Interlake Iron Corporation. SN 37,791. Pub. 9-23-58. Filed 9-25-57.

Class 15—Oils and Greases

670,831. PARADE AND DESIGN. Hunt Oil Company. SN 46,449. Pub. 9-23-58. Filed 2-24-58.

670,832. HX AND DESIGN. Hunt Oil Company. SN 46,450. Pub. 9-23-58. Filed 2-24-58.

670,833. ROLAPLATE. Adolph Gottscho, Inc. SN 47,554. Pub. 9-23-58. Filed 3-17-58.

Class 27—Horological Instruments

Class 18—Medicines and Pharmaceutical Preparations

670,833. STAVITE. A. E. Staley Manufacturing Company. SN 639,850. Pub. 2-23-54. Filed 12-20-52.

670,834. MORNING GLORY. SchenLabs Pharmaceuticals, Inc., by change of name from Schenley Laboratories, Inc. SN 31,691. Pub. 9-23-58. Filed 6-10-57.

670,835. INSORB. Rexall Drug Company. SN 41,941. Pub. 9-23-58. Filed 12-6-57.

670,836. AERO METER. Rexall Drug Company. SN 41,942. Pub. 9-23-58. Filed 12-6-57.

670,837. DENTRETS. Fulvio Febo, d. b. a. Prescripto Products. SN 47,636. Pub. 9-23-58. Filed 3-13-58.

670,838. CELLADOL. The Fleetwood Company. SN 47,849. Pub. 9-23-58. Filed 3-17-58.

Class 20—Linoleum and Oiled Cloth

670,839. KEYNOTE. Congoleum-Nairn Inc. SN 40,431. Pub. 9-23-58. Filed 11-12-57.

Class 21—Electrical Apparatus, Machines, and Supplies

670,805. CONSOLIDATED CERTIFICATE. See Class 4.

670,840. HITRIM. Bourns Laboratories, Inc. SN 20,243. Pub. 9-23-58. Filed 12-3-56.

670,841. NATUR-A-LITE AND DESIGN. William D. O'Morrow, d. b. a. Natur-A-Lite Company. SN 20,288. Pub. 9-23-58. Filed 12-3-56.

670,842. ROTO-FORK FUN TOOL AND DESIGN. Blair Specialty Company. SN 24,485. Pub. 9-23-58. Filed 2-15-57.

670,843. FSP. Whirlpool Corporation, by change of name from Whirlpool-Seeger Corporation. SN 27,158. Pub. 9-23-58. Filed 3-28-57.

670,844. MINILARM. Russell & Stoll Company, Inc. SN 27,739. Pub. 9-23-58. Filed 4-8-57.

670,845. FSP. Whirlpool Corporation. SN 31,616. Pub. 9-23-58. Filed 6-7-57.

670,846. FM TELEVERTER. Industrial Development Engineering Associates, Inc. SN 32,601. Pub. 9-23-58. Filed 6-25-57.

670,847. MICROVERTER. Barber-Colman Company. SN 32,898. Pub. 9-23-58. Filed 7-1-57.

670,848. SUNSHINE. Zenith Radio Corporation (Delaware corporation), by merger from Zenith Radio Corporation (Illinois corporation). SN 33,594. Pub. 9-23-58. Filed 7-11-57.

670,849. FPE AND DESIGN. Federal Pacific Electric Company. SN 33,611. Pub. 9-23-58. Filed 7-12-57.

670,850. DIAL-TENNA. Zenith Radio Corporation (Delaware corporation), by merger from Zenith Radio Corporation (Illinois corporation). SN 34,483. Pub. 9-23-58. Filed 7-26-57.

670,851. ERIE AND DESIGN. Erie Resistor Corporation. SN 34,525. Pub. 9-23-58. Filed 7-29-57.

670,852. GIANT VIEW. Mellink Steel Safe Co. SN 34,934. Pub. 9-23-58. Filed 8-5-57.

670,853. SUN AIR. Sunair Electronics, Inc. SN 36,323. Pub. 9-23-58. Filed 8-27-57.

670,854. SKYWATCH. Vericontrol Associates. SN 36,691. Pub. 9-23-58. Filed 9-4-57.

670,855. LINDLY AND DESIGN. Lindly & Company, Inc. SN 37,436. Pub. 9-23-58. Filed 9-18-57.

670,856. HELI-TUBE. Morris M. Newman, d. b. a. M. M. Newman Co. SN 38,374. Pub. 9-23-58. Filed 10-4-57.

670,857. OMEGA AND DESIGN. F. & B. Mfg. Co. SN 41,523. Pub. 9-23-58. Filed 11-29-57.

670,858. ALUMALYTIC. General Electric Company. SN 42,014. Pub. 9-23-58. Filed 12-9-57.

670,859. ACROMAG AND DESIGN. Acromag, Incorporated. SN 42,234. Pub. 9-23-58. Filed 12-13-57.

670,860. NICOTAPS. The National Telephone Supply Company. SN 42,897. Pub. 9-23-58. Filed 12-23-57.

670,861. GARDTROL. Shand and Jurs Co. SN 43,051. Pub. 9-23-58. Filed 12-26-57.

670,862. ZERO-START. Phillips Manufacturing Company, Inc. SN 43,339. Pub. 9-23-58. Filed 1-2-58.

670,863. HILCO. Howard L. Hill, d. b. a. Hilco Products. SN 44,022. Pub. 9-23-58. Filed 1-15-58.

670,864. PULFUZSW. Frank Adam Electric Company. SN 44,053. Pub. 9-23-58. Filed 1-16-58.

670,865. LINEARSYN. Sanborn Company. SN 44,122. Pub. 9-23-58. Filed 1-16-58.

670,866. CORRUSTEEL. Wandleside Cable Works Limited. SN 44,140. Pub. 9-23-58. Filed 1-16-58.

670,867. CUPROCHROME. Wilbur B. Driver Company. SN 44,162. Pub. 9-23-58. Filed 1-17-58.

670,868. PERMOCARB. Wilbur B. Driver Company. SN 44,163. Pub. 9-23-58. Filed 1-17-58.

670,869. PERMAGRID. Wilbur B. Driver Company. SN 44,164. Pub. 9-23-58. Filed 1-17-58.

670,870. MAGNOCARB. Wilbur B. Driver Company. SN 44,165. Pub. 9-23-58. Filed 1-17-58.

670,871. RADIOCARB. Wilbur B. Driver Company. SN 44,166. Pub. 9-23-58. Filed 1-17-58.

670,872. ARMOURLIGHT. Pilkington Brothers Limited. SN 44,349. Pub. 9-23-58. Filed 1-17-58.

670,873. CUSTOM TREND AND DESIGN. General Electric Company (Hotpoint Co. Division). SN 44,699. Pub. 9-23-58. Filed 1-27-58.

670,874. ATTENUTRON. Bomac Laboratories Inc. SN 44,871. Pub. 9-23-58. Filed 1-29-58.

Class 22—Games, Toys, and Sporting Goods

670,875. AHC AND DESIGN. America's Hobby Center, Inc. SN 31,179. Pub. 9-23-58. Filed 6-3-57.

670,876. MURRAY. The Murray Ohio Manufacturing Company. SN 46,474. Pub. 9-23-58. Filed 2-24-58.

670,877. MIN-O-POP. Frank R. Steuart. SN 46,857. Pub. 9-23-58. Filed 2-28-58.

670,878. THE PLAYMATE. A. J. Industries Corporation. SN 47,306. Pub. 9-23-58. Filed 3-10-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

670,879. RIVESTIMENTO DALMINE. Dalmine S. p. A. SN 23,878. Pub. 9-23-58. Filed 1-14-57.

670,880. M·H·F. Massey-Ferguson Limited, by change of name from Massey-Harris-Ferguson Limited. SN 24,180. Pub. 9-23-58. Filed 2-11-57.

670,881. GLYCODRATOR. Graver Tank & Mfg. Co., Inc. SN 32,240. Pub. 9-23-58. Filed 6-19-57.

670,882. SOLVO. Improved Machinery Inc. SN 35,262. Pub. 9-23-58. Filed 8-9-57.

670,883. LIMBEROPE. Joy Manufacturing Company. SN 35,783. Pub. 9-23-58. Filed 8-19-57.

670,884. THOROWELD. The Matisa Equipment Corporation. SN 38,295. Pub. 9-23-58. Filed 10-3-57.

670,885. DUALMATIC ETC. AND DESIGN. Charles W. Simonsen, d. b. a. Dualmatic Products Corp. SN 40,507. Pub. 9-23-58. Filed 11-12-57.

670,886. MOSLEWING. N. V. P. J. Endenburg's Zeilmakerij & Scheepstuigerij. SN 42,655. Pub. 9-23-58. Filed 12-18-57.

670,887. SCAF-O-MATIC. Universal Manufacturing Corporation. SN 46,070. Pub. 9-23-58. Filed 2-18-58.

670,936. FAN-PAC. American Machine and Metals, Inc. 670,961. PHOENIX HARBURG AND DESIGN. Phoenix

670,888. ROLAPLATE. Adolph Gottscho, Inc. SN 47,884. Pub. 9–23–58. Filed 3–17–58.

670,889. EXTRUCTOR. Rietz Manufacturing Co. SN 48,053. Pub. 9–23–58. Filed 3–19–58.

670,890. ECONO-SLING. C. A. Stephan, Inc. SN 48,062. Pub. 9–23–58. Filed 3–19–58.

670,891. NYLEX. William Gegenheimer Co., Inc. SN 48,090. Pub. 9–23–58. Filed 3–20–58.

670,892. UNI-TEMP. Salyers Equipment Co. SN 48,852. Pub. 9–23–58. Filed 3–24–58.

670,893. TCS AND DESIGN. Thieme Construction Supplies, Inc. SN 48,289. Pub. 9–23–58. Filed 3–24–58.

670,894. MIRRO-KEEN. Simonds Worden White Company. SN 48,504. Pub. 9–23–58. Filed 3–26–58.

670,895. SCAN-O-MATIC. Aage Jensen, d. b. a. Waterborg Machine Company. SN 46,538. Pub. 9–23–58. Filed 3–27–58.

670,896. L & J. L & J Press Corporation. SN 48,568. Pub. 9–23–58. Filed 3–27–58.

670,897. KNIT-MASTER. Sampson Broadwin and Leopold Broadwin, d. b. a. Almelie Knitting Machine Company. SN 51,421. Pub. 9–23–58. Filed 5–12–58.

670,898. TRU-EDGE. Lennox Industries, Inc. SN 51,473. Pub. 9–23–58. Filed 5–12–58.

670,899. CURVED LINE DESIGN. Simonds Saw and Steel Company. SN 51,509. Pub. 9–23–58. Filed 5–12–58.

670,900. TACO AND DESIGN. Taco Heaters, Incorporated. SN 51,519. Pub. 9–23–58. Filed 5–12–58.

670,901. GUIDE STITCH CORPORATION AND DESIGN. Guide Stitch Corporation. SN 51,713. Pub. 9–23–58. Filed 5–15–58.

670,902. BANTAM. Schield Bantam Company. SN 51,820. Pub. 9–23–58. Filed 5–16–58.

670,903. SCULTROL. Scully Signal Company. SN 51,823. Pub. 9–23–58. Filed 5–16–58.

670,904. LITTLE CORPORAL. Detrex Chemical Industries, Inc. SN 51,882. Pub. 9–23–58. Filed 5–19–58.

670,905. LUNDELL ETC. AND DESIGN. Lundell Manufacturing Company. SN 51,919. Pub. 9–23–58. Filed 5–19–58.

670,906. PERMA-PAD. Wilton Tool Manufacturing Co., Inc. SN 51,960. Pub. 9–23–58. Filed 5–19–58.

670,907. WESSON. Wesson Tool Company. SN 51,967. Pub. 9–23–58. Filed 5–19–58.

670,908. NATCO AND DESIGN. National Automatic Tool Company, Inc. SN 52,007. Pub. 9–23–58. Filed 5–20–58.

670,909. LUXITE AND DESIGN. Deluxe Service Tool Corporation. SN 52,037. Pub. 9–23–58. Filed 5–21–58.

670,910. PERM-ALUM. Sterling National Industries, Inc. SN 52,074. Pub. 9–23–58. Filed 5–21–58.

670,911. HIT AND DESIGN. Hardware & Industrial Tool Company, Inc. SN 52,119. Pub. 9–23–58. Filed 5–22–58.

Class 24 — Laundry Appliances and Machines

670,912. SLEEPING COLLAR. Ward Industries Corporation. SN 30,522. Pub. 9–23–58. Filed 5–22–57.

Class 26 — Measuring and Scientific Appliances

670,805. CONSOLIDATED CERTIFICATE. See Class 4.

670,913. SERVOGRAPH. Servo Corporation of America, assignee of Servo-Tek Products Co. SN 555,632. Pub. 9–5–50. Filed 4–26–48.

670,914. VXIIa. Camera Specialty Co., Inc. SN 25,590. Pub. 9–23–58. Filed 3–6–57.

670,915. DESIGN OF SHIELD. Henry Valve Company, Incorporated. SN 29,211. Pub. 9–23–58. Filed 5–1–57.

670,916. DUBL DUAL. The Dual Parking Meter Company. SN 29,345. Pub. 9–23–58. Filed 5–3–57.

Class 27 — Horological Instruments

670,917. PATEK. The Henri Stern Watch Agency, Inc. SN 34,379. Pub. 9–23–58. Filed 7–25–57.

670,918. JAMBOREE. Compagnie des Montres Longines Francillon S. A. (Longines Watch Co. Francillon Ltd.). SN 45,452. Pub. 9–23–58. Filed 2–7–58.

Class 29 — Brooms, Brushes, and Dusters

670,919. PERFECT HELPER. Clarence L. Moss, d. b. a. Moss Plastic Products Company. SN 37,895. Pub. 9–23–58. Filed 9–26–57.

Class 30 — Crockery, Earthenware, and Porcelain

670,920. KILNCRAFT. The Edwin M. Knowles China Company. SN 45,810. Pub. 9–23–58. Filed 2–13–58.

Class 31 — Filters and Refrigerators

670,921. REVAP. McQuay, Inc. SN 52,134. Pub. 9–23–58. Filed 5–22–58.

Class 32 — Furniture and Upholstery

670,922. PRO-FILE. Yawman and Erbe Manufacturing Company, Inc. SN 29,988. Pub. 9–24–57. Filed 5–10–57.

670,923. MARBLETONE. Curtis Companies Incorporated. SN 32,057. Pub. 9–23–58. Filed 6–17–57.

670,924. SPACEFINDER. Tab Products Co. SN 39,344. Pub. 9–23–58. Filed 10–22–57.

670,925. SPACE-GUARD. The Globe-Wernicke Co. SN 40,231. Pub. 9–23–58. Filed 11–7–57.

670,926. TAO COLLECTION. Kaplan Furniture Company. SN 40,763. Pub. 9–23–58. Filed 11–15–57.

670,927. SILL RACK RITE AND DESIGN. Robert E. Sill, d. b. a. Sill Rack-Rite Co. SN 45,920. Pub. 9–23–58. Filed 2–14–58.

670,928. 2-WAY SERVA-TRAY-TABLE. Madison Industries, Inc. SN 50,372. Pub. 9–23–58. Filed 4–25–58.

670,929. QUADRILLE. Drexel Furniture Company. SN 51,735. Pub. 9–23–58. Filed 5–16–58.

670,930. MASQUERADER. Northome Furniture Industries, Inc. SN 51,932. Pub. 9–23–58. Filed 5–19–58.

670,931. CATALINA. Blazon, Inc. SN 52,266. Pub. 9–23–58. Filed 5–26–58.

670,932. WONDURA. M. Goodman Plastics Mfg. Co., Inc. SN 52,303. Pub. 9–23–58. Filed 5–26–58.

670,933. REVERSAFOAM. The Spring-Air Company. SN 53,980. Pub. 9–23–58. Filed 5–23–58.

Class 33 — Glassware

670,934. GOLDEN TRIANGLE. Club Aluminum Products Company. SN 42,839. Pub. 9–23–58. Filed 12–23–57.

Class 34 — Heating, Lighting, and Ventilating Apparatus

670,935. FBP. Whirlpool Corporation. SN 29,119. Pub. 9–23–58. Filed 4–29–57.

Class 46 — Foods and Ingredients of Foods

671,006. IGA. Independent Grocers' Alliance Distributing Company. SN 44,093. Pub. 9–23–58. Filed 1–16–58.

670,936. FAN-PAC. American Machine and Metals, Inc. SN 31,808. Pub. 9-23-58. Filed 6-12-57.

670,937. CARNES AND DESIGN. Carnes Corporation. SN 41,796. Pub. 9-23-58. Filed 12-5-57.

670,938. GAFFERS & SATTLER. Utility Appliance Corp. SN 44,774. Pub. 9-23-58. Filed 1-27-58.

670,939. HERCULES. Paetushin Industries, Inc. SN 47,273. Pub. 9-23-58. Filed 3-7-58.

670,940. CENTRILATOR. Clarage Fan Company. SN 47,629. Pub. 9-23-58. Filed 3-13-58.

670,941. POWER THROW. Medine Manufacturing Company. SN 47,881. Pub. 9-23-58. Filed 3-17-58.

670,942. LUXWOOD. Thomas Industries, Inc. SN 47,912. Pub. 9-23-58. Filed 3-17-58.

670,943. SOUTHERN PRIDE. A I Root Company of Texas, Inc. SN 48,127. Pub. 9-23-58. Filed 3-21-58.

670,944. SUNRAY. National-U. S. Radiator Corporation. SN 48,197. Pub. 9-23-58. Filed 3-21-58.

Class 36 — Musical Instruments and Supplies

670,945. DUNCAN RHYTHOCYCLE. Duncan Rhythocycle, Inc. SN 5,009. Pub. 9-23-58. Filed 4-2-56.

670,946. HIFISTAR. Contina Bureaux- und Rechenmaschinenfabrik, Aktiengesellschaft. SN 19,051. Pub. 9-23-58. Filed 11-21-56.

670,947. HIFIMAT. Contina Bureaux- und Rechenmaschinenfabrik, Aktiengesellschaft. SN 19,052. Pub. 9-23-58. Filed 11-21-56.

670,948. DOLMETSCH. Arnold Dolmetsch Limited. SN 36,573. Pub. 9-23-58. Filed 9-3-57.

670,949. HOT POTATO. Wm. Kratt Co. SN 38,699. Pub. 9-23-58. Filed 10-10-57.

670,950. ALTA. Alta Records. SN 42,572. Pub. 9-23-58. Filed 12-17-57.

Class 37 — Paper and Stationery

670,951. COPY-FAX. Micropoint, Incorporated. SN 34,718. Pub. 5-20-58. Filed 7-31-57.

Class 38 — Prints and Publications

670,952. PORSCHE PANORAMA. Porsche Club of America, Inc. SN 31,337. Pub. 9-23-58. Filed 6-4-57.

670,953. THE PUBLIC PULSE. Elmo Roper and Associates. SN 34,177. Pub. 9-23-58. Filed 7-22-57.

Class 39 — Clothing

670,954. ROYAL PLUMAGE (FANCIFUL). Leo C. Hofman. SN 632,937. Pub. 7-29-53. Filed 7-23-52.

670,955. "TESTED IN THE STIRRUP WHERE IT REALLY COUNTS" AND DESIGN. Acme Boot Manufacturing Company, Inc. SN 693,108. Pub. 9-23-58. Filed 8-16-55.

670,956. DERBY. Union Underwear Company, Inc. SN 24,216. Pub. 9-23-58. Filed 2-11-57.

670,957. TREASURE X. Peter Pan Foundations, Inc. SN 28,272. Pub. 10-22-57. Filed 4-16-57.

670,958. BARELACE. The Mayer Company, Inc. SN 31,940. Pub. 9-23-58. Filed 6-13-57.

670,959. FREEDOM WALKER. Lester Pincus Shoe Corporation. SN 33,500. Pub. 9-23-58. Filed 7-10-57.

670,960. SHOCKGARD AND DESIGN. Mine Safety Appliances Company. SN 33,502. Pub. 9-23-58. Filed 7-11-57.

670,961. PHOENIX HARBURG AND DESIGN. Phoenix Gummiwerke Aktiengesellschaft. SN 34,002. Pub. 9-23-58. Filed 7-18-57.

670,962. LONDONUS. Louis London & Sons. SN 38,294. Pub. 9-23-58. Filed 10-3-57.

670,963. ANTARTEX. Donald MacDonald (Antartex) Limited. SN 39,538. Pub. 9-23-58. Filed 10-25-57.

670,964. T 'N' GREEN. Dean-Morris Shoe Co., Inc. SN 40,666. Pub. 9-23-58. Filed 11-14-57.

670,965. MISS UNITED STATES. Catalina, Inc. SN 41,888. Pub. 9-23-58. Filed 12-6-57.

670,966. DOLLY. Dolly Hosiery Mills, Incorporated. SN 42,692. Pub. 9-23-58. Filed 12-19-57.

670,967. BECK BOUQUETS AND DESIGN. A. S. Beck Shoe Corporation. SN 42,819. Pub. 9-23-58. Filed 12-23-57.

670,968. BARLETTA. Barletta Shoe Co. SN 43,416. Pub. 9-23-58. Filed 1-6-58.

670,969. BRIARCLIFF. International Shoe Company. SN 45,391. Pub. 9-23-58. Filed 2-6-58.

670,970. S AND DESIGN. Safeway Stores, Incorporated. SN 45,615. Pub. 9-23-58. Filed 2-10-58.

670,971. SOUVENIR. Hudson Hosiery Company. SN 45,975. Pub. 9-23-58. Filed 2-17-58.

670,972. QUEENS GIFT. Catawba Sales Agency, Inc. SN 46,108. Pub. 9-23-58. Filed 2-19-58.

670,973. ISLAND MAID. Hudson Hosiery Company. SN 46,144. Pub. 9-23-58. Filed 2-19-58.

670,974. WORKWELL. Kushins, Inc. SN 46,229. Pub. 9-23-58. Filed 2-20-58.

670,975. HIGH TENSION. Dunham Brothers Company. SN 46,298. Pub. 9-23-58. Filed 2-21-58.

670,976. JUSTIN AND DESIGN. H. J. Justin & Sons, Inc., d. b. a. Justin Boot Company. SN 46,320. Pub. 9-23-58. Filed 2-21-58.

670,977. CREW-TOPPER. Russell Hosiery Mills, Inc. SN 46,364. Pub. 9-23-58. Filed 2-21-58.

670,978. GRADS BY BRISTOL AND DESIGN. Vaisey-Bristol Shoe Company Incorporated. SN 46,382. Pub. 9-23-58. Filed 2-21-58.

670,979. LADY ORIS AND DESIGN. Lady Oris Hosiery Shops, Inc. SN 46,462. Pub. 9-23-58. Filed 2-24-58.

670,980. SAFESIDE. Sheldon Kahan, d. b. a. Kahan Shoes. SN 46,952. Pub. 9-23-58. Filed 3-3-58.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

670,981. BIANCHINI. Bianchini, Ferier, Inc. SN 47,557. Pub. 9-23-58. Filed 3-12-58.

670,982. WAICO. Waite Carpet Company. SN 47,797. Pub. 9-23-58. Filed 3-14-58.

Class 43 — Thread and Yarn

670,983. MOHLAN. National Spinning Co., Inc. SN 47,964. Pub. 9-23-58. Filed 3-18-58.

Class 44 — Dental, Medical, and Surgical Appliances

670,984. HYDROCEPTOR AND DESIGN. Vacudent Manufacturing Company. SN 21,040. Pub. 9-23-58. Filed 12-13-56.

670,985. TURBEX. The Fairfax Manufacturing Company, Inc. SN 32,877. Pub. 9-23-58. Filed 6-4-58.

Class 46—Foods and Ingredients of Foods

670,986. STALEY'S AND DESIGN. A. E. Staley Manufacturing Company. SN 632,582. Pub. 10–28–58. Filed 8–2–52.

670,987. STALEY'S AND DESIGN. A. E. Staley Manufacturing Company. SN 632,583. Pub. 1–13–53. Filed 8–2–52.

670,988 STALEY'S. A. E. Staley Manufacturing Company. SN 632,584. Pub. 10–28–52. Filed 8–2–52.

670,989. "THE FINEST COMPLIMENT TO YOUR GOOD TASTE." Guest Quality Foods, Inc. SN 21,150. Pub. 9–23–58. Filed 12–17–56.

670,990. PUDD'N-KRUNCH. Esther B. Patterson, d. b. a. Camac Co. SN 24,373. Pub. 9–23–58. Filed 2–13–57.

670,991. "BOO-FEE THE CRAB" AND DESIGN. Blue Channel Corporation. SN 31,303. Pub. 9–23–58. Filed 6–4–57.

670,992. POP-IN. Alex Ferrante, d. b. a. Ferrante's Pop-In Pizza. SN 41,809. Pub. 9–23–58. Filed 12–5–57.

670,993. SKINNER AND DESIGN. Skinner Manufacturing Company. SN 42,923. Pub. 9–23–58. Filed 12–23–57.

670,994. EHLERS I AND DESIGN. Albert Ehlers, Inc. SN 48,406. Pub. 9–23–58. Filed 3–25–58.

Class 49—Distilled Alcoholic Liquors

670,995. GOLDEN SQUARE. Schenley Industries, Inc. SN 47,522. Pub. 9–23–58. Filed 3–11–58.

Class 50—Merchandise Not Otherwise Classified

670,996. PORTA-CABANA. George Gough. SN 30,162. Pub. 9–23–58. Filed 5–16–57.

670,997. FLORA-FOUNTAIN. Fred Roberts Co. SN 34,257. Pub. 9–23–58. Filed 7–23–57.

670,998. W AND DESIGN. The Wallace Co., Inc. SN 35,711. Pub. 9–23–58. Filed 8–16–57.

670,999. TEN-A-FLEX. Florida Plastics, Inc. SN 42,012. Pub. 9–23–58. Filed 12–9–57.

Class 51—Cosmetics and Toilet Preparations

671,000. FRENCH TOUCH. Charles Antell, Inc. SN 44,247. Pub. 9–23–58. Filed 1–20–58.

671,001. DROPS OF BRILLIANCE. Helene Curtis Industries, Inc. SN 44,264. Pub. 9–23–58. Filed 1–20–58.

671,002. TAMMY. Old 97 Company, d. b. a. Marti Dare. SN 44,408. Pub. 9–23–58. Filed 1–21–58.

Class 52—Detergents and Soaps

671,003. OAKITE DRYCID. Oakite Products, Inc. SN 30,356. Pub. 12–24–57. Filed 5–20–57.

671,004. DEARSOL. Dearborn Chemical Company. SN 32,237. Pub. 9–23–58. Filed 6–19–57.

671,005. COCOLIVA. A. y R. Galofre & Cia. Limitada. SN 33,524. Pub. 9–23–58. Filed 7–8–57.

671,006. IGA. Independent Grocers' Alliance Distributing Company. SN 44,093. Pub. 9–23–58. Filed 1–16–58.

671,007. GLAD. Armour and Company. SN 44,248. Pub. 9–23–58. Filed 1–20–58.

671,008. ACATIONOX. Biological Research, Inc. SN 46,883. Pub. 9–23–58. Filed 3–3–58.

671,009. CAR-SKIN. Car-Skin Products Corporation. SN 47,232. Pub. 7–29–58. Filed 3–7–58.

671,010. NAILSOLV. Manpro Corporation. SN 32,604. Pub. 9–23–58. Filed 5–29–58.

Service Marks

Class 100—Miscellaneous

671,011. ADHESIVE SURFACES ENGINEERING AND DESIGN. Polymer Industries Inc. SN 6,876. Pub. 9–23–58. Filed 5–23–56.

671,012. THE DATICS CORPORATION AND DESIGN. The Datics Corporation. SN 18,844. Pub. 9–23–58. Filed 11–6–56.

Class 101—Advertising and Business

671,013. DCC AND DESIGN. Data Computing Corporation. SN 32,928. Pub. 9–23–58. Filed 7–1–57.

Class 102—Insurance and Financial

671,014. LIFE DIVIDEND GIFT. Princeton Theological Seminary. SN 4,474. Pub. 9–23–58. Filed 3–13–56.

671,015. COVER-ALL. United Fire & Casualty Company. SN 7,398. Pub. 9–23–58. Filed 4–30–56.

671,016. BUDGET-RITE. The Aetna Casualty and Surety Company. SN 33,034. Pub. 9–23–58. Filed 7–2–57.

Class 105—Transportation and Storage

671,017. CLIPPER. Pan American World Airways, Inc. SN 619,309. Pub. 6–10–53. Filed 9–27–51.

671,018. DESIGN OF BLUE SHIELD. Dampskibsselskabet af 1912 A/S, and A/S Dampskibsselskabet Svendborg. SN 35,172. Pub. 9–23–58. Filed 8–8–57.

Class 107—Education and Entertainment

671,019. THE CHAMPAGNE MUSIC OF LAWRENCE WELK. Teleklew Productions, Inc. SN 36,756. Pub. 9–23–58. Filed 9–5–57.

Certification Mark

Class B—Services

671,020. MARTINIZING. The American Laundry Machinery Company. SN 31,966. Pub. 9–23–58. Filed 6–14–57.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6—Chemicals and Chemical Compositions

671,021. Hyland Laboratories, Los Angeles, Calif. SN 33,877. Filed P. R. 7–17–57. Am. S. R. 3–10–58.

TRI-PLATE

For Disposable Petri Dish Containing Blood Agar Culture Medium.
First use Oct. 25, 1956.

671,022. Hyland Laboratories, Los Angeles, Calif. SN 33,878. Filed P. R. 7–17–57. Am. S. R. 3–10–58.

MULTI-PLATE

For Disposable Petri Dish Containing Blood Agar Culture Medium.
First use Oct. 25, 1956.

Class 37—Paper and Stationery

671,023. Charles Bruning Company, Inc., Chicago, Ill. SN 15,443. Filed P. R. 9–11–56. Am. S. R. 7–18–58.

COPYCARD

For Translucent Card Stock, for Receiving Writing, Printing, Typing, Drawings and Other Indicia.
First use in July 1956.

Class 46—Foods and Ingredients of Foods

671,024. Adams Corporation, Korn Kurls Division, Beloit, Wis. SN 22,647. Filed P. R. 1–10–57. Am. S. R. 1–3–58.

SNACK DIP

For Powdered Food Product for Mixing With Liquid To Form a Dip or Salad Dressing.
First use Dec. 19, 1956.

671,025. Ida Mae Salads, Inc., Brentwood, Md. SN 40,949. Filed P. R. 11–19–57. Am. S. R. 10–8–58.

Mrs. Brown's

For Packaged Fresh Salads—Namely, Potato Salad, Cole Slaw, Macaroni Salad, Pepper Hash, and Fruit and Vegetables in Gelatine Bases, All Sold as Refrigerated Items.
First use September 1956.

671,026. Ziel & Co., Inc., San Francisco, Calif. SN 48,072. Filed 3–28–58.

The Cambodian wording in the first panel may be translated to read "sweetened condensed milk" and "net weight 397 grams," the French wording in the second panel may be translated to read "sweetened condensed milk brand" and "manufactured in the United States of America for," and the Vietnamese wording in the fourth panel may be translated as "sweetened condensed milk" and "net weight 397 grams."
For Canned Condensed Milk.
First use February 1956.

671,027. Rod's Food Products, Inc., Los Angeles, Calif. SN 49,300. Filed 4–8–58.

For Salad Dressings.
First use Sept. 10, 1955.

671,028. The Home Canning Co., Blissfield, Mich. SN 54,762. Filed 7–3–58.

BLISSFIELD

For Canned Tomatoes.
First use Nov. 8, 1956.

Class 51—Cosmetics and Toilet Preparations

671,029. Coty, Inc., New York, N. Y. SN 9,446. Filed P. R. 6–1–56. Am. S. R. 3–12–58.

FAS TAN

For Sun Tan Lotion.
First use May 15, 1956.

671,030. Richard Hudnut, New York, N. Y. SN 12,626. Filed P. R. 7–23–56. Am. S. R. 10–10–58.

LIGHT UP RED

For Lipstick.
First use July 17, 1956.

671,031. Marcelle Cosmetics, Inc., Chicago, Ill. SN 31,407. Filed P. R. 6–5–57. Am. S. R. 9–30–58.

PINK TULIP

For Lipstick.
First use May 23, 1957.

671,032. Produits de Beauté Juvena S. à. r. l., Zurich, Switzerland. SN 38,114. Filed P. R. 8-27-57. Am. S. R. 7-28-58.

Owner of Swiss Reg. No. 165,517, dated May 3, 1957.

For Protective Cream To Prevent Sunburn, Creams for the Care of the Skin.

Class 52 — Detergents and Soaps

671,033. Chemco Specialties, Inc., d. b. a. Industrial Specialties Co., Dayton, Ohio. SN 698,774. Filed P. R. 11-23-55. Am. S. R. 9-18-58.

ISCO SAFE SPOTTER

For Preparations for the Removal of Spots and Stains. First use Jan. 15, 1949.

Service Marks

Class 101 — Advertising and Business

671,034. William B. Domnaleki, d. b. a. Cheese 'N Stuff, Phoenix, Ariz. SN 700,290. Filed P. R. 12-15-55. Am. S. R. 11-26-56.

For Retail Mail-Order Merchandising of Foods. First use Nov. 25, 1953.

Class 103 — Construction and Repair

671,035. United States Casting Repair Corp., Philadelphia, Pa. SN 34,752. Filed P. R. 7-31-57. Am. S. R. 10-17-58.

SEAL-LOCK

For Repairing Metal Castings of Others by Use of Metal Locking Slugs. First use May 1, 1957.

TRADEMARK REGISTRATIONS RENEWED

15,822. PIONEER. Cl. 46. 9-4-1888.
123,031. INTEROCEAN. Cl. 22. 10-8-18.
123,156. R & C AND DESIGN. Cl. 18. 10-15-18.
123,667. VICK'S. Cl. 18. 11-19-18.
123,751. PERCOPROOF. Cl. 26. 12-3-18.
124,004. J & M. Cl. 39. 12-31-18.
124,376. EAGLE. Cl. 28. 2-11-19.
124,377. REPRESENTATION OF EAGLE. Cl. 38. 2-11-19.
124,874. ALTISSIMO. Cl. 46. 3-18-19.
124,912. W. T. CO. AND DESIGN. Cl. 37. 3-18-19.
354,621. FOXCROFT. Cl. 42. 2-15-38.
356,193. CHARLES HEIDSIECK AND DESIGN. Cl. 47. 4-19-38.
356,375. HOME STITCH ORIGINAL AND DESIGN. Cl. 42. 4-26-38.
359,859. BRIT.TEX. Cl. 51. 8-30-38.
360,322. LAC-ER-SHEEN ETC. AND DESIGN. Cl. 42. 9-13-38.
360,323. VEL-O-SHEEN ETC. AND DESIGN. Cl. 42. 9-13-38.
360,976. LUMARITH. Cl. 2. 10-4-38.
361,102. ADHERON. Cl. 51. 10-4-38.
361,232. DRYBROW. Cl. 40. 10-11-38.
361,503. FLEXICORE. Cl. 23. 10-18-38.
361,603. OLYMPIAN. Cl. 36. 10-25-38.
361,621. FLAMEFAST. Cl. 80. 10-25-38.
361,884. OAK-HYTEX AND DIAMOND SHAPED FIGURE. Cl. 22. 11-1-38.
361,952. DIALYT. Cl. 26. 11-8-38.
362,317. CELLULUBE. Cl. 6. 11-15-38.
362,523. IVERS-LEE. Cl. 2. 11-22-38.
363,312. MOBIL. Cl. 13. 12-20-38.
363,419. CICO. Cl. 46. 12-27-38.
363,586. STANLEY AND DESIGN. Cl. 25. 1-3-39.
363,636. DAWSON DAYLIGHT. Cl. 1. 1-3-39.
363,983. SUNNY STATE AND DESIGN. Cl. 49. 1-17-39.
364,106. ONE GRAND. Cl. 46. 1-17-39.
364,223. SINGLE BLUE LINE. Cl. 37. 1-24-39.
364,225. MACAR. Cl. 4. 1-24-39.
364,247. ALDOURO. Cl. 47. 1-24-39.
364,281. JITTERBUG. Cl. 46. 1-24-39.
364,321. FORT SUMTER. Cl. 46. 1-24-39.
364,429. SUNDOUR. Cl. 42. 1-31-39.
364,443. BOILER COLLOIDENE. Cl. 52. 1-31-39.
364,517. MIDNITE SUN. Cl. 46. 2-7-39.
364,542. MINTRATE. Cl. 46. 2-7-39.
364,624. SNOW CAP AND DESIGN. Cl. 37. 2-7-39.
364,731. FINCASTLE AND DESIGN. Cl. 42. 2-14-39.
364,858. KAST-O-LITE. Cl. 12. 2-14-39.
365,025. KOWAVE. Cl. 28. 2-21-39.
365,026. SMOOTH-ON. Cl. 12. 2-21-39.
365,064. BETSY ROSS AND DESIGN. Cl. 42. 2-21-39.
365,126. PHENOGLU. Cl. 5. 2-21-39.
365,194. TEMPO-PHONIC. Cl. 21. 2-28-39.
365,214. GIANT INTERNATIONAL SERIES. Cl. 38. 2-28-39.
365,361. REVENESCENCE. Cl. 51. 3-7-39.
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565,804. DOLL-E-COACH BY AMSCO. Cl. 22.
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565,806. HEEL & SOLE CONTROL. Cl. 39.
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565,818. SUNFILTER. Cl. 19.

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93,246. BLUE RIBBON AND DESIGN. Cl. 46. 8–20–13. Oakford and Fahnestock. The Oakford Company, Peoria, Ill. Amended: In the statement, column 2, line 7, "teas" is deleted.

624,718. UHU-LINE. Cl. 6. 4–10–56. UHU-Werk H. u. M. Fischer, Buhl/Baden, Germany. Corrected: In the certificate, line 4 and in the statement, column 1, line 1, "corporation" should be deleted and *partnership* should be inserted.

640,622. POLYCUBE. Cl. 21. 1–29–57. Electro Silv-A-King Corporation, now by change of name Electro Lighting Corporation, Chicago, Ill. Corrected: In the certificate, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

643,189. SHIELD AND CROWN DESIGN. Cl. 21. 3–26–57. Electro Silv-A-King Corporation, now by change of name Electro Lighting Corporation, Chicago, Ill. Corrected: In the certificate, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

666,247. SOUND GUARD. Cl. 21. 8–26–58. Progress Sound Guard Corp., Jersey City, N. J. Corrected: In the certificate, column 2, line 1, "portable" should be deleted.

666,533. AL AND DESIGN. Cl. 21. 9–2–58. The Electric Auto-Lite Company, Toledo, Ohio. Corrected: In the certificate, column 2, line 1 "Connectors" should be deleted and *Conductors* should be inserted.

668,728. DOUBLE TONE. Cl. 39. 10–21–58. Hat Corporation of America, Norwalk, Conn. Corrected: In the certificate, column 2, line 3, "Sept. 1" second occurrence should be deleted and *Sept. 15* should be inserted.

669,232. GUILBERT. Cl. 23. 11–4–58. Guilbert, Incorporated, Philadelphia, Pa. Corrected: In the certificate, column 1, line 1, "Gilbert" should be deleted and *Guilbert* should be inserted.

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A I Root Co. of Texas, Inc., San Antonio, Tex. 670,943, pub. 9–23–58. Cl. 24.
A. J. Industries Corp., Delavan, Wis. 670,878, pub. 9–23–58. Cl. 22.
A/S Dampskibsselskabet Svendborg: *See*—
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A. Y R. Galofre & Cia. Limitada, Bogota, Colombia. 671,005, pub. 9–23–58. Cl. 52.
Abbott Laboratories, North Chicago, Ill. 565,733, canc. Cl. 18.
Acme Boot Mfg. Co., Inc., Clarksville, Tenn. 670,955, pub. 9–23–58. Cl. 39.
Acromag, Inc., Detroit, Mich. 670,859, pub. 9–23–58. Cl. 21.
Adam, Frank, Electric Co., St. Louis, Mo. 670,864, pub. 9–23–58. Cl. 21.
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Adamo, Joseph M., d. b. a. Adamo Co., Los Angeles, Calif. 565,812, canc. Cl. 42.
Adams Corp., Beloit, Wis. 671,024. Cl. 46.
Adams-Millis Corp., High Point, N. C. 365,697, ren. 3–14–59. Cl. 39.
Aetna Casualty and Surety Co., The, Hartford, Conn. 671,016, pub. 9–23–58. Cl. 102.
Aetna Steel Products Corp., New York, N. Y. 670,814, pub. 9–23–58. Cl. 12.
Ainslie Knitting Machine Co.: *See*—
Sampson Broadwin and Leopold Broadwin.
Allied Chemical Corp., by change of name from Allied Chemical & Dye Corp., New York, N. Y. 670,817, pub. 9–23–58. Cl. 12.
Allied Chemical & Dye Corp., New York, N. Y. 565,526, canc. Cl. 16.
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Alta Records, Clarks Summit, Pa. 670,950, pub. 9–23–58. Cl. 36.
American Allsafe Co., Inc., Buffalo, N. Y. 361,232, ren. 10–11–58. Cl. 40.
American Laundry Machinery Co., The, Cincinnati, Ohio. 671,020, pub. 9–23–58. Cl. 8.
American Machine and Metals, Inc., East Moline, Ill. 670,936, pub. 9–23–58. Cl. 34.
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American Slicing Machine Co., Chicago, Ill. 565,670, canc. Cl. 23.
America's Hobby Center, Inc., New York, N. Y. 670,875, pub. 9–23–58. Cl. 22.
Anare, Inc., Nashville, Tenn. 565,805, canc. Cl. 46.
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Antell, Charles, Inc., Baltimore, Md. 671,000, pub. 9–23–58. Cl. 51.
Argarden Tweeds Ltd., Edinburgh, Scotland. 565,736, canc. Cl. 42.
Arkwright Finishing Co., Providence, R. I. 364,223, ren. 1–24–59. Cl. 37.
Armour and Co., Chicago, Ill. 671,007, pub. 9–23–58. Cl. 52.
Arrestine Co., Inc., Birmingham, Ala. 565,559, canc. Cl. 18.
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Barker Bros. Corp., Los Angeles, Calif. 365,194, ren. 2–26–59. Cl. 21.
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Binney & Smith Co., New York, N. Y. 565,521, canc. Cl. 16.
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Blue Channel Corp., Port Royal, S. C. 670,991, pub. 9–23–58. Cl. 46.
Bohl, Frank E., Crystal Lake, Ill. 565,632, canc. Cl. 18.
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Borden Co., The, New York, N. Y. 565,661, canc. Cl. 46.
Bouquet Products, Inc., St. Louis, Mo. 565,782, canc. Cl. 18.
Bourns Laboratories, Inc., Riverside, Calif. 670,840, pub. 9–23–58. Cl. 21.
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Catawba Sales Agency, Inc., Hickory, N. C. 670,972, pub. 9–23–58. Cl. 39.
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Club Aluminum Products Co., Chicago, Ill. 670,934, pub. 9–23–58. Cl. 33.
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Congoleum-Nairn Inc., Kearney, N. J. 670,839, pub. 9–23–58. Cl. 20.
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Consolidated Iron-Steel Mfg. Co., The, Cleveland, Ohio. 565,599, canc. Cl. 34.

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Detrex Chemical Industries, Inc., Detroit, Mich. 670,904, pub. 9-23-58. Cl. 23.
Detroit Macoid Corp., Detroit, Mich. 670,811, pub. 9-23-58. Cl. 12.
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Dual Parking Meter Co., The, Pittsburgh, Pa. 670,916, pub. 9-23-58. Cl. 26.
Duncan Rhythocycle, Inc., Philadelphia, Pa. 670,945, pub. 9-23-58. Cl. 36.
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Ferro Enamel Corp., Cleveland, Ohio, now by change of name Ferro Corp. 565,532, canc. Cl. 16.
Findley, F. G., Co., The, Milwaukee, Wis. 565,650, canc. Cl. 5.
Flair Jewelry Corp., New York, N. Y. 565,600, canc. Cl. 27.
Fleetwood Co., The, Chicago, Ill. 670,836, pub. 9-23-58. Cl. 18.
Florida Plastics, Inc., Palmetto, Fla. 670,999, pub. 9-23-58. Cl. 50.
Foamalon Co. Inc., New York, N. Y. 670,796, pub. 9-23-58. Cl. 1.
Foster, Addison, Narberth, Pa. 565,722, canc. Cl. 36.
Gegenheimer, William, Co., Inc., Brooklyn, N. Y. 670,891, pub. 9-23-58. Cl. 23.
General Electric Co., Schenectady, N. Y. 565,495, canc. Cl. 34.
General Electric Co., Hudson Falls, N. Y. 670,858, pub. 9-23-58. Cl. 21.
General Electric Co., Schenectady, N. Y. 670,873, pub. 9-23-58. Cl. 21.
General Wire Spring Co.: *See*—
Silverman, Abe.
Georgia Peanut Co., Moultrie, Ga. 565,766, canc. Cl. 46.
Gilbert & Bennett Mfg. Co., Inc., The, Georgetown, Conn. 670,813, pub. 9-23-58. Cl. 12.
Glamour Products Co., Los Angeles, Calif. 565,500, canc. Cl. 18.
Globe-Wernicke Co., The, Norwood, Cincinnati, Ohio. 670,925, pub. 9-23-58. Cl. 32.
Glo-Lure, Inc., Medford, Wis. 565,776, canc. Cl. 22.
Goodman, M., Plastics Mfg. Co., Inc., Long Island City, N. Y. 670,932, pub. 9-23-58. Cl. 32.
Gottscho, Adolph, Inc., Hillside, N. J. 670,888, pub. 9-23-58. Cl. 23.
Gough, George, New York, N. Y. 670,906, pub. 9-23-58. Cl. 50.
Graf Co., to Graf Co., Union City, N. J. 356,375, ren. 4-26-58. Cl. 42.
Graver Tank & Mfg. Co., Inc., East Chicago, Ind. 670,881, pub. 9-23-58. Cl. 23.
Green, A. P., Fire Brick Co., Mexico, Mo. 364,858, ren. 2-14-59. Cl. 12.
Greenbaum, Jimmie, Specialties, Inc., Cleveland, Ohio. 565,773, canc. Cl. 39.
Green Lane Hosiery Co., Inc., Green Lane, Pa. 565,806, canc. Cl. 39.
Gregory and House, Inc., Cleveland, Ohio. 565,754, canc. Cl. 107.
Gubelin International Corp., New York, N. Y. 565,662, canc. Cl. 13.
Guest Quality Foods, Inc., Waterloo, Iowa. 670,989, pub. 9-23-58. Cl. 46.
Guide Stitch Corp., Raritan, N. J. 670,901, pub. 9-23-58. Cl. 23.
Guide System & Supply Co., Inc., New York, N. Y. 542,512, canc. Cl. 32.
Guilbert, Inc., Philadelphia, Pa. 669,232, cor. Cl. 23.
Hainke, Paul, Mfg. Co., The: *See*—
Hainke, Paul W.
Hainke, Paul, Mower Corp., Inc.: *See*—
Hainke, Paul W.
Hainke, Paul W., d. b. a. The Paul Hainke Mfg. Co., to The Paul Hainke Mower Corp., Inc., Hutchinson, Kans. 565,761, canc. Cl. 23.
Hairnet Corp. of America, New York, N. Y. 565,706, canc. Cl. 39.
Hardware & Industrial Tool Co., Inc., Philadelphia, Pa. 670,911, pub. 9-23-58. Cl. 23.
Harrower Laboratory, Inc., The, Jersey City, N. J. 565,651, canc. Cl. 18.
Hat Corp. of America, Norwalk, Conn. 668,728, cor. Cl. 39.
Heidsieck, Charles, S. A. R. L.: *See*—
Societe a Responsabilite Limitee Charles Heidsieck.
Heller, William, Inc., New York, N. Y. 565,549, canc. Cl. 42.
Henry Valve Co., Inc., Melrose Park, Ill. 670,915, pub. 9-23-58. Cl. 26.
Hensoldt, Carl, d. b. a. M. Hensoldt & Sohne, Wetzlarer Optische Werke, Wetzlar, to M. Hensoldt & Sohne Optische Werke A. G., Wetzlar, Germany. 361,952, ren. 11-8-58. Cl. 26.
Hensoldt, M., & Sohne, Optische Werke A. G.: *See*—
Hensoldt, Carl.
Hensoldt, M., & Sohne, Wetzlarer Optische Werke: *See*—
Hensoldt, Carl.
Hilco Products: *See*—
Hill, Howard L.
Hill, Howard L., d. b. a. Hilco Products, New York, N. Y. 670,863, pub. 9-23-58. Cl. 21.
Hoffman, Samuel: *See*—
Weidlich, Frederick E.
Hofman, Leo C., West Hyattsville, Md. 670,954, pub. 7-29-58. Cl. 39.
Home Canning Co., The, Blissfield, Mich. 671,028. Cl. 46.
Houston Oil Field Material Co., Houston, Tex. 670,820, pub. 9-23-58. Cl. 12.
Hudnut, Richard: *See*—
Chen Yu, Inc.
Hudnut, Richard, New York, N. Y. 671,030. Cl. 51.
Hudson Hosiery Co., Charlotte, N. C. 670,971, pub. 9-23-58. Cl. 39.
Hudson Hosiery Co., Charlotte, N. C. 670,973, pub. 9-23-58. Cl. 39.
Hunt Oil Co., Dallas, Tex. 670,831-2, pub. 9-23-58. Cl. 15.

Porsche Club of America, Inc., Alexandria, Va. 670,932, pub. 9-23-58. Cl. 38.
Spear, Winifred, New York, N. Y. 565,788, canc. Cl. 39.
Spencer Chemical Co., Kansas City, Mo. 670,807, pub.

Hyland Laboratories, Los Angeles, Calif. 671,021–2. Cl. 6.
Ida Mae Salads, Inc., Brentwood, Md. 671,025. Cl. 46.
Improved Machinery Inc., Nashua, N. H. 670,882, pub. 9–23–58. Cl. 23.
Independent Grocers' Alliance Distributing Co., Chicago, Ill. 671,006, pub. 9–23–58. Cl. 52.
Industrial Development Engineering Associates, Indianapolis, Ind. 670,846, pub. 9–23–58. Cl. 21.
Industrial Specialties Co.: *See*—
Chemco Specialties, Inc.
Interlake Iron Corp., Cleveland, Ohio. 670,880, pub. 9–23–58. Cl. 14.
International Shoe Co., St. Louis, Mo. 670,969, pub. 9–23–58. Cl. 39.
Ivers-Lee Co., Newark, N. J. 362,523, ren. 11–22–58. Cl. 2.
Jackson-Mitchell Pharmaceuticals, Inc., Los Angeles, Calif. 565,614, canc. Cl. 18.
Jensen, Aage, d. b. a. Waterborg Machine Co., Racine, Wis. 670,895, pub. 9–23–58. Cl. 23.
Johnston & Murphy, to Johnston & Murphy, Newark, N. J. 124,004, ren. 12–31–58. Cl. 39.
Jones, E. D., & Sons Co., Pittsfield, Mass. 365,025, ren. 2–21–59. Cl. 23.
Joy Mfg. Co., Pittsburgh, Pa. 670,883, pub. 9–23–58. Cl. 23.
Justin Boot Co.: *See*—
Justin, H. J., & Sons, Inc.
Justin, H. J., & Sons, Inc., d. b. a. Justin Boot Co., Fort Worth, Tex. 670,976, pub. 9–23–58. Cl. 39.
Kahan, Sheldon, d. b. a. Kahan Shoes, Chicago, Ill. 670,980, pub. 9–23–58. Cl. 39.
Kahan Shoes: *See*—
Kahan, Sheldon.
Kaplan Furniture Co., Cambridge, Mass. 670,926, pub. 9–23–58. Cl. 32.
Kay-Cee Industrial Products, New York, N. Y. 565,701, canc. Cl. 5.
Kedmont Mfg. & Waterproofing Co., Chicago, Ill. 565,652, canc. Cl. 16.
Kegan Laboratory, Inc., Englewood, N. J. 565,529, canc. Cl. 18.
Knowles, Edwin M., China Co., The, Newell, W. Va. 670,920, pub. 9–23–58. Cl. 30.
Kratt, Wm., Co., Union, N. J. 670,949, pub. 9–23–58. Cl. 36.
Kruger, Elisabeth: *See*—
Kruger, Werner.
Kruger, Werner, New York, to E. Kruger, Woodside, L. I., N. Y. 361,621, ren. 10–23–58, Cl. 30.
Kushins, Inc., Santa Rosa, Calif. 670,974, pub. 9–23–58. Cl. 39.
L & J Press Corp., Elkhart, Ind. 670,896, pub. 9–23–58. Cl. 23.
Laboratoires Francais de Chimiotherapie, Paris, France. 565,577, canc. Cl. 18.
Lady Oris Hosiery Shops, Inc., New York, N. Y. 670,979, pub. 9–23–58. Cl. 39.
Lannoy, Anna M., Chicago, Ill. 565,563, canc. Cl. 39.
Laros Textiles Co., Bethlehem, Pa. 565,470, canc. Cl. 39.
Laucks, I. F., Inc., Seattle, Wash., to Monsanto Chemical Co., St. Louis, Mo. 365,120, ren. 2–21–59. Cl. 5.
Lennox Industries, Inc., Marshalltown, Iowa. 670,898, pub. 9–23–58. Cl. 23.
Lindig, Arthur A., St. Paul, Minn. 565,669, canc. Cl. 10.
Lindly & Co., Inc., Minonia, N. Y. 670,855, pub. 9–23–58. Cl. 21.
London, Louis, & Sons, London, England. 670,962, pub. 9–23–58. Cl. 39.
Louisville Textiles, Inc., to Louisville Textiles, Inc., Louisville, Ky. 364,731, ren. 2–14–59. Cl. 42.
Lundell Mfg. Co., Cherokee, Iowa. 670,905, pub. 9–23–58. Cl. 23.
Lyons, Henry W., d. b. a. Orga-Min Producing Co., Laredo, Tex. 565,748, canc. Cl. 10.
Lyons, S. P., Co., Los Angeles, Calif. 565,484, canc. Cl. 6.
MacDonald, Donald (Antartex), Ltd., Glasgow, Scotland. 670,963, pub. 9–23–58. Cl. 39.
MacLaren Sportswear Corp., New York, N. Y. 565,796, canc. Cl. 39.
Madison Industries, Inc., Toledo, Ohio. 670,928, pub. 9–23–58. Cl. 32.
Mandee Fabrics, Inc., New York, N. Y. 565,615, canc. Cl. 42.
Manpro Corp., Detroit Mich. 671,010, pub. 9–23–58. Cl. 52.
Mansfield Hosiery Mills Ltd., London, England. 565,638, canc. Cl. 39.
Marcelle Cosmetics, Inc., Chicago, Ill. 671,031. Cl. 51.
Markowitz, Wm. J., Los Angeles, Calif. 565,648, canc. Cl. 39.
Martindale Electric Co., The, Lakewood, Ohio. 670,805. Pub. 8–5–58, Cl. 4; pub. 8–19–58, Cl. 21; pub. 9–16–58, Cl. 26. (Consolidated certificate, Classes 4, 21, and 26.)
Massey-Ferguson Ltd., by change of name from Massey-Harris-Ferguson Ltd., Toronto, Ontario, Canada. 670,880, pub. 9–23–58. Cl. 23.
Massey-Harris-Ferguson Ltd.: *See*—
Massey-Ferguson Ltd.
Matisa Equipment Corp., The, Chicago Heights, Ill. 670,884, pub. 9–23–58. Cl. 23.
Mayer, Co., Inc., The, New York, N. Y. 670,958, pub. 9–23–58. Cl. 39.
McAleer Mfg. Co., Detroit, Mich. 364,225, ren. 1–24–59. Cl. 4.
McClure, Helen S., New York, N. Y. 565,555, canc. Cl. 39.
McQuay, Inc., Minneapolis, Minn. 670,921, pub. 9–23–58. Cl. 31.
Mellink Steel Safe Co., Toledo, Ohio. 670,852, pub. 9–23–58. Cl. 21.
Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany. 670,829, pub. 9–23–58. Cl. 14.
Micropoint, Inc., Sunnyvale, Calif. 670,951, pub. 5–20–58. Cl. 37.
Mineralogist Publishing Co., The, Portland, Oreg. 365,657, ren. 3–14–59. Cl. 38.
Mine Safety Appliances Co., Pittsburgh, Pa. 670,960, pub. 9–23–58. Cl. 39.
Mitchell Mfg. Co., Chicago, Ill. 565,509, canc. Cl. 34.
Mitchell Mfg. Co., Chicago, Ill. 565,510, canc. Cl. 34.
Modine Mfg. Co., Racine, Wis. 670,941, pub. 9–23–58. Cl. 34.
Monsanto Chemical Co.: *See*—
Laucks, I. F., Inc.
Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy. 670,797, pub. 9–23–58. Cl. 1.
Moorman Mfg. Co., Quincy, Ill. 364,542, ren. 2–7–59. Cl. 46.
Mortop Sundour Fabrics Ltd., Carlisle, England. 364,429, ren. 1–31–59. Cl. 42.
Moss, Clarence L., d. b. a. Moss Plastic Products Co., Birmingham, Ala. 670,919, pub. 9–23–58. Cl. 29.
Moss Plastic Products Co.: *See*—
Moss, Clarence L.
Mullen Container Corp., Chicago, Ill. 670,804, pub. 9–23–58. Cl. 2.
Murray Ohio Mfg. Co., The, Nashville, Tenn. 670,876, pub. 9–23–58. Cl. 22.
N. V. P. J. Endenburg's Zeilmakerij & Scheepstuigerij, Gouda, Netherlands. 670,886, pub. 9–23–58. Cl. 23.
Nash Inc., Jersey City, N. J. 565,817, canc. Cl. 3.
Natco Corp., Pittsburgh, Pa. 670,810, pub. 9–23–58. Cl. 12.
National Aluminum Co., Columbus, Ohio. 670,816, pub. 9–23–58. Cl. 12.
National Automatic Tool Co., Inc., Richmond, Ind. 670,908, pub. 9–23–58. Cl. 23.
National Colloid Co., The, Steubenville, Ohio. 364,443, ren. 1–31–59. Cl. 32.
National Gypsum Co., Buffalo, N. Y. 670,818, pub. 9–23–58 Cl. 12.
National Spinning Co., Inc., New York, N. Y. 670,983, pub. 9–23–58. Cl. 43.
National Sure-Fit Quilting Co., Inc., Long Island City, to National Sure-Fit Quilting Co., Inc., New York, N. Y. 363,064, ren. 2–21–59. Cl. 42.
National Telephone Supply Co., The, Cleveland, Ohio 670,860, pub. 9–23–58. Cl. 21.
National-U. S. Radiator Corp., Johnstown, Pa. 670,944, pub. 9–23–58. Cl. 34.
Natur-A-Lite Co.: *See*—
O'Morrow, William D.
Newman Brothers, Inc., Cincinnati, Ohio. 670,821, pub. 9–23–58. Cl. 12.
Newman, M. M., Co.: *See*—
Newman, Morris M.
Newman, Morris M., d. b. a. M. M. Newman Co., Marblehead, Mass. 670,856, pub. 9–23–58. Cl. 21.
Norcon, Inc., Norwalk, Conn. 565,564, canc. Cl. 36.
North Main Lumber Co., Inc., Buffalo, N. Y. 670,809, pub. 9–23–58. Cl. 12.
Northome Furniture Industries, Inc., Dubuque, Iowa. 670,930, pub. 9–23–58. Cl. 32.
Northway Chemical Co., Inc., Geneva, N. Y. 565,687, canc. Cl. 11.
Oakford and Fahnestock, The Oakford Co., Peoria, Ill. 93,246. Am. 7(d). Cl. 46.
Oakite Products Inc., New York, N. Y. 671,003, pub. 12–24–57. Cl. 52.
Oak Rubber Co., The, Ravenna, Ohio. 361,884, ren. 11–1–58. Cl. 22.
Old 97 Co., d. b. a. Marti Dare, Tampa, Fla. 671,002, pub. 9–23–58. Cl. 51.
O'Morrow, William, d. b. a. Natur-A-Lite Co., Los Angeles, Calif. 670,841 pub. 9–23–58. Cl. 21.
Oregon Worsted Co., Portland, Oreg. 565,659, canc. Cl. 42.
Orga-Min Producing Co.: *See*—
Lyons, Henry W.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 565,891, canc. Cl. 2.
Pakistan Medicine Co.: *See*—
Ullah, Azid.
Pan American World Airways, Inc., New York, N. Y. 671,017, pub. 6–16–58. Cl. 105.
Parker-Bailey Mfg. Co., Cromwell, Conn. 565,474, canc. Cl. 23.
Park Silk Co., Inc., New York, N. Y. 565,626, canc. Cl. 42.
Pastushin Industries, Inc., Los Angeles, Calif. 670,939, pub. 9–23–58. Cl. 34.
Patterson, Esther B., d. b. a. Camac Co., Minneapolis, Minn. 670,990, pub. 9–23–58. Cl. 46.
Penny Mfg. Corp., Boston, Mass. 565,558, canc. Cl. 39.
Permatex Co., Inc., Huntington Station, N. Y. 365,534, ren. 3–14–59. Cl. 15.
Peter Pan Foundations, Inc., New York, N. Y. 670,957, pub. 10–22–57. Cl. 39.
Phillips Mfg. Co., Inc., Minneapolis, Minn. 670,862, pub. 9–23–58. Cl. 21.
Phoenix Gummiwerke Aktiengesellschaft, Hamburg-Harburg, Germany. 670,961, pub. 9–23–58 Cl. 39.
Platt Products Corp., Lansing, Mich. 565,583, canc. Cl. 34.
Pilkington Brothers Ltd., Liverpool, England. 670,872, pub. 9–23–58. Cl. 21.
Pincus, Lester, Shoe Corp., New York, N. Y. 670,959, pub. 9–23–58. Cl. 39.
Placentia Mutual Orange Association, Placentia, Calif. 124,874, ren. 3–18–59. Cl. 46.
Plibrico Co.: *See*—
Plibrico Jointless Firebrick Co.
Plibrico Jointless Firebrick Co., to Plibrico Co., Chicago, Ill. 365,659, ren. 3–14–59. Cl. 12.
Polak, Louis M., Jr., Hellertown, Pa. 670,822, pub. 9–23–58. Cl. 12.
Polymer Industries Inc., Springdale, Conn. 671,011, pub. 9–23–58. Cl. 100.

Weidlich, Frederick E., White Plains, N. Y., to W. E. Bass and S. Hoffman, both of Philadelphia, Pa., d. b. a. Web Jewelry Mfg. Co. 565,576, canc. Cl. 39.
Whirlpool-Seeger Corp.: *See*—
Whirlpool Corp.

Porsche Club of America, Inc., Alexandria, Va. 670,932, pub. 9–23–58. Cl. 38.
Prescripto Products: *See*—
Febo, Fulvio.
Princeton Theological Seminary, Princeton, N. J. 671,014, pub. 9–23–58. Cl. 102.
Produits de Beaute Juvena, S. a. r. l., Zurich, Switzerland. 671,032. Cl. 51.
Progress Sound Guard Corp., Jersey City, N. J. 666,247, cor. Cl. 21.
Quick Change Carriers, Inc., Lansdale, Pa. 565,524, canc. Cl. 23.
Reinberger & Collier, Pine Bluff, Ark. 123,150, ren. 10–15–58. Cl. 15.
Remle: *See*—
Beechler, Elmer.
Research Laboratories Center, Inc., New York, N. Y. 565,572, canc. Cl. 18.
Revlon, Inc.: *See*—
Revlon Nail Enamel Corp., The.
Revlon Nail Enamel Corp., The, to Revlon, Inc., New York, N. Y. 361,102, ren. 10–4–58. Cl. 51.
Rexall Drug Co., Los Angeles, Calif. 670,835–6, pub. 9–23–58. Cl. 18.
Reynolds & Reynolds Co., The, Dayton, Ohio. 565,695, canc. Cl. 11.
Rietz Mfg. Co., Santa Rosa, Calif. 670,889, pub. 9–23–58. Cl. 23.
Ritch & Co.: *See*—
Ritch, George L.
Ritch, George L., d. b. a. Ritch & Co., Harrisonville, Mo. 565,782, canc. Cl. 19.
Rivoli Hosiery Co., Inc., New York, N. Y. 565,725, canc. Cl. 39.
Roberts, Fred, Co., San Francisco, Calif. 670,937, pub. 9–23–58. Cl. 30.
Rockwell-Barnes Co., Chicago, Ill. 365,948, ren. 3–21–59. Cl. 37.
Rod's Food Products, Inc., Los Angeles, Calif. 671,027. Cl. 46.
Roper, Elmo, and Associates, New York, N. Y. 670,955, pub. 9–23–58. Cl. 38.
Rose-Martin, Inc., New York, N. Y. 565,750, canc. Cl. 101.
Russell Hosiery Mills, Inc., Star, N. C. 670,977, pub. 9–23–58. Cl. 39.
Russell & Stoll Co., Inc., New York, N. Y. 670,844, pub. 9–23–58. Cl. 21.
Safeway Stores, Inc., Oakland, Calif. 670,970, pub. 9–23–58. Cl. 39.
Salyers Equipment Co., Los Angeles, Calif. 670,882, pub. 9–23–58. Cl. 23.
Sanborn Co., Cambridge, Mass. 670,865, pub. 9–23–58. Cl. 21.
Sapphire Corp., New York, N. Y. 565,711, canc. Cl. 39.
Schen Labs Pharmaceuticals, Inc., by change of name from Schenley Laboratories, Inc., New York, N. Y. 670,834, pub. 9–23–58. Cl. 18.
Schenley Import Corp.: *See*—
Societe a Responsabilite Limitee Charles Heidsieck.
Schenley Industries, Inc., New York, N. Y. 670,995, pub. 9–23–58. Cl. 49.
Schenley Laboratories, Inc.: *See*—
Schen Labs Pharmaceuticals, Inc.
Schield Bantam Co., Waverly, Iowa. 670,902, pub. 9–23–58. Cl. 23.
Scully Signal Co., Melrose, Mass. 670,903, pub. 9–23–58. Cl. 23.
Seastrom Mfg. Co., Glendale, Calif. 670,826, pub. 9–23–58. Cl. 13.
Servo Corp. of America, New Hyde Park, N. Y., from Servo-Tek Products Co., Clifton, N. J. 670,913, pub. 9–5–58. Cl. 26.
Servo-Tek Products Co.: *See*—
Servo Corp. of America.
Shand and Jurs Co., Berkeley, Calif. 670,861, pub. 8–23–58. Cl. 21.
Sharp & Dohme, Inc., Philadelphia, Pa. 565,557, canc. Cl. 18.
Shaw Munson G., Co. Inc., New York, N. Y. 364,247, ren. 1–24–59. Cl. 47.
Shinderman Management Corp., Chicago, Ill. 565,783, canc. Cl. 101.
Sill Rack-Rite Co.: *See*—
Sill, Robert E.
Sill, Robert E., d. b. a. Sill Rack-Rite Co., Rochester, Minn. 670,927, pub. 9–23–58. Cl. 32.
Silverman, Abe, d. b. a. General Wire Spring Co., to General Wire Spring Co., Pittsburgh, Pa. 361,505, ren. 10–18–58. Cl. 23.
Simonds Saw and Steel Co., Fitchburg, Mass. 670,889, pub. 9–23–58. Cl. 23.
Simonds Worden White Co., Dayton, Ohio. 670,894, pub. 9–23–58. Cl. 23.
Simonsen, Charles W., d. b. a. Dualmatic Products Corp., Longmont, Colo. 670 895, pub. 9–23–58. Cl. 23.
Skinner Mfg. Co., Omaha, Nebr. 670,993, pub. 9–23–58. Cl. 46.
Smooth-on Mfg. Co., Jersey City, N. J. 365,026, ren. 2–21–59. Cl. 12.
Societe a Responsabilite Limitee Charles Heidsieck, to Schenley Import Corp., to Charles Heidsieck S. A. R. L., Reims, France. 356,193, ren. 4–19–58. Cl. 47.
Societe Rhodiaceta, Paris, France. 565,615, canc. Cl. 43.
Socony Mobil Oil Co., Inc.: *See*—
Socony-Vacuum Oil Co., Inc.
Socony-Vacuum Oil Co., Inc., to Socony Mobil Oil Co., Inc., New York, N. Y. 363,312, ren. 12–30–58. Cl. 15.
Southwest Commodity Corp., El Centro, Calif. 670,709, pub. 9–23–58. Cl. 1.
Spear, Winifred, New York, N. Y. 565,788, canc. Cl. 39.
Spencer Chemical Co., Kansas City, Mo. 670,907, pub. 9–23–58. Cl. 6.
Spring-Air Co., The, Chicago, Ill. 670,933, pub. 9–23–58. Cl. 32.
Squibb, E. R., & Sons, New York, N. Y. 565,570, canc. Cl. 18.
Staley, A. E., Mfg. Co., Decatur, Ill. 670,806, pub. 9–23–58. Cl. 6.
Staley, A. E., Mfg. Co., Decatur, Ill. 670,838, pub. 2–23–54. Cl. 18.
Staley, A. E., Mfg. Co., Decatur, Ill. 670,986–8, pub. 10–28–52. Cl. 46.
Standard Milling Co., Chicago, Ill. 565,441, canc. Cl. 46.
Standard Oil Co., Chicago, Ill. 565,674, canc. Cl. 15.
Stanley Works, The, New Britain, Conn. 262,566, ren. 1–3–59. Cl. 23.
Stephan, C. A., Inc., Hammond, Ind. 670,890, pub. 9–23–58. Cl. 23.
Sterling National Industries, Inc., Milwaukee, Wis. 670,910, pub. 9–23–58. Cl. 23.
Sterling Textile Printers Co.: *See*—
Sterling Textile Printers, Inc.
Sterling Textile Printers, Inc., to Sterling Textile Printers Co., New York, N. Y. 360,322, ren. 9–13–58. Cl. 42.
Sterling Textile Printers, Inc., to Sterling Textile Printers Co., New York, N. Y. 360,323, ren. 9–13–58. Cl. 42.
Stern, Henri, Watch Agency, Inc., The, New York, N. Y. 670,917, pub. 9–23–58. Cl. 27.
Steuart, Frank R., Henning, Minn. 670,877, pub. 9–23–58. Cl. 22.
Summit Mills Corp., New York, N. Y. 565,777, canc. Cl. 39.
Sunair Electronics, Inc., Fort Lauderdale, Fla. 670,953, pub. 9–23–58. Cl. 21.
Sunny State Liquor Co.: *See*—
Anchor Liquor Co.
Tab Products Co., San Francisco, Calif. 670,924, pub. 9–23–58. Cl. 32.
Taco Heaters, Inc., Cranston, R. I. 670,900, pub. 9–23–58. Cl. 23.
Talveron Co., Brooklyn, N. Y. 565,660, canc. Cl. 18.
Targ and Dinner, Inc., Chicago, Ill. 361,003, ren. 10–25–58. Cl. 26.
Teleklew Productions, Inc., Los Angeles, Calif. 671,019, pub. 9–23–58. Cl. 107.
Thieme Construction Supplies, Inc., West Compton, Calif. 670,893, pub. 9–23–58. Cl. 23.
Thomas Industries, Inc., Louisville, Ky. 670,942, pub. 9–23–58. Cl. 34.
Thomas Products, Inc., Buffalo, N. Y. 359,859, ren. 8–30–58. Cl. 51.
Thomas, Thelma H., St. Louis, Mo. 565,772, canc. Cl. 46.
Tirrill Gas Machine Corp., Dover, Del., and Netcong, N. J. 565,496, canc. Cl. 34.
Tuerk, Elvira V., Greenwood Lake, N. Y. 565,676, canc. Cl. 46.
UHU-Werk H. u. M. Fischer, Buhl/Baden, Germany. 624,718, cor. Cl. 6.
Ullah, Azid, d. b. a. Pakistan Medicine Co., Gary, Ind. 565,679, canc. Cl. 18.
Union Electric Co. of Missouri, St. Louis, Mo. 565,731, canc. Cl. 100.
Union Underwear Co., Inc., New York, N. Y. 670,956, pub. 9–23–58. Cl. 39.
United Fire & Casualty Co., Cedar Rapids, Iowa. 671,015, pub. 9–23–58. Cl. 102.
United States Casting Repair Corp., Philadelphia, Pa. 671,035. Cl. 103.
United States Paste Co., Philadelphia, Pa. 565,789, canc. Cl. 5.
United States Plywood Corp., New York, N. Y. 670,823, pub. 9–23–58. Cl. 12.
Universal Mfg. Corp., Zelienople, Pa. 670,887, pub. 9–23–58. Cl. 23.
Utility Appliance Corp., Los Angeles, Calif. 670,936, pub. 9–23–58. Cl. 34.
Vacudent Mfg. Co., Salt Lake City, Utah. 670,984, pub. 9–23–58. Cl. 44.
Valsey-Bristol Shoe Co. Inc., Monett, Mo. 670,978, pub. 9–23–58. Cl. 39.
Van Raalte Co., Inc., New York, N. Y. 365,412, ren. 3–7–59. Cl. 39.
Vericontrol Associates, New York, N. Y. 670,854, pub. 9–23–58. Cl. 21.
Vick Chemical Co.: *See*—
Vick Chemical Co., The.
Vick Chemical Co., The, Greensboro, N. C., to Vick Chemical Co., New York, N. Y. 123,667, ren. 11–19–58. Cl. 18.
Visionaide Visor Co., Inc., Brooklyn, N. Y. 565,815, canc. Cl. 19.
Vogue Mfg. Corp., West Chester, Pa. 565,726, canc. Cl. 39.
Waite Carpet Co., Oshkosh, Wis. 670,962, pub. 9–23–58. Cl. 42.
Wallace Co., Inc., The, Providence, R. I. 670,998, pub. 9–23–58. Cl. 50.
Wandleside Cable Works Ltd., London, England. 670,808, pub. 9–23–58. Cl. 21.
Ward Industries Corp., Syracuse, N. Y. 670,912, pub. 9–23–58. Cl. 24.
Warnes, Burton D., Buzzards Bay, Cape Cod, to Drink A Banana, Inc., Boston, Mass. 565,787, canc. Cl. 46.
Washington Steel Products, Inc., Tacoma, Wash. 565,619, canc. Cl. 13.
Waterborg Machine Co.: *See*—
Jensen, Aage.
Waters, James F., New York, N. Y. 565,699, canc. Cl. 13.
Web Jewelry Mfg. Co.: *See*—
Weidlich, Frederick E.

Micropoint, Inc., Sunnyvale, Calif. 670,981, pub. 9–20–58. Cl. 37.

Polymer Industries Inc., Springdale, Conn. 671,011, pub. 9–23–58. Cl. 100.

INDEX OF REGISTRANTS

Weidlich, Frederick E., White Plains, N. Y., to W. E. Bass and S. Hoffman, both of Philadelphia, Pa., d. b. a. Web Jewelry Mfg. Co. 565,576, canc. Cl. 28.

Weimald Hosiery Co.: *See*—
Aust, Harry.

Wensel, H., Tent & Duck Co., St. Louis, Mo. 565,605, canc. Cl. 42.

Wesson Tool Co., Ferndale, Mich. 670,907, pub. 9–23–58. Cl. 23.

Western Tablet Co., St. Joseph, Mo., to Western Tablet & Stationery Corp., Dayton, Ohio. 124,912, ren. 3–18–59. Cl. 37.

Western Tablet & Stationery Corp.: *See*—
Western Tablet Co.

Whirlpool Corp., by change of name from Whirlpool-Seeger Corp., St. Joseph, Mich. 670,843, pub. 9–23–58. Cl. 21.

Whirlpool Corp., St. Joseph, Mich. 670,845, pub. 9–23–58. Cl. 21.

Whirlpool Corp., St. Joseph, Mich. 670,935, pub. 9–23–58. Cl. 34.

Whirlpool-Seeger Corp.: *See*—
Whirlpool Corp.

Wilson Organic Chemicals, Inc., Sayreville, N. J. 565,746, canc. Cl. 10.

Wilton Tool Mfg. Co., Inc., Schiller Park, Ill. 670,906, pub. 9–23–58. Cl. 23.

Wolf, Hymie, d. b. a. Wolf Recording Co., San Antonio, Tex. 565,469, canc. Cl. 36.

Wolf Recording Co.: *See*—
Wolf, Hymie.

Woolworth, F. W., Co., New York, N. Y. 565,534, canc. Cl. 16.

Woolworth, F. W., Co., New York, N. Y. 565,535, canc. Cl. 16.

Yawman and Erbe Mfg. Co., Inc., Rochester, N. Y. 670,922, pub. 9–24–57. Cl. 32.

Zenith Radio Corp., by merger from, to Zenith Radio Corp., Chicago, Ill. 670,848, pub. 9–23–58. Cl. 21.

Zenith Radio Corp., by merger from Zenith Radio Corp., Chicago, Ill. 670,850, pub. 9–23–58. Cl. 21.

Ziel & Co., Inc., San Francisco, Calif. 671,020. Cl. 46.

U. S. GOVERNMENT PRINTING OFFICE: 0——1958

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202,603

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
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PATENTS

NOTICES

Disclaimer

2,743,201.—*Ralph P. Johnson*, Playa Del Rey, *Robert G. Shulman*, Los Angeles, and *Delbert M. Van Winkle*, Tarzana, Calif. MONATOMIC SEMICONDUCTOR DEVICES. Patent dated Apr. 24, 1956. Disclaimer filed Oct. 20, 1958, by the assignee, *Hughes Aircraft Company*.

Hereby enters this disclaimer to claims 2 and 3 of said patent.

Dedication

2,834,163.—*Joseph W. Fogwell*, *Herbert I. Hofman*, *William H. Gabey*, and *Willis L. Donaldson*, San Antonio, Tex. PACKAGING MACHINE. Patent dated May 13, 1958. Dedication filed Nov. 10, 1958, by the assignee, *Carbon Black Packaging, Inc.*

Hereby dedicates to the public the remainder of the term of the patent with respect to each of claims 1 to 32 inclusive.

Classification Order No. 267

Classification Order No. 267, dated December 12, 1958, incorporates changes in the following classes:

55 (Class Abolished)
56
97 (Class Abolished)
104
172 (New Class—Definitions will appear in Bull. No. 425)
280
806

The above changes will be incorporated in the Manual of Classification replacement pages dated January 1959.

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

2,614,183. Clock Train Periodic Switch. Antonio Moutinho, 71 Buckingham St., Oakville, Conn.

2,805,618. Sandwich Cooker. Donald W. Hollenbeck, Homewood Post Office, Lake Tahoe, Calif.

2,839,285. Heat Treatment Furnaces. Vickers Furnaces Ltd., Radlett, Hertfordshire, England, and Modern Mechanisation Ltd., London, England. Correspondence to: Michael S. Striker, 511 Fifth Ave., New York 17, N. Y.

2,850,247. Sliding Drawer Unit for Mounting in a Cabinet. Nicholl Lapp, 210 Alameda Boulevard, West Sacramento, Calif.

2,850,326. Electric Portable Hot Water Heater. John Fisher, Jr., 2100 N. 9th St., Milwaukee 5, Wis.

General Electric Company is prepared to grant non-exclusive licenses *in the field of radio purposes* under the following 13 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Patent Counsel, Electronic Components Division, General Electric Company, Syracuse, N. Y.

2,415,402. Vibration Translating Device.
2,491,794. Variable Resistance Phonograph Pickup.
2,511,663. Magnetic Phonograph Pickup.
2,511,664. Phonograph Pickup.
2,511,665. Hum Eliminating Circuit for Phonograph Pickups.
2,554,208. Phonograph Pickup Having a Cantilever Indexing Arm.
2,729,757. Ferroelectric Ceramic Composition and Method of Making Same.
2,731,419. Ferroelectric Ceramic Composition.
2,748,199. Channel-Shaped Stylus.
2,805,165. Ceramic Composition.
2,849,267. Glass Retainer Structure for Cabinet.
2,849,639. Electric Discharge Device and Method of Making Same.
2,849,640. Spacer Structure.

New Applications Received During October 1958

Patents	6,652
Designs	409
Plant Pats	13
Reissues	24
Total	7,098

Issue

Patents	930	No. 2,864,085 to No. 2,865,020, incl.
Designs	39	No. 184,078 to No. 184,116, incl.
Reissues	5	No. 24,575 to No. 24,579, incl.
Total	980	

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION

(Roman numerals in parentheses indicate Examining Group)

	Oldest Application	
	Not	Amended
202, 603		
7, 000		

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202, 603
Total number of pending Design applications	7, 000
Total number of applications awaiting action (excluding Designs)	84, 564
Total number of Design applications awaiting action	3, 421
Date of oldest new application	Nov. 13, 1957
Date of oldest amended application	Nov. 12, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 39, 43, 46, 50, 56, 60, 63, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 36, 37, 41, 42, 44, 48, 51, 54, 60.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 59, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 38, 39, 62, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 63.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 35, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	8, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	3-10-58	3-25-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	3-3-58	1-30-58
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	5-5-58	5-12-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	3-19-58	3-17-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	1-17-58	12-26-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	3-3-58	3-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	3-17-58	3-4-58
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	4-3-58	3-18-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	3-17-58	3-3-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-31-58	3-26-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	4-14-58	3-27-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	3-27-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	3-24-58	3-20-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-16-57	12-3-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	2-4-58	2-7-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	3-26-58	1-29-58
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	4-24-58	4-28-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	3-19-58	3-17-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	4-3-58	3-31-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	3-3-58	3-3-58
21. (III) MADER, R. C., Textiles	1-24-58	1-23-58
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-6-58	2-1-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-13-57	11-12-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	3-28-58	3-27-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	3-25-58	3-17-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	4-4-58	4-10-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	4-14-58	4-9-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	1-29-58	12-19-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	5-9-58	4-24-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	5-31-58	6-1-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	3-13-58	3-11-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	3-27-58	3-3-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding	6-3-58	6-3-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	12-5-57	12-3-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	2-10-58	1-24-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	5-5-58	6-3-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	4-10-58	4-30-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-12-58	3-12-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	3-24-58	3-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	1-13-58	1-13-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-3-58	4-3-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-20-58	1-8-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	3-11-58	2-26-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-17-58	3-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	4-3-58	4-3-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-12-58	2-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-3-58	2-26-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	3-3-58	2-13-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	3-13-58	3-6-58
52. (V) RIORDON, R. C., (acting) Supports and Racks	2-28-58	2-27-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	5-22-58	5-5-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	5-22-58	5-16-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	12-26-57	12-18-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	3-26-58	4-11-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	2-17-58	2-17-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part); Selective Punching	4-24-58	5-1-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	2-10-58	2-13-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	4-3-58	4-1-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	3-3-58	3-3-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	4-18-58	4-17-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	3-12-58	3-20-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-3-58	3-3-58
66. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	1-7-58	1-6-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	5-10-58	3-3-58
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	1-6-58	2-26-58

*Established August 23, 1957, by order of the Commissioner—722 O. G. 215.

The following divisions have been abolished: 66 and 68

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

29. (V) PATTZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Commutators; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

JOSEPH P. GRADY AND JOHN B. GRADY

v.

ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 14,438. Decided November 20, 1958

[— U. S. App. D. C. —; — F.2d —; — USPQ —]

1. REVIEW BY THE U. S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—CIVIL ACTION UNDER 35 U. S. C. 145—COMPLAINT PURPORTING TO BE PURSUANT TO R. S. 4915. "* * * appellants filed a complaint in the District Court purporting to be pursuant to 'Revised Statutes, Section 4915.' We construe this as intended to be under the successor statute, 35 U. S. C. § 145 (1952)."

2. SAME—SAME—JURISDICTION—LATE FILING OF COMPLAINT. Where, more than sixty days after the decision of the Board of Appeals rejecting the claims of their application, appellants filed a complaint in the District Court, construed as intended to be under 35 U. S. C. 145, *Held* that a motion by the Commissioner to dismiss the complaint on the ground that the court lacked jurisdiction over the parties and the subject matter was properly granted since appellants' complaint was not timely filed.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Clarence W. Moore, Solicitor, United States Patent Office, for the Commissioner of Patents.

Joseph P. Grady and *John B. Grady*, pro se.

Before FAHY, DANAHER, and BASTIAN, *Circuit Judges*.

PER CURIAM:

More than sixty days after the decision of the Board of Appeals of the Patent Office rejecting the claims of their application for patent [1] appellants filed a complaint in the District Court purporting to be pursuant to "Revised Statutes, Section 4915." We construe this as intended to be under the successor statute, 35 U. S. C. § 145 (1952). The Commissioner moved to dismiss the complaint on the ground that the court lacked jurisdiction over the parties and the subject matter. The court dismissed the complaint pursuant to the motion and at the same time denied a motion of appellants for leave to amend their complaint. This appeal followed.

[2] We find no abuse of discretion in the denial of the motion for leave to amend the complaint and we think the motion to dismiss was properly granted since appellants' complaint was not timely filed. See 35 U. S. C. § 145 (1952) and Rule 304 of the Rules of Practice in Patent Cases, 22 Fed. Reg. 5770 (1957), amending 37 C. F. R. § 1.304 (1952).

AFFIRMED.

PATENT SUITS

Notices under 35 U. S. C. 290; Patent Act of 1952

2,699,898, J. Matti, Process for making baked food products, counterclaim filed Oct. 17, 1958, D. C. N. J. (Camden), Doc. 882/58, *Donald A. Battiste* v. *Vacuum Baking Corp.*

2,809,188, J. R. Ballard, Portable room-cooling apparatus; **2,801,839**, E. Babcock, Room cooling device, filed Nov. 7, 1950, D. C., N. D. Ill. (Chicago), Doc. 50c1568, *The Hoover Co.* v. *Mitchell Mfg. Co.* Patent No. 2,801,850 held invalid and not infringed; action dismissed on merits Sept. 9, 1958.

2,133,642, G. W. Pierce, Electrical systems; **2,133,643**, same, Electrical system and apparatus; **2,133,645**, same; **2,133,646**, same; **2,133,648**, same; **2,806,970**, same, Electromechanical vibrator apparatus, filed Oct. 31, 1958, D. C., M. D. Pa. (Scranton), Doc. 6456, *Helen Russell Pierce* v. *Hupp Corp.*

2,133,642. (See 2,133,642.)

2,133,643. (See 2,133,642.)

2,133,646. (See 2,133,642.)

2,133,648. (See 2,133,642.)

2,230,900, F. Brons, Process and apparatus for exploring geological strata; **2,630,014**, E. A. Scherbatskoy, Radioactivity well logging system; **2,749,661**, same; **2,749,662**, J. H. Castel et al., same; **2,749,666**, E. A. Scherbatskoy, Radiation well logging system; **2,816,238**, same, Radioactivity well logging calibrating system, filed Oct. 30, 1958, D. C., W. D. Tex. (Pecos), Doc. 3115, *Pgac Development Co.* v. *The Western Company of Midland, Texas.* Same, Doc. 3119, *Pgac Development Co.* v. *Hushey Guns, Inc.*

2,806,970. (See 2,133,642.)

2,291,889. (See 2,099,188.) Notice supersedes notice published Nov. 4, 1958, at 736 O. G. 8.

2,474,308, H. G. Holmes, Wheel mirror mount, filed Oct. 30, 1958, D. C., E. D. Mo. (St. Louis), Doc. 58c444(3), *Food Machinery & Chemical Corp.* v. *Hunter Engineering Co.*

2,542,294, Cohen and Pucci, Foldable table, filed Oct. 29, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1925, *Boris Cohen et al.* v. *Motor Unit Parts Co., Inc.*

2,555,496. (See 2,619,213.)

2,583,264, C. H. Strange, Switch for a kiln oven, filed July 17, 1957, D. C., S. D. N. Y., Doc. 122/293, *Miss Lolita Strange et al.* v. *Norman Ceramics Co., Inc. et al.* Stipulation and order of discontinuance Oct. 31, 1958.

2,588,575, S. Schaffan, Jr., Miniature track unit, filed Oct. 30, 1958, D. C., S. D. N. Y., Doc. 139/204, *Atlas Tool Co., Inc.* v. *Geo. Borgfeldt Corp.*

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2,621,128, B. Messing, Method of forming laminated quilted material; **2,621,138**, same, Laminated sheet material and methods of making such material, filed Mar. 14, 1955, D. C., E. D. N. Y. (Brooklyn), Doc. C.15252, *Benjamin Messing et al.* v. *The Barr Corp.* Stipulation of dismissal Oct. 28, 1958.

2,621,128. (See 2,621,138.)

2,632,230, C. E. Neisler, Jr., Textile fabrics; **2,636,506**, H. B. Jackson, Plied yarns and plied yarn fabrics and method of making same, filed Oct. 17, 1958, D. C., W. D. N. C. (Asheville), Doc. 1800, *G. A. Horvath et al.* v. *Neisler Mills, Inc.*

2,636,531. (See Re. 24,054.)

2,636,585. (See 2,632,230.)

2,639,814. (See 2,230,509.)

2,662,161, K. B. Olander, Ironing table, filed Nov. 3, 1955, D. C., S. D. Ind. (Indianapolis), Doc. IP/58c298, *J. R. Clark Co. et al.* v. *Jones & Laughlin Steel Corp.*

2,168,021. (See 2,230,509.)

2,766,882. (See 2,220,509.)

2,766,883. (See 2,220,509.)

2,767,232, Jones and Svoboda, Self-closing door and interior door hinge assembly, filed Oct. 30, 1958, D. C. N. J. (Camden), Doc. 1190/58, *Milwaukee Stamping Co. v. Cutler Metal Products Co.*

2,768,040, C. W. Hunter, Vending machine shelf having bottle feeding mechanism; 2,768,066, F. V. Bookout et al., Selective bottled beverage vending machine, filed Nov. 1, 1958, D. C., W. D. Mo. (Kansas City), Doc. 12119, *The Vendo Co. v. Selectivend Co. et al.*

2,768,868. (See 2,750,042.)

2,782,806, K. Zyscet, Vegetable shredder, filed Oct. 27, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1916, *New-Nel Kitchen Products Co. v. F. W. Woolworth Co.*

2,796,048, I. Cohen, Water pistol, filed Nov. 14, 1957, D. C., S. D. N. Y., Doc. 126/226, *Irwin Corp. v. Empire Plastics Corp.* Final consent judgment; injunction issued Oct. 29, 1958.

2,800,836, J. J. Hornstein, Contact lens, filed Oct. 24, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1904, *Midwest Scientific Co., Inc. v. George N. Jensen et al.* Same, filed Oct. 24, 1958, D. C., E. D. Mich. (Detroit), Doc. 18537, *Midwest Scientific Co., Inc. v. Rubes Invisible Contact Lens Laboratories.* Same, filed Nov. 4, 1958, D. C., E. D. Va. (Richmond), Doc. 2848, *Midwest Scientific Co., Inc. v. Conforma Contact Lenses, Inc.*

2,816,235. (See 2,220,509.)

2,818,289, Schwarzkopf and Van Otterloo, Cut off blades for abrasive bodies and their production, filed Oct. 31, 1958, D. C., S. D. N. Y., Doc. 139/247, *Carborundum Co. v. Consolidated Diamond Tool Corp.*

2,835,874, First and Milton, Electrical interference suppression filter, filed Oct. 28, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19139, *J. & D. Development Co., Inc. v. All-Tronics.*

2,848,919, M. H. Corbin et al., Paint mixing machine, filed Oct. 31, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c43, *Color Carousel Corp. v. Rockcote Paint Co. et al.*

Re. 23,742, W. F. Hester, Fungicidal salts of alkylene bisdithiocarbamic acid, filed July 2, 1954, D. C., W. D. Mich. (Grand Rapids), Doc. 2441, *Rohm & Haas Co. v. Consolidated Industrial & Agriculture Chemicals, Inc. et al.* Summary judgment and injunction in favor of plaintiff, entered Oct. 30, 1958.

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Des. 182,607, W. D. Warren, Susan server, filed Oct. 29, 1958, D. C., S. D. N. Y., Doc. 139/191, *M. Wille, Inc. v. Rainbow Wood Products, Inc.*

box spring member, said last mentioned means engaging the lower surface portion of the box spring member

24,579

REISSUES

DECEMBER 16, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,575

SPAGHETTI BOWL

Pasquale F. Di Costanzo, New York, N. Y.

Original No. 2,771,755, dated November 27, 1956, Serial No. 379,922, September 14, 1953. Application for reissue October 14, 1957, Serial No. 690,594

10 Claims. (Cl. 220—83)

6. A spaghetti bowl comprising a dished body having a generally horizontal bottom wall and a circular and generally vertically extending side wall terminating in a generally horizontal top edge, said side wall having a thickened portion below said top edge of a width at least approaching the width of the bowl of a spoon, a concave depression formed in said portion and extending generally on a vertical plane and generally resembling the interior of the bowl of a spoon, said depression being adapted to receive the ends of the tines of a fork to facilitate the winding of strands of spaghetti on said fork by guiding and steadying the same as it is rotated on its longitudinal axis, said depression being positioned at the upper interior side of the circular wall of the bowl and a guide channel extending from the bottom of the bowl up to said depression.

24,576

DIAMOND CUT-OFF WHEEL

Clarence W. Anderson, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Original No. 2,796,706, dated June 25, 1957, Serial No. 606,439, August 27, 1956. Application for reissue July 11, 1958, Serial No. 755,820

2 Claims. (Cl. 51—206)

1. A diamond cut-off wheel consisting of a disc-shaped center slotted with slots at and inwards from the periphery, metal bonded diamond abrasive sectors welded to the periphery, said sectors consisting of two integral sector parts, a first sector part adjacent and welded to the periphery of the metal center essentially consisting of particles of cobalt bonded carbide of grit size from 80 to 180 with carbide fines finer than 180 all bonded together with cobalt, and a second sector part integral with said first sector part and radially exterior of it essentially consisting of diamond abrasive with sintered carbide particles of grit size smaller than 80, each said particle being carbide bonded with cobalt and cobalt bonding said sintered carbide and said diamond abrasive into an integral [center] *sector*, said second sector having a width greater [than said first sector and greater] than said center.

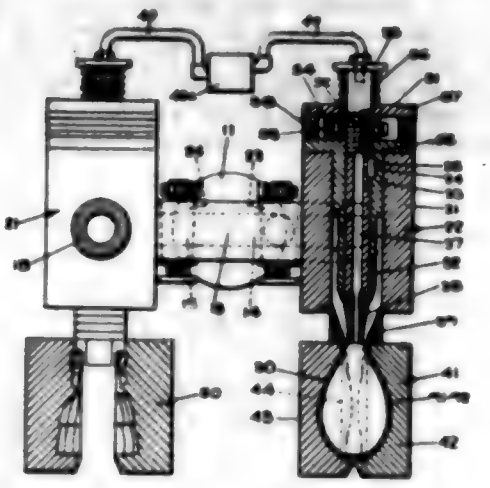
24,577

MACHINE FOR AND METHOD OF FORMING HOLLOW PLASTIC ARTICLES

John R. Haines, deceased, late of Columbus, Ohio, by Injection Molding Company, Kansas City, Mo., assignee

Original No. 2,632,202, dated March 24, 1953, Serial No. 191,031, October 19, 1950. Application for reissue July 9, 1956, Serial No. 596,909

8 Claims. (Cl. 18—5)



1. A machine for forming shaped articles of plastic material comprising a die head having walls and a central space within said walls having an outlet portion formed with a tapering throat; a longitudinally bored mandrel in the central space of said die head formed with a tapered end portion normally positioned in said tapered throat; mechanism for moving said mandrel in either direction lengthwise of said die head to constrict or enlarge the annular opening surrounding said mandrel within the tapered portion of said die head in accordance with any predetermined pattern and for preventing movement of the mandrel other than by the said mechanism; means for supplying air under pressure to the bore of said mandrel; and means for supplying plastic under super atmospheric pressure to the space between the walls of said die head and said mandrel concurrently with and at a time in the cycle of operations of the machine coordinated with a movement of the mandrel lengthwise of said die head.

24,578

BED ASSEMBLY

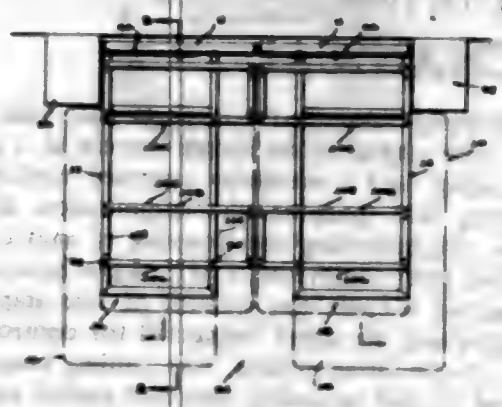
Alfonso Villa Torre, San Juan, Puerto Rico

Original No. 2,796,614, dated June 25, 1957, Serial No. 585,763, May 18, 1956. Application for reissue April 7, 1958, Serial No. 730,835

10 Claims. (Cl. 5—8)

9. A bed assembly comprising a lower support frame including rectangularly related side and end frame elements, guide means extending vertically from spaced upper surface portions of the side frame elements adjacent the intersecting corners of the frame elements for reciprocably supporting a rectangular box spring member thereon, a rectangular box spring member of a greater width than the lower support frame juxtapositionable on the lower support frame, and means for engaging said guide means disposed on a lower surface portion of the

box spring member, said last mentioned means engaging the lower surface portion of the box spring member permitting the box spring member to be moved predetermined distances sequentially along both the longitudinal and transverse axes of the lower support frame, said



guide means-engaging means comprising track means for each of said guide means having some portions thereof arranged substantially parallel to and other portions substantially transversely to the longitudinal axis of said box spring member.

24,579

PRODUCTION OF AROMATIC COMPOUNDS

Lloyd C. Fetterly, Oakland, Calif., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Original No. 2,819,322, dated January 7, 1958, Serial No. 399,570, December 21, 1953. Application for reissue April 7, 1958, Serial No. 727,015

13 Claims. (Cl. 260—668)

10. A process for the preparation of a polymethylbenzene having from three to five methyl groups which comprises hydrocracking a diarylmethane in which each aryl group is a methyl substituted phenyl group having from two to four methyl group substituents at an elevated temperature and a pressure of at least about 100 lbs./sq. in., gauge, suitable for hydrocracking, in the presence of from about one to about twenty moles of hydrogen per mole of diarylmethane and a high melting inorganic compound selected from the group consisting of oxides, sulfides and composites thereof of group VI and VIII metals having atomic numbers of at least 24, as catalyst.

said channel of the rim member, said groove and said bottom edge of one of said panels adjacent the other

PATENTS

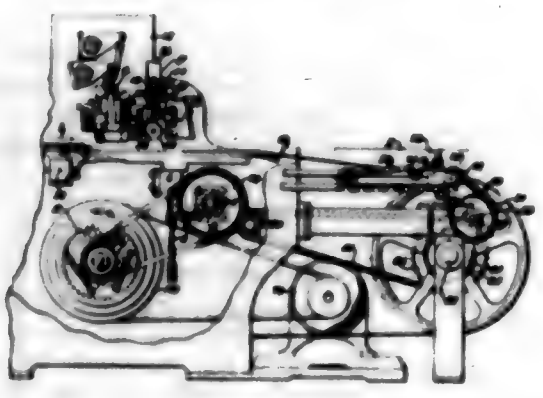
GRANTED DECEMBER 16, 1958

GENERAL AND MECHANICAL

2,864,085
MACHINES FOR SECURING HOOKED BELT-FASTENERS
John J. Potter, Sheffield, England, assignor to Hayden-Niles Limited, Sheffield, England
Application March 29, 1957, Serial No. 649,432
Claims priority, application Great Britain July 19, 1956
2 Claims. (Cl. 1—49.4)

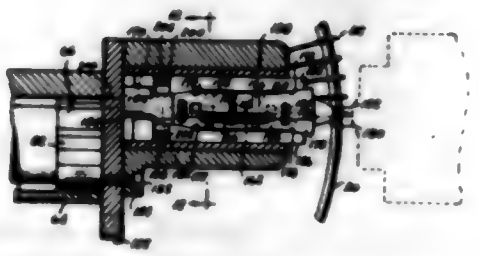
1. A machine for securing belt fastening hooks into a driving or conveyor belt of the type in which pivoted jaws are provided with detachable cheeks each with a transverse projection to make a close sliding fit with a corresponding transverse recess in the jaw, in which machine each jaw is provided with a spring-urged plunger adapted to enter the recess in the jaw, the projection on each cheek is provided with a recess to receive the end of the plunger, and each plunger is provided with a head in the form of a transverse bar of length greater than the width of the jaw, so that the ends of the bar may be grasped by the finger and thumb for retraction of the plunger, for sliding insertion of the cheek on to the jaw and sliding withdrawal of the cheek from the jaw.

2,864,086
SYNCHRONIZING APPARATUS FOR WIRE-BOUND BOX-MAKING MACHINES
Charles O. Riker, Morristown, N. J., assignor to Stapling Machines Co., Rockaway, N. J., a corporation of Delaware
Application February 7, 1957, Serial No. 638,853
5 Claims. (Cl. 1—146)



1. In a box-making machine of the type having stapling units driven cyclically through a stapling unit drive means and conveyors driven through a conveyor drive means for transporting assembled box parts past said stapling units to cause staples to be driven therein at a predetermined spacing, and a manually operated control switch for stopping said machine, the combination therein of means for synchronizing the stopping of said conveyors and stapling units comprising a pair of synchronizer units, one connected for effective control of said stapling unit drive means and the other connected for control of said conveyor clutch drive means, and timing means under the control of said manually operated switch for actuating said synchronizer units at different times.

2,864,087
PUNCHING AND ASSEMBLING DEVICE
Cecil E. Novinger, La Grange, and Theodore F. Novak, La Grange Park, Ill., assignors to Danly Machine Specialties, Inc., Chicago, Ill., a corporation of Illinois
Application August 31, 1954, Serial No. 453,482
13 Claims. (Cl. 1—169)



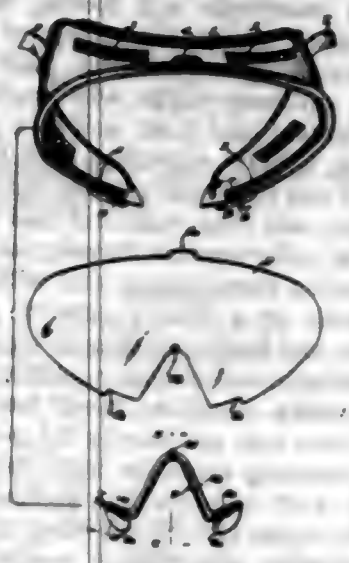
1. A feed for a hydraulic punch for driving piece parts through a carrying member and positioning them therein including in combination a table, a support carried by said table for reciprocation with a punching stroke and a return stroke, clamping means carried by said support operable to clamp a piece part in a position where it may function as a punch, a magazine containing a supply of piece parts to be driven into said carrying member, means for mounting said magazine on said support, feeding means for removing a piece part from said magazine and for carrying the part to a position where it may be clamped in said clamping means.

2,864,088
EYE SHIELD
Vernon F. Gongoll, Shillington, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application July 5, 1957, Serial No. 670,190
4 Claims. (Cl. 2—14)

1. An eye shield comprising a thin, flexible rim member of substantial width having an inner edge adapted to fit the eye-surrounding portions of the wearer's face exclusive of the nose portion and having an outer edge with a substantially continuous channel in the inner surface thereof, a slot formed in both end portions of said channel, a one-piece lens of flexible transparent material detachably engageable at its periphery with said channel with the exception of the nose-surrounding portion thereof, and a flexible nose piece having a top central groove into which is detachably fitted said nose-surrounding portion of the lens and having depending hooks extending from the bottom extremities thereof which are adapted to fit through said slots formed in the end portions of

tially conical shape, said device including an inner mem- and connected to the complemental ends of said front and

said channel of the rim member, said groove and said nose-surrounding portion of the lens being provided with



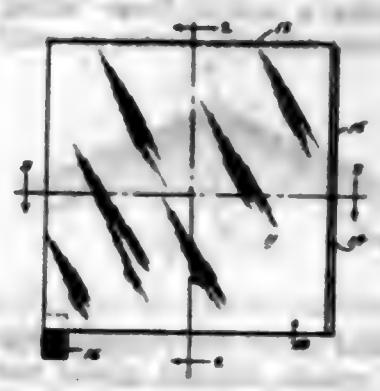
means for detachably locking said nose piece to said lens.

2,864,089
NECKTIE STRUCTURES
Robert J. Wolens, Windsor, Conn.
Application October 18, 1956, Serial No. 616,723
1 Claim. (Cl. 2—153)

A necktie structure comprising a hollow tapering body simulating the form of a knot, and having a front wall and two upper corner portions, projecting obliquely upwardly, each of said corner portions having a slot; a U-shaped stay wire comprising a bight engaged by said slots; two arms, the free end of each being adapted to engage a wing of an associated shirt collar; two resilient loops, each joining one of said arms with the corresponding end of said bight; a necktie comprising a short end, a long end, and an intermediate portion joining said ends, said short end being disposed vertically over the front wall of said hollow body, said intermediate portion being brought over the top of said hollow body and looped around one of said corner portions of the hollow body, then brought horizontally over said short end so as to cover the front wall of said hollow body, then looped around the other corner portion of said hollow body and passed first over the part of the tie lying on the top of said hollow body, then downwardly between said horizontally disposed part and said short end, thereby forming a knot; said long end being disposed vertically below said knot.

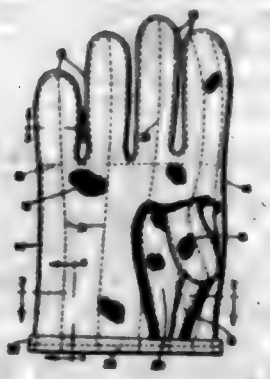
2,864,090
PHYSICIAN'S EXAMINATION HAND COVERING
Lyndon C. Sutherland, Rushville, Ill.
Application July 12, 1956, Serial No. 597,463
1 Claim. (Cl. 2—161)

A physician's examination hand covering for use in conducting rectal examinations comprising a pair of generally rectangular thin plastic panels arranged in face to face parallel relation, said panels each having opposed top and bottom edges and a pair of opposed side edges, said top edges of said panels being integrally joined together, said panels being sealed together along one of said side edges, and a combined identifying tab and handle fixedly secured to and extending outwardly from the bottom edge of one of said panels adjacent the other edge of said panel for stripping said hand covering from the physician's hand after use thereof, each of said panels having said bottom edge and the other of said side edges free to admit the physician's hand therebetween, the



physician's hand being encased in said covering and the examining fingers of the physician's hand being disposed so as to terminate adjacent the point of intersection of said top edge and said one side edge whereby contaminating contact between the physician's hand and the rectum may be avoided.

2,864,091
GLOVE WITH WIRE MESH REINFORCING
Herbert Schneider, Carrollton, Ohio, assignor to Martha Ferry Glove Company, Uhrichsville, Ohio, a partnership of Ohio
Application June 5, 1957, Serial No. 663,816
7 Claims. (Cl. 2—161)



1. A reinforced glove formed of pliable material having finger portions thereon and comprising a front portion and a back portion located together flatwise and joined at their marginal edges, woven all metal wire mesh material located flatwise upon and entirely covering the front portion of the glove including the front portions of the finger portions and the palm portion thereof, stitching at the marginal edges of the front and back portions and the wire mesh material including the finger portions thereof forming out-turned seams at all of said marginal edges, and a coating of rubber-like material binding the wire mesh and the front portion of the pliable material together.

2,864,092
SUN HAT
George Hurst, Chester, England
Application April 3, 1956, Serial No. 575,829
Claims priority, application Great Britain April 4, 1955
1 Claim. (Cl. 2—177)

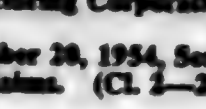
As an article of manufacture, a collapsible sun hat, comprising, a substantially conical-shaped body including a plurality of rectangular elongated pleats, a flexible element passing through one end of the pleats to provide a restricted opening at said end, and a two part clamping device for holding said body in said substan-

on said curtain in use, whereby said magnet will ad-

tially conical shape, said device including an inner member having a conical flange for engaging the inner edges of the pleats adjacent the said flexible element and also having an axially disposed elongated spindle for entering said restricted opening, said spindle provided with outer threads for a portion of its length, and an outer member comprising a conical flange mating with said inner conical flange and also having an axial depending

internally threaded socket for engaging with said outer threads of said spindle, the said spindle and the socket when threaded together adapted to maintain the outer member in spaced relation with respect to the inner member to hold the body set up for use in self-sustaining conical form without crushing the pleats between the flanged portions of said members to render the hat re-usable.

2,864,893
WASHABLE GARMENT PART
John K. Sumner, Plainfield, Philip Surowitz, Somerville, and Elmer J. Yodlick, Westfield, N. J., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts
Application October 28, 1954, Serial No. 463,426
6 Claims. (Cl. 2—243)

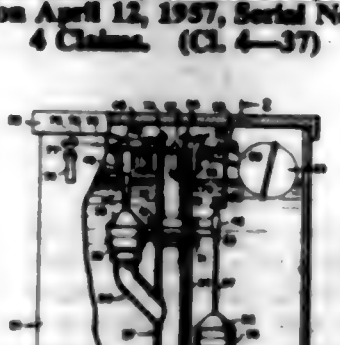


2. A resilient washable garment part comprising a laminated fabric of a plurality of layers of material, at least one of which is a web of nonwoven material, secured to each other, said web of nonwoven material being comprised of overlapping intersecting fibers containing melamine-formaldehyde as the thermosetting crease-proofing resin, and an ethyl acrylate copolymer as the binder material, the proportion of the binder material to the thermosetting resin being at least about 1.5 to 1 and the combined weight of the thermosetting resin and the acrylate being from about 25% to about 75% of the weight of the web, whereby the web is soft and flexible and possesses shape retention properties.

2,864,894
COLOSTOMY TOILET
Clarence B. Williams, Jr., Tallahassee, Fla.
Application May 17, 1957, Serial No. 659,884
3 Claims. (Cl. 4—1)

1. In a colostomy toilet, a receptacle having a bottom, spaced front and back walls rising from opposed end edges of said bottom, and side walls carried by the bottom and connected to the complemental ends of said front and back walls, a horizontally disposed nipple carried by said front wall and having one end in communication with the interior of said receptacle and having the other end adapted to abuttingly engage the portion of the abdomen of the user surrounding a colostomy, each of said side walls having a cut-away upper end portion extending from the end adjacent said front wall to a point midway of said side wall, a hood extending over the upper end of said back wall and the upper ends of the other portions of said side walls, said front wall and said cut-away portions of said side walls together forming an access opening for the insertion therethrough and withdrawal therefrom of the hands of a user, a conduit provided with spaced apertures and having both ends closed positioned within said receptacle and having a portion adjacent one closed end extending along the inner face of said side walls and said front wall and having the portion adjacent the other end extending along the inner face of said side walls and back wall with the intermediate portion extending along the under face of said hood inwardly of and adjacent said opening, and conduit means exteriorly of said receptacle and having one end connected in communication with said conduit and the other end adapted to be connected to a source of flushing liquid under pressure.

2,864,895
WATER FLUSH TOILETS AND BALL DUMP VALVE ASSEMBLY
James Martino, White Plains, N. Y.
Application April 12, 1957, Serial No. 652,564
4 Claims. (Cl. 4—37)



1. A selective water dump valve assembly for water flush tanks comprising an upright drain pipe having an upper end and laterally extending branch pipes located at different elevations thereupon, said branch pipes having valve seats thereon, ball valves overlying said seats and respectively having valve stems, and a selective lever arrangement mounted on the upper end of the drain pipe, said lever arrangement having two ball valve lift levers respectively loosely connected to the stems of the respective ball valves and respectively pivotally mounted on the drain pipe at the respective opposite sides thereof, a common operating shaft journalled in the drain pipe and having lever arms extending from the opposite sides of the shaft and within the drain pipe and selectively actionable upon said ball valve lift levers to lift said valves, and linkage means for connecting the common operating member with a turn handle of a flush tank.

2,864,896
CURTAIN POSITIONING MEANS
Henry M. Garber, Elizabethtown, Pa.
Application March 26, 1957, Serial No. 648,670
1 Claim. (Cl. 4—149)

In combination with a bathing appliance adjacent a non-metallic wall, a shower curtain suspended substantially vertically across an opening in the bathing appliance, a magnet attached adhesively to a vertical edge of said curtain, and a magnetizable member affixed adhesively to said wall in vertical alignment with the magnet

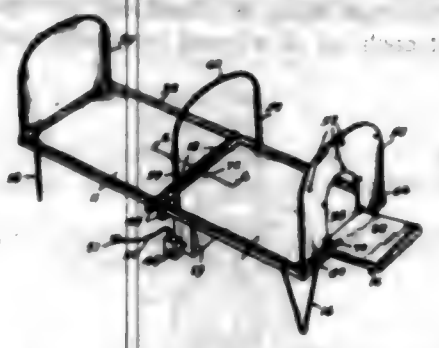
water on said bottom wall, said last named means including means for periodically moving said stream through

terior extending rearwardly from said frontal surface, said body having a plurality of circumferentially spaced

on said curtain in use, whereby said magnet will adhere magnetically to said magnetizable member on said

wall and releasably hold said vertical edge of said curtain against said wall.

2,864,097
STEAM BATHS
Ernest Schneeberg, Rolla, N. Dak.
Application January 11, 1957, Serial No. 633,618
3 Claims. (Cl. 4—169)



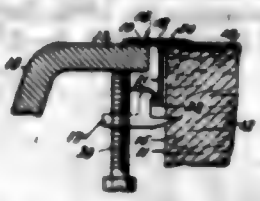
1. A knock down steam bath, comprising: a pair of aligned panels having adjacent ends and remote ends provided with remote end corners; hinge means hingedly connecting said adjacent ends together for folding movement; an upper beading around the edges of each of said panels forming a center valley within each of said panels; a piping along the sides of each of said panels inside of said beading and having open ends terminating adjacent the hingedly connected ends of said panels; said piping being provided with a plurality of spaced holes therealong on each side of said aligned panels; four downwardly directed supporting legs having upper ends releasably connected to said panels at said remote corners; a steam generator having extensions therefrom for fluid connection thereto; said generator underlying and abutting the hingedly connected ends of said panels and extending vertically downwardly therefrom, thereby forming a fifth leg support therefor; tubing means having one end of each telescopically received by and joined to one of the open ends of said piping, and the opposite end of each of said tubing means being telescopically received by and joined to one of the extensions of said generator, for steam passage from said generator to said piping and delivery of same out of said piping holes; a flexible cover removably mounted over said panels and said piping and forming a steam receiving chamber thereabove; said four supporting legs, said tubing means, and said cover all being demountable for reception in said valleys and between said panels when same are folded together.

2,864,098
SWIMMING POOLS AND METHOD OF CONSTRUCTING THE SAME
Allan Gordon Lorimer, Douglaston, N. Y., assignor to Malcolm A. Verdin, Sands Point, N. Y.
Application April 14, 1955, Serial No. 501,352
7 Claims. (Cl. 4—172)

1. An outdoor swimming pool having an earth bottom, a plurality of panels extending upwardly from said bottom at the periphery thereof and disposed side by side to form an enclosing wall, an earth embankment outside the wall to resist outward displacement of said wall, a water tight liner fitting said enclosing wall and bottom and extending outwardly over the tops of the side wall panels, and coping units forming a continuous coping covering the outwardly extending portion of the liner, said coping units having downwardly opening channels to fit

about the tops of the side panels, and having a tie cable about the coping units to hold them in place.

2,864,099
SINK MOUNTING
Charles L. Straka, Evanston, Ill., assignor to Church of Religious Science, Los Angeles, Calif., a church corporation of California
Application October 12, 1955, Serial No. 540,047
6 Claims. (Cl. 4—187)



1. In a mounting for positioning a generally rectangular peripherally flanged member in an apertured supporting structure which comprises a mounting frame of generally T-shaped cross section which is adapted to be positioned with the top portion extending laterally over the top surface of the flange of the member and the marginal portions of the supporting structure surrounding the aperture therein and with the stem portion depending between said flange and the vertical edge of said supporting structure and the stem portion having a hook formation on the bottom edge thereof; the improvement which comprises a fastening element for securing said frame to the flange of the member and to said supporting structure, said fastening element having an inverted T-shaped cross section, an upstanding hook formation on the upper end of the stem thereof which in the operative position of the fastening element is engaged with the hook formation on the bottom edge of the mounting frame, a vertically extending clamping screw in threaded engagement with one end of the cross bar portion forming the base of said fastening element which clamping screw is engaged with the bottom of the flange on said member to pivot said fastening element about said hook formation, and a laterally facing sharpened edge on the other end of the base of said fastening element which is engaged with and forced laterally into the vertical edge of said supporting structure when said fastening element is pivoted away from said flanged member by taking up on said clamping screw.

2,864,100
AUTOMATIC SELF FLUSHING SINK
Albert L. Hardy, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application December 30, 1957, Serial No. 706,011
5 Claims. (Cl. 4—187)

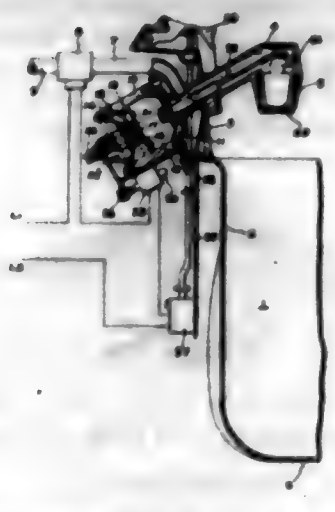
1. A sink comprising a generally horizontal bottom wall having a drain opening therein, side walls extending upwardly from said bottom wall, water inlet means overlying said bottom wall, and means associated with said water inlet means for directing a horizontal stream of

brushes driven by the electric motor, journal means supporting the brushes within the housing and substantially coplanar with portions of the brush peripheries in close

shaped portions extending longitudinally along the entire slide holding length thereof, means joining said members in fixed spaced position relative to one another

edges of said bottom, and side walls carried by the bottom sively to said wall in vertical alignment with the magnet

water on said bottom wall, said last named means including means for periodically moving said stream through



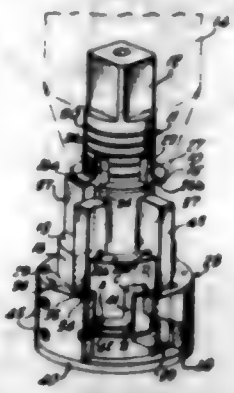
an arc of movement such that said stream periodically sweeps across said bottom wall.

2,864,101
BUOYANT RECEPTACLE FOR A DIVING DEVICE
William A. Kissenberger, Tacoma, Wash.
Application November 23, 1956, Serial No. 623,896
2 Claims. (Cl. 9—17)

1. A diving device for use by a deep sea diver comprising a receptacle having a flat bottom and an upstanding perforated wall rising from the perimeter of said bottom, an upstanding sleeve positioned within said receptacle and spaced from the upstanding wall of the latter and having its lower end fixedly secured to said bottom and having its upper end adjacent the upper end of said receptacle, said sleeve being adapted to receive an air supply tank, a cover closing the space between said sleeve and said receptacle and forming with said sleeve, said wall, and said bottom a compartment, a flexible inflatable bag positioned within said compartment, means operatively connected to said bag for inflating said bag with a gas under pressure, and means operatively connected to said receptacle for detachably securing said receptacle to the torso of a user.

2,864,102
DIE HEAD PROVIDING QUICK CHANGE OF CHASERS
Joseph Budnick, New York, N. Y., assignor to Electrical Fittings Corporation, Woodside, N. Y., a corporation of New York
Application March 29, 1957, Serial No. 649,466
7 Claims. (Cl. 10—121)

1. Die apparatus comprising, a longitudinal die body having an enlarged frontal end defining an outer peripheral bearing surface, said enlarged end terminating with a frontal surface and also having a hollowed interior extending rearwardly from said frontal surface, said body having a plurality of circumferentially spaced apart recesses extending inwardly from the outer circumferential surface thereof and longitudinally therealong to said frontal surface of said enlarged end, said recesses extending through the circumferential wall of said enlarged end, a threaded alignment plug suspended in the interior of said enlarged end, a movable sleeve for clamping threaded cutting chasers in said recesses, said sleeve having an interior bore surface adapted to fit snugly over said bearing surface and also having a plurality of circumferentially spaced apart and longitudinally extending recesses along its interior bore surface, said sleeve being movable with respect to said body from a first to a second of two positions along said bearing surface, each sleeve recess being provided with a stop abutment at its frontal end, respective ones of said sleeve and body recesses being in alignment for said first position so that each set of aligned recesses provides a transverse clearance for receiving and nesting respective ones of said chasers wherein the threaded cutting surfaces thereof confront said threaded plug and the frontal ends of said chasers rest upon correlated stop abutments, said stop abutments being adapted to arrest said chasers against forward longitudinal motion as each chaser rests in a correlated set of aligned recesses, whereby said chasers are initially aligned to be clamped to said die body, said aligned recesses being parted upon movement of said sleeve to the second of its positions, and means on said sleeve operatively engaging said chasers upon sleeve movement from said first to second of its positions and causing said chasers during such movement to shift off said stop abutments and out of respective sleeve recesses and into positive threaded engagement with the confronting alignment plug, whereby said chasers are firmly clamped between said sleeve bore surface and said plug so that accurate alignment of the cutting threads of said chasers is effected.



2,864,103
ELECTRICALLY DRIVEN CLEANING DEVICE WITH WORK SUPPORTING SWITCH ACTUATOR
Floyd D. Gerber, Huntington, W. Va.
Application July 29, 1957, Serial No. 674,714
1 Claim. (Cl. 15—21)

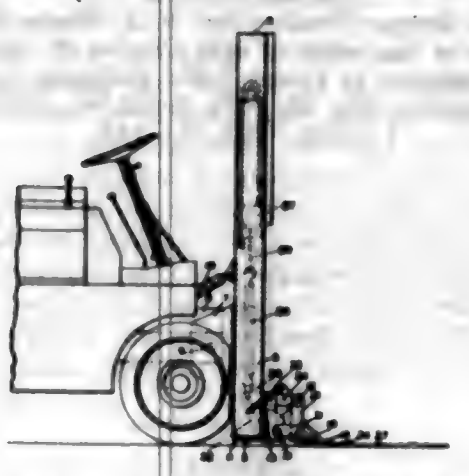
A soldering iron tip cleaner comprising a housing, an electric motor mounted in the housing, a pair of circular

adjacent the upper ends thereof for fulcrumming same on movement of said second slide, the lower ends of said

as to extend beyond the open ends of said head and below said side walls, the top of said blade interiorly

brushes driven by the electric motor, journal means supporting the brushes within the housing and substantially coplanar with portions of the brush peripheries in close adjacency to one another, said housing having a wall provided with an opening disposed adjacent said peripheral portions of the brushes and adapted to loosely accommodate a part of a soldering iron, a normally open electric switch for the motor supported by said wall beneath the opening and having a downwardly displaceable part for closing the switch, a switch actuator having a lower end connected to said switch part, means slidably connecting the switch actuator to said wall, and said switch actuator having an upwardly opening bifurcated upper end disposed between said opening and said brush portions and adapted to provide a rest for the soldering iron when the soldering iron tip is in engagement with said brush portions and whereby the switch actuator is displaced downwardly to effect closing of the electric switch.

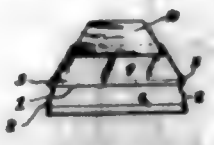
2,864,104
SCRAPER
Eugene J. Le Sage, Kankakee, Ill., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Application December 18, 1956, Serial No. 629,851
3 Claims. (Cl. 15—93)



1. An adjustable scraper mechanism for use on a mobile vehicle comprising a mast, a blade frame secured to the lower end of said mast in a fixed position thereon, a pivotable blade support, pivot means for said blade support pivotally securing said blade support to said blade frame for pivotal movement of said blade support about a substantially horizontal axis, a scraper blade secured to said blade support, a first pivot bracket secured to said blade frame, a second pivot bracket secured to said blade support, a first link pivoted to said first pivot bracket, a second link pivoted to said second pivot bracket, pivot means connecting said first and second links, a lift carried by said mast and slidable in ways provided in said mast for movement in a substantially vertical direction, and means connecting said lift to said first link for imparting pivotal movement to said blade support about said substantially horizontal axis upon said substantially vertical movement of said lift in an upward direction to move said scraper blade toward the surface to be scraped.

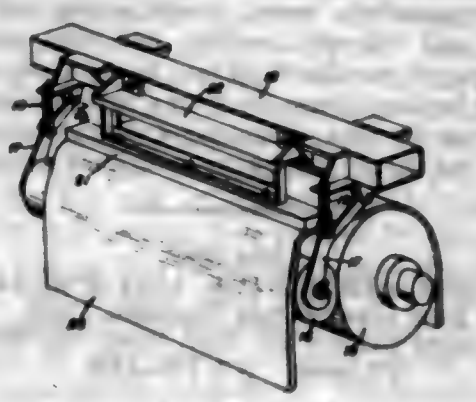
2,864,105
HOLDER AND WIPER FOR LABORATORY GLASS SLIDES
Jay Rose, New York, N. Y.
Application December 21, 1953, Serial No. 399,430
2 Claims. (Cl. 15—102)

1. A device for removably holding and cleaning a plurality of laboratory slides comprising a pair of elongated slide holding members of a length to hold a plurality of slides in edge-to-edge relation, said members having V-shaped portions extending longitudinally along the entire slide holding length thereof, means joining said members in fixed spaced position relative to one another so that said members are maintained in fixed spaced parallel relation with the open portion of the V's in facing relation and the narrow portion of the V's are spaced



apart a distance only sufficient for slidable insertion therebetween of said slides, and a wiping member slidably received between said V's having an end edge conforming to the surface of said slides and side edges extending from said end edge of a shape to fit within half the angle of the V's whereby said end edge contacts the entire surface of said slides.

2,864,106
SPRAY GUARD
Earll R. Muddiman, Levittown, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application April 3, 1957, Serial No. 650,504
4 Claims. (Cl. 15—102)



1. In a strip processing line which includes at least one tank adapted to contain liquid and from which strip emerges traveling upwardly, and a top directional roll journaled above the tank and over which the strip passes after leaving the liquid of the tank, the combination with said roll of a spray guard comprising a flexible curtain of material inert to the liquid of the tank overlying said roll, and support means to which said curtain is attached.

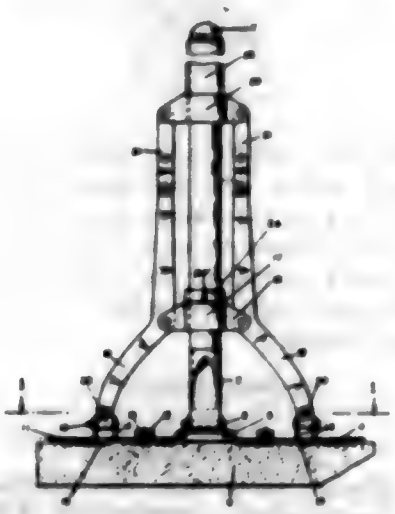
2,864,107
SELF-WRINGING MOP CONSTRUCTION
Nathaniel B. Greenleaf, Toronto, Ontario, Canada, assignor to Sponge Products Corporation, Chicago, Ill.
Application August 23, 1954, Serial No. 451,563
3 Claims. (Cl. 15—119)

1. A mop comprising a head, a pair of elongated backing plates hinged to said head to swing between aligned and substantially parallel positions, a foldable sponge element removably secured to said backing plates and adapted to be folded transversely of its length and to be compressed upon movement of said backing plates towards said parallel position, a handle pivoted to said head to swing about a pivot pin having its axis extending longitudinally of said backing plates and at right angles to the axes about which said hinged backing plates swing, means for swinging said backing plates comprising a pair of levers fulcrummed intermediate their length at opposite sides of said handle on a slide member slidably mounted on said handle, said levers being disposed to swing in a common plane containing the axis of said handle pivot pin, a second slide member on said handle, pivotal link means carried by said second slide and contained in said common plane and pivoted to said levers

end thereof and second stop means spaced longitudinally from said first stop means, said elongated support mem-

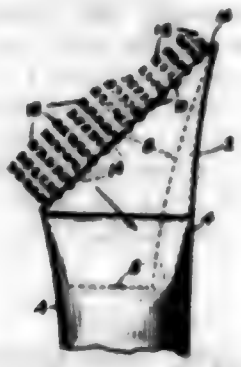
2,864,113
MOP STRUCTURE

adjacent the upper ends thereof for fulcrumming same on movement of said second slide, the lower ends of said levers being pivoted to lugs which in turn are pivotally connected to said backing plates by means of pivot pins disposed with their axes in alignment with the aforesaid pivot pin when said backing plates are swung to said aligned position, said levers being slidable upwardly



and downwardly along said handle as said backing plates swing between said aligned and substantially parallel positions respectively, spring means urging said backing plates to said aligned position, and stop means for limiting upward movement of said levers along said handle as said backing plates are swung to said aligned position to locate the axes of said pivot pins in precise alignment with the levers in their upward limit positions.

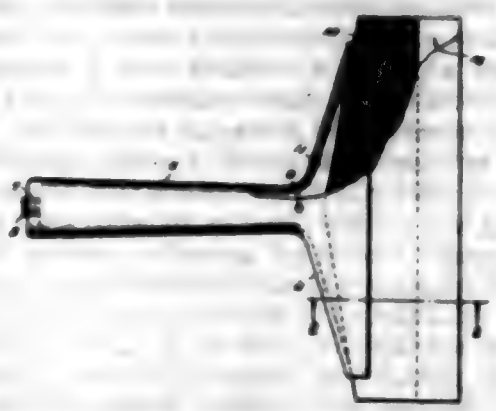
2,864,108
CEMENT APPLICATOR AND SPREADER
John Johnson, San Francisco, Calif.
Application October 25, 1957, Serial No. 692,425
4 Claims. (Cl. 15—135)



1. In a new article of manufacture, a cement applicator and spreader comprising a flexible, impervious envelope having an end folded back upon itself and having a plurality of dispensing outlets in said fold; and a spatula having an edge within said fold and having notches therein matching said outlets in said fold.

2,864,109
FOUNTAIN TYPE PLASTERER'S BRUSH
William T. Martin, Jr., Hammond, Ind.
Application May 24, 1956, Serial No. 587,136
1 Claim. (Cl. 15—133)

A water application brush for use in finishing plastered surfaces comprising a hollow head having an upper surface, side walls extending downwardly therefrom, and open ends, a hollow handle communicating with said head at a central point thereof, a filling opening in the end of said handle, a plug for said filling opening, a sponge rubber wiping blade clampingly engageable between said side walls, said blade being so dimensioned as to extend beyond the open ends of said head and below said side walls, the top of said blade interiorly of said head being tapered upwardly, the tapered surface thereof abutting the head at the top of said open



ends to prevent accidental lateral displacement thereof, said blade having a longitudinal slot in the outer face thereof and extending the full length of the blade, said handle, head and blade lying in substantially the same plane.

2,864,110
SHAFT AND HOLDER FOR CLEANING IMPLEMENTS
Charles W. Bruger, Union City, N. J.; Walter S. Usher, executor of the estate of said Charles W. Bruger, deceased, assignor to Louise Taffe, Palisades Park, N. J.
Application May 28, 1954, Serial No. 432,987
1 Claim. (Cl. 15—144)

A handle for an implement holder which consists of a clamp to receive an implement, an arcuate extension on said clamp member extending at an oblique angle thereto and having inwardly extending flanges, said handle having a plug at its lower end, a pair of splines in said plug engaging the flanges of said arcuate extension, said plug having an end having the same angle as the angle between the inner end of the arcuate extension and the clamp member, a screw through said clamp member engaging the end of said plug, said handle member comprising upper and lower telescoping sections, the upper section of said handle having an inner arcuate groove at one end thereof, a semi-circular spring in said groove and a plunger on said spring, the lower section of said handle having a plurality of apertures to selectively engage said plunger.

2,864,111
TOOTH BRUSHES
Charles Rotcsig, Paris, France
Application February 10, 1956, Serial No. 564,812
Claims priority, application France February 11, 1955
7 Claims. (Cl. 15—168)

1. A toothbrush, comprising, in combination, an elongated support member having first stop means at one

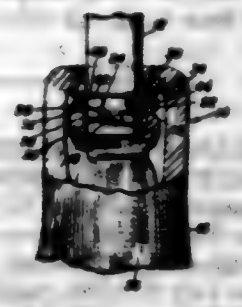
bers to the handle arms comprising spring clamps secured to the handle arms, said clamps each having a

actuating said wiper, a pump for supplying said spraying means with liquid under pressure, said pump including

end thereof and second stop means spaced longitudinally from said first stop means, said elongated support member being formed with a longitudinal groove adjacent said second stop means and spaced from said first stop means; a flexible member having a first end portion spaced from said first stop means and axially slidable in said elongated groove, an intermediate portion axially and transversely movable in said elongated groove, and a second end portion axially and transversely movable relative said support member; and brush means including a resilient base member having one end connected to said first end portion of said flexible member and the other end engaging said first stop means, a plurality of tufts of bristles having root portions fixedly connected to said base member, and resilient means connected to said first end portion of said flexible member and engaging said first stop means, said resilient means having

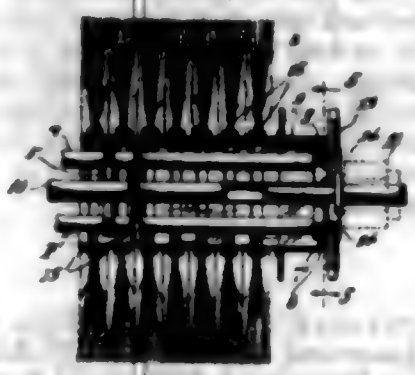
a plurality of apertures permitting passage of the free end portions of said tufts of bristles therethrough and being adapted to engage intermediate portions of said tufts of bristles in such a manner that upon outward flexing of said base member into a convex position causing radial positions of the tuft root portions, the portions of said tufts outward of said resilient means assume parallel positions with respect to each other in transverse direction of said support member, said flexible member, said base member, and said resilient means being movable relative to said support member between a first position in which they rest on said support member in unflexed condition and a second position in which said base member and said intermediate portion of said flexible member are flexed outwardly with respect to said support member, and said second end portion of said flexible member engages and is arrested by said second stop means.

2,864,113
MOP STRUCTURE
Cleve F. Christie, Knoxville, Tenn., assignor of twenty-five percent to Dovie A. Harrison, Knoxville, Tenn.
Application February 6, 1956, Serial No. 563,536
2 Claims. (Cl. 15—229)



1. A mop, said mop comprising an elongated handle having an upper end and a lower end, a mop head on said lower end of said handle, said head constructed of a single group of strands, means for fastening said strands to said lower end of said handle and including a first anchor attached to said handle near said lower end thereof, a wire secured at one end to said first anchor and having a plurality of loops extending around said handle and in contact with the surface of said handle, said strands having intermediate parts disposed on said loops, said wire having a securing loop which extends around said intermediate parts of said strands above the first mentioned loops and pressing said strands against said handle at a point spaced from the extreme lower end of said handle, a second anchor in said handle adjacent to the lower end thereof and located between said first anchor and said securing loop, said second anchor securing the free end of the wire to the handle, each anchor and said securing loop covered by the outer parts of all of said strands which hang over the inner parts of all of said strands, there being only one group of strands completely surrounding said handle with at least one strand of said group wrapped around said inner parts of said strands immediately below said lower end of said handle to hold parts of said strands together and there form a central core for the mop head.

2,864,112
STREET SWEEPER BRUSH AND HOLDER
Albert Theodore Nielsen, Kolding, Denmark, assignor to Newark Brush Company, Kenilworth, N. J.
Application April 22, 1955, Serial No. 503,137
4 Claims. (Cl. 15—181)



1. A street sweeper brush structure of the character described comprising a centrally located operating member carrying brush units, each of which has a stop pin, said member being composed of a plurality of strong metallic members in the form of seamless pipes suitably and arcuately spaced by longitudinally arranged support plates securely anchored thereto and at least one at each end of said members, the support plates at the ends having a bearing member detachably fastened thereto, a drive shaft and gear carried by each of said bearing members and assembly spacing members in the form of channel shaped rings positioned around said metallic members for properly locating the brush units thereon.

2,864,114
CLEANING DEVICE FOR CLEANING WINDOWS AND DISHES
Richard Schostal, Forest Hills, N. Y.
Application May 18, 1954, Serial No. 430,469
2 Claims. (Cl. 15—244)

2. A dish and window cleaning device comprising a U-shaped handle with stiffly flexible spring arms, cleaning members each having a tubular shank portion and a plurality of cleaning surfaces and slidably and removably secured to said handle arms, means to lock said cleaning members each in one of a plurality of positions along said arms, means to vary the cleaning surfaces of said cleaning members, said means to lock the cleaning mem-

polishing material, said roll of polishing material being of an outside diameter corresponding to the outside diameter of said head and one end thereof abutting said

valve chamber connected continuously with the atmosphere; having a plurality of air passages each leading

bers to the handle arms comprising spring clamps secured to the handle arms, said clamps each having a plunger and said shank portions of the cleaning members each having openings to selectively receive one of said plungers, said handle being of hollow tubing, and a U-shaped device housed in said handle at its base, the free ends of said device being slanted towards each other for pressing the free ends of the spring arms toward each other.

2,864,115
FLOOR CLEANING IMPLEMENTS IN THE NATURE OF BROOMS
Richard H. Champlin, Antioch, Ill., assignor, by mesne assignments, to Myron E. Schwartz, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application July 9, 1954, Serial No. 442,378
4 Claims. (Cl. 15—244)

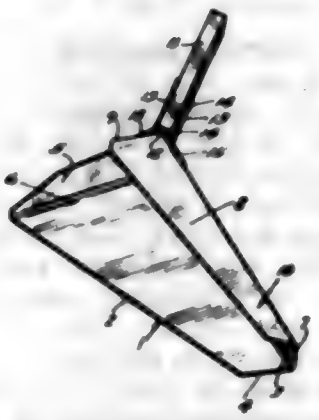
1. A broom-like cleaning implement comprising a flexible blade of resilient foraminous material, said blade having generally rectilinear surfaces and at least two substantially parallel edges, the surfaces of said blade being tapered toward one of said edges, the taper of said blade being gradual whereby the tapered edge of said blade is deformable to a position transverse to the plane of said blade, a body member having two spaced, elongated leg portions engaging a portion of said blade adjacent the other of said edges, the outer ends of said leg portions being shaped to produce a diminishing space therebetween toward said one edge, and pins extending inwardly into said space from said leg portions to engage said blade in spaced relationship, said body member extending over less than the entire length of the other of said edges whereby the end portions thereof form bumpers of resilient material.

2,864,116
WINDSHIELD CLEANING SYSTEM
Henry C. Rohr, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 24, 1955, Serial No. 490,331
14 Claims. (Cl. 15—250.4)

1. A pump having a fluid displacing elastic bulb with an intake stroke and a delivery stroke, inlet and outlet valves communicating with the interior of said bulb, power means acting thereon to effect one stroke, said fluid displacing bulb having a natural recovery characteristic which effects the other stroke, and power interrupting means movable with the bulb during said one stroke and operatively connected with said power means for rendering said power means inoperative so as to permit the natural recovery characteristic of said bulb to effect said other stroke.

7. A window cleaning system including in combination, a wiper movable across the surface of the window, means for spraying liquid in the path of said wiper, means for actuating said wiper, a pump for supplying said spraying means with liquid under pressure, said pump including a liquid displacing member having an intake stroke and a delivery stroke, and spring means for effecting the delivery stroke of said pump, said liquid displacing member having a natural recovery characteristic for effecting the intake stroke thereof, a manually operable member for storing energy in said spring means so as to effect the delivery stroke of said pump, and means operable by said manually operable member during movement thereof to store energy in said spring means for initiating operation of said wiper actuating means, said last recited means being automatically operable by said liquid displacing member during the delivery stroke thereof for terminating operation of the wiper actuating means.

2,864,117
DUST PAN
Alexander M. Williams, Watertown, S. Dak.
Application September 28, 1955, Serial No. 537,126
1 Claim. (Cl. 15—257.3)



A dust pan formed from a single sheet of material providing a flat, irregular, quadrilateral, bottom wall having straight converging front and rear side edges which approach each other to form one wall and discharge end of a pouring spout, said sheet material extending upwardly from said bottom between the divergent ends thereof to provide one side wall of the pan, said sheet material also extending upwardly along the rear edge to form a second side wall, said second side wall abutting said one side wall and having a forwardly extending wall portion overlying a substantial portion of said bottom wall between said discharge end of said pouring spout and said one side wall of the pan, said forwardly extending wall portion also overlying said one side wall and having a downturned section secured to the outer side of said one side wall adjacent the abutting ends of said side walls, a handle projecting upwardly and rearwardly from said abutting ends of said side walls and having divergent strap portions embracing each of said walls and rigidly connected thereto.

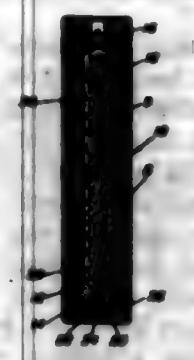
2,864,118
DISPOSABLE SHOE POLISHING KIT
Ray D. Adams and Allen G. Abre, Wichita, Kans.
Application December 4, 1956, Serial No. 626,156
2 Claims. (Cl. 15—258)

1. A single use disposable shoe polishing kit comprising, in combination, a disposable dauber comprising a daubing head, a manually squeezable shoe polish containing tube of elongated form communicatively and operatively attached at one end to a central portion of the dauber head and being of a length to provide a handle and of a diameter appreciably less than the diameter of the head and providing a shoulder at the juncture of said head and one end of said tube, polishing material in sheet form coiled and wound and wrapped around said tube and providing a ready-to-use roll of

spring element, a tube surrounding said element intermediate of the ends of said element, means for fastening

to sever from a part of the strip a blank and deposit it in said die members, immediately separating said die

polishing material, said roll of polishing material being of an outside diameter corresponding to the outside diameter of said head and one end thereof abutting said shoulder, an open-ended wrapper of tearable material wrapped around said roll of polishing material and having one end portion also extended and partly wrapped around a cooperating portion of said dauber head whereby said wrapper serves to connect said dauber, as an entity, to



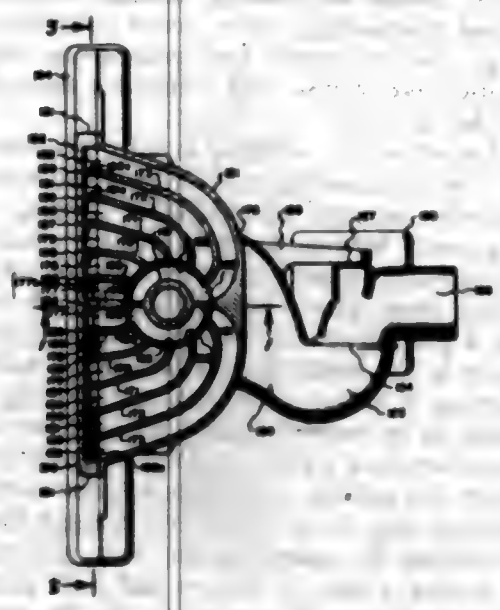
said roll of polishing material, a tear-strip interposed between the outer wrapping of said roll of polishing material and interior of said wrapper and having one end exposed and projecting beyond the adjacent end of the wrapper adjacent to said dauber head so that by using said extending one end as a pull tab, said tab may be caught hold of and said wrapper may be ripped off to free the polishing material so that it may be unwound from the tube in a manner to render the dauber free for use and said polishing material also free for use.

2,864,119

VACUUM CLEANER FOR DRAWING AIR THROUGH AND INTERMITTENTLY OVER SURFACE BEING CLEANED

Wilford P. Criss, Indianapolis, Ind.

Application September 14, 1953, Serial No. 380,028
6 Claims. (Cl. 15—404)



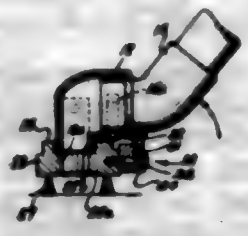
1. A nozzle for a vacuum cleaner comprising a casing having an elongated inlet end provided with a normally substantially horizontal elongated slot arranged to engage the surface of the material being cleaned; having an elongated inlet chamber formed within said casing and connected throughout its length with the horizontal slot; having a plurality of separate ports leading to said inlet chamber, positioned inwardly thereof, and spaced longitudinally along the length of said chamber; having an outlet opening positioned at an end of said casing removed from said inlet end which outlet opening is arranged to be connected to a suction creating means; having a cylindrical valve chamber connected continuously with the atmosphere; having a plurality of air passages each leading separately from one of said ports to said valve chamber; having a suction passage leading from said inlet end to said outlet end and continuously connecting said inlet end to said outlet end; and having a longitudinal partition separating said inlet end from said suction passage except for a narrow elongated normally substantially horizontal slit positioned adjacent to the surface to be cleaned; in combination with means comprising a valve body positioned in said valve chamber for connecting the atmosphere in said chamber sequentially and separately with said air passages whereby puffs of atmospheric air flow at high speed at separated points through said slit over the surface being cleaned, said valve body being continuously rotatable by substantially the full flow of the atmospheric air which the valve controls.

2,864,120

MULTIPURPOSE NOZZLE

Robert C. Lampe, Stamford, Conn., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Application August 13, 1954, Serial No. 449,661
3 Claims. (Cl. 15—417)



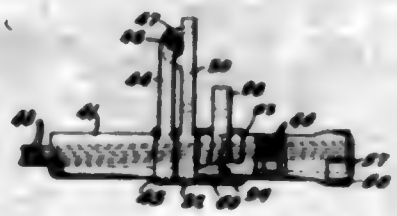
2. A relatively compact vacuum cleaner tool comprising a suction conduit connector, a supporting member in the form of a short angular pipe section defining an elbow having one end swiveled to said connector, a nozzle member having dissimilar surface contacting faces forming suction nozzle inlet openings on opposite sides of said nozzle member, means mounting said nozzle member on said supporting member for universal movement relative thereto whereby either of said nozzle faces may be disposed in operative position for contact with a surface to be cleaned and with the other of said nozzle faces arranged in communication with the other end of said tubular supporting member, said mounting means including a pair of pivots the axis of one of which being disposed transversely to the normal direction of nozzle movement and the axis of the other of which being disposed transversely to the axis of the first whereby said nozzle may be swung on the first of said pivots out of engagement with said supporting member and then may be swung on the second pivot to change work faces.

2,864,121

TORSION SPRING HINGE UNIT

Lawrence O. Imber, Adams Township, and Richard E. Hamlin, Toledo, Ohio, assignors to The Mather Spring Company, Toledo, Ohio, a corporation of Ohio

Application January 25, 1956, Serial No. 561,385
16 Claims. (Cl. 16—184)



13. In a vehicle having a frame, a tilting cab, and a counterbalanced hinge unit between said frame and said cab, said hinge unit comprising: a longitudinal torsion

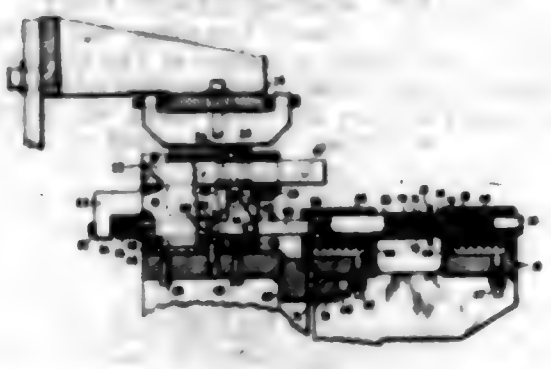
ranged in a row and each comprising separable sections, the reduced portion of which plunger extends outward

spring element, a tube surrounding said element intermediate of the ends of said element, means for fastening said element centrally of said element and said tube to said tube, means for anchoring said tube to said frame, means for anchoring the opposite ends of said element to said cab, and separate bearing means for said tube adjacent said anchoring means for the opposite ends of said torsion element, whereby equal torque is transmitted in the same direction from both ends of said element and said element is located along the axis of said hinge.

2,864,122
CONVERTER INFEED AND HEATER
Chester J. Haug, New York, N. Y., and Andrew A. Spisak, Cleveland, Ohio, assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Application April 11, 1955, Serial No. 500,398
5 Claims. (Cl. 18—1)

3. A mechanism for plasticizing and stretching thermoplastic filaments comprising input and output sets of rolls spaced apart the distance of a heating zone including driven rolls and idler rolls contacting therewith, means for driving the output driven roll at a greater peripheral speed than the input driven roll and including a drive electric motor, heater hoods located intermediate the sets of rolls on opposite sides of the filaments passing between said sets of rolls, heaters mounted in said hoods, means swingably mounting said hoods so the latter can be moved to substantially parallel operative positions relative to said filaments or swung to tilted inoperative positions, means for actuating said last named means and including a solenoid, means for circulating a cooling medium over said filaments in said zone intermediate said sets of rolls and including a fan and a fan motor, and a control circuit for said drive motor, solenoid and fan motor such that deenergization of said drive motor effects energization of said solenoid to cause said hoods to swing to tilted inoperative positions and energization of said fan motor to cause circulation of the cooling medium.

2,864,123
MOLDING METHODS AND APPARATUS
Henry Z. Gora, Stratford, Conn., assignor, by mesne assignments, to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Application April 17, 1952, Serial No. 282,795
28 Claims. (Cl. 18—5)



1. The method of molding articles of plastic material which comprises placing a strip of plastic moldable material between cooperating die members forming between them a molding cavity, bringing the die members together to sever from a part of the strip a blank and deposit it in said die members, immediately separating said die members and removing the remaining portion of the strip from which the blank was severed from between the open die members while leaving the blank in one of them, again closing the die members and maintaining them closed for sufficient time to mold the blank to finished shape and dimensions within the die cavity and then separating the die members and discharging the molded article therefrom.

16. The herein described method of molding articles of plastic material having a hole extending completely therethrough in a direction parallel to the closing movements of relatively movable die members forming an article-molding cavity between them, the steps of placing a supply strip of moldable plastic material between said die members when open, closing said die members to remove a portion of the molding supply strip and mold an article in the cavity therefrom, and at the same time with a hollow die part forming a hole in the article being molded by separating a portion of the material of the article therefrom by cutting completely through the article on a line defining the margin of the hole, depositing said separated portion in the hollow die part, separating the die members, withdrawing the hollow die part and the separated hole-forming portion deposited therein from the molded article, and accumulating the separated hole-forming portions in the hollow die part.

20. Apparatus for molding articles of plastic material comprising a rotatable drum; a plurality of pairs of axially aligned die members relatively movable between opened and closed positions mounted on the drum in closely spaced relation and movable by said drum successively past charging and discharging stations; means for guiding a continuous strip of plastic molding material between the die members in opened position at the charging station; means for closing the die members on the said strip to blank a portion of the material of the strip therefrom; means for opening the die members to free the strip therefrom, the blank being left in one of the die members; means for closing the die members on the blank and maintaining them closed until they reach the discharge station; means for opening the die members at the discharge station; and means for there discharging the molded articles.

26. Apparatus for molding articles of plastic material having a hole extending completely therethrough, a pair of relatively movable die members forming an article-molding cavity between them, means for placing a supply strip of moldable plastic material between said die members when open, means for closing said die members to remove a portion of the molding supply strip and mold an article in the cavity therefrom, one of said die members having a tubular projection for forming a hole in the article to be molded positioned to enter the molding cavity and separate a portion of the material of the article therefrom, the leading end of the tubular projection having a cutting edge to cut completely through the article on a line defining the margin of the hole, said tubular projection having a bore to receive and hold said separated portion, and means for separating the die members and withdrawing the tubular projection and the separated hole-forming portion deposited therein from the formed article.

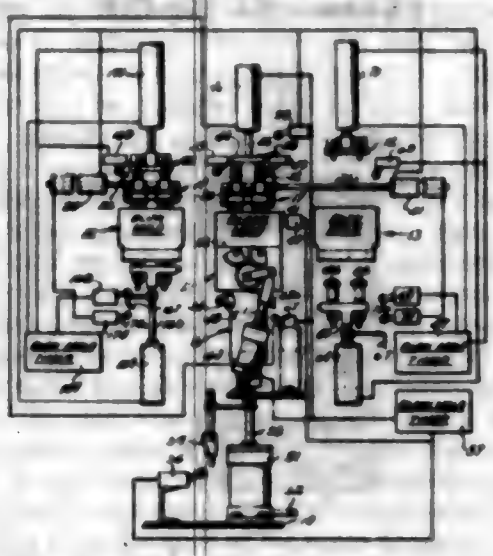
2,864,124
PLASTIC BLOW MOLDING APPARATUS
Robert G. Strauss, West Hartford, Conn., assignor to Plax Corporation, Bloomfield, Conn., a corporation of Delaware
Application September 5, 1957, Serial No. 682,166
3 Claims. (Cl. 18—5)

1. A machine for molding articles from plastic material, comprising a pair of sectional blow molds ar-

means for controlling the pressure of a fluid therein; and

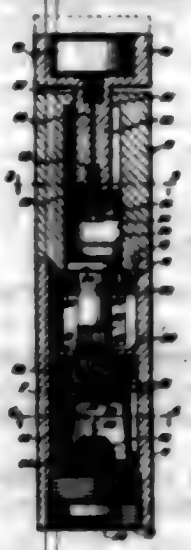
2,864,129

ranged in a row and each comprising separable sections, means for opening and closing the sections of one of said blow molds independently of the sections of the other of said blow molds, a parison mold having separable sections, means for opening and closing the sections of said parison mold independently of the sections of said blow molds, a pair of neck mold carriers, a sectional



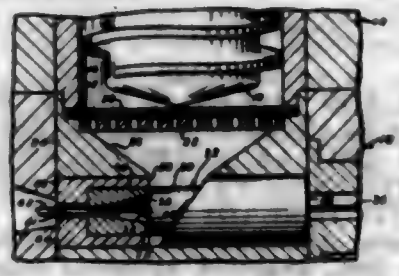
neck mold and a plunger on each of said carriers, means for opening and closing the neck mold on one carrier independently of the neck mold on the other carrier, means for moving one of said carriers between the parison mold and one of said blow molds, means for moving the other of said carriers between the parison mold and the other of said blow molds independently of movement of the other of said carriers.

2,864,125
PRESS FOR DENTAL INVESTMENT MATERIAL
William D. Kelley, Dallas, Tex.
Application July 8, 1954, Serial No. 442,155
2 Claims. (Cl. 18—5.7)



1. In an investment molding press for applying pressure to plastic dental investment casting material, at least two elongated tubular shell members screw threaded together in end to end relation, one of said shell members having a cylindrical bore formed axially therein, a pair of opposed pistons within said bore, hydraulic fluid between said pistons, one of said pistons being attached to a hydraulic pressure applying plunger, which plunger is apertured longitudinally and carries a pressure gauge thereon which is in communication with said cylindrical bore through said aperture in said plunger, said second piston being attached to a shouldered, fluid responsive plunger fitted in the other end of said cylindrical bore, the reduced portion of which plunger extends outward therefrom, a retaining ring surrounding the reduced portion of said shouldered plunger and being secured to the end of said shell member having a cylindrical bore, a spring interposed between said retaining ring and said shouldered portion of said last mentioned plunger, said second mentioned elongated, tubular shell member having an abutment intermediate the length thereof, which abutment is centrally apertured, said reduced end portion of said fluid responsive plunger being adapted to extend through said apertured abutment into said last mentioned tubular shell member, said last named tubular shell member being adapted to receive a molding flask having an axial hole formed therein, and screw means in said second mentioned tubular member at the end remote from said cylindrical bore, for retaining said molding flask within said tubular member.

2,864,126
PLASTICS EXTRUSION APPARATUS
George E. Henning, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application November 8, 1954, Serial No. 467,444
5 Claims. (Cl. 18—13)



1. Apparatus for extruding plastic sheaths onto filamentary cores, which comprises a cylindrical extrusion bore through which a plastic compound is advanced under pressure, an extrusion head secured transversely across the delivery end of the bore and having an internal chamber in communication with the bore, an extrusion die mounted at one end of the chamber, a core tube holder mounted in the head, and a core tube supported by the holder in axial alignment with the die for guiding an advancing filamentary core through the chamber and into the die, said holder having a cylindrical portion extending through the chamber and terminating in a transversely flat face which abuts the die, said flat face having a plurality of radial passages extending directly from the chamber which restrict the flow of the plastic compound into the die to a plurality of small radial streams converging upon the advancing core to form a sheath thereon in the die, said chamber and passages being compensated so as to equalize the pressure of the plastic compound circumferentially around the core as it passes through the die.

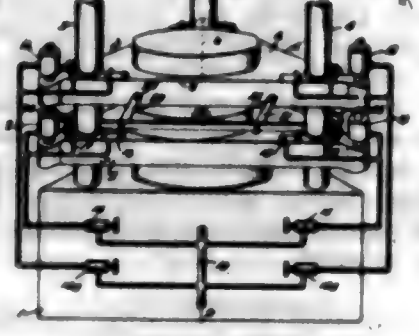
2,864,127
MULTILAYER PRESS
Fritz Marti, Basel, Switzerland, assignor to Lonza Electric and Chemical Works Ltd., Gampel, Switzerland
Application March 29, 1956, Serial No. 574,461
Claims priority, application Switzerland April 4, 1955
9 Claims. (Cl. 18—16)

1. In a multilayer press, in combination, a base; a plurality of mutually spaced guide posts connected to and extending upwardly from said base; a plurality of platens located one above the other and each formed with a plurality of openings through which said guide posts respectively extend with clearance; a plurality of pneumatic means operatively connected to each pair of successive platens for yieldably resisting the movement of said platens toward each other; a plurality of valve means respectively cooperating with said plurality of pneumatic

second cover having first and second openings tapered to prevent any appreciable outward flow of material there-

metallic layer bonded together throughout their contacting surfaces and arranged to form a base, two parallel

means for controlling the pressure of a fluid therein; and a pair of parallelogram linkage means respectively located in planes substantially parallel to said guide posts and making an angle with each other and respectively carried by each platen and engaging the valve means controlling



the pneumatic means between each platen and the next lower platen for automatically operating said valve means to maintain in said plurality of pneumatic means pressures which counteract tilting of said platens with respect to each other and which automatically maintain said platens parallel to each other during operation of the press.

2,864,128

APPARATUS FOR MOLDING INLET AND OUTLET FLANGES FROM POWDERED POLYETHYLENE AND SIMILAR THERMOPLASTIC MATERIALS WITH SIMULTANEOUS PRODUCTION OF MOLDED THREADS THEREON

Jerome S. Heisler, Albert Heisler, and Anthony J. Starr, Wilmington, Del., assignors, by mesne assignments, to Jerome S. Heisler and Albert Heisler, both of Wilmington, Del.

Application August 21, 1953, Serial No. 375,625
6 Claims. (Cl. 18—42)

2. A mold assembly adapted for powder molding of polyethylene and similar thermoplastic materials into the form of threaded flanges for pouring openings of containers, comprising a mold element provided with an opening therethrough and presenting on one side thereof surrounding said opening an open powder receiving molding surface, a mold member separable from said mold element and having an annular molding surface defining a continuation of said opening and extending from the side of such opening opposite to the side thereof defined by said element molding surface, a second mold member separable from said mold element having an annular molding surface concentrically arranged within and spaced from the molding surface of said first member, and having a part thereof closing the annular opening formed by said element and members at a point spaced from said element molding surface, said element and members forming an open mold cavity communicating at its open end with said element surface, at least one of said members having its molding surface provided with a spiral thread, being rotatable relative to the other member of said element, and being separable from said mold element when rotated relative to a molded flange in said cavity, and means for holding said element and members in cooperative relation during the molding operation.

2,864,129

PROCESS FOR THE PREPARATION OF ABRASIVE ARTICLES

Frederick R. Eirich, Rochester, N. Y., Daniel I. Livingston, Cambridge, Mass., and Sidney L. Reegen, Euclid, Ohio, assignors to Polytechnic Institute of Brooklyn, a chartered institution

Application August 25, 1953, Serial No. 376,342
6 Claims. (Cl. 18—47.5)

1. The process for producing abrasive articles which comprises heating a mixture of a finely divided abrasive substance and a condensation product of (1) a dibasic acid ester having the formula

$$ROOC—X_n—R'—X_n—COOR$$

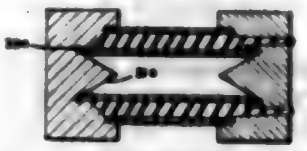
wherein R is the radical of an alcohol having not more than 6 carbon atoms, R′ is a ring member selected from the group consisting of benzene, naphthalene, and pyridine rings, X is a lower alkyl radical, and *n* is one of the integers 0 and 1; and wherein the —XCOOR groups are attached to the R′ ring at positions having a para relationship to each other; (2) a branched chain polyhydroxy alcohol containing carbon chain members of not more than 6 carbon length and (3) a plasticizer of the group consisting of polyalkylene glycols and alkoxy polyalkylene glycols in a mold of the desired configuration to a temperature of about 180° C. until the mixture distributes itself evenly in the mold, raising and maintaining the temperature to a temperature within the range 220° C. to 230° C. for about three to four hours, placing the mixture under pressure within the mold and continuing the heating for an additional two to three hours and removing the mold from the heating zone and permitting it to cool gradually to room temperature.

2,864,130

METHOD OF MOLDING

Charles H. Beare, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

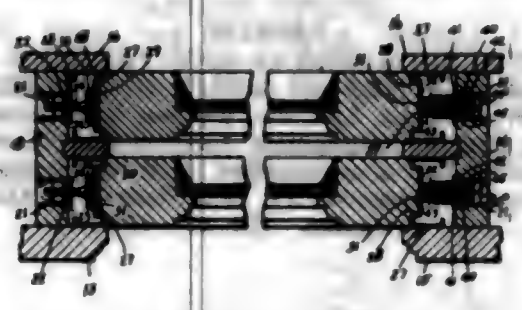
Application May 13, 1953, Serial No. 354,860
1 Claim. (Cl. 18—59)



In a method for molding vulcanizable elastomeric material and simultaneously bonding said material to surfaces of a pair of nested concentrically disposed metallic tubes, the steps comprising: placing a first imperforate cover and a second cover over the respective ends of the concentric tubes, said covers having concentric annular grooves thereon for maintaining said tubes in spaced relationship while deforming a portion of the ends of at least one of said tubes for securing said tube to the cover, said

second cover having first and second openings tapered to prevent any appreciable outward flow of material therethrough and connecting the annular space between said tubes, the exterior of said cover with the taper of the openings extending in such a direction that the openings having a larger cross-section on the side of the cover located immediately adjacent the end of the annular space defined by the concentric tubes, applying pressure to the covers so as to deform the ends of a tube thereby forming an assembly having an annular mold cavity between the covers and the annular space between concentric tube surfaces, placing the assembly in injecting apparatus and injecting a quantity of vulcanizable elastomeric material under pressure into said cavity through said first tapered opening while simultaneously venting air from said cavity through said second tapered opening and continuing the injection until a quantity of elastomeric material is forced outwardly through said second opening upon complete filling of the cavity, transferring said assembly from said injecting apparatus to vulcanizing apparatus, heating said assembly in said vulcanizing apparatus for vulcanizing the elastomeric material therein for causing the material to bond in situ to the tube surfaces, removing said assembly from said vulcanizing apparatus, and finally removing said covers from the ends of the tubes to provide a unitary assembly of nested metallic tubes maintained in concentric spaced relation by an elastomeric tubular member having surfaces bonded to contacting surfaces of the metallic tubes.

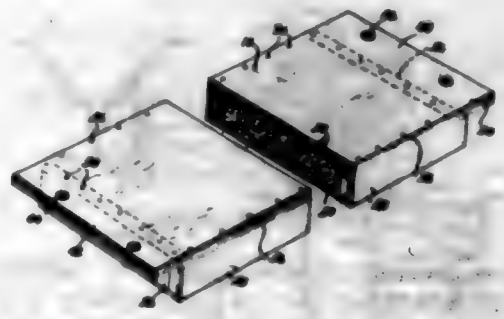
2,864,131
WINDOW CONSTRUCTION
Harry K. Piper, Paris, Ill.
Application November 16, 1954, Serial No. 469,107
2 Claims. (Cl. 20—12)



1. In a window construction including a sash and a frame having side rails for receiving said sash therebetween; a pair of opposed first and second slide rails mounted within the frame for slidably supporting said sash, adjustable means connecting the first slide rail to its adjacent side rail for moving said sash to a multiplicity of selective transverse positions between said side rails, said means including a plurality of vertically spaced nuts mounted in the side rail adjacent said first slide rail, a plurality of vertically spaced threaded members rotatably fixed to said first slide rail in alignment with said nuts, said members being adjustable within said nuts for moving said first slide rail transversely relative to the opposite slide and side rails, and a second means for connecting the second slide rail to its adjacent side rail, said second means including a compression spring of predetermined tension for normally urging said second slide rail towards said first slide rail.

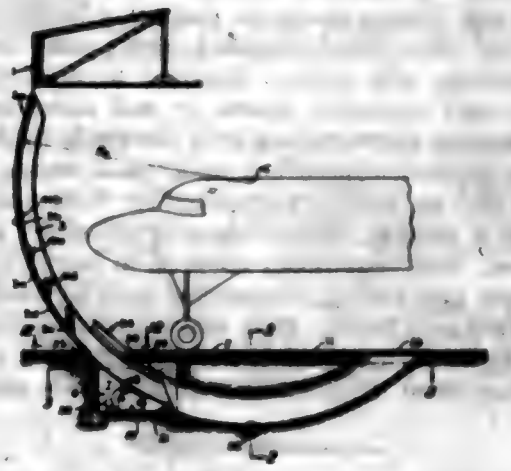
2,864,132
PANEL CONSTRUCTION
MacMillan Clements, Bethel, Conn.
Application April 16, 1953, Serial No. 349,289
1 Claim. (Cl. 20—15)

A panel for use in building construction and refrigerators comprising in combination, a laminated sheet including an outer metallic layer and an inner non-metallic layer bonded together throughout their contacting surfaces and arranged to form a base, two parallel sides at right angles to said base, and an inwardly extending overhanging flange at the upper edge of each side; said flanges being parallel to said base to form a substantially U-shaped channel along each side of said panel, a reinforcing member located in and substantially filling each of said channels and having its ends flush with the ends of the respective channel, an end piece separate from said sheet extending between and having



its outer side face flush with the adjacent end faces of said reinforcing members at each end of the panel, means for securing said flanges to said reinforcing members, a wooden cover of uniform thickness mounted on said flanges and said end pieces to form an enclosed space, insulating material in said space, means for securing said cover to said flanges and said end pieces, the edges of said cover being flush with said sides, and the ends thereof extending beyond said end pieces to form attaching portions.

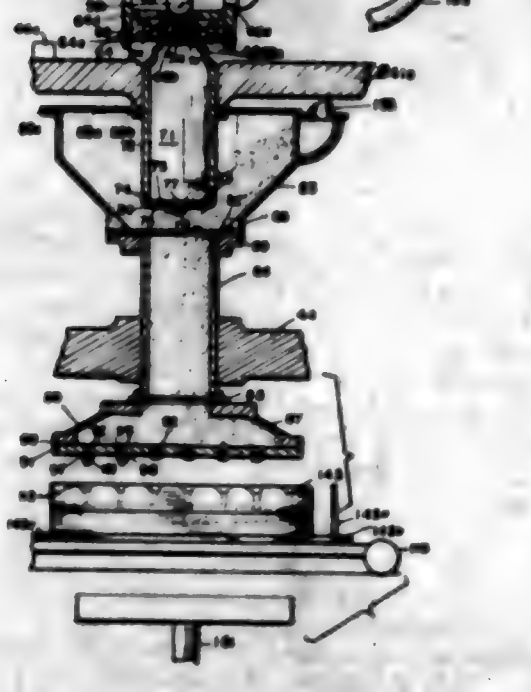
2,864,133
HANGAR DOOR
Dwen R. Younger, Napa, Calif.
Application November 7, 1955, Serial No. 547,228
5 Claims. (Cl. 20—19)



1. A vertically movable door for a door opening in a structure having a floor level comprising: a pair of vertically extending rigid door stiles and a plurality of horizontally extending door panels extending between said stiles in side by side coplanar relationship and covering said opening when said door is closed, a panel receiving chamber under said floor level of a depth sufficient to accommodate said panels in side by side stacked relationship, a pair of stile receiving chambers substantially deeper than said panel receiving chamber for receiving said stiles when the door is open, driving means under said level for urging said stiles upwardly to close said door and unstacking means operable automatically upon upward movement of said stiles for successively shifting said stacked panels into coplanar relationship, said last mentioned means being operable to automatically

shift said panels out of coplanar relationship and into side by side stacked relationship during opening movement of said door.

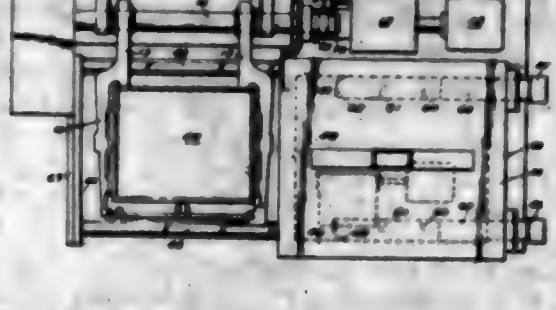
2,864,134
COKE BLOWING MACHINE
Charles R. Harrison, Wesleyville, Pa.
Application January 27, 1955, Serial No. 484,376
15 Claims. (Cl. 22—16)



1. A molding machine comprising a frame, a blow head on said frame, means to support a hopper on said frame, said blow head disposed above said hopper, a sand cartridge, said hopper disposed to discharge sand into said sand cartridge, means on said cartridge to engage a mold to communicate with the inside of the mold, means to support a mold box under said means, a main chamber and an auxiliary chamber for fluid under pressure, and a passage connecting said chambers and said blow head, said blow head adapted to move axially in said hopper into sealing engagement with one end of said sand cartridge whereby fluid under pressure from said chambers passes into said blow head and said cartridge and forces sand from said cartridge into said mold box.

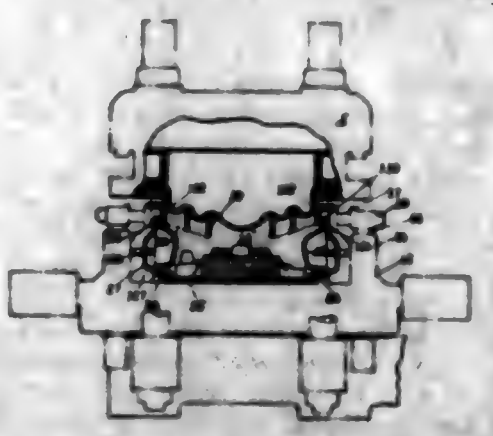
2,864,135
SINGLE-STATION SHELLMOLDING MACHINE
Paul Klump, Detroit, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Application May 5, 1958, Serial No. 734,168
4 Claims. (Cl. 22—39)

1. A shell molding machine of the type having a supporting framework, said framework being stationary, molding station components including a pattern carrier and sand box mounted on said framework, said pattern carrier being supported laterally of the pattern receiving portion thereof, means for moving said pattern carrier and sand box in a molding cycle, said molding cycle including a mold forming position in which the sand box and pattern carrier are clamped together for forming a shell mold and a curing position in which the sand box and pattern carrier are separated and are on opposite sides of their supports on the framework, and an oven supported on said framework for reciprocating straight line movement relative to said pattern carrier from a normal position adjacent said pattern carrier in the curing position thereof to and from a curing position in a curing cycle; characterized by said oven including top, bottom and side walls, a slot provided along the side wall adjacent the said pattern carrier support, said oven further including an open end adjacent said mold-



ing station and an end wall at the other end thereof, said open end being located to one side of said pattern carrier when said oven is in normal position, an oven closure member fixedly mounted adjacent the other side of said pattern carrier, and means for reciprocally moving said oven from said normal position to said curing position to place the said oven open end adjacent said oven closure member in curing position whereby said pattern carrier is enclosed for curing a mold supported thereon.

2,864,136
COMBINATION LATERAL AND VERTICAL PRESSURE DIAPHRAGM MOLDING MACHINE
Russell W. Taccone, Erie, Pa., assignor to Taccone Pneumatic Foundry Equipment Corporation, North East Township, Pa., a corporation of Pennsylvania
Application September 19, 1955, Serial No. 534,975
2 Claims. (Cl. 22—42)



1. A molding machine comprising a base adapted to support a pattern plate with a pattern thereon, means to support a flask around said pattern, spaced concave members disposed on said support having flexible diaphrams attached to the periphery of their concave surfaces whereby a chamber is provided between said concave surface and said diaphragm, said flask being adapted to be disposed over said pattern plate and between said concave members, openings in said flask walls adapted to be disposed in alignment with said diaphragms whereby pressure in the cavity behind said diaphragm is adapted to force said diaphragm into packing engagement with molding material adapted to be disposed in said flask over said pattern, and means to apply pressure to the top of said molding material.

mentality, and vacuum apparatus and including a normally closed switch means which, when open, supports

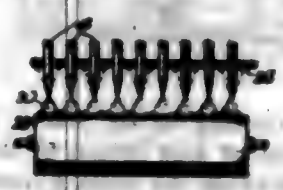
highly viscous slag over the molten metal in each riser

2,864,137

APPARATUS AND METHOD FOR PRODUCING METAL STRIP

Joseph B. Brennan, Cleveland, Ohio; Helen E. Brennan, executrix of the estate of said Joseph B. Brennan, deceased

Application October 25, 1952, Serial No. 316,873
22 Claims. (Cl. 22—57.3)



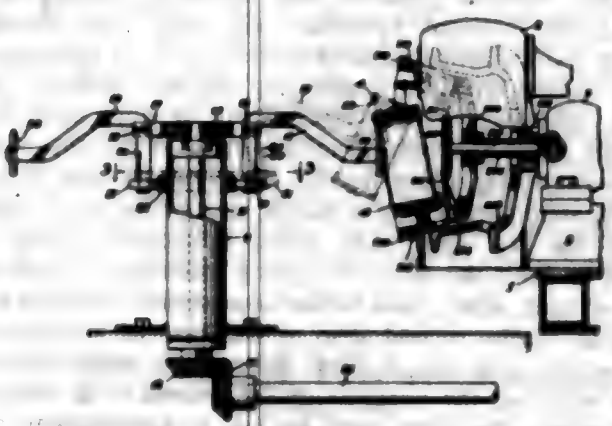
1. An apparatus for making metal tubing, comprising a molten metal centrifuge for distributing particulate metal circumferentially thereof, means including pressurized inert gas for depositing molten metal particles onto said centrifuge in substantially an annular band substantially concentric with the axis of the centrifuge, a wall surrounding said centrifuge and spaced from the annular band of molten metal particles deposited on said centrifuge and adapted to have the particulate metal deposited thereon to form a sheath, means for moving said sheath axially of said centrifuge, whereby a continuous metal tube is produced, means between the centrifuge and the portion of the sheath upon which the particulate metal is being deposited for heating the centrifuged metal particles, means for fusing the inner and outer surfaces of the metal tube, and means for densifying the material in said metal tube.

2,864,138

UNLOADING MEANS FOR CENTRIFUGAL CASTING CHUCK

Albert D. Pierce and Fredrick A. Wagner, Lansing, Mich., assignors, by mesne assignments, to Textron American, Inc., Providence, R. I., a corporation of Rhode Island

Application February 8, 1952, Serial No. 270,654
1 Claim. (Cl. 22—58.5)



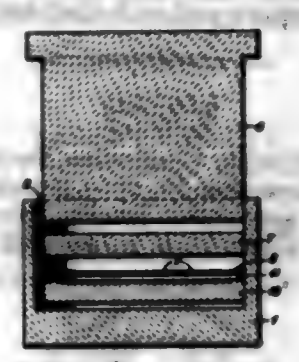
In combination, a fixed vertically disposed column, a turntable mounted for rotation on the column about the vertical axis thereof, a work engaging finger carried by the turntable and means for moving it vertically as the turntable rotates, a chuck mounted for movement along a path adjacent to but outside the path of the work engaging finger, the chuck being adapted to hold and support an annular drum and means associated with the chuck for supporting the drum on its lower periphery only and tilting it outwardly until the upper portion of the ring overlies the path of the finger, means for raising the finger when it is beneath the upper, inner periphery of the drum adjacent the face thereof furthest from the chuck and cause it to swing gravitally until the lower periphery of the drum is out of register with the chuck as the finger is carried away from the point at which it first contacted the drum by the rotation of the turntable.

2,864,139

METHOD AND APPARATUS FOR PRODUCING INTERMEDIATE SEMI-CONDUCTOR PRODUCT

Charlotte Z. Le May, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Application May 19, 1953, Serial No. 356,855
9 Claims. (Cl. 22—67)



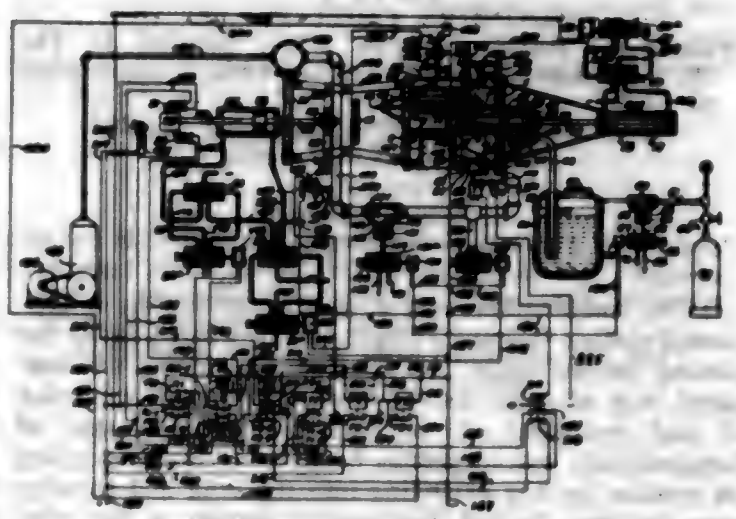
1. A method of making an intermediate product to be used for producing a known concentration of impurity in a semiconductor crystal drawn from a melt that comprises producing a body of substantially pure semiconductor material, making specific resistance determinations on said body, melting said body and incorporating therewith a predetermined weighable amount of impurity, resolidifying to reform said body of semiconductor material with said impurity material dispersed therethrough, remelting said body to cause the material thereof to flow into a restricted opening, solidifying the material in said restricted opening, and determining the concentration of impurity in said solidified material on the basis of said specific resistance determinations.

2,864,140

VACUUM DIE CASTING MEANS

David M. Morgenstern, Euclid, Ohio, assignor, by direct and mesne assignments, to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts

Application October 31, 1955, Serial No. 543,832
14 Claims. (Cl. 22—73)



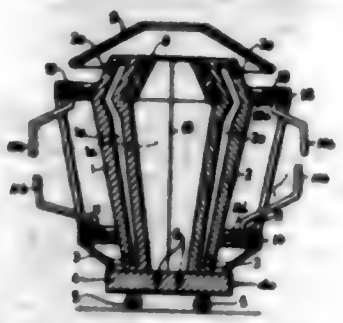
7. Vacuum apparatus incorporated in a die casting machine of the kind including die members relatively movable toward and from each other and by and between which a die cavity is defined, the machine including, also, mechanism for effecting reverse relative movement of said die members for opening and closing the die cavity, and an instrumentality for effecting delivery of molten metal to said cavity said apparatus comprising an enclosure surrounding the die members, means for evacuating said enclosure, and an electrical system for coordinating the operations of and that is in operative conjunction with the aforesaid mechanism, instru-

part being provided with a bend defining a socket, a member provided with a portion pivotally engaged in said socket and provided with an abutment adapted to extend

clothes hanger, a plurality of spaced rollers carried on said spring, each of said rollers being an annular disc whose central opening embraces the spring, the central

mentality, and vacuum apparatus and including a normally closed switch means which, when open, suspends operation of said system, electrical contacts insulated from each other and spaced apart and located in a position to receive metal that drops from between the die members, an electrical actuator that functions, when energized, to open the aforesaid switch means, and a circuit including said contacts and said electrical actuator.

2,864,141
MOLDS
Enn Vallak, Grythyttan, Sweden
Application November 26, 1954, Serial No. 471,463
Claims priority, application Sweden December 3, 1953
4 Claims. (Cl. 22—144)



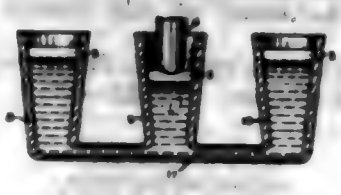
1. A mold for casting metals comprising a movably-supported bottom part and an upper part removable from said bottom part and comprising at least two mold sections each having a hollow cooling jacket with inlet and outlet for a cooling medium, said mold sections confining together with said bottom part a hollow space for liquid metal and being separable from each other, means for maintaining said sections in closed juxtaposition during the casting operation, means for separating said sections after at least a skin on said liquid metal has been solidified so as to disengage them from the ingot obtained by said solidification, means for removing said bottom part with said ingot thereon laterally, and means for retaining the ingot on said bottom part during transport.

2,864,142
FOUNDRY CHILL PLATE
Wendell L. Jenkins, Canton, Ohio, assignor to The W. L. Jenkins Company, Canton, Ohio, a corporation of Ohio
Application June 18, 1952, Serial No. 294,283
3 Claims. (Cl. 22—183)

1. In combination with a sand mold having a contoured surface forming at least part of a mold cavity for casting molten metal, a chill plate comprising an elongated strip of metal formed transversely to fit a portion of said contoured surface, said strip having a pair of longitudinally spaced prongs bent out of the strip along its median portion extending into the sand and forming vent openings through the median portion of the strip, and said prongs being inclined longitudinally in opposite directions at an acute angle with the strip to lock said chill plate in the compacted sand of the mold.

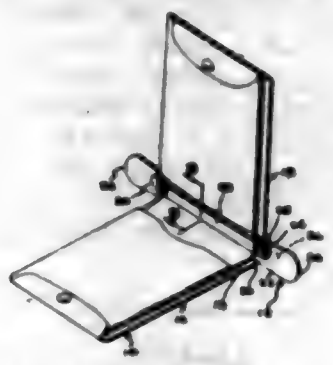
2,864,143
METHOD OF CASTING METALS
Blake M. Loring, Washington, D. C.
Application March 16, 1951, Serial No. 216,053
1 Claim. (Cl. 22—216)
(Granted under Title 35, U. S. Code (1952), sec. 266)

A method of producing a metal casting of improved grain structure which comprises disposing a layer of highly viscous slag over the molten metal in each riser of a plural riser mold which communicates at the bottom of the mold for flow of the metal from one riser to the



next and during cooling of the metal applying a force directly to the layer of slag in one of the risers at a frequency such as to cause the molten metal to oscillate in the mold at its natural frequency of oscillation.

2,864,144
WALLET PROTECTOR
Elmer B. Schick, Lexington, Mich.
Application November 9, 1956, Serial No. 621,416
1 Claim. (Cl. 24—3)



A protective device connectable to an article for binding the article against unauthorized removal or loss from the pocket, comprising an elongated strip engageable with the article and adapted at its opposite ends beyond the respective sides of the article for binding against the side walls of the pocket, said strip being of resiliently flexible material and normally flexing to a substantially straight position, said strip being flexible to a curved condition to permit removal from the pocket; and a second strip for connecting the first strip to said article, said second strip terminating at both ends well inwardly from the corresponding ends of the first strip, said second strip being fixedly connected at one end to the first strip and having a sliding connection at its other end to the first strip, said sliding connection being arranged to limit the strips to sliding movement longitudinally of each other, said sliding connection comprising a flat head on the second strip at the base of which head said second strip has a neck reduced in width relative to the width of the portions of the second strip contiguous thereto, the first strip having a longitudinal slot greater in width than said neck but smaller in width than the maximum width of the head, the slot being greater in length than the width of the head to permit insertion of the head therethrough, said head lying in face-to-face, sliding engagement with one face of the first strip, said neck extending through the slot with the remainder of the first strip overlying the opposite face of the first strip.

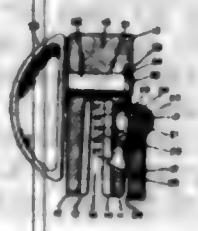
2,864,145
BUCKLE
Edwin C. Elmer, Glendale, Calif., assignor to McJohn Corporation, Los Angeles, Calif., a corporation of California
Application October 3, 1955, Serial No. 537,930
8 Claims. (Cl. 24—75)

1. A buckle comprising two buckle parts, one part being provided with a transverse abutment edge, the other

extending therethrough, the bottom wall having a slot with said thermoplastic constituent, and, owing to its

part being provided with a bend defining a socket, a member provided with a portion pivotally engaged in said socket and provided with an abutment adapted to extend between said socket and abutment edge, means spring biasing said abutment and abutment edge into engaged position to connect the buckle parts against endwise separation, and a handle provided with a portion also pivotally engaged in said socket and with an extension between the buckle part that has the bend and the mentioned member, pivotal movement of the handle thereby pivotally moving said member to move its abutment out of engagement with the mentioned abutment edge to release the buckle part having said edge.

2,864,146
AUTOMATIC SPRING PIN LOCK SLIDER OPERATABLE FROM BOTH SIDES
Louis H. Morin, Bronx, N. Y.
Application March 29, 1954, Serial No. 419,241
16 Claims. (Cl. 24—205.14)

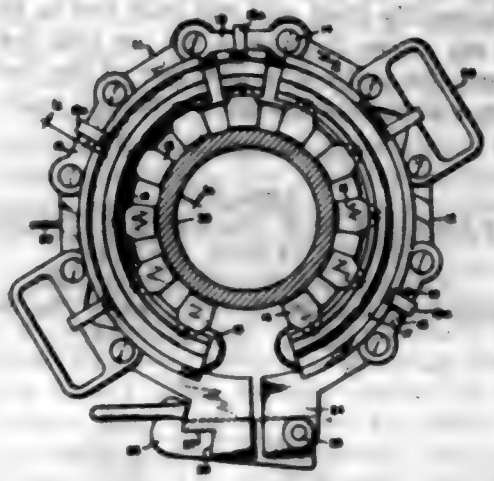


1. A lock slider for separable fastener stringers, comprising a slider body defined by spaced walls joined and spaced by a connecting web at one end of the slider body, said walls having inwardly directed flanges defining a channel in the slider body, a spring actuated pull pivoted on one wall of the slider body, said wall of the slider body having an aperture opening into the channel of the slider body adjacent the pivot of said pull, the pivot end portion of the pull having a lock element normally extending into the channel of the slider body through said aperture, a rotatable pin extending through the web, a cam on the end of the pin disposed at the first named wall and operatively engaging said pull, and manually rotatable means fixed to the other end of said pin for actuating said pin and cam and thereby move pull and withdraw the said lock element from the channel of the slider body.

2,864,147
CLOTHES HANGER AND ATTACHMENT THEREFOR
Benjamin Solow, North Hollywood, Calif.
Application November 5, 1957, Serial No. 694,649
5 Claims. (Cl. 24—230.5)

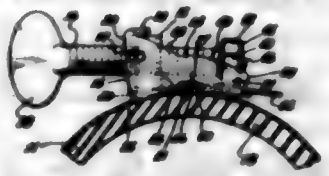
1. An attachment for the hook of a clothes hanger for permitting the same to be rolled along a supporting bar, said attachment comprising a resilient spring having a plurality of spaced rings, each of said rings being of sufficient internal diameter to embrace the hook of the clothes hanger, a plurality of spaced rollers carried on said spring, each of said rollers being an annular disc whose central opening embraces the spring, the central opening of each of said rollers being of sufficient internal diameter to embrace both the spring and the hook of the clothes hanger when the rings of the spring are disposed upon the hook of the clothes hanger, and stop means on said spring on either side of each of said rollers for preventing lateral movement of said rollers.

2,864,148
SAFETY COLLAR
Harold V. Walt, New Orleans, La., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application January 28, 1957, Serial No. 636,575
11 Claims. (Cl. 24—263)



1. A safety collar for attachment to pipe having a unifor cylindrical surface which comprises a flexible supporting member, a plurality of pipe gripping members carried by said supporting member for engagement with the periphery of pipe in pipe gripping relationship, fluid pressure operated means, said fluid pressure operated means being carried by said supporting member operatively engaging said pipe gripping members such that on impoeing fluid pressure on said fluid pressure operated means said pipe gripping members are caused to move relative to said supporting member, and means for latching said supporting member around the periphery of pipe.

2,864,149
BAND CLAMP
George A. Seaver, Northridge, and Clarence E. Christopherson and Alexander P. Bartusch, Los Angeles, Calif., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Application January 6, 1958, Serial No. 707,162
6 Claims. (Cl. 24—280)



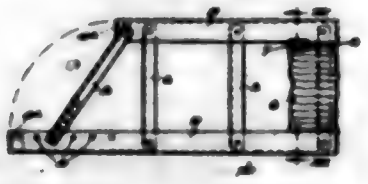
1. A band clamp for clamping an object and comprising: a frame having a bottom wall with an upper surface, opposed side walls extending upwardly from the bottom wall, an open front end and an end wall at the rearward end of the frame and extending upwardly from the bottom wall and being integral with the side walls thereby to define a chamber in the rearward end portion of the frame, the end wall having an opening

2,864,154
METHOD FOR MANUFACTURING SEGMENTED

field, and establishing a magnetic field from a source ex-

extending therethrough, the bottom wall having a slot formed therein extending transversely between the side walls; a screw having a forward end and extending through said end wall opening; a nut having an internally threaded hole, the nut being on the screw and disposed in said chamber; means on the frame for retaining the nut in the chamber against movement of the nut forwardly in the frame, nut abutment means on the frame for limiting upward movement of the nut in the chamber; a band for encircling said object and having two end portions extended through said slot, one band end portion extending forwardly in the frame and against the upper surface of the bottom wall, the other band end portion being connected to the forward end of the screw, the screw being rotatable with respect to said other end portion of the band, whereby as the screw is turned to move longitudinally forwardly in the frame, said other end portion of the band will bear downwardly and slidingly against said one end portion of the band; and a projection extending forwardly from said end wall and in engagement with the nut above the axis of the nut hole for inclining the nut and the screw in a direction of the forward end of the screw downward toward the bottom wall.

2,864,150
APPARATUS FOR MAKING CONCRETE STRUCTURAL SHAPES
Albert Henderson, Pittsburgh, Pa.
Application November 9, 1955, Serial No. 545,892
8 Claims. (Cl. 25—121)

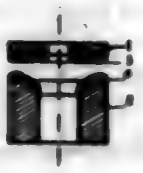


7. Mold apparatus for making concrete, that comprises four corner mold frame bars in rectangular formation, two series of struts that respectively pivotally connect each corner frame member to the next two adjacent corner frame members, the struts of each series being parallel with one another, for collapsing and expansion movements of their associated corner frame bars, mold wall elements bridging the spaces between the corner frame bars, and means independent of said struts, for releasably holding the bars at various rigidly set relative spacings.

2,864,151
FUSED FABRIC ASSEMBLIES
Lajos Bihaly, London, England
Application December 2, 1952, Serial No. 323,785
Claims priority, application Great Britain
January 1, 1952
8 Claims. (Cl. 28—78)

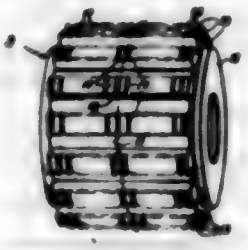
1. A mixed textile fabric for use in the production of fused fabric assemblies, said fabric comprising strands including as one constituent a thermoplastic structure which melts or softens sufficiently to become adhesive, upon heating to a temperature to which the other constituents of the fabric can be subjected without damage, this thermoplastic structure having its molecules arranged at random so that it will not contract to any substantial extent upon heating said strands including as another constituent a material which forms a unitary structure with said thermoplastic constituent, and, owing to its lower extensibility than the thermoplastic material, resists stretching of the strand, which would result in at least partial orientation of the thermoplastic material.

2,864,152
MANUFACTURE OF LOW-TENSION SPARKING PLUGS FOR ENGINES
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works
Application June 19, 1957, Serial No. 666,623
1 Claim. (Cl. 29—25.12)



A method of manufacture of low-tension sparking plugs operating by discharge of a capacity, and comprising a sparking unit or cartridge having two electrodes separated by an inter-electrode insulator, the said method comprising essentially the steps of: applying to the co-operating faces of the said electrodes an insulating and refractory material which is melted in the flame of a blow-pipe and projected on the said faces by a hot-spraying process; and grinding the surface of the deposit so formed on said electrodes, before adjustment and assembly of the cartridge of the said plug.

2,864,153
HOB
William F. Mahan, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Application January 24, 1955, Serial No. 483,585
3 Claims. (Cl. 29—103)

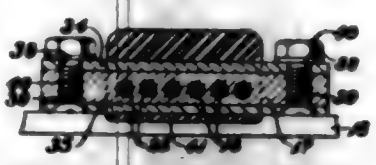


1. A cutter for hobbing gear teeth of predetermined pitch with tops of a desired contour comprising a rotary body, a multiplicity of first teeth rigid with said body and arranged in a plurality of generally parallel rows extending along the axis of the body and spaced circumferentially around the latter, the teeth of each row having cutting edges lying in a common plane and shaped to generate the interdental spaces between the teeth of said gear, said teeth in each row also being spaced laterally from each other a distance at least equal to three times said predetermined pitch to locate the teeth of successive rows along different circumferential lines extending helically around said body, and second teeth rigid with said body and each disposed between the adjacent teeth of said first row and also spaced along said helical lines, each of said second teeth having a cutting edge lying in the plane of the cutting edges of the associated row of first teeth and engageable with the teeth of said gear and shaped to contour the top on each of the gear teeth generated by said first teeth.

2,864,154
METHOD FOR MANUFACTURING SEGMENTED TRACKS

Robert E. Sussmann, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

Application November 26, 1954, Serial No. 471,383
4 Claims. (Cl. 29—148.3)

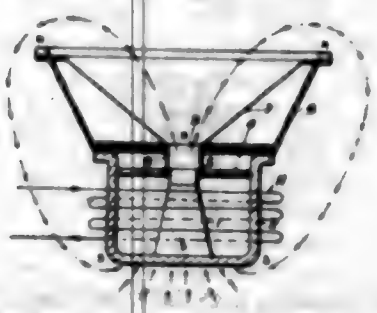


1. The method of making a tension member for eventual use in a self-laying track which tension member includes a plurality of laterally-spaced flexible reinforcing cables and an anchor plate joined to the terminal ends of the cables at each end of the tension member, the method comprising providing a plurality of plates each with a plurality of openings extending therethrough, threading a flexible cable through each of the corresponding openings of said plates from one plate to another, arranging the plates in spaced relation to each other lengthwise of the cables so that between opposing edges of each two anchor plates the cable portions extending between such two plates are all of equal length, deforming each plate to constrict its respective openings about the portion of each cable extending through each opening, and then transversely severing assembly adjacent the anchor plates to divide the cables into discrete segments each containing a group of cables with an anchor plate extending transverse to the end of each cable at each end of the segment to which anchor plates the cable ends are collectively secured.

2,864,155
METHOD OF PRODUCING MOVING COIL LOUD-SPEAKER

Harry Claude Willson, Wolverhampton, England, assignor to Reproducers and Amplifiers Limited, Wolverhampton, England, a British company

Application January 2, 1953, Serial No. 329,449
3 Claims. (Cl. 29—155.5)

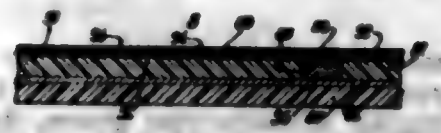


1. The method of producing a moving coil loudspeaker of the substantially totally enclosed permanent magnet type having a central magnet and carrying a cone-supporting chassis formed of magnetic material, and wherein the stray magnetic field produced by said chassis along and adjacent the axis of the loudspeaker is to be reduced to a negligible value, said method comprising the steps of assembling the component parts of the loudspeaker with said central magnet substantially unmagnetized, subjecting said loudspeaker including said central magnet and said chassis to a strong magnetic field directed along the axis of the loudspeaker and of sufficient strength to permanently magnetize said central magnet to the desired strength and to magnetize the said chassis in the same direction as said central magnet, removing said magnetic field, and establishing a magnetic field from a source external of said loudspeaker assembly and along the same axis as said strong field, but in the reverse direction, and of lower strength sufficient only to reverse the residual magnetism in the said chassis and to leave a residual field in the opposite direction to that produced by said central magnet.

2,864,156
METHOD OF FORMING A PRINTED CIRCUIT

Donald K. Canty, Chicago, Ill.

Application April 17, 1953, Serial No. 349,455
1 Claim. (Cl. 29—155.5)



In a method of forming a printed circuit, the steps of disposing over a first sheet of insulating material a first screen having coated and uncoated portions, the uncoated portions representing a desired circuit arrangement; applying a conductive paint to said screen to form conductive elements on said first sheet; removing said first screen; disposing over said first sheet of insulating material a second sheet of insulating material having openings aligned with portions of the conductive elements formed on said first sheet; disposing over said second sheet of insulating material a second screen having coated and coacted portions; parts of the uncoated portions being aligned with said openings; applying conductive paint to said second screen to form conductive elements on said second sheet and to cause the paint to flow through said recesses into engagement with portions of the conductive paint applied to said first sheet; removing said second screen; and allowing said paint to dry while holding said sheets together.

2,864,157
METHOD OF MAKING COMMUTATORS

Bartholomew Campbell, Perivale, Greenford, England, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio

Application December 2, 1954, Serial No. 472,753
Claims priority, application Great Britain
February 26, 1954
1 Claim. (Cl. 29—155.54)

The method of forming a radial face-type commutator from an annulus of ductile metal comprising, impact extruding said annulus to form a blank having a flat annular ring at one end with inner and outer annular walls extending normal to one face of said ring at the inner and outer concentric edges thereof connected by radial walls corresponding in number to that of the number of segments to be formed in the finished commutator, removing said annular walls from said ring to form a second blank comprising said annular ring and said radial walls in the form of tangs extending normal to one face of said ring, deforming said tangs to form radially overhanging shoulders thereon, molding an insulating material about said tangs and ring leaving one face of said ring free of insulating material and severing the metal of said ring between said tangs to form individual axially-facing segments embedded in said insulating material whereby said shoulders prevent said segments from flying outwardly against the action of centrifugal forces caused by a rapid rotation of the commutator.

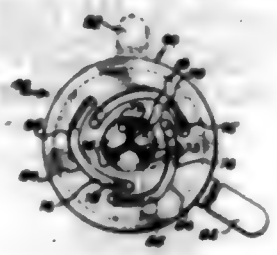
2,864,162
HAIR TAPERING DEVICE

blade between open and closed positions relative to the

2,864,158
METHOD OF ASSEMBLING A SEAL FOR BLAST-FURNACE DISTRIBUTOR
Percy J. Hake, Gary, Ind., assignor to United States Steel Corporation, a corporation of New Jersey
Application February 5, 1954, Serial No. 408,461
3 Claims. (Cl. 29—486)

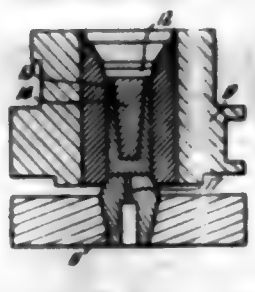
1. In a method of assembling a seal for the space between a rotatable cylindrical hopper and a base ring having an internal circumferential groove, the steps including providing a contractible metal seal ring, first drilling a plurality of spaced radial holes in the seal ring and then inserting the seal ring in the groove of the base ring, drilling radial holes through the base ring using the seal ring as a jig, telescoping the hopper with the base ring and seal ring, spotting on the exterior of the hopper through the holes in the seal ring and base ring, the locations for holes alined therewith, removing the base ring from the hopper, drilling radial holes in the hopper at said locations, again telescoping the hopper with the base ring and seal ring, inserting screws in the holes in the hopper, from the interior thereof, and turning the screws into the holes in the seal ring.

2,864,159
METHOD OF MAKING SPLICING SLEEVE ASSEMBLIES
Fred W. Doering, Cicero, and James C. Morison, La Grange, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application September 29, 1954, Serial No. 459,829
2 Claims. (Cl. 29—422)



1. The method of making electrical connectors for splicing conductors which comprises providing a metal sleeve having a predetermined length and a uniform inside diameter for receiving the conductors therein, providing a dielectric thermoplastic sleeve having a predetermined length greater than that of the metal sleeve and having an inner diameter substantially equal to the outer diameter of the metal sleeve for slidably receiving the metal sleeve therein, placing the metal sleeve in a predetermined position within the dielectric sleeve and with the ends thereof spaced inwardly from the ends of the dielectric sleeve, flaring one end of the metal sleeve to interlock the sleeves against movement relative to each other and to form a curved sloping inner surface on one end of the metal sleeve which merges with the inner surface of the dielectric sleeve for guiding the conductors into the metal sleeve, heating the end of the dielectric sleeve adjacent the unflared end of the metal sleeve, and pressing together the heated walls of said end of the dielectric sleeve to seal said end.

2,864,160
METHOD OF CONTINUOUSLY PROTECTING PYROPHORIC FLINT MATERIAL MANUFACTURED BY EXTRUSION
Walter Bungardt, Essen-Bredeney, Germany, assignor to Th. Goldschmidt A. G., Chemische Fabriken, Essen, Germany
Application October 11, 1954, Serial No. 461,629
1 Claim. (Cl. 29—473.3)



The method of extruding a pyrophoric flint rod structure with a protective covering; comprising the steps of first forming a cup-shaped ingot body comprising an aluminum alloy consisting of at least 95% by weight of aluminum and up to about 5% by weight of a metal selected from the group consisting of magnesium and silicon, telescoping into the hollow of said cup-shaped ingot an ingot body of an extrudable pyrophoric alloy of iron and cerium with iron content ranging between 15% and 40% by weight which conforms in shape to said hollow of said cup-shaped ingot, heating the telescoped ingot bodies thus obtained to extrusion temperature, and extruding in a single operation said bodies simultaneously through die means, to thereby produce a finished flint rod having fusion bonded thereto a protective outer aluminum alloy covering of substantially uniform thickness throughout, amounting to about 5% to 7.5% of the diameter of said flint rod, whereby the pyrophoric properties of said flint rod are maintained at an optimum.

2,864,161
SQUEEZE CONNECTOR
Lawrence M. Curtin, Mountainside, N. J., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application May 27, 1953, Serial No. 357,699
1 Claim. (Cl. 29—505)

In the art of locking a cylindrical sheet metal member in an opening in a wall, wherein the cylindrical member is dimensioned to have a sliding fit in the wall opening and is provided with a pair of diametrically related lock openings extending therethrough and dimensioned to receive the edge of the wall outlining the wall opening, the method which consists in inserting the cylindrical member into the wall opening and locating the lock openings in the plane of the wall and then applying a squeeze pressure on opposite sides of the cylindrical member along a line of squeeze pressure at right angles to a line connecting the lock openings to distend the portions of the member containing the lock openings radially outwardly into position to receive the defining edge portions of the wall opening within the deformed openings and thus permanently lock the initially cylindrical member to the wall.

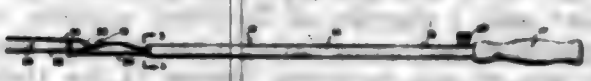
mounted in said housing, a collector pan carried by said

2,864,168

2,864,162
HAIR TAPERING DEVICE
Everett L. Macdonald, Cranston, R. I.
Application March 10, 1958, Serial No. 720,211
20 Claims. (Cl. 30—34)

1. A hair tapering device comprising a plurality of spaced parallel elongated members, each of said members having a flat body portion tapering toward each end and having a straight flat bottom edge portion, spaced parallel hair engaging members extending transversely between said elongated members, and means for mounting said device on an electric razor, said flat bottom edge portions being angularly disposed to the plane of the electric razor shaving head.

2,864,163
BARBECUE FORK
Otto Boruvka, New York, N. Y.
Application July 18, 1957, Serial No. 672,610
4 Claims. (Cl. 30—129)



1. A fork having a flat shank with tines offset from the plane thereof, one end of said shank having substantially parallel edges terminating in shoulders, a tubular shank, said shoulders having a transverse length greater than the diameter of said tubular shank, said one end of the flat shank being inserted in one end of the tubular shank with the tines extending forwardly therefrom, a first rod slidably fitted in the tubular shank, said rod having a threaded socket at one end, said tubular shank having an elongated slot therein, a screw threaded radially into said rod through said slot and having a head extending radially from said tubular shank, another rod having one end threaded in said socket and extending forwardly beyond said one end of the tubular shank, a bearing block disposed in said one end of the tubular shank, said block having a passage extending therethrough with said other rod slidably fitted in said passage, said block having a flat side disposed diametrically across said other end of the tubular shank, said flat shank being juxtaposed to said flat side of the block, a wedge-shaped plug secured in said other end of the block against said flat shank and holding the flat shank and bearing block in the tubular shank, and a plate secured to the outer forward end of said other rod and movable along and between said tines by slidable movement of said other rod in said bearing block and slidable movement of the first rod in said tubular shank.

2,864,164
SHEARS
Edward Wallace, Longmeadow, Mass.
Application February 6, 1958, Serial No. 713,648
3 Claims. (Cl. 30—248)

1. In a grass shear structure of the class described comprising in combination, a unitary relatively fixed handle and stationary blade with the blade extending forwardly from and below said handle, a movable blade disposed beneath the stationary blade, a pivotal connection between said blades for movement of the movable blade between open and closed positions relative to the stationary blade, said blades having longitudinal inner cutting edges and said movable blade provided with a rear end pivotal portion extending outwardly and forwardly relative to the cutting edge thereof, an operating member pivotally connected to said handle, a pull element, a rear pivotal connection between a rear end of said element and operating member, a forward pivotal connection between

said rear end pivotal portion of said movable blade and forward end of said pull element, said rear and forward pivotal connections being disposed relative to the cutting edge of the movable blade whereby on movement of said operating member for moving said movable blade to its closed position the cutting edge of said blade is pulled upwardly toward and into engagement with the cutting edge of said stationary blade.

2,864,165
FABRIC SLITTER
Frank Cataffo, Elmont, N. Y., assignor to Sunnen Holding Corporation, Woodside, N. Y., a corporation of New York
Application May 22, 1957, Serial No. 660,823
2 Claims. (Cl. 30—294)

1. A device for slitting folded or tubular material comprising in combination a handle adapted to be manually gripped and having a principal axis, a flat guiding blade mounted on and projecting outwardly from said handle and having an active guiding edge disposed at an angle with respect to the axis of said handle, a cutting element removably mounted on said guiding blade outwardly of said handle but near the inner end of said guiding blade, said cutting element having a cutting edge lying substantially in the plane of said guiding edge and being disposed at an angle to said guiding edge, and a pair of fabric confining and guiding members mounted at their inner ends on said handle and projecting outwardly along said guiding blade on opposite sides of said guiding blade each being spaced a distance therefrom sufficient to provide for the passage between it and said guiding blade of layers of fabric.

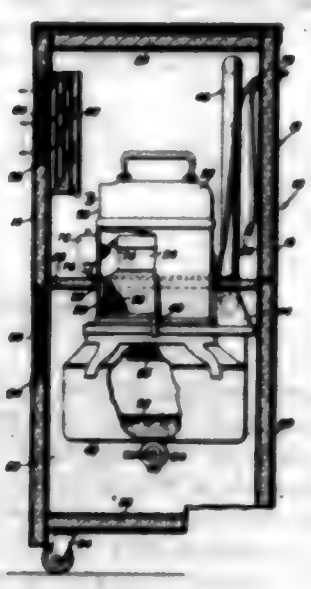
2,864,166
EVACUATOR FOR DENTAL USE
John S. Shaw, Concord, Calif., assignor to Tecit Manufacturing Company, St. Paul, Minn., a corporation of Minnesota
Application May 18, 1955, Serial No. 509,385
5 Claims. (Cl. 32—33)

1. An evacuator for use in conjunction with a dental operative procedure, said evacuator comprising a cabinet, a horizontal partition wall in said cabinet, a housing mounted on said partition and projecting downwardly therethrough, an air inlet on one side of said partition and an air outlet on the other side thereof, a motor mounted in said housing, a vacuum producing mechanism

being adapted for bodily movement therewith, means for measuring the degree units to which said ruler has been

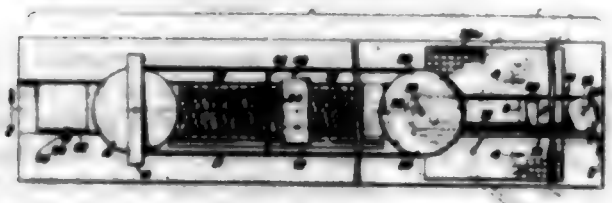
said arms being spaced apart, a measuring device carried by the outer ends of said arms, a carriage on which

mounted in said housing, a collector pan carried by said housing in communication with said vacuum producing mechanism, a vacuum line connected to and communicating with said collector pan, a mouth piece on the end



of said vacuum line remote from said collector pan, means in said collector pan and connected to said motor for removing moisture and foreign matter from air passing into said housing from said collector pan, and a drain on said collector pan.

2,864,167
SYSTEM AND APPARATUS FOR ANALYSIS OF SEISMOGRAPHIC RECORDS
J. A. Hall, Jr., Jackson, Miss.
Application January 20, 1955, Serial No. 483,015
15 Claims. (Cl. 33—1)

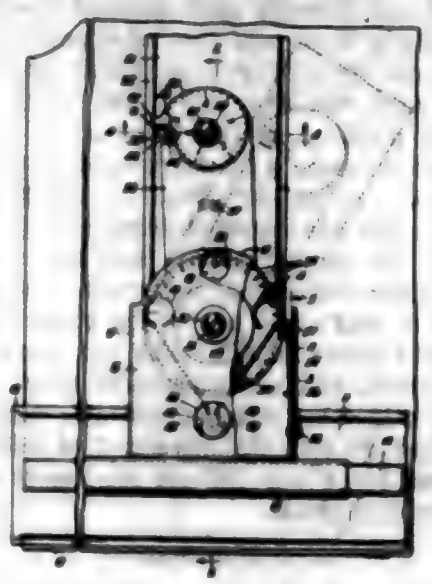


1. In a system for the analysis of seismographic records containing a plurality of oscillogram traces made by spaced seismo-pickups registering the arrival of elastic waves produced by a source of seismic disturbances in an analyzing device, comprising a scanning head, means for manually guiding said scanning head in substantial parallelism to a record sheet and along said record sheet, a step-out line indicating member carried by and rotatable on the said scanning head, arranged in close proximity to the record sheet, said step-out line indicating member being of variable shape, means for adjusting the shape of said step-out line indicating member, to conform its shape to the normal step-out line connecting the points of arrival for the same disturbance wave at the spaced seismo-pickups, a plotting means including a plotting head and a plotting arm pivoted at one end and carrying the said plotting head, means connecting said scanning head and said plotting head to produce a proportional displacement of the plotting head over a plotting sheet when the scanning head is moved over the record sheet and means for angularly displacing the plotting arm and the plotting head carried by it, in proportion to a manual angular displacement of the scanning head when the step out line indicating member of the said scanning head is aligned with the actually observed step out line.

2,864,168
SIGHT SYSTEM FOR FIREARMS
Frederick W. Sampson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 5, 1956, Serial No. 596,816
4 Claims. (Cl. 33—55)

1. In combination: a firearm having a receiver portion with a transversely extending dove-tailed groove having oppositely directed dove-tail receiving sides; a U-shaped member having vertical end walls and a dove-tailed horizontal bottom slidably received in said oppositely directed dove-tail receiving sides; said end walls and bottom being slotted and sprung whereby said dove-tailed bottom resiliently engages the sides of said dove-tailed groove; a gun sight hingedly mounted in said vertical end walls, said gun sight having a lower pedestal provided with a plurality of flat lower surfaces; and a triangularly shaped spring having a pair of tangs disposed in the slot of said horizontal bottom of the U-shaped member and having an upper surface engageable with said flat lower surfaces for yieldably holding said gun sight in a plurality of hinged positions.

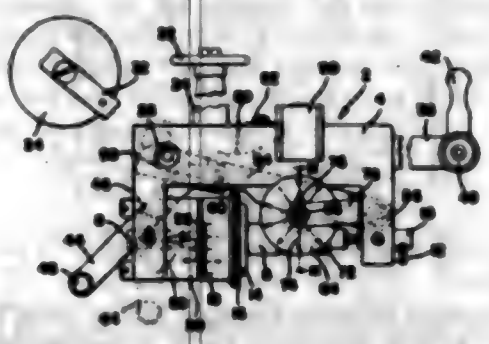
2,864,169
PROTRACTOR RULER AND VERNIER MECHANISM THEREFOR
Otto Klukunde, Chicago, Ill.
Application February 5, 1954, Serial No. 408,348
13 Claims. (Cl. 33—75)



1. A drafting instrument comprising a stationary supporting member, a pivot depending from said stationary supporting member, a ruler mounted upon said pivot for angular shifting movement thereabout and having two substantially parallel ruling edges, a plate mounted upon said pivot in superposed relation to said ruler, said plate being narrower than said ruler and having its edges disposed inwardly of the ruling edges on said ruler, a resilient connecting means between said ruler and said plate, during the angular shifting movement of said ruler said plate

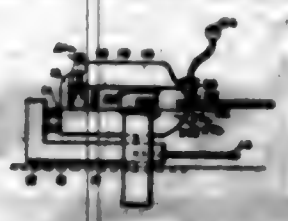
being adapted for bodily movement therewith, means for measuring the degree units to which said ruler has been angularly shifted, means for angularly shifting said ruler with respect to said plate to an extent of a fractional degree unit against the action of said resilient connecting means, and means for measuring the fractional degree unit to which said ruler has shifted by the operation of said last named means.

2,864,170
PLANIMETER
Hans Wiedemann, Bloomfield, N. J., assignor to Keuffel & Esser Company, Hoboken, N. J., a corporation of New Jersey
Application December 16, 1954, Serial No. 474,376
5 Claims. (Cl. 33—122)



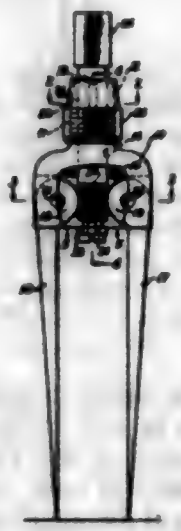
1. In a planimeter having the conventional pole arm, guide wheel, measuring wheel, dial and tracer arm, the measuring wheel and dial being geared together so that the dial indicates the number of revolutions of the measuring wheel, the improvement comprising a pair of magnetic members at least one of which is a permanent magnet one of which is mounted on said measuring wheel and one of which is positionable to coact with the other, a second pair of magnetic members at least one of which is a permanent magnet one of which is mounted on said dial and one of which is positioned to coact with the other and means for simultaneously moving said dial to disconnect the gearing between said dial and said measuring wheel and to bring said magnetic member on said dial adjacent the other of said second pair of magnetic members to return said dial to zero position and for bringing said magnetic member which is positionable to coact with the magnetic member on said measuring wheel toward the magnetic member on said measuring wheel to turn said measuring wheel to zero position.

2,864,171
APPARATUS FOR CONTINUOUS MEASUREMENT OF THE THICKNESS OF STRIP MATERIAL
Sven Gunnar Edling, Åke Henrik Malmquist, and Arthur Leonard Emanuel Lindstein, Sandviken, Sweden, assignors to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Application July 1, 1957, Serial No. 669,236
Claims priority, application Sweden July 18, 1956
5 Claims. (Cl. 33—147)



1. Apparatus for measuring the thickness of a continuous strip material and the like which moves longitudinally of itself comprising a pair of support arms extending generally parallel with but at opposite sides of the plane containing the strip material, the inner ends of said arms being interconnected and the outer ends of said arms being spaced apart, a measuring device carried by the outer ends of said arms, a carriage on which said support arms are mounted, said carriage being movable towards and away from the strip material between a measuring position wherein said measuring device measures the thickness of the strip material and a gauging position wherein said measuring device is to be calibrated, and a calibration gauge located at said gauging position.

2,864,172
DIVIDER
Ralph Buck, Dugruff, Ohio
Application November 14, 1956, Serial No. 622,210
2 Claims. (Cl. 33—153)



1. A divider comprising a housing open at one end, a pair of legs arranged so that a portion of each of said legs adjacent one end thereof is enclosed within said open end of said housing with the remaining portion of each of said legs projecting out of the open end of said housing, a gear segment on the enclosed portion of each of said legs, a slotted threaded sleeve projecting longitudinally from the other end of said housing, a rotatable shaft extending through said housing and sleeve and having a portion adjacent one end positioned within said housing open end and having a portion adjacent the other end exteriorly of said sleeve, a worm on said one end portion of said shaft and in meshing engagement with said gear segments, said shaft one end portion being reduced and having a flat thereon, a washer provided with a flat surface circumposed upon said shaft reduced one end portion and having the flat surface bearing against the flat on said shaft reduced end portion, means embodying a cap screw threadedly carried by said shaft reduced one end portion abuttingly engaging said washer and a part of said housing adjacent the open end thereof and having a threaded shank extending through said washer and in threaded engagement with a threaded bore provided in said shaft reduced one end portion to restrain the shaft against rotational movement relative to said housing.

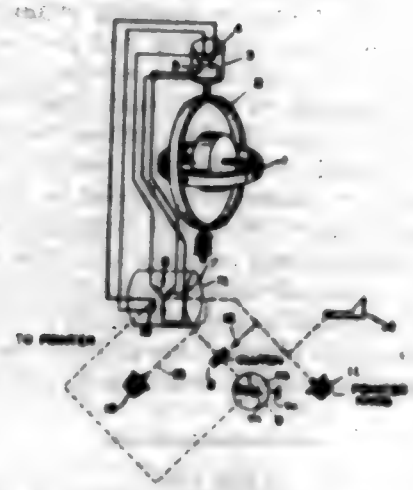
2,864,173
ELECTRICAL WELL CALIPER TOOL
Jacques H. Castel, Houston, Tex., assignor to Perforating Guns Atlas Corporation, Houston, Tex., a corporation of Delaware
Application March 8, 1955, Serial No. 493,841
12 Claims. (Cl. 33—178)

2. In a well surveying device for measuring diametric variations in a well, recording means at the earth's surface, downhole equipment including a body member having a chamber therein, at least two arm members pivotally carried by said body member at spaced positions thereon, means for urging said arm members into engage-

ment with the walls of the well, a signal producing device within said chamber including at least two relatively movable elements cooperating to produce a single electrical signal representative of the diameter of the well in response to movement of said arm members, a cable connected between said recording means and said signal producing device for transmitting said electrical signal to

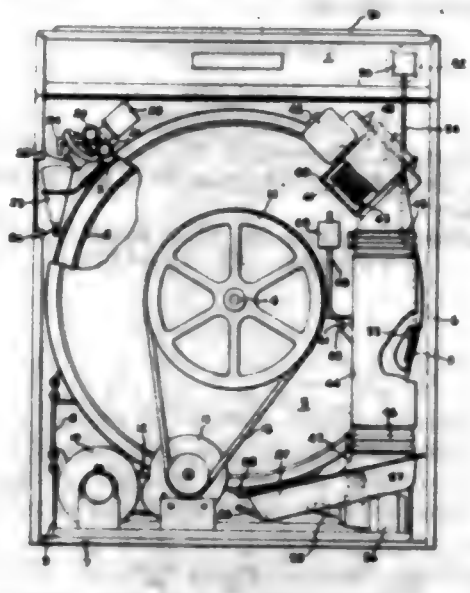
the recording means in order to produce a log of well diameter as a function of well depth, and structure mechanically connecting each of said elements to a different one of said arm members in order to provide for differential relative movement between said elements in response to movement of said arm members along the walls of the well at different well depths.

2,864,174
CONTINUOUS INDICATING DIRECTIONAL GYRO INDICATOR
Charles E. Harlbert, River Edge, and Joseph R. Conway, Bergenfield, N. J., assignors to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application December 27, 1955, Serial No. 555,561
8 Claims. (Cl. 33—204)



3. In the combination of a directional gyro and a synchro system for repeating the signals of the gyro and translating the repeated signals into readable intelligence, the synchro system comprising: a transmitter synchro connected to the gyro, a remotely located repeater synchro for receiving signals from the transmitter; an angularly adjustable case carrying the stator winding of the repeater synchro, a reading dial, a clutch detachably connecting the reading dial to the case, and a pointer rotatable relative to the dial by the rotor of the repeater synchro.

2,864,175
SPRAY CONDENSER FOR CLOTHES DRYERS AND COMBINATION WASHER-DRYERS
Aidan M. Stone, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application October 18, 1957, Serial No. 691,051
2 Claims. (Cl. 34—75)



1. In a laundry machine having a drying cycle, a clothes container, a blower having its outlet communicating with said container, said container having an outlet, a generally vertically extending conduit connecting said container outlet and said blower, said container, said blower and said conduit connected to form a closed air system during the drying cycle of said machine, heating means in said system outside said container for heating the air in said system; and means for supplying condensing water into said conduit intermediate said heating means and said container outlet comprising an open end tube extending into said conduit, a nozzle outside said conduit substantially aligned with said tube and spaced by an air gap therefrom, and water spreading means inside said conduit adjacent the end of said tube, said water spreading means forming a pocket with said conduit, the top of said pocket being at least as elevated as the top of the open end of said tube, and means for causing water to pass from said nozzle into said tube against said water spreading means whereby said water is spread into a spray curtain in said conduit, said water dripping down the walls of said conduit into said pocket after cessation of water flow from said water supply means so as to cover the open end of said tube.

2,864,176
WEB-GUIDING APPARATUS
Bror Backlert, Bromma, and Bengt Lamm and Sven Wallin, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Application April 4, 1957, Serial No. 650,731
Claims priority, application Sweden April 7, 1956
6 Claims. (Cl. 34—122)

1. In a conveyor system for transporting a continuous open-width web zig-zag in at least two spaced parallel runs, apparatus for changing the direction of travel of

2,864,180
ATHLETIC SHOE TOE PROTECTOR

axes of said rollers, said bowl having a cutting edge which

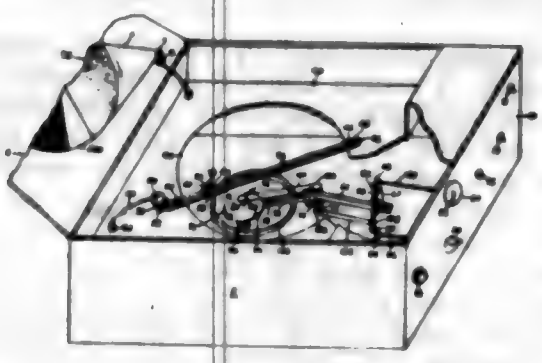
the leading free end portion of the web and guiding the same from the first run to the second run comprising in combination, a hollow turning roll mounted between the runs at one end thereof with its axis substantially parallel to said runs for transferring the leading end of the web from the first to the second run, said roll comprising a perforated cylindrical shell, means to drive said roll during transfer of said leading end, a pair of devices for blowing jets of gaseous medium against the web, the first of said devices being positioned to direct a jet of medium toward said roll substantially radially thereto at the point where the web initially contacts the roll in its travel from the first run, the second of said devices being positioned at the point where the web leaves the roll and operable to direct a jet of medium towards the web obliquely forward in the direction of travel of the web in the second run, suction means to apply suction to at least a segment of the interior of said cylindrical surface as it travels from said first to said second device to engage and support the web thereon, and means to remove the suction from the segment as it travels from the second to the first device.

2,864,177

RELATIVE MOTION INTERCEPT TRAINER

William M. Shanhouse, Roslyn Heights, Ernest Daher, Babylon, and Robert B. Stopp, Flushing, N. Y., assignors to the United States of America as represented by the Secretary of the Navy

Application December 22, 1953, Serial No. 399,848
1 Claim. (Cl. 35—10.2)
(Granted under Title 35, U. S. Code (1952), sec. 266)



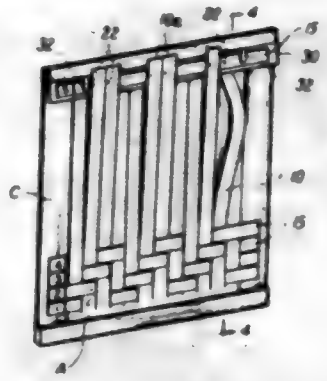
A device of the character described comprising a rotatable disk having varying light transmitting characteristics to simulate a radar screen, a belt connected to frictionally engage the periphery of said disk, means cooperatively connected to said belt to rotate said disk at a constant predetermined speed, a removable preadjustable track located beneath said rotatable disk, a movable element connected to travel along said track, a light connected to said movable element to generate a spot of light on said rotatable disk, a motor connected to one end of said track, an insulating pulley connected to the shaft of said motor, an electrical conducting belt cooperating with the insulating pulley and the movable element to orient said movable element and to connect said light to a source of power, a second element located beneath said rotatable disk, a plurality of lights discretely placed on said second element to generate a second spot of light on said rotatable disk regardless of the position of said first mentioned track and said first mentioned movable element, a second electric motor connected to move said second element, adjustable mechanical linkage means cooperating with said second element and said second motor to orient said second spot of light, and mechanical means to indicate the direction of travel of said second element.

2,864,178

MAT WEAVING

Danny C. Marquez, Portland, Oreg.

Application January 11, 1954, Serial No. 403,109
1 Claim. (Cl. 35—15)



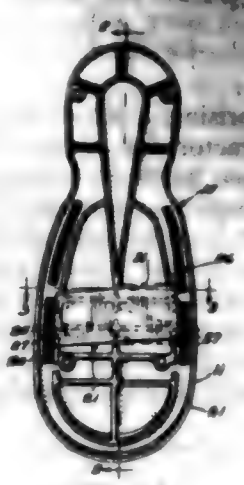
A pair of sheets of material having parallel slits defining strips of weaving material, indicia distributed along the strips of one of said sheets at predetermined intervals corresponding to the width of the strips of the other sheet to designate over and under passes of said strips of the other sheet for weaving a predetermined pattern, said slits in said one sheet terminating at a distance from the ends of the sheet, lines of perforations extending across said one sheet perpendicular to said slits and intersecting the ends thereof for detaching the unslitted end portions of said one sheet, and numbers on the strips of said one sheet inside one of said lines of perforations to designate the order in which said strips are to be used in weaving the slits in said other sheet also terminating at a distance from the ends of the sheet, and a line of perforations extending across said other sheet perpendicular to the slits and intersecting the ends thereof for detaching one unslitted end portion of the sheet.

2,864,179

METATARSAL BAR

Charles W. Watson, Chicago, Ill., assignor of fifty percent to George W. [illegible], Gary, Ind.

Application December 23, 1957, Serial No. 704,515
4 Claims. (Cl. 36—71)



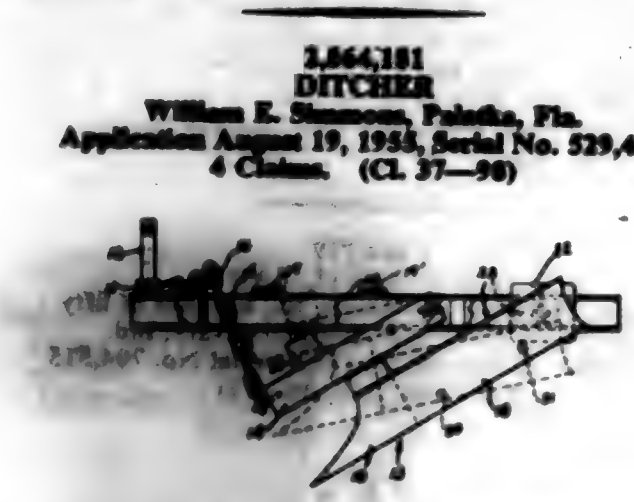
1. A metatarsal bar for detachable securement to a clog having ribs on the underside of the sole thereof, some of the ribs having a lateral direction and the others having an anterior-posterior direction comprising: a lower portion having a ground-contacting face and an upper portion for securement to the ribs, said upper portion having grooves extending both laterally and anteriorly-posteriorly for snap-type frictional engagement over respective like-directed ribs to restrain shifting of the bar in a horizontal plane during locomotion, the degree of friction being so selected as to prevent accidental dislodgment of the bar but to allow manual attachment and detachment.

elongated cross bar rigid with and extending transversely of said tooth member at the rear end thereof in a vertical

center of gravity of said iron that said iron is supported on said air cushion in a stable position on the surface

2,864,180
ATHLETIC SHOE TOE PROTECTOR
Maxson H. Montgomery, Long Beach, Calif.
Application December 23, 1957, Serial No. 704,481
9 Claims. (Cl. 36—72)

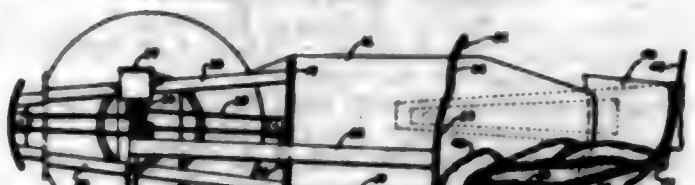
1. A toe protector for athletic shoes which include a cleat on the sole of said shoes, said cleat having a spike projecting therefrom, a toe protector formed of an elastic material and comprising a hollow upper, said upper being positioned around the toe of the shoe, a web extending across the bottom of the hollow upper and being positioned against the sole of the shoe, said web having an opening therein, said opening being of lesser dimension than the cleat so that the web will stretch over the cleat and engage the spikes projecting therefrom to hold said shoe protector on the athletic shoe.

2,864,181
DITCHER
William E. Simmons, Palatka, Fla.
Application August 19, 1955, Serial No. 529,453
4 Claims. (Cl. 37—98)

1. A ditcher comprising; a draw bar, means on said bar connectable to a tractor for lifting movements of said bar, a V-shaped plow having a sharp pointed nose and a support beam pivotally suspended for free swinging movement from said draw bar, the center of gravity of the plow being rearward of said pivot and the nose being forward thereof, stop means on said draw bar for limiting the forward swing of said plow, and flexible limit means connected between said draw bar and said support beam for limiting the rearward swing of said plow on said draw bar.

2,864,182
CABLE OPERATED EARTH MOVING SCRAPER
Robert Christopher Hamlyn Russell,
Wallingford, England
Application November 21, 1955, Serial No. 548,184
Claims priority, application Great Britain
November 25, 1954
3 Claims. (Cl. 37—125)

1. An earth moving scraper comprising a chassis, a pair of rollers on which said chassis is supported for movement over the surface of the ground, a hauling cable attached to said scraper, a stationary winding engine to which said cable is attached for drawing said scraper over the ground, a bowl mounted on said chassis for pivotable movement about a transverse axis positioned between the axes of said rollers, said bowl having a cutting edge which in one position of the bowl extends below the surface level of the ground, means for biasing said bowl towards said one position, and means for moving said bowl including a shaft mounted in bearings on said chassis and extending transversely thereof, a first drum on said shaft, a first cable wound on said drum and having a free end connected with said bowl, a second drum on said shaft, and a second cable wound thereon and having a free end extending to the said winding engine.

2,864,183
SCRAPER
Francis Patrick Ryan, Houston, Tex.
Application July 18, 1957, Serial No. 672,721
6 Claims. (Cl. 37—126)



1. A scraping unit comprising a body defined by a pair of side walls, a bottom disposed between said walls, a cutting edge secured to said bottom adjacent the forward ends of said side walls, a pair of false decks disposed between said walls above said bottom and substantially parallel thereto, said false decks being edgewise spaced from each other substantially medially by the side walls a distance at least equal to the spacing of said decks from said bottom, a pivotally mounted apron providing a regulatable closure for the front end of said body, a tailgate mounted for longitudinal reciprocation in said body above the said false decks, and a load direction gate mounted for longitudinal reciprocation between said bottom and the forward one of said false decks and for abutment against the forward edge of said rearward false deck providing an entrance path from the outer forward end of said bowl to an area substantially medially thereof for material scraped into said bowl when drawn over said material by associated tractive means.

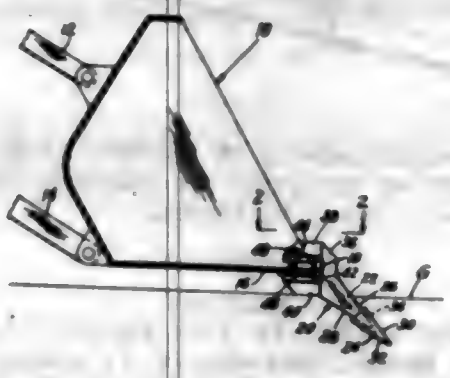
2,864,184
SCARIFIER TOOTH ATTACHMENT FOR END LOADER BUCKETS
Earl W. Fohr, Milwaukee, Wis.
Application May 16, 1955, Serial No. 507,221
1 Claim. (Cl. 37—142)

A scarifier tooth attachment for a loader bucket having a bottom plate formed with a cutting edge, comprising: a flat, elongated tooth member adapted to project forwardly from said cutting edge and pointed at its front end, said member having straight top and bottom surfaces converging in a forward direction and both declining in said forward direction, said member lying in a vertical plane and being formed integrally at its rear end with a flat, upwardly projecting extension having a vertical front edge merging into said upper surface, and having a forwardly declining top edge merging into said front edge, said extension lying in said plane; a flat,

within said sleeves, and the other side of each of said rods providing supporting feet for engagement with a supporting surface, inwardly extending portions at the

exerted thereagainst to release the lower edges of said sheets and envelope for removal of the sheets and enve-

elongated cross bar rigid with and extending transversely of said tooth member at the rear end thereof in a vertical plane normal to the plane of the tooth member, to provide an abutment extending along said cutting edge in contact therewith, said cross bar being rigidly connected to said extension below the upper end of the extension; and clamp means projecting rearwardly from said cross bar adapted for gripping the bottom plate adjacent the cutting edge thereof, comprising spaced clamp arms lying in vertically spaced, horizontal planes and rigidly connected to the top and bottom edges of the cross bar to cooperate with the cross bar in defining between the arms a slot receiving said bottom plate, vertically spaced,



flat gussets rigid with the respective arms, said gussets being rigid with and extended rearwardly from the tooth member and extension respectively and lying in the common plane of the tooth member and extension, one gusset rigid with the tooth member having a horizontal bottom surface merging into the bottom surface of the tooth member, the other gusset having a horizontal top surface merging into said top edge of the extension, the gussets having rear end edges converging rearwardly and terminating at the rear ends of the respective clamp arms, and clamping bolts threaded in one of said clamp arms and extending into said slot to engage the bottom plate between the bolts and other arm.

2,864,185

AIR FLOATED IRON

John E. Vance, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio

Application May 3, 1955, Serial No. 505,576
2 Claims. (Cl. 38—75)

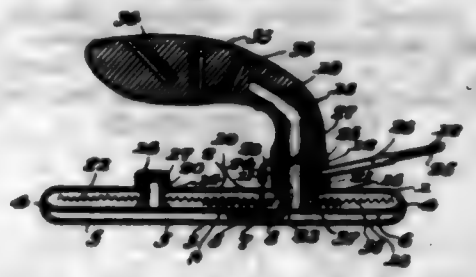
1. A laundry iron comprising, a sole plate having an ironing surface, a heating element for said sole plate and air flow means for leading air under pressure beneath said ironing surface, said iron normally resting on said ironing surface when said air flow means is not in operation, said ironing surface being formed with a closed annular portion extending sidewardly in all directions from the center of gravity of said iron and to restrict the flow of air from beneath said sole plate, the area of said ironing surface within said annular portion being so related to the weight of said iron and to the quantity of air led beneath said ironing surface that a cushion of air is formed beneath said ironing surface under sufficient pressure to support said iron on a cushion of air, said air cushion reacting between the surface being ironed and said ironing surface and being so related to the center of gravity of said iron that said iron is supported on said air cushion in a stable position on the surface being ironed when said air flow means is in operation.

2,864,186

STEAM IRON AND SUPPORT

René Praud, Tangier, Morocco, assignor to "Societe Industrielle pour le Perfectionnement des Appareils Menagers" (S. I. P. A. M.), Tangier, Morocco, a company

Application February 24, 1955, Serial No. 490,343
Claims priority, application Netherlands March 3, 1954
2 Claims. (Cl. 38—77)



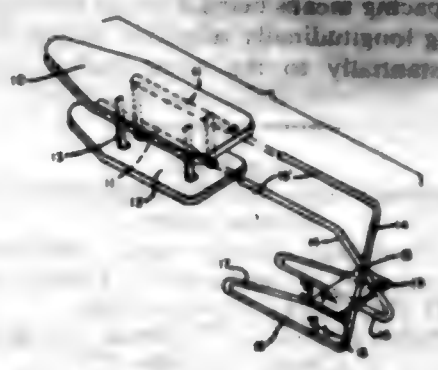
1. Steam flat iron, which comprises a handle, a sole with an absolutely flat ironing area raised along all of its periphery by a very gentle curving and having, as seen from below, a very narrow rounded off forward end and a very wide backward end, supporting means cooperating with said handle, means for interlocking said handle and supporting means said interlocking means being carried by the supporting means, a plurality of angularly related openings provided in said handle, and means for supplying the iron with liquid from an outside source thereof, each said opening being arranged to receive said interlocking means, the relative position of said support and handle being different from one opening to another, so as to give the iron, turned over on its support several working positions in each one of which the flat surface of the sole has a different [illegible]

2,864,187

SEAM PRESS BOARD

Olga Radtke, San Leandro, Calif.

Application November 14, 1956, Serial No. 622,424
1 Claim. (Cl. 38—110)



A seam press board comprising, in combination, an ironing board, a pair of laterally spaced apart sleeves secured to the under surface of said ironing board, a sleeve board, collapsible support means releasably connecting said ironing and sleeve boards in vertically spaced apart relationship, collapsible stand legs removably supporting said vertically spaced apart boards comprising a pair of U-shaped rods, each of said U-shaped rods having a pair of sides and a base connecting said sides, pivot means rotatably supporting the central portions of the bases of both of said U-shaped rods together for rotation about a horizontal axis between a collapsed coplanar position and an open angularly related position, one side of each of said U-shaped rods slidably disposed

through the openings in the ends of the side rails, a panel having a sign thereon in contact with and carried by the follower rides from a loading end toward an opposite end, the magazine having a corner at its end opposite its loading end; said holder comprising a back plate;

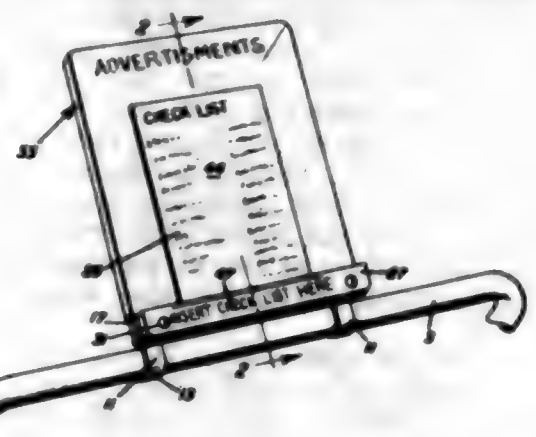
within said sleeves, and the other side of each of said rods providing supporting feet for engagement with a supporting surface, inwardly extending portions at the end of each said other side extending toward said one side and said base terminating in sections extending substantially parallel to said other side of said rod intermediate said pivot means and said other side, a plate bridging said sections, and spring clamp means secured to the under surface of said plate at opposite ends resiliently engaging said sections.

2,864,188
BREAST TAG
Joseph E. Tierney, Ottawa, Ontario, Canada, assignor, by mesne assignments, to E. J. Brooks Company, Newark, N. J., a corporation of New Jersey
Application March 5, 1957, Serial No. 644,117
1 Claim. (Cl. 40—3)

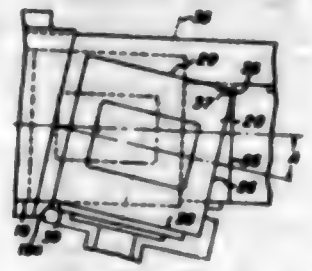
A breast tag comprising a body member, an integral leaf at one end of the body member and bendable relatively to the latter, a tongue member on said leaf at the end thereof remote from the body member and bendable relatively to said leaf, upstruck lips on the body member adjacent the latter's other end and adapted to receive a portion of said tongue member thereunder when the tag is closed, a bar on said body member between said lips in position to block said tongue member against projecting through said body member, and spacing means protruding from one of said members toward the other of said members in such position on said one member as to be effective to obtain of the reception of the tongue member under said lips to space said members from each other, said spacing means being a rib on said tongue member extending longitudinally relatively to said bar and extending substantially to the outer end of said tongue member.

2,864,189
SHOPPING AID SHEET HOLDERS FOR PUSHCARTS
Grady E. Campbell, White Sands Proving Ground, N. Mex., assignor of one-fourth to Owen, Morgan and Niland, El Paso, Tex., a partnership
Application June 28, 1957, Serial No. 668,661
1 Claim. (Cl. 40—17)

A holder for an advertising sheet and a shopper's list sheet and attachment to a shopper's pushcart comprising a rectangular backing panel for said sheets and having a lower end, means on said end of the panel forming a front pocket on the panel extending along said end for receiving lower edges of an advertising sheet imposed against the front of the panel and of a shopper's list sheet positioned in front of the advertising sheet, a transparent envelope sleeved over said panel and advertising sheet to hold the latter flat against the panel and having a lower edge disposed in said pocket and a leaf spring on the front of the panel behind the advertising sheet coacting with the pocket to clamp the lower edge of said envelope and the lower edges of said sheets together, said spring being flexible rearwardly by finger pressure exerted thereagainst to release the lower edges of said sheets and envelope for removal of the sheets and envelope, and a spot indicator on the front of the envelope and in front of the spring for indicating where such finger pressure should be exerted.



2,864,190
SLIDE CHANGER FOR PROJECTORS
William H. Horton, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application September 4, 1956, Serial No. 607,613
7 Claims. (Cl. 40—79)



1. In a slide changer of the type wherein a stack of slides is fed by edgewise translational movement of one slide at a time in a predetermined feed orientation along a supporting surface from a supply position toward a display position, the combination comprising a holder for slides in said supply position, said holder being disposed so that a first slide located therein in a position to be fed next toward the display position is disposed in a supply orientation with its respective edges in non-parallel relation with the orientation of the same edges during said edgewise translational movement, and slide moving means movable in the direction of said display position, and, in the course of said movement, being engageable with a trailing edge portion of said first slide for moving the slide onto said supporting surface and thereby causing angular movement of the slide in its own plane from said supply orientation into said feed orientation.

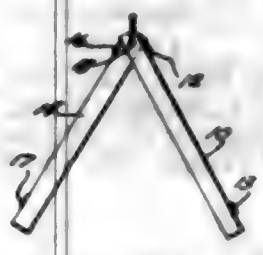
2,864,191
MULTI-PULL PORTABLE SIGN STAND
Elmer J. Hogen, Berkeley, Calif.
Application December 18, 1956, Serial No. 629,114
2 Claims. (Cl. 40—125)

1. In a display sign supporting frame, the combination which comprises a rectangular-shaped frame having side rails connected with cross slats, another frame also having side rails connected with cross slats, the width of the latter frame being such that the side rails thereof are adapted to be positioned inside of the side rails of the former frame, the side rails of said frames having aligned openings through one of the ends thereof and having slots extended from the openings through ends of the rails, a dowel extended between the side rails of the frames and

projector inside said housing, an optically projective representation suited to give the image of an object attrac-

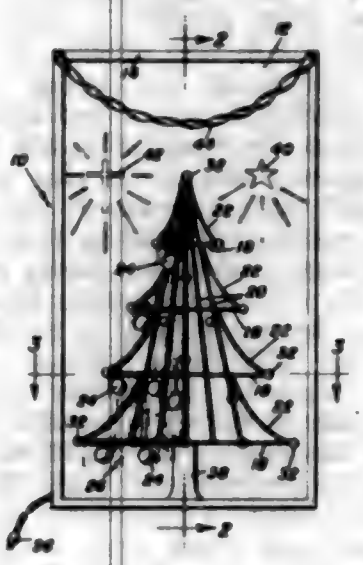
and may also be moved from the cocked position to trip the device by upward pressure applied to said trip

through the openings in the ends of the side rails, a panel having a sign thereon in contact with and carried by the



dowel and the slots in the ends of the rails being as wide as the thickness of said panel so that said panel can be extended through the slots in the ends of the rails.

2,864,192
SIMULATED CHRISTMAS TREE
Richard L. Skoalts, Williamsport, Pa.
Application July 26, 1956, Serial No. 600,309
1 Claim. (Cl. 41—15)



An artificial Christmas tree comprising an enlarged vertically disposed backing plate, a plurality of arcuate members having the free ends thereof attached to the backing plate in a plane substantially perpendicular to said backing plate, said backing plate being provided with a covering of reflective material, said members being disposed in vertically spaced relation with the lowermost member being longer than the other members with said members diminishing in size towards the uppermost member, a plurality of inclined members interconnecting said arcuate members, said arcuate members and inclined members generally forming one-half of a Christmas tree, said backing plate being provided with a plurality of light sockets therein, light bulbs disposed in said sockets and projecting from said backing plate, said bulbs being arranged beneath said arcuate members for illuminating the artificial tree, the outer of the inclined members between adjacent arcuate members being concavely curved for simulating the contours of a Christmas tree, a plurality of decorative balls and tinsel supported on said arcuate members, and a generally semi-cylindrical member extending downwardly from the plane of the lowermost arcuate member thereby simulating a tree trunk.

2,864,193
HOLDERS FOR MAGAZINES
Harold S. Drew, Sanford, Mich.
Application March 23, 1956, Serial No. 573,531
2 Claims. (Cl. 42—1)

1. In a holder for accommodating an elongate magazine having a slot in one face thereof in which a projecting follower button connected to a spring biased depressible follower rides from a loading end toward an opposite end, the magazine having a corner at its end opposite its loading end; said holder comprising a back plate; a longitudinally disposed side wall on said plate having a plurality of longitudinally spaced apart steps on the inner side thereof for selectively receiving the said corner of said magazine; a spacer on the base projecting in the same direction as the wall at a spaced distance from said wall and near the one end of said wall to provide a space between said spacer and wall through which the loading end of the magazine resting on said back

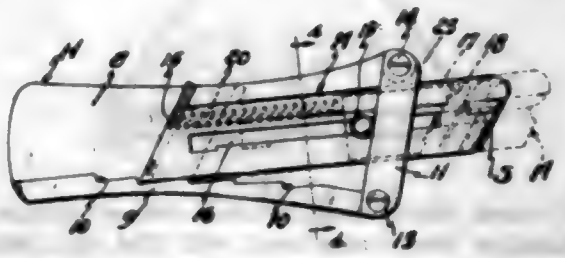
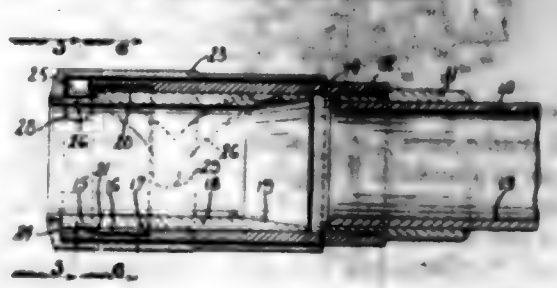


plate and having its follower slide button on the face thereof remote from said plate may be moved; a bar spanning said spacer and wall crosswise to said wall to depress said follower button as the magazine is moved progressively forwardly from step to step and shells are progressively loaded in said magazine; the spacer being cam shaped to cause the increased tilt of the magazine relative to the wall as the latter is pushed toward the said end of the wall from step to step with the magazine being held in position in a particular step by its engagement with said step and said spacer, and engagement of its follower button with said bar.

2,864,194
MANUALLY AND AUTOMATICALLY ADJUSTABLE CHOKE FOR SHOTGUNS
Arne Y. Grahn, Hartford, Conn., assignor to The Poly Choke Company, Incorporated, East Hartford, Conn., a corporation of Connecticut
Application September 17, 1957, Serial No. 684,583
10 Claims. (Cl. 42—79)



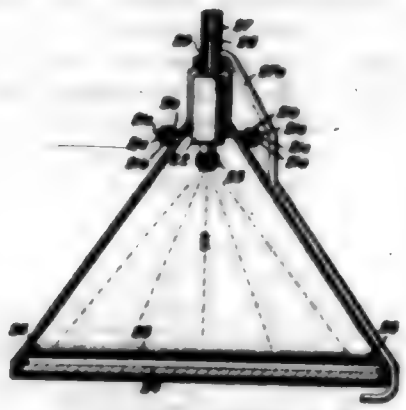
4. A choke mechanism for a gun barrel comprising a fixed member having a cylindrical part extending forwardly from the muzzle of the gun barrel, a choke tube having a charge-choking tubular part extending into and forwardly slidable in the cylindrical part, for forward propulsion by impact on said tubular part of a charge fired from the gun, and cooperating interengaging means on said member and choke tube to restrain forward movement of the tubular part and to rotate the latter first in one direction and then the other so that the tubular part is advanced in a step-by-step manner.

2,864,195
PHOTOGRAPHIC FISHING APPARATUS
Gunnar Bachmann, deceased, late of Reykjavik, Iceland, by Gudjon Bachmann, administrator, Forest Hills, N. Y.
Application October 16, 1957, Serial No. 690,488
6 Claims. (Cl. 43—4)

4. A fish lure comprising in combination a water tight housing having an optically transparent wall, an optical

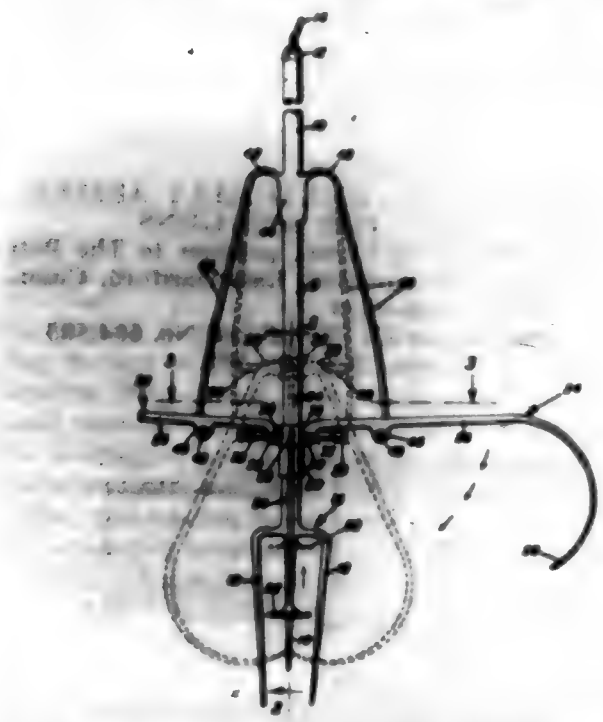
stantially rigid shank having a single eye at one end and a pair of aligned cooperating line accommodating eyes said shaft, the other of said drums being freely rotatable on said shaft, a cable line anchored to each of said

projector inside said housing, an optically projective representation suited to give the image of an object attractive to fish on projection by said projector, and an



optical screen inside said housing and so aligned with said projector and transparent wall that said attractive image when on the screen is visible to fish outside said housing through said wall.

2,864,196
FISHING GIG
Norman E. Rohen, Victoria, Tex.
Application July 16, 1957, Serial No. 672,173
4 Claims. (Cl. 43—6)



1. A fishing device comprising a fishing spear embodying a linearly straight elongated rigid staff having a handle and a line attaching eye at its rearward end and a fish spearing head at its forward end embodying a group of cooperating pointed penetrating tines, a hub-like collar slidingly mounted on said staff above said head, a trip member slidable on one of said tines and operatively connected to and movable with said collar, hook-type grappling jaws having shanks hingedly connected to diametrically opposite sides of said collar, a pair of co-planar diametrically opposite longitudinally bowed leaf springs having their upper ends turned in toward each other and adjoined integrally with a portion of said staff above said collar, the lower ends of said springs being free and terminating in eyes, said eyes being hingedly connected to median portions of the shanks of said grappling jaws and a stop fixedly mounted on said staff at a point below the eyes, whereby the collar associated with said hook-type grappling jaws may be moved down far enough on said staff to cock the device and may also be moved from the cocked position to trip the device by upward pressure applied to said trip member.

2,864,197
FISHING PLUG CASTING DEVICE
Jess A. Johnson, Bryan, Tex.
Application November 15, 1957, Serial No. 696,657
4 Claims. (Cl. 43—19)

1. A fishing plug casting device comprising a tubular housing having a gas chamber in one end thereof for the storage of gas under pressure, a first plug in the adjacent end of the housing forming a closure therefor and having a valved opening therein for the introduction of gas under pressure, a second plug in the housing intermediate its ends defining the gas chamber, an elongated cylinder in the housing communicating with the gas chamber through a fluid passage extending diagonally through the second plug and terminating in openings in opposite ends of the plug spaced laterally relative to each other, a valve in the gas chamber adapted to be seated in the opening in the adjacent end of the second plug, a valve stem having one of its ends connected to the valve and extending through an opening therefor in the second plug, in parallel relation to the cylinder, the valve being normally closed due to the pressure differential on opposite sides thereof, a cylindrical element in the housing surrounding and slidably engaging the cylinder, the cylindrical element having a plurality of longitudinally spaced annular grooves in its peripheral surface, a compression spring surrounding the cylinder and acting upon the cylindrical element and the cylinder to advance the cylindrical element relative to the valve stem, to open the valve, upon advancing the cylindrical element relative to the spring, to compress the spring, and thereafter releasing the cylindrical element, a spring biased lever pivotally connected intermediate its ends to the housing, exteriorly thereof, and having a detent on one of its ends extending through an opening therefor in the housing and capable of selectively and releasably engaging one of the annular grooves of the cylindrical element whereby the cylindrical element is retained in one of several advanced positions relative to the spring, a finger grip on the cylindrical element and operable outside the housing to advance the cylindrical element relative to the spring, a piston reciprocable in the cylinder, a first rod substantially co-extensive with the cylinder and connected at one end to the piston, a second rod connected to the opposite end of the first rod and extending outwardly beyond the end of the housing opposite the first plug, the outwardly extending portion of the second rod being adapted to engage a fishing plug and cast it in response to the action of gas pressure acting on the piston, a third plug in the adjacent end of the housing surrounding the second rod, and resilient means on the rods for engagement with the third plug to limit the longitudinally outward movement of the rods.

2,864,198
FISHING DEVICE WITH TRAP-HOOKS
Rees Edwards, Lubbock, Tex.
Application November 4, 1957, Serial No. 694,177
4 Claims. (Cl. 43—37)

1. For use by a fisherman to catch fish, a pull and spring actuated trap-hook structure comprising a sub-

the aperture to form a first face of the article, a movable

2,864,203

stantially rigid shank having a single eye at one end and a pair of aligned cooperating line accommodating eyes at the opposite end, said last named eyes being spaced from each other, a fishing line having one end cooperatively attached to one of the aligned eyes and having an adjacent portion passing slidingly through the other aligned eye, a first hook adapted to be baited and having a shank with an eye hingedly connected to the first-

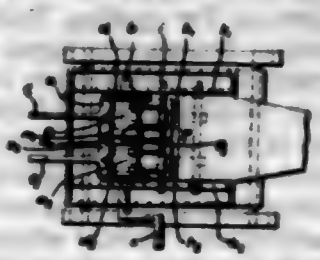
named eye, a second hook adapted to function as a snagging hook having a shank with an eye hingedly connected to said first-named eye, in such a manner that a portion thereof may be received between said line accommodating eyes whereby the same may be forced therefrom by a pull on said line and a coil spring adapted to encircle the shanks of the fish hooks when the latter are in side-by-side relationship.

2,864,199
FISHING ACCESSORY
Theodore F. Voltin, Bethesda, Md.
Application October 2, 1956, Serial No. 613,399
11 Claims. (Cl. 43—43.11)

1. A fishing accessory disposable between a thread supply on a fishing rod and the baited free end of a line extending from said supply, said accessory comprising a spool for a winding of a reserve length of the line thereon and constituting the sole support for said reserve length of line, means pivotally supporting said spool for movement from a normal line retaining position to a line releasing position and vice versa, and said spool in its line retaining position being inclined to the line extending therefrom and including a line engaging member for moving said spool to said line releasing position upon tension in the line extending from said spool to the baited free end thereof.

2,864,200
TOYS WITH INDEPENDENT RELEASE MECHANISMS FOR EACH WINDING DRUM
Ludwig Brütting, Zirndorf, near Nuremberg, Germany, assignor to Martin Fuchs, Nuremberg, Bavaria, Germany
Application June 1, 1954, Serial No. 433,396
Claims priority, application Germany June 1, 1953
5 Claims. (Cl. 46—40)

1. In a toy with a jib for carrying a tool to be moved up and down and to be opened and closed, the combination comprising two separate winding drums, means for mounting said drums on a single shaft, means for securing one of said drums for rotation in unison with said shaft, the other of said drums being freely rotatable on said shaft, a cable line anchored to each of said drums and adapted to be wound thereon, one of said cable lines carrying said tool to raise and lower the same and the other of said cable lines being adapted to open and close said tool, a toothed rim mounted on each drum, a separate locking and releasing device for each drum with spring means urging the same into operative engagement with a respective toothed rim, each device being provided with an operating arm lying outside the entire path



of movement of the other operating arm, means provided along mutually facing sides of said drums and constituting a coupling and braking arrangement to selectively entrain the freely rotatably mounted drum by the other drum and to alternately brake each drum by the other upon predetermined relative rotation, and crank means for manually rotating said shaft, said locking and releasing devices as well as said toothed rims being so constructed as to enable rotation of said shaft upon actuation of said crank means in either direction with said locking and releasing devices in the engaging positions thereof.

2,864,201
INFLATED DISCUS
Ralph G. Leise, Seattle, Wash.
Application January 16, 1956, Serial No. 559,494
4 Claims. (Cl. 46—98)

1. An inflated discus, comprising: a hollow body having substantially the shape of a discus which is circular in outline and has considerable thickness in its center, said body being formed of resilient material and said body having a thickened rim which thereby has a greater resistance to distortion than the remainder of said body, said thickened rim being formed by an interior annular insert secured in place and shaped to hold the body walls in the desired rim-like disposition, the material forming the insert being less dense than the material from which the body is formed and the inner face of said insert being concave and being feathered out along said body walls, and manually controllable valve means governing ingress and egress of air to and from said hollow body.

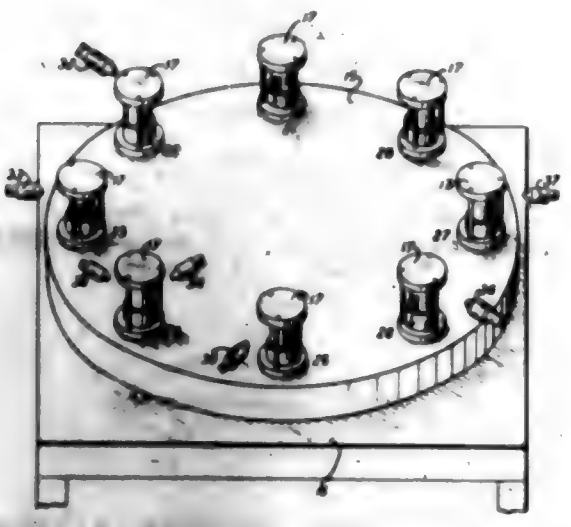
2,864,202
GLASS MOLDING MACHINE
Francis A. Haggerty, Coopersburg, and John K. McDuffee, Kutztown, Pa., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application September 24, 1953, Serial No. 382,022
1 Claim. (Cl. 49—37)

An apparatus for molding a glass article about a mandrel comprising a molding unit, a support for the unit movable intermittently about an axis to move the unit between intervals of rest at successive stations, the molding unit having a fixed position upper mold member with a longitudinal aperture therein and a surface surrounding

port reacting with said rod on movement of the movable support toward the fixed support to further move the

of inclination being complementary to the angle between the scriber point and said sharpening means, clamping

the aperture to form a first face of the article, a movable lower mold member having an aperture therein disposed in alignment with the aperture of the upper mold member and a surface, with greater surface area than the surface of the upper mold member, surrounding the aperture thereof to form a second face of the article opposing the first face thereof, an elongate mandrel having an upper forming end portion positioned in the aperture of the lower movable mold member and adapted for close sliding fit in the apertures of both mold members, a periphery mold member having an aperture extending longitudinally therethrough for guiding longitudinal movement of the mandrel therein, the upper portion of the aperture of the periphery mold member being enlarged to receive and support the movable mold member therein and surround portions of the upper and lower mold members and the area therebetween during molding of the article, a hollow member carried by the support to hold the periphery mold member for vertical movement, elements mounted fixedly on the lower ends of the mandrel and the periphery mold member, stationary circular tracks mounted beneath the support to engage the elements to cause movement of the elements with the mandrel and respective mold members between all the stations and through all stations excepting a forming station, the tracks causing the elements to locate the lower and periphery



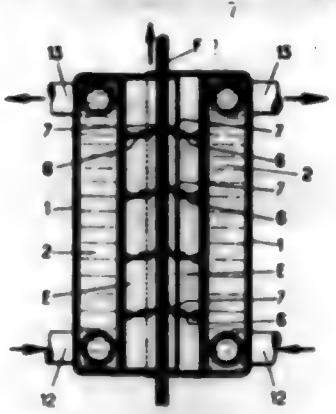
mold members and the mandrel downwardly free of the fixed upper mold member to receive at a loading station a tubular glass part on the lower mold member concentric with the mandrel, units to preheat the glass part at subsequent stations, a unit disposed at the forming station to heat the part when the lower and periphery mold members are in their down positions, a reciprocable member to receive and hold the elements at the forming station, a unit operable by a fluid under pressure to quickly move the member through spaced reciprocating cycles to cause the elements to move the mandrel and the movable mold members toward the fixed upper mold member to preform and finally form the article around the mandrel, the tracks causing the elements to lower the mandrel and the movable mold members away from the upper mold member during movement of the molding unit away from the forming station, the article moving downwardly with the lower mold member due to the surface area of the lower mold member being greater than the surface area of the upper mold, and a unit to heat the article to cause it to expand free of the mandrel for movement of the mandrel by its element and the track, downwardly out of the article, the track being formed to cause the element on the mandrel to move the mandrel upwardly, after the article has cooled sufficiently to shrink and thereby reduce the size of the aperture therein smaller than the mandrel, to eject the article from the movable mold members.

2,864,283

APPARATUS FOR COOLING OF GLASS

Bernard Long, Paris, France, assignor to Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France, Paris, France, a corporation of France

Application October 13, 1953, Serial No. 385,841
Claims priority, application France October 16, 1952
5 Claims. (Cl. 49—45)



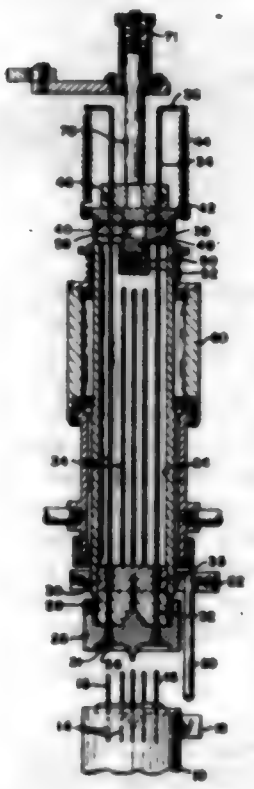
1. Apparatus for the industrial annealing of clear glass comprising a chamber for receiving said glass the inside walls of which have a high reflective power for infra-red radiation and are completely covered by a thin layer of a heat radiation absorbing material consisting of finely ground glass which has a higher absorptive power for radiations having wavelengths of more than three microns than for radiations having shorter wavelengths.

2,864,284

TOP STEM MOLD CLEANOUT

Charles L. Miller, Lock Haven, Pa., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

Application February 14, 1957, Serial No. 640,134
11 Claims. (Cl. 49—66)



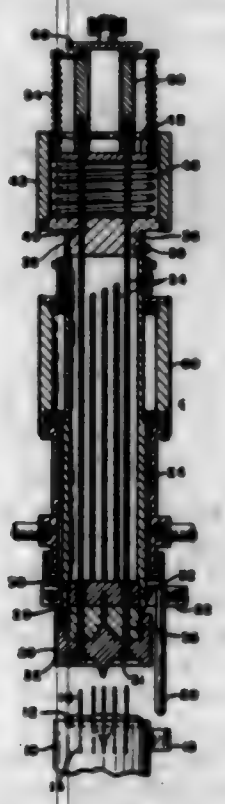
1. A press including a movable support, a mold on said support having a molding surface, a bore traversing the mold terminating in said surface, a bore clean out rod having an end portion movable in said bore and to a position at least flush with said molding surface, a fixed support, resilient means reacting between the movable support and rod for moving the rod part way toward the molding surface and additional means on said fixed sup-

said side walls, a top wall, and a bottom wall arranged in spaced parallel relation to said top wall with said top and bottom walls perpendicular to said side

the knives thereof comprising: an elongated member adapted to be carried by and to extend across the work supporting table of a knitter or sinker circuitry and

port reacting with said rod on movement of the movable support toward the fixed support to further move the end portion of the rod at least to the molding surface.

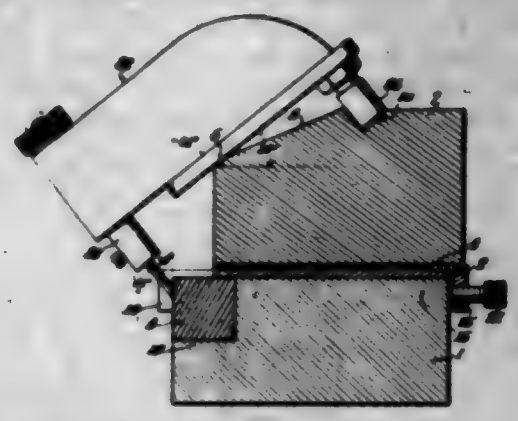
2,864,205
TOP MOLD UNPLUGGER
Robert A. Lyle, Cornica, Pa., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application February 14, 1957, Serial No. 640,135
3 Claims. (Cl. 49—66)



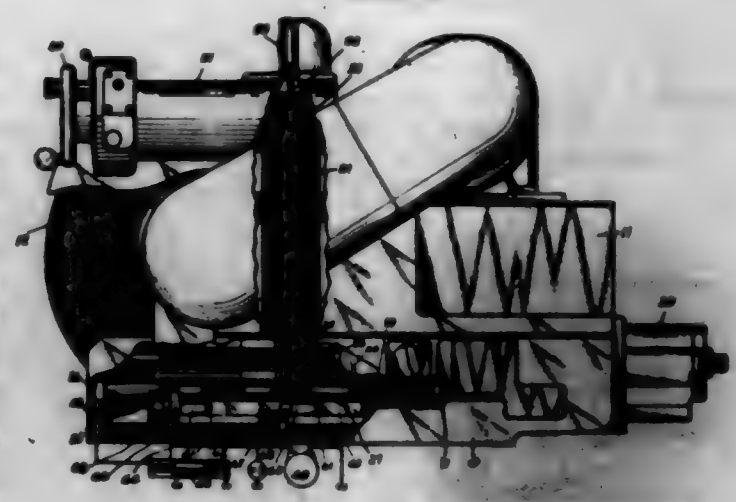
1. A press including a sleeve with means to reciprocate the same longitudinally of its axis, a mold at one end of the sleeve and a cap fixed at the other end thereof, said mold having a molding surface and passages extending therethrough to the molding surface, a compression spring seated by said cap, a member movable with respect to said cap urged away from said cap by said spring and restrained against excessive motion with respect to the cap, rods movable in said sleeve and having ends slidable in the passages in the mold, blocks affixed to the rods, a tension spring reacting between each rod and the member to urge the blocks toward engagement with the member, and an abutment operative in one direction of movement of the sleeve to force the member to move with respect to the cap against the action of the compression spring to thereby enable the ends of the rods to be moved by the tension springs to, at least, the molding surface of the mold.

2,864,206
METHOD AND APPARATUS FOR SHARPENING SCRIBER POINTS
Charles C. Lesse, Alexandria, Va., and William C. Mahoney, Columbus, Ohio
Application March 1, 1957, Serial No. 643,486
4 Claims. (Cl. 51—157)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A sharpening and grinding device for scribing tool points comprising, in combination, a base member carrying a sharpening stone, a sharpening jig including depending flanges supported by said base member and embodying guide means having a predetermined angle of inclination and means for supporting a scriber point secured in a scriber tool thereon in a predetermined angular position in contact with said sharpening means, said angle of inclination being complementary to the angle between the scriber point and said sharpening means, clamping means on said sharpening jig cooperating with said depending flanges for simultaneously releasably securing said sharpening jig and the said sharpening stone to said base member whereby a scriber point carried in a scriber tool supported in said sharpening jig may be sharpened.



2,864,207
FEED AND BACKLASH MECHANISM
Alvin J. Jones, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Application February 2, 1956, Serial No. 563,825
4 Claims. (Cl. 51—165)



1. A feed mechanism for a grinding machine including a base member, a grinding wheel support slidably mounted on said base member, a grinding wheel rotatably mounted on said support, means for effecting movement of said wheel support on said base member including a sliding rack and means for actuating said rack, connections between said rack and said wheel support including a manually operated shaft having a pinion gear thereon engaging the teeth of said rack for manual adjustment of said wheel support relative to said rack and means for taking up the backlash between said pinion and said rack comprising a second rack also in engagement with said pinion and slidably mounted in said base parallel to said first rack, said second rack having a piston on one end, means for applying fluid under pressure to said piston whereby to urge said pinion in a direction opposite to that in which it is urged by said first mentioned rack.

2,864,208
ALUMINUM BLOCK SANDPAPER HOLDER
Floyd Wilbur Ringer, Salina, Kans.
Application April 15, 1957, Serial No. 652,918
1 Claim. (Cl. 51—187)

An aluminum block sandpaper holder comprising a rectangular body having spaced parallel side walls, spaced parallel end walls arranged perpendicularly to

2,864,212
PACKAGING METHOD AND APPARATUS

2,864,214
APPARATUS FOR ASSEMBLING ARTICLES

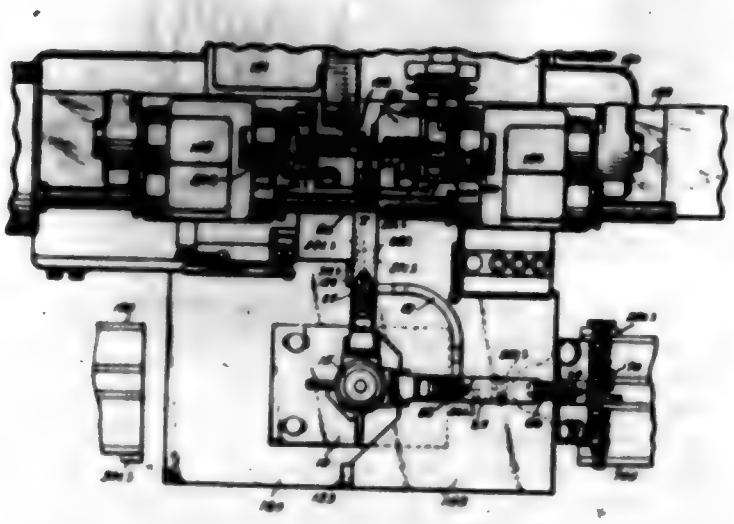
to eject the article from the movable mold members.

molding surface and additional means on said fixed sup-

said side walls, a top wall, and a bottom wall arranged in spaced parallel relation to said top wall with said top and bottom walls perpendicular to said side and end walls, said body having a threaded bore extending centrally through said top wall, said body and centrally through said bottom wall, a thumb screw including an elongated threaded shank detachably engaged in said threaded bore, a disc integrally mounted

axially on one end of said threaded shank and extending perpendicularly thereto, a handle integrally carried by said disc and extending therefrom oppositely from said threaded shank, and an integral annular flange depending from said disc adjacent the peripheral edge thereof oppositely of said handle, said flange and the top wall of said body cooperating to clamp therebetween the opposite ends of a sandpaper strip wrapped around said body.

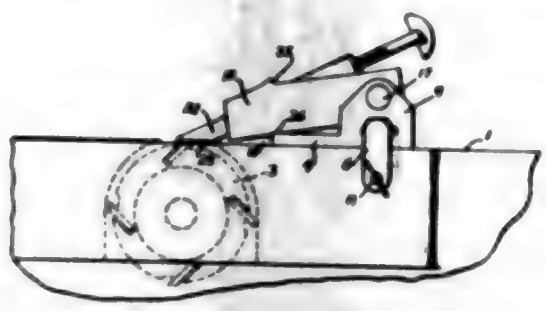
2,864,209
CRANK LOADER
Harold E. Balsiger, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Application July 21, 1955, Serial No. 523,429
19 Claims. (Cl. 51—215)



3. In a machine tool, means for rotatably supporting workpieces including a chuck, power means for opening and closing said chuck, a loading device for placing a workpiece in and removing same from said chuck, power means for actuating said loader and means responsive to opening of said chuck for actuating said power means to remove a workpiece from said machine tool.

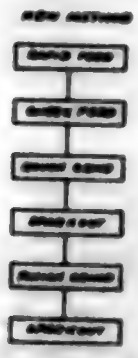
2,864,310
DEVICE FOR SHARPENING AND JOINTING KNIVES ON A JOINTER, SHAPER AND THE LIKE
Herman C. Mann, San Francisco, Calif.
Application May 14, 1956, Serial No. 584,545
8 Claims. (Cl. 51—246)

2. A knife sharpening and jointing device for use on a jointer, planer and the like for sharpening and jointing the knives thereof comprising: an elongated member adapted to be carried by and to extend across the work supporting table of a jointer or planer alongside and longitudinally of the knives thereof, a sharpening stone, a body carrying said stone slidably supported on said member for reciprocable movement on the latter with said stone projecting to one side of said member and outwardly of said body for engagement of said stone with said knives when said member is carried and above said table and in a position alongside said knives, means connected with said member for releasably securing it to said table in said position, the means for connecting said member to said table including an elongated base plate



parallel with and below said member and adapted to rest on and to extend across said table transversely thereof, and movable adjusting elements carried by said base plate engageable with the lateral edges of said table for controlling the angular relationship of said plate and member relative to the axis of said table that is normal to the axis of revolution of said knives to enable positioning said member parallel with the said axis of revolution, and guide means on said base plate and on said body spaced from said member and in slidable engagement with each other for holding said body against angular movement relative to said member during movement of said body along said member.

2,864,311
METHOD OF PLUNGE GRINDING
Harold E. Balsiger, Waynesboro, Pa., and Ralph E. Price, Beloit, Wis., assignors to Landis Tool Company, Waynesboro, Pa.
Original application August 26, 1948, Serial No. 46,336, now Patent No. 2,638,719, dated May 19, 1953. Divided and this application May 14, 1953, Serial No. 355,112
5 Claims. (Cl. 51—289)

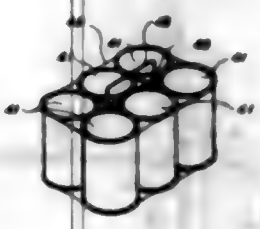


1. The method of plunge grinding a workpiece which consists in effecting a continuous rapid feeding movement of a grinding wheel against the workpiece, stopping said feeding movement of the wheel at a predetermined point for a selected interval to relieve the work from the stress imposed by the rapid feeding movement, continuing the grinding operation by the wheel in fixed position upon the work, freed from the stress produced by said rapid feed movement and finally resuming said feed until a predetermined size is reached.

charge points thereof located above different sections of said box and said path spaced transversely of the latter

containers in a partially open position and slitting means disposed in the path of the containers adjacent to said

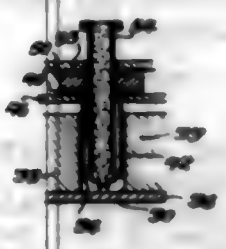
2,864,212
PACKAGING METHOD AND APPARATUS
John K. Bruce, South Pasadena, Calif., assignor to Bruce Engineering Corporation, Pasadena, Calif., a corporation of California
Application May 31, 1955, Serial No. 511,948
55 Claims. (Cl. 53—3)



1. Apparatus for assembling package cores having longitudinal and transverse vanes comprising a progressing conveyor, support means on the progressing conveyor for receiving and holding the cores in an upright position, rotary ejector means for engaging transverse vanes with the suport means in an upright position, ejector means for engaging longitudinal vanes with the support means in an upright position, rotary ejector means for engaging transverse vanes with the longitudinal vanes in an upright position, and magazines supplying core vanes to the ejector means.

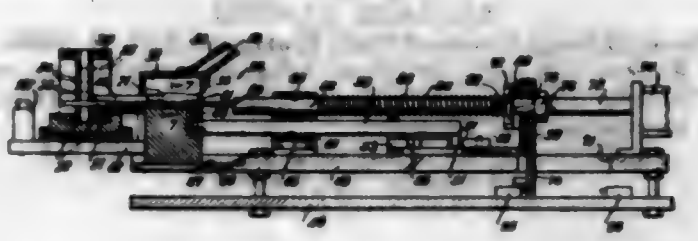
44. The method of confining a plurality of beaded containers about a divider having longitudinal and tranverse members by means of an encircling resilient wall member, which method comprises the steps of supporting the divider in upright position, inserting the cans laterally inwardly into engagement with the divider with the longitudinal and transverse members interspersed respectively between each pair of adjacent containers, the upper and lower beads of each container abutting the upper and lower beads of adjacent containers respectively above and below the divider, encircling the group of containers arranged about the divider with the resilient wall member, and removing the package including the divider from the divider support means.

2,864,213
METHOD AND APPARATUS FOR FORMING AND FILLING BAGS
Raymond H. Carter, Williamsville, N. Y., assignor to Sievepak Machinery Corporation, Williamsville, N. Y., a corporation of New York
Application July 15, 1955, Serial No. 522,222
9 Claims. (Cl. 53—29)



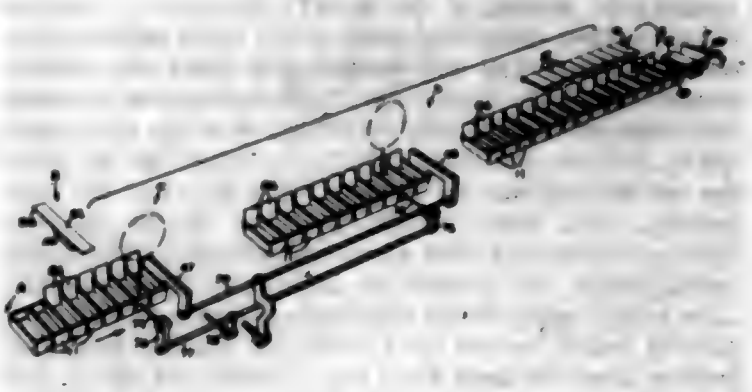
1. A method of making and filling a bag formed of woven tubing, comprising the steps of cutting off a length of tubing, closing the lower end of said length of tubing, flaring outwardly the upper end of said bag, holding the flared-out upper end of the bag while feeding a quantity of a substance into the bag through the upper end thereof, and then closing the upper end of the bag.

2,864,214
APPARATUS FOR ASSEMBLING ARTICLES
Albert C. Koehler, Queens Village, N. Y., and Arden L. Van Nest, Indianapolis, Ind., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application May 7, 1953, Serial No. 353,486
14 Claims. (Cl. 53—59)



1. An apparatus for assembling articles, which comprises a carrier for holding an article having portions for receiving parts positioned in parallel rows, means movable in a predetermined plane for feeding parts to the article, first means for moving the carrier in a predetermined direction perpendicular to said plane to index each receiving portion of the article of one row in front of the part-feeding means, second means perpendicular to the first means for moving the carrier in a direction perpendicular to the first-mentioned direction of movement to bring another row of the part-receiving portions to position to receive parts from the part-feeding means, a counter operable by each operation of the part-feeding means for actuating the second-mentioned carrier-moving means after one row of part-receiving portions is filled, and a counter operable by operation of the first-mentioned carrier-moving means and the second-mentioned carrier-moving means for stopping the part-feeding means.

2,864,215
PACKAGING MACHINE
Swan Hillman, Rockford, Ill.
Application January 24, 1955, Serial No. 483,629
15 Claims. (Cl. 53—59)



4. In a machine for packaging in an oblong rectangular open top box a predetermined number of elongated articles such as screws substantially shorter than the box, the combination of, means for supporting the box with its open end up and advancing the same sidewise and step by step along a horizontal path with the longitudinal axis of the box extending transversely of the path, a plurality of filling stations spaced along said path at different dwell positions of said box, mechanism at each of said stations for counting out a group of said articles and operable, during a dwell of the box at the station, to discharge the articles at a point above the box for gravitation of the articles into the box, said groups of all of said mechanisms totalling said predetermined number, and means supporting said mechanisms with said dis-

from the area where folded bags are stacked on said table top to the position where the bags are filled; suction nozzles on the upper surface of said table top at the area

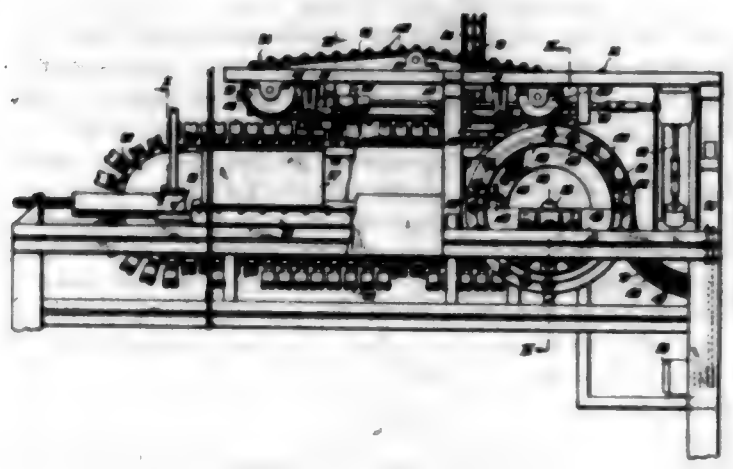
surrounding said rod within said tube for normally urging said rod upwardly and said hook outwardly of said tube, and latching means for maintaining the spring under com-

charge points thereof located above different sections of said box and said path spaced transversely of the latter along the box axis whereby to distribute the articles evenly throughout the box and avoid piling of the articles and spilling of the same over the top edges of the box.

2,864,216
SAUSAGE CANNER

Marshall Long, Overland Park, Kans., and Jack M. Miller, Kansas City, Mo., assignors, by mesne assignments, to Marlen Equipment Corporation, Overland Park, Kans., a corporation of Missouri

Application October 12, 1953, Serial No. 385,514
13 Claims. (Cl. 53—123)



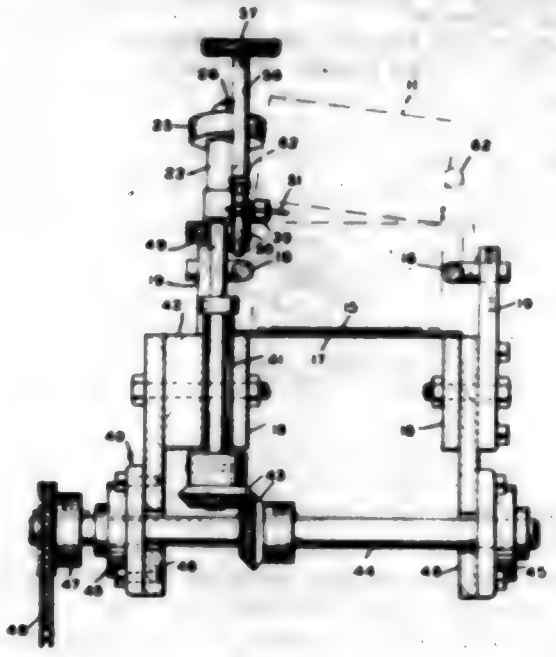
8. In a canning machine, a series of open end holders adapted to receive elongated articles spanning the series thereof; means for advancing the holders along a substantially linear path of travel with their open ends in alignment and then along an arcuate path of travel turned approximately ninety degrees; pivot means mounting the holders on the advancing means whereby to permit said turning of the holders, the axes of turning of said holders about said pivot means being substantially radial to the axis of said arcuate path when the holders traverse the latter, there being insufficient spacing between said open ends of the holders while advancing along said linear path to permit said turning; means for severing the articles between the holders while the same advance linearly, said pivot means diverging as the holders traverse the arcuate path of travel, spreading the holders apart; means for turning the holders as and when the same spread apart during advancement along said arcuate path of travel; means for ejecting the articles from the holders after the same have been turned; and means for positioning cans to receive the ejected articles from the holders.

2,864,217
METHOD AND APPARATUS FOR PACKAGING

Walter F. Podgorski, Preakness, N. J., assignor to P. Ballantine & Sons, Newark, N. J., a corporation of New Jersey

Application January 10, 1958, Serial No. 708,300
5 Claims. (Cl. 53—123)

1. In an apparatus for dividing collapsible, divisible paper board containers carried on a conveyor, opening means disposed in the path of the containers and arranged to contact a first portion of each of said divisible containers, to pivot said portion of said divisible containers through an acute angle about a second portion of said divisible containers along a common joint between said portions and to maintain said portions of said divisible containers in a partially open position and slitting means disposed in the path of the containers adjacent to said



opening means and arranged to separate said portions of said containers along the common joint thereof.

2,864,218
PACKING APPARATUS

James S. Wilson, Denver, Douglas V. Perman, Brookridge Heights, and H. Herbert Hanson, Denver, Colo., and Horace N. Broyles, St. Louis, Mo., and George W. Evans, Paul Pavoni, and William H. Kindel, Denver, Colo., assignors to Mechanical Products, Inc., Denver, Colo., a corporation of Colorado

Application October 31, 1955, Serial No. 543,866
19 Claims. (Cl. 53—124)

1. In apparatus for packing a compressible article into a bag, a spout providing a converging entrance section and having a bottom, sides and a top pivoted about a transverse axis; means for engaging said top to limit upward movement thereof; and means for adjusting said means upwardly and downwardly.

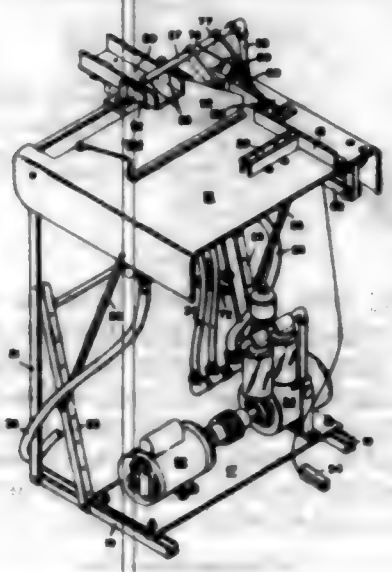
2,864,219
BAG HANDLING AND FILLING MACHINE

James D. Knisely, Kirkland, Wash., assignor of one-half to James Keith Payne, Kirkland, Wash.

Application October 28, 1957, Serial No. 692,598
4 Claims. (Cl. 53—187)

1. A bag handling and filling machine comprising: a table top having bag handling equipment mounted on the top thereof and operating means for the same secured to the underside; supporting means for said table top having adjustable structs permitting the angular adjusting and positioning of said top; a pick-up arm having suction heads disposed thereupon, suitable for lifting one end of a folded bag made of impervious sheet stock; pivoted, power driven arms arranged to move said pick-up arm

from the area where folded bags are stacked on said table top to the position where the bags are filled; suction nozzles on the upper surface of said table top at the area where bags are filled; said suction nozzles disposed to hold one side of a bag mouth to the table top during the period said suction heads are engaged with the opposite side of the bag mouth and being raised by said pick-up arm and thus effect the opening of the bag; flippers pivoted for partial horizontal revolution and adapted to enter the mouth of a bag after it is opened, to determine

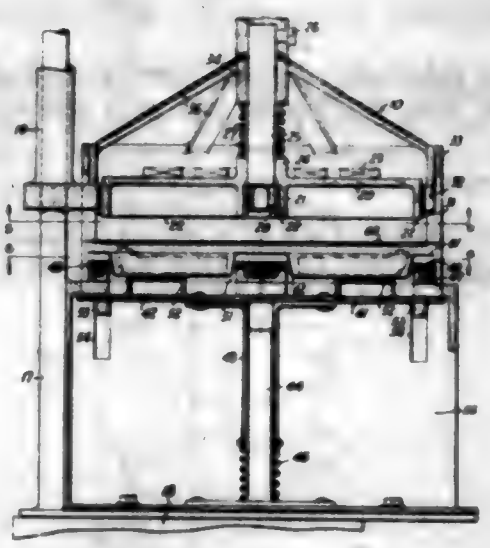


the exact position and opening shape of the bag mouth; a reciprocating charging tray arranged to partially enter the mouth of a bag and assist in filling the bag that has been positioned for filling; a source of vacuum for said suction heads and suction nozzles; air cylinders for sequentially actuating the operating means for said bag handling equipment a source of compressed air for operating said air cylinders; and air valving means and air conveying tubing to provide for the sequential operation of said air cylinders.

2,864,220
GARMENT COVER AND HANGER ASSEMBLY
Peter P. Petrunya, McKees Rocks, Pa.
Application June 26, 1956, Serial No. 593,895
1 Claim. (Cl. 53—241)

A garment cover support assembly comprising a vertically disposed, hollow cylindrical tube, a rod extending axially throughout the entire length of said tube and projecting from the end portions thereof, a supporting element secured to the lower end of said rod, a supporting hook pivotally mounted on said rod and swingable angularly outwardly from the upper portion of said rod through a longitudinal slot in said tube, spring means surrounding said rod within said tube for normally urging said rod upwardly and said hook outwardly of said tube, and latching means for maintaining the spring under compression when said rod is pulled downwardly resulting in retraction of said hook within said tube by virture of the bearing point for the hook provided at the lower end of said tube slot.

2,864,221
PIE PACKAGING MACHINE
Claude A. Jones, Jr., and George M. Betherum, San Leandro, and Glen B. Mohr, Oakland, Calif.
Application April 12, 1954, Serial No. 422,552
4 Claims. (Cl. 53—372)

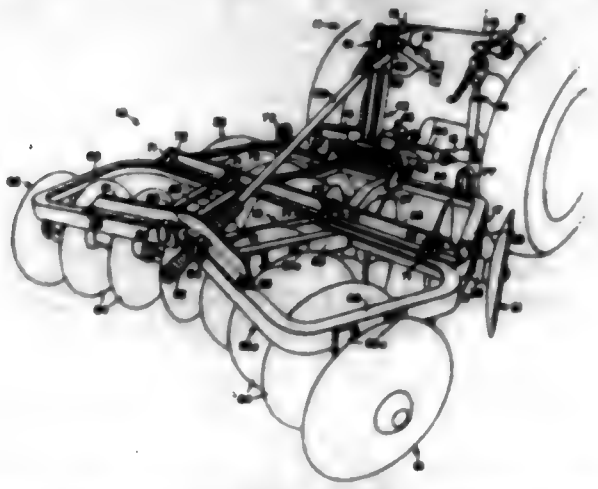


1. In a machine for the packaging of cut pieces of pie, wherein the cut pieces of pie are placed in a sheet of plastic material provided with self-supporting segmental shaped indentations to receive the pie, a work table adapted to support the indented sheet of plastic material with the cut pieces of pie therein, a working head overlying the table, said working head being movable in a vertical direction toward and away from the table, said working head including heat sealing means adapted to form a heat seal between a covering sheet overlying the indented sheet of plastic material and the areas of the plastic material surrounding each of the indented cavities, said head also including cutting means for simultaneously severing the covering sheet and the sheet of plastic material along lines surrounding each cavity, thereby providing individual packages for the individual pieces of pie.

2,864,332
FOLD OVER DISK HARROW
William P. Ochler and Charles H. Youngberg, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Application July 17, 1956, Serial No. 598,332
8 Claims. (Cl. 172—441)

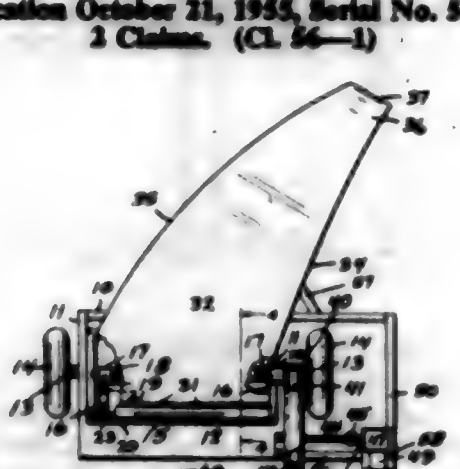
1. A lift type disk harrow adapted to be connected to a propelling tractor, comprising a transverse frame adapted to be connected with the tractor and including a rear part extending rearwardly from the generally central portion of said frame, front gang means carried by said transverse frame, a pair of rear gang units pivotally connected with said main frame and disposed above said rearwardly extending part, each of said rear gang units being independently movable from a position in rear of

the front gang means to a position substantially over the latter, and means connected with the rear portions of



said rear gangs and said rear part for holding said rear gangs in rigid relationship with said transverse frame.

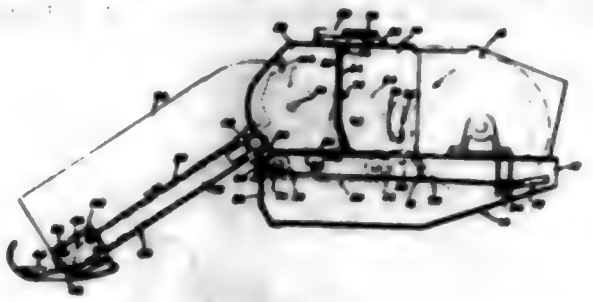
2,864,223
HAY CHOPPER
Vernon J. Lundell, Cherokee, Iowa
Application October 21, 1955, Serial No. 542,072
2 Claims. (Cl. 56—1)



1. A crop gathering machine comprising a semi-cylindrical casing having its concavity facing downwardly and disposed transversely of the line of travel, a framework to which said casing is secured, a rotating chopping and gathering structure journalled in said casing and substantially coaxial thereof for chopping and gathering standing crops, and including a plurality of radially positioned hammers, an upper discharge chute communicating directly through an upper portion of said casing, the lower end of said chute being substantially co-extensive with said casing, said chute including a plurality of laterally spaced baffle members therein for uniformly discharging material between said baffle members, said baffle members being positioned substantially vertically and generally following the contour of the wall of said casing, said baffle members extending upwardly into said chute and along a wall thereof.

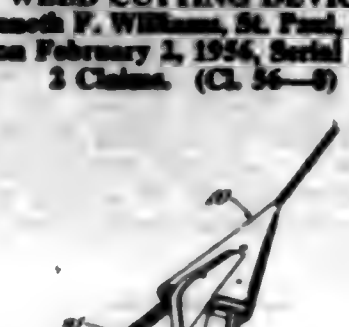
2,864,224
HARVESTING MACHINE
James R. West, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application July 5, 1957, Serial No. 670,133
10 Claims. (Cl. 56—2)

1. An agricultural forager provided with chopping means within a housing having an open forward end, in combination with a header constructed and arranged to be connected firmly and detachably to the forward end of said forager and extend forwardly therefrom, the rearward end of said header and forward end of said forager housing having laterally extending flanges comprising complementary face portions arranged to abut each other when connected and also having interengage-



able cam and cam engageable means at opposite sides operable to engage each other and center said header in a horizontal direction relative to said forward end of said housing during movement of said header rearwardly toward said housing to connect the same thereto, and quickly disengageable connecting means on said header and housing operable to hold the same connected together when centered and abutting each other.

2,864,225
WEED CUTTING DEVICE
Kenneth F. Williams, St. Paul, Minn.
Application February 3, 1956, Serial No. 562,985
2 Claims. (Cl. 56—8)



1. A weed cutting apparatus including a holder comprised of top and bottom sections provided with confronting surfaces having marginal notches disposed across their rear edges to produce a rearwardly directed slot and transverse opposed grooves forming an elongated chamber within said holder, a pair of blades having cutting edges along one side, pivot means passing through said top and bottom sections to pivotally attach said blades to said holder at a locus forward of said transverse chamber, and a coil spring disposed within said chamber, whereby said blades may bear against the ends of said spring when either said blades are pivotally urged toward each other.

2,864,226
ROTARY LAWN MOWER
Harold T. Bright, Elmhurst, Ill., assignor to Robertson Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application August 8, 1955, Serial No. 526,839
4 Claims. (Cl. 56—25.4)

1. In a rotary lawn mower of the type including a downwardly opening, wheel-supported casing having a top wall and a depending side wall extending around the front, rear, and sides of the casing, a motor supported on the casing and having a drive shaft extending downwardly through the top wall into the casing, and a cutting

blade mounted on said shaft in the lower part of said casing for rotation in a generally horizontal plane and having a fan-like action for drawing grass or leaves upwardly and forcing the cuttings into the upper part of the casing, the improvement comprising an inverted chute portion in said top wall having an arcuate cross-section and extending from a point adjacent one side of the casing to the front thereof in generally tangential relation to the path of rotation of the blade at the side where the blade is moving forwardly, said chute flaring

both upwardly and laterally toward the front of the casing and terminating in a discharge opening located substantially above the side wall at the front of the casing for discharging cuttings upwardly and forwardly into the path of movement of the mower, and a horizontal plate portion disposed at substantially the juncture between the top wall and the side wall of the casing at the front thereof, said plate portion extending inwardly of the casing from the side wall and transversely across said chute at the lower edge of said discharge opening.

2,864,227

GRAIN WINDROWER

Earl W. Paulson, Round Lake, Minn.

Application November 30, 1955, Serial No. 550,004

4 Claims. (Cl. 56—192)

1. A grain windrower comprising a pair of horizontally spaced rigid platforms, a plurality of spaced flexible endless members passing over said platforms adapted to carry cut grain toward the space between said platforms, said platforms having rearwardly diverging side edges to provide a wider rear opening in said space and a narrower forward opening therein, said windrower including a forward sickle cutting attachment, said wider rear opening causing grain cut by said sickle cutting attachment to fall to a spread angular position.

2,864,228

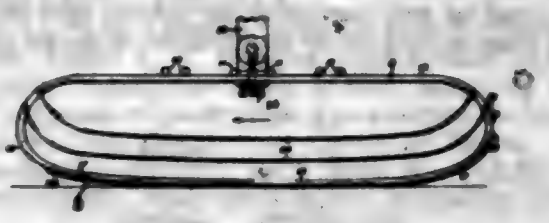
NUT GATHERER

Ray R. Griffith, Jr., Columbia, Miss.

Application May 23, 1957, Serial No. 661,135

2 Claims. (Cl. 56—328)

1. A nut gatherer, comprising a plurality of flexible ring-shaped runners each having an upper run portion and a lower run portion, said runners being arranged in spaced parallel relation, a bar extending transversely of said parallel arranged ring-shaped runners and connected to each of said upper run portions of said runners for maintaining said upper run portions of said several runners in parallel spaced relation and permitting said lower run portions to have flexibility of movement with respect to each other transversely of said gatherer when moved over the ground to conform to the contour of the ground, slats connected to and extending axially of



and beneath each of said lower run portions, said slats being arranged in spaced relation to each other, and a handle connected to said runners for moving the gatherer over the ground.

2,864,229

APPARATUS FOR THERMALLY PROCESSING YARNS

Warren A. Scott, Chester Springs, and Nicholas J. Stoddard, Berwyn, Pa., and Kirkland H. Gibson, North Kingstown, Harry B. Miller, Lakewood, and Richard G. Hilbert, Smithfield, R. I., assignors to Universal Winding Company, Cranston, R. I., a corporation of Massachusetts

Application June 5, 1957, Serial No. 663,726

17 Claims. (Cl. 57—34)

1. Apparatus for processing yarns comprising a creel for mounting at least one supply package of said yarn, a twister spindle, a traveler ring, a traveler, and feed means to ravel yarn from said supply package and feed the same at a preselected speed to the traveler and take-up package, spaced guide means intermediate said creel and said twister spindle to direct the yarn in a generally straight-line path during at least a portion of its travel, and heater means intermediate said spaced guide means operable to uniformly heat the yarn to a selected temperature during said portion of its travel.

2,864,230

METHOD OF MAKING NOVELTY YARN

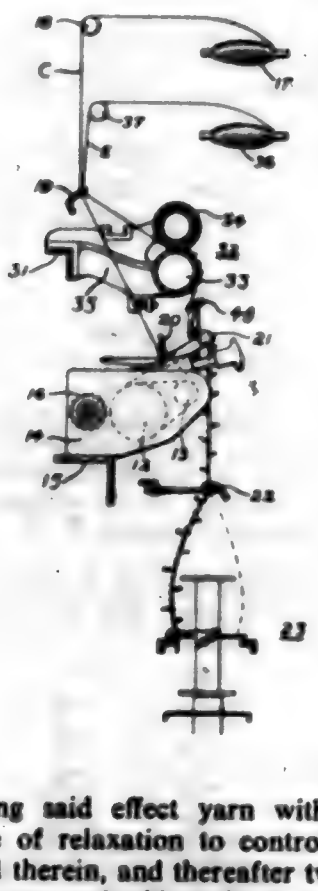
Thomas B. Moore, Jr., Laurens, S. C., assignor to Deering Milliken Research Corporation, Pendleton, S. C., a corporation of Delaware

Application June 2, 1953, Serial No. 359,036

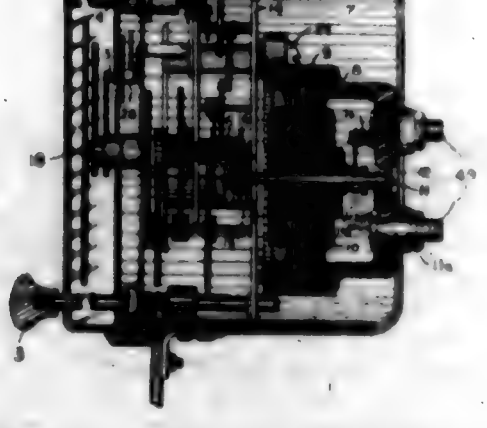
2 Claims. (Cl. 57—157)

2. The method of making a novelty yarn which comprises withdrawing a strand of carrier yarn from a first

yarn supply, simultaneously withdrawing a strand of highly twisted effect yarn from a second yarn supply, said effect yarn being withdrawn at a rate in excess of the rate of withdrawal of said carrier yarn, passing said effect yarn into a zone of relaxation to allow the same to kink, partially constraining said effect yarn with guide means within said zone of relaxation to control the length of the kinks formed therein, and thereafter twisting together the kinked effect yarn and said carrier yarn to form a plied strand having, at randomly spaced points, projecting twisted loops of said effect yarn.

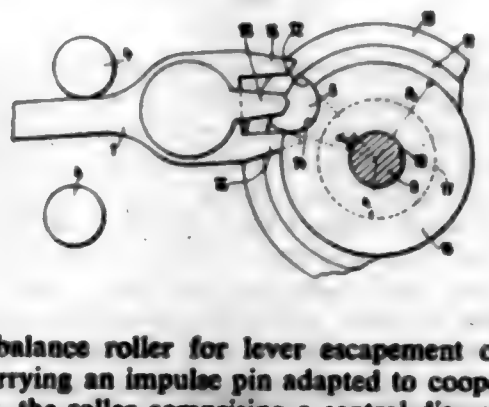


2,864,231
ELECTRIC TIMING DEVICE
Hans Springer, Ashland, Mass., assignor to General Electric Company, a corporation of New York
Application March 17, 1954, Serial No. 416,774
5 Claims. (Cl. 58—23)



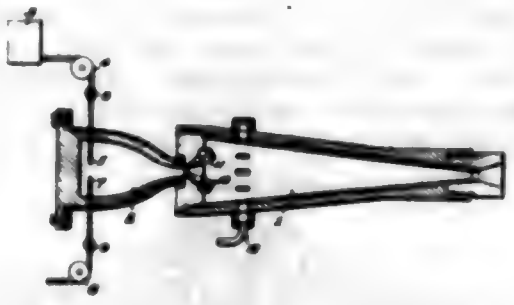
2. Timing means comprising a gear train, escapement means interacting with said gear train to permit said gear train to be advanced in intermittent steps at a substantially constant average speed, a direct current torque motor having a high inertia rotor for driving said gear train, a plurality of windings mounted on said rotor, a split commutator fixed to said rotor for rotation therewith, said windings being connected to said commutator, a plurality of brushes engaging said commutator for supplying electrical power to said windings, a low inertia spring connecting said rotor to said gear train for causing said rotor to oscillate back and forth a number of times at starting to agitate the escapement into motion, said rotor being unrestrained from rotating in a reverse direction under the influence of said spring when the electrical power to the windings of said rotor is interrupted, whereby reverse rotation of the rotor and commutator with respect to said brushes facilitates cleaning of said brushes.

2,864,232
BALANCE ROLLER FOR LEVER ESCAPEMENT OF A TIMEPIECE
Paul Tuetey, Le Locle, Switzerland, assignor to Les Fabriques d'Assortiments Réunies, Le Locle, Switzerland
Application December 29, 1955, Serial No. 556,241
Claims priority, application Switzerland February 25, 1955
9 Claims. (Cl. 58—121)



1. A balance roller for lever escapement of a timepiece, carrying an impulse pin adapted to cooperate with the lever, the roller comprising a central disc of uniform thickness having at its periphery a non-circular recess, open towards the outside and receiving the impulse pin, and an outer ring surrounding the central disc and bearing both on the pin and on the periphery of the disc so as to press the pin against the wall of the recess and thus secure the pin in its position.

2,864,233
SELF VAPORIZATION OF LIQUID FUELS BY PARTIAL OXIDATION
Johann G. Tschinkel, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Application December 15, 1950, Serial No. 201,055
6 Claims. (Cl. 60—35.4)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a process of vaporizing a normally stable liquid fuel taken from the class consisting of isopropyl alcohol and xylene, the step which comprises vaporizing a mixture consisting essentially of said fuel and phenylhydrazine by reacting said mixture with a peroxide compound taken from the class consisting of hydrogen per-

2,864,237
GAS TURBINE ENGINE HAVING ROTARY COM-

therein, a plunger reciprocably mounted in said plunger chamber, said fitting also having a port leading from

oxide and diethyl peroxide, said phenylhydrazine and peroxide compound being present in equivalent reaction proportions.

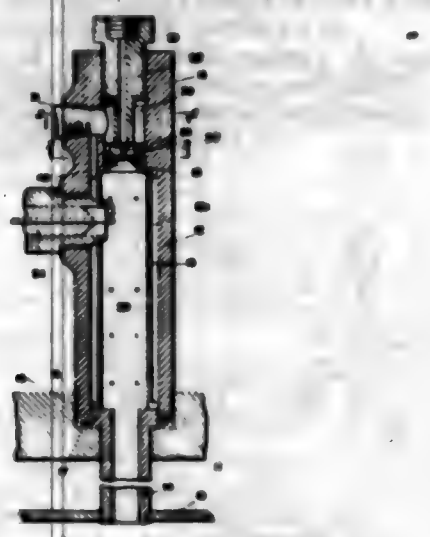
2,864,234

IGNITER FOR GAS TURBINE ENGINES

Clifford E. Seglem, Wallingford, and Stewart Way, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Continuation of application Serial No. 461,700, October 11, 1954. This application September 13, 1956, Serial No. 609,784

3 Claims. (Cl. 60—39.82)



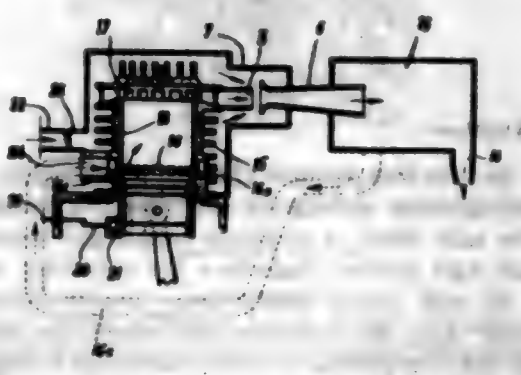
1. In combination, combustion apparatus and an igniter therefor comprising an elongate tubular housing, a first inwardly extending annular flange at one end of the housing providing an outlet section, a second inwardly extending annular flange at the other end of the housing providing an inlet section and said flanges forming therebetween a central chamber in communication with both said outlet section and said inlet section, a centrally apertured annular plate in the inlet section and positioned on said second flange, a centrally apertured atomizing disk in the inlet section having one face abutting said annular plate, an insert in the inlet section having an axial bore therein coinciding with the central apertures in the annular plate and atomizing disk for passage of fuel from the inlet section to the central chamber, said insert having an enlarged outer end portion secured in the inlet section and a reduced inner end portion abutting the other face of the atomizing disk and forming with the housing inner wall an annular air compartment, a lateral opening in the housing wall in communication with said annular air compartment for supplying air thereto, an annular groove in one face of the atomizing disk surrounding its central aperture, a plurality of passageways in the atomizing disk providing communication between the annular air compartment and the annular groove in the atomizing disk, said second annular flange having an enlarged recess therein in communication with the apertures and annular groove in the atomizing disk providing a chamber for mixing fuel and air before its admission to the central chamber and ignition means in the central chamber for igniting the mixture prior to its injection into the combustion chamber.

2,864,235

EXHAUST GAS EJECTOR TUBES IN ASSOCIATION WITH EXPLOSION ENGINES OR INTERNAL COMBUSTION ENGINES

François G. Paris, Chaville, Jean Le Foll, Le Pré-Saint-Gervais, Henri L. P. Moulien, Courbevoie, and Jean H. Bertin, Neuilly-sur-Seine, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France

Application March 6, 1953, Serial No. 340,835
Claims priority, application France March 14, 1952
1 Claim. (Cl. 60—39)



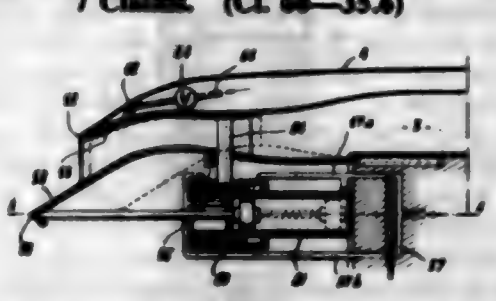
A power plant comprising an internal combustion piston engine with a plurality of sequentially operating cylinders provided with scavenging ports, an engine cooling system having a cool air circuit, a separate exhaust pipe for each of the said cylinders, a tube operatively associated with each exhaust pipe to form with it an ejector, a common suction chamber into which the said exhaust pipes open through their discharge ends and the said tubes open through their suction ends, the said suction chamber communicating with the said cool air circuit, a common discharge chamber into which the said tubes open through their discharge ends, the said chambers communicating with each other through the said tubes and being otherwise sealed from each other, and means for exhausting the said discharge chamber, the said means comprising a pipe conection between the said discharge chamber and the said scavenging ports.

2,864,236

METHOD OF AND MEANS FOR THE CONTROL OF THE AIR INLET OPENING OF A JET PROPULSION UNIT OR A GAS TURBINE ENGINE

Kléber Touré and Jean R. Lemely, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Application May 25, 1953, Serial No. 357,332
Claims priority, application France June 5, 1952
7 Claims. (Cl. 60—35.6)



1. In a jet propulsion unit designed for supersonic speeds and having an air intake casing ending forwardly with a sharp leading edge, a device for controlling the flow of atmospheric air into said casing by modifying the effective leading edge, comprising controllable nozzle means opening at said leading edge and facing forwardly of said unit, and means for supplying pressure fluid to said nozzle means, whereby a fluid jet is projected by said nozzle means forwardly of said unit and outside said casing to form a continuous fluid wall around and forwardly of said sharp leading edge.

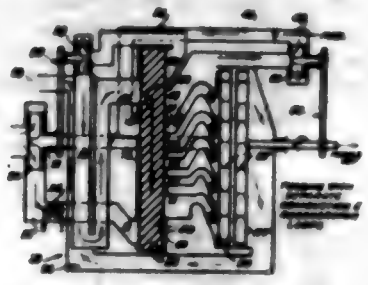
2,864,240

HYDRAULIC COUPLINGS WITH MEANS PROVID-

said fins being blunt and constituting a cutting edge, said lower edge being tapered upwardly toward said driving

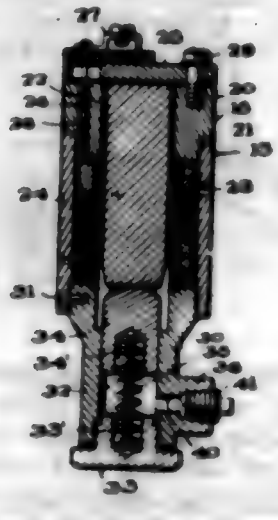
spring connecting said rotor to said gear train for causing

2,864,237
GAS TURBINE ENGINE HAVING ROTARY COMPRESSOR AND TURBINE DRIVEN BY COMPRESSED GAS
Richard R. Coleman, Jr., Dallas, Tex.
Application May 23, 1955, Serial No. 510,425
9 Claims. (Cl. 60—39.45)



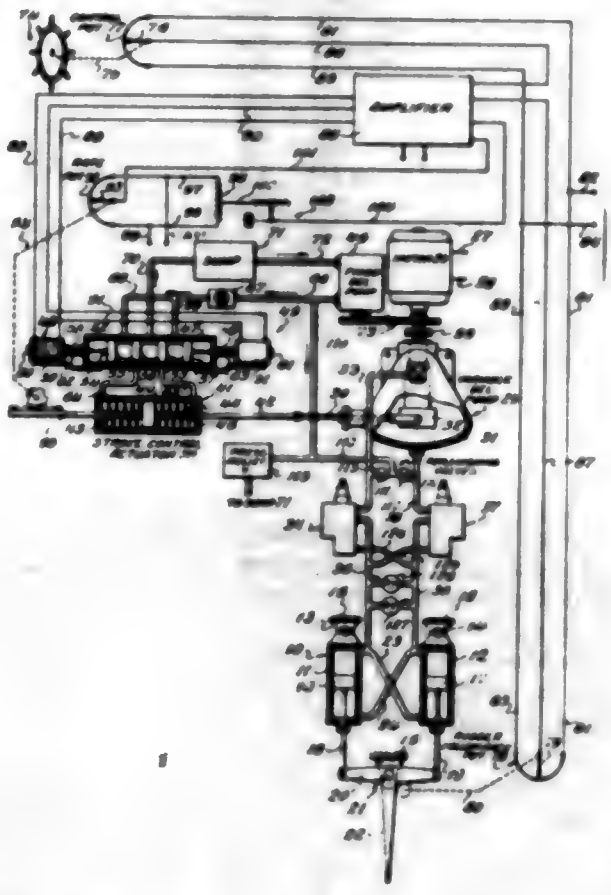
9. A gas turbine engine comprising a main shaft; a rotary compressor driven by said shaft; a turbine connected to said shaft; a pressure exchanger mounted on said shaft and having chambers for receiving air compressed by said rotary compressor; means between the compressor and the pressure exchanger for delivering air from the compressor to the chambers; a regenerator circuit having means for supplying high pressure air to said chambers to replace the compressed air previously supplied to the chambers by the rotary compressor; operatively associated with the pressure exchanger and a combustion circuit wherein fuel is burned for replacing the high pressure air in the chambers supplied by the regenerator circuit with combustion products; and means successively connecting each of said chambers with turbine nozzles of successively lower operating gas pressures as the pressure rotor rotates, said turbine nozzles directing the combustion products from the chambers to turbine blades of the turbine whereby the shaft is rotated, the lowest pressure nozzle successively connecting the chambers then communicating with the rotary compressor whereby gases remaining in the chambers are scavenged by compressed air.

2,864,238
FLUID DISPLACEMENT DEVICE FOR HYDRAULIC BRAKE SYSTEMS
Osborn A. Kershner and Emil Hahn, St. Joseph, Mich., assignors, by mesne assignments, to Lambert Brake Corporation, St. Joseph, Mich., a corporation of Michigan
Application May 9, 1955, Serial No. 506,855
1 Claim. (Cl. 60—54.6)



A fluid displacement device for use in fluid actuator systems having a fluid pressure-supplying cylinder and a fluid-pressure-operated motor cylinder, comprising a unitary fitting, a casing removably carried by said fitting, said fitting having a fluid-receiving plunger chamber therein, a plunger reciprocably mounted in said plunger chamber, said fitting also having a port leading from said plunger chamber to supply fluid from the plunger chamber to the motor cylinder, and a removable closure for one end of said plunger chamber, said port being adjacent to said closure, and said plunger and closure having abutting portions for limiting movement of said plunger towards said closure to a position where said port is closed by said plunger, resilient means interposed between said plunger and said closure to urge the plunger away from said closure, a solenoid coil in said casing, and a solenoid armature in said casing on the other side of said plunger from said resilient means for shifting said plunger towards said closure responsive to energization of said coil, thereby causing displacement of a predetermined volume of fluid from said chamber.

2,864,239
ELECTRO-HYDRAULIC SERVO SYSTEM FOR STEERING DIRIGIBLE CRAFT
George H. Taylor, Wantagh, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application October 4, 1956, Serial No. 613,937
14 Claims. (Cl. 60—52)



1. In a closed loop servo system for steering dirigible craft, the combination of, a steering control member having a movable part, electrical signal means having a movable element operatively connected to the control member movable part, a reversible, variably delivery, hydraulic pump having a stroke control member, a hydraulic motor for steering the craft operated directly by the fluid delivered thereto from said pump, a follow-back electrical signal means having a movable element operatively connected to said steering motor, means for displacing said pump stroke control member including a self-centralizing movable element operatively connected to said stroke member, electrical operating means for said displacing means, and a circuit including said electrical operating means having said control member signal means and said followback signal means arranged in differential relation therein.

2,864,243
APPARATUS FOR DEHYDRATING LIQUIDS
Carl Bower, Dayton, Ohio, assignor, by mesne assignments, to Bower Roller Bearing Company, Detroit, Mich., a corporation of Michigan
Application May 31, 1955, Serial No. 512,124
4 Claims. (Cl. 60—39.46)

2,864,245
ROTARY TORQUE TRANSMITTING JOINT
Walter R. Arthur, Chicago, Ill.
Application May 31, 1955, Serial No. 512,125
1 Claim. (Cl. 64—21)

combustion chamber.

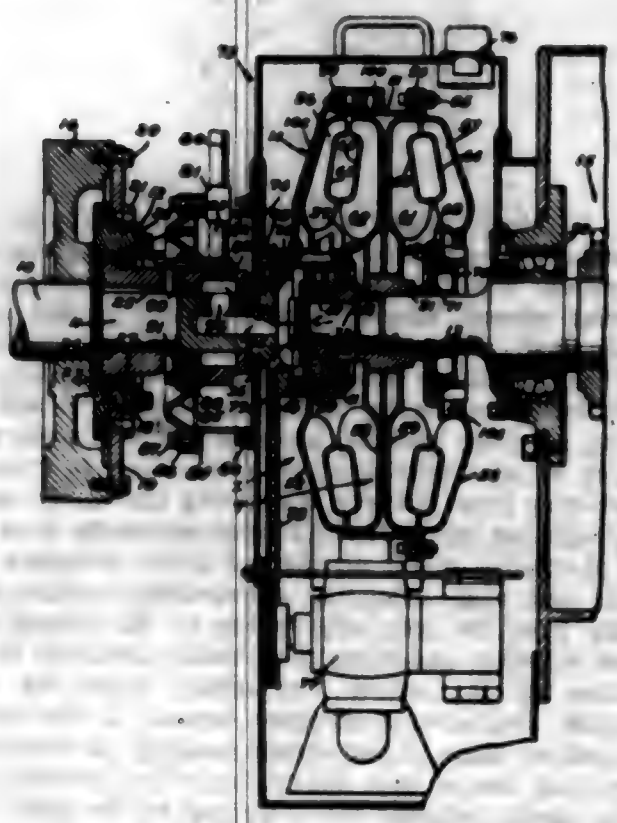
wardly of said sharp leading edge.

2,864,240

HYDRAULIC COUPLINGS WITH MEANS PROVIDING FOR MISALIGNMENT OF INPUT AND OUTPUT SHAFTS

Albert A. Ashton, Houston, Tex., assignor, by mesne assignments, to The Youngstown Sheet and Tube Company

Application September 21, 1953, Serial No. 381,270
4 Claims. (Cl. 60—54)



1. In means for driving a device, having a driven shaft with a projecting portion, from a prime mover: a turbine member fixed on the projecting portion of said shaft; an impeller member surrounding said turbine member; a driving shaft supporting said impeller member for rotation around said turbine member, one end of said driving shaft being flexibly and rotatably supported on the projecting end of said driven shaft by misalignment compensating bearing means, said driving shaft having a passage connecting the interior of said impeller member with a point on the driving shaft spaced from said end thereof; ring means providing an annular chamber around said driving shaft communicating with said passage; a casing surrounding a portion of said driving shaft contiguous to said ring means; a flexible diaphragm surrounding said driving shaft and connecting said casing and said ring means; duct means connecting said annular chamber with a source of fluid to be fed into said impeller member; and a flexible connection on the other end of said driving shaft for connecting it to said prime mover.

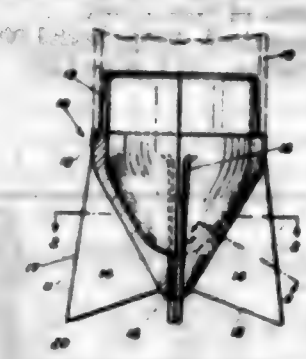
2,864,241

DRIVING POINTS FOR PILES

Vincent J. Fiore and Oscar Reich, New York, N. Y.; said Reich assignor to said Fiore

Application December 28, 1955, Serial No. 554,245
8 Claims. (Cl. 61—53)

1. A pile driving point for vertical downward penetration of soil by successive power hammer blows, said point having a multiplicity of identical radial fins, each of said fins having an outer edge, a lower edge and a point, each of said fins being symmetrical about a radial axis and extending downwardly to said point, said point of said fins being below said driving point, the lower edge of each of said fins being blunt and constituting a cutting edge, said lower edge being tapered upwardly toward said driving



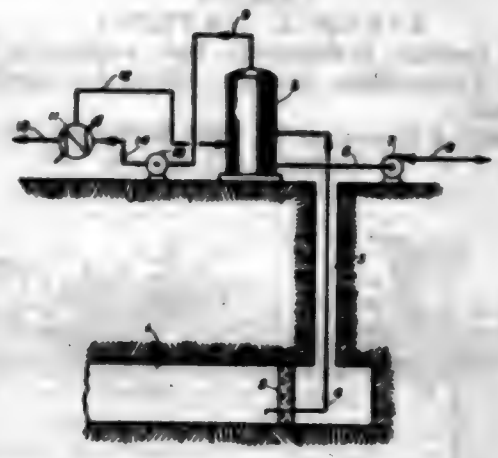
point, the upper end of said outer edge of each of said fins beginning at the largest dimension of said driving point.

2,864,242

METHOD AND APPARATUS FOR REMOVAL OF LIQUEFIED GAS FROM UNDERGROUND CAVERNS

Werner C. Muller, Roslyn, N. Y., assignor to National Petro-Chemicals Corporation, New York, N. Y., a corporation of Delaware

Application May 6, 1955, Serial No. 506,476
4 Claims. (Cl. 62—55)



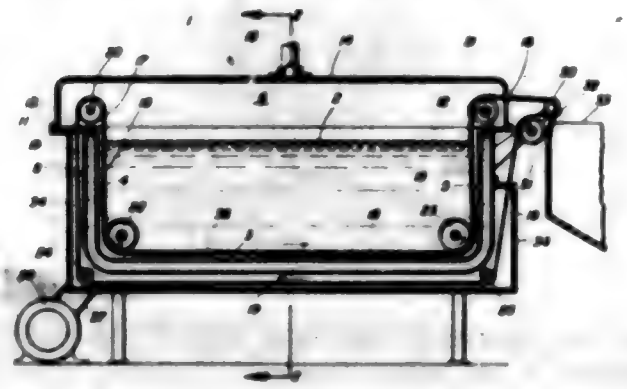
1. A method for withdrawing a liquefied gas, stored in an underground excavated cavern, through a confined conduit means providing open communication between the liquefied gas in the cavern and a receiving zone disposed at an elevation substantially higher than said cavern, said liquefied gas being stored in said excavated cavern which is disposed at a sufficient depth such that the liquid head in the conduit, when said conduit is full of liquefied gas, is greater than the static pressure in said cavern and said cavern is further characterized by being of such large internal surface area that flow of liquefied gas through the conduit into the receiving means is not obtainable by substantial pressurizing of the cavern with a gas such as is stored in liquefied form in the cavern, which comprises maintaining in said receiving zone a pressure lower than the pressure existing in said cavern to provide a pressure differential less than sufficient to vaporize a substantial amount of liquefied gas in said conduit but to vaporize a controlled relatively small amount by weight of liquefied gas in the conduit to reduce the density of the liquefied gas and static pressure in the conduit sufficiently to provide a self-actuating lift of said liquefied gas, in admixture with a relatively small amount of vaporized liquefied gas, through said conduit and into the receiving zone, and disengaging liquefied gas from the mixture that enters the receiving zone.

2,864,247

LOOP TRANSFER MECHANISM FOR KNITTING MACHINES

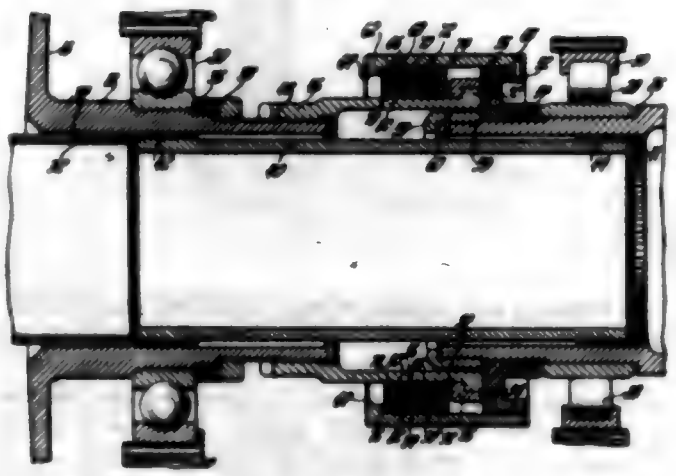
means for that member which is rotated which comprises an electric motor vertically disposed at one side of said

2,864,243
APPARATUS FOR DEHYDRATING LIQUIDS
Carl Berger, Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N. Y., a corporation of New York
Application February 2, 1956, Serial No. 563,059
4 Claims. (Cl. 62—123)



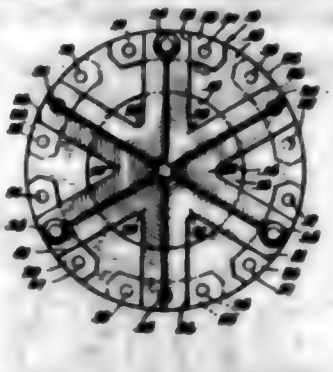
1. In an apparatus for the low temperature dehydration of aqueous heat sensitive materials, a metallic tank with at least one surface thereof being refrigerated and containing said aqueous material, and a flat non-metallic belt movable within said tank refrigerated by said refrigerated tank surface and sealingly engaged with opposed walls of the tank whereby water is removed from said aqueous material as ice crystals adhering to said belt.

2,864,244
FLEXIBLE COUPLING
Otakar P. Procher, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 21, 1954, Serial No. 476,693
10 Claims. (Cl. 64—9)



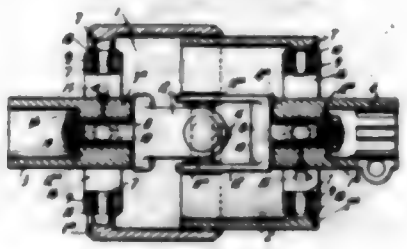
2. A flexible coupling for rotating members comprising, a first annular member supported by one of said rotating members, a second annular member supported by the other of said rotating members in radially opposed spaced relationship to said first annular member, torque transmitting means interconnecting said rotating members and permitting axial misalignment therebetween and between said annular members, and axially flexible resilient means including a number of axially positioned flexible disks positioned in the annular space between said annular members and operatively interconnecting said annular members for receiving axial thrust from one of said members under all degrees of axial misalignment therebetween, said disks being in radially spaced relationship to said annular members to permit said disks to axially flex upon receiving said axial thrust when said annular members are axially misaligned.

2,864,245
ROTARY TORQUE TRANSMITTING JOINT
Walter E. Amberg, Chicago, Ill.
Application December 28, 1954, Serial No. 476,027
20 Claims. (Cl. 64—12)



14. A rotary torque transmitting universal joint for transmitting substantially constant torque with substantially constant angular velocity without the formation of fatiguing stresses between a driving hub carried by a driving shaft and an adjacent driven hub carried by a driven shaft and for maintaining the axes of rotation of the shafts in intersecting relation comprising, a unit including a driving member, a driven member, a plurality of open throated links arranged substantially in a torque transmitting plane between the driving and driven members, each link being wholly located outwardly from the axes of rotation of the driving and driven members and having end arms extending substantially radially outwardly from the axes of rotation of the driving and driven members and being substantially inflexible in the direction of the torque transmitting plane but substantially flexible in a direction normal to the torque transmitting plane, means rigidly securing the outer end of one end arm of each link to the driving member and means rigidly securing the outer end of the other end arm of each link to the driven member for rotatably driving the driven member from the driving member, said unit being compressible for insertion between the driving and driven hubs, and means detachably securing the driving and driven members to the driving and driven hubs respectively.

2,864,246
UNIVERSAL JOINTS
Gilbert C. Hulse, Whitehall, Cambridge, New Zealand
Application October 11, 1954, Serial No. 461,446
Claims priority, application New Zealand October 15, 1953
6 Claims. (Cl. 64—31)



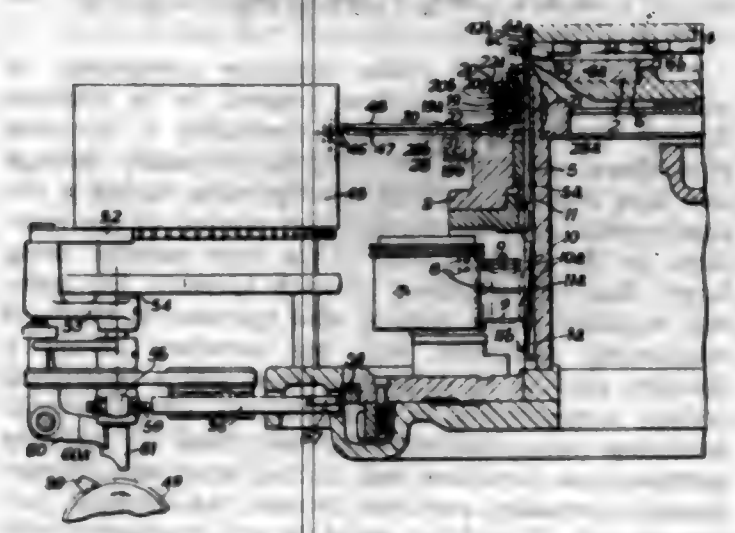
1. A constant velocity universal joint adapted to couple adjacent ends of a driving and a driven shaft for the transmission of power therebetween and the joint consisting of a pair of axially slidable telescoping members locked against rotation relative to each other, a shaft end mounted universally within each of said telescoping members and adjacent ends of said shafts being joined by a universal coupling which is adapted to rotate with respect to said shafts but secured against axial movement relative thereto so that the telescoping members rotate with the shafts as the drive is transmitted from one shaft to the other shaft through the telescoping members.

being below said driving point, the lower edge of each of enters the receiving zone.

2,864,247
LOOP TRANSFER MECHANISM FOR KNITTING MACHINES

Alfred Percy Saunders, Leicester, England, assignor to Wildt and Company Limited, Leicester, England, a British company

Application March 15, 1957, Serial No. 646,480
Claims priority, application Great Britain March 16, 1956
19 Claims. (Cl. 66—24)

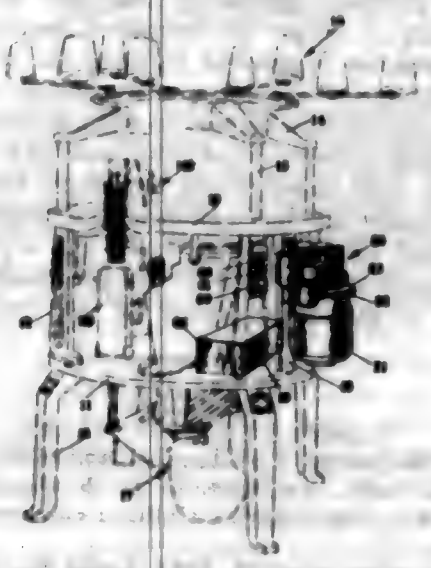


1. In a knitting machine, in combination, two opposed needle beds, knitting needles operating in said beds, the needles in at least one of said beds having stems which are flexible to the extent of permitting of lateral deflection of the hooked portions of said needles when knitted loops are being transferred from the needles of one bed to those of the opposed bed, means for advancing the needles having flexible stems from the relevant bed during such a transference of loops, and two co-axial spur gears which are rotatable together and are adapted to mesh with said flexible needles at longitudinally spaced points along the stems thereof, the said two gears being so set relatively that the teeth of the one are offset circumferentially with respect to the teeth of the other suchwise as to effect lateral deflection of the hooked portions of engaged needles advanced from the said relevant bed.

2,864,248
KNITTING MACHINE DRIVE MEANS

Frederick C. Wiesinger, Feasterville, Pa., assignor to Wildman Jacquard Co., Norristown, Pa., a corporation of Pennsylvania

Application May 24, 1956, Serial No. 586,959
14 Claims. (Cl. 66—86)

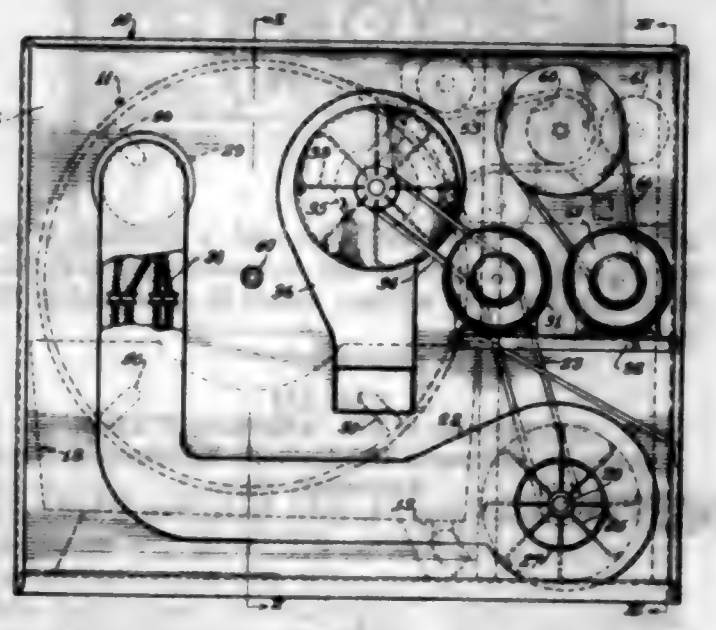


1. In a knitting machine the combination of a frame, a needle cylinder and a cam cylinder in said frame one of which is rotated relatively to the other and a drive means for that member which is rotated which comprises an electric motor vertically disposed at one side of said frame, a casing aligned with said motor attached to the frame and to which the motor is connected, and clutch means in said casing which comprises two independent clutches, reduction gearing from said motor to each clutch, gearing differing in ratio from each clutch to said member to be rotated, and means for selectively engaging the drive through said clutches and for changing the drive from one to the other.

2,864,249
COMBINATION WASHING AND DRYING MACHINE

Wallace H. Nichols, University Heights, Ohio, assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware

Application December 1, 1953, Serial No. 395,535
5 Claims. (Cl. 68—19)



1. In a laundry machine, a clothes tumbling drum journaled for rotation in a vertically extending plane and having opposite end walls and an open periphery and an absorbing agent confining the clothes to said drum during tumbling and transferring substantial amounts of water therefrom by absorption comprising an endless absorbent belt wrapped around said drum, wringer rolls spaced from said drum and engaging the opposite sides of said belt for wringing the water therefrom, a motor for driving said wringer rolls and belt, and other rolls spaced from said wringer rolls and wrapping said belt around substantially the entire periphery of said drum.

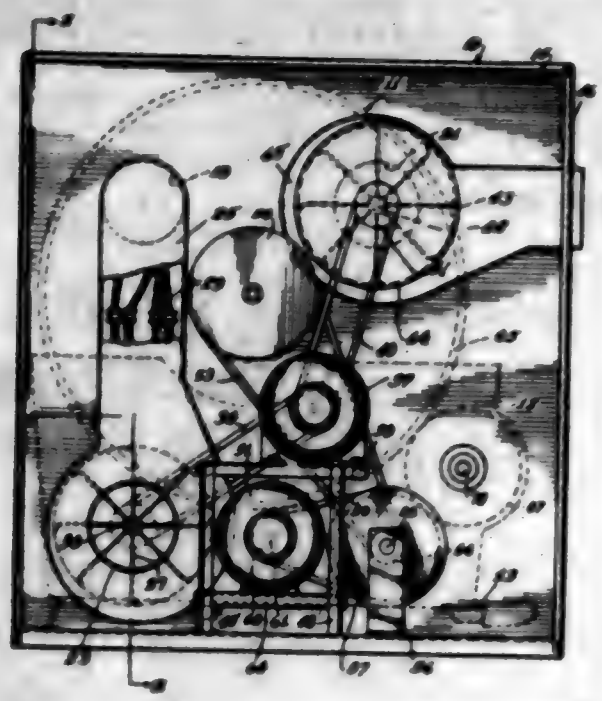
2,864,250
COMBINATION WASHING AND DRYING MACHINE

Wallace H. Nichols, Cleveland, Ohio, assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware

Application December 3, 1953, Serial No. 395,898
3 Claims. (Cl. 68—19)

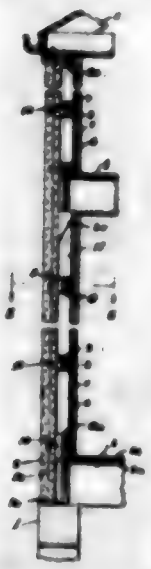
1. A laundry machine comprising a rotatable receptacle for tumbling materials having a liquid pervious inner peripheral wall and a liquid sorptive outer wall surroundingly engaging said inner peripheral wall and sorbing liquid thereinto removed from the materials tumbling in said receptacle, transfer means comprising a rotatable roller having a liquid impervious circumferentially continuous backing wall and means forming a liquid sorptive peripheral surface on said backing wall engaging said liquid sorptive outer wall on said receptacle to sorb liquid therefrom, rotatable wringer means engaging said transfer means to continuously squeeze said

sorptive surface against said backing wall and squeezing liquid from said sorptive peripheral surface for conditioning said surface to sorb additional liquid from said



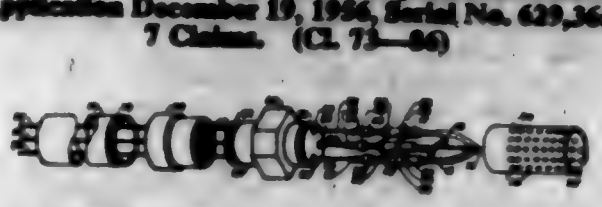
outer wall of said receptacle, and a common driving means rotatively driving said receptacle and said transfer means and said wringer means in synchronism with one another.

2,864,251
BUILDING WALL CONSTRUCTION
Anthony Imbrogno and Anthony J. Imbrogno, Jr., Pittsburgh, Pa.
Application May 18, 1954, Serial No. 430,504
1 Claim. (Cl. 72—1)



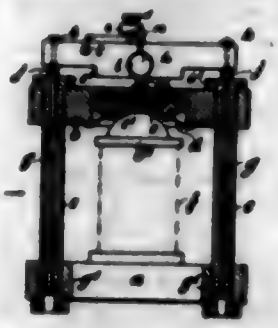
A building comprising inner and outer walls, the outer wall being of cementitious material, furring strips between said inner and outer walls extending only in a horizontal direction and being in vertically spaced, parallel relationship and spaced from said outer wall, spaced elements disposed alongside said furring strip between said outer wall and strips, providing a substantially unobstructed air envelope throughout the entire height and perimeter of the building, said building including an attic space in communication with said envelope, and said outer wall including integral, horizontally spaced ledges directly supporting floor joists and thus transferring loading to said outer wall, the ends of said joists being spaced from said outer wall to allow horizontal movement of air in said envelope.

2,864,252
CORROSION TESTING PROBE
Edward Schoechl, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Application December 19, 1956, Serial No. 629,365
7 Claims. (Cl. 73—86)



1. A corrosion-test probe mounting comprising, in combination, a base member adapted to be attached through the wall of a vessel containing a corrosive atmosphere, apertures extending longitudinally through said base member, each of said apertures having a circumferential shoulder therein, that portion of the apertures on the pressure side of the base member being larger than the remainder of each aperture, lug members mounted within each of said apertures in insulated relationship therewith, said lug members having a shoulder portion, an enlarged portion and a constricted portion corresponding to said apertures, circumferential insulating means between the outer wall of said lug members and the inner wall of said apertures, circumferential insulating members between the shoulder portion of each of said lug members and the corresponding shoulder of said apertures, and means for maintaining said corrosion-test probe mounting within a corrosive atmosphere.

2,864,253
MEANS FOR TESTING THE PHYSICAL PROPERTIES OF MATERIALS
Albert Lenton, Leeds, England, assignor to Saml. Denison & Son Limited, Leeds, England, a British company
Application April 28, 1955, Serial No. 504,564
7 Claims. (Cl. 73—94)



1. Apparatus for testing the physical properties of materials, comprising a base, a crosshead and a plurality of elastic columns connecting the base and crosshead and forming a frame to receive a specimen, a load applying member interposed between the crosshead and base and mounted for relative movement with respect to said crosshead and adapted to engage and apply stress to a specimen between it and the base and to apply the reaction of such stress to the crosshead and produce a resultant strain on the columns and displacement of the crosshead relative to said base, and a strain mechanism operatively connected to said crosshead so as to be responsive to said displacement of the crosshead.

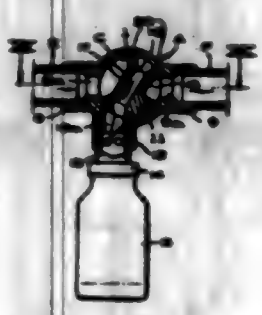
2,864,254
SAMPLE-TAKING VALVE
Frank A. McDonald, Los Angeles, and Willis T. Holmes, Arcadia, Calif., assignors to U. S. Flexible Metallic Tubing Co., Los Angeles, Calif., a corporation of California
Application April 23, 1956, Serial No. 580,977
3 Claims. (Cl. 73—424)

3. A sample-taking valve comprising a casing having a hollow interior with a rear wall and a cylindrical surface

and operating in conjunction with the cushion at the lower end of the motor to support and permit a limited

chamber, the bag being held in fluid-tight contact with the inner wall of the housing and the outer wall of the

that has inlet and outlet ports therein; a bonnet for covering the casing interior and having a bore therein; a valve rotor having a shank rotatably received in the bore and a body with a periphery that rotatably contacts with the cylindrical inner surface of the casing interior; said rotor body having a passage therein that constitutes the only means of communication between the inlet and outlet ports when the rotor is in a predetermined position; said cylindrical surface also having a sample-taking port; said rotor body periphery having a portion closing the sample-taking port when the rotor passage is in com-



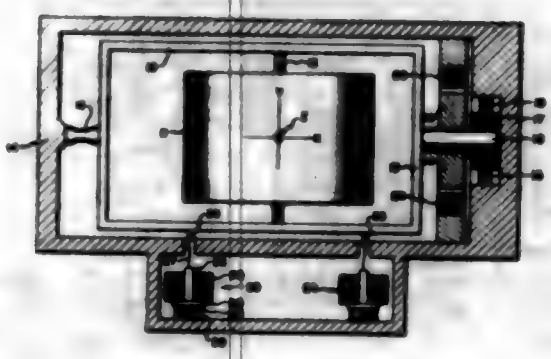
munication with the inlet and outlet ports; said rotor being rotatable for moving the passage from communicating with the inlet and outlet ports into a position where one end of the passage will communicate with the sample-taking port, whereby the contents of the rotor passage will flow through the sample-taking port; the valve body having cut-away portions which coact with said rear wall of the casing to define a secondary passageway of sufficient size for the unimpeded fluid flow between the inlet and outlet ports when the rotor is in sample-taking position.

2,864,255

SELF TESTING RATE GYROSCOPE

Howard H. Stern, La Jolla, and Ivan W. Keith, San Diego, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

Application October 4, 1957, Serial No. 688,153
9 Claims. (Cl. 74—5.4)



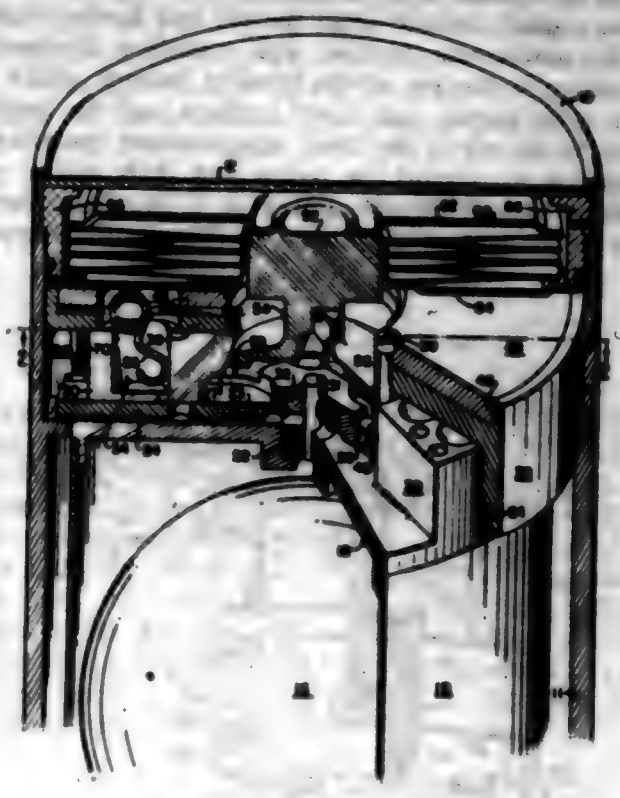
1. A self testing rate gyroscope comprising a casing, a gimbal within said casing, a torsion bar connected between said gimbal and said casing, a shaft connected to said gimbal and supported by a bearing, said shaft and said torsion bar forming an output axis about which said gimbal can rotate, a power driven rotor supported in said gimbal and having a spin axis perpendicular to and intersecting said output axis, said rotor and gimbal being arranged to rotate about said output axis in response to torques applied about an input axis of said rotor and gimbal, said input axis being perpendicular to and intersecting said spin axis and said output axis, a pick-off within said casing for producing an output signal in accordance with rotation of said gimbal, and means within said gyroscope for applying a torque about said input axis to produce rotation of said gimbal about said output axis whereby the operation of the gyroscope may be tested.

2,864,256

DAMPING DEVICE

Robert G. Haagens, Concord, and Edward L. Swainson, Newtonville, Mass., assignors, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware

Application December 21, 1956, Serial No. 629,859
14 Claims. (Cl. 74—5.5)



1. A device for damping the movement of a mass, comprising a casing containing the mass to be damped, walls forming a passage within said casing, fluid filling said casing and passage, a fluid impelling member disposed in the fluid and connected for movement with the mass without touching the casing, a gate mounted to slide within said casing to valve said passage, a plunger mounted for reciprocation within the casing, the gate and plunger having co-acting cam surfaces in contact one with another whereby movement of the plunger causes the gate to slide, and means for reciprocating the plunger in response to variations in temperature of the fluid.

2,864,257

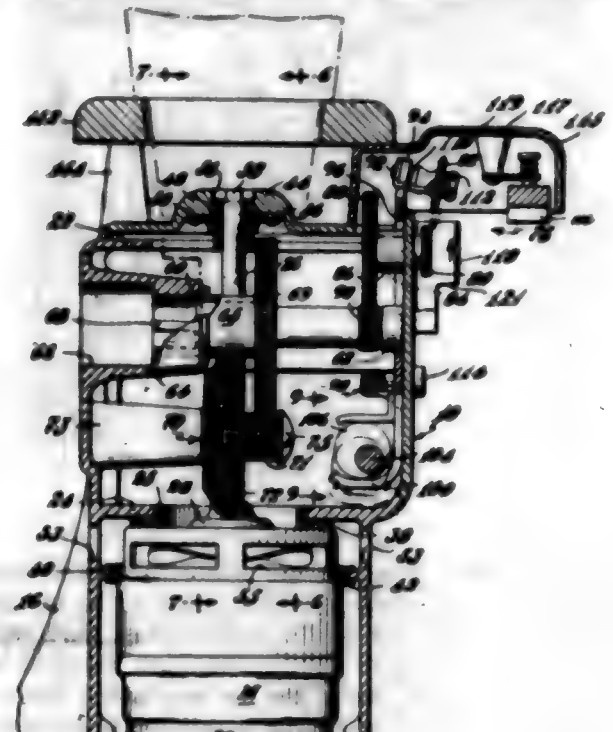
POWER UNIT FOR KITCHEN APPLIANCES

Robert L. Lappin, Marblehead, and Louis Zeiger, Swampscott, Mass.

Application November 16, 1954, Serial No. 469,182
2 Claims. (Cl. 74—16)

1. A power unit for kitchen appliances comprising a hollow pedestal-like casting having a closed top and an open bottom, a footing at the bottom end having spaced laterally extending toes at one side for counterbalancing overturn of the pedestal in that direction and integral, laterally spaced, reinforcing webs connecting the toes to the pedestal, an internally formed wall within the pedestal vertically spaced from the bottom, dividing the pedestal into lower and upper compartments, said dividing wall having a centrally located hole through it concentric with the hole in the dividing wall, a motor disposed within the lower compartment with its shaft extending perpendicular upward through the hole in the dividing wall and through the bearing hole, a removable plate screwed over the bottom opening, said plate containing a hole through it concentric with the hole in the dividing wall, a cushion element seated in the hole in the plate upon which the lower end of the motor rests, an annular cushion disposed between the upper end of the motor and the dividing wall, said cushion having a flange engaged with the opening to prevent lateral displacement

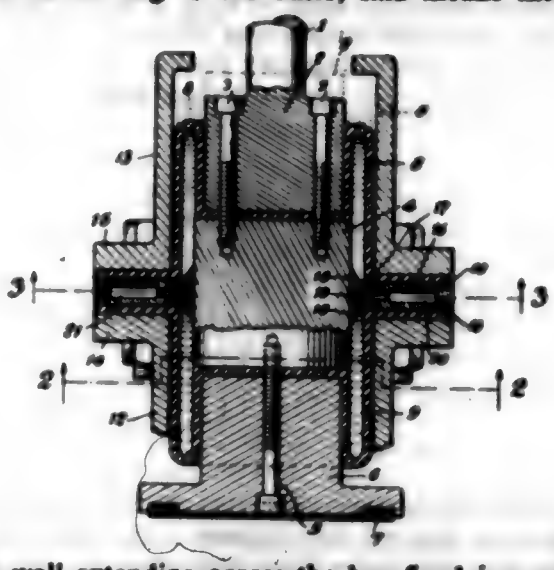
and operating in conjunction with the cushion at the lower end of the motor to support and permit a limited amount of movement of the motor in the chamber, an annular rib integral with the wall of the lower compartment and projecting inwardly therefrom, said rim being situated near the top of the compartment, an annular cushion containing a groove for engagement with the rib to hold it against axial displacement, said cushion extending radially inward from the rib and having contact with the motor near its upper end, a cushion disposed in the bearing at the top of the housing through which the motor shaft passes, said latter cushion and the cushion carried by the rib in the lower compartment operating in conjunction to support the motor and shaft and to permit slight lateral movement thereof, a coupling element at the upper end of the motor shaft accessible through



the bearing hole for engagement with an appliance, a support at the top of the pedestal for guiding an appliance into a position to be coupled to said coupling element and to hold it in that position, a second bearing boss in the vertical wall of the upper compartment, at the side of the toes, having a hole through it, a portion of the hole at the outer end being countersunk to afford a guide and a support for a second appliance, a coupling element supported within the inner part of the hole with which the appliance may be coupled by engagement within the outer portion of the hole, a worm on the motor shaft, and a train of gears within the upper compartment for driving the coupling element at the side at a lower rate of speed than the coupling element at the top, said gearing being rigidly supported within the upper compartment and the first one of the gears in the train being yieldably engaged by the worm on the motor shaft.

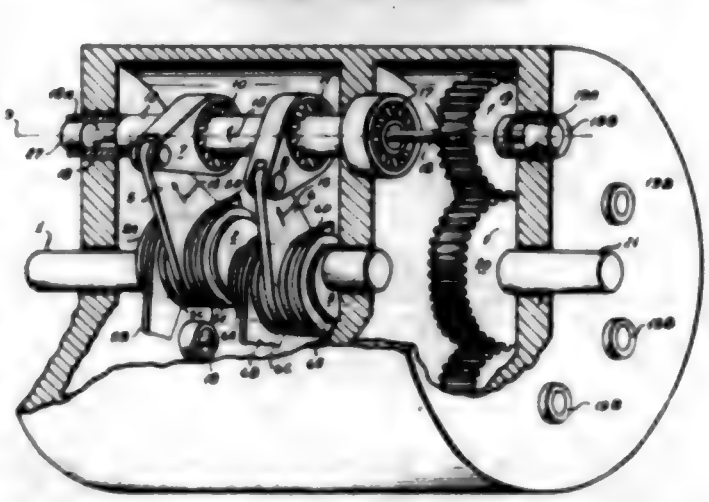
2,864,258
SEALING MEANS FOR RECIPROCATING MEMBERS
Karl A. Klingler, Naperville, Ill.
Application August 1, 1955, Serial No. 525,597
6 Claims. (Cl. 74—18.2)

3. Sealing means for reciprocating members such as valve stems and the like comprising an annular fluid-tight bag of flexible, extensible, elastomeric material filled with a body of incompressible hydraulic fluid, a cylindrical housing enclosing the bag, a body extending through the bag to define with the housing an annular chamber, the bag being held in fluid-tight contact with the inner wall of the housing and the outer wall of the body, the surfaces of the bag being free to roll into and out of contact with the opposed surfaces of the annular chamber as relative longitudinal displacement of the housing and the filler occurs, means, intermediate the ends of the bag, to prevent axial fluid movement from one end of the bag to the other, said means including



a radial wall extending across the bag fixed in one wall and axially movable with respect to the other wall of the annulus, the radial wall terminating in two thin oppositely extended circular flexible elastomeric lips adapted to be constricted by hydraulic pressure to seal the periphery of the radial wall, a metal reinforcing ring encircling the filler between, in contact with and supporting both lips.

2,864,259
POWER TRANSMISSION
Henry Troeger, Ramsey, N. J., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware
Application April 8, 1955, Serial No. 500,167
5 Claims. (Cl. 74—113)



1. A power transmission mechanism comprising an input shaft, a pair of eccentric members mounted on said shaft, said eccentric members being angularly offset with respect to each other, a plurality of driving elements equispaced around said input shaft, each of said driving elements including a pair of actuating links of equal length, one of said links freely mounted on one of the eccentric members, the other of said links freely mounted on the other of the eccentric members, a tubular shaft, a pair of clutches mounted on said tubular shaft, one of said actuating links operatively connected to one of said clutches and the other of said actuating links operatively connected to the other of said clutches so that said links are angularly offset, said clutches imparting multiphased movement from said actuating links to said tubular shaft to im-

member facing the first disk so that the roller lies be-

2,864,265

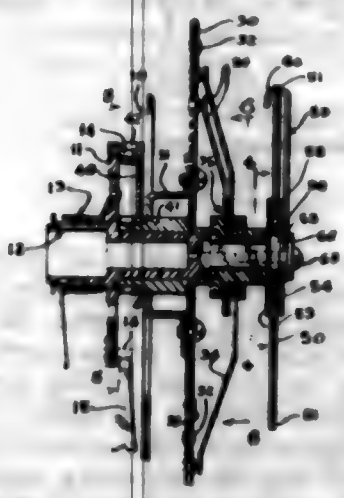
part rotary movement to said tubular shaft in one direction, brake means cooperating with said tubular shaft to prevent rotary movement thereof in an opposite direction, a torsion bar extending through said tubular shaft and operatively connected at one end to said tubular shaft, and an output gear operatively connected to the other end of the torsion bar; a collector gear driven by the output gear of each of said driving elements, and an output shaft connected to said collector gear and driven thereby.

2,864,260

RATCHET MECHANISM WITH INERTIA BRAKE

Frank G. Nicolaus, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of the estate of Raymond T. Moloney, deceased

Application June 10, 1957, Serial No. 664,738
3 Claims. (Cl. 74—142)



1. In an extended-range ratchet-stepping mechanism having step-up means for advancing a stepping ratchet wheel from a starting position through more than one revolution of travel, and spring means operable to return the wheel against a stop at said starting position from any advanced position, improvements comprising, to wit: inertia means for absorbing energy stored in the spring-returned travel of the ratchet wheel upon impact with said stop means comprising a second ratchet wheel floating upon the rotative spindle of the stepping ratchet wheel, and a spring presser arm secured to move with said spindle and having a pawl portion riding in the teeth of said second ratchet wheel, said teeth being pitched to be positively carried by said presser arm in return travel of the stepping ratchet, and to slip relative to said arm when the latter is stopped with said spindle, and the second wheel tends to continue in the return direction by inertia energy derived from return travel with the ratchet wheel stepping through action of said presser arm.

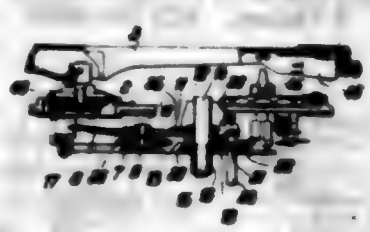
2,864,261

GEAR DRIVE FOR RECORD PLAYERS WITH PREFERABLY MORE THAN THREE DIFFERENT SPEEDS

Stanislaus Zaoralek, Lindau, Germany, assignor to Coutinho Bureaux- und Rechenmaschinenfabrik Aktiengesellschaft, Vaduz, Liechtenstein

Application July 18, 1955, Serial No. 522,786
Claims priority, application Germany July 28, 1954
3 Claims. (Cl. 74—190)

1. Gear drive for a record players with more than three different speeds for the disc tray comprising in combination: a drive motor, a stepped pulley disposed on the shaft of said drive motor, a disc tray, a friction wheel engaging the periphery of said disc tray for driving said disc tray, an intermediary pulley adapted to transmit its rotating motion on to said friction wheel, said intermediate pulley arranged to rotate on an axle, a guide bushing receiving said axle, a hand operated adjusting device for the adjustment of the speed of the disc tray, means in said adjusting device adapted to adjust the intermediary pulley as a function of the actuation of the speed adjusting device in the direction of the axis of rotation of the stepped pulley and also vertically to this axis so that the intermediary pulley either contacts one of the steps of the stepped pulley or is completely lifted up from said stepped pulley, said means comprised of two guide rods, the first of said guide rods adjustable as a function of the actuation of the speed adjusting device



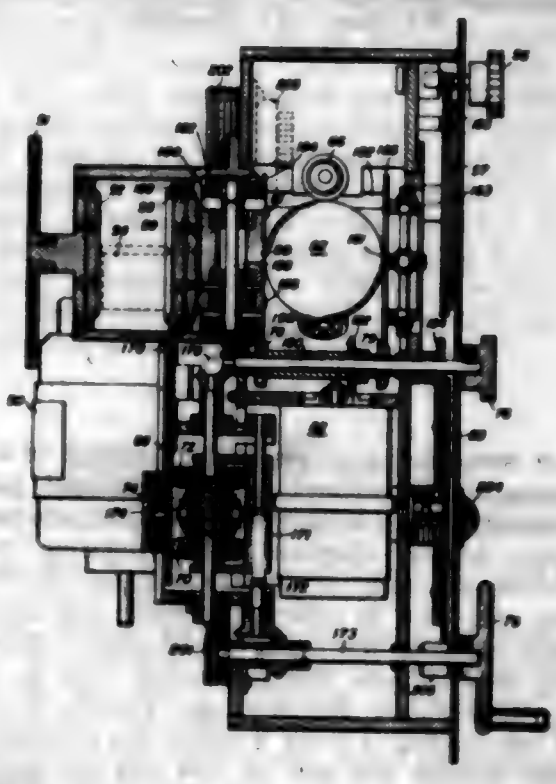
so as to be adjusted in parallel to the axis of the stepped pulley and contacting the guide bushing of the intermediary pulley, said contacting adapted to displace the intermediary pulley in the same direction, the second guide rod adjustable as a function of actuations of the speed adjusting device so as to be adjustable simultaneously with the first guide rod in a direction which is perpendicular to the axis of the stepped pulley and contacting the guide bushing, said contacting adapted to give the intermediary pulley different radial distances from the axis of the stepped pulley.

2,864,262

FRICTION DRIVE MECHANISM

George A. Bretell, Jr., and Firth Pierce, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Original application November 30, 1945, Serial No. 631,946, now Patent No. 2,720,712, dated October 18, 1955. Divided and this application March 18, 1954, Serial No. 418,818
9 Claims. (Cl. 74—198)



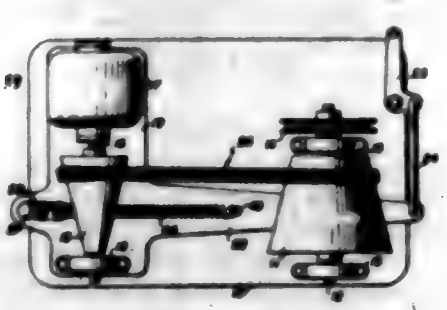
1. In combination in a variable speed drive, a disk, means for driving the disk, a cylindrical roller having a ridge extending above the cylindrical surface, said ridge lying in driven engagement with said disk, and output means engaging the cylindrical surface of said roller and driven thereby, said output means includes a disk-like

train including said bridging clutch in series with a gear train clutch, a primary pump driven by said engine to

arbor being positioned in said bushing holder and being of sufficient length to extend therethrough whereby alig-

member facing the first disk so that the roller lies between them, said output disk having a ridge-like portion engaging said cylindrical surface of the roller, and means for moving said roller across the face of the first disk, whereby as said roller is so moved, it maintains its driving engagement with both of said disks.

2,864,263
TRANSMISSION BELT
Philip N. Rowsee, Fort Worth, Tex.
Application March 8, 1954, Serial No. 414,779
5 Claims. (Cl. 74—235)

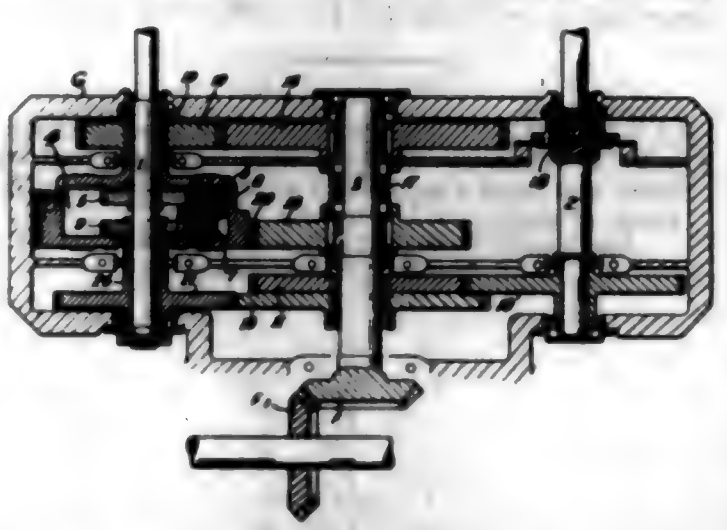


1. An endless belt for a cone type transmission, said belt being comprised of normally flat flexible segments arranged end to end, and pivotal means connecting said segments along the center line of the belt, said pivotal means each having at least one effective axis perpendicular to the inner surface of said belt at said center line, said segments being at least as long as the width thereof and being individually flexible around the cones of the transmission and resistant to distortion laterally and diagonally within the planes of said normally flat segments.

2,864,264
CENTRIFUGALLY RESPONSIVE CAM OPERATOR
Hans A. Rass, Rockford, Ill., assignor to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Application September 16, 1957, Serial No. 684,122
9 Claims. (Cl. 74—568)

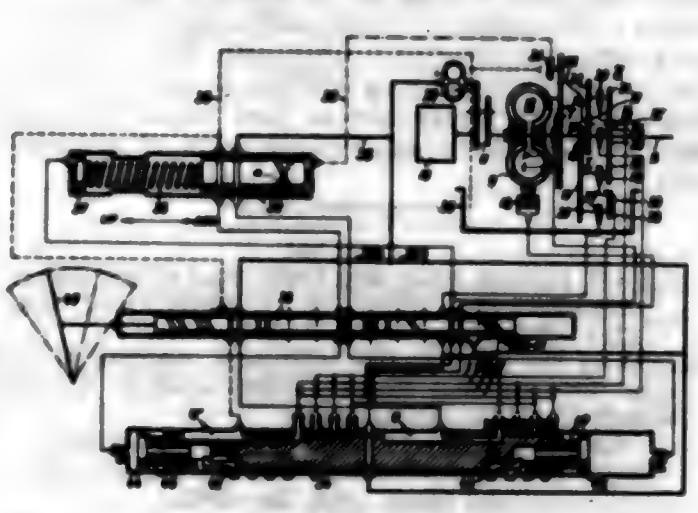
1. An operator for a cam freely mounted on a shaft, comprising a single element of sheet material, said element including a pair of oppositely disposed one-hundred-and-eighty degrees displaced tabs projecting at right angles from the body of the element, one of said tabs engaging said cam in drive relationship and means on said shaft engaging the other of said tabs in drive relationship, said element being provided with an oblong opening surrounding the shaft and wherein the minor axis of the opening is along a center line transversely of the shaft through said pair of tabs and the major axis of the opening is normal to its minor axis, and the element having its center of mass off-set relative to the longitudinal axis of the shaft, the assembly being such that, upon rotation of the shaft, centrifugal force will rock the element about said means as a center on the shaft, to shift the cam angularly relative to the shaft.

2,864,265
POWER UNITS
Louis F. R. Full, Littlecote, England, assignor to Full Developments Limited, London, England, a British company
Application November 1, 1954, Serial No. 466,145
Claims priority, application Great Britain November 13, 1953
10 Claims. (Cl. 74—675)



1. In a power unit, a plurality of prime movers, a pair of input shafts independently driven by said prime movers, an output shaft, and means for transmitting power from the input shafts to the output shafts, said means including an epicyclic gearing having at least three elements for combining the power from the input shafts, the first said element being connected to one input shaft, the second said element being connected to the other input shaft, and the third said element being journaled on one input shaft in driven relation with said first and second elements and in driving relation with said output shaft through at least two paths of power of different gear ratios and including means selectively coupling said paths of power to said output shaft.

2,864,266
MULTISTAGE DRIVE TRANSMISSION
Alfred Wels, Olpe, Westphalia, Germany, assignor to Elektro-Mechanik G. m. b. H., Westphalia, Germany
Application May 20, 1955, Serial No. 549,921
Claims priority, application Germany May 28, 1949
6 Claims. (Cl. 74—731)



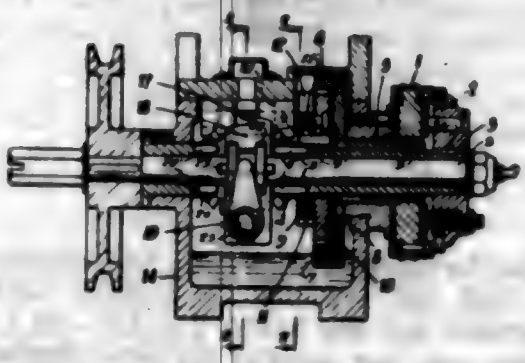
1. A multistage drive transmission comprising an engine actuating a Foettinger torque converter having a pump cooperating with a turbine and a guide wheel, a bridging clutch for coupling said pump and turbine, a shaft on which said turbine is mounted, a plurality of gear trains following said turbine shaft, each gear train including an oil-controlled clutch and the highest gear

moving said housing in the direction of said drive mechanism, and means for loading workpieces into said chuck

a plurality of elongated openings of varying sizes for accommodating wires of corresponding diameters and a

train including said bridging clutch in series with a gear train clutch, a primary pump driven by said engine to supply pressure oil, a secondary control oil pump driven by said turbine, shifting means responsive to the pressure of control oil from said control oil pump for selectively supplying pressure oil to said clutches in accordance with the speed of the turbine, said shifting means including a direction slide slidable in a cylinder, a counterspring adjacent one end of said direction slide biasing said slide in one direction in the cylinder and means responsive to the control oil pressure for displacing said direction slide against the biasing force of said counterspring, and compensating means controlling said shifting means to effect a down-shift from the highest gear train at substantially the turbine speed of the down-shift from the other gear trains.

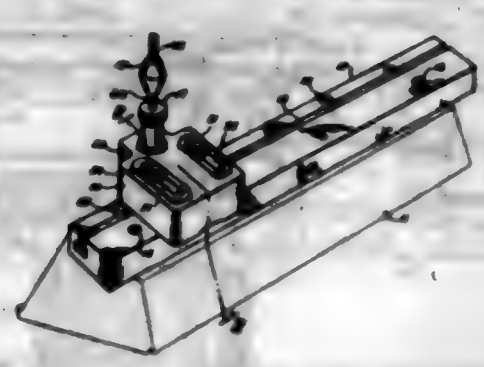
2,864,267
TRANSMISSION FOR PACKAGING MACHINES
Horace Bartlett Merriman and Robert David Sansom, Brentford, England, assignors to Gerrard Industries Limited, Brentford, England
Application August 21, 1956, Serial No. 605,317
Claims priority, application Great Britain September 2, 1955
4 Claims. (Cl. 74—665)



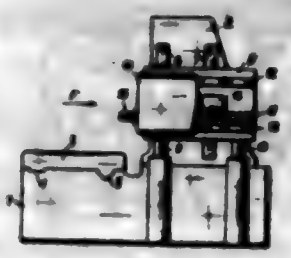
1. A transmission for packaging machines comprising a slip coupling, a drive shaft, a band tensioning drum normally driven by said drive shaft through said slip coupling, a reversible drive mechanism comprising epicyclic gear means for applying a final tensioning drive to the drum and including a sleeve shaft freely rotatable about said drive shaft, an internally toothed wheel fixed with said sleeve shaft, an externally toothed planet wheel having a smaller number of teeth meshing with the teeth of the internally toothed wheel, an eccentric keyed to the drive shaft and freely carrying said externally toothed planet wheel, a ratchet fixed to the planet wheel, and a spring pressed pawl engaging the ratchet to prevent any substantial rotation of the planet wheel in the direction opposite to a tensioning rotation of the internally toothed wheel.

2,864,268
ENGINE RECONDITIONING EQUIPMENT
Vyron E. Anderson, Cedar Rapids, Iowa, assignor to Cedar Rapids Engineering Company, Cedar Rapids, Iowa, a corporation of Iowa
Application July 13, 1955, Serial No. 521,835
3 Claims. (Cl. 77—2)

1. In engine reconditioning equipment of the type described, a rectangular alignment bar of substantial length having a longitudinal slot on the upper face thereof, a bushing holder casting positioned on said bar, a bushing extending a substantial distance above and vertically positioned in said holder and having a pair of spaced-apart bearings in the upper and lower end thereof, a pair of parallel transverse slots in said holder, said slots being at a right angle to said rectangular alignment bar, means including said transverse slot and said longitudinal slot for locking said holder in position in relation to said alignment bar, an arbor, one end thereof being tapered said arbor being positioned in said bushing holder and being of sufficient length to extend therethrough, whereby alignment of said bushing holder in reference to the work piece may be secured before said holder is locked in relation to said alignment bar.



2,864,269
HEADSTOCK FOR HIGHLY ACCURATE MACHINE TOOLS
André Mottu, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a firm of Switzerland
Application August 22, 1955, Serial No. 529,698
Claims priority, application Switzerland October 20, 1954
2 Claims. (Cl. 77—3)



1. In a machine tool including a headstock and a tool-carrying spindle revolubly carried by the headstock to rotate round a horizontal axis, the provision of a support for said headstock provided with three slideways parallel with the axis of the spindle and of which two extend vertically in planes located respectively to either side of the axis of the spindle and the third one is horizontal, and treble means carried by the headstock for engagement with the three slideways respectively and of which means two engaging the vertical slideways extend each across an element of a common sloping plane containing the axis of the spindle and the third means engaging the horizontal slideway extends across an element of a plane substantially perpendicular to the first plane and also containing the axis of the spindle.

2,864,270
BILLET CORING MACHINE
George A. Mitchell, Hubbard, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Application September 8, 1955, Serial No. 533,144
36 Claims. (Cl. 77—3)

1. In a machine for coring aluminum billets and the like the combination of a base, a drive mechanism mounted at one end of said base, an elongated cutter supporting shaft extending outwardly of said drive mechanism along the longitudinal axis of said base and mounting a cutter at its outer end, a chuck housing mounted on said foundation outwardly of said drive mechanism and adapted for slidable movement therealong toward and away from said drive mechanism, means in said chuck housing to grip a workpiece, means mounted in fixed relation to said base for forcibly and controllably

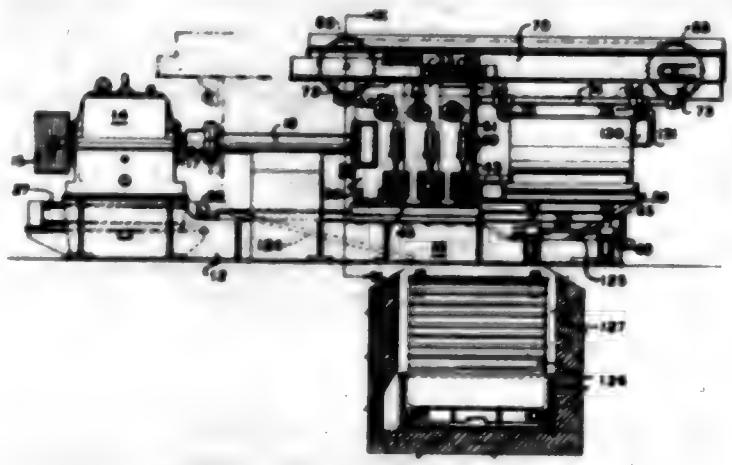
tively movable into operative closing engagement with the respective seats of said front and rear ports, whereby cur-

2,864,277
WEB CARD STOCK INSPECTION APPARATUS

shaft, to shift the cam angularly relative to the shaft.

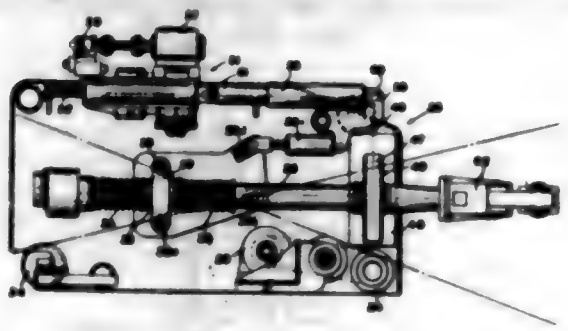
including an oil-controlled clutch and the highest gear

moving said housing in the direction of said drive mechanism, and means for loading workpieces into said chuck



housing positioned on said base outwardly of said chuck housing.

2,864,271
FORGING MANIPULATOR
Edgar Hoover Kendall, Alliance, Ohio
Application February 11, 1953, Serial No. 336,247
13 Claims. (Cl. 78—96)



1. In a forging manipulator of the kind having a movable carriage and a generally horizontal elongated clamp supporting peel mounted on said carriage, the improvement comprising a supporting block slidably mounted for vertical movement in said carriage, a sprocket journaled in said block for rotation in a generally vertical plane, said peel being received axially in said sprocket and keyed thereto whereby said sprocket rotates said peel, a ball and socket interconnection between said peel and sprocket whereby said peel may have varying angular relation with the plane of the sprocket, a chain having a depending loop entrained about said sprocket, and power means on said carriage to either raise and lower said chain bodily or to move the same along its path whereby said sprocket and peel may be moved vertically or rotated as desired.

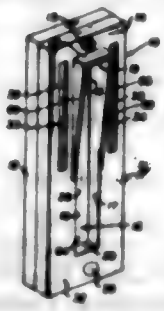
2,864,272
WIRE BENDING TOOL
Edwin C. Swanson, Rockford, Ill., assignor to Brock Equipment Company, a partnership
Application May 31, 1957, Serial No. 662,917
11 Claims. (Cl. 81—15)

10. A wire bending tool, comprising: a first lever member; a wire grasping and retaining head at one end having a plurality of elongated openings of varying sizes for accommodating wires of corresponding diameters and a transverse passage intersecting said openings; a locking pin in said passage of smaller cross-sectional area and dimensions than said passage for movement relative to said passage adapted to contact a wire in any of said openings; means in said head for forcing said locking pin into contact with a wire; and means for applying pressure to a wire in said head to bend the wire back over the head and form a bend in the wire.

2,864,273
WRENCH FOR TURNING HEAVILY COATED FASTENERS
Wendl T. Hentosh, Elsmere, Del.
Application August 14, 1956, Serial No. 603,968
3 Claims. (Cl. 81—121)

1. A tool for engaging and rotating drive members such as bolt heads and nuts that are equipped with right-handed thread, said tool having a socket with a mouth for slipping over and engaging the drive members, the mouth having an outer wall, flutes in said outer wall, said flutes being portions of left-hand helixes, and the sockets being no greater than ¾ inch in overall width.

2,864,274
REED STRUCTURE FOR MUSICAL INSTRUMENT
Gabriel J. Jaconimi, Sunnyside, N. Y.
Application June 6, 1957, Serial No. 664,081
8 Claims. (Cl. 84—363)

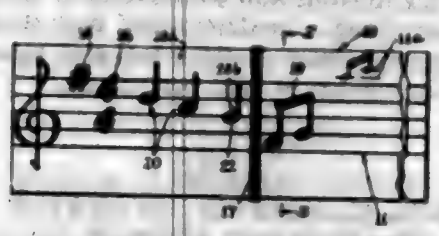


1. In a reed structure, a casing having therein a reed chamber, a front outlet apertured portion and a rear outlet apertured portion, said apertured portions communicating with the atmosphere and said chamber, a reed operatively mounted within said chamber, one end portion of the reed being attached to said casing, the other end being free, said casing also having a front inlet port and a rear inlet port in said casing, both of said ports being in communication with said chamber, a valve seat operatively associated with each of said ports, the valve seat at said rear inlet port being inclined upwardly and rearwardly, and the valve seat at said front inlet port being inclined upwardly and forwardly, and a valve member mounted in said casing between said ports and alterna-

element, means connecting said cathode to a reference potential, means connecting said anode to a potential which

for movement radial of the axis of the bore, a mirror disposed between said light source and said apertures

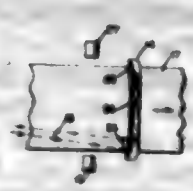
tively movable into operative closing engagement with the respective seats of said front and rear ports, whereby currents of air operatively entering said respective ports will alternately pass into the said chamber to operatively engage the adjacent lateral edge of said reed and leave said structure through said outlet apertured portions.

2,864,275
MUSICAL EDUCATIONAL BOARD
Alton L. Fraleigh, Norwalk, Conn.
Application July 14, 1954, Serial No. 443,270
1 Claim. (Cl. 84—471)

In an educational device for musical instruction, a base comprising a thin sheet of magnetically attractable material having a layer of protective material overlying the back and having the base overlying the edge of the layer with the center portion of said layer projecting from the base below said overlying edge and adapted to prevent the sheet of magnetically attractable material from engaging and marring the surface on which the device is supported, said projecting portion of said layer terminating short of the edges of the sheet whereby the fingers can be inserted under the edge of the sheet to facilitate handling of the device, the front surface of the base having a representation of a staff thereon, and musical symbols having magnetic means therein and exposed only on the under surface thereof movably mounted on said representation of a staff.

2,864,276
DEFORMABLE HEAD NAILS
Edward M. Parker, South Gate, Calif.
Application May 5, 1955, Serial No. 506,321
3 Claims. (Cl. 85—28)

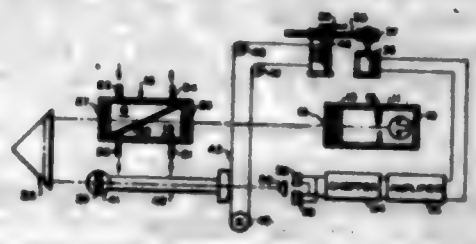
1. A nail for attaching a plastic core wall board having an easily damaged outer surface to a wooden frame member of a building, comprising a shank having a first essentially pointed end, and a thin bendable concave head at the opposite end of and integral with said shank, said head extending laterally outwardly from said shank to an outer peripheral edge of the head, said head having a pair of oppositely facing surfaces at its opposite axial sides both of which surfaces, as they extend progressively outwardly from said shank toward said edge, also extend progressively in an axial direction away from said shank, and do so entirely about the axis of the nail, said head being sufficiently thin axially relative to the diameter of the shank to be deformed toward an essentially parallel relation with respect to said damageable surface before the shank would bend when the nail is driven at an angle which is not directly perpendicular to said surface.

2,864,277
WEB CARD STOCK INSPECTION APPARATUS
Robert N. Eichorn, Endicott, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 16, 1954, Serial No. 475,732
7 Claims. (Cl. 88—14)



1. In a device for detecting light and dark areas on the surface of a moving web in combination, means for producing a light beam scannable across a surface of said moving web, a photo-multiplier for receiving light reflected from said surface to produce an output characteristic of the modulation of said reflected light caused by said light and dark areas of said surfaces, means for directing said light beam on to said surface, a first area of said directing means directing said beam on said surface at a first rate of movement and curved second areas of said directing means directing said beam on said surface at a second and different rate of movement of said beam whereby said directing means varies the rate of motion of said beam across said light and dark areas and the rate of reporting said light and dark areas by activation of said photo-multiplier tube by the reflection of said movable beam.

2,864,278
REFRACTOMETER
Marshall S. Sparks, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application March 7, 1955, Serial No. 492,647
1 Claim. (Cl. 88—14)



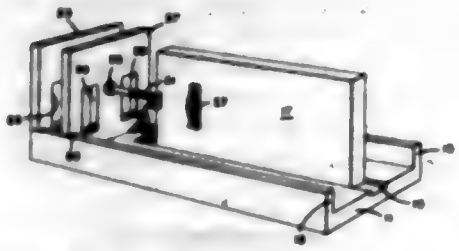
A refractometer comprising a refractometer cell adapted to be filled with a material to be tested, a radiation source, means to direct a beam of radiation from said source through said cell so that said beam is deviated by an amount representative of the refractive index of the material in said cell, first and second photovoltaic cells positioned adjacent one another so that said beam of radiation from said refractometer cell is focused between said first and second cells when the refractive index of the material in said refractometer cell has a preselected value, means connecting the positive terminal of said first cell to the negative terminal of said second cell, means connecting the positive terminal of said second cell to the negative terminal of first cell, first and second electrical contacts spaced from one another, means connecting said contacts to respective terminals of said first cell, an element adapted to make electrical contact with said first and second contacts, a source of alternating current of a first frequency, means energized by said current source to move said element to engage said first and second contacts alternately at said first frequency, an amplifier tuned to pass signals of only said first frequency, said amplifier having a vacuum tube in the input stage thereof which has a cathode, an anode and a control grid, means connecting said control grid directly to said

the teeth of said tool member and producing a crowned configuration to the teeth of the gear member by effecting relative traverse between said members in a plane parallel

pair of cutting means normally positioned above said web and on either side of the longitudinal axis of the web, and control means operable when a break occurs in the

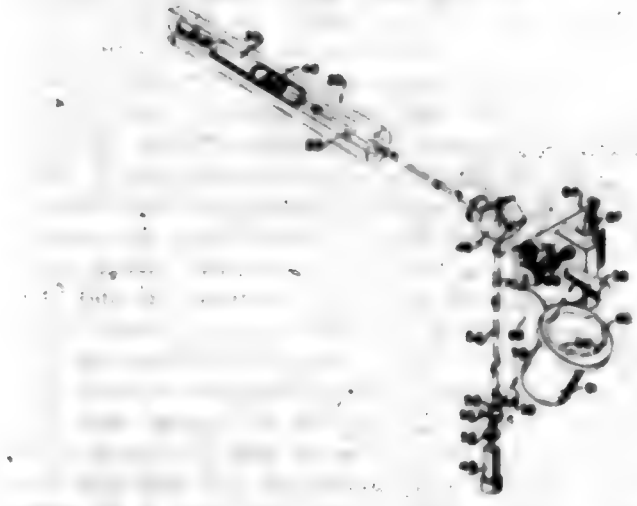
element, means connecting said cathode to a reference potential, means connecting said anode to a potential which is positive with respect to said reference potential, means connecting one of said contacts to said reference potential, a reversible two phase motor, means to energize the first winding of said motor from said current source, means responsive to the output signal from said amplifier to energize the second winding of said motor so that said motor rotates in a first direction when the output signal from said first cell exceeds the output signal from said second cell and said motor rotates in a second direction when the output signal from said second cell exceeds the output signal from said first cell, and means coupled to the drive shaft of said motor to deflect said beam of radiation between said first and second cells.

2,864,279
SPECTROPHOTOMETER CELL HOLDER
Lyle H. Phifer, West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Application November 7, 1955, Serial No. 545,170
3 Claims. (Cl. 88—14)



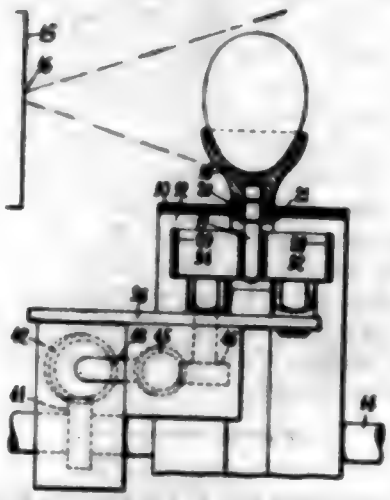
1. A holder for use in spectrophotometer analysis including a pair of gripping jaws, means for adjusting said jaws relative to each other, a pair of transparent plates gripped between said jaws for supporting a pair of juxtaposed samples therebetween, a pair of laterally spaced apertures in each of said jaws with the respective apertures in said jaws being in aligned relationship, said apertures allowing individual light beams to pass through said juxtaposed samples, and means for maintaining said individual light beams in their respective paths.

2,864,280
DEVICE FOR INSPECTING THE STRAIGHTNESS OF BORES
William E. Keller, West Warren, Mass., Norman E. Kidwell, Windsor Locks, Conn., and Douglas Ford Oliver, Dearborn, Mich., assignors to the United States of America as represented by the Secretary of the Army
Application April 4, 1956, Serial No. 576,224
4 Claims. (Cl. 88—14)



1. A device for checking the straightness of the bore of a tube including a light source, a pentaprism mounted for movement radial of the axis of the bore, a mirror disposed between said light source and said pentaprism, a reticle engraved in said mirror for passing a beam of light from said light source to said pentaprism for reflection therefrom along the bore, a roof prism having an apex and being movable along the bore according to the longitudinal contour thereof for returning said beam of light in a reflected beam to said pentaprism for reflection therefrom to said mirror with said reflected beam being parallel with said beam of light and variably spaced therefrom according to the radial relationship of said apex to the axis of the bore, electrical means responsive to movement of said reflected beam after being reflected from said mirror for moving said pentaprism to maintain said reflected beam along a predetermined path during movement of said roof prism in the bore, and means for recording the movement of said pentaprism.

2,864,281
EGG CANDLING APPARATUS
Roy E. Draper, Albion, N. Y.
Application January 12, 1956, Serial No. 558,761
4 Claims. (Cl. 88—14.2)



1. Egg candling apparatus comprising a pair of longitudinally spaced pulleys having horizontal axes and an endless belt passing over the same, a longitudinal row of bearing members carried by said belt with their bearing axes perpendicular to the belt surface, a series of egg cups disposed exteriorly of said belt and having spindles projecting through said bearing members for rotation therein, illuminating means disposed adjacent to the path of movement of said cups as the latter pass along with the upper reach of said belt and adapted to project light through eggs in said cup for candling, and means at the under side of the upper reach of said belt engageable with the projecting portions of said spindles to rotate the same as the egg cups pass said illuminating means.

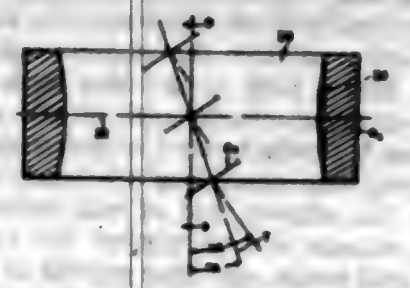
2,864,283
METHOD OF CROWN FINISHING THE TEETH OF INTERNAL GEARS
David W. Daniel, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Application November 8, 1954, Serial No. 467,279
4 Claims. (Cl. 90—1.6)

1. The method of crown finishing the teeth of an internal gear member which comprises running a gear-like finishing tool member in mesh at cutting speed with the internal gear member with the axes of said members crossed at an angle of between 2 degrees and 20 degrees, the tool member having its teeth crowned to an extent sufficient to limit the contact with the teeth of the gear member to narrow zones adjacent the thickest portion of

having a flattened section extending longitudinally thereof, by said plunger, the upper end thereof being inwardly

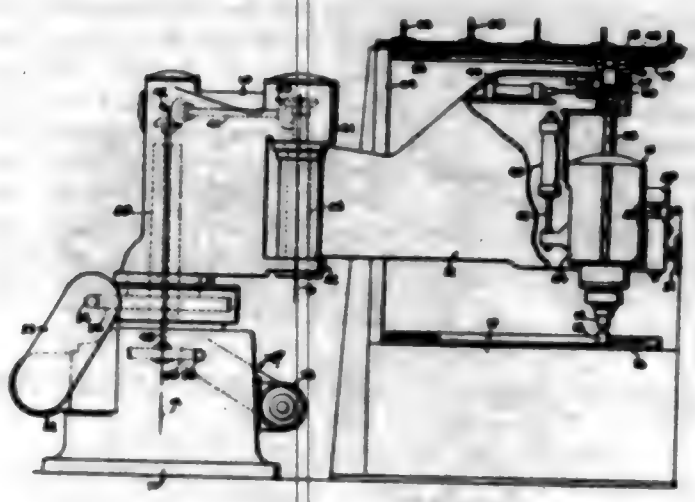
grid; means connecting said control grid directly to said

the teeth of said tool member and producing a crowned configuration to the teeth of the gear member by effecting relative traverse between said members in a plane parallel



to the axes of both of said members and in a direction in such plane oblique to the axis of said gear member and selected in accordance with required crowned configuration.

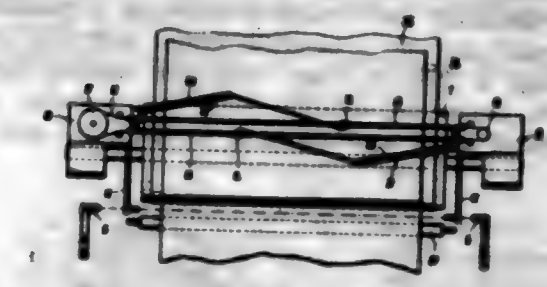
2,864,283
POWER OPERATED ROUTER
Theodore C. Mann, Beloit, Wis., assignor to Elmes-Carlson & Co., Rockford, Ill., a corporation of Illinois
Application July 8, 1955, Serial No. 520,823
1 Claim. (Cl. 90—13.2)



A router comprising a horizontal work support having an upwardly facing work-supporting surface and adapted to hold a work piece, a horizontal template support having a downwardly facing surface spaced above said work-supporting surface and adapted to hold a template, means rigidly connecting said two supports, a stationary base, a tool head, means supporting said head on said base to dispose the head between said surfaces and to permit the head to move through a predetermined angle in a horizontal plane, a power operated spindle journaled on said head on a vertical axis and projecting toward said work support to carry a cutter of predetermined diameter in engagement with the work piece, a member connected to said head for vertical movement relative thereto and for bodily movement with the head in said horizontal plane, a circular follower of substantially the same diameter as said cutter mounted on said member above said spindle and disposed along said axis for engagement with the template, and a power actuator connected to said member and operable when energized selectively to raise and lower the member thereby to move said follower into and out of engagement with the template independently of said head.

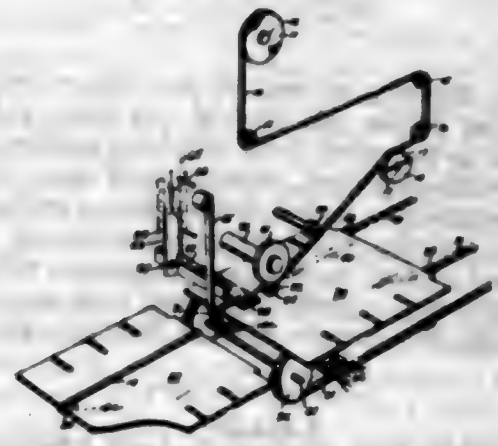
2,864,284
APPARATUS FOR INTERRUPTING THE FORMATION OF TRANSVERSE RENTS IN PAPER WEBS
Hermann Profilen, Bruckmühl, Upper Bavaria, Germany
Application March 25, 1954, Serial No. 418,694
Claims priority, application Germany March 30, 1953
15 Claims. (Cl. 92—36)

1. In a paper making machine including means for feeding a paper web the improvement that comprises a pair of cutting means normally positioned above said web and on either side of the longitudinal axis of the web, and control means operable when a break occurs in the



web for moving the cutting means located on the opposite side of the longitudinal axis of the web from the break in the direction of the break transversely of the web.

2,864,285
TAPING MACHINE
Louis W. Roselius, Lake Success, N. Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N. Y., a corporation of New York
Application May 24, 1954, Serial No. 431,762
5 Claims. (Cl. 93—1)



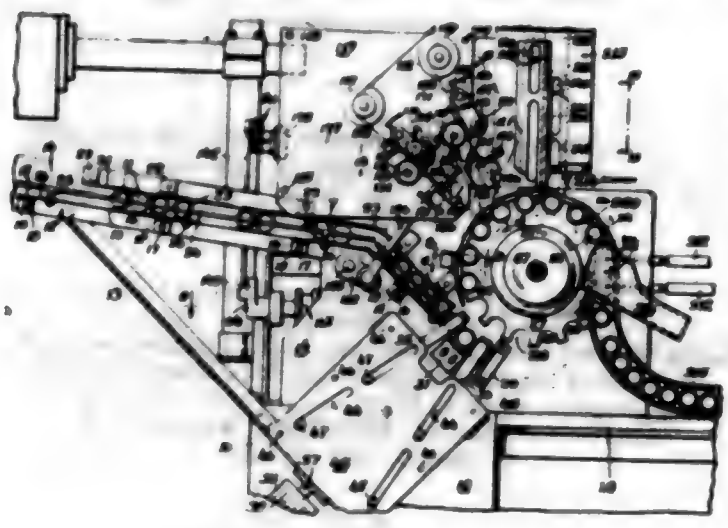
1. In a machine of the class described, means for moving a box blank edgewise past a tape-applying station, a moist tape feed mechanism, a yieldable tape guide at said station for guiding tape against an edge and one surface of said blank and extending in the path of said box blank and disposed to guide tape into said path and to be pushed out of said path by said edge due to the motion of said blank, means disposed to be triggered by said edge for actuating said tape feeding mechanism so as to feed tape against said guide prior to force being exerted thereagainst by said edge, wherein a portion of said tape is disposed intermediate said guide and said edge and wherein said tape is fed at a rate so as to have a predetermined length of free end thereof extending beyond the plane of said box blank to effect a foldable tab, continued motion of said box blank in said path pressing said tape against said guide effecting adherence of said tape to said edge and subsequently effecting yielding movement of said guide out of the path of motion of said blank.

2,864,286
APPARATUS FOR MAKING DRY CELLS
Edward R. Rawson and Douglas E. Whalen, Freeport, Ill., assignors to Burgess Battery Company, Freeport, Ill., a corporation of Delaware
Application October 28, 1953, Serial No. 388,836
10 Claims. (Cl. 93—36.01)

3. In apparatus for inserting a cylindrical liner in a dry cell anode in the form of an open-top cup, a mandrel mounted for rotation and longitudinal reciprocation, means for stationing said cup in substantial alignment with said mandrel with said open-top facing the mandrel, the exterior of said mandrel being cylindrical and

portions respectively of said chairs, said chairs being uni-

having a flattened section extending longitudinally thereof, said mandrel being hollow and having openings connecting said flattened surface section with the interior thereof, means for continuously rotating said mandrel and reciprocating said mandrel between a position in front of said cup and a position within said cup, means for feeding a flexible sheet with the leading surface thereof in tangential relation with said mandrel when said mandrel is at said position in front of said cup,



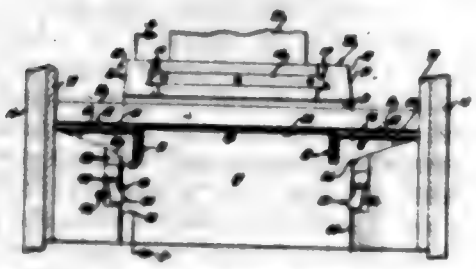
means for applying suction to the hollow interior of said mandrel during said feed of said sheet and reciprocation of said mandrel from said front position to said position within said cup, whereby said sheet is drawn to said mandrel and coiled thereon into a cylinder, and means for applying pneumatic pressure to said interior upon arrival of said mandrel at said position within said cup, whereby said cylinder is released from said mandrel and expands into contact with the interior wall of said cup.

2,864,287

MACHINE FOR FOLDING AND LOCKING CARTON BLANKS

Al Johnson and Fred Granger, Stockton, Calif., assignors to Al Johnson, doing business as Valley Pattern & Mfg. Co., Stockton, Calif.

Application May 19, 1955, Serial No. 509,649
1 Claim. (Cl. 93—51)



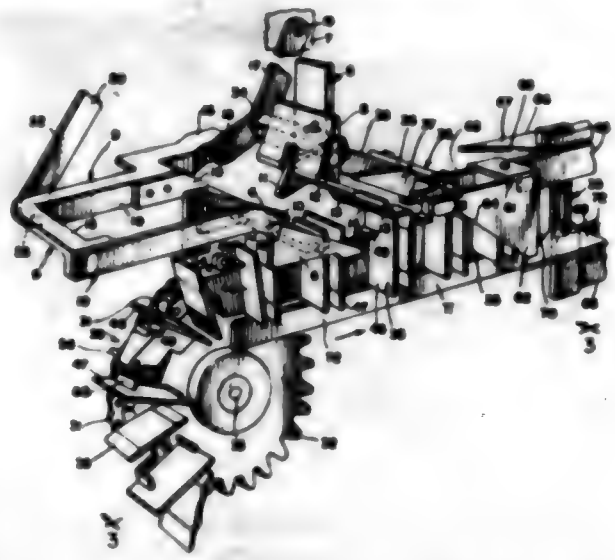
A carton folding and locking machine comprising a die and a plunger vertically movable through said die, said plunger including an elongated shoe having an uninterrupted rectangular bottom surface, a pair of end walls inclined upwardly and inwardly, a pair of side walls, each of said side walls including a central vertical portion, and a pair of end portions inclined upwardly and inwardly, and a pair of backing blades mounted flushly on said central vertical portion of said side walls and extending horizontally toward said opposite end walls and overrunning a fraction of said inclined portions of said side walls, said die including a pair of die end walls, and a pair of die side walls adapted to encompass said plunger, said die walls being interrupted only by a pair of end boots rockably mounted in recesses in said die end walls, the lower end of each of said end boots being outwardly urgeable into said recess in said die end wall by said plunger, the upper end thereof being inwardly swingable toward the corresponding inclined end wall of said plunger and into the relief recess provided thereby, and a pair of side boots rockably mounted in a pair of recesses in each of said die side walls at a location adjacent to and removed from the adjacent end of each of said backing blades, each of said side boots including a toe portion extending into the path of said plunger, and a knee portion normally located in said recess and being rockable toward said plunger to a location inwardly removed from the adjacent end of said backing blade as said plunger engages said toe portion and urges said toe portion into said recess, said knee portion of each of said die side wall boots being beveled on the side facing toward the adjacent one of said die end walls.

2,864,288

CARTON EXPANDING AND TRANSFER MECHANISM

Harry E. Engleson, Chicago, and Elmer D. Sramek, Cicero, Ill., assignors to F. B. Rodington Co., Chicago, Ill., a corporation of Delaware

Application March 30, 1956, Serial No. 575,264
15 Claims. (Cl. 93—53)



2. A machine for expanding and transferring cartons comprising means for removing the lowermost carton of a stack of collapsed cartons, an inclined slide adjacent the lowermost carton, reciprocating means to shift a lowermost carton in a predetermined position on an inclined slide, means for expanding the carton prior to placing it in said predetermined position on said slide, pusher means operated by the reciprocating means to push the carton from the slide to a horizontal position, a movable conveyer chain having buckets connected thereto and including spaced hinged plates, ledges formed on the inner surfaces of the plates, reciprocating depresser means for inserting a carton between said plates and resting the cartons on the ledges, means engaging a carton and progressively tilting the carton about the ledges, and additional means to shift a tilted carton to vertical position.

2,864,289

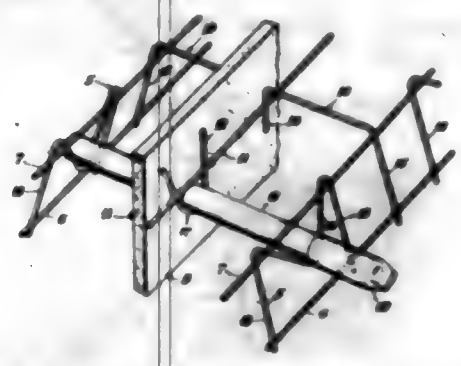
CONTINUOUS DOWEL BAR SUPPORT

Dominick M. De Canio, Chicago, Ill., assignor to Universal Form Clamp Co., Chicago, Ill., a corporation of Illinois

Application June 3, 1954, Serial No. 434,151
5 Claims. (Cl. 94—8)

1. A continuous support for dowel bar assemblies comprising a plurality of chairs each defining a support for the outer end of a transversely extending dowel bar, a pair of parallel spacer bars fixed to the upper and lower

portions respectively of said chairs, said chairs being uniformly spaced along said spacer bars in coplanar relation to one another, a plurality of cross bars each having an angularly bent leg portion fixed to said spacer bars intermediate said chairs and in parallel relation to the legs of said chairs, each of said cross bars having a main portion extending laterally from the plane of said chairs and terminating in a second leg portion disposed at right angles to said laterally extending main portion,



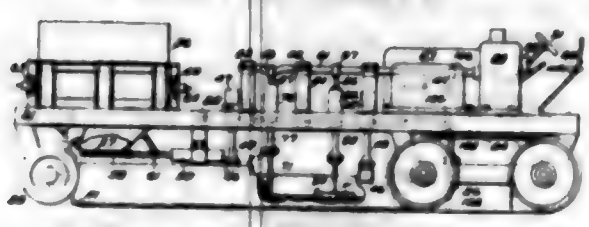
an elongated tie rod fixedly interconnecting said second leg portions of said cross bars and disposed in generally parallel relation to said spacer bars, and a plurality of U-shaped yoke elements fixed to said tie rod in spaced apart relation to one another, each of said yoke elements providing a seat portion disposed in axial alignment with the dowel bar support portion of one of said chairs so as to provide a support for an intermediate portion of a dowel bar having its outer end supported on said one chair.

2,864,290

APPARATUS FOR FORMING CONCRETE CURBS AND THE LIKE

Gerald R. Freeman, Carmichael, Calif.

Application April 11, 1955, Serial No. 500,356
3 Claims. (Cl. 94—46)



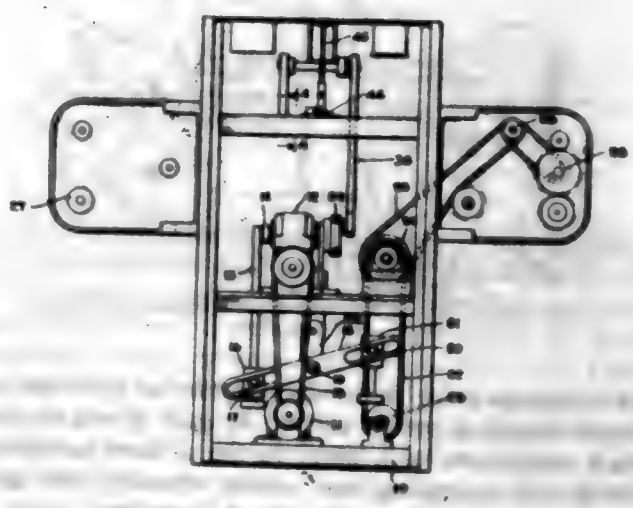
1. Apparatus for forming a longitudinally extending concrete curb structure on a supporting surface in which said structure has laterally spaced side walls and an upper contour extending therebetween, comprising: a longitudinally extending ground traversing vehicle, a pair of laterally spaced and generally vertically disposed plate-like members carried by and extending longitudinally of said vehicle, means on said vehicle for selectively raising and lowering said members, a first screed element extending laterally of and supported by said vehicle and disposed between said members, means on said vehicle for vertically oscillating said element, said first screed element being of generally flat construction and lying in a generally vertical plane, means on said vehicle for selectively raising and lowering said element whereby the lowermost oscillating position thereof may be controlled, and a second screed element positioned on and carried by said vehicle rearwardly of said first screed element and extending between said members, each of said screed elements having substantially similar lower edge portions contoured to complement the upper contour of said curb structure, and means on said vehicle for selectively raising and lowering said second screed element.

2,864,291

CONTACT PRINTER

George W. Morgans, New York, N. Y., assignor, by mesne assignments, to Technicolor New York Corporation, a corporation of Delaware

Application September 27, 1954, Serial No. 458,485
1 Claim. (Cl. 95—73)



An automatic contact printer comprising a transparent table adapted to support a photographic negative, a platen mounted for movement to and from a first position in which said platen is parallel to and exerts a force on said table and to and from a second position in which said platen is spaced from said table, said space being adapted to permit the passage of sensitized paper therethrough, and means for moving said platen to and from said first and second positions, including a rotatable shaft, cam means operatively connected to said shaft, and linkage means operatively connecting said cam means to said platen; and means for intermittently advancing said sensitized paper past said platen comprising a crank mounted on said rotatable shaft, a pivoted lever having an elongated slot at each side of said pivot, a slide arm pivotally connected to said crank at one end and having a part at its other end slidably disposed in one of said lever slots, whereby when said shaft rotates said lever will oscillate, another slide having a part slidably disposed in the other slot of said lever for imparting reciprocating movement to said other slide in response to oscillation of said lever, a roller adapted to be connected to said sensitized paper, and means responsive only to movement of said other slide in one direction operatively connecting said other slide to said roller for intermittently rotating said roller in one direction in response to the reciprocation of said other slide, said crank and cam means being positioned on said rotatable shaft relative to one another so that said roller rotates only when said platen is out of said first position, the pivot for said lever being movable whereby to adjust the extent of reciprocation of said other slide and thus adjust the extent of rotation of said roller.

2,864,292

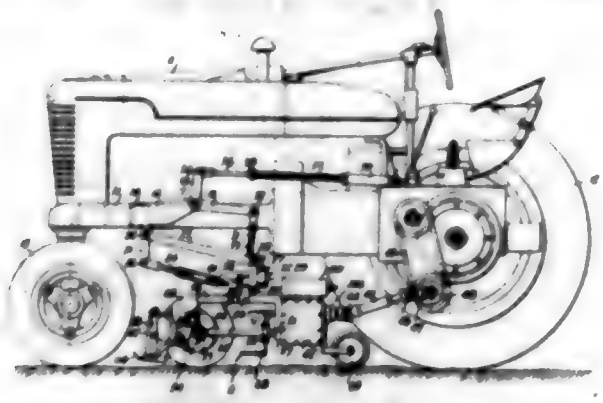
TRACTOR MOUNTED PLANT THINNING MACHINE

Harold F. Elliott, Menlo Park, David R. Scott, Palo Alto, and James A. Cheesbrough, Los Altos, Calif., assignors, by mesne assignments, to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Application January 18, 1956, Serial No. 559,855
19 Claims. (Cl. 172—6)

1. In an agricultural machine of the character described, a power shaft adapted to continuously rotate as the machine is moved along a row of plants, a clutch having a driving and driven member, said driving member operatively connected to said power shaft, an interrupted gear and pins adapted to rotate with said driven member, a generally horizontal driven shaft, a plate and gear car-

ried by said driven shaft, one of said pins adapted to engage said plate to accelerate the driven shaft when the clutch is engaged, the other to engage the plate and decelerate the driven shaft prior to disengagement of the clutch, said gears adapted to engage after the acceleration



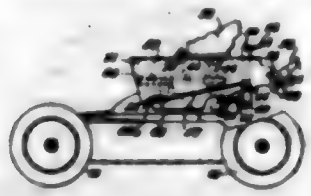
and disengage prior to the deceleration to drive the shaft, ground engaging means carried by said driven shaft, and means responsive to a plant in the desired condition of growth for operating the clutch whereby the ground engaging means undergo a cycle of operation.

2,864,293

GARDEN TOOL COMBINATIONS

Paul Edrich, Albert H. Foltzer, and Donald P. Henry, Cincinnati, Robert C. Kodo, Parma, Alvin F. Meyer, Cincinnati, Ervin J. Osterbus, Cleveland, Archer W. Richards, Chagrin Falls, and John R. Snowball and William D. Tittle, Cincinnati, Ohio, assignors to Weber Engineered Products, Inc., Cincinnati, Ohio, a corporation of Ohio

Application December 2, 1955, Serial No. 550,658
19 Claims. (Cl. 172—42)



1. A garden tool comprising the combination of a power head and a work unit; said power head including a motor, controls for said motor, drive means operated by said motor, support receiving means, and first abutment means; said work unit including a work performing member, driven means connected to said member, a support, and second abutment means; power transmission means between said drive means and said driven means, said transmission means having an inoperative position and an operative position; said support being slidable within said support receiving means; resilient means urging said transmission means to its said inoperative position and maintaining said support within said support receiving means; and means for urging said first abutment means and said second abutment means against one another to move said power unit and said work unit with respect to one another against the urging of said resilient means, whereby said transmission means is moved to its operative position.

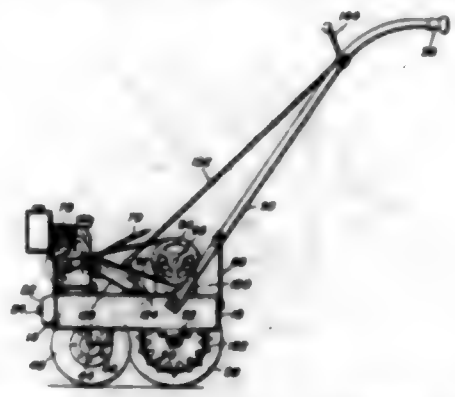
2,864,294

POWER DISC SPIKER

Ralph L. Pearson, Jr., Walters, Okla.

Application January 13, 1956, Serial No. 558,932
2 Claims. (Cl. 172—42)

1. In a turf piercing machine for the care of smooth lawns and which includes a frame, and an engine carried by said frame, an inboard pair of front wheels mounted for rotation on said frame and located beneath said engine, and a pair of handles secured to said frame and protruding rearwardly for a walking attendant, a rear axle, bearings secured to said frame in which said axle is mounted for rotation, spiked turf penetrating means adjustably secured to said axle intermediate and spaced from the ends thereof, said turf penetrating means being adapted to at least partially support the weight of the machine, means drivingly connecting said engine with



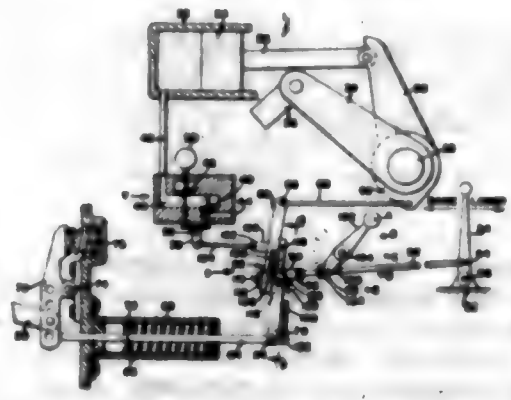
said axle, outboard demountable wheels of larger diameter than said turf penetrating means carried by the ends of said axle, said engine and axle driving connecting means including a lay shaft, means mounting said lay shaft on said frame for rotation, means including a flexible drive element connecting said lay shaft and said engine, a clutch operatively connected to said flexible drive element, and means drivingly connecting said lay shaft with said axle.

2,864,295

SELECTIVE LOAD AND POSITION CONTROL FOR AGRICULTURAL TRACTOR

Wallace H. Du Shane, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Continuation of application Serial No. 516,859, June 17, 1955. This application June 19, 1956, Serial No. 592,443
10 Claims. (Cl. 172—9)



8. In a tractor having means for the adjustable attachment of an implement thereto, a power unit on the tractor for adjusting the working position of the implement, an actuator for controlling the power unit, a position responder movable by the power unit in accordance with adjustment of the implement, and a load responder movable by the implement in accordance with changes in implement working load, the improvement comprising: a motion-transmitting system including a pair of intergaged lever elements interconnecting the actuator and both responders and arranged to operate the actuator in accordance with movement of the responders; adjustable means for changing the interengaged relation of the lever members and thereby effecting changes in the motion-transmitting characteristics of the system to vary the amount of responsiveness thereof to movement of the responders among a first status of full and exclusive

outer end spaced from said first baffle providing communi-

tral axis thereof to deflect air flowing through the passage

responsiveness to movement of the load responder, a second status of full and exclusive responsiveness to movement of the position responder and a third status of partial responsiveness to movement of both responders; and means for adjusting said change-effecting means.

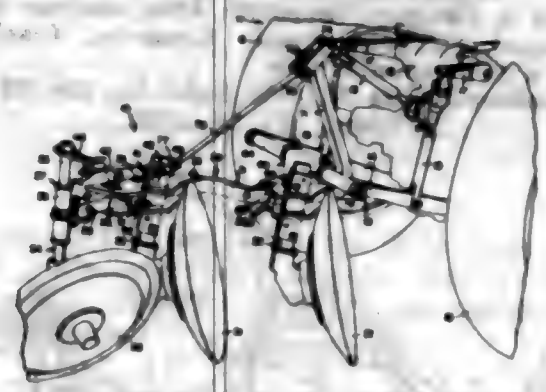
2,864,296

TRACTOR-MOUNTED DISK PLOW

Walter H. Silver and Orey W. Oerman, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

Continuation of application Serial No. 350,606, April 23, 1953. This application June 4, 1956, Serial No. 589,872

7 Claims. (Cl. 172—254)



1. A disk plow adapted to be connected with the upper and lower, laterally swingable links of a propelling tractor, comprising a frame beam extending generally in a fore-and-aft direction, a frame bracket, a generally vertical mast section connected at its lower end to said bracket and extending generally upwardly therefrom, said mast section having a rearwardly extending lower portion, means adjacent the upper end of said section to receive the rear end of said upper link, a front transverse bar disposed for lateral adjustment in said frame bracket and having means at its ends to receive the rear ends of said lower links, means fixing said transverse bar to said frame bracket in different lateral positions relative thereto, and means for fixing the lower rearwardly extending portion of said mast section to said frame beam in either of two laterally spaced apart positions at opposite sides of said frame beam.

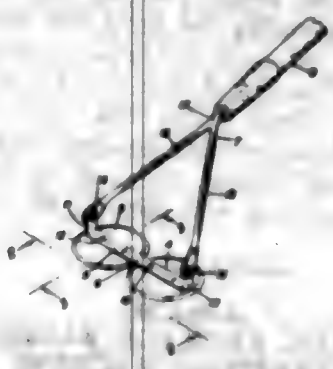
2,864,297

CULTIVATING AND WEEDING IMPLEMENTS

Monte E. Adams, San Diego, Calif.

Application August 9, 1954, Serial No. 448,517

2 Claims. (Cl. 172—376)



1. A cultivating and weeding implement, comprising a plurality of disc-like cutting blades, sequentially and tangentially disposed, the edges of which are bevelled and continuously sharpened; a U-shaped mounting bar secured to said blades with the outer edges thereof extending beyond said bar; a Y-shaped fork pivotally secured to said bar; and a handle affixed to said fork.

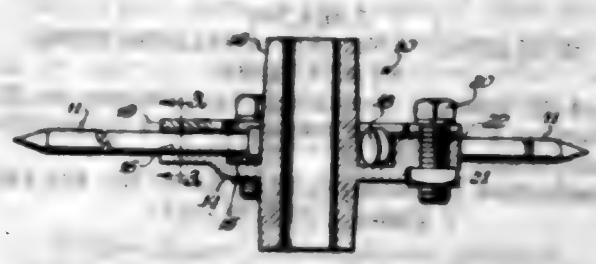
2,864,298

ROTARY HOE

Wayne G. Toland, Stockton, Calif., assignor to International Harvester Company, a corporation of New Jersey

Application February 17, 1956, Serial No. 566,176

3 Claims. (Cl. 172—556)



1. In a rotary hoe, a hub including a ring portion, an axially extending bearing portion and an outwardly offset web connecting said portions and providing an annular channel-like space therebetween, a plurality of circumferentially spaced grooves formed in said ring portion and extending outwardly from said annular space to the outer periphery of said ring portion, an elongated spike slidably received in each of said grooves having a head broader than the diameter of said groove and received in said annular space and engageable with said bearing portion and a shank extending beyond the outer periphery of the ring portion, a mating annular ring adapted to mate with the ring portion of said hub to hold the spikes in said grooves, means for removably securing said mating ring to said hub, and a resilient spacer between said rings accommodating spikes of different diameter therebetween.

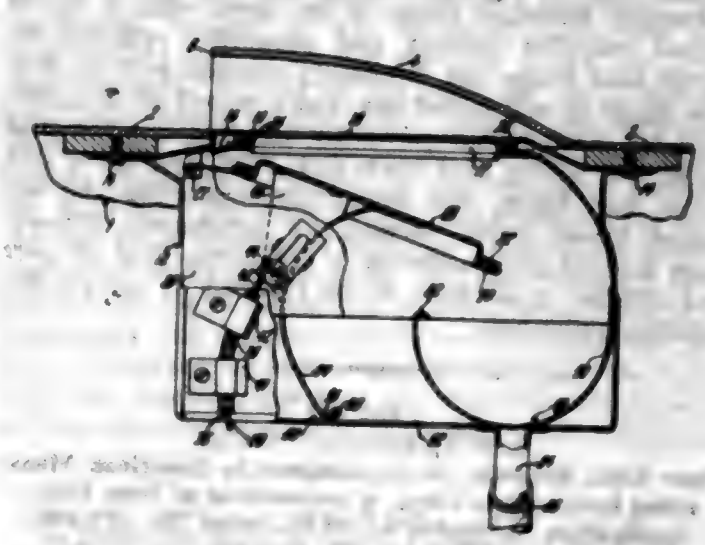
2,864,299

VEHICLE VENTILATOR

Kenneth R. Betts and Matthew R. Whitman, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 9, 1954, Serial No. 454,988

2 Claims. (Cl. 98—2)

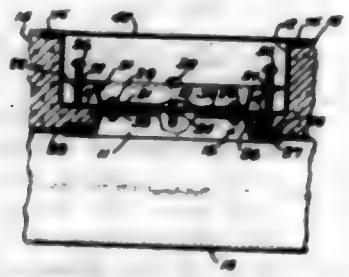


1. Ventilating device for automotive vehicles or the like comprising: means forming an opening in the vehicle body, means within the vehicle body providing a box-like chamber open to said opening and including an air outlet and a water drain, a baffle rigidly secured to the rear edge of said opening and extending downwardly and forwardly and returning upwardly to receive air against the inner portion thereof, said baffle having an opening therein adjacent said drain, a displaceable closure for said first opening movable between open and closed positions, means mounting said closure adjacent the opening in the vehicle body, a second baffle secured to the closure with the respective baffle concave portions in a facing relationship, said second baffle extending forwardly and downwardly and having its outer end engaging said first baffle when the closure is in a closed position and having said

for tensioning the band after wrapping, said tensioning positely facing opposed guideways, a flat clamping blade

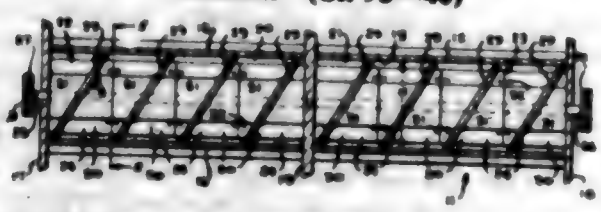
outer end spaced from said first baffle providing communication between first said opening and said outlet when the closure is moved to the open position, and closure operating means moving said closure to open and closed positions.

2,864,300
BUILDING AND AIR DISTRIBUTING STRUCTURE
Bernard E. Curran, Sewickley, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application December 4, 1956, Serial No. 626,140
7 Claims. (Cl. 98—31)



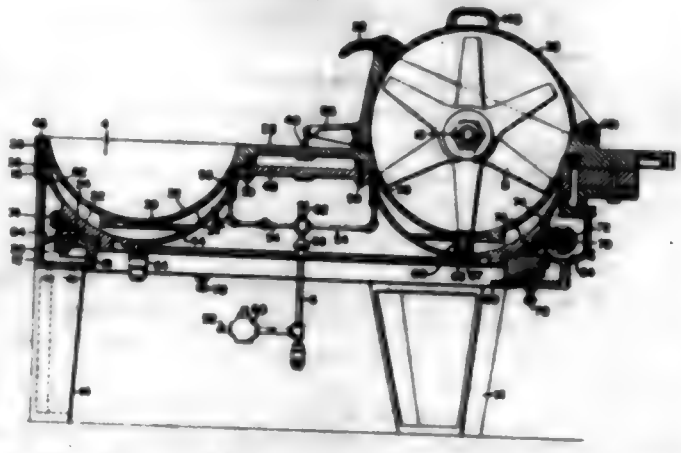
1. In an air distributing and building structure, a cellular metal load supporting floor having an opening in the upper wall thereof and flanged outlet connecting means including an upright hollow rectangular shoe member communicating with said opening and supported by said upper wall and having side walls, an outwardly extended bottom flange and an inwardly extended top flange extended above said opening, a substantially rectangular screed box having side walls and an inwardly extended bottom flange and means for temporarily supporting and adjusting said screed box vertically and angularly with relation to said outlet connecting means to vary the height and level thereof including an inverted rectangular shoe member having side walls and a closed lower wall and detachably secured to said inwardly extended upright shoe flange, said inverted she member having an outwardly extended flange at its upper end, a set of screws extended through said outwardly extended inverted shoe flange and threadedly engaged with the bottom flange of said screed box, and a second set of screws threaded through said outwardly extended inverted shoe flange and having their lower ends resting on top of said screed box flange, said temporary supporting and adjusting means being adapted for subsequent removal upon pouring and hardening of a concrete floor fill over said cellular metal floor to be replaced by an air distributing outlet unit.

2,864,301
LOUVERING SYSTEM
Peter Katz, Baldwin, N. Y., assignor to American Measuring Instruments Corp., a corporation of New York
Application November 13, 1953, Serial No. 391,886
6 Claims. (Cl. 98—40)



1. A louver structure, comprising a frame having perpendicularly disposed top, bottom and side walls defining a rectangular passage, a first slat disposed transversely across the passage and mounted for axial rotation between opposite side walls thereof, said slat having a width substantially equal to the height of the passage so that the slat closes the passage when disposed in one position and restricts the passage in all other positions of the slat, a disk intersecting said slat at an acute angle to a central axis thereof to deflect air flowing through the passage into several streams moving at said angle to said slat, and a pair of further slats smaller in width than the first slat and spaced parallel thereto in said passage, said further slats intersecting said disk at said angle to divide the flow of air in the passage into still further streams, said first slat, disks and smaller slats being formed as an integral shutter unit rotatable simultaneously in the passage so that said streams are directed angularly with respect to said top, bottom and side walls in all of said other positions of the first slat.

2,864,302
MEANS FOR SIMULTANEOUSLY CUTTING AND COOKING MEAT PRODUCTS
Frederick A. Zaenkert, Greenhills, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio
Application May 31, 1956, Serial No. 588,385
2 Claims. (Cl. 99—348)



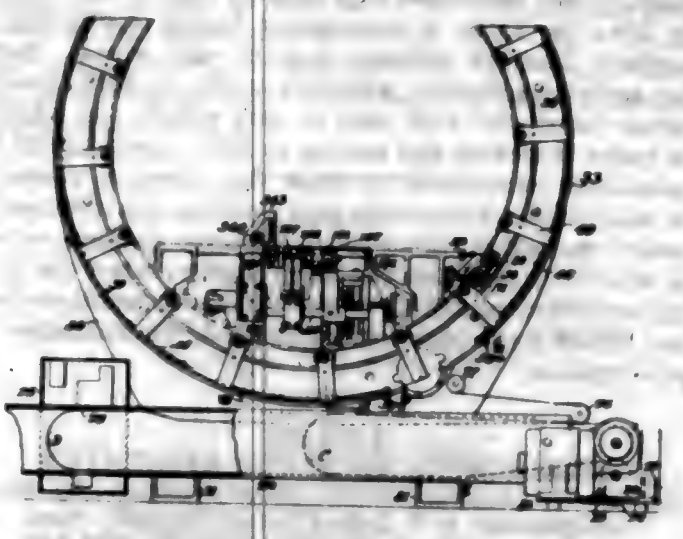
2. Food processing apparatus comprising in combination, a circular bowl having an upright central axis of rotation, a circumferential edge portion, and a central hub concentric with said axis, the bowl having an annular concentric depression circumscribing the hub and providing an open trough for carrying food to be processed, said trough comprising an upper food-supporting face and a nether face, a circular shell coinciding substantially in size and shape with the circular bowl, and having a circumferential edge portion to register with the edge portion of the bowl, a central hub on the shell contacting and underlying the hub of the bowl, means securing the hub of the bowl to the hub of the shell for mutual support of the bowl and the shell centrally thereof, and circumferentially disposed means fixing the shell to the bowl in spaced relation to the nether face of the trough wall, thereby to provide an annular chamber which includes the nether face of the trough wall, a frame, means supporting the bowl and shell assemblage upon the frame for axial rotation, cutting means supported upon the frame and including knives to mince the food within the trough as the bowl rotates, and means delivering a high-temperature heating fluid to the chamber while the bowl rotates, for cooking the food within the trough concurrently with mincing thereof by the cutting means.

2,864,303
AUTOMATIC PACKAGE BANDING OR STRAPPING MACHINE
Arthur J. Brown, Bronx, N. Y., Charles F. Osgood, Jr., Ridgewood, N. J., and William M. Grosvenor, Jr., New York, N. Y., assignors to General Strapping Corporation, New York, N. Y., a corporation of New York
Application June 30, 1950, Serial No. 171,522
23 Claims. (Cl. 100—37)

1. A machine of the character described comprising; means for wrapping band around an article, and means

ing device advancing means mounted in said guideway, means, a driven shaft, an electromagnetically controlled

for tensioning the band after wrapping, said tensioning means including, a gripper for seizing the band, and mechanism for opening and closing the gripper and moving it bodily in a substantially rectangular path, said



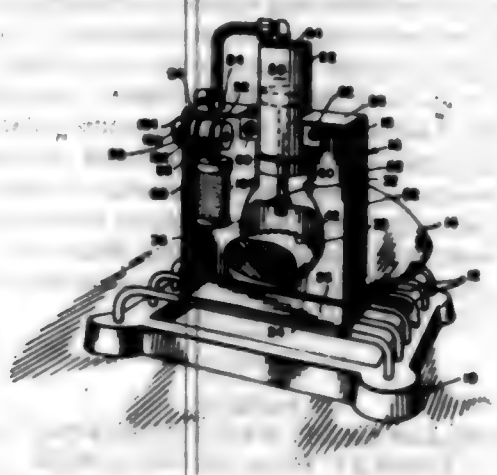
mechanism embodying at least one pivoted jaw, a plurality of slides operatively connected with the gripper, and means for causing both relative and combined movement of the slides.

2,864,384

AUTOMATIC CLAMPING MECHANISM FOR POSITIONING AND HOLDING HAM SHANKS AND SIMILAR ARTICLES DURING VASCULAR INJECTION THEREOF

Harold K. Gilman, Albany, N. Y., assignor, by mesne assignments, to The Albright-Nell Co., Chicago, Ill.

Application August 1, 1957, Serial No. 675,756
2 Claims. (Cl. 100—269)



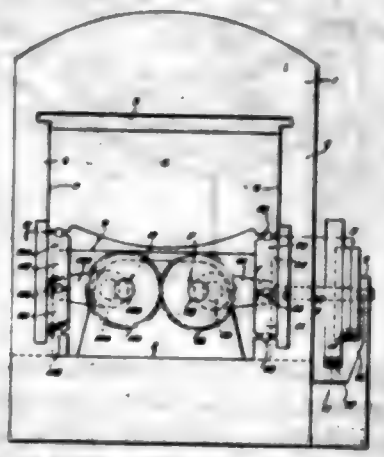
1. In an apparatus for clamping one end of a meat product to contract the veins thereof during hypodermic injection of a curing fluid into said veins, a horizontally disposed platform for supporting the product and adapted to be positioned on the weighing platform of a scale, a shallow box-like framework positioned on said supporting platform adjacent one end thereof and including a flat rectangular front wall disposed in a vertical plane and extending upwardly from the platform, and having vertical rearwardly extending marginal side flanges, and horizontal top and bottom rearwardly extending marginal flanges respectively, said top flange and said front wall being relieved to divide the top flange into two spaced sections and to provide a vertical slot in the front wall extending from the upper edge thereof to a region adjacent the bottom thereof, the lower edge of said slot being of arcuate configuration having an upwardly presented concavity, a pair of vertically disposed strips of antifriction material secured to said front wall on opposite sides of the slot, respectively, and defining a pair of oppositely facing opposed guideways, a flat clamping blade slidable in said guideways and having an arcuate edge with a downwardly presented concavity disposed in opposition to said lower edge of the slot, said blade being movable between an elevated position wherein said edges are relatively remote from each other to a lowered position wherein said edges are in relatively close proximity for clamping an end of a meat product therebetween, and means for moving said movable clamping blade between its advanced position and its retracted positions.

2,864,385

POWER PRESSES

William Frank Golding, Bristol, England

Application June 25, 1956, Serial No. 593,686
Claims priority, application Great Britain June 24, 1955
4 Claims. (Cl. 100—286)



1. A power press comprising a frame, a fixed platen secured to the frame, a movable platen supported on said frame for reciprocating motion relative to said fixed platen, at least two rotatable operating shafts each connected to said movable platen through a means for converting the rotation of said operating shafts into said reciprocating motion of said movable platen, an input shaft connected to each of the operating shafts through individual slip-permitting drive means, the operating shafts being connected together by positive torque-transmitting means independently of the connection between the input shaft and the operating shafts, means for driving the input shaft and including a clutch, a torque-responsive member in each of said slip-permitting drive means, said torque-responsive member being movable in accordance with variations in the torque transmitted and being connected to said clutch to disengage the latter when the torque transmitted by either of said slip-permitting drive means exceeds a predetermined maximum.

2,864,386

HAND OPERABLE OSCILLATING ADDRESS PRINTING MACHINE

Carl J. Hueber, Euclid, Ohio, assignor to Addressograph-Multigraph Corporation, Wilmington, Del., a corporation of Delaware

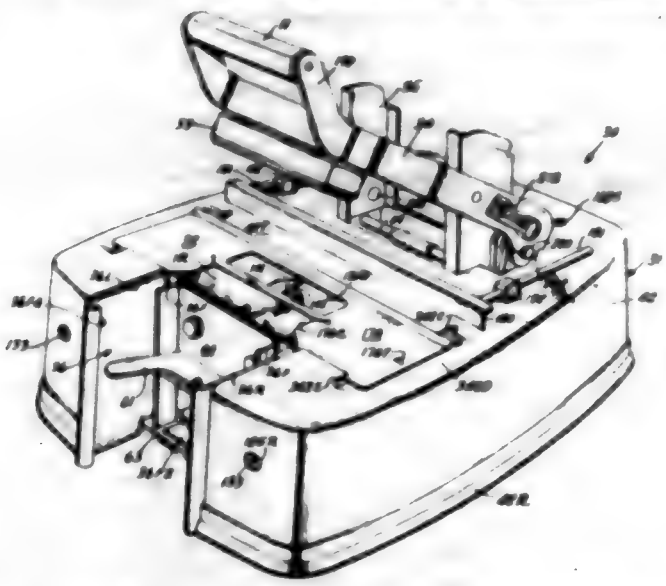
Application July 26, 1954, Serial No. 445,771
14 Claims. (Cl. 101—65)

1. In a hand-operated printing machine of the character described through which a series of printing devices are advanced one by one into and through a printing position, a rigid frame affording a printing device guideway and having an anvil in a forward portion of such guideway defining a printing position, ribbon feed means for a ribbon at said printing position, means on said guideway adjacent the rear end thereof defining a supply magazine for printing devices, means on said frame at the front end of said guideway defining a collecting magazine into which printing devices may be discharged, print-

said reel and feeding the same in printing relation between said printing means and the web, said drive roll being mounted on said support and positioned to engage said

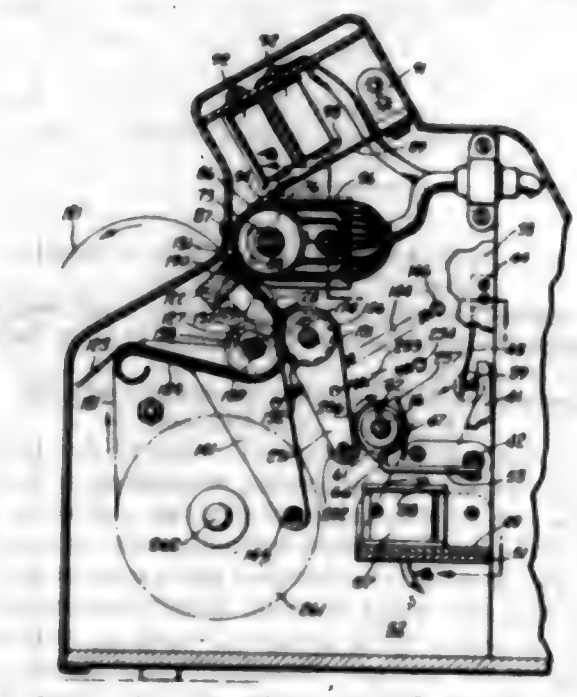
portion embedded in the layers of said envelope in substantial parallelism with the longitudinal axis of said

ing device advancing means mounted in said guideway, rigid mounting members extending upwardly above and on opposite sides of said guideway rearwardly of said anvil, a one-piece cover removably mounted on said frame and having an opening at said printing position and openings through which said supply magazine and said mounting members project, a platen operating arm having a pair of rearwardly extending arm members of hollow inverted U-shaped cross section detachably pivoted on and embracing the upper ends of said mounting mem-



bers, actuating means for said ribbon feed means, both of actuating means for said advancing means, said actuating means including separable drive connections respectively disposed on the upper ends of said mounting members and having end portions disposed within the hollows of the adjacent portions of said arm members, and said adjacent portions of said arm members each having drive connections within the hollows thereof for driving said actuating means from said platen operating arm when said platen operating arm is actuated.

2,864,307
PRINTER
Edgar A. Hilton, Los Altos, and Harold F. Elliott, Menlo Park, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Application March 9, 1956, Serial No. 570,553
13 Claims. (Cl. 101—93)

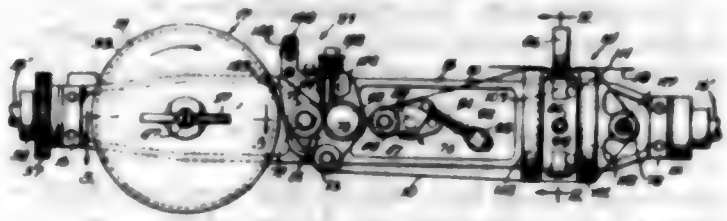


1. A printer which serves to print data which is represented by a plurality of data potentials comprising power means, a driven shaft, an electromagnetically controlled clutch serving to cyclically drive said shaft, a plurality of type wheels each having a plurality of print characters rotatably carried in side-by-side relationship on said shaft, means associated with each of said wheels serving to drive the same, a commutator having a plurality of contacts disposed adjacent each of said wheels, means for applying reference potentials to the contacts, sensing means associated with each of said wheels and adapted to rotate therewith and serving to make contact with the associated commutator to sense the reference potentials to indicate the character in print position, electromagnetic means associated with each of the type carriers serving to selectively lock the associated carriers when the print character corresponding to the data is in print position, and means for taking an impression of the characters in print position.

2,864,388
SILK SCREEN PRINTING APPARATUS
George W. Luppold, Lowell, Mass., assignor, by mesne assignments, to T. John Caveney, Lowell, Mass.
Application March 29, 1955, Serial No. 497,547
8 Claims. (Cl. 101—124)

1. In a printing press of the type having a horizontally reciprocating flat type bed and a vertically reciprocating, rotating, impression cylinder the combination of a stencil carrier mounted for movement with said flat type bed and supporting a perforated stencil in spaced relation above the upper face of said bed to form a hollow space therebetween; ink supply means mounted on said type bed in the hollow space below said stencil; a type high ink roller, having its circumferential surface continually fed with ink by said supply means and adapted to transfer said ink upwardly to the underface of said stencil, slideable, downwardly unyieldable, roller support means, rotatably supporting said roller with its axis parallel to the axis of said cylinder and horizontal translation means for sliding said roller into and away from a pressure nip relationship with said cylinder, directly below the cylinder axis, in synchronization with the movements of said cylinder, type bed and stencil carrier.

2,864,389
MARKING APPARATUS FOR APPLYING PRINTED INDICIA TO A MOVING WEB
Kenneth H. Brownlee, Skokie, Ill., assignor, by mesne assignments, to National Dairy Products Corporation, New York, N. Y., a corporation of Delaware
Application December 29, 1954, Serial No. 478,256
9 Claims. (Cl. 101—244)



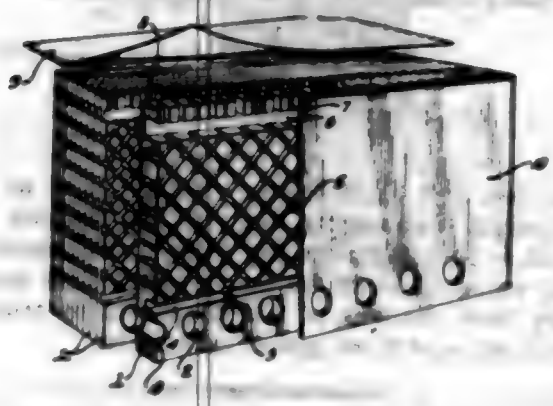
1. A marking device comprising an elongated rotatable support, a stationary gear mounted at one end of said support and coaxially therewith, printing means mounted on said support for printing at spaced intervals on a moving web during rotation of the support, a marking tape reel mounted on said support for rotation about its axis, tape feed means including a drive roll engaging the tape for positively unwinding the tape from

first position and a second position; a high pressure piston having a first portion and a second portion; a low pres-

chamber, said partition being provided with passage isolated from both said pumping zone and said chamber

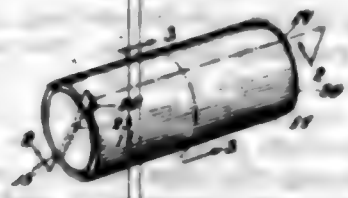
said reel and feeding the same in printing relation between said printing means and the web, said drive roll being mounted on said support and positioned to engage said tape after said tape has passed said printing means, an elongated rotatable drive shaft journaled on said support parallel to the axis of rotation of the support, and gear means at the opposite ends of said drive shaft operatively connected to said stationary gear and to said drive roll for driving the latter in response to rotation of said support about its axis.

2,864,310
SINGLE IMPRESSION MULTI-COLOR PRINTING DEVICE
Robert Frank Nelson, Long Beach, Calif.
Application March 29, 1954, Serial No. 419,326
5 Claims. (Cl. 101—327)



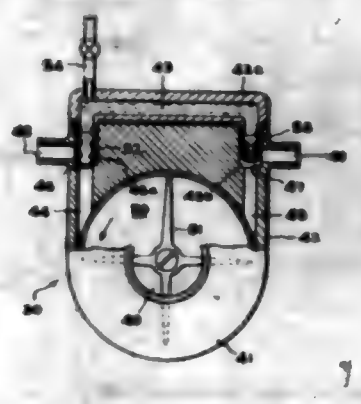
1. A single impression multi-colored printing plate consisting of a plurality of rectangular plates arranged in juxtaposition, an upper horizontal inking edge on each of the plates, all of said inking edges being arranged substantially in the same plane, each of said plates having transverse ports extending therethrough and through which the inking fluid passes, each of said plates having a horizontal groove therein arranged adjacent said ports, and said plates having notches therein extending from said groove to certain of said transverse ports, each of said plates having a passage therein adjacent the upper edge thereof, each of said plates having a plurality of substantially vertical ducts therein extending from the first named horizontal groove to said upper passage, and each of said plates having slots therein extending from the upper passage to the inking edge of each plate.

2,864,311
FLARES
Alfred C. Loedding, Princeton, N. J., assignor to Unexcelled Chemical Corporation, New York, N. Y., a corporation of New York
Application December 7, 1953, Serial No. 396,375
1 Claim. (Cl. 102—37.8)



In a flare, in combination: a solid substantially cylindrical powder charge having a longitudinal axis, a tubular envelope tightly receiving said charge for controlled end burning thereof, said envelope comprising a plurality of relatively thin layers of heat transfer reducing material and having a first and a second open end, an insulating member in the first end of said envelope adjacent to said charge, a flat metallic member having a first portion which constitutes an igniter and is in contact with said charge in the second end of said envelope, a second portion embedded in the layers of said envelope in substantial parallelism with the longitudinal axis of said charge, and a third portion separated from the charge in said first open end of the envelope by said insulating member, said first portion having a cross sectional area less than the cross sectional areas of said second and said third portion, and electrical conductor means connected with said first and said third portion for incandescing said first portion when connected with a source of electrical energy.

2,864,312
TWO-WAY PUMP
Winston L. Shelton, Jeffersontown, Ky., and Marion R. Karechi, St. Joseph, Mich., assignors to General Electric Company, a corporation of New York
Application November 21, 1955, Serial No. 548,039
1 Claim. (Cl. 103—3)



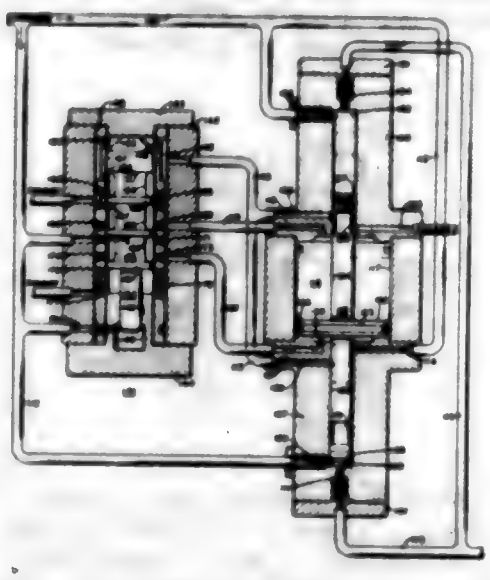
A centrifugal pump comprising a casing defining a cylindrical pump chamber, a laterally disposed housing having a space therein, a pair of substantially diametrically spaced outlet passages joining said chamber and said space and arranged tangentially with respect to said chamber, a valve seat at the entrance of each of said passages into said space, a conduit extending from said space adjacent each of said valve seats, an impeller for rotation within said chamber, one of said passages confronting flow within said chamber for one direction of rotation of said impeller, the other of said passages confronting flow within said chamber for the other direction of rotation of said impeller so that the fluid pressure is higher in said one passage for said one direction of rotation and in said other passage for said other direction of rotation, an axial inlet through which fluid enters said chamber, a pair of valves mounted within said space for movement to and from said valve seats respectively, said valves being operable by the pressure developed by said pump in said passages so that one valve is unseated during rotation of said impeller in one direction and the other valve is unseated during rotation of said impeller in the other direction, and force transmitting means arranged between said valves in said space for producing mutual movement thereof, said force transmitting means comprising a body of flowable material confined in said space between said valves in contact with each valve whereby the unseating of either valve causes the seating of the other valve.

2,864,313
HYDRAULIC INTENSIFIER
Edward Dawson, State College, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application April 24, 1957, Serial No. 654,977
13 Claims. (Cl. 103—51)

1. In a fluid pressure intensifying device the combination comprising: a distributing sleeve closed at both ends; a control piston reciprocally mounted in said sleeve and having a first portion, a second portion and a plurality of circumferential grooves, said control piston having a

low pressure side of said housing, the clearances between the shafts and the bearings being sufficient to permit the flow passage, and means communicating with said upwardly extending tube near its upper end for supplying

first position and a second position; a high pressure piston having a first portion and a second portion; a low pressure piston integral with said high pressure piston, said high pressure piston and said low pressure piston being adapted to be moveable from a first position to a second position; a fluid supply inlet; a drain outlet; first conduit means connecting said distributing sleeve and said high pressure piston first portion to said fluid supply inlet and connecting said control piston first portion and said high pressure piston second portion whereby fluid may be supplied to said high pressure piston first portion and said control piston first portion, said high pressure piston first portion being adapted to act as a valve for the supply of fluid to said control piston first portion; second conduit means connecting said distributing sleeve and said low



pressure piston and operatively associated with said first conduit means and said control piston whereby said low pressure piston may be connected to said fluid supply inlet when said high pressure piston approaches said first position and connected to drain when said high pressure piston approaches said second position; means for exhausting fluid supplied to said control piston first portion, said means comprising third conduit means associated with said distributing sleeve and connecting said control piston first portion and one of said control piston circumferential grooves to drain when said control piston is approaching its said first position and fourth conduit means operable to connect said control piston first portion to drain when said high pressure piston is approaching its second position; and a thrust piston adapted to constantly urge said control piston towards its said first position.

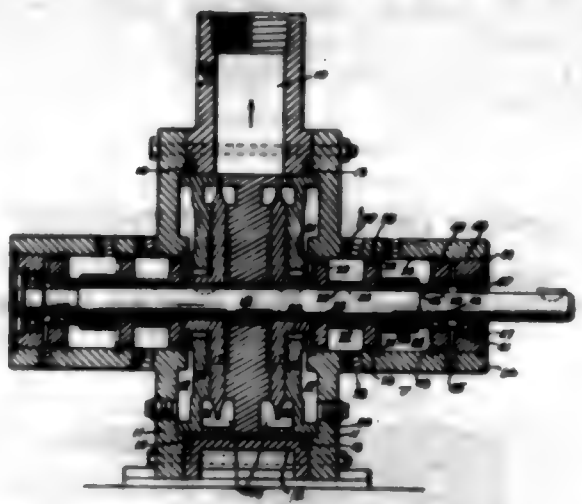
2,864,314

HIGH PRESSURE, HIGH TEMPERATURE PUMP

John T. Culleton, Hayward, Calif., assignor to Pacific Pumping Company, Oakland, Calif., a corporation of California

Application May 11, 1955, Serial No. 507,601
2 Claims. (Cl. 103—96)

1. A pump for hot fluids, including in combination a housing with inlet and outlet ports; a shaft mounted for rotation in said housing; a pump impeller mounted rigidly on said shaft; a face-type shaft-sealing assembly having a first face-seal member rotatably mounted on said shaft, a second stationary face-seal member mounted on said housing, and spring means urging a face of said first member into sealing contact with a face of said second member; and partition means between said impeller and said shaft-sealing assembly, forming part of said housing, dividing the interior of said housing into a pumping zone and a sealed chamber, and providing relatively narrow clearance around said shaft, sufficient to allow restricted entry of fluid from said pumping zone into said sealed chamber, said partition being provided with passage isolated from both said pumping zone and said chamber for circulating a coolant therethrough to cool the fluid passing through said clearance, whereby a cooled small fraction of the fluid being pumped lubricates the faces



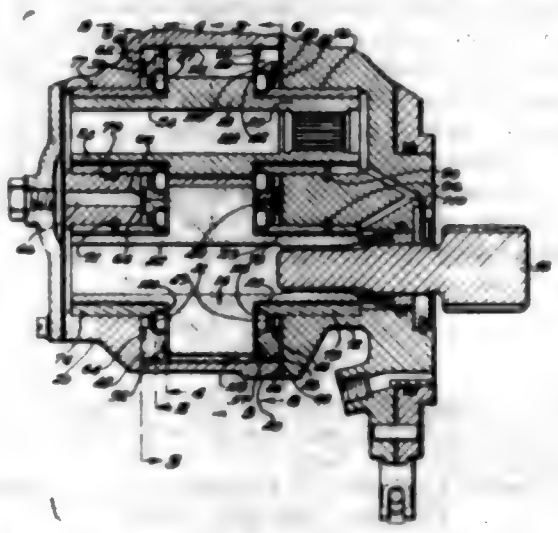
of said face-type shaft sealing member so as to protect them against wear during their relative rotation against each other with their sealing action, said cooling preventing vaporization of the fluid and resultant loss of its lubricity from the heat of friction caused by relative rotation of said seal faces against each other.

2,864,315

LIQUID PUMP

Stanley M. Udale, Detroit, Mich., assignor to Holley Carburetor Company, Detroit, Mich., a corporation of Michigan

Application February 11, 1954, Serial No. 409,728
2 Claims. (Cl. 103—126)



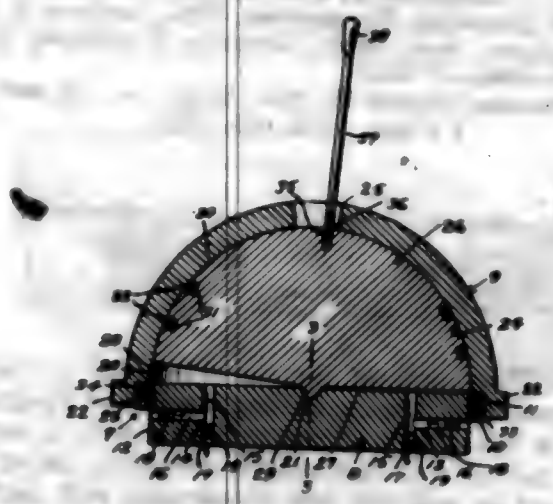
1. In a pump having two intermeshing gears, a cylindrical housing enclosing said gears, having a low pressure entrance and a high pressure exit, four supporting shafts, two for each gear, four bearings inserted in said housing, said bearings projecting into the housing, four end plates engaging the sides of said gears and said cylindrical housing and supported by said bearings, less than circular grooves formed in said end plates on their inner faces and terminating in said exit zone and terminating short of said inlet zone so that more than half the circumference of said gear is subjected to the outlet pressure yieldable means interposed between said bearings and said end plates comprising a U-shaped annular stamping so designed that it is compressed more on one side than the other so that the cylindrical ends of the end plates and the teeth of the gears are both pressed into contact with the cylindrical walls of said housing on the

2,864,319

portation system, comprising a rigid beam, means located

low pressure side of said housing, the clearances between the shafts and the bearings being sufficient to permit the gears to just contact the walls of the housing on the low pressure entrance side.

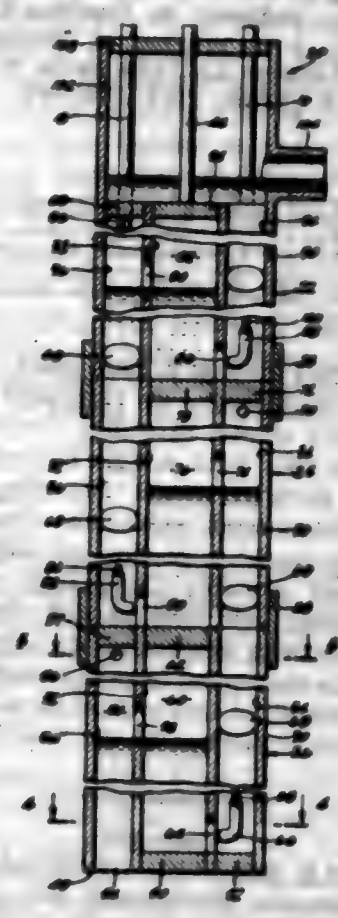
2,864,316
DOUBLE ACTING PUMP
Alfred N. Verrue, Phoenix, Ariz.
Application January 31, 1958, Serial No. 712,393
5 Claims. (Cl. 103—145)



1. A double acting pump comprising a housing including a substantially flat base and a substantially hemispherical shell combining with said base to form a substantially hemispherical chamber, a nearly hemispherical piston mounted in said chamber having substantially flat piston faces disposed at an angle of less than 180° to one another and facing said base, said piston having a rib extending diametrically thereacross of substantially semicircular cross section, said rib being disposed between said piston faces, said base having an inner side provided with a diametrically extending groove of substantially semicircular cross section in which said rib is mounted for limited oscillating movement, said base having a multiple passage therein on either side of said groove, each multiple passage having a branch opening through the inner face of the base communicating with an inlet port and an outlet port, said inlet port and outlet port each having an end opening outwardly of the base, said inlet port having an inwardly opening check valve, the outlet port having an outwardly opening check valve, a lever secured in and projecting from the apex of the piston, said shell having an elongated opening in the apex thereof disposed crosswise of the groove of the base in which a portion of the lever is disposed for oscillating movement, said piston being oscillated with the lever relative to the housing to cause the piston faces thereof to alternately swing toward the inner side of the base for executing a pumping stroke and to alternately swing away from said inner side of the base to execute a suction stroke.

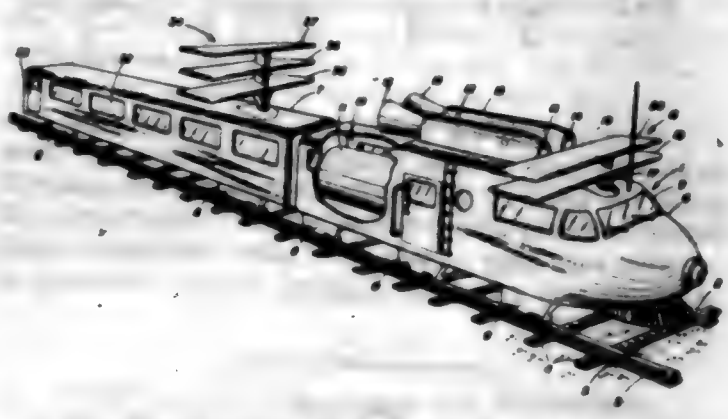
2,864,317
PUMPING DEVICE
Purnell A. Robinson, Los Angeles, Calif.
Application October 5, 1953, Serial No. 384,236
14 Claims. (Cl. 103—235)

1. A vacuum pump string including a reservoir having an elongated chamber therein, said chamber having an upper and a lower flow passage, a tube operatively connected to said reservoir and extending downwardly from said upper flow passage, means communicating with said downwardly extending tube near its upper end for creating a partial vacuum in the upper end of said downwardly extending tube, a tube operatively connected to said reservoir and extending upwardly from said lower flow passage, and means communicating with said upwardly extending tube near its upper end for releasing



bubbles in said upwardly extending tube near the lower end thereof.

2,864,318
METHOD AND APPARATUS FOR RAIL TRANSPORTATION
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application December 7, 1955, Serial No. 551,683
3 Claims. (Cl. 104—23)

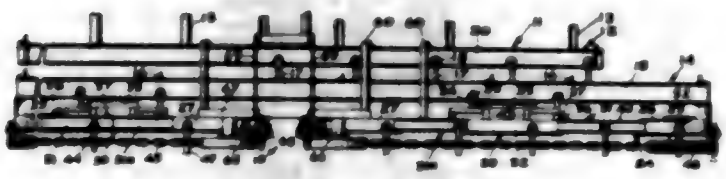


1. In a land vehicle for traveling upon spaced rails mounted on the ground, a vehicle, a plurality of trucks on the undersurface of said vehicle to support the same, runners on said trucks to engage said rails and to slidably support the vehicle thereon, depending flanges on said runners engageable with the undersurface of the rail head, the distance between the runner and its flange being greater than the height of the rail head so as to limit the vertical movement of the vehicle with respect to the rails but to maintain the vehicle in engagement with the rails when elevated thereabove, jet propulsion units on the top surface of said vehicle to propel said vehicle upon the rails, and airfoils on said vehicle for aerodynamic reaction with the relatively moving air to elevate the vehicle above the rails when the vehicle attains a predetermined speed.

plurality of spaced adjacent substantially parallel secondary panel elements supported on said primary panel

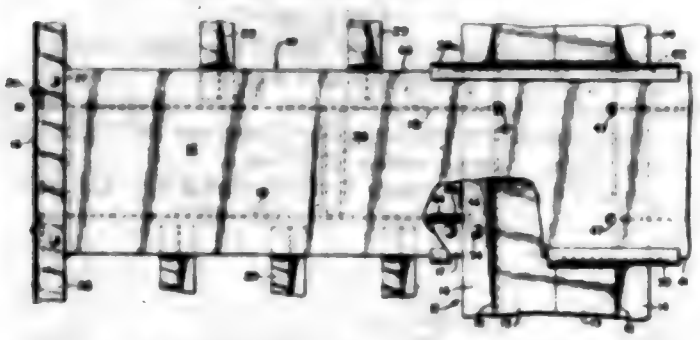
prising two pair of leaf springs formed together at adjacent ends, in substantial longitudinal alignment, said

2,864,319
EXTENDIBLE ENDLESS CHAIN CONVEYOR
Egbert Weldring, Grand Rapids, and William Beveridge, Detroit, Mich., assignors to Rapistan-Keystone, Inc., Detroit, Mich., a corporation of Michigan
Application October 22, 1954, Serial No. 463,996
10 Claims. (Cl. 104—91)



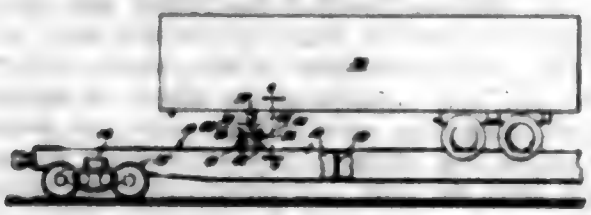
1. In a conveyor having a main track and an endless chain movable therealong, an extensible spur comprising: a spur track section extending transversely of said main track; said spur track section having a first portion and a second portion; means mounting each of said portions for coordinated movement toward and away from said main track; a portion of said endless chain mounted on and movable along each portion of said spur track section; said first portion being adapted to move oppositely with respect to the centerline of said main track to the movement of said second portion whereby the overall length of and tension in said endless chain remains constant regardless of the position of said spur track.

2,864,320
VEHICLE BOLSTER CONSTRUCTION
William H. Peterson, Homewood, Ill., assignor to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application July 28, 1954, Serial No. 446,360
19 Claims. (Cl. 105—228)



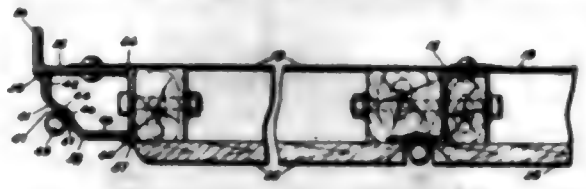
1. In a railway car underframe, the combination of a center sill unit, a body bolster unit having a top cover plate, the edges of the cover plate adjacent the center sill being free, and clamp means secured to said center sill adjacent each edge of said cover plate, said clamp means overlying said edges for resisting vertical movement of said cover plate.

2,864,321
ADAPTORS FOR LANDING GEARS OF SEMI-TRAILER TRUCKS
Deodat Clajan, New York, N. Y., assignor, by mesne assignments, to Piggy-Back, Incorporated, New York, N. Y., a corporation of New York
Application April 12, 1955, Serial No. 500,761
14 Claims. (Cl. 105—368)



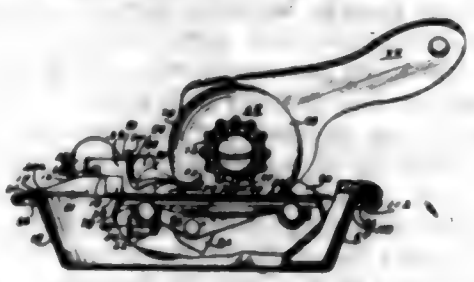
1. An adaptor for the landing gears of semi-trailer trucks to enable them to be used in a rail-and-road transportation system, comprising a rigid beam, means located adjacent each end of said beam for attaching the beam to a trailer landing gear so that it extends between the lower ends of the legs of the landing gear, wheels pivoted on said beam and positioned to run on a track of a gauge different from the separation of the legs of the landing gear, and means for guiding the wheels adapted to engage an edge of such a track.

2,864,322
LADING STRAP ANCHORS
Donald F. Leonhart, Youngstown, Ohio, assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Application August 15, 1951, Serial No. 241,909
1 Claim. (Cl. 105—369)



A metallic door post for the side walls of railway freight cars, said post comprising a web and flanges extending in opposite directions from said web, a metallic member having a straight portion welded to one of said flanges and to said web and cooperating with said one flange and said web to form a tubular section, a plurality of vertically spaced depressions pressed into said portion between the edges thereof, said depressions being continuous with said portion, a straight bar of uniform cross section extending along and in contact with said portion between said depressions, said bar spanning said depressions, and weld material securing said bar to said portion between said depressions.

2,864,323
PIE-MOLE
Wallace M. Houldsworth, Royal Oak, Mich.
Application August 26, 1952, Serial No. 306,437
16 Claims. (Cl. 107—49)

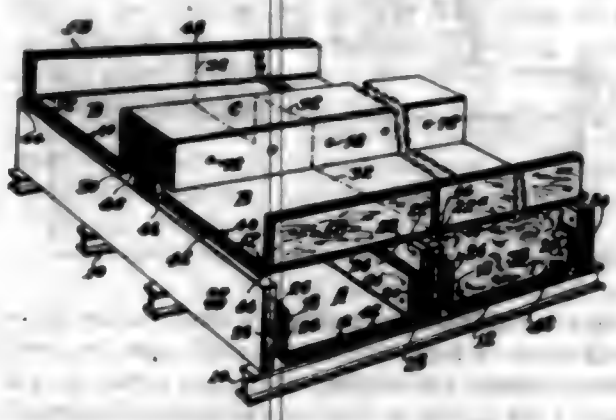


1. A culinary utensil for the purposes described, an elongated member having a rounded beveled end portion, constituting a front end portion, the member having a flat bottom surface and a contoured top surface, the forward portion of the member being flat, a ridge inclining upwardly from the flat portion, said ridge starting at one side of the member constituting the outer side and terminating at the opposite end and side of the member.

2,864,324
LOGISTIC PANEL CONSTRUCTION FOR ROOFS, WALLS, ETC., OF BUILDINGS
MacMillan Clements, Ridgefield, Conn.
Application January 19, 1955, Serial No. 482,699
3 Claims. (Cl. 189—13)

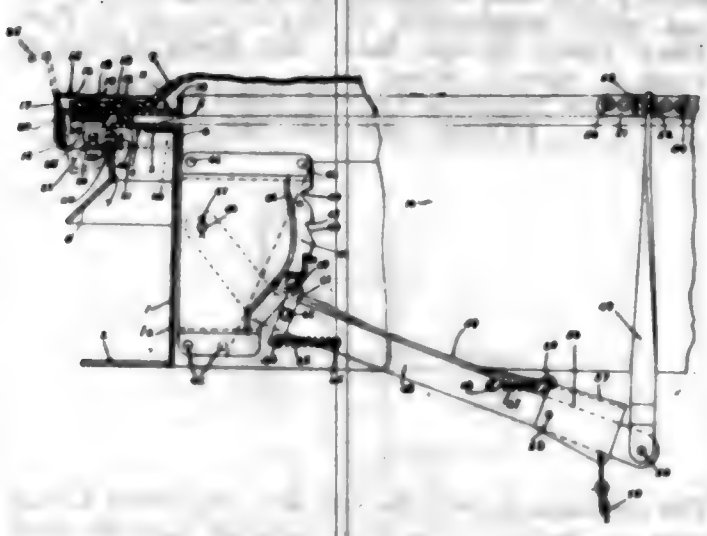
1. A roof construction comprising a series of substantially parallel primary panel elements arranged in side by side juxtaposed relation, each primary element being of channel shape and having upwardly extending sides and adapted to be mounted on suitable supporting means, a

plurality of spaced adjacent substantially parallel secondary panel elements supported on said primary panel elements at right angles thereto, each of said secondary elements being of channel shape and having upwardly extending sides and a bottom wall, a plurality of cap elements of channel shape, each cap element substantially covering the adjacent sides of two secondary elements and having downwardly extending sides and a top wall, the lower edges of each cap element being spaced from the bottom walls of the adjacent primary elements, said cap elements each having a metallic outer layer and an inner non-metallic layer bonded together, said primary and secondary elements each including a metallic layer and a separate non-metallic strip bonded to the outer face of each of the sides and bottom wall of each of said



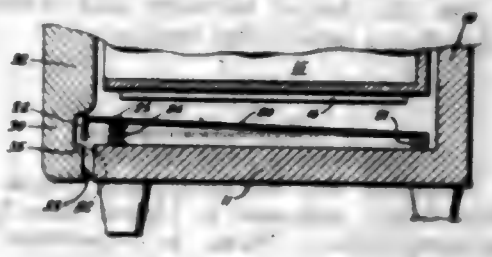
primary and secondary elements, said strips on said side walls being spaced from the strip on said bottom wall, and filler blocks between said adjacent sides of said secondary elements, the metallic layers of said primary elements, said secondary elements, and said cap elements facing upwardly, and the non-metallic layers thereof being underneath said metallic layers except for the side-portions thereof, the metallic portions of the upwardly extending sides of the primary panel elements being interposed between the upwardly extending non-metallic portions of said sides and the non-metallic portion of the downwardly extending sides of the cap elements, whereby to prevent heat exchange between the upwardly extending metallic layer of each primary element and the downwardly extending metallic layer of each cap elemgnt.

2,864,325
VENTILATING UNIT
Max Wasserman, Newton, and Russell Stetson, Sharon, Mass., assignors, by direct and mesne assignments, to Wasco Chemical Co., Inc.
Application November 9, 1955, Serial No. 545,815
7 Claims. (Cl. 108—16)



1. A mechanism for opening and closing a roof covering structure pivotally secured to a skylight well comprising two pair of leaf springs formed together at adjacent ends, in substantial longitudinal alignment, said leaf springs in each pair when untensioned in parallel face to face alignment with each other and one leaf spring of each pair secured to said roof covering structure, and the other secured to said well and a lever linkage system independent of said leaf springs and secured at one end to said roof covering structure and at the other to said well, said system including locking means adapted to secure said system and roof covering structure in a selected position by overcoming the biasing of said leaf springs.

2,864,326
REFRIGERATOR SAFETY DEVICES
William J. Laffey, Chicago, Ill.
Application July 31, 1956, Serial No. 601,318
2 Claims. (Cl. 109—63.5)



1. The combination with a refrigerator having a floor portion, and a hinged door, said floor having at least one longitudinal recess adjacent said floor portion of said refrigerator and having a substantially flush bottom portion below said recess and extending nearer said floor portion than the outer extent of said recess; of a platform pivotally mounted in the rear portion of said refrigerator adjacent said floor portion at one end thereof and its forward end positioned outwardly beyond the forward edge of said floor portion, said platform having a raised position and a lower weighted position, said platform being movable from an upper position in which its foward end is in horizontal alignment with said recess to a lower weighted position in horizontal alignment with said bottom portion beyond the forward edge of the floor portion engaging said flush bottom portion of said door at a position in its closing path outwardly of the fully closed position and thereby preventing same from closing, spring means supporting said platform in said raised position at an angle to said floor portion and with the forward end of the platform in horizontal alignment with said recess, and said spring means being compresible when said platform is weighted to permit the forward end of same to move downwardly into said weighted position.

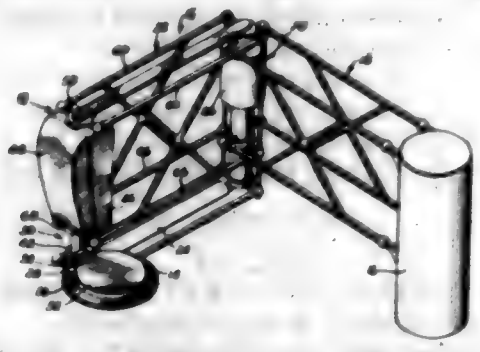
2,864,327
SEWING MACHINE
Henry L. Cole, Los Angeles, and Harold Spire, Sherman Oaks, Calif.
Application September 2, 1954, Serial No. 453,716
15 Claims. (Cl. 112—2)

1. In a sewing machine, the combination of: holding means for a workpiece; stitch-forming sewing means movable relative to said holding means and over said workpiece for sewing said workpiece, said sewing means including an axially and laterally movable needle adapted to be alternately inserted into and withdrawn from said workpiece; means mounting said sewing means for movement relative to said holding means in any direction over said workpiece; magnetic means for guiding said sewing means relative to said holding means along a predetermined path to cause said sewing means to form stitches in said workpiece along said path; and means for advancing said sewing means along said path, includ-

for a substantial distance, said control plate also extending longitudinally of the rock shaft for a substantial por-

mask mounted on said base and means for depositing a metallic coating on a crystal, the improvement comprising

ing means for moving said needle forwardly along said path when it is withdrawn from said workpiece and for moving said needle rearwardly along said path relative



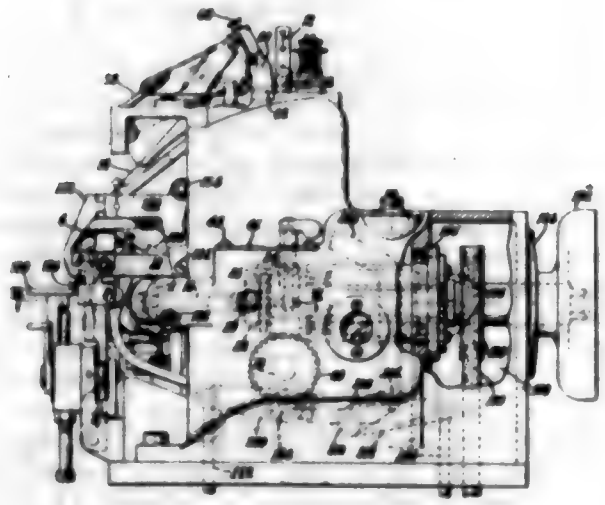
to said sewing means when it is inserted into said workpiece so that said needle advances said sewing means along said path in a step-by-step manner.

2,864,328
SEWING MACHINES

Hans F. Schaefer, Jr., Rockport, and Frank Pulsifer, Hamilton, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Original application July 5, 1952, Serial No. 297,216, now Patent No. 2,780,188, dated February 5, 1957. Divided and this application June 10, 1955, Serial No. 514,576

2 Claims. (Cl. 112—256)

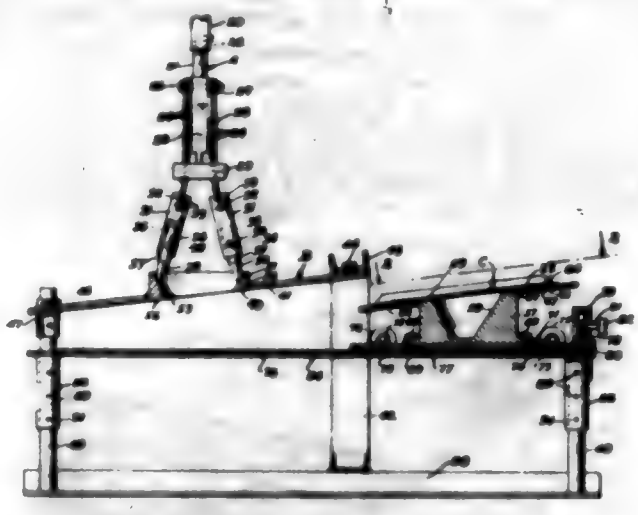


1. A shoe sewing machine having stitch forming and work feeding devices and a main sewing shaft for actuating the stitch forming and work feeding devices, in combination with mechanisms having oscillating parts for actuating the stitch forming and work feeding devices connected between one portion of the sewing shaft and said devices, and continuously rotating driving connections for the sewing shaft mounted on another portion of the sewing shaft, an oil retaining two-compartment housing, one compartment of which encloses the mechanisms for actuating the stitch forming and work feeding devices, the other compartment of which encloses the continuously rotating driving connections and means for supplying a solid stream of lubricant to the driving connections enclosing compartment and for supplying spray lubrication to the other compartment enclosing the actuating mechanisms, said lubricating means acting to lift the level of the lubricant in the compartment enclosing the driving connections above that in the compartment enclosing the mechanism for actuating the stitch forming and work feeding devices.

2,864,329
MACHINE FOR FORMING METAL PRODUCTS

John W. Woods, Percy G. Gribble, and John A. Ward, Auburn, Calif., assignors to Sierra Metal Products, Inc., Auburn, Calif., a corporation of Nevada

Application August 15, 1955, Serial No. 528,173
11 Claims. (Cl. 113—52)

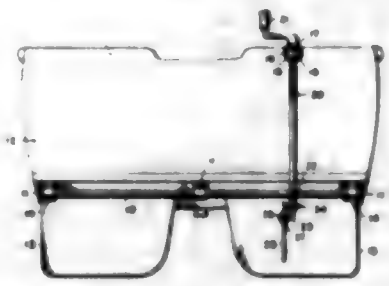


1. In a metal forming machine, a stem, means for rotating said stem, a tool attached to said stem for rotation therewith, means for moving said stem along its axis of rotation, a die having at least one position substantially in alignment with the axis of rotation of said stem, said tool being radially offset from the die surface, means biasing said tool radially outwardly from the axis of rotation of said stem toward said die, work-locating means for locating a metal blank above said die, a tool guide limiting outward biasing of said tool and guiding said tool while said tool is rotating into engagement with said blank, means stationarily mounting said tool guide adjacent said die when said die is in said first mentioned position, said die and tool guide shaped to receive a metal blank between their opposed faces to hold the blank on the die, said tool guide merging with and forming a continuation of said die when said die is in said first-mentioned position and means for moving said work locating means and die relative to said tool guide from a retracted position for loading and unloading said work locating means to a working position wherein said work locating means and die are aligned with said axis of rotation of said stem.

2,864,330
BRAKING OR TROLLING ATTACHMENT FOR BOATS

Maurice E. Cochran, Commerce, Okla., assignor, by direct and mesne assignments, of fifteen percent to Park Jones, Baxter Springs, Kans., and fifteen percent to Frank E. Marvin, Miami, Okla.

Application November 23, 1955, Serial No. 548,607
1 Claim. (Cl. 114—145)



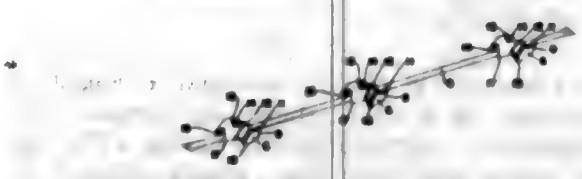
The combination with the hull of a motorboat having a stern and bottom, of bearings mounted upon the stern adjacent to the bottom, a horizontal rock shaft journaled in the bearings, a control plate mounted upon the rock shaft and extending radially of and beyond the same

means to support the spray unit for movement into different spraying positions disposed at angles relative to each

sertion into and removal from the drum-like container in a direction tangential to an axial passage formed by

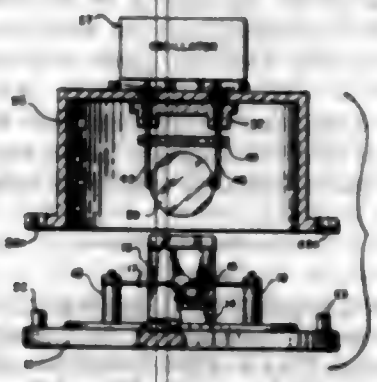
for a substantial distance, said control plate also extending longitudinally of the rock shaft for a substantial portion of the length of the rock shaft, an operating arm disposed upon the rear side of the control plate and arranged generally at a right angle to the same and rigidly secured to the control plate and extending rearwardly beyond the same, a generally vertical control shaft having its upper end portion screw-threaded, said control shaft being disposed close to and rearwardly of and generally parallel with said stern, a nut having screw-threaded engagement with the upper screw-threaded end portion of the control shaft and provided with a sleeve, a bracket rigidly mounted upon the stern adjacent to the upper end of the stern, a horizontal pivot element carried by the bracket and receiving the sleeve thereon and pivotally supporting the same so that the nut may swing in a substantially vertical plane, a horizontal crank arranged above and adjacent to the stern and rigidly mounted upon the upper end of the control shaft, a ball carried by the lower end of the control shaft, an L-shaped pin including horizontal and vertical portions, the horizontal portion being arranged at a right angle to the operating arm and pivotally mounted thereon to turn upon its longitudinal axis with relation thereto, a socket carried by the upper end of the vertical portion and having the ball swiveled therein, the arrangement being such that the control plate may be adjusted from a substantially horizontal position to a substantially vertical position and will project below said bottom.

2,864,331
PROTECTOR FOR HIGHWAY MARKINGS
George B. Brands, Akron, Ohio
Application November 7, 1955, Serial No. 545,310
2 Claims. (Cl. 116—63)



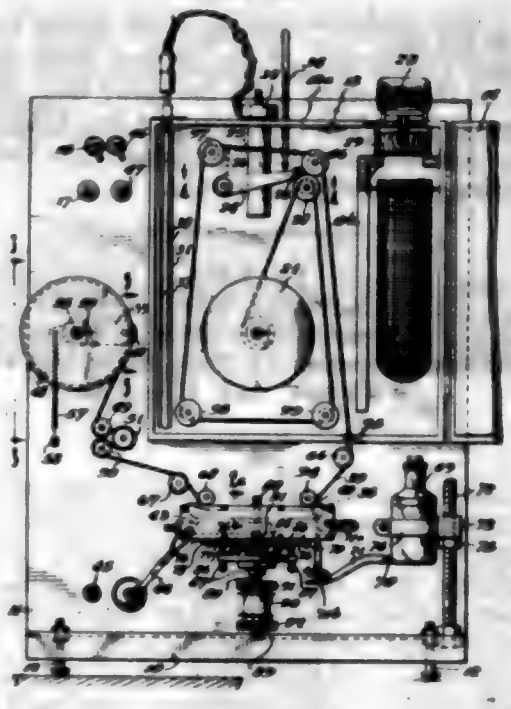
1. A protector for freshly applied highway traffic markings which comprises a sector of an automobile tire including the tread and sidewalls, said sector having tortuous edges defining at least three support portions whereby when a protector is placed on such a marking its contact therewith is limited to said support portions.

2,864,332
CRYSTAL PLATING APPARATUS
Raymond F. Woolley, Wanamassa, N. J., assignor to the United States of America as represented by the Secretary of the Army
Application September 6, 1957, Serial No. 682,559
1 Claim. (Cl. 118—49)
(Granted under Title 35, U. S. Code (1952), sec. 266)



In a crystal plating apparatus including a base and a bell jar adapted to be hermetically sealed to said base, a mask mounted on said base and means for depositing a metallic coating on a crystal, the improvement comprising a mount for supporting said crystal in alignment with said mask affixed to the underside of the top of said jar and an oscillator positioned immediately above the jar having leads extending through openings in said jar to said crystal mount.

2,864,333
APPARATUS FOR TREATING ONE SURFACE OF A STRIP
Leonard V. Sorg, Kansas City, and Elmer Bradley Offutt, Webster Groves, Mo., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application December 19, 1955, Serial No. 556,138
5 Claims. (Cl. 118—123)



1. An apparatus for treating one surface of a moving strip with a liquid treating agent which comprises in combination an elongated liquid supply trough having first and second ends, means for maintaining a longitudinally moving strip along said trough adjacent the surface of liquid therein, means for adjusting the level of liquid in said trough, pen means comprising the upper edges of said trough adapted to apply treating liquid to the underside of such strip, said pen means comprising a pair of spaced knife edges extending between said first and seconds ends on opposite sides of said trough, scraper means at the second end of said trough adapted to remove excess liquid treating agent from the strip as it leaves the trough and to retain the excess treating agent in the trough, and means for adjustably disposing said trough means in alignment with and immediately subjacent the lower side of said strip.

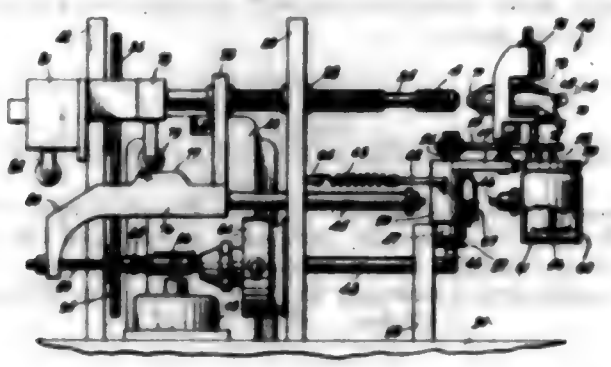
2,864,334
APPARATUS FOR SPRAYING SPIRALLY GROOVED CYLINDRICAL ARTICLES
Edward T. Stocker, Groveland, Mass., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application July 21, 1954, Serial No. 444,876
2 Claims. (Cl. 118—321)

1. An apparatus for successively spraying material on opposing surfaces of a spiral portion of an article comprising a holder for the article supported for rotation about its axis and a coincident centerline of the article, reversible means to rotate the holder in reverse directions for spraying the respective spiral surfaces successively, a unit to spray material on the surfaces successively,

tion of a metallic cap adapted to be fitted to the rearward end of the hammer cylinder, said cap having on opposite sides projections and a U-shaped grip portion

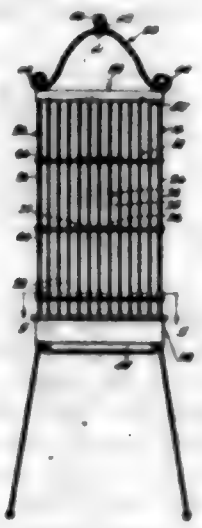
tion corresponding to degree of control signal magnitude variance from said value; lost motion means between a pair of successive ones of said members; means effective

means to support the spray unit for movement into different spraying positions disposed at angles relative to each other and the article to direct material to said surfaces successively, means responsive to the direction of rotation of the holder to move the holder axially at a speed com-



parable to the speed of rotation of the holder and article to maintain the surface of the portion being sprayed in the path of the material from the spray unit, and means responsive to the axial movement of the holder to shift the spray unit from one spraying position to another during reversing of said rotating means.

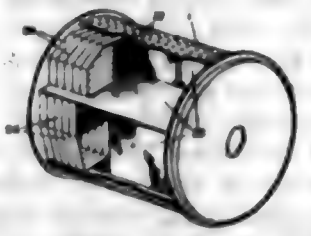
2,864,335
COLLAPSIBLE BIRD CAGE
Bernard Yellin, Chicago, Ill.
Application November 15, 1956, Serial No. 622,451
4 Claims. (Cl. 119—17)



1. A collapsible bird cage comprising a cage body formed of four sections, each section formed of a plurality of spaced vertical bars connected by cross bars, two of said sections provided at their opposite ends with vertical end bars longer than the other intermediate bars, said end bars being threaded at the lower extremities thereof, the other two of said sections having the opposite ends of certain of its cross bars looped to engage the vertical end bars to provide a hinge connection between said four sections to permit collapsing of said cage body, a bottom pan-shaped member in which the bottom of said cage body is received, said bottom member having openings through which extend the lower extremities of said end bars, and threaded fastening members secured to the threaded extremities of said end bars to retain said bottom pan.

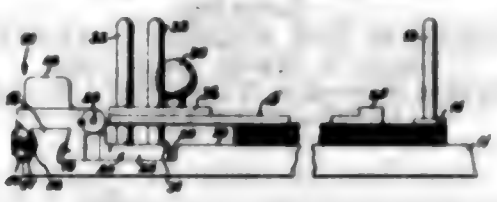
2,864,336
INCUBATOR FOR INCUBATING EGGS
James Hammett, Broughton, England
Application October 1, 1954, Serial No. 459,822
3 Claims. (Cl. 119—40)

1. An incubator comprising an angularly displaceable drum-like container, segmentally disposed frames for insertion into and removal from the drum-like container in a direction tangential to an axial passage formed by the inner ends of such frames, clips connectively associated with the frames each adapted to receive a single egg, said clips being constructed to support the egg only with the large end nearest the connection of the clip and frame and thus the large end first, a coiled spring to connect each clip to the frame so that the spring mounted



clips sag downwards as soon as an egg is inserted, supports to prevent the spring mounted clips sagging beyond a predetermined amount and means to turn the drum-like container on its axis whereby the eggs may be moved into a number of different positions during incubation by selective angular displacement of the container while at all times the clips maintain the eggs tilted into such a position that the large end of each egg is above the small end.

2,864,337
OVERLAY READ-OUT DEVICE
Clarence J. Reuter, Springfield, Ill.
Application December 16, 1955, Serial No. 553,643
3 Claims. (Cl. 120—33)



1. A device for use in reading material arranged in lines and columns on a record sheet, said device comprising a substantially rectangular base having a flat top surface upon which said sheet rests, means adjacent to one side edge of said base for maintaining said record sheet thereon, said base having a marginal area on its top surface adjacent to the opposed side edge of said base offset downwardly in a plane parallel to the plane of said top surface, an upstanding rail on said marginal area adjacent to the said opposed side edge defining with said area an elongated recess coextensive with the rail, said rail having its side walls inclined downwardly and inwardly, a nonseparable hinge structure comprised of a pair of hingedly connected elements, one of said elements having a dovetail formation on its bottom face engaged with and slidable along the rail and a bearing portion on one edge thereof, the other of said elements being essentially a flat plate having an upstanding bearing portion complemental to the first named bearing portion and being adapted to be seated in said recess below the plane of the top surface of the base, a plurality of non-aligned upstanding pins on said last named element, and a column and line guide overlying the sheet and apertured at one end to receive said pins therethrough, said guide and hinge structure being slidable as a unit along said rail and the guide and last named hinge element being movable about the hinge pivot as a unit.

2,864,338
MANUALLY GUIDED MECHANICAL HAMMER
Horst Zimmermann, Sprockhövel, Westphalia, Germany
Application May 3, 1954, Serial No. 427,253
11 Claims. (Cl. 121—36)

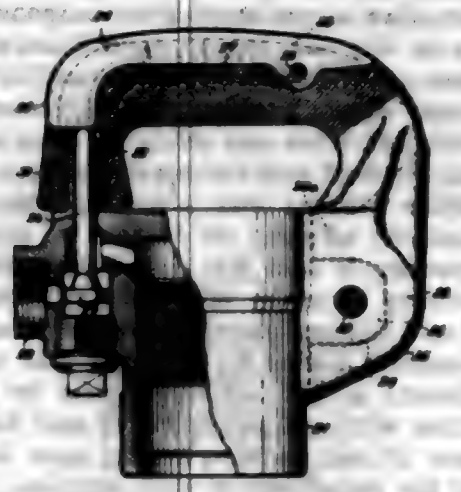
1. In a manually guided mechanical hammer operated by a pressure fluid such as compressed air, the combina-

riage and extending through the slot in said metal tube to the exterior thereof, a rubber tube within said metal tube, said rubber tube lying between said third roller and

means including two condition-varying elements a first of which is operable concurrently to vary the magnitudes of said conditions in opposite senses and the second

a unit to spray material on the surfaces successively.

tion of a metallic cap adapted to be fitted to the rearward end of the hammer cylinder, said cap having on opposite sides projections and a U-shaped grip portion connected on both its ends to the said projections, the



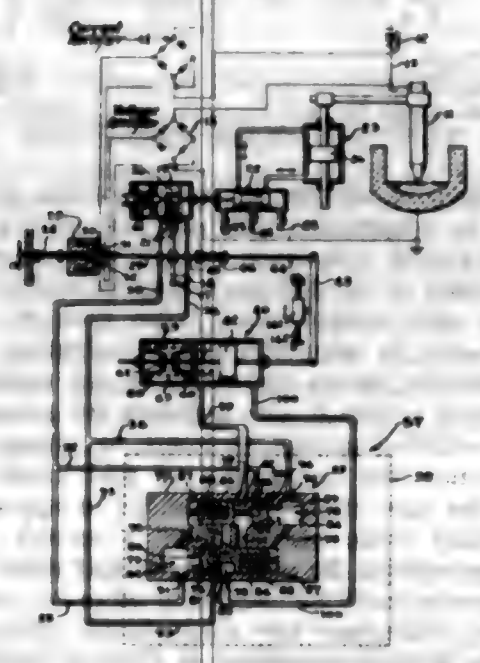
body of said grip portion consisting of synthetic polymeric organic, non-metallic material, said organic non-metallic material having a Shore degree of hardness between 85 and 100.

2,864,339

WIDE DEAD ZONE CONTROL WITH SET POINT RETURN

Jaromir K. Sanavsky, Chicago, Ill., assignor to GPE Controls, Inc., Chicago, Ill., a corporation of Illinois

Application February 27, 1957, Serial No. 642,801
25 Claims. (Cl. 121—41)



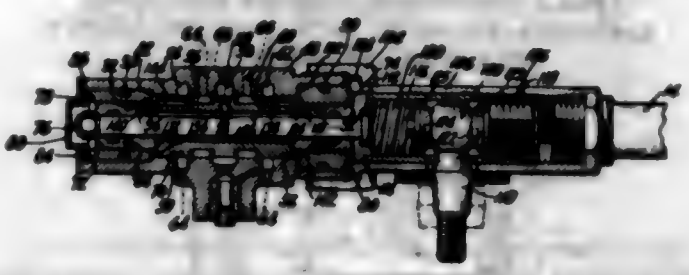
1. A regulator system including a controlled member that is movable, from a neutral position wherein it is effective to prevent delivery of energy for utilization by a power unit, to effect delivery of such energy; a train of successive, movable members each succeeding one of which is movable in response to movement of a preceding one; an amplifier having a movable output member that constitutes one of said train members and that is movable from a neutral position corresponding to said controlled member neutral position; and a control element constituting another one of said train members and that is movable from a neutral position corresponding to the other said neutral positions, wherein it is effective to maintain said amplifier output member stationary, in response to variance of a control signal from a selected zero-representing value and to operate said amplifier to move the output member thereof toward a position corresponding to degree of control signal magnitude variance from said value; lost motion means between a pair of successive ones of said members; means effective while the succeeding one of said pair of members is in a neutral position corresponding to the other neutral positions to restrain that succeeding member against movement in response to said preceding member; means responsive to increase of signal magnitude from its zero-representing value to a preselected value of signal magnitude to overcome said restraining means and to move said succeeding member to a position corresponding to the signal magnitude and to establish a positive drive between said pair of members; and means responsive to return of said succeeding member to its neutral position to interrupt the positive drive established by said condition magnitude responsive means.

2,864,340

POWER STEERING APPARATUS

Howard E. Hruska, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application October 3, 1951, Serial No. 249,593
8 Claims. (Cl. 121—46.5)



1. A valve comprising a housing with a cylindrical bore therein, a cylindrical valve member having a central position in the bore and slidably positionable from said central position for controlling flow, said housing being movable with respect to said valve member to reestablish the latter in its central position in the bore, two annular channels in the bore of the housing connectible to a source of fluid under pressure, a third annular channel in the bore of the housing connectible to a return line, two annular channels in the valve member connectible to working ports and communicating the third annular channel with the other annular channels in the bore of the housing, pressure chambers formed in the ends of the bore between the housing and the valve member, each of said pressure chambers being provided with two opposed reaction areas one associated with the housing and the other associated with the valve member, connections from said pressure chambers to the working ports via the two annular channels in the valve member, movement of said valve member away from its central position establishing unequal pressures in the chambers acting on said areas tending to cause the housing to follow up the valve member, and means for moving said valve member out of its central position.

2,864,341

FLUID MOTOR

Warren D. Novak, Chappaqua, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

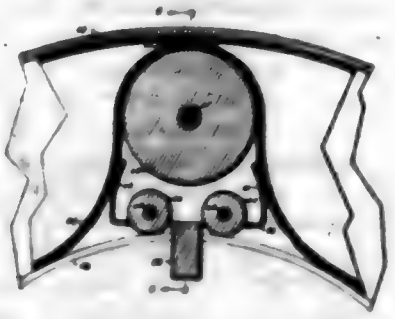
Application April 4, 1957, Serial No. 650,787
4 Claims. (Cl. 121—48)

4. A hydraulic motive means comprising, a rectangular metal tube having a slot in one side, a traveling carriage in said tube, said carriage having a pair of rollers bearing on one wall of said tube and a third roller positioned adjacent the opposite wall thereof, a guide plate formed at each end of said carriage extending transversely of said tube in advance of a respective one of said pair of rollers, a mechanical coupling means secured to said car-

therein, a gas passage in the setting in communication with said furnace gas outlet and setting gas outlet, tubular means in the setting disposed in heat exchange relation-

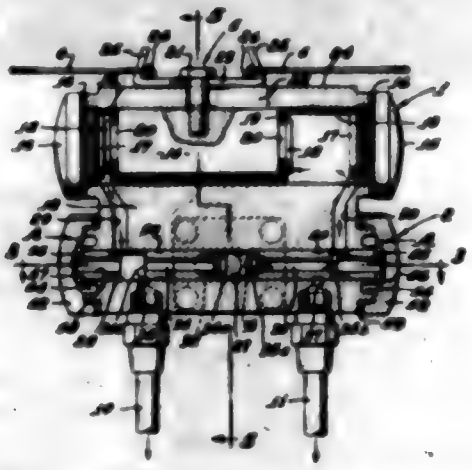
certain of said hollow marginal rails, said tubular ribs being separated from the water jacket space and hollow marginal rails, a cooling water inlet directly connected

riage and extending through the slot in said metal tube to the exterior thereof, a rubber tube within said metal tube, said rubber tube lying between said third roller and



said opposite wall and constricted therebetween, said rubber tube extending throughout the length of said metal tube, and means at each end of said rubber tube for applying hydraulic power thereto.

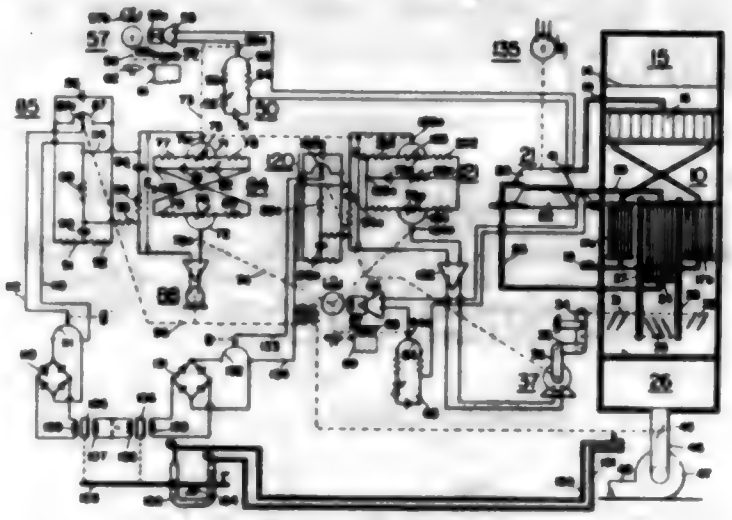
2,864,342
HYDRAULICALLY OPERATED MOTOR AND CONTROL MEANS THEREFOR
Lynn J. Ziegelmeyer, Klamath Falls, Oreg.
Application August 29, 1955, Serial No. 530,994
21 Claims. (Cl. 121—150)



1. Control means for a reciprocable hydraulically operated motor, comprising: a valve unit providing a cylinder having inlet ports and return ports for connection with a source of hydraulic pressure fluid; a reciprocable fluid pressure-responsive valve member movable in said cylinder between predetermined positions; said unit providing passages for communicating said cylinder with said motor; said valve member having means cooperable with said inlet and return ports for reversing the flow of hydraulic fluid through said passages responsive to fluid pressure-effected movements of said valve member from one of said predetermined positions to the other; and means providing air-containing chambers within the ends of said cylinder and at all times in communication with said passages whereby the air is compressed therein by the hydraulic pressure being applied to the motor and is applied to effect movement of said valve member into said positions.

2,864,343
CONTROL SYSTEMS
Theron W. Jenkins, Jr., Fort Washington, Pa., assignor to Leeds and Northrop Company, Philadelphia, Pa., a corporation of Pennsylvania
Application January 27, 1953, Serial No. 333,494
9 Claims. (Cl. 122—479)

1. A control system for maintaining the magnitudes of two conditions at predetermined values by maintaining both the magnitude of their sum and the magnitude of their difference at predetermined values, comprising means including two condition-varying elements a first of which is operable concurrently to vary the magnitudes of said conditions in opposite senses and the second of which is operable concurrently to vary the magnitudes of said conditions in the same sense, first and second condition-sensitive means respectively responsive to the magnitudes of said two conditions, a balanceable summing system which is balanced when said sum is at a predetermined value, a balanceable difference system which is balanced when said difference is at a predetermined value, each of said balanceable systems having a first adjustable element and a second adjustable element respectively affecting the balance of said systems, means responsive to said first condition-sensitive means for concurrently actuating said first adjustable element in each of said systems, means responsive to said second condition-sensitive means for actuating said second adjustable element in said summing system for producing in conjunction with said adjustment of said first element an unbalance of said summing system upon deviation of the sum of the magnitudes of said conditions from said predetermined value and for concurrently actuating said

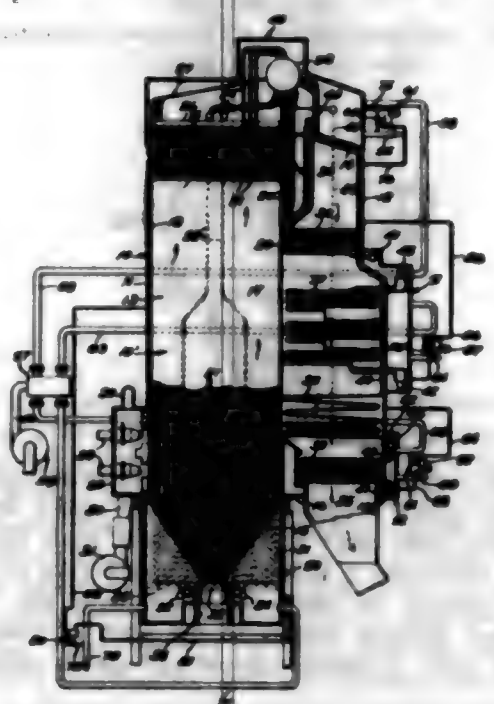


second adjustable element in said difference system for producing in conjunction with said first element in said difference system unbalance of said difference system upon deviation of the difference between said two conditions from said predetermined value, each of said systems including an adjustable system-balancing element, a first actuating means responsive to the unbalance of said summing system in one direction for actuating one of said condition-varying elements to change in the same direction the magnitudes of said conditions for changing the sum of said magnitudes to approach said predetermined value of said sum, a second actuating means responsive to the unbalance of said difference system for concurrently actuating the other of said condition-varying elements for concurrently changing the magnitudes of said conditions in opposite directions to change the difference between said magnitudes in a direction to approach said predetermined value of said difference, each of said actuating means having a connection for adjustment respectively of said system-balancing elements in said systems in directions to restore balance of each of them.

2,864,344
VAPOR GENERATORS
Nicholas C. Artemy, Valhalla, N. Y., assignor to Foster Wheeler Corporation, New York, N. Y., a corporation of New York
Application June 30, 1954, Serial No. 440,808
6 Claims. (Cl. 122—494)

1. In a vapor generator, a setting having a gas outlet opening therein, a furnace in the setting, means for firing the furnace, said furnace having a gas outlet opening

therein, a gas passage in the setting in communication with said furnace gas outlet and setting gas outlet, tubular means in the setting disposed in heat exchange relationship with gases of combustion passing to said setting gas outlet, a portion of said tubular members extending outside said setting, an air-tight casing enclosing the portion of said tubular members extending outside said setting, a source of fluid under pressure, fluid supply means in communication with said fluid source and casing, fluid discharge means in communication with said casing and the atmosphere, damper means for controlling the flow of fluid through said fluid supply means, other damper



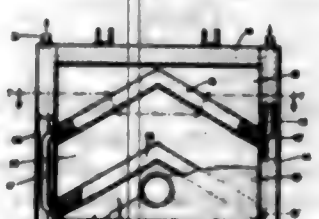
means for controlling the flow of fluid through said fluid discharge means, and pressure control means for operating both said damper means to maintain a desired pressure differential between said casing and setting, said pressure control means being adapted to move the first-mentioned damper means to an opened position and said other damper means to a closed position when the desired pressure differential changes by reason of an increase in pressure in the setting, and adapted to move said first-mentioned damper means to a closed position and said other damper means to an opened position when the desired pressure differential changes by reason of a decrease in pressure in the setting.

2,864,345

WATER COOLED FURNACE DOOR WITH ANGULAR RIBS

Jesse H. Reighart, Cleveland, Ohio

Application April 17, 1956, Serial No. 578,661
10 Claims. (Cl. 122—498)



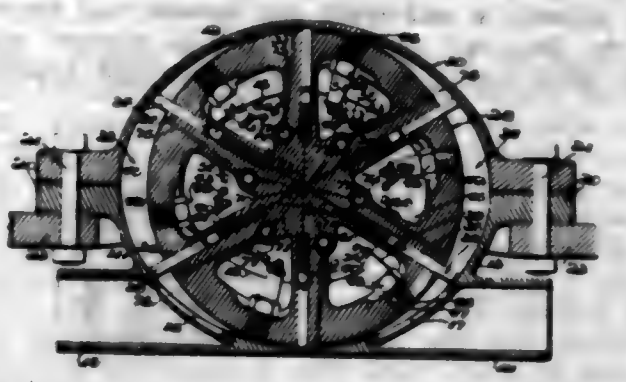
1. A water-cooled furnace door for industrial furnaces, comprising a hollow shell forming a water jacket space over the entire outer side of the door with communicating hollow inwardly disposed marginal rails forming a recess on the inner side of the door, a plurality of tubular water-cooled ribs within said recess, disposed between certain of said hollow marginal rails, said tubular ribs being separated from the water jacket space and hollow marginal rails, a cooling water inlet directly connected to one end of at least one of said tubular ribs, the other end of said one tubular rib communicating with one of said hollow marginal rails and providing the only communication between the tubular ribs and the water jacket, an outlet in said water jacket, said tubular ribs and hollow marginal rails forming pockets therebetween, and plastic refractory material in said pockets, whereby cooling water may be circulated first through said tubular ribs and then through the water jacket.

2,864,346

ROTARY INTERNAL COMBUSTION ENGINE

George H. Taylor, Jr., Wilmington, Del.

Application May 7, 1957, Serial No. 657,620
9 Claims. (Cl. 123—16)



3. A rotary internal combustion engine comprising a substantially elliptical casing including a substantially elliptical wall and relatively narrow side walls having elliptical edges, said elliptical edges defining a relatively large elliptical opening through said casing axially thereof, a substantially cylindrical rotor mounted within the elliptical casing for rotation and having a diameter slightly less than the width of the elliptical casing measured on its minor axis, a plurality of circumferentially spaced movable radial vane elements carried by said rotor and having side projections engaging said elliptical edges and guided thereby, springs for maintaining the projections of said vane elements in contact with the elliptical edges, spark plugs carried by the rotor between adjacent pairs of the vane elements and having contacts which move with the rotor, relatively stationary contacts connected with the casing and disposed in the path of travel of the spark plug contacts to brush the same for causing each spark plug in succession to fire near the point of maximum compression in the engine, said rotor having fuel chamber means formed therein for the reception of fuel, reciprocatory plunger means connected with the fuel chamber means and moving with the rotor, and a fixed cam connected with said casing in the path of movement of the plunger means and adapted to actuate the plunger means for injecting fuel from the fuel chamber means into the combustion space of the engine near the point of maximum compression, said rotor having fuel injection port means leading from said fuel chamber means.

2,864,347

INTERNAL COMBUSTION ENGINE

Everett M. Barber, Wappingers Falls, and Charles W. Davis, Fishkill, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

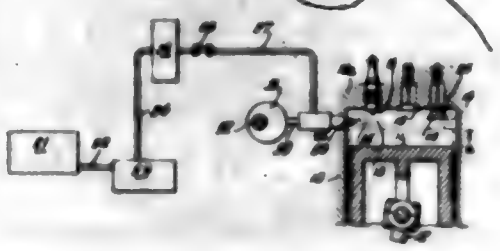
Application July 5, 1957, Serial No. 670,227
11 Claims. (Cl. 123—32)

1. The combination in an internal combustion engine comprising a cylinder having a piston operating therein and defining a combustion space, intake means for said cylinder for introducing air into said combustion space

in the manifold within the passageway and vertically spaced to lie intermediate next adjacent chambers for

ating linkage including a rocker arm and a push rod, each of said linkages being disposed in a plane passing

and for imparting a high velocity swirl thereto, fuel injection means carried by said cylinder for providing fuel to said combustion space, means for supplying fuel thereto whereby a portion of the first increment of injected fuel forms with a localized portion of the swirling air in said cylinder a combustible fuel-air mixture adjacent said fuel injection means, a spark ignition device mounted on said cylinder and having electrodes extending into said combustion space sufficiently close to said fuel injection means and the fuel injected therefrom so that said combustible fuel-air mixture formed from said localized portion of said swirling air with said first increment of injected fuel envelopes the spark gap between said electrodes substantially as soon as said combustible fuel-air mixture is formed, means coordinated with engine operation for controlling the start of injection of fuel from said fuel injection means during the latter part of the compression stroke of said piston, means synchronized with engine operation for producing a spark of igniting intensity at said spark gap between said electrodes at the time said combustible fuel-air mixture reaches said spark gap to initiate combustion and establish a



flame front traveling in the direction opposite that of said swirling air, and means for controlling the rate and duration of injection of fuel following ignition to impregnate shortly in advance of the traveling flame front additional quantities of said swirling air to form progressively additional combustible fuel-air mixture immediately in advance thereof for burning substantially as rapidly as formed to provide the power required on each cycle, whereby the formation of sufficient end gases consisting of combustible fuel-air mixture trapped by said flame front to cause spontaneous ignition and produce knock is prevented, said spark gap between said electrodes of said spark ignition device being positioned in a plane which is normal to the static center line of the fuel spray from said fuel injection means and located between 0.35" and 0.70" from the orifice thereof and in this plane in the direction of swirling air movement a distance between 0.10" and 0.40" from said center line, and in the same plane at right angles to this last mentioned distance not more than 0.25", said fuel injection means being of the type comprising a nozzle which produces a narrow angle penetrating spray, said angle varying between 5° and 25°.

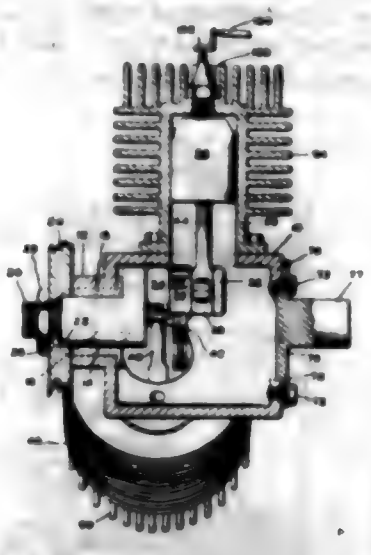
2,864,348

ROTARY INTERNAL COMBUSTION ENGINE

Donald H. Blish, Crown Point, Ind.

Application August 1, 1956, Serial No. 601,490
1 Claim. (Cl. 123—44)

An internal combustion engine assembly comprising a fixed support, a shaft fixed to said support, and a crank case having an open end and a reduced hollow end rotatably mounted on said shaft a bushing between said reduced hollow end and said shaft, a cover removably fixed to said open end, a power shaft fixed to said cover, said support having an aligned bore and counterbore forming a shoulder and said shaft having a reduced, externally threaded end portion extending through said bore and counterbore, a shoulder formed between the reduced end portion and the other portion of said shaft, said last mentioned shoulder being positioned in said counterbore in abutting relation to the shoulder formed between said bore and counterbore, a nut threadedly engaged on said reduced end portion and clampingly abutting said support to hold said shaft rigid thereon, said crank case being rotatably positioned on said other portion of said shaft, an axially off-set stem on said other portion of said shaft within said housing, a plurality of cylinders, angularly offset from each other, rotatable with said crank case, a plurality of piston rods rotatably po-



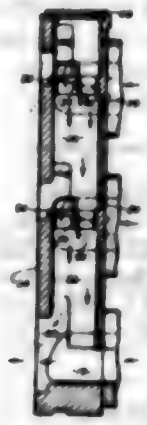
sitioned on said stem, each piston rod being connected to a piston within a cylinder, inlet and outlet means in each cylinder said other portion of said shaft having an axial bore providing a fuel inlet, a spark plug at the end of each cylinder in communication with the interior thereof, and ignition means in the path of rotation of each spark plug to ignite compressed gasses within said cylinder.

2,864,349

INTAKE MANIFOLD FOR INTERNAL COMBUSTION ENGINES

John C. Bandli and Leslie W. Foster, Minneapolis, Minn., assignors, by mesne assignments, to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin

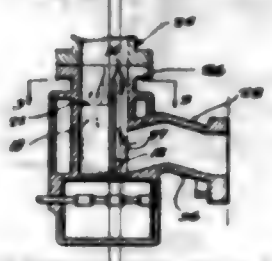
Application September 25, 1957, Serial No. 686,229
5 Claims. (Cl. 123—52)



3. An intake manifold for a multi-cylinder engine having three or more cylinders arranged on horizontal axes and in vertical alignment which comprises an elongated unitary casting adapted to be mounted in vertical position on the engine and having a plurality of vertically spaced chambers each in open communication with one of the engine cylinders, said casting having a fuel inflow port extending from each chamber, means for mounting a carburetor on the casting at each inflow port for supplying fuel through the port and connected chamber to the corresponding cylinder, said casting having an internal vertical passageway disposed alongside the chambers and opening into each chamber, a plurality of valves mounted

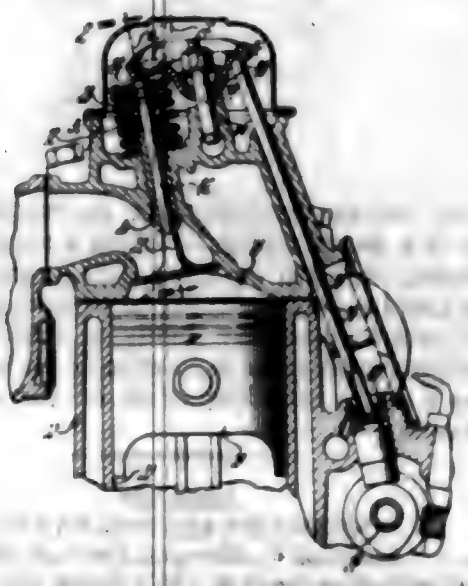
in the manifold within the passageway and vertically spaced to lie intermediate next adjacent chambers for opening and closing the passageway, a single control means connected to all of the valves for simultaneously opening and closing the valves, and a spring means acting upon the control means to yieldably retain the valves in closed position.

2,864,350
APPARATUS FOR PARTITIONING A MANIFOLD
Charles E. Finley, Derry, and Ralph E. Finley, Ligonier, Pa.
Application February 28, 1958, Serial No. 718,162
6 Claims. (Cl. 123—52)



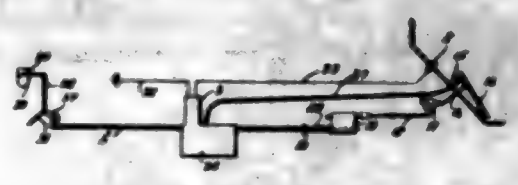
5. In combination with an internal combustion engine having a substantially hollow heat exchange member mounted on the intake manifold thereof, a manifold divider press-fitted into said heat exchange member and flush against the lower walls thereof comprising a substantially rectangular main body portion having a rounded end and opposed substantially rectangular end, a substantially rectangular partitioning member fixedly secured to said main body portion in perpendicular relationship relative to a side thereof, said partitioning member having a pair of opposed substantially rectangular ends, one of said ends of said partitioning member being coplanar with said rectangular end of said main body portion, and said rounded end of said main body portion extending beyond said other end of said partitioning member.

2,864,351
VALVE ACTUATION MECHANISM
Clayton B. Leach, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 7, 1956, Serial No. 626,925
18 Claims. (Cl. 123—90)



1. In an internal combustion engine having a cylinder with a piston disposed therein and a cylinder head cooperating with said cylinder and piston to form a combustion chamber, an intake valve and an exhaust valve for said chamber, each of said valves having an actuating linkage including a rocker arm and a push rod, each of said linkages being disposed in a plane passing through its respective valve, said planes being disposed oppositely and angularly from the center line of said cylinder, said valves being further disposed in a common plane angularly offset from said center line.

2,864,352
ACCELERATOR HYDRAULIC HOLDING UNITS
Thomas E. Wells, Toledo, Ohio
Application October 9, 1956, Serial No. 614,926
5 Claims. (Cl. 123—98)



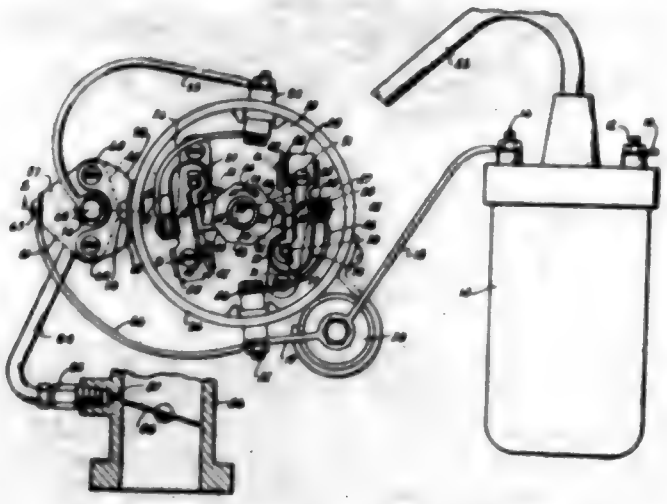
1. In a vehicle acceleration system of the class described a sealed hydraulic unit interposed on the normal vehicle linkage between the accelerator foot pedal and the butterfly fuel control valve; said sealed hydraulic unit having, a main hydraulic chamber partially filled with suitable hydraulic liquid, a pressure chamber in said main hydraulic chamber, and said pressure chamber being filled with and immersed beneath said hydraulic liquid, a check valve in said pressure chamber sealing an opening between said main hydraulic chamber and said pressure chamber, spring means on said check valve for downwardly urging said check valve into an unsealed or opened position to permit the free flow of said hydraulic liquid from said pressure chamber to said main hydraulic chamber, a release valve in said pressure chamber sealing an opening between said pressure chamber and said main hydraulic chamber; spring means urging said release valve upwardly into a sealed or closed position; a piston cylinder section in said pressure chamber, a movable piston operable in said piston cylinder section, spring means within said piston cylinder section urging said piston outwardly into its decompressing position, direct connecting means between said movable piston and said normal vehicle acceleration linkage, a hydraulic liquid outlet channel between said piston section and said pressure chamber; electrical closing means on said check valve for lifting said check valve to its sealed or closed position; mechanical opening means for externally forcing said release valve downwardly into an unsealed or open position and contact means on the floor board of a vehicle for operating said check valve electrical closing means and said release valve mechanical opening means.

2,864,353
SPARK ADVANCE, VACUUM-ELECTRIC CONTROL
Marion Mallory, Jr., Detroit, Mich.
Application April 11, 1957, Serial No. 652,123
2 Claims. (Cl. 123—117)

1. In an engine ignition system, mechanism for interrupting spark coil primary current comprising a support structure; first and second contacts fixedly carried by said support structure; first and second breaker arms movably carried on said support structure; third and fourth contacts carried by the breaker arms in registry with respective ones of the first and second contacts; spring means urging the breaker arms to positions wherein the two sets of contacts are closed; a distributor shaft having cam surfaces engaged with the breaker arms for sequentially opening the contacts; a terminal for each set of contacts; a switch housing section of dielectric material; a second housing section secured to said switch section and having a cylindrical bore therein; a piston within said cylindrical bore; a compression spring between

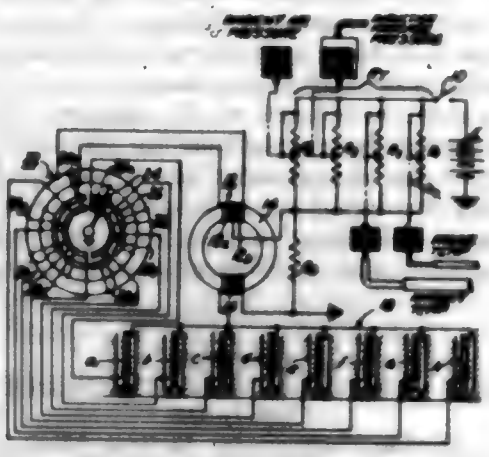
to a predetermined high temperature of the fuel in the and the adjoining front portion of the cabinet being

the piston and bore end wall; a vacuum line connected with the space between the piston and bore end wall; third and fourth switch terminals carried on said switch housing section; a first switch contact carried by said third terminal; a light spring arm carried by the fourth terminal and extending between the piston and first switch contact; a second switch contact carried by the spring



arm in registry with the first switch contact, said spring arm biasing the second switch contact away from the first switch contact and toward the piston; conductor means connecting the third switch terminal with one of the contact terminals; and conductor means connecting the fourth switch terminal with the other contact terminal.

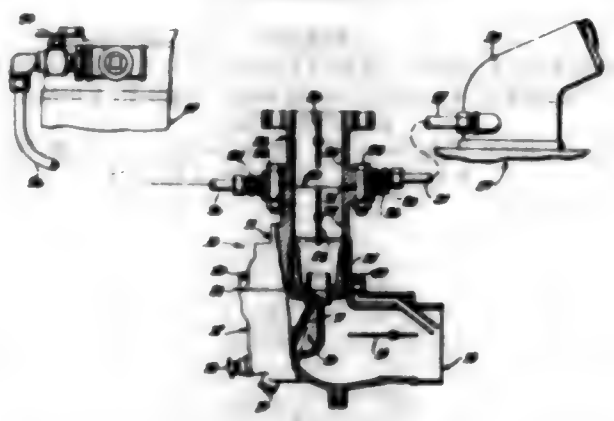
2,864,354
FUEL SUPPLY SYSTEM
Melvin C. Bartz, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application October 25, 1956, Serial No. 618,365
11 Claims. (Cl. 123—119)



1. A control for a fuel system having an electrically actuable fuel valve and a source of power, a pair of coupled inductors, means for connecting said source to one of said inductors, means for controlling the time duration of current flow in the other of said inductors, and means for connecting said other conductor to said valve.

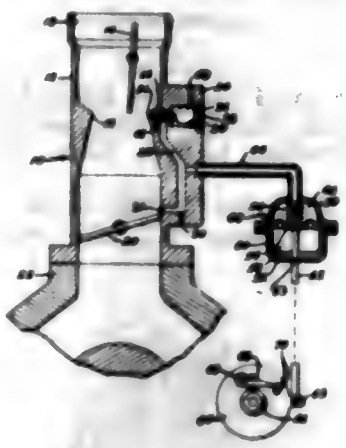
2,864,355
CARBURETOR HEAT EXCHANGER
Harmon H. Woodworth, Jr., Lake Bluff, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Application July 23, 1957, Serial No. 673,652
3 Claims. (Cl. 123—122)

3. A heater and gasket member for a carburetor and governor valve assembly wherein a passageway is formed through said carburetor and said governor valve, said heater and gasket member comprising a circular plate having an opening therethrough, said opening being formed of the same diameter as said passageway, said plate being formed of a relatively soft metal having a high thermal conductivity, said plate mountable between said carburetor and said governor valve in good thermal con-



tact and in an air sealing relationship therewith with said opening in alignment with said passageway, the outer periphery of said plate being formed in the shape of a trough having a certain curvature, a length of tubing mounted in said trough in good thermal contact therewith, and means connected to said tubing for conducting a heating fluid therethrough.

2,864,356
IGNITION DISTRIBUTORS
Stanley M. Udale, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Application December 19, 1957, Serial No. 703,935
19 Claims. (Cl. 123—117)

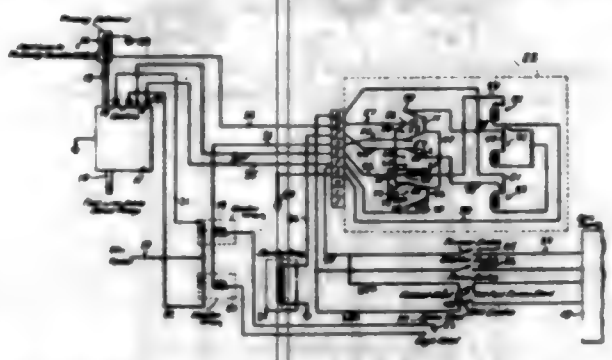


1. An ignition distributor for an internal combustion engine in a motor vehicle including a member adjustable to advance or retard the spark, first means responsive to engine speed and load effective to advance said spark, and second means responsive jointly to vehicle acceleration and instantaneous grade inclination of the vehicle to superimpose a spark retarding effect on the action of said first means.

2,864,357
ENGINE STARTING SYSTEM
Linwood F. Howard, Dayton, Ohio
Application April 8, 1957, Serial No. 660,732
10 Claims. (Cl. 123—179)

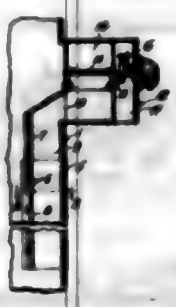
1. Electrical controls in a hot fuel prime system for supplying fuel for engine starting and wherein a tank holds priming fuel, heaters are arranged to heat the fuel in said tank when energized, a priming solenoid controls flow from the tank and a thermal switch closes in response

to a predetermined high temperature of the fuel in the tank; said electrical controls including a priming switch and a starting switch, a circuit closed by closing of said priming switch to open said priming solenoid; a relay en-



ergized by closing of said starting switch to open said circuit to said priming solenoid; and another relay energized in the closed position of said thermal switch to reclose said circuit.

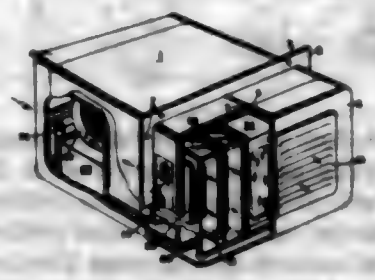
2,864,358
DOOR MOUNTED DOWN DRAFT FLUE FOR WOOD BURNING STOVES
George W. Harding, Lynchburg, Va., assignor to Automatic Draft and Stove Co., Inc., Lynchburg, Va.
Application June 30, 1954, Serial No. 440,428
4 Claims. (Cl. 126—77)



3. Wood burning stove comprising a hollow cylindrical body forming an enclosure defining a grateless combustion chamber having an unobstructed fuel access opening at the front at an intermediate position in the height of said enclosure, the latter including a laterally hinged door for closing said opening, a partition within said enclosure at the front, forming a down draft flue in conjunction with said enclosure, so much of said partition as is in conjunction with said door being swingable unitarily therewith, said down draft flue having its lower end terminating at a level adjacent the bottom of said door opening and extending upward therefrom, and having an air inlet opening through said enclosure at its upper end, a casing on the outer side of said enclosure overlying said inlet opening constituting the outer limb of said down draft flue, a damper within said casing controlling the inlet of air to said down draft flue, a thermostat within said casing having its thermal element connected metallically to said enclosure to respond predominantly to stove temperature, said casing being open at top and bottom respectively over and under said thermostat, providing for an upward convection flow of air at room temperature about said thermostat.

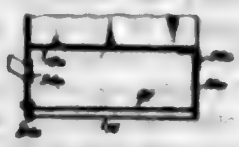
2,864,359
SPACE HEATER
Charles O. Vaughn, Dayton, Tenn., assignor, by mesne assignments, to Suburban Appliance Co., a corporation of Tennessee
Application October 28, 1955, Serial No. 543,443
15 Claims. (Cl. 126—110)

13. A space heater adapted for mounting in an opening in a wall comprising a cabinet having top, bottom, side, front end and rear end walls, the front end wall and the adjoining front portion of the cabinet being adapted to extend into a space behind said wall, a heating unit in said cabinet, said heating unit comprising a heater in a forward portion of said cabinet, a heat exchanger compartment communicatively connected to said heater at one side thereof, said heat exchanger compartment, being spaced both from the heater and the adjacent side wall of the cabinet and forming a wall portion of a passageway for air to be heated between said heat exchanger compartment and the heater and also defining a wall portion of a further passageway between said heat exchanger compartment and the adjacent side wall of the cabinet, and blower means in a rearward portion of said cabinet, the intake of said blower means being in communication with the passageway for air to be heated between the



heat exchanger compartment and the adjacent side wall of the cabinet, conduit means extending from the discharge of said blower means to the passageway for air to be heated between said heater and said heat exchanger compartment, the cabinet having an opening in the front portion thereof positioned to admit air from outside the cabinet into the passageway between the heat exchanger compartment and the adjacent side wall of the cabinet, said cabinet also having an opening in the front wall, whereby said blower means will draw air in through said opening in the front portion of the cabinet and over the outer wall of the heat exchanger compartment and discharge it through the passageway defined by the heater and the inside wall of the heat exchanger compartment and out through the opening in the front wall of the cabinet.

2,864,360
ROAD PAVING MACHINE
Richard R. Love, Buhl, Idaho
Application February 18, 1955, Serial No. 489,113
3 Claims. (Cl. 126—271.2)

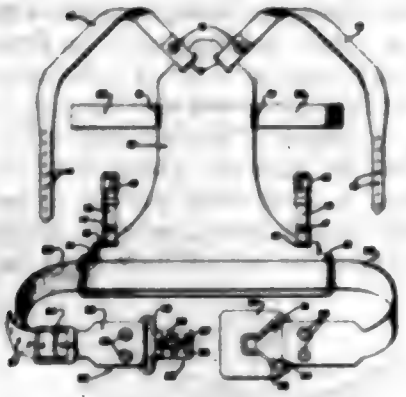


1. A road paving machine comprising a furnace, means for introducing heat into said furnace, said furnace having an open portion adapted to be placed in close proximity with a road surface and over a depression therein for heating said surface and the depression formed in said roadway, said furnace being formed in part by a container movable with respect to a part of said furnace, said container closing the top of said furnace and functioning as a part of said furnace and being heated during heating of said road surface, said container being movable to a position to dump the materials contained therein into said depression, and a deflector positioned in said furnace in a position to be above said surface during heating of the latter, a burner mounted on said furnace, and positioned to shoot a flame into said furnace, said deflector being positioned to receive the flame from said burner and deflect the flame from said burner away from said surface of the roadway, said deflector constituting a screen extending laterally across said furnace below said burner.

portion and a base, said base providing recesses, the material of said body keying into said recesses to retain

2,864,368
FOIL ENVELOPE AND ENCLOSING TUBE

2,864,361
BACK PLATE AND HARNESS FOR AQUA-LUNG
Harry B. Johnson, Indian Head, Md.
Application May 18, 1956, Serial No. 585,912
4 Claims. (Cl. 128—142)
(Granted under Title 35, U. S. Code (1952), sec. 266)



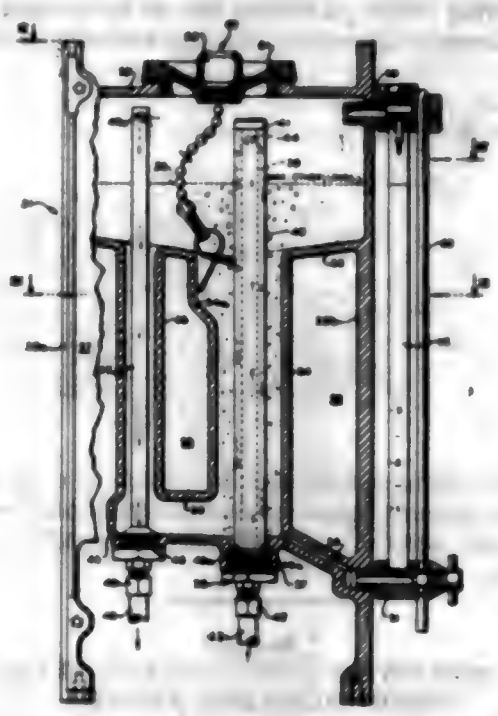
1. A support for portable breathing apparatus comprising a back plate generally contoured to the back of a wearer, said back plate comprising a one-piece integral construction having an upper vertical portion shaped to extend from the waist to and between the shoulder blades of the wearer and a lower horizontal portion shaped to wrap at least part way around the waist of the wearer, the construction and arrangement of the back plate being such as to fit snugly substantially in its entirety against the back and waist of the wearer, means on said back plate for attaching an oxygen flask thereto, a pair of shoulder straps adjustably attached to said back plate, and a waist band adjustably attached to said back plate and including a quick-release fastening mechanism at a front portion thereof.

2,864,362
MOULDABLE ABSORBENT MATERIAL
William A. Hermanson, Brookline, and Gerald I. Hermanson, Newton, Mass.
Application December 1, 1953, Serial No. 395,476
5 Claims. (Cl. 128—156)

1. A medical dressing of material comprising a porous inner paper web having wet strength, permeability and absorptivity, and adapted to lie over a wound, a center web of multiple plies of absorbent, permeable creped paper material, and a covering web of elastomeric latex impregnated paper material latently water absorbent in nature, and means securing said webs together.

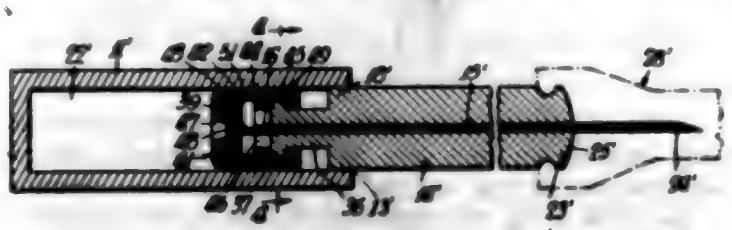
2,864,363
ANESTHETIC VAPORIZER AND ADMINISTERING APPARATUS
Wayne W. Hay, Madison, Wis., assignor to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York
Application June 25, 1957, Serial No. 667,944
10 Claims. (Cl. 128—203)

1. In an anesthesia machine, a vaporizer for mixing the vapor of a volatile liquid anesthetic agent with a gas vehicle, comprising a tank having a substantial length in at least one horizontal direction, two vertical tubes extending downwardly from said tank and in fluid communication therewith at their upper ends, a generally horizontally extending tube connecting the bottom ends of said vertical tubes, gas inlet means at the bottom of one of said vertical tubes, mixture outlet means above the maximum liquid level, and means for supplying gas to said inlet means, said gas bubbling upwardly through said one tube and thereby entraining said vapor, the upward movement of gas being effective to cause a circu-



lation of liquid up through said one tube, laterally through said tank, down through said other tube and laterally through the horizontal tube to the bottom of said one tube.

2,864,364
MEDICINAL SYRINGE
Arnold Robert Mizzy, New York, N. Y.
Application July 28, 1954, Serial No. 446,367
2 Claims. (Cl. 128—220)



1. An injection syringe comprising an elongated barrel, a plunger slidably mounted in the barrel and defining a variable volume chamber with respect thereto to contain a charge of medicinal fluid, said plunger having a hollow needle retained therein, extending longitudinally thereof and protruding at its pointed end beyond the front end of said plunger, a resilient member on said plunger adjacent the rear end thereof and coacting with the inner wall of said barrel to provide a seal to prevent leakage of fluid from said chamber, said plunger having an annular peripheral groove near its front end, a cap of resilient material having a recess therein with an inturned flange at its mouth of inner diameter slightly less than the diameter of the front end of said plunger so that said flange will snap into said peripheral groove removably to retain said cap on the front end of said plunger, said cap having a mass of solid material axially aligned with the recess and into which the pointed end of the needle is embedded.

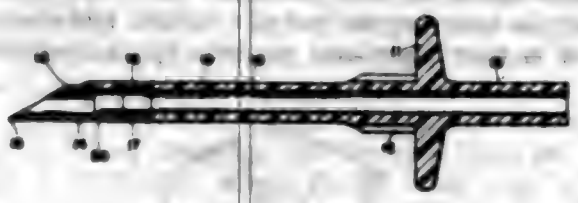
2,864,365
MEDICAL PUNCTURING NEEDLE
Constantin Szmukler, Grenoble, and André Vintrouel, Le Vesinet, France, assignors to Becton, Dickinson and Company, Rutherford, N. J., a corporation of New Jersey
Application March 8, 1957, Serial No. 644,781
5 Claims. (Cl. 128—221)

1. A puncturing needle including in combination a cannula body, a metal tip comprising a piercing end

2,864,370
INSTRUMENT FOR LANCING SNAKE BITES

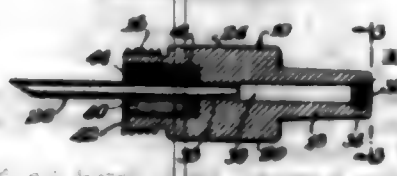
of flexible, air-impervious material substantially conform-

portion and a base, said base providing recesses, the material of said body keying into said recesses to retain



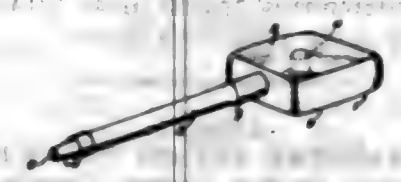
said tip fixed with respect to the cannula body and said tip being formed of sheet metal curved to define an arcuate portion co-extensive with said cannula.

2,864,366
HYPODERMIC SYRINGE ADAPTER
John J. Minkel, Brooklyn, N. Y., assignor to Chas. Pfizer & Co., Brooklyn, N. Y., a corporation of Delaware
Application April 4, 1957, Serial No. 650,642
9 Claims. (Cl. 128—221)



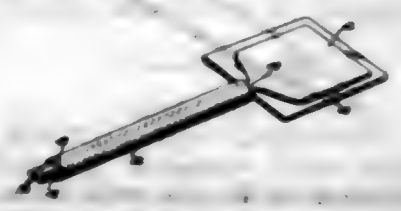
1. A device for adapting a hypodermic syringe for use with a Luer-type hypodermic needle comprising a substantially cylindrical body including a passageway extending longitudinally completely through it, a coupling means disposed upon one end of said body for engaging said syringe, a tapered snout on the opposite end of said body for engaging said Luer-type hypodermic needle, a filter element disposed upon said device and within said passageway for preventing the entry of particles into said hypodermic needle, said filter element being cup-shaped, and the outer end of said tapered snout being recessed for mounting said filter element with its outer surface providing a smooth continuation of said snout.

2,864,367
APPLICATOR
William C. Meade, Nesbonic, N. J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey
Application November 16, 1955, Serial No. 547,235
2 Claims. (Cl. 128—261)



1. A device for dispensing a plurality of applications of a liquid therapeutic formulation contained therein comprising: a resilient container, one wall thereof having a substantially centrally located, relatively flat-tipped protuberance on its inner surface extending part way towards the opposing wall of the container; a tube communicating with the container contents attached to a surface area other than that having the protuberance on its surface, the tube having a valve positioned at its tip portion opening on compression of the container walls for discharge of the container contents and closing on release thereof to prevent the container contents from flowing freely through said orifice when said device is inverted.

2,864,368
FOIL ENVELOPE AND ENCLOSING TUBE DISPOSABLE APPLICATOR
Frank A. Seeger, Watchung, N. J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey
Application April 3, 1957, Serial No. 650,449
4 Claims. (Cl. 128—261)



1. A single-use applicator adapted to inject pharmaceutical formulations into body cavities, said applicator comprising a formulation-storage envelope, an elongated neck-like portion extending away from said envelope, said envelope and neck-like portion normally being sealed; a passageway within said neck-like portion extending substantially the entire length thereof and connecting with the interior of said envelope, said neck-like portion being adapted to be torn away thereby to open said passageway to the outside at a point remote from said envelope; and a straight tubular member fitting around said neck-like portion extending from said envelope to a point just short of the end of said elongated neck-like portion, the cross-section of said tubular member being about one-fourth the cross-section of said envelope and the length of said tubular member being about twice the length of said envelope.

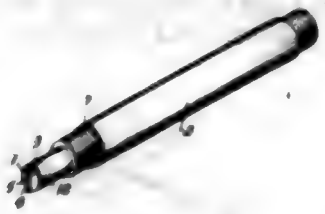
2,864,369
URINE BAG
Thomas F. Morrow, Minneapolis, Minn.
Application April 2, 1956, Serial No. 575,626
1 Claim. (Cl. 128—295)

A urine bag for a male person, comprising an open-topped bag receptacle constructed of a continuous sheet of pliable rubber and being formed to converge inwardly and downwardly from the open top whereby the largest transverse area of the bag interior is at the open top, said bag receptacle having a smooth and continuous upper edge with a forward portion and a rear portion, said forward portion being disposed well above the rear portion of the upper edge, said bag receptacle having at least one substantially continuous inwardly projecting sealing flange adjacent the upper edge and extending around the bag, the forward portion of the upper edge and the sealing flange sealingly engaging and fitting the lower abdominal portions of the person immediately above the genitals and the lower rear portion of the upper edge and the sealing flange sealingly engaging and fitting the body portions adjacent to and behind the scrotum, whereby to prevent flow of liquid out of the bag receptacle, the bag having a plurality of minute air vent apertures positioned below the forward portions of the upper edge to be positioned in confronting relation with the lower abdominal body portions above the genitals, and means secured to an integral portion of the bag receptacle adjacent the upper edge forward portion and constructed and arranged for securing the bag receptacle to the person's body.

of said second breast pocket freely overlaps an inner lower portion of said first breast pocket except where

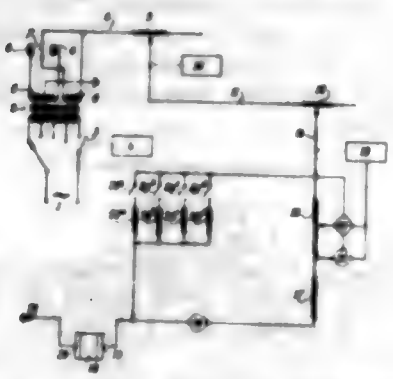
apexes of said pockets and extend, respectively, to a median point between said pockets and to a point below

2,864,370
INSTRUMENT FOR LANCING SNAKE BITES
Del Alves, Guadalupe, Calif.
Application September 19, 1955, Serial No. 534,968
4 Claims. (Cl. 128—314)



1. An instrument for lancing snake bites comprising a blade 5/6 inch wide and ¼ inch long adapted on the end of a handle, and having a centrally located guide point disposed 1/16 inch from the cutting edge of the blade.

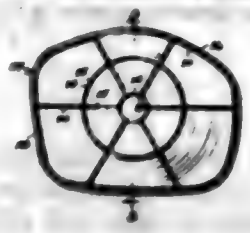
2,864,371
DEVICE FOR THE CONTROL OF ELECTRICAL SUPPLY FOR ELECTROTHERAPEUTIC PURPOSES, ESPECIALLY FOR STIMULOTHERAPY
Felice Parodi, Florence, Italy, assignor to Cauther S. A., Pantin, France, a corporation of France
Application June 13, 1955, Serial No. 515,284
Claims priority, application France June 14, 1954
13 Claims. (Cl. 128—419)



1. A device for the control of electrical supply for electro-therapeutic purposes, more particularly for stimulotherapy, comprising a source generating a main alternative current, a double rectifying diode fed by said source, a treatment circuit connected to said double rectifying diode, at least one pair of treatment electrodes inserted in said circuit, a plurality of resistances, inserted in said circuit, some at least of said resistances having a variable value, a plurality of regulators in said circuit fed by said source and connected with said variable resistances for varying the value thereof; control devices associated with certain at least of said regulators, said control devices varying the current admitted to said regulators, further control means for said resistances having fixed values, the operation of said further control means being performed in accordance with the selected type of electrodes, the ohmic resistance of the patient subjected to the treatment, the duration of application of the electrical treatment and the chosen electrical density.

2,864,372
BRASSIERE
William J. Buckley, Shelton, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Application August 4, 1955, Serial No. 526,443
8 Claims. (Cl. 128—481)

1. For use in a brassiere, an air-inflated pneumatic pad comprising an outer sheet of flexible, air-impervious material having a permanent cupped contour normally presenting a convex front surface simulating the contour of a bust of predetermined size and shape, an inner sheet of flexible, air-impervious material substantially conforming in peripheral outline to said outer sheet and having a cupped contour presenting a concave rear surface of less rounded curvature than said outer sheet and providing a pocket for receiving the bust of a wearer, said sheets being joined at their peripheral portions by an air-impervious



seal to provide an air containing space between said sheets, and wall means connected between said layers partitioning said air space into a plurality of air-containing cells, each of said cells being individually air-sealed to retain the air contained therein independently of the other cells, said wall means being of gradually decreasing height from the center to the periphery of said pad.

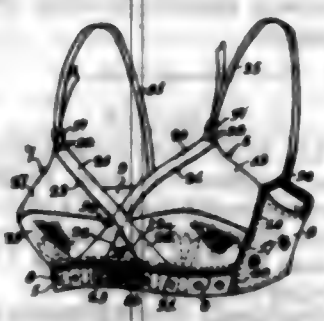
2,864,373
BRASSIERE
William J. Buckley, Shelton, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Application August 4, 1955, Serial No. 526,444
6 Claims. (Cl. 128—481)

1. For use in a brassiere, an air-inflatable bladder member comprising an outer layer of flexible, air-impervious non-elastic material, an inner layer of flexible, air-impervious material joined at its periphery to the periphery of said outer layer by an air-impervious seal to provide an air containing space between said layers, and ventilating means comprising air openings extending through said layers, and each defined by an air seal connection between said layers in surrounding relation to said opening, said ventilating means being arranged in circumferentially spaced relation in the marginal portion only of said bladder member, the areas of said layers inwardly of said ventilating means being imperforate and unsecured to each other, and said layers being in bonded contact with each other at said air seal connections surrounding said openings and being unsecured in the circumferentially spaced areas between said circumferentially space ventilating means.

2,864,374
BRASSIERE BREAST POCKETS
Joseph Verreault, Quebec, Quebec, Canada, assignor to Dominion Corset Company, Limitee, Quebec, Quebec, Canada
Application June 18, 1956, Serial No. 592,197
7 Claims. (Cl. 128—483)

1. In a brassiere, a front body band section, a first breast pocket secured at its lower edge to the upper edge of the front body band section, a first side panel secured to the outer side edge of said first breast pocket and adjacent side edge of the body band section and extending rearwardly, a first shoulder strap having one end secured to the upper end of said first breast pocket and the other end secured to the associated side panel, a second breast pocket secured at its lower edge to the upper edge of the front body band section so that an inner lower portion

of said second breast pocket freely overlaps an inner lower portion of said first breast pocket except where said portions are secured to said front body band section, a second side panel secured to the outer side edge of said second breast pocket and adjacent side edge of the body band section and extending rearwardly, a second shoulder strap having one end secured to the upper end of said second breast pocket and the other end secured to the associated second side panel, a separately formed first breast moulding band secured along one side edge for a substantial length to the inner edge of the first breast pocket and extending the full length of the inner edge of said first breast pocket, the said first breast moulding band having its lower end portion paralleling but free of attachment to the adjacent inner edge of the lower portion of the first breast pocket but being secured throughout the remainder of its length to said first breast pocket, a separately formed second breast moulding band secured along one side edge to the inner edge of the

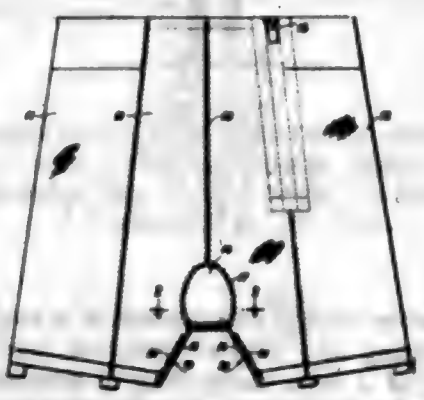


second breast pocket and extending the full length of the inner edge of said second breast pocket, the said second breast moulding band having an intermediate portion thereof free of attachment to the second breast pocket but being secured to the inner edge of said second breast pocket along the portions of its length located above and below the intermediate portion free of attachment, said first breast moulding band having an intermediate portion directly above its free lower end portion disposed beneath and free of attachment to the free intermediate portion of the second breast moulding band, said brassiere being further characterized in that the said lower end portion of the first breast moulding band freely overlies the inner lower portion of the second breast pocket and is secured along its lower end edge to the upper edge of the front body band section and in that the lower end portion of the second breast moulding band freely overlies the inner lower portion of the first breast pocket and is secured along its lower end edge to the upper edge of said body band section.

2,864,375
BRASSIERE
Pearl J. Steinmetz, Evanston, Ill., assignor to The H. W. Gossard Co., Chicago, Ill., a corporation of Illinois
Application May 7, 1956, Serial No. 582,977
3 Claims. (Cl. 128—492)

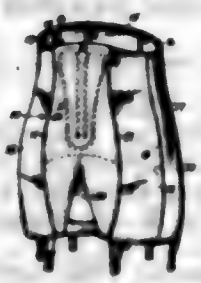
1. A brassiere comprising a front portion having bust pockets, and a connected back portion having means for securing the brassiere upon the body, marginal edges bordering the top and outer side edges of said bust pockets and forming channels which are open at the apexes of said pockets and extend, respectively, to a median point between said pockets and to a point below the outer borders of said pockets, extensible tapes composed at least partly of elastic material slidably disposed in said channels with their inner ends secured adjacent the inner ends of said channels and their outer ends forming loops which extend outside said channels at the apexes of said pockets, and shoulder straps each having one end secured to the back portion of the brassiere and the other end freely connected to the loops of said extensible tapes.

2,864,376
FOUNDATION GARMENT
Gertrude R. Seporack, Bridgeport, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a corporation of Connecticut
Application November 22, 1954, Serial No. 470,199
8 Claims. (Cl. 128—524)



1. A girdle, comprising body and crotch portions, said crotch portion being elongated and extending longitudinally between the front and the back of said body portion, the lower portion of said body portion forming leg engirdling portions each of which has an inner side portion adjacent to and extending below said crotch portion, and at least one stiffener connected to and extending along each of said inner side portions and terminating short of said crotch portion.

2,864,377
GIRDLE
Joseph R. Montreys, Bridgeport, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut
Application July 25, 1955, Serial No. 524,096
3 Claims. (Cl. 128—533)



1. In a girdle or the like, a back and side sections, a front panel comprising an outer flexible fabric layer, seams securing said fabric layer at its marginal side edge portions to said side sections, and stay means at the inner side of said fabric layer comprising a pair of flexible thermoplastic sheets superimposed one on the other and secured at their marginal side edges by said seams, a flexible stay member of elongated strip form interposed between said thermoplastic sheets in spaced relation to said seams, and continuous weld seams contiguously adjacent and parallel to the side edges of said stay member, homogeneously adhering said thermoplastic sheets to-

pheric pressure during the tobacco conditioning procedure, applying to the top and bottom surfaces of the mass of

radially disposed slot extending from the aperture to the outer peripheral edge of said flat disc, a circular tube

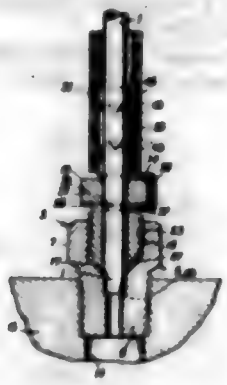
gether and positioning said stay member in a sealed pocket having outer and inner sides formed by said thermoplastic sheets and side edges defined by said weld means, the internal surfaces of said pocket being free of adherence to said stay means.

2,864,378

PROTECTORS FOR TUBING

Rudy F. Schneller, O'Fallon, and Owen L. Bandy, St. Louis, Mo., assignors to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio

Application December 3, 1954, Serial No. 472,885
4 Claims. (Cl. 138—61)



1. A protector for the end portion of a length of plastic tubing leading into a tube connector, said tube connector being of a type comprising a member having a threaded socket and a tubular nut threaded in the socket, the nut having a shank and a head on the outer end of the shank, said protector being made of sheet metal and having an elongate stem portion of at least part-circular cross section for receiving an end portion of the tubing, an integral arm portion extending laterally outwardly from one end of said stem portion, an integral finger extending forward from the outer end of the arm portion and offset laterally outward from the stem portion, said finger being shorter than said stem portion and its length being slightly greater than the height of the head of the nut, and another portion in the form of a C-shaped clip member at the outer end of the finger in a plane generally at right angles to the axis of the stem portion and with the opening of the C aligned with the axis of the stem portion, the clip member being adapted for clipping on the shank of the nut under the head of the nut, with the arm portion overlying the head of the nut and the stem portion extending out from the head of the nut for protecting the tubing against bending and shear stresses.

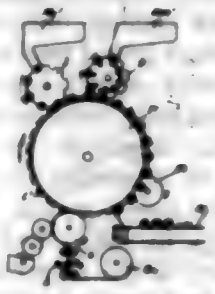
2,864,379

METHOD AND MEANS FOR MANUFACTURING FILTER MOUTHPIECE CIGARETTES

Kurt Körber, Hamburg-Bergedorf, Germany, assignor to Kurt Körber & Co. K.-G., Hamburg-Bergedorf, Germany

Application June 22, 1954, Serial No. 438,512
Claims priority, application Germany September 22, 1953
3 Claims. (Cl. 131—94)

1. In a method of manufacturing filter mouthpiece cigarettes, the steps in sequence of providing connecting bands having an adhesive coating on one side and moving the same spaced from each other in flat condition continuously in one direction in a circular path, depositing upon each of said connecting bands during its movement in said circular path, first two cigarettes in axial spaced and axial alignment, and thereafter a filter mouthpiece portion into the space between said two axial aligned cigarettes and positioned transversely to the direction of movement of said connecting band and in axial alinement with said two cigarettes, the length of the space between said two cigarettes being equal to the length of the filter mouthpiece portions, wrapping each connecting band around said axially aligned filter mouthpiece portion and the two ends of the cigarettes abutting the ends



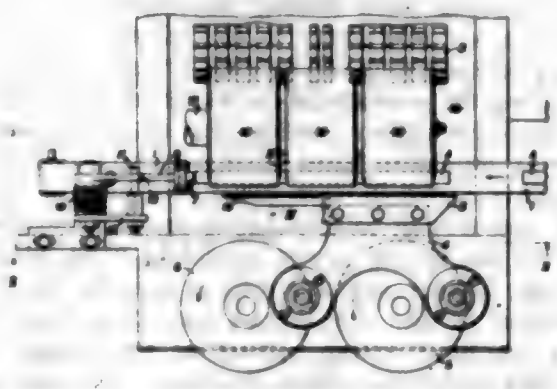
of said mouthpiece portion during the continuous movement of said connecting bands and then cutting during such continuous movement said filter mouthpiece portion into two portions, thereby forming two separate filter mouthpiece cigarettes.

2,864,380

APPARATUS FOR MAKING CIGARETTES

Desmond Walter Molins, London, England, and Felix Frederic Russ, deceased, late of London, England, by Caroline Marie Russ, executrix, Purley, England, assignors to Molins Machine Company Limited, London, England, a British company

Application December 3, 1956, Serial No. 625,775
Claims priority, application Great Britain December 6, 1955
4 Claims. (Cl. 131—94)



1. Apparatus for deflecting cigarette articles which are moving lengthwise, and at whose leading end faces tobacco is exposed, comprising a stop positioned in line with endwise moving cigarette articles so as to be engaged by the leading end face of an endwise moving cigarette article so as to arrest the endwise movement of said article, and a pusher mounted for horizontal movement in a closed path so as to push said article sideways on an operative stroke, wherein the said stop is located within the said closed path and is movable out of said path clear of the pusher on each return stroke of the latter.

2,864,381

METHOD FOR CONDITIONING TOBACCO

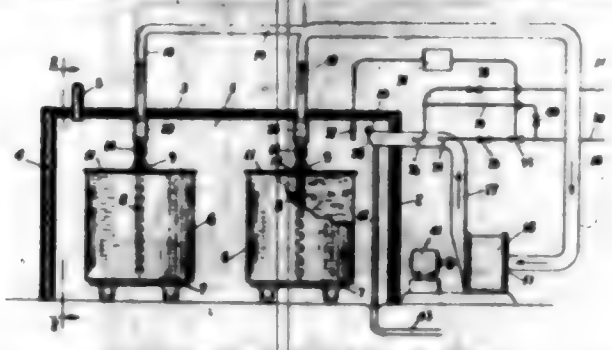
Lorne A. Rowell, Lachine, Quebec, Canada, assignor to Imperial Tobacco Company of Canada Limited, Montreal, Quebec, Canada

Application February 1, 1956, Serial No. 562,887
2 Claims. (Cl. 131—140)

1. The method of conditioning a compressed mass of tobacco comprising, passing a hollow perforated probe vertically downwards through the central portion of the mass of tobacco, placing the mass of tobacco in a chamber which is insulated to minimize condensation and to conserve heat and which is closed except for a vent which ensures that the chamber will be maintained at atmos-

said switches, and a series of rockers selectively operable by said digit keys to selectively operate certain of said switches; and dish-extruded magnetic means placed within to pass therethrough and reduce the temperature of the

pheric pressure during the tobacco conditioning procedure, applying to the top and bottom surfaces of the mass of tobacco cover members which are substantially impermeable to air, connecting the upper end of the probe to a source of suction and continually introducing into said chamber during the conditioning operation air which has



been suitably conditioned as to heat and moisture content, said process being characterized in that the sealing cover applied to the top of the mass of tobacco prevents air from short circuiting through the top of the mass of tobacco into the upper perforations of the probe as the tobacco slumps downwardly along the probe during the conditioning thereof.

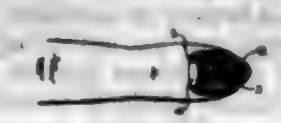
2,864,382
SMOKING PIPE
Christopher D. Hercules, Washington, D. C.
Application October 12, 1956, Serial No. 615,689
3 Claims. (Cl. 131—194)

1. A smoking pipe comprising a wood bowl having a short stem stub portion, a stem tip, and a light tubular metallic stem with limited flexibility, slidably fitted at its ends to said tip and said stub portion and having large heat dissipating surfaces for cooling gases passing through said stem, said stem being composed of a Sylphon type tube construction of alternate wide and narrow transverse sections and having sleeve end portions for sliding over a short stub on said bowl and an inner end of the tip respectively, the alternate narrow and wide sections of said Sylphon type construction being axially offset to make them all tangent to a substantially continuous flat bottom in said construction, whereby any deposits accumulated on said bottom may be readily removed.

2,864,383
HOLDER AND CAP DEVICE FOR A LADY'S PONY-TAIL HAIR-DO
Elizabeth A. Jacks and Alsie F. Penke, South Hadley, Mass.
Application September 16, 1957, Serial No. 684,114
2 Claims. (Cl. 132—46)

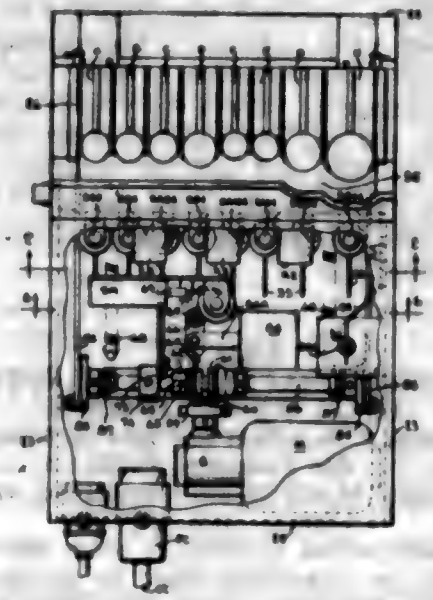
1. In a holder and cap device for a lady's pony-tail hair-do comprising in combination, a flat disc fabricated of resilient material and shaped to a generally circular outline, said flat disc having an aperture located eccentrically of the axis thereof and communicating with a radially disposed slot extending from the aperture to the outer peripheral edge of said flat disc, a circular tube having a longitudinal axis and extending outwardly from said flat disc and being integral therewith, said tube being slotted longitudinally thereof, said tube being secured at one end thereof to said flat disc and being disposed in a plane at a substantially right angle to the longitudinal axis of said flat disc, opposite sides of the radial slot of said flat disc relatively diverging outwardly from the sides of the slot of said tube at the juncture of said flat disc and tube, the opening defined by the aperture of said flat disc and the opening through said tube being adapted for the extension therethrough of a pony tail at the rear of the head with said flat disc being adapted to overlie the hair of the head adjacent the pony tail, and releasable interengageable tie means being disposed around said tube adjacent the juncture of said flat disc and tube for drawing said tube snugly about the pony tail enclosed therewithin and holding said tube and flat disc against the hair of the wearer.

2,864,384
FASHION-DESIGN COSTUME NAILS
Mary F. Walter, Amelia, Ohio
Application June 9, 1955, Serial No. 514,201
3 Claims. (Cl. 132—73)



2. A costume-design nail comprising a layer of textile fabric having a design matching with the pattern design of an enhancing part of the wearing apparel costume, said fabric layer being impregnated with reenforced transparent plastic material, and a tacky adhesive applied to the undersurface of the reenforced fabric layer.

2,864,385
COIN DISPENSING MACHINE
Arnold R. Buchholz and William H. Sprenger, Watertown, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Application December 23, 1954, Serial No. 477,154
5 Claims. (Cl. 133—2)



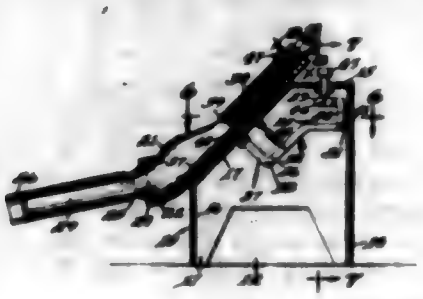
5. A keyboard for controlling an electrically operated and controlled coin dispensing apparatus having coin channels for pennies, a nickel, two dimes, a quarter, and a half dollar, comprising in combination, a series of circuit control switches, a row of tens keys 1 to 9, a row of digit keys 1 to 9 and zero, a series of rockers selectively operable by said tens keys to selectively operate certain of

2,864,389
UMBRELLA TENT

substantially superposed closed relationship and an angularly separated open relationship, a third frame member

said switches, and a series of rockers selectively operable by said digit keys to selectively operate certain of said switches.

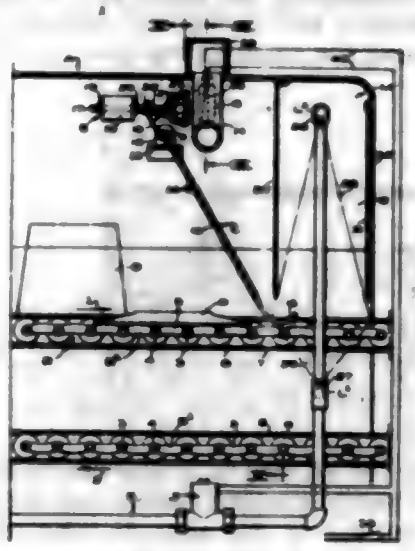
2,864,386
COIN COUNTER AND WRAPPER
Robert T. Allen, Elizabeth, N. J.
Application January 17, 1955, Serial No. 482,124
1 Claim. (Cl. 133—8)



In a coin counting and wrapping mechanism comprising a stand on which is mounted an inclined coin-holding tray divided into compartments by spaced, longitudinally-disposed ribs and including a common hopper into which counted coins may be discharged from said compartments, and a wrapping tube into which said coins are deposited from said hopper in condition for wrapping, the improvement comprising an individual flat coin-retaining plate disposed at the lower portion of each compartment and of dimensions adequate to hold a stack of coins deposited flat thereon and constructed and arranged to be withdrawn under said tray at right angles thereto for effecting discharge of said coins into said hopper, individual pressure actuating means disposed on said stand above each compartment, individual plate withdrawal means connected with and actuated by the corresponding pressure actuating means in a manner to effect said withdrawal of the plate when said pressure actuating means is actuated by pressure for the discharge of coins from the desired compartment individual retracting means constructed and arranged to effect retraction of each plate into coin-holding position after said discharge, said tray being constructed and arranged to effect counted stacking of the coins thereon in longitudinally-disposed rows, said tube being detachable from said hopper, and a removable coin counting insert adapted to fit over the compartments and comprising an elevated strip disposed in each compartment, each strip carrying a longitudinally-disposed series of predetermined number of slots, each slot being made to accommodate loosely one coin adapted for that compartment, and said strips in said compartments being joined by strips fitting over said ribs, whereupon, upon filling said slots with coins and lifting said insert free of said coins, the coins will remain stacked in counted relation in the compartments.

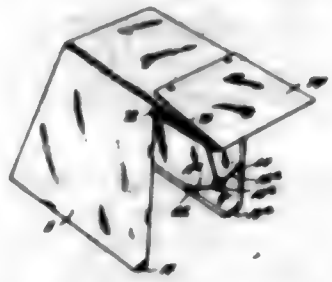
2,864,387
DISHWASHING MACHINE WITH AUTOMATIC FINAL RINSE CONTROL
George J. Federighi and Tore H. Noren, San Francisco, Calif.
Application March 29, 1954, Serial No. 419,236
2 Claims. (Cl. 134—46)

1. In a dishwashing machine: a water pipe leading to the machine for conveying water to the dishes in the machine; an electrically controlled valve mounted in the pipe; a housing mounted in the machine and having inlet and outlet ends extending to the outer surface of the machine; the outlet end being disposed at a higher level than the inlet end; a mercury switch disposed within the housing and being in electrical connection with the valve; said housing protecting the switch from the moisture within the machine and acting as a passage for air to pass therethrough and reduce the temperature of the switch; and dish-actuated magnetic means placed within the machine and adjacent to the switch for closing the



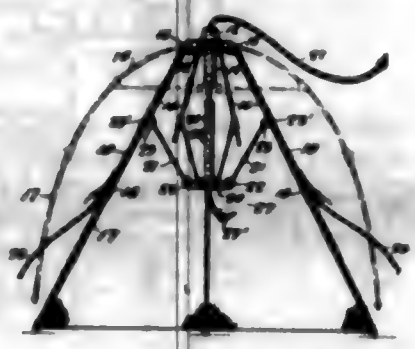
switch when a dish contacts with the means and causing the valve to open for permitting water to enter the machine.

2,864,388
SELF-ERECTING TENT
James F. Oliver, Canoga Park, Calif., assignor, by direct and mesne assignments, to Kwikover Inc., a corporation of California
Application September 19, 1955, Serial No. 535,110
4 Claims. (Cl. 135—1)



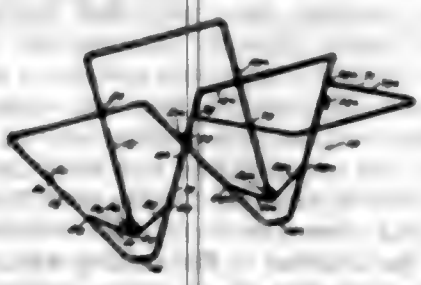
1. A collapsible tent frame comprising a first frame member and a second frame member hinged together for relative pivotal movement between a substantially superposed collapsed angularly closed position and an angularly separated open position, a thrust means interconnecting said first and second frame members and spanning the angular opening between said frame members and being hingedly broken intermediate the ends of its span to permit angular closing and opening of the span in response to corresponding action of said two frame members, energy absorbing and storage means cooperating with said thrust means to absorb and store energy when said frame members and thrust means are moved in an angularly closing sense and to release said energy when said frame members and thrust means are moved in an angularly opening sense, and a third frame member carried by said thrust means for linear movement in response to angular movements of said thrust means, said thrust means being oriented to linearly move said third frame member toward the hinged juncture of said first and second frame members when said first and second frame members are pivoted from said open to said closed position, and to linearly move said third frame member away from said juncture when said first and second frame members are pivoted from said closed to said open position, whereby said energy absorbing and storage means operates to drive said first and second frame members and said thrust means in said angularly opening sense and said third frame member linearly away from said juncture.

2,864,389
UMBRELLA TENT
Milton B. Smith and Earl C. Wallace, Andrews, and Lawson J. Zent, Huntington, Ind., assignors to The Hedrick Manufacturing Company, Toledo, Ohio, a corporation of Ohio
Application April 9, 1956, Serial No. 577,898
1 Claim. (Cl. 135—3)



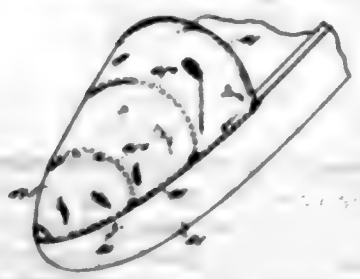
An umbrella tent comprising a dome-shaped body of canvas material provided with a central aperture at the top thereof, a centrally apertured annular plate secured to said body around said aperture on the upper side of said body, a vertical tube rigidly affixed within said plate, said tube having opposite end portions respectively disposed above and below the central portion of said body, a first centrally apertured spider surrounding said tube, said first spider being disposed on the underside of said body with the material of said body surrounding said central aperture engaged between the first spider and plate, means holding said first spider and plate together and clamping said material therebetween, a sleeve vertically slidable in said tube betwen upper and lower position, a second centrally apertured spider affixed around the lower end of said sleeve, a plurality of flexible radial arms having upper ends pivoted to said first spider and lower ends with ground-engaging means thereon, each of said arms comprising normally continuous upper and lower portions, fittings on the adjacent ends of said arm portions, pivot means on the outer sides of said fittings hingedly connecting said fittings, said fittings and pivot means providing for relative outward pivoting of said arm portions and engaging one another so as to prevent relative inward pivoting of said arms substantially beyond 180 degrees, radial links having inner and outer ends, the inner ends being pivoted to said second spider, pivot fittings rigidly affixed to the upper portions of said arms intermediate the ends thereof, and pivots connecting the outer ends of said radial links to said pivot fittings, whereby when said sleeve is slid to said upper position, said radial links bow said radial arms outwardly along substantially their entire lengths from said first spider to said ground-engaging means.

2,864,390
SELF-ERECTING TENT
James F. Oliver, Canoga Park, and Donald J. Kuyper, Riverside, Calif.
Application May 18, 1956, Serial No. 585,663
6 Claims. (Cl. 135—4)



1. In a tent, a frame structure therefor comprising first and second members hingedly connected together adjacent their ends for relative pivotal movement between a substantially superposed closed relationship and an angularly separated open relationship, a third frame member suspended angularly intermediate said first and second members, an energy storing and thrust means suspending said third member, said means comprising a spring having a central portion and two legs extending therefrom adapted to tension the spring by relative opposite angular movements thereof, a first of said spring legs being connected to said first member at a point removed from the hinge connection, the second of said spring legs being connected to said second member at a point removed from said hinge connection, said spring being oriented relative to said first and second members to provide opposite angular and spring tensioning movement of said legs when said first and second members are pivoted from an angularly separated open relationship toward a superposed closed relationship and to space said central portion from said hinge connection inwardly of the angle between said first and second members, and means connecting said third member to a point on said spring intermediate the ends of said legs, said spring being further oriented relative to said first and second frame members to move said third member connecting means linearly toward said hinge connection during angular relative movement of said first and second members toward a closed relationship, and to move said third member connecting means linearly outwardly away from said hinge connection during angular relative movement of said first and second members toward an open relationship.

2,864,391
BOAT HOOD
William A. Stark, Appleton, Wis.
Application July 11, 1957, Serial No. 671,352
3 Claims. (Cl. 135—6)



1. A boat hood comprising a flexible fabric panel having converging opposite side edges and a transversely extending rear edge, a hem formed in each of said side edges and in said rear edge, a pair of arcuate foundation rods pivotally secured together at one end and diverging rearwardly horizontally therefrom supported respectively in the hems in said opposite side edges of said panel, an upright arcuate bow extending through the hem in said rear edge, clamp means for detachably securing the lower ends of said arcuate bow rigidly to opposite gunnel portions of a boat and rigidly to the rear end portions of said foundation rods, a plurality of arcuate bows arranged parallel to and forwardly spaced from said first named arcuate bow, and clamp means for detachably securing the lower ends of each of said last named bows rigidly to opposite gunnel portions of a boat and rigidly to said foundation rods with said last named bows supporting said panel above said boat.

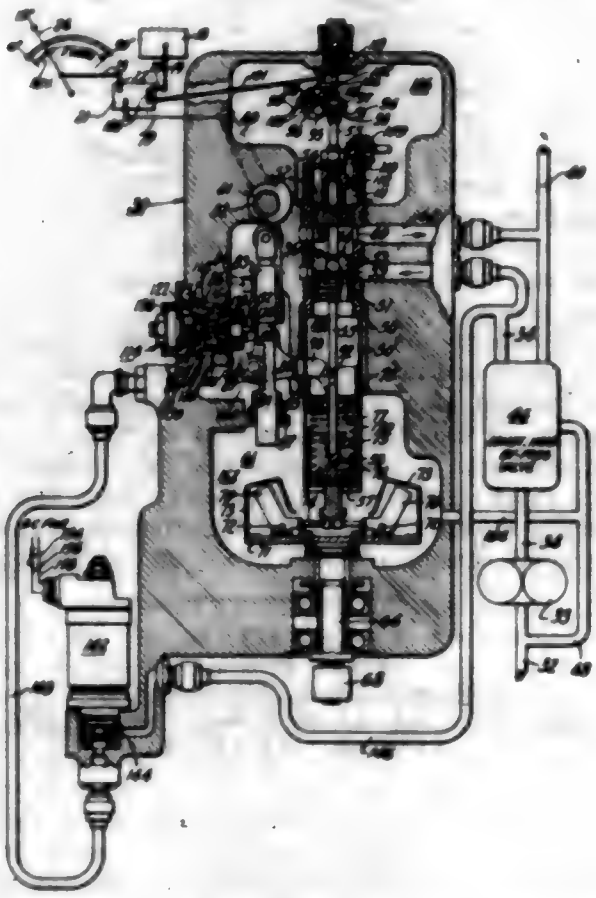
2,864,392
GOVERNOR RESET MECHANISM
Harry C. Zeisloft, Rochester, N. Y., and Howard J. Williams, South Bend, Ind., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application June 1, 1954, Serial No. 433,712
4 Claims. (Cl. 137—18)

1. In a fuel feed and power control system for a turboprop engine having a burner, the combination of a fuel

on the substantially large seating portion to readily flex

cordance with the liquid level in the receptacle, the down

conduit for conducting fuel to said burner, a fuel control valve in said conduit for controlling the fuel flow through said conduit to said burner, engine speed governor means having an adjustable speed setting and being operatively connected to said valve for controlling the fuel flow to said burner, pilot operated control means operatively connected to said governor means for adjusting the speed setting of said governor means in a predetermined manner, said control means including a governor setting lever



operatively connected to said governor means and a governor scheduling cam for controlling said lever, and governor reset means operable independently of said control means for controlling the speed setting of said governor means at preselected positions of said control means and below a predetermined maximum speed setting of said governor means, with said governor reset means including fluid pressure responsive movable wall means adapted to be connected to said governor means through said governor setting lever.

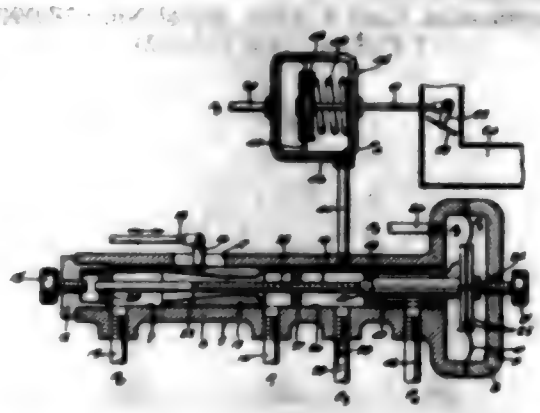
2,864,393

PRESSURE RATIO SENSER

John A. Drake, Van Nuys, Calif., assignor to Marquardt Aircraft Company, Van Nuys, Calif., a corporation of California

Application August 31, 1953, Serial No. 377,397
3 Claims. (Cl. 137—82)

3. In a control device having an output proportioned to the ratio between two compressible fluid pressures, a convergent-divergent nozzle receiving the higher of said two pressures and having sonic flow at its throat, a pick-up positioned within said nozzle and having a static pressure opening, means for limiting the location of said static opening of said pick-up to positions within the divergent section of said nozzle, diaphragm means for receiving the other of said two pressures on one side thereof, means for connecting said opening with the other side of said diaphragm means, said pick-up being connected to said diaphragm means for movement of said opening along said nozzle to a position where the static pressure sensed by said opening balances said other pressures, and means for modifying a supply pressure to obtain a regulating pressure proportional to the position of said pick-up and to the ratio of said two pressures, said modifying means comprising two restrictions spaced apart in a passage, said supply pressure being introduced to said passage and each restriction having sonic flow



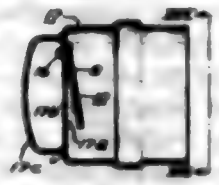
at its throat, means connected with said pick-up for varying the throat area of one of said restrictions, and means connected with said passage at a location intermediate said restrictions for receiving said regulating pressure.

2,864,394

AUTOMATIC RELIEF VALVE

Gustav A. Hempel, Pittsburgh, Pa., assignor to McDowell Manufacturing Company, Allegheny County, Pa., a corporation of Pennsylvania

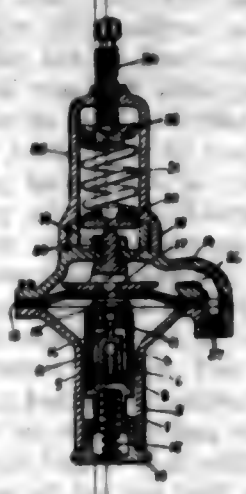
Application May 27, 1954, Serial No. 432,762
1 Claim. (Cl. 137—107)



An improved relief valve of the character shown and described to open and close-off a vent opening having a seating wall portion thereabout in a fluid-carrying member which comprises, a one-piece spring-like metal part of relatively thin section having a transversely-extending tab-like mounting portion provided with mounting holes therein, a neck-like connecting portion of narrowed extent, and a substantially larger seating portion, said metal part being of substantially uniform relatively thin sectional thickness along its full extent; a resilient body molded about and enclosing said metal part, said resilient body extending and being of substantially uniform thickness along said metal part to provide a metal part and resilient body assembly, said body having a transverse mounting portion at one end thereof about the mounting portion of said metal part and having a seating portion about the seating portion of said metal part; securing means extending through the mounting holes of said metal part to secure the mounting portions in a substantially flush relationship upon the seating wall portion of the fluid-carrying member, said metal part having a pre-set angular relationship between its mounting and seating portions and about its connecting portion to maintain the seating portions in a normally open non-stressed relationship with respect to the vent opening, seating portions of the assembly and essentially of said metal part having a pre-shaped contour when the seating portions are in both their open and closed positions that substantially corresponds to the contour of the seating wall portion, the assembly being sensitive to a positive application of fluid pressure upon one side to move the opposite side into an effective seating engagement with the seating wall portion and about the vent opening by fluid pressure acting

on the substantially large seating portion to readily flex the narrow neck-like connecting portion of said metal part into a stressed closed position, so that it will spring back into its normally open non-stressed position when fluid pressure is released, and said seating portions of said assembly are of substantially planar shape to correspond to a planar contour of the seating wall portion of the fluid-carrying member.

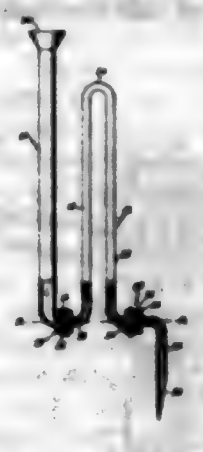
2,864,395
PRESSURE CONTROL APPARATUS
Keith Parr, Rosanna, Melbourne, Victoria, Australia
Application February 14, 1955, Serial No. 488,011
Claims priority, application Australia February 18, 1954
16 Claims. (Cl. 137—116.5)



1. A pressure control apparatus comprising a casing provided with an inlet port and an outlet port, a pipe section within said casing and provided with a passageway in communication with said inlet port, a pressure control valve seat at the end of said pipe section, a pressure control valve, means urging the pressure control valve to engage said seat against the direction of pressure flow in said passageway, a cover member secured to said casing and provided with an outlet, a diaphragm clamped between said casing and said cover member and provided with a pressure discharge port, a pressure relief valve controlling said pressure discharge port, means connecting said pressure relief valve with said pressure control valve, whereby both valves are movable in unison in the same direction, and a spring in said cover member urging said diaphragm toward said pressure relief valve, said pressure relief valve being held closed by said means urging said pressure control valve to engage said seat.

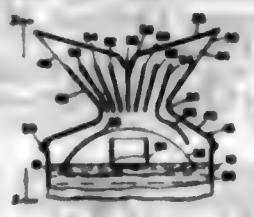
2,864,396
VOLUME CONTROL FOR FRACTION COLLECTORS
Jack Isreeli, Tuckahoe, N. Y., assignor to Technicon Chromatography Corporation, Chauncey, N. Y., a corporation of New York
Application October 9, 1956, Serial No. 614,954
6 Claims. (Cl. 137—132)

1. Liquid measuring and delivery apparatus, comprising a receptacle for a supply of the liquid to be measured and delivered, said receptacle having a liquid inlet and a liquid outlet, a siphon having its up leg provided with a liquid inlet in communication with said outlet, said liquid outlet of the receptacle and said liquid inlet of the siphon comprising interfitting relatively movable parts adjustable about a horizontal axis to adjust the vertical position of the bend of the siphon between the up and down legs thereof in relation to the receptacle for predetermining the discharge operation of the siphon in accordance with the liquid level in the receptacle, the down leg of said siphon comprising an upper part and a lower



outlet part movably connected to said upper part for movement about a horizontal axis.

2,864,397
COVERING HOOD FOR TANK BREATHER VALVES
Wallace M. Patterson, Penn Wynne, Pa., assignor to Sellers Injector Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application June 21, 1954, Serial No. 437,927
3 Claims. (Cl. 137—248)



1. A hood for use with a liquid seal pressure and vacuum relief valve mounted to move generally across the path of relieving gases comprising in combination with the valve, a body for the passage of relieving gases therethrough, said body constricted transverse the direction of movement of said valve providing a reduced passage for the relieving gases, a plurality of vanes extending lengthwise of the body constriction, said vanes positioned in spaced relationship in the constricted passage and flared apart in the portion of the body above the constriction forming a plurality of successive passages for said relieving gases during the operating movement of the valve, and a roof supported by the body spaced above said vanes leaving a passage for the movement of the relieving gases.

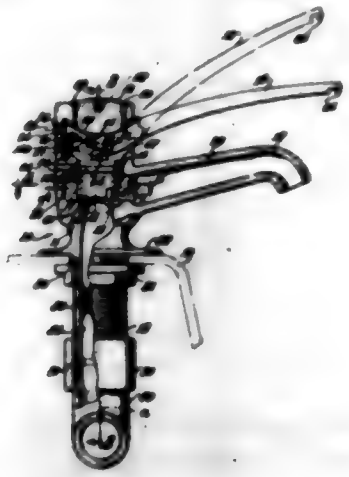
2,864,398
DUAL ACTION HANDLES
William P. Green, San Marino, Calif.
Application May 4, 1953, Serial No. 352,963
13 Claims. (Cl. 137—327)

1. A valve device comprising a valve body, a fluid flow controlling valve unit in the body mounted for rotary movement about an axis and for movement in opposite axial directions along said axis relative to said body, a movable actuating unit bearing in one of said axial directions against said valve unit, a backing unit carried by the body and against which said actuating unit bears in the other axial direction, said backing unit and actuating unit having slidably engaging surfaces guiding the actuating unit for both rotary movement about said axis relative to the backing unit and body and swinging movement about generally a second axis extending transversely of said first axis, said actuating unit being free for said rotary movement about said first axis relative to said backing unit, a threaded

relatively large diameter valve seat within said chamber, a first valve member reciprocable axially within said

gularly related to the axis of said inlet port; pivot means located in said valve chamber downstream from said coni-

connection between said body and backing unit mounting the latter so that rotation thereof relative to the body adjusts the backing unit and valve unit in essentially the direction of said first axis relative to the body,



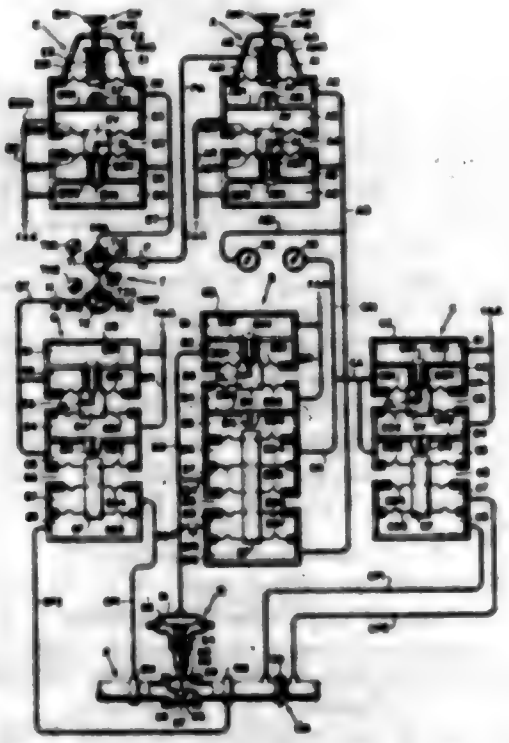
said actuating unit and valve unit having slidably engaging surfaces acting to wedge the valve unit axially upon said swinging movement, and means transmitting rotary movement about said first axis from said actuating unit to said valve unit.

2,864,399

CONTROLLER

Harry J. Hartz, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application May 11, 1956, Serial No. 584,321
6 Claims. (Cl. 137—486)



1. Means for moving a final control valve from open position to a throttling position intermediate its range of movement, including, a motor connected to the final control valve to move said valve toward open position as the pressure of an elastic fluid applied to said motor is increased, a controller having a first chamber connected to decrease the pressure of the fluid put out by said controller as the pressure of the fluid applied to said first chamber is increased and vice versa and a second chamber operating in the opposite sense to said first chamber, a first instrument measuring the flow of fluid through the final control valve, a first transmitter operated by said first instrument to increase the pressure of the fluid put out by said first transmitter as the flow of fluid through the final control valve increases and vice versa, a conduit for fluid connecting said first transmitter to said first chamber of said controller, a second instrument measuring the difference in pressure of the fluid on the opposite sides of the final control valve, a second transmitter operated by said second instrument to increase the pressure of the fluid put out by said second transmitter as the difference in pressure of the fluid on opposite sides of the final control valve increases and vice versa, a second restriction connected on its inlet side to the output of said second transmitter, a manually operable transfer switch having two parts, the second of said parts having a third port connected to the outlet side of said second restriction and a second port communicating with atmosphere and a first port connected to the first part of said transfer switch, the first of said parts having first, second, and third ports, the second port of said first part being connected to said first port of said second part, said first and second parts being manually operable to connect said first port of said first part to said second or to said third port of said first part and to connect said first port of said second part to said second or to said third port of said second part, a second regulator manually operable to vary the pressure of the fluid put out by said second regulator, the output for fluid from said second regulator being connected to said third port of said first part of said transfer switch, a first restriction connected on its inlet side to said first port of said first part of said transfer switch, a first regulator having an inlet chamber connected to the outlet side of said first rectriction and operable in response to changes in the pressure of the fluid in said inlet chamber to vary the pressure of the fluid put out by said first regulator, a conduit for fluid connecting the outlet of said first regulator to said second chamber of said controller, and a conduit for fluid connecting the outlet of said controller to said motor.

2. Means for bringing a final control element from either of its extreme positions into an intermediate, controlling position, including, an elastic-fluid-pressure-operated motor actuating the final control element over a range of movement, a controller varying the pressure of the fluid fed to said motor in response to any difference between a first pressure and a second pressure applied to said controller, a first measuring element responsive to a variable controller by the final control element, a first transmitter responsive to said first measuring element to vary said first pressure, a second measuring element responsive to the position of the final control element, a second transmitter responsive to said second measuring element to vary said second pressure, a manually-operable elastic-fluid-pressure regulator varying said second pressure, a first conduit for elastic fluid connecting said first transmitter so as to conduct said first pressure to said controller, and a transfer switch manually operable to connect said second transmitter so as to conduct said second pressure to said controller and to disconnect said regulator from said controller or vice versa, and a manually operable restriction between said transfer switch and said controller.

2,864,400

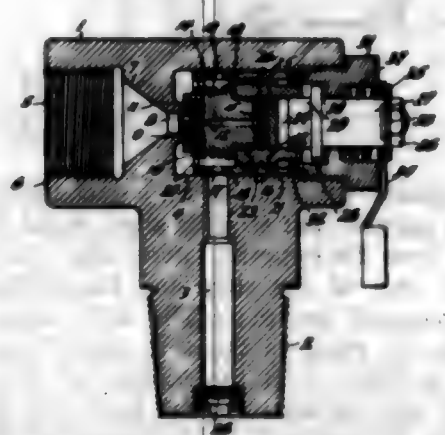
HIGH PRESSURE CUT OFF VALVE FOR GAS CYLINDERS

Hendrikus Petrus Wiegel, Nootdorp, Netherlands

Application March 23, 1955, Serial No. 495,970
Claims priority, application Netherlands March 24, 1954
2 Claims. (Cl. 137—495)

1. A back surge minimizing fluid flow valve comprising a housing defining a cylindrical valve chamber having front and rear axial ends, and formed with an axial discharge port through its forward end surrounded by a

relatively large diameter valve seat within said chamber, a first valve member reciprocable axially within said chamber to and from seating relation with said seat, said member having a restricted orifice extending in an axial direction therethrough for communicating with said port when the valve member engages said large diameter seat, a seat of relatively small diameter compared to that of said first mentioned seat formed around the rear end of said orifice, a second valve member movable axially in said chamber rearwardly of the first member to and from operative engagement with said small diameter seat, said second valve member including operating means for selectively urging it into engagement with said small diameter seat with sufficient force to seat said first valve



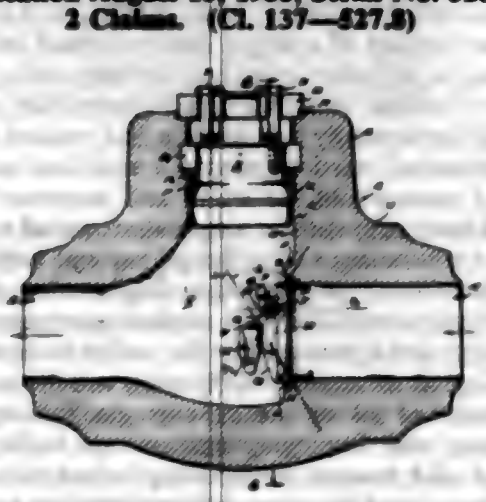
member against said large diameter seat, a fluid inlet passage in said housing in substantially unrestricted communication with both ends of said first valve member, whereby the opposite ends of said first valve member externally of said seats are exposed to fluid pressure within said chamber in the seated relation of both members, and the relatively larger area of said second member around said smaller diameter seat enabling the fluid pressure to urge said first valve member against said large diameter seat until the passage of fluid through said orifice permits an increase in pressure on the front end of said first member, and spring means active on said first member to unseat same from the large diameter seat when the fluid pressures on opposite ends thereof approach near equalization.

2,864,401

VALVE STRUCTURE

Laurence H. Carr, Homewood, Ill., assignor, by mesne assignments, to Edward Valves, Inc., East Chicago, Ind., a corporation of Delaware

Application August 15, 1955, Serial No. 528,210
2 Claims. (Cl. 137—527.8)



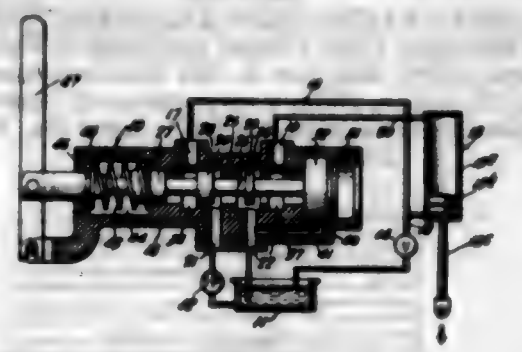
1. A tilting disk check valve comprising a one piece body providing a valve chamber intersected by oppositely directed aligned inlet and outlet ports and an angularly related access opening, said inlet port being recessed at its inner chamber end to provide a conical seat right angularly related to the axis of said inlet port; pivot means located in said valve chamber downstream from said conical seat and inwardly of the inner end of said access opening with its axis lying in a chordal plane of said valve chamber normal to the plane of said valve seat, offset to one side of the axis of said inlet port and delimited by the acute included angle of a pair of intersecting lines respectively drawn normal to said seat face through the upstream and opposite downstream points of intersection of said seat face by a plane containing the axis of the inlet port; a disk valve element having a conical seating surface formed on its peripheral upstream edge to matingly engage said valve seat and journal means on its downstream face with its pivot axis offset to one side of the valve element centerline at a distance equal to the offset of said axis of said pivot means from the inlet port axis, said journal means being effective to pivotally suspend said disk valve element from said pivot means between said conical seat and said pivot axis of said pivot means in closed valve position; counterweight means fixedly mounted on said disk valve element in a position to shift the effective center of gravity of said disk valve element and its fixedly mounted counterweight means to the downstream side of said pivot axes in the normal closed position of said disk valve element thereby assuring a closing force moment for said disk valve element upon cessation of normal fluid flow from said inlet port to said outlet port; and means for closing said access port against leakage of fluid therethrough.

2,864,402

MOTOR CONTROL VALVE WITH AUTOMATIC HOLD AND RELEASE

Frank G. Presnell, Los Angeles, Calif., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Continuation of abandoned application Serial No. 298,857, July 14, 1952. This application January 6, 1956, Serial No. 557,779
10 Claims. (Cl. 137—622.5)



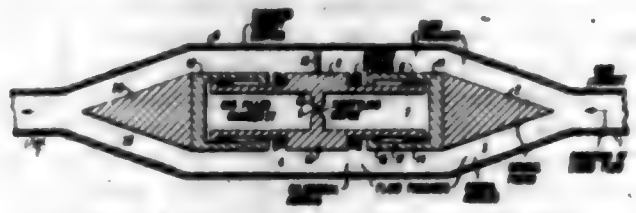
1. A hydraulic control valve comprising: a body member having a longitudinally extending valve chamber with a movable member therein forming a slide valve therewith, said movable member having a longitudinally extending passageway therein for conducting fluid out of one end of said valve chamber; a longitudinally extending plunger member in said end of said valve chamber adapted to project into said passageway of said movable member, said movable member being slidable longitudinally of said chamber between a first position wherein it is telescoped over said plunger member restricting flow into said passageway, and a second position adjacent the end of said plunger member wherein it throttles flow between the adjacent end surfaces of said plunger and movable members as the flow proceeds out of said end of said valve chamber, said body member having passage means therein for conducting fluid under pressure to said end of said valve chamber; and means biasing said movable member toward said end of said valve chamber; whereby said biasing means is prevented from moving said movable member from its throttling position to its passageway restrict-

radially into several conduits of approximately equal volume, and means for coupling the said inlet end of

the stuffer warp ends, the binder warp ends and wefts while raising the pile warp ends of the two sets alter-

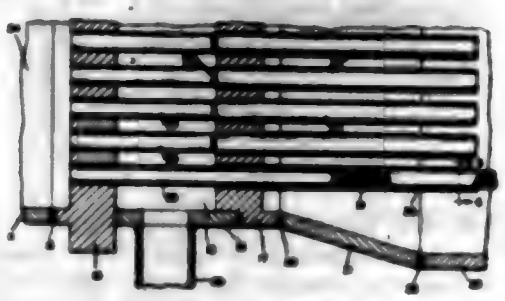
ing position as a result of back-pressure produced by the throttling action of the flow out of said end portion of said chamber.

2,864,403
DESURGER FOR LIQUID SYSTEMS
Fredric H. Delly, Tulsa, and Ernest C. Fitch, Jr., Stillwater, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Application May 10, 1955, Serial No. 507,288
4 Claims. (Cl. 138—26)



1. An apparatus for reducing pressure surges in a conduit for transporting liquids which comprises a cylindrical body member disposed within the conduit and supported therefrom to define an annular passageway between the walls of the conduit and the walls of the body member, at least two longitudinally juxtaposed chambers within said body member, each said chamber being adapted to contain a body of compressible fluid, at least one throttling fluid passageway interconnecting said chamber, a conical end member disposed at each end of said body member and longitudinally movable relative to said body member, sealing means interposed between each said conical member and said body member to provide a fluid-tight relation therebetween, each said conical member being adapted to compress and expand the compressible fluid within its corresponding chamber in response to pressure surges within said conduit thereby forcing fluid through said throttling fluid passageway in response thereto.

2,864,404
HEAT EXCHANGER CONSTRUCTION
Ernest Bruegger, Canal Fulton, and Philip S. Otten, North Canton, Ohio, assignors to The Griscom-Russell Company, Massillon, Ohio, a corporation of Delaware
Application September 15, 1953, Serial No. 380,214
1 Claim. (Cl. 138—38)

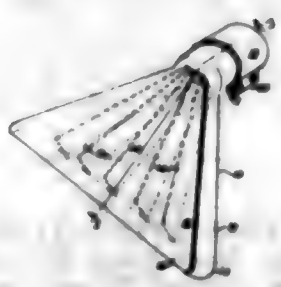


A small diameter, corrosion-resistant, double-walled leakage detector heat exchanger tube having nearly complete metal to metal contact between the walls of the double-walled tube and being adapted for containing corrosive fluids at high temperatures including inner and outer cylindrical tubes of corrosion-resistant metal selected from the class consisting of stainless steel and nickel, each of the inner and outer tubes having a wall thickness of the order of 1/16" thick, the outer diameter of the outer tube being of the order of 3/4" diameter, the inner tube being provided with a plurality of longitudinally extending grooves having a width and depth of the order of a few thousandths of an inch formed into the cylindrical outer surface thereof, and the outer cylinderical surface portions of the inner tube between the grooves being seated in intimate metal to metal heat transfer contact with the inner surface of the outer tube thereby providing metal to metal contact between the inner and outer tubes greatly in excess of the total projected area of the few thousandths inch wide grooves whereby efficient heat transfer may be effected through the walls of the double-walled tube.

2,864,405
HEAT EXCHANGER AGITATOR
Fred M. Young, Racine, Wis., assignor to Young Radiator Company, Racine, Wis., a corporation of Wisconsin
Application February 25, 1957, Serial No. 641,933
3 Claims. (Cl. 138—38)

1. An agitator for tubular heat exchangers comprising, a thin, narrow, flat strip of sheet metal having slits cut therein from the opposite lateral edges normal to the longitudinal axis of the strip and longitudinally along the strip, marginal portions of the strip being bent outwardly from the plane of the strip along lines extending diagonally outward from the termini of the respective longitudinal slits remote from the respective normal slits to points on the adjacent lateral edges of the strip to form a series of trapezoidal-shaped lobes spaced longitudinally along the opposite lateral edges of the strip, the ends of the lobes being bent to form transverse flanges.

2,864,406
EXHAUST DEFLECTOR
Abe Schewel, Lynchburg, Va.
Application September 1, 1954, Serial No. 453,646
1 Claim. (Cl. 138—46.5)



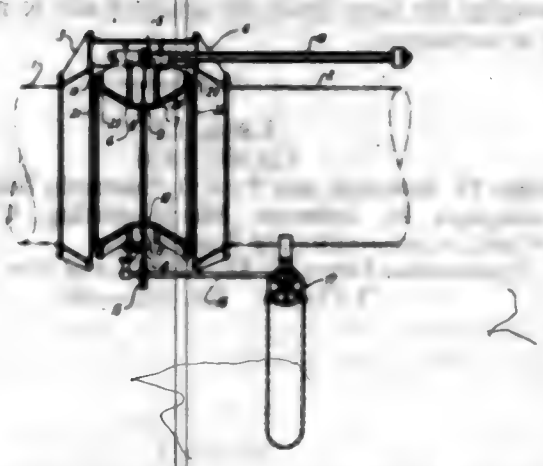
In combination with a vehicle mounted exhaust pipe having an outlet circular in cross-section, an exhaust pipe distributor formed of a single sheet of metal into a housing having a circular inlet end corresponding approximately in diameter to said exhaust pipe outlet, said housing flaring horizontally to a flat top and bottom connected by approximately vertical sides to a wide and narrow outlet end of several-fold the width and narrower in height than said inlet end, the flat single sheet metal top of said outlet end continuing into a flat planar end baffle wall by being down-turned at an oblique angle substantially less than vertical to terminate in a plane corresponding approximately to the plane of the flat outlet bottom, thereby intercepting, as an angular baffle wall, and diverting angularly downward all of the exhaust gas passing through said housing and impinging against said baffle, said flat bottom of said housing terminating before the downturn of the top of said housing thereby forming an inverted V-shaped outlet trough opening downwardly of said housing and extending entirely across the said laterally flared outlet end, said housing having a plurality of vertically mounted vanes, extending from the said circular inlet end to the flared outlet end, partitioning the flared housing

2,864,411
BAND SAW BLADE FOR USE WITH POWER

to one another and having guide members engageable

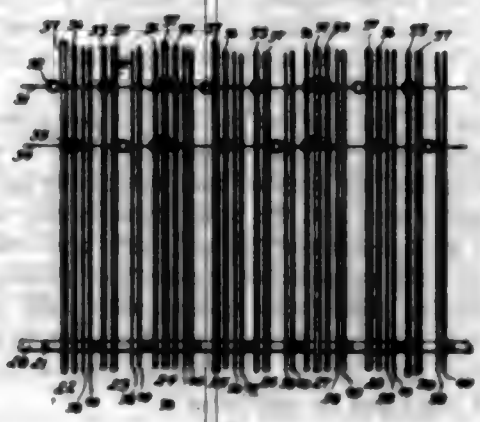
radially into several conduits of approximately equal volume, and means for coupling the said inlet end of the exhaust pipe distributor to the outlet of the exhaust pipe.

2,864,487
PNEUMATICALLY SEALED GOGGLE VALVES
Andrew Bowland, Pittsburgh, Pa.
Application May 11, 1956, Serial No. 584,364
3 Claims. (Cl. 138—94.5)



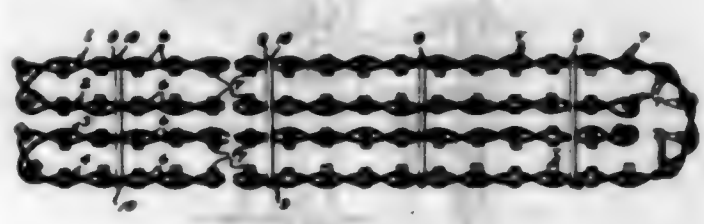
1. In a goggle valve structure, a pair of juxtaposed cage rings joined to the ends of a gas main, angularly spaced connectors bridging said cage rings and integrally joined therewith to form a suspension cage, a pair of valve rings in said cage having spaced parallel flexible annular steel plates connected to said valve rings and to said cage rings to be suspended thereby, and a goggle valve movably mounted between said valve rings.

2,864,488
CARPET WEAVING WITH IMPROVED COVERAGE
Frank W. E. Hoesterberth, Carlisle, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania
Application August 13, 1956, Serial No. 603,761
3 Claims. (Cl. 139—39)



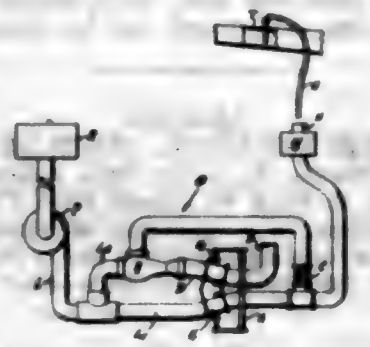
1. The method of weaving a pile carpet, using two sets of pile warp ends, binder warp ends, stuffer warp ends and wefts, which comprises threading in at least one stuffer warp end in each dent, threading in at least one binder warp end in each dent, threading in in the first, fourth, seventh, etc., dents an end of the first pile warp set on one side of the stuffer warp end and leaving an end out of the second pile warp set, threading in in the second, fifth, eighth, etc., dents an end of the second pile warp set on the other side of the stuffer warp end and leaving an end out of the first pile warp set, threading in in the third, sixth, ninth, etc., dents an end of the first pile warp set on said other side of the stuffer warp end and an end of the second pile warp set on said one side of the stuffer warp end, interweaving the pile warp ends of both sets, the stuffer warp ends, the binder warp ends and wefts while raising the pile warp ends of the two sets alternately in pile projections at different weft positions.

2,864,489
WOVEN BELTING
Louis E. Richter, Middletown, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut
Application July 6, 1956, Serial No. 596,212
4 Claims. (Cl. 139—408)



1. A woven multi-ply belting comprising a plurality of plies of woven webbing, each ply comprising interwoven warp and filler yarns, the filler yarns being continuous throughout all of said plies to join the plies at at least one edge, and a series of rows of binder yarns spaced across said webbing each row comprising a pair of binder yarns interwoven as a double chain extending through all of said plies between spaced pairs of filler yarns and forming loops on the outer surfaces of the outer plies, the loops formed by the binder yarns in one row being offset from the loops formed by the binder yarns in the next adjacent row and all of which loops span the same number of filler yarns.

2,864,410
TANDEM VALVE ARRANGEMENT FOR USE WITH AN EDUCTOR DEFUELING SYSTEM
John Fred Sauer, Cedar Grove, N. J., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
Application June 28, 1956, Serial No. 594,596
4 Claims. (Cl. 141—119)

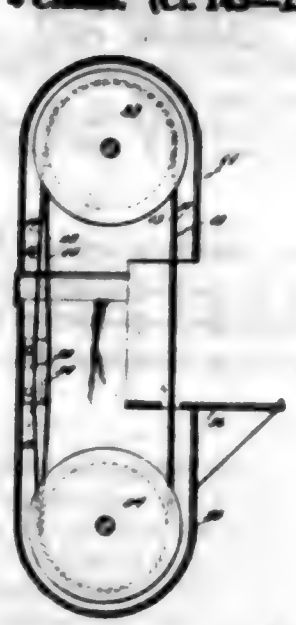


1. In combination in a dispensing system, a source of pressurized fluid, a bifurcated discharge line joined to said source, one fork of said line leading to a delivery hose and the second fork being joined to an eductor system having an eductor with a suction chamber and a discharge line leading therefrom, a bypass from said one fork of said bifurcated discharge line leading to said suction chamber of said eductor system and having a check valve opening in the direction of suction, and a tandem dual valve arrangement located respectively in said one fork of said bifurcated discharge line upstream of said bypass and in said discharge line of said eductor system to permit supply and withdrawal of liquid upon manipulation by a single means comprising a handle interconnecting said dual valve arrangement, the valves of said tandem dual valve arrangement having a common axis of rotation and being bias pivoted.

saw in a work-engaging position with respect to said

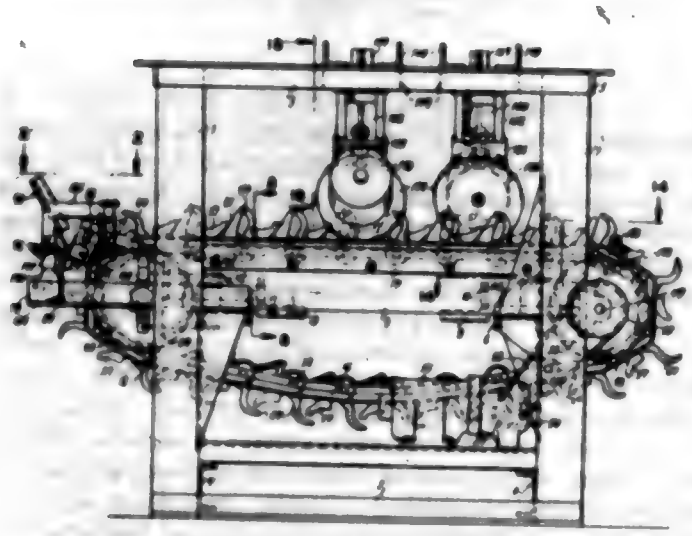
2,864,416
MULTIPLE DRILLING OR LIKE MACHINE

2,864,411
BAND SAW BLADE FOR USE WITH POWER DRIVEN BAND SAWS FOR CUTTING MEAT
Benjamin Murray Stringfellow, Columbus, Ga., assignor to Southern Saw Service, Inc., Atlanta, Georgia
Application December 13, 1957, Serial No. 702,624
4 Claims. (Cl. 143—22)



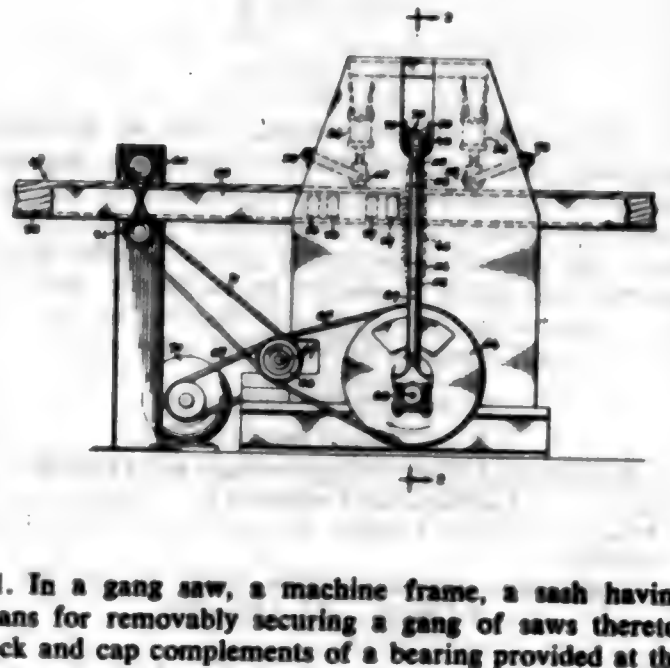
3. A composite endless band saw blade for use with meat cutting machines of the type having a pair of vertically spaced and vertically adjustable rollers rotatably mounted on a frame and on which the band saw blade is mounted and is revolved by the rollers, said composite band saw blade comprising a pair of endless blades one superimposed on the other with the inner surface of the outer blade in tight engagement with the outer surface of the inner blade, said blades having a series of teeth formed along corresponding edges and having opposed continuous circumferential recesses formed in their engaged surfaces providing a continuous annular trough within the composite blade and a plurality of opposed recesses formed in their engaged surfaces, one between each pair of teeth forming channels leading from the gullets between the teeth into said circumferential trough, whereby bone dust will pass from said gullets through said channels into said trough and be contained therein.

2,864,412
MACHINE FOR TRIMMING WOOD HEEL-BLANKS
Raymond E. Ponder, St. Louis, Mo., assignor, by mesne assignments, to Fred W. Mears Heel Company, Inc., Lawrence, Mass., a corporation of Massachusetts
Application November 5, 1954, Serial No. 467,141
18 Claims. (Cl. 143—49)



4. In a machine for trimming heel blanks, a bed having ways, an endless conveyor chain having links hinged to one another and having guide members engageable with said ways, whereby said links are guided by said ways to maintain the links in alignment during their travel along said ways, and sprockets supporting said chain, said sprockets having recesses engageable with the hinge portions of said links to support the chain, and a fixed separating arm extending immediately below and in alignment with the bottom of the recesses when the recesses are located in their highest point on said sprocket to engage said hinge portions in said recesses as they leave the sprocket and before entering said ways to positively disengage the same from the sprocket and to preclude any dip in movement.

2,864,413
GANG SAW
Arthur D. Arneman and Paul O. Edwards, Seattle, Wash., assignors to Johnson Manufacturing Co., Seattle, Wash., a corporation of Washington
Application February 21, 1956, Serial No. 566,885
2 Claims. (Cl. 143—60)



1. In a gang saw, a machine frame, a sash having means for removably securing a gang of saws thereto, block and cap complements of a bearing provided at the head end of said sash in the substantial center thereof, a cross-shaft gripped by said bearing with an intervening bushing of elastic rubber and projecting by the ends laterally beyond the sides of the sash, a respective pitman arm engaging each of said projecting ends, a respective cross-head carried by each of said shaft ends between the related pitman arm and the sash, cross-heads carried by the sash at the bottom end thereof, front and rear slippers on each of said cross-heads, respective guides on said frame providing slide faces mating with slide faces provided by the slippers, power-driven cranks driving said pitman arms, and means for feeding the work along a travel path traversed by said saws.

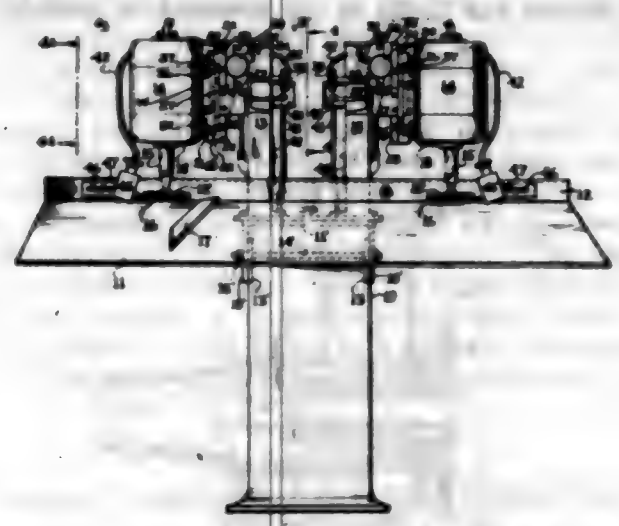
2,864,414
AUTOMATIC WOOD WORKING SLOTTING MACHINE
Anthony Mazzola, Westmont, Ill.
Application August 13, 1956, Serial No. 603,642
12 Claims. (Cl. 144—136)

1. A slotting machine comprising a tiltable work table, a base for said table, a workpiece guide rail supported at one end of said table, supporting members mounted on said base and having an electric motor supported thereby above and in spaced relation to said table and said guide rail, a circular saw operated by said motor and operable through a slot formed in said guide rail, means for moving said motor and said saw from work-engaging position, means for restoring said motor and said

tained within said head and having a direction of magnetization which is radial with respect to the longitudinal axis of said head, and a ferromagnetic pole piece disposed

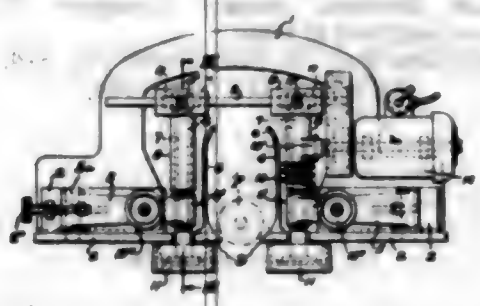
access to said bearing; said centrifugal pressure means including circumferentially spaced diagonal shoulders on said adjacent end of the rotary cutter adjacent the periph-

saw in a work-engaging position with respect to said table and said guide rail, means for adjusting the length



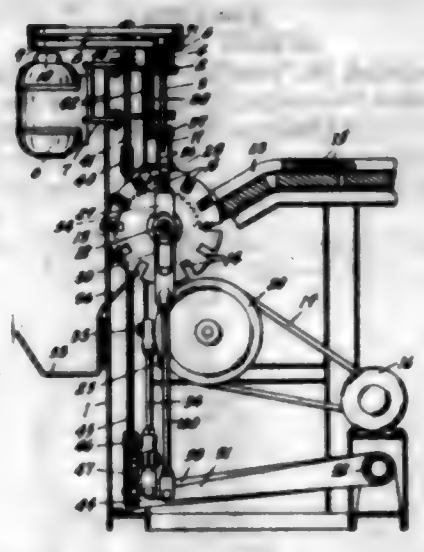
of movement of said moving means, and means engageable by the workpiece for actuating said moving means.

2,864,415
WORK FEEDING AND GUIDING DEVICE FOR SHAPING MACHINES
Max Mayer, Neu-Ulm (Danube), Germany
Application February 19, 1957, Serial No. 641,183
6 Claims. (Cl. 144—246)



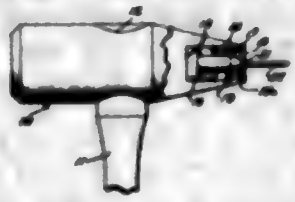
1. In a shaping machine having a work table provided with a power-operated cutter rotatably mounted upon a vertical shaft, a workpiece guiding and feeding device comprising an open-centered base adapted to rest upon the table and having a bridge portion with spaced end portions thereon adapted to be disposed on opposite sides of the cutter, said end portions having elongated rectilinear guideways thereon disposed substantially parallel to the intended direction of travel of the workpiece past the cutter, a pair of slides slidably mounted respectively upon said pair of guideways for independent sliding adjustment toward and away from one another and having upstanding guide portions with vertical workpiece guide surfaces thereon disposed in substantially the same vertical plane, a pair of horizontally-disposed pivot elements mounted near the outer ends of said guide portions, a pair of feed roller supporting arms having their outer ends pivotally mounted respectively on said pivot elements and directed toward one another with their inner ends having shaft bearings thereon disposed upon substantially horizontal parallel axes, a pair of substantially parallel feed roller shafts mounted respectively in said shaft bearings, a pair of feed rollers mounted respectively on the ends of said shafts adjacent said vertical workpiece guide surfaces, an adjusting device mounted on each slide and engaging each arm for adjustably swinging said arm and the feed roller thereon vertically toward and away from said base, a driving motor, and power-transmitting mechanism drivingly connecting said motor to said feed roller shafts while permitting independent vertical adjustment thereof relatively to one another.

2,864,416
MULTIPLE DRILLING OR LIKE MACHINE
Glenn L. Sherwood, Benton Harbor, Mich., assignor to Kaywood Corporation, Benton Harbor, Mich., a corporation of Michigan
Application January 16, 1956, Serial No. 559,249
10 Claims. (Cl. 144—110)



1. A multiple drilling machine comprising a drill head member having an aligned series of driven vertically disposed spindles, a rotary work carrier disposed below said head member and comprising a horizontally disposed driven shaft vertically aligned with said spindles and provided with axially spaced circular work holders having aligned angularly spaced work pockets adapted to supportingly receive elongated work, work feed members disposed between said carrier work holders and longitudinally slotted to receive said shaft and guided thereby, a plurality of laterally spaced pairs of work guide members aligned with said spindles and with said work feed members to receive and laterally support work transferred thereto from said work carrier pockets by said work feed members, a spring biased work retracting bar provided with a plurality of work engaging fingers disposed between adjacent pairs of said work guide members for stripping the work therefrom and returning it to the pocket from which it had been advanced to drilling position, and means for actuating said work carrier step by step and said work feed members and said retracting bar in timed relation comprising a driven gear on said work carrier shaft, a single toothed driving gear coacting therewith to drive said driven gear step by step, said driving gear being provided with a crank pin, a rock shaft provided with an actuating arm, a connecting rod connecting said crank pin to said rock shaft actuating arm, arms on said rock shaft connected to said work feed members, a reciprocable actuating rod for said work retracting bar, arms on said rock shaft having yielding connection to said rods.

2,864,417
MAGNETIC HAMMER
Richard A. Scholten, Valparaiso, Ind., assignor to The Indiana Steel Products Company, Valparaiso, Ind., a corporation of Indiana
Application March 30, 1956, Serial No. 575,155
7 Claims. (Cl. 145—30)



1. A magnetic hammer comprising a head composed of ferromagnetic material, a permanent magnet con-

a sharpened tip, and a leading edge and a trailing edge converging at the tip, substantially half of the length of

tension plate curved to conform to a side wall of the tire and having a reversely curved tongue at one end

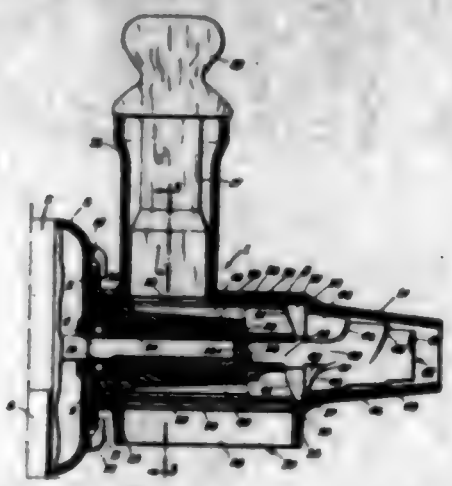
tained within said head and having a direction of magnetization which is radial with respect to the longitudinal axis of said head, and a ferromagnetic pole piece disposed between opposed portions of said magnet having the same magnetic polarity.

2,864,418
SCREW DRIVER
Rudolph M. Vaughn, Santa Ana, Calif.
Application February 21, 1957, Serial No. 641,748
3 Claims. (Cl. 145—50)

1. A screw driver comprising, in combination: a driving disc having a three hundred and sixty degree peripheral edge of given transverse width, the opposite side surfaces of said disc adjacent said peripheral edge diverging radially outwardly towards said edge from a circumferential line spaced radially inwardly from said edge to define non-planar conical surfaces of revolution, the transverse thickness of said disc at said circumferential line being less than said given width; an elongated holding means including at one end a retaining head having an axial bore passing from one face thereof and terminating within said head, said head including a slot passing into said face diametrically through said bore in a plane including the axis of said bore, said slot terminating at a point in said head spaced beyond the termination of said bore, whereby the termination point of said bore defines end shoulders, said slot having a width sufficient to receive said transverse width of said driving disc; said driving disc including hub portions extending transversely from the opposite center surface portions of said disc, adapted to abut against said end shoulders when said disc is positioned in said slot; and set screw means passing transversely into a side face of said retaining head to intersect said slot adjacent its point of termination and bear against a side of said disc to retain said disc in said head, the other end of said holding means extending radially away from said disc, whereby said disc may be rotated about one of its diametric axes.

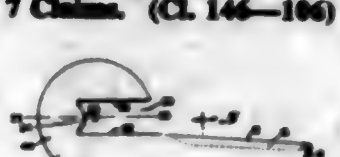
2,864,419
JUICER
Walter R. J. Woock, Lodi, Calif.
Application September 6, 1955, Serial No. 532,516
6 Claims. (Cl. 146—76)

1. A food material masticating appliance comprising, with an electric motor having an end cap, a drive shaft projecting through the end cap, a hub on the cap surrounding the shaft in spaced relation, and a shaft bearing in the hub; a cylindrical body engaged at one end of the hub and projecting axially therefrom about the shaft, means securing the body to the cap, a rotary cutter mounted on the shaft, means to feed food material into the body at one point, the rotary cutter being operative to reduce food material in the body to a pulp, means to permit the pulp to escape from the body at another point, centrifugal pressure means to prevent juice from the reduced food material in the body from passing between the hub and adjacent end of the rotary cutter and gaining access to said bearing; said centrifugal pressure means including circumferentially spaced diagonal shoulders on said adjacent end of the rotary cutter adjacent the periphery thereof and facing in the direction of rotation, the



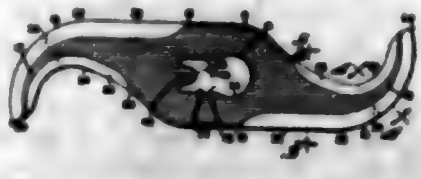
inner ends of said diagonal shoulders leading the outer ends relatively to said direction of rotation, and said adjacent end of the rotary cutter having an annular groove therein inwardly of said shoulders.

2,864,420
SINGLE BLADE CHOPPING KNIFE
William C. Schmidt, Cincinnati, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio
Application June 27, 1956, Serial No. 594,283
7 Claims. (Cl. 146—106)



1. A chopping and mincing knife comprising a substantially flat body including an elongate blade having a free end tip, and a slotted hub integral with the blade, the slot having a base and a throat, said throat being open in the direction of the blade tip, and a tongue at the base of the slot, said tongue extending toward the throat and in the general direction of the blade tip, said tongue adapted to abut against a portion of the periphery of a shaft upon which the blade is mounted, said tongue being reducible as to length for establishing a fixed distance between the tongue and the blade tip.

2,864,421
DOUBLE BLADE KNIFE
William C. Schmidt, Cincinnati, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio
Application June 27, 1956, Serial No. 594,284
1 Claim. (Cl. 146—106)



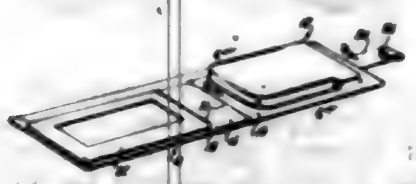
A double blade rotary mincing knife constituted of an initially flat S-shaped plate, comprising an apertured enlarged hub portion of uniform thickness, and diametrally opposed blades extending from the hub portion, said blades being progressively reduced in thickness and in width from the hub portion outwardly, and each having

the flared side wall portions of said diaphragm, and a valve stem mounted on said toe and extending there-

having a die face at one end and a closure at the other end, a ram and a resilient supporting element for said

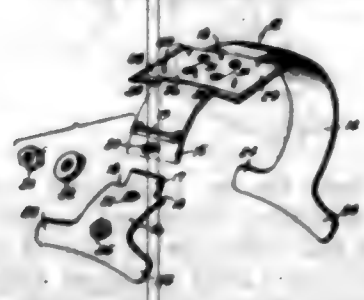
a sharpened tip, and a leading edge and a trailing edge converging at the tip, substantially half of the length of each leading edge being straight from the hub outwardly, and in tangential relationship to the hub, the remainder of each leading edge being sharpened and curved reversely to the direction of blade advancement to the extent of locating the tip of one blade substantially on an imaginary straight line which includes the straight leading edge of the other blade, a chamfer along and on one side only of the trailing edge of each blade to relieve and minimize drag as the blades advance through a material undergoing mincing, said blades being slightly bent in opposite directions from the mean plane of the knife, each along a transverse line which spans the curved portion of the blade at a location intermediate the tip and the straight section of the leading edge.

2,864,422
WALLET AND AUTOMATICALLY OPENING COIN PURSE
Daniel J. Nash, Jersey City, N. J., assignor to Nash Inc., Jersey City, N. J., a corporation of New Jersey
Application August 14, 1957, Serial No. 678,082
5 Claims. (Cl. 150—37)



1. An improved wallet comprising a plurality of panels secured along contiguous edges to form at least one pocket, a frame member including first and second U-shaped members having bridge portions and side legs, the ends of said side legs being hinge-connected whereby said first U-shaped member is movable relative to said second U-shaped member between a closed mutually confronting parallel position and an open mutually angular position, spring means engaging said first U-shaped member and normally urging said first U-shaped member to an open position, said second U-shaped member being secured to one of said panels, a panel secured to said first U-shaped member to define therewith a receptacle closure member, resilient latching means disposed on one of said bridge members engageable with the other bridge member normally to retain said first U-shaped member in closed position, and a first boss located on one of said bridge members and directed toward the other of said bridge members and laterally spaced from said latching means, and defining a fulcrum about which said first U-shaped member may be rocked relative to said second U-shaped member to effect a release of said latching means.

2,864,423
SNOW AND ICE CLEAT
Henry Lotz, Boston, Mass.
Application December 18, 1956, Serial No. 629,108
3 Claims. (Cl. 152—230)



1. A snow and ice cleat comprising a shoe having a tread portion, a long side wall and a short side wall, a tension plate curved to conform to a side wall of the tire and having a reversely curved tongue at one end thereof, a detent on the short wall for receiving such tongue therebeneath on its concave side with the convex side of the tongue rocking on the adjacent surface of the short side wall, and detachable means for retaining the tension plate to the short side wall and for moving the tension plate firmly up against the adjacent side wall of the tire.

2,864,424
MOTOR VEHICLE TIRE CONSTRUCTION
John L. Thoma, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application November 7, 1955, Serial No. 545,313
2 Claims. (Cl. 152—330)

1. In a motor car road wheel construction including a tubeless tire mounted upon a supporting rim having valve means for inflating the tire, that improvement comprising an inner, emergency, inflatable, normally deflated, tubular, air tight member circumferentially positioned upon said rim within said tire, separate valve means extending through said rim and opening into said member for inflating said member, said member possessed of sufficient strength when inflated to support one road wheel of a motor car, a frangible, circumferential retainer band positioned over said member for restraining the movement thereof with respect to the rim, said band adapted to break upon the inflation of said member.

2,864,425
INNER LINER FOR TUBELESS TIRE
Clarence U. Grunelmacher, Jasper, Ind.
Application February 15, 1956, Serial No. 565,693
3 Claims. (Cl. 152—341)

1. A tubeless pneumatic tire for mounting on a rim, said tire having a tread portion, side walls, and spaced bead portions, the outer faces of said bead portions being provided with nodules of rubberized fabric for sealing the bead portions to said rim, an open-ended rubberized fabric diaphragm arranged in said tire and dividing the same into inner and outer inflatable chambers, said diaphragm comprising flared side wall portions for engaging and sealing said diaphragm to the inner wall of said tire, a rubberized liner which is cup-shaped in cross section and having a toe and flared side wall portions for positioning in said tire closing the open end thereof, flared side wall portions of said liner being arranged to overlie

the out-turned ends of said members, means adjustably securing said elongated bar to said respective out-turned

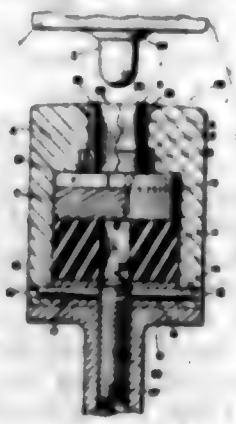
of extension directed generally upwardly, said seat elevating means being rotatable about its axis of extension

the flared side wall portions of said diaphragm, and a valve stem mounted on said toe and extending therethrough for passing air to said inflatable chambers, said flared side wall portions of said liner and said diaphragm comprising interlocking compressible ribs on the inner engaging faces thereof for sealing the diaphragm and liner, said toe portion of the liner being of substantially greater thickness than said side wall portions to assist in positioning of the liner in the tire.

2,864,426
TRUCK TUBELESS TIRE VALVE
Selden T. Williams, Bellerose, N. Y., assignor to Scovill Manufacturing Company, Waterbury, Conn., a specially chartered corporation of Connecticut
Application January 20, 1956, Serial No. 560,325
4 Claims. (Cl. 152—427)

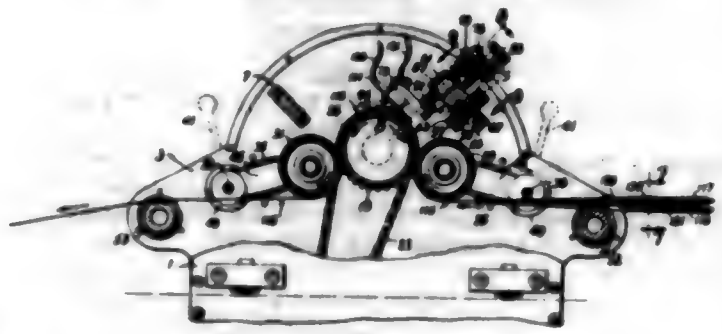
1. A tubeless tire valve stem for removable attachment to a truck or bus tire rim, said valve stem comprising a body portion having an integral enlarged disc-like base one face of which is adapted engage the inner face of a rim, a threaded shank projecting axially from the base and adapted to project radially through a valve stem hole in a rim, and a tubular stem extension permanently connected directly to the base and extending laterally from the peripheral wall thereof, the body portion being formed with a passageway extending through the shank and base and communicating with the tubular extension, said enlarged disc-like base being formed on its face intended for engagement with the inner face of a rim with an annular recess concentric with the shank and housing a deformable gasket for engagement with said rim face, and locking means of larger diameter than the valve stem hole in a rim and incapable of passage therethrough to threadedly engage the shank when projected through the valve stem hole and seat against the opposite rim face for locking the body portion and deforming the gasket into engagement with the rim to provide a leak-tight seal therewith.

2,864,427
DIMPLING APPARATUS HAVING A RESILIENTLY SUPPORTED RAM
William C. Stratman, Los Angeles, Calif., assignor to North American Aviation, Inc.
Application June 4, 1954, Serial No. 434,587
6 Claims. (Cl. 153—21)



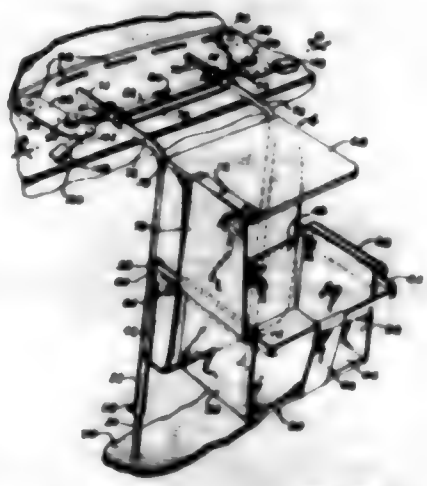
1. A die member for use with apparatus for forming dimples around an opening comprising a hollow member having a die face at one end and a closure at the other end, a ram and a resilient supporting element for said ram received within said die member, pins carried by said closure for lateral movement with respect thereto, openings in said die member for receiving said pins, and means operatively engaging said closure for moving pins laterally into said openings.

2,864,428
SEALING APPARATUS
James White, Oak Lawn, Ill., assignor, by mesne assignments, to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Application July 8, 1953, Serial No. 368,692
9 Claims. (Cl. 154—42)



1. Apparatus for forming a longitudinal heat-sealed seam between overlapping portions of continuous heat-sealable sheet material, comprising a rotary cylindrical roll, means for guiding the material for travel over the roll with the material arcuately in contact with the roll, and an electrical resistance heating element having a rigid portion opposed to the periphery of the roll where the overlapping portions of the material travel over the roll, said portion being relatively long in the direction of travel of the material and relatively narrow transverse to the direction of travel of the material, and said element being fixed against movement in the direction of travel of the material and adapted electrically to be heated to a temperature high enough to vaporize any heat-sealable material that may contact it.

2,864,429
CHILD'S AUTOMOBILE SEAT
John W. Combs, Wichita Falls, Tex.
Application May 2, 1955, Serial No. 505,271
4 Claims. (Cl. 155—10)



1. A child's seat for an automobile, which seat is adapted to be attachably connected to the cowl of an automobile, said seat comprising a pair of spaced apart, upright members each having the upper end thereof outturned and forming a frame, the respective lower ends of said upright members being adapted to rest on the floor of said automobile, an elongated bar extending between

ing elements one of which is engaged in each one of the

2,864,436

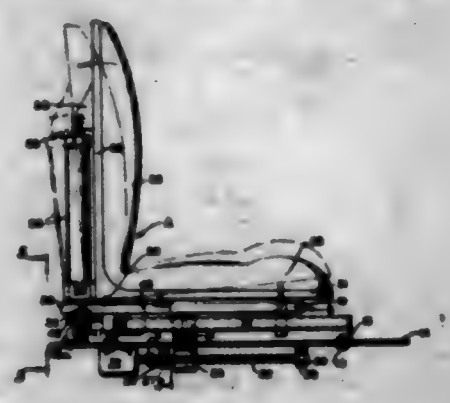
the out-turned ends of said members, means adjustably securing said elongated bar to said respective out-turned portions of said members, a leg pivotally mounted near each end of said bar and extending downwardly, which legs pivot about horizontal and vertical axes, an arm pivotally secured to said bar near each end thereof for pivoting about an upright axis, means securing each arm in fixed, adjusted relation to said elongated bar, an L-shaped lug pivotally mounted on each arm near the outer end thereof, which lugs pivot about upright axes, a rigid, relatively flat member extending between said upright members and being hingeably connected thereto near the upper ends thereof, a relatively thick cushion fitted on said rigid member and facing in the opposite direction from said outwardly extending ends of said upright frame members, and a seat member secured to said cushion near the lower edge thereof and extending outwardly therefrom to receive a child therein.

2,864,430
SELF ADJUSTING SPRING ARRANGEMENT
Theodore Ulrich, Detroit, Mich., assignor to American Motors Corporation, a corporation of Maryland
Application July 13, 1953, Serial No. 367,598
5 Claims. (Cl. 155—14)

1. For use with an automotive vehicle having a floor, a seat assembly comprising: guide rails spaced from each other and anchored to the floor; a seat frame carried on the guide rails and movable rectilinearly forwardly and rearwardly relative thereto, said frame including a front rail and a rear rail spaced from each other and extending crosswise of the vehicle floor and side rails interconnecting the front and rear rails at the opposite ends thereof, said frame in the lengthwise and axial direction of the front and rear rails being of sufficient length to accommodate at least two human passengers in side by side relationship thereby defining a driver's sitting area and an adjacent passenger's sitting area; means for lessening the tendency of the seat frame to deviate from a rectilinear path of movement relative to the guide rails and for urging the frame forwardly relative to the guide rails and the floor, said means including tension springs arranged in the manner of a V with the forward ends thereof being spread apart and secured to the floor and the rear ends secured to the frame at a generally common location, the major portion of the surface area of the V as defined by the springs being confined under the driver's sitting area, said latter area being situated only on one side of the center of the lengthwise dimension of the frame.

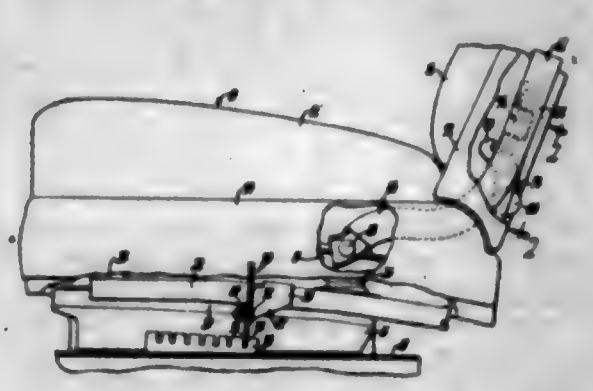
2,864,431
SWING-OUT ELEVATING SEAT FOR AUTOMOBILES
Howard L. Eaton, San Jose, Calif.
Application April 29, 1956, Serial No. 579,666
8 Claims. (Cl. 155—14)

3. A swing-out elevating type seat for an automobile comprising a track extending lengthwise of the passenger compartment of an automobile, a carriage mounted for limited movement lengthwise along the track, reversible drive means for controlling movement of the carriage along the track, axially extensible seat elevating means pivotally mounted on the carriage member with its axis of extension directed generally upwardly, said seat elevating means being rotatable about its axis of extension relative to the carriage, means controlling the extension and retraction of the seat elevating means, a seat mounted for movement on the seat elevating means and connected thereto for movement lengthwise of the axis of exten-



sion of the seat elevating means, guide means retaining the seat against rotative movement relative to the seat elevating means, and reversible drive means operatively interconnecting the seat elevating means and the carriage for controlling rotative adjustment of the seat elevating means and the seat supported thereon.

2,864,432
INERTIA LATCH FOR VEHICLE SEATS
Alfons A. Limberg, Grosse Pointe, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 21, 1955, Serial No. 547,979
9 Claims. (Cl. 155—161)



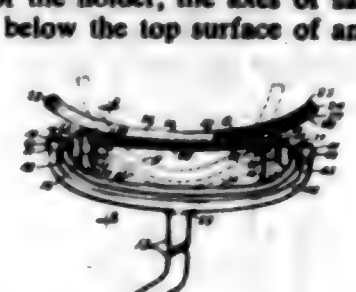
1. In a vehicle, a seat including a cushion base frame and a tiltable back frame pivotally mounted on said cushion base frame, keeper means yieldably supported on one of said frames, an acceleration responsive pendulum latch member, and means movably supporting said latch member on the other of said frames for movement thereof into engagement with said keeper means upon deceleration of said vehicle to limit tilting movement of said back frame, said keeper means being yieldable relative to said one of said frames upon engagement of said latch member with said keeper means.

2,864,433
HEAD-REST
Raymond D. Schnoor, Barrington, Ill.
Application September 16, 1955, Serial No. 534,717
5 Claims. (Cl. 155—177)

1. A head rest for dental chairs and the like, comprising a head supporting band of semi-elastic material having pockets therein opening on the bottom surface and located near the longitudinal extremities thereof, support means for supporting the head rest in the yoke of a chair including a holder carrying spaced bearing portions, and means for supporting and maintaining curvilinear alignment of the supporting pad including end reinforc-

bers connecting said lateral base members, rear upstandy fuel sump to receive fuel therefrom, common dustin

ing elements one of which is engaged in each one of the pockets in said supporting pad and each one of which is provided with a bearing lug for connection to one of the bearing lugs of the holder, the axes of said bearing lugs being located below the top surface of and substantially



midway between the inner and the outer ends of the reinforcing elements so that when pressure is applied to the middle portion of the supporting band to move the inner ends of the reinforcing elements downwardly and outwardly the outer ends thereof will move proportionately upwardly and inwardly.

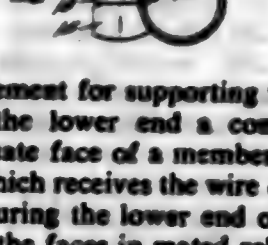
2,864,434
MOUNTING MEANS FOR SPRING ENDS
Hyland C. Flint, Birmingham, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Application November 4, 1954, Serial No. 466,986
21 Claims. (Cl. 155—179)

1. An upstanding rubber block having a hole therethrough at one end for receiving and supporting an end of a spring which extends substantially at right angles to said block, the opposite end of the block having means thereon by which said opposite end is secured to a frame element permitting the end having the aperture therein to tilt from said frame element toward the main body of the spring when the spring is loaded.

2,864,435
RESILIENT SUPPORT FOR SPRING
Hyland C. Flint, Birmingham, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Application October 12, 1955, Serial No. 539,981
15 Claims. (Cl. 155—179)

1. A resilient block for supporting the end of a spring strip on a frame having rearwardly extending means at the bottom for anchoring the block to a frame, the main portion of the block extending upwardly and having an aperture in the upper portion of the body for receiving the end of a spring in position to cause the block to tilt from the bottom anchored portion toward the main body of the spring when the spring is loaded, the upper end of the block curving toward the main body of the spring.

2,864,436
RESILIENT SUPPORT FOR SPRING
Sharon E. Kime, Detroit, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Application October 12, 1955, Serial No. 539,982
9 Claims. (Cl. 155—179)

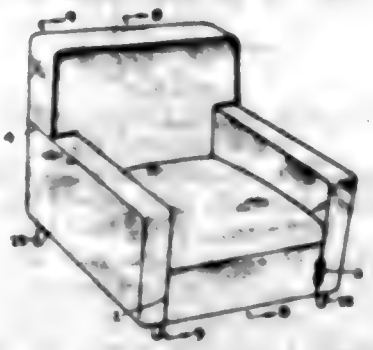


1. A resilient element for supporting the wire end of a spring having in the lower end a concave face which mates with an arcuate face of a member and an aperture in the upper end which receives the wire end of the spring, and means for securing the lower end of said element to said member with the faces in mated relation, said upper end of the element deflecting toward said spring in response to a pulling force applied thereto by the spring.

2,864,437
SAFETY HARNESS
Frank S. Spring, Duarte, Calif.
Application September 11, 1957, Serial No. 683,311
4 Claims. (Cl. 155—189)

1. A safety harness for association with a vehicle seat having a back rest, said harness comprising a continuous length of strap, attaching means for fixedly securing one end of said strap to one side of said seat, means for holding the other end of said strap at the rear of said back rest, a latch secured to said belt intermediate the ends thereof to divide said strap into a lap portion and a shoulder portion, and means on the other side of said seat releasably engageable by said latch to anchor said harness to said seat with said lap portion disposed transversely and completely across the lap of a wearer and with said shoulder portion disposed over a shoulder and diagonally across the chest of the wearer.

2,864,438
UPHOLSTERED FURNITURE
Elrel Levine, New Rochelle, N. Y.
Application May 28, 1956, Serial No. 587,563
8 Claims. (Cl. 155—191)



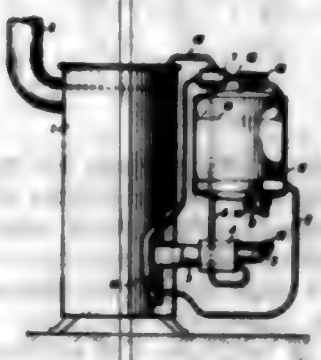
1. A frame for chairs and the like, comprising front and rear lateral base members, longitudinal, base mem-

2,864,442
PLEAT PIN

support, a tread removing tool mounted on said tool

bers connecting said lateral base members, rear upstanding members connecting with the rear lateral base member adjacent the respective ends thereof, means connecting the upper ends of said rear upstanding members, front upstanding members connecting with the front lateral base member adjacent the respective ends thereof, upper longitudinal members connecting the upper ends of respective front upstanding members with intermediate portions of the respective rear upstanding members, longitudinal seat members connecting intermediate portions of respective front upstanding members with lower portions of the respective rear upstanding members, a seat mounted upon said seat members, further members connecting said connecting means with intermediate portions of said seat members, and a back mounted upon said further members.

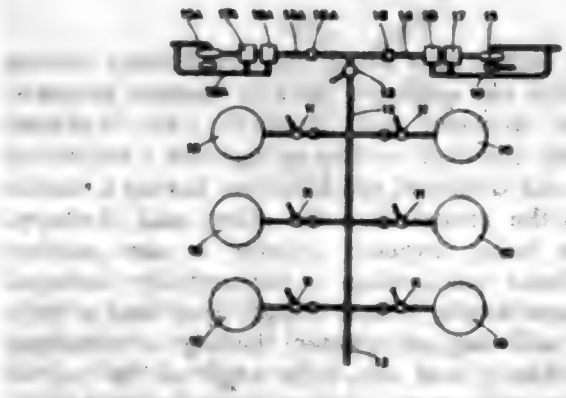
2,864,439
ARRANGEMENT FOR FEEDING AND BURNING LIQUID FUEL
Robert Von Linde, Grafelfing, and Walter Baier, Stockdorf, near Munich, Germany, assignors to Wilhelm Baier K. G., Stockdorf near Munich, Germany
Application August 15, 1955, Serial No. 528,473
Claims priority, application Germany August 23, 1954
9 Claims. (Cl. 158—5)



1. An arrangement for feeding and burning liquid fuel, comprising a furnace having a combustion chamber, a combined vaporizer and burner associated with said chamber and being adapted to evaporate said liquid fuel and burn it, a tank for said liquid fuel being disposed higher than said combined vaporizer and burner, conduit means between said tank and said combined vaporizer and burner, said conduit means including a generally U-shaped pipe having a descending leg and an ascending leg connected to said descending leg, the free end of the latter being connected to said fuel tank at its lower part, at least a portion of said ascending leg of said U-shaped pipe being within said combustion chamber, the free end of said ascending leg ending in an outlet above the top of said fuel tank, and descending conduit means connecting said outlet to said combined vaporizer and burner, whereby said fuel in said ascending leg is at least partially evaporated due to heating in said combustion chamber and the evaporation causes the fuel to ascend to said outlet from where it is discharged into said descending conduit means leading to said combined vaporizer and burner.

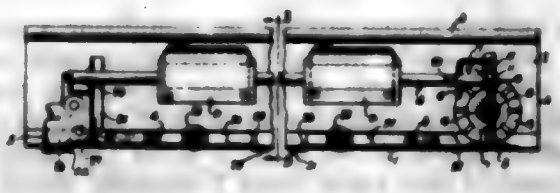
2,864,440
FUEL SYSTEMS FOR GAS TURBINE ENGINE INSTALLATIONS
Henry Cook, Derby, England, assignor to Rolls-Royce Limited, Derby, England
Application March 7, 1955, Serial No. 492,662
Claims priority, application Great Britain March 25, 1954
6 Claims. (Cl. 158—36.3)

1. A fuel system for an engine installation including at least two gas turbine engines, comprising in combination at least two fuel pump systems, each system including at least one pump, a delivery pipe line connected to each fuel pump to receive fuel therefrom, common ducting connected to the said delivery pipe lines and adapted to connect to said engines to supply fuel thereto, non-return valve means in each of said delivery pipe lines to prevent return flow thereinto from said common ducting and from another of said delivery pipe lines, and means to regulate the pressure in each of said delivery pipe lines comprising at least two simultaneously and complementally-operable pressure-controlling devices connected to each delivery pipe line, means in each device sensitive to



the pressure in the corresponding delivery pipe line and to an opposing predetermined load and operable to control the flow in the pipe line to limit the pressure therein to a preselected value, the capacity of each pump being selected to be sufficient to meet the maximum demand should at least one other pump fail, and the capacity and range of adjustment of each flow controlling means being sufficient for it to maintain the preselected pressure in the corresponding delivery pipe line on failure of any number of the other controlling means associated with the last named pipe.

2,864,441
HEAD RAIL ASSEMBLY FOR VENETIAN BLINDS
Verne R. Bates, Avon Lake, Ohio, assignor to Wright Sales Company, Inc., Cleveland, Ohio, a corporation of Ohio
Application October 11, 1954, Serial No. 461,491
1 Claim. (Cl. 160—173)



The improvement in Venetian blinds which comprises the combination with a head rail consisting of a generally U-shaped channel for enclosing mechanism for operating a blind, of a supporting bracket including a base portion to rest in contact with the upper side of the bottom of said channel, the bottom of the channel having spaced slots therein, and spaced lugs carried by said bracket and projecting downwardly therefrom through said slots and movable by longitudinal movement of the bracket to underlie and frictionally engage the under side of the channel for holding the bracket stationary on the channel, wherein one of the lugs of the bracket projects from an end of said base and resiliently engages the bottom of the channel on the under side of the latter, a cord lock unit is carried on the bracket, and the other lug of the bracket is directly formed on the cord lock unit.

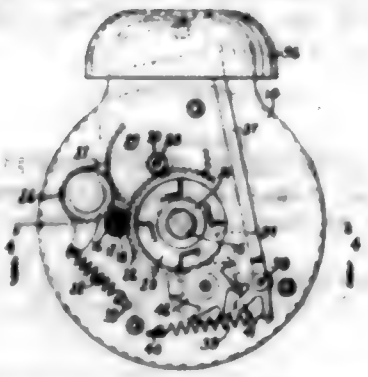
means for imparting longitudinal movement to said third slide selectively in opposite directions in said third guide-

notches when said jaws are moved from said open position to said closed position, and means for supporting a

2,864,442
PLEAT PIN
Nicholas Margolo, Uniondale, N. Y.
Application November 5, 1956, Serial No. 620,462
2 Claims. (Cl. 160—348)

1. A pleat former five prong pin for drapery having suitable vertical pin receiving pockets thereon comprising a pair of U-shaped rod members, each U-shaped member having a pair of vertical prongs and a horizontal base, one of said U-shaped rod members having a shorter base between the prongs than the other, said U-shaped rod members being disposed relative to one another in parallel planar relationship, a substantially U-shaped support element having a rear hanger loop and a front apex prong, said support element having a horizontal base secured fixedly and at a right angle to the pair of bases of said rod elements, the five prongs of said members and support element being disposed in a triangular configuration.

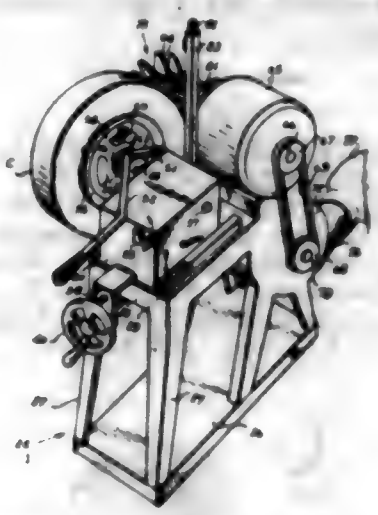
2,864,443
TIMER MECHANISM
Emil Niemand, Waterbury, Conn., assignor to The Lux Clock Manufacturing Company, Inc., Waterbury, Conn., a corporation of Connecticut
Application December 15, 1954, Serial No. 475,427
8 Claims. (Cl. 161—15)



1. An interval timing mechanism comprising a driving shaft, a driven shaft, means for operating said driven shaft at different speeds during one revolution thereof comprising two trains of gearing adapted to connect the driving shaft to the driven shaft to drive the latter, the gears of one of said trains being frictionally driven and the other being positively driven from the driving shaft, and means for mounting one of the gears of said positively driven train for pivotal movement about a point eccentric to its axis into and out of mesh with a mating gear, and means responsive to the rotation of the driven shaft for moving said movable gear out of mesh with its mating gear at a predetermined point in the rotation of the driven shaft.

2,864,444
TIRE CASING CONDITIONING MEANS
Herman E. Gladde, Franklin Lakes, N. J.
Application October 28, 1955, Serial No. 543,537
7 Claims. (Cl. 164—10.2)

1. In a casing tread removing apparatus, a support, a jack shaft slidably carried by said support, a casing mounting rim thereon, a tool shaft rotatably connected to said support, a tread removing tool mounted on said tool shaft and rotatable therewith, power means connected to each of said shafts for rotating said tool and said rim, manually actuated means connected to said jack shaft for moving said rim over a path towards said tool to effect engagement of the tread of a casing mounted on said rim with said tool for removing said tread from said casing during rotation of said tool and said rim, said rim including a pair of sections with one section being removable from the other to permit mounting and dismounting of said casing thereon and therefrom, respectively, a cam member slidably axially mounted on said jack shaft and rotatable therewith, said member being



fixed to the other of said sections for movement therewith and provided with circumferential and cam slots, a pivoted lever equipped with a roller selectively disposed within said circumferential slot for reciprocating said rim on said jack shaft upon manual oscillation of said lever, said roller being removable from said circumferential slot for disposal in said cam slot for reciprocating said rim automatically on said jack shaft when said lever is maintained in a fixed position, said member serving to move said casing over a path angularly related to said first-mentioned path to dress said casing along the margins of said tread during removal of said tread and upon reciprocation of said member.

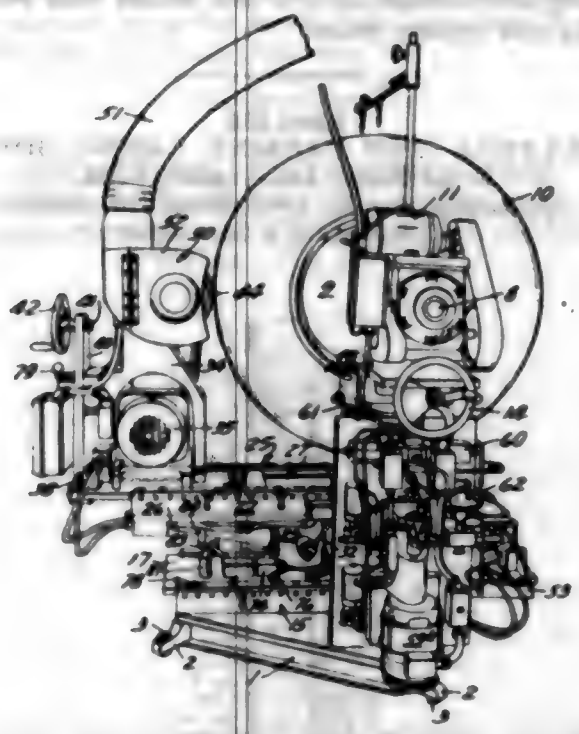
2,864,445
AUTOMATIC BUFFING MACHINE
Earle W. Hawkinson, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Application June 27, 1957, Serial No. 668,418
4 Claims. (Cl. 164—10.2)

1. A tire buffing machine comprising, a base, a fixed column extending upwardly from said base, a first horizontally disposed guideway at the top of said column, a first slide mounted in said guideway for movement longitudinally thereof, means for imparting said movement to said first slide, a tire supporting shaft journalled in said first slide for rotation on a horizontal axis extending in the direction of sliding movement of said first slide and for common sliding movements therewith, power means for rotating said shaft, a second horizontally disposed guideway secured to the base, said second guideway being laterally spaced from said column in the direction of longitudinal movement of said first slide and below a tire casing mounted on said shaft, said second guideway extending in a direction normal to the axis of said shaft and the direction of movement of said first slide, a second slide mounted for longitudinal sliding movement in said second guideway, power means for imparting said movement to the second slide selectively in opposite directions, a third horizontally disposed guideway, a third slide mounted in said third guideway for longitudinal movement therein,

2,864,448
PROCESS FOR SELECTIVELY AND TEMPO-

its upper end in the lower end of said tubing to project a substantial distance below said lower end to increase the

means for imparting longitudinal movement to said third slide selectively in opposite directions in said third guideway, mounting means pivotally mounting said third guideway on said second slide for rotation about a substantially vertical axis with said longitudinal movement of said third slide being radial of said vertical axis at all times, a second shaft carried by said third slide and movable therewith, said second shaft extending axially in a direction normal to the direction of longitudinal movement of said third slide, a buffer wheel mounted on said second shaft for common rotation therewith, power means for rotating said second shaft, power means operatively connected to said second slide and to said third guideway for imparting limited rotary movements to said third guideway and parts carried thereby in opposite directions, control means for said last-mentioned power



means operative to limit rotation of said third guideway in opposite directions, and means including cooperating actuating elements on said second slide and third guideway for controlling operation of the movement imparting means for said third slide, said controlling means being responsive to rotation of said third guideway on the axis of its respective mounting means to cause step by step movement of said third slide in one direction longitudinally of said third guideway, the longitudinal movement of the third slide being operative to adjust the radius of the buffing arc, the first and second slides being operative to bring a tire casing and said buffing wheel together for proper buffing of a tire tread or shoulder portion, the second slide initially adjusting the buffing wheel into a buffing position, adjustment of the first slide being generally for buffing a tire shoulder portion.

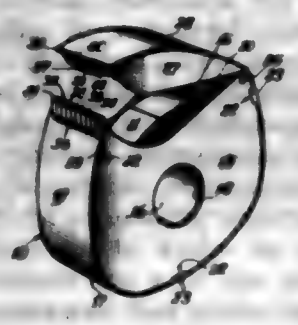
2,864,446

TAPE DISPENSER

Raymond J. Olson, Skokie, and John E. Prum, Niles, Ill., assignors to Federal Tool Corporation, Chicago, Ill., a corporation of Illinois

Application March 4, 1955, Serial No. 492,237
5 Claims. (Cl. 164—41)

1. A tape dispenser to sever a length of tape from a supply thereof comprising, a pair of jaws movable between open and closed positions, a serrated edge on the outer side of one of said jaws, the serrations of said edge providing V-shaped notches therebetwern, a row of pointed teeth on the inner side of the second one of said jaws arranged for sweeping motion through said notches when said jaws are moved from said open position to said closed position, and means for supporting a supply of tape in position wherein a length of tape may be withdrawn in a path between said serrated edge and said row of teeth when said jaws are in said open position, each of said teeth having a pair of side edges thereon converging at the point of the tooth and arranged to cooperate with the converging edges of adjacent serrations to sever said tape during said sweeping motion, said side



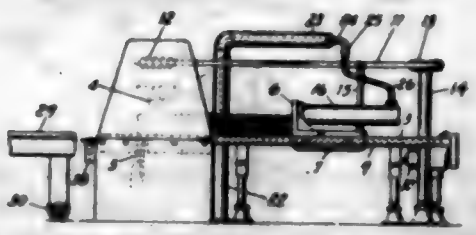
edges of said teeth during said sweeping motion being disposed at an acute angle with respect to the plane of said serrated edge so that the points of said teeth first engage and perforate said tape at the inner apices of said notches where the body of said serrations closely support the tape about three sides of the areas of perforations, said side edges of said teeth thereupon cooperating with said side edges of said serrations during said sweeping motion progressively to sever said tape outwardly in divergent directions from the perforations.

2,864,447

PAPER TRIMMERS WITH POWER EJECTING MEANS

Frederick R. Cartonius, Kalamazoo, Mich., assignor, by mesne assignments, to Rice Barton Corporation, Worcester, Mass., a corporation of Massachusetts

Application April 2, 1956, Serial No. 575,555
10 Claims. (Cl. 164—59)



1. In combination with a paper trimmer having a table with a back guide reciprocable along the rear of the table, paper ejecting means comprising a pair of pneumatic cylinders secured to the rear side of the vertical face of said back guide and projecting horizontally rearwardly in spaced relation above said table, pistons and piston rods reciprocably mounted in said cylinders with the rods projecting forwardly through said back guide, ejector heads on said rods on the forward side of said back guide, said back guide having recesses in the forward face thereof adapted to receive said ejector heads in the retracted positions of said pistons and rods, an air supply pipe extending in spaced relationship above the rear portion of said table and having a T fitting located centrally above said cylinders, flexible hoses connecting said T fittings to said cylinders, and a manual control valve on the front of said trimmer connected to supply air to said pipe, the stroke of said pistons being long enough to extend said ejector heads to the front edge of table when said back guide is in its foremost adjusted position.

the exterior of the second casing, the upper unit including a spacer ring slidably engaged in the chamber and

2,864,452

SUPPORTING AND LEVEL CONTROL MECHA-NISM FOR CONCRETE SLAB LAYING MA-

2,864,448

PROCESS FOR SELECTIVELY AND TEMPORARILY SEALING A GEOLOGICAL FORMATION HAVING ZONES OF VARYING PERMEABILITY

Donald C. Bond and Orrin C. Hollbrook, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application December 21, 1954
Serial No. 476,852
6 Claims. (Cl. 166—22)

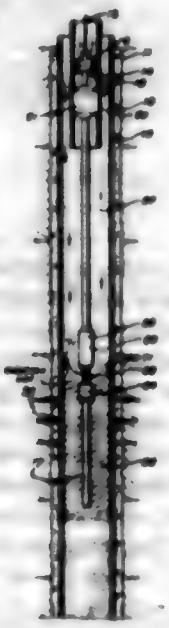
1. A process for selectively injecting a fluid into a subterranean rock formation of different streaks of permeability traversed by a bore hole comprising forcing into said formation through said bore hole a liquid heat-transfer medium cooled to a temperature substantially below formation temperature whereby said formation is cooled to a temperature substantially below normal formation temperature, introducing into the cooled formation a colloidal sol which at the reduced temperature of the formation sets to a gel solatable upon heating, retaining said sol within said formation until it cools to gelating temperature and forms a gel, allowing said formation to heat for a period of time sufficient for the temperature in the less permeable streaks to revert to a temperature above the gelating temperature of said sol but insufficient to allow the temperature in said more permeable streaks to rise to said gelating temperature, whereby said sol will remain temporarily gelated in said more permeable streaks but will revert to the sol state in said less permeable streaks, and injecting said fluid into said less permeable streaks after the gel therein has reverted to the sol state and the more permeable streaks are temporarily sealed by said gel.

2,864,449

APPARATUS FOR FLOWING FLUID MATERIAL IN A WELL

Gilbert H. Tausch, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Application January 29, 1954, Serial No. 407,023
11 Claims. (Cl. 166—115)



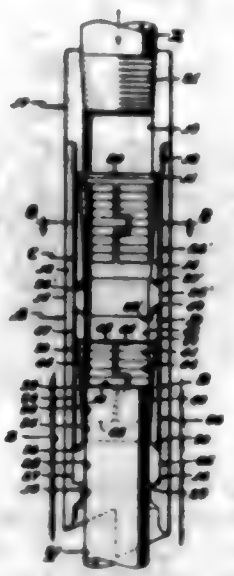
1. Apparatus for use in flowing a fluid material in a cased and tubed well while maintaining the tubing in place in which the tubing is arranged with its lower open end above a plurality of productive strata which comprises a retrievable tubular member lowerable on a flexible line through said tubing and sealingly seatable with its upper end in the lower end of said tubing to project a substantial distance below said lower end to increase the effective length of said tubing, said tubular member being provided with at least one port communicating its interior with the exterior of said tubular member at a point intermediate first and second ends of said tubular member, a valve means arranged in said tubular member below said port adapted to close said tubular member and prevent flow in one direction by fluid pressure exerted against said valve means, a slidable sleeve mounted exteriorly on said tubular member, and a biasing means arranged exteriorly on said tubular member to urge said sleeve to a position normally closing said port, closing of said valve and opening of said port by said fluid pressure exerted against a surface of said sleeve in said one direction serving to provide fluid passage through said opened port between the interior and exterior of the tubular member intermediate its first and second ends on overcoming said biasing means.

2,864,450

MULTIPLE UNIT PACKING CASING BOWL

Erwin Burns, Los Angeles, Calif.

Application May 13, 1955, Serial No. 508,083
2 Claims. (Cl. 166—218)



1. A packing casing bowl of the character described including, an elongate, vertically disposed body with a cylindrical chamber therein, an upwardly facing shoulder at the lower end of the body, a coupler with a bore of lesser diameter than the chamber engaged in the upper end of the body to establish a downwardly facing annular shoulder and adapted to be coupled with a section of casing, the lower end of the body being open to the chamber to receive the end portion of a second casing section, upper and lower packing and anchoring units carried in the chamber, and adapted to initially freely receive the said upper portion of the second-mentioned casing section, the lower unit including, a malleable packing ring slidably engaged in the chamber and carried by the shoulder at the lower end of the body and anchoring means including, a longitudinally shiftable supporting sleeve with a downwardly and inwardly inclined bore slidably engaged in the chamber and supported by the top of the packing ring and an annular series of contractable segmental wedge-shaped slips slidably positioned within and carried by the supporting sleeve and adapted to be actuated into substantially stationary gripping engagement with the second casing when an upward pull is put on the first-mentioned casing to hold the sleeve stationary whereby the packing ring is compressed between the shoulder and the sleeve and is urged into tight sealing engagement with the wall of the chamber and about

connection with said spring means, and separate valve means controlling the fluid flow to and the discharge

ergizing said precipitator for automatically varying the precipitator voltage to maintain a predetermined range

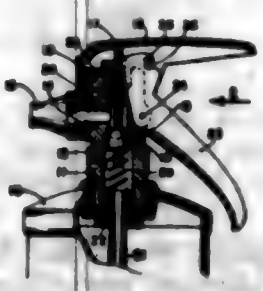
the exterior of the second casing, the upper unit including a spacer ring slidably engaged in the chamber and supported by the top of the sleeve of the lower unit, a second malleable packing ring slidably engaged in the chamber and supported by the spacer ring and anchoring means including, a second longitudinally shiftable supporting sleeve having a downwardly and inwardly inclined bore slidably engaged in the chamber and supported by the top of the second packing ring and a second annular series of contractable segmental wedge-shaped slips slidably positioned within and carried by the second sleeve and adapted to be actuated into substantially stationary gripping engagement with the second casing when an upward pull is put on the first-mentioned casing to hold the second sleeve stationary whereby the second packing ring is compressed between the spacer and the second sleeve and seals between the inner chamber wall and the second casing, the spacer ring of the upper unit acting on the sleeve of the lower unit to assure and aid actuation of the lower unit.

2,864,451

PRESSURIZED FIRE EXTINGUISHER

Charles K. Hutbling, Sr., Culver City, Calif.

Application August 23, 1955, Serial No. 530,024
5 Claims. (Cl. 169—31)



1. In a fire extinguisher head assembly including a valve body having a lever pivoted thereto and valve means normally biased to closed position and adapted to be opened only upon pivoting movement of said lever, the combination comprising: a manually grippable handle extending outwardly from said valve body, said handle being pivoted to said valve body at a point spaced from the point at which said lever is pivoted; and co-functioning means on said handle and lever blocking said lever from pivoting, whereby said lever is prevented from opening said valve means, said means being released from blocking said lever upon pivoting of said handle to a given position.

ERRATA

For Class 172—6 see:
Patent No. 2,864,222

For Class 172—6 see:
Patent No. 2,864,292

For Class 172—9 see:
Patent No. 2,864,293

For Class 172—42 see:
Patent No. 2,864,294

For Class 172—254 see:
Patent No. 2,864,295

For Class 172—376 see:
Patent No. 2,864,296

For Class 172—441 see:
Patent No. 2,864,297

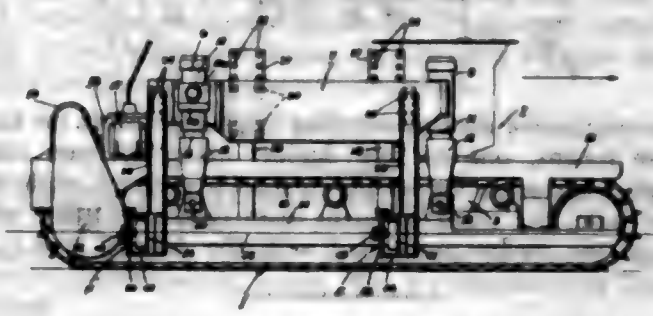
For Class 172—556 see:
Patent No. 2,864,298

2,864,452

SUPPORTING AND LEVEL CONTROL MECHANISM FOR CONCRETE SLAB LAYING MACHINES

Ronald M. Gunterl and Wilbur F. Earley, Stockton, Calif., assignors to Gunterl & Zimmerman Const. Div., Inc., Stockton, Calif., a corporation of California

Application November 5, 1956, Serial No. 620,498
7 Claims. (Cl. 180—9.1)



1. Supporting and level-control mechanism for a concrete-slab laying machine which includes a frame having longitudinally spaced uprights at the sides of the machine, self-propelled endless track units disposed laterally out from the uprights, bolsters above the track units, longitudinally spaced vertical hydraulical rams connecting each bolster and the corresponding track unit, level controlled means to actuate the rams, and means vertically adjustably connecting each bolster to the adjacent uprights.

2,864,453

WEIGHT-SHIFTING APPARATUS FOR TANDEM AXLE VEHICLES

Donald J. La Belle, Huntington Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 29, 1956, Serial No. 594,921
2 Claims. (Cl. 180—22)

1. In a tandem axle vehicle including a driving axle and an idler axle, a saddle member secured to said driving axle and having in addition to a portion positioned over such axle a cantilevered platform portion extending rearwardly thereof, a leaf spring bridging the space between said axles and operably connected thereto and to the vehicle frame, an air cushion carried by said cantilevered portion of said saddle and connected at its upper end to said frame, an air tank in circuit with said cushion and control means comprising a supply port and an exhaust port whereby air may be charged and withdrawn from said cushion.

2,864,454

LOAD RESPONSIVE FLUID SUSPENSION AND TRACTION INCREASING SYSTEM FOR TANDEM AXLES

Donald J. La Belle, Huntington Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

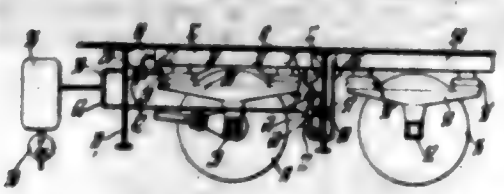
Application June 28, 1956, Serial No. 592,686
4 Claims. (Cl. 180—22)

1. In a multi-axle vehicle including a driving axle and an idler axle, springs means between each axle and the vehicle body, said spring means utilizing a fluid as the elastic medium, a source of fluid pressure having

electrode, a vertical tubular chamber surrounding said electrode, nozzle means in said chamber above said charging electrode and between the axis of said charging elec-

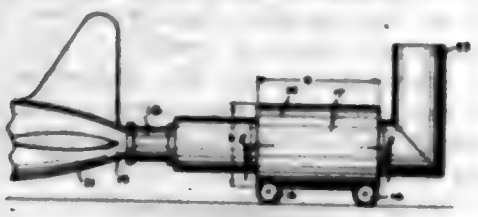
upstream facing pleats of said filter media comprising a plurality of electrodes on the downstream side of said

connection with said spring means, and separate valve means controlling the fluid flow to and the discharge of fluid from said spring means, the valve means functional with with relation to the spring means associated with said idler axle being governed by a pair of pres-



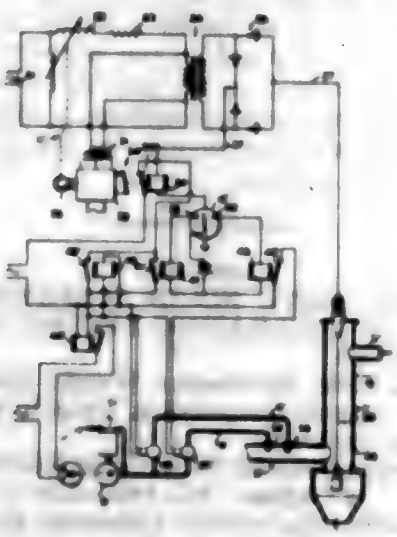
sure-responsive devices exerting opposing forces on such valve means, one of said devices being in open communication with the spring means associated with the idler axle, the other being in open communication with the spring means associated with the driving axle.

2,864,455
EXHAUST NOISE ABATEMENT APPARATUS
Martin Hirschorn, New York, N. Y.
Application April 13, 1955, Serial No. 501,100
8 Claims. (Cl. 181—59)



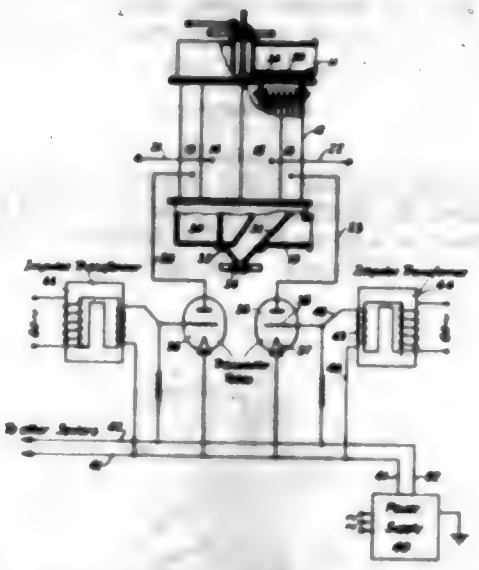
3. Sound attenuation apparatus comprising an enclosure forming a conduit for a sound bearing gaseous stream, dividers in the conduit shaped to force the gaseous stream into two separate streams, said dividers being hollow to form resonating chambers for the gaseous stream, side resonating chambers extending inwardly of the conduit and the dividers intermediate adjacent dividers to force the two separate gaseous streams to unite, and openings in the resonating chambers in communication with the conduit for the gaseous streams to permit said gaseous streams to expand thereinto, said resonating chambers being variously sized.

2,864,456
AUTOMATIC CONTROL FOR ELECTRICAL PRECIPITATORS
Herbert J. Hall, Princeton, and Harry J. White, Basking Ridge, N. J., assignors to Research Corporation, New York, N. Y., a corporation of New York
Application August 2, 1955, Serial No. 525,924
9 Claims. (Cl. 183—7)



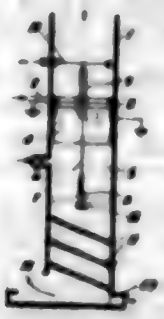
1. In combination with an electrostatic precipitator for cleaning gas, voltage control means for continuously energizing said precipitator for automatically varying the precipitator voltage to maintain a predetermined range of sparking rate, distributing means for adding a conditioning agent to the gas to be cleaned, means for sensing an electrical parameter of the precipitator charging circuit and means responsive to said sensing means for actuating said conditioning agent distributing means to maintain said electrical parameter within a predetermined range.

2,864,457
FLASHOVER ELIMINATION IN PRECIPITATOR
Hans Klemperer, Belmont, Mass., assignor to Apra Precipitator Corporation, New York, N. Y., a corporation of Delaware
Application April 30, 1956, Serial No. 581,495
3 Claims. (Cl. 183—7)



1. In an electrostatic precipitator having a bank of electrodes and an electrical power supply for furnishing current to said electrodes; an electronic device comprising a control electrode connected between said power supply and said precipitator electrodes for periodically interrupting the supply of current to the precipitator electrodes of said banks; an impulse producer that converts sine wave excitation into a peaked output wave; a source of alternating current for energizing said impulse producer; and connections between the output side of said impulse producer and said electronic device for modulating the current transmitted through said device to said electrodes from said power supply.

2,864,458
LIQUID-ELECTROSTATIC PRECIPITATION
Johannes Gerardus Adrianus De Graaf, Rijswijk Z. H., and Arend Hubregt de Haas Van Dorsser and Dick Zaalberg, The Hague, Netherlands, assignors to Machinefabriek Kiekens N. V., Landsmeer, Netherlands, a corporation of the Netherlands
Application July 30, 1956, Serial No. 600,829
Claims priority, application Netherlands August 2, 1955
11 Claims. (Cl. 183—7)



1. An electrostatic precipitator for purifying a fluid comprising: a vertically supported elongated charging

2,864,463
extending above the inner shell, and a nozzle disposed

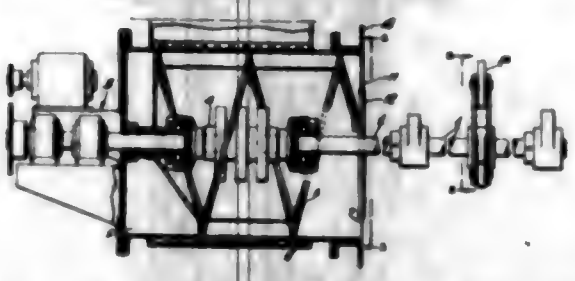
electrode, a vertical tubular chamber surrounding said electrode, nozzle means in said chamber above said charging electrode and between the axis of said charging electrode and the inner walls of said chamber, a freely falling conductive liquid film collecting electrode produced and directed by said nozzle means to be coaxial with said charging electrode and spaced from said walls of said chamber, means for passing said fluid to be purified through said chamber from its top to its bottom between said charging electrode and said collecting electrode, and means below said charging electrode for separating the resulting contaminated liquid of said collecting electrode from said fluid.

2,864,459

RAPPING SYSTEM FOR ELECTROFILTERS

Stig Gustafsson, Jonkoping, Sweden, assignor to A. B. Svenska Flaktfabriken, Kungsgatan, Stockholm, Sweden

Application October 22, 1956, Serial No. 617,542
Claims priority, application Sweden October 24, 1955
3 Claims. (Cl. 183—7)



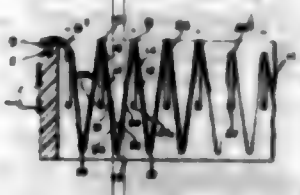
1. In a rapping system for an electrofilter having a housing enclosing the high-voltage collecting electrodes, hammer means operable to rap said collecting electrodes while energized, a separate chamber attached to said housing and communicating therewith through an opening in the wall of said housing, said hammering means comprising a shaft mounting said hammering means and projecting through said opening and into said separate chamber, an insulating coupling within said chamber, means to drive said coupling to actuate said hammering means, and an annular screw worm scraper in said chamber surrounding said coupling in spaced relation thereto to electrically insulate said shaft and said scraper, said scraper engaging the walls of said separate chamber and being connected to and driven by said drive means to scrape the walls of said chamber and convey the dust accumulated in said chamber out thereof through said opening into the electrofilter.

2,864,460

ELECTRODE ARRANGEMENT FOR ELECTROSTATIC GAS FILTER

James H. Powers, Middletown, Ky., assignor to General Electric Company, a corporation of New York

Application January 10, 1957, Serial No. 633,499
4 Claims. (Cl. 183—7)



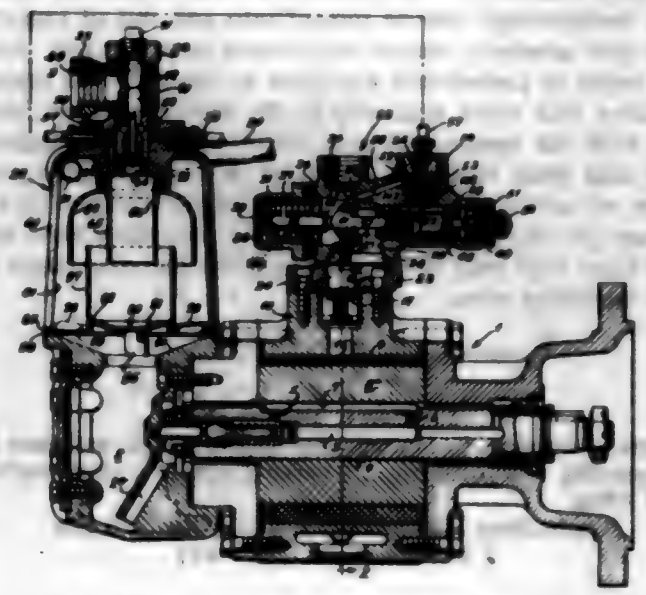
1. An electrostatic filter for filtering particles from a gas stream comprising an accordion folded filter media of dielectric fibrous material extending across the path of said gas stream with the ridges thereof alternately facing upstream and downstream, said media thereby forming a plurality of upstream facing pleats bounded by said downstream ridges, means to establish and maintain an electrostatic potential difference between adjacent upstream facing pleats of said filter media comprising a plurality of electrodes on the downstream side of said filter media, each of said electrodes arranged within one of said upstream facing pleats of said filter media, said electrodes each including three spaced apart conducting elements, one of said elements being disposed closely adjacent and parallel to said upstream facing ridge, said remaining two elements disposed downstream from said one element and electrically connected thereto, each of said remaining elements lying closely adjacent opposite sides of said pleat, and means for charging adjacent electrodes to different electrostatic potentials.

2,864,461

INTEGRATED OIL SEPARATING SYSTEM FOR GAS COMPRESSORS

Stanley T. Dueker, Affton, Mo., assignor to Wagner Electric Corporation, St. Louis, Mo., a corporation of Delaware

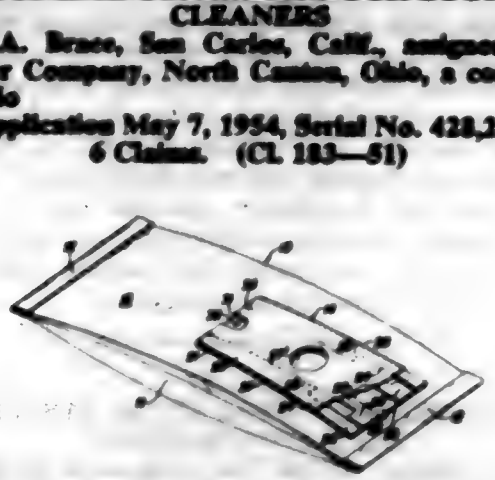
Application March 23, 1955, Serial No. 496,189
10 Claims. (Cl. 183—41)



1. An oil separator for separating oil from a mixture of compressed gas and oil comprising a separator housing secured to a base plate; passage means located near the top of the separator through which said mixture flows into the separator housing; deflector means in said housing for changing the direction of flow of the mixture therein, said deflector means including at least one air-scoop connected with the base plate, an upstanding baffle connected to the base plate, and depending baffle means connected to said housing and extending downwardly into overlapping spaced relationship with the upstanding baffle, said separator housing and said deflector means being positioned to intercept oil carried by the mixture; oil reservoir means positioned below the base plate for collecting the intercepted oil, unidirectional valve means on the base plate through which the intercepted oil passes to the oil reservoir from the separator housing; aperture means in the base plate located in communication with the housing and the reservoir through which oil passes between the separator housing and the oil reservoir means; and separator discharge means located at the top of the separator housing including a discharge passage with a unidirectional valve positioned therein for relieving the separator.

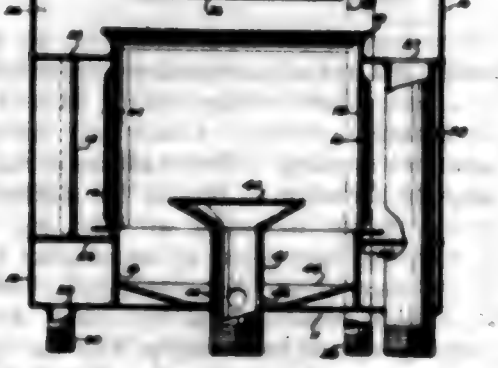
pivoted on the chassis for movement against the wheel, bumper member and the speed of said last named part

2,864,462
DISPOSABLE FILTER BAG FOR SUCTION CLEANERS
George A. Bruce, San Carlos, Calif., assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application May 7, 1954, Serial No. 428,228
6 Claims. (Cl. 183—51)



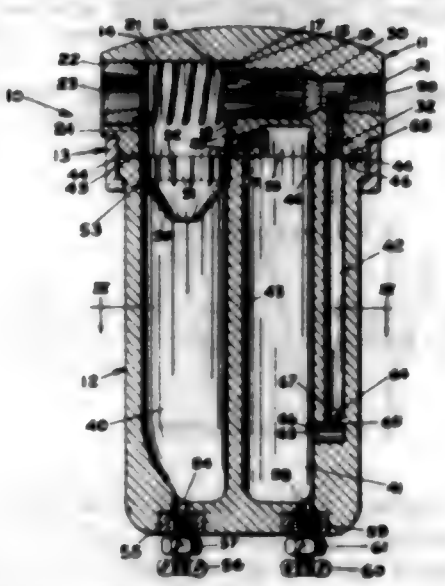
1. In combination, a paper filter bag having a flat bottom, two opposed flat side walls interconnected by pleats and closed at its top, said bag being readily collapsible into a compact flat condition for shipment and storage, said bottom wall having an air inlet opening spaced inwardly from the perimeter of said bottom, a valve assembly comprising a mounting plate and a slide valve movable relative to one another so that a pair of openings therethrough can be moved into and out of registry with one another, means frictionally holding said plate and valve in preselected positions as desired, and means securing said valve assembly to the bottom of said filter bag with the opening in said mounting plate in registry with said filter bag inlet and with the opposite marginal edges of said mounting plate free of attachment to the bottom of the filter bag whereby said mounting plate and said filter bag may be supported from the side edges of said mounting plate.

2,864,463
INTERNAL PURIFIER
Charles Langdon Campbell, Cleveland, Ohio, assignor to Centrifix Corporation, Cleveland, Ohio, a corporation of Ohio
Application July 29, 1955, Serial No. 525,196
3 Claims. (Cl. 183—81)



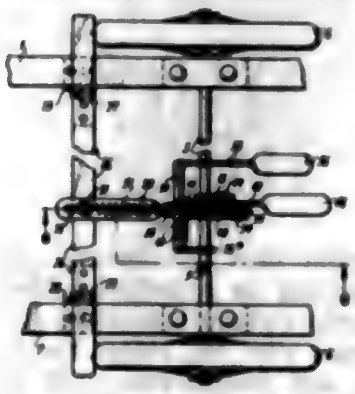
1. Centrifugal separating apparatus comprising an outer cylindrical shell open at its upper end and closed at its lower end and having tangential inlet openings in its side wall, an inner cylindrical shell disposed in and radially spaced from the outer shell and having an open upper end and a closed lower end and tangential inlet openings in its side wall, the upper end of inner shell being provided with an outwardly rolled lip, diaphragm means engaging the upper portion of the inner shell and closing the space between the outer shell and the inner shell to provide in combination with the outer shell a raceway containing the upper end of said inner shell and extending above the inner shell, and a nozzle disposed above the upper end of the inner shell and comprising a cylinder radially spaced from the outer shell and having an outwardly-rolled lip around its upper end disposed within the outer shell and outside the raceway and a lower open end constituting an inlet portion in said raceway and adjacent to the open end of the inner shell.

2,864,464
COMBINATION AIR FILTER AND LUBRICATOR
William M. Booth, Spring Lake, Mich., assignor to Gardner-Denver Company, Quincy, Ill., a corporation of Delaware
Application July 18, 1955, Serial No. 522,811
12 Claims. (Cl. 184—55)



1. A combination air filter and lubricator comprising: a head; an air passage through said head having an inlet port at one end and an outlet port at the other end, said air passage being straight; a filter element in said air passage intermediate said ports; a bowl and means for securing said bowl to said head; said bowl having a collection chamber and an oil chamber communicating at their upper ends independently of said air passage; said collection chamber communicating with said passage between said inlet port and said filter element; an oil feeder adapted to receive oil from said oil chamber and extending into said air passage between said filter and said outlet port.

2,864,465
BRAKE FOR BABY CARRIAGE
Matilda D. Welsh, St. Louis County, and Frederick Edward Miller, St. Louis, Mo.; said Miller assignor to said Welsh
Application July 6, 1953, Serial No. 366,133
7 Claims. (Cl. 188—20)



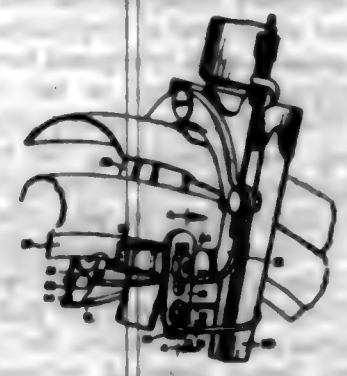
1. A brake for a baby carriage having a chassis and a road wheel thereon, comprising, a brake-shoe member

and a conduit line connecting said cylinder and said

2,864,471

pivoted on the chassis for movement against the wheel, a toggle link having a shiftable connection with said member, said pivotal connection being shiftable in the same direction as said brake shoe member during setting and releasing of said brake respectively, a toggle arm pivoted to the chassis and to said link and forming with the latter a lockable toggle, and spring means between the member and the link normally shifting said connection along said link toward the wheel, whereby movement of said toggle to locked position will move said shoe member against the wheel under tension of said spring means.

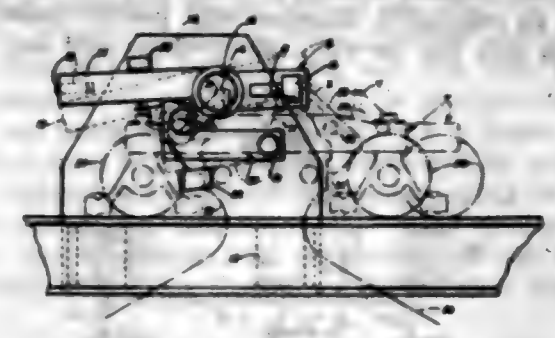
2,864,466
BRAKES FOR CYCLES
Frank Walter Tayler, Birmingham, England, assignor to H. C. Webb & Company Limited, Birmingham, England, a British company
Application January 9, 1956, Serial No. 558,163
Claims priority, application Great Britain September 8, 1955
5 Claims. (Cl. 188—24)



1. A rim brake assembly for the wheel of a cycle, said wheel being mounted for rotation between fork members having portions adjacent the rim of said wheel, said assembly comprising a pair of caliper-like levers, brake blocks secured on the ends of said levers, operating means acting on said levers to bring said blocks into engagement with opposite sides of said rim, flexible metallic stranded cables, said cables each having first and second ends and an intermediate portion, a rigid connection between the first end of each of said cables and an associated one of said caliper-like levers at a point adjacent the corresponding block, said intermediate portion forming a loop passing around one of said fork members, and an adjustable connection between said second end of the cable and said associated caliper-like lever at said point adjacent the corresponding block.

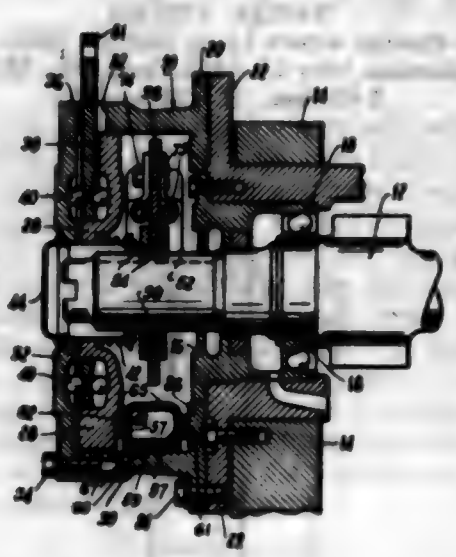
2,864,467
SPEED CHECK DEVICE FOR CONVEYOR SYSTEM
Paul Klamp, Detroit, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Application July 9, 1956, Serial No. 596,471
9 Claims. (Cl. 188—63)

1. A speed check mechanism for a traveling conveyor trolley or like unit having a bumper actuating part and a pair of speed check parts spaced thereon in the direction of travel of the unit, comprising a support and a bumper member mounted on said support for movement adjacent the path of a traveling unit, said bumper member being engageable by said actuating part of said unit to shift the bumper member to a position for contact by one of said speed check parts of said unit to check the forward motion of the latter, said bumper member being normally biased predeterminedly to shift the same out of position to be so contacted in a time interval whose duration is a function of the bias on said bumper member and the speed of said last named part in contacting said bumper member, said member being



engageable with the other speed check part of said unit upon reverse rebound of the latter occasioned by making said contact at over a predetermined speed.

2,864,468
FRICTION DEVICE
Edward K. Dornbock, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application October 11, 1955, Serial No. 539,796
10 Claims. (Cl. 188—78)



1. In a kinetic-energy-absorbing device, a rotatably driven torque plate having diametrically extending anchor projections with divergent sides, and two arcuate box-shaped cross section friction units arranged in end to end relation, each of said friction units having friction material lining on the opposite sides and outer arcuate surface thereof, an anchor block mounted between the sides of each unit at the ends thereof and engageable with the associated side of the anchor projection, and an anchor pin pivotally connecting the ends of each unit and the associated anchor blocks, the sides of each unit at the ends thereof being laterally offset to embrace the anchor projection, and resilient means fastened between the adjacent oppositely movable ends of said units to retain them in operative abutting relation with said anchor projection whereby said units are suspended and held in a normally released position.

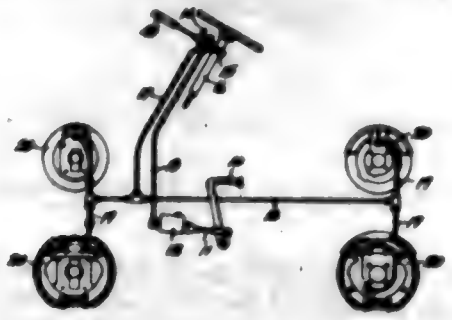
2,864,469
PRESSURE LOCKING UNIT FOR HYDRAULIC BRAKES
John J. Schlaumbrecht, Fabius Township, St. Joseph County, Mich.
Application June 15, 1953, Serial No. 361,519
5 Claims. (Cl. 188—152)

1. In combination, a hydraulic brake system including a master cylinder having a piston and a filling port near the beginning of the stroke of the piston, hydraulic brakes

upstanding open-ended tunnels disposed between said peripheral portions, said tunnels being aligned end-to-end

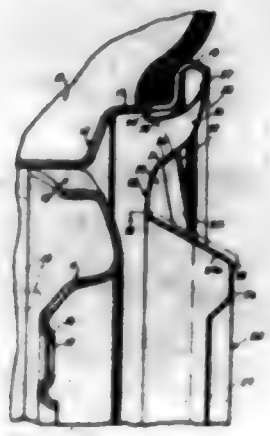
centrically about said clutch member, said clutch element being axially slidable and constrained for rotation with

and a conduit line connecting said cylinder and said brakes, a normally open valve interposed in said line, said valve retaining braking pressure in said brakes when closed, an expansible chamber inlet means communicating with said line between said cylinder and said valve,



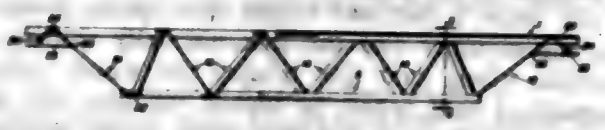
a normally closed valve in said inlet for controlling pressure in said chamber, and an actuator for simultaneously actuating both valves in opposite senses, said expansible chamber receiving fluid during initial movement of said piston past said filling port when said first valve is closed and said second valve is open.

2,864,470
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application May 22, 1956, Serial No. 586,441
4 Claims. (Cl. 188—264)



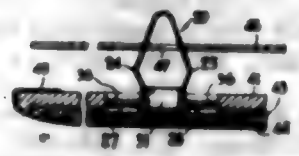
1. In a wheel structure including a wheel adapted to forwardly move and rotate and having rim and body parts and wheel openings disposed generally opposite the brake drum area of the wheel structure, an ornamental wheel cover for overlying protective disposition upon the outer side of the wheel with means between the cover and wheel for maintaining the cover in detachable assembly therewith, said cover having an outer margin in bottomed engagement upon the wheel and defining a substantially enclosed pocket between the cover and wheel, said cover having an intermediate dished portion provided with circumferentially spaced generally radially extending raised portions, each having a peak with said peaks lying generally in a common vertical plane, said raised portions including an inclined portion extending generally away from the direction of rotation of the wheel and a cover opening in said inclined portion disposed generally opposite the wheel opening with a slip stream of air moving rearwardly on the outer side of the forwardly moving and rotating wheel tending to create a low pressure area axially behind the plane of said peaks and with the centrifugal forces of the wheel forcing the air outwardly from an inner area between the cover and wheel for drawing air from brake drum area and inner area through said substantially enclosed pocket and cover openings creating an aspirating effect to circulate air and cool the brake drum area and wheel.

2,864,471
JOIST CONSTRUCTION
John K. Williams, Waco, Tex., assignor to Central Texas Iron Works, Waco, Tex., a corporation of Texas
Application February 23, 1956, Serial No. 567,223
1 Claim. (Cl. 189—37)



A joist construction comprising a first chord structure including two similar horizontally spaced parallel companion elements, each of the same angle member stock; a second chord structure including two similar horizontally spaced parallel companion elements, each of the same angle member stock as the said first chord structure elements; and a web structure connecting said chord structures in spaced parallel relation with a common central vertical plane midway between the elements of each chord structure, said web structure comprising a plurality of angle member components of the same stock as said chord structure elements and each having two longitudinal outer edges and a longitudinal central edge and having its opposite ends interposed between and contacting mutually opposed faces of the companion elements of said first and second chord structures respectively establishing and maintaining the horizontal spacing of the companion elements of each chord structure, the longitudinal outer edges of said components being united to said chord structure elements on the said mutually opposed faces of said chord structure elements and connecting the companion elements of each of said chord structures in spaced parallel relation, the central edges of said components being disposed substantially in said common central plane, the neutral longitudinal axes of each two web components having mutually adjacent ends intersecting each other substantially on the neutral axis of the contiguous chord structure, all of a plurality of serially adjacent web components being positioned with their longitudinal central edges facing in the same direction longitudinally of the joist construction, and contiguous ends of adjacent web components being nested with each other between the mutually opposed faces of said chord structure elements between which said web component contiguous ends extend.

2,864,472
FASTENERS
Eric Birger Fernberg, Northwood, England, assignor to F. T. Products Limited, London, England, a British company
Application June 7, 1955, Serial No. 513,845
2 Claims. (Cl. 189—88)



1. In a combination, a two-part snap fastener, and a sheet formed with a cruciform hole, said two-part snap fastener comprising a snap stud in the form of a single strip of spring metal bent to U-shape and having a snap engaging elbow, a neck, and outwardly directed feet, and a retainer for mounting said snap stud in the cruciform hole in said sheet, said retainer comprising a plate-like base having upper and lower sides, an opposed pair of substantially flat and coplanar peripheral portions having their upper sides engaged flatwise beneath one side of said sheet along respectively opposite edge portions of one cross portion of the cruciform hole, a pair of

member for reducing the angular velocity of said member relative to the angular velocity of said one wheel, said

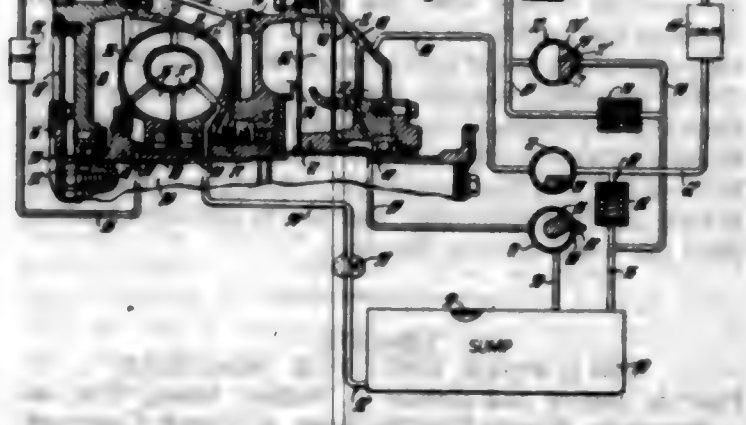
nected to the hub of said one wheel within a recess formed

upstanding open-ended tunnels disposed between said peripheral portions, said tunnels being aligned end-to-end with one another and having adjacent ends spaced from one another, said tunnels lying substantially within the thickness of the sheet and within the respective opposite ends of said one cross portion and receiving the feet of said snap stud, the space between the adjacent ends of said tunnels being occupied by a central portion of said body, said feet engaging between said tunnels and said central portion, and a pair of arms extending upwardly from respectively opposite sides of said central portion, said arms engaging through the other cross portion of said cruciform hole and clenched outwardly and downwardly over the other side of said sheet.

2,864,473
TRANSMISSION

Howard W. Christensen and Robert M. Tuck, Indianapolis, and Keith A. Bailey, Speedway City, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 28, 1955, Serial No. 555,847
22 Claims. (Cl. 192—4)



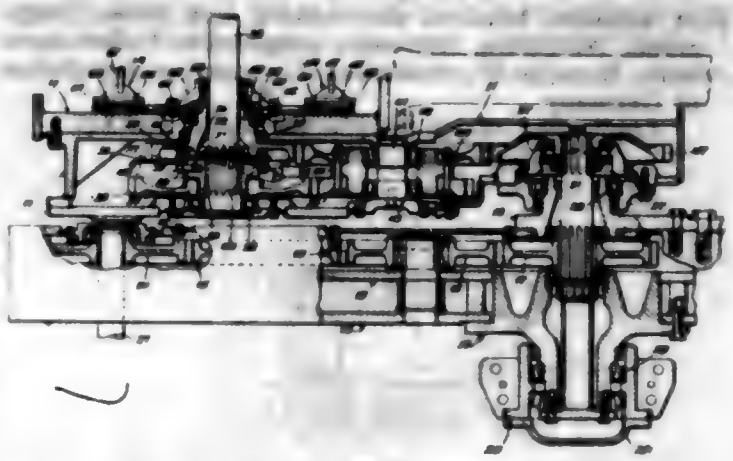
1. In combination, a torque converter having a converter chamber with a converter inlet and outlet and a hydrodynamic brake having a brake chamber with a brake inlet and outlet, a fluid supply, means to deliver fluid through said converter inlet and said converter chamber under pressure to said converter outlet, and valve means interconnecting said converter outlet, said brake inlet and outlet and said fluid supply and in the brake on position connecting said brake outlet and converter outlet to said brake inlet, and in the brake off position connecting said brake outlet to said fluid supply and said converter outlet to said fluid supply.

2,864,474
BRAKABLE TWO-SPEED TRANSMISSION

Pierce F. Richardson, Barrington, and William A. Siljander, Oak Park, Ill., assignors to International Harvester Company, a corporation of New Jersey

Application October 25, 1956, Serial No. 618,287
2 Claims. (Cl. 192—4)

1. For a power driven vehicle a brakable two-speed auxiliary transmission comprising a frame, a first gear mounted on and journalled for rotation on said frame, a second gear mounted on and journalled for rotation on said frame, one of said gears being of greater diameter than the other of said gears, said second gear being positioned in coaxially spaced relation with respect to said first gear, a drive shaft journalled for coaxial rotation in said first and second gears, a rotatable clutch member mounted on said drive shaft between said first and second gears, said clutch member being constrained for rotation with said drive shaft, a clutch element disposed concentrically about said clutch member, said clutch element being axially slidable and constrained for rotation with said clutch member, said clutch element being positioned to engage releasably at least one of said first and second gears in driving relation, a brake element mounted on and constrained for rotation with said first gear, a third gear mounted on and journalled for rotation on said frame and being in driving relation with a driven shaft, said third gear being in meshed relation with said first gear, a fourth gear mounted on and journalled for rotation on said frame, said fourth gear being positioned in coaxial spaced relation with respect to said third gear, said fourth gear being constrained for rotation with said

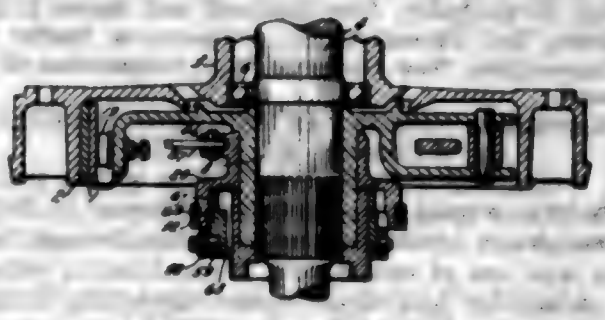


third gear and in meshed relation with said second gear, a first control lever mounted on said frame and positioned to move said clutch element from a neutral position into engagement with one of said first and second gears thereby drivingly connecting said clutch member and said drive shaft with one of said third and fourth gears, a driven shaft mounted on said frame in driving relation with said third gear, a brake shoe mounted on said frame positioned to engage releasably said brake element, and a second control lever mounted on said frame and adapted to move said brake shoe into engagement with said brake element for braking the rotative movement of said first and third gears.

2,864,475
POWER CONTROL MECHANISM FOR POWER CLUTCHES

John W. Poulter, Wauwatosa, Wis., Philip A. Huffaker, Chattanooga, Tenn., and Frederick Dwight Graham, Milwaukee, Wis., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin

Application October 30, 1956, Serial No. 619,258
23 Claims. (Cl. 192—36)



1. In a clutch mechanism for drivingly connecting a rotating driving element to a driven member, the combination of: clutch engaging parts connected to and rotatably driven by said driving element; a rotatable member connected to said clutch engaging parts for rotation therewith; resilient means for holding said rotatable member and said clutch engaging parts in a clutch disengaged position; means for retarding said rotatable

2,864,479
TRANSMISSION-HYDRAULIC CLUTCH

sealed to one end of said first sleeve, said spaced walls of said sleeves defining a chamber adapted to receive

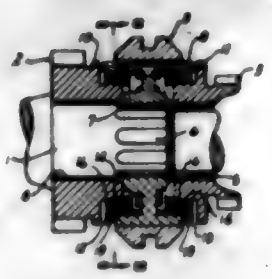
member for reducing the angular velocity of said member so that the angular displacement of said member with respect to said clutch engaging parts actuates said clutch engaging parts against the bias of said resilient means to effect clutch engagement; and control means including cam means coacting with said rotatable member for effecting release of said retarding means at any desired position in the angular displacement of said rotatable member and holding said rotatable member in said position against the bias of said resilient means.

2,864,476

SYNCHRONIZER

Karl Ashauer, Manfred Kalvesberg, and Heinz Dorpmund, Wolfsburg, Germany, assignors to Volkswagenwerk, G. m. b. H., Wolfsburg, Germany, a corporation of Germany

Application March 6, 1956, Serial No. 569,745
9 Claims. (Cl. 192—53)



1. In a synchronizing transmission having a jaw clutch sleeve with internal teeth, a synchronizer body on which said sleeve is mounted for axial movement, and a synchronizer ring adapted to frictionally engage a clutching surface on an associated gear; an intermediate ring operatively positioned between said sleeve and said synchronizer ring and having a plurality of teeth in axial alignment with internal teeth of said sleeve, spring means operatively connected between said intermediate ring and said synchronizer body for urging said intermediate ring circumferentially one half tooth-width out of phase with the corresponding teeth of said sleeve, said intermediate ring being axially movable by said sleeve for pressing the synchronizer ring against its associated gear, said intermediate ring and said sleeve having associated cam surfaces which contact when said intermediate ring is moved by said sleeve and bias said intermediate ring circumferentially against said spring means so that the teeth of the sleeve can pass through the intermediate ring teeth to the synchronizer ring.

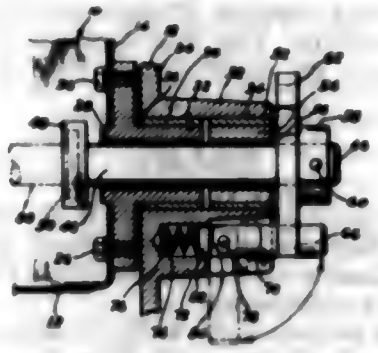
2,864,477

TRANSVERSELY ENGAGING PIN CLUTCH

James H. Hollyday, New Holland, and James L. Stackhouse, Jr., Lancaster, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Application November 19, 1956, Serial No. 623,155
4 Claims. (Cl. 192—71)

3. An agricultural distributer having a body supported by hubbed wheels and a rotatable element in the body thereof driven by shaft means extending through the hub of at least one of said wheels, in combination with driving means for said shaft means comprising; a driving clutch member fixed to the outer end of said shaft means and rotatable therewith exteriorly of the outer end of the hub of said one wheel, a plurality of circumferentially spaced members projecting radially outward from said hub of said member and disposed in a common plane transverse to said shaft means, one side of each member comprising a cam surface and the other side of each comprising an abutting surface substantially parallel to said shaft means; an elongated clutch member movably connected to the hub of said one wheel within a recess formed in the hub of said one wheel and extending inward from the periphery and outer end of said hub, said elongated clutch member being pivotally connected at one end within said recess for movement relative thereto between an inoperative position substantially transverse to said shaft means and an operative position substantially transverse to the plane of said projecting members for engagement with the abutting surface of one of said projecting members; and, means constantly urging said movable clutch



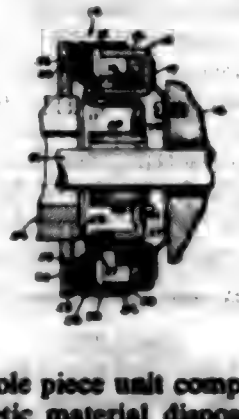
member toward said operative position but permitting movement of said member partially toward the inoperative position thereof when the wheel moves in backward direction and brings the cam surface of the next succeeding projecting member into engagement with said movable clutch member, whereby said rotatable element automatically is disengaged from said driving means when said wheel which carries the movable clutch member is rotated backwardly, said last mentioned means automatically restoring said movable clutch member to operative position upon the wheel moving forwardly.

2,864,478

POLE PIECE UNIT FOR MAGNETS

Paul A. Harter and Robert C. Walter, Beloit, Wis., assignors to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois

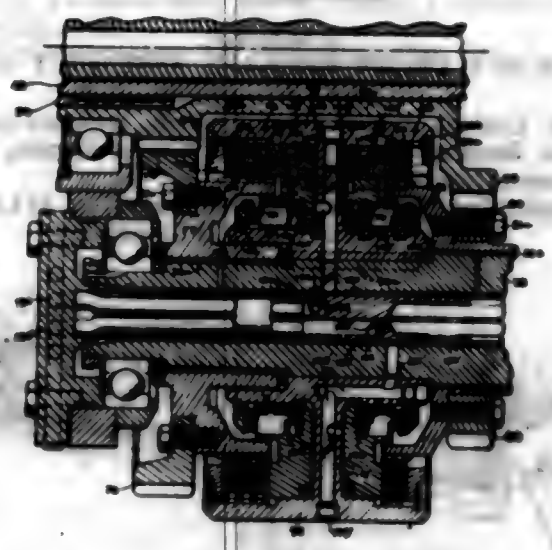
Application June 30, 1953, Serial No. 365,128
12 Claims. (Cl. 192—84)



1. An annular pole piece unit comprising two cylindrical rings of magnetic material disposed end to end and having inturned radial flanges at adjacent ends joined together to connect the rings and form an outer pole piece, an inner annular pole piece of magnetic material smaller than and concentric with said rings and having radially and axially offset cylindrical portions and an intermediate portion joining the adjacent ends of the cylindrical portions, axially facing pole faces respectively formed on the ends of one of said rings and the corresponding one of said cylindrical portions, and a nonmagnetic annulus disposed between said pole pieces and having an outer peripheral edge portion lying alongside and joined to one of said flanges and an inner peripheral edge portion lying against and fastened to said intermediate portion of said inner pole piece thereby to rigidly connect but magnetically separate the two pole pieces.

at the inner end thereof disposed within said first clutch medium intermediate said carrier and said meeting means

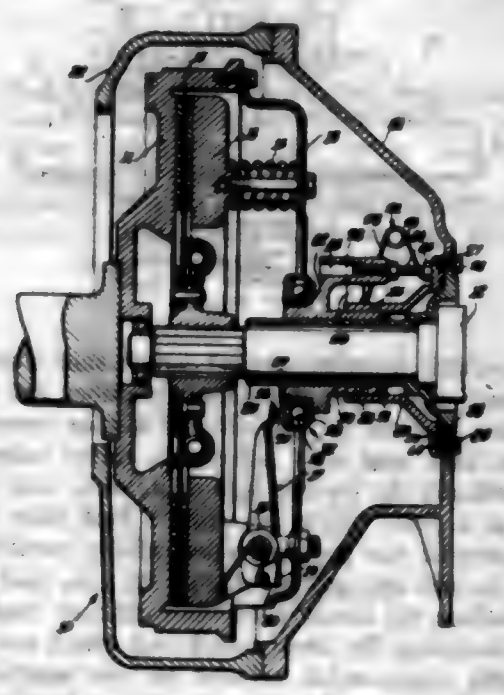
2,864,479
TRANSMISSION-HYDRAULIC CLUTCH BLEED-OFF VALVE
Harold C. Schindler, Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 17, 1955, Serial No. 482,257
5 Claims. (Cl. 192—85)



1. In a pressure-fluid-operated clutch having clutch mechanism and a movable abutment in operative connection with said mechanism and in fluid communication with a source of pressure fluid effective upon one face of said abutment to engage said clutch mechanism wherein said movable abutment is rotatable, the combination therewith of a valve and cooperating valve seat mounted for rotation with said abutment, said valve being mounted for generally radial movement from a seated position on its seat to an unseated position away from its seat in response to centrifugal force caused by said rotation, and means including said fluid under source pressure effective to hold said valve in seated position when said abutment is rotating, said means being insufficient where said fluid is shut off from its pressure source to hold said valve in seated position, said abutment having a fluid discharge passageway in communication with said valve and closed and opened respectively by said valve in position on and off its seat, said valve in seated position having radially aligned outer and inner faces in communication with said pressure fluid which is effective against said abutment face, said outer face having an area acted upon by said pressure fluid sufficiently greater than the area of said inner face subjected to pressure fluid in valve seated position to overcome the effect of centrifugal force acting radially outwardly on said valve when said abutment is rotating and said fluid is under pressure from its source.

2,864,480
CLUTCH ACTUATING MECHANISM
Russell S. Sink, Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application June 21, 1957, Serial No. 667,189
4 Claims. (Cl. 192—91)

1. In a friction clutch mechanism for releasably drivingly connecting a shaft with a drive element including clutch release means axially movable between a first, clutch engaged position and a second, clutch release position, the combination comprising, means for moving said clutch release means axially from said first position to said second position including a first stationary sleeve concentric with said shaft, a second sleeve concentric with said shaft having a wall radially spaced from a wall of said first sleeve and having one end thereof fixed to and sealed to one end of said first sleeve, said spaced walls of said sleeves defining a chamber adapted to receive fluid under pressure, a sleeve-like piston concentric with said shaft and extending into said chamber, said piston being axially movable by fluid pressure in said chamber from a first position to a second position, one end of said piston being operatively engageable with said clutch release means during said axial movement of said piston from its first position to its second position to move said clutch release means from its first position to its second position, said end of said piston operatively engaging said clutch release means normally being axially spaced from said clutch release means when said piston and clutch release means are in their first positions, means for rotatively fixing said piston to said sleeves including an ear extending radially from said second sleeve and having a radially extending slot formed therethrough and a cylindrical part carried by said piston extending axially through said slot, said cylindrical part having its axis radially spaced and parallel to the rotational axis of said shaft, said cylindrical part being provided with a central axially extending threaded bore, means for adjusting the axial spacing between said clutch release means and said piston end when in their first positions including a member having one end threaded into said threaded bore and projecting axially therefrom, said member having an enlarged head portion adapted to engage a portion of said second sleeve to limit axial movement of said piston with respect to said sleeves in one direction to establish the said first position of said piston, said member being rotatable with respect to said cylindrical part to vary the axial positioning of said piston end with respect to said clutch release means and said sleeves, and means biasing said piston to its first position.

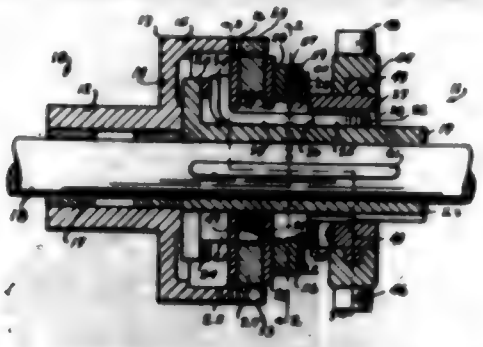


2,864,481
CLUTCH WITH ADJUSTING MEANS
Carl P. Strecker, Cincinnati, Ohio, assignor to The Conway Clutch Company, Cincinnati, Ohio, a corporation of Ohio
Application August 18, 1955, Serial No. 529,164
3 Claims. (Cl. 192—111)

1. In a friction clutch the combination of a first clutch member comprising a sleeve, an enlarged cup-like receptacle at one end of the sleeve, said cup-like receptacle including a base radially of the sleeve and a flange normal to said base at the periphery thereof, said cup-like flange having slots formed inwardly of its free edge at spaced intervals therearound, a second clutch member comprising a cylindrical body portion and a radial flange

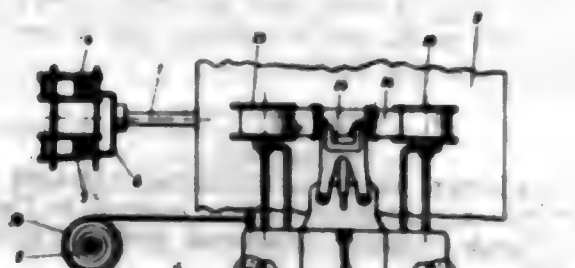
adjustable in an axial sense, said driving connection being fining an enlarged chamber thereover, a second conveyor

at the inner end thereof disposed within said first clutch member cup-like receptacle, said second clutch member cylindrical sleeve having formed downwardly of its periphery a plurality of slots, a clutch plate formed of material normally considered as non-friction disposed on the second clutch member cylindrical body portion and having lugs inwardly projecting therefrom into the slots thereof, a clutch plate formed wholly of material normally considered friction material disposed within the first clutch member cup-like receptacle and having peripheral lugs projecting into the cup-like receptacle flange slots, means carried by one of said clutch members co-operating with said second clutch member radial flange for pressing said clutch plates into driving engagement, and an adjustable thrust member nut threadedly carried by



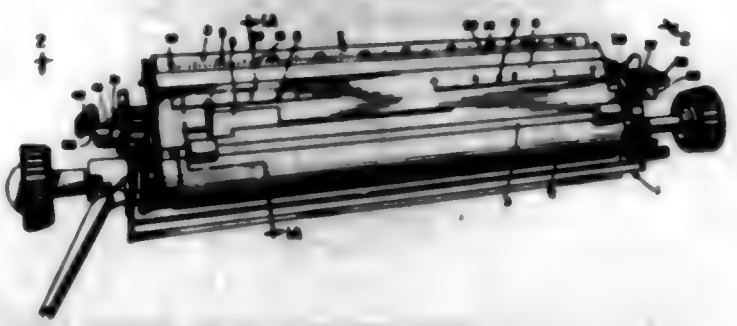
said one clutch member against which said clutch plates are pressed, said adjustable thrust member nut having a thrust face normal to its axis and a face remote from its thrust face and said adjustable thrust member nut being vertically slit on one side of its axis, said slit being formed at a point nearer its remote face than its thrust face to provide nut portions substantially parallel to one another in said nut on one side of its axis, said nut portion including the thrust face being thicker than the nut portion including the remote face and which nut portions are slightly displaceable relative to one another in the direction of extent of said nut axis, and screw means carried by the thinner nut portion and impinging on the thicker nut portion for displacing said thinner nut portion relative to the other and thereby clamp the nut on said clutch member in adjusted position.

2,864,482
PAGEPRINTER
Johann Wilhelm Augustin, Pforzheim, Germany, assignor to C. Lorenz Aktiengesellschaft, Stuttgart-Zuffenhausen, Germany, a corporation of Germany
Application September 11, 1953, Serial No. 379,669
Claims priority, application Germany September 11, 1952
13 Claims. (Cl. 197—49)



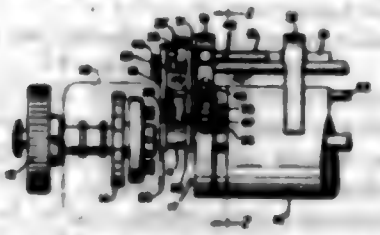
1. A page printing machine comprising a rotatable type carrier, means to selectively rotate said carrier to predetermined angular positions, marking means adjacent a portion of said carrier, means for laterally moving said carrier, separate means for laterally moving said marking means, both said moving means adapted to be independently controlled, means for guiding a recording medium intermediate said carrier and said marking means in a direction normal to the lateral movement of said carrier, said carrier being within said machine and adapted to be isolated from said marking means by said recording medium, said marking means being adapted to mark said medium at a point in register with the selected angular and lateral position of said carrier.

2,864,483
QUICK MARGIN RELEASE ASSEMBLY FOR TYPEWRITERS
John T. Carlson, Grand Rapids, Mich., assignor to R. C. Allen Business Machines, Inc., Grand Rapids, Mich., a corporation of Michigan
Application February 18, 1954, Serial No. 411,063
15 Claims. (Cl. 197—63)



1. In margin regulator mechanism, the combination with a typewriter including a movable carriage and a fixed stop post, of a rack bar mounted on the carriage, a pair of margin stop assemblies disposed for longitudinal sliding movement on the rack bar, an oscillatory detent member mounted on each stop assembly, a compression spring associated with each detent member for urging the detent member into a stop securing position on the rack bar, a separate spring attached to each stop assembly tending to slide the stops in opposite directions on the rack bar toward said fixed stop post, shiftable control rails engageable with the detent member of each assembly, said control rails extending longitudinally along said rack bar, one extending outwardly from one end of said rack bar and arranged to operate the release means of one stop assembly and the other extending outwardly from the other end of said rack bar and arranged to operate the release means of the other stop assembly, means normally retaining the control rails in elevated non-tripping position, and a key attached to the outwardly extending end of each control rail whereby the control rails may be actuated to a stop releasing position from a remote operating position.

2,864,484
STRIP FEEDING MECHANISM
Albert W. Metzner, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Application March 1, 1955, Serial No. 491,340
13 Claims. (Cl. 197—133)



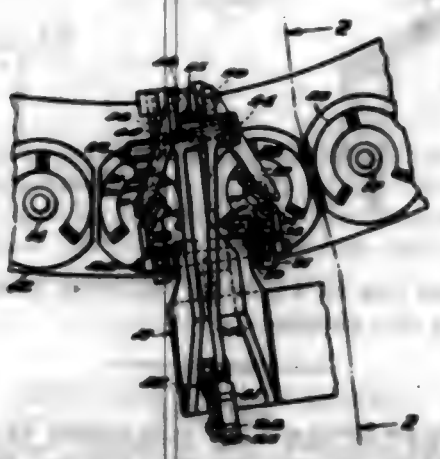
1. In a typewriting or like machine, a rotary platen, a pin feeding device at one end of said platen, a rotary driving connection between said platen and said pin feeding device, and an independent support for said device

tial material of the flanges to provide opposing abutting surfaces at each point of severance, said opposing surfaces

being located adjacent the intermediate channel in position to be actuated by the successive spacebands in the

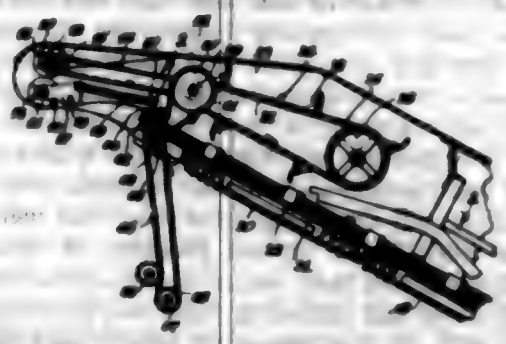
adjustable in an axial sense, said driving connection being enabled and disabled by adjustment of said support in said axial sense.

2,864,485
LAMP MOUNT POSITIONER
Ernest E. Yeo, Wenham, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application June 17, 1955, Serial No. 516,163
1 Claim. (Cl. 198—33)



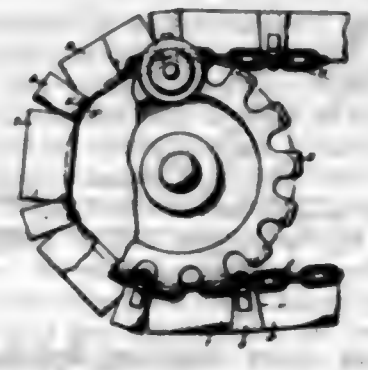
In a lamp making machine, an orientating mechanism for a mount having a hollow bottom flare adapted to center on a spindle and an upper pair of flats on opposite sides of the mount, a spindle on which the mount is positioned and rotatable relative to the axis thereof, a pair of fingers on opposite sides of the spindle and movable toward and from the flats, said fingers having planar flat engaging portions which are directly opposite each other when the flats are engaged, and at an oblique angle to the direction of motion of the fingers, whereby a mount may be oriented on the spindle.

2,864,486
TRASH MOVING CONVEYOR FOR CORN PICKERS
Ralph L. Sutton, Davenport, Iowa, assignor to International Harvester Company, a corporation of New Jersey
Application May 27, 1954, Serial No. 432,735
1 Claim. (Cl. 198—164)



A corn picker comprising a frame supporting structure, cooperative husking rolls journally mounted on said frame supporting structure in a generally horizontal plane, means rotating said husking rolls for inward and downward movement on the top and adjoining sides thereof, first conveyor means mounted on said frame supporting structure and arranged and constructed to feed ears of corn along and over said cooperative husking rolls, said first conveyor means including an endless chain and ear forwarder flights at intervals thereon, and said ear forwarder flights extending laterally inwardly from the side of one of said cooperative rolls, an enclosure on said frame supporting structure above said cooperative husking rolls and defining an enlarged chamber thereover, a second conveyor means mounted in said enclosure and running substantially the length of said cooperative husking rolls, and said second conveyor means having longitudinally spaced apart forward and rearward sprockets in said enlarged chamber and an endless chain mounted on said spaced apart sprockets and defining an upper and a lower flight and said chain having paddles at intervals therearound, and said paddles on the lower flight depending downwardly over said cooperative husking rolls and spaced above said first conveyor means whereby trash incidental to picking and husking corn entering said enlarged chamber is removed by said second conveyor, and said forward sprocket having a large diameter drum formed therewith to substantially fill the vertical and horizontal extent of said enlarged chamber.

2,864,487
STEEL LINK BELTS
Wilhelm Becker, Dattoln, Georg Krüll, Augermund, and Oskar Nee, Duisburg-Hochfeld, Germany, assignors to Untertage-Maschinenbau G. m. b. H., Recklinghausen, Germany, a German company
Application June 22, 1953, Serial No. 363,228
Claims priority, application Germany June 23, 1952
14 Claims. (Cl. 198—196)



1. A steel link belt comprising in combination a multiplicity of individual trough plates, a multiplicity of intermediate members interposed between said individual trough plates to alternate therewith and connect said individual trough plates together so as to be hingedly movable relatively to each other in the resulting continuous belt structure, each intermediate member comprising a pair of superposed plate elements rigidly secured at their center and having oppositely curved sides, the free edges of said sides being spaced apart a distance to form a slit of a width approximating the thickness of the adjacent trough plate slidably received therein, the curvature of such sides enabling the free edge portion of the respective trough plate to rock freely in one direction or the other about a pivot defined by an edge of said slit, and link chain traction means for said belt structure secured to said intermediate members, the distance of the hinged connection of the trough plates and the intermediate members from the center line of the chain traction means being less than the distance between the center line and the upper limit of the chain traction means.

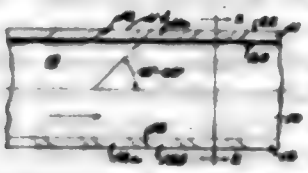
2,864,488
FLANGED CONVEYOR BELT
Victor K. Talpalo, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
Application February 23, 1956, Serial No. 489,837
3 Claims. (Cl. 198—201)

1. A conveyor belt comprising a generally flat flexible carcass portion having an upstanding flange of rubber-like material along the marginal edges of one side of the carcass portion, each flange being severed transversely at periodic intervals without the removal of any substan-

2,864,492
BODY OF POLYMERIZABLE MATERIAL CON-

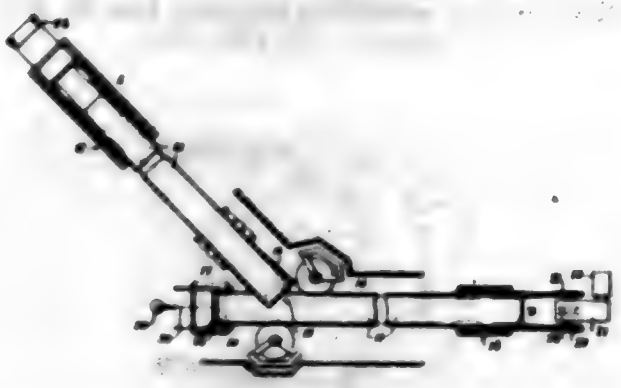
tubular part, coupling means retaining said first and second tubular parts in telescopic relation to each other,

tial material of the flanges to provide opposing abutting surfaces at each point of severance, said opposing surfaces at each point of severance being in a plane oriented at an



acute angle to the centerline of the belt and oriented also at an acute angle to the load-carrying surface of the belt.

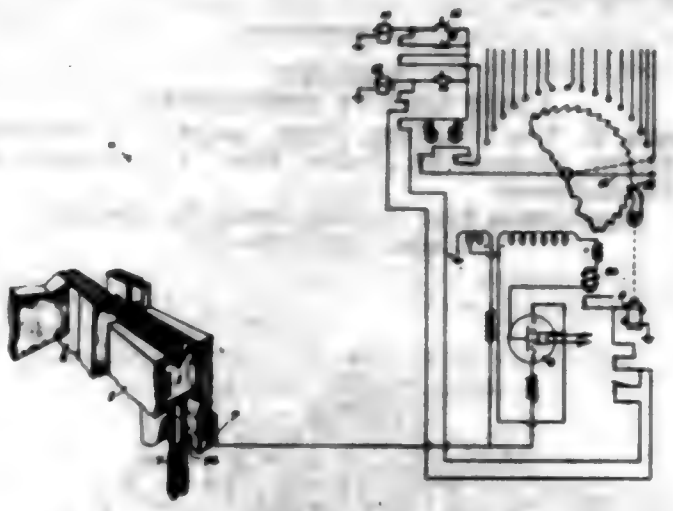
2,864,489
CONVEYORS
John R. Walker, Inverness, Scotland, assignor to Cable Belt Limited, Inverness, Scotland
Application September 17, 1956, Serial No. 610,287
Claims priority, application Great Britain October 24, 1955
3 Claims. (Cl. 198—203)



1. A conveyor system comprising first and second endless conveyor belts to convey material respectively from a loading point to a junction point and from the junction point to a delivery point, said belts running in directions bearing an angular relationship in a horizontal plane, one to the other, cable means supporting both the upper and lower runs of said belts at their edges, and driving means acting on said cables to transmit movement to said belts, the cable means comprising one cable circuit supporting one edge of the first belt and one edge of the second belt and another cable circuit supporting the other edge of the first belt and the other edge of the second belt, deflecting means for both the runs of both said cable circuits at the junction point, and additional belt supporting means for both belts in the region of the junction point supporting said belt independently of the cable circuits along portions thereof extending from their adjacent ends.

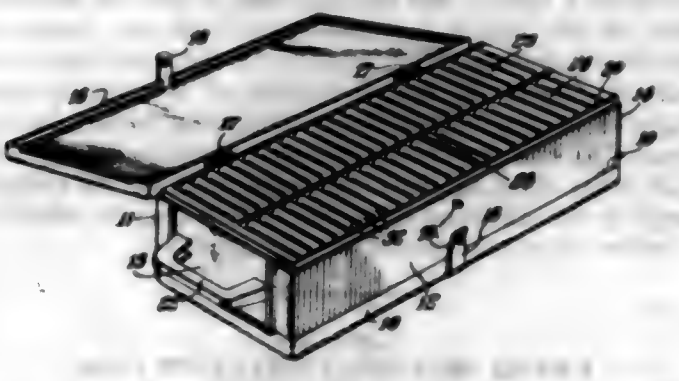
2,864,490
TYPOGRAPHICAL COMPOSING AND CASTING MACHINE
Louis Rosetto, Kings Point, N. Y., assignor to Mergenthaler Linotype Company, a corporation of New York
Application December 30, 1955, Serial No. 556,656
18 Claims. (Cl. 199—51)

14. In or for a typographical composing and casting machine equipped with a vertically movable first elevator and a horizontally disposed intermediate channel communicating therewith, the combination of an electrical system including a series of solenoids, a hydraulic system presenting a series of valves operable sequentially and each controlled by an individual solenoid of the electrical system, and a sensing probe for energizing the solenoids one after another according to the number of spacebands in a precomposed line, said sensing probe being located adjacent the intermediate channel in position to be actuated by the successive spacebands in the



precomposed line as it is being delivered from said channel into the first elevator.

2,864,491
RECEPTACLES FOR HOLDING SLIDES
Donald MacDougal Paterson, London, England
Application June 18, 1957, Serial No. 664,592
4 Claims. (Cl. 206—1)



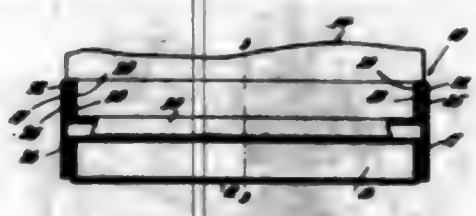
1. A receptacle for slides comprising a rectangular frame having opposite side and end walls and having openings at its top and bottom, closures on said frame for said top and bottom openings, a first plurality of spaced and substantially parallel slide supports projecting inwardly from one of said side walls and extending in a direction from one opening towards the other opening, a second plurality of spaced and substantially parallel slide supports projecting inwardly from the other of said side walls and extending in opposed and parallel relation with said first plurality of slide supports, a first plurality of spaced and parallel stop means disposed over one of said openings and extending from one side wall to the other side wall, and a second plurality of spaced and substantially parallel stop means disposed over the other of said openings and extending from one side wall to the other side wall, the stop means of each of said pluralities being disposed opposite the spaces between the stop means of the other of said pluralities, each stop means being connected to the ends of an adjacent pair of slide supports at one side wall and being connected to the opposed adjacent pair of slide supports on the other side wall, each plurality of stop means being arranged relative to said slide supports such that the spaces between adjacent slide supports along each opening are alternately closed and open, each stop means being spaced away from its nearer closure, the distance from each stop means to the other closure being only slightly greater than the length of the slide to be received in the space between the corresponding slide supports.

means of removing and severing the individual severable

2,864,498

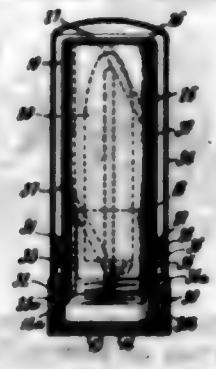
2,864,492
BODY OF POLYMERIZABLE MATERIAL CONTAINING CATALYST AND CARRIER
Elsie P. Lappala, Madison, Wis., assignor to Bjorksten Research Laboratories, Inc., Madison, Wis., a corporation of Illinois
Application December 23, 1953, Serial No. 400,601
6 Claims. (Cl. 206—47)

1. A body of catalyzable, polymerizable material having in the interior thereof: a body of activator material separated from said first body of polymerizable material by a rupturable membrane; and a porous tape carrier for said material folded in accordion pleats.

2,864,493
DISPENSING CONTAINERS
Harold N. Holcombe, York, Pa., assignor to Eastern Box Company, Baltimore, Md., a corporation of Maryland
Application September 4, 1957, Serial No. 681,965
3 Claims. (Cl. 206—53)

1. A storage and dispensing container for rolled web materials or the like comprising, in combination, a hollow enclosure of substantially the configuration of a rectangular parallelepiped, and having at least three laterally extending wall panels, namely a front wall panel, a bottom wall panel, and a rear wall panel, each of said panels having integral end flaps extending therefrom and secured together in overlapping contacting conterminous relation, an outer overlying flap at each end of the container being imperforate but at least one of the inner underlying flaps having a circular opening extending through it, a fixed cylindrical axle member extending substantially axially of said container and having its opposite ends seated snugly in said respective openings and in abutment with the inner face of the outermost flap, and adhesive material applied to the overlapping and contacting surfaces of said flaps and covering the entire mutually facing surfaces thereof, some of the adhesive at the margin of the circular opening also serving to secure together the contacting surfaces of the axle and the end flap in which the opening is formed, whereby the axle is secured in rigidly fixed relation to the end flaps of the container so that the rolled web material may freely rotate upon unwinding but is held in axially aligned position within the container during dispensing thereof.

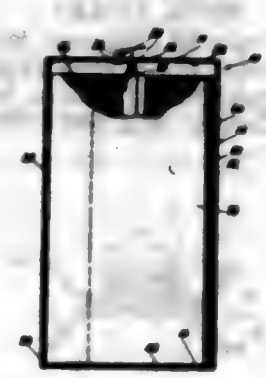
2,864,494
LIPSTICK STRUCTURES
Aurelia M. Wahle, New York, N. Y., assignor to Ejecteret SA., Geneva, Switzerland, a Swiss company
Application May 7, 1957, Serial No. 657,451
7 Claims. (Cl. 206—56)

7. A lipstick holder with a lipstick refill housing and for removal of the latter from said holder; comprising a case provided with a first tubular part and with a second tubular part, coupling means retaining said first and second tubular parts in telescopic relation to each other, whereby said tubular parts may be rotated as well as moved in axial direction to each other to two extreme positions, respectively, said first tubular part and said second tubular part being in one of said extreme positions coextensive in length with said lipstick refill housing so that the tubular parts completely encase said refill housing, said second tubular part terminating in an abutment against which said refill housing normally abuts, a longitudinally movable follower for carrying a lipstick,



and means operatively connecting said follower with a rotatable portion provided on said refill housing, said first tubular part being frictionally engaged with said rotatable portion of said refill housing so that said rotatable portion may be operated upon rotation of said first tubular part relative to said second tubular part, said second tubular part when moved in axial direction relative to said first tubular part into another of said extreme positions displacing via said abutment said refill housing beyond said first tubular part, thus disengaging said refill housing from said first tubular part for removal of said refill housing from said case.

2,864,495
PAPER PRODUCT ROLL DISPENSER
John A. Ritchie, Pointe Claire, Quebec, Canada
Application March 12, 1956, Serial No. 578,917
3 Claims. (Cl. 206—58)



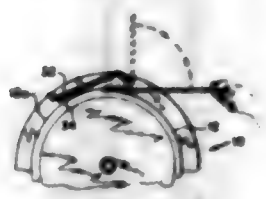
1. In combination, a dispensing container, one end wall of the container including a centrally located removable portion defining an access aperture portion in the end of the container, and a continuous roll of severable material comprised of a plurality of individual severable sheets, said sheets being defined by transverse perforation portions in the paper product material, said roll having an end portion disposed adjacent the end wall of the container which includes the removable portion, the end of the innermost sheet of the roll of material being located beneath the removable portion of the container, removal of said removable portion defining an access portion serving as

ning relation to the frame structure, the frame structure

2,864,382

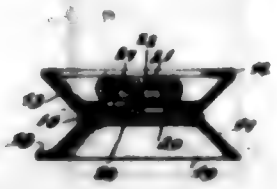
means of removing and severing the individual severable sheets of the roll, the innermost end portion of the roll of paper product material being secured to an adjacent inner surface portion of the removable portion of the container wherein removal of the removable portion results in drawing the end portion of the roll of material through the access aperture portion therein.

2,864,496
TAPE DISPENSING DEVICE
Daniel M. Ganz, Baldwin, N. Y.
Application June 12, 1957, Serial No. 665,162
5 Claims. (Cl. 206—59)



1. In combination, a dispenser body including spaced coextensive walls, a roll of ribbon-like material disposed intermediate said walls and journaled on said dispenser body to enable a user to pull successive lengths of said ribbon-like material from said roll, and a combined cutting and locking member disposed between said walls in spaced confronting relation to the outer periphery of said roll, coaxial pivots on said cutting and locking member intermediate the ends thereof mounting same for rocking movement whereby one end of said member is elevated as the other end of said member is depressed, a cutter formed on said one end of said member and engageable by said ribbon-like material as the latter is pulled from said roll, engagement of said ribbon-like material being effective to rock said other end of said member into contact with the outer periphery of said roll, said contact between said member and said roll being effective to lock said roll against rotation and fixing said cutter in an elevated position for the cutting operation as said ribbon-like material is pulled back against said cutter.

2,864,497
RING BOXES
Leonard Sofo, Chicago, Ill., assignor to Plasticrest Products, Inc., Chicago, Ill., a corporation of Illinois
Application April 1, 1955, Serial No. 498,573
4 Claims. (Cl. 206—76)

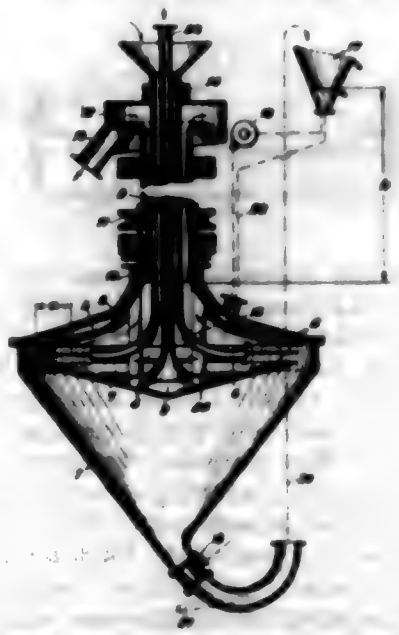


1. In a ring box, a rigid base having an upwardly opening recess of circular horizontal cross section in its upper surface, a resilient pad overlying said base extending across said recess, an elongated button overlying said pad extending diametrically across said recess, and mounting means connecting the button to the base secured to the central portion of said recess and of said button, said mounting means positioning the under surface of said button substantially contacting said pad, whereby the button and pad are relatively positioned for gripping between them the shank of a ring and to coact with the margin of said recess to hold the ring erect on said pad.

2,864,498
STABILITY OF FUEL OIL EMULSIONS CONTROLLED BY RESIN ASPHALTENE RATIO
John Bryant Matthews, Newton, and Eric John Clayfield, Upton Heath, Chester, England, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
No Drawing. Application March 14, 1955
Serial No. 494,248
Claims priority, application Great Britain March 24, 1954
3 Claims. (Cl. 208—15)

1. A method of preparing an emulsion-resistant liquid petroleum fuel oil containing a substantial amount not exceeding about 26% of petroleum resins and asphaltenes, which comprises altering the weight ratio of octane-soluble, magnesia-adsorbable petroleum resins and octane-precipitable, benzene-soluble asphaltenes in an oil in which said ratio is between 1:1 and 4:1 so that the weight ratio of the petroleum resins to asphaltenes is outside the ratio of between 1:1 and 4:1, respectively.

2,864,499
HEAVY MEDIA CENTRIFUGAL SEPARATING APPARATUS AND METHOD
Rudolf Teuteberg, Dortmund, Germany, assignor to SKB Schmechtermann & Kremer-Baum, Aktiengesellschaft Fuer Aufbereitung, Dortmund, Germany, a German corporation
Application September 9, 1952, Serial No. 308,630
Claims priority, application Germany September 21, 1951
19 Claims. (Cl. 209—172)



6. A centrifugal heavy liquid separator for the working up of mineral-containing material, which comprises, a stationary substantially enclosed heavy liquid container, an impeller rotatably positioned in said container, said impeller having at least two spaced-apart opposed surfaces defining a space therebetween in free peripheral communication with said container, means defining a fluid outlet from said container, means for retaining fluid in said container at a predetermined pressure, means defining a path of fluid flow from the central portion of said space out of said container, conduit means positioned for passing fluid to said space, and means for rotating at least one of said opposed surfaces of said impeller.

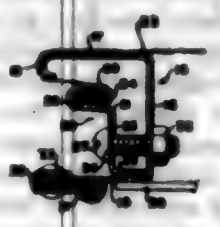
2,864,500
SCREEN FRAME
Bernie R. Miller, East Liverpool, Ohio, assignor, by mesne assignments, to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio
Application May 11, 1954, Serial No. 428,878
6 Claims. (Cl. 209—403)

1. A screen frame comprising a frame structure and a screen clamp for supporting a screen cloth in taut span-

2,864,504
COFFEE MAKER FILTER
Ivar Jensen, Oak Park, Ill., assignor to Sunbeam Corpo-

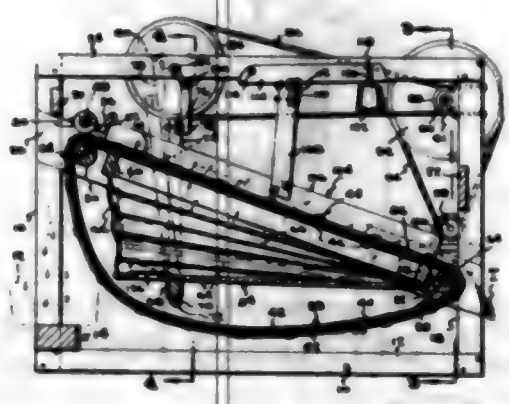
plate having an inlet opening and an outlet opening, a vertical cylindrical housing connected to said cover plate

ning relation to the frame structure, the frame structure including a lateral support plate having a curved exterior edge, a screen cloth mounted over the support plate and drawn around the curved exterior edge, the clamp being on at least one side of the frame structure inwardly of the curved edge and having a slot, a bar within said slot



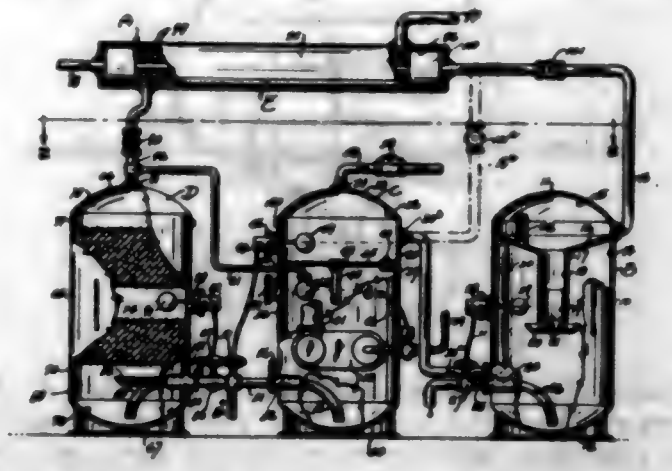
and gripping the border of the screen cloth, and holding it within said slot, said clamp having a pivotal connection with the frame structure at one portion and the screen gripping means at a movable portion and bolts connecting the frame structure with the clamp near the pivotal connection for adjusting the tension on the screen cloth to maintain it in a uniformly taut position.

2,864,501
DRY CONCENTRATOR
Grover T. Bolander, Williamsburg, N. Mex.
Application November 29, 1957, Serial No. 699,540
7 Claims. (Cl. 209—470)



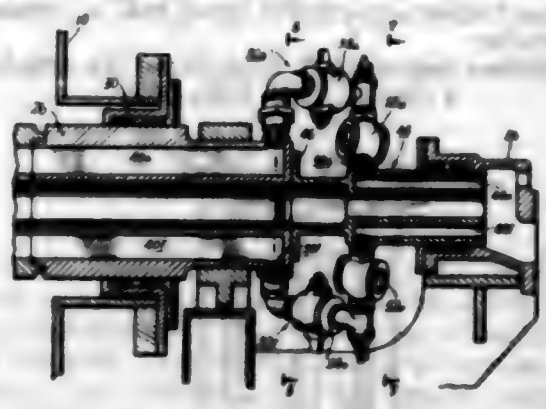
1. Apparatus for separating comminuted materials according to the relative specific gravities of its components, comprising: a frame; an endless, air-previous belt movably mounted thereon in position for supporting on one flight of the belt the material to be separated; means on the frame arranged for directing air upwardly through said flight through the supported materials for dividing the same into a concentrate and tailings having a specific gravity substantially less than that of the components of the concentrate, comprising a bellows supported by the frame in juxtaposition to said flight and formed wholly open at its top, said one flight of the belt extending over the open top of the bellows as a closure therefor; and hold-down means movably mounted on the frame extending in overlying relation to opposite side edge portions of said one flight of the belt and exerting a pressure downwardly thereagainst sealably engaging said side edge portions with opposite sides of the bellows, comprising a pair of hold-down bars extending in contact with the opposite side edge portions of said one flight of the belt, a yoke extending upwardly from and connecting said hold-down bars, a pivoted arm carried by the frame and swingable downwardly into contact with the yoke, and weight means on the pivoted arm tending to urge the same in a downward direction, thus to exert a pressure downwardly against the yoke for frictionally binding the hold-down bars against said one flight of the belt.

2,864,502
METHODS AND MEANS FOR THE TREATMENT OF OIL, GAS AND WATER EMULSIONS
Russell D. May, Tulsa, Okla., assignor to H_2 Oil Engineering Corporation, Tulsa, Okla., a corporation of Oklahoma
Application April 26, 1954, Serial No. 425,523
20 Claims. (Cl. 210—72)



1. The method of separating petroleum gas-oil-water emulsions in a continuous flow process which consists of initially treating a body of such emulsion for the removal of free water therefrom, transmitting the emulsion to a second stage treatment in a confined body under superatmospheric pressure and there subjecting the emulsion to a heat treatment for resolving the emulsion, transmitting the water and all of the demulsified oil in a confined body to a third stage filter and stablizing treatment under superatmospheric pressure and in said third stage treatment separating water from the oil.

2,864,503
FILTRATE DRAINAGE SYSTEM FOR ROTARY FILTERS
Henry M. Hunter, Brooklyn, N. Y., assignor to Chicago Bridge and Iron Company, Chicago, Ill., a corporation of Illinois
Application June 6, 1956, Serial No. 589,709
9 Claims. (Cl. 210—93)



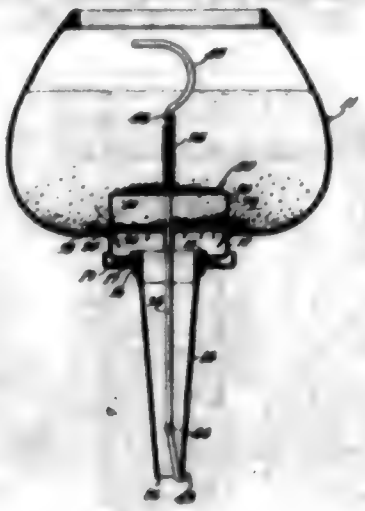
5. In a rotary filter of the type that includes a rotatable central shaft having longitudinal drainage channels therein through which the filtrate flows, apparatus for controlling the discharge of filtrate from said filter comprising a filtrate exhaust member rotatable with said shaft and having a plurality of filtrate passages, and a plurality of transfer conduits each having an inlet end connected to one of said channels and a discharge end connected to one of said passages, said transfer conduits being spirally arranged with respect to said shaft and filtrate exhaust member with the inlet end of each transfer conduit positioned circumferentially in advance of its discharge end to insure complete drainage of the connected channel during each revolution of said shaft.

cinted plate and having a fluid inlet and a fluid outlet adjacent said inlet, respectively, said grooves constituting

plate normally covering said flat face of said bar and connected to said bar for swinging movement outwardly

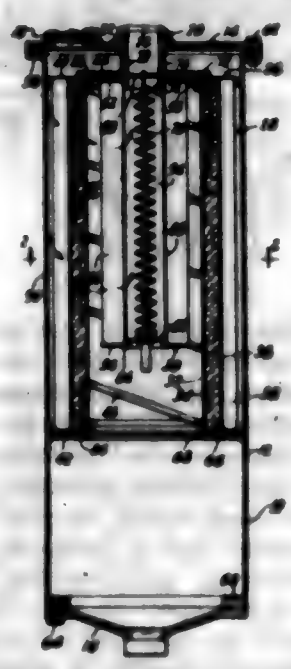
margin of said recess to hold the ring erect on said pad. screen clamp for supporting a screen cloth in taut span-

2,864,504
COFFEE MAKER FILTER
Ivar Jepsen, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Application July 12, 1955, Serial No. 521,593
7 Claims. (Cl. 210—238)



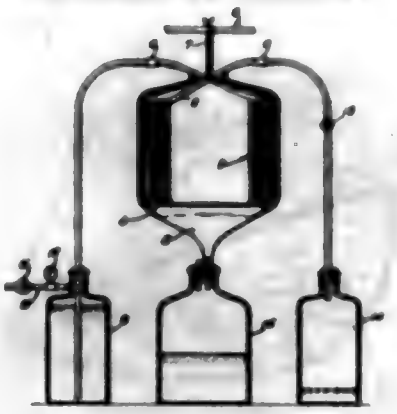
1. A filter of the type adapted for use in a vacuum coffee maker having an upper and a lower vessel comprising a porous screen, an annular ring member assembled in gripping relation to the periphery of said porous screen, means for mounting said ring in sealed engagement with said lower vessel with said screen in obstructing relation to the discharge opening of said upper vessel, an inverted cup member having a bottom and a wall terminating in a lower lip which is in engagement with said screen, said cup member having said lip spaced inwardly from said ring member so said cup member is covering only a part of said screen, said mounting means being positioned to bias said cup into engagement with said screen, and said cup being formed with an opening in said wall adjacent said screen and a series of holes in said bottom.

2,864,505
VERTICAL TWO STAGE DEMULSIFIER FILTER ASSEMBLY
Walter Kasten, Royal Oak, Mich., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application September 7, 1956, Serial No. 608,534
8 Claims. (Cl. 210—315)



1. In a filtering device for removing free water and solid contaminants from a liquid hydrocarbon, a cover plate having an inlet opening and an outlet opening, a vertical cylindrical housing connected to said cover plate so as to form a liquid tight tank, a static mounting plate located within the lower portion of the housing, said static mounting plate having an opening therein for permitting the water to settle to the bottom of said housing, an adjustable pilot assembly located in the upper portion of the housing, said pilot assembly comprising a pressure plate, a cylindrical tube attached to said pressure plate and extending through the outlet opening in the cover plate, and a spring located between the cover plate and the pressure plate, a single unit two-stage filter located between said static mounting plate and said pressure plate, said unit comprising a demulsifier element, a filtering element, and an endcap common to both of said elements attached to the ends of said elements for unifying said elements, said filtering element including a core and a pleated paper member surrounding the core, said demulsifying element including a second core telescoped over and spaced away from said pleated member, a fibre glass batt wrapped around said second core and a second pleated member surrounding said batt.

2,864,506
DEVICE FOR ULTRAFILTRATION
Clarence F. Hiskey, Brooklyn, N. Y.
Application November 30, 1953, Serial No. 395,036
3 Claims. (Cl. 210—321)



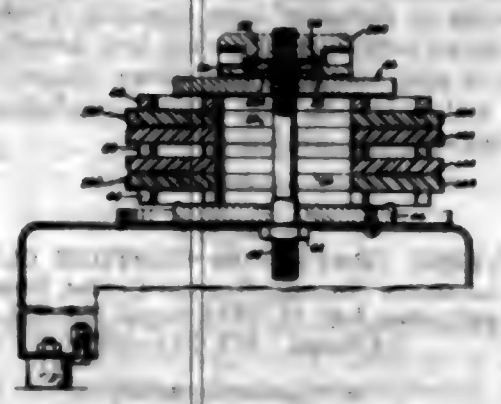
1. Apparatus for molecular filtration comprising a flexible tubular membrane, a porous flexible sleeve thereon coextensive therewith and next adjacent thereto, means to apply pressure to a solution within said tubular membrane to force filtrate through the walls of said membrane and sleeve, leaving the residue in said membrane, and means to remove the residue lengthwise through said membrane, in combination with a chamber housing said tubular membrane and sleeve to receive the filtrate forced through said membrane and sleeve, said chamber having a porous portion through which said filtrate may pass.

2,864,507
DIALYZERS
Jack Isreeli, Tuckahoe, N. Y., assignor to Technicon Instruments Corporation, Chauncey, N. Y., a corporation of New York
Application April 25, 1957, Serial No. 655,093
6 Claims. (Cl. 210—321)

1. A dialyzer comprising a plurality of sections disposed in adjacent confronting relation, each of said sections comprising a pair of plate members mounted in confronting face-to-face relation, a dialyzer membrane interposed in fluid tight relation between the confronting faces of said members, said confronting face of each member having a continuous spiral groove defined therein, said groove being reflexed substantially midway along the extent thereof and the opposite ends thereof terminating substantially at the outer marginal edge of the asso-

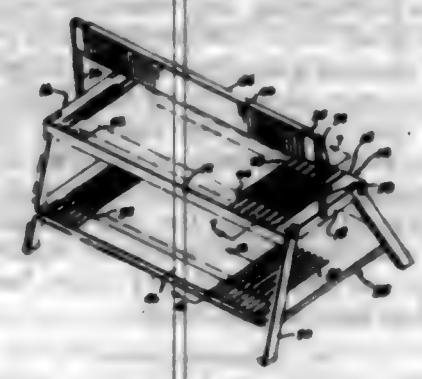
extending outwardly from said collar portion, said flange brackets; said last means including a tray rear wire extend-

ciated plate and having a fluid inlet and a fluid outlet adjacent said inlet, respectively, said grooves constituting fluid passages, the outlets of the passages of one of said



sections being connected to the inlets of the passages of another section at the similar sides, respectively, of the membranes of said sections, respectively.

2,864,508
PHONOGRAPH RECORDS STORAGE RACK
Chester W. Koscyk, Elyria, Ohio
Application July 12, 1957, Serial No. 671,534
2 Claims. (Cl. 211—40)



1. A phonograph record storage rack comprising a horizontally disposed platform having spaced side edges and an end edge extending between the adjacent ends of said side edges, a plurality of legs adapted to support the platform above a floor surface, there being a plurality of closed slots in said platform arranged in parallel spaced relation with respect to each other and with the end edges of said platform, said slots extending along one of the side edges of the platform from a point spaced inwardly of one end edge of the platform to a point spaced inwardly of the other end edge of the platform with one of the ends of the respective slots being adjacent to and spaced from said platform one side edge, each of said slots being of a length such as to receive a peripheral portion of a phonograph record of less than the diameter thereof and being of a width to conformably receive the thickness of said record peripheral portion, said platform being provided on the portion of the upper face thereof between said one ends of said slots and said platform one side edge with numerical indicia in registry with said one ends of said slots, a vertically disposed bar having one flat face positioned midway between the platform side edges and spaced above said platform and extending from one of said end edges to the other of said end edges of said platform and connected to the end edges of said platform for swinging movement from the vertical position to a position in which it is outwardly of and contiguous to said platform one side edge, said bar having one flat face, an index plate having two opposed flat faces, one of said faces having record identification data arranged thereatong and the other of the faces of said index plate having other record identification data arranged thereatong, said index plate normally covering said flat face of said bar and connected to said bar for swinging movement outwardly of said bar, said index plate when the bar has been swung to its position outwardly of said platform one side edge having the first named data in registry with said platform indicia and when said index plate is swung outwardly of the bar in its outwardly swung position having its other data in registry with said platform indicia.

2,864,509
DISH DRAINER
Henry J. Watral, Ramsey, N. J.
Application March 23, 1955, Serial No. 496,238
7 Claims. (Cl. 211—41)

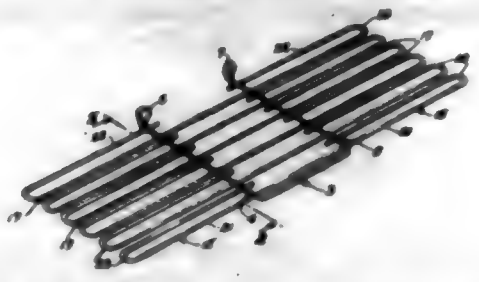
1. A dish drainer comprising an upper, substantially rectangular wire frame having a pair of opposed side portions and a pair of opposed end portions, a plurality of spaced, parallel, substantially U-shaped transverse members having ends interconnecting the side portions of said frame and a plurality of spaced, parallel, substantially U-shaped longitudinal members having ends interconnecting the end portions of said frame, said transverse members and said longitudinal members forming a basket-like structure, and a combination longitudinal and hook member comprising a single piece of wire secured cross-wise against said transverse members and having a plurality of upwardly extending integral, intermediate loop portions outwardly displaced from the side of said basket-like structure, the securement of said hook member to said transverse members being at opposite sides of each loop portion.

2,864,510
SMOKER'S PIPE RACK
John J. Stare, New York, N. Y.
Application May 25, 1953, Serial No. 357,260
5 Claims. (Cl. 211—60)

1. Article supporting means of the class described for use with a cylindrical container having a vertical axis and a removable top lid, the outer edge of said lid being spaced inwardly from the top peripheral portion of said container, said article supporting means comprising: a continuous annular collar portion which is adapted to encircle and surround the top portion of said container exteriorly thereof, said collar portion being vertically removable with respect to said container for removing said article supporting means from said container and replacing the same at will; a continuous annular bead portion extending radially inwardly from the inner side of said collar portion, said bead portion having a bottom edge disposed above the bottom of said collar portion and engageable with the top peripheral portion of said container for limiting downward movement of said collar portion with respect to said container, said bead portion being spaced outwardly from said outer edge of said lid to provide clearance for the free removal and replacement of said lid; and an article supporting flange portion

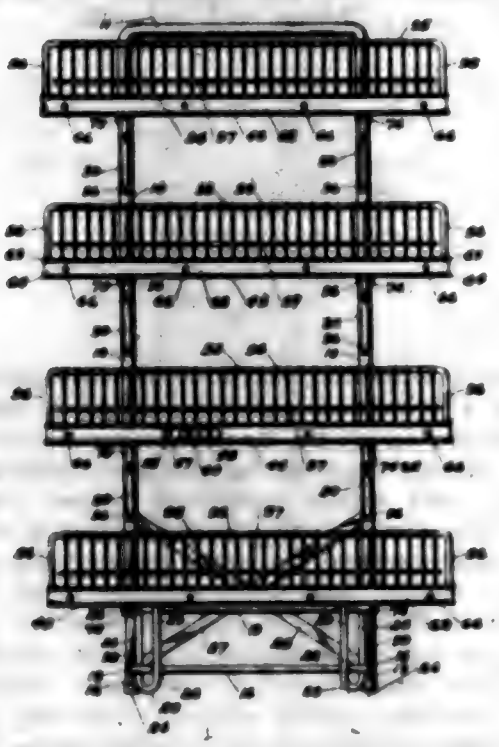
extending outwardly from said collar portion, said flange portion being integrally formed with said collar portion and having circular apertures formed therein for receiving depending portions of articles to be supported by said article supporting means.

2,864,511
GLOVE SELECTOR
Mildred E. Losey, Berkeley, Calif.
Application October 10, 1955, Serial No. 539,493
3 Claims. (Cl. 211—69)



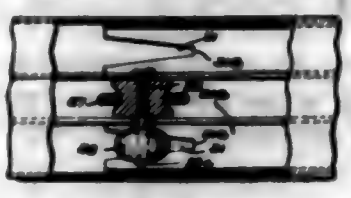
1. A glove holding and selecting device comprising a U-shaped bracket support having legs, wall-fastening means connected with the legs of said support adjacent the open end of the latter, narrow elongate C-shaped glove supporting members carried by the legs of said bracket support, each said C-shaped member having spaced open ends terminating interiorly of said support and closed, opposed outer ends extending laterally from opposite sides of said bracket support said C-shaped members being spaced from one another in a common horizontal plane so that gloves may be slidably positioned therebetween.

2,864,512
DEMOUNTABLE WIRE DISPLAY RACK
Francis Daniel Hoose, Elwood, Ind., assignor to Monticello Manufacturing Corporation, Elwood, Ind.
Application September 8, 1955, Serial No. 533,119
6 Claims. (Cl. 211—133)



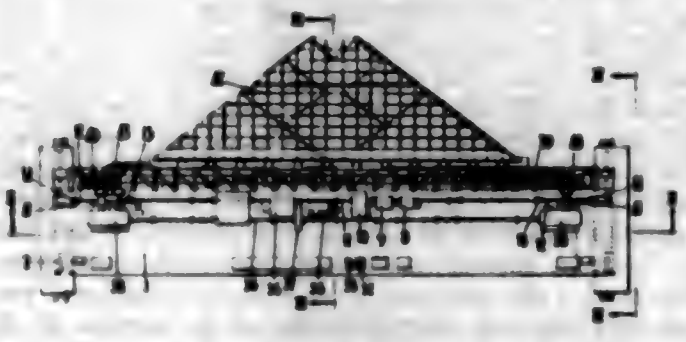
1. In a display rack, rear vertically disposed supporting legs; a plurality of vertically spaced apart brackets attached to each of said legs; a tray freely resting across said brackets at common elevations thereof; means retaining the tray against shifting laterally of the brackets; and means carried by the trays releasably engaging said legs and retaining said trays against movement along the brackets; said last means including a tray rear wire extending across said brackets; a tray tie wire spaced forwardly of said wire; a pair of spaced apart elastic wire members each having an elongated loop engaging around said tie wire; a shank extending from said loop loosely over the top side of said rear wire and thence diagonally downwardly; and a jaw on said shank detachably hooking around and engaging said legs.

2,864,513
TRAVERSE TRACK FOR CLOTHES CLOSETS
Lawrence Novack, Newton Center, Mass.
Application July 18, 1955, Serial No. 522,436
2 Claims. (Cl. 211—162)



1. The combination of a traverse track for clothes closets with a plurality of riders mounted to move along the track: the track comprising an outer channel-shaped track section and an inner channel-shaped track section slidably received in the outer section with portions of the track sections overlapping, and means for supporting said sections in aligned, fixed relationship, both sections having inturned lips and a longitudinal slot between the lips, the lips of the inner section being at a higher level than those of the outer section; and each rider comprising a pair of rollers disposed to bear on said lips, and a clothes hanger supporting member supported on said rollers and depending through said slot, the lips of said inner section having notches with converging upper edges engageable with said rollers, and said rollers having curved rims adapted to bear on said edges.

2,864,514
ORE RECLAIMING MACHINES
Ronald Bartram, Bexley, England, assignor to The General Electric Company Limited, London, England
Application October 26, 1955, Serial No. 542,999
Claims priority, application Great Britain November 4, 1954
7 Claims. (Cl. 214—16)

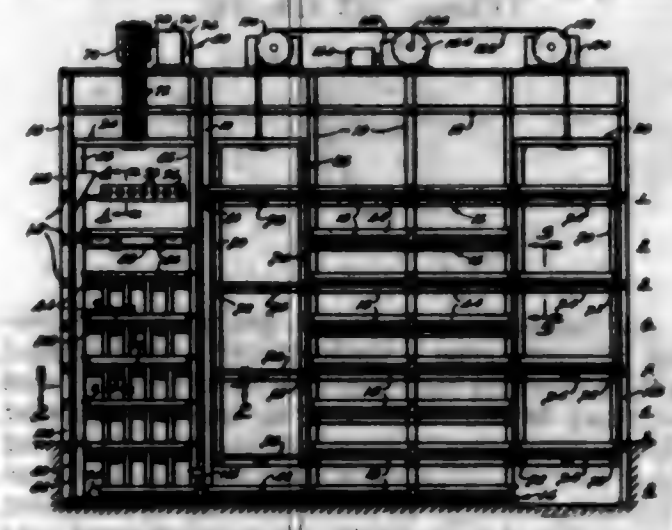


1. A machine for reclaiming ore and like bulk material disposed between a pair of parallel rails, said machine comprising a pair of bogies each having a single rear wheel and a plurality of front wheels and each of said bogies running along a different one of said rails, a bridge carried at each end on a different bogie, said bridge constituting a single unit integral with the rear wheels of said bogies, compensating bogies disposed one at each end of the bridge and carrying the front wheels of said bogies, said compensating bogies being attached to said bridge by means permitting relative movement between said compensating bogies and said bridge, lateral thrust-absorbing pads on said bridge and on said compensating bogies, means carried by said bridge for driving said bogies in either direction along said rails, a har-

cally spaced opposed ears extending from said yoke, a cal shell in spaced relation around said cap and having a

row carried by said bridge and adapted to agitate the face of a pile of material against which the machine is adapted to operate so as to loosen the material on the face of said pile, a transverse conveyor carried by, and running along the length of said bridge and adapted to deliver the loosened material onto a longitudinal conveyor by the side of said pile, and means for rotating said bridge about the axis of said rear wheels whereby the said transverse conveyor can be raised or lowered with respect to its normal operating position.

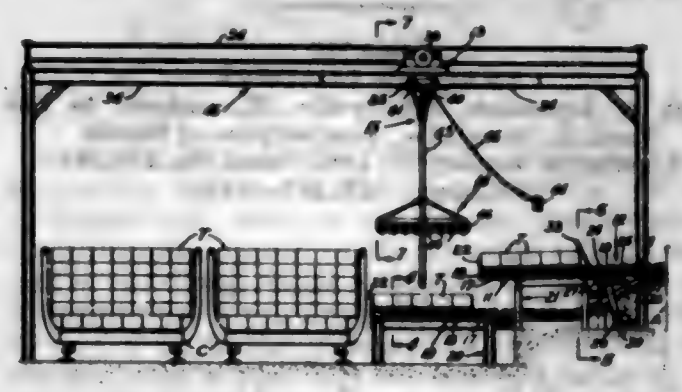
2,864,515
AUTOMOBILE PARKING APPARATUS
Preston E. Marshall, Wayne, Mich., assignor of one-half to John R. McKinley, Grosse Pointe Shores, Mich.
Application April 19, 1954, Serial No. 424,157
8 Claims. (Cl. 214—16.1)



1. Automobile parking apparatus comprising stationary means defining at least four superposed levels of track elements, a plurality of parking decks movable along said track elements, power operated means for moving said decks in sequence along successive levels in opposite directions, said power operated means including a horizontally reciprocable rack at each of said levels engageable with one of the decks on the track elements of such level, the racks on alternate levels being operable to shift the decks on such levels in one direction and the racks on the remaining levels being operable to shift the decks on the remaining levels in the opposite direction, and a single motor-driven means for actuating all of said racks in the same direction at each operation of said motor-driven means, transfer means for lowering decks from the ends of said levels to the next lower levels, and power operated means adapted to receive decks from the lowermost level and to elevate such decks to the top level to provide a continuous path along which said decks are movable in a fixed sequence.

2,864,516
APPARATUS FOR HANDLING CROSSTIES
Thomas G. Rogers, Chattanooga, Tenn., assignor to Southern Wood Preserving Company, Atlanta, Ga., a corporation of Georgia
Original application October 4, 1955, Serial No. 538,386. Divided and this application December 7, 1956, Serial No. 627,857
3 Claims. (Cl. 214—41)

1. A system for handling crossties as they are discharged from an adzing and boring machine to selectively load the ties on treatment trams so that each tram will be loaded with ties conforming to a predetermined standard, comprising, in combination, a pair of elongated conveyers extending one above the other in vertically spaced relation with their inner receiving ends positioned adjacent the discharge end of the adzing and boring machine to receive the ties as they are discharged from the machine, so that the ties extend transversely of the conveyors, and with the outer end of the lower conveyor extending substantially beyond the outer end of the upper conveyor; stop means positioned adjacent the outer end of each conveyor to hold the ties on the conveyor as they reach the outer end portion so that the outer end portions of the conveyors form loading stations; selective means positioned at the discharge end of the adzing and boring machine and operable to direct a tie as it is discharged from the machine onto any one of said conveyors including a laterally spaced pair of rigid downwardly inclined slide bars having their upper ends attached to the discharge end of the adzing and boring machine and their lower ends positioned adjacent the inner receiving end of the lower conveyor, said bars being so positioned that a tie discharged from the machine will extend transversely of the bars and slide down onto the lower conveyor, and a switch-like conveyor having its inner end pivotally attached to the discharge end of the adzing and boring machine and swingable from an inoperative position out of engagement with a crosstie as it slides down said bars into an operative position



where it engages a tie as it slides down said bars and directs the tie onto the upper conveyor, said switch-like conveyor including a laterally spaced parallel pair of elongated beams having a plurality of idle rollers mounted thereon and positioned to engage a crosstie as it travels along the switch-like conveyor, each of said beams having its upper end pivotally connected to the discharge end of the adzing and boring machine at a point spaced below and outwardly of the point of attachment of one of said slide bars thereto; manually operable means for swinging said beams about their pivotal axis to move the switch-like conveyor from its inoperative position to its operative position, said manually operable means including a rotatable rod positioned below and extending transversely of said switch-like conveyor; a laterally spaced parallel pair of levers having their lower ends fixedly secured to said rod and with their upper ends carrying an idle roller positioned to engage the underside of one of the beams of the switch-like conveyor; a handle lever fixedly connected to said rod for rotating it to cause said beams to move the switch-like conveyor from one position to another; and hoisting means for picking up the ties from the loading stations and loading them onto treatment trams for conveyance to the treating chamber.

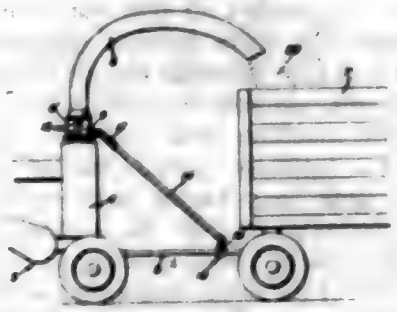
2,864,517
SILAGE HARVESTER DISCHARGE SPOUT LOCATOR
Charles F. Dickenshied, Jr., Zanesville, Pa.
Application February 8, 1957, Serial No. 639,167
1 Claim. (Cl. 214—42)

A spout locator comprising a horizontal yoke adapted to straddle a swiveled end portion of a silage discharge spout of a silage chopper and having upturned ends attachable to said end portion of the spout, a pair of lat-

der on the lower edge of said sealing portion, an annular ring resiliently secured to said downwardly extending

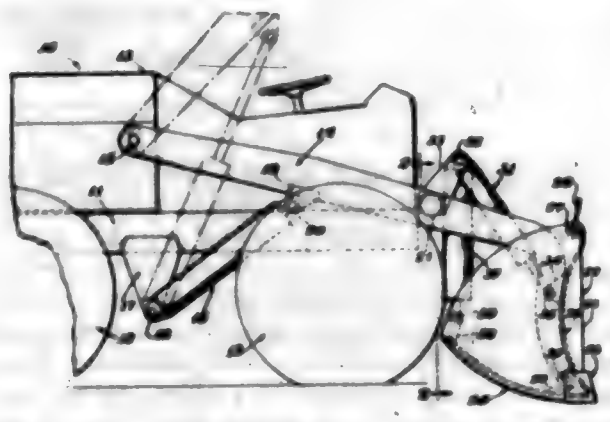
cleats coacting with said cleats to define a polygonally shaped open frame, a sheet of material between said bat-

erally spaced opposed ears extending from said yoke, a lever having one end portion pivoted between said ears for vertical swinging of the lever and having a free end portion, a pair of braces on the pivoted end portion of said lever at opposite sides thereof straddling said pair of ears and pivoted thereto by the pivot of said one end



portion, a downwardly extending fork on the free end of the lever adapted to straddle a vertically movable steering tongue of a wagon connected to a silage chopper having the swiveled end portion of the spout swiveled thereon, and a roller in said fork adapted to roll on the tongue.

2,864,518
TRACTOR LOADERS
Ralph L. Beyerstedt, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Application January 17, 1957, Serial No. 634,704
10 Claims. (Cl. 214—518)



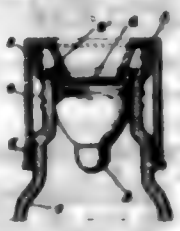
1. In a tractor loader, a boom pivotally mountable at one end thereof on said tractor, a bucket comprising a substantially U-shaped scoop element, and an ejector plate disposed within and pivotally connected to said scoop element, the other end of said boom pivotally connected to said ejector plate, means pivotally connected between said boom and said ejector plate for pivoting said ejector plate and said scoop element relative to said boom, the pivot axis of said last mentioned means to said boom being fixed relative to said boom, and means pivotally connected between said scoop element and said boom for pivoting said scoop element relative to said ejector plate.

2,864,519
SAFETY CLOSURE FOR BOTTLE
Lindsay T. Crabbe, Hinsdale, Ill., assignor to Phoenix Metal Cap Company, Inc., Chicago, Ill., a corporation of New York
Application March 27, 1956, Serial No. 574,191
2 Claims. (Cl. 215—9)

2. A safety closure for a bottle and the like comprising a screw cap having a top with a central dome, and a channel around the dome and a substantially cylindrical side wall, a series of rigid spaced lugs projecting from the lower portion of the side wall, and a rotatable cylindrical shell in spaced relation around said cap and having a top resting on the top of the cap with its inner edge having

a downturned rim in said channel and an internal peripheral bead on the shell fitting loosely below said lugs.

2,864,520
FEEDING-BOTTLES OBTURATED BY A SCREW-PLUG
Edmond Pitavy, Paris, France
Application March 11, 1955, Serial No. 493,650
Claims priority, application France January 21, 1955
3 Claims. (Cl. 215—11)



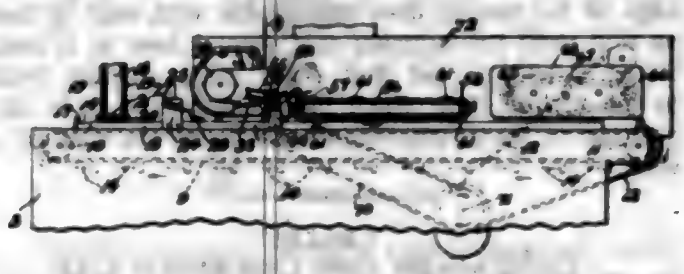
1. An improvement in infant feeding bottles comprising in combination a bottle having a neck stepped inwardly towards the mouth thereof, threads being formed on each step of said bottle neck, an internally threaded cap having an opening in the top thereof, a nipple having an open end with a lateral flange extending therefrom and extending through and from said cap opening with said flange positioned against the inner face of said cap top around said flange opening, said cap having said top thereof positioned on the mouth of said bottle with said nipple extending within said bottle neck in its storage position and capable of being inverted with said cap threads being in threaded engagement with one of said bottle neck threads with said nipple extending from said bottle neck for use in infant feeding and said nipple flange being positioned between said bottle neck and said cap forming a seal therebetween when said nipple is in its position for use, a cup-shaped internally threaded cap being in threaded engagement with the other of said bottle neck threads encasing said first-mentioned cap and said nipple when in their storage position and said cup-shaped cap having an inwardly extending bottom bearing against said nipple flanged open end in its storage position forcing said nipple against said first-mentioned cap retaining said first-mentioned cap and said nipple on said bottle neck and forming a seal therebetween.

2,864,521
SAFETY SEAL CLOSURES
Alex Kundert, Ruschlikon, Switzerland
Application July 10, 1957, Serial No. 671,820
3 Claims. (Cl. 215—43)

1. A closure member for bottles, jars, and other receptacles, of flexible and resilient material comprising a sealing portion internally threaded and adapted to engage like threads on the receptacle, a downwardly extending shoul-

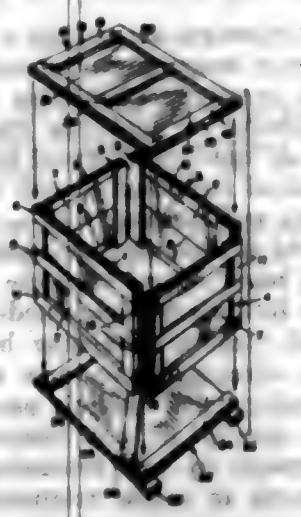
der on the lower edge of said sealing portion, an annular ring resiliently secured to said downwardly extending shoulder, a bridge member being secured at one end to the lower edge of said sealing portion, the other end of said bridge member being secured to said annular ring, said annular ring being provided with a plurality of internal ratchet teeth adapted to engage one or more like teeth on said receptacle, whereby removal of said closure will rupture said bridge member.

2,864,522
LABELING MACHINE
Howard B. Tuthill, Grand Rapids, Mich., assignor to Oliver Machinery Company, Grand Rapids, Mich., a corporation of Michigan
Application May 7, 1956, Serial No. 583,036
12 Claims. (Cl. 216—39)



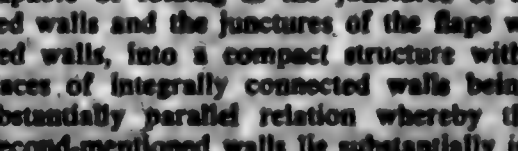
6. In a machine for attaching labels to containers, a movable carrier for said containers having a means for holding a container thereon for movement in the direction of the length of said container, an indexing element on said carrier for positioning said container longitudinally of said holding means; means for supporting a label immediately above said carrier; a portion of said indexing element being movable through said holding means for sweeping the label therefrom onto the adjacent container; affixing means for pressing said label about said container.

2,864,523
WIREBOUND CLEATED PLYWOOD OR CORRUGATED FIBER BOX
James F. Dedmon, Milan, Tenn.
Application July 7, 1954, Serial No. 441,901
3 Claims. (Cl. 217—12)



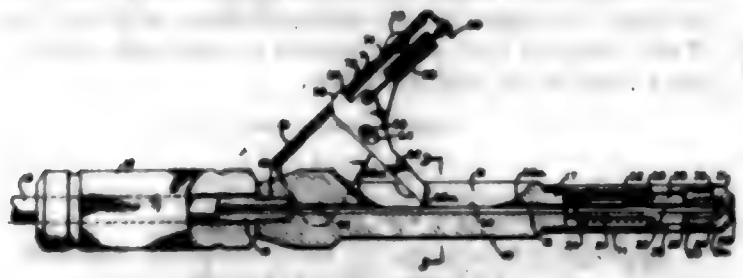
2. A collapsible wirebound structure, such as a box or crate, including a plurality of spaced apart hingedly connected closed side panels, each panel comprising outer vertically spaced horizontal cleats, inner horizontally spaced vertical battens adjacent the opposite ends of said cleats coacting with said cleats to define a polygonally shaped open frame, a sheet of material between said battens and said cleats covering the entire frame between the battens and the cleats to define the closed panel, a plurality of binding wires arranged between said battens and said sheet of material and arranged on the inside face of the sheet material, one each extending substantially parallel to a cleat, all of said wires serving to hingedly connect all of said panels, staples securing said cleats, battens, sheet of material and wires together, outer vertical cleats secured over the outer surface of said sheet and having their outer side edges substantially flush with the outer side edges of said vertical battens, whereby none of the elements may move relative to any other element, and a bottom for said structure.

2,864,524
KNOCKDOWN SHIPPING CONTAINER
William L. Dalton, Chicago, Ill.
Application September 22, 1955, Serial No. 535,998
5 Claims. (Cl. 217—12)



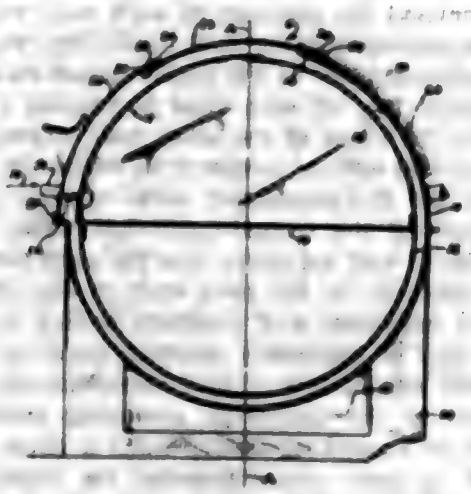
1. A collapsible shipping container comprising a tubular structure forming four container side walls, one pair of opposed side walls of said tubular member having cleats extending parallel to the free edges of such walls, each of such edges having a cleat thereat, the other pair of opposed walls each having cleats extending parallel to the axis of the tubular structure at each correspondingly extending edge of such wall and extending outwardly beyond a plane containing the side edges of the first-mentioned opposed walls and adjacent faces of the cleats thereat, the side walls of said structure being formed from a pair of like sheet members, each of which forms one of said first-mentioned walls and one of said second-mentioned walls integrally connected along their adjacent edges and a flap integrally connected to said first-mentioned wall along the opposite edge of the latter, the cleats on such first-mentioned wall terminating at the juncture of such wall and said flap, and extending outwardly beyond the juncture of such wall with the associated second-mentioned wall, each flap being secured to the adjacent cleat of the other second-mentioned wall at the outer face of such cleat in parallel relation with respect to the plane of the latter wall, operative to form a symmetrical tubular structure in which the ends of the cleats of the first-mentioned walls overlap the adjacent edge cleats of the second-mentioned walls, and a pair of individual wall members, one for each remaining side of the container at the open ends of the tubular structure, said individual wall members having parallel cleats along a pair of oppositely disposed edges of a length to overlie the edge cleats of said first-mentioned walls and positioned at the outwardly extending portions of the cleats of the second-mentioned walls to form a three-way interlock at each corner between the cleats of the respective walls forming such corner, said tubular structure being capable of folding at the junctures of integrally connected walls and the junctures of the flaps with their associated walls, into a compact structure with the internal faces of integrally connected walls being folded into substantially parallel relation whereby the cleats of the second-mentioned walls lie substantially in a common plane positioned intermediate and parallel to parallel planes in which are positioned the respective cleats of the first-mentioned walls.

2,864,525
RIVETING TOOL
Jerry F. Hamlin, San Rafael, Roy M. Magnuson, Santa Clara County, and Ralph K. Dougherty, San Jose, Calif., assignors, by direct and mesne assignments, of one-sixth to said Jerry F. Hamlin, one-sixth to Ilene E. Hamlin, one-sixth to Ralph M. Caykendall, and one-sixth to Marie Caykendall, all of San Francisco, one-sixth to Louise Newmann, and one-sixth to Louis Newmann, both of Oakland, Calif.
Application April 25, 1955, Serial No. 503,578
10 Claims. (Cl. 218—34)



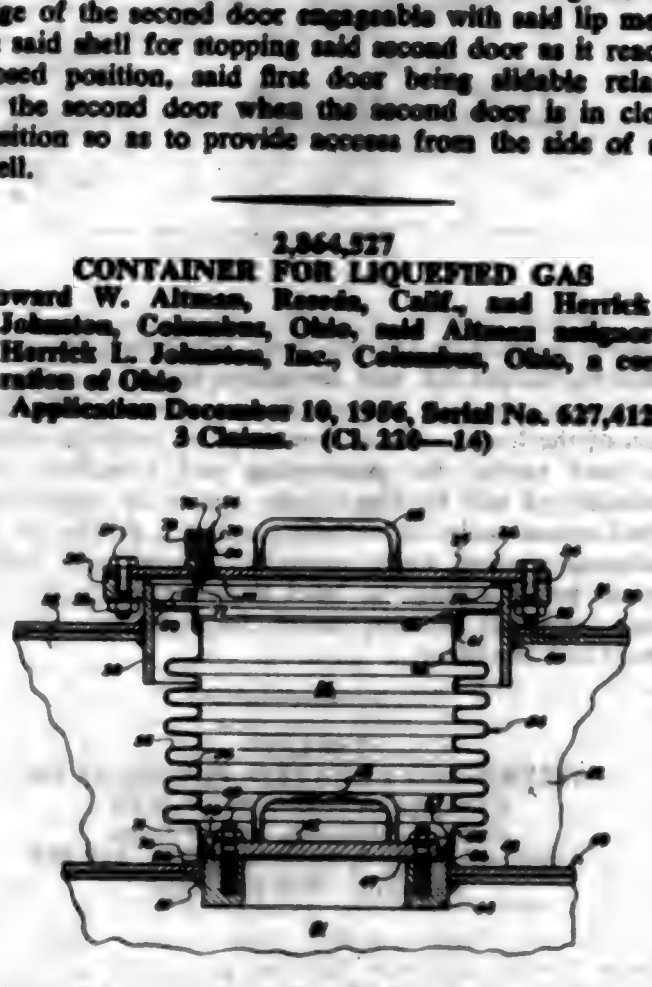
1. In a tool for assembling and installing blind rivets of a type employing a rivet upsetting center pin adapted to be driven into and left in place in the body of the rivet, a tubular tool body having passage means to receive a center pin, a mounting sleeve slidably mounted in said tubular body adjacent one end thereof, spring means urging said mounting sleeve inwardly from said adjacent end, said mounting sleeve having groove means therein extending transversely of the length thereof, a pair of chuck jaws having portions engaging said groove means for rocking movement of the jaws therein, said jaws having jaw portions adapted to open to pass a center pin to a position with the center pin in external driving relation with respect to said jaws, whereby impact against said jaws will drive said pin into the rivet body associated therewith, said body and said jaws being connected to transmit driving forces therebetween.

2,864,526
WASHING MACHINE
Benjamin Alvin Bass, East Moline, Ill., assignor to American Machine and Metals, Inc., New York, N. Y., a corporation of Delaware
Application December 20, 1954, Serial No. 476,249
1 Claim. (Cl. 220—18)



In a washing machine having a horizontal shell of generally cylindrical configuration with an aperture for providing access from the side for unloading purposes and the top for loading purposes, and a clothes holding cylinder rotatably mounted within said shell and being provided with a closeable opening adapted to be positioned opposite said aperture, the combination including first door means of arcuate shape for closing access to the side of said shell, said first door means being entirely in front of the vertical center line of said shell and being substantially above the horizontal center line thereof when in closed position, second door means of arcuate shape for closing access to the top of said shell, said second door means having one edge on either side of the vertical center line of said shell when in closed position, whereby said second door is in a balanced condition when in its closed position, means on said shell holding said arcuate doors thereon in circumferential telescopic sliding relationship to each other, shoulder means along the lower edge of said second door, shoulder means along the upper edge of said first door in overlapping relationship with said second door and engageable with said shoulder means along the lower edge of said second door so that said second door will be moved with said first door as the first door is moved toward closed position from fully opened position, lip means on said shell and shoulder means along the rear edge of the second door engageable with said lip means on said shell for stopping said second door as it reaches closed position, said first door being slidable relative to the second door when the second door is in closed position so as to provide access from the side of said shell.

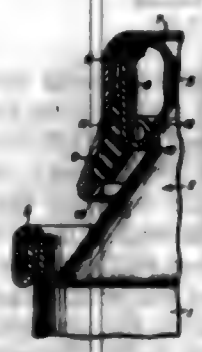
2,864,527
CONTAINER FOR LIQUEFIED GAS
Howard W. Altman, Reseda, Calif., and Herrick L. Johnston, Columbus, Ohio, said Altman assignor to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio
Application December 10, 1956, Serial No. 627,412
3 Claims. (Cl. 220—14)



1. In an arrangement for storing a liquefied gas having a boiling point temperature materially below 273° K. at atmospheric pressure, a manhole structure comprising, in combination: a container for the liquid being stored having an inner wall formed with a first opening, a jacket in spaced relationship with said container and having an outer wall formed with a second opening in registry with the first-mentioned opening, the first-mentioned opening being located inwardly of said outer wall, said two walls forming an evacuated-insulating space; a flexible channel member extending between said openings and in a direction transverse to said walls and defining an unobstructed manhole passage for providing access to the interior of said container, said flexible member is bounded by said evacuated insulation space and being secured in sealed relationship to said walls in such a manner as to preserve the evacuation of said space, a first cap removable to permit access to the interior of the vessel but normally positioned inwardly of said outer wall to close the opening of the inner wall, whereby said first cap prevents liquefied gas being stored under pressure in said container from contacting said flexible member, and a second cap removable to provide

access to the interior of the flexible channel and to the first cap but normaly positioned to close the outer opening, whereby the second cap supplements the insulating effect of the first cap and protects the first cap and the interior of the flexible member from atmospheric conditions.

2,864,528
METAL CAN FOR FOOD PRODUCTS
John Heuchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application August 20, 1954, Serial No. 451,223
2 Claims. (Cl. 220—46)

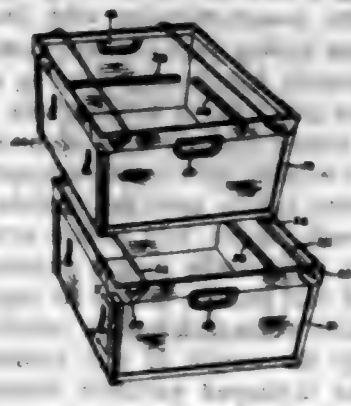


2. A metal container having a cone-shaped top terminating in a cylindrical neck, the upper end portion of said neck being outwardly and downwardly turned and merging downwardly into a cylindrical friction sealing wall terminating at its lower extremity in an inwardly turned closed bead and being spaced away from said neck a greater distance than the cross section of said bead, the lower end of the cylindrical neck terminating in an outwardly offset wall portion which is integrally joined to the upper end of the conical portion, said bead bearing against said outwardly offset wall portion in position for maintaining said friction wall in a rigid vertical position, and a closure member for said container having a depending skirt, the upper portion of which is cylindrical and the lower portion flared outwardly and downwardly, and a ring gasket engaging the inner face of said flared portion and extending above the same, said cylindrical portion of the skirt and the friction wall on the neck being spaced a distance less than the thickness of the gasket so that when the closure is forced onto the container the gasket will wedge between the cylindrical portions and will expand inwardly beneath the rigidly supported bead at the lower end of the friction wall for sealing and holding the closure on the container.

2,864,529
OVERCAPPED CONTAINER TOP STRUCTURE
John Heuchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application September 14, 1956, Serial No. 609,842
5 Claims. (Cl. 220—85)

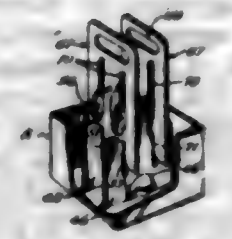
1. In a container of the character described, a body, a raised top having a central upstanding dispensing neck and seam secured to the upper end extremity of the body in a manner providing an annular groove inwardly of the seam, and an overcap smoothly encircling the neck and covering over the groove inwardly of the seam and also smoothly embracing and curled under said seam.

2,864,530
RECEPTACLE
Edward T. Johnson, Worcester, Mass.
Application September 2, 1953, Serial No. 532,237
1 Claim. (Cl. 220—97)



A wooden receptacle for selective nesting or stacking, comprising two downwardly-tapered sides, two downwardly-tapered ends, a rectangular bottom, side and end rails attached to the upper edges of the respective sides and ends, metallic corner plates covering the upper edges and outwardly-facing surfaces of the rails at the intersections thereof, elongated skid strips attached to the bottom and extending under and parallel to the sides, bails formed of metallic rod, each having a hinging portion extending through an aperture in a corner plate, each bail having a straight intermediate portion which, during stacking, lies across the upper edges of the end rails and parallel to the sides and which, during nesting, lies against a side under the side rail externally of the receptacle, each end of each of the bails having a locking portion lying within a closed recess in one of the end rails, and metallic cleats fastened to the sides for engaging an underlying receptacle during nesting, the hinging portion of each bail being bent at a right angle to form a locking portion which lies on the inner side of the aperture in a corner plate, and a recess formed in the end rail and covered by the corner plate in which the locking portion lies, the recess being formed to accommodate the motion of the locking member when the bail is moved, each metallic cleat consisting of a portion adapted to lie flat against a side and be fastened thereto, an outwardly- and downwardly-inclined portion, and a horizontal supporting portion extending from the lower end of the inclined portion, the supporting portion extending through the side into the interior of the receptacle and being bent at a right angle therein to form a locking portion.

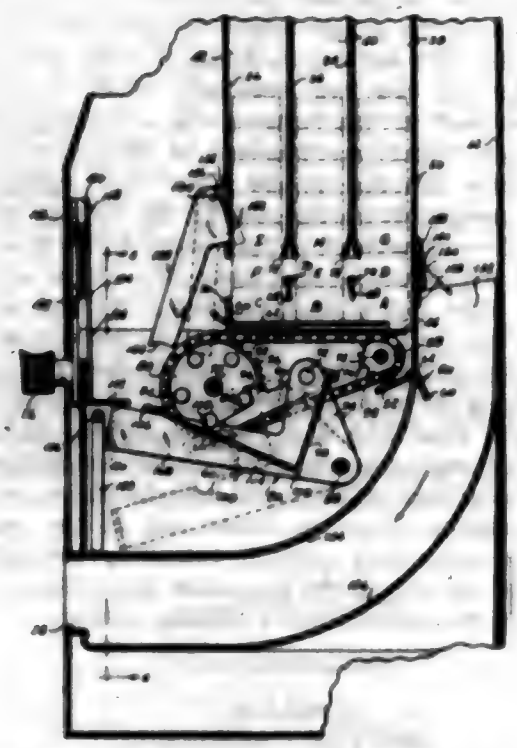
2,864,531
BOTTLE CARRIER
Harold G. Zastrow, Minneapolis, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Application January 21, 1955, Serial No. 483,349
4 Claims. (Cl. 220—105)



1. A bottle carrier including a rectangular tray-shaped body, a pair of parallel slots in the bottom thereof, a partition member of U-shaped form having a center section underlying the portion of said tray between said

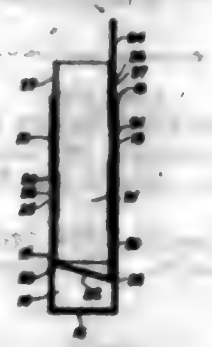
slots and having projections extending beneath said tray outwardly of said slots to reinforce the slotted tray bottom areas, said U-shaped partition member having panels extending upwardly through said slots and dividing said tray into three sections of substantially equal size, said panels each having a pair of substantially vertical, transversely spaced slots communicating with the upper end thereof, said panels having lateral projections above said slots, a pair of handle panels supported in substantially vertical position by said slots at substantially right angles to said partition panels and dividing each of said three sections into three substantially equal compartments, said handle panels having handle openings therein and having slots therein, through which said lateral projections extend, said slots in said handle panels terminating above the lower ends of said handle panels to provide projection engaging means when said handle panels are moved upwardly, whereby the weight of tray contents is transmitted through the U-shaped partition members to said handle panels when said tray is lifted thereby.

2,864,532
PACKET MERCHANDISING MACHINE
Christian Gabrielsen, Mountain Lakes, N. J., assignor to Rowe Manufacturing Co., Inc., Whippany, N. J., a corporation of New York
Application June 4, 1953, Serial No. 359,516
1 Claim. (Cl. 221—92)



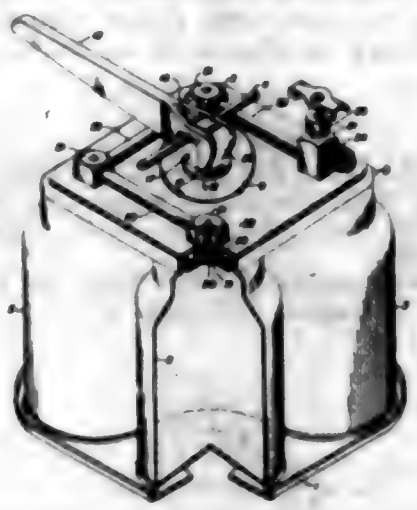
A packet merchandising machine including in combination a housing, a number of containers formed in said housing one behind the other and adapted to receive packets of merchandise, a pusher, means mounting said pusher for movement to dispense packets of merchandise from said containers, a drive shaft for said pusher mounting means, a wheel carried by said drive shaft for rotation with it, a plurality of spaced pins carried by said wheel adjacent its periphery, a pawl for engaging said pins to drive said wheel to step said pusher, and actuating means for said pawl, said actuating means including a bell crank having a pair of arms, means pivotally connectiong one of said arms to said pawl, the other of said bell crank arms being formed with a recess adapted to be engaged by one of said pins to position said wheel to prevent overrun of the wheel after an actuation.

2,864,533
RECEPTACLES
Robert Nyden, Manhasset, N. Y.
Application January 31, 1956, Serial No. 562,502
9 Claims. (Cl. 221—260)



1. A receptacle comprising a casing having front, rear and side walls, the front wall of the casing being arranged with an opening, and an article carrier slidable in the casing and including front, rear, side and bottom walls and a cover, the side walls of the article carrier being connected to the front wall of the article carrier and free of the rear and bottom walls of the article carrier, the front and rear walls of the article carrier being connected to the bottom wall of the article carrier and the cover of the article carrier being connected to the rear wall of the article carrier and free of the front and side walls of the article carrier, and a portion of the front wall of the article carrier being exposed through the opening in the front wall of the casing and arranged with a finger grip, whereby an upward force applied to the finger grip will move the front and side walls of the article carrier at a faster rate of speed than the rear and bottom walls of the article carrier due to the friction between the rear walls of the casing and the article carrier and the side walls of the article carrier being free of the rear and bottom walls of the article carrier causing the side walls of the article carrier to move the cover to open position.

2,864,534
APPARATUS FOR SIMULTANEOUSLY PUNCTURING GAS CHARGED CONTAINERS
George T. Wrenn, Jr., Portsmouth, Va., assignor to Virginia Smelting Company, West Norfolk, Va., a corporation of Maine
Application April 12, 1955, Serial No. 500,731
4 Claims. (Cl. 222—5)



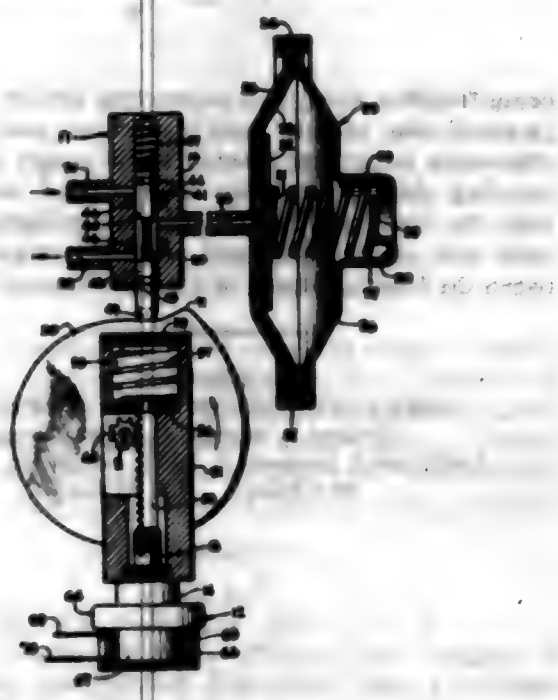
1. A dispenser unit for handling a multiple number of can type containers of pressurized gas, which dispenser comprises a pair of spaced, parallel plates arranged one above the other and adapted to receive and retain therebetween a plurality of said containers in definite geometric arrangement, head connectors disposed upon the upper plate in vertical alinement with said containers, and piercing tubular cutters dependent from said head con-

the end wall of said hollow housing and disposed in said neck, and a valve element on said post and coacting with

said central portion, the outer free ends of the strip being serrated, and two pairs of transverse folds in the wings,

sectors, and means for lowering the upper plate toward the bottom plate to secure the containers in position, to penetrate simultaneously said containers and to establish communication thereof with a common discharge manifold.

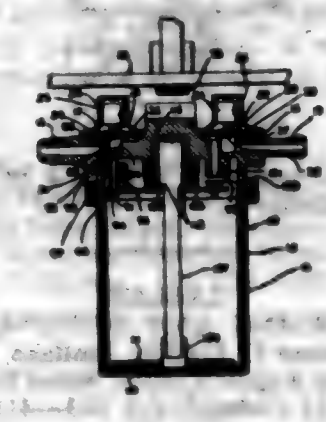
2,864,535
FLUID METERING DEVICE
Edward E. Modes, Chicago, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application October 27, 1955, Serial No. 543,224
2 Claims. (Cl. 222—54)



1. In a fluid metering device for ice trays and the like, a metering chamber having a movable wall expanding said chamber upon the admission of fluid under pressure thereto and contracting said chamber upon the release of fluid under pressure therefrom, spring means for contractibly moving said wall, a valve block having a valve chamber having communication with said metering chamber and having a valve spool movable therealong, an inlet into said valve chamber adjacent one end thereof, an outlet from said valve chamber adjacent an opposite end thereof, a rotatable cam engageable with said valve spool for operating the same, a spring maintaining said valve spool in engagement with said cam, motor means for rotatably moving said cam comprising a solid fill thermal element having a cylinder and an extensible piston extensible therefrom upon predetermined increases in temperature, a resistance heater associated with said thermal element and sequentially energizable to heat the same and effect extensible movement of said piston, a housing mounted on said cylinder and extending axially thereof, a shaft rotatably mounted in said housing and having said cam mounted thereon and means translating the rectilinear movement of said piston into rotational movement for rotating said cam comprising a rack operated by said piston and a pinion on said shaft meshing with said rack and operating said shaft and cam.

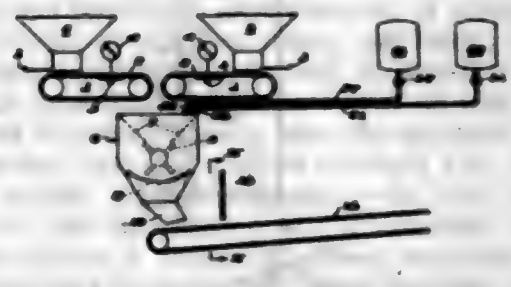
2,864,536
FLUID METERING DEVICE
Carl C. Banerlein, Lincolnwood, and Jerry C. Jauquet, McHenry, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application August 28, 1956, Serial No. 606,683
13 Claims. (Cl. 222—54)

1. In a liquid metering device, an expansible and contractible chamber, first valve means operated by contraction of said chamber for admitting liquid thereto to expand said chamber, second valve means for metering liquid from said chamber, spring means for contracting said chamber to meter liquid through said second valve means, and third valve means closed during expansion of



said chamber and opened upon full expansion of said chamber to accommodate the metering of fluid through said second valve means and to prevent the metering of fluid through said second valve means, until said chamber has been fully expanded.

2,864,537
BULK DENSITY CONTROL OF COKING COAL
Charles C. Throop and Orien V. Wince, Monessen, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Application August 14, 1956, Serial No. 603,943
8 Claims. (Cl. 222—57)

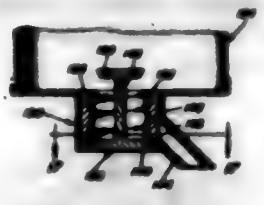


1. Apparatus for obtaining coking coal of uniform bulk density, comprising a conveyor moving at a uniform speed, means for discharging coal onto the conveyor at a uniform rate by weight, means for determining the volume of said discharged coal and means for adding to the coal before it is discharged onto the conveyor and in accordance with variations from a predetermined level in the height of coal thereon at least one of the compounds of the class consisting of oil and water, oil being added to decrease the height of coal on the conveyor to said predetermined level corresponding to the desired bulk density and water being added to increase the height of coal on the conveyor to the same predetermined level and thereby to maintain said discharged coal at a predetermined volume.

2,864,538
METERING LIQUID DISPENSER
William B. Rasmussen, Fresno, Wash., assignor of fifty percent to Alvin G. Ash, Tacoma, Wash.
Application September 20, 1955, Serial No. 535,412
3 Claims. (Cl. 222—453)

1. A dispensing cap for a container that has an outlet neck, said dispensing cap comprising a hollow housing having an end wall, a sleeve secured to said neck, said hollow housing having an open end and slidably disposed on said sleeve, a discharge opening in said housing and arranged to be controlled by said sleeve in response to movement of said housing on said sleeve, a post fixed to

the end wall of said hollow housing and disposed in said neck, and a valve element on said post and coacting with



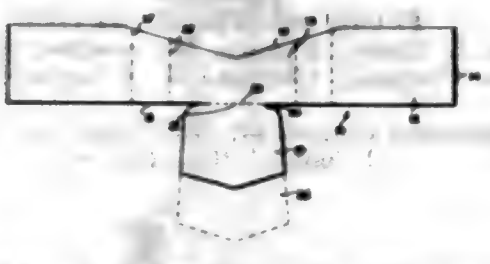
the inner end of said neck to form a valve for the contents of the container.

2,864,539
FLAP TURNING AND OPENING DEVICE
Salvatore C. Parrilla, Eastlake, Ohio
Application August 7, 1957, Serial No. 676,868
13 Claims. (Cl. 223—41)

1. Apparatus for turning and opening garment flaps or the like including, a frame structure, a stationary upwardly extending flap support finger supported on said frame structure, a flap gripping finger, means on said frame structure for supporting said flap gripping finger for movement between a flap gripping position in close proximity to said support finger and an open position in which said fingers are spaced apart, a pair of separable flap opening arms carried by said frame structure and each having an upper flap engaging end portion, said flap engaging end portions being normally disposed adjacent to each other and to said flap support finger, and means carried by said frame structure for moving said arms to spread said end portions apart.

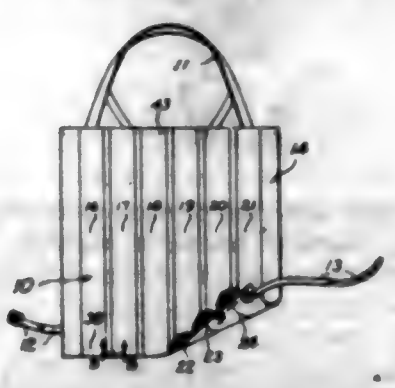
2,864,540
COLLAR STAY FOR SHIRTS AND OTHER GARMENTS
Seymour G. Kass, Bayside, N. Y.
Application July 18, 1957, Serial No. 672,611
1 Claim. (Cl. 223—83)

A collar holder consisting of an elongated flat strip of sheet material, said strip being stiffly resilient and including a symmetrical body having generally rectangular outer wings tapering inwardly at the central portion thereof, a tongue depending from said central portion, said tongue having an elongated body formed with aligned slits at its upper end to define a narrow connecting section to said central portion, the outer free ends of the strip being serrated, and two pairs of transverse folds in the wings, one of said pairs being located on each side of the central portion, intermediate the ends of the wings, the folds in each pair of folds being reversely turned, said folds being inherently resilient to tend to thrust said wings outwardly in the direction of their planes, said tongue



being foldable along said connecting section to a position perpendicular to said central portion, said wings being disposable in arcuate fashion to lie snugly along the upstanding sides of a collar of a folded laundered shirt with the free ends of the strip thrust against the back inner side of the collar and with the tongue secured between the front and back of the shirt beyond said collar.

2,864,541
SHELL RETAINER AND DISPENSER
Robert L. Altick, Oswego, Oreg.
Application January 2, 1957, Serial No. 633,182
10 Claims. (Cl. 224—14)



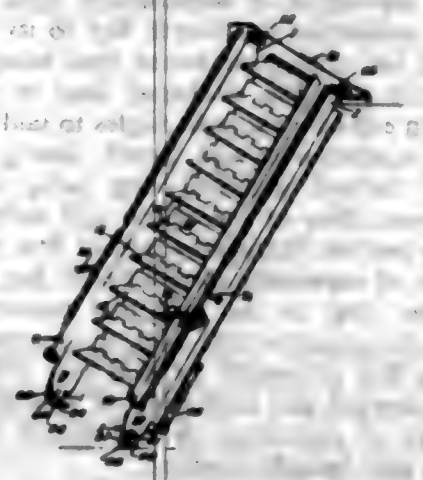
1. A shell retainer and dispenser comprising an elongated container portion of flexible material adapted to hold therein a series of shells end to end, and closure means at the bottom end of said container portion, said closure means comprising an elliptic spring means having oppositely spaced complementary spring portions extending transversely of said container portion, opposite ends of said elliptic spring means engaging opposite sides of said container portion, said spring means urging said opposite sides of said container portion apart so as to close said bottom end, intermediate portions of said elliptic spring means flexing outwardly upon bringing together said opposite ends of said elliptic spring means to present in between said intermediate portions a passage for the removal of shells from said container.

2,864,542
COMBINATION LADDER AND CHUTE
Earl A. Marryatt, Chester, N. J., assignor of fifty percent to Alexander C. Kidd, South Orange, N. J.
Application October 18, 1957, Serial No. 691,007
20 Claims. (Cl. 228—2)

1. A combination ladder and chute comprising a fixed frame, an adjusting frame slidably mounted on said fixed frame, tread plates having front ends and rear ends, pivot pins for pivotally connecting the front ends of said tread plates to said fixed frame and for pivotally connecting the rear ends of said tread plates to said adjusting frame, chute plates, each of said chute plates having a front end and a rear end, a hinge for pivotally

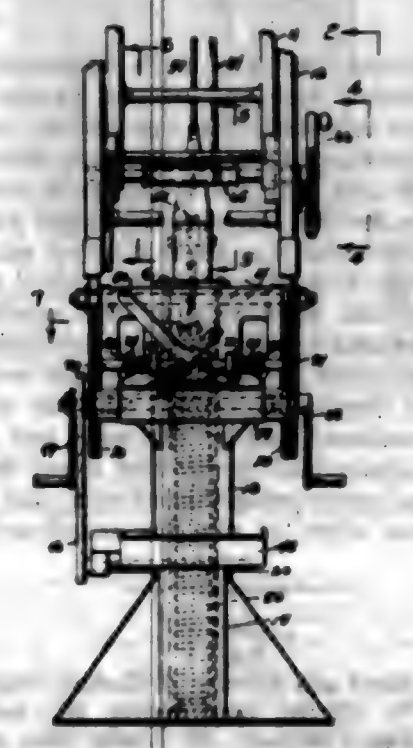
an opposed pair of said side wall panels, the remaining extending at substantially right angles to the fold line

connecting the front end of each chute plate to the rear end of one of said tread plates, a slot and pin connection for slidably connecting each chute plate to said adjusting frame, actuating plates operatively connected to said tread plates, and guide means in said fixed frame



operatively associated with said actuating plates to enable the actuation of said tread plates in one direction to position said tread plates in ladder forming position and to enable the actuation of said tread plates in another direction to position said tread plates and chute plates in alinement with one another in chute forming position.

2,864,543
VEHICLE LADDER APPARATUS
Herman J. Troche, Fairview Park, Ohio, assignor to J. H. Holan Corporation, Cleveland, Ohio, a corporation of Ohio
Application September 13, 1954, Serial No. 455,576
7 Claims. (Cl. 228—6)



3. In a tiltable and extensible ladder assembly a mechanism for selectively rotating the ladder about a pivotal connection to a support comprising in combination, an arcuately formed gear sector carried by said ladder with the pivotal connection as its center, an operator-controlled pinion shaft operably carried by the support for driving engagement with the gear sector to tilt the ladder, said gear sector having a plurality of apertures spaced along its arcuate periphery, and a releasable locking device including a pin slidably carried by the support for axial movement towards and away from engagement with an aligned aperture to releasably secure the gear sector and ladder against rotation, said slidable pin having means biasing the pin in an aperture engaging direction and including an operator-controlled lever on the support for retracting the pin from the aligned aperture to selectively release the gear sector and ladder for rotation, and means for automatically locking said pins in engagement with a selective aperture when the ladder is extended.

2,864,544
SELF-SUPPORTING FOLDING LADDER
Walter Schaldenger, Montague, N. J.
Application November 18, 1957, Serial No. 697,090
2 Claims. (Cl. 228—37)

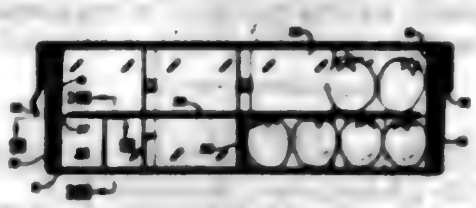
1. A ladder for alternate use as an extension ladder or a step ladder comprising a first section having spaced side rails with rungs extending between the side rails and supported thereby, a second section of substantially the same length as said first section and having its rails spaced closer together than the rails of said first section with rungs extending between said rails of said second section and supported thereby, whereby said rails of said second section may be received between said rails of said first section, a plate mounted on the inner face of each rail of said first section at one extremity thereof, each plate having a portion projecting outwardly from one edge of its rail, each plate being provided with an L-shaped slot with the stem extending from the edge of the plate adjacent the one end of the first section and the foot extending toward the associated rail, a rod mounted on the outer projecting portion of said plates spaced from said L-shaped slots and adapted to engage one edge of the rails of said second section away from such first section, a second rod extending through the rails of said second section, said second rod being continuous from one end to the other thereof and the ends of said second rod projecting outwardly beyond the outer surface of the rails of said second section a distance appreciably greater than the difference in width between the outside surfaces of the rails of said second section and between the inside surfaces of the rails of said first section, and to substantially overlap the rails of said first section, said outwardly projecting ends of said second rod being adapted for positioning in said L-shaped slots for positive connection of said one ends of said first and second sections.

2,864,545
SHIPPING CONTAINER FOR FRUITS, VEGETABLES AND OTHER ARTICLES
Mark B. Royce, Hoboken, N. J., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application July 31, 1957, Serial No. 675,487
7 Claims. (Cl. 229—23)

1. A shipping container comprising a one-piece paperboard body including a bottom panel, four side wall panels extending from the bottom panel, flaps extending from

cluded in the first side flap registering with the transverse said eccentric portion; and means for holding said bearing

an opposed pair of said side wall panels, the remaining pair of said side wall panels folding around said flaps and forming outer and inner wall panel sections, said inner wall panel sections having lateral extensions which, in the erected container body, extend in spaced relation



to said opposed pair of side wall panels to form guide pockets at the corners of the body, said opposed pair of side wall panels having cut-out areas, and wood veneer side members having end portions received in said guide pockets to hold the wood veneer side members in assembled relation with the paperboard body.

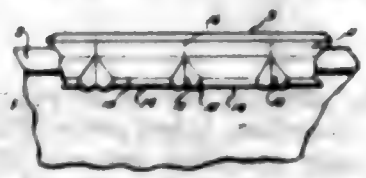
2,864,546

COVER FOR PAPER CONTAINERS

Elmer T. Aldington, Bethlehem, Pa., assignor, by mesne assignments, to American Can Company, New York, N. Y., a corporation of New Jersey

Application November 7, 1955, Serial No. 545,288

10 Claims. (Cl. 229—43)



1. A cover for a paper container, embodying laminated material in which one lamination is a metallic foil having dead folding properties, said cover having a central raised portion surrounded by an annular depending skirt of crown configuration for folding around the rim bead of a container, said cover having an annular indentation in the top thereof inside said skirt to allow outward pressure to be applied to the container rim bead by capping mechanism, said skirt having spaced upstanding outward folds therein and circumferential inward folds alternating therewith, and fine outer folds projecting above said upstanding folds to substantially the junction between the skirt and said annular indentation adjacent said central raised portion to maintain the cover partially separated when stacked.

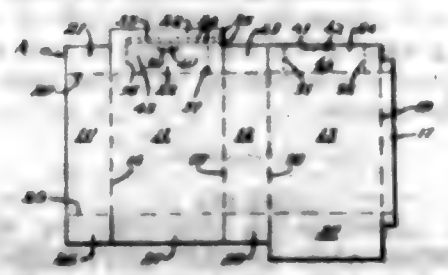
2,864,547

RECLOSABLE CARTON

Reynolds Guyer, St. Paul, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota

Application October 18, 1954, Serial No. 462,783

4 Claims. (Cl. 229—51)



1. A reclosable carton including a series of side walls connected in tubular relation, top closure flaps connected to the upper ends of said side walls, said closure flaps including a pair of opposed flaps folded into a common plane, a third closure flap folded to overlie the first folded flaps and having parallel weakened lines of separation extending at substantially right angles to the fold line connecting said third closing flap to its respective side wall, said weakened lines dividing said third closure flap into a center portion and end portions, means adhering the end portions to the first folded flaps, and a fourth flap folded to overlie the third flap and including weakened lines of separation at substantially right angles to the fold line connecting the fourth flap to its respective side wall, said last named weakened lines being substantially in registry with the weakened lines of said third flap, a tear strip extending at right angles to said weakened lines of said separation in said fourth closing flap near the free edge thereof, said tear strip being defined by spaced weakened lines of separation and defining a removable strip portion therebetween said first mentioned weakened lines of separation in said fourth flap extending from said tear strip to the fold line connecting said fourth flap to its respective side wall, the portions of said fourth closing flap outwardly of said tear strip toward the free edge thereof and outwardly of said first named weakened lines of separation in said fourth flap being adhered to the next beneath element.

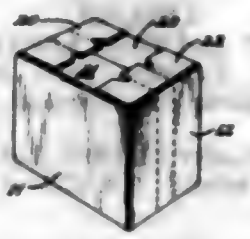
2,864,548

EASY OPENING CONTAINER CONSTRUCTION

Harold G. Zastrow, Minneapolis, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota

Application October 18, 1954, Serial No. 462,804

1 Claim. (Cl. 229—51)



A carton having four side walls connected together in tubular relation; each end of said carton having a first pair of flaps extending from one parallel pair of side walls and a second pair of flaps extending from the other parallel pair of said four side walls; each pair of flaps extending from the first mentioned parallel pair of side walls being substantially in edge abutting relation, and each pair of flaps extending from the second mentioned pair of parallel side walls being in edge spaced relation and in superimposed relation to the corresponding flaps of the first mentioned pair of parallel side walls, a tear strip extending longitudinally and medially of each of said second mentioned parallel side walls and across the flaps thereof substantially to the free edges thereof, the ends of said tear strips being aligned with, and overlying, the said abutting edges of said first mentioned opposed flaps.

2,864,569

BAG

Claude E. Hayward and Edward S. Gorton, Mobile, Ala., and James W. Girvin, East Peoria, Ill., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri

Application May 18, 1956, Serial No. 587,777

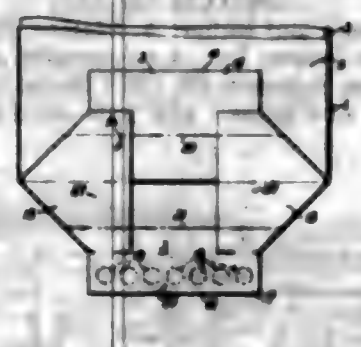
8 Claims. (Cl. 229—57)

1. A closure construction for a bag of the type having an inner ply and at least one paper ply outside said inner ply, said inner ply comprising a material different from the paper ply and which is less desirable for closure adhering than paper, said construction comprising inwardly directed end flaps and first and second side flaps, the first side flap being folded over upon the end flaps and the second side flap being folded over on the first side flap, the transverse edge of the portion of the inner ply in-

aligned aperture to releasably secure the gear sector and extending from the bottom panel, flaps extending from

737 O. G.—42

cluded in the first side flap registering with the transverse edge of the portion of the paper ply included in the first side flap so that the entire outside of the first side flap consists of a portion of the paper ply, the portion of the inner ply included in the second side flap being formed



so that a part of the portion of the paper ply included in the second side flap on the outside of the inner ply is exposed toward the outside of the first side flap, a portion of said second side flap including said exposed part of the portion of the paper ply included therein being secured to the first side flap by adhesive.

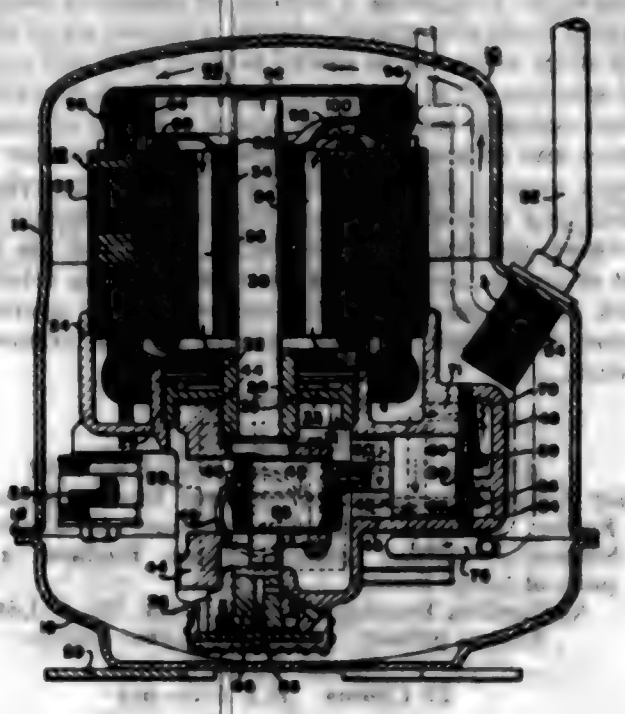
2,864,550

REFRIGERATING APPARATUS

John Welbel, Jr., and Irving M. Pelaez, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 23, 1956, Serial No. 623,831

2 Claims. (Cl. 230—58)



2. In a sealed motor compressor unit; a casing; a frame supported in said casing; said frame having a plurality of concentric cylindrical surfaces formed thereon; a motor including a stator positioned by one of said surfaces; said motor including a drive shaft; said drive shaft having one portion thereof in bearing engagement with another of said surfaces; a bearing insert for another portion of said drive shaft positioned by still another of said surfaces; said bearing insert comprising a central bearing portion in engagement with said shaft, a portion extending radially outwardly from said central portion, and a plurality of of flexible mounting members projecting from the plane of said radially extending portion; each of said mounting members having its one end arranged in engagement with said frame; said shaft having an eccentric portion; said frame having a plurality of cylinder bores therein; piston means arranged within said cylinder bores; connecting rods drivingly connecting said piston means to said eccentric portion; and means for holding said bearing insert in place; said last named means comprising a ledge formed on said frame for limiting the movement of said bearing insert in the one direction and means cooperating with said frame for limiting the movement of said bearing insert in another direction.

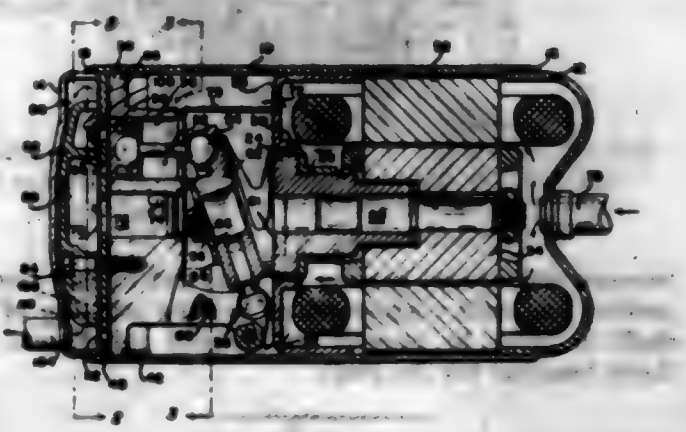
2,864,551

REFRIGERATING APPARATUS

John H. Holdorn and Richard J. Becht, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 30, 1957, Serial No. 637,243

7 Claims. (Cl. 230—58)



1. In a sealed motor compressor unit, a cylindrical sheet metal casing, stamped sheet metal end caps for said casing, motor compressor means disposed within said casing and including a drive shaft, a bearing for said drive shaft, stamped sheet metal bearing mounting means having an outer annular flange portion arranged in engagement with the inner wall of said cylindrical casing and having an inner flange portion arranged to encompass said bearing throughout a substantial portion of the axial length of said bearing, said bearing comprising the sole means for supporting said shaft, the ends of said shaft projecting beyond the opposite ends of said bearing, a motor rotor secured to one end of said shaft and having a portion arranged in overlapping relationship to said bearing, a motor stator supported by said casing in a position surrounding said motor rotor, the one end of said shaft having an offset crank portion and an angularly disposed bearing surface, a wobble plate supported on said offset crank portion in bearing relationship to said angularly disposed bearing surface, a cylinder block supported within said casing and having a plurality of cylinder bores forming compression chambers, means forming inlet and outlet ports for said compression chambers, piston means operating within said cylinder bores, and means drivingly connecting said piston means to said wobble plate.

2,864,552

SHAFT OR LIKE BEARINGS

Norman Anderton, Harworth, England, assignor, by mesne assignments, to Sir George Godfrey & Partners (Holdings) Limited, Harworth, England

Application August 18, 1954, Serial No. 450,747

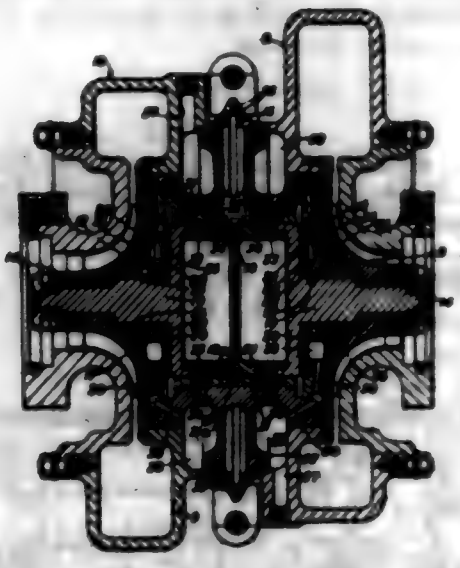
11 Claims. (Cl. 230—116)

1. A bearing for a rotating element comprising in combination bearing means, a shaft rotatable relatively to said bearing means and carried thereby, said bearing means having axially spaced bearing portions extending in a radial sense with respect to the axis of rotation of said shaft and a further bearing portion of substantially cylindrical form coaxial with said axis of rotation and disposed between said axially spaced bearing portions, said shaft having spaced radial bearing surfaces and an intervening cylindrical bearing surface which cor-

2,864,556

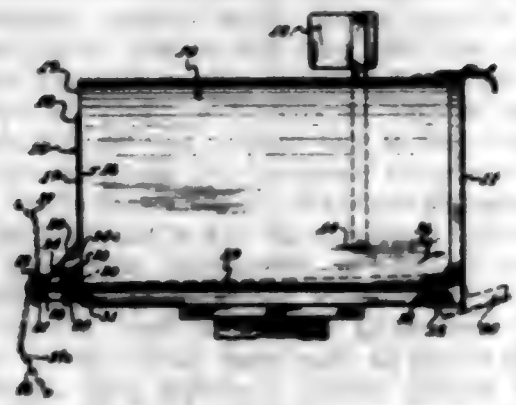
of transmitting means, one for each power of the first

respond to and lie closely adjacent to said axially spaced bearing portions and said further bearing portion, and means for feeding under pressure a gaseous fluid medium between said spaced bearing portions and further bearing portion and said corresponding bearing surfaces of the shaft in order to provide gas-charged radial and end thrust bearings for the shaft.

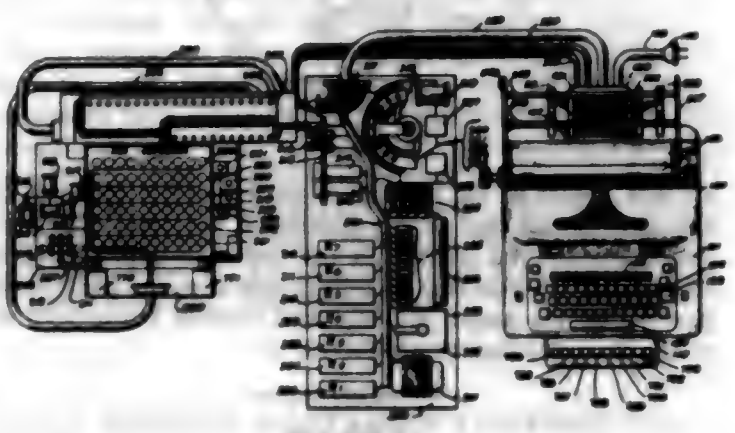


2,864,553
MAILBOX SIGNAL
Wilbur A. Petrie, Tucson, Ariz.
Application March 31, 1953, Serial No. 725,231
1 Claim. (Cl. 232—35)

In combination with a regulation rural mailbox having a forwardly and downwardly swinging door pivotally mounted on hinge pins at the lower front edge of said mailbox, a signal means on the back of said mailbox tripped by the opening of said door comprising a delivery flag member having an outer portion lying against the back of said mailbox and having a lower rearwardly sloping portion with its lower edge fixed to a hinge pin, a bracket fixed at the right hand side of the rear corner of said mailbox having a bore to pivotally receive the right hand end of said delivery flag hinge pin, a longitudinally rearwardly extending trip rod on the left hand side of said mailbox pivotally connected at its front end on a pin fixed to said door at a point above and rearwardly of the door hinge pin axis and longitudinally slidably supported in a bracket fixed to the left hand side rear corner of said mailbox, said rod including a bearing bore in its rear end to pivotally receive the left hand end of said delivery flag hinge pin, and means on the back of said mailbox to engage said lower rearwardly sloping portion of said delivery flag adjacent the left side of said mailbox when said trip rod is longitudinally actuated by the opening of the mailbox door by horizontally moving the left hand end of said delivery flag hinge pin toward the back of said mailbox to trip said delivery flag to swing down to a lower hanging position below the rear edge of said mailbox.

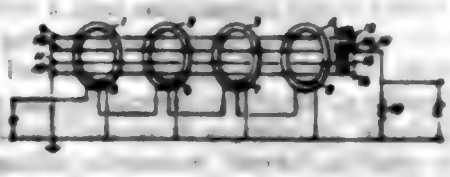


2,864,554
PRINTING CALCULATING APPARATUS
SWITCH MEANS
Donald L. Rolph and Robert A. McKee, Hayward, Calif., assignors to Friden, Inc., a corporation of California
Application February 28, 1955, Serial No. 490,770
14 Claims. (Cl. 235—60.12)



1. In a combination of a typewriter and calculating machine in which amounts are stored in column positioned registers and are read out of the registers for typing the amounts in corresponding columns in a sheet, a carriage in the typewriter, a commutator switch in the typewriter comprising a first set of conductor strips supported in parallel spaced relation, a second set of conductor stripe extending in spaced relation with and crosswise of said first set of conductor strips, a switch carrying carriage operable lengthwise of one of said sets of conductor strips and crosswise of the other set of conductor strips, wiper contact means carried by said switch carrying carriage and operable to form electrical connecting means between the first set of conductor strips and the second set of conductor strips and carriage operating means carried by the carriage of the typewriter and operable to move the switch carrying carriage in said commutator switch.

2,864,555
ANALOG FUNCTION GENERATOR
Rolf Edmund Spencer and Geoffrey Hanna Stephenson, Ealing, London, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Application January 12, 1954, Serial No. 403,666
Claims priority, application Great Britain August 17, 1948
20 Claims. (Cl. 235—61)



1. Apparatus for setting up electrical analogues of numbers, comprising a series of magnetizable cores, energizing windings on said cores, means for feeding alternating current to said windings to induce flux variations in the successive cores having successively greater amplitudes related as successive integral powers of two, and a plurality of conductors electro-magnetically linked with different combinations of said cores, each conductor being linked once only with any core, to induce in the respective conductors electro-motive forces representative of different numbers.

trol means and said shifting means to divide a dividend in said register by a divisor in said divisor receiving means

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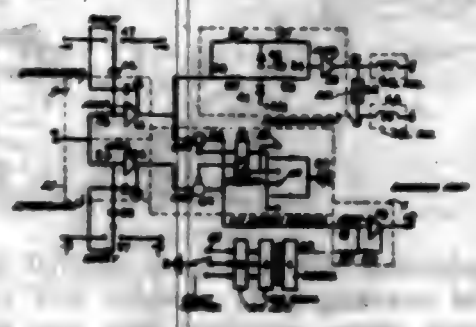
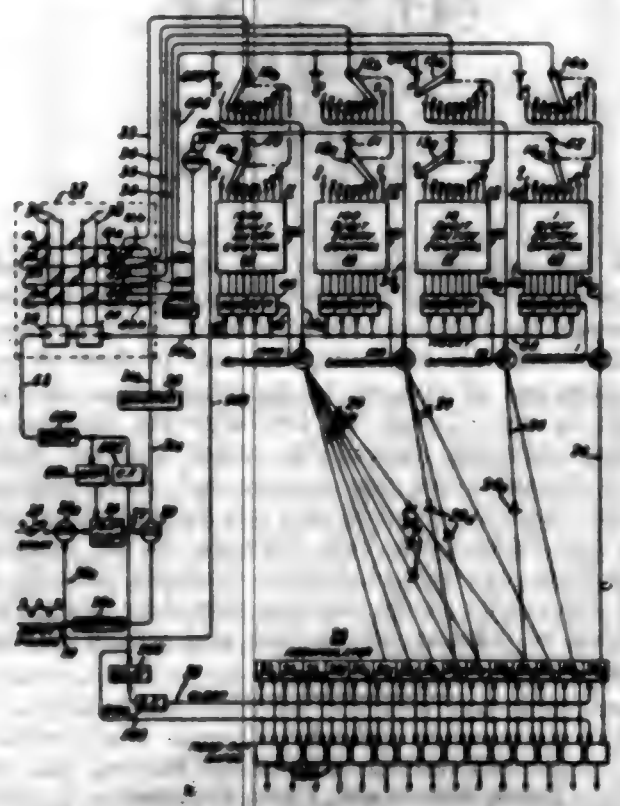
2,864,561
MATERIALS HANDLING PROCESS AND
APPARATUS

2,864,556
ELECTRONIC INTEGRATION SYSTEMS
François Henri Raymond, Le Vesinet, France, assignor to Societe d'Electronique et d'Automatisme, Courbevoie, Seine, France
Application March 29, 1954, Serial No. 417,354
Claims priority, application France April 15, 1953
29 Claims. (Cl. 235—61)



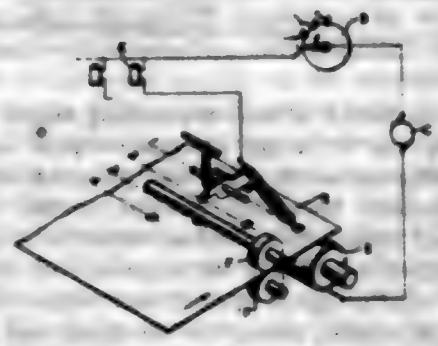
1. An electronic integration system comprising in combination first and second electronic integrator circuits of identical operative ranges of output voltage values, means for applying the same input signal to both circuits, means for resetting the output voltages within their operative ranges, a common output channel and reciprocally operative gating means from the outputs of said circuits to said common output channel, threshold amplitude discriminating means responsive at least to one definite value of the output voltage of at least one of said integrator circuits, and switching means controlled from the response of said threshold amplitude discriminating means for so controlling said gating means that the output signals from said integrator circuits are sequentially applied on said common output channel and the respective output voltages are reset concomitantly and in reverse sequence.

2,864,557
NUMBER CONVERTER
George W. Hobbs, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application December 13, 1954, Serial No. 477,325
12 Claims. (Cl. 235—61)



1. In a converter for translating a given number expressed in a higher base number to that of a lower base number, an accumulator having a plurality of cascaded stages, one for each power of the second base, a plurality of transmitting means, one for each power of the first base contained in said given number, with each transmitting means being interconnected with preselected ones of said stages and adapted to transmit impulses to said preselected stages for translating said power of the first base into a sum of powers of the second base equal thereto, a plurality of predetermined counters, one for counting the number of energizations of each transmitting means and each being presettable to count a different digit of the given number when expressed in said first base, and a programming means for energizing all of said transmitting means in sequence and being responsive to said predetermined counters for repetitively energizing each of said transmitting means a number of instances corresponding to the preset digit of the predetermined counter associated therewith.

2,864,558
CARD SENSING MECHANISM
William Wochenfuss, Brooklyn, N. Y., assignor to Burroughs Corporation, a corporation of Michigan
Application April 8, 1953, Serial No. 347,893
10 Claims. (Cl. 235—61.11)



10. In a punched record card analyzing mechanism a plurality of feed rolls, a sensing roll, a sensing brush cooperating with the sensing roll to complete a circuit, a tubular, insulated guide, said brush being guidingly and slidably mounted in said guide, a pivot, a holder pivotally mounted intermediate its ends on the pivot, the guide attached to the holder on one side of the pivot, a resilient means attached to the holder at the other side of the pivot, a resilient means individual to said brush and between the brush and holder urging only the brush toward contact with the sensing roll, the resilient urging action of the first mentioned resilient means supplementing that of the second mentioned resilient means by urging the holder to rotate about the pivot in a direction moving the brush toward the sensing roll, said second mentioned resilient means being an integral part of the brush, and stop means predeterminedly limiting the rotation of the holder about the pivot so that the holder will always be returned to the same predetermined brush sensing position by said first mentioned resilient means and the sensing brush will be urged constantly into exactly the same contacting position with the sensing roll by said second mentioned resilient means.

2,864,559
DIVIDEND-DIVISOR ALIGNING MECHANISM
Grant C. Eberbeck, San Leandro, Calif., assignor to Friden, Inc., a corporation of California
Application May 12, 1953, Serial No. 354,683
10 Claims. (Cl. 235—63)

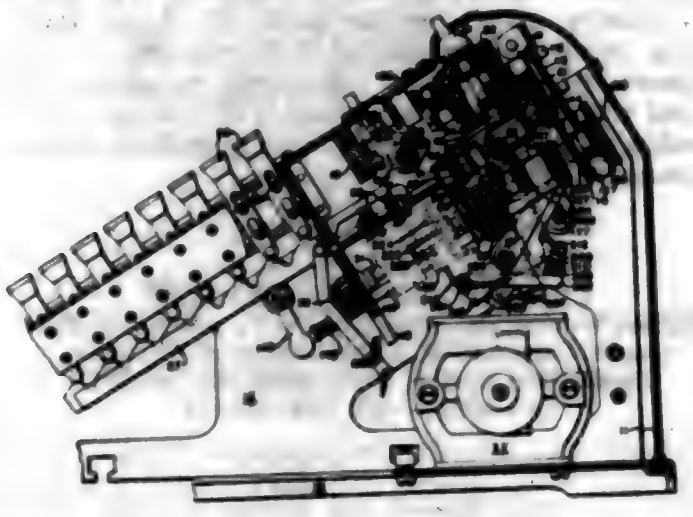
1. In a calculating machine, a dividend register and and an actuating means therefor, a divisor receiving means, means for shifting said register relative to said divisor receiving means, means for controlling positive and negative registrations on said register by said actuating means, an automatic division mechanism including a normally inoperative mutilated gear operative to control operation of said positive and negative registration con-

and motion transmitting means interconnecting said spool means and said winding means and including planetary

2,864,565
APPARATUS FOR DISPENSING WIRE
Robert L. Wheeler, Fort Wayne, Ind., assignor to Ro

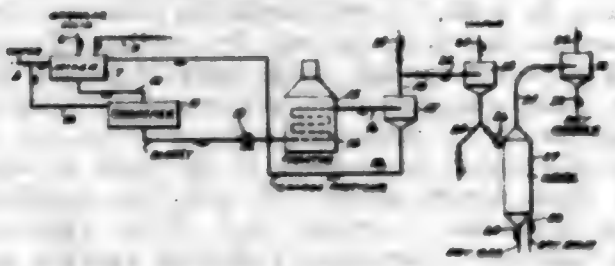
the left hand end of said delivery flag hinge pin toward different numbers.

trol means and said shifting means to divide a dividend in said register by a divisor in said divisor receiving means and an overdraft sensing means operative to position said mutilated gear in its operative position, and means for aligning a dividend in said register with a divisor in said receiving means comprising the combination of a manually operable means for setting said controlling means for a negative registration, a normally disabled program means, including a second mutilated gear operative



to control the operation of said controlling means and said shifting means for effecting alternate cyclic operation thereof, a driving connection for said program means for effecting continuous operation thereof, means rendered effective by said manually operable means to enable said driving connection to initiate the sequence of operations determined by said program means, and means controlled by said overdraft sensing means for disabling said program means and for positioning said first mutilated gear to initiate a division operation.

2,864,560
PROCESS FOR TRANSPORTING SOLID MATERIALS, WITH OR WITHOUT CONCURRENT DISINTEGRATION
Charles R. Carlisle, Pasadena, De Bois Eastman, Whittier, Calif., and Leon P. Gaucher, Beacon, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
Application March 8, 1955, Serial No. 492,878
10 Claims. (Cl. 241—5)

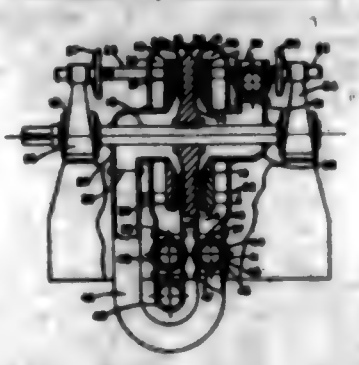


6. A process for finely pulverizing a solid material which comprises rough grinding said solid material to form coarse particles by transmitting energy from a vapor-driven engine to a mechanical grinder; forming a slurry of said coarse particles in a vaporizable liquid; passing said slurry into and through a long tubular grinding zone while heating said slurry to effect vaporization of said liquid in said tubular zone and form a dispersion of said particles in vapor; passing said dispersion at high velocity through the rest of said tubular grinding zone to effect reduction in the size of said particles; separating vapor from said dispersion; conveying said separated vapor to said engine as operating vapor therefor, to effect said rough grinding; and passing vapor from said engine in heat exchange relationship with said slurry ahead of said grinding zone to preheat said slurry.

2,864,561
MATERIALS HANDLING PROCESS AND APPARATUS
Fred H. Mork, St. Paul, Minn.
Application January 18, 1952, Serial No. 266,748
4 Claims. (Cl. 241—24)

3. In combination with a portable material handling, crushing and screening plant provided with screening means, crusher means associated with said screening means, conveyor means for conveying the crushed material to said screening means, and a hopper disposed beneath the said screening means, the combination comprising a separable unit including auxiliary first and second conveyor means, said first auxiliary conveyor means discharging directly into said hopper and said second auxiliary conveyor means discharging onto said screen means, and auxiliary screen means positioned so as to discharge screened material onto said first auxiliary conveyor means and unscreened material onto said second auxiliary conveyor means.

2,864,562
PLURAL STAGE DISC MILL WITH BACK PRESSURE CONTROL MEANS FOR EACH STAGE
Lee E. Eberhardt and Maurice D. Woodruff, Springfield, Ohio, assignors to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Application May 20, 1953, Serial No. 356,248
6 Claims. (Cl. 241—160)



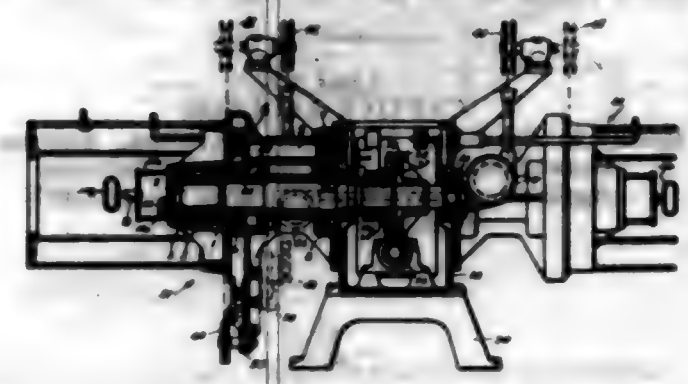
6. A disc mill including first and second sets of relatively rotatable refining elements, means defining a closed flow passage between said sets of refining elements, means in said passage for regulating the rate of flow of material from one of said sets to the other, means defining an inlet to one of said sets for delivering material to be refined centrally thereof for radial dispersal therebetween to said closed flow passage and means defining an outlet from the other of said sets having means connected for producing a back pressure on the material flowing from said sets of refining elements whereby to control the quality of the material refined by controlling the period of refining intermediate said sets of refining elements.

2,864,563
WINDING APPARATUS
Erwin Sintermann, Unna, Germany
Application January 11, 1957, Serial No. 633,558
10 Claims. (Cl. 242—35)

1. In a winding apparatus, in combination, rotatable spool means; rotatable winding means adapted to carry a filament for winding the same on said spool means;

a pivot arm attached to said second member whereby axis thereof parallel with said vertical axis, a second core

and motion transmitting means interconnecting said spool means and said winding means and including planetary gear means for holding said spool means stationary during rotation of said winding means and clutch means for coupling said spool means and said winding means for rotation with each other, said motion transmitting



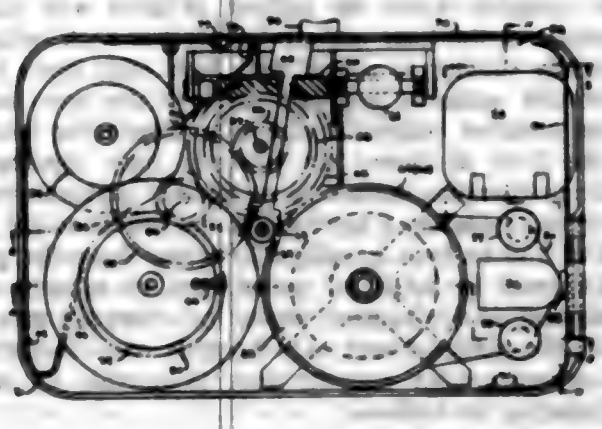
means being movable between two positions in one of which only said planetary gear means is operative and in the other of which only said clutch means is operative, whereby said winding means may be rotated while said spool means is held stationary or be rotated together with said spool means.

2,864,564

PORTABLE MAGNETIC RECORDER

Peter Katz, Baldwin, N. Y., assignor to American Measuring Instruments Corp., Long Island City, N. Y., a corporation of New York

Application February 18, 1954, Serial No. 411,178
5 Claims. (Cl. 242—55.12)



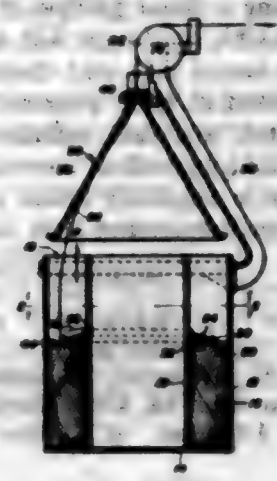
1. In a portable magnetic recorder, in combination: a spring motor, a pair of reels for carrying a magnetic medium, a first gear train for connecting said motor to said reels to drive them at one speed in one direction while recording and reproducing sound, a second gear train for connecting said motor to said reels to drive them in the opposite direction at a greater speed for rewinding the medium, a gear common to said first and second gear train for selectively driving said reels in either one of said directions, a manually operable slider having a plurality of predetermined positions, a slot in said slider having a predetermined shape, a member cooperating with said slot and movable in one direction in response to movements of said slider and variations in the shape of said slot, and a flexible element interconnecting said member and said gear for selectively causing engagement of said gear with said first gear train and with said second gear train and for disengaging said member from either gear train.

2,864,565

APPARATUS FOR DISPENSING WIRE

Robert L. Wheatley, Fort Wayne, Ind., assignor to Rea Magnet Wire Company, Incorporated, Fort Wayne, Ind., a corporation of Indiana

Application March 7, 1955, Serial No. 492,441
6 Claims. (Cl. 242—128)



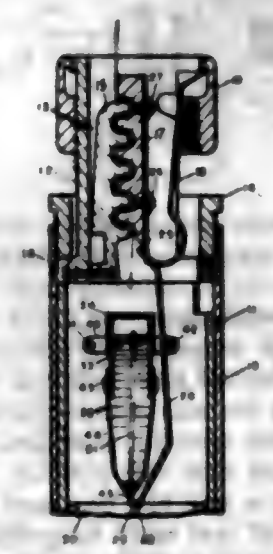
6. For use in an annular wall spacing of a container in wire dispensing apparatus in which insulated wire coiled elliptically in the annular spacing of the container is dispensed axially of the container, a dampening ring in the form of an annular body positionable axially in the annular spacing of the container to rest on the wire in the container and of a weight sufficient to counteract the tendency of the wire to loop ahead of itself in dispensing, said dampening ring comprising an annular body having inner and outer peripheral edges of circular contour, said bottom surface inclining upwardly inwardly of the annular body from the outer circular edge of the body to the inner circular edge, said inner edge of the body defining the opening of the annular body and extending axially of the body to provide a bearing surface for cooperation of the dampening ring with the container, said outer edge being smooth to provide a surface which will not injure the surface coating on insulated wire rubbed thereagainst as the wire is withdrawn from the container.

2,864,566

TENSION DAMPER

Norman E. Klein, Pendleton, S. C., assignor to Deering Milliken Research Corporation, Pendleton, S. C., a corporation of Delaware

Application June 14, 1954, Serial No. 436,665
5 Claims. (Cl. 242—153)



1. In a yarn tensioning device having a first yarn engaging member, a second yarn engaging member, and

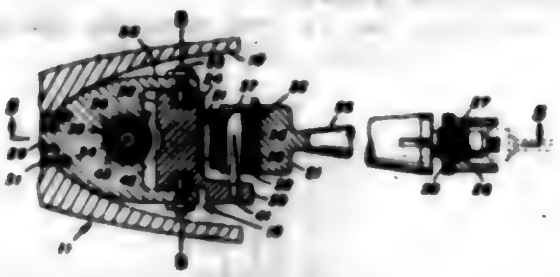
ing element and the main control surface of the craft, and positioned in the cylinder; hook means operatively con-

a pivot arm attached to said second member whereby said second member is capable of limited movement about an axis remote therefrom, improved damping means comprising in combination elongated agitator means rigidly attached by one end to said pivot arm in close proximity to said axis and extending substantially parallel to the plane in which said pivot arm is movable, a fluid chamber enclosing a major portion of said agitator means and having a flexible fluid-tight seal at the point of entry of said agitator means into said chamber, said fluid-tight seal being disposed in close proximity to the pivot axis of said pivot arm, and said agitator means being fixed against substantial longitudinal movement along its length and being movable angularly about said axis in substantially angular synchronization with said pivot arm.

2,864,567
AIRCRAFT
Curtis D. Ehmhauer, Gloversville, N. Y.
Application April 28, 1954, Serial No. 426,195
3 Claims. (Cl. 244—13)

1. In an aircraft, the combination of a main airfoil of substantially discoid shape to provide a circular leading edge and having a cut-out segmental portion to provide a linear trailing edge, a trailing horizontal stabilizer of substantially complementary segmental shape mounted with the linear leading edge thereof in elevated offset alignment with the linear trailing edge of said main airfoil to operate in the relatively undisturbed air stream above said main airfoil, and a pair of ailerons, each located at an opposite end of said cut-out segmental portion and hinged to said main airfoil, said ailerons and said horizontal stabilizer lying behind the trailing edge of said main airfoil.

2,864,568
AIR-FLOW DIRECTION PICKUP
Wallace L. Ihard, Tulsa, Okla., and Edmund A. Brummer, Hampton, Va., assignors to the United States of America as represented by the Secretary of the Navy
Application December 30, 1955, Serial No. 556,752
2 Claims. (Cl. 244—14)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. An airflow-direction pickup for aircraft comprising, means for supporting said pickup on said aircraft, an aerodynamic body, universal joint means having vertical and horizontal axes and block means for joining said body to said supporting means for rotation on said vertical and horizontal axes, first coil means fixed on said body and having the axis thereof parallel with said horizontal axis, a first core for said first coil fixed on said block means, said first coil pivoting on said horizontal axis with respect to said first core and in accordance with vertical motion of said body to provide an induced current in said coil and variable in accordance to the motion thereof with respect to said first core, second coil means fixed on said supporting means and having the axis thereof parallel with said vertical axis, a second core for said second coil fixed on said block means, said second core pivoting with respect to said second coil on said vertical axis and in accordance with horizontal motion of said body to provide an induced current in said second coil and variable in accordance to the motion of said second core with respect thereto, and means for transmitting signals indicative of said variations in induced current of said first and second coils.

2,864,569
CAPTIVE BALLOON
Harold E. Froehlich, New Brighton, Minn., assignor to General Mills, Inc., a corporation of Delaware
Application May 20, 1955, Serial No. 509,807
8 Claims. (Cl. 244—33)

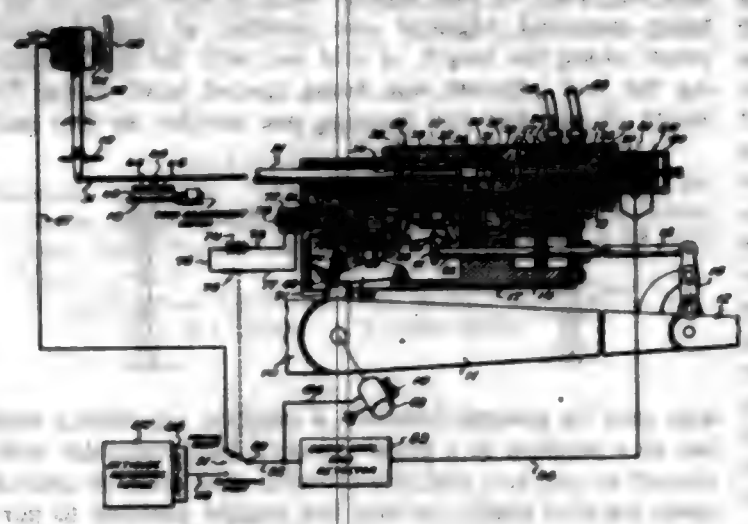
1. A captive balloon assembly comprising a balloon envelope including an outer cover member and a liner, the liner member being formed of a material capable of holding a lifting gas and the outer cover member being of relatively high tensile strength to lend strength to the liner member when the balloon is filled with gas and pressurized, the liner and cover member each being substantially tubular in shape with their ends open but individually gathered together to close the liner and the cover member, separate clamping means for each end of the liner to clamp the gathered ends together and separate clamping means to clamp the gathered ends of the cover member, a captive line connected to the lower end of the balloon envelope to tether it to the ground and control its height of ascent, and an opening in the lower end of the balloon above the clamping means for the lower gathered end, said opening extending through the cover member and the liner to provide an opening for inflating the balloon.

2,864,570
SERVO SYSTEM FOR CONTROLLING DIRIGIBLE CRAFT WITH PRIMARY AND TRIM TAB SURFACES
Clinton D. Burdick, Great Neck, George R. Arthur, Syosset, and Richard S. Brannin, East Williston, N. Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Application August 30, 1955, Serial No. 531,317
12 Claims. (Cl. 244—78)

1. In a dirigible craft having a main control surface and an auxiliary trim tab surface, a manual override and automatic pilot servo system including, a manually operable member, automatic pilot means including a servomotor, a power motor having a housing element and a movable element operatively connected to the trim tab surface, an override yielding connection between the power motor housing element and the manually operable member, means for interlocking said power motor hous-

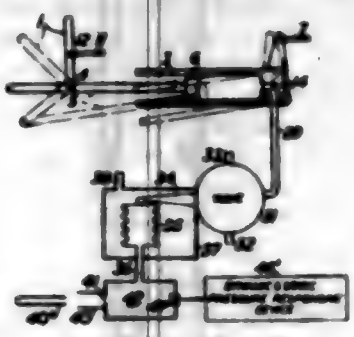
in a vertical direction, a support adapted to be secured to a supporting surface and carrying attaching elements releasably inserted through one of said openings and each of said legs being secured to said bar by means of a single bolt extending substantially diametrically across said bar, each of said legs of each of said pairs of legs

ing element and the main control surface of the craft, and means for operating said power motor operatively con-



nected to said automatic pilot servomotor and said manually operable means through said override connection.

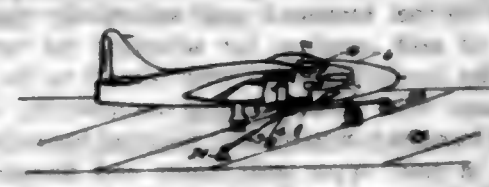
2,864,571
ARTIFICIAL FEEL SYSTEM FOR AIRCRAFT CONTROLS
Raymond Frederick Creasey, William Donald Horsfield, and Michael Woods Carr, Preston, England, assignors to The English Electric Company Limited, London, England, a British company
Application February 19, 1954, Serial No. 411,338
Claims priority, application Great Britain March 18, 1953
7 Claims. (Cl. 244—83)



3. In an airplane control system in an airplane including a pilot's control element, an enclosed force producing diaphragm communicating on one side thereof with static pressure, the other side of said diaphragm communicating with a source of ram air pressure when said airplane is in flight, linkage connecting said diaphragm with said control element to impose thereon a force representing a differential ratio between said static pressure and said ram air pressure when said control element is moved from a neutral position; a normally closed valve connected between each side of said diaphragm, said valve being operable in accordance with ram air pressure modified by static air pressure to communicate one side of said diaphragm with the other side thereof when said ram air pressure exceeds a predetermined value.

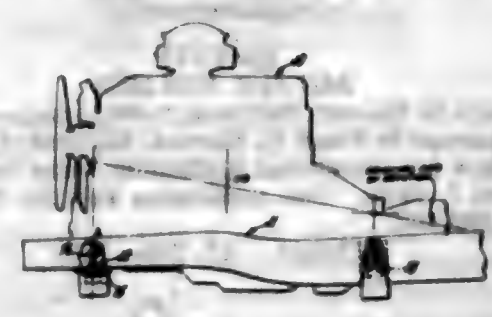
2,864,572
AIRCRAFT HOLD-DOWN UNIT
Sidney James Temple, Harrisburg, Pa.
Application March 31, 1955, Serial No. 498,468
2 Claims. (Cl. 244—110)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In combination with an aircraft having a parking brake mechanism, apparatus for restraining movement of the aircraft relative to a supporting surface and comprising a restraining cable affixed to the supporting surface; a cylinder secured to the aircraft; a piston operatively positioned in the cylinder; hook means operatively connected to the piston for at times engaging the retaining cable; and means operatively associated with said piston



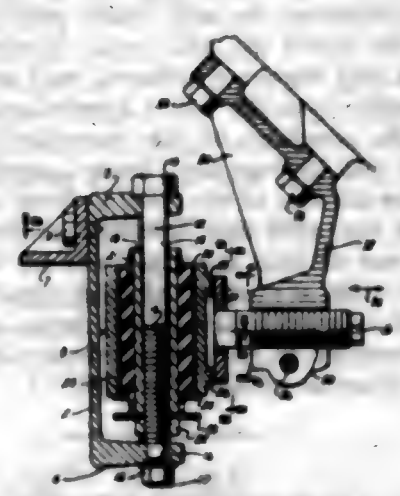
and responsive to the operations of the brake mechanism of the aircraft for controlling movement of the piston in the cylinder.

2,864,573
ENGINE MOUNTING
Maurice Olley, Detroit, and Phillip C. Bowser, Roseville, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 5, 1954, Serial No. 408,493
2 Claims. (Cl. 248—9)



1. In combination in an engine mounting system, a first pair of mounts each comprising an arcuate resilient member and a pair of complementary mounting flange brackets having said resilient member bonded between adjacent ends thereof, a second pair of mounts each comprising a stud threaded at both ends and inner and outer resilient cushions received on either end of said stud and receiving mounting flanges therebetween in isolated relation to said stud and means threadingly engaging said stud and preloading said cushions in compression whereby said stud is statically loaded in tension adjacent said cushions and in compression intermediate said inner cushions, said first pair of mounts being stiffer than said second pair of mounts.

2,864,574
ENGINE MOUNTING FOR BOATS
Cornelius W. Van Ranst, Dearborn, Mich.
Application September 9, 1955, Serial No. 533,378
6 Claims. (Cl. 248—10)



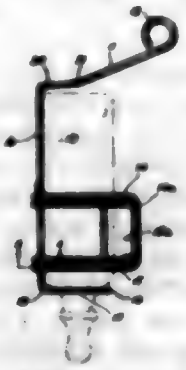
3. An engine mount comprising a bracket member including a generally vertical web portion with generally horizontally extending upper and lower end flanges, said web portion having a series of openings evenly spaced

hold said keeper means normally in position for engagement with said latch hooks and adapted to yield through

stantially rigid relation therewith for holding the end portions a substantially fixed distance apart, and fastening

in a vertical direction, a support adapted to be secured to a supporting surface and carrying attaching elements releasably inserted through one of said openings and adapted to be removed and selectively inserted into another of said openings for adjusting the vertical position of the bracket member with respect to the support in accordance with predetermined increments, a threaded member mounted in a vertical position for rotation about its axis in said upper and lower end flanges, a sleeve threadedly connected to said threaded member for vertical movement between said end flanges through a distance corresponding to the spacing between two adjacent openings of said series, a support element encircling said sleeve in radially spaced relation and having a socket in its outer wall, a resilient body operatively connected between said sleeve and said support element, a threaded pin having an enlarged head retained in said socket and adapted to be rotated about its axis, and an engine-engaging element threadedly connected to said pin for rectilinear adjustment in response to turning of said pin.

2,864,575
BOTTLE HOLDER
Francis R. Stewart, Burbank, Calif., assignor of fifty percent to Marie C. Stewart, Burbank, Calif.
Substituted for abandoned application Serial No. 652,589, March 7, 1946. This application July 24, 1956, Serial No. 599,847
4 Claims. (Cl. 248—103)



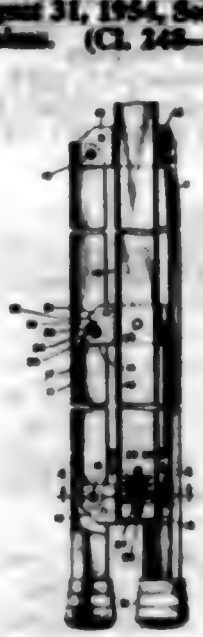
1. Holding means for a nursing bottle comprising a body portion, a pair of arms pivotally connected to said body portion on pivots always a fixed distance apart, said arms bending outwardly away from each other and adapted to hold a nursing bottle between them, the free ends of said arms being adapted to meet around said bottle with one of said ends passing behind the other, each of said arms being generally of U-form and each having spaced legs connected at their outer ends by a crossbar, the inner ends of the legs of each U-form arm being pivotally connected to said body portion, said arms following the curve of said bottle approximately to a point where said arms are adjacent, said arms being then bent outwardly from the bottle approximately equal distances to the crossbars of the respective U-form arms, the legs of one U-form arm being spaced apart a less distance than the legs of the other U-form arm so that the free end of one arm may overlap the free end of the other and one of said crossbars will lie behind and in engagement with the other of said crossbars, whereby with a bottle resting between said arms, neither arm is free to turn about its pivot but is held with its crossbar behind the crossbar of the other arm.

2,864,576
SUPPORTING DEVICE
Harold R. Breslau, Baltimore, Md.
Application March 23, 1954, Serial No. 417,998
3 Claims. (Cl. 248—166)

1. A gym set comprising a hollow tubular bar, pairs of legs connected to said bar at opposite ends thereof, each of said legs being secured to said bar by means of a single bolt extending substantially diametrically across said bar, each of said legs of each of said pairs of legs being mounted adjacent one another at spaced apart points along the length of said bar with the bolts securing the said adjacent legs being spaced apart along the length of said bar and crossing one another so that said

legs may be pivoted between a position paralleling said bar to a position in a plane generally perpendicular with respect to said bar, said legs crossing each other in spaced apart parallel planes in said last named position to permit securement of said legs to one another at said crossing point and means connecting said legs of each of said pairs of legs at said point of crossing.

2,864,577
FOLDABLE STANDARD BASE STRUCTURE
Leo J. Du Mais, Chicago, Ill., assignor to De-Lite Screen Company, Inc., Chicago, Ill., a corporation of Illinois
Application August 31, 1954, Serial No. 453,189
3 Claims. (Cl. 248—171)



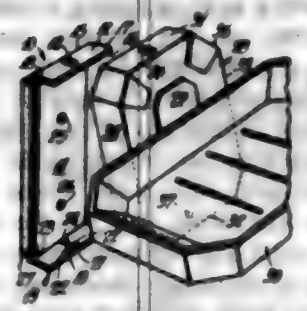
1. In a stand of the class described, a standard, an upper bracket member slidable along said standard, supporting legs for the standard pivoted on said upper bracket member to swing in radial planes between spread apart and collapsed positions, a lower bracket member slidable on said standard, coacting means on the standard and lower bracket for limiting the movement of the bracket on the standard, spreader links pivoted at their lower ends to said lower bracket member and at their upper ends to respective said legs and adapted to swing said legs outward from said standard when said upper bracket member is shifted downward along said standard and to swing said legs inward toward said standard when said upper bracket member is shifted upward along said standard, a rigid intermediate bracket member fixed on said standard having upwardly-opening latch hooks thereon individually extending radially therefrom in the paths of movement of respective legs with respect to the standard, keeper means on said legs intermediate their ends adapted to be engaged by said latch hooks when the legs are in their collapsed position, and spring means acting between said standard and said lower bracket member to urge the lower bracket downwardly on the standard to

under floor structure, a stud mounted on the handle

2,864,584

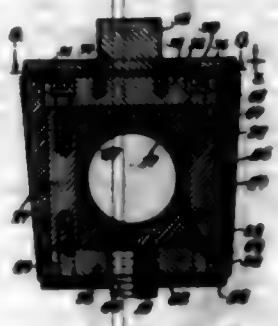
hold said keeper means normally in position for engagement with said latch hooks and adapted to yield through the relative movement of said standard and said lower bracket member to release said keeper means from said latch hooks.

2,864,578
BATHROOM FIXTURES
Bernard Margulis, New Rochelle, N. Y., assignor, by mesne assignments, to Reliable Metal Products Company, Inc., Mount Vernon, N. Y., a corporation of New York
Application April 10, 1956, Serial No. 577,371
2 Claims. (Cl. 248—223)



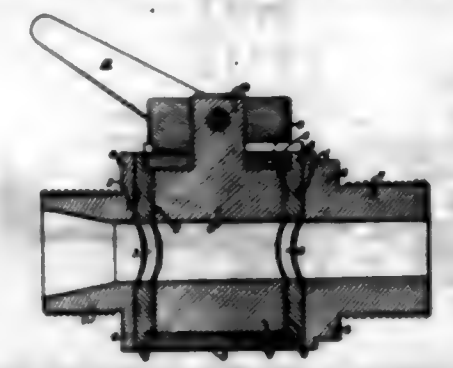
2. A bathroom fixture comprising a supporting bracket having an oblong plate provided with top and bottom flanges extending outwardly therefrom substantially at right angles thereto, said top flange having a central opening therein spaced from the free edge thereof and said bottom flange having a guide groove on its underside, said guide groove being of concave shape with the side edges converging from the free edge of said flange towards said plate and terminating short of said plate and said bottom flange also having an opening positioned just to the rear of the end of said guide groove, said groove and opening being disposed substantially on the transverse median of said bottom flange, a cover housing adapted to cover said plate, said cover housing comprising a face portion and top and bottom flanges extending from said face portion substantially at right angles thereto, said top flange having a downwardly projecting locking finger adapted to enter into said opening in the top flange of said plate, and the bottom flange of said cover housing having a semi-spherical protuberance positioned centrally of said bottom flange and adapted to move in said guide groove and fit snugly within said opening in the bottom flange of said plate.

2,864,579
NON-STICKING PLUG VALVE
Donald A. Stoltenberg, Chicago, Ill.
Application November 18, 1953, Serial No. 392,917
12 Claims. (Cl. 251—309)



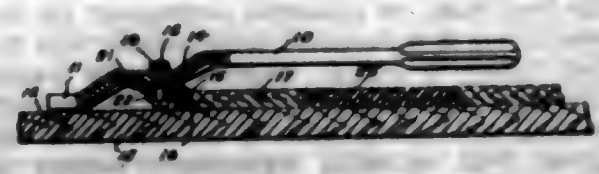
1. In a plug valve having a valve body including a valve seat, a rotatable valve plug comprising a body portion in rotary sealing engagement with said seat and formed from a lubric material having a low coefficient of friction with said seat, a pair of metal end portions disposed in axial recesses at the opposite axial ends of said body portion, elongated connecting means extending through said body portion and between said end portions in substantially rigid relation therewith for holding the end portions a substantially fixed distance apart, and fastening elements coacting with at least one of said end portions for retaining the valve plug in unitary assembled relation.

2,864,580
COCK INCLUDING A SLEEVE-SHAPED PACKING
André Alfred Arsène Edouard Lemoine, Paris, France, assignor to Auxiliaire de l'Industrie et des Mines, Saint-Etienne, France, a company of France
Application February 14, 1955, Serial No. 487,975
Claims priority, application France March 15, 1954
2 Claims. (Cl. 251—317)



1. In combination with a cock including a shell provided with a longitudinal fluid-conveying channel opening into a cylindrical recess extending transversely across said channel and a transversely bored rotary plug mounted loosely inside said transverse recess a cover engaging the inside of the transverse recess at either end thereof and covering the corresponding outer end of the rotary plug, the provision of a unitary sleeve of elastic material carried by the wall of the cylindrical recess and including a cylindrical body inserted between the plug and said wall and provided with circular ports registering with the openings of the longitudinal channel into the transverse recess, a first pair of annular beads formed in one with said body projecting clearly at least inwardly of said body along solid annular sections of the latter, surrounding the corresponding ports in the sleeve at a short distance outside the latter and adapted to be clamped with said solid sections between the rotary plug and the recess wall and a second pair of annular beads coaxial with and in one with the sleeve body at a small distance from the outer ends of said sleeve body, projecting clearly at least inwardly of said sleeve body along solid annular sections of the latter, located on opposite sides of the geometrical cylinder defined by the first two beads, and adapted to be clamped with last-mentioned solid sections of the sleeve registering therewith between the rotary plug and the recess wall and a short thinner skirt-shaped extension of the sleeve body at each end thereof, adapted to project beyond the corresponding end of the rotary plug and to be clamped between the cover at said end and the wall of the transverse recess in the shell.

2,864,581
FLOOR LAYING CLAMP
Clarence L. Harrison, Syracuse, N. Y.
Application November 12, 1954, Serial No. 468,285
4 Claims. (Cl. 254—15)



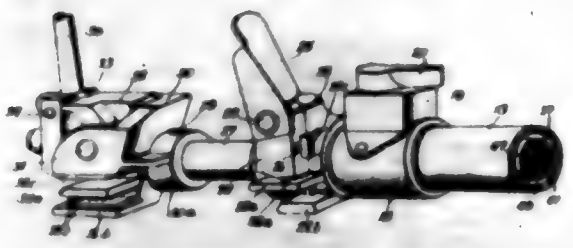
1. A floor laying clamp comprising a handle having a pivot point at one end adapted to be driven into the

cable rewind spring carried exteriorly of said housing, one

2,864,587

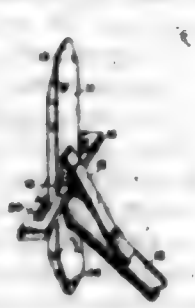
under floor structure, a stud mounted on the handle in proximity to said pivot point and extending from the handle downwardly toward the underfloor structure, a floorboard engaging jaw pivotally mounted on said stud and having movement thereon transversely of the handle, and a roller journalled on said stud and engaging said jaw.

2,864,581
FLUID PRESSURE OPERATED TOOL HAVING RELATIVELY MOVABLE GRIPPING DEVICES
Marchand B. Hall, Chicago, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Application May 14, 1953, Serial No. 354,958
6 Claims. (Cl. 254—51)



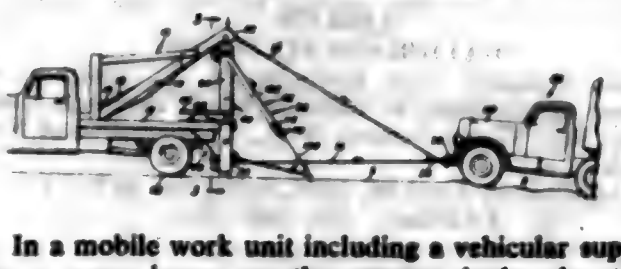
1. The combination in apparatus of the class described, of a pair of separate gripping devices, a cylinder carrying one of said devices, a piston mounted to reciprocate in said cylinder, a hollow piston rod connected to said piston and carrying the other of said devices, means for admitting compressed fluid to said cylinder on either side of said piston to effect relative linear movement of said devices toward and from each other, a second rod secured in and movable with said piston rod, and means carried by said cylinder for engaging said second named rod and preventing rotation of said cylinder about said second named rod.

2,864,583
WRECKING AND STRIPPING BAR
Calvin J. Bremler, Salem, Oreg.
Application August 8, 1955, Serial No. 527,851
1 Claim. (Cl. 254—131)



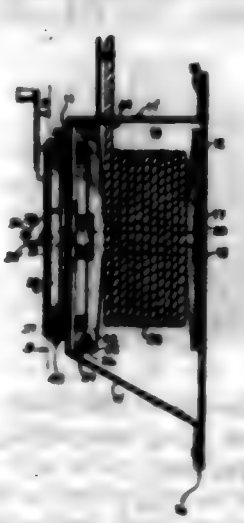
A wrecking and stripping bar comprising a flat foot plate having parallel upper and lower surfaces and parallel side edges, a sharpened edge formed on one end of said foot plate, an extension integrally formed on the end of said foot plate opposite said sharpened edge, said extension being angularly offset upwardly from said foot plate and having the side edges thereof outwardly converging, a sharpened edge formed on the end of said extension opposite said foot plate, an elongated rectangular flat fulcrum plate having a rectangular cross-section, said fulcrum plate having a central longitudinal slot formed therein encompassing said foot plate medially of its ends, means securing said fulcrum plate to said foot plate with said fulcrum plate extending transversely beyond the side edges of said foot plate, and a handle secured to said foot plate adjacent said fulcrum plate and extending at an angle thereto.

2,864,584
VEHICULAR SUPPORT-BODY STABILIZING ASSEMBLY
Cecil W. Gearard, Grand Forks, N. Dak.
Application March 16, 1956, Serial No. 572,151
3 Claims. (Cl. 254—139.1)



1. In a mobile work unit including a vehicular support body, a crane boom on the support body, the crane boom including an elevated terminal end portion, a winch assembly on said support body, a flexible force-transmitting cable operatively connected at one end to the winch assembly and including an intermediate portion journalled over the terminal end of the crane boom, a hook element secured at the other end of the force-transmitting cable; and a vehicular support body stabilizing assembly comprising a vertically extending support frame fixed on the support body disposed beneath the terminal end of the boom, an anchoring leg member reciprocably supported on the support frame for lifting and gravitating downwardly and including a lower end portion penetrable into a support surface by gravitation of the leg member, a brace assembly pivotally connected at an upper end portion of the support frame, the brace assembly including a lower end portion engageable with the support surface in spaced relationship from the lower end portion of the anchoring leg member, the anchoring leg member including a lower connecting portion engageable with the hook element on the force-transmitting cable for providing an anchor for the cable when it is journalled through a block and tackle assembly connected to material or a vehicle being moved by the work unit, said support body stabilizing assembly including a releasable latch assembly carried on an upper edge portion of the anchoring leg member, said latch assembly engageable with the hook element on the force transmitting cable whereby the anchoring leg member may be lifted, and means for automatically releasing the latch assembly in response to lifting of the leg member.

2,864,585
AUTOMATIC CABLE REWIND FOR A SAFETY DEVICE
Robert C. Gschwind, Chicago, Ill.
Application April 6, 1955, Serial No. 499,729
1 Claim. (Cl. 254—152)

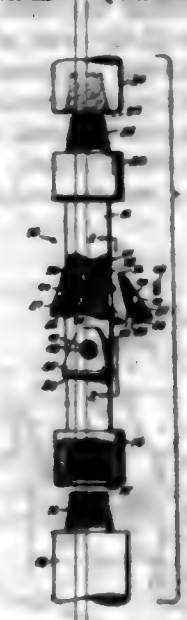


An automatic cable rewind for a safety device comprising a housing for said cable, a rotatable shaft journalled in said housing carrying a cable pulley member, a

substantially in counterflow over said surfaces, the hot fluid first encountering the surface of higher film coeffi- compartment, an air conditioning apparatus comprising:

cable rewind spring carried exteriorly of said housing, one end of said shaft projecting out of said housing and having means providing operative connection to said spring, a cover for said spring loosely carried by said one end of said shaft, with said shaft being freely rotatable within said cover, said spring coiled about said shaft under said cover and having operative connection to said cover, said coils of said spring increasing in tension by continuous rotation of said shaft in one direction, said cover rotatable in said one direction of said shaft when said coils attain a predetermined tension, means for controlling the rotation of said cover, and means for adjusting said controlling means.

2,864,586
CABLE TYPE STRAIGHT HOLE DEVICE
Leon C. Becker, Philadelphia, Pa.
Application July 1, 1957, Serial No. 669,968
4 Claims. (Cl. 255—28)



1. A cable type straight hole drill device comprising, in combination, a shank having a threaded lower end for engagement with the upper end of a drill bit and a threaded upper end for attachment to the lower end of a drill stem, said shank intermediate said lower and upper ends including a straight circular cylindrical main body portion, a plurality of segmental spheroidal lugs, a plurality of sets of vertically spaced diametrically opposite recesses in said main body portion, each said set of recesses being angularly spaced about the longitudinal axis of said main body portion, and each one of said lugs being detachably supported within each one of said recesses, each said lug including a segmental spheroidal front wall and a substantially flat back wall, each said recess being partly defined by a correspondingly shaped flat bottom wall for flat face engagement with said flat back wall of said lug, each said lug further comprising a longitudinal rib projecting outwardly from said back wall, each said rib having flat upper and lower surfaces extending normal to the longitudinal axis of said lug, said main body portion further including a counter-recess for receiving said rib of said respective lug, whereby longitudinal forces acting in either longitudinal direction upon said lug is transmitted directly to said main body portion through said rib, each said lug further comprising a discrete tab extending outwardly from the center of the upper flat surface of said rib coextensive with said rib and offset rearwardly from said wall of said lug, and said main body portion further comprising a longitudinally upwardly extending undercut of substantially identical size and shape as said tab in communication with the upper extremity of each said counter-recess for receiving said respective tab of said lug.

2,864,587
CLEANING THE GAS-SWEPT HEATING SURFACES OF HEAT EXCHANGERS
Bror Olof Broman, Stora Essingen, Sweden, assignor to Aktiebolaget A. Ekstroms Mekaniska Fabrik, Stockholm, Sweden
Application April 30, 1954, Serial No. 426,797
Claims priority, application Sweden May 15, 1953
6 Claims. (Cl. 257—1)

1. In heat interchange apparatus of the type including wall means defining a casing, an upper gas inlet, heat exchange surfaces within the casing, a lower gas outlet below the surfaces and directed laterally of the wall means, means for introducing shot pellets within the casing above the heat exchange surfaces so that for cleaning such surfaces the pellets cascade through the apparatus and ricochet and impact against such surfaces to remove dust and deposits therefrom, a pellet collecting pocket below the gas outlet, conduit means communicating with and constituting an extension of the gas outlet, a by-pass conduit means including an inlet communicating with said first-mentioned conduit means downstream of such gas outlet, and an outlet communicating with said pocket whereby a portion of the gas flowing through the outlet can pass through said by-pass conduit means for introduction into the pocket to flow upwardly therethrough counter-current to the descending flow of pellets and any material, ash or dust accompanying the same whereby the ascending introduced portion of the gas separates material, ash or dust from the pellets and conveys the separated materials into the gas stream leaving the gas outlet.

2,864,588
HEAT TRANSFER METHOD
Harry T. Booth, Frank E. Carroll, Jr., and Kenneth O. Parker, Dayton, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Application March 25, 1955, Serial No. 496,815
2 Claims. (Cl. 257—1)

1. A method of obtaining maximum heat transfer efficiency without congealing in the bringing into heat exchange relation of a hot fluid which is congealable and a cold fluid which is initially at a temperature lower than the congealing temperature of the hot fluid, including the steps of providing dual heat transfer surfaces having respectively different heat transfer film coefficients, arranging said surfaces in series relation, and putting the fluids

2,864,591
CORRUGATED TUBING

and downwardly converging portion at the lower end

an angle thereto.

nalled in said housing carrying a cable pulley member, a

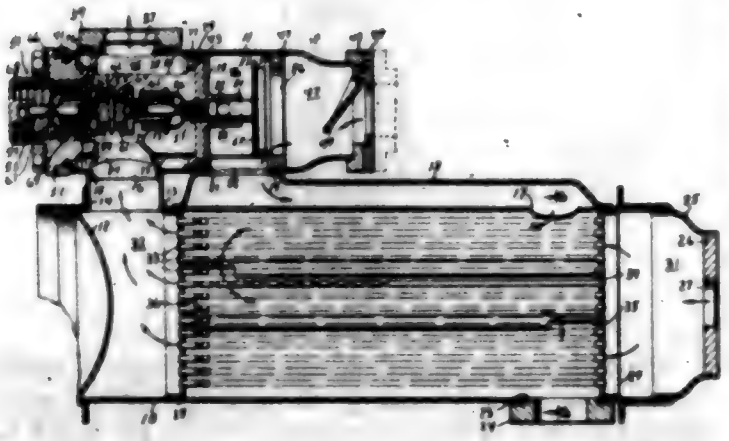
substantially in counterflow over said surfaces, the hot fluid first encountering the surface of higher film coefficient and flowing to the surface of lower film coefficient, and the cold fluid first encountering the surface of lower film coefficient and flowing to the surface of higher film coefficient.

2,864,589

HEAT TRANSFER DEVICE

Harry T. Booth, Frank E. Carroll, Jr., and Kenneth O. Parker, Dayton, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio

Application June 14, 1955, Serial No. 515,314
2 Claims. (Cl. 257—2)



1. A light weight valve and heat exchanger combination, including an open ended sheet metal heat exchanger casing, an open ended sheet metal valve casing in parallel adjacent relation to said heat exchanger casing, a pair of hollow sheet metal devices interconnecting said casings and providing communication between the interiors thereof, said casings and said devices being joined together in a unitary assembly, closures for the ends of said casings, one closure in each of said casings being open for flow of respectively different fluids therethrough, tube sheets installed in said heat exchanger casing on opposite sides of one of said pair of devices, the other said device being located between the other one of said closures and an adjacent one of said tube sheets, tubes supported between said tube sheets to conduct a first fluid from said one closure of said heat exchanger casing to said other device, partition means in said valve casing between the said one closure thereof and said one device and other partition means in said valve casing between said devices, an outlet for said first fluid from said valve casing communicating with the space between said other partition means and the other end closure in said valve casing, a passage through said partition means to conduct a second fluid from the said one end closure of said valve casing to said one device and thence to the interior of said heat exchanger casing between said tube sheets, a valve controlling the rate of flow through said passage, means responding to a changing condition of said first fluid to position said valve, and an outlet for said second fluid from the interior of said heat exchanger casing.

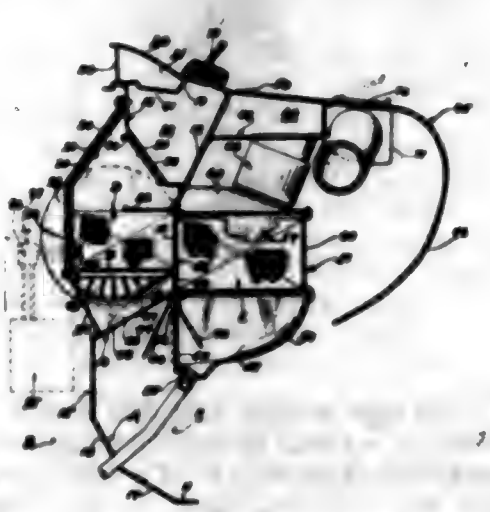
2,864,590

AIR CONDITIONING APPARATUS FOR AUTOMOTIVE VEHICLE

Meade F. Moore, Birmingham, Mich., assignor to American Motors Corporation, Kenosha, Wis., a corporation of Maryland

Application December 7, 1956, Serial No. 627,869
6 Claims. (Cl. 257—7)

1. In an air conditioning system for an automotive vehicle having an engine compartment and a passenger compartment, an air conditioning apparatus comprising: a primary panel separating the engine compartment from the passenger compartment; a heat radiating device mounted at the panel on the engine compartment side thereof; means for activating the heating device for heating the surrounding air; a housing structure surrounding the heat radiating device; said panel having a first opening therein beneath the heat radiating device for establishing communication between the interior of the housing and the passenger compartment; said housing having an opening therein above the heat radiating device for establishing communication between the interior of the housing and atmosphere; a cooling device mounted at the panel on the passenger compartment side thereof; means for activating the cooling device for cooling the surrounding air; a second housing structure surrounding the cooling device and having an opening therein for establishing communication between the interior of the second housing structure and the passenger compartment; a blower mounted within the first housing structure at one end thereof beyond the end of the heating device; said primary panel having a second opening therein for establishing communication between the first housing structure and the second housing structure; means for selectively activating the blower; said second housing structure having an air reception chamber exposed to the



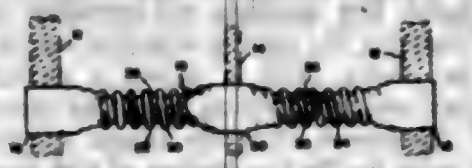
second panel opening and located at one end of and beyond the cooling device; an air transfer duct positioned beneath the cooling device and in communication with the air reception chamber; said latter duct having an opening for establishing communication between the interior thereof and the interior of the passenger compartment; a second air transfer duct positioned above the cooling device and having an opening for establishing communication between the interior of said duct and the interior of the passenger compartment; means for selectively closing off said last opening; means for selectively closing off the opening in the first mentioned air transfer duct; means for selectively closing off the first panel opening; a first air route including the first housing opening, the heating device, the first panel opening and the passenger compartment, when the means for closing off the first panel opening is opened; a second air route including the first housing opening, the heating device, the blower, the second panel opening, the air reception chamber and the first air transfer duct, when the means for closing said duct is open; a third air route including the first housing opening, the heating device, the blower, the second panel opening, the air reception chamber, the second air transfer duct, the opening in said second transfer duct and the passenger compartment, when the means for closing off the opening in the second aid transfer duct, is open.

2,864,595

APPARATUS FOR FREEZING PRODUCTS

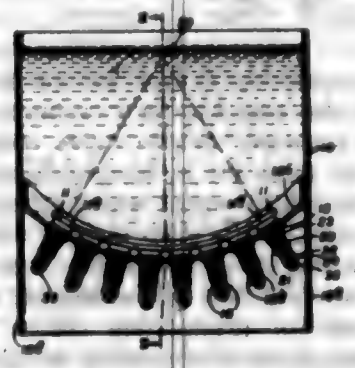
open position when the engine starts to run under its own

2,864,591
CORRUGATED TUBING
Russell M. Frink, Bloomfield Hills, Mich., assignor to Calumet & Hecla, Inc., Calumet, Mich., a corporation of Michigan
Application July 2, 1956, Serial No. 595,343
3 Claims. (Cl. 257—261.3)



1. A heat exchange tube adapted to carry a fluid, said tube having longitudinally spaced cylindrical portions and an intermediate portion, said intermediate portion being corrugated throughout its circumference to provide the same with an undulating configuration in longitudinal section in which the undulations are smooth and free of abrupt and sharp changes in direction, the maximum inside cross-sectional area of said intermediate portion being less than the minimum inside cross-sectional area of each of said spaced portions to increase the velocity of and the wiping action on fluid moving through said intermediate portion, thereby increasing the turbulence of the fluid moving through said heat exchange tube and affording more effective heat exchange, the ends of said intermediate portion flaring radially outwardly and blending into said cylindrical portions and the undulations at said flared ends gradually flattening out and likewise blending into said cylindrical portions.

2,864,592
LIQUID-VIBRATING APPARATUS
Leon W. Camp, Glendale, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware
Application March 7, 1955, Serial No. 492,483
11 Claims. (Cl. 259—1)



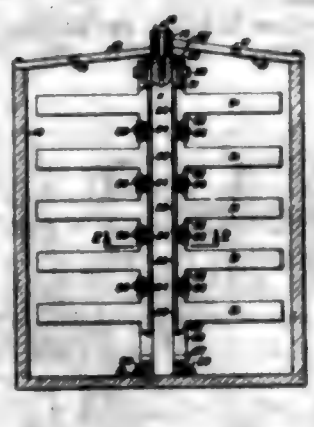
1. Apparatus of the type described comprising: a wall constituting a liquid barrier and having an orifice element defining a cylindrical passage through said wall; an integral vibrator comprising a front liquid-vibrating head positioned on the liquid side of said wall, a rear electromechanically responsive driver positioned on the other side of said wall, and a piston element joining said head and driver and positioned within said orifice element in supported and sealing relation therewith; said driver being of smaller lateral dimensions than said piston element whereby said vibrator can be installed and removed by sliding it into and out of said orifice element from the said liquid side of said wall.

2,864,593
MIXER FOR FEED AND THE LIKE
John M. Sharp, Kent, Ohio
Application January 6, 1958, Serial No. 707,336
13 Claims. (Cl. 259—97)

1. In a mixer having a housing for containing comminuted material to be mixed and having an inwardly and downwardly converging portion at the lower end of said housing and having a rotatable spiral flight conveyor extending vertically substantially through the central zone of said housing and having a cylindrical shroud closely embracing a portion of said conveyor and stopping short of both the top and bottom of said housing,

said flight conveyor rotatable to carry material upwardly; the combination therewith of means for continuously exerting a downward pressure on material in said converging portion of said housing outside the periphery of said conveyor flights and below said shroud.

2,864,594
MIXING DEVICE
Thomas W. Martinek, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Application December 7, 1953, Serial No. 396,497
12 Claims. (Cl. 259—105)

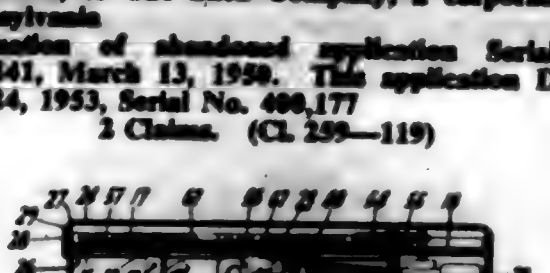


1. A mixing device comprising a vessel to hold materials to be mixed, a fixed shaft within said vessel, a series of two or more spaced agitator blades mounted on hubs encircling said shaft, bearing means between said hubs and said shaft, said hubs having opposed spaced spring-loaded gear surfaces, a series of non-rotatable slideable collars between said spaced hubs on said shaft, said collars carrying floating gears rotatably mounted on an axle perpendicular to said shaft and meshing with said geared surfaces on said hubs to form a floating gear train therebetween, so that rotation of one hub and blade causes the next succeeding hub and blade to rotate in the opposite direction, said springs in said spring-loaded gear surfaces being of different compression strength along said floating gear train, and means for compressing said bearings and hubs together against said springs to increase the shear between said agitator blades.

air comprising a housing structure having at one end an entrance for said medium and at the other end an exit for

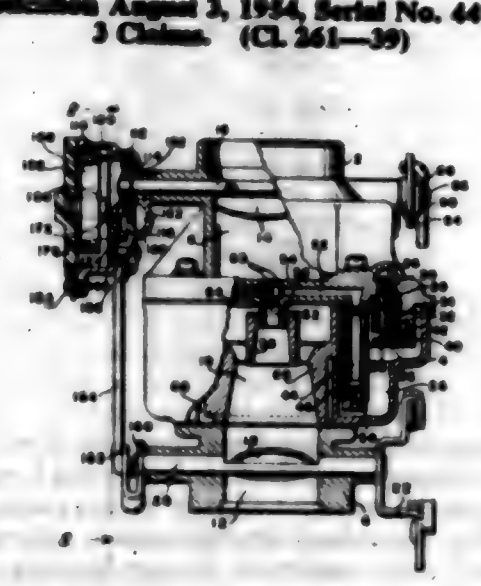
bearing members for rotatably supporting the boring tool, said tubular member forming a conveyor and being rigid-

2,864,595
APPARATUS FOR FREEZING DESSERTS
Lester N. Yoho, Havertown, Pa., assignor, by mesne assignments, to The Silex Company, a corporation of Pennsylvania
Continuation of abandoned application Serial No. 149,341, March 13, 1950. This application December 24, 1953, Serial No. 400,177
2 Claims. (Cl. 259—119)



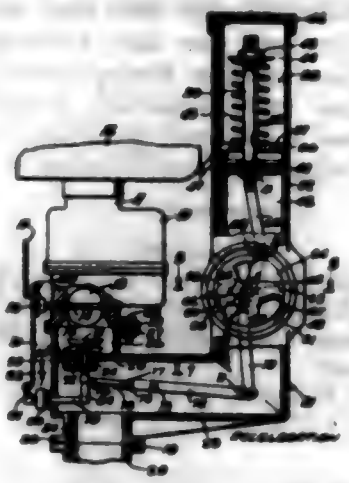
1. In a freezer of the character described, the combination on an elongated tray provided with an upwardly opening chamber, an elongated, relatively flat lid body provided with a major portion overlying and closing said chamber, and a minor portion extending above and beyond one end of said tray, said minor portion provided with an opening, rotatable agitators disposed in said chamber and carried by said lid body, a motor including an upwardly projecting drive shaft and a housing for the motor detachably connected to said lid body beneath said minor portion thereof and with said drive shaft extending through and above said opening therein, and motion transmitting means carried by said lid body, disposed mainly above the upper face thereof, and operatively and detachably connected with said motor and agitators for imparting motion of the former to the latter, said motion transmitting means including a train of engaging wheels one of which is spring biased in frictional engagement with said drive shaft.

2,864,596
CARBURETOR
Lawrence C. Dermond, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 3, 1954, Serial No. 447,495
3 Claims. (Cl. 261—39)



1. In a charge forming device for an internal combustion engine having a constant level fuel supply chamber, an intake passage having fuel and air inlets and a mixture outlet for supplying a combustible mixture to said engine, a throttle valve for controlling the flow of said mixture and a choke valve for controlling the admission of air through said inlet; mechanism for automatically controlling the operation of said choke valve comprising thermally responsive means operable to hold the valve closed at low temperatures, means operable by engine suction and effective to move the valve toward open position when the engine starts to run under its own power, a resilient operating connection separate from and independent of the thermostat between said suction operating means of the choke valve, means for rendering said suction operated means substantially ineffective when the choke valve is opened to the position it normally occupies when the engine first becomes self-operative, a second means for rendering the suction operated means ineffective when the choke valve is moved a predetermined distance beyond said first position, means for progressively heating the thermostat after the engine becomes self-operative in order to effect movement of said choke valve toward open position when said suction operated means is ineffective, and means for materially increasing the rate at which said thermostat is heated after the choke valve moves toward open position beyond the position it occupies when said second means becomes effective.

2,864,597
FUEL CARBURETING SYSTEM
Michael A. Arpaia, Glendale, Calif.
Application February 28, 1956, Serial No. 568,137
25 Claims. (Cl. 261—47)



1. In a fuel carbureting system for an internal combustion engine of the type having a carburetor provided with a manually actuated throttle valve controlling the flow of fuel and air from the carburetor to an engine intake manifold, that improvement which comprises a fuel cut-off valve in series with said throttle valve on the downstream side of the latter movable to a position positively cutting off all fuel flow to the engine, spring actuated linkage means for urging said cut-off valve to a fully open position, pressure-responsive means operatively connected to said linkage means having one side in communication with the atmosphere and the other in communication with said engine intake manifold and operable to close said cut-off valve in opposition to said spring to discontinue all fuel flow in response to a predetermined sub-atmospheric pressure in the manifold indicative of engine deceleration, and spring means operable to open said cut-off valve sufficiently to admit idling fuel requirements as the manifold pressure rises slightly above said predetermined pressure to indicate the approaching termination of a period of engine deceleration.

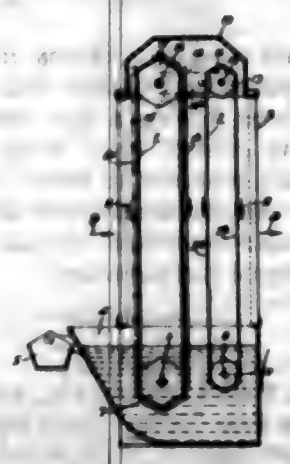
2,864,598
FILTER FOR CLEANSING OF A DUST-CONTAMINATED GASEOUS MEDIUM
Åke Arbergh, Jonkoping, Sweden, assignor to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden
Application March 1, 1956, Serial No. 571,463
Claims priority, application Sweden March 3, 1954
1 Claim. (Cl. 261—88)

A filter for cleansing dust-contaminated gaseous medium by oil and removing the oil entrained in the cleansed

rigidly connected to the forward end of the shaft for cutting into a body of material to be mined and removing material from said body to form a bore in

carried at one side of said casing and comprising a scale and a pointer movable relative to said scale, a pointer shaft carrying said pointer, a pinion fixed on said pointer

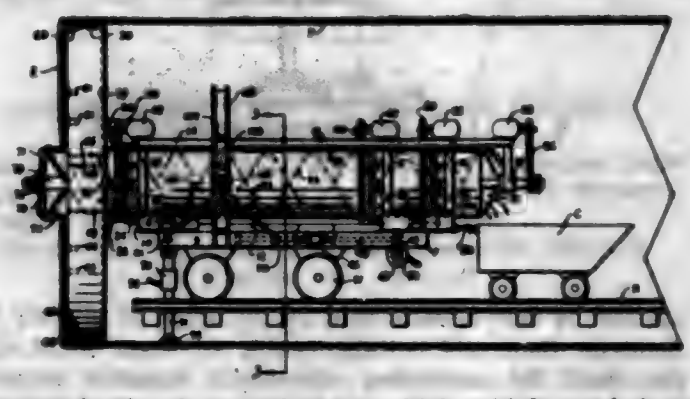
air comprising a housing structure having at one end an entrance for said medium and at the other end an exit for said medium, a hood mounted on the upper portion of said housing structure, an oil trough in the lower portion of said housing structure, a first pair of vertically aligned upper and lower sprocket wheels mounted adjacent the entrance end of said housing structure, a second pair of vertically aligned upper and lower sprocket wheels spaced from said first pair and mounted adjacent the exit end of said housing structure, the upper sprocket wheels being disposed in said hood above the path of movement of said medium and the lower sprocket wheels being submerged in said trough below the path of movement of said medium, said first upper sprocket wheel being of larger diameter than said second upper sprocket wheel, common drive means for said upper sprocket wheels driving them at the same angular velocity and in opposite directions, a first band for cleansing the medium trained about said first pair of sprocket wheels and consisting of a plurality of pivotally interconnected elements containing



filtering bodies of expanded metal, a second band for both cleansing the medium and removing oil drops entrained in the medium, trained about said second pair of sprocket wheels and consisting of a single continuous fine-mesh wire screen, the drive means advancing the bands through said trough to oil the runs thereof for collecting the contaminations from the medium, the drive means driving the runs having expanded metal filtering bodies to move downwardly into the oil trough adjacent the entrance end of the housing to discharge into the oil trough the major portion of said collected contaminations, the drive means thereby also driving the run of fine-mesh wire screen adjacent the exit end of the housing to move downwardly into the oil trough, whereby said run is drier than the previous runs and collects oil drops from the medium discharged from the housing, the difference in sprocket diameter causing the last of the filter bands to run at a lower speed than the first filter band to reduce the oiling of said last band relative to the oiling of the first band.

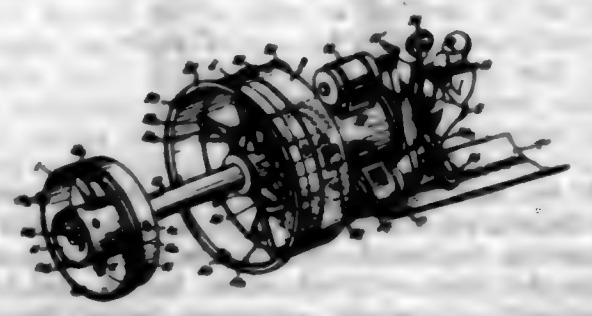
2,864,599
TUNNEL BORING MACHINE HAVING OPPOSITELY ROTATING HEADS
John G. Mazuzi, Independence, Ohio
Application January 23, 1952, Serial No. 267,850
1 Claim. (Cl. 262—7)

The combination of a tunnel-face cutting head comprising a circular frame plate having a cylindrical forwardly extending flange member at its periphery, baffle plate members rigid with said circular frame plate and said cylindrical flange, and sloping inwardly and terminating near the center of the head, the head plate having a central opening, an auger-like boring tool projecting through said opening and having radial tooth carrying elements at the cutting face and having rearwardly extending spiral vanes, a tubular member surrounding the boring tool, bearing members for rotatably supporting the boring tool, said tubular member forming a conveyor and being rigidly connected with and supporting the cutting head, means for driving the tubular member to rotate it and the cutting head in one direction, independent means for rotating the auger-like boring tool and its vanes in an opposite direction, a rigid frame having longitudinally spaced bearings for rotatably supporting said tubular member adjacent to



the cutting head, a carriage on which said frame is longitudinally movably mounted, means for securely anchoring said carriage within the tunnel being cut, and means for moving the frame and tubular member and cutting head with relation to the carriage, said independent means for rotating the auger-like boring tool comprising a motor mounted on said frame and a driving connection from said motor to the auger-like boring tool.

2,864,600
MINING MACHINE
Max B. Kirkpatrick, Anchorage, Territory of Alaska
Application August 8, 1955, Serial No. 527,898
28 Claims. (Cl. 262—7)



22. A mining machine comprising two coaxial annular cutters, of greater and lesser diameters, respectively, a non-rotative shell supporting said greater diameter cutter for rotation, means supporting the lesser diameter cutter for rotation, said shell being of slightly smaller diameter than and located rearwardly of its associated cutter, means for rotating said cutters independently or conjointly, at will, in opposite rotative senses at like peripheral speeds, means carried by said shell and the greater diameter cutter and radially extensible into anchoring engagement with the bore wall, and contractible from such engagement, means reacting between the two cutters for advancing either cutter axially while the other cutter is anchored by its extensible means, and traction means engageable with the bore wall for advancing the machine as a whole during conjoint counterrotation of the cutters.

2,864,601
AUGER BORING HEAD WITH NON-ROTATING BARREL
Vincent J. McCarthy, Youngstown, and George L. Adams, Salem, Ohio, assignors to The Salem Tool Company, Salem, Ohio, a corporation of Ohio
Application August 6, 1956, Serial No. 602,357
4 Claims. (Cl. 262—26)

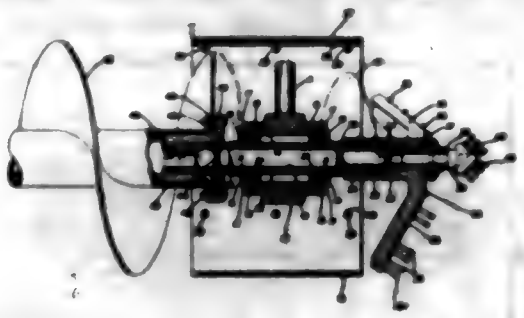
1. A rotatable and advanceable auger boring head structure comprising a rotatable shaft, cutting means

2,864,605
AUTOMATIC RANGE CHANGER WITH WEIGHT

transverse to the hanger bar, whereby, should the weights swing after they are hung on the bar, slightly different

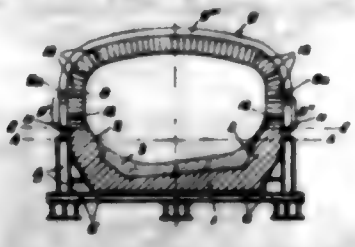
engine suction and effective to move the valve toward um by oil and removing the oil entrained in the cleaned

rigidly connected to the forward end of the shaft for cutting into a body of material to be mined and removing material from said body to form a bore in said body, a hub journalled upon said shaft and freely rotatable in either direction relative to the shaft, a maximum of two radial spokes upon said hub, a barrel



carried by said spokes, said barrel being of slightly less diameter than said cutting means, an auger flight upon the shaft for conveying rearwardly material removed by said cutting means, and longitudinal substantially V-shape runners upon said barrel for engaging in the bore in said body of material and preventing rotation of said barrel.

2,864,602
REVERBERATORY FURNACE
Franz Barta, Zurich, and Alfred Sieczeck, Kusnacht, near Zurich, Switzerland, assignors to Maerz Industrie-Ofenbau A. G., Zurich, Switzerland
Application December 17, 1954, Serial No. 484,544
Claims priority, application Austria December 17, 1953
4 Claims. (Cl. 263—46)



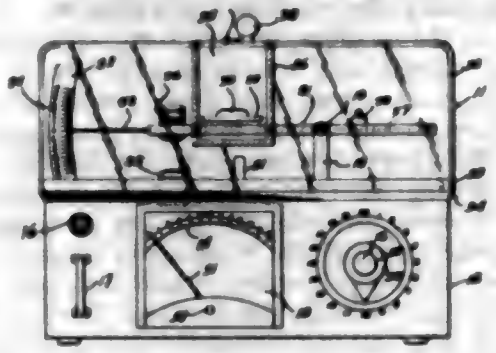
1. An open hearth furnace comprising a refractory hearth adapted to contain a bath, a rigid metallic trough supporting the hearth extending beneath the hearth and along the front and back of the hearth, and including front and back metallic abutments running horizontally along the front and back of the furnace above the level of the top of the hearth, and arch of brick, said arch having vertical legs extending up from the hearth at the front and back and said arch thence extending across the top of the furnace chamber, an arch-shaped metallic frame conforming to the shape of and adjacent the outside of the arch of brick and having vertical legs, said arch-shaped frame being coextensive with said arch of brick from the top of said hearth and the legs of said frame being supported respectively on the front and back abutments, and suspension means supporting brick at spaced intervals in each of said vertical legs of the arch of brick to the vertical legs of said frame.

2,864,603
DEVICE FOR INDICATING AND RECORDING THE DISTANCE AND SPEED OF TRAVEL OF MOTOR VEHICLES
Alfons Bauer, Graz, Steiermark, Austria
Application June 28, 1956, Serial No. 518,587
Claims priority, application Austria July 8, 1954
3 Claims. (Cl. 264—1)

1. In a device for indicating the speed of travel of motor vehicles: a casing having two spaced parallel plate bars formed with bores, a pendulum governor rotatably carried in said bores, a transmission for connecting said governor to a road wheel of a vehicle, a speed indicator carried at one side of said casing and comprising a scale and a pointer movable relative to said scale, a pointer shaft carrying said pointer, a pinion fixed on said pointer shaft, a toothed segment rotatably connected to one of said plate bars and in mesh with said pinion, a control pin carried by said toothed segment eccentrically with respect to the axis of rotation of said segment and ex-

tending from said segment, a spring arranged to urge said control pin, segment, and pointer into an initial position, and a control lever having a pin slidably engaging said control pin, said control lever being connected to and responsive to said governor to move said control pin and toothed segment against the force of said spring to cause a substantially linear deflection of said pointer in dependence on the swing of said governor.

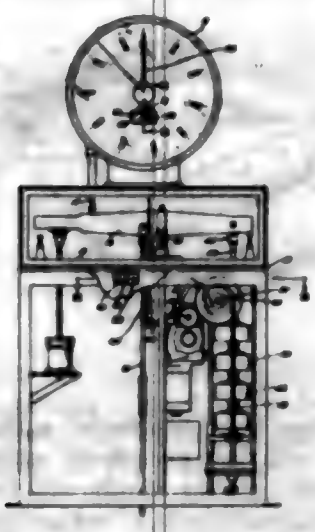
2,864,604
ELECTRO-MAGNETIC BALANCE
Bryce Fair Cirlin, Miami Beach, Fla.
Application April 8, 1955, Serial No. 500,123
1 Claim. (Cl. 265—27)



In an electrical weighing apparatus, a support, a first electro-magnet mounted on said support, a substantially flat armature of non-conductive material, a pair of upstanding posts on said support, conductive means on said posts pivotally engaging opposite edge portions of said armature and pivotally supporting said armature in a position overlying said first electro-magnet, a second electro-magnet mounted on said armature, means electrically connecting said second electro-magnet through said conductive means in parallel with and opposing said first electro-magnet, a pointer rigidly secured to and projecting horizontally from an end portion of said armature, an upstanding calibrated zero adjustment scale rigidly mounted on said support adjacent said pointer, a rheostat, an ammeter calibrated in weight units, a source of current, circuit means connecting said rheostat, ammeter, said parallel-connected electro-magnets, and source of current in series, whereby the current required to energize said electro-magnets sufficiently to support a weight on the armatuer and to elevate said pointer to a predetermined point on said scale will provide a reading on said ammeter in weight units, said armature being formed with a longitudinal recess opposite said second electro-magnet, and a sensitivity adjusting weight slidably engaged in said recess.

load receiver supporting frame, means for extending said recording medium, said drive means being in cooperable

2,864,605
AUTOMATIC RANGE CHANGER WITH WEIGHT PICK-UP
Matthew T. Thurmon, Rock Island, Ill., and John A. Roberts, Davenport, Iowa, assignors to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Application September 29, 1954, Serial No. 459,818
14 Claims. (Cl. 265—48)

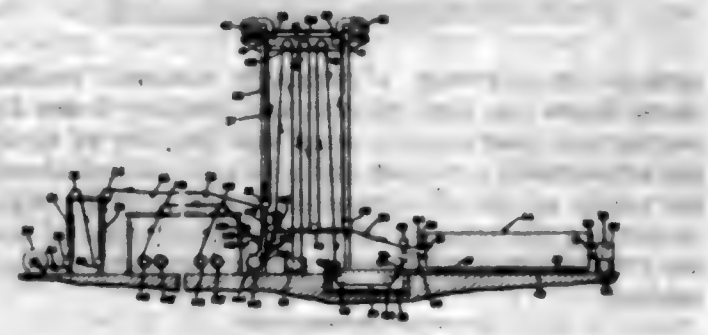


1. In a scale including a frame and a weigh beam fulcrumed thereon, an associated apparatus for increasing the weighing capacity of the scale, including a vertically movable carrier, unit weights carried by said carrier, drive means adapted to raise and lower said carrier, whereby, to transfer said unit weights to and from the weigh beam, a reversible motor mounted on said frame, a Geneva mechanism connecting said motor and said drive means for operating said drive means intermittently during motor operation.

2,864,606
HANGER SHAFT FOR UNIT WEIGHTS
Robert O. Bradley and Clayton H. Maurice, Jr., assignors, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application April 13, 1954, Serial No. 422,832
5 Claims. (Cl. 265—60)

1. In a weighing scale having an automatic load counterbalancing system and manually applied weights for increasing the load offsetting capacity, in combination, a hanger bar supported from the lever system of the scale, the hanger bar having annular grooved portions about the longitudinal axis of the bar, there being one grooved portion for each of the manually applied weights, and a hooked portion on each of the weights adapted to engage an annular groove of the hanger bar, at least one of the interengaging portions being relieved to provide spaced apart points of contact between the portions in a plane transverse to the hanger bar, whereby, should the weights swing after they are hung on the bar, slightly different seats will be selected on said contact points on each swing so that the hooked portions will be directed toward one side or the other of the grooved portions to slide down the sides of the grooved portions with a grinding action accompanied by heavy friction to reduce the period of swing on the weights.

2,864,607
APPARATUS FOR MAKING HIGH TENSILE STRAPPING
Robert F. Roukin, Sharon, Pa., assignor to Sharon Steel Corporation, Sharon, Pa., a corporation of Pennsylvania
Application September 26, 1957, Serial No. 686,312
21 Claims. (Cl. 266—3)



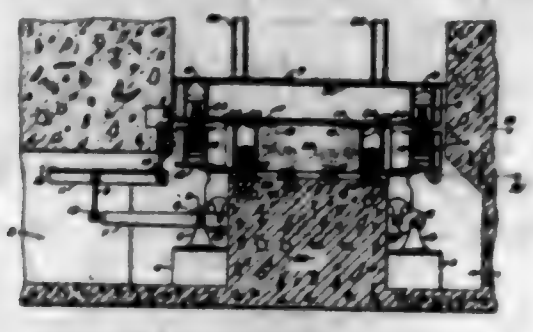
1. Apparatus for producing high tensile steel strapping of desired gauge and width, comprising a pay-off reel having a coil of cold rolled steel strip of desired gauge and width thereon, a normalizing furnace, means for maintaining a temperature of 1600° F. to 1800° F. in said furnace, upper and lower muffle tubes located longitudinally through the furnace, a return roll housing connected to said muffle tubes at one end of the furnace, means for maintaining a controlled atmosphere in said muffle tubes and roll housings, a lead bath roll housing connected to the other end of the lower muffle tube and having a roll therein, a lead pot adjacent said lead bath roll housing and having a molten lead bath therein, means for maintaining said lead bath at 900° F. to 1100° F., a cooling tower above and beyond the lead pot, upper and lower strip conveying rolls in the cooling tower, a paint tank below the cooling tower and having a roll submerged below the paint level therein, a bridle stand below and beyond the cooling tower, said bridle stand comprising a drive roll and a cooperating driven roll for withdrawing the cold rolled strip from the payoff reel and pulling the strip through the upper muffle tube in the furnace, around the return roll and in reverse direction through the lower muffle tube, over the roll in the lead bath roll housing, through the lead bath, over the upper and lower conveyor rolls in the cooling tower to cool the strip, then under the roll in the paint tank to coat the strip with paint, then up into the cooling tower to dry the paint coating on the strip, and then out of the cooling tower and reversely around the rolls of the bridle stand, and a driven coiler beyond the bridle stand for coiling the painted strip.

2,864,608
SHOCK ABSORBING PLATFORM FOR WEIGHING SCALES
George C. Reber, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application February 5, 1954, Serial No. 406,363
8 Claims. (Cl. 265—71)

1. In a weighing scale, in combination, weighing mechanism, a load receiver supporting frame carried by said weighing mechanism, a load receiver, a plurality of springs interposed between said load receiver and said

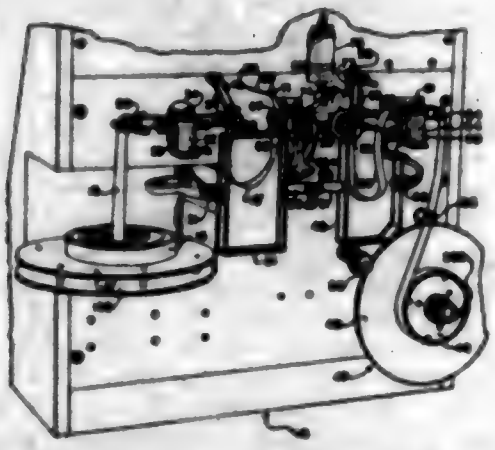
2,864,612
ing from said fuselage, a propeller shaft extending for-

load receiver supporting frame, means for preloading said plurality of springs so as to render them active only when a force greater than the capacity of the weighing scale is applied to the load receiver, a first rebound absorbing means operatively connecting said load receiver and said load receiver supporting frame to dampen the rebound of the load receiver when said plurality of



springs are activated, a resiliently mounted auxiliary frame below said load receiver, said auxiliary frame supporting said load receiver when said plurality of springs are substantially activated, and a second rebound absorbing means operatively connected to said auxiliary frame to dampen the rebound of the resiliently mounted auxiliary frame when said auxiliary frame supports said load receiver.

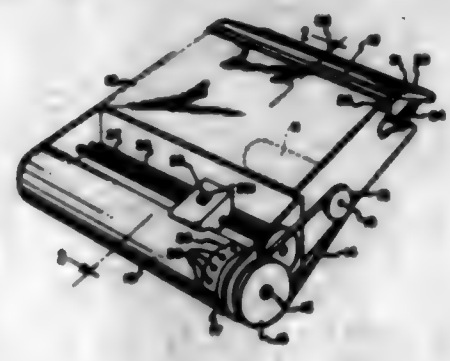
2,864,609
TAPE-FEEDING MEANS FOR RECORD TAPE
Coburn B. Trimble, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Application September 30, 1954, Serial No. 459,476
33 Claims. (Cl. 271—2.6)



1. Tape-feeding apparatus for determining movement of a record tape relative to a reading station comprising, in combination, means for supplying the record tape, frictional driving means for normally engaging and drawing tape from the supplying means and moving it relative to the reading station, a brake normally slidably engaging the tape and adapted to grip the tape and overcome the frictional driving engagement, and an actuating means under the control of the reading station to cause the brake to grip the tape and arrest the motion thereof in response to information read from the tape.

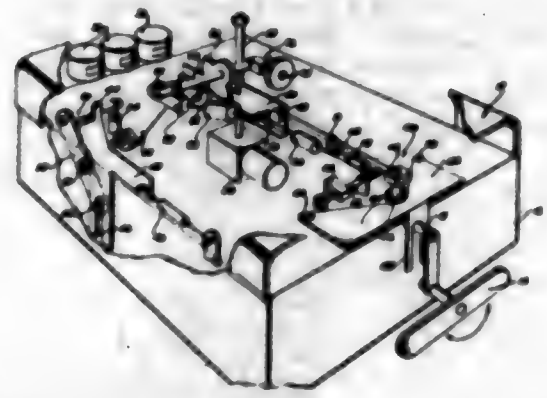
2,864,610
ENDLESS-BELT RECORDER APPARATUS
Ralph Textrum, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Application July 6, 1956, Serial No. 596,204
8 Claims. (Cl. 271—2.15)

1. Recording apparatus, having a continuous recording medium of the endless-belt type, including, in combination: motor means; idler means; circular drive means having peripheral surface means adapted to engage said recording medium, said drive means being in cooperable relationship with respect to said motor means for rotation thereby; freely-rotatable cylindrical roller means having peripheral surface means in laterally juxtaposed relationship with respect to said peripheral surface means of said circular drive means; said circular drive means and said cylindrical roller means having a common cen-



tral axis of rotation; said peripheral surface means of said drive means and said peripheral surface means of said cylindrical roller means jointly accommodating the tensional disposition thereabout of said recording medium at one effective end of said medium and said idler means accommodating the tensional disposition thereabout of said recording medium at the other effective end of said medium.

2,864,611
RECORDING AND REPRODUCING ASSEMBLY
John B. Gray, Los Angeles, Calif., assignor to Packard Bell Electronics Corp., Los Angeles, Calif., a corporation of California
Application October 14, 1957, Serial No. 689,867
8 Claims. (Cl. 271—2.18)

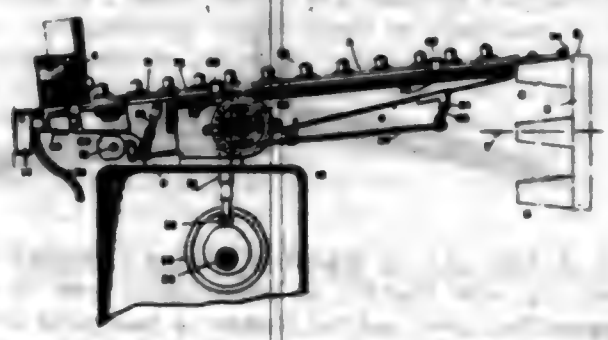


1. For a magnetic tape assembly in which a pinching member is pressed toward engagement with a driving capstan to drive the tape when a tape storage device is provided, a tape device engaging arrangement comprising: first and second rotatable crank members; a first spring member coupling said crank members so that each is responsive to the position of the other, said first spring member biasing said crank members into either one of first and second equilibrium positions; means responsive to the presence of a tape device and coupled to said first crank member for moving said crank members into the second equilibrium position when a tape device is inserted; means coupled to said second crank member for pressing the pinching member toward the driving capstan when said second crank member is in the second equilibrium position; slidable means coupled and responsive to said second crank member; and a second spring member coupling said second crank member to said slidable means to provide an auxiliary force tending to maintain the second equilibrium position.

arm assemblies about the transverse rod, an enlarged gear

2,864,617

2,864,612
PAPER CUP MACHINE BLANK FEEDING MECHANISM
Orville L. Dellinger, Conway, and Franklin D. Scott, Van Wert, Ohio, assignors to Continental Can Company, New York, N. Y., a corporation of New York
Application May 22, 1953, Serial No. 356,792
9 Claims. (Cl. 271—32)

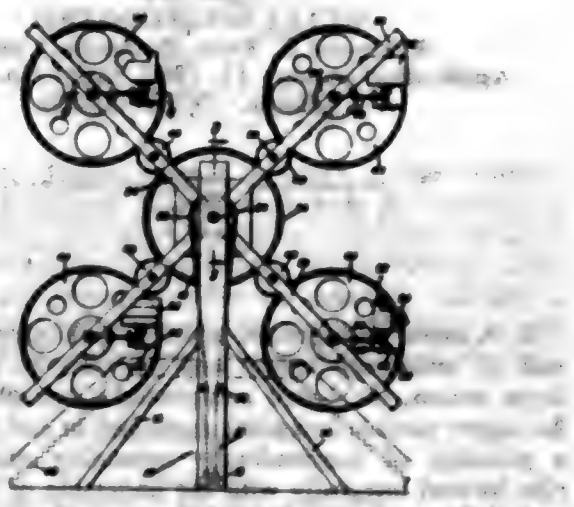


1. In apparatus of the character described, blank feeding means comprising a blank stack supporting means, a feedway, and means for extracting the blanks one by one from the bottom of the stack and advancing them in processional order along the feedway, said advancing means including at least one reciprocable feed bar with a portion extending under the stack and having provision for directly contacting blanks and attracting and holding individual blanks thereagainst by suction action, and control means for applying the suction while the bar portion is beneath the stack and is about to be moved forwardly to advance blanks, and for relieving the suction at the completion of each step advancement of blanks to permit the bar portion to be returned to position under the stack for attracting and feeding another blank, said blank attracting and holding means including a manifold extending longitudinally in the feed bar portion and having provision for controlled connection with a suction source, and suction orifices opening through the top from said manifold, blank stack opposing face of the bar portion, said vacuum source communication being through an electrically controlled valve, and there being included a cam operated timing switch in a control circuit connected with the valve, and a switch connected in series with the timing switch and normally held in circuit closing condition by the weight of the blank stack thereon so that when the stack is exhausted there can be no suction communication between the suction source and the feed bar portion manifold.

2,864,613
AIRPLANE TOY AMUSEMENT DEVICE FOR A CHILD
Ernest C. Porter, Atascadero, Calif.
Application June 14, 1957, Serial No. 665,717
3 Claims. (Cl. 272—1)

1. An airplane amusement device for a child comprising a hollow airplane-like structure having a fuselage comprising side walls merging together at their rear into a tail, an airplane nose extending forwardly from and secured to said side walls, airplane wing means extending from said fuselage, a propeller shaft extending forwardly from said nose, a simulated airplane propeller rotatably mounted on said shaft for rotation by wind pressure, an instrument panel extending between said side walls at the junction of said side walls and said nose, simulated instruments mounted on said instrument panel, one of said panel instruments being a dive and climb indicator comprising a weighted ball pivoted on a transverse axis means fixed relative to said panel, climb and dive indicia on said ball, pointer means fixed relative to said panel cooperating with said climb and dive indicia on said ball as said panel tilts fore and aft, the other of said panel instruments being a turn and bank indicator comprising a plate fixed relative to said panel, turn and bank indicia on said plate and a bottom weighted pointer journaled relative to said plate and having a top pointer end cooperating with said turn and bank indicia as said panel tilts sideways, handle grips extending downwardly from the rear bottom of said nose, curvilinear recesses in the bottom edges of each said side wall spaced rearwardly from said handle grips whereby said handle grips may be grasped by the hands of a child while the wall edges of the curvilinear recesses support the fuselage on the shoulders of the child with the head of the child extending into the hollow fuselage, the front of said fuselage at least being transparent for vision therethrough, and sound producing means under the control of the child operator comprising a trigger lever spring biased to non-operating position pivoted through the bottom of the nose to a location adjacent one handle grip, a connecting shaft pivoted at one end to said trigger lever and provided at the other end with a noise making element extendable into the path of a rotating part of said propeller to make a noise while the propeller is rotating, whereby the child carries said device on his shoulders about his head by grasping the handle grips and simulates the action of an airplane sighting through the front of the fuselage above the instrument panel with the instruments also in his line of vision, and may operate the trigger lever to produce an airplane simulating noise in cooperation with the propeller spinning under wind pressure.

2,864,614
FERRIS WHEEL TYPE AMUSEMENT RIDE
Michel Rene Castille, Opelousas, La.
Application February 7, 1957, Serial No. 638,868
4 Claims. (Cl. 272—36)

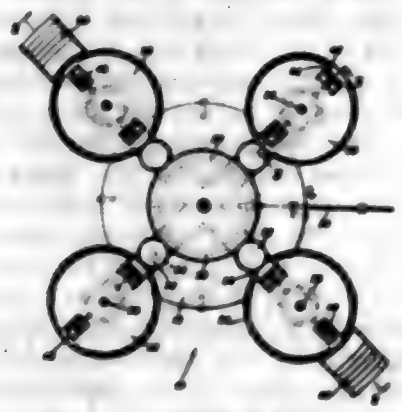


1. An amusement ride device comprising upstanding support members, a transverse rod mounted stationarily thereon, a stationary gear mounted on said transverse rod, a plurality of radially extending arm assemblies rotatably mounted on said transverse rod, means for rotating said

as a result of the detection thereby as aforesaid of diate ball seats and a terminal ball seat at each of the

arm assemblies about the transverse rod, an enlarged gear rotatably mounted on each radially extending arm, an occupant cart rigidly mounted on said enlarged gear to rotate therewith, an idler gear in meshing engagement with the stationary gear and the enlarged gear for driving the enlarged gear as the radial arms rotate so as to maintain said occupant cart upright, and means for rotating the occupant chair about a vertical axis during movement of the arms and the enlarged gear thus providing rotation of the occupant about a vertical axis while the occupant is revolving about the stationary rod and the rotational axis of the enlarged gear.

2,864,615
DISC-TYPE MERRY-GO-ROUND
Michel Rene Castille, Opelousas, La.
Application February 7, 1957, Serial No. 638,880
3 Claims. (Cl. 272—37)

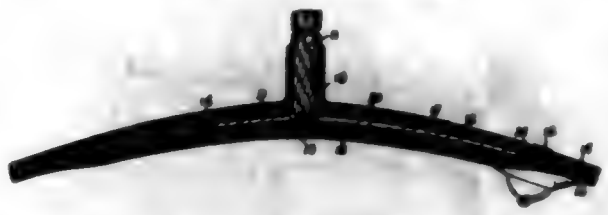


1. An amusement ride comprising a base having a stationary gear mounted thereon, a plurality of radially extending arms intersecting and supported from said base, each of said arms having an idler gear in meshing engagement with said stationary gear, each of said arms having a disk gear in meshing engagement with the idler gear whereby the disk gear will be caused to rotate about an axis through its center while the arms are rotated about the axis of support on the base, each of said disk gears having a chair supported by a shaft eccentrically mounted thereon for rotation about a vertical axis through said disk gear center, and means for driving said chairs about a vertical axis through said shaft.

2,864,616
METAL SPRINGBOARD
Raymond C. Rude, Pasadena, Calif.
Application January 17, 1955, Serial No. 482,074
4 Claims. (Cl. 272—66)

1. A metal springboard adapted to be supported at one end by anchoring means and between its ends by fulcrum means, the board comprising a top plate having a flat upper surface extending from end to end of the board, a plurality of longitudinally extending spaced parallel ribs formed integrally with the underside of the top plate and defining a plurality of downwardly opening longitudinal spaces, said ribs being displaced outwardly from either side of the longitudinal centerline of the plate, and an upwardly opening channel-shaped torsion brace anchored to the underside of the board and extending longitudinally thereof and between the innermost ones of said ribs.

2,864,617
TETHER BALL
Cornelius J. Crowley, New Haven, and Joseph C. Berlepsch, Jr., Orange, Conn., assignors to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut
Application March 26, 1956, Serial No. 573,775
3 Claims. (Cl. 273—58)



1. A ball such as described, having a molded rubber cover, an inner bladder, an intermediate layer of rubber between the cover and the bladder, a base piece of textile material applied to the outer surface of said intermediate rubber layer and located between said layer and said cover, a tethering element consisting of a cord of stranded fibrous material outside of the cover of the ball, said cord having at one end thereof splayed filamentary extensions projecting outwardly in all directions from said cord and anchored between said base piece and said intermediate layer, a disk fused to the outer surface of the cover and a collar joined with and upstanding from said disk, said collar surrounding a short length of the cord outside said cover, said collar being in snug-fitting relationship with said length of cord.

2,864,618
ARROWHEADS
John W. Schwenk, St. Paul, Minn.
Application May 1, 1957, Serial No. 656,482
8 Claims. (Cl. 273—106.5)

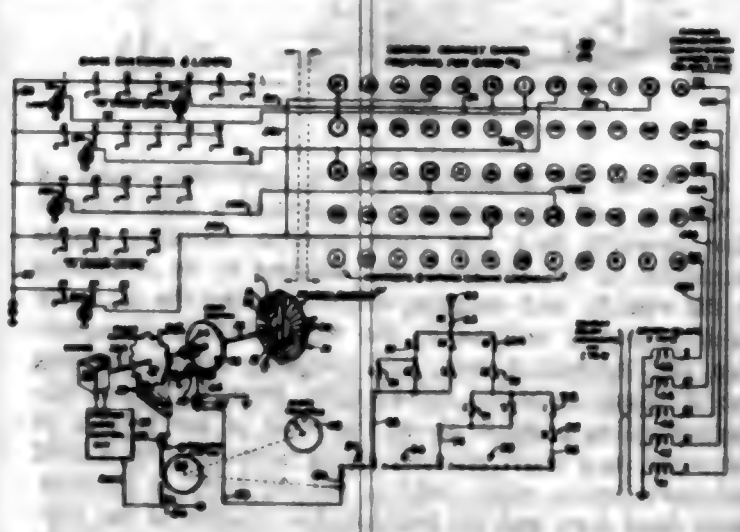
1. An arrowhead construction including a blade having an axial notch therein, and a ferrule forming a shaft receiving socket, said ferrule including a pair of tapered ferrule forming members including a body substantially semi-circular in cross-section and having outwardly directed ears projecting tangentially and then laterally from the edges thereof in spaced relation, the tangential portions of said ferrules extending through said notch, and the laterally projecting portions of said ears of each ferrule forming member extending on one side of the plane of the blade and secured in surface contact thereto and the body thereof lying on the other side of the plane of the blade.

2,864,619
BALL GAME SEARCHING AND SCORING CIRCUIT
Walter M. Burnside, Waukegan, Ill., assignor to American National Bank and Trust Company of Chicago, executor of the estate of Raymond T. Moloney, deceased
Application June 9, 1952, Serial No. 292,561
2 Claims. (Cl. 273—121)

1. In a game circuit, a plurality of game switches adapted to be closed as a result of operation of the game, certain combinations of said switches being adapted to determine an arbitrary score award value; search contacts connected with said switches in a power circuit as a result of game-operation thereof; searching contact means for traversing said search contacts to detect power-circuit connections as aforesaid; a plurality of search relays each connected to be actuated by said searching contact means

means on the base plate forming an electromagnet from said connection thereof, close said latch switch

as a result of the detection thereby as aforesaid of predetermined power-circuit connections; chain-circuit switches actuated by said search relays responsive to detecting action as aforesaid to establish various chain circuits which correspond to certain of said predetermined power-circuit connections; award contact means connected with certain of said chain-circuit switches for connection to a power source as a result of establishment of the corresponding chain circuit by operation of the appertaining search relays as aforesaid; master switch means including an evaluation step switch and a stepping coil therefor together with evaluation contactor means actuated thereby for contacting said award contact means as a result of stepping action of the evaluation switch; motor means operable to drive said search contact means; stop-clutch means operatively interposed between said motor means and said search contact means; electrically-



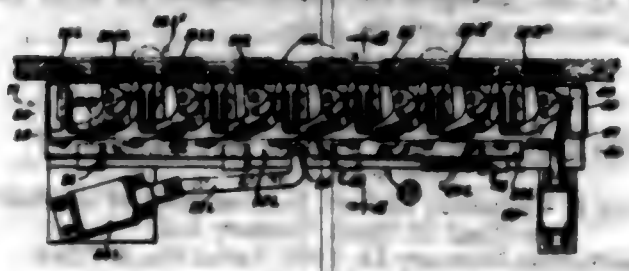
actuated clutch-operating means operable to stop said search contact means; circuit means energized through said evaluation-switch contactor and at least one of said established chain circuits for operating said stop-clutch means to stop the search contact means when at least said one of the established chain circuits is in fact established as aforesaid, a stepping circuit connected with said step-switch coil to actuate said step switch and its contactor; supervisory switch means connected in said stepping circuit and controlled by a member of said stop-clutch means in the non-stopping condition of the latter to render said stepping circuit ineffective for stepping purposes, but operably controlled by said member in the stopping condition of said clutch means to render said stepping circuit effective as aforesaid; a master control circuit for said motor means; and a score device actuated by said evaluation step switch as a result of stepping operation thereof.

2,864,620

BALL TRANSFER AND SWITCH MEANS

Donald E. Hooker, Wilmette, and Charles G. Troeller, Chicago, Ill., assignors to American National Bank and Trust Company of Chicago, executor of the estate of Raymond T. Moloney, deceased

Application March 12, 1956, Serial No. 570,930
7 Claims. (Cl. 273—124)



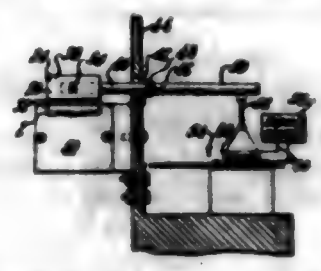
6. A novelty ball transfer mechanism comprising means defining a plurality of serially aligned intermediate ball seats and a terminal ball seat at each of the opposite ends thereof; two independently operable ball ejecting devices at each of the intermediate seats for respectively ejecting a ball therefrom in a direction toward one of said termini; reciprocable means connecting with the ejecting devices of like directional character for joint ball-ejecting operation responsive to each reciprocatory action thereof; selectively energizable electromagnetic means for each said reciprocable means for effecting a reciprocatory action thereof responsive to pulsing of said electromagnetic means; a ball-ejecting device at each of said terminal seats and respectively connected with an appropriate one of said reciprocable means for actuating the same to eject a ball in a direction back toward the intermediate seats; a first one of said terminal seats having no ejecting means for expelling a ball therefrom outwardly of the series so that at least one ball must remain in the series in said first terminal seat as a result of sustained ejecting action in that direction; independently operable ball ejecting means for the second and remaining terminal seat for ejecting a ball therein outwardly of the series; and electromagnetic booster means cooperable with the outwardly directed ejecting means of the intermediate seat next adjacent the said first terminal for increasing the thrust of the said last-mentioned ejecting means sufficiently to hurdle a ball over any ball in said first terminal seat whereby the boosted ball can escape from the series; together with circuit means for independently energizing the aforesaid electromagnetic means for the joint ejecting means for either direction and including said electromagnetic booster means for the direction toward said first terminus; and automatic pulse switch means operable to repeatedly pulse the electromagnetic actuating means for the direction toward said second terminus and the ejecting means at the latter a number of times sufficient to clear the entire series of seats of all balls lodged therein.

2,864,621

WEB REELING SYSTEM

Alexander Stavrakis, Upper Darby, Pa., and Charles J. Kennedy, Haddonfield, N. J., assignors to Radio Corporation of America, a corporation of Delaware

Application October 20, 1954, Serial No. 463,559
5 Claims. (Cl. 274—4)



1. In a tape driving system in which a tape member is driven past a signal transducer, means for exerting a pressure on a surface of said tape in a direction to press said tape toward said transducer, biasing means associated with said pressure means for normally exerting a predetermined pressure on said tape, and braking means for selectively increasing said pressure to arrest the motion of said tape.

2,864,622

MAGNETIC WORK CHUCK

William B. Seidel, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

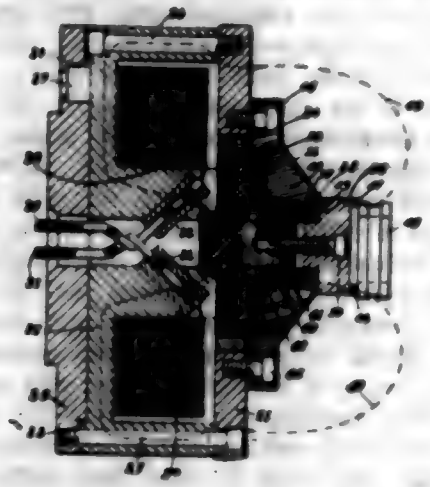
Application November 26, 1956, Serial No. 624,281
6 Claims. (Cl. 279—1)

1. A magnetic chuck for attachment to a rotatable driver comprising a base plate having an axis of rotation,

ing a body, adjustable connecting means on the body for

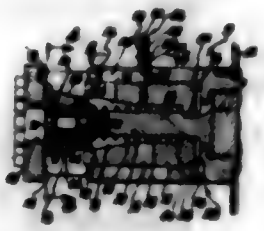
2,864,627

means on the base plate forming an electromagnet having a center magnetic pole lying on said axis, and an annular magnetic pole face surrounding said center pole in spaced relation thereto, means to magnetize said poles to opposite polarity, a circular cover plate attached to said annular pole face and having a central opening exposing said center pole, a pole assembly attached to the end of said center pole and extending through said opening, non-magnetic means mounted in said opening for isulating the center pole from said cover plate, said



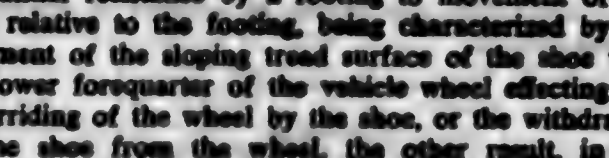
pole assembly extending axially beyond said cover plate and terminating in a single pole face plate of opposite polarity to said annular magnetic pole face against which work is to be held by magnetic force, and a second cover plate of non-magnetic material enclosing said pole assembly and overlapping said non-magnetic means for attachment to the first cover plate, whereby magnetic flux passing through the pole assembly must pass through said face plate and return through the air exteriorly of said second cover plate to said first cover plate.

2,864,633
FLUID OPERATED CHUCK
Paul L. Spink, Altadena, Calif., assignor to Claude C. Slate Company, Glendale, Calif., a corporation of California
Application September 24, 1956, Serial No. 611,601
7 Claims. (Cl. 279—4)



1. In a chuck, the combination of: supporting structure providing a longitudinal guideway having an axis and providing a lateral guideway extending transversely of said axis; jaw means movable along said lateral guideway into alignment with said longitudinal guideway, said jaw means being transversely expansible and contractible and having axially divergent cam surfaces; an actuator movable along said longitudinal guideway and haxing axially divergent cam surfaces engageable with said cam surfaces of said jaw means to contract said jaw means in response to movement of said actuator along said longitudinal guideway in one direction into an operative position relative to said jaw means, said actuator being movable along said longitudinal guideway in the opposite direction from said operative position through an intermediate position into an inoperative position to provide for expansion of said jaw means, and said actuator blocking said lateral guideway when in said operative position and said intermediate position to prevent removal of said jaw means from said supporting structure along said lateral guideway, said actuator clearing said lateral guideway in said inoperative position of said actuator; means for moving said actuator along said longitudinal guideway; and releasable means for preventing movement of said actuator into said inoperative position.

2,864,634
SKIS FOR WHEELED AIRCRAFT AND OTHER WHEELED VEHICLES
Leonard A. Lindelof, Plymouth Village, and Charles W. Dreyer, Golden Valley, Minn.
Application August 1, 1956, Serial No. 601,443
10 Claims. (Cl. 280—11)

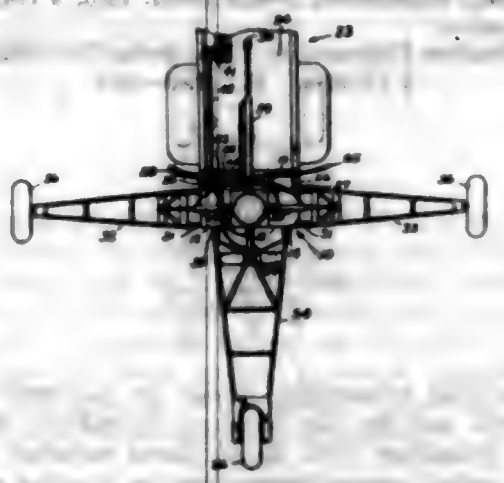


10. A ski for association with a supporting wheel of a vehicle, said ski including a body and a load transfer shoe movable back and forth thereon, coupling means connected to the ski body and adapted to be connected to the vehicle, said coupling means locating the ski body co-directionally relative to the wheel and in juxtaposition with respect thereto, said coupling means enabling the ski body to move downwardly from an upper secondary skiing position above the level of the bottom of the wheel to a lower primary skiing position at such level and back again, while holding the ski body in substantially fixed fore and aft relationship relative to the supporting wheel, suspension means connected to the ski body and adapted to be connected to the vehicle, said suspension means supporting the ski from the vehicle, said load transfer shoe having a tread surface for the wheel sloping rearwardly downward, said shoe being movable along the body of the ski rearwardly from and forwardly in return to a forward position thereon, said shoe in said forward position being disposed adjacently ahead of the lower forequarter of the vehicle wheel, said tread surface of said shoe, in position of the shoe rearwardly of its said forward position, engaging the under portion of the vehicle wheel, the rearwardly positioned shoe projecting downwardly beneath the bottom of the ski body for contact with a footing, one or the other or a combination of two results being obtained upon movement of the shoe relative to the ski body, one result, in the absence of substantial resistance by a footing to movement of the shoe relative to the footing, being characterized by engagement of the sloping tread surface of the shoe with the lower forequarter of the vehicle wheel effecting the underriding of the wheel by the shoe, or the withdrawal of the shoe from the wheel, the other result, in the presence of substantial resistance by a footing to movement of the shoe relative to the footing being characterized by load-bearing contact of the bottom of the shoe with the footing effecting forward or rearward conjoint movement of the ski body and connected vehicle attended by the rolling of the wheel onto or off from the sloping tread surface of the shoe.

2,864,635
PORTABLE BOOM SUPPORT ATTACHMENT FOR VEHICLES
Shannon K. Clements, Elkhart, Ind., assignor of one-half to Hugh M. Rush, Elkhart, Ind.
Application February 10, 1955, Serial No. 487,268
6 Claims. (Cl. 280—34)

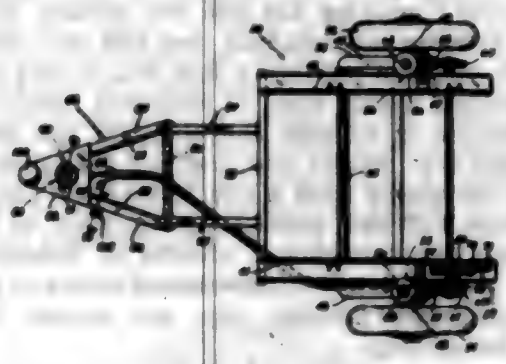
1. A support for booms and the like, adapted to be detachably mounted on a vehicle, said support compris-

ing a body, adjustable connecting means on the body for securing the same to a vehicle adjustably on an axis extending transversely of the vehicle, reciprocating power means mounted pivotally on the body for connecting the body to a vehicle at a point on the vehicle spaced longitudinally from the transversely mounted body for adjusting and securing the body in levelled position on said transverse axis, base means on the support for mounting a boom or the like thereon, elongated outrigger members mounted pivotally on the opposite lateral sides and on the rearward side of the body, ground engaging means on the



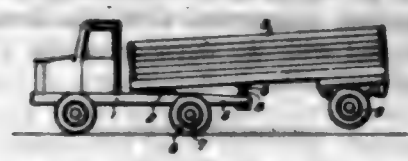
terminal ends of the outrigger members, said members being adapted to be pivoted between a retracted position projecting upwardly adjecent the body and an extended position projecting outwardly from the body, in which extended position the ground engaging means are disposed a substantial distance outwardly from the vehicle, whereby to increase substantially the effective supporting length and width of the vehicle, and reciprocating power means pivotally interconnecting the outrigger members and the body for operating said members arcuately between extended and retracted positions.

2,864,626
TRAILER HAVING VERTICALLY ADJUSTABLE HITCH AND RUNNING GEAR
Socrates J. Schantz, St. Louis County, Mo.
Application September 19, 1955, Serial No. 535,025
4 Claims. (Cl. 280—44)



1. A trailer hitch for lowering and raising a trailer support arm which comprises a hitch plate having a socket adapted to be connected to a stationary ball hitch secured to a towing vehicle, said trailer support arm being pivotally secured to the hitch plate to the rear of the socket and extending forwardly thereof underneath said hitch plate, means for raising and lowering the trailer support arm while the trailer is hitched to a tow vehicle, comprising extensible means between the hitch plate and the trailer support arm, and shock-absorbing means cooperating with the extensible means including a biasing element to counteract the transmission of shock forces between the hitch plate and the trailer support arm.

2,864,627
TRACTOR WITH SEMI-TRAILER LIFTING DEVICE
Alfred Kleinknecht, Unterohrn-Oehringen, Germany
Application March 24, 1955, Serial No. 496,996
Claims priority, application Germany April 2, 1954
7 Claims. (Cl. 280—401)

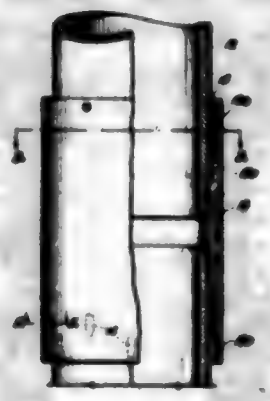


1. In combination with a tractor having front and rear wheels and a semi-trailer having rear wheels; a support for the front end of the semi-trailer mounted on said tractor between the front and rear wheels of the latter, and a lifting device mounted on said tractor behind said support and adapted to act upwardly from below upon a portion of the semi-trailer, which is behind the rear wheels of the tractor.

2,864,628
QUICK DISCONNECT COUPLING
Stuart K. Edleson, Berkeley, Mo., assignor to Essex Mfg. Co., Inc., St. Louis, Mo., a corporation of Missouri
Application July 2, 1956, Serial No. 595,374
8 Claims. (Cl. 284—18)

1. A pipe coupling consisting of first and second cooperating members, cam means for effecting union of said members upon relative axial and rotative movement thereof, said first part comprising a valve, a sealing member having at one end a valve-seating portion, resilient means urging said valve against said valve-seat portion of said sealing member, said second cooperating member comprising a poppet for engagement with said sealing member at its other end, said poppet being adapted for axial movement upon union of said members, said poppet having an axial bore, a stem disposed within the poppet bore for relative slideable movement therein for projecting beyond one end thereof upon union for engaging said valve to effect unseating of same.

2,864,629
THREADED COUPLING HAVING STAGGERED ROWS OF WEDGE PINS
Jesse E. Hall, Sr., Weatherford, Tex.
Application June 11, 1954, Serial No. 435,995
3 Claims. (Cl. 285—81)



1. In a coupling or joint of a character described, an externally threaded pipe, a matching internally threaded collar, the threaded section of said collar being spaced inwardly from one end thereof and the collar having an unthreaded bore between said end and said threaded section, a first series of pockets in said bore spaced at intervals around said pipe, a second

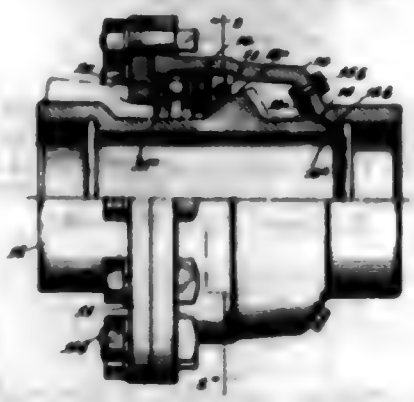
series of pockets in said bore spaced at intervals around said pipe, the pockets of said first series being spaced axially, and staggered circumferentially, relative to those of said second series, a longitudinally disposed wedge pin in each of said pockets and each of said pockets being arcuate in transverse cross-section whereby the pin in that pocket cooperates with the arcuate surface of the pocket and with the exterior of the pipe to resist unscrewing of the collar.

2,864,630

ANGULARLY MOVABLE BALL AND SOCKET JOINT HAVING BEARING MEANS PROVIDING SURFACE CONTACT WITH THE MOVABLE MEMBER

Victor W. Breitenstein, Arlington Heights, Ill., assignor to Francis N. Bard

Application June 28, 1956, Serial No. 594,511
7 Claims. (Cl. 285—261)



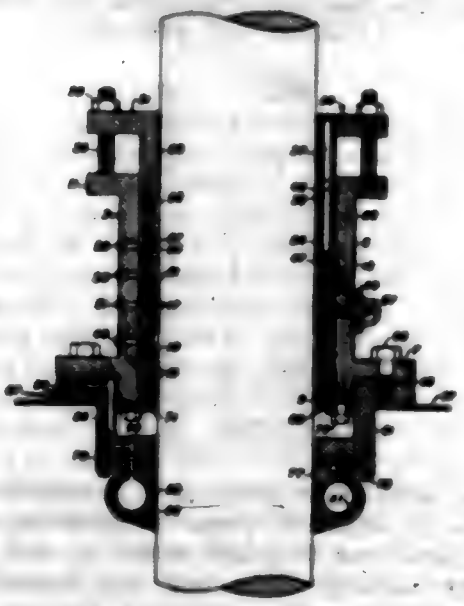
1. A joint comprising: an outer member; an inner member; means for carrying the inner member movably in said outer member, having an anti-friction bearing means for action only during relative axial rotation of said members and an anti-friction bearing for action only during angular movement between said members, said anti-friction bearing having a surface portion engaging one of said members which portion is complementary to said one member; and means providing a fluid tight seal between said members.

2,864,631

STUFFING BOXES

Manning H. Kemp, West Monroe, La., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Application June 29, 1954, Serial No. 440,855
3 Claims. (Cl. 286—26)



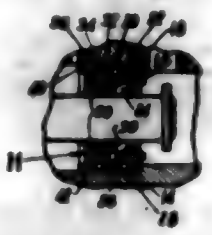
1. A stuffing box for a propeller shaft comprising a rigid annular casing surrounding said shaft, said casing having an annular slot adjacent to said shaft, an inflatable annular member in said casing, means for inflating said member against said shaft, a stuffing box body adjacent to said casing and fastened thereto in fluid-tight relationship, an annular space adjacent said shaft between said casing and said body and a valved fluid passageway extending from the exterior of said casing into said space.

2,864,632

POWER OPERATED MASTER CYLINDER

Edward E. Hupp, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application February 1, 1956, Serial No. 562,724
4 Claims. (Cl. 286—26)



1. In a fluid pressurizing device for automotive braking systems and the like having a cylindrical bore into which a cylindrical fluid displacement member extends, pressure sealing means comprising an annular retaining ring positioned between said fluid displacement member and the side walls of said bore and having an axially outwardly extending annular projection thereon, an annular U-packing positioned axially outwardly of said annular retaining ring and having a pair of axially inwardly extending annular projections one positioned radially inwardly and the other radially outwardly of said projection on said retaining ring, a first annular semi-rigid non-galling back-up disc positioned axially outwardly of said annular U-packing with its radially outer surface contacting the surface of said bore and its radially inner surface contacting the surface of said displacement member, a second annular disc positioned axially outwardly of said first annular disc with its radially outer surface substantially in contact with the surface of said bore and its radially inner surface spaced slightly from said displacement member, and means forming a shoulder axially outwardly of said second disc for supporting said second disc, said last mentioned means having an opening therethrough through which said fluid displacement member extends, said U-packing and said first annular disc being confined between said retaining ring and said second annular disc, and said U-packing, first disc, second disc, and last mentioned means being of materials which progressively increase in stiffness and strength; and the openings in said first, second disc, and last mentioned means gradually increasing from a size in said first disc having no clearance with said displacement member, to a size in said second disc providing a running fit therewith, to a size large enough in said last mentioned means so that said fluid displacement member does not contact the sidewalls of its opening.

2,864,633

METHODS AND APPARATUS FOR ANCHORING PIPE LINES AND THE LIKE

Alex Mackie, Centralia, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri

Application February 23, 1956, Serial No. 567,366
2 Claims. (Cl. 287—117)

1. A screw anchor assembly, comprising a steel guy rod having a pointed end and a cylindrical body, said body supporting a radially extending partially helical screw flange adjacent to and guided by said pointed end, said guy rod being elongated at one end, and provided with a threaded end portion, chamfered at its end to avoid

inclined with respect to the other edge surface, and a wedge movably received between the said other edge

2,864,639

REMOTE HANDLE BLOCKOUT FOR AUTOSCOPE

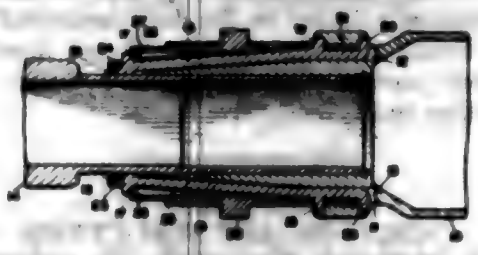
damage to threads by end pressure, an adapter member for driving said screw anchor into the ground, comprising a steel body, externally polygonal shape, having plane sides adapted to be received in a socket wrench, said adapter having an axial through bore internally threaded to receive the threaded end portion of said guy rod and said adapter body being elongated axially to receive a substantial length of said threaded portion, a locking plug of steel having a cylindrical threaded body and a non-

circular head adapted to be received in a socket wrench, said plug fitting the internal threads of said adapter, and being chamfered at its end to avoid thread damage, said plug driven home against the threaded end of said guy rod, fixedly securing the adapter on the end of the guy rod, to drive the screw anchor by torque applied by the adapter, said adapter being readily releasable and removable by first removing the threaded plug.

2,864,634
TELESCOPE MOUNT

C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army

Application February 18, 1958, Serial No. 718,385
4 Claims. (Cl. 287—117)
(Granted under Title 35, U. S. Code (1952), sec. 266)



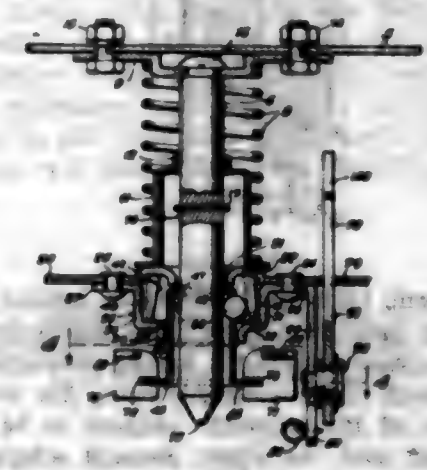
1. The combination of inner and outer members having matching tapered surfaces, said inner member having a thread near the larger end of its tapered surface and having a plurality of slots, a plurality of keys each mounted in a different one of said slots with a pair of spaced-apart flanges near one end of said outer member and a single flange at the other end of said outer member, and a collar mounted between said spaced-apart flanges and having an inner thread arranged to cooperate with the thread of said inner member for forcing it into and out of said outer member.

2,864,635
HOOD LATCH

Adam C. Lindner, Chicago, Ill., assignor to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware

Application March 16, 1954, Serial No. 416,544
1 Claim. (Cl. 292—12)

In a hood latch for automobiles and the like, a keeper rod, a latching structure for said rod comprising a latch plate, a generally U-shaped bracket secured to said latch plate and having a bottom wall spaced from and parallel with said plate, said bracket and said plate together forming a housing, a pair of axially aligned apertures, one in said plate and one in said bottom wall, a ring member in axial alignment with said apertures and enclosed in and positioned by said housing, said ring member having its upper edge in contact with said plate and its lower edge in contact with said bottom wall, a generally cylindrical hollow sleeve movably mounted in said bottom wall aperture and having an end portion positioned within said housing, said sleeve being in axial alignment with said plate and bottom wall apertures, lateral apertures in said sleeve end portion, a ball positioned in each of said sleeve apertures and having a major portion extending outside said sleeve and in contact with the inner wall of said ring, said inner ring wall being generally frusto-conical and converging toward said plate aperture, the least radius of said inner ring wall being less than the combined length of the radius of said rod and the diameter of said ball, the diameter of said bottom wall aperture being only slightly greater than the outside diameter of said sleeve whereby said outwardly extending ball portions are in

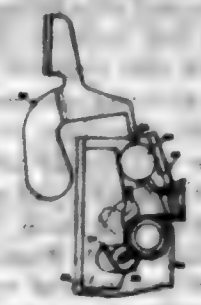


position to contact said bottom wall adjacent said bottom wall aperture to limit the outward movement of said sleeve from said housing, and means for moving said sleeve comprising a safety latch pivotally secured to said plate, said safety latch having a hook portion extending beyond said plate and positioned to limit the movement away from said plate of the member to which said keeper rod is secured, said safety latch having a manually operable handle lever having a lost-motion connection at one end with said sleeve, said second lever having an abutment portion at its opposite end, said second lever being pivotally supported intermediate its ends from said plate, said abutment portion being positioned to be contacted by said safety latch handle lever when said safety latch is moved toward unlatched position and to be moved thereby in a direction to urge said sleeve outwardly from said housing.

2,864,636
WEDGE TYPE LOCK

Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan

Application February 27, 1956, Serial No. 567,780
15 Claims. (Cl. 292—216)



12. A latch comprising a latch rotor rotatable between an unlatched position and a latching zone, means movable by said rotor upon rotation thereof and having opposed edge surfaces, fixed guide means slidably engaged by one of said edge surfaces, a wedge surface spaced from and

locking bar constructed so that when the locking bar moves under influence of the locking spring, the manually

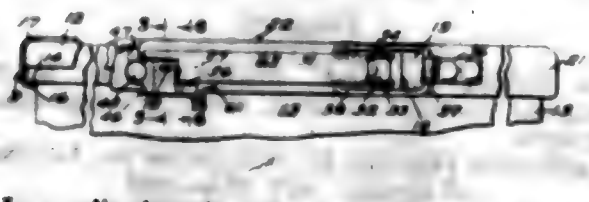
2,864,643
PICKAROON POINT

inclined with respect to the other edge surface, and a wedge movably received between the said other edge surface and said wedge surface.

2,864,637
MAGNETIC DOOR LATCH
Walter D. Teague, Annandale, N. J., and Robert H. Ensign, Bronxville, N. Y., assignors, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Application March 12, 1952, Serial No. 276,204
10 Claims. (Cl. 292—251.5)

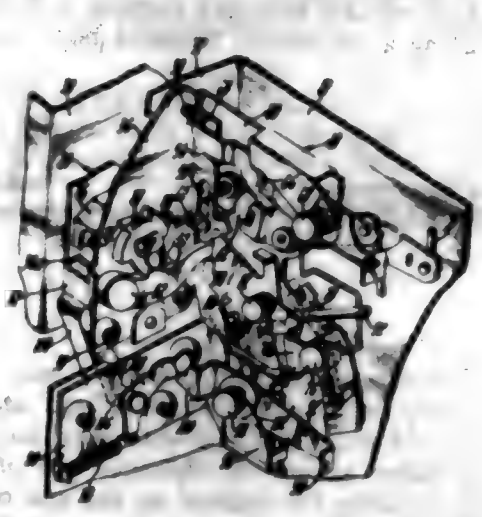
1. A magnetic latch for use with a cabinet having a movable door, said latch comprising relatively movable magnet and armature elements having cooperating faces, the face on each of the elements being flat over its entire area, one of the elements adapted to be mounted on the cabinet and the other element adapted to be mounted on the door, one of said elements being mounted so that its flat face projects forwardly at an acute angle to the flat face of the other element, to insure engagement of the elements before the door is fully closed, and said element having the forwardly projecting flat face being hinged to rock on its mounting by the magnetic force between the flat faces of the elements for moving the door to closed position on the cabinet.

2,864,638
LOCKING DEVICE FOR SPLIT CLAMPING RINGS
Theodore R. Nelson, Walnut Creek, and Norman W. Hunter, Lafayette, Calif., assignors to Rheem Manufacturing Company, Richmond, Calif., a corporation of California
Application June 6, 1955, Serial No. 513,240
6 Claims. (Cl. 292—256.69)



1. In a split clamping ring having a lever pivotally attached to said ring and movable in the general plane of said ring to expand and contract the ring and a latch member pivoted to said ring and movable in a plane generally normal to said ring plane, said lever having a continuous web portion and flanges along the edges thereof, said web having an inwardly deformed portion adjacent the distal end thereof, said latch having a notch spaced inwardly of the distal end thereof and an outwardly offset portion spaced inwardly of and adjacent said notch, said offset latch portion passing over said inwardly deformed portion of said lever web and the distal end of said latch passing behind an adjacent portion of said lever web when said lever is overlying a portion of said ring and said latch is pivoted into locking engagement therewith.

2,864,639
REMOTE HANDLE BLOCKOUT FOR AUTOMOBILE DOOR LATCH
Stanley D. Cockburn, Detroit, and Charles I. Griswold, Jr., Oak Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 22, 1956, Serial No. 617,617
5 Claims. (Cl. 292—336)



1. Latching apparatus for a vehicle door, comprising: a striker mounted on the vehicle body; a latch on the door having a movable bolt engageable with the striker and detent means for holding the bolt against release movement to maintain the door in latched position; movable release means for operating the detent means; a blocking member movable between an out-of-the-way position and an operative position in which it blocks movement of said release means; yieldable means urging said blocking member toward its out-of-the-way position; operating means on the door for moving said blocking member to its operative position against the force of said yieldable means; and an actuating member on the door connected with said operating means and engageable with and movable by a vehicle body portion when the door is closed to render said operating means ineffective.

2,864,640
CASKET SEALER STRUCTURE
Thomas D. Mattinson, Wood Dale, Ill., assignor to The Merit Company, Chicago, Ill., a corporation of Illinois
Application April 19, 1956, Serial No. 579,306
5 Claims. (Cl. 292—335)

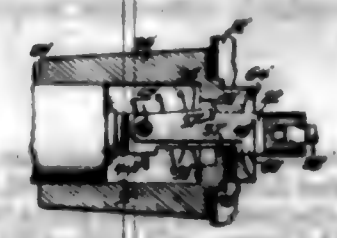
1. In a closure structure having a main body type frame and a closing cover pivoted thereto with a plurality of pull down elements projecting from the cover and aligned with the frame, the improvement comprising a locking mechanism in the frame having a longitudinally slidable locking bar carrying a plurality of locking elements adapted to coact with the pull down elements so as to lock the cover to the frame, a locking spring mechanism adapted to bias the locking bar at all times toward its locked position, a latch mechanism connected to the locking bar for holding the locking bar in a cocked position, with energy stored in the locking spring mechanism, manually operable means connected to the locking bar for moving the bar to its cocked position to store energy in the locking spring mechanism, means associated with the cover for tripping the latch mechanism automatically when the cover is closed so that the locking spring mechanism may move the locking bar to its locked position when the cover is closed, a lost motion connection between the manually operable means and the

arm, pivot means extending through the overlapping sides with the pivot axis normal to the planes of the sides, said

received within said transverse raised portion and se-

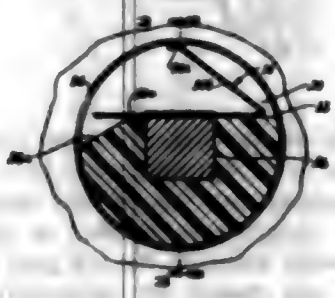
locking bar constructed so that when the locking bar moves under influence of the locking spring, the manually operable means may remain stationary, and a spring connected to the manually operable means biasing it toward the uncocked position of the locking bar.

2,864,641
INERTIA SAFETY DEVICE FOR A DOOR LATCH
James D. Leslie, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 26, 1956, Serial No. 580,949
7 Claims. (Cl. 292—336.3)



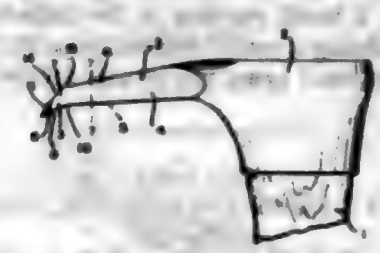
3. Actuating apparatus for a door latch, including: a handle member having a body portion; latch actuating means comprising a push button and an actuating rod slidably mounted in the body portion of said handle member; an inertia device swingably mounted on said actuating rod and engageable with the body portion of said handle member in response to rapid initial movement of said latch actuating means for preventing continued movement of said latch actuating means.

2,864,642
DOOR KNOB CONSTRUCTION
Charles R. Murphy, Grosse Pointe Park, Mich.
Application July 18, 1956, Serial No. 598,557
1 Claim. (Cl. 292—353)



In a latch operating mechanism including a spindle extending from the latch mechanism and adapted to operate the same by rotary movement, a series of teeth provided on said spindle adjacent at least one end thereof, an operating knob mounted on the toothed end of said spindle by means of an axial opening mating with said spindle and selectively movable longitudinally thereon, the improvement consisting of; a reduced portion on said knob through which said axial opening extends and including a tapered portion joining said reduced portion to said knob and diverging outwardly from said reduced portion, a transverse slot in said reduced portion communicating with said axial opening in said knob and transverse thereof, a band positioned on said reduced portion and enclosing said slot, the inner diameter of said band being slightly larger than the outer diameter of said reduced portion and one edge thereof being seated on said tapered portion, a V-shaped spring detent member having the end of the upper arm thereof engaging the inner surface of said band and the lower arm thereof positioned in said slot and engaging between the walls thereof and the said teeth provided on said spindle, and an opening in said band adjacent the end of said lower arm of said spring detent member to facilitate the insertion of a tool to release the same.

2,864,643
PICKAROON POINT
Arthur W. Jantzmen, Brimson, Minn.
Application September 7, 1954, Serial No. 454,332
6 Claims. (Cl. 294—61)



1. A point for a pickaroon or the like comprising; a shank, a point on the outer end of said shank, said point including a forwardly projecting tip having a substantially flat front face, a substantially flat rear face on said point and extending in angular relationship to said front face so as to form a wedge shape with said front face, a leading edge extending longitudinally of said tip from said front face to said rear face and a hook at the opposite end of said rear face between the latter and said shank.

2,864,644
CARGO HOOKS
Earl A. Marryatt, Chester, N. J.
Application September 30, 1957, Serial No. 687,061
16 Claims. (Cl. 294—83)

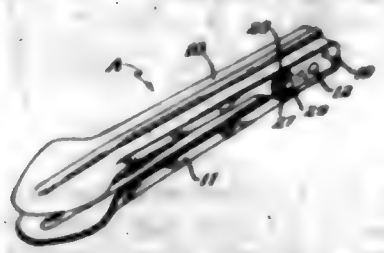
1. A cargo hook having two side bars in alinement with, and spaced from, one another, a first pin connecting the upper end of said bars to one another and adapted to receive a main hawser, a second pin connecting the lower ends of said bars, there being longitudinally extending slots in said bars in alinement with one another and intermediate said first and second pins, a third pin extending through said slots and slidably mounted in the same, an arcuate hook unit having one end pivotally connected to said third pin, an outwardly extending lip at the other end of said hook unit resting upon said second pin when said third pin rests on said bars at the lower ends of said slots in load carrying position, and a fourth pin connecting said bars between said second pin and said longitudinally extending slots, there being a recess on the inside of said one end of said hook unit to receive said fourth pin in load carrying position of said hook unit.

2,864,645
TONGS
Roy Muldrum, St. Paul, Minn.
Application August 3, 1953, Serial No. 372,118
3 Claims. (Cl. 294—106)

1. Tongs including a pair of tong arms each having an end of channel shaped cross section including parallel sides and a connecting base, said arms being arranged in opposed relation with the connecting bases of said arm ends in spaced relation and the sides in overlapping parallel relation, each side of one arm being substantially in surface contact with a corresponding side of the other

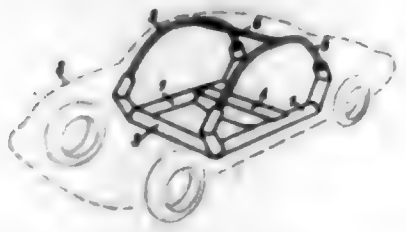
ways, a compound valve mechanism between the supply float chamber into engagement with the actuating plunger

arm, pivot means extending through the overlapping sides with the pivot axis normal to the planes of the sides, said arms being pivotal between substantially parallel relation to diverging relation, a U-shaped slot in one side of one of said arms with the arms of the slot directed toward the pivot means, a hook portion in the adjacent side of the other arm defining a notch registrable with the end of one slot arm when said arms are in one pivotal position, and



means slidable in said slot engageable in, and disengageable from, said notch of said hook portion when said tong arms are in said one position, the other arm of said slot being narrower than said one slot arm, said slidable means being frictionally engageable in said other slot arm when out of engagement with said notch to hold said slidable means in inoperative position.

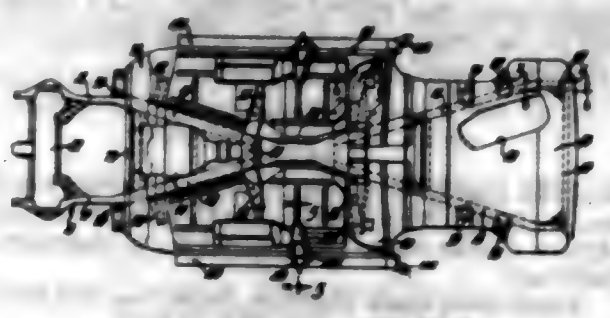
2,864,646
CAR BODY
Karl Wilfert, Stuttgart-Degerloch, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application February 23, 1955, Serial No. 490,065
4 Claims. (Cl. 296—28)



1. A car body for passenger motor vehicles including a framework, said framework comprising lower parts, each of said lower parts being of annular cross section and formed in the shape of a longitudinally extending U, the legs of the U extending upwardly to one-half the height of the vehicle body, said framework further comprising upper parts of annular cross section, each of said upper parts formed as a transverse inverted U-shaped frame having downwardly extending legs, said first-named legs being rigidly connected with and constituting means of support for corresponding adjacent ones of said last-named legs, each of said lower parts being of greater strength than said upper parts.

2,864,647
VEHICLE BODY-FRAME CONSTRUCTION
Gustave J. Cheema, Birmingham, Henry S. Kawecki, Ferndale, and Jules A. Olivier, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 12, 1956, Serial No. 615,617
8 Claims. (Cl. 296—28)

1. In combination with a cruciform vehicle frame having frame rails converging centrally thereof, a vehicle underbody receivable upon said frame and comprising a floor pan having reinforced box-sectioned sills formed along the outer edges thereof, a raised portion formed from said floor pan centrally and longitudinally thereof for receiving vehicle drive means therein, a raised portion formed from said pan at the rear and transversely of said first-mentioned raised portion and extending across said pan between said sills, a structural floor pan brace received within said transverse raised portion and secured to said sills, and depressed floor areas formed from



said pan between the limits defined by said raised portions, said sills and said converging frame rails disposed under said pan.

2,864,648
SAFETY BARRIER FOR AUTOMOBILE WINDOW
Dell J. Bland, Rockford, Ill.
Application December 5, 1956, Serial No. 626,497
11 Claims. (Cl. 296—186)

1. In a vehicle of the station wagon type, comprising a body having an open rear end, a tail-gate and a window hinged at the bottom and top of said open end, respectively, to swing toward one another to closed position, means for releasably securing the tail-gate in closed position separately, and means for releasably securing the window in open position separately, the improvement which consists in a grill insertable with a close fit in the opening in the rear end of the body above the tail-gate when the window is open, means on the upper end of said grill pivotally and detachably connectible with said body, whereby said grill after such connection is swingable about its upper end as an axis inwardly toward its operative position in the opening above the tail-gate, and other means for pivotally and detachably connecting the lower end of said grill with the upper end of said tail-gate, said latter means being connectible and disconnectible in response to swinging movement of said tail-gate.

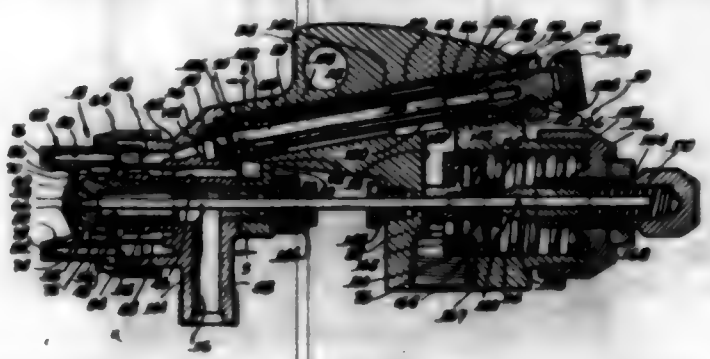
2,864,649
SPRAY GUN
John R. Adams, Chicago, Ill., assignor to Cline Electric Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application November 26, 1956, Serial No. 624,418
8 Claims. (Cl. 299—140.1)

1. In a spray gun of the type described, nozzle means having first and second gas passageways therethrough for directing separate streams of gas against material sprayed from the nozzle means, a gas supply conduit having communication with both the first and second gas passage-

valve seat in the spray gun, a valve member on said spindle cooperating with said second valve seat to provide

guide wheels supported from said frame for engaging the inner surface of the sills for guiding the vertical move-

ways, a compound valve mechanism between the supply conduit and the first and second gas passageways, a first valve-controlled opening between the supply conduit and the first gas passageway, said valve mechanism including first and second valve members with the first valve member operable to control the said first valve-controlled opening, and said first valve member having a second valve-controlled opening between the supply conduit and the second gas passageway, and said second valve member being movable toward and away from the second valve-controlled opening in said first valve member for controlling the passage of gas therethrough.

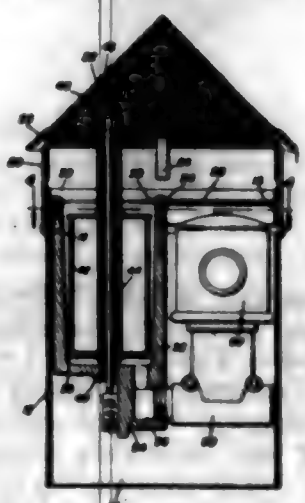


2,864,650

CONTROL ATTACHMENT FOR LAWN SPRINKLING SYSTEMS

George R. Deinzenter, Fort Lauderdale, Fla.

Application September 18, 1956, Serial No. 610,502
6 Claims. (Cl. 299—25)



1. A control unit for use with a lawn sprinkling system having a time clock and a control valve for operation thereof with the control valve being energized by an electric circuit controlled by the time clock, said unit comprising a rain water collecting chamber, a float movably positioned in said chamber for changes in elevation in response to the water level therein, a stem rigid with said float, a switch supported from the chamber and connected in the electric circuit and having an actuating plunger disposed in the path of movement of the stem and being movable in response to movement of said stem on the float for selectively energizing and de-energizing the electric circuit, a drain valve in the bottom of the chamber for discharging water from the chamber, and means mounted on the time clock and connected with the drain valve for actuation of said drain valve at predetermined intervals, said float chamber having a vertically disposed tubular guide extending through the bottom thereof and extending above the water overflow level, said float having a vertical tubular member slidable on the tubular guide, said stem being disposed concentrically within the tubular member and disposed interiorly of the guide and extending through the bottom of the float chamber into engagement with the actuating plunger of the switch, the upper end of the stem being connected with the tubular member above the overflow water level, thus preventing contact of water with the switch.

2,864,651

WITHDRAWN

2,864,652

WIDE SPREAD FAN SHAPED SPRAY DISCHARGE NOZZLE

Edward J. O'Brien, Bellwood, and Fred W. Wahlin, Kane County, Ill., assignors to Spraying Systems Co., Bellwood, Ill., a corporation of Illinois

Application September 16, 1955, Serial No. 534,774
4 Claims. (Cl. 299—121)

1. A side discharge liquid spray nozzle comprising a body with a rear end and a front end and having an external plain groove extending across the body from side to side thereof, the body having a liquid supply passage therein which leads forwardly from the rear end of the body toward the front end thereof to one side of the bottom of the groove and discharges across the bottom of the groove to the opposite side thereof, the groove having the bottom thereof extending transversely of the passage at right angles thereto and of uniform rounded cross section from end to end of the groove and the groove being tilted sidewise with the bottom thereof projecting foremost toward the front end of the body providing at said opposite side of the groove an undercut cavity of plain trough shape extending lengthwise of the groove and facing toward the rear end of the body to receive therein the discharge from the passage, the opposite sides of the trough shaped cavity being plain and uniformly sloped away from one another toward the rear of the body throughout their length in a relation to one another causing liquid discharged from the passage into the trough shaped cavity to emerge from the opposite ends of the trough shaped cavity.

2,864,653

SPRAY GUNS FOR SPRAYING TWO OR MORE MATERIALS

Kurt Herman Lindberg and Stig Folke Adrian Petersen, Skara, Sweden, assignors to Atlas Copco Aktiebolaget, Nacka, Sweden, a corporation of Sweden

Application November 1, 1956, Serial No. 619,745
Claims priority, application Sweden November 3, 1955
3 Claims. (Cl. 299—140)

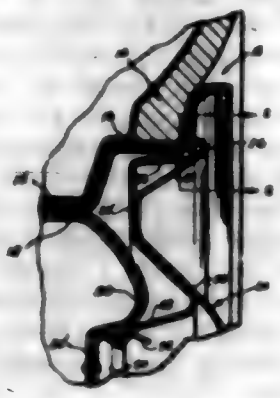
1. A spray gun for simultaneous spraying of two materials such as paint or lacquer and a hardening agent for such paint or lacquer, a spray head in said spray gun, said spray head having an annular orifice for a first spray material, a hollow valve spindle slidably mounted in said gun and projecting through said orifice to provide a first control valve for controlling the discharge of said first spray material through said annular orifice and providing a discharge passage for a second spray material disposed coaxially with the annular orifice, a first valve seat in said gun cooperating with said valve spindle to open and close said orifice, a trigger in the spray gun connected to said spindle for moving said spindle axially from said first valve seat to open said annular orifice, a second

pipe section being disposed within said spacer and ex- journal bearing housing, bearing means in said housing for

valve seat in the spray gun, a valve member on said spindle cooperating with said second valve seat to provide a second control valve for controlling the admission of said second spray material to said discharge passage in

the hollow valve spindle upon axial movement of the valve spindle by the trigger, and means on said gun for adjusting said second valve seat in an axial direction with respect to said valve member on said hollow valve spindle.

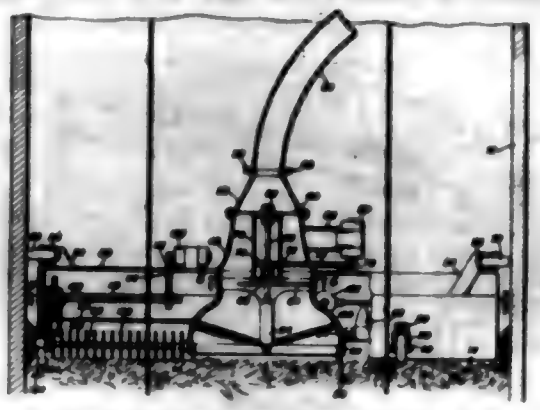
2,864,654
WHEEL COVER
Edwin P. Hurd, Detroit, Mich., assignor to Hurd Lock & Manufacturing Company, Detroit, Mich., a corporation of Michigan
Application December 21, 1953, Serial No. 399,254
8 Claims. (Cl. 301—37)



1. A wheel cover for disposition over a wheel and inwardly of the wheel rim, comprising a circular ornamental disk adapted to conceal the wheel and inner parts of the rim, an annulus in nested relation with said disk and having its radially outer periphery interlocked with said disk, the radially inner periphery of said annulus extending axially inwardly and adapted to be placed in resilient engagement with central portions of said wheel, said annulus having a plurality of resilient tabs equally spaced around its periphery and adapted to be pressed into engagement with the rim for aiding in cushioning the wheel cover on the rim said tabs being alternately twisted in opposite directions so as to permit alternating edges to be in biting engagement with said rim thereby preventing rotation of the cover relative to the wheel and rim.

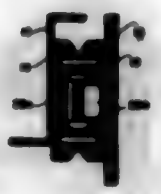
2,864,655
AUTOMATIC SILO ENSILAGE UNLOADER
Gerard E. Caron, Westford, Vt.
Application May 12, 1955, Serial No. 507,889
9 Claims. (Cl. 302—56)

1. A silo ensilage unloader comprising an elongated frame extending diametrically across a silo, a plurality of guide wheels supported from said frame for engaging the inner surface of the silo for guiding the rotational movement of said frame, silage engaging supporting wheels supported from said frame, silage engaging driving wheels supported from said frame, means on said frame for



conveying silage to the center of the silo, vertical lift fan means for excavating silage from the center of the silo and discharging the silage axially of the fan means, means for driving said driving wheels and silage conveying means, and independent means for driving said fan means.

2,864,656
SLIDE MECHANISM
Alexander Yorinks, New Hyde Park, N. Y.
Application June 25, 1954, Serial No. 439,341
6 Claims. (Cl. 308—3.8)



1. A slide apparatus including frictionally and non-frictionally engaged components comprising a track member being disposed in a given plane, a floating member, and an extension member, said floating member including all of said frictionally engaged components, the axes of a plurality of said frictionally engaged components being disposed in said given plane, the axes of a plurality of other of said frictionally engaged components being angularly disposed to said given plane, said floating member being non-frictionally interposed between said track member and said extension member, certain of said frictionally engaged components spacing said track member from said floating member, other of said frictionally engaged components spacing said floating member from said extension member.

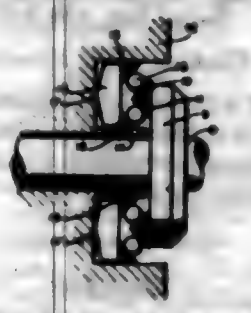
2,864,657
BEARING HANGER
David E. Davidson, Fleetmoor, and Bert B. Parshall, Wood Dale, Ill., and Donald E. Thal, San Mateo, Calif., assignors to Link-Belt Company, a corporation of Illinois
Application March 22, 1957, Serial No. 647,868
6 Claims. (Cl. 308—187)

1. A bearing hanger comprising a mounting bracket adapted for attachment to the trough of a screw conveyor, a tubular spacer centrally secured to said mounting bracket, a bearing housing positioned on the free end of said spacer, a pipe section rigidly connected to said bearing housing and having a hollow bore in communication with the interior of said bearing housing, said

pipe section being disposed within said spacer and extending above said bracket, and a clamping nut threaded

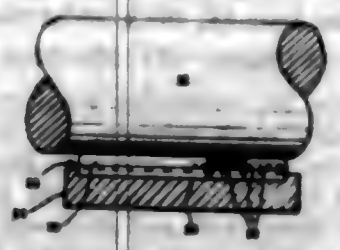
on the free end of said pipe section for drawing said housing tightly against the bottom of said spacer.

2,864,658
ANTIFRICTION BEARINGS DESIGNED TO ABSORB HIGH THRUST LOADS
Paul Eschmann, Schweinfurt, Germany, assignor to Kugelfischer Georg Schafer & Co., Schweinfurt, Germany
Application March 16, 1955, Serial No. 494,749
Claims priority, application Germany March 22, 1954
7 Claims. (Cl. 308—233)



1. An antifriction bearing comprising a stationary housing having an annular recess, a rotatable shaft within said housing disposed in substantially concentric relation to said recess, a disk-shaped thrust member attached to said shaft in facing relation to said recess, a first bearing ring attached to said thrust member, said first bearing ring having a first bearing surface angularly disposed to the axis of said shaft, a second bearing ring slidably disposed adjacent said recess and having a second bearing surface substantially parallel to the said first bearing surface of said first bearing ring, resilient means disposed between and engaging both said second bearing ring and said annular recess in said housing at a position remote from said first bearing ring thereby to resiliently urge said slidable second bearing ring toward said first bearing ring, and a plurality of ball-bearings disposed between and contiguous with the said angularly disposed first and second bearing surfaces of said first and second bearing rings.

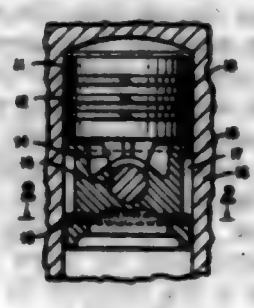
2,864,659
STAVE CONSTRUCTION FOR PROPELLER SHAFT BEARINGS
Stewart U. Patton, Severna Park, Md.
Application March 4, 1955, Serial No. 492,323
3 Claims. (Cl. 308—236)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In combination, a compensating device for relieving excessive loading in an end of a bearing comprising a

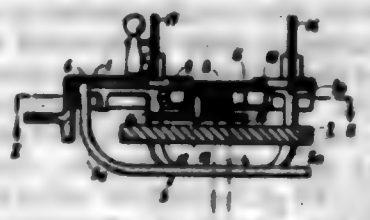
journal bearing housing, bearing means in said housing for supporting a shaft adapted for rotation therein, said bearing means including a flexible member adapted to be contacted by a journal on such a shaft, said bearing means having an outer surface in total contact with said housing, and means adjacent an end of said flexible member providing for greater compression than the remainder thereof, whereby said end of said flexible member is capable of deflection thereby permitting conformance to any sag curvature in a shaft.

2,864,660
INTERNAL COMBUSTION ENGINE PISTON AND OIL RING FOR SAME
Harry M. Seubert, Jr., Toledo, Ohio
Application April 11, 1956, Serial No. 577,606
5 Claims. (Cl. 309—45)



1. A piston assembly for internal combustion engines comprising a piston head, a skirt depending from the head and having an inwardly extending channel extending around the skirt, and an endless helix of resilient wire-like material embracing said channel and rotatable therein during its travel from one end of the channel to the other during piston reciprocation.

2,864,661
INSTRUMENT FOR CHECKING THE RATE OF TIME-PIECE MOVEMENTS
Fritz Marti, Georges Braunschweig, and Jean Schaad, La Chaux-de-Fonds, Switzerland
Application November 29, 1954, Serial No. 471,851
Claims priority, application Switzerland February 26, 1954
3 Claims. (Cl. 346—79)



1. In an instrument for checking the rate of time-piece movements, comprising a top plate, a synchronous motor serving as a time standard, a rotary member driven by said motor, marking ribs provided on said rotary member, which rotary member is mounted below said plate, an electromagnet energizable by the amplified tick-tocks of a time-piece to be tested, and a hammer controlled by said electromagnet and cooperating with an inking device to print, on a recording band, the successive points of intersection of the ribs with the hammer, the improvement in said instrument which consists of a gear train driven by the shaft of said synchronous motor and driving said recording band, said rotary member being a cage in the shape of an inverted bell, said cage being mounted on said motor shaft and substantially surrounding said synchronous motor as well as said gear-train, said ribs being provided on the rim of said bell-shaped cage.

CHEMICAL

2,864,663

BLEACHING METHOD

Julien Dougier, Basel, Switzerland

No Drawing. Application May 23, 1955
Serial No. 510,591
Claims priority, application France June 1, 1954
9 Claims. (Cl. 8—108)

1. In a process of bleaching organic fibrous material wherein the material while in contact with both a chlorine compound selected from the group consisting of a chlorite and a hypochlorite bleaching agent and an acid is subjected to heat to cause a reaction between the chlorine compound and acid to bleach the fibrous material, the steps which comprise thoroughly impregnating the fibrous material to the core thereof with the acid, removing excess acid from the material by squeezing same, thereafter contacting the material while thoroughly impregnated to the core thereof with acid with a solution containing the chlorine compound to impregnate substantially only the surface of the material with the chlorine compound, removing excess chlorine compound from the material by squeezing same, and subjecting the impregnated material to sufficient heat to cause the acid and the chlorine compound in the material to react and cause a bleaching of the material.

2,864,663

PROCESS FOR THE PRODUCTION OF VEGETABLE PROTEIN FIBERS

Leon C. Lis, Narragansett, R. I., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

Application November 1, 1954, Serial No. 465,921
4 Claims. (Cl. 18—54)

1. In a process of curing synthetic zein fiber with formaldehyde the step which consists in stretching the fiber, impregnating the fiber in stretched condition with about an equal weight of an aqueous solution containing from about 3% to about 10% of sulfuric acid, from about 3% to about 10% of formaldehyde and at least 90% saturated with sodium chloride, relaxing the fiber and subjecting it to an atmosphere which is at least 90% saturated with water vapor at a temperature within the range from about 110° F. to about 140° F. for a period of from about 30 minutes to about 2 hours.

2,864,664

SEPARATION OF URANIUM, PLUTONIUM, AND FISSION PRODUCTS

Robert Spence and Maurice Wolfenden Lister, Dideot, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 1, 1949
Serial No. 79,114
5 Claims. (Cl. 23—14.5)

2. In a method for recovery of uranium and plutonium in acidic aqueous nitrate solutions containing fission products the steps comprising essentially saturating the solution with a nitrate salt, rendering the solution substantially stoichiometrically neutral with a base, adding a reducing agent to change the plutonium to the trivalent state, extracting the uranium from the solution into an organic solvent therefor, removing the solvent with the uranium, making the residual aqueous solution acid with nitric acid, adding an oxidizing agent to change the plutonium to higher than the tetravalent state and adding organic solvent to extract the plutonium and separating the organic solvent with the plutonium.

2,864,665

REDUCTION OF PLUTONIUM TO PU^{+3} BY SODIUM DITHIONITE IN POTASSIUM CARBONATE

Daniel R. Miller, Ithaca, N. Y., and Henry R. Hoekstra, Chicago Heights, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application June 22, 1949
Serial No. 100,742
7 Claims. (Cl. 23—14.5)

1. The method of reducing plutonium values from a higher valence state to the trivalent state, which comprises adding to said plutonium values contained in an aqueous alkaline medium dithionite ion.

2,864,666

PRODUCTION OF URANIUM TETRACHLORIDE

Vincent P. Calkins, Oak Ridge, Tenn., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 13, 1950
Serial No. 200,691
9 Claims. (Cl. 23—14.5)

1. A process for the production of UCl_4 which comprises contacting uranium values under substantially anhydrous conditions with at least one inorganic chloride selected from the group of inorganic chlorides consisting of $AlCl_3$, BCl_3 and $NaAlCl_4$ at a temperature and pressure such that said chlorides are maintained in at least the molten form, until said uranium values are substantially completely converted to UCl_4 and thereafter recovering UCl_4 from the resulting reaction products.

2,864,667

ANIONIC EXCHANGE PROCESS FOR THE RECOVERY OF URANIUM AND VANADIUM FROM CARBONATE SOLUTIONS

Richard H. Bailes, Walnut Creek, and David A. Ellis and Ray S. Long, Concord, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application June 16, 1953, Serial No. 362,122
14 Claims. (Cl. 23—14.5)

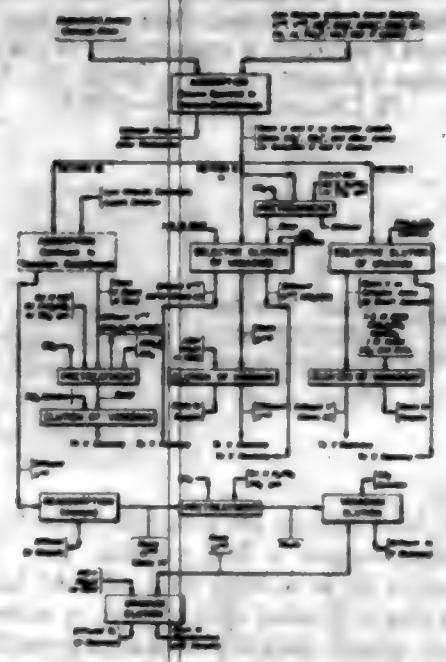
1. In a process for recovering uranium and vanadium from a carbonate leach solution, the steps comprising adsorbing the uranium and vanadium from said solution with a strongly basic anionic exchange resin, first selectively eluting uranium from said resin with an ammonium sulfate solution, then eluting vanadium from said resin subsequent to said uranium elution with an agent selected

tion temperature of the metal hydride at the prevailing hydrogen partial pressure; separating the unabsorbed

2,864,673

CARBON BLACK FURNACE DUAL FLUID

from the group consisting of above about 5 M NaCl solution, $(NH_4)_2CO_3$ solution, $NaHCO_3$ solution, about 1 M



NaOH solution and saturated SO_2 solution, and recovering the uranium and vanadium from the respective eluate.

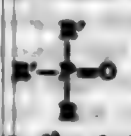
2,864,668

URANIUM EXTRACTION PROCESS

Willis H. Baldwin and Cecil E. Higgins, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application November 23, 1956
Serial No. 624,179
8 Claims. (Cl. 23—14.5)

1. A process for recovering uranium values from an acidic aqueous solution containing said values which comprises contacting said solution with an organic solution comprised of a substantially water-immiscible organic diluent and a member selected from the group having the formula



where R is selected from the group consisting of alkyl radicals, aryl radicals, and aralkyl radicals, R' is selected from the group consisting of alkyl radicals, aryl radicals, aralkyl radicals, alkoxy radicals, and aralkoxy radicals, and the total number of carbon atoms in the member is at least 12, whereby uranium values are extracted into the organic phase, and separating the resulting uranium-loaded organic phase from the remaining aqueous solution.

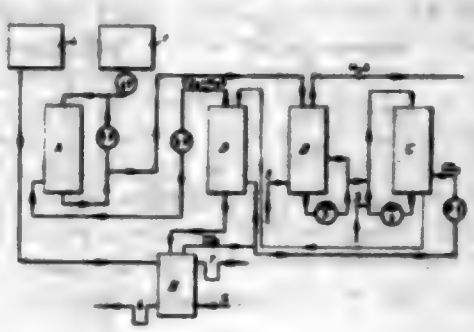
2,864,669

METHOD FOR RECOVERING SULFUR AND ALKALI FROM WASTE LIQUORS

Knut Ahlborg and Karl Nicolaus Cederquist, Falun, Sweden, assignors to Stora Kopparbergs Bergslags Aktiebolag, Falun, Sweden, a joint stock company limited of Sweden

Application November 1, 1954, Serial No. 466,132
13 Claims. (Cl. 23—131)

1. A method for recovering sulfur and alkali from waste liquors derived from the digestion of lignocellulosic materials with a cooking liquor containing a sulfur compound selected from the group consisting of alkali sulfites and bisulfites subsequent to evaporating and burning the liquors to smelt soda without any apreciable formation of thiosulfate, in which a solution of said smelt soda is carbonated in a first stage at a pressure of at least about atmospheric pressure by means of at least substantially pure oxygen-free carbon dioxide to convert the soda and the alkali metal sulfide of the solution at least substantially completely into bicarbonate, the carbonated solution is freed from the main portion of the sulfide sulfur by stripping by means of a material selected from the group consisting of steam under vacuum, air and flue gas, the solution is recarbonated in a second stage by means of carbon dioxide at a pressure of at least about atmospheric pressure, remaining sulfide sulfur is stripped by means of at least substantially pure oxygen-free carbon dioxide which is thereafter used for the carbonation in the first stage, and the hydrogen sulfide-free bicarbonate solution obtained is reacted in solution with a sulfur compound selected from the group consisting of alkali bisulfites, sulfurous acid and sulfur dioxide to remove at least substantially completely the carbon dioxide used for the above mentioned carbonation in the both stages and for the stripping in the second stage.



2,864,670

PROCESS FOR RECOVERING ACID FROM WASTE ACID LIQUORS

Roger Walwark III, Red Bank, N. J., assignor to National Lead Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application April 11, 1955
Serial No. 500,688
9 Claims. (Cl. 23—172)

1. A process for treating waste sulfuric acid liquor containing solubilized trivalent alum-forming cations and dissolved iron and magnesium impurities to obtain a residual acid solution amenable to concentration which comprises: introducing into said liquor a monovalent alum-forming constituent in at least an amount to react stoichiometrically with said alum-forming cations; cooling the treated liquor to a temperature below about —10° C., holding said liquor at said temperature for a period of time sufficient to crystallize out an alum compound and said iron and magnesium impurities as a filterable crystalline mass; and separating the filterable crystalline mass from the liquor to obtain a residual acid solution effectively free of said metallic impurities.

2,864,671

PROCESS OF HYDROGEN RECOVERY

John William Mohlman, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

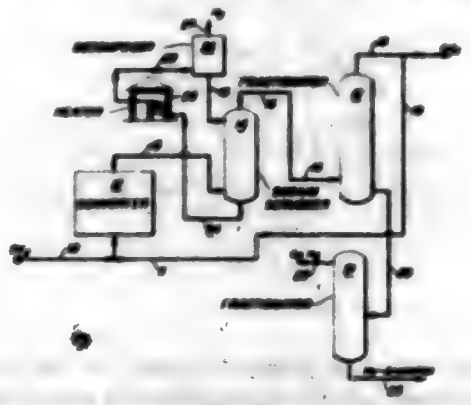
Application June 30, 1954, Serial No. 440,355
7 Claims. (Cl. 23—212)

1. In processes for thermal conversion of hydrocarbon charge stocks, the method of quenching the hot conversion product stream and recovering substantially pure hydrogen therefrom which comprises: rapidly cooling said hot conversion product stream in an absorption zone by directly contacting said hot conversion product stream with a cool liquid contact medium comprising at least one metal selected from the group consisting of alkali and alkaline earth metals capable of forming an equilibrium metal hydride with hydrogen at elevated temperature; absorbing hydrogen from the cooled conversion product stream in the liquid contacting medium to form a fluid mixture of metal hydride and liquid contacting medium while maintaining a temperature less than the decomposi-

and a product line and a recycle line from the opposite end section; an upright closed vessel having an outlet for

tion having an A. S. T. M. distillation with an initial boiling point within the range of about 210° F. to 355°

tion temperature of the metal hydride at the prevailing hydrogen partial pressure; separating the unabsorbed portion of the conversion product stream; withdrawing the fluid mixture from the absorption zone; recovering substantially pure hydrogen from the fluid mixture in a decomposition zone by adjusting the temperature-pressure relationship therein to provide a temperature greater than



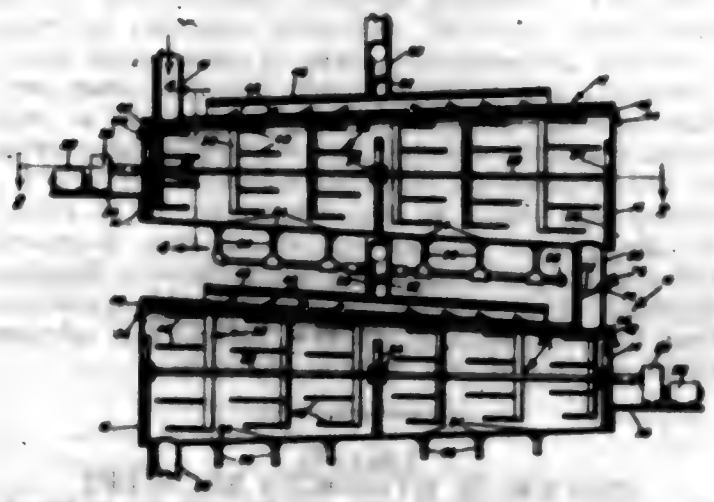
the decomposition temperature of metal hydride at the hydrogen pressure prevailing in said decomposition zone; withdrawing liquid contacting medium from the decomposition zone; cooling the liquid contacting medium to a temperature substantially below the temperature level in the conversion zone; and recycling said liquid contacting medium to the absorption zone.

2,864,672

ORGANIC WASTE REDUCTION APPARATUS

Edward H. Brooks, Sr., Pownal, Maine, assignor of forty-nine percent to Edward H. Brooks, Jr., Pownal, Maine

Application December 28, 1953, Serial No. 400,498
1 Claim. (Cl. 23—259.1)



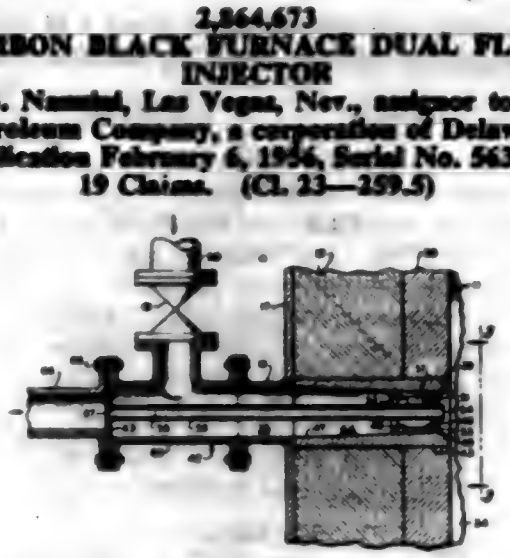
An organic waste digesting apparatus comprising a plurality of vertically stacked, horizontally disposed frustro-conical drums, vertically adjacent one of said drums being reversely positioned with respect to one another, each of said drums having a material entrance opening therein adjacent the smaller end thereof and a material exit opening therein adjacent the larger end thereof, the exit for one drum constituting the entrance for the next lower drum, a rotatable shaft extending axially through each of said drums, plows mounted on each shaft at spaced points therealong for agitating and lifting material within the drum while moving the material from the entrance to the exit, means for aerating the interior of each drum from both ends of the drum and means for exhausting gases and draining liquids from said drums at spaced intervals throughout the length of each drum.

2,864,673

CARBON BLACK FURNACE DUAL FLUID INJECTOR

Louis G. Nammid, Las Vegas, Nev., assignor to Phillips Petroleum Company, a corporation of Delaware

Application February 6, 1956, Serial No. 563,530
19 Claims. (Cl. 23—259.5)



1. A dual fluid injector for a carbon black furnace comprising in combination a first ceramic tube constructed and disposed to fit in a fluid inlet of said furnace, said first tube having a Venturi shaped bore, a second ceramic tube of lesser length than the converging portion of said Venturi having a tapered external surface adapted and disposed to fit into said converging portion adjacent the throat of said Venturi, said second tube having a cylindrical bore the ends of which are flared outwardly to merge with the converging and diverging surfaces of said Venturi to aid streamline flow of a first fluid therethrough, and a third tube for the injection of a second fluid into said furnace extending from the exterior of said furnace axially into and spaced from the inner cylindrical wall of said second tube by radial lugs secured to said third tube to aid the flow of said first fluid into said furnace through the annulus between said second and third tubes.

10. A carbon black furnace comprising in combination a heat insulating body having a reaction chamber therein, an inlet and an outlet passage communicating between the interior of said chamber and the exterior of said furnace, a metallic housing around said furnace, a dual fluid injector comprising a first ceramic tube fitted in said inlet passage, said first tube having a Venturi shaped bore, a second ceramic tube of lesser length than the converging portion of said Venturi having a tapered external surface adapted and disposed to fit into said converging portion adjacent the throat of said Venturi, said second tube having a cylindrical bore the ends of which are flared outwardly to merge with the converging and diverging surfaces of said Venturi to aid streamline flow of a first fluid therethrough, and a third tube for the injection of a second fluid into said furnace extending from the exterior of said furnace axially into and spaced from the inner cylindrical wall of said second tube by radial lugs secured to said third tube to aid the flow of said fluid into said furnace through the annulus between said second and third tubes, a first metal supply pipe for said first fluid secured to said metallic housing around and in communication with the bore of said first tube, said third tube passing through the wall of said first pipe and being supported thereby in its said position, and a supply pipe for said second fluid secured in communication with said end of said third tube supported by said first pipe.

2,864,674

PROCESS AND APPARATUS FOR RECOVERY OF POWDERED MATERIALS SUCH AS CARBON BLACK

William R. King, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application July 13, 1954, Serial No. 443,734
18 Claims. (Cl. 23—314)

6. Apparatus comprising in combination a carbon black pelleting mill having a feed line to one end section

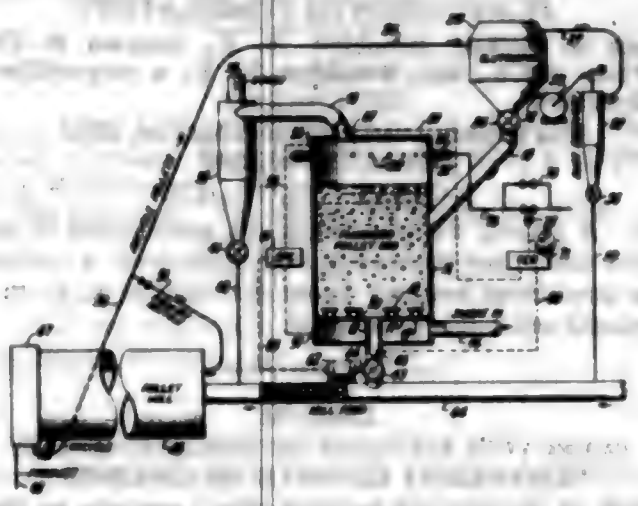
2,864,678

METHOD OF AND APPARATUS FOR PREPARA-

2,864,680

HERBICIDES RELATED TO 1,4,5,6-TETRACHLORO-

and a product line and a recycle line from the opposite end section; an upright closed vessel having an outlet for gases in the top section and an outlet conduit for pellets in the bottom section, said outlet being connected to the feed-line to said mill; a flow control device in said outlet conduit and means for regulating said flow control device so as to maintain a predetermined level of solids in a fluidized bed in said vessel; an inlet conduit connected with the bottom section of said vessel for introducing a carbon black-containing gas thereto; a pellet receiver connected by a conveyor with the pellet recycle line from said mill; a conduit having feed control means therein connecting said receiver with said vessel for delivery of pellets thereto; spray means in the upper section of said vessel for spraying a liquid onto said fluidized bed; and a feed line connected to said spray means having a flow control means therein.



12. A process for pelleting carbon black comprising passing powdered black to a pelleting mill and pelleting same; recovering a portion of the effluent pellets as product and recycling another portion to the feed end of said mill; passing at least a portion of the recycled pellets, prior to introduction to said mill, into an upper section of a carbon black recovery zone and maintaining a fluidized bed of said pellets therein; spraying a liquid comprising water into the upper section of said bed so as to wet said pellets; passing a gaseous suspension of powdered carbon black upwardly into the bottom of said bed over its entire cross section and upwardly therethru so as to maintain said bed in fluidized condition and deposit powdered carbon black on the moist surfaces of said pellets; withdrawing a stream of the suspending gas from the upper section of said recovery zone; withdrawing pellets from the bottom of said recovery zone and passing same to said mill as recycle; separately recovering dust from the recycled pellets fed to said recovery zone; and introducing the recovered dust to the feed end of said mill.

2,864,675

ADDITIVE FOR GASOLINE AND DIESEL FUELS

James W. Jean, Altadena, Calif., assignor, by direct and mesne assignments, of fifty-one percent to A. R. Chandler, thirty-two percent to John N. Adams, and seventeen percent to Stanley Turner

No Drawing. Application October 24, 1955
Serial No. 542,508
12 Claims. (Cl. 44—59)

1. The method of making an additive suitable for a spark ignition engine hydrocarbon fuel boiling in the gasoline boiling range and for a diesel engine fuel, which comprises admixing substantially dry urea and a dry alkali metal hydroxide selected from the group consisting of sodium hydroxide and potassium hydroxide with a liquid mixture consisting essentially of an alcohol containing from three to five carbon atoms, a ketone containing up to six carbon atoms and a solvent selected from the group consisting of a petroleum distillate fraction having an A. S. T. M. distillation with an initial boiling point within the range of about 210° F. to 355° F., an end point within the range of about 240° F. to 415° F., an A. P. I. gravity within the range of about 27.5 to 42.5 at 60/60° F. and an aromatic hydrocarbon content above about 50%, benzene, a homolog of benzene, gasoline and kerosene, the amount of said urea being within the range of from about 5% to 15% of the weight of said liquid mixture, the amount of said alkali metal hydroxide being within the range of from about one-sixth to one-half of the weight of said urea, the said solvent component of said liquid mixture comprising from about 25% to about 75% by volume of said liquid mixture, and the alcohol and ketone components comprising each in excess of about 10% by volume of said liquid mixture, allowing the admixture to stand at ordinary room temperature until a clear reddish colored liquid is formed, and separating the resultant clear red liquid from any newly formed solid material and residual material.

2,864,676

STABILIZATION OF ORGANIC COMPOUNDS

Ralph B. Thompson, Hinsdale, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application September 29, 1955
Serial No. 537,539
5 Claims. (Cl. 44—63)

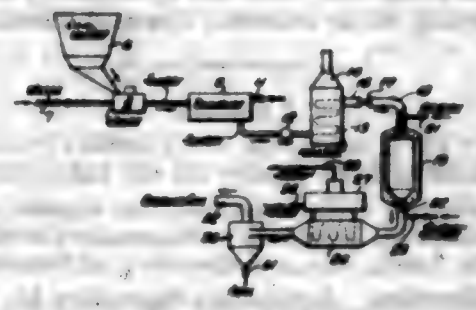
1. Gasoline subject to deterioration in storage containing a stabilizing concentration of an alkylaminocarbazole inhibitor.

2,864,677

GASIFICATION OF SOLID CARBONACEOUS MATERIALS

Du Bois Eastman, Whittier, Calif., and Leon P. Gaucher, Beacon, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

Application February 24, 1955, Serial No. 490,214
11 Claims. (Cl. 48—206)



1. In a process for the generation of carbon monoxide and hydrogen from a solid carbonaceous fuel by partial oxidation in an unpacked reaction zone wherein said solid fuel in fine particle form is reacted with free oxygen and steam while suspended in gaseous reactants and reaction products at a pressure within the range of from about 100 to about 600 pounds per square inch gauge and at a temperature within the range of from about 2000 to about 3500° F., the improvement which comprises forming a fluid slurry of solid fuel particles in a vaporizable liquid reactant selected from the group consisting of water and liquid hydrocarbons, introducing said slurry as a continuous stream into an externally heated tubular heating zone at a linear velocity of at least one-half foot per second, effecting vaporization of substantially all of said liquid from said slurry within said heating zone at an elevated pressure in excess of the pressure in said reaction zone thereby forming a stream of dispersion of said solid particles in resulting vapor moving at a velocity in excess of about 25 feet per second, and passing said stream of dispersion into said reaction zone into intimate admixture with gas containing free oxygen at a velocity in excess of about 30 feet per second.

ing the soil medium with a herbicidal amount of a compound of the structure:

reactor temperatures in the range 1100 F. to the sticking temperature, controlling conditions in the secondary re-

length of each drum.

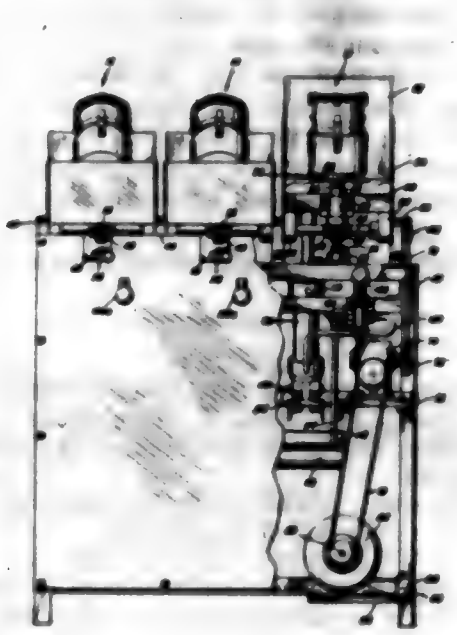
black pelleting mill having a feed line to one end section

2,864,678

METHOD OF AND APPARATUS FOR PREPARATION OF HIGHLY FLAMMABLE MIXTURES

William Charles Fink, Williamsport, Philip F. Lynn, Montoursville, and Magnus Nordstrom, Williamsport, Pa., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

Application April 27, 1956, Serial No. 581,135
7 Claims. (Cl. 52—19)



1. The method of preparing a highly flammable mixture of a zirconium metal powder and a cellulose binder solution which comprises: charging the powder and binder solution into a ball mill; affixing a ventable membrane lid to said ball mill; tilting said ball mill so that its longitudinal axis is disposed at an angle to the vertical; and rotating said ball mill while it is so angularly disposed to effect a mixing of the materials disposed therein.

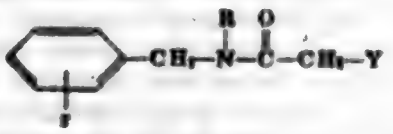
2,864,679

SELECTIVE METHOD OF INHIBITING PRE-EMERGENT GROWTH OF GRASSES

Philip C. Hamm, Webster Groves, and Angelo J. Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,736
12 Claims. (Cl. 71—2.3)

2. The method of selectively inhibiting the germination of grass seeds and the preemergence growth thereof in the presence of growing crops, which comprises treating the soil medium with a herbicidal amount of a compound of the structure:



wherein Y is a halogen atom, wherein x is a radical selected from the group consisting of a hydrogen atom, a halogen atom, a nitro radical and an alkyl radical having up to four carbon atoms, and wherein R is selected from the group consisting of hydrogen, alkyl radicals having up to six carbon atoms, alkenyl radicals having up to six carbon atoms, alkynyl radicals having up to six carbon atoms halo-substituted alkyl radicals having up to six carbon atoms, halo-substituted alkenyl radicals having up to six carbon atoms, and halo-substituted alkynyl radicals having up to six carbon atoms.

2,864,680

HERBICIDES RELATED TO 1,4,5,6-TETRACHLORO-BICYCLO(2.2.1)-5-HEPTENE

Edward R. Degginger, North Syracuse, N. Y., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Application January 31, 1957
Serial No. 637,375
8 Claims. (Cl. 71—2.3)

1. A compound suitable for use as a herbicide selected from the group consisting of 1,4,5,6-tetrachloro-2-acetoxy - bicyclo - (2.2.1) - 5 - heptene, 1,4,5,6 - tetrachlorobicyclo-(2.2.1)-5-heptenol-2 and 1,4,5,6-tetrachlorobicyclo-(2.2.1)-5-heptenone-2.

2,864,681

PLANT GROWTH STIMULATION

Louis G. Nickell, Brooklyn, N. Y., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware

No Drawing. Application May 25, 1954
Serial No. 432,312
2 Claims. (Cl. 71—2.5)

1. A process for stimulating the germination of seeds which comprises contacting said seeds with a composition containing between about 0.1 and 50 p. p. m. of isoniazid and a carrier therefor.

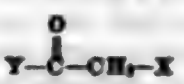
2,864,682

SELECTIVE METHOD OF INHIBITING PRE-EMERGENT GROWTH OF GRASSES

Angelo J. Speziale, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,739
10 Claims. (Cl. 71—2.5)

1. The method of selectively inhibiting the germination of grass seeds and the pre-emergence growth thereof in the presence of growing crops, which comprises treating the soil medium with a herbicidal amount of a compound of the structure:



wherein X is a halogen of the group consisting of chlorine, bromine and iodine and wherein Y is an organic nitrogen containing heterocyclic radical derived from amines of the group consisting of morpholine, piperidine, pyrrolidine, pyrrole, pyrroline, gamma-pyridone, alpha-pipecoline, beta-pipecoline, gamma-pipecoline, beta-pyrrolidone, thiomorpholine, and the substituted piperidines and morpholines wherein the substituents are selected from the group consisting of halogen radicals, nitro radicals and alkyl radicals having up to four carbon atoms, the nitrogen atom of the heterocyclic ring being attached directly to the carbonyl group.

2,864,683

SELECTIVE METHOD OF INHIBITING PRE-EMERGENT GROWTH OF GRASSES

Philip C. Hamm, Webster Groves, and Angelo J. Speziale, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,736
13 Claims. (Cl. 71—2.7)

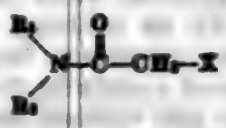
4. The method of selectively inhibiting the germination of grass seeds and the preemergence growth thereof in the presence of growing crops, which comprises treat-

by volume carbon monoxide, the temperature of preheat of the solids being about 1600° to 1800° F. and of the gas

tion from its halide and for preventing absorption of hydrogen in the titanium metal product during removal

from the group consisting of a petroleum distillate fraction in excess of about 30 feet per second.

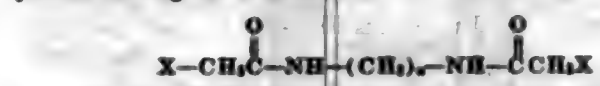
ing the soil medium with a herbicidal amount of a compound of the structure:



wherein each of the R_1 and R_2 radicals is selected from the group consisting of hydrogen, alkyl radicals having up to six carbon atoms, alkenyl radicals having up to six carbon atoms, alkynyl radicals having up to six carbon atoms, halo-substituted alkyl radicals having up to six carbon atoms, halo-substituted alkenyl radicals having up to six carbon atoms, and halo-substituted alkynyl radicals having up to six carbon atoms, not more than one of the R_1 and R_2 groups being hydrogen, and wherein the X radical is a halogen atom of the group consisting of chlorine, bromine and iodine.

2,864,684
HERBICIDES
Angelo J. Speziale, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application September 15, 1955
Serial No. 534,687
16 Claims. (Cl. 71—2.7)

1. A method of destroying plants which comprises contacting the plant with a herbicidal amount of a compound having the structure



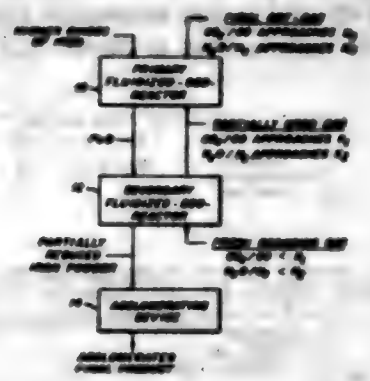
wherein X is a halogen atom of a group consisting of bromine, chlorine and iodine, and wherein *n* is an integer from two (2) to six (6).

2,864,685
PROCESS FOR MIXED FERTILIZER CONTAINING UREAFORM
Charles E. Waters, Petersburg, and Joseph A. Smith, Richmond, Va., assignors to Allied Chemical Corporation, New York, N. Y., a corporation of New York
No Drawing. Application July 14, 1955
Serial No. 522,157
7 Claims. (Cl. 71—29)

1. In the process of making a mixed fertilizer in which nitrogen is supplied in the form of a reaction product of urea and formaldehyde, the steps comprising mixing a super phosphate with a metallic base in an amount equal to 1.4 to 1.9 mol equivalents of base per mol of P_2O_5 in the phosphate, mixing in a urea formaldehyde resin fertilizer and blending to form a mixture having a pH of 6.0 to 7.5.

2,864,686
METHOD OF TREATING IRON OXIDE FINES
Jagdish C. Agarwal, Penn Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application December 15, 1955, Serial No. 553,265
7 Claims. (Cl. 75—3)

5. A method of preparing a synthetic product for use in steelmaking comprising continuously introducing finely divided higher iron oxide starting material to a primary fluidized bed reactor, continuously introducing intermediate product from said primary reactor to a secondary fluidized bed reactor, continuously introducing ascending currents of a fresh reducing gas of the group consisting of carbon monoxide, hydrogen and mixtures thereof to said secondary reactor and of off-gas from said secondary reactor to said primary reactor counter to the flow of iron oxide material, the ascending gas currents maintaining the beds in each reactor in a fluidized state, maintaining both reactor temperatures in the range 1100 F. to the sticking temperature, controlling conditions in the secondary reactor to approach equilibrium for the reduction of FeO to Fe and in the primary reactor to approach equilibrium for the reduction of higher oxides of iron to FeO, whereby



the intermediate product consists substantially of FeO and the ultimate product consists of metallic iron and FeO and has an available oxygen content on a gangue-free basis of about 5 to 15 percent by weight, and agglomerating the ultimate product without reoxidation.

2,864,687
PELLETIZING METHOD
Thomas L. Myron, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application March 27, 1956, Serial No. 574,157
1 Claim. (Cl. 75—3)

A method of pelletizing iron-bearing materials preliminary to fritting comprising feeding a mixture of moist iron-bearing particles and solid fuel particles to a pelletizer, the moisture content being 9 to 14 percent by weight, said mixture of particles having a size distribution as follows:

	Percent by weight
¾ by ⅛ inch	45 to 65
⅛ by 100 mesh	20 to 30
Minus 100 mesh	15 to 25

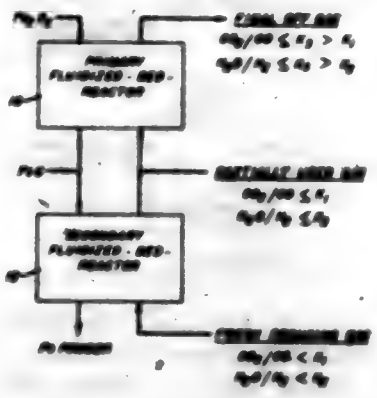
there being iron-bearing particles present in all three size ranges, and pelletizing said particles to produce pellets having solid nuclei, and accretions around said nuclei, the ¾ by ⅛ inch particles becoming nuclei, the minus 100 mesh particles becoming accretions on said nuclei, some of the ⅛ inch by 100 mesh particles becoming nuclei and others being included in the accretions.

2,864,688
TWO-STEP METHOD OF REMOVING OXYGEN FROM IRON OXIDE
Thomas F. Reed, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application January 28, 1958, Serial No. 711,757
1 Claim. (Cl. 75—26)

A method of removing oxygen from iron oxide comprising continuously feeding finely divided preheated higher oxide solids to a primary reactor and thence to a secondary reactor, continuously introducing ascending currents of preheated reducing gas to the secondary reactor and of off-gas from the secondary reactor to the primary reactor, the reducing constituent of said gas consisting essentially of hydrogen and up to about 25 percent

copper values from the solution, neutralizing the solution to a pH ranging from 5.2 to 5.7 and thereby form- characterized by high compressive and tensile strength, high hardness and low setting expansion, said alloy con-

by volume carbon monoxide, the temperature of preheat of the solids being about 1600° to 1800° F. and of the gas about 1500° to 1700° F., the ascending gas currents maintaining the solids in each reactor as a fluidized bed whose characteristics are substantially uniform throughout, the average composition of the solids in the primary reactor approaching FeO and in the secondary reactor having a maximum O/Fe atomic ratio of about 0.152, which com-



positions are attained immediately by newly fed solids, controlling reactions in the secondary reactor to produce an off-gas in which the ratios H_2O/H_2 and CO_2/CO approach equilibrium for removing oxygen from FeO, controlling reactions in the primary reactor to remove only sufficient oxygen from the higher oxides to form an intermediate product whose composition approaches FeO, and recovering a product predominantly metallic iron from the secondary reactor.

2,864,689

PROCESS OF SUCCESSIVELY DESULPHURIZING AND DESILICONIZING A BATH OF PIG IRON

René Perrin, Paris, France, assignor to Societe d'Electro-Chimie d'Electro-Metallurgie et des Aciéries Electriques d'Ugine, Paris, France, a corporation of France

No Drawing. Application July 2, 1957
Serial No. 669,464
Claims priority, application France July 24, 1956
3 Claims. (Cl. 75—51)

1. A process of successively desulphurizing and desiliconizing a bath of pig iron, which comprises blowing the bath by means of side blowing or through the bottom of the apparatus containing the pig iron with a gas which is non-oxidizing with respect to silicon at the temperature of the bath and carries entrained lime, thereby forming a layer of sulphur-containing lime on the surface of the bath, and thereafter, without removing the layer of sulphur-containing lime, blowing the bath by means of side blowing or through the bottom of the apparatus containing the pig iron with a gas which is oxidizing with respect to silicon at the temperature of the bath, thereby forming globules of manganese and iron silicates which rise in the bath and form a layer of slag below the layer of lime, the oxidizing gas employed being limited to such an amount and being fed at such a rate that there is no violent stirring of the bath and the gas is substantially entirely absorbed by the bath so that substantially no gas bubbles reach the surface of the bath.

2,864,690

PROCESS FOR TREATING TITANIUM METAL

Robert P. Lee, Red Bank, and Harry G. Rodman, Matawan, N. J., assignors to National Lead Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application March 8, 1955
Serial No. 493,867
8 Claims. (Cl. 75—84.4)

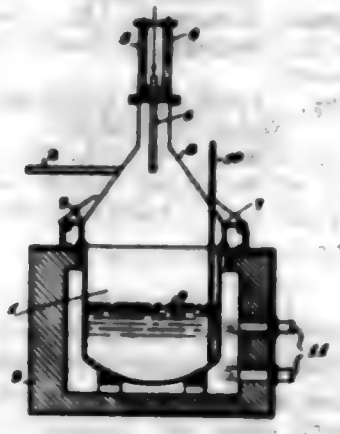
1. A process for removing the reaction byproducts from crude unleached titanium metal produced by reduction from its halide and for preventing absorption of hydrogen in the titanium metal product during removal of said reaction byproducts which comprises admixing said crude metal with an oxidizing acidic solution to solubilize the reaction byproducts from said metal and separating said solution containing the solubilized reaction byproducts from said titanium metal, said oxidizing acid solution capable of oxidizing hydrogen gas to hydrogen ion.

2,864,691

METHOD OF PRODUCING TITANIUM

James John Gray, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Application December 9, 1955, Serial No. 552,180
Claims priority, application Great Britain December 16, 1954
5 Claims. (Cl. 75—84.5)



1. In a process for the manufacture of titanium by heating a reaction mixture of titanium tetrachloride and metallic sodium in an inert atmosphere within a reaction vessel having side walls and at a temperature above the melting point of sodium chloride, the improvement which comprises withdrawing from the reaction mixture a portion of the heat generated in the reaction while maintaining a substantially lower temperature on the surface of the reaction mixture in proximity with the side walls of the reaction vessel than on the surface of the reaction mixture in proximity with the centre, said improvement comprising the steps of maintaining the reaction mixture as a molten pool in said reaction vessel, vaporizing a portion of the sodium from said molten pool, condensing the vaporized sodium on a cooling surface positioned above said reaction mixture and disposed at an angle to the horizontal in excess of 30° and flowing substantially all of the condensed sodium along said surface and down said side walls whereby substantially all of the condensed sodium is returned to the reaction mixture in proximity to the side walls of said reaction vessel.

2,864,692

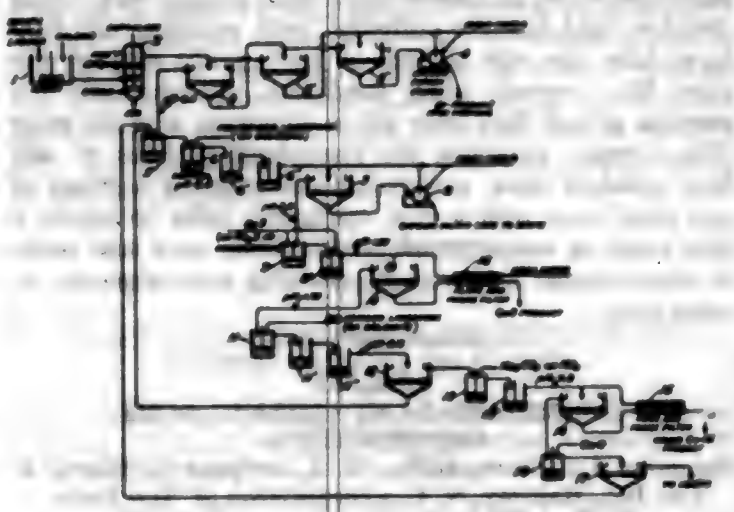
RECOVERY OF COPPER AND COBALT VALUES FROM SULPHATE LEACH SOLUTIONS

Edgar B. Maroche and Frank M. Tommel, Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania

Application September 24, 1956, Serial No. 611,617
10 Claims. (Cl. 75—108)

10. The method of treating a sulfate leach solution containing copper and cobalt values and some iron in solution which comprises aerating said solution, neutralizing the solution to a pH ranging from 2.0 to 2.6, precipitating copper from said solution and separating precipitated

copper values from the solution, neutralizing the solution to a pH ranging from 5.2 to 5.7 and thereby forming a precipitate containing iron, and separating the thus-formed precipitate from the solution.



2,864,693

BRAZING ALLOYS

Arthur T. Cape, Los Angeles, Calif., and Charles V. Feerster, West Englewood, N. J., assignors to Coast Metals, Inc., Little Ferry, N. J., a corporation of Delaware

No Drawing. Application April 24, 1956
Serial No. 580,175
4 Claims. (Cl. 75—125)

1. A brazing alloy having excellent flow characteristics and which produces joints of high strength, devoid of brittle zones, said alloy consisting essentially of nickel in amounts of from about 38% to about 64.5%, iron in amounts of from about 25% to about 54.5%, phosphorus in amounts of from about 8% to about 14%, and at least one element selected from the group consisting of copper, cobalt, chromium, manganese, molybdenum and tungsten, in an amount of from about 2.5% to about 10%, with the total such elements not exceeding about 25%.

2,864,694

ALLOYS ASSISTANT TO SALT BATHS

Peter R. Marsh, Montclair, N. J., assignor to Driver-Harris Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application March 13, 1956
Serial No. 571,142
10 Claims. (Cl. 75—128)

1. An alloy consisting essentially of 32% to 38% nickel, 14% to 20% chromium, up to 1.5% carbon, 1% to 2% manganese, 1% to 2% silicon, 1% to 3% columbium, 0.05% to 0.2% nitrogen, .04% to 0.1% selenium, balance essentially iron.

2,864,695

COBALT-GALLIUM DENTAL ALLOYS

Denton L. Smith, Rockville, Md., and Harold J. Caul, McLean, Va., assignors to the United States of America as represented by the Secretary of Commerce

Application June 23, 1956, Serial No. 593,306
3 Claims. (Cl. 75—170)

1. An alloy which is especially adapted to be plastically formed and subsequently hardened within a temperature range of 20 to 37° C. and which, after hardening is characterized by high compressive and tensile strength, high hardness and low setting expansion, said alloy consisting essentially of 20–40% of liquid gallium alloyed with 60–80% of powdered cobalt.

2,864,696

NICKEL BASE ALLOYS

Jay William Foreman, Dayton, Ohio, assignor to The Duriron Company, Inc., Dayton, Ohio, a corporation of Ohio

No Drawing. Application January 31, 1956
Serial No. 563,889
2 Claims. (Cl. 75—171)

1. An alloy characterized by extreme resistance to corrosion and abrasion having in its as-cast state the following composition: chromium 10 to 25%; from 5 to 20% silicon; boron from 0.25 to 4%; copper up to 2%; molybdenum up to 4%; carbon 0.25% maximum; as little iron as possible which together with the usual incidental impurities are always less than 8%, iron being predominant among these but not exceeding 5%; the balance being nickel.

2,864,697

TITANIUM-VANADIUM-ALUMINUM ALLOYS

Lee S. Busch, George W. Bauer, and Paul E. Moorhead, Warren, Ohio, assignors to Mallory-Sharon Metals Corporation, a corporation of Delaware

Application January 23, 1956, Serial No. 560,512
6 Claims. (Cl. 75—175.5)

1. A rolled heat treated titanium base alloy sheet product formed of a titanium base alloy consisting of 14% to 16% vanadium, 2% to 3½% aluminum, and the balance titanium with incidental impurities; said product being characterized by having in the solution-treated condition a ratio of yield strength to ultimate tensile strength from about 0.9 to as low as 0.5, an ultimate tensile strength less than 120,000 p. s. i., elongation in excess of 15%, and uniform elongation in excess of 10%.

period of about 4 to 9 hours until the unhulled oats reach a temperature of between about 160° and 210° F., temper the hot oats at approximately this temperature for

lactic acid and in which at least one but less than all of the hydroxy groups present in the radicals of said lactic acid are esterified with a fatty acid containing from 14

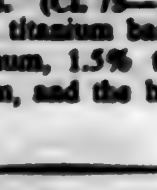
2,864,698
TITANIUM BASE ALUMINUM-TANTALUM-COLUMBIUM ALLOYS
Stanley Abkowitz and Paul E. Moorhead, Warren, Ohio, assignors to Mallory-Sharon Titanium Corporation, Niles, Ohio, a corporation of Delaware
Application June 19, 1956, Serial No. 592,277
5 Claims. (Cl. 75—175.5)

1. A weldable titanium base alloy consisting of 5% to 9% aluminum, .33% to 3.33% tantalum, .33% to 3.33% columbium, and the balance titanium with incidental impurities.

2,864,699
TITANIUM BASE ALPHA ALUMINUM-COLUMBIUM-TANTALUM ALLOY
Stanley Abkowitz and Paul E. Moorhead, Warren, Ohio, assignors to Mallory-Sharon Titanium Corporation, Niles, Ohio, a corporation of Delaware
Application December 17, 1956, Serial No. 628,649
5 Claims. (Cl. 75—175.5)

1. A weldable alpha titanium base alloy consisting of 7.5% to 8.5% aluminum, 1.5% to 2.5% columbium, 0.5% to 1.5% tantalum, and the balance titanium with incidental impurities.

2,864,700
PHOTOMECHANICAL METHOD FOR PREPARING MULTICOLOR MOSAIC CARRIERS FOR ADDITIVE COLOR PHOTOGRAPHY AND CINEMATOGRAPHY
Georges Emmens Chevalier, Paris, France, assignor to Mondiacolor, Paris, France, a corporation of France
Application November 29, 1955, Serial No. 549,755
Claims priority, application France March 17, 1951
19 Claims. (Cl. 96—35)

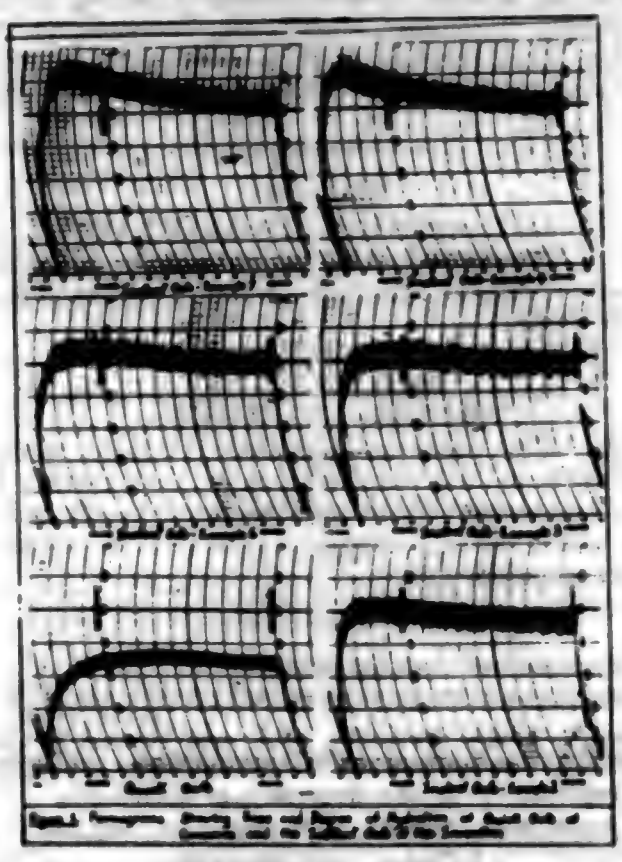


1. A photomechanical method for preparing a mosaic filter screen pattern on a transparent carrier for additive multicolor photography comprising, covering the front surface of said carrier with a first colorless light sensitive colloidal layer, exposing said first layer from the front surface thereof through a first opaque mask having a pattern of spaced minute light-permeable areas of similar shape and size, said areas aligned in parallel equally spaced straight rows, removing the unexposed portions of said first colloidal layer, dyeing said exposed portions of said first layer with a first color to obtain a first series of monochrome filter screens, applying additional colorless light sensitive colloidal layers on the same side of said carrier as said first layer to obtain additional series of filter screens, exposing each of said additional layers before application of the succeeding additional layers, said additional exposures being made from the rear surface of said carrier through said first filter screens, any prior additional filter screens and an additional mask having parallel opaque strips separated by light permeable strips, said permeable strips being positioned at an angle relative to any prior filter screens that each elongated permeable strip is completely interrupted periodically by said prior filter screens, said additional exposures affecting only those portions of the associated additional layers not in alignment with said prior filter screens and said opaque strips of said associated additional masks, removing the unexposed portions of each additional layer after its exposure and before application of a subsequent layer, dyeing the exposed portions of each of said additional layer with an additional distinctive color after removal of the associated unexposed portion and before application of a subsequent layer to obtain an associated additional series of monochrome filter screens, covering said additional series of monochrome filter screens with a final colorless light sensitive colloidal layer, exposing said final layer from the rear surface of said carrier through the prior filter screens under conditions affecting only the portions of said final layer not in alignment with the prior filter screens, removing the unexposed portions of said final colloidal layer, and dyeing said exposed portions of said final layer with a final distinctive color to obtain a final series of monochrome filter screens, each said series of monochrome filter screens covering approximately an equal area.

2,864,701
STABILIZED PANTOTHENIC ACID COMPOSITIONS
Raymond La Pierre, Iselin, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey
No Drawing. Application April 30, 1954
Serial No. 426,938
4 Claims. (Cl. 99—2)

1. A vitamin composition containing a pantothenic acid compound, adapted for the supplementation of animal feeds and characterized as having enhanced stability with respect to the pantothenic acid component, which comprises a salt of pantothenic acid, an edible organic carrier, and between about 1% and 5% of an alkali metal carbonate, the amount of said metal carbonate being sufficient to adjust the pH of said composition within the range of about 6 to 8.

2,864,702
OAT CEREAL PRODUCT AND PROCESS FOR OBTAINING THE SAME
Harry A. Murray, Williamsville, and Edwin L. Sexton, Kenmore, N. Y., and Daniel Melnick, Teaneck, N. J., assignors to The Best Foods, Inc., New York, N. Y., a corporation of New Jersey
Application June 28, 1954, Serial No. 439,622
4 Claims. (Cl. 99—80)



1. The process of making a toasted oat flake product which is capable of producing oatmeal upon the addition of boiling water and without any cooking treatment, which process comprises toasting unhulled oats for a

period of about 4 to 9 hours until the unhulled oats reach a temperature of between about 160° and 210° F., tempering the hot oats at approximately this temperature for a period of about 14 to 20 hours, removing the hulls, cutting the groats of the oats to yield cut meal of such a size distribution that more than 90 percent is retained over a #16 U. S. Standard Sieve, restoring the moisture content, and rolling to a flake thickness of 0.20 to 0.34 mm., with the moisture content of the end product being about 9 to 13 percent.

2,864,783

LIQUID SHORTENINGS AND METHOD OF IMPROVING BAKED GOODS

Glenn Schulmann, Chicago, Ill., assignor to Glenn Laboratories, Chicago, Ill., a co-partnership consisting of Glenn Schulmann and Willard Gassel

No Drawing. Application April 1, 1954
Serial No. 420,467

12 Claims. (Cl. 99—91)

11. In a method of preparing shortening-containing baked goods, the improvement which comprises incorporating into the dough batch, prior to baking, from about 2% to about 10%, based on the weight of the shortening, of an innocuous ester in the form of an aliphatic polyhydric alcohol substantially completely esterified with a water-soluble aliphatic hydroxy-monocarboxylic acid, at least one but less than all of the hydroxy groups present in the radicals of said hydroxy-monocarboxylic acid being esterified with a fatty acid containing from 12 to 22 carbon atoms.

2,864,784

PRODUCTION OF SWISS CHEESE

Fred Fentz, Jr., Monroe, Wis., and Arthur B. Erekson, Lafayette, Calif., assignors to The Borden Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application October 4, 1954
Serial No. 460,256

7 Claims. (Cl. 99—116)

1. A process of producing Swiss cheese which comprises setting, cutting and cooking the curd, drawing off a substantial portion of whey immediately before the curd is dipped, adding common salt to the curd and remaining whey, separating and pressing the curd, enclosing the pressed curd in a film of moisture-proof material pressed firmly against the soft surfaces of the curd, holding the enclosed cheese in a cold room for a few days to about two weeks, and curing the cheese in a warm room.

2,864,785

LIQUID SHORTENINGS

Glenn Schulmann, Chicago, Ill., assignor to Glenn Laboratories, Chicago, Ill., a co-partnership

No Drawing. Application August 31, 1954
Serial No. 453,427

13 Claims. (Cl. 99—118)

1. A normally liquid shortening effective for the production of baked goods of excellent volume and texture, comprising a normally liquid edible triglyceride oil containing dissolved therein from about 2% to about 10%, by weight of the shortening as a whole, of an innocuous ester in the form of an aliphatic polyhydric alcohol at least two of whose hydroxy groups are esterified with lactic acid and in which at least one but less than all of the hydroxy groups present in the radicals of said lactic acid are esterified with a fatty acid containing from 14 to 18 carbon atoms.

2,864,786

METHOD AND COMPOSITIONS FOR THE PREPARATION OF CARRAGEENIN WATER GELS

Leonard Sidney Stoloff, New Bedford, Mass., assignor to Seaplant Chemical Corporation, New Bedford, Mass., a corporation of Delaware

No Drawing. Application April 11, 1956
Serial No. 577,458

19 Claims. (Cl. 99—131)

1. A composition, useful for the preparation of carrageenin water gels having improved texture and elasticity, consisting essentially of carrageenin and the potassium salt of a sequestering agent, said sequestering agent being present in said composition in an amount sufficient to sequester substantially all of the shortening ions present when the composition is dissolved in an aqueous medium.

2,864,787

BEVERAGE CONCENTRATES AND SYRUPS

Harry A. Toulmin, Jr., Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N. Y., a corporation of New York

No Drawing. Application January 16, 1956
Serial No. 559,183

13 Claims. (Cl. 99—166)

1. A dry, solid, particulate comestible the particles of which are provided with a thin, firmly adherent, protective coating of water-soluble dextran having a molecular weight between 20,000 and that of native, unhydrolyzed microbiologically produced dextran and in which 95% to 97% of the linkages joining the anhydroglucose units are 1,6 linkages.

2,864,788

COATED FOOD PRODUCT AND METHOD OF PRODUCING SAME

Wilke G. Tebbens, Riverside, Ill., assignor to Tee-Pak, Inc., a corporation of Illinois

No Drawing. Application September 22, 1954
Serial No. 457,775

8 Claims. (Cl. 99—169)

1. A moisture-containing food product encased in a coating which imparts to the packaged food product a high degree of resistance to moisture vapor loss, fading, shrinkage, and loss of bloom, said coating comprising a ternary polymer composition of vinylidene chloride, vinyl chloride and a lower alkyl acrylate selected from the range of proportions including vinylidene chloride, 70 to 85 parts, vinyl chloride, 10 to 25 parts, and a lower alkyl ester of acrylic acid, 5 to 15 parts.

2,864,789

PACKAGED FOOD PRODUCT AND WRAPPER THEREFOR, WHICH PREVENTS THE DESTRUCTION OF RIBOFLAVIN IN FOODS

Walter L. Hardy, New York, N. Y., assignor to Waxed Paper Merchandising Council, Inc., Chicago, Ill., a corporation of Delaware

Application November 18, 1954, Serial No. 468,710

10 Claims. (Cl. 99—171)

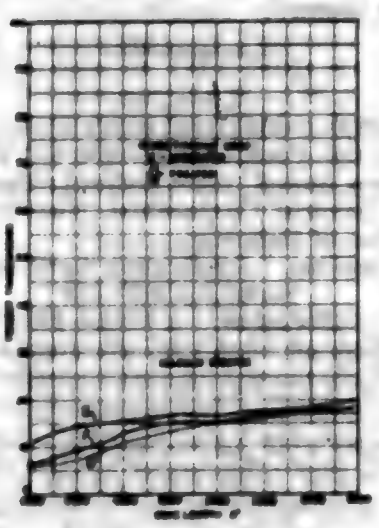
7. As an article of manufacture, a wrapper adapted for use on food products containing a substantial amount of riboflavin, said wrapper comprising: a flexible web, and an essentially colorless, transparent, selective light screen incorporated therewith, the light screen having the property of differentially absorbing light within the visible

essentially of: reacting finely-divided essentially dry lignocellulose in the absence of substantial amounts of

2,864,719

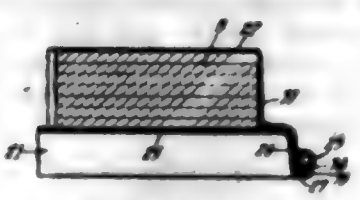
STABILIZED COPPER BRONZE POWDERS

range, said screen decreasing light transmission at least 4% of total incident light falling on the wrapper in the



4200 A. to 4600 A. range of light and having greater light transmission upward from 4600 A. to 6800 A.

2,864,710
DISPLAY PACKAGE AND METHOD OF PRODUCING SAME
Ralph K. Pettie, Georgetown, Conn., and Oscar F. Eckland, Barrington, Ill., assignors to American Can Company, New York, N. Y., a corporation of New Jersey
Application April 21, 1955, Serial No. 502,766
4 Claims. (Cl. 99—171)



3. A frangible shipping and display package for comestibles, comprising a rigid sheet metal base member for supporting the packaged product and terminating in a peripheral depending skirt wall, and a thin flexible wrapper sheet formed of frangible transparent plastic material disposed over the comestible and covering the top and side walls thereof, said depending base member skirt wall merging into an outwardly and upwardly extending flange terminating in an inwardly and downwardly extending smoothly curved wall disposed tangentially to said depending skirt wall and cooperating with said outwardly and upwardly extending base member flange as an open curl enclosing the marginal portion of said wrapper sheet in a substantially hollow end seam joint, the terminal peripheral portion of said wrapper sheet extending beyond said curl and thence reversely upwardly into engagement with the exterior surface of said smoothly curved wall portion thereof and clamped thereby against the downwardly extending wrapper sheet and against said skirt wall to constitute a hermetically sealed union between said base member and said sheet.

2,864,711
GLAZED CERAMIC BODIES AND METHODS FOR PRODUCING SAME
Joseph Boyce, Beaver Falls, and Karl Kautz, Pittsburgh, Pa., assignors to Vitro Corporation of America, Verona, N. J.
No Drawing. Application May 28, 1954
Serial No. 431,276
5 Claims. (Cl. 106—39)

1. A self-glazing ceramic powder having a firing temperature within the range from 1000 to 1600° F. consisting essentially of from about 30% to about 70% by weight of a premelted, finely divided, glass-like flux consisting of about 5% sodium oxide, about 7% potassium oxide, about 9% zinc oxide, about 1.5% boron oxide, about 8.5% aluminum oxide, about 61% silicon dioxide, and about 7.5% calcium fluoride, the said flux having a melting temperature below the firing temperature, and between about 70% and about 30% by weight of zircon.

2,864,712
HIGH VOLTAGE CERAMIC DIELECTRIC
Alvin L. Rogatz, Oak Park, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
No Drawing. Application July 29, 1955
Serial No. 525,379
2 Claims. (Cl. 106—39)

1. A ceramic dielectric material consisting essentially of titanium dioxide in an amount of from 60 percent to 95 percent by weight and the balance strontium zirconate.

2,864,713
CERAMIC DIELECTRIC COMPOSITIONS
Brian Lewis, Ruislip, England, assignor to The General Electric Company Limited, London, England
Application September 4, 1956, Serial No. 607,779
Claims priority, application Great Britain September 9, 1955
15 Claims. (Cl. 106—39)

1. A ceramic dielectric material which has a stoichiometric composition substantially corresponding to the formula $(1-x)L_2O.xMO.R_2O_5$, wherein L is sodium which may be partially replaced by potassium, M is a metal of the group consisting of cadmium and lead, R is niobium which may be partially replaced by tantalum, and x has a value in the range of 0.05 mole to 0.80 mole, L consisting wholly of sodium if lead is present.

2,864,714
METHOD OF PRODUCING AERATED CEMENTITIOUS MATERIAL
John S. Dixon, Jr., Haverford, Pa., and George B. Geyer, Wildwood, N. J., assignors to National Foam System, Inc., West Chester, Pa., a corporation of Delaware
Application February 9, 1954, Serial No. 409,645
4 Claims. (Cl. 106—88)

1. The method of producing a cellular cementitious structure consisting of the steps of, preparing a slurry of cementitious material, continuously generating a stable air foam by introducing pressurized air into a foam-forming solution and forcing the mixed air and solution through an apertured barrier, introducing said foam into said slurry as said foam is generated, intimately mixing said foam with said slurry as said foam is introduced to produce a substantially uniform dispersion of said foam in said slurry, introducing said mixed foam and slurry into a form of desired configuration, and allowing said mixture to set and harden.

2,864,715
METHODS OF MAKING A LIGNOCELLULOSE PRODUCT AND PRODUCTS RESULTING THEREFROM
William T. Glab, Dubuque, Iowa, assignor to Carr, Adams & Collier Company, a corporation of Iowa
No Drawing. Application July 15, 1954
Serial No. 443,711
13 Claims. (Cl. 106—163)

1. The method of making a moldable and extrudable composition in a substantially dry process, consisting

essentially of: reacting finely-divided essentially dry lignocellulose in the absence of substantial amounts of added water and from about 0.5–20% of sulfur in the presence of steam at a temperature of about 300–550° F. in a confined atmosphere at a temperature of from about 300–550° F. at a gauge pressure of at least about 200 pounds per square inch for from about 4–60 minutes, all said percentages being by weight of said lignocellulose.

2,864,715

STABILIZED PASTE ROSIN SIZE

Alfred Chandler Schmale, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 16, 1957
Serial No. 674,378

6 Claims. (Cl. 106—130)

1. A paste rosin size composition stabilized against crystallization by the incorporation therein of stabilizing amounts of a rosin amine derivative selected from the group consisting of (1) condensation products of rosin amine with acrylonitrile, (2) hydrogenated condensation products of rosin amine with acrylonitrile, (3) hydrolyzed condensation products of rosin amine with acrylonitrile, (4) condensation products of rosin amine with alkyl halides having at least 3 carbon atoms, (5) condensation products of rosin amine with lower alkylene dihalides, and (6) reaction products of maleic anhydride with compounds obtained by the reduction of condensation products of rosin amine with acrylonitrile, said rosin amine derivative having a molecular weight of at least 327.

2,864,717

WORKABILITY OF CLAY SOILS

John W. Lyons, Reading, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 15, 1957
Serial No. 652,649

19 Claims. (Cl. 106—287)

1. A method for the improvement of the workability of clay-containing soils comprising the distribution in clay soils in intimate admixture therewith of from about 0.05 to about 2 weight percent, based on the dry weight of the soil, of an alkanol-ethylene oxide condensation product defined by the structural formula $RO(CH_2CH_2O)_nH$, wherein R is an alkyl radical containing from 8 to 16 carbon atoms and n is a number from 2 to 30.

2,864,718

WORKABILITY OF CLAY SOILS

John W. Lyons, Reading, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 15, 1957
Serial No. 652,650

19 Claims. (Cl. 106—287)

1. A method for the improvement of the workability of clay-containing soils comprising the distribution in clay soils in intimate admixture therewith of from about 0.05 to about 2 weight percent, based on the dry weight of the soil, of a tertiary-alkylmercaptan-ethylene oxide condensation product defined by the structural formula $RS(CH_2CH_2O)_nH$, wherein R is a tertiary-alkyl radical containing from 8 to 16 carbon atoms and n is a number from 3 to 20.

2,864,719

STABILIZED COPPER BRONZE POWDERS AND METHOD

Victor M. Willis, Dalton, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application June 18, 1956
Serial No. 591,794

17 Claims. (Cl. 106—290)

1. A copper-containing bronze powder of improved stability characteristics which comprises a major quantity of a copper containing bronze powder and in intimate contact therewith at least 0.5% but not more than about 5% by weight of said metal powder of an organic compound selected from the group consisting of water insoluble long chain aliphatic and alicyclic hydrocarbon acids containing from 8 to about 32 carbon atoms and a water-insoluble rosinamine.

2,864,720

TRANSFER SHEET COATED WITH A COMPOSITION CONTAINING A SALT AND A HYDROTROPE

Richard G. Maguire, Chicago, and Glen W. Hedrick, Glen Ellyn, Ill., assignors to Ditto, Incorporated, Chicago, Ill., a corporation of West Virginia

No Drawing. Application October 29, 1954
Serial No. 465,617

3 Claims. (Cl. 117—36)

1. A carbon paper consisting essentially of a base sheet having a transfer coating thereon consisting essentially of from 10 percent to 80 percent by weight of a nickel salt, adapted to react with rubeanic acid, dispersed in oleaginous and waxy material containing from 2 to 20 percent by weight of a hydrotropic aryl sulphonate.

2,864,721

PLURAL COAT ENAMELING PROCESS

Burnham W. King and John R. Schultz, Jr., Columbus, Ohio, assignors, by mesne assignments, to The Fletcher Enamel Company, Dunbar, W. Va., a corporation of West Virginia

No Drawing. Application November 15, 1955
Serial No. 547,045

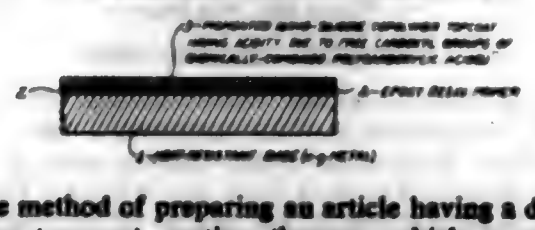
8 Claims. (Cl. 117—70)

1. The process of producing a vitreous enameled metal body which comprises: mixing with clay and water unfritted enameling materials to form a slip, said enameling materials being capable of forming a glass within a temperature range of from 1200° F. to 1700° F., and said enameling materials being in such proportions as to yield, on calculated analyses, an enameling material consisting essentially of:

	Weight percent
Fe_2O_3	1–15
ZnO	0–9
SiO_2	30–45
B_2O_3	17–28
At least one material selected from the group consisting of Na_2O and K_2O	11–22
CaO	3–8
Al_2O_3	0–7

applying the resulting slip to a steel body to a dry weight of from 8 to 17 grams per square foot two sides, and firing within a temperature range of from 1200° F. to 1700° F.; applying a vitreous enamel cover coat and refiring.

2,864,722
PLURAL COATING WITH EPOXY PRIMER AND ALKYD-SILICONE TOPCOAT
Ronald L. Miller and Norman G. Petersen, Chicago, Ill., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
Application March 1, 1955, Serial No. 491,548
10 Claims. (Cl. 117—72)



1. The method of preparing an article having a durable protective two-coat coating thereon, which comprises: providing a base article which is to be coated and which is capable of withstanding the baking temperatures used to convert the hereinafter-defined applied coatings to a protective coating system; applying to said base a priming coat comprising as the sole film-forming material therein a resinous moiety composed of at least one polymeric polyether derivative of polyhydric phenol, said derivative having alternating aromatic and aliphatic nuclei united through ether oxygen, having terminal epoxy groups and being free of functional groups other than epoxy and hydroxyl groups; baking said base and applied priming coat sufficiently to convert said priming coat to a film which is incompletely cured but which is non-tacky at atmospheric temperatures; then applying on said non-tacky priming coat a pigmented top-coat having a thickness of at least 0.5 mil and comprising as the principal film-forming material therein at least one homogeneous resinous alkyd-silicone copolymer containing polycarboxylic acid which has been chemically combined therewith without consuming all of its carboxyl groups, thereby to provide a principal film-forming material having at least a small amount of carboxyl groups available for reaction with the film-forming material of said primer; and thereafter baking said base and its applied priming and top-coats sufficiently to bring about chemical reaction of carboxyl groups of the top-coat with said priming coat and thereby to convert the two coats to a protective coating system.

2,864,723
ACID RESISTANT CELLULOSIC MATERIAL AND PROCESS FOR PRODUCING SAME
Linton A. Fleck, Basking Ridge, Theodore F. Cooke, Martinsville, and Philip B. Roth, Somerville, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application August 23, 1956, Serial No. 605,768
18 Claims. (Cl. 117—76)

1. A process for treating textile material containing at least 50% of cellulosic material to render the same resistant to acid degradation which includes the application of an aminoplast resin thereto, comprising applying to said fabric at least 10% based on the weight of the fabric of a water-soluble group II metal salt, drying said material, and precipitating said salt with a basic compound capable of forming water-insoluble group II metal compound selected from the groups consisting of oxides and hydroxides.

2,864,724
COATED FILM AND METHOD OF MAKING SAME
Gerald I. Keim, Oxford, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application September 21, 1956
Serial No. 611,354
6 Claims. (Cl. 117—76)

1. A process of treating nonfibrous regenerated cellulose film which comprises impregnating said film with an aqueous solution of a hydrophilic cationic tetrahydro triazone modified urea-formaldehyde resin, said resin being a reaction product of urea, from about 1.8 to about 2.4 moles of formaldehyde per mole of urea and from about 10% to about 100% by weight, based on the weight of urea, of a tetrahydrotriazone, drying the film, and applying thereto a water-repellent coating.

2,864,725
FLUID AND SYSTEM FOR PREPARING HYDROGEN SULFIDE SENSITIVE TAPE
Leonard V. Serg and Elmer Bradley Offutt, Kansas City, Mo., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application August 15, 1956, Serial No. 604,169
5 Claims. (Cl. 117—83)

1. The method of preparing a gelatin-coated tape which is quantitatively sensitive to hydrogen sulfide and which is light-, air-, and age-stable which comprises the steps of sensitizing a gelatin coating supported by a transparent gas-impervious tape with 0.25 to 0.30 mg. lead acetate per sq. cm. from an aqueous solution comprising 1 normal lead acetate and 1 normal sodium acetate by exposing only the coated surface to a pool of the solution, and subsequently drying the sensitized gelatin coating.

2,864,726
PROTECTIVE COATING FOR FERROUS TYPE METAL
Allan A. Manteuffel, Crystal Lake, and George R. Cook, Des Plaines, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Application November 17, 1955
Serial No. 547,564
9 Claims. (Cl. 117—127)

1. The process for the formation of an adherent, corrosion-resistant coating on a ferrous metal surface which comprises contacting said ferrous metal with a substantially water-emulsion-free mineral oil composition consisting essentially of a mineral oil boiling in the lubricating oil boiling range, an emulsifier, a coupling agent in which water and mineral oil are mutually soluble and at least about 1%, by wt. of total composition, of total water but less than that amount which causes substantial phase separation and emulsification of said oil composition, for a time sufficient to coat the surface of said metal with a corrosion-resistant, adherent coating.

2,864,727
RODENT REPELLENT BINDER CORD COMPRISING NAPHTHENIC ACID STABILIZED QUINALDINE
Pranas Jucaitis, Chicago, Ill., assignor, by mesne assignments, to International Harvester Company, Chicago, Ill., a corporation of New Jersey
No Drawing. Application December 23, 1954
Serial No. 477,411
1 Claim. (Cl. 117—138.5)

A binder cord having incorporated therein a rodent-repelling composition consisting of an effective amount up to 2% by weight of quinaldine and up to 2% by weight of naphthenic acids.

2,864,728
COPPER CONDUCTOR COATED WITH SILICONE RESIN COMPOSITION

Albert J. Predota and Harry J. Klafer, Cleveland, Ohio, assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

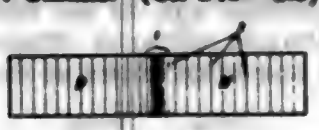
No Drawing. Application July 12, 1954
Serial No. 442,894
2 Claims. (Cl. 117—232)

1. A copper conductor coated with a heat-hardened synthetic resin coating of the double-build class, the resin solids of which comprise at least 20% resinous silicones and about 1–20% by weight on said silicones of at least one amine selected from the group consisting of triethanolamine, phenyl-beta-naphthyl amine and butoxy methyl melamine.

2,864,729
SEMI-CONDUCTING CRYSTALS FOR RECTIFIERS AND TRANSISTORS AND ITS METHOD OF PREPARATION

Karl O. Seiler, Nuruberg, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware

Application February 25, 1955, Serial No. 490,686
Claims priority, application Germany March 3, 1954
4 Claims. (Cl. 148—1.5)



1. A junction type semiconductor crystal comprising two layers of semiconductor material of different electrical properties joined together by a junction layer constituting a region of transition between said semiconductor layers, the electrical properties of said layers being determined by the nature of impurities in said layers, and the impurity density being greatest in said junction layer, characterized in that the density of impurities is greatest towards the center of said junction layer and decreases towards the peripheral surface area thereof.

2,864,730
METHOD FOR PROTECTING MAGNESIUM AND MAGNESIUM ALLOYS FROM CORROSION

David H. Kleder and Raymond Strickler, Baltimore, Md., assignors to Allied Research Products, Inc., Baltimore, Md., a corporation of Maryland

No Drawing. Application December 17, 1953
Serial No. 398,874
10 Claims. (Cl. 148—6.2)

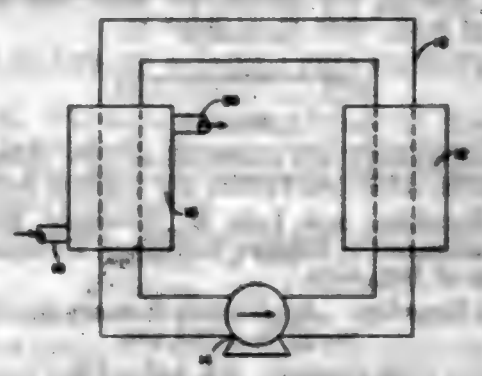
1. A composition for use in aqueous solution to impart a protective coating to magnesium and magnesium alloy articles consisting essentially of a hexavalent chromium compound selected from the group consisting of chromic acid and salts thereof in amount of about 14 to 37%, a nitrogen-containing compound selected from the group consisting of nitric acid and salts thereof in amount of about 32 to 70%, and a chloride compound selected from the group consisting of hydrochloric acid and salts thereof in amount of about 4 to 50%, the foregoing percent ranges being calculated on the basis of the total weight of active ions present in an aqueous solution containing said composition and having a pH of from about 0.0 to 2.0.

2,864,731
FORMING PROTECTIVE FILMS ON METAL

David H. Gurinsky, Center Moriches, Otto F. Kammerer, St. James, Jerome Sadofsky, Patchogue, and John R. Weeks, Port Jefferson, N. Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application July 13, 1956, Serial No. 597,828
19 Claims. (Cl. 148—6.11)

1. The method of inhibiting the corrosion of ferrous metal surfaces by heavy liquid metals at temperatures above 500° C. which comprises bringing zirconium and nitrogen into reactive contact to form on said metal surface an adherent layer of zirconium nitride having a thickness of at least 0.5 micron and thereafter maintaining zirconium dissolved in the heavy liquid metal contacting said metal surface.



8. The method of forming an adherent layer of a nitride of a metal selected from the group consisting of zirconium, titanium and hafnium on the surface of a high melting structural metal which comprises introducing into the metal to be protected a concentration of nitrogen higher than the normal concentration of nitrogen in said structural metal and thereafter contacting said surface with a liquid metal carrying medium containing the selected metal dissolved therein at a temperature at which the nitrogen is available for reaction at said surface.

2,864,732
METHOD OF COATING TITANIUM ARTICLES AND PRODUCT THEREOF

Paul D. Miller and Richard A. Jefferys, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

No Drawing. Application October 5, 1953
Serial No. 384,341
15 Claims. (Cl. 148—6.15)

1. A composite article comprising a basis material selected from the group containing titanium and titanium-base alloys, and a coating on the surface of said basis material, said coating consisting essentially of a major proportion of chemically combined titanium, at least one metal selected from the group consisting of the alkali metals and the alkaline earth metals, and at least one halide, and a minor proportion of a non-metallic radical selected from the group consisting of phosphate, borate, oxalate, citrate, and tartrate.

2,864,733
ZINC-TIN SOLDER FOR ALUMINUM

Frederick J. Kranich, Chicago, Ill.

No Drawing. Application June 28, 1955
Serial No. 518,650
10 Claims. (Cl. 148—24)

2. A solder consisting essentially of zinc and tin in proportion within the ratio range of nine parts by weight of one and eleven parts by weight of the other; and less than one part by weight of an alloy consisting of silicon, copper and silver, the silicon being in an amount approximating twenty percent by weight of said one part of alloy.

2,864,734
MAGNETIC FLAKE CORE AND METHOD OF PREPARATION

Edmond Adams and Albert M. Sycher, Silver Spring, and William M. Hubbard, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Application May 28, 1957
Serial No. 662,431
15 Claims. (Cl. 148—104)
(Granted under Title 35, U. S. Code (1952), sec. 266)

12. The method of preparing a magnetic core comprising forming flakes of an iron base alloy containing

10 to 17 percent aluminum and the balance essentially iron by rolling a powder of said alloy at about 200° C., heating said flakes to a temperature between 400° to 900° C. for a period of from 15 minutes to 4 hours, compacting said flakes into the desired core configuration, and heat treating the compacted flake core at a temperature of from 400° C. to 800° C.

2,864,735

NEMATOCIDAL CYCLOPARAFFIN COMPOSITIONS AND METHOD OF USING SAME

Roy E. Stansbury and Lyle D. Goodhue, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application January 2, 1952
Serial No. 264,646
10 Claims. (Cl. 167—22)

2. A composition of matter composed of soil rendered nematocidal and in an amount effective to render the said soil nematocidal in character a composition of matter containing 99 to 75 weight percent of a cycloparaffin having 3 to 8 carbon atoms in the ring and one to 25 percent of at least one compound selected from the group consisting of ethylene bromide, methyl bromide, dichloropropene, chlorobromopropene, chloropicrin, ethylenechlorobromide, and dichlorodiethyl ether.

3. A method of rendering soil nematocidal in character which comprises innoculating said soil with a cycloparaffin having 3 to 8 carbon atoms in the ring in the amount effective to render said soil nematocidal in character.

2,864,736

METHODS OF COMBATTING FUNGI EMPLOYING THIOUREA SALTS OF SULFONIC ACIDS

Johannes Thomas Hackmann, Amsterdam, Netherlands, assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application August 12, 1954
Serial No. 449,489
Claims priority, application Austria August 21, 1953
7 Claims. (Cl. 167—22)

7. The method of protecting plants from destruction by fungi which comprises treating said plants with a fungicidal toxic amount of an S-alkylthiourea salt in which the alkyl group contains from 1 to 14 carbon atoms of an acid selected from the group consisting of alkylated benzene, naphthalene and phenol sulfonic acids and oil-soluble petroleum sulfonic acids having from 12 to 26 carbon atoms, monocarboxylic acids having from 8 to 26 carbon atoms, and aliphatic monosulfate acids having from 8 to 18 carbon atoms.

2,864,737

METHODS OF DESTROYING FUNGI

Ellis Kirby Fields, Chicago, Ill., and Roger W. Watson and Melvern C. Hoff, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application September 13, 1954
Serial No. 455,768
7 Claims. (Cl. 167—22)

1. The method of controlling fungi on vegetables, fruits and field crops, which comprises contacting said fungi with a composition consisting essentially of a fungicidally active material resulting from the reaction at a temperature of from about 25° F. to about 200° F. of (1) a molybdenum oxide, (2) an acidic phosphorous sulfide-hydrocarbon reaction product and (3) hydrogen peroxide, said three components of the reaction being used in the approximate proportions based upon one part of component (1), of 1 to 40 parts of component (2), and 0.05 to 4 parts of component (3), and said acidic phosphorous sulfide-hydrocarbon reaction product being obtained by reacting from about 1% to about 50% of a phosphorous sulfide with the hydrocarbon at a temperature of from about 200° F. to about 600° F., and a substantially greater amount of a non-phytocidal carrier therefor, selected from the group consisting of a dust, an aqueous dispersion and a refined petroleum fraction lower boiling than lubricating oils, said composition being applied at a rate of from about 1 to about 16 pounds of said fungicidally active material per acre.

2,864,738

FUNGICIDAL COMPOSITIONS COMPRISING SULFURIZED MERCAPTOLS

Carleton B. Scott, Pomona, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

No Drawing. Application April 22, 1957
Serial No. 654,075
15 Claims. (Cl. 167—22)

1. A fungicidal composition comprising an inert fungicidal carrier material and, as the essential fungitoxic ingredient, a sulfurized mercaptol obtained by heating a dimethyl dialkyl ketone mercaptol of the formula:

wherein R and R' each represents an alkyl radical, with elemental sulfur at a temperature between about 100° C. and about 250° C. for a period of time between about 0.5 and about 12 hours, between about one and about ten atomic weights of sulfur being employed per molecular weight of said dimethyl dialkyl ketone mercaptol and said conditions of time and temperature being sufficient to effect the formation of a sulfurized mercaptol product containing from one to an average of ten atoms of sulfur per molecule of said dimethyl dialkyl ketone mercaptol.

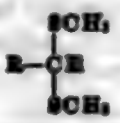
2,864,739

PESTICIDAL COMPOSITIONS COMPRISING SULFURIZED MERCAPTALS

Carleton B. Scott, Pomona, and Irving D. Webb, Yorba Linda, Calif., assignors, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

No Drawing. Application May 13, 1957
Serial No. 658,533
14 Claims. (Cl. 167—22)

1. A fungicidal and nematocidal composition comprising an inert pesticidal carrier material and, as the essential active ingredient, a sulfurized mercaptal obtained by heating a dimethyl mercaptal of the formula:



wherein R represents a monovalent substituent selected from the class consisting of aryl radicals and alkyl radicals containing from 1 to about 22 carbon atoms, with elemental sulfur at a temperature between about 100° C. and about 250° C. for a period of time between about 0.5 and about 12 hours, at least one atomic weight of sulfur being employed per molecular weight of said dimethyl mercaptal and said conditions of time and temperature being sufficient to effect the formation of a sulfurized mercaptal product containing from 1 to an average of 10 atoms of sulfur per molecule of said dimethyl mercaptal.

solution of the penicillin salt, an acid-insoluble, alkali-soluble medicinal shellac, a buffering agent, and excipi- wool with said wool grease adhering thereto into sewage

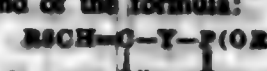
2,864,740

BETA-ALKYLMERCAPTOVINYL DIALKYL PHOSPHATE AND THIOPHOSPHATE INSECTICIDES

William R. Diveley, Newark, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 30, 1957
Serial No. 705,798
15 Claims. (Cl. 167—22)

1. A compound of the formula:



in which R and R' are lower alkyl radicals, R'' is selected from the group consisting of lower alkyl radicals and hydrogen and X and Y are members of the group consisting of sulfur and oxygen.

7. An insecticide composition comprising a compound of claim 1 and an insecticide adjuvant as a carrier therefor.

13. The method of preparing a compound of the formula:

which comprises contacting a compound of the formula RSCl with a compound of the formula

at a temperature in the range of about —20 to about 50° C. whereby a compound of the formula

is produced and subsequently heating said last named compound at a temperature in the range of about 20° C. to about 150° C. in the presence of an acid acceptor, in the formulas R and R' representing lower alkyl radicals, R'' representing a member of the group consisting of lower alkyl radicals and hydrogen, and X and Y representing members of the group consisting of sulfur and oxygen.

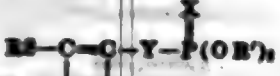
2,864,741

DI (ALKYLMERCAPTO) SUBSTITUTED VINYL, DIALKYL PHOSPHATE AND THIOPHOSPHATE INSECTICIDES

William R. Diveley, Newark, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 30, 1957
Serial No. 705,799
13 Claims. (Cl. 167—22)

1. A compound of the formula

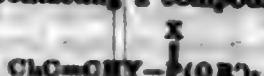


in which R and R' represent lower alkyl radicals, X and Y are selected from the group consisting of oxygen and sulfur, and one Q is SR and the other is H.

6. An insecticide composition comprising a compound of claim 1 and an insecticide adjuvant as a carrier therefor.

11. The method of preparing a compound of the formula

which comprises contacting a compound of the formula



with two molecular proportions of a compound of the formula MeSR at a temperature in the range of 0 to about 100° C. until substantially all of the chlorine is replaced by SR, in said formulas R and R' representing lower alkyl radicals, X and Y representing an element of the group consisting of sulfur and oxygen and Me representing an alkali metal.

2,864,743

COPPER SALTS OF NONYLATED NAPHTHALENE SULFONIC ACIDS

Richard R. Whetstone, Orinda, Frank C. Davis, Richmond, and Carl M. Monroe, Modesto, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application December 23, 1953
Serial No. 400,138
8 Claims. (Cl. 167—32)

6. A method of treating plants for the control of fungi which comprises applying to the plants an effective toxic amount of a copper salt of a nonylated naphthalenesulfonic acid.

2,864,743

STERILE, BIOLOGICALLY ABSORBABLE POWDER ADAPTED FOR DUSTING AND SPRAYING, AND A PROCESS OF MAKING SAME

August Kottler and Heinz Scheffler, Biberach (Riss), Germany, assignors to Dr. Karl Thomae G. m. b. H., Biberach (Riss), Germany, a corporation of Germany

No Drawing. Application March 22, 1954
Serial No. 417,946
Claims priority, application Germany March 23, 1953
7 Claims. (Cl. 167—58)

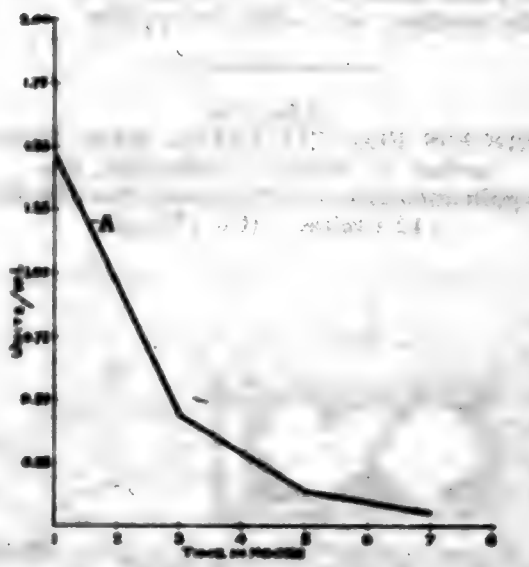
1. As a new powder base material adapted for spraying and dusting, the addition product formed by a metal salt, selected from the group consisting of inorganic magnesium salts and aluminum salts, under alkaline conditions with the ether obtained by reacting a formaldehyde-starch condensation product containing from 30 to 70 mol percent formaldehyde per starch unit with a compound selected from the group consisting of epichlorohydrin, monochlorohydrin and β-chloro-ethanol.

2,864,744

PENICILLIN IN SOLID DOSAGE UNIT FORM

Jack J. Mandelcorn, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N. Y., a corporation of Delaware

Application December 8, 1955, Serial No. 551,171
Claims priority, application Canada September 2, 1955
6 Claims. (Cl. 167—66)



1. A therapeutic dosage unit in solid compressed form comprising as a uniform mixture a therapeutic amount of water-soluble penicillin salt, a water-insoluble and acid-insoluble protein which is soluble in a saturated aqueous

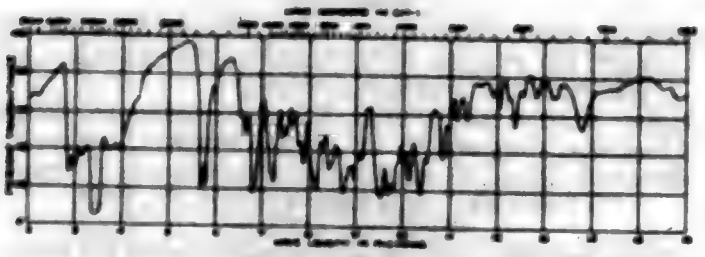
2,864,749

2,864,751

solution of the penicillin salt, an acid-insoluble, alkali-soluble medicinal shellac, a buffering agent, and excipients, said dosage unit being substantially resistant to the action of the gastric juice while readily disintegrating and releasing its penicillin activity in the presence of intestinal juice.

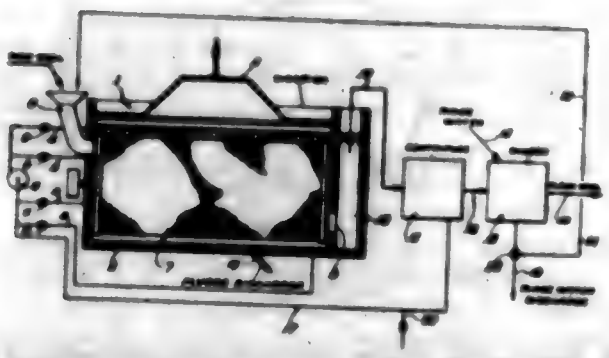
6. A therapeutic dosage unit in solid compressed form comprising as a uniform mixture about 33% by weight of an alkali metal salt of penicillin, about 20% by weight of casein, about 7% by weight of buffers and about 10% by weight of white shellac, the remainder of the unit being excipients, the penicillin, casein and white shellac being homogeneously dispersed throughout the dosage unit.

2,864,745
GLAUCARUBIN AMEBICIDE
Henry M. Shafer, Elizabeth, N. J., assignor to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey
Application November 14, 1956, Serial No. 622,212
3 Claims. (Cl. 167—65)



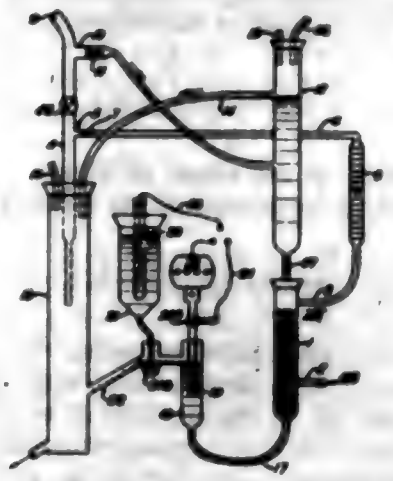
1. The compound glaucarubin, an organic substance adapted for the therapeutic treatment of amebiasis, having the empirical formula $C_{26}H_{38}O_{10}$, forming a di-hydro derivative upon hydrogenation, forming a hexaacetyl derivative having a melting point of 162° C. and optical rotation in pyridine of +49°, and a pentaacetyl monohydroxy derivative having a melting point of 227° C. and optical rotation in pyridine of +26°, and when in crystalline form being further characterized as exhibiting characteristic infra-red absorption at the following wave lengths expressed in microns: 2.93, 2.99, 5.69, 5.78, 5.99, 7.43, 7.53, 7.63, 7.80, 7.89, 8.18, 8.43, 8.72, 8.80, 8.90, 8.98, 9.14, 9.55, 9.69, 9.81, 10.02, 10.13, 10.38, 10.51, 10.83, 10.98, 11.18, 11.39, 11.91, 12.07, 12.27, 12.38, 12.58, 12.82, 13.22, and 13.81 as shown in the accompanying drawing, melting with decomposition at 262–263° C., exhibiting optical rotation in pyridine (1%) of +45° and in methanol (0.3%) of +89°, and having solubilities expressed in mg./ml. as follows: >3.5 and <4.8 in acetic acid; >20.8 and <26.2 in 1% sodium carbonate solution; and >200 in pyridine.

2,864,746
PROCESS FOR CLEANING RAW WOOL
Arthur M. Buswell, Gainesville, Fla.
Application June 6, 1956, Serial No. 589,650
12 Claims. (Cl. 195—6)



7. The process of removing from raw shorn wool naturally adherent wool grease, consisting essentially of lanolin and suint, which comprises introducing said raw wool with said wool grease adhering thereto into sewage sludge digester liquor containing anaerobically digesting organic material, excluding air from said liquor, maintaining said liquor and wool at a temperature of between approximately 32° F. and approximately 155° F., a volatile acids concentration of not substantially more than 2000 p. p. m., an ammonia nitrogen concentration of between approximately 30 and approximately 600 p. p. m., and a water to wool ratio not substantially less than 85 parts by weight of water to 15 parts by weight of wool, retaining said wool in said liquor for between approximately 24 hours and approximately 72 hours to effect digestion of the wool grease, and then separating the wool fibers from said liquor.

2,864,747
DETERMINATION OF HYDROGEN CYANIDE AND HYDROGEN SULPHIDE IN AIR
Harold H. Roth, Bay City, Mich., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 21, 1954, Serial No. 424,575
2 Claims. (Cl. 204—1)



1. That method of determining a compound of the class consisting of hydrogen cyanide and hydrogen sulphide in air comprising flowing the air through an absorbing liquid having a pH of at least 10 in means to produce a solution of the compound contained in the air in said absorbing liquid, then passing the resulting solution to a silver electrode half-cell associated electrically with a reference electrode, rotating said silver electrode at a velocity of about 1725 R. P. M. to effect relative movement at high velocity between said silver electrode and said solution, and applying the E. M. F. developed by said cell to means responsive thereto to indicate the concentration of said compound in the air tested.

2,864,748
FACSIMILE RECORDING-PAPER
Arthur H. Moses, Brooklyn, N. Y., assignor to Facsimile, Inc., New York, N. Y., a corporation of Delaware
No Drawing. Application August 27, 1956
Serial No. 606,216
5 Claims. (Cl. 204—2)

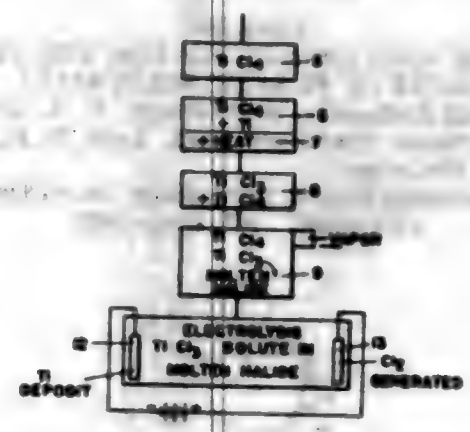
3. A recording medium adapted for being marked electrolytically between a cathode and an anode containing iron, comprising a white, porous paper sheet having a high wet strength, said paper being impregnated with a solution consisting essentially of an electrolyte and a marking compound, said compound being composed substantially entirely of salicylaldoxime, said solution being capable of reacting with the anode to form marks of a color ranging from white to deep brown when varying electric currents are passed through the paper between the anode and the cathode.

ence of water, a hydrophilic cyanide of a p-amino tri- least 300 cycles per second and said fluctuation having

2,864,749
PROCESS FOR THE PRODUCTION OF TITANIUM METAL

Harvey L. Slatin, New York, N. Y., assignor to Timax Corporation, Wilmington, Del., a corporation of Delaware

Application May 9, 1951, Serial No. 225,375
8 Claims. (Cl. 204—64)



2. A process for the production of a solution of titanium dichloride and titanium trichloride in a molten salt comprising providing in a bath of molten salt a bed of metal selected from the group consisting of sodium, lithium, magnesium and titanium, said molten salt being selected from the group consisting of the halides of the alkali and alkaline earth metals, feeding titanium tetrachloride to said molten bath so as to contact with said metal therein at about 825° C. and at a rate and in an amount consuming said metal and any titanium formed thereat and converting the tetrachloride to at least one of the group consisting of titanium dichloride and trichloride within said molten salt bath as a solute therein.

2,864,750
METHOD AND APPARATUS FOR WATER TREATMENT

John F. Hughes, Jr., and Thomas M. Leiske, Daytona Beach, Fla., assignors to Sta-Rit Lighter Company, Milwaukee, Wis., a corporation of Wisconsin

Application December 1, 1953, Serial No. 395,445
11 Claims. (Cl. 204—149)

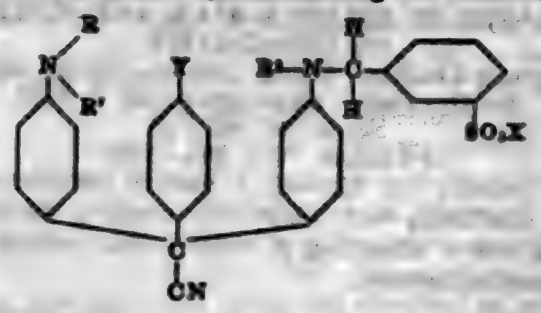
10. The method of treating water for prevention of scale deposit on surfaces which are wetted by the water, said method including the exposure of water which is in aquatic communication with said water on said surfaces between two electrodes in a unit providing dielectric mounting means for the electrodes, one of said electrodes comprising a "non-metallic conductor" and the other comprising an "adsorptive metal" electrode spaced from said non-metallic conductor, providing a source of uni-directional current connected with its positive pole to the non-metallic conductor and its negative pole to the adsorptive metal electrode, and passing uni-directional current from said source through said electrodes and through the water between the electrodes without connecting the uni-directional current directly to said surfaces.

2,864,751
PHOTOSENSITIVE COMPOUNDS AND PROCESS OF USING SAME

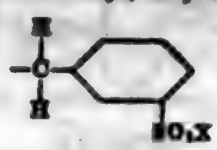
Lyman Chalkley, Prince Georges County, Md.

No Drawing. Application June 6, 1957
Serial No. 663,901
16 Claims. (Cl. 204—158)

3. The hydrophilic cyanide having the formula



where R and R² are each selected from the group consisting of methyl and ethyl groups, R¹ is selected from the group consisting of methyl, ethyl and



groups, Y is selected from the group consisting of hydrogen and an

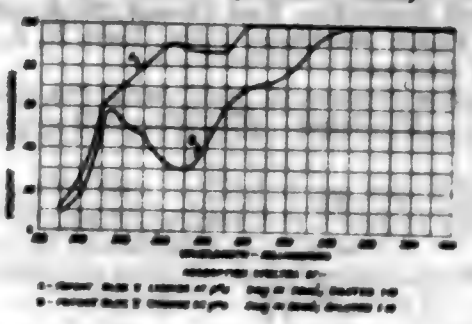
group in which R³ and R⁴ are each selected from the group consisting of methyl and ethyl groups and X is a cation.

9. A process for forming a stable dye compound comprising irradiating with ultraviolet light in the presence of water, a hydrophilic cyanide of a p-amino triphenylmethane dye containing a sulfonic acid group as a substituent of a benzyl group attached to an amino nitrogen atom.

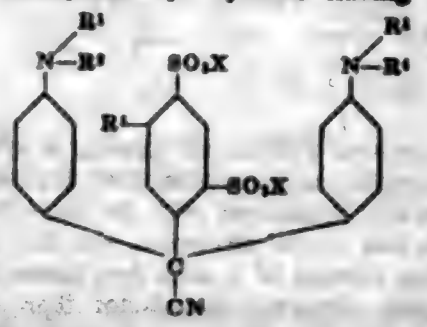
2,864,752
PHOTOSENSITIVE COMPOUNDS

Lyman Chalkley, Prince Georges County, Md.

Application June 6, 1957, Serial No. 664,113
18 Claims. (Cl. 204—158)



2. The hydrophilic dye cyanide having the formula



where R¹, R², R³ and R⁴ are each selected from the group consisting of methyl, ethyl and benzyl groups, R⁵ is selected from the group consisting of a hydrogen atom and a hydroxyl group and X is a cation.

10. A process for forming a stable dye compound comprising irradiating with ultraviolet light in the pres-

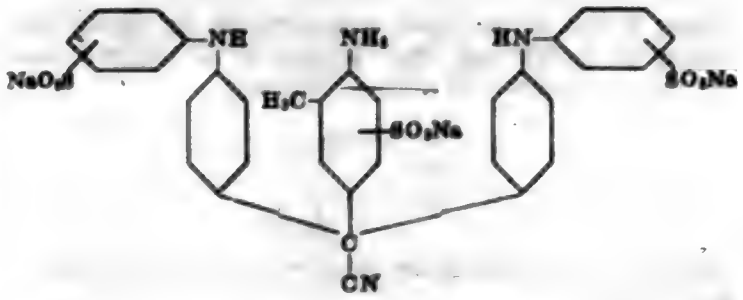
2,864,752
NEUTRONIC REACTOR FUEL ELEMENT

of the blocks, the tiles being arranged so that first, they

ence of water, a hydrophilic cyanide of a p-amino triphenylmethane dye containing a sulfonic acid group ortho to the central methane carbon atom on one of the phenyl groups attached thereto.

2,864,753
CYANIDE OF SOLUBLE BLUE AND METHOD OF USING SAME
Lyman Chalkley, Prince Georges County, Md.
No Drawing. Application July 1, 1957
Serial No. 668,930
3 Claims. (Cl. 204—158)

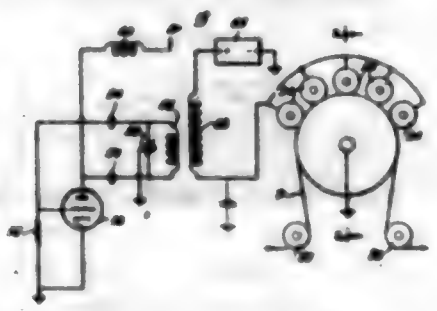
3. A process for forming a colored compound comprising irradiating with ultraviolet energy in the presence of an activator consisting of water, a dye cyanide having the following formula



2,864,754
PREPARATION OF TETRABORANE
Joseph P. Nixon, Evans City, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application May 3, 1954
Serial No. 427,349
6 Claims. (Cl. 204—164)

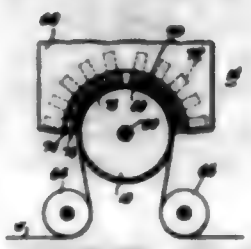
1. A method of preparing tetraborane (B_4H_{10}) which comprises subjecting diborane to a silent electric discharge at a pressure from 180 to 250 mm. and a temperature of −25° C. to +15° C. and recovering the tetraborane formed.

2,864,755
METHOD AND APPARATUS FOR THE TREATMENT OF PLASTIC MATERIALS
Francis Neill Rothacker, East Orange, N. J., assignor to Modern Plastic Machinery Corp., Lodi, N. J., a corporation of Delaware
Application January 10, 1957, Serial No. 633,450
23 Claims. (Cl. 204—165)



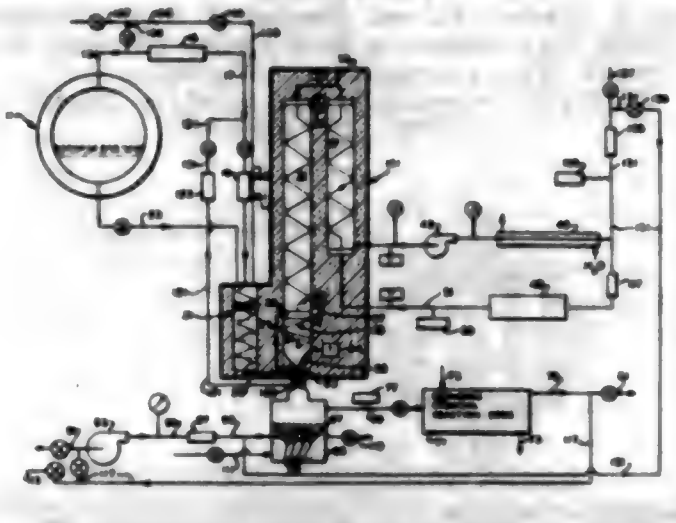
1. The improved method of treating a synthetic, organic, thermoplastic article comprising disposing said article between and in contact with the opposing faces of a pair of first and second electrodes, the face of said first electrode being formed of a solid first dielectric material having a higher dielectric loss factor than said plastic article and the face of said second electrode being formed of a material selected from the class consisting of good electrical conductors and dielectric materials having a dielectric loss factor less than said first dielectric material, an electric voltage being connected between said electrodes, said voltage fluctuating at a frequency of at least 300 cycles per second and said fluctuation having an amplitude of at least 400 volts, the potential of said first electrode being positive with respect to said article for at least a part of the time whereby to alter the surface properties of said thermoplastic article in contact with said first dielectric material to increase the receptive properties thereof.

2,864,756
METHOD AND APPARATUS FOR THE TREATMENT OF PLASTIC MATERIALS
Francis Neill Rothacker, East Orange, N. J., assignor to Modern Plastic Machinery Corp., Lodi, N. J., a corporation of Delaware
Application June 8, 1955, Serial No. 513,948
12 Claims. (Cl. 204—168)



1. The improved method of treating a polyethylene material, comprising the steps of establishing at a surface of said material a D. C. electric field and alternately varying the intensity of said electric field between points below and above the gaseous discharge point of the ambient atmosphere adjacent to said material surface.

2,864,757
OZONE CONCENTRATION AND DILUTION
Frederick R. Baicar, Stamford, Conn., and Wolcott Dennis, Basking Ridge, N. J., assignors to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York
Application February 17, 1956, Serial No. 566,236
10 Claims. (Cl. 204—176)

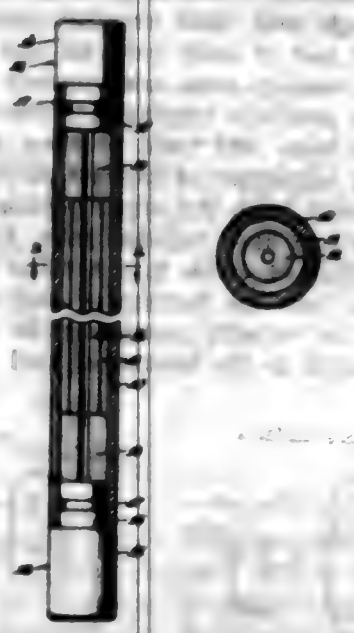


1. The method of producing a continuous ozone-containing gas stream comprising delivering a stream of oxygen-containing gas through an ozonizer and converting at least a part of the oxygen to gaseous ozone to produce a relatively low concentration of gaseous ozone, passing said ozonized gas stream through a condensation zone, progressively producing a liquid ozone-rich fraction during passage of said stream through said condensation zone, continuously, completely separating said ozone-rich liquid fraction from said remaining gas stream as said stream is discharged from the condensation zone, vaporizing said liquid ozone-rich fraction by contacting said fraction with a non-reactive, compatible liquid and entraining the vapors thus formed, in controllable concentrations, in a carrier gas.

medium comprising a molten metal selected from the group consisting of alkali and alkaline earth metals

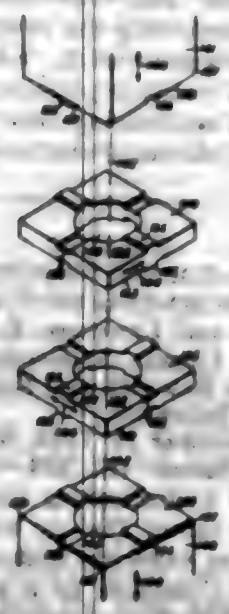
mixture of a major proportion of finely divided solid catalyst particles and a minor proportion of inert heat

2,864,758
NEUTRONIC REACTOR FUEL ELEMENT
Milton H. Shackelford, Schenectady, N. Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application March 17, 1954, Serial No. 416,969
4 Claims. (Cl. 204—193.2)



1. A fuel element comprising an outer tube formed of material selected from the group consisting of stainless steel, V, Ti, Mo, and Zr, a fuel tube concentrically fitting within the outer tube and containing an oxide of an isotope selected from the group consisting of U^{238}, U^{233}, and Pu^{239}, and a porous core concentrically fitting within the fuel tube and formed of an oxide of an element selected from the group consisting of Mg, Be, and Zr.

2,864,759
NUCLEAR REACTORS
Everett Long, Warrington, and James Wilfred Ashley, Appleton, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application June 30, 1955, Serial No. 519,055
4 Claims. (Cl. 204—193.2)

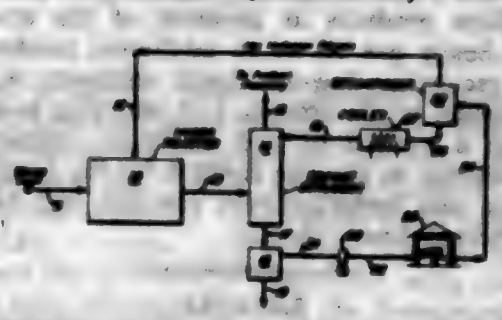


1. A graphite moderator structure for a nuclear reactor comprising stacks of uniform right prismatic graphite blocks positioned in layers extending in the direction of the lengths of the blocks, the blocks defining coolant channels parallel to their length, and having minimum Wigner growth properties in the direction of their length, and pairs of graphite tiles separating adjacent end faces of the blocks, the tiles being arranged so that first, they form two layers between each layer of blocks with their principal faces parallel to the end faces of the blocks, second, that all the tiles in any one layer having minimum Wigner growth properties in a direction which is one co-ordinate axis normal to the longitudinal axes of the blocks and that all the tiles in the adjacent layers have minimum Wigner growth properties in a direction which is the other coordinate axis normal to the longitudinal axis, third, the principal faces of the tiles and the end faces of the blocks are provided with means defining interlocking keys and keyways parallel to both said co-ordinate axes, fourth, the side walls of said tiles which are normal to the direction of minimum Wigner growth in their respective tiles butt together and the other side walls are spaced apart, fifth, the length of the side walls of the tiles lying along the direction of minimum Wigner growth is greater than the parallel dimensions of the vertical blocks above and below and is equal to the required lattice pitch of the coolant channels, and sixth, the tiles have means defining apertures co-axial with and of similar size to said coolant channels.

2,864,760
PROCESS FOR THE MANUFACTURE OF ELECTRODE PITCHES
Friedrich Crey, Schriesheim, Germany
No Drawing. Application November 26, 1954
Serial No. 471,536
5 Claims. (Cl. 208—44)

1. The process for preparing an electrode coal tar pitch composition containing at least 30% by weight of medium-molecular weight tar resins comprising mixing a coal tar with a light coal tar oil and a compound in an amount up to approximately 5% by weight of the mixture at a temperature of approximately 150° C. to approximately 200° C., said compound being selected from the group consisting of manganic chloride, chromic chloride, ferric chloride, nitrobenzene sulfonic acid chloride, paratoluene sulfonic acid chloride, and nitronaphthalene sulfonic acid chloride, stirring the so-formed mixture, and distilling the so-treated mixture until the residue has a softening point of approximately 80° C. Kramer-Sarnow, thereby obtaining a coal tar pitch for forming electrodes of exceptionally good stability and high tensile strength.

2,864,761
PROCESS OF HYDROGEN RECOVERY AND RECYCLE
Edmond L. d'Orville, La Grange, and John William Moldman, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application June 30, 1954, Serial No. 440,354
8 Claims. (Cl. 208—97)



1. In a process for reforming hydrocarbon feedstocks in the presence of a reforming catalyst and recycle hydrogen gas, the improved method of separating hydrogen gas from the hot effluent from the reforming zone and for recycling said hydrogen gas to the reforming zone which comprises: contacting the hot effluent from the reforming zone in an absorption zone with a molten metal contact

electrodes, said voltage fluctuating at a frequency of at trations, in a carrier gas.

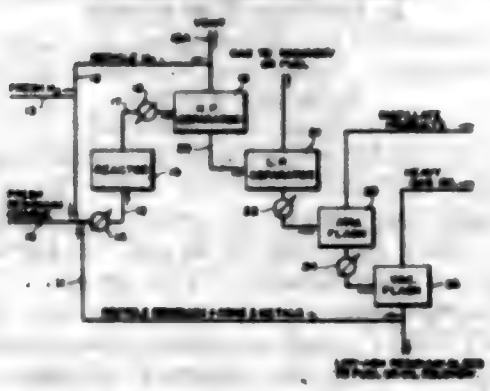
medium comprising a molten metal selected from the group consisting of alkali and alkaline earth metals capable of forming an equilibrium metal hydride with hydrogen at a temperature in the range of about 500°–1000° F., while maintaining a temperature-pressure relationship within the absorption zone providing a temperature less than the decomposition temperature of the metal hydride at the prevailing hydrogen partial pressure, whereby hydrogen in the hot effluent is absorbed in the molten metal contact medium as a metal hydride; separating the molten metal contact medium from the unabsorbed reforming effluent; regenerating hydrogen gas from the molten metal contact medium by adjusting the temperature-pressure relationship to provide a temperature greater than the decomposition temperature of the metal hydride at the prevailing hydrogen partial pressure; and recycling said regenerated hydrogen gas to the reforming zone.

2,864,762

HYDROGENOLYSIS OF PETROLEUM HYDROCARBONS

William C. Lanning and Reagan T. Wilson, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application March 30, 1953, Serial No. 345,462
3 Claims. (Cl. 208—113)



1. An improved process for the catalytic hydrogenolysis of refinery residual oils containing at least 60 parts per million of heavy metals, which comprises introducing said residual oil in admixture with hydrogen in an amount of 500 to 20,000 cubic feet per barrel of oil, and 2 to 20 weight percent of said oil of a catalyst, as hereinafter described, into a reaction zone maintained at a temperature in the range of 825 to 950 degrees F., and a pressure in the range of 1000 to 5000 p. s. i. g.; reacting said mixture in said reaction zone for a time sufficient to cause substantial hydrogenolysis whereby coke is formed in an amount of less than 20 weight percent of said oil; removing the reaction products comprising hydrogen, hydrocarbon vapors and liquid hydrocarbons from said reaction zone; separating light gases comprising hydrogen from said reactions products and returning same to said reaction zone as recycle hydrogen; recovering distillate products as products of the process; recovering heavy gas oil as an additional product of the process; recovering low-ash liquid residuum as an additional product of the process; and returning to said reaction zone a portion of said residuum, containing suspended therein, as the sole catalyst for the reaction, coke formed in said hydrogenolysis reaction and having absorbed thereon heavy metals.

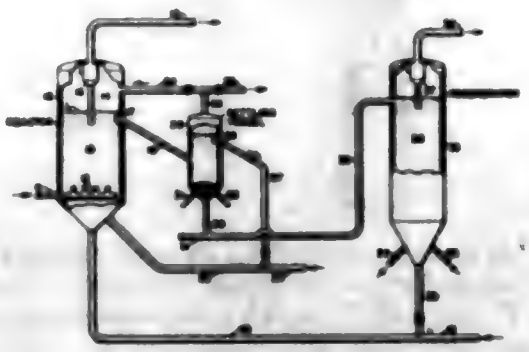
2,864,763

FLUIDIZED SOLIDS CATALYTIC REFORMING PROCESS

Bernard L. Schulman, Linden, and Walter G. May, Union, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application August 2, 1954, Serial No. 447,138
8 Claims. (Cl. 208—136)

1. A method of carrying out endothermic reactions which comprises contacting vaporous reactants with a mixture of a major proportion of finely divided solid catalyst particles and a minor proportion of inert heat transfer solid particles of greater density and larger average particle size than said catalyst particles in a main reaction zone, continuously introducing catalyst and heat transfer solid particles and vaporous reactants to the bottom of the main reaction zone, controlling the vapor velocities through said main reaction zone to form a dense, fluidized bed of solid particles and vaporous reactants in said reaction zone, continuously removing vaporous reaction products substantially free of solid particles overhead from said main reaction zone, continuously removing a mixture of catalyst particles and inert heat transfer solids from the upper portion of the dense fluidized bed in said main reaction zone, transferring the withdrawn mixture of solids to a settling vessel passing an aeration gas into the bottom of said settling vessel at a relatively low velocity permitting the settling of the heat transfer solids to the bottom of said settling vessel,



withdrawing aeration gas substantially free of solid particles overhead from said settling vessel, withdrawing a first stream of said particles comprising a major proportion of catalyst and a minor proportion of heat transfer solids as a side stream from the upper part of said settling vessel and a second stream of solid particles comprising a major proportion of heat transfer solids and a minor proportion of catalyst from the bottom of said settling vessel, recycling said first stream of solid particles to the bottom of the main reaction zone in a stream of recycle gas, conveying said second stream solid particles to a regeneration and heating zone, passing air through the latter zone to maintain a fluidized bed of solids therein and burn combustible materials therein, thereby regenerating the catalyst and heating the catalyst and heat transfer solids, withdrawing hot heat transfer solids and catalyst particles from the bottom of said regeneration and heating zone, and recycling them to the lower part of the main reaction zone.

2,864,764

FLUIDIZED SOLIDS PROCESS FOR THE HYDROFORMING OF NAPHTHAS

Joseph A. Polack and Lawrence E. Swabb, Jr., Baton Rouge, La., and George A. Danner, Jr., Tuscola, Ill., assignors to Esso Research and Engineering Company, a corporation of Delaware

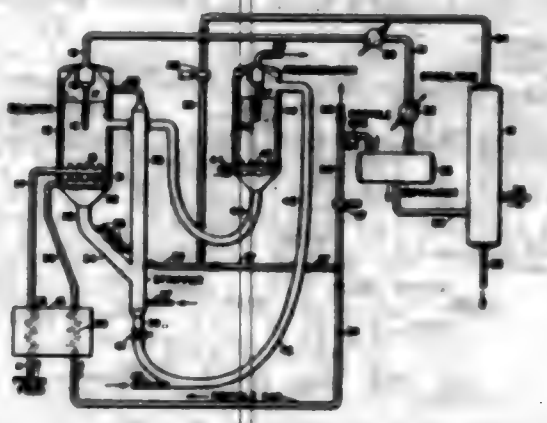
Application September 21, 1954, Serial No. 457,322
7 Claims. (Cl. 208—149)

3. A method of hydroforming hydrocarbon fractions boiling within the motor fuel or naphtha range which comprises contacting vaporous hydrocarbons and hydrogen-rich gas with a mixture of a major proportion of finely divided solid hydroforming catalyst particles and a minor proportion of inert, heat transfer solid particles shot of greater density and larger average particle size than said hydroforming catalyst particles in a main reaction zone, continuously introducing hydroforming catalyst, shot and vaporous reactants to the main reaction zone, controlling vapor velocities through said main reaction zone to form a dense, fluidized bed of solid particles and

2,864,769

primary reformer, which process includes cooling the

vaporous reactants in said reaction zone, continuously removing vaporous reaction products substantially free of solid particles overhead from said main reaction zone, continuously removing a mixture of catalyst particles and shot from the lower part of the dense, fluidized bed in said main reaction zone, moving the withdrawn mixture downwardly and laterally as a confined stream through a sloping conduit, passing a high density gas upwardly



through said confined stream so as to control the ratio of shot to catalyst in said confined stream by separating catalyst from shot, recycling the separated catalyst to the main reaction zone through said sloping conduit, transferring the high shot to catalyst ratio mixture formed by this treatment of the confined stream to a regeneration zone wherein the catalyst is regenerated and the shot is heated, and recycling the hot shot and regenerated catalyst to the main reaction zone.

2,864,765

DEWATERING ORE CONCENTRATES

Earl George Stenzenus and George Archibald Frame, Copper Cliff, Ontario, Canada, assignors to The International Nickel Co., Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application February 1, 1954
Serial No. 407,617
Claims priority, application Canada September 1, 1953
10 Claims. (Cl. 210—43)

1. In a process of treating ore concentrates wherein there is established an aqueous slurry of ore concentrates which is subsequently subjected to a filtration operation to form a filter cake, the improved method of dewatering the ore concentrates to provide a filter cake which is friable and easily handled by conventional methods of materials handling which comprises establishing an aqueous slurry of ore concentrates having a particle size of up to 300 microns, incorporating into said aqueous slurry prior to filtration a polyoxyethylene ether of a hexitol anhydride partial long chain fatty acid ester having a hydrophile-lipophile balance of not more than about 11 in a small but effective amount up to about 0.5% by weight of ore concentrates to thereby form on filtration a filter cake which has better handling characteristics and which is further characterized by friability and a substantially lower porportion of water as compared to the filter cake formed when said ether is not added.

2,864,766

UTILIZATION OF MIXTURES OF ORGANIC AND INORGANIC ACIDS IN THE PREPARATION OF GREASES

Arnold J. Morway, Clark, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application November 30, 1955
Serial No. 550,176
9 Claims. (Cl. 252—36)

1. A lubricating composition comprising a major amount of a lubricating oil, and an alkaline earth metal neutralized blend of 5 to 20 wt. percent low molecular weight carboxylic acid having from about 1 to 3 carbon atoms per molecule and 3 to 15 wt. percent mineral acid, and 3 to 6 wt. percent aluminum soap, all of said weight percentages being based on the total weight of the lubricating composition.

2,864,767

UTILIZATION OF SULPHURIC ACID IN THE PREPARATION OF FLUID LUBRICANTS

Arnold J. Morway, Clark, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application November 30, 1955
Serial No. 550,285
9 Claims. (Cl. 252—40.7)

1. A fluid lubricating composition comprising a major proportion of lubricating oil and 5 to 50 wt. percent of an alkaline earth metal base neutralized blend of a strong inorganic acid, a low molecular weight carboxylic acid having 1 to 3 carbon atoms per molecule and an intermediate molecular weight carboxylic acid having 7 to 10 carbon atoms per molecule, wherein the mol ratio of said low to intermediate molecular weight carboxylic acid is about 3:1 to 20:1 and the mol ratio of the total inorganic acid and low molecular weight acid to said intermediate molecular weight acid is about 4:1 to 25:1.

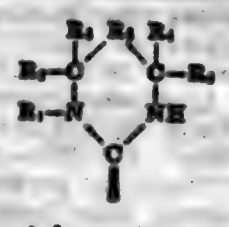
2,864,768

GERMICIDALLY ACTIVE SOAP CONTAINING REACTION PRODUCT OF SILVER SALT AND ETHYENETHIOUREA

Maynard M. Baldwin, Columbus, Ohio, assignor, by mesne assignments, to Permachem Corporation, Palm Beach, Fla., a corporation of Florida

No Drawing. Application February 28, 1956
Serial No. 566,327
6 Claims. (Cl. 252—107)

3. A germicidally active soap composition comprising a water-soluble, higher fatty acid soap and a germicidal amount of a reaction product of a silver halide selected from the group consisting of silver chloride, silver bromide, and silver iodide and a heterocyclic compound selected from the group consisting of the five and six member ring compounds having the general formula



wherein R_1 is selected from the group consisting of hydrogen and alkyl radicals containing 1 to 4 carbon atoms, R_2, R_3, R_4, and R_5 are selected from the group consisting of hydrogen and the methyl radical, and R_6 is selected from the group consisting of a linking bond and the divalent $—CH_2—$ radical, said reaction product of silver chloride and the heterocyclic compound being characterized by a ratio of three moles of the heterocyclic compound to one mole of the silver chloride, said reaction product of silver bromide and the heterocyclic compound being characterized by a ratio of two moles of the heterocyclic compound to one mole of the silver bromide, said reaction product of silver iodide and the heterocyclic compound being characterized by a ratio of one mole of the heterocyclic compound to one mole of the silver iodide.

period of up to 10 minutes so as to produce a rigid composition in which said metal salt is reduced to cryptocrystalline metal particles by said aldehyde, the amount

100 parts of a vinyl chloride polymer having an average particle size of 0.02–2.0 microns dispersed in 50–200 parts of a plasticizer is extruded into a thin film and

which comprises contacting vaporous reactants with a zone to form a dense, fluidized bed of solid particles and

2,864,769
GERMICIDALLY ACTIVE SOAP CONTAINING SILVER SALT OF AROMATIC SULFINIC ACID
Gerson A. Lutz, Columbus, and Robert E. Sharpe, Worthington, Ohio, assignors, by mesne assignments, to Permachem Corporation, Palm Beach, Fla., a corporation of Florida
No Drawing. Application February 20, 1956
Serial No. 566,371
4 Claims. (Cl. 252—107)

1. A germicidally active soap composition comprising a water-soluble higher fatty acid soap and a germicidal amount of a silver salt of a sulfinic acid selected from the group consisting of benzene sulfinic acid selected from substituted benzene sulfinic acid.

2,864,770
LIQUID DETERGENT COMPOSITION
Homer W. McCune, Wyoming, and Oscar T. Quimby, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Application October 3, 1956
Serial No. 613,604
8 Claims. (Cl. 252—138)

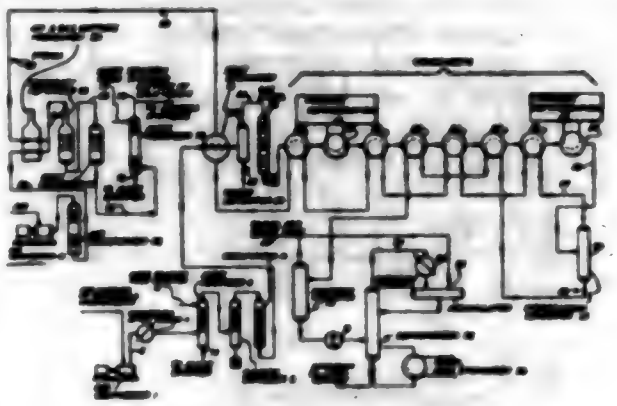
1. A thixotropic liquid detergent consisting essentially of: (1) an organic vehicle, fully water soluble, with a specific gravity greater than about 1, said vehicle including not less than ⅓ by weight of a member of the group consisting of glycols with not more than 4 carbon atoms in the molecule, glycerine and mixtures thereof; (2) a calcium sequestering phosphate substantially in soluble in said vehicle, said phosphate being in particulate form, at least about ¼ of the particles thereof, and sufficient to maintain a suspension in said vehicle settling not more than about 5% in four weeks, having a particle size not greater than about 0.5 micron, the remainder of said particles being no larger than about 25 microns, said phosphate being in ratio to the synthetic detergent of 1:1 to 4:1; and (3) a detergent chosen from a class consisting of sulfated and sulfonated, anionic, non-soap, detergents fully soluble in said vehicle, said anionic synthetic detergent constituting at least 10% of the whole composition, and enough to achieve adequate heavy duty detergency, but not over 25% and the solution of anionic synthetic detergent in the vehicle having a viscosity in the range from about 0.5 to about 2.0 poises.

2,864,771
METHOD OF MAKING FLUORESCENT PARAMAGNETIC PIGMENTS AND PRODUCT PRODUCED THEREBY
Joseph L. Switzer, Gates Mills, Robert C. Switzer, Shaker Heights, and Richard A. Ward, Cleveland Heights, Ohio, assignors to John D. Steele, Cleveland, Ohio
No Drawing. Application November 27, 1957
Serial No. 699,285
22 Claims. (Cl. 252—301.3)

12. A powdered fluorescent paramagnetic compound comprising a fluorescent inner metallic complex of a phenol of the group consisting of 8-hydroxyquinoline and derivatives thereof at least partially enveloping a solid powdered paramagnetic substrate as precipitate formations condensed directly on and about separate particles of said powdered substrate.

2,864,772
GAS PROCESSING
Gerald A. White, Los Angeles, Calif., assignor to C. F. Braun & Co., Alhambra, Calif., a corporation of California
Application January 16, 1956, Serial No. 559,298
4 Claims. (Cl. 252—376)

1. The process for removing hydrocarbons from a catalytic reformer off-gas containing a mixture of hydrogen and gaseous hydrocarbons without the use of a primary reformer, which process includes cooling the gas mixture to condense substantially all of the hydrocarbons having more than three carbon atoms and leave in the gas a major portion of the hydrocarbons containing less than three carbon atoms, separating the condensed hydrocarbons from the remaining gas mixture, adding steam to the gas mixture, adding oxygen to the gas mixture, reducing substantially all of the added



oxygen in a secondary reformer type of reaction at a temperature substantially below the temperature of a primary reformer type of reaction, thereby converting carbon in the remaining gaseous hydrocarbons to carbon monoxide and carbon dioxide, subjecting the mixture to a shift conversion reaction to form additional hydrogen and carbon dioxide, and thereafter removing the carbon dioxide to leave a gas substantially free of oxygen, carbon oxides, and hydrocarbons.

2,864,773
SEMI-CONDUCTOR COMPOSITION
William R. Counts and Robert W. Smith, Flint, and Karl Schwartzwalder, Holly, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Application January 24, 1954
Serial No. 406,338
18 Claims. (Cl. 252—503)

1. A ceramic composition exhibiting stable electrical properties consisting essentially of a substantially electrically stable mixed metal oxide semi-conductor material in admixture with glass and a reducing agent which latter constituent controls the resistance of the composition and is present in such small amount as to act as a discontinuous reducer phase, said semiconductor material consisting essentially of 15–60 parts of TiO_2, 0–50 parts of SnO_2, up to 15 parts of Ta_2O_5, 0–10 parts of MoO_3 and 20–40 parts of Al_2O_3.

2,864,774
PROCESS OF PRODUCING ELECTRICALLY CONDUCTIVE PLASTIC
Preston Robinson, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
No Drawing. Application April 29, 1953
Serial No. 352,063
5 Claims. (Cl. 252—514)

1. A process for producing cryptocrystalline metal with a resinous composition which comprises admixing a noble metal salt in a proportion of 20% by weight of the total composition, a resinous condensation product of an aldehyde with a member of the group consisting of phenol, urea and melamine, said condensation product being capable of undergoing further polymerization and an excess of the aldehyde in a proportion of not more than 20% by weight of the total composition and molding the said mixture under conditions of elevated temperature in the range of 300 to 330° F. and pressure of from about 1500 to 6000 p. s. i. for a

low-molecular aliphatic alcohol having at most 4 C-atoms,

2,864,784
AQUEOUS SLURRY PLASTICIZATION OF POLY-

amount of a lubricating oil, and an alkaline earth metal iodide.

period of up to 10 minutes so as to produce a rigid composition in which said metal salt is reduced to cryptocrystalline metal particles by said aldehyde, the amount of metal salt in an aldehyde being such as to have the cryptocrystalline particles impart electrical conductivity to the molded product.

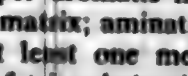
2,864,775

PROCESS FOR CURING POLYEPOXIDES BY AMINE ADDUCTS AND RESULTING PRODUCTS

Herbert A. Newey, Lafayette, Calif., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application September 29, 1955
Serial No. 535,525
15 Claims. (Cl. 260—2)

1. A process for producing an insoluble resinified product which comprises mixing and reacting a polyepoxide having



epoxy equivalency greater than 1.0 with from 5 to 40 parts per 100 parts of polyepoxide of an adduct of (1) a member of the group consisting of aliphatic polyamines having terminal primary amine groups and ammonia, and (2) a monoepoxide containing no more than 12 carbon atoms, said adduct having at least three hydrogen attached to two different amino nitrogen atoms and having a hydroxyl group attached to an aliphatic carbon atom which is adjacent to a nitrogen-bearing carbon atom.

2,864,776

PROCESS FOR PREPARING SHEETS OF ANION EXCHANGE RESIN

Yoshio Tsunoda, Shiberya-ku, Tokyo, and Masumi Seko, Okatomi, Nobeoka-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan

No Drawing. Application April 16, 1956
Serial No. 578,161
Claims priority, application Japan May 6, 1955
1 Claim. (Cl. 260—2.1)

Process for preparing anion exchange resin sheet comprising; the step of polymerizing in block form a solution mixture containing (1) 50–80% by weight of styrene, (2) 1–10% by weight of divinyl benzene, (3) 1–10% by weight butadiene, (4) 15–30% by weight of at least one member selected from the group consisting of dimethylphthalate, diethylphthalate, dibutylphthalate, dioctylphthalate, tricresylphosphate and polyethylene glycol; slicing the block form matrix into sheet form matrix; extracting the plasticizer from the sheet form matrix; chloromethylating the extracted sheet form matrix in such an amount that there exist an average of from 0.2 to 1.2 chloromethyl groups per aromatic nucleus in the resulting chloromethylated matrix; aminating said chloromethylated matrix with at least one member selected from the group consisting of trimethylamine, dimethylethanolamine, diethylenetriamine and tetraethylene pentamine in such an amount that there exist in the reaction mixture at least one mole of said amine for each chloromethylated group in said chloromethylated sheet form matrix.

2,864,777

METHOD FOR PRODUCING POROUS FILMS FROM A POLYVINYL CHLORIDE PLASTISOL CONTAINING WATER AS THE BLOWING AGENT

Joe A. Greenhoe, Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 27, 1956
Serial No. 600,397
3 Claims. (Cl. 260—2.5)

1. In the method for preparing a film of a plasticized vinyl chloride polymer in which a plastisol consisting of 100 parts of a vinyl chloride polymer having an average particle size of 0.02–2.0 microns dispersed in 50–200 parts of a plasticizer is extenuated into a thin film and heated to fuse said plastisol film into a homogeneous plasticized vinyl chloride polymer film; the improvement which consists of incorporating about 2–50 parts of water in said plastisol before extenuating same into a film.

2,864,778

PROCESS FOR PREPARING FOAMABLE CARBON DIOXIDE-CONTAINING STYRENE POLYMER COMPOSITION AND FOAMABLE COMPOSITION THEREOF

John L. Mindnich, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application August 8, 1956
Serial No. 602,914
4 Claims. (Cl. 260—2.5)

1. A composition of matter comprising a foamable styrene polymer having incorporated therein a foam-producing quantity of an aliphatic hydrocarbon boiling in the range of 10–80° C. and carbon dioxide in the amount of at least about 0.0002 weight percent of the total composition.

2,864,779

PROCESS OF PREPARING UREA-FORMALDEHYDE MOLDING POWDERS

Henri Le Bihan, Liege, Jean André Robert Godart, Tilff, and Raymond Alphonse Burton, Liege, Belgium, assignors to Societe Belge de L'Azote et des Produits Chimiques du Marly, S. A., Liege, Belgium

No Drawing. Application July 25, 1956
Serial No. 599,899
Claims priority, application Belgium August 2, 1955
3 Claims. (Cl. 260—17.3)

1. A process for the preparation of urea-formaldehyde molding powders in the form of granules, comprising the incorporation of 25 parts by weight of finely pulverized paper and 10 to 15 parts of a setting catalyst composed of 30 to 35% melamine, 30 to 35% sulfate of melamine and 30 to 40% hexamethylene tetramine at a temperature not exceeding 45° C. into 100 parts of a urea-formaldehyde condensation product consisting of a mixture of mono- and dimethylolureas, and the subsequent drying of the product thus obtained with the catalyst therein.

2,864,780

TRANSPARENT RESINOUS SUBSTANCE

Irving Katz, Long Beach, Calif., and Frederick L. Thomas, Madison, Wis., assignors to Bjorksten Research Laboratories, Inc., Madison, Wis., a corporation of Illinois

No Drawing. Application December 10, 1954
Serial No. 476,565
1 Claim. (Cl. 260—18)

As a composition of matter, the polymeric product of the reaction between castor oil, acetylated castor oil having an acetyl content about 38 percent of the hydroxyl content, pentane diol-1,5, and m-tolylene diisocyanate.

2,864,781

SALTS OF NEW HARDENABLE, BASIC, TERNARY CONDENSATION PRODUCTS

Otto Albrecht, Neuewelt, near Basel, and Armin Hiestand, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application January 7, 1957
Serial No. 632,636
5 Claims. (Cl. 260—21)

1. A water-soluble salt of a hardenable basic ternary condensation product which has been obtained by heating together first (*a*) an ether of a methylol-melamine with a

ing not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence

phenol-aldehyde resin containing a plurality of active hydrogen atoms, and (B) a non-aryl hydrophile poly-

low-molecular aliphatic alcohol having at most 4 C-atoms, with (*c*) triethanolamine, and then heating the condensation product so obtained with (*b*) a member selected from the group consisting of monocarboxylic acids of the formula

$$R—COOH$$

monocarboxylic acid-N-methylolamides of the formula

$$R—CO—NH—CH_2OH$$

and N-methylol-urethanes of the formula

$$R—O—CO—NH—CH_2OH$$

in which formulae R stands for an aliphatic hydrocarbon radical with 7 to 18 carbon atoms, and converting the basic product into the water-soluble salt.

2,864,782

LAMP BASING CEMENT CONTAINING BORIC ACID AND HEAT-CURABLE FORMALDEHYDE CONDENSATION RESIN

James S. Mitchell, Philadelphia, Pa., assignor to The Borden Company, a corporation of New Jersey

No Drawing. Application June 30, 1955
Serial No. 519,229
3 Claims. (Cl. 260—24)

1. A dual temperature range cement prepared for use at temperatures both below and above the melting and dehydration point of boric acid, the cement consisting essentially of a mixture of (1) a heat curable resin that is a condensation product of formaldehyde with a compound selected from the group consisting of phenol, melamine and urea, (2) boric acid, (3) a non-volatile solvent for the said resin serving as plasticizer therefor and being an electrical non-conductor, and (4) a granular mineral material that is electrically non-conductive, resistant to heat decomposition at temperatures up to 650° F. and is of such size of granules that the major part by weight of the granules are finer than 100 mesh and coarser than 300 mesh, the proportions being approximately 1–3 parts of boric acid for one of the said condensation product, 1.5–5 parts of the mineral material for one of boric acid, and 1–4 parts of the condensation product for 1 of the said non-volatile solvent, the condensation product providing the bond at temperatures up to its decomposition point, and the mineral material absorbing the dehydration products of the boric acid at elevated temperature and providing therewith a cementing composition effective at temperatures above the decomposition point of said condensation product.

2,864,783

RESINOUS FILM-FORMING COMPOSITION AND REGENERATED CELLULOSE FILM COATED THEREWITH

Ralph T. K. Cornwell, Rosemont, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Original application June 7, 1951, Serial No. 230,444, now Patent No. 2,770,555, dated November 13, 1956. Divided and this application April 24, 1956, Serial No. 580,185
11 Claims. (Cl. 260—28.5)

6. A heat-sealable, moistureproofing coating composition comprising, by weight, 10% to 80% of a thermoplastic and organic solvent-soluble synthetic resin, 10% to 75% of a mixture of plasticizers comprising 5% to 40% of tricyclohexyl phosphate and 5% to 35% of other plasticizing material, wax and a blending agent for the resin and wax, the coating composition in the form of a film having a high surface slip and a high resistance to sticking.

2,864,784

AQUEOUS SLURRY PLASTICIZATION OF POLYVINYL ACETAL RESINS

Bernard Mitchel Marks, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 15, 1956
Serial No. 604,069
3 Claims. (Cl. 260—29.6)

1. A process for plasticizing a partial polyvinyl acetal resin comprising (*a*) forming an aqueous slurry consisting essentially of (1) particles of an unplasticized partial polyvinyl acetal resin having a size such that at least 90% by weight of said particles will be retained on a 60-mesh screen (U. S. Sieve Series), said resin being the condensation product of polyvinyl alcohol and an aldehyde having 2 to 6 carbon atoms per molecule, (2) a water-insoluble ester plasticizer for said resin which is present in the amount of 10% to 50% by weight of said resin, and (3) water in an amount such that the weight ratio of (water): (resin plus plasticizer) is from 3:1 to 20:1; (*b*) agitating said aqueous slurry for a period of 10 to 100 minutes at a power input of at least 1 horsepower per 1000 gallons of slurry; (*c*) maintaining the temperature of said slurry from 20° C. to 65° C. during the agitation; and (*d*) recovering an aqueous slurry of non-bleeding, plasticized partial polyvinyl acetal resin particles containing at least 90% of the plasticizer originally added to said slurry.

2,864,785

ENAMEL COMPOSITION AND ELECTRICAL CONDUCTOR COATED THEREWITH

Malcolm Charlton, Cleveland, Ohio, assignor to American-Marietta Company, Cleveland, Ohio, a corporation of Illinois

No Drawing. Application October 11, 1954
Serial No. 461,649
4 Claims. (Cl. 260—43)

1. A wire-coating enamel comprising a major proportion of solvent and a minor proportion of a composition comprising as the essential resinous ingredients thereof (*a*) a polyvinylal resin and (*b*) a phenol-aldehyde resin formed from the condensation of at least 0.1 and not over 0.6 mol of formaldehyde with 1.0 mol of a reactive cresylic acid selected from the group consisting of meta cresol and mixtures of meta-cresol and para-cresol containing less than about 2% of less reactive phenolic bodies, the ratio by weight of (*a*) to (*b*) being between about 2 to at least about ½ and about 2 to about 2¼.

2,864,786

CERTAIN POLYEPOXIDE TREATED DERIVATIVES OF MONOEPOXIDE-AMINE MODIFIED-RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

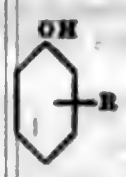
No Drawing. Original application June 10, 1953, Serial No. 360,842, now Patent No. 2,792,361, dated May 14, 1957. Divided and this application September 11, 1956, Serial No. 609,092
12 Claims. (Cl. 260—43)

1. A three-step manufacturing process involving (1) condensation; (2) oxyalkylation with a monoepoxide; and (3) oxyalkylation with a polyepoxide; said first manufacturing step being a method of producing a resin condensate by (A) condensing (*a*) an oxyalkylation-susceptible, fusible, non-oxygenated organic solvent-soluble, water-insoluble, low-stage phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde hav-

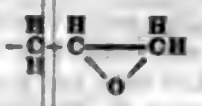
tained by the elimination of the aldehyde oxygen atom, the process be heat-stable; followed by (B) reacting said

together first (*a*) an ether of a methylol-melamine with a

ing not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated secondary monoamine having not more than 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable and oxyalkylation-susceptible; followed as a second step by (B) oxyalkylation by means of an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide to produce a monoepoxide oxyalkylated resin condensate; and then completing the reaction by a third step of (C) reacting said monoepoxide oxyalkylated resin condensate with nonaryl hydrophile polyepoxides containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive monoepoxide-oxyalkylated resin condensate and nonaryl polyepoxides be members of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; said reaction between the monoepoxide-oxyalkylated resin condensate and the nonaryl polyepoxide being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the oxyalkylated resin condensate to 1 mole of the nonaryl polyepoxide.

2,864,787

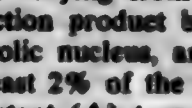
METHOD OF MODIFYING OXYALKYLATED PHENOL-ALDEHYDE RESINS WITH POLYEPOXIDE RESINS AND PRODUCT RESULTING THEREFROM

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

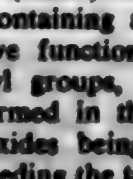
No Drawing. Original application November 19, 1953, Serial No. 393,224, now Patent No. 2,792,357, dated May 14, 1957. Divided and this application January 22, 1957, Serial No. 635,152

3 Claims. (Cl. 260—43)

1. A two-step manufacturing method, the first step involving an intermediate (ABA), which in turn, represents the reaction products of (A) an oxyalkylated phenol-aldehyde resin containing a plurality of active hydrogen atoms, and (B) a non-aryl hydrophile polyepoxide containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical in which an oxygen-linked hydrogen atom is replaced



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said oxyalkylated phenol-aldehyde resins, reactant (A) being the products derived by oxyalkylation of (*aa*) an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide, and (*bb*) a fusible, organic solvent-soluble, water-insoluble phenol-aldehyde resin; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

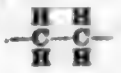


in which R^0 is selected from the group consisting of phenyl and saturated hydrocarbon radicals having not more than 24 carbon atoms and substituted in the 2,4,6 position; said oxyalkylated resin being characterized by the introduction into the resin molecule of a plurality of divalent radicals having the formula $(R_2O)_{n''}$ in which R_2 is a member selected from the class consisting of ethylene radicals, propylene radicals, butylene radicals, hydroxypropylene radicals, and hydroxybutylene radicals, and n'' is a numeral varying from 1 to 120; with the proviso that the reaction product be a member of the duced for each phenolic nucleus, and that the resin by weight represent at least 2% of the oxyalkylated derivative; the ratio of reactant (A) to reactant (B) being in the proportion of two moles of (A) to one mole of (B); with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the final proviso that the reactant product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; said second step being the reaction product between 2 moles of the aforementioned intermediate (ABA) and one mole of (C) a phenolic polyepoxide containing at least two 1,2-epoxy rings free from reactive functional groups other than 1,2-epoxy and hydroxyl groups, and cogenerically associated compounds formed in the preparation of said polyepoxides; said epoxides being monomers and low molal polymers not exceeding the tetramers; said epoxides being selecting from the class consisting of (*a*) compounds where the phenolic nuclei are directly joined without an intervening bridge radical, and (*b*) compounds containing a radical in which two phenolic nuclei are joined by a divalent radical selected from the class consisting of ketone residues formed by the elimination of the ketonic oxygen atom, and aldehyde residues ob-

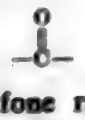
an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical

oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical

tained by the elimination of the aldehyde oxygen atom, the divalent radical



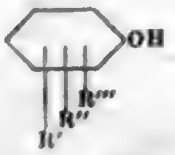
the divalent



radical, the divalent sulfone radical, and the divalent monosulfide radical —S—, the divalent radical

$$—CH_2SCH_2—$$

and the divalent disulfide radical —S—S—; said phenolic portion of the diepoxide being obtained from a phenol of the structure



in which R', R'', and R''' represent a member of the class consisting of hydrogen and hydrocarbon substituents of the aromatic nucleus, said substituent member having not over 18 carbon atoms; said final product being a member of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the final proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (ABA) and (C) being below the pyrolytic point of the reactants and the resultants of reaction.

2,864,788

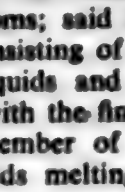
CERTAIN POLYEPOXIDE TREATED AMINE-MODIFIED THERMOPLASTIC PHENOL-ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

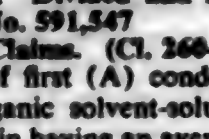
No Drawing. Original application March 13, 1953, Serial No. 342,281. Divided and this application June 15, 1956, Serial No. 591,546

10 Claims. (Cl. 260—45)

1. The method of first (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic nonhydroxylated secondary monoamine having up to 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction with the proviso that the molar ratio of reactants (*a*), (*b*) and (*c*) be approximately 1, 2 and 2 respectively; and with the proviso that the resinous condensation product resulting from the process be heat-stable; followed by (B) reacting said resin condensate with nonaryl hydrophile compounds containing at least two 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said 1,2-epoxy ring containing compounds being free from reactive functional groups other than 1,2-epoxy rings and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said 1,2-epoxy ring containing compounds being characterized by having present not more than 20 carbon atoms; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultant of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide.

2,864,789

CERTAIN POLYEPOXIDE TREATED AMINE-MODIFIED THERMOPLASTIC PHENOL-ALDEHYDE RESINS AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application March 13, 1953, Serial No. 342,282. Divided and this application June 15, 1956, Serial No. 591,547

10 Claims. (Cl. 260—45)

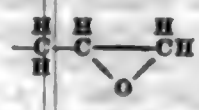
1. The method of first (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated secondary monoamine having up to 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction with the proviso that the molar ratio of reactants (*a*), (*b*) and (*c*) be approximately 1, 2 and 2 respectively; and with the proviso that the resinous condensation product resulting from the process be heat-stable; followed by (B) reacting said resin condensate with nonaryl hydrophile compounds containing at least two 1,2-epoxy rings obtained by replacement of

atom in a water-soluble polyhydric alcohol by the radical

resin condensate; and then completing the reaction by a

an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said 1,2-epoxy ring containing compounds being free from reactive functional groups other than 1,2-epoxy rings and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said 1,2-epoxy ring containing compounds being characterized by having present not more than 20 carbon atoms; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide.

2,864,790

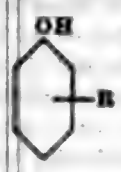
CERTAIN POLYEPOXIDE TREATED AMINE-MODIFIED THERMOPLASTIC PHENOL-ALDEHYDE RESINS AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

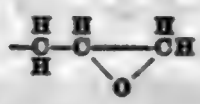
No Drawing. Original application March 13, 1953, Serial No. 342,283. Divided and this application June 15, 1956, Serial No. 591,548

10 Claims. (Cl. 260—45)

1. The method of first (A) condensing (*a*) a, fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2, 4, 6 position; (*b*) a basic non-hydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical, and any substituted tetrahydropyrimidine radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction with the proviso that the molar ratio of reactants (*a*), (*b*) and (*c*) be approximately 1, 2 and 2 respectively; and with the proviso that the resinous condensation product resulting from the process be heat-stable; followed by (B) reacting said resin condensate with nonaryl hydrophile compounds containing at least two 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said 1,2-epoxy ring containing compounds being free from reactive functional groups other than 1,2-epoxy rings and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said 1,2-epoxy ring containing compounds being characterized by having present not more than 20 carbon atoms; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermo-setting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide.

2,864,791

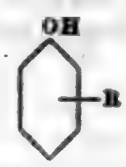
CERTAIN POLYEPOXIDE TREATED AMINE-MODIFIED THERMOPLASTIC PHENOL-ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application March 13, 1953, Serial No. 342,284. Divided and this application June 15, 1956, Serial No. 591,549

10 Claims. (Cl. 260—45)

1. The method of first (A) condensing (*a*) fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

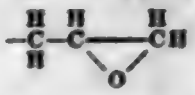


in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical and any substituted tetrahydropyrimidine radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction with the proviso that the molar ratio of reactants (*a*), (*b*) and (*c*) be approximately 1, 2 and 2 respectively; and with the proviso that the resinous condensation product resulting from the process be heat-stable; followed by (B) reacting said resin condensate with nonaryl hydrophile compounds containing at least two 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen

below the pyrolytic point of the reactants and resultants

that the polyamine be free from any primary amino radi-

atom in a water-soluble polyhydric alcohol by the radical



said 1,2-epoxy ring containing compounds being free from reactive functional groups other than 1,2-epoxy rings and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said 1,2-epoxy ring containing compounds being characterized by having present not more than 20 carbon atoms; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide.

2,864,792

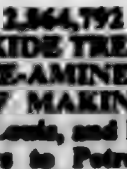
CERTAIN POLYEPOXIDE TREATED DERIVATIVES OF MONOEPOXIDE-AMINE MODIFIED-RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

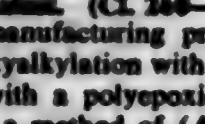
No Drawing. Original application June 10, 1953, Serial No. 360,841. Divided and this application September 11, 1956, Serial No. 609,091

12 Claims. (Cl. 260—45)

1. A three-step manufacturing process involving (1) condensation; (2) oxyalkylation with a monoepoxide; and (3) oxyalkylation with a polyepoxide; said first manufacturing step being a method of producing a resin condensate by (A) condensing (*a*) an oxyalkylation-susceptible, fusible, nonoxygenated organic solvent-soluble, water-insoluble, low-stage phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic nonhydroxylated secondary monoamine having not more than 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable and oxyalkylation-susceptible; followed as a second step by (B) oxyalkylation by means of an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide to produce a monoepoxide oxyalkylated resin condensate; and then completing the reaction by a third step of (C) reacting said monoepoxide oxyalkylated resin condensate with nonaryl hydrophile polyepoxides containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive monoepoxideoxyalkylated resin condensate and nonaryl polyepoxides be members of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; said reaction between the monoepoxide-oxyalkylated resin condensate and the nonaryl poyyepoxide being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the oxyalkylated resin condensate to 1 mole of the nonaryl polyepoxide.

2,864,793

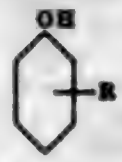
ALIPHATIC POLYEPOXIDE TREATED DERIVATIVES OF ALKYLENE OXIDE-AMINE MODIFIED-PHENOLIC RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application June 10, 1953, Serial No. 360,843, now Patent No. 2,792,362, dated May 14, 1957. Divided and this application September 11, 1956, Serial No. 609,093

7 Claims. (Cl. 260—45)

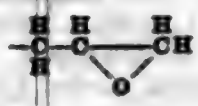
1. A three-step manufacturing process involving (1) condensation; (2) oxyalkylation with a monoepoxide; and (3) oxyalkylation with a polyepoxide; said first manufacturing step being a method of (A) condensing (*a*) a fusible, nonoxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic nonhydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical, and any substituted tetrahydropyrimidine radical, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and

and substituted in the 2,4,6, position; (*b*) a basic non- and substituted in the 2,4,6 position; (*b*) a basic non-

below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) oxyalkylation by means of an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide; and then completing the reaction by a third step of (C) reacting said oxyalkylated resin condensate with nonaryl hydrophile polyepoxides containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive monoepoxide-derived compounds (AA) and nonaryl polyepoxides (BB) be members of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; said reaction between (AA) and (BB) be conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the oxyalkylated resin condensate to 1 mole of the nonaryl polyepoxide.

2,864,794

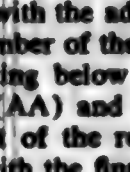
ALIPHATIC POLYEPOXIDE TREATED DERIVATIVES OF ALKYLENE OXIDE-AMINE MODIFIED PHENOLIC RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

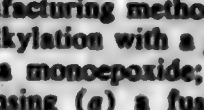
No Drawing. Original application June 10, 1953, Serial No. 360,844, now Patent No. 2,792,363, dated May 14, 1957. Divided and this application September 11, 1956, Serial No. 609,894

7 Claims. (Cl. 260—45)

1. A three-step manufacturing process involving (1) condensation; (2) oxyalkylation with a monoepoxide; and (3) oxyalkylation with a polyepoxide; said first manufacturing step being a method of (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical and any substituted tetrahydropyrimidine radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable followed as a second step by (B) oxyalkylation by means of an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide; and then completing the reaction by a third step of (C) reacting said oxyalkylated resin condensate with nonaryl hydrophile polyepoxides containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive monoepoxide-derived compounds (AA) and nonaryl polyepoxides (BB) be members of the class consisting of non-thermosetting organic solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; said reaction between (AA) and (BB) be conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the oxyalkylated resin condensate to 1 mole of the nonaryl polyepoxide.

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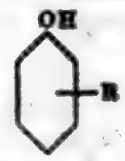
OXYALKYLATED ALIPHATIC POLYEPOXIDE-TREATED AMINE-MODIFIED PHENOL ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application July 30, 1953, Serial No. 371,410, now Patent No. 2,771,451, dated November 20, 1956. Divided and this application September 12, 1956, Serial No. 609,355

7 Claims. (Cl. 260—45)

1. A 3-step manufacturing method involving (1) condensation; (2) oxyalkylation with a polyepoxide; and (3) oxyalkylation with a monoepoxide; said first step being that of (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

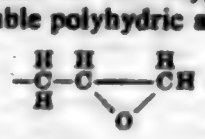


in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms

stantial absence of trifunctional phenols; said phenol being of the formula

in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional mono-

and substituted in the 2,4,6, position; (*b*) a basic non-hydroxylated secondary monoamine having up to 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) reacting said resin condensate with nonaryl hydrophile polyepoxides containing two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide, and then completing the reaction by a third step of (C) reacting said polyepoxide-derived product with a monoepoxide; said monoepoxide being an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide.

2,864,796

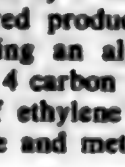
OXYALKYLATED ALIPHATIC POLYEPOXIDE-TREATED AMINE-MODIFIED PHENOL ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

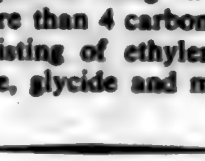
No Drawing. Original application July 30, 1953, Serial No. 371,412, now Patent No. 2,771,453, dated November 20, 1956. Divided and this application September 12, 1956, Serial No. 609,356

7 Claims. (Cl. 260—45)

1. A 3-step manufacturing method involving (1) condensation; (2) oxyalkylation with a polyepoxide; and (3) oxyalkylation with a monoepoxide; said first step being that of (A) condensing (*a*) a fusible, nonoxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic non-hydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical, and any substituted tetrahydropyrimidine radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) reacting said resin condensate with nonaryl hydrophile polyepoxides containing two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide, and then completing the reaction by a third step of (C) reacting said polyepoxide-derived product with a monoepoxide; said monoepoxide being an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide.

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OXYALKYLATED ALIPHATIC POLYEPOXIDE-TREATED AMINE-MODIFIED PHENOL ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

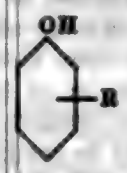
No Drawing. Original application July 30, 1953, Serial No. 371,413, now Patent No. 2,771,454, dated November 20, 1956. Divided and this application September 12, 1956, Serial No. 609,357

7 Claims. (Cl. 260—45)

1. A 3-step manufacturing method involving (1) condensation; (2) oxyalkylation with a polyepoxide; and (3) oxyalkylation with a monoepoxide; said first step being that of (A) condensing (*a*) a fusible, nonoxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the sub-

phenol and an aldehyde having not over 8 carbon atoms (3) oxyalkylation with a polyepoxide; said first step

stantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated polyamine having at least one secondary amino group and having up to 32 carbon atoms in any radical attached to any amino nitrogen atom, and with the further proviso that the polyamine be free from any primary amino radical, any substituted imidazoline radical, and any substituted tetrahydropyrimidine radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) reacting said resin condensate with nonaryl hydrophile polyepoxides containing two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical

said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide, and then completing the reaction by a third step of (C) reacting said polyepoxide-derived product with a monoepoxide; said monoepoxide being an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methyl glycide.

2,864,798

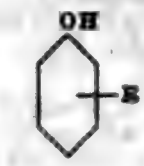
OXYALKYLATED ALIPHATIC POLYEPOXIDE-TREATED AMINE-MODIFIED PHENOL ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

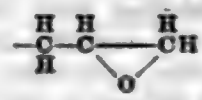
No Drawing. Original application July 30, 1953, Serial No. 371,411, now Patent No. 2,771,452, dated November 20, 1956. Divided and this application September 12, 1956, Serial No. 610,699

7 Claims. (Cl. 260—45)

1. A 3-step manufacturing method involving (1) condensation; (2) oxyalkylation with a polyepoxide; and (3) oxyalkylation with a monoepoxide; said first step being that of (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) a basic hydroxylated secondary monoamine having up to 32 carbon atoms in any group attached to the amino nitrogen atom, and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) reacting said resin condensate with nonaryl hydrophile polyepoxides containing two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide, and then completing the reaction by a third step of (C) reacting said polyepoxide-derived product with a monoepoxide; said monoepoxide being an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide.

2,864,799

ALIPHATIC POLYEPOXIDE TREATED AMINE-MODIFIED PHENOL-ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application March 13, 1953, Serial No. 342,285. Divided and this application June 15, 1956, Serial No. 591,550

10 Claims. (Cl. 260—45.1)

1. The method of first (A) condensing (*a*) fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric

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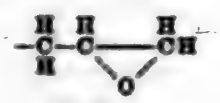
monoepoxide; said monoepoxide being an alpha-beta-

phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) cyclic amidines selected from the class consisting of substituted imidazolines and substituted tetrahydropyrimidines wherein the substituent is an organic radical composed of elements selected from the group consisting of carbon, hydrogen, oxygen and nitrogen and in which there is present at least one basic secondary amino radical and characterized by freedom from any primary amino radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction with the proviso that the molar ratio of reactants (*a*), (*b*) and (*c*) be approximately 1, 2 and 2 respectively; and with the proviso that the resinous condensation product resulting from the process be heat-stable; followed by (B) reacting said resin condensate with nonaryl hydrophile compounds containing at least two 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said 1,2-epoxy ring containing compounds being free from reactive functional groups other than 1,2-epoxy rings and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; said 1,2-epoxy ring containing compounds being characterized by having present not more than 20 carbon atoms; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide.

2,864,800

AROMATIC POLYEPOXIDE TREATED DERIVATIVES OF ALKYLENE OXIDE-AMINE MODIFIED-PHENOLIC RESINS, AND METHOD OF MAKING SAME

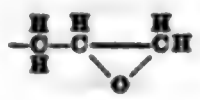
Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application June 18, 1953, Serial No. 362,845, now Patent No. 2,792,364, dated May 14, 1957. Divided and this application September 11, 1954, Serial No. 455,895

7 Claims. (Cl. 260—45.1)

1. A three-step manufacturing process involving (1) condensation; (2) oxyalkylation with a monoepoxide; and (3) oxyalkylation with a polyepoxide; said first manufacturing step being a method of (A) condensing (*a*) a fusible, noncoxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula

in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2,4,6 position; (*b*) cyclic amidines selected from the class consisting of substituted imidazolines and substituted tetrahydropyrimidines wherein the substituent is an organic radical composed of elements selected from the group consisting of carbon, hydrogen, oxygen and nitrogen and in which there is present at least one basic secondary amino radical and characterized by freedom from any primary amino radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable; followed as a second step by (B) oxyalkylation by means of an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide; and then completing the reaction by a third step of (C) reacting said oxyalkylated resin condensate with nonaryl hydrophile polyepoxides containing at least two 1,2-epoxy rings and having two terminal 1,2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical.



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive monoepoxide-derived compounds (AA) and nonaryl polyepoxides (BB) be members of the class consisting of non-thermosetting organic solvent soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; said reaction between (AA) and (BB) be conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the oxyalkylated resin condensate to 1 mole of the nonaryl polyepoxide

10% by weight of the combined weight of said (1) and (2), and not more than 18 carbon atoms and substituted in

2,864,801

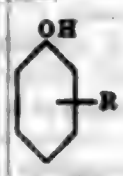
OXYALKYLATED ALIPHATIC POLYEPOXIDE-TREATED AMINE-MODIFIED PHENOL ALDEHYDE RESINS, AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

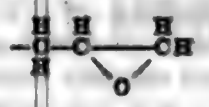
No Drawing. Original application July 30, 1953, Serial No. 371,414, now Patent No. 2,771,455, dated November 20, 1956. Divided and this application September 12, 1956, Serial No. 609,358

7 Claims. (Cl. 260—45.1)

1. A 3-step manufacturing method involving (1) condensation; (2) oxyalkylation with a polyepoxide; and (3) oxyalkiation with a monoepoxide; said first step being that of (A) condensing (*a*) a fusible, non-oxygenated organic solvent-soluble, water-insoluble, phenol-aldehyde resin having an average molecular weight corresponding to at least 3 and not over 6 phenolic nuclei per resin molecule; said resin being difunctional only in regard to methylol-forming reactivity; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a saturated aliphatic hydrocarbon radical having at least 4 and not more than 24 carbon atoms and substituted in the 2, 4, 6 position; (*b*) cyclic amidines selected from the class consisting of substituted imidazolines and substituted tetrahydropyrimidines wherein the substituent is an organic radical composed of elements selected from the group consisting of carbon, hydrogen, oxygen and nitrogen and in which there is present at least one basic, secondary amino radical and characterized by freedom from any primary amino radical; and (*c*) formaldehyde; said condensation reaction being conducted at a temperature sufficiently high to eliminate water and below the pyrolytic point of the reactants and resultants of reaction; and with the proviso that the resinous condensation product resulting from the process be heat stable followed as a second step by (B) reacting said resin condensate with nonaryl hydrophile polyepoxides containing two terminal 1, 2-epoxy rings obtained by replacement of an oxygen-linked hydrogen atom in a water-soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1, 2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal oxirane rings is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of non-thermosetting solvent-soluble liquids and solids melting below the point of pyrolysis; with the added proviso that the reaction product be a member of the class of solvent-soluble liquids and solids melting below the point of pyrolysis; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; and with the final proviso that the ratio of reactants be 2 moles of the resin condensate to 1 mole of the polyepoxide, and then completing the reaction by a third step of (C) reacting said polyepoxide-derived product with a monoepoxide; said monoepoxide being an alpha-beta-alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide, and methylglycide.

2,864,802

MOLDING COMPOSITIONS OF HIGH MOLECULAR WEIGHT AND LOW MOLECULAR WEIGHT POLYMERS

Raymond M. Price, Midland, Lewis J. Young, Sanford, Bernard H. Tubbs, Clare, and Robert E. Lee, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application November 28, 1955, Serial No. 549,291

6 Claims. (Cl. 260—45.5)

1. A resinous composition consisting of from 60 to 98 percent by weight of a normally solid thermoplastic alkenyl aromatic resin A selected from the group consisting of (1) a polymerized monovinyl aromatic hydrocarbon of the benzene series, (2) copolymers of at least 60 percent by weight of a monovinyl aromatic hydrocarbon of the benzene series and not more than 40 percent of an alkenyl aromatic hydrocarbon of the benzene series having a single isopropenyl radical directly attached to a carbon atom of the aromatic nucleus and (3) resinous products consisting of from 60 to 98 percent by weight of at least one of the polymers of 1 and 2 and from 40 to 2 percent of a rubbery elastomer which is a member of the group consisting of natural rubber and rubbery copolymers of from 40 to 80 percent by weight of butadiene and from 60 to 20 percent of styrene, the said resin A containing not more than 3 percent by weight of volatile ingredients capable of being vaporized and removed by heating the resin at a temperature of 213° C. at one millimeter absolute pressure for a time of 25 minutes and having an average molecular weight of at least 140,000, as determined by the scattering of light, intimately incorporated with 40 to 2 percent of a normally solid thermoplastic alkenyl aromatic resin B selected from the group consisting of a polymerized monoalkenyl aromatic hydrocarbon of the benzene series having a single ethylenically unsaturated group of the formula $CH_2=CR-$ wherein R represents a member of the group consisting of hydrogen, methyl and ethyl radicals, said group being directly attached to a carbon atom of the benzene nucleus, which resin B contains not more than 3 percent by weight of volatile ingredients capable of being vaporized and removed by heating the resin at a temperature of 213° C. at one millimeter absolute pressure for a time of 25 minutes, is compatible with resin A and has an average molecular weight of not more than one-third as great as the average molecular weight of resin A and has a second order transition temperature at least as high as 45° C. and not more than 5° C. above the second order transition temperature of resin A.

2,864,803

ALPHA-BETA UNSATURATED DICARBOXYLIC ACID-VINYL ALKYL ETHER COPOLYMERS STABILIZED WITH A WATER SOLUBLE THIOAMIDE

John F. Jones, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application November 30, 1954 Serial No. 472,257

18 Claims. (Cl. 260—45.8)

1. A composition comprising a member selected from the class consisting of (A) interpolymers of substantially equimolar proportions of (1) alpha-beta unsaturated dicarboxylic acids and anhydrides thereof and (2) vinyl alkyl ethers in which the alkyl group has from 1 to 10 carbon atoms and (B) interpolymers of substantially equimolar proportions of (1) and (2) and from 0.1 to about

prises mixing the three monomeric components with a free radical producing catalyst, heating the mixture ap-

2,864,811

10% by weight of the combined weight of said (1) and (2) of an ingredient having a plurality of $CH_2=C<$ groups which ingredient is copolymerizable with (1) and (2) to form cross-linked interpolymers, partial amides, partial esters of monohydric alcohols and partial alkali metal salts of (A) and (B), and a stabilizing ingredient from about 6% to about 120% by weight based on said interpolymers of a water-soluble thioamide.

2,864,804

HYDROXY-SUBSTITUTED ALLYLIC ETHERS AND DERIVATIVES

Edward C. Shokal, Walnut Creek, and Roy W. H. Tess, Orinda, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application December 17, 1953
Serial No. 398,836
15 Claims. (Cl. 260—47)

1. Compounds of the group consisting of (1) hydroxy-substituted 2-alkenyl ethers of the formula

wherein R is a divalent radical obtained from a dihydric phenol by removing the hydrogen from the phenolic OH groups, *n* is an integer of the series 0 to 6 and one X is a 2-alkenyl radical and the other X is selected from the group consisting of 2-alkenyl radicals and the glycidyl radical, and (2) esters of the aforedescribed hydroxy-substituted 2-alkenyl ethers.

2,864,805

EPOXIDE RESINS

Harold G. Cooke, Jr., Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Application December 5, 1955
Serial No. 550,841
8 Claims. (Cl. 260—47)

1. The method of producing epoxide resins which comprises reacting a mixture of cyanuric acid and a dihydric phenol with epichlorhydrin in the presence of an organic nitrogen base as a catalyst and an organic solvent for cyanuric acid to form polychlorhydrin derivatives, and subjecting the resulting chlorhydrin derivatives to dehydrohalogenation to form epoxide resins.

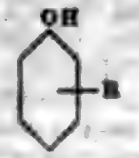
2,864,806

CERTAIN OXYALKYLATION DERIVATIVES OF POLYEPOXIDE MODIFIED PHENOL-ALDEHYDE RESINS

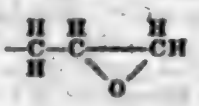
Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application February 19, 1953, Serial No. 337,884. Divided and this application April 30, 1956, Serial No. 581,296
10 Claims. (Cl. 260—53)

1. Synthetic hydrophile products; said synthetic hydrophile products being the oxyalkylation derivatives of the reaction products of (A) an oxyalkylation-susceptible, fusible, organic solvent-soluble, water-insoluble phenol-aldehyde resin; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a hydrocarbon radical having at least 4 and not more than 18 carbon atoms and substituted in the 2,4,6 position; and (B) non-aryl hydrophile polyepoxides containing at least two 1,2-epoxy rings obtained by replacement of oxygen linked hydrogen atoms in a water soluble polyhydric alcohol by the radical



said polyepoxides being free from reactive functional groups other than 1,2-epoxy and hydroxyl groups and characterized by the fact that the divalent linkage uniting the terminal epoxide groups is free from any radical having more than 4 uninterrupted carbon atoms in a single chain; with the further proviso that said reactive compounds (A) and (B) be members of the class consisting of nonthermosetting solvent-soluble liquids and low-melting solids; and with the further proviso that the reaction product be a member of the class of acylation- and oxyalkylation-susceptible solvent-soluble liquids and low-melting solids; and said reaction between (A) and (B) being conducted below the pyrolytic point of the reactants and the resultants of reaction; with the final proviso that the ratio of reactants be 2 moles of resin to 1 mole of polyepoxide; followed by an oxyalkylation step by means of an alpha-beta alkylene monoepoxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide.

2,864,807

POLYAMIDES FROM BRANCHED CHAIN C_9 AND C_{10} DIAMINES

John F. Nobis and Harry Greenberg, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application June 10, 1955
Serial No. 514,757
1 Claim. (Cl. 260—78)

A fiber-forming, cold drawable, linear polyamide having as sole complementary polyamide-forming constituents an acid selected from the group consisting of sebacic acid, adipic acid and mixtures thereof and a saturated, aliphatic, branched chain diamine selected from the group consisting of 1,6-diaminooctane, 3,6-diaminooctane, 2-ethyl-1,8-diaminooctane, 2,5-diethyl-1,6-diaminooctane and mixtures thereof.

2,864,868

TERPOLYMER SYSTEM

Alva F. Harris, Wilbraham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 15, 1954
Serial No. 475,585
1 Claim. (Cl. 260—78.5)

A process for preparing a water-soluble terpolymer of vinyl acetate, maleic anhydride and a styrene component by a mass polymerization process which com-

2,864,814

METALLIFEROUS MONOAZO DYESTUFFS

from the group consisting of —CN and —COO.alkyl,

prises mixing the three monomeric components with a free radical producing catalyst, heating the mixture en masse at 50–70° C. to initiate polymerization, reducing the temperature of the mixture about 10° C. to the range of 40–60° C. and maintaining the mixture at said temperature for about 15–25 hours and then gradually raising the temperature to 100–120° C. for a period of 30–40 hours; said styrene component being selected from the group consisting of styrene, alpha alkylstyrenes, alpha chlorostyrenes, alpha methyl-paramethylstyrene, the ring-substituted mono-and di-alkyl and chlorostyrenes and mixtures thereof, said alkyl groups containing 1–4 carbon atoms, the monomer mixture employed being such that the mol percent ratio of vinyl acetate to maleic anhydride varies from 52–48 to 50–50 and the styrene component constitutes 1.8–4.0 mol percent of the mixture.

2,864,809

HYDROGENATED POLYBUTADIENE AND PROCESS FOR PRODUCING SAME

Rufus V. Jones and Charles W. Moberly, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application November 30, 1953
Serial No. 395,291

8 Claims. (Cl. 260—85.1)

1. A process for producing thermoplastic materials which comprises, admixing (A) a substantially gel free rubbery homopolymer of butadiene having a Mooney viscosity (ML-4) of 10 to 40, said polymer having been prepared by an emulsion polymerization process at a temperature of 20° F. to 60° F., and subsequently dried in an inert atmosphere at a temperature below 150° F.; (B) a solvent and disperser for said polybutadiene; and (C) 10 to 15 percent by weight based on said polybutadiene of a nickel-kieselguhr catalyst having a particle size of 1 to 8 microns and which has been activated by contact with hydrogen at a temperature of 500 to 800° F.; contacting the mixture with hydrogen for 2 to 8 hours at a temperature of 400 to 600° F. at a pressure of 400 to 600 p. s. i. g., to a residual unsaturation of less than 30 percent; and recovering the resulting plastic material.

2,864,810

COGENERIC GLYCOL ETHERS OF PARTIAL ESTERS OF PENTAERYTHRITOL AND ROSIN

Jack B. Batdorf, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application March 30, 1955
Serial No. 498,095

4 Claims. (Cl. 260—104)

1. A composition comprising a cogeneric mixture of glycol ethers derived from the reaction of a partial ester of a pentaerythritol selected from the group consisting of pentaerythritol and polypentaerythritols and a rosin selected from the group consisting of rosin, hydrogenated rosin, dehydrogenated rosin, disproportionated rosin, and polymerized rosin with an alkylene oxide selected from the group consisting of ethylene oxide and combinations thereof with propylene oxide, the amount of alkylene oxide being from about 10 to 100 moles for each mole of said ester.

2,864,811

METHODS OF TREATING PULP MILL ALKALINE BLEACH EFFLUENTS

Joseph B. Doughty, Charleston, and William R. Cook, Hartsville, S. C., assignors to West Virginia Pulp and Paper Company, New York, N. Y., a corporation of Delaware

No Drawing. Application November 5, 1956
Serial No. 620,168

5 Claims. (Cl. 260—124)

1. A method of treating alkaline pulp mill chlorine bleach effluents containing chlorinated lignin in low concentration to recover same which comprises adding thereto aluminum sulfate in quantity sufficient to precipitate the chlorinated lignin and recovering the precipitate.

2,864,812

WATER SOLUBLE DYE SALTS

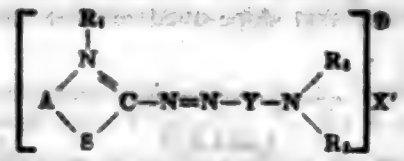
Werner Bossard, Riehen, near Basel, and Jacques Veltz and Francois Favre, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland, a Swiss firm

No Drawing. Application December 12, 1955
Serial No. 552,292

Claims priority, application Switzerland December 15, 1954

6 Claims. (Cl. 260—146)

1. A dyestuff of the general formula:



wherein the cation is free from acid salt forming groups and

R_1 is a member selected from the group consisting of lower alkyl and benzyl,

A means an alkene radical, the two adjacent double bound C atoms of which are connected to the N and S atoms of the hetero nucleus,

Y means a para-phenylene radical,

R_2 and R_3 each mean a member selected from the group consisting of hydrogen, lower alkyl, benzyl, cycloalkyl and phenyl, and taken together with —N< form a saturated heterocyclic ring system, and X' means an anion.

2,864,813

WATER SOLUBLE COLOUR SALTS

Werner Bossard, Riehen near Basel, and Jacques Veltz and François Favre, Basel, Switzerland, assignors to J. R. Geigy, A.-G., Basel, Switzerland, a Swiss firm

No Drawing. Application January 23, 1956
Serial No. 560,872

Claims priority, application Switzerland January 28, 1955

8 Claims. (Cl. 260—146)

1. A dyestuff of the general formula:

$$[A—N=N—Y—Z]^{\oplus}X^{\ominus}$$

the cation part of which is free from acid salt forming groups and wherein A represents an N-alkyl pyridinium hetero ring system which is bound to the azo group by a C-atom that forms part of said pyridinium ring, Y represents a p-arylene radical, Z represents an amino group, and $X^{\ominus}$ represents an anion.

2,864,819

$\Delta^{5,14}$-11-20-DIKETO-16-(ORGANIC SULFONOXY)-

2,864,823

PROCESS FOR THE PRODUCTION OF ACYL-

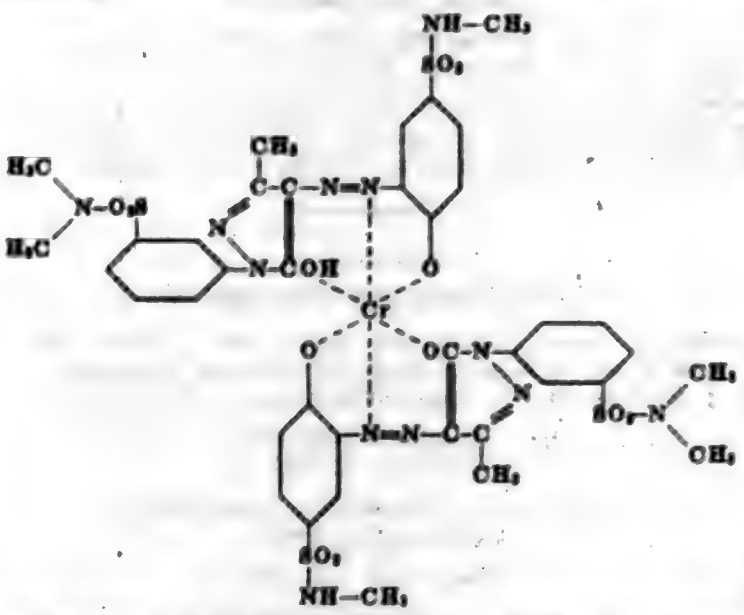
2,864,814

METALLIFEROUS MONOAZO DYESTUFFS

Hans Ruchstuhl, Basel, Switzerland, assignor, by mesne assignments, to Sandoz & Co., Newark, N. J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust

No Drawing. Application July 12, 1956
Serial No. 597,339
1 Claim. (Cl. 260—147)

The metalliferous azo dye which corresponds to the formula



said dyestuff being soluble in acetone to provide a dyed dope from which fast dope-dyed acetate fibers can be spun.

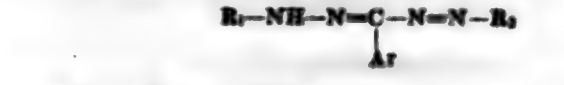
2,864,815

METHOD OF PREPARING FORMAZANE DYESTUFFS

Herbert Ziegler, Bendeur, Belgium, assignor to Societe Carbochimique, Societe Anonyme, Brussels, Belgium, a Belgian company

No Drawing. Application September 14, 1953
Serial No. 380,140
Claims priority, application Belgium September 20, 1952
3 Claims. (Cl. 260—149)

1. The method of producing metal complexes of meso-aryl formazane dyestuffs selected from the group consisting of copper and nickel complexes of meso-aryl formazanes having the structural formula



wherein Ar is selected from the group consisting of phenyl and lower alkyl-substituted phenyl, and R_1 and R_2 are substituted o-hydroxyphenyl groups selected from the group consisting of o-hydroxy-nitrophenyl, o-hydroxy-sulfophenyl, o-hydroxy-halonitrophenyl, o-hydroxy-nitro-sulfophenyl and o-hydroxy-dinitrophenyl, which comprises coupling the diazonium salt of an aromatic amine having the structural formula

wherein R_1 has the meaning above indicated, with a compound having the structural formula

wherein Ar has the meaning above indicated, X is selected from the group consisting of —COOH, —$CONH_2$, —COO.alkyl, —CHO, —CO.alkyl, —CO.aryl and —CO.COO.alkyl, and Y_1 is a saponifiable group selected from the group consisting of —CN and —COO.alkyl, saponifying group Y_1 of the resulting hydrazone compound and coupling said saponified hydrazone compound in the presence of a metal salt selected from the group consisting of copper salts and nickel salts with an additional mol of the diazonium salt of an aromatic amine having the formula

wherein R_2 has the meaning above indicated, to exchange the saponified group Y_1 for the diazonium radical of said last-mentioned diazonium salt.

2,864,816

WATER-INSOLUBLE MONOAZO DYESTUFFS

Bruno J. R. Nicolaus, Basel, and Ernest Merian, Bottmingen, Switzerland, assignors to Sandoz A. G., Basel, Switzerland, a Swiss firm

No Drawing. Application May 27, 1957
Serial No. 661,595
Claims priority, application Switzerland June 21, 1956
7 Claims. (Cl. 260—207)

1. A water-insoluble monoazo dyestuff which corresponds to the formula

wherein R represents the radical of a hydroxybenzene which has a molecular weight below 125 and consists of carbon, hydrogen and oxygen atoms, and is coupled in the ortho-position to the hydroxy group, and R_1 represents a member selected from the group consisting of phenyl and methylphenyl.

2,864,817

PROCESS FOR CRYSTALLIZATION OF ERYTHROMYCIN

Donald R. Croley, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Application September 1, 1955
Serial No. 532,136
8 Claims. (Cl. 260—210)

1. The process for the crystallization of erythromycin which comprises treating an aqueous solution of erythromycin base with a solvent of the group consisting of lower alkyl ketones, lower alkanols, water-soluble alkylene glycols and chlorinated alkanes to form a solid lattice-solvate of erythromycin base isolating said lattice-solvate of erythromycin; treating the said solvate with water at a temperature in the range of about 0 to 100° C. to form a crystalline erythromycin of the group consisting of erythromycin dihydrate and erythromycin anhydrate; and recovering the said crystalline erythromycin.

2,864,818

Δ^5-11,16,20-TRIKETO-PREGNENE 3-KETALS AND PROCESS

Glen E. Arth, Cranford, N. J., George I. Poos, Ambler, Pa., and Lewis H. Sarett, Princeton, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application December 31, 1956
Serial No. 631,489
6 Claims. (Cl. 260—239.55)

1. The process which comprises reacting 1-carbalkoxymethyl - 2 - acetonyl - 2,4b - dimethyl - 4 - keto - 1,2,3,4,4a,4b,5,6,7,8,10,10a - dodecahydrophenanthrene 7-ketal with a strong alkali under anhydrous conditions to produce Δ^5-11,16,20-triketo-pregnene 3-ketal.

5. Δ^5-11,16,20-triketo-pregnene 3-keto.

2,864,825

di-[4-(tétrahydro-2-furyl)-2-butyl] azelate having the

2,864,819

$\Delta^{5,16}$-11-20-DIKETO-16-(ORGANIC SULFONOXY)-PREGNADIENE-3-KETALS AND PROCESS

Glen E. Arth, Cranford, N. J., George I. Poos, Ambler, Pa., and Lewis H. Sarett, Princeton, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application December 31, 1956
Serial No. 631,493
5 Claims. (Cl. 260—239.55)

1. The process which comprises reacting Δ^5-11,16,20-triketo-pregnene 3-ketal with an organic sulfonyl halide to produce $\Delta^{5,16}$-16-(organic sulfonoxy)-11,20-diketo-pregnadiene 3-ketal.

3. $\Delta^{5,16}$-11,20-diketo - 16 - (organic sulfonoxy)-pregnadiene 3-ketal.

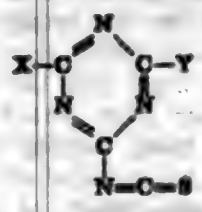
2,864,820

ISOTHIOCYANO-S-TRIAZINES

Edward H. Shaers, Flushing, N. Y., and Mary A. Hughes, Shaker Heights, Ohio, assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application November 26, 1957
Serial No. 698,912
5 Claims. (Cl. 260—248)

1. Isothiocyano-s-triazines having the formula



wherein X and Y represent radicals chosen from the group consisting of Cl and N—C=S.

2,864,821

N-(PYRAZINOYL)-GLYCINE

Julius D. Taylor, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Application September 24, 1957
Serial No. 685,827
2 Claims. (Cl. 260—250)

1. N-(pyrazinoyl)-glycine.

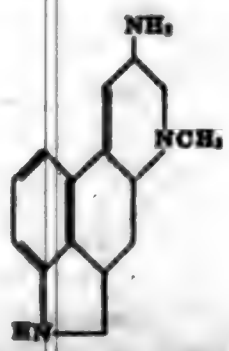
2,864,822

9-AMINO-7-METHYL-Δ^{10}-ERGOLENE AND DERIVATIVES THEREOF

Eugene J. Fernsfeld and Edmund C. Kornfeld, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Application October 22, 1956
Serial No. 617,244
9 Claims. (Cl. 260—285.5)

1. A compound selected from the group consisting of 9-amino-7-methyl-Δ^{10}-ergolene represented by the formula



and its N-substituted lower alkyl carboxyacyl and monocarbocyclic aromatic carboxyacyl derivatives.

2,864,823

PROCESS FOR THE PRODUCTION OF ACYLAMINO-AMINO-ANTHRAQUINONES

Heinz-Werner Schwechten, and Rütger Nestl, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany

No Drawing. Application August 4, 1955
Serial No. 526,589
Claims priority, application Germany August 17, 1954
5 Claims. (Cl. 260—287)

1. A process for the production of acylamino-amino-anthraquinones, which comprises treating with a mineral acid at a temperature between 40° C. to 100° C. a member selected from the group consisting of acetylamino-anthraquinone and benzoylamino-anthraquinone, said member containing a further acylamino group attached to the anthraquinone nucleus, the acyl radical of which is selected from the group consisting of pyridine carbonyl, quinoline carbonyl, phthalyl quinoline carbonyl, thiazole carbonyl, thiazole-anthrone carbonyl, and anthrapyrimidine carbonyl.

4. The process of claim 1 wherein the benzoylamino-anthraquinone is 1-(5',6'-phthalylquinoline-8'-carbonyl)-amino-5-benzoylamino-anthraquinone.

2,864,824

ALKOXY DERIVATIVES OF 3:5-DIOXO-PYRAZOLIDENE AND PROCESS FOR THEIR MANUFACTURE

Leonard Michelson, Rochester, N. Y., assignor to R. J. Strasenburgh Co., Rochester, N. Y., a corporation of New York

No Drawing. Application August 31, 1956
Serial No. 607,386
2 Claims. (Cl. 260—310)

1. As a new compound, 1:2-diphenyl-4CH_2—CH_2—CH—COOH-3:5-dioxopyrazolidine.

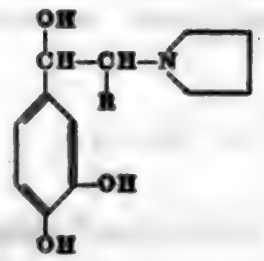
2,864,825

PYRROLIDINES

Richard V. Heinzelman, Kalamazoo Township, Kalamazoo County, and Brooke D. Aspergren, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application November 12, 1952
Serial No. 320,124
10 Claims. (Cl. 260—326.5)

1. A member selected from the group consisting of (*a*) compounds of the formula:



wherein R is a member selected from the group consisting of hydrogen and lower-alkyl radicals containing from one to eight carbon atoms inclusive, and (*b*) acid addition and quaternary ammonium salts thereof.

acyl hydrocarbon containing up to ten carbon atoms;

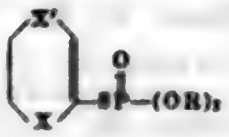
2,864,853

2,864,826
S-(O,O-DIALKYL PHOSPHORODITHIOATES) OF DIOXENETHIOL, THIOXENETHIOL AND DITHIENETHIOL

William R. Diveley, Newark, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

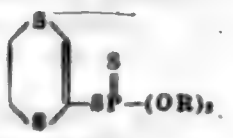
No Drawing. Application August 10, 1956
Serial No. 603,246
10 Claims. (Cl. 260—327)

1. An insecticidally active composition of matter of the formula



in which X' and X are selected from the group consisting of sulfur and oxygen, and R is a lower alkyl group.

2. An insecticidally active composition of matter of the formula



in which R is a lower alkyl group.

2,864,827
PROCESS FOR POLYMERIZING ALDEHYDES

Donald H. Baer, Los Angeles, Calif., and John E. Mahan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application November 15, 1954, Serial No. 468,874
7 Claims. (Cl. 260—340)

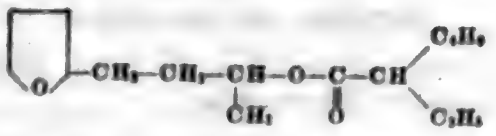
1. The method of polymerizing an alkyl aldehyde having two to seven carbon atoms which comprises contacting said aldehyde with an acid catalyst composed of sulfuric acid and phosphoric acid, said acids being in the weight ratio of 2 : 1 to 1 : 2.

2,864,828
ESTERS OF γ-(TETRAHYDRO-2-FURYL) ALKANOLS

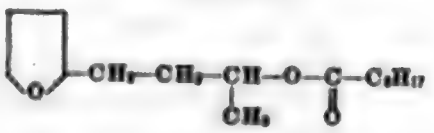
Charles R. Russell, Peoria, and Lester E. Schniepp, Barrington, Ill., and Louis S. Hafner, Indian Head, Md., and Herbert E. Smith, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application June 11, 1957
Serial No. 665,104
6 Claims. (Cl. 260—347.4)
(Granted under Title 35, U. S. Code (1952), sec. 266)

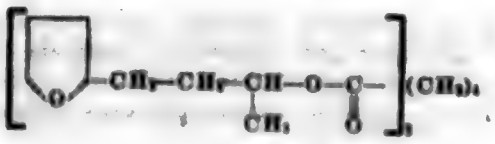
6. A compound selected from the group consisting of 4-(tetrahydro-2-furyl)-2-butyl 2-ethyl caproate having the formula



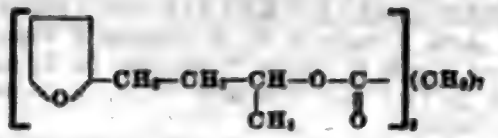
4-(tetrahydro-2-furyl)-2-butyl pelargonate having the formula



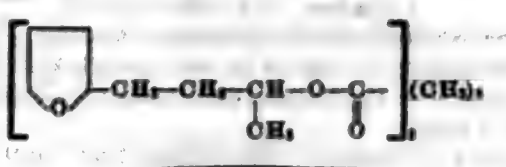
di-[4-(tetrahydro-2-furyl)-2-butyl] adipate having the formula



di-[4-(tetrahydro-2-furyl)-2-butyl] azelate having the formula



and di-[4-(tetrahydro-2-furyl)-2-butyl] sebacate having the formula



2,864,829
STEROL DEHYDROHALOGENATION PROCESS

Howard C. Klein, Brooklyn, N. Y., and Roland Kapp, Newark, N. J., assignors to Nopco Chemical Company, Harrison, N. J., a corporation of New Jersey

No Drawing. Application May 18, 1954
Serial No. 428,793
12 Claims. (Cl. 260—397.2)

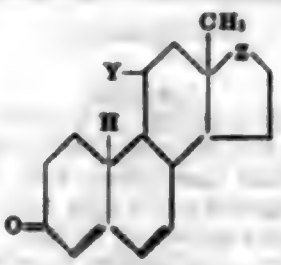
1. In a process for producing a 7-dehydrosterol, the step which comprises reacting an alanate salt selected from the group consisting of alkali metal and alkaline earth metal salts of alpha-alanine and beta-alanine with a sterol derivative selected from the group consisting of sterol esters and sterol ethers which have a double bond between the 5 carbon atom and the 6 carbon atom and which have a halogen atom attached to the 7 carbon atom, the reaction being carried out by heating the alanate salt and the halogenated sterol compound in an inert solvent at a temperature of not less than about 80° C.

2,864,830
11-OXYGENATED DERIVATIVES OF $\Delta^{4,6}$-19-NORANDROSTADIENE

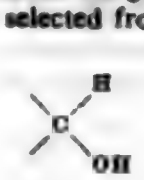
Eugene J. Agnello and Gerald D. Laubach, Jackson Heights, N. Y., assignors to Chas. Pfizer & Co., Inc., New York, N. Y., a corporation of Delaware

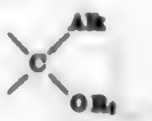
No Drawing. Application May 8, 1957
Serial No. 657,723
7 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of those having the formula:

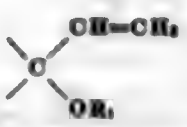


wherein Y is selected from the group consisting of β-hydroxyl and keto, Z is selected from the group consisting of





and



R_1 is selected from the group consisting of hydrogen and

5. A method of preparing compounds having the formula:

2,864,836
6-METHYL-16-OXYGENEGNENES AND

acyl hydrocarbon containing up to ten carbon atoms; and Alk is selected from the group consisting of alkyl groups containing up to four carbon atoms.

2,864,831

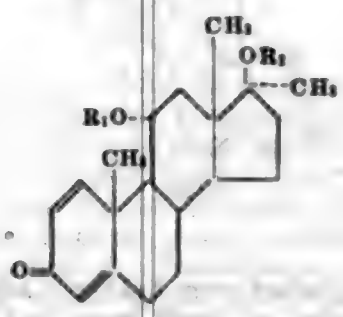
11α-HYDROXY-1-DEHYDROMETHYLTESTOSTERONE AND THE ESTERS THEREOF

Samuel H. Eppstein, Galesburg, and Peter D. Meister, Kalamazoo Township, Kalamazoo County, Mich., and Adolph Weintraub, Brooklyn, N. Y., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application August 21, 1956
Serial No. 605,424

6 Claims. (Cl. 260—397.45)

1. A 1,4-androstadiene of the formula:



wherein R_1 and R_2 are selected from the group consisting of hydrogen and acyl in which the acyl group is selected from the group consisting of hydrocarbon carboxylic acid containing from one to eight carbon atoms, inclusive, and a benzenesulfonic acid containing from one to eight carbon atoms, inclusive.

2,864,832

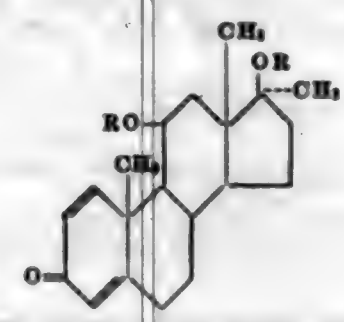
11β-HYDROXY-17α-METHYL -1- DEHYDROTESTOSTERONE, AND THE 11β,17β-DIACYLATES THEREOF

Samuel H. Eppstein, Galesburg, Peter D. Meister, Kalamazoo Township, Kalamazoo County, Mich., and Adolph Weintraub, Brooklyn, N. Y., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application August 21, 1956
Serial No. 605,441

6 Claims. (Cl. 260—397.45)

1. A compound of the formula:



wherein R is selected from the group consisting of hydrogen and acyl in which the acyl group is of a hydrocarbon carboxylic acid containing from one to eight carbon atoms, inclusive.

2,864,833

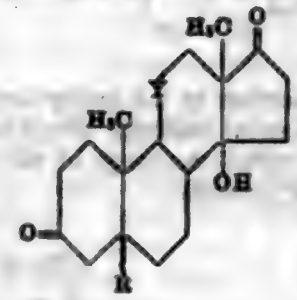
DERIVATIVES OF OXYGENATED STEROIDS

Eugene J. Agnello, Jackson Heights, N. Y., assignor to Chas. Pfizer & Co., New York, N. Y., a corporation of Delaware

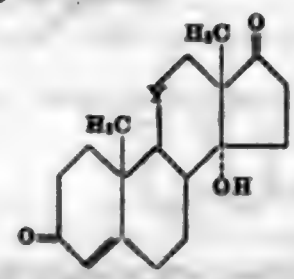
No Drawing. Application January 29, 1957
Serial No. 636,877

6 Claims. (Cl. 260—397.45)

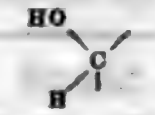
1. A steroid compound selected from the class consisting of those having the formula



and those having the formula



wherein Y is chosen from the group consisting of



and

and

is chosen from the group consisting of cis hydrogen and trans hydrogen.

2,864,834

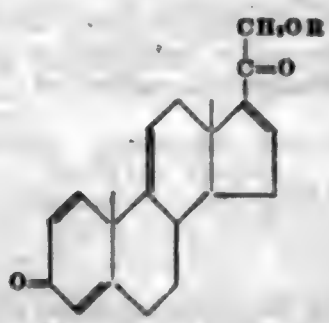
PREGNATETRAENES AND METHOD OF PREPARING THE SAME

Harold Mendelsohn, Nanuet, and Leland L. Smith, New City, N. Y., and Victor E. Origoni, Emerson, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application October 8, 1957
Serial No. 688,831

7 Claims. (Cl. 260—397.45)

1. Compounds having the general formula:



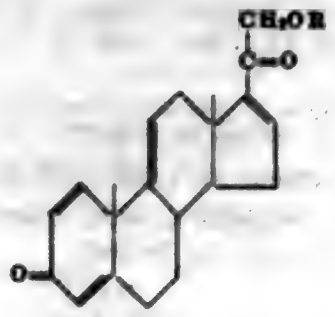
in which R is hydrogen or a lower alkanoyl radical.

2,864,838

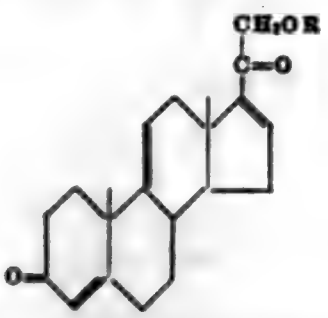
6 METHYL 16 OXY Δ⁴ PREGNENES AND

C. a 1-phenyl-1-acyloxy-2-dichloroacetamido-3-OR-substituted propane of formula,

5. A method of preparing compounds having the formula:



in which R is a member of the group consisting of hydrogen and lower alkanoyl radicals, which comprises heating to a temeprature within the range of 40°–120° C. a compound having the formula:



in which R is as defined, with selenium dioxide in the presence of a solvent for the reactants.

2,864,835

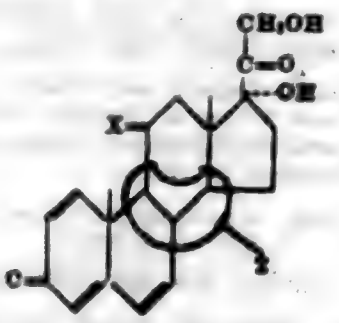
PREGNATETRAENES AND ESTERS THEREOF

David H. Gould, Leonia, Emanuel B. Hershberg, West Orange, and Elliot Shapiro, Irvington, N. J., assignors to Schering Corporation, Bloomfield, N. J., a corporation of New Jersey

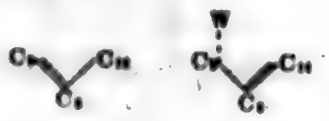
No Drawing. Continuation of application Serial No. 581,265, April 30, 1956. This application November 25, 1957, Serial No. 698,337

18 Claims. (Cl. 260—397.45)

1. Compounds of the group consisting of unsaturated pregnanes of the formula



wherein X is a member of the group consisting of O and (H, OH), Z represents a configuration of carbon atoms 8, 9 and 14 of the group consisting of



W is a member of the group consisting of H and halogen having an atomic number less than 53, and the 21-lower alkanoic and 17,21-dilower alkanoic esters thereof.

2,864,836

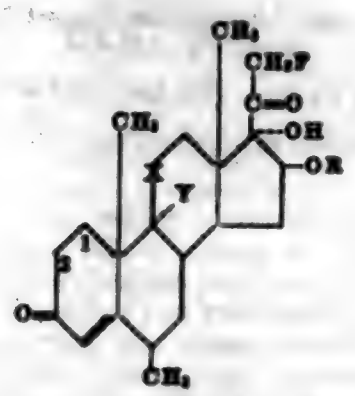
6 METHYL 16 OXY-Δ⁴-PREGNENES AND Δ¹,⁴-PREGNADIENES

Frank H. Lincoln, Kalamazoo, William P. Schneider, Kalamazoo Township, Kalamazoo County, and Oldrich K. Sebek and George B. Spero, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application February 19, 1958 Serial No. 716,819

19 Claims. (Cl. 260—397.45)

1. A 16-oxygenated steroid of the formula:



wherein the 1,2-carbon atom linkage is selected from the linkages consisting of single bond and double bond linkages, Y is selected from the group consisting of hydrogen and fluorine, X is selected from the group consisting of the carbonyl radical and the β-hydroxymethylene radical, and R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,864,837

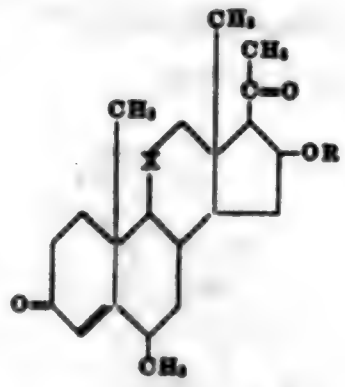
ORGANIC COMPOUNDS AND PROCESS

Oldrich K. Sebek, George B. Spero, and John L. Thompson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application February 19, 1958 Serial No. 716,835

5 Claims. (Cl. 260—397.45)

1. A 16-oxygenated steroid of the formula:



wherein X is selected from the group consisting of the carbonyl radical and the β-hydroxymethylene radical and R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,864,843

CYCLOPENTADIENYL MOIETY-CONTAINING

hours, contacting the resulting oxidized oil with a sufficient amount of water so as to remove nitric acid; con-

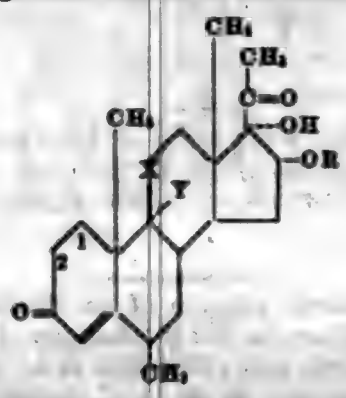
2,864,838

6 METHYL 16 OXY Δ^4 PREGNENES AND $\Delta^{1,4}$ PREGNADIENES

Frank H. Lincoln, Kalamazoo, William P. Schneider, Kalamazoo Township, Kalamazoo County, and Oldrich K. Sebek and George B. Spero, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application February 19, 1958
Serial No. 716,837
19 Claims. (Cl. 260—397.45)

1. A 16-oxygenated steroid of the formula:



wherein the 1,2-carbon atom linkage is selected from the linkages consisting of single bond and double bond linkages, Y is selected from the group consisting of hydrogen and fluorine, X is selected from the group consisting of the carbonyl radical and the β-hydroxymethylene radical, and R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

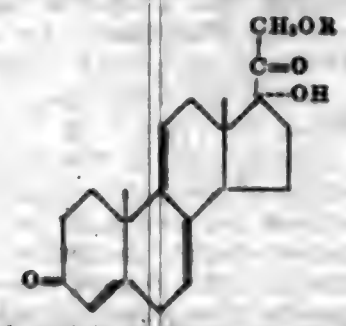
2,864,839

$\Delta^{4,7,9(11)}$-PREGNATRIENE-17α,21-DIOL-3,20-DIONE AND PROCESS THEREFOR

Josef Fried, Princeton, N. J., assignor to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application July 25, 1958
Serial No. 750,867
5 Claims. (Cl. 260—397.45)

1. A steroid of the general formula



wherein R is selected from the group consisting of hydrogen and a lower fatty acid acyl radical.

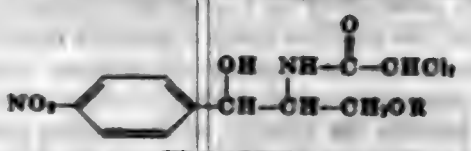
2,864,840

PROCESS FOR PRODUCING ORGANIC ESTERS OF NITROPHENYL DICHLOROACETAMIDO PROPANE DIOLS

William H. Edgerton, Huntington Woods, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

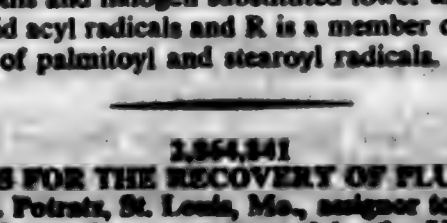
No Drawing. Application March 28, 1955
Serial No. 497,433
12 Claims. (Cl. 260—484)

1. Process for producing a compound of formula,



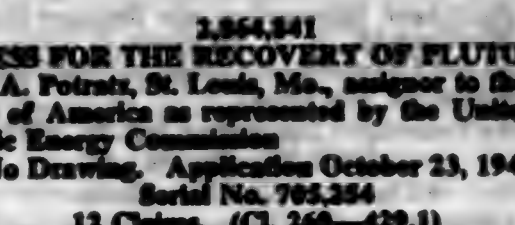
Threo form

which comprises ring-nitrating at a temperature below 0° C. a 1-phenyl-1-acyloxy-2-dichloroacetamido-3-OR-substituted propane of formula,



Threo form

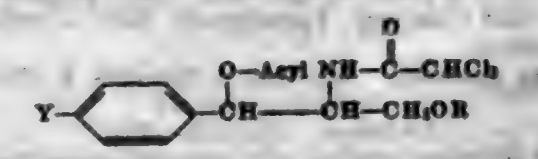
to produce a 1-p-nitrophenyl-1-acyloxy-2-dichloroacetamido-3-OR-substituted propane of formula,



Threo form

and subjecting the latter compound to mild hydrolysis with a strong alkaline agent at a temperature in the neighborhood of 5° C.; where Acyl is a member of the group consisting of aliphatic carboxylic acid acyl radicals containing 1 to 18 carbon atoms and halogen substituted lower aliphatic carboxylic acid acyl radicals and R is a member of the group consisting of palmitoyl and stearoyl radicals.

7. A compound having the formula,



where Y is a member of the class consisting of H and NO_2, Acyl is a member of the group consisting of aliphatic carboxylic acid acyl radicals containing 1 to 18 carbon atoms and halogen substituted lower aliphatic carboxylic acid acyl radicals and R is a member of the group consisting of palmitoyl and stearoyl radicals.

2,864,841

PROCESS FOR THE RECOVERY OF PLUTONIUM

Herbert A. Potratz, St. Louis, Mo., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 23, 1945
Serial No. 705,254
12 Claims. (Cl. 260—429.1)

1. In a process for the separation of plutonium from solutions containing that element together with uranium, fission products and other impurities commonly associated therewith, the steps which comprise contacting an acid solution containing plutonium in the tetravalent state and uranium in the hexavalent state with ammonium carbonate in an amount sufficient to render said solution alkaline, thereafter contacting said alkaline solution with cupferron and extracting the resulting mixture with a substantially water immiscible organic liquid solvent for the plutonium cupferride.

2,864,842

PREPARATION OF ORGANOMETALLIC COMPOUNDS

Henry A. Walter, Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application June 15, 1956
Serial No. 591,538
10 Claims. (Cl. 260—429.3)

1. The method of preparing an organometallic compound which comprises dispersing 1 molar equivalent of a metal hydride and up to 1 molar equivalent of a diazohydrocarbon in an anhydrous inert organic liquid at a temperature of —100° C. to 50° C. and in the total absence of oxygen.

2,864,843

an alkyl radical having from 1 to 12 carbon atoms; X

2,864,843

CYCLOPENTADIENYL MOIETY-CONTAINING METAL MONOHALIDES

Earl G. De Witt, Royal Oak, and Hymin Shapiro and Jerome E. Brown, Detroit, Mich., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application May 6, 1953
Serial No. 353,434
11 Claims. (Cl. 260—429.9)

1. As new compositions of matter mixed cyclopentadienyl moiety-containing quasi ionic organometallic compounds possessing the general formula

$$R_nMX$$

wherein R is a cyclopentadienyl moiety-containing hydrocarbon radical, *n* is a small whole integer from 1 to 2 inclusive, X is selected from the group consisting of fluorine, chlorine, bromine and iodine, and M is a heavy metal selected from the class consisting of the metals of groups I–B, II–B, III–A, III–B, IV–A, IV–B, V–A, V–B, VI–A, VI–B, and VII–B of the periodic table.

2,864,844

STABILIZED THIMEROSAL

Edwin O. Davisson, Greenwood, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Application February 2, 1955
Serial No. 485,798
2 Claims. (Cl. 260—433)

1. An aqueous solution of thimerosal containing from about 0.001 to about 0.1 percent on a weight per volume basis of ethylenediamine tetraacetic acid as a stabilizing agent.

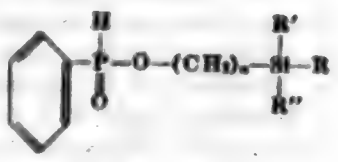
2,864,845

CARBON FUNCTIONAL ORGANO-SILICON PHOSPHONATES

Paul M. Kerschner, Pennsauken, and Bertrand W. Greenwald, Haddonfield, N. J., assignors to Cities Service Research and Development Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application July 26, 1957
Serial No. 674,306
6 Claims. (Cl. 260—448.2)

1. As a new composition of matter, a compound having the formula:



wherein *n* is an integer from 3 to 8, and R, R', R" are alkyl groups having from 1 to 6 carbon atoms.

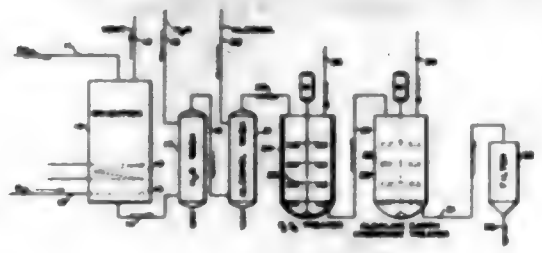
2,864,846

PROCESS FOR PRODUCING LUBRICATING OIL ADDITIVES

James T. Gragson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 3, 1954, Serial No. 472,896
7 Claims. (Cl. 260—452)

1. A process for producing a lubricating oil additive having both detergent and anti-oxidant properties which comprises subjecting a refined paraffinic lubricating oil having a viscosity of at least SAE-20 to oxidation in the presence of nitric acid having a concentration of 25 to 40 weight percent HNO_3 at a temperature in the range of 140 to 170° F. for a period of time in the range 4 to 10 hours, contacting the resulting oxidized oil with a sufficient amount of water so as to remove nitric acid; contacting the washed oil with a sufficient amount of alcohol so as to remove remaining water; contacting the washed and dried oil with from 5 to 15 weight percent of phosphorus pentasulfide for a period of time in the range 1 hour to 4 hours at a temperature in the range 300 to 400° F.; diluting a resulting product with an equal volume of benzene; contacting a resulting product with



a saturated aqueous solution of an alkaline earth compound selected from the group consisting of alkaline earth hydroxides, oxides, and carbonates in an amount of 0.5 to 10 weight percent of the total charge; agitating the mixture for a period of time in the range of 5 minutes to 5 hours at a temperature in the range of 175 to 300° F.; filtering the resulting product so as to remove solid particles therefrom; and recovering the filtrate as the lubricating oil additive.

2,864,847

PRODUCTION OF DIALKYL HYDROGEN PHOSPHITES

Jesse Roger Maugham, Chesterfield County, Va., assignor to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

No Drawing. Application September 14, 1953
Serial No. 380,119
5 Claims. (Cl. 260—461)

1. Process for the production of di-lower-alkyl hydrogen phosphite which comprises gradually introducing phosphorus trichloride into a reaction zone containing at least three molecules of an alcohol for each molecule of phosphorus trichloride introduced, mixing the alcohol and phosphorus trichloride, maintaining the mixture at a temperature within the range from —20° to 50° C. and introducing ammonia into the mixture simultaneously with the introduction of phosphorus trichloride to combine with hydrochloric acid as it is formed and maintain the reaction mixture during the introduction of the phosphorus trichloride within the pH range from 3.5 to 8.5, the total quantity of ammonia introduced into the mixture being sufficient to give an end reaction mixture having a pH within the range from just acid to methyl red to 7.

2,864,848

METHOD OF PRODUCING L-α-GLYCERYL-PHOSPHORYLCHOLINE

Charles Stewart McArthur, Saskatoon, Saskatchewan, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada

No Drawing. Application July 19, 1954
Serial No. 444,373
6 Claims. (Cl. 260—461)

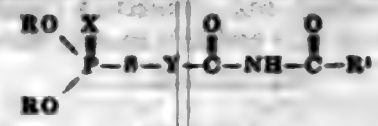
1. In the production of L-α-glycerylphosphorylcholine in high yield, the method which comprises intimately mixing lecithin in one of a group of solvents consisting of water and aqueous alcohol, adding thereto a soluble mercuric salt, heating the mixture at the boiling point of the solvent and continuing the heating until the fatty acids are liberated.

a peroxide group through the carbon atom of a methylene group.

in a first zone under sulfonating conditions thereby pro-

2,864,849
THIOPHOSPHORIC ACID ESTERS AND THEIR PRODUCTION
Gerhard Schrader, Opladen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Application August 28, 1956
Serial No. 606,554
Claims priority, application Germany September 7, 1955
7 Claims. (Cl. 260—461)

1. A phosphoric acid ester of the general formula



in which R stands for a lower alkyl radical, X stands for a member selected from the group consisting of oxygen and sulfur, Y stands for lower alkylene and R' is a lower alkoxy radical.

2,864,850
METHOD FOR PREPARING 1,1-DICYANO ETHYL SUBSTITUTED 1,3-DIKETONES
Jerome C. Westfahl, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York
No Drawing. Continuation of application Serial No. 523,124, July 19, 1955. This application April 15, 1957, Serial No. 652,655
17 Claims. (Cl. 260—464)

1. A method of preparing compounds having at least one $-CH_2-CH(CN)_2$ substituent in place of at least one hydrogen atom of a methylene group attached to two carbonyl carbon atoms comprising reacting a compound having a

linkage as the sole functional linkage with monomeric 1,1-dicyano ethylene containing substantially no homopolymer thereof, in the absence of a catalyst.

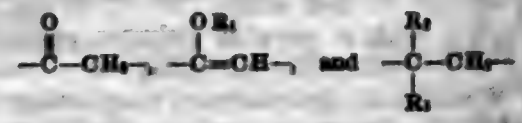
2,864,851
PREPARATION OF NITRILES FROM CYANOGEN AND KETONES
William L. Fierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Application May 14, 1957
Serial No. 658,976
15 Claims. (Cl. 260—465)

1. A method of preparing organic nitriles of the formula RCN, where R is a hydrocarbon radical, which comprises reacting cyanogen and a ketone of the formula R'COR", where R' and R" are hydrocarbon radicals from which the nitrile is derived, at a temperature above the thermal decomposition point of the ketone in the range of 500°–1000° C.

2,864,852
ACYLATED KETO ESTERS AND KETO NITRILES
Reuben G. Jones, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
No Drawing. Application February 2, 1955
Serial No. 485,814
12 Claims. (Cl. 260—465.4)

1. A compound represented by the formula

wherein Y represents a member of the group consisting of a hydrogen atom, a lower carbalkoxy group, and an alkyl radical having from 1 to 12 carbon atoms; X represents a member of the group consisting of a lower carbalkoxy radical and a cyano radical; Z represents a member of the group consisting of



wherein R_1 represents a lower alkyl group, and R_2 and R_3 when taken singly represent lower alkoxy radicals and when taken together with the carbon atom to which they are attached represent a member of the group consisting of 1,3-dioxans and 1,3-dioxolanes; and R_4 represents a member of the class consisting of hydrogen, a lower carbalkoxy group, a tertiary alkyl radical containing from 4 to 8 carbon atoms having a tertiary carbon atom attached directly to the carbonyl group carrying the R_4 group, and phenyl, naphthyl, thenyl and pyridyl and their lower alkoxy and halogen substitution products.

2,864,853
PROCESS FOR THE PRODUCTION OF HALOALKANE NITRATES
Gustave Bryant Bachman and Ted J. Logan, West Lafayette, Ind., assignors to Purdue Research Foundation
No Drawing. Application August 7, 1956
Serial No. 602,513
5 Claims. (Cl. 260—467)

3. A process for the production of haloalkyl nitrates which comprises passing an alkene containing up to about 20 carbon atoms into an inert liquid solvent containing as reactive solutes the two compounds dinitrogen tetroxide and a halogen selected from the group consisting of bromine and iodine, the temperature of said solvent being maintained at from −10° C. to +20° C.

2,864,854
DECARBOXYLATION OF TRIMELLITIC ACID
Art C. McKinnis, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Application December 28, 1953
Serial No. 400,777
13 Claims. (Cl. 260—475)

1. A process for decarboxylating trimellitic acid to form predominantly terephthalic acid which comprises dissolving trimellitic acid and a mercuric halide in an inert mutual solvent, heating the resulting solution in a first reaction stage in the presence of water at between about 100° and 350° C. while continuously withdrawing carbon dioxide and hydrogen halide to thereby effect decarboxylation and the formation of a mercuri derivative of terephthalic acid, subsequently reacting said mercuri derivative with excess hydrogen halide in a subsequent reaction stage at between about 25° and 300° C. to thereby effect hydrohalogenolysis of said mercuri derivative resulting in the formation of terephthalic acid, and recovering terephthalic acid from the reaction mixture.

2,864,855
AROMATIC CARBOXYLIC ACIDS AND DERIVATIVES AND PREPARATION THEREOF FROM PEROXIDE POLYMERS
Stafford L. Hopwood, Jr., Cedar Grove, and Louis A. Errede, Westfield, N. J., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application August 24, 1955, Serial No. 530,361
20 Claims. (Cl. 260—475)

1. The novel process which comprises reacting an oxygen-containing oxidizing agent at a temperature between about 30° C. and about 250° C. with a peroxide polymer having a recurring aromatic nucleus bonded to

2,864,860
MANUFACTURE OF TEREPHTHALIC ACID

2,864,864
KETONE SYNTHESIS

a peroxide group through the carbon atom of a methylene group.

9. The novel process which comprises reacting an oxygen-containing oxidizing agent at a temperature between about 30° C. and about 250° C. in the presence of an alcohol with a peroxide polymer containing the recurring unit —O—CH_2—Q—CH_2—O— wherein Q contains at least one six-membered ring having aromatic unsaturation, the remaining nuclear substitution of said Q being selected from at least one of the group consisting of the normally gaseous halogens, hydrogen and methyl radicals to produce an ester derivative of an aromatic carboxylic acid and recovering said ester derivative as the product of the process.

10. The novel process which comprises reacting an oxygen-containing oxidizing agent at a temperature between about 30° C. and about 250° C. in the presence of ammonia with a peroxide polymer containing the recurring unit —O—CH_2—Q—CH_2—O— wherein Q contains at least one six-membered ring having aromatic unsaturation, the remaining nuclear substitution of said Q being selected from at least one of the group consisting of the normally gaseous halogens, hydrogen and methyl radicals to produce an amide of an aromatic carboxylic acid and recovering said amide as the product of the process.

11. The novel process which comprises reacting an oxygen-containing oxidizing agent at a temperature between about 30° C. and about 250° C. in an alkaline medium containing an alkali metal salt with a peroxide polymer containing the recurring unit

—O—CH_2—Q—CH_2—O—

wherein Q contains at least one six-membered ring having aromatic unsaturation, the remaining nuclear substitution of said Q being selected from at least one of the group consisting of the normally gaseous halogens, hydrogen and methyl radicals to produce a metal salt of an aromatic carboxylic acid and recovering said metal salt as the product of the process.

2,864,856

POLYPROPYLENE GLYCOL ESTERS OF TETRACARBOXYBUTANE AND DIGLYCOLIC ACID

Alvin Howard Smith, Glendale, Mo., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application August 6, 1954, Serial No. 448,387, now Patent No. 2,819,221, dated January 7, 1958. Divided and this application April 10, 1957, Serial No. 651,826

4 Claims. (Cl. 260—484)

1. The step of esterifying a polypropyleneglycol having an average molecular weight of at least 1600 and not over 2700 with diglycolic acid and tetracarboxy butane acid; the molal ratio of reactants being one part of tetracarboxy butane to four parts each of polypropylene glycol and diglycolic acid; said reaction being conducted at a temperature sufficiently high to evolve water and below the pyrolysis point of reactants and reaction product with the elimination through reaction of approximately two-thirds of the carboxyl radicals present and substantially all the hydroxyl radicals present.

4. An esterified cogeneric mixture obtained by the process defined in claim 1.

2,864,857

PROCESS FOR SULFONATING OILS WITH CHLOROSULFONIC ACID

William R. Whitney, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application October 28, 1955, Serial No. 543,554

1 Claim. (Cl. 260—504)

In a process for sulfonating a hydrocarbon oil which comprises contacting said oil with chlorosulfonic acid in a first zone under sulfonating conditions thereby producing a hydrocarbon sulfonic acid and liberating HCl, contacting said liberated HCl with a regulated amount of SO_3 in a second zone to regenerate chlorosulfonic acid and returning the said regenerated chlorosulfonic acid as the sulfonating agent to the first zone, the improvement comprising maintaining said second zone in open vapor communication with said first zone and admitting said regulated amount of SO_3 into said second zone in an amount effective to maintain a pressure equivalent to the pressure resulting from contacting substantially equimolar amounts of HCl and SO_3 in said second zone.

2,864,858

PREPARATION OF ORGANIC ACIDS HAVING A QUATERNARY ALPHA CARBON ATOM

Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application January 23, 1956 Serial No. 560,871

17 Claims. (Cl. 260—514)

1. Process for preparing organic acids which comprises bringing together, in the liquid phase at a pressure below about 50 atmospheres, an inorganic acid catalyst selected from the group consisting of hydrogen fluoride, sulfuric acid, hydrated boron trifluoride and fluosulfonic acid and an olefin-acting material having from 2 to 20 carbon atoms selected from the group consisting of olefins, alkyl chlorides, alkyl fluorides, secondary monohydric alcohols and tertiary monohydric alcohols in the presence of carbon monoxide and a saturated hydrocarbon having at least one tertiary hydrogen atom per molecule, separating an acid phase containing the reaction product of the carbon monoxide and said saturated hydrocarbon from the reaction mixture, hydrolyzing said reaction product to form an organic acid, and recovering the so-produced acid.

2,864,859

PREPARATION OF ORGANIC ACIDS HAVING A TERTIARY OR QUATERNARY ALPHA CARBON ATOM

Abraham Schneider, Overbrook Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application January 23, 1956 Serial No. 560,873

11 Claims. (Cl. 260—515)

1. Process for preparing organic acids which comprises bringing together, in the liquid phase, an inorganic acid catalyst selected from the group consisting of hydrogen fluoride, sulfuric acid, hydrated boron trifluoride, and fluosulfonic acid and an olefin-acting material having a tertiary carbon atom and not more than 20 carbon atoms per molecule selected from the group consisting of tertiary olefins, tertiary alkyl fluorides, tertiary alkyl chlorides, and tertiary alcohols in the presence of carbon monoxide and an alkyl substituted aromatic hydrocarbon having the alkyl group attached to the aromatic nucleus by a carbon atom selected from the group consisting of tertiary carbon atoms and secondary carbon atoms and a total of not more than 30 carbon atoms per molecule, wherein the pressure of carbon monoxide is maintained below about 50 atmospheres and the mole ratio of said aromatic hydrocarbon to said olefin-acting material is from 1:1 to 20:1, separating an acid phase containing the reaction product of the carbon monoxide and said aromatic hydrocarbon from the reaction mixture, and hydrolyzing said reaction product to form an organic acid having one more carbon atom than said aromatic hydrocarbon.

atoms to form the corresponding glycol thioether; contacting the solution containing said glycol thioether at a ture in the range of about 41° C. to about 182° C. until said impurity is bound and distilling phenol free of said

2,864,860
MANUFACTURE OF TEREPHTHALIC ACID
John F. Walker, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application March 4, 1957
Serial No. 643,491
4 Claims. (Cl. 260—515)

1. In the manufacture of dialkali metal terephthalate wherein an alkali metal salt of benzoic acid is heated to an elevated temperature in a substantially oxygen-free inert atmosphere, the improvement which comprises pretreating said alkali metal salt by subjecting it to a subatmospheric pressure of less than about 100 millimeter of mercury in the presence of a substantially oxygen-free inert atmosphere.

2,864,861
PREPARATION OF METHYLOLACRYLAMIDE
Henry P. Wohnsiedler and Pierrepont Adams, Darien, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application June 5, 1956
Serial No. 589,363
6 Claims. (Cl. 260—561)

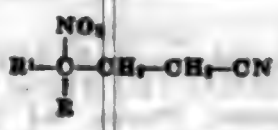
6. A method of preparing solid polymerizable, monomeric methylol acrylamide in good yield without the formation of by-products which comprises: preparing a solid mixture comprising substantially equimolecular proportions of solid acrylamide and paraformaldehyde, said mixture having present therein a catalytic amount of a base unreactive in the mixture, agitating said mixture until it liquifies, continuing agitation until reaction is substantially complete, and recovering solid methylol acrylamide.

2,864,862
METHYLOLACRYLAMIDE
George Leslie Sutherland and Gustave Gerald Doxy, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application August 30, 1956
Serial No. 606,983
2 Claims. (Cl. 260—561)

1. In the fusion method of preparing substantially pure crystalline methylolacrylamide by dry-mixing crystalline acrylamide and paraformaldehyde in the presence of a catalytic amount of a base unreactive in the mixture wherein the fusion reaction is inhibited, the improvement which comprises: neutralizing the acid content of the acrylamide with a strong base.

2,864,863
NITRO AND POLYAMINES AND A PROCESS FOR PRODUCING THESE AMINES
Vernon V. Young, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
No Drawing. Application June 14, 1957
Serial No. 665,663
7 Claims. (Cl. 260—563)

1. In a process for the production of uncyclized amines, the step which consists of contacting a nitrile having the structural formula:



where R and R^1 are selected from the group consisting of lower alkyl, benzyl, phenyl, and R and R^1 are cyclohexyl with hydrogen in a lower fatty acid solvent at a temperature ranging from about 10° to about 150° C. at hydrogen pressures of 25–2000 p. s. i. and in the presence of a noble metal catalyst.

2,864,864
KETONE SYNTHESIS
John H. Stith, Plainfield, Walter R. F. Guyer, Short Hills, and Ober C. Slotterbeck, Clark, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application August 27, 1954, Serial No. 452,687
7 Claims. (Cl. 260—597)

1. The process for converting an olefin of 2 to 12 carbon atoms into a ketone having one more than twice the number of carbon atoms than said olefin, which comprises passing to a reaction zone said olefin of 2 to 12 carbon atoms, carbon monoxide, and as a hydrogen donor a hydrogenated multiple ring aromatic, maintaining a mol ratio of said hydrogenated aromatic to olefin of up to 2.25, maintaining a cobalt catalyst in said zone, maintaining a temperature of from about 300–400° F. and a pressure of from about 3000–5000 p. s. i. g. in said zone, and recovering said ketone and dehydrogenated hydrogen donor.

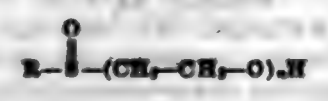
2,864,865
PREPARATION OF AROMATIC ALDEHYDES AND ALCOHOLS
Louis A. Errede, Westfield, and Stafford L. Hopwood, Jr., Cedar Grove, N. J., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application May 4, 1955, Serial No. 505,904
15 Claims. (Cl. 260—599)

1. The process which comprises polymerizing a quinodimethane in the presence of oxygen to produce a peroxide polymer and thermally decomposing said peroxide polymer to produce an aromatically unsaturated compound, having para-positioned aliphatic substituents selected from the group consisting of a hydroxy methyl radical and a formyl radical and recovering the aromatically unsaturated compound thereby produced as a product of the process.

5. The process which comprises thermally decomposing a peroxide polymer containing the recurring unit [—O—CH_2—Q—CH_2—O—] wherein Q contains at least one six-membered ring having aromatic unsaturation and wherein Q is bonded at carbon atoms which are in the para position to each other, the remaining nuclear substitution of said Q being selected from at least one of the group consisting of the normally gaseous halogens, hydrogen and methyl radicals, at a temperature between about 50° C. and about 200° C. to produce an aromatically unsaturated compound having para-positioned aliphatic substituents selected from the group consisting of a hydroxymethyl radical and a formyl radical.

2,864,866
PROCESS FOR PREPARING SURFACE-ACTIVE MATERIALS
Rector P. Lowthan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application December 28, 1956
Serial No. 631,049
18 Claims. (Cl. 260—607)

1. A detergent composition, effective in cleaning nylon, wool, and mixtures thereof, when used in aqueous solution, represented by the formula



wherein R is selected from the group consisting of normal alkyl radicals containing from 12 to 16 carbon atoms and tertiary alkyl radicals containing from 14 to 16 carbon atoms, and n is an integer in the range of 4 to 7.

7. A process for preparing a detergent which comprises reacting an alkyl mercaptan of from 8 to 20 carbon atoms with an alkylene oxide of from 2 to 5 carbon

decomposing a 1,1-diarylethane in the presence of kaolin, containing as a binder therefor, a hydrolyzed alkyl ortho

2,864,875
HYDROISOMERIZATION

atoms to form the corresponding glycol thioether; contacting the solution containing said glycol thioether at a pH of not more than 7 with an oxidizing agent selected from the group consisting of hydrogen peroxide and peracids under oxidizing conditions to form the corresponding sulfoxide in colorless form and of less odor than when produced at higher pH than 7; and recovering the sulfoxide from the reaction mixture.

2,864,867

CONDENSATION REACTIONS

William T. Miller, Ithaca, N. Y., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application July 12, 1955
Serial No. 521,639
14 Claims. (Cl. 260—609)

1. A process for the replacement of a vinylic halogen of an unsaturated halocarbon which comprises reacting in the temperature range of 25 to 150° C. a compound selected from the group consisting of mono- and polymercaptans having from one to about 16 carbon atoms with a polyhalogenated ethylenically unsaturated compound having from 3 to about 12 carbon atoms and having at least one halogen atom bonded to each of the doubly bonded carbon atoms and in which the halogen atoms are selected from the group consisting of chlorine and fluorine, at least half of the halogen atoms being fluorine.

11. A compound having the formula,

$$CH_3(CH_2)_{11}SCF{=}CFCF_3$$

2,864,868

CYCLOPENTENYL PHENOLS AND METHOD FOR PREPARING THEM

Alfred R. Bader, Milwaukee, Wis., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application July 22, 1952
Serial No. 300,359
9 Claims. (Cl. 260—621)

1. A method of preparing cyclopentenyl derivatives of a phenolic compound selected from the class consisting of phenol, p-cresol and guaiacol, which comprises reacting cyclopentadiene with said phenolic compound at a temperature of about 0° C. to 150° C., and in the presence of a catalyst selected from the class consisting of aluminum chloride, ferric chloride, antimony pentachloride, boron trifluoride, zinc chloride, titanium chloride, hydrofluoric acid, sulfuric acid, phosphoric acid, phosphorus pentoxide, stannic chloride, bismuth chloride, tellurium dichloride, and tellurium tetrachloride, and recovering said cyclopentenyl derivatives from the reaction mixture.

2,864,869

PHENOL PURIFICATION

Henry Peter Crocker, Lower Kingswood, and Reginald Harold Hall, Sutton, England, assignors, by mesne assignments, to Hercules Powder Company, a corporation of Delaware

No Drawing. Application February 14, 1956
Serial No. 565,317
Claims priority, application Great Britain February 24, 1955
9 Claims. (Cl. 260—621)

1. The process for the purification of phenol produced by the decomposition of cumene hydroperoxide and containing impurities which give rise to color formation on chlorination which comprises contacting the phenol at an elevated temperature with an amino-compound of the formula $R{-}NH_2$, wherein R is selected from the group consisting of hydroxyl, amino, and substituted amino radicals, in a predetermined stoichiometric amount required to bind all of said impurity, heating at a temperature in the range of about 41° C. to about 182° C. until said impurity is bound and distilling phenol free of said amino compound, said impurity and said bound impurity.

2,864,870

PROCESS FOR NITRATING NON-AROMATIC HYDROCARBONS

Jack H. Kraus, Media, and Robert K. Smith, Springfield, Pa., assignors to Hendry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 8, 1955
Serial No. 545,776
3 Claims. (Cl. 260—644)

1. A process for simultaneously synthesizing the mononitro derivative of a non-aromatic hydrocarbon having 5 to 20 carbon atoms and containing a tertiary carbon atom and the mononitro derivative of a non-aromatic hydrocarbon having 5 to 20 carbon atoms and containing a secondary carbon atom from a mixture comprising said hydrocarbons and effecting a separation of the mononitro derivatives, which process comprises contacting said mixture with a mixture of aluminum nitrate nonahydrate and from five to thirty weight percent of water to nitrate each of said hydrocarbons into their mononitro derivatives, contacting said nitrated hydrocarbons with a strong aqueous alkaline solution to dissolve the mononitro derivative of the hydrocarbon having a secondary carbon atom, and separating the undissolved mononitro derivative of the hydrocarbon having a tertiary carbon atom.

2,864,871

METHOD OF PRODUCING DINITRO-TETRA ALKYL BENZENES

Marion G. Mornington, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application July 20, 1956
Serial No. 599,017
4 Claims. (Cl. 260—645)

1. The method of producing a 1,4-dinitro-2,3,5,6-tetra alkyl benzene comprising initially cooling a body of strong nitric acid having a specific gravity of from about 1.41 to about 1.51 to a substantially uniform temperature throughout by vigorously agitating said body of nitric acid in contact with cooling elements until said temperature is lowered to from about 5° to about 15° C., then adding gradually, little by little, to the cooled body of nitric acid while continuing the stirring and the cooling a powdered reactant consisting essentially of 2,3,5,6-tetra alkyl benzene, wherein each alkyl group contains from 1 to 6 carbon atoms, controlling the rate of said addition of the powdered reactant to, and the rate of cooling of, the resulting nitric acid mixture so as to maintain the said mixture at a substantially uniform temperature sufficiently low to prevent oxidizing fumes from being formed in the said mixture, continuing the said addition and cooling until the reaction approaches completion, thereafter admixing with stirring the resulting mixture with cold water to precipitate out 1,4-dinitro-2,3,5,6-tetra alkyl benzene, and filtering, washing, neutralizing and drying the crystalline solids to secure 1,4-dinitro-2,3,5,6-tetra alkyl benzene of high quality and of high yield.

2,864,872

CRACKING OF 1,1-DIARYLETHANES TO SUBSTITUTED STYRENES

Kenneth W. Saunders, Darien, and Edwin M. Smolin, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application May 1, 1956
Serial No. 581,826
10 Claims. (Cl. 260—650)

3. In a method of producing mononuclear vinyl aromatic compounds, the step which comprises catalytically

and a vertically depending unfixed and unattached lower end, a support for said cable at its attached end, a

vidual outer metal containers, one of said containers having anode materials placed therein, the other having cath-

decomposing a 1,1-diarylethane in the presence of kaolin, containing as a binder therefor, a hydrolyzed alkyl ortho silicate said kaolin and said binder having been subjected to baking at a temperature of from about 350° C. to 550° C.

2,864,873
PRODUCTION OF 1,1,2-TRIFLUORO-2-CHLOROETHYLENE
Charles B. Miller, Lynbrook, N. Y., and Lee B. Smith, Woodbridge, N. J., assignors to Allied Chemical Corporation, a corporation of New York
No Drawing. Application March 16, 1954
Serial No. 416,697
4 Claims. (Cl. 260—653.5)

1. In a process for preparing 1,1,2-trifluoro-2-chloroethylene, the step which comprises reacting a mixture of hydrogen and 1,1,2-trifluoro-1,2,2-trichloroethane in the vapor phase at temperatures between about 325° C. and about 425° C. in the presence of a catalyst comprising copper metal and an oxide of chromium.

2,864,874
PREPARATION OF m- AND p-DIISOPROPYLBENZENE
Herman I. Enos, Jr., Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 29, 1953
Serial No. 364,963
8 Claims. (Cl. 260—671)

1. The method of preparing a diisopropylbenzene substantially free of o-diisopropylbenzene and trimethylindane which comprises propylating benzene in a first alkylation reaction with a substantially equimolecular amount of a propylene-containing gas, containing no higher molecular weight unsaturates, in the presence of an acid-acting condensation catalyst to substantially pure cumene, contacting the substantially pure cumene in admixture with about an equimolecular amount of propylene, free of other unsaturates, in a second alkylation reaction with 0.1 to 2 mole percent of the benzenoid material in the reaction mixture of aluminum chloride at a temperature in the range of 65–115° C. until the reaction mixture contains a substantial amount of diisopropylbenzene, substantially none of which is o-diisopropylbenzene and subsequently separating m-diisopropylbenzene from the reaction products by distillation.

2,864,875
HYDROISOMERIZATION
Joseph B. McKinley, Pittsburgh, and William A. Horne, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application March 18, 1952, Serial No. 277,304
1 Claim. (Cl. 260—683.65)

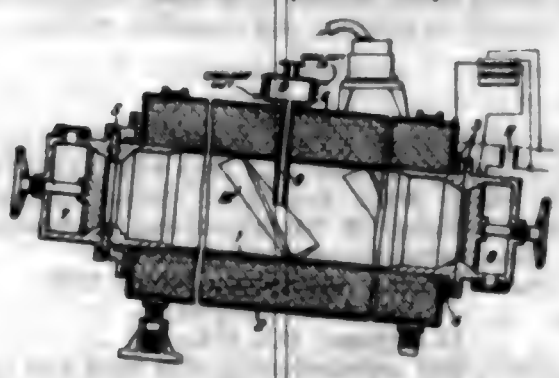
A hydroisomerization process which comprises reducing a regenerated molybdenum oxide catalyst with hydrogen containing an amount of an oxygenic substance selected from the group consisting of oxygen, steam and carbon dioxide supplying about 0.0023 to about 0.03 mol of oxygen per mol of hydrogen, contacting the resulting reduced catalyst in a reaction zone with a charge comprising naphtha and hydrogen in proportions of about 1,000 to about 20,000 cubic feet of hydrogen per barrel of said naphtha and an amount of an oxygenic substance selected from the group consisting of oxygen, steam and carbon dioxide supplying about 0.0023 to about 0.03 mol of oxygen per mol of hydrogen, at a pressure of about 100 to about 2,000 pounds per square inch and at a temperature of about 850° to about 1100° F.

2,864,876
IMPROVED PROCESS FOR THE MANUFACTURE OF CHLORINATED RUBBER
Robert M. Brooks, Milltown, N. J., and Vernon R. Grande, Kennett Square, Pa., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 27, 1955
Serial No. 518,335
6 Claims. (Cl. 260—772)

1. The process for producing chlorinated rubber which comprises passing a stream of inert gas containing chlorine dioxide in an amount up to about 9% by weight in a stirrable solution of rubber containing up to about 15% by weight of said rubber in a volatile chlorinated aliphatic hydrocarbon solvent substantially inert to chlorine until the viscosity of the rubber solution has been reduced to a value less than about 5% of the original rubber solution viscosity, and subsequently chlorinating the resulting rubber solution of reduced viscosity at a temperature between about 25° C. and about 70° C. without phase separation during chlorination until chlorinated rubber having about 66% by weight of chlorine is produced.

ELECTRICAL

2,864,877
OVEN FOR PRODUCTION OF MAGNESIUM
Fritz Harders, Post Ergste Uber Schwerte (Ruhr), Helmut Knappel, Dortmund-Nette, and Karl Brotzmann, Dortmund, Germany, assignors to Dortmund-Hörder Hüttenunion Aktiengesellschaft, Dortmund, Germany
Application September 4, 1956, Serial No. 607,956
Claims priority, application Germany September 5, 1955
9 Claims. (Cl. 13—31)



1. In a rotary oven for the recovery of magnesium, of the type comprising an inner reaction vessel; an outer vessel enclosing the inner vessel; electrical insulating means and heat insulating means in the space between said vessels, securing said vessels in spaced relationship to one another; an electrical resistance means for heating the oven, with electrical connections for a lead-in to the wall of said inner vessel and a lead-off from said outer vessel: said inner vessel consisting of a cylindrical vacuum-tight tube being an electrical conductor, a first vacuum compartment at the inlet end of said tube for admitting magnesium thereto, a second vacuum compartment at the outlet end of said tube for discharging magnesium, which has been thermically treated, from said tube, and means for evacuating the insulation-filled space between said inner vessel and said outer vessel.

2,864,878
THERMOCOUPLE CABLE SUSPENSION
Herbert F. Dalglish, St. Paul, Minn., assignor to Mark W. Gehan, St. Paul, Minn.
Application July 12, 1954, Serial No. 442,715
8 Claims. (Cl. 136—4)

8. In combination with a storage area a thermocouple cable suspended therein having an attached upper end

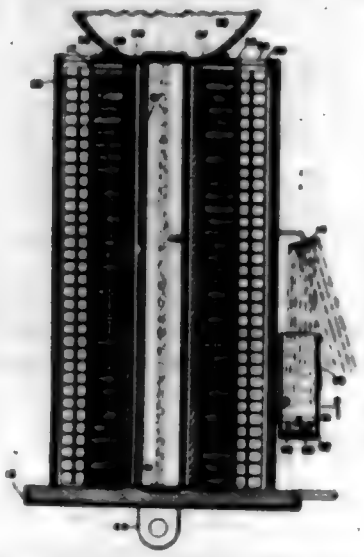
herein described, and suitable for application over irregular metal surfaces as an adherent filling material;

2,864,884
RESISTOR AND SPARK PLUG EMBODYING

and a vertically depending unfixed and unattached lower end, a support for said cable at its attached end, a weight fixed to said cable at its unattached end, and a lead-in cable connected to the attached end of said

thermocouple cable, whereby the depending unfixed and unattached cable end can be freely flexed out of its normally vertically depending position by the strain of storage material thereagainst, and is thereafter self-returned to its normally vertically depending position.

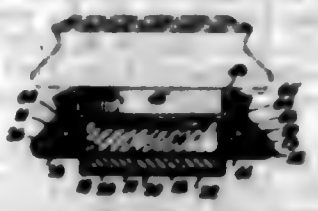
2,864,879
METHOD AND APPARATUS FOR GENERATING ELECTRICAL POWER FROM SOLAR ENERGY
Harry A. Toulmin, Jr., Dayton, Ohio, assignor, by mesne assignments, to Basic Research Corporation, Wilmington, Del., a corporation of Delaware
Application December 21, 1954, Serial No. 476,696
7 Claims. (Cl. 136—4)



1. In a solar generator, a plurality of thermo-electric elements arranged to form a hollow cylinder having an inner wall, means comprising a lens system to concentrate heat rays of the sun into a beam within said cylinder proximate to but spaced from the inner wall thereof to energize said elements by radiation from said beam and means at the bottom of said hollow cylinder to reflect the beam of heat rays against the inner wall of said cylinder to further energize said thermo-electric elements.

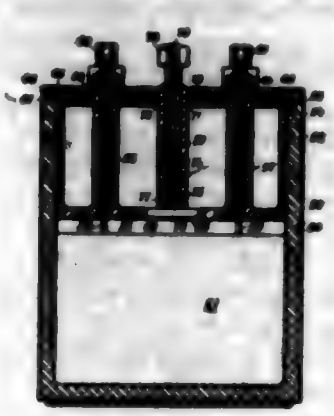
2,864,880
BATTERY CONSTRUCTION AND CELL THEREFOR
Gordon E. Kaye, Mount Kisco, N. Y., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Application September 27, 1954, Serial No. 458,500
5 Claims. (Cl. 136—111)

1. A battery comprising a plurality of individual cell units, each unit including a pair of top and bottom individual outer metal containers, one of said containers having anode materials placed therein, the other having cathode materials placed therein, and an electrical insulator placed between cooperating marginal regions of said containers and constituting therewith a sealed enclosure for the unit, said containers acting as anode and cathode terminals respectively of each unit, said container-terminals being constructed in a manner such that said bottom container has a portion integrally extruded thereof and said



top container has a recess integrally formed therein, the diameter of said extruded portion and said recess being such that said extruded portion can be tightly press fitted within said recess portion, to be firmly held therein, said terminals thus making metal to metal contact so as to make a good electrical connection and to provide a mechanically stable pile between adjacent units of said battery so as to obviate the need for any additional stacking means.

2,864,881
TRIGGERABLE ELECTRO-CHEMICAL GENERATORS
Jean Eugène Alphonse Doyen, Paris, France, assignor to Yardney International Corporation, New York, N. Y., a corporation of New York
Application April 6, 1953, Serial No. 348,244
Claims priority, application France April 9, 1954
3 Claims. (Cl. 136—113)



1. An electrochemical deferred-action battery comprising a casing, an electrode assembly in said casing, a sealed container in said casing above said electrode assembly, said container having a cover, a tubular guide depending from said cover and a tubular plunger displaceably mounted in and closely surrounded by said guide for movement toward the bottom of said container, said bottom having a frangible portion in line with said plunger, said portion having a predefined area substantially exceeding the cross-sectional area of said plunger, and rupturable seal means closing an end of said guide, said seal means being adapted to be broken upon a descent of said plunger to fracture said frangible portion.

2,864,882
PLASTIC FILLER IN STRIP FORM AND ELECTRICAL CONNECTIONS COATED THEREWITH
Robert B. Snell, White Bear Lake, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Application July 6, 1953
Serial No. 366,391
12 Claims. (Cl. 174—84)

1. A plastic filler composition in strip form and removably adherently attached to a temporary liner, all as

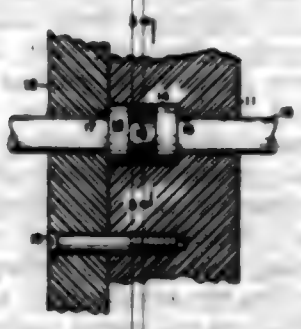
2,864,886
FACSIMILE TRANSMITTER
Walter S. Lemmon, Greenwich, Conn., assignor to Radio

means for applying the uncorrected video signal output of said signal deriving means to said signal storing means, and means for combining the uncorrected video signal

the type comprising an inner reaction vessel; an outer vessel suspended therein having an attached upper end

herein described, and suitable for application over irregular metal surfaces as an adherent filling material; said composition in strip or lump form and at temperatures up to at least about 40° C. being non-flowing, but susceptible of plastic deformation by finger-pressure, being moderately adherent to metal and highly coherent to itself; in the form of a strip one-eighth inch in thickness and 1½ inches in width, being smoothly hand-stretchable to at least about ten times its original length, and having a tensile strength of the order of 3–5 lbs. per inch of width; having a water absorption value not greater than about 0.4%, a dielectric strength of at least about 30,000 volts at a thickness of one-eighth inch, and a dissipation factor not higher than about 0.10; said composition consisting essentially of about 110 parts by weight of a rubbery hydrocarbon polymer base at least mainly consisting of a rubbery copolymer of isobutylene and a diolefin in approximately the proportions of 98:2, about 40–80 parts siliceous particulate stiffener for said base, about 25–50 parts of heavy paraffin oil, about 5–30 parts of resinous tackifier, and about 4–15 parts of polyethylene.

2,864,883
SEALED CONDUIT FOR ELECTRICAL CONDUCTORS
Vernon G. Townsend, Minneapolis, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 13, 1953, Serial No. 392,869
1 Claim. (Cl. 174—151)

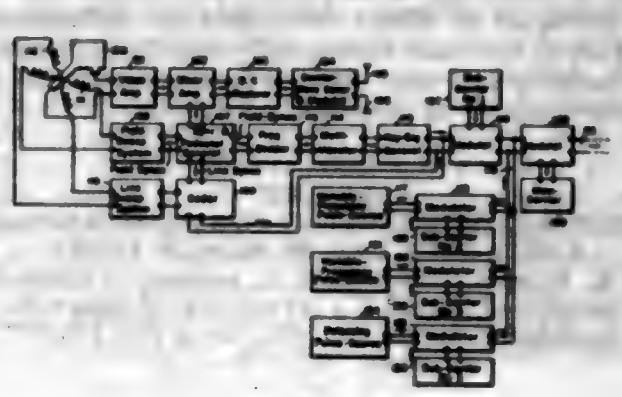


An electrical connector for lead wires which comprises a base of insulating material having a passageway extending therethrough between its front and rear faces, said passageway being formed of an enlarged diameter bore extending inwardly from its rear face and a reduced diameter bore extending inwardly from its front face providing an internal shoulder within the base, an electrical conductor positioned within said passageway and having front and rear lead connecting end portions extending outwardly from said front and rear faces, said front connecting end portion being in tight fitting engagement with the small diameter bore of the passageway, said conductor having co-extensive front and rear annular flanges thereon with their peripheries in contact with the enlarged bore of the passageway and providing an annular groove between the inner walls of the flanges, said front annular flange having its outer wall positioned in contact with the internal shoulder of the passageway and said rear annular flange having its outer wall positioned in the plane of the rear face of the base, a packing ring of resilient material within said annular groove having its outer periphery in contact with the enlarged bore of the passageway and providing a seal therewith, a cover plate having a passageway extending therethrough between its inner and outer faces for receiving the rear lead connecting end portion of the conductor in tight fitting engagement therewith and means for securing the cover plate to the base and positioning the inner face of the cover plate in surface contact with both the outer wall of the rear annular flange and the rear face of the base.

2,864,884
RESISTOR AND SPARK PLUG EMBODYING SAME
William E. Counts and Robert W. Smith, Flint, and Karl Schwartzwalder, Holly, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 25, 1954, Serial No. 405,866
13 Claims. (Cl. 174—152)

1. A resistor comprising the combination of an insulator sleeve, a metal conducting member positioned in said sleeve, a glass conducting seal overlying said member and having a gas-tight bond with said sleeve, a semi-conductor overlying said seal and being bonded thereto and to said sleeve, a second glass conducting seal overlying said semi-conductor and being bonded thereto and to said sleeve, and a second metal conducting member in said sleeve having good electrical connection with said second seal, said semi-conductor being formed of a composition comprising 25 to 40 parts glass, 25 to 75 parts semi-conductor material, 0 to 40 parts filler and 0 to 6 parts reducing agent, said resistor having substantially stabilized resistance.

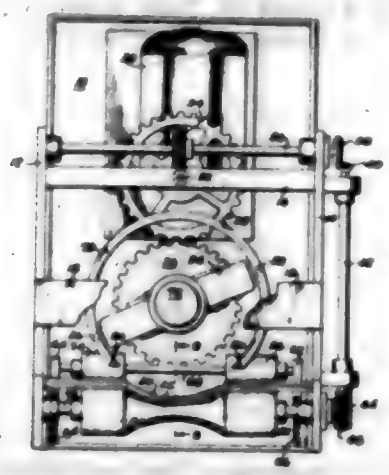
2,864,885
SUBSCRIBER TELEVISION SYSTEM
George V. Morris, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application December 4, 1951, Serial No. 260,735
9 Claims. (Cl. 178—5.1)



1. A subscription television transmitter comprising: means for producing a television signal representing a program to be transmitted to subscriber receivers; coding said television signal in accordance with a coding schedule; means for generating a charging signal independent of said coding schedule and having successively repetitive pulses of a pulse repetition rate adjustable over a selected range corresponding to a range of subscription rates; means for adjusting the pulse repetition rate of said charging signal to a value within said selected range representing a particular subscription rate for said program; means for transmitting the coded television signal and the charging signal concurrently to subscriber receivers; and means for varying the pulse repetition rate of the charging signal to other values within said selected range as said program progresses.

the detected dialling tone, relay means operable by the output of said first channel, and the second of said chan- ing said audio system into recording condition; a start-stop drive control member for recording; a start-stop

2,864,886
FACSIMILE TRANSMITTER
Walter S. Lemmon, Greenwich, Conn., assignor to Radio Industries Corporation, a corporation of New York
Application June 29, 1955, Serial No. 518,817
1 Claim. (Cl. 178—7.1)

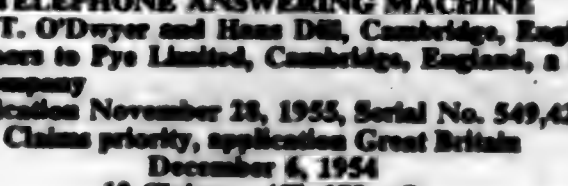


A facsimile line scanner for strip material, comprising means for feeding original strip material, to be scanned, along a substantially linear path; means for deflecting such material, at one point of its travel, into a transversely arcuate form about an axis spaced from said path but generally paralleling the same; a light source fixedly mounted on said axis in position to direct illumination towards the arcuately formed material; a scanner assembly mounted for rotation about said axis and including at least two angularly spaced, radially directed scanner pick-up lens units mounted to swing in rotary paths successively across a transverse line element of said material; individual light-concentrating lens units mounted on said scanner assembly adjacent each of said pick-up lens units and so oriented as to concentrate light from said source directly onto the area of said material being scanned by the adjacent pick-up unit; an arcuate light shield secured in a position concentric with said axis and surrounding the paths of said pick-up lens units during their travel away from said transverse line element, said shield being of channeled cross-section open toward said axis and positioned to closely encompass the extremities of said pick-up lens units during such travel; and drive means for operating said strip material feeding means and said scanner assembly in synchronized relation.

2,864,887
CIRCUITS COMPENSATING FOR PHOTOCONDUCTIVE LAYER LAG IN PICKUP TUBES
Paul K. Weimer, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application August 25, 1953, Serial No. 376,397
4 Claims. (Cl. 178—7.2)

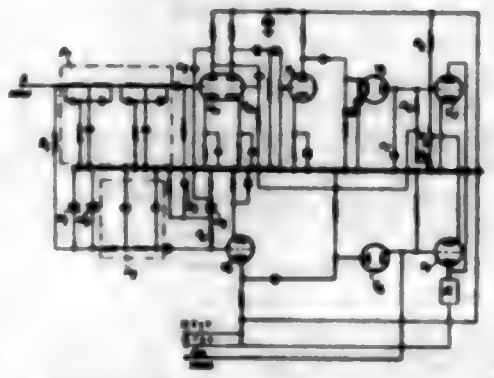
1. In a television image pickup system operating at a predetermined frame repetition rate and including an image pickup tube comprising a light responsive target, means for generating an electron beam, deflection means for causing said beam to trace a scanning raster on said target, and means for imaging a scene to be televised on said light responsive target, a lag compensation system comprising means for deriving uncorrected video signals nominally representative of said scene from said target in response to the tracing of said scanning raster thereon, means for storing signals for a period of time substantially corresponding to the duration of one of said frames, means for applying the uncorrected video signal output of said signal deriving means to said signal storing means, and means for combining the uncorrected video signal output of said signal deriving means with video signals stored for said period by said storing means in mutual phase opposition to produce a lag compensated video signal output.

2,864,888
AUTOMATIC GAIN CONTROL CIRCUITS
Hunter C. Goodrich, Collingswood, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application August 24, 1953, Serial No. 376,193
14 Claims. (Cl. 178—7.3)



1. In a signal processing circuit the combination of: a source of intelligence signal; a semiconductor signal translating device having electrodes corresponding to an emitter, base and collector; first impedance means galvanically connected between said emitter and said base to form a first loop circuit; signal coupling means from said signal source to said first loop circuit to apply an input signal to said device; second impedance means connected between said collector and said base defining a second loop circuit extending from said emitter to said collector; bias means connected with said second loop circuit in a polarity direction supporting amplifier action, the value of said second impedance means being so chosen as to allow collector saturation by excursions of said input signal; means connected in said first loop circuit for developing a control voltage in accordance with current flow through said first loop circuit; and means for applying said control voltage to said signal source for controlling the amplitude of signal delivered to said first loop circuit by said signal source.

2,864,889
TELEPHONE ANSWERING MACHINE
Martin T. O'Dwyer and Hans Dill, Cambridge, England, assignors to Pye Limited, Cambridge, England, a British company
Application November 28, 1955, Serial No. 549,422
Claims priority, application Great Britain December 6, 1954
13 Claims. (Cl. 179—6)



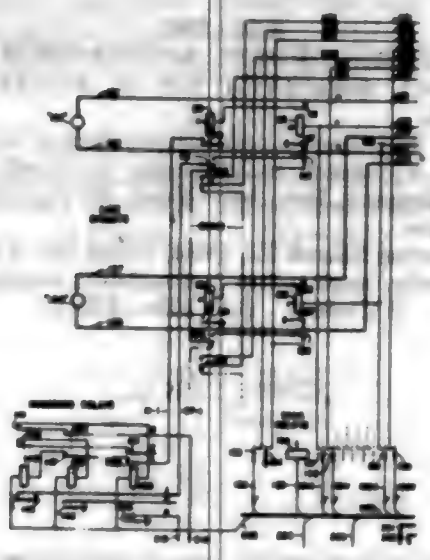
1. In a telephone answering machine of the kind described, a line monitoring circuit which is adapted to be connected to the speech circuit of the telephone line at least when a caller is recording a message and which comprises two parallel channels, the first of said channels including means for detecting the presence of a dialing tone and means for producing an output in response to

faces defining an airgap therebetween, said head being arranged for perpendicular magnetic recording operations;

and associated with a magnetic record and which heads are recycled relative the record in response to the repro-

the detected dialling tone, relay means operable by the output of said first channel, and the second of said channels including means for detecting speech frequencies and means arranged to operate said relay means in the absence of said speech frequencies, said relay means operating effectively to disconnect the telephone answering machine from the speech circuit of the telephone line.

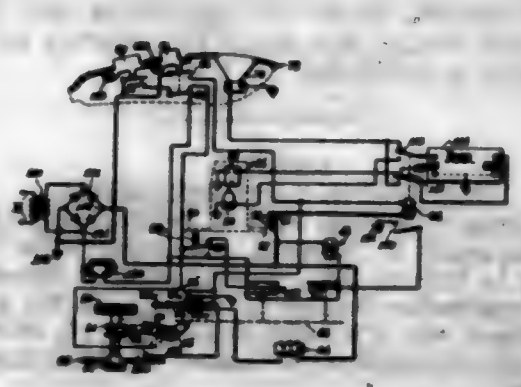
2,864,890
AUTO-SELECTING CROSS-BAR TELEPHONE SYSTEM
Rudolph Frank Stehlik, Antwerp, Belgium, assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application December 11, 1953, Serial No. 397,625
21 Claims. (Cl. 179—22)



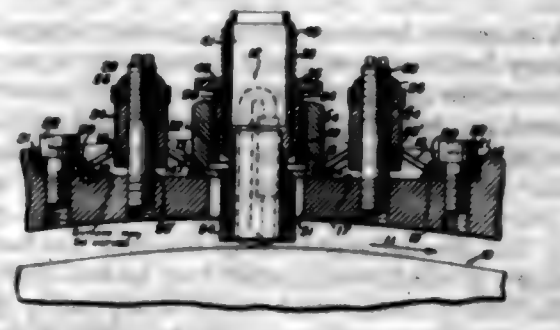
1. Switching equipment for use in an automatic telephone system comprising a first cross-bar switch and a group of line circuits connected thereto, a speech circuit for each line circuit, a plurality of connector circuits accessible to said switch, a register finder cross-bar switch connected to said connectors, a plurality of registers accessible to said finder, means responsive to the seizure of one of said line circuits for extending the speech circuit thereof automatically from said one line circuit through said first switch to an idle one of said connectors and through said one connector and said cross-bar finder to an idle one of said registers, means in said register for storing impulses corresponding to the digits of the call number of a second one of said line circuits received over said extended speech circuit, means in said register operated responsive to the completion of the receipt of said digits thereby for causing said first switch to extend the speech circuit of said second line circuit therethrough to said one connector, and means in said one connector controlled over said last speech circuit for connecting the speech circuits of said two line circuits together through said first switch and said one connector, and for releasing said finder and said register from said connection.

2,864,891
CONTROL SYSTEM FOR DICTATING MACHINES
Richard Kobler, West Orange, N. J., assignor to McGraw-Edison Electric Company, Elgin, Ill., a corporation of Delaware
Application May 29, 1957, Serial No. 662,489
12 Claims. (Cl. 179—100.1)

1. In a dictating machine including a support for a record, record-cooperable translating means adapted for recording and reproducing, and drive means for providing a relative scanning movement between the support and translating means: the combination of an audio system including said translating means and conditionable selectively for recording and reproducing; means for placing said audio system into recording condition; a start-stop drive control member for recording; a start-stop drive control member for reproducing; means for placing said audio system in reproducing condition when said reproduce control member is operated; a warning device; and means responsive to operation of both of said start-stop control members for activating said warning device.

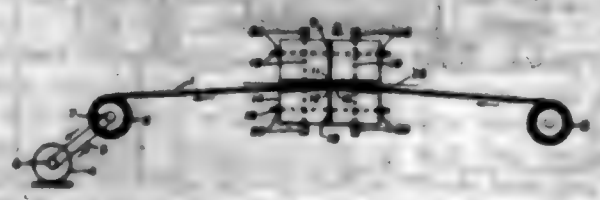


2,864,892
TRANSDUCER MOUNTING
Robert L. Perkins, St. Paul, Minn., assignor, by mesne assignments, to Sperry Rand Corporation, a corporation of Delaware
Application April 7, 1954, Serial No. 421,573
25 Claims. (Cl. 179—100.2)



1. Apparatus for adjustably mounting a transducing device for movement with respect to the path of travel of a record member including, a main support means having a surface formed in a predetermined configuration related to said path of travel of said record member, a transducer support member disposed in a bearing relation on said surface of said main support means, and means at least in part angulated as to both the main support means and said transducer support member for producing one force component for moving the transducer support member along said surface and for producing a second force component for maintaining said support member in said bearing relation to said surface.

2,864,893
MAGNETIC RECORDING HEAD
Joseph W. Gratian, Rochester, N. Y., assignor, by mesne assignments, to General Dynamics Corporation, a corporation of Delaware
Application November 30, 1953, Serial No. 394,929
9 Claims. (Cl. 179—100.2)



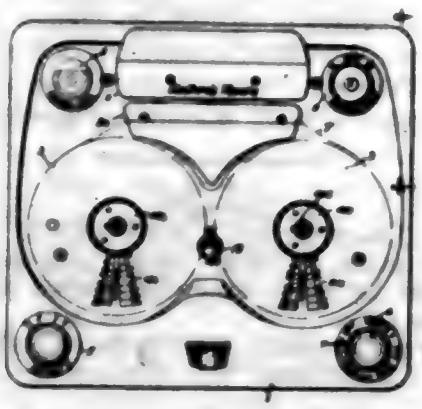
1. In magnetic recording apparatus, the combination of a head having a magnetic circuit including a pair of pole

to said first pole of said source, said left and right pole pieces each having a pole tip portion disposed at right

studded on both sides with a plurality of straight sided right prismatic projections partially inserted in registered

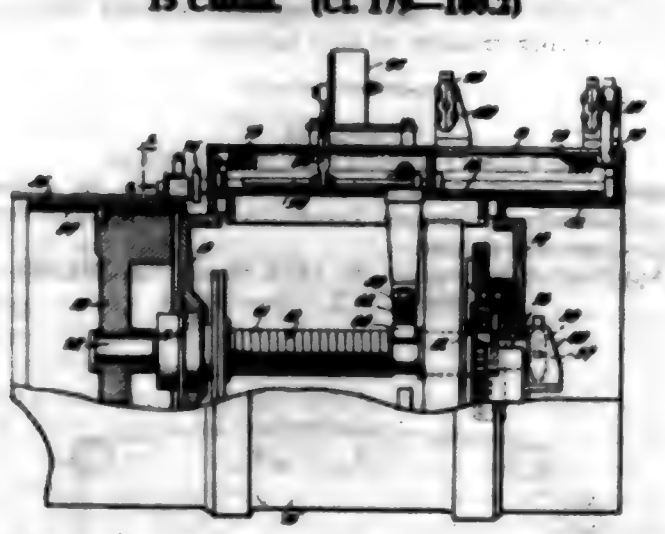
faces defining an airgap therebetween, said head being arranged for perpendicular magnetic recording operations; a longitudinal magnetic recording medium comprising a magnetically active portion secured to one side of a non-magnetic portion; means for transporting said medium through said airgap, and means for centering said magnetic portion in said airgap.

2,864,894
MAGNETIC TAPE RECORDER
Colin B. Dale, Oak Park, Paul K. Brindenbaugh, Chicago, and Raymond C. Bierman, Clarendon Hills, Ill., assignors to Webcor, Inc., a corporation of Illinois
Original application October 29, 1951, Serial No. 253,678, now Patent No. 2,741,439, dated April 10, 1956. Divided and this application October 11, 1955, Serial No. 542,594
20 Claims. (Cl. 179—100.2)



4. A magnetic two-way recorder, comprising a pair of transducer heads to coact with a magnetic tape, mechanism to feed the tape in forward or reverse direction across the transducer heads, a pair of pressure pad devices, one to press the tape into intimate contact with one head and the other to press the tape into intimate contact with the other head, a feed direction controller, means operated thereby for alternatively driving the feed mechanism in a direction to effect the forward feed or in a direction to effect the reverse feed, switch means concurrently operated by the controller to select one or the other of the transducer heads to function depending on the feed direction, and operative connections between the controller and the pressure pad devices for also moving only the pressure pad device of the selected head into intimate contact therewith.

2,864,895
RECORDING APPARATUS
Ellis H. Bryant, Jr., Atlanta, Ga., assignor to John Leonard Franklin, Atlanta, Ga.
Application May 4, 1956, Serial No. 582,686
15 Claims. (Cl. 179—100.2)

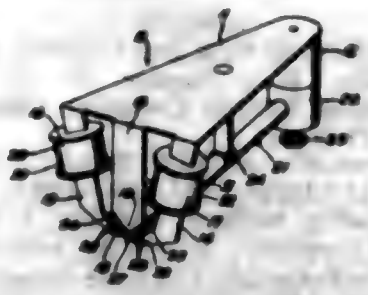


1. In recording and reproducing apparatus employing first and second sensing heads coupled to said apparatus and associated with a magnetic record and which heads are recycled relative the record in response to the reproduction of a control marker tone pulse to arrive at a record starting point, the improvement comprising an erase current source energizing said first head, a tone alternating-current source, means for initiating a recording operation by energizing said second head, means for terminating said recording operation and connecting said first head to said tone alternating-current source to the exclusion of said erase current source to momentarily record a tone pulse at the tone source frequency, means for resetting said record after said tone pulse is recorded, means for reproducing said recording, and means including said first head for recycling said record in response to the reproduction of said tone pulse and prior to the sensing of said pulse by said second head.

2,864,896
DEVICE FOR RECORDING SOUND OSCILLATIONS IN SPIRAL GROOVES ON A PLATE-SHAPED CARRIER
Jan Boeuijs and Henk Lauterslager, Baarn, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application March 22, 1954, Serial No. 417,812
Claims priority, application Netherlands March 25, 1953
3 Claims. (Cl. 179—100.4)

1. A device for recording sound oscillations in a spiral groove on a plate-shaped carrier, comprising a driving mechanism for controlling the position of a groove cutter on the carrier in response to variations of the intensity of a control signal supplied to said driving mechanism, means for deriving from said sound oscillations a control signal having an intensity as determined by the intensity of said sound oscillations greater than a predetermined threshold value, said control signal having a maximum intensity value, means for limiting the intensity of said control signal to a given value independently of variations of the intensity of said sound oscillations, said given value being greater than said threshold value, and substantially less than that of said maximum intensity, and means for applying said control signal to said driving mechanism.

2,864,897
UNIVERSAL PHONOGRAPH PICKUP HEAD OR THE LIKE
Ira J. Kaar, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Application February 17, 1958, Serial No. 715,623
7 Claims. (Cl. 179—100.41)



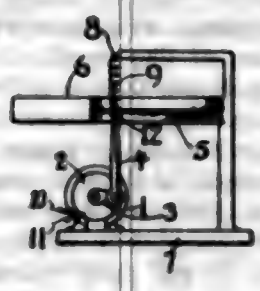
1. An acousti-electrical transducer including a source of magneto-motive force having first and second poles, left, right and common pole pieces magnetically coupled

2,864,902
AMPLIFYING CIRCUIT COMPRISING A

mum amplification at which the amplifier circuit has a given permissible signal distortion and having other posi-

to said first pole of said source, said left and right pole pieces each having a pole tip portion disposed at right angles to that of the other, said common pole piece having a pair of tip portions at right angles to each other, each disposed in parallel relation to its respective one of said pole tip portions of said left and right pole pieces but spaced therefrom to form a pair of air gaps disposed at 90° to each other, a cantilever member of paramagnetic material coupled at one end mechanically and magnetically to the second pole of said source, an armature portion carried at the opposite end of said cantilever member, said armature portion including a pair of wing-shaped elements disposed at 90° to each other and flexibly positioned in the cooperating 90° air gap formed between said left, right and common pole pieces, a stylus carried by said wing-shaped elements, and first and second field coils, said first field coil cooperating with said left pole piece and said second field coil cooperating with said right pole piece.

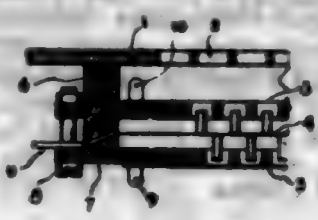
2,864,898
TRANSDUCER DEVICES
Roland E. Gunther, Princeton Junction, N. J.
Application March 26, 1954, Serial No. 419,009
1 Claim. (Cl. 179—100)



In a device for transducing electrical wave forms into corresponding sound wave forms the combination of a source of rotational mechanical energy, a magnetic fluid clutch, said magnetic fluid clutch conventionally comprising a rotational mechanical input and a rotational mechanical output as well as an electrical control circuit; said source of rotational mechanical energy applying to said rotational mechanical input of said magnetic fluid clutch; an eccentric power take-off means, said eccentric means applying to said rotational mechanical output of said magnetic fluid clutch; a diaphragm; a frame, said frame peripherally mounting said diaphragm; a mechanical linking means, said mechanical linking means applying between said eccentric power take-off and said diaphragm, and said mechanical linking means so disposed with respect to said diaphragm to apply linear motion derivable from said eccentric means to said diaphragm in a direction essentially perpendicular to said diaphragm; a spring, one end of said spring rigidly held by said frame, the other end of said spring applying elastically to said diaphragm in linear opposition to said motion derivable from said linking means; and said electrical wave forms to be transduced into sound being applicable to said electrical control circuit of said magnetic fluid clutch.

2,864,899
TRANSDUCER
Henry W. Parker, Flushing, N. Y.
Application November 29, 1954, Serial No. 471,807
1 Claim. (Cl. 179—111)

A substantially constant air gap, three electrode, electrostatic loudspeaker comprising an insulated studded diaphragm electrode, held in constraint by frame clamped edges, midway between two opposite separately insulated cooperating foraminated planar outer electrodes fixed parallel to the plane of the diaphragm, the said diaphragm studded on both sides with a plurality of straight sided right prismatic projections partially inserted in registered



straight sided clearance holes in the said foraminated outer electrodes.

2,864,900
MANUALLY OPERABLE SWITCH FOR AUTOMATIC TELEPHONE SYSTEM
Dorsey D. Simmons, Galion, Ohio, assignor to North Electric Company, a corporation of Ohio
Application October 26, 1954, Serial No. 464,745
9 Claims. (Cl. 179—158)

1. In a selector switch for use in a telephone exchange, a first control circuit for adapting said selector switch for operation as an incoming trunk selector switch in an exchange, a second control circuit for adapting said selector switch for operation as a first selector switch in an exchange, and a switch member having selector means operative to a first position to render said first control circuit effective, and operable to a second position to render said second control circuit effective.

2,864,901
HYBRID CIRCUITS FOR CONNECTING A FOUR WIRE TRANSMISSION LINE TO A TWO WIRE TRANSMISSION LINE
Pierre Roger Raoul Algrain and Maurice Camille Eugene Bataille, Paris, France, assignors to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application June 24, 1953, Serial No. 363,852
3 Claims. (Cl. 179—170)

1. A hybrid circuit comprising a two wire circuit and a four wire circuit, a transformer having a primary winding and at least first and second secondary windings, means for connecting the two wire circuit across said primary winding, means for connecting the transmitting pair of wires of said four wire circuit across said first secondary winding of said transformer, an amplifier having an input and first and second outputs, means for connecting the receiving pair of wires of said four wire circuit to the input of said amplifier, means for connecting said first amplifier output directly to said second secondary winding of said transformer, whereby signals from said amplifier are induced across said primary winding and across said first secondary winding, and means connecting said second amplifier output directly to said first secondary winding for applying signals thereto which have the same amplitude as the induced signals but which are opposite in phase.

2,864,906
LOCKING DEVICE FOR FRENCH PHONE

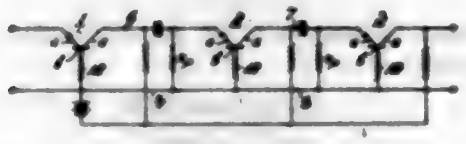
2,864,908
POSITIVE PRESSURE CURRENT COLLECTOR

2,864,902

AMPLIFYING CIRCUIT COMPRISING A PLURALITY OF TRANSISTORS

Adrianus Johannes Wilhelmus Marie van Overbeek, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application April 8, 1954, Serial No. 421,931
Claims priority, application Netherlands April 29, 1953
3 Claims. (Cl. 179—171)



3. A multistage transistor amplifier comprising a plurality of transistor amplifying stages in grounded base connection, each of said stages comprising a transistor having an emitter electrode, a collector electrode and a base electrode, a first electrical conductor system comprising a capacitor connecting the collector electrode of a first transistor to the emitter electrode of the next succeeding second transistor, a second electrical conductor system connecting the base electrode of said first transistor to the base electrode of said second transistor, an input signal source connected between the emitter electrode and the base electrode of the first transistor, means coupled to the collector electrode of said second transistor for deriving therefrom an amplified signal, an impedance connected between the base electrodes of said first and second transistors in said second conductor system, an impedance element connected between said first conductor system and said second conductor system, said impedance element having a value defined by the equations

$$r_g = K(\alpha r_b - r_b - r_e)$$
$$r_g < 0.2 r_m$$

where:

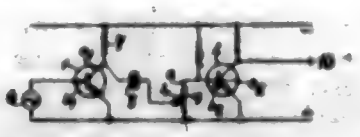
K is a constant greater than 1.2 but less than 3,
α is the current amplification factor,
r_b is the total base impedance in ohms,
r_e is the total emitter impedance in ohms, and
r_m is the transmission impedance of the transistors in ohms.

2,864,903

TRANSISTOR AMPLIFIER WITH GAIN CONTROL

Augustus Gerard Theodoor Becking, Paul Blom, and Pieter Boxman, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application April 26, 1954, Serial No. 425,414
Claims priority, application Netherlands May 5, 1953
11 Claims. (Cl. 179—171)



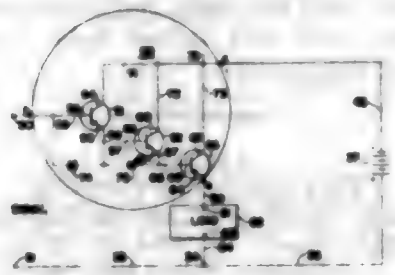
1. An amplifier circuit having a given permissible signal distortion comprising first and second transistors connected in cascade, each of said transistors having an emitter electrode, a collector electrode and a base electrode, first circuit means for supplying an energizing current to the collector electrode of the first of said transistors and second circuit means independent of the energizing current of said first circuit means for coupling the collector electrode of the first transistor and the base electrode of the second transistor, said second circuit means comprising a direct current blocking capacitor and a variable impedance in series relationship, said variable impedance having one position corresponding to maximum amplification at which the amplifier circuit has a given permissible signal distortion and having other positions corresponding to amplifications less than maximum such that a decrease in the amplification of said circuit corresponding to said other positions simultaneously increases the input impedance of said second transistor without increasing the given permissible signal distortion.

2,864,904

SEMI-CONDUCTOR CIRCUIT

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application November 29, 1955, Serial No. 549,700
5 Claims. (Cl. 179—171)



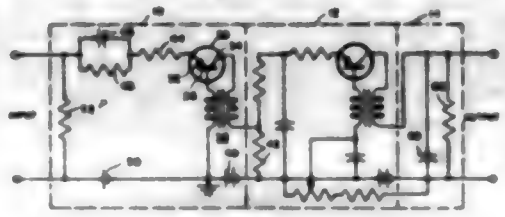
5. A signal translating device comprising: first, second and third transistors of like conductivity type, each of said transistors including a base, a collector and an emitter electrode; means directly connecting together electrically the collector electrodes; means directly connecting the emitter electrode of the first transistor to the base electrode of the second transistor; means directly connecting the emitter electrode of the second transistor to the base electrode of the third transistor; asymmetric current conducting means connected between said first transistor base electrode and said second transistor base electrode; second asymmetric current conducting means connected between said first transistor base electrode and said third transistor base electrode; means connecting a source of signal potential to said third transistor emitter and said first transistor base electrode; and means connecting output means to said third transistor emitter and to said collectors.

2,864,905

MODULATOR-DEMODULATOR AMPLIFIER SYSTEM

Richard F. Grantges, Madison, and Johann Holzer, Long Branch, N. J.

Application February 4, 1957, Serial No. 638,180
6 Claims. (Cl. 179—171)
(Granted under Title 35, U. S. Code (1952), sec. 266)

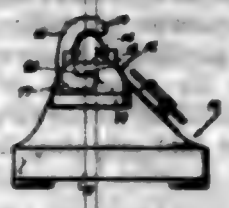


1. An amplifier comprising, a source of input signal, means including a first passive network characterized by a prescribed impulse response function and a non-linear active device for converting said input signal to a prescribed pulse code such that each pulse in the code is of the same shape and amplitude, and a second passive network characterized by said prescribed impulse response function and responsive to said pulse code for converting said pulse code into a signal having the same form as said input signal.

necting said bed to said plate upon operation of which said bed can be placed in a pressure relationship with

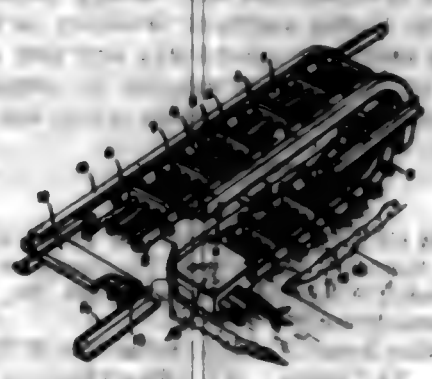
shaft and connecting means constructed to connect said reversible motor shaft to said operating handle, an over-

2,864,906
LOCKING DEVICE FOR FRENCH PHONE
Charles W. Medenbach, East Keansburg, N. J.
Application July 27, 1954, Serial No. 445,951
4 Claims. (Cl. 179—189)



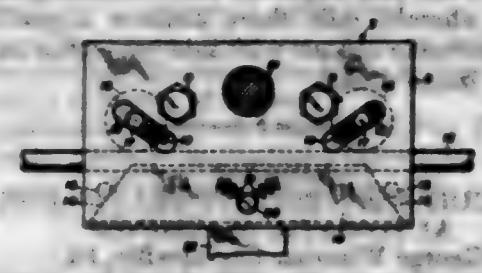
1. A snap-on clamp for a French phone which includes a French phone, said French phone including a base, a C shaped body of sufficient size to encompass the French phone with one half of C-shaped body when it is resting upon the telephone base, said base of said phone provided with a cut away portion on one side below the position at which the French phone rests on said base, the opposite half of said C clamp shaped to fit into the cut away portion of the telephone base, said lower portion of said C clamp provided with a spring pressed plunger, said plunger retracting within the C clamp to permit the lower end of the C clamp to fit into the cut away portion of the base and said spring pressed plunger providing a gripping detent to hold said C clamp in a snapped on holding relationship.

2,864,907
SUPPORTING MEANS FOR FLEXIBLE MEMBERS
Gilbert Wanninger, Siegen, Westphalia, Germany
Application December 22, 1954, Serial No. 477,645
Claims priority, application Germany January 13, 1954
13 Claims. (Cl. 191—12)



1. A supporting device for flexible members having a predetermined permissible radius of bending, comprising a stationary supporting track extending in a straight line path, a pair of parallel spaced movable rail means including guide means disposed on said supporting track, means in registry with said rail means for imparting movement to the latter along said supporting track, said rail means including a straight portion and a curved portion and having said straight portion extending parallel to said straight line path of said supporting track and said curved portion curved through substantially 180 degrees with respect to said supporting track to define a predetermined arcuate configuration having a radius not less than the permissible radius of bending of said members adapted to be supported by said rail means, a carrying chain supported between said rail means and guided by said guide means, at least one flexible member carried by said carrying chain and having a first portion extending parallel to and in the longitudinal direction of said carrying chain and a second portion fixed through substantially 180 degrees, said rail means including said guide means ensuring that said predetermined permissible radius of bending of said flexible member is not exceeded.

2,864,908
POSITIVE PRESSURE CURRENT COLLECTOR
John F. Drummey, Mineola, N. Y., assignor to Morganite Incorporated, Long Island City, N. Y., a corporation of New York
Application June 15, 1955, Serial No. 515,585
2 Claims. (Cl. 191—59.1)



2. A positive pressure current collector, comprising a housing having an elongated internal recess to form a current collector chamber, said housing adapted to be mounted on a current conducting support, an elongated, non-rotatable current collecting insert fixed in said housing and defining the bottom wall of said chamber, for slidably embracing one side of a trolley wire, the elongated face of said slidable insert being parallel to the elongated dimension of said recess, a pair of rollers spaced along the longitudinal axis of said recess within said chamber in opposed relation to said insert, for peripheral engagement with the opposite side of said wire, said rollers being respectively mounted on shafts, the ends of which are slidably supported in aligned bearing slots in opposite walls of said housing, said slots being elongated in planes which intersect a horizontal plane through the longitudinal axis of a trolley wire embraced by said insert, whereby respective rollers and shafts are radially shiftable in said slots, and spring means connected to the shafts and housing for urging respective shafts toward said insert to maintain positive contact pressure with said wire, throughout the length of said insert.

2,864,909
SWITCH
Alfred E. Cobb, Lexington Park, Md.
Original application January 18, 1955, Serial No. 482,688, now Patent No. 2,847,543, dated August 12, 1958. Divided and this application June 10, 1957, Serial No. 664,859
7 Claims. (Cl. 200—46)
(Granted under Title 35, U. S. Code (1952), sec. 266)

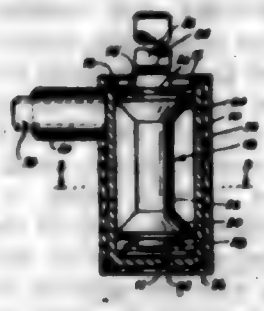
1. A card switch comprising in combination a bed containing a plurality of parallel rows of spring-loaded insulated contacts, a plate containing a plurality of parallel conducting insulated bars having the same spacing as the parallel rows of said bed, hinge means for con-

response to rotation of said reversible motor in a second

anism, said auxiliary bimetallic means being arranged

necting said bed to said plate upon operation of which said bars can be placed in a pressure relationship with said spring-loaded contacts, means for providing a wiping action between said bars and said contacts upon the occurrence of a pressure relationship therebetween, and an insulated card adapted to be placed on said bed and having apertures that are alignable with chosen spring-loaded contacts whereby only those contacts alignable with said apertures make contact with said bars upon an operation of said hinge means.

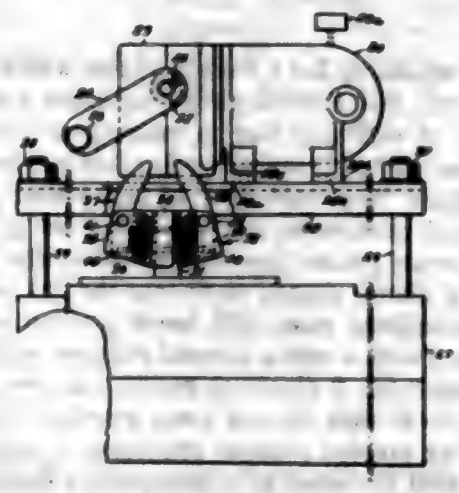
2,864,910
CIRCUIT CONTROL APPARATUS FOR AUTOMATIC MACHINES
George Wintrim, Carversville, Pa.
Application January 22, 1957, Serial No. 635,541
13 Claims. (Cl. 200—61.48)



1. Circuit control apparatus including switch means having a compensating contact, a resilient element supporting the contact, fluid-controlled retarding means limiting the return rate of the compensating contact and the resilient element to an original position after displacement of the contact and resilient element from an original position, means for insulating the compensating contact from a part of a machine to which it is to be connected, and means for connecting the switch to a machine with the compensating contact in a circuit with a relatively movable element of a machine which serves to close the electric circuit and displace the compensating contact from its original position in one portion of the motion of the movable element and to move away from the displaced compensating contact at other portions of the motion of the movable element and break said electric circuit and thus cooperate with said compensating contact to close and open said circuit during different parts of a cycle in the operation of the machine.

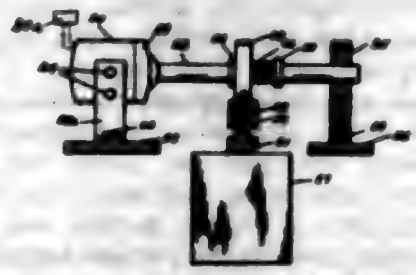
2,864,911
MECHANISM FOR MOTOR OPERATION OF A CIRCUIT BREAKER
John C. Brumfield, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application June 23, 1955, Serial No. 517,593
4 Claims. (Cl. 200—92)

1. An operating mechanism for operating a circuit breaker having an operating handle, a pair of cooperable contacts and a maintaining means, said operating handle being opertively connected to said cooperable contacts to move said contacts to an engaged position responsive to motion of said operating handle to a first position and to move said contacts to a disengaged position responsive to motion of said operating handle to a second position, said maintaining means constructed to maintain said cooperable contacts engaged and said operating handle in said first position when said operating handle is moved thereto and to maintain said cooperable contacts disengaged and said operating handle in said second position when said operating handle is moved thereto and means to prevent motion of said operating handle past said first or said second position; said operating mechanism comprising a reversible motor having an output shaft and connecting means constructed to connect said reversible motor shaft to said operating handle, an energizing means constructed to selectively energize said reversible motor to rotate said output shaft in a first or a second direction; said connecting means comprising a first member being moved by said reversible motor output shaft and a second member pivotally mounted on said operating handle and positioned to be removably engaged by said first member for a portion of its rotation, said first member constructed to removably engage said second member to move said operating handle to said first



position responsive to rotation of said reversible motor in a first direction and to move said operating handle to said second position responsive to rotation of said reversible motor in said second direction, said second member having biasing means of sufficient rigidity to drive said operating handle against said maintaining means and from said first to said second position and from said second to said first position, said biasing means of said second member having sufficient flexibility to flex when said operating handle is moved into said first or second position and allow said first member to disengage said second member upon further rotation of said first member.

2,864,913
MOTOR OPERATED CIRCUIT BREAKER
Frederick G. Schmidt, Haverford, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application June 23, 1955, Serial No. 517,594
13 Claims. (Cl. 200—92)



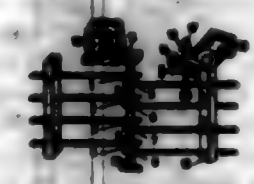
1. A mechanism for operating a circuit breaker having an operating handle which is movable between a first and a second position, said mechanism comprising a reversible motor and a connecting means, said connecting means being constructed to provide a force transmitting connection between said reversible motor and said operating handle for motion of said operating handle between said first and second positions, said connecting means being constructed to move said operating handle toward said first position in response to rotation of said reversible motor in a first direction and to thereafter provide a non force transmitting connection between said reversible motor and said operating handle and to move said operating handle toward said second position in

2,864,917
SHORT-TIME DELAY FUSE
Edward V. Sundt, Wilmette, Ill.

circuit interruptions, means for supporting and maintaining said plates in an interleaved, spaced-apart rela-

response to rotation of said reversible motor in a second direction and to thereafter provide a non force transmitting connection between said reversible motor and said operating handle for indefinitely continued rotation of said reversible motor in said second direction, said connection between said reversible motor and said operating handle being constructed to be removable to allow manual operation of said operating handle.

2,864,913
RELAY CONTACT ARRANGEMENT AND OPERATION
Walter Schmitz, Frankfurt am Main, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Application February 28, 1955, Serial No. 491,893
Claims priority, application Germany April 9, 1954
7 Claims. (Cl. 200—104)

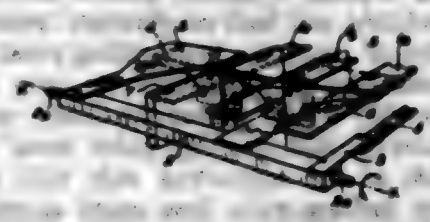


1. A relay having a contact assembly comprising a plurality of circuit-controlling springs including respectively laterally relatively stationary and laterally relatively movable springs, each spring carrying at least one contact point for electrical contact-making engagement with a similar contact point carried by an adjacent spring, insulating members respectively disposed between springs controlling different circuits, said contact points and said insulating members extending along a common axis, means for applying a force which is operative in the direction of and applied along said common axis to produce contact pressure which is propagated through said insulating members along said axis from contact point to contact point included in said assembly, and means for laterally displacing said relatively movable springs with respect to said relatively stationary springs in a direction extending perpendicular to the direction of said force.

2,864,914
ELECTRIC CIRCUIT BREAKER
Wallace A. Coburn, Brandon, Manitoba, Canada, assignor to C. T. Electrical Controls Limited, Brandon, Manitoba, Canada
Application March 15, 1955, Serial No. 494,343
Claims priority, application Canada January 27, 1955
13 Claims. (Cl. 200—116)

1. An electric circuit breaker having a pair of fixed contacts, a pair of ganged contacts movable into and out of contact each with one of said fixed contacts whereby to make and break a pair of independent electric circuits, a totalizing bar, a pair of main bimetallic elements each arranged to be heated by the current in one of said circuits and each acting on one end of said totalizing bar, a latch mechanism for tripping the movable contacts, arranged for actuation by movement of a part of said bar intermediate its ends, and auxiliary bimetallic means arranged in the path of transmission of movement from said main bimetallic elements to said latch mechanism, said auxiliary bimetallic means being arranged so as to compensate for deflection of the main bimetallic elements due to ambient temperature fluctuations.

2,864,915
MONITORING DEVICE FOR POLYPHASE POWER SUPPLY SYSTEMS
Emile A. Bourdeau, Nanterre, France, assignor to La Telemecanique Electrique (Societe Anonyme), Nanterre, France, a company of France
Application April 21, 1955, Serial No. 729,705
Claims priority, application France May 3, 1957
8 Claims. (Cl. 200—116)



1. In a polyphase power system monitoring device of the type described, at least a pair of coplanar, parallel spaced bimetal strips adapted to flex out of their common plane in response to current flow in related phases of the system, at least one platelike element positioned in a plane normal to said common plane and transverse to said strips, said element having opposite side notches embracing adjacent side edges of the respective strips, side arms projecting from opposite sides of said element beyond said notches and lying outside said common plane, guide means constraining said element to movement in said normal plane, and means displaceable for controlling current in said system including actuator portions actuable by said side arms, whereby equal flexing of said strips will bodily displace said element, while differential flexing of said strips will tilt said element in said normal plane, to actuate said actuator portions for displacing said control means.

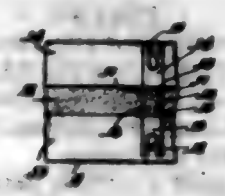
2,864,916
BLADE TYPE CARTRIDGE FUSE
Gerald A. Barrett, Burlington, Ontario, and Roy A. Patterson, Thistletown, Ontario, Canada, assignors to Canadian General Electric Company, Limited, Toronto, Ontario, Canada, a corporation of Canada
Application April 2, 1958, Serial No. 726,927
Claims priority, application Canada July 23, 1957
7 Claims. (Cl. 200—132)

1. A cartridge fuse construction having a cartridge which includes at each end thereof a pair of oppositely disposed apertures in its wall; a pin disposed in said apertures; a ferrule closing off the end of said cartridge, said ferrule having a flange overlying the end of said cartridge and the ends of said pin and an indentation in said flange cooperating with an end of said pin to maintain said cartridge, pin and ferrule in assembled relationship; yieldable hollow blade type contact means secured at one end thereof to said pin and projecting through the ferrule from the end of said cartridge; and a fusible link inside said cartridge connected between said contact means at one end of the cartridge and contact means at the other end of the cartridge.

2,864,923
EXCHANGEABLE CONTACT ELEMENT FOR DISCONNECT SWITCHES AND THE LIKE

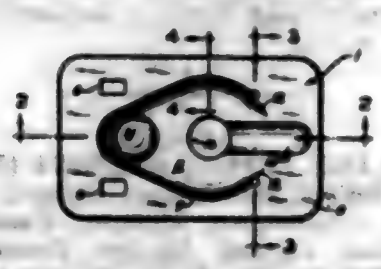
spring clutch means being arranged to transmit unlimited torque to said driven member when said driving member is moving in the opposite direction

2,864,917
SHORT-TIME DELAY FUSE
Edward V. Sundt, Wilmette, Ill.
Application December 23, 1954, Serial No. 477,300
7 Claims. (Cl. 200—135)



1. A time delay fuse for protecting an electric circuit comprising, an elongated flat supporting strip formed of thermosetting organic synthetic plastic material having electrical insulating and high temperature resistant characteristics, a film of relatively low melting point fuse metal carried by one side of the supporting strip in intimate contact therewith, a pair of longitudinally spaced apart films of relatively high melting point metal carried by the same side of the supporting strip with the film of relatively low melting point fuse metal extending therebetween and in series electrical contact therewith, and means including electrical terminals connected to the pair of films of relatively high melting point metal for connecting the same into the electric circuit to be protected, an overload in the electric circuit causing the film of relatively low melting point fuse metal to heat to the melting point thereof for breaking the electric circuit and the heating rate thereof being delayed by the intimate contact between it and the supporting strip.

2,864,918
THERMOSTAT
Henry David Epstein, Boston, Mass., assignor to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application May 20, 1957, Serial No. 660,270
14 Claims. (Cl. 200—138)

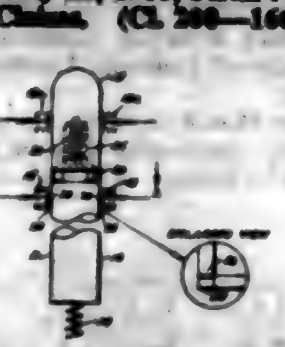


1. A thermostat comprising an integral bimetallic sheet, said sheet having a face including means adapted to receive a fastener and having a marginal flange adapted to stiffen said face against any substantial distortion in response to temperature, said sheet having a tongue portion relieved from said face within the flange but having an integral connecting portion therewith at one of the ends of the tongue portion, said tongue portion having a nondevelopable form adapted to produce snap action in response to temperature, and a contact at the other end of said tongue portion, whereby said tongue portion and contact may move with snap action relative to said stiffened face in response to a predetermined temperature.

2,864,919
CERAMIC ARCING PLATE MATERIAL
Allen E. Stringfellow, Haddonfield, N. J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application May 11, 1956, Serial No. 587,633
3 Claims. (Cl. 200—144)

1. In a circuit interrupter arc chute, a plurality of ceramic arcing plates having a low coefficient of thermal expansion and high heat shock resistance after repeated circuit interruptions, means for supporting and maintaining said plates in an interleaved, spaced-apart relationship so that an arc must follow an elongated path to pass through a stack of said plates, said plates being composed of a ceramic material consisting essentially of 5 to 13 percent MgO, 37 to 57 percent Al_2O_3, and 38 to 50 percent SiO_2, and containing more than 50 percent cordierite crystals.

2,864,920
HIGH SPEED SWITCH MECHANISM
William Hotine, Bayville, N. Y., assignor of one-third to George Trad, Asbury Park, N. J.
Application October 20, 1954, Serial No. 463,386
12 Claims. (Cl. 200—152)



1. A high speed switch mechanism comprising, a dielectric block having a cavity therein, a globule of mercury received in said cavity, a plurality of electrical contact members having one end thereof within said cavity and the opposite end extending outside of the said block at least one of said contacts forming with the blocks a mercury retaining well therein, a switch actuating means secured to said block to induce a high speed reciprocal motion of the block and contacts, with reference to the globule of mercury, to alternately make and break the electrical contact between certain of the said contact members.

2,864,921
CONTACT FOR INTERRUPTER SWITCH
Herbert C. Graves, Jr., Pittsburgh, Pa., assignor to Gibson Electric Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application July 18, 1955, Serial No. 524,977
3 Claims. (Cl. 200—166)

1. An interrupter switch comprising a copper rod having an extension of organic insulating material, means for imparting in reciprocal fashion an axial motion to the said conductive and non-conductive rod, contact means spring biased radially against the outer surface of the said rod and annular contact means positioned between the copper and insulating portions of the said rod, the said annular contact means comprising a pressed and sintered refractory material impregnated with silver and having a silver-coated serrated face, said face being clamped in contact with the copper portion of the rod thereby forming a silver-to-copper joint, the cavities between the serrations being partially filled with silver, the amount of said silver therein being limited so that it does not extend above the plane defined by the top of the said serrated surface.

2,864,926
ELECTRICAL COMPONENT AND METHOD OF MAKING SAME

parent bodies, and an interlayer of a transparent resilient material interposed between said bodies, one of said

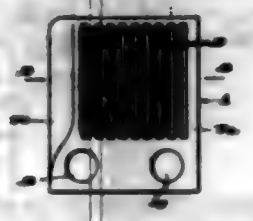
from said main conductive elements to said latch mecha- other end of the cartridge.

2,864,922

EXCHANGEABLE CONTACT ELEMENT FOR DISCONNECT SWITCHES AND THE LIKE

Fritz Kull, Wettingen, Ernst Mosa, Baden, and Walter Steinemann, Wettingen, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Application September 20, 1955, Serial No. 535,347
Claims priority, application Switzerland May 11, 1954
2 Claims. (Cl. 200—166)



1. In a disconnect switch comprising a pair of spaced parallel stationary contact members and a removable contact member located at the outer end of a movable switch blade member arranged to be slidably moved into and out of the space between said stationary contact members so as to engage and disengage the latter respectively, the improvement wherein each of the opposite contacting faces of said removable contact member is provided with a plurality of lubricant-filled grooves, each of the grooves having a plane bottom surface parallel to the contact faces of the contact member, perpendicular side wall portions adjacent the groove bottom extending approximately one-half the height of the groove, and outwardly divergent side wall portions at the upper half of the groove.

2,864,923

ELECTRIC RELAY

Charles A. Mathews, Springfield, Pa., assignor to General Electric Company, a corporation of New York

Application May 17, 1957, Serial No. 659,797
5 Claims. (Cl. 200—166)

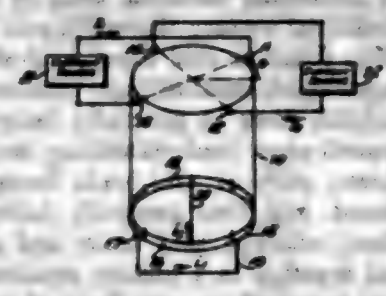
1. A relay comprising: a stationary contact; a cooperating movable contact; a driven member providing a mounting for said movable contact, said driven member being movable in a predetermined direction to carry said movable contact into engagement with said stationary contact; a driving member movable in opposite directions for providing a source of torque; and spring clutch means including at least one resilient finger-like element interconnecting said driven and driving members in a manner to transmit only a limited amount of torque to said driven member whenever said movable and stationary contacts are engaged and said driving member is moving in a direction corresponding to said predetermined direction, said spring clutch means being arranged to transmit unlimited torque to said driven member when said driving member is moving in the opposite direction.

2,864,924

ELECTROMECHANICAL RESOLVER

Arthur Mayer, Bronx, N. Y., assignor to Reeves Instrument Corporation, New York, N. Y., a corporation of New York

Application July 18, 1955, Serial No. 522,680
34 Claims. (Cl. 201—48)



1. A resolver comprising a cylindrical surface of resistive material, means for establishing an electric current field in said surface, said means including at least one brush contacting the resistive surface and being angularly movable with respect thereto, and means for determining the configuration of the electric current field along equipotential lines on said surface, said equipotential lines being spaced at a distance from said brush.

2,864,925

ELECTRICAL CORROSION PROBE

Lynn E. Ellison, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Application September 24, 1956, Serial No. 611,518
13 Claims. (Cl. 201—63)

1. A corrosion test probe comprising an outer annular externally threaded plug having a shouldered aperture therethrough, an annular gasket against said shoulder, a base member within and spaced from said plug, said base member having an annular peripheral shoulder and two apertures through the body thereof, a second annular gasket within said plug, said first gasket sealing one side of said peripheral shoulder and said second gasket sealing the other side thereof, a packing ring threadably engaging said plug at a point removed from said shoulder therein, said packing ring having a sealing surface against said second gasket, an elongated circuitous corrosion test element having spaced adjacent legs mounted within said two apertures of said base member, said test element comprising two test specimens of substantially the same resistivity and composed of the metallic material of construction for which the rate of corrosion is to be determined, one of said test specimens being tubular and the other being mounted within the first in insulated spaced relationship from the sides of the first test specimen, one common leg of said test specimens being joined together and to the wall of its associated aperture of said base, the other common leg being mounted within its associated aperture in pressure-sealed and insulated relationship by means of opposing packing nuts threadably engaged with said aperture and holding a third annular gasket against said leg, and electrical leads extending from said juncture and the spaced terminal of each of said test specimen forming said common leg.

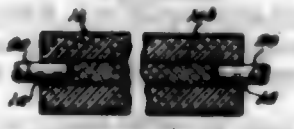
2,864,930

IRON

Vincent H. Hoffa, Mary G. Hoffa, and Robert Gail Hoffa,

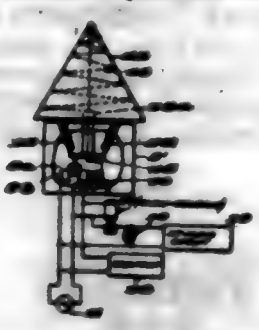
of the tube and thereafter decreasing progressively toward the other end of the tube, a jacket of thermal in-

2,864,926
ELECTRICAL COMPONENT AND METHOD OF MAKING SAME
Nathan Pritikin, Chicago, Ill.
Application October 19, 1954, Serial No. 463,303
6 Claims. (Cl. 201—73)



1. An electrical component comprising a pair of preformed sheets of insulating material, each of said sheets having on one principal surface thereof a pair of spaced-apart metallic films fused to said sheet, said sheets being arranged in spaced-apart, face-to-face relationship with said pairs of metallic films in generally facing relationship, a pair of spaced-apart leads extending into the space between said sheets, each of said leads being joined in metal-to-metal bond with two generally facing ones of said metallic films, whereby said leads and said sheets are firmly bonded together in a unitary structure, and an electrical element arranged on one face of one of said sheets and electrically connected to said leads.

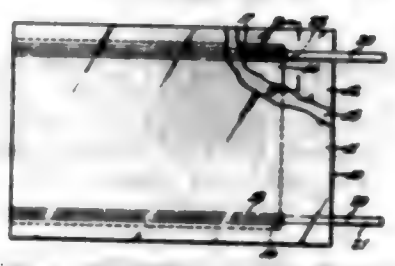
2,864,927
AUTOMATIC DE-ICING SYSTEM
Albert C. Veldhuis, West Chester, Pa., assignor to Wind Turbine Company, a corporation of Pennsylvania
Original application September 29, 1953, Serial No. 383,112. Divided and this application December 5, 1955, Serial No. 550,991
2 Claims. (Cl. 219—19)



2. An icing condition indicator comprising an ice-collector element mounted to move from an upper position to a lower position under the weight of ice collected thereon, biasing means counterbalancing the weight of said collector element and normally holding said collector element in its upper position, said collector element comprising a member presenting a conical ice-collecting surface formed symmetrically about a vertical axis and presenting uniform wind-resistance and ice-collecting capacity in all directions about said axis, heating means carried by said collector element to melt ice therefrom and comprising an electrical resistance distributed over the entire ice-collecting area of said collector, a source of electric current for energizing said resistive heating means, and switch means controlled by said collector element in its lower position for connecting said source to said heating means, whereby said collector element oscillates periodically between said upper and lower positions in response to continued ice-forming conditions.

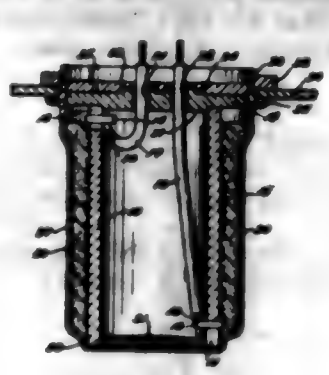
2,864,928
ELECTRICALLY CONDUCTIVE OPTICAL ARTICLE
Vance P. Dunford, Burbank, Calif., assignor to The Sierracin Corporation, Burbank, Calif., a corporation of California
Application January 18, 1957, Serial No. 635,048
4 Claims. (Cl. 219—19)

1. In an electrically conductive optical article, the combination of a laminate comprising a pair of transparent bodies, and an interlayer of a transparent resilient material interposed between said bodies, one of said bodies having a transparent electrically conductive coating on the inner surface thereof; and electrical contact means for said coating, said means comprising a pair of sets of electrical contact elements, each set including a socket member embedded in said interlayer in electrical contact with said coating, and a plug member releasably



engageable with each of said socket members, said socket members extending at least to one exterior portion of said laminate, one end of each of said plug members extending outwardly from said laminate, the resiliency of said interlayer material being sufficient to maintain said plug members in engaged relation with said socket members, but permitting withdrawal of said plug members upon the imposition of relative sliding forces between said plug members and said socket members.

2,864,929
HEATER
Russell L. Schwing, Akron, Ohio, assignor to Thermal Manufacturing Company, Akron, Ohio, a corporation of Ohio
Application March 14, 1957, Serial No. 645,947
3 Claims. (Cl. 219—19)

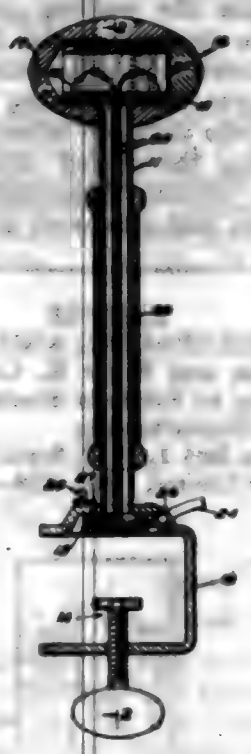


1. A heater for an appliance, said heater comprising a cylindrical tubular core of ceramic material having axial notches in its opposite ends, an anchor clip engaged in each notch, a resistance wire element extending helically about said core from one anchor clip to the other in open spaced coils, said element being welded to said clips, a disc of insulating material of larger diameter than the tubular core, said disc being mounted over one end of the core, lead wires connected to said anchor clips and extending through openings in the disc, a cup-like case of aluminum enclosing said tubular core and said disc, a cylindrical body of solidified magnesium phosphate filling the space between the case and the core and providing a solid enclosure of insulating material surrounding the resistance wire element, said body of magnesium phosphate also forming a cover layer extending across the bore of the inner end of said core, said case having a reduced diameter portion at its closed end engaging the inner end of the core to center it, said disc having a shouldered portion engaging with the other end of the core to center it, and sealing means between the disc and the case and sealing the lead wires in the openings in said disc.

mentioned walls having apertures and said housing being provided with sockets registering with said apertures, the

irregular shaped consumable electrode and a workpiece, feeding the electrode toward the workpiece to maintain

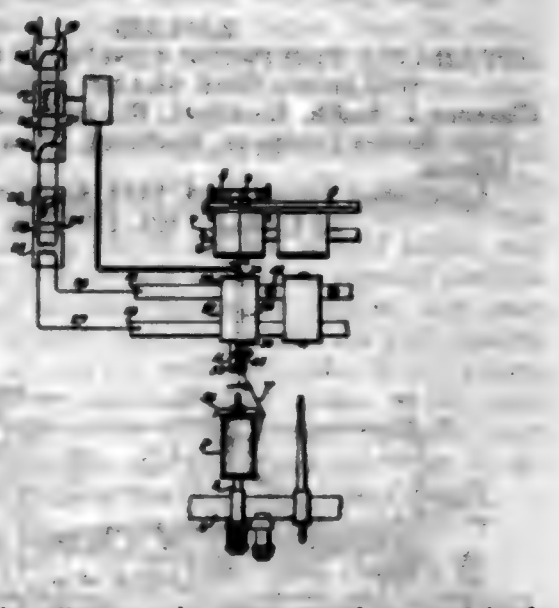
2,864,950
IRON
Vincent H. Ulin, Max G. Herron, and Robert Gail Herron, Oakland, Calif.
Application October 18, 1954, Serial No. 462,987
1 Claim. (Cl. 219—21)



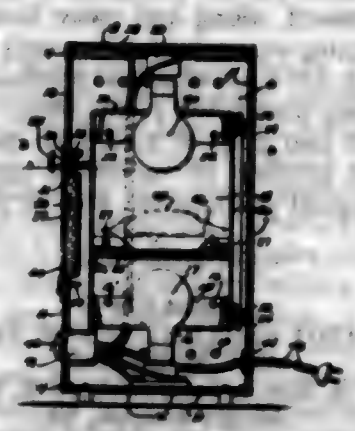
An improved iron comprising a hollow symmetrical ovate head having a removable end plug press fit into said head and formed of a material of substantial thickness and having good heat conductivity, a single heating coil disposed within said head in axial alignment with the longitudinal axis of said head and in insulated relation thereto, means for securing said coil within said head for removal upon withdrawal of said removable end, said means comprising portions of said head and plug respectively engaging opposed end portions of said coil for positioning and supporting said coil within said head, said coil having a plurality of turns of wire wound about the same for substantially the entire length thereof, a rigid elongated tube threadly affixed to said head substantially medially of the ends thereof and extending therefrom with electrical leads therethrough connected to said heating coil, an insulated covering over at least a portion of said tube, a base plate having clamping means for mounting thereof and secured to the opposite end of said tube from said head, and an electrical junction box mounted on said base plate in engagement with said electrical leads for connecting same to an external power source and including electric current control means for controlling the temperature of said head.

2,864,931
HEATING DEVICE FOR USE IN PROCESSING TEXTILE YARNS
Nicholas J. Stoddard, Philadelphia, and Warren A. Seem, Gwynedd, Pa., assignors to Universal Winding Company, Cranston, R. I., a corporation of Massachusetts
Original application January 4, 1954, Serial No. 401,952, now Patent No. 2,903,165, dated August 28, 1957. Divided and this application April 25, 1955, Serial No. 503,672
5 Claims. (Cl. 219—19)

1. An electric heating device, for use in processing thermoplastic yarn comprising a thin-walled tube of small bore defining an elongated restricted heating zone through which the yarn is continually passed, a coil of resistance wire surrounding the tube substantially throughout the length thereof, the pitch of the coil turns increasing progressively from one end of the tube to the midpoint of the tube and thereafter decreasing progressively toward the other end of the tube, a jacket of thermal insulating material enclosing said tube, a protective shell surrounding said jacket, cover members closing the ends of said protective shell, disks of thermal insulation disposed interiorly adjacent said cover members, and bushings of wear resisting material mounted in said disks of thermal insulation and fitting over the ends of the tube, said bushings having stop flanges in engagement with the inner faces of said disks.



2,864,932
INFRARED COOKING OVEN
Walter O. Forrer, Milwaukee, Wis.
Application August 19, 1954, Serial No. 450,843
9 Claims. (Cl. 219—35)



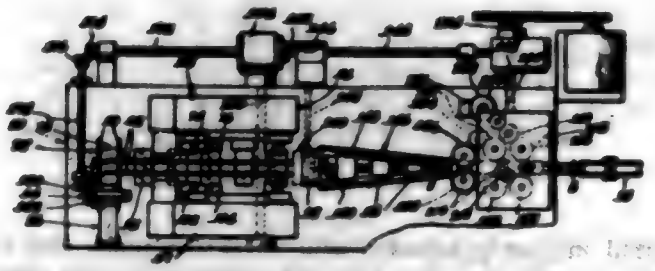
7. An infra-red oven comprising the combination with a Pyrex glass shelf, of upper and lower infra-red bulbs spaced above and below the shelf, the shelf being closer to the lower bulb than to the upper, shelf-supporting means laterally offset from said bulbs and comprising a housing having a door affording access to the shelf at a point between the laterally spaced supporting means therefor and having side and rear walls of high infra-red reflectivity, an external shell spaced from said shelf-supporting housing and provided with upper and lower openings for air circulation, said housing being provided with corresponding upper and lower openings for accommodating free air movement about said means and shelf, the combined effect of the transparency of said shelf to infra-red radiation and the cooling of said shelf by the air being such as to be adapted to maintain said shelf at a temperature below that which would scorch material placed on the shelf, said housing comprising upper and lower and side and rear pan-shaped walls in unitary assembly, the side and rear pan-shaped walls having outwardly directed flanges and the upper and lower pan-shaped walls having inwardly directed flanges, the last

ends simultaneously from the workpiece to draw arcs between the welding ends and the workpiece, and after

longitudinal axis parallel to each other but transverse to said strip, said strip being of width less than the length

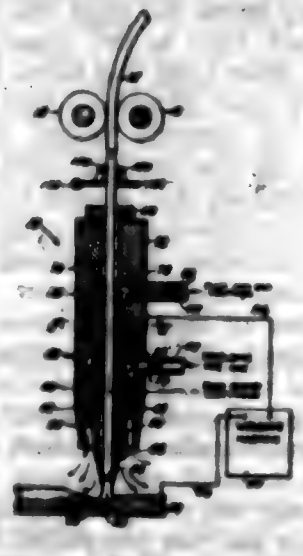
mentioned walls having apertures and said housing being provided with sockets registering with said apertures, the said infra-red bulbs being mounted in the said sockets and projecting through the apertures to the interior of the housing.

2,864,933
APPARATUS FOR PRODUCING CAN BODIES AND WELDING SIDE SEAMS THEREOF
Clarence J. Smith, Rockford, Ill., assignor to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois
Application February 19, 1957, Serial No. 641,210
22 Claims. (Cl. 219—64)



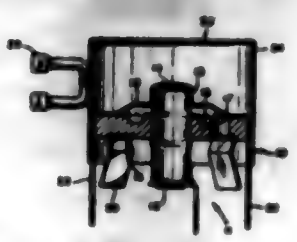
1. An apparatus for forming can bodies or the like from successive blanks and for welding side seams of the can bodies, comprising means for continuously advancing successive blanks along a predetermined path of travel, means adjacent said path of travel and continuously movable around elongated endless path means successively toward, along and away from said path of travel for engaging successive continuously moving blanks and positioning side seam marginal portions of each blank in predetermined juxtaposed relationship, and means disposed adjacent said path of travel for welding the side seam marginal portions of successive blanks when said side seam marginal portions are held in juxtaposed relationship.

2,864,934
METHOD AND APPARATUS FOR FLUID FLUX ARC WELDING
Arthur A. Bernard and Richard A. Bernard, Chicago Heights, Ill.
Application September 26, 1957, Serial No. 685,343
12 Claims. (Cl. 219—74)



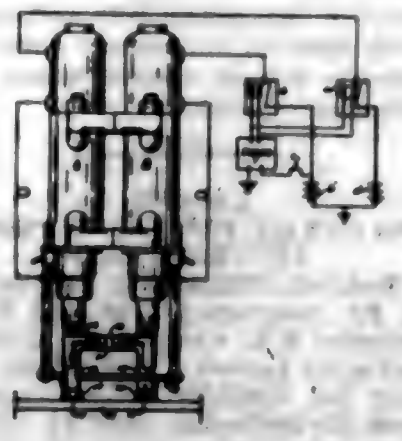
1. An arc welding method including the steps of establishing an electric welding arc between the end of a bare irregular shaped consumable electrode and a workpiece, feeding the electrode toward the workpiece to maintain the arc, charging the electrode with welding current as it is fed through a welding current contact tube which is the head portion of a welding torch, coating a substantial portion of the electrode surface with a fluid form of welding flux inside the welding current contact tube through which the electrode is also fed, and using sufficient welding current density to produce a jet type arc with sufficient force for producing an evacuated area around the tip of the electrode which is greater in cross-sectional area than the overall area of the fluid flux coated electrode, whereby substantially all of the fluid flux is sucked into said evacuated area.

2,864,935
APPARATUS FOR SPACING AND UNITING PARTS
Alfred D. Johnson and Floyd K. Collins, Seneca Falls, N. Y., assignors to Sylvania Electric Products Inc., a corporation of Massachusetts
Application July 1, 1957, Serial No. 669,311
14 Claims. (Cl. 219—78)



1. Apparatus for automatically positioning two parts of an electron gun with respect to each other comprising means for holding said parts, a positioner engaged by one of said parts to restrain it against motion, means for engaging the second part and moving it with respect to the first part, means for sensing the relative displacement between said parts, and means under control of the sensing means for arresting the motion of said moving means.

2,864,936
METHOD OF WELDING STUD ASSEMBLY
Hugh M. Eaton, Jr., Elyria, Ohio, assignor to Gregory Industries, Inc.
Original application January 29, 1954, Serial No. 407,118, now Patent No. 2,788,434, dated April 9, 1957. Divided and this application July 9, 1956, Serial No. 596,704
2 Claims. (Cl. 219—99)



1. The method of welding an assembly having at least two welding ends electrically isolated from each other and mechanically joined together, said method comprising the steps of initiating flow of several welding currents, one for each welding end simultaneously through all of the welding ends and a workpiece to which the ends are to be welded with each current flowing independently of any other current, lifting all of the welding

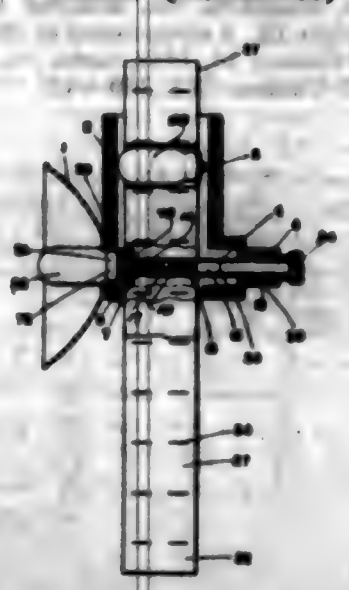
in a railway signalling interlocking plant wherein the for controlling the energization of said motor and for routes are composed of a plurality of discrete route selectively tuning said amplifier circuit to one of a plu-

ends simultaneously from the workpiece to draw arcs between the welding ends and the workpiece, and after a definite duration of said arcs simultaneously breaking the flow of all of said welding currents through all of the welding ends and plunging all of the welding ends simultaneously towards the workpiece to secure the assembly to the workpiece.

2,864,937
AXLE HOUSING STRAIGHTENING
John F. Randall, Detroit, and Jules L. Crochet, Birmingham, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application November 16, 1956, Serial No. 622,808
1 Claim. (Cl. 219—162)

The process of permanently altering the shape of a rear axle housing comprising applying a pair of closely spaced electrodes to the axle housing at a location intermediate an end and the center of the housing, said electrodes delineating a small area on the surface of one side only of the axle housing, supporting the axle housing against displacement by the electrodes, forcing the electrodes into electrical contact with the axle housing, energizing the electrodes from a low voltage, high current source, causing a localized flow of electric current by conduction from one electrode to the other through the delineated area of the axle housing, said electric current being sufficiently intense and flowing for sufficient time to locally heat the axle housing in said delineated area on one side only of the axle housing until softening and permanent deformation of the heated area occurs, and then cooling the heated area.

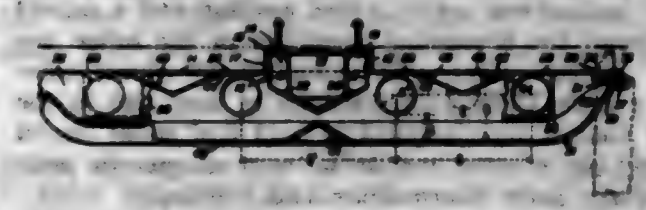
2,864,938
REPEATING PHOTOFLASH GUN
Robert E. Shaw, Beverly, Frank H. Walker, Salem, and John H. Quinn, Jr., South Hamilton, Mass., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application March 23, 1954, Serial No. 418,172
3 Claims. (Cl. 240—37)



1. A repeating photoflash gun for use with a series of photoflash lamps detachably carried by a strip with their

longitudinal axis parallel to each other but transverse to said strip, said strip being of width less than the length of a lamp, each of said lamps having a contact base at one end, said gun comprising a hollow chamber for receiving a lamp, said chamber having oppositely disposed longitudinal openings in register with each other in its walls, one of said openings being longer than the length of the lamp to permit entry of the lamps and strip with the lamp parallel to the axis of said chamber, the other opening in said chamber being long enough to permit exit of the strip but short enough to prevent exit of the lamp, a spring holder for said contact base and movable in said hollow chamber, a loading rod attached to said holder and extending out of one end of said holder and movable therein to move said lamp to an exposed position at the other end of said chamber, a resilient stop near said other end of said container to hold the bulb against the movement of said rod until the holder firmly grasps said base and then to allow forward motion of the lamp in said holder, said holder also serving to hold the lamp against movement with said rod when the latter is retracted, thereby ejecting the bulb from said holder.

2,864,939
SHALLOW LUMINOUS FLUORESCENT LIGHTING FIXTURE
Marcus Bedian, Los Angeles, and William B. Rosenfield, Pacoima, Calif., assignors to Sunbeam Lighting Company, Los Angeles, Calif.
Application April 22, 1957, Serial No. 654,367
5 Claims. (Cl. 240—51.11)



1. A ceiling fluorescent light fixture comprising an elongated rectangular ballast housing having a depending V-shaped bottom member with outer reflecting surfaces, the top of said housing being adapted for mounting against the ceiling; an elongated plane top plate for said fixture, said top plate having a central elongated opening through which said ballast housing extends and to which said top plate is attached for holding said top plate parallel to but spaced from the ceiling; a dished translucent diffuser having a substantially plane face forming an enclosing housing for tubular fluorescent lamps, the end and side margins of said diffuser tapering upwardly toward the margins of said top plate; means at the side margins of said diffuser for removably attaching said diffuser to the margins of said top plate; means for operatively mounting pairs of elongated fluorescent lamps in spaced-apart relation with the upper surfaces of said tubes closely adjacent the under surface of said top plate, said pairs being disposed on both sides parallel to the reflecting surfaces of said ballast housing bottom; and elongated V-shaped reflector attached to the underside of said top plate and disposed intermediate the two lamps of each pair.

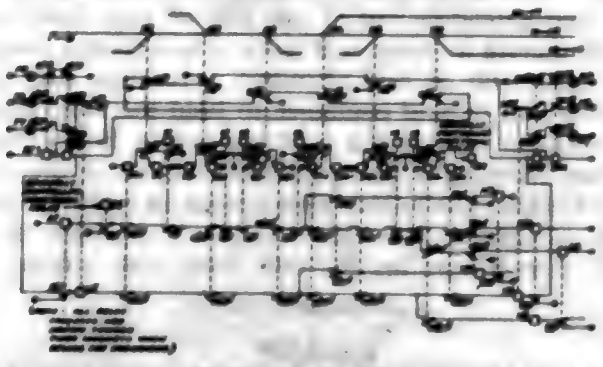
2,864,940
CIRCUIT ARRANGEMENT FOR LIGHT SIGNALS WITH TWO CLEAR POSITIONS IN TRACK ROUTE INTERLOCKING DIAGRAMS
Robert Helmert, Stuttgart, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application March 6, 1956, Serial No. 569,778
Claims priority, application Germany March 9, 1955
3 Claims. (Cl. 246—3)

1. A circuit arrangement in a panel diagram machine for controlling light signals having two permissive aspects

blination, a central station, a relay station, and a plurality

2,864,945
CRYSTAL CONTROLLED TELEVISION TUNER

is a railway signalling interlocking plant wherein the routes are composed of a plurality of discrete route sections, each section insulated from the other, and comprising a plurality of track switches, each capable of having a normal and a reversed position, a plurality of transfer contact sets, each set under control of a different one of said track switches, each contact set having a first closed position when the associated track switch is in a normal position and a second closed position when the associated track switch is in a reversed position, a pair of control relays having individual windings, each relay for controlling different aspects of said signals, a



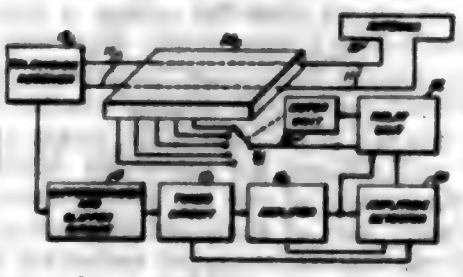
series circuit including the windings of said control relays, a first shunt circuit for preventing operation of a first one of said control relays, said first shunt circuit comprising a series connection among the transfer contact sets of given of said switches and a point intermediate the series connection of both said windings when said transfer contact sets are in a first position and a second shunt circuit for preventing operation of the other one of said control relays, said second shunt circuit comprising a series connection between at least one of the transfer contact sets included in said first shunt circuit when said one transfer contact set is in an opposite position and the point intermediate said windings.

2,864,941

MONITORING APPARATUS

Charles H. Currey, Palatine, and Arthur Charles Lewis Brown, Evanston, Ill., assignors to A. C. Nielsen Company, Chicago, Ill., a corporation of Illinois

Application September 26, 1956, Serial No. 612,124
18 Claims. (Cl. 250—2)



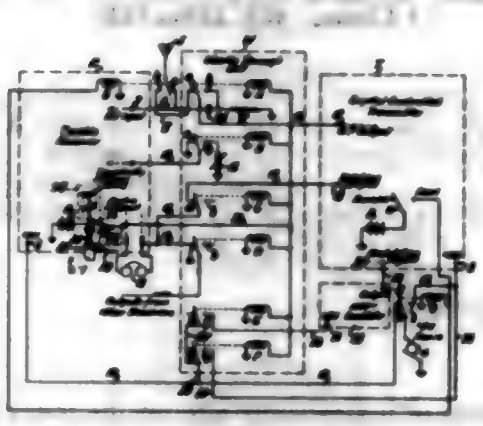
1. Apparatus for monitoring the listening habits of television receiver users, comprising, a receiver attachment, a signal link interconnecting said attachment and said receiver, a frequency responsive amplifier circuit in said attachment, said amplifier circuit being connected to be energized by a signal from said signal link, a plurality of tuned circuits coupled to the input of said receiver, said tuned circuits being respectively tuned to different ones of a plurality of different frequencies corresponding to the carrier frequencies of signals receivable by said receiver, a commutator for selectively connecting the output signal from said amplifier circuit to said tuned circuits, a plurality of diode means connected respectively in each of said tuned circuits for periodically short-circuiting said tuned circuits in response to an oscillation wave supplied thereto from said tuned circuit, motor means for driving said commutator, and relay means responsive to an output signal from said amplifier circuit for controlling the energization of said motor and for selectively tuning said amplifier circuit to one of a plurality of predetermined frequencies, one of said frequencies being an even multiple of the line frequency of said television receiver.

2,864,942

RECEIVER TUNING IN TWO-WAY RADIO

Frederick H. Drake, Boonton, N. J., assignor to Aircraft Radio Corporation, Boonton, N. J., a corporation of New Jersey

Application March 11, 1955, Serial No. 493,687
7 Claims. (Cl. 250—13)



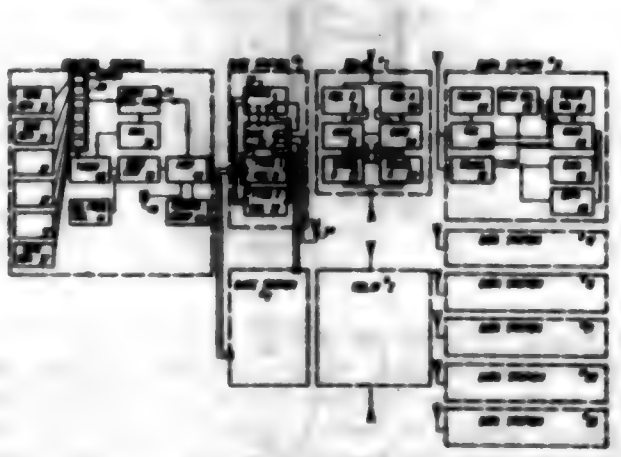
1. The combination with a two-way simplex radio communication system comprising a crystal-controlled transmitter operating on a fixed carrier frequency and a tunable radio receiver having an angularly movable crank on motion-transmitting means extending to the adjustable frequency-determining elements of the receiver; of means supporting said crank for movement between two end positions with respect to said motion-transmitting means, said crank being operative to move said motion-transmitting means angularly in all positions of adjustment of said crank with respect to said motion-transmitting means, tuning-facilitating means operative upon movement of said crank to one of its end positions to impress upon said receiver a transmitter-produced signal for tuning purposes, and spring means normaly retaining said crank in its other end position, thereby to remove said transmitter-produced signal from said receiver.

2,864,943

CENTRAL STATION INTERROGATION VIA RELAYS OF UNATTENDED DATA SATELLITES WHICH ANSWER BACK

Curtis J. Schultz, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application February 24, 1954, Serial No. 412,221
12 Claims. (Cl. 250—15)



1. A system for selectively collecting various items of data from a plurality of remote points including in com-

means mounting said first plate on said main tuning control shaft for rotation therewith to bring different ones

completing an electric circuit including said capacitors with terminals of unlike polarity toward each other to

bination, a central station, a relay station, and a plurality of data stations at said remote points, said central station including radio transmitting means adapted to transmit a carrier wave modulated by a subcarrier wave, means for modulating said subcarrier wave by different tone signals to identify the various data stations, and means for modulating said subcarrier wave by pulses to identify a particular item of data, said relay station including radio receiving and transmitting means adapted to retransmit signals received thereby and a self-contained power source, said radio receiving means at said relay station being normally energized only periodically to conserve said power source and held energized in response to reception of a carrier wave, said data stations each including radio receiving means, radio transmitting means, a self-contained power source, and a plurality of data devices producing signals in accordance with data measured, said radio receiving means at said data stations being normally energized only periodically to conserve said power source thereof and held energized in response to reception of a subcarrier wave modulated by a particular tone signal, and means at said data stations operating when each station is energized and responding to pulse modulation of said subcarrier wave to select a particular data device and applying signals therefrom to said radio transmitting means at said data station, said radio transmitting means at said data station transmitting a carrier wave modulated by signals from said data devices, said relay station receiving carrier waves transmitted by said data stations and transmitting a carrier wave to thereby relay signals from said data stations, and said central station including receiver means for receiving from said relay station carrier waves including signals which originate at said data stations.

2,864,944

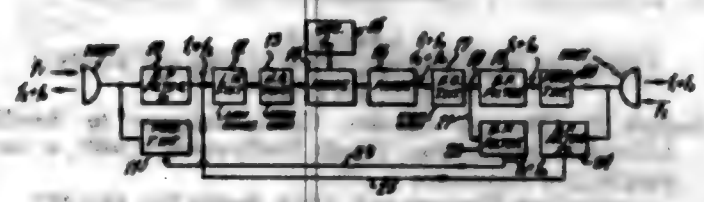
TWO WAY RADIO RELAY SYSTEM INCLUDING TRAVELING WAVE TUBES

Rolf W. Peter, Cranbury, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application May 18, 1954, Serial No. 430,660

The terminal fifteen years of the term of the patent to be granted has been disclaimed

2 Claims. (Cl. 250—15)



1. In a radio relay station for simultaneously amplifying and relaying separate radio frequency signals of different frequencies and carrying different intelligences, means for feeding said signals of different intelligences through a common path including in cascade in the order named, at least one traveling wave tube amplifier circuit, a mixer, and a filter passing the sum frequencies from said mixer; a local oscillator, means for applying the output of said oscillator as heterodyning energy to said mixer, said oscillator having a frequency greater than the width of the frequency band occupied by said signals taken together, whereby said separate signals are heterodyned to signals of frequencies different from each other and not overlapping the frequencies of the original signals, a pair of filters each having an input coupled to the output of said first-named filter and operating to separate said different frequency heterodyned signals, and separate means coupled to the output of each of said last-named filters for relaying said different frequency heterodyned signals to other relay stations.

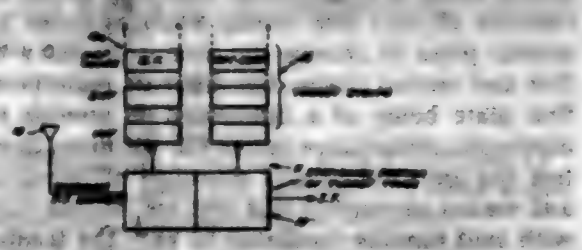
2,864,945

CRYSTAL CONTROLLED TELEVISION TUNER

Richard Bull, South Pasadena, and Robert Eland, Arcadia, Calif., assignors to Standard Coil Products Co., Inc., Los Angeles, Calif., a corporation of Illinois

Application December 14, 1954, Serial No. 475,133

4 Claims. (Cl. 250—20)



1. In a television tuner, an oscillator converter section, said oscillator converter section comprising a multi-element electron tube having a tuned circuit including an inductor electrically coupled between the plate and the grid of said tube, frequency controlling means connected between the grid of said tube and ground, said frequency controlling means comprising a piezo electric crystal, means for operating said piezo electric crystal at a high mechanical overtone, said means comprising an inductance connected in electrical shunt to said crystal, said tuned circuit being proportioned to select the electrical fundamental frequency corresponding to said overtone frequency, and incorporating a fine tuning device connected between the grid and the plate of said tube for varying the tuning of said tuned circuit and an electrical component also connected between the grid and the plate of said tube for limiting the frequency variation produced by operation of said fine tuning device.

2,864,946

FINE TUNING CONTROL SYSTEM FOR TELEVISION RECEIVERS HAVING SAME RANGE ON EACH CHANNEL

John C. Arbenbach, Haddonfield, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application July 16, 1956, Serial No. 597,942

1 Claim. (Cl. 250—20)

A fine tuning control system, for television receivers of the type having tunable signal selection circuits for selecting any one of a plurality of V. H. F. television signals, a local oscillator having a tunable oscillator circuit connected in said receiver providing an oscillator signal for mixing with a selected V. H. F. television signal to convert said selected V. H. F. television signal to a corresponding intermediate frequency signal, uni-control means for tuning said signal selection and oscillator circuits including a front panel channel selector knob mounted on a rotatable main tuning control shaft, and a detent mechanism connected with said main tuning control shaft for providing a plurality of channel selecting stop positions and step-by-step selection of any one of said plurality of television channels; comprising a front panel fine tuning knob mounted on a rotatable fine tuning control shaft, a variable capacitor having first and second relatively movable parallel plates, said first plate comprising a substantially circular conductive disc having a plurality of radially extending notches defining a plurality of different plate portions, means including a resilient spring arm rigidly mounted at one end thereof and supporting said second plate at the other end thereof in registry with one of said plate portions of said first plate,

to said charging circuit means to increase the potential across said capacitance-resistance circuit in response to a ing such a phase shift of each of said current components with respect to the other as to effect linear algebraic addi-

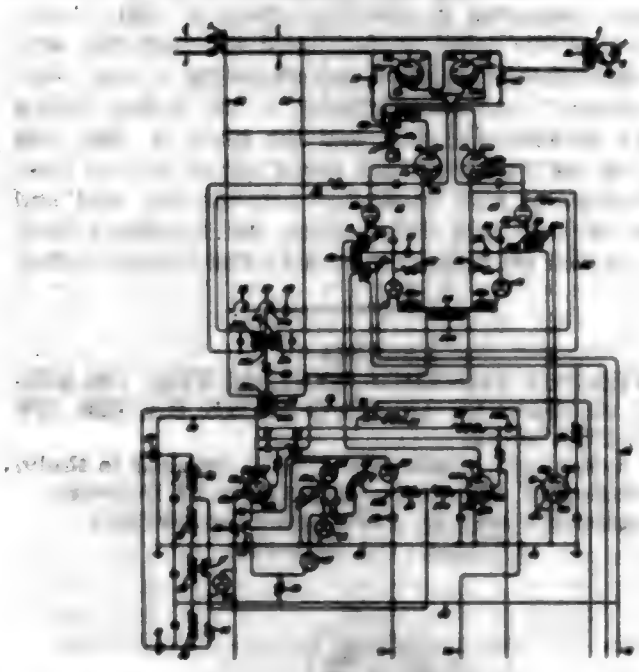
means mounting said first plate on said main tuning control shaft for rotation therewith to bring different ones of said plate portions into registry with said second plate for different stop positions of said main tuning control shaft, cam means mounted on said fine tuning control shaft for rotation therewith, the periphery of said cam means being in engagement with said spring arm whereby rotation of said fine tuning knob operates to move said second plate to change the area of registry between said first and second plates, the different plate portions of said first plate being of a dimension to provide maximum to minimum capacitance ratios for optimum fine tuning control for any one of said plurality of television channels, and means connecting said first and second capacitor plates with said tunable oscillator to vary the frequency thereof with rotation of said fine tuning knob.

2,864,947

ELECTRIC TIMER

Maurice E. Bivens and William B. Hills, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York

Application June 14, 1954, Serial No. 436,588
8 Claims. (Cl. 250—27)



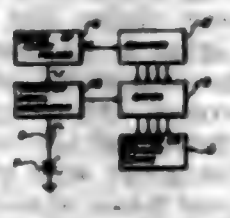
1. Timing apparatus comprising a pair of alternating voltage supply terminals, a first electric valve provided with an anode-cathode circuit supplied from said terminals and with a control electrode, an initiating switch and a second electric valve having an anode-cathode circuit supplied from said terminals and a control electrode connected to be responsive to actuation of said switch for causing said second valve to produce an electrical impulse, a first timing circuit set in operation in response to said impulse for supplying a timing voltage to the control electrode of said first valve to effect a variation in its conductivity enduring for a first predetermined interval of time, and a second timing circuit responsive to initiation of said variation in conductivity for supplying a voltage to the control electrode of said second valve to render said second valve ineffective to exert further control on said first timing circuit during the remainder of said time interval and responsive to the termination of said variation in conductivity for supplying a timing voltage to render said second valve effective to supply a further electrical impulse to said first timing circuit to effect a repeat timing operation a predetermined interval of time after the end of said first interval comprising first and second capacitors, means for supplying simultaneously to said capacitors charging voltages related to the capacitances thereof to charge said capacitors with different quantities of electricity, an adjustable resistor for completing an electric circuit including said capacitors with terminals of unlike polarity toward each other to provide for discharge of one of said capacitors into the other in response to interruption of said charging means, and a connection from the terminal of one of said capacitors to said control electrode of said second valve.

2,864,948

DATA TRANSFER CONTROL CIRCUIT

Glyn A. Neff, Pasadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Application June 18, 1954, Serial No. 437,838
3 Claims. (Cl. 250—27)



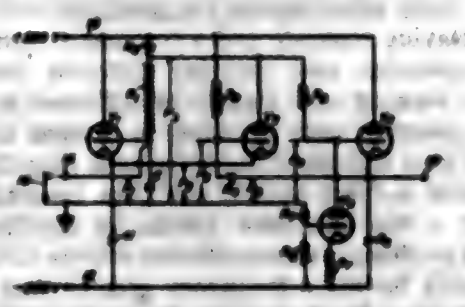
1. A control circuit for use in data processing apparatus, including in combination a first mono-stable circuit having a first condition of operation and a second condition of operation, means placing the first mono-stable circuit in its second condition of operation for a predetermined interval, a second mono-stable circuit having a first condition of operation and a second condition of operation, means placing the second mono-stable circuit in its second condition of operation for a predetermined interval longer than the predetermined interval of the first mono-stable circuit, a comparison circuit coupled to the first mono-stable circuit and the second mono-stable circuit, a third mono-stable circuit coupled to the comparison circuit and having a first condition of operation and a second condition of operation, means placing the third mono-stable circuit in its second condition of operation in response to a signal from the comparison circuit for a predetermined period longer than the predetermined period of the second mono-stable circuit, a differentiating circuit coupled to the third mono-stable circuit, and signal generating means coupled to the differentiating circuit.

2,864,949

CIRCUIT FOR PRODUCING LINEAR SWEEP POTENTIAL

Joseph F. Gleason, Encino, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware

Application November 8, 1954, Serial No. 467,485
8 Claims. (Cl. 250—27)



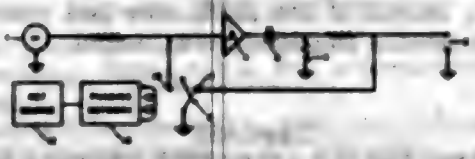
1. Apparatus of the type described comprising: a capacitance-resistance circuit consisting of a condenser and resistance element connected in series; a potential source; switching means; circuit means responsive to actuation of said switching means for connecting said source to said capacitance-resistance circuit to charge said condenser through said resistance element; a high gain amplifier having input terminals and output terminals; means connecting said amplifier output terminals

detect microwave energy in said first wave guide and connected to apply the resulting pulses to said first diode

means for deriving the output from the anode of the fifth tube and applying it to the grid of the sixth electron tube,

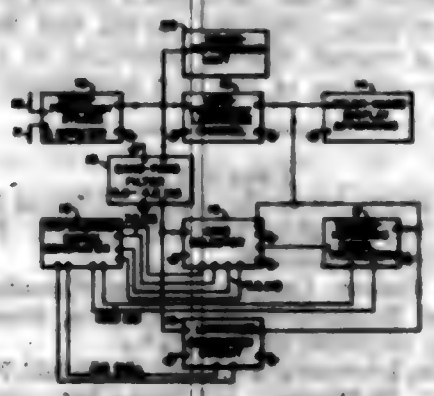
to said charging circuit means to increase the potential across said capacitance-resistance circuit in response to a reduction of potential across said input terminals; a first means for deriving and applying to one input terminal of said amplifier a potential following the potential at one end of said resistance element, and a second means for deriving and applying to the other input terminal a potential following the potential at the other end of said resistance element.

2,864,950
MEANS FOR PHASE DISCRIMINATION OF AN ALTERNATING CURRENT SIGNAL
Henry L. Pursick, New York, N. Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application November 30, 1954, Serial No. 472,121
7 Claims. (Cl. 250—27)



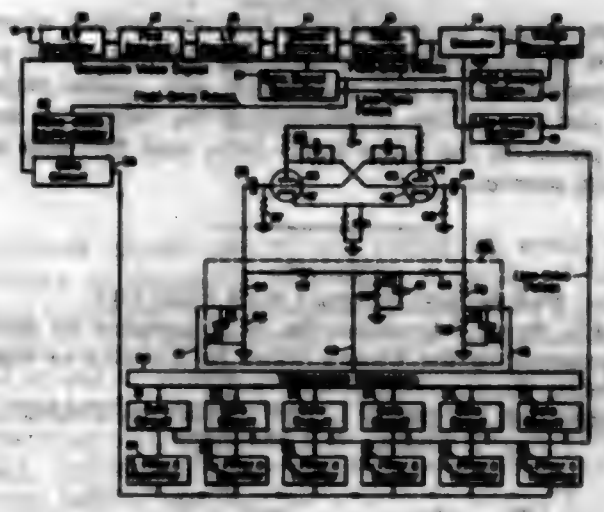
1. A phase discriminating circuit for selecting a desired phase component of an input signal including in combination first means for eliminating a predetermined portion of said input signal to produce a first output signal, means for applying said input signal to said first eliminating means, means comprising a series capacitor for removing the direct current component from said output signal to produce a periodic signal, means for applying the output signal to the removing means, second means for eliminating from the periodic signal the portion of said periodic signal corresponding to the portion of the input signal other than said predetermined portion and means for applying said periodic signal to the second eliminating means to produce an output wave form representative of the desired phase component.

2,864,951
CHROMINANCE-SIGNAL COMPONENT-SELECTION SYSTEM
Bernard D. Loughlin, Lynbrook, N. Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application December 8, 1954, Serial No. 473,916
7 Claims. (Cl. 250—27)



1. In a color-television receiver, a system for selecting one or more chrominance-signal components along predetermined axes of a received chrominance subcarrier signal comprising: circuit means for supplying a chrominance subcarrier signal; phase-selective circuit means coupled to said supply circuit means and having a pair of output circuits for developing in said output circuits phase-selected current components representative of chrominance-signal components derived along a first set of predetermined axes of said subcarrier signal; and circuit means for intercoupling said output circuits for providing such a phase shift of each of said current components with respect to the other as to effect linear algebraic additions of in-phase components jointly representative of chrominance-signal components derived along a second set of predetermined axes of said subcarrier signal to develop one or more augmented current components representative of said chrominance-signal components derived along said second set of predetermined axes of said subcarrier signal.

2,864,952
TRIGGER STEERING CIRCUIT ARRANGEMENT
Walter S. Druz, Bonneville, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application May 29, 1956, Serial No. 588,016
10 Claims. (Cl. 250—27)



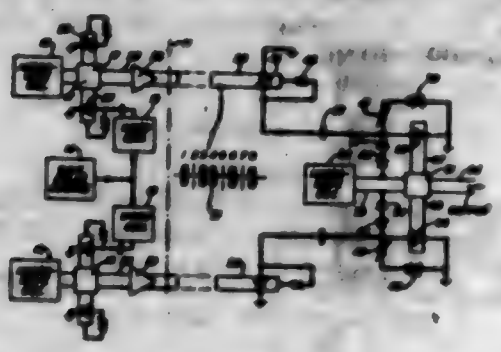
1. A trigger-steering, isolation circuit arrangement for a multi-stable actuating device having a plurality of input circuits each of which responds to an applied pulse for establishing said device in an assigned one of its stable operating conditions, said circuit arrangement comprising: a first signal source for producing pulse signals of a given amplitude; a first load circuit connected across said first source; a second signal source for producing pulse signals having approximately said same given amplitude; a second load circuit connected across said second source; a bilaterally conductive impedance circuit connected between one side of said first load circuit and one side of said second load circuit and provided with an intermediate tap connected to one of said input circuits of said device; and an additional bilaterally conductive impedance circuit connected in parallel with said second load circuit and provided with an intermediate tap connected to another one of said input circuits, whereby pulses applied to said first load circuit from said first source are impressed across said one input circuit with a relatively high amplitude and across said other input circuit with a relatively low amplitude whereas pulses applied to said second load circuit from said second source are impressed across both said one and said other input circuit with said same relatively high amplitude.

2,864,953
MICROWAVE PULSE CIRCUITS
Owen E. De Lange, Ramsey, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application October 31, 1956, Serial No. 619,527
11 Claims. (Cl. 250—27)

1. In an exclusive-Or circuit, a wave guide hybrid junction having two pairs of conjugate arms extending therefrom, first and second diodes located respectively in the arms of one of said pairs, means for supplying microwave energy to one of the arms of said other pair, first and second wave guides, a first detector coupled to

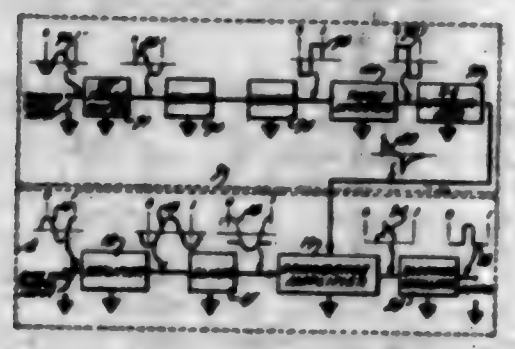
element whereby to reduce said control oscillations toward zero by controlling said variable frequency oscil- primary under control of said grid when energized, a

detect microwave energy in said first wave guide and connected to apply the resulting pulses to said first diode to change its impedance, a second detector coupled to detect microwave energy in said second wave guide and connected to apply the resulting pulses to said second



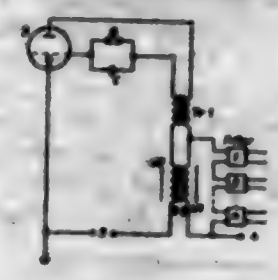
diode to change its impedance, first and second sources of trains of microwave pulses having different pulse patterns coupled to said first and second wave guides respectively, and means for synchronizing the timing of individual pulses in the pulse trains from said first and second pulse sources.

2,864,954
PULSE REGENERATOR CIRCUIT
Edward L. Byrne, Merchantville, N. J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 1, 1957, Serial No. 694,859
1 Claim. (Cl. 250—27)



A pulse regenerator comprising, in combination, first connection means for a source of sine wave digital information; an amplifier circuit including a first electron tube having at least a cathode, an anode, and a control element, means for applying said digital information to the control element of said first tube, means for deriving an output signal from the anode of said first tube; a slicer circuit including a second electron tube with at least a cathode, an anode, and a negatively biased control element, means for applying the output of the first tube to said grid of the second tube for deriving a clipped output from said anode of said second tube; connection means for a source of sine wave timing signals whose frequency is the same as that of the sine wave digital information; a phase shifter including a third electron tube having at least a cathode, an anode, and a control element, means including a phase shifting network for applying said timing input to said control grid of said third tube, means for deriving an output signal from the anode of said third tube; a squarer circuit including a fourth electron tube having at least a cathode, an anode, and a control element, means including a series resistor for applying the output of the third tube to the control element of the fourth tube, means for deriving an output signal from said fourth tube, a second squarer circuit similar to the first including a fifth electron tube, means including a series resistor for applying the output from the first squarer circuit to the control element of said fifth electron tube, a phase inverter including a sixth electron tube having at least a cathode, an anode and a control element, means for deriving the output from the anode of the fifth tube and applying it to the grid of the sixth electron tube, a series resistor and capacitor differentiator circuit coupled to said anode of said sixth tube, means for deriving narrow timing pulses from said resistor of said differentiator circuit; a coincidence amplifier responsive to the simultaneous occurrence of said narrow timing pulses and said clipped pulses of sine wave information to provide control pulses, said coincidence amplifier including a seventh and eighth electron tubes having their cathodes connected together and their anodes connected together, means for applying said clipped output of said second tube to the control element of said seventh tube, means for applying said narrow timing pulses to said grid of said eighth tube, means for deriving said control pulses from said coincidence amplifier, a blocking oscillator including a ninth electron tube with at least a cathode, an anode, and a control element, means for applying said control pulses to the grid of said ninth tube, means for deriving the output of the ninth tube said output being the desired narrow amplified pulse output.

2,864,955
BLOCKING OSCILLATOR FOR PRODUCING A HARMONIC FREQUENCY SPECTRUM OF A HIGH OUTPUT POWER
Kurt Josten, Stuttgart, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application August 15, 1956, Serial No. 604,101
Claims priority, application Germany August 20, 1955
4 Claims. (Cl. 250—36)



1. A blocking oscillator for producing a harmonic frequency spectrum comprising a tube having an anode, cathode and control grid, a first transformer having a primary winding connected in the anode circuit and a secondary winding connected in the grid circuit of said tube to provide the relaxation process, a plurality of filters having their input circuits connected in series in the cathode conductor of said tube, and a second transformer having one winding connected across said series input circuits and a second winding connected in series with the secondary winding of said first transformer.

2,864,956
STABILIZATION SYSTEM FOR TUNABLE OSCILLATOR WITH REFERENCE TO A PAIR OF STABLE OSCILLATORS
David Mark Mahow, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada
Application December 17, 1957, Serial No. 703,327
15 Claims. (Cl. 250—36)

1. A stabilization system for a variable frequency oscillator having an automatic frequency control element, comprising first and second stable oscillators of fixed reference frequencies spaced apart to define an interval, energy combining means for combining the output energies of said oscillators and effective to generate output oscillations including components derived by differences of integer multiples of said input frequencies, selector means for extracting low frequency component control oscillations from said output oscillations, and means applying said control oscillations to said frequency control

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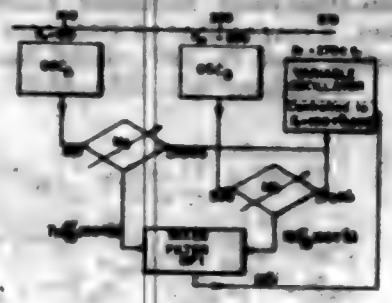
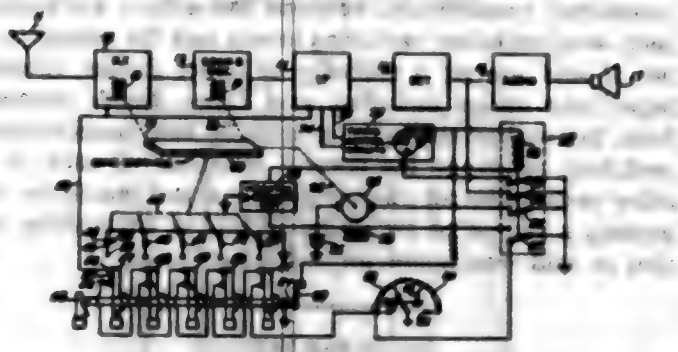
2,864,963

element whereby to reduce said control oscillations toward zero by controlling said variable frequency oscilla-



tor to a frequency of stabilization which differs from a reference frequency by an integer submultiple of said interval.

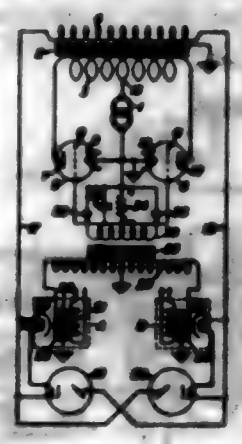
2,864,957
SIGNAL-SEEKING DEVICE
Joseph R. Lucchesini, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application November 10, 1954, Serial No. 468,008
10 Claims. (Cl. 250—40)



1. In a signal-seeking receiver, means for varying the tuning of said receiver to tune in signals having frequencies within a predetermined frequency range, means for stopping said tuning means upon the tuning in of a signal, a circuit which must be closed to permit operation of said stopping means, at least one manually-operable switch comprising contacts which are closed when the switch is not actuated and through which said circuit is normally closed, and said switch also comprising contacts which are open when the switch is not actuated, said switch having a single actuating mechanism for opening the first-named contacts and for closing the last-named contacts, and at least one other switch connectable in said circuit through said last-named contacts and operable by said tuning means to be closed during tuning through a portion of said frequency range, whereby when said first switch is not actuated said stopping means is operable throughout said frequency range, and when said first switch is actuated said stopping means is operable only in said portion of said frequency range.

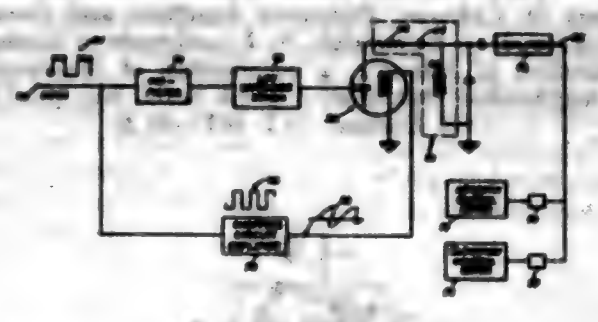
2,864,958
X-RAY APPARATUS
Montford Morrison, Rochester, N. Y.
Application August 13, 1957, Serial No. 677,861
6 Claims. (Cl. 250—94)

6. In an X-ray apparatus including a source of alternating voltage connected to the primary of a step-up transformer having its secondary supplying electrical energy to two X-ray tubes connected in a parallel relation providing both directions of circuit-conductivity load on the transformer, a step-up transformer having a primary and a secondary, a source of alternating voltage, two electron discharge structures each having a control grid and said structures connected between said source and said primary limiting the flow of current from source to primary under control of said grid when energized, a balanced voltage load on said secondary including two X-ray tubes connected in a parallel relation providing both directions of electrical circuit conductivity, a high-voltage-insulated filament transformer for each of said two X-ray tubes, a feed-back circuit receiving energy from a parallel connection with said two X-ray tubes and applying a portion of it to said control grids, and said



feed-back circuit transmitting energy by means of the primary to secondary electrostatic capacity of said filament transformers and including a step-down transformer having a full-wave rectifier in the secondary thereof, the output of which is connected to the control grids of said electron discharge structures, whereby the current flow from said source to said transformer is under feed-back circuit control by the voltage applied to the two X-ray tubes.

2,864,959
TARGET TRACKER
John J. Nastrenore, Fort Washington, N. Y.
Application June 16, 1955, Serial No. 516,053
5 Claims. (Cl. 250—203)
(Granted under Title 35, U. S. Code (1952), sec. 266)

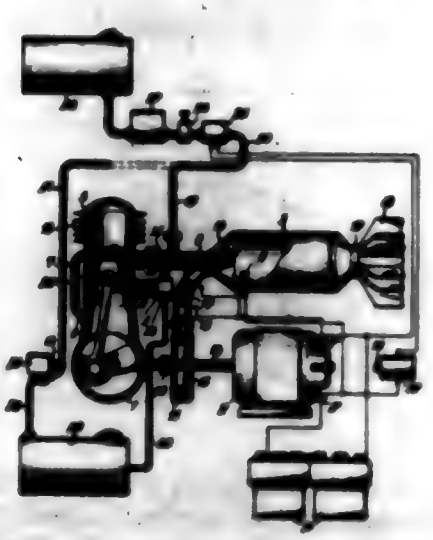


1. A device for tracking intermittent targets comprising, in combination: scanning means for receiving radiation from a target which provides such radiation intermittently and for producing an output signal modulated in accordance with the spatial position of said target; orientation means coupled to move said scanning means; circuit means connected to receive the output signal of said scanning means for converting said output signal into signals capable of driving said orientation means so that said scanning means tracks said target; and memory means connected to said circuit means for providing a signal having the same characteristics as those possessed by the modulation component of the scanning-means output signal immediately prior to any cessation of radiation from said target so that, due to this substitutive signal supplied by said memory means, said scanning means is impelled during the periods in which target radiation is not received to continue along the tracking course it was following immediately prior to the cessation of radiation.

means mounting said units in end-to-end relation including means mounting said stators for individual position

acteristics as said tubular beam and an infinite cross-section with an aperture of the same diameter as the inner

2,864,960
COMBINED SET FOR PRODUCING HEAT AND ELECTRIC ENERGY
Robert von Linde, Grafelfing, near Munich, and Reiner Friedl, Starnberg, Upper Bavaria, Germany, assignors to Wilhelm Beier K.G., Webasto-Werk, Stockdorf, near Munich, Germany
Application January 16, 1956, Serial No. 559,319
Claims priority, application Germany January 18, 1955
14 Claims. (Cl. 290—2)

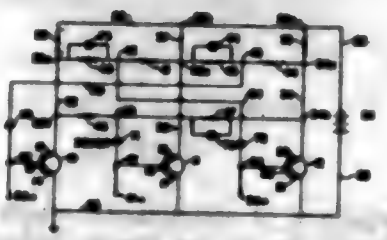


3. A combined set for producing heat and electric energy, comprising an internal combustion engine having an exhaust pipe, an electric generator connected to be driven by the engine, a burner whose feed end is connected to said exhaust pipe, and means for adjusting the amount of fuel fed to the engine in such a way that a substantial part of the fuel fed to the engine is discharged with the exhaust gas, in an unburnt condition, for after-combustion in the burner.

2,864,961
TRANSISTOR ELECTRONIC SWITCH
Robert D. Lohman, Princeton Junction, and Gerald B. Herzog, New Brunswick, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application September 3, 1954, Serial No. 454,176
16 Claims. (Cl. 307—88.5)

14. An electronically controllable signal switching circuit comprising, in combination with signal input and output terminals for said switching circuit, a pair of semiconductor devices of opposite conductivity types each arranged to provide a separate signal translation path between said input and output terminals, control means separate from said input and output terminals and coupled with said pair of devices for effectively biasing one of said pair of devices in a conductive state in response to a control signal and for simultaneously biasing the other of said pair of devices in a nonconductive state, whereby only one of said pair of semiconductor devices is conductive to provide signal translation between said input and said output terminals.

2,864,962
SEMICONDUCTOR APPARATUS
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application April 26, 1957, Serial No. 655,301
9 Claims. (Cl. 307—88.5)



1. Multiposition semiconductor switching apparatus comprising: at least three semiconductor switching means, each of said semiconductor means having a plurality of electrodes including an output electrode, a control electrode and a further electrode; a source of direct current potential having a first and a second terminal; means connecting the further electrode of each of the semiconductor switching means to the first terminal of said source; load means for each of the semiconductor switching means connected, respectively, between the output electrode of each semiconductor switching means and the second terminal of said source; a plurality of Zener diodes; feedback impedance means including said Zener diodes connected from the output electrode of each of said semiconductor switching means to the control electrode of each of the other semiconductor switching means; and means for connecting a source of switching signals in controlling relation to said semiconductor switching means.

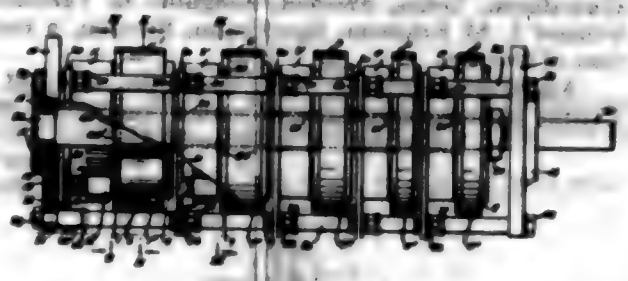
2,864,963
MAGNETIC SHIELD
Kunte E. Dornstreich, Silver Spring, and Chauncey Leland Parsons, Burtonsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Application June 24, 1957, Serial No. 667,727
4 Claims. (Cl. 307—91)
(Granted under Title 35, U. S. Code (1952), sec. 266)

4. A magnetic shield for a device comprising a plurality of tubular members composed of a ferromagnetic material, said members being mounted concentric to said device and with their axes mutually perpendicular, a toroidal winding on each of the tubular members, a source of alternating current, and means connecting said source to said windings, said last-named means including means for regulating said alternating current to produce maximum permeability in said shield.

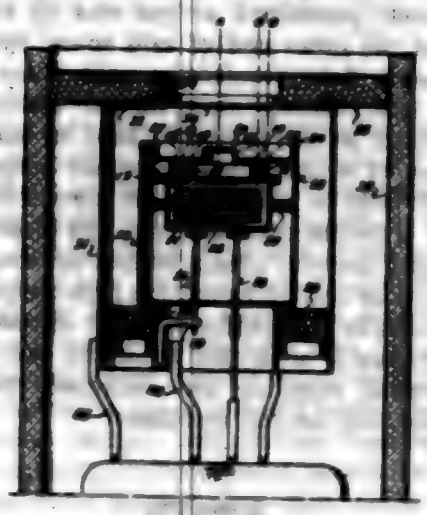
2,864,964
MULTIPLE GENERATOR UNIT
William Kober, Fairport, N. Y., assignor to TRM Electric Corporation, Rochester, N. Y.
Application October 3, 1956, Serial No. 616,138
15 Claims. (Cl. 310—112)

1. A multiple frequency generator set comprising, multiple axial air gap generator units each including a stator and a rotor with certain of said units having a number of poles different from others of said units, and

means mounting said units in end-to-end relation including means mounting said stators for individual position adjusting movement thereof relative to the rotors associated therewith, said last-named means including self-locking means using the force of magnetic attraction between said stators and their associated rotors to hold the former in adjusted position relative to the latter.



2,864,965
ELECTRON GUN FOR TUBULAR BEAM
Chao C. Wang, Mineola, N. Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application April 5, 1956, Serial No. 576,388
4 Claims. (Cl. 313—82)

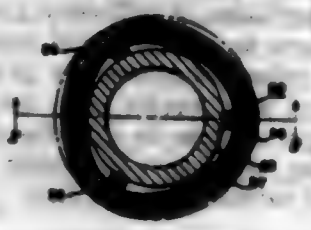


1. An electron gun comprising a cathode having a planar emitting surface, electrostatic beam forming means and an anode for producing a parallel-flow cylindrically-tubular electron beam of predetermined inner and outer diameters between said cathode and said anode, said electrostatic beam forming means including outer beam forming electrode means disposed about said beam in coaxial relationship with said axis, said outer electrode means comprising first and second ring-like edges of different diameters in different planes between said anode and cathode at right angles with said axis, said first and second edges being electrically insulated from said anode, the diameters and spacings of said edges from said cathode being predetermined for location of said edges along an outer equipotential region external of said beam established for a solid parallel-flow cylindrical beam having similar electrical characteristics with said tubular beam and a diameter corresponding to the outer diameter of said tubular beam, said electrostatic beam forming means further including inner beam forming electrode means including a third ring-like edge of predetermined diameter less than the inner diameter of said beam in a plane between said anode and cathode at right angles with said axis and spaced by a predetermined distance from said cathode which is less than the spacing of said first and second ring-like edges from said cathode, the diameter and spacing of said third ring-like edge from said cathode being predetermined for location of said third edge along an inner equipotential region established for a parallel-flow cylindrical beam of similar electrical characteristics as said tubular beam and an infinite cross-section with an aperture of the same diameter as the inner diameter of said tubular beam.

2,864,966
NON-ACTINIC FLUORESCENT LAMP
Lawrence Burns, Swampscott, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application December 2, 1955, Serial No. 551,289
3 Claims. (Cl. 313—109)

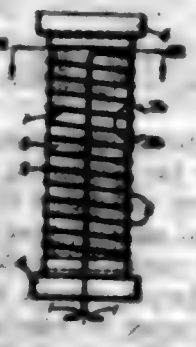
1. A fluorescent lighting fixture comprising a metallic reflector, a fluorescent lamp having a tubular envelope of light-transmitting glass and a fluorescent coating on the inner surface of said envelope, means for holding said lamp in light-reflecting relationship to said reflector and a metal piece electrically and mechanically connected to said reflector and bearing on the outside surface of the tubular envelope of said lamp.

2,864,967
IGNITION DISTRIBUTOR
David C. Rodick, Anderson, and James C. Norris, Pendleton, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 27, 1954, Serial No. 425,812
4 Claims. (Cl. 313—149)



1. A coupling adapted to be positioned on the end of a cylindrical rod, comprising; a member having a thin walled portion defining a cylindrical socket of greater diameter than the diameter of said rod, and means disposed between the walls of the socket and the cylindrical surface of the rod for distorting the configuration of the socket to a non-cylindrical shape when said member is applied over the end of said rod.

2,864,968
CATHODE STRUCTURE
Curtis E. Wind, Palo Alto, Calif., assignor to Varian Associates, a corporation of California
Application October 14, 1955, Serial No. 540,547
11 Claims. (Cl. 313—278)

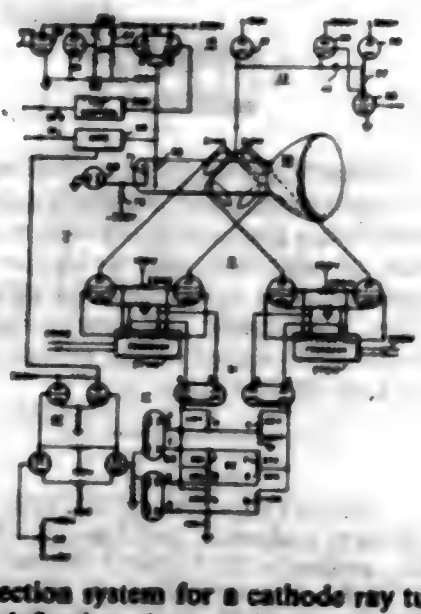


1. A cathode structure comprising a filament of the electron emissive type for carrying a cathode current and a mounting member on which said filament is securely affixed, the filament being secured to the mounting mem-

wound on said supports around the exterior of the said ignition coil, the voltage in the secondary coil being

ber at a plurality of contact points spaced apart along the length of said filament, the filament segments between said contact points being freely suspended so as to be free from contact with said mounting member.

2,864,969
OFF-SCREEN BLANKING CIRCUIT
Abraham Steinman, Jamaica, N. Y., assignor to the United States of America as represented by the Secretary of the Army
Application February 26, 1957, Serial No. 642,630
3 Claims. (Cl. 315—26)

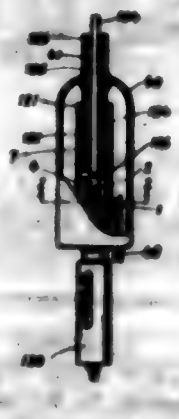


1. In a deflection system for a cathode ray tube, means for providing deflection along each of two coordinates of the face of said tube, means to obtain voltages proportional to the amplitudes of deflection along each of said coordinates, means to combine said voltages to provide a single output voltage substantially proportional to the absolute value of their vector sum, and means responsive to said output voltage to suppress the beam of said cathode ray tube when said deflection extends beyond the limits of said cathode ray tube face.

2,864,970
ELECTRONIC DEVICE
William Ross Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Application July 11, 1955, Serial No. 521,201
30 Claims. (Cl. 315—25)

1. A cathode ray tube comprising a target, an electron beam source means for delivering a beam of electrons along a path in spaced and askew relation with respect to a horizontal marginal edge of said target, means for applying forces to the beam for deflecting the beam to a zone adjacent said target, means for applying focusing forces to the beam prior to entering the zone adjacent said target, and deflection means for applying forces to the beam along its path in said zone causing the beam to be deflected toward and into impingement with said target.

2,864,971
ELECTRON TUBE FOR GENERATING HIGH FREQUENCY OSCILLATIONS
Sigvard Joan Agne Tonnes, Hagersten, and Sven Gustaf Gustafsson, Solna, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Application July 21, 1954, Serial No. 444,888
Claims priority, application Sweden August 18, 1953
8 Claims. (Cl. 315—39.67)



1. In an electron tube, in combination, an anode; a cylindrical reflector electrode spaced from and surrounding said anode and providing a discharge space; a collector electrode positioned at one end of said space; a cathode near the other end of said space; means providing a magnetic field permeating said space normal to the axis of said reflector electrode; an electrostatic field formed parallel to the magnetic field by anode-cathode potential having a component directed perpendicular to the magnetic field to impart a drift toward said collector electrode to electrons accelerated by the electrostatic field and oscillating therein; means indirectly coupled to two of said electrodes for taking out the high frequency energy from the collector electrode; a tuned circuit comprising a coaxial resonator separated from the said energy output; and means coupling the electrode system of the tube with the said coaxial resonator.

2,864,972
PRESSURE MEASURING APPARATUS
Yao T. Li, Watertown, Mass.
Application November 4, 1954, Serial No. 466,773
10 Claims. (Cl. 315—58)

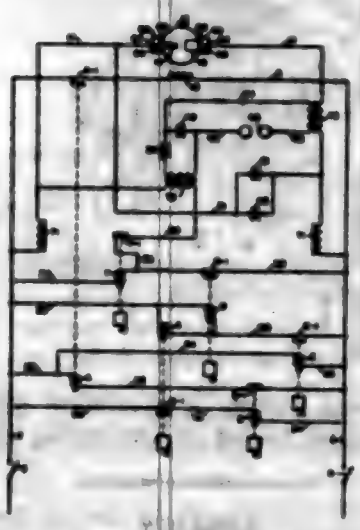
1. A pressure responsive device comprising a hollow tube of prismatic contour, strain gage supports mounted on the faces of the prism, an unbounded strain gage

connected directly across the remainder of said switching circuit, said inductance comprising the sole electrical

connect the emitter-base circuit of said transistor to a second source of alternating current, said first source of

wound on said supports around the exterior of the prism, and means for causing a pressure difference between the interior and exterior of the tube.

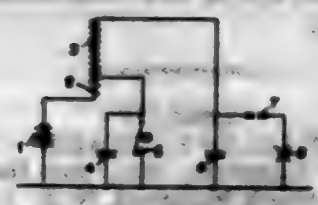
2,864,973
CONTROL CIRCUIT
Charles L. Scott, Parma, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 29, 1955, Serial No. 537,329
2 Claims. (Cl. 315—116)



1. A starting arrangement for electric discharge devices comprising, supporting means for a discharge device and having terminals, supply conductors connected to switch means for connecting said supply conductors to a source of electrical energy, means connecting said terminals to the supply conductors, heating means adjacent said supporting means for heating a discharge device supported thereby, circuit means connecting said heating means to said supply conductors, a quick acting heater energizing relay having normally open contacts in the circuit means for the heating means and having operating means connected to said supply conductors, means for producing a high voltage pulse connected to said means connecting said terminals to said supply conductors, time delay relay means having operating means also connected to said supply conductors and having contacts in a circuit connecting said pulse producing means to said supply conductors, and additional time delay relay means having operating means connected to said supply conductors by the contacts of the first-mentioned time delay relay means and having normally closed contacts in the connection of the operating means for said heater energizing relay to said supply conductors, and in the connection of said pulse producing means to said supply conductors so that when said supply conductors are energized said heating means will be energized for a predetermined time and then said pulse producing means will be energized for a predetermined time at the end of which the heating and pulse producing means will be deenergized.

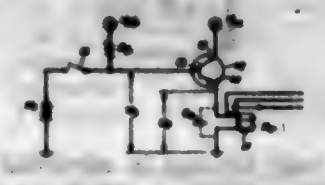
2,864,974
IGNITION SYSTEM FOR INTERNAL COMBUSTION ENGINES
Wytze Reye Smits, Voorburg, Netherlands, assignor to Staatsbedrijf N. V. Research Laboratorium, Leidschendam, Netherlands
Application October 19, 1954, Serial No. 463,348
1 Claim. (Cl. 315—214)

A low voltage ignition system for internal combustion engines comprising, in combination, an ignition coil having a secondary coil, the secondary coil normally supplying a voltage in the order of 20,000 volts, an ignition condenser of 3,000 to 5,000 pf. connected in parallel with said ignition coil, the voltage in the secondary coil being reduced to 1,500 to 3,000 volts and a series connected



spark gap and low tension surface discharge spark plug disposed in parallel with said condenser.

2,864,975
TRANSISTOR CIRCUIT FOR OPERATING A RELAY
Eric E. Sumner, North Caldwell, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application July 12, 1957, Serial No. 671,896
7 Claims. (Cl. 317—9)

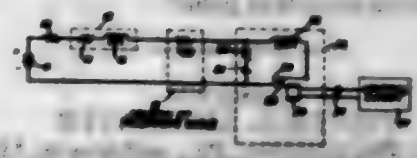


1. A transistor circuit for operating a relay having at least a winding comprising a transistor having base, emitter, and collector electrodes, a circuit including said winding connected between said emitter and a point of fixed potential, a source of voltage V_{cc} connected to said collector, means for applying signals to operate said relay to an input circuit connected between said base and said point of fixed potential, and means for limiting the collector-to-base voltage to a predetermined safe value regardless of inductive transients which may occur when said relay releases, said safe value being N per cent greater than said voltage V_{cc}, said last-named means comprising a source of voltage V and a circuit for applying said voltage V to said base electrode, said voltages V and V_{cc} being related as follows:

$$\frac{V}{V_{cc}} \geq \frac{N}{100} \frac{R_b}{\beta R_w}$$

where R_b is the resistance of said circuit means, β is the base-to-emitter current gain of said transistor and R_w is the effective series resistance of said winding.

2,864,976
PROTECTION CIRCUITS FOR ACTIVATED CONTACTS
James L. Smith, Bunking Ridge, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application April 25, 1955, Serial No. 503,768
21 Claims. (Cl. 317—11)

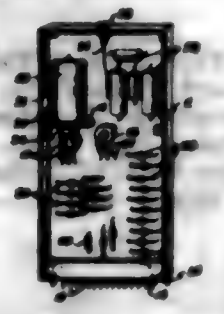


1. Means for preventing a harmful degree of contamination in the presence of organic vapors of switching contacts employed to interrupt the current flow in a switching circuit, said circuit presenting an impedance across the contacts which is virtually resistive and carrying a maximum current of less than one ampere, said means comprising solely an inductance having a value greater than 100 microhenries and less than 1,000 microhenries connected directly in series with said contacts, the combination of said inductance and said contacts being

the line of direction of vibration of the armature and reed at right angles to the pivotal support axis formed to time, comprising fixed, spaced, opposite polarity plates of conducting material positioned so as normally to be

connected directly across the remainder of said switching circuit, said inductance comprising the sole electrical connection between one of said contacts and the remainder of said circuit.

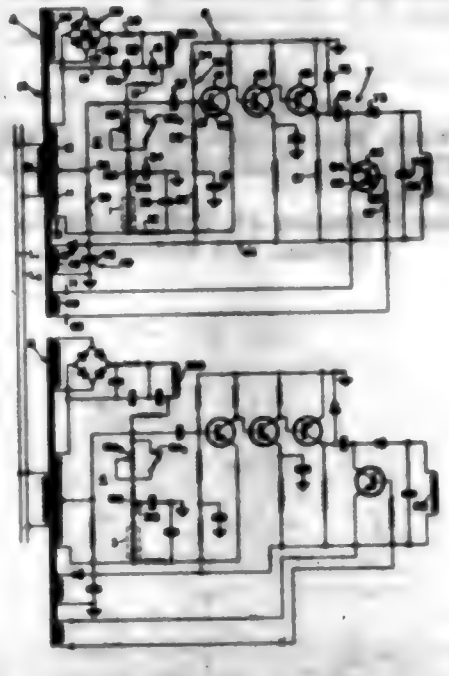
2,864,977
PLUG-IN PACKAGES
Richard F. Will, Rockville, Md., and Dana A. Griffin, North Plainfield, N. J.
Application October 14, 1953, Serial No. 387,318
2 Claims. (Cl. 317—101)



1. A package unit for use in electrical circuits which comprises a U-shaped frame defining a relatively thin housing having a top and end walls, open sides, and an open bottom and having an inwardly turned flange on each end wall projecting into said open bottom, two panels of insulating material, means for selectively securing one end of each of said panels to said bottom flanges, means for selectively securing the other end of each of said panels to the end walls of said frame, said panels lying in parallel planes along the respective edges of said frame, a number of electrical components mounted on a first side of each of said panels, a predetermined configuration of conductive leads lying along the surface of the observe side of each of said panels, a plug having two similar sections, one of said sections being similarly mounted on said first side of each of said panels and projecting beyond said one end thereof, each of said plug sections having a first shoulder portion in one face thereof to which a panel is secured in a manner such that said obverse side of each panel and associated plug lie within the plane of the sides of said frame and second shoulder portions in the bottom face of the plug adapted to seat on said inwardly turned flanges; said panels mounted so that said first one side of each panel together with the associated plug section face the other, said plug sections being aligned adjacent each other to form a single plug for said entire unit when the panels are mounted in said frame, said conductive leads on each respective panel being connected with contact members of the plug section mounted on that panel and means connecting said electrical components mounted on each respective panel with various portions of the conductive leads on that panel.

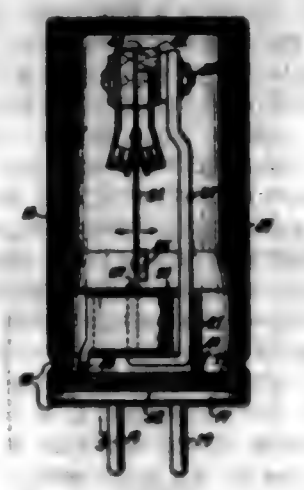
2,864,978
CONTROL APPARATUS
Alan I. Frank, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application February 14, 1956, Serial No. 565,498
7 Claims. (Cl. 317—148.5)

1. In combination, a pair of terminals adapted to be connected to a first source of alternating current, a circuit connected to these terminals comprising a capacitor, a diode, and a relay connected in series, a transistor having an emitter, a collector, and a base, a circuit connecting said emitter and said collector in series with said capacitor between said terminals, and means adapted to connect the emitter-base circuit of said transistor to a second source of alternating current, said first source of



alternating current having a reversible phase with respect to said second source of alternating current.

2,864,979
VIBRATOR STRUCTURE
Clifford N. Williamson, Parma Heights, Ohio, assignor to Cornell-Dubilier Electric Corp., South Plainfield, N. J., a corporation of Delaware
Application March 17, 1954, Serial No. 416,854
10 Claims. (Cl. 317—182)



1. A vibration reducing mounting for D. C. to A. C. converter assembly having elements including a vibrating reed with an armature at the extremity thereof to be acted upon by an electro-magnetic coil and core and having a base for electrically connecting and mechanically supporting the entire converter comprising an enclosure surrounding said elements and attached to said base, a sound absorbent resilient material lining to said enclosure, relatively rigid arms extending from said assembly near the end opposite said coil, mechanical contact surfaces at the extremities of said arms for contacting said lining at aligned points to form a support for said assembly, the axis of said aligned points being at right angles to the line of direction of vibration of the armature, said lining being spaced from said assembly, a resilient tubular mounting surrounding the coil end of said elements in intimate contact therewith, said tubular mounting extending toward said base for supporting attachment thereto, two opposite sides of said tubular mounting defining openings between the coil end of said assembly and the base to allow free movement in

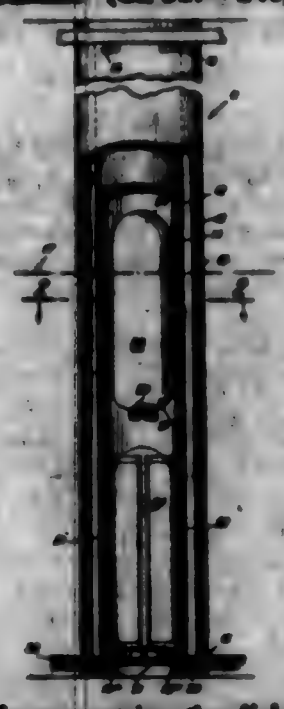
said main winding, coil means for driving said movable current, a pair of transistors of opposite conductivity

the line of direction of vibration of the armature and reed at right angles to the pivotal support axis formed by the arms.

2,864,980
SEALED CURRENT RECTIFIER
David L. Moeller, Medford, Mass., and William J. Martin, Jr., Bristol, N. H., assignors to General Electric Company, a corporation of New York
Application June 10, 1957, Serial No. 664,670
7 Claims. (Cl. 317—234)

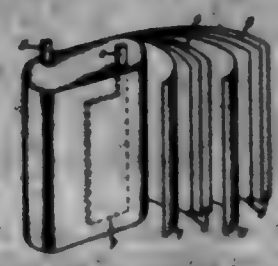
1. Current rectifier apparatus comprising a semi-conductor member having oppositely-disposed contact surfaces; a first contact structure having a central portion conductively secured to one of said contact surfaces, an outer rim portion, and an annular corrugated portion intermediate said rim and center portions; a second contact structure having a center portion conductively secured to the other of said contact surfaces and having peripheral surfaces extending beyond the edges of said semiconductor member; said annular corrugated portion being radially compressed by said rim portion to urge said rim portion between a first position in which said rim portion is separated from said second contact structure to afford access to edges of said semiconductor member for cleaning purposes and a second position in which said rim portion rests upon said peripheral surfaces of said second contact structure; means for sealing said peripheral and rim surfaces together when said rim portion is in said second position; and insulating means in one of said contact structures disposed to prevent electrical short-circuiting of said semiconductor member by said contact structures.

2,864,981
COMPENSATING CAPACITOR
Clarence A. de Glen, Roslyn, N. Y., assignor to The Liquidometer Corporation, Long Island City, N. Y., a corporation of Delaware
Application August 14, 1956, Serial No. 603,971
7 Claims. (Cl. 317—246)



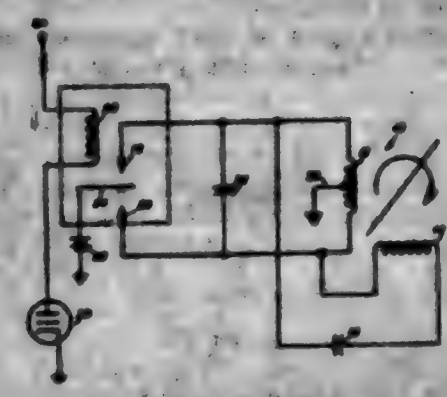
1. A capacitor for measuring the dielectric constant of various fluids in which it may be immersed from time to time, comprising fixed, spaced, opposite polarity plates of conducting material positioned so as normally to be completely immersed in one of said fluids, so that the ambient fluid acts as a dielectric therefor, said float means floatingly supported by said one fluid and normally held by the level of the fluid in which it is floating above the space between said plates but movable upon an abnormal lowering of the fluid level into the space between said plates to provide a fixed dielectric for the capacitor constituted by said plates, means guiding and constraining said float means to movement between a lower position in which it is located between said plates so as substantially to constitute the dielectric of said capacitor including said plates and an upper position wholly above said plates, said float means having a dielectric constant in the same range of values as the values of the dielectric constants of the fluids being measured from time to time.

2,864,982
ELECTRIC CAPACITOR
Ralph A. Rascoite, Glens Falls, and Raymond Neil Dalton, Hudson Falls, N. Y., assignors to General Electric Company, a corporation of New York
Application December 17, 1952, Serial No. 326,484
5 Claims. (Cl. 317—258)



1. An electric capacitor comprising cooperating armatures, an interposed dielectric spacer consisting of a sheet of a polymethylene terephthalate resin sandwiched between two sheets of paper, said dielectric spacer being impregnated with a dielectric material filling the voids in said capacitor.

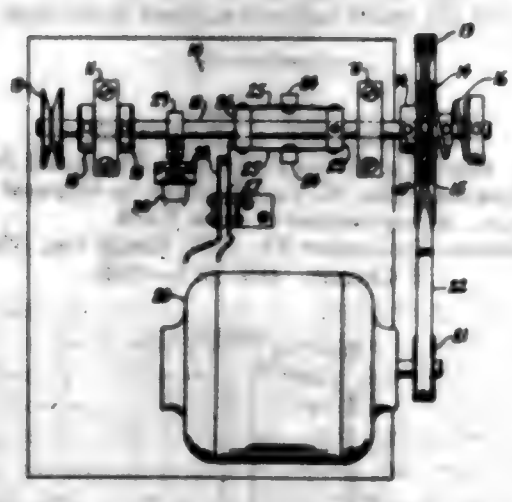
2,864,983
MOTOR DRIVE SYSTEM
Cecil A. Crafts, Pasadena, and Franklin Page, Jr., Arcadia, Calif., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 29, 1955, Serial No. 549,901
1 Claim. (Cl. 318—171)



A drive system comprising a split phase synchronous motor having a main winding and an auxiliary winding, means connecting one end of said main winding to one end of said auxiliary winding, a phase shift capacitor connected between the other ends of both windings, a center tap on said main winding, a source of fixed potential having one side thereof connected to said center tap, a tuned reed vibrator having a movable contact connected to the other side of said source and having a pair of fixed contacts respectively connected to opposite ends of said main winding, a filter capacitor connected across the ends of

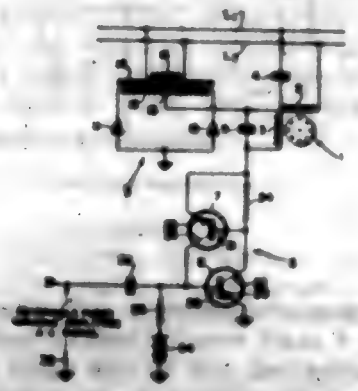
said main winding, coil means for driving said movable contact, and means for feeding to said coil a current cyclically fluctuating at the natural frequency of said vibrator, said feeding means comprising an electronic tube driver having a plate circuit in series connection with said coil means and a grid circuit in connection with a signal source having a predetermined frequency equal to the natural frequency of said vibrator.

2,864,984
ELECTRIC MOTOR CONTROL CIRCUIT
John L. Verdier, George O. Verdier, Willis J. Verdier, and Preston Doyle Verdier, Sidney, Ohio
Application August 28, 1956, Serial No. 606,638
1 Claim. (Cl. 318—207)



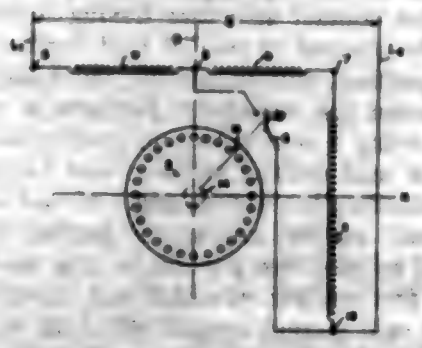
In combination with a motor and driven machine of the type described, an adjustable slippable clutch allowing said motor to rotate at normal speed when said driven machine is overloaded and falls below its normal speed, a current reversing switch actuated by each change of rotation of said driven machine, a pair of contacts actuated by said driven machine and said contacts actuated to closed position when rotation of driven machine falls below its normal speed, said contacts allowing electrical energy to flow through said reversing switch to the starting winding of said motor, instantly reversing the rotation of said motor and driven machine.

2,864,985
ELECTRICAL CONTROL APPARATUS
Kenneth H. Bock, Newtown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application August 30, 1957, Serial No. 681,418
9 Claims. (Cl. 318—207)



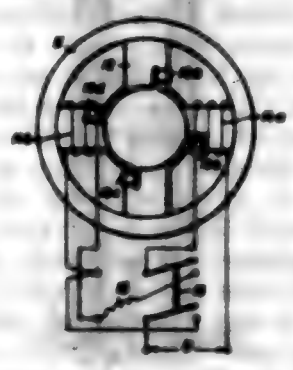
1. An apparatus for controlling a motor having a power phase winding and a control phase winding comprising, in combination, means adapted to connect said motor power phase winding to a source of alternating current of a fixed phase, a pair of terminals adapted to be connected to a source of an alternating control signal having a reversible phase with respect to said fixed phase current, a pair of transistors of opposite conductivity types connected in a bistable configuration having a conductive state and a non-conductive state, said bistable configuration having an input connected to said pair of terminals adapted to be connected to a source of an alternating control signal having a reversible phase with respect to said fixed phase current, biasing means connected to said terminals to render said bistable configuration non-conductive in the absence of a control signal, and a source of full wave rectified pulsating unidirectional current, said bistable configuration having an output connected in series with said motor control phase winding to said unidirectional current source.

2,864,986
ELECTRIC MOTOR
Charles C. Hutchins and Blair C. Seaman, Ridgway, Pa., assignors to Hutchins Electric Company, Inc., Ridgway, Pa., a corporation of Pennsylvania
Application June 15, 1953, Serial No. 361,564
6 Claims. (Cl. 318—220)



1. A self-starting single phase electric motor comprising a rotor member and a stator member, one of said members including means for the reception of motor windings, a first winding comprising a plurality of coils in series arrangement positioned in said receiving means, a second winding comprising a plurality of coils in series arrangement positioned in said receiving means and displaced from coils of said first winding, one end of said second winding being connected to said first winding intermediate to the ends thereof and the other end of said second winding being connected to one end of said first winding, coils of said first winding on one side of said intermediate connection being in mutually inductive relation with coils of said first winding on the other side of said intermediate connection, and means for connecting a source of power across said first and second windings in series during running operation of the motor.

2,864,987
POLE CHANGING SHADED POLE MOTOR
Paul Vaske, Oldenburg, Germany, assignor to Licentia Patent-Verwaltungs-G. m. b. H., Hamburg, Germany
Application April 7, 1958, Serial No. 726,679
Claims priority, application Germany April 5, 1957
2 Claims. (Cl. 318—223)



1. A pole changing shaded pole motor comprising a 2-n-polar stator, a plurality of poles and a plurality of

periodically to said direct current line, motor means for tact respectively with each closed winding, a tap on each

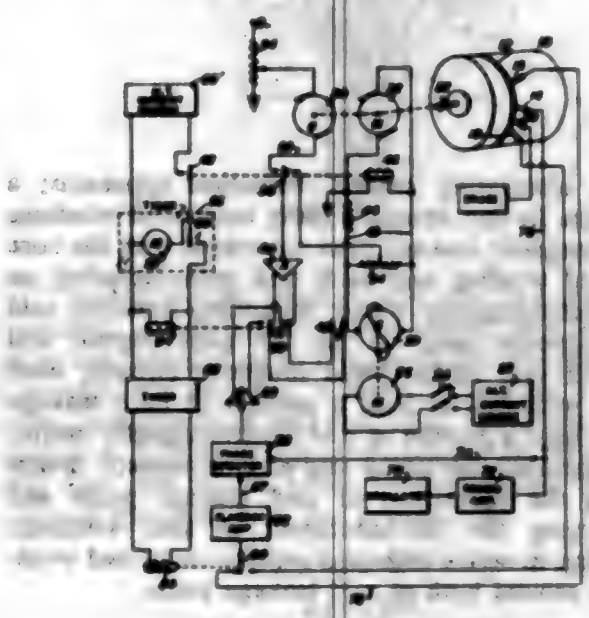
exciting coils provided on every second of said poles, switch means adapted to switch the motor from n-polar excitement to 2-n-polar excitement and vice versa, and a series resistance adapted to be connected with said exciting coils by said switch means during n-polar excitement, said stator being adapted to create a pronounced third field harmonic during n-polar excitement maintaining the speed of said motor at substantially two thirds of the speed during 2-n-polar excitement.

2,864,988

APPARATUS FOR SPEED CONTROL

Frank William Kline, Jr., Minneapolis, and Howard L. Daniels, St. Paul, Minn., assignors, by mesne assignments, to Sperry Rand Corporation, a corporation of Delaware

Application October 26, 1954, Serial No. 464,848
20 Claims. (Cl. 318—314)



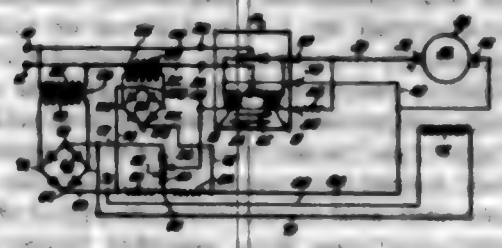
1. In apparatus for controlling the speed of a movable record member having a control track, means including tachometer type means associated with the record member for generating a first corrective signal when the speed of the record member is different than a predetermined speed, means including phase comparison means associated with said control track for producing a second corrective signal when the record member varies from said predetermined speed, means for varying the speed of the record member, said last-mentioned means being responsive to said corrective signals, the arrangement being such that the speed varying means tends to cause the record member to move at said predetermined speed upon receipt of said corrective signals.

2,864,989

ADJUSTABLE SPEED DRIVE FOR D. C. ELECTRIC MOTORS

William J. Bradburn, Jr., Milwaukee, and Hans Richard Aagger Hansen, St. Francis, Wis., assignors to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin

Application December 5, 1956, Serial No. 626,443
4 Claims. (Cl. 318—331)



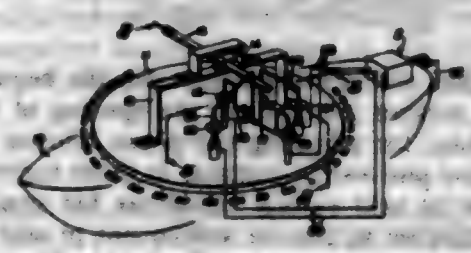
1. In an adjustable speed drive, a motor control circuit for a direct current motor having a shunt field winding and an armature, comprising: an internally self-saturated magnetic amplifier having input terminals for alternating current, output terminals for a full wave direct current and additional input terminals for control winding means; means for supplying a constant direct current voltage to said motor; means connecting the output voltage terminals of said magnetic amplifier to said motor, one of said voltages being applied across said armature and one being applied across said field winding of said motor; a speed-setting potentiometric resistor having a variable tap thereon, said resistor being connected across said means for supplying a constant direct current voltage; and circuit means providing a direct current proportional to the current supplied to said magnetic amplifier, and multiple resistance means across which said last named direct current is applied and across a portion of which said first named direct current is applied to produce a motor IR drop compensation voltage and a control ampere turn compensation voltage, the remaining portion of said multiple resistance means, said control winding means and the tapped portion of said potentiometric resistor being series connected across the output terminals of said magnetic amplifier.

2,864,990

AUTOMATIC PILOT

Arthur D. Hill, Newport Beach, Calif., assignor to Hill-Cunningham Automatic Pilot Company, Newport Beach, Calif., a partnership

Application September 21, 1954, Serial No. 457,455
5 Claims. (Cl. 318—489)



1. In an automatic pilot for a craft having a rudder and having means activated to indicate or to effect a correction to said rudder when the craft is off-course, apparatus for activating said corrective means comprising a bar magnet, an azimuth card rotatably mounted, a pair of mercury cups on the north-south axis of said card, a gimbal bar mounted in said cups having a counterweighted central portion below the level of said cups; a second pair of mercury cups in easterly-westerly alignment on said card; and a yoke for said bar magnet fastened to said central portion of said gimbal bar and extending upwardly therefrom and having end portions extending to said east-west mercury cups, said end portions alternately making contact with the mercury cups respective thereto when said yoke and said gimbal bar are tilted by said bar magnet, the east mercury cup and one of the north-south cups being terminals of one circuit, the west mercury cup and the other of said north-south cups being terminals of a second circuit, said circuits controlling said corrective means.

2,864,991

MECHANICAL CURRENT CONVERTER

Hans Blatter, Wettingen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Application February 17, 1954, Serial No. 410,594
Claims priority, application Switzerland February 19, 1953
3 Claims. (Cl. 321—46)

1. A mechanical current converter for the transfer of power between multiphase alternating current lines and a direct current line; said converter comprising switch contacts for connecting each alternating current line

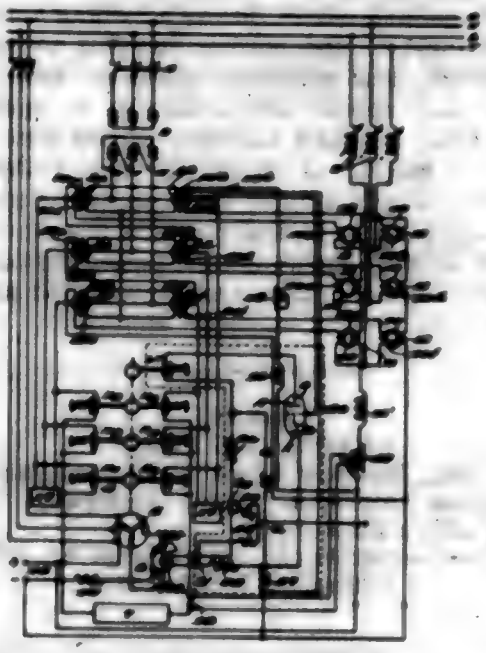
2,864,993

APPARATUS FOR CONTROLLING THE TEMPERA-

2,864,997

MEASURING DEVICE

periodically to said direct current line, motor means for actuating said switch contacts in synchronism with the phases of said alternating current lines, said motor means opening the respective switch contacts at a fixed time interval after each closure thereof, premagnetized switch chokes in said alternating current lines developing intervals of reduced current beginning prior to and extending beyond the instants of equality of the instantaneous voltages on alternating current lines of adjacent phases whose switch contacts are about to be opened and closed respectively, purely electrical control means responsive



to the duration of the interval between the beginning of the reduced current interval and the opening of the contact of a phase for adjusting the phase relation of said motor to close said switch contacts at times varying from closure prior to said voltage equalities for small direct current amplitudes to closure subsequent to said voltage equalities at greater current amplitudes, and purely electrical regulating means responsive to the direct current line varying the premagnetization of said switch chokes to alter the duration of the reduced current intervals with varying load in order to control the load of said converter.

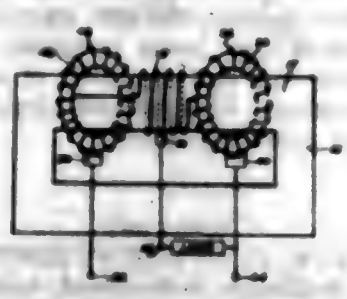
2,864,993

VOLTAGE REGULATING APPARATUS

Gustav O. Fredrickson, Southington, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut

Continuation of application Serial No. 467,781, November 9, 1954. This application February 11, 1958, Serial No. 714,667

10 Claims. (Cl. 323—47)



1. An adjustable voltage control device comprising an autotransformer having a helical winding, a paramagnetic core extending through the winding, a brush engageable with part of a turn on the winding and in slidable electrical contact therewith for movement throughout substantially the entire length of the winding, a pair of closed windings about the core and in spaced relation to the helical winding, a pair of brushes in slidable contact respectively with each closed winding, a tap on each closed winding, the helical winding being in electrical series connection with said taps, an input circuit including the brushes on the closed windings, and an output circuit including the brush on the helical winding and one of the other brushes.

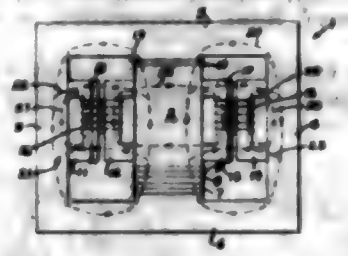
2,864,993

WELDING TRANSFORMER WITH COMPOUND SECONDARY WINDING

William R. Schober, Troy, Ohio, assignor to The Hobart Brothers Company, Troy, Ohio, a corporation of Ohio

Application November 10, 1955, Serial No. 546,176

15 Claims. (Cl. 323—60)



1. In an alternating current induction apparatus; a magnetic core having spaced serially connected windings thereon, a magnetic leakage path associated with the core for each said winding and each said path including an air gap, electromagnetic means extending between said paths on opposite sides of the air gaps therein and forming with said paths closed magnetic circuits, each said circuit including at least a portion of each leakage path and at least a portion of said electromagnetic means, means for variably energizing said electromagnetic means for varying the saturation of said leakage paths and thereby varying the self-inductance of said windings, and a winding in series with said serially connected windings wound around both of said leakage paths.

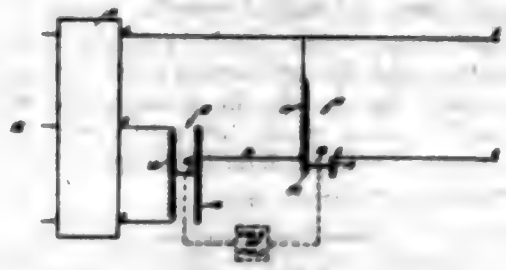
2,864,994

PHASE SHIFTER WITH AUTOMATIC VOLTAGE COMPENSATION

Emory E. Phillips, Lawrence, Kans.

Application May 28, 1954, Serial No. 433,898

4 Claims. (Cl. 323—114)



1. An electrical phase shift circuit having an input circuit and an output circuit, said input circuit being energized from a three phase voltage source, said electrical phase shift circuit being comprised of a phase shift transformer and a compensating transformer, one phase of said three phase source energizing the primary winding of said phase shift transformer, said voltage compensating transformer energized by a second phase of said three phase source and by the secondary winding of said phase shift transformer, means to transmit non-linear motion to said voltage compensating transformer from said phase shift transformer, said means maintains the magnitude of voltage at said output at a constant magnitude for all degrees of phase shift, said means being comprised of a cam drive assembly, said cam drive assembly having a cam driven to control the movement of said voltage compensating transformer.

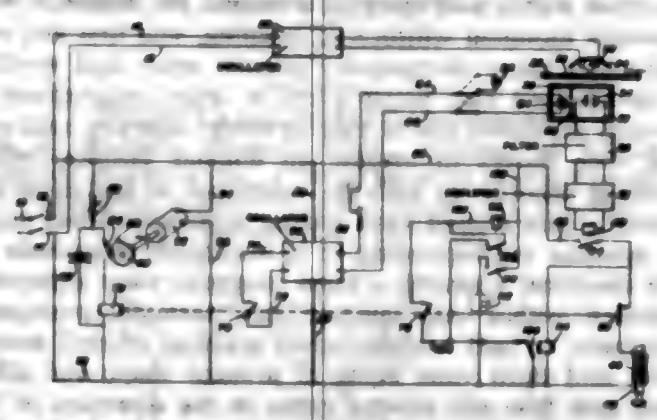
2,864,999

being movable to successively position each of said

2,864,995
APPARATUS FOR CONTROLLING THE TEMPERATURES OF OPERATION IN GYROMAGNETIC RESONANCE SPECTROSCOPY
James N. Shoolery, Palo Alto, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California
Application November 26, 1956, Serial No. 624,457
20 Claims. (Cl. 324—.5)

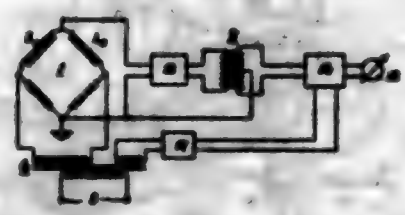
1. Sample holder apparatus for use in a gyromagnetic resonance spectrometer device comprising a first tube structure having a radio frequency coil mounted thereon, a second tube structure adapted to contain a sample of matter mountable in said first tube, and means for introducing a flowing temperature-controlled fluid between said first and second tubes for controlling the temperature of the sample in said second tube.

2,864,996
DETECTING APPARATUS
Garrett R. Linderman, Washington, D. C., assignor to Linderman Engineering Company, Inc., a corporation of Maryland
Application April 15, 1955, Serial No. 501,671
12 Claims. (Cl. 324—20)



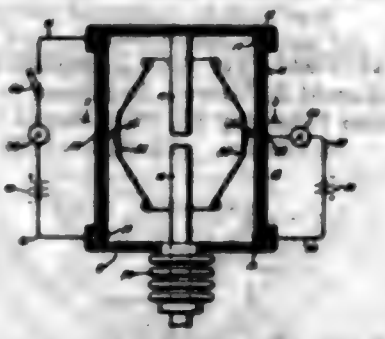
1. In combination with a pin hole detector having a source of current, a work path, a light source and a shielded photosensitive device disposed on opposite sides of said work path, and an output circuit energized by said photosensitive device and containing a circuit controller, a switch, and a signal responsive device; testing apparatus comprising: an indicator circuit containing a signal producing indicator switch, and a relay therefor responsive to energization of said output circuit of said photosensitive device; a test circuit including a current source, a switch, and a test lamp positioned to direct light upon said photosensitive device; and actuating means interconnected with said source of current and said switches whereby said signal producing indicator will signify the condition of said photosensitive device.

2,864,997
MEASURING DEVICE
Carl van Bastel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application August 23, 1955, Serial No. 530,160
Claims priority, application Netherlands September 11, 1954
4 Claims. (Cl. 324—34)



1. Apparatus for measuring variations of a quantity from a given value, comprising means for producing a first alternating voltage of given frequency value and having variations as determined by variations of the quantity to be measured, means for producing a second alternating voltage of said given frequency and having a pulse wave shape the cyclic variations of which have a duration less than the duration of the cyclic variations of said first alternating voltage, demodulating means, means for applying said first and second voltages to said demodulating means in a manner whereby a pulse of said second alternating voltage occurs having its maximum magnitude value at substantially the time that a cyclic variation of said first alternating voltage reaches its maximum magnitude value whereby an output voltage of said demodulating means is substantially insensitive to phase variations of said first alternating voltage, and means connected across the output of said demodulating means for indicating variations in the output voltage thereof.

2,864,998
PRESSURE MEASURING ARRANGEMENT FOR A VACUUM CIRCUIT INTERRUPTER
Thomas H. Lee, Media, Pa., assignor to General Electric Company, a corporation of New York
Application July 8, 1957, Serial No. 670,443
6 Claims. (Cl. 324—33)

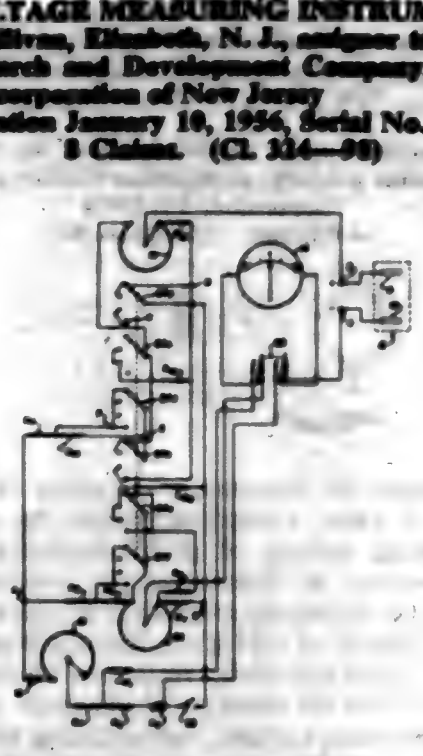


1. In an arrangement for measuring the degree of vacuum present inside a vacuum circuit interrupter of the type comprising an evacuated envelope containing a pair of electrodes having a spaced-apart position for defining an arcing gap therebetween and a metallic vapor-condensing shield surrounding the arcing gap and normally electrically isolated from said electrodes: the combination with said interrupter of means for applying a voltage between said electrodes sufficient to cause electrons to be emitted from one of said electrodes, means for maintaining said metallic shield at a negative potential relative to said electron-emitting electrode whereby said shield acts as a collector for positive ions formed by collision of said electrons with gas molecules inside said interrupter, an external circuit interconnecting said shield and said electron-emitting electrode for transmitting positive ion current resulting from the formation of said positive ions, and current measuring means for measuring said positive ion current.

is energized by said maximum magnitude of said electrical quantity, said last named means comprising a ro-

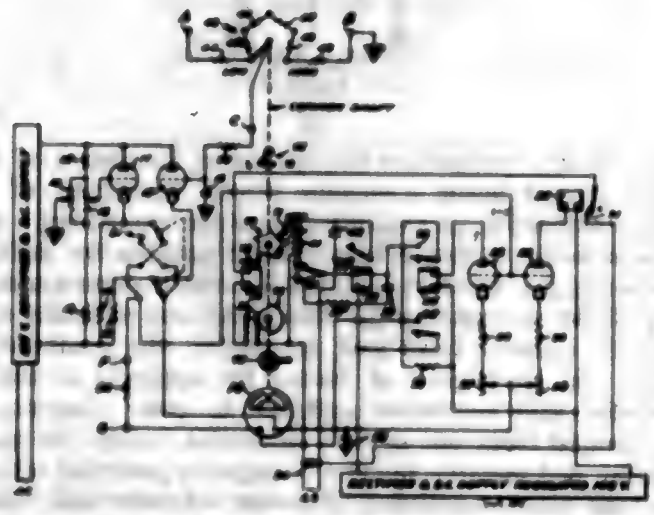
2,865,004
TRAVELING WAVE ELECTRON DISCHARGE

2,864,999
VOLTAGE MEASURING INSTRUMENT
Alan P. Sullivan, Elizabeth, N. J., assignor to Cities Service Research and Development Company, New York, N. Y., a corporation of New Jersey
Application January 10, 1956, Serial No. 558,246
8 Claims. (Cl. 324—98)



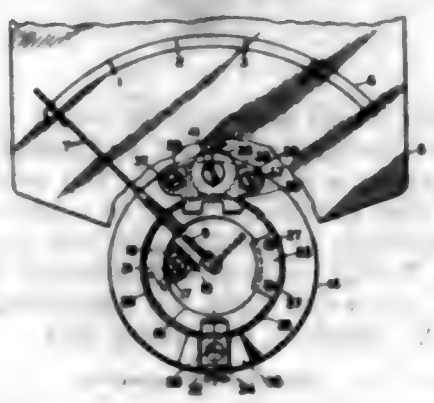
1. An instrument for measuring direct current voltages of opposite polarity comprising a pair of terminals across which the voltage to be measured may be applied, a source of direct current, two series circuits connected in shunt with said source, one of said circuits including two resistors in immediate series relation and the other including a series combination of a resistor and a potentiometer of equal resistance value, means to reverse in said other circuit the terminals of said combination, said circuits being proportioned to make the junctions of said series connected resistors in said one circuit and of said resistor and potentiometer in said other circuit points of equal potential with respect to said source, a connection between one of said terminals and the slider of said potentiometer, a connection between the other of said terminals and the junction of said resistors in said one circuit, and means to measure the flow of current between said terminals.

2,865,000
AUTOMATIC VOLT-OHMETER
Harold R. Newell, Bradford, N. H.
Application February 15, 1954, Serial No. 410,246
8 Claims. (Cl. 324—115)



3. Apparatus for measuring electrical values comprising in combination means for deriving an input voltage proportional to the electrical value to be measured, a meter provided with indicating means and a scale having a plurality of ranges of calibrations, means connecting said meter to measure said electrical value, said scale being movable to successively position each of said ranges on the face of said meter, means for applying said input voltage to said meter, a rotatable shaft to which said scale is connected for rotation therewith, whereby to successively position each of said ranges on the face of said meter, a ratchet wheel carried by said shaft, a solenoid, means carried by said solenoid for turning said ratchet wheel, whereby to advance said scale from one range to another when said solenoid is repeatedly energized, and means responsive to said input voltage for energizing said solenoid for a limited period of time when said input voltage is above a predetermined value, said last mentioned means being adapted to repeatedly energize said solenoid until said input voltage drops below said predetermined value, and means movable with said rotatable shaft for varying the magnitude of said input voltage.

2,865,001
ELECTRICAL MEASURING INSTRUMENT
Norval P. Miller, Danvers, Mass., assignor to General Electric Company, a corporation of New York
Application December 23, 1955, Serial No. 555,957
7 Claims. (Cl. 324—147)



1. In an electrical measuring instrument of the repulsion type, a winding having an opening therein and being effective when energized for producing a magnetic field in said opening which varies in accordance with the magnitude of an electrical quantity to be measured, a first magnetic vane fixedly mounted and extending in a radial direction within said opening, a second flat magnetic vane pivotally mounted within said opening, said first and second vanes being substantially parallel when said winding is deenergized and being effective when magnetized to develop repulsion forces therebetween whereby said second vane moves to assume an angular position which varies in accordance with the magnitude of said electrical quantity, said second vane having a predetermined angular position corresponding to a maximum magnitude of said electrical quantity, a third magnetic vane adjustably mounted within said opening and normally positioned proximate to said predetermined position of said second vane, said third vane being of arcuate shape and offset from said first and second vanes in the direction of the axis of said opening and having its inner edge inclined at an angle with respect to said axis, said third vane being normally positioned proximate to said predetermined position of said second vane such that one end of said third vane is proximate to said predetermined position with the remainder of said third vane extending in a direction away from the region transversed by said second vane in moving from the unenergized position to the said predetermined position, said second and third vanes being effective when magnetized to develop attraction forces therebetween, said attraction forces having a like effect on said second vane as said repulsion forces whereby the two forces together determine the precise angular position of said second vane, means for adjusting the position of said third vane to cause said second vane to assume said predetermined angular position when said winding

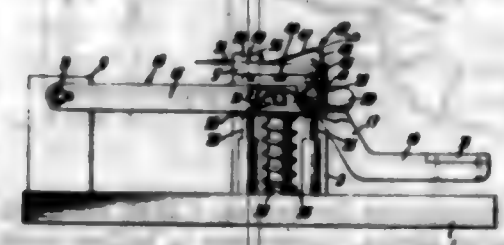
each of the opposite faces of said flap, each of said inter- and the path of travel of said follower varying along the

is energized by said maximum magnitude of said electrical quantity, said last named means comprising a rotatably mounted ring member surrounding said opening and located at one end thereof, said ring member having a plurality of gear teeth formed on at least a portion of its periphery, said third vane being fixedly mounted on said ring member, and a rotatably mounted pinion engaging said gear teeth, said pinion being formed for ready manipulation thereof whereby a substantially linear scale is obtained for each position of said third vane over its operating range.

2,865,002
LONG SCALE INSTRUMENT
Ray L. Triplett, Bluffton, Ohio, assignor to The Triplett Electrical Instrument Company, Bluffton, Ohio, a corporation of Ohio
Application May 7, 1954, Serial No. 428,192
4 Claims. (Cl. 324—150)

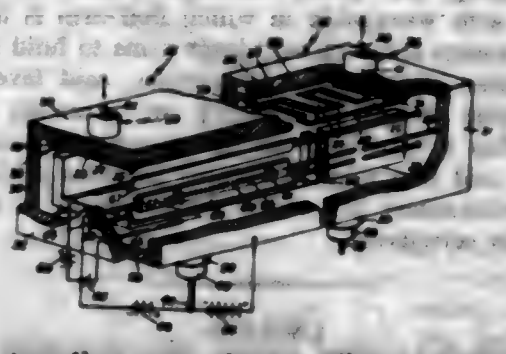
1. In an electrical measuring instrument, a casing having a glass cover plate on one face thereof, a scale under said glass cover plate, a coil pivotally mounted within said casing and having a pointer movable over said scale, a core supported in said coil, a magnetic unit surrounding said coil, said magnetic unit comprising a plurality of segments of an annulus assembled end to end to form a unit which has a shape of a portion of an annulus greater than 90°, each of said segments subtending an angle of less than 90°, each of said segments comprising directional steel being directionalized only along an axis extending normal to the curvature of the segment midway between the ends thereof and being magnetized along said axis so that the distribution of magnetic flux is substantially equal at the ends of each segment as well as the central portion thereof whereby equal flux distribution is obtained along the arcuate length of the magnetic unit.

2,865,003
TEST STAND FOR TRANSISTOR
John J. Harmon, Boston, Mass., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application August 31, 1953, Serial No. 377,398
9 Claims. (Cl. 324—158)



8. A test stand comprising a base, a substantially horizontally mounted lever pivoted at one end to said base on a horizontal pivot, a platform for depression by the hand of an operator on the free end of said lever, a socket supported by the lever having a horizontal bore for reception of an electrical terminal of a device to be held by the fingers of the hand which depresses the platform, and an electrical contact member supported by the base, said contact member having a portion extending transverse to and adapted to intersect the bore and being in the path of movement of said terminal to make electrical contact therewith upon movement of said socket.

2,865,004
TRAVELING WAVE ELECTRON DISCHARGE DEVICES
Edward C. Dench, Needham, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application March 30, 1954, Serial No. 575,113
18 Claims. (Cl. 332—7)



12. A traveling wave electron discharge device comprising a periodic nonreentrant slow wave energy propagating network for transmitting electromagnetic wave energy, an electrode spaced from and substantially coextensive with said periodic network, said network and said electrode at least partially defining an interaction space therebetween, an electron source, and means for directing a beam of electrons along said interaction space in energy interacting relationship with said wave energy, said electron source being arranged in juxtaposition with said entire network, said means for directing including means for producing mutually transverse electric and magnetic fields in the region of said interaction space and substantially perpendicular to said beam of electrons in said interaction space, said means for directing further including beam forming means adjacent said electron source for injecting electrons from said source into said interaction space in a direction substantially parallel to the direction of said magnetic field.

2,865,005
WAVE GUIDE SWITCH MECHANISM
John A. Kuecken, North Syracuse, N. Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application February 17, 1956, Serial No. 566,314
6 Claims. (Cl. 333—7)

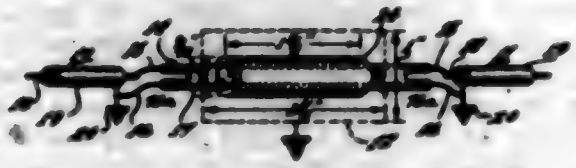
1. A Y-junction electrical waveguide comprising a hollow leg waveguide and two hollow arm waveguides, all rectangular in transverse cross section, arranged in a Y-shape, and having a straight line of intersection corresponding to the apex line of the dihedral angle between two intersecting side walls of the arm waveguides, a flap located within the interior of the intersecting arm waveguides at their intersection and hinged to the intersecting arm waveguides along said straight line of intersection, a lever arm articulately connected to and extending from

2,865,010
WIRING DEVICE

2,865,012
BATTERY CONNECTOR

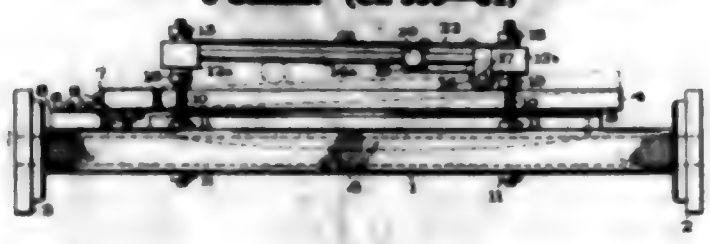
each of the opposite faces of said flap, each of said intersecting side walls having a notch extending from the intersection along the wall for a portion only of the height of the side wall, one lever arm passing outwardly through said notch in one of said intersecting side walls and the other outwardly through the notch in the other of said intersecting side walls, each lever arm approximately filling the notch through which it extends when the arm waveguide in which that arm is disposed is in use, means coupling said lever arms to hold them in fixed angular relation to one another, said lever arms and coupling means constituting an operating handle for said flap accessible from the exterior of said guide by which said flap may be rotated between positions in which it alternately lies across the entrances to the arm waveguides selectively.

2,865,006
LONGITUDINAL ISOLATION DEVICE FOR HIGH FREQUENCY SIGNAL TRANSMISSION LINES
Samuel Sobieroff, Havertown, Pa.
Application February 15, 1954, Serial No. 410,185
9 Claims. (Cl. 333—33)



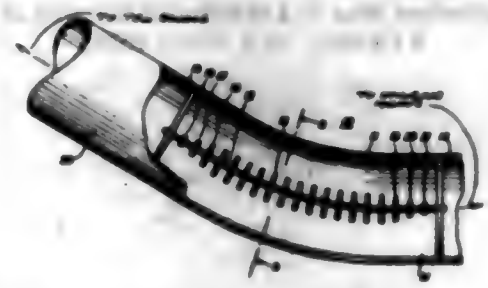
1. A longitudinal isolation device for high frequency signal transmission lines, comprising in combination, a plurality of substantially parallel-extending rectilinear conductor elements providing a twin conductor transmission line section of relatively short length compared to a transmitted wave length, an open-ended tubular sleeve of high-frequency non-conducting magnetic material closely surrounding all of said conductor elements within its hollow interior collectively over a major portion of the length thereof, and means providing signal input and output connections for said conductor elements at opposite ends of said sleeve, thereby to interpose impedance to longitudinal current flow through said section between said connection means.

2,865,007
LINEARIZING DRIVE FOR VARIABLE ATTENUATORS
Frank Gudaitis, Brooklyn, N. Y., assignor to Polytechnic Research & Development Company, Inc., Brooklyn, N. Y., a corporation of New York
Application August 9, 1954, Serial No. 448,622
6 Claims. (Cl. 333—81)



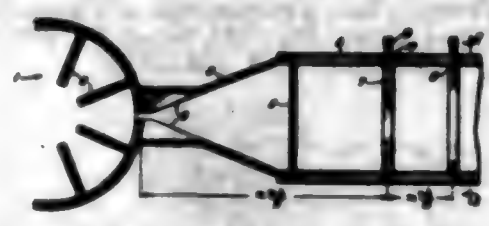
3. A variable attenuator comprising a waveguide section having an attenuator element mounted therein for movement transversely of the waveguide, a drive for said attenuator element comprising an elongated cam bar mounted outside of said section and extending along the length thereof, a track rail rigidly supported on said waveguide section and arranged generally parallel with said cam bar, a slide mounted for movement on said track rail and having a cam follower arranged to engage said cam bar throughout the extent of movement of said slide, means resiliently maintaining contact between said cam bar and said follower, the distance between said cam bar and the path of travel of said follower varying along the length of said bar whereby movement of said slide along said track rail effects movement of said attenuator element transversely of said waveguide section, and adjustable supporting means at one end of said track rail for adjusting the angular position of the path of travel of said follower with respect to the axis of said waveguide section.

2,865,008
WAVE GUIDE ELBOWS
Winston E. Kock, Basking Ridge, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 22, 1953, Serial No. 363,034
2 Claims. (Cl. 333—98)



1. A high frequency electromagnetic wave transmission system including a source of wave energy in the circular electric mode, means for utilizing said circular electric mode energy, and means for selectively transmitting said energy around a bend in a guiding path connecting said source to said utilizing means, said transmitting means comprising a curved section of conductively bounded wave guide of circular cross section and a cylindrical conductive member extending coaxially within and substantially coextensive with said guide, said member having a plurality of transverse circumferential grooves each having an axial dimension less than a quarter-wavelength of said waves.

2,865,009
TUNING IRIS FOR WAVE GUIDES
Charles Vincent Litton, Redwood City, Calif., assignor to Litton Industries, Inc.
Application December 14, 1953, Serial No. 397,912
5 Claims. (Cl. 333—98)



1. An arrangement for tuning a high frequency electron discharge device, comprising a hollow wave guide coupled to the output of said device, a first iris member having a transmitting non-circular aperture, and means for rotatably mounting said iris in said wave guide on substantially a constant reactance contour of said guide and a given distance from the output of said device, whereby rotation of said iris produces impedance variations of a resistive nature, a second iris having a transmitting non-circular aperture, and means for rotatably mounting said second iris in said wave guide on substantially a constant resistance contour of said guide and a given distance from said first iris, whereby rotation of said second iris produces impedance variations of a reactive nature.

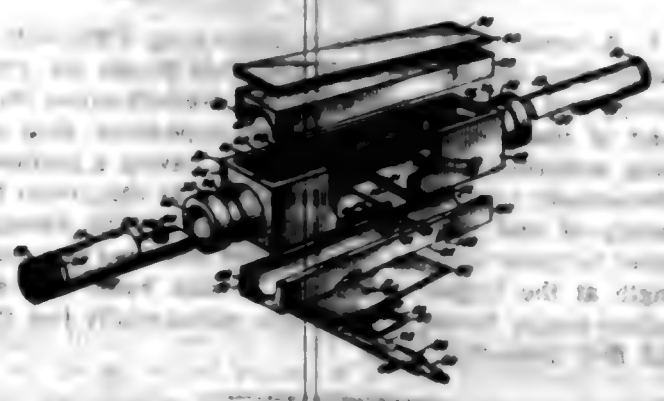
2,865,614
CYCLIC GAIN CONTROLS FOR SONAR DEVICES

said output channels whereby a phase shifted output from one of said output channels will combine with an un-

2,865,010
WIRING DEVICE
Owen L. Taylor, Easton, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Application October 21, 1954, Serial No. 463,715
8 Claims. (Cl. 339—95)

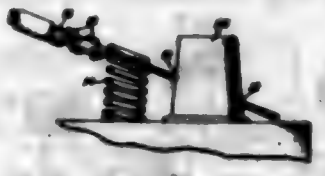
4. A wiring device comprising a hollow casing having a substantially flat terminal located therein in fixed relationship, an elongated interior surface within said casing spaced beside said terminal and extending divergently therefrom in one direction, a U-shaped leaf spring having one arm with one side edge thereof supported only by said surface and the other side thereof located closely adjacent said terminal and with the lateral dimension of said one arm extending divergently therefrom in the opposite direction, said one arm being movable over said surface, means integral with said casing engaging the outer side of the other spring arm for substantially preventing bodily movement of the said spring away from said terminal, and an opening in said casing adjacent the divergent portions of said terminal and said elongated arm whereby an electrical conductor may be inserted therethrough in said one direction to deflect said elongated arm over said surface so as to be held into engagement with said terminal.

2,865,011
HEAVY DUTY TERMINAL CONNECTOR
Herman H. Dejadon, River Forest, Ill.
Application June 24, 1954, Serial No. 439,031
10 Claims. (Cl. 339—150)



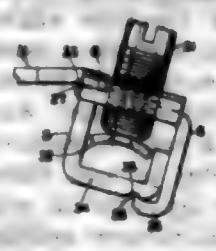
6. A heavy duty terminal connector, comprising a pair of oblong bodies formed of metal having relatively high current carrying capacity and having longitudinally disposed flutes in adjoining sides thereof together forming a tubular channel for receiving and gripping a line terminal at both ends, a yieldable pressure element arranged adjacent one of said oblong bodies, insulating means forming an inclosure for the oblong bodies and the pressure element having openings therein for admitting line terminals to both ends of the channel in said oblong bodies, said insulating means being formed of plastic material having some elastic characteristics and two oppositely disposed wall portions located between the ends thereof having no elastic characteristics, a housing therefor, and clamping means including a cam device supported in the housing adjacent the insulating means and acting against one of the oppositely disposed wall portions of the insulating means to compress the yieldable pressure element against one of the oblong bodies to effect clamping thereof in tight electrical and mechanical engagement with line terminals.

2,865,012
BATTERY CONNECTOR
Willis E. Black, Dugway, Utah
Application August 2, 1956, Serial No. 601,849
2 Claims. (Cl. 339—228)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A battery post connector comprising a substantially flat conductor having a serrated edged opening therein consisting of edges that engage the battery post and which opening is slightly larger than the battery post adapted to be received therein, coil spring means depending from a position adjacent said opening and being continuously perpendicular to the top of the battery, the base of said coil spring means being flat and adapted to positively engage the top of the battery case to provide a stable support for said connector and also to impart a slight cant to the connector relative to the horizontal thereby causing the serrated edged opening to make a low resistance electrical engagement with the battery post.

2,865,013
ELECTRICAL TERMINAL
John J. Kazmowski, Gonic, N. H., assignor to General Electric Company, a corporation of New York
Application December 21, 1956, Serial No. 629,831
4 Claims. (Cl. 339—272)

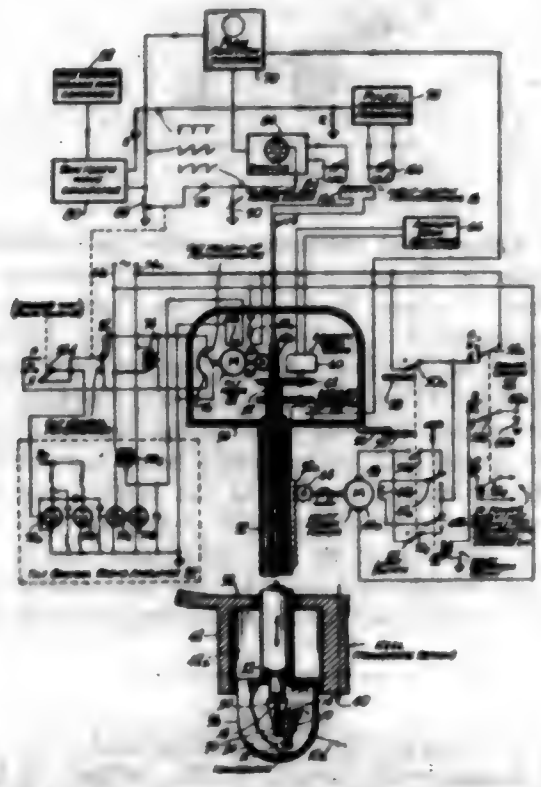


1. A two-part, heavy-duty electrical terminal for a meter socket comprising in combination: a first part in the form of a substantially J-shaped member having its long leg terminating in a section of reduced width lying between a pair of inwardly projecting ears the outer under-edge of the bottom section of said J-shaped member having a transverse groove therein, a support member, means for mounting said J-shaped member on said support member, a second part in the form of an inverted substantially L-shaped member removably mounted on said J-shaped member and forming therewith a receptacle for an electrical conductor, the bottom section of said L-shaped member having its outer edge in the form of a yoke and the leg of said L-shaped member being turned inwardly to form a mounting flange the upper edge of said flange having a transverse ridge thereon, said yoke straddling said section of reduced width and underlying said inwardly projecting ears and said mounting flange underlying the bottom section of said J-shaped member with said ridge fitting in locking relationship into said groove when said L-shaped member is mounted on said J-shaped member, and a terminal screw carried by said L-shaped member having a portion thereof projecting into said receptacle, said terminal screw developing clamping forces when screwed against a conductor within said receptacle, said clamping forces serving to securely unite said first and second parts.

a disc is opposite the respective window and whereby the disc then rotates until another colored portion is opposite the respective window, the disc remaining stationary

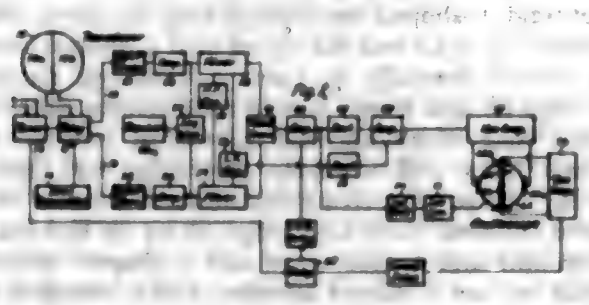
for shifting the relative position of a particular one of said pulses within its particular time interval in relation to the preceding pulse so that said shifted pulse will

2,865,814
CYCLIC GAIN CONTROLS FOR SONAR DEVICES
Roy H. Mains, Seattle, Wash., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application December 14, 1953, Serial No. 398,110
10 Claims. (Cl. 340—3)



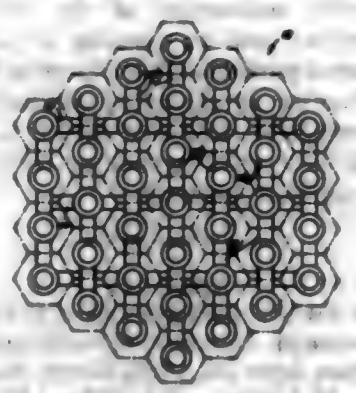
10. An underwater sonar device comprising an electro-acoustic transducer having a directional beam pattern, means for variably tilting said transducer throughout a substantial range of elevation angles of the beam axis thereof, an indicator, a receiver operating said indicator and connected for energization by said transducer, means for transmitting compressional wave energy into the region toward which said transducer is directed in the various tilted positions of said transducer, and receiver gain control means operable to suppress reverberation and like effects in said receiver and controlled by tilting of said transducer to vary the degree of gain effected by said gain control means automatically upwardly and downwardly with increase and decrease, respectively, of the downward tilt angle of said transducer beam axis.

2,865,815
APPARATUS AND METHOD FOR ECHO RANGING
Arthur Nelson Butz, Jr., Maplewood, N. J., assignor to the United States of America as represented by the Secretary of the Navy
Application July 14, 1944, Serial No. 544,986
9 Claims. (Cl. 340—6)



1. Apparatus for determining the direction of a source of wave energy comprising a pair of transducers disposed with their active faces coplanar, an output channel for each transducer, phase shifting means connected across said output channels whereby a phase shifted output from one of said output channels will combine with an unshifted phase output from the other of said output channels to produce a resultant output in each channel, means for modulating and then combining said resultant outputs into a common channel, means applying a time varied gain to said resultant outputs when in said common channel, means for obtaining the electrical difference between the outputs, phase responsive means for producing a signal proportional to said difference and oppositely phased for opposite signs, respectively, of said difference, a cathode ray oscilloscope, means for initiating a sweep of the ray beam in said oscilloscope, and means applying said signal to deflect said beam from its sweep path in opposite directions corresponding to said opposite phases.

2,865,816
LOW FREQUENCY BROAD BAND UNDERWATER TRANSDUCER
Albert A. Hudimac, San Diego, and Robert C. Mathes, Escondido, Calif., assignors to United States of America as represented by the Secretary of the Navy
Application May 31, 1956, Serial No. 588,581
4 Claims. (Cl. 340—9)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A broad band transducer comprising a plurality of independent effective vibratory surface means for transmitting and receiving energy over a predetermined broad band of low frequency in a high impedance fluid and being uniformly spaced over an area having a perimeter substantially equal to one wave length at the lowest frequency of said band, adjacent surface means having a center to center spacing substantially less than one wavelength at the highest frequency of said band, and said surface means having a total area substantially less than said first mentioned area.

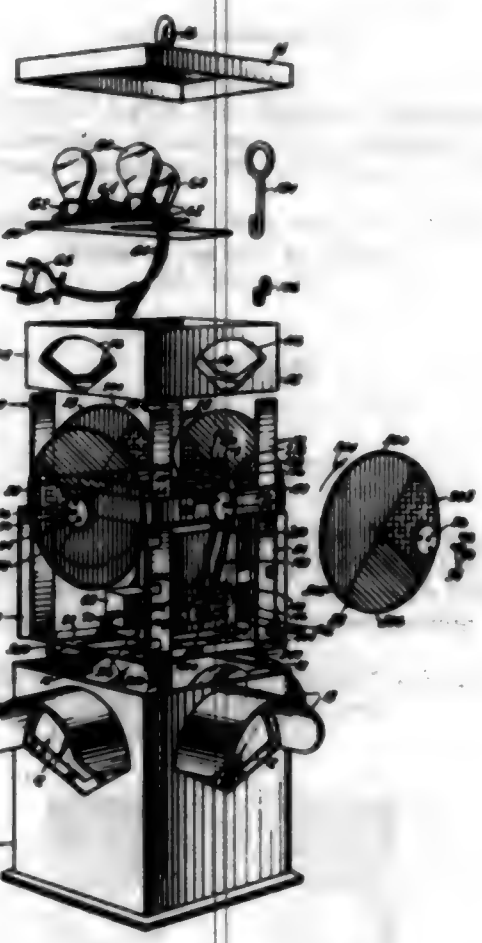
2,865,817
TRAFFIC SIGNAL
Calvin A. Hellen, Omaha, Nebr.
Application March 25, 1957, Serial No. 648,311
4 Claims. (Cl. 340—41)

1. A traffic signal adapted for long lamp life and operation with minimum lamp replacement servicing, comprising a frame, a housing enclosing said frame, said housing having openings on four sides thereof, windows of clear transparent material mounted on said housing and covering said openings, four discs each having a portion thereof disposed opposite a respective window, said discs being disposed between the frame and said housing, said discs each having a plurality of sections of different colors for signalling motorists, lamp means in said housing and disposed inwardly of said discs whereby the colored light from said discs shining through said windows signals motorists, means for mounting said discs rotatably on said frame and for causing intermittent rotation of said discs whereby said discs each remain motionless during a period in which one colored portion of

2,865,820
signals to form an error signal, means responsive thereto

trical and mechanical engagement with line terminals. ing to securely unite said first and second parts.

a disc is opposite the respective window and whereby the disc then rotates until another colored portion is opposite the respective window, the disc remaining stationary while the other colored portion is opposite the window until a further signalling period using the other color has been completed, said means for causing said intermittent rotation comprising a first and second means for jogging rotation of said discs and means for intermittently actuating said first and second means with a time lapse between the time the first means is actuated and the time the second means is actuated, said sections being in sequence of appearance at a window, a color indicating stop for a one hundred eighty degree section of said disc, a color indicating go ahead for a ninety degree section, and a color indicating the end of the go ahead period for a ninety degree section, said time lapse being synchronized with the position of said discs whereby said time lapse



is equal to the time at which the section indicating the end of the go ahead period of a disc is opposite to its respective window, and whereby the time lapsing between the intermittent actuations of said first and second means is equal to and synchronized with the time that the stop and go colors in two opposite ones of said sections of said discs are opposite the respective window whereby said discs, intermittently rotating as described, make possible a sufficiency of light changes with a minimum of turning on and off of the lamp means for eliminating a major cause of lamp failure.

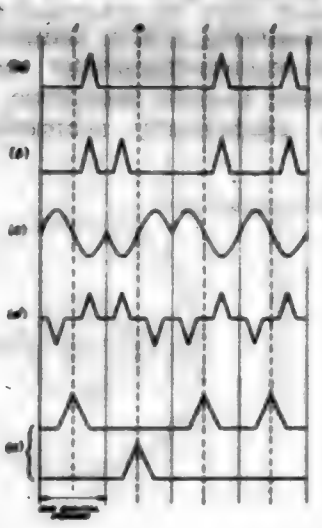
2,865,018

INTELLIGENCE TRANSMISSION

Andrew Bark, Weston, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application June 25, 1954, Serial No. 439,400
12 Claims. (Cl. 340—167)

1. A system for transmitting intelligence in code form comprising means for transmitting signal energy in the form of pulsations occurring at a constant repetition rate of *n* uni-polar pulses per time interval and means for shifting the relative position of a particular one of said pulses within its particular time interval in relation to the preceding pulse so that said shifted pulse will present a component of the applicable code other than the component represented by said preceding pulse, where *n* represents the total number of pulses occurring within said time interval, means for feeding said coded intelligence to a coincidence gate provided with



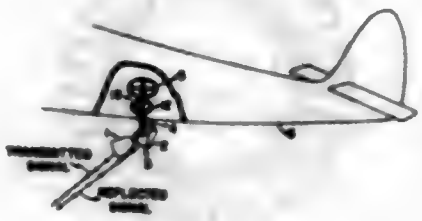
a feedback path having a fractional pulse period delay to one input of said coincidence gate.

2,865,019

MEASURING AIRCRAFT COURSE AND GROUND SPEED SYSTEMS

Bertram M. Harrison, Wellesley Hills, Mass.

Continuation of application Serial No. 562,873, November 10, 1944. This application January 16, 1956, Serial No. 559,379
6 Claims. (Cl. 343—8)



1. Apparatus for determining the ground speed and direction of aircraft, including a support rotatable about an axis substantially perpendicular to the fore and aft axis of the aircraft, a transmitting antenna and a receiving antenna mounted on said support along a line perpendicular to said rotatable axis, a second transmitting antenna and a second receiving antenna mounted on said support along a line perpendicular to both said rotatable axis and said first line, means for rotating said axis, means for energizing both said transmitting antennae to radiate high frequency electromagnetic waves, means for indicating where said first transmitting and receiving antennae are positioned by rotation of said support so that the difference between the frequency of transmitted and reflected waves is zero, whereby said second transmitting and receiving antennae are positioned so that the difference between the frequency of transmitted and reflected waves is a maximum, means for indicating the direction of the line of said first antennae with respect to the fore and aft axis of the aircraft as a measure of the true direction of flight, and means for indicating the said maximum frequency difference as a measure of the true ground speed.

2,865,020

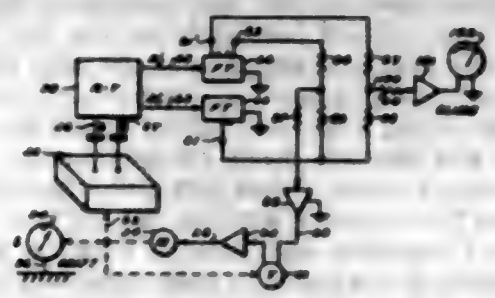
AIRCRAFT VERTICAL VELOCITY AND DRIFT ANGLE MEASURING SYSTEM

Albert Wolinsky, New Rochelle, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

Application August 13, 1956, Serial No. 603,583

8 Claims. (Cl. 343—9)

1. An aircraft measuring system comprising, Doppler microwave antenna-receiver-transmitter means emitting two signals containing Doppler amplitude and sense information, means algebraically subtracting said two signals to form an error signal, means responsive thereto positioning said first-named means to cross-track, and



means algebraically adding said two signals to form a vertical velocity signal.

184,065

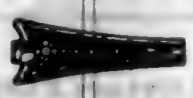
184,068

DESIGNS

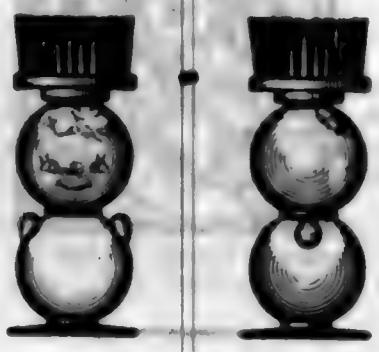
DECEMBER 16, 1958

184,078
BRACELET LINK OR SIMILAR ARTICLE
Karl C. Augenstein, Cranston, R. I., assignor to Speidel Corporation, Providence, R. I., a corporation of Rhode Island
Application May 20, 1958, Serial No. 50,984
Term of patent 14 years
(Cl. D45—4)

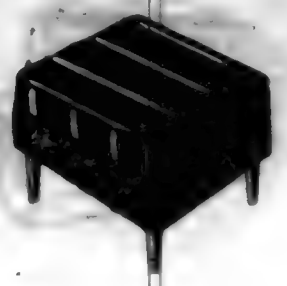
184,079
BRACELET LINK OR SIMILAR ARTICLE
Karl C. Augenstein, Cranston, R. I., assignor to Speidel Corporation, Providence, R. I., a corporation of Rhode Island
Application May 20, 1958, Serial No. 50,985
Term of patent 14 years
(Cl. D45—4)



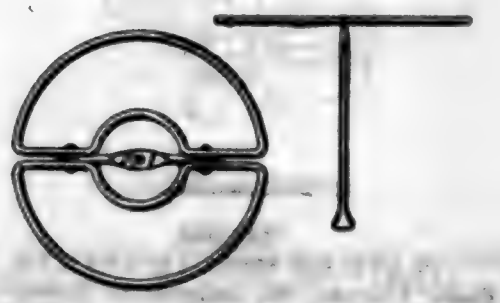
184,080
COMBINATION TALCUM POWDER CONTAINER AND BRUSH DISPENSER OR SIMILAR ARTICLE
Edward W. Beatty, Chicago, Ill., assignor to Richard G. Krueger, Inc., New York, N. Y., a corporation of Delaware
Application June 16, 1958, Serial No. 51,383
Term of patent 14 years
(Cl. D58—17)



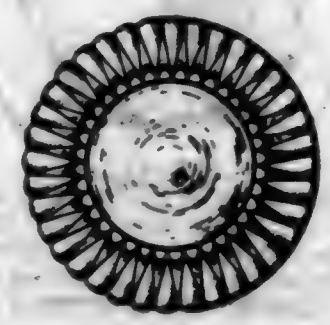
184,081
OTTOMAN
Sam Belz, Memphis, Tenn.
Application December 3, 1957, Serial No. 48,764
Term of patent 14 years
(Cl. D15—8)



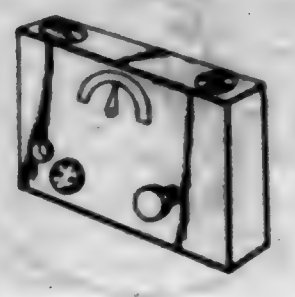
184,082
TELEVISION ANTENNA OR SIMILAR ARTICLE
Andrew Colton, Wayne County, Mich.
Application December 23, 1957, Serial No. 48,984
Term of patent 14 years
(Cl. D26—14)



184,083
BOTTLE CAP
Lindsay T. Crabbe, Hinsdale, Ill., assignor to Phoenix Metal Cap Co., Chicago, Ill.
Application March 8, 1957, Serial No. 45,170
Term of patent 14 years
(Cl. D58—26)



184,084
TOY BOMBSIGHT
Charles R. Dougherty, Detroit, Mich.
Application August 21, 1957, Serial No. 47,470
Term of patent 14 years
(Cl. D34—15)



184,091
PHOTOELECTRIC EXPOSURE METER

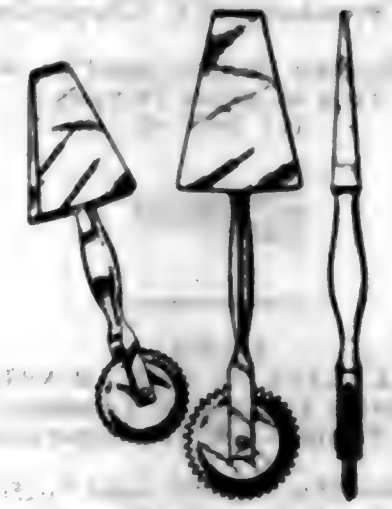
184,094
WEIGHING SCALE

184,685
DRESS ENSEMBLE
Melville Davidow, New York, N. Y.
Application June 11, 1958, Serial No. 51,303
Term of patent 3½ years
(Cl. D3—26)

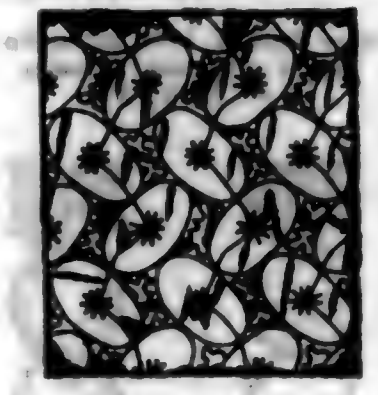
184,686
PLATE OR SIMILAR ARTICLE
Alfred Dube, Lincoln, Ill., assignor to Stetson China Co., Lincoln, Ill., a corporation of Illinois
Application July 8, 1958, Serial No. 51,703
Term of patent 14 years
(Cl. D44—15)

184,687
PLATE OR SIMILAR ARTICLE
Alfred Dube, Lincoln, Ill., assignor to Stetson China Co., Lincoln, Ill., a corporation of Illinois
Application August 4, 1958, Serial No. 52,026
Term of patent 14 years
(Cl. D44—15)

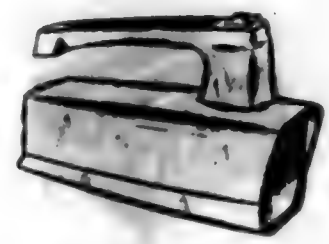
184,688
COMBINED PIZZA PIE CUTTER AND SERVER
Harold G. Edgar, Pittsfield, N. H., assignor to Tucker Products Company, a corporation of Massachusetts
Application June 20, 1958, Serial No. 51,452
Term of patent 14 years
(Cl. D44—29)



184,689
EMBROIDERED NYLON FABRIC OR SIMILAR ARTICLE
Leonard Grinberg, Valley Stream, N. Y.
Application February 12, 1958, Serial No. 49,629
Term of patent 3½ years
(Cl. D92—1)

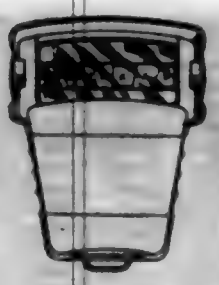


184,690
FOOD MIXER
John J. Hamilton, Greenwich, Conn., assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Application June 17, 1958, Serial No. 51,483
Term of patent 14 years
(Cl. D44—1)



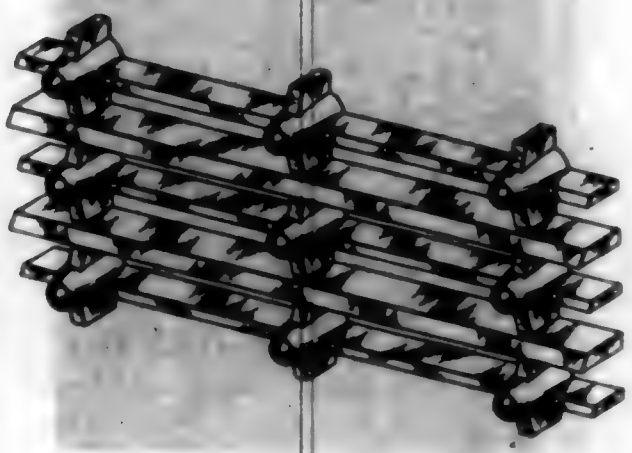
184,691

184,091
PHOTOELECTRIC EXPOSURE METER
Gilbert M. Hunt, Willowick, Ohio, assignor to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey
Application May 28, 1958, Serial No. 58,988
Term of patent 14 years
(Cl. D61—1)

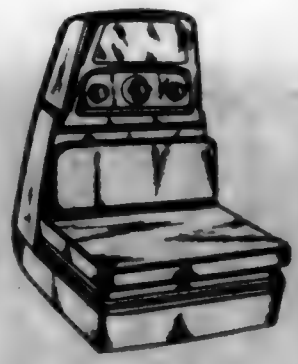


184,092
THERMOMETER
Lucien Kramer, Paris, France
Application December 3, 1956, Serial No. 44,033
Term of patent 7 years
(Cl. D52—7)

184,093
AUTOMOBILE GRILLE UNIT OR THE LIKE
William F. Lange, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 5, 1958, Serial No. 58,741
Term of patent 7 years
(Cl. D54—3)



184,094
WEIGHING SCALE
John M. Little, Toledo, Ohio, assignor to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application December 16, 1957, Serial No. 48,902
Term of patent 14 years
(Cl. D52—10)



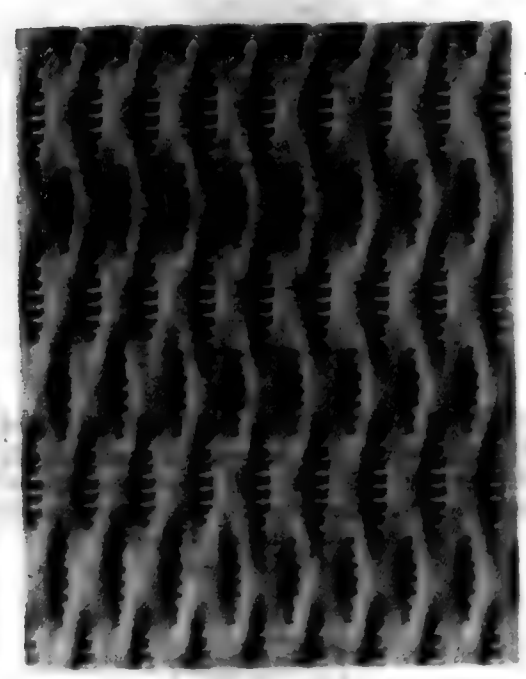
184,095
FLASH UNIT FOR PHOTOGRAPHIC CAMERAS
Clark C. Macomber, Evanston, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Application September 19, 1958, Serial No. 52,691
Term of patent 14 years
(Cl. D61—1)

184,096
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,888
Term of patent 14 years
(Cl. D92—1)

184,101
PUFFED TEXTILE FABRIC

184,103
PUFFED TEXTILE FABRIC

184,097
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,889
Term of patent 14 years
(Cl. D92—1)



184,098
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,891
Term of patent 14 years
(Cl. D92—1)

184,099
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,892
Term of patent 14 years
(Cl. D92—1)

184,100
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,893
Term of patent 14 years
(Cl. D92—1)

184,105
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to

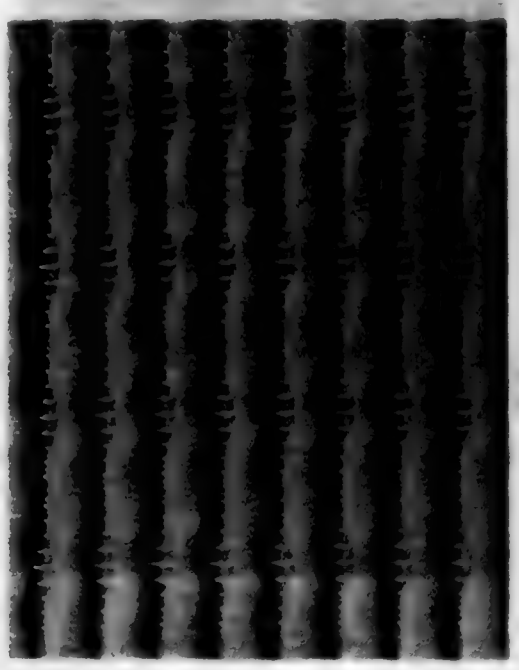
184,107
TRAY FOR A DRILL PRESS
Frank P. Mikulski, Utica, Mich.

184,101
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,894
Term of patent 14 years
(Cl. D92—1)

184,103
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,896
Term of patent 14 years
(Cl. D92—1)

184,102
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,895
Term of patent 14 years
(Cl. D92—1)

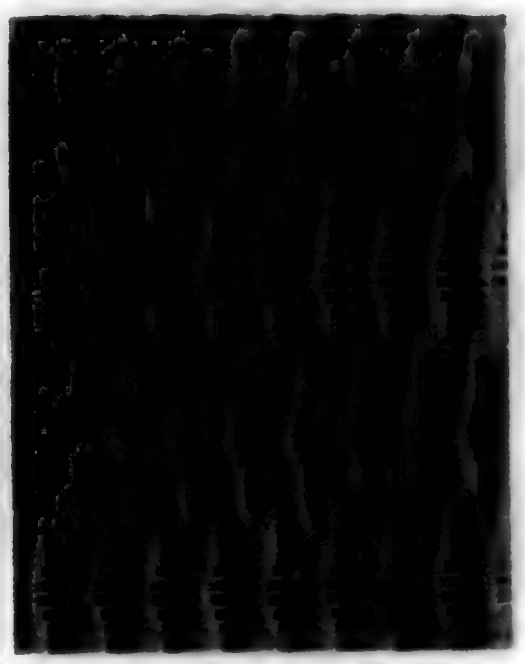
184,104
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,897
Term of patent 14 years
(Cl. D92—1)



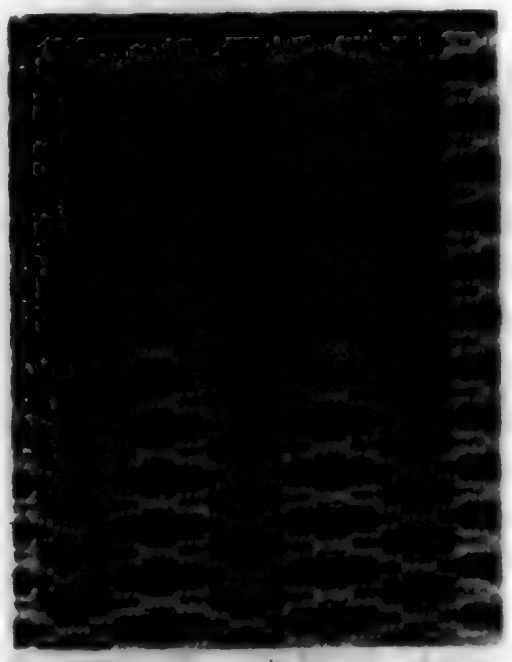
184,110
AUTOMOBILE GRILLE UNIT OR THE LIKE
Edward G. Mueller, Omaha, Nebr., assignor to General

184,114
LINOLEUM SURFACE COVERING OR SIMILAR ARTICLE

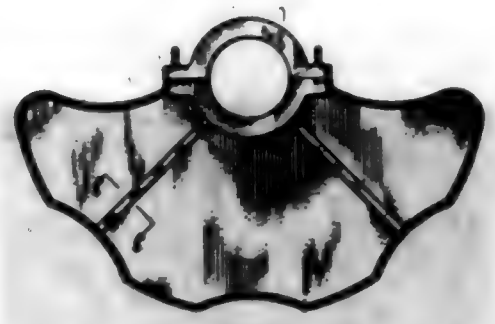
184,105
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,898
Term of patent 14 years
(Cl. D92—1)



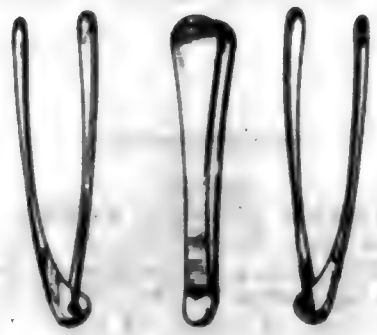
184,106
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 27, 1957, Serial No. 47,899
Term of patent 14 years
(Cl. D92—1)



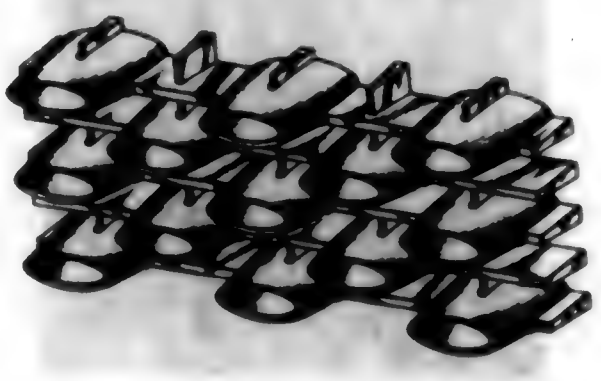
184,107
TRAY FOR A DRILL PRESS
Frank P. Mikulski, Utica, Mich.
Application September 6, 1957, Serial No. 47,640
Term of patent 3½ years
(Cl. D63—1)



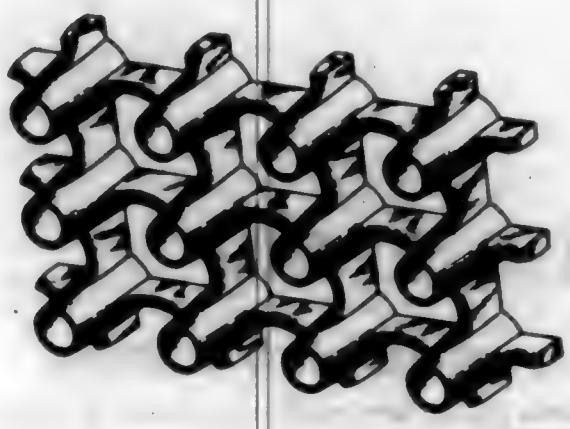
184,108
TONGS
John Wesley Meyer, South Waverly, Pa.
Application October 14, 1957, Serial No. 48,079
Term of patent 3½ years
(Cl. D44—4)



184,109
AUTOMOBILE GRILLE UNIT OR THE LIKE
Edward G. Mueller, Omaha, Nebr., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 5, 1958, Serial No. 58,752
Term of patent 7 years
(Cl. D54—2)



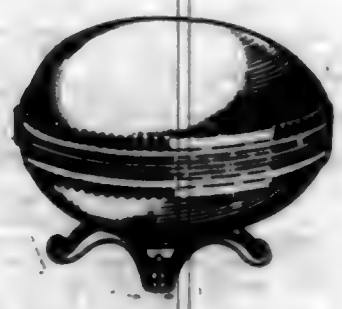
184,110
AUTOMOBILE GRILLE UNIT OR THE LIKE
Edward G. Mueller, Omaha, Nebr., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 26, 1958, Serial No. 51,078
Term of patent 7 years
(Cl. D54—2)



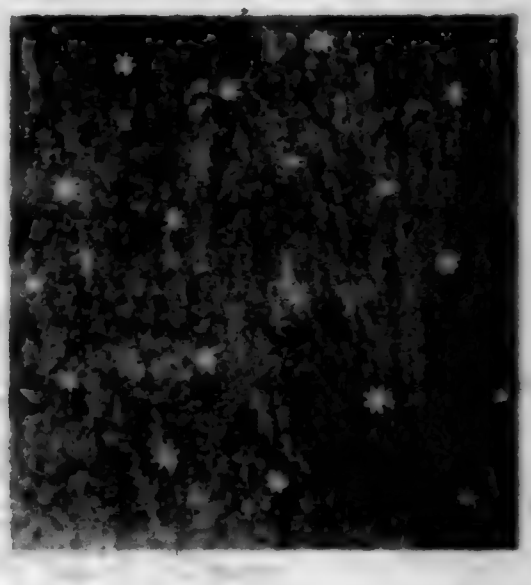
184,111
ARM CHAIR
George Nelson, Quogue, and John F. Pile, Brooklyn, N. Y., assignors to Herman Miller Furniture Company, Zeeland, Mich., a corporation of Michigan
Application October 3, 1957, Serial No. 47,954
Term of patent 14 years
(Cl. D15—1)

184,112
POURING SPOUT
Efrem M. Ostrowsky, Highland Park, Ill., assignor to Jules P. Gitz and Joseph A. Gitz, River Forest, Ill.
Application September 11, 1957, Serial No. 47,721
Term of patent 14 years
(Cl. D28—26)

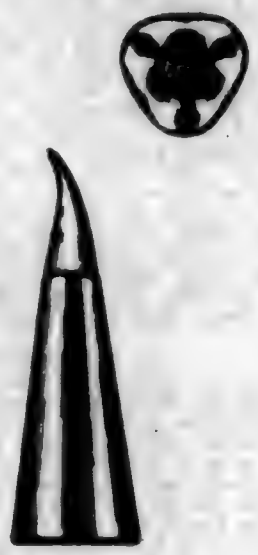
184,113
JEWELRY BOX OR THE LIKE
William J. Reilly, Attleboro, Mass.
Application April 4, 1958, Serial No. 50,339
Term of patent 14 years
(Cl. D58—11)



184,114
LINOLEUM SURFACE COVERING OR SIMILAR ARTICLE
Elizabeth W. Rice, East Orange, N. J., assignor to Congoleum-Nairn Inc., Kearny, N. J., a corporation of New York
Application November 19, 1956, Serial No. 43,836
Term of patent 14 years
(Cl. D92—17)



184,115
COMBINED BOTTLE AND DISPENSER CAP
William Stark, Elmhurst, Ill.
Application November 27, 1957, Serial No. 48,697
Term of patent 14 years
(Cl. D58—7)



184,116
DRUM LID
James C. Witt, Terrace Park, Ohio, assignor to The Witt Cornice Company, Cincinnati, Ohio, a corporation of Ohio
Application February 27, 1958, Serial No. 49,823
Term of patent 14 years
(Cl. D50—26)

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Anderson, Clarence W., to Norton Co. Diamond cut-off wheel. Re. 24,576, 12–16–58, Cl. 51—206.

Di Costanzo, Pasquale F. Spaghetti bowl. Re. 24,575, 12–16–58, Cl. 220—88.

Fetterly, Lloyd C., to Shell Development Co. Production of aromatic compounds. Re. 24,579, 12–16–58, Cl. 260—668.

Haines, John R., deceased, to Injection Molding Co. Machine for and method of forming hollow plastic articles. Re. 24,577, 12–16–58, Cl. 18—5.

Injection Molding Co.: See—
Haines, John R. Re. 24,577.

Norton Co.: See—
Anderson, Clarence W. Re. 24,576.

Shell Development Co.: See—
Fetterly, Lloyd C. Re. 24,579.

Villa Torre, Alfonso. Bed assembly. Re. 24,578, 12–16–58, Cl. 5—9.

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Augenstein, Karl C., to Speidel Corp. Bracelet link or similar article. 184,078, 12–16–58, Cl. D45—4.

Augenstein, Karl C., to Speidel Corp. Bracelet link or similar article. 184,079, 12–16–58, Cl. D45—4.

Beatty, Edward W., to Richard G. Krueger, Inc. Combination talcum powder container and brush dispenser or similar article. 184,080, 12–16–58, Cl. D58—17.

Bell & Howell Co.: See—
Macomber, Clark C. 184,085.

Bels, Sam. Ottoman. 184,081, 12–16–58, Cl. D15—8.

Chicopee Mills, Inc.: See—
McCord, Douglas D. 184,096–184,106.

Colton, Andrew. Television antenna or similar article. 184,082, 12–16–58, Cl. D20—14.

Congoleum-Nairn Inc.: See—
Rice, Elizabeth W. 184,114.

Crabbe, Lindsay T., to Phoenix Metal Cap Co. Bottle cap. 184,083, 12–16–58, Cl. D58—26.

Daugherty, Charles R. Toy bombsight. 184,084, 12–16–58, Cl. D34—15.

Davidow, Melville. Dress ensemble. 184,085, 12–16–58, Cl. D3—26.

Daystrom, Inc.: See—
Hunt, Guilbert M. 184,091.

Dube, Alfred, to Stetson China Co. Plate or similar article. 184,086, 12–16–58, Cl. D44—15.

Dube, Alfred, to Stetson China Co. Plate or similar article. 184,087, 12–16–58, Cl. D44—15.

Edgar, Harold G., to Tucker Products Co. Combined pizza pie cutter and server. 184,088, 12–16–58, Cl. D44—29.

General Motors Corp.: See—
Lange, William F. 184,093.
Mueller, Edward G. 184,109.
Mueller, Edward G. 184,110.

Gits, Joseph A.: See—
Ostrowsky, Efrem M. 184,112.

Gits, Jules P.: See—
Ostrowsky, Efrem M. 184,112.

Grinberg, Leonard. Embroidered nylon fabric or similar article. 184,089, 12–16–58, Cl. D92—1.

Hamilton, John J., to Westinghouse Electric Corp. Food mixer. 184,090, 12–16–58, Cl. D44—1.

Hunt, Guilbert M., to Daystrom, Inc. Photoelectric exposure meter. 184,091, 12–16–58, Cl. D61—1.

Kremer, Lucien. Thermometer. 184,092, 12–16–58, Cl. D52—7.

Krueger, Richard G., Inc.: See—
Beatty, Edward W. 184,080.

Lange, William F., to General Motors Corp. Automobile grille unit or the like. 184,093, 12–16–58, Cl. D54—2.

Little, John M., to Toledo Scale Corp. Weighing scale. 184,094, 12–16–58, Cl. D52—10.

Macomber, Clark C., to Bell & Howell Co. Flash unit for photographic cameras. 184,095, 12–16–58, Cl. D61—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,096, 12–16–58, D92—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,097, 12–16–58, Cl. D92—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,098, 12–16–58, Cl. D92—1.

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McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,100, 12–16–58, Cl. D92—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,101, 12–16–58, Cl. D92—1.

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McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,104, 12–16–58, Cl. D92—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,105, 12–16–58, Cl. D92—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,106, 12–16–58, Cl. D92—1.

Mikulski, Frank P. Tray for a drill press. 184,107, 12–16–58, Cl. D63—1.

Miller, Herman Furniture Co.: See—
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Moyer, John W. Tongs. 184,108, 12–16–58, Cl. D44—4.

Mueller, Edward G., to General Motors Corp. Automobile grille unit or the like. 184,109, 12–16–58, Cl. D54—2.

Mueller, Edward G., to General Motors Corp. Automobile grille unit or the like. 184,110, 12–16–58, Cl. D54—2.

Nelson, George, and J. F. Pile, to Herman Miller Furniture Co. Arm chair. 184,111, 12–16–58, Cl. D15—1.

Ostrowsky, Efrem M., to J. P. and J. A. Gits. Pouring spout. 184,112, 12–16–58, Cl. D58—26.

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Pile, John F.: See—
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Reilly, William J. Jewelry box or the like. 184,113, 12–16–58, Cl. D58—11.

Rice, Elizabeth W., to Congoleum-Nairn Inc. Linoleum surface covering or similar article. 184,114, 12–16–58, Cl. D92—17.

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Hamilton, John J. 184,090.

Witt Cornice Co., The: See—
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Witt, James C., to The Witt Cornice Co. Drum lid. 184,116, 12–16–58, Cl. D58—26.

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TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A. B. Svenska Flaktfabriken: *See*—
Gustafsson, Stig. 2,864,459.
Abbott Laboratories: *See*—
Taylor, Julius D. 2,864,821.
Abkowitz, Stanley, and P. E. Moorhead, to Mallory-Sharon Titanium Corp. Titanium base aluminum-tantalum-columbium alloys. 2,864,698, 12–16–58, Cl. 75—175.5.
Abkowitz, Stanley, and P. E. Moorhead, to Mallory-Sharon Titanium Corp. Titanium base alpha aluminum-columbiumtantalum alloy. 2,864,699, 12–16–58, Cl. 75—175.5.
Achenbach, John C., to Radio Corp. of America. Fine tuning control system for television receivers having same range on each channel. 2,864,946, 12–16–58, Cl. 250—20.
Acme Steel Co.: *See*—
Hall, Marchand B. 2,864,582.
Adams, Edmond, A. M. Byrles, and W. M. Hubbard, to United States of America, Navy. Magnetic flake core and method of preparation. 2,864,734, 12–16–58, Cl. 148—104.
Adams, George L.: *See*—
McCarthy, Vincent J., and Adams. 2,864,601.
Adams, John N.: *See*—
Jean, James W. 2,864,675.
Adams, John R., to Cline Electric Mfg. Co. Spray gun. 2,864,649, 12–16–58, Cl. 299—140.1.
Adams, Monte E. Cultivating and weeding implements. 2,864,297, 12–16–58, Cl. 97—68.
Adams, Pierrepont: *See*—
Wohnsiedler, Henry P., and Adams. 2,864,861.
Adams, Ray D., and A. G. Ahre. Disposable shoe polishing kit. 2,864,118, 12–16–58, Cl. 15—258.
Addressograph-Multigraph Corp.: *See*—
Hueber, Carl J. 2,864,308.
Aeroquip Corp.: *See*—
Beaver, George A., Christophersen, and Bartusch. 2,864,149.
Agarwal, Jagdish C., to United States Steel Corp. Method of treating iron oxide fines. 2,864,696, 12–16–58, Cl. 75—3.
Agnello, Eugene J., to Chas. Pfizer & Co., Inc. Derivatives of oxygenated steroids. 2,864,832, 12–16–58, Cl. 260—397.45.
Agnello, Eugene J., and G. D. Laubach, to Chas. Pfizer & Co., Inc. 11-oxygenated derivatives of $\Delta^{4,9}$-19-norandrostadiene. 2,864,830, 12–16–58, Cl. 260—397.3.
Ahlborg, Knut, and K. N. Cederquist, to Stora Kopparbergs Bergslags Aktiebolag. Method for recovering sulfur and alkali from waste liquors. 2,864,669, 12–16–58, Cl. 23—131.
Ahre, Allen G.: *See*—
Adams, Ray D., and Ahre. 2,864,118.
Aigrain, Pierre R. R., and M. C. E. Bataille, to International Standard Electric Corp. Hybrid circuits for connecting a four wire transmission line to a two wire transmission line. 2,864,901, 12–16–58, Cl. 179—170.
Aiken, William R., to Kaiser Industries Corp. Electronic device. 2,864,970, 12–16–58, Cl. 315—35.
Aircraft Radio Corp.: *See*—
Drake, Frederick H. 2,864,942.
Air Reduction Co., Inc.: *See*—
Balcar, Frederick R., and Dennis. 2,864,757.
Hay, Wayne W. 2,864,263.
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Blatter, Hans. 2,864,991.
Kull, Fritz, Maag, and Steinmann. 2,864,922.
Albrecht, Otto, and A. Hierstand, to Ciba Ltd. Salts of new hardenable, basic, ternary condensation products. 2,864,781, 12–16–58, Cl. 260—21.
Aldington, Elmer T., to American Can Co. Cover for paper containers. 2,864,546, 12–16–58, Cl. 229—43.
Allbright-Nell Co., The: *See*—
Gilliman, Harold K. 2,864,304.
Allen, R. C., Business Machines, Inc.: *See*—
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Allen, Robert T. Coin counter and wrapper. 2,864,286, 12–16–58, Cl. 133—8.
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Waters, Charles E., and Smith. 2,864,685.
Allied Research Products, Inc.: *See*—
Kinder, David H., and Stricklen. 2,864,730.
Allis, Louis, Co., The: *See*—
Bradburn, William J., Jr., and Hansen. 2,864,989.
Altick, Robert L. Shell retainer and dispenser. 2,864,541, 12–16–58, Cl. 224—14.
Altman, Howard W., and H. L. Johnston, said Altman to Herrick L. Johnston, Inc. Container for liquefied gas. 2,864,527, 12–16–58, Cl. 220—14.

Alves, Del. Instrument for lancing snake-bites. 2,864,370, 12–16–58, Cl. 128—314.
Amberg, Walter E. Rotary torque transmitting joint. 2,864,246, 12–16–58, Cl. 64—12.
American Can Co.: *See*—
Aldington, Elmer T. 2,864,546.
Pottle, Ralph K., and Eckland. 2,864,710.
American Cyanamid Co: *See*—
Fluck, Linton A., Cooke, and Roth. 2,864,723.
Mendelsohn, Harold, Smith, and Origoni. 2,864,834.
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American Machine and Metals, Inc.: *See*—
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American Measuring Instruments Corp.: *See*—
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American Metal Products Co.: *See*—
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Flint, Hyland C. 2,864,435.
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Ulrich, Theodore. 2,864,430.
American National Bank and Trust Co. of Chicago: *See*—
Burnside, Walter M. 2,864,619.
Hooker, Donald R., and Troeller. 2,864,620.
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American Radiator & Standard Sanitary Corp.: *See*—
Haagens, Robert G., and Swainson. 2,864,256.
American Viscose Corp.: *See*—
Cornwell, Ralph T. K. 2,864,788.
Phifer, Lyle H. 2,864,279.
Anderson, Norman, to Sir George Godfrey & Partners (Holdings) Ltd. Shaft or like bearings. 2,864,552, 12–16–58, Cl. 230—116.
Anderson, Vyron E., to Cedar Rapids Engineering Co. Engine reconditioning equipment. 2,864,266, 12–16–58, Cl. 77—2.
Apra Precipitator Corp: *See*—
Klemperer, Hans. 2,864,457.
Arborgh, Åke, to Aktiebolaget Svenska Flaktfabriken. Filter for cleansing of a dust-contaminated gaseous medium. 2,864,598, 12–16–58, Cl. 261—80.
Armstrong Cork Co.: *See*—
Le Sage, Eugene J. 2,864,104.
Arneman, Arthur D., and P. O. Edwards, to Johnson Mfg. Co. Gang saw. 2,864,413, 12–16–58, Cl. 143—60.
Arpaia, Michael A. Fuel carbureting system. 2,864,597, 12–16–58, Cl. 261—47.
Arth, Glen E., G. I. Poos, and L. H. Sarett, to Merck & Co. Δ^{5}-11,16,20-triketo-pregnene 3-ketals and process. 2,864,818, 12–16–58, Cl. 260—239.55.
Arth, Glen E., G. I. Poos, and L. H. Sarett, to Merck & Co. $\Delta^{5,16}$-11,20-diketo-16-(organic sulfonoxy)-pregnadiene-3-ketals and process. 2,864,819, 12–16–58, Cl. 260—239.55.
Arthur, George R: *See*—
Burdick, Clinton D., Arthur, and Brannin. 2,864,570.
Artsay, Nicholas C., to Foster Wheeler Corp. Vapor generators. 2,864,344, 12–16–58, Cl. 122—494.
Asahi Kasei Kogyo Kabushiki Kaisha: *See*—
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Ash, Alvin G.: *See*—
Rasmussen, William B. 2,864,538.
Ashauer, Karl, M. Kalvesberg, and H. Dorpmund, to Volkswagenwerk G. m. b. H. Synchronizer. 2,864,476, 12–16–58, Cl. 192—53.
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Ashton, Albert A., to Youngstown Sheet and Tube Co. Hydraulic couplings with means providing for misalignment of input and output shafts. 2,864,240, 12–16–58, Cl. 60—54.
Aspergren, Brooke D.: *See*—
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Liedberg, Kurt H., and Peterson. 2,864,653.
Augustin, Johann W., to C. Lorenz, Akt. Pageprinter. 2,864,482, 12–16–58, Cl. 197—49.
Automatic Draft and Stove Co., Inc.: *See*—
Harding, George W. 2,864,358.
Auxim l'Auxiliaire de l'Industrie et des Mines: *See*—
Lemoine, André A. A. E. 2,864,580.
Bachman, Gustave B., and T. J. Logan, to Purdue Research Foundation. Process for the production of haloalkane nitrates. 2,864,853, 12–16–58, Cl. 260—467.

Bradburn, William J., Jr., and H. R. A. Hansen, to The Louis Allis Co. Adjustable speed drive for D. C. electric
Burgess Battery Co.: *See*—
Rawson, Edward B., and Whelan. 2,864,286.

Bachmann, Gunnar, deceased; G. Bachmann, administrator. Photographic fishing apparatus. 2,864,195, 12-16-58, Cl. 43—4.

Backer, Leon C. Cable type straight hole device. 2,864,585, 12-16-58, Cl. 255—28.

Backlert, Bror, E. Lange, and S. Wallin, to Aktiebolaget Svenska Flaktfabriken. Web-guiding apparatus. 2,864,176, 12-16-58, Cl. 34—122.

Bader, Alfred R., to Pittsburgh Plate Glass Co. Cyclopentenyl phenols and method for preparing them. 2,864,868, 12-16-58, Cl. 260—621.

Baer, Donald R., and J. R. Mahan, to Phillips Petroleum Co. Process for polymerizing aldehydes. 2,864,827, 12-16-58, Cl. 260—340.

Baier, Walter: *See*—
Von Linde, Robert, and Baier. 2,864,439.

Baier, Wilhelm, K. G.: *See*—
Von Linde, Robert, and Baier. 2,864,439.
Von Linde, Robert, and Friedl. 2,864,960.

Bailes, Richard H., D. A. Ellis, and R. S. Long, to United States of America, Atomic Energy Commission. Anionic exchange process for the recovery of uranium and vanadium from carbonate solutions. 2,864,667, 12-16-58, Cl. 23—14.5.

Bailey, Keith A.: *See*—
Christensen, Howard W., Tuck, and Bailey. 2,864,473.

Balcar, Frederick R., and W. Dennis, to Air Reduction Co., Inc. Ozone concentration and dilution. 2,864,757, 12-16-58, Cl. 204—176.

Baldwin, Maynard M., to Permachem Corp. Germicidally active soap containing reaction product of silver salt and ethylenethiourea. 2,864,768, 12-16-58, Cl. 252—107.

Baldwin, Willis H., and C. E. Higgins, to United States of America, Atomic Energy Commission. Uranium extraction process. 2,864,668, 12-16-58, Cl. 23—14.5.

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Podgorski, Walter F. 2,864,217.

Balsiger, Harold E., to Landis Tool Co. Crank loader. 2,864,200, 12-16-58, Cl. 51—215.

Balsiger, Harold E., and R. E. Price, to Landis Tool Co. Method of plunge grinding. 2,864,211, 12-16-58, Cl. 51—289.

Bandli, John C., and L. W. Foster, to McCulloch Corp. Intake manifold for internal combustion engines. 2,864,349, 12-16-58, Cl. 123—52.

Bandy, Owen L.: *See*—
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Barber, Everett M., and C. W. Davis, to The Texas Co. Internal combustion engine. 2,864,347, 12-16-58, Cl. 123—32.

Bard, Francis N.: *See*—
Bristenstein, Victor W. 2,864,630.

Bark, Andrew, to Raytheon Mfg. Co. Intelligence transmission. 2,865,018, 12-16-58, Cl. 340—167.

Barnes, W. F., and John, Co.: *See*—
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Bartram, Ronald, to The General Electric Co., Ltd. Ore reclaiming machines. 2,864,514, 12-16-58, Cl. 214—10.

Bartu, Franz, and A. Siesacsek, to Maerz Industrie-Ofenbau A. G. Reverberatory furnace. 2,864,602, 12-16-58, Cl. 263—46.

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Bartz, Melvin C., to Bendix Aviation Corp. Fuel supply system. 2,864,354, 12-16-58, Cl. 123—119.

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Bataille, Maurice C. E.: *See*—
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Batdorf, Jack B., to Hercules Powder Co. Cogeneric glycol ethers of partial esters of pentaerythritol and rosin. 2,864,810, 12-16-58, Cl. 260—104.

Bates, Verne R., to Wright Sales Co., Inc. Head rail assembly for Venetian blinds. 2,864,441, 12-16-58, Cl. 160—173.

Battelle Development Corp., The: *See*—
Miller, Paul D., and Jefferys. 2,864,782.

Bauer, Alfons. Device for indicating and recording the distance and speed of travel of motor vehicles. 2,864,603, 12-16-58, Cl. 264—1.

Bauer Bros. Co., The: *See*—
Eberhardt, Lee E., and Woodruff. 2,864,562.

Bauer, George W: *See*—
Busch, Lee S., Bauer, and Moorhead. 2,864,607.

Bauerlein, Carl C., and J. C. Janquart, to The Dole Valve Co. Fluid metering device. 2,864,530, 12-16-58, Cl. 222—54.

Beare, Charles H., to General Motors Corp. Method of molding. 2,864,130, 12-16-58, Cl. 18—59.

Becht, Richard J.: *See*—
Heidorn, John H., and Becht. 2,864,551.

Beck, Kenneth H., to Minneapolis-Honeywell Regulator Co. Electrical control apparatus. 2,864,965, 12-16-58, Cl. 318—207.

Becker, Wilhelm, G. Krill, and O. Nee, to Untertage-Maschinenbau G. m. b. H. Steel link belts. 2,864,487, 12-16-58, Cl. 198—198.

Beckling, Augustus G. T. P. Blom, and P. Borman, to North American Philips Co., Inc. Translator amplifier with gain control. 2,864,903, 12-16-58, Cl. 179—171.

Becton, Dickinson and Co.: *See*—
Samuhler, Constantin, and Vintraud. 2,864,365.

Bell Telephone Laboratories, Inc.: *See*—
De Lange, Owen E. 2,864,953.
Kock, Winston E. 2,865,008.
Smith, James L. 2,864,976.
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Bartz, Melvin C. 2,864,354.
Camp, Leon W. 2,864,592.
Dombeck, Edward K. 2,864,468.
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Berlepsch, Joseph C., Jr.: *See*—
Crowley, Cornelius J., and Berlepsch. 2,864,617.

Bernard, Arthur A. and R. A. Method and apparatus for fluid flux arc welding. 2,864,934, 12-16-58, Cl. 219—74.

Bernard, Richard A.: *See*—
Bernard, Arthur A. and R. A. 2,864,934.

Bertin, Jean H.: *See*—
Paris, Francois G., Foll, Meulien, and Bertin. 2,864,235.

Best Foods, Inc., The: *See*—
Murray, Harry A., Sexton, and Meinick. 2,864,702.

Bethlehem Steel Co.: *See*—
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Bethurum, George M.: *See*—
Jones, Claude A., Jr., Bethurum, and Mohr. 2,864,221.

Betts, Kenneth R., and M. R. Whitman, to General Motors Corp. Vehicle ventilator. 2,864,299, 12-16-58, Cl. 98—2.

Beveridge, William: *See*—
Woldring, Egbert, and Beveridge. 2,864,319.

Beyerstedt, Ralph L., to The Frank G. Hough Co. Tractor loaders. 2,864,518, 12-16-58, Cl. 214—510.

Bierman, Raymond C.: *See*—
Dale, Colin B., Bridenbaugh, and Bierman. 2,864,894.

Bihaly, Lajos. Fused fabric assemblies. 2,864,151, 12-16-58, Cl. 28—78.

Bish, Donald H. Rotary internal combustion engine. 2,864,348, 12-16-58, Cl. 123—44.

Bivens, Maurice E., and W. B. Hills, to General Electric Co. Electric timer. 2,864,947, 12-16-58, Cl. 250—27.

Bjorksten Research Laboratories, Inc.: *See*—
Katz, Irving, and Thomas. 2,864,780.
Lappala, Risto P. 2,864,492.

Black, Willis E. Battery connector. 2,865,012, 12-16-58, Cl. 339—238.

Bland, Dell J. Safety barrier for automobile window. 2,864,648, 12-16-58, Cl. 296—106.

Blatter, Hans, to Akt. Brown, Boveri & Cie. Mechanical current converter. 2,864,991, 12-16-58, Cl. 321—48.

Blom, Paul: *See*—
Becking, Augustus G. T., Blom, and Boxman. 2,864,903.

Bodian, Marcus, and W. B. Rosenfeld, to Sunbeam Lighting Co. Shallow luminous fluorescent lighting fixture. 2,864,930, 12-16-58, Cl. 240—51.11.

Bolander, Grover T. Dry concentrator. 2,864,501, 12-16-58, Cl. 209—470.

Bond, Donald C., and O. C. Holbrook, to The Pure Oil Co. Process for selectively and temporarily sealing a geological formation having zones of varying permeability. 2,864,448, 12-16-58, Cl. 166—22.

Boontje, Jan, and H. Lauterslager, to North American Philips Co., Inc. Device for recording sound oscillations in spiral grooves on a plate-shaped carrier. 2,864,896, 12-16-58, Cl. 179—100.4.

Booth, Harry T., F. E. Carroll, Jr., and K. O. Parker, to United Aircraft Products, Inc. Heat transfer method. 2,864,588, 12-16-58, Cl. 257—1.

Booth, Harry T., F. E. Carroll, Jr., and K. O. Parker, to United Aircraft Products, Inc. Heat transfer device. 2,864,589, 12-16-58, Cl. 257—2.

Booth, William M., to Gardner-Denver Co. Combination air filter and lubricator. 2,864,484, 12-16-58, Cl. 184—55.

Borden Co., The: *See*—
Fouts, Fred, Jr., and Erekson. 2,864,704.
Mitchell, James S. 2,864,782.

Boruvka, Otto. Barbecue fork. 2,864,163, 12-16-58, Cl. 30—129.

Bossard, Werner, J. Voltz, and F. Favre, to J. R. Geigy, A.-G. Water soluble dye salts. 2,864,812, 12-16-58, Cl. 260—146.

Bossard, Werner, J. Voltz, and F. Favre, to J. R. Geigy, A.-G. Water soluble colour salts. 2,864,813, 12-16-58, Cl. 260—146.

Bourdeau, Eusebe A., to La Telemecanique Electrique (Societe Anonyme). Monitoring device for polyphase power supply systems. 2,864,915, 12-16-58, Cl. 200—116.

Bowland, Andrew. Pneumatically sealed goggle valves. 2,864,407, 12-16-58, Cl. 138—94.5.

Bowser, Phillip C.: *See*—
Olley, Maurice, and Bowser. 2,864,573.

Boxman, Pieter: *See*—
Becking, Augustus G. T., Blom, and Boxman. 2,864,903.

Boyce, Joseph, and E. Kauta, to Vitro Corp. of America. Glazed ceramic bodies and methods for producing same. 2,864,711, 12-16-58, Cl. 106—39.

Brace, George A., to The Hoover Co. Disposable filter bag for suction cleaners. 2,864,462, 12-16-58, Cl. 183—51.

Chandler, A. R.: *See*—
Jean, James W. 2,864,675.

Cooke, Theodore F.: *See*—
Fluck, Linton A., Cooke, and Roth. 2,864,723.

Cornell-Dubilier Electric Corp.: *See*—

Bradburn, William J., Jr., and H. R. A. Hansen, to The Louis Allis Co. Adjustable speed drive for D. C. electric motors. 2,864,989, 12–16–58, Cl. 318—331.

Bradley, Robert O., and C. H. Maurice, Jr., to Toledo Scale Corp. Hanger shaft for unit weights. 2,864,606, 12–16–58, Cl. 265—60.

Brands, George B. Protector for highway markings. 2,864,331, 12–16–58, Cl. 116—63.

Brandt Automatic Cashier Co.: *See*—
Buchholz, Arnold R., and Sprenger. 2,864,385.

Brannin, Richard S.: *See*—
Burdick, Clinton D., Arthur, and Brannin. 2,864,570.

Braun, C. F., & Co.: *See*—
White, Gerald A. 2,864,772.

Braunschweig, Georges: *See*—
Marti, Fritz, Braunschweig, and Schaad. 2,864,661.

Brennan, Joseph B. Apparatus and method for producing metal strip. 2,864,137, 12–16–58, Cl. 22—57.3.

Breslau, Harold R. Supporting device. 2,864,576, 12–16–58, Cl. 248—166.

Bressler, Calvin J. Wrecking and stripping bar. 2,864,583, 12–16–58, Cl. 254—131.

Brettell, George A., Jr., and F. Pierce, to United States of America, Navy. Friction drive mechanism. 2,864,262, 12–16–58, Cl. 74—198.

Bridenbaugh, Paul K.: *See*—
Dale, Colin B., Bridenbaugh, and Bierman. 2,864,894.

Brietenstein, Victor W., to F. N. Bard. Angularly movable ball and socket joint having bearing means providing surface contact with the movable member. 2,864,630, 12–16–58, Cl. 285—261.

Bright, Harold T., to Robertson Mfg. Co. Rotary lawn mower. 2,864,226, 12–16–58, Cl. 56—25.4.

Brock Equipment Co.: *See*—
Swanson, Edwin C. 2,864,272.

Broman, Bror O., to Aktiebolaget A. Ekstroms Maskinaffar. Cleaning the gas-swept heating surfaces of heat exchangers. 2,864,587, 12–16–58, Cl. 257—1.

Brooks, Edward H., Jr.: *See*—
Brooks, Edward H., Sr. 2,864,672.

Brooks, Edward H., Sr., 49% to E. H. Brooks, Jr. Organic waste reduction apparatus. 2,864,672, 12–16–58, Cl. 23—259.1.

Brooks, E. J., Co.: *See*—
Tierney, Joseph E. 2,864,188.

Brooks, Robert M., and V. R. Grassie, to Hercules Powder Co. Improved process for the manufacture of chlorinated rubber. 2,864,876, 12–16–58, Cl. 260—772.

Brotzmann, Karl: *See*—
Harders, Fritz, Knüppel, and Brotzmann. 2,864,877.

Brown, Arthur J., C. F. Osgood, Jr., and W. M. Grosvenor, Jr., to General Strapping Corp. Automatic package banding or strapping machine. 2,864,303, 12–16–58, Cl. 100—27.

Brown, Arthur C. L.: *See*—
Currey, Charles H., and Brown. 2,864,941.

Brown, Jerome E.: *See*—
De Witt, Earl G., Shapiro, and Brown. 2,864,843.

Brownlee, Kenneth H., to National Products Corp. Marking apparatus for applying printed indicia to a moving web. 2,864,309, 12–16–58, Cl. 101—244.

Broyles, Horace N.: *See*—
Wilson, James S., Perman, Hansen, Broyles, Evans, Pavout, and Kindel. 2,864,218.

Bruce Engineering Corp.: *See*—
Bruce, John K. 2,864,212.

Bruce, John K., to Bruce Engineering Corp. Packaging method and apparatus. 2,864,212, 12–16–58, Cl. 53—3.

Bruegger, Ernest, and P. S. Otten, to The Griscom-Russell Co. Heat exchanger construction. 2,864,404, 12–16–58, Cl. 138—38.

Bruger, Charles W., deceased; W. S. Usher, executor, to L. Taffe. Shaft and holder for cleaning implements. 2,864,110, 12–16–58, Cl. 15—144.

Brumfield, John C., to I-T-E Circuit Breaker Co. Mechanism for motor operation of a circuit breaker. 2,864,911, 12–16–58, Cl. 200—92.

Brummer, Edmund A.: *See*—
Ikard, Wallace L., and Brummer. 2,864,568.

Brutting, Ludwig, to M. Fuchs. Toys with independent release mechanisms for each winding drum. 2,864,200, 12–16–58, Cl. 46—40.

Bryant Electric Co., The: *See*—
Taylor, Owen L. 2,865,010.

Bryant, Ellis H., Jr., to J. L. Franklin. Recording apparatus. 2,864,803, 12–16–58, Cl. 179—100.2.

Buchholz, Arnold R., and W. H. Sprenger, to Brandt Automatic Cashier Co. Coin dispensing machine. 2,864,385, 12–16–58, Cl. 133—2.

Buck, Ralph. Divider. 2,864,172, 12–16–58, Cl. 33—153.

Buckley, William J., to The La Resista Corset Co. Brassiere. 2,864,372, 12–16–58, Cl. 128—481.

Buckley, William J., to The La Resista Corset Co. Brassiere. 2,864,373, 12–16–58, Cl. 128—481.

Budnick, Joseph, to Electrical Fittings Corp. Die head providing quick change of chasers. 2,864,102, 12–16–58, Cl. 10—121.

Bull, Richard, and R. Eland, to Standard Coil Products Co., Inc. Crystal controlled television tuner. 2,864,945, 12–16–58, Cl. 250—20.

Bungardt, Walter, to Th. Goldschmidt, A. G., Chemische Fabriken. Method of continuously protecting pyrophoric flint material manufactured by extrusion. 2,864,160, 12–16–58, Cl. 29—473.3.

Burdick, Clinton D., G. R. Arthur, and R. S. Brannin, to Sperry Rand Corp. Servo system for controlling dirigible craft with primary and trim-tab surfaces. 2,864,570, 12–16–58, Cl. 244—78.

Burgess Battery Co.: *See*—
Rawson, Edward R., and Whalen. 2,864,285.

Burns, Erwin. Multiple unit packing casing bowl. 2,864,450, 12–16–58, Cl. 166—218.

Burns, Laurence, to Sylvania Electric Products Inc. Non-actinic fluorescent lamp. 2,864,966, 12–16–58, Cl. 313—109.

Burnside, Walter M., to American National Bank and Trust Co. of Chicago, executor of the estate of R. T. Moloney, deceased. Ball game searching and scoring circuit. 2,864,619, 12–16–58, Cl. 273—121.

Burroughs Corp.: *See*—
Wockenfuss, William. 2,864,558.

Burton, Raymond A.: *See*—
Le Bihan, Henri, Godart, and Burton. 2,864,779.

Busch, Lee S., G. W. Bauer, and P. E. Moorhead, to Mallory-Sharon Metals Corp. Titanium-vanadium-aluminum alloys. 2,864,697, 12–16–58, Cl. 75—175.5.

Buss, Benjamin A., to American Machine and Metals, Inc. Washing machine. 2,864,526, 12–16–58, Cl. 220—10.

Buswell, Arthur M. Process for cleaning raw wool. 2,864,746, 12–16–58, Cl. 195—6.

Buts, Arthur N., Jr., to United States of America, Navy. Apparatus and method for echo ranging. 2,865,015, 12–16–58, Cl. 340—6.

Byrne, Edward L., to United States of America, Navy. Pulse regenerator circuit. 2,864,954, 12–16–58, Cl. 250—27.

C. T. Electrical Controls Ltd.: *See*—
Coburn, Wallace A. 2,864,914.

Cable Belt Ltd.: *See*—
Walker, John R. 2,864,489.

Calkins, Vincent P., to United States of America, Atomic Energy Commission. Production of uranium tetrachloride. 2,864,666, 12–16–58, Cl. 23—14.5.

Callery Chemical Co.: *See*—
Nigon, Joseph P. 2,864,754.

Calumet & Hecla, Inc.: *See*—
Frink, Russell M. 2,864,591.

Camp, Leon W., to Bendix Aviation Corp. Liquid-vibrating apparatus. 2,864,502, 12–16–58, Cl. 259—1.

Campbell, Charles L., to Centrifix Corp. Internal purifier. 2,864,463, 12–16–58, Cl. 183—81.

Campbell, Grady E., ¼ to Owen, Morgan & Niland. Shopping aid sheet holders for pushcarts. 2,864,169, 12–16–58, Cl. 40—17.

Camprubi, Bartholomew, to The Hoover Co. Method of making commutators. 2,864,157, 12–16–58, Cl. 29—155.54.

Canadian General Electric Co., Ltd.: *See*—
Barrett, Gerald A., and Patterson. 2,864,916.

Cape, Arthur T., and C. V. Foerster, to Coast Metals, Inc. Brazing alloys. 2,864,693, 12–16–58, Cl. 75—125.

Cara, Michael W.: *See*—
Creasey, Raymond F., Horsfield, and Cara. 2,864,571.

Cardy, Donald K. Method of forming a printed circuit. 2,864,156, 12–16–58, Cl. 29—155.5.

Carkeek, Charles R., D. Eastman, and L. P. Gaucher, to The Texas Co. Process for transporting solid materials, with or without concurrent disintegration. 2,864,560, 12–16–58, Cl. 241—5.

Carlson, John T., to R. C. Allen Businesss Machines, Inc. Quick margin release assembly for typewriters. 2,864,483, 12–16–58, Cl. 197—63.

Caron, Gerard E. Automatic silo ensilage unloader. 2,864,655, 12–16–58, Cl. 302—56.

Carr, Adams & Collier Co.: *See*—
Glab, William T. 2,864,715.

Carr, Laurence H., to Edward Valves, Inc. Valve structure. 2,864,401, 12–16–58, Cl. 137—527.8.

Carroll, Frank E., Jr.: *See*—
Booth, Harry T., Carroll, and Parker. 2,864,588.
Booth, Harry T., Carroll, and Parker. 2,864,589.

Carter, Raymond H., to Sievepak Machinery Corp. Method and apparatus for forming and filling bags. 2,864,213, 12–16–58, Cl. 53—29.

Castel, Jacques H., to Perforating Guns Atlas Corp. Electrical well caliper tool. 2,864,178, 12–16–58, Cl. 33—178.

Casther S. A.: *See*—
Parodi, Felice. 2,864,371.

Castille, Michel R. Ferris wheel type amusement ride. 2,864,614, 12–16–58, Cl. 272—36.

Castille, Michel R. Disc-type merry-go-round. 2,864,615, 12–16–58, Cl. 272—37.

Catallo, Frank, to Samcoe Holding Corp. Fabric slitter. 2,864,165, 12–16–58, Cl. 30—294.

Caul, Harold J.: *See*—
Smith, Denton L., and Caul. 2,864,695.

Caveney, T. John: *See*—
Luppold, George W. 2,864,308.

Cedar Rapids Engineering Co.: *See*—
Anderson, Vyron E. 2,864,268.

Cederquist, Karl N.: *See*—
Ahlborg, Knut, and Cederquist. 2,864,669.

Central Texas Iron Works: *See*—
Williams, John K. 2,864,471.

Centrifix Corp.: *See*—
Campbell, Charles L. 2,864,463.

Chalkley, Lyman. Photosensitive compounds and process of using same. 2,864,751, 12–16–58, Cl. 204—158.

Chalkley, Lyman. Photosensitive compounds. 2,864,752, 12–16–58, Cl. 204—158.

Chalkley, Lyman. Cyanide of soluble blue and method of using same. 2,864,753, 12–16–58, Cl. 204—158.

Champlin, Richard H., to M. E. Schwartz. Floor cleaning implements in the nature of brooms. 2,864,115, 12–16–58, Cl. 15—244.

Chance, A. B., Co.: *See*—
Mackie, Alex. 2,864,653.

Chandler, A. R.: *See*—
Jean, James W. 2,864,675.

Charlton, Malcolm, to American-Marietta Co. Enamel composition and electrical conductor coated therewith. 2,864,786, 12–16–58, Cl. 260—43.

Cheesbrough, James A.: *See*—
Elliott, Harold F., Scott, and Cheesbrough. 2,864,292.

Cheese, Gustave J., H. S. Kawecki, and J. A. Olivier, to General Motors Corp. Vehicle body-frame construction. 2,864,647, 12–16–58, Cl. 296—28.

Chevalier, Georges E., to Mondhacolor. Photomechanical method for preparing multi-color mosaic carriers for additive color photography and cinematography. 2,864,700, 12–16–58, Cl. 96—35.

Chicago Bridge and Iron Co.: *See*—
Hunter, Henry M. 2,864,503.

Chicago Forging and Mfg. Co.: *See*—
Lindner, Adam C. 2,864,635.

Chicopee Mfg. Corp.: *See*—
Sumner, John K., Surowitz, and Yedlick. 2,864,093.

Christenson, Howard W., R. M. Tuck, and K. A. Bailey, to General Motors Corp. Transmission. 2,864,475, 12–16–58, Cl. 192—4.

Christie, Cleve F., 25% to D. A. Harrison. Mop structure. 2,864,113, 12–16–58, Cl. 15—229.

Christophersen, Clarence E.: *See*—
Seaver, George A., Christophersen, and Bartusch. 2,864,149.

Church of Religious Science: *See*—
Strahe, Charles L. 2,864,092.

Ciba Ltd.: *See*—
Albrecht, Otto, and Hiestand. 2,864,781.

Cincinnati Butchers' Supply Co., The: *See*—
Schmidt, William C. 2,864,420.
Schmidt, William C. 2,864,421.
Zaenkert, Frederick A. 2,864,302.

Cincinnati Milling Machine Co., The: *See*—
Seidel, William B. 2,864,622.

Cirlin, Bryon F. Electro-magnetic balance. 2,864,604, 12–16–58, Cl. 265—27.

Cities Service Research and Development Co.: *See*—
Kerschner, Paul M., and Greenwald. 2,864,845.
Sullivan, Alan P. 2,864,999.

Clayfield, Eric J.: *See*—
Matthews, John B., and Clayfield. 2,864,498.

Clejan, Deodat, to Piggy-Back, Inc. Adaptors for landing gears of semitrailer trucks. 2,864,321, 12–16–58, Cl. 105—368.

Clements, MacMillan. Panel construction. 2,864,132, 12–16–58, Cl. 20—15.

Clements, MacMillan. Logistic panel construction for roofs, walls, etc., of buildings. 2,864,824, 12–16–58, Cl. 108—18.

Clements, Shannon K., ⅓ to H. M. Rush. Portable boom support attachment for vehicles. 2,864,625, 12–16–58, Cl. 280—34.

Cline Electric Mfg. Co.: *See*—
Adams, John B. 2,864,849.

Coast Metals, Inc.: *See*—
Cape, Arthur T., and Feurster. 2,864,693.

Cobb, Alfred E. Switch. 2,864,909, 12–16–58, Cl. 200—46.

Coburn, Wallace A., to C. T. Electrical Controls Ltd. Electric circuit breaker. 2,864,914, 12–16–58, Cl. 200—116.

Cochran, Maurice E., 15% to P. Jones, and 15% to F. E. Marvin. Braking or trolling attachment for boats. 2,864,330, 12–16–58, Cl. 114—145.

Cockburn, Stanley D., and C. J. Griswold, Jr., to General Motors Corp. Remote handle blockout for automobile door latch. 2,864,639, 12–16–58, Cl. 292—280.

Cole, Henry L., and H. Spire. Sewing machine. 2,864,327, 12–16–58, Cl. 112—2.

Coleman, Richard E., Jr. Gas turbine engine having rotary compressor and turbine driven by compressed gas. 2,864,237, 12–16–58, Cl. 60—39.45.

Collier Carbon and Chemical Corp.: *See*—
Scott, Carleton B. 2,864,735.
Scott, Carleton B., and Webb. 2,864,739.

Collins, Floyd K.: *See*—
Johnson, Alfred D., and Collins. 2,864,935.

Combs, John W. Child's automobile seat. 2,864,429, 12–16–58, Cl. 155—10.

Commercial Solvents Corp.: *See*—
Young, Vernon V. 2,864,863.

Commonwealth Engineering Co. of Ohio, The: *See*—
Toulmin, Harry A., Jr. 2,864,318.

Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France: *See*—
Long, Bernard. 2,864,203.

Consolidated Electrodynamics Corp.: *See*—
Neff, Glyn A. 2,864,948.

Contina Bureaux -und Rechenmaschinenfabrik Akt.: *See*—
Zaoralek, Stanislaus. 2,864,261.

Continental Can Co., Inc.: *See*—
Dellinger, Orville L., and Scott. 2,864,612.
Henchert, John. 2,864,528.
Henchert, John. 2,864,529.
Royce, Mark B. 2,864,545.

Conway Clutch Co., The: *See*—
Strecker, Carl P. 2,864,481.

Conway, Joseph R.: *See*—
Hurlburt, Charles R., and Conway. 2,864,174.

Cook, George R.: *See*—
Manteuffel, Allan A., and Cook. 2,864,726.

Cook, Henry, to Rolls-Royce Ltd. Fuel systems for gas turbine-engine installations. 2,864,440, 12–16–58, Cl. 158—36.3.

Cook, William R.: *See*—
Doughty, Joseph R., and Cook. 2,864,811.

Cooke, Harold G., Jr., to Devoe & Raynolds Co., Inc. Epoxide resins. 2,864,805, 12–16–58, Cl. 260—47.

Cooke, Theodore F.: *See*—
Finck, Linton A., Cooke, and Roth. 2,864,723.

Cornell-Dubilier Electric Corp.: *See*—
Williamson, Clifford N. 2,864,979.

Cornwell, Ralph T. K., to American Viscose Corp. Resinous film-forming composition and regenerated cellulose film coated therewith. 2,864,782, 12–16–58, Cl. 260—28.5.

Counts, William E., H. W. Smith, and K. Schwartzwalder, to General Motors Corp. Semi-conductor composition. 2,864,773, 12–16–58, Cl. 252—503.

Counts, William E., H. W. Smith, and K. Schwartzwalder, to General Motors Corp. Resistor and spark plug embodying same. 2,864,884, 12–16–58, Cl. 174—152.

Crabbe, Lindsay T., to Phoenix Metal Cap Co., Inc. Safety closure for bottle. 2,864,519, 12–16–58, Cl. 215—9.

Crafts, Cecil A., and F. Page, Jr., to United States of America, Navy. Motor drive system. 2,864,983, 12–16–58, Cl. 318—171.

Creasey, Raymond F., W. D. Horsfield, and M. W. Cara, to The English Electric Co. Ltd. Artificial feel system for aircraft controls. 2,864,571, 12–16–58, Cl. 244—83.

Crise, Wilford P. Vacuum cleaner for drawing air through and intermittently over surface being cleaned. 2,864,119, 12–16–58, Cl. 15—404.

Crocker, Henry P., and R. H. Hall, to Hercules Powder Co. Phenol purification. 2,864,869, 12–16–58, Cl. 260—621.

Croley, Donald R., to Eli Lilly and Co. Process for crystallization of erythromycin. 2,864,817, 12–16–58, Cl. 260—210.

Crowley, Cornelius J., and J. C. Berlepsch, to The Seamless Rubber Co. Tether ball. 2,864,617, 12–16–58, Cl. 273—58.

Croy, Friedrich. Process for the manufacture of electrode pitches. 2,864,760, 12–16–58, Cl. 208—44.

Cruchet, Jules I.: *See*—
Randall, John F., and Cruchet. 2,864,937.

Culleton, John T., to Pacific Pumping Co. High pressure, high temperature pump. 2,864,314, 12–16–58, Cl. 103—96.

Curran, Bernard E., to H. H. Robertson Co. Building and air distributing structure. 2,864,300, 12–16–58, Cl. 98—31.

Currey, Charles H., and A. C. L. Brown, to A. C. Nielsen Co. Monitoring apparatus. 2,864,941, 12–16–58, Cl. 250—2.

Curtenius, Frederick B., to Rice Barton Corp. Paper trimmers with power ejecting means. 2,864,447, 12–16–58, Cl. 164—59.

Curtiss, Lawrence M., to The Thomas & Betts Co. Squeeze connector. 2,864,151, 12–16–58, Cl. 29—505.

Cuykendall, Marie: *See*—
Hamlin, Jerry F., Magnuson, and Daugherty. 2,864,525.

Cuykendall, Ralph M.: *See*—
Hamlin, Jerry F., Magnuson, and Daugherty. 2,864,525.

Daber, Ernest: *See*—
Shanhouse, William M., Daber, and Stopp. 2,864,177.

Daimler-Benz Akt.: *See*—
Wilfert, Karl. 2,864,646.

Dale, Colin B., P. K. Bridenbaugh, and R. C. Bierman, to Webcor, Inc. Magnetic tape recorder. 2,864,894, 12–16–58, Cl. 179—100.2.

Dalglish, Herbert F., to Mark W. Gehan. Thermocouple cable suspension. 2,864,878, 12–16–58, Cl. 136—4.

Da-Lite Screen Co., Inc.: *See*—
Du Mais, Leo J. 2,864,577.

Dalton, Raymond N.: *See*—
Ruscetta, Ralph A., and Dalton. 2,864,962.

Dalton, William L. Knockdown shipping container. 2,864,524, 12–16–58, Cl. 217—12.

Danford, Vance P., to The Sierracin Corp. Electrically conductive optical article. 2,864,928, 12–16–58, Cl. 219—10.

Daniel, David W., to National Broach & Machine Co. Method of crown finishing the teeth of internal gears. 2,864,282, 12–16–58, Cl. 90—1.6.

Daniels, Howard L.: *See*—
Kline, Frank W., Jr., and Daniels. 2,864,968.

Danly Machine Specialties, Inc.: *See*—
Novinger, Cecil E., and Novak. 2,864,087.

Danner, George A., Jr.: *See*—
Polack, Joseph A., Swabb, and Danner. 2,864,764.

Daugherty, Ralph K.: *See*—
Hamlin, Jerry F., Magnuson, and Daugherty. 2,864,525.

Davidson, David E., B. B. Parshall, and D. E. Thal, to Link-Belt Co. Bearing hanger. 2,864,657, 12–16–58, Cl. 308—187.

Davis, Charles W.: *See*—
Barber, Everett M., and Davis. 2,864,347.

Davis, Frank C.: *See*—
Whetstone, Richard R., Davis, and Monroe. 2,864,742.

Davisson, Edwin O., to Eli Lilly and Co. Stabilized thimerosal. 2,864,844, 12–16–58, Cl. 260—133.

Dawson, Edward, to United States of America, Navy. Hydraulic intensifier. 2,864,312, 12–16–58, Cl. 103—51.

DeCanio, Dominick M., to Universal Form Clamp Co. Continuous dowel bar support. 2,864,269, 12–16–58, Cl. 94—8.

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Deere & Co.: *See*—
Du Shane, Wallace H. 2,864,295.
Oehler, William P., and Youngberg. 2,864,222.
Silver, Walter H., and Oerman. 2,864,290.

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Degginger, Edward R., to Allied Chemical Corp. Herbicides related to 1,4,5,6-tetrachlorobicyclo (2.2.1)-5-heptene. 2,864,680, 12–16–58, Cl. 71—2.3.

De Giers, Clarence A., to The Liquidometer Corp. Compensating capacitor. 2,864,981, 12–16–58, Cl. 317—246.

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Delly, Frederic H., and E. C. Fitch, Jr., to Jersey Production Research Co. Desurger for liquid systems. 2,864,403, 12–16–58, Cl. 138—26.
Dejadon, Herman H. Heavy duty terminal connector. 2,865,011, 12–16–58, Cl. 339—150.
Delamater, George B. Control attachment for lawn sprinkling systems. 2,864,650, 12–16–58, Cl. 299—25.
De Lange, Owen E., to Bell Telephone Laboratories, Inc. Microwave pulse circuits. 2,864,953, 12–16–58, Cl. 250—27.
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De Witt, Earl G., H. Shapiro, and J. R. Brown, to Ethyl Corp. Cyclopentadienyl moiety-containing metal monohalides. 2,864,843, 12–16–58, Cl. 260—429.9.
Dickenshied, Charles F., Jr. Silage harvester discharge spout locator. 2,864,517, 12–16–58, Cl. 214—42.
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Diveley, William R., to Hercules Powder Co. Beta-alkylmercaptovinyl dialkyl phosphate and thiophosphate insecticides. 2,864,740, 12–16–58, Cl. 167—22.
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Dixon, John S., Jr., and C. B. Geyer, to National Foam System, Inc. Method of producing aerated cementitious material. 2,864,714, 12–16–58, Cl. 106—88.
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Doughty, Joseph B., and W. R. Cook, to West Virginia Pulp and Paper Co. Methods of treating pulp mill alkaline bleach effluents. 2,864,811, 12–16–58, Cl. 260—124.
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Drake, Frederick H., to Aircraft Radio Corp. Receiver tuning in two-way rado. 2,864,942, 12–16–58, Cl. 250—13.
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Draper, Roy E. Egg candling apparatus. 2,864,261, 12–16–58, Cl. 88—14.5.
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Eaton, Hugh M., Jr., to Gregory Industries, Inc. Method of welding stud assembly. 2,864,936, 12–16–58, Cl. 219—99.
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Eichorn, Robert N., to International Business Machines Corp. Web card stock inspection apparatus. 2,864,277, 12-16-58, Cl. 88—14.

Elrich, Frederick R., D. I. Livingston, and S. L. Reegen, to Polytechnic Institute of Brooklyn. Process for the preparation of abrasive articles. 2,864,129, 12-16-58, Cl. 18—47.5.

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Errede, Louis A., and S. L. Hopwood, Jr., to Minnesota Mining and Mfg. Co. Preparation of aromatic aldehydes and alcohols. 2,864,865, 12-16-58, Cl. 260—599.

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Fluck, Linton A., T. F. Cooke, and P. E. Roth, to American Cyanamid Co. Acid resistant cellulosic material and process for producing same. 2,864,723, 12-16-58, Cl. 117—76.

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Bossard, Werner, Voltz, and Favre. 2,864,813.

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Gray, John B., to Packard Bell Electronics Corp. Recording and reproducing assembly. 2,864,611, 12-16-58, Cl. 271—216.
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Jacks, Elizabeth A., and A. F. Peake. Holder and cap device for a lady's pony-tail hair-do. 2,864,583, 12-16-57, Cl. 132—46.
Jacomini, Gabriel J. Reed structure for musical instrument. 2,864,274, 12-16-58, Cl. 84—363.
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Baserlein, Carl C., and Janquart. 2,864,530.
Jean, James W., 51% to A. R. Chandler, 32% to J. N. Adams, and 17% to R. Turner. Additive for gasoline and Diesel fuels. 2,864,675, 12-16-58, Cl. 44—50.
Jefferys, Richard A.: *See*—
Miller, Paul D., and Jefferys. 2,864,732.
Jenkins, Theron W., Jr., to Leeds and Northrop Co. Control systems. 2,864,542, 12-16-58, Cl. 122—475.
Jenkins, W. L., Co., The: *See*—
Jenkins, Wendell L. 2,864,142.
Jenkins, Wendell L., to The W. L. Jenkins Co. Foundry chill plate. 2,864,142, 12-16-58, Cl. 22—183.
Jensen, James L., to Minneapolis-Honeywell Regulator Co. Semi-conductor circuit. 2,864,904, 12-16-58, Cl. 179—171.
Jensen, James L., to Minneapolis-Honeywell Regulator Co. Semiconductor apparatus. 2,864,962, 12-16-58, Cl. 307—88.5.
Jepson, Ivar, to Sunbeam Corp. Coffee maker filter. 2,864,504, 12-16-58, Cl. 210—238.
Jersey Production Research Co.: *See*—
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Tausch, Gilbert H. 2,864,449.
Walt, Harold V. 2,864,148.
Johnson, Al, and F. Ganger; said Johnson doing business as Valley Futters & Mfg. Co. Machine for folding and locking carton blanks. 2,864,267, 12-16-58, Cl. 93—51.
Johnson, Alfred D., and F. K. Collins, to Sylvania Electric Products Inc. Apparatus for spacing and uniting parts. 2,864,935, 12-16-58, Cl. 219—78.
Johnson, Edward T. Receptacle. 2,864,580, 12-16-58, Cl. 220—97.
Johnson, Harry B. Back plate and harness for aqua-lung. 2,864,361, 12-16-58, Cl. 128—142.
Johnson, Jess A. Fishing plug casting device. 2,864,127, 12-16-58, Cl. 43—19.
Johnson, John. Cement applicator and spreader. 2,864,108, 12-16-58, Cl. 15—135.
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Arneman, Arthur D., and Edwards. 2,864,413.
Johnston, Herrick L.: *See*—
Altman, Howard W., and Johnston. 2,864,527.
Johnston, Herrick L., Inc.: *See*—
Altman, Howard W., and Johnston. 2,864,527.
Jones, Alvin J., to Landis Tool Co. Feed and backlash mechanism. 2,864,207, 12-16-58, Cl. 51—165.
Jones, Claude A., Jr., G. M. Betharum, and G. B. Mohr. Pie packaging machine. 2,864,221, 12-16-58, Cl. 53—372.
Jones, John F., to The B. F. Goodrich Co. Alpha-beta unsaturated dicarboxylic acid-vinyl alkyl ether copolymers stabilized with a water soluble thioamide. 2,864,803, 12-16-58, Cl. 260—45.8.
Jones, Park: *See*—
Cochran, Maurice E. 2,864,330.
Jones, Reuben G., to Eli Lilly and Co. Acylated keto esters and keto nitriles. 2,864,852, 12-16-58, Cl. 260—465.4.
Jones, Rufus V., and C. W. Moberly, to Phillips Petroleum Co. Hydrogenated polybutadiene and process for producing same. 2,864,809, 12-16-58, Cl. 260—85.1.
Josten, Kurt, to International Standard Electric Corp. Blocking oscillator for producing a harmonic frequency spectrum of a high output power. 2,864,955, 12-16-58, Cl. 250—36.
Jucaitis, Pranas, to International Harvester Co. Rodent repellent binder cord comprising naphthenic acid stabilized quinaldine. 2,864,727, 12-16-58, Cl. 117—138.5.
Juntanen, Arthur W. Pickaroon point. 2,864,643, 12-16-58, Cl. 294—61.
Kaar, Ira J., to Hoffman Electronics Corp. Universal phonograph pickup head or the like. 2,864,897, 12-16-58, Cl. 179—100.41.
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Aiken, William E. 2,864,970.
Kalversberg, Manfred: *See*—
Asbauer, Karl, Kalversberg, and Dorpmund. 2,864,476.
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Gurinsky, David H., Kammerer, Sadofsky, and Weeks. 2,864,731.
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Klein, Howard C., and Kapp. 2,864,829.
Karecki, Marion E.: *See*—
Shelton, Winston L., and Karecki. 2,864,312.
Kass, Seymour G. Collar stay for shirts and other garments. 2,864,540, 12-16-58, Cl. 223—83.
Kasten, Walter, to Bendix Aviation Corp. Vertical two stage demulsifier filter assembly. 2,864,505, 12-16-58, Cl. 210—315.
Katz, Irving, and F. L. Thomas, to Bjorksten Research Laboratories, Inc. Transparent resinous substance. 2,864,780, 12-16-58, Cl. 260—18.
Katz, Peter, to American Measuring Instruments Corp. Louvering system. 2,864,301, 12-16-58, Cl. 98—40.
Katz, Peter, to American Measuring Instruments Corp. Portable magnetic recorder. 2,864,564, 12-16-58, Cl. 242—55.12.
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Boyce, Joseph, and Kauts. 2,864,711.
Kawecki, Henry B.: *See*—
Cheens, Gustave J., Kawecki, and Olivier. 2,864,647.
Kaye, Gordon E., to P. R. Mallory & Co., Inc. Battery construction and cell therefor. 2,864,880, 12-16-58, Cl. 136—111.
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Sherwood, Glenn L. 2,864,416.
Kazanowski, John J., to General Electric Co. Electrical terminal. 2,865,018, 12-16-58, Cl. 339—272.
Keim, Gerald I., to Hercules Powder Co. Coated film and method of making same. 2,864,724, 12-16-58, Cl. 117—76
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Stern, Howard H., and Keith. 2,864,256.
Keller, William R., N. E. Kidwell, and D. F. Oliver, to United States of America, Army. Device for inspecting the straightness of bores. 2,864,280, 12-16-58, Cl. 88—14.
Kelley, William D. Press for dental investment material. 2,864,125, 12-16-58, Cl. 18—5.7.
Kemp, Manning H., to The Pure Oil Co. Stuffing boxes. 2,864,631, 12-16-58, Cl. 286—26.
Kendall, Edgar H. Forging manipulator. 2,864,271, 12-16-58, Cl. 78—96.
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Stavrakis, Alexander, and Kennedy. 2,864,621.

Limberg, Alfons A., to General Motors Corp. Inertia latch for vehicle seats. 2,864,432, 12-16-58, Cl. 155—161.
Lincoln, Frank H., W. F. Schneider, O. K. Sebek, and G. B. Maguire, Richard G., and G. W. Hedrick, to Ditto, Inc. Transfer sheet coated with a composition containing a salt and a hydrotrope. 2,864,720, 12-16-58, Cl. 117—36.

Kerschner, Paul M., and R. W. Greenwald, to Cities Service Research and Development Co. Carbon functional organosilicon phosphonates. 2,864,843, 12-16-58, Cl. 260—448.2.
Kershner, Osborn A., and H. Hahn, to Lambert Brake Corp. Fluid displacement device for hydraulic brake systems. 2,864,236, 12-16-58, Cl. 60—54.6.
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Wiedemann, Hans. 2,864,170.
Kidd, Alexander C.: *See*—
Marryatt, Earl A. 2,864,842.
Kidwell, Norman R.: *See*—
Keller, William R., Kidwell, and Oliver. 2,864,280.
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Prodota, Albert J., and Kiefer. 2,864,728.
Kime, Sharon R., to American Metal Products Co. Resilient support for spring. 2,864,426, 12-16-58, Cl. 155—179.
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King, Barnham W., and J. Schultz, Jr., to The Fletcher Enamel Co. Plural coat enameling process. 2,864,721, 12-16-58, Cl. 117—70.
King, William R., to Phillips Petroleum Co. Process and apparatus for recovery of powdered materials such as carbon black. 2,864,674, 12-16-58, Cl. 23—314.
Kirkpatrick, Max B. Mixing machine. 2,864,600, 12-16-58, Cl. 262—7.
Kissenberger, William A. Buoyant receptacle for a diving device. 2,864,101, 12-16-58, Cl. 9—17.
Kissinger, Curtis D. Aircraft. 2,864,567, 12-16-58, Cl. 244—13.
Klabunde, Otto. Protractor ruler and a vernier mechanism therefor. 2,864,169, 12-16-58, Cl. 33—75.
Klamp, Paul, to Mechanical Handling Systems, Inc. Single-station shellmolding machine. 2,864,135, 12-16-58, Cl. 22—20.
Klamp, Paul, to Mechanical Handling Systems, Inc. Speed check device for conveyor system. 2,864,467, 12-16-58, Cl. 188—63.
Klein, Howard C., and R. Kapp, to Nopco Chemical Co. Sterol dehydrohalogenation process. 2,864,829, 12-16-58, Cl. 260—397.2.
Klein, Norman E., to Deering Milliken Research Corp. Tension damper. 2,864,586, 12-16-58, Cl. 242—153.
Kleinknecht, Alfred. Tractor with semi-trailer lifting device. 2,864,627, 12-16-58, Cl. 280—401.
Klemperer, Hans, to Apra Precipitator Corp. Flashover elimination in precipitator. 2,864,547, 12-16-58, Cl. 183—7.
Kline, Frank W., Jr., and H. L. Daniels, to Sperry Rand Corp. Apparatus for speed control. 2,864,968, 12-16-58, Cl. 318—314.
Klingler, Karl A. Sealing means for reciprocating members. 2,864,258, 12-16-58, Cl. 74—18.2.
Knisely, James D., ¼ to J. K. Payne. Bag handling and filling machine. 2,864,219, 12-16-58, Cl. 53—187.
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Kober, William, to TKM Electric Corp. Multiple generator unit. 2,864,964, 12-16-58, Cl. 310—112.
Kobler, Richard, to McGraw-Edison Co. Control system for dictating machines. 2,864,891, 12-16-58, Cl. 179—100.1.
Kock, Winston E., to Bell Telephone Laboratories, Inc. Wave guide elbows. 2,865,003, 12-16-58, Cl. 333—98.
Koehler, Albert C., and A. L. Van Nest, to Western Electric Co., Inc. Apparatus for assembling articles. 2,864,214, 12-16-58, Cl. 53—59.
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Poulter, John W., Hufaker, and Graham. 2,864,475.
Koneyk, Chester W. Phonograph records storage rack. 2,864,506, 12-16-58, Cl. 211—40.
Koppers Co., Inc.: *See*—
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Korber, Kurt, to Kurt Korber & Co. K.-G. Method and means for manufacturing filter mouthpiece cigarettes. 2,864,379, 12-16-58, Cl. 131—94.
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Korber, Kurt. 2,864,379.
Kornfeld, Edmund C.: *See*—
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Koslo, Robert C.: *See*—
Edrich, Paul, Foltzer, Henry, Koslo, Meyer, Osterhus, Richards, Snowball, and Tittle. 2,864,298.
Kottler, August, and H. Scheffler, to Dr. Karl Thomae, G. m. b. H. Sterile, biologically absorbable powder adapted for dusting and spraying, and a process of making same. 2,864,742, 12-16-58, Cl. 167—58.
Kranich, Frederick J. Zinc-tin solder for aluminum. 2,864,733, 12-16-58, Cl. 148—24.
Krause, Jack H., and R. K. Smith, to Houdry Process Corp. Process for nitrating non-aromatic hydrocarbons. 2,864,870, 12-16-58, Cl. 260—644.
Krill, Georg: *See*—
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Kuechen, John A., to United States of America, Navy. Wave guide switch mechanism. 2,865,030, 12-16-58, Cl. 333—7.
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Kull, Fritz H. Maag, and W. Steinmann, to Aktiengesellschaft Brown, Boveri & Cie. Exchangeable contact element for disconnect switches and the like. 2,864,922, 12-16-58, Cl. 200—166.
Kundert, Alex. Safety seal closures. 2,864,521, 12-16-58, Cl. 215—42.
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Oliver, James F., and Kuyper. 2,864,290.
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Oliver, James F. 2,864,336.
La Belle, Donald J., to General Motors Corp. Weight-shifting apparatus for tandem axle vehicles. 2,864,453, 12-16-58, Cl. 180—22.
La Belle, Donald J., to General Motors Corp. Load responsive fluid suspension and traction increasing system for tandem axles. 2,864,464, 12-16-58, Cl. 180—32.
Lafley, William J. Refrigerator safety devices. 2,864,336, 12-16-58, Cl. 109—48.5.
Lambert Brake Corp.: *See*—
Kershner, Osborn A., and Hahn. 2,864,236.
Lampe, Robert C., to Electrolux Corp. Multipurpose nozzle. 2,864,120, 12-16-58, Cl. 15—417.
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Balsiger, Harold E., and Price. 2,864,211.
Jones, Alvin J. 2,864,297.
Lane, Charles C., and W. C. Mahoney. Method and apparatus for sharpening scriber points. 2,864,200, 12-16-58, Cl. 51—157.
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La Pierre, Raymond, to Merck & Co., Inc. Stabilized pantothenic acid compositions. 2,864,701, 12-16-58, Cl. 99—2.
Lappala, Risto P., to Bjorksten Research Laboratories, Inc. Body of polymerizable material containing catalyst and carrier. 2,864,492, 12-16-58, Cl. 206—47.
Lappin, Robert L., and L. Zalger. Power unit for kitchen appliances. 2,864,257, 12-16-58, Cl. 74—16.
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Laubach, Gerald D.: *See*—
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Boontje, Jan, and Lauterslager. 2,864,896.
Lausely, Jean R.: *See*—
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Leach, Clayton B., to General Motors Corp. Valve actuation mechanism. 2,864,351, 12-16-58, Cl. 123—90.
Le Bihan, Henri, J. A. R. Godart, and R. A. Burtea, to Societe Belge de l'Azote et des Produits Chimiques du Marly, S. A. Process of preparing urea-formaldehyde molding powders. 2,864,779, 12-16-58, Cl. 260—17.3.
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Price, Raymond M., Young, Tubbs, and Lee. 2,864,802.
Lee, Robert P., and H. G. Rodman, to National Lead Co. Process for treating titanium metal. 2,864,690, 12-16-58, Cl. 75—84.4.
Lee, Thomas H., to General Electric Co. Pressure measuring arrangement for a vacuum circuit interrupter. 2,864,966, 12-16-58, Cl. 324—33.
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Jenkins, Theron W., Jr. 2,864,343.
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Paris, François G., Le Foll, Meulien, and Bertin. 2,864,235.
Leise, Ralph G. Inflated discus. 2,864,201, 12-16-58, Cl. 46—90.
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Le May, Charlotte E., to Texas Instruments Inc. Method and apparatus for producing intermediate semi-conductor product. 2,864,139, 12-16-58, Cl. 22—67.
Lemmon, Walter E., to Radio Industries Corp. Facsimile transmitter. 2,864,886, 12-16-58, Cl. 178—7.1.
Lemoine, André A. A. E., to Auxim l'Auxiliaire de l'Industrie et des Mines. Cock including a sleeve-shaped packing. 2,864,580, 12-16-58, Cl. 251—317.
Lenton, Albert, to Saml. Dennison & Son Ltd. Means for testing the physical properties of materials. 2,864,283, 12-16-58, Cl. 73—94.
Leonhart, Donald F., to The Youngstown Steel Door Co. Lading strap anchors. 2,864,322, 12-16-58, Cl. 105—369.
Le Sage, Eugene J., to Armstrong Cork Co. Scraper. 2,864,104, 12-16-58, Cl. 15—93.
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Leslie, James D., to General Motors Corp. Inertia safety device for a door latch. 2,864,641, 12-16-58, Cl. 292—336.3.
Levine, Elroi. Upholstered furniture. 2,864,434, 12-16-58, Cl. 155—191.
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Li, Yao T. Pressure measuring apparatus. 2,864,972, 12-16-58, Cl. 315—55.
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Linderman, Garrett B., to Linderman Engineering Co., Inc. Detecting apparatus. 2,864,994, 12–16–58, Cl. 324—20.

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Abkowitz, Stanley, and Moorhead. 2,864,699.

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Edling, Sven G., Malmquist, and Lindstein. 2,864,171.

Mancke, Edgar B., and F. M. Temmel, to Bethlehem Steel Co. Recovery of copper and cobalt values from sulphate leach solutions. 2,864,692, 12–16–58, Cl. 75—108.

Mangham, Jesse R., to Virginia-Carolina Chemical Corp. Production of dialkyl hydrogen phosphites. 2,864,847, 12–16–58, Cl. 260—461.

Mann, Herman C. Device for sharpening and jointing knives on a jointer, shaper and the like. 2,864,210, 12–16–58, Cl. 51—246.

Mann, Theodore C., to Ekstrom-Carlson & Co. Power operated router. 2,864,283, 12–16–58, Cl. 90—13.2.

Manteuffel, Allan A., and G. R. Cook, to The Pure Oil Co. Protective coating for ferrous type metal. 2,864,726, 12–16–58, Cl. 117—127.

Margulis, Bernard, to Reliable Metal Products Co., Inc. Bathroom fixtures. 2,864,578, 12–16–58, Cl. 248—228.

Marks, Barnard M., to E. I. du Pont de Nemours and Co. Aqueous slurry plasticization of polyvinyl acetal resins. 2,864,784, 12–16–58, Cl. 260—29.6.

Marlen Equipment Corp.: *See*—
Long, Marshall, and Miller. 2,864,216.

Marquardt Aircraft Co.: *See*—
Drake, John A. 2,864,393.

Marquez, Danny C. Mat weaving. 2,864,178, 12–16–58, Cl. 35—15.

Marryatt, Earl A., 50% to A. C. Kidd. Combination ladder and chute. 2,864,542, 12–16–58, Cl. 228—2.

Marryatt, Earl A. Cargo hooks. 2,864,844, 12–16–58, Cl. 294—83.

Marsh, Peter R., to Driver-Harris Co. Alloys resistant to salt baths. 2,864,894, 12–16–58, Cl. 75—128.

Marshall, Preston E., ½ to J. E. McKinley. Automobile parking apparatus. 2,864,515, 12–16–58, Cl. 214—16.1.

Marti, Fritz, to Lonza Electric and Chemical Works Ltd. Multilayer press. 2,864,127, 12–16–58, Cl. 18—16.

Marti, Fritz, G. Braunschweig, and J. Schaad. Instrument for checking the rate of time-piece movements. 2,864,661, 12–16–58, Cl. 346—79.

Martin, William J., Jr.: *See*—
Mueller, David L., and Martin. 2,864,880.

Martin, William T., Jr. Fountain type plasterer's brush. 2,864,109, 12–16–58, Cl. 15—123.

Martinek, Thomas W., to The Pure Oil Co. Mixing device. 2,864,594, 12–16–58, Cl. 259—105.

Martino, James. Water flush toilets and ball dump valve assembly. 2,864,095, 12–16–58, Cl. 4—57.

Martins Ferry Glove Co.: *See*—
Schneider, Herbert. 2,864,091.

Marvin, Frank E.: *See*—
Cochran, Maurice E. 2,864,230.

Maschinefabriek Kiekens N. V.: *See*—
De Graaf, Johannes G. A., Van Doreser, and Zaalberg. 2,864,458.

Masland, C. H., & Sons: *See*—
Hoeselbarth, Frank W. E. 2,864,408.

Masoni, John G. Tunnel boring machine having oppositely rotating heads. 2,864,599, 12–16–58, Cl. 262—7.

Mather Spring Co., The: *See*—
Imber, Lawrence O., and Hamlip. 2,864,121.

Mathes, Robert C.: *See*—
Hudimac, Albert A., and Mathes. 2,865,016.

Mathews, Charles A., to General Electric Co. Electric relay. 2,864,923, 12–16–58, Cl. 200—166.

Matthews, John B., and E. J. Clayfield, to Shell Development Co. Stability of fuel oil emulsions controlled by resin asphaltene ratio. 2,864,466, 12–16–58, Cl. 208—18.

Mattinson, Thomas D., to The Merit Co. Casket sealer structure. 2,864,640, 12–16–58, Cl. 292—338.

Maurice, Clayton H., Jr.: *See*—
Bradley, Robert O., and Maurice. 2,864,606.

May, Russell D., to Hi Oil Engineering Corp. Methods and means for the treatment of oil, gas and water emulsions. 2,864,502, 12–16–58, Cl. 210—72.

May, Walter G.: *See*—
Schulman, Bernard L., and May. 2,864,763.

Mayer, Arthur, to Reeves Instrument Corp. Electromechanical resolver. 2,864,924, 12–16–58, Cl. 201—48.

Mayer, Max. Work feeding and guiding device for shaping machines. 2,864,415, 12–16–58, Cl. 144—246.

Mazzola, Anthony. Automatic wood working slotting machine. 2,864,414, 12–16–58, Cl. 144—136.

Morway, Arnold J., to Esso Research and Engineering Co. Utilization of mixtures of organic and inorganic acids in the preparation of greases. 2,864,786, 12–16–58, Cl. 252—

Noren, Tore H.: *See*—
Federighi, George J., and Noren. 2,864,287.

Norris, James C.: *See*—

McArthur, Charles S., to National Research Council. Method of producing L-α-glycerylphosphorylcholine. 2,864,842, 12–16–58, Cl. 260—461.
McCarthy, Vincent J., and G. L. Adams, to The Salem Tool Co. Auger boring head with non-rotating barrel. 2,864,601, 12–16–58, Cl. 262—26.
McCulloch Corp.: *See*—
Bandil, John C., and Foster. 2,864,549.
McCune, Homer W., and O. T. Quimby, to The Procter & Gamble Co. Liquid detergent composition. 2,864,770, 12–16–58, Cl. 252—138.
McDonald, Frank A., and W. T. Holmes, to U. S. Flexible Metallic Tubing Co. Sample-taking valve. 2,864,254, 12–16–58, Cl. 73—424.
McDowell Mfg. Co.: *See*—
Hempel, Gustav A. 2,864,594.
McDuffee, John K.: *See*—
Haggarty, Francis A., and McDuffee. 2,864,202.
McGraw-Edison Co.: *See*—
Kobler, Richard. 2,864,881.
McJohn Corp.: *See*—
Elsner, Edwin C. 2,864,148.
McKee, Robert A.: *See*—
Relph, Donald L., and McKee. 2,864,554.
McKinley, John R.: *See*—
Marshall, Preston R. 2,864,515.
McKinley, Joseph B., and W. A. Horne, to Gulf Research & Development Co. Hydroisomerization. 2,864,875, 12–16–58, Cl. 260—683.65.
McKinnis, Art C., to Union Oil Co. of California. Decarboxylation of trimellitic acid. 2,864,854, 12–16–58, Cl. 260—475.
McNeil Machine & Engineering Co., The: *See*—
Schaeller, Rudy F., and Bandy. 2,864,378.
Mears, Fred W., Heel Co., Inc.: *See*—
Ponder, Raymond E. 2,864,412.
Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 2,864,125.
Klamp, Paul. 2,864,467.
Mechanical Products, Inc.: *See*—
Wilson, James S., Perman, Hansen, Broyles, Evans, Pavoni, and Kindel. 2,864,218.
Medenbach, Charles W. Locking device for French phone. 2,864,906, 12–16–58, Cl. 179—189.
Meister, Peter D.: *See*—
Eppstein, Samuel H., Meister, and Weintraub. 2,864,831.
Eppstein, Samuel H., Meister, and Weintraub. 2,864,832.
Meldrum, Roy. Tongs. 2,864,645, 12–16–58, Cl. 294—106.
Melnick, Daniel: *See*—
Murray, Harry A., Sexton, and Melnick. 2,864,702.
Mende, William C., to Ortho Pharmaceutical Corp. Applicator. 2,864,367, 12–16–58, Cl. 128—261.
Mendelsohn, Harold, L. L. Smith, and V. E. Origoni, to American Cyanamid Co. Pregnatetraenes and method of preparing the same. 2,864,834, 12–16–58, Cl. 260—397.45.
Mendelsohn, Jack J., to American Home Products Corp. Penicillin in solid dosage unit form. 2,864,744, 12–16–58, Cl. 167—65.
Merck & Co., Inc.: *See*—
Arth, Glen E., Poos, and Sarett. 2,864,818.
Arth, Glen E., Poos, and Sarett. 2,864,819.
La Pierre, Raymond. 2,864,701.
Shafer, Henry M. 2,864,745.
Mergens, George W., to Technicolor New York Corp. Contact printer. 2,864,291, 12–16–58, Cl. 95—73.
Mergenthaler Linotype Co.: *See*—
Rossetto, Louis. 2,864,490.
Merian, Ernest: *See*—
Nicolaus, Bruno J. R., and Merian. 2,864,816.
Merit Co., The: *See*—
Mattinson, Thomas D. 2,864,640.
Merriman, Horace B., and R. D. Sansum, to Gerrard Industries Ltd. Transmission for packaging machines. 2,864,267, 12–16–58, Cl. 74—805.
Metals & Controls Corp.: *See*—
Epstein, Henry D. 2,864,918.
Metzner, Albert W., to The Standard Register Co. Strip feeding mechanism. 2,864,484, 12–16–58, Cl. 197—133.
Meyer, Alvin F.: *See*—
Edrich, Paul, Foltser, Henry, Koala, Meyer, Osterhus, Richards, Snowball, and Tittle. 2,864,293.
Michelson, Leonard, to R. J. Strasenburgh Co. Alkoxy derivatives of 3:5-dioxo-pyrazolidine and process for their manufacture. 2,864,824, 12–16–58, Cl. 260—310.
Millar, Norval P., to General Electric Co. Electrical measuring instrument. 2,865,001, 12–16–58, Cl. 324—147.
Millar, Ronald L., and N. G. Peterson, to The Glidden Co. Plural coating with epoxy primer and alkyd-silicone topcoat. 2,864,722, 12–16–58, Cl. 117—72.
Miller, Bernie R., to Ferro Corp. Screen frame. 2,864,500, 12–16–58, Cl. 209—403.
Miller, Charles B., and L. B. Smith, to Allied Chemical Corp. Production of 1,1,2-trifluoro-2-chloro-ethylene. 2,864,875, 12–16–58, Cl. 260—653.5.
Miller, Charles L., to Sylvania Electric Products Inc. Top stem mold cleanout. 2,864,204, 12–16–58, Cl. 49—66.
Miller, Daniel R., and H. R. Hoekstra, to United States of America, Atomic Energy Commission. Reduction of plutonium to Pu^{+3} by sodium dithionite in potassium carbonate. 2,864,665, 12–16–58, Cl. 23—14.5.
Miller, Frederick E.: *See*—
Welsh, Matilda D., and Miller. 2,864,405.
Miller, Harry B.: *See*—
Boom, Warren A., Stoddard, Gibson, Miller, and Hilbert. 2,864,229.
Miller, Jack M.: *See*—
Long, Marshall, and Miller. 3,864,216.
Miller, Paul D., and R. A. Jefferys, to The Battelle Development Corp. Method of coating titanium articles and product thereof. 2,864,732, 12–16–58, Cl. 148—6.15.
Miller, William T., to Minnesota Mining and Mfg. Co. Condensation reactions. 2,864,807, 12–16–58, Cl. 260—609.
Mine Safety Appliances Co.: *See*—
Roth, Harold H. 2,864,747.
Minneapolis-Honeywell Regulator Co.: *See*—
Beck, Kenneth H. 2,864,985.
Frank, Alan I. 2,864,978.
Harts, Harry J. 2,864,399.
Jensen, James L. 2,864,904.
Jensen, James L. 2,864,962.
Malm, Roy H. 2,865,014.
Minnesota Mining and Mfg. Co.: *See*—
Errede, Louis A., and Hopwood. 2,864,865.
Hopwood, Stafford L., Jr., and Errede. 2,864,835.
Miller, William T. 2,864,807.
Snell, Robert B. 2,864,882.
Miskel, John J., to Chas. Pfizer & Co. Hypodermic syringe adapter. 2,864,366, 12–16–58, Cl. 128—221.
Mitchell, George A., to Lombard Corp. Billet coring machine. 2,864,270, 12–16–58, Cl. 77—[illegible].
Mitchell, James S., to The Borden Co. Lamp basing cement containing boric acid and heat-curable formaldehyde condensation resin. 2,864,782, 12–16–58, Cl. 260—24.
Missy, Arnold R. Medicinal syringe. 2,864,364, 12–16–58, Cl. 128—220.
Mladinich, John L., to Monsanto Chemical Co. Process for preparing foamable carbon dioxide-containing styrene polymer composition and foamable composition thereof. 2,864,778, 12–16–58, Cl. 260—2.5.
Moberly, Charles W.: *See*—
Jones, Rufus V., and Moberly. 2,864,809.
Modern Plastic Machinery Corp.: *See*—
Rothacker, Francis N. 2,864,755.
Fothacker, Francis N. 2,864,756.
Modes, Edward E., to The Dole Valve Co. Fluid metering device. 2,864,535, 12–16–58, Cl. 222—54.
Mohlman, John W.: *See*—
D'Ouville, Edmond L., and Mohlman. 2,864,761.
Mohlman, John W., to Standard Oil Co. Process of hydrogen recovery. 2,864,671, 12–16–58, Cl. 23—212.
Mohr, Glen B.: *See*—
Jones, Claude A., Jr., Bethurum, and Mohr. 2,864,221.
Molins, Desmond W., F. F. Ruau, deceased; C. M. Ruau, executrix, to Molins Machine Co. Ltd. Apparatus for making cigarettes. 2,864,380, 12–16–58, Cl. 131—94.
Molins Machine Co. Ltd.: *See*—
Molins, Desmond W., and Ruau. 2,864,380.
Moloney, Raymond T.: *See*—
Burnside, Walter M. 2,864,619.
Hooker, Donald E., and Troeller. 2,864,620.
Nicolaus, Frank G. 2,864,260.
Mondiacolor: *See*—
Chevalier, George E. 2,864,709.
Mones, Arthur H., to Faximile, Inc. Facsimile recording paper. 2,864,748, 12–16–58, Cl. 204—2.
Monroe, Carl M.: *See*—
Whetstone, Richard R., Davis, and Monroe. 2,864,742.
Monsanto Chemical Co.: *See*—
Greenhoe, Joe A. 2,864,477.
Hamm, Philip C., and Speziale. 2,864,678.
Hamm, Philip C., and Speziale. 2,864,683.
Harris, Alva F. 2,864,808.
Lyons, John W. 2,864,717.
Lyons, John W. 2,864,718.
Mladinich, John L. 2,864,778.
Speziale, Angelo J. 2,864,682.
Speziale, Angelo J. 2,864,684.
Walter, Henry A. 2,864,842.
Montgomery, Maxson H. Athletic shoe toe protector. 2,864,180, 12–16–58, Cl. 36—72.
Monticello Mfg. Corp.: *See*—
Hoose, Francis D. 2,864,512.
Montreya, Joseph R., to The La Resista Corset Co. Girdle. 2,864,377, 12–16–58, Cl. 128—533.
Moore, Meade F., to American Motors Corp. Air conditioning apparatus for automotive vehicle. 2,864,590, 12–16–58, Cl. 257—7.
Moore, Thomas R., Jr., to Deering Milliken Research Corp. Method of making novelty yarn. 2,864,230, 12–16–58, Cl. 57—157.
Moorhead, Paul E.: *See*—
Abkowitz, Stanley, and Moorhead. 2,864,698.
Abkowitz, Stanley, and Moorhead. 2,864,699.
Busch, Lee S., Bauer, and Moorhead. 2,864,697.
Morganite Corp.: *See*—
Drummey, John F. 2,864,908.
Morgenstern, David M., to Package Machinery Co. Vacuum die casting means. 2,864,140, 12–16–58, Cl. 22—73.
Morin, Louis H. Automatic spring pin lock slider operatable from both sides. 2,864,146, 12–16–58, Cl. 24—206.14.
Morison, James C.: *See*—
Doering, Fred W., and Morison. 2,864,159.
Mork, Fred H. Materials handling process and apparatus. 2,864,561, 12–16–58, Cl. 241—24.
Morningstar, Marion G., to The B. F. Goodrich Co. Method of producing dinitro-tetra alkyl benzenes. 2,864,871, 12–16–58, Cl. 260—646.
Morris, George V., to Zenith Radio Corp. Subscriber television system. 2,864,884, 12–16–58, Cl. 178—5.1.
Morrison, Montford. X-ray apparatus. 2,864,968, 12–16–58, Cl. 250—94.
Morrow, Thomas F. Urine bag. 2,864,369, 12–16–58, Cl. 128—296.

Pavoni, Paul: *See*—
Wilson, James S., Perman, Hansen, Broyles, Evans, Pavoni, and Kindel. 2,864,218.
Poos, George I.: *See*—
Arth, Glen E., Poos, and Sarett. 2,864,818.
Arth, Glen E., Poos, and Sarett. 2,864,819.

Morway, Arnold J., to Esso Research and Engineering Co. Utilization of mixtures of organic and inorganic acids in the preparation of greases. 2,864,766, 12-16-58, Cl. 252—16.

Morway, Arnold J., to Esso Research and Engineering Co. Utilization of sulphuric acid in the preparation of fluid lubricants. 2,864,767, 12-16-58, Cl. 252—40.7.

Motorola, Inc.: *See*—
Schultz, Curtis J. 2,864,943.

Mottu, André, to Societe Genevoise d'Instruments de Physique. Headstock for highly accurate machine tools. 2,864,239, 12-16-58, Cl. 77—3.

Muddiman, Earll R., to United States Steel Corp. Spray guard. 2,864,106, 12-16-58, Cl. 15—102.

Mueller, David L., and W. J. Martin, Jr., to General Electric Co. Sealed current rectifier. 2,864,980, 12-16-58, Cl. 317—234.

Muller, Werner C., to National Petro-Chemicals Corp. Method and apparatus for removal of liquefied gas from underground caverns. 2,862,242, 12-16-58, Cl. 62—55.

Murgolo, Nicholas. Pleat pin. 2,864,442, 12-16-58, Cl. 160—348.

Murphy, Charles R. Door knob construction. 2,864,642, 12-16-58, Cl. 292—353.

Murray, Harry A., E. L. Sexton, and D. Melnick, to The Best Foods, Inc. Oat cereal product and process for obtaining the same. 2,864,702, 12-16-58, Cl. 99—80.

Musser, C. Walton, to United States of America, Army. Telescope mount. 2,864,634, 12-16-58, Cl. 287—117.

Myron, Thomas L., to United States Steel Corp. Pelletizing method. 2,864,687, 12-16-58, Cl. 75—3.

Nannini, Louis G., to Phillips Petroleum Co. Carbon black furnace dual fluid injector. 2,864,673, 12-16-58, Cl. 23—259.5.

Nash, Daniel J., to Nash Inc. Wallet and automatically opening coin purse. 2,864,422, 12-16-58, Cl. 150—37.

Nash Inc: *See*—
Nash, Daniel J. 2,864,422.

Nastremero, John J. Target tracker. 2,864,959, 12-16-58, Cl. 250—203.

National Broach & Machine Co.: *See*—
Daniel, David W. 2,864,282.

National Cash Register Co., The: *See*—
Trimble, Cebera B. 2,864,609.

National Distillers and Chemical Corp.: *See*—
Noble, John F., and Greenberg. 2,864,807.

National Foam System, Inc.: *See*—
Dixon, John S., Jr., and Geyer. 2,864,714.

National Lead Co.: *See*—
Lee, Robert P., and Redman. 2,864,690.
Walwark, Roger, III. 2,864,670.

National Petro-Chemicals Corp.: *See*—
Muller, Werner C. 2,864,242.

National Products Corp.: *See*—
Brownlee, Kenneth H. 2,864,309.

National Research Council: *See*—
Makow, David M. 2,864,956.
McArthur, Charles S. 2,864,848.

Neeff, Ratger: *See*—
Schwechten, Heins-Werner, and Neeff. 2,864,823.

Neff, Glyn A., to Consolidated Electrodynamics Corp. Data transfer control circuit. 2,864,948, 12-16-58, Cl. 250—27.

Nelson, Robert F. Single impression multi-color printing device. 2,864,810, 12-16-58, Cl. 101—327.

Nelson, Theodore R., and N. W. Hunter, to Rheem Mfg. Co. Locking device for split clamping rings. 2,864,688, 12-16-58, Cl. 292—256.66.

Newark Brush Co.: *See*—
Nielsen, Albert T. 2,864,112.

Newell, Harold R. Automatic volt-ohmeter. 2,865,000, 12-16-58, Cl. 324—115.

Newey, Herbert A., to Shell Development Co. Process for curing polyepoxides by amine adducts and resulting products. 2,864,775, 12-16-58, Cl. 260—2.

Newman, Louis: *See*—
Hamilin, Jerry F., Magnuson, and Daugherty. 2,864,525.

Newman, Louise: *See*—
Hamilin, Jerry F., Magnuson, and Daugherty. 2,864,525.

Nichols, Wallace H., to Whirlpool Corp. Combination washing and drying machine. 2,864,249, 12-16-58, Cl. 68—19.

Nichols, Wallace H., to Whirlpool Corp. Combination washing and drying machine. 2,864,250, 12-16-58, Cl. 68—19.

Nickell, Louis G., to Chas. Pfizer & Co., Inc. Plant growth stimulation. 2,864,691, 12-16-58, Cl. 71—2.5.

Nicolaus, Bruno J. R., and E. Merian, to Sandoz A. G. Water-insoluble monoazo dyestuffs. 2,864,816, 12-16-58, Cl. 260—207.

Nicolaus, Frank G., to American National Bank and Trust Co. of Chicago, executor of the estate of R. T. Moloney. Ratchet mechanism with inertia brake. 2,864,360, 12-16-58, Cl. 74—142.

Nielsen, A. C., Co.: *See*—
Currey, Charles H., and Brown. 2,864,941.

Nielsen, Albert T., to Newark Brush Co. Street sweeper brush and holder. 2,864,112, 12-16-58, Cl. 15—181.

Niemand, Emil, to The Lux Clock Mfg. Co., Inc. Timer mechanism. 2,864,443, 12-16-58, Cl. 161—15.

Nigon, Josephh P., to Callery Chemical Co. Preparation of tetraborane. 2,864,754, 12-16-58, Cl. 204—164.

Noble, John F., and H. Greenberg, to National Distillers and Chemical Corp. Polyamides from branched chain C_9 and C_{10} diamines. 2,864,807, 12-16-58, Cl. 260—78.

Nee, Oskar: *See*—
Berber, Wilhelm, Krëll, and Nee. 2,864,487.

Napco Chemical Co.: *See*—
Klein, Howard C. and Kapp. 2,864,829.

Nordstrom, Magnus: *See*—
Fink, William C., Lynn, and Nordstrom. 2,864,678.

Noren, Tore H.: *See*—
Federighi, George J., and Noren. 2,864,297.

Norris, James C.: *See*—
Bedick, David C., and Norris. 2,864,967.

North American Aviation, Inc.: *See*—
Stratman, William C. 2,864,427.

North American Philips Co., Inc.: *See*—
Becking, Augustus G. T., Blom, and Bezman. 2,864,903.
Boomtje, Jan, and Lauteslager. 2,864,896.
Van Overbeek, Adrianus J. W. M. 2,864,902.
Von Basel, Carl. 2,864,897.

North Electric Co.: *See*—
Simmons, Dorsey D. 2,864,900.

Novack, Lawrence. Traverse track for clothes closets. 2,864,513, 12-16-58, Cl. 211—162.

Novak, Theodore F.: *See*—
Novinger, Cecil E., and Novak. 2,864,087.

Novak, Warren D., to General Precision Laboratory Inc. Fluid motor. 2,864,341, 12-16-58, Cl. 121—48.

Novinger, Cecil E., and T. F. Novak, to Danly Machine Specialties, Inc. Punching and assembling device. 2,864,087, 12-16-58, Cl. 1—200.

Nyden, Robert. Receptacles. 2,864,533, 12-16-58, Cl. 221—260.

O'Brien, Edward J., and F. W. Wahlin, to Spraying Systems Co. Wide spread fan shaped spray discharge nozzle. 2,864,652, 12-16-58, Cl. 299—121.

O'Dwyer, Martin T., and H. Dill, to Pye Ltd. Telephone answering machine. 2,864,889, 12-16-58, Cl. 179—6.

Oehler, William P., and C. H. Youngberg, to Deere & Co. Fold over disk harrow. 2,864,222, 12-16-58, Cl. 55—73.

Oerman, Orez W.: *See*—
Silver, Walter H., and Oerman. 2,864,296.

Offutt, Elmer B.: *See*—
Sorg, Leonard V., and Offutt. 2,864,338.
Sorg, Leonard V., and Offutt. 2,864,725.

Olin Mathieson Chemical Corp.: *See*—
Fried, Josef. 2,864,839.

Oliver, Douglas F.: *See*—
Keller, William E., Kidwell, and Oliver. 2,864,280.

Oliver, James F., to Kwikover Inc. Self-erecting tent. 2,864,288, 12-16-58, Cl. 135—1.

Oliver, James F., and D. J. Kuyper. Self-erecting tent. 2,864,290, 12-16-58, Cl. 135—4.

Oliver Machinery Co.: *See*—
Tuthill, Howard B. 2,864,522.

Olivier, Jules A.: *See*—
Chesna, Gustave J., Kawecki, and Olivier. 2,864,647.

Olley, Maurice, and P. C. Bowser, to General Motors Corp. Engine mounting. 2,864,573, 12-16-58, Cl. 248—9.

Olson, Raymond J., and J. E. Prass, to Federal Tool Corp. Tape dispenser. 2,864,446, 12-16-58, Cl. 164—41.

Origoni, Victor E.: *See*—
Mendelsohn, Harold, Smith, and Origoni. 2,864,834.

Ortho Pharmaceutical Corp.: *See*—
Mende, William C. 2,864,267.
Senger, Frank A. 2,864,268.

Osgood, Charles F., Jr.: *See*—
Brown, Arthur J., Osgood, and Greavenor. 2,864,303.

Osterhus, Ervin J.: *See*—
Edrich, Paul, Foltzer, Henry, Koslo, Meyer, Osterhus, Richards, Snowball, and Tittle. 2,864,293.

Otten, Philip S.: *See*—
Bruegger, Ernest, and Otten. 2,864,404.

Owen, Morgan & Niland: *See*—
Campbell, Grady E. 2,864,189.

Pacific Pumping Co.: *See*—
Culleton, John T. 2,864,814.

Package Machinery Co.: *See*—
Morgenstern, David M. 2,864,140.

Packard Bell Electronics Corp.: *See*—
Gray, John B. 2,864,611.

Page, Franklin, Jr.: *See*—
Crafts, Cecil A., and Page. 2,864,988.

Paris, François G., J. Le Foll, H. L. P. Meulien, and J. H. Bertin, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Exhaust gas ejector tubes in association with explosion engines or internal combustion engines. 2,864,235, 12-16-58, Cl. 60—30.

Parke, Davis & Co.: *See*—
Edgerton, William H. 2,864,840.

Parker, Edward M. Deformable head nails. 2,864,378, 12-16-58, Cl. 85—28.

Parker, Henry W. Transducer. 2,864,899, 12-16-58, Cl. 179—111.

Parker, Kenneth O.: *See*—
Booth, Harry T., Carroll, and Parker. 2,864,589.

Parodi, Felice, to Casther S. A. Device for the control of electrical supply for electrotherapeutic purposes, especially for stimulotherapy. 2,864,371, 12-16-58, Cl. 128—419.

Parr, Keith. Pressure control apparatus. 2,864,395, 12-16-58, Cl. 137—116.5.

Parrilla, Salvatore C. Flap turning and opening device. 2,864,539, 12-16-58, Cl. 223—41.

Parshall, Bert B.: *See*—
Davidson, David E., Parshall, and Thal. 2,864,657.

Parsons, Chauncey L.: *See*—
Dornstreich, Knute E., and Parsons. 2,864,963.

Paterson, Donald M. Receptacles for holding slides. 2,864,491, 12-16-58, Cl. 206—1.

Patterson, Roy A.: *See*—
Barrett, Gerald A., and Patterson. 2,864,916.

Patterson, Wallace M., to Sellers Injector Corp. Covering hood for tank breather valves. 2,864,297, 12-16-58, Cl. 137—248.

Patton, Stewart U. Stave construction for propeller shaft bearings. 2,864,659, 12-16-58, Cl. 308—238.

Paulsen, Karl W. Grain windrower. 2,864,227, 12-16-58, Cl. 56—192.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,864,152.

Rush, Hugh M.: *See*—

Pavoni, Paul: *See*—
    Wilson, James S., Perman, Hansen, Broyles, Evans, Pavoni, and Kindel. 2,864,218.
Payne, James K.: *See*—
    Knisely, James D. 2,864,219.
Peake, Alnie F.: *See*—
    Jacks, Elizabeth A., and Peake. 2,864,283.
Pearson, Ralph L., Jr. Power disc spiker. 2,864,294, 12–16–58, Cl. 97—40.
Pelser, Irving M.: *See*—
    Weibel, John, Jr., and Pelser. 2,864,550.
Peras, Lucien, to Regie Nationale des Usines Renault. Manufacture of low-tension sparking plugs for engines. 2,864,152, 12–16–58, Cl. 29—25.12.
Perforating Guns Atlas Corp.: *See*—
    Castel, Jacques H. 2,864,173.
Perkins, Robert L., to Sperry Rand Corp. Transducer mounting. 2,864,882, 12–16–58, Cl. 179—100.2.
Permachem Corp.: *See*—
    Baldwin, Maynard M. 2,864,768.
    Lutz, Garson A., and Sharpe. 2,864,769.
Perman, Douglas V.: *See*—
    Wilson, James S., Perman, Hansen, Broyles, Evans, Pavoni, and Kindel. 2,864,218.
Pernick, Henry L., to United Aircraft Corp. Means for phase discrimination of an alternating current signal. 2,864,950, 12–16–58, Cl. 250—27.
Perrin, René, to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine. Process of successively desulphurising and desiliconising a bath of pig iron. 2,864,689, 12–16–58, Cl. 75—51.
Peter, Rolf W., to Radio Corp. of America. Two way radio relay system including traveling wave tubes. 2,864,944, 12–16–58, Cl. 250—15.
Peterson, Norman G.: *See*—
    Millar, Ronald L., and Peterson. 2,864,722.
Peterson, Stig F. A.: *See*—
    Liedberg, Kurt H., and Peterson. 2,864,653.
Peterson, William H., to Pullman-Standard Car Mfg. Co. Vehicle bolster construction. 2,864,220, 12–16–58, Cl. 105—225.
Petrie, Wilbur A. Mailbox signal. 2,864,553, 12–16–58, Cl. 232—35.
Petrolite Corp.: *See*—
    De Groote, Melvin, and Shen. 2,864,786–2,864,801.
    De Groote, Melvin, and Shen. 2,864,806.
    Smith, Alvin H. 2,864,856.
Petrunya, Peter P. Garment cover and hanger assembly. 2,864,230, 12–16–58, Cl. 53—241.
Pfizer, Chas., & Co., Inc.: *See*—
    Agnello, Eugene J. 2,864,822.
    Agnello, Eugene J., and Laubach. 2,864,830.
    Miskel, John J. 2,864,386.
    Nickell, Louis G. 2,864,681.
Phifer, Lyle H., to American Viscose Corp. Spectrophotometer cell holder. 2,864,279, 12–16–58, Cl. 88—14.
Philco Corp.: *See*—
    Laschenski, Joseph E. 2,864,957.
Phillips, Emory R. Phase shifter with automatic voltage compensation. 2,864,994, 12–16–58, Cl. 323—114.
Phillips Petroleum Co.: *See*—
    Baer, Donald H., and Mahan. 2,864,827.
    Gragson, James T. 2,864,846.
    Jones, Rufus V., and Moberly. 2,864,809.
    King, William R. 2,864,674.
    Lanning, William C., and Wilson. 2,864,762.
    Louthan, Rector P. 2,864,866.
    Nannini, Louis G. 2,864,673.
    Sparks, Marshall S., Jr. 2,864,278.
    Stransbury, Roy E., and Goodue. 2,864,735.
    Whitney, William B. 2,864,857.
Phoenix Metal Cap Co., Inc.: *See*—
    Crabbe, Lindsay T. 2,864,519.
Pickles, Joseph, to Ferro Stamping Co. Wedge type lock. 2,864,636, 12–16–58, Cl. 292—216.
Pierce, Albert D., and F. A. Wagner, to Textron American, Inc. Unloading means for centrifugal casting chuck. 2,864,138, 12–16–58, Cl. 22—58.5.
Pierce, Firth: *See*—
    Brettell, George A., Jr., and Pierce. 2,864,202.
Piggy-Back, Inc.: *See*—
    Clejan, Deodat. 2,864,321.
Piper, Harry K. Window construction. 2,864,131, 12–16–58, Cl. 20—12.
Pitavy, Edmond. Feeding-bottles obturated by a screw-plug. 2,864,520, 12–16–58, Cl. 215—11.
Pittsburgh Plate Glass Co.: *See*—
    Bader, Alfred R. 2,864,868.
Plasticrest Products, Inc.: *See*—
    Sofo, Leonard. 2,864,497.
Plax Corp.: *See*—
    Strauss, Robert G. 2,864,124.
Podgorski, Walter F., to P. Ballantine & Sons. Method and apparatus for packaging. 2,864,217, 12–16–58, Cl. 53—123.
Polack, Joseph A., L. E. Swabb, Jr., and G. A. Danner, Jr., to Esso Research and Engineering Co. Fluidized solids process for the hydroforming of naphthas. 2,864,764, 12–16–58, Cl. 208—149.
Poly Choke Co., Inc., The: *See*—
    Grahn, Arne Y. 2,864,194.
Polytechnic Institute of Brooklyn: *See*—
    Eirich, Frederick R., Livingston, and Reegen. 2,864,129.
Polytechnic Research & Development Co., Inc.: *See*—
    Gudaitis, Frank. 2,865,007.
Ponder, Raymond E., to Fred W. Mears Heel Co., Inc. Machine for trimming wood heel-blanks. 2,864,412, 12–16–58, Cl. 143—49.
Poos, George I.: *See*—
    Arth, Glen E., Poos, and Sarett. 2,864,818.
    Arth, Glen E., Poos, and Sarett. 2,864,819.
Porter, Ernest C. Airplane toy amusement device for a child. 2,864,613, 12–16–58, Cl. 272—1.
Potratz, Herbert A., to United States of America, Atomic Energy Commission. Process for the recovery of plutonium. 2,864,841, 12–16–58, Cl. 260—429.1.
Potter, John J., to Hayden-Nilos Ltd. Machines for securing hooked belt-fasteners. 2,864,085, 12–16–58, Cl. 1—49.4.
Pottle, Ralph K., and O. F. Ecklund, to American Can Co. Display package and method of producing same. 2,864,710, 12–16–58, Cl. 99—171.
Poulter, John W., P. A. Huffaker, and F. D. Graham, to Koehring Co. Power control mechanism for power clutches. 2,864,475, 12–16–58, Cl. 192—36.
Powers, James H., to General Electric Co. Electrode arrangement for electrostatic gas filter. 2,864,460, 12–16–58, Cl. 183—7.
Prachar, Otakar P., to General Motors Corp. Flexible coupling. 2,864,244, 12–16–58, Cl. 64—9.
Praud, Rene, to "Societe Industrielle pour le Perfectionnement des Appareils Menagers" (S. I. P. A. M.). Steam iron and support. 2,864,186, 12–16–58, Cl. 38—77.
Predota, Albert J., and H. J. Kiefer, to The Glidden Co. Copper conductor coated with silicone resin composition. 2,864,728, 12–16–58, Cl. 117—232.
Presnell, Frank G. to Bendix Aviation Corp. Motor control valve with automatic hold and release. 2,864,402, 12–16–58, Cl. 137—622.5.
Press, John E.: *See*—
    Olson, Raymond J., and Press. 2,864,446.
Price, Ralph K.: *See*—
    Balsiger, Harold E., and Price. 2,864,211.
Price, Raymond M., L. J. Young, B. H. Tubbs, and R. E. Lee, to The Dow Chemical Co. Molding compositions of high molecular weight and low molecular weight polymers. 2,864,802, 12–16–58, Cl. 260—45.5.
Pritikin, Nathan. Electrical component and method of making same. 2,864,926, 12–16–58, Cl. 201—73.
Procter & Gamble Co., The: *See*—
    McCune, Homer W., and Quimby. 2,864,770.
Proffen, Hermann. Apparatus for interrupting the formation of transverse rents in paper webs. 2,864,294, 12–16–58, Cl. 92—38.
Pullman-Standard Car Mfg. Co.: *See*—
    Peterson, William H. 2,864,220.
Pulsifer, Frank: *See*—
    Schaefer, Hans F., Jr., and Pulsifer. 2,864,228.
Purdue Research Foundation: *See*—
    Bachman, Gustave B., and Logan. 2,864,853.
Pure Oil Co., The: *See*—
    Bond, Donald C., and Holbrook. 2,864,448.
    Ellison, Lynn E. 2,864,925.
    Fierce, William L., and Sandner. 2,864,851.
    Kemp, Manning H. 2,864,631.
    Manteuffel, Allan A., and Cook. 2,64,726.
    Martinek, Thomas W. 2,864,594.
    Schaschl, Edward. 2,864,252.
Pye Ltd.: *See*—
    O'Dwyer, Martin T., and Dill. 2,864,889.
Quinn, John H., Jr.: *See*—
    Shaw, Robert E., Walker, and Quinn. 2,864,838.
Quimby, Oscar T.: *See*—
    McCune, Homer W., and Quimby. 2,864,770.
Radio Corp. of America: *See*—
    Achenbach, John C. 2,64,946.
    Goodrich, Hunter C. 2,864,888.
    Lohman, Robert D., and Herzog. 2,864,961.
    Peter, Rolf W. 2,864,944.
    Stavrakis, Alexander, and Kennedy. 2,864,621.
    Weimer, Paul K. 2,864,887.
Radio Industries Corp.: *See*—
    Lemmon, Walter S. 2,864,895.
Radliff, Olga. Seam press board. 2,864,187, 12–16–58, Cl. 38—115.
Randall, John F., and J. I. Crochet, to Ford Motor Co. Axle housing straightening. 2,864,937, 12–16–58, Cl. 219—162.
Rapistan-Keystone, Inc.: *See*—
    Woldring, Egbert, and Beveridge. 2,864,319.
Rasmussen, William R., 50% to A. G. Ash. Metering liquid dispenser. 2,864,588, 12–16–58, Cl. 222—453.
Rass, Hans A., to Fairbanks, Morse & Co. Centrifugally responsive cam operator. 2,864,264, 12–16–58, Cl. 74—568.
Rawson, Edward R., and D. R. Whalen, to Burgess Battery Co. Apparatus for making dry cells. 2,864,298, 12–16–58, Cl. 93—36.01.
Rawson, Philip N. Transmission belt. 2,864,263, 12–16–58, Cl. 74—235.
Raymond, François H., to Societe d'Electronique et d'Automatisme. Electronic integration systems. 2,864,556, 12–16–58, Cl. 235—61.
Raytheon Mfg. Co.: *See*—
    Bark, Andrew. 2,865,018.
    Dench, Edward C. 2,865,004.
Rea Magnet Wire Co., Inc.: *See*—
    Whearley, Robert L. 2,864,565.
Redick, David C., and J. C. Norris, to General Motors Corp. Ignition distributor. 2,864,967, 12–16–58, Cl. 318—149.
Redington, F. B., Co.: *See*—
    Engleson, Harry R., and Sramek. 2,864,268.
Reed, Thomas F., to United States Steel Corp. Two-step method of removing oxygen from iron oxide. 2,864,688, 12–16–58, Cl. 75—26.
Reegen, Sidney L.: *See*—
    Eirich, Frederick R., Livingston, and Reegen. 2,864,128.
Reeves Instrument Corp.: *See*—
    Mayer, Arthur. 2,864,934.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,864,152.

Reich, Oscar: *See*—
Fiore, Vincent J., and Reich. 2,864,241.

Reighart, June H. Water cooled furnace door with angular ribs. 2,864,345, 12–16–58, Cl. 122—498.

Reiser, George C., to Toledo Scale Corp. Shock absorbing platform for weighing scales. 2,864,608, 12–16–58, Cl. 265—71.

Reliable Metal Products Co., Inc.: *See*—
Margulis, Bernard. 2,864,578.

Renkin, Robert F., to Sharon Steel Corp. Apparatus for making high tensile strapping. 2,864,607, 12–16–58, Cl. 266—3.

Reproducers and Amplifiers Ltd.: *See*—
Willson, Harry C. 2,864,155.

Research Corp.: *See*—
Hall, Herbert J., and White. 2,864,456.

Reuter, Clarence J. Overlay read-out device. 2,864,337, 12–16–58, Cl. 120—33.

Rheem Mfg. Co.: *See*—
Nelson, Theodore R., and Hunter. 2,864,638.

Rice Barton Corp.: *See*—
Curtenius, Frederick H. 2,864,447.

Richards, Archer W.: *See*—
Edrich, Paul, Foltzer, Henry, Koslo, Meyer, Osterhus, Richards, Snowball, and Tittle. 2,864,293.

Richardson, Pierce F., and W. A. Siljander, to International Harvester Co. Brakable two-speed transmission. 2,864,474, 12–16–58, Cl. 192—4.

Richter, Louis E., to The Russell Mfg. Co. Woven belting. 2,864,409, 12–16–58, Cl. 139—408.

Riker, Charles O., to Stapling Machines Co. Synchronising apparatus for wirebound box-making machines. 2,864,080, 12–16–58, Cl. 1—146.

Ringer, Floyd W. Aluminum block sandpaper holder. 2,864,208, 12–16–58, Cl. 51—187.

Ritchie, John A. Paper product roll dispenser. 2,864,493, 12–16–58, Cl. 206—58.

Roberts, John A.: *See*—
Thorsson, Matthew T., and Roberts. 2,64,605.

Robertson, H. H., Co.: *See*—
Curran, Bernard E. 2,864,300.

Robertson Mfg. Co.: *See*—
Bright, Harold T. 2,864,226.

Robinson, Preston, to Sprague Electric Co. Process of producing electrically conductive plastic. 2,864,774, 12–16–58, Cl. 252—514.

Robinson, Purnell A. Pumping device. 2,864,317, 12–16–58, Cl. 103—235.

Rodman, Harry G.: *See*—
Lee, Robert P., and Rodman. 2,64,690.

Rogats, Alvin L., to Zenith Radio Corp. High voltage ceramic dielectric. 2,864,712, 12–16–58, Cl. 106—39.

Rogers, Thomas G., to Southern Wood Preserving Co. Apparatus for handling crossties. 2,864,516, 12–16–58, Cl. 214—41.

Rohan, Norman E. Fishing gig. 2,864,196, 12–16–58, Cl. 43—6.

Rohr, Henry C., to General Motors Corp. Windshield cleaning system. 2,864,116, 12–16–58, Cl. 15—250.4.

Rolls-Royce Ltd.: *See*—
Cook, Henry. 2,864,440.

Rolph, Donald L., and R. A. McKee, to Friden, Inc. Printing calculating apparatus switch means. 2,864,554, 11–16–58, Cl. 235—60.12.

Rose, Jay. Holder and wiper for laboratory glass slides. 2,864,105, 12–16–58, Cl. 15—102.

Roselius, Louis W., to S & S Corrugated Paper Machinery Co., Inc. Taping machine. 2,864,285, 12–16–58, Cl. 93—1.

Rosenfeld, William B.: *See*—
Bodian, Marcus, and Rosenfeld. 2,864,939.

Rossetto, Louis, to Mergenthaler Linotype Co. Typographical composing and casting machine. 2,864,490, 12–16–58, Cl. 199—51.

Rotcelg, Charles. Tooth brushes. 2,864,111, 12–16–58, Cl. 15—168.

Roth, Harold H., to Mine Safety Appliances Co. Determination of hydrogen cyanide and hydrogen sulphide in air. 2,864,747, 12–16–58, Cl. 204—1.

Roth, Philip R.: *See*—
Fluck, Linton A., Cooke, and Roth. 2,864,728.

Rothacker, Francis N., to Modern Plastic Machinery Corp. Method and apparatus for the treatment of plastic materials. 2,864,755, 12–16–58, Cl. 204—165.

Rothacker, Francis N., to Modern Plastic Machinery Corp. Method and apparatus for the treatment of plastic materials. 2,864,756, 12–16–58, Cl. 204—168.

Rowe Mfg. Co., Inc.: *See*—
Gabrielsen, Christian. 2,864,532.

Rowell, Lorne A., to Imperial Tobacco Co. of Canada Ltd. Method for conditioning tobacco. 2,864,381, 12–16–58, Cl. 131—140.

Royce, Mark B., to Continental Can Co., Inc. Shipping container for fruits, vegetables and other articles. 2,864,545, 12–16–58, Cl. 229—22.

Ruau, Caroline M.: *See*—
Molina, Desmond W., and Ruau. 2,864,380.

Ruau, Felix F.: *See*—
Molina, Desmond W., and Ruau. 2,864,380.

Ruckstuhl, Hans, to Saul & Co., as nominee of Fidelity Union Trust Co., executive trustee under Sandos Trust. Metalliferous monoazo dyestuffs. 2,864,814, 12–16–58, Cl. 260—147.

Rude, Raymond C. Metal springboard. 2,864,616, 12–16–58, Cl. 272—66.

Ruscetta, Ralph A., and R. N. Dalton, to General Electric Co. Electric capacitor. 2,864,982, 12–16–58, Cl. 317—258.

Rush, Hugh M.: *See*—
Clements, Shannon K. 2,864,625.

Russell, Charles E., L. E. Schniepp, L. S. Hafner, and H. E. Smith, to United States of America, Agriculture. Esters of α-(tetrahydro-2-furyl) alkanols. 2,864,828, 12–16–58, Cl. 260—347.4.

Russell Mfg. Co., The: *See*—
Richter, Louis E. 2,864,409.

Russell, Robert C. H. Cable operated earth moving scraper. 2,864,182, 12–16–58, Cl. 37—125.

Ryan, Francis P. Scraper. 2,864,183, 12–16–58, Cl. 37—126.

SKB Schuechtermann & Kremer-Baum Aktiengesellschaft Fuer Aufbereitung: *See*—
Teuteberg, Rudolf. 2,864,499.

S & S Corrugated Paper Machinery Co., Inc.: *See*—
Roselius, Louis W. 2,864,285.

Sabaroff, Samuel. Longitudinal isolation device for high frequency signal transmission lines. 2,865,006, 12–16–58, Cl. 333—33.

Sadofsky, Jerome: *See*—
Gurinsky, David H., Kammerer, Sadofsky, and Weeks. 2,864,731.

Salem Tool Co., The: *See*—
McCarthy, Vincent J., and Adams. 2,864,601.

Samcoe Holding Corp.: *See*—
Catallo, Frank. 2,864,165.

Sampson, Frederick W., to General Motors Corp. Sight system for firearms. 2,864,168, 12–16–58, Cl. 33—55.

Sandner, Walter J.: *See*—
Fierce, William L., and Sandner. 2,864,851.

Sandos A. G.: *See*—
Nicolaus, Bruno J. R., and Merian. 2,864,816.

Sandos Trust: *See*—
Ruckstuhl, Hans. 2,864,814.

Sandvikens Jernverks Aktiebolag: *See*—
Edling, Sven G., Malmquist, and Lindstein. 2,864,171.

Sansum, Robert D.: *See*—
Merriman, Horace B., and Sansum. 2,864,267.

Sarett, Lewis H.: *See*—
Arth, Glen E., Poos, and Sarett. 2,864,818.
Arth, Glen E., Poos, and Sarett. 2,864,819.

Sauer, John F., to The Texas Co. Tandem valve arrangement for use with an eductor defueling system. 2,864,410, 12–16–58, Cl. 141—119.

Saul & Co.: *See*—
Ruckstuhl, Hans. 2,864,814.

Saunders, Alfred P., to Wildt and Co. Ltd. Loop transfer mechanism for knitting machines. 2,864,247, 12–16–58, Cl. 66—24.

Saunders, Kenneth W., and R. M. Smolin, to American Cyanamid Co. Cracking of 1,1-diarylethanes to substituted styrenes. 2,864,872, 12–16–58, Cl. 260—650.

Sausaman, Robert E., to The B. F. Goodrich Co. Method for manufacturing segmented tracks. 2,864,154, 12–16–58, Cl. 29—148.3.

Sazavsky, Jaromir K., to G P E Controls, Inc. Wide dead zone control with set point return. 2,864,330, 12–16–58, Cl. 121—41.

Schaad, Jean: *See*—
Marti, Fritz, Braunschweig, and Schaad. 2,864,661.

Schaefer, Hans P., Jr., and F. Pulsifer, to United Shoe Machinery Corp. Sewing machines. 2,864,328, 12–16–58, Cl. 112—250.

Schantz, Socrates J. Trailer having vertically adjustable hitch and running gear. 2,864,626, 12–16–58, Cl. 280—44.

Schaschl, Edward, to The Pure Oil Co. Corrosion testing probe. 2,864,252, 12–16–58, Cl. 73—86.

Scheffler, Heinz: *See*—
Kottler, August, and Scheffler. 2,864,743.

Scheidegger, Walter. Self-supporting folding ladder. 2,864,544, 12–16–58, Cl. 228—27.

Schering Corp.: *See*—
Gould, David H., Hershberg, and Shapiro. 2,864,835.

Schewel, Abe. Exhaust deflector. 2,864,406, 12–16–58, Cl. 138—46.5.

Schick, Elmer R. Wallet protector. 2,864,144, 12–16–58, Cl. 24—3.

Schindler, Harold C., to General Motors Corp. Transmission-hydraulic clutch bleed-off valve. 2,864,479, 12–16–58, Cl. 192—85.

Schlumbrecht, John J. Pressure locking unit for hydraulic brakes. 2,864,469, 12–16–58, Cl. 188—152.

Schmals, Alfred C., to Hercules Powder Co. Stabilized paste rosin size. 2,864,716, 12–16–58, Cl. 106—238.

Schmidt, Frederick G., to I-T-E Circuit Breaker Co. Motor operated circuit breaker. 2,864,912, 12–16–58, Cl. 200—92.

Schmidt, William C., to The Cincinnati Butchers' Supply Co. Single blade chopping knife. 2,864,420, 12–16–58, Cl. 146—106.

Schmidt, William C., to The Cincinnati Butchers' Supply Co. Double blade knife. 2,864,421, 12–16–58, Cl. 146—106.

Schmitz, Walter, to Siemens & Halske Akt. Relay contact arrangement and operation. 2,864,912, 12–16–58, Cl. 200—104.

Schneider, Abraham, to Sun Oil Co. Preparation of organic acids having a quaternary alpha carbon atom. 2,864,858, 12–16–58, Cl. 260—514.

Schneider, Abraham, to Sun Oil Co. Preparation of organic acids having a tertiary or quaternary alpha carbon atom. 2,864,859, 12–16–58, Cl. 260—515.

Schneider, Herbert, to Martins Ferry Glove Co. Glove with wire mesh reinforcing. 2,864,091, 12–16–58, Cl. 2—161.

Schneider, William P.: *See*—
Lincoln, Frank H., Schneider, Sebek, and Spero. 2,864,834.
Lincoln, Frank H., Schneider, Sebek, and Spero. 2,864,838.

Smith, Robert W.: *See*—
Counts, William E., Smith, and Schwartzwalder. 2,864,864.

Standard Oil Co. (Indiana): *See*—
D'Orville, Edmond L., and Mohlman. 2,864,761.
Fields, Ellis K., Watson, and Hoff. 2,864,787.

Schaeller, Rudy F., and O. L. Bandy, to The McNeil Machine & Engineering Co. Protectors for tubing. 2,864,378, 12-16-58, Cl. 128—61.
Schnlepp, Lester E.: *See*—
Russell, Charles R., Schnlepp, Hafner, and Smith. 2,864,828.
Schnoor, Raymond D. Head-rest. 2,864,422, 12-16-58, Cl. 155—177.
Schober, William R., to The Hobart Brothers Co. Welding transformer with compound secondary winding. 2,864,993, 12-16-58, Cl. 323—56.
Scholten, Richard A., to The Indiana Steel Products Co. Magnetic hammer. 2,864,417, 12-16-58, Cl. 145—30.
Schoenberg, Ernest. Steam baths. 2,864,097, 12-16-58, Cl. 4—160.
Schostal, Richard. Cleaning device for cleaning windows and dishes. 2,864,114, 12-16-58, Cl. 15—244.
Schrader, Gerhard, to Farbenfabriken Bayer Akt. Thiophosphoric acid esters and their production. 2,864,849, 12-16-58, Cl. 260—461.
Schulman, Bernard L., and W. G. May, to Esso Research and Engineering Co. Fluidized solids catalytic reforming process. 2,864,762, 12-16-58, Cl. 208—136.
Schulman, Glenn, to Glenn Laboratories. Liquid shortenings and method of improving baked goods. 2,864,703, 12-16-58, Cl. 99—91.
Schulman, Glenn, to Glenn Laboratories. Liquid shortenings. 2,864,705, 12-16-58, Cl. 99—118.
Schultz, Curtis J., to Motorola, Inc. Central station interrogation via relays of unattended data satellites which answer back. 2,864,943, 12-16-58, Cl. 250—15.
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Booth, Harry T., Carroll, and Parker. 2,864,589.
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ISSUED DECEMBER 16, 1958

NOTE.—First number=class, second number=subclass, third number=patent number

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Classification of Designs

D 2—26: Des. 184,085
D15— 1: Des. 184,111
8: Des. 184,081
D26—14: Des. 184,082
D34—15: Des. 184,094
D44— 1: Des. 184,090
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D44—15: Des. 184,086
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D45— 4: Des. 184,078
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D52— 7: Des. 184,092
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D54— 2: Des. 184,098
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D99— 1: Des. 184,096
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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
December 16, 1958 Volume 737 Number 3

TRADEMARKS

CONDITION OF TRADEMARK APPLICATIONS AS OF OCTOBER 31, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,019
Date of oldest new application	March 10, 1958
Date of oldest amended application	July 2, 1958

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	4-15-58	7-7-58
(II) R. F. SHERYOCK, Classes 6, 15, 27, 29, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	3-10-58	7-3-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 18, 17, 20, 22, 28, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	4-15-58	7-8-58
Renewals (All Classes)	10-6-58	10-27-58
Sec. 12 (c) Publications (All Classes)	10-13-58	10-27-58

Applications Filed During the Month of October 1958—1,888

Registrations Issued	322—No. 671,036 to No. 671,357
Renewals Issued	65

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

SN 51,329. Consultant Sales Service, Inc., Denver, Colo. Filed May 9, 1958.

SN 51,423. The Cudahy Packing Company, Omaha, Nebr. Filed May 12, 1958.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 32,479. Dynamit-Actien-Gesellschaft vormals Alfred Nobel & Co., Troisdorf, Bezirk Koln, Germany. Filed June 24, 1957.

MIPOLAM

For Synthetic Plastics in the Form of Sheets, Films, Tubes, Pipes, Bars, and Rods.

First use Oct. 1, 1955; in commerce Oct. 1, 1955.

Class 2—Receptacles

SN 24,784. Koehring Company, Milwaukee, Wis. Filed Feb. 20, 1957.

KO-CAL

For Metal Bins, and Hoppers.

First use on or about Oct. 15, 1954.

SN 32,223. The Zell Products Corporation, Norwalk, Conn. Filed June 18, 1957.

ZELL

Owner of Reg. Nos. 608,100 and 659,498.

For Compacts, Portable Cosmetic Cases, Jewelry Cases, Lockets, Pill Holders, Tissue Holders, Lipstick Cases.

First use on or about Jan. 1, 1923.

SN 43,287. Acro Mayflower Transit Company, Inc., Indianapolis, Ind. Filed Jan. 2, 1958.

PACKED WITH PRIDE

For Shipping Containers—Namely, Wooden and Paper Barrels, Corrugated Board Cartons, and Wooden Boxes and Crates.

First use on or about Jan. 1, 1949.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 2,721. Pioneer Industries, Inc., Darby, Pa., by change of name from Pioneer Suspender Company, Darby, Pa. Filed Feb. 15, 1956.

DIPLOMAT

For Wallets and Billfolds.

First use Nov. 29, 1955.

SN 51,268. Federated Department Stores, Inc. (Bloomingdale Bros. Division), New York, N. Y. Filed May 8, 1958. Sec. 2(f).

LYTASAIRE

Owner of Reg. No. 357,373.

For Hand Luggage—Namely, Valises, Traveling Cases, Gladstone Cases and Hat Boxes, and Trunks.

First use June 27, 1936.

Class 4—Abrasives and Polishing Materials

SN 15,729. Rustain Products, Saddle River Township, N. J. Filed Sept. 14, 1956.

ZUD

Owner of Reg. No. 354,304.

For Abrasive Compositions for Removing Stains From Porcelain and Ceramics.

First use Aug. 20, 1937.

SN 19,396. Ralph A. Simpkins, d. b. a. The Valay Company, Columbus, Ohio. Filed Nov. 16, 1956.

For Shoe Polish in Paste-Like Form.

First use May 1956.

SN 30,364. Rustain Products, Saddle River Township, N. J. Filed May 20, 1957. Sec. 2(f).

NORINCE

Owner of Reg. No. 345,800.

For Polishing Preparations Having Combined Cleansing and Polishing Characteristics.

First use Feb. 15, 1936.

SN 38,574. Union Chemicals, Inc., Shreveport, La. Filed Oct. 8, 1957.

BEAUTY BEST

For Combined Cleaning and Polishing Preparations for Automobiles.

First use May 1, 1957.

SN 51,028. Herbert J. Kornbluh, d. b. a. Sight-Eze, Houston, Tex. Filed May 5, 1958.

No claim is made to exclusive right to use the representations of the glasses and the container per se, apart from the mark as shown.

For Applicators With Contained Glass Cleaner and Polish.

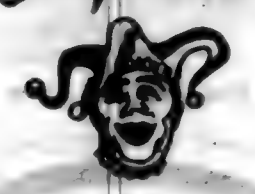
First use Apr. 18, 1958.

SN 41,150. Commercial Solvents Corporation, New York, N. Y. Filed Nov. 23, 1957.

SN 47,874. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Mar. 13, 1958.

SN 51,320. Consultant Sales Service, Inc., Denver, Colo. Filed May 9, 1958.

Jester



For Surface Polishing Solutions.
First use on or about Mar. 1, 1958.

SN 53,051. E. E. Price, Kansas City, Mo. Filed June 6, 1958.

MIRA*KLEER

For Liquid Cleaning and Polishing Compound.
First use Feb. 21, 1957.

Class 5—Adhesives

SN 46,199. The Borden Company, New York, N. Y. Filed Feb. 20, 1958.

SEAM-IT

For Material Comprising, in Part, Natural Rubber Latex, Stabilizers, Vulcanizing Ingredients, for Binding Carpets Together.
First use Jan. 22, 1954.

SN 46,200. The Borden Company, New York, N. Y. Filed Feb. 20, 1958.

CURE-SET

For Waterproof, Chemically Set Adhesive for Laying Rubber, Cork and Vinyl Tile on Concrete, Installing Linoleum and Flexible Tile on Subfloors of Steel, Terrazzo, Ceramic Tile and Other Nonporous Surfaces; Also Provides a Tight Bond When Used for Adhering Metal Stair Nosings, Metal Trim, Tackless Carpet Strip and Other Flooring Accessories.
First use Jan. 12, 1954.

SN 46,201. The Borden Company, New York, N. Y. Filed Feb. 20, 1958.

SPLIC-IT

For Material Comprising Natural Rubber Latex, Stabilizers, Anti-Oxidants, and Discoloration Inhibitors for the Use by Textile and Carpet Manufacturers for the Bonding of Yarn Ends.
First use Jan. 22, 1954.

SN 46,629. B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,996, 427,173, and others.
For Adhesives in Cement, Sheet, and Tape Form.
First use about February 1957; at least as early as 1880 as to "Goodrich."

SN 51,432. The Cudahy Packing Company, Omaha, Nebr. Filed May 12, 1958.

FLEXINE

For Glue.
First use in 1931.

SN 51,676. The Cudahy Packing Company, Omaha, Nebr. Filed May 14, 1958.

CLEARFLEX

For Glue.
First use in March 1950.

SN 53,166. Laminated Plas-Tex Corporation, Springfield, Ohio. Filed June 9, 1958.

TILE-COTE #312

For Adhesive for Affixing Wall and Floor Coverings and the Like.
First use July 15, 1957.

Class 6—Chemicals and Chemical Compositions

SN 835. Schwarz Laboratories, Inc., Mount Vernon, N. Y. Filed Jan. 16, 1956. Sec. 2(f).

Schwarz

Owner of Reg. No. 524,322.
For Biochemical Intermediates and Reagents, Radio Active Chemicals and Pharmaceutical Chemicals.
First use Aug. 31, 1950, on cytidine sulfate.

SN 5,136. Stubnitz Greene Corporation, Adrian, Mich. Filed Mar. 23, 1956.

REYN-O-SOL

For Plasticols.
First use Jan. 1, 1953.

SN 28,182. Olin Mathieson Chemical Corporation, New York, N. Y. Filed Apr. 15, 1957.

OMAVIS

For Viscosity-Index Additives.
First use Mar. 22, 1957.

SN 33,523. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed July 8, 1957.

TUBERCIDE

For Alcoholic Germicide for the Disinfection of Surgical and Dental Instruments.
First use May 15, 1957.

SN 36,106. Photostat Corporation, Providence, R. I. Filed Aug. 23, 1957.

PHOTOSTAT

Owner of Reg. Nos. 83,479, 112,167, and 121,876.
For Photographic Developing and Fixing Chemicals.
First use November 1956.

Class 12—Construction Materials

SN 44,422. Standard Tile Company Incorporated, Brooklyn,

SN 41,150. Commercial Solvents Corporation, New York, N. Y. Filed Nov. 22, 1957.

NOR'WAY

Owner of Reg. Nos. 353,720, 556,961, and others.
For Alcoholic Solvents, Methanol, and Radiator Anti-Freeze Solutions, Radiator Preparations Including Anti-Rust and Water Pump Lubricant, Sealer, Cleaning and Flushing Compositions.
First use Oct. 9, 1936.

SN 42,618. American Cyanamid Company, New York, N. Y. Filed Dec. 18, 1957.

CALCOFLUOR

For Dyes.
First use No. 5, 1957.

SN 43,022. Hayes-Sammons Chemical Co., Mission, Tex. Filed Dec. 26, 1957.

TIX-TOX

For Insecticides.
First use in May 1954.

SN 44,595. Cela Landwirtschaftliche Chemikalien G. m. b. H., Ingelheim am Rhein, Germany. Filed Jan. 24, 1958.

NEXION

Owner of German Reg. No. 664,178, dated Oct. 9, 1954; and U. S. Reg. No. 581,620.
For Animal and Plant Insecticides and Pesticides.

SN 46,046. Armour and Company, Chicago, Ill. Filed Feb. 18, 1958.

PROPODUOMEEN

For Condensation Products of Propylene Oxide With N-Substituted Aliphatic Diamines.
First use Jan. 2, 1958.

SN 46,047. Armour and Company, Chicago, Ill. Filed Feb. 18, 1958.

PROPOMEEN

For Condensation Products of Propylene Oxide With Aliphatic Amines.
First use Oct. 11, 1957.

SN 47,024. The Trubek Laboratories, East Rutherford, N. J. Filed Mar. 3, 1958.

1932

For Synthetic Organic Chemicals Used Either for Their Odor or Flavor Characteristics and Intermediates for Use in the Manufacture of Industrial Chemicals.
First use Jan. 8, 1958.

SN 47,674. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Mar. 13, 1958.

POOL-CLOR

Owner of Reg. No. 207,661.
For Chlorine Liberating Product for Use in Water, Particularly Swimming Pools.
First use Feb. 26, 1958.

SN 47,746. Enjay Company, Inc., New York, N. Y. Filed Mar. 14, 1958.

ENJAY

Owner of Reg. Nos. 646,275 and 646,276.
For Hydrocarbon Polymers Such as Synthetic Rubber or Butyl Polymers.
First use May 17, 1955.

SN 49,252. Crown Chemical Corporation, Providence, R. I. Filed Apr. 8, 1958.

MINICLOR

For Final Finish for Textile Fabrics.
First use Mar. 27, 1958.

SN 50,636. Organon Inc., Orange, N. J. Filed Apr. 29, 1958.

RYPROGEN

For Laboratory Reagent Not Intended for Therapeutic Use, but Only for Use in the Laboratory in Serological Tests for Syphilis.
First use Mar. 31, 1958.

Class 7—Cordage

SN 36,644. American Manufacturing Company, Incorporated, Brooklyn, N. Y. Filed Sept. 4, 1957.

REEL-O-ROPE

For Rope, Cord, and Twine.
First use July 19, 1957.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 42,497. Lane, Limited, New York, N. Y. Filed Dec. 16, 1957.

CHARATAN

Owner of Reg. Nos. 628,896 and 628,944.
For Smoking Pipes.
First use in October 1954.

SN 49,585. Imperial Knife Associated Companies, Inc., Bogal

Class 12—Construction Materials

SN 26,400. Steel Door Corporation, Birmingham, Mich. Filed Mar. 18, 1957.

DETROITER

For Doors for Use in Buildings.
First use Aug. 1, 1954.

SN 38,330. The Athens Flooring Company, Athens, Ohio. Filed Oct. 4, 1957.

MALTA TOWN AND COUNTRY

Owner of Reg. No. 585,992.
For Window Units and Components Therefor.
First use in January 1957.

SN 38,944. R. O. W. Window Company, Joliet, Ill. Filed Oct. 15, 1957.

VISTA-VENT

For Storm Sash and Doors.
First use June 14, 1957.

SN 39,552. The Sealoid Company, Inc., St. Louis, Mo., assignee of The Sealoid Company, St. Louis, Mo. Filed Oct. 25, 1957.

ENOXOR

For Thermosetting Plastic Flooring and Patching Material.
First use Nov. 1, 1956.

SN 41,987. The Carter-Waters Corporation, Kansas City, Mo. Filed Dec. 9, 1957.

BLOK-JOINT

For Resilient Sealing Strip Made of Rubber for Use Between Joints of Building Blocks in Building Structures.
First use Oct. 12, 1955.

SN 42,891. Metal Structures Corporation, Dallas, Tex. Filed Dec. 23, 1957.

MESCO

For Prefabricated Metal Buildings and Parts Thereof.
First use on or about Oct. 1, 1958.

SN 43,520. American Biltrite Rubber Company, Inc., Trenton, N. J. Filed Jan. 7, 1958.

STARDUST

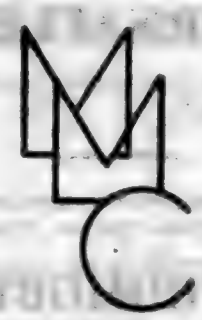
Owner of Reg. No. 599,268.
For Vinyl Floor Tile.
First use Dec. 6, 1957.

SN 44,422. Standard Tile Company Incorporated, Brooklyn, N. Y. Filed Jan. 21, 1958.

CAPRI OLD MASTERS

For Ceramic Tile for Buildings and Ornamental Facings for Furniture.
First use in November 1957.

SN 45,742. Marinette Marine Corporation, Marinette, Wis. Filed Feb. 12, 1958.



For Fabricated Metal Structural Shapes—Namely, I-Beams, T-Bars, and Plate Stock for Use in Assembling and Building Bridges.
First use Jan. 23, 1958.

SN 46,428. Dorsett Plastics Corporation, Santa Clara, Calif. Filed Feb. 24, 1958.

ISO-GLAS

For Material Used in Making Boats, Sold as Completed Craft, and Comprising Laminated Sheet and Panel Material of Woven and/or Matted Glass Fibers and Isophthalic Resin.
First use Jan. 10, 1958.

SN 48,729. Fentron Industries, Inc., Seattle, Wash. Filed Mar. 31, 1958.

Electro/COLOR

For Metal Construction Materials—Namely, Window Frames, Doors, Door Frames, Spandrel Panels, Louvers, Solar Shades, Copings, Facias, Gutters, and Column Covers.
First use Dec. 1, 1955.

SN 49,553. Brown-Graves Company, Akron, Ohio. Filed Apr. 14, 1958.

No exclusive proprietory right is claimed in the word "Tilt" apart from the mark. Owner of Reg. No. 654,661.
For Windows.
First use on or about Feb. 3, 1958.

SN 50,459. Devoe & Raynolds Company, Inc., Louisville, Ky. SN 37,992. The Wander Company, d. b. a. Smith-Dorsey,

SN 51,366. National Gypsum Company, Buffalo, N. Y. Filed May 9, 1958.

SILENTEX

For Insulation and Acoustical Tile.
First use Apr. 16, 1958.

SN 51,388. Wilcox-Woolford Corporation, Spring City, Pa. Filed May 9, 1958.

FURNAFLEX

For Plywood Veneer.
First use Sept. 3, 1957.

SN 51,575. Georges Jacques Miron, d. b. a. Modern Engineering Industries, Montreal, Quebec, Canada. Filed May 13, 1958.

PETROMOBILE

Owner of Canadian Reg. No. 110,025, dated Apr. 18, 1958.
For Mobile Service Station Units.

SN 54,015. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed June 23, 1958.

CHEMFAST CONCRETE

The word "Concrete" is disclaimed apart from the mark as shown.
For Chemical Resistant Mineral Filled Coating Compositions Containing No Portland Cement and Using Thermosetting Resins as the Binding Agent.
First use June 27, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 41,459. La Barge Pipe and Steel Company, St. Louis, Mo. Filed Nov. 27, 1957.

The lining in the drawing is part of the mark and does not represent a color. In this application applicant makes no claim to the words "Pipe" and "Steel," apart from the mark shown.
For Pipe and Pipe Couplings.
First use Jan. 2, 1957.

SN 48,507. The Swartzbaugh Manufacturing Company, Murfreesboro, Tenn. Filed Mar. 28, 1958.

NIX-A-MITE

For Insecticide Distribution Systems for Buildings and Parts Thereof.
First use Mar. 1, 1957.

SN 49,585. Imperial Knife Associated Companies, Inc., Providence, R. I. Filed Apr. 14, 1958.

IMPERIAL

Owner of Reg. No. 539,856.
For Stainless Steel Hollow Ware—Namely, Creamers, Pitchers, Sugar Bowls, and Coffee Pots.
First use Mar. 15, 1958.

SN 51,842. Aeroquip Corporation, General Logistics Division, Burbank, Calif. Filed May 19, 1958.

TRACKLOCK

For Cargo Fasteners.
First use July 24, 1957.

SN 52,813. The Hopp Press, Inc., New York, N. Y. Filed June 3, 1958.

"FITS-ALL"

Owner of Reg. No. 573,054.
For Price Tag Mouldings.
First use on or about June 3, 1950.

SN 52,984. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 5, 1958.

pHd

For Large Head Socket Cap Screws.
First use Apr. 21, 1958.

SN 53,999. The Bowman Products Co., Cleveland, Ohio. Filed June 23, 1958.

BOWMALLOY

For Fastener Hardware—Namely, Bolts, Screws, Nuts, Lock Nuts, and Washers.
First use June 10, 1958.

SN 54,045. Illinois Tool Works, Chicago, Ill. Filed June 23, 1958.

NIBSCREW

For Rotary Fasteners—Namely, Nuts and Screws.
First use May 6, 1958.

Class 16—Protective and Decorative Coatings

SN 47,232. The Harrison Paint & Varnish Company, Canton, Ohio. Filed Mar. 7, 1958. Sec. 2(f) as to "Dutch Standard."

No claim is made to the words "Quality Since 1911" apart from the mark. Owner of Reg. Nos. 371,933 and 517,152.
For Paints, Varnishes, Enamels, Stains, and Fillers.
First use Nov. 23, 1956; June 3, 1953, as to "Dutch Standard."

SN 49,728. American Cyanamid Company, New York, N. Y. SN 53,960. The Devine Paint Co., New York, N. Y.

SN 50,439. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed Apr. 28, 1958.

BLOXFIL

For Coating Compositions for Concrete, Concrete Block, Cinder Block, and Aggregate Block Walls.
First use in March 1958.

SN 55,019. Oncrete Products, Inc., Evanston, Ill. Filed July 9, 1958.

ON-GARD

For Ready Mixed Masonry and Concrete Coating.
First use Mar. 10, 1958.

SN 57,923. Poor & Company, Chicago, Ill. Filed Aug. 26, 1958.

POOR

For Chemical Materials and Compositions for Coating Metal Surfaces or Rust Proofing, Protective and Decorative Coatings and Analogous Preparations.
First use Jan. 2, 1958.

SN 58,073. American Can Company, New York, N. Y. Filed Aug. 29, 1958.

BARACOTE

For Protective Coatings for Use on the Interior and/or Exterior of Containers Fabricated From Sheet Metal, Plastic and/or Paper.
First use Feb. 11, 1958.

Class 17—Tobacco Products

SN 45,727. David Dunlop, Petersburg, Va. Filed Feb. 12, 1958.

RECORD

For Cigarettes.
First use Jan. 27, 1958.

SN 49,959. Philip Morris Incorporated, New York, N. Y. Filed Apr. 18, 1958.

NEW YORKER

For Cigarettes.
First use Apr. 12, 1957.

Class 18—Medicines and Pharmaceutical Preparations

SN 31,766. Mrs. Jacqueline Andrée Alice Decaux Charpentier, d. b. a. Laboratoire de Phytotherapie E. Charpentier, Paris, France. Filed June 11, 1957.

BOLDOLAXINE

For Laxatives.
First use November 1955; in commerce 1954.

SN 37,892. The Wander Company, d. b. a. Smith-Dorsey, Chicago, Ill. Filed Sept. 27, 1957.

TRISULFAMINIC

Owner of Reg. No. 589,662.
For Nasal Decongestant Plus Sulfonamides.
First use Sept. 13, 1957.

SN 39,073. Olin Mathieson Chemical Corporation, New York, N. Y. Filed Oct. 17, 1957.

BRAXORONE

For Hormonal Preparations With Progestational Activity.
First use Sept. 27, 1957.

SN 39,965. International Latex Corporation, Dover, Del. Filed Nov. 1, 1957.

ISODETTES

For Medicated Throat Lozenge.
First use Oct. 16, 1957.

SN 43,551. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Jan. 7, 1958.

LINAID

For Chemo-Therapeutic Preparation for the Lowering of Blood Cholesterol.
First use Nov. 15, 1957.

SN 44,835. Norgine Laboratories, Inc., New York, N. Y. Filed Jan. 28, 1958.

MURIPSIN

For Medicinal Preparation in the Nature of a Gastric Acidifying Compound.
First use Jan. 16, 1958.

SN 45,756. The Purdue Frederick Company, New York, N. Y. Filed Feb. 12, 1958.

COLCHINATE

For Preparation for the Treatment of Gout and Gouty Arthralgia.
First use Dec. 23, 1957.

SN 46,075. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

MEPROVAN

Owner of German Reg. No. 685,230, dated Dec. 7, 1955.
For Pharmaceutical Specialty With a Gynaecological Field of Application.

SN 46,076. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

DIXARIT

Owner of German Reg. No. 649,883, dated Dec. 9, 1953.
For Analeptic Preparation.

SN 46,080. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

ADUMBRAN

Owner of German Reg. No. 677,805, dated June 15, 1955.
For Sedative, Hypnotic, and Tranquilizer.

SN 54,836. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1958.

SN 40,616. Automotive Brake Industries, Inc., d. b. a. Safeguard Brake Valve Co., Los Angeles, Calif. Filed Nov. 13,

SN 49,728. American Cyanamid Company, New York, N. Y. Filed Apr. 16, 1958.

VI-DELTA

Owner of Reg. Nos. 351,165 and 395,269.
For Pharmaceutical Preparations Containing Vitamins A and D.
First use Feb. 18, 1937.

SN 50,262. V-M Nutri-Food, Inc., Evanston, Ill. Filed Apr. 23, 1958.

VENUS

Owner of Reg. Nos. 643,168, 644,064, and others.
For Protein-Concentrate Food Supplement Affording Essential Amino Acids.
First use Mar. 13, 1958.

SN 50,494. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Apr. 28, 1958.

CATROL

Owner of Reg. No. 640,931.
For Psychochemical Medication for the Treatment of Mental Depression and Mood Depression.
First use Mar. 14, 1958.

SN 51,543. Best & Gee Proprietary Limited, d. b. a. Edinburgh Laboratories (Aust) Pty. Ltd., Sydney, Australia. Filed May 13, 1958.

LANTIGEN

Owner of Australian Reg. No. 68,409, dated June 24, 1936.
For Medicinal Preparation for Human Consumption To Be Taken Internally for the Treatment of Catarrh, Bronchitis, Asthma and Sinus.

SN 51,606. American Cyanamid Company, New York, N. Y. Filed May 14, 1958.

NEO-ARISTOCORT

Owner of Reg. No. 653,318.
For Topical Steroid Preparation.
First use Apr. 30, 1958.

SN 51,659. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed May 14, 1958.

COSA-TETRASTATIN

Owner of Reg. Nos. 661,579 and 661,581.
For Antibiotic Preparation.
First use May 1, 1958.

SN 52,459. American Cyanamid Company, New York, N. Y. Filed May 28, 1958.

ARISTOBIOTIC

Owner of Reg. No. 653,318.
For Topical Steroid Preparation.
First use May 15, 1958.

SN 52,960. The Purdue Frederick Company, New York, N. Y. Filed June 5, 1958.

ISOBILAGOL

For Physiologic Digestive Tonic.
First use May 22, 1958.

SN 53,061. Sterling Drug Inc., New York, N. Y. Filed June 6, 1958.

MYORDIL

For Coronary Vasodilator and Cardiac Regulator for Use in the Prevention and Treatment of Angina Pectoris and Cardiac Fibrillation.
First use May 20, 1958.

SN 53,192. Olin Mathieson Chemical Corporation, New York, N. Y. Filed June 9, 1958.

CHROMITOPE

For Pharmaceutical Preparations Containing Radioactive Chromate.
First use Dec. 10, 1957.

SN 53,506. The Iso-Sol Company, Inc., Lindenhurst, N. Y. Filed June 13, 1958.

TEAR-EFRIN

For Ophthalmic Medicines.
First use on or about Sept. 27, 1957.

SN 54,029. Esta Medical Laboratories, Inc., Chicago, Ill. Filed June 23, 1958.

LANESTA

For Medicated Vaginal Jelly.
First use Apr. 1, 1958.

SN 54,576. Dr. Karl Thomae G. m. b. H., Biberach an der Riss, Germany. Filed June 30, 1958.

PERSANTIN

Owner of German Reg. No. 662,881, dated Mar. 23, 1936.
For Cardiac and Circulatory Preparation.

SN 54,628. Olin Mathieson Chemical Corporation, New York, N. Y. Filed July 1, 1958.

DUMOGRAN

For Preparations Containing Hormones, Vitamins, and Minerals.
First use June 28, 1958.

SN 54,633. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1958.

SENODOXINE

For Anti-Nauseant.
First use May 9, 1958.

SN 54,635. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1958.

SENODOX

For Anti-Nauseant.
First use May 9, 1958.

SN 50,609. Ero Manufacturing Company, Chicago, Ill. Filed Apr. 29, 1958.

SN 52,866. Keystone Railway Equipment Company, Chicago, Ill. Filed June 4, 1958.

SN 54,696. The Purdue Frederick Company, New York, N. Y. Filed July 1, 1955.

INTESTONICUM

For Preparation for the Treatment of Dyspepsia, Bloating, and Like Conditions.
First use May 9, 1955.

SN 56,030. Merit Pharmaceutical Corporation of America, North Miami, Fla. Filed July 25, 1955.

OCTOGESIC

For Analgesic Preparation.
First use May 19, 1958.

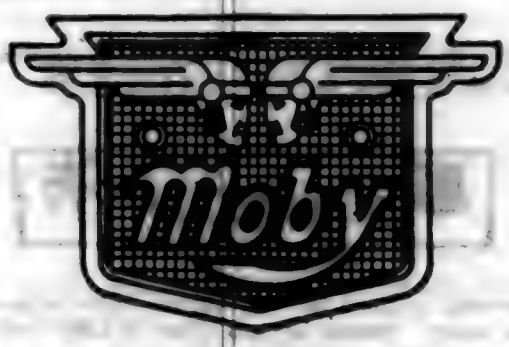
Class 19—Vehicles

SN 25,996. Lancer Industries, Inc., North Miami, Fla. Filed Mar. 12, 1957.

Sea Lancer

For Boats, Cruisers and the Like To Be Powered With Outboard or Inboard Motors.
First use June 10, 1956.

SN 28,989. Ateliers de la Motobecane, Pantin (Seine), France. Filed Apr. 29, 1957.



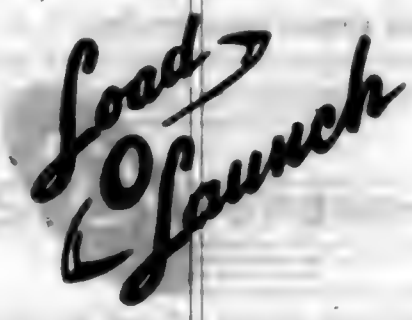
Priority claimed under Sec. 44(d) on French Reg. No. 460,895, dated Nov. 13, 1956 (Seine); Natl. Inst. No. 81,347. Owner of U. S. Reg. Nos. 555,003, 636,737, and others.
For Motor Driven Bicycles and Motor Scooters.

SN 28,990. Ateliers de la Motobecane, Pantin (Seine), France. Filed Apr. 29, 1957.

MOBY

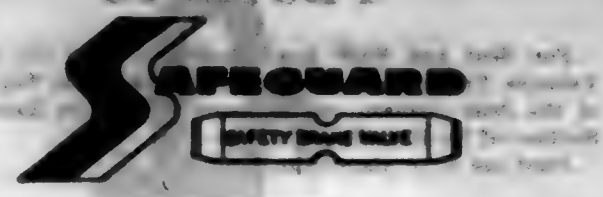
Priority is claimed under Sec. 44(d) on French Reg. No. 460,723, dated Nov. 7, 1956 (Seine); Natl. Inst No. 81,019. Owner of U. S. Reg. Nos. 555,003, 636,737, and others.
For Motor Driven Bicycles and Motor Scooters.

SN 30,066. James L. Pearce, d. b. a. Pearce Manufacturing Company, Worthington, Ohio. Filed Oct. 28, 1957.



For Boat Trailer Dolly.
First use June 14, 1957.

SN 40,616. Automotive Brake Industries, Inc., d. b. a. Safeguard Brake Valve Co., Los Angeles, Calif. Filed Nov. 12, 1957.



The words "Safety Brake Valve" and the representation of a part of the goods are disclaimed apart from the mark.
For Safety Valves for Vehicle Brakes.
First use Jan. 2, 1956.

SN 41,036. Rudy W. Hess Welding Service, Inc., Matawan, N. J. Filed Dec. 2, 1957.

CARRY CRAFT

For Boat Trailer.
First use Feb. 15, 1954.

SN 45,475. General Motors Corporation, Detroit, Mich. Filed Feb. 7, 1958.

KINGSWOOD

For Automobiles.
First use Dec. 27, 1957.

SN 47,478. Wagemaker Company, Grand Rapids, Mich. Filed Mar. 10, 1958.

PLY-LAP

For Boat Hulls.
First use July 29, 1955.

SN 49,890. Armstrong Patents Co. Limited, Beverley, Yorkshire, England. Filed Apr. 18, 1958.

No claim is made to the representation of an automobile or the expression "Cushioned Ride" except as shown. Owner of Reg. Nos. 667,226 and 667,227.
For Shock Absorbers for Vehicles.
First use Aug. 31, 1954; in commerce Jan. 15, 1958.

SN 50,418. Tatra, Narodni Podnik, Kprivnice, Czechoslovakia. Filed Apr. 25, 1958.

TATRA

Owner of Czechoslovakian Reg. No. 117,861, dated Sept. 3, 1934; and U. S. Reg. Nos. 350,261 and 351,478.
For Automobiles; Station Wagons; Delivery Cars; Trucks; Trolley Cars; Omnibuses, Trailers, Tank Cars, Service Cars and Trucks; Ambulances; Vehicles With Built-In Machinery, Street Cleaning Vehicles; Garbage Collecting Trucks, Sprinkling Cars, Motorized Fire Trucks; Ladder Trucks, Motorized Railway Cars, and Structural Parts and Accessories of Said Vehicles.

SN 38,142. International Electronic Industries, Inc., Nashville, Tenn. Filed Oct. 1, 1957.

SN 43,941. Feedback Controls, Inc., Waltham, Mass. Filed Jan. 13, 1958.

SN 50,609. Ero Manufacturing Company, Chicago, Ill. Filed Apr. 29, 1958.

PROTECTO

For Seat and Back Rest Cushion Covers for Automotive Vehicles Preformed and Sized To Enclose the Top and Sides of the Seat Cushion and at Least the Entire Exposed Front Surface of the Back Rest Cushion.
First use on or about Apr. 1, 1958.

SN 50,945. Vauxhall Motors Limited, Luton, England. Filed May 2, 1958.

Owner of British Reg. No. 718,789, dated June 8, 1953; and U. S. Reg. No. 157,400.
For Motor Road Vehicles, Chassis for Motor Road Vehicles, Trailers (Vehicles), and Parts for Said Vehicles.

SN 51,774. Checker Motors Corporation, Kalamazoo, Mich. Filed May 16, 1958.

SUPERBA

For Automobiles.
First use May 2, 1958.

SN 52,448. Towe-E-Z Trailer Hitch, Inc., Irwin, Pa. Filed May 27, 1958.

TOWE·E·Z

For Trailer Hitches.
First use July 1954.

SN 52,546. Alcort, Inc., Waterbury, Conn. Filed May 29, 1958.

ALCORT
Sunfish

For Sailboats.
First use July 13, 1954.

SN 52,655. Le Febure Corporation, Cedar Rapids, Iowa. Filed May 26, 1958.

MAIL-KWIK

For Mobile Stands for Collecting and Distributing Mail and Parts Thereof.
First use May 13, 1958.

SN 52,896. Keystone Railway Equipment Company, Chicago, Ill. Filed June 4, 1958.

KEYSTONE-PORTLOC

For Door and Door Frame Assembly for Covered Hopper Cars.
First use May 11, 1956.

SN 52,943. Dunlop Tire and Rubber Corporation, Buffalo, N. Y. Filed June 5, 1958.

Duthane

Owner of Reg. No. 652,547.
For Wheels and Casters for Hand Trucks With Tires of Polyurethane Elastomer.
First use Oct. 25, 1956.

SN 53,359. Raybestos-Manhattan, Inc., Passaic, N. J. Filed June 11, 1958.

FADEMASTER

For Liquid Cooled Brakes.
First use May 14, 1958.

SN 53,513. Kit Manufacturing Company, Long Beach, Calif. Filed June 13, 1958.

The drawing is lined for red, but no claim is made to this particular color. Owner of Reg. Nos. 511,082 and 528,845.
For House Trailers.
First use Apr. 1, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 21,341. University Loudspeakers, Inc., White Plains, N. Y. Filed Dec. 19, 1956.

DIFFAXIAL

For Extended or Multi-Range Speakers.
First use March 1956.

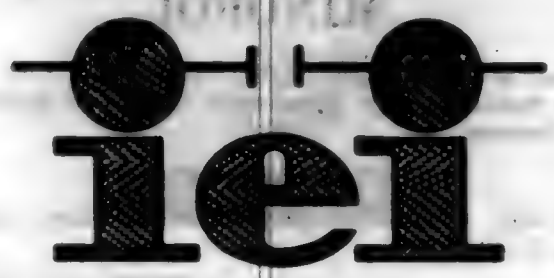
SN 34,907. Beta Electric Corp., New York, N. Y. Filed Aug. 5, 1957.

For High Voltage Power Supplies.
First use on or before Jan. 1, 1948.

SN 50,150. Consolidated Diesel Electric Corporation, Stamford, Conn. Filed Apr. 22, 1958.

SN 51,000. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 5, 1958.

SN 38,148. International Electronic Industries, Inc., Nashville, Tenn. Filed Oct. 1, 1957.



The drawing is lined for gray, but color is not considered a feature of the mark.
For Electrical Capacitors.
First use on or about Jan. 15, 1954.

SN 41,479. Richberger's, Memphis, Tenn. Filed Nov. 27, 1957.

RICHLITE

For Incandescent Electric Lamp Bulbs, Fluorescent Electric Lamp Bulbs, Fluorescent Lamp Starter Switches, Electric Fixtures and Fuses.
First use Aug. 29, 1952.

SN 42,054. Protectall Industries, Inc., Batavia, Ill. Filed Dec. 9, 1957.

WEED-O-MATIC

For Electric Fence Chargers.
First use in July 1955.

SN 42,222. Major Equipment Co., Inc., Chicago, Ill. Filed Dec. 11, 1957.

MAJOR

For Electric Theater Lighting Equipment and Parts Thereof; Reflectors for All Lighting Purposes and Applications, Manual and Remote Control Switchboards for All Purposes and Applications in the Lighting Control Field, and Parts Thereof.
First use Jan. 1, 1919.

SN 42,322. Tokyo Tsushin Kogyo Kabushiki Kaisha, d. b. a. Tokyo Tsushin Kogyo Ltd., Shinagawa-ku, Tokyo-to, Japan. Filed Dec. 12, 1957.

Storecorder

Owner of Japanese Reg. No. 484,666, dated July 21, 1956.
For Magnetic Tape Recorders and Reproducers, and Magnetic Tape Therefor.

SN 42,841. Feedback Controls, Inc., Waltham, Mass. Filed Jan. 13, 1958.

For Magnetic Amplifiers, Servomechanisms, Quadrature Rejectors, Synchro Data Switches, and Servo-Type Data Repeaters for Indication of Shaft Angle and A. C. and D. C. Voltage.
First use in June 1956.

SN 48,956. The Louis Allis Company, Milwaukee, Wis. Filed Apr. 3, 1958.

SYNCRO-SPEDE

For Electric Motors.
First use Aug. 23, 1957.

SN 49,011. Regan Engineering Corporation, Milwaukee, Wis. Filed Apr. 3, 1958.

REGAN

For Electric Heating Elements.
First use Jan. 14, 1944.

SN 49,256. Dialight Corporation, Brooklyn, N. Y. Filed Apr. 8, 1958.

DATALITES

For Electric Indicator Lights for Pilot and Signal Light Purposes.
First use Feb. 1, 1958.

SN 49,463. F. P. Ryan, Lookout Mountain, Tenn. Filed Apr. 10, 1958.

COMFORTEER

For Electric Space Heaters.
First use Mar. 13, 1958.

SN 49,783. Raylite Electric Corp., Bronx, N. Y. Filed Apr. 16, 1958.

RAINBOW WINK-O-LITES

Owner of Reg. No. 660,312.
For Decorative Lighting Outfits for Christmas Trees and Electric Lamps for Such Outfits.
First use in January 1958.

SN 31,687. Kai Ji Battery Factory, Victoria, Hong Kong. SN 32,729. International Electric Company, Chicago, Ill.

SN 50,150. Consolidated Diesel Electric Corporation, Stamford, Conn. Filed Apr. 22, 1958.

CON DIESEL

No claim is made to the word "Diesel" except as the same is used in conjunction with the other features of the mark.
For Diesel Powered Electric Generator Units and Portable Electric Power Units.
First use Feb. 28, 1958.

SN 50,191. The Strong Electric Corporation, Toledo, Ohio. Filed Apr. 22, 1958.

Strong U-H-I

Owner of Reg. Nos. 379,854 and 542,000.
For Arc Lamps.
First use Mar. 20, 1957.

SN 50,550. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 28, 1958.

tan-Ti-cap

For Solid Electrolyte Tantalum Electrolytic Capacitors.
First use on or about Jan. 10, 1958.

SN 50,779. Duro-Test Corporation, North Bergen, N. J. Filed May 1, 1958.

DURO-LITE

For Incandescent and Fluorescent Lamps.
First use Apr. 23, 1958.

SN 50,782. Essex Wire Corporation, Fort Wayne, Ind. Filed May 1, 1958.

PAR-UFLEX

Owner of Reg. Nos. 586,117 and 580,989.
For Electrical Wire and Cable and Insulation Therefor.
First use on or about Feb. 15, 1958.

SN 50,862. Anaconda Wire and Cable Company, New York, N. Y. Filed May 2, 1958.

NYLAC

For Electric Wires and Cables.
First use Apr. 3, 1958.

SN 50,930. McGraw-Edison Company, Elgin, Ill. Filed May 2, 1958.

TOASTMASTER

Owner of Reg. Nos. 197,304, 350,056, and others.
For Electric Appliances and Parts Therefor—Namely, Waffle Bakers, Coffee Makers, Fry Pans, Dry Irons, Steam Irons, Portable Space Heaters, Water Heaters, Hot Food Servers, Cord Sets, Power Supply Cords, Timers for Toasters, and Electric Motors for Toasters.
First use Feb. 21, 1934, on coffee makers.

SN 51,000. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 5, 1958.

MINOFOL

Owner of German Reg. No. 700,792, dated Mar. 11, 1957.
For Insulating Foils of Synthetic Plastic for Electro-Technical Purposes.

SN 51,078. Teleflex Incorporated, North Wales, Pa. Filed May 5, 1958.

For Marine Controls Utilizing Electric Switches and Power Actuators.
First use Feb. 28, 1958.

SN 51,079. Teleflex Incorporated, North Wales, Pa. Filed May 5, 1958.

HELMSMAN

For Marine Controls Utilizing Electric Switches and Power Actuators.
First use Feb. 28, 1958.

SN 51,313. Arvin Industries, Inc., Columbus, Ind. Filed May 9, 1958.

For Portable Electric Room-Heating Appliances.
First use on or about Sept. 4, 1957.

SN 51,442. Essex Wire Corporation, Fort Wayne, Ind. Filed May 12, 1958.

PARALENE

Owner of Reg. Nos. 586,117, 560,368, and 648,167.
For Electrical Wire and Cable and Insulation Therefor.
First use Apr. 9, 1958.

SN 51,527. West Bend Aluminum Co., West Bend, Wis. Filed May 12, 1958.

WEBALCO

For Electric Skillet.
First use Apr. 4, 1958.

SN 51,637. Kai It Battery Factory, Victoria, Hong Kong. Filed May 14, 1958.

For Flashlight Batteries.
First use Dec. 30, 1949; in commerce Feb. 21, 1957.

SN 51,981. Cornell-Dubilier Electric Corporation, South Plainfield, N. J. Filed May 20, 1958.

For Antenna Rotators.
First use in September 1956.

SN 52,506. Metalitite Products, Inc., Hammond, Ind. Filed May 28, 1958.

For Moistureproof and Dustproof Boxes, Troughs and Housing for Electrical Systems—Namely, Electrical Wiring Boxes and Troughs for Mounting Chassis, Relays, Terminal Strips, Etc.; Control Panel Enclosures for Mounting Electrical Controls, Instruments, Etc.; Pushbutton Enclosures for Housing Pushbuttons, Switches, and Pilot Lights; and Sectional Wireways.
First use Mar. 24, 1958.

SN 52,539. Daniel Woodhead Company, Chicago, Ill. Filed May 28, 1958.

SAFETY YELLOW

Owner of Reg. No. 660,051.
For Electrical Apparatus and Supplies—Namely, Electrical Lamps, Lamp Guards, Lamp Handles, Plugs, Caps, Sockets, Connectors, Receptacles, Lamp Globes, Bunghole Lamps, Wire, Cables, Cords, Transformers, Mounting Nipples, Reflectors, Electrical Cord Winders and Reels for Electrical Cords and Wires, Vapor-Proof Guards for Electric Lamps, Synthetic Oil-Proof Rubber Insulating Compound and Insulating Cases Made Therefrom for Electric Equipment, Electric Circuit Connectors, and Grounding Attachments.
First use Nov. 25, 1937.

SN 52,729. International Electric Company, Chicago, Ill. Filed June 2, 1958.

INTERNATIONAL

Owner of Reg. Nos. 424,467 and 533,000.
For Battery Chargers.
First use May 12, 1958.

Class 22—Games, Toys, and Sporting Goods

SN 24,474. Teikoku Rayon Company, Limited, Nishi-ku, Osaka, Japan. Filed Feb. 15, 1957.

Teviron

Priority claimed under Sec. 44(d) on Japanese application, filed Aug. 20, 1956; Reg. No. 524,038, dated July 18, 1958.
For Fishing Nets Made of Synthetic Fibers.

SN 39,786. The Zell Products Corporation, Norwalk, Conn. Filed Oct. 29, 1957.

ZELL

For Toy Banks.
First use on or about Jan. 15, 1926.

SN 44,244. American Foreign Industries, Inc., San Francisco, Calif. Filed Jan. 20, 1958.

For Fishing Tackle—Namely, Swivels, Ice Lures, Fish Hooks, Wet and Dry Flies, Streamer Flies and Popping Bugs.
First use Oct. 28, 1957.

SN 48,707. Cadaco-Ellis, Inc., Chicago, Ill. Filed Mar. 31, 1958.

AIRLINES LOTTO

No claim of exclusive right is made to "Lotto" as used on game equipment.
For Component Parts for Playing a Lotto-Type Game Comprising a Game Board, Markers, and Cards.
First use Mar. 19, 1958.

SN 49,091. Michael Stranak, d. b. a. Ace Bait Co., Murray, Ky. Filed Apr. 4, 1958.

MIN-A-LURE

For Artificial Fishing Lures.
First use in January 1958.

SN 49,200. Scientific Products Company, Richmond, Va. Filed Apr. 7, 1958.

ALPHA-1

For Toy Rockets.
First use Feb. 28, 1958.

SN 49,589. Kinco Auto Products, Inc., d. b. a. National Unit

SN 52,524. Theodore W. Spaetgens, Vancouver, British

SN 49,883. Hope Engineering Company, Mankato, Minn. Filed Apr. 14, 1958.

SNAG-SLIPPER

For Artificial Fishing Lures.
First use Apr. 3, 1958.

SN 49,908. Aqua-Buoy Corporation of Miami, West Hartford, Conn. Filed Apr. 17, 1958.

twin-buoy

For Inflatable Device To Be Worn by a Swimmer as an Aid or Support for Swimming.
First use Mar. 25, 1958.

SN 50,275. Fred Arbogast Company, Inc., Akron, Ohio. Filed Apr. 24, 1958.

BUSY-BODY

For Artificial Fishing Lure.
First use on or about Apr. 1, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 32,888. Fred Medart Manufacturing Co., St. Louis, Mo. Filed July 17, 1957.

MEDART MOTO-VATOR

For Motor-Driven Actuators for Folding Gymnasium Seats, Bleachers and the Like.
First use July 1, 1957.

SN 33,938. E. J. Kahn Corporation, Evanston, Ill. Filed Aug. 21, 1957.

PARTY-PAK

For Plastic Spoons, Knives, and Forks.
First use May 14, 1957.

SN 34,603. Loblaw, Inc., Buffalo, N. Y. Filed Sept. 3, 1957.

FAMILY FAIR

For Paring Knives, Metal Cooking Pans, Sets of Kitchen Implements—Namely, Masher, Spoon, Fork, Turner, Egg Beater, and Ladle.
First use June 27, 1957.

SN 37,854. Bijur Lubricating Corporation, Rochelle Park, N. J. Filed Sept. 26, 1957.

SPRAYJET

For Liquid and Oil Pressure Sources and Pressure Supply Devices, Such as Lubricant Pumps and Compressed Air and Lubricant Containers by Means of Which Lubricant and Liquid Coolant Are Propelled Under Pressure.
First use Jan. 15, 1957.

SN 37,856. Bijur Lubricating Corporation, Rochelle Park, N. J. Filed Sept. 26, 1957.

SPRAYCOOL

For Liquid and Oil Pressure Sources and Pressure Supply Devices, Such as Lubricant Pumps and Compressed Air and Lubricant Containers by Means of Which Lubricant and Liquid Coolant Are Propelled Under Pressure.
First use June 15, 1957.

SN 41,654. King O'Lawn, Inc., South Gate, Calif. Filed Dec. 2, 1957.

KING O'LAWN

The lining appearing in the drawing of the mark is intended to indicate the color red.
For Power Lawn Mowing and Edging Equipment.
First use April 1949.

SN 43,662. Guido Bertoglio and Sauro Albertini, Viganello, Switzerland. Filed Jan. 9, 1958.

AB-L

Owner of Swiss Reg. No. 161,569, dated May 4, 1956.
For Automatic Machine for Filling and Fitting Cartridges for Ball-Fountain Pens.

SN 47,038. R. C. Young, d. b. a. R. C. Young Company, Manitowoc, Wis. Filed Mar. 3, 1958.

YOUNG

For Feather Trimmer Used in Trimming the Feathers on Arrows.
First use July 1, 1948.

SN 49,072. Carl A. Mercer, d. b. a. Mercer Engineering Co., Canoga Park, Calif. Filed Apr. 4, 1958. Sec. 2(f).

MERCER

For Automobile Mufflers.
First use Aug. 1, 1957.

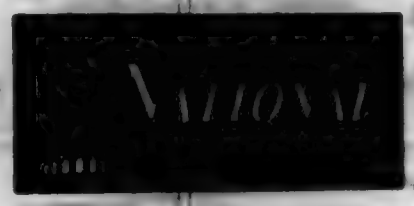
SN 49,173. The Monarch Machine Tool Company, Sidney, Ohio. Filed Apr. 7, 1958.

Owner of Reg. No. 507,625.
For Lathes, Metal Turning Machines and Parts Thereof.
First use Mar. 31, 1958.

SN 34,453. Watervliet Tool Company, Inc., Albany, N. Y. Filed June 27, 1958.

Class 26—Measuring and Scientific

SN 49,869. Kinco Auto Products, Inc., d. b. a. National Unit Exchange, Memphis, Tenn. Filed Apr. 14, 1958.



Without waiving its common law rights and for purposes of this registration only applicant makes no claim herein to the words "Unit Exchange," apart from the mark as shown.

For Rebuilt Parts for Automobiles, Tractors, Road Machinery, Trucks, and Engines—Namely, Carburetors, Clutch Plates, Clutch Cover Assemblies, Shock Absorbers, Water Pumps, Fuel Pumps, Brake Shoes, and Master Cylinders.

First use Mar. 1, 1947.

SN 49,919. Globe American Corporation, d. b. a. Vulcan-Hart Manufacturing Company, Kokomo, Ind. Filed Apr. 18, 1958.

VULCAN

For Dishwashing Machines and Commercial Kitchen Equipment—Namely, Automatic Self-Leveling Dispensers Comprising a Calibrated Spring Mechanism Within a Cylindrical Container for Positioning Plates, Saucers, and the Like.

First use in May 1956 on dishwashing machines.

SN 51,435. Dempsey & Stanley, Inc., River Forest, Ill. Filed May 12, 1958.

DESCO

For Spray Type Power Gun for Cleaning.

First use Feb. 6, 1958.

SN 51,926. Midas, Inc., Chicago, Ill. Filed May 19, 1958.

The term "Muffler Shops" and the representation of the muffler are disclaimed apart from the mark as shown. Owner of Reg. Nos. 620,322, 657,604, and others.

For Mufflers for Internal Combustion Engines and Parts Thereof—Namely, Tail Pipes, Exhaust Pipes, and Muffler Clamps.

First use July 1, 1957.

SN 52,121. Holtkamp Electric Service Co., Centralia, Ill. Filed May 22, 1958.

WIND WHEEL

For Internal Combustion Engines.

First use Aug. 29, 1957.

SN 52,153. Quickpak Machinery Corp., Culver City, Calif. Filed May 22, 1958.

QUICKPAK

For Machines for Heat Sealing Plastic Containers.

First use on or about Mar. 1, 1958.

SN 52,534. Theodore W. Spaetgens, Vancouver, British Columbia, Canada. Filed May 28, 1958.

LO-REZ

Owner of Canadian Reg. No. 103,647, dated June 29, 1956.

For Vibration Control Mountings.

SN 53,159. Jabsco Pump Company, Burbank, Calif. Filed June 9, 1958.

"WATER MULE"

For Self-Priming Water Pumps.

First use May 26, 1958.

SN 53,160. Jabsco Pump Company, Burbank, Calif. Filed June 9, 1958.

"WATER PUPPY"

For Self-Priming Water Pumps.

First use May 19, 1958.

SN 54,238. The Joyce-Cridland Company, Dayton, Ohio. Filed June 25, 1958.

YELLO-JACKIT

For Hydraulic Jacks.

First use Apr. 1, 1957.

SN 54,424. John Oster Manufacturing Co., Milwaukee, Wis. Filed June 27, 1958.

For Hair Clippers.

First use in 1932.

SN 54,452. Watervliet Tool Company, Inc., Albany, N. Y. Filed June 27, 1958.

The drawing is lined for red and yellow, but color is not considered a limiting feature.

For Automotive Servicing Equipment—Namely, Bumper Jacks, Safety Lifts, Truck Lifts, and Sanding Machines.

First use on or about Apr. 1, 1958.

SN 42,471. Gestetner Limited, London, England. Filed Dec. 16, 1957.

SN 51,541. Automation Corporation of America, North Hollywood, Calif. Filed May 13, 1958.

SN 54,453. Watervliet Tool Company, Inc., Albany, N. Y. Filed June 27, 1958.

The drawing is lined for the colors red and yellow, but color is not considered a limiting feature of the mark.
For Bumper Jacks.
First use on or about Apr. 1, 1958.

SN 54,944. Gorham Manufacturing Company, Providence, R. I. Filed July 8, 1958.

LISA

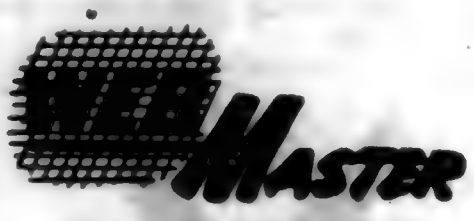
For Stainless Steel Table Flatware and Table Cutlery.
First use June 18, 1958.

SN 54,945. Gorham Manufacturing Company, Providence, R. I. Filed July 8, 1958.

AMERICRAFT

For Stainless Steel Table Flatware and Table Cutlery.
First use June 18, 1958.

SN 57,965. Mount Hope Machinery Company, Taunton, Mass. Filed Aug. 27, 1958.



For Woven Web Controlling Apparatus and Parts Thereof.
First use Aug. 14, 1958.

SN 57,966. Mount Hope Machine Company, Inc., Taunton, Mass. Filed Aug. 27, 1958.

"SKEW LINER"

For Weft Straightening Apparatus and Parts Thereof.
First use Jan. 23, 1958.

Class 26—Measuring and Scientific Appliances

SN 29,451. Jarrell-Ash Company, Newtonville, Mass. Filed May 6, 1957.

JAco

For Spectrometers, Spectrographs, Microphotometers, Excitation Units for Exciting Samples in Spectro-Chemical Analysis, Photoprocessors for Processing Photographic Films and Plates, Fluorometers, Spark Stands for Electrodes, Calculating Boards, and Blood Cell Counters.
First use Nov. 30, 1951.

SN 30,039. Riken Optical Industries, Ltd., Chuo-ku, Tokyo, Japan. Filed May 14, 1957.

golden Ricoh

Owner of Reg. No. 571,618.
For Cameras and Parts Thereof.
First use August 1956; in commerce August 1956.

SN 30,371. Baird-Atomic, Inc., Cambridge, Mass. Filed Oct. 23, 1957.

Eva

For Thermal Imaging Devices That Facilitate a Visual Image of Infra-Red Radiation.
First use on or about June 1, 1950.

SN 30,980. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Nov. 1, 1957.

CROP-TROL

For Thermostats.
First use Mar. 15, 1957.

SN 41,487. Sunbeam Corporation, Chicago, Ill. Filed Nov. 27, 1957.

SUNBEAM

For Electrical and Mechanical Measuring and Testing Instruments, Including Devices for Measuring Current, Voltage, Resistance, and Power; Continuity Testers; Leakage Current Testers; Dielectric Testers; Gages and Scales for Measuring Distances, Displacements and Eccentricities; and Force Measuring Devices.
First use on or before August 1950.

First use on or about Mar. 1, 1958.

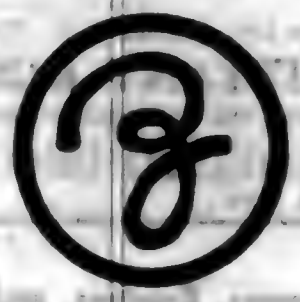
SN 42,471. Gestetner Limited, London, England. Filed Dec. 16, 1957.

GESTELITH

Owner of British Reg. Nos. 734,015 and 768,783, dated May 23, 1956, and Mar. 21, 1957, respectively.

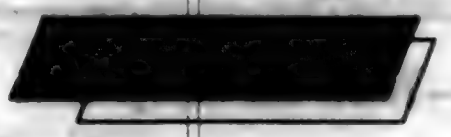
For Sensitized Sheet Material; Writing and Drawing Instruments—Namely, Bow Pens, Dividers, Perspex Rulers, T-Squares, Triangles, and Curves.

SN 46,299. Zylite Products Co., Inc., New York, N. Y. Filed Feb. 4, 1958.



For Eyeglass Frames and Parts Thereof.
First use Jan. 20, 1958.

SN 48,596. White-Hixon Laboratories, Inc., Long Island, N. Y. Filed Mar. 27, 1958.



For Photographic Print Treating Apparatus, Such as Photographic Print Developing Equipment and Print Carrying Baskets Used Therein.
First use on or about Mar. 1, 1958.

SN 49,547. Aseptic Thermo Indicator Company, North Hollywood, Calif. Filed Apr. 14, 1958.

RETORT-CHEX

For Chemically Treated Paper Indicators Which Are Adapted To Change Color When Subjected to a Predetermined Time-Temperature Exposure.
First use on or about Mar. 1, 1958.

SN 49,657. Coreco Research Corporation, New York, N. Y. Filed Apr. 14, 1958.

CHEKMATE

For Cameras Adapted To Photograph a Document or a Document and Person Simultaneously.
First use Mar. 5, 1958.

SN 50,488. Ingersoll-Rand Company, New York, N. Y. Filed Apr. 28, 1958.

TENDAMATIC

For Control Device for Compressor Operative To Indicate Abnormal Operating Conditions of the Compressor and to Automatically Halt the Compressor in Response to a Continued Abnormal Condition.
First use Apr. 3, 1958.

SN 51,541. Automation Corporation of America, North Hollywood, Calif. Filed May 13, 1958.

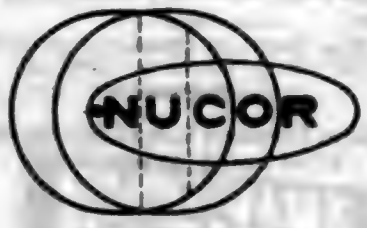
For Numerical Programming and Control Equipment Employing Magnetic Synchronous Film for the Control of Power Machinery.
First use Nov. 10, 1955.

SN 51,561. General Aniline & Film Corporation, New York, N. Y. Filed May 13, 1958.

unitizer

For Microfilm Printers.
First use Apr. 21, 1958.

SN 51,651. Nuclear Corporation of America, New York, N. Y. Filed May 14, 1958.



For Fluid Flow Meters and Liquid Level Gauges.
First use on or about Apr. 1, 1958; June 8, 1956, as to the word portion of the mark.

SN 52,258. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 26, 1958.

AGFAPHON

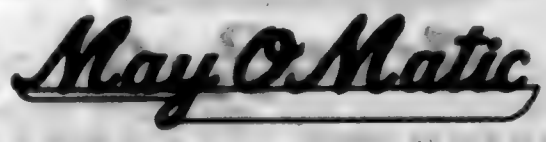
Owner of German Reg. No. 681,571, dated Sept. 13, 1955; and U. S. Reg. Nos. 215,536, 599,049, and others.
For Sensitized Films for Sound Recording.

SN 52,667. Addiator Rechenmaschinen-Fabrik C. Kubler, Berlin-Charlottenburg, Germany. Filed June 2, 1958.

ADDFEAT

For Calculating Devices—Namely, Mechanical and Electric Calculating Machines, Miniature Calculating Machines.
First use May 14, 1958; in commerce May 14, 1958.

SN 52,800. Mayline Company, Inc., Sheboygan, Wis. Filed June 4, 1958.



For Drafting Tables and Drafting Desks.
First use on about July 15, 1956.

SN 52,893. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed June 4, 1958.

FOTO-MITE

For Photo Flash Unit for Photographic Cameras.
First use March 1958.

SN 52,989. V. & E. Manufacturing Co., Pasadena, Calif. Filed June 5, 1958. Sec. 2(f).

SPEED BOW

Owner of Reg. No. 613,077.
For Compasses.
First use Oct. 20, 1952.

SN 53,046. Packard-Bell Computer Corporation, Los Angeles, Calif. Filed June 6, 1958.

MULTIVERTER

For Voltage-to-Digital, Digital-to-Voltage Conversion System That Can Perform Various Arithmetic Operations in the Process of Conversion.
First use May 13, 1958.

SN 53,101. Pierre Angenieux, Saint-Heand (Loire), France. Filed June 9, 1958.

RECTROFOCUS

For Wide-Angle Objectives for Photographic and Cinematographic Cameras.
First use in June 1950; in commerce in October 1950.

SN 53,146. General Precision Laboratory Incorporated, Pleasantville, N. Y. Filed June 9, 1958.

GPL

The drawing is lined for contrast purposes only and color is not a feature of the mark. Owner of Reg. Nos. 580,779, 586,219, and others.
For Motion Picture Projectors, Motion Picture Cameras, Schmidt Optical Systems, and Apparatus for Determining Speed and Drift of an Aircraft.
First use Dec. 14, 1956, on Aug. 21, 1950, as to "GPL" in a different display.

SN 53,614. Frank Helling, Lindenhurst, N. Y. Filed June 16, 1958.

HAWKSHAW

For Convex Wide Angle Mirrors and Mountings Therefor.
First use Feb. 15, 1958.

SN 53,975. Industrial Nucleonics Corporation, Columbus, Ohio. Filed June 19, 1958.

AccuFull

Owner of Reg. No. 585,217.
For Measuring and Controlling Equipment for Determining the Amount of Fill in Containers.
First use Feb. 13, 1958.

Class 27—Horological Instruments

SN 43,256. Le Porte-Echappement Universel S. A., La Chaux-de-Fonds, Switzerland. Filed Dec. 31, 1957.

SECTICON

Owner of Swiss Reg. No. 159,547, dated Feb. 20, 1956.
For Timepieces and Parts Thereof, Electric Clocks and Mechanisms and Cabinets Therefor.

Class 28—Jewelry and Precious-Metal Ware

SN 24,279. Oneida Ltd., Oneida, N. Y. Filed Feb. 12, 1957.

BRITTANY ROSE

Applicant disclaims the word "Rose" apart from the mark as shown.
For Silverplated Flat Tableware.
First use Dec. 19, 1956.

Class 29—Brooms, Brushes, and Dusters

SN 43,796. Art & Sign Brush Mfg. Corp., Long Island City, N. Y. Filed Jan. 13, 1958.

GREYHOUND

For Signpainters' One Stroke Brushes Made With Grey Squirrelhair and Oxhair Mixtures.
First use June 1, 1949.

Class 31—Filters and Refrigerators

SN 57,933. Tyler Refrigeration Corporation, Niles, Mich. Filed Aug. 26, 1958.

AIR-SKREEN

For Refrigerated Food Cases.
First use Aug. 12, 1958.

Class 32—Furniture and Upholstery

SN 53,943. Maxwell Royal Chair Company, Hickory, N. C. Filed June 20, 1958.

county squire

For Living Room Furniture.
First use May 20, 1958.

SN 55,910. The Dayton Rubber Company, Dayton, Ohio. Filed July 24, 1958.

VOYAGER

For Pillows.
First use June 30, 1958.

SN 56,391. Dixie Bedding Company, Incorporated, Greensboro, N. C. Filed July 31, 1958.

DORSAL-AID

For Mattresses and Box Springs.
First use June 26, 1957.

SN 57,274. International Latex Corporation, Dover, Del. Filed Aug. 15, 1958.

PLAYTEX

For Display Racks.
First use Feb. 2, 1956.

SN 50,243. The Pure Oil Company, Chicago, Ill. Filed Apr.

SN 52,117. HMH Publishing Co., Inc., Chicago, Ill. Filed

SN 57,329. Broyhill Furniture Factories, Lenoir, N. C. Filed Aug. 18, 1958.

EXPRESSION

For Bedroom, Dining Room, and Living Room Furniture.
First use Apr. 19, 1958.

SN 57,586. American Seating Company, Grand Rapids, Mich. Filed Aug. 21, 1958.

"AMERFLEX"

For Chair Seats and Backs Molded of Plastic Material.
First use about July 1, 1958.

SN 57,913. Metropolitan Furniture Manufacturing Company, South San Francisco, Calif. Filed Aug. 26, 1958.

COMPOSITIONS

For Upholstered Furniture and Occasional Tables.
First use Aug. 5, 1958.

SN 58,540. Joanna Western Mills Company, Chicago, Ill. Filed Sept. 8, 1958.

SOFLITE

For Window Shades.
First use in August 1955.

SN 58,541. Joanna Western Mills Company, Chicago, Ill. Filed Sept. 8, 1958.

STRATHMORE

For Window Shades.
First use in June 1957.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 20,248. Carrier Corporation, Syracuse, N. Y. Filed Dec. 3, 1956.

HEVY DUTY JETGLAS

For Gas-Fired Water Heaters.
First use in February 1956.

SN 37,523. Arkla Air Conditioning Corporation, Evansville, Ind., assignee of Servel, Inc., Evansville, Ind. Filed Sept. 19, 1957.

ARKLA-SERVEL

For Air Conditioning Apparatus.
First use Sept. 11, 1957.

SN 48,512. Tropical Gas Company, Inc., Panama, Republic of Panama. Filed Mar. 28, 1958.

TROPIGAS

Owner of Panamanian Reg. No. 4,498, dated Sept. 14, 1955.
For Gas Cooking Appliances, Water Heaters, Incinerators, and Commercial Heating Devices Such as Melting Pots, Torches, Drying Equipment and the Like.

SN 52,437. Wm. Steinen Mfg. Co., Newark, N. J. Filed May 27, 1958.

WISCO

For Draft Regulators.
First use May 1, 1958.

SN 52,442. Super-Kwik Inc., Plainfield, N. J. Filed May 27, 1958.

SUPER-KWIK

For Cooking Machines and Food Service Equipment—Namely, Barbecue-Rotisseries, Ovens, Frankfurter Cookers, Hamburger Grills, and Bake Ovens.
First use Jan. 30, 1958.

SN 55,266. Pioneer Manufacturing Co., Los Angeles, Calif. Filed July 14, 1958.

AQUAMATIC

For Water Heaters.
First use May 23, 1958.

SN 55,334. Pacific Fence and Wire Company, Portland, Oreg. Filed July 15, 1958.

CHAIN-O-MATIC

For Fireplace Screens.
First use June 9, 1958.

SN 55,655. Duro-Dyne Corporation, Farmingdale, N. Y. Filed July 21, 1958.

OPAX

For Brackets Used on Louvers and Louvers Made Therefrom for Air Conditioning Installations.
First use Mar. 18, 1958.

SN 55,726. Richards & Conover Hardware Corporation, Kansas City, Mo. Filed July 21, 1958.

RICH-LINE

For Hot Water Heaters.
First use Jan. 15, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 46,607. The Dayton Rubber Company, Dayton, Ohio. Filed Feb. 26, 1958.

NYCRON

For Vehicle Tires.
First use Feb. 17, 1958.

SN 48,617. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,906, 427,173, and others.
For Pneumatic Tires, Inner Tubes for Tires, Nonpneumatic Nonmetallic Tires, Belting, Hose, Tubing and Gaskets, All Made in Whole or in Part of Rubber or of Rubber-Like Material.
First use about July 1957; at least as early as 1890 as to "Goodrich."

SN 40,709. Metro Matrix & Reproduction Co., Inc., New York, N. Y. Filed Nov. 15, 1957.

SN 52,358. Contribution Greetings, Inc., Clifton, N. J. Filed May 29, 1958.

CONTRIBUTE CARDS

SN 50,243. The Pure Oil Company, Chicago, Ill. Filed Apr. 23, 1958.

PURE TRUCKER

Owner of Reg. Nos. 343,649, 545,476, and 580,472.
For Tires for Automotive Vehicles.
First use on or about Jan. 22, 1957.

SN 51,444. Murray L. Feinberg, d. b. a. Murray Tire Company, Chelsea, Mass. Filed May 12, 1958.

TICOA

For Automobile Tires.
First use Sept. 6, 19[redacted]

SN 51,636. Johns-Manville Corporation, New York, N. Y. Filed May 14, 1958.

ASBESTO-TITE

For Compressed Asbestos Sheet Packing.
First use Mar. 27, 1958.

SN 52,617. Lee Rubber & Tire Corporation, d. b. a. Republic Rubber Division, Youngstown, Ohio. Filed May 13, 1958. Sec. 2(f).

HI-GRADER

For Belting of Rubber and Fabric Composition.
First use Apr. 1, 1937.

Class 36—Musical Instruments and Supplies

SN 42,744. United Music Corporation, Chicago, Ill. Filed Dec. 19, 1957.

For Automatic Phonographs, Phonograph Remote Control Devices, Amplifiers, and Sound Systems.
First use May 15, 1957.

SN 50,145. Vic Bellamy, Harrodsburg, Ky. Filed Apr. 22, 1958.

For Grooved Phonograph Records.
First use Mar. 21, 1958.

SN 50,175. James O'Neill, d. b. a. Dublin Record Co., Woodside, N. Y. Filed Apr. 22, 1958.

DUBLIN

For Grooved Phonograph Records With Recordings.
First use Oct. 6, 1956.

SN 52,117. HMH Publishing Co., Inc., Chicago, Ill. Filed May 22, 1958.

Owner of Reg. No. 643,926.
For Mechanically Grooved Phonograph Records.
First use Sept. 25, 1956.

Class 38—Prints and Publications

SN 28,416. American Mail Advertising Incorporated, Boston, Mass. Filed Apr. 18, 1957.

ADVERLOG

For Catalogs of Direct Mail Formats.
First use Nov. 19, 1956.

SN 31,941. Henry McDuff-Still, Baltimore, Md. Filed June 13, 1957.

BETTERELATIONS

For Printed Cards, Brochures, Reminder Sheets and Booklets Prepared for Internal Use by Industrial and Business Concerns.
First use Nov. 2, 1953.

SN 38,872. Tech-Tac, Inc., Los Angeles, Calif. Filed Oct. 14, 1957.

TECH-TAC

For Transparent, Self-Adhering Sheets Bearing Various Indicia, Characters, and Symbols, Adapted To Be Transferred to Drawing Sheets for Reproduction.
First use June 4, 1953.

SN 39,736. Music Aids Publishing Co., Inc., New York, N. Y. Filed Oct. 29, 1957.

LOOKMARKS

For Series of Cards Attachable to Sheet Music as Teaching Aids.
First use Aug. 1, 1957.

SN 40,511. Sports Fax'n Forecast, Clayton, Ohio. Filed Nov. 12, 1957.

SPORTSKED

For Compilations of Sports Event Schedules.
First use June 1, 1957.

SN 40,668. Diesel Publications, Inc., Stamford, Conn. Filed Nov. 14, 1957.

RIVERS & HARBORS

For Monthly Publication.
First use July 29, 1957.

SN 45,689. Kops Bros., Inc., New York, N. Y. Filed Feb. 11, 1958.

PETIT FOUR

Class 40—Fancy Goods, Furnishings, and Notions

First use May 1, 1958.

"Goodrich."

SN 40,789. Metro Matrix & Reproduction Co., Inc., New York, N. Y. Filed Nov. 15, 1957.

Timely Features

For Publications Containing Promotional Advertising Matter Comprising Text, Illustrations, and Art Subjects Published From Time to Time and Matrices Containing the Same.
First use Feb. 10, 1953.

SN 44,953. Dancyger Manufacturing Company, Cleveland, Ohio. Filed Jan. 30, 1958.

TAGORAMA

For Printed Tags and Labels.
First use Dec. 18, 1957.

SN 46,300. Meredith Publishing Company, Des Moines, Iowa. Filed Mar. 24, 1958. Sec. 2(f).

Better Homes & Gardens CHRISTMAS IDEAS

Owner of Reg. No. 623,726.
For Annual Publication.
First use October 1952.

SN 49,932. Home Facts, Inc., New Canaan, Conn. Filed Apr. 18, 1958.

HOMESELLING

For Magazine.
First use Feb. 10, 1958.

SN 50,612. Famous Artists Schools, Inc., New York, N. Y. Filed Apr. 29, 1958. Sec. 2(f).

Famous Artists Course

Owner of Reg. No. 636,967.
For Lessons, Booklets, and Brochures.
First use Sept. 14, 1946.

SN 50,894. Haloid Xerox Inc., Rochester, N. Y. Filed May 2, 1958.

PRODUCTS FOR XEROGRAPHY • PRODUCTS FOR PHOTOGRAPHY •
HALOID XEROX

The words "Products for Xerography" and "Products for Photography" appearing in the drawing are disclaimed.
Owner of Reg. No. 667,393.
For Xerographic Copies.
First use Mar. 1, 1958.

SN 52,858. Contribution Greetings, Inc., Clifton, N. J. Filed May 29, 1958.

CONTRIBUTE-CARDS

For Greeting Cards.
First use May 15, 1958.

Class 39—Clothing

SN 41,064. American Play Suit Co., d. b. a. Playville Fashions, New York, N. Y. Filed Nov. 21, 1957.

GRIPEZE

Owner of Reg. No. 638,086.
For Infants' Garments and Clothing Including Infants' Crawlers, Coveralls, and Overalls.
First use Oct. 25, 1957.

SN 42,104. Zayre Corp., Boston, Mass. Filed Dec. 9, 1957.

ZAYRE

For Hosiery, Girls' and Boys' Pajamas, and Boys' Underwear.
First use Sept. 4, 1956.

SN 42,518. Monterey Undergarment Co., Inc., New York, N. Y. Filed Dec. 16, 1957.

Tender Touch

For Ladies' Undergarments—Namely, Slips, Petticoats, and Panties.
First use July 18, 1957.

SN 43,042. Vendome Lingerie Inc., Bronx, N. Y. Filed Jan. 8, 1958.

VENDOME

For Women's Lingerie—Namely, Slips, Chemises, Panties, Nightgowns, and Negligees.
First use July 8, 1935.

SN 44,521. Carolina Maid Products, Inc., Granite Quarry, N. C. Filed Jan. 23, 1958.

CAROLINA MAID

For Dresses.
First use April 1935.

SN 44,761. Ruthene Inc., New York, N. Y. Filed Jan. 27, 1958.

HARLEQUIN

For Girdles.
First use Oct. 22, 1957.

SN 45,488. Kops Bros., Inc., New York, N. Y. Filed Feb. 7, 1958.

MARTINI

For Foundation Garments.
First use Jan. 8, 1958.

SN 52,895. Monarch Rug Mills, Inc., Dalton, Ga. Filed June 4, 1958.

VICOUNT

Class 46—Foods and Ingredients of Foods

SN 961,247. A/S Standard Ltd., Stavanger, Norway. Filed

For Grooved Phonograph Records With Recordings.
First use Oct. 6, 1956.

For Monthly Publication.
First use July 29, 1957.

SN 45,689. Kops Bros., Inc., New York, N. Y. Filed Feb. 11, 1958.

PETIT FOUR

For Foundation Garments.
First use Jan. 27, 1958.

SN 46,289. Colebrook Knitwear, Inc., New York, N. Y. Filed Feb. 21, 1958.

Stefano

For Ladies' and Misses' Sweaters.
First use Nov. 1, 1957.

SN 46,324. Kops Bros., Inc., New York, N. Y. Filed Feb. 21, 1958.

WALK-AWAY

For Foundation Garments.
First use Feb. 11, 1958.

SN 47,734. Crescent Corset Company, Inc., Cortland, N. Y. Filed Mar. 14, 1958.

NANCY B

For Brassieres, Girdles, Foundation Garments, Garter Belts.
First use Feb. 5, 1958.

SN 51,592. Connie Sage, Inc., New York, N. Y. Filed May 13, 1958.

Pamela Scott

For Children's Dresses, Cover Jumpers, Shirts, Blouses, and Shorts.
First use Apr. 18, 1958.

SN 51,936. Peter Pan Foundations, Inc., New York, N. Y. Filed May 19, 1958.

TIGER CUB

For Girdles and Panty Girdles.
First use May 1, 1958.

SN 52,741. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed June 2, 1958.

DARLENE

Owner of Reg. Nos. 515,362 and 610,440.
For Dresses, Skirts, Beach Jackets (Knitted), and Knitted Car Coats.
First use Jan. 15, 1958.

SN 52,889. Queen Knitting Mills, Inc., Philadelphia, Pa. Filed June 3, 1958.

SKIN-PANTS

For Leotard Tights.
First use Apr. 15, 1958.

SN 52,899. Lido Foundations, Inc., New York, N. Y. Filed June 4, 1958.

REDUCE-EZE

For Girdles.
First use July 8, 1957.

Class 40—Fancy Goods, Furnishings, and Notions

SN 53,415. Lion Brothers Company, Inc., Baltimore, Md. Filed June 12, 1958.

For Embroidered Emblems for Clothing.
First use in April 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 25,256. Wm. E. Hooper & Sons Co., Baltimore, Md. Filed Feb. 28, 1957. Sec. 2(f).

STURDEE

Owner of Reg. No. 236,106.
For Cotton Duck, Laundry Net Netting, and Laundry Padding.
First use Mar. 1, 1925.

SN 39,101. Sure-Fit Products Company, Bethlehem, Pa. Filed Oct. 17, 1957.

Ready Upholstery

For Ready-Made Slip Covers for Upholstered Furniture.
First use in September 1951.

SN 44,954. Electric Parts Corporation, Georgetown, Ky. Filed Jan. 30, 1958.

CITATION

For Blankets.
First use Dec. 22, 1957.

SN 44,957. Electric Parts Corporation, Georgetown, Ky. Filed Jan. 30, 1958.

VANGUARD

For Blankets.
First use Jan. 2, 1958.

SN 45,835. United States Rubber Company, New York, N. Y. Filed Feb. 13, 1958.

NAUGAFOAM

Owner of Reg. Nos. 354,435 and 416,758.
For Fabric, More Specifically, Comprising a Fabric Base, an Intermediate Layer of Rubber-Like Foam, and a Covering Layer of Coated Fabric Simulating Leather.
First use not later than Oct. 30, 1957.

SN 52,894. Monarch Rug Mills, Inc., Dalton, Ga. Filed June 4, 1958.

CHALET

For Fine Textured Carpets.
First use May 1, 1958.

SN 43,220. Malt-A-Plenty, Inc., Tulsa, Okla. Filed Jan. 2, 1958.

SPLENDORS

SN 47,693. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Mar. 13, 1958.

SN 52,895. Monarch Rug Mills, Inc., Dalton, Ga. Filed June 4, 1958.

VICOUNT

For Fine Textured Carpets.
First use May 1, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 53,575. Gavin S. Herbert, Los Angeles, Calif. Filed July 17, 1957.

"PROTECTO-KLAY"

For Radiologic Shields To Protect the Skin From X-Ray.
First use Mar. 21, 1949.

SN 41,237. Chattanooga Pharmacal Co., Inc., Chattanooga, Tenn. Filed Nov. 25, 1957.

HYDROCOLLATOR

Owner of Reg. No. 574,604.
For Electrically Operated Cabinets for Heating Therapeutic Steam Packs.
First use Nov. 29, 1949.

SN 44,508. Young Dental Manufacturing Company, St. Louis, Mo. Filed Jan. 22, 1958.

ENODON

For Dental Appliances—Namely, Rubber Dam Holders, Reamer Racks, Rubber Reamer Stops and Gages for Marking Instruments To Limit Movement to the Apex of the Tooth.
First use Dec. 18, 1957.

SN 48,482. Herrons Engineering & Chemical Company, Inc., Cheshire, Conn. Filed Mar. 26, 1958.

RIPPLE NIPPLE

The word "Nipple" is disclaimed apart from the mark.
For Nursing Nipples for Liquid and Semi-Solid Foods.
First use Oct. 4, 1957.

SN 48,494. The Motloid Company, Chicago, Ill. Filed Mar. 26, 1958.

SIL-E-DENT

For Dental Impression Material in the Nature of Silicone-Type Synthetic Material.
First use Dec. 6, 1957.

Class 45—Soft Drinks and Carbonated Waters

SN 50,298. General Foods Corporation, White Plains, N. Y. Filed Apr. 25, 1958.

REAL-KOOL

Owner of Reg. Nos. 226,448, 697,866, and others.
For Powders for Making Soft Drinks.
First use at least as early as Apr. 10, 1958.

Class 46—Feeds and Ingredients of Feeds

SN 661,247. A/S Standard Ltd., Stavanger, Norway. Filed Feb. 18, 1954.

The portrait shown is that of Haakon VII, King of Norway, and is used with his express permission. Owner of U. S. Reg. Nos. 206,993 and 668,434.
For Sardines-Brisling, Kipper Snacks, Kippered Herring, Prepared Fish Balls in Bouillion, Shrimps, Mackerel, Herring in Various Types of Packing, Fish Pastes, Crab Paste, Crab, Lobster, and Lobster Paste, Canned or Otherwise Packed.
First use 1905; in commerce June 1, 1910.

SN 700,272. Sooty Concessions Limited, London, England. Filed Dec. 19, 1955.

Priority claimed under Sec. 44(d) on British Reg. No. 744,143, dated July 6, 1955.
For Confectionery—Namely, Toffees, Wafer Biscuits, Chocolate Biscuits, Chocolate Moulds, Easter Eggs, and Sugar Figures.

SN 10,082. The Shasta Water Company, San Francisco, Calif. Filed June 11, 1956.

SHASTA
E-Z SQUEEZE

No claim is made to the term "E-Z Squeeze" apart from the mark as shown. Owner of Reg. Nos. 584,863, 537,420, and others.
For Syrups for Beverage and Food Purposes.
First use May 25, 1956.

SN 19,088. Mark L. Morris, Topeka, Kans. Filed Nov. 9, 1956.

f/d

Owner of Reg. Nos. 536,011, 596,058, and others.
For Mixture of Cereals, Milk, Minerals and Other Ingredients for Use in Specialized Foods for Dogs and Cats.
First use June 12, 1956.

SN 31,182. Safflower Products Corporation, San Francisco, Calif. Filed May 31, 1957.

SAFF-LO

For Safflower Oil for Culinary Purposes.
First use May 2, 1957.

Class 49—Distilled Alcoholic Liquors

SN 37,296. Botany Mills, Inc., Passaic, N. J., assignee of

SN 43,320. Malt-A-Plenty, Inc., Tulsa, Okla. Filed Jan. 2, 1958.

SPLENDORS

For Frozen Confections in the Nature of Round Portions of Ice Cream Tumbled in Edible Decorations, Such as Toasted Cocoanut, Candy and the Like.
First use Nov. 16, 1957.

SN 43,372. Geo. W. Caswell Company, San Francisco, Calif. Filed Jan. 3, 1958. Sec. 2(f) as to "Caswell's."

Caswell's

Owner of Reg. Nos. 189,707, 398,092, and others.
For Coffee.
First use Nov. 20, 1957; 1907 as to "Caswell's."

SN 43,531. Etablissements Jules Hutin, Societe a Responsabilite Limitee, Blaise-Sous-Arsilleres, par Frignicourt (Marne), France. Filed Jan. 7, 1958.

LE LUTIN

The French words "Le Lutin" mean in English "the goblin" or "the elf." Owner of French Reg. No. 160, dated Nov. 12, 1957 (Greffe); Natl. Inst. No. 98,734.
For Cheese, Butter, Cream, Yogurt, and Ice Cream.

SN 43,926. Certified Grocers of Illinois, Inc., Chicago, Ill. Filed Jan. 14, 1958.

COUNTRY'S DELIGHT

Owner of Reg. Nos. 595,287, 653,402, and 656,180.
For Frozen Vegetables and Canned Foods—Namely, Fruits, Vegetables, Applesauce, and Tomato Juice.
First use Oct. 1, 1953, on canned foods specified.

SN 44,275. Gold Cup Baking Co., Inc., Chicago, Ill. Filed Jan. 20, 1958.

LADY THERESA

For Bakery Goods—Namely, Coffee Cakes.
First use Dec. 19, 1957.

SN 45,074. Schenley Industries, Inc., New York, N. Y. Filed Jan. 31, 1958.

FLAVORS BY Samovar

No claim of exclusive right is made to "Flavors by" as used on non-alcoholic food flavors. Owner of Reg. No. 379,647.
For Non-Alcoholic Food Flavors.
First use Dec. 18, 1957.

SN 46,847. Maryland Restaurant Company, Inc., d. b. a. Steak Ranch, Milwaukee, Wis. Filed Feb. 28, 1958.

STEAK RANCH

For Food Products—Namely, Salad Dressings and Barbecue Sauce.
First use in March 1955.

SN 47,093. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Mar. 13, 1958.

STA-D-MADE

For Feed for Livestock and Poultry.
First use Feb. 7, 1958.

SN 48,782. King Kone Corporation, New York, N. Y. Filed Mar. 31, 1958.

PIZZA-RINO

For Pizza Flavored Crackers.
First use Mar. 5, 1958.

SN 49,151. Fruit Products Corporation, New York, N. Y. Filed Apr. 7, 1958.

CHOC-FROST

Owner of Reg. Nos. 357,323, 645,217, and others.
For Frozen Confections on Sticks.
First use Mar. 26, 1958; May 13, 1957, in form of "Choco-Frost."

SN 50,780. General Foods Corporation, White Plains, N. Y. Filed May 1, 1958.

CAFE MIO

No claim is made to exclusive rights in the expression "Cafe" apart from the mark as shown. The English equivalent of the mark is "my coffee."
For Coffee.
First use on or about Mar. 26, 1958.

SN 54,178. Perkel Fruit Distributors, Inc., De Land, Fla. Filed June 24, 1958.

SWEET N' LOVELY

For Fresh Fruits.
First use Oct. 1, 1957.

SN 54,942. Robert J. Ghiglia, Chowchilla, Calif. Filed July 8, 1958.

MERCED QUEEN

For Fresh Tomatoes.
First use June 2, 1958.

SN 54,943. Robert J. Ghiglia, Chowchilla, Calif. Filed July 8, 1958.

BELLA MIA

The mark consists of an Italian expression that may be translated as "my beloved."
For Fresh Tomatoes.
First use June 2, 1958.

SN 55,052. H. S. Davies, Inc., Chicago, Ill. Filed July 10, 1958.

PICTURE

For Canned Fruits, Canned Vegetables, Canned Fruit Juices, Canned Vegetable Juices, Canned Fish.
First use Apr. 22, 1958.

SN 43,903. Essex Gifting Wax Company, West Palm Beach,

SN 51,664. The Pure Oil Company, Chicago, Ill. Filed May

Class 49—Distilled Alcoholic Liquors

SN 47,975. Schenley Distillers, Inc., d. b. a. Number One Distilling Company, New York, N. Y. Filed Mar. 18, 1958.

MR. AMERICANO

For Whiskey.
First use Mar. 6, 1958.

SN 49,032. Schenley Industries, Inc., New York, N. Y. Filed Apr. 3, 1958.

GOLDEN TRIANGLE

For Whiskey.
First use Mar. 20, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 42,473. Gestetner Limited, London, England. Filed Dec. 16, 1957.

GESTELITH

Owner of British Reg. Nos. 754,015 and 763,783, dated May 23, 1956, and Mar. 21, 1957, respectively.
For Paper Printing Plate for Use With Offset Duplicating Apparatus, Printers' Blankets (Not of Textile Material) and Engravers' Plates.

SN 49,393. K. H. Teasley & Co., Inc., Dallas, Tex. Filed Apr. 9, 1958.

RAINBOW

Owner of Reg. No. 665,842.
For Canvas Products—Namely, Boat Canopies, Boat Covers, and Barge Covers.
First use in March 1955.

SN 49,630. Arvid Strauss, d. b. a. Marlo Studios, Chicago, Ill. Filed Apr. 14, 1958.

MARLO

For Artificial Reproductions (Made of Plastic) of Plants, Flowers, Fruits, Poultry, and Various Cuts of Meat, Some of Which Are Used for Commercial Display Purposes, and Some Used for Home Decoration Purposes.
First use Mar. 1, 1958.

Class 51—Cosmetics and Toilet Preparations

SN 18,708. N. L. Malmstrom & Company, Brooklyn, N. Y. Filed Nov. 5, 1956.

ETHOXYLAN

For Lanolin Oils, Waxes, and Wool Greases Used as Ingredients of Cosmetics.
First use June 15, 1956.

SN 37,294. Botany Mills, Inc., Passaic, N. J., assignee of Rolley, Inc., South San Francisco, Calif. Filed Sept. 16, 1957.

SEA AND SKI

Owner of Reg. Nos. 636,263 and 586,288.
For Lotion for Use as a Tanning Cream, Which May Be Used Also as an After Shave Lotion, Hairdressing, Skin Rashes and Irritations, and for the Care of Infants' Skin.
First use about Feb. 1, 1946.

SN 40,288. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROFLEURAROMES

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 44,083. Godefroy Manufacturing Company, St. Louis, Mo. Filed Jan. 16, 1958.

SUDDEN GLORY

For Lotion Creme Haircoloring and Hair Conditioning Preparation.
First use June 11, 1957.

SN 44,111. Pelindo, Inc., New York, N. Y. Filed Jan. 16, 1958.

SWORDSMAN

For Cosmetic Preparations—Namely, Pomade, Hair Conditioner, Men's Cologne for After Shaving and Bath, Talcum Powders, Deodorants, Facial Astringents, Hair Tonic, Hair Straightening Preparations (Process Cream for the Use of Men Only as a Hair Straightener), Hair Coloring Rinses, Pre-Process Oil To Prepare Hair and Skin for the Use of Hair Straightener.
First use June 1, 1957.

SN 46,460. The Kurlash Company, Inc., Rochester, N. Y. Filed Feb. 24, 1958.

EVENING EYES

For Eye Shadow Stick.
First use Jan. 8, 1958.

SN 49,050. Helene Curtis Industries, Inc., Chicago, Ill. Filed Apr. 4, 1958.

CLICK

For Cold Wave Lotion.
First use on or about Mar. 7, 1958.

Class 52—Detergents and Soaps

SN 26,654. U. S. Polychemical Corporation, Newburgh, N. Y. Filed Mar. 21, 1957.

ST-21 POLY SPRAY JET

The term "Spray Jet" is disclaimed.
For Liquid Cleaning Preparation for General Cleaning, De-Waxing, De-Greasing, and Disinfecting.
First use Sept. 1, 1956.

SN 36,433. Dumas Milner Corporation, Jackson, Miss. Filed Aug. 29, 1957.

WHITE WAVE

Owner of Reg. No. 615,003.
For Liquid Detergent for Household Use.
First use Aug. 16, 1957.

SN 43,608. Easy Glitter Wax Company, West Palm Beach, Fla. Filed Jan. 8, 1958.

EASY GLITTER SUPER WHITE

The words "Super White" are disclaimed apart from use in the mark as shown.

For Tire Cleaning Composition.

First use Sept. 1, 1957.

SN 50,795. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed May 1, 1958.

ZEPHYR

For Detergent for Dishwashing and General Cleaning Purposes.

First use Mar. 28, 1958.

SN 51,664. The Pure Oil Company, Chicago, Ill. Filed May 14, 1958.

PURE-SURE

Owner of Reg. Nos. 579,549, 581,164, and 588,967.

For Liquid Composition for Cleaning Concrete Surfaces.

First use Mar. 28, 1958.

SN 54,927. Chemtrol Industries, New York, N. Y. Filed July 8, 1958.

carefree

For Powdered Soap Product for Cleansing Sweaters, Socks, Woolens, and Like Products.

First use June 23, 1958.

SERVICE MARKS

Class 100 — Miscellaneous

SN 39,632. Industrial Vendors, Inc., Hammond, Ind. Filed Oct. 29, 1957.

The lining on the drawing constitutes a part of the mark and does not represent color.

For Operation of Automatic Cafeterias—Namely, the Installation, Servicing, and Maintenance of Food and Drink Vending Machines.

First use Aug. 31, 1952.

Class 101 — Advertising and Business

SN 15,946. The Dayton Rubber Company, Dayton, Ohio. Filed Sept. 19, 1950.

I. T. A.

For Technical Service Information to Others in Manufacturing Rubber Goods Provided by Reports, Bulletins, and Correspondence.

First use May 1953.

SN 17,544. Blue Chip Stamp Company, Emeryville, Calif. Filed Oct. 16, 1950.

BLUE CHIP

For Promoting the Sale of Goods and Services of Others by Means of Trading Stamps Which Are Redeemable in Premiums.

First use July 22, 1950.

SN 37,276. MPO Productions, Inc., New York, N. Y. Filed Sept. 16, 1957.

MPO

For Production and Distribution of Educational Films and Commercial Film Advertising for Others for Use on Television and in Motion Picture Theatres, and by Schools, Churches, and Other Organizations.

First use in June 1947.

Class 103 — Construction and Repair

SN 36,774. Borg-Warner Corporation, Chicago, Ill. Filed Sept. 6, 1957.

Owner of Reg. Nos. 387,173, 647,472, and others.

For Installation, Erection, Maintenance, Service and Repair of Air Conditioning Machinery and Apparatus and Parts Thereof; Refrigerating Machinery and Apparatus and Parts Thereof; and Ice-Making Machinery and Apparatus and Parts Thereof.

First use on or prior to May 1, 1957.

Class 107 — Education and Entertainment

SN 16,194. Gertrude S. Enelow, Chicago, Ill. Filed Sept. 24, 1956.

BODY DYNAMICS

For Conducting Classes and Giving Individual Instructions in the Harmonious Blending of Bodily Motion With the Human Emotional Pattern.

First use Jan. 15, 1950.

671,076. TITAN AND DESIGN. Firma Titan Eisenwarenfabrik G. m. b. H. SN 39,291. Pub. 9-30-58. Filed

Class 18 — Medicines and Pharmaceutical

First use June 15, 1956.

First use Aug. 16, 1957.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

671,036. CERCOPOLY. Kleinwanzlebener Saatzucht vorm. Rabbethge & Giesecke Aktiengesellschaft. SN 21,071. Pub. 9–30–58. Filed 12–14–56.

671,037. DELDISILK. Donovan Industries, Inc. SN 26,451. Pub. 9–30–58. Filed 3–19–57.

671,038. PAK-A-LYT. Stevens' Fireplace Log Corporation. SN 31,160. Pub. 9–30–58. Filed 5–31–57.

671,039. MINIPELS. Nu-Plastics, Inc. SN 33,274. Pub. 9–30–58. Filed 7–5–57.

671,040. REAL EASE. Borco Chemicals, Inc. SN 37,774. Pub. 9–30–58. Filed 9–25–57.

671,041. STYROWOOD. Matthew Sullivan, d. b. a. Sullivan Products Co. SN 39,425. Pub. 9–30–58. Filed 10–23–57.

671,042. CHUCK WAGON ETC. AND DESIGN. The Quaker Oats Company. SN 40,148. Pub. 9–30–58. Filed 11–5–57.

671,043. L O & CO. AND DESIGN. L. Oppenheimer & Co., Inc. SN 41,774. Pub. 9–30–58. Filed 12–4–57.

671,044. HALOID XEROX ETC. AND DESIGN. Haloid Xerox Inc., by change of name from The Haloid Company. SN 42,129. Pub. 9–30–58. Filed 12–10–57.

671,045. HALOID XEROX. Haloid Xerox Inc., by change of name from The Haloid Company. SN 42,134. Pub. 9–30–58. Filed 12–10–57.

671,046. GENTRO. The General Tire & Rubber Company SN 45,046. Pub. 9–30–58. Filed 1–31–58.

671,047. CLOVERIT. O. M. Scott and Sons Company. SN 46,249. Pub. 9–30–58. Filed 2–20–58.

Class 2—Receptacles

671,048. RPC AND DESIGN. A. C. Martinelli Rogers Plastic Corporation. SN 41,308. Pub. 9–30–58. Filed 11–25–57.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

671,049. REGAL-AIRE. Regal Plastic Company. SN 32,987. Pub. 9–30–58. Filed 7–1–57.

Class 4—Abrasives and Polishing Materials

671,050. GRANAL. Wheelabrator Corporation. SN 32,793. Pub. 9–30–58. Filed 6–27–57.

Class 5—Adhesives

671,051. SUPER "300." Permatex Company, Inc. SN 34,812. Pub. 9–30–58. Filed 8–1–57.

Class 6—Chemicals and Chemical Compositions

671,052. ROCKWELL'S. Rockwell Laboratories, Inc. SN 8,996. Pub. 9–30–58. Filed 5–24–56.

671,053. BUGATROL. The Doughten Seed Company. SN 32,668. Pub. 9–30–58. Filed 6–26–57.

671,054. CRABKILL. Lee Patten Seed Company. SN 32,684. Pub. 9–30–58. Filed 6–26–57.

671,055. ZEO-TABS. Hardy Salt Company. SN 32,819. Pub. 9–30–58. Filed 6–28–57.

671,056. LUSTERSOY. Honeymead Products Company. SN 33,350. Pub. 9–30–58. Filed 7–8–57.

671,057. CLEARSOY. Honeymead Products Company. SN 33,351. Pub. 9–30–58. Filed 7–8–57.

671,058. AULA LAC AND DESIGN. Geigy Chemical Corporation, by change of name from Aula Chemicals, Inc. SN 34,397. Pub. 9–30–58. Filed 7–26–57.

671,059. CP AND DESIGN. Corn Products Refining Company. SN 35,915. Pub. 9–30–58. Filed 8–21–57.

671,060. CHASE-MM AND DESIGN. Chase Products Co. SN 36,055. Pub. 9–30–58. Filed 8–23–57.

671,061. ATLAS. Atlas Powder Company. SN 36,419. Pub. 9–30–58. Filed 8–29–57.

671,062. FLUDEX. Petrolite Corporation. SN 39,492. Pub. 9–30–58. Filed 10–24–57.

671,063. SPRAY KING AND DESIGN. Quality Chemical Products Co. SN 42,532. Pub. 9–30–58. Filed 12–16–57.

671,064. PELASPAN. The Dow Chemical Company. SN 45,726. Pub. 9–23–58. Filed 2–12–58.

671,065. TANATHANE. B. B. Chemical Co. SN 45,942. Pub. 9–30–58. Filed 2–17–58.

671,066. TRIODYCIN. IBC Research Laboratories, Inc. SN 46,226. Pub. 9–30–58. Filed 2–20–58.

671,067. PEER O PANE AND DESIGN. Peer-O-Pane Bottled Gas Co. Inc. SN 52,543. Pub. 9–30–58. Filed 5–12–58.

Class 7—Cordage

671,068. RIB-O-STRAP. Victor England, d. b. a. Victor England Agencies. SN 47,634. Pub. 9–30–58. Filed 4–16–58.

671,069. REEL-ET. Puritan Cordage Mills, d. b. a. Puritan Marine Products. SN 48,789. Pub. 9–30–58. Filed 3–31–58.

671,070. LONG 10. Sperry Rand Corporation. SN 52,776. Pub. 9–30–58. Filed 6–2–58.

Class 10—Fertilizers

671,071. UREAPHOS AND DESIGN. The Kerley Chemical Corporation. SN 55,855. Pub. 9–30–58. Filed 7–23–58.

671,072. GREENA-LAWN. Mock Seed Company. SN 56,157. Pub. 9–30–58. Filed 7–28–58.

671,073. DANO. Dano of America, Inc. SN 56,461. Pub. 9–30–58. Filed 8–1–58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

671,074. ACE SMOOTHWOOD. Ace Tackless Corporation. SN 17,851. Pub. 9–30–58. Filed 10–22–56.

671,075. FABRI CAST. Fabri-Valve Company of America. SN 38,342. Pub. 9–30–58. Filed 7–8–57.

671,076. TITAN AND DESIGN. Firma Titan Eisenwarenfabrik G. m. b. H. SN 39,291. Pub. 9–30–58. Filed 10–23–57.

671,077. TITAN AND DESIGN. Firma Titan Eisenwarenfabrik G. m. b. H. SN 39,392. Pub. 9–30–58. Filed 10–23–57.

671,078. COLOR-LITE. Club Aluminum Products Company. SN 42,837. Pub. 9–30–58. Filed 12–23–57.

671,079. ARMBRUST AND DESIGN. Armbrust Chain Company. SN 48,227. Pub. 9–30–58. Filed 3–24–58.

671,080. BASIKRETE. Roberts Manufacturing Co. SN 48,336. Pub. 9–30–58. Filed 3–24–58.

671,081. SIERRA. Sierra Engineering Co. SN 48,355. Pub. 9–30–58. Filed 3–24–58.

Class 14—Metals and Metal Castings and Forgings

671,082. HANDY HI-TEMP. Handy & Harman. SN 24,438. Pub. 9–30–58. Filed 2–14–57.

671,083. SINTOMETAL. Frank Mottola. SN 32,616. Pub. 9–30–58. Filed 6–25–57.

671,084. VAC-ARC. Latrobe Steel Company. SN 33,250. Pub. 9–30–58. Filed 7–5–57.

671,085. REVERE AND DESIGN. Revere Copper and Brass Incorporated. SN 43,963. Pub. 9–30–58. Filed 1–14–58.

Class 15—Oils and Greases

671,086. UOP DRIACIN AND DESIGN. Universal Oil Products Company. SN 35,709. Pub. 9–30–58. Filed 8–16–57.

671,087. PARAGON. Vistrylite Candle Company. SN 45,637. Pub. 9–30–58. Filed 2–10–58.

Class 16—Protective and Decorative Coatings

671,088. CUSTOMIX. Keystone Paint and Varnish Corporation. SN 37,882. Pub. 9–30–58. Filed 9–26–57.

671,089. JUSCALON. Surface Coating Engineers of New England, Incorporated. SN 39,426. Pub. 9–30–58. Filed 10–23–57.

671,090. WONDER WOODSTAIN. Devoe & Raynolds Company, Inc. SN 47,740. Pub. 9–30–58. Filed 3–14–58.

671,091. DESO KROME. United Wallpaper, Inc., d. b. a. De Soto Paint & Varnish Co. SN 49,888. Pub. 9–30–58. Filed 4–17–58.

671,092. GOODHUE. Federated Department Stores, Inc. (Bloomingdale Bros. Div.), d. b. a. Bloomingdale's. SN 51,626. Pub. 9–30–58. Filed 5–14–58.

671,093. VORPON. The Vorac Company. SN 52,452. Pub. 9–30–58. Filed 5–27–58.

671,094. LASTING PROTECTION AND DESIGN. Lasting Products Company. SN 52,578. Pub. 9–30–58. Filed 5–29–58.

671,095. FISTONA. Fishman & Sons, Inc. SN 52,706. Pub. 9–30–58. Filed 6–2–58.

Class 17—Tobacco Products

671,096. GOODWILL. Brown & Williamson Tobacco Corporation. SN 45,715. Pub. 9–30–58. Filed 2–12–58.

Class 18—Medicines and Pharmaceutical Preparations

671,097. AMINOTRATE. Norman Dartell, d. b. a. Dartell Laboratories. SN 696,956. Pub. 9–30–58. Filed 10–24–55.

671,098. EVANS. U. S. Nature Products Corporation. SN 8,369. Pub. 9–30–58. Filed 5–15–56.

671,099. A–B–A. Cramer Chemical Co. SN 28,578. Pub. 9–30–58. Filed 4–22–57.

671,100. DEXYL. The Pinex Company, Inc. SN 34,991. Pub. 9–30–58. Filed 8–5–57.

671,101. COSA-SIGNEMYCIN. Chas. Pfizer & Co., Inc. SN 45,408. Pub. 9–30–58. Filed 2–6–58.

671,102. AMPHATRAX. Chas. Pfizer & Co., Inc. SN 47,072. Pub. 9–30–58. Filed 3–4–58.

671,103. COSASTATIN. Chas. Pfizer & Co., Inc. SN 47,279. Pub. 9–30–58. Filed 3–7–58.

671,104. TRICO ZEMA AND DESIGN. Roland J. Bousquet, d. b. a. Veno Products Co. SN 47,720. Pub. 9–30–58. Filed 3–14–58.

671,105. RAOLEIN. Abbott Laboratories. SN 47,802. Pub. 9–30–58. Filed 3–17–58.

671,106. CALDECORT. Wallace & Tiernan Incorporated. SN 48,065. Pub. 9–30–58. Filed 3–19–58.

671,107. TACITIN. Ciba Limited. SN 48,083. Pub. 9–30–58. Filed 3–20–58.

671,108. ENTOBAX. Ciba Limited. SN 48,084. Pub. 9–30–58. Filed 3–20–58.

671,109. MONZAL. Dr. Karl Thomae G. m. b. H. SN 49,098. Pub. 9–30–58. Filed 4–4–58.

671,110. PROTEIN MANTLE. Dome Chemicals, Inc. SN 49,137. Pub. 9–30–58. Filed 4–7–58.

671,111. NORISODRINE. Abbott Laboratories. SN 49,340. Pub. 9–30–58. Filed 4–9–58.

671,112. SILENT NITE. Joseph M. Gidding, d. b. a. J. M. Gidding & Co. SN 49,495. Pub. 9–30–58. Filed 4–11–58.

671,113. FREEDON. The Berjon Company. SN 50,211. Pub. 9–30–58. Filed 4–23–58.

Class 19—Vehicles

671,114. DESIGN OF SUNFISH. Alcort, Inc. SN 28,003. Pub. 9–30–58. Filed 4–12–57.

671,115. KANT-KER-RODE. Van Brode Milling Co., Inc. SN 35,543. Pub. 9–30–58. Filed 8–14–57.

Class 21—Electrical Apparatus, Machines, and Supplies

671,116. WINCO. Wincharger Corporation. SN 43,645. Pub. 9–30–58. Filed 1–8–58.

671,117. AMF AND DESIGN. American Machine & Foundry Company. SN 44,582. Pub. 9–30–58. Filed 1–24–58.

671,118. CITATION. Electric Parts Corporation. SN 44,955. Pub. 9–30–58. Filed 1–30–58.

671,119. VANGUARD. Electric Parts Corporation. SN 44,956. Pub. 9–30–58. Filed 1–30–58.

671,120. RHEEM. Rheem Manufacturing Company. SN 44,981. Pub. 9–30–58. Filed 1–30–58.

671,121. R AND DESIGN. Regan Engineering Corporation. SN 45,199. Pub. 9–30–58. Filed 2–3–58.

671,122. BELDTHERM. Belden Manufacturing Company. SN 45,516. Pub. 9–30–58. Filed 2–10–58.

Class 22—Games, Toys, and Sporting Goods

671,123. SOOTY. Sooty Concessions Limited. SN 700,267. Pub. 9–30–58. Filed 12–19–55.

Class 20—Incubators and Devices Not Metal Ware

671,124. DUPLI-BRIDGE. Maurice G. Paul, Jr. SN 25,454. Pub. 9-30-58. Filed 2-4-57.

671,125. FIGURE AND PHYSIQUE. Jack Dellinger, d. b. a. Dellinger Home Gym Equipment Co. SN 29,200. Pub. 9-30-58. Filed 5-1-57.

671,126. FLIP TRIP. Maria von Oettingen. SN 32,712. Pub. 9-30-58. Filed 6-26-57.

671,127. AMF AND DESIGN OF ROBOT. American Machine & Foundry Company. SN 34,110. Pub. 9-30-58. Filed 7-22-57.

671,128. LV-90. Santa Cruz Processors. SN 37,748. Pub. 9-30-58. Filed 9-24-57.

671,129. DEAD SHOT. S. Stanley Hawbaker, d. b. a. Big Mountain Scent Company. SN 41,541. Pub. 9-30-58. Filed 11-29-57.

671,130. EMPIRE AND DESIGN. Sol M. Beheifer, d. b. a. Beacon Sales. SN 48,732. Pub. 9-30-58. Filed 1-10-58.

671,131. THUNDERBIRD. Thunderbird Water Ski Company. SN 46,775. Pub. 9-30-58. Filed 2-27-58.

671,132. PLAYTEX. International Latex Corporation. SN 47,259. Pub. 9-30-58. Filed 3-7-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

671,133. VOLVIS. Etablissement Volvis, C. B. Strandgren. SN 28,696. Pub. 9-30-58. Filed 4-28-57.

671,134. FLOATSHAVE. Guardian Merchandising Corporation, assignee of George Monnet. SN 32,516. Pub. 9-30-58. Filed 6-24-57.

671,135. READY-RACK. Lloyd E. Yetter. SN 35,610. Pub. 9-30-58. Filed 8-15-57.

671,136. RENA AND DESIGN. Rena Büromaschinenfabrik G. m. b. H. SN 35,880. Pub. 9-30-58. Filed 8-20-57.

671,137. RENAPLAN. Rena Büromaschinenfabrik G. m. b. H. SN 35,881. Pub. 9-30-58. Filed 8-20-57.

671,138. BANDOMATIC. The James C. Heintz Company. SN 36,186. Pub. 9-30-58. Filed 8-26-57.

671,139. SNO-SWEEP. Starbrand Corporation. SN 36,402. Pub. 9-30-58. Filed 8-28-57.

671,140. SNOW KING. Clawson Machine Company. SN 36,697. Pub. 9-30-58. Filed 9-5-57.

671,141. LOS AND DESIGN. Losenhausenwerk Düsseldorfer Maschinenbau A. G. SN 37,091. Pub. 9-30-58. Filed 9-12-57.

671,142. BALL-O-MATIC. Swing-Shift Mfg. Co. SN 40,880. Pub. 9-30-58. Filed 11-18-57.

671,143. LITTLE SHAVER. Sargent & Company. SN 42,925. Pub. 9-30-58. Filed 12-23-57.

671,144. GEARCHEM. Eco Engineering Company, Division of Economy Faucet Company. SN 43,440. Pub. 9-30-58. Filed 1-6-58.

671,145. MEMAC. Mears Machine Company. SN 43,623. Pub. 9-30-58. Filed 1-8-58.

671,146. DELUXE STEEL KING AND DESIGN. De Luxe Saw and Tool Company. SN 43,624. Pub. 9-30-58. Filed 1-13-58.

671,147. TRU HELIX ETC. AND DESIGN. De Luxe Saw and Tool Company. SN 43,627. Pub. 9-30-58. Filed 1-13-58.

671,148. PRECO. Preco Incorporated. SN 45,607. Pub. 9-30-58. Filed 2-10-58.

671,149. LIFTMASTER. Lewis-Shepard Products, Inc. SN 48,283. Pub. 9-30-58. Filed 3-24-58.

671,150. REX. Crucible Steel Company of America. SN 48,464. Pub. 9-30-58. Filed 3-26-58.

671,151. JACKROD. Ingersoll-Rand Company. SN 48,563. Pub. 9-30-58. Filed 3-27-58.

671,152. CARBONITE. Continental Products, Inc. SN 48,600. Pub. 9-30-58. Filed 3-24-58.

671,153. HYDRAPAC. Kenneth E. Galt, d. b. a. Roleor Industries. SN 48,735. Pub. 9-30-58. Filed 3-31-58.

671,154. ROLLPAC. Kenneth E. Galt, d. b. a. Roleor Industries. SN 48,736. Pub. 9-30-58. Filed 3-31-58.

671,155. BATCH-A-BOUT. Noble Company. SN 48,774. Pub. 9-30-58. Filed 3-31-58.

671,156. WEED-O-VATOR. Ply Clothing Co., d. b. a. Ken Camp Manufacturing Outfitter. SN 48,786. Pub. 9-30-58. Filed 3-31-58.

671,157. DUALUBE AND DESIGN. National Aircraft Corporation. SN 48,862. Pub. 9-30-58. Filed 4-1-58.

671,158. VISCOUNT. Underwood Corporation. SN 49,537. Pub. 9-30-58. Filed 4-11-58.

671,159. DOCUMENTOR. Underwood Corporation. SN 50,124. Pub. 9-30-58. Filed 4-21-58.

671,160. R-L. Root-Lowell Manufacturing Co. SN 51,665. Pub. 9-30-58. Filed 5-14-58.

671,161. BEAR. Norton Company. SN 52,144. Pub. 9-30-58. Filed 5-22-58.

671,162. REPRESENTATION OF BEAR'S HEAD. Norton Company. SN 52,145. Pub. 9-30-58. Filed 5-22-58.

671,163. CHLORO-GUARD. Tri-Pak Machinery Service, Inc. SN 52,250. Pub. 9-30-58. Filed 5-23-58.

671,164. ICE-SCALATOR. Tri-Pak Machinery Service, Inc. SN 52,251. Pub. 9-30-58. Filed 5-23-58.

671,165. V8 AND DESIGN. Fern O. Patterson, d. b. a. Volume Sprayer Mfg. Co. SN 52,232. Pub. 9-30-58. Filed 5-26-58.

671,166. COANDAFLOW. Société à Responsabilité Limitée: Société Française d'Etudes et de Réalisations d'Inventions Coanda Sferi Coanda. SN 52,619. Pub. 9-30-58. Filed 5-14-58.

671,167. CITCO STIX. Cleveland Industrial Tool Company, Inc. SN 52,669. Pub. 9-30-58. Filed 6-2-58.

Class 24—Laundry Appliances and Machines

671,168. FSP. Whirlpool Corporation, by change of name from Whirlpool-Seeger Corporation. SN 26,515. Pub. 9-30-58. Filed 3-19-57.

671,169. SUPER FRUITEX. Barbara Products, Inc. SN 41,794. Pub. 9-30-58. Filed 12-5-57.

Class 26—Measuring and Scientific Appliances

671,170. DESIGN OF INANIMATE FIGURE. Keuffel & Esser Company, assignee of Micro-Master, Inc. SN 30,670. Pub. 9-30-58. Filed 5-24-57.

671,171. LACO. Joseph Laufer, d. b. a. Laco Supply Company. SN 34,442. Pub. 9-30-58. Filed 7-26-57.

671,172. OCULUS AND DESIGN. Käthe Baiser, nee Mendte, as guardian of Clemens-Ulrich Michael Mager, the sole heir of Wilhelm Mager, deceased. SN 34,503. Pub. 9-30-58. Filed 7-29-57.

671,173. SANKYO. Kabushiki Kaisha Sankyo Seiki Seisakusho. SN 37,267. Pub. 9-30-58. Filed 9-16-57.

671,174. VARIO-DIAGON. M. Hensoldt & Söhne, Optische Werke A.-G. SN 42,217. Pub. 9-30-58. Filed 12-11-57.

671,175. VAPOR ALL'S-WELLITE AND DESIGN. Vapor Heating Corporation. SN 45,928. Pub. 9-30-58. Filed 2-14-58.

671,176. -U AND DESIGN. Underwood Corporation. SN 47,466. Pub. 9-30-58. Filed 3-10-58.

671,177. ADD-MATE. Underwood Corporation. SN 47,467. Pub. 9-30-58. Filed 3-10-58.

Class 27—Horological Instruments

671,178. VERNO. Savoy Watch Co. Inc. SN 44,206. Pub. 9-30-58. Filed 1-17-58.

671,224. SCIENCE PERSPECTIVES. Library of Science,

671,237. 'VIYELLON.' William Hollins & Company Lim-

Class 28—Jewelry and Precious-Metal Ware

671,179. COURTSHIP. The International Silver Company. SN 26,274. Pub. 9–30–58. Filed 3–15–57.

671,180. BALLET-LOK. Harry Guise, Inc. SN 33,149. Pub. 9–30–58. Filed 7–3–57.

671,181. TIE-UPS BY TRIFARI AND DESIGN. Trifari, Krussman & Fishel, Inc. SN 37,055. Pub. 9–30–58. Filed 9–11–57.

671,182. LOVABLE. Coro, Inc. SN 39,596. Pub. 9–30–58. Filed 10–28–57.

671,183. SEA TREASURE. Litwin & Sons, Inc. SN 42,034. Pub. 9–30–58. Filed 12–9–57.

671,184. FOSTER-MATIC AND DESIGN. Foster Metal Products Incorporated. SN 42,126. Pub. 9–30–58. Filed 12–10–57.

Class 29—Brooms, Brushes, and Dusters

671,185. IGA. Independent Grocers' Alliance Distributing Company. SN 43,617. Pub. 9–30–58. Filed 1–8–58.

671,186. S AND DESIGN. Safeway Stores, Incorporated. SN 44,924. Pub. 9–30–58. Filed 1–29–58.

Class 30—Crockery, Earthenware, and Porcelain

671,187. PIN-RITE. The Potters Supply Company. SN 47,678. Pub. 9–30–58. Filed 3–13–58.

Class 31—Filters and Refrigerators

671,188. TIP-TOP. The Murray Corporation of America. SN 36,012. Pub. 9–30–58. Filed 8–22–57.

671,189. NOVO. Industrial Enterprises Incorporated, assignee of United Specialties Company of Illinois. SN 51,383. Pub. 9–30–58. Filed 5–9–58.

Class 32—Furniture and Upholstery

671,190. CORRELAIRE. B. P. John Furniture Corporation. SN 39,638. Pub. 9–30–58. Filed 10–28–57.

671,191. MUSIC MINDER. Imperial Furniture Company. SN 41,279. Pub. 9–30–58. Filed 11–25–57.

671,192. DAW-LUXE. Daw-Wood Products, Inc. SN 45,723. Pub. 9–30–58. Filed 2–12–58.

671,193. HICHIN POST. William B. Wallace, d. b. a. William Wallace Company. SN 52,785. Pub. 9–30–58. Filed 6–2–58.

671,194. NIP 'N NAP. Welsh Co. SN 53,087. Pub. 9–30–58. Filed 6–6–58.

Class 33—Glassware

671,195. TRU-SITE. Dearborn Glass Company. SN 43,931. Pub. 9–30–58. Filed 1–14–58.

Class 34—Heating, Lighting, and Ventilating Apparatus

671,196. J-B INSTANT GRIP. Jacke-Evans Manufacturing Company. SN 45,482. Pub. 9–30–58. Filed 2–7–58.

671,197. BEEF-EATER. Abercrombie & Fitch Company. SN 51,246. Pub. 9–30–58. Filed 5–8–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

671,198. CHEMICURE. Tru-Flex Rubber Products Company. SN 47,695. Pub. 9–30–58. Filed 3–13–58.

671,199. DURACURE. Tru-Flex Rubber Products Company. SN 47,696. Pub. 9–30–58. Filed 3–13–58.

Class 36—Musical Instruments and Supplies

671,200. MAGNANTE. Excelsior Accordions, Inc. SN 3,743. Pub. 9–30–58. Filed 3–2–56.

671,201. DISC MATE AND DESIGN. Red-Rope Stationery Industries, Inc. SN 44,311. Pub. 9–30–58. Filed 1–20–58.

671,202. SUN ETC. AND DESIGN. Sun Record Company, Inc. SN 45,422. Pub. 9–30–58. Filed 2–6–58.

671,203. OFFICIAL MICKEY MOUSE CLUB AND DESIGN. Walt Disney Music Company. SN 46,609. Pub. 9–30–58. Filed 2–25–58.

Class 37—Paper and Stationery

671,204. ECRIDOR. Fabrique Suisse de Crayons Caran d'Ache S. A. SN 32,988. Pub. 9–30–58. Filed 7–1–57.

671,205. F FIBREBOARD AND DESIGN. Fibreboard Paper Products Corporation. SN 32,989. Pub. 9–30–58. Filed 7–1–57.

671,206. STACO AND DESIGN. Stationers Specialty Corporation. SN 33,291. Pub. 9–30–58. Filed 7–3–57.

671,207. PATASORB. Paterson Pacific Parchment Company. SN 34,301. Pub. 9–30–58. Filed 7–24–57.

671,208. RED RAY AND DESIGN. A. G. Verdolyack, Inc. SN 34,316. Pub. 9–30–58. Filed 7–24–57.

671,209. RAY-DIANT AND DESIGN. H. D. Catty Corporation of N. Y. SN 38,430. Pub. 9–30–58. Filed 10–7–57.

671,210. COLORBRITE. Eberhard Faber Pencil Company. SN 39,607. Pub. 9–30–58. Filed 10–28–57.

671,211. DIONNE. The Sterlick Company, Inc. SN 41,120. Pub. 9–30–58. Filed 11–21–57.

671,212. VISI-TRAN. General Aniline & Film Corporation. SN 44,613. Pub. 9–30–58. Filed 1–24–58.

671,213. PARLETEX. International Paper Company. SN 45,169. Pub. 9–30–58. Filed 2–3–58.

671,214. ANIMATION BOND. Saxon Paper Corporation. SN 45,211. Pub. 9–30–58. Filed 2–3–58.

671,215. RACE-KLEEN. Eberhard Faber Pencil Company. SN 45,548. Pub. 9–30–58. Filed 2–10–58.

671,216. MUNICIPAL. Graham Paper Company. SN 45,796. Pub. 9–30–58. Filed 2–13–58.

671,217. TEL-O-MATIC. Ad-A-Day Company, Inc. SN 45,839. Pub. 9–30–58. Filed 2–14–58.

671,218. ELECTROMARK AND DESIGN. The Electromark Corp. SN 46,303. Pub. 9–30–58. Filed 2–21–58.

671,219. DESIGN OF GROTESQUE HUMAN. Hilding A. Johnson, d. b. a. Sargent-Morse Co. SN 46,891. Pub. 9–30–58. Filed 1–22–58.

671,220. ROYTAPE. Royal McBee Corporation. SN 46,496. Pub. 9–30–58. Filed 2–24–58.

671,221. WESTERN GOLD. Graham Paper Company. SN 46,935. Pub. 9–30–58. Filed 3–3–58.

Class 38—Prints and Publications

671,222. ANA AND DESIGN. American Nurses' Association. SN 34,750. Pub. 9–30–58. Filed 8–1–57.

671,223. DISTILLED WRITING AND DESIGN. The Industrial Publishing Corporation. SN 39,627. Pub. 9–30–58. Filed 10–28–57.

Class 46—Foods and Ingredients of Foods

Class 50—Merchandise Not Otherwise

671,224. SCIENCE PERSPECTIVES. Library of Science, Inc. SN 47,265. Pub. 9-30-58. Filed 3-7-58.

671,225. PL. Pocket Books, Inc. SN 47,281. Pub. 9-30-58. Filed 3-7-58.

671,226. STAMPOLOG. World Wide Sports, Inc. SN 47,619. Pub. 9-30-58. Filed 3-12-58.

671,227. OB-GYN IN DAILY PRACTICE. The Purdue Frederick Company. SN 47,760. Pub. 9-30-58. Filed 3-14-58.

Class 39—Clothing

671,228. SCREEN STAR. Neisner Brothers, Inc. SN 24,618. Pub. 9-30-58. Filed 2-18-57.

671,229. ACTION-FIT. M. C. Schrank Company. SN 27,900. Pub. 9-30-58. Filed 4-11-57.

671,230. SCOOTER COAT LANSON ETC. AND DESIGN. Lanson Rainwear Corp. SN 30,343. Pub. 9-30-58. Filed 5-20-57.

671,231. TIDY TEENS AND DESIGN. Tidykins, Inc. SN 33,511. Pub. 9-30-58. Filed 7-10-57.

671,232. D'ORSAY. D'Orsay Mills, Inc. SN 34,344. Pub. 9-30-58. Filed 7-25-57.

671,233. GLOBE TROTTER. Carmi-Ainsbrooke Corporation. SN 34,398. Pub. 9-30-58. Filed 7-26-57.

671,234. "FIT STITCHED." A. Sagner's Son. SN 35,884. Pub. 9-30-58. Filed 8-20-57.

671,235. QUALITY HOUSE. S. Klein Department Stores, Inc. SN 37,883. Pub. 9-30-58. Filed 9-26-57.

671,236. KIT'S. George Dickstein, d. b. a. Kit's Manufacturing Company. SN 38,429. Pub. 9-30-58. Filed 10-7-57.

671,237. POPLINYL. Sun Valley Manufacturing Co. SN 39,919. Pub. 9-30-58. Filed 10-21-57.

671,238. FLAIR OF MIAMI AND DESIGN. Flair of Miami. SN 41,264. Pub. 9-30-58. Filed 11-25-57.

671,239. CORDE DE PARIE ETC. Corde de Parie Corset Co. Inc. SN 41,748. Pub. 9-30-58. Filed 12-4-57.

671,240. "AMBUSH." Exquisite Form Brassiere, Inc. SN 41,902. Pub. 9-30-58. Filed 12-6-57.

671,241. WENDY IRIS. A. Golder & Co. SN 42,018. Pub. 9-30-58. Filed 12-9-57.

671,242. CREPE-LENE. Brownie Knitting Mills, Inc. SN 42,576. Pub. 9-30-58. Filed 12-17-57.

671,243. KNAPP FREE-WAY ETC. Knapp Brothers Shoe Manufacturing Corporation. SN 43,459. Pub. 9-30-58. Filed 1-6-58.

671,244. DONNA LEE. Shelby Textile, Inc. SN 43,628. Pub. 9-30-58. Filed 1-8-58.

671,245. TOP CREATIONS AND DESIGN. Harry Epstein. SN 43,935. Pub. 9-30-58. Filed 1-14-58.

671,246. NAUTICALS BY QUEEN CASUALS. Queen Knitting Mills, Inc. SN 44,409. Pub. 9-30-58. Filed 1-21-58.

671,247. NAUTICAL BLUES BY QUEEN CASUALS. Queen Knitting Mills, Inc. SN 44,410. Pub. 9-30-58. Filed 1-21-58.

671,248. MR. JOHN JR. "CELEBRITY." Mr. John, Inc. SN 44,473. Pub. 9-30-58. Filed 1-22-58.

671,249. THAMES. Norwich Mills, Inc. SN 44,556. Pub. 9-30-58. Filed 1-23-58.

671,250. PHIL-MAID. Phil-Maid, Inc. SN 44,916. Pub. 9-30-58. Filed 1-29-58.

671,251. SKIVVIES. Norwich Mills Inc. SN 45,340. Pub. 9-30-58. Filed 2-5-58.

671,252. DOUBLE DATE. A. Stein & Company. SN 45,625. Pub. 9-30-58. Filed 2-10-58.

671,253. HUSSCO. Hussco Shoe Company. SN 45,976. Pub. 9-30-58. Filed 2-17-58.

671,254. JEWEL BOX. Edison Brothers Stores, Inc. SN 46,118. Pub. 9-30-58. Filed 2-19-58.

671,255. CORINTHIAN. L. Greif & Bro., Inc. SN 46,313. Pub. 9-30-58. Filed 2-21-58.

671,256. SEVILLE. L. Greif & Bro., Inc. SN 46,314. Pub. 9-30-58. Filed 2-21-58.

671,257. 'VIYELLON.' William Hollins & Company Limited. SN 46,544. Pub. 9-30-58. Filed 2-25-58.

671,258. THERMALOUNGER. Faith Mills Corp. SN 47,107. Pub. 9-30-58. Filed 3-5-58.

671,259. PETTI. Rhea Manufacturing Company. SN 47,895. Pub. 9-30-58. Filed 3-17-58.

Class 40—Fancy Goods, Furnishings, and Notions

671,260. PERMALOID. Emsig Manufacturing Co. SN 41,631. Pub. 9-30-58. Filed 12-2-57.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

671,261. VINRAY. Munsingwear, Inc. SN 39,486. Pub. 9-30-58. Filed 10-24-57.

671,262. PENTHOUSE. Kleiman, Ewen & Rose, Inc. SN 45,245. Pub. 9-30-58. Filed 2-4-58.

671,263. EVERTRIM. Michael Sutton, d. b. a. Trimfit Pillowcase Co. SN 46,578. Pub. 9-30-58. Filed 2-25-58.

671,264. THRIFT FASHIONS. A. & M. Karagheusian, Inc. SN 47,221. Pub. 9-30-58. Filed 3-7-58.

671,265. GUILD GROUP. A. & M. Karagheusian, Inc. SN 47,222. Pub. 9-30-58. Filed 3-7-58.

671,266. REDSTONE. William Moreno Levy, d. b. a. Moreno Textiles Company. SN 47,396. Pub. 9-30-58. Filed 3-10-58.

671,267. FAILLOROY. J. P. Stevens & Co. Inc., assignee of D. B. Fuller & Co. Inc. SN 48,162. Pub. 9-30-58. Filed 3-21-58.

671,268. BETSY ROSS. National Sure-Fit Quilting Co., Inc. SN 48,314. Pub. 9-30-58. Filed 3-24-58.

671,269. PERLEE WHIRL. Neil Kolodney. SN 48,641. Pub. 9-30-58. Filed 3-28-58.

Class 43—Thread and Yarn

671,270. VINLOFT. American Viscose Corporation. SN 46,396. Pub. 9-30-58. Filed 2-24-58.

Class 44—Dental, Medical, and Surgical Appliances

671,271. HEMATUBE. Courtland Laboratories. SN 30,409. Pub. 9-30-58. Filed 5-21-57.

671,272. REPRESENTATION OF LABORATORY TECHNICIAN ETC. Miles Dental Laboratories, Inc. SN 37,841. Pub. 9-30-58. Filed 9-13-57.

671,273. OLO. Dr. Carl Hahn K. G. SN 43,516. Pub. 9-30-58. Filed 1-3-58.

671,274. MINUET. Beltone Hearing Aid Co. SN 45,518. Pub. 9-30-58. Filed 2-10-58.

671,275. SERENADE. Beltone Hearing Aid Co. SN 45,519. Pub. 9-30-58. Filed 2-10-58.

Class 45—Soft Drinks and Carbonated Waters

671,276. FRUTNIK AND DESIGN. George A. Calevas, d. b. a. Calevas Laboratories. SN 47,231. Pub. 9-30-58. Filed 3-7-58.

Class 101—Advertising and Business

671,341. B. E. M. Charles B. Wolfe, d. b. a. One Hour Martinizing. SN 25,914. Pub. 9-30-58. Filed 3-11-57.

Class 46—Foods and Ingredients of Foods

671,277. POTAGRAIN. Potagrain Foods Refining Corporation. SN 681,796. Pub. 9–30–58. Filed 2–16–55.

671,278. PILLEY'S. City Products Corporation, by merger from Frank Pilley and Sons, Inc. SN 7,034. Pub. 9–30–58. Filed 4–24–56.

671,279. WARREN'S AND DESIGN. The Poplars, Inc., d. b. a. The Poplars. SN 6,692. Pub. 9–30–58. Filed 5–21–56.

671,280. GRAVYMASTER. Gravymaster Company, Inc. SN 26,695. Pub. 9–30–58. Filed 3–22–57.

671,281. PRIME PAK ETC. AND DESIGN. Prime Pak. SN 27,728. Pub. 9–30–58. Filed 4–8–57.

671,282. CRISPHEART. Mascari Brothers. SN 31,725. Pub. 9–30–58. Filed 5–29–57.

671,283. TAST-E-WIP. Foremost Dairies, Inc., d. b. a. Shuey-Diamond Dairy. SN 31,920. Pub. 9–30–58. Filed 6–13–57.

671,284. TOMASCIO. Vermont Cheese Products, Inc. SN 33,386. Pub. 9–30–58. Filed 7–8–57.

671,285. HEART OF MILK. The Borden Company. SN 33,791. Pub. 9–30–58. Filed 7–16–57.

671,286. CUMBERLAND VALLEY CV AND DESIGN. C. M. Nonemaker. SN 34,299. Pub. 9–30–58. Filed 7–24–57.

671,287. ORANGE BLOSSOM. Hershey Creamery Company. SN 41,167. Pub. 9–30–58. Filed 11–22–57.

671,288. S. E. R. S. E. Rykoff & Company. SN 42,160. Pub. 9–30–58. Filed 12–10–57.

671,289. PEARSON'S. Pearson Candy Co. SN 45,343. Pub. 9–30–58. Filed 2–5–58.

671,290. GRAND RIVER ORCHARDS. Grand River Orchards, Inc. SN 45,877. Pub. 9–30–58. Filed 2–14–58.

671,291. EXPLORER. Leaf Brands, Inc. SN 46,486. Pub. 9–30–58. Filed 2–24–58.

671,292. BOB-A-LEE. Robert E. Behnken. SN 47,327. Pub. 9–30–58. Filed 3–10–58.

671,293. BACHMAN. Bachman Chocolate Manufacturing Co. SN 47,820. Pub. 9–30–58. Filed 3–17–58.

671,294. EHLERS B AND DESIGN. Albert Ehlers, Inc. SN 48,258. Pub. 9–30–58. Filed 3–24–58.

671,295. QUINT. Wesson Oil & Snowdrift Sales Company. SN 48,527. Pub. 9–30–58. Filed 3–26–58.

671,296. IT'S-A-DILLY. The It's-A-Dilly Company. SN 48,037. Pub. 9–30–58. Filed 3–28–58.

671,297. BN. D. E. Winebrenner Company, Inc. SN 48,954. Pub. 9–30–58. Filed 4–2–58.

671,298. DRUMS. New England Confectionery Company. SN 49,293. Pub. 9–30–58. Filed 4–8–58.

671,299. CAFEX. Cain's Coffee Co. SN 49,678. Pub. 9–30–58. Filed 4–15–58.

671,300. REGALIA AND DESIGN. Dairymen's League Co-Operative Association, Inc. SN 49,684. Pub. 9–30–58. Filed 4–15–58.

671,301. REGALIA. Dairymen's League Co-Operative Association, Inc. SN 49,685. Pub. 9–30–58. Filed 4–15–58.

671,302. INSTEA. Continental Coffee Company. SN 50,027. Pub. 9–30–58. Filed 4–21–58.

671,303. SWANY WHITE. Freeport Roller Mills, Inc. SN 50,045. Pub. 9–30–58. Filed 4–21–58.

671,304. WAGON TRAIN. Stagecoach Orchards, Inc. SN 50,116. Pub. 9–30–58. Filed 4–21–58.

671,305. SURREY. Stagecoach Orchards, Inc. SN 50,117. Pub. 9–30–58. Filed 4–21–58.

671,306. FIVE 5 SOMES. Leaf Brands, Inc. SN 50,304. Pub. 9–30–58. Filed 4–24–58.

671,307. JAYTEE. John Thallon & Company, Inc., d. b. a. John Thallon & Co. SN 55,256. Pub. 9–30–58. Filed 7–17–58.

Class 50—Merchandise Not Otherwise Classified

671,308. FROSTY. U. S. Packaging Corporation. SN 670,710. Pub. 7–9–57. Filed 7–27–54.

671,309. SAFE-HI. Ross Manufacturing Company. SN 32,016. Pub. 9–30–58. Filed 6–14–57.

671,310. HUDSON ETC. AND DESIGN. H. D. Hudson Manufacturing Company. SN 33,077. Pub. 9–30–58. Filed 7–2–57.

671,311. F-F. D. David Fearing Co., Inc. SN 36,579. Pub. 9–30–58. Filed 9–3–57.

671,312. ROBINSON CRUSOE. Van Brode Milling Co., Inc. SN 42,558. Pub. 9–30–58. Filed 12–16–57.

671,313. CATAFLEX. Cataphote Corporation. SN 43,009 Pub. 9–30–58. Filed 12–26–57.

671,314. E-Z-WAYE. Joseph Karas, d. b. a. Karas Products Co. SN 43,761. Pub. 9–30–58. Filed 1–10–58.

671,315. STYLE SET. Ru-Son Products Co. SN 43,780. Pub. 9–30–58. Filed 1–10–58.

Class 51—Cosmetics and Toilet Preparations

671,316. CREME N. Societe Anonyme Laboratoires du Dr. N. G. Payot. SN 31,032. Pub. 9–30–58. Filed 5–29–57.

671,317. COUP DE FEU. Marquay, S. a. r. l. SN 35,368. Pub. 9–30–58. Filed 8–12–57.

671,318. KIDDIE-COMB. Lucky Tiger Manufacturing Company. SN 37,437. Pub. 9–30–58. Filed 9–18–57.

671,319. NOREEN AND DESIGN. Noreen, Inc. SN 41,832. Pub. 9–30–58. Filed 12–5–57.

671,320. L'INTERDIT. Societe a Responsabilite Limitee: Les Parfums H. de Givenchy. SN 42,163. Pub. 9–30–58. Filed 12–16–57.

671,321. PCK. Pro-Cya-Kera Laboratories, Inc. SN 44,978. Pub. 9–30–58. Filed 1–30–58.

671,322. GLO-PUFF AND DESIGN. Glo-Rus, Inc. SN 45,163. Pub. 9–30–58. Filed 2–3–58.

Class 52—Detergents and Soaps

671,323. SIMONE MOUNIER. Charles of the Ritz, Inc. SN 36,853. Pub. 9–30–58. Filed 9–9–57.

671,324. BOYCE-ITE. Leonard D. Boyce. SN 52,383. Pub. 9–30–58. Filed 5–27–58.

671,325. ATLAS. Atlas Supply Company. SN 53,919. Pub. 9–23–58. Filed 6–20–58.

Service Marks

Class 100—Miscellaneous

671,326. USAC. United States Auto Club. SN 23,757. Pub. 9–30–58. Filed 2–4–57.

671,327. POLO-METRIC PROSTHETICS. Charles E. Cox, d. b. a. Cox Dental Laboratory. SN 29,703. Pub. 9–30–58. Filed 5–9–57.

671,328. CRA. California Redwood Association. SN 34,587. Pub. 9–30–58. Filed 7–30–57.

671,329. WESTERN HILLS. The Western Hills Hotel, Inc., d. b. a. The Western Hills Hotel. SN 37,533. Pub. 9–30–58. Filed 9–19–57.

671,330. TRIBO-NETICS. Elmer Fred Macks, d. b. a. Tribo-Netics Laboratories. SN 40,958. Pub. 9–30–58. Filed 11–18–57.

671,331. O'BRIEN INDUSTRIES OB AND DESIGN. O'Brien Industries, Inc. SN 41,560. Pub. 9–30–58. Filed 11–29–57.

Class 23—Cutlery, Machinery, and Tools Class 46—Foods and Ingredients of Foods

Class 101—Advertising and Business

671,332. PRINTECHNIC. Van Valkenburgh, Nooger & Neville, Inc. SN 12,849. Pub. 9-30-58. Filed 7-25-56.

671,333. TRAINER-TESTER PRINTECHNIC. Van Valkenburgh, Nooger & Neville, Inc. SN 12,850. Pub. 9-30-58. Filed 7-25-56.

671,334. PD. Process Displays, Incorporated. SN 20,216. Pub. 9-30-58. Filed 11-30-56.

671,335. GENIE. World Stamp Inc. SN 23,191. Pub. 9-30-58. Filed 1-24-57.

Class 102—Insurance and Financial

671,336. DEVICE INCLUDING THE LETTERS NASP PROMINENTLY DISPLAYED. National Casualty Company. SN 6,013. Pub. 9-30-58. Filed 5-9-56.

671,337. THE EQUI-NUITY COMPANY. The Equity Annuity Life Insurance Company. SN 21,796. Pub. 9-30-58. Filed 12-28-56.

671,338. PRIP. Quinby & Co., Incorporated. SN 37,678. Pub. 9-30-58. Filed 9-23-57.

671,339. YOU'RE IN GOOD HANDS WITH ALLSTATE AND DESIGN. Allstate Insurance Company. SN 43,798. Pub. 9-30-58. Filed 1-13-58.

Class 103—Construction and Repair

671,340. RED-E-FREDDY. Red-E-Gas Company. SN 659,570. Pub. 9-30-58. Filed 1-15-54.

671,341. B. E. M. Charles B. Wolfe, d. b. a. One Hour Martinizing. SN 25,914. Pub. 9-30-58. Filed 3-11-57.

671,342. B BORING INC. AND DESIGN. Boring, Inc. SN 41,512. Pub. 9-30-58. Filed 11-29-57.

671,343. HYDREX PEST CONTROL CO. AND DESIGN. Robert B. Loibl, Jr., d. b. a. Hydrex Pest Control Co. SN 42,590. Pub. 9-30-58. Filed 12-17-57.

Class 107—Education and Entertainment

671,344. TOWN AND DESIGN. Harris Sales Corp. SN 34,052. Pub. 9-30-58. Filed 7-10-57.

Collective Membership Mark

Class 200

671,345. RJ ETC. AND DESIGN. American Gem Society. SN 18,798. Pub. 9-30-58. Filed 8-13-56.

Certification Mark

Class B—Services

671,346. SELECTED BY EMMONS WALKER AND DESIGN. Orville H. Emmons, d. b. a. Emmons Walker. SN 688,809. Pub. 9-30-58. Filed 6-3-55.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 7—Cordage

671,347. Hallmark Cards, Incorporated, Kansas City, Mo. SN 40,574. Filed P. R. 11-13-57. Am. S. R. 10-15-58.

SPARKLE SHEEN

For Ribbon for Gift Tying Purposes.
First use Feb. 16, 1957.

671,348. Hallmark Cards, Incorporated, Kansas City, Mo. SN 40,575. Filed P. R. 11-13-57. Am. S. R. 10-15-58.

Tinsel Sheen

For Ribbon for Gift Tying Purposes.
First use Feb. 16, 1957.

Class 12—Construction Materials

671,349. Architectural Porcelain Constructors, Oakland, Calif. SN 38,067. Filed P. R. 10-16-57. Am. S. R. 10-6-58.

SELF-FLASHING

For Building Panels Having Flashing Flanges and Offset Corners So That the Panels Interlock To Form Watertight Joints, Independently of Any Joint Filler Material.
First use June 1957.

Class 17—Tobacco Products

671,350. General Cigar Co., Inc., New York, N. Y. SN 33,809. Filed 10-7-58.

Applicant disclaims the words "With New" and "Binder Tobacco."
For Binder Tobacco for Cigars.
First use June 3, 1957; Feb. 28, 1956, as to "Smooth Smoke."

Class 21—Electrical Apparatus, Machines, and Supplies

671,351. Marathon Battery Company, Wausau, Wis. SN 30,257. Filed P. R. 5-17-57. Am. S. R. 10-17-58.

FAMOUS FOR ENDURANCE

For Batteries.
First use in April 1924.

363,524. TRI-CONE AND DESIGN. Cl. 23. 12-27-38.

364,847. COOLONG. Cl. 42. 2-14-39.

Class 23—Cutlery, Machinery, and Tools, Class 46—Foods and Ingredients of Foods and Parts Thereof

671,352. Waldes Koh-I-Noor, Inc., Long Island City, N. Y. SN 38,651. Filed P. R. 10-9-57. Am. S. R. 10-27-58.

PRONG-LOCK

For Retaining Rings and Clips.
First use Sept. 16, 1957.

Class 38—Prints and Publications

671,353. Cowan Publishing Corp., New York, N. Y. SN 35,855. Filed P. R. 8-20-57. Am. S. R. 10-7-58.

SEMICONDUCTOR PRODUCTS

For Technical Magazine.
First use Aug. 9, 1957.

671,354. Powell Magazines, Inc., New York, N. Y. SN 40,188. Filed P. R. 11-6-57. Am. S. R. 10-3-58.

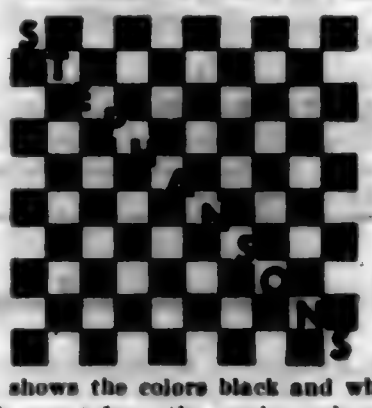
Modern Sanitation AND BUILDING MAINTENANCE

For Monthly Magazine Covering All Phases of Cleanliness, Order and Safety in the Buildings Which House American Industry, Commerce and Institutions.
First use on or about Sept. 27, 1957.

671,355. Schafer's Bakeries, Detroit, Mich. SN 14,279. Filed 8-20-56.

For Bread.
First use October 1954.

671,356. Stephanson's, Washington, D. C. SN 36,752. Filed P. R. 9-5-57. Am. S. R. 9-8-58.



The drawing shows the colors black and white. No claim to color is made apart from the mark as shown.
For Bakery Products—Namely, Pies, Cakes, Tea Cakes, Pastries, Cheese Cake, and Tea Breads.
First use on or about Sept. 1, 1936; on or about Sept. 1, 1925, as to "Stephanson's."

Service Mark

Class 101—Advertising and Business

671,357. Safeway Stores, Incorporated, Oakland, Calif. SN 24,004. Filed 2-7-57.

SAVE-A-TAPE

For Cash Register Receipt Redemption Plan—Namely, the Redemption of Cash Register Receipts With Premium Goods.
First use Nov. 2, 1955.

TRADEMARK REGISTRATIONS RENEWED

16,114. ANAGLYPTA. Cl. 37. 12-25-1888.
122,983. NU'LOCRYSTAL. Cl. 46. 10-1-18.
123,708. GENERAL. Cl. 46. 12-3-18.
123,709. CAPTAIN. Cl. 46. 12-3-18.
124,005. MARVELFIT. Cl. 39. 12-31-18.
124,351. T. R. B. CO. AND DESIGN. Cl. 23. 2-4-19.
124,376. PATCHWORK. Cl. 38. 2-25-19.
124,976. SUPREME. Cl. 46. 4-1-19.
358,032. NAILIFE. Cl. 51. 6-28-38.
359,064. TYMATIC. Cl. 37. 8-2-38.
359,552. HEP. Cl. 52. 8-23-38.
359,828. OCULEX. Cl. 18. 8-30-38.
359,924. SUN SIP. Cl. 46. 9-6-38.
360,500. TIELEMAN & BROS ETC. AND DESIGN. Cl. 46. 9-20-38.
360,653. SMOOTHIE. Cl. 29. 9-20-38.
360,777. NEW CENTER NEWS ETC. AND DESIGN. Cl. 38. 9-27-38.
360,998. VELDOWN. Cl. 44. 10-4-38.
361,056. THE DERBY. Cl. 42. 10-4-38.
361,153. WHO WANTS THE HANDSOME WAITER AND DESIGN. Cl. 48. 10-11-38.
361,436. TURTLE. Cl. 27. 10-18-38.
361,573. CAPESKIN. Cl. 39. 10-25-38.
361,698. MELROSE ETC. AND DESIGN. Cl. 49. 10-25-38.
361,793. COUNTRY SQUIRE AND DESIGN. Cl. 49. 11-1-38.
361,828. TRAVELETTE AND DESIGN. Cl. 38. 11-1-38.
362,142. DEL RIO. Cl. 47. 11-15-38.
362,428. NOFMA. Cl. 12. 11-15-38.
362,522. FLINTSTONE. Cl. 13. 11-22-38.
362,502. MENU. Cl. 37. 11-22-38.
362,503. MONARCH. Cl. 37. 11-22-38.
362,594. SNOWFIBRE. Cl. 37. 11-22-38.
362,595. SNOWFIBRE. Cl. 37. 11-22-38.
362,596. SNOWTEX. Cl. 37. 11-22-38.
362,597. WHIPCORD. Cl. 37. 11-22-38.
362,758. MOISTITE. Cl. 37. 11-29-38.
362,770. KOINIFE. Cl. 23. 11-29-38.
363,007. BLAZER. Cl. 42. 12-6-38.

First use June 1957.

TM 737 O. G.—11

First use in April 1924.

363,524. TRI-CONE AND DESIGN. Cl. 23. 12-27-38.
363,650. REGENER. Cl. 32. 1-3-39.
363,669. BECETAX. Cl. 18. 1-3-39.
363,670. CANTAXIN. Cl. 18. 1-3-39.
363,671. DELTAXIN. Cl. 18. 1-3-39.
363,672. FLAVAXIN. Cl. 18. 1-3-39.
363,673. POLYTAXIN. Cl. 18. 1-3-39.
363,885. PHILADELPHIA. Cl. 49. 1-10-39.
363,992. MIRO-FLARE. Cl. 34. 1-17-39.
364,361. MIST CHARM OF THE REDWOODS. Cl. 51. 1-31-39.
364,487. SAVOLITE. Cl. 51. 1-31-39.
364,577. CHOC-O-LUNCH. Cl. 46. 2-7-39.
364,669. DODGE. Cl. 19. 2-7-39.
364,703. TEDDY. Cl. 42. 2-14-39.
364,755. POLAIRE. Cl. 42. 2-14-39.
364,833. MATCH-ME. Cl. 39. 2-14-39.
364,847. COOLONG. Cl. 42. 2-14-39.
364,849. SKY TOPPER. Cl. 46. 2-14-39.
364,857. LIDO AND DESIGN. Cl. 46. 2-14-39.
365,051. 21. Cl. 6. 2-21-39.
365,052. DESIGN OF RECTANGLE AND CIRCLE COLORED BLUE AND RED. Cl. 6. 2-21-39.
365,053. DESIGN OF RECTANGLE AND CIRCLE COLORED BLUE AND RED. Cl. 19. 2-21-39.
365,070. SAUCIT. Cl. 46. 2-21-39.
365,403. KEIL'S HONEY AND POLLEN AND DESIGN. Cl. 18. 3-7-39.
365,476. DESIGN COLORED BLUE AND RED. Cl. 35. 3-7-39.
365,501. NIGHTLIFE. Cl. 38. 3-14-39.
365,833. LADY WAYNE AND DESIGN. Cl. 51. 3-21-39.
365,915. ARLEX. Cl. 6. 3-21-39.
365,939. REPRESENTATION OF PENGUIN. Cl. 48. 3-21-39.

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Section 8

86,689. SYSTEMAT. Cl. 37. 5-28-12.
96,998. SWEETEST MAID AND DESIGN. Cl. 46. 5-12-14.
289,942. THE SUN DIAL. Cl. 38. 12-15-31.

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565,823. EASY-RITING. Cl. 37.
565,828. A-PAK. Cl. 46.
565,831. TASTY RICE. Cl. 46.
565,835. SHYN-MAID. Cl. 4.
565,837. MOORE REDI-READ. Cl. 37.
565,841. WINDSOR. Cl. 40.
565,851. FOUNT-N-GRAPH. Cl. 37.
565,866. VANGUARD. Cl. 22.
565,868. HUR-Q-LATORS ETC. AND DESIGN. Cl. 32.
565,875. FLAKE WHITE. Cl. 46.
565,882. HELLESENS AND DESIGN. Cl. 21.
565,885. ACME. Cl. 46.
565,886. THE GLOVETROTTER'S FRIEND. Cl. 37.
565,887. CHAM-MA. Cl. 37.
565,888. MIRACLE PRESS-TOE-LITE. Cl. 21.
565,894. SPLIT-A-WORD. Cl. 21.
565,895. WHISKAS. Cl. 46.
565,897. METRO. Cl. 37.
565,903. TEL-U-SWITCH. Cl. 21.
565,904. DI DE O. Cl. 6.
565,905. DESIGN OF ENVELOPE WITH WINGS. Cl. 37.
565,908. FLO GRANULES. Cl. 6.
565,909. FLO CRYSTALS. Cl. 6.
565,915. KARDIGAN. Cl. 22.
565,928. TWIX. Cl. 40.
565,929. GRAPH-O-LIGHT. Cl. 16.
565,932. READER'S "D" LIGHT AND DESIGN. Cl. 21.
565,936. BUTASOL. Cl. 6.
565,937. PROGRESSIVE. Cl. 18.
565,939. DROOKO. Cl. 41.
565,940. OCTOBER BRAND. Cl. 46.
565,943. THENYLHIST. Cl. 18.
565,950. PHONOMATIC. Cl. 21.
565,959. PERM-LOX. Cl. 21.
565,960. PATHILON. Cl. 18.
565,963. BIBLE-LITE. Cl. 38.
565,967. GARMENT GRIPPER. Cl. 40.
565,972. TRUSCON AND DESIGN. Cl. 23.
565,975. ROYAL ELECTRONIC PRECISION AND DESIGN. Cl. 21.
565,976. TYLERIZED SEATING AND DESIGN. Cl. 52.
565,990. CONTOUR-ETTE. Cl. 40
565,993. DESIGN OF A BOY EATING AN ICE CREAM BAR. Cl. 46.
565,994. JOLLY BOY. Cl. 46.
565,996. LOOPSTICK. Cl. 21.
565,997. VARI-LOOPSTICK. Cl. 21.
565,999. SNAPICS. Cl. 38.
566,003. BLUE PACK. Cl. 40.
566,008. BY BERNAD AND DESIGN. Cl. 37.
566,017. HETCO AND DESIGN. Cl. 13.
566,018. ELTEE. Cl. 21.
566,024. HOOK-KING. Cl. 40.
566,030. TRAUM TAILOR-TRIK. Cl. 40.
566,031. LANOC. Cl. 6.
566,037. HUMANIZED PICKLE DESIGN. Cl. 46.
566,038. THE OFFICIAL DIRECTORY OF ORGANIZED LABOR ETC. Cl. 38.
566,039. ROMPLAST. Cl. 6.
566,040. ARSIOD AND DESIGN. Cl. 18.
566,042. RANGER AND DESIGN. Cl. 23.
566,045. R & M AND DESIGN. Cl. 23.
566,046. SLICE-O-MATIC. Cl. 23.
566,049. FELORAL. Cl. 18.
566,051. THE LAWYER & LAW NOTES. Cl. 38.
566,054. FLAX-O-GRAMS. Cl. 40.
566,060. DEMI-TASSE. Cl. 17.
566,062. SPIN=FLYTE. Cl. 42.
566,063. DESIGN WITHIN CIRCLE. Cl. 23.
566,068. VOLO. Cl. 46.
566,073. MARKET QUEEN. Cl. 46.
566,074. SIMPLE SIMON. Cl. 46.
566,078. INVESTMENTWEEDS. Cl. 39.
566,079. NEW WAY OF LIFE NEWS. Cl. 38.
566,088. TAG-A-DOLL AND DESIGN. Cl. 32.
566,097. VITRION. Cl. 8.
566,101. BUFFALO BILL CODY. Cl. 9.
566,107. CAL-POK. Cl. 38.
566,110. SNOW-SCAPE. Cl. 13.
566,111. PERMANITE AND DESIGN. Cl. 13.
566,117. PETER PENN SAYS: Cl. 38.
566,127. TRAVELERS. Cl. 37.
566,129. BROSIUS. Cl. 13.
566,133. WESTERN AIR EXPRESS AND DESIGN. Cl. 105.
566,140. WESTERN AIR EXPRESS AND DESIGN. Cl. 102.
566,141. TRIPLE FIGURE DESIGN. Cl. 101.
566,142. VOCATIONEERS. Cl. 101.
566,143. POWERATED. Cl. 34.
566,147. DOUBLCUP. Cl. 2.
566,152. MOLDTITE. Cl. 21.
566,154. EVERLITE AND DESIGN. Cl. 21.
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566,160. KLIPZON. Cl. 21.
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566,162. TOWN & COUNTRY HOMES. Cl. 12.
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566,165. DESIGN OF BOTTLE REPRESENTING THE SHAPE OF THE EIFFEL TOWER. Cl. 49.
566,166. NO SIZE. Cl. 5.
566,173. SPEEDI-GLU. Cl. 3.
566,175. LORD LESLIE. Cl. 42.
566,179. KUTRYTE. Cl. 44.
566,184. T-BONE STEAK EXPRESS. Cl. 105.
566,185. TENDER LOIN STEAK LINER WEHBY SYSTEM. Cl. 105.

Crown Zellerbach Corp., San Francisco, Calif. 362,594, ren. 11-22-58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,595, ren. 11-22-58. Cl. 37.
Fibreboard Paper Products Corp., San Francisco, Calif. 671,205, pub. 9-30-58. Cl. 37.
Finch, Joseph S. and Co.: *See*— Records & Goldsborough, Inc.

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Aardenburg, N. V. Lucas: *See*—
Commanditaire Vennootschap op Aandeelen Tieleman.
Abbott Laboratories, North Chicago, Ill. 671,105, pub. 9–30–58. Cl. 18.
Abbott Laboratories, North Chicago, Ill. 671,111, pub. 9–30–58. Cl. 18.
Abercrombie & Fitch Co., New York, N. Y. 671,197, pub. 9–30–58. Cl. 34.
Ace Tackless Corp., Brooklyn, N. Y. 671,074, pub. 9–30–58. Cl. 13.
Achurch, William C., Charleston, S. C. 361,525, ren. 11–1–58. Cl. 38.
Ad-A-Day Co., Inc., Taunton, Mass. 671,217, pub. 9–30–58. Cl. 37.
Alcort, Inc., Waterbury, Conn. 671,114, pub. 9–30–58. Cl. 19.
Allstate Insurance Co., Skokie, Ill. 671,339, pub. 9–30–58. Cl. 102.
American Cyanamid Co., New York, N. Y. 565,960, canc. Cl. 18.
American Gem Society, Los Angeles, Calif. 671,345, pub. 9–30–58. Cl. 200.
American Law Book Co., The, Brooklyn, N. Y. 566,051, canc. Cl. 38.
American Machine & Foundry Co., New York, N. Y. 671,117, pub. 9–30–58. Cl. 21.
American Machine & Foundry Co., New York, N. Y. 671,127, pub. 9–30–58. Cl. 22.
American Molasses Co.: *See*—
Nulomoline Co., The.
American Nurses' Association, New York, N. Y. 671,222, pub. 9–30–58. Cl. 38.
American Packing & Provision Co., Ogden, Utah. 565,826, canc. Cl. 46.
American Sales Book Co., Ltd., Toronto, Canada, and Niagara Falls, Elmira, and Glendale, N. Y. 86,689, canc. Cl. 37.
American Slicing Machine Co., Chicago, Ill. 566,046, canc. Cl. 23.
American Stores Co., Philadelphia, Pa. 565,895, canc. Cl. 46.
American Viscose Corp., Philadelphia, Pa. 671,270, pub. 9–30–58. Cl. 43.
Anderson, Belle, Chicago, Ill. 565,856, canc. Cl. 37.
Apple Concentrates, Inc., West Concord, Mass. 565,940, canc. Cl. 46.
Architectural Porcelain Constructors, Oakland, Calif. 671,349. Cl. 12.
Armbrust Chain Co., Providence, R. I. 671,079, pub. 9–30–58. Cl. 13.
Atlas Powder Co., Wilmington, Del. 365,915, ren. 3–21–59. Cl. 6.
Atlas Powder Co., Wilmington, Del. 671,061, pub. 9–30–58. Cl. 6.
Atlas Supply Co., Newark, N. J. 671,325, pub. 9–23–58. Cl. 52.
Aula Chemicals, Inc.: *See*—
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Bachman Chocolate Mfg. Co., Mount Joy, Pa. 671,292, pub. 9–30–58. Cl. 46.
Balser, Kathe, nee Mendte, as guardian of C.-U. M. Mager, the sole heir of W. Mager, deceased, Giessen, Germany. 671,172, pub. 9–30–58. Cl. 26.
Banting, J. D., d. b. a. Cosmopolitan Cosmetics, Amsterdam, Netherlands. 565,928, canc. Cl. 40.
Barbara Products, Inc., Mt. Vernon, N. Y. 671,169, pub. 9–30–58. Cl. 24.
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Bates, Hamilton C., d. b. a. C. J. Bates & Son, to C. J. Bates & Son, Chester, Conn. 360,633, ren. 9–20–58. Cl. 20.
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Belden Mfg. Co., Chicago, Ill. 671,122, pub. 9–30–58. Cl. 21.
Beltone Hearing Aid Co., Chicago, Ill. 671,274–5, pub. 9–30–58. Cl. 44.
Belvend Mfg. Co., Inc., Chicago, Ill. 565,903, canc. Cl. 46.
Belvend Mfg. Co., Inc., Chicago, Ill. 565,904, canc. Cl. 46.
Berjon Co., The, Memphis, Tenn. 671,113, pub. 9–30–58. Cl. 18.
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Boreo Chemicals, Inc., Chicago, Ill. 671,040, pub. 9–30–58. Cl. 1.
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Pillsbury, Howard E.
Bousquet, Roland J., d. b. a. Veno Products Co., Baton Rouge, La. 671,104, pub. 9–30–58. Cl. 18.
Boyce, Leonard D., St. Louis, Mo. 671,324, pub. 9–30–58. Cl. 52.
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Calevas, George A.
California Redwood Association, San Francisco, Calif. 671,328, pub. 9–30–58. Cl. 100.
Carmi-Ainsbrooke Corp., New York, N. Y. 671,223, pub. 9–30–58. Cl. 39.
Carver, Horace N.: *See*—
Rich Signs Corp.
Catalina, Inc., Los Angeles, Calif. 566,155, canc. Cl. 39.
Cataphote Corp., Toledo, Ohio. 671,218, pub. 9–30–58. Cl. 50.
Catty, H. D., Corp. of N. Y., Norwalk, Conn. 671,209, pub. 9–30–58. Cl. 37.
Charles of the Ritz, Inc., New York, N. Y. 671,223, pub. 9–30–58. Cl. 52.
Chase Products Co., Broadview, Ill. 671,060, pub. 9–30–58. Cl. 6.
Chrysler Corp., Highland Park, Mich. 364,069, ren. 2–7–59. Cl. 19.
Ciba Ltd., Basel, Switzerland. 671,107–8, pub. 9–30–58. Cl. 18.
City Products Corp., Chicago, Ill., by merger from Frank Pilley and Sons, Inc., Sioux City, Iowa. 671,278, pub. 9–30–58. Cl. 46.
Clawson Machine Co., Flagtown, N. J. 671,140, pub. 9–30–58. Cl. 25.
Cleveland Industrial Tool Co., Inc., Chardon, Ohio. 671,167, pub. 9–30–58. Cl. 23.
Club Aluminum Products Co., Chicago, Ill. 671,078, pub. 9–30–58. Cl. 13.
Cody Sales Co., Chicago, Ill. 566,101, canc. Cl. 9.
Colder, A., & Co., New York, N. Y. 671,341, pub. 9–30–58. Cl. 39.
Collings, Thomas J., New York, N. Y. 565,982, canc. Cl. 21.
Commanditaire Vennootschap op Aandeelen Tieleman & Dros, Leiden, to N. V. Lucas Aardenburg, also d. b. a. Handelsafdeling Tieleman & Dros., Hoogeveen, Netherlands. 330,500, ren. 9–20–58. Cl. 46.
Commercial-Pacific Corp.: *See*—
San Carlos Canning Co.
Continental Coffee Co., Chicago, Ill. 671,302, pub. 9–30–58. Cl. 46.
Continental Distilling Corp., Philadelphia, Pa. 365,535, ren. 1–10–59. Cl. 49.
Continental Products, Inc., New Brunswick, N. J. 671,152, pub. 9–30–58. Cl. 22.
Corde de Paris Corset Co. Inc., New York, N. Y. 671,339, pub. 9–30–58. Cl. 39.
Corn Products Refining Co., New York, N. Y. 671,089, pub. 9–30–58. Cl. 6.
Coro, Inc., New York, N. Y. 671,182, pub. 9–30–58. Cl. 28.
Cosmopolitan Cosmetics: *See*—
Banting, J. D.
Courtland Laboratories, Los Angeles, Calif. 671,271, pub. 9–30–58. Cl. 44.
Cowan Publishing Corp., New York, N. Y. 671,258. Cl. 38.
Cox, Charles E., d. b. a. Cox Dental Laboratory, Oakland, Calif. 671,327, pub. 9–30–58. Cl. 100.
Cox Dental Laboratory: *See*—
Cox, Charles E.
Cramer Chemical Co., Gardner, Kans. 671,099, pub. 9–30–58. Cl. 18.
Crompton Co., to Crompton Co., West Warwick, R. I., to Crompton Co., New York, N. Y. 364,703, ren. 2–14–59. Cl. 42.
Crompton Co., West Warwick, R. I. 364,867, ren. 2–14–59. Cl. 42.
Crown Zellerbach Corp., San Francisco, Calif. 359,064, ren. 8–2–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,582, ren. 11–22–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,583, ren. 11–22–58. Cl. 37.

Heintz, James C., Co., The, Cleveland, Ohio. 671,128, pub. 9–30–58. Cl. 22.
Helical Tube Corp., East Orange, N. J. 566,017, canc. Cl. 13.
Hellesens Enke & V. Ludvigsen A/S, Copenhagen, Denmark.
Kleinert, I. B., Rubber Co., New York, N. Y. 565,967, canc. Cl. 40.
Kleinwanzlebener Saatzucht vorm. Rabbethge & Giesecke Aktiengesellschaft, Einbeck, Hannover, Germany. 671,036,

Crown Zellerbach Corp., San Francisco, Calif. 362,594, ren. 11–22–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,595, ren. 11–22–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,596, ren. 11–22–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,597, ren. 11–22–58. Cl. 37.
Crown Zellerbach Corp., San Francisco, Calif. 362,758, ren. 11–29–58. Cl. 37.
Crucible Steel Co. of America, Pittsburgh, Pa. 671,150, pub. 9–30–58. Cl. 23.
Curtis Development & Mfg. Co., Milwaukee, Wis. 566,154, canc. Cl. 21.
Daily Mirror, Inc., to The Hearst Corp., New York, N. Y. 365,591, ren. 3–14–59. Cl. 38.
Dairymen's League Co-Operative Association, Inc., New York, N. Y. 671,300–1, pub. 9–30–58. Cl. 46.
Dartell Laboratories: *See*—
Dartell, Norman.
Dartell, Norman, d. b. a. Dartell Laboratories, Los Angeles, Calif. 671,097, pub. 9–30–58. Cl. 18.
Davidow, Inc. Sportswear, New York, N. Y. 566,078, canc. Cl. 39.
Daw-Wood Products, Inc., Clifton, N. J. 671,192, pub. 9–30–58. Cl. 32.
Dearborn Glass Co., Bedford Park, Ill. 671,195, pub. 9–30–58. Cl. 33.
Delinger Home Gym Equipment Co.: *See*—
Delinger, Jack.
Delinger, Jack, d. b. a. Delinger Home Gym Equipment Co., Oakland, Calif. 671,125, pub. 9–30–58. Cl. 22.
De Luxe Saw and Tool Co., Louisville, Ky. 671,146–7, pub. 9–30–58. Cl. 23.
Dermetics, Inc., Seattle, Wash., to Rilling Dermetics Co., Bridgeport, Conn. 364,361, ren. 1–31–59. Cl. 51.
Designed Products, Inc., Oak Park, Ill. 565,963, canc. Cl. 38.
Desoto Paint & Varnish Co.: *See*—
United Wallpaper, Inc.
Devoe & Raynolds Co., Inc., Louisville, Ky. 671,090, pub. 9–30–58. Cl. 16.
Dickstein, George, d. b. a. Kit's Mfg. Co., University Heights, Ohio. 671,238, pub. 9–30–58. Cl. 39.
Di-De-O Co.: *See*—
Mark, Walter V.
Disney, Walt, Music Co., Burbank, Calif. 671,208, pub. 9–30–58. Cl. 36.
Doll, Wesley E., Nashville, Tenn. 565,999, canc. Cl. 38.
Dome Chemicals, Inc., New York, N. Y. 671,110, pub. 9–30–58. Cl. 18.
Dono of America, Inc., Sacramento, Calif. 671,073, pub. 9–30–58. Cl. 10.
Donovan Industries, Inc., New York, N. Y. 671,087, pub. 9–30–58. Cl. 1.
D'Orsay Mills, Inc., Reading, Pa. 671,232, pub. 9–30–58. Cl. 39.
Doughten Seed Co., The, Jersey City, N. J. 671,058, pub. 9–30–58. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 671,064, pub. 9–23–58. Cl. 6.
Eco Engineering Co., Division of Economy Faucet Co., Newark, N. J. 671,144, pub. 9–30–58. Cl. 23.
Edison Brothers Stores, Inc., St. Louis, Mo. 671,254, pub. 9–30–58. Cl. 39.
Ehlers, Albert, Inc., Brooklyn, N. Y. 671,294, pub. 9–30–58. Cl. 46.
Elsman, Ewen & Rose, Inc., Long Island City, N. Y. 671,262, pub. 9–30–58. Cl. 42.
Electric Parts Corp., Georgetown, Ky. 671,118–19, pub. 9–30–58. Cl. 21.
Electromark Corp., The, Cleveland, Ohio. 671,216, pub. 9–30–58. Cl. 37.
Emmons, Orville H., d. b. a. Emmons Walker, Dover, Mass. 671,346, pub. 9–30–58. Cl. 8.
Emsig Mfg. Co., New York, N. Y. 671,260, pub. 9–30–58. Cl. 40.
England, Victor, d. b. a. Victor England Agencies, San Francisco, Calif. 671,068, pub. 9–30–58. Cl. 7.
England, Victor, Agencies: *See*—
England, Victor.
Epstein, Harry, Harrisburg, Pa. 671,245, pub. 9–30–58. Cl. 38.
Equity Annuity Life Insurance Co., The, Washington, D. C. 671,337, pub. 9–30–58. Cl. 102.
Etablissement Volvis C. B. Strandgren, Ecublens, Vaud, Switzerland. 671,133, pub. 9–30–58. Cl. 23.
Excelsior Accordions, Inc., New York, N. Y. 671,200, pub. 9–30–58. Cl. 36.
Exquisite Form Brassiere, Inc., New York, N. Y. 671,240, pub. 9–30–58. Cl. 39.
Faber, Eberhard, Pencil Co., Wilkes-Barre, Pa. 671,210, pub. 9–30–58. Cl. 37.
Faber, Eberhard, Pencil Co., Wilkes-Barre, Pa. 671,215, pub. 9–30–58. Cl. 37.
Fabrique Suisse de Crayons Caran d'Ache S. A., Geneva, Switzerland. 671,204, pub. 9–30–58. Cl. 37.
Fabri-Valve Co. of America, Portland, Oreg. 671,075, pub. 9–30–58. Cl. 13.
Faith Mills Corp., Averill Park, N. Y. 671,258, pub. 9–30–58. Cl. 39.
Fearing, D. David, Co., Inc., Mahtomedi, Minn. 671,311, pub. 9–30–58. Cl. 50.
Federal Wine & Liquor Co., Jersey City, N. J. 362,142, ren. 11–15–58. Cl. 47.
Federated Department Stores, Inc. (Bloomingdale Bros. Div.), d. b. a. Bloomingdale's, New York, N. Y. 671,092, pub. 9–30–58. Cl. 16.
Fellows Medical Mfg. Co., Inc., New York, N. Y. 566,049, canc. Cl. 18.
Fibreboard Paper Products Corp., San Francisco, Calif. 671,206, pub. 9–30–58. Cl. 37.
Finch, Joseph S. and Co.: *See*—
Records & Goldsborough, Inc.
Finer Made Pickle Co.: *See*—
Neiman, David.
Firma Titan Eisenwarenfabrik G. m. b. H., Schwelm, Germany. 671,076–7, pub. 9–30–58. Cl. 13.
First National Bank in St. Louis, St. Louis, Mo. 566,140, canc. Cl. 102.
Fishman & Sons, Inc., New York, N. Y. 671,095, pub. 9–30–58. Cl. 16.
Flair of Miami, Miami, Fla. 671,238, pub. 9–30–58. Cl. 39.
Flax, Nat. S., New York, N. Y. 566,054, canc. Cl. 40.
Flex-O-Laters, Inc., Carthage, Mo. 565,868, canc. Cl. 22.
Flood, John E., d. b. a. Flood Pipe & Tobacco Co., Oklahoma City, Okla. 566,060, canc. Cl. 17.
Flood Pipe & Tobacco Co.: *See*—
Flood, John E.
Foremost Dairies, Inc., d. b. a. Shuey-Diamond Dairy, San Francisco, Calif. 671,282, pub. 9–30–58. Cl. 46.
Forsyth, John, and Co., Glasgow, Scotland. 565,939, canc. Cl. 41.
Foster Metal Products Inc., Attleboro, Mass. 671,184, pub. 9–30–58. Cl. 28.
Freeport Roller Mills, Inc., Freeport, Minn. 671,303, pub. 9–30–58. Cl. 46.
Frei Bros.: *See*—
Wetmore, Ralph M.
French-American Pharmaceuticals Co., Inc., The, New York, N. Y. 566,040, canc. Cl. 18.
French Industries, Inc., San Francisco, Calif. 566,062, canc. Cl. 42.
Freshmaster Corp., New York, N. Y. 566,079, canc. Cl. 38.
Fruto Beverage Co., Rockford, Ill. 566,163, canc. Cl. 45.
Fuller, D. B., & Co. Inc.: *See*—
Stevens, J. P., & Co., Inc.
Gaines Animal Foods Ltd., Ruislip, England. 565,895, canc. Cl. 46.
Gardner, Howard A., d. b. a. Sales-Aide Service, Chicago, Ill. 566,141, canc. Cl. 101.
Geigy Chemical Corp., by change of name from Aula Chemicals, Inc., Ardsley, N. Y. 671,058, pub. 9–30–58. Cl. 6.
General Aniline & Film Corp., New York, N. Y. 671,212, pub. 9–30–58. Cl. 37.
General Cigar Co., Inc., New York, N. Y. 671,350. Cl. 17.
General Paint Corp., San Francisco, Calif. 565,929, canc. Cl. 16.
General Tire & Rubber Co., The, Akron, Ohio. 671,046, pub. 9–30–58. Cl. 1.
Gidding, J. M., & Co.: *See*—
Gidding, Joseph M.
Gidding, Joseph M., d. b. a. J. M. Gidding & Co., New York, N. Y. 671,112, pub. 9–30–58. Cl. 18.
Glo-Rna, Inc., Dayton, Ohio. 671,322, pub. 9–30–58. Cl. 51.
Golt, Kenneth E., d. b. a. Rolcor Industries, Minneapolis, Minn. 671,153–4, pub. 9–30–58. Cl. 23.
Goldenwest Citrus Association, The: *See*—
Golden West Citrus Association.
Golden West Citrus Association, to The Goldenwest Citrus Association, Tustin, Calif. 123,708, ren. 12–3–58. Cl. 46.
Golden West Citrus Association, to The Goldenwest Citrus Association, Tustin, Calif. 123,709, ren. 12–3–58. Cl. 46.
Goldstein, Albert M., Inc., New York, N. Y. 566,003, canc. Cl. 40.
Gorham Mfg. Co., Providence, R. I. 566,097, canc. Cl. 8.
Graham Paper Co., St. Louis, Mo. 671,216, pub. 9–30–58. Cl. 37.
Graham Paper Co., St. Louis, Mo. 671,221, pub. 9–30–58. Cl. 37.
Grand River Orchards, Inc., Geneva, Ohio. 671,290, pub. 9–30–58. Cl. 46.
Gravymaster Co., Inc., Long Island City, N. Y. 671,280, pub. 9–30–58. Cl. 46.
Grayburne Corp., New York, N. Y. 565,996, canc. Cl. 21.
Grayburne Corp., New York, N. Y. 565,997, canc. Cl. 21.
Gregory Fount-O-Ink Co., from Gregory Fount-O-Ink Co., Los Angeles, Calif. 565,851, canc. Cl. 37.
Greif, L., & Bro., Inc., Baltimore, Md. 671,255–6, pub. 9–30–58. Cl. 39.
Griffin Canners Inc.: *See*—
Maxcy, Gregg, Inc.
Guardian Merchandising Corp., Montreal, Canada, from G. Mounet, New York, N. Y. 671,134, pub. 9–30–58. Cl. 23.
Guise, Harry, Inc., New York, N. Y. 671,180, pub. 9–30–58. Cl. 28.
Hahn, Dr. Carl, K. G., Dusseldorf, Germany. 671,273, pub. 9–30–58. Cl. 44.
Hallmark Cards, Inc., Kansas City, Mo. 671,347–8. Cl. 7.
Haloid Co., The: *See*—
Haloid Xerox Inc.
Haloid Xerox Inc., by change of name from The Haloid Co., Rochester, N. Y. 671,044–5, pub. 9–30–58. Cl. 1.
Hampden Brewing Co., Willimansett, Mass., to Brading Breweries Ltd., Ottawa, Canada. 261,153, ren. 10–11–58. Cl. 48.
Handelsafdeling Tieleman & Dros.: *See*—
Commanditaire Vennootschap op Aandeelen Tieleman & Dros.
Handy & Harman, New York, N. Y. 671,082, pub. 9–30–58. Cl. 14.
Hardy Salt Co., St. Louis, Mo. 671,055, pub. 9–30–58. Cl. 6.
Harris Sales Corp., Woodstown, N. J. 671,344, pub. 9–30–58. Cl. 107.
Harris & Tyler Ltd., London, England. 565,976, canc. Cl. 52.
Hart, Phyllis F., Detroit, Mich. 566,142, canc. Cl. 101.
Hawbaker, S. Stanley, d. b. a. Big Mountain Scent Co., Richmond Furnace, Pa. 671,129, pub. 9–30–58. Cl. 22.
Hearst Corp., The: *See*—
Daily Mirror, Inc.

National Oak Flooring Manufacturers, Memphis, Tenn. 362,428, ren. 11–15–58. Cl. 12.
National Sure-Fit Quilting Co., Inc., New York, N. Y. 671,269, pub. 9–30–58. Cl. 42.
Records & Goldsborough, Inc., Baltimore, Md., to Joseph S. Finch and Co., Schenley, Pa., and New York, N. Y. 301,898, ren. 10–23–58. Cl. 49.
Red-E-Gas Co., Webster Groves, Mo. 671,340, pub. 9–30–58. Cl. 103.

Heintz, James C., Co., The, Cleveland, Ohio. 671,138, pub. 9–30–58. Cl. 23.
Helical Tube Corp., East Orange, N. J. 566,017, canc. Cl. 13.
Hellesens Ruhe & V. Ludvigsen A/S, Copenhagen, Denmark. 565,882, canc. Cl. 21.
Hensoldt, M., & Sohne, Optische Werke A. G., Wetzlar, Germany. 671,174, pub. 9–30–58. Cl. 26.
Hershey Creamery Co., Harrisburg, Pa. 671,287, pub. 9–30–58. Cl. 46.
Het Gootsche Schrijfmachinehuis & Handelsonderneming "Beka": *See*—
Kerk, Bernhard.
Hayden Chemical Corp., New York, N. Y. 565,906, canc. Cl. 6.
Hayden Chemical Corp., New York, N. Y. 565,909, canc. Cl. 6.
Hayden Chemical Corp., New York, N. Y. 565,936, canc. Cl. 6.
Hickok Mfg. Co., Inc., Rochester, N. Y. 362,770, ren. 11–29–58. Cl. 23.
Hollins, William, & Co. Ltd., Nottingham, England. 671,257, pub. 9–30–58. Cl. 39.
Holm, Aage E., d. b. a. Holm & Rahr, Copenhagen, Denmark. 566,165, canc. Cl. 49.
Holm & Rahr: *See*—
Holm, Aage E.
Home Comfort Mfg. Co., East Peoria, Ill. 566,161, canc. Cl. 34.
Honeymead Products Co., Mankato, Minn. 671,056–7, pub. 9–30–58. Cl. 6.
Hook-King Co., Chicago and Glencoe, Ill. 566,024, canc. Cl. 40.
Horlacher Brewing Co., Allentown, Pa. 365,939, ren. 3–21–59. Cl. 48.
Howard Products Inc., Worcester, Mass. 566,110, canc. Cl. 13.
Hudson, H. D. Mfg. Co., Chicago, Ill. 671,310, pub. 9–30–58. Cl. 50.
Hughes Tool Co., Houston, Tex. 363,524, ren. 12–27–58. Cl. 23.
Husseo Shoe Co., New York, N. Y. 671,233, pub. 9–30–58. Cl. 39.
Hydrex Pest Control Co.: *See*—
Loibl, Robert B., Jr.
IBC Research Laboratories, Inc., New York, N. Y. 671,096, pub. 9–30–58. Cl. 6.
Imperial Chemical Industries Ltd., London and Millbank, London, England. 566,031, canc. Cl. 6.
Imperial Furniture Co., Grand Rapids, Mich. 671,191, pub. 9–30–58. Cl. 32.
Imperial Lamp and Shade Co., Philadelphia, Pa. 565,888, canc. Cl. 21.
Independent Grocers' Alliance Distributing Co., Chicago, Ill. 671,185, pub. 9–30–58. Cl. 29.
Industrial Enterprises Inc., New York, N. Y., from United Specialties Co. of Illinois, Chicago, Ill. 671,189, pub. 9–30–58. Cl. 31.
Industrial Publishing Corp., The, Cleveland, Ohio. 671,223, pub. 9–30–58. Cl. 38.
Ingersoll-Rand Co., New York, N. Y. 671,151, pub. 9–30–58. Cl. 22.
International Latex Corp., Dover, Del. 671,132, pub. 9–30–58. Cl. 22.
International Paper Co., New York, N. Y. 671,215, pub. 9–30–58. Cl. 37.
International Silver Co., The, Meriden, Conn. 671,179, pub. 9–30–58. Cl. 28.
Intersonic Electronic Co., Inc., New York, N. Y. 565,975, canc. Cl. 21.
It's-A-Dilly Co., The, Potsdam, N. Y. 671,296, pub. 9–30–58. Cl. 46.
Jackes-Evans Mfg. Co., St. Louis, Mo. 671,196, pub. 9–30–58. Cl. 34.
Jackson and Church Co., Saginaw, Mich. 566,143, canc. Cl. 34.
John, B. P., Furniture Corp., Portland, Oreg. 671,180, pub. 9–30–58. Cl. 32.
Johnson, Hilding A., d. b. a. Sargent-Morse, Rockford, Ill. 671,219, pub. 9–30–58. Cl. 37.
Kabushiki Kaisha Sankyo Seiki Seisakusho, Suwashi, Nagano-Ken, Japan. 671,173, pub. 9–30–58. Cl. 26.
Karagheusian, A. & M., Inc., New York, N. Y. 671,264–5, pub. 9–30–58. Cl. 42.
Karas, Joseph, d. b. a. Karas Products Co., Flint, Mich. 671,314, pub. 9–30–58. Cl. 50.
Karas Products Co.: *See*—
Karas, Joseph.
Kardigan Co., Summit, Ill. 565,918, canc. Cl. 22.
Kayser, Julius, & Co., to Kayser-Roth Corp., New York, N. Y. 124 006, ren. 12–31–58. Cl. 39.
Kayser-Roth Corp.: *See*—
Kayser, Julius, & Co.
Kell, Albert T., Valencia, Pa. 365,403, ren. 3–7–59. Cl. 18.
Ken Camp Mfg. Outfitter: *See*—
Ply Clothing Co.
Kerk, Bernhard, d. b. a. Het Gootsche Schrijfmachinehuis & Handelsonderneming "Beka," Hilversum, Netherlands. 566 042, canc. Cl. 23.
Kerley Chemical Corp., The, Phoenix, Ariz. 671,071, pub. 9–30–58. Cl. 10.
Keuffel & Esser Co., Hoboken, N. J., from Micro-Master, Inc., Kansas City, Mo. 671,170, pub. 9–30–58. Cl. 26.
Keystone Paint and Varnish Corp., Brooklyn, N. Y. 671,088, pub. 9–30–58. Cl. 16.
Kimberly-Clark Corp.: *See*—
Veldown Co., Inc.
Kit's Mfg. Co.: *See*—
Dickstein, George.
Klein, S., Department Stores, Inc., New York, N. Y. 671,225, pub. 9–30–58. Cl. 38.
Kleinert, I. B., Rubber Co., New York, N. Y. 565,967, canc. Cl. 40.
Kleinwanzlebener Saatzucht vorm. Rabbethge & Giesecke Aktiengesellschaft, Einbeck, Hannover, Germany. 671,026, pub. 9–30–58. Cl. 1.
Knapp Brothers Shoe Mfg. Corp., Brockton, Mass. 671,243, pub. 9–30–58. Cl. 39.
Knopf, Artie W., New York, N. Y. 566,178, canc. Cl. 44.
Kolodney, Neil, Brooklyn, N. Y. 671,269, pub. 9–30–58. Cl. 42.
Laco Supply Co.: *See*—
Laufer, Joseph.
La Marca, Matthew, Brooklyn, N. Y. 566,111, canc. Cl. 13.
Lance, Inc.: *See*—
Lance Packing Co.
Lance Packing Co., to Lance, Inc., Charlotte, N. C. 364,377, ren. 2–7–59. Cl. 46.
Lanson Rainwear Corp., New York, N. Y. 671,230, pub. 9–30–58. Cl. 39.
Lasting Products Co., Baltimore, Md. 671,094, pub. 9–30–58. Cl. 16.
Latrobe Steel Co., Latrobe, Pa. 671,084, pub. 9–30–58. Cl. 14.
Laufer, Joseph, d. b. a. Laco Supply Co., Los Angeles, Calif. 671,171, pub. 9–30–58. Cl. 26.
Leaf Brands, Inc., Chicago, Ill. 671,291, pub. 9–30–58. Cl. 46.
Leaf Brands, Inc., Chicago, Ill. 671,306, pub. 9–30–58. Cl. 46.
Levy, William, Moreno, d. b. a. Moreno Textiles Co., New York, N. Y. 671,266, pub. 9–30–58. Cl. 42.
Lewis, Mary E., Brooklyn, N. Y. 566,068, canc. Cl. 32.
Lewis-Shepard Products, Inc., Watertown, Mass. 671,149, pub. 9–30–58. Cl. 23.
Library of Science, Inc., New York, N. Y. 671,224, pub. 9–30–58. Cl. 38.
Lindeteves Inc., New York, N. Y. 566,018, canc. Cl. 21.
Lisk Mfg. Co. Ltd., to Lisk-Savory Corp., Canandaigua, N. Y. 362,522, ren. 11–22–58. Cl. 13.
Lisk-Savory Corp.: *See*—
Lisk Mfg. Co. Ltd.
Litwin & Sons, Inc., Cincinnati, Ohio. 671,182, pub. 9–30–58. Cl. 26.
Loibl, Robert B., Jr., d. b. a. Hydrex Pest Control Co., North Hollywood, Calif. 671,343, pub. 9–30–58. Cl. 102.
Losenhausenwerk Dusseldorfer Maschinenbau A. G., Dusseldorf-Grafenberg, Germany. 671,141, pub. 9–30–58. Cl. 23.
Lucky Tiger Mfg. Co., Kansas City, Mo. 671,318, pub. 9–30–58. Cl. 51.
Macks, Elmer F., d. b. a. Tribo-Netics Laboratories, Vermilion, Ohio. 671,330, pub. 9–30–58. Cl. 100.
Mager, Clemens-Ulrich M.: *See*—
Balser, Kathe, nee Mendte.
Mager, Wilhelm: *See*—
Balser, Kathe, nee Mendte.
Magnetic Recording Industries, Ltd., New York, N. Y. 565,894, canc. Cl. 21.
Mail Order Printing Co., Detroit, Mich. 565,905, canc. Cl. 37.
Mantell, Michael J., Los Angeles, Calif. 565,900, canc. Cl. 40.
Marathon Battery Co., Wausau, Wis. 671,251. Cl. 21.
Mark, Walter V., d. b. a. Di-De-O Co., Detroit, Mich. 565,904, canc. Cl. 6.
Marquay, S. a. r. l., Paris, France. 671,217, pub. 9–30–58. Cl. 51.
Martinelli, A. C., Rogers Plastic Corp., West Warren, Mass. 671,048, pub. 9–30–58. Cl. 2.
Mascari Brothers, Wilkes-Barre, Pa. 671,282, pub. 9–30–58. Cl. 46.
Maxcy, Gregg, Inc., Sebring, to Griffin Canners Inc., Bartow, Fla. 359,924, ren. 9–6–58. Cl. 46.
May Co., D. C., The, Durham, N. C. 565,887, canc. Cl. 37.
Mears Machine Co., Lancaster, Ohio. 671,145, pub. 9–30–58. Cl. 23.
Merchant's Biscuit Co., The, Denver, Colo., to United Biscuit Co. of America, Melrose Park, Ill. 124,976, ren. 4–1–59. Cl. 46.
Micro-Master, Inc.: *See*—
Keuffel & Esser Co.
Miles Dental Laboratories, Inc., Cleveland, Ohio. 671,272, pub. 9–30–58. Cl. 44.
Miro-Flex Co., Inc.: *See*—
Rich Signs Corp.
Mr. John, Inc., New York, N. Y. 671,248, pub. 9–30–58. Cl. 39.
Mock Seed Co., Pittsburgh, Pa. 671,072, pub. 9–30–58. Cl. 10.
Mohawk Motor Lines, Inc., Nashville, Tenn. 566,184, canc. Cl. 105.
Mohawk Motor Lines, Inc., Nashville, Tenn. 566,185, canc. Cl. 105.
Monday Morning Publisher Inc., The, to W. Springer, Detroit, Mich. 360,777, ren. 9–27–58. Cl. 38.
Monnet, George: *See*—
Guardian Merchandising Corp.
Moore Business Forms, Inc., Niagara Falls, N. Y. 565,937, canc. Cl. 37.
Moreno Textiles Co.: *See*—
Levy, William M.
Mottola, Frank, Los Angeles, Calif. 671,083, pub. 9–30–58. Cl. 14.
Munsingwear, Inc., Minneapolis, Minn. 671,261, pub. 9–30–58. Cl. 42.
Murray Corp. of America, The, Detroit, Mich. 671,188, pub. 9–30–58. Cl. 31.
National Aircraft Corp., Union, N. J. 671,157, pub. 9–30–58. Cl. 23.
National Casualty Co., Detroit, Mich. 671,336, pub. 9–30–58. Cl. 102.

Stagecoach Orchards, Inc., Medford, Oreg. 671,304–5, pub. 9–30–58. Cl. 46.
Starbrand Corp., Fort Wayne, Ind. 671,139, pub. 9–30–58.
Van, Wylie T., d. b. a. W. T. Van Co., St. Paul, Minn. 566,107, canc. Cl. 38.
Van Brode Milling Co., Inc., Clinton, Mass. 671,115, pub.

National Oak Flooring Manufacturers, Memphis, Tenn. 362,428, ren. 11–15–58. Cl. 12.
National Sure-Fit Quilting Co., Inc., New York, N. Y. 671,265, pub. 9–30–58. Cl. 42.
Neiman, David, d. b. a. Finer Made Pickle Co., Los Angeles, Calif. 566,073, canc. Cl. 46.
Neiman, David, d. b. a. Finer Made Pickle Co., Los Angeles, Calif. 566,074, canc. Cl. 46.
Neisner Brothers, Inc., Rochester, N. Y. 671,238, pub. 9–30–58. Cl. 39.
New England Confectionery Co., Cambridge, Mass. 364,849, ren. 2–14–59. Cl. 46.
New England Confectionery Co., Cambridge, Mass. 671,298, pub. 9–30–58. Cl. 46.
Nirenberg & Saltman, Inc., New York, N. Y. 361,573, ren. 10–25–58. Cl. 39.
Noble Co., Oakland, Calif. 671,155, pub. 9–30–58. Cl. 23.
Nonemaker, C. M., Chambersburg, Pa. 671,286, pub. 9–30–58. Cl. 46.
Noreen, Inc., Denver, Colo. 671,319, pub. 9–30–58. Cl. 51.
Northwest Plastics, Inc., St. Paul, Minn. 566,147, canc. Cl. 2.
Norton Co., Troy, N. Y. 671,161–2, pub. 9–30–58. Cl. 23.
Norton Mfg. Corp.: *See*—
Wayne University of Beauty Culture, Inc.
Norwich Mills, Inc., Norwich, N. Y. 671,249, pub. 9–30–58. Cl. 39.
Norwich Mills Inc., Norwich, N. Y. 671,251, pub. 9–30–58. Cl. 39.
Nulomoline Co. The, to American Molasses Co., New York, N. Y. 122,963, ren. 10–1–58. Cl. 46.
Nu-Plastics, Inc., Garland, Tex. 671,039, pub. 9–30–58. Cl. 1.
O'Brien Industries, Inc., Caldwell, N. J. 671,231, pub. 9–30–58. Cl. 100.
One Hour Martinizing: *See*—
Wolfe, Charles S.
Oppenheimer, L., & Co., Inc., New York, N. Y. 671,043, pub. 9–30–58. Cl. 1.
Palmer, Thomas J., Queens Mill, to The Wall Paper Mfrs. Ltd., London, England. 16,114, ren. 12–25–58. Cl. 37.
Paste Co. of America, Philadelphia, Pa. 566,166, canc. Cl. 5.
Patch, E. L., Co., The, Stoneham, Mass. 124,578, ren. 2–25–59. Cl. 38.
Paterson Pacific Parchment Co., Sunnyvale, Calif. 671,207, pub. 9–30–58. Cl. 37.
Patten, Lee, Seed Co., Jersey City, N. J. 671,054, pub. 9–30–58. Cl. 6.
Patterson, Fern O., d. b. a. Volume Sprayer Mfg. Co., Tulsa, Okla. 671,165, pub. 9–30–58. Cl. 23.
Paul, Maurice G., Jr., Philadelphia, Pa. 671,124, pub. 9–30–58. Cl. 22.
Pearson Candy Co., St. Paul, Minn. 671,289, pub. 9–30–58. Cl. 46.
Peer-O-Pane Bottled Gas Co. Inc., Sparta, Ill. 671,067, pub. 9–30–58. Cl. 6.
Permatex Co., Inc., Huntington Station, N. Y. 671,051, pub. 9–30–58. Cl. 5.
Petrolite Corp., St. Louis, Mo. 671,062, pub. 9–30–58. Cl. 6.
Pfeffer Milling Co., Lebanon, Ill. 565,875, canc. Cl. 46.
Pfizer, Chas., & Co., Inc., Brooklyn, N. Y. 671,101–3, pub. 9–30–58. Cl. 18.
Phil-Maid, Inc., Chicago, Ill. 671,250, pub. 9–30–58. Cl. 39.
Pierce, Ernest P., d. b. a. Zenith Tool Co., Cleveland, Ohio. 566,063, canc. Cl. 23.
Pilley, Frank, and Sons, Inc.: *See*—
City Products Corp.
Pillsbury, Howard E., Newbury, Newburyport, Mass., to Bostwich Laboratories, Inc., Bridgeport, Conn. 359,552, ren. 8–23–58. Cl. 52.
Pinex Co., Inc., The, Ft. Wayne, Ind. 671,100, pub. 9–30–58. Cl. 18.
Ply Clothing Co., d. b. a. Ken Camp Mfg. Outfitter, Seattle, Wash. 671,150, pub. 9–30–58. Cl. 23.
Pocket Books, Inc., New York, N. Y. 671,225, pub. 9–30–58. Cl. 38.
Poplars, The: *See*—
Poplars, Inc., The.
Poplars, Inc., The, d. b. a. The Poplars, East Lansing, Mich. 671,279, pub. 9–30–58. Cl. 46.
Potagrain Foods Refining Corp., New York, N. Y. 671,277, pub. 9–30–58. Cl. 46.
Potters Supply Co., The, East Liverpool, Ohio. 671,187, pub. 9–30–58. Cl. 30.
Powell Magazines, Inc., New York, N. Y. 671,354. Cl. 38.
Preco Inc., Los Angeles, Calif. 671,148, pub. 9–30–58. Cl. 23.
Preston Laboratories, Inc., d. b. a. The Thenylhist Co., Chicago, Ill. 565,943, canc. Cl. 18.
Prime Pak, Los Angeles, Calif. 671,281, pub. 9–30–58. Cl. 46.
Process Displays, Inc., Milwaukee, Wis. 671,354, pub. 9–30–58. Cl. 101.
Pro-Cyn-Kera Laboratories, Inc., Crystal Lake, Ill. 671,321, pub. 9–30–58. Cl. 51.
Purdue Frederick Co., The, New York, N. Y. 671,227, pub. 9–30–58. Cl. 38.
Puritan Cordage Mills, d. b. a. Puritan Marine Products, Louisville, Ky. 671,069, pub. 9–30–58. Cl. 7.
Puritan Marine Products: *See*—
Puritan Cordage Mills
Quaker Oats Co., The, Chicago, Ill. 671,042, pub. 9–30–58. Cl. 1.
Quality Chemical Products Co., Forest Park, Ill. 671,063, pub. 9–30–58. Cl. 6.
Queen Knitting Mills, Inc., Philadelphia, Pa. 671,246–7, pub. 9–30–58. Cl. 39.
Quinby & Co., Inc., Rochester, N. Y. 671,328, pub. 9–30–58. Cl. 102.
Records & Goldsborough, Inc., Baltimore, Md., to Joseph S. Finch and Co., Schenley, Pa., and New York, N. Y. 301,698, ren. 10–25–58. Cl. 49.
Red-E-Gas Co., Webster Groves, Mo. 671,340, pub. 9–30–58. Cl. 103.
Red-Rope Stationary Industries, Inc., Brooklyn, N. Y. 671,201, pub. 9–30–58. Cl. 36.
Regal Plastic Co., Kansas City, Mo. 671,049, pub. 9–30–58. Cl. 3.
Regan Engineering Corp., Milwaukee, Wis. 671,121, pub. 9–30–58. Cl. 21.
Rena Buromaschinenfabrik G. m. b. H., Deisenhofen, near Munich, Bavaria, Germany. 671,136–7, pub. 9–30–58. Cl. 23.
Revere Copper and Brass Inc., New York, N. Y. 671,085, pub. 9–30–58. Cl. 14.
Rhea Mfg. Co., New York, N. Y. 671,259, pub. 9–30–58. Cl. 39.
Rheem Mfg. Co., Richmond, Calif. 671,120, pub. 9–30–58. Cl. 21.
Rich Signs Corp., to H. N. Carver, to Miro-Flex Co., Inc., Wichita, Kans. 363,902, ren. 1–17–59. Cl. 34.
Rilling Dermetics Co.: *See*—
Dermetics, Inc.
River Brand Rice Mills, Inc., New York, N. Y. 565,831, canc. Cl. 46.
Robbins & Myers, Inc., Springfield, Ohio. 566,045, canc. Cl. 23.
Roberts Mfg. Co., Industry, Calif. 671,080, pub. 9–30–58. Cl. 13.
Rockwell Laboratories, Inc., Kansas City, Kans. 671,052, pub. 9–30–58. Cl. 6.
Rolcor Industries: *See*—
Golt, Kenneth E.
Rome, David, Associates, New York, N. Y. 566,039, canc. Cl. 6.
Root-Lowell Mfg. Co., Lowell, Mich. 671,160, pub. 9–30–58. Cl. 23.
Rose Mfg. Co., Denver, Colo. 671,309, pub. 9–30–58. Cl. 50.
Royal McBee Corp., Port Chester, N. Y. 671,220, pub. 9–30–58. Cl. 37.
Ru-Son Products Co., Jersey City, N. J. 671,315, pub. 9–30–58. Cl. 50.
Rykoff, S. E., & Co., Los Angeles, Calif. 671,288, pub. 9–30–58. Cl. 46.
Safeway Stores, Inc., Oakland, Calif. 671,186, pub. 9–30–58. Cl. 29.
Safeway Stores, Inc., Oakland, Calif. 671,357. Cl. 101.
Sagner's, A., Son, Baltimore, Md. 671,234, pub. 9–30–58. Cl. 39.
St. Louis Lightning Protection Co., St. Louis, Mo. 565,959, canc. Cl. 21.
Salem-Brosius, Inc., Pittsburgh and Sharpsburg, Pa. 566,129, canc. Cl. 13.
Sales-Aide Service: *See*—
Gardner, Howard A.
San Carlos Canning Co., Long Beach, to Commercial-Pacific Corp., San Francisco, Calif. 364,857, ren. 2–14–59. Cl. 46.
Sanitary Food Mfg. Co., St. Paul, Minn. 96,908, canc. Cl. 46.
Santa Cruz Processors, Santa Cruz, Calif. 671,128, pub. 9–30–58. Cl. 22.
Sargent & Co., New Haven, Conn. 671,143, pub. 9–30–58. Cl. 23.
Sargent-Morse: *See*—
Johnson, Hilding A.
Savolite, Inc., New York, N. Y. 364,487, ren. 1–31–59. Cl. 51.
Savoy Watch Co. Inc., New York, N. Y. 671,178, pub. 9–30–58. Cl. 27.
Saxon Paper Corp., New York, N. Y. 671,214, pub. 9–30–58. Cl. 37.
Schafer's Bakeries, Detroit, Mich. 671,355. Cl. 46.
Schrank, M. C., Co., Bridgeton, N. J. 671,229, pub. 9–30–58. Cl. 39.
Schwartz, Max, d. b. a. Max Schwartz Co., New York, N. Y. 566,175, canc. Cl. 42.
Schwartz, Max, Co.: *See*—
Schwartz, Max.
Scott, O. M., and Sons Co., Marysville, Ohio. 671,047, pub. 9–30–58. Cl. 1.
Seoane, Abelino, Phoenix, Ariz. 565,937, canc. Cl. 18.
Shelby Textile, Inc., Shelby, N. C. 671,244, pub. 9–30–58. Cl. 39.
Shuey-Diamond Dairy: *See*—
Foremost Dairies, Inc.
Sierra Engineering Co., Sierra Madre, Calif. 671,081, pub. 9–30–58. Cl. 13.
Societe a Responsabilite Limitee Boralnal: *See*—
Societe de Recherches Chimiques et D'Applications Industrielles (Sorchap) Societe Anonyme.
Societe a Responsabilite Limitee: Les Parfums H. de Givenchy, Ivry-sur-Seine, Seine, France. 671,320, pub. 9–30–58. Cl. 51.
Societe a Responsabilite Limitee: Societe Francaise d'Etudes et de Realisations d'Inventions Coanda Sferi Coanda, Clichy, France. 671,166, pub. 9–30–58. Cl. 23.
Societe Anonyme Laboratoires du Dr. N. G. Colombos, Seine, France. 671,316, pub. 9–30–58. Cl. 51.
Societe Anonyme Revillon Freres, Paris, France. 363,650, ren. 1–3–59. Cl. 52.
Societe de Recherches Chimiques et D'Applications Industrielles (Sorchap) Societe Anonyme, to Societe a Responsabilite Limitee Boralnal, Paris, France. 359,528, ren. 8–30–58. Cl. 18.
Booty Concessions Ltd., London, England. 671,123, pub. 9–30–58. Cl. 22.
Sperry Rand Corp., New Holland, Pa. 671,070, pub. 9–30–58. Cl. 7.
Springer, William: *See*—
Monday Morning Publisher Inc., The.

Stagecoach Orchards, Inc., Medford, Oreg. 671,304–5, pub. 9–30–58. Cl. 46.
Starbrand Corp., Fort Wayne, Ind. 671,139, pub. 9–30–58. Cl. 23.
Stationers Specialty Corp., New York, N. Y. 671,206, pub. 9–30–58. Cl. 37.
Stein, A., & Co., Chicago, Ill. 671,252, pub. 9–30–58. Cl. 39.
Stenzel, R., Food Products: *See*— Stenzel, Rudolph J.
Stenzel, R., Pickle Products: *See*— Stenzel, Rudolph J.
Stenzel, Rudolph J., d. b. a. R. Stenzel Food Products and R. Stenzel Pickle Products, San Leandro, Calif. 566,037, canc. Cl. 46.
Stephanson's, Washington, D. C. 671,356. Cl. 46.
Sterilek Co., Inc., The, New York, N. Y. 671,211, pub. 9–30–58. Cl. 37.
Sterling Drug Inc.: *See*— Winthrop Chemical Co., Inc.
Stevens' Fireplace Log Corp., Oakland, Calif. 671,038, pub. 9–30–58. Cl. 1.
Stevens, J. P., & Co. Inc., from D. B. Fuller & Co. Inc., New York, N. Y. 671,267, pub. 9–30–58. Cl. 42.
Stylofede Corp., Glendale, Calif. 565,841, canc. Cl. 40.
Sullivan, John F., Travelers Pen Co., New York, N. Y. 566,127, canc. Cl. 37.
Sullivan, Matthew, d. b. a. Sullivan Products Co., Willow Grove, Pa. 671,041, pub. 9–30–58. Cl. 1.
Sullivan Products Co.: *See*— Sullivan, Matthew.
Sun Printing & Publishing Association, The, New York, N. Y. 289,942, canc. Cl. 38.
Sun Record Co., Inc., Memphis, Tenn. 671,202, pub. 9–30–58. Cl. 36.
Sunbeam Laboratories, to Vonett Sales Co., Los Angeles, Calif. 358,032, ren. 6–28–58. Cl. 51.
Sun Valley Mfg. Co., Boston, Mass. 671,237, pub. 9–30–58. Cl. 39.
Surface Coating Engineers of New England, East Walpole, Mass. 671,089, pub. 9–30–58. Cl. 16.
Sutton, Michael, d. b. a. Trimfit Pillowcase Co., Beverly Hills, Calif. 671,263, pub. 9–30–58. Cl. 42.
Swing-Shift Mfg. Co., Longview, Wash. 671,142, pub. 9–30–58. Cl. 23.
Tappan Stove Co., The, Mansfield, Ohio. 565,903, canc. Cl. 21.
Texas Housing Co., Dallas, Tex. 566,162, canc. Cl. 12.
Thallon, John, & Co.: *See*— Thallon, John, & Co., Inc.
Thallon, John, & Co., Inc., d. b. a. John Thallon & Co., New York, N. Y. 671,307, pub. 9–30–58. Cl. 46.
Thenylhist Co., The: *See*— Preston Laboratories, Inc.
Thomae, Dr. Karl, G. m. b. H., Biberach an der Riss, Germany. 671,109, pub. 9–30–58. Cl. 18.
Thunderbird Water Ski Co., Tacoma, Wash. 671,131, pub. 9–30–58. Cl. 22.
Tidykins, Inc., New York, N. Y. 671,231, pub. 9–30–58. Cl. 39.
Timken Roller Bearing Co., The, Canton, Ohio. 124,351, ren. 2–4–59. Cl. 23.
Traum, David, Co., Inc., New York, N. Y. 566,030, canc. Cl. 40.
Tribo-Netics Laboratories: *See*— Macks, Elmer F.
Trifari, Krussman & Fishel, Inc., New York, N. Y. 671,181, pub. 9–30–58. Cl. 28.
Trimfit Pillowcase Co.: *See*— Sutton, Michael.
Tri-Pak Machinery Service, Inc., Harlingen, Tex. 671,163–4, pub. 9–30–58. Cl. 23.
Tru-Flex Rubber Products Co., Los Angeles, Calif. 671,198–9, pub. 9–30–58. Cl. 35.
Truscon Steel Co., Youngstown, Ohio. 565,972, canc. Cl. 23.
Underwood Corp., New York, N. Y. 671,158–9, pub. 9–30–58. Cl. 23.
Underwood Corp., New York, N. Y. 671,176–7, pub. 9–30–58. Cl. 26.
Union Wadding Co., Pawtucket, R. I. 565,835, canc. Cl. 4.
United Biscuit Co. of America: *See*— Merchant's Biscuit Co., The.
United Condenser Corp., New York, N. Y. 566,152, canc. Cl. 21.
United Specialties Co. of Illinois: *See*— Industrial Enterprises Inc.
United States Auto Club, Speedway, Ind. 671,326, pub. 9–30–58. Cl. 100.
U. S. Nature Products Corp., New York, N. Y. 671,096, pub. 9–30–58. Cl. 18.
U. S. Packaging Corp., Bridgeport, Conn. 671,308, pub. 7–9–57. Cl. 50.
United States Pen Co., Inc., New York, N. Y. 565,897, canc. Cl. 37.
United Technical Laboratories, Morristown, N. J. 566,160, canc. Cl. 21.
United Wallpaper, Inc., d. b. a. Desoto Paint & Varnish Co., Chicago, Ill. 671,091, pub. 9–30–58. Cl. 16.
Universal Oil Products Co., Des Plaines, Ill. 671,086, pub. 9–30–58. Cl. 15.
Valkenburgh, Van, Nooger & Neville, Inc., New York, N. Y. 671,332–3, pub. 9–30–58. Cl. 101.
Van, W. T., Co.: *See*— Van, Wylie T.
Van, Wylie T., d. b. a. W. T. Van Co., St. Paul, Minn. 566,107, canc. Cl. 38.
Van Brode Milling Co., Inc., Clinton, Mass. 671,115, pub. 9–30–58. Cl. 19.
Van Brode Milling Co., Inc., Clinton, Mass. 671,312, pub. 9–30–58. Cl. 50.
Vanguard Corp., Springfield, Mass. 565,906, canc. Cl. 22.
Vapor Heating Corp., Chicago, Ill. 671,175, pub. 9–30–58. Cl. 26.
Veldown Co., Inc., New York, N. Y., to Kimberly-Clark Corp., Neenah, Wis. 360,908, ren. 10–4–58. Cl. 44.
Veno Products Co.: *See*— Bousquet, Roland J.
Verdolyack, A. G., Inc., Kalamazoo, Mich. 671,206, pub. 9–30–58. Cl. 37.
Vermont Cheese Products, Inc., Newark, N. J. 671,284, pub. 9–30–58. Cl. 46.
Victrylite Candle Co., Oshkosh, Wis. 671,087, pub. 9–30–58. Cl. 15.
Voiello, Fratelli, S. P. A., Genoa, Italy. 566,068, canc. Cl. 46.
Volume Sprayer Mfg.: *See*— Patterson, Fern O.
Vonett Sales Co.: *See*— Sunbeam Laboratories.
Von Oettingen, Maria, Cincinnati, Ohio. 671,126, pub. 9–30–58. Cl. 22.
Vorac Co., The, Rutherford, N. J. 671,093, pub. 9–30–58. Cl. 16.
Wagner Electric Corp., St. Louis, Mo. 365,051, ren. 2–21–59. Cl. 6.
Wagner Electric Corp., St. Louis, Mo. 365,052, ren. 2–21–59. Cl. 6.
Wagner Electric Corp., St. Louis, Mo. 365,053. Am. 7(d). Cl. 19.
Wagner Electric Corp., St. Louis, Mo. 365,476, ren. 3–7–59. Cl. 35.
Waldes Koh-I-Noor, Inc., Long Island City, N. Y. 671,352. Cl. 23.
Walker, Emmons: *See*— Emmons, Orville H.
Wallace & Tiernan Inc., Belleville, N. J. 671,106, pub. 9–30–58. Cl. 18.
Wallace, William B., d. b. a. William Wallace Co., Kilgore, Tex. 671,193, pub. 9–30–58. Cl. 32.
Wallace, William, Co.: *See*— Wallace, William B.
Wall Paper Mfrs. Ltd., The: *See*— Palmer, Thomas J.
Washington Mfg. Co., Nashville, Tenn. 364,838, ren. 2–14–59. Cl. 39.
Wayne University of Beauty Culture, Inc., Fort Wayne, Ind., to Norton Mfg. Corp., Lynchburg, Va. 365,833, ren. 3–21–59. Cl. 51.
Welsh Co., St. Louis, Mo. 671,194, pub. 9–30–58. Cl. 32.
Wesson Oil & Snowdrift Sales Co., New Orleans, La. 671,295, pub. 9–30–58. Cl. 46.
Western Air Lines, Inc., Los Angeles, Calif. 566,133, canc. Cl. 105.
Western Hills Hotel, Inc., The, d. b. a. The Western Hills Hotel, Forth Worth, Tex. 671,329, pub. 9–30–58. Cl. 100.
Wetmore, Ralph M., Sebastopol, to Frei Bros., Santa Rosa, Calif. 365,076, ren. 2–21–59. Cl. 46.
Wheelabrator Corp., Mishawaka, Ind. 671,050, pub. 9–30–58. Cl. 4.
Whirlpool Corp., by change of name from Whirlpool-Seeger Corp., St. Joseph, Mich. 671,168, pub. 9–30–58. Cl. 24.
Whirlpool-Seeger Corp.: *See*— Whirlpool Corp.
White Adhesive Co., Inc., Newtonville, Mass. 566,173, canc. Cl. 5.
Wichita Allied Printing Trades Council, Wichita, Kans. 566,038, canc. Cl. 38.
Wincharger Corp., Sioux City, Iowa. 671,116, pub. 9–30–58. Cl. 21.
Winebrenner, D. E., Co., Inc., Hanover, Pa. 671,297, pub. 9–30–58. Cl. 46.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N. Y. 363,669, ren. 1–3–59. Cl. 18.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N. Y. 363,670, ren. 1–3–59. Cl. 18.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N. Y. 363,671, ren. 1–3–59. Cl. 18.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N. Y. 363,672, ren. 1–3–59. Cl. 18.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N. Y. 363,673, ren. 1–3–59. Cl. 18.
Woempner, W. L., San Francisco, Calif. 565,950, canc. Cl. 21.
Wolfe, Charles S., d. b. a. One Hour Martinizing, Stamford, Conn. 671,341, pub. 9–30–58. Cl. 103.
Wolferman, Fred, Inc., Kansas City, Mo. 361,793, ren. 11–1–58. Cl. 49.
World Stamp Inc., Minneapolis, Minn. 671,335, pub. 9–30–58. Cl. 101.
World Wide Sports, Inc., New York, N. Y. 671,220, pub. 9–30–58. Cl. 38.
Yetter, Lloyd E., Colchester, Ill. 671,185, pub. 9–30–58. Cl. 23.
Zenith Tool Co.: *See*— Pierce, Ernest P.
Zell Bros.: *See*— Zell Brothers Inc.
Zell Brothers Inc., to Zell Bros., Portland, Oreg. 361,436, ren. 10–18–58. Cl. 27.

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CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202,603

PATENTS

NOTICES

Erratum

All references to Patent No. 2,862,712 to Charles F. Mitchell, for Combined Foam and Ribbed Bowling Ball Finger Patch, appearing in the OFFICIAL GAZETTE of December 2, 1958, should be deleted as the application was withdrawn from issue and the patent was not issued.

Disclaimer

2,823,330.—*Leo R. Landroy*, Wayne, Pa. ELECTRON TUBE STRUCTURE AND MANUFACTURE. Patent dated Feb. 11, 1958. Disclaimer filed Nov. 20, 1958, by the assignee, *Burroughs Corporation*.

Hereby enters this disclaimer to claims 2 and 6 of said patent.

Patents Available for Licensing or Sale

2,789,585. Collar Stretcher. Abe Goldstein, Cal. Poly. Box 1122, San Luis Obispo, Calif.

2,837,089. Hair Treatment Pads for Combs. Ernest Van Meer, Jr., 4306 N. Sawyer Ave., Chicago 18, Ill.

2,850,898. Center Punch and Gauge. John G. Holsten, Cima, Calif.

2,856,607. Rain Hat With Veil (Veil Attached Folding Into Hat When Not in Use). Wilmett H. Richardson, 1711 Washington St., San Francisco, Calif.

2,859,740. Governor for Internal Combustion Engines. Elmore L. Sandlin and Maurice M. Smith. Correspondence to: Eaton, Bell, Hunt & Seltzer, Johnston Building, Charlotte 2, N. C.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents on reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Measurements and Industrial Products Division, 830 Western Ave., West Lynn 3, Mass.

2,787,362. Electric Motor Braking System.

Applications for license under the following 4 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N. Y.

2,482,768. Cloud Moisture Meter.

2,842,183. Mica Paper.

2,842,515. Organopolysiloxane Elastomer and Method of Making.

2,842,580. Cleavage of Organohalogenopolysilanes With Quaternary Ammonium or Phosphonium Halides.

Applications for license under the following 5 patents may be addressed to: General Electric Company, Transformer Division, 100 Woodlawn Ave., Pittsfield, Mass. Attention Patent Counsel.

2,749,487. Tantalum Electrolytic Capacitor.

2,845,290. Pressure Relief Device.

2,845,821. Switch Operating Mechanism.

2,846,624. Electrolytic Capacitor.

2,849,522. High Voltage Bushing Adapter.

New Applications Received During October 1958		Issue		
Patents	6,082	Patents	1,170	No. 2,865,021 to No. 2,869,198, incl.
Designs	429	Designs	44	No. 184,117 to No. 184,160, incl.
Plant Pats	13	Plant Pats	5	No. 1,781 to No. 1,785, incl.
Reissues	24	Reissues	3	No. 24,580 to No. 24,582, incl.
Total	7,088	Total	1,220	

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION

(Roman numerals in parentheses indicate Examining Group)

	Oldest Application	
	New	Amended

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202, 603
Total number of pending Design applications	7, 000
Total number of applications awaiting action (excluding Designs)	84, 564
Total number of Design applications awaiting action	3, 421
Date of oldest new application	Nov. 13, 1958
Date of oldest amended application	Nov. 12, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 42, 45; 50, 56, 58, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 59.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 13, 15, 14, 21, 24, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 63.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 32, 33, 35, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 46, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Bruhat; Harvesting; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows.	3-10-58	2-25-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	2-3-58	1-29-58
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	5-5-58	5-12-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	3-19-58	3-17-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminuters; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	1-17-58	12-26-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	3-3-58	3-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	3-17-58	3-4-58
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	4-2-58	2-19-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	3-17-58	3-3-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-31-58	3-26-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	4-14-58	3-27-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	3-27-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	3-24-58	3-20-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-16-57	12-3-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	3-4-58	3-7-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	2-26-58	1-29-58
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	4-24-58	4-25-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	3-19-58	3-17-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	4-3-58	3-31-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	3-3-58	3-3-58
21. (III) MADER, R. C., Textiles	1-24-58	1-23-58
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	3-6-58	3-1-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-13-57	11-12-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	3-20-58	3-27-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	3-25-58	3-17-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	4-4-58	4-10-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	4-14-58	4-9-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	1-29-58	12-19-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminuters; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

Total	7,088	Total 1,280

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application Now	Oldest Application Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-6-58	4-24-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-31-58	4-1-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	3-12-58	3-11-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	3-27-58	3-3-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding	6-3-58	6-3-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	12-6-57	12-3-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	3-10-58	1-24-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	5-6-58	5-6-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	4-18-58	4-30-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	3-12-58	3-12-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	3-24-58	3-12-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	1-13-58	1-13-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-3-58	4-3-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-20-58	1-3-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	3-11-58	2-28-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., Radioactive) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-17-58	3-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	4-3-58	4-3-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	3-12-58	3-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	3-3-58	3-28-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	3-3-58	3-13-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	3-12-58	3-6-58
52. (V) NEFF, P. R., Supports and Racks	3-20-58	3-27-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators	3-23-58	4-3-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	4-29-58	4-16-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	12-26-57	12-16-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	3-26-58	4-11-58
57. (III) MILLER, A. B., Belt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	3-17-58	3-17-58
58. (III) BRONAUGH, F. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part); Selective Punching	4-24-58	5-1-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	3-10-58	3-13-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	4-3-58	4-1-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	3-3-58	3-3-58
62. (IV) LOWE, D. R., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	4-18-58	4-17-58
63. (I) WINKELSTEIN, A. E., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	3-13-58	3-20-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	3-3-58	3-3-58
66. (V) LISANN, L., Geometric Instruments; Acoustics; Building Structures	1-7-58	1-6-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	3-10-58	3-3-58
68. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	5-1-58	4-24-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	4-1-58	4-1-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	3-26-58	4-4-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Web Feeding	4-1-58	3-13-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	4-1-58	3-21-58
CLASS. DIVS. V—ANGEL, C. D., Scaffolds; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings		
M. E. DIV. A* (I) LANHAM, S. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	3-10-58	3-13-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	3-14-58	3-17-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	4-4-58	3-3-58
	1-9-58	3-28-58

*Established August 23, 1957, by order of the Commissioner—722 O. G. 21A.

The following divisions have been abolished: 55 and 58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

2,868,871. S. L. McNair, Electrical vibrating device in com- N. D. Ill. (Chicago). Dec. 58c1950. *Bell & Howell Co. v.*

29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	3-17-58
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminuters; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration	3-14-58	3-6-58

PATENT SUITS

Notices under 35 U. S. C. 290; Patent Act of 1952

1,900,300, Herron and Lertzman, Spark plugs; 1,900,318, H. Rabezzana, Spark plug electrode with resistance in center wire; 2,272,618, Fessler and Schwartzwalder, Ceramic body, filed June 19, 1953, D. C., N. D. Ohio (Toledo), Doc. 7036, *General Motors Corp. v. The Electric Auto-Lite Co.* Consent judgment; patents held valid and infringed Nov. 4, 1958.

1,900,316. (See 1,903,305.)

2,272,618. (See 1,900,309.)

2,300,626, L. J. Biro, Writing instrument; 2,307,230, same; 2,400,070, same, Fountain pens; 2,412,004, same, Writing instruments; 2,416,806, same; 2,491,003, same, Fountain pen, filed Sept. 15, 1958, D. C., S. D. Calif. (Los Angeles), Doc. 808/58-HW, *Hartley Pen Co. v. The Parker Pen Co.*

2,307,230. (See 2,300,626.)

2,400,070. (See 2,300,626.)

2,412,004. (See 2,300,626.)

2,416,806. (See 2,300,626.)

2,438,304, J. Bender, Jr., Phonograph driving mechanisms; 2,480,903, E. G. Metzner, Two-speed phonograph turntable drive; 2,512,709, F. S. Gay, Plural speed friction drive mechanism; 2,560,662, F. M. Slough, Plural speed friction drive transmission for phonograph turntables; 2,516,236, same, Friction drive mechanism for phonograph turntables, filed Feb. 23, 1956, D. C., N. D. Ohio (Cleveland), Doc. 32561, *General Industries Co. v. Consolidated Electronics Industries Corp.* Dismissed with prejudice (defendant admits the validity of the patents) Nov. 4, 1958.

2,438,305. (See 2,438,304.)

2,480,901, R. A. Clark, Jr., Remote radio receiver tuning indicating apparatus; 2,668,889, H. A. Rahmel et al., System for determining listening habits of wave signal receiver users, filed Nov. 2, 1950, D. C., N. D. Ill. (Chicago), Doc. 50c1941, *A. C. Nielsen Co. v. American Research Bureau, Inc.*

2,400,396, A. E. Nelson, Support; 2,402,416, same, Can opener; 2,402,901, same, Pivotal bracket; 2,448,096, same, Bracket; 2,502,082, same; 2,507,297, same, Can opener; 2,668,127, same, Magnetic lid holder; 2,671,362, same, Bracket, appeal filed July 15, 1958, C. C. A., 8th Cir., Doc. 16044, *Nelson Smith Nelson v. Swing-A-Way Mfg. Co. et al.* Notice received Nov. 6, 1958.

2,402,416. (See 2,400,396.)

2,402,901. (See 2,402,396.)

2,671,362. (See 2,400,396.)

2,402,096. (See 2,300,626.)

2,516,709. (See 2,438,304.)

2,502,096. (See 2,438,304.)

2,502,297, L. L. Layne, Wheel mask, filed July 17, 1957, D. C., W. D. N. Y. (Buffalo), Doc. 7468, *J. Bert Layne v. G. & W. Merchandising Corp.* Stipulation of discontinuance Nov. 3, 1958.

2,502,096. (See 2,402,396.)

2,502,711, A. D. Foster, Conveyor and switch means for checkout counter, filed June 18, 1958, D. C., M. D. Ga. (Macon), Doc. 1444-M, *Almor Corp. v. Dixie Craft Mfg. Co.* Notice received Nov. 18, 1958.

2,504,062, J. W. Anderson, Windshield wiper blade linkage assembly; 2,708,296, L. Nemmy, Clip for wiper blades, filed Mar. 9, 1956, D. C., N. D. Ill. (Chicago), Doc. 56c462, *The Anderson Co. and Production Inventions, Inc. v. Sears, Roebuck & Co. et al.* Claims 6, 8, and 12 of Patent No. 2,504,062 held valid and infringed; defendants restrained; claims 7, 8, 9, and 10 of Patent No. 2,708,296, added by counterclaim, held invalid and not infringed July 2, 1958.

2,507,297. (See 2,502,711.)

2,508,296. (See 2,504,062.)

2,508,124. (See 2,504,062.)

2,508,745, W. H. Oberwortman, Feeder for fodder cutter, filed Mar. 7, 1955, D. C. Colo. (Denver), Doc. 5632, *W. H. O. Alfalfa Milling Co. v. Harry Speed.* Defendant enjoined from infringing plaintiff's patent Oct. 16, 1958. Same, Doc. 5633, *W. H. O. Alfalfa Milling Co. v. Clyde Allen & Son.* Decree as above (notice Oct. 21, 1958).

2,678,784, W. O. Hersey, Toy pistol; 2,734,298, same, Toy gun, filed Oct. 4, 1956, D. C., S. D. N. Y., Doc. 113/202, *Knickerbocker Plastic Co., Inc. v. Empire Plastic Corp.* Stipulation and order of dismissal Nov. 13, 1958.

2,694,492, Hunter and Cousins, Noise eliminator for fluid systems, filed Nov. 2, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1942, *Chrysler Corp. v. Anchor Coupling Co., Inc.*

2,703,963, Wolf and Wilcox, Apparatus and method for tablet production; 2,737,673, J. R. Wolf et al., Coating mechanism, filed Nov. 3, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1940, *F. J. Stokes Corp. v. Pittpatco Corp.*

2,705,007, W. L. Inglett, Bagging method, appeal filed July 15, 1958, C. C. A., 4th Cir., Doc. 7718, *Inglett & Co., Inc. v. Baugh & Sons Co.* Judgment of District Court, Eastern District, Virginia, affirmed Nov. 6, 1958.

2,705,474. (See 2,807,317.)

2,705,483. (See 2,807,317.)

2,709,688. (See 2,806,062.)

2,713,007. (See 2,807,317.)

2,724,883. (See 2,675,753.)

2,727,672. (See 2,720,228.)

2,730,976, E. B. Trusler, Method of dry cleaning fabric and simultaneously rendering the same antistatic, filed Feb. 20, 1956, D. C., E. D. Mo. (St. Louis), Doc. 10622(3), *The Davies-Young Soap Co. v. Nu-Pro Mfg. Co.* Decree entered patent held invalid; cause dismissed on the merits Nov. 3, 1958.

2,186,171, A. C. Kidd, Pipe coverings, filed May 28, 1937, D. C. N. J. (Newark), Doc. 497/57, *Miracle Adhesives Corp. v. Curtiss-Wright Corp.* Order of dismissal; patent held valid and infringed Nov. 13, 1958.

2,720,416, J. S. Kessler, Sealed joint for flanged pipe with opposed packing grooves, filed July 17, 1957, D. C., E. D. Wis. (Milwaukee), Doc. 57c164, *Ladish Co. v. L. C. Thomsen & Sons, Inc.* Dismissed with prejudice Nov. 10, 1958.

2,807,197, J. B. Rodman, Apparatus for cutting fattened containers, suit for Declaratory Judgment filed Oct. 31, 1958, D. C., N. D. Calif. (San Francisco), Doc. 37796, *H & O Engineering Corp. et al. v. Weyerhaeuser Timber Co.*

2,807,317, D. M. Ackerman, Liquid dispenser and applicator; 2,713,007, same, Dispenser and applicator; 2,709,422, same, Liquid applying massaging device, filed June 26, 1958, D. C., S. D. Calif. (Los Angeles), Doc. 808/58-HW; 2,705,474, same, amended complaint filed Oct. 31, 1958, *Pharma-Craft Corp. v. Dolletta M. Ackerman.* Consent judgment; defendant restrained (notice Oct. 31, 1958).

2,809,562, J. J. Herzstein, Contact lens, filed Nov. 10, 1958, D. C., E. D. Mich. (Detroit), Doc. 18547, *Midwest Scientific Co., Inc. v. Philadelphia Contact Lens Center.*

2,809,566, F. J. Curran, Perfumed or deodorant ball and a support therefor, filed May 16, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c572, *Frank J. Curran Co. v. Sky Star et al.* Cause dismissed on plaintiff's motion Oct. 31, 1958.

2,818,966, C. H. Stevenson, III, Feeding and orienting device, filed Nov. 5, 1958, D. C., N. D. Calif. (San Francisco), Doc. 37966, *Clarence H. Stevenson, III et al. v. Lemmon Corp. et al.*

2,817,008, J. Schwartz et al., Broad-band end-fire television antenna, filed Nov. 18, 1958, D. C., N. D. Ohio (Toledo), Doc. 8122, *Channel Master Corp. v. White-Airway Products Co.*

2,818,176, J. Shapiro, Plate of hardware for attaching a leg to furniture and the like, filed Oct. 22, 1958, D. C., E. D. N. Y. (Brooklyn), Doc. 19120, *Joseph Shapiro v. Gold Star Sales Corp.*

2,818,208. (See 2,489,202.)

66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

2,866,671, S. L. McNair, Electrical vibrating device in combination with a cushion, filed Sept. 9, 1958, D. C. N. J. (Newark), Doc. 1018/58, *Samuel L. McNair et al.* v. *Davega Stores Corp.* Order of dismissal Oct. 23, 1958.

2,841,604. (See 2,858,754.)

2,861,166, W. W. Block, Combination serving cart or rack for stacked serving tables, filed Nov. 7, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1977, *Quaker Stretcher Co.* v. *Cal-Dak Co., Inc. et al.*

2,858,941, J. Litowsky, Cap, filed Nov. 4, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1944, *American Needle & Novelty Co.* v. *S & L Novelty Co.*

2,858,754, J. P. Bagby et al., Exposure control for photographic cameras; 2,841,084, same, filed Nov. 5, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1950, *Bell & Howell Co.* v. *Wollensak Optical Co.*

Re. 24,333, N. H. Franks, Shelving unit, filed Nov. 7, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1972, *Union Asbestos & Rubber Co.* v. *Rock Engineering Co., Inc.* Same, Doc. 58c1973, *Union Asbestos & Rubber Co.* v. *Equipment Mfg., Inc.* Same, Doc. 58c1974, *Union Asbestos & Rubber Co.* v. *The Peltier Corp.* Same, Doc. 58c1975, *Union Asbestos & Rubber Co.* v. *American Metal Products Co.*

Des. 176,367, Meyer and Stahlhut, Reflector for tubular lamp lighting fixtures, filed Oct. 31, 1958, D. C., N. D. Calif. (San Francisco), Doc. 37785, *Day-Brite Lighting, Inc.* v. *Fluorescent Fixtures of California, Inc.*

REISSUES

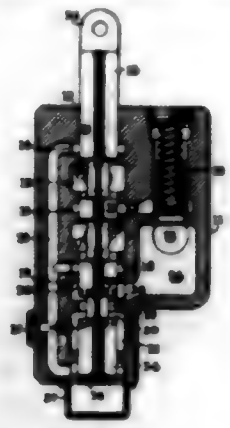
DECEMBER 23, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,580
STABILIZING MEANS FOR HIGH PRESSURE HYDRAULIC VALVES OF THE PLUNGER TYPE

Robert F. Hodgson, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey

Original No. 2,812,775, dated November 12, 1957, Serial No. 608,787, September 10, 1956. Application for reissue April 22, 1958, Serial No. 732,762
7 Claims. (Cl. 137—622)



8. In a valve of the type including a housing having a cylindrical bore, two longitudinal spaced flow chambers intersecting the bore, a cylindrical seat land encircling the bore and interposed between the two flow chambers, a plunger reciprocable in the bore and having a peripheral control edge which coacts with the seat land to form a variable area flow path between said chambers, means for shifting the plunger between first and second positions in which the variable area flow path is closed and opened, respectively, and a spring biasing the plunger toward its second position, the improvement which comprises a separate flow path formed in the plunger for providing parallel flow between chambers, the separate path comprising a longitudinal portion and a second portion which extends in a direction normal to the plunger axis from the longitudinal portion through the surface of the plunger at a point spaced from the control edge, the flow area afforded by the separate path being so selected that the axial component of the dynamic reaction force at any position of the plunger is less than the spring bias at the same position.

24,581
CONVERTIBLE UTENSIL

Paul Escaut, Beziers, France

Original No. 2,812,098, dated November 5, 1957, Serial No. 552,525, December 12, 1955. Application for reissue December 27, 1957, Serial No. 706,231
Claims priority, application France June 22, 1955
1 Claim. (Cl. 220—19)

A transferable utensil comprising a first annulus of metal receiving a trellis which constitutes the bottom of the utensil, a second annulus of metal having a diameter greater than the first said annulus, a first series of metallic widened-out U-shaped wires arranged in the form of an open trapezium, the lateral branches of successive U-shaped wires crossing each other and having their end portions articulated on the first metal annulus, a second series of metallic widened-out U-shaped wires arranged in the form of an open trapezium and having their lateral branches shorter [and more oblique] than those of the wires of the first series, the lateral branches of successive U-shaped wires of the second series crossing each other and having their end portions articulated on the said second metal annulus, the transverse bases of the widened-out U-shaped wires of the two series being connected pivotally to each other by tubular members whereby the utensil may be collapsed to form a flat body substantially in the plane of the trellis, a third series of widened-out U-shaped wires having the end portions of their lateral branches articulated on the second metal annulus with the branches of the successive wires crossing each other, and two substantially U-shaped handles having the end portions of their lateral branches articulated on the second metal annulus and having their branches passing respectively one on each side of the wires of the third series so that when the handles are brought together the loops are folded over to form a partial closure for the top of the utensil, and when the handles are moved apart the loops are moved away, thus the utensil can be opened for filling or emptying.

24,582
METHOD AND ELECTROLYTE FOR PRODUCING BRIGHT GOLD

Edwin Cornell Rinker, Morristown, N. J., assignor to Sel-Rex Corporation, Belleville, N. J., a corporation of New Jersey

No Drawing. Original No. 2,799,633, dated July 16, 1957, Serial No. 587,961, May 29, 1956. Application for reissue November 29, 1957, Serial No. 704,224
14 Claims. (Cl. 204—43)

1. In the art of forming a layer in excess of .000005" thickness of bright gold containing about 0.1 to 2% of silver by electrolytic deposition, the method which consists in electrolyzing an electrolyte containing the following components in the following proportions dissolved in one liter of water:

	Grams
Free potassium cyanide	45 to 200
Potassium gold cyanide	6 to 48
Potassium silver cyanide	0.08 to 0.4

the proportion of potassium silver cyanide calculated as silver to potassium gold cyanide calculated as gold being between 0.1% and 2% by weight, and maintaining said bath at a temperature of between 45° F. and 80° F.

PLANT PATENTS

GRANTED DECEMBER 23, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,781
GLADIOLUS PLANT

Murray W. Fisher, Burlington, Ontario, Canada, assignor to Selected Glads, Inc., Nashville, Tenn., a corporation of Tennessee

Application January 17, 1958, Serial No. 709,718
1 Claim. (Cl. 47—60)

The new variety of gladiolus plant substantially as herein described and illustrated, characterized by its large size, the general symmetry and regular placement of its flowers, the unusually smooth and colorful bulbs and the novel and beautiful combination of colors of the flowers.

1,782
GLADIOLUS PLANT

Ralph J. Pommert, Pacific, Wash., assignor to Selected Glads, Inc., Nashville, Tenn., a corporation of Tennessee

Application April 24, 1958, Serial No. 730,734
1 Claim. (Cl. 47—60)

The new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly by the relative ability of its spike and florets to resist the effects of hot sun, the comparative resistance of the plant to diseases, its straight, strong and wiry stemt, the loose attachment of leaves to the stem, the excellent attachment of buds to the spike, lying close thereto, the even spacing of florets on the spike with all facing in the same direction, and the ability to open all florets to the tip bud, after the spike has been cut in tight bud and placed in water.

1,783
ROSE PLANT

Eugene S. Boerner, Newark, N. Y., assignor to Jackson & Perkins Company, Newark, N. Y., a corporation of New York

Application April 24, 1958, Serial No. 731,557
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of vigorous plant growth, vigorous and prolific production of flowers under ordinary greenhouse conditions, with the flowers borne on stems of unusually good strength, large, high-centered and full-petalage form of the flowers, and a distinctive La France Pink, lightly overcast with Shrimp Pink, general color tonality of the flowers.

1,784
ROSE PLANT

Eugene S. Boerner, Newark, N. Y., assignor to Jackson & Perkins Company, Newark, N. Y., a corporation of New York

Application April 24, 1958, Serial No. 731,558
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of unusual floriferousness, fully double flowers, each having a large number of thick petals which open gracefully, a distinctive Carmine, lightly overcast with Spectrum Red, general color tonality of the flowers, a constant color retention throughout the life of the flowers, and an exceptionally good long-lasting quality of the flowers.

1,785
PEACH

Grant Merrill, Red Bluff, Calif., assignor to Grant Merrill Orchards, Inc., Red Bluff, Calif., a corporation of California

Application April 25, 1958, Serial No. 731,967
1 Claim. (Cl. 47—62)

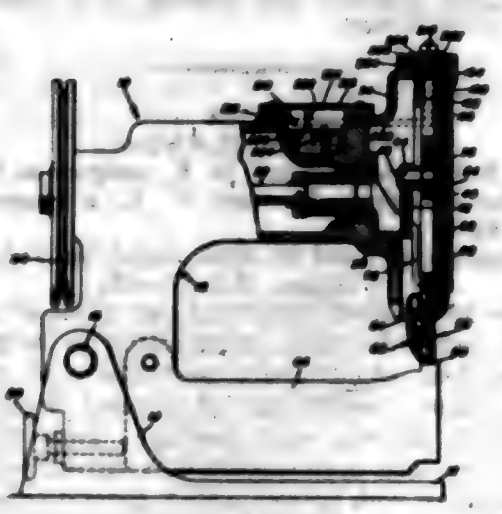
A new and distinct variety of peach substantially as described and illustrated and producing large, highly colored, firm, yellow fleshed freestone peaches, almost entirely covered with red, round in shape, with small suture ridge, very small apical tip, characterized as to novelty by its ripening during the early part of the gap between July Elberta (Plant Patent No. 15) and Elberta (unpatented) or about ten days ahead of Elberta (unpatented) in Red Bluff, Tehama County, California, and being similar to Merrill Gemfree (Plant Patent No. 1,409) which the instant variety most nearly resembles, but ripening about forty days later in Red Bluff, Tehama County, California, and with flesh which is almost completely free from the pit, and with skin that is brighter red and with a tree that blooms a few days later.

PATENTS

GRANTED DECEMBER 23, 1958

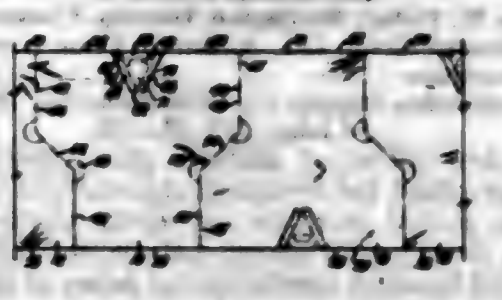
GENERAL AND MECHANICAL

2,865,021
WIRE STITCHING MACHINE
Mario P. Marelli, Fort Lauderdale, Fla.
Application June 22, 1956, Serial No. 593,252
12 Claims. (Cl. 1—3)



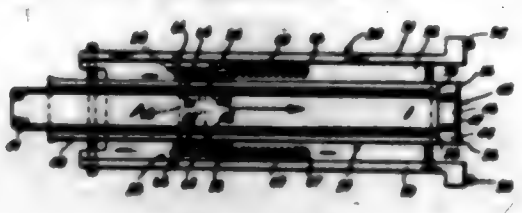
1. In a wire stitching machine of the stapling type, a reciprocating former, a guideway in said former, a driver mounted in said guideway for movement relative to said former, an anvil, support means resiliently positioning said anvil in alignment with said guideway for cooperation with said former and said driver, said former having opposed inner walls defining edges of said guideway, V-shaped cross sectional grooves in said inner walls forming extensions of edges of said guideway, said grooves being relatively shallow as compared to the remainder of said guideway, said driver having V-shaped edge portions seated in said grooves, said grooves forming wire guides for legs of a wire staple, said anvils being of a width to retain staple legs in said grooves.

2,865,023
BARBER'S CLOTH
Russell M. Anderson, Kansas City, Mo.
Application May 20, 1957, Serial No. 660,339
2 Claims. (Cl. 2—50)



1. A barber cloth comprising a sheet of flexible material provided with a straight top edge medially interrupted by an isosceles trapezoidal, neck-receiving notch extending into the sheet and having its longer base disposed in alignment with said top edge, a pair of side edges each including a straight upper stretch perpendicular to the top edge, a straight intermediate stretch angled inwardly and downwardly at an acute angle from the lower extremity of the corresponding upper stretch and a straight lower stretch extending downwardly along a line perpendicular to said top edge from the lower extremity of the corresponding intermediate stretch, and a bottom edge parallel to and substantially shorter than said top edge, said upper and lower stretches being of substantially equal lengths, said intermediate stretches being shorter than said upper and said lower stretches, there being a substantially circularly arcuate wrist-receiving notch extending into the sheet at the zone of juncture of each intermediate stretch and its corresponding lower stretch.

2,865,033
STAPLING MACHINE MAGAZINE
William A. Ferrester, Herrin, Ill., assignor to International Staple and Machine Company, Herrin, Ill., a corporation of Pennsylvania
Application September 10, 1954, Serial No. 455,195
3 Claims. (Cl. 1—3)



1. A staple magazine assembly for use in a stapling machine, said assembly comprising a magazine, a base for supporting said magazine, a magazine release having biasing means cooperating with said base for urging said magazine against said stapling machine, and retaining means on said base preventing movement of the magazine upwardly from the base while providing for limited movement in a direction against said biasing means.

2,865,034
SOCK PROTECTOR
Hattie E. Lundy, Hansen, Idaho
Application February 24, 1956, Serial No. 567,528
1 Claim. (Cl. 2—61)

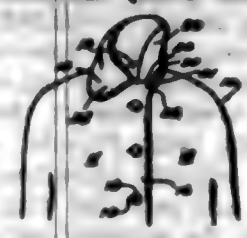
A sock protector for preventing rubber boots and the like from wearing holes in the heel of a sock comprising a substantially rectangular body portion having angular corners adjacent one of its longer sides and a recess formed centrally in its other longer side, said recess having straight side edges and a convex inner edge, the continuation of said straight edges of said recess defining the bottom area of said body, and the remaining portions thereof defining the side areas of said body, and a Y-shaped reinforcing member having a stem portion and a pair of divergent branch portions, said stem portion having its side edges sewed to the side areas of the body in overlying position with respect to the marginal areas adjacent the side edges of said recess and said branch portions having their edges sewed to the lower portions of the side areas and bottom of said body.

therethrough, and a pair of resilient semicircular mem- intermediate said seat and rear portions and connecting

2,865,025
POCKET CONSTRUCTION FOR HUNTING COAT
William P. Hennessey, West Boylston, Mass., assignor to Brown's Bench Jacket Co., Worcester, Mass., a corporation of Massachusetts
Application May 31, 1956, Serial No. 588,484
2 Claims. (Cl. 2—94)

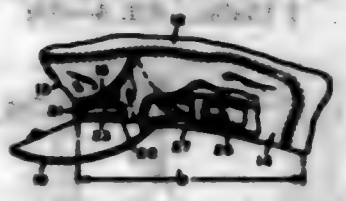
1. A coat construction comprising in combination a skirt portion for the coat and a detachable game and fish bag therefor, said bag including front and rear flexible walls having end edges secured together, an open edge, and a flap along the open edge on one of the walls, said flap being adapted to fold down over the free edge of the other wall at the open edge to close the bag, a series of spaced fasteners on the skirt portion of the coat, and a corresponding series of fastener-securing means on the bag, each said fastener securing means being located in the flap, in the rear wall, and in the front wall, all three said fastener-securing means being juxtaposed when the flap is folded to simultaneously receive the individual fasteners holding the bag to the coat and the flap closed.

2,865,026
SINGLE-BREASTED GARMENT
Barney Weston, New York, N. Y.
Application September 16, 1954, Serial No. 456,372
1 Claim. (Cl. 2—96)



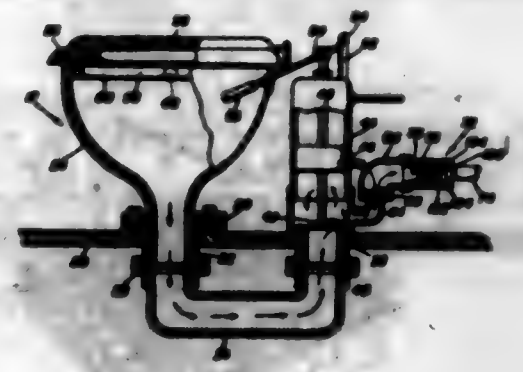
In a single-breasted coat having a back panel and a pair of front panels, one longitudinal edge of each front panel being secured to a longitudinal edge of said back panel, the free edges of the front panels overlapping at the front of the garment, a neck opening formed in the panels, a collar having its lower edge secured to the upper edges of said panels about the neck opening, the ends of the collar being spaced inwardly from the upper edges of the respective panels to provide overlapping portions, cooperating fastening elements on the adjacent edges of the front panels and arranged medially of the front of the coat, the fastening elements on the overlapping panel being spaced inwardly from the vertical edge of said panel to dispose said edge under said collar, the said edge of said overlapping panel being straight from the bottom of the panel to the point where it underlies the collar, an integral extension on the upper corner portion of each of said front panels, said extensions each tapering toward its free end to provide a lapel point to disguise the laterally extending character of said extension when said collar is open and when said upper panel edge portions are turned back to provide a pair of symmetrical lapel portions on opposite sides of the centrally located row of fastening elements, the extension on the overlapping panel being wholly disposed and completely concealed underneath the outwardly extending portion of the opposite collar-end when the upper portions of said panel edges are overlapped and when said collar is closed, and means for releasably fastening the extension on the overlapping panel to the opposite one of said panels beneath said collar for holding upper portions of said panel edges in overlapped relation and maintaining said collar closed.

2,865,027
SELF-FITTING CAP
Jack I. Shapiro, University City, Mo., assignor of one-half to Frank Lilienick, University City, Mo.
Application July 15, 1957, Serial No. 671,772
4 Claims. (Cl. 2—197)



2. A cap comprising a variable-size headband including a front piece and a rear piece associated retractably therewith, a visor secured to the headband front piece, a crown including a crown top portion overlaying the visor, and a crown front portion joined along its upper margin to the crown top portion and along its lower margin to the visor and the headband front piece, the crown front portion being foldable between the said top portion and the visor, the crown further comprising crown side portions each secured along its upper margin to the crown top portion and each having a part extending forwardly and in overlapping relationship to the crown front portion in the area of said front portion which is so foldable between the crown top portion and the visor, the headband rear piece being joined to the lower margin of that part of the crown side portions aft of the visor, and size adjustment means connecting the said forwardly-extending parts of the crown side portions across the crown front portion, whereby the overlap of the crown side portions over the front portion is increased as the headband pieces are retracted with respect to each other.

2,865,028
SEWAGE SYSTEM FOR MOBILE HOMES AND THE LIKE
Verne L. Patenaude, Fitchburg, Mass.
Application October 4, 1955, Serial No. 538,391
1 Claim. (Cl. 4—10)



In a sewage system, a septic tank, a pressure feed line connected to said tank for conveying sewage thereto, and means in said line for breaking up sewage solids passing through said line and preventing backflow of gases through said line comprising a resilient conical flow restricting member having a transversely slit forward portion and a pair of flat normally engaging resilient lips extending forward from said portion at opposite sides of the slit and together with said slit portion being separative under pressure in said line to restrictively pass sewage

tion to the bottom surface; means carried by the forward end of said frame for connecting a tow line thereto; an

span the roof of a railway car, said arch being rigidly fixed to at least one said tank member, a vertically dis-

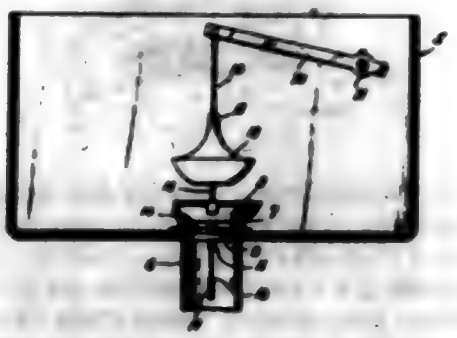
movement in a direction against said biasing means.

776

areas and bottom of said body.

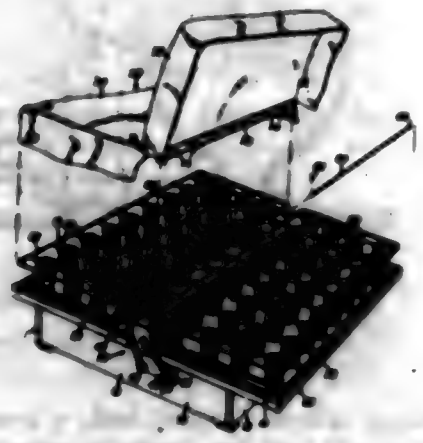
therethrough, and a pair of resilient semicircular members in said line at opposite sides of said pair of lips yieldingly resisting the separation of said slit and lips to cause said slit and lips to mash and break up sewage solids passing between said lips, said semi-circular members yieldingly retaining said lips engaged and said slit closed to prevent backflow of gases through said member.

2,865,029
GUIDE FIXTURE FOR FLUSH TANKS
Lester Sherman Coffelt, Sacramento, Calif.
Application June 14, 1957, Serial No. 665,713
1 Claim. (Cl. 4—56)



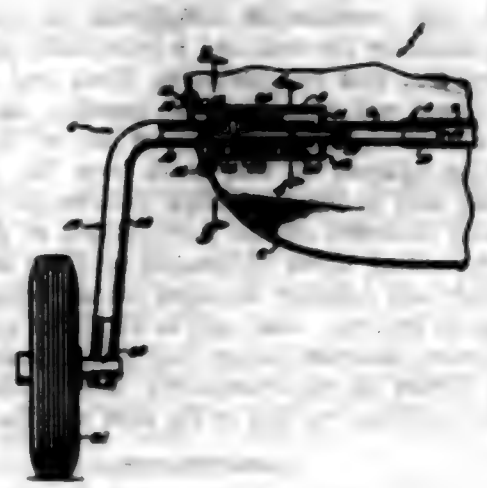
The combination with the discharge pipe having an outwardly flared upper face and an inverted frusto-conical valve seat of a flush tank, of a valve guide comprising a supporting ring fitted within said discharge pipe adjacent to the valve seat, horizontal transverse supporting arms secured across said supporting ring, a vertical bearing tube having one end secured centrally of said supporting arms, the other end of said bearing tube terminating a substantial distance above the supporting arms, a flat valve rod having a twisted apertured lower end operating within said bearing tube, a vertically disposed, laterally expansible spring pin extending through the aperture in the lower end of said rod providing a stop adapted to prevent accidental displacement of said rod, and a ball valve having an opening in the lower side thereof secured to the other end of said rod, said bearing tube extending through said opening into said ball valve.

2,865,030
SOFA BED UPHOLSTERING TENSIONER
Virgil P. Carrick, High Point, N. C.
Application March 14, 1956, Serial No. 494,046
3 Claims. (Cl. 5—51)



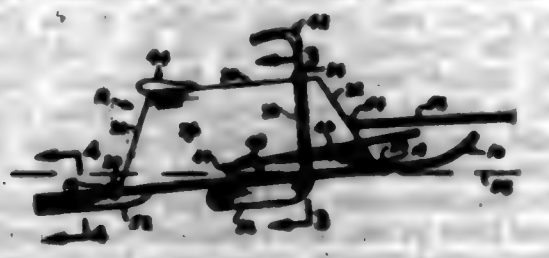
1. In a sofa bed construction of the type including a seat portion and a back portion, and a single fabric covering for said seat and back portions, a fabric tensioning device said fabric tensioning device comprising a pull denim strip secured to the underside of said fabric intermediate said seat and back portions, a plurality of stiff transverse connecting strips carried by said seat and back portions, a longitudinal connecting rod disposed intermediate said seat and rear portions and connecting said connecting strips together, said pull denim strip being connected to said connecting rod, said connecting strips being formed of resilient material to permit folding of the sofa bed, said connecting strips being provided at ends thereof with eyes, said connecting rod passing through said eyes, said pull denim strip being folded to form a sleeve, said connecting rod being disposed in said sleeve, said seat and rear portions including spring assemblies, each of said connecting strips being secured directly to a plurality of springs of said spring assemblies.

2,865,031
CHASSIS FOR TRAILERS
Clifford B. Maloney, Ontario, Calif.
Application August 16, 1954, Serial No. 450,165
2 Claims. (Cl. 9—1)



1. In chassis construction: a trailer having a pair of of opposed side walls, a pair of axially aligned tubular castings secured within and to each side wall, each casing adjacent a side wall being open ended with the inner end of each casing closed, a wheeled strut for each side wall, each strut being in part received axially of a casing, means between each casing and each strut for maintaining the strut axially therein, that portion of each strut within a casing being provided with a longitudinal slot, a coil spring adapted to surround the longitudinal slot of each strut, and provided with an end portion received in said slot; the opposite end of said spring provided with a spaced returnedly bent portion, and means in each casing for reception in said returnedly bent portion to detachably anchor the spring thereto.

2,865,032
WATER SCOOTER
Clarence L. Moody, Jr., Elk City, Okla.
Application December 19, 1955, Serial No. 553,851
4 Claims. (Cl. 9—31)



1. A water scooter, for towing on water, comprising: a ski-like runner; a box-like hollow water tight frame centrally mounted longitudinally on the upper surface of said runner and adapted to extend vertically edgewise thereabove, the width of said frame being less than the width of said runner and adapted to be straddled by an operator, said frame having upwardly converging side walls and end walls terminating in an upper surface parallel with rela-

collar-end when the upper portions of said panel edges under pressure in said line to restrictively pass sewage

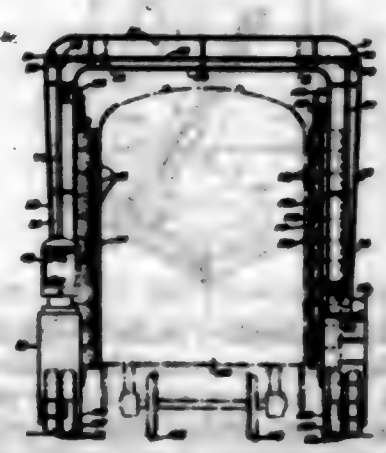
tion to the bottom surface; means carried by the forward end of said frame for connecting a tow line thereto; an open ended tubete member extending vertically between the upper surface and the bottom of said frame, adjacent the forward end thereof, and sealed water tight therewith; a steering column rotatably carried by said member, said column extending above said frame and extending downwardly through said runner; a rudder rigidly connected at one end to the lower end of said column and extending rearwardly therefrom adjacent the lower surface of said runner; handle bars connected to the upper end of said column for guiding said rudder; a seat carried by the upper surface of said frame adjacent the rear end thereof; a forwardly extending upwardly inclined splash guard carried by opposite sides of the forward portion of said frame in spaced relation above said runner, said splash guard terminating forwardly of the frame and rearwardly of the forward end of said runner in an arcuate-edged end of substantially greater width than said runner; and a depending vertical stabilizer carried longitudinally by the rearward end of said runner for co-acting with said rudder and maintaining a balance of said scooter adjacent the surface of the water.

2,865,033
SHOE PROVIDED WITH ASYMMETRICAL SWIMMING WEBS
David L. Jayet, Glas s. Yverdon, Switzerland, assignor, by mesne assignments, to David Jayet, Le Trayas (Var), France
Application December 28, 1955, Serial No. 556,015
Claims priority, application Switzerland May 24, 1955
2 Claims. (Cl. 9—31)

1. An asymmetrical swimming fin comprising walls forming a cavity having length, width and height, said cavity having a first plane extending through the width and length thereof and a second plane at right angles thereto extending through the height and length thereof, said cavity being symmetrical with respect to both said planes, and a web portion extending from said walls, said first plane extending through said web portion, said web portion being symmetrical with respect to said first plane but asymmetric with respect to said second plane, said web having lateral and intermediate ridges of unequal length reinforcing said web portion, said ridges being symmetrical with respect to said first plane.

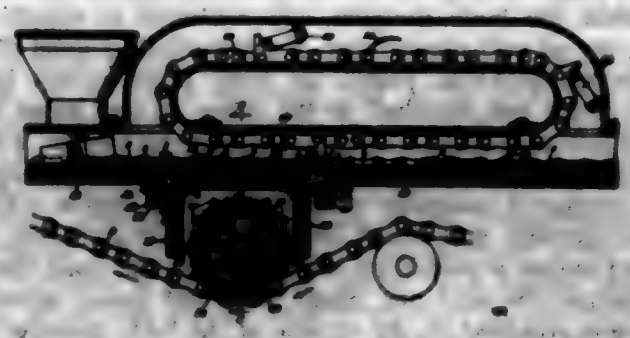
2,865,034
RAILROAD CAR WASHER
David L. Pottle, San Francisco, Calif.
Application June 7, 1955, Serial No. 513,785
3 Claims. (Cl. 15—53)

1. A railway car-washing machine comprising a first narrow, elongated tank member on one side of said machine, a second narrow, elongated tank member on the opposite side of said machine, an arch attached at the lower ends to said tank members and shaped to span the roof of a railway car, said arch being rigidly fixed to at least one said tank member, a vertically disposed rotary side brush mounted on each leg of said arch arranged to scrub the sides of a car over which said arch moves, a prime mover on said machine, at least one hydraulic pump driven by said prime mover, hydraulic traction means mounted on each of said tank members to advance said machine, first means for independently moving the upper end of each of said side brushes perpendicularly inward and outward relative to the side of the car being washed, second means for independently moving the lower end of each of said side brushes perpendicularly inward and outward relative to



the side of the car being washed, side brush drive means for independently rotating each said side brush, a rotary window brush on each side mounted on each leg of said arch arranged to scrub the windows of said car, a central shaft for said window brush, third means for raising and lowering said shaft, fourth means for independently moving each window brush inward and outward, window brush drive means for independently rotating each of said window brushes, control means for independently manually controlling flow of hydraulic fluid from said pump to each of said traction means, first means, second means, third means, fourth means, side brush drive means, and window brush drive means.

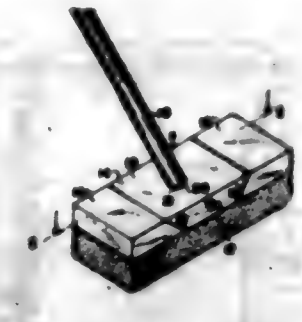
2,865,035
SPACE BAND CLEANING MACHINE
William P. Donchower, Folsom, Pa., assignor to Maurice H. Hartzell and Blanche D. Hartzell, Chester, Pa.
Application September 17, 1956, Serial No. 610,023
9 Claims. (Cl. 15—102)



1. A space band cleaning machine comprising, in combination, means forming a horizontal cleaning surface, means for successively feeding space bands over said surface in a continuous movement longer than the length of the bands, means for horizontally vibrating said surface with a stroke less than the length of the continuous movement, and means for pressing the bands down on said surface as they move thereover.

2,865,036
MULTI-SEGMENT SPONGE MOP
Nathan Peritz, Brooklyn, N. Y.
Application July 6, 1956, Serial No. 598,177
6 Claims. (Cl. 15—119)

1. A water absorbent mop head comprising a water absorbent pad of relatively high flexibility and a plate assembly of low flexibility, said pad being secured adhesively to the assembly which comprises three segments having surfaces normally in abutment forming a rectangle, including a middle segment and two end segments, the end surfaces of the middle segment converge towards the pad and the abutting surfaces of the end segments being



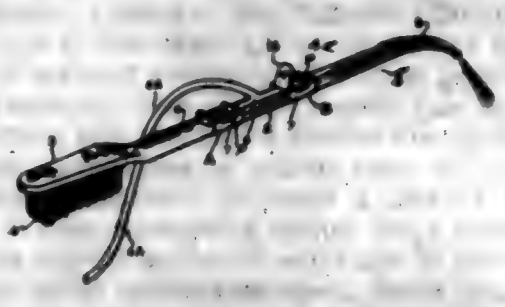
sloped in a complementary manner whereby the middle segment is disposed in a wedge-like fashion between the end segments, thus pressure applied to the middle segment is transferred via the sloping surfaces uniformly to the end segments and shearing forces acting on the end segments are resisted by the converging surfaces of the middle segment.

2,865,037
SURFACE POLISHING DEVICE
John King, London, England
Application June 18, 1956, Serial No. 596,377
3 Claims. (Cl. 15—124)

1. A surface polishing device comprising in combination a hollow composite body member having two opposite plane faces, an electric heating element positioned within the body member and arranged to supply heat to one of said plane faces, a substantially funnel shaped member provided within the body member and having its larger end attached to the other of said plane faces, the said other plane face being liquid permeable, a structure surmounting the funnel shaped member and adapted to engage a container of polishing preparation which is substantially non fluent when in a cold condition, rubbing means provided on the outside of the body member adjacent the said one plane face, and liquid permeable means provided on the outside of the body member adjacent the said other plane face, the arrangement being such that part of the heat generated by the heating element is effective to heat the said one plane face and part is effective to melt polishing preparation contained in the said container, said liquid permeable means being effective to facilitate distribution of polishing preparation on a surface to be polished when the said other face is lowermost, and said rubbing means being effective to facilitate polishing of the surface when the said one face is lowermost.

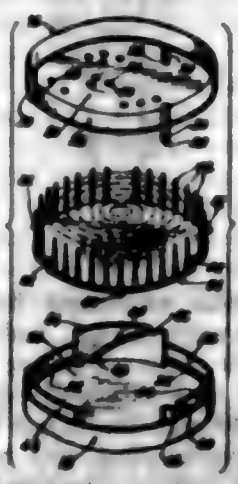
2,865,038
FLUSHABLE TOOTH BRUSH
John Vanteeg, Seaview, Wash.
Application April 9, 1956, Serial No. 577,857
1 Claim. (Cl. 15—128)

A flushable tooth brush comprising a channeled handle, a head integral with one end of said handle, bristles af-



fixed to and extending from one side of the head, a hose defining perforations therein located in close juxtaposition to the bristles longitudinally inserted in the handle and registering with the bristle side of said head, a hollow nipple for the purpose of draining the free end of said hose connected to said hose and handle and remote from the head, a first clamp means to close off the hose portion adjacent to said nipple while the structure is in use and to open said hose portion when draining is desired; a branch hose adapted to convey water connected to aforesaid hose between said hose portion and head, and a second clamp means to control the flow of water to said bristles movably located and surrounding the handle and first mentioned hose intermediate the branch hose and head.

2,865,039
RETRACTABLE BRUSH
Philip Kaye, Norridge, and Edward E. Tate, Chicago, Ill., assignors to Lester R. Pollet, Chicago, Ill.
Application June 7, 1957, Serial No. 664,401
11 Claims. (Cl. 15—184)



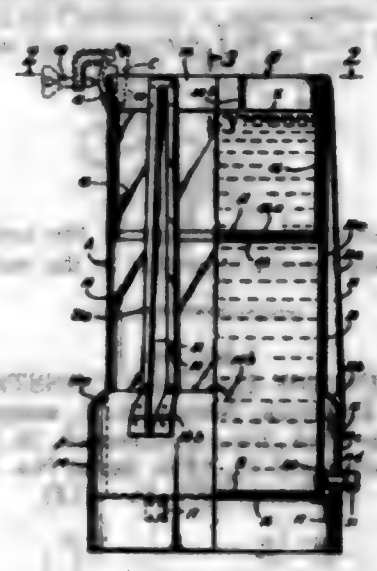
2. In a retractable brush, the combination comprising a housing having hollow generally cup shaped upper and lower members interconnected for relative rotation, said upper member having a top wall with a plurality of openings therein, a bristle carrier plate movably received in said housing and having a plurality of bristles mounted on said plate and extending upwardly therefrom through said openings, the engagement between said bristles and said openings being effective to connect said plate to said upper member for rotation therewith, means on said lower member defining a plurality of angularly spaced inclined cams thereon, and a plurality of cam follower elements on said carrier plate and engaged with said cams for moving said plate upwardly and downwardly and thereby extending and retracting said bristles in response to relative rotation of said members, said cams having substantially horizontal upper portions for locking said carrier plate with said bristles extended.

2,865,040
HEATED WINDSHIELD WIPER BLADE
James A. Hamm, Bethlehem, Pa., assignor of one-half to Catherine D. Hamm, Bethlehem, Pa.
Application November 1, 1957, Serial No. 693,955
2 Claims. (Cl. 15—250.5)

1. In a windshield wiper blade, an elongated body of a soft, resilient material having an axial bore therethrough; a pair of transversely spaced blade elements integral with said body and projecting therefrom to define therebetween a heating channel, the body having a row of openings communicating between said channel and said bore, the material of said body completely surrounding said bore except for the provision of the openings, said material being of substantial thickness over the full circumference of the bore; and an electrical resistance element extending within the bore, said material of the body protectively enclosing the element over the full circumference of said element, said element comprising the only component of the wiper blade disposed in said bore, whereby on energizing of said element, heat emanating therefrom will pass from the openings into the heating channel, said heating channel being closed at its sides by the blade elements over the full length of the body, for confining of the heat within the heating channel, whereby said heat will be caused to be concentrated against the windshield in the area between the blade elements.

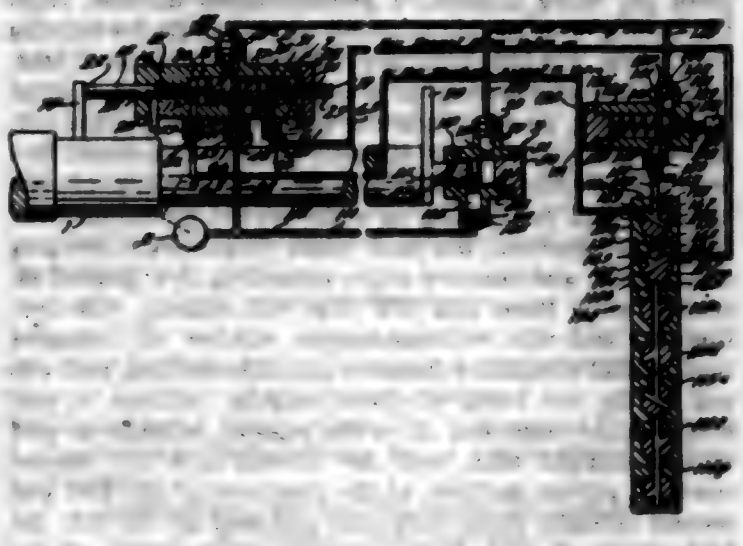
2,865,041
FLUID CONTAINER ASSEMBLY
Merrs F. Koontz, Houston, Tex.
Application November 26, 1956, Serial No. 624,237
2 Claims. (Cl. 15—264)

1. A fluid container assembly including, a tubular base, an upper support ring longitudinally spaced above said base and in axial alignment therewith, a plurality of circumferentially spaced longitudinally extending support arms connected from said base to said upper support ring to secure said upper support ring in its position in axial alignment with said tubular base, a barrel having a plastic tubular wall and a closed bottom for holding a liquid therein, said barrel being removably positioned within said tubular base, said upper support ring and said spaced support arms to thereby confine and support said barrel against lateral distortion, an internal clamping head ring having a longitudinally extending substantially cylindrical portion adapted to be positioned internally of said barrel, said clamping head ring also having an outwardly extending annular radial flange adapted to extend laterally



above the upper edge of said barrel and into engagement with the inner surface of said upper support ring.

2,865,042
SOOT BLOWER CONTROL SYSTEM
William McColl, Ilford, England, assignor to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Application March 30, 1956, Serial No. 575,217
14 Claims. (Cl. 15—317)



1. A fluid heater cleaner having a blower element arranged to be power operated and to be projected for operation from an inoperative or retracted position and to be rotated while in operative position, rotary driving means arranged through unidirectional rotation to effect projection, retraction and rotation of the blower element and means responsive to the blower element travel to effect rotation of the driving means at a higher speed during projection of the blower element to and retraction of the blower element from operative position than during a blowing period when the blower element is in operative position.

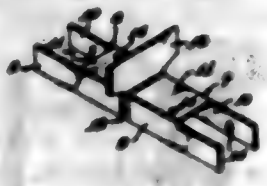
2,865,043
GUIDE SPACER FOR SLIDE DOORS
Arthur Cox, Pasadena, Calif.
Application December 16, 1954, Serial No. 476,210
1 Claim. (Cl. 16—90)

A guide spacer as disclosed, including a pair of aligned channel members, each having a top and parallel side

signed pattern cut or otherwise formed in its cylindrical

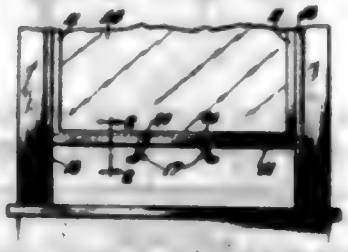
2,865,043

members, the side members of which are extended beyond the top, and a tongue, at least as wide as the tops, and



formed from abutting extensions of the contiguous ends of the tops, which project normal to the surface thereof.

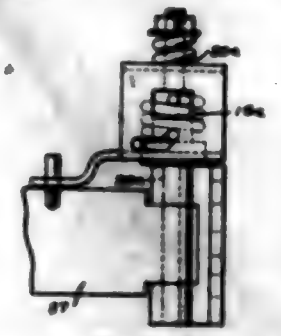
2,865,044
STORM WINDOW HANDLE CONSTRUCTION
Arthur E. Bielak, Nutley, N. J., assignor to Win-Chek, Inc., Hackensack, N. J.
Application April 20, 1956, Serial No. 579,617
1 Claim. (Cl. 16—115)



In a storm window, vertically slidably disposed within a window frame having a sill, and wherein the storm window comprises a bottom window sill engageable strip having a channel extending lengthwise and opening through the bottom thereof, a pivot pin secured in said strip and extending transversely thereof, the axis of said pivot pin being disposed a predetermined distance from the bottom wall of said channel, and a handle for moving said storm window vertically within the window frame, said handle comprising an elongated tab having a pivot pin receiving aperture therein adjacent one end thereof, the tab being defined by opposite parallel side walls, first and second straight edges at the opposite sides of said aperture and converging in a downward direction away from the aperture, the said edges respectively merging into convex and concave edges extending in a general direction away from said first edge and defining with portions of said side walls, a convex window sill engaging surface and a concave finger engageable surface, said one end of the tab being in obtuse angular relation to said first straight edge and in acute angular relation to said second straight edge, said tab having first and second rounded corner portions at the junctures of the first and second straight edges with said one end of the tab, the high point of said first rounded portion being spaced from the axis of said aperture a distance no greater than the aforementioned predetermined distance and the center of gravity of said tab being so disposed that when the tab is free of said window sill, the high point of the second rounded portion will engage the bottom wall of said channel and upon lowering of the storm window toward said sill, said convex surface will engage the sill and the tab will be swung about the pivot pin in a clockwise direction to a position within said channel.

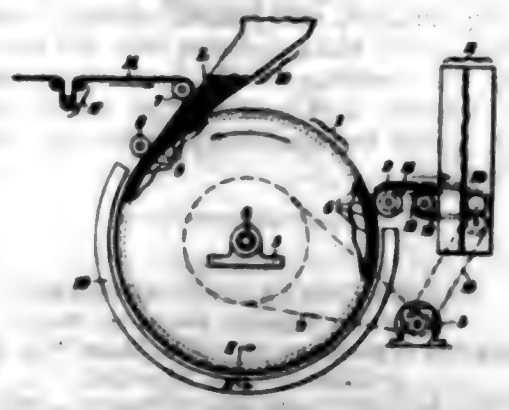
2,865,046
DOOR CHECK AND HOLD OPEN
Calvin K. Miller, Royal Oak, Mich., assignor to Soss Manufacturing Company, Detroit, Mich., a corporation of Maine
Application May 18, 1954, Serial No. 430,776
8 Claims. (Cl. 16—140)

8. A combined door check and hold open having in combination a housing for attachment to a pillar and provided with two openings, a shaft provided with a head at one end and arranged to turn in the housing, an arm secured on said shaft adapted to be connected to a door hinged on said pillar and displaced angularly with said shaft during opening of the door, a hinge arm, a hinge butt, said hinge arm and said hinge butt having knuckles secured thereon, said housing being fastened to said butt, said shaft passing through said knuckles to form the knuckle pin of the door hinge, a coiled spring clutch fitting on to the shaft in the housing and having ends projecting from the openings in the housing and thereby free to move angularly with respect to the housing for a limited distance, a resilient compression member operating between the housing and the shaft head to resist axial move-



ment of the shaft with respect to the housing to thereby hold one end of the spring in engagement with a portion of the opening in the housing from which it projects and thereby provide a breakable coupling between the arm and housing, which coupling normally causes the housing to tend to wrap the clutch spring around the shaft and hold the door open, and means for overcoming the resistance of the compression member by forced movement of the shaft axially when a closing force exerted on the door breaks this coupling and causes abutment with a portion of the opening from which it projects of the other end of the coiled spring clutch to open it and release the shaft so that the door can easily close.

2,865,046
APPARATUS AND METHOD FOR PRODUCING PATTERNED FOAM RUBBER COATED FABRICS
Whitworth F. Bird, Riverside, Conn., assignor to Collins & Aikman Corporation, Philadelphia, Pa., a corporation of Delaware
Application July 18, 1956, Serial No. 598,610
9 Claims. (Cl. 18—4)



1. A method of producing pattern latex foam covered fabric which comprises the steps of passing base material in continuous sheet form partway about a heated rotary drum having design indentations in its cylindrical surface; feeding ungelled latex foam between the drum and the base material in the region of tangential approach of the material to the drum; drawing the finished fabric from the drum after it has passed partway about the drum to gell the latex foam; and finally advancing the fabric through an after treating chamber to cure and vulcanize the latex.

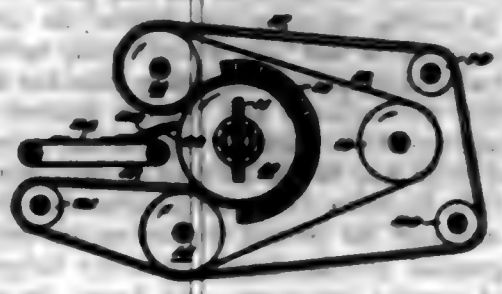
3. In apparatus for producing patterned latex foam coated fabric, a driven heated rotary drum having a de-

2,865,051
APPARATUS FOR INJECTION MOLDING

2,865,053
PERFABRIC TYPE CURTAIN RIB

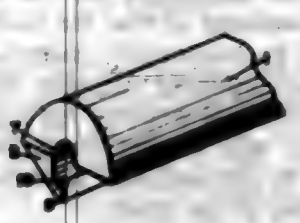
signed pattern cut or otherwise formed in its cylindrical surface; means for guiding the base material in sheet form to approach the drum at a tangent; means for feeding ungelled latex foam between the drum and the base fabric in the region of tangential approach of the fabric to the drum; an after treating chamber; and means for drawing the finished fabric from the drum after having passed partway about the drum to gell the latex foam and advancing the fabric through after treating chamber to cure and vulcanize the latex.

2,865,047
PROCESS AND APPARATUS FOR MOLDING MATS
James N. Mason, Winchester, Mass., assignor, by mesne assignments, to American Biltrite Rubber Company, Inc., a corporation of Delaware
Application November 3, 1955, Serial No. 544,658
2 Claims. (Cl. 18—6)



2. A process of molding individual mats of elastomeric compound, which comprises the steps of moving in a horizontal path a chain of separate open molds, charging each mold during such movement with a charge of elastomeric compound which becomes adhesive when heated, closing the molds progressively by pressing their open side against a heated moving surface thereby heating the charge and molding it against the contoured mold bottom, stripping the molds from said surface leaving the molded mats adhering thereto, and subsequently stripping the mats one by one from the heated surface.

2,865,048
EXTRUSION OF FILM
Ronald Augustus Hudson, Welwyn Garden City, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application June 11, 1956, Serial No. 590,635
Claims priority, application Great Britain July 6, 1955
1 Claim. (Cl. 18—12)

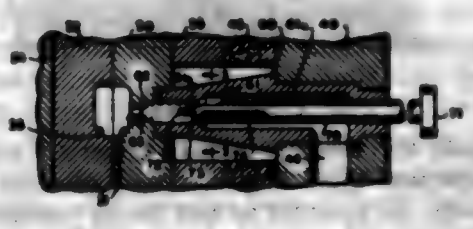


Apparatus for the extrusion of organic thermoplastic material in the molten state in the form of flat film having beaded edges, comprising a die body member and opposed lip members defining a slot orifice therebetween and terminating in an extrusion orifice, the facing slot-defining surfaces of said lip members being parallel and extending from said extrusion orifice inwardly to divergent wall sections, the width of said parallel slot-defining surfaces being uniform throughout the central portions thereof and reduced at the ends thereof by approach of said divergent wall sections more closely to said extrusion orifice.

2,865,049
RIM CENTERING DEVICE FOR TIRE RETREADING MOLDS
Arnold Duerksen, Lodi, Calif., assignor to Super Mold Corporation of California, a corporation of California
Application September 13, 1957, Serial No. 683,811
1 Claim. (Cl. 18—18)

The combination with a horizontal-axis full-circle tire retreading mold, having a tire engaged therein, an initially deflated curing tube in the tire, and an inside curing rim in the tire radially out from the beads of said tire and supporting the tube; of a rim centering hanger comprising a rigid shank extending radially of the tire and mold at the top and laterally out from the mold a sufficient distance for hand engagement, an upper arm rigid with the shank at the top overhanging and engaging the mold in the transverse central zone thereof, a lower arm on and rigid with the shank parallel to the upper arm radially inward of the tire and projecting laterally past one tire bead, and a post parallel to the shank rigid with and upstanding from the lower arm and engaging the curing rim at the top and centrally of its width and maintaining said rim centralized in the tire; the curing rim being exteriorly convex in cross section whereby when the shank is pulled laterally out from the mold the engagement of the post with the rim will be released to provide slack sufficient for the removal of the hanger from the mold.

2,865,050
VALVED GATE FOR AN INJECTION MOLDING PRESS
William Strauss, Philadelphia, Pa., assignor to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application June 6, 1955, Serial No. 513,475
3 Claims. (Cl. 18—30)



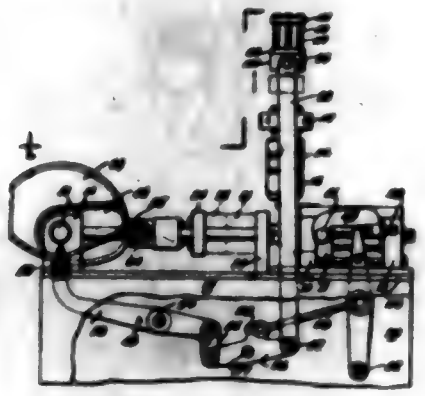
3. In an injection molding press, a pin valve member having one end thereof tapered to a smaller cross-section than the remainder of said pin valve member, a pin projecting from said tapered portion of said pin valve member having a cross-section smaller than the cross-section of the remainder of said pin valve member, and a plurality of flats extending lengthwise on the remainder of said pin valve member up to said tapered portion thereof.

ing and closing the nippers which comprises a pivotal lever arm pivotally mounted about a fixed pivot point, lever relative to the pivoted arm in said direction so that, after said catch has been disengaged from said fixed

vided with two openings, a shaft provided with a head at one end and arranged to turn in the housing, an arm

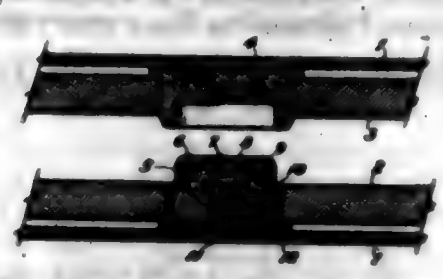
3. In apparatus for producing patterned latex foam coated fabric, a driven heated rotary drum having a de-

2,865,051
APPARATUS FOR INJECTION MOULDING PLASTIC ARTICLES
Gregory A. de Mattia, Nutley, and Marius P. de Mattia, Passaic, N. J.
Application July 19, 1957, Serial No. 672,920
9 Claims. (Cl. 18—30)



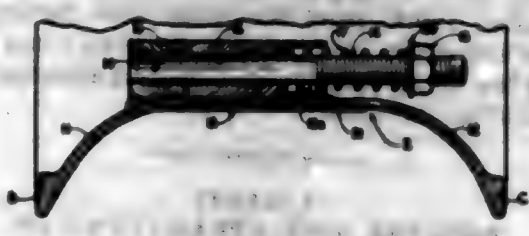
1. In an apparatus for forming thin-walled articles in the thin-walled cavities of plastic molds, of plastic material deposited in a chamber communicating with said mold, a plunger movably disposed in said chamber, means for imposing forces on the plunger urging the plunger toward the molds, means for moving the plunger in the chamber to a position away from the molds, against the force of said urging forces, latch means engaging the plunger to hold it in said position away from the molds, and means for disengaging the plunger latch means, releasing the plunger for movement, responsive to said urging forces, toward the molds from said position away from the molds, the plunger then instantaneously moving toward the molds under the full impact of the so-released forces exerted on the plunger and projecting the material from the chamber into said molds, thus completing a cycle of so forming said thin-walled articles, and means for automatically repeating said cycle.

2,865,052
VENTED MOLD FOR PLASTIC MATERIALS
Grayson W. Wheer, New Canaan, Conn., assignor to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York
Application October 4, 1955, Serial No. 538,312
6 Claims. (Cl. 18—34)



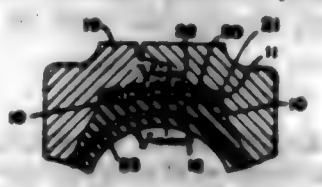
1. A mold for molding plastic materials which comprises companion mold members with recesses jointly to form a cavity, an aperture to said cavity providing means for the admission of plastic material thereinto, and a valve assembly for venting gases from said mold cavity during the molding operation which comprises a valve having a valve stem and a valve head, a valve frame adapted to receive said valve and faced at one end to seat said valve head, said valve assembly having means for interlocking the valve head and plastic material, means for transferring gases from said mold cavity through said valve assembly to the atmosphere, means for limiting the travel of said valve stem within said valve frame, and means for maintaining said valve in a normally open position.

2,865,053
RETREADING TIRE CURING RIM
Chalmer D. Holmes, Carlisle, Pa., assignor to Carlisle Corporation, a corporation of Delaware
Application January 26, 1956, Serial No. 561,474
6 Claims. (Cl. 18—45)



6. In an apparatus for retreading automobile tires, a tire curing rim unit comprising complementary annular collapsible rim structures, said structures having substantially identical diameters whereby they register to define a common and uniform circumference, a sleeve member having a recessed end portion anchored on one rim structure, a bolt member anchored on the said other rim structure and projecting through said sleeve, an adjustable member mounted on said bolt, a coil spring surrounding said bolt and engaging said adjustable member and said sleeve within the recessed end portion thereof tending to retain said structures together and having its compression varied according to the position of said member on said bolt, each structure comprising a plurality of pivoted segments mounted for pivotal movement on pivot pins, and a segmental annular flange structure integral with one of said annular structures, said flange structure extending laterally from said rim structure for partially lapping the companion rim structure.

2,865,054
METHOD OF FORMING TIRE TREADS
George V. Constantakis, Allen Park, Mich., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application June 14, 1955, Serial No. 515,679
9 Claims. (Cl. 18—59)



1. A method of forming the rubber tread of a tire comprising, incorporating hard traction elements in the rubber tread of the tire, vulcanizing and molding said tread by heating the tread and pressing it by application of pressure to the interior of the tire against a body of impressionable material so that the hard elements will be forced into the impressionable material, and then after vulcanization and molding stripping the tread from the impressionable material whereby the hard elements in the vulcanized tread will project from the surface of the tread so as to be immediately effective to increase the traction properties of the tread.

2,865,055
DRIVING MECHANISM FOR THE NIPPERS OF COMBING MACHINES
Fritz Schneemann, Ingolstadt, Germany, assignor to Deutscher Spinnereimaschinenbau Ingolstadt, Niederlassung der Schubert & Salzer Maschinenfabrik Aktiengesellschaft, Ingolstadt-Oberbayern, Germany, a corporation of Germany
Application February 23, 1955, Serial No. 490,067
Claims priority, application Germany March 3, 1954
4 Claims. (Cl. 19—116)

1. In a combing machine having nippers mounted in a fixed position, the improvement in the means for open-

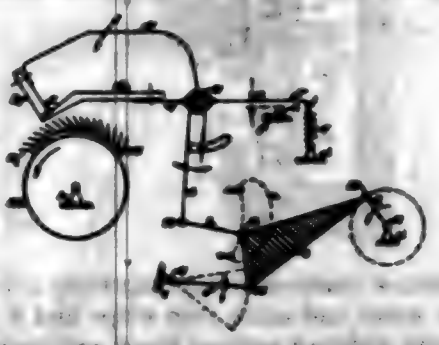
2,865,059
METAL JOINT BRIDGING

2,865,061

said extrusion orifice.

said pin valve member up to said tapered portion thereof.

ing and closing the nippers which comprises a pivotal lever arm pivotally mounted about a fixed pivot point and connected to the upper jaw of said nippers for opening and closing actuation thereof upon pivoting, a bell crank lever, a rocker arm pivotally mounted at one end thereof for pivoting about a fixed pivot point spaced apart from said first mentioned pivot point, a connecting rod, and a crank mounted for rotation about a fixed



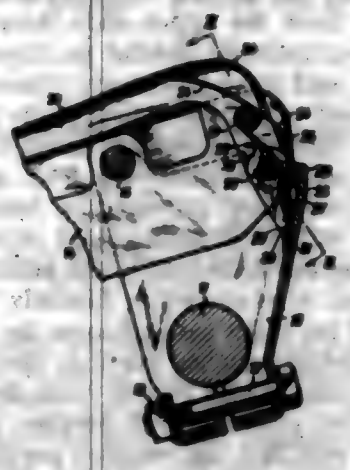
axis, said bell crank lever being pivotally connected at one end to the free end of said rocker arm and at the other end to said crank, said connecting rod being pivotally connected at one end thereof to said pivotal lever arm and at the other end to the angular apex of said bell crank lever and being so arranged, whereby, upon rotation of said crank, the angular apex of said bell crank lever describes a sausage-shaped curve.

2,865,056

TEXTILE DRAWING MECHANISM

Friedrich Kübler, Stuttgart-Bad Cannstatt, Germany, assignor to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung, Schweinfurt, Germany, a German company

Application December 26, 1956, Serial No. 630,669
Claims priority, application Germany January 4, 1956
15 Claims. (Cl. 19—135)



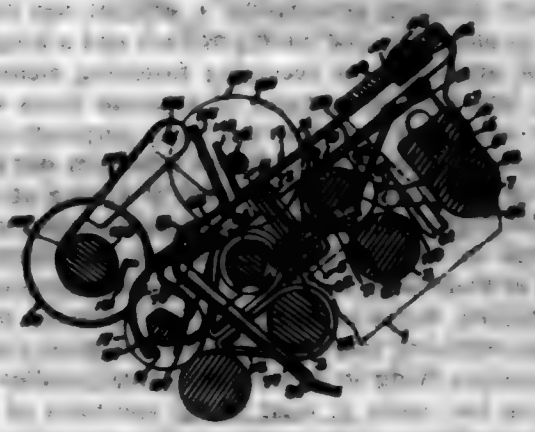
1. In a drawing mechanism for textile machinery having a fixed support, an arm pivoted on the support and carrying top rolls which are spring loaded against lower rolls in an operative position of the pivoted arm; a device for releasably locking the pivoted arm in its operative position against the reaction to the spring loading of the top rolls and for moving the pivoted arm to and from the operative position thereof, said device comprising a lever pivoted on said arm and having a portion adapted to bear downwardly against the latter, a catch pivotally mounted on said lever, a fixed stop engageable by said catch when said portion of the lever bears downwardly upon the pivoted arm with the latter in the operative position thereof to prevent displacement of the pivoted arm away from said operative position, said catch being disengaged from said fixed stop by swinging of said lever relative to the pivoted arm in the direction moving said portion of the lever away from the pivoted arm, and means limiting the swinging of said lever relative to the pivoted arm in said direction so that, after said catch has been disengaged from said fixed stop, continued swinging of said lever in said direction effects movement of the pivoted arm away from its operative position.

2,865,057

TOP ROLL GUIDES

Louis M. Catchett and Richard K. Butler, Whitman, Mass., assignors, by mesne assignments, to Textile Engineering Corporation, Whitman, Mass., a corporation of Massachusetts

Application December 24, 1952, Serial No. 327,821
41 Claims. (Cl. 19—137)



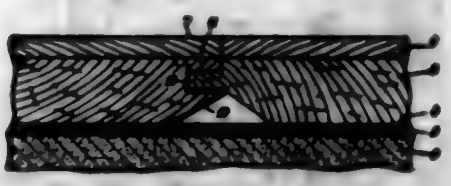
1. A roll guide for maintaining the necked top rolls of a textile drafting apparatus in position over the bottom rolls thereof, consisting of a member engaging a fixed part of the apparatus and thereby confined to bodily movement solely in a vertical plane and having a forwardly extensible portion holding the front top roll by the latter's neck, and a second member engaging a fixed part of the apparatus and likewise confined to bodily movement solely in a vertical plane and holding the rear top roll by its neck, and having a forwardly extensible portion holding the middle top roll by its neck.

2,865,058

COMPOSITE FLOORS

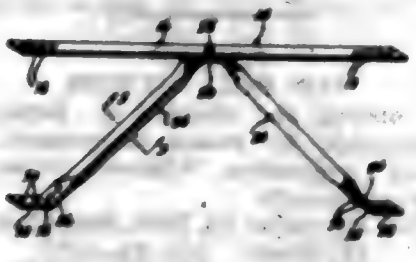
Sven Åke Andersson and Arvid Gerhard Magnusson, Nybro, Sweden, assignors to Gustaf Kihlr, Stockholm, Sweden

Application April 4, 1956, Serial No. 576,137
Claims priority, application Sweden April 12, 1955
4 Claims. (Cl. 20—7)



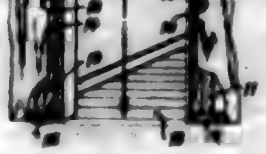
2. In a floor structure, the combination with a sub-floor having a substantially flat upper surface, of a covering layer provided on said sub-floor and consisting of a material allowing depressions, a plurality of spaced metal clamping strips depressed loosely into the surface of said covering layer along their whole length and having stamped-out and upwardly bent tongues equidistant from one another, and a wooden floor entirely free of said sub-floor and composed of lengths of laminated boards pressed tightly together by said tongues and comprising a wearing parquet layer glued to a lower layer provided with tongues and grooves, and said boards having different parts extending with the grain direction in the longitudinal and transverse direction of the board to counteract swelling and shrinking and resting freely with their entire lower surface on the covering layer and having a width, which is considerably greater than three times their thickness and corresponds to the distance between the tongues of the clamping strips.

2,865,659
METAL JOIST BRIDGING
Douglas J. Scriven, London, Ontario, Canada
Application April 13, 1956, Serial No. 577,977
3 Claims. (Cl. 20—9)



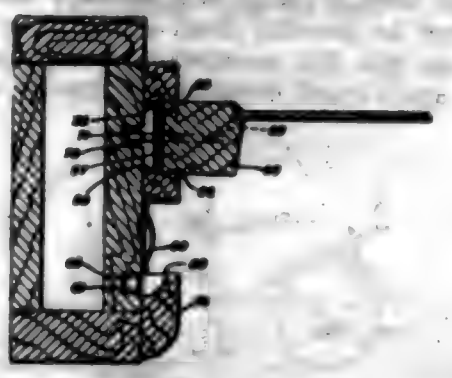
1. Joist bridging comprising a straight top bar lying wholly in one plane and having at each end a longitudinal series of apertures for receiving fastening elements extending into the top surfaces of adjacent joists with the top bar extending between the joists perpendicularly to the length and planes thereof; and a bottom bar approximately in the shape of an inverted V having at its apex short, flat bight portions in face to face contact with and connected to the top bar, the bottom bar having legs formed at their outer ends each with an extension having a longitudinal series of apertures for receiving fastening elements extending into the bottom surfaces of said joists, the extensions lying in a common plane parallel to that of the top bar, some at least of the apertures of the top bar being aligned with corresponding apertures of the respective extensions along lines perpendicular to said planes of the extensions and top bar, at least the bottom bar being of material bendable along lines extending transversely of its end portions and bight, for bending of the legs of the bottom bar into selected angular relationships relative to one another and to the top bar, and for bending of the divergent ends of the legs along lines extending transversely thereof to provide said extensions bearing against the bottom surfaces of joists, while maintaining the extension in a common plane parallel to that of the top bar with the apertures of the top bar and extensions being maintained in alignment.

2,865,660
DOOR FRAME MOUNTING AND METHOD OF PROCEDURE
Alois W. Puttiani, Oakland, Calif.
Application April 11, 1955, Serial No. 500,555
4 Claims. (Cl. 20—11)



1. The method of setting a finished door frame in a building wall having a roughly framed timbered doorway opening larger than the finished door frame, which comprises establishing a plumb line between the confronting faces of the doorway framing, forming a plurality of grooves in said framing and spaced along said confronting faces, and extending at right angles through said doorway, all to the same depth as measured from said plumb line respectively as to said faces, positioning filler blocks of uniform thickness in said grooves to project therefrom for locating the finished door frame thereagainst to its final vertical position, and placing and securing the finished door frame in place against said blocks.

2,865,661
WINDOW CONSTRUCTION
Aloysius T. Kunkel, Akron, Ohio
Application November 14, 1952, Serial No. 320,422
3 Claims. (Cl. 20—42)



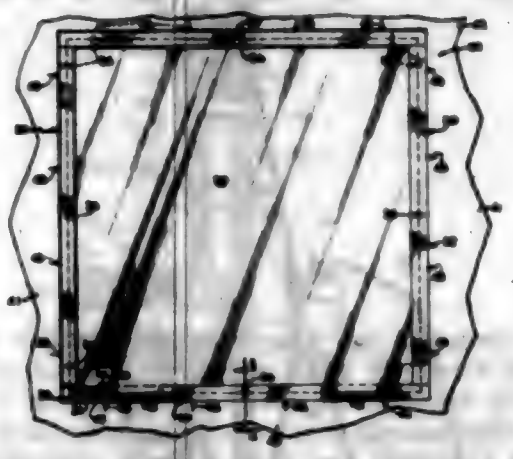
1. A window construction, comprising a frame having side jambs, inner and outer stop strips and a parting strip on each jamb defining vertical inner and outer guideways along the same, top and bottom sashes slidable in said inner and outer guideways, respectively, sealing strips resiliently mounted along said guideways for yieldingly engaging the edges of said sashes, pivot means adjacent the bottom of said guideways, bottom portions of said sashes being pivotally engageable with said pivot means in lowered positions of the sashes, at least a substantial proportion of said inner stop strips being detachable to permit pivoting of said inner sash about the pivot means thereof in said lowered position of the inner sash, said outer sash being narrower than said inner sash, the breadth between inwardly opposite faces of the lower end portions of said parting strips being sufficiently increased with respect to the upper portions thereof to permit inward passage therebetween of the relatively narrow outer sash but not outward passage of the relatively wider inner sash, whereby is permitted inward pivoting of said outer sash about the pivot means thereof in the lowered position of the outer sash, the sealing strips in said outer guideways extending from the upper ends thereof to at least adjacent the longitudinally central portions thereof, the sealing strips of said inner guideways extending from the lower ends thereof to at least adjacent the longitudinally central portions thereof, elongated weight-counterbalancing means extending coextensively with respect to the guideways and connected between the frame and lower portions of the respective sashes, said upper sash pivot means comprising plates secured to the jambs at the lower ends thereof, and pins extending laterally outwardly of the side edges of the upper sash adjacent the bottom thereof, said plates having notched portions opening inwardly for pivotal reception of said pins in vertically lowered position of the upper sash, and cam portions on said plates for guiding the pins into the notched portions when the upper sash is lowered to the pivotal position thereof.

2,865,662
WINDOW SASH CONSTRUCTIONS
Fred Hiemmel and Isidore Hiemmel, New Haven, Conn.
Application July 1, 1954, Serial No. 440,602
3 Claims. (Cl. 20—56.4)

1. In a sash assembly, a pair of cooperating extruded metal sash members, one of said members comprising a backing member having a substantially planar horizontally disposed mounting plate, a rear wall portion extending upwardly and forwardly from the inner edge of the mounting plate and terminating in a face adapted to engage one side of a pane of glass; the other of said members constituting a resilient face member comprising a forward wall portion extending upwardly and rearwardly from a location adjacent the plane defined by said mounting plate, said forward wall portion terminating in a face adapted to engage the other side of a pane of glass, and

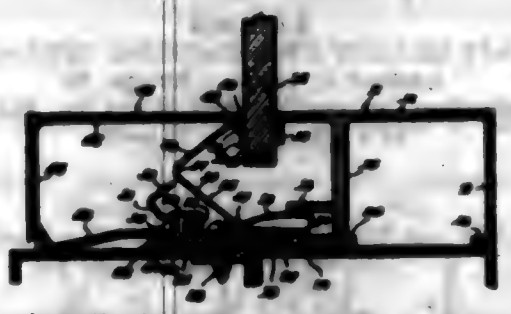
erating mechanism is connected being displaced angu- portion of said annular removable member, two addi-

a rearwardly directed leg integral with said forward wall portion extending generally parallel to and in sliding substantially face-to-face relationship with said mounting plate, said leg including a bridge section extending transversely of said backing member, said bridge section being interrupted along the longitudinal extent of said sash member by a series of spaced apertures formed therein, the longitudinal extent of each aperture being at least



equal to the spacing between adjacent apertures in the series; said face member having a longitudinally extending flange rising from the inner edge of said bridge section, and screw means extending through the wall portion of said backing member into engagement with said flange for transmitting a rearwardly directed biasing force on said face member solely through said bridge section and forward wall portion to the pane-engaging face thereof.

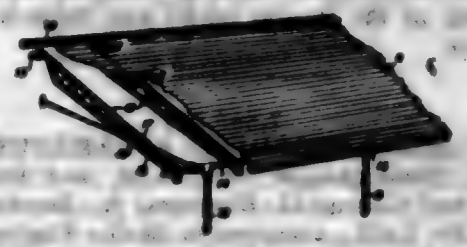
2,865,063
SPRING CLIP
George D. Hartshorn, Harvey, Ill., assignor to Bruce Manufacturing Company, Harvey, Ill., a corporation of Delaware
Application November 7, 1957, Serial No. 695,091
6 Claims. (Cl. 20—56.4)



1. A spring clip for glass pane sash mounting consisting of a spring member fashioned intermediate its ends into a U-shape end portion and into a base portion and also into a combined glass pane engaging and outer sash member holding portion, the said base portion resting upon and supported by the bottom portion of an inner sash member and having an offset portion in engagement with a rib on the said bottom portion of the inner sash member and also having an outward extension for engagement with a portion of an outer sash member, the said glass pane and outer sash member holding portion consisting of a plurality of spring portions angularly connected with each other in continuous form and terminating in an angular flange in engagement with both the glass pane and a portion of the outer sash member.

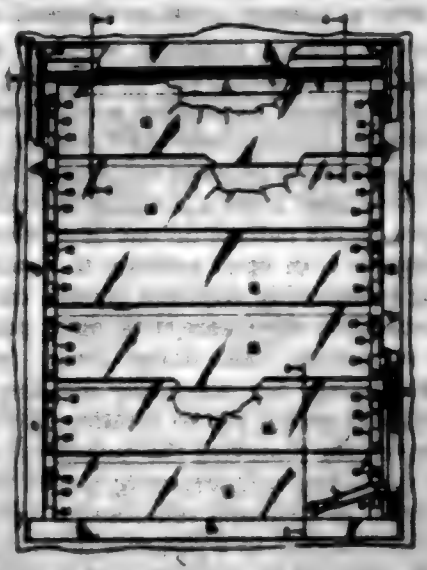
2,865,064
METAL AWNING AND LOCKING MEANS THEREFOR
John P. Rapin, Albany, N. Y., assignor to Charles P. Rapin, Albany, N. Y.
Application July 11, 1956, Serial No. 597,198
1 Claim. (Cl. 20—67.5)

A patio awning assemblage including a supporting frame to rest upon a ground surface, a plurality of truss rafters, and a fabric of slats of sheet material, each being roll-formed longitudinally with oppositely curled longitudinal edges to provide beads, which beads are interlockingly secured together at their edges, said rafters including spaced upper and lower rafter elements, the upper element of which is of flat strip material and supports said fabric, and a clip formed from a single blank of resilient sheet metal provided with a first hook to engage the inter-



locked beads of adjacent slats, and the remainder of said clip being formed into flat, parallel portions, connected together at one end and open at the other, one portion of which terminates in a second snap-retaining hook, and said portions being spaced apart a distance equal to the thickness of said flat strip, which strip is embraced by said parallel portions and said second snap-retaining hook to secure said fabric to said upper element.

2,865,065
WINDOW CONSTRUCTION
Salvatore J. Spasaro, Hackensack, N. J.
Application June 13, 1955, Serial No. 515,187
7 Claims. (Cl. 20—62)



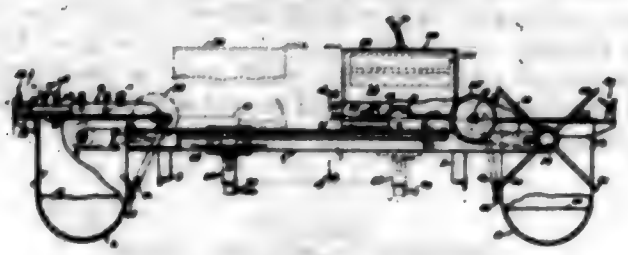
7. In a jalousie window construction, a plurality of window sections and a supporting frame therefor, each of said window sections comprising a pane of transparent material and a supporting clip arm at each end thereof, said clip arms having each a clip portion for engaging the end margin of the pane and an actuating portion, means for pivotally mounting said clip arms on said frame, an actuating bar on each side of said window frame, said respective actuating bars being connected to the actuating portions of the adjacent clip arms, a shaft mounted for rocking movement in said frame and extending from side-to-side thereof, equal length arms projecting from said rock shaft near the opposite ends thereof, pivotal connections between said arms and said actuating bars at the respective opposite sides of the window frame, operating mechanism for opening and closing said window sections, said mechanism being operatively connected to one of said actuating bars so as to effect movement of the clip arms connected therewith and so as to impart rocking movement to said shaft, the arm projecting from said shaft at the side of the window remote from the actuating bar to which the op-

2,865,069

2,865,071

erating mechanism is connected being displaced angularly ahead of the corresponding arm at the other side of the window, in the direction of turning movement when the operating mechanism is actuated to close the window sections, by such amount as to so compensate for slack and torsion that when said operating mechanism is moved to close said window sections the clip arms on the opposite sides of the window frame will exert substantially equal turning moments upon the opposite ends of the several panes and cause a tight closing thereof.

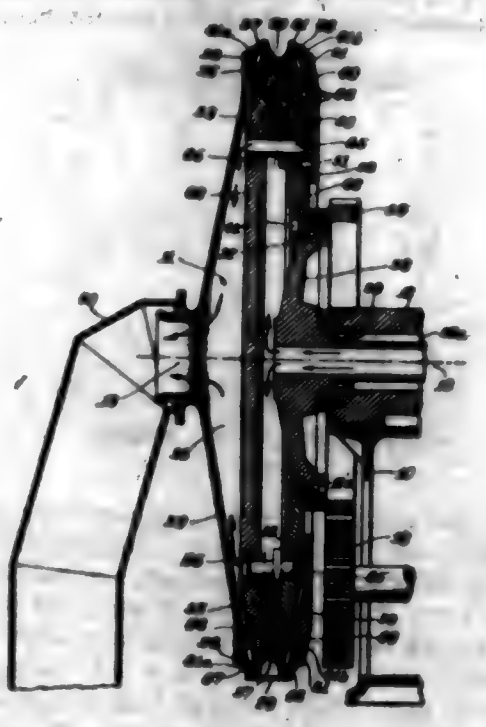
2,865,866
SHELL MOLDING APPARATUS
Frank K. Shallenberger, Palo Alto, and Edward Krupotich and George H. Bingham, Jr., Stanford Village, Palo Alto, Calif., assignors to Shalco Engineering Corporation, Palo Alto, Calif., a corporation of California
Application March 2, 1953, Serial No. 339,562
24 Claims. (Cl. 22—29)



1. Shell molding apparatus comprising a pair of spaced dump boxes for containing molding material and having corresponding open ends, each of said dump boxes being provided with a pattern support adapted to receive a pattern thereon, means hingedly securing said supports to said dump boxes respectively for swinging said patterns from closed positions extending across said open ends to open positions substantially 180 degrees therefrom, a curing oven positioned between said dump boxes and supported for movement from a position in heat transmitting relationship with the pattern on one of said supports when said one support is in open position to a position in heat transmitting relationship with the pattern on the other of said supports when the latter is in open position, means swingably supporting said dump boxes for movement through 180 degrees for depositing molding material on said patterns and means for so rotating said dump boxes, stripping means for removing the mold from said patterns and means supporing said stripping means for movement from a position in stripping relationship with the pattern in one of said supports to a position in stripping relationship with the pattern in the other of said supports.

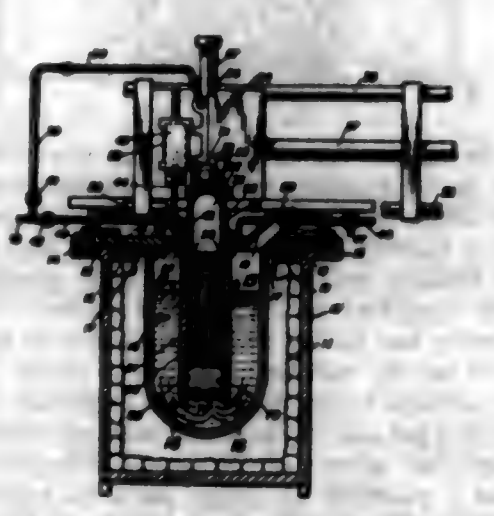
2,865,867
CONTINUOUS CASTING MACHINE
Ilario Properzi, Milan, Italy
Continuation of application Serial No. 542,685, October 25, 1955. This application February 6, 1957, Serial No. 638,660
13 Claims. (Cl. 22—57.4)

13. In a machine for the continuous casting of molten metal having a rotating drum assembly and having thereon an annular removable member with a peripheral casting groove therein and an annular body portion therewith extending radially inwardly from the peripheral casting groove, the combination for supporting the annular removable member in the drum assembly and for directing liquid coolant from within the drum assembly to areas adjacent the peripheral groove for cooling metal being cast in the groove, including first two wall means spaced from one another and having said annular removable member peripherally thereof to form an inner chamber defined by said first two wall means and the annular body portion of said annular removable member, two additional wall means with each thereof secured to said annular removable member at a corresponding side and serving with a corresponding one of said first two wall means to provide an outer liquid coolant chamber at each side of the drum assembly and outwardly of said inner chamber extending radially adjacent a side of the



peripheral groove, means introducing liquid coolant into said inner chamber, and means providing liquid coolant passages out of said inner chamber through said annular body portion and through said two outer chambers to accomplish circulation of the liquid coolant adjacent the peripheral groove to cool the metal adapted to be cast therein.

2,865,868
APPARATUS FOR CASTING METAL
Andrew C. Dunn, Chicago, Ill.
Application October 18, 1954, Serial No. 462,701
15 Claims. (Cl. 22—69)



1. A casting mold comprising a plurality of mold sections having an inlet associated therewith and a check valve in said inlet, to permit flow of liquid into said mold under pressure but to prevent reverse flow, said valve including a controlling member and a fixed seat forming a part of said inlet and a removable portion which becomes embedded in the molded material when the mold is filled, the division of said mold into a plurality of sections passes through and divides said inlet, exposing said removable portion for removal with the molded material.

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tending through said opening and the aperture in said boss, pivotally mounting said clamp plate on said base

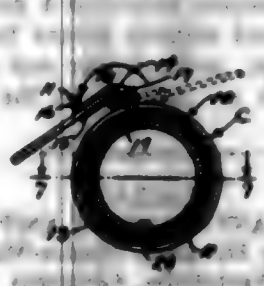
wardly extending trunnion by which the pull tab may be pivotally attached to a slider, at least one of said bifurca-

frame to rest upon a ground surface, a plurality of truss window remote from the actuating bar to which the op-

2,865,669
NECK BAND HOLDER FOR TABLE NAPKINS AND THE LIKE
Charles B. Gamble, Birmingham, Ala.
Application May 4, 1956, Serial No. 582,857
1 Claim. (Cl. 24—9)

As an article of manufacture, an elongated ribbon of flexible material adopted to serve as a neck band for holding a table napkin in place on the upper part of a person's body, said ribbon having a circular hole extending therethrough adjacent each end thereof, a separate piece of adhesive having a tacky area on one side thereof adhesively secured to the ribbon over each of the holes with the tacky areas facing the holes, the separate pieces of adhesive being generally square and of substantially the same width as the ribbon and the ribbon being folded intermediate its length with each of said tacky areas adhesively securing the ends of the ribbon together through the holes thereby protecting the tacky areas until used on the napkin and holding the ends of the ribbon together, and projecting free ends on the ribbon beyond said holes forming pull tabs by means of which the ends may be separated for placing the ribbon about a person's neck whereby the tacky areas may be separated from the adjacent ends of the ribbon and stuck to a napkin, one of said free ends extending beyond the other free end so that said ends may be easily grasped for separating same.

2,865,670
CLAMP FOR SECURING A HOSE TO A NOZZLE OR COUPLING
Wilma V. Sechler, Milwaukee, Wis., assignor to Harry Nick, Milwaukee, Wis.
Application October 30, 1957, Serial No. 693,374
4 Claims. (Cl. 24—28)

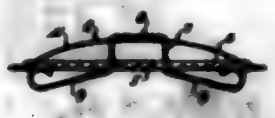


2. A device for securing a hose in intimate gripping contact with a coupling or the like comprising a hose clamping member formed from a single strand of wire and including a pair of concentric open rings and a bight portion connecting the rings together at one end, said rings terminating at the other end in straight portions, and a saddle pivotally mounted upon the bight portion and having a pair of spaced parallel sleeves slidably receiving the straight portions and an out-turned cam face, the saddle being swingable on the bight portion with the cam face engaging the rings and bending said rings and contracting the rings into intimate gripping contact with the hose.

2,865,671
INCONSPICUOUS CORD WINDING AND STORING DEVICE
George S. Clemens, Chicago, Ill.
Application November 1, 1955, Serial No. 544,214
1 Claim. (Cl. 24—71.2)

A winding and storing device for an elongated electric cord adapted to lie flat on, and inconspicuously blend in with, a floor covering to create the illusion that the device is smaller than it is, the device comprising: a flat base made of transparent material having a circular disk portion and an upstanding centrally disposed sleeve, the sleeve defining a pair of longitudinal slots located in opposed relation on a common diameter and adapted to receive the cord, the sleeve further having a pair of opposed outwardly tapering locking flats in spaced relation to the disk portion and having their greatest reach along a diameter normal to the diameter defined by the slots, whereby the sleeve may be flexed to reduce the reach of the locking flats; and a cover of transparent material having a circular disk portion with a depending skirt, the skirt having a pair of opposed marginal openings to receive the cord, the circular disk portion further having a centrally disposed opening adapted to pass over the locking flats of the sleeve when the sleeve is flexed to collapsed condition and to seat against the flats and hold the skirt in engagement with the base when the sleeve is not collapsed.

2,865,672
BOW TIE AND FRAME MEANS THEREFOR
Robert J. Klever, Akron, Ohio
Application September 27, 1956, Serial No. 612,509
5 Claims. (Cl. 24—61)



1. A frame for use in a bow tie and comprising a flat bar, a wire having a substantially U-shaped center section, said U-shaped center section having legs extending through said bar and having end holding sections diverging from said U-shaped section, said U-shaped section and end holding sections being formed as a unit from a single wire, and a spring compressed between said flat bar and the base of said U-shaped section urging said U-shaped wire section away from said bar to draw said end holding sections resiliently against a face of said bar whereby collar means can be engaged by the end sections of said bar and by said end holding sections by an automatic holding action of said spring.

2,865,673
LINK CLAMP
Harold R. Mawson, Peoria, Ill.
Application May 28, 1954, Serial No. 433,959
3 Claims. (Cl. 24—134)

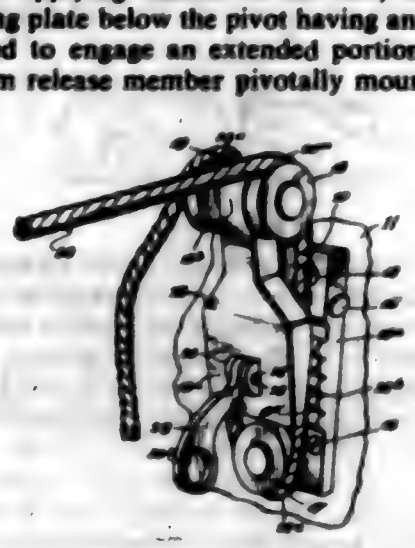
3. A line clamp of the character described, comprising: a flat base plate adapted to be secured to support means, the lower portion of the base plate being corrugated and the base plate having an opening therein centrally located above the corrugated portion; a flat clamping plate having an apertured boss intermediate the ends thereof and adapted to extend into said opening; a pivot pin journalled in said base member and ex-

having a continuous base wall portion and opposite side wall portions, said continuous base wall portions being

thereof, said ring surrounding the adjacent end of said inner mold and said covering for forming the inner ends

member peripherally thereof to form an inner chamber defined by said first two wall means and the annular body exposing said removable portion for removal with the molded material.

tending through said opening and the aperture in said boss, pivotally mounting said clamp plate on said base plate and in spaced relation thereto, whereby a line passed over the portion of the clamping plate above the pivot and between the clamping and base plates is secured therebetween by applying tension to the line, the portion of the clamping plate below the pivot having an inclined portion adapted to engage an extended portion of the line; a single cam release member pivotally mounted centrally



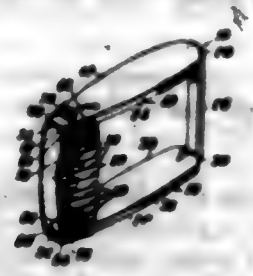
of said clamping plate below said pivot and having an end extending therethrough for engagement with said base plate on movement of said cam member, continued movement of the cam member bringing it into an over centered position locking the line clamp open, the surface of said base plate adjacent the end of said cam member being smooth whereby movement of the cam member into engagement with the base plate effects release of said line.

2,865,074

BUCKLE FOR REVERSIBLE BELTS

William H. Meeker, Rochester, N. Y., assignor to Hickok Manufacturing Company, Inc., Rochester, N. Y., a corporation of New York

Application September 4, 1952, Serial No. 308,320
19 Claims. (Cl. 24—188)



1. A buckle for permanent attachment to an end of and functioning with reversible belts comprising a belt attachment portion consisting of a pair of side bars and a rear bar fixedly joining the side bars at common ends so as to maintain the other and free end portions in spaced relationship, and a belt holding portion reversibly pivotally carried by and forming the sole connection between said free end portions of said bars and embodying a body having an inner belt opposing face and a belt engaging member on said face and lying inwardly of and between the free end portions of said bars.

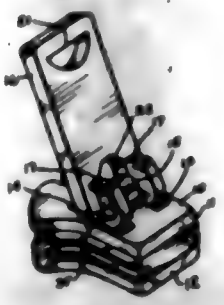
2,865,073

CAM LOCKS FOR ZIPPER FASTENERS

Osborne Firing, Woodbury, and Otto J. Hoelster, Plymouth, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Application April 18, 1956, Serial No. 579,015
3 Claims. (Cl. 24—205.14)

1. A cam lock slider for zipper fasteners, a rectangular flat metal pull tab comprising a body portion having a central aperture adjacent one end so as to provide bifurcations at that end, each bifurcation having an inwardly extending trunnion by which the pull tab may be pivotally attached to a slider, at least one of said bifurcations having a longitudinal extension adjacent said end which has a U-bend beyond the body portion of the pull tab and which extension when bent, underlies the body portion of the pull tab on one side of said aperture, said extension projecting inwardly beyond the U-bend a substantial distance along the underside of the pull



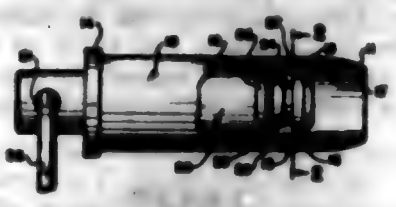
tab to form a locking cam whose height is substantially greater than the thickness of the metal of the pull tab, such cam having a laterally outwardly opening recess and a solid web of metal in supporting contact with the pull tab throughout the length of that portion of such cam which extends inwardly from the U-bend, such laterally opening recess and solid web of metal resulting from transverse swaging of the metal of said extension which underlies the pull tab.

2,865,076

QUICK RELEASE SELF-LOCKING SHEAR PIN

Richard W. Newton, Lake Ronkonkoma, and Harold E. Koch, Lindenhurst, N. Y., assignors to Harold E. Koch, Lindenhurst, N. Y.

Application February 16, 1954, Serial No. 410,546
7 Claims. (Cl. 24—211)



1. A locking pin comprising a hollow outer casing having an external surface, an internal surface, and a circumferential channel therein opening into said external surface, a member within said channel extending above said external surface, said member being distortable to a position below said external surface, and also distortable from a position below to a position above said external surface, and slidable means for causing distortion of said member, said member and said means being in contact through an opening in the bottom of said channel.

2,865,077

FASTENING-CLAMP

Wolfgang Hennig, Nieder-Marsberg, Westphalia, Germany

Application December 21, 1953, Serial No. 399,313
Claims priority, application Germany February 24, 1953
8 Claims. (Cl. 24—230)

1. A clamping device comprising, in combination, first and second substantially U-shaped support means, each

tracing the rings into intimate gripping contact with the hose.

the ends thereof and adapted to extend into said opening; a pivot pin journalled in said base member and ex-

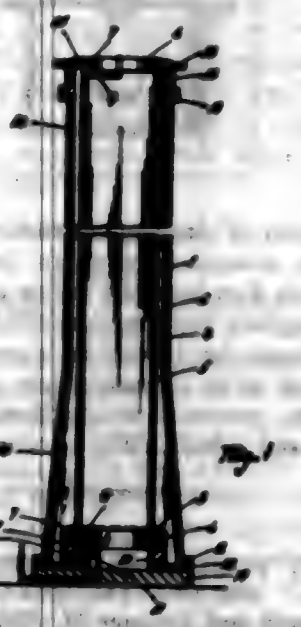
having a continuous base wall portion and opposite side wall portions, said continuous base wall portions being adapted to be encompassed, respectively, by the free ends of a clamping band surrounding a tubular member; first and second tightening members arranged between said side wall portions of said first and second support means, respectively; first and second mounting means for mounting said first and second tightening members on said side wall portions of said first and second support means, respectively, for pivotal movement relative thereto and also for sliding movement relative thereto toward and away from each respective continuous base wall portion along a path extending in a direction inclined thereto so that upon movement of each tightening member toward the continuous base wall portion of the respective support means the clamping band lying upon the inner face of such continuous base wall portion will be wedged thereagainst, said first and second support means being in alignment with each other and arranged opposite each other in such a manner that the regions of said first and second support means wherein said respective paths are nearer to said respective continuous base wall portions than in the regions wherein said respective paths are spaced further from said respective continuous base wall portions are closer to each other than the last-mentioned regions; and tightening means connected to said first and second tightening members for moving the same toward each other whereby the clamping band surrounding the tubular member and having its free ends lying upon the inner faces of said continuous base wall portions of said first and second support means, respectively, will be wedged thereagainst and be tightened about the tubular member or the like during tightening of said tightening means.

2,865,078

DEVICE FOR USE IN THE MANUFACTURE OF SPIGOT AND SOCKET PIPES OF CONCRETE HAVING PRE-TENSIONED REINFORCEMENTS

Erik David Valter Hasselblad, Malmo, Sweden, assignor to Aktiebolaget Tryckrör, Limhamn, Sweden, a corporation of Sweden

Application June 27, 1955, Serial No. 518,315
2 Claims. (Cl. 25—127)



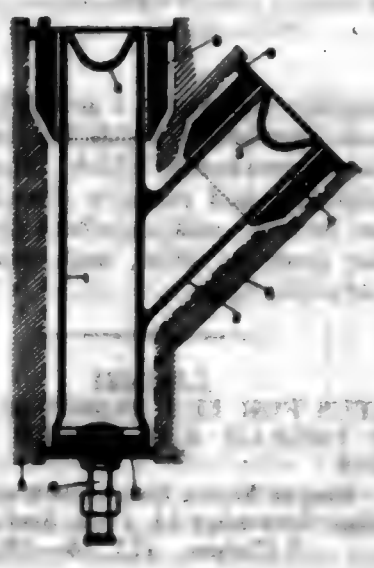
1. A device for use in the manufacture of spigot and socket pipes of concrete comprising a resiliently expansible outer mold, a substantially rigid inner mold, an expansible cover surrounding said inner mold, fluid pressure means for expanding said covering, a rigid ring open on both ends mounted on one end of said outer mold in abutting and radially slidable relationship as an extension thereof, said ring surrounding the adjacent end of said inner mold and said covering for forming the spigot ends of the pipe, a reinforcing rod retaining ring against the free end of said rigid ring for retaining reinforcing rods which extend therethrough in position between said outer and inner molds, a socket mold associated with said inner mold at the opposite end from the said rigid ring, an expansible covering surrounding said socket mold and having a larger diameter than the expansible covering surrounding said inner mold for forming the socket ends of the pipes to match the spigot end thereof, reinforcing rod retaining means around said socket mold for retaining the ends of reinforcing rods in position between said outer mold and said socket mold, and fluid pressure means for expanding said expansible covering surrounding said socket mold.

2,865,079

PROCESS FOR SHAPING IN A MOLD A MOLDABLE MATERIAL IN THE FORM OF HOLLOW BODIES OF NON-UNIFORM CROSS SECTION, BY EMPLOYING AN INFLATABLE INNER BAG AND YIELDING ELEMENTS PLACED ON SAID INNER BAG

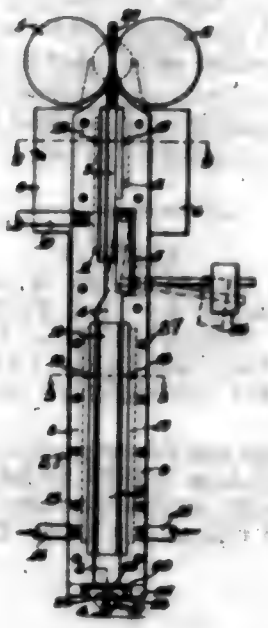
Giorgio Marchioli and Giuseppe Grenzigni, Milan, Italy

Application June 2, 1955, Serial No. 512,906
Claims priority, application Italy April 13, 1955
5 Claims. (Cl. 25—128)



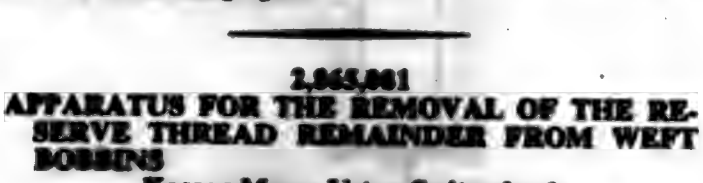
1. An inflatable core for forming in a rigid mould a hollow body that includes a plurality of joined portions having circular cross-sections which are arranged with their axes angularly displaced from each other and at least one of which has an end part of increased internal diameter; said core comprising an inflatable body having a plurality of connected cylindrical portions corresponding to the portions of the hollow body to be formed and arranged with their axes similarly angularly displaced from each other and an apertured wall between the interiors of said cylindrical portions of the inflatable body, and at least one annular, yieldable element having an external configuration corresponding to the internal shape of the end part of increased internal diameter and removably fitting on the one of said cylindrical portions corresponding to the related portion of the hollow body to be formed, said annular, yieldable element having an internal diameter substantially greater than the normal uninflated outer diameter of the related cylindrical portion so that said yieldable element is held on the latter only following initial inflation of said body and is capable of being expanded by the latter in response to further inflation for transmitting molding pressure to the molding material thereabout.

2,865,080
METHOD AND APPARATUS FOR CRIMPING AND RELAXING FILAMENTS
Robert Adolf Andrew Hentschel, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application October 28, 1953, Serial No. 388,909
9 Claims. (Cl. 28—1)



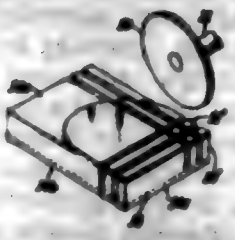
1. In apparatus comprising a stuffer-box crimper having a pressure chamber in which filamentary material is crimped, the improvement which comprises a second chamber adjoining said pressure chamber and a pressurized door between said chambers capable of closing one chamber from the other, each chamber having an inlet for a softening agent.

2,865,081
APPARATUS FOR THE REMOVAL OF THE RESERVE THREAD REMAINDER FROM WEFT BOBBINS
Kaspar Moos, Uster, Switzerland
Application November 13, 1956, Serial No. 621,801
9 Claims. (Cl. 28—19)



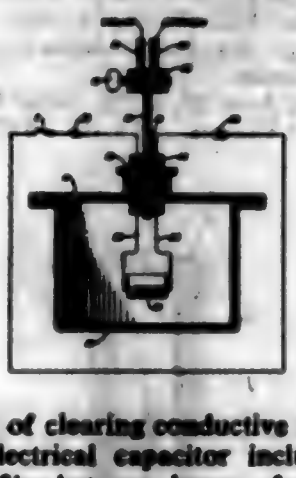
1. A machine for the removal of the reserve thread remainder of weft bobbins for automatic machines, comprising in combination a slot-shaped guide, supporting the bobbins to be conveyed by their heads, with their shanks pointing downward, and at least one endless conveying device making frictional contact with the bobbins at their heads, and conveying them while they are being rotated at the same time in the direction of unwinding the thread, a thread stripping device, with a soft adhering body, moving with a rotational motion from above to below over the bobbin shank, and means for the intermittent stoppage of the conveying motion, limiting it to a rotation of the bobbin about its own axis in the direction of unwinding, and a thread removal device and immediately in front of it a pipe for compressed air whose stream of compressed air forces the end of the thread to unwind from the bobbin and enter into the neighborhood of said thread removal device.

2,865,082
SEMICONDUCTOR MOUNT AND METHOD
Paul R. Gates, Danvers, Mass., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application July 16, 1953, Serial No. 368,373
1 Claim. (Cl. 29—25.3)



In the manufacture of semiconductor devices, the steps including preparing a semiconductor wafer, fixing said wafer in abutment against one surface of a conductive support, severing said wafer and support by intersecting cuts normal to said one surface to provide individual semiconductor units each having an integral part of said support defined by said intersecting cuts, the intersecting cuts being common to both said wafer and support and terminating short of a surface of said support opposing said one surface to leave a temporary part of said support common to said individual semiconductor units, and removing said temporary part of said support to separate said semiconductor units.

2,865,083
METHOD OF CLEARING ELECTRICAL CAPACITORS
Joseph A. Kotor, Chatham, and John R. Weeks, Jr., South Orange, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application May 3, 1951, Serial No. 224,372
8 Claims. (Cl. 29—25.42)



1. The method of clearing conductive regions in the dielectric of an electrical capacitor including a thermoplastic dielectric film between layers of conducting material which comprises applying a controllable direct-current potential between the layers in a non-oxidizing atmosphere consisting of an elemental gas, said potential being greater than the potential which the capacitor is designed to withstand, and subsequently heat sealing the capacitor.

2,865,084
CUTTING TOOL AND INSERT CLAMPING MEANS THEREFOR
Henry T. Wendt and Delmer H. Rhine, Hannibal, Mo., assignors to Wendt-Sonis Company, Hannibal, Mo., a corporation of Missouri
Application April 14, 1954, Serial No. 423,495
1 Claim. (Cl. 29—96)

In a cutting tool of the type utilizing a flat, parallel-surfaced, replaceable cutting insert, the improvement comprising means for using optionally a flat, parallel-surfaced chip-breaker insert thereon, comprising a tool body having a recess within which such cutting insert

2,865,085
ARTICLE ASSEMBLING APPARATUS

operatively connected to said fingers to move them be-

and chip-breaker insert may be accommodated, a bearing surface on the tool body at a level substantially intermediate the depth of such chip-breaker insert when in place within the recess, together with a bridging clamp including two spaced, downwardly-presented force-concentrating projections of unequal length, their inequality being approximately half the thickness of such chip-breaker insert, the span of the clamp between said projections extending from over the tool body recess to over

the tool body bearing surface, and means intermediate said clamp projections whereby to secure the clamp with the shorter projection exerting a clamping force against the upper surface of such chip-breaker insert and the longer projection bearing against the bearing surface of the tool body, said bridging clamp being reversible so that when such chip-breaker insert is removed, the longer clamp projection may be brought to bear against the upper surface of such cutting insert and the shorter projection against the tool body bearing surface.

2,865,885

PREPARATION OF MAGNETIC MATERIALS AND MAGNETIC MEMBERS

Albert J. Cornish, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application July 30, 1954
Serial No. 446,945
7 Claims. (Cl. 29—155.6)

1. In the process of preparing a magnetic material from bismuth and manganese, the steps comprising intimately admixing powdered bismuth and manganese in equimolecular proportions, the powdered bismuth and manganese comprising particles of an average diameter of not over 10 microns, the particles of each material being coated or smeared with the other material and heating the admixed powders while in an unpressed condition in an inert atmosphere to a temperature just below the melting point of bismuth but not less than 260° C. for a period of time whereby a product comprising substantially all highly magnetic MnBi alloy in a readily powdered form is produced.

2,865,886

METHOD OF MAKING A TOROIDAL MAGNETIC DEVICE

Richard R. Whipple, Haverhill, Mass., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application March 16, 1953, Serial No. 342,398
2 Claims. (Cl. 29—155.57)

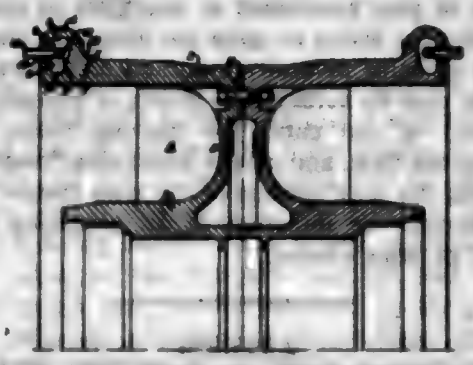
1. The method of making a toroidal electromagnetic device with a substantially radially segmented toroidal core which comprises applying a non-conductive flanged, winding supporting tube having an inner diameter slightly larger than the outer diameter of the segment to the ends of each segment of the core whereby one end of each segment protrudes beyond the flange of the tubular member secured thereto and the other end is recessed a like distance within the other tubular member thereon, applying a winding on each segment and the tubes thereon which winding extends the full distance between the flanges, assembling the segments by telescoping the unwound portion of one segment within the winding protruding end of another segment to form a coil having a continuous core and a substantially full 360 degree winding, and interconnecting the windings on the segments in a desired circuit arrangement.

2,865,887

METHOD OF MANUFACTURING A WHEEL

René Lucien, Paris, France, assignor to Societe d'Inventions Aeronautiques et Mecaniques S. I. A. M., Fribourg, Switzerland, a societe anonyme of Switzerland

Application November 30, 1953, Serial No. 395,185
Claims priority, application France August 4, 1953
2 Claims. (Cl. 29—159)



1. A process of molding a wheel with a toridal cavity comprising shaping a mold to the desired outer configuration of the wheel, inserting a toroidal core into the mold, supporting the toroidal core with a circular hollow tube supported on a plurality of axially extending hollow tubes, filling the mold with molding material, curing the material and venting the resultant gases through the hollow tubes, the core forming a toroidal cavity in the wheel and the hollow tubes forming orifices connected to the cavity, inserting a cutting tool through the orifices to cut the circular hollow tube and toroidal core into sections, and withdrawing the sections through the orifices.

2,865,888

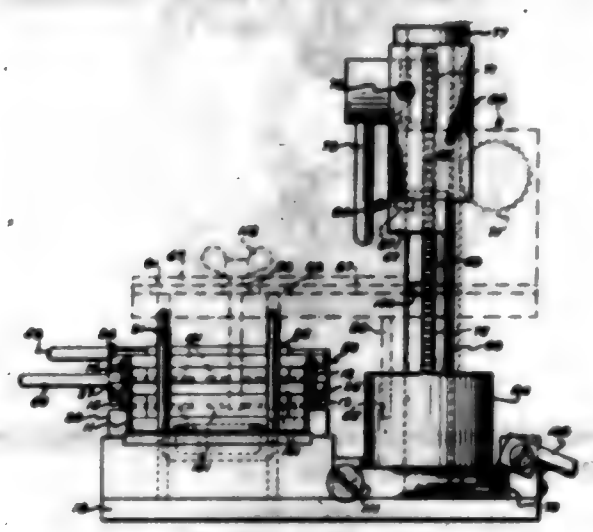
REFRACTORY METAL BODIES

Leonard F. Yntema, Waukegan, Ill., and Iver E. Campbell, Gahanna, Ohio, assignors, by direct and mesne assignments, to Fansteel Metallurgical Corporation, North Chicago, Ill., a corporation of New York

No Drawing. Application October 16, 1952
Serial No. 315,184
4 Claims. (Cl. 29—194)

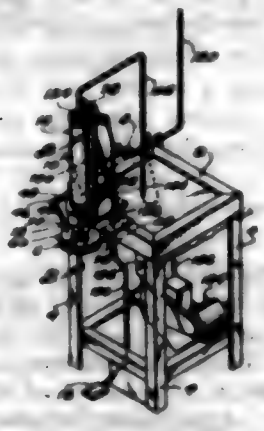
1. As an article of manufacture, a refractory metal body resistant to oxidation at elevated temperatures comprising a molybdenum base having an exterior layer composed predominantly of an alloy or intermetallic composition of molybdenum, silicon and chromium in the approximate proportions of 59% molybdenum, 37% silicon and 4% chromium.

2,865,089
ARTICLE ASSEMBLING APPARATUS
George R. Machlan, North Riverside, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application January 31, 1958, Serial No. 485,219
3 Claims. (Cl. 29—203)



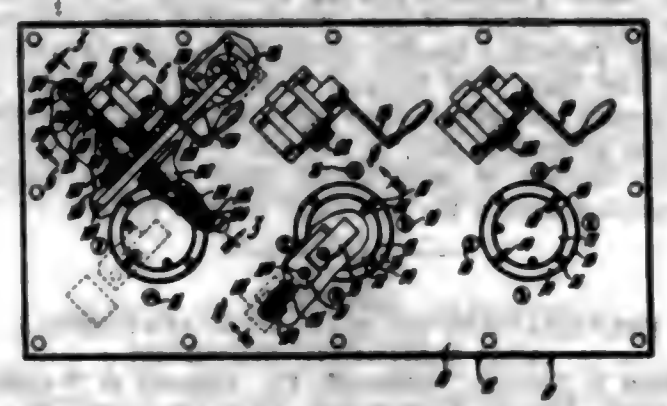
1. A device for assembling wire spring relay brackets and wire combs having wire springs actuated by an apertured card, comprising a base for supporting the bracket, a carriage slidably mounted on the base, a plurality of levers pivotally mounted on the carriage for engaging a plurality of resilient fingers of the bracket to spread them to permit the insertion of a pileup of wire combs therein, a plurality of pins positioned in apertures in the carriage for actuating the levers to open the fingers of the bracket, a plurality of cams pivotally mounted on the carriage for moving the pins to actuate the levers, a plurality of handles secured to the cams for moving them, a frame mounted on the base, and means depending from the frame for engaging the wire springs of the wire combs to deflect them to permit the insertion of an actuating card into the pileup of wire combs.

2,865,090
MACHINE FOR ASSEMBLING EYES IN DOLL HEADS
David Cohn, Brooklyn, N. Y., assignor to Model Plastics Corporation, White Plains, N. Y., a corporation of New York
Application February 8, 1954, Serial No. 408,813
9 Claims. (Cl. 29—209)



1. A machine for inserting individual dolls' eyes into a stretchable socket in a doll's head, said machine comprising a frame including a support having an aperture, fingers adapted to be inserted within said socket extending from one side of said support and being mounted on said support so as to be movable between a first position adapted to be received within said socket and a second position outwardly spaced from said first position, means operatively connected to said fingers to move them between said positions, an element mounted on said frame, said element being movable between a first position remote from said support on said other side thereof and a second position passing through said aperture and inside said fingers when the latter are in their second position, means operatively connected to said element for moving it between its first and second positions, and means on said element for releasably holding a doll's eye, said element being adapted to move through and beyond said fingers to insert said doll's eye in said stretchable socket and strip said socket off the fingers upon continued movement of the element.

2,865,091
RING ASSEMBLY FIXTURE
Frank M. Prucha, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 30, 1954, Serial No. 478,796
3 Claims. (Cl. 29—222)



1. In a piston ring assembly machine having an arbor adapted to retain a plurality of piston rings and to receive a piston member upon one end thereof, said arbor being reciprocal within a base member for displacing said rings from said arbor and upon said piston member, means automatically initiating the operation of said machine upon the receipt of a piston member upon said arbor which includes a switch member operatively connected to means for axially moving said arbor, said switch member being mounted upon said base member for relative movement with said arbor, means biasing said switch member in engagement with said arbor, and switch actuating means disposed within said arbor for engagement by a piston member received upon the end of said arbor, said last-mentioned means actuating said switch without overcoming said biasing means.

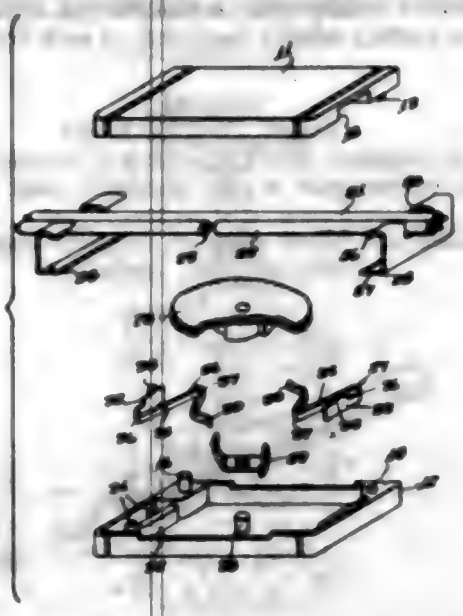
2,865,092
METHOD OF ROTATABLY MOUNTING A FIRST MEMBER UPON A SECOND MEMBER
Charles E. Gilbert, New York, N. Y.; Edwin J. Flinn, Margaret Doris Gilbert and Norman Coates, executors of the estate of Charles E. Gilbert, deceased
Original application December 26, 1950, Serial No. 202,782, now Patent No. 2,723,337, dated November 8, 1955. Divided and this application February 17, 1955, Serial No. 488,730
3 Claims. (Cl. 29—432)

1. The method of rotatably mounting a first member upon a second member comprising the steps of providing a post projecting from said first member, providing a bore on said second member adapted slidably to engage said post, providing a pointed projection on said second member extending transversely partially into said bore, said projection being of harder material than said post whereby said projection is adapted to score and cut a groove in said post, forcing said second member bore over said post to cause said projection to cut a longitu-

minating in a guard portion, and a cap element slidably

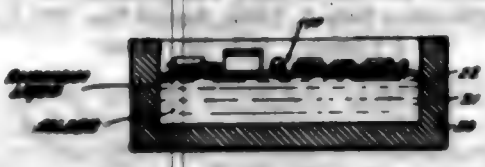
said yoke on the end of said second shaft, said second

dinal groove in said post, and thereafter rotating said second member to cause said projection to cut a closed circular groove around said post with said projection



within said groove, whereby said projection substantially prevents said second member from moving longitudinally of said post while permitting free relative rotary movement of said first member.

2,865,093
METHOD OF SILVER DIP SOLDERING
Grover R. Ingram, Reading, Ohio, assignor to General Electric Company, a corporation of New York
Application May 28, 1957, Serial No. 660,131
4 Claims. (Cl. 29—488)

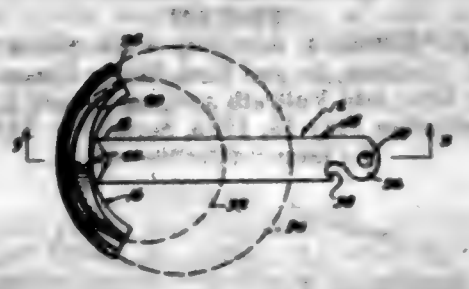


1. A method of dip soldering an assembly having a sheet of high temperature insulating material, at least a single electrical conductor disposed on a surface of said sheet, at least a single small diameter aperture located in said sheet and associated with said conductor, and at least one electrical lead positioned in said aperture which comprises dipping said assembly in a molten silver solder bath having a covering layer of molten aluminum thereon, immersing said electrical lead in said silver solder bath to form a solder connection in said small diameter aperture between said conductor and said lead, and removing said assembly from said bath.

2,865,094
METHOD OF SECURING A COUPLING TO AN END OF A HIGH TEMPERATURE FLEXIBLE HOSE
Irving D. Frost, West Orange, N. J., assignor to Resistoflex Corporation, Belleville, N. J., a corporation of New York
Application October 4, 1954, Serial No. 461,825
2 Claims. (Cl. 29—506)

1. The method of providing a permanent coupling assembly of the end of a hose, having a wire braid covering a plastic tube of a material having the substantially inelastic and limited cold flow characteristics of polytetrafluoroethylene, a metal nipple portion with external circumferential ribs extending within the tube, and a metal socket portion with internal circumferential ribbing outside said braid overlying said tube and nipple portion and joined to said nipple portion beyond the end of the hose; which comprises the steps of crimping the socket portion down onto the braid to take up any clearance therebetween; continuing the crimping of the socket portion while the nipple portion is free to contract until the nipple portion has had its internal diameter permanently reduced at least .002 inch, and the hose end has been apparently completely and permanently assembled to the coupling; and thereafter with the socket portion radially unconfined, radially expanding the nipple portion along with the hose end to expand the socket portion within its elastic limit.

2,865,095
CAN OPENER
James Frances Mahoney, Manchester, N. H.
Application July 18, 1958, Serial No. 749,375
3 Claims. (Cl. 30—16)



1. A can opener comprising an elongated handle, a head in the form of a sector positioned with the concave face facing toward said handle transversely of said handle adjacent one end of said handle and fixedly secured at its midpoint to said handle one end, an upstanding blade conformably shaped to a sector positioned below said head adjacent the concave face of said head and having the upper end fixedly attached to the portion of said head adjacent said head concave face, and an upstanding hook conformably shaped to a sector positioned outwardly of said blade and adjacent the convex face of said blade and dependingly secured to the portion of said head adjacent the convex face thereof.

2,865,096
MAGAZINE TYPE SAFETY RAZOR
Eugene Hasset, Santa Cruz, Calif., and Gabriel H. Bolik, Portland, Oreg.
Application October 1, 1956, Serial No. 613,201
5 Claims. (Cl. 30—40)

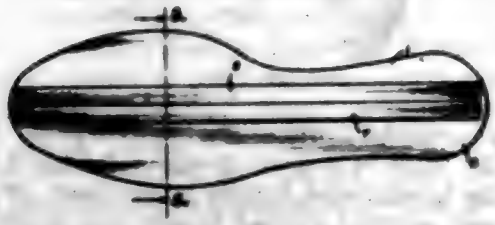
1. In a safety razor comprising a body portion having a blade retention chamber adapted to hold a supply of stacked blades at one end of said body portion, a blade delivery plane presented by said body portion with its inner edge adjacent said chamber and its outer edge ter-

lip of said suture-gripping element cooperating to squeeze

2,865,103

minating in a guard portion, and a cap element slidably mounted on said body portion for reciprocation over said chamber and blade delivery plane, the inner surface of said cap element having engaging means adapted to engage a blade when said cap element is moved forwardly over said chamber, means operatively interposed between said cap element and body portion for regulating the reciprocal movement of said cap element relative to said body portion between three distinct positions, said means comprising a releasable first limit means limiting before release reciprocal movement of said cap element between a loading position wherein said engaging means is positioned rearwardly of a blade supply held by said chamber and a shaving position wherein a blade engaged by said engaging means is positioned adjacent said guard portion, and a second limit means defining an ejection position for said cap element when said cap element is forwardly of said shaving position, said engaging means of said cap element in said ejection position moving a blade out over said guard portion for ejection, said cap element being adjustable to said ejection position only after release of said first limit means.

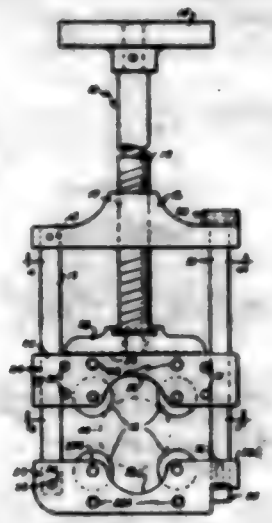
2,865,097
INNERSOLE LINING FOR SHOES
Harry C. Vollrath, Jr. and Ruth Eloise Conner, Kansas City, Mo.; said Vollrath assignor to said Conner
Application May 16, 1956, Serial No. 585,283
1 Claim. (Cl. 36—43)



A slip-in liner for a shoe comprising, a layer of plastic material of approximately one and one-half iron thickness and of substantially the size of the inside of the sole of said shoe, a thin layer of unsized cotton material of the same size of said plastic material, means securing said cotton material to said plastic material to form a one-piece structure, a narrow strip of thin material extending longitudinally of the plastic material side of said liner, said strip having an adhesive coating material on both sides thereof, a removable layer of protective covering material for the exposed side of said strip, whereby said liner may be cut to fit the shoe and said protective covering is adapted to be removed and the liner inserted into the shoe so that the adhesive surface of the strip will adhere to the inside sole portion of the shoe to hold the same securely in place while the shoe is being worn, said plastic material being moisture absorbent to absorb the moisture from the foot through said cotton material and outside moisture leaking through the sole of the shoe.

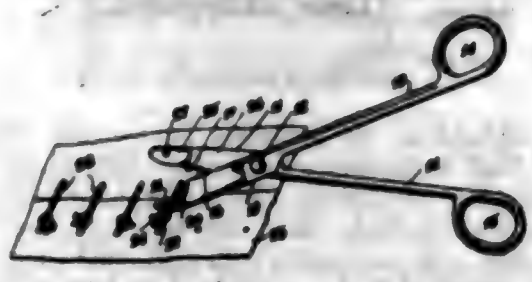
2,865,098
TUBING AND PIPE CUTTER
Louis Joseph and Anthony J. DiPietro, Brooklyn, N. Y.
Application January 2, 1958, Serial No. 706,625
3 Claims. (Cl. 30—101)

1. A cutting tool for tubular elements which includes a central supporting element, a first and second shaft attached to said element in spaced relationship, said first shaft permanently affixed and said second shaft removable, a threadably mounted operating screw with a handle affixed at one end thereof, said operating screw threaded through said central element and provided with a rotatably supported shoe at its opposite end, a pair of yokes, said first yoke pivotally affixed at one end on the end of said first shaft and means to retain the opposite end of said yoke on the end of said second shaft, said second yoke slidably guided at both ends between said two shafts and slidably positioned between said central element and said first yoke, said first and second shafts retained in parallel spaced relationship, a plurality of cutting wheels, one pair of cutting wheels mounted on said first yoke and



another pair of cutting wheels mounted on said second yoke, said first and second yokes positioned with the cutting wheels in opposed relation, said cutting wheels rotatably mounted on said yokes and protruding beyond the surface of said yokes, said shoe abutting with one side of said second yoke to provide the means to impress the desired cutting pressure in operation of said cutter.

2,865,099
SCISSOR INSTRUMENT
Robert C. Blackwood, Larchmont, N. Y.
Application July 3, 1956, Serial No. 595,626
1 Claim. (Cl. 30—134)



A pair of surgical scissors comprising a first blade having a concave cutting edge on its inner surface near its free end, the portion of the outer surface of said blade adjacent to said cutting edge tapering towards said cutting edge forming a shoulder along said cutting edge increasing in thickness as it recedes therefrom, a second blade pivotally connected to said first blade and having a substantially straight cutting edge on its inner surface to cooperate with said concave cutting edge, a suture-gripping element comprising a body having an inside surface mounted in engagement with the inner surface of the second blade near its free end opposite to said concave cutting edge of the first blade, the side of said body facing said concave cutting edge constituting a recess wall having a convex periphery and shaped to form a V section with said inner surface of the second blade to cooperate with said shoulder of the first blade, the outer surface of said body terminating in a lip spaced from said inner surface and extending beyond its cutting edge, said wall and lip in conjunction with said inner surface forming a recess receiving said concave cutting edge and shoulder of the first blade and the suture to be severed, and means integral with said blades for manually bringing said blades together and separating them, said shoulder of said first blade and said wall and

presented for measurement in the measuring field of the device, said device comprising a casing having a cover

2,865,106
GEOMETRICAL MEASURING AND DRAFTING

sembly of the end of a hose, having a wire braid covering inner edge adjacent said chamber and its outer edge ter-

lip of said suture-gripping element cooperating to squeeze a suture between them when said suture and shoulder enter said recess in the course of bringing said blades together to shear said suture, and to retain said suture in said recess until said blades are separated.

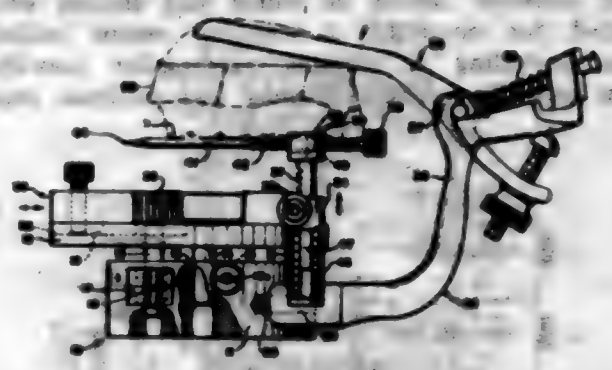
2,865,100
DEBURRING TOOL
Richard E. Gilbert, San Mateo, Calif., assignor to United Air Lines, Inc., Chicago, Ill., a corporation of Delaware
Application February 8, 1956, Serial No. 564,290
4 Claims. (Cl. 30—317)

1. A cutting tool comprising a shaft, said shaft having a main shank and an offset end portion disposed parallel thereto, a cutting head comprising a substantially spiral band having a substantially V-shaped notch disposed in the outer end portion thereof, said notch having opposed cutting edges, the inner end portion of said spiral band interlocking in nonrotatable relationship with said shaft offset end portion, said cutting head V-shaped notch being spaced from the axis of said main shank in a direction substantially opposite to that of the offsetting of said shaft offset portion from said axis.

2,865,101
DENTAL ENGINE HEAD ASSEMBLY
Henri Leonard, Besancon, France, assignor to ETS. Garnier & Fils, Besancon, France, a French company
Application July 12, 1957, Serial No. 671,482
Claims priority, application France July 17, 1956
2 Claims. (Cl. 33—26)

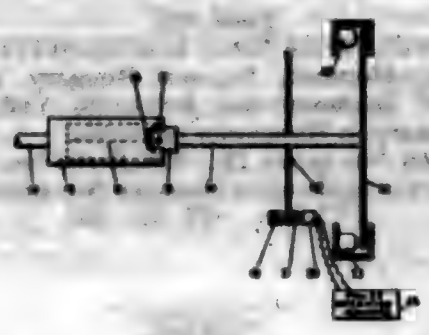
1. A dental head assembly comprising a tubular body having a coupling extension at its rear end engageable with coupling means on a dental engine, a spindle extending coaxially in said body, gripper means at the front end of the spindle for releasably gripping a dental tool, driver means at the rear end of the spindle engageable with driving means on the dental engine when said body is coupled to the latter, a front bearing in said body for rotatably supporting the spindle in the body adjacent the front end thereof, a rear bearing for rotatably supporting the spindle in the body adjacent the rear end of the spindle, internal shoulder means in the body engageable by the front side of said rear bearing, and a retainer sleeve which is slotted for radial resiliency and fitting in said body for engagement of the front end of the sleeve with the rear side of the rear bearing, the rear end of the sleeve being engageable with the coupling means of the dental engine when said body is coupled to the dental engine so that the coupling means retains the rear bearing in position against said shoulder means.

2,865,102
APPARATUS AND METHOD FOR PREPARATION OF ARTIFICIAL DENTURES
Joseph Zeisigber, Savannah, Ga.
Application March 16, 1955, Serial No. 494,682
9 Claims. (Cl. 33—32)



1. A device for use in the construction of artificial dentures including a holder upon which a maxillary cast may be mounted, and positioning means whereby said cast may be positioned for mounting on said holder, said positioning means having a knife edge for providing co-level support to the hamular notches of said maxillary cast and a rod having a free end extending normal to said knife edge to support the endpoint of the anterior portion of said maxillary cast.

2,865,103
SHAFT ROTATION DETERMINING APPARATUS
Raymond Alan Lolley, St. Albans, and John Gibson Padbury, Welwyn Garden City, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application February 9, 1956, Serial No. 564,608
Claims priority, application Great Britain February 17, 1955
10 Claims. (Cl. 33—1)



1. Apparatus for measuring the amount of angular movement of a shaft comprising a rotatable means mounted coaxially with said shaft, a coaxial thin metal wire elastically coupling said rotatable means to said shaft, said wire producing a torque tending to restore said rotatable means to a neutral relative position between said shaft and said rotatable means when there is angular displacement from said neutral relative position, damping means controlling the movement of said rotatable means whereby said rotatable means is displaced from neutral relative position when there is movement of said shaft, and means to measure the total angular movement of said rotatable means.

2,865,104
UNIVERSAL MEASURING INDICATOR
Hans Moritz Hemmldt, Wetzlar, Hesse, Germany
Application March 8, 1956, Serial No. 570,364
Claims priority, application Germany March 11, 1955
13 Claims. (Cl. 33—1)

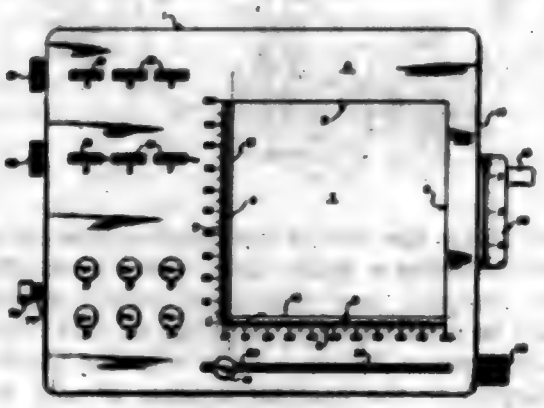
1. A device, including a measuring field provided with with a screen, for carrying out evaluations, measurements, comparison tests and the like of area or line patterns

2,865,105

said first shaft and means to retain the opposite end of

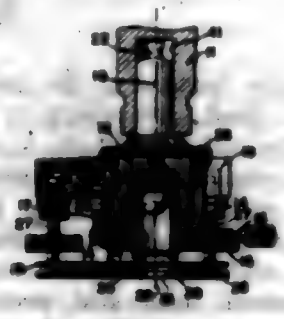
them, said shoulder of said first blade and said wall and

presented for measurement in the measuring field of the device, said device comprising a casing having a cover presenting a cover surface, the measuring field being formed by a rectangular cut-out in the cover of the casing, the screen comprising an endless web operable beneath the cover across the measuring field, a pair of spaced conveyer rollers on which said endless web is mounted for operation, a scanning means including means providing a variable rectangular coordinate system including abscissa means and ordinate means,



one of the coordinates of the coordinate system comprising a thin transverse line on the endless web, marginal scales on the cover surface along sides of the measuring field for respectively reading the abscissa and the ordinate of the coordinate system, means for moving the abscissa means and the ordinate means across the measuring field, and a counter means mechanically connected with at least one of the moving means for recording the coordinate measurements on the measuring field of the coordinate means mechanically connected with the counter means.

2,865,105
MULTIPURPOSE THEODOLITE
Antal Tircsy-Hernoch, Sopron, Hungary, assignor to "Licencia" Talalmanyokat Ertekesito Vallalat, Budapest, Hungary, a Hungarian enterprise
Application November 29, 1954, Serial No. 471,841
Claims priority, application Hungary November 28, 1953
3 Claims. (Cl. 33—46)



1. A multipurpose theodolite having a base portion, a trunnion arranged for rotation in said base portion, a downwardly open axial cavity in said trunnion, a target means in said axial cavity for being surveyed from below said base portion, a light source means within said cavity for illuminating said target means, an upright means on said trunnion, a top portion comprising a measuring instrument, and a socket means with a cavity on said top portion for axially slidable engagement with said upright means so as to enable said top portion to be detachably supported by said base portion, the cross sections of said upright means and said cavity, respectively, being selected so as to prevent mutual rotation of said upright means and said socket means when engaged with one another.

2,865,106
GEOMETRICAL MEASURING AND DRAFTING INSTRUMENT
Frank N. Murdock, Pacific Palisades, Calif.
Application June 9, 1955, Serial No. 514,147
1 Claim. (Cl. 33—199)

A three point divider comprising, in combination, two relatively rigid legs hingedly connected together for relative angular swinging movements toward and from one another about an axis which is substantially perpendicular to both legs and fixed in position on both legs, relatively rigid links each having one end hingedly connected to the mid-portion of one of the legs for swinging movements about an axis substantially parallel to the first mentioned axis, means connecting the other ends of said links for angular movements relative to one another as the legs are moved toward and from one another, pointed elements secured to the unconnected ends of each of the legs at positions such that each of the points of the pointed elements is in a straight line relationship with the first mentioned axis and the axis of connection of one of the links to the leg upon which the pointed element is secured, hingedly connected auxiliary links, an arcuate element having portions along which each of said first named links is longitudinally movable, a third pointed element connected to said first named links through the hingedly connected auxiliary links and the arcuate element so that the point thereof is aligned with the points of the pointed elements on the legs, and said legs, links and axes being so relatively disposed that a straight line connecting the point on the third pointed element to the axis of the hinge connection between one of said first named links and one leg is parallel to the straight line connecting the axes and point of the pointed element on the other leg.

2,865,107
LINE HOLDER FOR MASONS, CARPENTERS AND OTHER WORKMEN
Peter George Castano, Brockton, Mass.
Application October 11, 1954, Serial No. 461,449
2 Claims. (Cl. 33—35)

1. A mason's line holder comprising a bracket including a pair of flat plates, an annular connector of narrower cross section than at least one of said plates and securing the plates in a position at right angles to and spaced from each other, said one of said plates having a groove in its work contacting surface adapted to receive a mason's line, said plates being spaced from each other at their adjacent edges to provide a passageway for said line to extend through, said narrower portion of said annular connector having a notch in the periphery thereof, said notch being in alignment with said groove with the mason's line extending directly from said groove to said notch.

in position against said shoulder means.

comparison tests and the like of area or line patterns

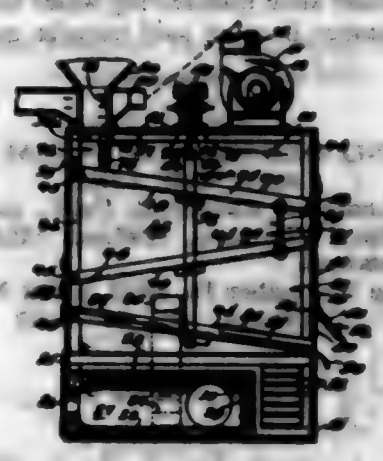
2,865,108
COMPOUND MEASURING INSTRUMENT
Charles N. Lengyel, Chicago, Ill.
Application January 10, 1956, Serial No. 558,256
6 Claims. (Cl. 33—167)

2. The combination of a micrometer head having a barrel and a micrometer screw threaded therein and a spindle connected to the screw and projecting from one end thereof and a thimble connected to the screw and telescoped over said barrel, a scale on said barrel having transversely scribed graduations and an indicia arranged in an ascending progression from said one end of said barrel toward the other on one side thereof and in a descending arithmetic progression on the other side thereof, a pair of vernier scales on said thimble with axially scribed graduations, an indexing line on the barrel cooperative with said graduations on the thimble providing a reading therefor, and a frame member movably connected to said micrometer head and having an anvil alignable axially of said spindle in one position of said frame whereby providing an external caliper micrometer, and said frame movable to a second position with its major plane substantially perpendicular to said spindle, and a reference surface on a side of said frame adapted in said second position thereof to cooperate with said spindle and defining a depth gauge with said head.

2,865,109
CONVEYOR FOR DRYING AND COOLING APPARATUS
George V. Burdet, Berkeley, Calif., assignor to M. J. B. Company, a corporation of Delaware
Application August 2, 1957, Serial No. 675,933
8 Claims. (Cl. 34—66)

1. A treating machine of the class described comprising a housing defining a level rectangular path, means controlling temperature and air flow through said housing, means for moving a series of perforated separate trays in closely adjacent relation over the path defined, said trays moving sidewise and at right angles to their former path of travel when reaching a corner of said path, automatic means for speeding up a tray as it approaches a corner so as to permit transverse movement of such tray out of the path of the next succeeding tray, and means for effecting said transverse movement.

2,865,110
VIBRATING SHELF-TYPE DRIER
Phillip R. Perkins, Skokie, Ill.
Application February 21, 1955, Serial No. 489,496
3 Claims. (Cl. 34—86)



1. An apparatus for drying an admixture of finely divided solids and relatively coarse solids which comprises in combination a vertically elongated drying chamber, a plurality of oppositely inclined perforated chutes within said chamber, said chutes being arranged transversely of said chamber and terminating short of opposite walls whereby solids travel slowly over one chute and downwardly on the chute next below in a zig-zag direction countercurrent to the flow of hot gases, a louvered chute subjacent to the bottommost of said perforated chutes, said louvered chute comprising plates which overlap each other so that the hot gases pass upwardly through the louvers and so that the fine material is prevented from falling through, suspension means including means for vibrating said perforated chutes and said louvered chute simultaneously, means integral with said drying chamber for generating hot gasiform fluids, means for discharging said fluids below said louvered chute, conduit means for conducting hot gases from below said louvered chute to below the perforated chute next above, means for exhausting hot gasiform fluids of increased moisture content from said chamber, port means in the top of said chamber for admitting the admixture of solids to the topmost perforated chute, baffle means spaced upwardly from the surface of said topmost chute and adjacent said port to limit the depth of the stream of solids on said chute, and means for preheating the introduced admixture of solids.

2,865,111
LAUNDRY DRYING MACHINE
Peter Edward Goldfuss, Benton Harbor, Mich., assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Application November 13, 1953, Serial No. 391,873
6 Claims. (Cl. 34—95)

1. In a laundry machine, a rotatable clothes tumbling drum, said drum having parallel end walls and a perforate cylindrical wall connecting said end walls together, a

water absorbent member extending about said perforate wall in close contact therewith, a travelling absorbent transfer member contacting said water absorbent member and travelling at the peripheral speed thereof, a wringer roll for wringing water from said absorbent transfer member and a suction shoe transferring water from said water absorbent member through said transfer member.

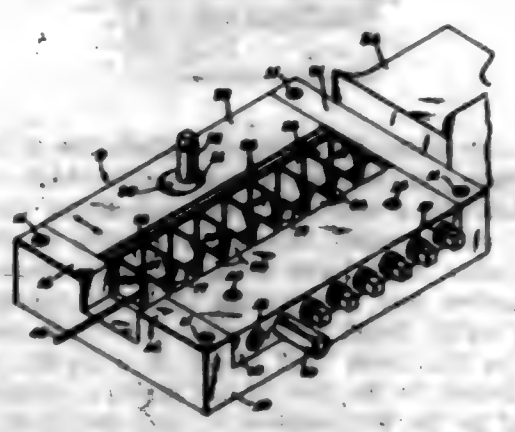
2,865,112

SEALING ORIFICE FOR STEAM TUBES AND THE LIKE

Richard J. Antrasser, Richmond, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application November 16, 1955, Serial No. 547,175

11 Claims. (Cl. 34—242)



1. Sealing orifice for steam tubes and the like comprising a hollow, open-ended body; a pair of blocks having adjacent, matching sides, said blocks being positioned in a spaced, parallel, jaw-like relationship within said body; the matching sides of each of said blocks having a plurality of indentations therein, separated by a plurality of projecting partitions which extend equally at correspondingly spaced intervals from said maching sides of each of said blocks; an aligned plurality of apertures in said body, each of said apertures being formed between an opposing, juxtaposed pair of said partitions extending from the sides of said blocks; a plurality of chambers formed by the opposed, matching indentations on the sides of said blocks, each of said chambers being positioned between consecutive pairs of partitions; an internal passageway in said body through said chambers and between said aligned apertures; at least one outlet for fluid in one of said blocks communicating individually to the outside of said body with at least one of said chambers; means for altering the relative adjacent positioning of said blocks in said body to vary the size of the apertures formed between said partitions extending from said blocks; and coupling means on one end of said body for fastening it to the extremity of a steam tube.

2,865,113

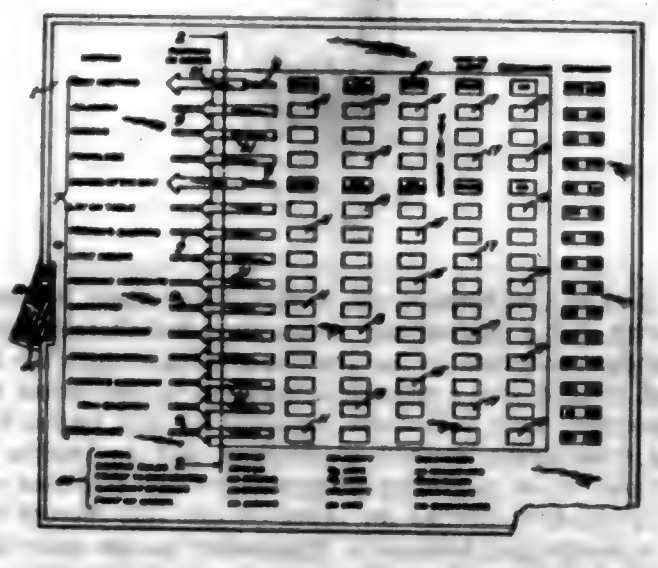
PARLIAMENTARY PROCEDURE GUIDE BOARD

Valentine J. King, San Francisco, Calif., assignor of twenty-five percent to Emmet King, San Francisco, fifteen percent to Paul Bergemann, Novato City, fifteen percent to T. L. Bergemann, Berkeley, and twenty percent to William Bergemann, Berkeley, Calif.

Application May 3, 1956, Serial No. 582,431

8 Claims. (Cl. 35—21)

5. A parliamentary procedure control device comprising a board comprising a back board and a face board, said face board having a list of parliamentary motions arranged thereon in order of their precedence and an opening in line with each of said listed motions, a plurality of indicators, each associated with one of said listed motions, means slidably anchoring each of said indicators in one of said openings to permit movement of each indicator from a non-indicating position to an indicating position, means inter-coupling all said indicators and responsive to movement of one from a non-indicating position to an indicating position, for locking out any indicators occupying non-indicating positions and associated with motions of a lower order on said list, said means including a coupling strip disposed substantially behind said indicators, said strip having a plurality of openings therein, one for each indicator and bounded by a phantom



rectangle of same size, with each such opening involving a locking slot at a lower corner of such rectangle and a connecting cam slot extending to the other lower corner of such rectangle, said locking slots being progressively shorter as viewed from the bottom opening up and decreasing to zero at the uppermost opening, said cam slots having cammed upper edges, increasing in declination from a substantially horizontal edge in the lowermost cam slot to a substantially diagonal upper edge in the topmost cam slot.

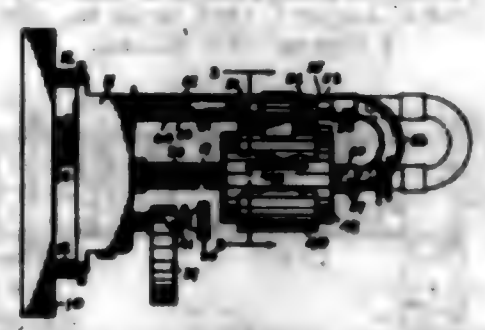
2,865,114

SPEED RATE OF READING INDICATOR

Walter H. Peeves, Indianapolis, Ind.

Application May 24, 1955, Serial No. 510,803

6 Claims. (Cl. 35—35)

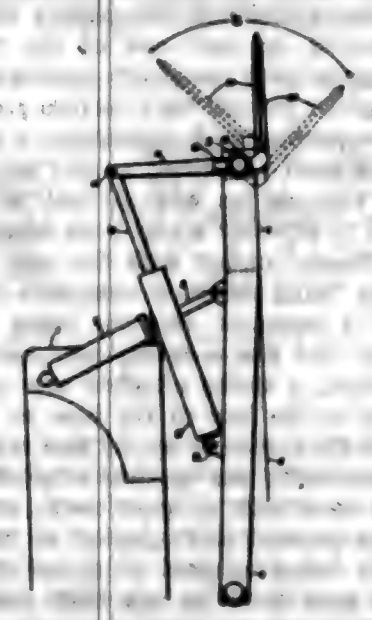


1. A reading speed indicator for directing a band of light progressively from line to line of reading matter comprising a hollow opaque cylindrical member rotatable about its axis and having a plurality of slots through its wall spaced therearound and parallel to said axis; a source of light within said member; an opaque shield about said member open for a circumferential distance around the under side of the member; a source of power; and a variable speed transmission interconnecting said source and said member; said source turning said member at a constant rate for any speed change available through said transmission; the turning of said member producing a moving beam of light formed by passage of light from said source through said slots moving across said shield opening.

2,865,115
SPIKED SHOE ATTACHMENT
Floyd M. McKinney, South Gate, Calif.
Application March 3, 1958, Serial No. 718,526
3 Claims. (Cl. 36—7.7)

1. An attachment adapted to be removably applied to the normally-tapering sole of footwear, said attachment comprising two similar but oppositely formed elongated plates each provided at both ends with sole edge-engaging extensions, each plate between said extensions being provided with spikes that extend in a direction opposite to the direction of said extensions, both ends of both plates being provided with openings, an elastic member extending through the opening at one end of each plate and connecting said ends of the plates, and a longer elastic member extending through the opening at the other end of each plate and connecting said other ends of the plates, said plates, thereby, being angled one relative to the other and the stretch on both elastic members being substantially the same when the sole edge-engaging attachments of the respective plates are engaged with the opposite edges of the sole.

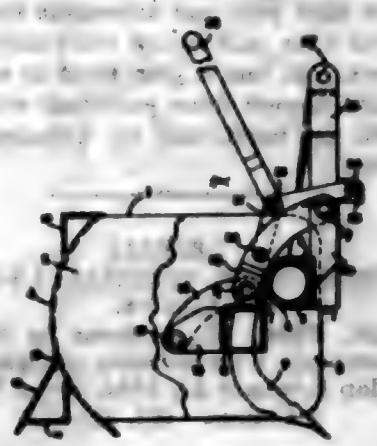
2,865,116
TREE REMOVER ATTACHMENTS
Ernest L. Mosier, Deerfield Beach, Fla.
Application June 28, 1956, Serial No. 592,640
6 Claims. (Cl. 37—2)



1. A tree puller attachment for tractors and the like, comprising, in combination, a U-shaped attachment frame having a transverse member and legs secured adjacent the end thereof, means for pivotally mounting the open ends of the frame legs to a tractor or the like, said transverse member having a substantially wide flat bottom surface; a shaft rotatably mounted on said frame adjacent the frame transverse member, tapered L-shaped tree engaging members, tapered apertures in said shaft having therein a leg of each of the tapered L-shaped tree engaging elements, removable means securing said tapering legs in said tapered aperture; means for raising and lowering said frame by pivotal action, and reciprocal means for rotating said shaft.

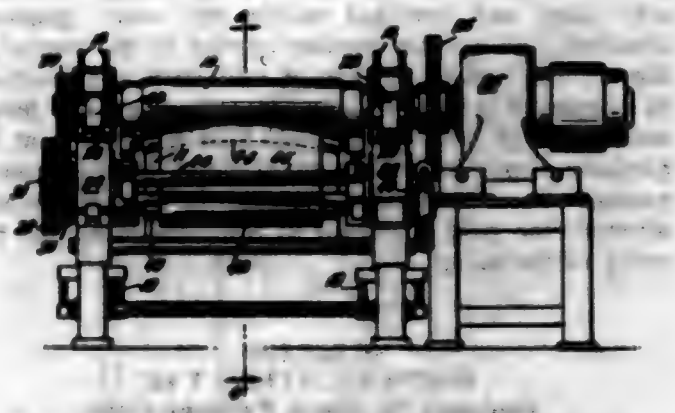
737 O. G.—62

2,865,117
EARTH SCRAPER WITH RETRACTABLE SCARIFIER
Morris C. Davis, Norwalk, Butler Perryman, Santa Ana, and Roy C. Gannon, El Monte, Calif., assignors to Earthcavator Company, Inc., a corporation of California
Application February 10, 1956, Serial No. 564,707
2 Claims. (Cl. 37—145)



1. A combination earth scraper and scarifier comprising a rectangular scraper bucket having a blade extending along its lower rear extremity, a curved back side, and end members attached to said back side, a tubular shaft extending between said end members above and forward of said blade, a scarifier bar having scarifier teeth attached thereto, said bar being arranged parallel to said shaft and rotatable with respect thereto from a position where the ends of said teeth may engage the earth in front of said blade to a position where said teeth lie in the extreme upper portion of said bucket, lever means for securing and locking said scarifier bar in said scarifier tooth earth engaging position and spring means for urging said scarifier bar to said other position.

2,865,118
CALENDER FOR WEB MATERIAL
Bruce D. Stewart, Danville, N. J., assignor to McKiernan-Terry Corporation, Harrison, N. J., a corporation of New Jersey
Application November 29, 1954, Serial No. 471,744
1 Claim. (Cl. 38—52)



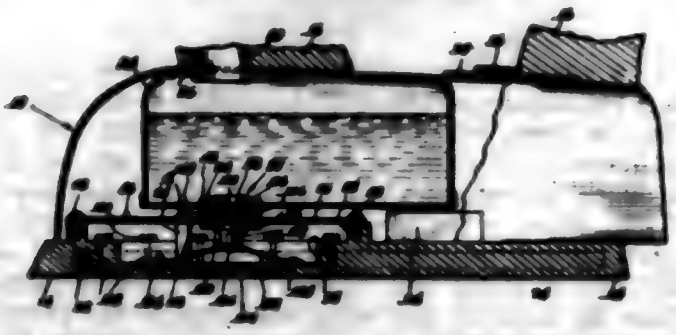
Calender for web materials comprising a supporting frame, a bottom roll journaled in said frame, a top roll cooperable with said bottom roll, levers fulcrumed at their one ends on said frame at opposite ends of said top roll, independently regulatable power cylinders pivotally connected with the frame and pivotally connected with the opposite ends of said levers, self-aligning bearings on said levers supporting said top roll in the intermediate portions of said levers, fulcrum pins for the fulcrumed ends of said levers, fulcrum supports for said pins, said fulcrum supports carrying said fulcrum pins being ver-

2,865,124

tors in one of said openings to permit movement of each opening.

tically adjustable on the frame, eccentric bushings carrying said fulcrum pins and rotatably adjustable on said fulcrum supports for laterally shifting said levers for centering the top roll over the bottom roll, means for driving said top roll, and gearing for driving said bottom roll from said top roll including a gear fixed to said top roll, a first idler gear driven from said top roll gear and journaled on one of said eccentrically adjustable fulcrum pins, a second idler gear journaled on the frame in mesh with said first idler gear and adjustable toward and away from said first idler gear on an arc centered on the axis of said bottom roll, and a gear fixed to said bottom roll driven by said second idler gear and whereby drive of the rolls will be unaffected by adjustment of related parts described.

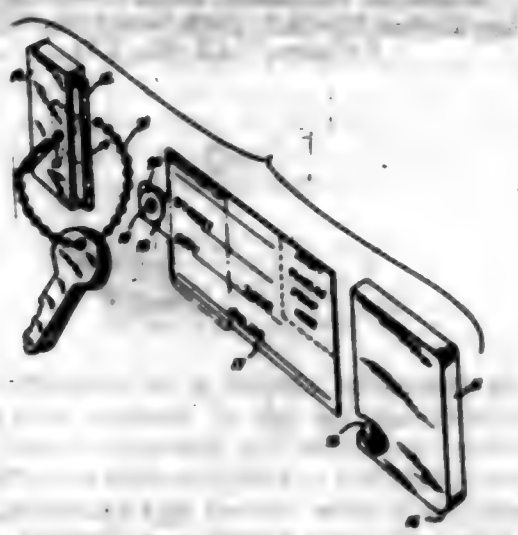
2,865,119
STEAM IRON WITH THERMALLY-OPERATED VALVE
Otto P. Pratt, Elgin, Ill., assignor to McGraw-Edison Company, a corporation of Delaware
Application February 24, 1954, Serial No. 412,238
2 Claims. (Cl. 38—77)



1. A steam iron comprising a sole plate constituting one element of a thermostat and formed of a material having a relatively high coefficient of expansion, said sole plate having a recess therein forming a steam generating chamber with an evaporating base, means for heating the sole plate, means providing a water reservoir, a cover plate for the steam generating chamber, means providing a passage from the water reservoir through the cover plate and to the steam generating chamber, an upwardly bowed strip disposed in said recess and constituting the second thermostat element of a material having a relatively low coefficient of expansion and with the ends thereof secured directly to the evaporating base of the sole plate and confined within the steam generating chamber, and a valve member carried by the central portion of the bowed portion of said strip and positioned to cooperate with said passage to control the flow of water through said passage and said strip being at least partially disposed in the path of water flowing from the passage when the valve member is in open position whereby the strip is cooled to resist reclosing and chattering of the valves.

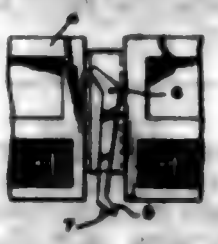
2,865,120
IDENTIFICATION TAG
Benjamin M. Hines, Fairfield, Conn.
Application September 4, 1953, Serial No. 758,976
3 Claims. (Cl. 40—2)

1. An identification tag comprising a casing member defining a chamber open at one end, a closure member, a tongue extending from one edge of the closure member into the open end of the chamber and fitted closely therewith to hold the members together, a slot formed in the tongue and extending therethrough into the closure member, a flexible mailing tag located in the chamber, at least a portion of one end of the mailing bag extending from the chamber into the slot, an opening through said mailing tag portion, apertures in the closure member communicating with the slot and in alignment with the opening in the mailing tag, and an attaching element pass-



ing through the apertures and tag opening to secure the mailing tag to the closure member.

2,865,121
MULTIPLE SLIDE CHANGER FOR AUTOMATIC SLIDE PROJECTOR
Walter Carlos Anderton, Birmingham, Ala.
Application November 12, 1957, Serial No. 695,916
2 Claims. (Cl. 40—79)



1. A multiple slide changer for automatic slide projectors comprising, containers for picture slides, a spring type clip attached on each end of the container, said clips being adapted to fit removably together and hold two containers together for use on a picture projector, a base portion for supporting said containers, a lever mounted on one end of each container, a stud mounted on said base portion adjacent an end of said lever, said lever being adapted to separate a clip joint when the free end of the lever makes contact with the said adjacent stud; a bar, said bar being mounted swingably on the bottom upper face of a projector, said bar being provided with a roller in one end and a spring type hinge joint in its other end portion, a spring attached near said bar, three studs mounted in the face of the base as stops for said bar; an edge of the container having part removed to form a recess for said roller, the opposite edge of the container being formed as a rack of gear teeth, one end of the said bar being pointed and adapted to fit in said gear teeth, said bar being adapted to move its pointed end from the last gear tooth in one slide container to the first gear tooth in another slide container when the containers are held together by said clip joint and moved along by the mechanism of the projector.

2,865,122
TREE SIMULATING CARD DISPLAY
Weldon L. Clawson, Pana, Ill.
Application February 24, 1956, Serial No. 566,380
2 Claims. (Cl. 40—124)

1. A display device for greeting cards comprising a pair of intersecting profile members, each substantially an isosceles triangle in outline, each having a complementary slot for assembly in a desired position substantially perpendicular to each other forming the corners of an imaginary substantially vertically disposed quad-

the axis thereof to wind said cable around, and to un- adjustably securing the finger rest thereto to extend

rangular pyramid, the equal sides of each triangular profile member having a plurality of vertically aligned substantially horizontally disposed kerfs adapted to receive therein greeting cards or the like to simulate limbs of a tree, said kerfs of each equal side being horizontally offset with respect to the kerfs of the adjacent equal sides along the height of the imaginary pyramid, one of said profile members having an upwardly opening kerf dis-

posed substantially vertically from the apex thereof, and a base unit including support means to position and retain said profile members in the substantially vertical position, said base unit comprising a fixed base member having a substantially vertically disposed opening therein and a rotatable member having a depending trunnion journaled in said opening of said fixed base member with said support means being carried by said rotatable member and engaging the lower portions of said profile members.

2,865,123

LICENSE PLATE FRAME AND HOLDER

Chester J. Glowinski, Dearborn, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 25, 1954, Serial No. 464,224
1 Claim. (Cl. 40—125)

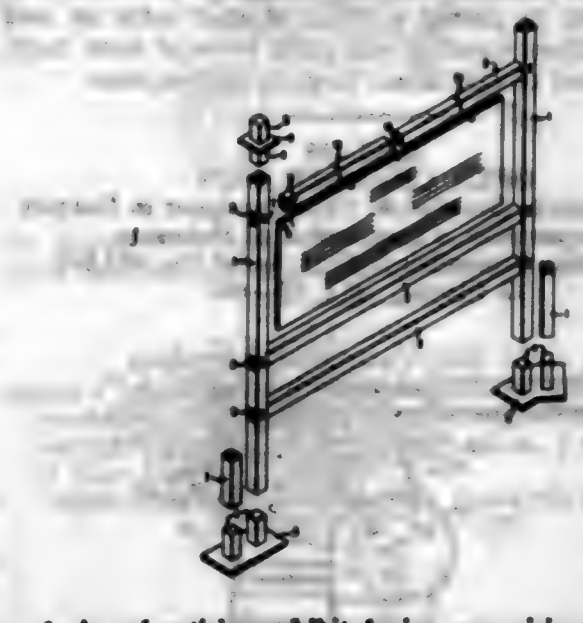
A license plate holder comprising only one pair of overlapped lengthwise adjustable backing plates, the first of said backing plates having overturned upper and lower edges forming U-shaped guiding means for receiving straight upper and lower edges of the second backing plate, lengthwise extending ratchet means formed integrally from the faces of said backing plates to enable lengthwise adjustment of said plates, said ratchet means including a plurality of tabs struck from one of said backing plates forming a ratchet-like surface with stop shoulders and at least one tab struck from the other of said backing plates engaging a stop shoulder of said ratchet-like surface, license plate mounting means secured to the front face of each of said backing plates, each of said mounting means including a generally U-shaped wire element having a vertical base portion and substantially horizontal resilient arm portions, said base portion being secured to the front face of the associated backing plate near the end thereof, said resilient arm portions terminating in hook-shaped ends for receiving and holding the upper and lower edges of the license plate, respectively.

2,865,124

ADVERTISING EXHIBIT DEVICE

Domenico Mortellito, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 11, 1957, Serial No. 633,747
7 Claims. (Cl. 40—125)



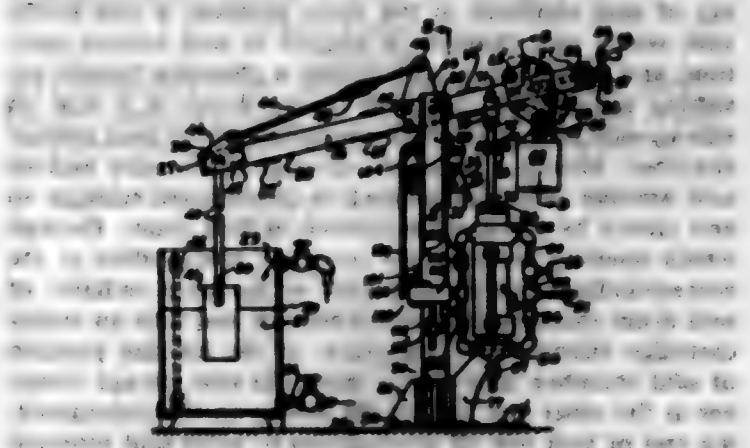
1. An advertising exhibit device comprising at least one pair of identical hollow vertical members of uniform rectangular cross-section, at least one horizontal member of uniform rectangular cross-section for insertion at each end into receiving openings in said vertical members, said each end having on at least one side at least one detent for engaging a detent hole in a vertical member, said horizontal member being rigidly connectable at each end to a vertical member by insertion of said end snugly into a receiving opening and interlocking by said detent engaging said detent hole, and at least two base members each comprising a base plate having at least one upright element of uniform rectangular cross-section for insertion snugly into the lower end of one of said hollow vertical members.

2,865,125

APPARATUS FOR SELECTIVELY CONTOURING A METAL PART BY ETCHING

William P. Longsfeld, Huntington Park, Calif., assignor to Turco Products, Inc., Los Angeles, Calif., a corporation of California

Application November 22, 1954, Serial No. 470,345
7 Claims. (Cl. 41—9)



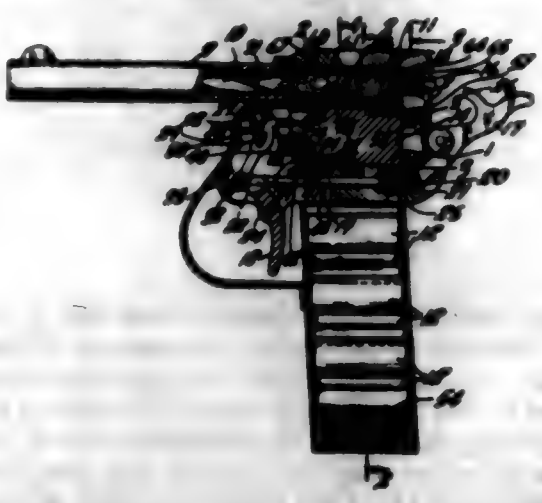
1. Apparatus for controlling the rate of movement of an object into and out of an etching solution for contouring a surface portion of said object, which comprises a mandrel having a preselected outer surface contour corresponding to the contour to be formed on said surface portion, a cable connected at one end to said mandrel, a support for said cable permitting movement thereof over said support, an end portion of said cable being vertically suspended from said support for attachment to an object, means for rotating said mandrel on

foil on the leading end of said body curving through a path apart parallel longitudinal slots in said base plate inter-

mailing tag portion, apertures in the closure member of an imaginary substantially vertically disposed quad-

the axis thereof to wind said cable around, and to unwind it from, the outer surface of said mandrel for automatically controlling the rate of movement of said cable and of movement of said object on said cable and portion through said solution to contour said surface portion, and means actuated in response to rotation of said mandrel to permit winding of said cable on said mandrel without causing said cable to wind onto itself, for movement of said object through said solution.

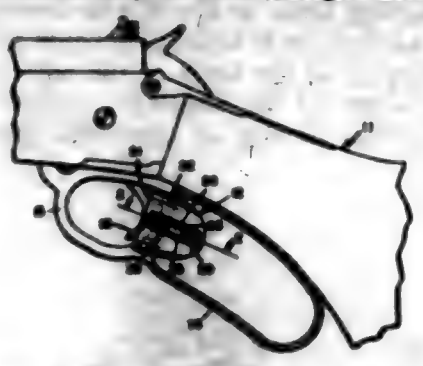
2,865,126
OPEN CHAMBER GUN
David Durdick, Greenwich, Conn., assignor to Durdick Corporation, a corporation of Delaware
Application September 3, 1954, Serial No. 454,845
12 Claims. (Cl. 42—68)



1. An open chamber gun comprising a drum of cylindrical contour mounted for rotation on its cylinder axis, said drum having at least one open chamber in its cylinder surface for conveying a cartridge seated therein from a loading position to a battery or firing position and thence to an ejecting position, each said chamber paralleling the cylinder axis of said drum, being of uniform non-circular shape from end-to-end in parallel planes normal to said cylinder axis, and having, at its respective opposite ends, an access opening and an escape opening; a breech frame in which said drum is mounted for rotation, said frame having an arcuate breech surface concentric and substantially co-equal in radius of curvature with the arcuate surface of said drum, for closing off the open top of said chamber in said battery position and having a separate breech surface for closing off the access opening of said chamber in the same position; a gun barrel with which said chamber is aligned in said battery position; and, a magazine unit having a chamber therein for storing ammunition for said rotary drum in a row of side-by-side rounds between opposite ends of said storage chamber, having a transfer opening at the one end of said storage chamber located in juxtaposed relation to and closed by the arcuate surface of said drum, through which opening the terminal round of ammunition at the corresponding end of said row is movable radially of said drum through the open mouth of and into an empty cartridge chamber of said drum, in the loading position of said chamber, and having means in said storage chamber at the other end thereof for acting on the corresponding end of said row of ammunition to press said terminal round into sliding contact with the cylinder surface of said drum at said transfer opening.

2,865,127
TRIGGER FINGER REST FOR FIREARMS
Thomas J. Finnegan, Los Angeles, Calif., assignor of one-half to Robert Swan, Los Angeles, Calif.
Application September 12, 1955, Serial No. 533,731
4 Claims. (Cl. 42—69)

3. In a firearm having a trigger and a trigger guard, a finger rest, and means cooperating with the guard for adjustably securing the finger rest thereto to extend laterally therefrom, said finger rest presenting a forwardly facing surface which may be fixed in a position forwardly

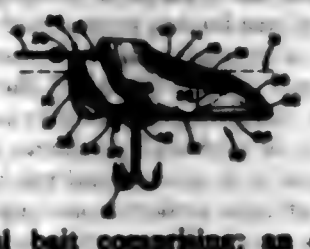


of, in alignment with or rearwardly of the forward surface of the trigger by reason of said adjustable securing means.

2,865,128
ROD ACCESSORY FOR FISH HOOKS AND LEADERS
Charles H. Fullert, Sunnyside, Wash.
Application May 13, 1957, Serial No. 658,637
7 Claims. (Cl. 43—25.2)

7. A fish hook and leader mounting device adapted for mounting on a fishing rod comprising a sleeve, means to clamp the sleeve around a rod, tackle securing hooks at both ends of said sleeve, each hook having an outer portion extending lengthwise of the sleeve on the exterior surface thereof, and around a portion of the adjacent end of the sleeve, said sleeve having passages extending therethrough from end to end thereof, and a resilient member in each passage, each hook having a securing shank portion attached to one of said resilient members whereby the latter will oppose movement of the hooks endwise away from said sleeve, the sleeve having longitudinally running grooves in its exterior surface, the central portions of which are narrowed and deepened to center the outer portions of the hooks therein, said outer portions of the hooks having upturned ends projecting above the deepened central portions to receive the eye of a fish hook.

2,865,129
ARTIFICIAL BAIT WITH AIR PASSAGEWAY
Aristes G. Spagias, Kalamazoo, Mich.
Application January 16, 1957, Serial No. 634,805
8 Claims. (Cl. 43—42.06)



1. An artificial bait comprising: an elongated body adapted to be drawn lengthwise through the water to define a leading end and a trailing end, said body having an arcuate passageway extending therethrough and having a leading portion and a trailing portion respectively corresponding to said leading end and said trailing end, the leading portion of said passageway being curved upwardly with respect to the lengthwise axis of said body and the trailing portion of said passageway extending lengthwise of said body; said body having a buoying chamber in said body adjacent to the leading end thereof and beneath the leading portion of said passageway; an arcuate hydro-

stretchable material at least at the apertured portion thereof, and a doll limb formed at least at its upper end

wall, said backwardly extending part constituting a sec-

upper and lower edge of the license plate, respectively.

ment to an object, means for rotating said mandrel on

foil on the leading end of said body curving through a path substantially parallel with the curvature of the leading portion of said passageway and then reversely therefrom, said hydrofoil having end portions extended beyond the opposite, lateral sides of said body; a pair of scoops on said lateral sides of said body opening toward, and spaced from, said hydrofoil, and communicating with said passageway.

2,865,130
FISHING LURE
Anthony C. Accetta, Riviera Beach, Fla.
Application January 4, 1957, Serial No. 632,443
8 Claims. (Cl. 43—42.15)

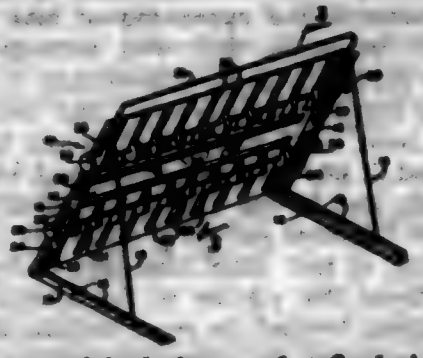
1. A fish lure comprising a head, a body attached to one end of said head and including an elongated freely flexible member having means on the end opposite to said head for receiving a fish hook, a plurality of freely flexible thread-like members spaced longitudinally along said elongated member and having the center portions thereof extending through and interlocked with said elongated member and providing free ends extending outwardly therefrom whereby each of said free ends is independently movable about its respective center portion.

2,865,131
FISH HOOKS
Robert Ellis, Bronx County, N. Y.
Application December 28, 1956, Serial No. 631,272
6 Claims. (Cl. 43—43.16)

1. A fish hook comprising a straight rigid tube, means for securing the upper end of said tube to a fish line, and a flexible spring wire slidable for its entire length into and out of said tube from its lower end, said flexible spring wire being normally tensioned to form a closed loop when said wire is pulled out of said tube.

2,865,132
PROOF READER GUIDE
Irma S. Fleming, Long Beach, Calif.
Application June 27, 1956, Serial No. 745,110
5 Claims. (Cl. 45—61)

1. A proof reader guide comprising, in combination, a main base plate, bracket means supporting said base plate angularly upon a support surface, a pair of detachably mounted guide rods supported upon said base plate in spaced apart parallel relationship, a pair of spaced apart parallel longitudinal slots in said base plate intermediate said guide rods, and manually operated means



for driving an original sheet and a final sheet past said guide rods through said longitudinal slots.

2,865,133
FOOTED FURNITURE LEG
Alfred C. Hoven, Douglas N. Humphries, and Walter E. Nordmark, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application December 31, 1956, Serial No. 631,734
2 Claims. (Cl. 45—137)

1. A footed furniture leg comprising: a molded foot of resilient material having a toroidal cavity therein and a restricted opening extending from said cavity through the top of the foot, and a downwardly sloping tubular metal leg having at its lower extremity a toroidal protuberance seated in said cavity with the leg protruding upwardly through said restricted opening, said molded foot being downwardly divergent from the top of the foot to a plane through said cavity, then downwardly convergent to a parallel plane below said cavity, and finally terminating in a cone concentric with the axis of the leg and of such conical slope relative to the slope of the leg that the foot makes line contact with the floor regardless of its turned position on the leg.

2,865,134
ATTACHMENT OF DOLL LIMB TO DOLL BODY
David Cohn, Brooklyn, N. Y., assignor to Model Plastic Corporation, White Plains, N. Y., a corporation of New York
Application February 2, 1955, Serial No. 485,794
6 Claims. (Cl. 46—173)

1. In combination, a doll body having a narrow limb-receiving aperture, said body being formed of resiliently

green tissue of an exteriorly growing living plant, the receptacle being of a material impermeable to air, means

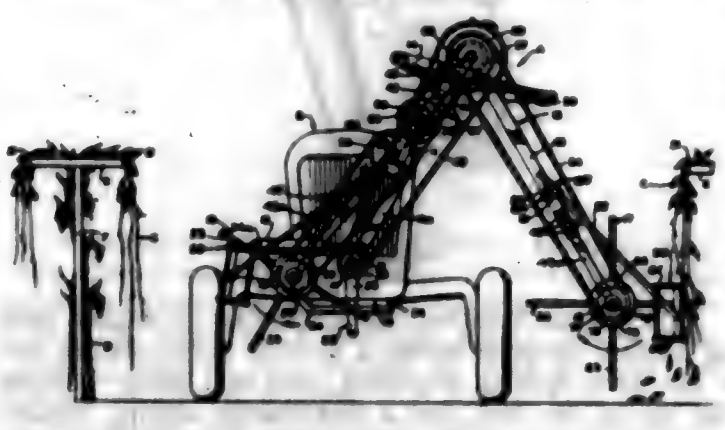
2,865,141
MOTOR DRIVEN SHARPENER FOR EDGED TOOLS

3. In a firearm having a trigger and a trigger guard, a finger rest, and means cooperating with the guard for

said body adjacent to the leading and thereof and forward the leading portion of said passageway; an arcuate hydro-

stretchable material at least at the apertured portion thereof, and a doll limb formed at least at its upper end of flexible material, the upper end of said limb being flattened and comprising limb wall portions defining a given narrow peripheral shape substantially similar to the shape of said aperture, said aperture and said upper end of said limb being much narrower than said limb proper, said upper end of said limb passing through said aperture into said body and having a laterally extending portion which engages the inner surface of said body so as to prevent separation of said limb from said body, said limb articulating about that portion of the flexible upper end thereof projecting beyond the outer surface of said body adjacent said aperture on a line substantially parallel to the length of said aperture, the flexible limb wall portions within said aperture being secured inside a substantially rigid bushing, said laterally extending portion which engages the inner surface of said body being a part of said rigid bushing.

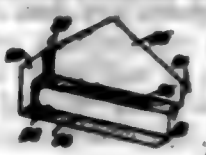
2,865,135
GRAPE LEAF STRIPPING MECHANISM
Walter J. Gamboni and Harold D. Nelson, Delano, Calif.
Application March 18, 1957, Serial No. 646,659
6 Claims. (Cl. 47—1)



1. A grape leaf stripping mechanism comprising a main frame for mounting on an end of a supporting vehicle, a support member movably mounted on said main frame for movement transversely of such vehicle, means for adjusting said support member relative to the main frame, a beater frame pivotally mounted on said support member for pivotal movement about an axis extending lengthwise of a vehicle upon which said main frame is mounted, whereby the beater frame is movable transversely with the support member, means for adjusting the beater frame pivotally about its axis of support on the support member, a pair of beaters mounted in laterally spaced relation on said beater frame for rotation in planes substantially perpendicular to the pivotal axis of the beater frame, and drive means mounted rotatably to drive said beaters in opposite directions with the laterally outward portions of said beaters moving downwardly, whereby said beaters may be projected laterally from selected sides of the main frame by controlled transversely movement of said support member, and may be selectively elevated and lowered by controlled pivotal movement of the beater frame.

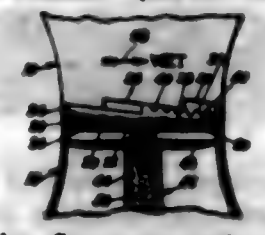
2,865,136
BORDER BLOCK
Howard Roy Scott and Wallace A. Scott, Tampa, Fla.
Application May 4, 1956, Serial No. 582,676
1 Claim. (Cl. 47—33)

A border block of the class described, having a base portion adapted to abut a supporting surface, and vertical end walls and a front wall rising from and integral with said base portion and partially enclosing the same, said base portion being cut away to form a step-like portion comprising a section rising upwardly from the said base portion and then backwardly to meet a rear wall, said backwardly extending part constituting a secondary base portion, and means on said secondary base



and foldable thereagainst for anchoring said block to a supporting surface and maintaining it in position thereon.

2,865,137
SELF-WATERING CAPILLARY FLOWER POT
Russell S. Longacre, York, Pa.
Application August 2, 1957, Serial No. 675,979
4 Claims. (Cl. 47—38)



1. A self-watering flower pot unit comprising in combination, a water reservoir receptacle, a flower pot positioned adjacent the upper portion of said receptacle and adapted to contain soil-like material in which seeds and plants are to be planted, said flower pot having at least one aperture in the bottom thereof, a capillary member extending upwardly from the lower portion of said reservoir receptacle and the upper end thereof terminating adjacent said aperture in said flower pot and adapted to contain material through which water is conducted by capillary action, said capillary member having water inlet means to permit water from said reservoir receptacle to permeate the material within said capillary member and conduct it to the upper end thereof for engagement with soil-like material within said flower pot, thereby to absorb water from said capillary member and the contents thereof, and means on the upper portion of said reservoir engageable with means on the lower portion of said flower pot and operable to move said flower pot vertically various distances relative to said capillary member upon relative movement of said reservoir and pot, thereby to vary the engagement of the soil-like material in said flower pot with the material in said capillary member and correspondingly vary the amount of water entering said flower pot.

2,865,138
WATER RECOVERY UNIT AND METHOD
Glen P. Eidman, Glenn, Eugene L. Bess, Chico, and George F. Hafer, Davis, Calif.
Application November 13, 1956, Serial No. 621,718
8 Claims. (Cl. 47—58)

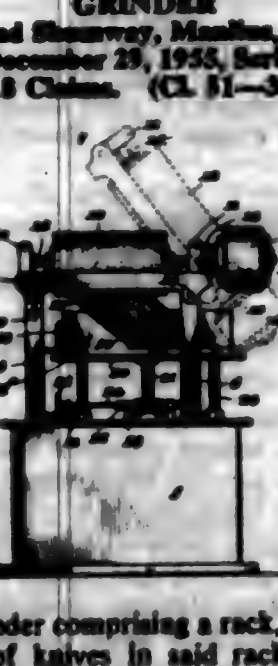
1. A water recovery unit comprising an initially open receptacle arranged to encompass and to depend from

in spaced apart parallel relationship, a pair of spaced

receiving aperture, said body being formed of resiliently

green tissue of an exteriorly growing living plant, the receptacle being of a material impermeable to air, means to close the receptacle in substantially airtight relation about the green tissue, the receptacle being water-tight so as to retain water in a portion thereof below the encompassed green tissue, and normally closed but releasable water outlet means directly communicating with said portion of the receptacle.

2,865,139
TREATMENT OF GLASS
Orson L. Anderson, Morristown, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application May 31, 1955, Serial No. 511,888
6 Claims. (Cl. 49—89)

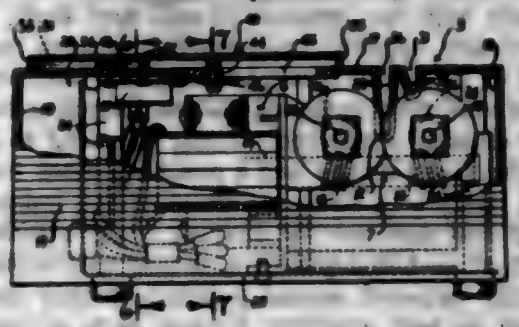


1. The method of modifying the physical properties of glass which comprises subjecting the glass to the combination of a temperature of at least 100 degrees centigrade but not in excess of 350 degrees centigrade, and a pressure of from six to one hundred thousand pounds per square inch for a time interval of at least several hours and thereafter reducing said temperature and pressure to room temperature and atmospheric pressure, respectively.

2,865,140
GRINDER
Conrad Shumway, Manlius, N. Y.
Application December 29, 1955, Serial No. 556,253
18 Claims. (Cl. 51—34)

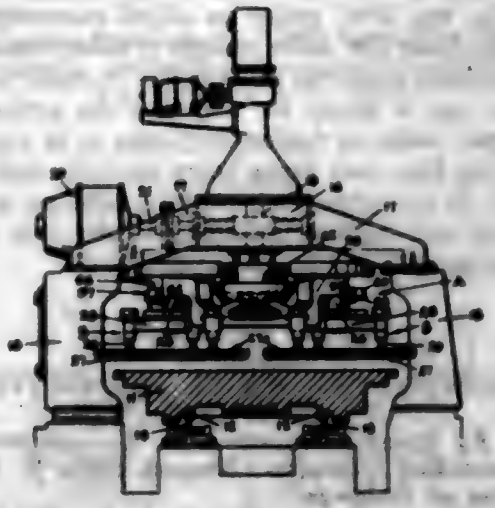
1. A knife grinder comprising a rack, means for clamping a plurality of knives in said rack with each knife at a slightly different angle longitudinally to the horizontal, a frame located above said rack, a cylindrical grinding wheel mounted in said frame and means for rotating and reciprocally moving said wheel above said knives so as to grind a modified surface upon all of said knives.

2,865,141
MOTOR DRIVEN SHARPENER FOR EDGED TOOLS
Alfred W. Madl and Theodore E. Bodnarski, Milwaukee, Wis., assignors to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Application August 22, 1957, Serial No. 679,617
5 Claims. (Cl. 51—89)



5. In a blade sharpening tool having an abrasive wheel rotatably driven by an electric motor and a housing enclosing the motor and the abrasive wheel, said housing having a slot therein aligned with the abrasive wheel and into which a blade may be inserted to be guided for sharpening engagement with the abrasive wheel: a cover; means mounting said cover to overlie a wall of the housing and to slide in opposite directions to and from a position covering said slot; said mounting means including inwardly projecting members on the cover extending through apertures in said wall of the housing which are elongated in said directions, and securement members on the inner ends of said projecting members, underlying said wall of the housing holding the cover on the housing and confining it to sliding motion in said directions; a switch for controlling energization of the motor, mounted on the housing under said cover, said switch having an actuator extending through said housing wall and movable in the same directions as the cover to "off" and "on" positions; and abutments on the cover, engageable with the switch actuator to move the latter to its "off" position in consequence of movement of the cover to its position covering said slot and to its "on" position in consequence of movement of the cover to a position uncovering said slot.

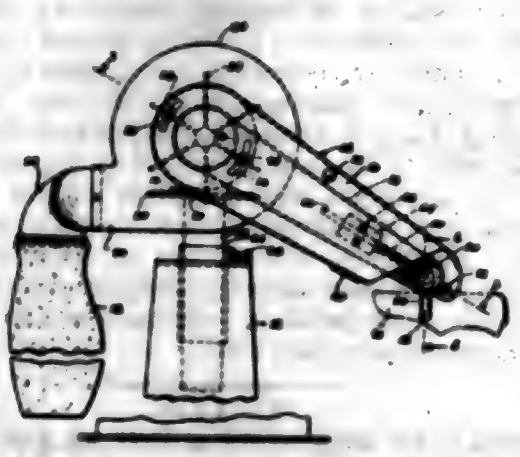
2,865,142
APPARATUS FOR SURFACING GLASS SHEETS
Donald W. Dunipace, Perrysburg, and John M. Byal, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application July 14, 1955, Serial No. 522,017
3 Claims. (Cl. 51—128)



1. In an apparatus adapted to substantially uniformly polish the surface area of a glass sheet passing thereby across the width of the sheet, a supporting framework, a first shaft rotatably mounted in said framework, a main frame carried by said shaft, means for rotating said first shaft to cause said main frame to follow a substantially

circular path about said first shaft, two downwardly directed second shafts rotatably supported in said main frame and diametrically opposed from each other, an auxiliary frame affixed to each of said downwardly directed second shafts, means for imparting the drive of said means for rotating said first shaft to each of said second shafts to rotate each of said second shafts simultaneously with the rotation of said first shaft, a pair of diametrically opposed first polishing means individually carried by said main frame between said auxiliary frames, each of said first polishing means including two downwardly directed shafts individually mounted to said main frame for free rotation and a polishing block for contacting the surface of the glass sheet affixed individually to each of said downwardly directed freely rotatable shafts of each of said first polishing means and a pair of diametrically opposed second polishing means individually mounted to said auxiliary frames, each of said second polishing means including three downwardly directed shafts mounted to its respective auxiliary frame for free rotation and a polishing block for contacting the surface of the glass sheet affixed individually to each of said downwardly directed freely rotatable shafts of each of said second polishing means.

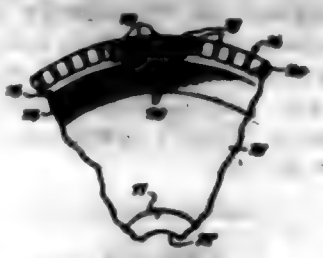
2,865,143
SHOE UPPER ROUGHING MACHINE
Paul Goldsmith, Los Angeles, Calif.
Application May 28, 1956, Serial No. 587,744
6 Claims. (Cl. 51—141)



1. A shoe upper roughing machine comprising a motor and drive pulley for a sanding belt, an idler pulley, means spacing the same at a distance from said drive pulley such as to hold the belt taut, said means including guide means for the idler pulley to afford movement toward and away from the drive pulley, resilient means urging the same away from the drive pulley in order to keep the belt taut, and a gauge for engaging the periphery of a shoe upper while its folded-over edge is in contact with the sanding belt, said gauge being movable with the idler pulley so as to maintain its position relative to the idler pulley and belt despite movement of the idler pulley toward and away from the drive pulley.

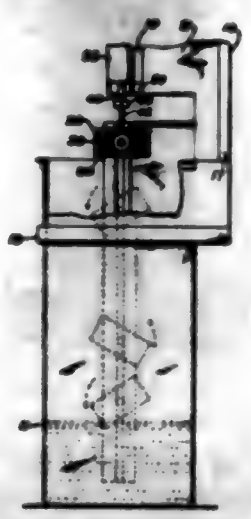
2,865,144
SUPPORTING DEVICE FOR COATED ABRASIVE PRODUCTS
Warren K. Seward, Kenmore, N. Y., assignor to The Carborundum Company, Niagara Falls, N. Y., a corporation of Delaware
Application June 1, 1956, Serial No. 588,759
6 Claims. (Cl. 51—141)

1. A contact wheel comprising a hub and a rim, said rim having a transversely serrated peripheral surface comprising a series of transverse lands and separating grooves disposed about the entire periphery of the wheel, said rim being composed of a non-abrasive rigid material with the grooves thereof substantially filled with a resilient solid material softer than the material of the lands, where-



by the lands and filling form a substantially cylindrical surface.

2,865,145
DEGREASER
Irwin L. Lane, Nutley, N. J., assignor to Metalwash Machinery Company, Elizabeth, N. J., a co-partnership
Application March 24, 1955, Serial No. 496,375
8 Claims. (Cl. 51—164)



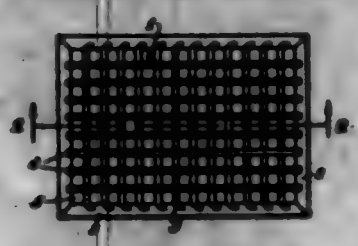
1. Apparatus including a tank, a carrier basket, guide means for guiding the carrier basket along a straight vertical path of movement, means for causing vertical displacement of said carrier basket within said tank, and means for causing rotation of said carrier basket about its transverse axis simultaneous with said vertical displacement, while said carrier basket travels along a vertical guided path.

2,865,146
PORTABLE ABRADING TOOL
Otho F. Hipkins, Tampa, Fla.
Application March 18, 1957, Serial No. 646,416
2 Claims. (Cl. 51—170)

1. A portable abrading tool comprising an upstanding housing having a bottom provided with a longitudinally extending slot, a pair of longitudinally extending horizontally disposed carriages each carrying an abrading element on its lower surface positioned in side by side relation longitudinally of and within said housing and having the abrading elements projecting through said slot, a pair of spaced fixed shafts carried by said housing and extending transversely of said housing, spaced rotatable rollers on each of said fixed shafts, each of said carriages having a pair of closed slots arranged in tandem relation, the rollers of one of said shafts being received within one of the complemental slots of said carriages and the rollers of the other of said shafts being received within the other of the complemental slots of said car-

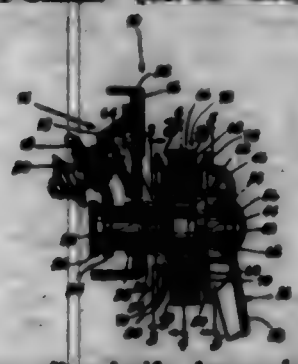
ringes, a rotatable drive shaft within said housing, and means connecting said carriages to said drive shaft for simultaneous reciprocating movement of said carriages in opposite directions responsive to the rotary movement of said shaft.

2,865,147
FUMICING STONE
Georges Grandsenaigne, Nice, France
Application October 3, 1955, Serial No. 537,957
2 Claims. (Cl. 51—204)



1. A pumice stone comprising, a monolithic body having on at least one face thereof a set of parallel orthogonal grooves, and a set of grooves bounded by parallel planes which are oblique to the face of the stone and intersect the aforesaid orthogonal grooves at right angles, said grooves being of the same depth.

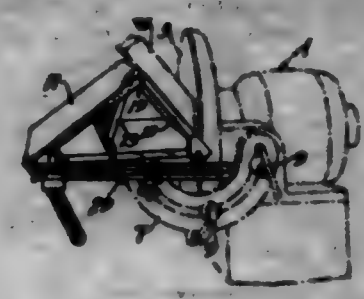
2,865,148
KNIFE SHARPENER
Walter E. Moore, Bel-Nor, Mo., assignor to Swing-A-Way Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Application April 8, 1955, Serial No. 500,183
1 Claim. (Cl. 51—218)



In a kitchen utensil, a knife sharpening assembly comprising a grinding wheel having a rim portion provided with parallel annular grinding faces having sharp circular inner edges, a pair of identical concave-convex flange members disposed in flanking arrangement on each side of said grinding wheel, said flange members including concentric inner and outer frusto-conical portions having their convex sides toward said wheel, the inner portion having a larger apex angle than the outer portion, and means securely clamping said flange members and the wheel between them so as to maintain the inner frusto-conical portions in firm clamped engagement with respective inner edges of the grinding faces.

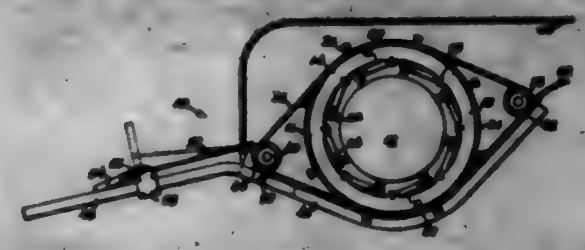
2,865,149
WORK HOLDING ATTACHMENT FOR GRINDERS
Marco Soave, Hicksville, N. Y.
Application October 1, 1953, Serial No. 383,527
3 Claims. (Cl. 51—217)

1. A work supporting attachment for grinding wheels, comprising a support board adapted to fit on the work rest of a grinder, a pair of boards hinged together, means for adjustably supporting the said pair of boards on the support board, at a selected position in a range between a position where the pair of boards lie flat on the support board and a position with the hinge line at a predetermined elevation from the support board and each of the pair of boards slanting downwardly toward the support board therefrom, and a trough for slidably supporting a work holder and a parallel motion supporting the trough



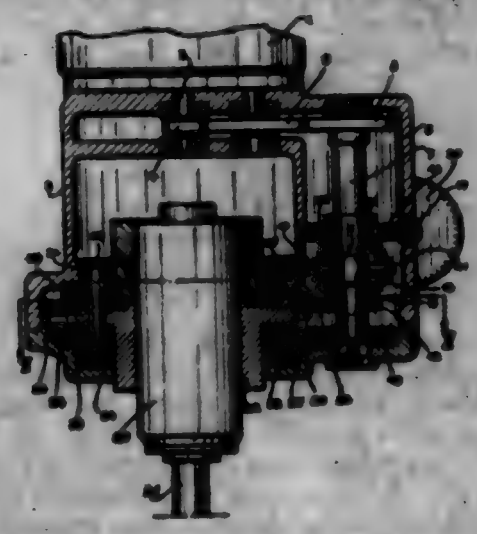
on one of the boards parallel to the hinge line for movement toward and away from the hinge line.

2,865,150
ROTARY CRANKSHAFT GRINDER
Elmer A. Fuglie, Winona, Minn., assignor to Winona Tool Manufacturing Company, Winona, Minn., a partnership
Application October 31, 1956, Serial No. 619,436
6 Claims. (Cl. 51—241)



1. A rotary grinder, comprising an annular member adapted to circumscribe a cylindrical work piece, a multiplicity of individual grinding elements carried within the interior of said annular member in spaced circumferential relationship with each other, a flexible driving member circumscribing said annular member and engaging a portion of the periphery of said member and a pair of synchronous driving members each engaging said flexible member on opposite sides of said annular member providing a balanced torque on said member to evenly grind said work piece.

2,865,151
ATTACHMENT FOR DRILLING MACHINES
Georg R. Wolfle, Offenbach (Main), Germany, assignor to M. S. O. Maschinen- und Schleifmittelwerke Aktiengesellschaft, Offenbach (Main), Germany, a German company
Application September 5, 1957, Serial No. 682,232
Claims priority, application Germany September 7, 1956
9 Claims. (Cl. 51—245)



1. A grinding attachment adapted for connection to the spindle of a drill, comprising a casing for connection

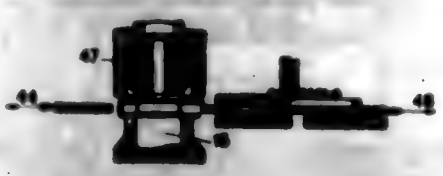
to the drill head of a drill, a bearing ring disposed in said casing, a first pivot pin mounted eccentrically in said bearing ring, a bushing mounted in said bearing ring so as to be pivotable about said first pivot pin, and adapted to carry an internal grinding spindle, a toothed rim rotatably mounted on the bearing ring, a second pivot pin connecting said toothed rim to said bushing, a countershaft and transmission means operative on said countershaft for connecting the drill spindle to the bearing ring and the toothed rim to drive the bearing ring and the toothed rim at the same speed.

2,865,152
BAG HEADER
Robert F. Windstrup, Edward Rose, and Nicholas S. Miller, Chicago, Ill., assignors to Peters Machinery Company, Chicago, Ill., a corporation of Illinois
Application April 9, 1956, Serial No. 576,848
16 Claims. (Cl. 53—14)

1. In a bag sealing machine having combined tucking and presealing means operative to form gussets in the open end of a bag and effect presealing of the bag below the gussets, the combination with said tucking and presealing means of labeling means operative to apply and fold a header label over a bag following tucking by said tucking means, label sealing means operatively associated with said labeling means to seal the header label to the bag, and supplemental presealing means intermediate said tucking and presealing means and said labeling means operative to effect a second presealing of the bag above the first preseal.

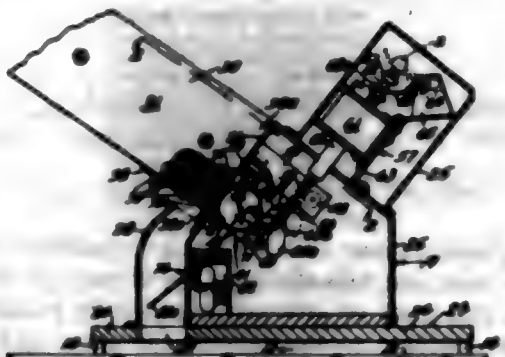
14. A method of automatically sealing a header label to an initially open-ended bag, comprising the steps of forming gussets in the open end of the bag, presealing the bag below the gussets while they are held in formed relation, presealing the bag over the first preseal, folding a header label over the bag at opposite sides of said gussets and seals, tack-sealing said label to said bag, and effecting a final sealing of said label and said bag.

2,865,153
METHOD AND APPARATUS FOR APPLYING FOIL
Arisato Seragnoli, Bologna, Italy
Application January 18, 1954, Serial No. 404,822
10 Claims. (Cl. 53—34)



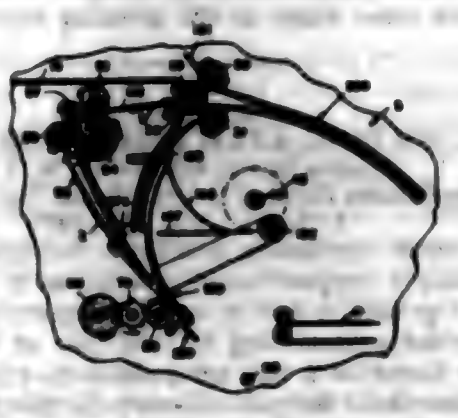
1. Process for applying foil to chocolate coins and other similar articles, in which a foil of enveloping material is folded to U-shape around the article to be wrapped up, characterized in that the arms of the U are trimmed at a certain distance around the article, that portion of one of the arms of the U which is projecting beyond the article being pushed against the other portion having the shape of a conical envelope and subsequently compressed to hat-shape, whereupon those parts of the wrapping material which project on the periphery of the article are folded against the peripheral contour of the article, the article being then, if necessary, embossed to form reliefs.

2,865,154
INSERT FEEDING APPARATUS
William R. Ceyne, Minneapolis, Minn., assignor to The Pillsbury Company, a corporation of Delaware
Application June 28, 1955, Serial No. 516,427
11 Claims. (Cl. 53—59)



1. Apparatus for feeding insert members, one at a time, into a series of open-topped containers from a stack of insert members, said apparatus comprising a frame, a magazine mounted on said frame for holding such a stack of insert members and having a discharge end, insert-abutting retaining means disposed in spaced relation with the discharge end of such a magazine to preclude discharge of such insert members longitudinally outwardly thereof, a high speed friction element supported by said frame opposite the discharge end of said magazine and moving in a direction laterally therecross, said friction element being shiftable toward and away from the discharge end of said magazine and into instantaneous engagement with and release from the outermost insert member therein for impelling the same laterally across and away from the discharge end of said magazine and into the open mouth of such a container, and means mounted on said frame for rapidly moving said friction element, and driving mechanism having instantaneously releasing driving connection with said friction element and urging the same toward the magazine whereby to produce instantaneous engagement of the friction element with the outermost brochure.

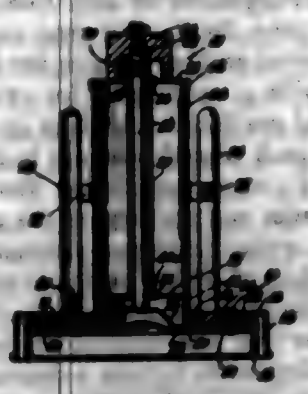
2,865,155
APPARATUS FOR FOLDING SHEETS AND INSERTING THEM IN ENVELOPES
George C. Nydegger, Sunland, Calif.
Application November 12, 1954, Serial No. 468,364
10 Claims. (Cl. 53—117)



1. In a machine for folding a sheet of paper or the like and inserting the folded sheet into an envelope, the combination of a guideway for receiving a portion of said

sheet less than the full length thereof, said guideway having an abutment at its outer end to be engaged by the leading edge of said sheet, roller means for moving a sheet endwise into said guideway and against said abutment whereby to cause said sheet to become bowed between its ends when its leading end engages said abutment, driven roller means for receiving said bowed portion of said sheet to create a first fold therein and to move said sheet in the opposite direction, an arched envelope actuating member mounted to swing about a radius conforming to the path of movement of said sheet during said latter movement, said member having opposed jawed sheet-gripping means positioned to receive and grip the first fold of said sheet during said latter movement of said sheet, said sheet during said latter movement being operable to swing said member in one direction, stop means for limiting said last mentioned movement of said member whereby to cause said sheet to buckle at the end of the first named fold, driven roller means for receiving said last named buckled portion of said sheet to create a second fold in said sheet, a folded-sheet-inserting guide shaped to fit in an envelope, third roller means for moving said folded sheet into said folded-sheet-inserting guide, an envelope conveyor, an envelope guide positioned to receive an envelope from said conveyor, said envelope guide having a substantially flat portion adjacent said conveyor and a substantially V-shaped opposite end portion, said substantially flat portion being positioned to be engaged by said envelope actuator during said last named swinging movement thereof, driven roller means mounted adjacent said V-shaped portion of said envelope guide, a driven star wheel mounted parallel with and adjacent said last named roller means, said envelope actuator being operable during its reverse swinging movement to move said envelope into engagement with said last named roller means and thence in cooperation with said last named roller means to move the flap end of said envelope onto said folded-sheet inserting guide whereby to enable said envelope to receive said folded-sheet from said folded-sheet inserting guide, and sheet releasing means operable in response to said last named swinging movement of said envelope actuator to release said sheet from said sheet-gripping means whereby to permit said folded sheet to be moved into said folded-sheet inserting guide by said third roller means.

2,865,156
ANTIBIOTIC SENSITIVITY DISC DISPENSER
Jerome A. Wallace, Brooklyn, N. Y.
Application July 5, 1955, Serial No. 520,061
7 Claims. (Cl. 53—237)

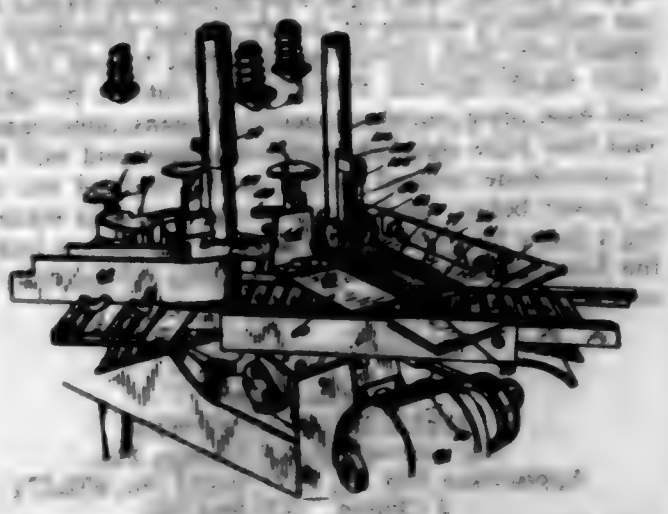


5. A dispenser including in combination a hollow base support to receive a disk, said support having a horizontal portion formed with an annular series of apertures, a rotatable carrying plate overlying said base plate, a loading plate overlying said carrying plate, both the latter and said loading plate being formed with series of apertures disposed similarly to those of said support, means cooperating with surfaces of said loading plate and said base plate to fix these plates relative to one another in substantial spaced-apart relation, said latter means being engageable with surfaces of said carrying plate to limit the relative rotation of this plate with respect to said loading plate and said base plate, a rotatably mounted shaft connected centrally of said carrying plate and extending upwardly therefrom, disc-carrying vials mounted by said loading plate in line with the apertures thereof and the upper end of said shaft extending beyond said vials to provide a manipulating portion for the rotation of said carrying plate.

2,865,157
PACKAGING FIXTURE
William Taiman, Hudsonville, Mich.
Application April 4, 1955, Serial No. 498,879
1 Claim. (Cl. 53—261)

A packaging fixture comprising: first and second oppositely disposed substantially symmetrical guiding members forming a conduit, said members having substantially coextensive projecting bill portions at corresponding ends thereof adapted to enter and grip a receptacle, and having substantially coextensive overlapping funnel portions at the opposite ends thereof; means providing a pair of slots intermediate one of said members, and a pair of aligned radial pins projecting into said slots and carried intermediately of the other of said members, said pins and slots constituting the only connections between said members and each of said slots having a length less than the extent of overlap of said funnel portions.

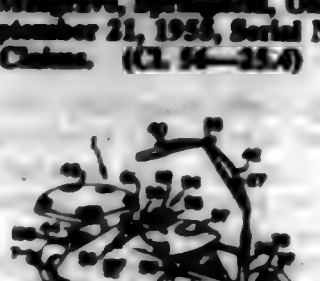
2,865,158
BOTTLE-FILLING APPARATUS
Alden H. Wakeman, Lakeville, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Application May 7, 1956, Serial No. 583,110
13 Claims. (Cl. 53—281)



3. An apparatus for use with a table rotatable about a vertical axis and provided with a plurality of vertically adjustable bottle pedestals arranged in symmetrical relation about the periphery of said table, said apparatus comprising a bottle feed means mounted for linear reciprocatory movement in a substantially horizontal plane, said means, when actuated in one relative direction, effecting disposition of an empty bottle on a pedestal when the latter is disposed at a first station of rotational adjustment, a bottle-sweeping means mounted in spaced

relation with respect to said feed means for linear reciprocatory movement in a substantially horizontal plane, said sweeping means, when actuated in one relative direction, effecting removal of a filled bottle from a pedestal when the latter is disposed at the second station of rotational adjustment, bottle-capping means mounted intermediate said feed and sweeping means for reciprocatory linear movement along a vertical axis, said capping means, when actuated in one relative direction, effecting capping of the filled bottle removed by said sweeping means from the pedestal at the second station, and gear means disposed normal to the direction of movement of said capping means and actuated thereby into rotation, said gear means being also disposed normal to the direction of movement of said feed and sweeping means and contacting same to actuate the latter upon actuation of said gear means by said capping means.

2,865,159
RIDING LAWN MOWER
Orly Musgrave, Springfield, Ohio
Application September 21, 1955, Serial No. 535,553
7 Claims. (Cl. 56—25.4)



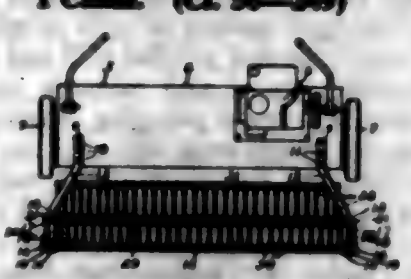
4. In a riding lawn mower: an elongated frame, forward and rearward supporting wheel means on the frame, a seat on the frame, a steering post having handle means thereon, the steering post extending upwardly from a forward part of the frame, extending rearwardly and terminating in handle means, a base plate member on the frame and having on each lateral side of the mower a foot-receiving wing which extends laterally of the mower beyond the frame, said foot-receiving wings having depending outer edge portions forming with the foot-receiving portions of the wings guide edges, a cross-beam motor support on the base plate, said cross-beam having a cut-out portion, a source of power on the cross-beam positioned over said cut-out portion and having an output shaft which depends through said cut-out portion and said base plate member, securing means interconnecting said base plate member, said cross-beam and said frame, a cutter-blade secured on the output shaft of the source of power below the base plate member, said blade having a lesser length than the width of the mower including the foot-receiving wings and extending substantially horizontally beneath the base plate member.

2,865,160
MECHANICAL MOWER
Ray Parnell, Zolfo Springs, Fla.
Application July 16, 1957, Serial No. 672,271
2 Claims. (Cl. 56—36)

1. A mower attachment for a tractor having a frame including a horizontal frame member, a vertical frame member extending from said horizontal frame member and a side power pulley adjacent said frame, a second horizontal frame member secured in parallelism to said first mentioned horizontal frame member, a yoke pivotally connected at its inner end to said second horizontal frame member extending laterally from the side of said tractor, a mower head pivotally connected to the outer end of said yoke, a support for the outer end of said head, a rotatable mower in said head, connections between said mower and said side pulley, power lift mechanism carried by said vertical frame member above said horizontal frame member, a link pivoted to the outer end of said yoke, a pivotal connection between said link and said power lift mechanism, and a flexible chain connection be-

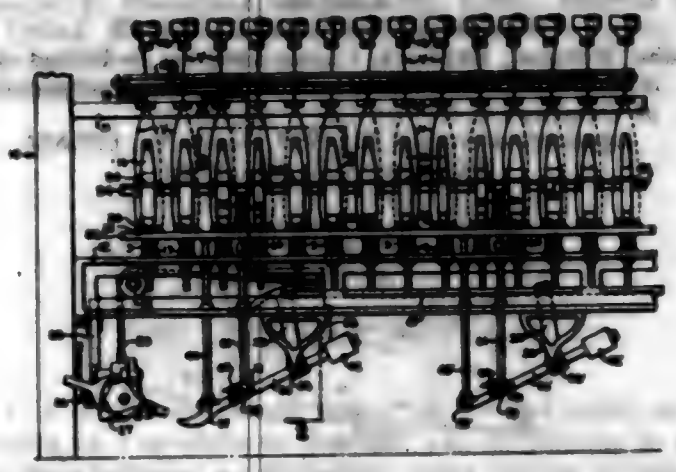
tween an intermediate portion of said link and the inner end of said mower housing for raising and lowering the outer end of said mower above and below the horizontal in accordance with the contour of the ground, said chain being of a length sufficient to allow lowering of the outer end of the mower below the horizontal.

2,865,161
CRAB GRASS RAKE ATTACHMENT FOR REEL TYPE MOWERS
Otto J. Nygren, Minneapolis, Minn.
Application January 11, 1957, Serial No. 633,614
1 Claim. (Cl. 56—249)



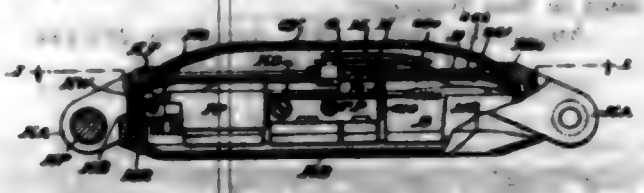
For use in a rake attachment for lawn mowers comprising a pair of supporting arms for rigidly but detachably mounting the attachment in longitudinally spaced and parallel relation to a forward transverse edge portion of the frame of a lawn mower above and forwardly of the cutter blades of said mower, horizontally disposed bearing members formed in the outer end portion of each of said supporting arms, a rake head comprising a plurality of longitudinally spaced downwardly and outwardly projected bowed tines rigidly mounted in a tine carrier bar and a spacer bar rigidly attached to each tine substantially at the longitudinal center thereof affording means for maintaining spaced arrangement of said tines and substantial rigidity to said rake head, said tine carrier bar being journaled at its outer end portions in the bearings of each supporting arm with a working fit for axial rocking rotation, the outer end portions of the tine carrier bar extending outwardly of each of said bearings in the said supporting arms to afford a mounting station thereon; tension assemblies on the outer end portions of the carrier bar comprising a pair of spring tensioned clamping members the forward end portion of which being rotatably and adjustably attached to the said outwardly projecting end portions of the tine carrier bar and continuing in relatively long rearwardly extending arms having a depending rod rockably attached to its rear end portion, said rod extending through an aligned transverse bore in the rear end portion of its cooperating supporting arm immediately thereof, a coiled spring encircling said rod in engagement with and below the respective supporting arm, a nut threadedly engaging the lower end portion of said rod for adjustably tensioning the coiled spring between said arm and said nut whereby the position of the tines, mounted on the tine carrier bar, may be held yieldingly locked in predetermined position relative to the ground being worked.

2,865,162
TRAVERSING YARN BALLOON CONTROL
Orville L. Hope, Gastonia, N. C., assignor to Textile Machinery Exchange Inc., Charlotte, N. C., a corporation of North Carolina
Application July 5, 1956, Serial No. 596,866
16 Claims. (Cl. 57—110)



3. In a twisting machine having a vertically traversing ring rail, traveler-carrying rings on said ring rail, yarn receiving bobbins extending through said rings and wherein yarn forms a balloon above each ring during its travel; the combination therewith of balloon control rings substantially co-axially alined with and normally spaced substantially above the traveler-carrying rings and encircling the balloons, means to raise and lower the balloon control rings during corresponding movements of the ring rail, and means yieldably supporting said balloon control rings for movement relative to the raising and lowering means and being so arranged as to permit the balloon control rings to be moved downwardly relative to the ring rail for doffing.

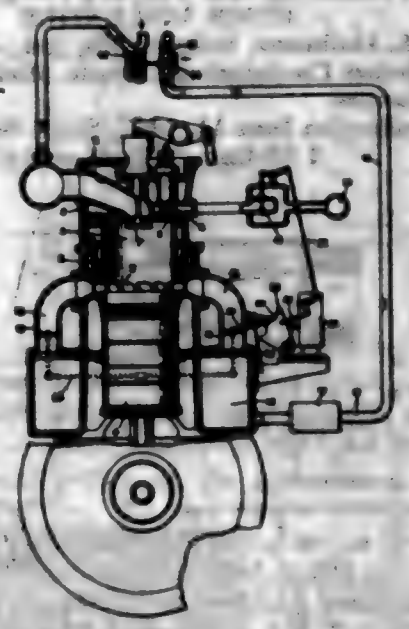
2,865,163
ELECTRICALLY-POWERED TIME DEVICE
George G. Ensign and Glenn T. Soper, Elgin, Ill., and Gustus Lundahl, Orlando, Fla., assignors to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois
Application April 15, 1952, Serial No. 282,388
19 Claims. (Cl. 58—28)



10. In an electrically actuated watch, a case including a caseback, a dial in the case, motor and train structures in the case and occupying a part of the area at the rear of the dial, another part of the said area being free and unencumbered and an electrical battery occupying said other part of said area and having one surface thereof closely behind the dial and the opposite surface thereof closely adjacent the caseback, said battery presenting a contact terminal at its surface adjacent said structures, and a cooperating contact terminal carried by said structures.

2,865,164
AIR FUEL CONTROL FOR TWO-CYCLE TURBO-CHARGED SPARK IGNITION GAS ENGINES
William M. Kaufmann, Hamburg, N. Y., assignor to Worthington Corporation, Harrison, N. J., a corporation of Delaware
Application April 14, 1954, Serial No. 423,164
2 Claims. (Cl. 60—13)

1. The combination in a two-cycle spark ignition gas engine including an exhaust gas turbine driven off the cylinder of said engine, and a blower driven by said turbine, a conduit for conducting the exhaust gases from said engine cylinder to said turbine, a second conduit for conducting air under pressure produced by said blower to said engine cylinder, inlet means for delivering gas fuel to said cylinder, a governor; valve means in the inlet means and operatively connected to the governor for controlling the delivery of gas to the cylinder in response to the operation of the governor, a valve in the second conduit for regulating the quantity of air delivered to said cylinder, a



cam operatively connected to the governor, linkage means operatively connected to the cam and said valve to actuate said valve to regulate the quantity of air delivered to said cylinder, and said cam having a land so constructed and arranged that the quantity of air delivered to said cylinder in proportion to the gas and the air-gas mixture will be reduced at and below half load operating conditions of the engine proportionately as the load on the engine is proportionately below half load to provide a suitable air-gas ratio for starting up and at such load conditions of said engine.

2,865,165
VARIABLE NOZZLE FOR JET ENGINE
Ralph Krom, La Mesa, Calif., assignor to Solar Aircraft Company, San Diego, Calif., a corporation of California
Application March 17, 1958, Serial No. 150,127
4 Claims. (Cl. 60—35.6)

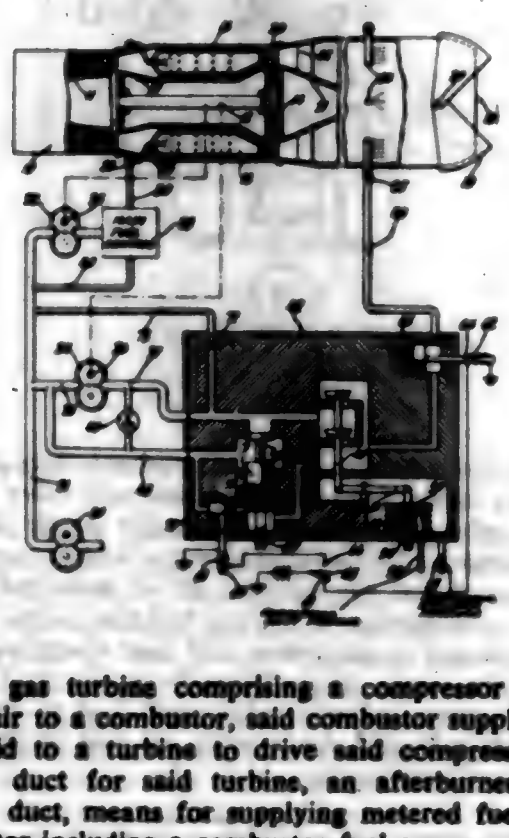
1. In a variable area nozzle: a fixed member; and a plurality of slidably interlocked alternately arranged in-

said fuel is burned; and speed sensitive braking means

2,865,171

wardly facing and outwardly facing channels forming a circular nozzle orifice, said outwardly facing channels being swingably connected to said fixed member; whereby swinging said interlocked channels in unison towards or away from the center of said nozzle orifice respectively causes the size of the orifice to decrease or increase, the shape of the orifice remaining circular for any size of the orifice.

2,865,166
AFTERBURNER FUEL SYSTEM WITH PUMP UNLOADER
Gordon E. Holbrook, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 11, 1952, Serial No. 292,940
2 Claims. (Cl. 60—35.6)

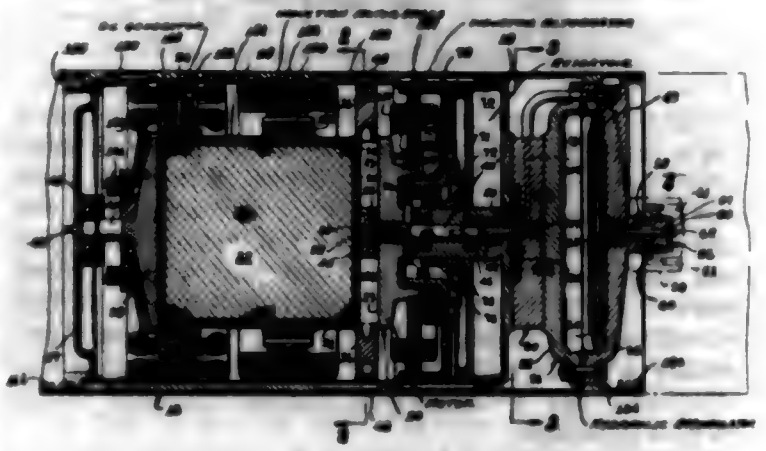


1. A gas turbine comprising a compressor for supplying air to a combustor, said combustor supplying motive fluid to a turbine to drive said compressor, a jet exhaust duct for said turbine, an afterburner in said exhaust duct, means for supplying metered fuel to said combustor including a combustor fuel pump and a combustor fuel control device, means for supplying metered fuel to said afterburner including an afterburner fuel pump and an afterburner fuel control device, and means for continuously driving both of said pumps during the operation of said turbine and compressor, said afterburner fuel control device including a fuel supply passage connecting the outlet side of said afterburner fuel pump and the inlet side of said afterburner, a fuel return passage connecting said fuel supply passage to the inlet side of said afterburner fuel pump, a pressure regulator valve in said fuel return passage for controlling the return of fuel from said fuel supply passage to the inlet side of said afterburner fuel pump, a metering valve in said fuel supply passage downstream of said pressure regulator valve for regulating the flow of fuel to said afterburner, a shutoff valve in said fuel supply passage downstream of said metering valve for stopping the flow of fuel to said afterburner, said pressure regulator valve including a piston portion having a first side communicating with said fuel return passage and a second side communicating with said fuel supply passage downstream of said metering valve and upstream of said shutoff valve and including a light spring arranged to bias said pressure regulator valve in closing direction, a relief passage connecting said fuel return passage with said second side of said piston portion, and a control valve in said relief passage arranged to open on closure of said shutoff valve to provide a drop in fuel pressure on said second side of said piston portion whereby said pressure regulator valve will function as a negligible resistance relief valve for said afterburner fuel pump to unload the same when the flow of fuel to said afterburner is stopped by the closure of said shutoff valve.

2,865,167
INNER CONE ATTACHMENT
John Wurzbel, Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application August 22, 1957, Serial No. 679,674
7 Claims. (Cl. 60—35.6)

3. An afterburner comprising an outer shell of circular cross-section having a forward and after end, at least one fuel spraybar extending radially inwardly from said outer shell, a tailcone having a forward and after end corresponding with said outer shell forward and after end and comprising axially aligned shells located concentrically within said outer shell and forming an annular passage therewith, means recessed within said tailcone and detachable from the after end thereof connecting said axially aligned shells and also loosely positioning the inner end of said spraybar so as to permit radial movement between said spraybar and said tailcone, and tailcone forward end connecting means recessed within said tailcone forward end and being detachable from the after end thereof.

2,865,168
FUEL BURNING REACTION MOTOR POWERED HYDRAULIC AND ELECTRIC POWER UNIT
Jack H. Zillman, Manhattan Beach, and Harry M. Steele, Jr., Pacific Palisades, Calif., assignors of one-third to Alex Deutsch, one-third to Lester Deutsch and one-third to Ben Weingart
Application July 9, 1952, Serial No. 297,934
20 Claims. (Cl. 60—39.14)



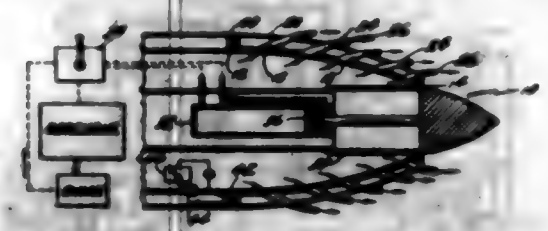
1. A reaction motor comprising: a pressure tight combustion chamber adapted to receive a body of fuel of less volume than said chamber and having means therein to support said body spaced from an interior wall portion of said chamber to form a plenum chamber adjacent said wall portion; bearing means supporting said chamber for rotation about a fixed axis; at least one jet nozzle in the wall of said combustion chamber disposed tangentially with respect to said axis and communicated with said plenum chamber to cause rotation of said chamber when

2,865,173
FLUID-OPERATED VIBRATION TEST EXCITER AND METHOD OF OPERATING SAME

said burner through the perforations of said side wall portions, and means in said burner for igniting the combus-

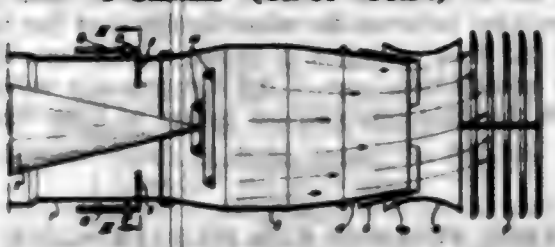
said fuel is burned; and speed sensitive braking means rotatively coupled to said chamber to regulate the speed of rotation thereof.

2,865,169
JET EXHAUST NOZZLE
George F. Hennessey, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application February 15, 1956, Serial No. 565,698
4 Claims. (Cl. 60—35.54)



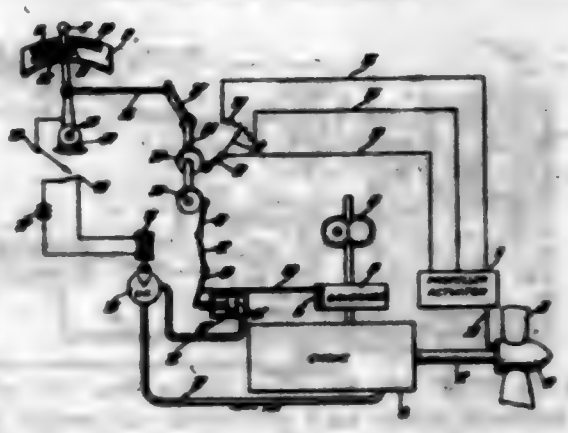
1. A jet exhaust nozzle having an annular casing converging in a downstream direction and terminating in an aft main opening, a substantially large number of openings in said casing, an annular sleeve surrounding said casing in juxtaposed relation therewith and also converging in a downstream direction, said sleeve having sections located on the periphery thereof which are perforate and imperforate, said perforate sections comprising two sets of relatively small passageways, one of said sets comprising a substantially large number of passageways terminating in relatively small outer exhaust ends directed generally in a downstream direction and discharging to the free airstream for silencing the exhaust flow and the other of said sets comprising a substantially large number of passageways terminating in outer exhaust ends directed generally in an upstream direction and discharging to the free airstream for reversing the exhaust flow, each of said sets comprising a plurality of rows of passageways with the adjacent passageways of each row being spaced in a direction along the longitudinal axis of the nozzle, means for rotating said sleeve whereby said openings are in registry with either one of the sets of passageways in said perforate sections, and both sets in nonregistry with said openings, a tapered plug in said casing, and means for moving said plug in an axial direction to open and close said main opening.

2,865,170
METHOD OF JET DEFLECTION AND APPARATUS THEREFOR
Marcel Kadosch, Paris, France, assignor to Societe Nationale d'Etudes et de Construction de Moteurs d'Aviation, Paris, France, a French company
Application July 23, 1956, Serial No. 599,593
Claims priority, application France August 12, 1955
5 Claims. (Cl. 60—35.54)



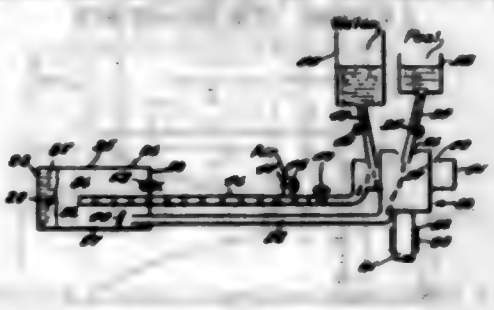
1. In a jet propulsion unit having a propulsive nozzle and a tail pipe for leading a continuous stream of motive gas thereto, a jet deflecting device comprising jet guiding means positioned downstream of said nozzle and extending outside and laterally of the normal undeflected path of the jet, and controllable means in said tail pipe which increases the temperature of an eccentric portion of said stream relatively to the remainder thereof whereby said stream is dissymmetrically heated and a transverse temperature gradient is established thereacross.

2,865,171
ENGINE GOVERNOR SETTING MECHANISM
Arthur W. Gaubatz, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 25, 1954, Serial No. 452,167
3 Claims. (Cl. 60—39.28)



1. In combination, an engine, a governor controlling the engine, a load device driven by the engine, means for varying the power requirements of the load, means for varying the speed setting of the governor, a common control device for the two said means, and means, actuated by initial movement of the control device in a sense tending to increase the load power requirement, to effect an anticipating advance of the governor setting; the last-named means comprising a first arm actuated by the control device, a second arm actuated by the first arm through means providing a lost motion connection, and a means for moving the second arm through the range of the lost motion.

2,865,172
ROTARY REACTION ENGINE
Theodore Bodde, Philadelphia, Pa.
Application April 5, 1955, Serial No. 499,417
10 Claims. (Cl. 60—39.34)



9. In a jet engine, a rotor, a combustion chamber mounted on the rotor at a position disposed radially outwardly from the axis, walls in the combustion chamber provided with a jet opening near the radially outer end thereof disposed in the direction opposite to the direction of rotation, means for forcing a mixture of air and slugs of water into the combustion chamber at a position adjacent the radial outer end of the chamber, separate means for forcing a stream of fuel into the chamber at a position located radially inwardly at the point of entry of the mixture of air and slugs of water, whereby the mixture of air and slugs of water is separated by centrifugal force in the chamber, the water collecting toward the outside and the separated air toward the inside and the atomized fuel is projected into the separated air, and intermittent ignition means for exploding the mixtures of air and atomized fuel, whereby the explosion occurs intermittently and discharges an accumulation of water and then products of combustion through the jet opening.

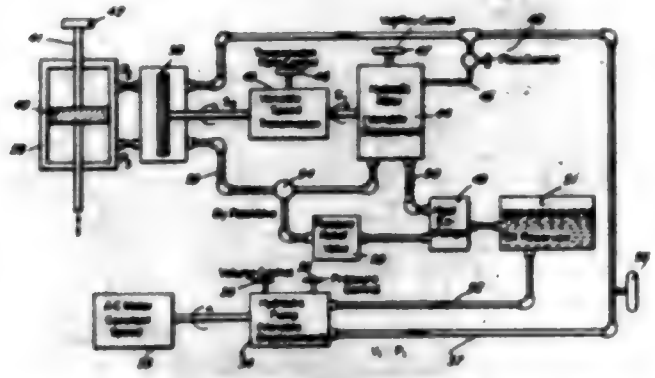
the gas output of this engine through its said duct, a common duct with which said discharge ducts communi-

port the panels against the side walls of the excavation, U-shaped members having legs, one of said legs engaging

off valve to provide a drop in fuel pressure on said second side of said piston portion whereby said pres-

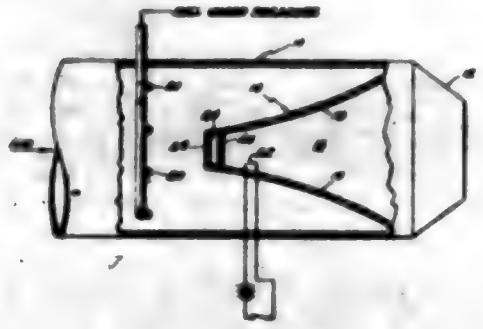
with respect to said axis and communicated with said plenum chamber to cause rotation of said chamber when

2,865,173
FLUID-OPERATED VIBRATION TEST EXCITER AND METHOD OF OPERATING SAME
John A. Dickie, Hamden, Conn., assignor, by mesne assignments, to Textron Inc., a corporation of Rhode Island
Application September 2, 1955, Serial No. 532,307
13 Claims. (Cl. 60—52)



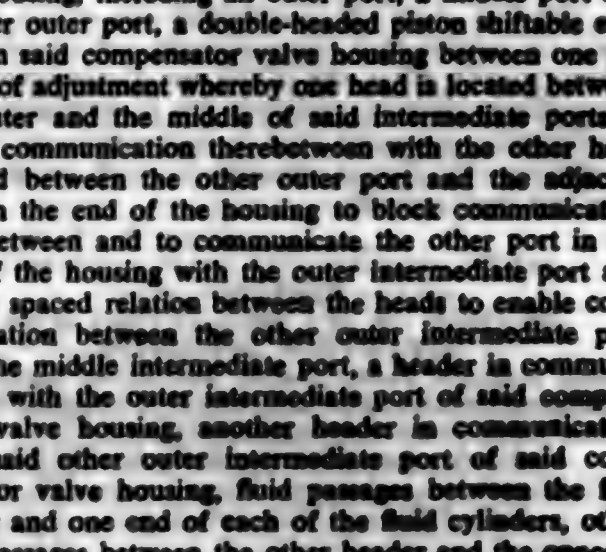
1. A hydraulic exciter system adapted to be used over a wide frequency range, comprising a reciprocatory piston, a cylinder containing the piston, valve means for the piston, a hydraulic motor to drive the valve means, a hydraulic pump connected to fluidly drive both the motor and the piston connections by which the valve means may direct fluid from the pump to the cylinder, in combination with means to vary the flow of the pump, means to vary the speed of the valve means without varying the flow of the pump, and means to fix the difference in pressure drop across the piston, whereby the amplitude or the velocity or the acceleration of the reciprocatory piston can be kept constant while the frequency is varied.

2,865,174
SCREECH REDUCTION IN COMBUSTION CHAMBERS
Arthur W. Blackmun, Jr., and George D. Lewis, Manchester, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application May 16, 1956, Serial No. 585,296
5 Claims. (Cl. 60—39.69)



5. In an axial flow jet propulsion type power plant having an elongated combustion section, a casing defining said combustion section and having a longitudinal axis, an elongated burner located in said casing and being coaxially disposed therewith whereby the combustion fluids flow substantially along said axis, said burner having continuously perforated side wall portions which are substantially continuously curved and diverging in a downstream direction, said wall portions terminating at their downstream end adjacent said casing, an imperforate burner wall portion forming a closed upstream end of said burner, a perforated wall portion in said burner downstream of said imperforate burner and forming a tuned chamber in cooperation with said burner side wall portions, means for introducing fuel upstream of said burner whereby the fuel and air mixture pass from outside to the inside of said burner through the perforations of said side wall portions, and means in said burner for igniting the combustion fluids.

2,865,175
HYDRAULIC POWER SYSTEM
John T. Gondek, Minneapolis, Minn.
Application September 26, 1956, Serial No. 611,921
3 Claims. (Cl. 60—97)



1. In a hydraulic power system for the displacement of pistons in one group of fluid cylinders in advance of displacement of pistons in another group of fluid cylinders in direction sequence in one direction and in reverse sequence in the other direction, a fluid reservoir, a reversible pump having ports at opposite sides thereof, suction valves in communication one with the other at one end and in communication with opposite ports of the pump at opposite ends, means communicating the fluid in the reservoir with the ends of the suction valves in communication with each other, a compensator valve housing having ports in opposite ends thereof and three additional ports in spaced relation in the intermediate portion of said housing, including an outer port, a middle port and another outer port, a double-headed piston shiftable endwise in said compensator valve housing between one position of adjustment whereby one head is located between the outer and the middle of said intermediate ports to block communication therebetween with the other head located between the other outer port and the adjacent port in the end of the housing to block communication therebetween and to communicate the other port in the end of the housing with the outer intermediate port and with a spaced relation between the heads to enable communication between the other outer intermediate port with the middle intermediate port, a header in communication with the outer intermediate port of said compensator valve housing, another header in communication with said other outer intermediate port of said compensator valve housing, fluid passages between the first header and one end of each of the fluid cylinders, other fluid passages between the other header and the opposite end of the fluid cylinders, a passage communicating the middle intermediate port of the compensator valve housing with the fluid reservoir for return of fluid thereto.

2,865,176
CONTROL SYSTEMS FOR MULTI-ENGINE AIRCRAFT EMPLOYING REACTION JETS
John Shellens, Northolt, England, assignor to D. Napier & Son Limited, London, England, a British company
Application December 12, 1956, Serial No. 627,760
Claims priority, application Great Britain December 14, 1955
11 Claims. (Cl. 60—97)

1. A control system for an aircraft comprising at least two engines, gas discharge ducts respectively from said engines, means driven by each of said engines for producing an operating value which is proportional to

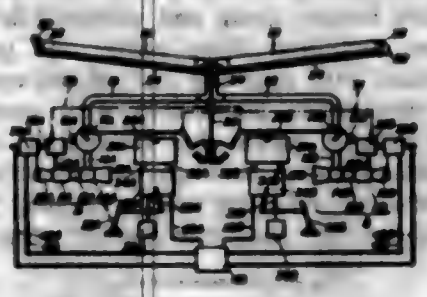
said sections together as a single unit, a drill string pas-

municating with the other end of said dehumidifying coil,

verse temperature gradient is established thereacross.

and then products of combustion through the jet opening.

the gas output of this engine through its said duct, a common duct with which said discharge ducts communicate, at least one propulsion nozzle connected to said common duct, an isolating valve in each of said discharge ducts, a movable valve member in each said isolating valve, each said movable valve member having a normal position in which the associated engine is connected to said common duct and an isolating position in which said associated engine is isolated from said common duct, a servo control mechanism for each engine, a device sensitive to said operating values connected to all of said engines and operative in the event of a predetermined drop in the magnitude of said operating value of any one of said engines below the operating value of any other of said engines, and connections between said sensitive device and said servo control mechanisms, said device being operative to actuate the servo control mechanism of said one engine to move the movable valve member of the isolating valve thereof into said isolating position responsive to said drop in the magnitude of its operating value.

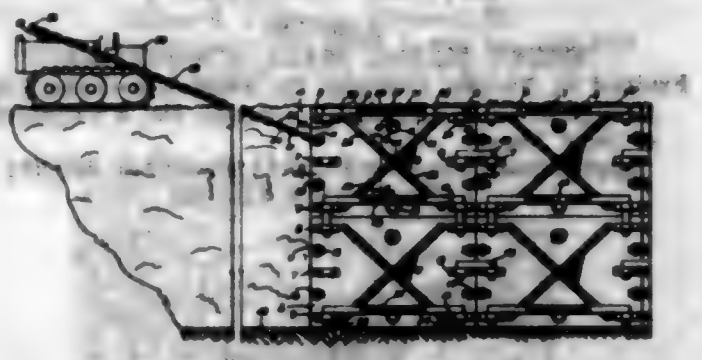


2,865,177
PROCESS FOR SOLIDIFYING POROUS MATERIALS
Robert J. Gaudinger, Oak Park, Ill., assignor, by mesne assignments, to Chemject Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Application July 7, 1954
Serial No. 441,921
1 Claim. (Cl. 61—36)

A method of reducing the permeability and increasing the solidity of porous material which comprises impregnating said material with an aqueous solution of acrylamide, methylene bis acrylamide and calcium acrylate having weight percentages based on the total weight of these constituents of from about 95 to 28.5%, 5 to 1.5%, and up to 70% respectively, and increasing the penetration of said solution into said material by incorporating therein just prior to said impregnation preselected equivalent minor amounts of methacrylic acid and sodium bicarbonate, whereby gaseous pressure is generated which enhances penetration of said solution into said material to a predetermined degree.

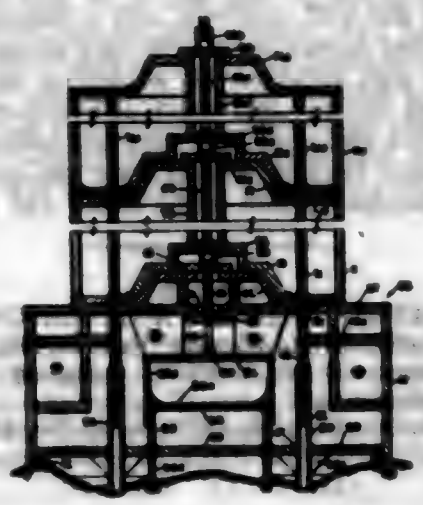
2,865,178
SHORING APPARATUS
Glenn J. Wicks, Ottawa, Kans.
Application March 19, 1956, Serial No. 572,384
4 Claims. (Cl. 61—41)

1. Cribbing of the character described for excavations such as trenches and the like comprising, a plurality of pairs of oppositely disposed panels for placement against opposite faces of side walls of an excavation and placed in end to end relation, spaced bracket members on the adjacent faces of said opposed panels near the respective end edges, braces between said opposed panels at the upper and lower edges thereof, each of said braces comprising a plurality of arms extending diagonally from one panel to the other and secured together at their centers, means at the extremities of the brace arms and removably engaged with the brackets whereby said braces support the panels against the side walls of the excavation, U-shaped members having legs, one of said legs engaging in a bracket of one panel and the other leg engaging in a bracket of the other panel to hold the panels in end to end relation in said excavation, means on the panels forming elongate chambers, said panels having a plurality of apertures communicating the chambers with



the exterior of said panels adjacent the walls of the excavation, means for delivering fluid under pressure to the chambers for discharge in jets through the apertures for cutting the side walls of the excavations and freeing said cribbing from the walls of the excavation, and means for connection with the cribbing for drawing same along said excavation.

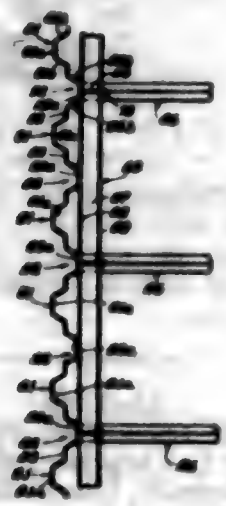
2,865,179
OFFSHORE DRILLING STRUCTURE
Robert C. McNeill, Los Angeles, Calif., assignor to Shell Development Company, Emeryville, Calif., a corporation of Delaware
Application September 28, 1953, Serial No. 382,766
9 Claims. (Cl. 61—46.5)



5. An offshore drilling structure comprising a set of prefabricated sections vertically assembled on top of each other to extend from the bottom of the water to a level above its surface, each of said sections comprising four hollow cylindrical columns having upper and lower closure plates, said columns being held together by bracing to form a rectangular figure, polygonal key members forming part of said upper and lower cover plates, said key members being convex on the upper plates and concave on the lower plates and registering with and engaging each other when said sections are disposed on top of each other, a first guide tube passing axially through each column and welded to the upper and lower plates thereof, a plurality of second guide tubes passing axially through each column and welded to the upper and lower plates thereof, said second guide tubes being disposed around said first guide tube, a tubular string freely passing throughout each set of axially assembled columns within the first axial guide tube thereof, said string being braced in tension between each of the columns of the lowermost section and each of the columns of the top section to hold

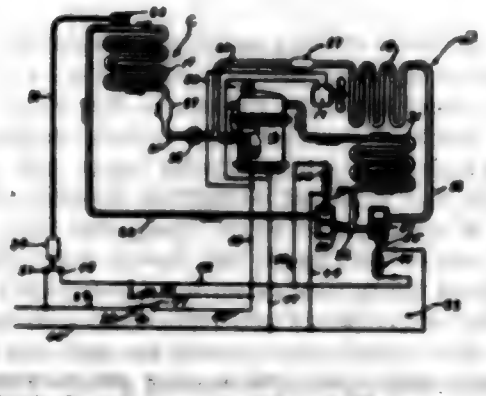
said sections together as a single unit, a drill string passing within at least some of said second guide tubes of each of the column sets, each of said drill strings penetrating to a desired depth into the ground below the column sets, and means for locking said drill strings with said columns to anchor said columns to the ground.

2,865,180
SHEET PILING WALL STRUCTURE
Fridtjof G. Nielsen, Chicago, Ill., assignor to Great Lakes Dredge & Dock Company, Chicago, Ill., a corporation of New Jersey
Application December 23, 1953, Serial No. 400,081
7 Claims. (Cl. 61—49)



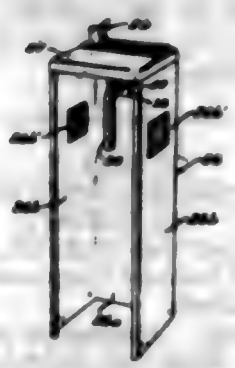
1. A wall structure of the class described comprising sheet piling, a wale rigidly secured across said piling at one side of the wall structure, and a plurality of batter beams slanting downwardly from said piling at said one side of the wall structure for anchoring the same, said batter beams having rigid sheet deflection-resisting connections below said wale only with said piling whereby to avoid excessive twisting of said wale and consequent increased deflection of said piling under soil pressure.

2,865,181
COMBINATION FREEZER AND DEHUMIDIFIER
Leland J. Anderson and Charles Ward Stoner, Milwaukee, Wis., assignors to Ben-Hur Mfg. Company, Milwaukee, Wis., a corporation
Application May 16, 1955, Serial No. 508,502
3 Claims. (Cl. 62—199)



1. A dual freezing and dehumidifying arrangement adapted to be installed in a freezer cabinet comprising, a freezer cycle and a dehumidifier cycle, a compressor, a condenser communicating with one side of said compressor; said dehumidifying cycle in open communication with said condenser and including a capillary tube communicating with the condenser at one end thereof, a dehumidifying coil having one end communicating with the other end of said capillary tube, an accumulator communicating with the other end of said dehumidifying coil, and a line connecting said accumulator with the other side of said compressor; said freezer cycle including a second capillary tube in open communication with the said one end of said condenser, freezer coils having one end connected to the other end of said capillary tube, a freezer accumulator secured to the other end of said freezer coil, and a line communicating with said freezer accumulator and the said other side of said compressor; valve means interposed between said one end of said condenser and the said ends of the capillary tubes of the respective freezer cycle and dehumidifier cycle, said valve means including three ports, one port in open communication with said one end of the condenser and one port respectively connecting with each respective cycle, and plunger means for alternately opening and closing communication between the respective port and its respective cycle, whereby refrigerant may be alternately channeled through one cycle and the other.

2,865,182
SELF-CONTAINED WATER COOLER OF THE BUBBLER TYPE
Wilfred R. Schultz, Troy, Mich., assignor to Temprite Products Corporation, Birmingham, Mich., a corporation of Michigan
Application September 21, 1956, Serial No. 611,290
4 Claims. (Cl. 62—398)

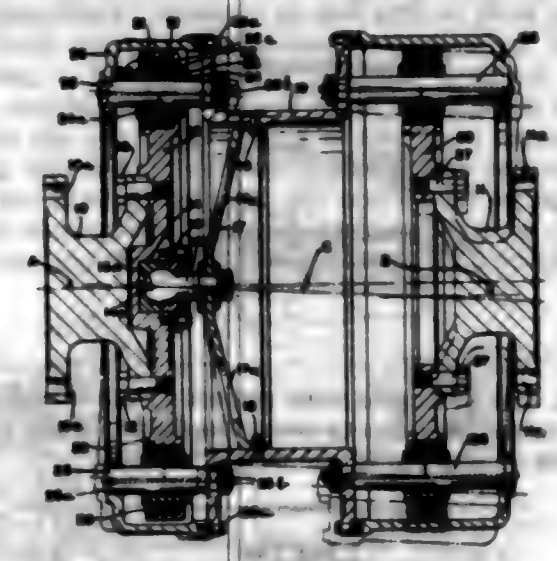


4. In a self-contained cabinet water cooler, the combination of a cabinet structure comprising a floor-supported frame having channel shaped rear posts arranged with their channel recesses facing each other and a wall structure extending across the front and two opposite sides of the frame structure; an insulation box structure with upright side walls supported in the upper part of the frame structure for holding a refrigerant-expanding cooling unit; refrigerant compressing means supported in the cabinet below the insulation box; and a refrigerant condenser comprising a refrigerant conduit looped back and forth in a single plane to form a flat structure disposed between the channel posts and extending from the lower part to the upper part of the cabinet and adjacent to the rear wall of the insulation box, the cabinet structure, channel frame posts and the box serving cooperatively to induce circulation of air upward over the condenser when the latter is heated in operation.

2,865,183
FLEXIBLE-COUPLING ASSEMBLY FOR CONNECTING SHAFTS AND THE LIKE
Thomas L. Fawick, Cleveland, Ohio
Application March 27, 1957, Serial No. 648,880
7 Claims. (Cl. 64—16)

1. A flexible-coupling assembly comprising a pair of coupling members presented to each other in axially spaced relation and a torque-transmitting spider between said members, said spider having at each of its ends, and, at a substantial distance from its axis of rotation, a set of circumferentially spaced driving units engaged with

the adjacent one of said members, and each of said units comprising axially disposed slide-bearing means and a



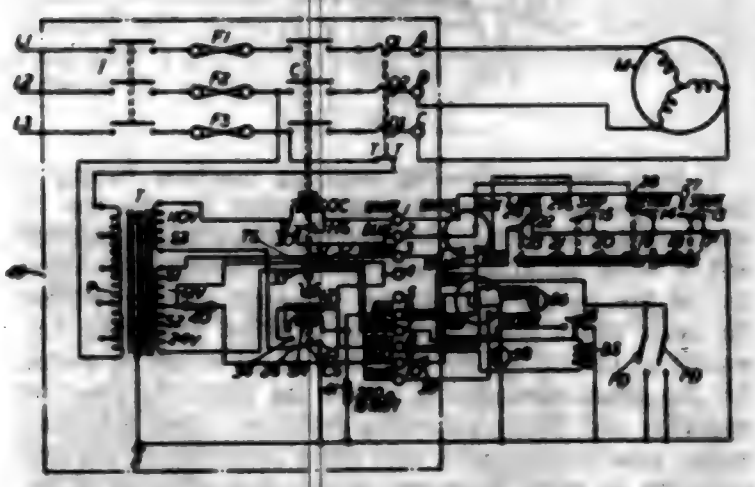
ball-and-socket connection in series with each other for torque transmission.

2,865,184

ELECTRICAL STARTING AND STOPPING ARRANGEMENTS FOR KNITTING MACHINES

Arthur Sleeuland, Leicester, England, assignor to Mellor Bromley & Co. Limited, Leicester, England, a British company

Application June 6, 1956, Serial No. 589,696
Claims priority, application Great Britain November 1, 1955
18 Claims. (Cl. 66—157)



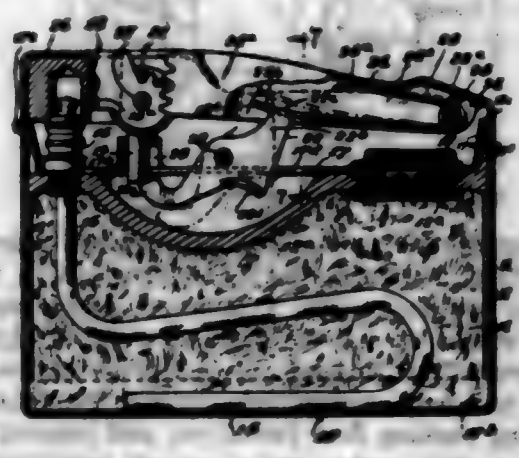
1. In a knitting machine, an electrical starting and stopping arrangement comprising, in combination, an electric driving motor for driving the said machine, a circuit incorporating electrical stop motion devices operation of any one of which, in an emergency, effects the switching off of said motor, a brake operable to bring the machine to a stop when the motor is switched off, a contactor with an operating coil whereby mains current to the said motor is switched on and off, a stop motion relay arranged in circuit with the stop motion devices, a current-responsive device through the agency of which the brake is both applied and released, said stop motion relay embodying a changeover element movable from one position to another to make the circuit incorporating the operating coil of the motor contactor and break the circuit of the aforesaid current-responsive device, or vice versa, a time switch which is included in the last mentioned circuit and is adapted to open the same automatically and thereby effect release of the brake after the expiration of a short period of time from the instant of application thereof, start, stop, inch and retain switches, and means enabling said switches to be operated as required at the will of the attendant of the machine and according as to whether the machine is to be started, stopped or inched.

2,865,185

PYROPHORIC LIGHTER

Allen B. Goldman, Glencoe, Ill.

Application January 28, 1957, Serial No. 636,819
4 Claims. (Cl. 67—7.1)



1. A pyrophoric lighter having an abradant wheel comprising: a pyrophoric element holder adjacent said wheel and adapted to have a pyrophoric element therein bear against said wheel; an operating member arranged to be moved manually to rotate said wheel; a rotatable lever having one end normally bearing against said pyrophoric element; and spring means bearing against the other end of said lever and said operating member to hold said lever against said element and said element against said wheel and to return the member to the ready position after use; said lever being adapted to be rotated away from said element beyond the dead center so that the force of said spring means locks said lever out of engagement with said element to facilitate changing said element.

2,865,186

HIGH-INTENSITY PHOTOFLASH LAMP

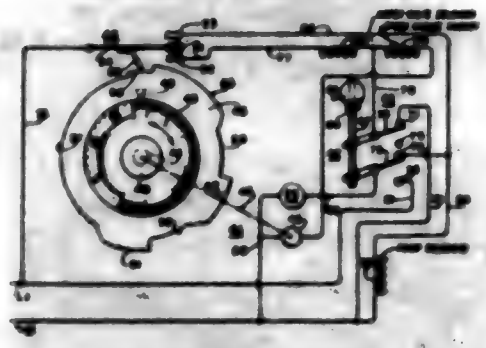
Lester F. Anderson and Sedgwick R. Bennett, Williamsport, and Joseph J. Wellenkerf, Montoursville, Pa., assignors to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

Application June 28, 1955, Serial No. 516,722
7 Claims. (Cl. 67—31)

3. A photoflash lamp comprising an enclosing outer bulb of light-transmitting material, said bulb being open at one end, a metal closure member hermetically fixed to said bulb at said open end, a smaller bulb within said first-mentioned bulb and also having an open end, a filling of combustible filaments held loosely within said smaller bulb, igniting means for said filaments within said smaller bulb, a spring acting between said bulbs to force said smaller bulb against said metal closure member, the smaller bulb being otherwise free, and a filling of combustion-supporting gas in both bulbs.

pair of levers for moving said latch member out of said

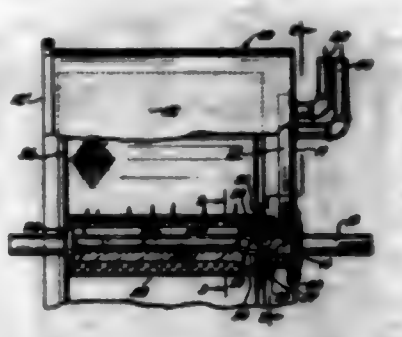
2,865,187
LAUNDRY APPARATUS
Joseph K. Cowdery, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 1, 1954, Serial No. 459,650
2 Claims. (Cl. 68—12)



1. In apparatus for washing fabrics and centrifuging washing fluid therefrom, the combination of a tub for containing washing water, a perforate basket rotatably disposed within the tub for containing the fabrics to be treated, means for rotating the basket at relatively low and high speeds for respectively washing the fabrics and centrifuging washing fluid therefrom, said rotating means including a main motor and a magnet energizable and deenergizable for effecting high and low speed rotation of the basket respectively, electrical valve means energizable for admitting water to the tub and terminating admission of water when deenergized, electrically actuated means for draining vitiated water from the tub, said draining means being rendered effective and inactive when energized and deenergized respectively, a switching mechanism responsive to the amount of water in the tub and movable to one controlling position when the tub is devoid of water and to a second controlling position when a predetermined quantity of water is present in the tub, a timing mechanism including a single cam, first and second switches selectively opened and closed thereby and a timing motor for actuating the cam, a power source, means connecting the valve means across the power source in series with the switching mechanism and the first cam operated switch, means connecting the water draining means across the power source in series with the second cam operated switch, means connecting the timer motor across the power source through said switching mechanism when the latter is disposed in its second controlling position, means connecting said timer motor and magnet in a parallel circuit in series with the second cam operated switch when said switching mechanism is disposed in its first controlling position, and means controlling operation of the main motor.

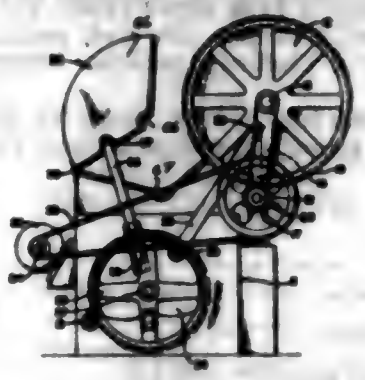
2,865,188
FLUID INTRODUCING MEANS FOR WASHER BASKETS
Alfred G. Kling and William Kellerman, Chicago, Ill., assignors to Kling "100" Corporation, Franklin Park, Ill., a corporation of Illinois
Application June 14, 1956, Serial No. 591,355
8 Claims. (Cl. 68—207)

2. In a garment handling device having a garment basket provided with first and second end walls, a rotatable supporting shaft extending axially of said basket and having ends projecting from the end walls thereof, said first end wall having an opening of greater diameter than the shaft, a cylindrical end member having open ends and secured within said opening of said first end wall to rotate with the basket, a plurality of spacing members connecting said shaft with the interior of said cylindrical end member to also rotate with the basket, which spacing members are in the form of vanes, there being passages which extend generally longitudinally of the shaft between said vanes and which lead from the exterior of the basket to the interior thereof, and means for conducting fluid from outside the basket into said passages, each vane



having a side so angled with respect to the direction of rotation of the basket as to sweep the fluid into the basket as a result of rotation of the basket.

2,865,189
LAUNDRY APPARATUS
Albert F. Wildgen, Davenport, Iowa, assignor to American Machine and Metals, Inc., New York, N. Y., a corporation of Delaware
Application August 22, 1956, Serial No. 605,583
9 Claims. (Cl. 68—210)



1. In a dump unloading washing machine having a casing open at the top, a hinged cover for the top of said casing movable between open and closed positions and a work agitating drum movable through the open top of the casing between an operative position within the latter and a dump unloading position projecting forwardly of the casing, the combination of actuating means for the drum operative to move the latter between its operative and dump unloading positions, cover actuating means synchronized with said drum actuating means and operative to move the cover to the open position of the latter during movement of the drum toward its dump unloading position and to permit movement of the cover to its closed position upon movement of the drum to the operative position of the latter, and cover locking means operated by said cover actuating means to tightly hold the cover in its closed position on the casing and to prevent removal of the cover from its closed position so long as said drum actuating means is conditioned to hold the drum in the operative position of the latter.

2,865,190
WRINGER
Nicholas L. Eiten, Cedar Falls, Iowa, assignor to Chamberlain Corporation, Waterloo, Iowa, a corporation of Iowa
Application December 8, 1955, Serial No. 551,794
3 Claims. (Cl. 68—263)

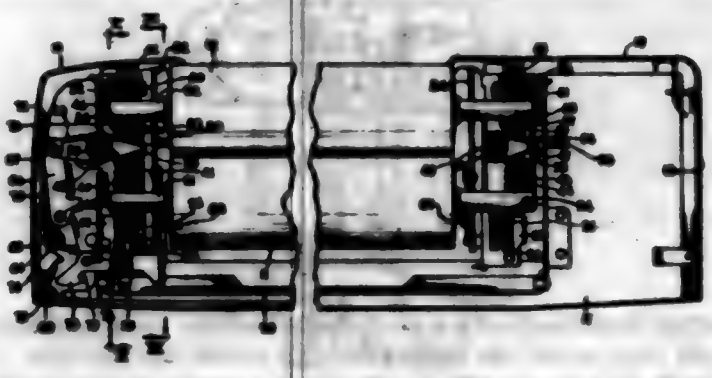
2. In a wringer including bottom and top rolls rotatable on vertically spaced parallel horizontal axes, a reset mechanism for applying pressure between said rolls including a lever element at one end of the wringer pivotal about a horizontal axis transverse to said axes and hav-

2,865,194

2,865,196

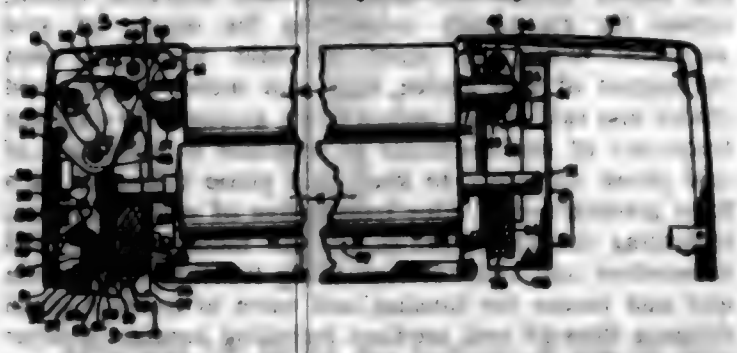
tain switches, and means enabling said switches to be of combustion-supporting gas in both bulbs.

ing an arm portion extending generally outwardly from said axis and movable to pivot the lever element in a direction to apply pressure between the rolls, a lever member operatively connected to said arm to pivot said arm and lever element with pivotal movement of the lever member, a handle element pivotally mounted on said lever member for movement about a horizontal axis parallel to the axis of movement of said lever, spring means urging said handle element inwardly to a generally vertical position against said one end of the wringer, said handle element being pivotal downwardly to an operative position projecting outwardly from the wringer, link



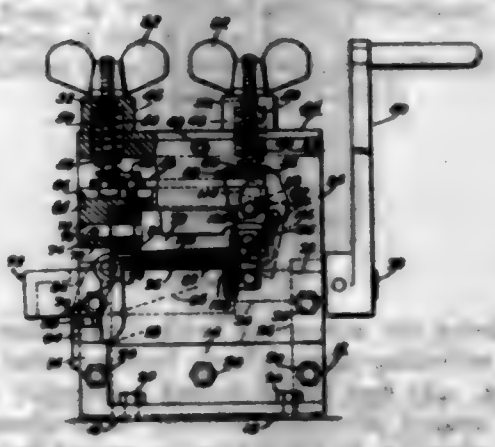
means connected to said lever member at a location spaced from the location where the handle is pivotally mounted on the lever, a sliding connection between said handle and said link means permitting the link to slide vertically on the handle as the handle is pivoted away from its vertical position, and stop means on said lever member positioned to be engaged by said link means when the handle has been pivoted a predetermined distance from its vertical position and said link means applying a pivotal force to said lever member, whereby said lever is actuated with downward movement of said handle element after a predetermined movement to apply pressure between the wringer rolls.

2,865,191
WRINGER
Nicholas L. Etter, Waterloo, Iowa, assignor to Chamberlain Corporation, Waterloo, Iowa, a corporation of Iowa
Application June 19, 1956, Serial No. 592,390
2 Claims. (Cl. 68—363)



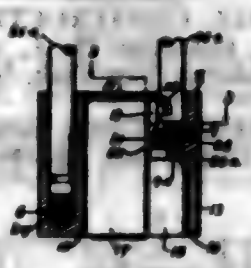
1. In a wringer, a frame, a bottom roll journaled for rotation in said frame, a top roll, movable support means journalling said top roll, a reset mechanism inter-connecting said support means and said frame for movement of said top roll into a position in parallel inter-engaged relation with said bottom roll, and latch means comprising a latch member pivotal about a horizontal axis transverse to the roll axes, means urging said latch member to a latching position, a first pair of levers pivotal on a common horizontal axis in vertical alignment with the roll axes, a second pair of levers journaled on horizontal axes parallel to and on opposite sides of the lower roll, a pair of links respectively connecting said second pair of levers with the upper ends of said first pair of levers, and means on the lower ends of said first pair of levers for moving said latch member out of said latching position on actuation of either one of said second pair of levers.

2,865,192
SCARFING MACHINE
Albert V. Collier, Philadelphia, Pa., assignor to Nelson J. Katz, Philadelphia, Pa.
Application October 31, 1957, Serial No. 693,753
5 Claims. (Cl. 69—13)



1. In a scarfing machine, a fixed position lower roller, a rotatable vertically adjustable top roller, means floatingly mounting said top roll, springs suspending said mounting means for vertical movement thereof, a knife plate having the cutting edge thereof mounted in proximity to the bite of said rollers and means mounting said knife plate correlated with adjustment of said top roller for varying the angle of said knife plate dependent upon the spacing between said rollers.

2,865,193
PADLOCK
Frank J. McConnell, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Application May 2, 1956, Serial No. 582,178
1 Claim. (Cl. 70—38)

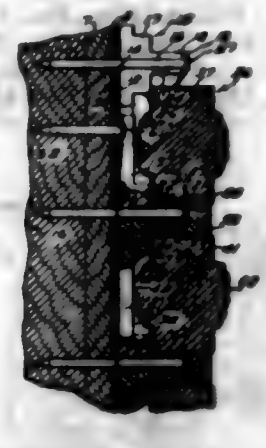


A padlock comprising a body having a bore extending longitudinally thereinto from one end and a hole extending thereinto from its opposite end parallel to and intersecting said bore along one side thereof, the outer end of said hole being adapted to receive the leg of a shackle and the inner end being of reduced diameter forming a coaxial recess communicating with said bore and having a bottom wall, a removable lock unit contained in said bore including a housing having a tumbler carrying portion and a separate projection extending laterally from the housing toward said hole and containing a recess in the surface thereof completing the recess in said lock body, the wall of the recess in said projection being provided with screw threads, and a retaining screw disposed in the recess in said body in threaded engagement with the screw threads on said projection and acting against said bottom wall to retain the lock unit in said bore, said retaining screw being accessible through the shackle receiving hole and being concealed by the leg of said shackle when in locked position.

which extend generally longitudinally of the shaft between

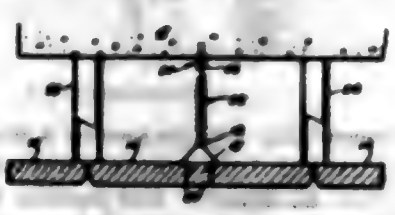
about a horizontal axis transverse to said axes and hav-

2,865,194
BRICK SUPPORTING CLIP
Frank J. Wallace, Portland, Oreg., and Alfred Kenneth Chilton, Berkeley, Calif.; said Wallace assignor to said Chilton
Application November 25, 1955, Serial No. 548,899
3 Claims. (Cl. 72—103)



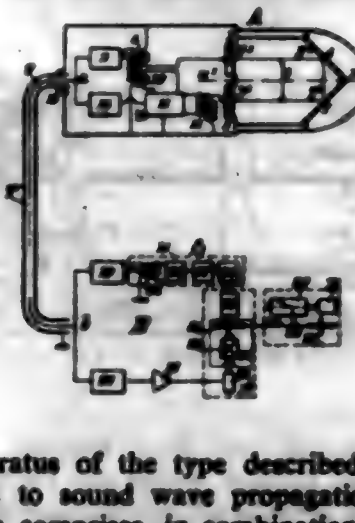
3. A device for supporting bricks comprising a longitudinally extending angular strip having a first and second flange, said first flange having a plurality of longitudinally spaced apertures thereon, said second flange having a plurality of longitudinally spaced brackets extending in general coplanar relationship therefrom, each of said brackets having an integral rectangular portion extending from the edge of said second flange and an integral extension extending from the outer edge of said rectangular portion and medially of the ends thereof defining a pair of shoulders, an angular projection extending from the end of said extension and disposed in parallel spaced relationship to said first flange, said projection having an upper edge surface aligned with the upper edge of said extension adapted to support the lower edge of a brick and a depending tab portion whose distal end extends below the lower edge of said extension, said projection having an aperture therein aligned with an aperture in said first flange, and said tab portion being deformable upon the insertion of a brick between adjacent brackets.

2,865,195
WALL CONSTRUCTION
William A. Jack, Hampton, N. J., assignor to Johns-Manville Corporation, New York, N. Y., a corporation of New York
Application October 18, 1953, Serial No. 386,326
1 Claim. (Cl. 72—118)



In a wall construction such as a ceiling, a building slab, a plurality of polygonal panels having their edges substantially abutting to form a substantially continuous planar facing over said slab, clip means partially embedded in the lower surface of said slab, coil spring means removably attached to said clip means and said bolt means and resiliently urging said panels toward said slab, elongated tubular spacers interposed between said panels and said slab, one end of said spacers contacting the lower surface of said slab and the other end of said spacers contacting the upper surface of said panels, each spacer being in simultaneous contact with a plurality of said panels at their adjoining edges, said spacers having their longitudinal axes generally perpendicular to the plane of the panels, and said spacers retaining said panels in co-planar relationship in response to the resilient urging of said springs.

2,865,196
APPARATUS FOR MEASUREMENTS CONCERNING THE VELOCITY OF PROPAGATION OF WAVES, AND IN PARTICULAR SOUND WAVES
Paul Joseph Bordenave, Montlhery, Par la Troache, and Andre Victor Hippolyte Joubert and Andre Pascal, Grenoble, France, assignors to Etat Francais, represented by Ministere de la Defense Nationale, Paris, France
Application December 13, 1956, Serial No. 628,187
Claims priority, application France December 17, 1955
4 Claims. (Cl. 73—53)



1. An apparatus of the type described for measurements relative to sound wave propagation in a liquid medium which comprises, in combination, a transmitter placed in said medium capable of emitting a wave therein in response to an electric oscillation imparted to the input thereof, a receiver placed in said medium and sensitive to said wave, said receiver being capable of delivering at its output an electric oscillation in response to said wave striking it, means for causing said wave to travel at any time a given distance between said transmitter and said receiver through said medium, a device having its input connected both with the input of said transmitter and with the output of said receiver and capable of delivering at its output an electric magnitude variable in accordance with variations of the phase difference between the electric oscillation at the input of said transmitter and the electric oscillation at the output of said receiver, a variable frequency electric oscillator, movable means operatively connected with said oscillator for varying the frequency thereof, electric motor means for operating said movable means, means for electrically connecting the output of said oscillator with the input of said transmitter and the output of said device with said motor means, said device and said motor means being arranged to vary the frequency of said oscillator in response to variations of said phase difference to keep said phase difference at a fixed predetermined value irrespective of such variations, indicating means operative by said motor means, said transmitter and said receiver being located side by side and said means for causing said wave to travel a given distance through said medium including another receiver and another transmitter located side by side and opposite said first mentioned transmitter and receiver respectively, and electric means for connecting the output of said second mentioned receiver with the input of said second mentioned transmitter.

2,865,197
MICROVISCOMETER
Carl J. Panther and Raymond L. Griffin, Oakland, Thomas K. Miles, Orinda, and Warren C. Simpson, Berkeley, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
Application June 18, 1956, Serial No. 592,126
5 Claims. (Cl. 73—59)

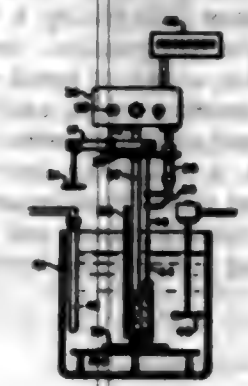
1. A microviscometer for determining viscosities of small amounts of plastics and asphalt-like substances, said

2,865,201

least 10^{-3} mm. of Hg comprising a metal housing means

pair of levers, and means on the lower ends of said first of said shackle when in locked position.

apparatus comprising a pair of smooth-surfaced plates adapted to be mounted in face-to-face contact with each other and to receive between them a thin film of material to be tested, first holding means fixedly securing one of said plates against movement, second holding means fixedly secured to said other plate and arranged for sliding movement parallel to, but out of contact with, said first holding means, linkage means attached to said second

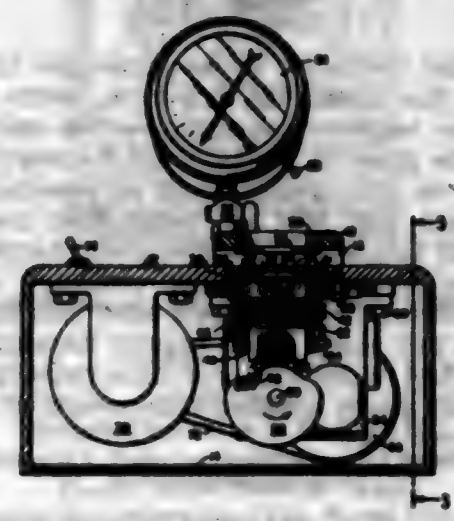


holding means, means for applying a pre-determined force to said linkage means to slide one of the plates over the other and in contact therewith, a flag secured in fixed relationship with said linkage means and movable with said linkage means and one of the plates, electrical circuit means including said flag as a movable control element, and measuring means coupled to said circuit means for measuring the displacement of said flag and said movable plate with respect to the other plate.

2,865,198
HARDNESS TESTING APPARATUS
Ludwig Tschirf and Fritz Gärtner, Vienna, Austria
Application July 6, 1954, Serial No. 441,446
Claims priority, application Austria July 9, 1953
10 Claims. (Cl. 73—81)

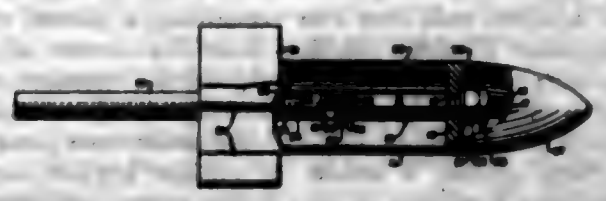
1. Apparatus for testing the hardness of one of two opposed spaced surfaces, comprising a testing head, power transmitting means on said head for transmitting power acting in a first predetermined direction, an indenter carried by said testing head for movement relative thereto in a second predetermined direction transverse to said first predetermined direction, a cross spring blade link including a block carrying said indenter and engaged by said power transmitting means, and two leaf springs arranged transversely to each other, each of said springs having one end connected to said testing head and another end connected to said block for converting power transmitted by said transmitting means in said first predetermined direction into an indenting force acting on said indenter in said second predetermined direction, chucking means connected to said testing head and operable for chucking said head between said two surfaces in a position in which said second predetermined direction is normal to said one surface, and means connected to said chucking means and operable for exercising thereon a chucking force independent of and exceeding the indenting force.

2,865,199
TESTING MACHINE FOR SHEET MATERIAL
Philip H. Miller, Lake Worth, Fla., assignor to Crosby Steam Gage & Valve Company, Wrentham, Mass., a corporation of Massachusetts
Application December 13, 1955, Serial No. 552,856
8 Claims. (Cl. 73—102)



1. A strength testing machine for sheet material having, in combination, a frame, a clamping ring mounted on the frame, a movable assembly supported in the frame including a fluid-filled cylinder, a piston, a diaphragm plate secured to the cylinder and movable against the ring to clamp a specimen thereagainst, an elastomeric diaphragm retained by the plate, the cylinder having an end wall with an opening closed by the diaphragm, and means for moving the piston to increase the fluid pressure in the cylinder to urge the plate against the ring and to expand the diaphragm outwardly toward the ring.

2,865,200
WIND TUNNEL ROLL-MOMENT BALANCE
Luther P. Gienaler, Rockville, Md.
Application October 27, 1954, Serial No. 465,159
5 Claims. (Cl. 73—147)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. An internal balance for measuring an external rolling moment around the longitudinal axis of an aerodynamic body, in combination, an elongated cylindrical element for supporting said body, a sting for supporting said element, a cruciform member integrally formed with said element and consisting of four separate flexible webs having opposed surfaces and responsive to said rolling moment, and four pairs of strain gages with each of said pairs of gages being associated with one of said webs respectively, said gages being secured to said opposed surfaces of the associated web and yieldable in proportion to the magnitude and direction of distortion of the web in response to said rolling moment, and a measuring apparatus electrically connected to said strain gages for producing a visual indication in accordance with said magnitude and direction of said rolling moment.

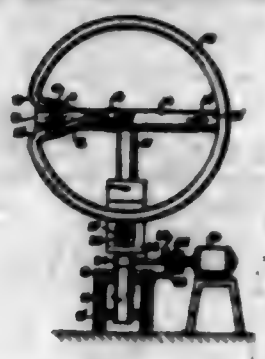
said ram intermediate the ends thereof, a portion of said

sponsive to a change in volume of said fluid for actuating said film delimiting means to vary the thickness of

ship in response to the resilient urging of said springs.

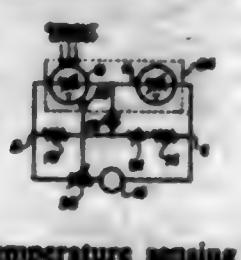
small amounts of plastics and asphalt-like substances, said

2,865,201
GYROSCOPIC MASS FLOWMETER
Wilfred Roth, West Hartford, Conn.
Application August 26, 1954, Serial No. 452,437
30 Claims. (Cl. 73—194)



30. A mass flowmeter of the gyroscopic type which comprises a fluid conduit of loop form, means mounting said loop for angular movement about an axis approximately in the plane of the loop and for angular movement about an axis approximately perpendicular to the first-mentioned axis, inlet and outlet fluid conduit sections for said loop arranged substantially parallel to one of said axes, driving means for oscillating said loop about the other of said axes, said other axis being at an angle to an axis about which angular momentum exists due to fluid flow in said loop to produce gyroscopic action, and indicating means sensitive to movement of said loop about said one axis.

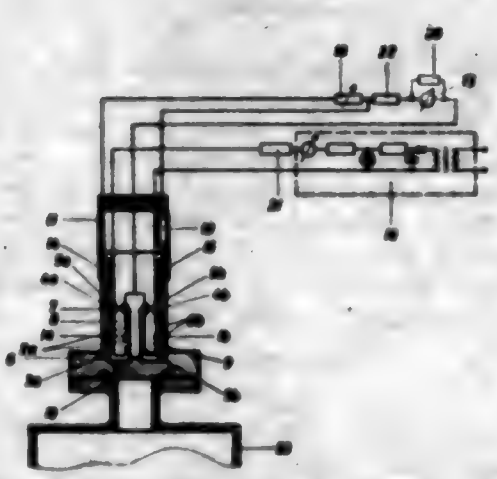
2,865,202
DEVICE FOR MEASURING AND DETECTING THERMAL ENERGY
Frank K. Bennett, Iselin, N. J., assignor to Gulton Industries, Inc., a corporation of New Jersey
Application April 23, 1954, Serial No. 425,147
5 Claims. (Cl. 73—355)



1. A radiation temperature sensing device comprising a bridge circuit, the first arm of said bridge circuit containing a first thermal sensitive element having a negative temperature coefficient of resistance exposed to the source of the temperature being measured, an arm of said bridge circuit adjacent said first arm containing a second thermal sensitive element shielded from the source of the temperature being measured, said second element also having a negative temperature coefficient of resistance, a resistor contained in each of the other two arms of said bridge circuit, a source of voltage applied across two opposite terminals of said bridge circuit sufficient to place the operating range of the combination in the negative incremental resistance region, and current detecting means whose resistance is positive and slightly greater than that of said bridge circuit connected across the other two opposite terminals of said bridge circuit.

2,865,203
HEAT-CONDUCTION MANOMETERS
Helmut Gruber, Hanau-on-Main, Germany, assignor to W. C. Heraeus G. m. b. H., Hanau-on-Main, Germany, a German body corporate
Application April 20, 1954, Serial No. 424,475
Claims priority, application Germany April 25, 1953
6 Claims. (Cl. 73—399)

1. A heat-conducting manometer adapted for measuring gas pressures in the range of 10 mm. of Hg to at least 10^{-3} mm. of Hg comprising a metal housing means, a measuring chamber mounted within said housing means, means for attaching said housing means to an enclosure in which the gas pressure is to be measured, means providing a communication between the interior of said measuring chamber and said enclosure, a gas-tight reference chamber mounted within said housing means, a pair of relatively sturdy conductor wires insulatingly sealed in the walls of each of said chambers and extending into said chambers, a resistor comprising a semi-conductor bead having a negative temperature coefficient of resistance in each chamber, a pair of metal electrode members of high electric conductivity in each chamber connecting said bead to said conductor wires and forming a support for said bead, a measuring instrument, electric circuit means connected to said conductor wires and extending between said housing means and said measuring instrument and forming a measuring bridge jointly with



said beads, said electrode members and said conductor wires, said bridge having a measuring branch including said resistor which is within said measuring chamber, a reference branch including said resistor which is within said reference chamber, and a diagonal branch including said measuring instrument connected between the juncture of said beads and the juncture of the other two branches, two resistors having a positive temperature coefficient of resistance in each of the other two branches of said bridge circuit means, said resistors having equal resistance and equal positive temperature coefficients of resistance, three of said four resistors having positive temperature coefficients of resistance being arranged within said metal housing means and the fourth one being adjustable and disposed outside of said metal housing, and a resistor disposed outside of said metal housing means having a positive temperature coefficient of resistance and connected in parallel with said measuring instrument.

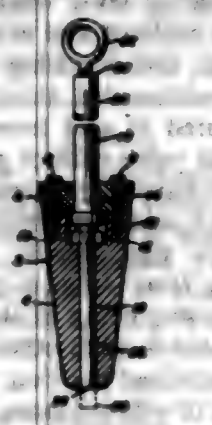
2,865,204
APPARATUS FOR DIP SAMPLING MOLTEN METALS
Benjamin S. Lamb, Homewood, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Application July 20, 1956, Serial No. 599,343
2 Claims. (Cl. 73—425)

1. Apparatus for obtaining a solidified sample of a molten metal which comprises a frusto-conical metal body adapted to be dipped in said molten metal, said body having an axial center bore therethrough, a ram slidable in said bore with one end normally projecting outwardly of the larger diameter end of said frusto-conical body, said ram being substantially greater in length than said body, and a circumferential flange on

actuated by the bodily movements of said gear along the handle and at a point spaced from said shaft and adapted

mined direction, chucking means connected to said test- with said magnitude and direction of said rolling moment.

said ram intermediate the ends thereof, a portion of said bore intermediate the ends of said body being enlarged circumferentially, said flange being disposed for limited axial movement in the enlarged portion of said bore.



2,865,205
TORSIONALLY DEFORMABLE SUPPORT FOR A GYROSCOPE GIMBAL
William F. Lear, Pacific Palisades, Calif., and Thomas Barish, Cleveland, Ohio, assignors to Lear, Incorporated
Original application October 23, 1951, Serial No. 252,736, now Patent No. 2,720,569, dated October 11, 1955. Divided and this application May 10, 1957, Serial No. 658,367
3 Claims. (Cl. 74—5)

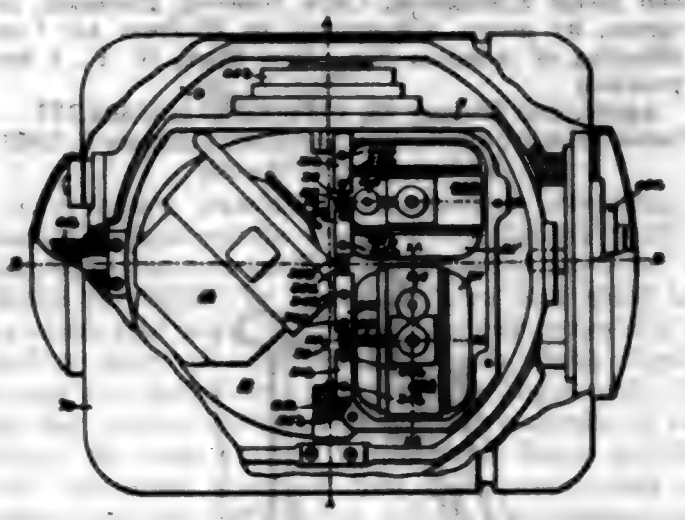
3. A gyroscope comprising a framework, a gimbal, a rotor mounted in said gimbal, means for rotating said rotor, and means for supporting said gimbal for limited angular displacement about an axis perpendicular to the axis of the rotor comprising a pair of coaxial members positioned at opposite sides of the gimbal, each said member having an enlargement at one end and a shank at the other, said gimbal having means for clamping said enlargement and said framework having means for clamping said shank, said members having a portion of cruciform transverse cross-section intermediate said enlargement and shank which is torsionally deformable in a predetermined degree depending upon the torque applied to displace the housing about the axis of said members, said enlargement providing portions for adapting said reduced portions to a clamping type of mounting of practical proportions.

2,865,206
BUOYED RATE GYROSCOPE
Thomas R. Quermann, Huntington Station, N. Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application July 5, 1957, Serial No. 670,436
8 Claims. (Cl. 74—5.5)

1. A buoyed gyroscope including in combination a gyroscope housing, a casing, fluid disposed in said casing for buoyantly supporting said housing, means defining an axis of rotation for said housing, actuatable means for delimiting a film of said fluid in contact with said housing to provide a predetermined damping force against rotation of said housing around said axis and means responsive to a change in volume of said fluid for actuating said film delimiting means to vary the thickness of

said film substantially to maintain the damping force constant.

2,865,207
GYRO-VERTICAL ELEMENT
Edward J. Poitras, Holliston, and John F. Taplin, West Newton, Mass.
Application September 20, 1952, Serial No. 310,628
31 Claims. (Cl. 74—5.34)



1. An artificial horizon comprising a universal support, a rigid mass statically balanced on said support, gyroscopic means carried by and measuring rotation of said mass, and gyro-controlled torque developing means on said mass acting independent of said support to still said rotation, said gyroscopic and gyro-controlled means constructed and arranged to impart zero net gyroscopic momentum to said mass.

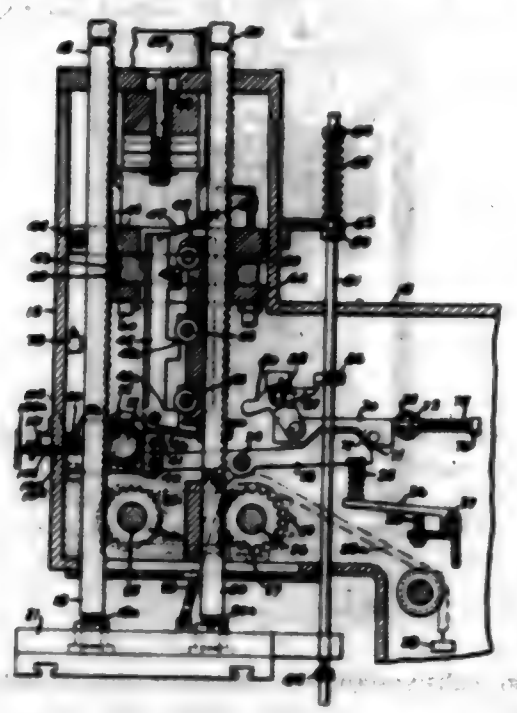
2,865,208
PRESS
Andrew J. Wacht, Detroit, Mich.
Application June 29, 1956, Serial No. 594,731
12 Claims. (Cl. 74—25)

1. In a press, a longitudinal movable rack provided therein, a gear engaging said rack and adapted, when rotated, to actuate said rack and to roll on said rack longitudinally thereof when said rack meets resistance of a predetermined magnitude; a toggle mechanism adapted to produce press operating forces, means adapted to interconnect drivingly said toggle mechanism and said rack, power means operating said toggle mechanism, cam means

nally within said housing for slidably confining the ends located in the same plane and the respective symmetrical

ing gas pressures in the range of 10 mm. of Hg to at length than said body, and a circumferential flange on

actuated by the bodily movements of said gear along the rack and adapted to operate the means interconnecting drivingly said toggle mechanism and said rack to cause

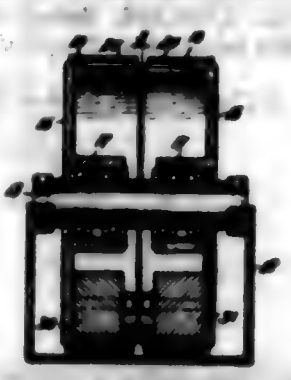


driving engagement of the toggle mechanism to said rack, and to start said power means for operating said toggle mechanism.

2,865,209
VALVE ADJUSTMENT DEVICES
Svend Helge Kristensen, Little Nestved, Denmark, assignor, by mesne assignments, to Hi-Press Air Conditioning of America, Inc., New York, N. Y., a corporation
Application January 28, 1954, Serial No. 406,777
Claims priority, application Denmark February 2, 1953
6 Claims. (Cl. 74—53)

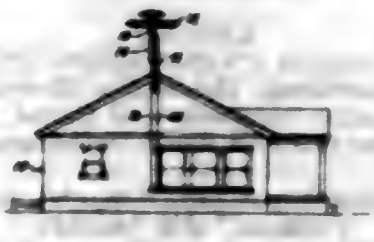
1. An operating mechanism, for use in connection with the remote control of a valve having a reciprocably movable control part, comprising in combination, a supporting structure, a shaft projecting through said structure and being journalled for rotation relative to said supporting structure, a handle secured to said shaft on one side of said structure and manually actuatable to turn said shaft, an actuating lever pivoted relative to said supporting structure and on the other side thereof relative to said handle and at a point spaced from said shaft and adapted to oscillate about said pivot, cam and cam follower means between said shaft and said actuating lever operable for oscillating said actuating lever when said shaft is turned completing a tilting cycle of said actuating lever for each full turn of the shaft, said actuating lever having an elongated path, a pin positionable along said elongated path and adjustably secured to said lever, a guide in driving connection with said valve control part and including an elongated guide way disposed adjacent said actuating lever at said other side of said supporting structure, said pin engaging said guide way thereby transmitting motion from said actuating lever to said guide, said elongated path and said guide way being of similar shape and contour and being parallel to each other when said actuating lever is in a predetermined position, whereby in said predetermined position of said actuating lever the position of said pin may be changed along said elongated path and therewith along said guide way while the guide and the actuating lever are at standstill.

2,865,210
SHAKER DRIVE
Chester Donald Fisher, Muncy, Pa., assignor to Sprout, Waldron & Company, Inc., Muncy, Pa., a corporation of Pennsylvania
Application August 29, 1956, Serial No. 606,846
8 Claims. (Cl. 74—61)



1. An oscillating drive device of the character described for imparting oscillatory motion to apparatus along substantially only a single plane, comprising a pair of coaxial pulleys, means for mounting said pulleys for counter-rotation on said apparatus, an eccentric weight of substantial mass on each of said pulleys, an endless positive drive timing belt for positive engagement with said pulleys, means for driving said belt, and means for threading said belt for counter-rotation of said pulleys with respect to each other.

2,865,211
ANTENNA ROTATOR
Norman V. Doyle, Marlin, Tex.
Application October 14, 1955, Serial No. 540,535
3 Claims. (Cl. 74—89)

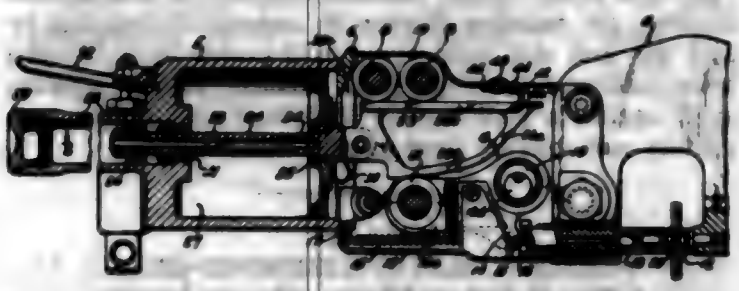


1. An antenna rotator including an upright housing, a twisted bar mounted in the housing for rotation relative thereto and having connection with an antenna, an actuating rod extending longitudinally within said housing, a transverse arm connected to the rod and having a complementary slot for slidable engagement by the bar, and opposed channel members extending longitudi-

between the axis of said pin and the axis of said inter-

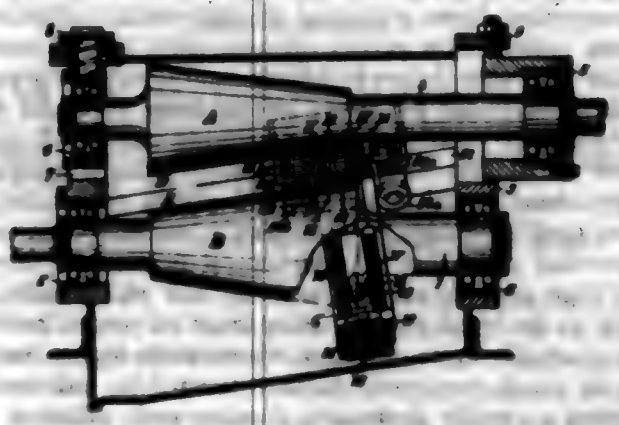
nally within said housing for slidably confining the ends of the arm to prevent rotation of said arm whereby said bar is rotated upon relative reciprocal movement of said rod and arm, the channel members and rod being in spaced parallel relation to said bar.

2,865,212
MECHANICAL MOVEMENT FOR PRESSING TOOL
Howard R. Fischer and James A. Roberts, Utica, N. Y., assignors to Chicago Pneumatic Tool Company, New York, N. Y., a corporation of New Jersey
Application February 1, 1955, Serial No. 485,546
18 Claims. (Cl. 74—110)



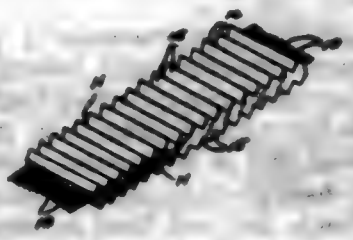
1. In a power operated machine of the character described, a mechanical movement comprising a piston powered by a constant pressure having a cam end defined by an upper steep slope merging into a lower relatively gradual slope, a power plunger, a housing for the piston and plunger, a shaft positioned in the housing, a bell crank lever pivotally mounted at one end on the shaft to transmit movement from the piston cam end to the plunger, a roller carried by the free end of the lever, and a shoulder formed on the lever at its pivoted end abutting an end of the plunger, said steep slope coacting upon a power stroke of the piston with the roller to move the lever rapidly about its pivot and thereby cause a rapid initial movement of the plunger, and the lower slope coacting after the latter action with the roller to effect a relatively slower subsequent movement of the plunger; characterized by means for adjusting the position of the shaft relative to the housing and thereby adjusting the location of the roller relative to the cam end of the piston for any given position of the piston so as to cause the roller to ride upon the lower slope immediately subsequent to movement of the piston for a predetermined distance.

2,865,213
CHANGE SPEED DEVICES
Jean Guillaume Pernollet, Paris, and Yves Boyer, St. Maurice, France
Application May 17, 1955, Serial No. 509,830
Claims priority, application France May 20, 1954
7 Claims. (Cl. 74—193)



1. A change speed device which comprises, in combination, a frame, a driven cone and a driving cone journalled in said frame about their respective axes, said axes being located in the same plane and the respective generatrices of said cones located in this plane and nearest to each other being parallel, the apexes of said cones extending in opposed directions, a driving ring structure passing around one of said members and caught between said two generatrices to transmit torque from said driving member to said driven member with a transmission ratio variable in accordance with the position of said ring structure along said two generatrices, said ring structure including two coaxial ring elements movable with respect to each other by relative rotation about their common axis, a part carried by one of said ring elements and movable axially with respect to the other in response to relative rotation of said two ring elements with respect to each other, a member slidable in said frame with a translatory movement in a direction parallel to said two generatrices, and means for pivotably connecting said other ring element and said part with said member, so that said two coaxial ring elements can pivot simultaneously about a determinable axis parallel to the plane of said two generatrices and perpendicular to said two generatrices.

2,865,214
ULTRA HIGH SPEED ENDLESS BELTS
Leslie A. Runton, Middle Haddam, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut
Application April 10, 1957, Serial No. 651,862
3 Claims. (Cl. 74—231)



1. A power transmission mechanism comprising a smooth surface spindle devoid of end flanges which is adapted to be rotated at high speeds in the order of 70,000 to 100,000 R. P. M., an ultra high speed belt by which said spindle is rotated, said belt comprising an endless layer of high tensile strength highly flexible woven yarn fabric impregnated with a displaceable rubber-like composition forming layers on each side of said fabric, the inner driving surface layer being provided with contiguous V-shaped open ended transversely extending grooves, said grooves defining therebetween contiguous V-shaped sharp edged teeth extending from side to side of said belt which are adapted to engage the smooth surface of said spindle and to flex and displace as the belt bends around said spindle and to thereby wipe the surface of said spindle and to expel entrained air in said grooves through the open ends thereof and thereby prevent any building up of an air cushion between said belt and said spindle.

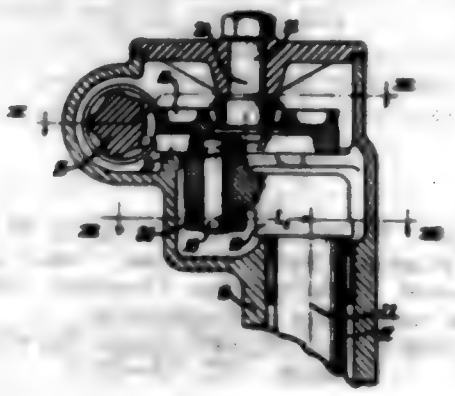
2,865,215
POWER STEERING GEAR
Arthur E. Bishop, Chatswood, near Sydney, New South Wales, Australia
Application January 3, 1955, Serial No. 479,590
19 Claims. (Cl. 74—388)

9. In combination in a power steering system for vehicles, a steering shaft, a valve having a reciprocal spool secured to said steering shaft for reciprocation within a fixed housing, an output shaft, an intermediate element having a high lead worm and worm wheel connection with said steering shaft, a crank arm secured to said output shaft for rotation thereof, a pin on said arm extending into a radial slot in said element, the distance

2,865,218

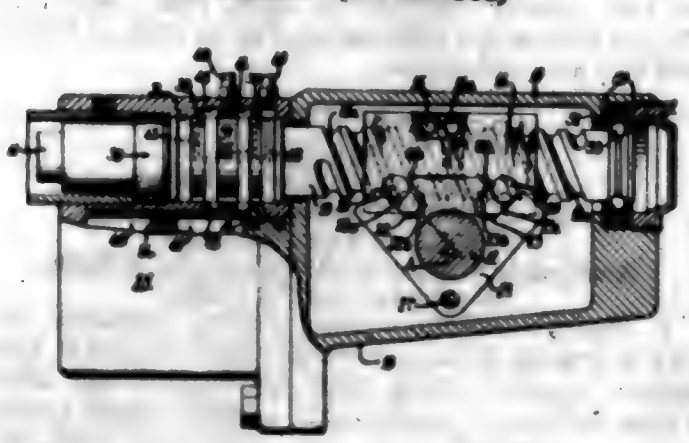
fast to said drive shaft, and fast and loose gears on said

between the axis of said pin and the axis of said intermediate element being a minimum when the vehicle is in its straight ahead condition, means for applying a power boost to said output shaft, said means being constructed to apply power at a point in the system between said slot and the end of said output shaft opposite therefrom, means mounting said steering shaft for reciprocation and rotation, said worm and worm wheel connection causing reaction for reciprocating said steering shaft upon resistance of said intermediate member to rotation to thereby actuate said valve to apply said power boost and slack eliminating means centering said steering shaft axially in the valve-neutral position, said last named means comprising a pair of normally flat Belleville springs having their internal peripheries in rotational but non-reciprocal connection with said shaft and their ex-



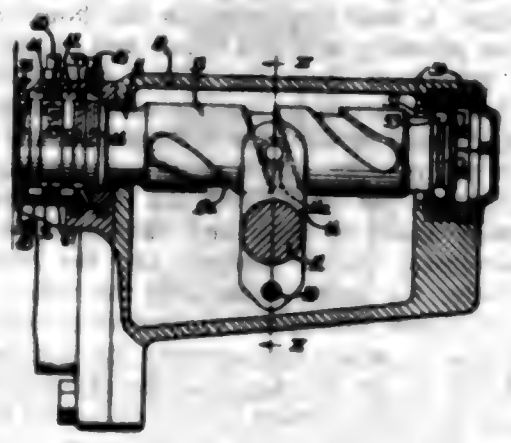
ternal peripheries confined between a pair of fixably adjusted abutment shoulders, said Belleville springs having a high spring rate and a deflection load at the extreme position of the valve spool away from the central position several times that at the central position, said valve spool member having a plurality of peripheral grooves separated by lands and said fixed housing member having a connection with said shaft and their external peripheries confined between a pair of fixably adjusted abutment shoulders, means positioning the lands of said spool opposite the grooves of said housing in the central valve-neutral position, at least one of said lands having less width than its respective groove and having its groove forming faces non-planar in contour whereby reciprocating movement of the spool will cause closure of the space between said one land on one member and an adjacent land on the other member in a gradual manner.

2,865,216
VARIABLE RATIO STEERING GEAR
Arthur E. Bishop, Chatswood, near Sydney, New South Wales, Australia
Application March 16, 1955, Serial No. 494,706
19 Claims. (Cl. 74—388)



9. A variable ratio steering gear for vehicles or the like comprising a first reciprocating member actuated by rotation of a steering wheel and a second rotary member mounted for rotation about an axis transverse to the path of reciprocation of said first member, a pair of pins on said first member and a pair of slots on said second member cooperating with said pins, said slots being positioned on said second member such that their axes intersect the axis of said second member and lie at an angle of 90° to each other, the bisector of which angle lies perpendicular to the path of reciprocation of said first member when said second member is in a neutral high ratio force transmitting condition and the axis of a selected one of said slots lying perpendicular to the path of movement of said first member when said second member is in an extreme position of turn and is at its minimum force transmitting ratio and power motor means connected to said second member for rotation thereon in support of rotation by said pin and slot connection, said power motor means being actuated in response to rotation of said steering shaft against a load applied thereto at said means connecting said steering shaft to said first member.

2,865,217
VARIABLE RATIO STEERING GEAR
Arthur E. Bishop, Chatswood, near Sydney, New South Wales, Australia
Application May 27, 1955, Serial No. 511,541
Claims priority, application Australia June 1, 1954
4 Claims. (Cl. 74—388)



2. In a power steering system for vehicles having a rotatable steering shaft and an oscillatable cross shaft connected to a steered part, a power motor operatively connected to said steered part, a control valve for energizing said motor in response to the application of a steering load to said steering shaft when said shaft is rotated by a vehicle operator against a steering load, a cam connection between said steering shaft and said cross shaft comprising a generally helical cam track on said steering shaft and extending from a central straight-ahead position to extreme positions on axially opposite sides of said central position and cam follower means operatively secured to said cross shaft and positively co-operating with said cam track whereby rotation of said steering shaft will cause angular oscillation of said cross shaft from a midpoint straight-ahead position to extreme points of maximum vehicle turn, said cam track having a low lead at its central portion providing at said central portion a conventional high steering ratio, a varying lead which increases rapidly as the track extends away from its central portion and a gradually more constant substantially higher lead as the cam track progresses further toward its extremities providing a rapidly decreasing steering ratio adjacent the straight-ahead vehicle condition and a decrease in the rate of ratio decrease, substantially before the cross shaft has rotated to its extreme position to a substantially lower steering ratio.

adapted for manipulation by the vehicle driver, means responsive to predetermined manipulation of said ele-

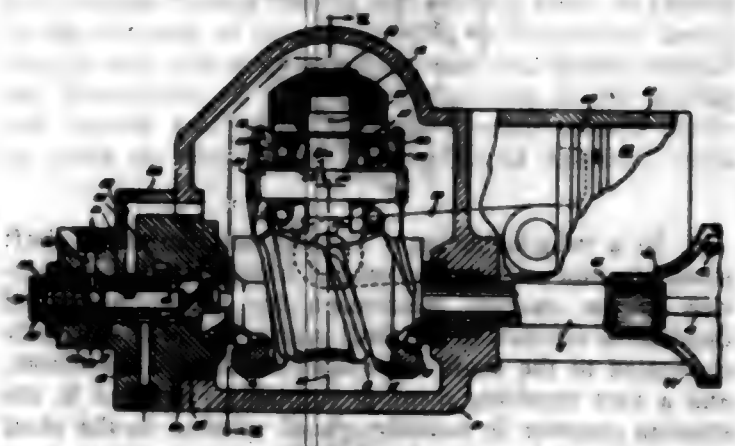
2,865,223
VEHICLE STEERING DEVICE

2,865,218

VARIABLE RATIO POWER STEERING GEAR

Arthur E. Bishop, Chatswood, near Sydney, New South Wales, Australia

Application May 7, 1957, Serial No. 657,570
27 Claims. (Cl. 74—388)



13. In combination in a power steering gear, a steering input shaft and a steering gear output shaft, a force transmitting connection between said shafts including variable ratio gear reduction means and a limited lost motion connection, said variable ratio gear reduction comprising an hour-glass worm having a roller engaging cam track therein, said cam track having a maximum helical pitch at its midpoint and a substantially decreasing pitch at its ends, said output shaft being rotatably mounted transversely of said worm, a pair of spaced rollers mounted on said output shaft for rotation about an axis perpendicular to the axis of said output shaft and for simultaneous engagement with said cam track when said output shaft is in its centered neutral position, motor means applying power to said output shaft upon the occurrence of lost motion during the application of steering loads to said shafts, and a reciprocable spool valve operable upon said lost motion to energize said motor, said valve comprising a reciprocating valve core mounted substantially coaxially with said worm for reciprocation within a fixed valve housing, means translating said lost motion into reciprocation of said valve, means providing feel-back against reciprocation of said valve, said last named means comprising a high rate spring biasing said valve in one direction and a low rate spring biasing said valve in the opposite direction, said springs being initially loaded to provide a balanced valve condition in which said valve core is in its midpoint neutral position and in which both of said springs remain under some degree of stress throughout the operative range of reciprocation of said valve core, and means for adjusting said high rate spring to vary loading thereof and to thereby adjust the mid-position of said valve core.

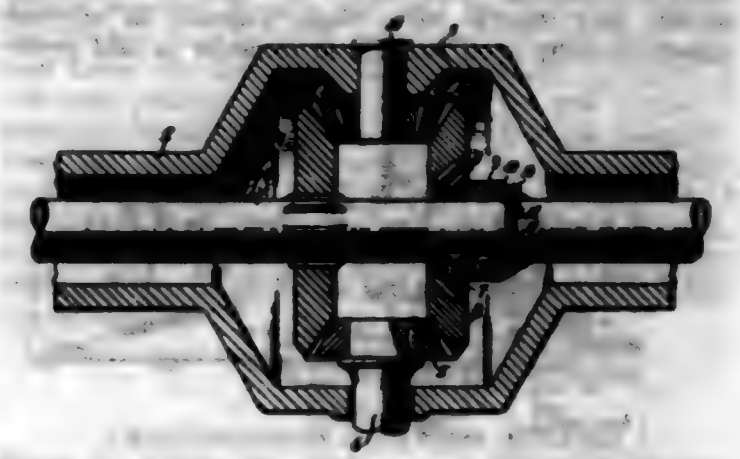
2,865,219

MEANS FOR TRANSMITTING POWER EQUALLY TO A DRIVEN SHAFT AT SYMMETRICALLY DISPLACED POINTS IN THE DIAMETRICAL PLANE OF SAID SHAFT

Alfred W. Allen, St. Petersburg, Fla.

Application January 4, 1957, Serial No. 632,451
2 Claims. (Cl. 74—410)

1. Mechanism for transmitting power equally to diametrically opposite points of a driven shaft comprising, a housing, a drive shaft extending into said housing through one side thereof supported by a bearing in said side, a driven shaft extending through said housing positioned with its axis perpendicularly intersecting the produced axis of said drive shaft, an idler gear mounted in said housing at the side of said driven shaft opposite said drive shaft, coaxially with said drive shaft, a drive gear fast to said drive shaft, and fast and loose gears on said driven shaft respectively in mesh with said drive gear



and idler gear at diametrically opposite points of said gears.

2,865,220

CONTROL MECHANISM

George R. Bayley, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 12, 1953, Serial No. 391,425
10 Claims. (Cl. 74—471)

1. A double action lever mechanism comprising a support, a lever mounted for pivotal movement on a fixed axis on said support, a pair of control cables, guide means for said cables secured on said support in parallel spaced apart relation, means forming converging arcuate guide slots in said support at one side of said axis and symmetrical relative thereto, said guide slots having laterally extended portions at the diverging ends thereof, each of said arcuate guide slots being concentric with the laterally extended portion of the opposing slot, a link extending between the diverging ends of said slots, means pivotally and slidably connecting the opposite ends of said link with the respective guide slots, additional means connecting each of said control cables with the opposite ends of said link, and means on said link slidably and pivotally engaging said lever, said last mentioned means being spaced from the lateral centerline of the ends of said link whereby swinging movement of said lever in one direction causes said link to pivot about one end thereof and swinging movement of said lever in the opposite direction causes said link to pivot about the other end thereof.

2,865,221

MOTOR VEHICLE POWER TRANSMISSION

Thomas M. Bell, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application August 24, 1949, Serial No. 116,853
12 Claims. (Cl. 74—472)

1. In a motor vehicle drive having an engine provided with an intake system comprising a throttle valve, a variable speed ratio transmission comprising means operable to effect change in the speed ratio drive between the engine and vehicle, a throttle-valve-adjusting element

like comprising a first reciprocating member actuated by

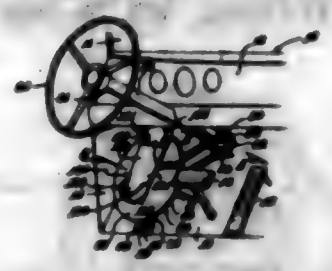
steering ratio.

adapted for manipulation by the vehicle driver, means responsive to predetermined manipulation of said element for causing operation of said speed ratio change means, said throttle valve being disposed in approximately its fully open position in response to said predetermined manipulation of said element, and means operably responsive to sub-atmospheric pressure change in said intake system at the atmospheric side of said throttle valve for preventing operation of said speed ratio change means in response to said predetermined manipulation of said element.

2,865,222
ADJUSTABLE STEERING WHEEL
Benjamin R. Beckman, Philadelphia, Pa., assignor to The White Motor Company, Cleveland, Ohio, a corporation of Ohio
Application November 1, 1956, Serial No. 619,863
5 Claims. (Cl. 74—493)

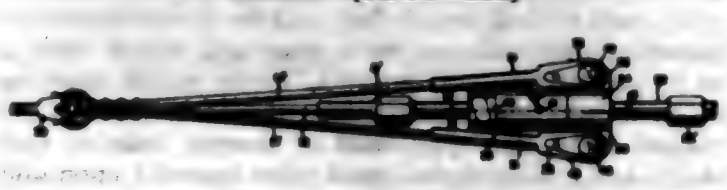
1. In a steering gear, the combination of a steering column, a rotatable steering shaft therein, a steering wheel affixed to one end thereof, a fixed bracket for the support of said steering column, a hinge plate pivoted to said bracket, said pivotal connection constituting the fulcrum for said hinge plate, a tubular boss on said hinge plate engaged with said steering column, a pair of bosses on said hinge plate having aligned openings therein, a pin in said openings, an eye bolt pivotally connected to said pin, a second boss on said bracket subjacent the bosses on said hinge plate, nuts on said eye bolt abutting said boss on said bracket to retain said hinge plate in vertical adjusted position, and means on said steering shaft to accommodate the movement thereof as said hinge plate is vertically adjusted.

2,865,223
VEHICLE STEERING DEVICE
David Kope, Reedley, Calif.
Application October 8, 1956, Serial No. 614,695
11 Claims. (Cl. 74—494)



1. In a vehicle having a steering mechanism, a shaft rotatably mounted in the vehicle having driving connection to the steering mechanism for operation thereof incident to rotation of the shaft, a steering member rigidly connected to the shaft and radially extended therefrom, and a foot receiving member rotatably journaled in the steering member in radially spaced relation to the shaft for rotation independently of the steering member about an axis substantially parallel to the shaft thereby to rotate the shaft in response to application of turning moment on the steering member by the foot receiving member.

2,865,224
CONTROL APPARATUS
Benjamin F. Krouse, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application January 11, 1954, Serial No. 403,219
4 Claims. (Cl. 74—501)

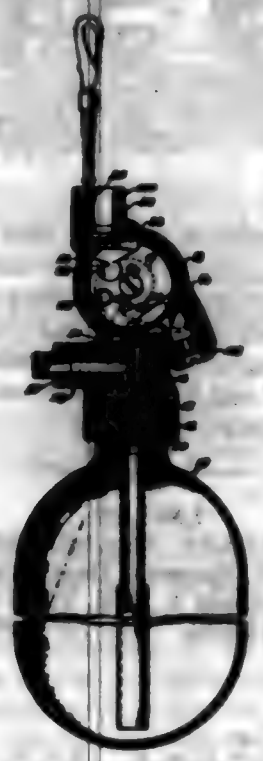


1. A control system comprising a main control cable including a rotatably adjustable turnbuckle, a servo control cable, means to connect said servo control cable to said main control cable, said last named means comprising an enlargement or shoulder on said turnbuckle, said enlargement or shoulder on said turnbuckle including an annular abutment substantially normal to the longitudinal axis of said turnbuckle, a first and second recessed attachment member positioned on said control cable so as to overlie said enlargement or shoulder, an annular abutment on said second recessed attachment member cooperating with said annular abutment on said turnbuckle, means securing said attachment members to one another such that a force from said servo cable will be substantially longitudinal on said main control cable, means for securing said servo cable to said attachment members, said securing means being readily removable therefrom, and said turnbuckle being adjustable without removing said servo cable.

2,865,225
PLURAL SELECTIVE POSITION CAM ACTUATOR FOR VALVES
Russell I. Huffman, Dover, Ohio, assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Application December 20, 1954, Serial No. 476,134
3 Claims. (Cl. 74—501)

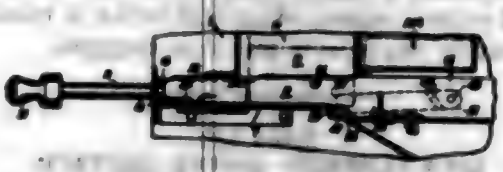
1. In a pull-cable operated fluid release control device for effecting movement of closure opening means, which control device is provided in a housing equipped with a pair of substantially oppositely disposed apertures for selectively accommodating said pull-cable; the improve-

ment comprising, in combination, a rotatable sheave in said housing adapted to have said pull-cable wrapped thereabout, cam means secured to said sheave and adapted to operate said closure opening means upon said pull-cable being pulled, said sheave being formed with a pair of spaced flat portions in the periphery thereof, said flat portions having leading and trailing ends, as related to the direction of rotation of said sheave during operation of said cam means, shoulders on said sheave extending transversely of each said flat portion at the leading end thereof, said sheave with cam means secured thereto being so disposed in said apertured housing, when



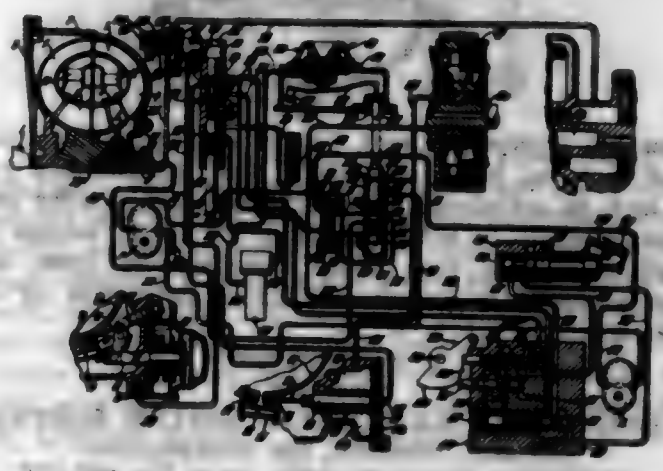
said cam means is in its initial unactuated position, and said flat portions on said sheave being so dimensioned and disposed that the trailing end of each said flat portion on the sheave is positioned opposite one of said apertures in the housing, said cable having an elongated rigid anchor at one terminal end thereof adapted to be disposed adjacent a flat portion of the sheave and in engagement with the associate shoulder transverse of said flat portion when said cable is wrapped around said sheave in operative condition, and means on said sheave projecting radially of said cable for limiting displacement of said cable in both directions axially of said sheave.

2,865,226
VENDING MACHINE PULL ROD EJECTOR MECHANISM
John E. Stanhope, University City, and William H. Pastsold, Jr., Florissant, Mo., assignors to National Vendors, Inc., St. Louis, Mo., a corporation of Missouri
Application April 17, 1957, Serial No. 653,678
9 Claims. (Cl. 74—565)



2. In a vending machine of the type having a side wall, a purchaser-controlled draw bar movable transversely with respect to its own length in forward and rearward direction with respect to the machine, and an arm extending rearward from the draw bar adjacent the side wall, means for checking the movement of the draw bar to prevent relatively fast movement thereof by a purchaser, said means comprising a detent pivoted on the inside of the side wall for swinging movement on a horizontal axis transverse to the machine, said detent being located between the side wall and said arm and extending forward from its pivot, a first pin extending from said arm under the detent, the detent normally occupying a retracted position engaging the first pin and extending generally horizontally forward, a second pin extending from said arm at a point forward of and above the first pin, said second pin being located above and clear of the detent when the detent is in its retracted position, said detent having an angled edge portion toward its forward end engageable by the first pin when the draw bar is moved forward.

2,865,227
TRANSMISSION CONTROL SYSTEM
Oliver K. Kelley, Birmingham, and Robert S. Plexico, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 4, 1952, Serial No. 291,692
27 Claims. (Cl. 74—645)

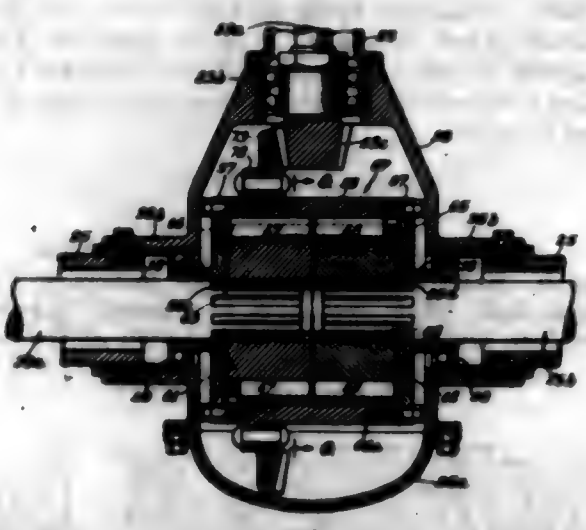


1. In a transmission control system for a vehicle transmission including hydraulically actuated mechanism for selectively providing reduction gearing drive or direct drive, servomotors for selectively actuating said reduction drive and direct drive mechanisms, respectively, a fluid pressure source, a manually operable selector valve for directing fluid pressure to said reduction gearing servomotor to apply the same, a hydraulically controlled shift valve effective in one position to select reduction drive and effective in a second position to select direct drive, a manually operable pressure metering valve for delivering variable metered pressure fluid to said shift valve, a pressure reduction valve between said pressure metering valve and said shift valve for reducing the pressure delivered to said shift valve, a second manually operable valve selectively operable to by-pass said reduction valve and deliver full metered pressure from said metering valve to said shift valve, and a governor responsive to vehicle speed for delivering variable metered pressure to said shift valve, said governor pressure and the pressure delivered by said manually operable pressure metering valve acting in opposition to each other to control said hydraulically actuated shift valve.

2,865,228
POSITIVE DRIVE DIFFERENTIAL FOR MOTOR VEHICLES
Albert A. Weismann, Des Plaines, Ill.
Application May 3, 1954, Serial No. 427,265
10 Claims. (Cl. 74—650)

1. A positive drive differential having two interacting two-way overrunning clutches for two coaxial driving wheels of a motor vehicle and consisting of: a cylindrical cammed race; a pair of cylindrical overrunning races confronting longitudinally spaced portions of the cammed race and concentric and coaxial therewith, there being

one cylindrical race for each wheel; a cage rotatably mounted between said cammed race and said cylindrical races and yieldingly gripping the cylindrical races but being so constructed and arranged that it cannot engage said cammed race; said cage having spaced longitudinal slots; and at least one wedge means in each of said slots, there being two sets of wedges; each set of wedges being



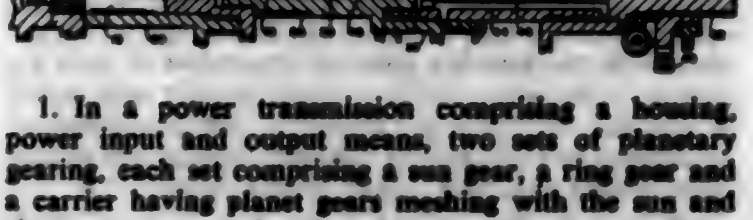
operably engageable with one of said cylindrical races and each set being engageable with the cammed race to lock its cylindrical race to the cammed race for rotation therewith in either direction; the set of wedges for each cylindrical race being disengageable from said cammed race to permit differential movement of the wheels.

2,865,229
ADJUSTABLE AXLE SHAFT SPACER BLOCKS
Edwin R. Hedrueck, San Antonio, Tex.
Application August 21, 1956, Serial No. 605,375
4 Claims. (Cl. 74—713)

1. In an automobile final drive having spaced pinions in a subhousing, said pinions driving opposed and spaced gears carried by the axles to be rotated by the final drive, a spacer block separate from and carried by the subhousing between the pinions and between the axles and providing a spacer for spacing the ends of said axles apart, said block having a pair of opposite side walls spaced apart approximately the distance between said axle-ends when such axle-ends are in positions most remote from each other, and having a recess in one of said side walls in a position to directly oppose the end of one of said axles when said block is in place in said subhousing, and a bearing disc having a thickness dimension approximately equal the depth of the recess snugly fitting in the recess.

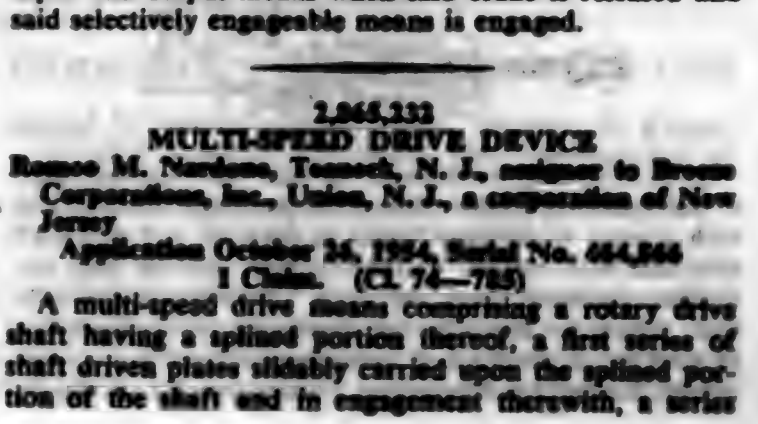
2,865,230
FOUR SPEED TRANSMISSION
Howard W. Simpson, Dearborn, Mich.
Application August 20, 1956, Serial No. 605,628
4 Claims. (Cl. 74—759)

1. In a variable speed power transmission, a housing, axially aligned input and output members, first and second axially aligned planetary gear sets, each set comprising a sun gear, a ring gear and a rotatable carrier supporting a plurality of planet gears, each of which meshes with both the sun gear and ring gear of its own gear set, means connecting the input member to a member of each gear set, a clutch connecting the carrier of each set to the output member, a clutch for connecting the ring gear of the second gear set to the output member, a brake



for holding a member of the first gear set stationary, a brake for holding a member of the second gear set stationary and another brake for holding another member of the second gear set stationary, said clutches and brakes being selectively engageable for obtaining a plurality of forward gear ratios and a reverse reduction ratio between the said input and output members.

2,865,231
PLANETARY TRANSMISSION
Howard W. Simpson, Dearborn, Mich.
Application October 1, 1956, Serial No. 613,199
27 Claims. (Cl. 74—759)



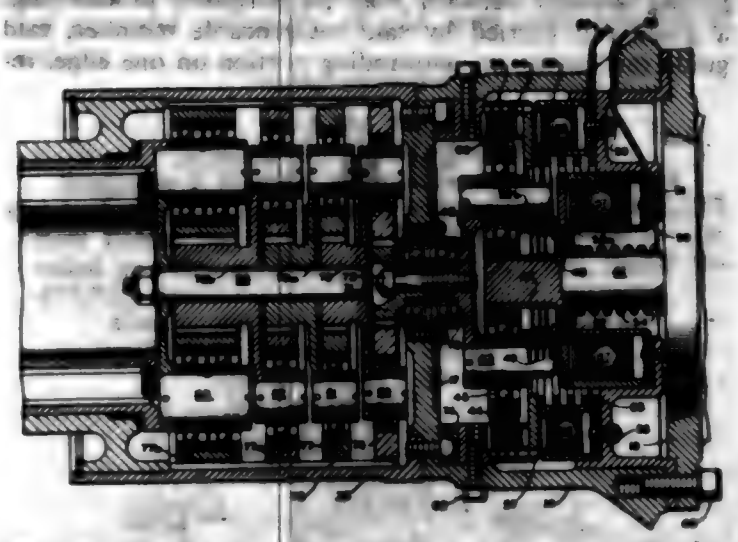
1. In a power transmission comprising a housing, power input and output means, two sets of planetary gearing, each set comprising a sun gear, a ring gear and a carrier having planet gears meshing with the sun and ring gear only, a first member of each gear set being drivingly connected to the power input means, second members of each gear set being drivingly connected together, a third member of one gear set drivingly connected to the output means and a brake for holding a third member of the other gear set to obtain a reduction drive through the transmission; and selectively engageable means for coupling said second members to the output means to obtain a one to one direct drive between the input and output means when said brake is released and said selectively engageable means is engaged.

2,865,232
MULTI-SPEED DRIVE DEVICE
Romeo M. Nardone, Teaneck, N. J., assignor to Brown Corporations, Inc., Union, N. J., a corporation of New Jersey
Application October 26, 1954, Serial No. 464,866
1 Claim. (Cl. 74—785)

A multi-speed drive means comprising a rotary drive shaft having a splined portion thereof, a first series of shaft driven plates slidably carried upon the splined portion of the shaft and in engagement therewith, a series

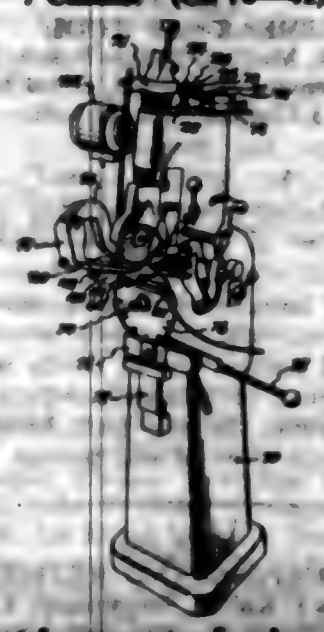
rigid relative to each other solely by tight frictional en- holding sleeve mounted in said opening, said sleeve hav-

of washer shaped plates alternately disposed between the driven plates, a planetary carrier in the form of a spider plate spaced from the plates, stud members carried by the spider and extending therefrom in the direction of the plates, planet gears rotatably carried upon a portion of the said studs, and washer shaped plates carried by the other portion of the studs, a first solenoid adjacent the plates, a washer shaped armature for said solenoid engageable with the plates, a spring around the splined shaft in engagement with the armature to normally urge it against the plates to produce frictional engagement of said plates thereby locking the studs with said shaft, a second series of driven plates disposed about



but spaced from the splined shaft and in mesh with the planet gears, a second set of washer shaped plates alternately disposed between the second set of driven plates, a fixed ring member coupled to the second set of washer shaped plates, a second solenoid adjacent the second set of plates, an armature between the second solenoid and second set of plates, a second spring normally urging the second set of plates together, output means coupled to the planetary carrier and a source of electrical potential selectively connected to the solenoids whereby the armatures may be pulled away from the plates against the pressure of the springs to vary the transmission of power from the power source through the plates to the output means.

2,865,233
SAW SHARPENING DEVICE
John H. McLaren, Buffalo, N. Y.
Application April 21, 1958, Serial No. 729,998
7 Claims. (Cl. 76—41)

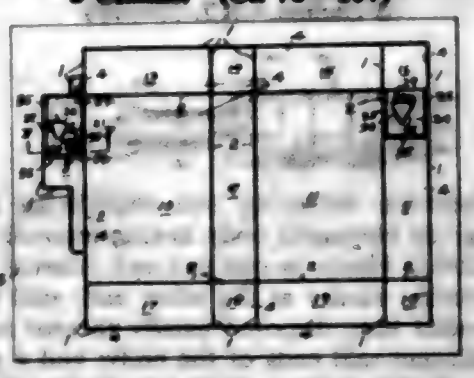


1. Attachment for apparatus for sharpening saw blades to enable the apparatus to sharpen blades having groups of cutting teeth seperated by slots, said apparatus including a reciprocatory head movable toward and from the saw blade and carrying a sharpening implement, said attachment including a circuit closing member having a part engaging a side of the saw blade, means for positioning said member in operative relation to the saw blade to enable said part to enter into said slots, and mechanism actuated by said circuit closing member when said part thereof enters a slot to restrict the movement of said head toward the saw.

2,865,234
METHOD AND APPARATUS FOR SHAPING SAW TEETH
Richard Kaiser, Wurtbaurem, near Biberach (Riss), Germany, assignor to Vollmer-Werke Maschinenfabrik, Gesellschaft mit beschränkter Haftung, Biberach, Wurttemberg, Germany
Application November 26, 1957, Serial No. 698,628
2 Claims. (Cl. 76—54)

1. A method of shaping saw teeth which comprises actuating a pawl to engage a saw tooth and move it into swaging position, immediately reversing movement of said pawl to move it backwardly out of engagement with said tooth, applying a swaging bolt to said tooth to swage said tooth, forwardly moving said pawl into engagement with said tooth to advance it into flattening position, rearwardly moving said pawl out of engagement with said tooth and into engagement with a next tooth, and applying flattening pressure to said first tooth.

2,865,236
DIE STRUCTURE AND METHOD OF MAKING SAME
Henry F. Phillips, Oakland, Calif., assignor to The Fle-Seal Corporation, Seattle, Wash., a corporation of Delaware
Continuation of application Serial No. 315,896, October 21, 1952. This application March 1, 1954, Serial No. 413,115
3 Claims. (Cl. 76—107)



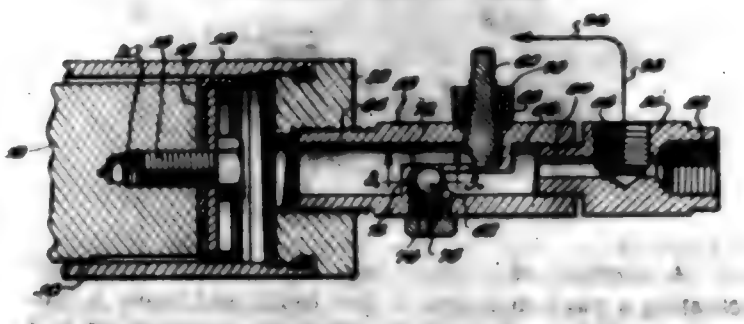
1. The method of making a die for forming, in one operation, a carton blank that is foldable to provide a carton having a pair of lapping, engaged, different flaps provided with a pair of cut and creased registerable, spout portions cooperative for movement together relative to the remainders of said flaps when the latter are in said lapping engaged relation comprising the steps of; casting a pair of separate blocks about a pair of groups of creasing and cutting rules each group of which is adapted to form a different cut of said spout portions, for rigidly holding the rules of each group in each block as a unit with each block and against movement of said rules in each group relative to each other, then releasably supporting separate carton cutting and creasing rules

jaws pivotally mounted within said yoke, an adjustable element on said body, a rotatable handwheel structure

axially aligned input and output members, first and second axially aligned planetary gear sets, each set comprising shaft driven plates slidably carried upon the splined portion of the shaft and in engagement therewith, a series

rigid relative to each other solely by tight frictional engagement between said carton cutting and creasing rules and separate blocks that include said pair of blocks with said separate carton cutting and creasing rules being so supported by said separate blocks in positions for cutting and creasing said carton blank including said flaps and with said separate groups being supported by the blocks carrying them in positions for cutting and creasing said portions in said flaps simultaneously with the cutting and creasing by said carton cutting and creasing rules.

2,865,236
PNEUMATIC DRILL
William N. Parks, Pittsburgh, Pa., assignor to The ARO Equipment Corporation, Bryan, Ohio, a corporation of Ohio
Application June 11, 1956, Serial No. 590,518
3 Claims. (Cl. 77—33.5)



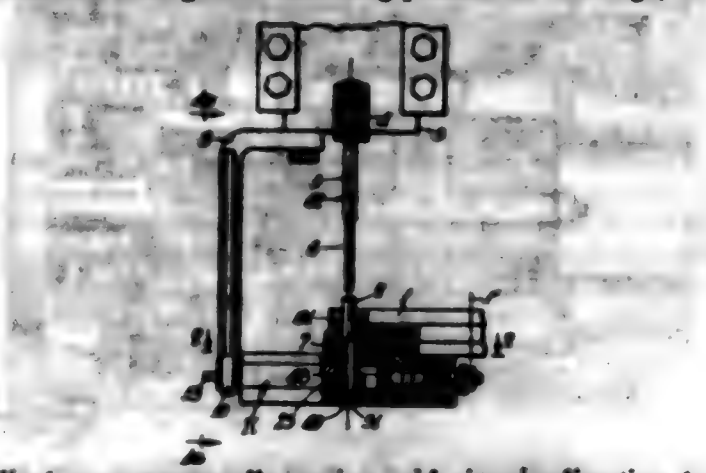
1. In a pneumatic drill of the character disclosed, a pneumatic motor, pneumatic feed means therefor, spring return means for said feed means, and means for controlling said motor and said feed means comprising a control valve for admitting air to said motor and said feed means in one position and for cutting off air to both in another position, a needle valve for controlling the rate of air to said feed means only, and a normally closed check valve shunting said needle valve and opening in the return direction from said feed means whereby said feed means is controlled by said needle valve and check valve independent of the air admitted to said motor under control of said control valve only.

2,865,237
DEBURRING AND CHAMFERING HAND TOOL
Charles Degenhart, Silver City, N. Mex.
Application August 24, 1956, Serial No. 606,136
3 Claims. (Cl. 77—73)

1. A precision deburring and chamfering hand tool comprising: an elongated body having internal deburring and chamfering blades at one end and external deburring and chamfering blades at the other end; said body having a threaded bore disposed axially thereof and having its ends adjacent said ends of the body; and a pilot comprising a cylindrical plug adapted to fit into the neck of a cartridge case and further comprising a threaded pin selectively engageable in said ends of the bore.

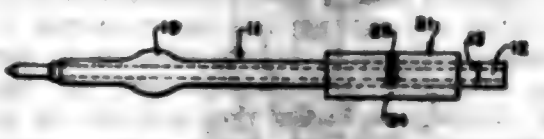
2,865,238
EQUIPMENT FOR FORMING CHISELED GROOVES IN RODS OR THE LIKE
Valentin Rotterath, Iversheim, Germany, assignor to Groov-Pin Corporation, a corporation of New York
Application October 17, 1955, Serial No. 540,890
Claims priority, application Germany October 23, 1954
2 Claims. (Cl. 78—39)

1. Equipment for forming grooves in rods or the like comprising a supporting plate having an axial opening, a holding sleeve mounted in said opening, said sleeve having a bore and a plurality of circumferentially spaced slots leading into said bore, a plurality of pusher bars movable radially on said supporting plate and aligned respectively with said slots, a chisel mounted at the inner end of each pusher bar and movable through an associated slot, a rod supporting member comprising a plate having a plurality of bores therethrough arranged in a circle, means to rotate said plate successively to align the bores therein with the bore of said holding sleeve, a reciprocable member, a rod moving plunger mounted at one end to said reciprocable member and aligned with said bores, a rotatable ring encompassing said supporting plate, a member projecting laterally outward from the periphery of said ring, a guide rail carried by said reciprocable member, said guide rail having an outstanding portion on one edge, re-



silient means normally urging said ring in direction to bring said projecting member into engagement with the edge of said guide rail, the stroke of said reciprocable member in each direction of movement thereof being such as to successively bring said outstanding portion into alignment with said projecting member and to move said outstanding portion past said projecting member, whereby when said projecting member is engaged by said outstanding portion upon movement of said reciprocable member, said ring will be rotated against the urging of said resilient means, means controlled by such rotary movement of said ring to move said pusher bars radially inward through said slots to effect penetration of such rod by said grooving chisels and means upon rotation of said ring by said resilient means when said outstanding portion has moved past said projecting member to move said pusher bars radially outward from said slots.

2,865,239
BREAK-OFF TOOL
Joseph A. McKay, Pebble Beach, Calif.
Application September 6, 1955, Serial No. 532,483
3 Claims. (Cl. 81—3)



1. A break-off tool, comprising: a sleeve having medially thereof a transverse slot almost severing said sleeve to form a slotted portion and to divide said sleeve into two parts which may be bent with respect to each other at the slotted portion, and said parts being slightly bent with respect to each other at said portion.

2,865,240
HOLDING, CLAMPING AND RETRIEVING TOOL
Thomas J. Kaiser, Sacramento, Calif.
Application March 16, 1956, Serial No. 572,121
4 Claims. (Cl. 81—18)

1. A tool comprising a tubular handle, a yoke connected to one end of said handle, a pair of gripping

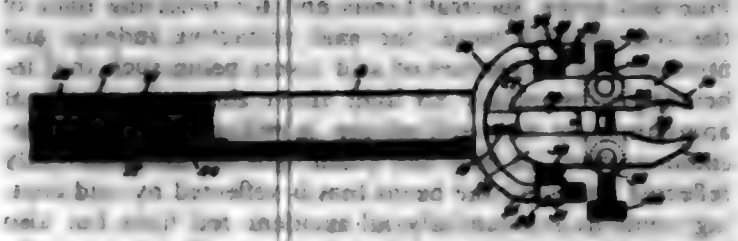
2,865,244

terrate layers of media of respectively high and low re-

of cutting teeth separated by slots, said apparatus including a reciprocatory head movable toward and from

rules in each group relative to each other, them releasably supporting separate carton cutting and creasing rules

jaws pivotally mounted within said yoke, an adjustable screw connecting said jaws in confronting relation to each other, an expander positioned between said jaws, a rod



connected to said expander and passing through said handle, and a nut on the end of the rod for drawing said expander outwardly of said jaws upon rotation of said nut.

2,865,241

SCREW-CUTTING LATHES

Benjamin J. Farrow, Wimborne, Dorset, England

Original application March 9, 1954, Serial No. 415,129, now Patent No. 2,756,623, dated July 31, 1956. Divided and this application January 4, 1955, Serial No. 479,735

Claims priority, application Great Britain January 15, 1954

2 Claims. (Cl. 82—29)

1. Apparatus for use with a screw cutting lathe for releasing the carriage from the lead screw comprising a half-nut device for engaging the lead screw, a member carrying the half-nut device and mounted pivotally on the carriage apron on one axis, the half-nut device being spaced from said axis, resilient means for continually urging the half-nut device in the direction of disengagement, hand operable means mounted pivotally on the apron on another axis, a lost motion connection between the hand operable means and the member such that movement of either of said hand operable means and member also imparts movement to the other except for some lost motion, said resilient means acting on the hand operable means only through said lost motion connection, locking means mounted on the apron movably for effecting a positive locking of said half-nut device in said position, and an unlocking device actuated by said hand operable means for pushing the locking device to its unlocking position at the beginning of the disengagement movement while the lost motion is being taken up, a stop, and abutment means fixed to said hand operable means so as to move therewith, and engageable with said stop at the end of the required cut whereby said abutment means is pivotally moved thereby first unlocking the locking means while taking up the lost motion and thereafter moving the member to the fully disengaged position should the spring fail to do so.

2,865,242

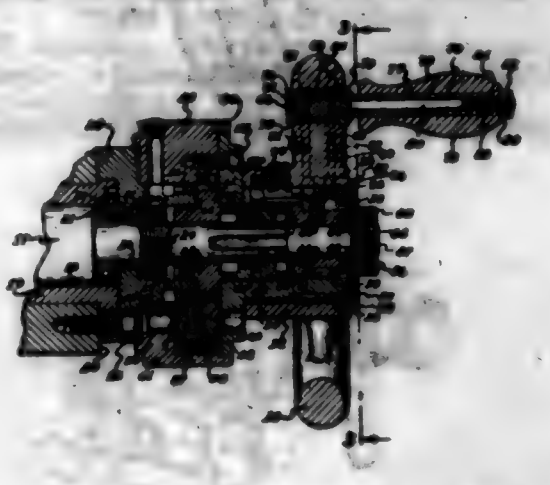
HANDWHEEL ACTUATED MACHINE TOOL MECHANISM

Harry C. Kemper, Goshen Township, Clermont County, Ohio, and Charles J. Hunt, Covington, Ky., assignors to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Delaware

Application April 4, 1957, Serial No. 650,655

1 Claim. (Cl. 82—31)

A multi-speed handwheel drive for a movable machine tool mechanism having a body, a movable element on said body, a drive shaft in said body rotatable to actuate said element on said body, a rotatable handwheel structure journalled coaxially of said drive shaft, a shiftable clutch movable to one position to directly connect said handwheel structure to rotate said drive shaft, a differential planetary gear train including a gear fixed on said body, a gear journalled coaxially of said drive shaft, and a planetary differential double gear journalled in said handwheel structure simultaneously engaging both of said aforementioned gears, and single handle control means on the rim of said handwheel structure connected to actuate said shiftable clutch and projecting outwardly axially



from said rim parallel to the axis of rotation of said handwheel, wherein said single handle control means comprises an axially shiftable handle extending outwardly from the rim of said handwheel, and means in said handwheel actuated by the axial shifting of said handle comprising a shifter stem in said handle, a rack on the inner end of said stem, a pinion engaged by said rack and having a radially inwardly extending shaft with a gear fixed thereon in the hub of said handwheel, a shiftable key in said hub having a rack engaged by said last mentioned gear, detent means in said hub engaging said key, a means connecting said key to actuate said shiftable clutch.

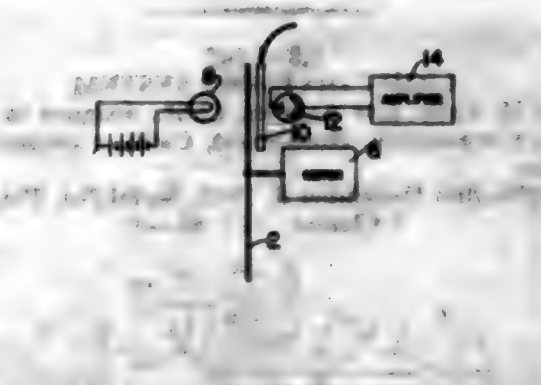
2,865,243

ELECTRONIC TONE GENERATING DEVICE

Richard H. Dorf, New York, N. Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Application September 18, 1954, Serial No. 456,131

6 Claims. (Cl. 84—1.28)



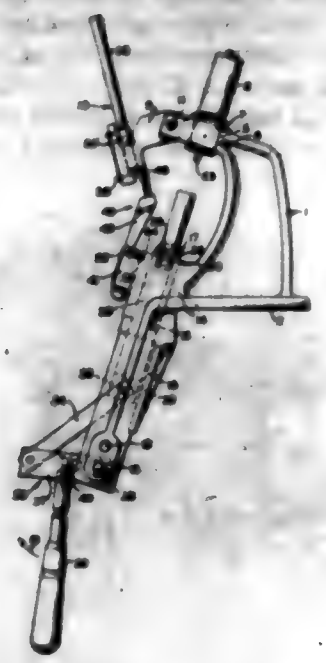
1. A musical instrument having a sound transducer and having a driving means for constantly cycling a pitch determining member therepast to produce in cooperation with said transducer tones corresponding substantially with those of the evenly tempered scale, said member comprising a plurality of endless rows of pitch determining elements, the rows on a member comprising at least one octave of said scale, and the number of elements in each row being an integer, the number of cycles per second of said member being no greater than a natural vibrate rate, and the number of elements in each row being integrally divisible by said number of cycles.

defining member of said intermediate slit and said exit

tate the carrier means about said axis including an

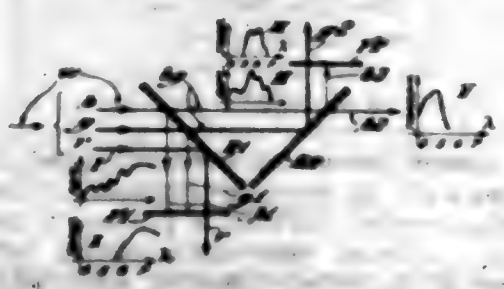
comprising a supporting plate having an axial opening, a nected to one end of said handle, a pair of gripping

2,865,244
SHELL LOADING APPARATUS
Robert L. Doyle, Palo Alto, Calif., assignor to Pacific Gun Sight Company
Application December 23, 1955, Serial No. 554,974
1 Claim. (Cl. 86—38)



Shell loading apparatus comprising a rigid frame, means on said frame for securing thereto a shell loading die oriented along an operative axis, shell holding means mounted on said frame for reciprocation along said axis, a toggle linkage connected between said shell holding means and said frame for so reciprocating said latter means, an arm swingably mounted on said frame for swinging one end thereof toward and away from said axis, and a cup on said one end of said arm for supporting a primer for insertion into the primer pocket of a shell in said shell holding means, and a primer magazine remote from said axis for feeding individual primers to said cup, said magazine including an open-ended tube adapted to receive a stack of primers in single file, one of the ends of said tube being positioned adjacent the path of swinging of said cup and aligned with said cup when said cup is swung to a position adjacent thereto, and a latch member, at least partially closing said end of said tube and movable by said cup when so aligned for opening said end of said tube to permit transfer of a primer in said tube to said cup.

2,865,245
LIGHT DIVIDING SYSTEM
Donald H. Kelly, Los Angeles, Calif., assignor to Technicolor Corporation, Hollywood, Calif., a corporation of Maine
Application December 8, 1953, Serial No. 396,818
3 Claims. (Cl. 88—1)

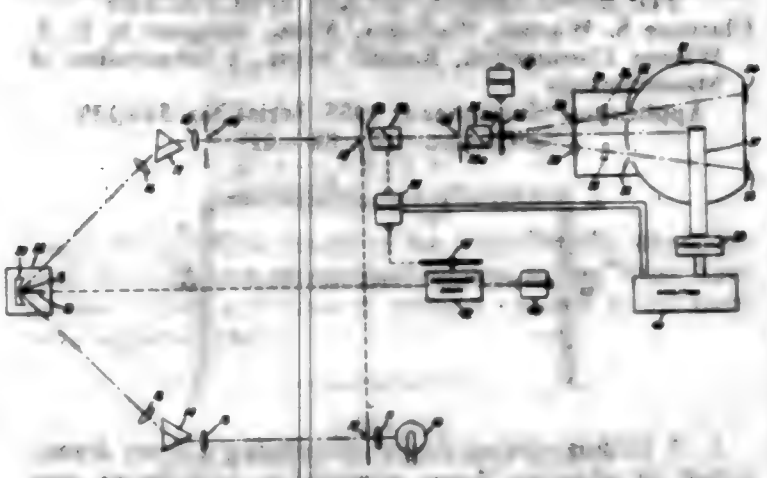


1. Light dividing apparatus comprising: means for projecting a beam of essentially white light along a given axis; a first and a second substantially transparent supporting means arranged in said axis one behind the other and inclined to each other and to said axis; on said first surface a first optically selective light transmitting and reflecting interference coating having a plurality of alternate layers of media of respectively high and low refractive indexes of respective approximately equal optical thicknesses, for selectively transmitting light in the blue and green spectral bands and for reflecting light in the red spectral band, the said refractive indexes and number and thicknesses of said layers being such that inherently substantially all light above the wave length of approximately 600 millimicron is reflected while appreciable portions of blue and green light are also inherently reflected such that the beam that is reflected by said coating contains substantially all incident red light but also blue and green light and that the beam that is transmitted by said coating contains the remainder of the incident blue and green light and is substantially free of red light; on said second surface which receives said remainder of the incident blue and green light a second optically selective light transmitting and reflecting interference coating having a plurality of alternate layers of media of respectively high and low refractive indexes of respective approximately equal optical thicknesses, for selectively transmitting light in the blue spectral band and for reflecting light in the green spectral band, the said refractive indexes and number and thicknesses of said layers of said second interference coating being such that inherently substantially all light above the wave length of approximately 500 millimicron is reflected while an appreciable portion of blue light is also inherently reflected such that the beam that is reflected by said second coating contains substantially all green light incident from said first coating but also blue light and that the beam that is transmitted by said second coating contains substantially only the remaining blue light; in the reflected beam of said first interference coating a first absorption filter positioned opposite said first surface such as to intercept the light reflected therefrom which first absorption filter transmits substantially all red light and has an absorption-transmission characteristic which is steep within a wave length range between approximately 550 and 650 millimicron and such as to absorb substantially all blue and green light thereby to produce a reflected beam of substantially saturated red light; and in the reflected beam of said second interference coating a second absorption filter positioned opposite said second surface such as to intercept the light reflected therefrom which second absorption filter transmits substantially all green light and has an absorption-transmission characteristic which is steep within a wave length range between approximately 450 and 550 millimicron and such as to absorb substantially all blue light thereby to produce a reflected beam of substantially saturated green light and to produce a transmitted beam of substantially saturated blue light; whereby the red beam that is reflected from said first interference coating and the green and blue beams that are reflected and transmitted, respectively, by said second interference layer, have high color saturation.

2,865,246
SPECTROPHOTOMETER
Benjamin S. Pritchard, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application October 14, 1953, Serial No. 386,859
3 Claims. (Cl. 88—14)

1. A spectrophotometer comprising in optical alignment a light source, a variable width entrance slit, a first spectrum forming means, an intermediate slit consisting of a mirror and slit defining member both mounted on a movable carriage and also movable relative to each other to vary the effective width of said intermediate slit, second spectrum forming means, a variable width exit slit, driving means for moving the carriage to cause the exit slit to transmit a band of light whose center frequency varies progressively through the spectrum, means connecting said driving means, said entrance slit, said slit

lengthwise of said casing parallel to the axis of said a thread engaging with said other threaded portion of

defining member of said intermediate slit and said exit slit for varying non-linearly the widths of said entrance and exit slits and for varying substantially linearly the effective width of said intermediate slit at said center frequency varies linearly with movement of said carriage whereby to maintain the spectral width of the band of light transmitted by said exit slit constant throughout the spectrum, the widths of the entrance and exit slits being equal and the effective width of said intermediate slit being not less than the width of said entrance and exit slits whereby the width of said entrance and exit slits alone controls the spectral width of the band of light transmitted by said exit slit, a photometering prism for

plane polarizing said light, means for splitting said polarized light into two diverging beams of light plane polarized at right angles to each other, a flicker device in the path of the two beams for causing the beams to emerge therefrom varying in intensity from zero to maximum in opposite phase, means for causing one of said beams to strike a sample and the other of said beams to strike a standard, integrating means for receiving light from said sample and said standard, a photocell receiving the integrated light, and means controlled thereby for varying the position of the photometering prism until the integrated light from the sample and standard shows no fluctuation at flicker frequency.

2,865,247

COMPOUND PHOTOMETRIC DEVICE

Frank F. Crandell, Pasadena, and George D. Perkins, Van Nuys, Calif., assignors to Photo Research Corporation, Hollywood, Calif., a corporation of California

Application October 10, 1955, Serial No. 539,302
21 Claims. (Cl. 88—22.5)

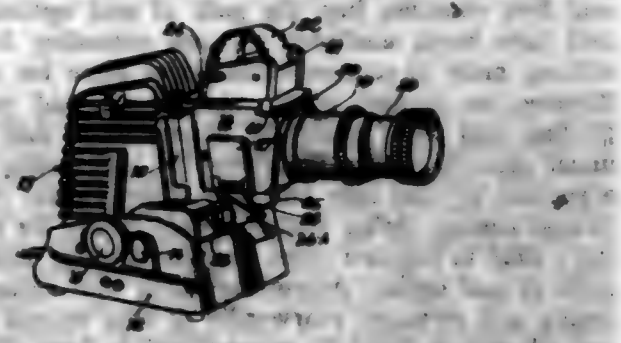
2. In a portable compact meter for measuring characteristics of a light source and including operably associated meter, index, and light responsive cell carried within the meter, the combination of: a hollow casing means including a side wall, a bottom wall and a top cover means opposite the bottom wall and provided with a window over said index; means providing a light admitting port in said side wall in alignment with said cell and defining a light path into the casing means; means for selectively interposing a plurality of light-modifying elements in said light path comprising a carrier means within the casing means rotatable about an axis perpendicular to the light path and having a plurality of circumferentially spaced openings therein adapted to carry selected light-modifying elements; means to rotate the carrier means about said axis including an actuating member externally of the covering means and connected to the carrier means; an annular scale-carrying means connected with the carrier means to move simultaneously with the carrier means and observable beneath the window; and light-limiting means mounted in the casing means and including shutter elements movable along the side wall to open and close said port.

2,865,248

COMBINATION SLIDE AND FILM PROJECTOR WITH AUTO-FOCUSING

Ernest W. Goldberg, Wilmette, Ill., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware

Application March 3, 1953, Serial No. 274,534
9 Claims. (Cl. 88—28)



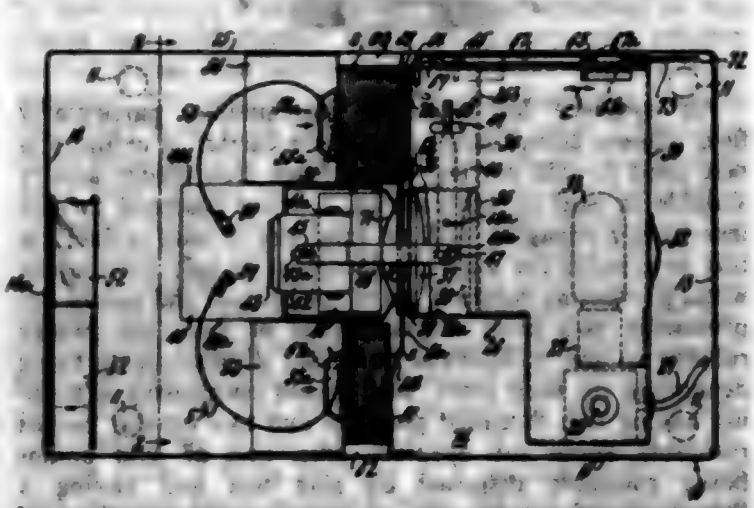
1. In a picture projector having a slide bed in one focal plane and a film track movable into and out of a different focal plane, and a projecting lens device movable into focus with either said plane, the combination of mechanism drivingly interconnecting said track and lens device for moving said film track into a position of focus and simultaneously moving said lens device into focus with the track, and moving said film track out of its focal plane and simultaneously moving the lens device into focus with said slide bed.

2,865,249

PORTABLE PICTURE SLIDE PROJECTING SYSTEM

Carl E. Zweidinger and Erich Rosenthal, New York, N. Y., assignors to Camera-Optics Manufacturing Corp., New York, N. Y., a corporation of New York

Application May 18, 1955, Serial No. 507,365
2 Claims. (Cl. 88—18)



1. An apparatus having an optical system including a light source for successively projecting picture slides; comprising a first storage chamber, a second storage chamber, said storage chambers being, respectively, arranged at either side of said optical system, an elongated casing accommodating both said chambers and said system, said casing having a slotted guide along one side thereof, manipulating means extending lengthwise of said casing therewithin and including a flexible metal tape slidable

curvature R of the lens surfaces, the axial thickness t

supported for movement about its transverse center axis

reflecting interference coating having a plurality of al-

necting said driving means, said entrance slit, said slit

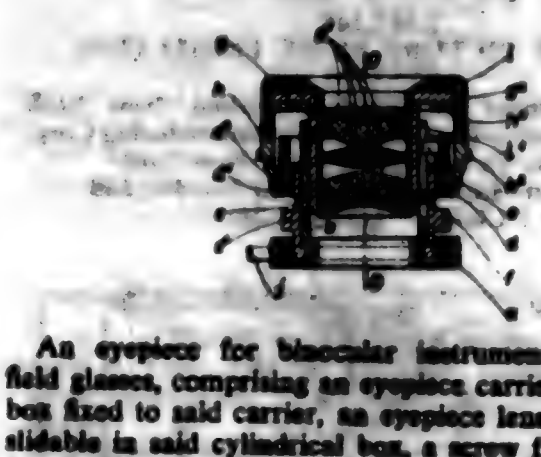
lengthwise of said casing parallel to the axis of said optical system, a fixed finger piece on said casing, a movable finger piece on said tape cooperating with said fixed finger piece and having a portion thereof extending through said slotted guide, an imperforate slide shifting plate arranged for movement in transverse direction to said manipulating means and normally positioned adjacent one end of said first chamber, said shifting plate including a first shifting flange extending substantially normal to said shifting plate and being arranged to receive a slide from said first chamber for movement from an extreme position in said first chamber towards said optical system with said shifting plate being disposed between the slide and said light source when said shifting plate has moved toward said optical system, a second shifting flange forming part of said shifting plate and extending oppositely with respect to said first shifting flange for engaging a slide after the same has been transferred from said first chamber into the path of said optical system, said tape being anchored on and extending from said shifting plate to said movable finger piece for operation thereby, an arcuate guide member on said casing for guiding said tape during the course when said movable finger piece is moved lengthwise of said casing to move a portion of said tape and said shifting plate transverse to said casing, spring means in said casing for maintaining a slide in position when supplied through said shifting plate to said optical system, deviating wall means in said casing and arranged rearwardly of said second chamber and adapted to direct the respective slide from said optical system into said second chamber, and means registering a further slide from said first chamber with said first shifting flange of said slide shifting plate upon return of said shifting plate to said extreme position.

2,865,159

EYEPIECE FOR BINOCULAR INSTRUMENTS

Kurt Wagner, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany

Application October 29, 1954, Serial No. 465,518
1 Claim. (Cl. 88—34)



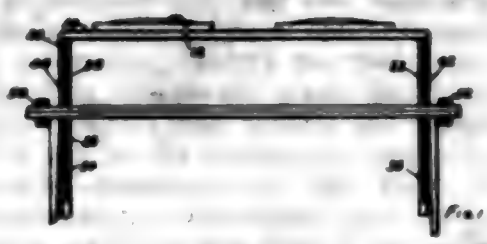
An eyepiece for binocular instruments, particularly field glasses, comprising an eyepiece carrier, a cylindrical box fixed to said carrier, an eyepiece lens holder axially slidable in said cylindrical box, a screw fastened to said lens holder engaging with an axial slot of said cylindrical box to provide for axial displacement of said lens holder while preventing rotation, an eyepiece cup, and means for producing two axial displacements of said lens holder relative to said cylindrical box, said displacements being dependent on each other, said means comprising a bushing having two threaded portions and two tubular bodies rotatable about the eyepiece axis, one of said bodies being rotatably disposed on said box and having a thread engaging with one of said threaded portions of said bushing, a screw fastened to said bushing engaging with said axial slot of said cylindrical box so that a rotation of said first tubular body causes an axial displacement of said bushing with respect to said cylindrical box, the rotation of said body being transmitted by a flexible member to a corresponding body of the other eyepiece of said binocular instrument, said other body being rigidly connected to said eyepiece cup and having a thread engaging with said other threaded portion of said bushing so that it participates in axial displacements of said bushing and its rotation in relation to said bushing causes an axial displacement with respect to said bushing, said lens holder having an annular collar extending in a space formed by said eyepiece cup and a corresponding collar of said other body, said eyepiece cup and said other body, being freely rotatable with respect to said lens holder and taking along said lens holder on axial displacements.

2,865,251

FOLDING OPERA GLASS SPECTACLES

Clarence S. Warner, Wellesley, Mass., assignor to C. S. Warner Corporation, Boston, Mass., a corporation of Massachusetts

Application November 1, 1955, Serial No. 544,239
3 Claims. (Cl. 88—41)



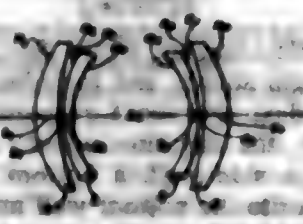
1. A folding optical device comprising a front frame, a pair of objective lenses mounted in said frame, two guide bars each having a short section projecting rigidly from a respective end of said frame and at right angles thereto and a long section hinged to the short section and swingable between a position in alignment therewith and a position substantially parallel to the plane of said frame, a series of rack teeth on both sections of each said guide bar, a rear frame in a plane parallel to the front frame, said rear frame having two slots therethrough in which said guide bars are respectively slidable, a pinion mounted in each said slot in meshed engagement with the rack teeth on the corresponding guide bar, a shaft on which both pinions are fixed for simultaneous rotation, said pinions being in engagement with the rack teeth on said short sections when the front frame is adjacent to the rear frame and said long sections of the guide bars are folded to their positions parallel to the planes of the frames, and a pair of ocular lenses mounted in said rear frame and respectively aligned with the lenses in the front frame.

2,865,252

WIDE FIELD OBJECTIVE COMPRISING FOUR HIGHLY MENISCUS ELEMENTS

Max Reiss, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application July 12, 1956, Serial No. 597,465
4 Claims. (Cl. 88—57)



1. A photographic objective of the type comprising two members in axial alignment on opposite sides of a central airspace, each member consisting of a simple meniscus negative element bordering the central airspace and a simple positive meniscus element separated therefrom by a small airspace, the concave surfaces of all said elements being turned toward the central airspace, in which the refractive indices N of the lens elements, the radii of

2,865,256

COMPENSATING DEVICE FOR FIREARMS

by positively located non-adjustable means as in a special machine receiving only a predetermined element, said

to carry selected light-modifying elements; means to re- therewithin and including a flexible metal tape slidable

curvature R of the lens surfaces, the axial thickness t of the lens elements and the axial separations s of the lens elements, each numbered by subscripts in order from front to rear, are within the ranges defined by the following algebraic inequalities:

$$1.50<N_1<1.63$$
$$1.55<N_2<1.70$$
$$1.55<N_3<1.70$$
$$1.50<N_4<1.63$$
$$0.24\ F<(R_1-R_2)<0.31\ F$$
$$-0.05\ F<(R_1+R_2)<+0.05\ F$$
$$0.18\ F<(R_3-R_4)<0.24\ F$$
$$-0.04\ F<(R_3+R_4)<+0.04\ F$$
$$0.06\ F<(R_5-R_1)<0.22\ F$$
$$-0.06\ F<(R_5-R_6)<-0.22\ F$$
$$0.03\ F<(R_7-R_8)<0.08\ F$$
$$-0.01\ F<(R_7-R_8)<-0.06\ F$$
$$0.04\ F<(t_1+s_1+t_2)<0.15\ F$$
$$0.08\ F<s_2<0.18\ F$$
$$0.04\ F<(t_3+s_3+t_4)<0.15\ F$$

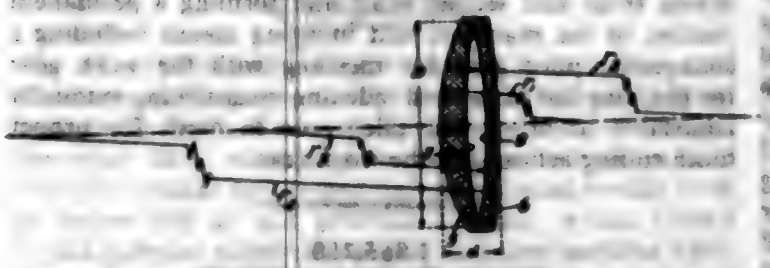
where F is the focal length of the objective and where the radii of curvature of surfaces convex to the front have positive values and those of surfaces concave to the front have negative values.

2,865,253

INFRARED ACHROMAT LENS

Emil H. Thiolens, New York, N. Y., assignor to Servo Corporation of America, New Hyde Park, N. Y., a corporation of New York

Application December 10, 1956, Serial No. 627,329
4 Claims. (Cl. 88—57)



1. An optical objective, corrected for spherical and chromatic aberrations and coma in the wavelength region of 2 to 5 microns, comprising a positive meniscus lens of arsenic trisulfide and a negative meniscus lens of lithium fluoride defining a convex air lens therebetween, the radii of curvature of said positive lens being respectively substantially 95 percent and 335 percent of the focal length of said objective, and the radii of curvature of said negative lens being respectively substantially 210 percent and 525 percent of the focal length of said objective.

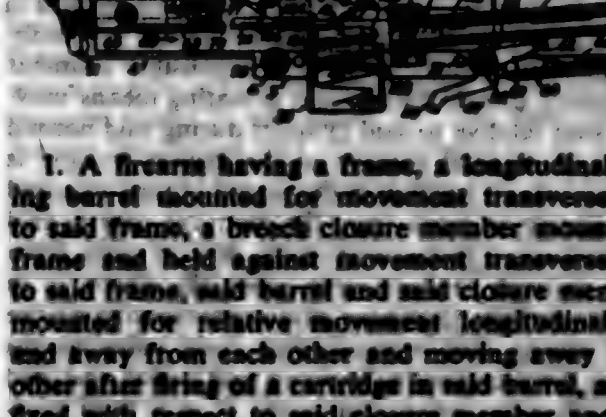
2,865,254

RECOILING BARREL OPERATED PIVOTED LOADING TRAY MECHANISM

Henry Wilhelm Ahlvin, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

Application September 17, 1954, Serial No. 456,664
Claims priority, application Sweden October 1, 1953
3 Claims. (Cl. 89—46)

1. In a gun having a recoiling longitudinal barrel with a breech on one end and pivotal about a relatively fixed axis, a jacket slidably housing the breech end of the barrel and mounting means including a relatively stationary transverse axis pivotally supporting said jacket for elevating and depressing the gun barrel, the combination with a loading tray arrangement comprising a loading tray having a transverse center axis, said loading tray being pivotally supported for rotation about said transverse center axis, said axis being disposed within the plane of the elevational movement of said barrel and intersecting the pivot axis of the barrel, whereby said tray is pivotally supported for movement about its transverse center axis between a ramming position substantially in register with the longitudinal axis of the barrel and the loading position substantially coaxial with the pivot axis of the barrel, guide means supported for movement in unison with the recoil movement of the barrel operatively coupled with said loading tray for effecting pivotal movement of said tray from the ramming position into said loading position in response to the recoil movement of the barrel, and yieldable means operatively connected with said loading tray, said yieldable means being tensioned by the pivotal movement of the loading tray into its loading position to return the tray to its ramming position, said guide means including a camming surface on a gun part recoiling together with the barrel and a cam structure riding on said camming surface and operatively connected with the loading tray for pivoting the latter from its ramming position into its loading position upon recoil of the barrel.



2,865,255

FIREARM WITH TRANSVERSELY MOVABLE BARREL CHAMBER

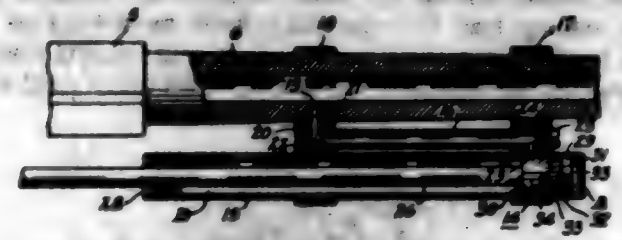
Roger Marsh, Hudson, Ohio, assignor to Weapons, Inc., Hudson, Ohio, a corporation of Ohio

Application August 3, 1955, Serial No. 526,173
19 Claims. (Cl. 89—163)

1. A firearm having a frame, a longitudinally extending barrel mounted for movement transversely relative to said frame, a breech closure member mounted in said frame and held against movement transversely relative to said frame, said barrel and said closure member being mounted for relative movement longitudinally toward and away from each other and moving away from each other after firing of a cartridge in said barrel, a cam plate fixed with respect to said closure member and having a cam slot therein with inclined upper and lower marginal edge portions, a cam follower carried by said barrel and traveling relative to said slot along the length of said slot during relative longitudinal movement between said barrel and said closure member, said inclined upper marginal edge portion engaging said follower during separation of said barrel and said closure member to move the cartridge-receiving breech end portion of said barrel transversely from a firing position to a loading position and said inclined lower marginal edge portion engaging said follower as said barrel and said closure member approach each other to move said breech end portion transversely from said loading position to said firing position, and means for feeding a cartridge to the breech portion of said barrel while said breech portion is in said loading position and for removing the empty cartridge case from said barrel after firing and while said breech portion is in said firing position.

on said arbor, said idler gear subsequently moving away from said work gear upon reverse pivoting of said sup- stream end thereof and a section of less curvature at the downstream end thereof, the gap to chord ratio of

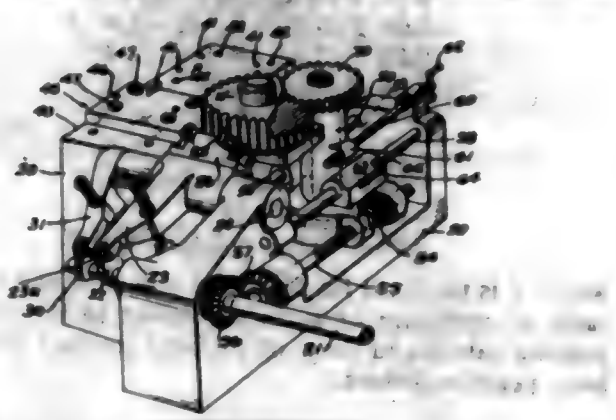
2,865,256
COMPENSATING DEVICE FOR FIREARMS
Roger Marsh, Hudson, Ohio, assignor to Weapons, Inc., Hudson, Ohio, a corporation of Ohio
Application October 13, 1954, Serial No. 461,999
2 Claims. (Cl. 89—191)



1. An actuating-power-variation compensating device for a self-actuating firearm having a barrel through which a projectile fired from an individual round of ammunition travels, a feed opening through which each round is fed to said barrel, and means for covering said opening including reciprocable actuating means responsive to the actuating power supplied by the expanding propellant gases and movable axially relative to the barrel during the travel of the projectile through the length of the barrel a distance substantially proportional to said actuating power for causing uncovering of said opening automatically while said compensating device is substantially ineffective during normal firing of a round for which the firearm is designed, said compensating device comprising: means for modifying movement of said actuating means including a closed gas cylinder and a piston mounted to reciprocate in said cylinder, said piston and cylinder defining an expansible chamber at one end of said piston for receiving high pressure gases to actuate said piston, means connecting said piston to said actuating means for reciprocation in unison therewith relative to said barrel, means holding said cylinder against movement relative to said barrel, valve means formed by portions of said piston and cylinder for controlling flow of gases to said expansible chamber in accordance with the position of said piston relative to said cylinder, and means for supplying motive fluid from the barrel to said pressure chamber including a gas intake port in said barrel downstream of the projectile at the instant ignition is initiated and a passage leading from said port to said cylinder for establishing communication between said expansible chamber and the interior of said barrel, said actuating means moving said piston relative to said cylinder during said normal firing from its original position at the instant ignition is initiated to a second position in the period of time required for the projectile to move from the cartridge case to said gas port, said valve means preventing flow of gases from the barrel through said gas port when the piston is in said second position to render said compensating device ineffective during said normal firing, said valve means establishing communication between said barrel and said expansible chamber when said piston is in a third position relative to said barrel which is spaced from said second position, said actuating means causing movement of said piston during firing between said second and third positions and beyond said positions, said expansible chamber being located on the end of the piston wherein the chamber increases in size as said piston moves in a direction from said third to said second position.

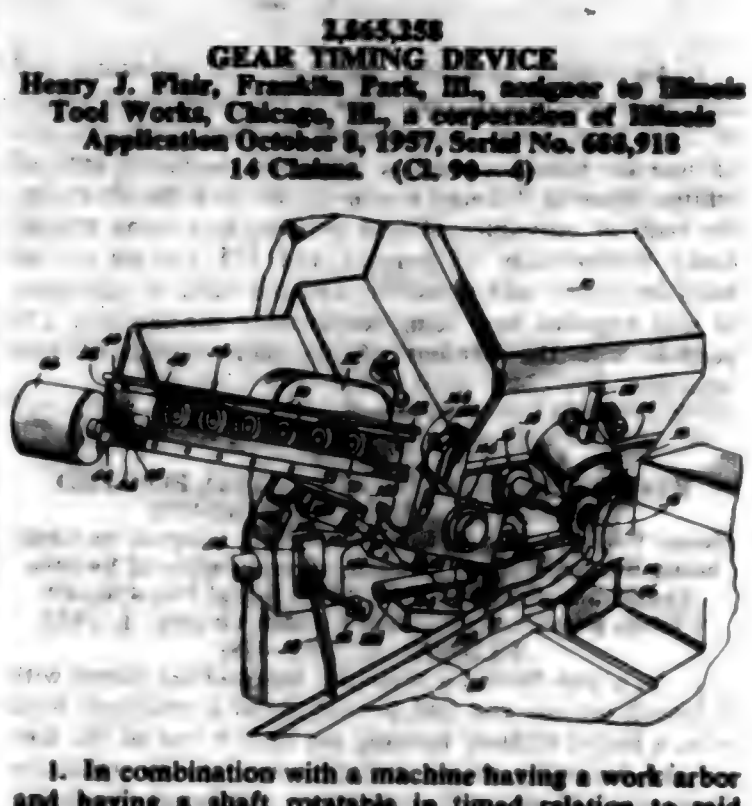
2,865,257
GEAR CHAMFERING MACHINE OF THE UNIVERSAL TYPE
John M. Christmann, Grosse Pointe Woods, and William H. Bibbens, Huntington Woods, Mich.
Application May 29, 1953, Serial No. 358,506
7 Claims. (Cl. 90—1.4)

1. In a machine for chamfering end edges of toothed machine elements of various dimensional specifications with each such element being received and operated upon by positively located non-adjustable means as in a special machine receiving only a predetermined element, said machine comprising a permanent structure and a number of changeable portions each received in one non-adjustable position, a frame structure, a drive shaft on said frame structure, a hinged arm actuated from said drive shaft to oscillate through a predetermined angle, said shaft and arm forming a permanent portion of the machine, said arm being adapted to receive and to actuate a pair of spaced cutters predesigned for a predetermined work gear to be chamfered, said frame structure receiving to be assembled thereto a predesigned fix-



ture adapted to receive and to locate a work gear of said predetermined dimensional specifications and to locate said work gear in such space relation to the cutters that each of said cutters produces a substantially uniform chamfer on at least portions of two meeting tooth edges of each of two spaced teeth of the work gear, a second shaft perpendicular to said first shaft, and indexing means driven from said second shaft and forming a permanent portion of the machine, said indexing means including a changeable pilot gear for meshing with the work gear for indexing the same, said indexing means being manually adjustable to bring said pilot gear in mesh for proper tooth rolling action with the work gear.

2,865,258
GEAR TIMING DEVICE
Henry J. Flair, Franklin Park, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application October 8, 1957, Serial No. 688,918
14 Claims. (Cl. 90—4)



1. In combination with a machine having a work arbor and having a shaft rotatable in timed relation to said arbor, a timing device for properly phasing a work gear on said arbor, comprising a timing gear fixed on said shaft, a support pivotable about said shaft, an idler gear rotatably carried by said support, said idler gear meshing with said timing gear and orbiting about said timing gear upon pivoting of said support whereby said idler gear meshes with a work gear on said arbor to phase the gear

on said arbor, said idler gear subsequently moving away from said work gear upon reverse pivoting of said support, and means for pivoting said support.

2,865,259

ARBOR-SUPPORTING JACK FOR MACHINE TOOLS

William J. Blazek, New Lexington, and Stanley Zakrzewski, Bremen, Ohio, assignors to Lempco Products, Incorporated, Bedford, Ohio, a corporation of Ohio

Application July 21, 1955, Serial No. 523,423
8 Claims. (Cl. 90—26)

2. A portable pedestal-type support for machine tool arbors comprising a vertically arranged, bottom pedestal member having a base-engaging lower end portion; an elongated stem member telescopically carried in said pedestal member and extending vertically outwardly from the upper end of said pedestal member; means carried by said pedestal member engaging said stem member operable to move the latter vertically with respect to said pedestal member; an arbor-supporting head carried by said stem member, said head including relatively spaced antifriction roller elements defining a cradle support for the reception of a rotary arbor; and visual indicator means actuated by the movement of said stem member for indicating positions of vertical adjustment of the latter relative to said pedestal member.

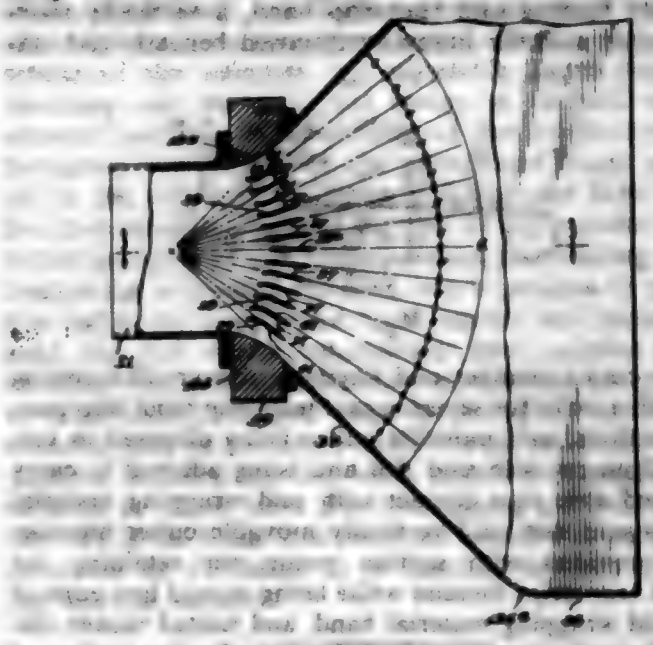
2,865,260

FLOW CONTROL APPARATUS

Charles A. Lee, Neenah, Wis., assignor, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware

Application September 23, 1953, Serial No. 381,619
19 Claims. (Cl. 92—44)

1. Flow control apparatus for web-forming equipment comprising an inflow conduit for containing a flowing stream of fluid and establishing said stream of fluid in a substantially steady-state flow condition at the outflow end of said inflow conduit, a laterally-diverging conduit connected to said inflow conduit at the outflow end thereof for receiving the flowing stream of fluid from said inflow conduit, a plurality of symmetrically spaced, flow control vanes disposed within the throat of said diverging conduit in position to act upon said flowing stream to establish said fluid in a substantially steady-state flow condition with substantially uniform pressure and velocity distribution across the width of the widened stream at the outflow end of the diverging conduit, each of a plurality of said flow control vanes having a section of predetermined curvature at the upstream end thereof and a section of less curvature at the downstream end thereof, the gap to chord ratio of said flow control vanes being within the range of from 1:2 to 1:4, and an outflow conduit connected to the outflow end of said laterally-diverging conduit for carrying said widened flowing stream to the web-forming region of said web-forming equipment while maintaining said widened flowing stream of fluid in said substantially uniform and steady-state flow condition.



16. Flow control apparatus for web-forming equipment comprising an inflow conduit for containing a flowing stream of fluid and establishing said stream of fluid in a substantially steady-state flow condition at the outflow end of said inflow conduit, at least the outflow end of said conduit being of generally rectangular cross-section, a laterally-diverging conduit of rectangular cross-section connected to said inflow conduit at the outflow end thereof for receiving the flowing stream of fluid from said inflow conduit, said laterally-diverging conduit decreasing in depth in the direction of flow therethrough, a plurality of spaced-apart flow control vanes positioned within the throat of the laterally-diverging conduit so as to divide said throat into substantially equal angular segments, each of which angular segments encompasses a divergence angle of between about 3° and about 15°, said flow control vanes having dimensions and characteristics so as to act upon said flowing stream to establish said fluid in a substantially steady-state flow condition with substantially uniform pressure and velocity distribution across the width of the widened and shallowed stream at the outflow end of the diverging conduit, the flow control vane located nearest the central axis of said flowing stream being flat and the other of said flow control vanes each having a section of predetermined surface curvature at the upstream end thereof and a section of less curvature at the down-stream end thereof, the vanes on opposite sides of said flat vane being curved in opposite directions, and a generally rectangular outflow conduit connected to the outflow end of said laterally-diverging conduit for carrying said widened and shallowed flowing stream to the web-forming region of said web-forming equipment while maintaining said widened and shallowed, generally rectangular flowing stream of fluid in said substantially uniform and steady-state flow condition.

2,865,261

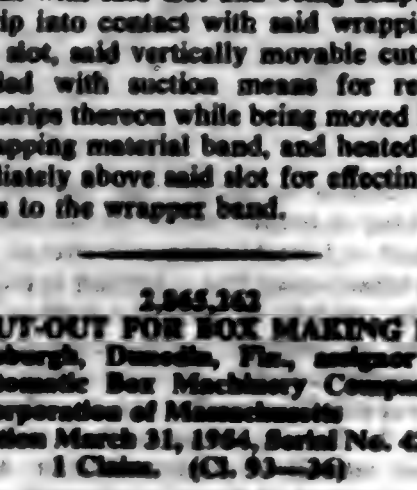
MECHANISM TO PRODUCE A TEAR-STRIP AND TO SECURE IT TO A WRAPPER

Arlesto Seragnoli, Bologna, Italy

Application March 24, 1955, Serial No. 496,585
1 Claim. (Cl. 93—1)

Mechanism for forming a tear-strip and for securing the same to a wrapper, comprising a stationary guide

plate on which a band of wrapping material is disposed for intermittent displacement therealong, said guide plate being provided with an elongated slot for exposing a corresponding area of the lower face of the wrapping material, a stationary guide disposed beneath said guide plate for intermittent movement of a band of tear-strip material therethrough with successive tear-strip sections disposed beneath said elongated slot, said stationary guide comprising a stationary cutter member, means for intermittently feeding said tear-strip band, a vertically movable cutter member normally disposed beneath said sta-



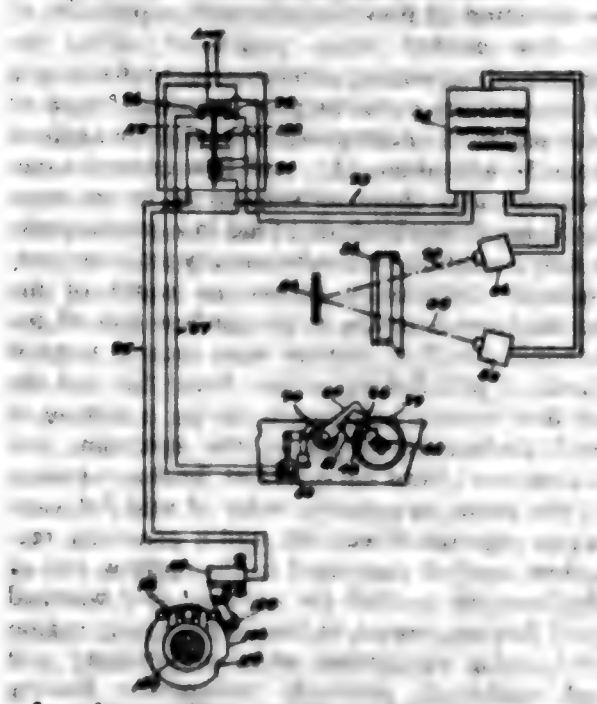
tionary cutter member and having a scissors-like cutting action therewith for severing said tear-strip band into tear-strip sections, said movable cutter being disposed in vertical alignment with said slot and being adapted to carry a severed strip into contact with said wrapping material through said slot, said vertically movable cutter member being provided with suction means for retaining the severed tear-strips thereon while being moved into contact with said wrapping material band, and heated means disposed immediately above said slot for effecting sealing of the tear-strips to the wrapper band.

2,865,243

FEEDER CUT-OUT FOR BOX MAKING MACHINE

John Fredenburgh, Dunedin, Fla., assignor to United States Automatic Box Machinery Company, Boston, Mass., a corporation of Massachusetts

Application March 31, 1954, Serial No. 422,023
1 Claim. (Cl. 93—24)



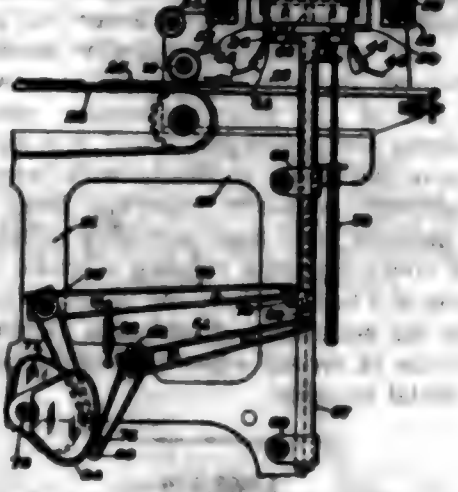
In a box making machine of the type described, means for feeding a succession of blanks at uniform intervals into said machine, means for driving said feeding means, a box-forming mechanism operable in timed relation to the feeding succession of blanks for forming each successive blank into a box, and means controlled by boxes leaving said box-forming mechanism for stopping said feeding means wherever said box-forming mechanism fails to deliver a box in predetermined sequence, said means for stopping said feeding means comprising a solenoid operated clutch mechanically connecting said driving means and said feeding means, said solenoid clutch being connected for energization under the control of two parallel circuits, one of said circuits including a photocell and a first switch controlled by said photocell, the other of said circuits including a second switch and means for mechanically opening and closing said second switch periodically in timed relation to said box-forming mechanism operation, said latter means being operable to open said second switch at the time a box is adapted to leave said box-forming mechanism, said photocell circuit including a photocell located on the output side of said box-forming mechanism and further including a light source positioned to direct a beam of light at said photocell across the path of boxes leaving said forming mechanism whereby said light beam is adapted to be interrupted each time a box leaves said forming mechanism and providing for the closure of said first switch in response to the interruption of said beam of light on said photocell for maintaining energization of said solenoid operated clutch, said photocell acting to open said first switch whenever said light beam shines on said photocell, said solenoid operated clutch functioning to stop said feeding means only when both of said switches are opened simultaneously.

2,865,263

APPARATUS FOR MAKING GLUED CORRUGATED CARTONS

Clifford A. Strand, Nashua, N. H., assignor to The International Paper Box Machine Company, Nashua N. H., a corporation of New Hampshire

Application September 28, 1956, Serial No. 612,729
5 Claims. (Cl. 93—51)



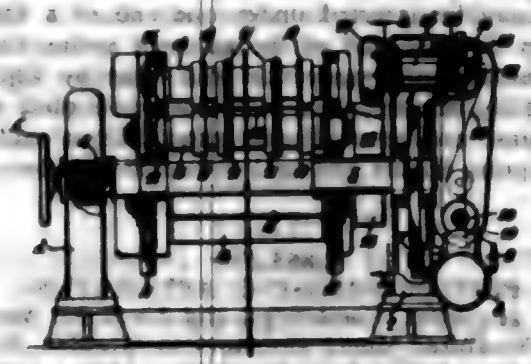
2. Apparatus for forming glued corrugated boxes, said apparatus comprising a box form reciprocating axially within said channel and arranged to support the erected side walls and glue flaps of a box from the inside thereof; a plunger telescopably mounted within said box form and arranged to erect the side walls and glue flaps of a box with each stroke thereof; timed means actuating said plunger and box form with said plunger preceding said form at a spaced distance into said channel and trailing said form at a spaced distance out of said channel; first lateral extensions fixed on said box form and arranged to apply pressure axially, toward the box bottom, on the outer edges of said erected side walls and glue flaps for squaring up the box and leveling the edges thereof; pressure plates, reciprocating laterally in timed relation to said plunger and form and arranged to apply lateral pressure inwardly on said erected, and box form supported, side walls and glue flaps for adhering said flaps to said walls and second lateral extensions fixed to said pressure plates, said extensions being adapted to counter the pressure of said first lateral extensions and to cooperate there-

wardly of one side face of said vertical section, a rib on the end of said flange, said flange and rib being en-

said abutment members including a rigid vertical portion connected with the top surface of said plate and a ver-

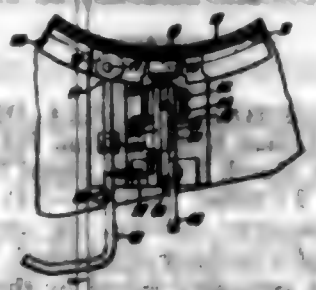
with in maintaining said box in squared up condition with edges leveled during the application of pressure by said pressure plate.

2,865,264
DRIVE MECHANISM FOR TRIPLEX SLITTER-SCORERS
Henry W. Meese, Haddonfield, N. J., assignor to Samuel M. Langston Co., Camden, N. J., a corporation of New Jersey
Application February 13, 1957, Serial No. 639,921
3 Claims. (Cl. 93—58.2)



1. In a machine for performing work on continuously travelling web stock, a plurality of unitary web-working instrumentalities each comprising a driving pulley, a common rotary carrier for said instrumentalities, said pulleys being uniformly spaced radially from the rotary axis of said carrier so as to transcribe a common circular path as the carrier is rotated, means for moving said units selectively into operative position with respect to the web and for withdrawing said units, and a relatively fixed rotary resilient driver for said units positioned so that when each of the units occupies the said operative position the axis of the driver occupies a common plane with the axes of the pulley of said unit and of the carrier, and the radial distance between the axes of the driver and pulley is less than the combined normal radii of the driver and pulley so that the peripheral surface of the driver is resiliently frictionally engaged with the peripheral surface of the pulley.

2,865,265
MANUFACTURE OF PAPERBOARD HAT BOX BODIES AND COVER FLANGES
Whitney D. Sherman, West Nyack, N. Y., assignor to Continental Can Company, Inc., a corporation of New York
Application June 24, 1955, Serial No. 517,815
4 Claims. (Cl. 93—77)

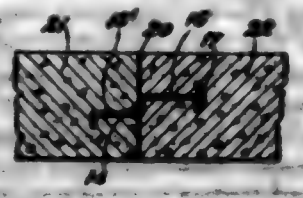


4. Apparatus for forming paperboard bodies and cover flanges for hat boxes and the like and preparing them for attachment to end and cover pieces which comprises a curvilinear mandrel to receive a paperboard blank of substantially rectangular form having a series of flaps projecting from one side thereof and having adhesive applied to one end thereof over an area adapted to serve as a glue lap, means for holding the blank in a position wrapped around said mandrel with its ends overlapped while clamping the overlapped ends tightly together, means for folding said flaps inwardly to pre-break said flaps adjacent their base portions whereby they are caused to assume positions extending inwardly toward the center of the glued blank, said folding means arranged for operation while said holding means is still effective and during setting of the adhesive, an adjustable gauge ring surrounding said mandrel, and means to fix said ring in selected positions longitudinally of the mandrel to predetermine the position of the paperboard blank according to the width of the blank to bring said flaps into a location extending beyond the end of the mandrel to be folded inwardly by said folding means, said holding means comprising a member movable into a position to press a first end of the paperboard blank against said mandrel to hold said first end in substantially fixed relation to the mandrel, and a second member movable into a position to press the overlapped ends of the blank against the mandrel and so to clamp such overlapped ends tightly together, said first member being spaced from said second member so as to leave the overlapping portion of said first end of the blank free from the mandrel to permit the other end of the blank to be inserted between the first end and the mandrel.

2,865,266
CENTERLINE PAINT
James F. Wynn, Marietta, Ohio, assignor to American-Marietta Company, a corporation of Illinois
Application November 28, 1956, Serial No. 624,841
16 Claims. (Cl. 94—1.5)

1. A reflective highway marking paint comprising a paint vehicle containing a reflective pigment dispersed therein and from about 3 to about 8 pounds per gallon of glass-free paint of transparent glass fragments having a refractive index of at least approximately 1.5 incorporated in said paint, said glass fragments being sufficiently large to be retained by a U. S. Standard Number 270 mesh screen and being constituted by a plurality of angularly intersecting substantially planar, light reflecting faces.

2,865,267
WATERSTOP FOR EXPANSION JOINTS
Alonzo W. Bailey, Cleveland, Ohio
Application August 21, 1956, Serial No. 605,380
1 Claim. (Cl. 94—18)



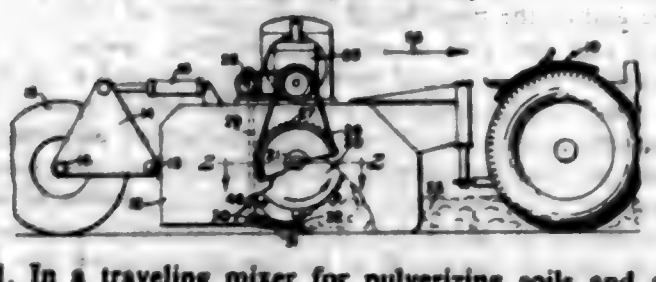
In combination with a pair of adjacent concrete slabs in a road pavement, the confronting ends of said slabs being disposed in spaced relation with each other and defining an expansion joint, a waterstop for said expansion joint comprising a strip of rubber, a central vertical section of said strip having a substantially planar configuration and being disposed in parallel relation with the confronting end walls of said slabs, an integral horizontal flange extending from the bottom edge and out-

on said walls respectively over the openings therein, one of said openings being formed by a generally conical

axial displacement; a shutter release key displaceably arranged in the camera casing; said tube being provided

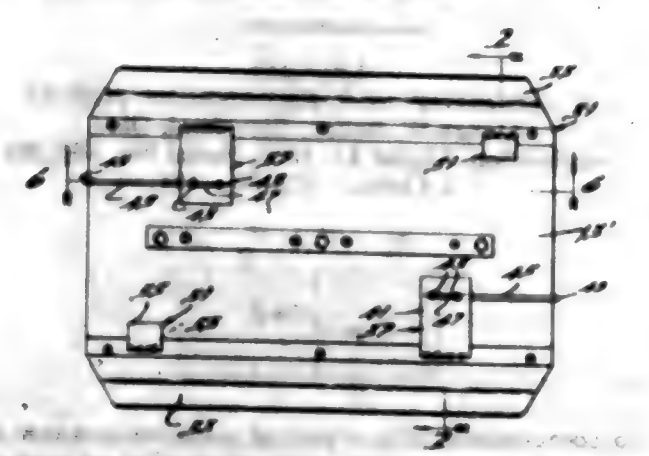
wardly of one side face of said vertical section, a rib on the end of said flange, said flange and rib being embedded in the end portion of one of said slabs, a second integral horizontal flange extending from the top edge and outwardly of the side face opposite said one side face of said vertical section, a rib on the end of said second flange, said second flange and its rib being embedded in the end portion of the other of said slabs, and said second flange entering its slab at a position vertically higher than said first flange, whereby said vertical section of said strip will elongate to accommodate vertical and lateral movement of one slab with respect to the other.

2,865,268
MIXING APPARATUS
Adryl W. Gardner, Redlands, Calif.
Application October 8, 1956, Serial No. 614,505
8 Claims. (Cl. 94—46)



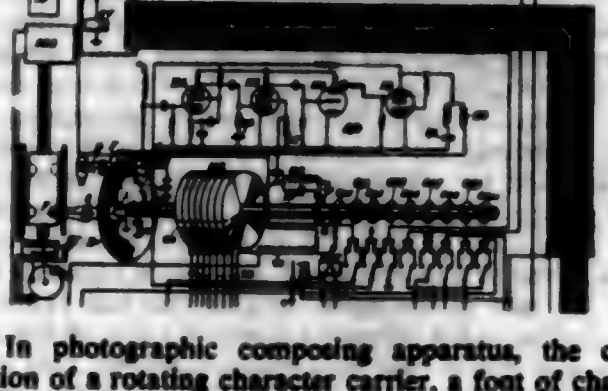
1. In a traveling mixer for pulverizing soils and aggregates and combining a liquid stabilizer therewith, the combination of a frame, a cylindrical rotor supported on said frame for rotation about a transverse horizontal axis, and having means for moving and agitating material in the path of said rotor, means for driving said rotor, a blade extending transversely across said frame immediately beneath said rotor for directing the soils and aggregates upwardly against the periphery of said rotor, means provided with an orifice adjacent the top side of the blade for flowing a layer of liquid stabilizer across the top of said blade for admixture with the soils and aggregates as they are swept off the blade by the rotor, and a closure for said orifice biased to closed position and adapted to be opened by the liquid discharged through said orifice.

2,865,269
CONCRETE FLOAT PLATE ASSEMBLY
Eugene Campbell McMillan, Detroit, Mich., assignor to McMillan Floor Company, Hazel Park, Mich., a corporation of Michigan
Application January 27, 1956, Serial No. 561,852
3 Claims. (Cl. 94—45)



1. A float plate assembly adapted to be removably mounted on a generally rectangular shaped plate-like troweling blade, said assembly including a plate portion having its side edges extending angularly upwardly, a pair of abutment members disposed adjacent opposite side edges of said plate in a longitudinally spaced apart relationship and adjacent to opposite ends thereof, each of said abutment members including a rigid vertical portion connected with the top surface of said plate and a generally horizontal inwardly extending portion, spring finger means connected with each of said horizontal portions and having the free end thereof extending beyond the adjacent end of said plate portion and terminating in a vertically depending portion having the lower end thereof normally disposed below the top surface of said plate portion, and a second pair of abutment members disposed adjacent opposite side edges of said plate portion in reversed longitudinally offset relationship, each of said second pair of abutment members including a vertical portion connected with the top surface of said plate portion and a horizontal surface extending inwardly from said vertical portion in spaced relation to the top surface of said plate portion, whereby either end of said plate portion may be inserted under one end of a blade by lifting up the free end of the adjacent spring finger to permit the assembly operation and whereby when said plate is fully inserted onto said blade said plate will be held against accidental disengagement from said blade by said spring fingers and said abutment members.

2,865,270
PHOTOCOMPOSING APPARATUS
Rene A. Higonnet, Cambridge, and Louis M. Moyroud, West Medford, Mass., assignors to Graphic Arts Research Foundation, Inc., Cambridge, Mass., a corporation of Delaware
Original application January 12, 1949, Serial No. 70,472, now Patent No. 2,682,814, dated July 6, 1954. Divided and this application January 12, 1954, Serial No. 403,556
4 Claims. (Cl. 95—4.5)



1. In photographic composing apparatus, the combination of a rotating character carrier, a font of characters arranged upon the carrier in one half of a circle about the axis of rotation, a second font arranged in the same order upon the carrier in the other half of said circle, and means for projecting a selected character in a selected font from said carrier including a selector synchronized with the carrier having provision to discriminate between different characters in the same font, timing cams synchronized with the carrier, two groups of contacts operated by the cams, each contact of one group being operated one-half cycle after a corresponding contact of the other group, and a flip-flop circuit having transfer contacts movable to select one or the other of said groups of contacts according to the font selected.

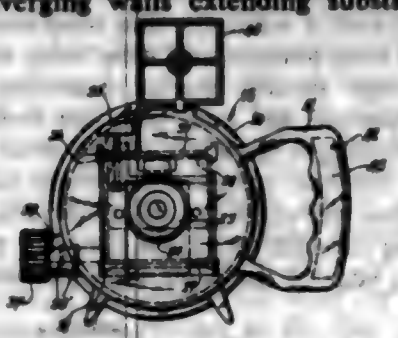
2,865,271
WATERPROOF CAMERA DEVICE
Jordan Klein, Miami, Fla.
Application March 19, 1956, Serial No. 572,246
2 Claims. (Cl. 95—11)

1. In an underwater camera, the combination comprising a pair of circularly cylindrical, hollow, plastic, opaque members separably joined by threaded means to form a waterproof joint, a circular sealing ring removably held between adjoining annular portions of said members, each of said members having a flat wall with an opening therein, a pair of transparent covers mounted

elements respectively on said camera and inner carrier for selectively positioning said inner carrier on said camera and slightly rearwardly from the line of juncture with the

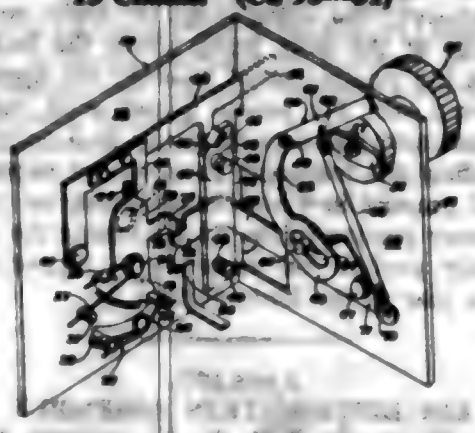
a curvilinear mandrel to receive a paperboard blank of

on said walls respectively over the openings therein, one of said openings being formed by a generally conical corrugated bore tapering inwardly from the cover thereat, a lens mounted at the smaller end of the tapered bore, a pair of diverging walls extending substantially from



said lens towards the other of said openings, a ruby window member mounted at the other of said openings, and a rigid handle secured to one of said members at the exterior thereof and having a corrugated finger grip portion offset from said one member.

2,865,272
SELF COCKING SHUTTER WITH DOUBLE EXPOSURE PREVENTION DEVICE
Edmund F. Deffenbaugh and Harold L. Malone, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application May 24, 1956, Serial No. 587,156
13 Claims. (Cl. 95—31)

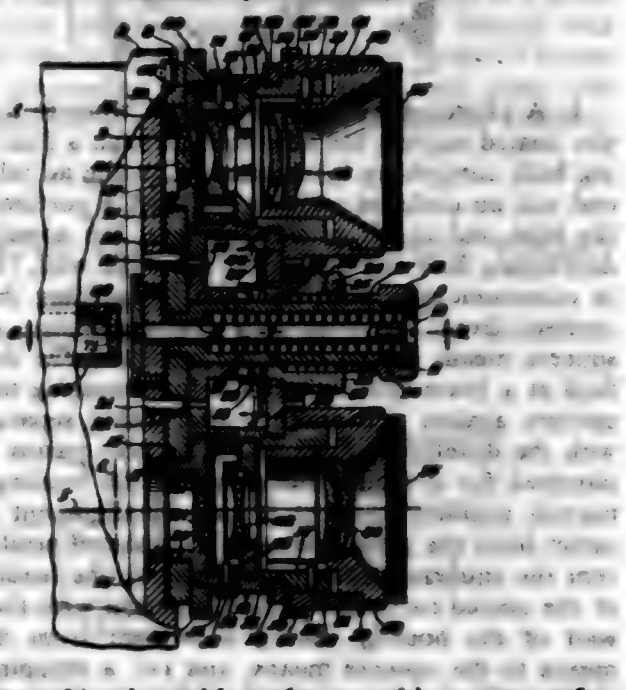


1. In a roll film camera, the combination with a camera body having a wall formed with an exposure aperture, an aperture cover blade and an aperture closing blade rockably mounted on said wall and movable to and from aperture covering position, means to connect said blades, a rotatable film winding knob, of means including a flexible lever to connect said knob to one of said blades to move and tension said blades when said knob is rotated to wind film, a shutter tripping member, means on said tripping member cooperating with one of said blades to retain the blades in said tensioned relation, means controlled by said tripping member to move said flexible lever out of connecting relation with said one blade and to release said retaining means to free said blades, and means to move said blades relative to said aperture to make an exposure.

2,865,273
PHOTOGRAPHIC CAMERA WITH RETRACTABLE TUBE
Alfred Meltzer and Ewald Graboff, Braunschweig, Germany, assignors to Voigtländer Aktiengesellschaft, Braunschweig, Germany, a joint stock company of Germany
Application February 10, 1955, Serial No. 487,434
Claims priority, application Germany February 18, 1954
1 Claim. (Cl. 95—39)

A photographic camera comprising a picture-taking objective and a telescopic tube carrying said objective; said tube having a rest position in the camera casing and a picture-taking position, to which the tube is shifted by axial displacement; a shutter release key displaceably arranged in the camera casing; said tube being provided with a stop collar at its inner end relative to the camera casing, for locking movement of the shutter release key in rest position of the tube and in its positions between said rest position and picture-taking position, and releasing said key in picture-taking position of the tube; the release key being provided with a ledge extending in the direction of the telescopic movement of the tube and the stop collar having a locking edge for locking said ledge until the stop collar comes to abutting position at the wall of the camera.

2,865,274
LENS CARRYING STRUCTURE FOR PHOTOGRAPHIC CAMERAS
Paul Richartz, Lincolnwood, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Application August 24, 1955, Serial No. 530,356
3 Claims. (Cl. 95—45)



1. The combination with a photographic camera, of a stud mounted on said camera and projecting forwardly therefrom in spaced relation with the exposure axis of said camera, a centrally bored inner lens carrier mounted on said stud for rotation and axial movement and the bearing between said inner carrier and stud comprising an axial forwardly projecting bored hub on said inner carrier and surrounding said stud, a centrally bored outer lens carrier arranged forwardly of said inner carrier and mounted on said hub for rotation and axial movement and the bearing between said outer carrier and hub comprising an axial forwardly projecting bored hub on said outer carrier and surrounding said first mentioned hub, said carriers being provided with equal pluralities of lens mounts uniformly spaced radially of and angularly about the axes of said carriers for the selectively positioning thereof in registration with said exposure axis and the simultaneous registration of the lens mounts of one carrier with those of the other, a plurality of primary lenses of different focal lengths respectively mounted on the lens mounts of said inner carrier, a plurality of secondary lenses of different magnifications and cooperable with said primary lenses and respectively mounted on the lens mounts of said outer carrier, cooperating registering

thereto attached to the opposite sides of the ledge and to the first member, a spring mounted louver assembly

bread slice during a toasting operation, means actuated by said main bimetal strip upon attaining an actuating

tionship and adjacent to opposite ends thereof, each of

opening therein, a pair of transparent covers mounted

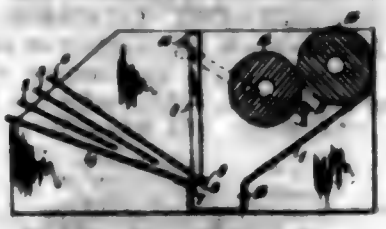
elements respectively on said camera and inner carrier for selectively positioning said inner carrier on said camera with any of the inner carrier lens mounts in registration with said exposure axis and engageable and disengageable respectively with axial movement of said inner carrier toward and away from said camera, cooperating registering elements respectively on said inner and outer carriers for selectively positioning said outer carrier on said inner carrier with a selected outer carrier lens mount in registration with a selected inner carrier lens mount and engageable and disengageable respectively with axial movement of said outer carrier toward and away from said inner carrier, and helical compression spring means associated with said stud and hubs in coaxial relation therewith for yieldably urging said carriers axially toward said camera.

2,865,275

TRANSFER DEVELOPING APPARATUS

Frans W. Ruijs, Utrecht, Netherlands, assignor to A. B. Dick Company, Niles, Ill., a corporation of Illinois

Application March 3, 1955, Serial No. 491,911
Claims priority, application Netherlands March 5, 1954
6 Claims. (Cl. 95—89)



1. A photocopy developing device wherein light-sensitive coated carriers are advanced through a fluid developing bath comprising (*a*) a housing having an inlet at one end and an outlet at another end with a portion between the inlet and outlet at a lower level for containing the developing fluid and defined by a bottom wall, (*b*) means in communication with the inlet for guiding the coated carriers from the inlet into the developing fluid, (*c*) squeeze means spaced from the inlet with the developing fluid at a lower level inbetween for squeezing the coated carriers against one another after being separately wet with the developing fluid, (*d*) a support means pivotally mounted for swinging movement in the housing from a normal position adjacent to and in alignment with the outlet from the guide means to a displaced position adjacent the squeeze means for supporting the leading edges of the coated carriers in spaced relation with the bottom wall of the housing during movement from the guide means to the squeeze means, and (*e*) a stripping means stationarily positioned within the housing immediately in advance of the inlet to the squeeze means and in the operated position of said support means to engage the leading edges of said coated carriers for displacement from said supporting means into engagement with the squeeze means responsive to movement of the supporting means to operated position.

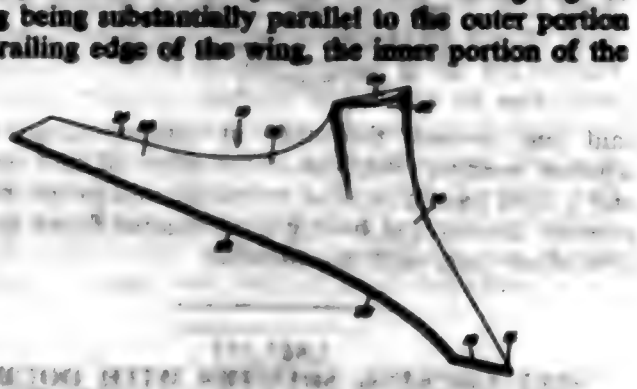
2,865,276

PEANUT HARVESTING SWEEP

George M. Reed, Jourdanton, Tex.

Application May 6, 1955, Serial No. 506,589
1 Claim. (Cl. 172—720)

A device for routing peanut plants with the peanuts thereon from the soil, said device comprising a one-piece sweep having an upstanding hollow body portion, a vertical land side forming one side of the body portion and terminating in a concave upper and forward edge, said body portion terminating at its forward end in a lower edge in acute angular relation to the front lower corner of the land side thereby forming a point for insertion into the soil, the region of the body portion disposed rearwardly of the front lower edge being inclined upwardly and slightly rearwardly from the line of juncture with the land side, the upper region of the body portion having a transversely convex front surface smoothly merging into the inclined region whereby soil moving over the point and body portion will be turned in a spiral manner away from the land side, a relatively thin wing extending laterally from said body portion, said wing being elongated and having the major portion thereof extending rearwardly of the body portion and land side, the leading edge of said wing including a slightly concave inner portion extending from the rear corner of the front lower edge of the body portion, the outer portion of the leading edge of the wing being substantially parallel to the outer portion of the trailing edge of the wing, the inner portion of the



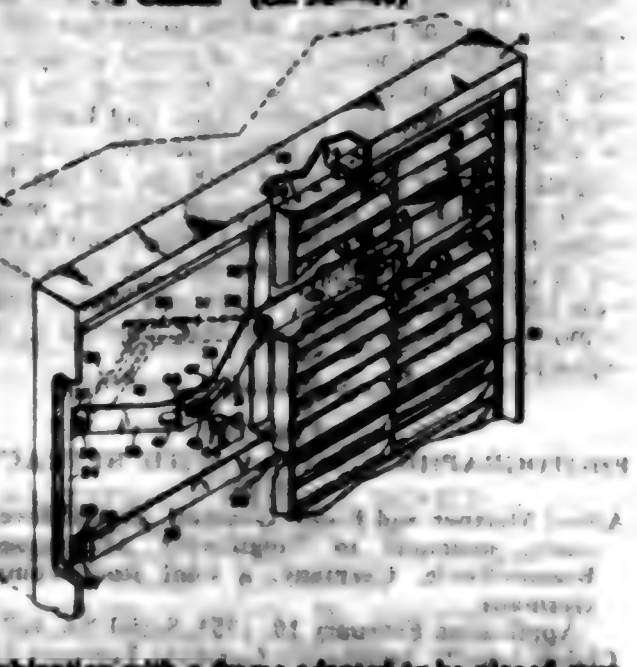
trailing edge of the wing curving upwardly to the upper edge of the body portion, the upper surface of the inner portion of the wing curving upwardly for merging with the inclined region of the body portion, the upward slope of the upwardly curved surface of the wing being greatest adjacent the upper edge of body portion, the trailing edge of the wing being above the leading edge throughout the length thereof whereby the upper surface of the sweep will lift peanut plants with the peanuts thereon and move the same laterally in a spiral manner for separating dirt from the peanuts and depositing the plants and peanuts in a row substantially on top of the soil, the inner portion of the wing forming the other side of the body portion for receiving a supporting beam against the rear of the body portion.

2,865,277

AIR DISTRIBUTION ASSEMBLY

Harlan L. Howe, De Witt, N. Y., assignor to Carrier Corporation, Syracuse, N. Y., a corporation of Delaware

Application October 1, 1956, Serial No. 613,194
1 Claim. (Cl. 98—40)



In combination with a frame adapted to be placed over an open end of an air conditioning unit, the frame including a recessed ledge on its inner edge, a first member having an offset end secured to the ledge at opposite sides thereof, and a second member extending at an angle

a heating element for supplying heat from one face of the structure to toast to be warmed, said structure being

stack, and compressing said stack of superimposed layers, in a dry condition free from any added binding material,

tube having a rest position in the camera casing and a picture-taking position, to which the tube is shifted by

with said primary lenses and respectively mounted on the lens mounts of said outer carrier, cooperating registering

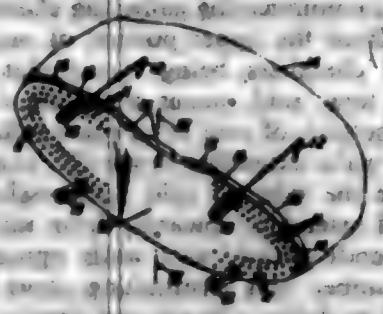
thereto attached to the opposite sides of the ledge and to the first member, a spring mounted louver assembly adapted to be placed within the frame, said assembly comprising a plurality of louvers, each louver including a frame of substantially square contour, a plurality of parallel slats, and a support strut extending from side to side of the louver frame to support said slats, a first band spring secured to said second member intermediate its ends, said first band spring having slots formed adjacent its ends, a second band spring having an end attached to the recessed ledge of the frame, the opposite end thereof having a slot therein placed in superposed relation with a slot in the first band spring, a fastening member adjustably secured to the strut of a first louver extending through the superposed slots for fastening the first and second band springs to the first louver to resiliently hold the same on the frame, a third band spring having an end attached to the recessed ledge on the opposite side of the frame, the opposite end of the third band spring having a slot therein placed in superposed relation with the remaining slot of the first band spring, and a second fastening member adjustably secured to the strut of a second louver extending through the superposed slots of the first band spring and the third band spring for fastening the second louver to the first and third band springs to resiliently hold the same on the frame.

2,865,275

SMOKING OR OTHER TREATMENT OF BACON AND THE LIKE

Timothy Edward Linnell and Peter Robert Linnell, Northampton, England, assignors of one-half to Raymond Eddie Linnell and Thomas Richard Linnell, both of Northampton, England

Application April 12, 1956, Serial No. 577,464
Claims priority, application Great Britain April 14, 1955
3 Claims. (Cl. 99—294)



1. In a device for protecting an edible commodity against deterioration through its surface, a plate adapted to be fitted in intimate contact with the surface, the plate having a plurality of marginally placed holes therethrough and a plurality of fastening members slidably extending through said holes at spaced apart intervals, each member comprising a stem of substantial length extending through a selected one of said holes and having at one end a hook anchorable in said commodity and at the other end a coiled spring bearing against the external surface of the plate.

2,865,279

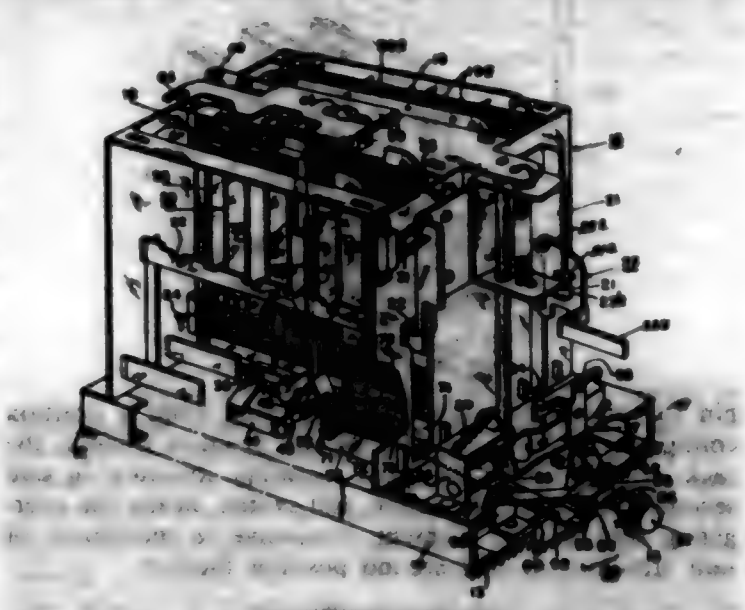
TOASTER APPARATUS

Reed A. Palmer, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application July 6, 1956, Serial No. 596,231
8 Claims. (Cl. 99—329)

1. In a control mechanism for an electric toaster comprising a bread support and an electric heater disposed to heat one side of a slice of bread positioned on said support, the combination of a switch for controlling energization of said heater, means for closing said switch to initiate a toasting operation, a thermally responsive structure comprising a main bimetal strip arranged to receive heat from the surface of said one side of said

bread slice during a toasting operation, means actuated by said main bimetal strip upon attaining an actuating temperature in response to heat received thereby from said bread slice to open said switch means and terminate the toasting operation, a thermally responsive member for compensating said main bimetal to reduce the effect of ambient temperature changes on the actuation of



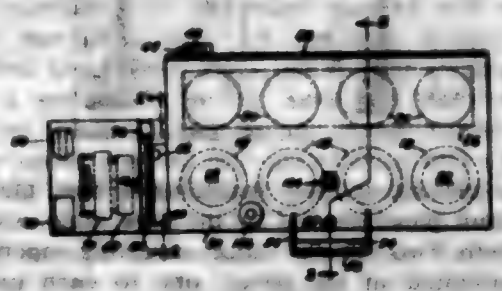
said actuated means, and means for heating said thermally responsive member upon termination of a toasting operation to overcompensate said main bimetal strip to prevent the latter from actuating said actuated means during a succeeding toasting operation until after said main bimetal strip is cooled below its actuating temperature.

2,865,280

APPARATUS FOR MAKING TOASTED POCKET IN A BUN

Richard Lennstine, Chicago, Ill.

Application December 19, 1956, Serial No. 631,589
3 Claims. (Cl. 99—332)



1. Apparatus for making toasted pockets in buns which comprises a base having an aligned row of shallow cavities, a cover for said base having plunger members secured to the bottom side thereof and in alignment with said row of shallow cavities, said cover member hingedly mounted along its back edge on said base, a heater member in each of said plungers, a lifter plate attached to one side of said cover plate, a motor, a disc rotated by said motor, a roller carried by said disc underlying said lifter plate and adapted to raise the same after a time period of operation of said plunger heaters in buns positioned in said cavities.

2,865,281

TOASTER APPARATUS

James R. Chivers, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application January 4, 1957, Serial No. 632,536
4 Claims. (Cl. 99—339)

1. A toaster comprising a housing, a generally horizontal pivot pin carried by one side of the housing and adjacent the bottom margin thereof, a toast warming structure movably supported by said pin and including

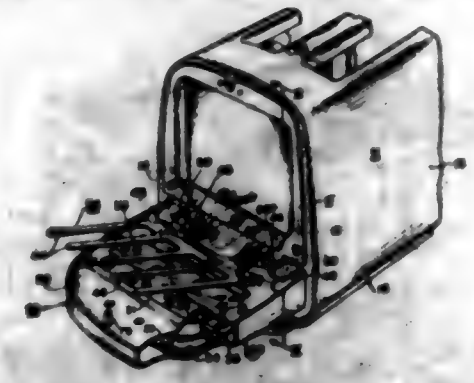
2,865,285

TOGGLE PRESS

2,865,286

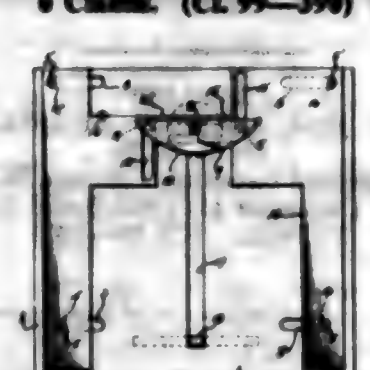
FLOWS FOR GARBAGE TRUCKS

a heating element for supplying heat from one face of the structure to toast to be warmed, said structure being movable upwardly about the pin to a first position contiguous the housing and downwardly to a second position wherein the structure extends from the housing with said face upwardly exposed, a toast rack carried by said pivot



pin for movement relative the housing from a position contiguous the housing to a second position wherein the rack extends above the toast warming structure in said second position of the latter, and switch means for energizing said heating element responsive to movement of said structure to said second position thereof.

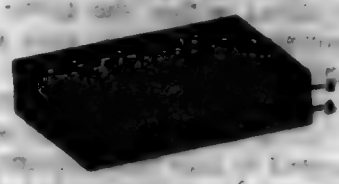
2,865,282
TOASTERS
Jack E. Brown, Brooklyn, and George Koslow, New York, N. Y.
Application November 21, 1956, Serial No. 623,663
6 Claims. (Cl. 99—390)



1. An electric toaster, including a base plate, a rear and a front panel carried by the base plate, a cover provided with two spaced slice directing openings, two slides mounted in the cover, one to each opening for varying the slice width of such openings, a central heating unit mounted between the panels and providing slice receiving compartments on both sides thereof, a slice elevator mounted for vertical movement in the panels and in the compartments, two cooperating heating units, one to each respective panel mounted in the panels for sliding movements to and from the central heating unit, and means mounted in one of the panels for imparting simultaneous sliding movements to the latter two heating units to increase or decrease the slice receiving compartments and for moving the two slides to vary the width of the slice directing openings relatively to the distance between the central heating unit and the two adjustable heating units.

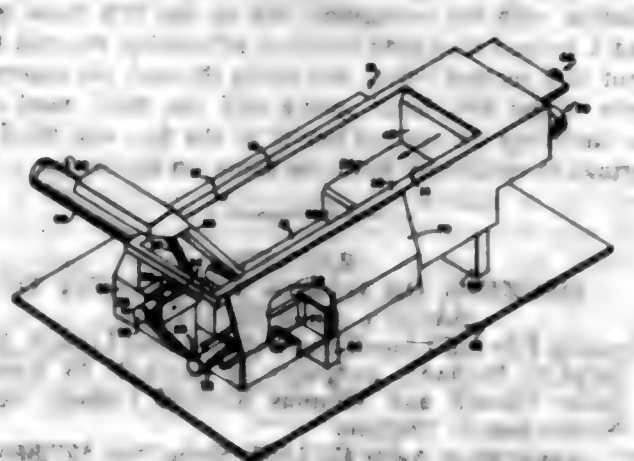
2,865,283
METHOD OF FORMING DRY COMPRESSED COMPACT SPONGE UNIT
Lewis J. Bindler, Cincinnati, Ohio
Application March 30, 1955, Serial No. 497,962
2 Claims. (Cl. 100—93)

1. The method of forming a dry compressed compact sponge unit of relatively stiff character comprising superimposing layers of dry sponge sheet material to form a stack, and compressing said stack of superimposed layers, in a dry condition free from any added binding material,



to collapse said stack and press-bond the layers together in a collapsed compact unit.

2,865,284
BALING PRESS
Wallace M. Thompson, Albert George Swint, Jr., and Walter C. Little, Cordele, Ga., assignors to Harris Foundry & Machine Company, Cordele, Ga., a corporation of Georgia
Application August 8, 1955, Serial No. 527,942
1 Claim. (Cl. 100—233)



In a baling press, means defining a compression chamber having a communicating gathering chamber extending horizontally from the upper portion of one end thereof, both of said chambers being rectangular in plan and having open tops, said means including a bottom wall defining the bottom of said compression chamber, parallel rigid side walls extending upwardly from said bottom wall to define the sides of said compression chamber, a rigid end wall extending upwardly from said bottom wall between the ends of said side walls opposite from said gathering chamber and terminating short of the upper edges thereof to define a lower end portion of said compression chamber, a horizontal wall disposed generally in the horizontal plane of the upper edge of said end wall to define the bottom of said gathering chamber, said side walls having at least integral extensions at their upper portions extending outwardly to define the sides of said gathering chamber, a first ram defining an end wall of said gathering chamber disposed between the extensions of said side walls and movable between the ends of said horizontal wall through said gathering chamber to discharge material deposited therein into said compression chamber, a lid pivoted at one end about a horizontal axis adjacent the upper edge of said end wall, power means for pivoting said lid downwardly through the open top of said compression chamber between said side walls to compress the material therein into the lower portion thereof, a second ram defining an opposite end wall of the lower portion of the compression chamber and movable between said side walls through the lower portion of said compression chamber to compress the material therein against said first-mentioned end wall into an end portion thereof, and a third ram defining a lower end portion of one of said side walls movable adjacent said end wall through the lower end portion of said compression chamber to compress the material therein against the lower end portion of the opposite side wall into a corner portion of said compression chamber.

ferred to form a gap between the surface of the rotating roller and the surface of the member from which the

tion extending longitudinally of said cylinder adjacent one end of said surface portion, a primary shaft rotatably

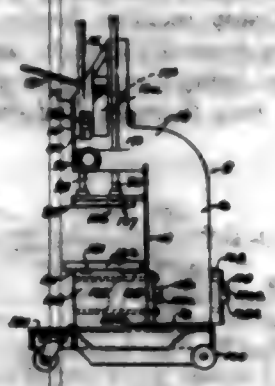
receive heat from the surface of said one side of said structure movably supported by said pin and including

2,865,285

TOGGLE PRESS

Andrew J. Wachi, Detroit, Mich.

Application August 16, 1956, Serial No. 604,487
7 Claims. (Cl. 100—372)



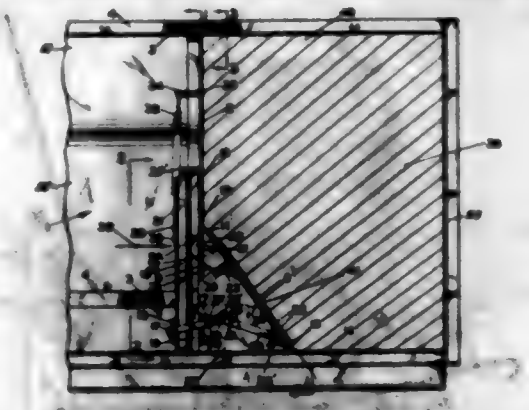
4. In a press including a vertical frame and a vertically-moving ram consisting of a plurality of racks and plate means supported by said racks at the lower ends thereof, a horizontal shaft journalled at its ends in bearings within the frame and provided with axially-disposed pinion means, the pinion means being in engagement with at least one rack, a similar shaft with similar pinion means disposed parallel to the first-named shaft, the last-named pinion means being in engagement with the other racks, sprocket wheel and endless chain means connecting the two shafts to secure uniform rotation of both, a horizontal beam disposed crosswise to the racks, the ends of the beam being disposed in vertical slideways in the frame to allow the beam to be moved vertically therein, the beam being provided with arms extending therefrom towards the rear of said frame, a member pivotally secured to the upper end of the beam and including at its upper portion bracket means provided with vertical slots, the lower portion of the member including a short swing rack, the teeth of the rack facing the teeth of at least one rack of the ram, a toggle including two arms connected endwise by a knuckle joint and normally disposed at an angle to each other, the outer end of one member being secured to the frame above said knuckle joint, the end of the other arm being secured to a horizontal shaft, the ends of which are disposed in the vertical slots in said brackets, a cylinder within the upper end of the frame, a piston reciprocating within the cylinder, a rod connected to the piston and extending outwardly from the cylinder, the piston being adapted to be operated by fluid means under pressure, the outer end of the piston being adapted to bear, by intermediate means, against the knuckle joint of the toggle to impart a divergent movement to the arms of said toggle, link means pivotally connected to the beam for normally keeping the swing rack out of engagement with the racks of the ram, a lever pivotally secured to the frame and adapted to engage the link means, the pinion operated by the hand wheel being adapted to move the racks of the ram downwardly, means mounted on the frame and adapted to be operated by the ram on its movement downwardly to actuate the lever to bear against the link means to bring the swing rack into engagement with the rack or racks of the ram and to initiate a movement of the piston rod against the toggle to force the ram downwardly by means of said swing rack, and stationary means projecting from the frame to engage the other end of said link means to pull said short rack out of engagement with the rack or racks of the ram on the return movement of the bench when pulled upwardly by the return movement of the piston rod.

2,865,286

PLOWS FOR GARBAGE TRUCKS

Edward T. Nowell, Portland, Oreg.

Application December 31, 1953, Serial No. 401,621
2 Claims. (Cl. 198—295)



1. A packing device for refuse truck bodies adapted to receive loose refuse material to be packed at one end thereof, said packing device comprising a plow in a substantially upright position transversely of the body and reciprocally movable in the body longitudinally thereof, said plow including a substantially flat main portion having a pressure face and a substantially flat toe portion across the lower part of said main portion on the pressure side thereof, said toe portion having a lower edge engageable with the floor of the body and said toe portion normally being inclined downwardly and forwardly of said main portion to force some of the loose material upwardly when the plow is moved toward the packing position, and collapsible means connecting said toe portion to said main portion and including spring biased mechanism normally maintaining said toe portion in its inclined relation with the upper edge portion of said toe portion engaging said main portion and the lower edge portion of said toe portion engaging the body floor, said collapsible means including an arm pivotally connected at one end to said main portion and pivotally connected at its other end to a link with the other end of the link pivotally connected to the lower part of said toe portion, stop means on said link and arm to prevent the arm and link from assuming a straight line or dead center position, a spring urging the arm and link toward a straight line position, and spring means connected between the upper part of said toe portion and said main portion and biasing the upper edge portion of said toe portion into engagement with said main portion while permitting vertical and angular movement therebetween.

2,865,287

ROTARY IMAGE TRANSFER MACHINE

Paul B. Strelch, Sr., Maywood, and Joseph Hruby, Deerfield, Ill., assignors to Charles Bruning Company, Inc., Teterboro, N. J., a corporation of New Jersey

Application July 30, 1954, Serial No. 446,714
3 Claims. (Cl. 101—132.5)

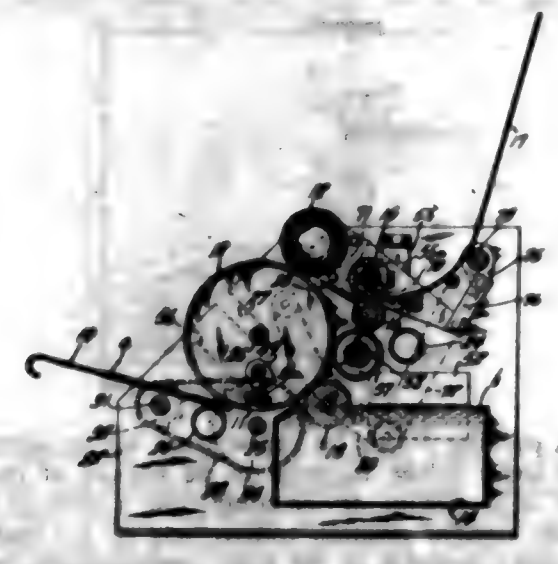
1. In a machine wherein an image is transferred from the surface of one member to the surface of another, the combination of a reservoir containing liquid to be applied to the surface of the member from which the image is to be transferred, means for applying pressure between the members, means for advancing the member from which the image is to be transferred toward the pressure applying means without submerging the member beneath the surface of the liquid, means for independently advancing the member to which the image is to be transferred toward the pressure applying means without submerging the member beneath the surface of the liquid, a rotating roller receiving liquid from the reservoir, the surface of said roller in its normal operative position being closely spaced but spacially separated in relation to the path of travel of the member from which the image is to be trans-

ing a plurality of prongs formed therefrom, each of said

inside of said hollow shaft, said auxiliary pump having

imposing layers of dry sponge sheet material to form a corner portion of said compression chamber.

ferred to form a gap between the surface of the rotating roller and the surface of the member from which the image is to be transferred, the liquid being applied from the periphery of the rotating roller to the surface of the member from which the image is to be transferred by



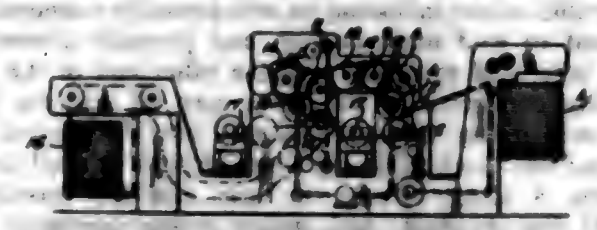
the liquid crossing the gap in the form of a meniscus, and means for driving the rotating roller in a direction so that the surface of the roller will move in an opposite direction to the direction of feed of the member from which the image is to be transferred.

2,865,288

ROTARY PERFECTING MACHINE FOR LETTERPRESS WORK

Georg Kalbscheidt, Dresden-Weisser Hirsch, Germany, assignor to Veb Druckmaschinenwerk Victoria, Heidenau, Germany

Application July 13, 1954, Serial No. 443,093
5 Claims. (Cl. 101—229)



1. In a rotary perfecting machine for letterpress work, a main frame, a perfecting unit, a printing unit mounted within said main frame comprising a plate cylinder and an impression cylinder for printing a sheet on one side, a first drum positioned in cooperative engagement with said impression cylinder, grippers on said first drum adapted to release the sheet after completion of printing thereon by said plate cylinder, axially parallel drum transporting and drying-promoting devices mounted on said main frame in a successive cooperating series for transferring a printed sheet to said perfecting unit from said first drum, said first drum and said drum transporting devices being mounted in position to prevent contact with the freshly printed side of the sheet to be transferred, alternate drums of said series being fitted with a sheet metal jacket and means for delivering a perfected sheet to a stack.

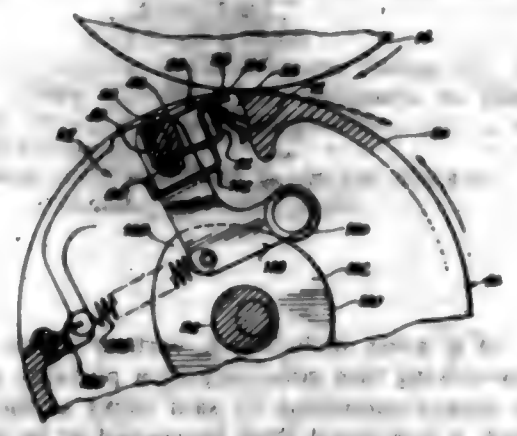
2,865,289

GRIPPER CONSTRUCTION FOR DUPLICATORS

Wallace R. Fowlie, North Riverside, John L. Tregoy, Broadview, and Edgar H. De Bois, Chicago, Ill., assignors to A. B. Dick Company, Niles, Ill., a corporation of Illinois

Application October 3, 1956, Serial No. 627,529
5 Claims. (Cl. 101—409)

1. In a printing machine, the combination comprising a printing cylinder having a cylindrically curved surface portion for receiving a sheet to be printed, an anvil portion extending longitudinally of said cylinder adjacent one end of said surface portion, a gripper shaft rotatably mounted on said cylinder adjacent said anvil portion, said shaft having diametrically opposite flat faces thereon, a plurality of flat spring sheet metal gripper blades fixed on said gripper shaft against one of said faces and having outer end portions swingable into and out of engagement with said anvil portion for clamping a sheet therebetween, an angle shaped stop member having a pair of flanges thereon extending generally at right angles to each other, one of said flanges being fixed to said gripper shaft against the opposite flat face thereon, said one flange extending



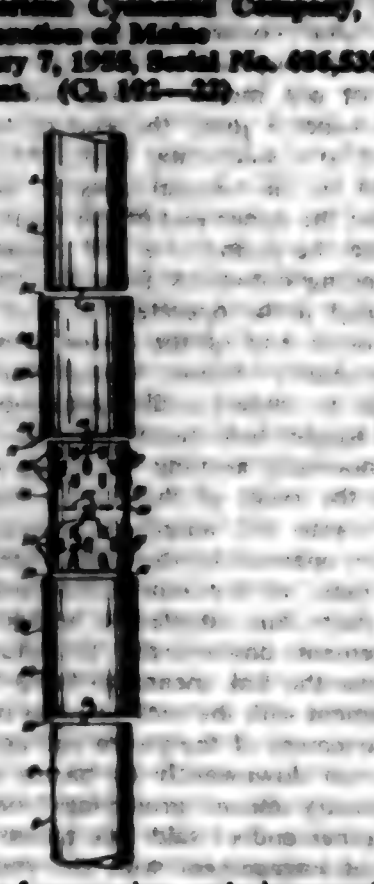
from said shaft under said gripper blades and generally parallel thereto, the other flange on said stop member having notches therein receiving said gripper blades and portions defined by the said notches and extending between said gripper blades generally at right angles thereto, said stop member having a plurality of sheet guiding tongues struck therefrom and extending outwardly from said other flange and downwardly relative to said gripper blades at an acute angle thereto, said tongues defining an acutely angled crotch between said tongues and said gripper blades for receiving and positioning the leading edges of the sheets to be printed.

2,865,290

CARTRIDGE COUPLING DEVICE

George B. Bemper, Springville, Utah, assignor, by mesne assignments, to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application February 7, 1955, Serial No. 486,535
2 Claims. (Cl. 102—22)



1. A coupling device for securing explosive cartridges in endwise abutting relationship comprising a sleeve hav-

means in the interior of and for movement relative to

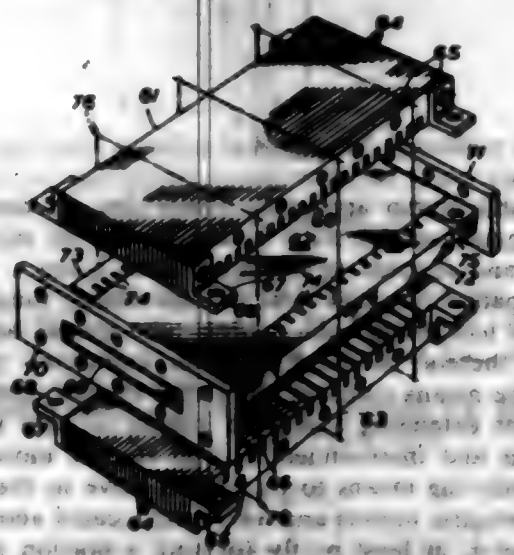
ing a plurality of prongs formed therefrom, each of said prongs including a longitudinal body with a base integral with said sleeves and an unattached end, said unattached end being formed into a cartridge-engaging point, the unattached end curving through two planes to form axial and anti-rotational abutment surfaces when engaged in a cartridge, no portion of said prongs extending within the inner diameter of said sleeve in unassembled position, and slip tubes adapted to slide over said sleeve into engagement with said longitudinal bodies thereby moving said prongs radially inwardly relative to said sleeve to engage said prongs in the cartridges.

2,865,291

PUMPS FOR LIQUID CURRENT-CONDUCTING MATERIAL

Dudley Albert Watt, Oxford, England, assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application May 23, 1952, Serial No. 289,684
Claims priority, application Great Britain May 23, 1951
2 Claims. (Cl. 103—1)



1. An induction type liquid conductor pump comprising a thin wall flat rectangular section metal duct, a magnetic structure clamped to each wide wall of the duct and substantially coextensive therewith, insulating material between the magnetic structure and the wide wall of the duct, the face of each magnetic structure adjacent the duct being formed with a series of transverse slots, distributed polyphase windings in said slots for generating a wave of magnetic field traveling in a direction along the duct, and conductor bars at least one wavelength long secured in electrical contact along the outside of the narrow walls of the duct, said bars being slotted across the face in contact with the narrow walls of the duct.

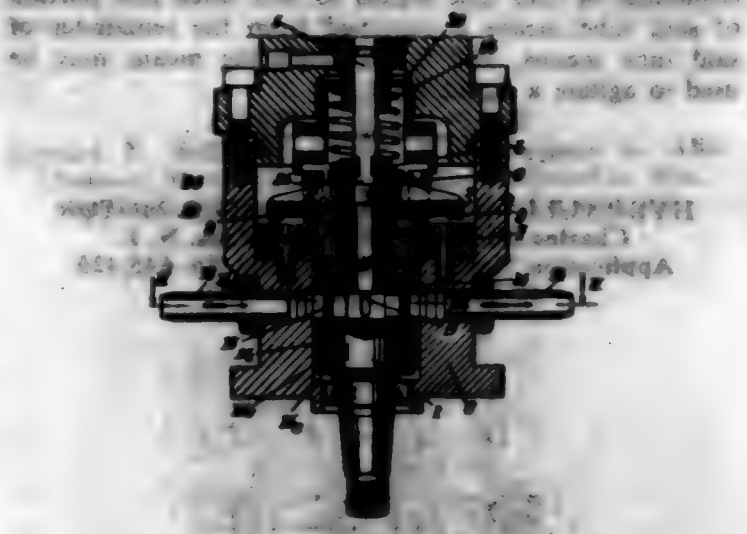
2,865,291

PISTON PUMPS FOR THE INJECTION OF FUEL INTO INTERNAL COMBUSTION ENGINES

Jean Pierre Ballonde, La Koumbo-Bicotre, France, assignor to La Precision Mecanique, Paris, France, a society of France

Application November 14, 1956, Serial No. 622,143
Claims priority, application France November 14, 1955
3 Claims. (Cl. 103—5)

1. An internal combustion engine fuel injection system which comprises, in combination, a frame, a pump including a pump body rigid with said frame and a reciprocating piston slidably axially in said pump body, a hollow driving shaft, means for operatively connecting said piston with said shaft to have said piston driven by said shaft, an auxiliary pump for feeding fuel under pressure to said pump body, means for connecting the output of said auxiliary pump with said pump body, the body of said auxiliary pump being constituted by the inside of said hollow shaft, said auxiliary pump having a piston slidable with a reciprocating motion inside said auxiliary pump body constituted by the inside of said shaft, means operatively connected with said main pump



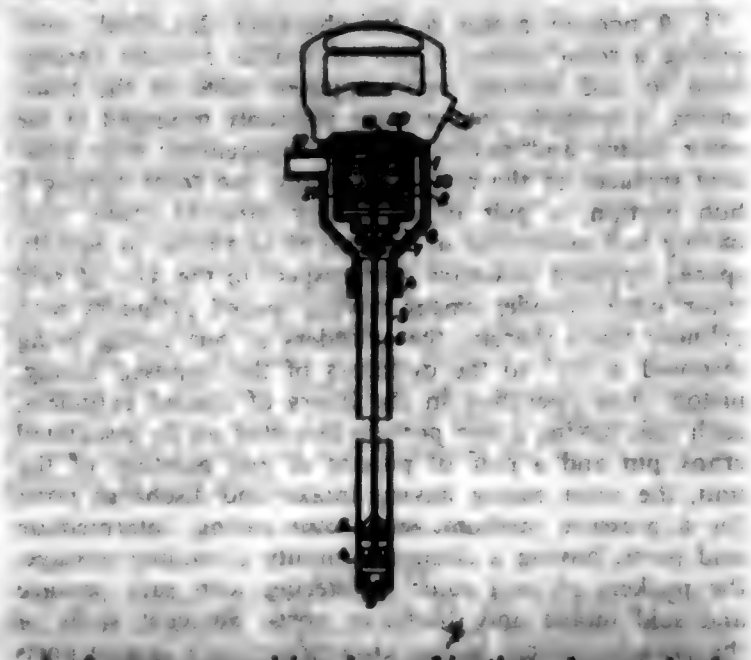
piston to have said auxiliary pump piston driven by said main pump piston, and valve means operative by said first mentioned pump for controlling the flow of fuel to said auxiliary pump.

2,865,293

LIQUID MOVING APPARATUS

Nikolaus Laing, Stuttgart, Germany

Application December 1, 1955, Serial No. 550,444
Claims priority, application Germany September 13, 1950
6 Claims. (Cl. 103—53)

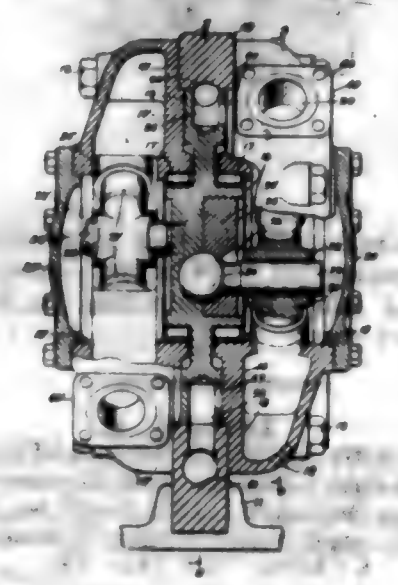


1. A pump comprising, in combination, elongated tube means having an inlet end and being provided with a chamber distant from said inlet end, said tube means having an outlet communicating with said chamber so that when liquid flows along the interior of said tube means from said inlet to said outlet thereof the liquid flows through said chamber; oscillating means carried by said tube means and including a housing having a high thermal conductivity and defining part of said chamber; a shaft fixed to said oscillating means to be reciprocated along its axis thereby and extending from said oscillating means along the interior of said tube means to a point adjacent said inlet end of said tube means; sealing means connected to said housing and said shaft for preventing entrance of liquid into said housing; liquid displacing means carried by said shaft adjacent said inlet end of said tube

said supporting member and downwardly into said spin- ment with said lip, and passage means formed in said

means in the interior of and for movement relative to the latter for displacing liquid toward said chamber when said shaft is reciprocated by said oscillating means; and means removably connecting a portion of said tube means in which said liquid displacing means is located from the remainder of said tube means so that when said portion of said tube means is removed from the remainder of said tube means, said liquid displacing means may be used to agitate a liquid.

2,865,284
HYDRAULIC PRESSURE BOOSTER MOTOR
Charles M. Turnky, Palisades Park, N. J.
Application March 12, 1957, Serial No. 645,425
18 Claims. (Cl. 103—37)



1. A booster motor of the character described, comprising a rotor casing, a pair of similar cylinder casings fixed to and bearing upon opposed sides of the rotor casing, a multiple pocket rotor rotatably mounted in the rotor casing and having bearing engagement with adjacent surfaces of the cylinder casings, the rotor having a hub portion, a pair of oppositely directed crank pins having ball mountings in the hub of said rotor at equally spaced opposed positions with respect to the axis of said rotor, each cylinder casing having spaced cylinders with cylinder liners therein, the cylinders of one casing being disposed at 90° to the cylinders of the opposed casing, piston units operating in the liners of spaced cylinders, each unit having a hub portion mounted on its associated crank pin and a pair of pistons at end portions of the unit, the rotor casing having intake and discharge ports for a pressure medium, said rotor casing, intermediate said ports, having a circumferentially extending passage, the pockets of said rotor registering with said passage and said intake and discharge ports, adjacent walls of the cylinder casings having circumferentially spaced ports adapted to register with ports of alternate pockets of said rotor, cylinder heads at outer ends of said cylinders, said cylinder heads having check valve controlled discharge ports, the liners of said cylinders having annular grooves in registering alinement with the circumferentially spaced ports on adjacent walls of said cylinder casings, said pistons having circumferentially spaced longitudinally extending grooves at outer end portions thereof opening into the ends of the cylinders, and said liners having circumferentially spaced ports registering with the annular grooves of said liners and with the grooves of said pistons at predetermined intervals in the cycle of operation of the rotor for admitting the pressure medium into the cylinder ends, preparatory to pressure discharge of the medium from said cylinders through the exhaust ports of said heads.

2,865,293
PORTABLE PUMP APPARATUS
Nikolaus Laing, Karlsruhe-Durlach, Germany
Application March 25, 1953, Serial No. 344,094
Claims priority, application Germany September 13, 1950
12 Claims. (Cl. 103—87)

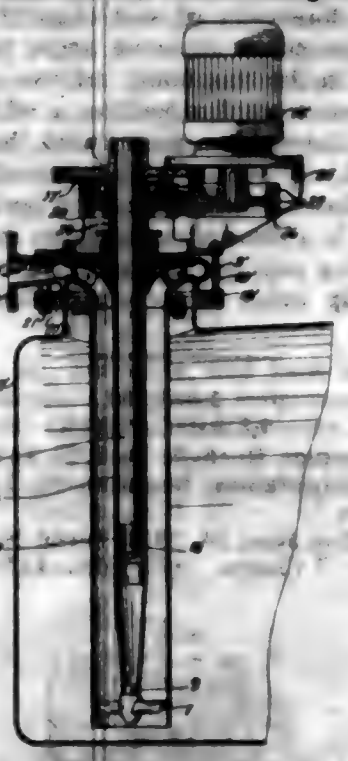
1. Portable pump apparatus comprising, in combination, elongated suction tube means having an inlet and an outlet and adapted to convey a fluid along a predetermined path from said inlet to said outlet; fluid moving means located in said suction tube means adjacent said inlet thereof; an electric motor connected to said suction tube means adjacent said outlet thereof; elongated shaft means extending along the interior of said suction tube means and interconnecting said electric motor and said fluid moving means to transmit a drive to the latter from said electric motor; and a housing located about said electric motor, at least partly forming a portion of said suction tube means and being located at least partly along said predetermined path so as to be engaged by fluid moving in said suction tube means during operation of said electric motor, said housing forming part of and being removably connected to at least a part of said suction tube means adjacent said outlet thereof and being made of a material which has a high degree of thermal conductivity, said fluid moving means being of a cross-section at least as small as the internal cross-section of the removable portion of said suction tube, whereby said motor and fluid moving means can be separated bodily from said suction tube.

2,865,296
ROTARY PUMPS
Paul Baumgartz, Duesseldorf-Oberkassel, Germany
Application May 6, 1958, Serial No. 906,539
3 Claims. (Cl. 103—86)

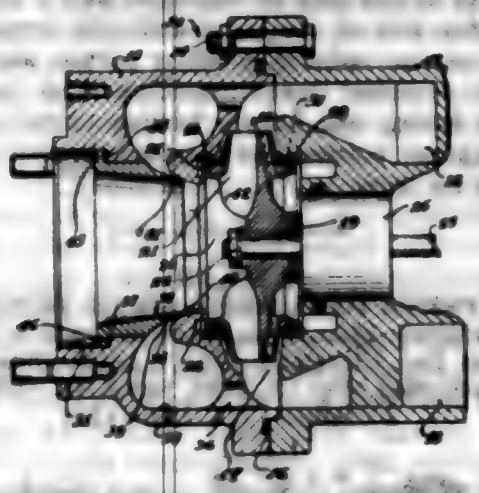
1. A rotary pump of the type comprising a vertically disposed hollow and elongated impeller spindle closed at its lower immersible end and having an internal bearing proximate said lower end, a main impeller carried by said spindle and disposed above the level of the liquid to be pumped, an upper bearing disposed above said main impeller and rotatably supporting said spindle and said impeller, drive means for said spindle disposed proximate the upper end of said spindle above said main impeller, a suction pipe disposed around and extending longitudinally of said spindle below said main impeller, an auxiliary impeller supported on said spindle within the lower end of said pipe, a stationary shaft supporting member disposed above said upper spindle bearing and a stationary shaft extending upwardly into

movement relative thereto, means engaging the adjustable member and said supporting member for maintaining the said pocket in proper angular position relative to the axis of said rotor, said pockets having a channel therein, whereby a lip protrudes from the mouth of said channel,

said supporting member and downwardly into said spindle, the lower end of said shaft having bearing engagement with said internal bearing and providing stationary support for said spindle proximate the lower end thereof.

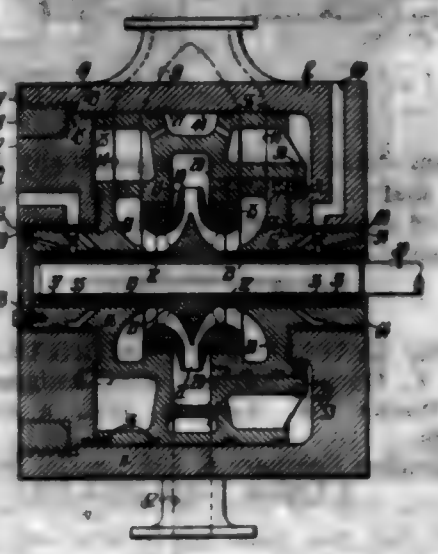


2,865,297
INJECTOR COVER FOR PUMPS
Robert Clibern and Donald O. Nordquest, Cleveland, Ohio, assignors to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application December 22, 1952, Serial No. 327,216
2 Claims. (Cl. 103—103)



1. A pump comprising a casing having a volute pumping chamber, an outlet, and a center inlet, said casing having a wall forming a passage extending axially away from said center inlet, said wall having an annular by-pass chamber formed therein opening into said passage adjacent said center inlet, an annular lip in said wall extending radially inwardly into said passage between said by-pass chamber and said center inlet, a sleeve in said passage slidably guided by said wall for axial movement into seating engagement with said lip to close said by-pass chamber and out of seating engagement with said lip to open said by-pass chamber to said center inlet through an annular injector gap formed between said sleeve and said lip, said sleeve having a radially outwardly extending flange formed with a spring seating surface on one side thereof and a motive surface on the opposite side thereof, said motive surface being spaced from an adjoining wall portion of said casing to form a pressure control chamber therewith, a spring bottomed against said flange and against said casing pre-loading said sleeve into seated engagement with said lip, and passage means formed in said casing between said outlet and said by-pass chamber and said pressure control chamber, pressured fluid in said pressure control chamber acting on said motive surface in opposition to said spring to open said annular injector gap and by-pass fluid from said by-pass chamber into said center inlet.

2,865,298
CENTRIFUGAL PUMP
Edward P. Brill, Brookfield, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application August 15, 1956, Serial No. 604,165
4 Claims. (Cl. 103—104)



1. A centrifugal pump comprising an inner casing defining an impeller chamber and inlet and discharge passages, said casing having a centrally located axially extending member at either end, said members defining a bore, a shaft rotatably mounted in said bore, an impeller mounted on said shaft and positioned within said impeller chamber in proper alignment with said inlet and said discharge passages, an outer casing surrounding said inner casing, said outer casing having inlet and discharge passages cooperating with said inlet and discharge passages in said inner casing, the ends of said outer casing having surfaces defining axially aligned apertures of varying diameter for receiving said members, said surfaces being in contact with said members at only one point adjacent the inboard side of said ends, said surfaces being in contact with said members at the portion of said surfaces defining the smallest portion of said apertures, whereby the ends of said outer casing are free to deflect relative to said inner casing and said members due to the internal pressure in said pump.

2,865,299
ADJUSTING DEVICE FOR PUMP IMPELLERS
Hanns Hornschuch, Easton, Pa., and Alexander Bridch, Phillipsburg, N. J., assignors to Ingersoll-Rand Company, New York, N. Y., a corporation of New Jersey
Application June 14, 1954, Serial No. 436,340
6 Claims. (Cl. 103—111)

1. In an adjusting device, the combination of a centrifugal pump casing having an impeller chamber, an impeller in the impeller chamber, an impeller shaft in the casing secured to the impeller, a drive shaft for driving the impeller shaft positioned in axial alignment therewith, a coupling comprising coupling members on the shafts for drivingly connecting said impeller shaft to the drive shaft and constituting the sole driving connection therebetween, one of said coupling members being slidably connected with the impeller shaft against rotary motion relative thereto, another coupling member on the drive shaft and secured against rotary motion relative thereto, adjustable means engaged to the impeller shaft against longitudinal

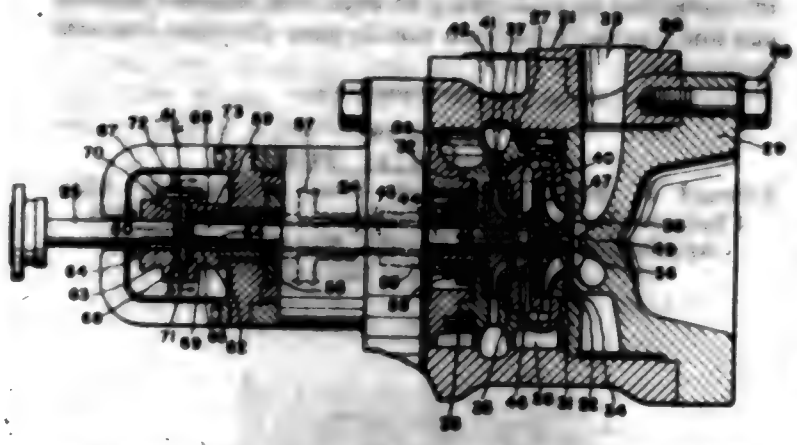
said end plate portion adjoining the pumping cavity, a

tion of said rotor, said cams each having two peaks and

said heads.

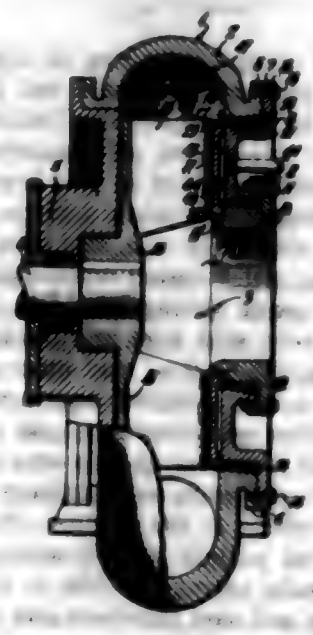
supporting member disposed above said upper spindle bearing and a stationary shaft extending upwardly into

movement relative thereto, means engaging the adjustable member and said coupling members for maintaining the coupling members in coaxial alignment and holding the adjustable member in an adjusted position, said adjust-



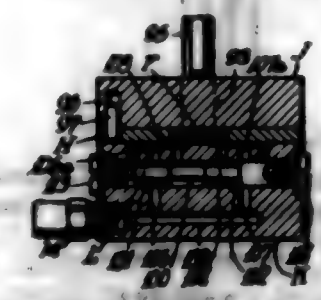
able means being movable longitudinally relative to the impeller shaft upon release by the last said means for effecting endwise movement of the impeller shaft relative to the casing.

2,865,300
SEALING SYSTEM FOR CENTRIFUGAL PUMPS
William V. Garris, Augusta, Ga., assignor to Georgia Iron Works Co., Augusta, Ga., a corporation of Georgia
Application February 6, 1957, Serial No. 638,505
4 Claims. (Cl. 103—111)



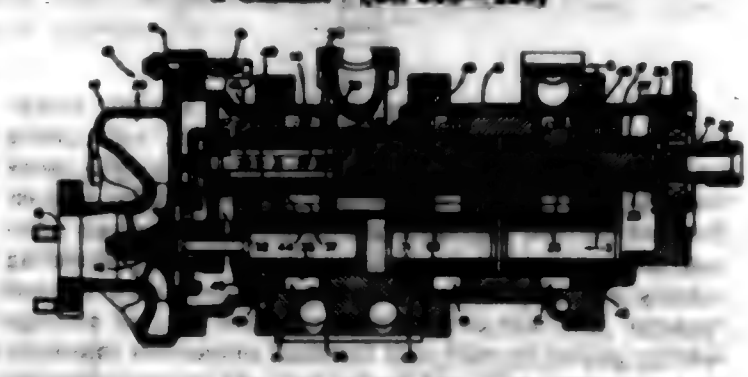
1. In a sealing system in which the flared lip of an annular gasket carried by one of two relatively rotatable coaxial members makes a joint with a circular race carried by the other of said members, the gasket-carrying member comprising complementary elements, one being formed with an annular rabbet having one wall thereof cylindrical and coaxial with the axis of rotation, and another wall lying in a plane substantially perpendicular to the axis of rotation, the other element having a conical coaxial wall flaring in the direction of the perpendicular wall of said rabbet, said elements being relatively axially translatable to a position in which the conical wall surrounds the cylindrical wall with its outer end contacting said perpendicular wall and its inner end spaced from the adjacent end of said cylindrical wall, a gasket channel of trapezoidal cross-sectional shape being thus formed, having a narrow annular mouth, an annular rubber-like gasket of wedge-shape cross-section having an inner cylindrical face seated upon said cylindrical wall, an outer conical face having substantially the same pitch as said conical wall, and a rear face adjacent said perpendicular wall, said gasket being longer than said gasket channel whereby a lip protrudes from the mouth of said channel, said gasket in response state being slightly thicker than the thickness dimension of said channel and having its rear face displaced at an acute angle to its cylindrical face whereby in the translatory relative axial movement of said members toward a position in which the forming of said gasket channel is consummated, the frictional drag of said conical wall against the corresponding face of said gasket establishes a strain in the outer portion of the mass of said gasket in a direction away from the mouth of said channel, causing said lip to bend outwardly, the convex side of said lip being in pressed engagement with said race.

2,865,301
LUBRICATION
Thomas R. Thomas, Rochelle Park, N. J., assignor to Auto Research Corporation, Boonton, N. J., a corporation of Delaware
Application June 24, 1953, Serial No. 363,826
7 Claims. (Cl. 103—117)



1. A centralized lubricating gear pump comprising a central plate element having recesses for the meshing pump gears, and upper and lower cover plates and a reversing valve to reverse flow of lubricant to and from said pump, said cover plates carrying the reversing valve having a single inlet at one side of the valve and a single outlet at the other side of the valve and said reversing valve having a central reduced diameter portion and end portions and branched bores extending from the inlet to the valve having one branch leading to the central reduced diameter portion and the other branch leading to an end of the valve.

2,865,302
PRESSURE-LOADED GEAR PUMP
John F. Murray, Macedonia, Ohio, assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application May 18, 1955, Serial No. 509,314
2 Claims. (Cl. 103—126)



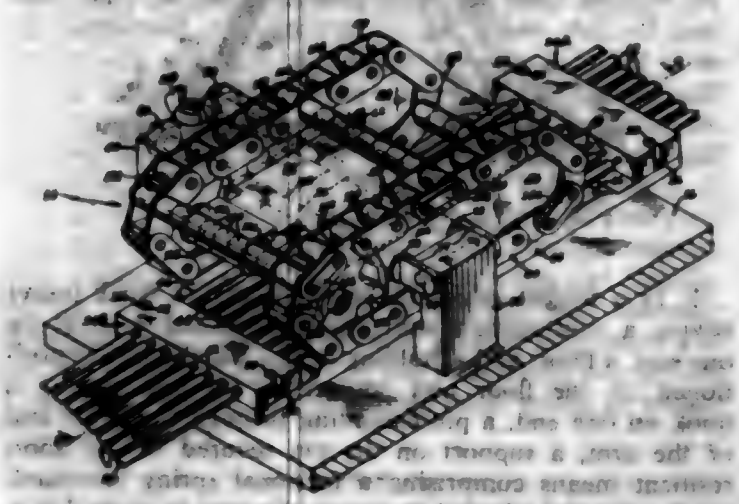
1. In a high pressure pump including a body having a pumping cavity with an inlet and an outlet, a bearing means for said cavity having an end plate portion providing a sealing face for the pumping cavity and a tubular bearing portion, said bearing means arranged to form together with said body a chamber behind said end plate portion, means providing a passage in communication with the pump discharge and said chamber, whereby pressure loads are provided on both sides of said end plate portion, an annular recess formed in the sealing face of

said end plate portion adjoining the pumping cavity, a trapping relief recess in said sealing face on the discharge side of said pump and extending longitudinally inwardly of said face, and a radially extending cylindrical passage formed in said end plate portion longitudinally inwardly of said sealing face extending between said annular recess and said trapping relief recess communicating pump discharge from said trapping relief recess to said annular recess for flooding the bearing means with coolant and lubricant at pump-generated pressure.

2,865,303
PUMPS

Andrea Ferrari, Jr., Scarsdale, and Jack Israeli, Tuckahoe, N. Y., assignors, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N. H., a corporation of New York

Application October 22, 1954, Serial No. 463,860
9 Claims. (Cl. 103—149)



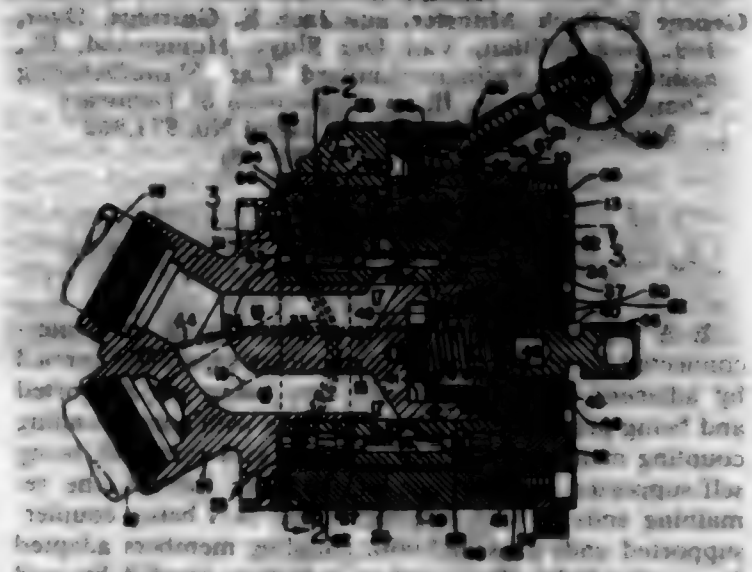
1. In a fluid pump wherein a plurality of individual flexible tubes are disposed in side-by-side relation and which comprises backing means and movable roller means which are in confronting relations and between which said tubes are disposed and which are movable longitudinally of said tubes, said roller means comprising a plurality of roller devices extending transversely of the tubes and spaced from each other in the direction of movement of said roller means and movable longitudinally of said tubes in engagement therewith, progressively along their lengths for compressing all of said tubes simultaneously between said roller means and said backing means for the pumping operation, means including resilient means mounting said backing means and said roller means for limited relative movement resiliently toward and away from each other variable distances transversely of said tubes while the tubes are compressed therebetween, and means mounting said backing means and said roller means for relative movement from relative positions in which said tubes are compressed to relative positions, away from each other, for the insertion and removal of said tubes.

2,865,304
FLUID PUMP OR MOTOR

Wilmer S. Fallon, Mount Gilead, Ohio

Application February 14, 1955, Serial No. 488,028
8 Claims. (Cl. 103—162)

1. A machine of the character described, comprising a housing having a recess therein, a projection extending axially into said recess, a rotor journalled on said projection and having a series of axially disposed cylinders therein, said projection having inlet and discharge passages therein with which said cylinders are connected in succession, a pair of opposed pistons operable in each cylinder, a pair of cam rings disposed within said housing, cooperating internal cams on said rings for positively reciprocating said pistons in both directions during rotation of said rotor, said cams each having two peaks and two valleys and being substantially identical and adapted to cause said pump to displace a maximum amount of fluid when the peaks of one cam are opposite the peaks of the other cam and to displace substantially no fluid when the peaks of one cam are opposite the valleys of the other cam, and means for simultaneously adjusting the position of the cams equal amounts in opposite directions with respect to said inlet and discharge passages and

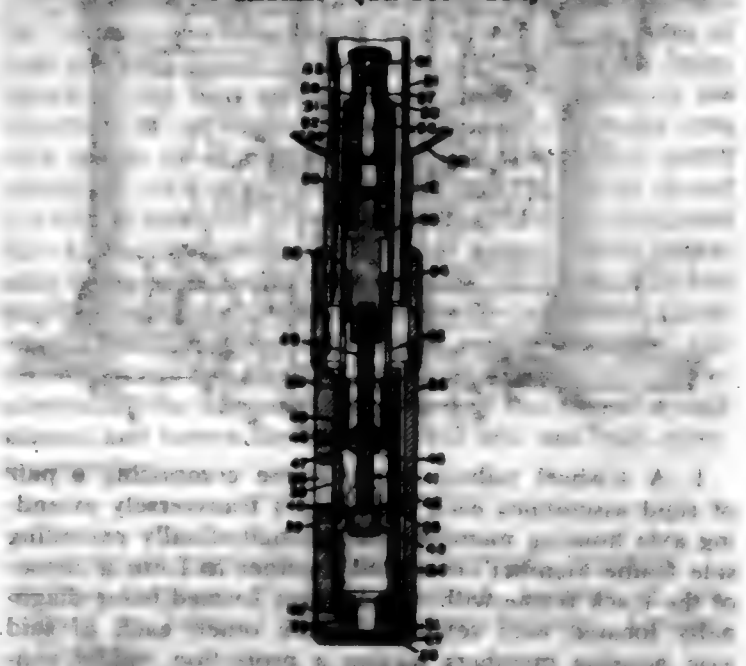


thereby varying the displacement of said machine, said adjusting means comprising gear teeth on said cam rings, a circular rack engaging the teeth of each cam ring, a gear engaging the teeth of the racks, one rack being disposed on one side of said gear and the other rack being disposed on the opposite side of said gear, and means for rotating the gear to move one rack in one direction and the other rack in the opposite direction, thereby simultaneously to adjust the position of the cams.

2,865,305
GAS LIFT APPARATUS

Rosie P. Vincent, Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware

Application May 10, 1954, Serial No. 428,491
4 Claims. (Cl. 103—232)



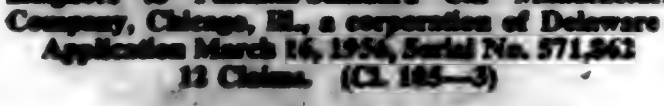
1. A gas lift apparatus including a production tubing, a well fluid inlet at the lower end of said tubing, a lifting gas inlet to said tubing, and a standing valve in said well fluid inlet, said standing valve comprising opposed valve members balanced to compensate for pressure variations in said well, means forming a pressure chamber, a compressible fluid in said chamber, a movable wall in said chamber, means to transmit production tubing pressure

zontal cross arm disposed along the top marginal edge of ing teeth, an inner rotatable severing member arranged

wall, said gasket being longer than said gasket channel portion, an annular recess formed in the sealing face of

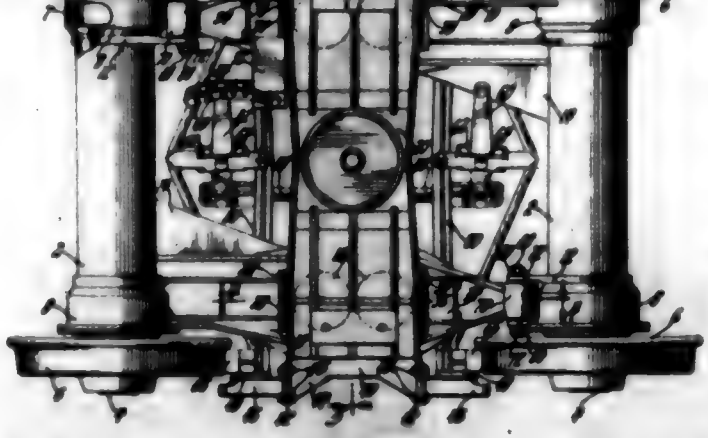
to said movable wall, and means connecting said movable wall and said opposed valve members, whereby said valve members will shut off the flow of well fluids into said production tubing when the pressure on said movable wall reaches a predetermined amount.

2,865,366
TRAIN CONSIST
George E. Bock, Munster, and Jack E. Gutridge, Dyer, Ind., and William Van Der Sluys, Homewood, Ill., assignors to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application March 16, 1956, Serial No. 571,962
12 Claims. (Cl. 105—3)



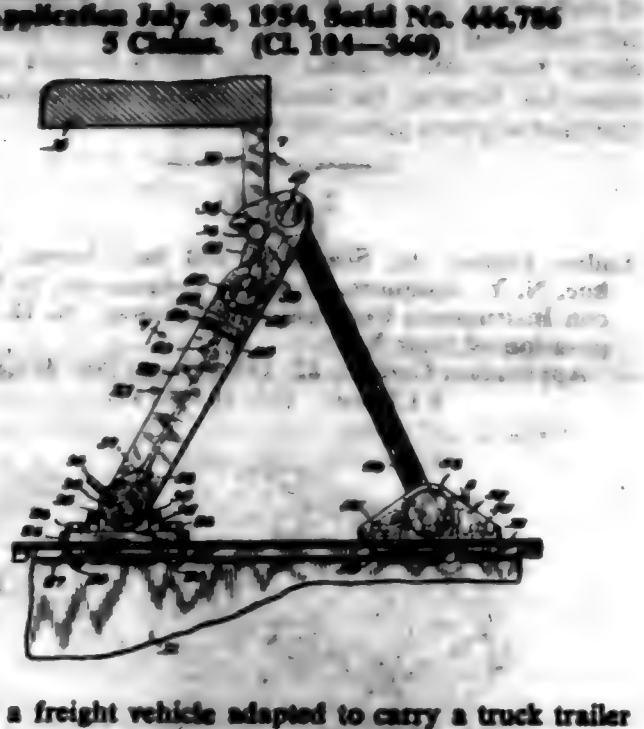
1. A train consist including a plurality of cars interconnected by mating coupling members separately carried by adjacent cars, one of said cars being self-supported and being provided at each of its ends with corresponding coupling members, the remainder of said cars each being self-supported at only one of the ends thereof, the remaining ends of said last mentioned cars being coupler-supported ends provided with coupling members adapted for mating with the coupling members carried by said first mentioned car, the self-supported ends of said last mentioned cars being provided with coupling members of the type carried by said first mentioned car for coupling in load-bearing relation with a coupler-supported end of a similar car.

2,865,367
RAILWAY VEHICLE TRUCK
Joseph P. Miller, Hinsdale, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 8, 1954, Serial No. 461,168
7 Claims. (Cl. 105—197)



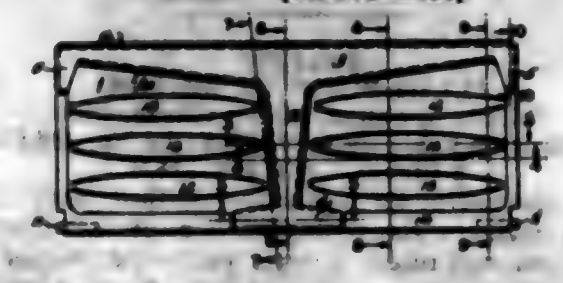
1. A 4-wheel railway truck frame comprising a pair of rigid assemblies each including a transversely extending axle housing member and a longitudinally extending side frame member connected together to form a corner of the truck frame with corners thus formed being diagonally located with respect to each other, each of said axle housing members having a projection rigidly connected thereto at one of the other set of diagonally located corners of said truck, said projections extending toward the transverse center line of said truck and an associated side frame member, and articulated joints located between the axes of said housing members and the transverse center line of said truck connecting each of said projections to the associated side frame member toward which it extends.

2,865,368
HOLD-DOWN DEVICE FOR FREIGHT VEHICLE
Jack E. Gutridge, Munster, Ind., and William E. Gellenbeck, Jr., Chicago, Ill., assignors to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application July 30, 1954, Serial No. 446,786
5 Claims. (Cl. 104—360)



1. In a freight vehicle adapted to carry a truck trailer having a substantially horizontally disposed bumper on one end, a floor, and a holding device for the trailer positioned on the floor and comprising an arm having a hook on one end, a pin extending through the other end of the arm, a support on the pin secured to the floor, resilient means comprising a torsional spring surrounding the pin and adapted to engage the arm to resist downward movement of the arm, a member having one end pivotally connected to said one end of the arm, a support positioned at the other end of the member and secured to the floor and provided with an opening therethrough to receive the member, the trailer being adapted to be backed up so that the bumper engages the arm pushing the arm downwardly to rotate the arm about said pin against the force of the resilient means and the member sliding in the last-named support until the bumper is received in the hook, and interengaging means comprising a notched clamping element on the support and notches on the member to prevent movement of the member through the support after the bumper is received in the hook on the arm.

2,865,369
GONDOLA CAR END
Richard L. Lich, St. Louis, Mo., assignor to General Steel Castings Corporation, Granite City, Ill., a corporation of Delaware
Application August 11, 1954, Serial No. 449,138
2 Claims. (Cl. 105—406)



1. A pivoted railway gondola car end wall comprising a generally rectangular steel plate having a T-shaped reinforcing member rigidly secured thereto, said reinforcing member including an upright leg disposed midway between the opposite ends of said plate and extending between the top and bottom edges thereof, and a hori-

convergent and one of said walls being provided internally with a groove, said fitting device comprising a member

tending longitudinally therethrough said first shaft and pivotally connected to said jaw members to swing said

zontal cross arm disposed along the top marginal edge of the plate and extending between the opposite ends of the plate, leaving separate, generally rectangular areas of the plate beneath said cross arm on opposite sides of said upright leg, said areas being provided with a plurality of vertically spaced outwardly struck reinforcing ribs running horizontally between said upright leg and the corresponding ends of the plate in general parallelism with said cross arm and disposed throughout substantially the entirety of said areas, said reinforcing member also including a transverse enlarged base presenting laterally projecting arms at the lower end of said upright leg, said plate being provided with corrugations along the lower marginal edge thereof effecting continuations of said arms and extending therefrom to the corresponding opposite ends of the plate, said cross arm being provided with downwardly enlarged terminal end portions at and extending downwardly of the upper corners of said plate, said plate having vertical corrugations therein at the opposite ends thereof extending from the outer ends of the first mentioned corrugations to the lower ends of said downwardly enlarged terminal end portions of the cross arm, a hinge pin secured to each lower corner of said plate and extending therefrom for pivotally mounting the end wall assembly upon an associated gondola car, said reinforcing member being of U-shaped configuration in cross section and being continuously welded to said plate such that the plate and the reinforcing member together form a box section, the cross arm protecting and rigidifying the upper marginal edge of the end wall assembly against damage by collision from loading equipment and the like while said upright leg and reinforcing ribs obviate buckling of the unit due to shifting loads within an associated gondola car.

2,865,310

METHOD OF AND APPARATUS FOR FORMING CANDY EGGS

Albert Rodney Murray, Overland, Pa., assignor to Minster Brothers, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Application October 24, 1956, Serial No. 617,988
6 Claims. (Cl. 107—8)

1. The method of shaping and manipulating a candy egg body which consists in providing an oval mold of semi-circular cross-section transversely and open at the top, placing in said mold a mass of candy egg forming material of a volume less than the capacity of said mold, causing said mold to be moved in a circular path transversely to the longitudinal axis of the mold until the mass in said mold is brought to the requisite egg shape and desired consistency, and then upsetting said mold to remove the candy egg body therefrom.

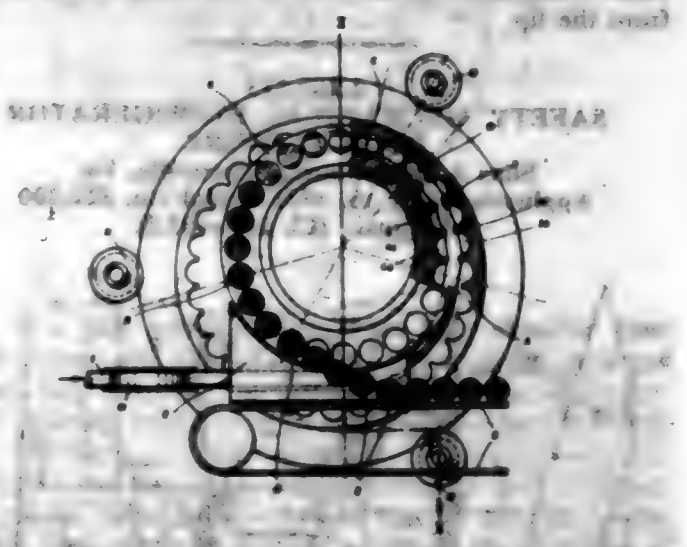
2,865,311

CANDY MAKING MACHINE

Hermann Thirlings, Vlersen, Rhineland, Germany, assignor to Henkelle-Werke Albert Henkel Aktiengesellschaft, Vlersen, Rhineland, Germany

Application March 27, 1957, Serial No. 648,836
Claims priority, application Germany November 17, 1956
4 Claims. (Cl. 107—8)

1. In a machine for stamping out candies from a candy strand: an outer rotatable annular severing member having its inner peripheral portion provided with inner severing teeth, an inner rotatable severing member arranged within said outer annular severing member and in eccentric relationship thereto, said inner severing member having its outer peripheral portion provided with outer severing teeth facing said inner severing teeth, said inner and outer severing teeth being adapted in response to a substantially synchronous movement thereof to sever portions from a candy strand fed between said inner and outer severing teeth, said inner and outer severing teeth confining with each other spaces for receiving portions severed from said candy strand, a plurality of first punch means mounted along a circular line and arranged for rotation together with said inner severing member about the axis of rotation of the latter and reciprocable in a direction parallel to said axis, the axes of said first punch means respectively being in substantial alignment with the axes of said spaces when the teeth confining the same substantially engage each other, a rotatable disc provided with a plurality of bores arranged in axial alignment with said punch means, said disc being rotatable together with said severing members, said first punch



means being movable to enter said spaces to thereby move the respective severed candy strand piece faced by the respective punch means into the adjacent bore of said disc, a plurality of second punch means corresponding in number to that of said first punch means and respectively located in axial alignment therewith and arranged for rotation in synchronism with and about the axes of said severing members, said second punch means being movable into said bores in a direction opposite to the direction of movement of said first punch means into said spaces thereby in cooperation with said first punch means to compress the respective severed candy strand portion in said disc between a respective pair of aligned first and second punch means, said second punch means also being retractable from said disc to allow said first punch means to eject the respectively compressed candy strand piece, means continuously urging said first and second punch means away from each other, cam means controlling the movement of said first and second punch means, and means for rotating said disc and said severing members.

2,865,312

FIXING DEVICES FOR ROOFING SHEETS

William Cookson, Fareham, England, assignor of one-third to Julius Caio Vrolenberg-Ingleby, London, England

Application August 29, 1955, Serial No. 530,975
Claims priority, application Great Britain
September 2, 1954
5 Claims. (Cl. 108—32)

1. The combination of a fixing device and a roofing sheet, said roofing sheet including a rib substantially of inverted U section upstanding from the plane of the sheet, the two opposite walls of the rib being upwardly

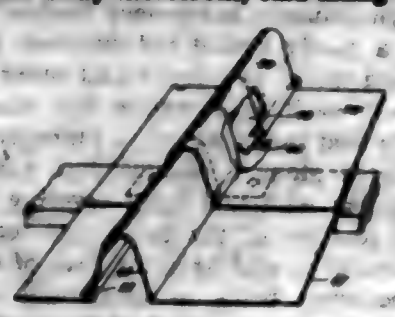
bracket securely mounted on the tube just above and adjacent the diagonal member and having a pair of

and having forwardly extending thread engaging portions at the other end and means for locking the shanks in

projections to the associated side frame member toward which it extends.

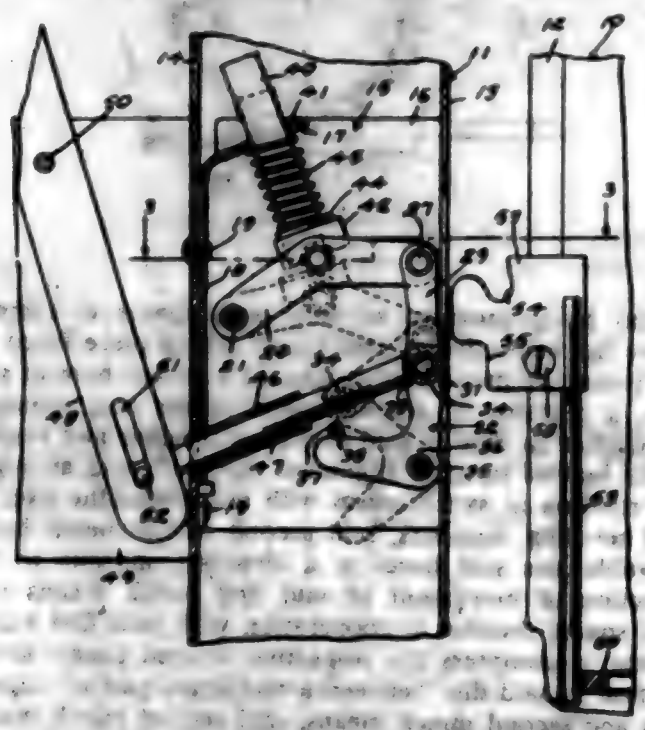
tween the opposite ends of said plate and extending between the top and bottom edges thereof, and a hori-

convergent and one of said walls being provided internally with a groove, said fixing device comprising a member provided with securing means for a purlin, two opposite walls engaging the opposite walls of the roofing sheet and a lip extending from one of the walls of the fixing device downwardly and away therefrom, said fixing device being



so dimensioned that when the U section rib of the roofing sheet is pressed onto the fixing device, the free extremity of the lip snaps into the internal groove in the wall of the roofing sheet while the other wall of the rib in the roofing sheet is supported by the wall of the fixing device remote from the lip.

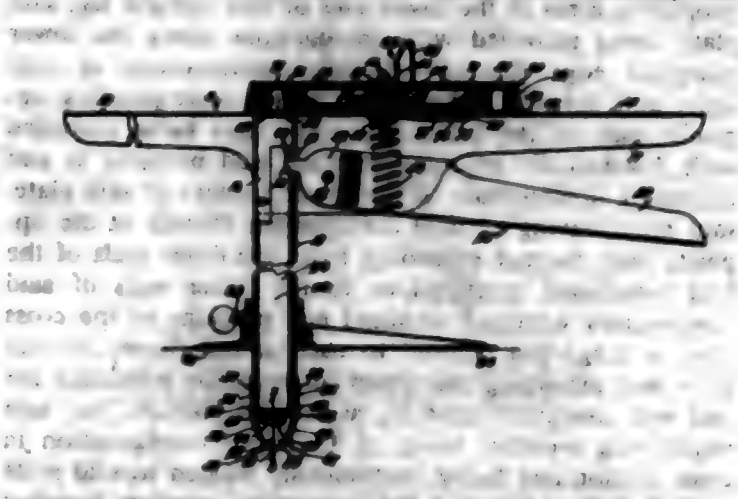
2,865,313
SAFETY MECHANICAL REFRIGERATOR DOOR CLOSURE
Silas A. Morehouse, Centerville, Va.
Application July 15, 1955, Serial No. 522,260
9 Claims. (Cl. 109—63.5)



3. In a shelf-equipped refrigerator of the type having a hinged door, a safety door closure comprising a bolt mounted in said door and normally biased in a latching direction, manually operative means on said door for moving said bolt in an unlatching direction, and a keeper for said bolt on said refrigerator in contact with a shelf thereof, said keeper being adapted upon displacement of said shelf to release said bolt.

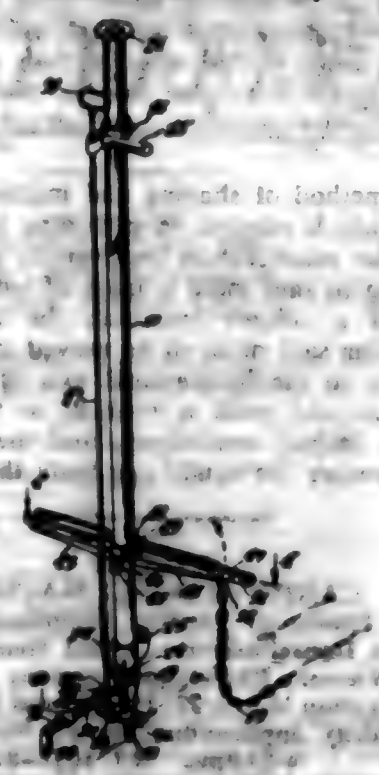
2,865,314
SEED PLANTER
Nils R. Lundin, Paterson, and Ingemar Lundquist, East Orange, N. J.
Application June 23, 1953, Serial No. 363,506
3 Claims. (Cl. 111—92)

1. A seed sower comprising a rectangular tubular shaft, a pair of normally closed jaw members forming a point for inserting said shaft into soil, spring hinges mounting said jaw members on said shaft and urging said jaw members together, a second shaft having a passage extending longitudinally therethrough said first shaft and pivotally connected to said jaw members to swing said jaw members apart against the spring hinges to open the end of said passage, a seed dispenser mounted at the opposite end of said first shaft having a seed carrier with a plurality of evenly spaced circumferentially spaced chambers, said chambers being positioned at the other end of the shaft to readily receive a given quantity of seed not greater than the maximum volume of the chamber, a circular disc under said seed chambers, to form a bottom for said chambers to retain seed therein, said



seed carrier having ratchet teeth indexed with said chambers an opening in said disc aligned with said first shaft and the chambers as successively presented to drop the said given quantity of seeds into said passage, a pivotally mounted hand lever having a projection engaging said second shaft for moving said second shaft longitudinally within said first shaft, a bracket mounted on said hand lever with a pawl moved along said seed dispenser having ratchet teeth engaged by said pawl to turn said seed dispenser one chamber with the opening of the jaw members to successively and automatically drop the seed and open the jaw members for delivery of said seed to the soil.

2,865,315
HAND BULB PLANTER
Jacob Goldstein, Brooklyn, N. Y.
Application August 19, 1954, Serial No. 450,975
1 Claim. (Cl. 111—92)



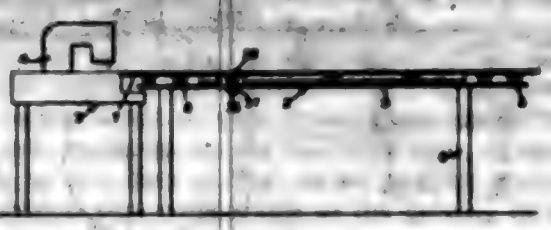
A bulb planter comprising an elongated hollow tube having its lower end cut away diagonally as an opening to provide a pointed penetrating end for the tube, a clamp

means for controlling the displacement of all of said sec-

comprising a frame with radially adjustable rollers for

bracket securely mounted on the tube just above and adjacent the diagonal opening and having a pair of spaced legs, a bill-shaped closure member for the cutaway opening pivotally mounted between the legs on a hinge pin, spiral spring means mounted around the pin with one end bearing against the tube and the other end against the closure member to urge the latter to close the opening in the tube, a bracket means adjustably mounted on said bill-shaped closure member and having upper and lower arms, said lower arm having means thereon serving as a gauge to limit penetration of the tube into the ground and the upper arm serving as a means to mount an accessory thereon, and a rod connected to the lower arm of the second-mentioned bracket and extending along the side of the tube in spaced relation to act as an actuating means for the bill-shaped closure member.

2,865,316
WORK SUPPORTING AND GUIDING DEVICE
Paul L. Forgot, Oshkosh, Wis., assignor to Deltex Rug Company, Oshkosh, Wis., a corporation of Wisconsin
Application November 15, 1957, Serial No. 696,740
6 Claims. (Cl. 112—2)

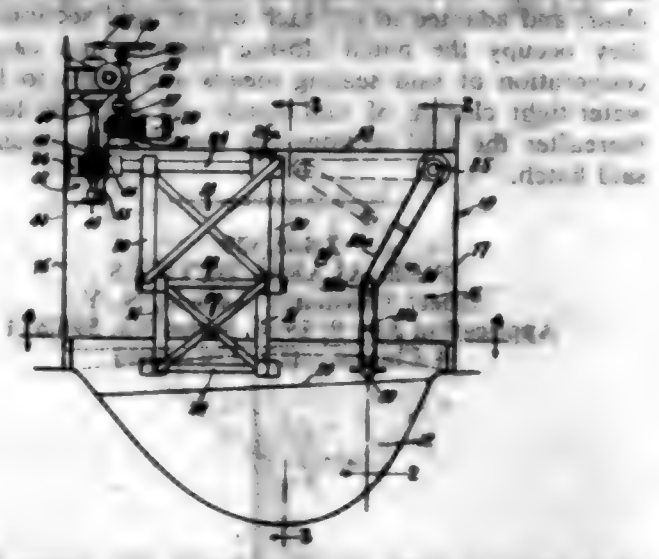


1. A work supporting and guiding device comprising a supporting table, a turntable mounted on said supporting table for movement in a substantially horizontal plane to define a closed oval path, a pivot bearing attached to said supporting table, and a guiding trackway carried by said turntable, said trackway having a pair of parallelly disposed longitudinally directed tracks in which said pivot bearing is received for guided movement of said turntable along said supporting table in a substantially straight line, said trackway having an arcuate end section joining said longitudinally directed tracks in which end section said pivot bearing is received for guided rotary movement of said turntable about said pivot bearing.

2,865,317
LOOP SPREADING DEVICE
Lawrence W. Bechtel, New York, N. Y., assignor to Wilcox & Gibbs Sewing Machine Company, New York, N. Y., a corporation of New York
Application September 19, 1955, Serial No. 535,153
1 Claim. (Cl. 112—187)

A loop spreader for a Pointlock or Flatlock type sewing machine having a looper lever provided with a spreader operating cam thereon comprising a bracket adapted to be mounted on the machine to overlie the lever, a holder pivotally mounted intermediate the ends thereof on the bracket, the forward end of the holder being upwardly inclined and having a plurality of cylindrical, uniformly, laterally spaced spreader needle receiving sockets extending laterally from the end thereof and the rearward end of the holder having a cam engaging means thereon adapted to engage the operating cam, spreader needles having cylindrical shanks at one end disposed in said sockets for axial and angular adjustments and having forwardly extending thread engaging portions at the other end, and means for locking the shanks in adjusted position in said sockets.

2,865,318
LIFTING AND LOWERING MECHANISM FOR SONAR DOME
Marcel Clynes, New York, N. Y., and John A. Herbst, Montville, N. J., assignors to Bogue Electric Manufacturing Co., Paterson, N. J., a corporation of New Jersey
Application June 13, 1956, Serial No. 591,484
7 Claims. (Cl. 114—5)



1. In a ship hull having a water tight chamber open at the lower end thereof, a sonar dome casing arranged within said chamber for movement between an inoperative position within said chamber to an operative position exteriorly of said chamber, means for movably mounting said casing on wall portions of said chamber, said means comprising a pair of linkage systems having pivotal axes disposed at right angles to the direction of movement of said casing, the pivotal axes of one linkage system being substantially at right angles to the pivotal axes of the other linkage system, and means operatively connected to one linkage system for imparting pivoted movement to the elements of said system whereby the elements of the other linkage system execute similar pivoted movement thereby moving said casing in a precise rectilinear path symmetrically related to the longitudinal extent of said chamber.

2,865,319
HATCH-COVERS ARRANGEMENTS
Henri Kammerman, Paris, France, assignor to International MacGregor Organisation (I. M. G. O.), Casablanca, Morocco, a body corporate of Morocco
Application October 1, 1953, Serial No. 536,191
Claims priority, application France October 7, 1954
1 Claim. (Cl. 114—202)

In a hatch-cover arrangement for opening and closing hatches on board of ships, in railway tracks and like vehicles, comprising a hatch, with lateral and transverse edges, guideways on the lateral edges of said hatch, a plurality of laterally aligned solid rectangular cover sections, roller means adjacent the corners of the lateral sides of each of said sections for operative engagement with said guideways, means pivotally connecting adjacent transverse edges of said cover sections, a single flexible

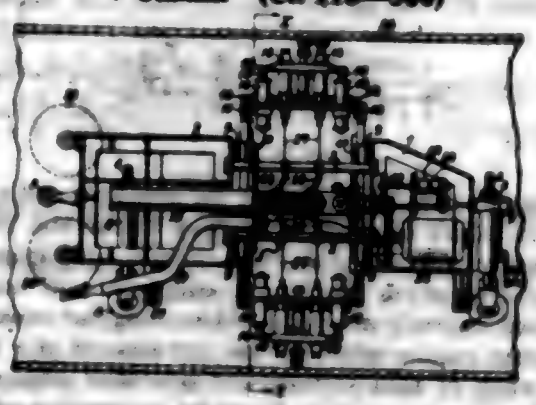
longitudinal path and at a known linear speed, a hollow serving to control the rate of flow of said resin moving

means for controlling the displacement of all of said sections along the said guideways to close and open said hatch, a stowage space for locating said sections when the hatch is open, said space being situated under the ship's deck laterally of said hatch and at a lower level than the level of said guideways, guiding means in said space for said sections, inclined ramp means connecting said guiding means and guideways, sealing means on all of said sections adapted to form a water-tight joint with said edges on said hatch and lifting means comprising jacks at each corner of each cover section operating between said guideways and sections, located along the lateral edges of said hatch and leaving the hatch opening clear, and adapted to lift each one of said sections when they occupy the hatch closing position and cause the cooperation of said sealing means and edges to form a water-tight closing of said hatch and also for lowering thereafter the said sections for ensuring the opening of said hatch.

2,865,320
FIRE ALARM DEVICES
Albert Thiemann, Astoria, N. Y.
Application July 9, 1956, Serial No. 596,671
4 Claims. (Cl. 116—106)

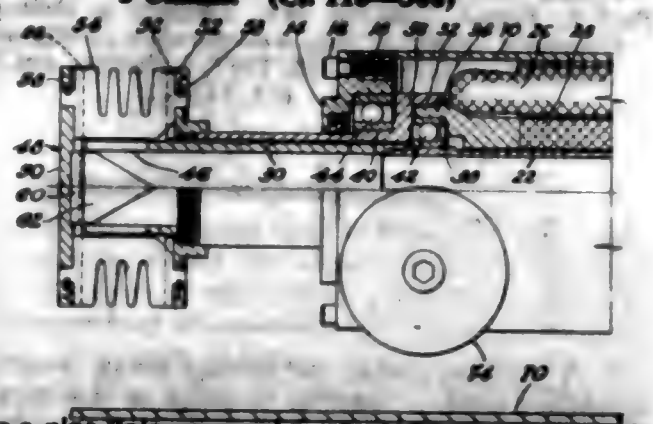
1. A fire alarm device comprising a cylindrical container for volatile liquid having a top and provided with an opening; a fitting mounted gas-tight in the opening and provided with a bore therethrough and having a head; a whistle mounted fast with respect to the head and of cylindrical shape and axially alined with the container, and having a wind duct and chamber bore both axially askew to the whistle, and a fusible plug over the bore for preventing vapor to issue therefrom.

2,865,321
DEVICE FOR METAL COATING PIPELINES, PARTICULARLY PIPELINES OF POWER STATIONS
Paul von Arx, Staefa, Switzerland, assignor to F. von Arx & Co., A. G., Staefa, Switzerland
Application November 4, 1953, Serial No. 390,127
Claims priority, application Switzerland November 6, 1952
7 Claims. (Cl. 118—306)



1. Spray apparatus with a movable mounting frame for coating the inside of pipes with sprayed materials, comprising a frame with radially adjustable rollers for supporting the frame centrally in the pipe while it is moved axially therein, a plurality of spray nozzles equiangularly spaced annularly around said frame, a carrier for said spray nozzles rotatably mounted on the frame coaxially of the pipe when the frame is in adjusted position for coating a pipe of a particular diameter, gear means for oscillating said carrier through an angle substantially equal to that between the spray nozzles, flexible supply lines for said oscillating spray nozzles, means for driving said gear means alternately in reverse directions to provide said oscillation, and means for axially moving said frame along the pipe.

2,865,333
PIPE LINING MACHINE
Alfred J. Perkins, Lakeland, Fla., assignor to Perkins Pipe Linings, Inc., Grand Island, N. Y.
Application August 13, 1957, Serial No. 677,985
5 Claims. (Cl. 118—306)



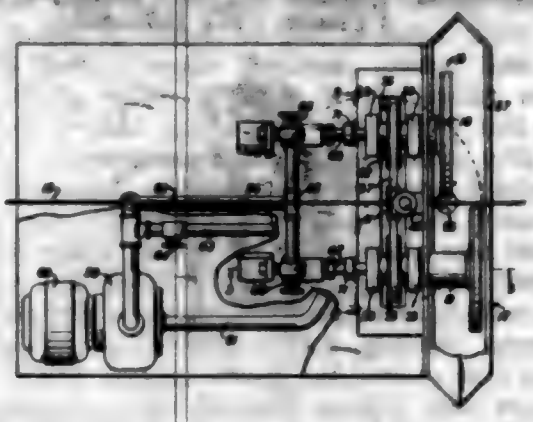
1. In a pipe lining apparatus adapted to travel through a pipe while applying a lining to the interior thereof, a lining applicator machine comprising a generally cylindrical frame having ring-shaped first and second transverse end walls at its opposite ends, means for supporting said frame in said pipe to be coaxial therewith, a lining material feed conduit extending through and supported by said first end wall to extend coaxially with said frame through the same and outboard of said second end wall, the outboard portion of said conduit ending in and supporting a lining material distributor head stator portion, a hollow center motor within said frame and annularly embracing said conduit, said motor comprising a stator mounted by said frame and a hollow rotor journaled at one end by a first bearing on said first end wall and at its other end by a second bearing on said conduit, a hollow output shaft connected to said motor rotor as an extension thereof and extending through said second end wall in embracing relation to said outboard portion of said conduit, third bearing means journaling said shaft in said second end wall, and a lining material distributor head rotor mounted by said shaft in embracing cooperative relation to said distributor head stator portion, the joint of said motor rotor to said shaft being radially enlarged to provide an internal annular groove mounting said second bearing, whereby the motor rotor and shaft assembly is journaled at spaced positions on said frame, and said conduit is supported at similarly spaced positions at said first end wall and at said second bearing for maintaining the outboard distributor stator and rotor parts in proper alignment.

2,865,323
COLOR CODING APPARATUS
Wilbur L. Hoff, Snyder, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application April 22, 1955, Serial No. 503,293
10 Claims. (Cl. 118—314)

1. An apparatus for color coding an insulated wire comprising means to advance the insulated wire in a

being supported by said upright in tilted position to de- said valve whereby, when the fluid in said trough becomes

longitudinal path and at a known linear speed, a hollow wheel for a coloring liquid having a peripheral member and a central inlet, means to feed the coloring liquid to the inlet, outlets of predetermined sizes for the wheel disposed in the peripheral member at positions spaced predetermined distances apart to direct streams of the coloring liquid radially from the wheel, means to rotatably support the wheel relative to the path of the

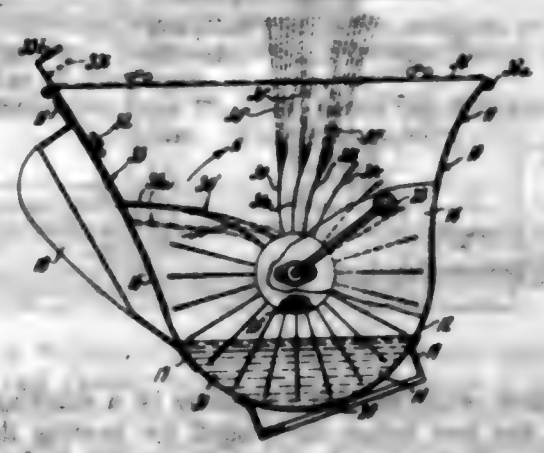


insulated wire whereby the streams of coloring liquid successively will be moved through the path, and means to rotate the wheel at a predetermined speed relative to the linear speed of the insulated wire to cause streams of the coloring liquid to pass through the outlets to form color code markings, on the insulated wire, of sizes comparable to the sizes of the outlets and at positions on the insulated wire comparable to the spacing of the outlets in the peripheral member.

2,865,324
APPARATUS FOR APPLYING COATING MATERIAL TO ARTICLES
George A. Stein, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Application June 23, 1954, Serial No. 438,766
10 Claims. (Cl. 118—626)

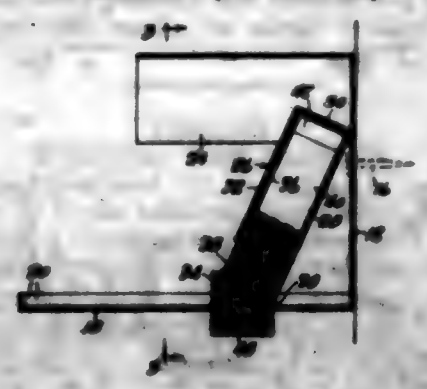
3. An apparatus for applying a thermosetting resin to the surface of a moving fibrous article comprising a horizontally disposed generally circular disc adapted to rotate about the central axis thereof, a hollow casing housing said disc and having an opening therein disposed adjacent the periphery of said disc, means for feeding the resin onto the upper surface of the disc adjacent the center thereof with the resin being thrown outwardly across the surface of the disc by the rotation of the disc into said opening to coat the article moving past said opening, means for supplying heat to the resin disposed on said disc, an annular member disposed generally axially of said disc with the lower end of said member being spaced above the upper surface of the disc to provide a restricted opening therebetween, said opening having a progressively smaller vertical dimension in a direction from the center of the annular member to the periphery thereof and serving to control the rate of flow of said resin moving outwardly across the surface of said disc, and electrostatic means for directing the discharge of said resin from the periphery of the disc to effect a greater proportional discharge of resin into the opening to coat the article and a lesser proportional discharge of resin at other positions within the casing.

2,865,325
APPLICATOR FOR SPATTERING MASSES
Theodore L. Lestina, New York, and William B. Kriewall, Bayside, N. Y.
Application November 1, 1954, Serial No. 466,868
12 Claims. (Cl. 118—306)



1. A device for directing under force a pasty mass against a surface to be treated, which device has a portable housing with a spout, a rotatable carrier mounted in said housing, a reservoir for said mass communicating with said housing, an abutment member adjacent said spout and spaced from said carrier and said reservoir, pairs of outwardly diverging, flexible blade means extending from said carrier into said reservoir and toward said abutment member, whereby upon rotation of said carrier said pairs of blade means come successively in contact with said mass, retain portions of the latter between each pair of blades, and then strike said abutment member, past which said blade means are flexed, so that said blade means upon release from said abutment member impel mass particles through said spout against said surface against which said spout is directed.

2,865,326
BIRD FEEDERS
Henry Edward Lowe, Jr., Canopolis, Mich.
Application August 15, 1957, Serial No. 678,333
10 Claims. (Cl. 119—52)

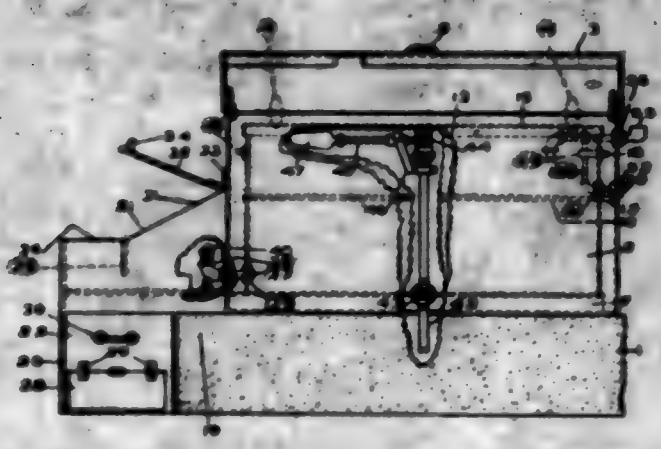


1. A bird feeder comprising a support having a substantially upright mounting portion and a substantially horizontal plate portion having an opening therein spaced from said upright, and a container having pivotally connected communicating opposite end portions, one of said container portions being comparatively shallow and fitting snugly in said plate opening to define a tray, the other container portion projecting above said plate and

mally biasing said tapered point to extended position; faces, one on each side of the aperture across said open-

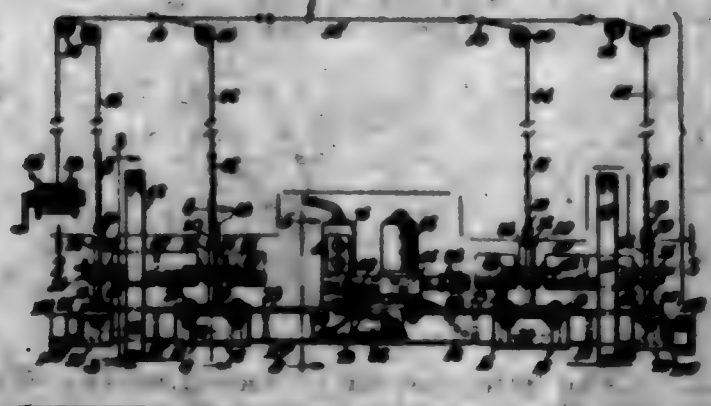
being supported by said upright in tilted position to define a container opening between said container portions for access to the contents of the container.

2,955,327
STOCK WATERING TROUGH WITH HEATING TANK
James W. Anderson, Bentley, Alberta, Canada
Application May 6, 1957, Serial No. 657,241
1 Claim. (Cl. 119—72)



A stock watering unit consisting of a drinking trough and a fire box below the trough for heating the water therein, said fire box having a flue outlet, and a further unit connected to supply water to the trough, said further unit comprising a storage tank separate from the stock watering unit and connected to supply water thereto, and means for heating the water in the storage tank by hot gases expelled from the flue outlet of the fire box, said means including an outer casing overlies of the storage tank and in which casing said tank is suspended with a space intervening between the casing and tank, said casing including an inlet at one lower end connected to receive the hot gases from the fire box flue outlet and said casing having a flue outlet at the opposite upper end for escape of the gases and including baffles in the casing, said baffles comprising a series of plates adapted to cause the gases to move rearwardly from the flue inlet to the rear of the casing and then forwardly to the front of the casing before escaping through the casing flue outlet.

2,955,328
WATERING TROUGH
Elden Hostetler, Middlebury, Ind.
Application September 28, 1956, Serial No. 537,191
10 Claims. (Cl. 119—79)

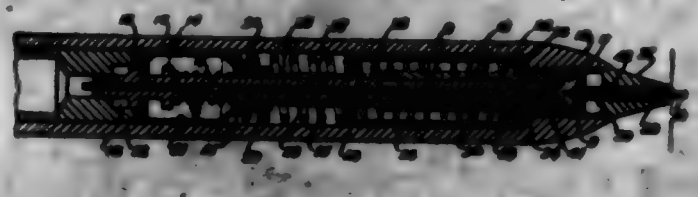


5. In combination with an elongated trough for delivering fluid material for animal consumption, a supply conduit, a jet conduit having an end portion within said trough and directed longitudinally thereof, the other end of said jet conduit being connected to said supply conduit, a quick-acting full-flow valve between said conduits and a control means in said trough and having connection with said valve whereby, when the fluid in said trough becomes low, the valve will be actuated to cause a quick full flow of fluid into said trough.

2,955,329
PETS HOME RECREATION
George Elliott, Wayzata, Minn.
Application September 26, 1957, Serial No. 686,188
3 Claims. (Cl. 119—63)

1. A combination recreation and grooming device for animals comprising, in combination, a brush of generally rigid U-shaped configuration having a pair of sides and an arcuate base, means for supporting said base in substantially vertical plane in adjustable relationship with the ground level, stiffening means in enclosing contact with said sides and base maintaining the shape of said brush against the movement of animals therethrough, and means releasably securing the free ends of said sides together to define a central opening only large enough to permit the pet to pass therethrough in close engagement with the bristles of the brush, said supporting means for said brush comprising a pair of ground engaging stakes in spaced apart side by side parallel relationship, and adjustable clamp means one at each side of said brush engaged with said stiffening means and mounted upon said stakes slidably supporting said brush for longitudinal movement between adjusted vertical positions.

2,955,330
WRITING INSTRUMENT
Everett R. Swank, Hayward, Calif.
Application November 26, 1954, Serial No. 471,269
6 Claims. (Cl. 120—17)



1. A pencil comprising: a tubular casing; a barrel mounted slidably lengthwise within said casing for slidably receiving and supporting a length of lead; clamp means carried by said barrel for releasably clamping said lead against slidable retractable movement within said barrel during normal writing use; a barrel receiver tube mounted slidably on said barrel; clamp actuating means carried by said receiver tube and slidably movable therewith into and out of engagement with said clamp means for causing clamping and unclamping of said lead; a retractor sleeve mounted in said casing for slidable movement relative thereto and relative to said barrel receiver tube; said retractor sleeve including a centrally apertured tapered point defining the writing point of said pencil projecting slidably outwardly beyond the end of said casing and through which said lead can be slidably extended and retracted; frictional lead gripping means in said point normally engaging lead projected therethrough and having a weaker lead clamping power than the lead clamping power of said clamp means; spring means nor-

mally biasing said tapered point to extended position; means including separable abutment means between said retractor sleeve and said barrel receiver tube for causing movement of said clamp actuating means carried by said receiver tube away from said clamp means to cause deactuation of said clamp when said retractor sleeve is moved toward its retracted position against the force of said spring means; locking means for releasably securing said receiver tube in retracted position during at least a portion of the movement of said retractor sleeve and point from their retracted positions toward their extended positions under influence of said spring means and whereby the lead frictionally engaged by said gripping means in said point is caused to advance with said point an increment of extended movement relative to said barrel and said deactuated clamp means, means including said spring means for deactuating said locking means upon movement of said retractor sleeve from its retracted position to its ear fully extended position; and means including said spring means operable upon deactuation of said locking means for moving said clamp actuating means carried by said receiver tube into engagement with said clamp means and for moving together said receiver tube and barrel from their respective retracted positions to their extended positions relative to said point to slidably advance and extend the writing end tip of said lead through the apertured extended point of said retractor sleeve against the frictional lead clamping power of said gripping means engaging said lead.

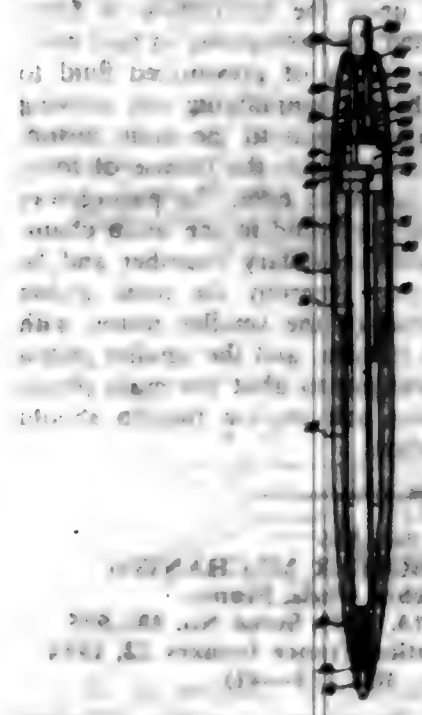
2,865,331

CAM TYPE RETRACTABLE MECHANISM

James L. Marcotte, Lewisiale, Calif., assignor, by mesne assignments, to Paper Mate of Puerto Rico, Inc., Salinas, Puerto Rico, a corporation of Puerto Rico

Application August 17, 1953, Serial No. 374,497

17 Claims. (Cl. 120—42.03)



11. A writing instrument having an elongated tubular barrel, a writing cartridge slidable therein and provided with a writing tip at one end thereof and a laterally movable cam follower having an upwardly directed tip carried on the end of the cartridge opposite the writing tip, a mechanism for shifting the cam follower from one to the other of two laterally spaced positions and selectively retaining the follower in each position, including a stationary body element provided with a downwardly directed face and aperture means formed in the body element and communicating with said face, the face being provided with two concaved, oppositely inclined surfaces, one on each side of the aperture means, said oppositely inclined surfaces constituting guiding surfaces to facilitate movement of the cam follower tip from one of said laterally spaced positions to the other; and camming means movable longitudinally through the aperture means in the body element and having oppositely inclinded camming surfaces for contacting the cam follower tip when said tip is in one of said positions in the aperture means to move the tip from said one position onto the respective concaved, inclined surfaces to guide the tip to the other position.

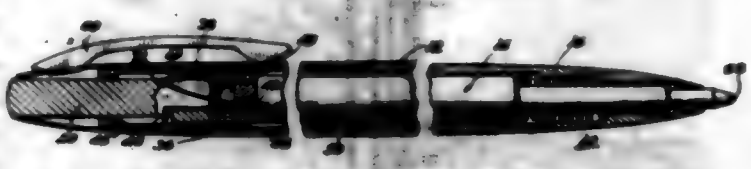
2,865,332

OPERATING MECHANISM FOR A WRITING INSTRUMENT

Lewis C. Hansen, Fort Madison, Iowa, assignor to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware

Application June 23, 1954, Serial No. 438,668

5 Claims. (Cl. 120—42.03)



4. In a writing instrument having a barrel portion, a writing unit therein axially movable between a forward writing position and a retracted position and resilient means urging said unit to said retracted position, said unit including a fluid dispenser and a reservoir in axial alignment, an actuating mechanism contained in said barrel portion and in free abutting relationship with said reservoir comprising yoke spring means within said barrel having a bight portion disposed rearwardly therein and operatively engageable with said operating element and two forwardly extending longitudinally rigid laterally yieldable legs, hook means formed in one of said legs and normally urged outwardly toward said barrel portion, the other of said legs being operatively engageable with said unit in abutting end to end relationship and restrained against substantial lateral movement, and shoulder means formed in said barrel portion to receive said hook means when said operating element and said unit are manually moved to said forward position and released whereby the force of said resilient means on said other leg moves said bight portion outwardly and urges said hook means inwardly when said hook means is in engagement with said shoulder means, said hook means being held against inward movement by engagement with said shoulder means, said operating element when subsequently manually depressed, engaging said bight portion in the outward position to maintain said bight portion in the outward position and release said hook means from said shoulder means to permit inward movement thereof.

2,865,333

WRITING IMPLEMENTS

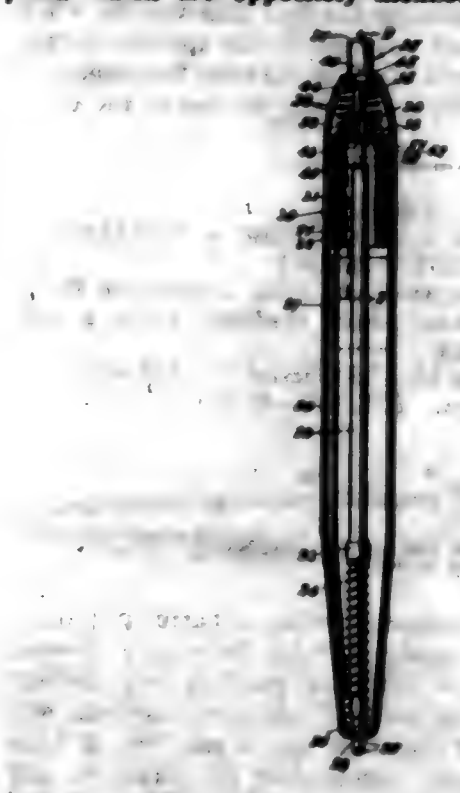
Emil Heckin, Elmhurst, N. Y., assignor, by mesne assignments, to Paper Mate of Puerto Rico, Inc., Salinas, Puerto Rico, a corporation of Puerto Rico

Application October 20, 1954, Serial No. 463,497

13 Claims. (Cl. 120—42.03)

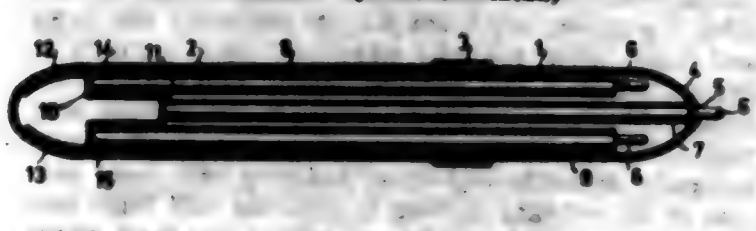
12. A mechanism for selectively projecting and retracting a writing tip of a cartridge movably positioned in a housing of a writing implement, said cartridge having a follower tip at its inner end and being normally biased into retracted position, comprising: an actuating plunger having an inner portion composed of a pair of longitudinally joined elements, one element being of greater cross section than the other; a stationary member within the housing, said stationary member having a slot including a portion of smaller cross section and a portion of larger cross section to slidably and non-rotatably receive said

rod-like elements; a follower tip carried by the inner end of the cartridge and adapted to enter the slot portion of larger cross section and not fully enter the slot portion of smaller cross section, said stationary member having a surface facing said follower tip and formed with guide paths which are oppositely inclined and form a unidi-



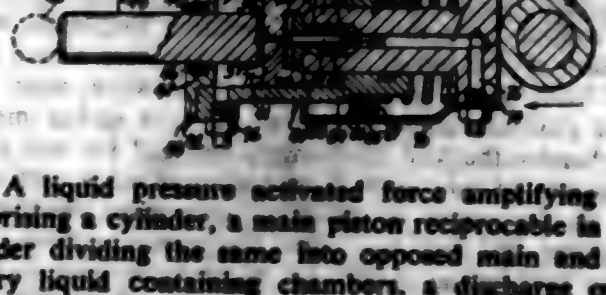
rectional cam path for said follower tip leading from one slot portion to the other in succession; each of the rod-like elements having an inclined cam face at its end, said cam faces being oppositely inclined, said cam faces sequentially contacting the follower tip to move the same upon one of said inclined guide paths when the plunger is depressed.

2,865,334
MAGAZINE-TYPE BALL-POINT PENS
Harry Rodulusky, New York, N. Y.
Application August 21, 1957, Serial No. 679,338
4 Claims. (Cl. 120—42.13)



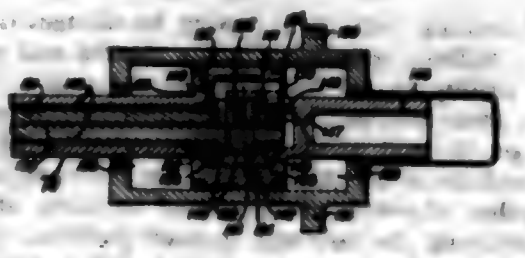
1. In a ball-point pen, a barrel, three ink-containing cartridges positioned in the barrel, one of said cartridges being located centrally of the other cartridges and being also located forwardly of the others, said central cartridge having a ball-point end extending out of the forward end of the barrel in writing position, the remaining cartridges being completely contained within and housed by the barrel and constituting reserve cartridges to be substituted for the central cartridge when the ink supply in the latter is exhausted, and seating means within the rear portion of the barrel for holding the central cartridge positioned forwardly of the others, said seating means including rests located rearwardly of the rear end of the central cartridge for the reception of the rear portions of said reserve cartridges, said seating means consisting of a stepped member formed with rearwardly-extending spring tongues, the rear end of the barrel being integrally closed and providing an inner conical surface against which the spring tongues frictionally engage to maintain the seating means against the rear end of the central cartridge.

2,865,335
POWER MULTIPLIER
George W. Lewis, Toledo, Ohio
Application March 11, 1953, Serial No. 341,788
4 Claims. (Cl. 121—41)



1. A liquid pressure activated force amplifying unit comprising a cylinder, a main piston reciprocable in said cylinder dividing the same into opposed main and secondary liquid containing chambers, a discharge outlet port located adjacent to one end of said cylinder, a work-performing member directly connected to said main piston extending exteriorly of said secondary chamber, a smaller piston facing said main piston in said main chamber being reciprocable in one end of said cylinder, the smaller piston having a portion external of said main chamber pierced longitudinally by a fluid passage, the high pressure inlet port carried by an external portion of the smaller piston movable therewith for the inflow of pressurized liquid to the main chamber, a passageway transversing said main piston for establishing liquid communication between the main and secondary chambers, single seals for said main piston and said smaller piston, each single seal providing a sealing action responsive to the intermittent and variable liquid pressure on the main chamber whereby sealing friction in opposition to small initiating forces applied to the secondary piston is materially reduced, dual valve means located at one end of said fluid conduit co-acting with said main piston passageway for controlling the inflow of pressurized liquid to the main chamber and its discharge therefrom, said dual valve means acting upon the application of force to said smaller piston to seal the passageway in said main piston while allowing the inflow of pressurized fluid to the said main chamber thereby amplifying any moving force applied to the smaller piston to the main piston, said dual valve member acting upon the release of force applied to said smaller piston to open the passageway of said main piston permitting liquid in the main chamber to be transferred to said secondary chamber and be discharged by its outlet port whereby the main piston closely follows the motions of the smaller piston with minimum lag due to seal friction, and the smaller piston being constructed and arranged to abut the main piston and directly transmit force and motion thereto should the pressure means be inactive.

2,865,336
HYDRAULIC BOOSTER MECHANISM
Paul Leboucher, Paris, France
Application January 13, 1955, Serial No. 481,595
Claims priority, application France January 22, 1954
1 Claim. (Cl. 121—41)



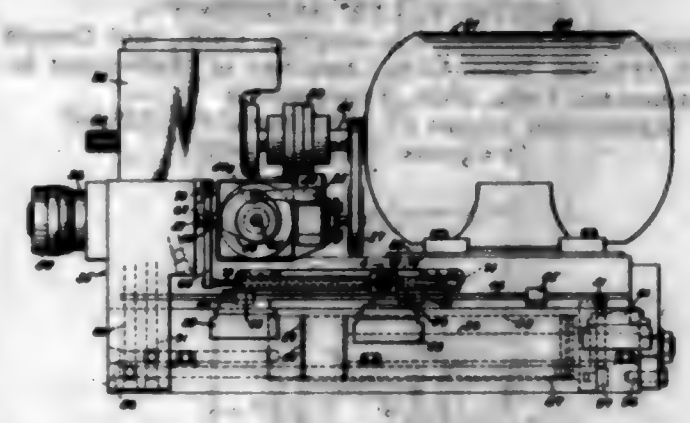
An hydraulic booster mechanism comprising a fixedly mounted hollow cylinder, a piston reciprocable in said cylinder and defining therewith piston chambers

on each side of said piston, a hollow piston rod connected to one end of said piston and connected at its opposite end to a member the movement of which is powered and controlled thereby, a coaxial control rod carried within said piston rod, a movable distributor for hydraulic fluid supply to and exhaust from said piston located within said piston and connected to and actuated by said control rod, said control rod having an axial duct for admission of fluid under pressure, an annular fluid exhaust duct of larger cross section than said axial admission duct defined by the space between the piston rod and control rod, an annular fluid supply chamber in said distributor communicating with said axial duct in the control rod, said piston having separate channels, of enlarged cross section relative to said axial supply duct communicating with said piston chambers, said annular supply chamber being adapted to alternately communicate with said channels upon movement of said distributor in one or other direction from a neutral non-communicating position to supply fluid under pressure to one or the other of the piston faces, annular collars on said distributor on either side of said annular supply chamber having widths less than the diameters of said piston channels, annular exhaust chambers in said distributor on either side of said collars, one each of said chambers permanently communicating with a respective piston channel whereby each chamber presents an area exposed to the pressure fluid in the corresponding piston channel, the annular exhaust chambers alternately communicating with exhaust ports in said piston having enlarged cross sections relative to said axial supply duct, and an exhaust channel in said piston connecting said ports with said annular fluid exhaust duct, whereby slight movement of said distributor in either direction from neutral position admits fluid under pressure to one of said piston chambers and exhausts relatively pressureless fluid from the other piston chamber through the above-described exhaust means.

2,865,337
YAW DAMPING SYSTEM
Paul A. Dennis, Hermosa Beach, and Douglas Dill, Los Angeles, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application September 2, 1955, Serial No. 532,136
8 Claims. (Cl. 121—41)

1. In an aircraft: a control surface; control-surface operating means; a source of electric signals; a servo-actuator for independently operating said surface to take care of yawing; means connected to said actuator for supplying pressure fluid thereto to power same; control means for said actuator interposed intermediate said supply means and the actuator and operatively connected to both the latter; a rate-of-yaw gyro operatively connected to said source of signals to impose its signals thereon; electrical conductor means connecting said signal-source and the actuator control means; and variable-length linear-force responsive means interposed bodily in the control-surface operating means to vary in length in response to opposed tensile forces and opposed compressive forces applied thereto by predetermined pilot-operations thereof for overriding the signals emanating from said signal source to said actuator-control so as to superpose the pilot's efforts upon the actuator without thereby disassociating the yaw-damping action from the control surface.

2,865,338
HYDRAULIC POWER FEED MECHANISM FOR MACHINE TOOLS
Edward E. Judge, Sr., Lansing, Mich., assignor to Industrial Metal Products Corp., Lansing, Mich., a corporation of Michigan
Application December 13, 1956, Serial No. 628,856
9 Claims. (Cl. 121—45)



1. A feed mechanism comprising a driven unit and a frame, said driven unit comprising a piston and rod hydraulically actuated in a conforming chamber of said frame so that said driven unit is movable in forward and retract directions relative said frame, a hydraulic pressure source connected to the rod side of said piston, reciprocable valve means in said frame for connecting said hydraulic pressure or exhaust to the face side of said piston depending on the longitudinal position of said valve means, said driven unit carrying rotatable cam means engageable with said valve means for imparting longitudinal movement thereto, so that the rotation rate and shape of said cam means can be chosen to cause said valve means to control hydraulic power operating on said piston to move said driven unit at a desired drive rate.

2,865,339
VARIABLE RATIO POWER STEERING APPARATUS
Arthur E. Bishop, Chatswood, near Sydney, New South Wales, Australia
Application November 10, 1955, Serial No. 546,310
3 Claims. (Cl. 121—46.5)

1. A valve for hydraulic power steering systems comprising a housing, a reciprocable valve core in said housing having a central annular land cooperating with a first annular low pressure sump groove in the housing, second and third annular groves in said core on opposite sides of said land in fluid connection with said groove when said core is in a central, neutral condition, a first port in said housing facing said second grove and connected to one side of a reversible power motor, a second port in said housing facing said third groove and connected to the other side of said reversible power motor, a

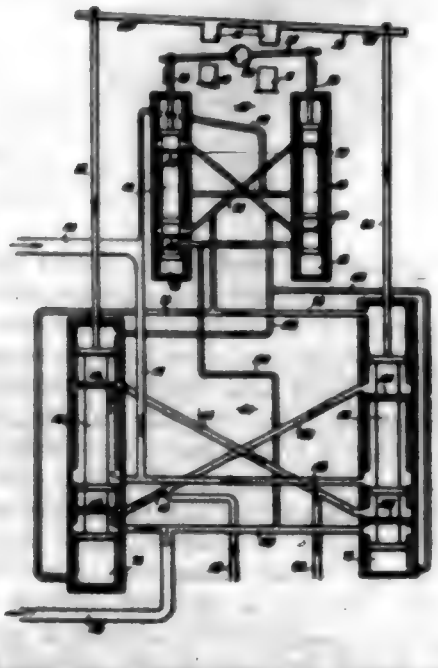
source of fluid under pressure, a first conduit connecting said source to said first port, a second conduit connecting said source to said second port, first and second valve means normally blocking said first and second conduits when said core is in neutral condition, means associated with said core for actuating said first valve means into open position and substantially simultaneously closing the fluid connection between said first and second grooves, and further means associated with said core for actuating said second valve means into open position and substantially simultaneously closing the connection between said first and third grooves.

2,865,340

SERVO VALVE ASSEMBLY

Raymond D. Atchley, Los Angeles, Calif., and Donald G. O'Brien, Tulsa, Okla., assignors to Midwestern Instruments, Tulsa, Okla., a corporation

Application August 17, 1955, Serial No. 529,849
13 Claims. (Cl. 121—41)



5. A servosystem comprising in combination, a pilot-stage control; a second-stage fluid flow control operably coupled with said pilot-stage control for response to the latter; an error-detecting torque motor actuator for said pilot stage control having a movable frame assembly and an armature shiftable relative to the frame assembly, said armature being operably coupled with said pilot-stage control; and a direct, mechanical feedback connection between said second-stage control and said frame assembly for moving the latter relative to the armature.

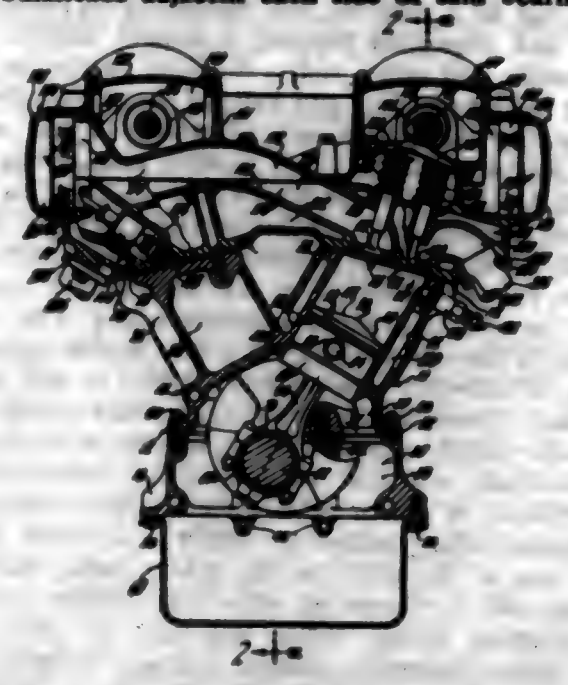
2,865,341

ENGINE FRAME CONSTRUCTION

John Dolza, Davisburg, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 19, 1955, Serial No. 482,794
2 Claims. (Cl. 121—194)

1. A cylinder block for an internal combustion engine having a plurality of cylinders and comprising, upper and lower support members, said support members having recesses extending therein and being adapted to be secured together at the edges around said recesses to form a crankcase for said engine, bulkheads extending transversely of said upper and lower support members and dividing said recesses into separate crankcase compartments, said separate crankcase compartments each having a cylinder opening therein through said upper support member, said bulkheads having edges formed to provide bearings for supporting the crankshaft of said engine, and bolts extending from one of said support members to another and securing said support members rigidly together, certain of said bolts extending through said bulkheads adjacent each side of said bearings and



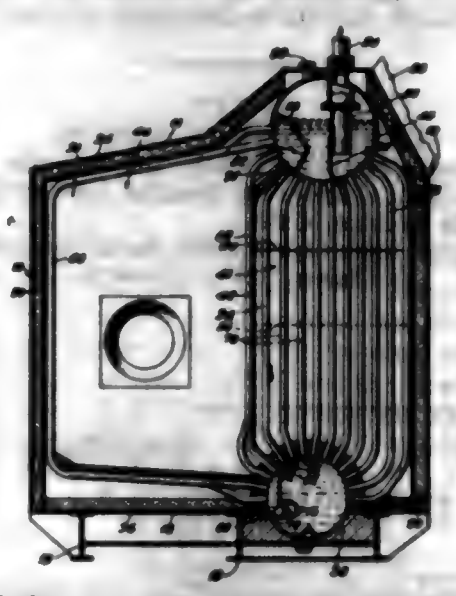
securing said bearings rigidly together for supporting said crankshaft within said support members, other of said bolts extending through said support members at said edges around said recesses.

2,865,342

BOILERS, FIRST STAGE FORCED CIRCULATION

Gustav A. Rohm, Springfield, Ill., assignor to Springfield Boiler Company, Springfield, Ill., a corporation of Illinois

Application December 2, 1954, Serial No. 472,745
11 Claims. (Cl. 122—406)



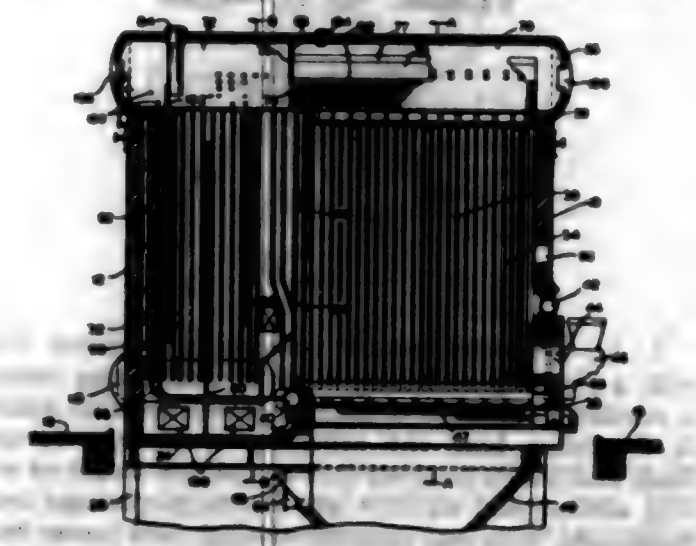
1. In a boiler assembly, a boiler housing and unit including longitudinally disposed generally parallel upper and lower drums, means in the housing defining a longitudinal hot gas path between the drums and a longitudinal furnace space next to it, baffle means in the lower drum dividing it into at least two parts, convection tubes extending through the gas path and connected to the upper drum and one part of the lower drum for natural circulation, a cold water inlet to the other part of the lower drum, a pump connected to the inlet for forced circulation, water wall tubes extending along the sides of the furnace space and connecting the other part of the lower drum and the upper drum, a plurality of auxiliary tubes extending through the gas path and connected to the other part of the lower drum and the upper drum below the water level, and a hot water outlet for the upper drum.

2,865,343

FIRST STAGE FORCED CIRCULATION IN BOILERS

Gustav A. Reiss, Springfield, Ill., assignor to Springfield Boiler Company, Springfield, Ill., a corporation of Illinois

Application December 20, 1954, Serial No. 476,195
10 Claims. (Cl. 122—406)



1. In a boiler assembly, a housing, a boiler structure including an upper drum disposed generally in the top center of the housing, the housing being divided generally into a forward furnace space and a rear gas path, the forward space having a forced circulation system including a generally rectangular manifold and a plurality of water wall tubes lining the forward space connected between the manifold and the upper drum, a cold water inlet for the manifold adapted to be connected to a pump, a natural circulation system in the rear gas path including a pair of lower drums generally parallel to the upper drum and disposed on opposite sides of the housing, a plurality of convection tubes between the upper and lower drums, a fuel supply for the furnace space, and a transverse baffle structure in the upper drum dividing it into portions that conform generally to the division of the housing to divide the upper drum between the forced and natural circulation systems, the baffle structure including a screening medium below the normal water level to allow hot water to flow through the forward portion into the rear portion.

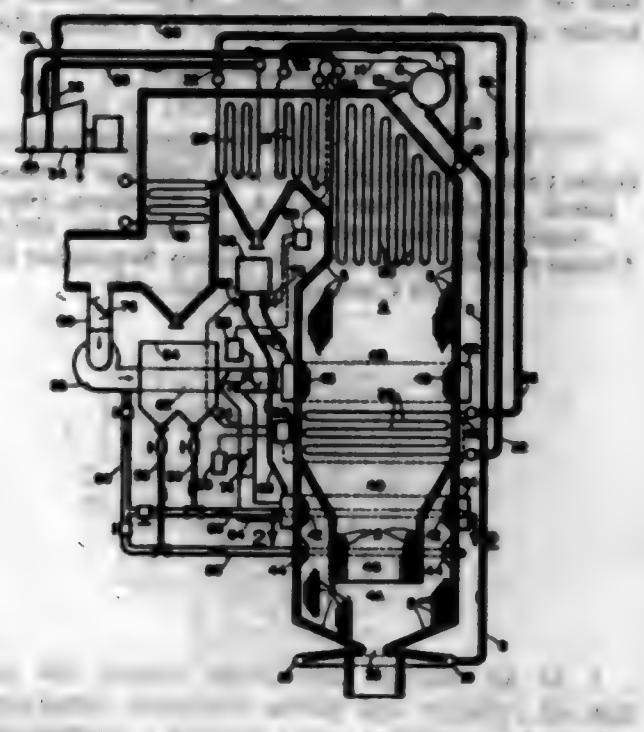
2,865,344

APPARATUS AND METHOD FOR HEATING STEAM

Arthur C. Firl, Ridgefield Park, N. J., assignor to Combustion Engineering, Inc., New York, N. Y., a corporation of Delaware

Application June 21, 1955, Serial No. 517,039
4 Claims. (Cl. 122—478)

4. In apparatus for generating and heating steam including means for burning comminuted fuel suspended in a mixture of oxygen and relatively cool recirculated combustion gas from which nitrogen is substantially excluded, the combination comprising a first water cooled furnace chamber having gas outlet means at one end thereof; first burner means for feeding a mixture of fuel and substantially nitrogen-free oxygen into said first chamber, said burner means being remotely disposed with respect to said gas outlet means to cause combustion of said fuel within a first combustion zone; second burner means for feeding into said first chamber a mixture of nitrogen-free cooled combustion gas composed mostly of CO_2 and comminuted fuel, said second burner means being located at a point beyond the downstream side of said first burner means with respect to gas flow to cause reduction of said CO_2 gas to CO gas; a second combustion chamber adjoining said first chamber at the gas outlet end thereof for receiving said CO gas and having a gas offtake at the end thereof which is remote from said first chamber; first heating means for absorbing heat from said CO gas said heating means being disposed within said second chamber at a point remote from said gas offtake; third burner means for discharging a mixture of substantially nitrogen-free oxygen and substantially nitrogen-free cooled recirculated combustion gas into said second chamber for



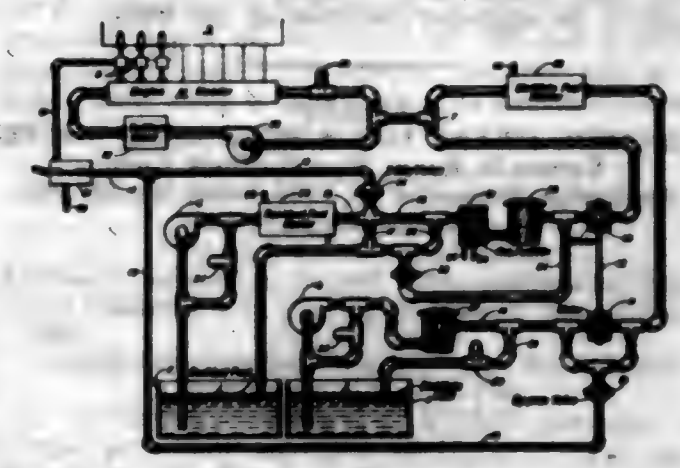
combustion of said CO gas to CO_2 gas in a second combustion zone and at a point beyond the downstream side of said first heat absorbing means with respect to gas flow; second heating means for absorbing heat from said second combustion zone gas; and means for recirculating a portion of said cooled second combustion zone gas to said first burner means and to said second burner means.

2,865,345

FLUID FLOW PROPORTIONING

Joseph R. Hilton, Concord, Calif., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application November 2, 1955, Serial No. 544,580
1 Claim. (Cl. 123—30)



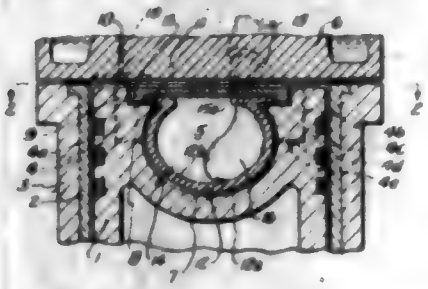
For use with a circulating header for supplying dissimilar fuels to a compression ignition engine having a throttle, selectively operated means for maintaining a predetermined ratio of said fuels at high load conditions and for supplying only distillate fuel at low load conditions, said means comprising a residual fuel line, a valve in said line, a distillate fuel line, a positive displacement meter of the rotating type in each of said lines, and means coupling the rotating parts of said meters, a bypass around the meter in said distillate line,

said spring, a link connecting said fuel control lever and therewith when said tappet is at one end of the reciprocat-

engine, and bolts extending from one of said support upper drum.

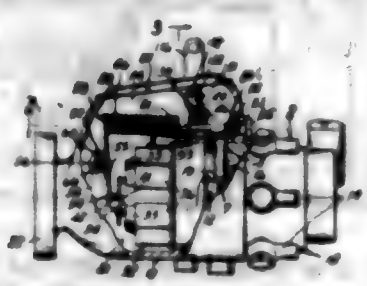
a valve in said bypass, means for opening said valve in said bypass and for closing the valve in said residual fuel line and meter at low load conditions to supply only distillate fuel to said header, and means for rendering said last-named means inoperative at high load conditions whereby said residual fuel meter will be operative through said coupling means to control the rate of flow of distillate through said distillate meter to said header at a predetermined ratio to the residual fuel flow.

2,865,346
INTERNAL COMBUSTION ENGINE
Julius Liebel, Nurnberg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A. G., Nurnberg, Germany
Application September 4, 1956, Serial No. 607,909
Claims priority, application Germany September 13, 1955
10 Claims. (Cl. 123—32)



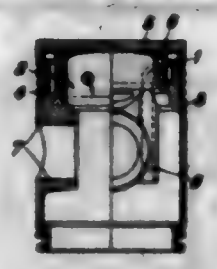
1. In an internal combustion engine, the combination of cylinder and piston structures constructed and arranged to provide a recess forming a combustion chamber, means for feeding fuel and air into said combustion chamber and burning it therein, and automatic regulating means for the transfer of heat from said combustion chamber in dependence upon the thermal conditions of the latter, with said regulating means being composed of a liner for said combustion chamber of similar shape but smaller diameter than said recess and inserted with such a distance from the wall of said recess that only a small air gap is maintained between the recess wall and the outer surface of the liner, the improvement comprising a liner consisting of a material of such heat-expansion capacity that it expands outwardly during running of the engine until the air gap is reduced to zero, and provided on its outer surface with a modified surface layer having a chemical consistency for preventing said outer liner surface from sticking to the wall of said recess in an expanded condition of the liner.

2,865,347
CONTROL MEANS FOR A FUEL PUMP VALVE
Vernon D. Roosa, West Hartford, Conn.
Application September 23, 1954, Serial No. 457,903
8 Claims. (Cl. 123—140)



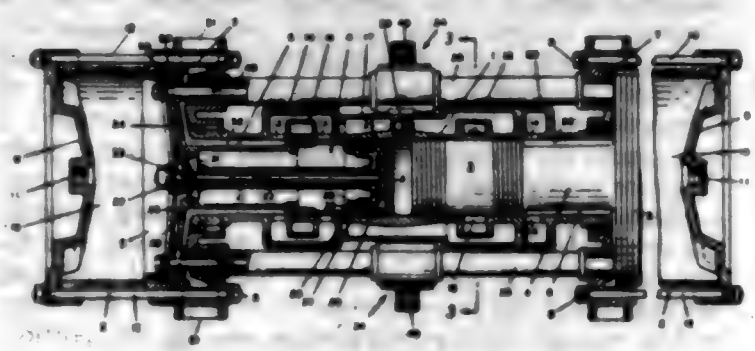
1. In a fuel pump, a movable control member, a governor arm in the form of a plate having a transverse groove and an angularly related ear at each end of the groove having an aperture in alignment with the groove, a pivot for the arm mounted on the fuel pump comprising a bar extending through said aperture of each ear having an edge engaging in said groove and connecting means between the governor arm and said control member.

2,865,348
PISTON
Wilhelm Krimer and Ernst Hansen, Neckarsulm, and Gerhard Schleber, Bad Wimpfen, Germany, assignors to Karl Schmidt G. m. b. H., Neckarsulm (Wurttemberg), Germany
Application March 19, 1956, Serial No. 572,321
Claims priority, application Germany March 23, 1955
3 Claims. (Cl. 123—41.35)



1. An oil-cooled piston comprising a piston body with a piston head having a crown and a ring section, a circular sheet metal cooling oil splash chamber molded in the piston head and extending as a single opening from said crown to along at least half the length of said ring section, and oil inlet and discharge passages communicating with said chamber through said piston body for partially filling said chamber with cooling oil.

2,865,349
LUBRICATING AND SYNCHRONIZING MEANS FOR FREE PISTON ENGINES
John G. Macdonald, Goderich, Ontario, Canada
Application June 7, 1957, Serial No. 664,360
17 Claims. (Cl. 123—41.37)



1. In a free piston engine, a diesel cylinder, a compressor cylinder at each end of said diesel cylinder, a pair of opposing pistons each having a diesel piston portion disposed to operate in said diesel cylinder and a compressor piston portion disposed to operate in said compressor cylinder, and synchronizing means for synchronizing the movement of said pistons, said synchronizing means comprising a pair of oppositely disposed rack members, one connected to each of said pistons, said rack members engaging a common pinion, each of said pistons having lubricating passage means therein and lubricating passage means including said rack members having a constant volume for all piston positions in communication with said piston passage means and the exterior of said engine.

2,865,350
FUEL SYSTEMS FOR VARIABLE STROKE PISTON ENGINES
Arnold E. Biermann, Fairview Park, Ohio
Application July 1, 1955, Serial No. 519,347
2 Claims. (Cl. 123—48)

1. In a control system for a variable-stroke internal combustion engine, a variable delivery fuel pumping means, a control shaft on said fuel pumping means, a driving spring on said control shaft, a stroke change lever on said engine for adjustably varying the piston stroke, a fuel control lever for driving said control shaft through

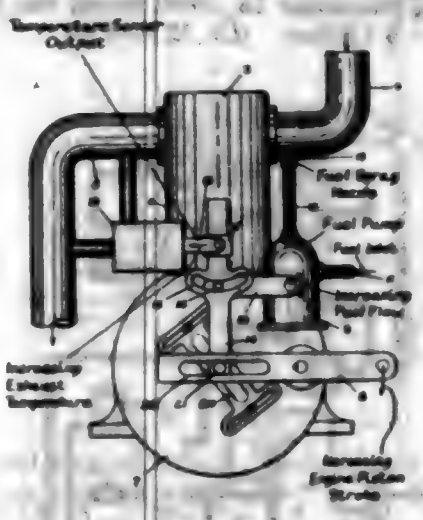
vent pressure from building up within said chamber, and a passageway extending through the post and in com-

2,865,355
INTERNAL COMBUSTION ENGINE

receiving said CO gas and having a gas offtake at the end

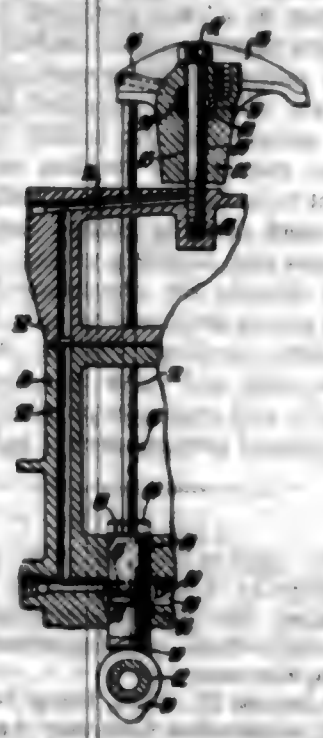
meters, a bypass around the meter in said distillate line,

said spring, a link connecting said fuel control lever and said stroke change lever, a direct connected lever on said control shaft, a spring loaded hinged lever mounted on said stroke change lever, a slotted link connecting said direct connected lever and said hinged lever, and



linkage connected to said spring loaded hinged lever for varying the position of said stroke change lever from minimum stroke position to maximum stroke position and for increasing fuel flow after maximum stroke position of said stroke change lever is reached.

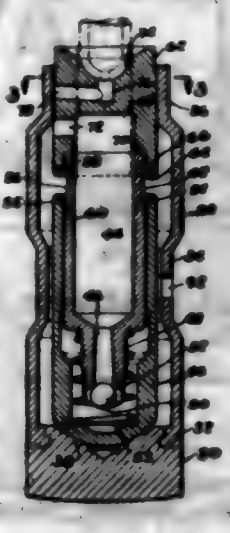
2,865,351
LUBRICATING SYSTEM
Boris J. Mitchell, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 23, 1954, Serial No. 451,598
1 Claim. (Cl. 123—90)



An engine having a valve train including a rocker arm having a support and a tappet having a guide and a camshaft having a bearing and reciprocating said tappet and a push rod between said tappet and said rocker arm, and comprising a lubricating system including a source of lubricant under pressure, a supply passage connected to said source and having an end forming a port on the inner surface of said guide member, a recess on the outer surface of said tappet and positioned to communicate with said supply port throughout the reciprocating movement of said tappet, a distribution passage connected to said rocker arm and having an end forming another port on the inner surface of said guide member, said another port being disposed opposite said recess and in communication

therewith when said tappet is at one end of the reciprocating movement thereof and being disposed remotely from said recess and out of communication therewith when said tappet is at the opposite end of the reciprocating movement thereof, said tappet being in continuous communication with said supply port through said recess and throughout the reciprocating movement of said tappet.

2,865,352
TAPPET CONSTRUCTION
Earl A. Thompson, Ferndale, Mich.
Application December 5, 1955, Serial No. 552,924
5 Claims. (Cl. 123—90)



1. A hydraulic tappet comprising a generally cylindrical hollow body having an open end and a base at the closed end thereof adapted to be engaged by a cam to actuate said tappet, a cylinder in said body having a closed end and having an open end extending in the direction of the open end of the body, a piston slidably disposed in said cylinder and having one end projecting outwardly thereof, a cap on said projecting end of said piston slidably engaging the wall of said body adjacent the open end thereof, means on said body through which pressurized oil can be admitted into said body and from the interior of said body to said piston-cylinder assembly, said cap having at the outer end thereof means forming a seat for the reception of one end of a push rod and means for directing a small portion of the oil in said body to said seat in said cap, said last mentioned means comprising a passageway in said cap extending from said seat to the surface of the cap that is slidably engaged with said body adjacent the open end of the body, there being a slight clearance provided between said slidably engaged surfaces.

2,865,353
VALVE LASH ADJUSTER
Achilles C. Sampietro, Detroit, Mich., assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application January 31, 1956, Serial No. 562,422
16 Claims. (Cl. 123—90)

1. A valve arrangement for an engine provided with a valve push rod, a spring loaded poppet valve, and a rocker arm therebetween, the combination comprising an engine head having a pressurized oil gallery and a smooth cylindrical hole leading to the gallery, a rocker arm supporting post having a straight cylindrical end press fit into said cylindrical gallery, a bearing member slidably carried on the post and being in engagement within the rocker arm to urge it against the push rod and valve, said bearing member being hollow to define a pressure oil chamber between it and the post, means connected to the post for sealing said oil chamber, means providing a small leakage path from the chamber to pre-

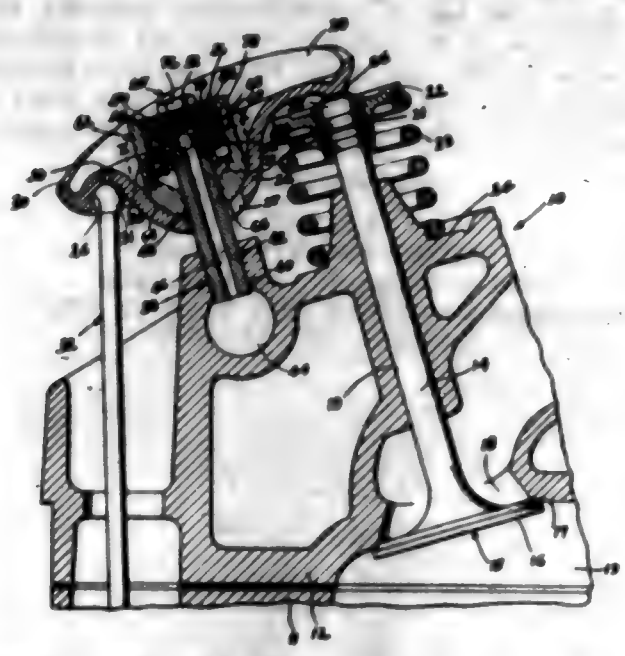
ture of said fluid medium and to said control means for simultaneously adjusting the amount of suction air sup-

extending tub-like casing including a base having an opening therethrough, a foot of the casing supporting

an edge engaging in said groove and connecting means between the governor arm and said control member.

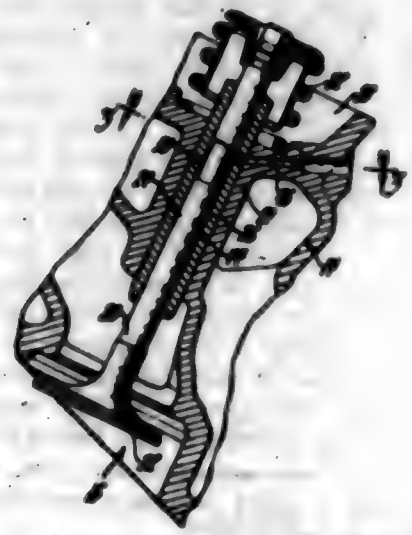
on said engine for adjustably varying the piston stroke, a fuel control lever for driving said control shaft through

vent pressure from building up within said chamber, and a passageway extending through the post and in com-



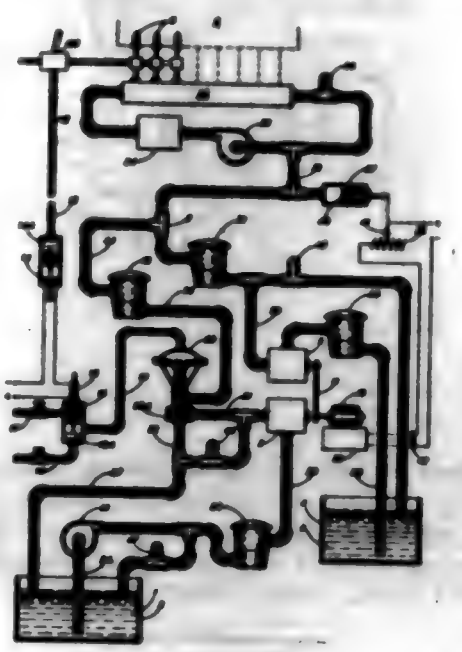
munication with said oil chamber and the gallery to pressurize the chamber.

2,865,354
INTAKE VALVE VENT MEANS
Mark H. Frank, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 19, 1958, Serial No. 716,215
5 Claims. (Cl. 123—90)



1. In an engine having intake valve stems extending through a wall separating a lubrication space from engine induction passages and wherein the difference in the pressure condition within said induction passages as compared to the pressure condition within said lubrication space produces a negative pressure condition about the ends of said valve stems received within said lubrication space which normally induces the flow of lubricant about said valve stems from said lubrication space to said induction passages and results in the subsequent loss thereof, atmospheric vent passages formed through the side wall of said engine and through said separating wall and terminating in open communication with each of said intake valve stems individually for providing an atmospheric pressure condition about said valve stems intermediate said lubrication space and said induction passages more nearly similar to the pressure condition within said lubrication space and thereby substantially eliminating the negative pressure condition about the ends of said valve stems within said lubrication space inducing the flow and loss of lubricant to said induction passages.

2,865,355
INTERNAL COMBUSTION ENGINE FUEL SYSTEM
Joseph R. Hilton, Concord, Calif., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application December 14, 1955, Serial No. 553,624
6 Claims. (Cl. 123—139)



1. Apparatus for selectively maintaining predeterminable ratios between the fluid flow rates in two fluid streams of dissimilar liquid fuels for an internal combustion engine having a throttle directly controlling the flow of said streams to said engine, comprising first rotating means in the first of said streams for causing liquid flow in said first stream at a rate governed by the speed of rotation of said first rotating means, second rotating means in the second of said streams for causing liquid flow in said second stream at a rate governed by the speed of rotation of said second rotating means, coupling means between said first and second rotating means for maintaining a constant ratio between the speeds of rotation of said first and second rotating means, means for driving said rotating means and coupling means, and a valve responsive to said throttle for preventing flow of one of said fluids to said engine until said throttle has been moved to a predetermined position, further motion of said throttle acting to open said valve to admit a mixture of both of said fuels to said engine in proportions determined by said first and second rotating means and said coupling.

2,865,356
REGULATING MECHANISM FOR INJECTION-TYPE INTERNAL COMBUSTION ENGINES
Hans R. Groesinger, Stuttgart-Untertürkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application August 27, 1956, Serial No. 606,401
Claims priority, application Germany August 30, 1955
14 Claims. (Cl. 123—139)

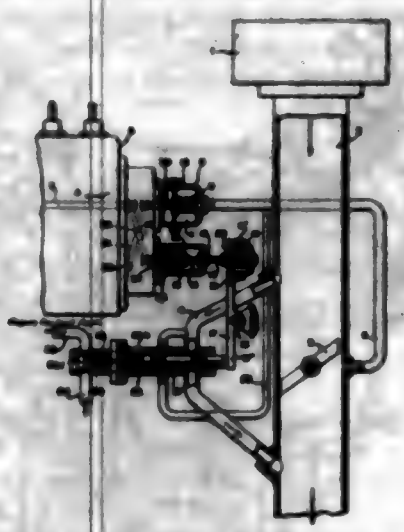
1. A control arrangement for an internal combustion engine provided with fuel injection and with a circulatory system through which a fluid medium flows in heat exchange relationship with said engine comprising a regulating mechanism for adjusting the quantity of the injected fuel, thermostatic means exposed to said fluid medium to control said thermostatic means in response to changes in the temperature of said fluid medium and therewith of said engine, conduit means with control means for selectively varying the supply of suction air to said engine, and means for operatively connecting said thermostatic means to said regulating mechanism for adjusting said regulating mechanism in dependence on the tempera-

said insert nubbin being a solidified puddle with a junc- plying oil to the bearing surfaces between said pivot

being disposed opposite said recess and in communication

connected to the post for sealing said oil chamber, means providing a small leakage path from the chamber to pre-

ture of said fluid medium and to said control means for simultaneously adjusting the amount of suction air supplied to said engine through said conduit means in dependence on said temperature.



2,865,357

ENGINE FUEL INJECTION PUMP

Carl H. Mueller, Pasadena Hills, and Victor G. Klein, Defiance, Mo., assignors to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio

Application November 9, 1955, Serial No. 545,964
1 Claim. (Cl. 123—140)

A fuel injection pump for an engine having a vacuum intake, comprising a pump cylinder having an inlet check valve connected through a chamber to a fuel tank and having an outlet check valve connected to said intake, an accelerator pump having a supply connection with said chamber and the tank and having an outlet check valve connected to the downstream side of said outlet valve of the pump cylinder, a plunger in the pump cylinder, a rotatable eccentric, a drive from the engine adapted to rotate said eccentric, connecting means between the eccentric and said plunger comprising telescoping parts and means biasing them apart with a stop limiting the bias action, whereby the plunger may reciprocate in the cylinder under full stroke or less than full stroke conditions, a stop in said cylinder movable from a position allowing full stroke of the plunger to positions for engagement thereby at less than full stroke, means normally biasing said stop to its full stroke position, and means responsive to intake vacuum adapted to move said stop toward less than full stroke positions in response to increased vacuum.

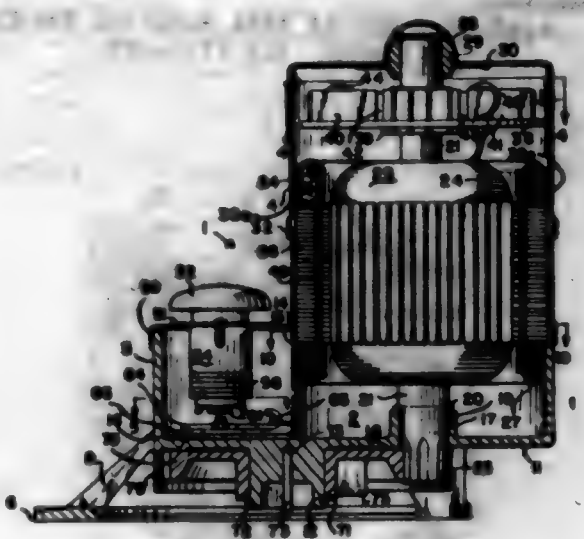
2,865,358

ELECTRIC MOTOR HOUSINGS FOR GASOLINE ENGINE STARTERS

Orly Musgrave, Springfield, Ohio

Application June 25, 1956, Serial No. 593,624
8 Claims. (Cl. 123—179)

1. In combination, in electrically operable starter apparatus, a starter housing comprising a longitudinally extending tub-like casing including a base having an opening therethrough, a foot of the casing supporting the base upwardly, an electric motor having a vertically extending motor shaft journalled in the opening and passing downwardly therethrough, a switch mount in the form of a cover on said casing, said switch mount having an open top portion extending around said motor shaft, stationary elements of said motor including an iron core supported on an internal lip of said casing below said



switch mount, a header over said open top portion of said switch mount closing the same surrounding and inclosing the motor, the upper end of said motor shaft being journaled in said header, movable elements of said motor secured on said motor shaft and retained in the combination of header, switch mount and casing, and means carried by the starter housing for connecting said motor to a source of voltage, said means including a manually manipulable member supported by said switch mount.

2,865,359

POPPET VALVE WITH WEAR RESISTANT STEM TIP

John A. Newton, Painesville, and Max J. Tanschek, Lyndhurst, Ohio, assignors to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio

Application May 18, 1955, Serial No. 509,312
2 Claims. (Cl. 123—188)

1. An internal combustion engine poppet valve having a metal stem with stem metal closing the end of the stem and forming a solid dished impact end providing a recess within the circumference of the stem, a high carbon cobalt base alloy insert nubbin of harder characteristic than the stem metal integrally united to the stem throughout the entire area of said dished end, said dished end having a bottom of arcuate contour with a substantially deep maximum depth along the axis of the stem and with a minimum depth adjacent the circumference of the stem, and

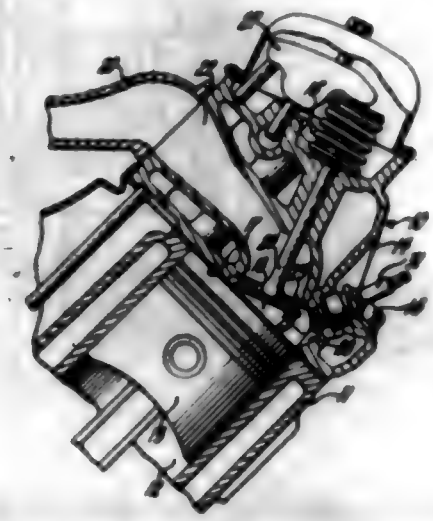
said insert nubbin being a solidified puddle with a junction bond along the entire extent of said arcuate bottom and having a substantially flat outer face forming a wear-resisting impact surface, the wear-resistant surface of said nubbin being substantially undiluted with stem metal, and the bond between the nubbin and dished end of the stem extending into both the nubbin and stem metals.

2,865,360

COMBUSTION CHAMBER AND METHOD OF FORMING COMBUSTION CHAMBER CAVITIES

Mark H. Frank, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 23, 1956, Serial No. 599,426
3 Claims. (Cl. 123—191)



1. A combustion chamber for engines comprising an engine head having a cavity formed in a plane surface thereof and adapted to communicate with a cylinder of an engine, said cavity being formed to include a substantially plane end surface disposed obliquely to said plane surface and side surfaces extending from said end surface and toward said cylinder, said side surfaces being formed to diverge away from said end surface and to converge beyond the diverging parts of said side surfaces, a pair of inlet and exhaust valves opening into said cavity through said end surface, and means for opening and closing said valves within the diverging parts of said side surfaces, the slope of said diverging parts of said side surfaces being great enough to provide a greater valve opening between said valves and said diverging parts of said side surfaces than between said valves and the seats for said valves.

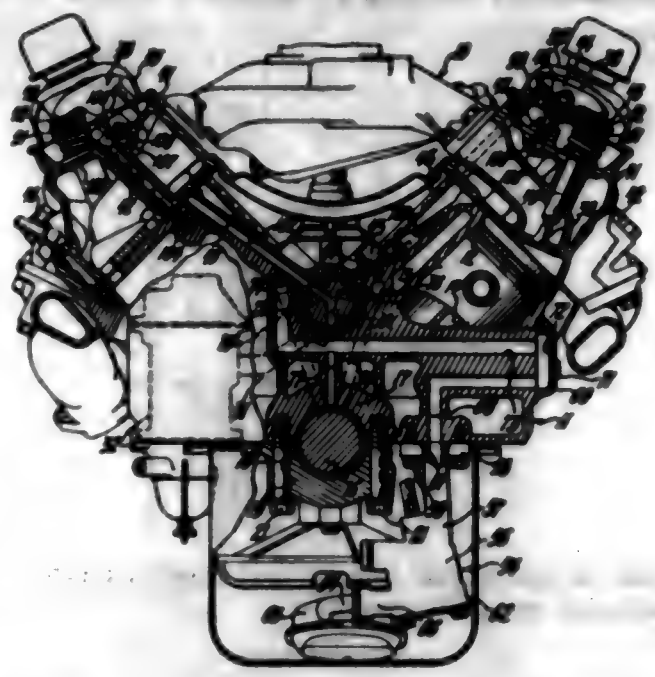
2,865,361

ENGINE LUBRICATING SYSTEM

Clayton B. Leach, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 17, 1954, Serial No. 437,503
1 Claim. (Cl. 123—196)

An internal combustion engine comprising a cylinder having a piston reciprocably mounted therein and a valve for said cylinder, a rocker arm for operating said valve, pivot bearing means for supporting said rocker arm, a push rod for operating said rocker arm, lubrication means including a passage in said push rod for continuously supplying oil to the bearing surface between said push rod and said rocker arm, and lubrication means including a passage in said pivot means for intermittently supplying oil to the bearing surfaces between said pivot means and said rocker arm, said passages in said push



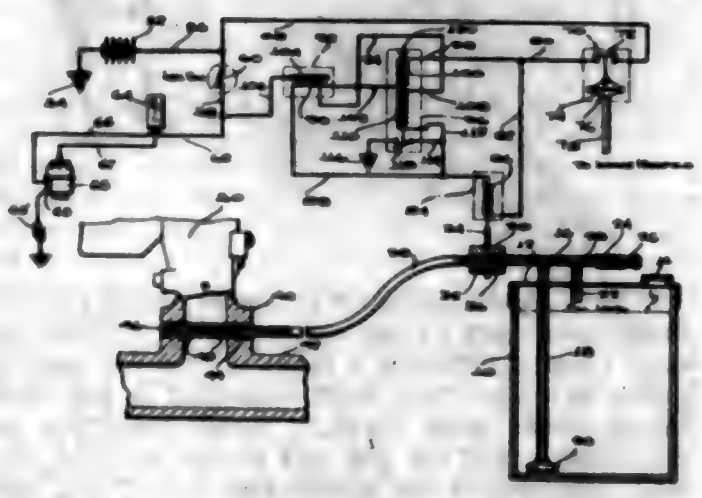
rod and in said pivot means being connected in parallel to lubricating oil supply means for said engine.

2,865,362

TOP CYLINDER AND VALVE LUBRICATOR

Charles W. Traughber, Jr., Sedalia, Mo.

Application March 16, 1956, Serial No. 572,011
1 Claim. (Cl. 123—196)

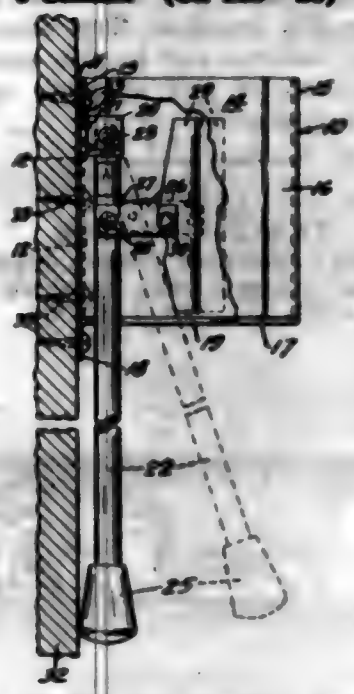


In a system for injecting a top cylinder lubricant into the intake manifold of an internal combustion engine including an ignition system, a container for said lubricant; a connection communicating between said container and intake manifold for effecting a flow of a quantity of said lubricant into the intake manifold responsive to the existence of a vacuum in said manifold, said connection having an air inlet whereby to intermix with the lubricant a quantity of air for formation of an air-lubricant mixture to be injected into the intake manifold; a normally closed valve controlling flow of said mixture through said connection; and means for opening said valve in response to the existence of vacuum in the intake manifold, said means including a solenoid associated with said valve and adapted when energized to shift the valve to open position, a source of current, a vehicle ignition coil, a vehicle ignition switch electrically connected to said source and to said ignition coil, a normally open vacuum switch electrically connected to said solenoid and to said ignition switch and adapted to close responsive to the existence of said vacuum condition, said vacuum switch being connected in communication with the intake manifold, said means further including a thermostatic time de-

is to be measured, the cuff including a pneumatic or amplifying means having input terminals, means includ-

lay relay electrically connected with the solenoid, ignition switch, and with the vacuum switch, said time delay relay being adapted for breaking circuit to the engine ignition system when energized, said vacuum switch opening following engine stoppage to deenergize said systems including the solenoid.

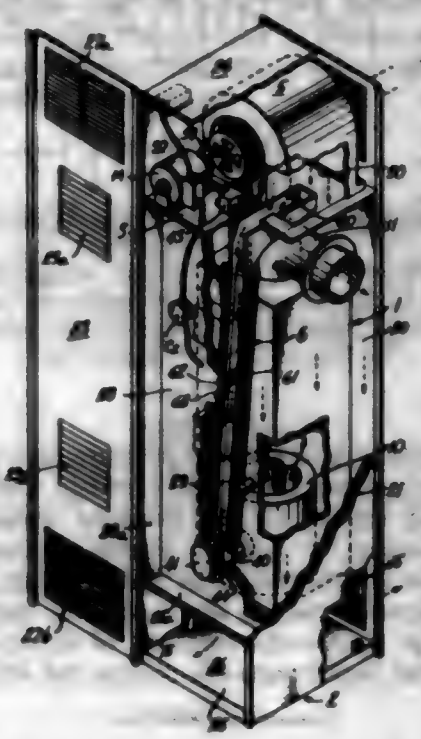
2,865,363
DEVICE FOR CRACKING FROZEN MULTIPLE CONFECTIONS
Harold H. Gurstelle and Sidney G. Burton, St. Paul, Minn.
Application February 24, 1956, Serial No. 567,517
6 Claims. (Cl. 125—23)



6. A device suitable for cracking frozen twin confections into two approximately equal halves along the confection bridge connecting the said halves, said device comprising: a base; a cover affixed to said base including a top, a pair of convergent side walls perpendicular to said top between which a frozen twin confection to be cracked may be wedged and supported, and a pair of narrow corner walls connecting said top and side walls by which an uncracked frozen twin confection wedged between said side walls is prevented from contacting said top; a lever pivotally affixed to said base adjacent the wide end of said cover extending within said cover midway between said side walls and beyond the narrow end of said cover; a linkage affixed to said lever at a point spaced a relatively short distance from said pivot point and extending toward said top in a plane perpendicular thereto; and an elongate breaking bar pivotally affixed to said linkage about its mid-point within said plane, whereby upon movement of said lever about its pivot toward and away from said top said breaking bar moves tiltably within said plane correspondingly toward and away from said top.

2,865,364
UPRIGHT FURNACE ASSEMBLY
Herman J. Cutler, Edmonds, Wash., assignor to La Salle Oil Burner Company, Inc., Seattle, Wash., a corporation of Washington
Application July 23, 1956, Serial No. 599,578
3 Claims. (Cl. 126—110)

1. A unitary furnace assembly comprising an upright housing having a separate, closable and openable front wall for access to the space within the housing immediately behind said front wall, the housing being adapted to be supported from the floor, and an upright furnace body supported within the housing with its bottom above the floor level and its top below the upper end of the housing, the housing and furnace body being of relative sizes and relatively disposed to define a hot air chamber at floor level beneath the furnace body and a generally upright heat exchange space surrounding the furnace body and between the latter and the housing, said heat exchange space communicating at its bottom with the hot air chamber; an upright panel spaced intermediate the front wall of the housing and the furnace body to define an upright control space generally separate from the heat exchange space; a platform supported within the housing in spaced relation above the furnace body and below the top of the housing to define an uppermost cold air chamber, the housing having registers admitting air to the cold air chamber and for discharge of such air from the hot air chamber; the furnace body including a fire pot at its lower end, a smoke stack leading from its upper end, and an intermediate combustion space; an oil pump, a blower, and a motor connected to drive the pump and the blower, all supported from said platform, the blower inlet being open to the cold air chamber and its outlet opening discharging through said platform to the



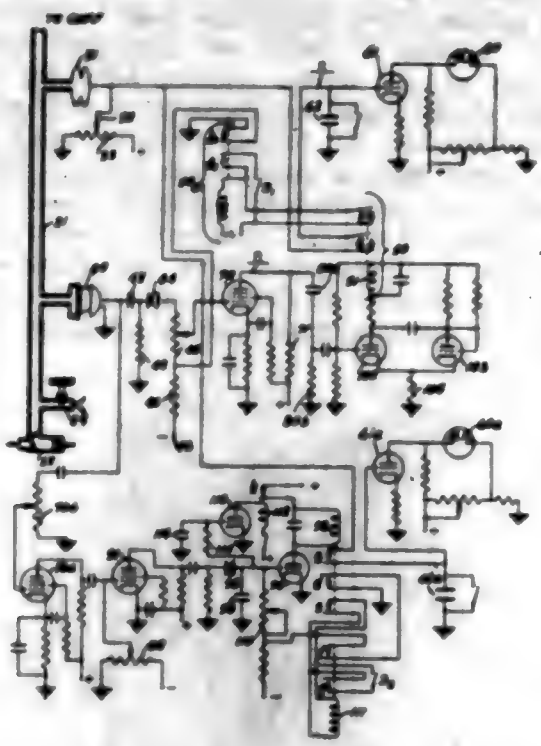
heat exchange space; a blast tube within but closed off from the heat exchange space, projecting at its outer end into said control space, and connected for discharge within the fire pot; a cap closing the outer end of the blast tube and accessible from within the control space; an oil burner tip within said blast tube; an oil line extending between the oil pump and said burner tip; an air duct generally of channel form located within the heat exchange space immediately behind and normally closed at its open side by said upright panel, said air duct including an air scoop disposed immediately below the platform at the blower outlet opening of a size and shape relative to such outlet opening to intercept a portion of the discharged air, said air duct extending downwardly from said scoop within the heat exchange space past the furnace body to said blast tube to supply air into the blast tube and past the burner tip for combustion; control devices operatively connected to the furnace assembly; and control means operatively connected to said control devices and located in and accessible from within the control space.

2,865,365
SPHYGMOMETER
Arthur E. Newland, Bedford, and Arthur J. Schultz, Indianapolis, Ind.; said Schultz assignor to said Newland
Application June 11, 1956, Serial No. 590,579
13 Claims. (Cl. 128—2.05)

1. In combination in a sphygmometer, a cuff for encircling a limb of the body the blood pressure of which

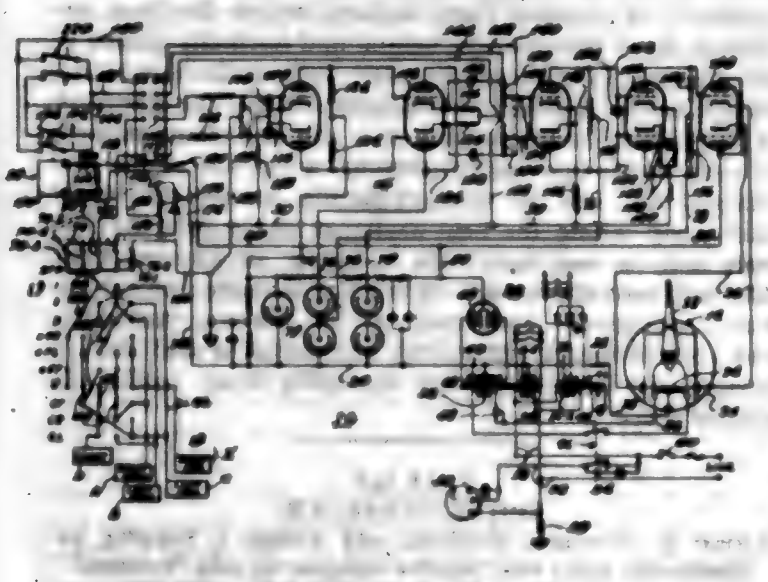
noted chamber in reverse order, said diaphragm being lying the flange of said first tubular extension for detach-

is to be measured, the cuff including a pneumatic or hydraulic system for completely constricting and stopping the blood flow past the cuff, a motion transducer responsive to wave motion in the cuff for generating a voltage wave analogous to the wave motion, a pressure transducer responsive to the pressure in said system for generating a voltage wave analogous to the pressure; a pump for inflating the system to predetermined pressure, and a



valve for linearly relieving said pressure; two meters, two normally open gates for instantaneously and selectively coupling said meters to the pressure transducer, and means responsive to voltage signals characteristic of systolic waves in the output of said pressure transducer for instantaneously closing one gate, and means responsive to voltage signals characteristic of diastolic waves in said output for instantaneously closing the other gate.

2,865,366
ELECTROCARDIOGRAPH
Leslie W. Partridge, Janesville, Wis., assignor to The Burdick Corporation, Milton, Wis., a corporation of Delaware
Application July 23, 1954, Serial No. 445,235
23 Claims. (Cl. 128—2.06)



1. An electrocardiograph for use with electrodes adapted to be connected as by patient leads to various points on a patient's body, including in combination, amplifying means having input terminals, means including a multi-position lead selector switch for connecting various of said electrodes to the input terminals of said amplifying means, said last mentioned means being constructed and arranged in at least one position to interconnect certain of said electrodes for connection to one of said terminals and to connect another one of said electrodes to the other of said terminals, and resistance means of about one-hundred thousand ohms adapted to be inserted in series circuit with each of said electrodes and the aforesaid point of interconnection by said switch means in said one position to decrease the current flow in the series circuit including the electrodes, resistance means and patient's body to a low value, and resistance means of about fifty thousand ohms adapted to be inserted in circuit between said another one of the electrodes and the other of said terminals by said switch means in said one position.

2,865,367
TRACTION TABLE
Dean L. Sorensen, Seattle, Wash.
Application January 3, 1956, Serial No. 557,906
4 Claims. (Cl. 128—71)

4. A traction table having a frame and a top for the support of the body of a patient thereon in prone position, relatively movable means at the head and foot ends of the table for anchoring the extremities of the patient thereto for an application of traction, a cylinder fixed in the frame, a piston in the cylinder, means connecting said piston and said traction applying means for their actuation, a source of vacuum, means for establishing a predetermined vacuum at said source, means operable automatically when said predetermined vacuum has been established for applying vacuum from said source to said cylinder to effect an application of traction to the patient's body, adjustable means for establishing the amount of vacuum applied, means for controlling the duration of the period of application, adjustable means for regulating the rate of application of vacuum and adjustable means for regulating the rate of relieving said vacuum.

2,865,368
RESUSCITATORS
Frank E. Sanborn, Chicago, Ill., assignor to E. A. Baer, Chicago, Ill.
Application November 26, 1954, Serial No. 471,255
16 Claims. (Cl. 128—142)

1. In a resuscitator, a body, a diaphragm, a chamber in the body, means for supplying fluid under pressure to said chamber, a second chamber in the body open to the inner side of the diaphragm, the outer side of the diaphragm being exposed to the atmosphere, a port connecting the two chambers, a venturi leading to atmosphere and yielding for opening and closing the same, a nozzle constructed and arranged to discharge fluid into the venturi said venturi and nozzle being connected for common endwise reciprocation, said nozzle being in communication with the first-noted chamber and having a valve for opening and closing the nozzle to the first-

plunger, the cross-sectional area of said piston being

2,865,373

housing, the housing and furnace body being of relative

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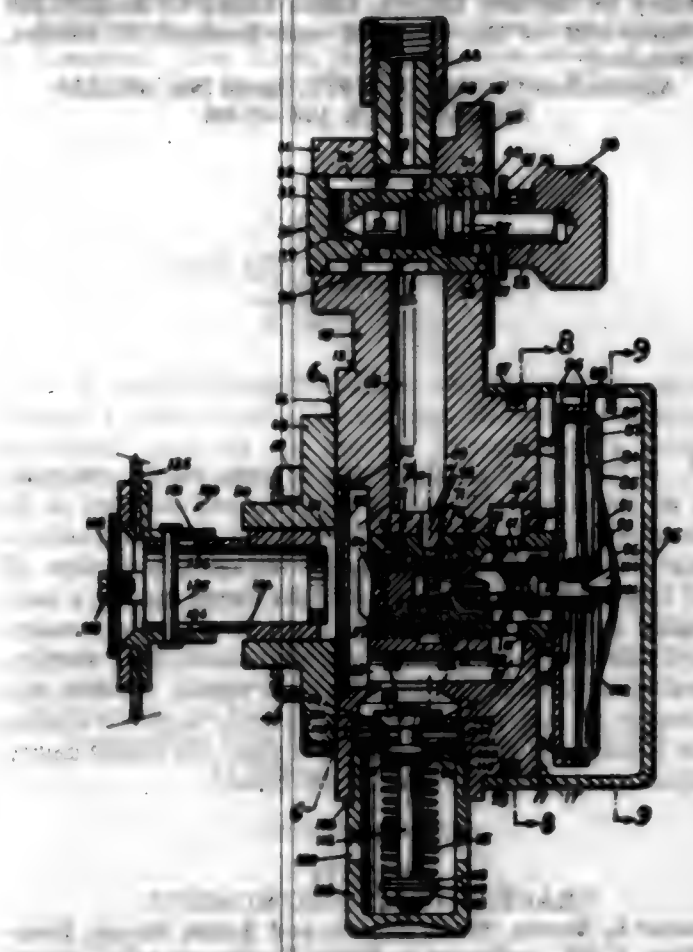
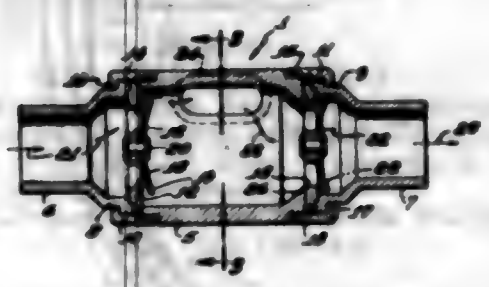
circling a limb of the body the blood pressure of which

noted chamber in reverse order, said diaphragm being attached to the venturi for reciprocating the same and



the nozzle and the valve to open and close the port and the nozzle.

2,865,369
VALVE STRUCTURE FOR SUBMARINE BREATHING APPARATUS
Richard M. Kline, Los Angeles, Calif.
Application September 26, 1955, Serial No. 536,525
1 Claim. (Cl. 128—142)



In a valve structure for submarine breathing apparatus or the like: a hollow open-ended generally cylindrical casing having opposite ends of reduced diameter, the opposite ends being exteriorly threaded; the ends of the casing having annular surfaces; said casing having an interior surface converging toward one end; means forming a transverse mouthpiece passage communicating with the interior of the casing intermediate its ends; a first valve seat disc having a series of angularly spaced ports; the peripheral portion of the first disc engaging said annular surface at said one end of said casing and conforming in size thereto; a thin resilient circular closure carried by said first disc and normally overlying said ports of said first disc, and located on the outer side of said first disc; the peripheral portion of said first disc having an edge of reduced thickness to provide an annular shoulder facing outwardly of the casing; a first tubular extension having a diverging base provided with a flange at its end interfitting the first disc at its reduced edge, said flange of said first extension conforming in size to said one end of said casing; a first holding ring threadedly engaging said one casing end, and having a flange overlying the flange of said first tubular extension for detachably clamping the first tubular extension and said first disc to said one casing end; a second valve seat disc having a series of angularly spaced ports; the peripheral portion of the second disc engaging said annular surface of the other end of said casing and conforming in size thereto; a thin resilient circular closure carried by said second disc and overlying said ports of said second disc, and located on the inner side of said second disc; the peripheral portion of said second disc having an edge of reduced thickness providing an annular shoulder facing outwardly of the casing; a second tubular extension having a diverging base provided with a flange at its end interfitting the second disc at its reduced edge, said flange of said second extension conforming in size to said other end of said casing; and a second holding ring threadedly engaging said other casing end; and having a flange overlying the flange of said second tubular extension for detachably clamping the second tubular extension and said second disc to said other casing end; the diverging base portions of said extensions and the converging interior surface of said casing providing smooth flow of air through the casing in response to inhalation and exhalation through said transverse mouthpiece passage.

2,865,370
DISPENSING ADAPTOR FOR DISPOSABLE AEROSOL UNITS
Daniel H. Gattone, Drexel Hill, Pa., assignor to Birch & Gattone, Incorporated, a corporation of Delaware
Application September 6, 1957, Serial No. 682,506
10 Claims. (Cl. 128—173)

2. A dispensing adaptor for use with disposable aerosol units having a hollow valve stem, comprising a hollow body formed with a coupling skirt, a centrally apertured plate mounted in the body above the skirt engageable over the valve stem, valve operating means carried by the body positioned above the end of the valve stem, and a discharge nozzle extending from the said body, said valve operating means being an enlargement formed on a wall of the hollow body and including a combined cam and nebulizer surface.

2,865,371
APPARATUS FOR RAPIDLY INJECTING RADIO-OPAQUE LIQUID UNDER PRESSURE IN THE TECHNIQUE OF SELECTIVE ANGIOCARDIOGRAPHY
Nemo Dorbecker and Antonio Rodriguez-Alvarez, Mexico City, Mexico
Application October 18, 1954, Serial No. 462,742
8 Claims. (Cl. 128—214)

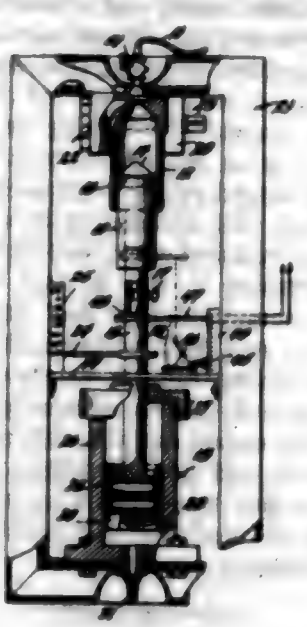
1. An apparatus of the class described comprising a hollow cylinder adapted to contain the substance to be injected and having an orifice in one end thereof, said cylinder being mounted so that its axis is substantially vertical and the end thereof containing said orifice being conically shaped, a plunger slidably mounted therein, said plunger having a conically shaped head at one end thereof adapted to fit into said conically shaped end of said cylinder, a piston attached to the other end of said

2,865,375

and said supporting members when the prongs are in

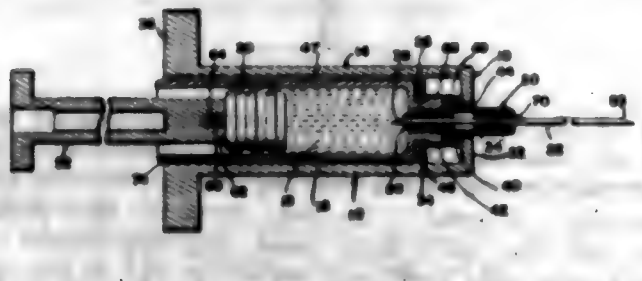
points on a patient's body, including in combination, a valve for opening and closing the nozzle to the first-

plunger, the cross-sectional area of said piston being larger than the cross-sectional area of said plunger, a second hollow cylinder in which said piston is slidably mounted, an orifice in said second hollow cylinder, a source of compressed air connected to said last-named



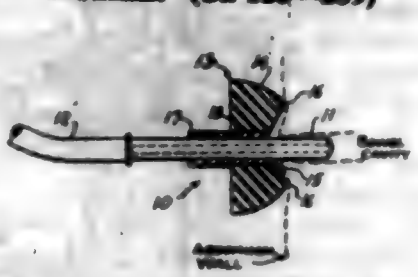
orifice, said last-named orifice being positioned in said second hollow cylinder so that compressed air from said source drives said piston and said plunger whereby the substance in said first hollow cylinder is expelled through said orifice therein.

2,865,372
HYPODERMIC SYRINGE
John J. Mikel, Brooklyn, and Kenneth T. Tancredi, Ridgewood, N. Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
Application November 18, 1957, Serial No. 697,194
6 Claims. (Cl. 128—218)



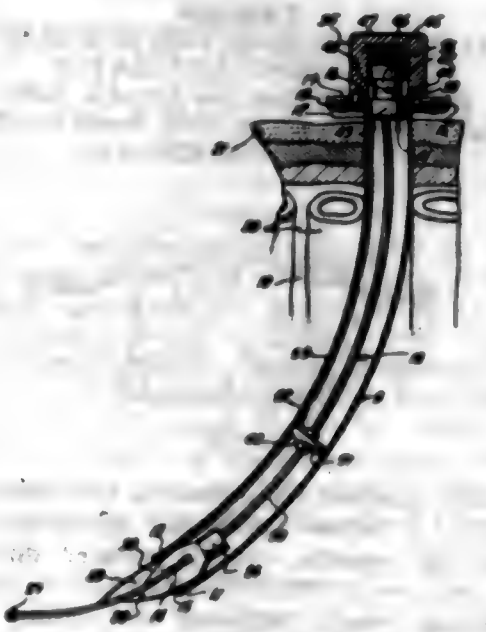
1. A hypodermic syringe incorporating a disposable cartridge and needle assembly adapted for longitudinal movement together to establish communication therebetween, said syringe comprising a trough-shaped body, said cartridge including a recessed neck disposed adjacent its front end, said needle including a hub having a flange disposed adjacent said front end of said cartridge, said body including a front wall and an intermediate wall disposed a distance apart sufficient to provide a recess for receiving and longitudinally locking said front end of said cartridge and said flange together after they are moved into contact with each other, said front and intermediate walls being cut out to form slots connected with the open side of said trough-shaped body which are wide enough to respectively pass said needle hub and said cartridge neck as said assembly is loaded through said open side of said trough-shaped body, said slots being narrow enough to provide shoulders for restraining longitudinal movement of said contacting cartridge front end and needle flange and said cartridge being inserted within said trough-shaped body with said contacting cartridge front end and needle flange disposed within said recess.

2,865,373
COLOSTOMY SYRINGE NOZZLE OR THE LIKE
Bernard H. Recher, Ottawa, Ohio; Claud L. Recher, administrator of the estate of said Bernard H. Recher, deceased
Application October 30, 1957, Serial No. 693,329
2 Claims. (Cl. 128—239)



1. A colostomy or ileostomy syringe nozzle comprising an injection tube having an open end adapted to fit into a bowel cavity in an abdominal wall, a resilient flange substantially concentrically engaging a portion of said tube perpendicular thereto, said flange having a converging forward surface with a recess portion concentrically located about said tube, said converging surface forming an annular ridge with said recess portion, the diameter of said ridge being sufficiently large to enable it to contact the abdominal wall around the bowel cavity without contacting the end of the bowel.

2,865,374
TRACHEOTOMY INSTRUMENT
Charles E. Brown, Sierra Madre, and Aaron Bloom, Pasadena, Calif., assignors to Sierra Engineering Co., Sierra Madre, Calif., a corporation of California
Application September 16, 1957, Serial No. 684,261
4 Claims. (Cl. 128—305)



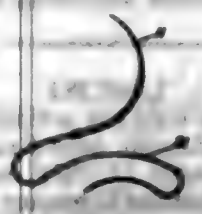
1. A tracheotomy instrument comprising a hollow arcuate tube having an open operating end and an open handle end, a flange at said handle end having lock means thereon, a piercing assembly comprising a streamlined head having a pressure fit in said operating end and knife means on the head extendable beyond the tube, a knob having a lock means engageable with said first identified lock means, means forming an axially extending pocket in said knob, a plug slidably and rotatably secured in said pocket, an arcuate relatively stiff rod interconnecting said plug and said head, said rod in assembled position lying substantially along the axis of said tube, and a spacer disc fixed on said rod intermediate opposite ends thereof and having a sliding fit in said tube.

2,865,379
ASH RECEIVER

and substantially parallel horizontal plaits around the

said one end of said casing; a first holding ring threadedly engaging said one casing end, and having a flange over- thereof adapted to fit into said conically shaped end of said cylinder, a piston attached to the other end of said

2,865,375
PLATING SURGICAL NEEDLES
Reginald Marsh Bonbo, Rye, N. Y., and Robert Charles Bell, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application March 27, 1956, Serial No. 574,160
3 Claims. (Cl. 128—339)



1. A needled surgical suture comprising: an eyeless needle, a shiny, corrosion-resistant, flexible nickel-nickel phosphide plate on the surface thereof, and a flexible surgical suture swaged to said needle.

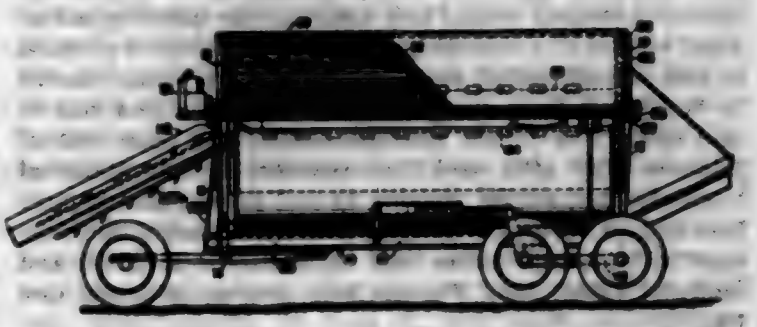
2,865,376
GOLD PLATING SURGICAL NEEDLES
Laurence Delisle Pellier, Westport, Conn., and Charles Daniel Di Pietro, Port Chester, N. Y., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application March 27, 1956, Serial No. 574,161
3 Claims. (Cl. 128—339)

1. A process for preparing shiny, corrosion-resistant gold plated needled surgical sutures which comprises: cleaning steel eyeless needles, and immersing in an alcoholic solution of gold chloride containing 0.1 gram of gold chloride per 60 to 120 milliliters of solution, for between 30 and 90 seconds, and rinsing the needles with an alcoholic rinse.

2,865,377
UTILITY PRONG METAL
Walter E. Schreer, Affton, Mo., Victor Trybiarski, Jr., East St. Louis, Ill., and Irvin H. Walling, St. Louis, Mo., assignors to Loose Leaf Metals Company, St. Louis, Mo., a corporation of Missouri
Application April 30, 1956, Serial No. 581,725
1 Claim. (Cl. 129—17)

In combination, a loose leaf metal including two prong supporting members, prongs mounted on each supporting member, means pivotally connecting said prong supporting members so that said supported prongs are movable in arcs from open position to overlapping closed position, an arcuate cam member secured to one supporting member intermediate the ends thereof including a strip portion in arcuate form transversely spanning a portion of said one supporting member, an arcuate bracket secured to the other prong supporting member intermediate the ends thereof and in operative opposed relation to said arcuate cam member including a strip portion in arcuate form transversely spanning a portion of said other supporting member, said bracket overlying the arcuate cam member when said prong supporting members are in position with the prongs in closed relation, said arcuate cam member being disposed between the bracket and said supporting members when the prongs are in closed relation, said arcuate cam member and said bracket being in separated relation when said said prong supporting members are in position with the prongs in open relation, an elongated latch member mounted on the supporting member to which said bracket is secured for longitudinal reciprocative movement transversely of said bracket and said cam member, said latch member having an angularly directed tongue at one end and a thumb piece at the other, said bracket including a transverse slot in a plane parallel with its supporting member, said tongue being disposed in said transverse slot of said bracket, said cam member including a transverse shoulder, a cam surface at each side of said shoulder, and a transverse slot spaced from said shoulder in a plane parallel with its supporting member, said cam surface between said shoulder and said transverse slot in said cam member leading from the inner end of said shoulder to the open end of said transverse slot to guide the latch member tongue from the shoulder into the transverse slot, said tongue engaging said transverse shoulder in one position of said supporting members and engaging in said transverse slot of said cam member in another position of said supporting members, and spring means biasing said latch member longitudinally outwardly and said tongue towards engagement with the closed end of the bracket slot, said cam surface of said cam member between said shoulder and said slot of said cam member providing automatic guide means to direct said latch tongue from shoulder engaging position to slot engaging position upon closing movement of said supporting members.

2,865,378
CROP HULLING APPARATUS
Mead S. Carmichael, Jr., Columbus, Ohio, assignor to The Scott Viner Company, Columbus, Ohio, a corporation of Ohio
Original application June 18, 1953, Serial No. 362,459. Divided and this application September 6, 1955, Serial No. 532,444
1 Claim. (Cl. 136—30)



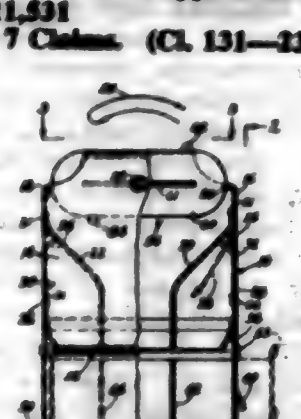
An improved viner, or the like, of the type wherein the crop and stalks are fed into a rotatable drum having a rotatable beater cylinder mounted therein, the improvement comprising, in combination, a beater cylinder mounted on a stub shaft extending axially therethrough for rotation of said cylinder and including a main cylindrical portion and an inwardly tapered front nose portion; a rotatable drum surrounding the beater cylinder and having an open forward end; a stationary closure wall for said open end of the drum and receiving one end of said stub shaft, said closure wall having a crop intake opening centrally positioned in the lower portion thereof, said front nose portion of said beater cylinder being spaced rearwardly of said intake opening; a guard pan secured to the inner surface of said stationary closure means to cover the upper portion of said intake opening, said guard pan extending rearwardly from said opening and having a back face in abutting relationship with the forward end of said nose portion and surrounding said stub shaft, and a plurality of beaters angularly mounted on the nose portion of said beater cylinder and extending substantially the length thereof.

2,865,383
ible means joining the upper ends of said poles exteriorly

said recess.

fit in said tube.

2,865,379
ASH RECEIVER
George W. Fernandez, Lawndale, Calif.
Substituted for abandoned application Serial No. 566,243, February 17, 1956. This application January 27, 1958, Serial No. 711,531
7 Claims. (Cl. 131—235)

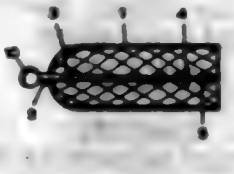


6. In an ash receiver, an upstanding casing open at its upper end, a tray assembly including a pair of oppositely facing trays with a common bottom therebetween positioned within said casing so that the bottom is horizontally disposed and below the open end of the casing with one of the trays facing upwardly and the other of the trays being within the casing and facing downwardly and connected to said casing for movement to a position in which said one tray faces downwardly and said other tray faces the open upper end, there being a passage extending from one end of said one tray to the adjacent end of said other tray, a flexible closure extending over and normally closing the open end of said other tray and connected to said casing for sliding movement from the position closing the open end of said other tray to a position closing the open end of said one tray, the said other tray with the closure closing the open end thereof being adapted to contain a supply of sand, sand leveling elements adjacent each end of said closure, said elements facing toward said tray assembly bottom, means connected to said tray assembly for effecting movement of said tray assembly from said first named position to said second named position, said closure being adapted to be moved from the position closing the open end of said other tray to the position closing the open end of said one tray after said tray assembly has been moved from said first named position to said second named position and to cause the leveling element opposite said passage to be moved across said other tray to level off and feed the excess sand through said passage into said one tray.

2,865,380
HAIRPIECES AND METHOD OF HAIR PREPARATION
Princess Mitchell, Pittsburgh, Pa.
Application June 4, 1956, Serial No. 589,279
3 Claims. (Cl. 132—5)

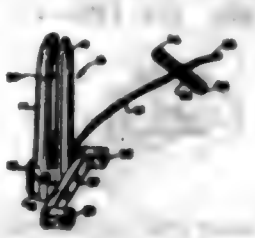
1. A method of rapidly converting a short hair dress into a long hair dress by the addition of artificial hair to the natural hair, comprising the steps of, plaiting the natural hair into a plurality of vertically spaced-apart and substantially parallel horizontal plaits around the head, providing a thin preformed member having depending elongated strands of hair of a length greater than the distance between said vertically spaced-apart plaits, and successively sewing one of said preformed members to each of said plaits beginning with the lowermost plait, to form successively overlapping layers of artificial hair and thereby providing a long hair dress.

2,865,381
HAIR CURLER ASSEMBLY
Christian Stöhr, Zeyern, near Kronach, Germany
Application December 17, 1956, Serial No. 628,747
Claims priority, application Germany December 20, 1955
9 Claims. (Cl. 132—40)



1. A hair curler assembly comprising a hollow, substantially tubular curler body, around which a hair curl is to be wound, an elongated fastening member comprising a single elongated pin extending into said curler body, said curler body having an opening in an end wall thereof, said fastening member extending for axial sliding movement through said end wall opening and having a retaining abutment at each end of larger size than the opening for preventing the fastening member from being entirely removed through said end wall opening, said curler body having at least one body opening spaced from said end wall opening, said fastening member being movable to an operative holding position in which it extends obliquely through the interior of said hollow curler body with its ends projecting from the respective openings, whereby the fastening member in its operative position is adapted to brace the curler body against the head to prevent unrolling of the curler.

2,865,382
HAIR CURLING AND WAVING DEVICE
William A. Roget Kunze, Miami Beach, Fla.
Substituted for abandoned application Serial No. 573,269, March 22, 1956. This application June 6, 1958, Serial No. 740,436
3 Claims. (Cl. 132—42)



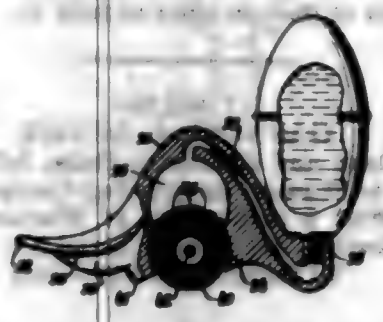
1. A permanent wave rod for cold waving and curling hair comprising a circular base with a winding post extending perpendicularly thereto and having an axial longitudinal slot opening, a resilient member having one end secured to the base adjacent the slot opening of the winding post and a free end, and a locking member on the resilient member at the free end thereof adapted to coact with the slot opening in the winding post, said winding post tapering from the base outwardly with the axial longitudinal slot opening extending from the free tapered end of the post and terminating short of the base, said locking member being a crossbar having free ends and secured midway said free ends to the resilient member, said base having a U-shaped portion at one side thereof with free ends extending outwardly.

gether at one of their one ends to each other and detachably secured at their other ends to the rods forming

tively positioned in the fourth pipe for allowing passage of additive liquid to said additive liquid portion of the

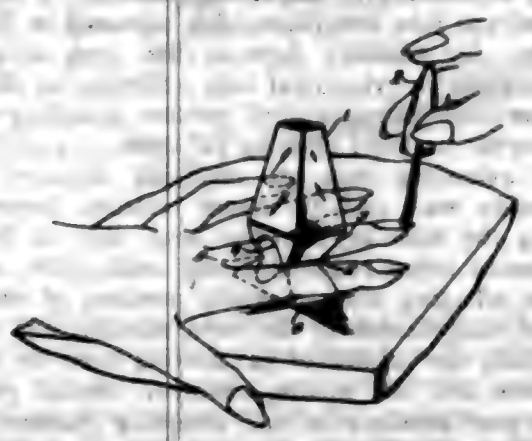
arcuate cam member being disposed between the bracket substantially the length thereof.

2,865,383
APPARATUS FOR APPLYING LOTIONS, DYES, BLEACHES OR LIKE LIQUIDS TO THE HAIR ROOTS OR TO THE SCALP
Flora McDougall Kaley, Rome, Italy
Application November 18, 1957, Serial No. 697,143
9 Claims. (Cl. 132—45)



1. Apparatus for applying flowable substances to the scalp comprising a body, a hair parting member on said body, means for spreading outwardly on each side of the parting member the hairs parted by said member, means for attaching a reservoir for the flowable substance to said body, a recess in said body within the length of the hair spreading means, a rotary brush mounted in said recess, and a channel for conveying the flowable substance from the reservoir attached to said body to said recess so that the flowable substance is applied by the rotary brush to the scalp in the parting formed by the parting member.

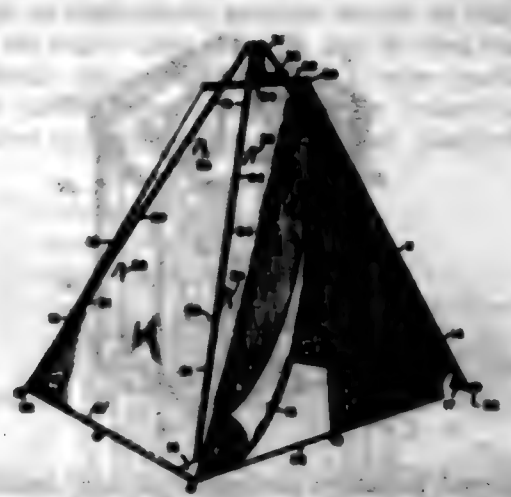
2,865,384
BOTTLE
Ivor G. Noon, Clayton, Mo.
Application October 28, 1954, Serial No. 465,368
3 Claims. (Cl. 132—73)



3. The combination with a nail polish bottle having substantially greater height than transverse dimensions and an opening in its top, of a base having a flat bottom and a finger hole whose axis is substantially perpendicular to the axis of the opening in the top of the bottle, said finger hole being located adjacent said flat bottom, said base having adjacent said flat bottom external concavities whose axes are substantially parallel with the axis of said finger hole, the walls between said finger hole and said concavities being proportioned to be comfortably receivable between adjacent fingers of a hand.

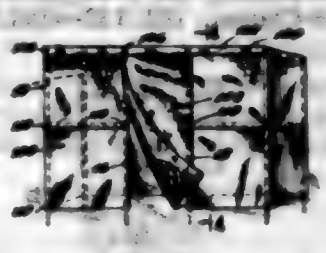
2,865,385
TENT
Dermont B. Crafts, Auburn, Maine
Application July 19, 1956, Serial No. 598,537
4 Claims. (Cl. 135—1)

2. A tent comprising a series of connected panels of sheet material tapered in width from bottom to top and forming an enclosure, a stand including substantially straight tent poles adapted to be set up with their lower ends apart, upper ends of said poles converging and forming a compressing means for supports for panels, a flexible means joining the upper ends of said poles exteriorly of said panels, said panels having exteriorly adjacent the base of said panels pockets for receiving the lower



ends of said tent poles, spring means connecting the upper ends of said poles and biasing the lower end of said poles apart and said panels extended.

2,865,386
COLLAPSIBLE STRUCTURE
John M. Burns, Oak Park, Ill.
Application July 20, 1956, Serial No. 599,271
8 Claims. (Cl. 135—1)



1. A collapsible shelter comprising a frame including a plurality of straight, rigid poles disposed vertically and arranged in spaced relation to form an enclosure-defining series, each pole having a pointed ground-engaging portion at its lower end, a plurality of straight, rigid rods each extending horizontally betwen the upper ends of successive poles of the series and means detachably connecting the ends of said rods to the upper ends of successive poles respectively, an elongate side wall element of flexible material extending continuously around said series of poles in engirdling relation, with its ends terminating at one of said poles, the portion of said side wall element extending from said one pole to the next succeeding pole forming an entranceway closure, means detachably connecting said side wall element to each of said poles adjacent the ground-engaging end and adjacent the upper end, and a roof member of flexible material extending over and between said rods and having flaps depending from its edges in closed, overlapping relation with said side wall element and detachably secured to each of said poles adjacent the upper end.

2,865,387
FOLDING STRUCTURE FOR FRAMING TENTS AND THE LIKE
Emilio Annibaldi, Milan, Italy
Application March 27, 1956, Serial No. 574,244
Claims priority, application Italy March 30, 1955
5 Claims. (Cl. 135—4)

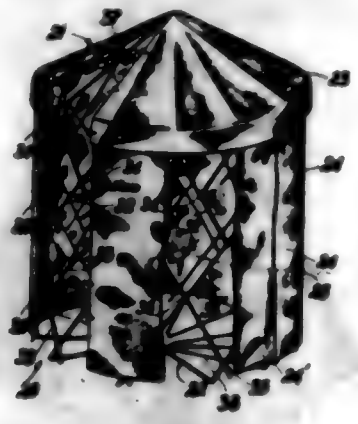
1. A tent frame structure comprising, in combination, a cylindrical lazy tong-type wall structure composed of two sets of substantially parallelly extending rods intersecting each other and secured at said point of intersection to each other in lazy tong-like manner; a reinforcing structure at the bottom of said lazy tong-like wall structure composed of a plurality of rods secured to-

washing liquid and greater than said suds whereby the

tura, is controlled by a pilot valve member which is

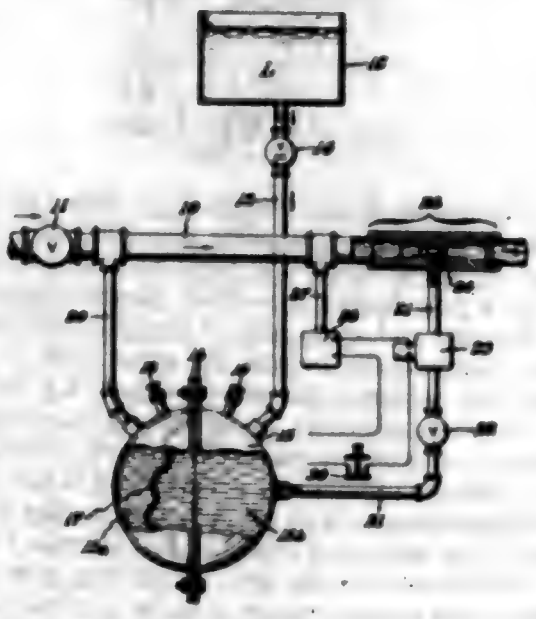
natural hair into a plurality of vertically spaced-apart with free ends extending outwardly.

gether at one of their one ends to each other and detachably secured at their other ends to the rods forming said cylindrical lazy tong-like wall structure; and a



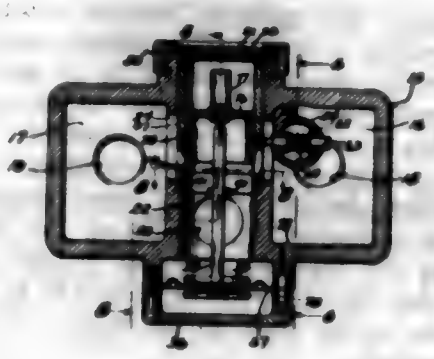
conical roof structure composed of rods secured at one of their ends to each other and detachably secured at their other ends to the opposite end of said cylindrical lazy tong-like wall structure.

2,865,388
LIQUID MIXING AND PROPORTIONING DEVICE
Solon A. Sternbergh, West Lawn, Pa., assignor to West Shore Manufacturing Company, Reading, Pa., a corporation of Pennsylvania
Application January 13, 1955, Serial No. 481,639
6 Claims. (Cl. 137—101.17)



1. Apparatus for introducing an additive liquid into a carrier liquid, comprising a main pipe in which said carrier liquid is caused to flow; a venturi positioned in said main pipe; a container having an internal flexible diaphragm dividing the container into two separate portions, a carrier liquid portion and an additive liquid portion; a second pipe connecting said carrier liquid portion to the main pipe upstream of the venturi; a third pipe connecting said additive liquid portion of the container to the throat of the venturi, closure means operatively positioned in said third pipe; control means for operating said closure means directly in response to the flow of carrier liquid in the main pipe and independently of the flow of liquid additive, said control means being connected to the main pipe by mechanical means and being connected to said closure means by electrical means; a reservoir containing said additive liquid; a fourth pipe connecting the reservoir to said additive liquid portion of the container; and refilling means for automatically refilling said additive liquid portion of the container, said refilling means including check means operatively positioned in the fourth pipe for allowing passage of additive liquid to said additive liquid portion of the container and for preventing flow of additive liquid in the reverse direction, and means for relieving the pressure in said second pipe and said carrier liquid portion of the container, whereby said additive liquid is automatically caused to flow from the reservoir into said additive liquid portion of the container to refill it.

2,865,389
GAS MIXING DEVICE
Robert C. Ozum and Charles S. Hoke, Milwaukee, Wis., assignors to Waukee Engineering Company, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application May 2, 1956, Serial No. 582,218
9 Claims. (Cl. 137—111)



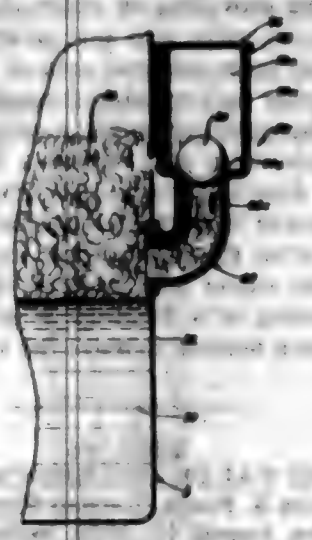
1. In a gas mixing and proportioning device, a unitary casing providing a plurality of gas receiving chambers each having an inlet and a gas mixing chamber having an outlet and having ports therein connecting each receiving chamber with the mixing chamber, a segment of a cylindrical tube interchangeably mounted in the mixing chamber for partially defining the open area of the several ports, a cylindrical tube rotatable in the mixing chamber and having a wall portion co-acting with the segment for partially defining the open area of the ports, means extending into one receiving chamber through the casing wall and in sealed relation therewith for rotating the tube to vary the open area of the ports, said means being removable and replaceable as a unit without affecting other movable portions of the device, a valve reciprocable in the tube segment and tube for controlling the volume of gas flowing from the receiving chambers into the mixing chamber, means responsive to the gase pressure in one receiving chamber and in the mixing chamber for reciprocating the valve, a rod connecting the pressure responsive means with the valve, and means for guiding movement of the rod to prevent torsion of the pressure responsive means and coacting with the segment and the tube in defining the open area of the ports.

2,865,390
LIQUID OVERFLOW CONTROL FOR DOMESTIC APPLIANCE
James O. Bowen, Benton Harbor, and Norman D. Seymour, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Application November 5, 1956, Serial No. 620,388
9 Claims. (Cl. 137—188)

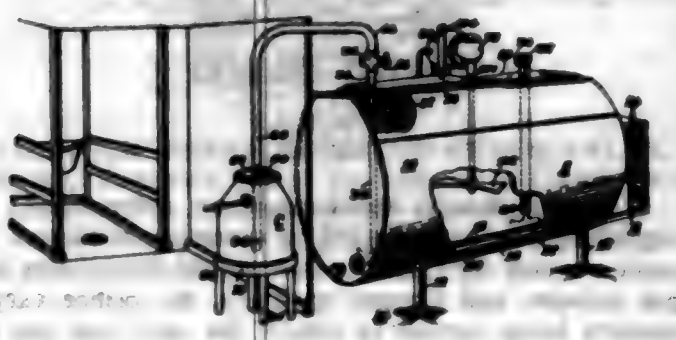
1. A liquid overflow control for a washing appliance comprising a washing chamber for containing a quantity of washing liquid with suds floating on the surface of the liquid, an overflow conduit connected to the chamber at a location to conduct the washing liquid to a drain when said liquid rises above a predetermined level, a valve member in the conduit and an orifice defining member in the conduit against which said valve member seats, said valve member having a density greater than said

third ring for sealing engagement with said second cas- for a restricted flow of water to the end area thereof op-

washing liquid and greater than said suds whereby the valve member is forced away from its seat only when the liquid reaches a predetermined level above the valve member.



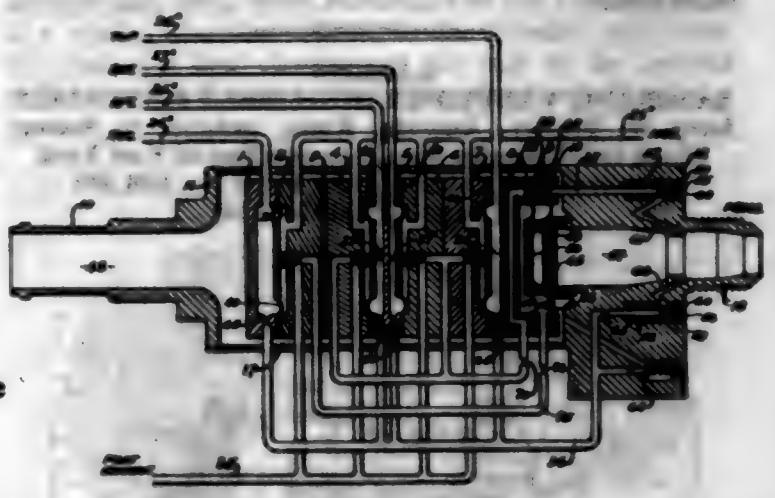
2,865,391
MEANS FOR FILLING A BULK MILK CONTAINER FROM ONE OR MORE MILK CANS
Lloyd P. Duncan, Washington, Mo.
Application February 16, 1955, Serial No. 488,578
5 Claims. (Cl. 137—385)



1. In a milking system comprising a bulk milk tank, said tank having inner and outer spaced walls, refrigerating means, means for cooling said inner walls connected to said refrigerating means, means for applying a vacuum to the interior of said tank, in combination, a portable milk can having a filling opening, a removable cover, means for partially sealing said cover to said can opening on said milk can, and a valve controlled conduit means connecting the interior of said bulk milk tank with the interior of said portable milk can, said conduit means extending through said cover and having a flexible portion secured to said tank and extending between said tank and cover, and having another portion extending from said cover to adjacent the bottom of said can.

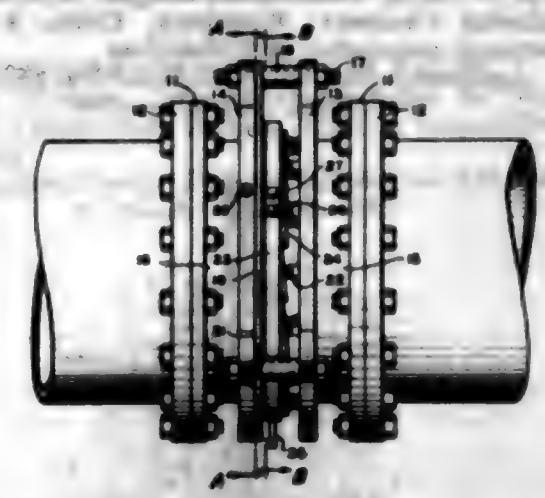
2,865,392
REMOTE-SENSED FUEL TANK AIR CONTROL VALVE
John G. Russell, Mayfield Heights, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Application June 17, 1955, Serial No. 516,121
17 Claims. (Cl. 137—396)

1. In a valve assembly of the character wherein flow of fluid therethrough is controlled by a main valve member which is seated and unseated in accordance with the magnitude of fluid pressure in a chamber therebehind relative to the fluid pressure thereabout, and which, in turn, is controlled by a pilot valve member which is seated by predetermined fluid pressure in a chamber therebehind and unseated by reduction of such fluid pressure therebehind to respectively prevent escape of fluid pressure from the main valve chamber and to vent the main valve chamber, the combination of a valve casing provided with an inlet port adapted to be connected to a fluid pressure source, and an outlet port adapted to be



connected to a unit to be supplied with fluid under pressure; and a series of juxtaposed main and pilot valve housing members clamped together to said casing and forming a vent passage adapted to be communicated with said main valve chamber when said pilot valve member is unseated, supply passages communicating said inlet port with said main and pilot valve chambers, and a sensing passage adapted to communicate said pilot valve chamber with fluid under pressure supplied to such unit.

2,865,393
VALVE
William H. Edge, Severn Beach, near Bristol, and Ronald G. Hiller, Sea Mills, Bristol, England, assignors to Phillips Petroleum Company, Bartlesville, Okla., a corporation of Delaware
Application August 4, 1954, Serial No. 447,707
5 Claims. (Cl. 137—246)

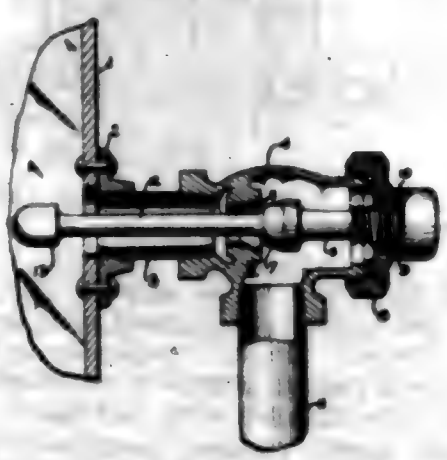


1. A goggle valve comprising a pair of casing sections aligned on a common axis and spaced apart; a valve plate movable in a transverse plane between the casing ends; a first ring secured to the end of a first of said casings; a first packing means incorporated in said ring for sealing engagement with said valve plate; a second ring secured to the second casing and spaced from said end; a plurality of bolts securing said first and second rings in spaced relationship; a third ring movably mounted on the second casing between the second ring and the end of said casing; a second packing means incorporated in said third ring for sealing engagement with said valve plate; a third packing means incorporated in said

said case on the inlet side of said flange and that on the relation to a fluid pressure source and a fluid pressure

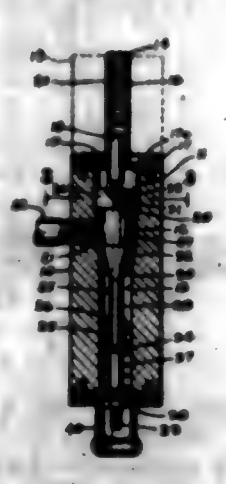
third ring for sealing engagement with said second casing; a plurality of cams mounted on said third ring opposite said second packing means; a plurality of rollers mounted on said second ring in contact with said cams; means for lubricating said first, second and third packing means; and means for rotating said third ring whereby said cams and rollers force said third ring and second packing means into sealing engagement with said valve plate.

2,865,394
SAMPLING VALVE FOR HIGH MELT MATERIALS
Jerry W. Presley, Augusta, Kans., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Application October 4, 1957, Serial No. 688,309
1 Claim. (Cl. 137—334)



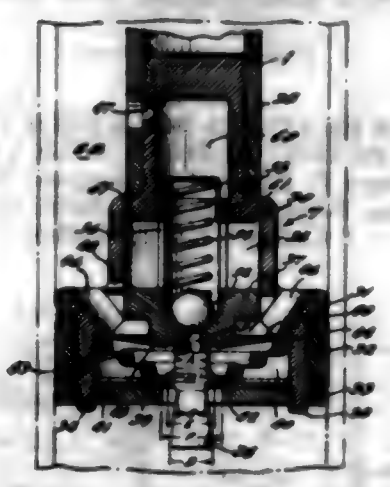
A device for sampling high melt materials maintained as liquid in a container comprising a rising stem valve, means for connecting the valve to the wall of the container, in said valve a seat, on the stem thereof a valve disc, and a metallic extension of said stem beyond the valve disc, said extension being of length sufficient to pass through said valve connecting means and into the body of liquid within the container.

2,865,395
FLOW CONTROL VALVE
George C. Fields, Wilmette, Ill., assignor to Scovill Manufacturing Company, Waterbury, Conn., a specially chartered corporation of Connecticut
Application May 24, 1956, Serial No. 587,829
5 Claims. (Cl. 137—486)



4. A fluid flow control valve comprising a valve body having a valve seat, a floating valve member guided in said body, a valve carried thereby adapted to move toward and away from said seat, a piston carried by the valve member in spaced relation to and above the valve and having an annular area around the valve connecting with the inlet so as to be constantly subjected to inlet pressure tending to move the valve to open position, said body having an enlarged bore in which said piston moves, means for closing the upper end of said bore means providing for a restricted flow of water to the end area thereof opposed to said annular area, said valve body having a bore below the valve providing an outlet chamber, a stem depending from the valve into said outlet chamber, a passageway leading from said end area of the piston through the valve member and opening through a lateral port in said stem to the outlet chamber, a port-controlling sleeve surrounding said stem and having a baffle flange in the path of water flowing through the valve, a spring tending to hold said sleeve in port-open position against the fluid flow, so that when the rate of flow increases beyond the desired rate the sleeve will move at least partially over said port resulting in a build-up of pressure on the end area of the piston tending to move the valve toward closed position.

2,865,396
METERING VALVE FOR SHOCK ABSORBERS
Nevin S. Focht, Garden City, N. Y.
Application August 15, 1956, Serial No. 179,567
4 Claims. (Cl. 137—493.3)



1. In a hydraulic shock absorber, valve means for regulating flow from a working space comprising an element movable for varying a flow orifice, cooperating dash pot cylinder and plunger members, the orifice varying element being carried by one of the said dash pot elements, the said dash pot member being subjected on one side to the pressure within the dash pot and on the other to pressure within the working space, a check valve in the said dash pot member for admitting fluid from the working space into the dash pot cylinder behind the plunger, and a spring in the dash pot cylinder for yieldingly holding the check valve closed, the spring acting between the cooperating dash pot members and compressing as they are forced together for increasing the working space pressure required to open the check valve.

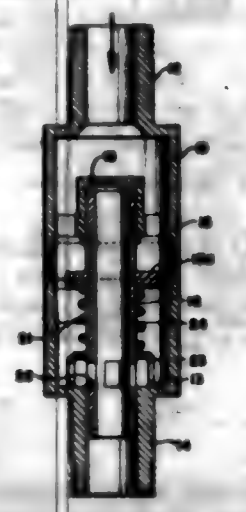
2,865,397
HYDRAULIC GOVERNOR
Ray L. Chenault, Seneca, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application October 6, 1954, Serial No. 460,723
3 Claims. (Cl. 137—504)

1. A hydraulic governor comprising a case having an inlet at one end and an outlet tube extending from the other end, a cylinder supported within said case and being closed toward said inlet and open toward said outlet tube, the bores of said outlet tube and said cylinder having equal cross-sectional areas, a tubular valve member mounted within said case for axial movement and having its upper and lower end portions received in said cylinder and said outlet tube respectively, the two ends of said valve member having equal areas, a flange carried by said valve member intermediate its length and having its circumferential edge spaced from the inside of said case to from an annular orifice, said orifice providing a path for flow of fluid between the portion of

vide a magnetic field when energized, a first movable valve means formed of magnetic material mounted in

2,865,482
MULTIPORT DIAPHRAGM VALVE

said case on the inlet side of said flange and that on the outlet side thereof to subject opposite sides of said flange to different pressures, and a spring bearing against said flange on the outlet side to oppose pressure differences, said valve member having radially directed ports adjacent said outlet tube adapted to be partially blocked thereby, said ports being adapted to discharge fluid at



right angles to the direction of movement of said valve member to avoid dynamic forces on this member, the inner face of said case tapering toward said outlet tube opposite the working range of said flange to diminish the orifice area as said valve member moves toward its closed position and thereby increase the pressure differential to compensate for the increase in force which said spring exerts as it is compressed.

2,865,396

HYDRAULIC BRAKE BLEEDING CHECK VALVE

William C. Popovich, Corry, Pa., assignor to Corpo, Inc., Corry, Pa., a corporation of Pennsylvania

Application January 21, 1955, Serial No. 483,213
2 Claims. (Cl. 137—539)

1. A hydraulic bleeder valve comprising a body having an open end, a chamber inwardly of the open end of said body and having its inner end formed as a valve seat of semi-spherical shape, an externally threaded nipple projecting from the other end of said body, said nipple being provided with a bore concentrically arranged with respect to and in communication with said valve seat, a plug within said chamber closing the open end of said body, a ball in said chamber normally seated on said valve seat, a coil spring positioned within said chamber and bearing against said plug and said ball for biasing said ball to its seated position, an adapter having an elongated body threadably connected to said threaded nipple, a threaded nipple attached to said adapter and extending at a right angle therefrom, and a U-shaped clamp portion, one arm of said U-shaped clamp portion being threaded and receiving said nipple of said adapter, the other arm of said adapter being bifurcated for receiving an air bleeder connector on an automobile wheel.

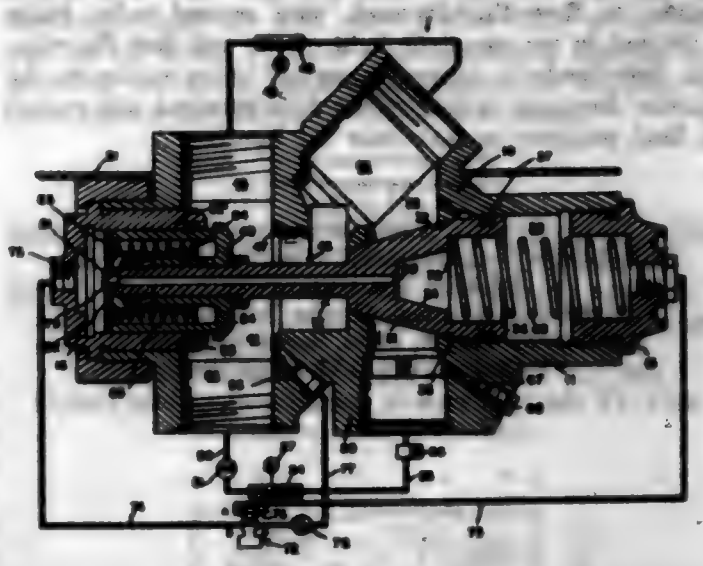
2,865,399

SHUT-OFF VALVE ASSEMBLY FOR FLUID PRESSURE SYSTEMS

Ludwig A. Majneri, Grosse Pointe, Mich.

Application March 31, 1955, Serial No. 495,690
17 Claims. (Cl. 137—563)

7. A valve assembly for closing a fluid pressure supply conduit of a pressure line disposed in fluid circulating relation to a fluid pressure source and a fluid pressure operated device, comprising a body having a cylinder provided with inlet and outlet ports intermediate the ends thereof, valve seats respectively surrounding the ports within the cylinder and tapered axially of the cylinder, a valve member mounted in the cylinder for sliding movement axially of the cylinder and having a tapered part engageable with the seats to close communication through said ports upon movement of the valve member in a closing direction relative to the cylinder, said cylinder having a first chamber at the end of the tapered part of greater diameter and having a second chamber at



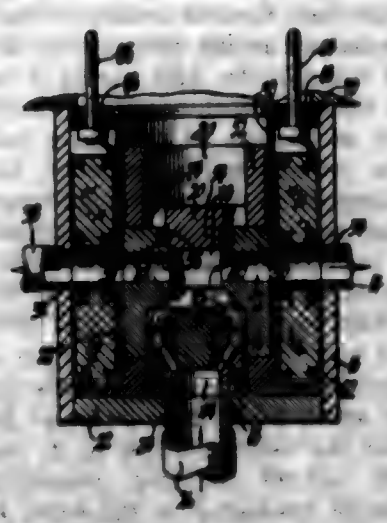
the opposite end of the tapered part provided with a first inlet opening and an outlet opening adapted to be connected respectively to said pressure source and pressure operated device, said body having a further inlet opening for fluid under pressure communicating with the first chamber and operable to admit fluid under pressure into the first chamber to move the valve member in its closing direction toward the second chamber, and means including a valve-controlled conduit adapted to connect said second chamber and said first inlet opening with said pressure source and thereby bypass said pressure operated device.

2,865,400

SOLENOID OPERATED AIR VALVE

Ralph M. Stallard, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 25, 1957, Serial No. 641,994
4 Claims. (Cl. 137—623)



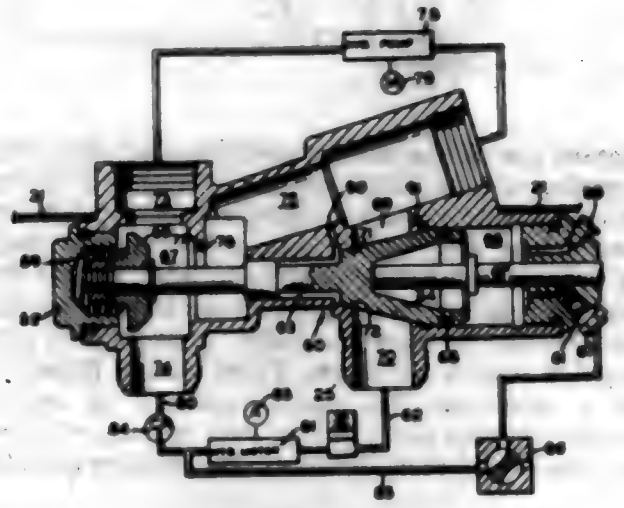
1. In a fluid control valve, a housing of magnetic material having interconnecting channels therein, a casing surrounding said housing, and extending beyond opposite ends of the same, a coil mounted on the casing to pro-

a plurality of annular members circumscribing said bel- clamp actuating means by drive means from a rest posi-

for closing the upper end of said bore means providing

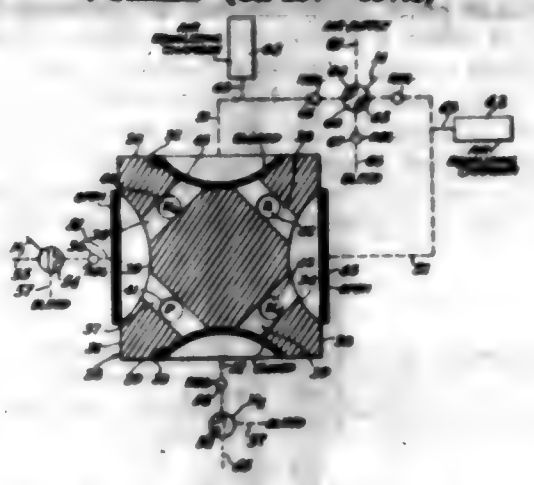
vide a magnetic field when energized, a first movable valve means formed of magnetic material mounted in one end of the casing and having a protruding section that extends into the end of one channel in the housing to prevent flow therethrough and which when in said closed position seats upon the end of the housing to provide a minimum air gap at that part of the magnetic circuit, a second valve means of magnetic material movably mounted in the other end of the casing in one of the channels, means for applying fluid pressure to the second valve means, fluid pressure applied thereto tending to force the valve toward the housing and seal the channel to flow therethrough, said second valve being so located in the magnetic field of the coil that the magnetic field tends to move the second valve means in the opposite direction to that of the fluid pressure and permit the fluid pressure to flow into the housing.

2,865,401
SHUT-OFF VALVE ASSEMBLY FOR FLUID PRESSURE SYSTEMS
Ludwig A. Majneri, Grosse Pointe, Mich.
Application July 6, 1954, Serial No. 441,347
1 Claim. (Cl. 137—625.29)



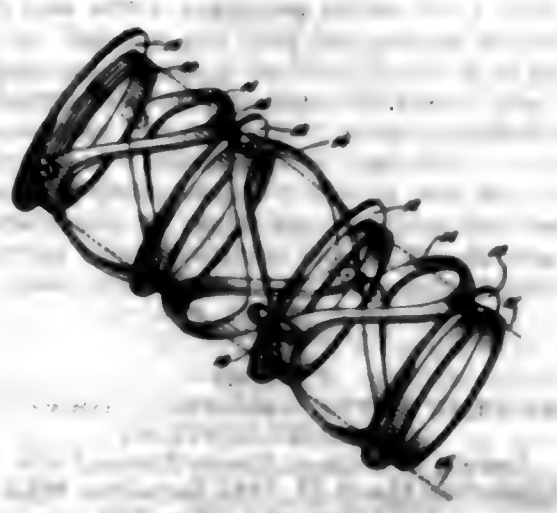
A valve assembly for closing a fluid pressure supply conduit of a pressure line disposed in fluid circulating relation to a fluid pressure source and a fluid pressure operated device, comprising a body having a cylinder provided with inlet and outlet ports intermediate the ends thereof, valve seats respectively surrounding the ports within the cylinder and tapered axially of the cylinder, a valve member mounted in the cylinder for sliding movement axially of the cylinder and having a tapered part engageable with the seats to close communication through said ports upon movement of the valve member in a closing direction relative to the cylinder, said cylinder having a first chamber at the end of the tapered part of greatest diameter and having a second chamber at the opposite end of the tapered part provided with a first inlet opening and an outlet opening adapted to be connected respectively to said pressure source and pressure operated device, said body having a further inlet opening for fluid under pressure communicating with the first chamber and operable to admit fluid under pressure into the first chamber to move the valve member in its closing direction toward the second chamber, manually operable means mechanically connected to the valve member for moving the latter in a direction to close the inlet and outlet ports, and means including a valve-controlled conduit adapted to connect said second chamber and said first inlet opening with said pressure source and thereby bypass said pressure operated device.

2,865,402
MULTIPORT DIAPHRAGM VALVE
Frank D. Miller, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
Application June 22, 1955, Serial No. 517,132
4 Claims. (Cl. 137—637.1)



1. A multi-diaphragm valve comprising, in combination, a solid one-piece multi-face transparent body portion, said portion having a rectangular channel formed therein the corners of said channel terminating at four faces positioned in different planes of said portion, each of said four faces having a partial spherical recess formed therein and connecting adjacent legs of said channel, said portion having formed therein separate inlet channels separately connected to opposite legs of said rectangular channel and terminating in a face of said portion, said portion having formed therein an outlet channel connected to one leg of said rectangular channel intermediate said opposite legs and terminating in a face of said portion, the latter also having formed therein a purge channel connected to the leg of said first channel opposite that connected to said outlet channel, a flexible diaphragm overlying each recess, means simultaneously to move the diaphragms of the recesses between said inlet channels and said outlet channel to connect one inlet channel to and to disconnect the other inlet channel from said outlet channel, and means to move the diaphragms between said inlet channels and said purge channel to disconnect said one inlet channel from and to connect the other inlet channel to said purge channel.

2,865,403
FLEXIBLE PRESSURIZED CONDUIT
Allan D. Le Vantine, Tarzana, Calif., assignor to Litton Industries of California, Beverly Hills, Calif.
Application May 7, 1957, Serial No. 657,581
5 Claims. (Cl. 138—30)

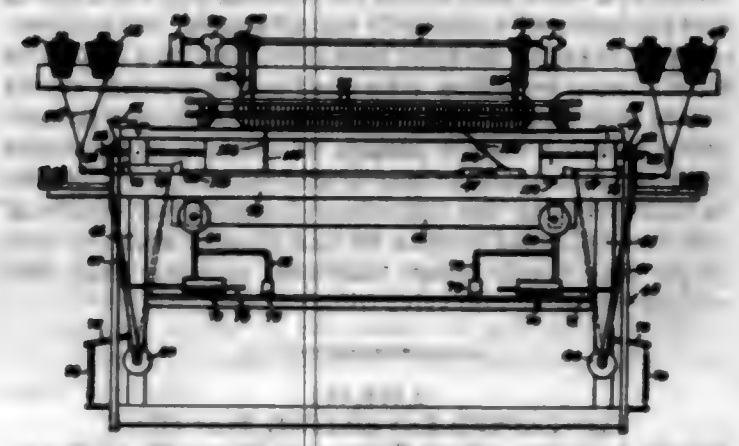


1. A flexible pressurized conduit capable of being easily flexed when subjected to a pressure differential, said conduit comprising: a flexible section of bellows tubing;

ply conduit of a pressure line disposed in fluid circulating ends of the same, a coil mounted on the casing to pro-

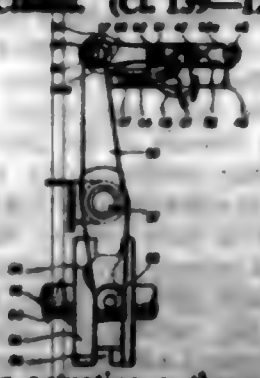
a plurality of annular members circumscribing said bellows tubing at uniformily spaced points along the length thereof, said members laterally constraining said bellows tubing to a substantially constant circular cross-sectional area and dividing said section of bellows tubing into a plurality of subsections; and a plurality of intercoupled gimbal rings corresponding respectively to said plurality of subsections and operative to form a skeletal structure within which said bellows tubing is suspended, each of said gimbal rings hingedly mounting the annular members at opposite ends of the corresponding subsection of tubing about two mutually orthogonal axes.

2,865,404
COPLESS SHUTTLE LOOM
Ennes G. Mascarenhas, Minas, Brazil
Application June 30, 1954, Serial No. 440,479
4 Claims. (Cl. 139—126)



1. In a loom having a shuttle which is impelled back and forth in a path of travel on a reciprocatively movable slay, said slay being adapted to beat up the weft threads, the improvement which comprises: a scissors carried by said slay for severing the weft threads; and solely mechanical means actuated periodically by the shuttle during its reverse travel along said path, for operating said scissors to sever the weft threads which are consecutively placed by the shuttle between the warp threads, said means for operating the scissors including a pair of swingable arms pivoted on the slay and extending upward therefrom, including a linkage disposed above the shed and connecting the said arms, including motion-transmitting means between the scissors and one arm, and including a shuttle-engageable member connected with the other arm and disposed in the path of the shuttle.

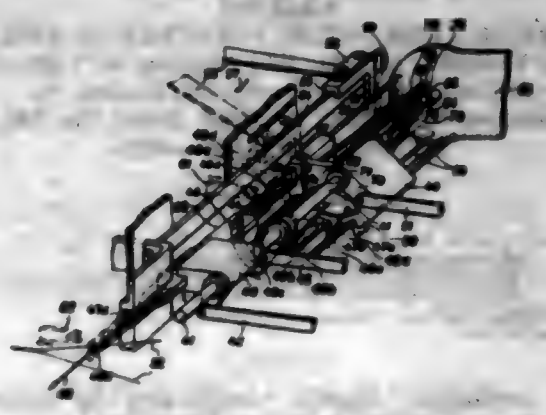
2,865,405
METHOD AND MEANS FOR ACTUATING A THREAD CLAMP IN TEXTILE MACHINERY
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Frères, S. A., Winterthur, Switzerland, a corporation of Switzerland
Application February 14, 1957, Serial No. 640,181
Claims priority, application Switzerland February 18, 1956
13 Claims. (Cl. 139—126)



1. A method for actuating a thread clamp, particularly in weaving machines, including the steps of moving clamp actuating means by drive means from a rest position toward the thread clamp into an active position which is adjacent to the thread clamp, arresting the actuating means in the active position, and thereupon operating the actuating means by continued action of said drive means for abuttingly engaging and actuating the thread clamp.

4. A device for actuating a thread clamp, particularly in a weaving machine, including drive means, clamp actuating means adapted to abuttingly engage the thread clamp, means operatively associated with said drive means and with said actuating means for moving said actuating means by said drive means from a rest position to an active position and thereupon moving said actuating means by said drive means for abutting engagement of and actuating the thread clamp.

2,865,406
MECHANISM FOR SELECTIVE FEEDING OF WEFT THREADS IN WEAVING MACHINES
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Frères, S. A., Winterthur, Switzerland, a corporation of Switzerland
Application July 15, 1957, Serial No. 671,988
Claims priority, application Switzerland July 21, 1956
9 Claims. (Cl. 139—126)

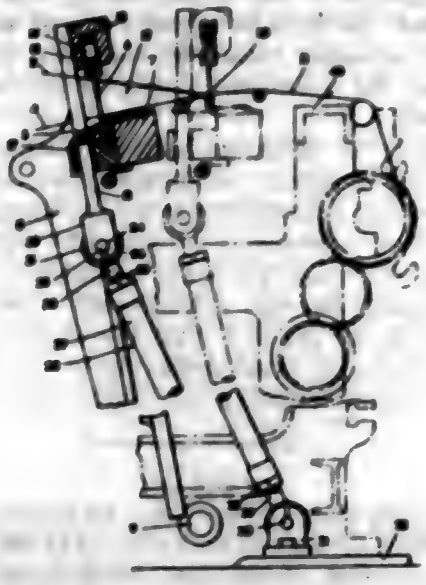


1. In a weaving machine of the gripper shuttle type, a weft or filling thread selecting mechanism comprising a plurality of thread feeding and gripping assemblies, each assembly correlated to a separate weft or filling thread, stationary guide means for said assemblies, a carrier movably supporting said assemblies, said carrier being movable to move said assemblies to any one of a plurality of selected positions, said stationary guide means and said carrier including a thread guide means for each weft or filling thread, and a thread guide element for each weft or filling thread interposed between the respective thread guide means in said stationary guide means and the respective thread guide means in said carrier.

2,865,407
WEAVING
Alfred George Billing and James Duckworth, Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Application December 30, 1954, Serial No. 478,778
Claims priority, application Great Britain January 14, 1954
1 Claim. (Cl. 139—188)

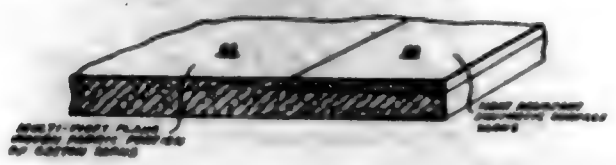
A flat loom for weaving comprising a rock shaft near the base of the loom, a sley which is adapted to oscillate back and forth about the rock shaft, a reed carried by the sley and having straight reed wires, mechanism for oscillating the sley about the rock shaft to effect beat-up, reed lifter-rods slidably extending through openings in the sley and carrying the reed, and links connected to the lifter rods and pivoted near the base of the loom about an axis parallel to the rock shaft, whereby the horizontal oscillation applied to the sley by the oscillating mechanism

is transmitted to the reed as a vertical oscillation relative to the slay and the fell of the fabric is engaged during



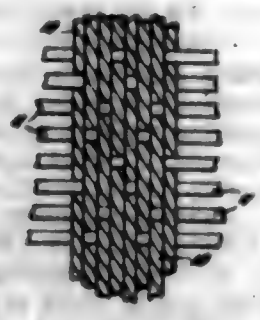
each beat-up by a portion of the reed close to the end of the reed wires.

2,865,408
CORRUGATOR DOUBLE-BACKER BLANKET
Richard Vollrath, Easton, Pa., assignor to Victor Balata & Textile Belting Company, Easton, Pa.
Application November 15, 1955, Serial No. 546,951
5 Claims. (Cl. 139—408)



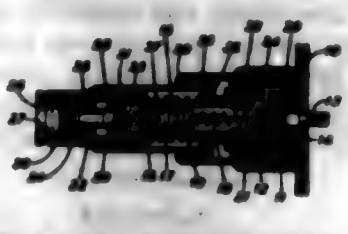
1. A corrugator blanket comprising an interwoven multi-weft-plane fabric having a thickness of more than one-quarter of an inch and less than one inch, said fabric being woven from cotton yarns with the exception of the surface yarns thereof adjacent its edges, the surface yarns at one side of the fabric adjacent at least one of said edges being warp yarns and consisting of heat resistant, abrasion resistant, synthetic, organic, polymeric yarns, said fabric having a plurality of cotton yarns underlying said synthetic yarns to provide absorbency.

2,865,409
DRYER FELT FOR FINE QUALITY PAPER
Dietrich V. Aston, Philadelphia, Pa.
Application June 27, 1955, Serial No. 518,329
9 Claims. (Cl. 139—426)



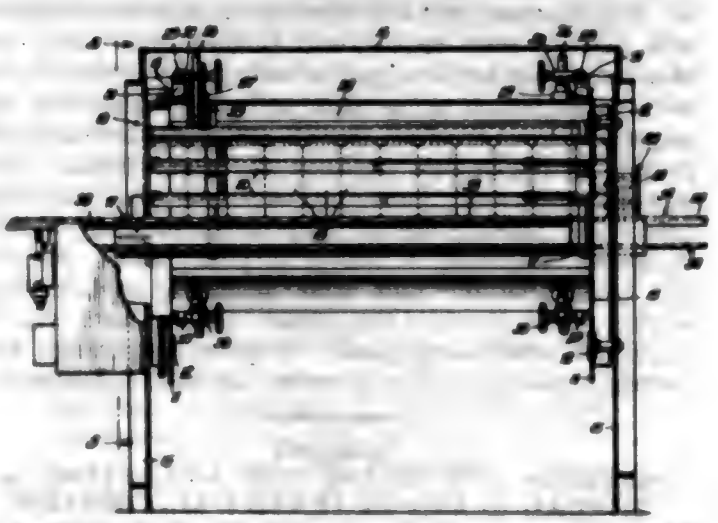
1. A dryer felt for high quality paper constructed of a plurality of plies woven in a relatively open construction from warp and filling yarns, one face of the felt being adapted to directly contact the paper during its manufacture, in which the yarns in the filling of the ply forming said face are relatively heavy in weight and soft in twist, being spun exclusively of polyester fibers.

2,865,410
ROTATABLE VALVE
George L. Neely, Berkeley, Calif., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application May 15, 1957, Serial No. 659,278
8 Claims. (Cl. 141—89)



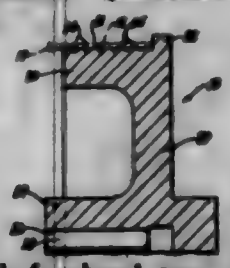
1. A device for use with a body having a longitudinal passage therethrough adapted to be secured to a container for fluid under pressure, said device comprising, in combination, a valve seat, means for securing said valve seat in said passage, and a resiliently biased annular valve mounted upon an axially movable stem provided with a transverse head, a separate hollow bifurcated torque element having a bore extending at least partly therethrough, said element being movable in said passage to rotate said transverse head and said stem, the bore of said element being smaller in diameter than the transverse dimension of said head and the bifurcated portion of said element being of such length that it will engage said head to rotate said stem without releasing said valve from said seat.

2,865,411
CONTAINER INVERTING MACHINE
Robert A. Johnson, Park Ridge, and Homer W. Ohlhaver, Highland Park, Ill., assignors to White Cap Company, Chicago, Ill., a corporation of Delaware
Application September 29, 1955, Serial No. 537,384
7 Claims. (Cl. 141—92)



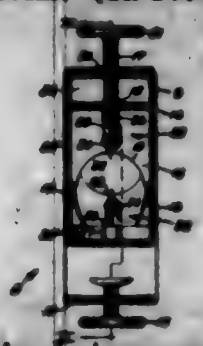
4. In a machine for rinsing and draining filled containers, a rotatable cage having a plurality of circumferentially spaced horizontally extending runways in each of which a row of open but filled containers is adapted to be positioned, a conveyor which extends through the cage from a position in front of the cage to a position in the rear of the latter and which forms the bottom of the uppermost runway in the cage, means above the forwardly extending section of the conveyor for filling the containers on the conveyor with water or other liquid, perforated means in each runway movable toward the containers in that runway for retaining within the containers the contents thereof when the containers are inverted, means for moving the conveyor, means for moving said perforated retaining means, and means for moving the cage intermittently to align each of the runways in turn with the conveyor.

2,865,412
DRIVE WHEEL FOR BAND SAWS
Robert L. Crane, Hopkins, Minn., assignor to Continental Machines, Inc., Savage, Minn., a corporation of Minnesota
Original application September 12, 1955, Serial No. 533,786. Divided and this application March 4, 1957, Serial No. 643,669
2 Claims. (Cl. 143—36)



1. A drive wheel, for band saws, having a face over which a saw band may be trained, said drive wheel being characterized by: means on the wheel providing a circumferential flange at one axial end of the wheel face; a taper of less than 3° on said face with the largest diameter of the face adjacent to said flange; and a series of small circumferential grooves in the wheel face, equispaced from one another along the entire axial dimension of the wheel face, one of said grooves being directly at the base of said flange and the other grooves having a uniform width at the wheel face and having considerably greater width than depth, said grooves cooperating to define lands therebetween of a uniform narrow width substantially equal to the width of said other grooves and aggregating approximately fifty percent of the total wheel face area.

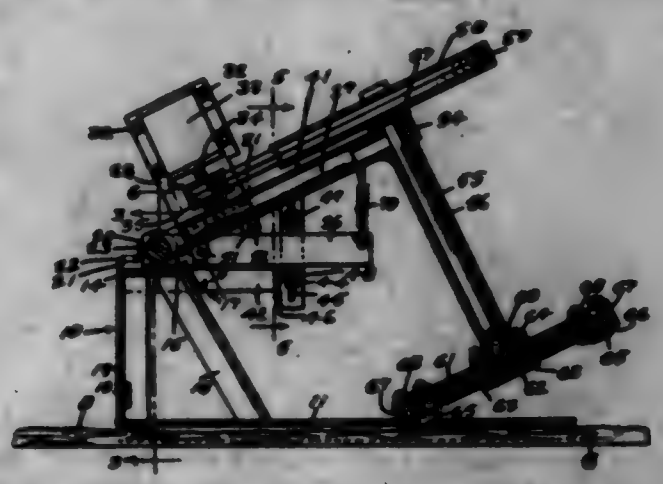
2,865,413
DOWEL GROOVING DEVICE
Grant A. Smith, Los Angeles, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application April 22, 1957, Serial No. 654,163
8 Claims. (Cl. 144—136)



1. A dowel grooving device, comprising: a housing having an inlet opening and an outlet opening; said inlet and outlet openings being in axial alignment; a carriage telescoped within said housing cooperable for slidable transverse movement with respect to the axis of said inlet and outlet openings, said carriage being provided with an inlet and an outlet shutter cooperable for acting in concurrence to vary said inlet and outlet openings; control means cooperable for adjustably controlling the slidable movement of said carriage; grooving means cooperable for making a groove along the longitudinal axis of a work piece inserted through said inlet and outlet openings.

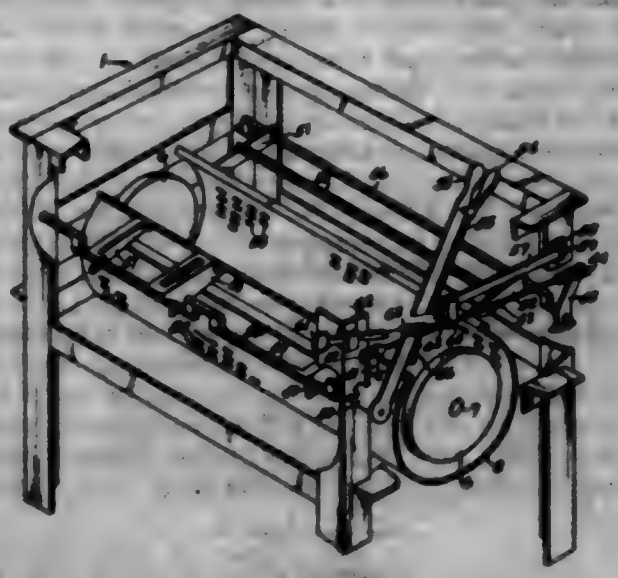
2,865,414
SLAB DEBARKER HAVING BARK-ABRADING ELEMENTS MOUNTED ON ROTATABLE RESILIENT DISK
Wilfred G. Fritz, Lexington, N. C.
Application March 18, 1957, Serial No. 647,063
4 Claims. (Cl. 144—208)

1. In an apparatus of the character described, in combination, a supporting frame including a pair of spaced parallel base members between which a slab of wood having bark to be removed is adapted to be passed and transversely aligned uprights carried by said base member, journals carried by the upper ends of said uprights, a pivot shaft pivotally mounted in said journals, a rod fixed to and extending from said shaft longitudinally aligned with said base members and inclined upwardly relative thereto, a sleeve surrounding said rod, means for clamping said sleeve about said rod, a motor plate



secured to said sleeve, a motor carried by said plate, a motor drive shaft operable by said motor, pulley means rotatable by said drive shaft, a second sleeve perpendicular to said first-mentioned sleeve and extending downwardly therefrom at the free end thereof, a rotatable shaft in said second sleeve, second pulley means connected to said rotatable shaft at its upper end, a driving connection between said first and second pulley means, a disk carried by the lower end of said rotatable shaft, and bark-removing elements carried by said disk.

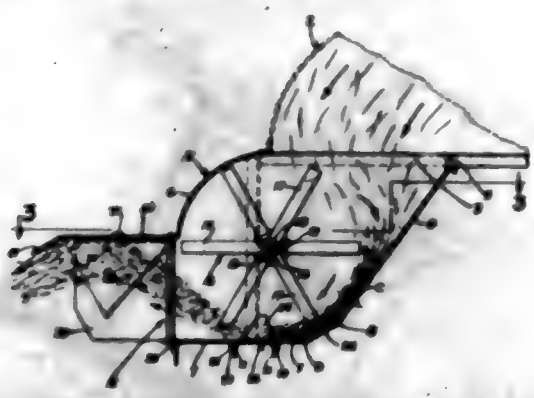
2,865,415
PEANUT SHELLING MACHINE
Lawrence Pearman, Chula, Ga.
Application April 23, 1957, Serial No. 654,536
21 Claims. (Cl. 146—11)



1. A peanut shelling machine comprising a framework, a drum mounted at each end of the framework and serving as a support for a cutter bar reel shaft, a sheet metal basket extending longitudinally of the framework and mounted on the drums, radially movable members carried by the said drums and bearing against the internal surface of the basket, cam means operatively associated with the radially movable members, and operating means mounted on the framework and connected to the cam means to move such cam means thereby imparting movement to the radially movable members to vary the posi-

tion of the basket relative to the support for the cutter bar shaft to adjust the sheet metal basket relative to the cutter bar reel.

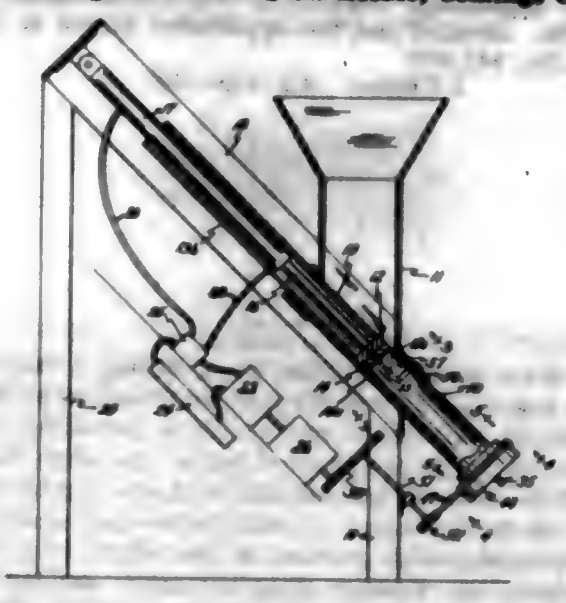
2,865,416
STRAW CUTTER
Edgar E. Hettum, Rosson, Minn.
Application September 20, 1954, Serial No. 456,942
2 Claims. (Cl. 146—117)



1. In a straw cutter and spreader for combines, a housing comprising a front inclined wall and side, top and bottom walls, and having an intake opening at its upper end and a discharge opening at its rear end, means for securing said housing to a combine with its intake opening in communication with the straw discharge opening of the combine, a shaft extending transversely through said housing and having its end portions rotatably mounted in the side walls of the housing, means for driving said shaft, a plurality of rotary cutter bars secured to said shaft in spaced relation along its length, said cutter bars extending radially from said shaft and having their outer terminals disposed in close proximity to said bottom wall, as they pass thereover, said bottom wall having an elongated opening therein disposed in parallel relation to said shaft and extending the width of the housing, an elongated member normally closing said opening and constituting a portion of said bottom wall, a plurality of fixed knife elements secured to said elongated member and having their cutting edges extending upwardly therefrom into cutting relation with said rotary cutter bars directly below said shaft, means for detachably securing said elongated member in operative position in the bottom wall of the housing, said rotary cutter bars engaging the straw delivered into said housing from the combine and driving it into cutting engagement with said stationary knife elements and simultaneously sweeping the disintegrated straw from the bottom wall of the housing out through the discharge opening thereof, and said stationary cutting elements having oppositely disposed cutting edges, the cutting edges at one side of said elements being disposed at a relatively greater angle to the vertical than the cutting edges at the opposite side thereof, whereby reversal of said fixed knife elements in said housing will vary the cutting characteristics of said fixed and rotary cutting elements upon the straw delivered into the housing from the combine.

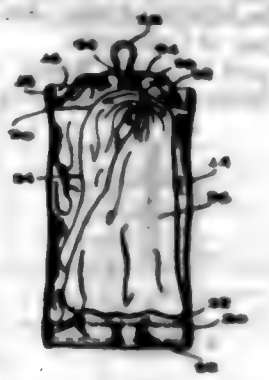
2,865,417
MEAT GRINDER
Cecil Anthony Waters, Manhattan, Mont.
Application March 5, 1956, Serial No. 569,399
3 Claims. (Cl. 146—181)

1. In a meat grinder having a meat confining tube, a multiple apertured die closing one end of the tube and having a central aperture for a drive stem, and means in the tube to press meat endwise against said die, the improvement comprising a knife having a central non-circular aperture bearing on the meat receiving face of said die and pressed against said face solely by the meat pressure against the knife, a tubular die holder removably secured to said tube, a drive stem having a head adapted to rest against the upstream face of said knife and having a non-circular portion fitting in the knife aperture, the stem extending through the die and die holder, a drive ring encircling the tube and die holder, bearings on said



tube mounting said ring for rotation upon the tube, and means affixed to said drive ring extending inwardly therefrom across the die holder and non-rotatably engaging the stem whereby rotation of said drive ring on the bearings rotates the knife.

2,865,418
APPAREL RECEPTACLE
Corinne P. Bourdon, Miami, Fla.
Application August 16, 1957, Serial No. 678,553
4 Claims. (Cl. 150—1)



1. A receptacle for garments comprising an elongated member formed of fabric material and having a pair of opposed open ends, said member having a substantially cylindrical main body portion, a substantially rigid annular member fixedly secured, respectively, to said main body portion adjacent each of said open ends, one of said ends having a substantially cylindrical extension projecting beyond the annular member immediately adjacent thereto, a draw string encircling the outer end of said extension, and the outer end of said extension being reverted over said draw string.

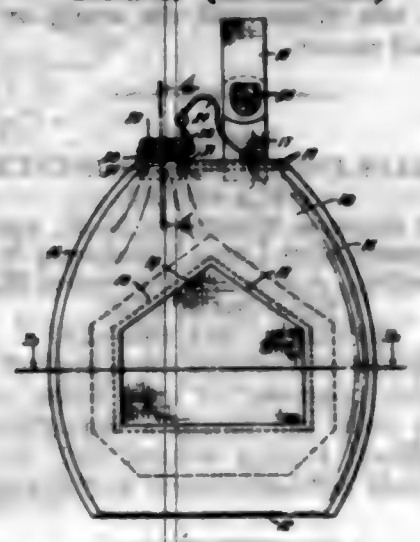
2,865,419
COLLAPSIBLE CONTAINER
Marion M. Cunningham, Providence, R. I., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application October 4, 1957, Serial No. 688,368
1 Claim. (Cl. 150—1)

A collapsible container comprising a flexible tube formed of a plurality of plies of rubberized cord fabric, the cords of adjacent plies being angularly disposed relative to each other and extending at an angle of between approximately 52° and 54° to the longitudinal axis of

the tube, the marginal halves of the edges of each end of the tube being secured together to close each end of

the tube, and a closable opening in said container for filling and emptying the container.

2,865,430
FLEXIBLE CANTEENS
Roy E. Allenbach, Pueblo, Colo., assignor to The Pueblo Tent and Awning Co., Inc., Pueblo, Colo., a corporation of Colorado
Application September 27, 1957, Serial No. 686,790
1 Claim. (Cl. 150—2.1)



A flexible water canteen comprising: a continuous unitary sheet of flexible water-proof thermo-plastic material folded over itself to provide a front portion and a back portion joined together at their bottoms by said fold, said portions being similar in size and shape and having side edges and top edges; thermo-welded seams joining the side edges of the front portion to the side edges of the back portion; a suspension strap extending between the top edges of said portions; a line of stitching securing said top edges, with the strap therebetween, together; a medially positioned window opening formed in said front portion; a sheet of flexible absorbent material positioned between said portions and covering said window opening; a second line of stitching securing said sheet to said front portion peripherally about said window, said sheet extending downwardly between said portions below said window to act as a wick to raise water to said window; and means for admitting water to said canteen between said portions.

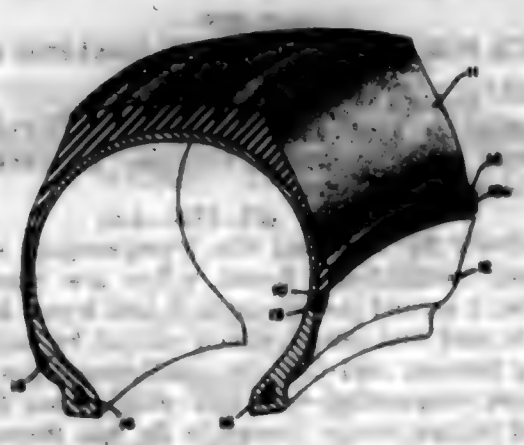
2,865,421
DIELECTRIC TELESCOPING BUCKET
Helen Walsh, Elizabeth, N. J.
Application August 14, 1956, Serial No. 603,948
7 Claims. (Cl. 150—48)

1. A dielectric carrier comprising an annular dielectric top-frame, a deformable round dielectric bottom with external dimensions substantially the same as the internal dimensions of the top frame, a dielectric web attached at the top to the outside of the frame, and at the lower edge to the inside of the bottom, a dielectric handle attached to the top frame, and the web frictionally engaged between the top frame and the bottom when the bottom is nested within the top frame.

2,865,422
VEHICLE TIRE ANTI-SKID CHAIN AND APPLYING MEANS
William R. Royer, Kingston, Pa.; Ella Dale Royer, administratrix of said William R. Royer, deceased
Application February 15, 1956, Serial No. 565,588
9 Claims. (Cl. 152—213)

1. In a vehicle tire anti-skid chain embodying side chains and cross connecting chains, duplicate latch hooks of the type comprising a flat plate body having a hook bill on one end and a pivoted locking lever on the other end, each latch hook being attached to one end of a side chain for connection by its hook bill with the other end thereof, an applier comprising a substantially U-shaped member designed to straddle the tire and having resilient side arms between which the tire is gripped, and means forming a part of the plate body of each latch hook for detachable connection with a terminal portion of a side arm whereby the latch hooks are maintained in their working positions at the sides of the tire while the said other ends of the side chains are coupled thereto.

2,865,423
SIDEWALL CONSTRUCTION FOR A TIRE
Bruce J. Renaud, Detroit, Mich., assignor to United States Rubber Company, New York, N. Y., a corporation of New Jersey
Application May 9, 1955, Serial No. 506,838
8 Claims. (Cl. 152—353)



1. In a vehicle tire having a sidewall formed of at least two externally visible concentric bands of different colored rubber stocks, a circumferential external lip formed of one of said stocks extending therefrom in overhanging spaced relation to the line of juncture between the two bands of different colored rubber stocks, to substantially conceal the said line of juncture.

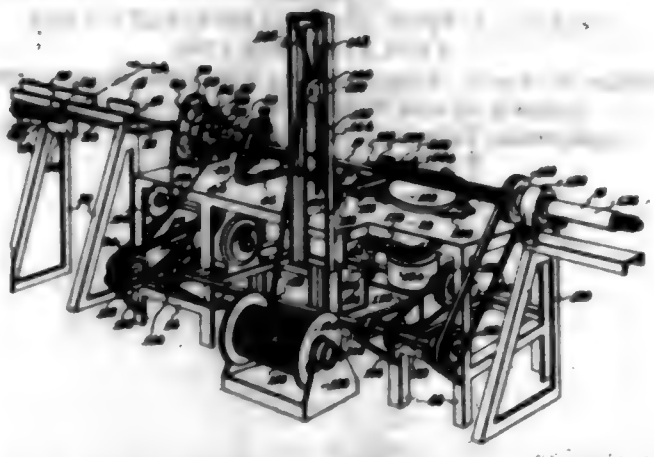
2,865,424
VERTICAL ADJUSTABLE SEAT OPERATED BY

said tie plate and extending therefrom toward said mounting housing for reinforcing said tie plate and arranged

2,865,414
MACHINE FOR FORMING FINNED HEAT TRANSFER TUBES

Arthur H. McElroy, Tulsa, Okla., assignor to Coyne Products, Inc., Tulsa, Okla., a corporation of Oklahoma

Application January 27, 1955, Serial No. 484,391
11 Claims. (Cl. 153—64.5)



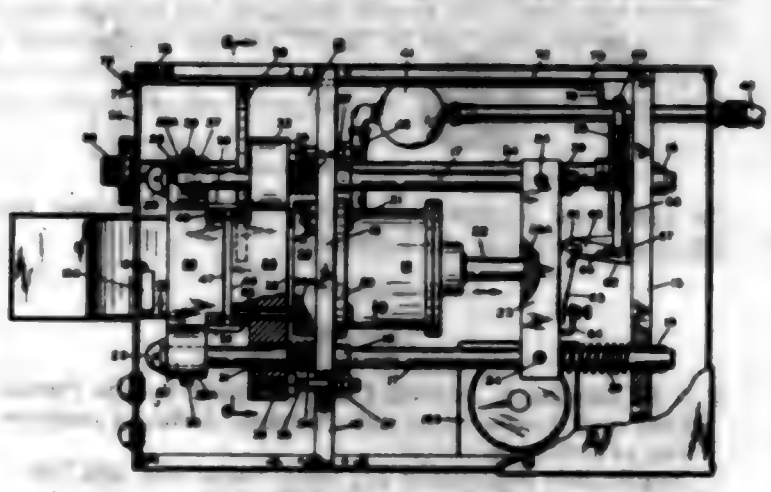
1. A device for wrapping a strip on edge spirally around the exterior of a longitudinally moving and rotating tube to provide spiral, spaced heat exchange fins exteriorly on the tube comprising drive means for longitudinally feeding and rotating a tube having one end of a strip affixed on edge to its exterior surface, means for rolling the strip as it initiates the formation of fins on the tube, guide means around the tube and through which the tube passes receiving the strip from said rolling means and guiding it around the tube, while maintaining it in its roller condition, a rotatable guide cylinder axially aligned with the tube following the fin formation and guidingly receiving and supporting the finned tube, motor means, and a drive transmission means connected between the motor means, the drive means for the tube, the strip rolling means and the guide cylinder, said drive transmission means commonly actuating the drive means and the rolling means so that the rolling means rotates in the linear movement therethrough of the strip in synchronized speed with the rotational speed of the tube as the strip is being wound on the tube and the drive transmission means rotating the guide cylinder in the same direction and at approximately the same speed as the tube is rotated to prevent wear being imposed on the fins of the tube.

2,865,425
DEVICE FOR MOUNTING AND SEALING FILM TRANSPARENCIES

Donald W. Byers, Portland, Oreg.

Continuation of application Serial No. 581,778, April 30, 1956. This application February 11, 1958, Serial No. 714,669
11 Claims. (Cl. 154—1.6)

1. A device for mounting film transparencies in framing mounts comprising a frame, a first jaw mounted in said frame, a second jaw mounted in said frame in facing relation to said first jaw, a punch carried by said frame extending through said first jaw, said second jaw having an aperture cooperating with said punch, said first jaw having an arcuate recess formed in the side thereof adjacent said second jaw, a numbering disk, means mounting said numbering disk on said frame for rotation thereon with an edge portion of said disk adjustably positioned in said recess, a plurality of numbering die members formed in one face of said disk adjacent the peripheral edge thereof, guide members on said jaws for guiding a transparency and its respective mount into mounting position between said jaws, and means on said frame for reciprocating said second jaw toward said first jaw to simultaneously mount said transparency in said framing mount, punch an orienting mark in said mount and die stamp an identifying number in said mount.



2,865,426
PHOSPHATE-IMPREGNATED INTEGRATED MICA SHEET

Moses D. Heyman, Woodmere, N. Y., assignor to Integrated Mica Corp., Woodmere, N. Y.

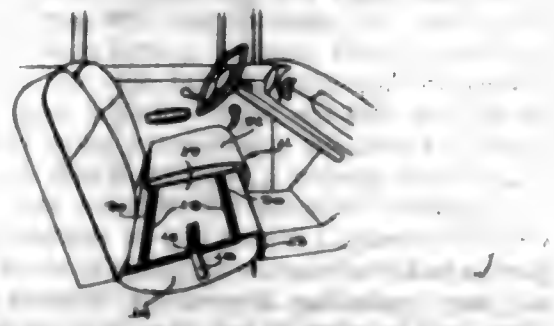
No Drawing. Application November 26, 1954
Serial No. 471,538
13 Claims. (Cl. 154—2.6)

1. A phosphate-impregnated mica product comprising integrated mica composed of mica flakes cohered into an integrated sheet and having a multiplicity of pores among the flakes, a silica skeletal shell occupying the pores, and cured orthophosphoric acid impregnating the silica shell.

2,865,427
SLIDING AUTOMOBILE SEAT ATTACHMENT

Robert E. Garfield, Homestead, Fla.

Application May 10, 1957, Serial No. 658,341
2 Claims. (Cl. 155—5)

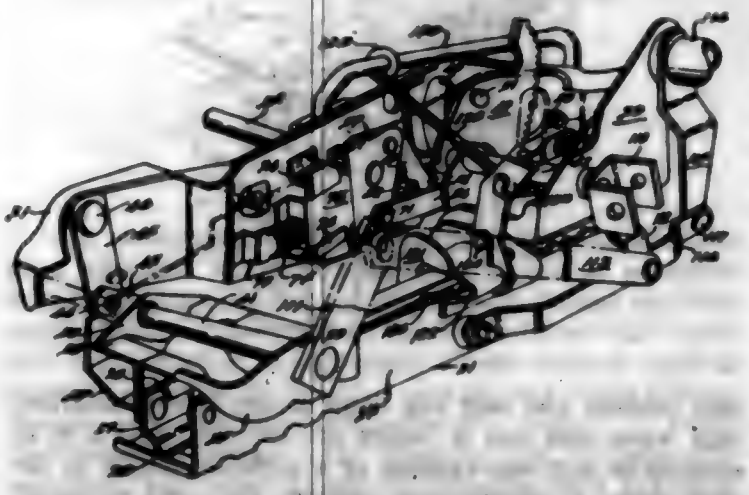


1. A sliding seat attachment for a motor vehicle comprising a rigid support member shaped to fit over the seat portion of a motor vehicle seat and having a depending front flange, said support member being devoid of a back which would interfere with tilting of the back portion of a motor vehicle seat, depending rigid abutment members adjustably secured to the opposite ends of said support member and being engageable with the opposite ends of the seat portion of a vehicle seat to limit horizontal movement of the support member, a plurality of parallel track members secured longitudinally on said support member, an auxiliary seat member having a depending front flange located adjacent the first-named front flange, vertical rollers journaled to the second-named flange and engaging the first-named flange, and depending means on said auxiliary seat member slidably engaged with said track members, said auxiliary seat member being relatively short as compared with the length of said track members, whereby said auxiliary seat member is shiftable from one side of the support member to the other.

said chair, a fourth U-shaped frame member forming a sides, the snaps on said individual cushions being en-

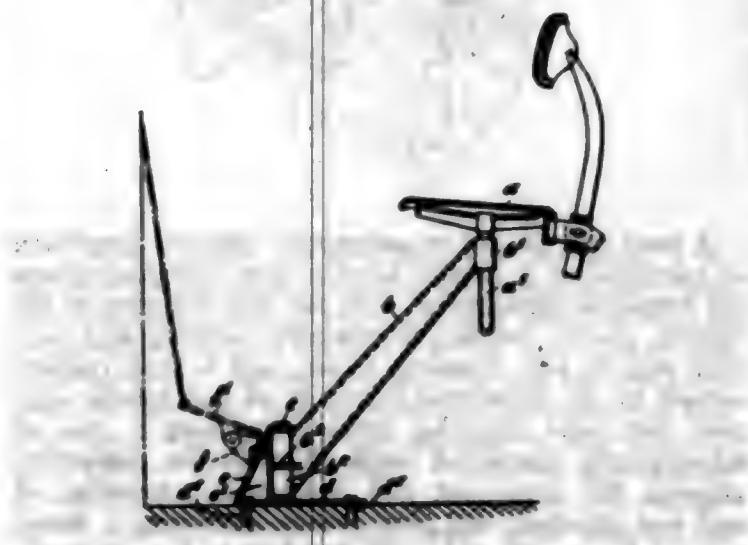
top-frame, a deformable round dielectric bottom with to substantially conceal the said line of juncture.

2,865,428
VERTICAL ADJUSTABLE SEAT OPERATED BY JACK MECHANISM
Richard J. Williams, Birmingham, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Application September 5, 1953, Serial No. 378,701
17 Claims. (Cl. 155—14)



9. In a track element, a raisable and lowerable member, a support, a swingable link, a toothed sector, means pivoting said link and sector on said support and to said member, pawls on said member engaging the teeth of said sector for controlling the raising and lowering of said member, detents carried by said member for locking said sector in shifted position, and means for operating said pawls and detents in predetermined sequence for unlatching one of the detents while the associated pawl permits the change in the vertical position of the member in one direction.

2,865,429
ROTATABLE OSCILLATORY SEATS FOR ASSOCIATION WITH PEDAL OPERATED MACHINERY
Stanley Howard Adcock Thompson, Stoke Bishop, Bristol, England, assignor to The Tan-Sad Chair Company (1931) Limited, Birmingham, England, a British company
Application January 25, 1957, Serial No. 636,392
1 Claim. (Cl. 155—81)

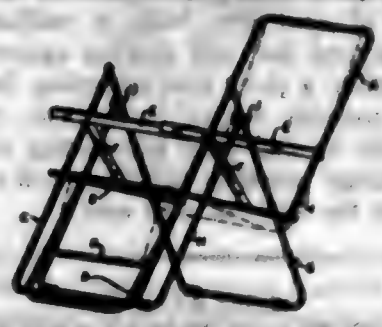


Improvements in rotatable oscillatory seats comprising a seat, an inclined arm having a mounting housing integrally formed on the base of said arm, a contacting forked flange forming a pair of stops on said mounting housing extending laterally therefrom and being substantially equally spaced one on each side of said arm, a base frame adapted to be fastened to a floor, a tie plate integral with and extending from said base frame to the upper side of said arm mounting housing with a part extending thereover, an upwardly extending medial web integral with said tie plate and extending therefrom toward said mounting housing for reinforcing said tie plate and arranged between said forked flange stops on said housing engageable thereby for limiting the arcuate swing of said arm by engagement of said stops with said medial web on oscillation of said arm, means including a pin for oscillatably securing said mounting housing between said base frame and said tie plate part, and a rotatable spindle means for oscillatably mounting said seat on the upper end of said arm.

2,865,430
ARRANGEMENT IN DISMOUNTABLE OFFICE SWIVEL CHAIRS
Fridtjof Fellmer, Oslo, Norway
Application January 22, 1957, Serial No. 635,254
5 Claims. (Cl. 155—66)

1. A swivel chair comprising a seat having a pivot shaft depending therefrom, a spider having a central, vertically extending open-ended sleeve, a height adjustment device removably fitting in said sleeve and rotatably receiving said pivot shaft which is axially separable therefrom, and releasable cooperating means on said device and said sleeve for adjustably determining the vertical position of said device relative to said sleeve, the inner diameter of said sleeve being at least as large as the outer diameter of said pivot shaft so that, when said height adjustment device is removed from said sleeve and separated from said shaft, said seat can be disposed in inverted position below said spider with said shaft extending upwardly into said sleeve for storage in a relatively small space; said height adjustment device including a tubular member which is closed at its lower end and dimensioned to extend slidably into said sleeve, a helical spring in said tubular member and resting on said lower end of the latter, rotatable means supported by said spring, and a spindle carried by said rotatable means and projecting upwardly from said tubular member, said pivot shaft being hollow and opening downwardly to telescope into said tubular member around said spindle.

2,865,431
TRANSFORMABLE FOLDING CHAIR
Bernard Henri Russel and Robert Russel, Talence, France
Application April 27, 1956, Serial No. 581,111
1 Claim. (Cl. 155—166)



A folding reclining chair, comprising a first U-shaped frame member forming the seat of said chair, a second U-shaped frame member forming the back of said chair and pivotally connected with the rear ends of said first U-shaped frame member, a third U-shaped frame member forming a support for the legs of a person using

2,865,435
CUSHIONING DEVICE

2,865,437
SEAT FOR FOLDING CHAIRS AND THE LIKE

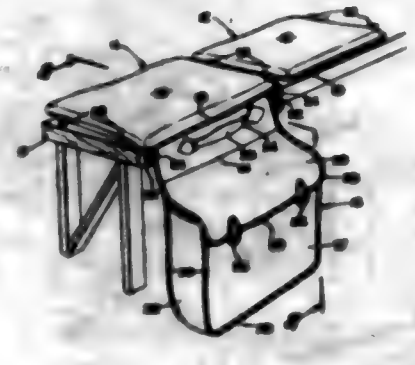
said chair, a fourth U-shaped frame member forming a suspension means for said chair and having extensions projecting above the level of said first U-shaped frame member, both said third and fourth U-shaped frame members being pivotally secured to the front ends of said first U-shaped frame member, a canvas strip having one end secured to the lower end of said third U-shaped frame member and having the other end secured to the upper end of said second U-shaped frame member, arm rests for said chair and comprising bars pivotally connected with said second U-shaped frame member and with said extensions of said fourth U-shaped frame member, elongated lock arms pivotally connected with said extensions of said fourth U-shaped frame members and adjustably as to their length connectable with said first U-shaped frame member, and a ground supported stand supporting said chair and comprising at its upper end a horizontally disposed axle, connecting said stand pivotally with said extensions of said fourth U-shaped frame member, and a fifth and sixth U-shaped frame member, each of said last mentioned frame members having its cross member disposed on the ground, at least one rubber ring fitted of each of said cross members, and the upper ends of said fifth and sixth of said frame members being pivotally connected to each other, in order to permit of folding of said stand together with said chair.

2,865,431
CHAIR ARM TABLE
Anderson G. Dearing, New Albany, Ind.
Application June 2, 1958, Serial No. 739,814
4 Claims. (Cl. 155—128)

1. A table detachably applied to a chair arm having a substantially horizontally disposed length, and a forward downturn portion, comprising a table; a flange downwardly extending from the table along the inner side of the arm and, by a portion at least, along said arm downturned portion; a plate in contact with the under side of said table; a flange downwardly extending from a side of the plate spaced from said table flange and extending along the outer side of said arm and, by a portion at least, along the outer side of said arm downturned portion; a bolt extending between the upper forward portions of said flanges; a resilient, friction surface block carried by said bolt between said flanges and having an under face inclined downwardly and outwardly to bear downwardly and rearwardly against said arm; a second bolt extending between said flanges below and forwardly of said first bolt; a resilient member carried by the second bolt and bearing against said arm downturned portion; a third bolt extending between said flanges at rear portions thereof; a resilient, friction surface block carried by said third bolt resting on said arm; and means yieldingly retaining said flanges in compressive engagement with the sides of said arm.

2,865,433
COMBINATION STADIUM SEAT AND ARTICLE CARRIER
Stuart T. Warner, Altadena, Calif.
Application September 6, 1955, Serial No. 532,647
3 Claims. (Cl. 155—133)

2. In a compactly folding stadium cushion unit, a pair of cushions provided with snaps along their opposite sides, the snaps on said individual cushions being engageable with the snaps on either side of one another when said unit is unfolded, a collapsible open-topped bag secured to one of said cushions along the edge thereof, a handle grip secured to said unit adjacent the connection between said one cushion and said bag whereby



said cushion and said bag hang in side-by-side relationship when said unit is folded for carrying, and a strap secured to said one cushion of a sufficient length to extend under a conventional stadium seat, and cooperating securing means on said cushion adapted to engage the end of said strap to clamp said cushion in place on said seat.

2,865,434
HEAD REST
Chris Grenz, Miles City, Mont.
Application April 16, 1957, Serial No. 653,141
1 Claim. (Cl. 155—177)

A head rest for use in automotive vehicles comprising in combination, a tubular support post, clamping means for releasable engagement with the seat structure of the vehicle, pivotal means for rotatably securing said support post to said clamping means, and a head cushion carried by the uppermost extremity of said tubular support post, said clamping means comprising a pair of telescopically connected angle brackets for adjustably gripping the uppermost and lowermost extremities of said seat structure, said pivot means comprising a sleeve secured to one of said angle brackets and a pivot pin securing said post to said sleeve for rotation about a horizontal axis, said head cushion including a ball, adjustable clamp means rotatably securing said ball to said support post, a cylindrical head rest rotatably carried by said ball, a guide plate integral with said one bracket adjacent to said tubular support post, and a plate carried by said tubular post slidably received within said guide plate for reciprocating horizontal movement for adjusting the angular relationship between said tubular support post and said angle brackets.

front and rear posts; and an arm rest secured at the top of the outer panel and the posts and concealing the up-

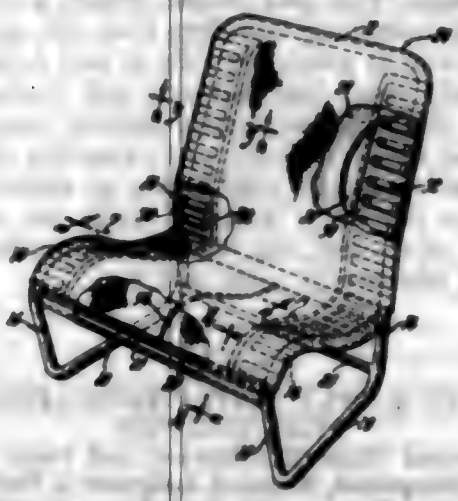
2,865,441
IGNITERS FOR GAS TURBINE ENGINES, COMBUS-

thereover, an upwardly extending medial web integral with her forming a support for the legs of a person using

2,865,436
CUSHIONING DEVICE
Joseph H. Brunson and Louis S. Stuykin, Minneapolis, Minn.
Application December 28, 1955, Serial No. 555,924
10 Claims. (Cl. 155—179)

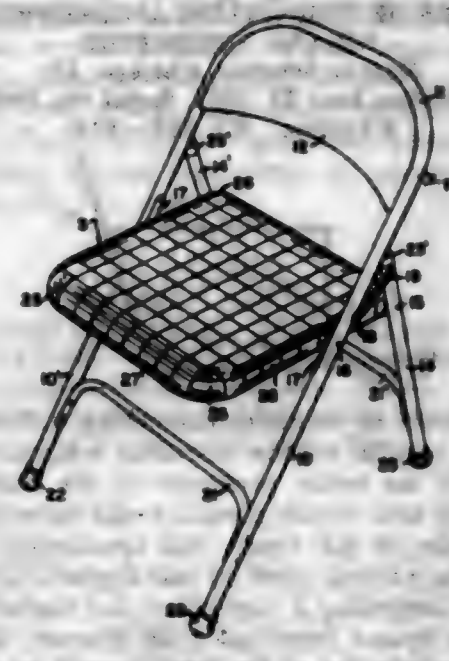
1. A cushioning device comprising a body constructed of a yieldable material, said body having a generally horizontal upper surface, said body also having an elongated rounded corner surface portion between said upper and side surfaces, said rounded corner surface portion having a plurality of elongated grooves and ridges formed therein and extending longitudinally thereof, a cover constructed of flexible sheet material and encompassing said body, said cover having an elongated welt overlying said corner surface portions and extending longitudinally of the grooves therein, whereby said grooves and ridges will restrict transverse movement of said welt.

2,865,436
SEAT
Maurice A. Therne, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 27, 1954, Serial No. 458,377
2 Claims. (Cl. 155—184)



1. A seat of the character described, including: a peripheral frame having front, back and opposite side members; a flexible sponge rubber padding sheet member of substantially uniform thickness within said frame, said padding member having front and rear end portions overlying the front and back members of the frame and said padding member having side portions of said substantially uniform thickness wrapped at least partially around said opposite side members of the frame; an outer covering of resilient two-way stretchable sheet material on said padding member; means for securing the padding member and cover to the front and back members of the frame; a rubber tensioner sheet secured to said padding member at each side thereof and underlying the padding member within the boundaries of the frame, each tensioner being wrapped around the adjacent side member of the frame between said side member and said padding member and each tensioner being formed with a plurality of slots extending transversely of the frame; and means secured to the tensioners for joining said tensioners beneath the padding member.

2,865,437
SEAT FOR FOLDING CHAIRS AND THE LIKE
King D. Shwayder, Detroit, Mich., assignor to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Application April 29, 1957, Serial No. 655,838
7 Claims. (Cl. 155—186)



1. A chair seat comprising a layer of metal having a plastic layer bonded to the exterior surface thereof and having a top and depending flanges on substantially all sides, the lower edges of said flanges extending inwardly and upwardly as a curl so as to add rigidity to said seat and also place the exposed edges of said metal and plastic layers in a protected position.

2,865,438
END STANDARD FOR AN AUDITORIUM CHAIR OR THE LIKE
Jan Machiele, Erving B. Morgan, and Gerald L. Weaver, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application April 25, 1958, Serial No. 731,807
6 Claims. (Cl. 155—191)

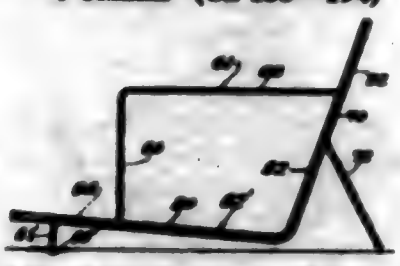
1. An end standard for an auditorium chair or the like, comprising: a pair of vertical posts of straight, cross-sectionally square metal tubing disposed in forwardly-rearwardly spaced parallel relation with their outer side faces in the same vertical plane; a flat sheet metal outer panel extending between the posts and provided with inwardly extending vertical flanges at the front and rear edges thereof, said front and rear flanges being spot-welded to the rear and front walls respectively of the

pair of cushions provided with snaps along their opposite

and said angle brackets.

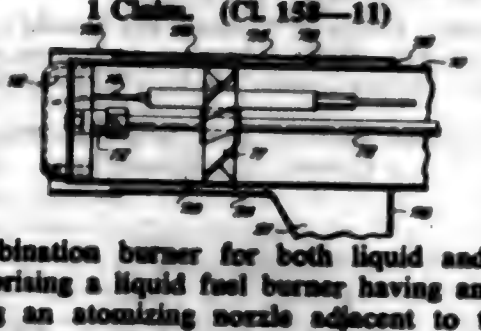
front and rear posts; and an arm rest secured at the top of the outer panel and the posts and concealing the uppermost extremities thereof.

2,865,439
ARTICLES OF FURNITURE AND SUPPORTING MEANS THEREFOR
Harvey Schaller, Chicago, Ill.
Application June 27, 1952, Serial No. 295,984
6 Claims. (Cl. 155—194)



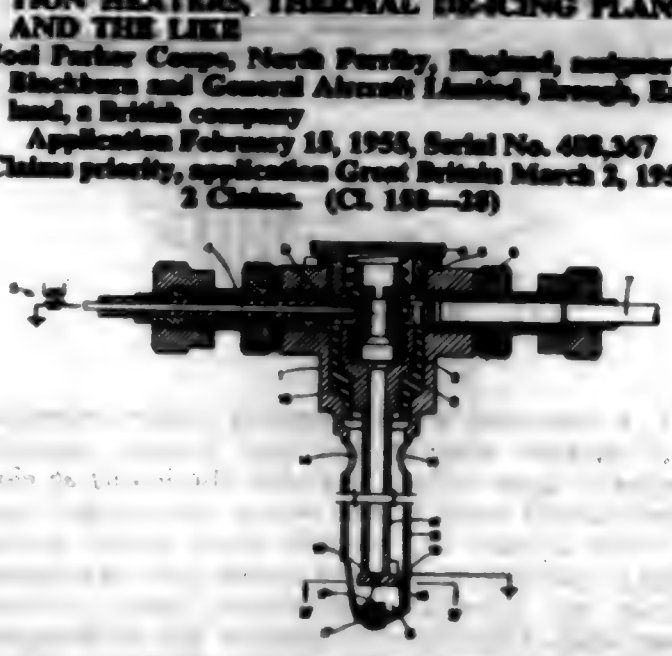
1. An article of furniture comprising a frame having a generally vertical portion extending continuously along substantially the entire perimeter of the frame, means forming with said vertical portion a tube extending around the perimeter of the frame and co-extensive with the length of the vertical portion, and supporting means for the frame comprising a continuous rod extending within the tube at spaced fractional parts thereof, the rod extending angularly out of the tube through an opening in one side thereof, the remaining part of the perimeter of the tube at a cross section thereth.ough at said opening being continuous.

2,865,440
COMBINATION GASEOUS AND LIQUID FUEL BURNER
Robert I. Warnecke, Cheektowaga, N. Y., assignor to Roberts-Gordon Appliance Corporation, Buffalo, N. Y.
Application November 7, 1952, Serial No. 319,261
1 Claim. (Cl. 158—11)



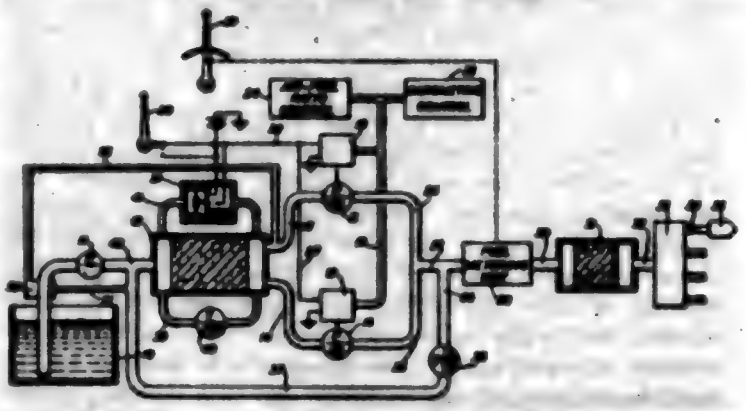
A combination burner for both liquid and gaseous fuel comprising a liquid fuel burner having an air duct containing an atomizing nozzle adjacent to the outer end thereof but entirely contained therein and to which liquid fuel is supplied under pressure, a blower connected with said air duct for supplying air thereto, means for imparting a whirling motion to the air flowing in said duct, a metal sleeve extending about said air duct concentrically therewith and permanently secured to said air duct in spaced relation thereto and forming therewith a passage open at its outer end adjacent to the discharge end of said air duct, said passage being of substantially uniform cross-sectional area throughout the major part of its length with no portion thereof of substantially greater cross sectional area than at the discharge end thereof, the discharge end of said sleeve terminating short of the discharge end of said air duct and the other end of said sleeve being closed, a mixing tube connected with said sleeve adjacent to said other end of said sleeve and extending in a direction to discharge a primary mixture of air and gas into said passage in a direction toward the discharge end of said passage for producing further mixing of air and gas in said passage while moving toward the discharge end thereof, and means for admitting air and gas into said mixing tube in a direction to induce flow of said air and gas toward said passage.

2,865,441
IGNITERS FOR GAS TURBINE ENGINES, COMBUSTION HEATERS, THERMAL DE-ICING PLANTS AND THE LIKE
Noel Parker Coupe, North Ferriby, England, assignor to Blackburn and General Aircraft Limited, Brough, England, a British company
Application February 15, 1955, Serial No. 488,367
Claims priority, application Great Britain March 2, 1954
2 Claims. (Cl. 158—28)



1. A torch igniter for gas turbine engines and combustion heaters such as those used in thermal de-icing plants, comprising a straight inner fuel conveying tube provided at its outer end with a jetting orifice, an outer tube surrounding and spaced from said inner tube and insulated therefrom, said outer tube having at least one air inlet aperture adjacent its inner end, a plurality of circumferentially spaced extension portions at the outer end of said outer tube forming discharge apertures, a deflector and atomizer element carried by said extensions of said outer tube in spaced relation to said jetting orifice and having an indented conical surface in its upper face concentric with said jetting orifice, a plurality of radial projections each extending from the outer end of said inner tube to points inwardly of said extension portions of said outer tube between said discharge apertures, said discharge apertures extending between transverse planes spaced inwardly and outwardly of said projections, and means for establishing an electrical potential between said tubes whereby sparks are created between said projections and the adjacent portions of said outer tube whereby to ignite said fuel.

2,865,442
FUEL SUPPLY SYSTEMS FOR LIQUID FUEL ENGINES
Frank Bernard Halford, Edgware, and Peter Crossland, Hemel Hempstead, England, assignors to The De Havilland Engine Company Limited, Leavesden, England, a British company
Application July 23, 1954, Serial No. 445,334
Claims priority, application Great Britain July 29, 1953
2 Claims. (Cl. 158—36.3)

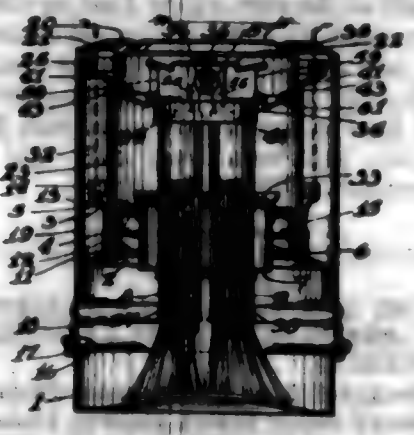


1. A fuel supply system for a liquid fuel engine comprising a filter having an inlet and an outlet, means for feeding fuel at a relatively low pressure to the inlet of said filter, a high pressure fuel pump of the variable

ing a scoop within said second flask passing periodically when the latter occupies a first charge position, said

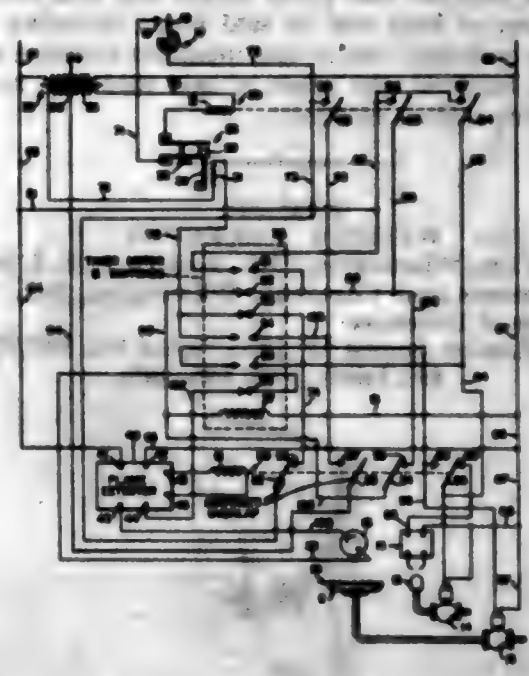
capacity type, a connection leading from the outlet of said filter to said pump, a fuel discharge device, a fuel delivery conduit leading from said pump to said discharge device, a return flow conduit leading from said delivery conduit to the inlet of said filter, control mechanism adapted to vary the capacity of said pump as a function of at least one variable influence, means for over-riding said variable influence and for setting said pump to deliver the full quantity of fuel, and a pressure-sensitive valve in said return flow conduit which is closed under normal operating conditions and is adapted to open when the pump delivery pressure exceeds by a predetermined amount the normal delivery pressure.

2,865,443
PORTABLE COOKING STOVE
Herman Ubbo Lahde, Nashville, Tenn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Application September 5, 1950, Serial No. 183,173
2 Claims. (Cl. 158—72)



1. In a portable stove for burning liquid fuel, the combination comprising a fuel tank having means thereon defining a top wall element thereof, a vertical generator tube secured to said top wall element and extending therethrough into said tank, wick material extending from within said tank into said generator tube and part way upwardly therein, said generator tube defining a vaporizing chamber therein above said wick material, a valve housing mounted on the upper end of said generator tube and closing the upper end of said vaporizing chamber, said valve housing having means thereon defining a pair of generally horizontal fuel discharge orifices directed outwardly thereof in substantially opposite directions, said valve housing having means defining a passage affording communication through said housing between said vaporizing chamber and said orifices, said valve housing comprising manually movable valve means for selectively shutting off said passage and thereby cutting off communication between said vaporizing chamber and said orifices, means defining an annular open-topped flame trough having a bottom wall element and radially spaced inner and outer side wall elements, said side wall elements of said trough defining an annular top opening therein overlying said bottom wall element, generally circular top wall means integral with and extending across the upper margin of said inner wall element of said trough, means forming a heat-conductive conection between said circular top wall means and said valve housing, said inner side wall being spaced substantially outwardly from said valve housing, said inner wall element having a pair of entrance openings therein generally at diametrically opposite points thereon for admitting a mixture of fuel and air to said trough, means mounting said trough on said stove with said entrance openings substantially alined with said discharge orifices and with substantial clear space therebetween so that said discharge orifices will direct fuel vapor across said space and into said entrance openings for combustion in said trough, said bottom wall element of said trough having a pair of grooves therein alined with and adjacent said entrance openings and sloping downwardly between said outer and inner wall elements for deflecting fuel vapor and air upwardly into said trough, means defining a pair of generally horizontal vanes extending outwardly from the upper margin of said inner wall element toward said outer wall element and substantially in overlying relation to said grooves and said entrance openings for restraining upward escape of fuel vapor from said trough, and means mounted on said stove and defining an annular generally cylindrical windshield disposed around said trough in outwardly spaced relation thereto.

2,865,444
CONTROL APPARATUS
Fred T. Deziel, Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application December 28, 1954, Serial No. 476,311
10 Claims. (Cl. 158—128)



1. Burner control apparatus for use with a fuel burner, comprising; electrical control means arranged to be energized upon a need for fuel burner operation and having means adapted to be connected to energize the fuel burner to establish a flame, a flame detector adapted to be associated with the fuel burner to detect flame at the fuel burner, electrical timing means connected to be energized upon a need for fuel burner operation and having means associated with said flame detector to periodically simulate the absence of flame, electrically energizable safety cutout means for terminating operation of the burner, and means for causing said safety cutout means to be energized upon failure of said flame detector to respond to the simulation of the absence of flame.

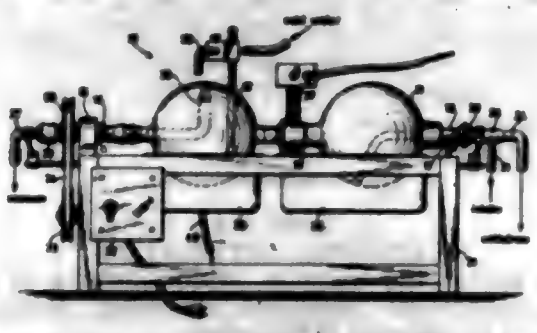
2,865,445
EVAPORATOR
Joseph Bechler, Fort Lee, N. J.
Application October 14, 1954, Serial No. 462,163
7 Claims. (Cl. 159—23)

1. An evaporator comprising a unit rotatable about a substantially horizontal axis, said unit including a first and a second flask, said first flask having a tubular extension in line with said axis, first conduit means opening into said first flask through said extension and forming stationary inlet means for admitting a solution into same, second conduit means forming a connection between said flasks along said axis, and third conduit means entering said second flask along said axis for removing condensed solvent from the latter, said third conduit means form-

tube in a direction to induce flow of said air and gas toward said passage.

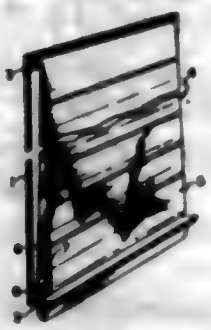
feeding fuel at a relatively low pressure to the inlet of said filter, a high pressure fuel pump of the variable

ing a scoop within said second flask passing periodically through a position adjacent the nadir of said second flask during rotation of said unit; means for heating said first flask and cooling said second flask; mechanism for rotating said unit about said axis; stationary outlet means for said solvent; a support for said first flask rigidly secured to said first conduit means; a first fluid-tight joint



between said first conduit means and said extension enabling relative rotation therebetween; and a second fluid-tight joint between said outlet means and said third conduit means; at least one of said joints including a pair of mating members, one of said members having a surface of plastic material, the other of said members having a co-operating surface of glass.

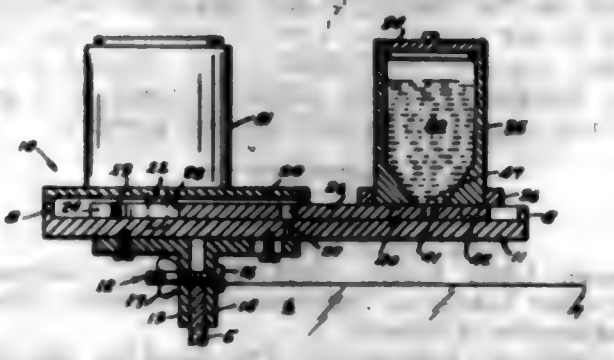
2,865,446
WINDOW COVERING
Paul M. Cole, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application August 11, 1955, Serial No. 527,729
10 Claims. (Cl. 160—85)



10. A curtain adjustable to shut out substantially all light from a covered area comprising two essentially rectangular sections of net fabric juxtaposed face to face and connected to one another by a plurality of intervening essentially parallel resilient strips spaced apart a distance greater than the unextended length, each strip being fastened at opposite ends to opposing faces and pleated in between, the net sections being located for limited lengthwise movement relative to one another in a direction perpendicular to the resilient strips said strips consisting of a material which impedes the passage of light.

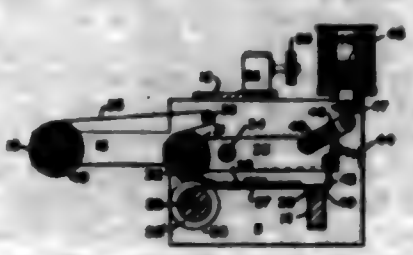
2,865,447
FEEDING APPARATUS
Harry Kaufman, New Rochelle, N. Y.
Application December 6, 1954, Serial No. 473,266
5 Claims. (Cl. 161—10)

1. Apparatus for automatically feeding at predetermined intervals pulverulent food to fish and the like in a tank, comprising a discharge plate having a discharge port, means for mounting said discharge plate over said tank with said discharge port communicating with said tank, a pivotable transfer plate slideably mounted on said discharge plate, said transfer plate having at least one aperture of predetermined size for carrying a given quantity of food, a hopper mounted over said transfer plate and accessible to the outside for storing a quantity of pulverulent fish food, said hopper having an outlet port communicating with said aperture in said transfer plate when the latter occupies a first charge position, said transfer plate having a second discharge position displaced from said first position where the aperture therein communicates with said discharge port in said discharge plate, a rotatably mounted cam coupled to said transfer plate, said cam having a profile adapted to maintain the transfer plate in its charge position for a relatively long period of time and periodically to displace substantially



instantaneously said transfer plate to said discharge position, whereby all of the pulverulent food in said aperture in said transfer plate may be discharged simultaneously into said tank, and motor means mounted over said cam and coupled to said cam for rotating the latter continuously whereby food is automatically fed into the tank at periodic intervals, said cam lying over said discharge plate and underneath said motor means.

2,865,448
MACHINE FOR AUTOMATICALLY CUTTING ADJUSTABLY PREDETERMINED LENGTHS FROM ROLL MATERIAL
Harry A. Mead, Jefferson County, near Denver, and Lambert Lamont Slagel, Denver, Colo.
Application April 11, 1955, Serial No. 500,605
12 Claims. (Cl. 164—39)



1. A machine of the character described, comprising powered feed means operable to advance a web of sheet material, a cutter reciprocable to transversely sever the web advanced by said feed means, means operatively engaged with and actuable by said cutter to interrupt the web-advancing action of said feed means during web-severing travel of the cutter and to automatically reestablish web-advancing action of the feed means upon return of the cutter away from severing relation with the web, cutter-actuating means in synchronously-driven relation with said feed means, and coacting elements in said cutter-actuating means relatively adjustable to selectively vary the operative cycle of the cutter for consequent determination of the duration of web-advance interruption controlled thereby.

2,865,449
UNWINDING AND CUTTING MACHINE FOR ROLLED-UP RIBBONS
Walter G. Frankenberg, Millersville, Pa., assignor to General Cigar Co., Inc., New York, N. Y., a corporation of New York
Application September 26, 1952, Serial No. 311,743
5 Claims. (Cl. 164—48)

1. A machine for dispensing ribbon segments of equal length from a roll of a tenuous ribbon, which comprises spool means to hold said roll of tenuous ribbon, a fixed,

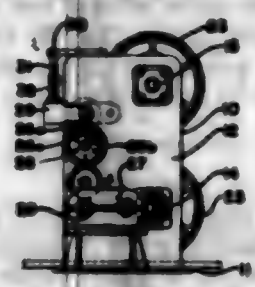
thereof, a cylindrical punch slidably confined in said axial

by said water block, said liquid distillate fraction having

supporting frame, conveyor means with a foraminous endless belt mounted on said supporting frame, a vacuum box disposed above the inner surface of the lower reach of said foraminous endless belt, the wall of said vacuum box adjacent to said inner surface having openings for applying suction from said vacuum box through said foraminous endless belt to hold the leading end of said ribbon in contact with said foraminous endless belt, intermittent drive

means connected to said conveyor means to move said foraminous endless belt a distance substantially the same as the desired equal length of said ribbon segments, cutting means operative to cut a ribbon segment from said ribbon each time said ribbon in contact with said foraminous endless belt has been moved therewith said distance and the movement has been interrupted, and take-off means for removing each resulting ribbon segment from said endless belt before said movement has been resumed.

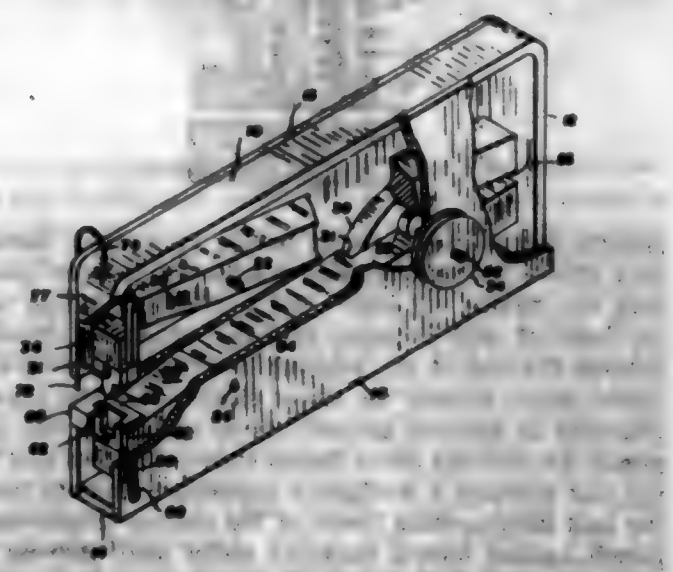
2,865,450
APPARATUS FOR TREATING STRIP AND THE LIKE
Albert J. Sarka, Maple Heights, Ohio, assignor to Wean Equipment Corporation, Cleveland, Ohio, a corporation of Ohio
Application December 9, 1954, Serial No. 474,250
18 Claims. (Cl. 164—49)



11. Apparatus for treating rapidly moving strip and the like comprising continuously operable means feeding strip and the like in a path, tension means on the continuously operable means whereby a portion of the strip may be drawn under tension through the continuously operable means at a rate of speed in excess of the speed of said continuously operable means and then returned through the continuously operable means to the position it would have had had no withdrawal been effected, and means receiving the strip from the continuously operable means intermittently acting on said strip and moving said strip at a rate of speed in excess of the rate of feed whereby the strip is drawn intermittently under tension through the continuously operable means at a rate in excess of the rate of feed.

2,865,451
MEANS AND METHOD OF SEWING SHEET METAL
Harold D. Berg, San Diego, Calif.
Application June 5, 1956, Serial No. 589,685
4 Claims. (Cl. 164—109)

1. A machine for interconnecting sheet metal elements, comprising: a frame having a bed plate and a fixed head spaced above the bed plate and defining therewith a work-receiving gap; said bed plate having an elongated rectangular opening therein; a chisel punch operatively mounted in said head to enter and recede from said opening; said chisel punch having a rectilinear, transverse cutting edge and a pair of elongated, rectangular cutter faces having a common boundary at said cutting edge, and a pair of flat anvil faces at the outer ends of said cutter faces; said chisel punch corresponding with said opening in cross-sectional shape and dimension; a clincher block operatively mounted on said frame to approach and recede from the underside of said bed plate at said opening and having a pair of abutment faces in confronting relation to said anvil faces; means for power driving said chisel punch and means for power driving said clincher block toward said punch when the chisel punch is in the position assumed at the end of the punching stroke; whereby long, narrow segments of a pair of sheet metal elements may be parted on three sides, from said elements with a minimum of deformation and residual stress in the elements and said segments clinched to connect said elements together; a work feed control comprising a spacer pin reciprocably mounted on said head to span said gap laterally of said chisel punch; said spacer pin being biased to enter the immediately pre-



ceding aperture punched by said chisel punch as the work is fed into the machine, thereby arresting the feeding movement of the work while the chisel punch and clincher block operate; means to retract said spacer pin as said chisel punch recedes from said opening, and further means to release said spacer pin when said chisel punch reaches the fully retracted position thereof; said means for power driving comprising a punch-carrying arm pivoted on said frame above said gap, a clincher block-carrying arm pivoted on said frame below said gap, and driven rotary cams operatively mounted on said frame for alternately tilting the first mentioned arm to carry said chisel punch toward and into said aperture and tilting the second mentioned arm to carry said clincher block toward said chisel punch; said means to retract comprising a catch on the first mentioned arm to engage said pin during the retraction movement of the first mentioned arm; said catch disengaging from said pin when the first mentioned arm reaches its fully retracted position.

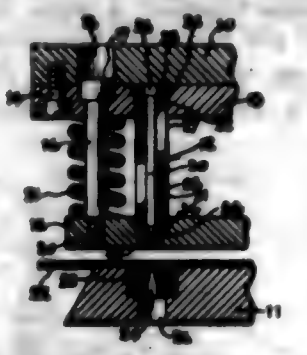
2,865,482
PIERCING PUNCH
Walter G. Porter, Cincinnati, Ohio
Application October 5, 1955, Serial No. 538,558
4 Claims. (Cl. 164—110)

1. A reinforced piercing punch for forming holes in a metal workpiece comprising, an upper and lower sleeve, each having a plurality of limbs spaced apart radially from one another and projecting endwisely from said sleeves, said limbs slidably intermeshing with one another and providing an extensible reinforcing section intermediate said sleeves, said sleeves having a common axial bore extending therethrough from one end to the opposite end

communicating with said aperture in said transfer plate

length from a roll of a tenuous ribbon, which comprises spool means to hold said roll of tenuous ribbon, a fixed,

thereof, a cylindrical punch slidably confined in said axial bore, said intermeshing limbs embracing said punch intermediate the length thereof, said upper and lower sleeves reinforcing the cylindrical punch for the full length thereof, a piercing nib formed on an endwise portion of said punch, said nib having a diameter less than the diameter of the punch, said nib having a curved fillet section extending about the periphery thereof which joins the nib to the endwise portion of the punch, means confining the punch within said upper sleeve against endwise movement therein, a nib bushing having an outside diameter substantially equal to the said common axial bore of the sleeves, said bushing being press-fitted into said bore at the outer endwise portion of said lower sleeve, the said endwise portion of the lower sleeve confining the bushing under pressure and reinforcing the bushing against ex-



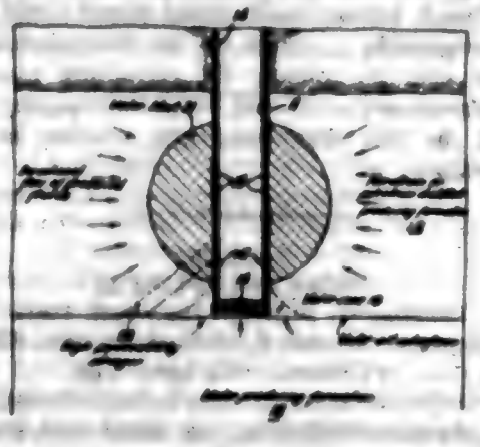
pansive forces, said bushing having an internal bore slidably embracing said nib and reinforcing the nib laterally, said nib having an outer end normally residing within the bore of said bushing, said nib projecting outwardly beyond the end of the bushing upon axial motion of the upper sleeve toward the lower sleeve, whereby upon application of endwise pressure upon the upper end of the punch the piercing nib is forced endwisely from said bushing and through a workpiece supported beneath the nib, the said intermeshing limbs of the sleeves reinforcing the punch against lateral buckling under said endwise pressure, the related diameters of the reinforced piercing nib and punch creating substantially equalized resistance to lateral buckling under endwise pressure, said reinforced nib being capable of piercing a metal workpiece having a thickness greater than the diameter of the nib.

2,865,453

WELL TREATMENT TO REMOVE A WATER BLOCK

Richard H. Widmyer, Bellaire, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application October 9, 1956, Serial No. 614,988
3 Claims. (Cl. 166—42)



1. A method of dispelling a water block from a zone surrounding a well bore penetrating a petroleum producing formation which comprises introducing via said well bore into the zone containing said water block a liquid petroleum distillate fraction in an amount substantially equal to the volume of said formation occupied by said water block, said liquid distillate fraction having a viscosity substantially equal to that of water under the formation conditions of temperature and pressure in said zone of injection, thereafter introducing via said well bore into the zone of injection of said liquid distillate fraction a gaseous medium to distribute the previously injected liquid petroleum distillate fraction within said formation and to dispel said water block outwardly from said zone into the formation, the volume of gaseous medium thus-introduced being at least as great as the zone of said formation occupied by said water block, said volume of gaseous medium being measured under the formation conditions of temperature and pressure, subsequently introducing into the thus-treated zone via said well bore additional said liquid petroleum distillate fraction containing a surfactant material which reduces the surface tension of water and which reduces the interfacial tension between water and oil or other hydrocarbon liquids contained within the zone of the formation undergoing treatment, the volume of said additional liquid petroleum distillate fraction being in the range 1/20—1/2 the volume of said liquid petroleum distillate fraction first introduced into the zone of said formation containing said water block, and thereafter injecting additional gaseous medium into the thus-treated zone via said well bore so as to substantially completely dispel said water block from said zone outwardly into said formation.

2,865,454

OIL WELL FISHING APPARATUS AND METHOD

John F. Richards, Seal Beach, Calif., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

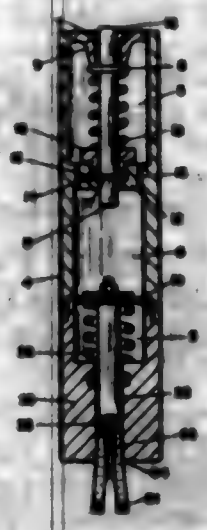
Application July 2, 1956, Serial No. 595,273
5 Claims. (Cl. 166—46)

2. In cleaning petroleum wells, a method of recovering a fish immovably held against the wall of a well by a pressure differential between the mud column pressure and the pressure of the formation, comprising the steps of: lowering a tubular string into the well, providing an inner pressure-tight seal at a predetermined point within said string, connecting the lower end of said tubular string to said fish with the mud column pressure penetrating the lower portion of said tubular string below said inner seal while the upper portion of said tubular string above said inner seal is open to the atmosphere, forming an outer pressure-tight seal in the annular space between said tubular string and the walls of the well at a desired point above said fish but within the mud column, collapsing the inner seal to release the pressure in the borehole below said outer seal, thereby reducing the pressure differential holding said fish against the wall of the well, collapsing said outer seal while simultaneously moving said tubular string, and removing said tubular fishing string and said fish from the well before the pressure differential has built up to a value sufficient to hold the fish again tightly against the wall of the well.

is distorted to reduce its peripheral dimension, the mar-

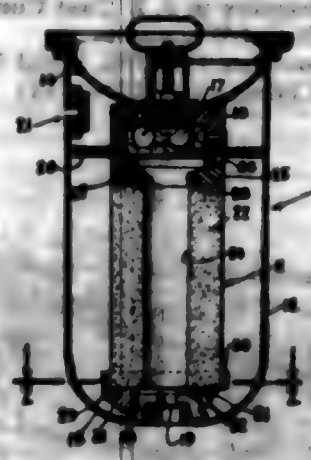
having a pressure portion connected between the said

2,865,455
TUBING SCRAPER
Benjamin J. Rhoads, Jr., Hobbs, N. Mex., assignor to Pan American Petroleum Corporation, a corporation of Delaware
Application October 25, 1950, Serial No. 192,861
11 Claims. (Cl. 166—170)



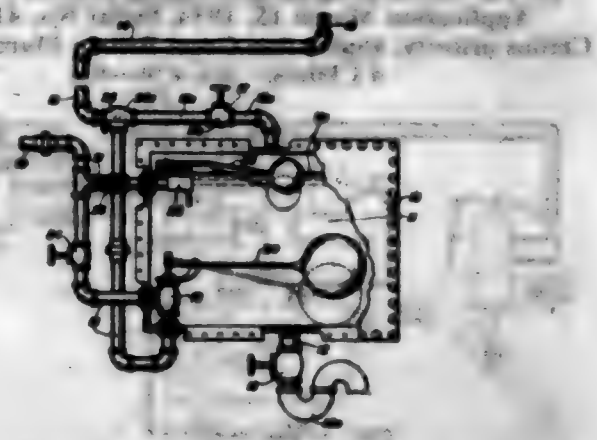
11. In an apparatus for reciprocation in a well tubing, an elongated body, an expansible packer on said body, means forming a gas chamber in said body, a piston exposed on one side to the pressure in said tubing and on the other side to the pressure in said gas chamber, and means connecting said piston to said packer to actuate the expansion and contraction of said packer, the improvement comprising a fluid passage between said gas chamber and the outside of said body, normally closed valve means in said passage, and means to open said valve means and equalize the pressure in said gas chamber with the gas pressure in said tubing when said apparatus contacts the upper end of said tubing whereby changes in pressure at the bottom of said tubing will be automatically compensated once each cycle of said apparatus.

2,865,456
PRESSURIZING CARTRIDGE AND PYROTECHNIC CHARGE THEREFOR
David H. Dennis, Short Hills, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey
Application August 22, 1956, Serial No. 605,638
9 Claims. (Cl. 169—6)



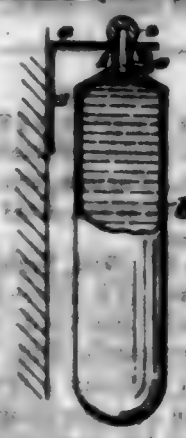
1. A pressurizing cartridge comprising a tubular casing having opposed ends, an igniter adjacent one of said ends, an inwardly facing spud at the other of said ends, a tubular charge of pyrotechnic pressure developing substance in said casing spaced from the inner side wall thereof, means for attaching one end of said charge adjacent said igniter, and a spacer including means for gripping said spud and a socket for receiving the other end of said charge said casing having an outlet at its end adjacent said igniter, whereby said igniter is adapted to direct a flame through said tubular charge in one direction and the flame is redirected in the opposite direction along the exterior of said charge.

2,865,457
FIRE EXTINGUISHING SPRINKLER SYSTEM OF DRY-PIPE TYPE
Dale M. Jensen, Ogden, Utah
Application August 8, 1957, Serial No. 677,418
22 Claims. (Cl. 169—17)



1. In a dry-pipe fire extinguishing sprinkler system having water distribution sprinkler lines which are normally maintained dry, and water supply piping in communication with said water distribution lines, the combination of a closed container for a body of water, normally sealed against the atmosphere; a normally open drain leading from said container at a low level thereof; water trap means interposed in said drain below said container; valve means interposed in said water supply piping for opening and shutting off flow through said piping; valve control means disposed within said container for maintaining said valve means closed when a body of water is maintained within said container and for opening said valve means when the said body of water drains from said container; and means normally closed to the atmosphere but in open communication with the interior of said container, said means opening to the atmosphere under conditions of extreme heat for causing said body of water to drain from said container.

2,865,458
EMERGENCY FIRE EXTINGUISHER
Manlio Simoncini and Carlos Falcon, Buenos Aires, Argentina
Application April 17, 1957, Serial No. 653,321
3 Claims. (Cl. 169—35)



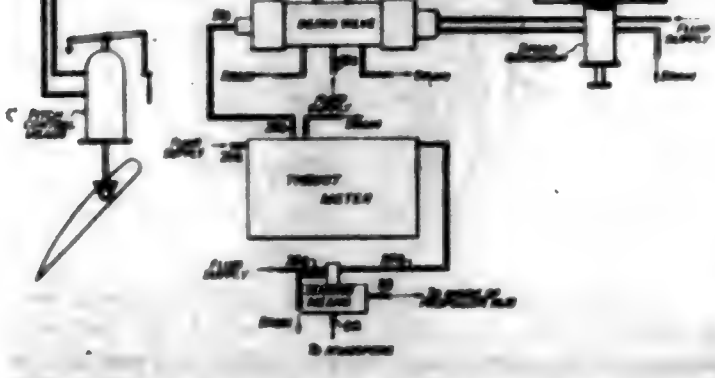
1. An emergency fire extinguisher comprising a bag made from flexible resilient material terminating at one end in an integrally formed neck having a relatively narrow passage therethrough, said neck closed by an enlarged resilient button-like integral head and a fixed support for said bag having an opening therethrough of such size as to permit passing said head only when said head

positions of different elevations with respect to said frame, wheel and axle means pivotally connected to said

applying the resultant control voltage to said control means for energizing the servomotor in accordance with

is distorted to reduce its peripheral dimension, the marginal edge of said support surrounding said opening constituting a cutting edge whereby said bag is decapitated as it is pulled from said support to provide a nozzle having a cleanly severed discharge end for expelling extinguishing liquid in a jet stream.

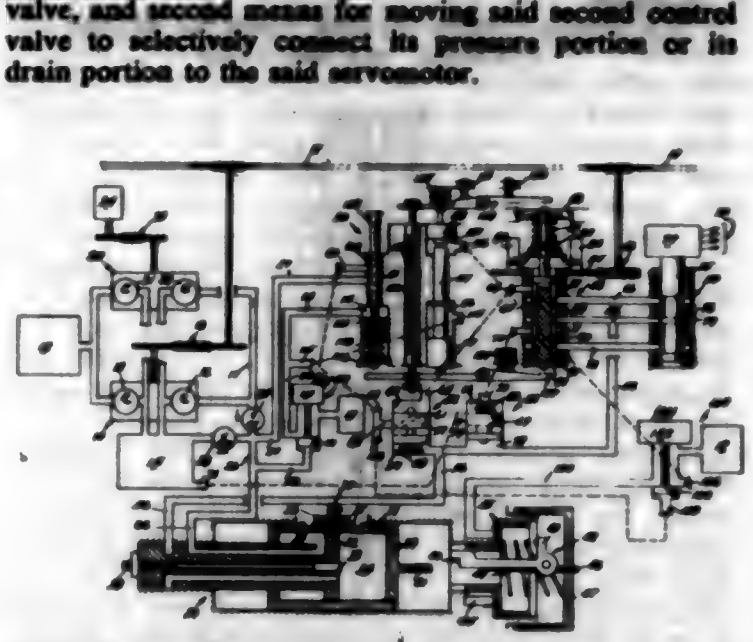
2,865,459
ANEMO-ELECTRIC POWER PLANT
Robert John Purdue, Potters Bar, England, assignor to De Havilland Propellers Limited, Hatfield, England
Application March 15, 1954, Serial No. 416,320
Claims priority, application Great Britain March 17, 1953
4 Claims. (Cl. 170—62)



1. An anemo-electric power plant operating on the depression principle and comprising a supporting structure, a propeller shaft rotatably mounted in the supporting structure, a hollowed bladed propeller having apertures in the tips of the blades, said supporting structure having an airtight passageway effecting communication between the interior of the blades and the outlet of an air turbine mounted on said supporting structure, pitch change means operable by fluid pressure for adjusting the pitch angle of the blades, and control means for actuating said pitch change means in response to variations of the axial thrust acting on said propeller, the said control means comprising axial thrust measuring means including a thrust block resisting the axial thrust acting on said propeller shaft due to the effect of the wind on the propeller, sensing means for determining the difference between the pressure existing within the said airtight passageway and the pressure of the surrounding atmosphere, compensating means controlled by said sensing means and subjecting said thrust block to a thrust proportional to said difference in pressure, and a valve system controlled by said axial thrust measuring means and regulating the supply of fluid to the said pitch change means in response to the thrust acting on said thrust block.

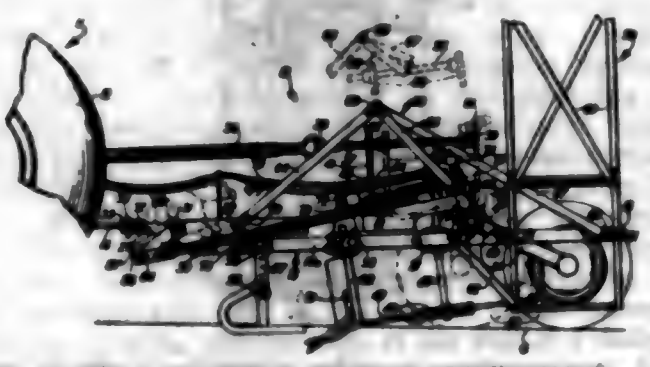
2,865,460
PITCH CONTROL SERVO SYSTEM FOR AN AERONAUTICAL PROPELLER
Harry M. St. John, Jr., Farmington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application June 17, 1954, Serial No. 437,326
14 Claims. (Cl. 170—160.2)

1. In an hydraulically operated servo system which includes a source of hydraulic fluid under pressure and a drain and which also includes a reversible servo motor adapted for operation in one direction by being connected with the said source and for operation in the opposite direction by being connected with the said drain, the combination comprising a first control valve connected directly to the servomotor and having a pressure portion and a drain portion, a first means for moving said first control valve to selectively connect its pressure portion or its drain portion to the said servomotor, a second control valve connected directly to the said servomotor and having a pressure portion connected between the said source and the pressure portion of said first control valve and also having a drain portion connected between the said drain and the drain portion of said first control valve, and second means for moving said second control valve to selectively connect its pressure portion or its drain portion to the said servomotor.



11. An hydraulic servo system for controlling the pitch of an aeronautical propeller comprising in combination, a source of hydraulic pressure, a drain, a reversible servomotor adapted to effect pitch change toward low pitch when connected with the source and toward high pitch when connected with the drain, a movable control valve responsive to propeller speed connected to the servomotor and having a pressure passage connected to the source and a drain passage connected to the drain, said control valve being positioned at one propeller speed to connect its pressure passage to the servomotor and being positioned at a greater propeller speed to connect its drain passage to the servomotor, and means for feathering the propeller including selectively operable actuating means engageable with said control valve to shift to and maintain the same in its position corresponding to said greater propeller speed, said actuating means including a valve adapted to disconnect said source and said control valve when said control valve is engaged by said actuating means.

2,865,461
ROOT CROP HARVESTER
Sherman C. Heth, John C. Jeswik, and Stig O. Vifot, Racine, Wis., assignors to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Application September 19, 1955, Serial No. 534,963
5 Claims. (Cl. 171—141)



1. In a root crop harvester of the type attachable to a hitch of a tractor to be towed by the latter on the ground and having a crop digging implement and rotating spinner assemblage for receiving said crops from the ground upon advancement of said harvester and sensitive in operation to fore and aft tilting, the combination of a frame, a hitch mechanism pivotally mounted on the front end of said frame for pivotal movement into

2,865,465
VACUUM CLEANER

inlet passage communicating with said inlet chamber,

of said charge said casing having an outlet at its end size as to permit passing said head only when said head

positions of different elevations with respect to said frame, wheel and axle means pivotally connected to said frame for supporting the latter at various elevations determined by the pivotal position of said wheel and axle means with respect to said frame, a rod joined between said hitch mechanism and the pivotal connection of said wheel and axle means with said frame for transmitting pivotal movements between said hitch mechanism and said wheel and axle means, force applying means operatively associated with said wheel and axle means, and a lost motion connection forming the joint between said rod and said hitch mechanism for permitting upward movement of said front end of said frame in response to irregularities in ground traversed.

ERRATUM

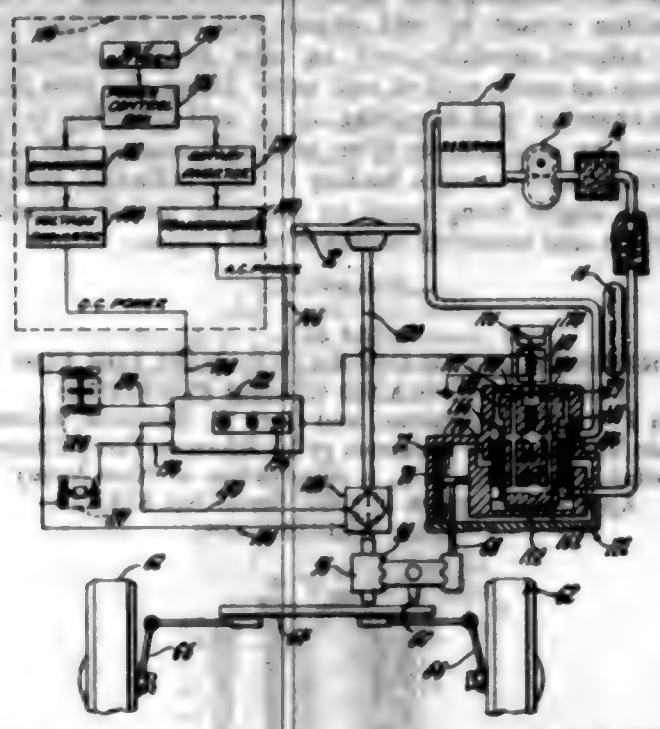
For Class 172—720 see:
Patent No. 2,865,276

2,865,463

AUTOMOTIVE VEHICLE HAVING FREE CONTROL AND STABILITY FEATURES

William F. Milliken, Williamsville, and David W. Whitcomb, East Aurora, N. Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 1, 1956, Serial No. 568,734
5 Claims. (Cl. 180—79.2)



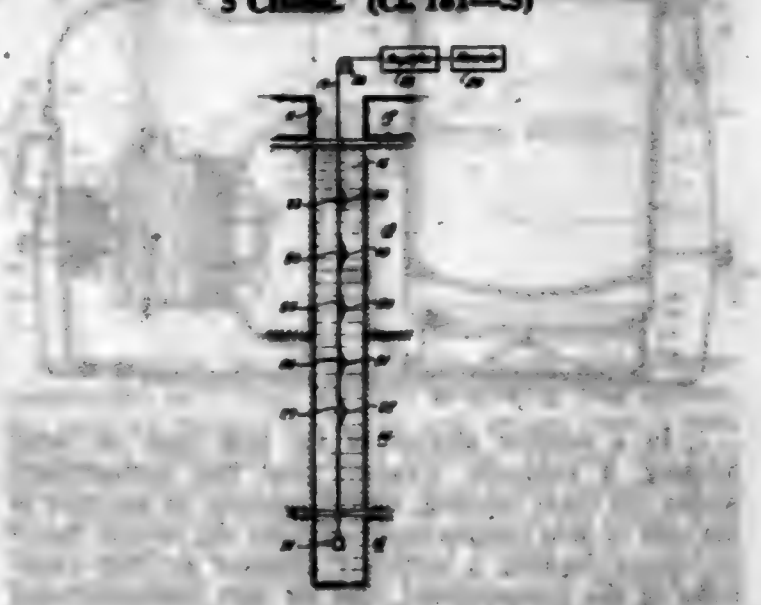
5. In an automotive vehicle, manual steering apparatus including a steering shaft operatively connected with a steering part, power steering apparatus including a servomotor operatively connected with said steering part, control means for regulating the energization of said servomotor, an electrical strain gauge pick-off on said steering shaft adapted to develop a control signal voltage of amplitude and phase corresponding to the magnitude and direction of manually applied turning effort, a rate gyroscope on the vehicle adapted to develop a modulating control signal voltage of amplitude and phase corresponding to the magnitude and direction of the rate of turn of the vehicle about its vertical axis, an accelerometer on the vehicle adapted to develop a control signal voltage of amplitude and phase corresponding to the magnitude and direction of the lateral acceleration of the vehicle, a servo-amplifier adapted to algebraically combine said control signals in selected proportions and to develop a resultant control signal voltage having a polarity and magnitude corresponding to the phase and amplitude of the algebraic sum of the control voltages, and means for applying the resultant control voltage to said control means for energizing the servomotor in accordance with the magnitude and polarity of the resultant control signal.

2,865,463

DETERMINATION OF PROPAGATION CHARACTERISTICS OF EARTH FORMATIONS

Oswald Alfonso Itria, Bellaire, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application January 19, 1956, Serial No. 560,048
5 Claims. (Cl. 181—.5)



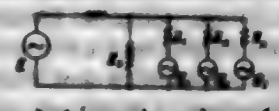
2. Apparatus for determining the velocity characteristic of an earth formation surrounding a borehole comprising a multiple-conductor cable, a plurality of electro-acoustic transducers individually affixed thereto at predetermined spaced positions thereon, and forming structurally continuations thereof, said multiple-conductor cable being firmly attached to each transducer at opposite extremities of each said transducer, each of said transducers being individually coupled to a separate conductor means within said cable, and a bridging member for each transducer attached to said cable above and below the transducer, said bridging member having a shorter effective length than the combined cable and transducer being bridged for supporting the cable therebelow.

2,865,464

UNIDIRECTIONAL DYNAMIC MICROPHONE

Rudolf Görike, Vienna, Austria

Application July 28, 1955, Serial No. 525,827
Claims priority, application Austria August 7, 1954
21 Claims. (Cl. 181—31)



1. A unidirectional dynamic microphone responsive in a certain frequency range and comprising a single diaphragm, means defining a first air chamber with the rear face of said diaphragm, means defining at least one cavity whose length is substantially larger than the shortest wavelength of said frequency range, said cavity being arranged to connect said first air chamber to the sound field surrounding the microphone and having such an effective cross-sectional area that said diaphragm forms with respect to said one cavity a terminating impedance which corresponds substantially to the characteristic impedance of a cavity of said effective cross-sectional area and of infinite length, means defining a second air chamber, and frictional resistance means connecting said second air chamber to said first air chamber, said one cavity bypassing said second air chamber and said frictional resistance means.

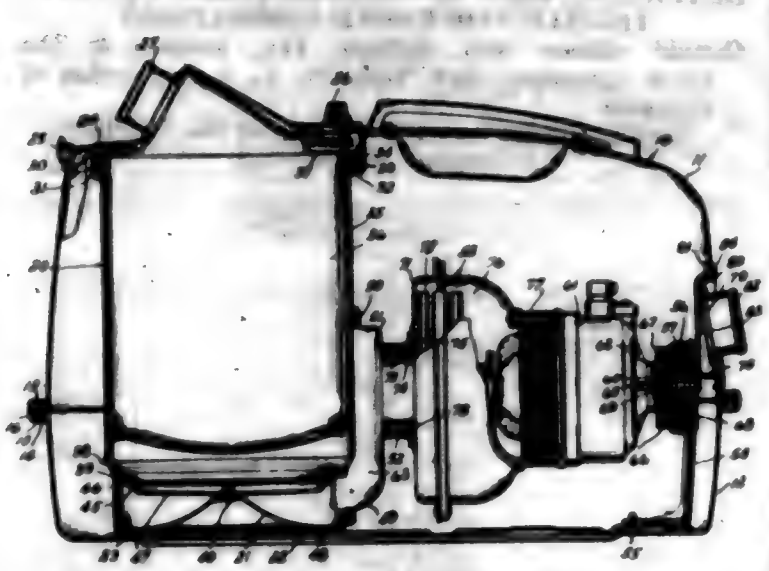
air whenever the throttle is opened to admit steam or compressed air to the hammer, said lubricator compris-

2,865,470

PROCESS FOR TREATING GAS CONTAINING

trol valve connected directly to the said servomotor and the front end of said frame for pivotal movement into

2,865,465
VACUUM CLEANER
Stanley F. Lechowicz, New Britain, Conn., assignor to Landers, Frary & Clark, New Britain, Conn., a corporation of Connecticut
Application January 6, 1956, Serial No. 557,766
11 Claims. (Cl. 183—37)



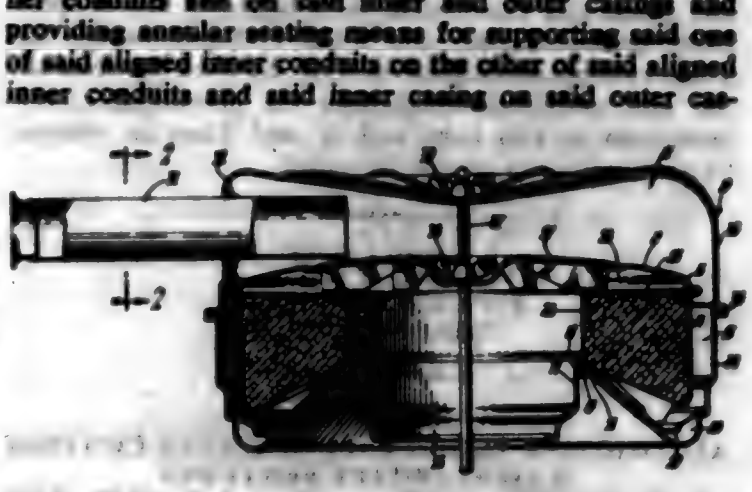
1. In a vacuum cleaner of the tank type, an outer housing, a vertically arranged dust bag compartment within the outer housing, means forming an aperture in the side of said compartment adjacent the bottom thereof, means forming a vertically disposed air duct externally of the compartment, said air duct communicating at one end with said aperture in said compartment and being provided with a horizontally directed aperture adjacent its other end, a horizontally disposed fan and motor assembly within and spaced from the outer housing having an inlet air passageway at one end, means connecting said one end of fan and motor assembly to said means forming said air duct for the support of said one end of the fan and motor assembly thereby and forming an enclosed air passageway connecting said inlet air passageway with said horizontally directed aperture in the air duct, and means on the outer housing resiliently supporting the other end of said fan and motor assembly.

2,865,466
GAS FILTER AND ADHESIVE THEREFOR
Stanley H. Frohmader, Madison, Wis., assignor to Research Products Corporation, Madison, Wis., a corporation of Wisconsin
No Drawing. Application March 7, 1955
Serial No. 492,753
13 Claims. (Cl. 183—44)

1. A gas filter comprising a gas-pervious filter base and a dust-catching adhesive on the surfaces of said filter base, said adhesive comprising a self-emulsifiable mineral oil containing dispersed therein an oleophilic thickener for said oil, said thickener being present in an amount sufficient to impart a non-dripping character to said adhesive.

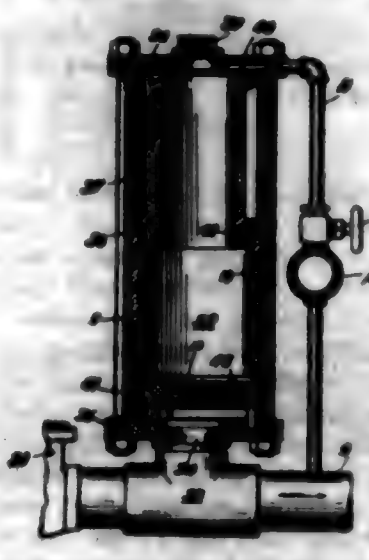
2,865,467
CLEANER SILENCER ASSEMBLY
John D. McMichael, Swartz Creek, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 15, 1955, Serial No. 534,422
1 Claim. (Cl. 183—44)

A cleaner silencer assembly comprising inner and outer casings having aligned inner conduits forming an outlet to be connected to the induction system of an internal combustion engine, said inner and outer casings having spaced upper walls providing an inlet chamber and spaced side and lower walls providing an annular inlet passage communicating with said inlet chamber, said inner casing providing an annular filter chamber communicating with said annular inlet passage and having an upper wall spaced from the upper end of one of said aligned inner conduits and providing an outlet chamber between said filter chamber and said outlet, an annular filter in said filter chamber, annular shoulder means formed on the adjacent ends of said aligned inner conduits and on said inner and outer casings and providing annular seating means for supporting said one of said aligned inner conduits on the other of said aligned inner conduits and said inner casing on said outer cas-



ing, spacing means between said upper end of said one of said aligned inner conduits and said upper wall of said inner casing, means removably securing said inner and outer casings on said annular shoulder means, means removably securing said inner and outer casings to said induction system of said engine and on the other of said aligned conduits, and an inlet conduit extending through an outer wall of said outer casing and into said inlet chamber and supplying air to said assembly to be cleaned by said annular filter, said inlet conduit and said chambers and passages leading to said induction system of said engine being tuned to attenuate sounds emanating from said induction system of said engine.

2,865,468
PRESSURE FLUID OPERATED INJECTOR FOR LUBRICATION AND OTHER PURPOSES
John J. Kupka, Gladstone, and Carl W. Shattuck, Mountain Lakes, N. J., assignors to McKiernan-Terry Corporation, Harrison, N. J., a corporation of New Jersey
Application March 8, 1957, Serial No. 644,829
1 Claim. (Cl. 184—39)



For a steam or compressed air pile driving hammer having a horizontally extending steam or compressed air supply pipe with a throttle by which the steam or compressed air may be admitted to start or to warm up the hammer prior to starting, an automatically acting differential pressure operated lubricator for said hammer mounted on said supply pipe so as to derive heat directly therefrom and connected with said pipe at the hammer side of the throttle so as to receive steam or compressed

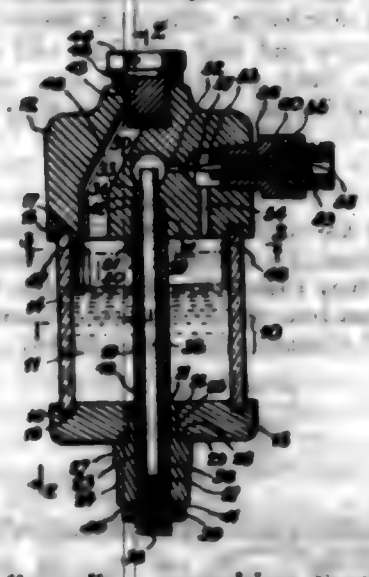
thrown by the rotating fingers when the outer ends of the

shoe assemblies and hangers to said brake levers, and a

algebraic sum of the control voltages, and means for sintance means.

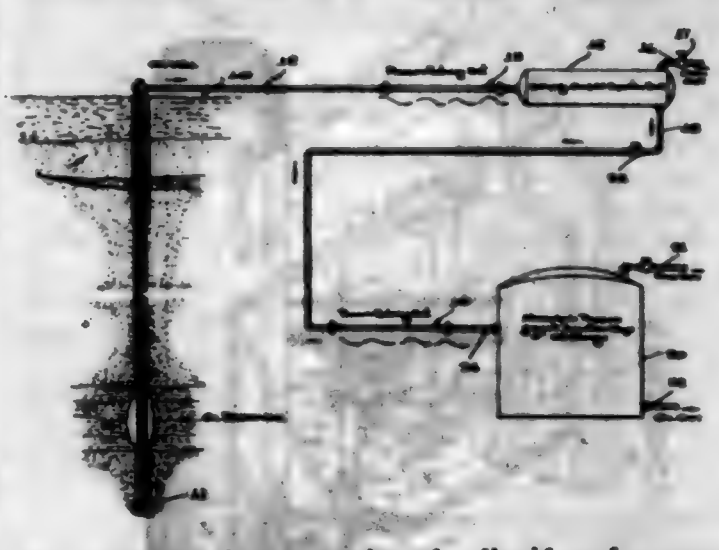
air whenever the throttle is opened to admit steam or compressed air to the hammer, said lubricator comprising a cylinder closed at opposite ends by cylinder heads, one of said cylinder heads having a dependent cylindrical wall of lesser diameter than the cylinder and projecting into the cylinder from said cylinder head, said dependent cylindrical wall being open at the inner end and closed at the outer end, a skirted piston operating in said cylinder and having the skirt of the same surrounding said open-ended cylindrical wall and sealed in overlidding relation therewith and forming in connection with said cylindrical wall a telescopically collapsible pressure creating oil containing feed chamber having a differential pressure relation in the areas exposed to pressure inside and outside said skirted piston, said one cylinder head having an oil filling opening in communication with the interior of said cylindrical wall whereby said pressure feed chamber including said skirted piston may be filled with oil, means on the supply pipe for supporting the lubricator in mounted relation on the pipe and including coupling means for connecting the opposite end of said cylinder with said horizontally extending steam or compressed air supply pipe whereby said cylinder will receive steam or compressed air when the throttle is opened and can drain back into said supply pipe when the throttle is closed, and an oil feed connection extending from said first mentioned end of the cylinder for supplying oil to the hammer, said oil feed connection including visible oil flow control means and being connected in pressure receptive communication with said supply pipe at the hammer side of the throttle whereby differential operating pressure will be applied to said skirted piston when the throttle is opened to start or preheat the hammer and operation of the lubricator will be stopped and the lubricator permitted to drain back into the supply pipe when the throttle is closed.

2,865,469
AIR LINE OILERS
Frank J. Lyden, Manitowoc, Wis.
Application May 13, 1955, Serial No. 508,033
10 Claims. (Cl. 184—55)



1. An air line oiler, comprising a casing providing an oil reservoir, said casing having an air passage for flow of compressed air therethrough and having a bore between said reservoir and passage, said casing further having a bottom wall with an aperture aligned with said bore, oil feeding means including a rigid porous rod disposed in said bore and extending into said air passage, and adjusting means exteriorly accessible from below said bottom wall for longitudinally shifting said rod, said adjusting means extending in said apertured bottom wall and having a fluid-tight joint therewith to permit manipulation of said adjusting means while said casing is under internal pressure.

2,865,470
PROCESS FOR TREATING GAS CONTAINING FLUID
John J. Secher, The Hague, Netherlands
Application April 8, 1955, Serial No. 500,185
1 Claim. (Cl. 183—114.5)



In a process for separating the liquid and gaseous constituents of a high pressure petroleum well stream, the steps of, flowing the entire well stream from a well through a conductor at high velocity, causing the well stream to undergo a continuous progressive pressure drop at a substantially uniform rate by flowing the entire well stream from the conductor into a helical path without any appreciable reduction in velocity, then flowing the well stream from the helical path into a conventional oil and gas separator while reducing the pressure upon the well stream, withdrawing separated gas from the separator, causing the entire remaining well stream to undergo a further continuous and progressive pressure drop at a substantially uniform rate by flowing the entire remaining well stream from the separator in a second helical path at high velocity, both said paths being elongate and generally rectilinear and of much greater length than diameter, the paths being of substantially constant diameter whereby the well streams are caused to flow therethrough at substantially constant high velocities, subsequently discharging the well stream into a second oil and gas separator at near atmospheric pressure, and withdrawing separated gas and liquid from the second separator.

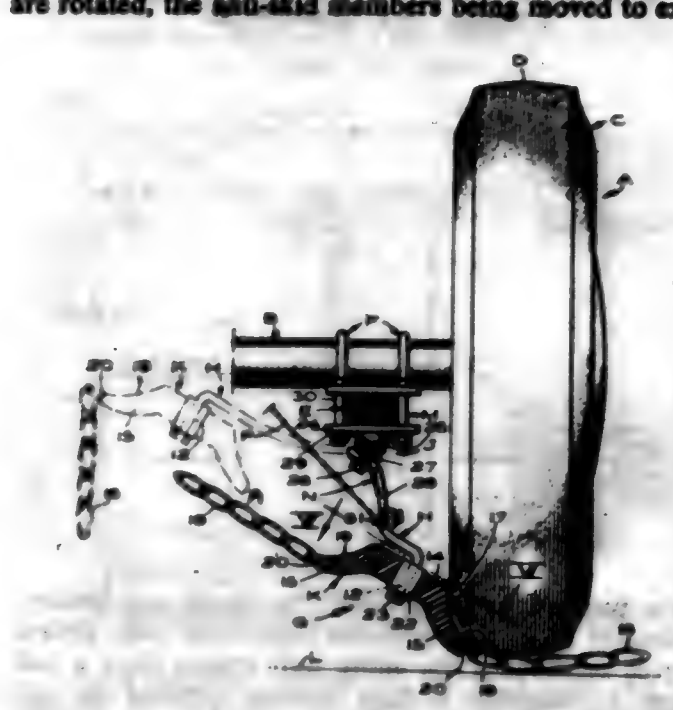
2,865,671
ANTI-SKID DEVICE FOR VEHICLES
Francis P. Chamoun, Wenatchee, Wash.
Application December 26, 1956, Serial No. 630,494
3 Claims. (Cl. 188—4)

1. In an anti-skid device for a vehicle having a wheel tire; an arm swingably mounted on the vehicle; a member rotatably mounted on the outer end of the arm and having a circular hub movable into contact with the tire when the arm is swung into operative position and moves the rotatable member therewith; the axis of the hub being inclined to the plane of the tire when the hub contacts the side of the tire; whereby the member will be rotated by the rotating tire; a plurality of resilient fingers extending beyond the hub and having a shape and length to lie in a plane that extends at an angle to the plane of the tire when the hub contacts with the tire to cause the outer ends of the fingers to move through a circle that is substantially tangent to a circle lying in the inclined plane formed by one side of the tire tread at a place where the tire tread portion contacts with the tire-supporting surface; whereby the outer ends of the resilient fingers will move adjacent to the supporting surface when their ends move nearest to the side of the tire; and elongated anti-skid flexible members connected to the outer ends of the fingers; said anti-skid members being successively

ing said cam unit, an outer race for said roller assem-

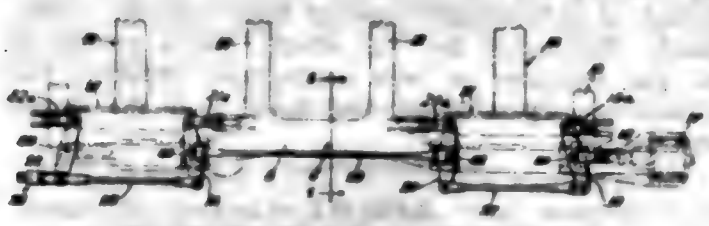
2,865,676

thrown by the rotating fingers when the outer ends of the fingers are adjacent to the tire tread and to the supporting surface so that the members will lie between the tire tread and the roadway as the tire and first-mentioned member are rotated, the anti-skid members being moved to extend



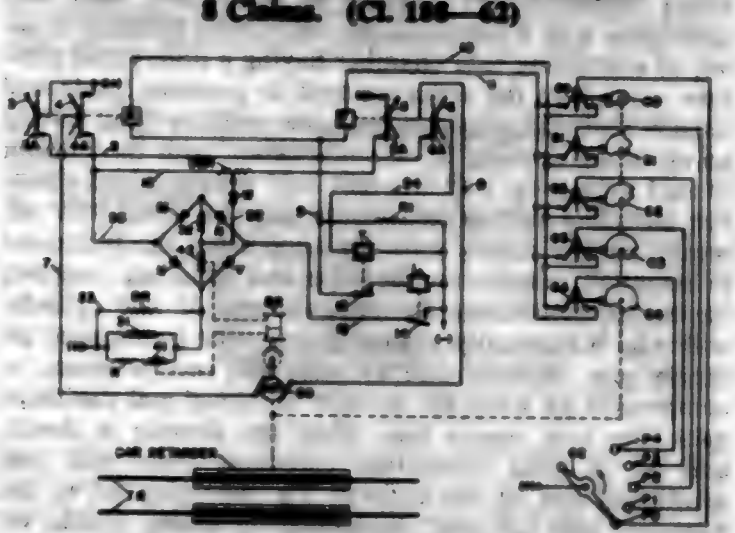
substantially transverse to the tire tread just prior to that portion of the tread contacting the supporting surface to place the members between the tread and supporting surface and thereby prevent skidding of the tire; and means for swinging the arm from inoperative into operative position and vice versa.

2,865,472
CLASP BRAKE
Edward J. Simmek, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Application August 16, 1954, Serial No. 449,987
7 Claims. (Cl. 188—56)



1. In a clasp brake arrangement for a railway car truck, wheel and axle assemblies, a frame supported thereby, power means mounted on one corner of said frame, braking means for the wheels at one side of the truck comprising first, second and third horizontal live actuating levers, a vertical dead cylinder lever operatively connected at the lower end thereof to said power means and having its upper end directly connected to said first live horizontal actuating lever intermediate the ends of said actuating lever, a rod pivotally connecting said second and third actuating levers intermediate their respective ends, a horizontal dead actuating lever fulcrumed intermediate the ends thereof on said frame and adjacent said third live actuating lever, a pull rod pivotally interconnecting the first and second actuating levers at the outboard ends thereof, another pull rod connecting the other two actuating levers at the outboard ends thereof, four dead brake levers fulcrumed intermediate the ends thereof to the frame on opposite sides of their respective wheels and having their upper ends connected to the inboard ends of their respective actuating levers, brake shoe assemblies and brake hangers carried by said brake levers at the lower ends thereof, non-rattling devices each comprising a pin and spring serving to secure said brake shoe assemblies and hangers to said brake levers, and a slack adjusting device operatively connected to last mentioned pull rod.

2,865,473
MOTOR AND BRAKE CONTROL CIRCUITS
Stuart M. Phelps, Rochester, and Henry C. Shirley, Spencerport, N. Y., assignors to General Railway Signal Company, Rochester, N. Y.
Application May 15, 1957, Serial No. 659,607
8 Claims. (Cl. 188—62)



5. In a control system for electrically operated car retarder mechanism having a track brake driven by a reversible electric motor and provided with a forward and reverse operating circuit, said motor having an armature and also series and shunt field windings, an electric motor brake for holding said track brake in its last driven position when said motor is not operating, said motor brake having an operating coil connected in series with said series field winding and a holding coil connected in multiple with said shunt field winding, fullwave rectifiers connected in series with said motor armature and said series field winding and also said operating coil when said motor is operating in the forward or reverse direction, said rectifiers maintaining the same direction of current through said series field winding and said operating coil, and a discharge resistance connected in series with said armature and said rectifiers and also in series with said series field winding and said operating coil when said motor is operating in the reverse direction.

2,865,474
ONE-WAY AUTOMATIC BACKSTOPS
Joseph A. Marland, La Grange, Ill., assignor to Marland One-Way Clutch Co., La Grange, Ill.
Application June 19, 1957, Serial No. 666,702
7 Claims. (Cl. 188—82.84)

1. The combination for a cam unit adapted to be connected to a shaft and having a roller assembly surround-

wood driver clutch member splined in the hub, yielding

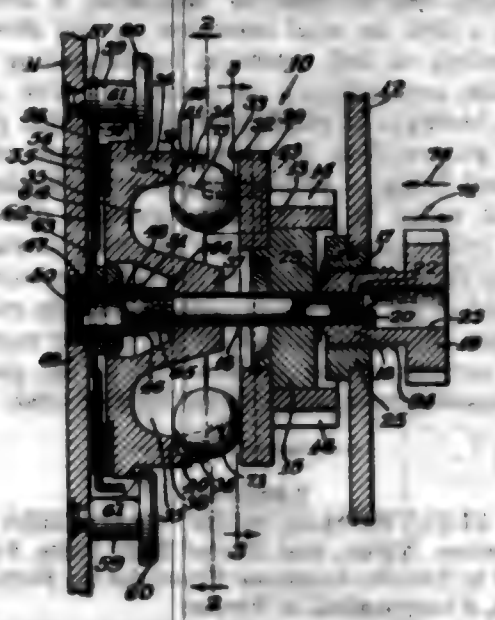
ing said cam unit, an outer race for said roller assembly, an annular cover for enclosing the side of said roller assembly, said cover being in engagement with the side of said outer race, said cover having apertures extending transversely therethrough, comprising a channel arm having a transverse dimension substantially less than the diameter of said outer race, said channel arm having at one end a longiutdinal U-shaped recess of a width greater than the diameter of the shaft adapted to be connected to said cam unit, said channel arm having two circular extending cover plate portions integrally connected thereto adjacent the end thereof in the plane of the bottom of said channel, said arm and said circular portions having apertures therein, and fastening members extending through said latter apertures and the apertures in said cover into said roller assembly.

2,865,675

SPEED RESPONSIVE BRAKE

David M. MacMillin, Wilmette, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Application October 14, 1957, Serial No. 689,999
6 Claims. (Cl. 188—187)



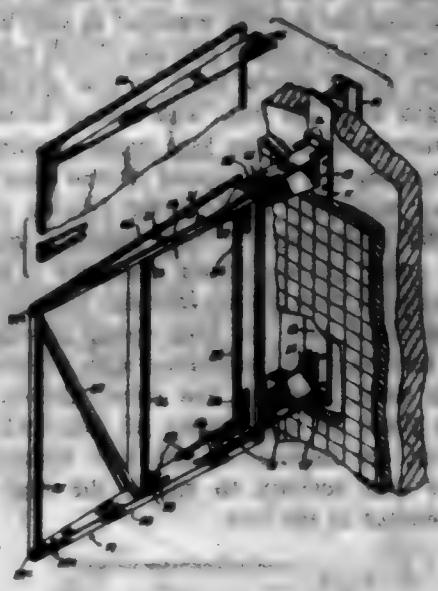
1. A governor comprising, in combination, frame means, a shaft carried by said frame means, a rotatable driven member, the speed of which is to be controlled, carried by said shaft and having radially extending flat ball receiving surfaces, a rotatable cage carried by said shaft and having radial slots facing said ball receiving surfaces of said driven member, said cage being movable toward and away from said driven member, means interconnecting said driven member and said cage whereby the latter rotates conjointly with the former, a ball in each slot, the portions of said slots contacted by said balls when they are thrown outwardly by centrifugal force incident to rotation of said driven member into tangential engagement with the respective ball receiving surfaces on said driven member being characterized by requiring that the lines through the respective balls joining the portions where they are tangent to said slots and said surfaces be more nearly parallel to the axis of rotation of said cage at relatively slow speed thereof than they are at relatively high speed, a spring reacting between said cage and said frame means to bias said cage toward said driven member, a friction plate non-rotatably carried by said frame means in spaced relation to said cage, friction means interposed between said friction plate and said cage, and a manually adjustable member carried by said frame means and cooperating with said driven member to move the same toward or away from said cage to effect respectively an increase or a decrease in the speed thereof.

2,865,676

WALL MOUNTED CANTILEVER PARTITION

Nathan Schooler, Beechhurst, N. Y.

Application December 10, 1956, Serial No. 627,407
10 Claims. (Cl. 189—34)



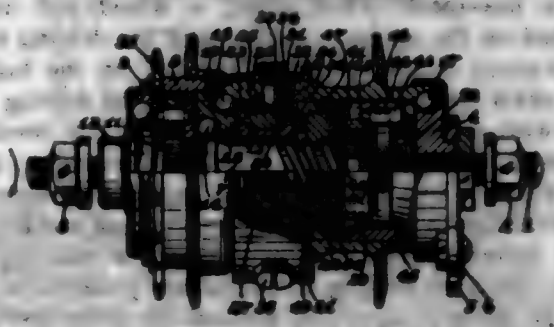
1. A wall mounted partition of the type described, comprising a wall bracket attached to a structural support located within said wall including a base plate, bracket arms having a T-shaped cross-section integrally attached at each end of said base plate and in opposed relation with each other extending perpendicularly to said base plate, a substantially hollow rectangular partition slidably mounted on said bracket arms, said partition comprising a frame, face panels secured to said frame, said partition frame comprising upper and lower horizontal frame members, front and rear frame members attached at the ends thereof to the ends of said horizontal frame members, said horizontal frame members being disposed in opposed relationship to each other and each of which comprises a channel beam, a cross bar integral with each said channel beam and adjacent the end attached to said rear vertical frame member, guide rails integrally attached to the edge of said channel beams and extending inwardly of the partition frame and in opposed relationship so as to permit and guide said T-shaped bracket arm to enter into said partition, said rear vertical frame member having slots at each end thereof, said slots having a configuration corresponding to the cross-section of said bracket arms, and means wholly within said partition for fastening said partition to said bracket arms.

2,865,677

AUTOMATIC TWO-SPEED GEARING AND HUB BRAKE FOR VELOCIPEDES AND THE LIKE

Edwin Elliott Hood, Elmira, N. Y., assignor to Bendix Aviation Corporation, a corporation of Delaware

Application March 14, 1955, Serial No. 494,123
7 Claims. (Cl. 192—4)



1. In a two-speed coaster brake for velocipedes and the like, a hollow wheel hub and means for rotating the hub including a driving member and a high speed screw shaft fixed thereto, a high speed conical driving clutch member threaded on the high speed screw shaft, a high

the said driving shaft and having its working face directed

ment with said central member, and stop means on said

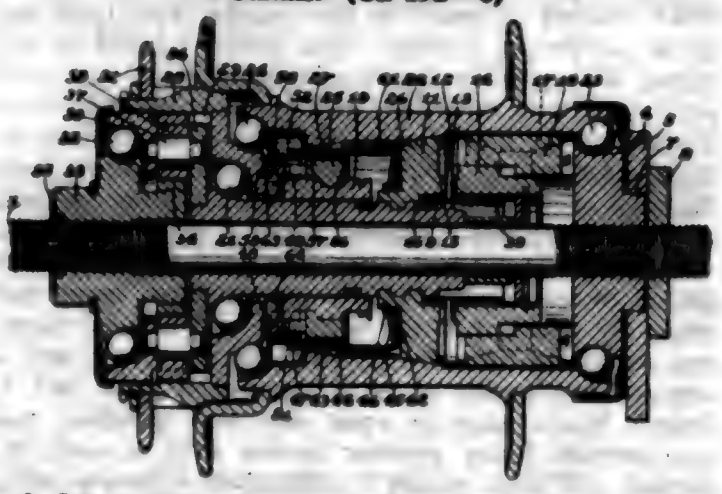
speed driven clutch member splined in the hub, yielding means resisting movement of the high speed driven clutch member away from the high speed driving clutch member, means limiting the travel of the high speed driving clutch member, a low speed screw shaft, reduction gearing connecting the driving member to said low speed screw shaft, a low speed conical driving clutch member threaded on the low speed screw shaft, a low speed driven clutch means rigid with the hub, and means actuated by clutch closing movement of the low speed driving clutch member for moving the high speed driven clutch member out of contact with the high speed driving clutch member against the resistance of said yielding means; in which the high speed driven clutch member is in the form of a ring having a continuous internal conical clutch surface for engagement with the high speed driving clutch member, and having a skirt provided with a plurality of axially extending slots, and the low speed driven clutch means is in the form of a plurality of interiorly tapered projections on the interior of the hub slidably engaged by said slots and serving to spline the high speed driven clutch member in the hub.

2,865,478

TWO-SPEED COASTER BRAKE FOR VELOCIPEDES AND THE LIKE

Edwin Elliott Hood, Elmira, N. Y., assignor to Bendix Aviation Corporation, Elmira Heights, N. Y., a corporation of Delaware

Application February 20, 1956, Serial No. 566,449
6 Claims. (Cl. 192—6)



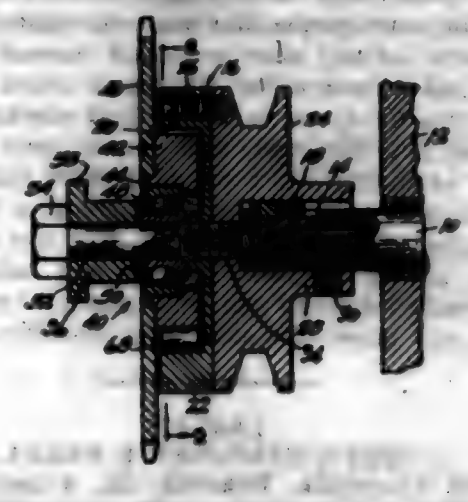
1. In a two-speed coaster brake a fixed axle, an anchor member, means for immobilizing the anchor member brake mechanism including a brake applying expander member adjacent one end of the axle having a splined connection with the anchor member, a low-speed screw shaft journalled on the axle, a low-speed driving clutch and brake operating member threaded on said screw shaft for alternative operative engagement with the hub and expander member, means frictionally connecting the low speed clutch member to the expander member, a driving member and high-speed screw shaft rotatably mounted on the low-speed screw shaft, a wheel hub rotatably mounted on the anchor member and the driving member, a high-speed clutch member threaded on the high-speed screw shaft for movement into and out of driving engagement with said hub, reduction gearing for rotating the low-speed screw shaft from the driving member, an abutment member rotatably mounted on the high-speed screw shaft in the path of engaging movement of the high speed clutch member, said abutment member and high speed clutch member having cooperating projections which, when in registry, abut and prevent the high speed clutch member from engaging the hub; and means responsive to backward and forward rotation of the driving member for indexing the abutment member relatively to the high speed clutch member to alternatively bring said projections into and out of registry.

2,865,479

ENGINE STARTER

Max C. Hungerford, Dowagiac, Mich.

Application January 16, 1956, Serial No. 559,399
6 Claims. (Cl. 192—46)



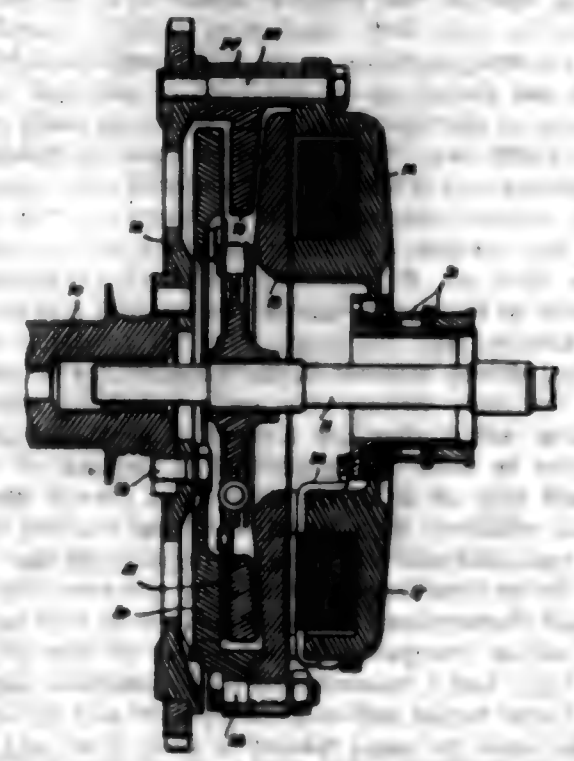
1. An engine starter adapted to be mounted as a unit upon an engine drive shaft, comprising a cup-shaped driven member having a central cylindrical cavity, means for securing said member to said shaft, a driving unit including a disk, an axial extension on said driven member, a bearing on said extension for journaling said disk for rotation concentrically in said cavity with clearance, said disk having a circumferentially elongated peripheral recess of progressively increasing depth from end to end thereof and being of greatest depth at its leading end, a cylindrical roller in said recess having a diameter less than the radial spacing between the base surface of the recess and the inner surface of the driven member at the deepest end of the recess and greater than the radial spacing between the inner surface of the driven member and the base surface of the shallow end of the groove and drive transmission means carried by said disk.

2,865,480

ELECTROMAGNETIC CLUTCHES

Jean Maurice, Ablon, and Michel Ritz, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France

Application July 6, 1955, Serial No. 520,378
Claims priority, application France July 12, 1954
4 Claims. (Cl. 192—84)



1. An electro-magnetic clutch comprising: a driving shaft and a driven shaft, an electro-magnet yoke fixed to

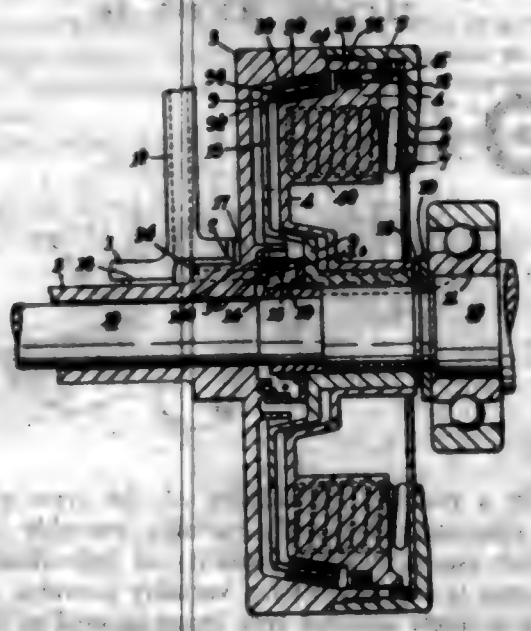
the said driving shaft and having its working face directed towards said driving shaft, a friction plate fixed to the said yoke with its working face directed towards said driving shaft, an electro-magnet armature fast for rotation but free for lateral movement with respect to said yoke, a second friction plate fixed to the said armature, the said friction plates being located on the side of said yoke which is the nearer to the said driving shaft, a friction disc adapted to be gripped between the two said friction plates and mounted fast for rotation with said driven shaft, an auxiliary plate fixed to said driving shaft, means for fixing the unit assembly constituted by said yoke and said first-mentioned friction plate to the said auxiliary plate, said fixing means being accessible both before and after the mounting of the clutch in position and surrounding the said armature and said second friction plate.

2,865,481

FLUID OPERATED FRICTION CLUTCH WITH CUSHION

Piero Mariano Giri de Tarmenia, Cox Green, England

Application November 30, 1953, Serial No. 395,214
Claims priority, application Great Britain December 5, 1952
2 Claims. (Cl. 192—91)



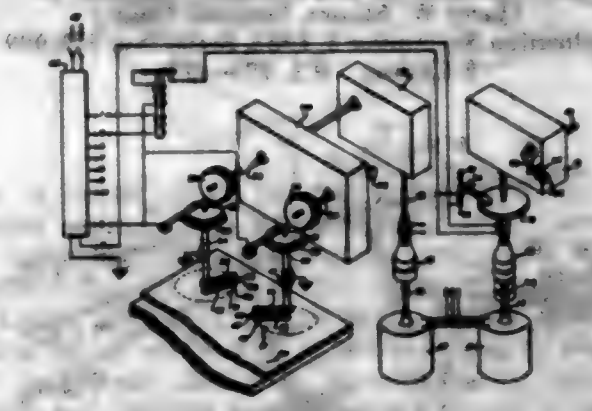
1. A fluid operated friction clutch comprising a pair of co-rotating friction clutch elements movable axially towards and away from each other and connected to a power input shaft, a central member disposed between said clutch elements and frictionally held therebetween, said central member being connected to a driven shaft and restricted against axial displacement, a thrust-receiving member connected to one of said co-rotating clutch elements, a complementary thrust-receiving member on the other of said co-rotating clutch elements, said one clutch element forming an exterior casing surrounding the engaging parts of the clutch and constituting a cylinder to receive the other clutch element as a piston slidable therein, spring means for holding said thrust-receiving members apart and for urging the co-rotating clutch elements towards said central member and into frictional engagement therewith to engage the clutch, fluid pressure operated means adapted to effect axial displacement of said co-rotating clutch elements in opposite directions to compress said spring and to effect disengagement with said central member and a fluid release valve adapted to relieve the pressure between the co-rotating clutch elements and to cause said spring to separate said thrust-receiving members, said pressure release valve being a flap valve mounted for rotation relative to a first one of said clutch elements and a member rotationally connected to said flap valve and in frictional engagement with said central member, and stop means on said first clutch element and on said flap valve whereby said valve will be rotated relative to said first clutch element to one of two limiting positions when said central member is rotating at a substantially different speed than said first clutch element but is brought to an intermediate position upon a reversal of the direction of relative rotation, said flap valve and first clutch element having passage means therethrough controlled by the position of said flap valve.

2,865,482

AUTOMATIC CONTROL OF RADIO TRANSMITTERS OR OTHER EQUIPMENT

William M. Granger, Sechelt, British Columbia, Canada

Application June 14, 1954, Serial No. 436,658
Claims priority, application Canada November 16, 1953
9 Claims. (Cl. 192—142)



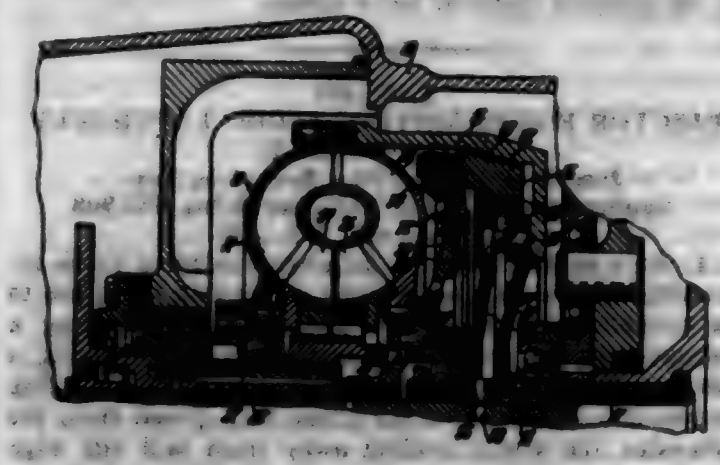
1. An apparatus for remotely controlling angular displacement of a shaft: comprising at least two synchronous electric motors; indexing means having at least one plane surface, said surface having formed therein an irregularity; a feeler finger held in contact with and for rotation relative to said plane surface; a first electrically-operable clutch; a first of said electric motors being effective to cause relative rotation between said feeler finger and said indexing means through said first clutch, said irregularity being formed in the path of the relative movement of said feeler finger; a second electrically-operable clutch; a second of said motors being effective to cause rotation of said shaft through said second clutch; and means actuated by contact between said feeler finger and said irregularity to de-energize said second clutch.

2,865,483

LOCKUP CLUTCH MEANS FOR FLUID TORQUE CONVERTERS AND THE LIKE

William G. Livezey, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

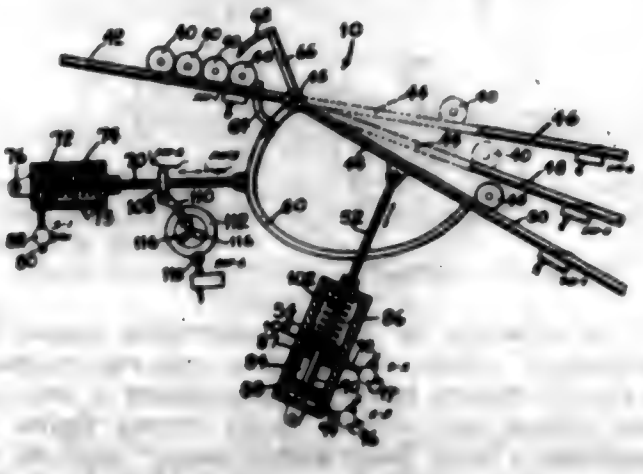
Application November 25, 1955, Serial No. 549,856
6 Claims. (Cl. 192—3.2)



1. Fluid drive clutch means for use within a fluid torque converter for directly connecting impeller and

rotor members thereof, said clutch means including an annular clutch member, helix splineways securing said clutch member to the rotor member of said torque converter and permitting axial travel of said clutch member relative to the impeller member of said torque converter for engaging said impeller member to said rotor member, and means biasing said clutch member in light engagement with said impeller member, said splineways engaging said clutch member to said impeller member during the overrun of said rotor member and disengaging said clutch member therefrom during the overrun of said impeller member, with and in opposition to said biasing means, respectively.

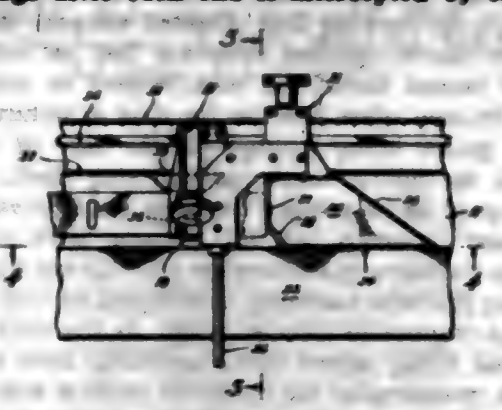
2,865,484
AUTOMATIC TRANSFER UNIT
John M. Biddlecor, Dayton, Ohio, assignor to Harry W. Moore, Dayton, Ohio
Application September 2, 1953, Serial No. 378,099
5 Claims. (Cl. 193—39)



1. In a transfer device for distributing articles movable on a receiving conductor to a set of distribution conduits, a transfer conduit pivotally movable adjacent the receiving conductor, a pivotally operable gate member attached to the receiving conductor, an escapement arm attached to the gate member, a control finger also attached to the gate member disposed in angular spaced relation from the escapement arm and cooperably operable with the escapement arm to allow movement of one article to the transfer conduit upon each operation of the gate member, a multiple position reciprocally operable fluid motor attached to the transfer conduit operable to align the transfer conduit with any one of the distribution conduits, fluid operable piston means attached to the gate member for movement thereof, switch means adjacent the receiving conductor and the distribution conduits indicating positions of articles thereupon, solenoid operable valve means controlling flow of fluid to and from the fluid motor and the piston means, and control means attached to the solenoid operable valve means.

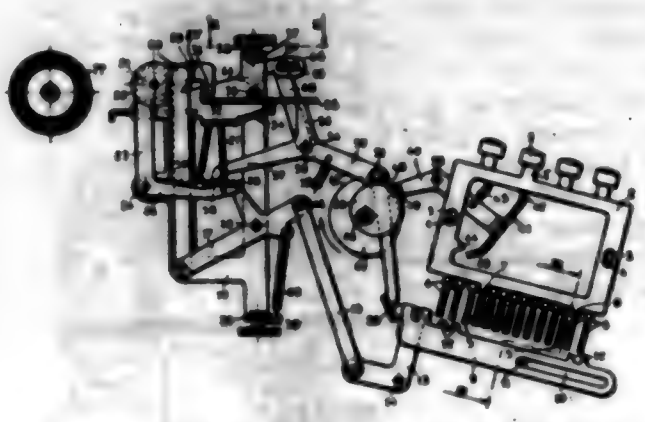
2,865,485
EJECTOR FOR REMOVING STRIPS LATERALLY FROM A TABLE
Joseph H. Minter, New Braunfels, Tex.
Application January 9, 1956, Serial No. 557,966
3 Claims. (Cl. 193—39)

1. As a subcombination, an ejector adapted to be releasably secured to a table along which thin strips are to be propelled longitudinally, said ejector comprising a substantially flat scoop with one of its ends forming a bite edge portion, and an arm integral with and extending approximately normal to the scoop and spaced from the bite edge, the arm extending away from said bite edge portion at an inclination thereto to deflect laterally the end of a strip passing from said bite edge portion into engagement with the arm, and a second bite edge portion disposed to intercept the end of a strip passing over the bite edge after such end is intercepted by said first



portion, said second portion extending away from the first portion toward the arm.

2,865,486
PRINTING MECHANISM FOR TYPEWRITING MACHINES
Natale Capellaro, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S. p.A., Ivrea, Italy, a corporation of Italy
Application January 18, 1955, Serial No. 482,941
Claims priority, application Italy January 11, 1954
23 Claims. (Cl. 197—16)



15. In a printing mechanism of the type wherein a set of separate individually variably movable type carriers each one carrying a plurality of individually selectable types is supported by a variably movable common support, a single selected type being located at the printing point by the combined movement of the type carrier carrying the selected type and of the common support, the combination of power means, a first device operable by said power means for individually actuating said type carrier carrying the selected type, and a second device operable by said power means for actuating said support substantially concurrently with said first device.

2,865,487
RECORD CONTROLLED PRINTING OR WRITING MACHINES
William J. Hildebrandt, Farmington, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware
Application May 22, 1956, Serial No. 586,682
7 Claims. (Cl. 197—38)

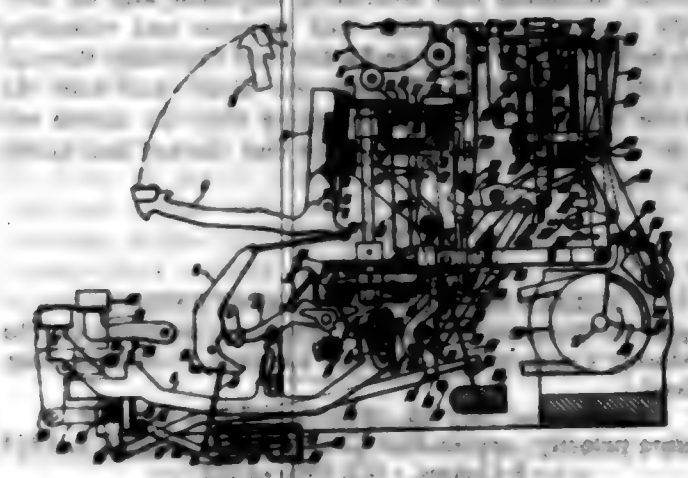
1. For use with a writing machine, apparatus to control it automatically by a record which for such control has a succession of coded recordings some of which are variously representative of writing and other operations to be produced under its control by the writing machine,

2,865,491
ERROR GUARD'S DEVICE

comprising means entirely within the bases and accessible

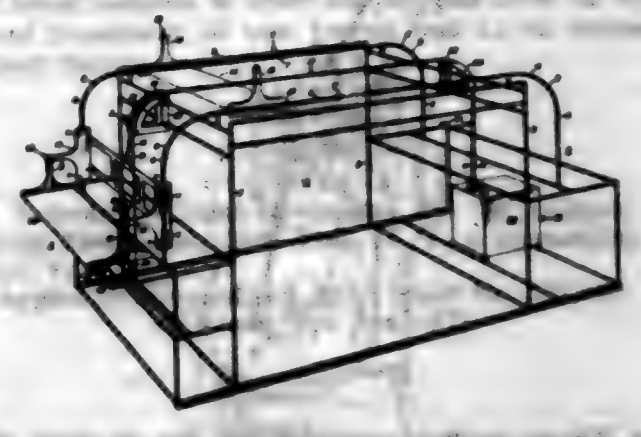
and some of which are non-representative of operations of said writing machine and are required to be passed idly without effect, said operations of the writing machine consuming varying time intervals for their execution, said apparatus comprising various control solenoids operable to cause said operations of the writing machine, means to read and translate the coded recordings representative of said writing machine operations into output signals to operate said control solenoids variously, and to read and translate the said non-representative recordings into an output signal which is collectively representative thereof, means governed by each record controlled operation of said writing machine to institute each next operation of said reading and translating means in a timed relation to the conclusion of such operation of the writing machine, so that the operations of the latter will be sequenced orderly in accord with the individual time requirements therefor, and means responsive to each said collectively representative output signal, to cause a next operation of said reading and translating means to ensue automatically after a given time interval which is much shorter than most time intervals consumed by the executions of said operations of the said writing machine.

2,865,488
PROPORTIONAL LETTER FEED MECHANISM
John Toggenburger, Hartford, Conn., assignor to Underwood Corporation, New York, N. Y., a corporation of Delaware
Application April 1, 1955, Serial No. 498,661
27 Claims. (Cl. 197—84)



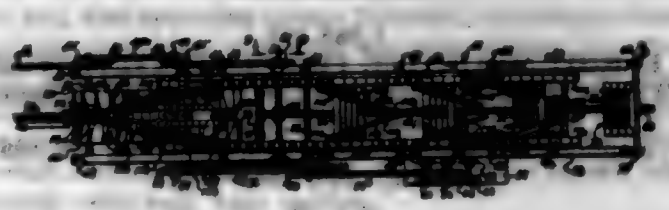
1. In a typewriting machine having typing keys, a letter-feed carriage and means for impelling said carriage in linear letter-feed direction; a proportional letter-feed escapement mechanism comprising an escapement wheel having equi-spaced teeth, means connecting said wheel for rotation by the carriage, a spring-actuated dog mounted for movement circumferentially relatively to said wheel and into and out of engagement with said teeth, stop means for limiting circumferential movement of said dog in one direction when in engagement with said teeth, to limit the rotation of the wheel and thereby limit the linear movement of the carriage, means operable under control of all the typing keys to release the dog from engagement with said teeth to allow its circumferential movement in the opposite direction, a series of stop pins arranged circumferentially of said wheel selectively projectable for variably limiting the circumferential movement of the dog in said opposite direction and causing reengagement of said dog with said teeth when the dog reaches any stop pin, said stop pins being selectively projectable under control of certain of said typing keys, a stop member normally positioned for limiting said dog in said opposite direction to a shorter circumferential movement than that obtainable by the projection of at least one of said stop pins, and means mounting said stop member for engagement by and movement to an ineffective position by the projection of at least said one stop pin.

2,865,489
CARRIER SYSTEM
Peter A. Ochenyk, Wilton, N. Dak.
Application November 4, 1955, Serial No. 545,825
8 Claims. (Cl. 198—19)



1. A carrier system for transporting material between spaced stations over an intervening space, comprising a track connecting said stations and offset upwardly therebetween for clearing said space, a carrier member locked to and riding on said track, flexible cable means connected to said carrier member for pulling said member in opposite directions, reversible drive means connected and applying force selectively to said cable means for driving said carrier member in either direction, and control means at each station for controlling the movement of said carrier member therebetween.

2,865,490
SINGLE FILING MACHINE
Robert F. Krupp, San Lorenzo, and Jan K. Wagner, Oakland, Calif., assignors to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Application June 15, 1954, Serial No. 591,658
17 Claims. (Cl. 198—30)



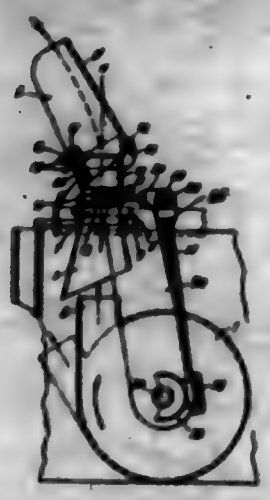
7. In a single filing machine, a plurality of pallets, means for receiving a regularly shaped group of containers arranged in columns and rows on said pallet, means for advancing said pallets, a first conveyor extending longitudinally along, and in close proximity to, one side of the path of travel of said pallets, a second conveyor extending longitudinally along, and in close proximity to, the side of the path of travel of said pallets opposite said first conveyor, means for driving said first and second conveyors in timed relation to said pallets, first switch means positioned to move an outermost first column of containers laterally off its pallet as said pallet advances onto said first conveyor, second switch means positioned to move the opposite outermost second column of containers laterally off said pallet as said pallet advances onto said second conveyor, third switch means positioned to move the next outermost third column of containers laterally onto said first conveyor behind said first column, and fourth switch means positioned to move the next outermost fourth column of containers laterally off said pallet onto said second conveyor behind said second column.

2,865,491
BUCKET ELEVATOR AND SUPPORTING

direction of means for causing said keyrod to actuate

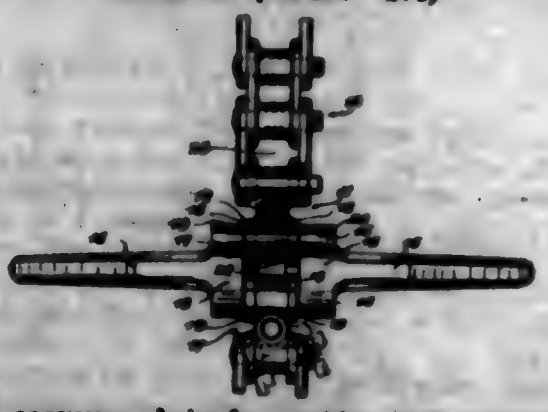
engagement with the arm, and a second bite edge portion to be produced under its control by the writing machine.

2,865,491
THROW-GUIDING DEVICE
Paul Schiller, Zurich, Switzerland
Application December 26, 1956, Serial No. 630,670
Claims priority, application Switzerland January 7, 1956
9 Claims. (Cl. 198—125)



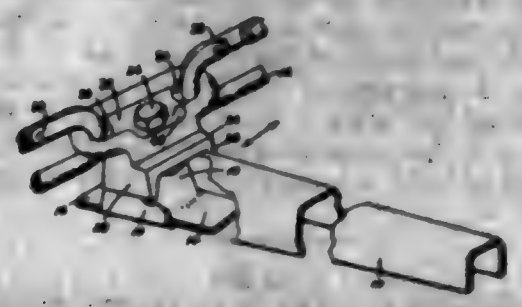
1. Throw guiding apparatus for use on snow plows and comprising, in combination, a support; a throw guiding mechanism including a catcher funnel mounted on said support and throw guiding means mounted on said catcher funnel for turning movement about an upright axis; an impeller casing mounted on said support for turning movement between two positions, and having a discharge spout located opposite said catcher funnel in one of said positions only; a single manually operated member; coupling means movable between two coupling positions for selectively coupling said manually operated member to said throw guiding means and to said impeller casing so that in one coupling position of said coupling means said throw guiding means is turned by said manually operated member, and in the other coupling position of said coupling means said impeller casing is moved between said two positions; and control means for selectively moving said coupling means between said coupling positions thereof.

2,865,492
FLIGHT MOUNTING FOR CHAIN CONVEYOR
William P. Bigler, Cheyrin Fritz, and Joseph G. Bigler, Wilmington, Ohio
Application November 30, 1954, Serial No. 472,106
1 Claim. (Cl. 198—176)



In a conveyor chain for pushing bulk material over a flat surface, said chain having a pair of universal joints, the adjacent elements of which are spaced apart lengthwise of the chain to receive a sprocket tooth between them, each of said elements having transverse cylindrical bores, transverse pins journaled in said bores and projecting laterally therefrom in both directions, a flight with an integral base disposed on each side of said bridging the space between said elements, the integral base of each of said flights having bores receiving and wholly containing the projecting ends of said pins and comprising means entirely within the bases and accessible from the outside of the bases for locking the pins against movement in the bores, said flights having smooth side contours extending continuously from their bases to their outer ends and sloping upwardly and inwardly toward the tops of the flights, whereby the flights on opposite sides of the chain are rigidly connected and spaced by said pins and whereby the bulk material moved by the conveyor is freed to ride up over a flight to avoid jamming.

2,865,493
BARN CLEANER MECHANISM
Henry St. Pierre, Worcester, Mass.
Application February 4, 1957, Serial No. 638,185
2 Claims. (Cl. 198—176)



1. Apparatus of the class described comprising a cleat, said cleat being U-shaped in cross section and inverted, a chain for traveling said cleat, means connecting the chain thereto, said means comprising a member within the cleat and a member exterior of the cleat, said exterior member including legs straddling the cleat and an integrally forged, partial chain link thereon and extending transversely of the cleat, and a fastener extending through the exterior member, through the cleat, and into the interior member, the latter extending from the closed end of the U-shaped cleat to the open end thereof and acting as a wear-shoe.

2,865,494
CHAIN DRIVEN BELT CONVEYORS
Angus W. Duncan, Worcester, England, assignor to The Mining Engineering Company Limited, Worcester, England
Application July 19, 1956, Serial No. 598,996
Claims priority, application Great Britain August 8, 1955
3 Claims. (Cl. 198—191)

1. In a conveyor including an endless belt supported on and tensioned by cranked carrier members between cable link chains, the combination comprising cable link chains which may be driven by sprockets, spaced intermediate links in said chains of one-piece construction, carrier members disposed between transversely aligned intermediate links for supporting and tensioning said belt, rollers on the ends of the carrier members for supporting the latter, spanning portions on said carrier members adjacent said rollers for overlying said links, said intermediate links having a pair of lugs extending from each side, the lugs of each pair being spaced and parallel to each other and extending at right angles to the chains, projecting ends on said spanning portions received between said pairs of lugs, and means to rigidly connect said ends and said lugs so that said chains depend from said carrier members and transmit torque thereto without supporting the load on the conveyor belt.

and juxtaposed and secured to the inner surface of said

2,865,506

2,865,493

BUCKET ELEVATOR AND SUPPORTING APPARATUS

Elstern H. Oldsmun, St. Louis, Mo.

Original application November 10, 1954, Serial No. 467,966. Divided and this application August 22, 1955, Serial No. 529,868

4 Claims. (Cl. 198—206)

1. An elevator of the type described, including a base having adjustable motor mounting means, trunnion bearing means, a boom having trunnion means adapted to fit directly into said bearing means and remain therein by the force of gravity alone, an endless belt supported at one end of the boom by a shaft passing through the trunnion means and supported at its other end by a second shaft secured to the free end of the boom and eccentric means for adjusting the endless belt carried by said boom independently of the trunnion means.

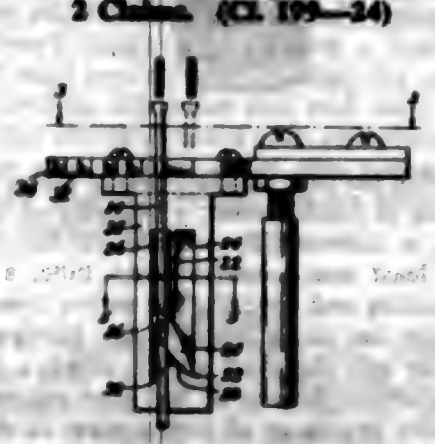
2,865,496

ALTERNATING SWITCHING ATTACHMENT FOR TYPOGRAPHICAL MACHINES

Franz Schönenberger, Baden, Switzerland, assignor, by mesne assignments, to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Application July 23, 1956, Serial No. 599,555

2 Claims. (Cl. 199—24)



2. In a typographical composing machine having a plurality of matrices stored in channels of a magazine, individual escapements for singly releasing said matrices, a framework, a keyrod mounted in said framework for vertical movement to actuate either one of two adjacent escapements depending on its lateral position, and means for causing vertical movement of said keyrods, the combination of means for causing said keyrod to actuate said two escapements on alternate vertical strokes comprising a recessed housing attached to said framework, the recess in said housing being formed to provide at its upper end two downwardly opening vertical slots with a separating rail between them and at its lower end a roof-like cam surface with its peak centered beneath said separating rail, a pin extending from one of said keyrods into the recess of said housing, a pawl pivotally suspended on said pin within said recess, said pawl being adapted to enter one of said slots on each upward movement of said keyrod and to be laterally confined therein.

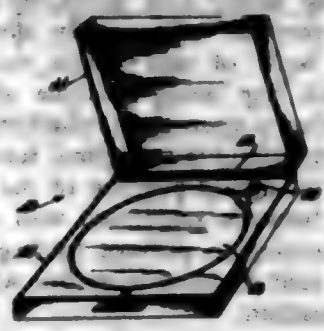
2,865,497

COMPACTS

Bert Schwartz, Croton-on-Hudson, N. Y., assignor to Hazel Bishop Inc., New York, N. Y., a corporation of New York

Application December 5, 1955, Serial No. 551,080

4 Claims. (Cl. 206—37)



1. A compact comprising, in combination, a case having a base portion defining a recess and a cover movably engaged with said base portion, a pan removably received within said recess and in frictional engagement with said recess defining portions of said case, said pan being adapted to contain a makeup composition, and actuating means acting between said case and said pan for dislodging said pan from frictional engagement with said case, said actuating means including an actuating member supported for reciprocating movement within the confines of said base and in proximity with said recess for selective engagement between said case and said pan, and operating means disposed completely within said case associated with said actuating means for selectively effecting said movement of said actuating member, said operating means including a manually operated handle disposed within the space intermediate said base portion and said cover when said cover is in closed relationship with said base portion.

2,865,498

PAPERBOARD TOBACCO POUCH

William A. Ringler, Wayne, Pa., assignor, by mesne assignments, to The Diamond Match Company, New York, N. Y., a corporation of Delaware

Application March 13, 1956, Serial No. 571,188

5 Claims. (Cl. 206—41.1)

1. In a paperboard tobacco pouch, a tubular body having an end wall, a front wall, an end wall and a rear wall in articulation in the order named, an inner end wall articulated to the free side edge of said rear wall

2,865,502

APPARATUS FOR GUIDING EXTRUSIONS

being in the shape of a hopper and having a manually operated drain valve on one side; screens covering the

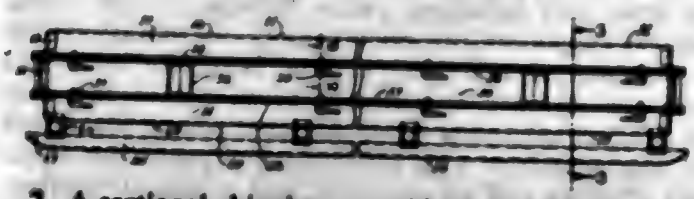
and juxtaposed and secured to the inner surface of said first named end wall, an inner front wall articulated to said inner end wall and juxtaposed to the inner surface of said front, and an inner end wall articulated to the opposite side edge of said inner front wall and juxtaposed to the inner surface of said second named end wall, a pair of diagonal score lines in said rear wall and mating pairs of diagonal scorelines in said front wall and said inner front wall, the diagonal score lines in each of said walls extending from the lower corners of the walls to a point of juncture at the upper edges of the walls midway between the end edges thereof, a top closure flap articulated to the upper edge of said rear wall, a tuck flap articulated to said closure flap, a score line extending outwardly through said top closure flap and said tuck flap from the point of juncture of the diagonal score lines in said rear wall, a bottom closure flap articulated to the lower edge of said rear wall, and additional end closure flaps articulated to the upper and lower ends of said end walls, said rear wall and the juxtaposed front wall and inner front wall being collapsible outwardly along said pairs of diagonal score lines upon the exertion of inwardly directed pressure against the end walls of said pouch, said top closure flap and said tuck flap being foldable along the score line therein to define a pouring spout when said rear wall is folded outwardly along the diagonal score line therein, said tuck flap in the closed position of the pouch extending downwardly between said front wall and said inner front wall and serving to prevent folding movement of said pouch along said diagonal score line when said pouch is in the closed position.

2,865,499

SECTIONAL SHIPPING CONTAINER AND INTERNAL PODS THEREFOR

Axel V. Brogren, Detroit, Mich., assignor to Parsons Corporation, Detroit, Mich., a corporation of Michigan

Application January 18, 1954, Serial No. 404,629
3 Claims. (Cl. 206—46)



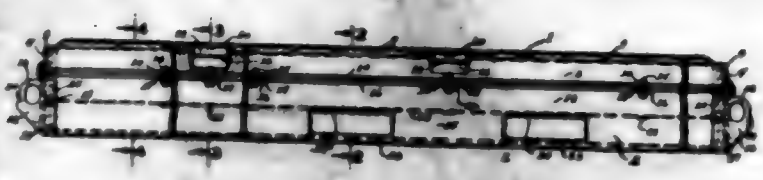
2. A sectional shipping assembly for protectively packaging a plurality of airfoils arranged longitudinally with their chord planes substantially horizontal at different levels, comprising an elongated metal shipping container having a container bottom section including a bottom wall and said walls extending thereabove, the side walls having an upper edge rim flange extending outwardly; skid means depending from said bottom section arranged longitudinally parallel and spaced below the bottom wall; a container top section including a top wall and side walls extending downward therefrom and having an outwardly flanged lower edge rim; and an intermediate spacer section having an outwardly flanged upper edge rim and an outwardly flanged lower edge rim, coextensive respectively with the lower edge rim of the container top section and the upper edge rim of the container bottom section; a first blade support diaphragm having a blade support cavity and diaphragm edges substantially coextensive with the upper edge rim of the spacer section, a second blade support diaphragm having a blade support cavity and diaphragm edges substantially coextensive with the upper edge rim of the bottom section, and releasable securement means at said edges, whereby the top section lower edge rim is secured to the edges of the first diaphragm and the spacer section upper edge and whereby the spacer section lower edge is secured to the edges of the second diaphragm and the upper edge of the box bottom section.

2,865,500

SHOCK-ABSORBING SHIPPING ASSEMBLY FOR ROTOR BLADES

John Theron Parsons, Donald E. Goodlund, and Alb C. Bollmeier, Traverse City, Mich., assignors to Parsons Corporation, Detroit, Mich., a corporation of Michigan

Application September 6, 1955, Serial No. 532,683
6 Claims. (Cl. 206—46)



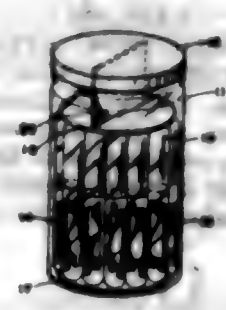
1. A readily fabricated shock-absorbing shipping container for elongated objects of a type characterized by flexibility in bending and torsion, comprising a shipping container top having sides, each side being integral, a shipping container bottom having sides, each side being integral, parallel skids integral with the longer sides of the container bottom, upper and lower attachment flanges integral, respectively, with the lower margin of the top sides and the upper margin of the bottom sides, means whereby the attachment flanges of said top and bottom sides are releasably secured to each other, said attachment flanges being of sufficient cross-sectional area to add stiffness locally to the container, and spaced flange notches indented through the major portion of their cross-sectional area at intervals along their length whereby to provide, despite such local stiffness, a degree of flexibility to the container as a whole under anticipated loadings in bending and torsion, commensurate to the extent to which the objects to be shipped therein may deflect without damage.

2,865,501

SUTURE TUBE SHIPPING PACKAGE

William A. Smart, Jr., Brookfield, and Thomas J. Connelly, Danbury, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application November 20, 1957, Serial No. 699,631
2 Claims. (Cl. 206—63.3)

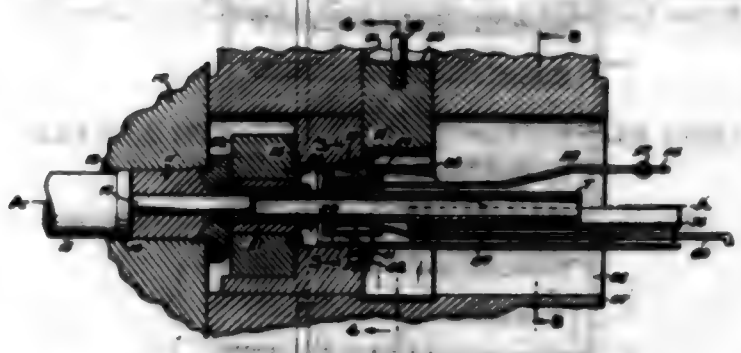


2. A shipping package of glass suture tubes, said package comprising in combination: a plurality of sealed glass suture tubes in substantially parallel configuration in a glass jar, at least one suture in each tube, a sterilizing liquid surrounding and covering the suture tubes and substantially filling the jar, a cushion disc between the bottom of the jar and the glass suture tubes, a stiff suture tube retainer above the top of the glass suture tube and of sufficient size to engage all suture tubes in the jar, said retainer having a slot therein, and a slotted divider, the slot in said divider engaging said retainer and the slot in said retainer engaging said divider, said divider being of sufficient length above the slot to bear against the top of the jar and of sufficient length below the slot to engage, cushion and orient the suture tubes, and be oriented by said suture tubes.

wall of the chamber, the chamber having an inlet and an outlet for solids at a distance above the bottom, an

center and lateral sections, each of said screening sets having at least two pieces, each piece comprising a frame

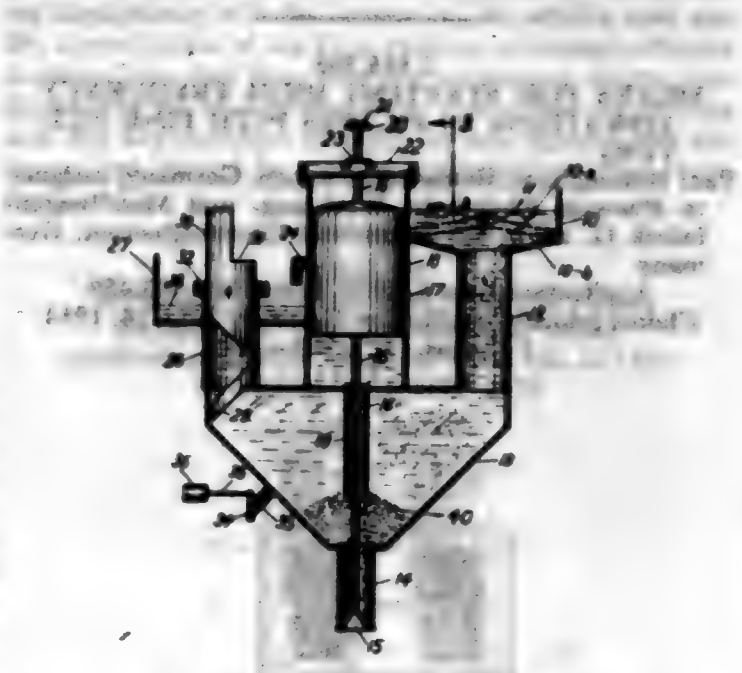
2,865,582
APPARATUS FOR GUIDING EXTRUSIONS
Bernard Anscher, New York, N. Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application July 10, 1952, Serial No. 298,972
1 Claim. (Cl. 207—16)



An extrusion press including a container having a cylindrical chamber for receiving material to be extruded therein, a ram, a pressing disc at the forward end of said ram slidably fitting said chamber and a mandrel integral with and extending forwardly in axial relation from said disc in said chamber, a die assembly located at one end of said chamber comprising a die having a circular opening in coaxial alignment with said cylindrical chamber through which said material is forced by said ram, a platen having a cylindrical opening disposed forwardly of said container, said opening in said platen being of substantially greater diameter than said chamber in said container and in coaxial alignment therewith, a die carrier having a cylindrical bore in coaxial alignment with said chamber slidably fitting and normally disposed in the rearward portion of said cylindrical opening in said platen, a substantially horseshoe shaped frame vertically slidable in said platen adapted to lock said die carrier in its rearward position, a bolster carried internally by said die carrier having a cylindrical bore in coaxial alignment with said chamber, a tubular bushing secured to said bolster in said cylindrical bore, means for supporting substantially the entire length of an extruded portion of said material comprising a tubular frame mounted in said cylindrical opening in said die carrier, a run-out table having a concave semicylindrical supporting surface aligned with said opening in said die supported by said tubular frame, and means for preventing the warping and distortion of said extruded material comprising a guide member spaced from the aforesaid tubular bushing and supported by said tubular frame, said guide member defining an outer wall, an inner wall concentric with said outer wall, said inner wall flaring rearwardly and outwardly along a portion of its rearward length and forming a bearing surface along its frontal portion closely fitting the shape of said extruded material, said inner and said outer walls forming an annular chamber closed at its ends thereof and having an inlet pipe and an outlet pipe connected thereto for supplying a coolant to said annular chamber and discharging it therefrom.

2,865,583
SAND WASHING AND SIFTING MACHINE
Eric Paul Thomsen, Farmingdale, N. Y.
Application July 31, 1952, Serial No. 301,930
6 Claims. (Cl. 209—17)

3. A sand washing and sifting machine of the character described comprising a longitudinally extending flume carrying a mixture of sand and water and extending along one side of the machine; a vertical tubular member connecting the bottom of said flume to a sedimentation tank located on a lower level and extending transversely from said flume; said sedimentation tank being in the shape of a hopper and having a manually operated drain valve on one side; screens covering the flume; a centrally located drain pipe fastened to the bottom of said sedimentation tank; a valve closing the upper end of said tubular member on the bottom of said bottom end of said drain pipe, a control tank being located centrally upon said sedimentation tank, said control tank having a drain on one side; a vertical pipe connecting said control tank to the said sedimentation tank and



extending downwardly a considerable distance into said tank; a float located in said control tank and mounted upon a vertical rod extending down through said vertical pipe through said sedimentation tank and through said drain pipe at the bottom of same, said rod being attached to said valve at the bottom of the drain pipe; a second tubular member connected to the opposite side of said sedimentation tank forming an adjustable outlet for same, and a waste flume surrounding said vertical tubular member into which same may empty.

2,865,504
SEPARATING APPARATUS
Bolesław J. Zaborycki, Arvida, Quebec, and Ronald Wilfred James Lewis, Montreal, Quebec, Canada, assignors to F. L. Smidth & Co., New York, N. Y., a corporation of New Jersey
Application August 9, 1956, Serial No. 603,995
3 Claims. (Cl. 209—138)

1. An apparatus for separating undesired components in the form of foreign substances and lumps from a mixture of the components and a finely divided material, which comprises a chamber having a bottom including an air-permeable section inclined upwardly toward a

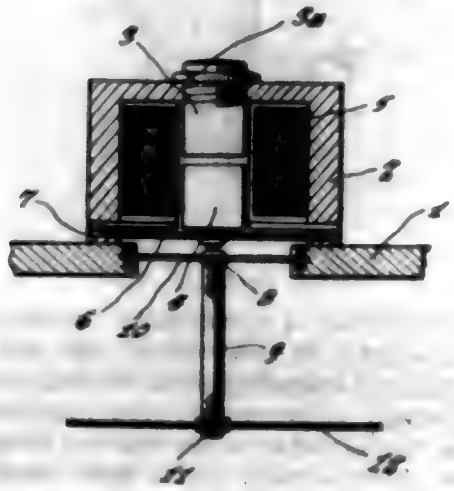
rotatable therewith, a second brake element medially ing unfiltered liquid into said settling tank to rise in level

wall of the chamber, the chamber having an inlet and an outlet for solids at a distance above the bottom, an outlet for the components adjacent the lower end of the inclined bottom section, means for introducing air through the inclined bottom section to aerate the mixture within the chamber, vertical partition means within the chamber above its bottom, and means for agitating the contents of the chamber extending along said inclined section and reciprocable lengthwise.

2,865,505
MEANS FOR STARTING HIGH FREQUENCY VIBRATIONS IN FILTERS WITH FINE NETTING

Paul Brüninghaus, Remscheid-Lennep, Germany, assignor to Rheinische Werkzeug- und Metallwarenfabrik G. m. b. H., Remscheid-Lüttringhausen, Germany

Application June 6, 1955, Serial No. 513,459
Claims priority, application Germany June 14, 1954
3 Claims. (Cl. 209—310)



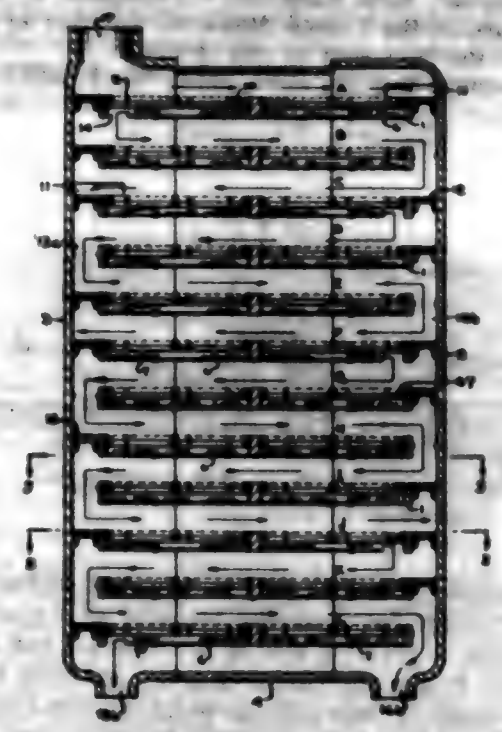
1. A device for imparting vibrations of high frequency in fine netting of filters, comprising in combination, a substantially horizontal base support having an opening therein, a membrane secured in said opening to the edges thereof, a rod having its one end secured to said membrane and extending downwardly therefrom, netting secured to the other end of said rod, said membrane, rod and netting being adapted for reciprocating vibratory movement, an electromagnetic oscillator mounted on said base support above said opening, and including a stationary armature portion, and a reciprocating armature spaced between said stationary armative portion and said rod in axial alignment with said rod and adjacent said one end of said rod and normally spaced therefrom, flexible spring means in said electromagnetic oscillator, for maintaining said rod spaced from said armature, whereby when said oscillator is energized, said armature by pinpoint-like impact upon one end of the rod imparts vibratory reciprocating movement of high frequency to said rod, said membrane and said netting.

2,865,506
SEPARATORS FOR PULVERULENT MATERIALS

Herbert Velka, Uzwil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland

Application June 15, 1953, Serial No. 361,781
Claims priority, application Netherlands June 18, 1952
8 Claims. (Cl. 209—315)

1. A plansifter compartment for the separation of fine materials comprising a plurality of superposed screening sets forming superposed screening planes, a casing housing said superposed screening sets comprising separable center and lateral sections, each of said screening sets having at least two sieves, each sieve comprising a frame,

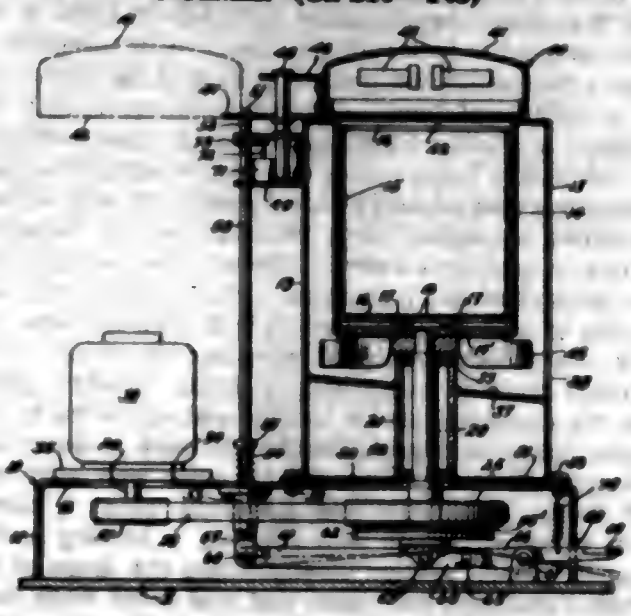


a screen cloth and means to clamp said screen cloth onto said frame and a bottom plate conforming to each sieve.

2,865,507
CENTRIFUGAL DRIER CONSTRUCTION

Joseph G. Brabacher, Ephrata, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Application November 25, 1955, Serial No. 548,883
2 Claims. (Cl. 210—143)



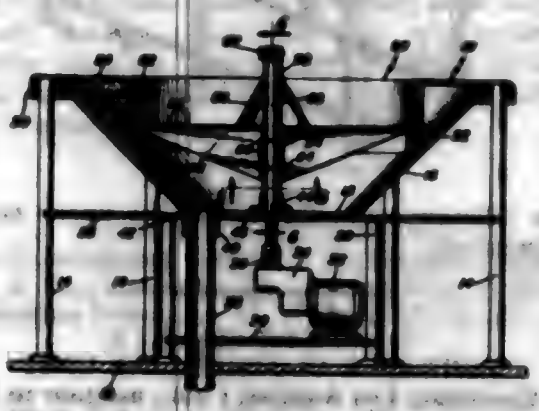
1. A centrifugal drier comprising a cage rotatable on a vertical axis and having an opening at its upper end, a closure for said opening, means supporting said closure for movement to a closed and an open position, a latch member fixed to said closure, a latch element in the form of a vertically extending axially movable rod having an upper end and a lower end, said upper end being engageable with said latch member when said closure is in closed position to lock the closure in such position and movable downwardly from engaged position to unlock the closure, electric means including a normally closed switch for rotating said cage, means connected to said latch element for opening said switch responsive to movement of the latch element to unlock said closure, a floating lever having one end pivotally connected to said lower end of said latch element and extending beneath said cage, a first brake element connected to the bottom of said cage and

ing the fluid to be filtered into said chamber, said means adjacent sides of an adjacent set of separator plates, and

transversely from said flume; said sedimentation tank an air-permeable section inclined upwardly toward a

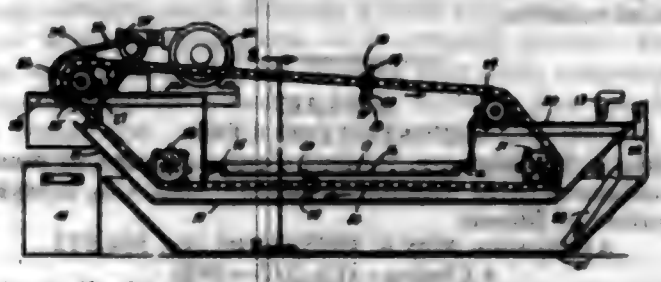
rotatable therewith, a second brake element medially pivotally connected to said lever end extending adjacent said first brake element, and means connected to the end of said lever opposite said one end for swinging said lever about its connection with said latch element to bring said brake elements into engagement and only after such engagement pivoting said lever about its pivotal connection with said second brake element to move said latch element downwardly to unlatch said closure and open said switch.

2,865,506
ARTICLE HANDLING TABLE WITH REVOLVING PERFORATED DRUM
Charles E. Nock, Pocomoke, Md.
Application February 24, 1957, Serial No. 642,615
10 Claims. (Cl. 210—152)



1. A packaging table comprising a tank, support means for said tank, a circular drum disposed in the upper portion of said tank and having an open top and a plurality of drainage apertures in its bottom walls, a vertical shaft supporting said drum for rotation in said tank about a vertical axis, a cross member secured to said support means and underlying and supporting the bottom wall of said tank, a drain conduit communicating with the interior of the tank, drive means for imparting rotation to said shaft, means carried by said support means and beneath said tank for carrying said drive means, said tank having a vertical cylindrical wall therein receiving in closely spaced relation said drum and a horizontal, laterally projecting table surface at the upper end of said cylindrical wall and extending from the latter to the upper edge of said tank.

2,865,509
LIQUID FILTERING DEVICE
Avery S. Hurlan, Indianapolis, Ind., assignor, by mesne assignments, to Indiana Commercial Filters Corporation, Lebanon, Ind., a corporation of Indiana
Application April 15, 1955, Serial No. 501,623
5 Claims. (Cl. 210—312)



1. A liquid filtering device including an elongated walled settling tank for receiving unfiltered liquid at one end thereof, a lower receiving tank associated with the settling tank and arranged to provide an overflow passage for receiving filtered liquid therefrom, a filter medium supported on said settling tank spaced above the bottom thereof, said medium being liquid sealed about its periphery with the walls of the settling tank, means for discharging unfiltered liquid into said settling tank to rise in level through said filter medium and overflow through said passage into said receiving tank, an upwardly and outwardly sloping apron at the discharge end of said settling tank, an endless belt having one flight thereof movable in a plane intermediate the bottom of the settling tank and said filter medium, means for driving and guiding said belt through said plane, a plurality of scraping and wiping members secured to said belt for travel therewith in sliding engagement with the bottom of the settling tank and the lower surface of the filter medium to cleanse adhering particles from said filter medium and remove sludge from the bottom of said settling tank, and means for guiding said belt and members upwardly of said apron to the discharge end thereof for spilling sludge and particles therefrom.

2,865,510
MULTIPLE STAGE GRAVITY FILTERS
Raymond W. Greene, Hampden, Maine
Application October 22, 1956, Serial No. 617,621
15 Claims. (Cl. 210—315)

1. A multi-stage gravity filter comprising a tank open at the top and closed at the bottom; a removable cover for said open top; a filtered liquid outlet at the bottom of said tank; an outermost filter unit having an open top disposed in the upper portion of the tank removably suspended from said cover and spaced from the wall of said tank, said unit having an imperforate bottom plate, the sides of said unit comprising open mesh metal with layers of filter paper disposed across said mesh and removably clamped thereto; other nested inner filter units each open at the top disposed within and spaced from each other and from the first filter unit, said other units seating upon the said bottom plate, and each of said other units comprising open mesh metal side walls with layers of filter paper disposed across said mesh and removably clamped thereto; means for introducing liquid to be filtered under pressure into the center of the innermost unit; and means for removing the filtered liquid through the said outlet.

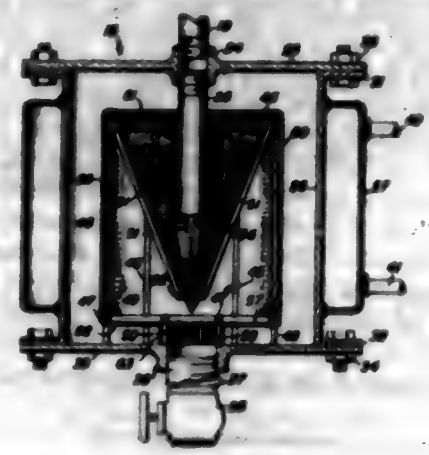
2,865,511
FILTER APPARATUS
William L. Hopkins, Jr., Savannah, Ga., assignor to G and A Laboratories, Inc., Savannah, Ga., a corporation of Georgia
Application December 28, 1955, Serial No. 555,927
12 Claims. (Cl. 210—416)

1. A filtering apparatus comprising walls providing a filter chamber, a filter structure within the chamber having a peripheral portion and an upwardly open reentrant tapered portion within the peripheral portion, said tapered portion converging downwardly, said peripheral portion being spaced from the chamber walls, the space between the chamber walls and the peripheral portion being in free communication above the upper edge of the peripheral portion with the space within the reentrant portion so that material entering said reentrant portion may overflow said upper edge and flow downwardly along the outer surface of the peripheral portion, and means for supply-

respect to said body, whereby said body and inner bearing members form a link of three-piece construction which

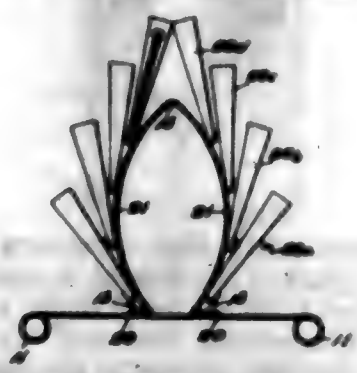
of which said sheets has had an operation performed on one side thereof and is to be subjected to an operation

ing the fluid to be filtered into said chamber, said means including a conduit in part located within the said tapered



portion and having an opening communicating with the space within the said tapered portion.

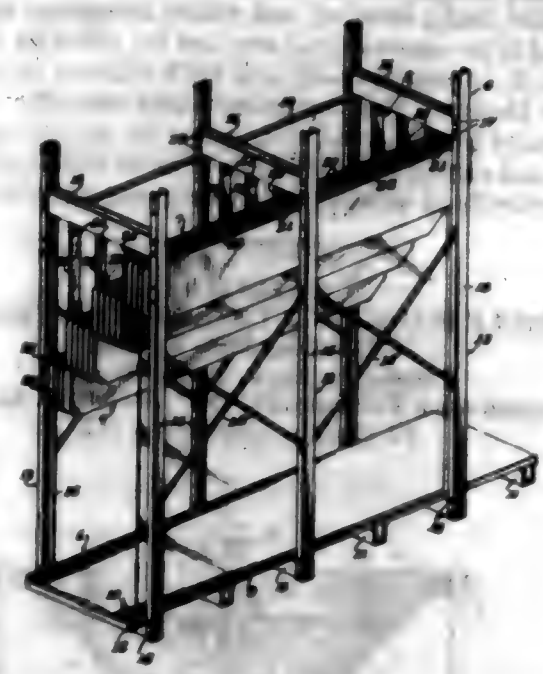
2,865,512
MATCH BOOK DISPLAY STAND
Albert Weber, Warwick, R. I., assignor to Ackwo Manufacturing Co., Inc., a corporation of Rhode Island
Application June 19, 1956, Serial No. 592,287
4 Claims. (Cl. 211—13)



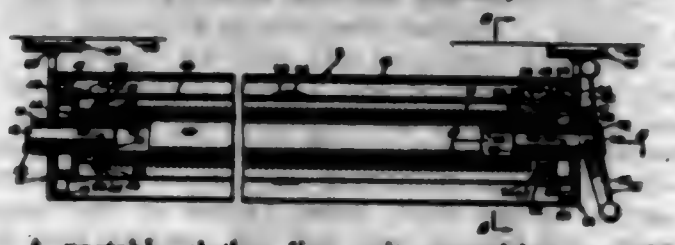
1. A match book display stand comprising a base, a separate sheet metal member mounted on said base at the mid portion thereof comprising two outwardly convex sections connected at their upper ends, L-shaped fingers of the same piece of stock as said sections extending outwardly and upwardly from each section, the upwardly extending portion of the finger being resilient and spaced sufficiently from the body of the section to grip and hold a match book between the finger and the section.

2,865,513
PLATE GLASS STORAGE RACK
William A. Allen, San Bernardino, Calif.
Application January 24, 1955, Serial No. 483,523
7 Claims. (Cl. 211—41)

4. A plate glass storage rack comprising transversely spaced vertical frame members, horizontal lower frame members connecting the vertical members at their lower ends and horizontal upper frame members connecting the vertical members adjacent their upper ends, a floor on the lower frame members provided with a multiplicity of longitudinal upwardly facing grooves, plural sets of separator plates, the sets, from immediately below the upper frame members and from the inner side of the vertical frame members on one side, being disposed progressively nearer the inner side of the vertical frame member on the other side and progressively nearer the floor, the plates of each set being spaced approximately according to the transverse spacing of the floor grooves, the sets being similarly spaced from each other, whereby the plural sets of plates define spaces that are in substantial vertical alignment with the floor grooves, means connecting together the vertical frame members and the adjacent sides of an adjacent set of separator plates, and means between each two adjacent sets of plates connecting the adjacent sides thereof to the upper horizontal frame members.



2,865,514
PORTABLE CLOTHES LINE UNIT
Bayar Goodman, Los Angeles, Calif., assignor to Wilshire Manufacturing Company, Los Angeles, Calif., a partnership
Application August 23, 1954, Serial No. 451,414
17 Claims. (Cl. 211—119.15)



1. A portable clothes line unit comprising a spring secured at one end to a first end member and at its other end to a rotatable member, a winding drum secured to said rotatable member for rotation therewith and having a plurality of the lines secured in spaced apart positions on its surface, said rotatable member being rotatably supported by a second end member having a series of openings around a circular path concentric with the axis of said rotatable member, means for holding the ends of said lines after being extended from said drum, and a lever pivotally connected to said rotatable member and having a pin adapted for insertion into one of said openings upon said lever being tilted, said lever being rotated to tighten the lines and thereafter tilted to lock the drum against rotation.

2,865,515
CONNECTING LINK
Alfred L. Spangenberg, Weston, Conn., assignor, by mesne assignments, to Simplex-Adamson Mfg. Co., a corporation of Illinois
Application May 6, 1955, Serial No. 506,512
6 Claims. (Cl. 213—208)

5. A three piece connecting link comprising an elongated body having integral annular portions at the opposite ends which are formed with spherical inner surfaces to define outer races of self-aligning bearings, said self-aligning bearings being completed by ball-shaped inner bearing members embraced by the spherical inner surfaces of the related annular portions and thereby held within the latter while being free to move universally with

ery with the walls of the settling tank, means for discharg-

surface of the peripheral portion, and means for supply-

respect to said body, whereby said body and inner bearing members form a link of three-piece construction which is able to transmit a force between members susceptible of misalignment in more than one plane and to which said inner bearing members are attached, and means on the exterior of said body disposed centrally with respect to said annular portions and defining a single fitting for receiving a supply of lubricant, each of said inner spheri-

cal surfaces of the annular portions having an annular, circumferentially extending groove therein opening against the related ball-shaped inner bearing member, said body having branched passages extending from said single fitting and opening tangentially into said grooves for distributing lubricant between the contacting surfaces of the outer race and inner bearing member of both self-aligning bearings.

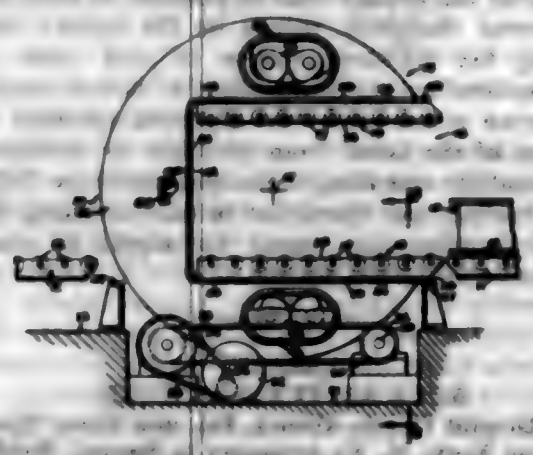
2,865,516

TURNOVER APPARATUS

William E. Hoddevich, Rockford, Ill., assignor to Greenlee Bros. & Co., Rockford, Ill., a corporation of Illinois

Application November 10, 1953, Serial No. 391,125

6 Claims. (Cl. 214—1)



6. Turnover apparatus having, in combination, a base, rotary drive elements mounted on said base in two horizontally spaced parallel rows, a rotary carrier having driving engagement with said elements at the periphery of the carrier and resting on and supported by the elements for rotation about a horizontal axis spaced above and paralleling said rows, a pair of jaws spaced apart on opposite sides of said axis and defining opposed walls of a generally rectangular recess opening radially from said carrier and axially through opposite ends thereof and extending radially and inwardly beyond the axis, means supporting said jaws on said carrier for movement through equal distances toward each other and said axis to clamp workpieces in a centered position about the axis, and means for rotating said drive elements to turn said carrier about said axis between two positions in which said recess opens horizontally in opposite directions from the axis, said jaw supporting means being disposed within said periphery of said carrier.

2,865,517

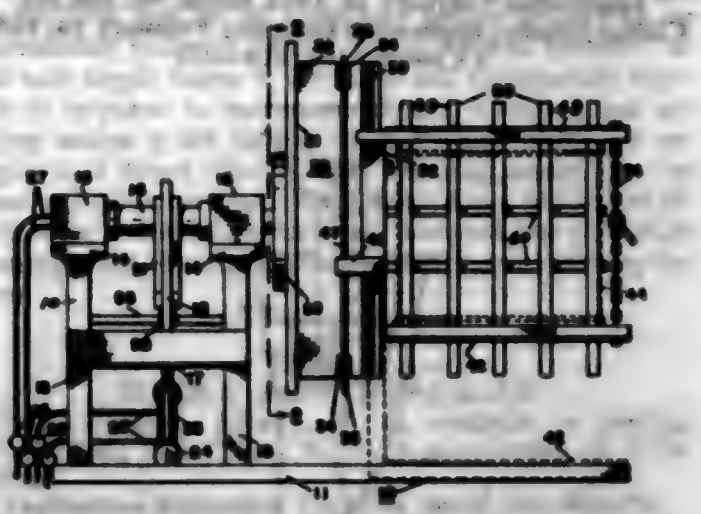
INVERTER FOR PRINTED SHEETS

Gilbert H. Alford, Baltimore, Md., assignor to Wm. Hollingsworth Machine Co. Inc., Baltimore, Md., a corporation of Maryland

Application October 26, 1954, Serial No. 464,695

2 Claims. (Cl. 214—1)

1. An inversion unit for handling and turning over stacks of flat sheets located in a horizontal position, each of which said sheets has had an operation performed on one side thereof and is to be subjected to an operation on the other side thereof; said unit comprising a machine having a pair of spaced brackets at one end thereof, a base structure made up of a pair of parallel members to which said brackets are secured, a pair of journals mounted one on each of said brackets, a hollow shaft rotatably mounted in said pair of journals, a carriage rigidly secured to said hollow shaft to be rotated thereby, means for rotating said shaft, step by step, through an arc of 180° and then causing travel of said shaft through the same steps in the reverse order to the original position of said shaft, a pair of platforms carried by said carriage for movement toward each other to clamp said stack of sheets therebetween or away from each other to permit removal of said stack of sheets from such unit; said pair of parallel members extending outwardly and past said carriage and pair of platforms carried by said carriage,



said shaft rotating means including a cylinder having a piston reciprocatingly movable therein, a rack secured to said piston, a gear mounted on said hollow shaft and meshing with said rack, and means for controlling the flow of fluid for moving said piston, said means including conduits and connected to the opposite ends of said cylinder, apparatus for moving said platforms toward or away from each other, said carriage including means for guiding the movements of said platforms, a cylinder carried by said carriage and having a piston reciprocatingly mounted therein, a piston rod connected to one of said platforms, conduit structure including flexible parts connected to the opposite ends of the last mentioned cylinder, a pair of endless flexible members each having one run connected to one of said platforms and the opposite run connected to the other of said platforms and pulley structure mounted on said carriage to guide said flexible members.

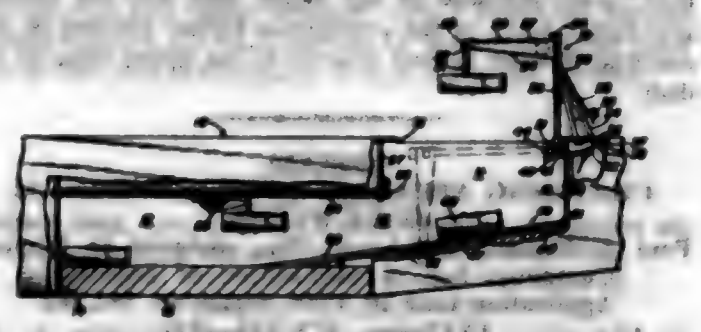
2,865,518

APPARATUS FOR LOADING A WATER VESSEL

Rudolph A. Matheisel, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application April 24, 1957, Serial No. 654,975

7 Claims. (Cl. 214—15)



1. In combination with a water vessel having a loading compartment accessible by a hatchway, a bay con-

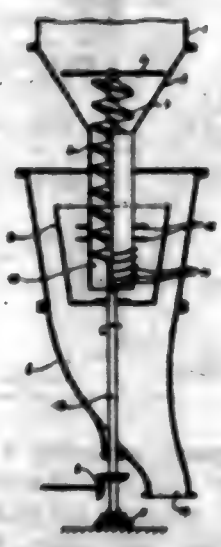
nected with the compartment, and a rotary underwater door communicating with the bay, means pivotally mounted in said compartment for loading stores, said means being movable from a stowed position in said compartment to an erect position through said hatchway, a powered dolly in said compartment to laterally move said store from said compartment to said bay, and crane means movably mounted in said bay for picking up stores in said bay and said compartment to be placed on the door.

2,865,319

APPARATUS FOR TRANSFERRING PULVERULENT MATERIAL BETWEEN CHAMBERS OF DIFFERENT PRESSURES

Rudolf Wesselak, Gelsenkirchen, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Application February 10, 1953, Serial No. 336,181
Claims priority, application Germany February 14, 1952
3 Claims. (Cl. 214—17)



1. Apparatus for transferring finely divided granular material, particularly pulverulent material comprising, the combination with a chamber of a downflow pipe secured fast to said chamber and extending to another area at a different pressure from that of said chamber, an upwardly open dish concentrically surrounding the discharge end of the pipe leaving an annular intermediate overflow space therebetween, and a worm rotatably mounted in said pipe and rigidly connected to the dish for rotation of the dish therewith, said worm terminating at its discharge end at a level in advance of the discharge end of the pipe but below the level of the top of the dish leaving the discharge end of said pipe free of worm action where the pipe discharges onto the dish, whereby material from said chamber is thrust to the dish through the pipe by the worm forming a solid plug of material on the dish and extending up inside the lower end of the pipe; and thence upwardly against gravity in the annular space of the dish and over the upper edge of the dish into said another area of different pressure under the gas pressure sealing action of the solid plug of material in the discharge end of the pipe under pressure of the worm feed and the counter gravitative force of the contiguous higher column of said material flowing against gravity to the upper edge of the dish.

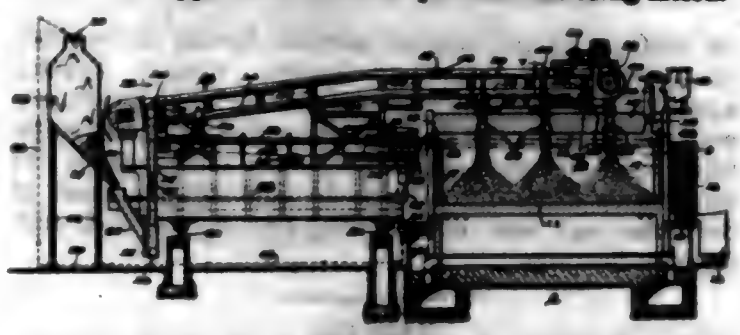
2,865,520

CHARGING APPARATUS FOR HORIZONTAL COKE OVENS

Paul J. Hommé, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Application June 20, 1956, Serial No. 592,562
13 Claims. (Cl. 214—21)

1. An arrangement of apparatus for charging of coal to be coked from one side of the battery downwardly through the roof of any one of a series of coke oven chambers in a parallel arranged battery thereof each having top charging holes spaced along the same in the battery roof, and chamber doors at opposite horizontal ends of the chamber, comprising; a carriage movable relative to said battery along the front face thereof from chamber to chamber at ground level below said chambers, a conveyor system comprising means for continuous movement of coal mounted for movement as a unit with said carriage relative to said battery and constituted of a lower vertical flight portion arranged to elevate coal from a lower portion below the bottoms of said chambers to an upper elevation above the tops of the chambers and an upper lateral means portion extending laterally from said upper elevation across the carriage and over the top of the side of the battery, said upper lateral means portion including a discharge flight section movable as a unit with said carriage relative to said battery directly over the battery roof in position to parallel each of said oven chambers, means on the battery roof for supporting the discharge section of said upper lateral means portion for movement on the battery roof along the same as a unit with the aforesaid carriage during movement of the latter from chamber to chamber, and branch conduits extending from said discharge flight section for feeding coal therefrom to each charging hole of an oven chamber, and means for supply of coal into said lower vertical flight portion.

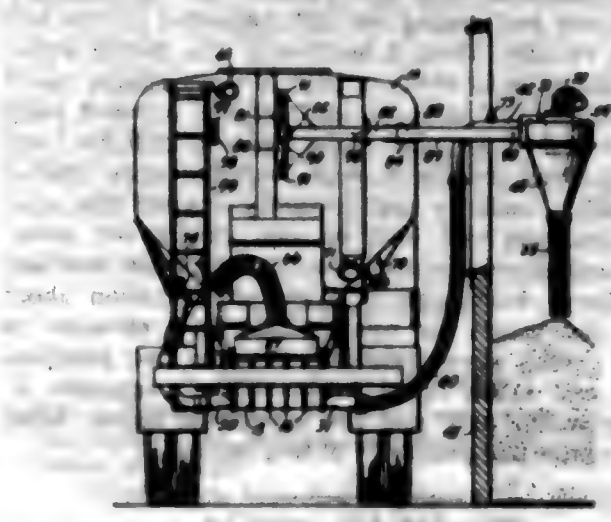


2,865,521

BULK MATERIAL TRUCK

Chester Donald Fisher, Muncy, Pa., and Greer Marechal, Jr., New York, N. Y., assignors to Sprout, Waldron & Company, Inc., Muncy, Pa., a corporation of Pennsylvania

Application June 4, 1957, Serial No. 664,108
1 Claim. (Cl. 214—83.23)

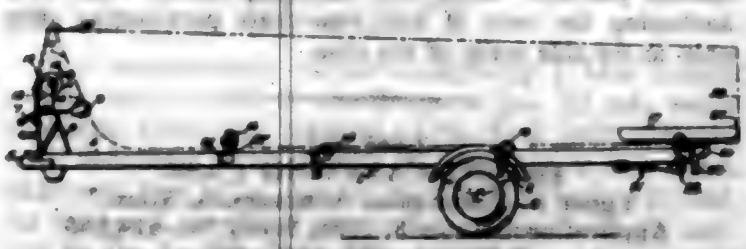


In a pneumatic bulk material truck of the character described having an airlock and means for entraining in a conveying stream of air bulk material introduced into said airlock for pneumatically conveying said entrained material selectively either into said truck during loading or to a point remote from said truck during unloading, the combination which comprises a separating and collecting tank having a material outlet at the bottom

borne, with the latter terminating in an inturned flange grooves spaced uniformly along its inner face and open-

thereof, detachable conduit means for interconnecting said material outlet with said airlock means, a material inlet adjacent the top of said collecting tank, means for evacuating said collecting tank through said air outlet thereof during loading operations effecting sucking in of material from outside said truck entraining in a stream of air through said material inlet and separation of said material from said entraining air in said collecting tank, extensible means for mounting said collecting tank on said truck for movement from a position adjacent said airlock and evacuating means during loading to a plurality of extended positions remote from said truck during unloading, and detachable conduit means for conducting material from said truck entrained in a stream of air into said tangential inlet of said collecting tank during unloading.

2,865,522
BOAT TRAILER
Walter F. Peterson and Frank H. Peterson, Jacksonville, Fla.
Application January 23, 1956, Serial No. 560,491
7 Claims. (Cl. 214—84)

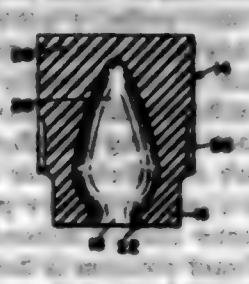


1. In a boat trailer having an elongated frame and comprising keel-engaging anti-friction traverse means along the centerline of said frame, a cradle assembly comprising a generally horizontal elongated bar extending transversely of said frame, pivotal supporting means attaching said bar to said frame for pivoting about a predetermined axis generally parallel to the length of said bar, cradle support means having cradle supporting pivots spaced laterally from said axis, cradles pivotally supported on said supporting pivots, manually controlled means operatively connected to said bar and frame for pivoting said bar on said predetermined axis thereby to vary the heights of said cradle supporting pivots with respect to said frame, said manually controlled means comprising a link coupled to said bar at a point offset from said predetermined axis, an overcenter coupling assembly connected in force applying relation to said link, said assembly comprising a manually operable arm, and stop means for said arm.

2,865,523
TRACTOR ATTACHMENT
Thomas E. Morrison, Los Angeles, Calif., assignor of twenty-five percent to J. E. Haddock, Ltd., Pasadena, Calif.
Application September 25, 1956, Serial No. 611,853
4 Claims. (Cl. 214—147)

1. A tractor attachment for lifting and moving objects from the ground spaced laterally of the tractor, comprising, in combination: a pair of spaced, parallel vertical posts rigidly secured to said tractor side; an upper pivot bar passing between the upper ends of said posts; a toggle frame including articulated structural members adapted to pivot with respect to each other to horizontally extend and contract said frame in overall length; means pivoting the ends of the two end pairs of the articulated structural members to the upper ends of said posts; a lower pivot bar passing between the lower ends of said posts; a T-frame having a horizontal member pivoted between a pair of said articulated structural members to assume a position substantially parallel and in spaced relationship to said upper and lower pivot bars, and a vertical member passing downwardly between said pair of articulated structural members; a first hydraulic cylinder secured to said lower pivot bar at a point substantially midway on said bar and having the free end of its associated piston pivoted to the lower end of said T-frame vertical member; a second hydraulic cylinder secured to said upper pivot bar at a point substantially midway on said bar and having the free end of its associated piston pivoted to an intermediate point on said T-frame vertical member, so that said toggle frame is vertically and horizontally movable in response to movement of said T-frame; and engaging means at the far end of said toggle frame for engaging said object whereby said engaging means may be lifted to a given vertical level, extended in a horizontal direction for a desired distance, and lowered into a position to engage said object preparatory to lifting and moving the same.

2,865,524
STERILE AMPULE PACKAGE
Solomon Remek, Albany, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware
Application September 13, 1956, Serial No. 609,674
4 Claims. (Cl. 215—6)



1. A sterile ampule package comprising an outer container, a substantially rigid ampule positioned within the outer container, said ampule having a head portion, a plug fitting in one end of the container and adapted when fully inserted to seal the ampule within the outer container, said plug being provided with a chamber opening into the interior of the container but closed to the exterior, the wall portion of said chamber being of yielding material and snugly receiving the head portion of the ampule, whereby the ampule is retained by said plug and is held in relatively fixed position with reference to the outer container, and wholly enclosed therein, the head of the ampule being enlarged and connected to the body of the ampule by a restricted neck portion and the chamber in said plug being enlarged and receiving the head portion and being provided with a restricted portion accommodating the neck portion of the ampule, the inner face of the plug terminating at said restricted portion.

2,865,525
BOTTLE CLOSURE
William Satz, Los Angeles, Calif., assignor, by mesne assignments, to Harold H. Kuhn, Cleveland, Ohio
Application March 30, 1953, Serial No. 347,913
6 Claims. (Cl. 215—46)

1. A manually operable closure for a bottle with an externally beaded neck, said closure comprising a hollow shell having a bore with primary and secondary counter-

2,865,529
WEATHERPROOF STORAGE CABINET
Norbert L. Bowers, Columbus, Ind.

threaded for engagement with said threaded portion of the container, and an inner plug member mounted in

to be coked from one side of the battery downwardly collecting tank having a material outlet at the bottom

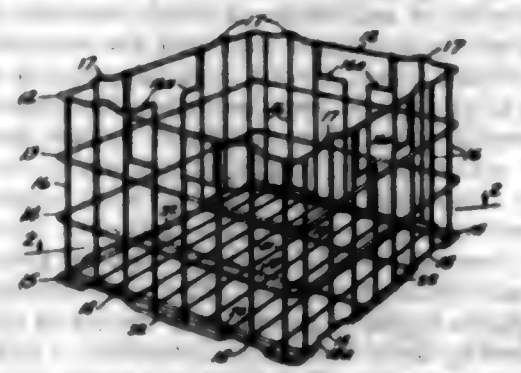
bore, with the latter terminating in an inturned flange at the mouth of said shell, there being shoulders formed in said shell at the points of juncture between said bore and counterbores, a slidable sealing device disposed within said counterbores, said device including a disc disposed with a very loose fit in said primary counterbore and having spring jaws extending radially from the periphery thereof and bent to normally expand outwardly and downwardly into said secondary counterbore, the extremities of said jaws having inturned teeth which rest against said flange to detain said device in said shell, and a rubber gasket fitting under the lower face of said disc and having means for retaining said gasket in assembled relation with said disc, said closure, when applied to a bottle with an externally beaded neck by being pressed axially thereon, responding by the yielding of said device to the pressure of said beaded neck thereagainst whereby said device, including said jaws, is pressed entirely into said primary counterbore and said jaws flexed inwardly

by their engagement with the shoulder at the mouth of said primary counterbore, thereby constricting said jaws to extend said teeth inwardly beneath the bead of said bottle neck while the latter is pressed against said gasket thereby retaining said device in sealing relation with said bottle neck, the loose fit of said disc in said primary counter bore causing said jaws to still be inclined outwardly at substantial angles when said closure is in closing relation with said bottle, a central portion of said disc, at this time, engaging a corresponding central portion of the end face of the shoulder between said bore and primary counterbore said disc having a frustoconical convex upper surface causing peripheral portions of said disc and the end face of said shoulder to be axially spaced apart a substantial distance thereby permitting said shell to rock about a center located substantially in the plane of said teeth until said rotation is halted by engagement of said shell with said bottle below said plane, without disturbing the seal between said device and said bottle neck.

2,865,526
CELL TYPE WOOD BOXES
Floyd D. Flexon, Godfrey, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application March 21, 1956, Serial No. 572,977
1 Claim. (Cl. 217—22)

A rigid cell type open top bottle case comprising a generally rectangular bottom, interconnected side and end walls rising from the margin of said bottom and attached thereto, each end wall having a plurality of vertical grooves spaced uniformly along its inner face and opening through at least the upper margin of said wall, each side wall having a plurality of longitudinally spaced vertical grooves in its inner face opening through at least the upper margin of said wall, a partition assembly insertable in and readily removable from the case as a unit and comprising a plurality of longitudinal vertical partition strips having their ends snugly fitted in the grooves in the end walls, each longitudinal strip provided medially between its ends with an upwardly opening notch, said notches being in alignment with each other transversely of the assembly, a plurality of cross partition strips intersecting the longitudinal partition strips at right angles thereto, one only of the cross partition strips having vertically extending notches in its lower margin corresponding in number and registering with the notches in the longitudinal strips, the notches being of such depth that when the strips are assembled the upper margins of both strips are substantially flush, the remaining cross partition strips having vertical notches opening through their upper margins to accommodate the longitudinal partition strips, the latter notches being of a depth approximately equal to the width of the longitudinal partition strips and fastening means releasably anchoring the ends of said one cross partitioning strip only to the side walls of the case.

2,865,527
ARTICLE-CARRYING CASE
Egner L. Bloomquist, Minneapolis, Minn.
Application October 8, 1956, Serial No. 614,568
5 Claims. (Cl. 220—19)



1. An article-carrying case for storage with other similar cases in a stack, comprising receptacle means including an upright and substantially enclosing side wall structure having vertically aligned upper and lower edge portions, said receptacle means also including a bottom spaced above the lower edge portion of the sidewall structure, said upper edge portion having a plurality of upright and peripherally spaced male inserts thereon, and said lower edge portion lying generally in a horizontal plane for engaging, substantially around the entire periphery thereof, a supporting surface, and said lower edge portion also having a plurality of downwardly opening and peripherally spaced recesses cooperatively interfittable with corresponding male inserts of the next adjacent case therebelow in the stack, and a substantially continuous case-aligning ring secured to the receptacle bottom in the plane of said lower edge portion and disposed inwardly therefrom for engaging the upright inserts of the case therebelow and restricting relative horizontal movement between adjacent cases in the stack, whereby a case may be inclined and readily moved by sliding substantially horizontally off the case therebelow.

2,865,528
WITHDRAWN

vice to permit rotation of the rotor between said stopping position and starting position independently of the motor;

low said tablet supporting tray, said body member and said base member being rigidly interconnected by a stem

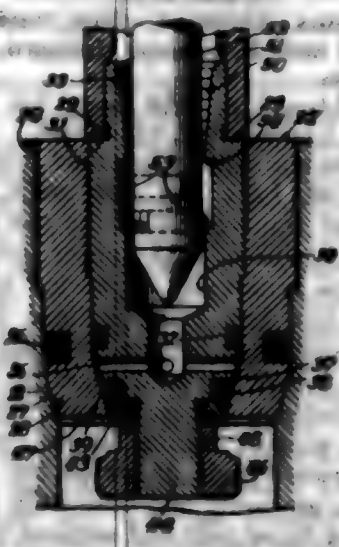
ing, in combination: a pair of spaced, parallel vertical posts rigidly secured to said tractor side; an upper pivot

externally bonded neck, said closure comprising a hollow shell having a bore with primary and secondary counter-

2,865,529
WEATHERPROOF STORAGE CABINET
Norbert L. Sprouse, Columbus, Ind.
Application May 1, 1958, Serial No. 733,357
2 Claims. (Cl. 220—34)

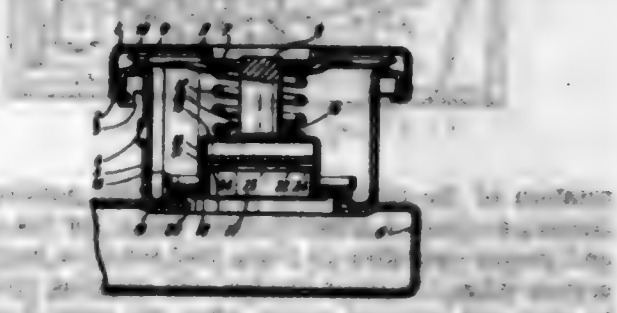
1. A weatherproof cabinet comprising a base frame; a back wall carried by the frame; a pair of side walls extending from edge portions of the back wall, the side walls defining a front opening therebetween at their front edges and also a top opening between the back wall and the top portions of the side walls; a cover hingedly carried by the back wall to swing therefrom and over said top opening; an upper panel hingedly carried by a front edge portion of said cover; a lower panel hingedly carried by a lower edge portion of the upper panel; said two panels in one position hanging downwardly from said cover covering said front opening, and in a second position, the lower panel being folded over the upper panel and the two panels being carried over said cover; a stop member carried by said cabinet; the lower end of said upper panel resting on said stop member when said cover is swung upwardly and rearwardly, said stop member thereby retaining the cover in an upwardly and rearwardly directed position to render the normal under side visible from the front of the cabinet.

2,865,530
ACCESS PLUG
Jay P. Gould, Glendale, Calif.
Application May 29, 1956, Serial No. 588,672
11 Claims. (Cl. 220—39)



1. An access plug for use in an internally threaded portion of a pressure container for high pressure fluid, said plug comprising an outer plug member externally threaded for engagement with said threaded portion of the container, and an inner plug member mounted in said outer plug member and shiftable relative thereto, shifting of said inner plug member in one direction opening a passage through said outer plug member to bypass pressure fluid from the inner end to the outer end of said plug, said inner plug member having means engageable with the outer plug member for effecting rotation thereof when the inner member is shifted after said passage is opened, whereby said plug may be disengaged from the container when under pressure.

2,865,531
CLOSURE CAP FOR THE COOLING SYSTEMS OF INTERNAL COMBUSTION ENGINES
James R. S. Gorst, Chandlers Ford, and Stanley W. Kemp, Totton, England, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 2, 1955, Serial No. 512,832
Claims priority, application Great Britain June 8, 1954
1 Claim. (Cl. 220—44)



A closure device for a filler spout of a cooling system in which said spout has a primary valve seat and a vent above said seat, said device comprising a cap adapted to be removably secured to said spout and having a dependent central stud, a domed primary valve member loosely mounted on said stud with an outwardly extending annular portion adapted to engage said primary valve seat, a spring compressed between said cap and said valve member and urging the latter downwardly, an inner annular shoulder formed on said valve member, said inner shoulder being substantially coplanar with the lower end of said stud when said outwardly extending portion engages said primary valve seat, a partition in said valve member spaced from and positioned below said shoulder, ports in said valve member and said partition, and a free floating flexible secondary valve disc vertically movable between said inner shoulder and said partition and controlling said ports, said valve disc being movable from a first position at which said disc seats on said partition to a second position at which said disc engages said inner shoulder, said end of said stud providing a support for said disc when said disc engages said inner shoulder and said stud being movable downwardly against said disc to release said disc from said inner shoulder.

2,865,532
VENDING MACHINE
William J. Smith, San Jose, Calif., assignor to S & S Vending Machine Co., San Jose, Calif., a corporation of California
Application March 7, 1955, Serial No. 492,688
12 Claims. (Cl. 221—13)

1. In a carton vending machine, a dispensing unit including a rotor having a pocket for the reception of a carton, the rotor having a starting position, a carton dispensing position, and a stopping position, all in circumferentially spaced relation in one direction of rotation of said rotor, a drive motor for the rotor, a driving connection between the motor and rotor, means to place the motor in operation at said starting position of the rotor and to stop the motor at said stopping position of the rotor, said driving connection including a lost-motion de-

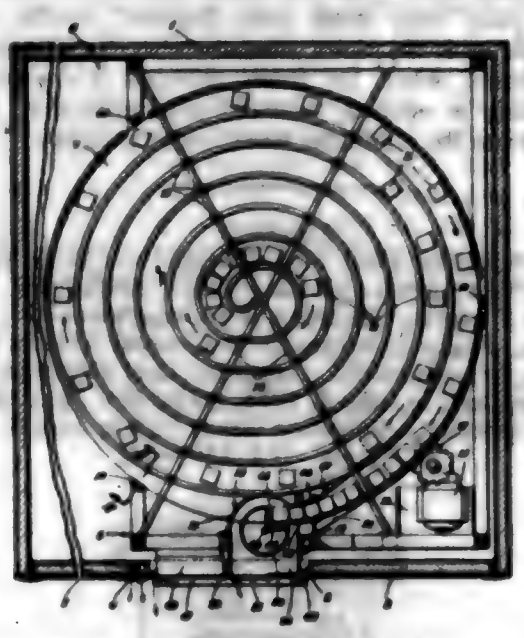
the sides of said hopper for engaging and holding said

2,865,537
DISPENSER

thereto, each end wall having a plurality of vertical

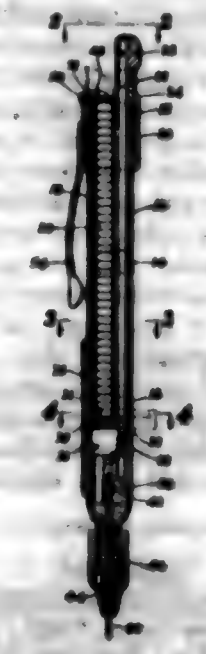
WITHDRAWN

vice to permit rotation of the rotor between said stopping position and starting position independently of the motor; a conveyor arranged to move cartons one at a time into the pocket of the rotor when the latter is in said stopping position and with continuance such movement to cause



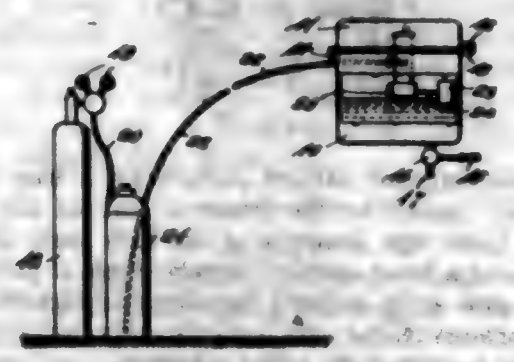
rotation of the rotor from said stopping position to said starting position, a separate drive motor for the conveyor, and means operative to place said separate motor in operation when the rotor reaches said stopping position and to stop said separate motor when the rotor is so rotated from said stopping position to said starting position.

2,865,533
TABLET DISPENSER
Eugene V. Taylor, Chicago, Ill.
Application April 29, 1954, Serial No. 426,356
2 Claims. (Cl. 221—199)



1. A tablet dispenser comprising a tubular body member with axially spaced bushing members secured therein, a tablet carrying column extending through and secured in said bushing members with the axis of the column being off-set from the axis of said body member, an actuator extending through and journaled for rotary movement in said bushing members with the axis of the actuator being spaced from the axes of said column and said body member, a tablet supporting tray secured to said actuator at the lower end of said body member and having a tablet receiving recess therein, a base member axially aligned with said body member immediately below said tablet supporting tray, said body member and said base member being rigidly interconnected by a strap member, the lower end of said actuator being journaled in said base member, a torsion spring connected between said actuator and said base member and normally serving to maintain the tablet receiving recess of said tablet tray below said column, and said actuator being rotatable whereby said tablet receiving recess may be pivoted from beneath said column for permitting a tablet to drop from the tray recess upon tilting of the tablet dispenser.

2,865,534
DEVICE TO MAINTAIN A CONSTANT LIQUID LEVEL IN A CONTAINER
William M. Barnes, Atlanta, Ga., assignor to The Coca-Cola Company, New York, N. Y., a corporation of Delaware
Application December 17, 1956, Serial No. 628,773
4 Claims. (Cl. 222—56)



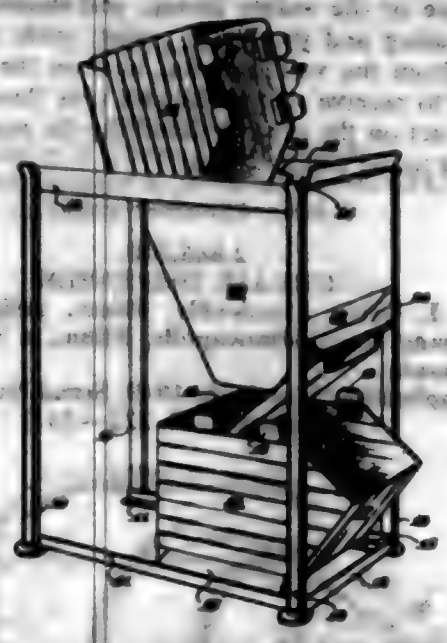
4. In a device of the character described, in combination, a pressurized tank for containing a reserve supply of liquid, a source of gas under pressure communicating with the top of said tank, a liquid conduit extending into the bottom thereof, a primary tank for containing a primary supply of said liquid and having a valved outlet, and liquid inflow control means in said primary tank, said control means comprising a chamber having an inlet port communicating with said conduit and an outlet passage opening into said primary tank, automatic means for closing said outlet passage when an adequate supply of liquid is present in said primary tank, and automatic means within said chamber for closing said outlet passage when said chamber is empty of liquid, to prevent flow of gas therethrough.

2,865,535
MATERIAL HANDLING STAND AND BOX THEREFOR
Richard C. Johnson, Hubbard, Ohio, assignor to The Powell Pressed Steel Company, Hubbard, Ohio, a corporation of Ohio
Application March 26, 1958, Serial No. 724,057
6 Claims. (Cl. 223—165)

1. In combination a supporting stand having a hopper with bottom, front, back and side walls, a structural member positioned transversely of the top of said stand adjacent said back wall of said hopper, and a box having a fixed bottom removably supported on said stand, a front wall of said box being inclined upwardly and outwardly from said fixed bottom, the side walls of the box terminating at their forward edges on the upwardly and outwardly inclined edges of said front wall and secured thereto, support means on the lower sides of said box, the forward ends of which are adjacent the lower edge of the upwardly and outwardly inclined front wall, said inclined front wall and support means of said box engaging said structural member when said box is positioned on said stand, said structural member forming a fulcrum over which said box may be tilted, means on

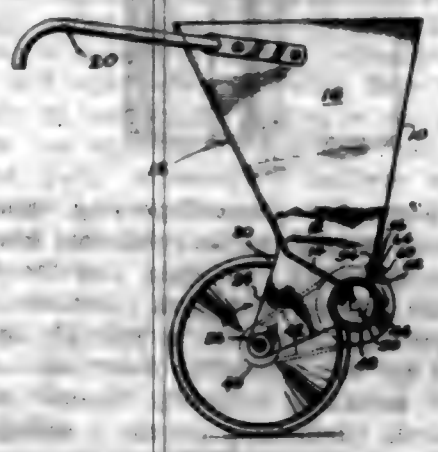
rotating operation, and means for retarding descending ring of stationary diffuser vanes surrounding the impeller

the sides of said hopper for engaging and holding said box when tilted, and said hopper having an opening in



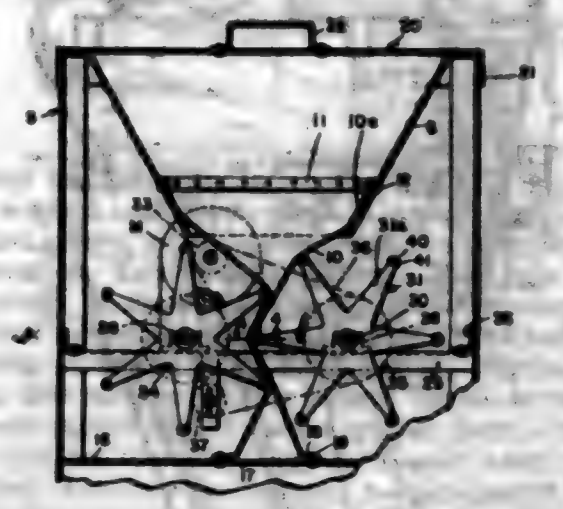
the front wall thereof through which workpieces deposited therein may be removed.

2,865,536
SPREADER FOR FERTILIZER AND THE LIKE
Alfred A. Price, Tacoma, Wash.
Application May 17, 1955, Serial No. 508,840
1 Claim. (Cl. 222—177)



In a spreader for fertilizer and the like having a hopper including front and back walls, the lower portion of the back wall being angled in the direction of the front wall but terminating short of joining said front wall to form an open bottom for the hopper, a rotor mounted for rotation below the open bottom of the hopper in close proximity to the end of the angled section of the back wall but spaced apart from the lower end of the front wall, thereby forming a dispensing opening, means for adjusting the size of the dispensing opening, a pair of spaced brackets extending downwardly from the hopper, a shaft journaled for rotation between the brackets, a pair of wheels mounted for rotation on the shaft, ratchet means interengaging one of the wheels and the shaft upon rotation of the wheel in one direction, but permitting free rotation of the wheel independently of the shaft in the other direction, and coupling means interconnecting the shaft and the rotor for driving the latter upon engagement of the ratchet means, the improvement which comprises an outer thickness of stippled rubber material for said rotor, said material being compressible through said thickness and said thickness having a rough and irregular peripheral surface comprising a plurality of preformed projections capable of resilient deformation for loosening and dislodging fertilizer in the areas adjacent the projections to prevent caking of the fertilizer.

2,865,537
DISPENSER
Clark E. Jackson, Alhambra, Calif., assignor to Turco Products, Inc., a corporation of California
Application August 22, 1955, Serial No. 529,709
3 Claims. (Cl. 222—214)



1. In a material dispenser, a body, a pair of radially spaced rotors rotatably carried by said body to rotate about parallel axes and each rotatably carrying at its periphery a plurality of circumferentially spaced rollers mounted to rotate about axes parallel with the axes of rotation of said rotors; the radius of each of the respective rotors being greater than half the distance between the axes of rotation of said rotors whereby the rollers carried by one of said rotors extend between rollers of the other of said rotors during rotation of said rotors, means for simultaneously rotating said rotors in opposite directions, and a flexible material-carrying tube having a top inlet end and a bottom outlet end, extending longitudinally between said rotors in position to be simultaneously engaged at longitudinally spaced points by at least two of the rollers carried by one of said rotors and at an intermediate point by a roller carried by the other of said rotors, whereby, in response to said rotation of said rotors, to be collapsed and stretched by said rollers in a manner gradually to work the contents of said tube toward the outlet end thereof, and means supporting the inlet end of said tube.

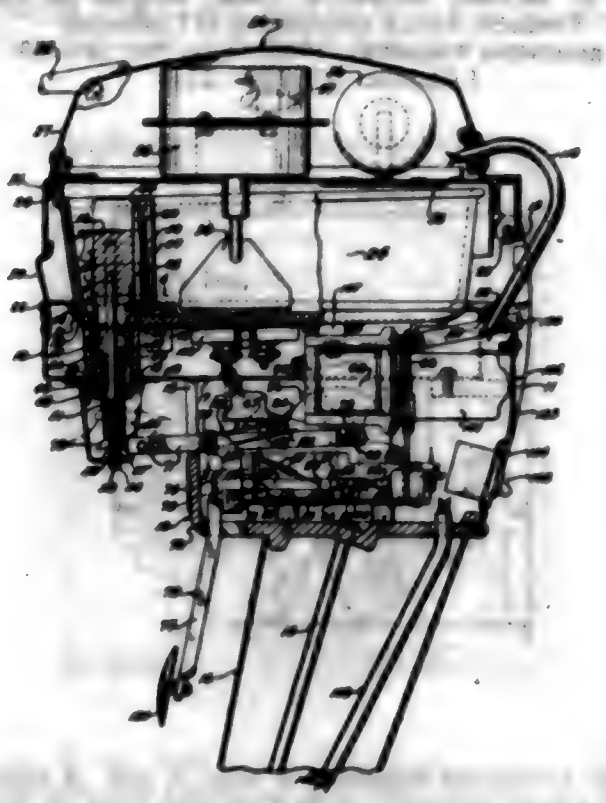
2,865,538
LIQUID DISPENSING MECHANISM
Frederick H. Newmann, Jr., Milwaukee, Wis., assignor to Superdisplay Incorporated, Milwaukee, Wis., a corporation of Wisconsin
Original application September 29, 1952, Serial No. 312,095, now Patent No. 2,773,218, dated December 4, 1956. Divided and this application August 16, 1956, Serial No. 604,443
3 Claims. (Cl. 222—321)

1. In a liquid dispensing device, a receptacle for liquid to be dispensed, said receptacle having a tubular extension depending from its bottom, a tubular spout member telescopically mounted in said tubular extension and having an elongated chamber with a valve seat near its lower end, a gravity influenced weight mounted for up and down movement in said receptacle, and an elongated valve member depending from said weight into said elongated chamber of the tubular member and having its lower end engageable with said valve seat to control flow from said spout, said valve member being of less diameter than said elongated chamber to provide a space for liquid within said chamber and around said valve member, said spout being movable to raise said weight to start a dis-

rod upwardly through their cylinder-charging stroke,

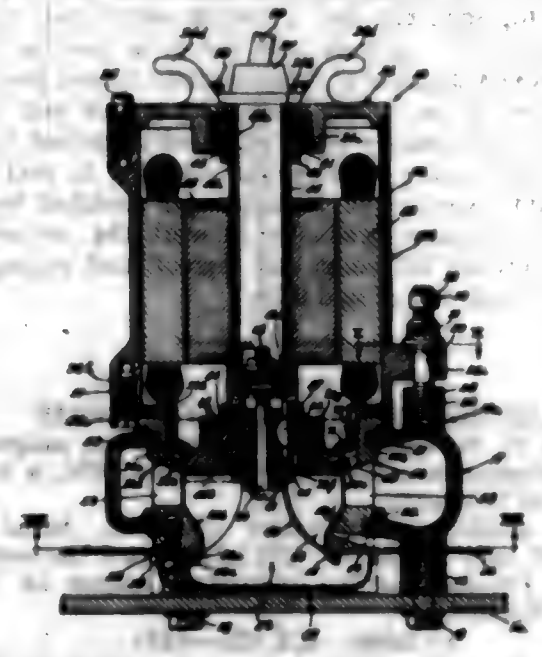
2,865,543

pensing operation, and means for retarding descending movement by gravity of the weight when the spout is



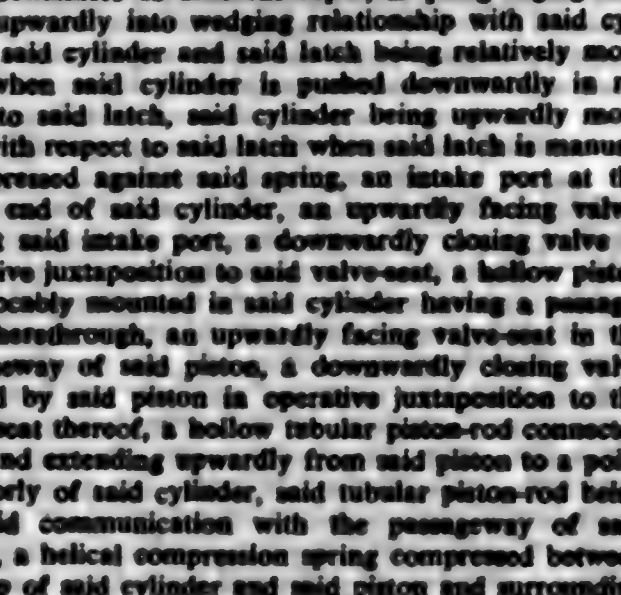
released whereby liquid is dispensed from the spout until the descending weight causes closing of the valve.

2,865,539
TANK AND REPLACEABLE MOTOR DRIVEN PUMP ASSEMBLY
Miles Lowell Edwards, Portland, Oreg.
Application March 22, 1955, Serial No. 496,265
17 Claims. (Cl. 222—333)



1. A pump assembly comprising an annular pump volute casing having a central aperture therethrough and a centrifugal pumping chamber surrounding the aperture in full communication therewith around the entire circumference thereof, mounting posts depending from said volute casing for supporting the casing in spaced relation from a tank wall or the like, a pump and motor assembly including a pump casing insertable through the central aperture of the volute casing and a motor carrying casing on said pump casing adapted to project above the volute casing, said pump casing defining an inlet to the pump and an impeller chamber between the inlet and the volute of the volute casing, a motor driven centrifugal impeller rotatably mounted in said impeller chamber, a ring of stationary diffuser vanes surrounding the impeller defining diffuser passages, said passages discharging into the volute of the volute casing, seal means between the volute casing and the pump casing, studs projecting upwardly from the volute casing, ears on the motor casing adapted to receive said studs, and nuts threadable on the studs to act on the ears for attaching the pump and motor assembly to the volute casing.

2,865,540
GREASE DISPENSER
Russell J. Gray, Mendeville, Minn., assignor to Gray Company, Inc., Minneapolis, Minn., a corporation of Minnesota
Application March 26, 1949, Serial No. 83,710
2 Claims. (Cl. 222—341)



1. A hand-operated grease-dispensing apparatus for dispensing more or less viscous lubricants from original vendable merchandising containers and for detachable mounting upon and use with such containers, including a pump supporting cover-plate, a generally upright cylinder carried by and depending from said cover-plate, said cylinder extending upwardly beyond said cover-plate in movable relationship thereto, a spring-tensioned friction latch pivotally mounted upon the upper side of the cover-plate and constructed and arranged releasably to grip said cylinder, thereby to permit said cylinder to be vertically adjusted relative to said cover-plate so as to fit containers of different depth, a spring urging said latch upwardly into wedging relationship with said cylinder, said cylinder and said latch being relatively movable when said cylinder is pushed downwardly in respect to said latch, said cylinder being upwardly movable with respect to said latch when said latch is manually depressed against said spring, an intake port at the lower end of said cylinder, an upwardly facing valve-seat at said intake port, a downwardly closing valve in operative juxtaposition to said valve-seat, a hollow piston reciprocably mounted in said cylinder having a passageway therethrough, an upwardly facing valve-seat in the passageway of said piston, a downwardly closing valve carried by said piston in operative juxtaposition to the valve-seat thereof, a hollow tubular piston-rod connected with and extending upwardly from said piston to a point exteriorly of said cylinder, said tubular piston-rod being in fluid communication with the passageway of said piston, a helical compression spring compressed between the top of said cylinder and said piston and surrounding said tubular piston-rod and disposed in the space between it and said cylinder, a hand grip on the outer portion of said tubular piston-rod for moving the piston and

of so as to be pivotal one with respect to the other, each frame member having a plurality of spaced horizontal

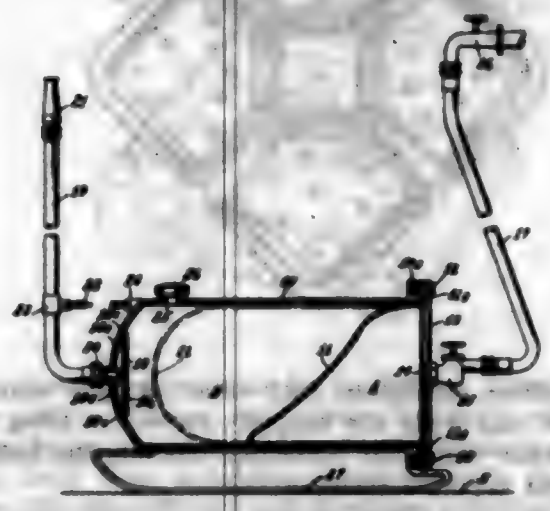
each of said coils including a bottom wall and inner walls, said inner walls being disposed in divergent rela-

caking of the fertilizer.

spout being movable to raise said weight to start a dis-

rod upwardly through their cylinder-charging stroke, said tubular piston-rod having a discharge opening exteriorly of said cylinder.

2,865,541
SPRAYER
Harry F. Hicks, Detroit, Mich.
Application October 8, 1956, Serial No. 614,712
2 Claims. (Cl. 222—386.5)

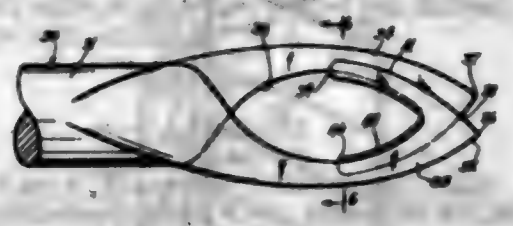


1. A sprayer for a fluid including an open-ended tank, an open-ended expansible bag inserted in the tank, the peripheries adjacent the open-ended portions of the tank and bag abutting one another, a plate securing the abutting portions together and having an inlet, means to conduct a fluid under pressure through the plate inlet and into the bag to expand the bag in a direction away from the plate, said tank having an outlet, hose means joined to the outlet to conduct the fluid to be sprayed from the tank as the bag expands to force that fluid through the tank outlet under substantially uniform pressure, and means extending across the tank outlet and spaced from the tank and having a portion disposed closely adjacent the tank to form a restricted passageway between said means and the tank communicating with the tank outlet and effecting an agitation of fluid discharged from the tank with such means preventing the bag from closing the tank outlet as the bag expands in said direction away from the plate.

2,865,542
HOSIERY INSPECTION MACHINES
Gus T. Smith, Paducah, Ky., assignor to Clearwater Hosiery Co., Paducah, Ky., a corporation of Kentucky
Application July 3, 1956, Serial No. 595,728
1 Claim. (Cl. 223—77)

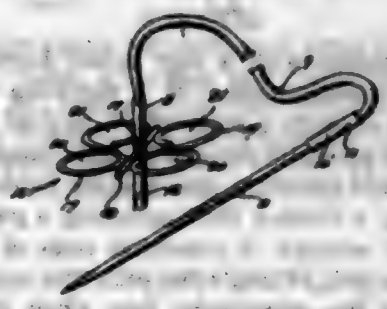
A hosiery inspection machine comprising a transversely expandable form circular in cross-section and having circumferentially extending recesses in its surface, a movable element carrying a nap material positioned within each recess, said movable element normally being positioned in its recess with the nap material beneath the surface of the form, and means operable upon the transverse expansion of said form to move said element in the same transverse direction and position said nap material slightly above the surface of said form.

2,865,543
SLOTTED SEWING NEEDLE
Morris R. Winkler, Far Rockaway, N. Y.
Application June 30, 1955, Serial No. 519,862
1 Claim. (Cl. 223—102)



A quick threading sewing needle adapted for use in a sewing machine, comprising a shaft having a cylindrical shank and an eye, said eye being formed by two V-shaped hook members, each member having a fixed arm integrally joined to the shank and a free arm juxtaposed to the fixed arm of the other member, said fixed and free arms being curved to define a substantially elliptical eye opening, said members having pointed apexes at the extreme ends thereof slightly spaced apart to form a thread guide notch for threading the needle, said notch communicating with said eye opening, the juxtaposed arms defining slots communicating with said eye opening, said juxtaposed arms having a maximum transverse thickness less than the diameter of said shank, the transverse thickness of said members at said apexes being less than the maximum transverse thickness of said juxtaposed arms.

2,865,544
FISH STRINGER
Frank G. Christowski, Milwaukee, Wis.; now by change of name Frank G. Christie
Application May 31, 1952, Serial No. 290,920
1 Claim. (Cl. 224—7)



In a fish stringer, a string having a stringing needle attached to one end, a cartridge secured to the other end of said string, said cartridge having a hole formed in it at an angle to its axis, a retainer removably mounted on said cartridge by means of said hole, said retainer comprising a pin adapted for insertion into said hole, a plurality of springs secured to said pin at one end and arranged to yieldably interfere with the passage of said cartridge over the pin when the pin is inserted into or withdrawn from said hole, and a plurality of finger loops formed adjacent to said springs to facilitate grasping of the retainer, said finger loops and springs being formed to provide a recess between them about which the string may be wound so that the retainer may be used in the manner of a reel, whereby said springs serve to prevent accidental removal of said retainer from said cartridge while in use and adapt the retainer for use as a reel.

2,865,545
TRAY CARRIER
Joseph D. Small, Cincinnati, Ohio
Application February 27, 1956, Serial No. 567,814
5 Claims. (Cl. 224—45)

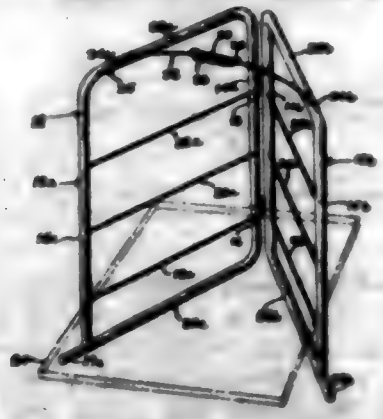
1. A collapsible device for carrying trays, comprising a pair of vertically disposed substantially rectangular frame members hingedly joined along vertical sides there-

2,865,546
CARTON

able tab formed therein, and a pouring opening in said third panel for receiving the said flexible tab, the

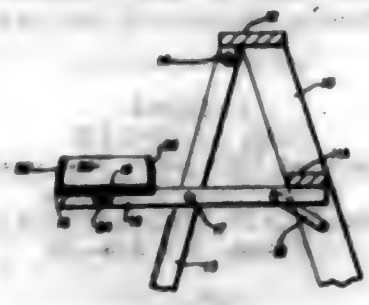
volute of the volute casing, a motor driven centrifugal impeller rotatably mounted in said impeller chamber, a tween it and said cylinder, a hand grip on the outer portion of said tubular piston-rod for moving the piston and

of so as to be pivotal one with respect to the other, each frame member having a plurality of spaced horizontal ribs extending between opposite vertical sides thereof, the spaced ribs of one member being aligned horizontal-



ly with the corresponding spaced ribs in the other member and flexible bail means connecting the top portion of the rectangular frames intermediate the vertical sides thereof.

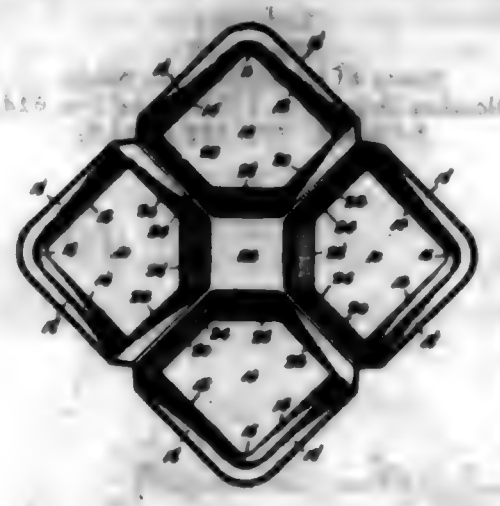
2,865,546
SUPPORT DEVICE FOR A STEPLADDER
Myron H. Shutt, Youngstown, Ohio
Application February 7, 1957, Serial No. 638,812
1 Claim. (Cl. 228—17)



The combination with a step ladder having a pair of parallel rails interconnected by a plurality of steps and at their upper ends by a platform, a pair of rigidly interconnected legs pivotally secured at their upper ends to the underside of said platform whereby the ladder is collapsible for storing, a folding shelf including a pair of parallel arms pivotally secured to respective ones of said legs intermediate the ends of said arms such that one end of each arm underlies the uppermost step when the ladder is opened for use, the opposite ends of said arms being interconnected by a shelf, and there being links pivotally secured at one end to said rails and at their other ends to said arms to actuate said arms between horizontal and vertical positions when the ladder is opened and closed and constraining said arms to swing upwardly to a nested position between and parallel to said legs when the ladder is folded; of a tray removably attached to said shelf and swingable therewith into said nested position, said tray including a bottom wall co-extensive in area with and resting upon said shelf and removably secured thereto, and spaced side walls and spaced front and back walls, said front and back walls being upwardly and inwardly arcuated so as to retain articles therewithin and to clear the underside of said platform when the assembly is moved into the nested position.

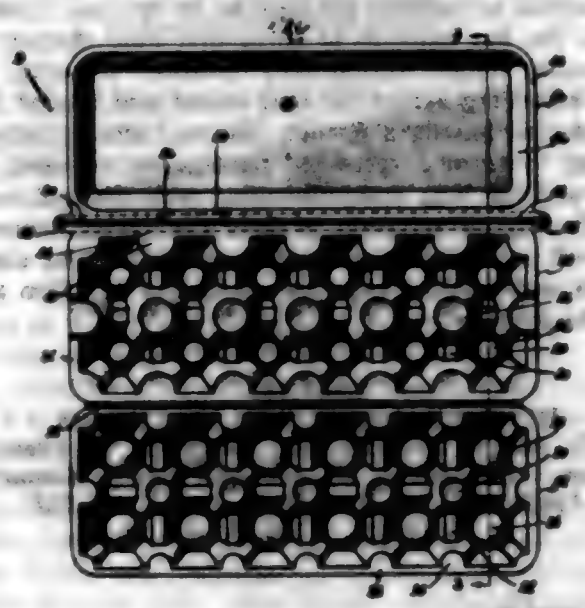
2,865,547
MOLDED PULP CARTON
Arthur W. Van Dyke, Elizabeth, N. J., assignor to Diamond Gardner Corporation, a corporation of Delaware
Application January 19, 1954, Serial No. 404,831
6 Claims. (Cl. 229—2.5)

1. A molded pulp carton comprising a top wall and at least three like cells hingedly joined to said top wall, each of said cells including a bottom wall and inner walls, said inner walls being disposed in divergent relation and hingedly joined to an adjacent inner wall of an adjacent cell, said bottom walls being positioned in



different planes related to each other in such manner that, when said walls are hingedly moved to bring the adjacent inner walls into contacting relation, the bottom walls are in coplanar relation.

2,865,548
MOLDED PULP CONTAINER WITH TEAR STRIP
Charles L. Stewart, Hammond, Ind., assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application November 4, 1955, Serial No. 544,917
2 Claims. (Cl. 229—2.5)



1. A molded pulp carton having two hinged-together, pocketed sections wherein the pockets of one section are complementary to those of the other section, and a generally smooth section connected to one of said pocketed sections, in opposed relationship to the other of said pocketed sections, by an integral hinge section, said hinge section comprising a substantially flat tear strip of substantially the same thickness as the other portions of the carton and having a portion thereof which is displaced relative to the remaining portion of said tear strip and which comprises a relatively narrow median bead extending along the length of its undersurface, said bead defining a narrow groove on the upper surface of said tear strip, and a line of perforations extending along each side of said tear strip, said bead being generally parallel to and spaced from the edges of said tear strip.

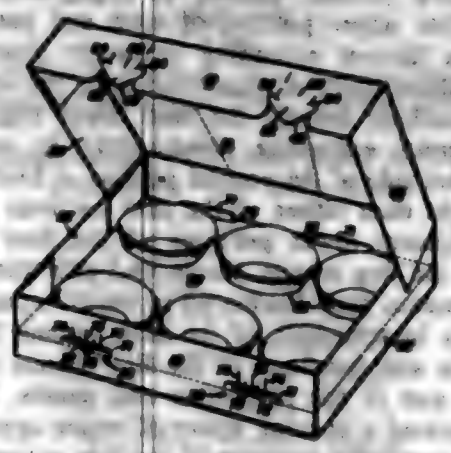
2,865,553

opposed pairs of side and end panels with handholes in

terial slightly above the surface of said form.

frame members hingedly joined along vertical sides there-

2,865,549
CARTON
William H. Inman, Newark, N. Y., assignor to Bloomer Bros. Company, Newark, N. Y., a corporation of New York
Application February 7, 1957, Serial No. 638,736
6 Claims. (Cl. 229—19)

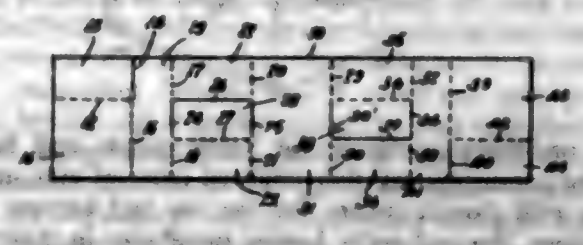


1. A rectangular carton having bottom, front, rear, and side walls, a cover, said cover having a top portion hingedly connected to said rear wall and having front and side cover flaps extending at substantially right angles from the edges thereof and overlying said front and side walls, a horizontal slit in said front wall, a locking tongue attached to said front cover flap for cooperation with said slit for locking said cover in closed position, and an interior article receiving tray comprising a horizontal sheet having marginal, downwardly extending flanges, one of said flanges having an upwardly extending tab lying against said front wall and covering said slit for guiding said locking tongue.

2,865,550
CONTAINERS HAVING STRONG END CLOSURES AND METHODS OF MAKING THEM
Frank D. Bergstein, Hamilton, Ohio, assignor to The Bergstein Packaging Trust, a trust composed of Robert M. Bergstein and Frank D. Bergstein, trustees
Application March 8, 1954, Serial No. 414,558
8 Claims. (Cl. 229—17)

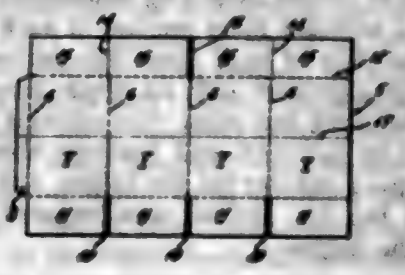
1. A one-piece paperboard container having walls defining an open ended tubular body, each wall at one of said open ends having a flap hingedly connected to the end edge of said wall, said flaps forming an end closure for said tubular body, the flaps on two of the walls which are in edge contacting relation being narrow and folded outwardly at substantially right angles to the last named walls, the flap hinged to a third wall opposite one of said last named walls being enlarged to completely cover the open end of said tubular body with two of its edges coinciding with the outer edges of the said narrow flaps and secured thereto, the flap hinged to the fourth wall of the container also being enlarged and of a size to cover the third named flap, said fourth flap having extensions projecting beyond the edges of said narrow flaps, said extensions defining the edges of a liftable tab formed in the fourth named flap, said fourth named flap being secured to said third named flap excepting for the liftable tab formed therein, and a pouring opening in said third named flap underlying the said liftable tab, the extensions of said liftable tab being foldable about the underlying edges of said third named flap and said narrow flaps when said end closure is in sealed condition, the last named edges of said third named flap defining a pouring lip for said container.

2,865,551
CARTON
John P. Rasmussen, East Lansing, Mich.
Application July 12, 1957, Serial No. 671,519
2 Claims. (Cl. 229—28)



1. A blank for forming a carton having a first pair of relatively spaced transversely extending weakened lines forming a top portion, a second pair of weakened lines outwardly of each of said first pair of lines providing outer side portions, die cuts extending transversely of said outer side portions to provide flaps, a third pair of weakened lines outwardly of said second pair of weakened lines in spaced parallel relation thereto to form bottom portions, the remainder of the blank outwardly of said third pair of lines providing inner side portions and die cuts contiguous with said third pair of lines providing flaps on said inner side portions.

2,865,552
SEPARABLE SHIPPING CONTAINER
Nicholas M. Sider, Chicago, and Oscar H. Williamsen, Riverside, Ill., assignors to International Paper Company, New York, N. Y., a corporation of New York
Application June 2, 1953, Serial No. 359,865
1 Claim. (Cl. 229—37)



A container fabricated from corrugated board comprising an initially one-piece outer body having side and end walls separable along a line of perforations formed completely therearound, bottom-forming closure flaps formed integrally with said side and end walls, an open-ended liner snugly fitted within said body for the full depth thereof, a plurality of downturned flaps formed integrally with and depending from the upper edges of said side and end walls in juxtaposition with the outer faces thereof, opposed adjacent pairs of said downturned flaps being formed integrally and adapted to be separated along a line of perforations extending therebetween and positioned in parallel alignment with but slightly offset from the adjacent container corner whereby to maintain said upper flaps in juxtaposition with said side and end walls until said container has been filled and to thereafter permit said upper flaps to be folded and secured into top closure-forming relation to form a unitary package in which no relative movement can take place between said body and said liner.

fold line, said first flap being adapted to be moved away

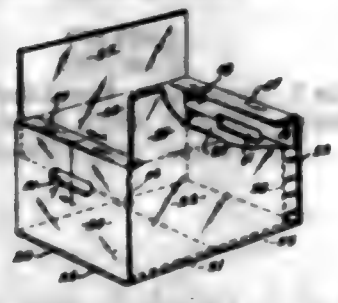
formed in spaced relation with the suction valve, a bore

2,865,553

REINFORCING AND COVER SUPPORTING DEVICE FOR A CONTAINER

Paul Waytulon, St. Louis, Mo., assignor, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application December 30, 1954, Serial No. 478,597
1 Claim. (Cl. 229—37)



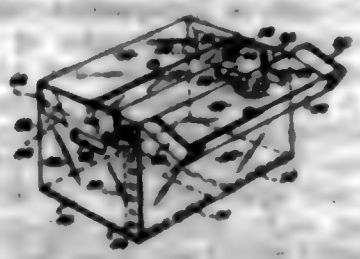
A one-piece container for bottle goods and the like having connected together opposed pairs of side and end walls with closure means for the top and bottom of the container, the end walls having handholes in their upper portions, the opposed end walls each having at its extreme upper edge a flap defined therefrom by a fold line, the flap consisting of a plurality of transverse sections of slightly less width than the end wall and with fold lines defining the said sections, first and second transverse sections of substantially the same dimensions which form a ledge being folded inwardly on an end fold line and secured together in rigid parallel face contacting relationship with each other and extending vertically outwardly from each end panel, said first section being hinged along a fold line defining the upper edge of the end wall, and at least one finger engaging outer free section of each said flap slidably disposed against the inner face of each end wall, and in which pre-assembled form the container is collapsed for storage and shipment, when fully erected and only after the bottle goods or the like are in the container the ledge forming sections in their fixed contacting relationship extending inwardly with their folded ends facing each other in substantially the plane of the folds constituting the top edges of each of the end walls and at substantially right angular relationship thereto, and each outer free section extending downwardly and slidably engaging the adjacent inner portion of each end wall and with the end edge of each outer free section terminating in substantial alignment with an upper boundary of each handhole, whereby the outer free sections provide a reinforcement to said end wall portions above said handholes and also a support for the ledges, and marginal end portions of the top closure superimposed on and supported by the ledges.

2,865,554

ONE-PIECE BEVERAGE SHIPPING CASE

Edward F. Rapking, Glasgow, Mo., and Howard D. Willett, Alton, Ill., assignors, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application February 7, 1955, Serial No. 486,396
4 Claims. (Cl. 229—44)



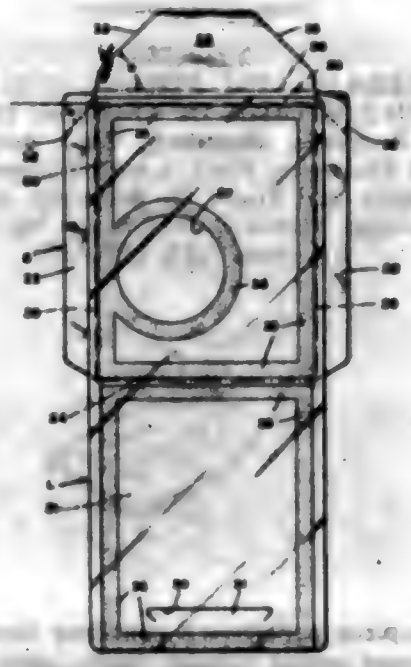
1. In a one-piece collapsible heavy duty paperboard container which is adapted for shipping in collapsed flat form, the said container comprising connected together opposed pairs of side and end panels with handholes in the end panels and bottom closure flaps integral with the side and end panels; split covers integral with the side panels with each cover having depending side and end flanges, each end panel having a reinforcing flap means hinged to its upper edge, the reinforcing flap means including a first portion thereof in engagement with an adjacent inner upper portion of each end panel, a second portion thereof extending upwardly from a lower fold line substantially in alignment with the upper edge of each handhole toward the said upper edge, a third portion thereof extending downwardly in engagement with the inner side of the second portion, a fourth portion of less height than either of the said portions positioned between adjacent lower portions of the first and third portions of the flap means, the second and third portions of the flap means each having an upwardly opening notch substantially intermediate of its ends, means fixedly positioning the said portions of the flap means relative to each other and to the respective end panels, the fourth portion effecting a spacing apart of upper opposed parts of the first and third portions of the flap means and thus forming therebetween an upwardly opening slot above the fourth portion, and the dimensions of the said slots and the notches being such as to receive and hold the said end flanges and opposed portions of the side flanges respectively of the split covers therein.

2,865,555

BOXBOARD CONTAINER

Orleon W. Stone, Valley Cottage, N. Y., assignor to Lassiter Corporation, Charlotte, N. C., a corporation of North Carolina

Application February 28, 1955, Serial No. 718,226
12 Claims. (Cl. 229—51)



1. In a container formed from a blank of a suitably stiff foldable sheet material, an upstanding front wall having a transverse fold line extending thereacross intermediate its upper and lower ends, a rear wall constituting an extension of the lower end of the front wall and disposed behind the front wall, a first flap constituting an extension of the upper end of the front wall and disposed behind the rear wall, said first flap having a pair of downwardly convergent side edges, and a pair of side flaps, each side flap constituting an extension of a corresponding side of the front wall and being disposed behind the rear wall, each side flap being secured to the rear wall and a corresponding portion of the first flap and being formed with a line of weakness that is generally coincident with one of the side edges of the first flap, each line of weakness extending to an end of the said

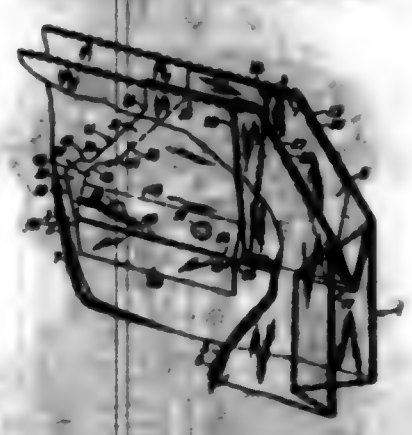
secured to said third named flap excepting for the lift place between said body and said liner.

fold line, said first flap being adapted to be moved away from the rear wall to thereby effect tearing of the side flaps along the lines of weakness and tilting of the first flap and the upper portion of the front wall about said fold line relative to the remainder of the front wall.

2,865,556
BAG

Russell J. Williams, Clayton, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri

Application January 11, 1956, Serial No. 558,542
11 Claims. (Cl. 229—62.5)

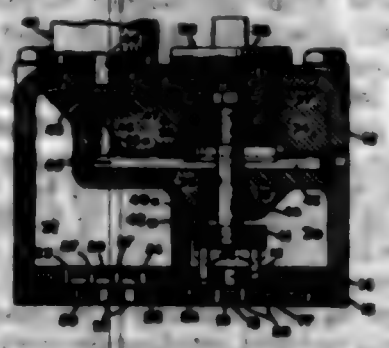


1. A bag having a valve flap at one of its corners at one end, the bag having a closure at said end, the valve flap having a central fold spaced from the closure, a flexible sleeve projecting inward from the valve flap, said sleeve being folded in half on a central fold in line with the central fold of the valve flap, said sleeve having a central longitudinal slit extending from its inner end to a point spaced inward from the inner end of the valve flap, and said sleeve having a flexible flap secured thereto at one side of the slit for covering the slit, said covering flap projecting laterally with respect to the length of the sleeve from the portion of the sleeve on said one side of the slit in the direction away from the closure and adapted to overlie the outside of the portion of the sleeve on the other side of the slit when the sleeve becomes flattened upon filling the bag, said covering flap extending from a point between the inner end of the valve flap and the outer end of the slit toward the inner end of the sleeve.

2,865,557
COMPRESSOR UNLOADER

George W. Hartwell, South Hadley, Mass., assignor to Worthington Corporation, Harrison, N. J., a corporation of Delaware

Application May 27, 1955, Serial No. 511,661
5 Claims. (Cl. 230—31)



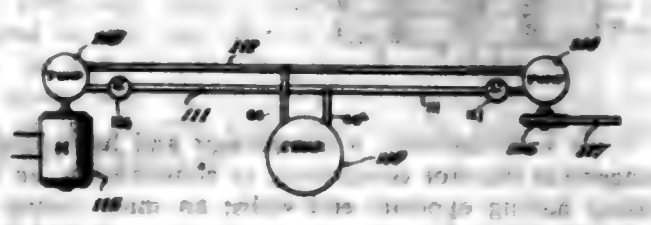
1. In combination with a compressor having a cylinder including a movable piston therein, a suction valve and a discharge valve for the compressor, a cylinder head for the compressor cylinder and including inlet and outlet chambers communicating respectively with the suction valve and the discharge valve, of unloading means in said cylinder head comprising an unloader cylinder formed in spaced relation with the suction valve, a bore through the unloader cylinder and in communication with the inlet chamber, piston means in the unloader cylinder, a rod of lesser diameter than the bore extending therethrough and connected at one end to the piston of the unloading means, finger means in the inlet chamber and connected to the other end of the rod and adapted to extend into the suction valve, biasing means engaging the piston of the unloading means to move the finger means into contact with the suction valve to open the suction valve, a plurality of bores within the cylinder head providing passage means for the fluid being compressed and from the outlet chamber to the piston of the unloading means, a nozzle in the passage means formed by said plurality of bores, control means for said nozzle and selectively seated thereon for regulating the flow of high pressure fluid from the outlet chamber to the piston of the unloading means, and a restricted passageway formed by the outer periphery of the rod and the bore whereby when the control means is operative to close off communication from the outlet chamber to the piston of the unloading means fluid leaks through the restricted passageway to the suction chamber to permit a gradual lowering of the piston of the unloading means to force the finger means into contact with the suction valve.

2,865,558
HYDRAULICALLY OPERATED COMPRESSORS

Otto J. Schemmel, Chicago, Ill.

Original application January 22, 1954, Serial No. 405,299, now Patent No. 2,791,370, dated May 7, 1957. Divided and this application December 4, 1956, Serial No. 626,099

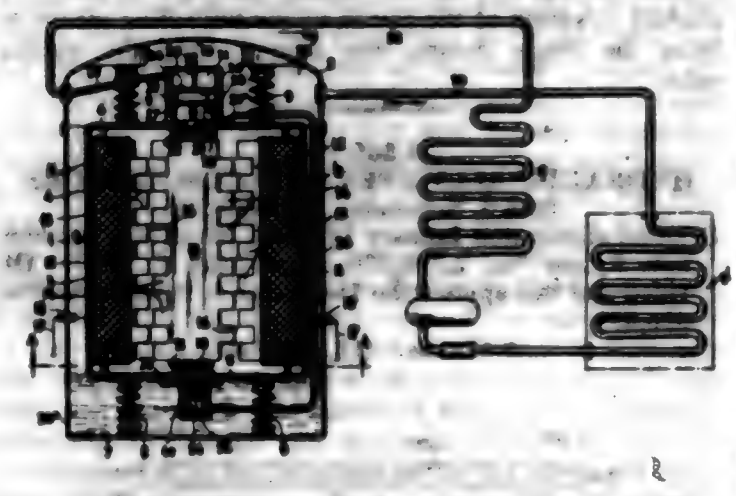
3 Claims. (Cl. 230—49)



1. The combination with a motor driven truck having a refrigerated body enclosure in which use is made of a compressible fluid refrigerating medium, of means to compress the refrigerating fluid medium comprising a unit including a pressure liquid operated motor and a fluid compressor in driven connection with said motor, said pressure liquid operated motor being provided with pressure liquid supply and release liquid connections for supply of pressure liquid to the liquid operated motor and delivery of released liquid from said motor, together with means to place the liquid under pressure, said pressure liquid means including first and second liquid pumping units each having a pressure liquid delivery connection and a return liquid intake connection, the first liquid pumping unit being mounted in proximity to the power motor of the truck, means to drivingly connect a power driven element of the power motor to the first liquid pumping unit, an electric motor, means to drivingly connect said electric motor to the second defined liquid pumping unit, means to supply electric current to said electric motor, a common pressure liquid conduit connecting together the pressure liquid delivery connections of the first and second liquid pumping units, a common return liquid conduit connecting together the return liquid intake connections of the first and second liquid pumping units, a pressure liquid supply conduit connecting the common pressure liquid conduit aforesaid to the pressure liquid supply connection of the liquid operated motor, a return liquid conduit connecting the release liquid connection of the pressure liquid operated motor to the common return liquid con-

duit aforesaid, a check valve in the common pressure liquid conduit between the pressure liquid supply conduit and the first liquid pumping unit, and another check valve in the common pressure liquid conduit between the pressure liquid supply conduit and the second liquid pumping unit, each check valve being constituted to permit free flow of liquid only in the direction from the pumping unit which corresponds to such check valve towards the pressure liquid supply conduit which connects to the liquid operated motor, whereby the refrigerating medium compressing unit may be operated by power derived from the truck power motor during road running of the truck, and whereby said refrigerating medium compressing unit may be operated by electric current derived from a source other than the power motor of the truck when said power motor is idle.

2,865,559
LUBRICATION IN REFRIGERATOR COMPRESSOR
Carlos Giglio, Buenos Aires, Argentina
Application September 9, 1954, Serial No. 454,893
9 Claims. (Cl. 230—55)



1. In a refrigerator, a compressor and lubricating arrangement therefor comprising, in combination, an outer casing having opposite end walls; an inner casing having opposite end walls and being arranged within said outer casing in such a manner that one of said end walls of said outer casing and one of said end walls of said inner casing form a compressor chamber between themselves and that the other of said end walls of said outer casing and the other of said end walls of said inner casing form a lubricant chamber between themselves, the latter being adapted to receive a lubricant or the like; compressor pump means arranged within said compressor chamber and including a compressor cylinder and a compressor piston slidably arranged therewithin; lubricant pump means arranged within said lubricant chamber and including a lubricant cylinder and a lubricant piston slidably arranged therewithin, said lubricant pump means being so constructed and arranged and communicating with said compressor pump means in such a manner that a lubricant received within said lubricant chamber will, during reciprocation of said lubricant piston within said lubricant cylinder, be moved from said lubricant chamber into said compressor cylinder of said compressor pump means, thereby lubricating the latter; electromagnetic motor means arranged within said inner casing and including a stator and an armature mounted for reciprocation relative thereto, said stator and armature being so constructed and arranged that upon electrical energizing of said motor means said armature is electromagnetically reciprocated in both directions; and connecting means connecting said armature of said motor means with both of said pistons for simultaneously reciprocating the same relative to their respective cylinders during operation of said motor means, whereby said lubricant pump means and said compressor pump means are operated simultaneously, the latter being continuously lubricated during operation thereof.

2,865,589
DIFFUSION PUMP
Lorenzo Francocchini, Florence, Italy, assignor to Officine Galileo Societa per Azioni, Florence, Italy, a corporation of Italy
Application April 5, 1956, Serial No. 577,672
Claims priority, application Italy April 10, 1954
9 Claims. (Cl. 230—101)

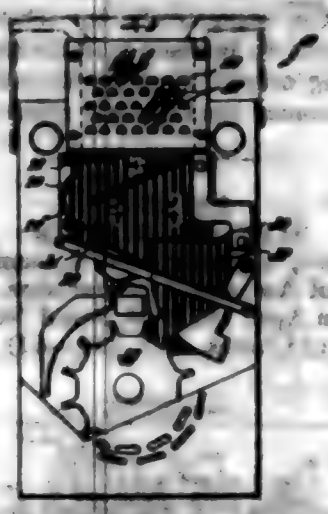
1. A vacuum diffusion pump comprising a lateral wall defining a chamber, said chamber being provided with an upper inlet and a lower outlet, means included in said wall for cooling said wall, transversely extending thermal barrier means dividing said chamber into an upper section and a lower section, said barrier means being spaced from said wall to define a first annular passageway therewith, closure means for said lower section disposed at the bottom of said chamber, means for supplying heat to said closure means, a pipe extending from said closure means in said lower section through said transverse barrier means into said upper section, a plurality of downwardly directed nozzles disposed at regularly spaced locations in said upper section and communicating with said pipe, and a first annular partition wall in said lower section extending from said closure means to a location spaced from said barrier means to define a second annular passageway therewith, said first partition wall being coaxial with said pipe, whereby upon connecting said inlet to a vessel to be evacuated and said outlet to a pump, heating of a liquid placed on said closure means causes said liquid to vaporize, a portion of the vapors rising through said pipe and being directed downwardly in said upper section in a series of parallel streams through said nozzles, said vapors entraining the gas to be removed from said vessel and being cooled and condensed by said lateral wall, the gas passing downwardly through said first annular passageway to be carried along to said outlet by further vapor generated between said pipe and said first partition wall, the further vapor passing first upwardly between said pipe and first partition wall and then being deflected through said second annular passageway by said barrier means to pass downwardly between said first partition wall and said lateral wall.

subscriber, means for detecting the presence on said con- to the other stable state, and third means operable in re-

2,865,561
FARE COLLECTION BOX WITH WATER SEPARATOR

Frank P. Rossoppe, Cranston, R. I., assignor, by mesne assignments, to Grant Development Company, Providence, R. I., a corporation of Rhode Island

Application October 1, 1956, Serial No. 613,843
1 Claim. (Cl. 232—7)



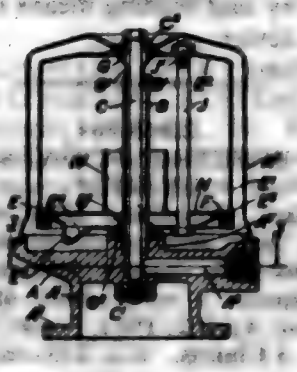
Coin collecting apparatus comprising a free standing cabinet mounting at its top a cap having an upwardly facing wide mouth coin passage which tapers downwardly toward the interior of the cabinet, and within its bottom part coin registering means, a coin guide extending downwardly from the lower end of the coin passage to the coin registering means, said coin guide comprising an upper tubular part having a flat bottom containing a plurality of transversely extending, spaced parallel staggered apertures, each of which has an upwardly convex curved edge and a transversely extending straight edge meeting the lower ends of the curved edge, said curved edge carrying a baffle integral therewith which projects downwardly therefrom at a steeper angle than the slope of the bottom in which the openings are formed, an enclosure mounted on the underside of the bottom beneath the perforated portion for receiving water draining through the apertures, said baffles preventing water from bridging the apertures and being again entrapped by the coins, a lower part having spaced parallel lands transversely thereof, and extending continuously from the upper tubular part downwardly to the lower extremity of the guide, the edges of the lands being of right section, and a plurality of angularly disposed tracks projecting from the face of the lower part beyond the plane of the lands for receiving the edges of coins sliding flatwise downwardly on the lands and for causing the coins to travel transversely back and forth across the lands to wipe any remaining water from the surfaces of the coins before they reach the coin registering means, the grooves between the lands being open at their lower ends to permit water collecting between the lands to escape to the underside of the guide.

2,865,562
CENTRIFUGAL OIL CLEANERS

Anthony Edgerton Berlin, Wembley, England, assignor to The Glacier Metal Company Limited, Wembley, England, a British company

Application January 24, 1955, Serial No. 483,682
Claims priority, application Great Britain
February 5, 1954
1 Claim. (Cl. 233—24)

A centrifugal oil filter comprising a stationary casing and a centrifugal drum rotatably mounted therein, said casing comprising a circular base plate and a drum shaped housing mounted on said base plate, said housing comprising a cylindrical side wall and a circular end wall opposite said base plate, said drum comprising a cylindrical side wall coaxial with and spaced apart from said cylindrical side wall of said housing, a circular end wall adjacent to and spaced apart from said end wall of said housing and a circular end wall adjacent to and spaced apart from said base plate, a reaction nozzle in said end wall of said drum adjacent to said base plate and adapted to discharge oil into the space between said base plate and the end wall of said drum adjacent thereto, an oil inlet tube mounted on said base plate and extending through said end wall of said drum adjacent to said base plate and coaxially with said cylindrical side walls to said end wall of said drum adjacent to said end wall of said housing, an oil discharge opening in said tube adjacent the end thereof remote from

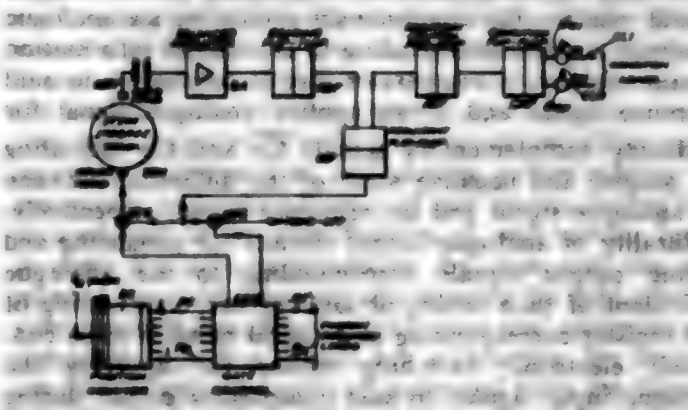


said base plate, an oil discharge opening in said base plate communicating with the space between said base plate and the end wall of said drum adjacent thereto, an oil supply conduit extending through said base plate and communicating with said tube, an annular disc mounted in said drum parallel and adjacent to but spaced apart from said end wall of said drum which is adjacent to said base plate, said disc having a circular opening the edge of which is concentric with and spaced apart from said tube, a tubular projection connected at one end to said edge of said opening and extending toward the end of said drum which is remote from said base plate, said tubular projection extending about two fifths of the distance from said annular disc to the opposite end of said drum.

2,865,563
MESSAGE REGISTERS

Esmond Philip Goodwin Wright and Joseph Rice, London, England, assignors to International Standard Electric Corporation, New York, N. Y.

Application May 22, 1953, Serial No. 356,386
Claims priority, application Great Britain May 23, 1951
8 Claims. (Cl. 235—61)



1. In a telecommunication switching system wherein each successive message unit chargeable to a subscriber is indicated by a discrete signal impressed upon a conductor assigned to said subscriber, a memory device having a plurality of signal storage sections, each for storing a plurality of signals representing a number which in turn represents a cumulative total of message units chargeable to a subscriber, means for repeatedly reading the signals stored in one of said sections assigned to a particular subscriber, a conductor assigned to said particular

first additional resistance representing the trimming moment of the weight of the hull and the hydrostatic dis-

messages and said output message and (2) the other of said input messages and said output message, a third

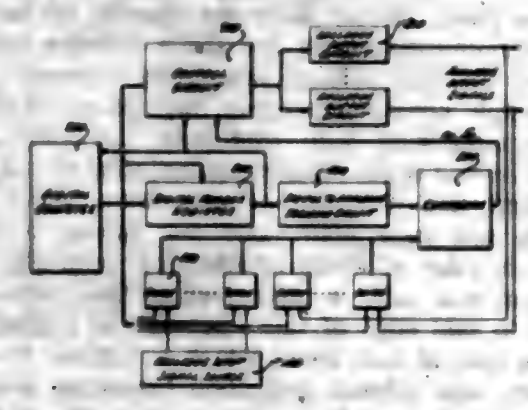
subscriber, means for detecting the presence on said conductor of an operating signal indicating a chargeable message unit, computing means connected to said reading means and to said detecting means and responsive to the first coincidence of an operating signal detected by said detecting means and a reading operation of said reading means for modifying the signals read by said reading means, means for recording a registration of said modified signals in said one section of said memory device, and means including said reading means for rendering said computing means inoperative upon subsequent coincidences of the same operating signal detected by said detecting means and a reading operation of said reading means and for causing said recording means to record the signals read by said reading means in said one section of said memory device.

2,865,564

HIGH-SPEED ELECTRONIC DATA CONVERSION SYSTEM

Harold R. Kaiser, Woodland Hills, Claude A. Lane, Culver City, and Wilford S. Shockency, Torrance, Calif., assignors, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware

Application April 2, 1953, Serial No. 346,391
3 Claims. (Cl. 235—61)



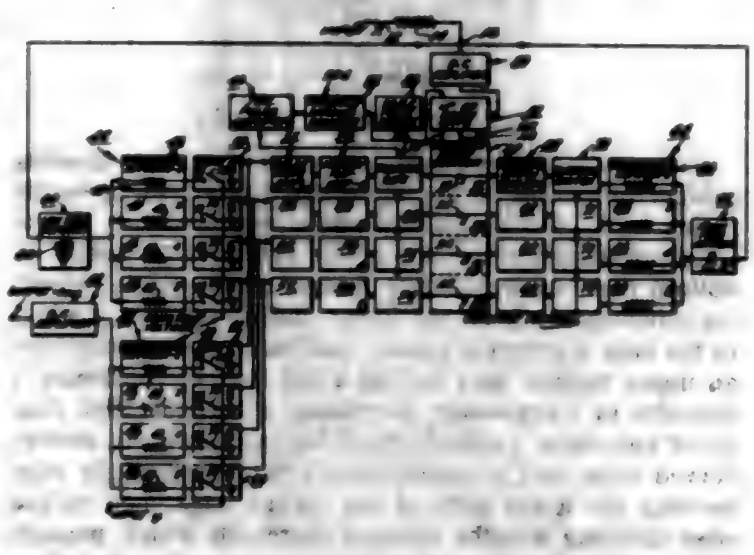
1. A high-speed electronic input-output conversion system for converting a plurality of applied analogue input signals to corresponding sets of digital output signals during corresponding analogue-to-digital conversion periods, and for converting a plurality of sets of digital input signals to corresponding analogue output signals during corresponding digital-to-analogue conversion periods, said system comprising: a digital number register including a plurality of flip-flops, one for each digit of the digital signal sets, said flip-flops producing signals corresponding to said digits, respectively; a decoding circuit coupled to said register for continuously producing an analogue reference signal corresponding to the digital information in said register; a comparator circuit responsive to said reference signal and to an applied analogue signal for producing complementary signals $\overline{Co}$ and Co indicating the positive and negative sense of the difference between the analogue signal and the reference signal, respectively; a plurality of analogue output circuits for producing and storing output signals corresponding to the analogue equivalent of each setting of said register, each setting of said register corresponding to a digital number to be converted; electronic switching means for applying the analogue input signals to said comparator circuit during corresponding analogue-to-digital conversion periods and for applying said analogue output signals to said comparator circuit during corresponding digital-to-analogue conversion periods; analogue-to-digital control means coupled to said register for setting said flip-flops, one at a time in descending order of place, to stable states representing the digital equivalent of the applied analogue signal, said analogue-to-digital control means including first means for initially setting said flip-flops to one stable state, second means for sequentially setting said flip-flops to the other stable state, and third means operable in response to one of said complementary signals for resetting said flip-flops to said one state after said flip-flops are set to other state, respectively; and digital-to-analogue control means coupled between said analogue output circuits and said comparator circuit for actuating said output circuits to produce said analogue output signals, said digital-to-analogue control means including means responsive to signals Co and $\overline{Co}$, respectively, for selectively actuating said output circuits to increase and decrease the level of the corresponding output signal until said corresponding output signal becomes equal to said reference signal.

2,865,565

STEP MULTIPLIER

Arthur W. Vance, Cranbury, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application April 28, 1954, Serial No. 424,339
12 Claims. (Cl. 235—61)



1. In a computer, wherein a varying electrical signal represents a variable, means including first register means having a plurality of stages for converting at a certain characteristic frequency said electrical signal to a combination of discrete electrical conditions of said register stages, second register means having a plurality of stages each associated with a different one of said first register stages, means for transferring at another lower frequency said first register electrical conditions to associated stages of said second register means, a variable conductance network, switching means responsive to the electrical conditions of said second register means for varying the conductance of said network, and means for applying another electrical signal to said conductance network.

2,865,566

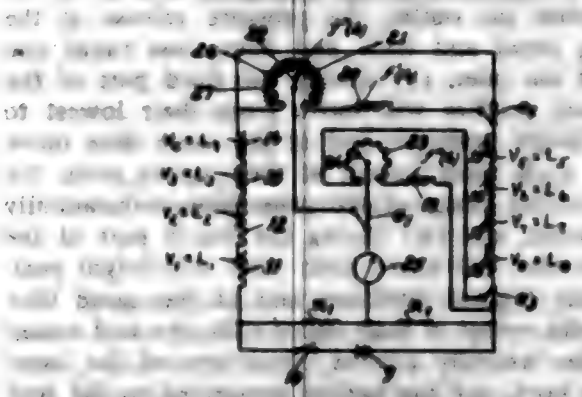
APPARATUS FOR THE ESTIMATION OF THE DISTRIBUTION OF THE CARGO IN A SHIP

Kurt Lennart Svensson, Gothenburg, Sweden, assignor to Aktiebolaget Getaverken, Gothenburg, Sweden, a corporation of Sweden

Application May 10, 1954, Serial No. 428,784
Claims priority, application Sweden May 16, 1953
2 Claims. (Cl. 235—61)

1. An apparatus for estimating the influence upon a ship of the distribution of a certain quantity of cargo therein, comprising a first group of series-connected resistances, means to adjust said resistances to represent the moments with respect to an imaginary plane dividing the ship into a fore-body and an after-body and caused by parts of said cargo when placed in various holds in the fore-body of the ship, a second group of series-connected resistances, means to adjust said resistances of said second group to represent the moments with respect to said plane and caused by parts of said cargo when placed in various holds in the after-body of the ship, a

first additional resistance representing the trimming moment of the weight of the hull and the hydrostatic displacement lifting force with respect to said plane, a second additional resistance representing the lengthwise bending moment of the weight of the hull and the hydrostatic displacement lifting force, a dual purpose electric balancing device containing a supply of electric current, two reference resistances and a galvanometer, a first potentiometer, a second potentiometer, a switching device for alternatively arranging the various resistances in relation to the balancing device in such a manner, that



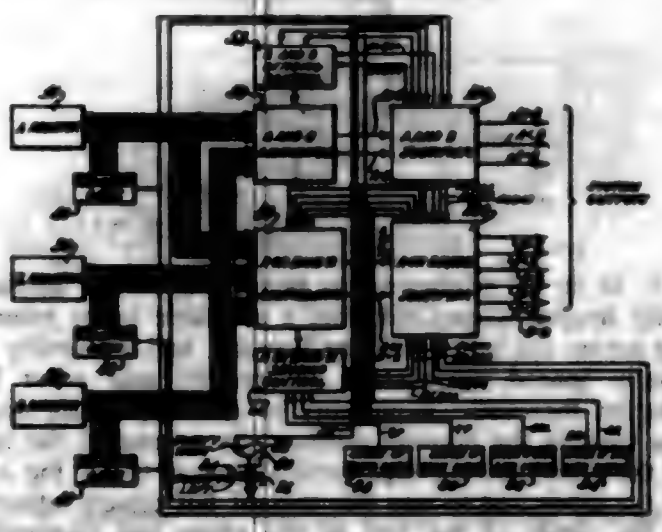
for one purpose a first branch is constituted by one of said groups of resistances and a second branch is constituted by the second group of resistances in series with said first additional resistance, said first and second branches being connected by said first potentiometer, whereas for the other purpose a third branch is constituted by the series connection of both groups of resistances and a fourth branch is constituted by said second additional resistance, said third and fourth branches being interconnected by said second potentiometer.

2,865,567

MULTIPLE MESSAGE COMPARATOR

Grant W. Booth, Collingswood, and Linder C. Hobbs, Haddonfield, N. J., assignors to Radio Corporation of America, a corporation of Delaware

Application June 22, 1954, Serial No. 438,372
16 Claims. (Cl. 235—61)



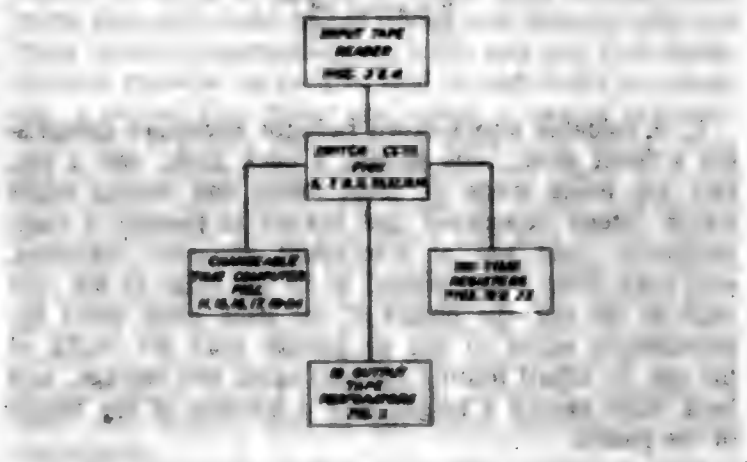
1. In a system for determining the relationships of two input messages and an output message wherein on each succeeding determination one of the input messages becomes the output message, said messages each comprising characters grouped into items, each of said characters represented by a plurality of simultaneously appearing binary coded electrical signals, the combination comprising a first means responsive to signals representing said input messages for determining relative binary value as between individual character signals from said messages, a second means responsive to signals representing said input messages and signals representing said output message for determining relative binary value as between individual character signals from (1) one of said input message and said output message and (2) the other of said input messages and said output message, a third means responsive to signals representing said input messages for determining which of said messages is the longer, a fourth means responsive to signals representing said input messages and signals representing said output message for determining which is the longer as between (1) one of said input messages and said output message and (2) the other of said input messages and said output message, a plurality of bistable means for manifesting relative message magnitudes, and control means responsive to said first, second, third, and fourth means for controlling the conditions of stability of said bistable means.

2,865,568

RECORD-CONTROLLED COMPUTING RECORDING SYSTEM

Richard L. Abbrecht, Maspeth, N. Y., and Edward Vroom, Brooklyn, Conn., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application December 7, 1955, Serial No. 551,489
29 Claims. (Cl. 235—61.8)



9. In a record controlled accounting system adapted to record on an output medium the computed chargeable time of customer uses of facilities in response to the sensing of an input record containing data pertaining to (1) the time each use of said facilities commenced, (2) the time each use of said facilities terminated, (3) the identification of the particular facility utilized during each use, and (4) the identification of the customer for each use, said system including a computer and a plurality of registers with each register being individually associated with a different facility, means for sensing data on an input record, switching means operable in response to said sensing means sensing data pertaining to the time the use of a certain facility was terminated and to the identification of said certain facility to enter the data pertaining to the time said use was terminated into the register associated with said certain facility, additional switching means operable in response to said sensing means sensing data pertaining to the time the use of said certain facility commenced and to the identification of said certain facility to enter the data pertaining to the time said use commenced into said computer and to enter the data currently stored in said last-named register into said computer, said computer including means for subtracting the time the use of said certain facility commenced from the time the use of said certain facility was terminated to obtain the duration of the use of said certain facility, further means in said computer for subtracting a previously fixed amount of time from the length of time said certain facility was used to obtain the chargeable time for which the customer that utilized said certain facility is to be billed, means operable under control of said computer for entering said chargeable time into said last-named register, additional means operable in response to said sensing means sensing data pertaining to the identification of the cus-

may pass substantially unobstructedly downwardly past the gate; and cooperating means on the gate and the

2,865,574

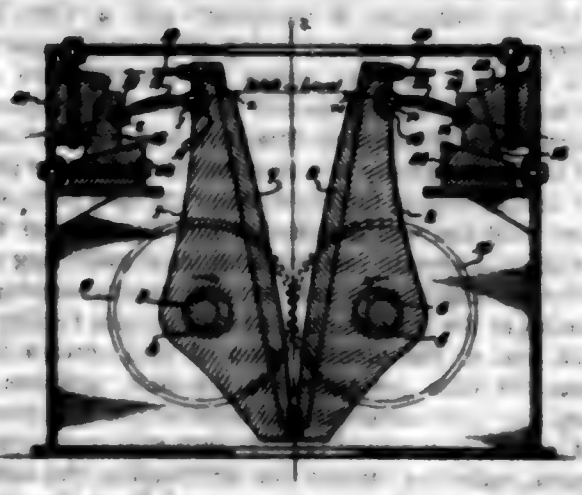
CORE HOLDER FOR WINDING MACHINES

tomer that utilized said certain facility and pertaining to the identification of said certain facility to record on an output medium both the chargeable time data entered in said last-named register and the data comprising the identification of said customer.

2,865,569
RADIATOR ENCLOSURE
Nathan Levenberg, Lynbrook, N. Y.
Application December 1, 1953, Serial No. 395,497
4 Claims. (Cl. 237—79)

1. A foldable knock-down radiator enclosure comprising a front panel, side panels, a back plate, and a top, said top being made of sheet metal and having edges which extend downward and inward to provide a comparatively rigid top of substantial apparent thickness, said back plate being hinged at its top edge to the rear edge of the top, the height of the back plate being approximately equal to but no greater than the width of the top, to afford folding for packaging and storage, said back plate having a height only a fraction of the height of the panels.

2,865,570
METHODS AND MEANS IMPROVING CONVEYING AND SIZE SEGREGATION DURING CRUSHING
Earle M. Nutting, Los Angeles, Calif.
Application June 29, 1953, Serial No. 364,689
14 Claims. (Cl. 241—24)



12. In a crusher of the class described, the combination comprising a frame; a pair of opposed similar jaws; means connecting said jaws near their upper ends to the frame for swinging and vertically reciprocating movements, the said jaws being arranged in spaced relationship to provide a top inlet and a bottom outlet therebetween, and means connected to said jaws whereby when mixed sizes of fragmentary and friable material are introduced into said inlet the said material will be crushed and in part conveyed downwardly between said jaws and through said outlet during a cycle of their operation and whereby (*a*) during the first part of the cycle the facing profiles of the jaws will move downwardly from their highest to their mid-height positions and at the same time move toward each other through horizontal distances which are minimal at the inlet and maximum at the outlet, (*b*) during the second part of the cycle the said profiles will move downwardly from their mid-height positions to their lowest positions and at the same time move away from each other to effect pressure release from the material graduated in extent upwardly from the outlet, the pressure release at the outlet being rapid and wide and being less rapid and less wide at the inlet, (*c*) during the third part of the cycle the said profiles will move from their lowest to about mid-height positions and at the same time move away from each other except at their upper ends, the material-retarding effect of the jaws being substantially nil at the outlet, and (*d*) during the fourth part of the cycle the profiles will move from their mid-height positions to their highest positions and at the same time move inwardly except at their upper ends, the said means including the inwardly convex curvatures of the inner faces of the jaws, and mechanism connected to the jaws near their lower portions for causing points on the jaw profiles at the level of said mechanism to move in substantially oval and synchronous paths at substantially the same speed.

2,865,571
ICE CRUSHER
Gilbert D. Ferdon, Fox Point, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Application May 16, 1957, Serial No. 659,666
6 Claims. (Cl. 241—157)

6. In an ice crusher of the type comprising a substantially hopper shaped housing, a rotatable arbor extending across the interior of the housing, and a plurality of axially spaced apart claws secured on said arbor for rotation therewith: a plurality of parallel, spaced apart fins fixed in the housing substantially normal to the axis of the arbor, having edge portions spaced below the axis of the arbor and to one side thereof but closely adjacent to the orbits of the tips of the claws and cooperable with the claws in defining a first ice crushing zone in which ice is crushed to coarse particles; a gate having a plurality of blades disposed parallel to one another in laterally spaced apart relationship; means mounting said gate in the housing, below the arbor, for movement in opposite directions between defined positions, at one of which the blades are close to the fins and adjacent to the claw tips, so that the blades cooperate with the fins and the claws to provide a second crushing zone in which coarse ice particles issuing from said first ice crushing zone are reduced in size, and at the other of which positions all parts of the blades are spaced a substantial distance from said fins so that coarse ice particles from said first ice crushing zone

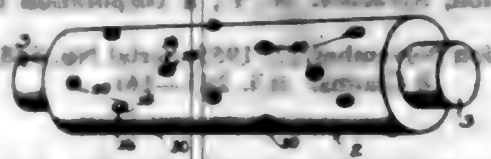
bear against said circumferential face within any one of said depressions, and means for driving said body

held by said spool holding means; and means for mount-

individual character signals from (1) one of said input

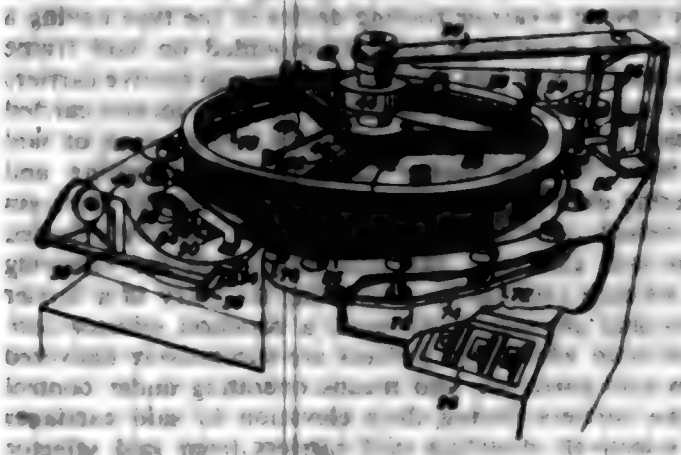
may pass substantially unobstructedly downwardly past the gate; and cooperating means on the gate and the housing for releasably holding the gate in either of said positions.

2,865,572
COMMINUTING CYLINDER WITH INDIVIDUAL MOUNTED CUTTING AND SHEARING TEETH
William H. Lamert, Skokie, Ill., assignor to Chicago Pump Company, a corporation of Delaware
Application March 29, 1954, Serial No. 419,277
2 Claims. (Cl. 241—294)



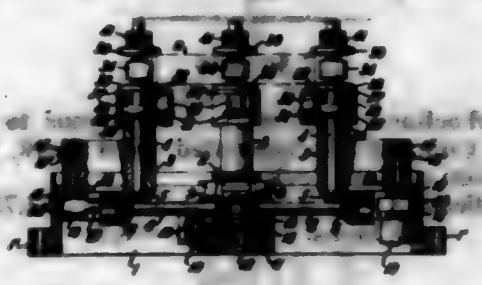
2. In combination with a cylinder having a cylindrical recess in its peripheral surface, a tooth secured in said recess, said tooth having a base portion with its upper face flush with the peripheral surface of said cylinder, a cutting edge projecting upwardly from said base portion beyond the peripheral surface of said cylinder, a pair of shearing edges projecting upwardly from said base portion on opposite sides of said cutting edge to a height less than the height of said cutting edge, said cutting and shearing edges being aligned in a vertical plane extending angularly relative to the longitudinal axis of said cylinder.

2,865,573
COIL WINDER
Stephen V. Turura and Paul E. Oberg, Minneapolis, Minn., assignors to Sperry Rand Corporation, a corporation of Delaware
Application October 6, 1954, Serial No. 460,536
12 Claims. (Cl. 242—4)



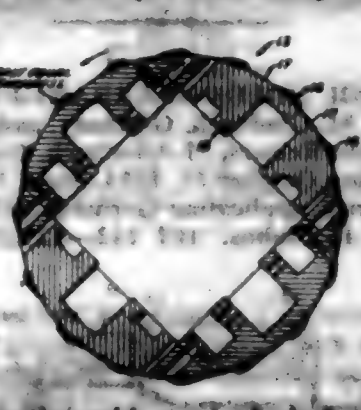
1. A machine for winding strand material around a closed core comprising a shuttle rotatable through a core arranged to have one end of a length of strand material greater than the diameter of the shuttle secured thereto, means on said shuttle to which the other end of the length of strand material is fixedly attached to form a fixed point of departure of the length of strand material from said shuttle during the rotation of the latter, and means separate from said shuttle around a portion of which loops are formed during the rotation of said shuttle in the entire portion of the length of strand material extending from said fixed point of departure to said core and for maintaining said loops in untangled condition as the latter are tightened around said core by rotation of said shuttle.

2,866,574
COKE HOLDER FOR WINDING MACHINES
Werner Blumenstihl, Zurich, Switzerland, assignor to Micafil A.-G., Zurich, Switzerland
Application January 11, 1955, Serial No. 481,290
Claims priority, application Switzerland January 12, 1954
10 Claims. (Cl. 242—4)



1. A holder for simultaneously supporting and effecting rotation of ring bodies to be wound, said holder comprising a base having a vertical axis, four vertical slide blocks on said base and spaced uniformly about said vertical axis, each said slide block having a vertical bore therein, a first vertical shaft individual to and rotatably mounted in each said block bore, a first feed roller secured to each said first shaft, a second vertical shaft individual to and supported by each said slide block, said second shafts being also uniformly spaced about said vertical axis and being located intermediate the latter and said first shafts, resilient material on each of said second shafts to constitute a second feed roller and which is spaced vertically from said first feed roller on the same slide block, drive gearing interconnecting each of said first shafts with the said second shaft correlated therewith, means for driving each of said first shafts and hence also said second shafts and said first and second feed rollers, and means for effecting simultaneous equal and radial adjustments of said slide blocks in the same sense with respect to said vertical axis thereby to position all of said first rollers and all of said second rollers at the same radial distances respectively from said vertical axis in any given position of radial adjustment.

2,865,575
STRIP COILING MANDREL
Alfred H. Werner, Youngstown, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Application January 11, 1954, Serial No. 538,574
3 Claims. (Cl. 242—78.4)



3. The combination with a set of pinch rolls adapted to propel strip and a set of retractable wrapper rolls on the exit side of said pinch rolls for guiding the strip, of a coiling mandrel for the strip comprising a rotatable cylindrical body at least partially surrounded by said wrapper rolls, said body having a substantially continuous outer circumferential face, a plurality of ribs removably fixed to said body and spaced around said circumferential face leaving a series of depressions therebetween for frictionally holding strip on said body, each of said ribs extending the length of said body parallel to the axis of rotation thereof and being of a minimum height at least equal to the strip thickness enabling the leading end of the strip to remain substantially unbent and to

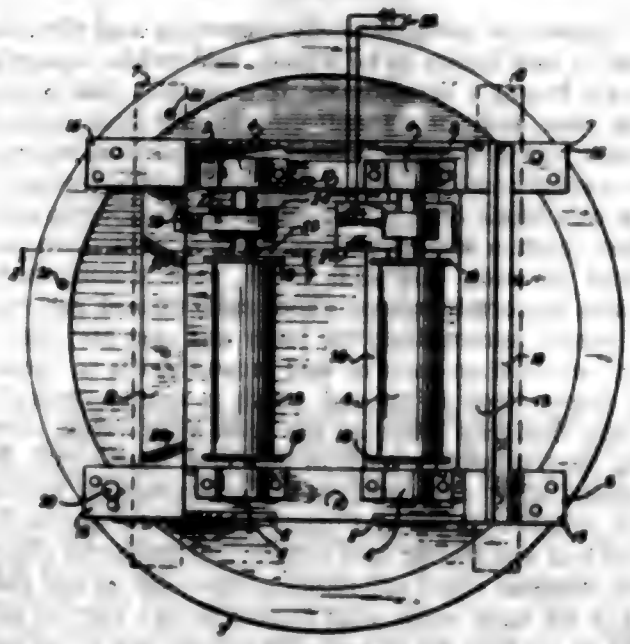
resultant thrust line of said first propulsion means always

points to said gondola, at least some of said lines being

be crushed and in part conveyed downwardly between space a substantial distance from said ice crushing zone coarse ice particles from said first ice crushing zone

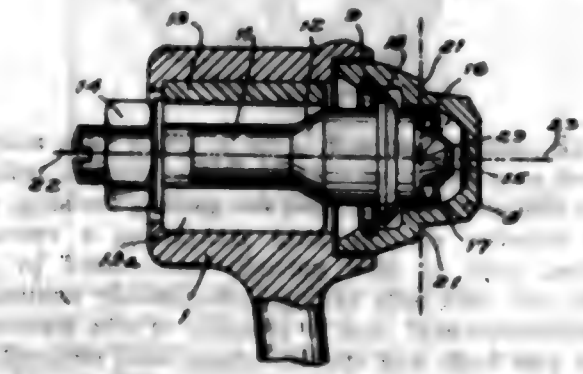
bear against said circumferential face within any one of said depressions, and means for driving said body faster than the speed at which said pinch rolls propel the strip and enabling slippage between the leading end of the strip and said body to position the leading end within a depression and thereafter tensioning the strip.

2,865,576
REEL STAND
Horst L. Woellner, Buffalo, N. Y., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application May 9, 1956, Serial No. 583,730
5 Claims. (Cl. 242—78.7)



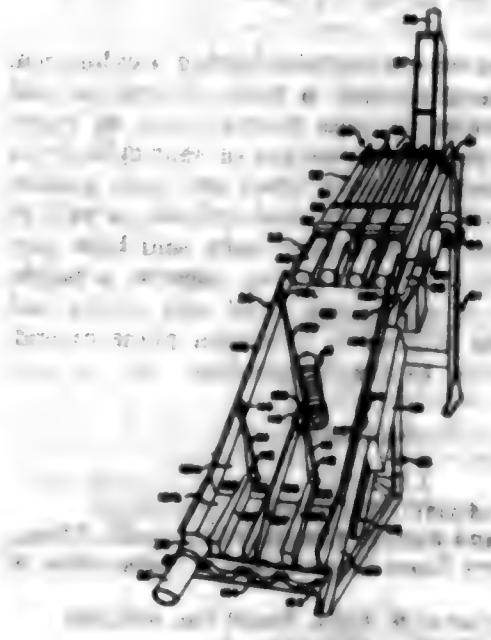
1. A reel stand comprising a circular support track adapted to be secured to the edge of a circular hole in a floor, a frame, having a central depressed portion, slidably supported on the circular track so that the depressed portion is located within the hole, a pair of rollers, and means for rotatably supporting the rollers in spaced parallel relation on the depressed portion of the frame for rotatably supporting a reel at substantially floor level thereon.

2,865,577
SPOOL HOLDING ARRANGEMENT
Stefan Fürst, M.-Gladbach, Germany, assignor to Dr. Ing. Walter Reinert, M.-Gladbach, Germany
Application October 29, 1954, Serial No. 465,703
Claims priority, application Germany October 29, 1953
15 Claims. (Cl. 242—129.51)



4. In a winding machine, a spool holding arrangement, comprising in combination, a supporting means having a first axis; a spool holding means having a second axis and an outer surface including an annular shoulder having a guide face located in a plane perpendicular to said second axis and adapted to engage one end face of a spool held by said spool holding means; and means for mounting said spool holding means on said supporting means rotatable about said second axis and pivotable within predetermined limits in a plurality of directions transverse to said second axis, the arrangement being such that said first and second axes intersect at a point located in said plane of said guide face during pivotal movement of said spool holding means.

2,865,578
CARRIER ROUTING DEVICES FOR PNEUMATIC CONVEYOR SYSTEMS
Carroll A. Hennessy, Syracuse, N. Y., assignor to Lamson Corporation, Syracuse, N. Y., a corporation of New York
Application November 23, 1955, Serial No. 548,641
8 Claims. (Cl. 243—16)



1. In a pneumatic conveyor system having a plurality of pneumatic conveyor lines entering and a plurality of lines leaving a carrier routing device of the type having a frame and a carriage movably mounted on said frame for each entering line normally adapted to receive carriers from said line, the combination of stop means carried by said frame adjacent the delivery end of each of said carriages, spacing means for separately elevating and lowering each carriage, whereby carriers in said carriages are raised over said stop means and thereby released from said carriages, stop means adjacent the receiving end of each carriage for preventing the entry of a carrier when said carriage is elevated, a common selector conveyor onto which said carriers are successively delivered from said carriages, and means operating under control of the carriers during their elevation in said carriages for selectively directing said carriers from said selector conveyor into said lines leaving said device as determined by said carriers.

2,865,579
JET PROPULSION SYSTEM FOR MAINTAINING AIRCRAFT IN A VERTICAL ATTITUDE
Georges Caillette, Neuilly-sur-Seine, France
Application January 23, 1956, Serial No. 560,840
Claims priority, application France January 28, 1955
2 Claims. (Cl. 244—52)

1. In an aerodyne having a structure such that its center of pressure lies at a predetermined distance behind the center of gravity of the aerodyne and on a longitudinal axis thereof passing through said center of gravity, first jet propulsion means developing a thrust force and positioned on said aerodyne in such a manner that the

resultant thrust line of said first propulsion means always coincides with said axis, second jet propulsion means developing a thrust force the resultant thrust line of which is angularly adjustable with respect to said axis and is always maintained vertical, said second propulsion means being positioned on said aerodyne in such a manner that said resultant thrust line of said second propulsion means either coincides with said axis when the latter is vertical

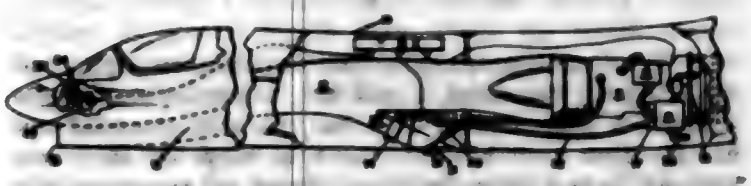
or intersects said axis at a point located at a predetermined distance ahead of said center of gravity when said axis forms an angle with the vertical, and means for varying said thrust force of the first propulsion means in accordance with the magnitude of said angle.

2,865,590

OIL COOLING AND DRAG REDUCING SYSTEM

Edmund V. Marshall, Dallas, Tex., assignor to Chance Vought Aircraft, Incorporated, Dallas, Tex., a corporation of Delaware

Application June 25, 1956, Serial No. 593,654
14 Claims. (Cl. 244—57)



3. In combination with a vehicle having an air consuming engine, fuel and oil supply lines connected to said engine, and an engine air supply duct in said vehicle for receiving ram air through the inlet thereof having by-pass air duct means for unloading said air supply duct, an oil cooling and drag reducing system comprising, a fuel-oil heat exchanger connected in the fuel and oil lines for transferring heat from the oil to the fuel, fuel temperature sensing means in the fuel line responsive to the heat transferred to the fuel, said by-pass air duct means having air-oil heat exchanger means for transferring heat from the oil to the air, said by-pass air duct means having valve means for metering air through said air-oil heat exchanger means, and pressure sensing means, said pressure sensing means being a Mach meter means, said valve means being responsive to said Mach meter means for reducing the aerodynamic drag caused by the ram air on the air supply duct inlet to provide an efficient oil cooling and drag reducing system.

2,865,591

BALLOON GONDOLA ASSEMBLY

Harold E. Froehlich, New Brighton, Minn., assignor to General Mills, Inc., a corporation of Delaware

Application April 16, 1956, Serial No. 578,536
8 Claims. (Cl. 244—137)

1. A balloon gondola assembly for high altitude manned flight comprising a rigid body member having first means for supporting a passenger thereon in selective positions, means on said gondola for attaching said body member to a lifting cell, said means for attaching including a plurality of suspension lines attached at spaced points to said gondola, at least some of said lines being resilient for changing the angular orientation between

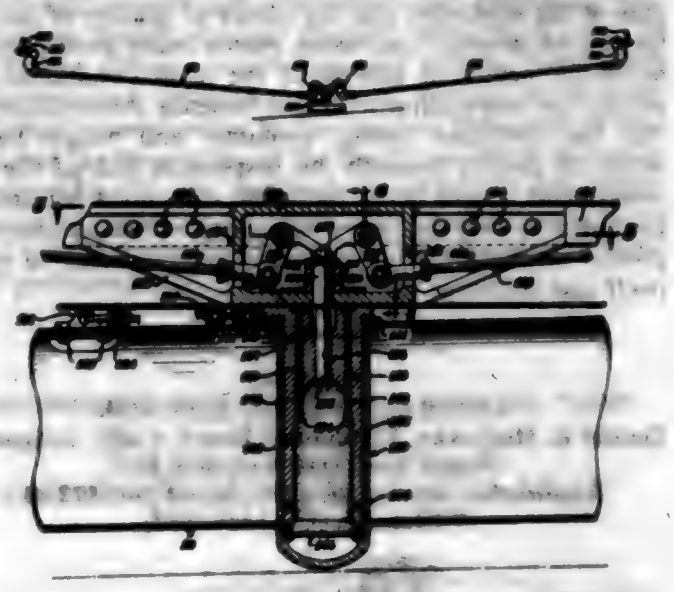
said body member and cell in a vertical plane in response to movement of a passenger between selective positions.

2,865,592

MEANS FOR RELEASABLY MOUNTING STORES ON AIRCRAFT

Martin A. Price, Redondo Beach, Calif., assignor to Ryan Aeronautical Corporation, Los Angeles, Calif., a corporation

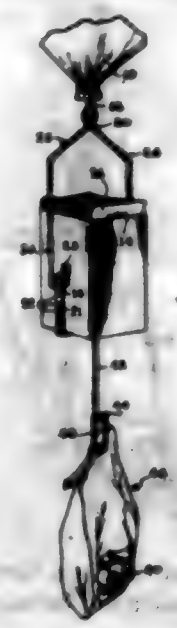
Application October 26, 1954, Serial No. 464,748
8 Claims. (Cl. 244—137)



8. A combination for mounting a jettisonable store on an aircraft and for releasing the store with ejective force, comprising: attachment structure carried by the store; attachment mechanism carried by the aircraft away from the airstream for releasable engagement with said attachment structure to support the store on the aircraft; means to create fluid pressure with an abrupt pressure rise; expansible means on the store responsive to said fluid pressure for ejecting the store, said expansible means being structurally separate from the aircraft for ejection as a whole with said store, said expansible means comprising two telescoped members, one of which abuts the aircraft; means to limit the movement of said one member relative to the store to insure that said one member is ejected from the aircraft with the store; and means on the aircraft to actuate said attachment mechanism on the aircraft for release of the store in response to said fluid pressure.

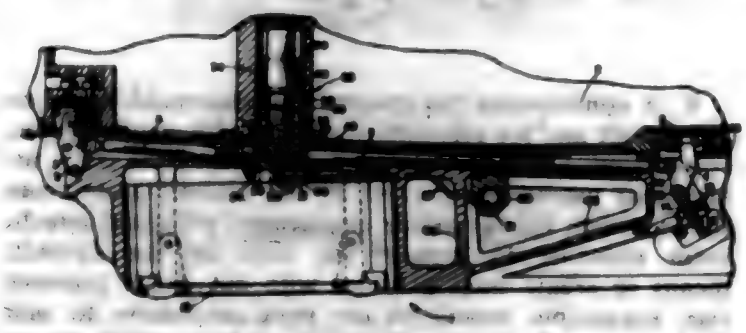
an annular mass of a resilient material the outer surface legs located at the respective transverse end portions of

2,865,583
BALLOON MESSAGE RELEASE MECHANISM
James A. Winter, Arlington, Mass., assignor to General Mills, Inc., a corporation of Delaware
Application September 6, 1955, Serial No. 533,714
3 Claims. (Cl. 244—137)



2. A mechanism for dropping articles from a balloon in flight comprising an open container for carrying the articles and for discharging the articles when the container is inverted, a suspension member adapted to be connected to a balloon and to be pivotally connected on an axis to the sides of the container, a series of vertically spaced suspension points along the sides of the container each adapted for connection to the suspension member to permit adjustment of the distance between the pivotal axis of the container and the center of gravity of the container, the pivotal suspension points being positioned beneath the center of gravity of the loaded container, and means for suspending a weight beneath the container so that the combined loaded container and weight have a center of gravity beneath the suspension axis of the container, said weight being reducible suspended beneath the container so that the center of gravity will move above the pivotal suspension point to permit the container to upend itself and discharge the contents.

2,865,584
AIRCRAFT PYLON EJECTOR
Daniel E. Holloway, Manhattan Beach, Calif., assignor to North American Aviation, Inc.
Application March 19, 1956, Serial No. 572,411
7 Claims. (Cl. 244—137)

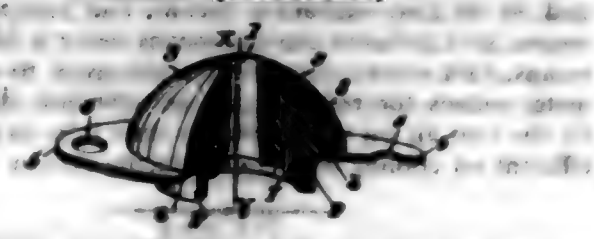


1. In combination with an aircraft having recessed attachment sockets and a chamber formed therein, a store supporting pylon device for suspension and ejection from said aircraft comprising a duality of attaching hook means adapted for releasable attachment to said attachment sockets; a tie rod means releasably interconnecting said hook means for securing the same in attaching relationship to said aircraft; said tie rod including a weakened portion adapted to release said attaching hook means upon rupture of said weakened portion; a cylinder concentrically mounted about said tie rod including the weakened portion thereof; pistons integral with said tie rod located one near each end of said weakened portion and reciprocally mounted in said cylinder and forming therewith an expansible chamber; and explosion chamber means communicating with said cylinder for pressurizing said expansible chamber and rupturing said weakened portion whereby said attaching hook means may be released from the attachment sockets; a piston means integral with and extending from said pylon device and reciprocally inserted into said aircraft chamber adapted for propelling and guiding said pylon device away from said aircraft substantially along a predetermined straight line path upon the application of pressure to the piston means; said piston means communicating with said concentric chamber and being operable subsequent to movement of said pistons.

2,865,585
UNIVERSAL JACKING SUPPORT FOR ENGINES AND TRANSMISSIONS
Thomas W. Beyer and Jack E. Harvey, San Rafael, Calif.
Application March 15, 1954, Serial No. 416,274
5 Claims. (Cl. 248—3)

1. In an adjustable engine and transmission support of the character described, a jack bar, a bracket sleeve telescoped on each end of said bar, an arm extended upwardly from each bracket sleeve, a flange on each arm adapted to rest upon the usual flange of an automobile frame so as to hang from said frame, and a jack screw threadedly extended through the intermediate portion of the bar between said bracket sleeves and engagable with the engine of said automobile, and a base on each arm longitudinally slidably engaging said bracket sleeve.

2,865,586
ANTI-VIBRATION RESILIENT SUPPORTS
Jean Félix Poulsen, Paris, France, assignor to the company "Luxembourgeoise de Brevets et de Participations," Luxembourg, a society of the Grand Duchy of Luxembourg
Application November 15, 1954, Serial No. 468,929
2 Claims. (Cl. 248—18)



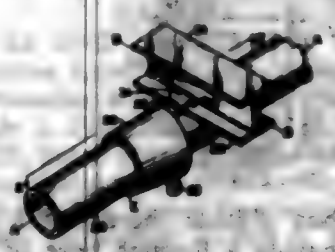
1. An anti-vibration elastic support device which comprises, in combination, a rigid part in the form of a body of revolution, a rigid annular part in the form of a body of revolution coaxial with the first mentioned one and including a flat end wall transverse to the common axis of said parts and located close to one end of said first mentioned part and a tubular inner wall, of a diameter greater than that of said end of said first mentioned part, extending axially from the inner periphery of said flat end wall in a direction opposed to that in which said first mentioned part is extending from said end thereof, and

end for vertical movement and lateral swinging whereby said arm may be lifted to lift a package out of a

let means for normally closing said outlet operable by

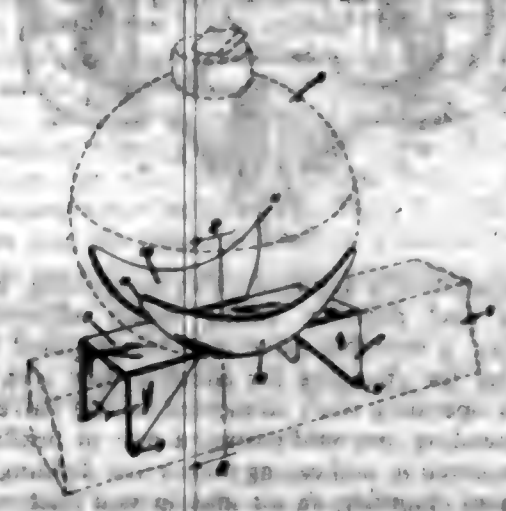
an annular mass of a resilient material the outer surface of which has the general shape of a dome with a stem portion, the inner wall of said annular mass adhering to the outer wall of said first mentioned part and the base of the dome and stem of said resilient mass adhering respectively to said end flat wall and said tubular inner wall of said second mentioned part, said resilient mass being provided with an annular groove having substantially cylindrical walls coaxial with said rigid parts, said groove surrounding said first mentioned part and extending from said end thereof to a substantial distance so that any plane at right angles to the axis of said parts and intersecting both of said parts also intersects said groove, to permit resilient displacements of said parts with respect to each other in directions transverse to said axis.

2,865,587
DEVICE FOR CLAMPING A PIPE TO A STRUCTURAL MEMBER
Errol P. D'Azzo, New York, N. Y.
Application July 13, 1956, Serial No. 597,620
6 Claims. (Cl. 248—72)



1. A clamping device comprising a cylindrical pipe, a clamping member encircling said pipe, said clamping member having a tapered bore, said bore having a cross-section of greater length than width, the width of the bore being substantially equal to the width of the pipe, a structural member resting on said pipe, and a clip having a curved body and a jaw, said body being disposed in said bore between said clamping member and said pipe, said jaw bearing on the structural member, said clamping member having tightening means whereby the structural member is held by the clip in a fixed position with respect to said pipe.

2,865,588
FLARE POT HOLDER
Bruce L. McCartney, Monroe, La., assignor to Percy W. Parker, Monroe, La.
Application February 1, 1954, Serial No. 407,553
1 Claim. (Cl. 248—226)

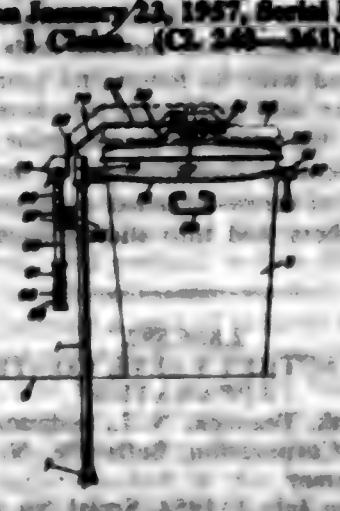


A flare pot holder comprising: an elongated substantially flat plate adapted to rest firmly upon an equally flat upper edge portion of a barricade rail, the median portion of said plate serving to seat a central bottom portion of a conventional spherical flare pot thereon, longitudinally spaced pairs of downwardly convergent resilient legs located at the respective transverse end portions of the plate and depending from said plate for receiving and frictionally gripping said rail therebetween, and upwardly and outwardly inclined flanges formed integrally with said longitudinal edges of said plate and situated opposite to each other between said pairs of legs and projecting well beyond the median portions of said longitudinal edges and conformingly shaped and adapted to embracingly receive the flare pot therebetween for retaining said flare pot in position and supported in part on the median portion of the plate, said legs being substantially triangular in elevation and having their apical ends disposed downwardly and flared outwardly to facilitate attachment of the legs to said barricade rail, and said flanges being concavo-convex and also substantially crescent-shaped in side elevation.

2,865,589
AWNING RAFTER SUPPORT
Errol P. D'Azzo, Brooklyn, N. Y.
Application July 5, 1957, Serial No. 670,139
15 Claims. (Cl. 248—284)

9. A rafter support comprising an elongated molding having a turned curved ledge 180° of arc, and an adapter clamp member formed of flexible material and disposed on said ledge, said member having a split cylindrical section with two straight extensions, said extensions having curved flanges formed thereon respectively, one of said flanges having a depending wall portion terminating in an enlarged cylindrical portion having an external curvature corresponding to the internal curvature of said ledge and the inner sides of the flanges having a curvature corresponding to the external curvature of said ledge, the angular extent of the inner sides of said flanges being about ninety degrees of arc so that said member is angularly positionable on said ledge.

2,865,590
HOLDDOWN DEVICES FOR GARBAGE CANS AND LIDS
Robert F. Greenwell, Alton, Ill.
Application January 23, 1957, Serial No. 635,737
1 Claim. (Cl. 248—361)



A hold down device for a garbage can comprising a post adapted to be driven into ground alongside a garbage can, a hold down arm adapted to extend horizontally across a lid of a garbage can, means on one end of said arm attachable to a handle on a garbage can lid, means attached to said post and mounting said arm at its other

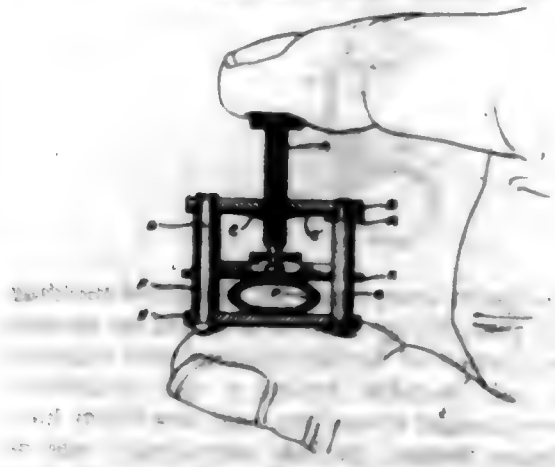
respective exhaust chambers with said air inlet in said

movable in said casing, a valve head on one end of said

portion adapted to release said attaching hook means mentioned part is extending from said end thereof, and

end for vertical movement and lateral swinging whereby said arm may be lifted to lift a garbage can lid off a garbage can and said arm swung laterally to swing such a lid to one side of the garbage can, said second named means comprising a vertical tubular guide sleeve secured to said post at the rear of and below the top of the post, a vertical plunger slidably extended through said guide above and below the same and rotatable therein, said arm being attached to said plunger above said guide, and spring means on said plunger below said guide, said spring means urging said plunger downwardly to hold said arm down for holding a garbage can lid down on a garbage can, said arm extending upwardly from said plunger and forwardly across the top of the post for rotation through an angle of 360° without interfering with said post.

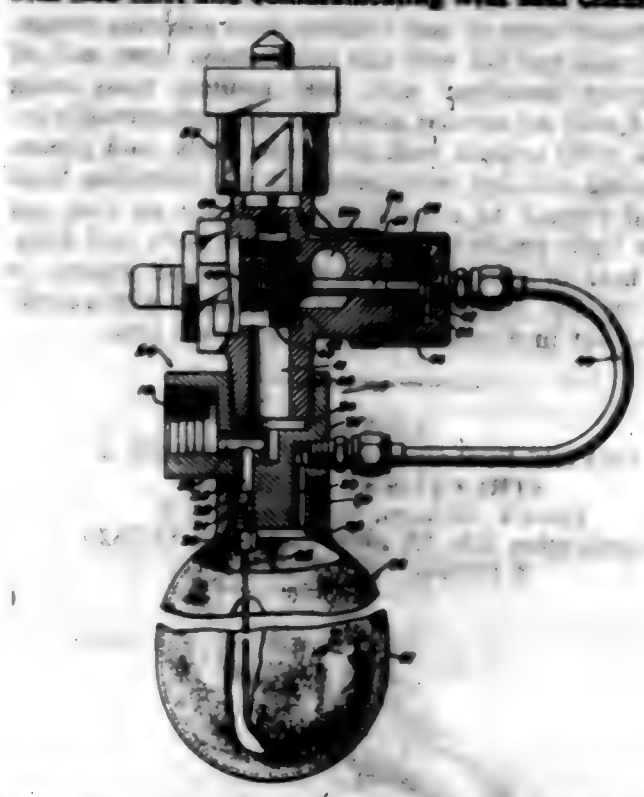
2,865,391
HOSE-CLAMP
Alida Viola Hollinshead, Toronto, Ontario, Canada
Application February 23, 1956, Serial No. 567,224
1 Claim. (Cl. 251—8)



A hose clamp comprising a top plate, side supports attached to said top plate to form a rigid U-shaped member, a base plate pivotally mounted at one end on one of said side supports, means for releasably engaging the free end of said base plate with the other side support comprising a countersunk slot adjacent the free end of the base plate and a chamfered head on the side support in register with said countersunk slot for snap engagement therewith, a pair of spring nut members held in position on the underside of said top plate by said side supports and having their inner ends free, a clamping member slidably mounted on said side supports for movement between said base plate and said top plate, a threaded screw member which passes freely through said top plate in threaded engagement with the free ends of said spring nut members, and with its lower end journalled in said clamping member, said spring nut members being flexible away from said top plate in the direction of movement of said screw member therethrough to move said screw member out of its screw-threaded engagement with said spring nut members and into sliding engagement therewith.

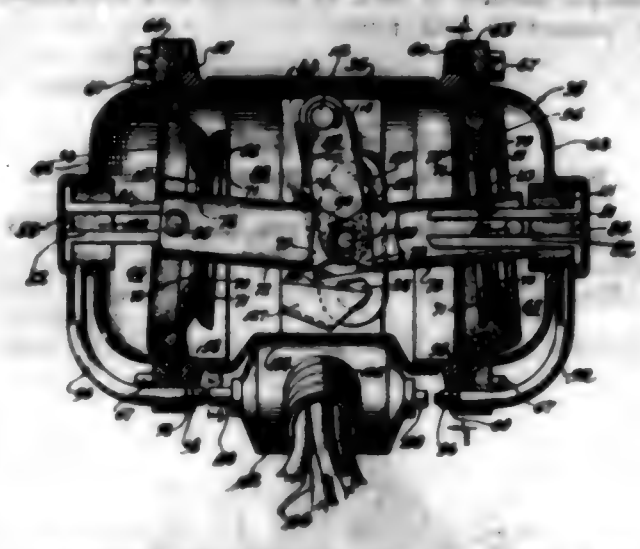
2,865,592
DELAYED ACTION VALVE CONTROLLING APPARATUS
George I. Schrank, Teaneck, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey
Application July 2, 1954, Serial No. 441,821
8 Claims. (Cl. 251—25)

1. Apparatus for accumulating a predetermined volume of gaseous carbon dioxide at a desired pressure within a predetermined interval of time and then releasing the same, said apparatus comprising a chamber having a predetermined volume, a carbon dioxide inlet, and an outlet means for normally closing said outlet operable by pressure within said chamber to unclose said outlet; and a metering tube connected in fluid flow communication with said inlet and communicating with said chamber for



introducing carbon dioxide therein at a predetermined rate, said tube having a through bore of a diameter of between about .02 and about .03 inch and having a length at least about 100 times the diameter of its bore.

2,865,593
PNEUMATICALLY OPERATED VALVE
Kurt Staiger, Indianapolis, Ind., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application April 29, 1955, Serial No. 504,752
12 Claims. (Cl. 251—30)



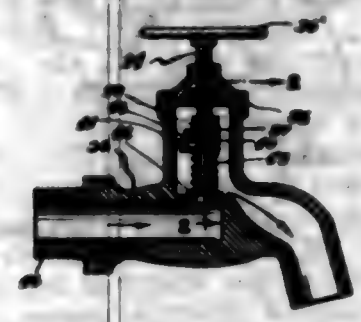
1. A pneumatically actuated valve comprising, in combination, a duct member, casing means adjacent said duct member, a movable valve member mounted in said duct member for changing the effective flow area therethrough, an operating shaft connected to said valve member and extending into said casing, a pair of flexible diaphragms mounted in said casing means and defining therewith a plenum chamber, an air inlet in said duct member on the upstream side of said valve member, means connecting said air inlet with said plenum chamber, said casing means including means defining with said respective diaphragms exhaust chambers on the sides of the diaphragms opposite said plenum chamber, means providing continuously for limited communication of said

normal operating pressure into increased sealing contact

disks, a plurality of turbine blade assemblies radially

respective exhaust chambers with said air inlet in said duct, a pair of valve seats communicating with said respective exhaust chambers, means defining a pair of exhaust passageways communicating with said respective exhaust chambers through said respective valve seats, said diaphragms including valve closure means for engagement with said respective valve seats as an incident to predetermined displacement of said diaphragms in opposite directions within said casing to block the outflow of air through said respective exhaust passageways, the effective flow areas of said exhaust passageways being limited with respect to the flow areas of said means establishing communication between the respective exhaust chambers and said air inlet to limit the maximum relative pressure drop in said exhaust chambers with respect to the pressure in said duct member, means for opening and closing said exhaust passageways alternately, and linkage means connecting said diaphragms to said shaft to transmit reverse movements of said diaphragms to said shaft as rotary movement effective for shifting said valve member in said duct member.

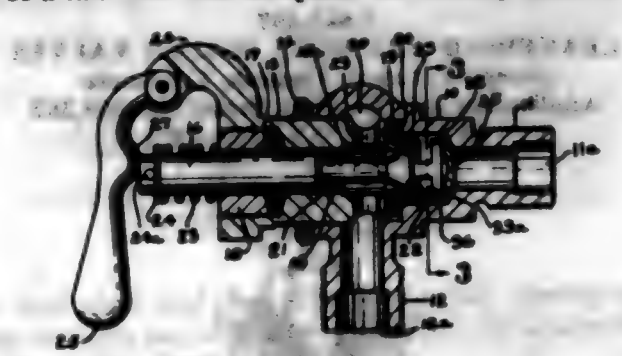
2,865,594
MANUAL AND AUTOMATIC VALVES
Robert N. Whitfree, Lynchburg, Va., assignor to Kel-Win Manufacturing Company, Inc.
Application July 1, 1953, Serial No. 365,487, now Patent No. 2,745,627, dated May 15, 1956, which is a division of application Serial No. 165,284, May 31, 1950, now Patent No. 2,658,716, dated November 10, 1953. Divided and this application March 6, 1956, Serial No. 569,707
2 Claims. (Cl. 251—75)



1. A valve for fluid systems comprising a casing, an inlet and an outlet in the casing, a valve seat in the casing, a valve stem having a closure on one end and a projection on the other end, said valve stem being mounted in the casing, a spindle with a handle at one end for operating the valve and provided on the outside of the casing, an intermediate member in the casing and connected to the projection and to the other end of the spindle with lost motion connections at the spindle connection and at the projection connection, a spring mounted between the closure and the intermediate member, and a trigger element pivotally mounted in the casing and projecting into the intermediate member to cooperate and contact the projection on the valve stem when the valve is in the open position and when the handle is turned to close the closure onto its seat, the trigger element is restrained by the intermediate member against pivotal movement until just before closing when the trigger element is released for rotation to permit the spring to automatically cause seating of the closure on the seat due to spring action and lost motion between the valve stem and the intermediate member.

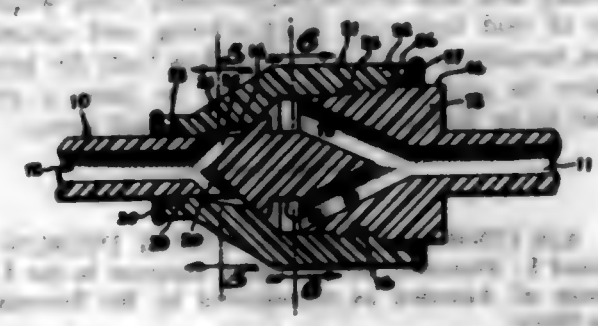
2,865,595
SELF-CLOSING ANTI-KNOCK VALVE
Edward H. Barlow, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application November 17, 1953, Serial No. 392,551
1 Claim. (Cl. 251—118)

In a valve construction, a valve casing, a stationary valve seat mounted in said casing, a valve stem axially movable in said casing, a valve head on one end of said stem having a conical surface movable toward and away from the valve seat for closing and opening the valve, the valve casing having an enlarged bore communicating with a smaller inlet bore with a shoulder therebetween, said larger bore providing a space into which the valve head moves in opening the valve against the direction of flow of fluid, spring means for urging the valve head to closed position, a flow deflector cap of polygonal cross-section and of a size such that its apices are slidably fitted in said



enlarged bore and having an open end which rests against the valve seat and a closed end which is adjacent said shoulder to direct the incoming flow of fluid between said closed end and shoulder and around the sides of the cap, the sides of the cap having apertures intermediate its ends to direct the flow of fluid therethrough in a lateral direction, such flow being directed against the conical surface of said valve head when the latter is in open position and during a part of its closing movement, and serving to counteract the quick closing effect of the spring means.

2,865,596
PLASTIC VALVE
Anthony Bernard Mounig, Cincinnati, Ohio, assignor to The Lunkenheimer Company, Cincinnati, Ohio, a corporation of Ohio
Application June 23, 1954, Serial No. 438,646
3 Claims. (Cl. 251—175)



1. A valve comprising an axial valve body constituted by a unitary synthetic resin molding, said axial valve body including a tubular inlet conduit adapted for connection to an inlet line, a tubular outlet conduit adapted for connection to an outlet line, a barrel of greater diameter than the inlet conduit and adjacent thereto, a substantially conical sealing flange of lesser diameter than the barrel, said conical sealing flange adjacent to and tapering toward said outlet conduit and spaced from said barrel to provide a neck of reduced diameter between them, said axial valve body being provided with passageways through said barrel connecting the inlet conduit to the space intermediate the barrel and sealing flange, said axial valve body being provided with passageways connecting the outlet conduit to the exterior of the body on the outlet side of the sealing flange, and a multi-diameter, plastic sleeve having a portion of greater diameter screw threaded over the barrel, and a portion of lesser diameter slidably engaged over the outlet conduit, and a tapered wall between said portion of greater diameter and said portion of lesser diameter, said sealing flange being sufficiently flexible so as to deform under

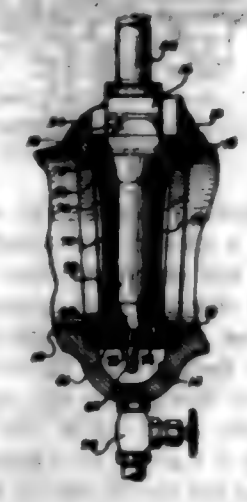
2,865,600
TENSIONING DEVICE FOR CABLES

ber, said plug being of such greater transverse dimension than the slow slot and the angle irons which define said

determined volume, a carbon dioxide inlet, and an out- diaphragm opposite said pressure chamber, means providing continuously for limited communication of said

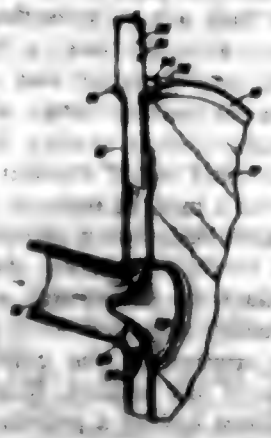
normal operating pressure into increased sealing contact with said tapered wall when said valve is closed, said wall having greater rigidity than the conical sealing flange and being sufficiently rigid to provide a seating surface for the flange, said wall adapted, on translation of the sleeve by rotation, to sealingly engage with and disengage from the sealing flange, thereby closing and opening the valve.

2,865,597
LEAKPROOF PRESSURE SEALED VALVES
Joseph E. Lucas, Caracas, Venezuela
Application July 21, 1953, Serial No. 369,382
14 Claims. (Cl. 251—187)



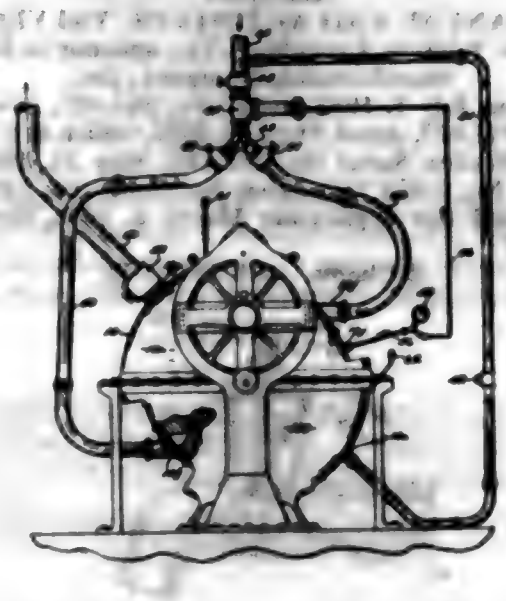
1. In a valve, a valve closure member comprising a substantially rigid generally wedge-shaped hollow body having converging planar sides; a pair of valve discs; means maintaining the peripheries of said discs in spaced substantially concentric relation to peripheral portions of said sides of said hollow body to provide a continuous annular space therebetween in each of said sides; a flowable elastic sealing material confined in said body and extending into said spaces but normally lying within the edges of said body and discs defining said spaces and means movable relative to said hollow body for applying pressure to said confined material to cause a portion thereof to be displaced outwardly into said spaces.

2,865,598
AIR COOLED TURBINE WHEEL DESIGN
Merland L. Monsson, Bovey, Ohio, assignor to the United States of America as represented by the Secretary of the Navy
Application March 3, 1954, Serial No. 413,977
7 Claims. (Cl. 253—39.15)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A turbine wheel assembly comprising a hollow shaft, a pair of spaced disks mounted on said shaft, communicating apertures in said shaft leading from said hollow portion of said shaft to the space between said spaced disks, a plurality of turbine blade assemblies radially mounted in circumferentially spaced relationship between said disks, each of said assemblies consisting of an island insert, said island insert being affixed to the peripheral portions of said disks, a hollow blade shell having an airfoil portion and a skirt portion, said airfoil portion surrounding said island insert along the longitudinal axis thereof, said skirt portion extending radially between said spaced disks and being affixed to each of said spaced disks, a corrugated intermediate member positioned between said island insert and said blade airfoil portion, and a sealing shroud extending between said disk peripheries and around said blade assemblies substantially at the junction of said airfoil and skirt portions of said blade shell.

2,865,599
ROTATING MACHINE SUCH AS A CENTRIFUGAL OPPOSED PRESSURE TURBINE
Lawson R. Beyer, Cleveland, Ohio
Application March 14, 1955, Serial No. 493,959
4 Claims. (Cl. 253—101)



1. A turbine rotatable by pressurized fluid, comprising: a hollow casing; a rotor axially rotatably mounted within said casing, said rotor being defined by two ends and a circular periphery therebetween; fluid return-inlet aperture means in at least one of said ends inwardly displaced from the circular periphery thereof and extending thereinto; a plurality of arcuately spaced passageways in said rotor extending from said fluid return-inlet aperture means to a plurality of circumferentially spaced locations around the periphery of said rotor; and a plurality of circumferentially spaced recesses in the periphery of said rotor at said plurality of circumferentially spaced locations, each recess communicating with a corresponding one of said passageways, whereby rotation of said rotor will, by centrifugal action, aspirate a fluid adjacent said fluid return-inlet aperture means therewith and will centrifugally pressurize and force said fluid outwardly through said passageways into said recesses; said casing being provided with port means, adapted to be supplied with a pressurized fluid, non-radially directed toward said recesses, in rapid sequence during rotation of said rotor, and adapted to angularly press, within each of said recesses in sequence, against said pressurized fluid which is centrifugally outwardly forced by rotation of said rotor; said hollow casing including means spacedly defining, with the circular periphery and at least a portion of one end of said rotor member, communication means effectively communicating said recesses and said fluid return-inlet aperture means and adapted to pass deflected and excess pressurized fluid from each of said recesses and said port means to said fluid return-inlet aperture means.

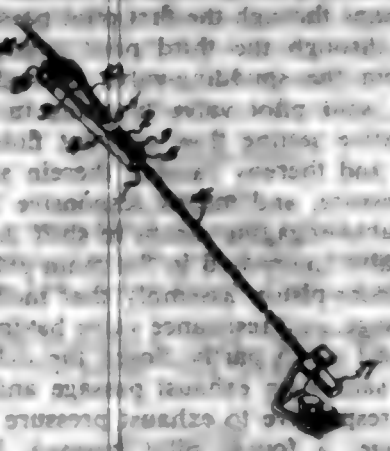
operatively secured to said telescoping bit for opening said port means when the bit is on the bottom of the well, leading from the pilot valve to the spudding valve to introduce fluid to said spudding valve to actuate the same,

2,865,600

TENSIONING DEVICE FOR CABLES

Robert C. Blackburn, Shirleys Island, Ga.

Application August 3, 1955, Serial No. 526,893
4 Claims. (Cl. 254—67)



1. Tensioning device for cables, compriting a body member provided with a tubular guideway therethrough of non-round cross-section having an end wall at one end with a hole therethrough and having a bridge piece at the other end formed with a divergent sided notch opening laterally with respect to said guideway, a bifurcated wing extending longitudinally outward from the side of said guideway toward which said notch flares, a pin supported by said wing bridging the space between the bifurcations, the bridging portion of said pin forming a connecting means for the attachment of a cable, an elongated slide nonrotatably reciprocable in said guideway having a portion thereof of complementary cross-sectional size and shape with respect to the cross-section of said guideway, a screw extending freely through the hole in said wall having a shoulder at an intermediate point abutting said wall, said screw being threadedly coupled to said slide for drawing it toward said connecting means, one side of said wing extending beyond said end wall, a clamp lock secured to the extending portion of said side and clampably engaging that part of said screw which extends outwardly beyond said shoulder, a flexible member fixed to said slide extending from the end opposite said screw and through said notch for anchoring said tension device to an extraneous object, the side of said guideway toward which said notch flares being formed with an opening between said notch and wing for permitting the insertion of said slide, the opposite side of said guideway being formed with an opening extending from said bridge piece, of a length at least equal to that of said slide, to make room for the manipulation of said slide in inserting it, and aligning it in said guideway coaxially with said screw.

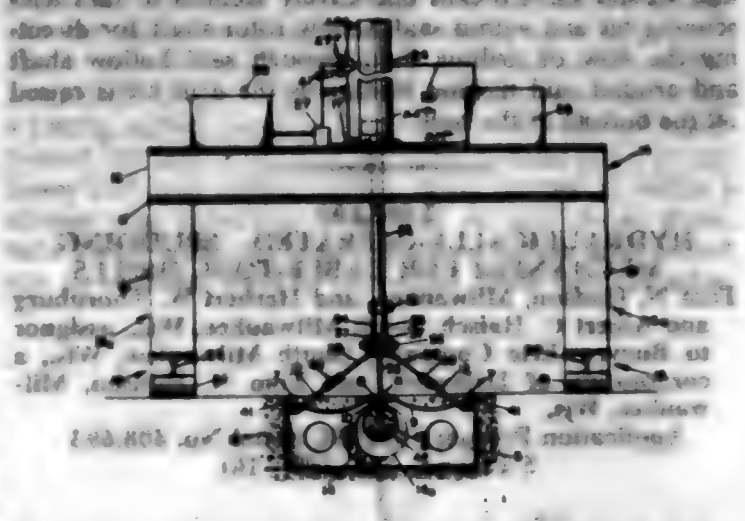
2,865,601

MEANS FOR REMOVING UNDERGROUND STREET RAILWAYS AND THEIR APPURTENANT STRUCTURES

Kirwan Y. Mesick, Arlington County, Va.

Application October 10, 1956, Serial No. 615,977
5 Claims. (Cl. 254—10)

1. In a device for removing underground railways of the type having a plow slot and an underground conduit with which said slot communicates, said slot being defined by longitudinally extending, spaced angle irons, a lifting device comprising a frame of a size to span the track and to bear upon the roadway upon opposite sides thereof, lift elements comprising a hydraulic lift cylinder and a piston rod upon said frame, a lift plug dimensioned to enter the conduit and provided with an upstanding member which projects upwardly through said slot and means for engaging the lift elements with said upstanding member, said plug being of such greater transverse dimension than the slow slot and the angle irons which define said



slot, that when said plug is drawn forcibly upward it engages and lifts not only said angle irons but also portions of the conduit forming materials.

2,865,602

HYDRAULIC TURBINE WITH BY-PASS VALVE

Frank Whittle, Dunsford, England, assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

Application November 21, 1955, Serial No. 547,930
Claims priority, application Great Britain
December 10, 1954
5 Claims. (Cl. 255—4)

1. A fluid-driven turbine unit adapted to be secured to a pipe string for drilling oil and gas wells while a drilling fluid is pumped through said turbine and pipe string, said turbine comprising a stator casing, a rotor supported in spaced relationship for rotation within said casing, said rotor being provided with a hollow shaft mounted within said rotor and having the lower end extending downwardly from said casing, turbine blading carried on the inner wall of said casing and the outer surface of said rotor, a drill bit fixedly mounted against radial movement and telescopically mounted for axial movement on the downwardly-extending end of said rotor shaft, port means near the upper end of said rotor shaft interconnecting the interior of said shaft and the interior of the pipe string, port means through the wall of said hollow rotor shaft below said turbine blading for admitting fluid discharged from said blading into the lower portion of said shaft above the bit, first valve means

ing a second portion of said cable, intermediate the winch and the reciprocated portion of the cable, against motion wardly from the periphery of the drill toward the axis of the drill, the cutting end of said drill being provided with

low portion of said shaft to the space between said spaced

excess pressurized fluid from each of said recesses and said port means to said fluid return-inlet aperture means.

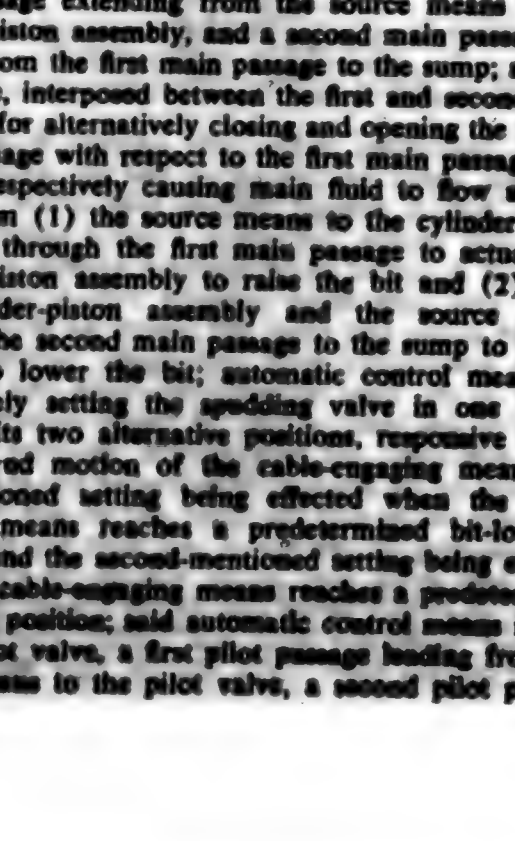
operatively secured to said telescoping bit for opening said port means when the bit is on the bottom of the well, and second valve means operatively secured to said telescoping bit and within said hollow rotor shaft for directing the flow of drilling fluid through said hollow shaft and around said turbine blading as the drill bit is raised off the bottom of the well.

2,865,603

HYDRAULICALLY-OPERATED SPUDDING MECHANISM FOR CABLE-TOOL DRILLS

Tom N. Hudson, Milwaukee, and Herbert W. Thornburg and Albert C. Heisch, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware, and Tom N. Hudson, Milwaukee, Wis.

Application February 8, 1954, Serial No. 408,693
5 Claims. (Cl. 255—10)



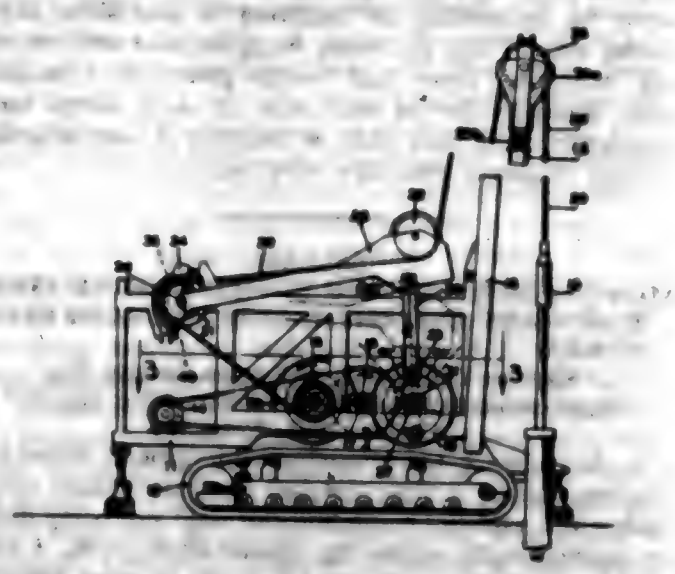
1. In an automatically self-synchronizing spudding mechanism for cable-tool drills, the combination of: cable-engaging means to impart vertical reciprocating motion to a percussion-drill bit suspended by a cable; a fluid-pressure-actuated single-acting cylinder-piston assembly, acting in opposition to gravity, to reciprocate the cable-engaging means; source means for creating fluid pressure; a sump; a main-fluid system, comprising a first main passage extending from the source means to the cylinder-piston assembly, and a second main passage extending from the first main passage to the sump; a spudding-valve, interposed between the first and second main passages, for alternatively closing and opening the second main passage with respect to the first main passage, and thereby respectively causing main fluid to flow alternatively from (1) the source means to the cylinder-piston assembly through the first main passage to actuate the cylinder-piston assembly to raise the bit and (2) from the cylinder-piston assembly and the source means through the second main passage to the sump to permit gravity to lower the bit; automatic control means for alternatively setting the spudding valve in one or the other of its two alternative positions, responsive to the position and motion of the cable-engaging means, the first-mentioned setting being effected when the cable-engaging means reaches a predetermined bit-lowering position, and the second-mentioned setting being effected when the cable-engaging means reaches a predetermined bit-raising position; said automatic control means including: a pilot valve, a first pilot passage leading from the source means to the pilot valve, a second pilot passage leading from the pilot valve to the spudding valve to introduce fluid to said spudding valve to actuate the same, a third pilot passage leading from the pilot valve to the sump, said pilot valve being shiftable to two alternative settings to alternatively direct to the spudding-valve through the second pilot passage pilot fluid derived from the source means through the first pilot passage, or direct to the sump through the third pilot passage pilot fluid exhausted from the spudding-valve through the second pilot passage, said pilot valve blocking in its last-mentioned alternative setting flow of pilot fluid in the first pilot passage and thereby causing therein an increase in pilot fluid pressure, and means responsive to the movement of the cable-engaging means to shift the pilot valve; a resistance valve interposed in the main exhaust passage from the cylinder-piston assembly that includes the second main passage, said resistance valve having a restricted passage to resist when partly closed the exhaust flow of fluid through said main exhaust passage and being shiftable to open responsive to exhaust pressure in said main exhaust passage; a fourth pilot passage, leading from the first pilot passage to the resistance valve, to introduce fluid to said resistance valve to actuate the same to close; a bypass leading from the fourth pilot passage toward the sump; a relief valve interposed in the bypass and actuable by fluid pressure in the fourth pilot passage to admit fluid therefrom into the bypass and thereby maintain pressure on the resistance valve to actuate the same to close in opposition to the exhaust flow and thereby maintain a predetermined exhaust pressure in the main exhaust passage; and valve means interposed in the fourth pilot passage for admitting fluid through the fourth pilot passage to the resistance valve whenever the pilot valve is set to block the fluid flow in the first pilot passage and thereby cause an increase in fluid pressure in said passage and in the fourth pilot passage to thereby maintain a retarding fluid pressure on the resistance valve when the cable-engaging means reaches its said predetermined bit-raising position.

2,865,604

AUTOMATIC CABLE-CLAMPING MECHANISM FOR CABLE-TOOL DRILL

Albert C. Heisch, South Milwaukee, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware

Application February 13, 1956, Serial No. 565,146
7 Claims. (Cl. 255—11)



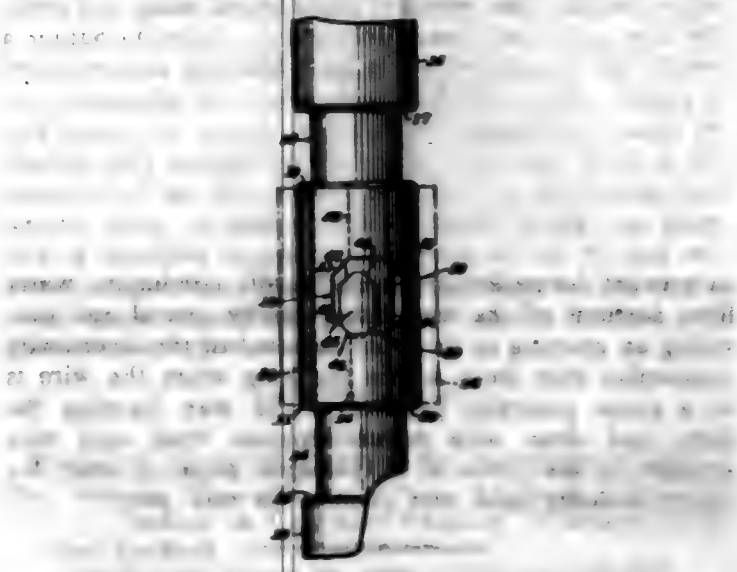
7. In an automatic cable-clamping mechanism for a cable tool drill, the combination of: a drill frame; a vertically reciprocable drill tool cable; a winch for winding in and paying out the cable; reciprocating cable-actuating means for imparting vertical reciprocating motion to a portion of the cable; a cable-clamping brake supported by the drill frame and engageable with the cable for brak-

extended from said head end and opening into the side

perpendicular to said bend and having a smooth im-

ing a second portion of said cable, intermediate the winch and the reciprocated portion of the cable, against motion relative to the drill frame; brake-setting means connected to the brake and the frame for normally setting the brake; and means actuated in response to position of the cable-actuating means for automatically unsetting the brake when the cable-actuating means reaches a position in advance of its normal reversal position from a tool-lowering to a tool-raising stroke and thereafter holding said brake unset during a predetermined portion of its cycle.

2,865,625
REAMER-STABILIZER
Jack Chadderdon, Long Beach, Calif., assignor to Servco Engineering, Ltd., Long Beach, Calif., a corporation of California
Application October 4, 1954, Serial No. 460,026
3 Claims. (Cl. 255—28)



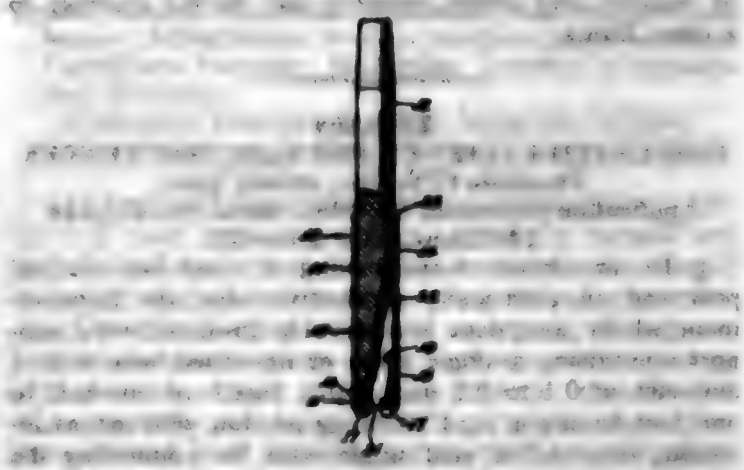
1. In a tool of the character described, adapted to be incorporated in a drill string; an elongated cylindrical mandrel having upper and lower annular shoulders, a cylindrical reaming collar loosely and slidably mounted on said mandrel, a key on said mandrel substantially midway between said shoulders, said collar having a first recess wider than said key, receiving said key, and provided with a side face engageable with a side face of said key, said collar having at least one keyway therein extending axially from one end of said recess and circumferentially offset from said side face of said recess, said side face of said recess having axially spaced and oppositely slanted cam surfaces, said side face of said key having axially spaced cam surfaces complementary to but of less length than said cam surfaces of said recess, the length of said collar being greater than the distance from said key to either of said shoulders whereby said key is always in rotary driving relation to said collar.

2,865,626
ROCK DRILL
Delbert Lewis Farmer, Norwood, Ohio, assignor to The Cincinnati Tool Company, Cincinnati, Ohio, a corporation of Ohio
Application August 13, 1956, Serial No. 603,763
1 Claim. (Cl. 255—63)

As a new article of manufacture, a rock drill of the impact type comprising a forged body having a cutting end formed at the lower end thereof, said cutting end being configurated to form a first pair of ribs extending radially from the body along a first diameter, a second pair of ribs extending radially from the body along a second diameter perpendicular to the first diameter, said first ribs having endwise faces tapering downwardly from the periphery of the drill toward the axis of the drill, the second pair of ribs having endwise faces tapering upwardly from the periphery of the drill toward the axis of the drill, the cutting end of said drill being provided with a first slot extending across said first diameter, a second slot extending across said second diameter, a hard metal chisel blade disposed within said first slot and extending completely across said first rib, said chisel blade having a cutting surface tapering downwardly from the periphery toward the axis of the drill to define a chisel point at said lower end, said cutting surface being beveled to define a cutting edge extending lengthwise of said chisel blade, hard metal centering inserts disposed within said second slot on opposite sides of said chisel blade and extending

to the ends of said second ribs, each of said centering inserts having a cutting face having two portions, a first portion tapering upwardly from the periphery of the drill toward the axis thereof, and a second portion intercepting the first portion and tapering downwardly from said first portion toward the axis of the drill, the second portion of said cutting face being downwardly beveled to define a cutting edge, and said beveled cutting edge of the second portions of said centering inserts and the chisel point of said chisel blade formed by its downward taper, being aligned to form a continuous cutting edge at right angles to the cutting edge of said chisel blade, and brazing means for joining said chisel blade and said inserts to said body.

2,865,607
DRILL BIT
Carl V. Tibbs, Capistrano Beach, Calif.
Application November 1, 1956, Serial No. 619,206
3 Claims. (Cl. 255—63)



1. A percussion drill for concrete and the like comprising a solid one-piece body having a forward end and from the opposite end of which extends a tool-connecting shank, straight longitudinal grooves extended the length of said body, a straight generally central bore

said plurality of weights adapted to control the opera- of the rotor, and arranged to cooperate with a pair of

source means to the pilot valve, a second pilot passage

by the drill frame and engageable with the cable for brak-

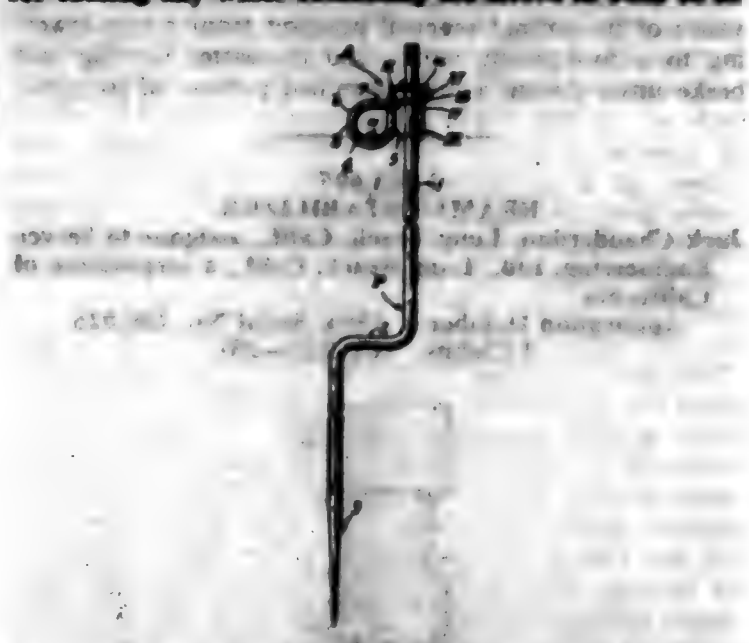
extended from said head end and opening into the side wall of said body and into a groove at a point spaced from said forward end, the axis of said bore being inclined to the axis of said drill throughout the length thereof, said grooves being adapted to convey chips from said forward end toward said shank exteriorly of said body when positioned in a hole being drilled and said central bore being adapted to convey chips through said body toward said shank, and abrasion-resistant cutting elements fixed in the head end of said body adapted to disintegrate a body of material being drilled upon the percussive impact of said drill thereagainst.

2,843,698
CORE BARREL
Walter L. McKenna, Edgemont, S. Dak.
Application February 7, 1957, Serial No. 638,762
3 Claims. (Cl. 255—72)

1. A core barrel comprising an elongated hollow cylindrical member, cutting means detachably secured to the lower end of said member, a spiral thread formed on the outer surface of said member from one end thereof to the other, said member having an aperture formed in the side thereof, a second cylindrical hollow member adjustably telescopically positioned within said first member, said second member having an aperture formed therein for registry with the aperture formed in said first member in one position of adjustment of said members, means for selectively securing said first member to said second member in a position with said apertures in registry and in a second position with said apertures out of registry, and means securing said second member to a drive fitting.

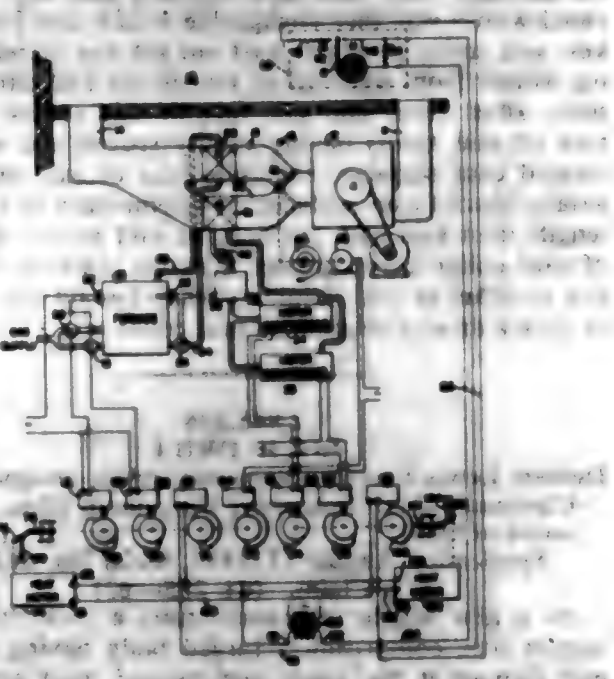
2,865,589
INSULATED FASTENER FOR ELECTRIC FENCES
Theodore O. Steiner, Akron, Ohio
Application September 26, 1956, Serial No. 612,128
14 Claims. (Cl. 256—10)

1. In an electric fence having at least one vertical post and an electrically conductive wire, the improvement which comprises a removable insulated wire support comprising a single piece of untwisted wire with a diameter of 0.1 to 0.2 inch and a length of one-half to one foot having a rigid attaching portion with means including one end of said single wire for connecting the wire support to the post and having a wire-retaining portion for supporting the wire, the wire-retaining portion having a bend forming a single helical loop at the other end of the wire for surrounding and supporting the electrically conductive wire in a horizontal position generally perpendicular to said bend and having a smooth impervious sleeve of high molecular weight thermoplastic polymeric insulating material bonded to and covering the wire forming said loop, said sleeve having a radial thickness of 0.02 to 0.07 inch and having water-repelling means comprising a smooth hydrophobic external surface for causing any water contacting the sleeve to bead so as



to prevent formation of an electrically conductive water film, portions of the loop being axially spaced and providing an opening to facilitate removal of the electrically conductive wire from within the loop when the wire is in a plane generally parallel to the wire forming the loop, and short wire means separate from said wire support in the form of a U-shaped piece of wire for rigidly holding said wire support to said post.

2,865,610
CONTROL APPARATUS
Hubert T. Sparrow, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application November 23, 1955, Serial No. 548,383
3 Claims. (Cl. 257—3)



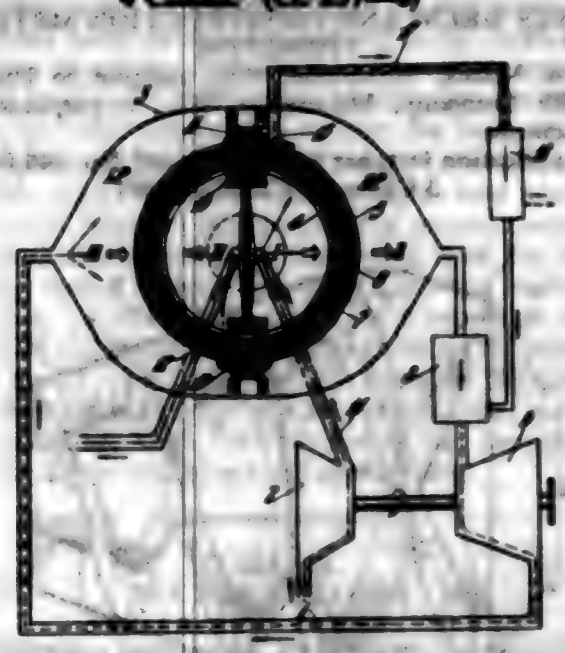
1. In a temperature control apparatus for controlling various stages of heating and cooling apparatus, a first step controller having a plurality of switches operated in a selected sequence, bimetal heat motor means, means connecting said motor in a driving relation to said step controller thereby providing position modulation for said step controller as it operates throughout its range, two of

edge portion of one of the adjacent plates formed by corresponding impressions in the other side of said edge

a pressure vessel, said vessel having an internal cylindrical chamber of substantially uniform diameter,

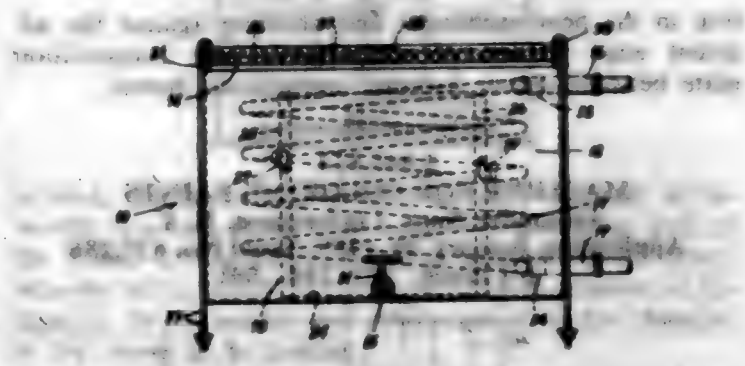
said plurality of switches adapted to control the operation of the heating apparatus, a third of said switches being normally closed when the step controller is in its initial position where said heating apparatus is deenergized, a second step controller having a plurality of switches operated in a selected sequence, a second bimetal heat motor, means connecting said second motor in a driving relation to said second step controller thereby providing position modulation for said step controller as it operates throughout its range, two of said last mentioned plurality of switches being adapted to control the operation of the cooling apparatus, a third of said last mentioned switches being normally closed when said step controller is in its initial position where said cooling apparatus is de-energized, temperature responsive means responsive to space temperature having first switch means normally closed when the space temperature is below a selected value and second switch means normally closed when the space temperature is above said selected value, a source of power, connection means including said first switch means and said third of the switches of the second step controller for connecting said first motor means to said source of power, and further connection means including said second switch means and said third of the switches of the first step controller for connecting said second motor to said source of power thereby an interlock is provided to prevent operation of one of said motors whenever the other has moved from its initial position upon the call for heating or cooling by said temperature responsive means.

2,865,611
ROTARY REGENERATIVE HEAT EXCHANGER
Max Bentele, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Application March 13, 1953, Serial No. 342,231
4 Claims. (Cl. 257—9)



1. In a rotary regenerative counter flow heat exchanger, and in combination, a rotor having a plurality of partitions symmetrically disposed about its axis and defining compartments, a heat exchange matrix contained in the said compartments, stationary casing and partition means comprising sealing shoes cooperating with the said rotor partitions to divide the heat exchanger into a low pressure hot gas side and a high pressure cold gas side, conduit means for conducting hot and cold gases to and from the heat exchanger in the said respective sides thereof and arranged for flowing the cold gas through the said compartments in one direction and the hot gas through the said compartments in the opposite direction, the said sealing shoes comprising a pair of shoes on opposite faces of the rotor, and arranged to cooperate with a pair of adjacent rotor partitions to form therewith an enclosed space, one of said shoes continuing beyond the other in the direction of rotation of the rotor to maintain a closure with a said partition after it has passed the cooperating shoe, whereby as a partition passes the second said shoe, a pressure difference is created across the matrix in the rotor compartment following the said partition causing gas flow to remove particles suspended in and adhering to the matrix.

2,865,612
VEHICULAR WATER HEATERS FOR FIELD USE
Luke Urbon Patten, O'Fallon, Mo., assignor of fifty percent to Robert M. Hall, St. Charles, Mo.
Application April 3, 1956, Serial No. 575,676
1 Claim. (Cl. 257—265)



A water heater of relatively large capacity adapted for readily removable cooperative installation in a motor vehicle powered by a combustion engine employing a liquid coolant, said heater comprising, in combination, a flat-bottomed upright cylindrical tank having greater diameter than height, a heating coil supported within said tank and having end couplings extended through the tank wall for connection into the engine coolant circulation, said heating coil being supported by a vertical diametrical baffle plate terminating in spaced relation to the sides of the tank and extending from the bottom of the tank substantially to the top to minimize surging of water due to motion of the vehicle, a valved outlet in the tank wall for drawing water from the tank, a full-diameter removable top closure for said tank, compressible sealing means between said top closure and the tank for preventing water leakage due to splashing and churning, and means for securing the tank to a supporting platform on the vehicle including means to press the top closure against said sealing means.

2,865,613
PLATE TYPE HEAT-EXCHANGER
Gustaf Conrad Egerstedt, Stockholm, and Sverre Knut Jonsson, Saltsjöbaden, Sweden, assignors to Aktiebolaget Rosenblads Patenter, Stockholm, Sweden, a corporation of Sweden
Application February 14, 1955, Serial No. 487,896
Claims priority, application Sweden February 26, 1954
3 Claims. (Cl. 257—246)

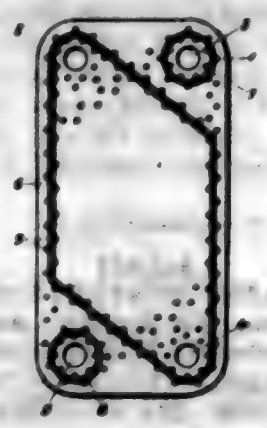
1. A heat exchanger comprising in combination a plurality of heat transmission plates integrally formed into their final shape out of thin plate material and arranged in spaced stacked relationship, string shaped circumferential border packings between each pair of adjacent heat transmission plates, said packings running along edge portions of said plates at a distance from the free edges thereof and being directly opposite each other when viewed in a direction perpendicular to the plates, said edge portions outside the packings having integrally formed spacers between adjacent edge portions of each pair of adjacent heat transmission plates, said spacers being arranged in a row in closely spaced relation to each other along and close to the outer side of the packing and consisting of protrusions on one side of the

blading in the other, said bowl and discharge portions being connected together with the blading in the frusto- extending upwardly therefrom to support said motor above said chamber and at a height above the level of

trically conductive wire in a horizontal position generally

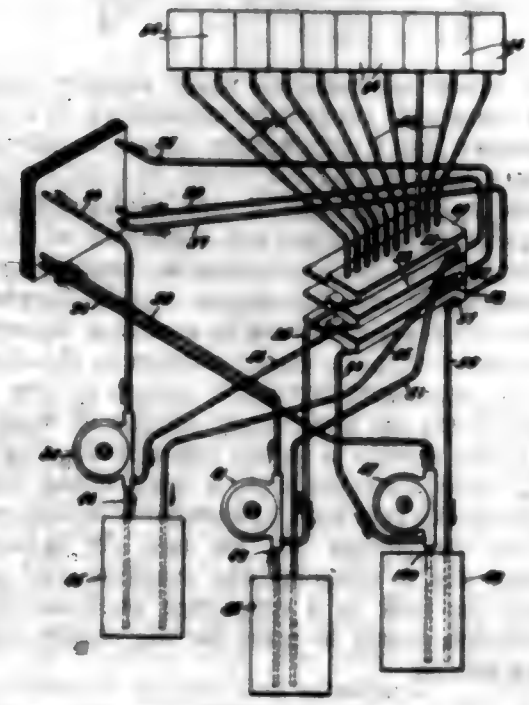
step controller as it operates throughout its range, two of

edge portion of one of the adjacent plates formed by corresponding impressions in the other side of said edge portion, all such spacers protruding in the same direc-



tion in the heat exchanger and abutting against the adjacent edge portion of an adjacent heat transmission plate between spacer forming impressions therein.

2,865,614
MACHINE FOR COLORING PAINTS
Alexander Nagy, Lindenhurst, N. Y.
Application January 30, 1957, Serial No. 637,286
6 Claims. (Cl. 259—95)



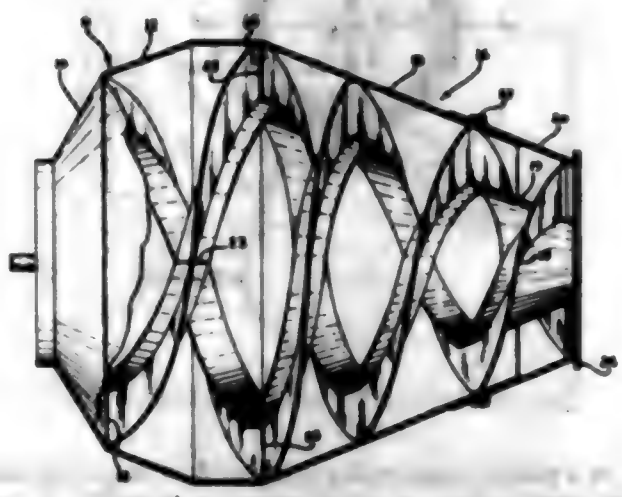
3. The combination of a container for a predetermined quantity of paint of a neutral color, a vessel containing coloring matter, a viewer having a visual inspection area for receiving paint from said container and coloring matter from said vessel, a pump, a first conduit connecting said viewer with said pump, a second conduit connecting said pump with said container, a third conduit connecting said vessel with said container, a valve operatively connected to said third conduit and having a pocket of a predetermined size to receive and isolate a predetermined quantity of coloring matter from said vessel, and means for actuating said valve to enable the contents of said pocket to be drawn by said pump from said vessel into said container and then into said viewer.

2,865,615
HIGH PRESSURE STIRRER CONTACTING APPARATUS
John L. Slaughter, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application April 29, 1955, Serial No. 504,972
6 Claims. (Cl. 259—107)

1. A reaction vessel adapted to operate at elevated temperature and under high pressure which comprises a pressure vessel, said vessel having an internal cylindrical chamber of substantially uniform diameter, a removable elongated head for said vessel, an axial bore through said head, a rotatable shaft extending through said bore into said vessel, agitator means on said shaft, removable longitudinal baffles disposed adjacent the walls of said chamber, a radially slotted ring at the upper end of said chamber through which said shaft passes and a

slotted spider adjacent the bottom of said chamber having a guide bore into which said shaft extends, said slots receiving opposite ends of said baffles and securing said baffles in radial and longitudinal alignment, an enlarged chamber in the upper end of said head concentric with the axis of said shaft-receiving bore, a packing within said chamber, and a cooling jacket exterior of said head in the region of said packing.

2,865,616
MIXER DRUM AND CONSTRUCTION METHOD THEREFOR
John A. Masek, Milwaukee, Wis., assignor to The T. L. Smith Company, Milwaukee, Wis., a corporation of Wisconsin
Application October 12, 1955, Serial No. 540,841
3 Claims. (Cl. 259—169)



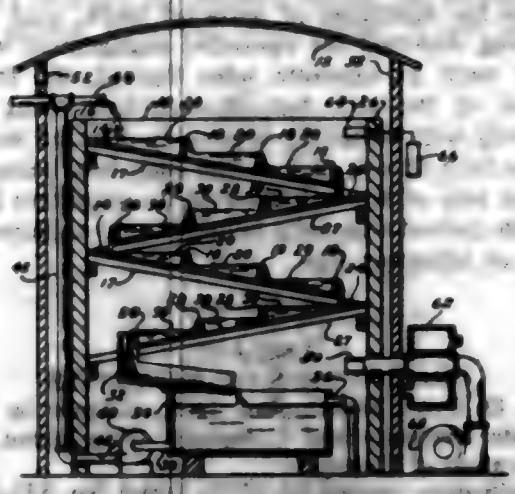
1. A mixer drum comprising a bowl portion having a dished section and a frusto-conical section, blading mounted in each of said sections with the blading in one section aligned with the blading in the other, a discharge portion terminating in a discharge opening and having a forward and a rear section of frusto-conical shape, said forward and rear sections being telescoped one into the other to provide a joint, a roller track mounted on said discharge portion at said joint whereby the drum has a double thickness under the track, and blading mounted in each of said forward and rear sections with the blading in one section aligned with the

along the inner surface of the wall of said tower, means for supplying a scrubbing liquid to said liquid jet nozzle

thereof, an upper portion extending from the upper part of the socket portion parallel with and above the base

blading in the other, said bowl and discharge portions being connected together with the blading in the frusto-conical section of said bowl portion aligned with the blading in the forward section of said discharge portion.

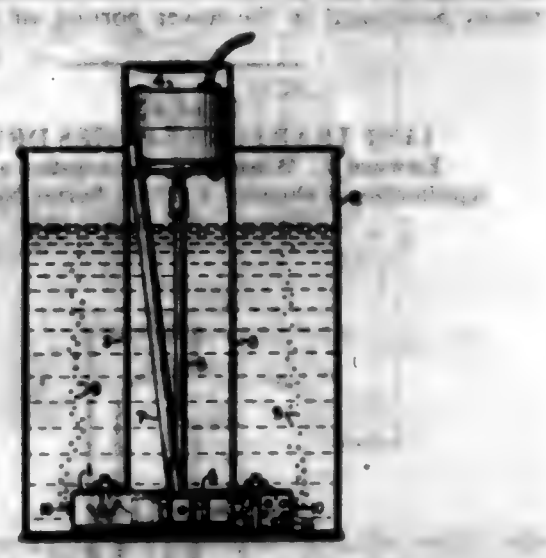
2,863,617
PHENOL DECOMPOSING APPARATUS
William T. Dickens, Cincinnati, and Allen D. Evans, Cleves, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Application April 23, 1956, Serial No. 579,800
1 Claim. (Cl. 261—9)



In a phenol decomposing apparatus of the class described, a housing member provided with air vents in the sidewalls thereof, an open top vertical tower positioned within and occupying at least 50% of the interior volume of said housing member, a plurality of baffle plates positioned within said tower, said baffle plates containing a plurality of projections of substantially equal height from their upper surfaces which define a plurality of liquid reservoirs thereon, said baffle plates being attached alternately to opposing walls of said tower, said baffle plates being pitched downwardly 5–20° from a perpendicular drawn to said tower walls and overhanging the next lowermost baffle plate, means for introducing aqueous phenolic wastes onto at least the topmost baffle plate, liquid-collecting means positioned below the lowermost baffle plate, means for discharging at least a portion of the liquid from the liquid-collecting means, means for recycling at least a portion of the liquid from the liquid-collecting means through the tower, blowing means for introducing air into the tower at a point below the lowermost baffle plate, and means for controlling the temperature of the air introduced into the tower by the blowing means, said temperature-controlling means being cooperatively connected with and controlled by temperature-indicating means positioned within the tower.

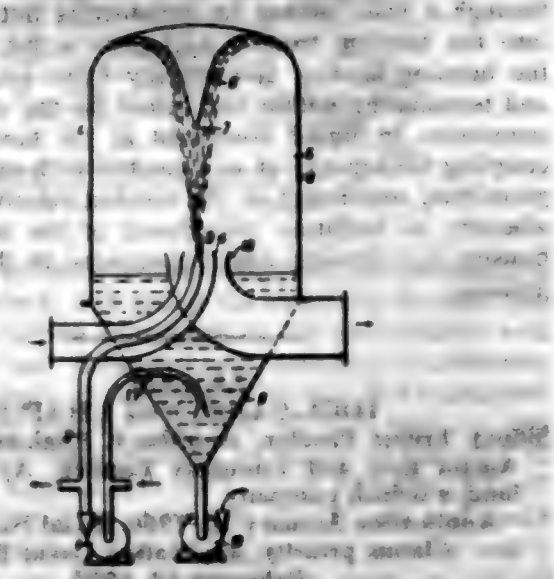
2,865,618
WATER AERATOR
Arthur S. Abell, Elkhorn, Wis.
Application January 30, 1956, Serial No. 562,681
2 Claims. (Cl. 261—93)

2. A water aerator comprising a horizontally disposed sheet metal channel member, a plate closing all but the ends of said channel member, screens covering the end openings of the channel member to constitute said channel member and plate as a chamber adapted to be submerged in the water to be aerated and having screened side walls for movement of water and escape of air, a rotary vane type impeller mounted to rotate freely in the water within said chamber, a substantially vertical drive shaft carrying said impeller and extending upwardly through the top of said chamber, an electric motor having its shaft coupled to said drive shaft to effect rotation of said impeller, means connected with said chamber and extending upwardly therefrom to support said motor above said chamber and at a height above the level of the water in which said chamber is to be submerged, and an air tube extending upwardly from said chamber to receive air from above the level of the water to be



aerated, the lower end of said air tube opening downwardly into said chamber at a location above the path of the blades of the impeller during rotation of the latter, whereby air is drawn down said tube upon rotation of the impeller by the motor and submergence of the chamber in the water to be aerated.

2,865,619
APPARATUS FOR SCRUBBING GASES
Alfred Haimeier, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Application October 25, 1955, Serial No. 542,611
Claims priority, application Germany November 9, 1954
3 Claims. (Cl. 261—116)



1. Apparatus for scrubbing gases with liquid which comprises a substantially vertically extending scrubbing tower, upwardly directed liquid jet nozzle means centrally positioned in the lower portion of said tower and dimensioned for passing a narrow diverging jet of liquid upwardly through said tower, upwardly directing gas jet nozzle means in the lower portion of said tower concentrically surrounding said liquid jet nozzle means terminating substantially at the same height in the tower therein, dimensioned and positioned for passing a narrow diverging jet of gas upwardly through said tower in contact with a diverging jet of liquid from said liquid jet nozzle over substantially the entire upward path of travel thereof, deflecting means positioned in the upper portion of said tower and dimensioned to deflect and reverse both said jets and direct the same downwardly

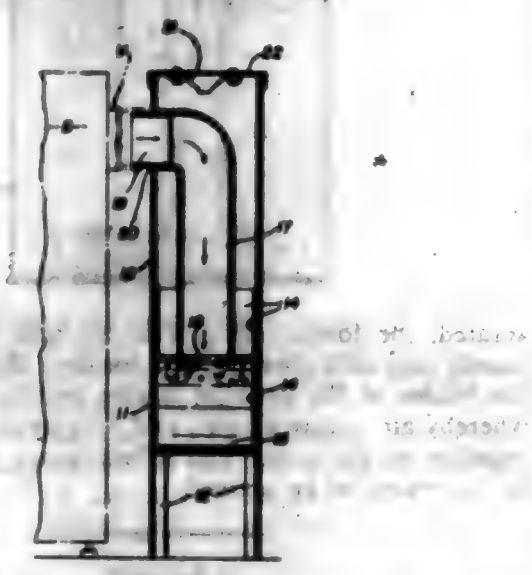
pump, a leak valve arranged in the hydraulic circuit of outer surfaces of said mass, including pressure sensitive

temperature and under high pressure which comprises

blading mounted in each of said forward and rear sections with the blading in one section aligned with the

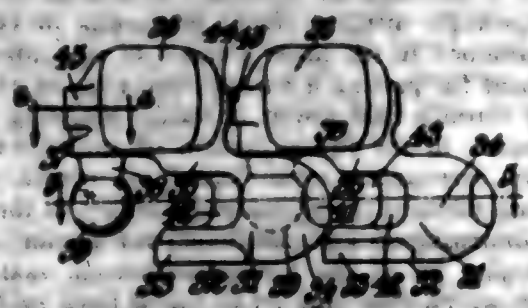
along the inner surface of the wall of said tower, means for supplying a scrubbing liquid to said liquid jet nozzle means, means for supplying gas to be scrubbed to said gas jet nozzle means, a gas outlet conduit concentrically surrounding said gas jet nozzle means, and liquid discharge means positioned in the lower portion of said tower.

2,865,630
LINT TRAP FOR CLOTHES DRYERS
Edward F. Woodhurst, Youngstown, Ohio
Application February 4, 1957, Serial No. 638,150
5 Claims. (Cl. 261—121)



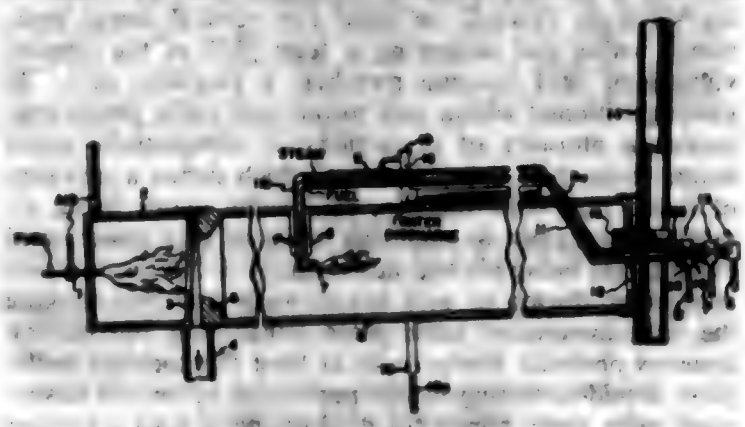
1. A lint and moisture trap comprising a closed housing of substantial height, a removable liquid tank in the housing, the tank having a height materially less than the inside height of the housing and having an open top, air vent means in a wall of the housing at an elevation above the tank, inlet means leading into the housing through a wall thereof for conducting lint and moisture into the housing from a source of origin, a conduit in the housing leading downwardly from said inlet means and terminating within and below the top of the tank for immersion in liquid contained in the tank, and means coupling the top end of said conduit with said inlet means permitting movement of the conduit relative to the tank whereby to facilitate withdrawal of the tank from the housing for cleaning and replacement of the tank in the housing.

2,865,631
TOOL-CARRYING CHAINS
Sidney Ernest Procter, Aylesbury, England, assignor to Austin Hoy and Company Limited, Aylesbury, England, a British company
Application January 16, 1956, Serial No. 558,361
Claims priority, application Great Britain February 22, 1955
1 Claim. (Cl. 262—33)



In a coal cutter chain the combination of a series of links each of which comprises a base portion, a socket portion above the base portion and integral with one end thereof, an upper portion extending from the upper part of the socket portion parallel with and above the base portion, a pick box on said upper portion, a ball carrying portion extending from said upper portion beyond the base portion, a ball stem depending from said upper portion, and a ball on the stem adapted to enter and fit in the socket portion of the next link of the chain, the socket portion of each link being rounded externally on both fore and aft faces thereof cylindrically about an axis which is at right angles to the base portion and concentric with the stem of the ball received in said socket portion, said socket portions of adjoining links being relatively spaced lengthwise of the chain to leave therebetween apertures for reception of sprocket teeth, said rounded faces being disposed for operative engagement with said sprocket teeth on opposite sides thereof, the front and rear ends of the pick box of each link being formed respectively with relatively oppositely directed stop faces, said stop face at one end of the pick box being curved about the axis of the ball stem of its respective link and each such curved stop face being closely adjacent a stop face of an adjoining link.

2,865,623
PRODUCTION OF PIGMENTS
William D. Ross, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application August 30, 1955, Serial No. 531,557
10 Claims. (Cl. 263—33)



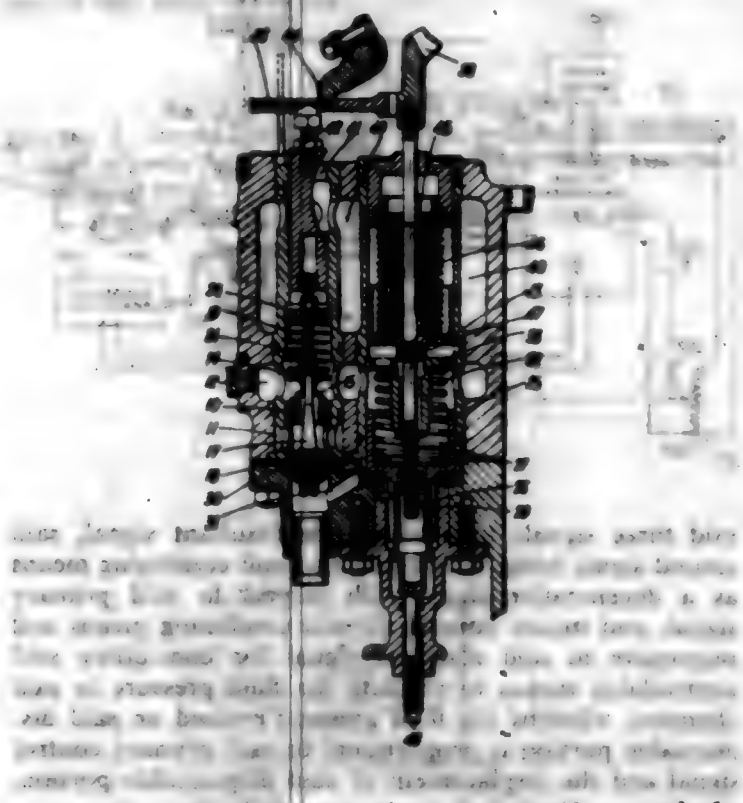
1. In a process for calcining a pigmentary material wherein said material is passed through a horizontally inclined rotary kiln from its raised end, while passing into the low end and through said kiln, hot combustion gases and air at about the maximum gas temperature for said calcining process, the improvement which comprises introducing a fluid fuel in an amount less than the chemical equivalent of the oxygen in said combustion gases and air into the interior gas space of said kiln where the pigment temperature is substantially below maximum, and burning said fuel in an axially positioned flame maintained in said gas space with a portion of the oxygen in the gas stream.

2,865,623
HYDRAULIC GOVERNOR SYSTEMS
Charles Horace Lionel Wynne, London, England, assignor to D. Napier & Son Limited, London, England, a British company
Application April 19, 1955, Serial No. 502,268
Claims priority, application Great Britain April 26, 1954
5 Claims. (Cl. 264—14)

1. Hydraulic governor apparatus for an internal combustion engine comprising a positive displacement pump driven at speed proportional to that of the engine, a speed control member arranged to control the speed of the engine, a working piston associated with the speed control member and acted upon by pressure derived from the

bearing perpendicular to said third rod, an additional rod tion with said fluid source and said chamber for inte-

pump, a leak valve arranged in the hydraulic circuit of the working piston to control the escape of fluid from the said circuit, the said leak valve being connected with the working piston so as to be moved automatically in response to movements of the piston to dampen the movements of the piston, means for adjusting the datum setting of the leak valve to control the speed at which the engine is to operate, and apparatus to limit the supply of fuel to the engine at any particular engine speed, comprising a double-sided stop piston lying in a cylinder with pressure chambers at opposite sides of the piston, a pressure reducing valve in the hydraulic circuit of the working piston and between the delivery side of the pump and the working piston, hydraulic connections to the chambers



at opposite ends of the stop piston connected respectively to the hydraulic circuit on opposite sides of the pressure reducing valve, the pressure reducing valve having a relatively restricted passage of fixed cross sectional area which is open at all times to the hydraulic fluid, and an adjustable orifice controlled by pressure drop across the valve so that at higher rates of flow the valve provides a progressively larger opening, the said stop piston being arranged to resist movement of the speed control member, in a direction to increase the engine speed, beyond a point which thus varies with and is determined by the engine speed.

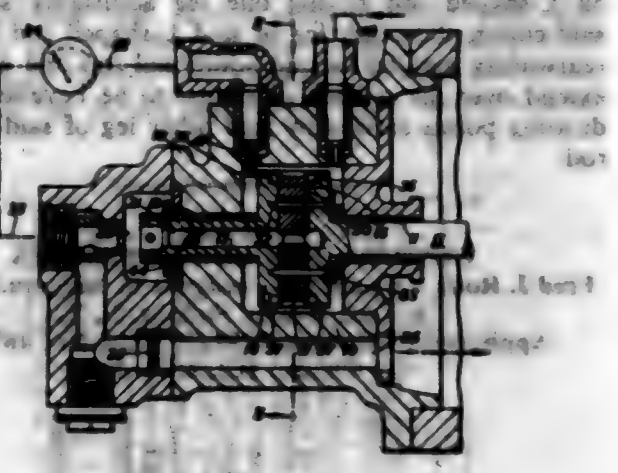
2,865,624

DEVICES SENSITIVE TO ROTATIONAL SPEED

John Shelton, Northolt, England, assignor to D. Napier & Son Limited, London, England, a British company

Application December 31, 1956, Serial No. 631,924
Claims priority, application Great Britain January 13, 1956
8 Claims. (Cl. 264—14)

1. A rotary speed sensitive device comprising a rotary support formed wtih a substantially radial guide, a centrifugal mass connected to the support to rotate therewith, and having its centre of gravity displaced from the rotary axis of the support, and having at least limited freedom of movement along said guide, the radial inner and outer surfaces of the mass lying in separate fluid chambers, and including valve mechanism operated by said centrifugal mass and controlling the pressure in one of said chambers substantially to balance the centrifugal forces acting on the mass, and including means sensitive to the differential fluid pressure between the inner and outer surfaces of said mass, including pressure sensitive devices with pressure sensing heads arranged at approxi-



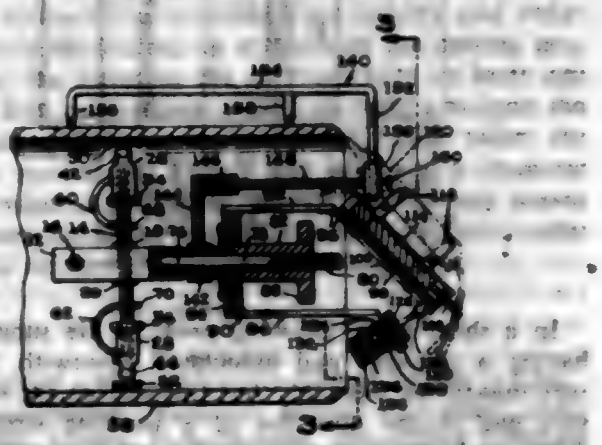
mately the same radial displacement from the rotary axis as the inner and outer surfaces of the centrifugal mass.

2,865,625

PIPE BEVELLING DEVICE

Sebert J. Pauley, Dunbar, W. Va., assignor to Gustave Miller, Washington, D. C.

Application July 3, 1957, Serial No. 669,872
1 Claim. (Cl. 266—23)



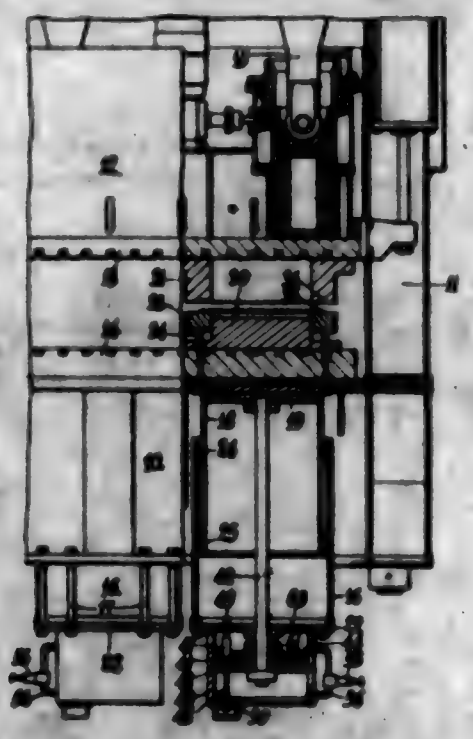
In a device of the character described, in combination an elongated block, a threaded rod extending through said block in a direction transverse to the longitudinal axis thereof, a second threaded rod extending transversely through said block at right angles to said first mentioned rod, a threaded cap for each end of each rod, an outwardly concaved shoe swivelly mounted on the end of each cap, lock nuts on each rod on each side of said block permitting longitudinal adjustment of said rods and hence of said shoes, a third rod having smooth portion and a threaded end extending longitudinally from an end of said block, an internally threaded sleeve on the threaded end of said third rod, an elongated plate secured to said sleeve and rotatable on the smooth portion of said rod, a pair of rods, one secured at one end to each end of said plate extending parallel to said third rod and beyond said sleeve, a housing hingedly secured to the end of one of said rods, a tubular spring housing secured to the end of the other of said rods inclined toward the other end of said first mentioned housing, a piston in said spring housing, a piston rod secured to said piston and abutting said other end of said first mentioned housing, replaceable spring means in said spring housing biasing said piston towards said other end of said first mentioned housing and cutting torch supporting means carried by said first mentioned housing, the smooth portion of said third rod carrying a ring housing, a rod extending from said ring

inclined with respect to said plate members towards said

chine of the type including a rotary driving shaft and

bearing perpendicular to said third rod, an additional rod secured to the end of said rod extending from said ring bearing, and parallel to said third rod, a collar carried by the end of said additional rod and perpendicular thereto, an L-shaped rod having one leg adjustably secured in said collar, the other leg of said L-shaped rod extending rearwardly parallel to said additional rod and adapted to extend over the outside of a pipe to be bevelled and indicating points carried by said other leg of said L-shaped rod.

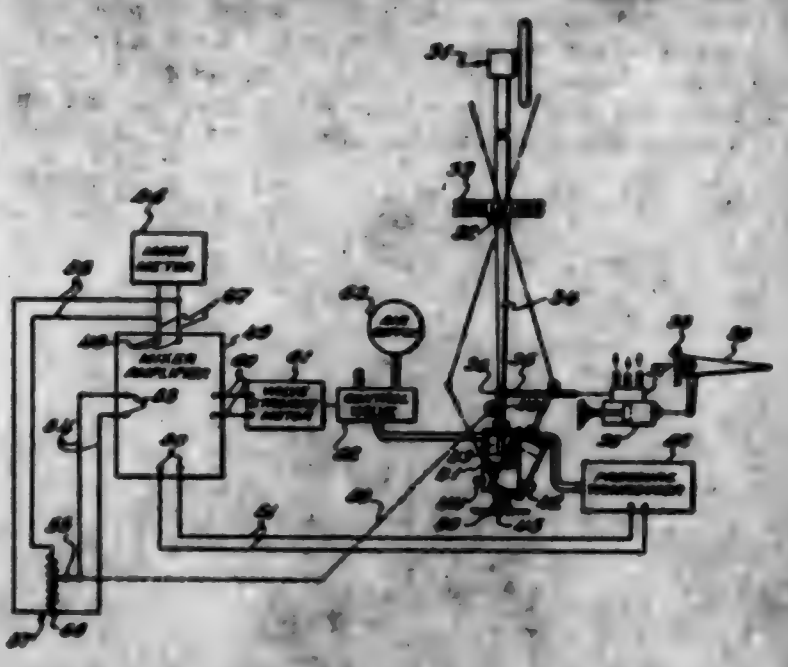
2,865,626
CUSHION FOR POWER PRESSES
Fred J. Rode, Chicago, Ill., assignor to Niagara Machine & Tool Works, Buffalo, N. Y.
Application February 9, 1955, Serial No. 487,166
1 Claim. (Cl. 267—1)



In a sheet metal drawing press, a die supporting bed having a pressure pad associated therewith, fluid pressure means for yieldably resisting movement of the pressure pad in the direction of a working stroke of said press, and auxiliary resistance means comprising a hydraulic cylinder and a piston movable therein upon movement of said pressure pad, relatively restricted hydraulic fluid passage means past said piston to permit movement thereof under a pressure against the pressure pad in said working stroke direction substantially greater than the normal resistance of the first fluid pressure means, and hydraulic pressure relief means operable automatically to neutralize said auxiliary resistance means upon completion of a predetermined initial movement of said pressure pad in said working stroke direction, and hydraulic dash pot means comprising a pair of relatively movable members associated with said cylinder and said piston, respectively, and operable to damp the final return movement of said pressure pad.

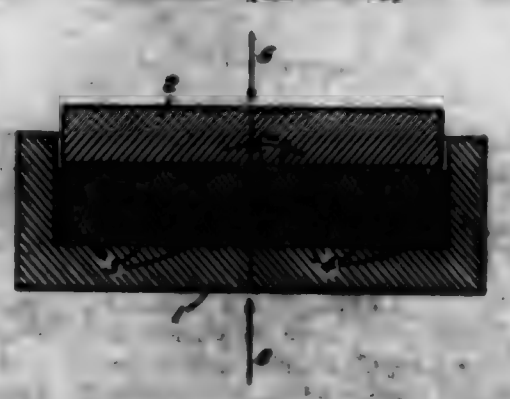
2,865,627
FLUID-TYPE SPRING
Warren P. Clement, Pasadena Manor, and Joseph E. Zapunick, Garden City, N. Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Application June 10, 1953, Serial No. 361,432
9 Claims. (Cl. 267—1)

1. A fluid-type spring comprising means defining a chamber having a portion of fixed surface area that may be displaced in position by externally-applied forces to vary the volume of said chamber, a source of fluid substance under pressure, controllable means in communication with said fluid source and said chamber for introducing and exhausting said fluid substance into and out of said chamber and regulating its pressure therein, means providing a primary control signal of variable magnitude, means providing a second signal proportional to the fluid pressure in said chamber, means for providing a third signal proportional both to said primary signal and to the displacement of said displaceable portion from a predetermined position thereof, means for combining



said three signals to produce one resultant signal, said second signal being introduced into said combining means as a degenerative signal with respect to said primary signal, and means coupled to said combining means and responsive to said resultant signal for controlling said controllable means to regulate the fluid pressure in said chamber, whereby the fluid pressure exerted on said displaceable portion is proportional to said primary control signal and the displacement of said displaceable portion.

2,865,628
SAFETY RESILIENT MEANS FOR MACHINERY SUBJECTED TO HIGH STRESSES, PARTICULARLY FOR ROLLING MILLS, CALENDERS AND THE LIKE
Carlo Montagna, Dalmine, Italy, assignor to Dalmine S. p. A., Milan, Italy, a corporation of Italy
Application August 4, 1956, Serial No. 602,679
Claims priority, application Italy September 9, 1954
3 Claims. (Cl. 267—1)



1. A cushioning device comprising, in combination, a pair of parallel plate members movable towards and away from each other, one of said plate members having at least one portion extending at an angle therefrom in direction towards the other plate member outside the path of movement of the latter; a set of rigid pressure-transmitting elements arranged between said plate members and having ends abutting, respectively, against the same, said rigid pressure-transmitting elements being

pieces, guide means on said capstan adjacent said pole pieces for positioning the magnetic tape so that one-half

2,865,633
SPRINGLESS POGO STICK

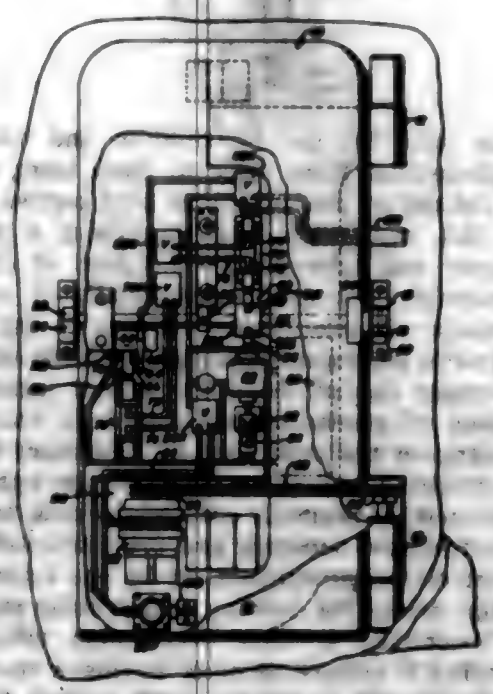
inclined with respect to said plate members towards said one portion of said one plate and being movable from a less-inclined position to a more inclined position when said plate members are moved toward each other; means between the plate members guiding said members for substantially rectilinear movement toward and away from each other; and a set of elastic cushions located intermediate adjacent pressure-transmitting elements so that when said first and second plate members move toward each other under the action of pressure against the same, said rigid pressure-transmitting elements tend to turn to said more inclined position by compressing said elastic cushions, one of said elastic cushions being located at one end of said set of rigid pressure-transmitting elements and abutting against said portion extending from one of said plate members.

2,865,629

AUTOMATIC DOOR SYSTEM

Harvey L. Henkel, Hamilton, Ohio, assignor to Herring-Hall-Marvin Safe Company, Hamilton, Ohio, a corporation of Ohio

Application June 7, 1955, Serial No. 513,715
4 Claims. (Cl. 268—66)



1. In a vault door opening and closing system wherein the door is mounted for mechanical pivotal movement on a frame and in which door movement components are an integral portion of the door per se: a vault door and frame therefor, at least one fixed door pinion mounted upon the frame, a rotatable pinion mounted upon the door in spaced relation to said fixed pinion, endless flexible power transmission means connecting said rotatable pinion and said fixed pinion, rotary drive means mounted on the door actuably engaging the rotatable pinion, the rotatable pinion upon actuation transmitting torque through said power transmission means about said fixed pinion, whereby said rotatable pinion, said power transmission means and said door may be arcuately moved about said fixed pinion by orbital movement of said power transmission means about the rotatable pinion to effect opening and closing of the door.

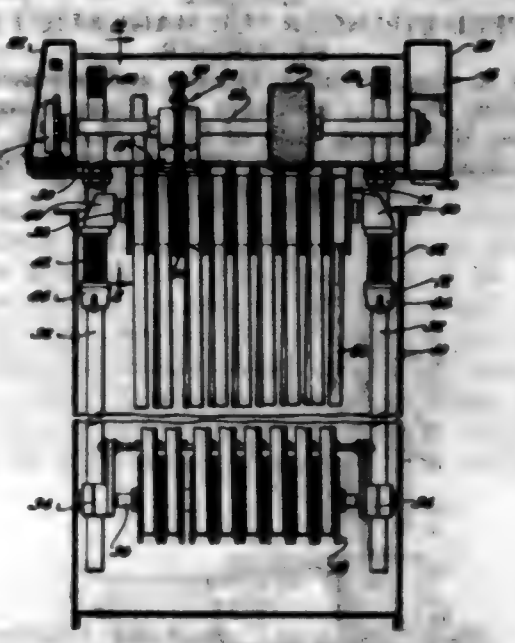
2,865,630

POSITIVE DRIVE ASSEMBLY FOR CONSTANT TENSION, FILM HANDLING MACHINE

Walter Enkelmann, Los Angeles, Calif., assignor to Unicorn Engineering Corporation, Los Angeles, Calif., a corporation of California

Application August 9, 1956, Serial No. 603,101
16 Claims. (Cl. 271—2.3)

1. A positive drive assembly for a film processing machine of the type including a rotary driving shaft and a film roller shaft parallel to and spaced a given distance from the driving shaft for mounting a plurality of film rollers, said assembly comprising: a gear case including spaced, substantially parallel side walls, a pair of coplanar meshing driving and driven gears between said side walls, said gears having coaxial hubs extending from opposite faces thereof and journaled in said side walls, the hubs of the driving and driven gears having central



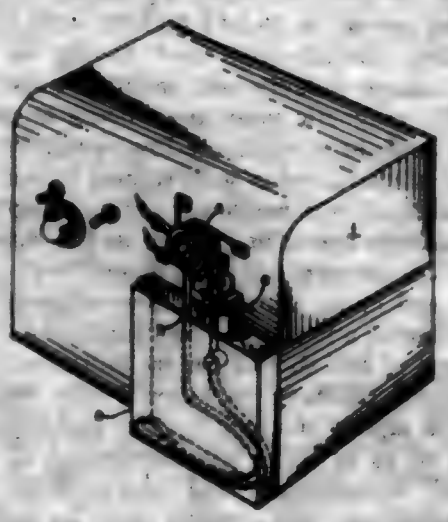
bores therethrough for receiving said driving and roller shafts respectively, means on the hub of the driving gear for securing the latter to the driving shaft, at least one end of the hub on the driven gear extending beyond the adjacent hub of the case for mounting a film roller, the bore in the hub of the driven gear being of a diameter to loosely receive the roller shaft, and bearing means in said latter bore for rockably supporting said roller shaft in said driven gear.

2,865,631

MEANS FOR AND METHOD OF DRIVING TAPE

Wesley Tannenbaum, Bedford, Joseph F. Cleary, Norwood, Ellis Hosier, Framingham, and Alfred Leonard Goldstein, Bedford, Mass., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

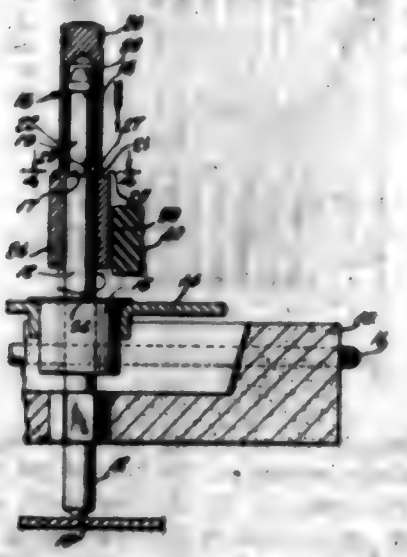
Application September 3, 1957, Serial No. 681,039
12 Claims. (Cl. 271—2.3)



1. A device for quickly accelerating and driving magnetic recorder tape at high speed comprising a constantly rotating capstan including parallel spaced circular pole

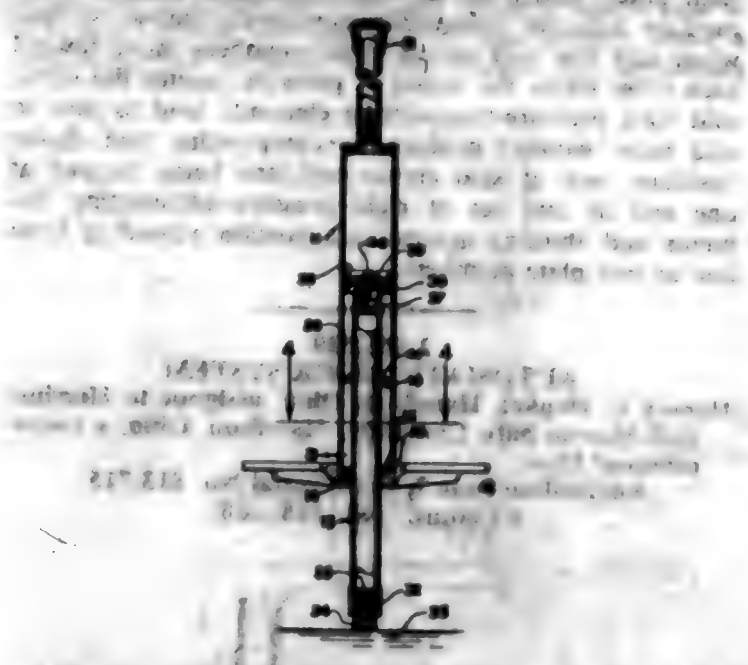
pieces, guide means on said capstan adjacent said pole pieces for positioning the magnetic tape so that one-half of its width spans said pole pieces, means within said capstan for quickly establishing a magnetic field across said pole pieces, and magnetic means adjacent said tape attracted by the field into engagement with the tape and pressing the tape into driven engagement with said rotating capstan.

2,865,632
SPEED CHANGER FOR MAGNETIC TAPE RECORDER
Charles A. Vogel, Valley Stream, and Michael Sawichi, Yonkers, N. Y., assignors to Harry Shannon and Stanley Rosenberg, both of Great Neck, N. Y.
Application December 6, 1957, Serial No. 701,186
7 Claims. (Cl. 271—2.5)



5. Capstan apparatus for changing the speed of movable recording tape for magnetic sound recording and reproducing apparatus wherein the moving tape is operatively clamped between said capstan and a roller idler comprising, drive means having an upright turnable shaft, said shaft having a predetermined outside diameter and also having opposed spaced apart shoulder stops defined by an axial segment of shaft having an undercut outside diameter intermediate said shoulder stops, a longitudinal capstan sleeve having a cylindrical inner bore extending from one open end of said sleeve, said sleeve being mounted on said shaft, said capstan having an axial section thereof of predetermined outside diameter different than the aforesaid shaft outside diameter, said capstan also having an opening extending through a section of its wall, and means in locked register with said opening and extending therethrough and having an inner end adapted to engage slidably said undercut outside diameter of said shaft, magnetic tape speed being alternated from a relatively high to a relatively low speed by alternating the position of said capstan with respect to said shaft from one to another of two positions, vertical displacement of said capstan from one to another of its two positions being limited by engagement of said means with respectively said lower and upper shoulder stops wherein positioning of said capstan to a first of its positions causes said means to engage one of said shoulder stops and thus disposes said capstan outside diameter juxtaposed said movable tape, whereby said tape is clamped against said capstan by said idler roller so as to effect tape movement of a predetermined speed, translation of said capstan to the other of its positions withdraws said capstan from its position juxtaposed said tape wherein said tape is now clamped against said shaft outside diameter by said idler, whereby the speed of said tape is operatively changed to another predetermined speed.

2,865,633
SPRINGLESS POGO STICK
James I. Woodall, Los Angeles, Calif., assignor to L. G. Glidersleeve, doing business as Glidersleeve Manufacturing Company, Pasadena, Calif.
Application July 2, 1956, Serial No. 595,346
2 Claims. (Cl. 272—57)



1. A pogo stick for use by children and adults in propelling themselves from place to place using energy stored in a column of pressurized air held captive within said pogo stick, said pogo stick comprising a pair of elongated inner and outer tubular members of different diameters movably assembled telescopically of one another, the smaller diameter tubular member having piston means fixed to its inner end cooperable with the side wall and closed upper end of the outer tubular member to hold a column of pressurized air captive, a removable hollow handgrip at the upper end of said outer tubular member, normally closed valve means at the upper end of said outer member normally concealed within and protected by said hollow handgrip and made accessible for replenishment of the pressurized air by the removal of said handgrip, means for holding said tubular members detachably assembled at their overlapping telescoping ends comprising a unitary member having a transverse bore centrally thereof forming a guide journal for said inner tubular member and including a concentric larger diameter threaded portion mating with screw threads on the lower end of said outer member, and stop means fixed to said inner tubular member at a point spaced below said piston means and on the interior side of said guide journal, said stop means being cooperable with said guide journal to limit the maximum extension movement of said tubular members relative to one another.

2,865,634
BASKETBALL BANKBOARD SUSPENSION
Paul V. Townsend, Anderson, Ind., assignor to Recreation Equipment Corporation, Anderson, Ind.
Application June 19, 1956, Serial No. 594,739
3 Claims. (Cl. 273—1.5)

1. A basket ball bankboard and basket support comprising an overhead fixed structure; a pair of spaced apart, parallel brace members hingedly carried by and normally diagonally depending from said structure; a leg downturned from the lower ends of each of said brace members; a bankboard fixed to said legs; a pair of spaced apart vertically extending support members carried by said structure by upper end portions and hingedly interconnected by lower end portions with said brace members adjacent the junction of said legs with said brace members; an arm extending from each of the upper end

drum, the fastener and record-orienting arrangement

2,865,635

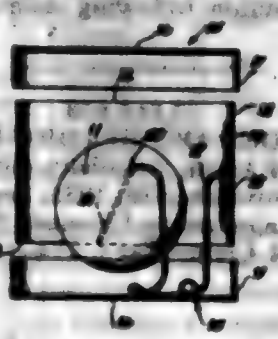
portions of said support members at a common obtuse angle therefrom in a direction away from said brace members; hinge means interconnecting lower ends of said arms with upper ends of said support members; said arms each being hinged by their upper ends to said structure; said hinge means limiting hinging between said support members and said arms to positions thereof positioning said support members approximately vertically; and cable means carried by said structure for lifting said bankboard swinging said brace members toward said structure and said upper portions of said support members toward said brace members approaching parallelism

therebetween and with said structure; said cable means comprising a cross tie between said legs; a retracting cable fixed by one end to said tie; a pulley carried by said structure spaced forwardly of said hinge means; said retracting cable being passed over said pulley terminating in a free end; a second pulley fixed to the cable free end; and a lift cable fixed by one end to said tie and carried over said second pulley; a third pulley fixed to said structure spaced from said upper ends of the arms, said lift cable being carried over said third pulley; and the length of said retracting cable between said first and pulleys increasing upon upward swing of the bankboard under pull on said lift cable.

2,865,635
GOLF INSTRUCTION DEVICE
Leslie A. Jensen, Chicago, Ill.
Application August 7, 1956, Serial No. 602,593
2 Claims. (Cl. 273—36)

1. A golf instruction device comprising in combination a puck having a thin generally flat body adapted to be laid upon the grass or the like and having a sharp pointed nose and a pair of side surfaces extending in diverging relation from the nose and presenting angularly related striking areas, a golf club having an upwardly extending shank and a head at the lower end of the shank, said head having a top side and a forward side the latter presenting a striking face, a guide line bisecting said face vertically and continuing in centered relation over said top side, said head alignable by the player with said striking face transverse to said sharp-pointed nose of the puck and said guide line centered on the nose so as to strike the puck on the nose with said face, said shank having a central guide line extending lengthwise thereof and lateral guide lines at opposite sides of the central guide line, said central guide line adapted to guide the player to place his thumbs therealong while conventionally grasping the club to correctly hold the club in relation to said striking face to properly strike said nose, said lateral guide lines providing correction for the individual player to place his thumbs in grasping the club along either of the lateral guide lines to cant the face of the head of the club to the left or right respectively in the event that by the player gripping of the club shank as aforesaid causes him to hit the puck not on the nose but on either of said striking areas so that the projected path of the puck is either to the right or left respectively and not straight forward.

2,865,636
TOY
Robert L. Blackman, Los Angeles, Calif.
Application November 23, 1956, Serial No. 623,983
4 Claims. (Cl. 273—67)



4. A toy, comprising: a hollow open-ended body member; a closure across one end of said hollow body member; an elastic member secured to the hollow member and having a free portion; a resilient movable member attached to the free portion of said elastic member and having outer dimensions less than the inner dimensions of said hollow member, the toy being operable to repeatedly bounce the resilient member against the closure.

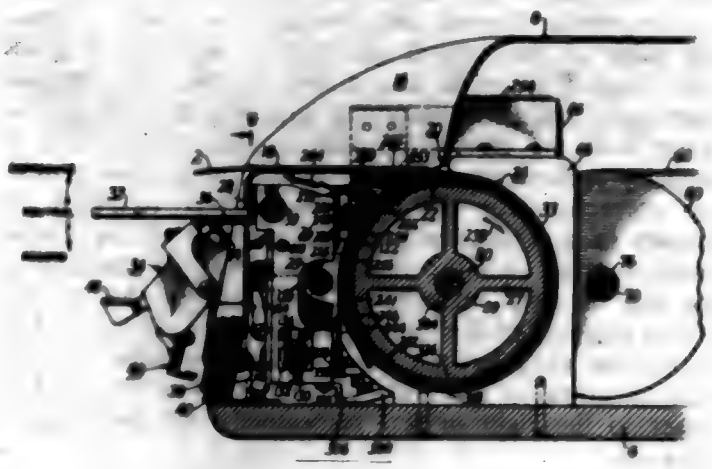
2,865,637
SOUND RECORDING AND REPRODUCING APPARATUS
Frederick W. Roberts, Fairfield, Edward S. Gillette, Bridgeport, John A. Dunton, East Norwalk, and Arthur W. Skoog, Bridgeport, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn.
Application August 7, 1947, Serial No. 767,210
31 Claims. (Cl. 274—4)

1. A sound recording and reproducing apparatus of a type arranged to operate with a paper-thin, permanent, foldable record sheet, said apparatus comprising: a machine frame, a rotatable record supporting drum mounted on the frame around which a record sheet may be cylindrically wrapped, a fastener and record-orienting arrangement on the drum for securing one end of the record sheet thereto, a record sheet holding structure disposed around the drum during sound transducing in a fixed position on the frame relative to the axis of said

gripping means provided with a resilient gripping surface and adapted to be inserted into a tube, said tube gripping

sion supports extending from one end thereof and from diametrically opposite sides of the chuck member in a

drum, the fastener and record-orienting arrangement and holding structure cooperating with the drum to maintain the record sheet in firm disposition on the drum during sound transducing operation, a motor and intermediate driving mechanism including a reversing clutch unit coupled to the drum for rotation thereof during sound transducing operation, the direction of drum rotation depending upon the setting of the reversing clutch unit, an electrical system arranged to supply current to



the motor, a loading control means and control operable thereby which control, upon actuation of the control means, completes the drive through the clutch unit to rotate the drum in a forward direction, and a record drum position-responsive mechanism operating to declutch the clutch unit at the completion of at least one complete drum revolution following such control means actuation.

2,865,638

PHONOGRAPH RECORD PLAYER

Norbert Karl Acker, Offenbach (Main), Germany

Application November 30, 1955, Serial No. 550,080
Claims priority, application Germany December 15, 1954
4 Claims. (Cl. 274—10)

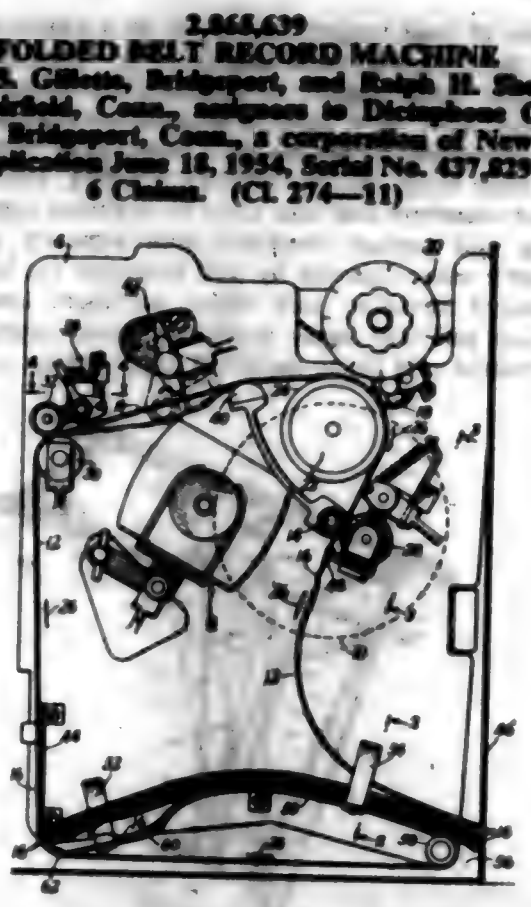
1. In a phonograph record player having a plurality of records in a magazine and means for selecting among said records for playing, a stationary circular pin disc having a plurality of selector pins in spaced relation around its circumference, a stationary circular contact disc having electrical contacts also in spaced relation around its circumference, a selector wheel movable in relation to said pin disc and said contact disc, a solenoid in fixed position on said selector wheel capable of cooperation with each of the selector pins on said pin disc and with the respective contact on said contact disc, an electric motor for rotating said selector wheel, manually operable electrical means for actuating the pin of each record to be played, and electric connections with each of the said selector pins and said contacts to be closed into independent circuits over the said solenoid when the said selector wheel, during its rotation, passes a contact-closing position between the selector pin and its respective contact.

2,865,639

FOLDED BELT RECORD MACHINE

Edward S. Gillette, Bridgeport, and Ralph H. Sherman, Jr., Fairfield, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York

Application June 18, 1954, Serial No. 437,829
6 Claims. (Cl. 274—11)



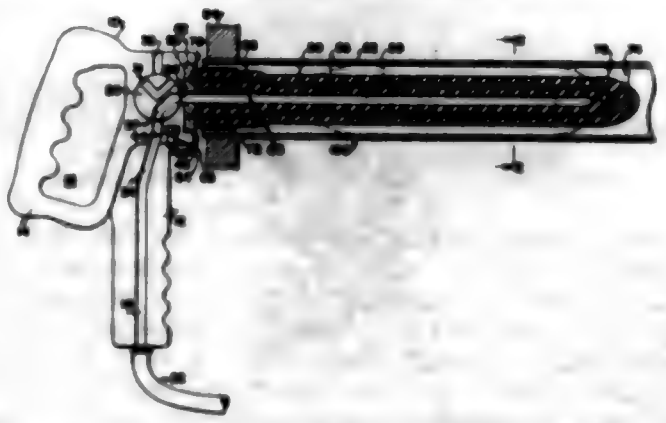
1. In a record system, a tape record creased across its width at spaced intervals along its length, and storage means for storing in accordion-pleated form some length of said record, said storage means including a curved platform or shelf having a raised portion for part of its length and a depressed portion for another part of its length, said platform positioned beneath a moving part of said tape and adapted to receive and support some length of the tape in accordion-pleated form as the tape urged by gravity folds itself in layers upon said platform, said platform directly supporting the layers of said tape over roughly their right half and supporting a portion of their left half in a raised position over the depressed portion of said platform, whereby creases in said tape have free space to open as said tape is being withdrawn from said storage means.

2,865,640

TUBE HOLDING APPARATUS

Donald C. Watson, Roselle Park, Harry E. Spears, Fair Haven, and Samuel W. Bonne, Jr., Scotch Plains, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application December 21, 1955, Serial No. 554,489
7 Claims. (Cl. 279—3)

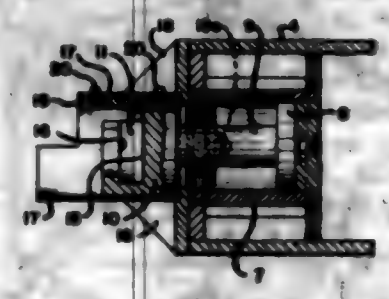


1. A tool of the character described including a head member provided with passageways for gas, valve means for selecting certain of said passageways for alinement for the passage of gas therethrough, an expansible tube

pointed nose and a pair of side surfaces extending in a fixed position on the frame relative to the axis of said

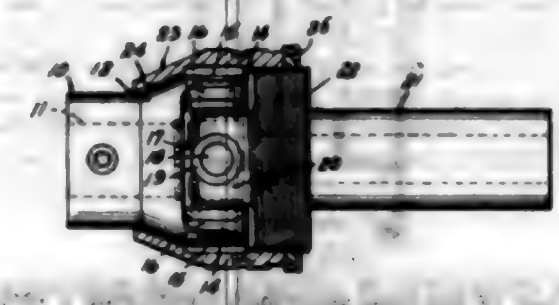
gripping means provided with a resilient gripping surface and adapted to be inserted into a tube, said tube gripping means extending from said head member for insertion into a tube to be held stationary, and means associated with said valve means whereby said expansible tube gripping means is expanded to cause said resilient gripping surface to frictionally engage the inner wall of said tube.

2,865,641
TOOL HOLDER FOR TOOL DRESSING MACHINES
Walter P. McKain, Parkersburg, W. Va., assignor, by mesne assignments, to Fadis Radio & Electric Co., Inc., Cincinnati, Ohio, a corporation of New York
Application January 23, 1956, Serial No. 560,650
8 Claims. (Cl. 279—9)



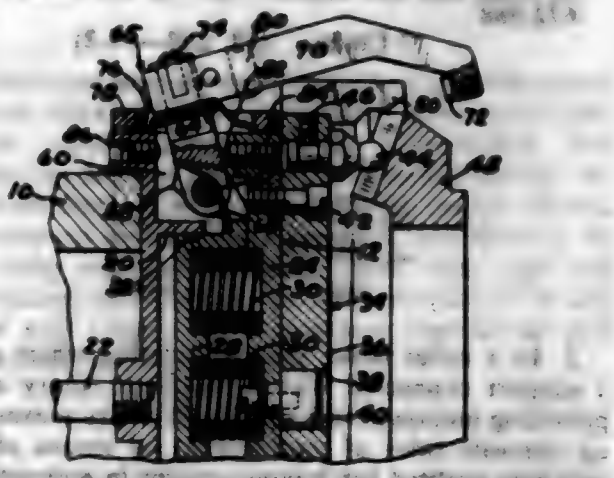
1. A tool holder for tool dressing machines comprising a support, a rigid tool-engaging member carried by the support and movable relatively thereto, means carried by the support for moving the tool-engaging member relatively to the support while the support is stationary, the tool-engaging member having a radially outwardly open socket with a reduced radially outwardly open end portion defining one wall of the socket, the socket being adapted to receive a portion of a tool of relatively great radial dimension while the end portion receives a part of the tool of relatively small radial dimension so that the tool may be introduced radially into interfitting relationship with the tool-engaging member when the tool-engaging member is in a predetermined position relatively to the support, and means fixedly carried by the support alongside the path of the tool-engaging member in its movement relatively to the support cooperating with the tool-engaging member and said portion of the tool to maintain the tool-engaging member and said portion of the tool in interfitting relationship after commencement of movement relaively to the support from said predetermined position of the tool-engaging member with said portion of the tool in interfitting relationship therewith.

2,865,642
TOOLHOLDER FOR REAMERS AND THE LIKE
Herbert O. Kelsey, Elmwood, Conn.
Application December 7, 1956, Serial No. 626,868
2 Claims. (Cl. 279—16)



1. In a toolholder for reamers and the like, a rotatable cylindrical shank having a pair of short trunnion supports depending from one end of the shank and disposed respectively on diametrically opposite sides of the shank, a rotatable chuck member adapted to carry a reaming tool and the like and having a pair of up-standing short trunnion supports extending from one end thereof and from diametrically opposite sides of the chuck member in a direction opposite the trunnion supports on the shank, a connecting member having a solid body and a pair of trunnions extending from the body and slidably and pivotally received by the trunnion supports on the shank and a second pair of trunnions extending from the body at right angles and lying in the same plane as the first pair and pivotally and slidably received by the trunnion supports on the chuck member, the chuck member having a shallow external conical surface extending coaxially thereof and tapering toward the other end thereof, and an external collar threadably mounted on the shank for movement longitudinally thereof and having an internal shallow conical surface engageable with the conical surface on the chuck member to limit relative sliding and pivotal movement between the chuck member and shank.

2,865,643
EDGE CLAMPING CHUCK
John J. Parker and Leonce T. Marowski, Detroit, Mich.
Application June 27, 1957, Serial No. 668,469
9 Claims. (Cl. 279—106)

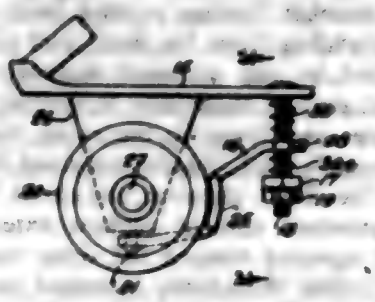


1. A chuck for holding a work piece of circular form by axially directed clamping forces exerted at a plurality of points adjacent its periphery comprising a body member having a rear face forming a support for attaching the chuck to a machine spindle and a front face for receiving a work engaging head, a chuck actuating member mounted in the body for axial motion between the faces, means forming a plurality of pivots rigidly carried by the actuating member with their axes tangentially positioned and equally spaced around the periphery of the body, a plurality of generally C-shaped clamping talons each mounted on a pivot and extending forwardly and inwardly to a work engaging tip, means acting between said actuating member and said talons and yieldably biasing the talons on said pivots toward the innermost position of their tips, and means effective during only a portion of the stroke of the actuating member for moving the talons outwardly against their bias whereby the actuator upon a rearward movement will first cause rocking of the talons inwardly and thereafter will move the talons bodily toward the rear to clamp a work piece between the tips and the work engaging head.

2,865,644
CONTROLLABLE SKATE HAVING CONTINUOUSLY APPLIED BRAKE
Simon Levin, New York, N. Y.
Application May 16, 1955, Serial No. 508,675
8 Claims. (Cl. 280—11.2)

1. In a roller skate, the combination which comprises a support connected with a footplate, rotary means attached to said support for providing motion to said

skate, a constraining means in continuous engagement with said rotary means, self-adjustable force transmitting means in engagement with said constraining means



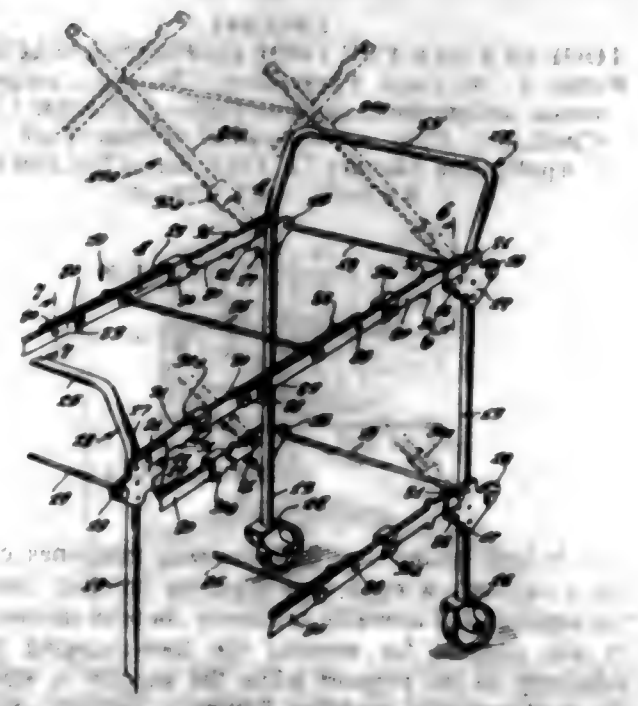
whereby said self-adjustable force transmitting means enables said constraining means to accommodate to said rotary means and means for applying a controllable force to said self-adjustable force transmitting means.

2,865,645
ROLLER SKATE HAVING CONTINUOUSLY APPLIED BRAKING MEANS
Sharon Levin, New York, N. Y.
Original application May 16, 1955, Serial No. 508,475. Divided and this application July 19, 1957, Serial No. 672,988
7 Claims. (Cl. 280—11.2)

5. In a roller skate, the combination which comprises a support connected with a footplate, rotary means for providing motion to said skate, said rotary means mounted on opposite sides of said support by means of an axle, said axle adapted for free movement in a direction transverse to the rotation of said rotary means, self-adjustable force transmitting means for coupling said axle to said rotary means and means for applying a controllable force to said axle whereby said self-adjustable force transmitting means constrains said rotary means at all times.

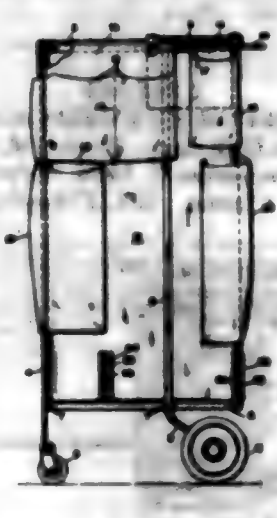
2,865,646
FOLDAWAY TEA CART
Henry Krumbein, Brooklyn, N. Y.
Application June 11, 1957, Serial No. 664,968
2 Claims. (Cl. 280—41)

1. A folding tea cart frame including the combination of a pair of end members, each of which comprises a pair of normally upright parallel legs spaced apart, a transverse elongated member rigidly interconnecting the upper portions of the two legs in each pair, a pair of similar links pivotally connected at one end of each individually to the legs in each pair a predetermined distance below the upper ends thereof with each link in each pair pivotally connected at an intermediate position to a corresponding intermediate portion of the corresponding opposite link in each pair, so that in erected position of the frame the other ends of the links overlap each other with their intermediate portions of the links to which they are connected, a transverse rod extending from one connected pair of links to the other pair and forming at the ends of said rod the pivots by which the two pairs of links are pivotally connected, a second pair of mutually similar links pivotally connected at one end of each individually to said legs in each pair of the latter a predetermined distance above the lower ends thereof with each link in each second pair pivotally connected at an intermediate portion to a corresponding intermediate portion of the corresponding opposite link in each second pair, so that in erected position of said frame, the other ends of the links of said second pairs overlap intermediate portions of the links to which they are pivotally connected, a second transverse rod extending from the intermediate portions of one of the second pair of links to the intermediate portions of the other



pair of the latter links and forming the pivots at the ends thereof by which the second pairs of links are pivotally connected, and a locking member slidably mounted upon each link between the pivoted end and intermediate portion thereof in effective position to be longitudinally shifted along the same to engage upon and lock the overlapping end of the respectively opposite link thereto which is connected to the link involved, at a point remote from the transverse rod forming the pivot of the two links thus locked by the locking member in each case.

2,865,647
CHAMBERMAID'S CART
Raymond J. Wilson, Portland, Oreg.
Application May 9, 1957, Serial No. 658,194
2 Claims. (Cl. 280—47.35)



1. A cart of the class described comprising a vertically disposed chassis mounted upon supporting wheels and adapted to be tilted rearwardly relative to the wheels into a running position, said chassis comprising a forward vertical frame member and two rearward vertical frame members, a top ring member secured to the top end of said frame members and a matching bottom ring member

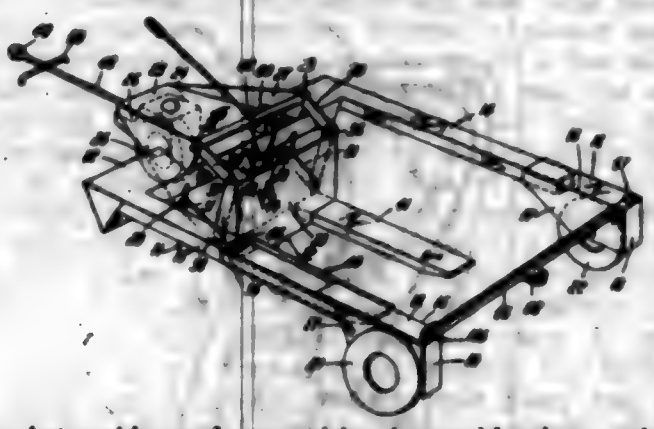
secured to the frame members near the bottom end thereof, said frame members extending below the bottom ring, the bottom end of the rearward frame members being turned rearwardly relative to the bottom ring and provided with said supporting wheels whereby the cart may be tilted rearwardly, an elongated bag vertically suspended within the chassis and extended at its top end into apron portions overhanging said top ring member in parallelism with the external walls of the bag, vertically disposed pockets secured to the internal and external walls of the bag, vertical pockets secured to the exterior of said apron portions whereby the weight of said apron portions cooperates with that of the bag in maintaining the bag suspended from said top ring member, a downwardly opening pocket secured to said bag at its bottom end between said rearward frame members, downwardly opening pockets secured to the bag at its bottom end between said forward and rearward vertical frame members, and correspondingly located vertically disposed pins secured to said bottom ring member and normally engaged within said downwardly opening pockets to thereby hold the bag against swinging outwardly rearward of the chassis when the cart is tilted rearwardly into a running position.

2,865,648

TRUCKS FOR TRANSPORTING GOODS

Alfred Erwin Reginald Arpot, Basingstoke, England, assignor to John Reginald Sharp and Emmanuel Kaye, Basingstoke, England

Application October 20, 1953, Serial No. 387,117
Claims priority, application Great Britain October 31, 1952
3 Claims. (Cl. 280—62)



1. A towable truck comprising in combination a tubular frame consisting of a head member and two rearwardly extending side arms, a tie bar having tow bar coupling means mounted thereon, universal joint means removably connecting said tie bar to the rear end of one of said side arms so that said bar extends across the rear ends of said side arms such that said frame and said bar enclose a load carrying space, a wheel associated with each of said side arms at the rear ends thereof, a wheeled steerable bogie extending forwardly of said head member and having a tow bar associated therewith, means mounted on said head member to support load carrying means within said space, and bracket means attached to one of said side arms, said bracket means being adapted to secure said tie-bar in fixed relation to said side arm when not in use.

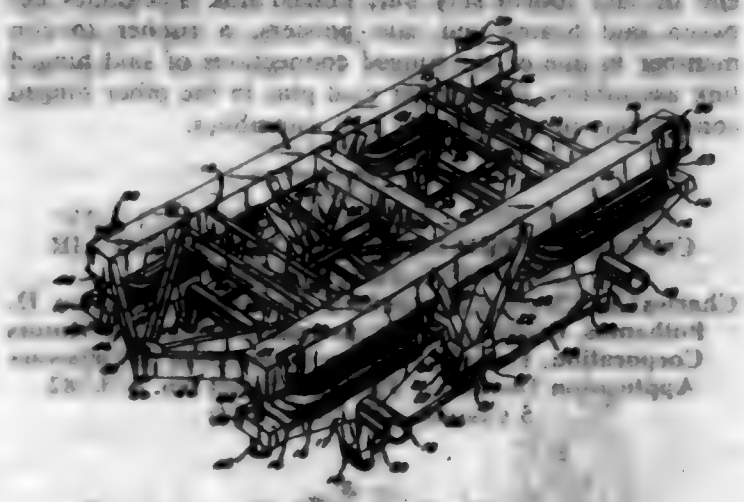
2,865,649

TANDEM AXLE WHEEL SUSPENSION FOR AUTOMOTIVE VEHICLES

William M. Chalmers, Niles, and Franklin R. Easton, Salem, Ohio, assignors to Youngstown Steel Car Corporation, Niles, Ohio, a corporation of Ohio

Application December 5, 1956, Serial No. 626,698
6 Claims. (Cl. 280—104.5)

1. A pneumatic air spring suspension for a vehicle comprising a pair of parallel axles, bolsters affixed thereon in normal relation thereto, chassis beams superjacent said bolsters and parallel thereto, air cells carried by said bolsters and supporting the ends of said beams, brackets suspended from said axles in normal relation thereto, trunnion members depending from said beams intermediate said air cells, pillow blocks on the free ends thereof and U-shaped torsion rods seated in said pillow blocks, the ends thereof being pivotally connected to said brackets, a cross beam intermediate said chassis beams, a bracket suspended therefrom, vertical arms on said axles in the center thereof, and links pivotally connected to said bracket and said arms, chassis cross members intermediate said beams parallel to said cross beam, second brackets depending therefrom adjacent one of said beams, second vertical arms on said axles adjacent one end thereof, tie rods pivotally connected to said second arms and said second brackets and snubbers pivotally connected to said axles and said chassis cross members superjacent said second vertical arms.

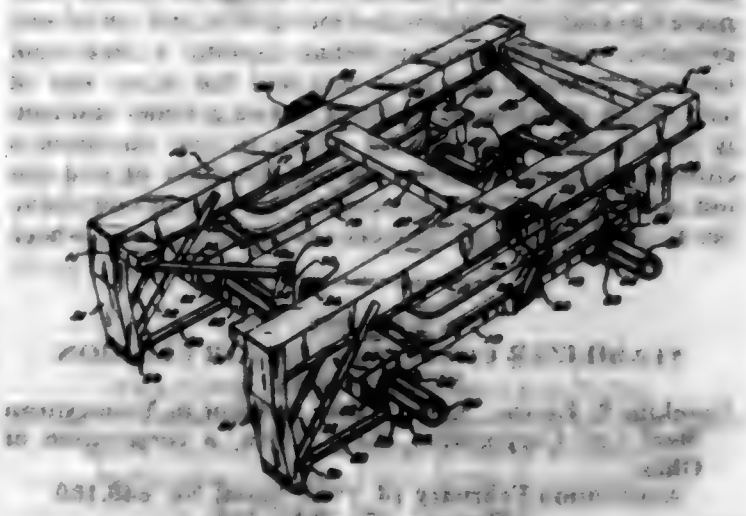


2,865,650

AIR CUSHION SUSPENSION FOR AUTOMOBILE VEHICLES

William M. Chalmers and Matt Maharick, Niles, Ohio, assignors to Youngstown Steel Car Corporation, Niles, Ohio, a corporation of Ohio

Application February 11, 1957, Serial No. 639,492
6 Claims. (Cl. 280—104.5)



1. An undercarriage for an air spring suspension assembly comprising a pair of parallel beams, cross members affixed thereto, a front axle, bolsters yieldably mounted thereon subjacent said beams, air cells intermediate said beams and said bolsters, arms depending from the forward ends of said beams, a pair of stay bars between said arms and said axle, rubber clad pin connections on each end of each stay bar, a pair of secondary stay bars between the outer ends of said beams and the cen-

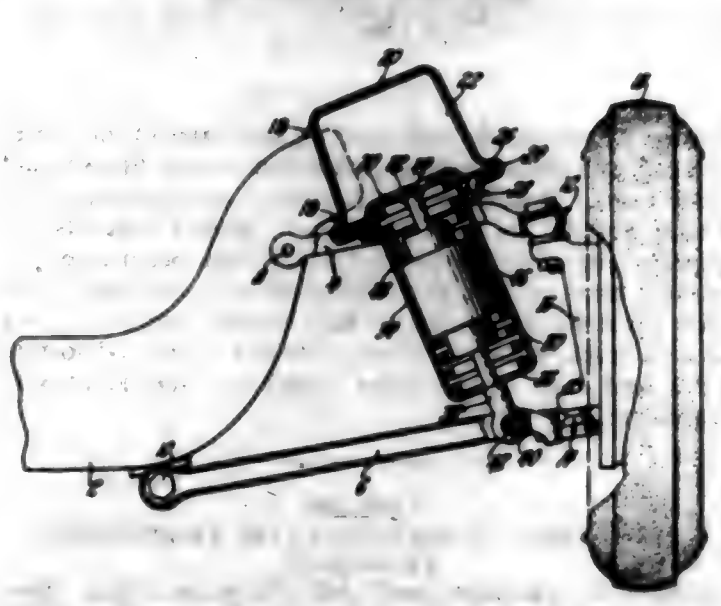
tral portion of said axle, rubber clad pin connections on each end of each secondary stay bar, a rear axle on said bolsters, a third stay bar between the upper face of said rear axle and the lower face of said front axle, rubber clad pin connections on each end of the last named stay bar, a post depending from the rearward end of one of said beams, a horizontal bracket affixed to said rear axle, a fourth stay bar between said post and said bracket, rubber clad pin connections on each end of said fourth stay bar, hinged link assemblies between said beams and said bolsters, a rubber torsion member in one of the hinged connections of said hinged link assemblies, and rubber clad pins in the other hinged connections in said hinged link assemblies.

2,865,651

COMBINED WHEEL HOP DAMPER AND AIR SPRING SUSPENSION

Charles A. Chayne, Bloomfield Township, and Von D. Polhemus, Franklin, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 30, 1954, Serial No. 478,782
5 Claims. (Cl. 280—124)



1. In a vehicle suspension, the combination of a frame, a wheel, lever means connecting said wheel to said frame, a cylinder having an open end, means rigidly connecting said cylinder to said frame, an elongated piston connected to said lever means and movable in and out of said cylinder, resilient annular means forming a leak-proof juncture between said open end and the upper end of said piston whereby air confined in said cylinder resiliently resists movement of said piston in one direction, a closed cylindrical chamber formed interiorly of said piston, and dynamic absorber means movable in said chamber to counteract high frequency oscillation of said wheel.

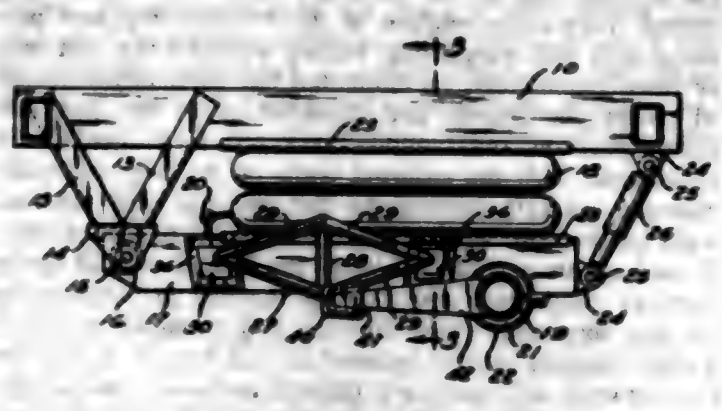
2,865,652

STABILIZER COUPLING FOR AIR CUSHION SUSPENSION

Franklin B. Easton, Salem, Ohio, assignor to Youngstown Steel Car Corporation, Niles, Ohio, a corporation of Ohio

Application February 14, 1957, Serial No. 640,100
3 Claims. (Cl. 280—124)

1. An undercarriage for a vehicular air cell supporting structure comprising a chassis frame, bolsters pivoted thereon adjacent the forward end thereof, rubber clad pins in the pivotal connection for said bolsters, air cells intermediate said bolsters and said frame, shock absorbers between the rearward ends of said frame and bolsters, a rubber bushing carried by said bolsters, a vehicle axle in said bushing, a truss disposed between said bolsters, cross arms in said truss, rubber sleeves on the ends of said cross arms seated in said bolsters, a bracket welded to said axle, a rubber sleeve on the end thereof, a bear-



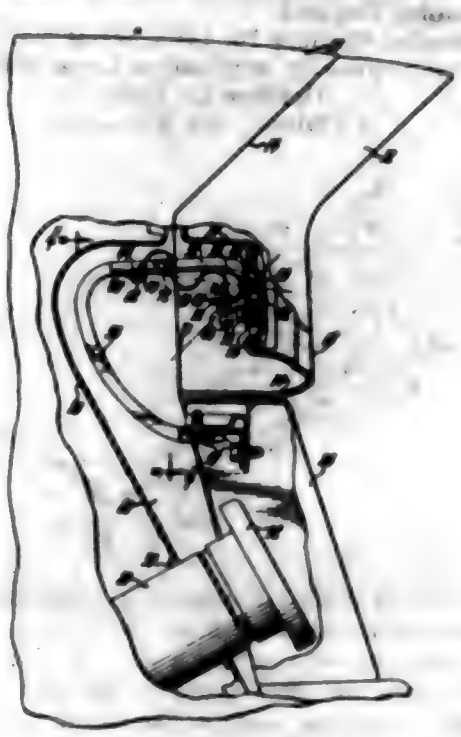
ing socket in the center of said truss supporting said rubber sleeve on the bracket, and means on said rubber sleeves to restrain the rotation thereof.

2,865,653

ACCESS DOOR FOR VEHICLE FUEL INLET

Blair N. Nixon, Lansing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 21, 1956, Serial No. 611,263
2 Claims. (Cl. 280—152)



1. In combination with an access door for a fuel filler neck in an automotive vehicle, a rear lamp support and a hinge, said support being secured to a portion of said vehicle and having a decorative and protective molding mounted thereon in a generally vertical disposition, said molding having its lower terminal end disposed immediately above an access opening providing access to said filler tube, said door being hinged to said rear lamp support and including an exterior portion providing a closure for said opening and disposed immediately adjacent said molding lower terminal end when in a closed position so as to form a design continuation thereof, said hinge supporting said door on said lamp support and having a first section secured to said lamp support and a second section secured to said door and a hinge pin holding said sections in hinged relation and return bent pivots formed on each of said sections and receiving an overcenter leaf spring whereby said spring may move about said pivots during opening and closing movements of said door and transmit overcenter actuation thereto.

bracing the ends of said sleeve and a pin extending

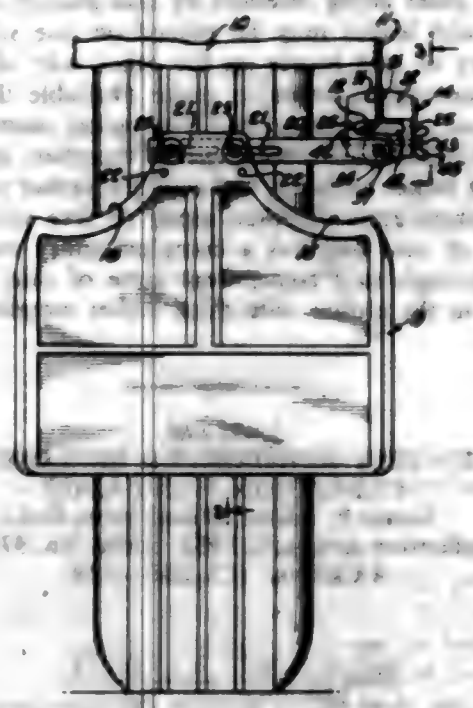
free side of said third jacket member with the free side

2,865,654

AUTOMOBILE FENDER FLAP AND SUPPORTING CLAMP

Frank M. Le Compte, Cranford, N. J., assignor to Tingley Rubber Corporation, a corporation of New Jersey

Application June 17, 1955, Serial No. 516,095
11 Claims. (Cl. 280—154.5)



1. A device for supporting a fender flap from the fender of a car, comprising a clamp adapted to be fastened to the fender and including a pair of opposed jaws exactly alike and interchangeable, each of said jaws being made from a metal sheet bent into U-shape to present near one end clamping edges for bearing against a face of a fender wall, each of said jaws presenting near the opposite end a pair of fingers, the two jaws being disposed opposite each other with the fingers of the two jaws in overlapping engagement, each of said jaws intermediate its ends being formed with a recess to receive the differently shaped lower edge sections of fenders of standard makes, a fastening pin passing through said fingers to hold said jaws together while permitting said jaws to have relative angular movement about the axis of said pin, an arm for supporting a fender flap having a hole to receive said pin, whereby said clamp may be mounted on said arm, said clamp being angularly adjustable as a unit about the axis of said pin in relation to said arm, means including said pin for securing said clamp to said arm in adjusted position against angular movement as a unit about said axis, and means for releasably clamping said jaws to opposite faces of a fender wall comprising a bolt passing through the two jaws in a direction transverse to said pin.

2,865,655

LAND VEHICLE WHEEL FLAP

Martin C. Boysen, Joseph, Oreg.

Application March 26, 1956, Serial No. 573,858
6 Claims. (Cl. 280—154.5)

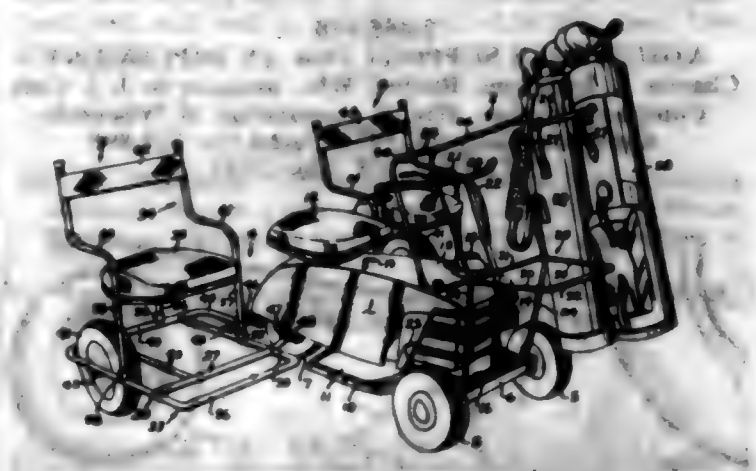
3. In combination with a land vehicle having a frame member and a rotatable wheel, a releasable connector for a wheel flap comprising a back plate secured to said frame in a substantially vertical plane and having a horizontally disposed support lip spaced downwardly from its upper edge; keepers yieldably secured in overlying relationship to the marginal vertical edge portions of said back plate and disposed above said support lip; said keepers having at least a portion spaced from said back plate and together therewith defining an upwardly open socket; a base plate slidable downwardly into said socket and having portions thereof confined intermediate said back plate and said yieldable keepers; arms carried by said base plate; and a flap secured to said arms and disposed to stop material thrown by rotation of said wheel.

2,865,656

SIDE CAR ARRANGEMENT FOR GOLFING VEHICLE

Ody Musgrave, Springfield, Ohio

Application June 25, 1956, Serial No. 593,670
3 Claims. (Cl. 280—283)



1. In combination, in a side car for attachment to a tractor, a frame having means for forming an articulated connection secured to the frame along a first lateral side thereof whereby the side-car is joinable to a tractor, a ground-contacting wheel carried by the frame disposed along a second and opposite lateral side of the frame rearwardly on the frame, a chair-like structure mounted on the frame having a seat provided between the said first and second frame sides and in vertical relation thereto, the chair-like structure including a trio of vertically extending legs releasably secured to the frame and providing support for the seat, two of the legs being mounted on the opposite sides of the frame forwardly of the wheel and being reversely bent upwardly of the seat, the third leg extending vertically from the rear of the frame to engage the seat rearwardly, the frame being open and unobstructed to the seat forwardly, and a flexible back strap secured to the upper ends of the said two legs flexibly uniting the legs rearwardly of the wheel center.

2,865,657

TRACTOR AND IMPLEMENT HITCH

Evans L. Clarke, Milan, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Application May 29, 1956, Serial No. 585,866
4 Claims. (Cl. 280—460)

1. In a hitch for a tractor mounted implement, said implement having spaced apart lower hitch points and a single hitch point in an elevated position relatively to said spaced apart hitch points, the combination with the tractor of a pair of laterally spaced lower links of predetermined width pivoted to the tractor at laterally spaced bearings, at least one of said bearings constituting a sleeve of a length substantially in excess of the width of its respective link fixed transversely on said link, a bifurcated bracket fixed on the tractor and em-

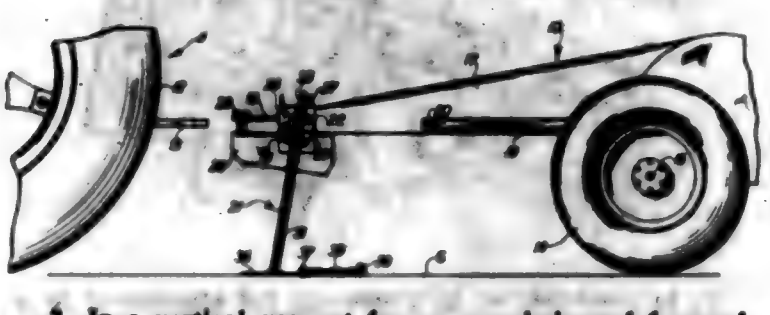
2,865,661

ing through said disk, a locking spring within said recess

bracing the ends of said sleeve and a pin extending through the sleeve and bracket, whereby to provide for

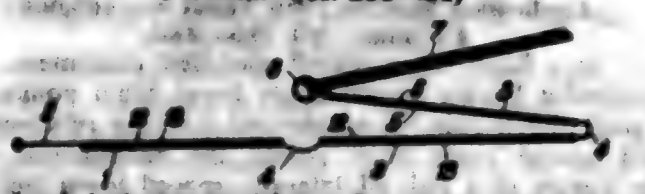
pivotal movement of its respective link substantially exclusively in a single surface of revolution having an axis common to said bearing.

2,865,658
ADJUSTABLE SUPPORT FOR AN IMPLEMENT
Charles J. Dubuque, Racine, Wis., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Application July 28, 1955, Serial No. 524,895
3 Claims. (Cl. 280—475)



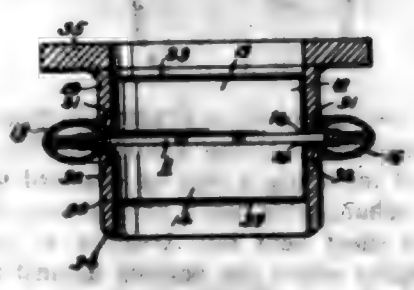
3. In a vertical support for an over-balanced forward end of an implement, the combination of a drawbar attached to said implement and extending forwardly thereof, a plate pivotally connected to one side of the forward end of said drawbar and disposed in an upright plane, a jack attached to said plate for pivotal movement therewith in said upright plane for supporting said implement in its over-balanced position and for adjustably elevating said drawbar, an abutment on said drawbar disposed forward of and below the pivot of said plate for limiting forward pivotal movement thereof, said abutment including a rear end spaced from said drawbar for snugly receiving a front edge of said plate upon forward pivot of said plate for restricting transverse movement of said plate with said jack, and said plate providing an edge portion downwardly spaced relatively to said pivot for engagement with said abutment.

2,865,659
BOOK-JACKET WITH A REPLACEABLE NOTE-PAD
Otto Heinrich Zimmermann, Wuppertal-Barmen, Germany
Application November 18, 1953, Serial No. 392,569
1 Claim. (Cl. 281—31)



A book jacket comprising a first jacket member and a second jacket member, a first flexible means connecting one of the free sides of said first jacket member with one of the free sides of said second jacket member, a third jacket member and a second flexible means connecting a free side of said third jacket member with the free side of said second jacket member, said third jacket member defining a pocket open at its free edge opposite said second flexible connecting means and having an opening at the outer edge of said third jacket member, and a pad having one stiff sheet and a plurality of leaves, a plurality of rings holding together said leaves on one edge thereof, said stiff sheet being received by said pocket, so that one part of said leaves may be placed on one side and the other part of said leaves on the other side of said third jacket member, in order to make available the top leaf of said pad, upon lifting said first jacket member and to make available said second jacket member, upon lifting said third jacket member, and said first jacket member has a transparent zone disposed along its free side, and said top leaf of said pad has a complementary zone portion visible through said transparent zone of said first jacket member in the closed, said third jacket member covering position.

2,865,660
INTERNALLY REINFORCED BELLOWS-TYPE EXPANSION JOINT UNIT
James P. Zallea, Wilmington, Del.
Application August 3, 1953, Serial No. 371,971
4 Claims. (Cl. 285—229)



1. In an expansion joint adapted for operatively interconnecting axially spaced opposed end portions of a pair of pipe line sections, a bellows element comprising a plurality of axially aligned tubular portions and an annularly corrugated portion between each successive pair of said tubular portions, each of said corrugations including an outer ovaloid part entirely concave to the interior of the pipe and jointed to the adjacent tubular portions by inner curved parts entirely convex to the interior of the pipe, the major axis of said ovaloid part being normal to the axis of said bellows element, annular external means respectively embracing said tubular portions to reinforce the same and afford support for said curved convex inner parts against flexing under operating conditions, and annular internal means within each of said annular corrugations, each of the latter means being structurally and functionally independent of the others and self-locked in place and having an outer peripheral edge abutting the outermost circumferentially extending portion of the corrugation to thereby support the same against any reduction in diameter, each of said annular internal means comprising a ring member that is flat as a whole and which includes a plurality of coplanar segments of a like thickness substantially corresponding to the clear distance between the curved convex inner parts of the corrugations, certain of said segments being arcuately shaped about an axis normal to the plane of the segment and being positioned in end to end relation to thereby conjointly form the major part of said ring member, and one of said segments being a key segment operative to close said ring, said external and internal annular means being conjointly operative to stay any outward bulging of the side walls of said ovaloid part under operating conditions, and said annular internal means being disposed wholely within said corrugation to thereby provide an unobstructed passage through said bellows element.

ing said supporting member to the faucet shaft against rotation relative thereto; a handle member telescopically

tween said trigger lever and said knotting bills, operable to affect rotation of said bills when the trigger lever is

a wheel flap comprising a back plate secured to said

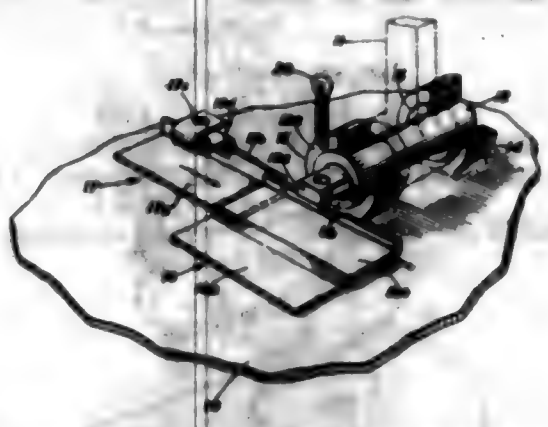
737 O. G.—62

link, a bifurcated bracket fixed on the tractor and em-

2,865,661
MEANS FOR LOCKING A REMOVABLE COUPLING PIN

Nicholas Klompas, Beverly Hills, Ontario, Canada, assignor to Oronda Engines Limited, Malton, Ontario, Canada, a corporation

Application January 9, 1956, Serial No. 553,160
2 Claims. (Cl. 287—39)

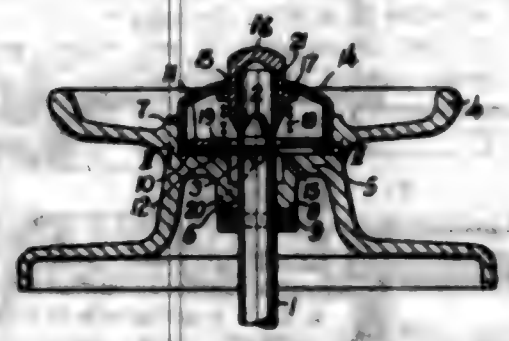


1. A demountable coupling pin for coupling a rod or link to a body, comprising a bearing attached to the body, a pin removably received and slidable along its length in the bearing and having one end projecting from the bearing, a flange on the projecting part of the pin and engaging the bearing to prevent the projecting part from entering the bearing, a stop on the body spaced from and in line with the projecting part of the pin and having a fastening part secured to the body and a clamping part, a locking piece between the projecting part of the pin and the stop, the locking piece having a body engaging part engaging the clamping part of the stop, and means positively connecting the locking piece to the projecting part of the pin.

2,865,662
MEANS FOR REMOVABLY MOUNTING A MEMBER ON A SHAFT

Karl Nurmse, Svangsta, Sweden, assignor to Aktiebolaget Urfabriken, Svangsta, Sweden, a corporation of Sweden

Application September 6, 1955, Serial No. 532,548
Claims priority, application Sweden September 10, 1954
2 Claims. (Cl. 287—53)



1. In combination with a shaft having a tapered end, a pin secured to said shaft transversely of its axis and spaced from said tapered end, said shaft having a peripheral groove intermediate said pin and said tapered end; a fishing line spool removably and non-rotatably connected to said shaft, said spool having at one end a centrally located hub portion with a longitudinal bore therein extending through said spool, said hub portion terminating in an end surface having a diametric groove therein, the bore of said spool receiving said shaft with said shaft pin being inserted within the diametric groove in said hub portion to prevent rotation of said spool relative to said shaft, said spool having a centrally located recess at the other end thereof, a centrally-apertured disk in the bottom of said cylindrical recess having a central portion parallel to and spaced from the bottom surface of the cylindrical recess, the tapered end of said shaft extending through said disk, a locking spring within said recess intermediate the bottom surface thereof and said disk, said locking spring having two parallel leg portions extending on opposite sides of said shaft in engagement with the peripheral groove therein and an arched portion essentially concentric with the peripheral wall of said cylindrical recess, said locking spring preventing axial displacement of said spool relative to said shaft, a hood member mounted in the cylindrical recess in said spool, said hood member having a tubular flanged portion contiguous with the wall of said cylindrical recess and also having a central opening therein, and means for radially displacing the leg portions of said spring out of engagement with the peripheral groove in said shaft comprising a push button longitudinally movable within said hood opening colinearly with respect to said shaft, said push button having a wedge end portion adjacent the tapered end of said shaft and arranged to be inserted intermediate said spring leg portions, and spring means normally biasing said push button axially away from said shaft, whereby upon manual displacement of said press button axially toward said shaft said locking spring will be deformed out of engagement with said shaft to permit removal to said spool from said shaft.

2,865,663
PUMP ROD ASSEMBLY

Roy K. Shellman, Compton, and Clarence H. Leathers, Redondo Beach, Calif., assignors to Macclatchie Manufacturing Company, Compton, Calif., a corporation of California

Application September 13, 1954, Serial No. 455,384
5 Claims. (Cl. 287—111)

1. The combination, comprising prime mover having a pony rod and means through which the rod projects, said rod having a cylindrical surface sized for reciprocation through said means and a shoulder facing axially oppositely from the rod end, a mud pump piston rod having a threaded shank axially aligned with the pony rod and abutting said end thereof, a split bushing spanning said shoulder and shank and including another shoulder and threads respectively engaging said pony rod shoulder and the shank threads to releasably hold said rods in end abutting relation whereby axial movement of the pony rod may be transmitted to the piston rod, said split bushing being within a cylindrical axial projection of said pony rod surface so as to be receivable within said means during rod reciprocation, and a nut mounted on said shank and having a recess receiving the end of said bushing to prevent disengagement of said shoulders and threads, said nut being rotatable on the shank away from the bushing to free it for separation from the shank permitting release of the piston rod from connection to the pony rod.

2,865,664
FAUCET SAFETY HANDLE

Harold W. Robb, Pomona, Calif.

Application February 4, 1955, Serial No. 486,883
1 Claim. (Cl. 287—119)

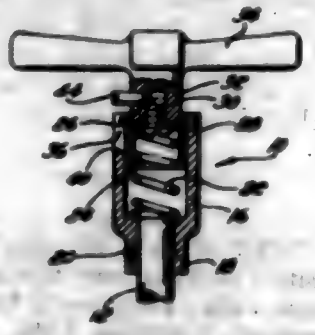
In a safety handle for a faucet having a projecting faucet shaft, the combination of: a supporting member mountable on the faucet shaft; means for fixedly secur-

in said intermediate position, whereby said part on the

member at all positions of said locking lever, said arcuate

jacket member and a second flexible means connecting a said bellows element.

ing said supporting member to the faucet shaft against rotation relative thereto; a handle member telescopically connected to and carried by said supporting member and reciprocable relative thereto axially of the faucet shaft between retracted and extended positions relative to said supporting member, said handle member being freely rotatable relative to said supporting member about the axis of the faucet shaft when in said extended position; spring means engaging said supporting member and said handle member for biasing said handle member toward said extended position thereof; intereengageable stop means on said handle member and said supporting member for preventing movement of said handle member beyond said extended position thereof in response to the biasing action of said spring means; and intereengageable means on said handle member and said supporting member and responsive to movement of said handle member from said extended position to said re-



tracted position for transmitting rotation of said handle member to said supporting member for transmission thereby to the faucet shaft, including a J-shaped bayonet slot in one of said members and a pin on the other of said members insertable into said bayonet slot, said bayonet slot including an open-ended portion extending generally parallel to the axis of the faucet shaft, an intermediate portion generally perpendicular to said open-ended portion, and a closed-ended portion generally parallel to said open-ended portion and located alongside of said open-ended portion, said pin being movable through said open-ended portion and said intermediate portion into said closed-ended portion into engagement with a closed end of said closed-ended portion, said spring means biasing said pin into engagement with said closed end of said closed-ended portion of said bayonet slot when said pin is disposed therein, whereby to lock said handle member and said supporting member together against relative rotation.

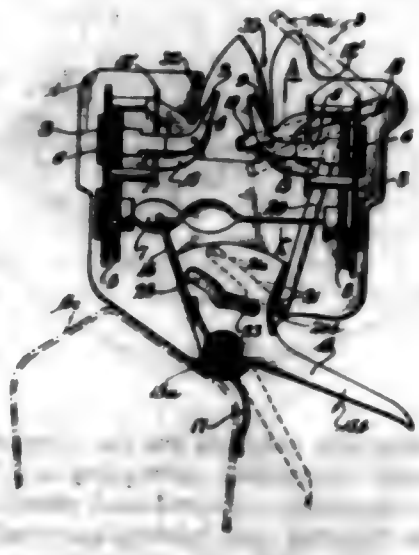
2,865,665

KNOTTING DEVICE

Daniele Mosca, Rho Velciano, Italy

Application January 8, 1957, Serial No. 633,872
Claims priority, application Italy January 13, 1956
11 Claims. (Cl. 289—17)

1. A knotting device for automatically tying a pair of threads in a composite knot comprising, a pair of laterally spaced apart side plates, a pair of knotting bills including thread holding means and thread shearing means rotatably mounted between said plates on axes substantially parallel to the planes of said plates, a pair of support members mounted transversely between said plates, said plates having guide slits in an end edge thereof for supporting said threads extended between said side plates and laterally spaced one from the other with the holding and shearing means of said bills located between said threads, a trigger lever pivotally mounted between said plates, said knotting bills and support members having cooperating cam guide means for controlling sequential operation of said holding means and thread shearing means during cyclic operation of the device, a tension lever connected to said trigger lever for reciprocal movement in a vertical plane between said knotting bills, drive means connected between said trigger lever and said knotting bills, operable to affect rotation of said bills when the trigger lever is moved, and second thread gripping means operably connected with the trigger means and arranged adjacent one of said plates in a predetermined position relative to the guide slits in said one plate whereby operation of the second thread gripping means will cross said threads,



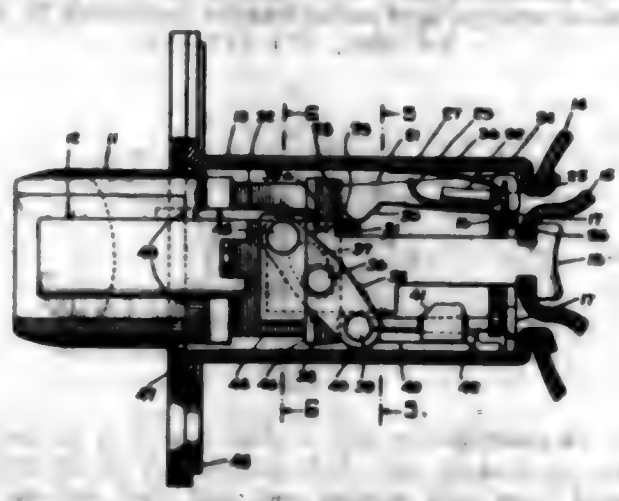
said device operative upon movement of the trigger lever to perform a sequence of operations in which the threads first are crossed by said second gripping means, thereafter said knotting bills are rotated through a cycle of revolution in which a pair of spaced apart knots are formed and ends of the threads are severed, then said tensioning lever is moved to slide said knots one toward the other to form said composite knot.

2,865,666

DEADLOCKING LATCHBOLT FOR CYLINDRICAL LOCK

Paul P. Kuhlt, Philadelphia, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut

Application August 20, 1956, Serial No. 604,899
9 Claims. (Cl. 292—163)



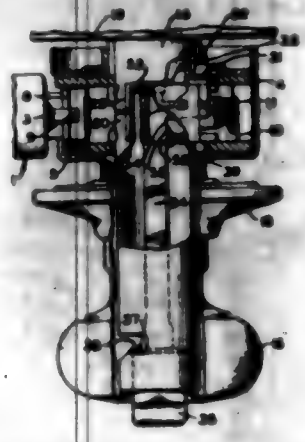
4. In a lock of the class described, a latch tube, a latchbolt moving in said latch tube between projected and retracted positions, a tail adapted to be moved longitudinally in the latch tube by a retractor and through which the retractor moves the latchbolt to retracted position, a deadlocking lever spring pressed toward a position dogging the latchbolt and movable against the spring pressure to release position, a part on the latchbolt in camming relation to the deadlocking lever when said lever is in an intermediate position relatively to its dogging and release positions, a trigger bolt moving in the latch tube between projected and retracted positions, a portion on said trigger bolt acting when the trigger bolt is in projected position to hold the deadlocking lever

the screen in vertical position, said latch means being each other, said horizontal arm having an open end and

the cylindrical recess, the tapered end of said shaft extend- mountable on the faucet shaft; means for fixedly secur-

in said intermediate position, whereby said part on the latchbolt by its camming relation to the lever will move the lever to its release position when said latchbolt is retracted, a portion on the said tail in camming relation to the deadlocking lever when the lever is in dogging position, and said portion on the tail effective when the trigger bolt is in retracted position to move the lever to said intermediate position as the retractor moves the tail to retract the latchbolt.

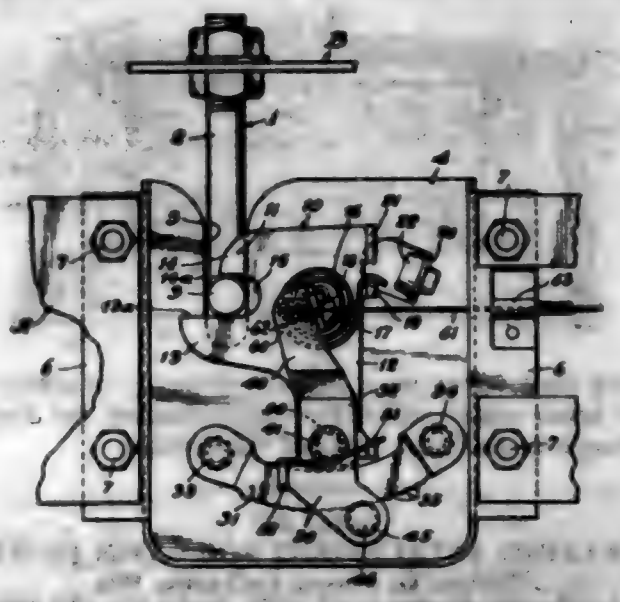
2,865,667
SPINDLE MECHANISM FOR LOCKS
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Application October 3, 1956, Serial No. 613,684
5 Claims. (Cl. 292—169)



1. In a door lock having a bolt retractor slidably supported for movement from an outer position in which the bolt is projected to an inner position in which the bolt is retracted, spring means urging said retractor to said outer position, and inside and outside knob spindles supported for independent rotation about a common axis, and wherein said spindles are provided with rollbacks in engagement with said retractor for sliding said retractor toward said inner position upon rotation of either of said spindles, the improvement comprising: dogging means carried by said inside spindle and movable to a position dogging said outside spindle against rotation, and holding means movable with said dogging means and having a cam surface engageable with said retractor for holding said retractor out of engagement with the rollback on said outer spindle when said dogging means is in said dogging position.

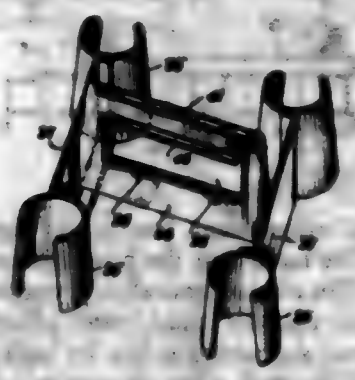
2,865,668
HOOD LATCH WITH RATCHET LOCKING MEANS
Herbert Krause, Chicago, Ill., assignor to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application August 30, 1956, Serial No. 607,080
3 Claims. (Cl. 292—216)

1. In a hood latch, a latch-supporting plate, a keeper-receiving opening in said plate, a latch pivotally mounted on said plate, said latch having keeper-engaging portions positioned to lie across said opening when said latch is in latching position, yielding means positioned to urge said latch toward non-latching position, and means for locking said latch in latching position, said last-named means comprising a generally arcuate member fixed on said plate, said latch having an arm portion pivotal in an arc paralleling and adjacently within the arc of said fixed member, a locking lever pivoted to and movable with said latch arm portion, said locking lever having a lever portion paralleling said latch arm portion at one side of the pivot of said locking lever, said locking lever having a second arm portion on the opposite side of said last named pivot, said second locking lever portion overlying said arcuate member at all positions of said locking lever, said arcuate member having serrations formed along its outer arcuate edge, said last-named locking lever portion having an element positioned thereon overlying said serrations at



all positions of said locking lever, and yielding means operative against said main latch arm portion and said locking lever and effective to urge said element into engagement with said serrations at all positions of said latch.

2,865,669
BOTTLE CARRIER
Frank R. Lindsicum, Moorestown, N. J.
Application July 26, 1955, Serial No. 524,525
12 Claims. (Cl. 294—87.2)



1. A bottle carrier embodying a hollow frusto-conical part with a diameter at the smaller upper end less than that of the enlarged neck portion of a bottle intended to be carried, said part having opposed sides resiliently connected and adapted to be flexed apart for the reception of the bottle neck by forcibly spreading the sides by relative axial insertion of the enlarged neck portion of the bottle, and automatically to contract into position below said enlarged portion, said frusto-conical part having an open top and adapted to expose fully the top part of the inserted bottle.

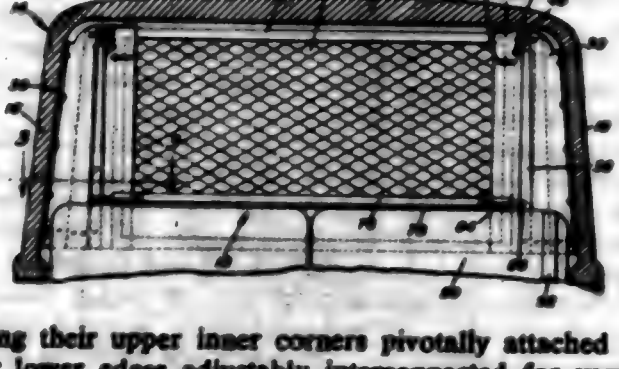
2,865,670
SCREEN-TYPE GUARD FOR OPERATORS OF PRISONER TRANSPORTING VEHICLES
John D. Dunn, Franklin, La.
Application June 28, 1956, Serial No. 594,528
3 Claims. (Cl. 296—34)

1. In combination with a sedan-type passenger vehicle an attachment for protecting the driver of said vehicle comprising a bracket adapted to be mounted at each side of the vehicle, said brackets being disposed in transverse alignment rearwardly of the driver's seat, a transverse screen member pivotally attached to the upper ends of said brackets and normally forming a transverse partition in the vehicle, latch means interconnecting the lower edge of the screen and the brackets for locking

to have its lever end anchored in the ground, a bearing said plunger being axially slidable in said second guide

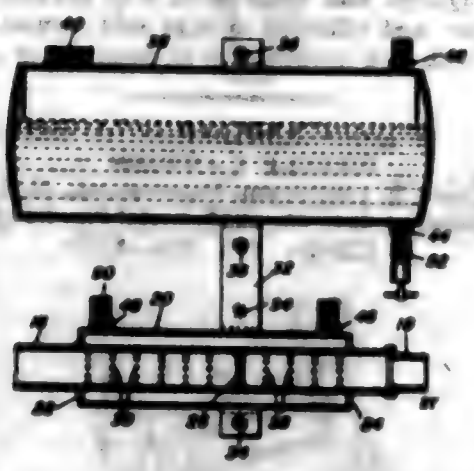
between said knotting bills, drive means connected be- is in projected position to hold the deadlocking lever

the screen in vertical position, said latch means being operable from the front side of the screen for protecting the driver from attack from rear seat passengers, each of said brackets including a pair of overlapping plates



having their upper inner corners pivotally attached and their lower edges adjustably interconnected for varying the angle of the outer edge of the bracket.

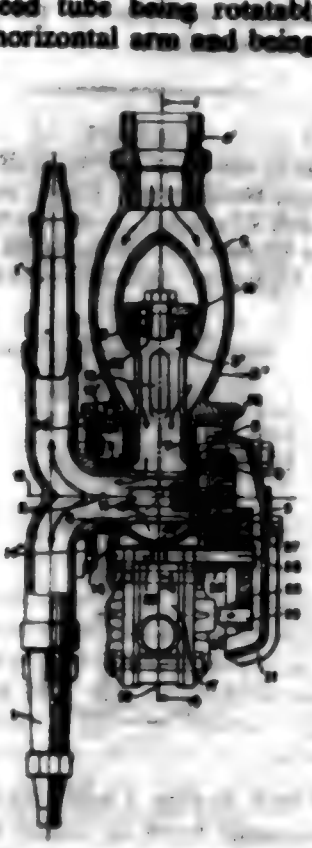
2,865,671
SPRAYING ATTACHMENT FOR LAWN MOWER
William G. Jensen, Lafayette, Wis.
Application September 7, 1956, Serial No. 608,459
6 Claims. (Cl. 299—30)



1. A spraying attachment for power operated lawn mowers of the type having as the power plant therefor an internal combustion engine operatively connected thereto and including an exhaust pipe, said attachment being mounted upon and supported solely by said exhaust pipe and comprising a conduit with means for connecting the same to and supporting the same from said exhaust pipe, a casing mounted upon and surrounding said conduit, said casing being sealed from direct communication with the atmosphere and forming with said conduit a vaporizer chamber, means connected to said chamber and to said exhaust pipe for passing exhaust gases through said chamber, a tank for a liquid to be vaporized and sprayed, means mounting said tank upon said casing, means connected to said tank and to said chamber for feeding a liquid from said tank to said chamber at a constant rate whereby to vaporize said liquid in said chamber by the heat of the exhaust gases passing through said conduit, means connected to said chamber for discharging vaporized liquid from said chamber into said exhaust pipe.

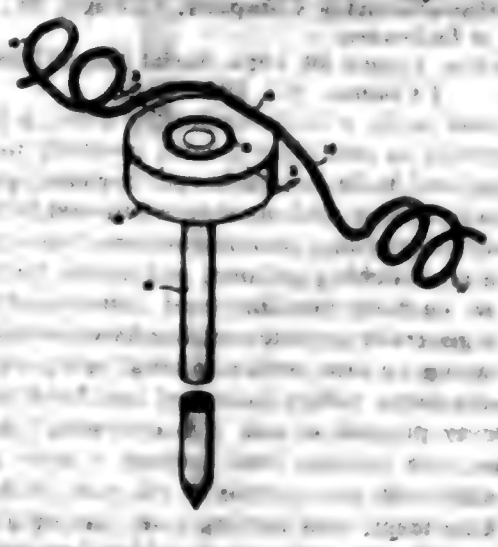
2,865,672
TANK WASHING APPARATUS
Paul André Jean-Marie Guinard, Saint Cloud, France, assignor to Etablissements Pompes Guinard, Saint Cloud (S. et O.), France, a corporation of France
Application February 21, 1956, Serial No. 567,801
2 Claims. (Cl. 299—63)

1. A tank cleaning device comprising a bifurcated stationary tube having a supply end and a delivery end and adapted to be connected to a source of supply of washing liquid, a hollow T-shaped member having vertical and horizontally extending arms disposed at right angles to each other, said horizontal arm having an open end and an obturated end, said vertical arm having a plurality of lateral apertures and being rotatably and water-tightly engaged in the delivery end of said bifurcated tube, two diametrically opposed reaction nozzles, a hollow feed tube disposed in said horizontal arm, one end of said feed tube being connected to said nozzles and the other being obturated, said feed tube being rotatably water-tightly mounted in said horizontal arm and being provided with



openings intermediate its ends, a movable toothed ring secured to said feed tube, a stationary toothed ring disposed around the delivery end of said bifurcated tube so as to mesh with said movable toothed ring, volumetric geared pump means secured to said T-shaped member and adapted to rotate therewith, said volumetric geared pump being further adapted to work in a closed circuit, a throttle member in said volumetric pump having a plurality of differently calibrated ports adapted to limit and adjust the delivery of said pump, and a multiplying gear train connecting said feed tube with the shaft of said pump and adapted to transmit the rotation of said feed tube to the shaft of said pump.

2,865,673
WATER SPRINKLING DEVICE
Stanley Hathaway, Greenville, N. C.
Application May 28, 1957, Serial No. 662,130
5 Claims. (Cl. 299—65)



1. A device for converting a flexible garden hose into a sprinkler comprising a relatively slender shaft adapted

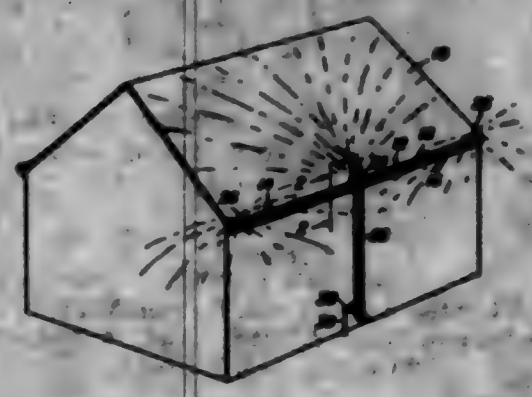
having in addition a generally radially and axially outwardly directed cover portion extending from said stop

recesses to retain the cover on the wheel and against turning, said recesses being defined by spaced side edges

said second locking lever portion overlying said arcuate lower edge of the screen and the brackets for locking

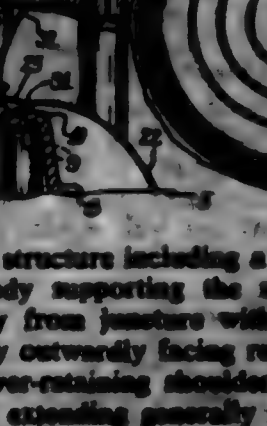
to have its lower end anchored in the ground, a bearing member rotatably mounted on the opposite end of said shaft having a portion freely rotatable relative to such shaft, a hose supporting yoke mounted on said freely rotatable member with its extremities extending outwardly in opposite direction from said member, said oppositely extending extremities having hose encircling coils into which spaced portions of a hose may be readily inserted and said hose may pivot around the free end of said shaft and due to the force of the water discharged from the hose to cause said shaft to flex and swing said hose with a whipping action.

2,865,674
COMBINATION SPRINKLING AND FIRE EXTINGUISHING APPARATUS, AND GUTTERING
Mark C. Johnstead, Burbank, Calif.
Application October 21, 1957, Serial No. 691,289
10 Claims. (Cl. 299—194)



1. A sprinkling apparatus for use with a building having a roof area and a ground area adjacent thereto, comprising an eavestrough for attachment to the building adjacent an edge of the roof; two water conduits supported by the eavestrough and extending longitudinally thereof; at least one sprinkler head in communication with one of said conduits and positioned to spray water on the roof area of the building; at least one sprinkler head in communication with the other conduit and positioned to spray water on the ground area adjacent the building; and means for selectively introducing water under pressure into said conduits.

2,865,676
SPRAY NOZZLE FOR USE IN BEDDING GLASS PLATES FOR GRINDING AND POLISHING
Anthony G. Spence, Ottawa, Ill., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application August 9, 1954, Serial No. 448,515
2 Claims. (Cl. 299—153)



1. In apparatus for applying a suspension of bedding material to the surface of grinding and polishing tables, a spray nozzle having a body portion, and a spray head attached to said body portion and having an arcuate slot formed therein, said slot being of substantially constant cross-sectional area and defined by two continuous spaced surfaces each of which having its end edges terminating at an enlarged aperture having its center line displaced at an approximate angle of 60° from the center line of said spray head.

2,865,678
FUEL INJECTION NOZZLE
Vernon D. Roosa, West Hartford, Conn.
Application April 13, 1956, Serial No. 578,010
12 Claims. (Cl. 299—107.4)

1. In a fuel injection device, a nozzle body having a valve chamber, a valve plunger of smaller cross section than said chamber disposed in the chamber, and means adjustably supporting the plunger for reciprocating movement longitudinally of the chamber comprising a first guide in which the plunger is axially slidable disposed adjacent one end of the chamber and movable laterally of the chamber, a second guide movable relative to the first guide disposed adjacent the other end of the chamber,

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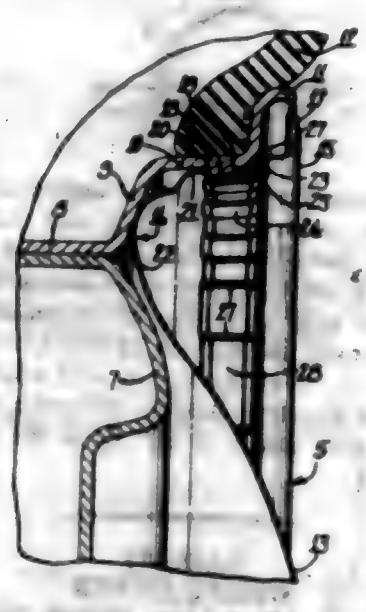
2,865,677
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application October 7, 1954, Serial No. 461,937
2 Claims. (Cl. 301—37)

1. In a wheel structure including a tire rim and a disk spider wheel body supporting the same and provided radially inwardly from juncture with the tire rim with generally radially outwardly facing retaining bumps having undercut cover-retaining shoulders merging with the wheel body and extending generally radially and axially inwardly from noses on the bumps, a cover for disposition at the outer side of the wheel including a central crown portion and a side wall having a stop extremity engageable with the wheel body radially outwardly from the juncture of the bumps with the wheel body, said side wall including an annular cover-retaining generally radially inwardly directed radially resiliently flexibly deflectable rib spaced axially outwardly from said stop extremity, and having at both the axially inner and axially outer sides thereof radially resiliently flexible annular portions of said side wall so as to be radially flexible therewith and engagable under resilient tension with the undercut shoulders of the bumps adjacent to the bump noses and maintained against camming further axially inwardly by said stop extremity engaging the wheel body, the cover

horizontally extending arms disposed at right angles to a sprinkler comprising a relatively slender shaft adapted

having in addition a generally radially and axially outwardly directed cover portion extending from said stop extremity and disposed for overlying relation to the tire rim, said last mentioned cover portion having a plurality of outer marginal annular reinforcing ribs providing pry-off shoulders engageable with a pry-off tool for exerting pry-off force to disengage the retaining rib from the bumps.

2,865,678
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application February 16, 1955, Serial No. 487,275
8 Claims. (Cl. 301—37)



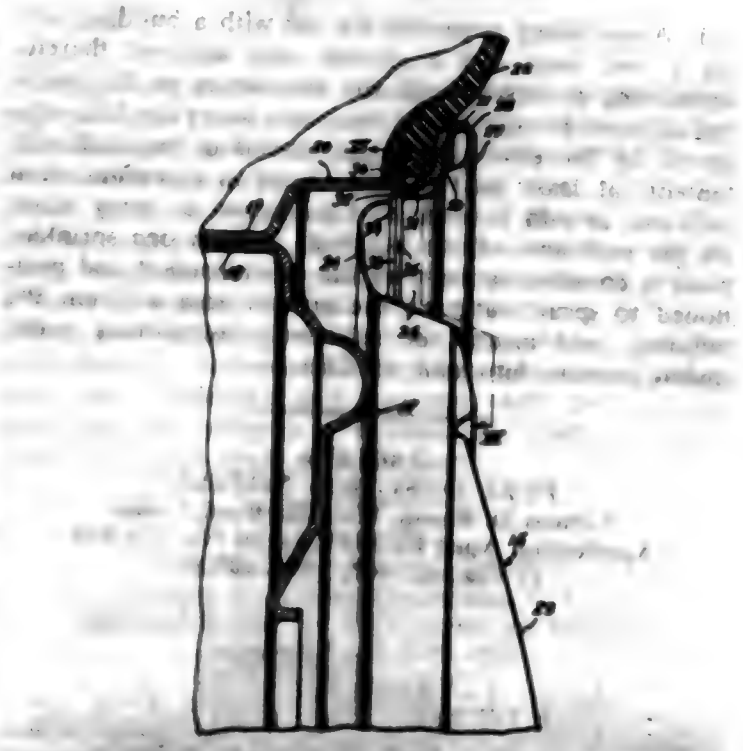
1. In a wheel structure including a wheel body and a tire rim with cover retaining bumps on a generally radially inwardly facing flange of the tire rim and projecting generally radially inwardly and spaced axially outwardly from a generally axially outwardly facing flange of the rim, a cover member for disposition at the outer side of the wheel including a generally axially extending portion of a diameter to fit clear within said radially facing rim flange and joining a dished annular portion extending generally radially inwardly therefrom, with an annular bump engaging continuous resiliently radially flexible rib projecting generally radially outwardly for cover retaining engagement behind said retaining bumps in resiliently flexible press-on, pry-off relation, said dished portion being divided into a plurality of resilient sections arranged to overlie and engage said axially outwardly facing rim flange thrustingly and thereby resiliently cooperating with the axially inner side of said rib for retaining the rib in cover engaging relation to the bumps.

2,865,679
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application July 22, 1955, Serial No. 523,673
10 Claims. (Cl. 301—37)

1. In a cover structure for a wheel including tire rim and body parts, one of which has generally radially extending spaced protuberances disposed generally in a common circle about the axis of the wheel, a metallic circular cover member having an outer marginal annular edge merging into a dished curved inner portion with an annular shoulder at junction of said portions, said outer portion having a series of recesses adapted to register with the wheel protuberances, and each recess being defined on its axially inner side by said shoulder, said shoulder being common to all said recesses and being resiliently deflectable radially when pressed against said wheel protuberances for entry of said protuberances in the recesses to retain the cover on the wheel and against turning, said recesses being defined by severed side edges with the material pressed from the recesses over the

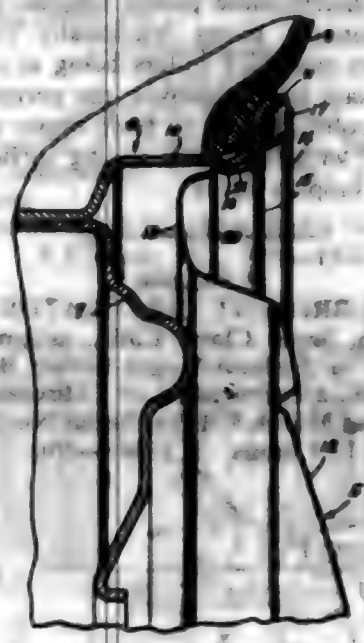
recesses and said side edges opposing the sides of the protuberances to hold the cover against turning on the wheel.

2,865,680
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application March 5, 1956, Serial No. 569,610
20 Claims. (Cl. 301—37)



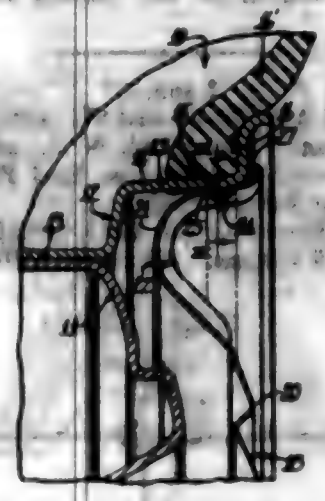
1. In a wheel structure, a wheel including tire rim and body parts one of which has generally radially extending spaced protuberances disposed generally in a common circle about the axis of the wheel, and a metallic circular cover member having an outer marginal annular edge portion merging into a dished curved inner portion with an annular shoulder at the junction of said portions, said outer portion having offset structure providing recesses on the axially outer side of the cover adapted to register with said wheel protuberances, and each recess being defined on one of its sides by said shoulder, said shoulder being common to all said recesses and being resiliently deflectable radially when pressed against said wheel protuberances for entry of said protuberances in recesses to retain the cover on the wheel and against turning.

2,865,681
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application April 24, 1956, Serial No. 580,494
6 Claims. (Cl. 301—37)



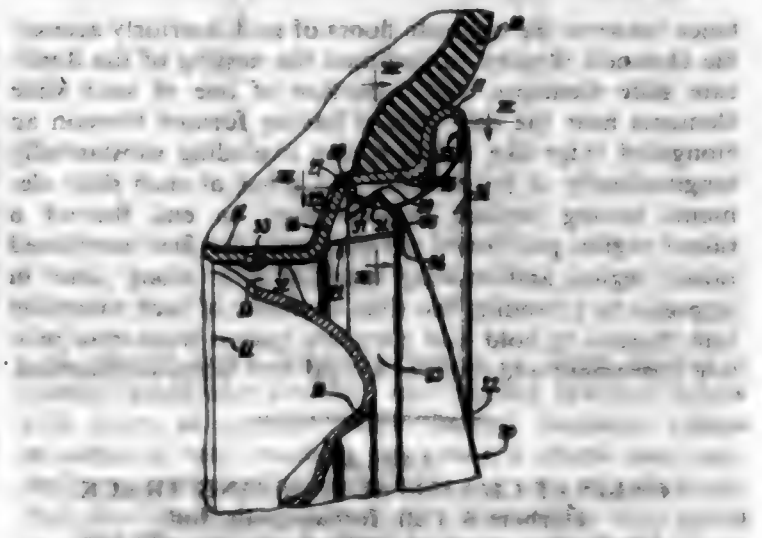
1. In a wheel structure including a wheel part having retaining bumps projecting therefrom, a cover for disposition at the outer side of the wheel including a circular normally substantially stiff portion for opposing said bumps and having shoulder means thereon for retainingly engaging in snap-on pry-off relation with the bumps, the cover portion at opposite sides of the shoulder means having resilient deflectability enhancing separations, said separations defining generally axially extending stripe having said shoulder means and connected integrally with the cover at their opposite ends but free at their sides so as to be relatively resiliently flexible relative to the adjacent portions of the cover.

2,865,682
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application June 11, 1956, Serial No. 590,623
6 Claims. (Cl. 301—37)



1. In a wheel structure, a wheel including tire rim and body parts one of which has a plurality of generally radially extending protuberances disposed generally in a common circle about the axis of the wheel, and a circular wheel cover member for overlying retained disposition upon the wheel including a dished portion provided with circumferentially spaced generally radially extending ribs, said dished portion having a generally axial portion of greater width than the axial dimension of said protuberances, said axial portion having rib-like shoulder means between said radially extending ribs normally lying in a circle of a diameter so that said shoulder means can fit under tension retainingly behind said protuberances, said axial portion being recessed in offset relation to said shoulder means for registration with the wheel protuberances, said recess being defined on its axially inner side by said shoulder means and said shoulder means being resiliently deflectable out of said circle at said protuberances when pressed against the wheel protuberances for entry of the protuberance in said recess and resilient gripping engagement of said shoulder means behind the protuberances to retain the cover member on the wheel, and localized deflectable cover areas on said axial portion disposed in the vicinity of said shoulder means and said recess which deflectable cover areas are substantially circumferentially confined between pairs of the radially extending ribs and which deflectable cover areas are deflectable upon the axial movement of the shoulder means across the protuberances.

2,865,683
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application March 10, 1958, Serial No. 720,886
11 Claims. (Cl. 301—37)

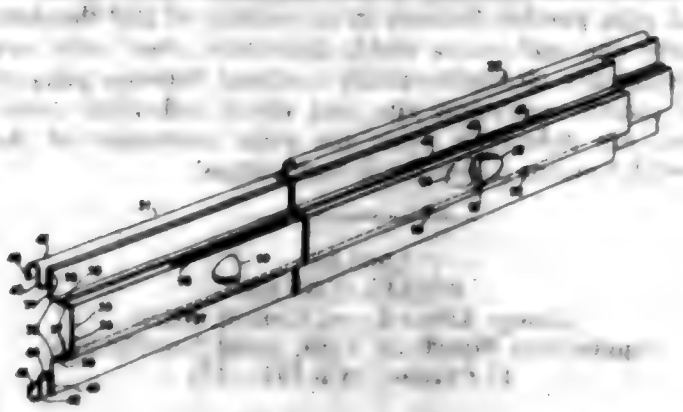


1. In a wheel structure including a tire rim part and a body part with one of said parts having thereon a plurality of axially outwardly extending gooseneck retaining spring clips provided with heads directed generally radially outwardly, a cover for disposition at the outer side of the wheel having a generally axially inwardly directed flange therebehind, said flange having clip receiving pockets therein retainingly receptive of the gooseneck heads of the retaining clips, said pockets being defined by generally radially outwardly projecting embossements in the flange engageable by a pry-off tool for removing the cover from the wheel.

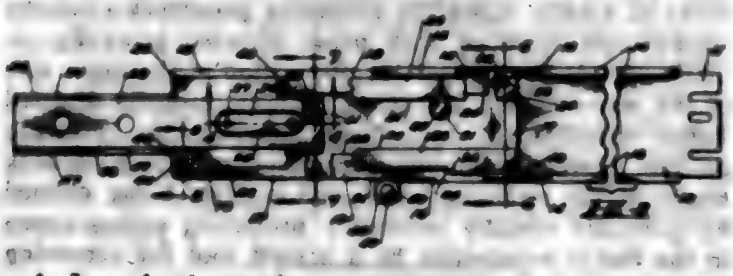
2,865,684
NON-SAG EXTENSION ARM
William G. Meyer, Clifton, N. J., Henry C. Fischer, Aberdeen, Md., and Emil J. Hehner, Whitestone, N. Y., assignors to Steel Slides, Inc., Yonkers, N. Y., a corporation of New York
Application June 5, 1954, Serial No. 589,434
9 Claims. (Cl. 308—3.6)

1. An extension arm comprising in combination: a pair of nestable duplicate slide elements, each of such elements including: a main channel portion having in transverse cross-section sides which form a flared outer part for engaging in nested relationship with the channel portion of the next adjacent slide element; a pair of primary flanges extending outwardly in opposite directions along respective opposite edges of the opposite sides of the flared part of said channel portion, said flanges being integral with said channel portion, a pair of opposite slide element sides

formed integrally each with its respective primary flange, said opposite slide element sides being formed respectively in transverse cross-section in the shape substantially of an S and a reverse S thereby forming a pair of exteriorly accessible subchannels next adjacent respective of said opposite primary flanges, a pair of interiorly accessible and oppositely disposed subchannels next adjacent respective of said first-mentioned subchannels, said interiorly accessible subchannels being thus positioned for receiving the respective primary flanges of the next adjacent slide element, the transverse distance between the opposite edges of said primary flanges being less than the transverse distance between the opposite floors of said interiorly accessible channels thereby to facilitate the nesting of the duplicate slide elements, and a portion of one of such slide elements near the end thereof having formed thereon an elongated ridge-like raised region extending substantially longitudinally of the element, the other of such slide elements having formed thereon near an end thereof a raised region positioned for engaging the first-mentioned raised region and moving longitudinally along same in response to extending the slide elements of such extension arm thereby to hold said elements against transverse relative movement and to form a rigid arm when so extended.

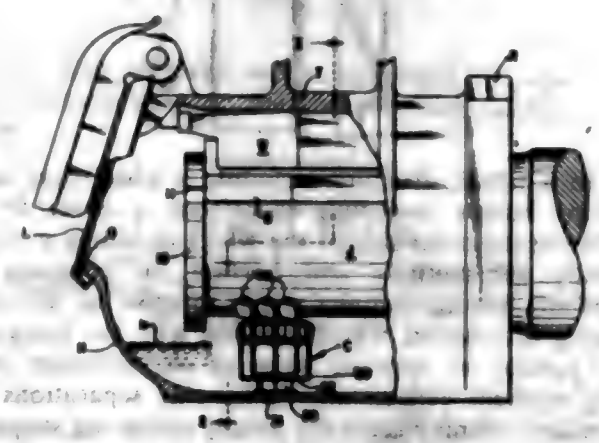


2,865,685
CABINET CHASSIS SUPPORTING TRACK
Herbert S. Fall, Indianapolis, Ind.
Application April 15, 1957, Serial No. 652,936
2 Claims. (Cl. 308—3.8)



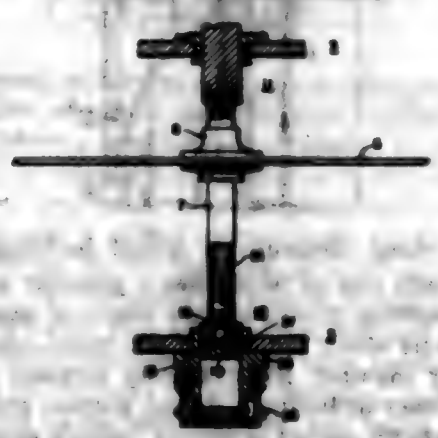
1. In a load carrying, extensible track mechanism, a fixed plate; an intermediate plate; means slidably guiding and retaining said intermediate plate longitudinally of the fixed plate; a roller carried by said fixed plate at an end portion thereof and below an edge of said intermediate plate; a second roller carried by said intermediate plate at one end thereof at an edge opposite to the edge over said fixed plate carried roller; a track member on said fixed plate along which said second roller may travel; a load support plate; means slidably guiding and retaining said support plate longitudinally of said intermediate plate; a third roller carried by said intermediate plate at an end portion opposite to its said one end thereof and under said support plate; a fourth roller carried by said support plate at an upper corner of an end portion thereof; and a track member along said intermediate plate, along which said fourth roller may travel; said intermediate plate fulcruming over said first roller and said second roller limiting rocking of the intermediate plate over the first roller; and said support plate fulcruming over said third roller and said fourth roller limiting rocking of the support plate over said third roller, upon said intermediate and support plates being extended from said fixed plate; said guiding and retaining means in both instances constituting opposing upper and lower grooves on said fixed and intermediate plates; tongues on said intermediate and support plates frictionally riding in said groove; said first and third rollers being at commonly directed ends of said lower grooves; the peripheries of said first and third rollers being by their upper sides substantially tangential with the under sliding surfaces of the intermediate and support plates.

2,865,686
LUBRICANT CIRCULATOR
George E. Rich, Santa Clara, Calif., assignor, by mesne assignments, to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of California
Application March 9, 1956, Serial No. 570,556
11 Claims. (Cl. 308—99)



1. A lubricant circulator for use in railway journal housings and the like comprising a generally U-shaped frame adapted to be fixedly mounted in a journal housing; a plurality of shaft means parallel to each other extending across and fixedly supported by said frame; bushing means rotatably mounted on each of said shaft means; and flexible disc means supported by each bushing, said disc means being constructed from elastomeric material and adapted to flex substantially so as to provide a direct frictional driving engagement with the journal whereby rotation of the journal rotates said disc means directly.

2,865,687
INSTRUMENT BEARING ASSEMBLY
Charles Bergmann, Bloomfield, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 30, 1953, Serial No. 401,141
9 Claims. (Cl. 308—159)



1. In a bearing assembly for mounting a shaft for rotation relative to a stator structure about the shaft axis, a bearing member, and a coil spring having a number of convolutions defining an axial passage of the spring, said

shaft and said bearing member having respectively end and base surfaces, said bearing member and shaft being positioned within said passage with said surfaces in engagement along a plane transverse to said axis, the diameter of said passage being smaller than the diameters of said shaft and said bearing member when the spring is in an untensioned condition.

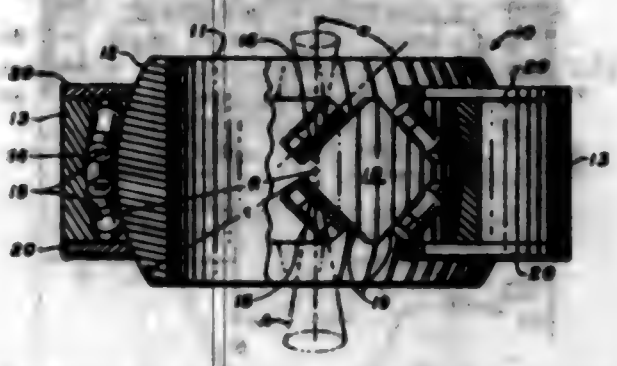
2,865,688

ROLLER BEARING

Harold E. Lemont, Jr., Pottstown, Pa., assignor to Vertol Aircraft Corporation, Morton, Pa., a corporation of Pennsylvania

Application April 26, 1956, Serial No. 580,958

8 Claims. (Cl. 308—194)



1. A bearing comprising an inner member having a spherical outer surface, an outer member having a spherical inner surface uniformly spaced from said outer surface, rollers disposed between said surfaces, said rollers having a portion bearing upon said outer surface and having another portion bearing upon said inner surface, and means for retaining said rollers in a position such that the axis of each roller forms an angle with a plane cutting through the roller and containing the axis of said outer member.

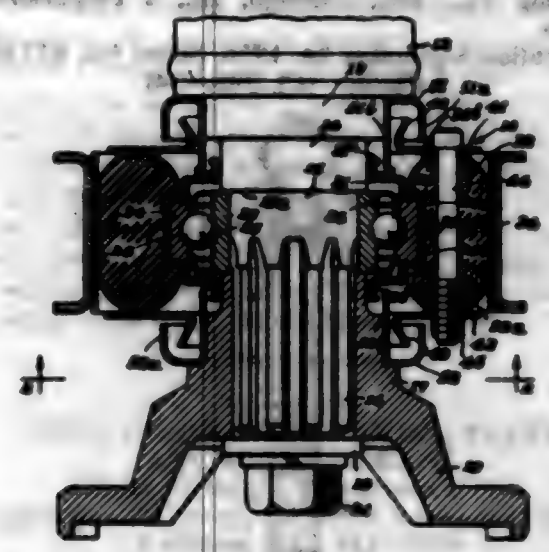
2,865,689

SHAFT BEARING

Donald L. Anderson, Rockford, Ill., assignor of one-half to Edmund B. Anderson and one-half to Walter H. Stark, Rockford, Ill.

Application May 18, 1956, Serial No. 585,688

3 Claims. (Cl. 308—184)



1. A shaft mounting comprising a shaft, anti-friction bearing means including means defining an inner bearing race on said shaft fixed against axial movement with respect thereto and an outer bearing race rotatable with respect thereto, a bearing support member attached to said outer race and fixed against axial movement with respect thereto, means on said support member defining an annular rib, a toroidally shaped insert formed of resilient and deformable material having an annular recess therein medially between the ends thereof for receiving said rib to hold said insert against axial movement with respect to said support member, a mounting bracket having a cylindrical wall slidably engaging said insert at the side thereof opposite said recess, said insert having convex faces at opposite ends thereof, a pair of annular plates engaging said convex faces at opposite ends of said insert, and fasteners extending through said insert and attached to said plates to support the latter in said insert and for drawing the plates toward each other to axially compress said insert and radially expand the same against said mounting bracket to hold said insert against axial movement with respect to the mounting bracket and to provide an adjustable resilient support for said bearing means.

2,865,690

ROTARY DRUM AND SELF-ADJUSTING MEANS THEREFOR

John T. Rhen, Davenport, Iowa, assignor to Iowa Manufacturing Company of Cedar Rapids, Iowa, Cedar Rapids, Iowa, a corporation of Iowa

Application January 6, 1956, Serial No. 557,857

1 Claim. (Cl. 308—203)

In rotary drum adjusting means, a drum having a normal lengthwise position, two bearing brackets below said drum at opposite sides thereof, trunnion rollers mounted in said brackets for rotation about axes normally approximately parallel with the axis of said drum, said brackets being respectively mounted to turn about an axis substantially perpendicular to and in the plane of the axis of its associated roller, an exterior tire secured to said drum substantially concentric therewith and resting on said rollers and in cooperation therewith rotatably supporting said drum, a lever arm secured to one of said brackets extending therefrom inwardly beneath said drum and along said tire, said arm being provided with abutment members disposed at opposite sides of said tire in proximity thereto to be contacted thereby in the lengthwise movement of said drum in either direction from its said normal position for turning said one bracket about its axis, each of said brackets having arms extending from opposite sides thereof lengthwise of said drum, and links substantially parallel with said tire extending between and pivoted to said arms of said brackets at opposite sides thereof, said links providing with said bracket arms and brackets a parallelogram assuring turning of the other bracket with said one bracket in the same direction and to the same extent as the latter.

2,865,691

JOURNAL BEARING MEANS

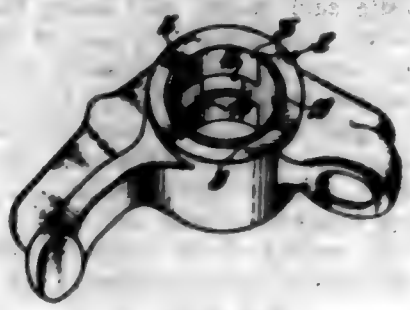
Lloyd E. Muller, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application April 2, 1956, Serial No. 575,452

3 Claims. (Cl. 308—237)

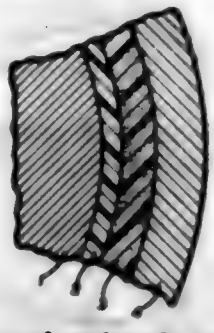
1. Journal bearing liner means including a sleeve member receivable within a shaft receiving bore provided within a housing member, said sleeve member being slotted from end to end to provide circumferentially spaced edges, and tabs formed from said edges and

circumferentially disposed for cooperative engagement within receiving means provided within said bore between



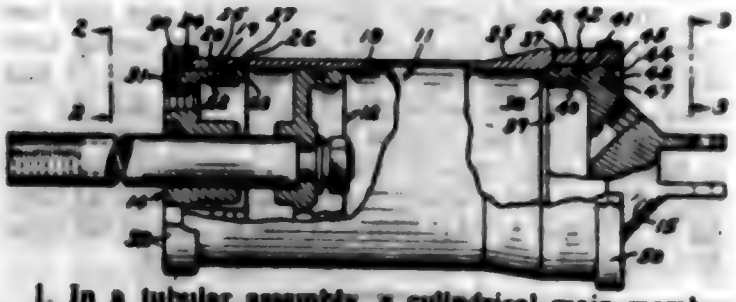
said spaced edges for preventing circumferential and axial movement of said sleeve member within said bore.

2,865,692
COMPOUND BEARING WITH SYNTHETIC RESIN LAYERS
Richard Goossens, Leucherthal, Sigmaringen, Germany
Application October 26, 1955, Serial No. 542,804
Claims priority, application Germany November 9, 1954
9 Claims. (Cl. 308—238)



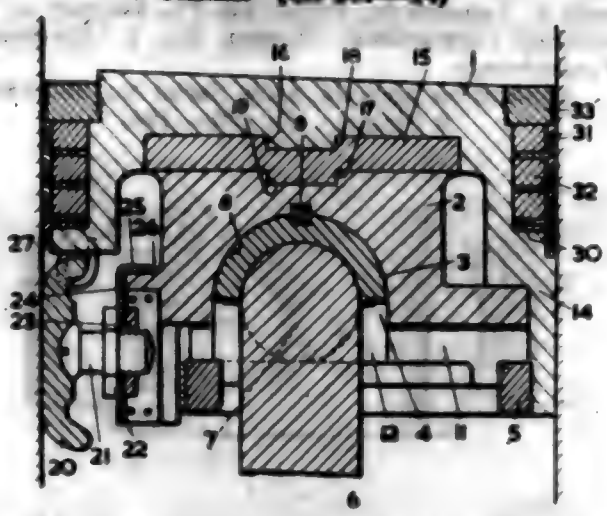
1. A compound metal and resin bearing comprising a metal shell and superimposed on said shell at least two thin layers, the inner one of said layers which is in contact with said metal shell and the layer directly overlying said inner layer comprising a curable resin from the class comprising epoxide resins and phenol formaldehyde resins, said inner resin layer additionally comprising mica as filler material, said mica causing the formation of capillaries in said inner resin layer, while the resin layer directly overlying said inner resin layer protects the metal shell from contact with the lubricant.

2,865,693
CYLINDER CONSTRUCTION
George E. Bernhart, Altadena, Calif.
Original application May 18, 1954, Serial No. 430,479, now Patent No. 2,785,826, dated March 12, 1957. Divided and this application February 27, 1956, Serial No. 568,128
11 Claims. (Cl. 309—2)



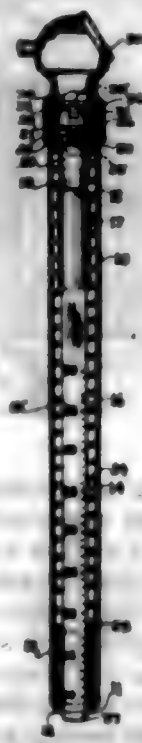
1. In a tubular assembly, a cylindrical main member characterized by a cylindrical inner surface extending substantially the length of said member, a radially inwardly projecting shallow first shoulder at one end of said surface, and a radially outwardly projecting second shoulder at the other end of said surface, said member having an end cylindrical inner surface between said second shoulder and the end of said member, a first head member received in said main member in abutment with said first shoulder, means detachably retaining said first head member, a second head member mounted within the end of said main member having said end cylindrical inner surface and against said second shoulder, and means detachably securing said second head member against said second shoulder.

2,865,694
PISTONS FOR INTERNAL COMBUSTION ENGINES
John Burrand, Teddington, England
Application November 1, 1956, Serial No. 619,819
Claims priority, application Great Britain November 4, 1955
5 Claims. (Cl. 309—14)



1. A piston comprising a head having an upper part of smaller diameter than a lower part, a strut located beneath said head to support at least the central part of said head and being axially removable from said piston, upper bearing means associated with the underside of the said strut, removable lower bearing pieces, lower bearing retaining means making screw threaded engagement with a part carried by said head releasably clamping said strut between said head and said lower bearing means with said piston, a plurality of L-section rings surrounding said upper part of said head, and a clamping ring making screw threaded engagement with a threaded portion of said upper part.

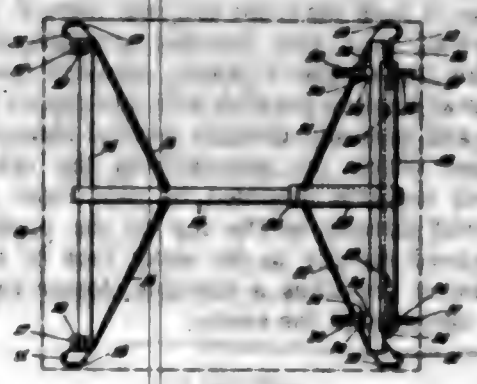
2,865,698
AUTOMATIC SEALING MECHANISM FOR PISTONS AND THE LIKE
Albert Mazelka, Chicago, Ill., assignor to Milton Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Application September 24, 1956, Serial No. 611,618
1 Claim. (Cl. 309—34)



A seal for an expellable plunger of an air gauge, said plunger at one end thereof providing a circular

flange, a cup-shaped washer mounted on the opposite side of said flange of said plunger, a member threadably connected to said plunger so as to connect said washer in facial abutment with the flange of said plunger, said washer having an upwardly and outwardly tapered peripheral edge portion engageable with the side wall of said cylinder and providing a spring seat, a compression spring having an end portion encircling said member and seated in the spring seat provided by said cup-shaped washer and engageable with said tapered peripheral edge thereof to urge said peripheral edge into sealing contact with the inner walls of the air gauge.

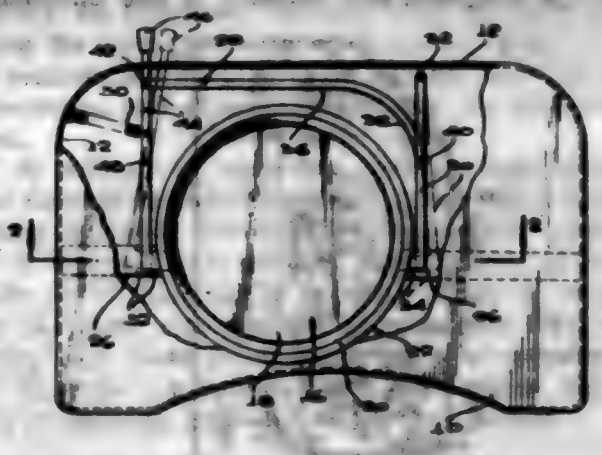
2,865,696
ADJUSTABLE SUPPORTING DEVICE
Alfred Meeser, Bern, Switzerland
Application December 13, 1955, Serial No. 552,914
Claims priority, application Switzerland December 15, 1954
5 Claims. (Cl. 311—35)



1. Adjustable supporting device comprising, in combination, a horizontal top member; a first pair of legs downwardly projecting from said top member and having a pair of free ends for engaging the ground; a second pair of legs having another pair of free ends for engaging the ground, and a connecting member connecting the upper ends of the second pair of legs to form a unitary structure; pivot means connecting the center of said connecting member with the table top member for relative turning movement about a horizontal axis; a pair of wedge means respectively secured to one of said members for movement between a releasing position permitting turning of said connecting member with said second legs to an adjusted position in which the four free ends of said legs simultaneously engage the ground, and a holding position abutting against said top member and said connecting member so that said connecting member and said second legs are immovably held in said adjusted position; and spring means interposed between said wedge means and one of said members for moving said wedge means into said holding position.

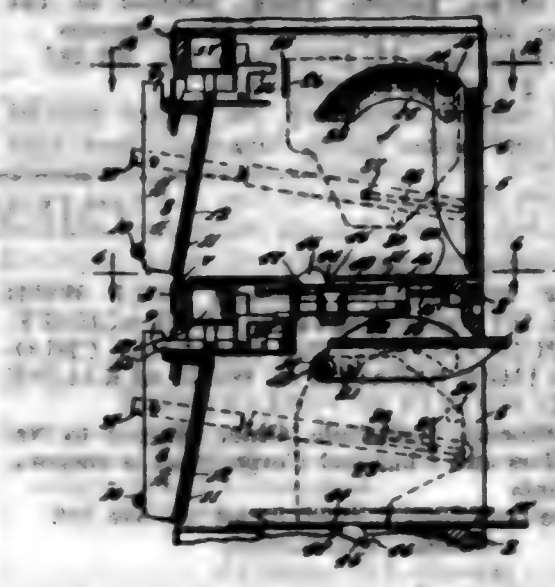
2,865,697
HIGH CHAIR TRAY HAVING PLATE-ANCHORING MEANS
Wilbur R. Staley, Wauconda, Nev.
Application November 29, 1957, Serial No. 699,989
8 Claims. (Cl. 311—103)

1. A table, plate, and plate retainer assembled comprising: a table top having an opening; a plate removably engaged in said opening; and locking means mounted on the table top for movement between a first position lockably engaging the plate in the opening and a second position releasing the plate for removal from the opening, said plate being formed with circumferential flange, said locking means including opposed jaws extendable into overlying relation to said flange in the first position of the locking means, said flange of the plate having a top surface sloping downwardly outwardly from the plate, the jaws having bottom surfaces sloped complementarily to the top surface of the flange for exerting a cam action



against the plate tending to shift the plate downwardly within the opening.

2,865,698
COIN CONTROLLED VENDING MACHINES
John D. Smith, Audubon, N. J., assignor to Hoos & Hardart Company of New York, New York, N. Y., a corporation of New York
Application February 1, 1955, Serial No. 485,549
13 Claims. (Cl. 312—39)

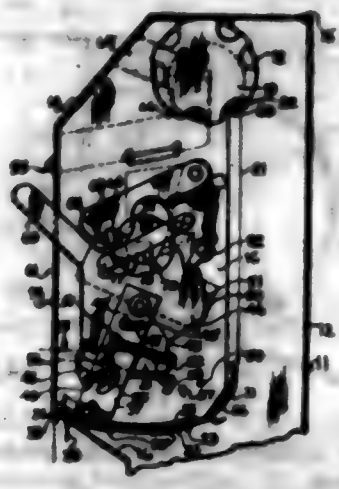


1. In a vending machine, a casing having a vending compartment with a delivery opening, a door for said opening, a counter-weight fixed to said door and pivotally supported offcenter, said counter-weight being in raised position when the door is closed, a detent engaged by the counter-weight when the latter is in raised position, an auxiliary counter-weight pivotally supported at one end and riding on the first counter-weight, and means operative on a predetermined downward movement of both counter-weights to arrest the downward movement of the auxiliary counter-weight to prevent its further cooperation with the first counter-weight during the continued downward movement of the first counter-weight, and coin controlled releasing means for said detent.

2,865,699
STAMP VENDING MACHINES
William B. Fitzgerald, Chicago, Ill.
Application December 20, 1954, Serial No. 476,463
3 Claims. (Cl. 312—39)

3. A vending machine comprising in combination, a guide for guiding the movement of an article to be vended in a longitudinal direction with respect to the guide, a manually rotatable disc carried within said machine, an article engaging member for moving said article in one direction to be vended from said machine comprising an arm pivotally carried by said disc, means for pivoting said arm relative to said disc and in a like direction when

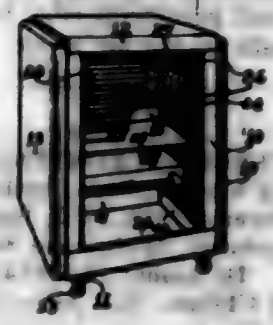
said disc is rotated, means for releasably latching said arm against pivotal movement until said disc has been rotated the predetermined distance in one direction, a



slot and pin connection between said disc and said arm to move said arm in a direction to vend said article from said machine, and a spring finger carried on said guide to prevent jamming of an article therein.

2,865,700
UTILITY CABINET FOR A BUSINESS MACHINE
Raymond L. Myers, Holden, Mass., assignor to The Wright Line, Inc., a corporation of Massachusetts
Application September 12, 1952, Serial No. 309,283
2 Claims. (Cl. 312—309)

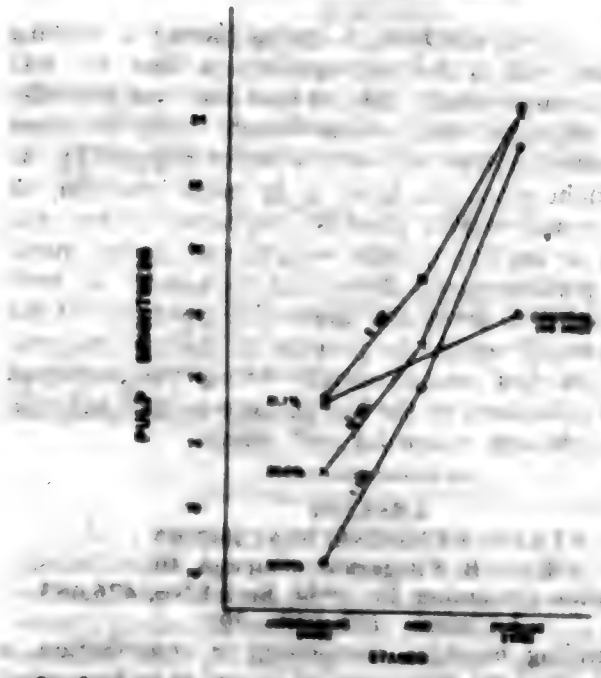
1. A utility cabinet comprising two spaced parallel vertical metal end plates having outwardly bent edge portions, vertical corner posts formed in part by said portions which project outwardly and laterally from and are rigid with the end plates, horizontal upper and lower pans, each pan having an outermost rectangular plane surfaced bottom and inwardly projecting strengthening flanges forming a substantially continuous periphery therefor, two of the flanges being integrally united to the inner surfaces of the outer portions of the end plates so that the pans serve as the sole rigid supporting spacers for the plates and form a rigid tubular metal casing hav-



ing openings at both the front and rear thereof, the other two flanges of each pan forming strengthening cross members for the tubular structure, opposed inner plates having central portions parallel with and spaced from the end plates and inwardly opening vertical channel-shaped end portions which are mounted on the cabinet end plates, shelf supports mounted on said inner plates, a cover secured directly to the top of the upper pan, a support secured directly to the outer face of the lower pan, and means providing a movable closure for at least one of the openings of the casing.

CHEMICAL

2,865,701
PROCESS OF BLEACHING KRAFT PULP WITH ALKALINE HYPOCHLORITE BLEACH ACIDIFYING THE PULP CONTAINING RESIDUAL CHLORINE AND THEN BLEACHING WITH ALKALINE PEROXIDE
Willard F. Schroeder, Ashtabula, Ohio, assignor to National Distillers and Chemical Corporation, a corporation of Virginia
Application December 7, 1953, Serial No. 396,709
2 Claims. (Cl. 8—106)



1. A process for producing a kraft pulp of improved brightness stability and strength which comprises chlorine bleaching a kraft pulp, alkali extracting said chlorine bleached pulp, bleaching the resulting pulp with an alkaline hypochlorite bleach to provide a pulp of pH 9.5±1.0 pH unit and containing a residual chlorine content of from 10 to 33% of the amount of the available chlorine from the alkaline hypochlorite, acidifying the resulting pulp containing said amount of residual chlorine with a non-reducing strong mineral acid to a pH of 4.0 to 5.5, and subjecting the resulting acidified pulp to at least one alkaline peroxide bleach to produce a pulp of improved strength and brightness stability.

2,866,702
METHOD FOR PREVENTING ADHESION AND GROWTH OF BARNACLES
Walter Martin Bruner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application April 30, 1956, Serial No. 581,412
1 Claim. (Cl. 21—3)

The method which comprises protecting against barnacle-forming conditions a marine structure by cladding

2,865,708
PROCESS OF RECOVERING COBALT, CERIUM, AND MANGANESE CATALYSTS

comprises mixing ammonium bisulfate with a fluorine-containing ammonium composition selected from the group consisting of ammonium bifluoride and ammonium

same with polytetrafluoroethylene in pre-formed impermeable sheet form, said sheet having a smooth exterior surface and having a thickness of 2 to 60 mils, whereby adherence of barnacle growth to the thus clad marine structure is inhibited.

2,865,703

PROCESS OF PURIFYING URANIUM

Glenn T. Seaborg, Chicago, Ill., Edwin F. Ortmann, Albany, Calif., and Lyle H. Jensen, Seattle, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application August 16, 1946
Serial No. 691,162
1 Claim. (Cl. 23—14.5)

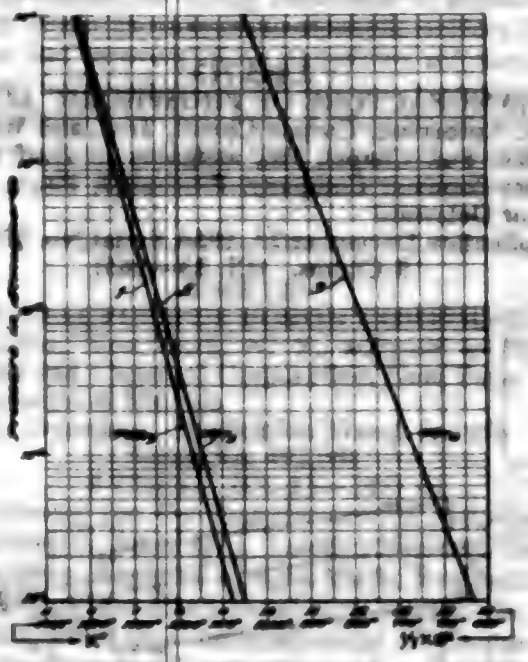
A process of purifying uranium contained in aqueous nitric acid solution of uranium tetrachloride together with about 10,000 p. p. m. each of the impurities sodium, magnesium, iron, beryllium, lithium, boron, potassium, and phosphorus, comprising adding ammonium molybdate to said solution whereby uranous molybdate and part of said impurities are precipitated, while the remainder of said impurities remains in solution; separating the precipitate from the solution; heating said precipitate with 15 N nitric acid whereby it is dissolved and the uranium is oxidized to its hexavalent state; diluting the solution with water so as to obtain a nitric acid concentration of approximately 1 N; adding ammonium nitrate to the solution; contacting the solution with diethyl ether whereby the uranyl nitrate is taken up by the ether while the impurities remain in an aqueous phase; and separating the ether solution from said aqueous phase.

2,865,704

METHOD OF SEPARATING URANIUM, PLUTONIUM, AND FISSION PRODUCTS BY BROMINATION AND DISTILLATION

Arthur H. Jaffey, Chicago, Ill., and Glenn T. Seaborg, Albany, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application January 8, 1947, Serial No. 720,920
7 Claims. (Cl. 23—14.5)



1. The method of separating plutonium from uranium and radioactive fission products, which comprises reacting a neutron-irradiated uranium mass with a brominating agent at an elevated temperature to form the bromides of uranium, plutonium and such fission products as form bromides, distilling the uranium bromide, volatile fission products, and volatile fission product bromides from the mass by subjecting the mass to a temperature between 777° and 1467° C. and a pressure substantially equal to the vapor pressure of YBr_3 at said temperature and then distilling the plutonium bromide from the mass by subjecting the mass to a temperature greater than 1512° C. and pressure less than the vapor pressure of $PuBr_3$ at that temperature, and separately collecting the resulting distillate.

7. A method of separating uranium and plutonium from neutron-irradiated uranium mass, which comprises treating said mass with hydrogen bromide at a temperature of approximately 400° C. and pressure of approximately 10^{-4} atmospheres whereby UBr_4 is vaporized from the mass, selectively condensing said UBr_4 vapor, heating said neutron-irradiated mass to approximately 700° C. under a pressure of 10^{-4} atmospheres, and selectively condensing the $PuBr_3$ vapor thus formed.

2,865,705

IMPROVEMENT UPON THE CARRIER PRECIPITATION OF PLUTONIUM IONS FROM NITRIC ACID SOLUTIONS

Ralph A. James and Stanley G. Thompson, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 14, 1946
Serial No. 654,505
2 Claims. (Cl. 23—14.5)

1. A process for improving the carrying of plutonium on an insoluble carrier precipitate from a hydrazine-containing nitric acid solution of plutonium in a maximum valence state of +4 derived by dissolving neutron-bombarded uranium metal in nitric acid which comprises adding to said solution sufficient potassium nitrite to make the solution about 0.1 molar and to destroy the hydrazine prior to contacting the solution with said carrier.

2,865,706

PREPARATION OF FLUOSILANES

Frederick T. Fitch and Paul C. Miller, Baltimore, Md., assignors to W. R. Grace & Co., New York, N. Y., a corporation of Connecticut

No Drawing. Application May 31, 1955
Serial No. 512,312
4 Claims. (Cl. 23—14)

1. A method of preparing fluorinated chlorosilanes of the general formula $SiHCl_xF_y$, where x and y are whole numbers and their sum is equal to 3, which comprises contacting under anhydrous conditions a finely divided silicon metal-containing mass simultaneously with hydrogen chloride and silicon tetrafluoride by passing a gaseous mixture consisting essentially of hydrogen chloride and silicon tetrafluoride over said silicon mass at a temperature of 385°–525° C., the mole ratio of hydrogen chloride to silicon tetrafluoride in said gaseous mixture being at least 1:1 and not more than about 5:1, condensing the reaction products, and separating fluorinated chlorosilanes therefrom.

2,865,707

IRON SALTS

Milton James Hogsed, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 25, 1954
Serial No. 470,131
18 Claims. (Cl. 23—50)

1. A process for the preparation of a metal salt of iron nitrosyl carbonyl hydride wherein the salt of iron carbonyl hydride and said metal is reacted with a soluble nitrite salt in an aqueous reaction medium at a temperature of about 65–100° C.

pH unit and containing a residual chlorine content of from 10 to 33% of the amount of the available chlorine from the alkaline hypochlorite, acidifying the resulting

The method which comprises protecting against barnacle-forming conditions a marine structure by cladding

2,865,708

PROCESS OF RECOVERING COBALT, CERIUM, AND MANGANESE CATALYSTS

Robert L. Dinsmore, Long Beach, and Warren V. Spencer, Compton, Calif., assignors to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

No Drawing. Application August 26, 1955
Serial No. 530,994
6 Claims. (Cl. 23—61)

1. A process for recovering a catalytic metal selected from the group consisting of cobalt, cerium and manganese, in a form active for the oxygen-containing gas oxidation of xylenes, from a reaction mixture produced by oxidizing xylene with an oxygen-containing gas while obtaining at least a substantial portion of phthalic acid, said reaction mixture having suspended therein insoluble material containing spent catalytic metal, which comprises the steps of separating said insoluble material from said reaction mixture, treating for a period of several hours at a temperature in excess of about 75° F. said insoluble material with an aqueous solution of a material selected from the group consisting of an alkaline salt and a base of an alkali metal, and separating the resulting precipitated alkaline salt of the catalytic metal from said solution.

2,865,709

PRODUCTION OF SILICO FLUORIDES

Hans Hora, Evanston, and Robert F. McCullough, Glenview, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application September 12, 1955
Serial No. 533,900
4 Claims. (Cl. 23—88)

1. A process for producing substantially water insoluble silico fluoride salts of high purity from crude fluosilicic acid solution having a fluorine to silicon mol ratio less than about 4.4:1, which comprises adjusting the mol ratio of fluorine to silicon of the crude solution to a ratio between 4.5:1 and 6:1 by adding a basic ammonia reactant, separating insoluble silica-containing material from the F/Si adjusted solution and reacting the adjusted solution with a water soluble salt of a cation whose silico-fluoride salt is water insoluble.

2,865,710

PROCESS OF DEFLUORINATION OF PHOSPHORUS COMPOUNDS

Ira M. Le Baron, Evanston, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application July 21, 1955
Serial No. 523,611
11 Claims. (Cl. 23—108)

1. A process of preparing defluorinated phosphates a substantial portion of which are in alpha form which comprises directly introducing, for quick fusion, a fluorine-containing superphosphate, prepared by calcination at a temperature below its fusion temperature, into a mass of said material being maintained in the molten state at temperatures below volatilizing temperatures for phosphorus constituents in the ratio and at the rate of not more than about 15 pounds of solid feed material per minute per 100 pounds of molten material, removing at least a portion of said molten mass when homogeneous and quenching the removed portion within at least ten seconds after its removal from the molten bath.

2,865,711

PROCESS FOR THE PRODUCTION OF HYDROGEN FLUORIDE

Gustav H. Gloss, Mundelein, Ill., and David H. Reeve, Lakeland, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application November 29, 1954
Serial No. 624,990
11 Claims. (Cl. 23—153)

1. A method of producing hydrogen fluoride which comprises mixing ammonium bisulfate with a fluorine-containing ammonium composition selected from the group consisting of ammonium bifluoride and ammonium bifluoride containing a minor amount of ammonium fluoride, in an amount equivalent to at least about 0.9 mole of ammonium bisulfate per mole of ammonia in the fluorine-containing ammonium composition, and maintaining the reactants at a temperature between about 200° C. and about 300° C. to evolve hydrogen fluoride from the reaction mixture.

2,865,712

PROCESS FOR RECOVERY OF GERMANIUM SULFIDE

Leslie J. Bechard, Jr., Grass Valley, Calif., and Plato Malozemoff, Flushing, N. Y., assignors to Tsumeb Corporation Limited, a corporation of South West Africa

No Drawing. Application July 7, 1954
Serial No. 441,933
2 Claims. (Cl. 23—134)

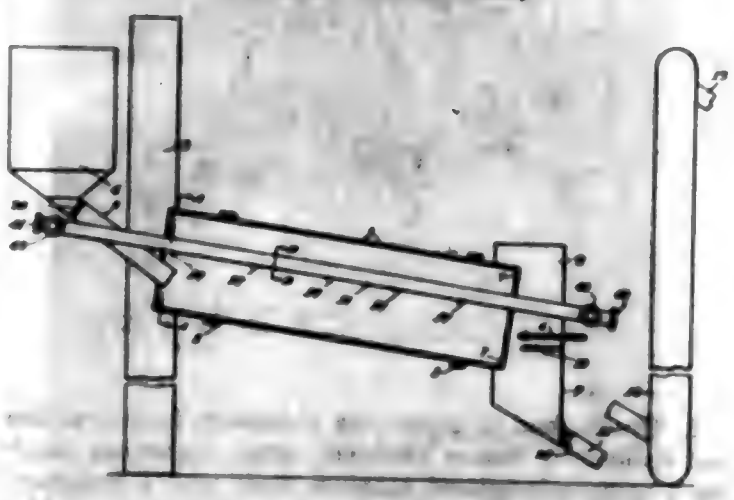
1. The process for recovering germanium sulfide from a sulfide-bearing material containing copper sulfide in an amount of not less than about 10% and lead sulfide in an amount of not less than about 4% and a small amount of germanium sulfide, which comprises intermixing with said sulfide-bearing material a solid carbonaceous material containing volatile hydrocarbons and which yields fixed carbon on thermal decomposition, heating the mixed charge to a temperature between about 800° C. and 1150° C. and above the normal fusion temperature of the copper and lead sulfides of said sulfide-bearing material, the amount of the carbonaceous material intermixed with the sulfide-bearing material being sufficient to yield, on decomposition, fixed carbon in an amount of not less than 4%, on the weight of the sulfide-bearing material, and sufficient to prevent fusion of copper and lead sulfides of said sulfide-bearing material when the sulfide-bearing material is heated to said temperature, said heating being carried out in an atmosphere of a non-oxidizing gas and effecting the volatilization of substantially all of the germanium content of the original sulfide-bearing material substantially free from the lead and copper sulfide contents thereof, and condensing the volatilized germanium content to recover the same.

2,865,713

MANUFACTURE OF PHOSPHORIC ACID

Oran L. Culberson, Corpus Christi, Tex., and William A. Pardee, Fox Chapel, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application December 23, 1954, Serial No. 477,304
9 Claims. (Cl. 23—165)



1. The process of manufacturing phosphoric acid which comprises: charging phosphate rock to a heated horizontal rotary kiln; rotating the kiln and thereby tumbling the phosphate rock and causing it to travel

3. A carbon black furnace comprising a refractory lined heat insulated body having a generally cylindrical

change in the pH 3.5–5 range, and an inert diluent, said alpha carbonyl monoxime having the formula

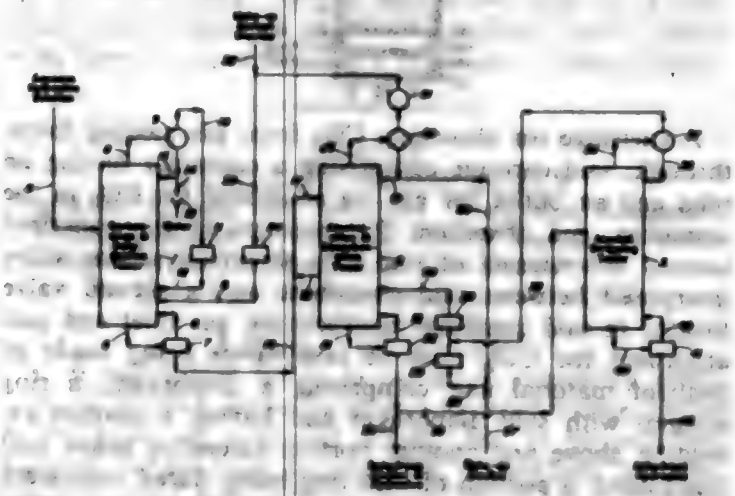
longitudinally through the said kiln; maintaining the temperature in the said kiln within a range that will carbonize asphalt; successively applying and carbonizing a plurality of small increments of asphalt with the said phosphate rock during its longitudinal passage through the said kiln; discharging from the kiln an aggregate of fully carbonized asphalt and phosphate rock; charging the said aggregate to a blast furnace in the absence of added fluxing material; heating the said aggregate in the blast furnace to a temperature below 2400° F. and thereby freeing phosphorus in vapor form from the phosphate rock; oxidizing the phosphorus vapors to phosphorus pentoxide; hydrating the phosphorus pentoxide to phosphoric acid; and separating the phosphoric acid from accompanying gases.

2,865,714

PRODUCTION OF ANHYDROUS HYDRAZINE

John Rebell, West Hempstead, Meyer Steinberg, Long Island City, and Elliott B. Jones, Levittown, N. Y., assignors to Guggenheim Brothers (1949 Firm), a copartnership

Application August 2, 1954, Serial No. 447,824
18 Claims. (Cl. 23—190)



1. In a process for producing anhydrous hydrazine in which a hydrazine-containing compound is thermally decomposed within an anhydrous alcoholic solvent for the separation and recovery of an anhydrous solution of hydrazine, the improvement that comprises employing as the hydrazine-containing compound a complex of hydrazine and carbon dioxide selected from the group consisting of carbazic acid, hydrazinium carbazate, and mixtures thereof.

2,865,715

MANUFACTURE OF BORON COMPOUNDS

Jonas Kamlet, New York, N. Y., assignor to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application March 3, 1955
Serial No. 492,051
8 Claims. (Cl. 23—191)

1. A process for the manufacture of boron nitride which comprises reacting a boron compound selected from the group consisting of boric oxide, metaboric acid, orthoboric acid, the alkali metal metaborates, the alkali metal orthoborates, and the alkali metal tetraborates with at least stoichiometric proportions of an alkali metal amide at a temperature between 210° C. and 1000° C., in an ammonia atmosphere, treating the resulting reaction mixture with water, separating the water-insoluble boron nitride from the concomitant water-soluble reaction products and heating said boron nitride at a temperature of from 1800° C. to 2200° C., whereby it becomes more stable.

2,865,716

PRODUCTION OF CRYSTALLINE COBALT TETRACARBONYL

Robert H. Hanak, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application September 1, 1954
Serial No. 453,681
6 Claims. (Cl. 23—203)

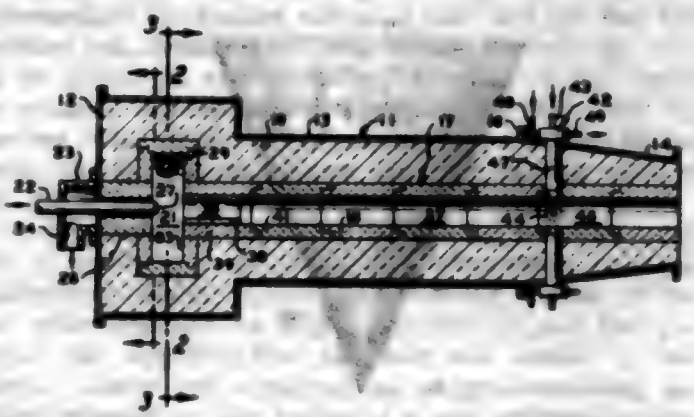
1. A method of preparing crystalline cobalt tetracarbonyl, comprising subjecting a mixture of a cobalt salt of an organic carboxylic acid having the formula RCO_2H, where R is selected from H, alkyl, cycloalkyl and aryl groups free of non-benzenoid unsaturation and containing only carbon, hydrogen and oxygen, with a lower aliphatic primary alcohol containing 2 to 8 carbon atoms, to contact with a gas consisting essentially of carbon monoxide at around 200° C. and above about 2000 p. s. i. to convert a substantial quantity of the cobalt to cobalt carbonyl, then reducing the temperature of the mixture to form crystalline cobalt tetracarbonyl therein and recovering crystalline cobalt tetracarbonyl from said mixture.

2,865,717

FURNACE CARBON BLACK PROCESS AND APPARATUS

Joseph C. Krejci, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

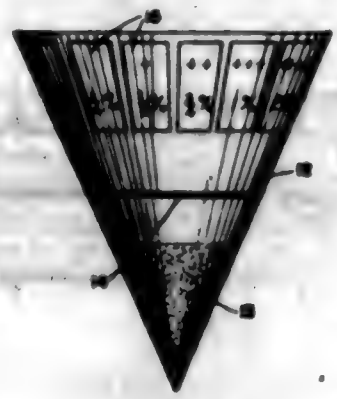
Application May 7, 1956, Serial No. 583,285
8 Claims. (Cl. 23—209.4)



1. A process for producing carbon black which comprises introducing a vaporous hydrocarbon into a generally cylindrical first zone having a diameter greater than its length, said introduction being along the axis of said first zone, establishing a rotating mass of hot combustion gases surrounding said vaporous hydrocarbon in said first zone by continuously injecting tangentially thereinto free oxygen containing gases and fuel, supporting combustion thereby, and continuously injecting the resulting hot combustion gases into said rotating mass in said first zone, continuously passing said vaporous hydrocarbon surrounded by said rotating hot combustion gases axially into a generally cylindrical second zone the length of which is greater than its diameter and the diameter of which is less than ¾ that of said first zone through a choke 4.5 to 18 inches long disposed in, and within 6 inches of the inlet end of, and having from 40 to 85% the diameter of, said second zone, said second zone being in communication with and in axial alignment with said first zone, forming carbon black from said vaporous hydrocarbon by pyro-chemical action due to the heat of the surrounding hot combustion gases without the further addition of any substantial amount of free oxygen containing gases downstream of said choke, quenching the effluent from said second zone with a water quench as it leaves the same, and separating said carbon black from the resultant gaseous products of said process.

3. A carbon black furnace comprising a refractory lined heat insulated body having a generally cylindrical bore, said bore comprising a generally cylindrical first chamber having a diameter greater than its length, means to introduce hydrocarbon feed generally axially of said first chamber, means to introduce free oxygen containing gases and fuel therefor into said first chamber generally tangentially to the inner surface of said first chamber, said first chamber being connected to discharge into a second generally cylindrical chamber the length of which is greater than its diameter and the diameter of which is less than ¾ that of said first chamber, and a refractory choke 4.5 to 18 inches long disposed in, and within six inches of the inlet end of, and having from 40 to 85% the diameter of, said second chamber, said first and second chambers being axially aligned and communicating with each other, said second chamber being imperforate and having a single axial inlet and a single axial outlet, a discharge conduit forming a substantial continuation in communication with said second chamber, and water spray quench means at the downstream end of said second chamber.

2,865,718
URINE SUGAR TESTING
William M. Fowler, Oak Park, Ill., assignor to Chicago Diagnostic Supply House, Inc., Chicago, Ill., a corporation of Illinois
Application January 13, 1955, Serial No. 481,587
7 Claims. (Cl. 23—230)



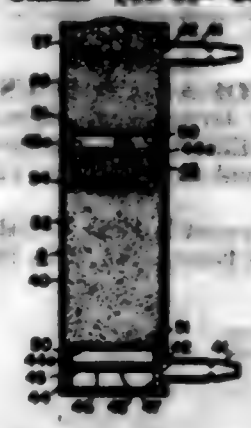
1. In the testing of an aqueous specimen for sugar content wherein the specimen is heated in the presence of a water-soluble cupric salt at an alkaline pH to form cuprous oxide in proportion to the reducing sugar content, the improvement comprising introducing into said specimen during said testing a solid alkali metal alcoholate, and regulating the amount of said alcoholate thus introduced to generate sufficient heat by reaction with the water in said specimen to form said cuprous oxide.

2,865,719
METHOD AND COMPOSITION FOR DETECTING PHOSPHORYLATING COMPOUNDS
David N. Kramer, Baltimore, Md., assignor to the United States of America, as represented by the Secretary of the Army
No Drawing. Application November 8, 1956, Serial No. 621,183
10 Claims. (Cl. 23—230)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A composition of matter for detecting the presence of a phosphorylating compound yielding acid anions on hydrolysis and selected from the group consisting of isopropyl methylphosphonofluoridate, pinacolyl methylphosphonofluoridate, cyclohexyl methylphosphonofluoridate, ethyl dimethylphosphoroamidocyanidate, and diisopropylfluorophosphine oxide comprising a mixture of an alpha carbonyl monoxime, an acid-base indicator showing a change in the pH 3.5–5 range, and an inert diluent, said alpha carbonyl monoxime having the formula

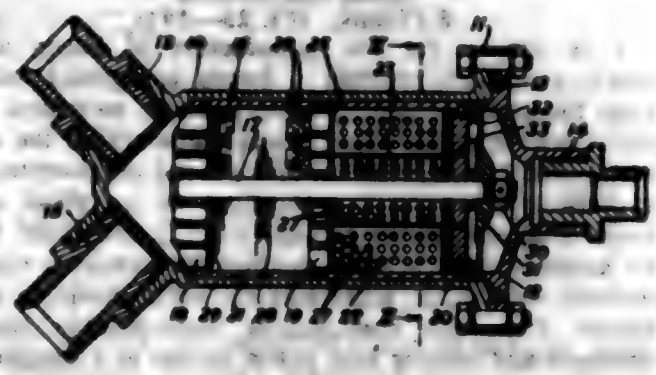
wherein R^1 and R^2 are selected from the group consisting of methyl, phenyl and hydrogen.

2,865,720
CARTRIDGE FOR ABSORBING CO_2
Lloyd V. Guild, Library, Pa.
Original application November 13, 1951, Serial No. 255,928, now Patent No. 2,746,846, dated May 22, 1956. Divided and this application April 4, 1956, Serial No. 576,033
1 Claim. (Cl. 23—284)



A cartridge for absorbing CO_2 from gas passing therethrough, said carriage comprising a container having an inlet and an outlet for gas, an absorbent for CO_2 in the container, and absorbent for moisture in the container located downstream of said CO_2 absorbent, a first valve interposed between said absorbent and a second valve located in said container between the gas inlet and said absorbent for CO_2, each of said valves being made of resilient material and comprising a diaphragm, a ring integral with said diaphragm and having a portion extending above and another portion extending below said diaphragm, a portion of said ring being flared outwardly to a greater diameter than said diaphragm for fitting tightly against the inside of said container, each of said valves having a plurality of elongated slits extending through said diaphragm, said slits diverging from each other from the surface of said diaphragm facing toward said inlet to the surface of said diaphragm facing toward said outlet, said second valve having an opening in said ring adjacent the inlet to said container.

2,865,721
CATALYTIC BED ASSEMBLIES
Bernard Frederick Adams Lane, Clophill, and Philip Ramsden, Luton, England, assignors to D. Napier & Son Limited, London, England, a British company
Application December 13, 1955, Serial No. 552,929
Claims priority, application Great Britain December 15, 1954
2 Claims. (Cl. 23—288)



1. A catalytic bed assembly for decomposing fluids comprising a reaction chamber, an inlet for said fluid

with an abrasive substance consisting essentially of a ratio of about 20 parts by weight of cellulose nitrate having a

ing of tin dioxide on the surface thereof, said tin dioxide

at one end of said reaction chamber, an outlet for products of reaction at the other end of said reaction chamber, said outlet being of substantially greater cross sectional area than said inlet, and a catalytic bed within said reaction chamber comprising a quantity of pellets consisting essentially of silver closely packed within said reaction chamber in a zone adjacent said inlet and a stack of silver coated gauzes packed within said reaction chamber in a zone adjacent said outlet.

2,865,723

SYNERGISTIC ANTIOXIDANT COMPOSITIONS

Charles C. Shepherd, Birmingham, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 2, 1955
Serial No. 550,786
2 Claims. (Cl. 44—69)

1. Gasoline containing an antiknock quantity of an alkyllead antiknock compound normally tending to deteriorate in the presence of oxygen containing, in amount sufficient to inhibit such deterioration, a small antioxidant quantity of a synergistic antioxidant composition consisting essentially of 4-(isopropylamino)-diphenyl amine and 2-6-di-tert-butyl phenol, the weight ratio of 4-(isopropylamino)-diphenyl amine to 2,6-di-tert-butyl phenol being from between about 9:1 to about 1:9 respectively.

2,865,723

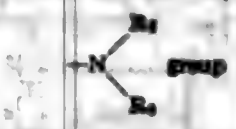
STABILIZED MOTOR FUELS

Gerald R. Lappin and John W. Thompson, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

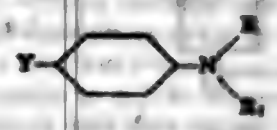
No Drawing. Application August 31, 1953
Serial No. 377,723
5 Claims. (Cl. 44—71)

1. A motor fuel stable to oxidation, consisting essentially of gasoline normally subject to deterioration caused by the action of molecular oxygen, and, in quantity sufficient to inhibit such deterioration, a stablizing composition consisting essentially of about 1% to about 25% by weight of a salt selected from the group consisting of a citrate salt and a tartrate salt of an amine antioxidant having the formula:

wherein R represents a member selected from the group consisting of a hydrogen atom and normal and secondary butyl groups, R_1 represents a member selected from the group consisting of a hydrogen atom and normal and secondary butyl groups, Y represents a member selected from the group consisting of a hydroxy group and an



wherein R_2 represents a member selected from the group consisting of a hydrogen atom and normal and secondary butyl groups and R_3 represents a member selected from the group consisting of a hydrogen atom and normal and secondary butyl groups and about 75% to about 99% by weight of an amine antioxidant having the formula:



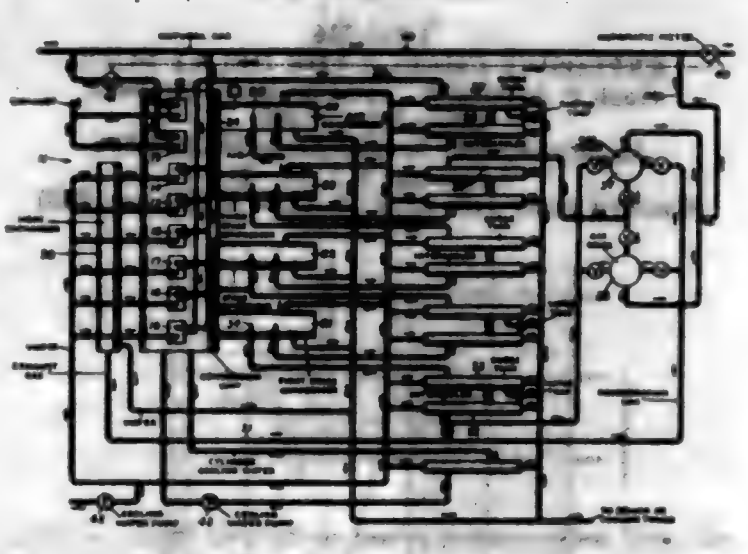
wherein R, R_1 and Y have the meaning just assigned to them.

2,865,724

CONTROL OF HEATING VALUE OF FUEL GAS

John Henry Arnold, Summit, N. J.

Application December 14, 1954, Serial No. 475,191
12 Claims. (Cl. 48—196)



1. A method of regulating the heating value of a fuel gas of high heating value which comprises burning a portion of a fuel gas in an internal combustion engine in the presence of insufficient oxygen to fully burn the fuel gas to generate power and produce an exhaust gas of low heating value, mixing the exhaust gas with said fuel gas to produce a mixed gas having a heating value intermediate the heating values of said fuel gas and said exhaust gas, continuously determining the heating value of the mixed gas and regulating the speed of said engine to produce exhaust gas at an increased rate when the heating value of the mixed gas exceeds a predetermined value and at a decreased rate when the heating value of the gas is less than said predetermined value.

8. A system for regulating the heating value of a fuel gas to maintain its heating value substantially constant, comprising conduit means for a flowing stream of fuel gas under pressure, an engine operable on said fuel gas, means for supplying fuel gas from said conduit to said engine, means for supplying an oxygen-containing gas under pressure to said engine at a rate sufficient to support combustion of the fuel gas in the engine but insufficient to burn the fuel gas completely, whereby said engine produces power and exhaust gas of low heating value, means for conducting said exhaust gas from said engine to the conduit means to mix with the fuel gas therein, means communicating with said conduit downstream of said engine for determining the heating value of the mixed gas in said conduit means, and means responsive to the means for determining the heating value of the gas and to variation of the heating value of the mixed gases from a predetermined value for increasing the speed of the engine to increase the rate of production of the exhaust gas when the heating value of the mixed gases exceeds said predetermined value and decreasing the speed of said engine to decrease the rate of production of the exhaust gas when the heating value of the gas is less than said predetermined value.

2,865,725

POLISHING ARTICLE

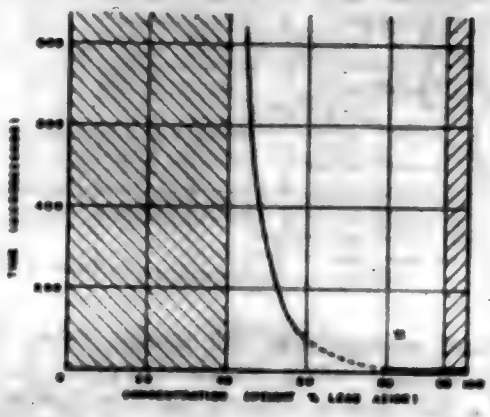
John B. Schroeder, Chicago, Ill.; Gertrude D. Schroeder, administratrix of the estate of said John B. Schroeder, deceased, assignor to Keen-O-Cloth, a partnership consisting of Jessan Speck Harvey and Thoreen Speck

No Drawing. Application June 18, 1956
Serial No. 591,821
3 Claims. (Cl. 51—383)

1. A lens polishing article consisting essentially of a cotton fabric of about 0.2 millimeter thickness coated

with an abrasive substance consisting essentially of a ratio of about 20 parts by weight of cellulose nitrate having a nitrogen content of from about 11.8–12.2% per about 10 parts of cerium oxide.

2,865,726
EXPLOSIVE CHARGE FOR DELAY FUZE
Hugh P. Jenkins, Jr., and Charles H. Shoemate, China Lake, Calif.
Application June 3, 1953, Serial No. 291,586
3 Claims. (Cl. 52—2)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. An explosive charge for use as a short time delay fuze consisting essentially of a compressed mass of homogeneously mixed particles of lead azide and a material chosen from the class consisting of aluminum stearate and stearic acid, the particles of said material being present in an amount from about 40% to about 60% by weight.

2,865,727
ROCKET MOTOR LIQUID PROPELLANT COMBINATION
Jay W. De Dapper, Los Angeles, Calif., assignor to North American Aviation, Inc.
No Drawing. Application December 4, 1950
Serial No. 199,151
5 Claims. (Cl. 52—5)

5. An improved rocket motor fuel comprising not less than 80% by weight turpentine and the remainder an ethereal liquid in which up to four and one-half percent by weight lithium aluminum hydride is dissolved and which is miscible with turpentine.

2,865,728
SMOKELESS POWDER
Ralph L. Cook, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
No Drawing. Application May 17, 1955
Serial No. 509,120
7 Claims. (Cl. 52—5)

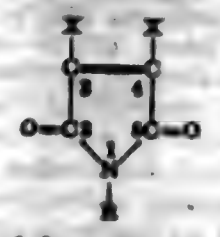
7. Smokeless powder grains having a nitrocellulose-nitroglycerin base, the outer one-sixth of the grains being impregnated with a diisoalkylphthalate having from 3 to 6 carbon atoms in the alkyl chain and substantially devoid of any deterrent in the remainder of the grain.

2,865,729
COATED SMOKELESS POWDER
Jack J. Foster, Alton, and Joseph M. Allevio, Wood River, Ill., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
No Drawing. Application April 12, 1955
Serial No. 500,992
3 Claims. (Cl. 52—7)

1. A substantially spherical smokeless powder grain consisting of a nitrocellulose propellent core with a coating of tin dioxide on the surface thereof, said tin dioxide being present in the amount of from about 0.3 to about 1.5 parts by weight per each 100 parts by weight of said grain.

2,865,730
METHOD OF REGULATING PLANT GROWTH
Robert L. Gates, Medina, and Kenneth P. Deuschner, Middleport, N. Y., assignors to Food Machinery and Chemical Corporation, San Jose, Calif.
No Drawing. Application July 25, 1955
Serial No. 524,287
5 Claims. (Cl. 71—2.5)

1. The method of regulating the growth of plants which comprises applying to the area where plant growth regulation is desired an N-substituted haloomaleimide of the class formula

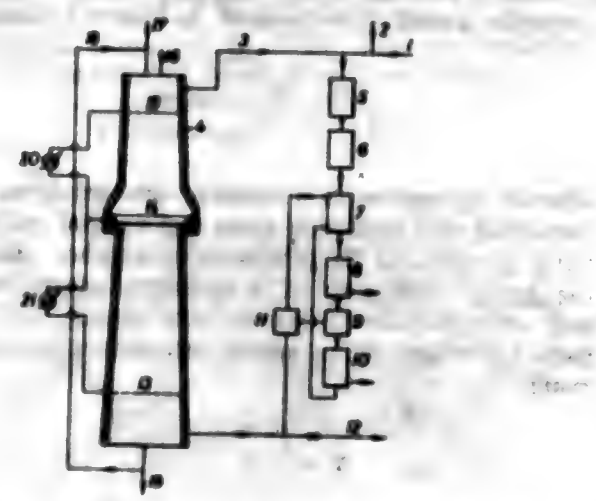


wherein X is selected from the group consisting of hydrogen and a halogen and at least one of said X's is a halogen, and R is selected from the class of radicals consisting of alkyl, aryl and alicyclic radicals, said application being at the rate of from about 0.5 pound to 30 pounds per acre.

2,865,731
IRON ORE BRIQUETTE WITH PAPER PULP BINDER
John H. Crowe, Lakeland, Fla., assignor to Minerals & Chemicals Corporation of America, a corporation of Maryland
No Drawing. Application June 25, 1954
Serial No. 439,453
13 Claims. (Cl. 75—3)

2. The method of briquetting finely divided iron oxide material which comprises mixing the said material with a thick aqueous pulp of cellulose fibers and briquetting the resulting mixture.

2,865,732
PROCESS FOR THE PRODUCTION OF SPONGE IRON
Olof Jensen, Nordberg, Oslo, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway
Application December 26, 1956, Serial No. 630,567
Claims priority, application Sweden January 7, 1956
13 Claims. (Cl. 75—11)



1. A process for reduction of iron ore in the form of lump ore, pellets or otherwise agglomerated iron ore con-

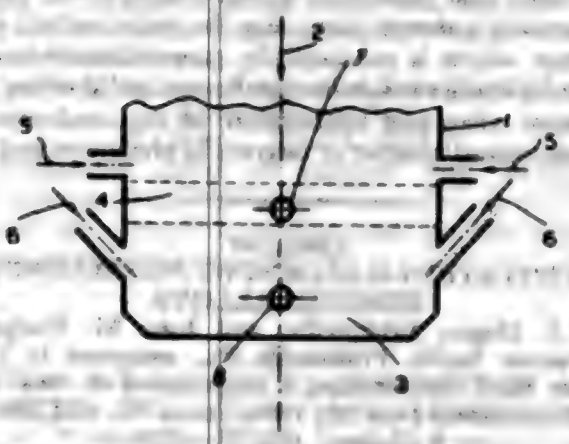
stantially below the point at which uranium-mercuride solids form in a liquid mercury phase, removing a sub- of sodium in said mixture and said condensed sodium in

them.

cotton fabric of about 0.2 millimeter thickness coated

centrate, which has a tendency to disintegrate during the reaction, with gas consisting of hydrogen and carbon monoxide as a reducing agent, said reducing gas consisting of fresh gas and circulatory gas from which substantially all of the oxidizing products formed during the reaction with the iron ore have been removed before being re-introduced into the process, in a vertical shaft furnace, heated by means of electric resistance heating, the iron ore moving downwards in said furnace in countercurrent to said reducing gas ascending through the furnace, the ore being mixed with a substantial part of recirculated cooled sponge iron before charging the ore to the top of the furnace, that improvement comprising introducing the whole amount of reducing gas at the lower end of the furnace in a cold state, said reducing gas containing at least 90% hydrogen, calculated on the content of reducing components in the gas, supplying the electrical energy to the furnace at three vertically spaced points, and heating the reducing gas to reaction temperature in the zone between the two lower points.

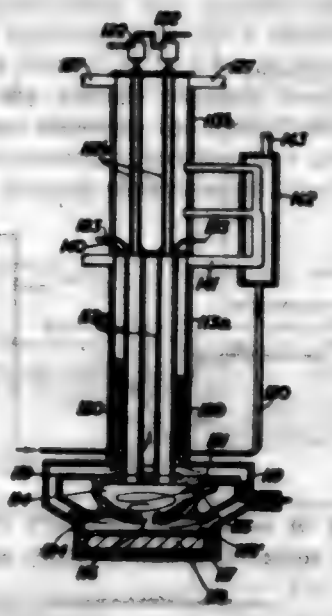
2,865,733
SMELTING PROCESS
Adriano Carli, Genoa, Italy, assignor to Societa Finanziaria Siderurgica Finsider S. p. A., Genoa, Italy
Application February 27, 1953, Serial No. 339,337
Claims priority, application Italy April 30, 1952
11 Claims. (Cl. 75—40)



1. A process for manufacturing metals from metal ores, comprising the steps of subjecting a metal ore to a first continuous fuel supply so as to heat and smelt said metal ore, and subjecting said heated and smelted metal ore to a second continuous fuel supply so as to reduce the same to a molten metal, said first and second fuel supplies being independent of each other and separately regulatable so as to allow separate regulations thereof being adapted, respectively, to the exact fuel demands of said heating and smelting step and said reducing step.

2,865,734
TREATMENT OF METAL-CONTAINING MATERIALS
Sidney Klemantaski, London, England, assignor to The British Iron and Steel Research Association, London, England, a British company
Application July 16, 1956, Serial No. 598,099
Claims priority, application Great Britain July 19, 1955
7 Claims. (Cl. 75—40)

1. A method of treating metallic ores comprising supplying continuously through an entry passage said ores in dispersed state to a reaction passage, causing said ores to pass along said passage to a high temperature region, at least partially reducing said ores during movement along said passage, agglomerating the metal at said high temperature region, controlling the oxygen potential of the metal at said high temperature region, collecting said metal and passing the gases from said region over the



collected metal through an outlet passage other than the entry passage for the ores.

2,865,735
PROCESSES FOR REDUCING THE SULPHUR CONTENT IN IRON AND FOR ECONOMIZING IN COKE IN CUPOLA FURNACES
Helmut Timmerbeil, Hagen-Haspe, and Hugo Quesregger and Werner Kramm, Knapsack, near Cologne, Germany, assignors to Knorr-Bremse G. m. b. H., Munich, Germany, a German company
No Drawing. Application August 24, 1956
Serial No. 605,952
4 Claims. (Cl. 75—55)

1. A process for reducing the sulphur content of iron in a cupola furnace process requiring a series of coke charges comprising reducing the initial and subsequent charges of the coke by introducing therewith calcium carbide having a melting point of less than 1800° C.

2,865,736
METHOD OF ALLOYING GASEOUS MATERIALS WITH METALS
Howard O. Beaver, Jr., Reading, Pa., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey
Application February 8, 1956, Serial No. 564,389
10 Claims. (Cl. 75—59)

1. A process for introducing a gaseous alloying material into an alloy, which comprises withdrawing the atmosphere surrounding the molten alloy, introducing the gaseous material over the molten alloy and then casting the molten alloy while in contact with the gaseous material.

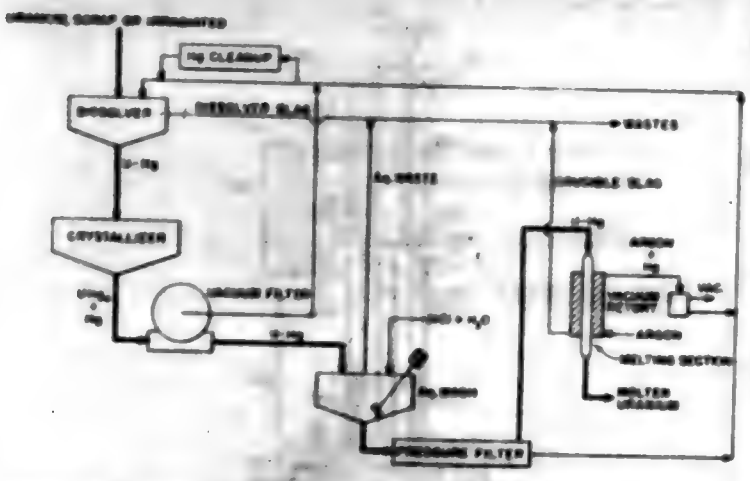
2,865,737
METHOD OF PURIFYING URANIUM METAL
Raymond Eugene Blanco, Oak Ridge, Tenn., and Bruce H. Morrison, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application June 4, 1957, Serial No. 663,585
5 Claims. (Cl. 75—84.1)

1. A process for the segregation and recovery of uranium metal from a mixture containing said uranium metal together with extraneous impurities which comprises contacting said mixture with liquid mercury at a temperature of at least approximately 300° C., whereby a reaction mass containing a uranium-mercury solution and an impurity-containing slag are formed, separating said uranium-mercury solution from said slag, cooling the separated uranium-mercury solution to a temperature sub-

consisting of a nitrocellulose propellent core with a coat-

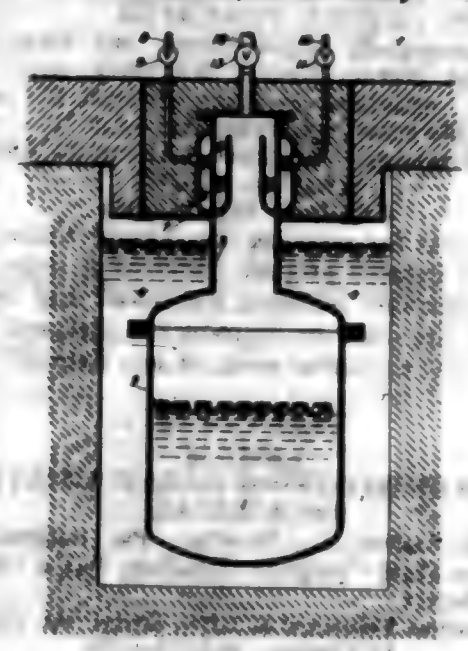
1. A process for reduction of iron ore in the form of lump ore, pellets or otherwise agglomerated iron ore con-

stantially below the point at which uranium-mercuride solids form in a liquid mercury phase, removing a sub-



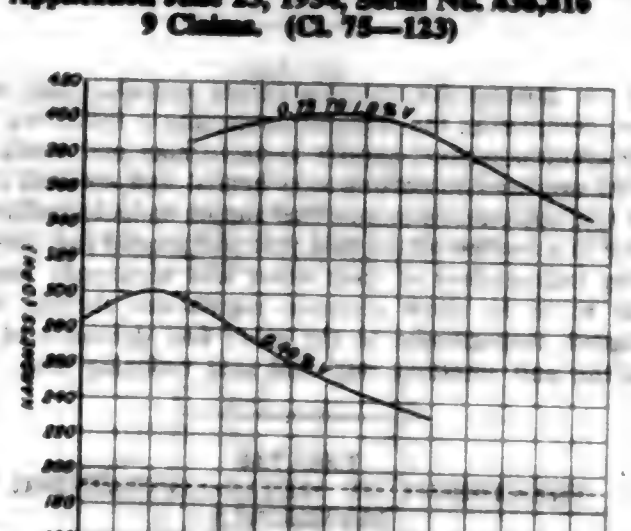
stantial amount of said liquid mercury from said solids, and recovering metallic uranium from said solids.

2,865,738
PROCESS OF PREPARATION OF TITANIUM
Werner C. Muller, Roslyn, N. Y., assignor to National Distillers and Chemical Corporation, a corporation of Virginia
Application August 17, 1955, Serial No. 528,059
2 Claims. (Cl. 75—84.5)



1. In a process for preparation of a titanium sponge by treatment at a temperature of about 850° to about 1150° C. in an inert atmosphere and for a time sufficient for complete reduction to titanium metal of a mixture comprising finely divided titanium metal and sodium chloride in the presence of sodium metal in excess of that theoretically required to reduce titanium chlorides in said mixture to titanium metal, said mixture having been prepared by reduction of titanium chloride by sodium, the improvement which comprises maintaining a vapor zone above the mixture undergoing said treatment and in which vapor space a partial pressure is exerted by migration of sodium vapor from dissolved sodium metal in said mixture, and controlling the sodium metal in said mixture to the desired concentration by controlling the partial pressure exerted by said sodium vapor in said vapor zone to a vapor pressure such as that exerted by the desired concentration of sodium in said mixture by positioning a collecting zone in said vapor phase, said collecting zone being maintained under such temperature conditions so that sodium vapors condense in said collecting means when the vapor pressure exerted by the sodium vapor in said vapor space is higher than the vapor pressure exerted by the desired concentration of sodium in said mixture and said condensed sodium in said collecting zone vaporizes when said mixture contains a deficiency of sodium to provide in said vapor space a partial pressure such as that exerted by the desired concentration of sodium in said mixture.

2,865,739
PROCESS AND APPARATUS FOR RECOVERING ZINC
George R. Alderson, Eugene W. Wood, and Edwin A. Blayney, Birmingham, Ala., assignors to W. J. Bullock, Inc., a corporation of Delaware
Application December 20, 1956, Serial No. 629,384
3 Claims. (Cl. 75—66)



1. The process of operating a zinc recovery furnace-condenser system which comprises the steps of charging the furnace, bringing the furnace up to zinc vaporizing temperature and holding it at said temperature, continuously sensing a temperature near the outer surface of the condenser which is substantially proportionally constant to the temperature inside the condenser, and shutting down the system when said temperature of the condenser falls a predetermined number of degrees in predetermined time.

2,865,740
PRECIPITATION-HARDENING NONMAGNETIC-FERROUS ALLOYS
James J. Heger, Bridgeville, and John M. Hodge and Raymond Smith, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Application June 23, 1954, Serial No. 438,816
9 Claims. (Cl. 75—123)

EFFECT OF CHROMIUM IN A 0.60 PERCENT VANADIUM AND IN A 0.75 TO 1.0 PERCENT VANADIUM STEEL

1. Age-hardenable austenitic steel containing sufficient metal from the group consisting of manganese, up to 12% nickel and a mixture thereof, to render the steel substantially wholly austenitic characterized by the absence of tungsten and containing in addition thereto about .25 to 1% carbon, about .30 to 3% vanadium, and about 1 to 4% molybdenum.

2,865,741

ACID RESISTANT AUSTENITIC STAINLESS STEEL

Raymond Smith, Pittsburgh, Pa., and Charles O. Tarr, Glenshaw, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Continuation of application Serial No. 489,785, August 18, 1954. This application November 4, 1957, Serial No. 694,728

4 Claims. (Cl. 75—125)

1. A readily forgeable austenitic stainless steel highly resistant to corrosion by mineral acids and characterized by an I. P. M. rate of less than .006 in boiling 30% sulphuric acid, said steel consisting of

	Percent
Carbon	.05 to .08
Manganese	.75 to 1.50
Silicon	.60 max.
Phosphorus	.04 max.
Sulphur	.04 max.
Nickel	23.00 to 27.00
Chromium	17.00 to 20.00
Molybdenum	.80 to 1.50
Copper	.80 to 1.50
Titanium	.30 to .50

with the balance iron and residual amounts of other elements.

2,865,742

ALLOYS OF TITANIUM CONTAINING BETA STABILIZERS WITH MINOR AMOUNTS OF ALUMINUM

William W. Gullett, College Park, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware

No Drawing. Application June 25, 1957
Serial No. 667,963
2 Claims. (Cl. 75—175.5)

1. Fabricated alloys of titanium with .1–5% of a metal selected from the group consisting of Fe, Cr, V, Mo and Mn, .01–.03% oxygen and .1—1% aluminum balance substantially titanium.

2,865,743

KETENE DIMER SIZING COMPOSITION AND PROCESS FOR SIZING PAPER THEREWITH

Cyrus A. Welgerber, Chadds Ford, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application March 11, 1957
Serial No. 645,820
12 Claims. (Cl. 92—3)

8. The process of sizing paper which comprises forming an aqueous suspension of paper pulp, incorporating in the aqueous suspension a sizing composition comprising a free-flowing powder made up of finely-divided silica particles having deposited thereon a ketene dimer, said coated particles having a particle size not in excess of about 74 microns, said ketene dimer having the formula $(RCH{=}C{=}O)_2$ where R is a hydrocarbon radical, such as alkyl having at least 8 carbon atoms, cycloalkyl having at least 6 carbon atoms, aryl, aralkyl and alkaryl, and then forming the aqueous suspension into sheets.

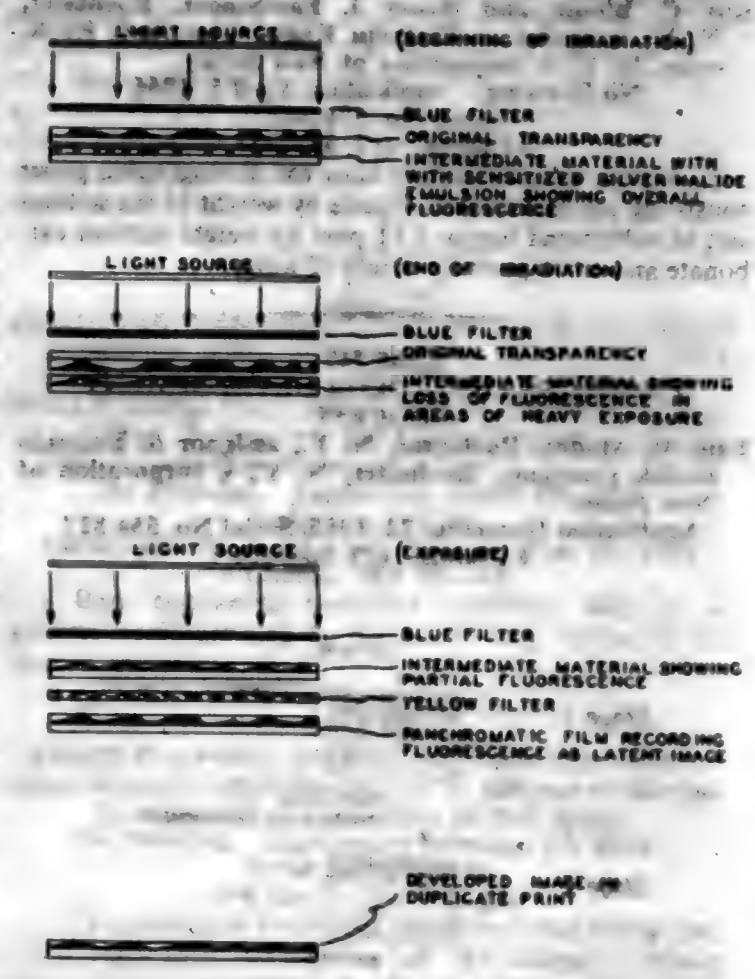
2,865,744

FLUORESCENCE IN PHOTOGRAPHIC EMULSIONS AND DUPLICATING PROCESS USING SUCH FLUORESCENCE

Joseph S. Friedman, Binghamton, N. Y., and Lester Horwitz, Kansas City, Mo., assignors to General Aniline & Film Corporation, New York, N. Y., a corporation of Delaware

Application January 26, 1956, Serial No. 561,648
4 Claims. (Cl. 96—27)

1. A process of preparing a direct duplicate from a transparent original which comprises exposing through said original with blue light a photographic material carrying on a transparent support a silver halide emulsion containing a sensitizing dye capable of increasing the fluorescence of said emulsion, for a time in excess of that required for the formation of a latent image and sufficient to destroy in the heavily exposed areas the ability to fluoresce without affecting the ability to fluoresce in the areas of low exposure, removing said original, exposing with blue light through said exposed intermediate printing



material, a duplicating material carrying on a suitable support a panchromatic emulsion while interposing a yellow filter between said intermediate and said duplicating material, said yellow filter absorbing all of the blue light but transmitting the fluorescent light emitted by said intermediate material to be recorded upon said panchromatic emulsion, and developing in a black and white developer the latent image in the duplicating material to form a duplicate picture of said original.

2,865,745

PHOTOGRAPHIC REPRODUCTION PROCESS

Robert E. Chan, Herbert B. Cowden, and William R. Kendall, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 25, 1955
Serial No. 530,638
2 Claims. (Cl. 96—28)

2. A method of photographic reproduction which comprises exposing to a subject a substantially unhardened gelatino-silver halide emulsion layer containing a gelatin tanning silver halide developing agent, developing the exposed emulsion layer with an alkaline solution to obtain a hardened gelatin and silver image in the region of most exposure and substantially unhardened gelatin and silver halide in the less exposed regions of the emulsion layer, pressing the developed emulsion layer while moist with the alkaline solution, against an absorbent surface having thereon a mixture of thiourea and sodium formaldehyde bisulfite, thereby causing only the unexposed regions of

face of the stainless steel in air at a temperature of 500–

sion polymerization of styrene and butadiene in the pro-

the emulsion layer to adhere to the absorbent surface and the silver halide thereon to be converted to a black image, and separating said receiving sheet and emulsion layer to transfer only a stratum of the unexposed region of the emulsion layer containing the black image to the receiving sheet.

2,865,746

TINTING BATH FOR PHOTOGRAPHIC PAPER

Roy C. Bloom and Henry J. Fassbender, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application April 5, 1956
Serial No. 576,247
2 Claims. (Cl. 96—48)

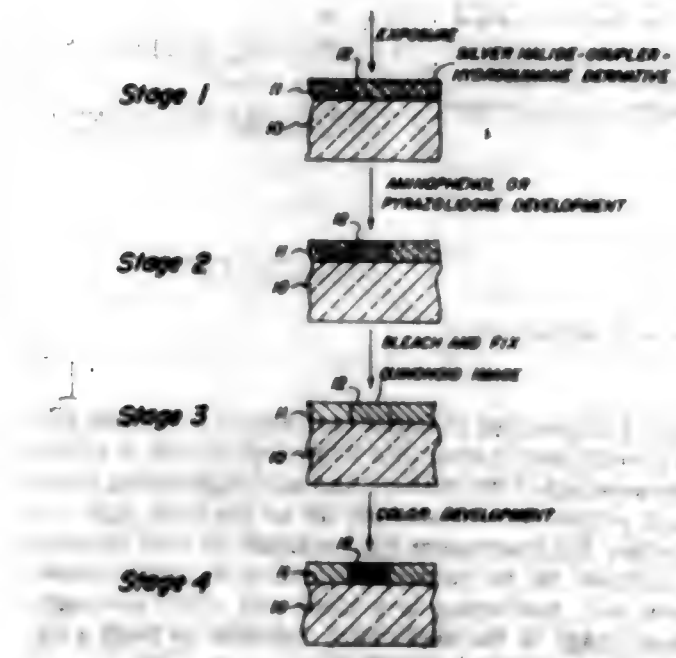
1. A photographic tinting bath for photographic paper consisting essentially of 2–4 parts by weight of the sodium salt of sulfonated lignin, 0.71 part by weight sodium carbonate and 1,000 parts by weight of water.

2,865,747

PHOTOGRAPHIC COLOR DEVELOPMENT PROCESS

Paul M. Mader, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application December 22, 1955, Serial No. 554,827
6 Claims. (Cl. 96—55)



1. A photographic reproduction process which comprises exposing to a subject a silver halide emulsion layer containing a mixture of a coupler compound reactive with the oxidation product of a primary aromatic amine silver halide developing agent to form a dye and a hydroquinone derivative of the class consisting of n-octadecylhydroquinone, sec.-octadecylhydroquinone and 2-hexadecyl-6-methylhydroquinone dispersed in the emulsion layer by means of a substantially water-insoluble, low molecular weight, organic crystalloidal material having a boiling point above about 175° C., developing the exposed emulsion layer with an alkaline solution of a developing agent of the class consisting of p-aminophenol, N-alkyl-o-aminophenol, and 3-pyrazolidone silver halide developing agents thereby forming in the emulsion layer an image of silver and oxidized hydroquinone derivative, removing the silver image and residual silver halide from the emulsion layer, treating the remaining oxidized hydroquinone derivative image in the presence of the coupler compound with an alkaline solution of a p-phenylenediamine silver halide developing agent to form a dye image in the region of original silver image.

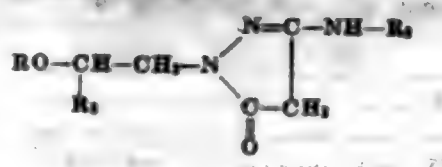
2,865,748

3-ACYLAMIDO-5-PYRAZOLONE AND 3-ACYLAMIDO-5-ACYLOXYPYRAZOLE COUPLERS FOR COLOR PHOTOGRAPHY

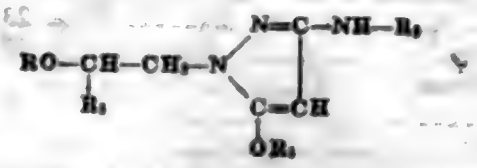
George Fenlak, Anthony Loria, and Warren A. Rockhow, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application October 30, 1956, Serial No. 619,151
7 Claims. (Cl. 96—55)

1. A photographic silver halide emulsion containing a coupler compound of the class consisting of those having the general formulas



and



wherein R represents a member of the class consisting of a hydrogen atom and a carboxylic acid group, R_1 and R_2 each represent a carboxylic acid acyl group and R_3 represents a member of the class consisting of a hydrogen atom, an alkyl group of from 1 to 4 carbon atoms and a monocyclic aryl group of the benzene series.

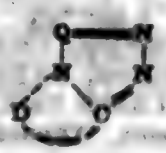
2,865,749

STABILIZED PHOTOGRAPHIC EMULSIONS

James A. Van Allan, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application November 6, 1956
Serial No. 620,572
14 Claims. (Cl. 96—67)

1. A photographic silver halide emulsion containing a compound selected from those represented by the following general formula:



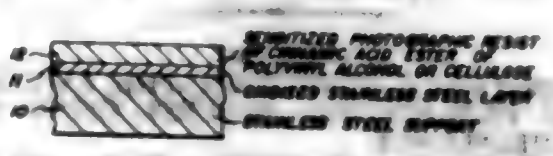
wherein D represents the nonmetallic atoms necessary to form a quinoline ring and Q represents a member selected from the group consisting of a nitrogen atom and a CR group wherein R represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 4 carbon atoms and an aryl group.

2,865,750

PHOTOMECHANICAL REPRODUCTION

Donald J. Trevoy, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

Application March 18, 1955, Serial No. 495,343
5 Claims. (Cl. 96—86)



1. The method of forming a photographic resist element having a base of stainless steel containing chromium and nickel and having thereon a photographic resist comprising a light-sensitive polymeric material consisting of a cinnamic acid ester of polyvinyl alcohol as a combined carrier and light sensitive material and containing a light sensitizing agent, which comprises oxidizing the sur-

face of the stainless steel in air at a temperature of 500–950° C. for 2 to 9 minutes to form an oxide layer thereon, cooling the stainless steel, and coating said photographic resist thereon.

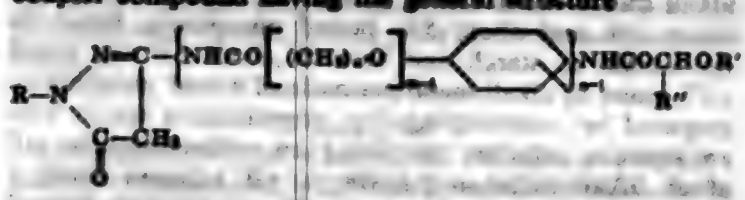
2,865,751

1-ALKYL-3-ACYLAMIDO-5-PYRAZOLONE COUPLERS FOR COLOR PHOTOGRAPHY

George Fenlak, Anthony Loria, and Warren A. Rochlow, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application September 18, 1956
Serial No. 610,620
4 Claims. (Cl. 96—94)

1. A photographic silver halide emulsion containing a coupler compound having the general structure



wherein R represents an alkyl group of from 1 to 12 carbon atoms, R' represents a monocyclic aryl group of the benzene series, *n* represents a positive integer of from 1 to 2, *n'* represents a positive integer of from 1 to 3, R'' represents a member of the class consisting of a hydrogen atom and a lower alkyl group and *m* represents a positive integer from 1 to 2.

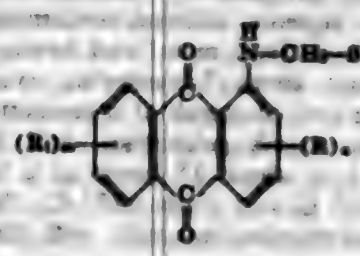
2,865,752

LIGHT-ABSORBING ANTHRAQUINONE DYES FOR PHOTOGRAPHIC EMULSIONS

Vernon L. Saunders and Charles V. Wilson, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application October 17, 1955
Serial No. 541,059
10 Claims. (Cl. 96—102)

1. A photographic silver halide emulsion containing an anthraquinone dye represented by the following general formula:



wherein R and R_1 each represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, a hydroxyl group, a methyl group, an ethyl group, a methoxyl group, an ethoxyl group, a $—SO_3M$ group and a $—NHCH_2SO_3M$ group, *m* and *n* each represents a positive integer of from 1 to 3, and M represents a member selected from the group consisting of an alkali metal atom, an ammonium group and an organic ammonium salt group, said anthraquinone dye having its maximum absorption in a region of the spectrum to which said photographic silver halide emulsion is sensitive.

2,865,753

PHOTOGRAPHIC EMULSIONS CONTAINING A STYRENE-BUTADIENE LATEX AND PHOTOGRAPHIC PAPER MADE THEREWITH

Kearney P. Grifin and William H. Griggs, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application December 14, 1955
Serial No. 552,989
4 Claims. (Cl. 96—114)

1. A composition of matter comprising a gelatin-silver halide photographic emulsion in which has been incorporated a styrene-butadiene latex resulting from the emulsion polymerization of styrene and butadiene in the proportions of 55–65% of the former and 45–35% of the latter.

2,865,754

TENDERIZER FOR MEATS AND VEGETABLES

Henry Dorobo, Chicago, Ill.

No Drawing. Application September 18, 1956
Serial No. 610,669
3 Claims. (Cl. 99—1)

1. A food product for tenderizing meats and vegetables consisting of a very fine mixture of about eleven ounces of powdered egg shells that had been baked at about 350 degrees Fahrenheit, about one-half teaspoon of lemon powder, about one-quarter teaspoon of caraway seeds and about one-quarter teaspoon of garlic salt, which ingredients are mixed thoroughly and ground to the fineness, for example, of talcum powder.

2,865,755

REDUCING THE TENDENCY OF BEER TOWARDS GUSHING AND INCREASING ITS FOAM STABILITY

Richard Stanley Wray Thorne, Holte, Denmark, assignor to Alfred Jorgensen's gærungsfysiologiske Laboratorium, Copenhagen, Denmark, a firm

No Drawing. Application March 25, 1957
Serial No. 647,967
Claims priority, application Denmark May 16, 1956
8 Claims. (Cl. 99—48)

1. Beer containing non-toxic cobaltous salts in an amount corresponding to 0.1 to 5.0 mg. of cobalt per litre.

2,865,756

FRUIT FLAVORS, PRODUCTS, AND METHODS

Joseph Morsey, Lake Hiawatha, N. J., assignor to Sheaffer, Incorporated, a corporation of New Jersey

No Drawing. Application February 17, 1954
Serial No. 411,003
15 Claims. (Cl. 99—78)

1. The method of producing sugar-free fruit flavor consisting essentially of distilling off the aromatic essence from a fruit component selected from the group consisting of raspberry, cherry, blackberry, grape, strawberry, peach, banana, pineapple, apple and pear containing sugar and aromatic essence, subjecting the residue from said distillation step to vacuum distillation to concentrate the same and increase its sugar content, mixing said concentrate with an essence-containing fresh fruit complement selected from the group consisting of crushed fruit and expressed juice of raspberry, cherry, blackberry, grape, strawberry, peach, banana, pineapple, apple and pear, fermenting said mixture to remove sugar therefrom, pressing the fermented mixture to separate a sugar-free concentrate from the fermented mixture, and adding the distilled aromatic essence to said sugar-free concentrate to produce a fully constituted sugarless fruit flavor.

15. The product produced by the method of claim 1.

2,865,757

PROCESS OF MAKING CAKE CONTAINING PROTOPECTIN

Walter Axtell, New York, N. Y.

No Drawing. Application June 29, 1955
Serial No. 518,940
2 Claims. (Cl. 99—92)

1. The process of making a cake product having dietetic and medicinal properties, which comprises making a batter including flour of low glutinous content and protopectin in the proportions of 10 to 25 parts by weight of protopectin to 100 parts by weight of the flour, and baking the mixture within 40 minutes from the time the protopectin is brought into contact with the liquid in the batter.

2,865,758
CRANBERRIES AND PROCESS OF PREPARING THE SAME
Kenneth C. Weckel, Madison, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin
No Drawing. Application May 7, 1957
Serial No. 657,483
5 Claims. (Cl. 99—102)

1. The process of preparing cranberries suitable for use in the bakery, confectionery, frozen dessert, mixed fruit, beverage and like fields which comprises puncturing the air sacs in the cranberries, submerging the punctured cranberries in a concentrated aqueous sugar syrup containing a small amount of an agent selected from the group consisting of calcium chloride and alum and subjecting the cranberries in the syrup to a vacuum treatment, the temperature of the berries being maintained below 130° F. until completion of the vacuum treatment.

2,865,759
CATALYTIC MODIFICATION OF FATS
Theodore J. Weiss, Park Forest, Lars H. Wiedermann, Des Plaines, and Glen A. Jacobson, Brookfield, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application September 22, 1955
Serial No. 536,653
13 Claims. (Cl. 99—118)

1. In the modification of glycerides, the improvement comprising: contacting the glyceride with an alkali metal catalyst dispersed on an electrolytic carrier comprising an inorganic alkali metal salt of a strong acid to bring about modification of the fat, deactivating the alkali metal catalyst with water and thereafter separating the modified glyceride from the foots resulting from the deactivation of the catalyst.

2,865,760
SHORTENING CONTAINING OXYGENATED THERMALLY MODIFIED HARD FAT
Joseph W. Bremer, Jr., Chicago, and Lee Hiltman, Highland Park, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application December 24, 1956
Serial No. 630,018
7 Claims. (Cl. 99—123)

1. A shortening composition comprising: a shortening material and a small amount of deodorized oxygenated, thermally modified hard fat.

2,865,761
DIETARY GEL COMPOSITION
Herbert Thai Lee and Clarence C. Taylor, Anaheim, Calif.
No Drawing. Application January 2, 1957
Serial No. 633,017
5 Claims. (Cl. 99—133)

1. A dietary calcium-type gel composition comprising a minimum methoxyl pectinic acid, a sufficient quantity of a substantially sodium-free artificial sweetening agent selected from the group consisting of calcium cyclamate and mixtures of calcium cyclamate and calcium saccharin to furnish at least about 50 mg. of calcium per 1 gram of said pectinic acid, a sufficient amount of acid and of an alkali metal salt of an edible oxy-organic acid to give the final aqueous gel a pH of between about 3.85 and 4.50 and a sufficient amount of sodium hexametaphosphate in combination with said oxy-organic acid salt to effect the dissolution in water of said pectinic acid in the presence of the amount of said calcium furnished solely by said sweetening agent within the pH range stated when at an elevated temperature but insufficient to prevent formation of a final aqueous gel at a lower temperature of set.

2,865,763
PUDDING MIX
Hans Neuhaus, Chicago, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application September 16, 1954
Serial No. 456,621
6 Claims. (Cl. 99—139)

1. A composition suitable for preparing a pudding comprising sugar, flavoring, and a cold-water swelling alkali metal starch ortho phosphate containing between about 1% and about 5% bound phosphorus based on the weight of starch and between about 1.0 and about 1.75 moles of alkali metal per mole of bound phosphorus, prepared by commingling dry, ungelatinized starch with an aqueous solution containing an orthophosphate salt of an alkali metal and having a pH between about 4 and about 7, removing unabsorbed liquid from the treated starch at a temperature below that at which the starch gelatinizes, and heating the treated starch at a temperature between about 120° C. and about 175° C. until the reaction has proceeded to substantial completion.

2,865,763
FOOD COMPOSITION
Louis W. Ferraro, Franklin Park, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application February 27, 1957
Serial No. 642,685
6 Claims. (Cl. 99—144)

1. A composition suitable for thickening and stabilizing gravies and for modifying the flavor thereof which comprises essentially a phosphate-modified starch and monosodium glutamate in a proportion between about 10:1 and about 50:1 by weight, said phosphate-modified starch having been prepared by soaking dry, ungelatinized starch in an aqueous solution containing an orthophosphate salt of an alkali metal and having a pH between about 4 and about 7, removing excess surface moisture from the soaked starch at a temperature below that at which the starch gelatinizes, and heating the starch for about 1 to about 15 hours at a temperature between about 120° C. and about 175° C., the length of the heating period varying inversely with the temperature.

2,865,764
PROCESS OF PRESERVING FOOD PRODUCTS AND COMPOSITION THEREFOR
Henry J. Gorzica, Fort Atkinson, Wis., and William J. Zick, Crete, Ill., assignors to E. Heller & Company, a corporation of Illinois
No Drawing. Application September 19, 1956
Serial No. 610,712
10 Claims. (Cl. 99—159)

1. A process of inhibiting growth of molds on a proteinaceous edible product normally fostering such growth comprising applying to such product a mold inhibiting composition containing between about 10% and about 90% of sodium bicarbonate and between about 90% and 10% of salt as an inert diluent, the sodium bicarbonate and salt forming the basic constituents and in admixture therewith a potentiating member of the group consisting of sorbic acid, sodium diacetate and mixtures of sorbic acid and sodium diacetate, said sorbic acid being present in an amount between about 1 and about 4 grams per pound of basic constituents on a dry weight basis and said sodium diacetate being present in an amount between about 0.5 gram and about 3.5 grams per pound of basic constituents on a dry weight basis.

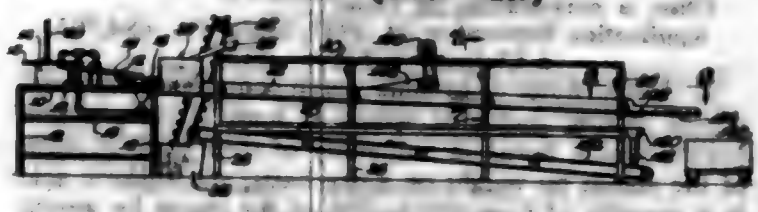
an intermediate wax paper sheet applied to the exterior

2,865,774

2,865,765
PROCESS OF PRESERVING FRESH PRODUCE IN ORIENTED FILM
Albert R. Allen, Ridley Park, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application December 23, 1954
Serial No. 476,846
5 Claims. (Cl. 99—154)

1. In the process of preserving fresh produce comprising the steps of successively washing, blanching, cooling and freezing the produce, the improvement which comprises enclosing the washed produce, prior to blanching, in a wrapper of oriented polyethylene terephthalate film to form a package of the produce, and thereafter blanching in a medium selected from the class consisting of hot water and steam, cooling, and freezing the packaged produce.

2,865,766
APPARATUS FOR COATING FRAGILE FOODS
George Christensen, Bill Nichols, and Richard W. Rath, Waterloo, Iowa, assignors to The Rath Packing Company, Waterloo, Iowa, a corporation of Iowa
Application March 28, 1955, Serial No. 497,110
8 Claims. (Cl. 99—169)



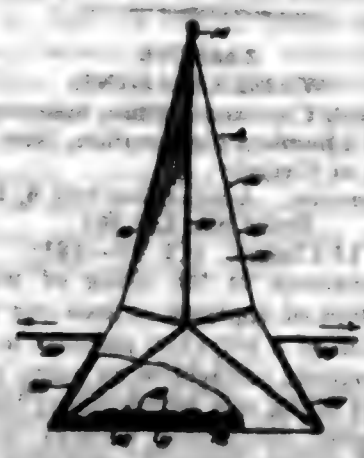
1. A method for applying comminuted dry material to a generally flat fragile article having an adhesive surface which comprises laying said article on an inclined surface having a layer of said dry material thereon with one face in contact with said layer, vibrating said surface with a relatively high-frequency low-amplitude movement to advance the article along the surface with its opposite face exposed, and simultaneously shaking additional comminuted dry material on said exposed face to completely coat said article.

3. An apparatus for coating generally flat fragile articles with a liquid adhesive and an external layer of dry comminuted material comprising a first article support having an inclined surface, means for continuously flowing a stream of said liquid adhesive down said surface to advance the articles thereon and coat the underside thereof with the liquid, a reservoir mounted above said surface for supplying liquid to coat the top side of articles passing therebeneath, a second article support having an inclined surface mounted for vibration, means for applying a layer of said dry material on the surface of said second article support, means for vibrating said second article support, a hopper mounted on and above said second article support for supplying dry material to coat the top side of the articles and conveyor means for transferring said liquid-coated articles from said first article support to said second article support.

2,865,767
METHOD OF PACKAGING FOOD ITEMS
Robert A. Gore, Terre Haute, Ind., assignor, by mesne assignments, to Union Carbide Corporation, New York, N. Y., a corporation of New York
No Drawing. Application February 4, 1955
Serial No. 486,272
8 Claims. (Cl. 99—171)

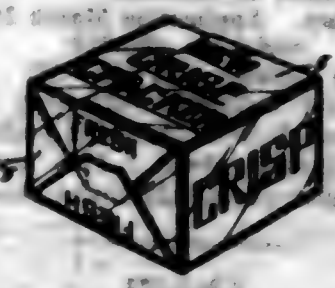
1. In a method of packaging food items with a skin tight covering the steps which comprise inserting the item to be packaged in a bag made of a plastic film and shrinking the bag to conform to the contour of said item by suddenly immersing the bag and contents in a liquid medium comprising propylene glycol at a temperature above 100° C. but below the melting point of the plastic and maintaining said bag and contents in said liquid medium until shrinkage has been effected.

2,865,768
FOOD PACKAGE
James F. Barnes, Van Nuys, Calif., and Elmer F. Rebholz, St. Louis, Mo., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California
Application December 29, 1954, Serial No. 478,387
7 Claims. (Cl. 99—171)



1. A combination food package and cooker, comprising a closed, collapsed container, said container being constructed and arranged so that it can be expanded to provide an enlarged volume therein, said container having a flat bottom adapted to support it on a horizontal heating surface and at least the bottom portion of said container being formed of a metal foil sheet material, said container in collapsed condition having side wall portions folded together and into generally parallel alignment with said bottom wall and being expandable by the unfolding of said side wall portions to provide said enlarged volume, and a food product within said container requiring heating and an enlargement in volume in the preparation thereof, said food product having a volume before preparation not over the reduced volume of said container when in collapsed condition and an appreciably greater volume during and after preparation but not over that of the enlarged volume of said container.

2,865,769
PACKAGE FOR CRACKERS AND THE LIKE
Raymond E. Jacke, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Application July 23, 1954, Serial No. 445,237
1 Claim. (Cl. 99—172)



A sealed non-rigid package and a cubical stack of flat frangible crackers therein, said package comprising, in combination, an internal wrap consisting of grease-proof creped paper substantially enclosing four of the six sides of the stack and butt-edged, said creped paper having a pair of relatively short folds at each of a pair of directly opposite sides thereof extending at right angles to the adjacent sides thereof and thus overlying the margins of the stack at said sides, each pair of said folds defining a central open area at each of said directly opposite sides,

said calcium furnished solely by said sweetening of basic constituents on a dry weight basis.

an intermediate wax paper sheet applied to the exterior side of said creped paper and folded completely about the creped paper which envelopes said stack, said wax paper sheet being lapped and sealed at the length ends, and an outermost member hermetically enclosing said stack and said creped and wax paper sheets, said outermost member consisting of a layer of metallic foil and an inner face layer adapted for releasable heat sealing, said outer wrap assembly being tightly folded around the internal wrap assembly and covering the same and having end folds releasably heat sealed together.

2,865,770

WHISKEY AGING

Gordon B. Nichol, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application July 6, 1955
Serial No. 520,362
11 Claims. (Cl. 99—181)

5. An improvement in the aging of whiskey which comprises the steps of applying at least one coating of an aqueous emulsion of a polyvinyl polymer to a substantial portion of the outside surfaces of an aging barrel for said whiskey prior to filling said barrel, filling said barrel with whiskey, thereafter aging said whiskey in said barrel, whereby loss of volatile material, including ethyl alcohol from said barrel, during aging, is substantially reduced.

2,865,771

BRONZE-RESISTANT COMPOSITIONS COMPRISING TETRABROMOFLUORESCEIN LEAD SALT AND PREPARATION THEREOF

James F. Thompson, deceased, late of Cincinnati, Ohio, by Edna Weaver Thompson, executrix, Cincinnati, Ohio, assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application June 7, 1956
Serial No. 589,886
20 Claims. (Cl. 106—33)

1. A pigment composition containing a red pigment having antibronzing properties consisting essentially of the lead salt of 2,4,5,7-tetrabromo-3,6-fluorandiol mixed with about 1–10% by weight of a rosin amine and about 1–10% by weight of an acid red dye of the class consisting of Acid Alizarin Red B, Violamine B, and halo-3,6-fluorandiols.

2,865,772

LIGHTWEIGHT INSULATING FIREBRICK AND METHOD OF MANUFACTURE

Albert R. Lenz and Glen W. Charles, Mexico, Mo., assignors to A. P. Green Fire Brick Company, Mexico, Mo., a corporation of Missouri

No Drawing. Application March 25, 1955
Serial No. 496,929
6 Claims. (Cl. 106—67)

1. A lightweight insulating refractory consisting essentially of about 16–20% expanded perlite, about 35–67.5% calcined bauxite, about 5–15% raw kyanite, and about 2.5–5% water soluble aluminum phosphate binder.

2,865,773

COATING COMPOSITIONS

George S. McKnight, Jr. and Robert C. Brown, Rumford, Maine, assignors to Oxford Paper Company, New York, N. Y., a corporation of Maine

No Drawing. Application June 25, 1954
Serial No. 439,474
9 Claims. (Cl. 106—154)

1. An aqueous coating composition which comprises solubilized soya protein and between about 1 and 20 per-cent by weight based on the weight of soya protein of monomethylol dimethyl hydantoin.

2,865,774

PLASTICIZERS FOR COATED CELLOPHANE

Preston M. Kampmeyer, Guilford, and Thomas C. Hendrickson, Wallingford, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Application August 2, 1954
Serial No. 601,629
7 Claims. (Cl. 106—178)

1. A composition for preparing a moistureproof heat sealable coating for regenerated cellulose consisting essentially of a nitrocellulose lacquer having incorporated therein from 20–40% by weight of a plasticizer, said plasticizer consisting essentially of about equal parts of a dihydric alcohol diester of benzoic acid and a monohydric alcohol ester of an acid selected from the group consisting of phthalic, phosphoric, phenyl phosphoric, citric, adipic and sebacic.

2,865,775

COLD WATER DISPERSIBLE STARCH AND PROCESS OF PREPARING IT

James William Todd, Columbus, Ohio, assignor to National Industrial Products Company, Columbus, Ohio, a corporation of Ohio

Application September 18, 1957, Serial No. 684,703
6 Claims. (Cl. 106—213)

4. A cold water dispersible starch comprising the product of mixing starch of which at least 50% is a thin boiling starch, borax in a quantity of from 30% to 40% of the starch by weight on a dry basis, and sulfuric acid in a quantity of from 4% to 7% of the starch by weight on a dry basis.

2,865,776

COVER PAINT CONTAINING ALUMINUM LEAF

Thomas Rehmer, Hallein, and Paul Hartmann, Vienna, Austria, assignors to Walter Marx & Co. E. C., Hallein, Austria

Application July 1, 1955, Serial No. 519,378
Claims priority, application Austria July 5, 1954
3 Claims. (Cl. 106—253)

1. A cover paint suitable for use as a protective coating over a base layer of rust-protecting paint, and comprising a uniform dispersion of aluminum leaf particles in a paint vehicle, said aluminum leaf particles having a mean longitudinal dimension of 5 microns and a maximum longitudinal dimension of 10 microns and a thickness of from 0.01 to 0.1 micron, the specific surface area of said aluminum leaf particles being from 70,000 to 90,000 square centimeters per gram, the weight of said aluminum leaf particles in the dispersion constituting a small fraction of the weight of the paint vehicle.

2,865,777

METHOD OF PREPARING A SILICEOUS PIGMENT

Edward M. Allen, Doylestown, Ohio, and Raymond S. Chisholm, Pittsburgh, Pa., assignors to Columbia-Southern Chemical Corporation

No Drawing. Application July 6, 1955
Serial No. 520,373
5 Claims. (Cl. 106—288)

1. A method of preparing a finely-divided silica-alkaline earth metal sulfite pigment which comprises establishing a solution containing sulfite ions and alkaline earth metal ions dissolved therein, reacting said solution with an alkali metal silicate by admixing the reactants under conditions of vigorous agitation and at a controlled rate to produce a slurry having a pH in the range from about 5.2 to about 10 and recovering the resulting finely-divided, precipitated silica-alkaline earth metal sulfite pigment, said silica having an average ultimate particle size below 0.1 micron.

2,865,784

METHOD OF MANUFACTURING ELECTRON

2,865,786

2,865,778

COMPOSITIONS AND METHODS FOR MAKING THE SAME

Roger W. Strassburg, Cleveland, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application December 22, 1955
Serial No. 554,614
23 Claims. (Cl. 106—288)

1. The method which comprises treating a brown, particulate, disproportionated solid selected from the group consisting of silicon monoxide and silicon monoxide containing from about 1 to 8% by weight of bound nitrogen at a temperature of from about 600° C. to below the fusion point of said solid with a halogen gas in an amount sufficient to react with at least a portion of the silicon in said solid to form gaseous silicon halides and to leave a light colored to white, solid, particulate, silicon dioxide composition containing halogen in an amount not in excess of about 3% by weight.

3. The method according to claim 1 containing the additional step of treating said silicon dioxide composition with fluid H_2O in an amount and at a temperature sufficient to remove essentially all of the halogen from said silicon dioxide composition without fusing the same.

2,865,779

SILICA PIGMENT AND PREPARATION THEREOF

Edward M. Allen, Doylestown, Ohio, assignor to Columbia-Southern Chemical Corporation, a corporation of Delaware

No Drawing. Application June 24, 1955
Serial No. 517,919
8 Claims. (Cl. 106—306)

1. A method of preparing a finely-divided silica-alkaline earth metal sulfite pigment which comprises forming an aqueous slurry of finely-divided, precipitated silica having an average ultimate particle size below 0.1 micron having dissolved and dispersed therein alkaline earth metal ions and sulfite ions, the slurry having a pH from about 1.5 to about 6, and reducing the acidity of the slurry to a pH above 6.5 to precipitate a finely-divided, silica-alkaline earth metal sulfite.

2,865,780

PREPARATION OF SILICA-SULFITE PIGMENTS

Edward M. Allen, Doylestown, Ohio, assignor to Columbia-Southern Chemical Corporation, a corporation of Delaware

No Drawing. Application June 24, 1955
Serial No. 517,935
4 Claims. (Cl. 106—306)

1. A method of preparing a finely-divided silica-alkaline earth metal sulfite pigment which comprises introducing a water-soluble alkaline earth metal salt into an aqueous medium containing finely-divided, precipitated silica having an average ultimate particle size below 0.1 micron and sulfite ions dispersed therein, said salt having a greater solubility in the aqueous medium than its corresponding alkaline earth metal sulfite, admixture of the reactants being conducted under conditions of agitation, and recovering of the resulting finely-divided silica-alkaline earth metal sulfite pigment.

2,865,781

PRODUCTION OF FINELY DIVIDED CALCIUM CARBONATE

Eugene Wehner, Cleveland Heights, Ohio, assignor, by mesne assignments, to The Sinclair Manufacturing Company, H. M. Sinclair, Jr., trustee, Toledo, Ohio, a partnership

No Drawing. Application July 2, 1956
Serial No. 595,083
7 Claims. (Cl. 106—306)

1. In a process for producing finely divided calcium carbonate in which a mixture is formed consisting of at least one alkali-metal carbonate and at least one calcium-carbonate-containing material; said mixture is maintained in the molten state at a temperature below 900° C. and above the melting point of the mixture for a time sufficient for the melt to become homogeneous; and then the melt is decanted into an aqueous quenching medium in which the amount of water is insufficient to dissolve an appreciable proportion of the calcium carbonate in the melt but is at least sufficient to dissolve the alkali metal compounds present; the improvement which comprises: incorporating in the melt a siliceous material of the group consisting of silica and alkali-metal silicates in an amount between 2% to 20% by weight, based on the weight of the calcium-carbonate-containing material in the mixture, by addition of said siliceous material to the other melt-forming constituents; whereby the particle size of the calcium carbonate precipitated by decanting the melt into the aqueous quenching medium is substantially smaller than the size of the particles obtained by carrying out the process without the intentional addition of siliceous material in the amounts stated.

2,865,782

METHOD FOR PREPARING COMPOUNDS COMPRISING SILICON AND OXYGEN

Roger W. Strassburg, Cleveland, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application December 22, 1955
Serial No. 554,640
10 Claims. (Cl. 106—308)

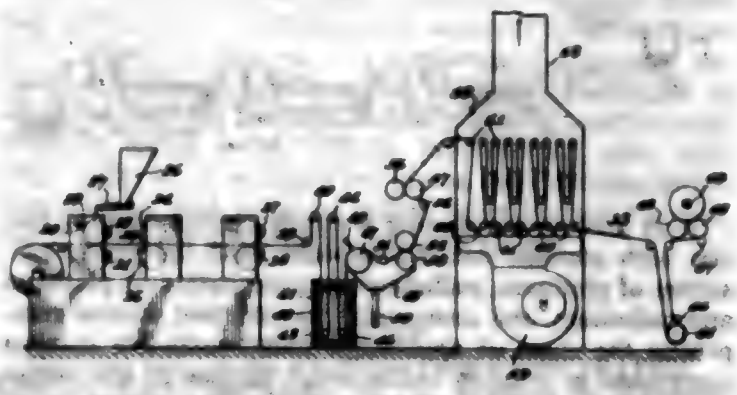
1. The method comprising treating a light colored to white, particulate, solid material comprising amorphous silica containing halogen attached to the silicon of said silica in an amount not in excess of about 3% by weight, with an alcohol compound free of amine groups in the fluid state and in an amount, at a pressure and at a temperature sufficient to replace substantially all of said halogen of said silica with a residue of said compound attached to said silica through oxygen and without causing sintering of said silica and without decomposition of said alcohol compound.

2,865,783

NON-WOVEN WEB PRODUCT AND METHOD OF MAKING SAME

Charles L. Henderson, Appleton, and Harry G. Fitzgerald, Green Bay, Wis., assignors, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware

Application October 30, 1952, Serial No. 317,782
14 Claims. (Cl. 117—5.5)



8. The method of making a porous web product which comprises sizing a non-woven web with a water soluble sizing material, printing a fused, thermoplastic resinous material onto said web, washing said web with water to remove at least a portion of the water soluble sizing material, and drying said web.

monomethylol dimethyl hydantoin.

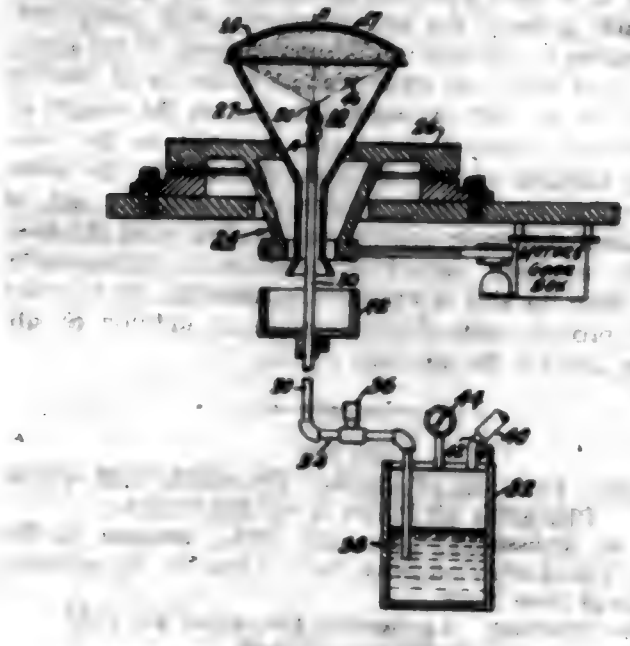
fine pigment, said silica having an average ultimate particle size below 0.1 micron.

2,866,734

METHOD OF MANUFACTURING ELECTRON SENSITIVE MOSAIC SCREENS

Theodore A. Saulnier, Jr., Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Application August 31, 1954, Serial No. 453,285
3 Claims. (Cl. 117—33.5)



1. The method of coating phosphor screen comprising an array of phosphor elements disposed on a base plate and having well-defined interstices between said elements comprising the steps of applying minute droplets of water to said screen to form a thin film of water in intimate contact with substantially the entire surface of each of said elements without filling said interstices, providing a thin film of an organic resinous material in intimate contact with substantially the entire surface of each of said elements without filling said interstices therewith and without bridging across said interstices, coating a film of metal on said resinous material and in intimate contact therewith, and removing said resinous material.

2,866,735

METHODS OF COATING CATALYST CARRIERS

Henry L. Coles, Birmingham, Mich., assignor to Calchester Corporation, Bay City, Mich., a corporation of Michigan

Application April 6, 1955, Serial No. 499,589
10 Claims. (Cl. 117—46)

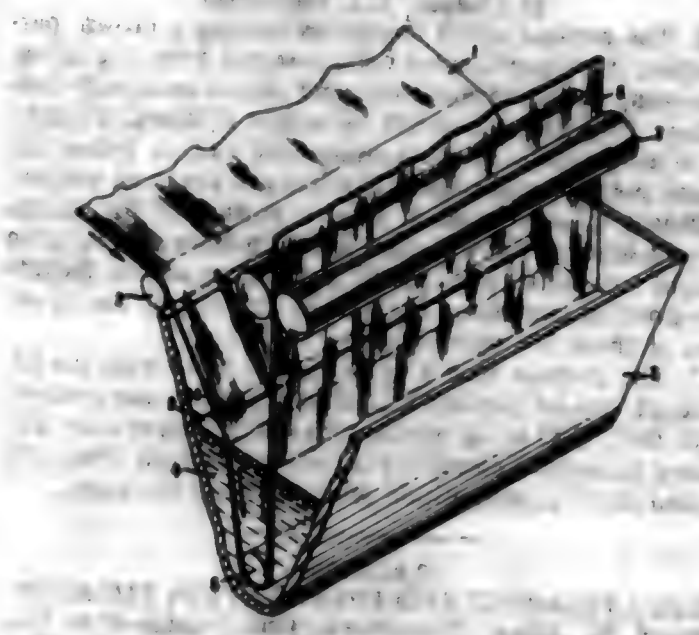
1. A process for coating a rough surface catalyst carrier with metallic catalyst selected from the group consisting of platinum, palladium, a combination of platinum and palladium, and compounds thereof, said process comprising the steps of applying a flame reducible catalyst compound in solution to the rough surface of the carrier to coat the carrier, and firing the coated carrier in an open flame which contacts the carrier to reduce catalyst compound to free catalytic metal and fix free catalytic metal to the carrier; said flame heating the coated carrier at temperatures above the decomposition temperature of the catalyst compound and below the melting point of the free catalytic metal.

2,866,736

FILM COATING PROCESS AND APPARATUS

Andrew Turik, Clinton, Iowa, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 23, 1956, Serial No. 560,786
3 Claims. (Cl. 117—67)



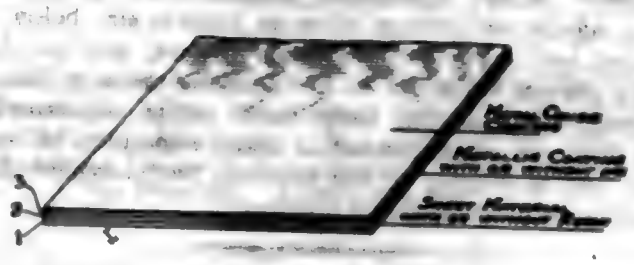
1. In the process of coating film wherein a continuous web of film is continuously passed through a bath of liquid coating composition having a layer of foam of said composition at the surface of the bath whereby to coat both sides of said film, the improvement which comprises continuously coating the underside of said film with said liquid coating composition for the entire width of the film at a line which is substantially parallel to the surface of said bath and above the level of foam on said surface, and thereafter passing said film through said bath, the distance between said line of prior coating and said surface of the bath being limited to prevent solidification of the coating on the film.

2,866,737

PROCESS FOR PRODUCING COLOR EFFECTS ON TEXTILE AND OTHER SHEET-LIKE MATERIAL AND PRODUCTS THEREFROM

Karl Risch, Wattwil, Switzerland, assignor to Heberlein Patent Corporation, New York, N. Y., a corporation of New York

Application March 9, 1956 Serial No. 570,657
Claims priority, application Germany March 9, 1955
9 Claims. (Cl. 117—71)



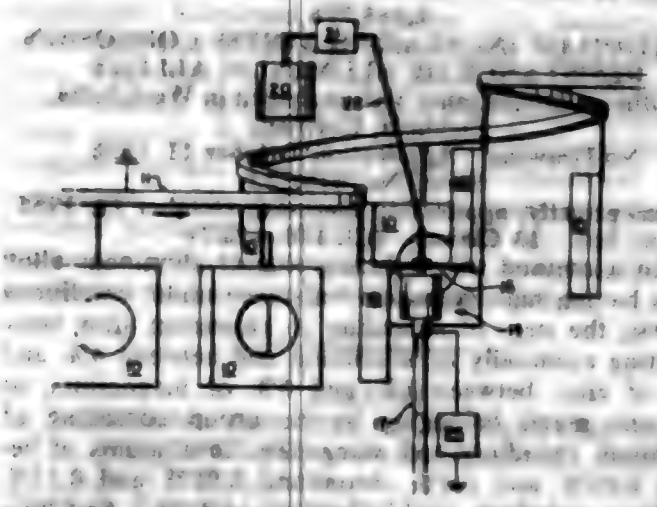
5. A process, which comprises depositing a metal coating from the vapor thereof on a thin, flexible sheet-like material having a resinous surface adapted to prevent peeling of the metal coating therefrom, depositing an organic dye on top of said metal deposit and then depositing on top of said organic dye a metal oxide coating from the vapor thereof, the thickness of said metal and metal oxide coatings being such that the flexibility of the said material is not substantially altered, to produce a sheet-like material having a metallic lustre and iridescence.

prising impregnating the paper with a long-chain, non- coating thereon consisting by weight of about 80 to 85

2,865,788
BONDING PROCESS
Günther Nischk, Leverkusen, Karl E. Müller, Leverkusen-Bayerwerk, and Eugen Beck, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Application March 18, 1954, Serial No. 415,414
Claims priority, application Germany March 13, 1953
5 Claims. (Cl. 117—72)

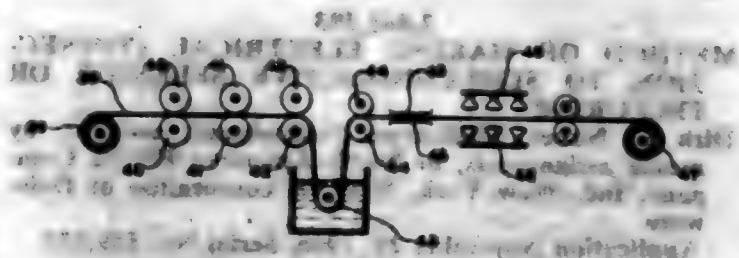
1. The process of bonding plastic to glass which comprises applying an ethylenically unsaturated polymeric product containing carboxyl groups to a surface of the glass, thus forming a coating on said glass, applying to the surface of said coating (1) a polymerizable ethylenically unsaturated polyester (2) a liquid ethylenically unsaturated monomer which is polymerizable with said polyester and (3) a polymerization catalyst for the reactants of said mixture, then permitting polymerization to take place.

2,865,789
ELECTROSTATIC SPRAY COATING SYSTEM
James W. Juvinall, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Application February 7, 1955, Serial No. 486,638
7 Claims. (Cl. 117—93)



2. The method of applying porcelain enamel to an article, comprising feeding porcelain enamel slip at a controlled rate to the surface of a rotating disc, said slip having a fineness of grind represented by in the order of 5 P. C. units measured on a Fineness of Grind Gauge, containing an anti-tearing electrolyte and having a specific gravity of substantially 1.65, moving the article to be coated along a predetermined path in coating relation with said disc, creating an electrostatic field of high potential gradient between the disc and the moving article, atomizing the slip from said disc into said electrostatic field to form an electrically charged spray of dispersed porcelain enamel particles, and electrostatically depositing the porcelain enamel particles onto the article to form a biscuit, said atomization and deposition being carried out in a quiescent atmosphere.

2,865,790
METHOD OF TREATING FIBROUS MATERIAL UTILIZING A RADIO-FREQUENCY FIELD WHICH EXTENDS PREDOMINANTLY AT RIGHT ANGLES TO THE LENGTH OF SAID MATERIAL
Carl A. Beer, Washington, D. C.
Application August 19, 1955, Serial No. 529,452
2 Claims. (Cl. 117—93)



1. The method of treating fibrous material which includes applying thereto a sufficient quantity of bonding solution to mechanically impregnate the fibers throughout; and immediately applying to the fibrous material over a substantial area thereof a radio-frequency field which extends predominantly at right angles to the largest surface of said material to thereby create such a uniform field which will cause the solution binder solids to become fluid to the extent of practically nullifying the viscosity of said binder solids uniformly throughout whereupon said field will force them into the interstices between the fibers to the extent of producing substantially complete interpenetration and adsorption of all available fiber surfaces uniformly, thus completing and perfecting any aforementioned mechanical impregnation before the setting of the binder of the solution, and then, by the cumulative uniform heating action of said field upon the fibrous mass, creating sufficient heat to at least initially set the binder in place in the fibrous mass; whereby, when dry, the tensile strength of the fibrous mass is increased over that which would be obtained by any mechanical impregnation and subsequent drying without the use of the aforementioned specifically applied radio-frequency field.

2,865,791
METAL NITRIDE COATING PROCESS
Wilhelm Reppert and Gottfried Schwedler, Frankfurt am Main, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Application February 25, 1955
Serial No. 491,194
Claims priority, application Germany March 5, 1954
5 Claims. (Cl. 117—106)

5. A process for coating surfaces with titanium nitride which comprises introducing separately a titanium halide and ammonia in a nitriding zone adjacent to the surfaces to be coated maintained at a temperature above the decomposition temperature of the complex compounds of ammonia with the titanium halide, said ammonia and said titanium halide being brought into contact with each other only at a temperature above said decomposition temperature, said titanium halide being formed by passing a hydrogen halide over titanium nitride.

2,865,792
REDUCED CURL IN PHOTOGRAPHIC PAPER
Glen G. Gray, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
No Drawing. Application December 20, 1954
Serial No. 476,547
6 Claims. (Cl. 117—143)

1. A process of treating photographic paper to reduce curl, prior to coating with a photographic emulsion com-

quenching said heat treated shaped aluminum alloy body acting said receivers to receive wires in overlying and

like material having a metallic lustre and iridescence.

prising impregnating the paper with a long-chain, non-hygroscopic organic ether having a chemical composition $RO(CH_2CH_2O)_nR'$ in which R and R' are alkyl groups and n is a number between 2 and 135, followed by coating the impregnated paper with a light-sensitive photographic emulsion.

2,865,793

METHOD OF MAKING ELECTRICAL CONNECTION TO SEMI-CONDUCTIVE SELENIDE OR TELLURIDE

Dirk de Nobel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application November 29, 1955, Serial No. 549,754
Claims priority, application Netherlands December 6, 1954
9 Claims. (Cl. 117—200)

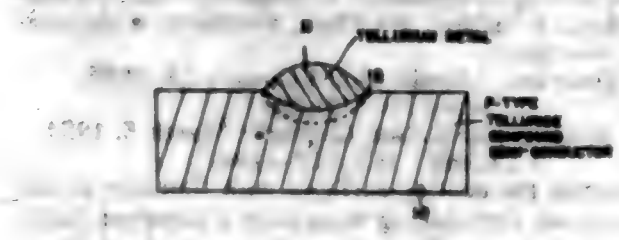
1. A method of making an electrical connection to a semiconductive body constituted of a member selected from the group consisting of a bivalent metal selenide and a bivalent metal telluride, said bivalent metal being selected from the group consisting of zinc, cadmium, mercury, tin and lead, which comprises bringing said body into reactive engagement with a solution of a precious metal selected from the group consisting of gold, silver, mercury, platinum, rhodium, osmium, palladium and iridium thereby to dissolve out some bivalent metal from a surface portion of said body and precipitate on the said surface portion from which bivalent metal was dissolved said precious metal.

2,865,794

SEMI-CONDUCTOR DEVICE WITH TELLURIDE CONTAINING OHMIC CONTACT AND METHOD OF FORMING THE SAME

Ferdinand Anne Kroger and Dirk de Nobel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application December 1, 1955, Serial No. 550,502
Claims priority, application Netherlands December 1, 1954
5 Claims. (Cl. 117—200)



4. A method of making an ohmic contact to a p-type semi-conductive body portion consisting essentially of a telluride of a metal selected from the group consisting of zinc, cadmium, mercury, tin and lead, which comprises contacting said body portion with tellurium metal, and fusing said tellurium to said body portion in a predominantly nitrogen gas atmosphere to incorporate some tellurium in the body portion and thereby establish the ohmic contact.

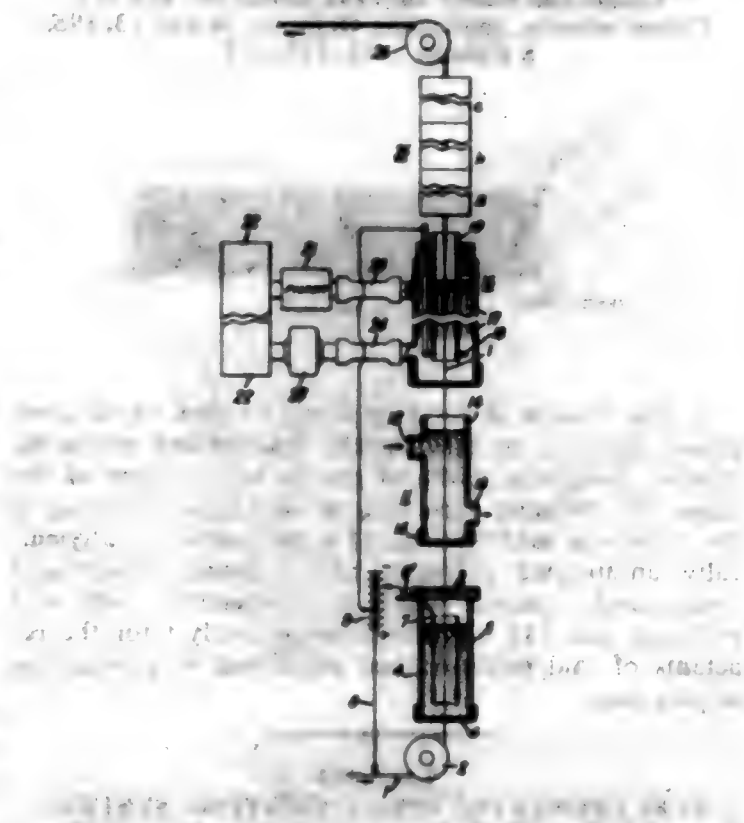
2,865,795

INSULATED ELECTRICAL CONDUCTOR AND METHOD OF MAKING THE SAME

William G. Morrison, Jr., Schenectady, N. Y., assignor to General Electric Company, a corporation of New York

Application October 30, 1951, Serial No. 253,832
3 Claims. (Cl. 117—230)

4. An electric conductor, an adherent homogeneous coating thereon consisting by weight of about 80 to 85 parts of polytetrafluoroethylene and about 20 to 15 parts



of heat-hardened organopolysiloxane resin and an overlying coating of heat-hardened organopolysiloxane resin.

2,865,796

METHOD OF INCREASING STRESS CORROSION RESISTANCE OF ALUMINUM ALLOYS

Wilhelm Rosenkranz, Meinerzhagen in Westphalia, Eichholz, Germany

No Drawing. Application October 11, 1956
Serial No. 615,223
Claims priority, application Germany October 12, 1955
13 Claims. (Cl. 148—12.7)

5. In a method of producing shaped aluminum alloy bodies having high corrosion resistance under conditions of stress, the steps of annealing an aluminum alloy body consisting essentially of aluminum and between 4% and 12% of zinc, between 1% and 6% of magnesium, at least one metal belonging to the group consisting of chromium, vanadium and manganese, in amounts of between 0.05% and 0.6% chromium, 0.05% and 0.15% vanadium and 0.1% to 1.5% manganese, at a first temperature and for a period of time sufficient to cause substantially equalization of concentration of said magnesium and of said zinc within the crystallites of said aluminum alloy body, said first temperature being so chosen as to maintain substantially said one metal in solution within said alloy and to prevent substantially precipitation thereof in the form of an intermediate compound; adjusting the temperature of said aluminum alloy body to a second temperature sufficiently high to allow non-cutting shaping of said aluminum alloy body, to retain substantially said one metal in solution in said alloy and not more than 20° C. higher than said first temperature; subjecting said aluminum alloy body to non-cutting shaping while the same is substantially at said second temperature; subjecting the thus-shaped aluminum alloy body to solution heat treatment at a temperature not exceeding said first temperature by more than 50° C. and such as to prevent any substantial precipitation of said one metal;

simultaneously polymerized and hardened to form an impact-resistant surface upon the molded article.

2,865,804

out in a quiescent atmosphere.

curl, prior to coating with a photographic emulsion com-

quenching said heat treated shaped aluminum alloy body at room temperature, and subsequently hardening the same in boiling water, whereby a shaped aluminum alloy body of great stress corrosion resistance is formed.

2,865,797

METHOD OF FORMING CARBONACEOUS PROTECTIVE COATINGS ON TITANIUM AND ZIRCONIUM

Frank X. McCawley, Cheverly, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware

No Drawing. Application November 5, 1957
Serial No. 694,504
1 Claim. (Cl. 148—13.1)

The method of treating a metal mass selected from the group consisting of titanium, titanium alloys, zirconium and zirconium alloys in an oxidizing atmosphere at 600–1100° C., without oxygen penetration to a depth of more than about 4 mils which consists in first heating in a pure hydrocarbon vapor at 750–1000° C. for 10–30 minutes.

2,865,798

ARC WELDING FLUX COMPOSITIONS

Eric Hindess, Heaton, Newcastle-upon-Tyne, England, assignor to Fusarc Limited, a British company

No Drawing. Application January 4, 1955
Serial No. 479,843
Claims priority, application Great Britain
February 4, 1954
3 Claims. (Cl. 148—26)

1. A free-flowing, anhydrous, non-deliquescent, granulated flux composition for arc welding consisting of finely-divided fluxing materials and a prefused agglomerant therefor, said fluxing materials being selected from the group consisting of silicates and oxides of calcium, magnesium, aluminum, manganese, titanium, iron, barium, chromium, and zirconium, and titanates of calcium, magnesium, aluminum, manganese, iron, barium, chromium, and zirconium, said agglomerant being a substantially anhydrous glaze composition consisting of the fusion product of silica and oxides of at least three elements selected from the group consisting of lithium, titanium, sodium, potassium, calcium, aluminum, boron and barium, said glaze composition having a fusing temperature in the range 500° C. to 700° C., and said agglomerant being present in said flux composition in a proportion of 5 to 30 parts by weight thereof.

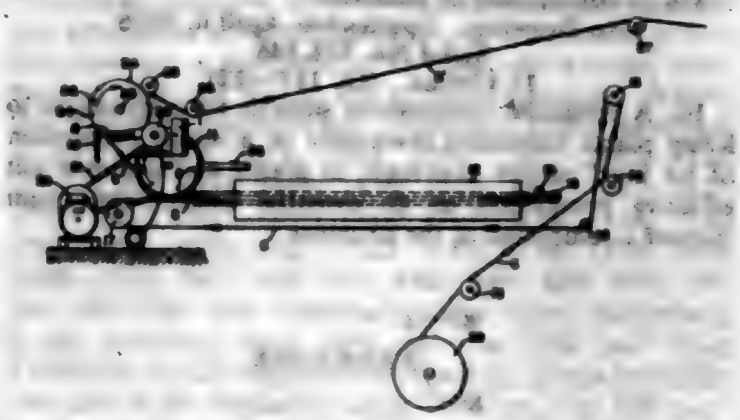
2,865,799

MACHINE FOR THE MANUFACTURE OF MULTIPLE STRAND ELECTRICAL CONDUCTOR LEADS

Ernst R. Gossett, Burbank, Calif., assignor, by mesne assignments, to L. A. Young Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan

Substitute for abandoned application Serial No. 244,996, September 4, 1951. This application January 26, 1953, Serial No. 333,886
16 Claims. (Cl. 154—3.24)

1. In a machine for the manufacture of a product comprising air insulated multiple conductor leads and thermoplastic spacing elements; indexing mechanism embodying combined guiding and feeding mechanism for thermoplastic elements; said indexing mechanism comprising a main pulley having thereon along one of its circumferential edges a continuous stop flange, said pulley also having on its circumference transversely arranged uniformly spaced receivers for the thermoplastic elements, said receivers comprising closed end shallow grooves terminating at one end at the stop flange, said pulley also having uniformly spaced circumferential grooves intersecting said receivers to receive wires in overlying and abutting relation to thermoplastic elements located in said receivers; means for feeding a multiple of conductor wires to the grooves on said pulley, heating means comprising an oven constituting a part of said machine for heating the advancing wires as they approach the pulley,



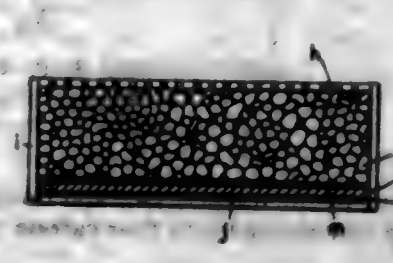
means to maintain said wires under tension whereby said heated wires are forced and fused into thermoplastic elements on said pulley by pressure developed by the tension means, in combination with means for propelling the advance of the wires and thermoplastic elements thereon through the machine.

2,865,800

PROCESS OF FORMING SHAPED ARTICLES OF POROUS STYRENE POLYMERS HAVING IMPACT-RESISTANT SURFACES

Fritz Stastny, Weinheim an der Bergstrasse, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Application November 9, 1955, Serial No. 545,846
Claims priority, application Germany November 11, 1954
8 Claims. (Cl. 154—116)



1. A method of manufacturing a shaped molded article of a porous cellular styrene polymer which comprises: partially covering the inner surface of a gas-permeable mold enclosing a volume of the desired shape with a layer (A) of a mixture of an unsaturated polyester resin and a vinyl compound liquid at room temperature; then covering said layer (A) with a second layer (B) of compact expandable particles of a styrene polymer containing a readily volatile non-solvent organic liquid as a raising agent, and initially partly polymerizing said unsaturated polyester resin and said vinyl compound in said layer (A), and in any order; subsequently filling the remaining volume of the mold with (C) pre-expanded porous cellular particles of a styrene polymer capable of additional expansion; and heating the contents of the mold at a temperature above the softening range of both the expandable compact and pre-expanded particles of styrene polymers whereby said styrene polymers are expanded to exert intersecting pressure within said mold and are firmly united with each other and said layer (B) is firmly united with said layer (A) in which the mixture of unsaturated polyester resin and vinyl compound is

methanol solution, said methanol soluble salt being rats and characterized by antioxidant activity, said com-

simultaneously polymerized and hardened to form an impact-resistant surface upon the molded article.

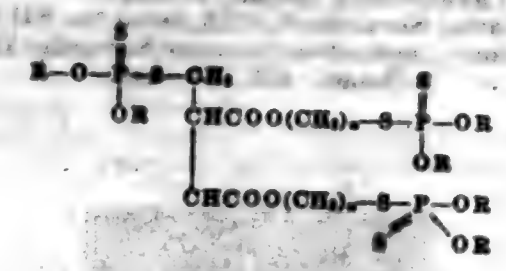
2,865,891
PROPARGYL PHOSPHOROTHIOATES
Joseph W. Baker and George A. Saul, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application April 6, 1956
Serial No. 576,546
11 Claims. (Cl. 167—22)

10. A pesticidal composition suitable for application to living plants consisting essentially of a major proportion of an inert carrier non-toxic to plants and a minor but effective proportion as an essential active component thereof a compound of the structure

where R and R' are alkyl groups containing less than four carbon atoms and X is a chalkogen of atomic weight less than 40, at least one of which is sulfur.

2,865,902
PESTICIDES
Abraham Baviey, Brooklyn, and Donald P. Cameron, Bronx, N. Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
No Drawing. Application July 2, 1957
Serial No. 669,421
6 Claims. (Cl. 167—22)

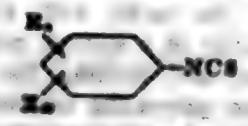
1. A compound of the formula



wherein *n* is one of the integers two and three and R is an an alkyl group containing up to four carbon atoms.

2,865,903
NEMATOCIDAL COMPOSITION AND METHODS EMPLOYING CYCLOHEXYL ISOTHIOCYANATES
Norman J. Lewis, Des Peres, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application June 13, 1958
Serial No. 516,268
5 Claims. (Cl. 167—30)

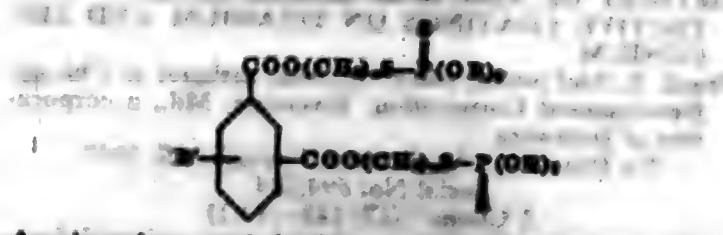
1. A method of destroying nematodes in nematode infected agricultural solids which comprises contacting the organism with a compound having the chemical structure:



wherein R is an alkyl group having up to twelve carbon atoms, X is a halogen atom, and *m* and *n* are each integers from 0 to 3 provided that the sum of *m* and *n* does not exceed 5.

2,865,904
PESTICIDES
Abraham Baviey, Brooklyn, and Donald P. Cameron, Bronx, N. Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
No Drawing. Application July 2, 1957
Serial No. 669,452
6 Claims. (Cl. 167—30)

1. A compound of the formula



wherein *n* is one of the integers two and three, R is an alkyl group containing up to four carbon atoms, and R' represents from one to two substituents consisting of alkyl and alkoxy containing from one to four carbon atoms.

2,865,905
QUATERNARY AMMONIUM NAPHTHALENE AND NAPHTHOL SULFONATES
Martin S. Frant, Oakland, and Sylvan L. Cohen, Flushing, N. Y., assignors to Gallowhur Chemical Corporation, New York, N. Y., a corporation of New York
No Drawing. Application May 4, 1954
Serial No. 427,652
13 Claims. (Cl. 167—32)

1. A water-insoluble chemical compound selected from the group consisting of quaternary ammonium naphthalene sulfonates and quaternary ammonium naphthol sulfonates, the quaternary ammonium moiety thereof containing four nitrogen-linked hydrocarbon groups one of which is a higher alkyl group, wherein alkyl represents a mixture ranging from C_9H_{17} to $C_{17}H_{37}$ in which lauryl, myristyl and cetyl radicals are the most active and predominant, two to three of said hydrocarbon groups being lower alkyl groups, and one of said hydrocarbon groups being selected from the group consisting of benzyl, alkyl-substituted benzyl and chloro-substituted benzyl and when three hydrocarbon groups are lower alkyl, the remaining hydrocarbon group is alkyl-substituted benzyl.

2,865,906
SOLIDIFIED AIR ODOR CONTROL LIQUIDS
Jack J. Bulloff, Dayton, Ohio, assignor to International Sanitation Company, Inc., Cincinnati, Ohio, a corporation of Ohio
No Drawing. Application August 5, 1955
Serial No. 526,771
21 Claims. (Cl. 167—42)

1. A solid air odor controlling composition consisting essentially of the product obtained by dissolving a solid moldable material selected from the group consisting of polyethylene and ethyl cellulose, and having a Dow melt index number between 0.1 and 35 in liquid menthadiene, the constituents being admixed at a temperature of 160° F. to 250° F., and cooling the solution to form a solid product.

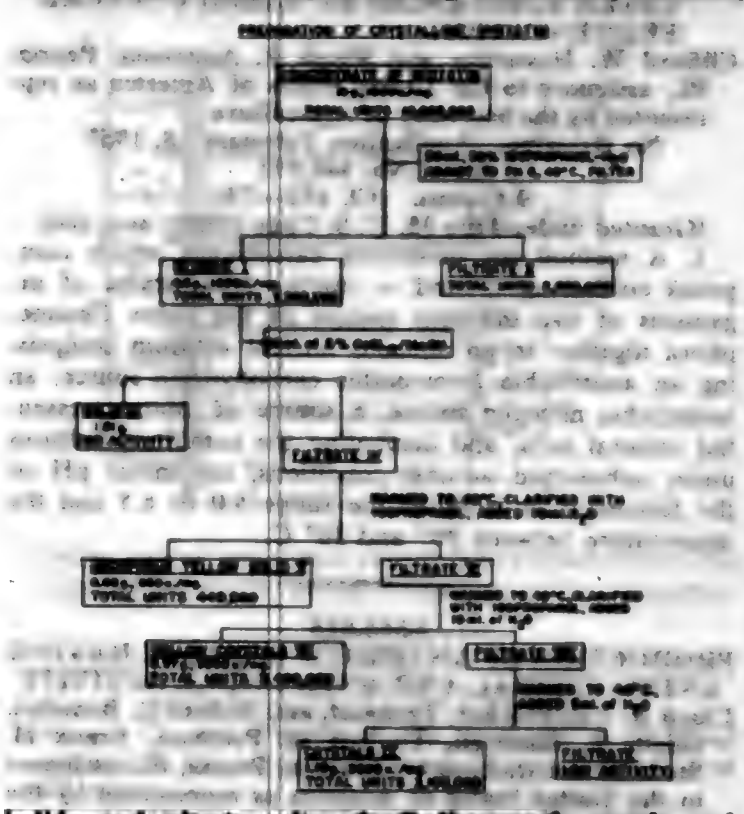
2,865,907
NYSTATIN PURIFICATION
James D. Dutcher, New Brunswick, and John Vandeputte, Milltown, N. J., assignors to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia
Application January 6, 1955, Serial No. 480,278
10 Claims. (Cl. 167—66)

2. In the process of preparing nystatin of high potency, the steps which comprise solubilizing partially purified nystatin in a methanol soluble salt-methanol medium and precipitating the nystatin by addition of water to the

a plurality of foundation subcoats, a primary coating

2,865,914

methanol solution, said methanol soluble salt being selected from the group consisting of chloride, bromide, iodide and nitrate salts of alkaline earth metals and bromide, iodide and acetate salts of alkali metals.



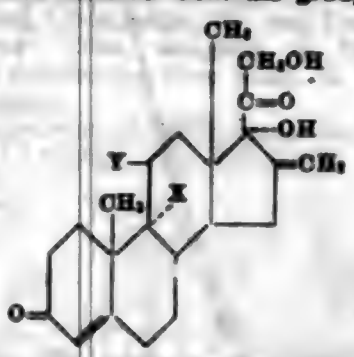
2,865,906

16-METHYLENE PREGNENE DERIVATIVES

Eugene J. Agnello and Gerald D. Laubach, Jackson Heights, N. Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware

No Drawing. Application June 9, 1958
Serial No. 740,598
7 Claims. (Cl. 167—65)

1. A compound selected from the group consisting of



and the Δ^{1}-, Δ^{6}- and $\Delta^{1,6}$-derivatives thereof wherein X is selected from the group consisting of hydrogen, α-halogen, α-methoxy and α-ethoxy; Y is selected from the group consisting of keto and β-hydroxy; 21-position esters and acid esters thereof derived from mono and dicarboxylic acids containing only carbon, hydrogen and oxygen up to a total of twenty carbon atoms and alkali and alkaline earth metal salts of said acid esters.

2. A pharmaceutical composition comprising a compound as claimed in claim 1 together with a pharmaceutically acceptable carrier.

2,865,809

SUBSTANCE HAVING ANTIOXIDANT ACTIVITY AND ITS PREPARATION FROM YEAST

Martin Forbes, Silver Spring, Md., Paul Gyorgy, Villanova, and Friedrich Zilliken, Philadelphia, Pa., assignors to the trustees of the University of Pennsylvania, Philadelphia, Pa.

Application August 11, 1955, Serial No. 527,764
9 Claims. (Cl. 167—81)

1. A crystalline organic compound capable of preventing hemolysis of red blood cells of vitamin E-deficient rats and characterized by antioxidant activity, said compound having a molecular weight of approximately 280, the empiric formula $C_{19}H_{12}O_3$, and a melting point of approximately 118° C., crystallizing characteristically in needle crystals which crystals exhibit blue fluorescence in ultra-violet light, which fluorescence decreases, in solution, with increased acidity and disappears entirely at an acidity corresponding to that of 3N hydrochloric acid; the ultra-violet spectrum of said compound in ethanol showing absorption at wavelengths in the ultra-violet part of the spectrum, a minimum at 262 $m\mu$, and a broad maximum at 300–303 $m\mu$; in the infra-red spectrum showing the following characteristic frequency peaks, expressed in cm.$^{-1}$; 3510; 3070; 3040; 3010; 2925; 2895; 2850; 2790; 2765; 1930; 1890; 1850; 1810; 1772; 1632; 1625; 1500; 1487; 1461; 1451; 1416; 1401; 1376; 1349; 1330; 1304; 1271; 1254; 1207; 1168; 1156; 1144; 1110; 1085; 1060; 1010; 967; 943; 921; 888; 849; 820; 808; 787; 744; and 738; said frequency peaks being determined, in the frequency range 4000 cm.$^{-1}$ to 1300 cm.$^{-1}$ from a solution of said organic compound in carbon tetrachloride, and in the frequency range 1400 cm.$^{-1}$ to 650 cm.$^{-1}$ from a solution of said organic compound in carbon tetrachloride, and in the frequency range 1400 cm.$^{-1}$ to 650 cm.$^{-1}$ from a solution of said organic compound in carbon disulfide; and said compound being aromatic in nature and capable of being hydrogenated to absorb up to 4 moles of hydrogen per mole of said compound.

3. The method of extracting from yeast a material possessing antioxidant activity which is capable of preventing hemolysis by dialuric acid of red blood cells from rats depleted in vitamin E, which comprises: dissolving said yeast in 90–95 percent aqueous ethanol by bringing said yeast into contact with said solvent at its boiling point; removing inactive material from the resulting extract by subjecting said extract to a low temperature, thereby precipitating out inactive material; filtering off said precipitated material and evaporating the resulting clear filtrate to dryness at a reduced pressure less than atmospheric; redissolving the resulting dry extract in methanol; allowing said methanolic solution to stand at a low temperature until inactive material precipitates therein, and removing said insoluble inactive material from said solution; evaporating the resulting clear liquid to dryness at a reduced pressure less than atmospheric and under an inert atmosphere; suspending the dry residue in a 0.05 molar phosphate buffer solution approximately 100 grams of said residue being suspended in 1000 milliliters of said phosphate buffer, and adjusting the pH thereof to a pH on the alkaline side; extracting the resulting suspension with ether, drying the resulting ether extract and removing the insoluble material therefrom; evaporating the resulting clear filtrate to dryness under reduced pressure and in the presence of an inert atmosphere until said ether is removed therefrom; dissolving the resulting solid residue in petroleum ether; subjecting the resulting petroleum ether solution to chromatography on a magnesium silicate column, and removing the active material adsorbed on said column therefrom by means of warm petroleum ether, thereby eluting said adsorbed active material from said magnesium silicate adsorbent; and evaporating the resulting eluate under an inert atmosphere to a small volume and cooling, thereby securing said active material in crystalline form.

2,865,810

MARKED PHARMACEUTICAL TABLET AND METHOD OF MARKING THE SAME

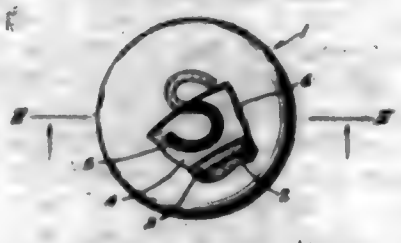
Ray Y. Sanders, Jr., Buffalo, N. Y.

Application October 7, 1955, Serial No. 539,111
15 Claims. (Cl. 167—82)

1. A marked pharmaceutical tablet for internal consumption comprising, a coated medicinal core including

connected in series with said main stages and having timewise feeding water into said fractional extractive

a plurality of foundation subcoats, a resinous coating containing a lubricative plasticizer over said core, and



indicia printed on said coating in ink of a distinguishing color.

2,865,811

HAIR STRAIGHTENER CONTAINING A KERATIN REDUCING AGENT, ANIONIC WETTING AGENT AND WATER-SOLUBLE SOAP AND METHOD OF USING SAME

Fernand Rosech, Troy, N. Y., assignor to Irval Cosmetics, Inc., Troy, N. Y., a corporation of New York

No Drawing. Application May 2, 1952
Serial No. 285,797
9 Claims. (Cl. 167—87.1)

1. A composition effective for straightening kinky hair which consists essentially of a creamy dispersion in water of the following ingredients in substantially the following proportions by weight:

	Percent
Anionic wetting agent	.3 to 6
Water-soluble soap	2 to 10
Ammonium carbonate	2 to 8
Alkali-metal bisulfite	1.5 to 5
Aqua ammonia (28% soln.)	0 to 2
Triethanolamine	0 to 6
Unsaturated organic acid emollient	0 to 5
Methylcellulose gel	0 to 6

the ratio by weight of the ammonium carbonate to the alkali-metal bisulfite being from about 1.5 to 1 to about 4 to 1 and the pH of the composition being between about 7.5 and about 9.8.

2,865,812

METABOLIC PROCESS FOR PRODUCTION OF GIBBERELLIC ACID

Antony Borrow, Edward Garstang Jefferys, and Ian Stewart Nixon, Welwyn, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application December 26, 1956
Serial No. 630,467
Claims priority, application Great Britain
December 30, 1955
3 Claims. (Cl. 195—36)

2. A process as claimed in claim 1 in which carbon dioxide is introduced in a proportion not greater than 10% by volume of the air used for aeration.

2,865,813

PROCESS FOR THE MANUFACTURE OF COMPOUND EPI-F

Emilio Testa, Milan, Italy, assignor to Lepetit S. p. A., Milan, Italy

No Drawing. Application March 28, 1957
Serial No. 649,003
4 Claims. (Cl. 195—51)

1. Process for preparing Δ^4-pregnene-11a,17a,21-triol-3,20-dione (Compound epi-F) starting from a steroid of of the group consisting of Δ^4-pregnene-17a,21diol-3,20-dione (Compound S) and its lower aliphatic carboxylic acid esters which comprises contacting said steroid with a strain of *Coryneum cardinale* 952 (LCI) (ATCC 13063T);

2,865,814

METHOD OF MAKING CAROTENES AND RELATED SUBSTANCES BY MIXED CULTURE FERMENTATION

Clifford W. Hesseltine and Ralph F. Anderson, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application February 18, 1957
Serial No. 640,991
9 Claims. (Cl. 195—78)
(Granted under Title 35, U. S. Code (1952), sec. 266)

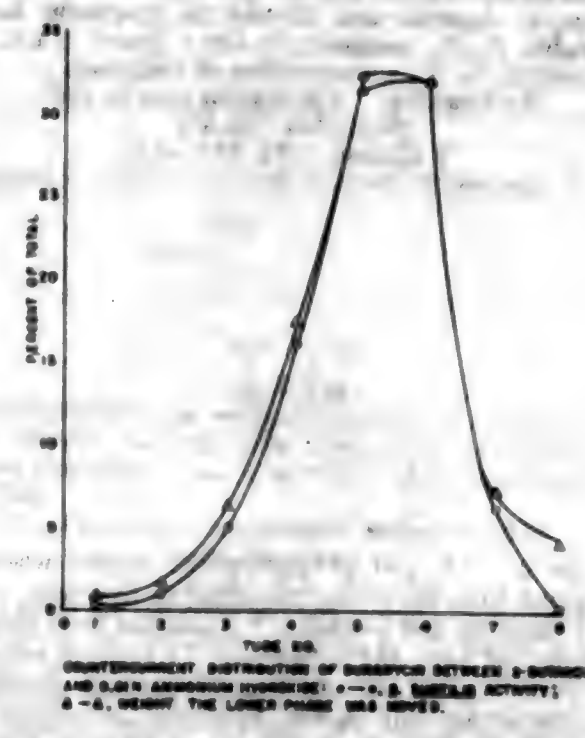
1. A method for producing carotenoids which comprises cultivating + and — mating type strains of organisms of two different species of the genus Choanephora together in an aqueous nutrient medium comprising an assimilable fermentable carbohydrate source, an assimilable nitrogen source, a source of thiamin, essential mineral salts, and incubating the combined cultures under submerged aerobic conditions, the initial pH of the fermentation being in the range 5.0 to 6.5 and the temperature between 20° and 30° C.

2,865,815

PRODUCTION OF ANTIBIOTIC MIXTURE HAVING ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY

Lloyd A. Lindenfelser, Tremont, and Robert G. Benedict, Odette L. Shotwell, Thomas G. Pridham, Frank H. Stodola, and Richard W. Jackson, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

Application February 8, 1957, Serial No. 639,174
7 Claims. (Cl. 195—80)
(Granted under Title 35, U. S. Code (1952), sec. 266)



DISTRIBUTION OF SUBSTRATE BETWEEN 2-BUTANOL AND 0.05 N AMMONIUM HYDROXIDE: ○—○, 2, BACILLUS ACTIVITY; ●—●, WEIGHT THE LOWER PHASE WAS MOVED.

1. A process for producing an antibiotic mixture which comprises cultivating *Streptomyces cinnamomeus* forma *azacoluta* in an aqueous medium containing an assimilable carbon source and an assimilable nitrogen source under aerobic conditions.

2,865,816

METHOD AND APPARATUS FOR THE ASSAY OF VIABLE MICROORGANISMS

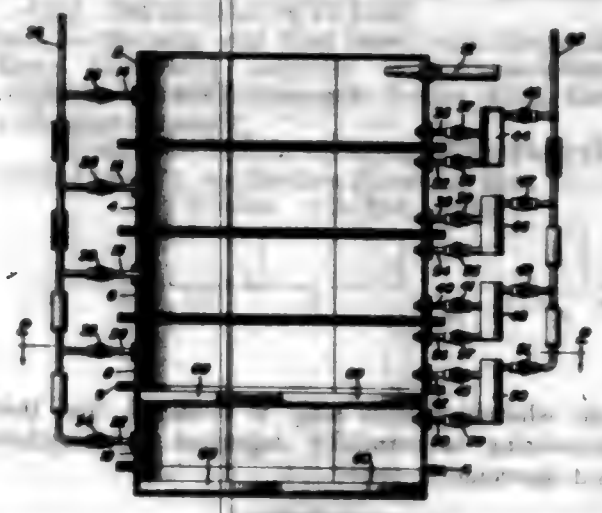
David Stafanye and Julo N. Dews, Frederick, Md.

Application September 18, 1956, Serial No. 610,695
7 Claims. (Cl. 195—103.5)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A dilution apparatus comprising a series of sealed main volumetric stages, intermediate smaller substages

so positioned that material passing therethrough will fol- and to transport sodium ions away from said zone

connected in series with said main stages and having valved inlet and outlet connections between stages, each

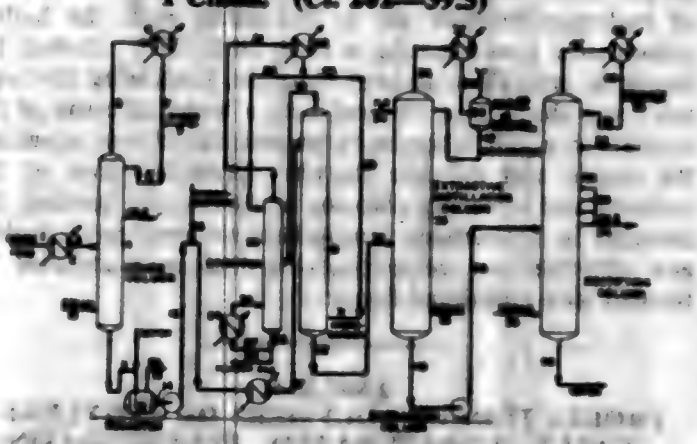


substage having additional valved outlet connections into a common conduit to permit evacuation of the apparatus.

2,865,817
COKE QUENCHING LIQUIDS
Irvin A. Classen, Pittsburgh, Pa., assignor to National Aluminate Corporation, Chicago, Ill., a corporation of Delaware
No Drawing. Application August 17, 1956
Serial No. 604,611
22 Claims. (Cl. 202—37)

1. The method of rendering coke quenching operations non-corrosive to ferrous metals which comprises quenching coke with an aqueous liquid containing a corrosion inhibiting amount of a 1,2-substituted imidazoline containing at least one aliphatic group of at least 6 carbon atoms.

2,865,818
PROCESSING OF ALCOHOLS
John J. Hawkins, Champaign, Ill., and Franklyn D. Miller, Cincinnati, Ohio, assignors to National Petro-Chemicals Corporation, New York, N. Y., a corporation of Delaware
Application June 13, 1955, Serial No. 515,184
1 Claim. (Cl. 202—39.5)



In a method for purifying and refining crude aqueous ethanol produced by the hydration of an ethylene containing stream, said crude ethanol containing both lower and higher boiling impurities, including diethyl ether and unstable polymeric oils which undergo decomposition under distillation conditions, which comprises the steps of continuously passing said crude aqueous ethanol into a fractional distillation zone, continuously removing from the upper portion of said zone a stream containing lower boiling impurities including substantially all of the diethyl ether and other impurities boiling below ethanol, removing from the lower portion of said zone an aqueous ethanol stream, continuously passing said aqueous ethanol stream into a fractional extractive distillation zone, continuously feeding water into said fractional extractive distillation zone at a point above the aqueous ethanol feed stream, maintaining an internal liquid reflux having an ethanol content of 5 to 40 weight per cent within the zone below the water feed point, continuously removing from the upper portion of said extractive distillation zone, a stream containing organic impurities including both lower and higher boiling materials, continuously removing from the lower portion of said extractive distillation zone a dilute aqueous ethanol stream, passing said aqueous ethanol to a concentrating, fractional distillation zone, and removing from an upper portion of said concentrating distillation zone a stream of concentrated ethanol, the improvement which comprises the steps of subjecting said aqueous ethanol stream recovered from said initial fractional distillation zone to preliminary extraction by contacting of said aqueous ethanol stream in an extraction zone with a volatile hydrocarbon extractant which is a selective solvent for said polymeric oils, continuously removing from said extraction zone an extract stream of said selective solvent containing substantially all of said polymeric oils, and continuously removing from said extraction zone a raffinate stream containing substantially all of the ethanol at a concentration of 30 to 40 weight percent based on total ethanol and water, and relatively free of higher boiling unstable polymeric oils which tend to undergo thermal decomposition to volatile, malodorous impurities during final rectification operations.

2,865,819
PURIFICATION OF NEOPENTYLGLYCOL BY AZEOTROPIC DISTILLATION
Hugh J. Hagemeyer, Jr., and Sam H. Johnson, Jr., Longview, Tex., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
No Drawing. Application June 25, 1956
Serial No. 593,313
6 Claims. (Cl. 202—42)

1. In a process for producing neopentylglycol wherein isobutyraldehyde is reacted with formaldehyde and resulting hydroxypivaldehyde is reduced to neopentylglycol, the improvement for recovering neopentylglycol from the crude product of the aforementioned reactions which comprises distilling crude reaction product containing neopentylglycol in the presence of an azeotroping agent for said neopentylglycol, said azeotroping agent having a boiling point at atmospheric pressure within the range of 150 to 300° C. and forming an azeotrope with neopentylglycol having a boiling point not above 150° C. and containing from 10% to 60% by weight of neopentylglycol at a pressure not above atmospheric and said agent being selected from the group consisting of unsaturated aliphatic hydrocarbons and aromatic hydrocarbons having the aforementioned properties, C_9–C_{12} saturated aliphatic alcohols, mono- and di-esters of diacids and diols having the aforementioned properties, acetophenone, nitrobenzene and diphenyl ether.

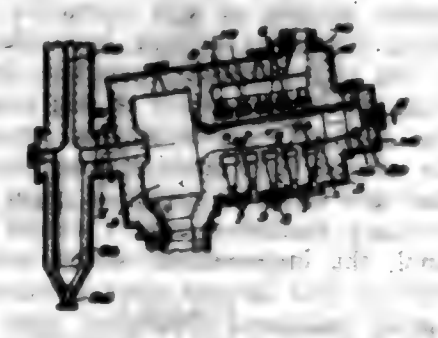
2,865,820
METHOD FOR HEAT TREATMENT OF FINELY DIVIDED SOLID MEDIA
Friedrich Totzek and Joseph Daniels, Essen, Germany, assignors, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Application April 18, 1951, Serial No. 221,992
4 Claims. (Cl. 202—100)

1. Apparatus for the heat treatment of finely-divided solid material comprising a metallic shell having a heat-resistant inner lining, an elongated substantially cylindrical reaction chamber located within said lining, a nozzle disposed tangentially to said reaction chamber said nozzle being located adjacent one end thereof and

2,865,821
PROCESS FOR PREPARING SYMMETRICAL TETRACHLOROETHANE FROM SYMMETRI

than twice the effective slowing down length and equal to or less than twice the effective diffusion length for

so positioned that material passing therethrough will follow a helical path through said reaction chamber, means for feeding finely-divided solid material to said nozzle, a heating chamber located within said lining intermediate



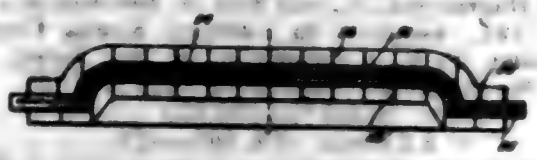
the reaction chamber and said shell means for supplying hot combustion gases to said heating chamber and means for passing hot gases from said heating chamber to said reaction chamber.

2,865,821

PROCESS FOR THE MANUFACTURE BY THE ELECTROFORMING METHOD OF PARTS AND COMPONENTS SUBJECTED TO STATIC AND THERMAL STRESSES, AND PARTICULARLY OF MOULDS

Richard Jonke, Vanceremon, and Josef Liutner, La Garenne-Colombes, France

Application September 29, 1953, Serial No. 383,848
Claims priority, application France October 7, 1952
5 Claims. (Cl. 204—6)



1. In a process for providing by electrodeposition a relatively thin walled metallic piece having a front face and a back face honeycomb design and likely to be subjected to static and thermal stresses with supporting ridges adapted to be electroplated, the steps comprising fixing said supporting ridges on to said back face of said metallic piece so as to form a current-conducting assembly and electroplating said supporting ridges as well as said back face of said metallic piece with a suitable metal thereby obtaining a metallic piece of honeycomb structure, provided on its back face with reinforcing electroplated supporting ridges surrounded on all sides by an homogeneous metallic mass and without its front face being in any way altered.

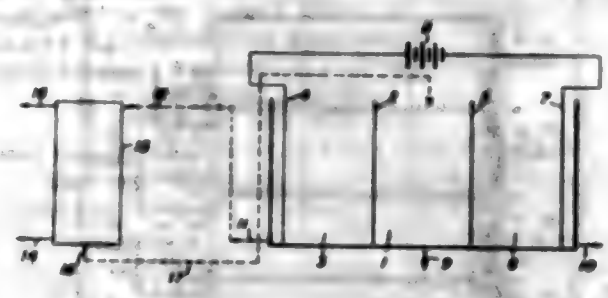
2,865,822

METHOD FOR DEIONIZING AQUEOUS PENTAERYTHRITOL SOLUTIONS

Clarence R. Murphy, Tulsa, Okla., assignor to Warren Petroleum Corporation Inc., Tulsa, Okla., a corporation of Delaware

Application April 30, 1956, Serial No. 581,712
6 Claims. (Cl. 204—72)

1. A method of deionizing an aqueous pentaerythritol solution containing sodium formate as impurity which comprises electrodialyzing such pentaerythritol solution in a dissociation zone between anion and cation exchange membranes with direct current, while maintaining the pH of such solution below about 8 by adding formic acid thereto in order to inhibit degradation of said pentaerythritol, to transport formic acid ions from said zone through an anion exchange membrane to an anode compartment, wherein formic acid is obtained, and to transport sodium ions away from said zone through a cation exchange membrane to a cathode com-



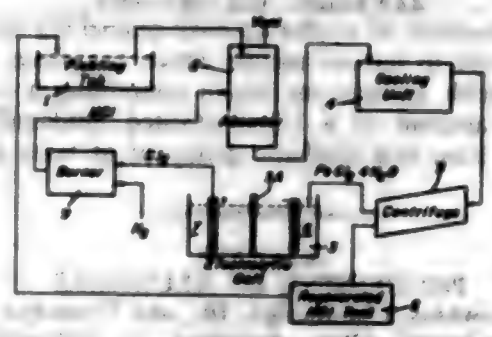
partment, wherein caustic soda is obtained, and thereafter recovering substantially deionized pentaerythritol from said dissociation zone.

2,865,823

METHOD OF RECLAIMING WASTE PICKLE LIQUOR

Arch W. Harris, Warrensville Township, Cuyahoga County, and Charles D. Stricker, Shaker Heights, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey

Application June 4, 1957, Serial No. 663,568
6 Claims. (Cl. 204—151)



2. A method of reclaiming waste hydrochloric-acid pickle liquor which consists in dissolving from 10 to 20% of hydrogen-chloride gas in the liquor until the hydrochloric acid concentration is from 20 to 25%, cooling the liquor to crystallize ferrous chloride, separating the crystals from the liquor, electrolyzing a water solution of the crystals in a cell wherein an anionic membrane separates the anode and cathode thereby depositing iron at the cathode and releasing chlorine at the anode, burning the chlorine in a hydrogen atmosphere to form fresh hydrogen chloride and contacting the hydrogen chloride so formed with additional liquor.

2,865,824

PRODUCTION OF POLYMERS OF ETHYLENICALLY UNSATURATED FLUORINE-CONTAINING COMPOUNDS

Jean W. Berland, Massapequa, and Charles B. Miller, Lynbrook, N. Y., and John H. Pearson, Glen Rock, N. J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application April 2, 1954
Serial No. 420,736
2 Claims. (Cl. 204—163)

2. A method of preparing polytrifluorochloroethylene having an N. S. T. value in excess of about 300° C. which comprises subjecting 1,1,2-trifluoro-2-chloroethylene as sole charge to a source of gamma radiation having a strength of at least 5 curies at a temperature of about −15° to +15° C. for a time sufficient to obtain said desired polymerization.

series of elastic bands around the structure, each band comprising a series of joined links and each link compris-

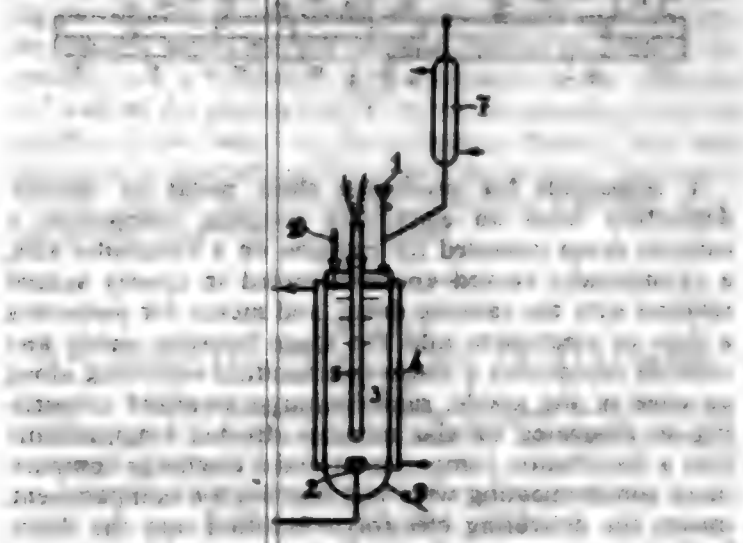
2,865,830

APPARATUS FOR PRODUCING

stream into a fractional extractive distillation zone, con-

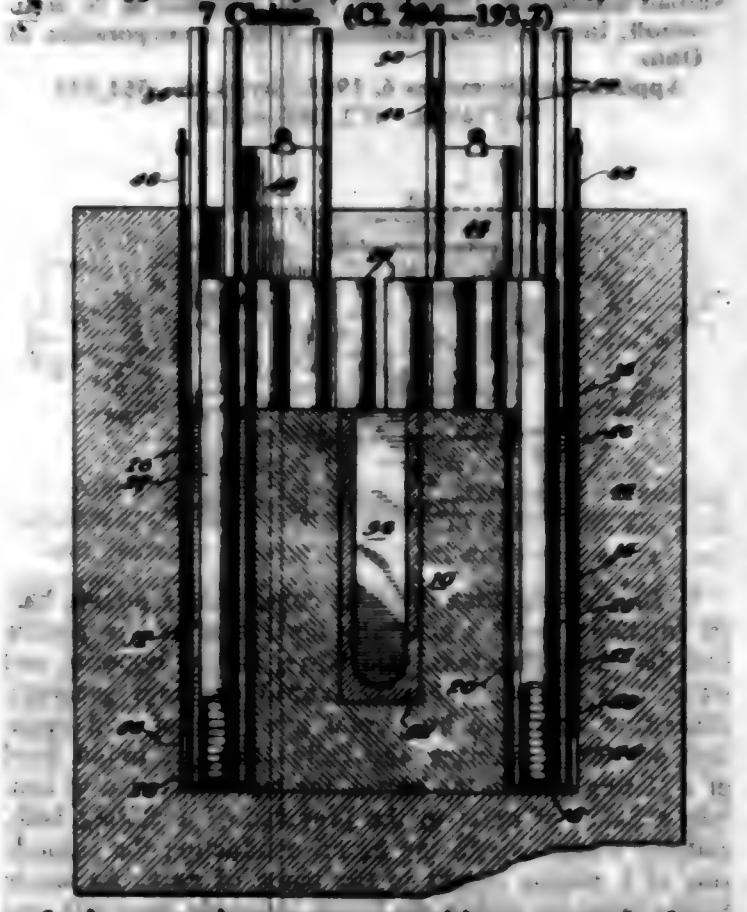
said nozzle being located adjacent one end thereof and

2,865,823
PROCESS FOR PREPARING SYMMETRICAL TETRACHLOROETHANE FROM SYMMETRICAL DICHLORETHYLENE
Armin Jezobowsky and Kurt Sennewald, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, Bezirk Koln, Germany, a German company
Application June 3, 1954, Serial No. 434,223
Claims priority, application Germany June 11, 1953
7 Claims. (Cl. 204—163)



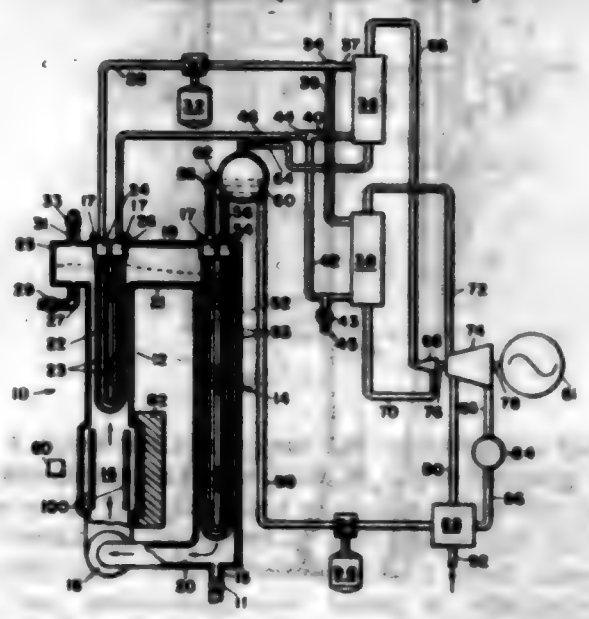
1. A process for preparing 1,1,2,2-tetrachlorethane which comprises reacting liquid 1,2-dichlorethylene with chlorine in the presence of ultra-violet light while maintaining the temperature at between about 45° C. and 120° C., and maintaining the pressure sufficient to keep the 1,2-dichlorethylene in the liquid state.

2,865,826
NEUTRONIC REACTOR
Hugh B. Stewart, Scotia, N. Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application July 7, 1953, Serial No. 366,631
7 Claims. (Cl. 204—193.2)



1. A neutronic reactor comprising a core having a moderating ratio greater than H_2O and consisting of neutron moderator materials, the overall dimensions of said core in at least one plane being equal to or greater than twice the effective slowing down length and equal to or less than twice the effective diffusion length for neutrons in the core materials, an active portion provided with fissionable material containing at least 50 percent fissionable isotope immediately surrounding the core, and a reflector disposed about the active portion consisting of neutron moderating materials.

2,865,827
POWER GENERATION FROM LIQUID METAL NUCLEAR FUEL
Orrington E. Dwyer, Wading River, N. Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application May 27, 1955, Serial No. 511,885
2 Claims. (Cl. 204—193.2)



1. Apparatus for generating power from heat produced by the fissioning of uranium dissolved in liquid bismuth which comprises a loop for the circulation of said bismuth, a source of neutrons for irradiating said uranium-containing bismuth in a first section of said loop, a first heat exchanger in said loop downstream from said first section, a superheater and a reheater and means for circulating a liquid metal heat exchange medium from said first heat exchanger in parallel flow to said superheater and reheater, a second heat exchanger in said loop downstream from said first heat exchanger and having a length approximately equal to the combined lengths of the first heat exchanger and the first section of said loop, a steam turbine and a source of water, flow means connecting said source of water to said second heat exchanger to supply water to said second heat exchanger, flow means connecting said second heat exchanger to said superheater to supply steam to said superheater, flow means connecting said superheater to said turbine to supply superheated steam to said turbine, flow means connecting said turbine to said reheater to supply steam to said reheater, flow means connecting said reheater to said turbine to supply reheated steam to said turbine, and means for returning the steam from said turbine to said second heat exchanger in condensed form.

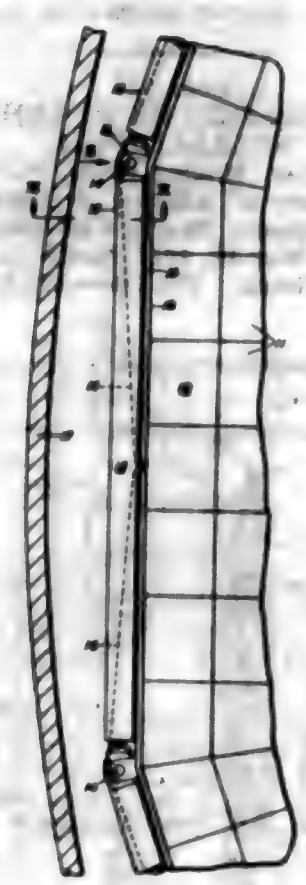
2,865,828
MODERATOR AND REFLECTOR STRUCTURES FOR NUCLEAR REACTORS
Everett Lang, Warrington, and Frank Geoffrey Gretchleigh, Wigan, England, assignors to United Kingdom Atomic Energy Authority, London, England
Application December 12, 1955, Serial No. 552,662
Claims priority, application Great Britain December 13, 1954
7 Claims. (Cl. 204—193.2)

1. In combination with a moderator and reflector structure for a nuclear reactor, restraint means comprising a

crally concentric to the said horizontal axis of rotation and having a periphery passing through the level of a

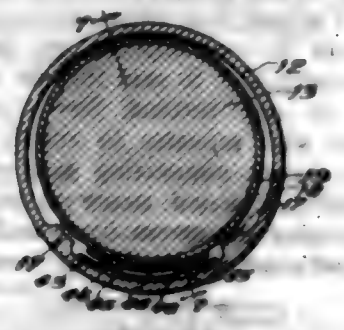
2,865,833
ELECTROLYTIC CELL

series of elastic bands around the structure, each band comprising a series of joined links and each link comprising a nest of coaxial tubes, the tubes in each nest being end-loaded one against the other so that alternate tubes accept equal tensile and compressive loads respectively,



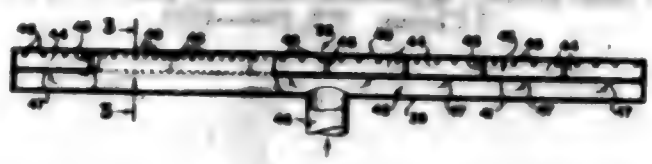
couplings between adjacent links from the innermost tube of one link to the outermost tube of the adjacent link, and means for transmitting the tension in the bands as a centripetal load to the walls of the moderator and reflector structure.

2,865,829
SLUG EJECTOR
Hugh W. Bolling, Richland, Wash., and Richard N. Lyon, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application April 12, 1945, Serial No. 588,057
13 Claims. (Cl. 204—193.3)



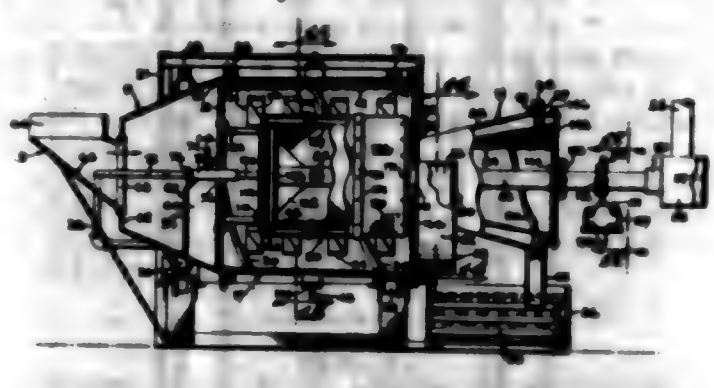
1. A combination slug extractor and slideway for use in connection with a neutronic reactor comprising a pair of elongated, ribbon-like members in face-to-face abutment having an arcuate cross section, said members being longitudinally stiff and being provided with cooperating projections and openings extending normal to the interface of said members so arranged that relative longitudinal movement of said members will effect transverse separation of said members.

2,865,830
APPARATUS FOR PRODUCING SHEET METAL BY ELECTRODEPOSITION
John Zoldin, Perth Amboy, N. J., assignor to The Anaconda Company, New York, N. Y., a corporation of Montana
Application May 14, 1956, Serial No. 584,716
5 Claims. (Cl. 204—206)



1. Apparatus for producing sheet metal by electrodeposition from an electrolyte solution, comprising a cathode drum mounted for rotation on a horizontal axis, a cylindrically curved anode mounted in closely spaced relation with the cathode drum, and means for projecting a flow of electrolyte into the space between anode and cathode comprising a discharge manifold extending along an edge of the anode, said discharge manifold comprising an elongated tubular member divided longitudinally into a distribution compartment and a discharge compartment communicating with said distribution compartment, means for delivering electrolyte solution into the distribution compartment of said discharge manifold, and said discharge compartment being provided with a series of spaced solution outlets along substantially the entire length of the discharge manifold, said outlets being so positioned as to project a stream of electrolyte delivered under pressure into said distribution compartment into the space between the anode and the cathode drum to cause the electrolyte to flow along the surface of the cathode drum opposite said anode.

2,865,831
ELECTROPLATING MACHINE
Nathan Ransohoff, Cincinnati, Ohio, assignor to N. Ransohoff, Incorporated, Hamilton, Ohio, a corporation of Ohio
Application December 6, 1955, Serial No. 551,342
14 Claims. (Cl. 204—213)



1. An electroplating machine comprising a plating barrel rotatable about a generally horizontal axis in plating and discharge direction, said barrel having opposite end walls, said end walls having central openings generally concentric with said horizontal axis, one of said openings providing drainage and delineating the liquid level of a plating bath in the barrel, the barrel adapted to contain a batch of parts in the presence of a plating bath, cathode means within the barrel conducting the cathode side of a plating circuit to the batch of parts, an anode basket mounted within the barrel rotatable therewith and adapted to contain a batch of metallic anode pieces, means conducting the anode side of the plating circuit to said batch of anode pieces, the anode basket being gen-

slab of low melting metal; a top closure member for said resisting wall; and a bottom member for said retaining

under flashing conditions to vaporize a portion thereof;

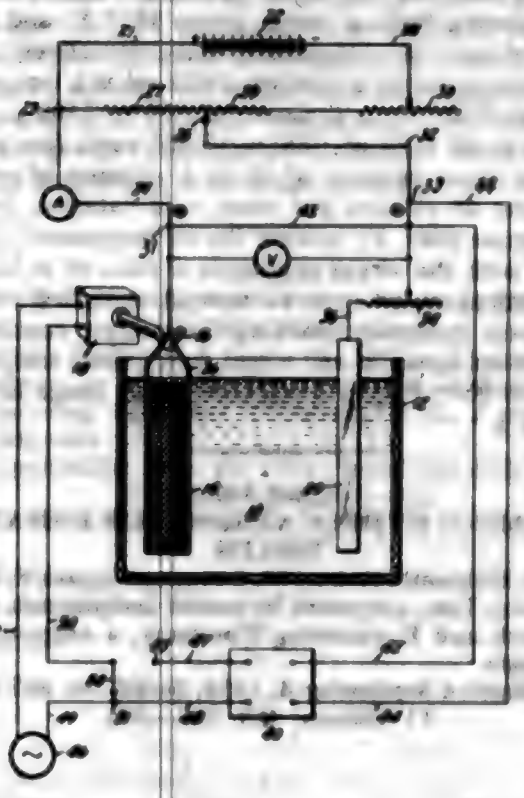
erally concentric to the said horizontal axis of rotation and having a periphery passing through the level of a plating bath delineated by said central opening, whereby the plating circuit is completed from the batch of anode pieces to the batch of parts through the plating bath with the anode pieces and parts maintained in a state of agitation within the rotating barrel during the plating operation, a charging scoop having a charging scoop mounted on one end wall of the barrel and communicating with the central opening thereof, said charging scoop advancing parts to be plated through said central opening into the plating barrel during rotation thereof in plating direction, and a discharge tube mounted on the opposite end wall of the plating barrel and communicating with the interior of the barrel at the periphery thereof, said discharge tube discharging the plated parts from the barrel during rotation thereof in said discharge direction after the plating operation is completed.

2,865,833

ELECTROLYTIC DESOLUTION OF STAINLESS STEEL.

Edgar C. Pitzer, Richmond, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application June 10, 1953, Serial No. 360,595
5 Claims. (Cl. 204—322)



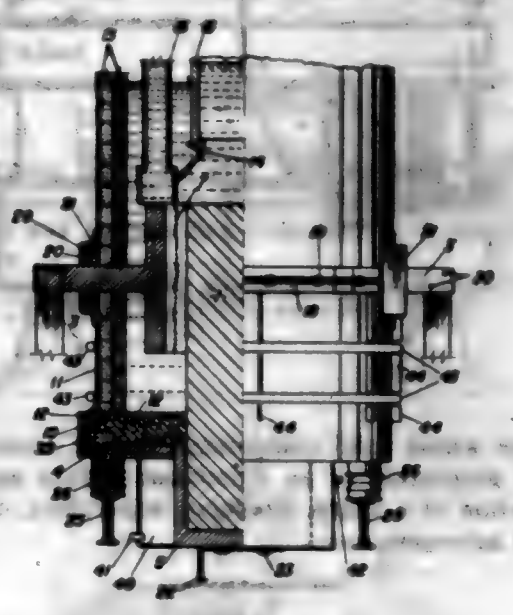
1. Apparatus for substantially completely dissolving radioactive stainless steel elements in nitric acid, the steel of said elements having a high chromium content, said apparatus comprising an electrolytic cell adapted to contain nitric acid, a source of electrolyzing current, means for supplying said electrolyzing current to said elements in said bath, said means comprising a cathode and an anode holder in said cell, said anode holder being composed entirely of a metal selected from the group consisting of tantalum, columbium, titanium and zirconium, said anode holder being adapted to receive and support said stainless steel elements and being coated with a film formed by subjecting said metal to electrolytic attack in nitric acid whereby said holder is adapted to supply electrolyzing current to said steel elements in nitric acid bath only at points where said elements rest in contact with said anode holder and means for agitating said holder.

2,865,835

ELECTROLYTIC CELL

John Rosmer, Warren, N. Y., Charles H. Von Tesmar, Ashtabula, Ohio, and Herbert Baldwin Williams, Rochester, N. Y., assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

Application July 24, 1956, Serial No. 599,821
4 Claims. (Cl. 204—245)



1. A fused salt electrolysis cell comprising a horizontally disposed metal base plate, an anode-receiving metal socket set in said plate and extending below the bottom side thereof, an anode set in said socket and extending upwardly into a zone of electrolysis, a metal cathode in said zone surrounding said anode, a refractory-lined metal shell having a smaller cross-section than that of said plate and surrounding said cathode, said cathode being supported in said zone by cathode supporting means extending through an opening in an intermediate portion of said metal shell, the lower edge of said shell being spaced above the top of said plate, a refractory material covering said base plate and extending upward to completely surround and tightly embrace said anode at a height above said socket, base-cooling means adapted to cool the base of said cell and base portion of said anode while said cell is in operation, collector means disposed in an upper portion of said cell and adapted to collect products of electrolysis from a fused salt bath during operation of said cell, and supplementary cooling means adapted to contain a liquid heat-exchange medium disposed at an exterior portion of and in heat-exchange relationship with said metal shell, said supplementary cooling means being disposed at a portion of said shell intermediate the cell bottom portion and cathode arm supports and adapted to maintain the cell in thermal balance such that cracking of the anode is minimized when the cell is operated at such high amperage that anode cracking is induced by use of said base-cooling means for substantially providing the required cooling of said cell.

2,865,834

ELECTROLYTIC ALKALI HALOGEN CELL.

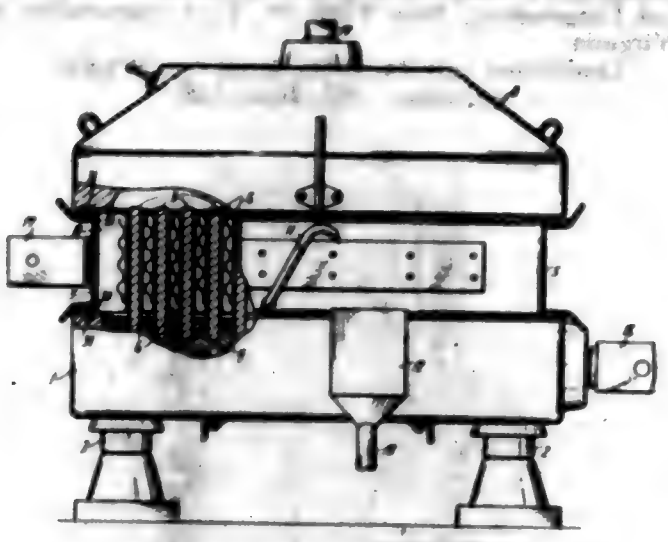
Theodore L. Rose, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Application February 24, 1953, Serial No. 338,260
7 Claims. (Cl. 204—266)

1. In an electrolytic alkali chlorine cell comprising a cathode assembly including foraminous cathodic electrodes housed in an upright liquid retaining wall; an anode assembly cooperative therewith including upright anodic electrodes having their lower ends embedded in a

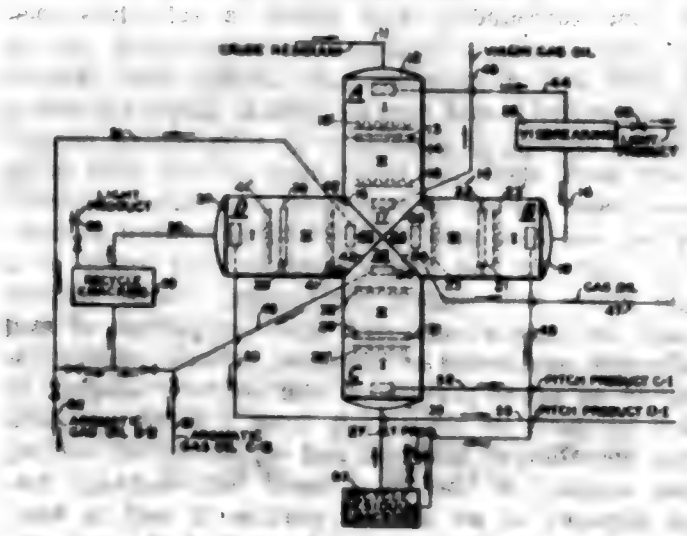
each containing a bed of supported platinum catalyst and to 800 pounds per square inch and at a temperature

slab of low melting metal; a top closure member for said retaining wall; and a bottom member for said retaining wall and support for said cathode and anode assemblies; said top closure member being prepared from a concrete



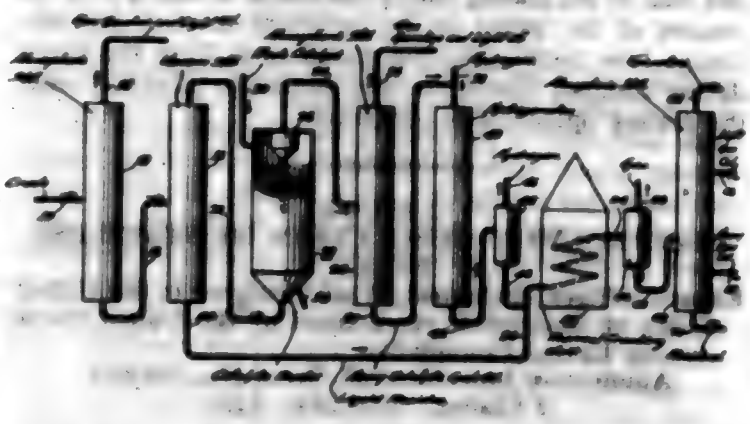
mixture whose solid components consist essentially of a minor proportion of an aluminous cement and a major proportion of a sharp, irregular, impervious, chlorine resistant aggregate.

2,865,835
FLASH DISTILLATION PROCESS
Charley H. Owen, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application January 6, 1954, Serial No. 402,578
6 Claims. (Cl. 208—48)



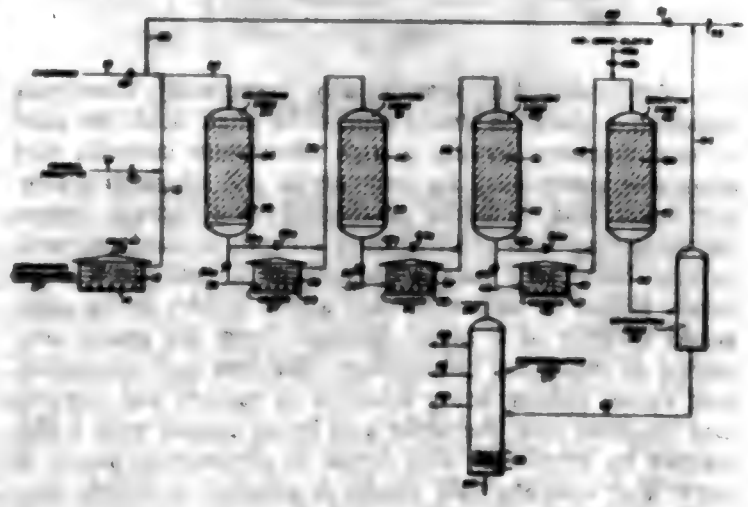
2. A process comprising introducing a reduced petroleum crude into a first flash section of a distillation zone under flashing conditions to vaporize a portion of same; passing vapor thus formed into a first condensing section in said zone and condensing same therein; subjecting unvaporized liquid from said first flash section to visbreaking and passing residuum product from said visbreaking into a second flash section in said distillation zone under flashing conditions to vaporize a portion of same; passing vapors formed in said second flash section, into a second condensing section in said zone and condensing same therein; subjecting residuum from said second flash section to recycle cracking and passing residuum product from said cracking into a third flash section of said distillation zone under flashing conditions to vaporize a portion of same; passing vapors formed in said third flash section into a third condensing section in said zone, and condensing same therein; subjecting condensate from said third condensing zone to recycle cracking and passing residuum product from the last said cracking into a fourth flash section in said zone under flashing conditions to vaporize a portion thereof; and recovering as product of the process a virgin gas oil condensate, a residual pitch and an aromatic gas oil condensate.

2,865,836
THERMAL CRACKING PROCESS EMPLOYING HYDROGEN DONOR
Norman W. Franke and Meredith M. Stewart, Penn Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application November 10, 1952, Serial No. 319,764
2 Claims. (Cl. 208—57)



1. A process for thermally cracking virgin petroleum residues having boiling points above 950° F. and carbon residues above 5% comprising non-destructively catalytically hydrogenating a catalytic cycle oil at a temperature of 650° to 750° F., a pressure of 500 to 2500 p. s. i., a hydrogen to oil ratio of 1000 to 10,000 cubic feet per barrel, and a space velocity of ½ to 2 volumes of cycle oil per volume of catalyst per hour, said catalytic cycle oil boiling above 600° F., mixing the hydrogenated catalytic cycle oil with the virgin residue in a ratio of at least one part of hydrogenated cycle oil four parts of virgin residue, and severely thermally cracking the mixture consisting of hydrogenated cycle oil and virgin residue at a temperature of 850° to 950° F. and a pressure in the range of 400 to 1000 p. s. i.

2,865,837
REFORMING HYDROCARBONS FOR ENHANCED YIELDS
Henry A. Holcomb, Robert M. Love, and James F. Mathis, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, a corporation of Delaware
Application September 4, 1956, Serial No. 607,639
11 Claims. (Cl. 208—65)



1. A method for producing enhanced yields of high octane hydrocarbons in which a naphthenic hydrocarbon fraction is charged in series to a plurality of reaction zones

for contact with said solids so as to vaporize predominantly only the included gas oil substantially free of objection-

said fraction with a catalyst consisting essentially of from 64 to 93% silica, from 6 to 20% by weight alu-

anodic electrodes having their lower ends embedded in a

each containing a bed of supported platinum catalyst and maintained at hydrocarbon conversion conditions which comprises adding a normal paraffin in a sufficient amount within the range from about 10 to about 60% by volume of the naphthenic hydrocarbon to the naphthenic hydrocarbon feed to the lead reaction zone of said plurality of zones and adding an isoolefin in a sufficient amount within the range from about 10 to about 60% by volume of the naphthenic hydrocarbon to the converted hydrocarbon charged to the tail reaction zone of said plurality of zones such that the normal paraffin is contacted with the catalyst for a time within the range from about 10 to about 20 seconds and such that the isoolefin is contacted with the catalyst for a time within the range from about 2 to about 5 seconds whereby enhanced yields of high octane hydrocarbons are obtained.

2,865,838

CONDITIONING HYDROCARBON STOCKS FOR CATALYTIC REACTION

Ivor W. Mills, Glenolden, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application August 24, 1954
Serial No. 451,966
3 Claims. (Cl. 208—96)

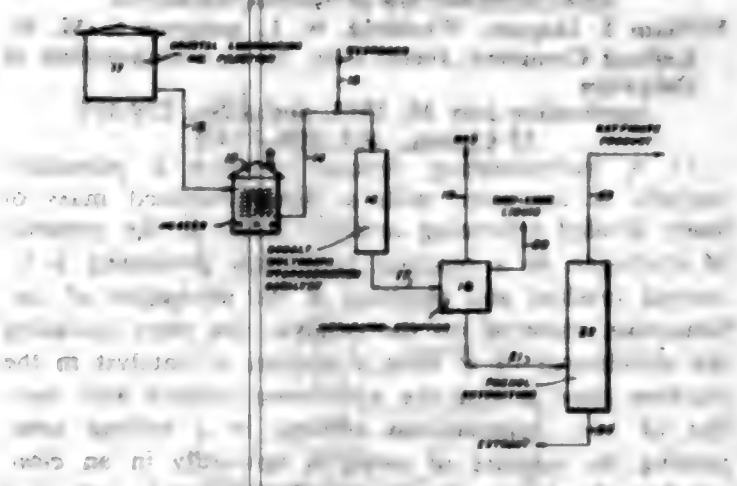
1. In the catalytic conversion of a petroleum stock containing organo-metallic components deleterious to the catalyst, the steps which comprise contacting said stock in liquid phase with solid phosphoric acid catalyst at a temperature in the range of from 50° F. to 350° F., and thereafter directly subjecting said stock containing a reduced amount of said deleterious organo-metallic components to a catalytic conversion operation selected from the group consisting of a catalytic cracking operation and a catalytic reforming operation.

2,865,839

PROCESS FOR IMPROVING THE QUALITY OF LUBRICATING OILS

Richard C. Halter and James R. Miller, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application June 19, 1956, Serial No. 592,275
8 Claims. (Cl. 208—96)



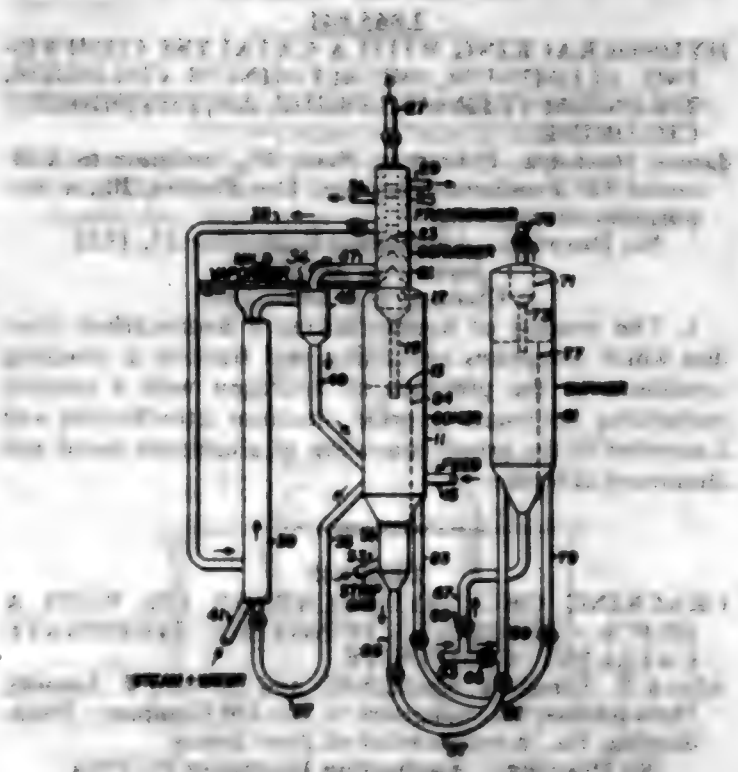
1. An improved process for treating a lubricating oil distillate fraction derived from a crude oil taken from the group consisting of Mid-Continent and Coastal type crude oils comprising the steps of hydrogenating said lubricating oil distillate fraction over a hydrogenation catalyst in the presence of hydrogen in an amount in the range of from 200 to 2000 cubic feet per barrel of said oil distillate while passing the hydrogen and said fraction co-currently over said catalyst at a rate within the range of ¼ to 3 volumes of said fraction per volume of catalyst per hour at a pressure in the range of 700 to 800 pounds per square inch and at a temperature within the range of 650 to 750° F. to form a liquid phase containing hydrogen light hydrocarbon and a small amount of low flash point liquid, subsequently separating the gas and low flash point liquid from said liquid phase to form a gas-free, flash-corrected liquid lubricating oil phase, contacting at least a portion of the lubricating oil components of said liquid lubricating oil phase with phenol in a solvent extraction zone to form an extract phase and a raffinate phase and recovering the raffinate phase as product.

2,865,840

SEPARATION OF GAS OIL IN COKING RESIDUA

John F. Mesar, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application November 25, 1953, Serial No. 394,424
1 Claim. (Cl. 208—97)



A process of coking residual hydrocarbon oils containing objectionable high boiling metallic compound impurities which comprises the steps of contacting the residual oil in a coking zone with a dense, turbulent, fluidized bed of preheated particulate solids at a temperature in the range of 900° F. to 1100° F., to crack the hydrocarbon oil and to vaporize gas oil and heavy ends boiling above the gas oil range which heavy ends include said objectionable metallic compounds, condensing and separating from the vapors so produced in a scrubbing-fractionating zone a scrubber liquid bottoms fraction and a separate fractionator bottoms fraction, said fractionator bottoms fraction being of sufficiently low boiling range to include substantially all said heavy ends and objectionable metallic compounds and also to include some gas oil substantially free of said objectionable metallic compounds, removing product vapors overhead, withdrawing hot particulate solids from said coking zone, passing the withdrawn solids into the lower portion of a vertically arranged tubular solids contacting zone, partially quenching the withdrawn solids with water in the lower portion of said tubular contacting zone to a temperature in the range of 25° to 250° F. lower than in said coking zone to form steam to act as a lifting vapor for the solids, introducing the separated fractionator bottoms fraction and the scrubber liquid bottoms fraction into the lower portion of said tubular contacting zone above the point of introduction of said water and hot particulate solids

upwardly, the downwardly passing heated catalyst indirectly transfers heat to the catalyst in the reaction

zone at coking temperature to produce lower boiling

for contact with said solids so as to vaporize predominantly only the included gas oil substantially free of objectionable metal compounds without appreciable coking thereof and to deposit the high boiling heavy hydrocarbon ends including most of the objectionable metallic compounds on said introduced particulate solids while passing the entire mixture of solids and vapors upwardly at a high velocity through said tubular contacting zone, then passing said mixture of solids and vapors from the top of said tubular contacting zone into a solids separating zone to separate solids from vapors, passing said separated vapors to the scrubbing portion of said scrubbing-fractionating zone below the bottom of the fractionating portion of said scrubbing-fractionating zone and passing said separated solids with the deposited heavy ends containing said objectionable metal compounds to a lower portion of said coking zone for further cracking of said heavy ends.

2,865,841

HYDROCRACKING WITH A CATALYST COMPRISING ALUMINUM, OR ALUMINUM CHLORIDE, TITANIUM TETRACHLORIDE, AND HYDROGEN CHLORIDE

James Hoekstra, Evergreen Park, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application September 21, 1953
Serial No. 381,506
4 Claims. (Cl. 208—108)

1. The process of hydrocracking a hydrocarbon fraction which comprises contacting said fraction at cracking conditions in the presence of hydrogen with a catalyst comprising hydrogen chloride, titanium tetrachloride and a member of the group consisting of aluminum metal and aluminum chloride.

2,865,842

CRACKING OF A HYDROCARBON OIL WITH A SILICA - ALUMINA - TUNGSTEN PHOSPHATE CATALYST COMPOSITE

Alfred E. Hirschler, Springfield, and Edward J. Janoski, Philadelphia, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application December 29, 1954
Serial No. 478,510
1 Claim. (Cl. 208—114)

Process of cracking which comprises contacting a straight run petroleum fraction boiling in the range of from 375° F. to 500° F. with a catalyst consisting essentially of, in percent by weight, 70 to 94% silica, 6 to 20% alumina and 0.5 to 6% tungsten phosphate and essentially free of free acids of phosphorus at a temperature within the range of from 450° C. to 540° C., a space velocity of from 0.5 to 3 and a pressure of about atmospheric, and recovering gasoline of high octane rating from the reaction mixture.

2,865,843

SILICA - ALUMINA - CHROMIA - MANGANESE OXIDE CATALYST AND HYDROCARBON CONVERSION THEREWITH

Alfred E. Hirschler, Springfield, and Edward J. Janoski, Philadelphia, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application January 20, 1955
Serial No. 483,178
6 Claims. (Cl. 208—120)

1. A catalyst for the conversion of hydrocarbons consisting essentially in percent by weight of from 64 to 93% silica, from 6 to 20% alumina, from 0.5 to 8% chromia and from 0.5 to 8% manganese oxide.

4. Process for converting a hydrocarbon fraction boiling above the gasoline range which comprises contacting said fraction with a catalyst consisting essentially of from 64 to 93% silica, from 6 to 20% by weight alumina, from 0.5 to 8% by weight chromia and from 0.5 to 8% by weight manganese oxide under catalytic conversion conditions whereby said hydrocarbon fraction is converted to gasoline of high octane rating.

2,865,844

HYDROFORMING PROCESS USING HIGH ACTIVITY CATALYSTS CONTAINING SILICA AND CHROMIA

Isidor Kirshenbaum, Union, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application May 28, 1953, Serial No. 358,018
3 Claims. (Cl. 208—134)

1. A process for the catalytic hydroforming of hydrocarbon fractions which comprises contacting such a hydrocarbon fraction in a hydroforming zone maintained between about 700° F. and 1150° F. and at a pressure between about 0 and 3000 p. s. i. g. and with about 1000 to 10,000 cubic feet per barrel of hydrogen present with a catalyst composition which consists essentially of 10 weight percent MoO_3 on a silica-chromia support, the support consisting essentially of 52 weight percent silica and 48 weight percent chromia.

2,865,845

HYDROFORMING CATALYST PROMOTED BY THE ADDITION OF A ZINC HALIDE

Kenneth K. Kearby, Cranford, N. J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application June 18, 1953
Serial No. 361,821
6 Claims. (Cl. 208—136)

4. A process for obtaining improved yields of a premium quality naphtha by hydroforming a heavy virgin naphtha feed stock over an active alumina-molybdenum oxide catalyst which has incorporated therein from about 3% to 10% by weight of a zinc halide.

2,865,846

FLUID SYSTEM FOR USE IN CONVERSION AND REFORMING OF HYDROCARBONS

William J. Degnen, Westfield, N. J., assignor to M. W. Kellogg Company, Jersey City, N. J., a corporation of Delaware

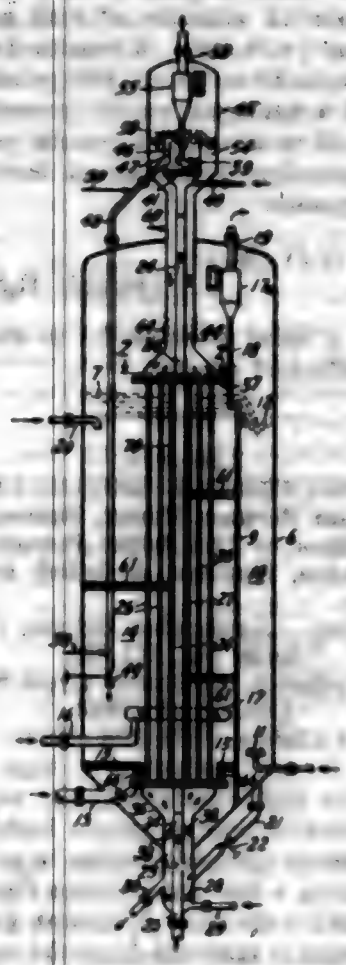
Application July 30, 1951, Serial No. 239,320
15 Claims. (Cl. 208—147)

11. A hydroforming process wherein a petroleum naphtha is contacted with a dense fluidized mass of finely divided reforming catalytic solids in the presence of hydrogen in a reaction zone thus producing a reformed product and resulting in the deposition of carbonaceous material on the catalyst; the steps including the withdrawal of at least a portion of catalyst in the reaction zone, mixing the withdrawn catalyst with catalyst of less carbonaceous content in a mixing zone, passing the mixture of catalysts upwardly in an elongated confined zone by means of an oxygen containing gas whereby at least a portion of the carbonaceous material is removed by burning, passing the catalyst from the elongated confined zone to a regeneration zone wherein the catalyst is further contacted with oxygen containing gas so that the temperature of the catalyst is substantially greater than the temperature of the catalyst in the reaction zone, passing a portion of the heated catalyst downwardly through a plurality of elongated confined zones, one of which surrounds the first mentioned elongated confined zone wherein catalyst passes

substantially constant from top to bottom, and controlling amount of feed material, under reaction conditions in-

of catalyst per hour at a pressure in the range of 700

upwardly, the downwardly passing heated catalyst indirectly transfers heat to the catalyst in the reaction



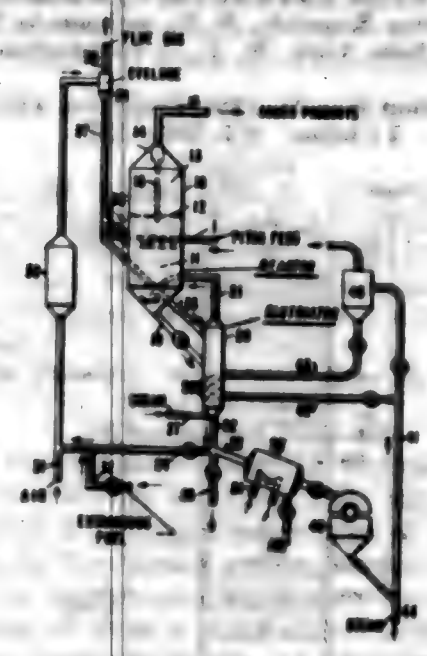
zone, and passing catalyst from the regeneration zone to the reaction zone.

2,865,847

CONTROL OF COKE PARTICLE SIZE IN FLUID COKING PROCESS

Charles E. Jahnig, Red Bank, Walter G. May, Union, and Bernard L. Schulman, Roselle, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application August 3, 1953, Serial No. 371,798
4 Claims. (Cl. 208—152)



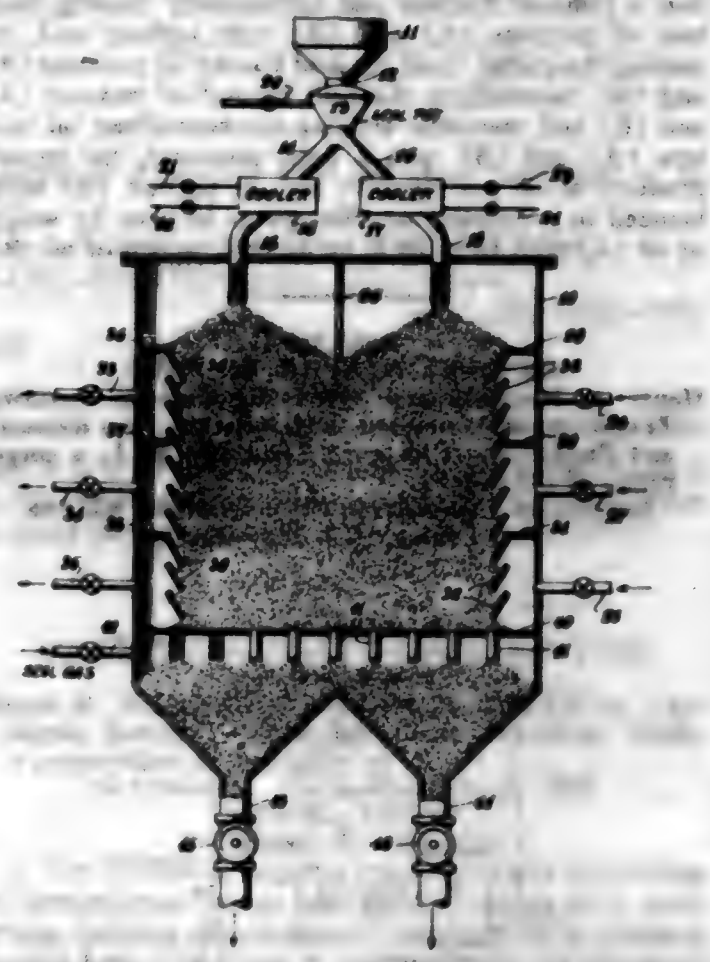
1. In a process for coking heavy hydrocarbonaceous material wherein the hydrocarbonaceous material is fed into a dense turbulent fluidized bed of finely divided essentially inert refractory solids maintained in a coking zone at coking temperature to produce lower boiling hydrocarbon vapors which are removed overhead and a coke-like deposit which remains on the fluidized solids, and the coke-containing solids are withdrawn from said fluidized bed, heated to a temperature of at least 1000° F. and returned to said coking zone to maintain said fluidized bed at coking temperature, the improvement which comprises passing the solids withdrawn from said coking zone to a dilute phase elutriation zone, passing an inert gas upwardly through the solids in a dilute phase in the elutriation zone at a velocity of at least 1.5 to 3 times the free fall velocity of the largest particles to be entrained, sufficient to entrain particles smaller than about 175 microns, removing the inert gas and entrained particles upwardly from the elutriation zone and passing them directly into the aforesaid fluidized bed in said coking zone, withdrawing relatively coarse particles downwardly from the elutriation zone, grinding the relatively coarse particles, and returning the ground particles to the aforesaid elutriation zone.

2,865,848

TEMPERATURE CONTROL IN HYDROCARBON CONVERSION PROCESSES

Amilcare Ramella, Woodbury, N. J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Application September 24, 1952, Serial No. 311,234
4 Claims. (Cl. 208—165)



1. The method of converting hydrocarbons in the presence of a moving bed of granular contact material which comprises: gravitating a plurality of streams of granular contact material downwardly through a reaction zone in contiguous relationship along the vertical length of each stream, introducing a plurality of streams of hydrocarbons into one of the streams of contact material at spaced levels along the length thereof, withdrawing the streams of hydrocarbons at similarly spaced levels along the length of one of the other streams of contact material, so that the hydrocarbons pass laterally through all the contiguous streams of contact material, controlling the flow rate and temperature of each stream of hydrocarbons, so that the temperature of the reaction zone is maintained

produce at one end of an extraction zone an extract phase and at the other end of said extraction zone a

2,865,865

TEXTILE TREATING COMPOSITION

substantially constant from top to bottom, and controlling the flow rate and temperature of the contiguous streams of contact material, whereby the temperature of the reaction zone from one side to the other is maintained substantially constant.

2,865,849

ELECTRICAL INSULATING OILS AND METHOD FOR PRODUCING THEM

Mintje van Loon, The Hague, and Govert Verberg, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application September 4, 1956
Serial No. 607,580
Claims priority, application Netherlands
November 15, 1955
3 Claims. (Cl. 208—211)

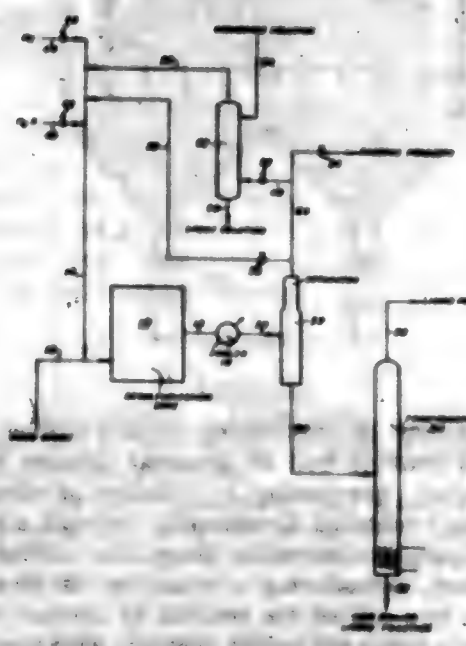
1. A process for the production of a non-gassing and oxidation stable electrical insulating oil from a mineral oil containing at least 35% aromatics and 1% sulfur and having a viscosity between 1° and 9° Engler at 20° C. comprising splitting the oil into portions (A) and (B), separately treating oil portion (A) by catalytically selectively hydrogenating the oil to substantially reduce the sulfur content without essentially effecting the aromatic content of the oil and separately treating oil portion (B) with a selective aromatic solvent to obtain a raffinate fraction and subsequently treating these two oil portions (A) and (B) with sulfuric acid, removing the sludge from the acid treated oil portions (A) and (B), neutralizing the acid treated oil mixture (A) and (B) and thereafter treating the neutralized oil mixture (A) and (B) with a solid absorbent, the treated products of oil portion (A) and oil portion (B) being blended in proportion of from 80 to 40 parts by weight of oil (A) with from 20 to 60 parts by weight of oil (B).

2,865,850

DESULFURIZATION PROCESS

Henry A. Holcomb and Morris R. Morrow, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application September 6, 1955, Serial No. 532,786
6 Claims. (Cl. 208—212)



1. A process which comprises the steps of desulfurizing a petroleum hydrocarbon boiling in the naphtha range in contact with a desulfurization catalyst in the presence of about 250 to about 2,000 cubic feet of hydrogen per barrel of feed stock and about 1.0 to about 10 mol percent of added hydrogen sulfide (H_2S), based on the total amount of feed material, under reaction conditions including a temperature within the range of about 500° to about 750° F. (T_r), a space velocity in the range of about 1 to about 16 volumes of feed per volume of catalyst per hour (v./v./hr.), a reactor pressure within the range of about 50 to about 300 pounds per square inch gauge and a hydrogen partial pressure within the range of about 50 to about 150 pounds per square inch absolute, said reaction conditions at least substantially satisfying the equation

$$M = 17.8 + 0.43\ (v./v./hr.) + 1.3\ (\text{percent } H_2S) - 0.03\ (T_r)$$

wherein M has a value of about 0.1 to about 5, and recovering a desulfurized product.

2,865,851

PRODUCTION OF MOTOR FUEL

Frederick William Bertram Porter, Sunbury-on-Thames, England, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Application October 19, 1955
Serial No. 541,525
Claims priority, application Great Britain
October 22, 1954
5 Claims. (Cl. 208—364)

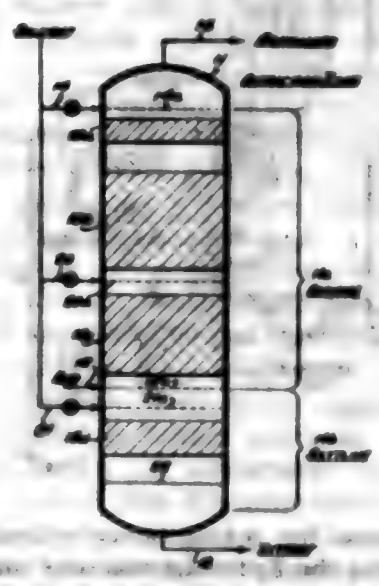
1. A process for the production of high quality motor gasoline from the high boiling polymer which is formed by thermal polymerization of certain highly unsaturated components of steam cracked gasoline in subjecting steam cracked gasoline to a low temperature thermal polymerization treatment to stabilize it against gum formation, and which polymer is removed from the treated gasoline as a waste product amounting to between about 10% and 16% by weight of the steam cracked gasoline, which process comprises catalytically hydrogenating at least part of said polymer at a temperature in the range of from about 650° F. to 850° F., a pressure in the range of from about 500 p. s. i. g. to about 1000 p. s. i. g., a space velocity not in excess of about 10 v./v./hr. of liquid feedstock, and a gas recycle rate not in excess of about 10,000 S. C. F./B., and fractionating the resulting hydrogenated product to yield said high quality motor gasoline.

2,865,852

SOLVENT EXTRACTION PROCESS

James A. Davies, Scarsdale, N. Y., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application May 31, 1954, Serial No. 431,363
2 Claims. (Cl. 208—327)



1. In the liquid-liquid countercurrent solvent extraction of a catalytic cycle gas oil to be fractionated to

sufficient to remove free dihydric alcohol, followed by filtration, wherein said filter agent is a combination of

um mutual solution of a crystallizable organic solid taken from the group consisting of halogenated aliphatic hy-

produce at one end of an extraction zone an extract phase and at the other end of said extraction zone a raffinate phase, said extraction zone comprising two superposed contiguous sections, a refining section adjacent said other end of said extraction zone and a settling section adjacent said one end of said extraction zone and wherein furfural, a partially miscible selective solvent, is introduced into said extraction zone at said refining section and said catalytic cycle gas oil is introduced into said extraction zone at about that position where said refining section and said settling section meet, the specific gravity differential between said catalytic cycle gas oil and said furfural selective solvent being substantial, said selective solvent having a higher specific gravity than said catalytic cycle gas oil, and wherein two contiguous continuous separate liquid phases, said raffinate phase and said extract phase, are present within said settling section and tend to have substantially the same specific gravity, the interface between said liquid phases being located in said extraction zone within said settling section, the improvement which comprises introducing additional furfural selective solvent into said extraction zone below the point of introduction of said catalytic cycle gas oil thereinto at said settling section directly into said raffinate phase therein to maintain the specific gravity differential between said separate liquid phases in said settling section greater than 0.1.

2,865,853

METHOD OF REDUCING BOD OF STARCH BEARING EFFLUENT BY ADDITION OF SUBSTITUTED STARCH TO EFFLUENT

Jack B. Batdorf, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 16, 1955
Serial No. 516,845
3 Claims. (Cl. 210—59)

1. In a process wherein starch is employed as a treating agent and wherein an effluent from said process containing starch is discharged into a body of water thereby increasing the biochemical oxygen demand of said body of water, the improvement which comprises incorporating in said body of water a water-soluble starch ether in an amount sufficient to give a starch ether/starch ratio of 35/65–65/35, said starch ether containing substituent groups selected from a class consisting of carboxyalkyl and hydroxyalkyl substituent groups in an amount of at least 0.11 substituent group per anhydroglucose unit.

2,865,854

METHOD OF REDUCING B. O. D. OF STARCH BEARING EFFLUENT BY ADDITION OF SUBSTITUTED CELLULOSE TO EFFLUENT

Walter J. Sweet, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 16, 1955
Serial No. 516,847
3 Claims. (Cl. 210—59)

1. In a process wherein starch is employed as a treating agent and wherein an effluent from said process containing starch is discharged into a body of water thereby increasing the biochemical oxygen demand of said body of water, the improvement which comprises incorporating in said body of water a water-soluble cellulose ether in an amount sufficient to give an ether/starch ratio of 20/80–65/35, said ether containing substituent groups selected from the class consisting of carboxyalkyl and hydroxyalkyl substituent groups in an amount of at least 0.3 substituent group per anhydroglucose unit.

2,865,855

TEXTILE TREATING COMPOSITION

Carroll F. Chandler, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 8, 1952
Serial No. 303,428
7 Claims. (Cl. 252—8.9)

5. A composition of matter consisting essentially of a yarn dressing wherein mineral oil constitutes at least about 50% by weight of the dressing and the acetylated derivative of 2-methoxy ethyl ricinoleate constitutes at least about 2% by weight of the dressing.

2,865,856

METHOD OF INHIBITING CORROSION OF METALS

William R. Hughes, Tulsa, Okla., assignor to Cities Service Research and Development Company, New York, N. Y., a corporation of New Jersey

No Drawing. Application November 17, 1955
Serial No. 547,535
6 Claims. (Cl. 252—8.55)

1. The process of preventing the corrosion of ferrous metals exposed to contact with corrosive fluids containing varying amounts of hydrogen sulfide, carbon dioxide and other acidic materials which comprises introducing into such fluids a small quantity, sufficient to substantially inhibit corrosion, of an inhibitor having the general formula

wherein R is selected from the group consisting of H,

$$-CH_2-CH_2-NH_2$$

$$-CH_2-CH_2-NH-CH_2-CH_2-NH_2$$

$$-CH_2-CH_2-NH-CH_2-CH_2-NH-CH_2-CH_2-NH_2$$

and

$$-CH_2-CH_2-NH-CH_2-CH_2-NH-CH_2-CH_2-NH-CH_2-CH_2-NH_2$$

and A is a divalent hydrocarbon radical having from 2 to 14 carbon atoms, and thereafter causing the inhibitor to come into contact with the metal to be protected.

2,865,857

ACID-NEUTRALIZING LUBRICATING OIL COMPOSITIONS

James H. Walker, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application July 13, 1955
Serial No. 521,887
7 Claims. (Cl. 252—33)

1. The process of forming stable, filterable lubricating oil compositions having base ratios in excess of 4, comprising forming an admixture consisting of a dihydric alcohol having less than 5 carbon atoms, an inorganic substance selected from the group consisting of alkaline earth metal oxides and hydroxides, a filter agent, a lubricating oil, and from 0.3% to 2%, by weight, of an alkaline earth metal sulfonate, heating said admixture to a temperature in the range of about 250° F. to about 350° F. for a time sufficient to remove free dihydric alcohol, followed by filtration, and incorporating in the resulting filtrate a dihydric alcohol having less than 5 carbon atoms, an inorganic substance selected from the group consisting of alkaline earth metal oxides and hydroxides, a lubricating oil, from 0.3% to 2%, by weight, of an alkaline earth metal sulfonate, and a filter agent, heating the whole mixture to a temperature in the range of about 250° F. to about 350° F. for a period of time

sufficient to remove free dihydric alcohol, followed by filtration, wherein said filter agent is a combination of glycolic acid and formic acid such that the glycolic acid is present in amounts of about 35 mol percent to about 80 mol percent in the glycolic acid-formic acid combination, said filter agent being present in amounts such that the mol ratio of said filter agent to said inorganic substance has a value from about 0.2 to about 0.5, and wherein the weight ratio of dihydric alcohol to said inorganic substance is from 30:1 to 10:1.

2,865,858

ALKYL, HYDROXYALKYL CELLULOSE GREASE

Bruce W. Hotten, Orinda, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application May 25, 1956
Serial No. 587,213
5 Claims. (Cl. 252—52)

1. A grease composition comprising a major proportion of an oil of lubricating viscosity, and, in an amount sufficient to thicken said oil to the consistency of a grease, an alkyl, hydroxyalkyl cellulose, wherein said alkyl radicals contain from 2 to 4 carbon atoms, and wherein said cellulose has an average from 2 to 1 alkyl radicals per glucose unit, and from 1 to 2 hydroxyalkyl radicals per glucose unit.

2,865,859

SOLUBILIZING OF MINERAL, VEGETABLE, ANIMAL OILS FOR COSMETIC, PHARMACEUTICAL AND INDUSTRIAL PURPOSES

Irwin I. Lubowe, Scarsdale, N. Y.

No Drawing. Application November 9, 1956
Serial No. 621,210
6 Claims. (Cl. 252—56)

1. A clear, non-aqueous solubilized liquid composition consisting of a low molecular weight aliphatic alcohol and an oil normally immiscible in said low molecular weight aliphatic alcohol and said oil and alcohol being made miscible and solubilized in each other by inclusion of a mixer composition including a low molecular weight aliphatic alcohol ester of a high molecular weight fatty acid, said first mentioned low molecular weight alcohol containing 1–5 carbon atoms and said oil containing 14–100 carbon atoms and said mixer composition including an ester of an aliphatic alcohol containing 1–6 carbon atoms and a fatty acid containing 10–24 carbon atoms and said ester constituting 5–35% of the amount of the mixture of the first mentioned low molecular weight alcohol and oil, and said solubilized composition consisting essentially of 20–50% of the oil, 20–50% of the low molecular weight aliphatic alcohol and 5–20% of the ester, by weight.

2,865,860

CONSTANT PRESSURE SYSTEMS

Bernhardt Joseph Eisenman, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 18, 1955
Serial No. 522,877
4 Claims. (Cl. 252—62)

1. A process for reducing changes in pressure, said pressure being within the range of 10 to 100 p. s. i. a. in a closed essentially fixed-volume system subjected to varying temperatures within the range of 50° C. to −40° C., said temperatures within said range varying from about 50° C. below the melting point of the crystallizable organic solid to about 10° C. above said melting point, which process comprises maintaining in said system a gaseous fluorine-containing halogenated lower alkane of from 1 to 4 carbon atoms and a liquid saturated equilibrium mutual solution of a crystallizable organic solid taken from the group consisting of halogenated aliphatic hydrocarbons, 1,4-butanediol, aromatic hydrocarbons, halogenated aromatic hydrocarbons, and nitrated aromatic hydrocarbons, and, said fluorine-containing halogenated alkane, said fluorine-containing halogenated alkane being present in said mutual solution in the amount of about 0.5 to about 10 mole percent, said crystallizable organic solid being mutually soluble with and chemically inert to said gaseous fluorinated alkane, and, said organic solid being crystallizable out of said mutual solution.

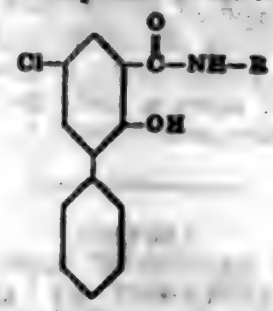
2,865,861

HALOGENATED-3-PHENYLSALICYLANILIDES

John A. Stephens, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,767
5 Claims. (Cl. 252—107)

1. An antiseptic detergent soap composition comprising a detergent soap and 0.1% to 10% by weight based upon the soap of a compound of the structure



where R is a benzenoid hydrocarbon radical containing 1 to 3 chlorine substituents which chlorine substituents are directly attached to the aromatic ring nucleus of the said benzenoid hydrocarbon radical.

2,865,862

MAGNESIUM ANTIMONATE PHOSPHOR

Richard W. Mooney, Towanda, Pa., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts

No Drawing. Application October 24, 1956
Serial No. 617,906
2 Claims. (Cl. 252—301.5)

1. A phosphor comprising magnesium lithium antimonate activated by a substance selected from the group consisting of tungsten and titanium, the selected substance being present in an amount between about 0.0001 and about 0.25 gram-atoms per 100 grams of the magnesium, lithium and antimony expressed in terms of the oxides, the proportion by weight of magnesium, lithium and antimony, expressed as the oxides can be between 20% and 60% of MgO, between 5% and 35% of lithium oxide, and between 30% and 70% of antimony trioxide, by weight.

2,865,863

LEAD- AND MANGANESE-ACTIVATED CADMIUM FLUOROPHOSPHATE PHOSPHOR

Robert W. Wellentin, Bloomfield, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application January 24, 1955, Serial No. 483,773
4 Claims. (Cl. 252—301.6)

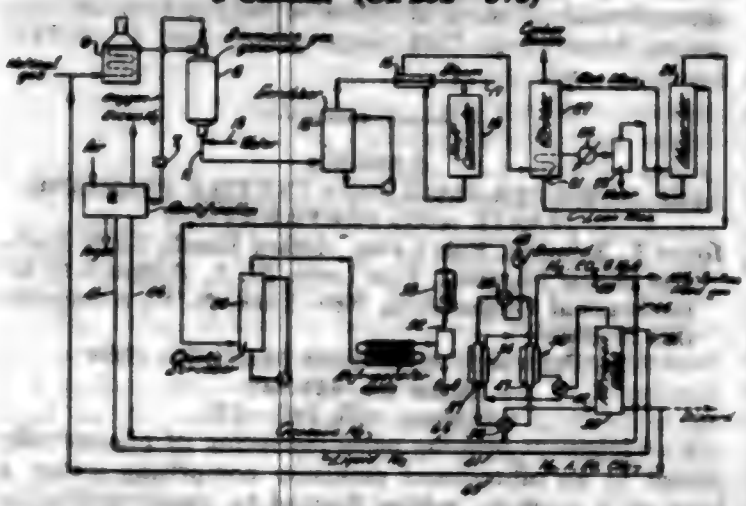
1. A luminescent material having the general formulation $3Cd_3(PO_4)_2 \cdot xCdF_2 : yMn : zPb$, where x is not less than 1.5 moles and not more than 4.5 moles, y is not less than 0.0347 percent by weight and not more than 1.390 percent by weight of cadmium orthophosphate, z is not less than 1% by weight and not more than 10% by weight of cadium orthophosphate, and there is chemically combined with said luminescent material from 1 to 50 molar percent of excess P_2O_5 over the total moles of cadmium orthophosphate.

impregnation zone a dense phase fluidized bed of finely wherein n is a whole number from 1 to 5, approximately

2,865,864
PROCESS FOR THE PRODUCTION OF AMMONIA SYNTHESES FEED GAS

Du Bois Eastman, Roger M. Dille, and Ronald W. Chapman, Whittier, Calif., assignors to The Texas Company, New York, N. Y., a corporation of Delaware

Application August 19, 1955, Serial No. 529,429
5 Claims. (Cl. 252—375)



1. A process for the production of a mixture of hydrogen and nitrogen in predetermined proportions comprising subjecting air to liquefaction and rectification producing an oxygen-rich fraction containing argon and a nitrogen fraction substantially free from oxygen and argon; reacting a carbonaceous fuel with said oxygen-rich fraction in a gas generation zone under conditions of partial combustion producing carbon monoxide and hydrogen as the principal products of reaction and yielding a product gas comprising carbon monoxide, hydrogen, argon, and methane; converting said carbon monoxide to carbon dioxide with concomitant production of hydrogen by reaction with steam in a water gas shift reaction zone; separating carbon dioxide and water from the effluent of said water gas shift reaction zone forming a hydrogen-rich gas stream containing minor amounts of methane, nitrogen, and argon; cooling said hydrogen-rich gas stream to a temperature below the freezing point of methane and contacting said gas stream with said nitrogen fraction in liquid phase condensing methane and argon from said gas stream; separating a gaseous mixture of nitrogen and hydrogen substantially completely free from other constituents from the liquid fraction comprising nitrogen, argon, and methane; and vaporizing and returning a sufficient amount of said liquid fraction to said gas generation zone to maintain the concentration of argon in said hydrogen-rich gas stream at least equal to the concentration required to prevent freezing of methane and effective to satisfy the following formula:

$$A+0.5CO+0.33N_2>0.69CH_4+0.65$$

wherein A, CO, N_2, and CH_4 represent the concentrations of argon, carbon monoxide, nitrogen, and methane, respectively, expressed as mol percent in said hydrogen-rich gas stream, none of which exceed 5 mol percent.

2,865,865
PREPARATION OF A STABILIZED RANEY NICKEL CATALYST

Charles Ockrent, Gerald Ernest Hauser Skrimshire, and Alan John Sutherland, London, England, assignors to The British Drug Houses Limited, London, England, a British company

No Drawing. Application April 19, 1956
Serial No. 579,126
Claims priority, application Great Britain April 25, 1955
7 Claims. (Cl. 252—430)

1. A method for the preparation of a stabilized Raney nickel catalyst which comprises mixing from approximately 20 to 50% of Raney nickel with a fatty alcohol having from 16 to 26 carbon atoms, inclusive, said fatty alcohol being at a sufficiently elevated temperature to enable said mixing to take place, then cooling the resulting mixture to form a solidified suspension of Raney nickel in said fatty alcohol.

2,865,866
SPHEROIDAL ALUMINA

James Hoekstra, Evergreen Park, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application January 6, 1956
Serial No. 557,627
14 Claims. (Cl. 252—448)

1. In the process of preparing substantially spherical alumina particles from a sol containing aluminum and chloride ions, the step which comprises aging the alumina spheres in a basic medium containing at least 1.0 equivalents of a base selected from the group consisting of ammonia and alkyl amines for each equivalent of chloride in the sol, for a time sufficient to absorb at least 1.0 equivalents of said base.

2,865,867
SOLID CONTACT MATERIAL

Rene E. Van Dyke, Orinda, and Richard P. Trainer, Piedmont Hill, Calif., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

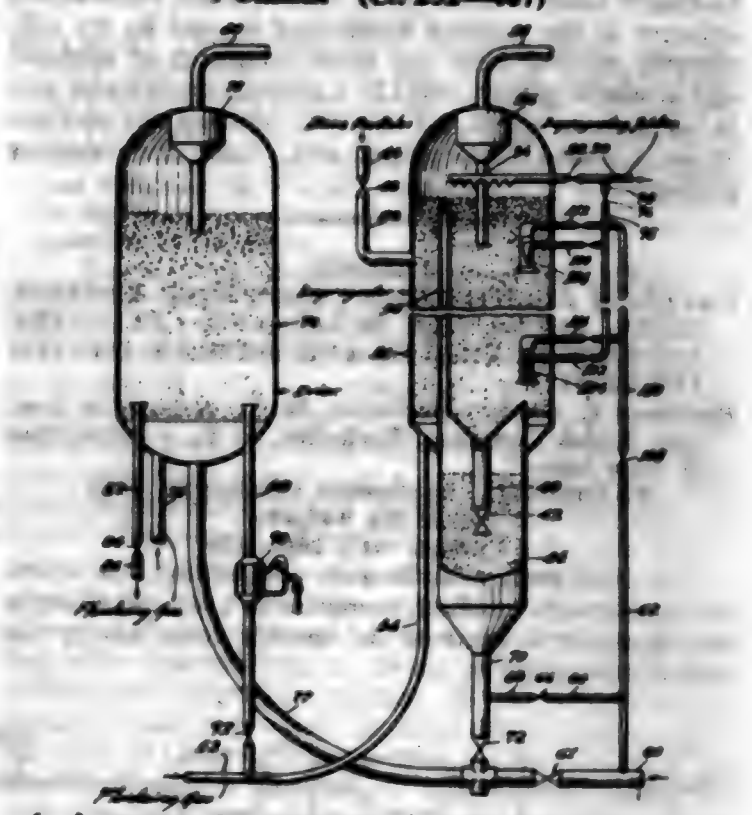
No Drawing. Application December 26, 1956
Serial No. 630,444
10 Claims. (Cl. 252—455)

1. A method for producing a molecular sieve composite which comprises compositing crystallites of a zeolitic molecular sieve material selected from the group consisting of alkali, alkaline earth and combined alkali-alkaline earth metal aluminum silicate zeolites in a substantial amount corresponding to no more than 65% by weight of the total solids in the subsequently calcined product with gelatinous aluminum hydroxide substantially free of ions of soluble salts and drying the composite so obtained.

2,865,868
PROCESS FOR PREPARING IMPREGNATED COMPOSITE CATALYSTS

Joseph B. McKinley, Pittsburgh, Benjamin P. Thomas, Springdale Township, Allegheny County, and Michael J. Derrig, Verona, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application April 4, 1952, Serial No. 280,474
7 Claims. (Cl. 252—467)



1. A process for preparing a uniformly impregnated composite catalyst which comprises maintaining in an

weight of monomeric material consisting of 75-98% by

2,865,875
LOW ASH PHENOL-FORMALDEHYDE RESINS

impregnation zone a dense phase fluidized bed of finely divided catalyst base particles superimposed by a dispersed phase of said catalyst base particles, spraying into said catalyst base particles an impregnating solution containing a catalyst component at an impregnation temperature below the boiling point of the impregnation solution, whereby agglomeration of said catalyst base particles is avoided, the size of said spray being sufficiently large to prevent free transport of the impregnation solution upwardly in said impregnation zone and sufficiently small to prevent the formation of large clumps of wetted catalyst base particles which drop to the bottom of said impregnation zone, and then at least partially drying the thus impregnated catalyst.

2,865,869

COMPOSITION COMPRISING AN ALKYD RESIN, ORGANIC POLYISOCYANATE AND A TERTIARY ALCOHOL - CONCENTRATED ACID FOAMING AGENT AND METHOD OF PREPARING CELLULAR RESIN THEREFROM

Raymond R. Hindersinn, Lewiston, and Stephen M. Creighton, Niagara Falls, N. Y., assignors to Hooker Chemical Corporation, Niagara Falls, N. Y., a corporation of New York

No Drawing. Application November 23, 1956
Serial No. 623,796
22 Claims. (Cl. 260—2.5)

12. A process for the production of a polyurethane foam which comprises mixing together (A) an alkyd resin comprised of the reaction product of (1) a polycarboxylic compound selected from the group consisting of a polycarboxylic acid, a polycarboxylic acid anhydride, a polycarboxylic acid halide, and a polycarboxylic acid ester and (2) a polyhydric alcohol, (B) an organic polyisocyanate in an amount from about 30 to 130 percent based on the number of hydroxyl and carboxyl groups, and (C) a foaming agent comprised of (1) a tertiary alcohol having the general formula:

where R_1 is an aliphatic group containing at least one hydrogen atom bonded to the carbon atom immediately adjacent to the carbinol group, and R_2 and R_3 are substituents selected from the group consisting of aliphatic and aromatic groups, and (2) a strong, concentrated acid in an amount up to 1.5 percent; foaming the mixture at an elevated temperature, and curing the resulting product.

2,865,870

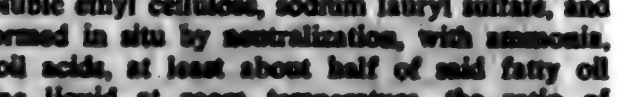
LACQUER COMPOSITION COMPRISING EPOXIDE RESIN, POLYAMIDE RESIN AND CELLULOSE ACETATE BUTYRATE AND ARTICLE COATED THEREWITH

Raymond G. Pinder, Rochester, N. Y., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application October 24, 1955
Serial No. 542,496
4 Claims. (Cl. 260—13)

1. A heat hardenable lacquer composition, the essential constituents of which comprise in a solvent therefor approximately 6 parts of an epoxide resin having the typical structure:

wherein n is a whole number from 1 to 5, approximately 3 parts of a polyamide resin having the typical structure:



wherein n is a whole number from 5 to 15 and R is an alkylene group having from 5 to 20 carbon atoms, and approximately 2 parts of cellulose acetate butyrate containing from 12 to 15% acetyl groups and 35 to 39% butyryl groups.

2,865,871

OIL IN WATER EMULSION TEXTILE PRINTING PASTE AND PREPARATION

Joyce L. Johnson, Fair Lawn, Arthur Booth, Little Falls, and Ernest Mosmer, Fair Lawn, N. J., assignors to Interchemical Corporation, New York, N. Y., a corporation of Ohio

No Drawing. Application March 16, 1954
Serial No. 416,589
4 Claims. (Cl. 260—15)

1. A pigment printing paste consisting of pigment dispersed in an oil-in-water emulsion comprising water, a latex of a synthetic rubber formed by copolymerization of approximately equal parts of butadiene and acrylonitrile, methyl cellulose which has a viscosity of between 1200 and 9000 centipoises as measured on a 2% aqueous solution at 25° C., a volatile water-immiscible organic solvent, an organic solvent-soluble thermosetting resin selected from the class consisting of melamine-formaldehyde resins and urea-formaldehyde resins, an organic solvent-soluble ethyl cellulose, sodium lauryl sulfate, and a soap formed in situ by neutralization, with ammonia, of fatty oil acids, at least about half of said fatty oil acids being liquid at room temperature, the ratio of water to organic solvent in said paste varying from about 200 to about 0.25, said thermosetting resin being present in an amount equal to from about 0.25 part to about 1.5 parts per part of pigment, said ethyl cellulose being present in an amount equal to from about 0.15 to about 4.0 parts per part of said thermosetting resin, said methyl cellulose being present in an amount equal to between about 0.1% and 1.0% of the total weight of the printing paste, said sodium lauryl sulfate being present in amount not exceeding 5% based on the weight of said printing paste, and said in situ of formed soap being formed by neutralization of fatty acids which total more than 3% of the total print paste.

2,865,872

GRAFT COPOLYMERS OF ACRYLONITRILE AND ANOTHER ETHENOID MONOMER WITH A HYDROXYL-CONTAINING CELLULOSE DERIVATIVE AND THEIR PREPARATION

Hugh J. Hagemeyer, Jr., Longview, Tex., and Elizabeth L. Oglesby, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application October 22, 1954
Serial No. 464,189
8 Claims. (Cl. 260—17)

1. The method which comprises graft copolymerizing a mixture of 5–50% by weight of a compound composed of cellulose having 10–70% of the hydroxyl groups of the cellulose in free form and having the hydrogen of the remainder of the hydroxyl groups replaced by radicals from the group consisting of alkyl groups of 1–4 carbon atoms, carboxyalkyl groups of 2–5 carbon atoms and acyl groups of 2–5 carbon atoms, and 95–50% by

monium hydroxide and volatile, water-soluble amines to

N,N-diethyl acrylamide copolymer and containing Al_2O_3

alcohol being at a sufficiently elevated temperature to enable said mixing to take place, then cooling the result-

1. A process for preparing a uniformly impregnated composite catalyst which comprises maintaining in an

weight of monomeric material consisting of 75–98% by weight of acrylonitrile and 25–2% by weight of at least one other polymerizable monoethylenically unsaturated monomer based on the weight of said monomeric material and selected from the group consisting of monoethylenically unsaturated carboxylic acid esters wherein the ester group contains 1–4 carbon atoms and the carboxylic acid group contains 2–5 carbon atoms, amides and N-alkyl and N,N-dialkyl amides of monoethylenic carboxylic acids of 2–5 carbon atoms wherein said alkyl groups contain 1–4 carbon atoms, vinyl pyridines, styrene, vinyl chloride, vinylidene chloride, alkyl vinyl ethers wherein the alkyl group contains 1–3 carbon atoms, vinyl ketones containing 4–6 carbon atoms, acrylic acid and methacrylic acid, and thereby forming a composite unitary polymer capable of forming high softening, readily dyeable unsegmented fibers, said graft copolymerizing being effected by heating said mixture of cellulose compound and monomeric material in the presence of a polymerization catalyst and 0.01–2.0 mole percent based on the weight of said monomeric material of an alkyl mercaptan wherein the alkyl group contains 4–18 carbon atoms.

2,865,873
LACQUER EMULSION FOR LITHOGRAPHIC PLATES

George R. Hodgins, Seaford, and Robert F. Leonard, East Rockaway, N. Y., assignors to Litho Chemical and Supply Co. Inc., New York, N. Y., a corporation of New York

No Drawing. Application February 6, 1957
Serial No. 638,472
5 Claims. (Cl. 260—17.4)

1. A lacquer emulsion for pre-sensitized lithographic plates comprising the following constituents in substantially the following proportions by weight:

	Percent
The partially hydrolyzed co-polymer of vinyl chloride and vinyl acetate	3.53
Di-isobutyl ketone	6.95
Xylene	10.24
Polyoxyethylene sorbitan mono-stearate	0.80
Sorbitan mono-stearate	0.09
Sorbitan mono-oleate	1.13
Image coloring toner pigment	3.50
Gum arabic (100%)	15.51
Phosphoric acid (85%)	4.09
Phenol (100%)	0.11
Water	54.05

2,865,874
INTERPOLYMERS OF ALKYD RESINS, VINYL HALIDES AND VINYL ESTERS

Roger M. Christenson, Whitefish Bay, Wis., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application November 24, 1953
Serial No. 394,221
12 Claims. (Cl. 260—22)

1. An interpolymer which is soluble in aromatic hydrocarbons and which will dry to form durable protective films upon surfaces, which interpolymer is an addition product of a mixture consisting of (A) an alkyd resin which is the esterification product of a mixture of a polyhydric alcohol, a dicarboxylic acid component substantially free of ethylenic unsaturation and a fatty acid of an unsaturated glyceride oil, (B) vinyl acetate and (C) vinyl chloride, said alkyd resin being present in an amount of about 10 to 50 percent by weight based upon the interpolymerizable component, the rest of the mixture being vinyl acetate and vinyl chloride.

2,865,875
LOW ASH PHENOL-FORMALDEHYDE RESINS AND PROCESS OF PREPARATION

Joseph R. Hyman, Fishkill, and William R. Starr, South Plainfield, N. J., assignors to Catalin Corporation of America, a corporation of Delaware

No Drawing. Application March 5, 1956
Serial No. 569,234
12 Claims. (Cl. 260—29.3)

1. The process of producing an aqueous resin solution of a phenol-formaldehyde resin of the type catalyzed with a metal alkali, which solution is characterized by the fact that it is substantially free of metal alkali salts of an acid other than phenol but has a pH of between 4 and 8 and an ash content of not over 0.9%, which comprises reacting 1 mol of phenol with 1.5–3.2 mols of formaldehyde in the presence of a soluble metal alkali to produce a water soluble resin, passing the resulting alkaline solution of the water soluble resin through a mass of cation exchanger that is adjusted to the acid cycle and is insoluble in the said solution, continuing such cation exchange treatment until the pH of the solution is below 8 and adjusting the pH of the solution to between 4 and 8 by adding an alkali selected from the group consisting of the soluble metal alkalies, ammonia and amines, in such amount if any required to give a pH of between 4 and 8.

2,865,876
LOW-WATER-LOSS CEMENT COMPOSITION AND METHOD OF FORMING A SLURRY OF THE SAME

Platho P. Scott, Jr., Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware

No Drawing. Application November 30, 1953
Serial No. 395,319
12 Claims. (Cl. 260—29.6)

3. A low-water-loss cement composition comprising hydraulic cement and from about 0.5 to about 5.0 percent, based on the dry cement, of a salt of sulfonated polystyrene, said polystyrene before sulfonation having a molecular weight between about 10,000 and about 400,000, said sulfonated polystyrene containing between about 0.7 and about 2.0 sulfonic acid groups per styrene unit and said salt being selected from the group consisting of ammonium and alkali metal salts.

2,865,877
COATING COMPOSITIONS COMPRISING AQUEOUS DISPERSIONS OF POLYMER SALTS AND ALKYLPHENOLETHYLENE OXIDE CONDENSATES AND ARTICLES COATED THEREWITH

Harold L. Hatton and Joseph A. Stieber, Philadelphia, and Frederick W. Tootell, Jr., Abington, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application September 26, 1955
Serial No. 536,742
19 Claims. (Cl. 260—29.6)

1. An aqueous coating composition comprising (1) 33 to 90 parts of a salt of a copolymer of at least one acid of the group consisting of acrylic, methacrylic, and itaconic acids with at least one ester of an acid of said group with an alcohol having 1 to 18 carbon atoms, said copolymer containing from about 5% to about 20% by weight of salt units when calculated as the ammonium salt, (2) 5 to 45 parts of a salt of a copolymer in approximately 1:1 mole ratio of maleic anhydride and a branched chain unsaturated hydrocarbon of 4 to 10 carbon atoms selected from the group consisting of aliphatic olefines and unsaturated terpenes, the last-mentioned salt having a molecular weight of about 500 to 5000, each of the salts (1) and (2) being that obtained by the addition to an aqueous dispersion of the respective copolymer of a substance selected from the group consisting of am-

2,865,883
POLYVINYL CHLORIDE WITH MANGANOUS

plex resinous epoxides and polyfunctional polyethylene polyamines to form a molding mixture, the complex resin-

monium hydroxide and volatile, water-soluble amines to neutralize acid-containing units in the copolymer, and (3) 5 to 25 parts of a water-insoluble ethylene oxide condensate of a higher alkyl phenol containing an average of from 1 to 5 oxyethylene units and in which the alkyl group has 8 to 18 carbon atoms.

2,865,876

AQUEOUS COATING COMPOSITIONS, ARTICLES COATED THEREWITH, AND METHODS FOR PRODUCING THEM

Frederick W. Toothill, Jr., Abington, and Joseph A. Stieber and Harold L. Hatton, Philadelphia, Pa., assignors to Rohm & Haas, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application September 26, 1955
Serial No. 536,743
10 Claims. (Cl. 260—29.6)

1. An aqueous composition comprising (1) a water-soluble salt of an approximately 1:1 mol ratio linear copolymer of maleic anhydride and a branched-chain unsaturated hydrocarbon of 4 to 10 carbon atoms selected from the group consisting of aliphatic mono-olefins and unsaturated terpenes, said salt being obtained by the addition to the aqueous copolymer dispersion of a substance selected from the group consisting of ammonium hydroxide and volatile, water-soluble amines to neutralize acid-containing units in the copolymer and having an average molecular weight of about 500 to 5000, and (2) a water-insoluble ethylene oxide condensate of a higher alkylphenol containing an average of from one to five oxyethylene units and in which the alkyl group has 8 to 18 carbon atoms, the weight ratio of the copolymer salt to the condensate being from 1:2 to 5:2 and the total weight of the copolymer salt and condensate being at least 5% by weight of the aqueous composition.

2,865,879

COMBINED ACETONITRILE AND AROMATIC HYDROCARBON SOLVENT SOLUTION OF A VINYL CHLORIDE-VINYL ACETATE COPOLYMER

Gerald P. Roeser, Falkington, Pa., assignor, by mesne assignments, to American-Marietta Company, Stover-Mudge Co. Division, Chicago, Ill., a corporation of Illinois

No Drawing. Application February 9, 1956
Serial No. 564,376
10 Claims. (Cl. 260—32.4)

1. A resin composition comprising a copolymer of vinyl chloride and vinyl acetate containing a major proportion by weight of vinyl chloride, said copolymer being dissolved in a solvent composition consisting essentially of acetonitrile and liquid aromatic hydrocarbon solvent, said acetonitrile being present in said mixture of acetonitrile and liquid aromatic hydrocarbon solvent in proportions of from substantially 5% to 65% by weight.

2,865,880

FIBERS COMPRISING ACRYLONITRILE POLYMERS CONTAINING ALUMINUM AND SILICON OXIDES

John R. Caldwell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application April 7, 1954
Serial No. 421,681
6 Claims. (Cl. 260—41)

1. Fibers having improved dyeing and sticking characteristics made from an acyclic acrylonitrile polymer composition selected from the group coesisting of acrylonitrile, N-methyl methacrylamide copolymer; acrylonitrile, N-isopropyl acrylamide copolymer; polyacrylonitrile; acrylonitrile, vinyl acetate copolymer; and acrylonitrile, N,N-diethyl acrylamide copolymer and containing Al_2O_3 and SiO_2 in colloidal form in an amount within the range of 8 to 15% by weight of the polymer the Al_2O_3 being present in an amount of 50 to 75% of the total oxide mixture.

2,865,881

RUBBERY COMPOSITION REINFORCED WITH NITROGEN CONTAINING SILICON MONOXIDE AND PROCESS FOR MAKING SAME

Daniel S. Sears, Henrico County, Va., assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

Original application May 28, 1954, Serial No. 433,899, now Patent No. 2,823,988, dated February 18, 1958. Divided and this application January 16, 1957, Serial No. 637,346
18 Claims. (Cl. 260—41)

1. A composition of matter comprising a rubbery material selected from the group consisting of a rubbery homopolymer of a diene, a rubbery copolymer of a mixture of dienes, a rubbery copolymer of at least one diene and at least one copolymerizable monomer having a single carbon to carbon double bond and selected from the group consisting of isobutylene, styrene, acrylonitrile, methacrylonitrile, methyl acrylate, methyl methacrylate, ethyl acrylate, ethyl methacrylate and 2-vinyl pyridine, a rubbery homopolymer of an acrylic acid ester, a rubbery copolymer of a mixture of acrylic acid esters, a rubbery copolymer of a mixture of at least one acrylic acid ester and at least one copolymerizable monomer having a single carbon to carbon double bond and selected from the group consisting of chloroethyl vinyl ether, acrylonitrile, vinyl chloride, dichlorodifluoro ethylene and styrene, and mixtures thereof, said diene being selected from the group consisting of open-chain conjugated diene hydrocarbons and open-chain conjugated diene hydrocarbons having one atom of hydrogen replaced with chlorine and said diene having from 4 to 8 carbon atoms, and a compound comprising a condensed, particulate, solid, nitrogen-containing silicon monoxide,

$$(Si)_x \cdot (SiO_2)_y \cdot (N)_z$$

where x and y are whole numbers and where z is a number such that the proportion of nitrogen is from about 1 to 8% by weight of said silicon monoxide as determined by Kjeldahl analysis, and containing a substantial amount of fibers, said compound being present in a minor amount based on the total amount of said rubbery material and said compound and sufficient to reinforce said rubbery material.

2,865,882

ELASTOMERIC COMPOSITIONS HAVING SILICA-CONTAINING REINFORCING PIGMENT

Roger W. Strassburg, Cleveland, Ohio, assignor to The B. F. Goodrich Company, New York, N. Y., a corporation of New York

No Drawing. Application December 22, 1955
Serial No. 554,648
23 Claims. (Cl. 260—41.5)

10. A light colored to white, particulate, solid, amorphous silica containing a minor amount by weight of nitrogen and obtained by treating a light colored to white, particulate, solid material comprising amorphous silica containing halogen in an amount not in excess of about 3% by weight with a nitrogen compound having active hydrogen and in an amount and at a temperature sufficient to replace essentially all of the halogen of said silica with a residue of said compound attached to said silica through nitrogen and without causing sintering of said silica.

containing 1–5 carbon atoms; the nitrile groups of said copolymer being at least partially reduced to primary about 280° C., and under a reduced pressure within the

vinyl acetate and vinyl chloride.

of a substance selected from the group consisting of am-

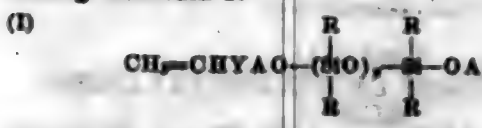
2,865,883
POLYVINYL CHLORIDE WITH MANGANOUS PYROPHOSPHATE
Julius Jacboon, Westfield, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 29, 1955
Serial No. 518,944
15 Claims. (Cl. 260—45.75)

1. A polymeric vinyl chloride composition comprising a polymeric vinyl chloride and a manganous pyrophosphate in a minor amount sufficient to stabilize said polymeric vinyl chloride against deterioration.

2,865,884
POLYETHYLENICALLY UNSATURATED POLYSILOXANES
Peter L. de Benneville, Philadelphia, and Marvin J. Hurwitz, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application May 12, 1955
Serial No. 507,973
10 Claims. (Cl. 260—46.5)

1. A composition of matter consisting of a compound having Formula I:

(I)



where Y is selected from the group consisting of oxygen and sulfur, A is selected from the group consisting of cyclohexylene and alkylene groups having 2 to 8 carbon atoms, at least two thereof extending in a chain between the adjacent O and Y atoms, R is a lower alkyl group having 1 to 4 carbon atoms, and y is a number having an average value from about 1 to 9.

2,865,885
POLYETHYLENICALLY UNSATURATED SUBSTITUTED BIS-AMINO POLYSILOXANES
Peter L. de Benneville, Philadelphia, and Marvin J. Hurwitz, Elkins Park, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Original application May 12, 1955, Serial No. 507,973. Divided and this application November 7, 1957, Serial No. 694,919
13 Claims. (Cl. 260—46.5)

1. A compound having the formula:

where Y is selected from the group consisting of oxygen and sulfur, A is selected from the group consisting of cyclohexylene and alkylene groups having 2 to 8 carbon atoms, at least two thereof extending in a chain between the adjacent N and Y atoms, R is a lower alkyl group having 1 to 4 carbon atoms, and y is a number having an average value from about 1 to 9.

2,865,886
POLYETHYLENE POLYAMINE-EPOXIDE COMPOSITIONS
Sylvan Owen Greenlee, Racine, Wis., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York
No Drawing. Application February 11, 1952
Serial No. 271,869
2 Claims. (Cl. 260—47)

1. The method of making insoluble, infusible molded products which comprises admixing normally solid complex resinous epoxides and polyfunctional polyethylene polyamines to form a molding mixture, the complex resinous epoxides being polymeric polyethers of dihydric phenols, said dihydric phenols being free from functional groups other than phenolic hydroxyl groups, said resinous epoxides resulting from the heating of the dihydric phenol with an excess of epichlorhydrin and of caustic alkali and having intermediate alcoholic hydroxyl-containing aliphatic groups and epoxide-containing terminal aliphatic groups, said resinous epoxides being free from functional groups other than alcoholic hydroxyl and epoxide groups, and the amount of polyfunctional polyamine being from about ¼ to about 1.7 of the amount equivalent to the resinous epoxide, considering one active hydrogen of the amine groups of the polyamine equivalent to one epoxide group of the complex epoxide, introducing a body of said mixture in the substantial absence of a solvent into a confining space, and heating said mixture in said confining space to form a insoluble, infusible product.

2,865,887
GLYCIDYL ETHERS OF REACTION PRODUCTS OF CERTAIN PHENOLS WITH POLYMERIZABLE AROMATIC SUBSTANCES CONTAINING AT LEAST ONE VINYL GROUP
James Brown Douglas Mackenzie, Duxford-Cambridge, England, assignor to Ciba Limited, Basel, Switzerland
No Drawing. Application April 30, 1954
Serial No. 426,933
Claims priority, application Great Britain May 1, 1953
11 Claims. (Cl. 260—47)

1. A glycidyl ether of a polyhydric phenol produced by heat condensation in the presence of a mineral acid catalyst of (A) a phenol containing at least one free phenolic hydroxyl group and at least one unsubstituted reactive position in a benzene nucleus and being free from other substituents capable of reacting with epoxide groups with (B) a monocyclic aromatic hydrocarbon containing as the sole non-aromatic unsaturation at least one vinyl group attached to the benzene ring of the aromatic hydrocarbon, reactants (A) and (B) being so selected that if (A) is a monohydric phenol (B) is a divinyl benzene, while if (B) is a monovinyl benzene, then (A) is a polyhydric phenol.

2,865,888
AMINE-EPOXIDE COMPOSITIONS
Sylvan Owen Greenlee, Racine, Wis., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York
No Drawing. Original application February 11, 1952, Serial No. 271,869. Divided and this application August 22, 1957, Serial No. 679,755
8 Claims. (Cl. 260—47)

1. A composition of matter which is capable of hardening which comprises an unreacted mixture of normally solid resinous glycidyl polyethers of a polyhydric phenol and hexamethylene diamine.

2,865,889
REDUCED COPOLYMERS
Joseph A. Blanchette, East Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application June 21, 1957
Serial No. 667,290
7 Claims. (Cl. 260—63)

1. A reduced copolymer of 10–50% by weight of a nitrile selected from the group consisting of acrylonitrile and methacrylonitrile and 90–50% by weight of a ketone wherein the carbon of the carbonyl radical is directly joined to a radical selected from the group consisting of vinyl and isopropenyl radicals and to a radical selected from the group consisting of phenyl and alkyl radicals

tially completed, said inert cyclic hydrocarbon being a

2,865,890
VINYLTRIDIALKOXYTRIMETHYLSILANE AND

containing 1–5 carbon atoms; the nitrile groups of said copolymer being at least partially reduced to primary amino groups and the carbonyl groups thereof being substantially completely reduced to secondary hydroxyl groups.

2,865,890

CONDENSATION PRODUCT OF ISOPHTHALIC DIHYDRAZIDE, FORMALDEHYDE AND BUTANOL

Robert W. Auten, Jenkintown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application January 19, 1956
Serial No. 560,875
1 Claim. (Cl. 260—72.5)

A composition of matter comprising a thermosetting resinous condensation product of a mixture of (*a*) isophthalic dihydrazide, (*b*) butanol in an amount of about 7 to 15 moles per mole of dihydrazide, and (*c*) formaldehyde in an amount from 4 to 8 moles per mole of dihydrazide, sufficient of the butanol being combined to render the condensation product soluble in a solvent selected from the group consisting of toluene, xylene, mixtures thereof, and mixtures thereof with alcohols, said product being that obtained by heating the mixture at a pH of 1 to 7 and a temperature of 80° C. to reflux.

2,865,891

LINEAR COPOLYESTERS AND PROCESS

Rudolph Henry Michel, Kenmore, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 24, 1953
Serial No. 382,219
5 Claims. (Cl. 260—75)

1. The process which comprises reacting under ester interchange conditions ethylene glycol, an alkyl ester of terephthalic acid wherein the alkyl group contains from 1–7 carbon atoms, an alkyl ester of isophthalic acid wherein the alkyl group contains from 1–7 carbon atoms, and a polyethylene glycol having an average molecular weight within the range of from about 1000 to about 4000 and defined by the formula

$$HO-(CH_2)_2-(O-CH_2-CH_2-)_n-O-(CH_2)_2-OH$$

wherein *n* is an integer, said polyethylene glycol comprising from 40%–70% of the total weight of said ester of terephthalic acid, said ester of isophthalic acid, and said polyethylene glycol, said ester of terephthalic acid comprising from 50%–95% of the remainder of said total weight, and said ethylene glycol being present in the proportion of from 1.5 to 5 mols per mol of the mixture of esters of terephthalic and isophthalic acids, whereby to form a mixed ester and polymerizing said mixed ester at a temperature between about 230° to 290° C., and a pressure between 0.05 and 20 millimeters of mercury to form a linear copolyester.

2,865,892

PROCESS FOR STABILIZING MOLTEN POLYETHYLENE TEREPHTHALATE

Emmette Parr Isard, Kenmore, and Cyrus Efrem Stoeg, Grand Island, N. Y., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 30, 1953
Serial No. 383,420
2 Claims. (Cl. 260—75)

1. A process for stabilizing the molecular weight of a polyethylene terephthalate polymer in molten form which comprises maintaining an undegraded polyethylene terephthalate at a temperature of from about 265° to about 280° C., and under a reduced pressure within the range of from 15 to 40 millimeters of mercury, maintaining an inert relatively quiescent, atmosphere substantially free of free oxygen above the surface of the molten polymer, and continuously stirring the melt.

2,865,893

HYDROLYSIS COPOLYMERS OF VINYL ACETATE AND UNSATURATED CARBAMATES

Cornelius C. Unruh and Donald A. Smith, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application July 27, 1954
Serial No. 446,168
7 Claims. (Cl. 260—77.5)

1. The method of making a water-soluble polymer capable of being readily hardened by formaldehyde which comprises copolymerizing about 80–99% by weight of vinyl acetate with about 1–20% by weight of an allylic urethane from the group consisting of allyl and methallyl carbamates, and hydrolyzing the resulting water-insoluble copolymer with a solution of an alkali metal hydroxide in alcohol to a water-soluble polymer having a nitrogen content of 0.3–2.9%.

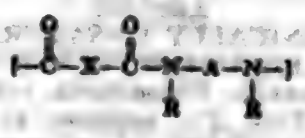
2,865,894

POLYAMIDES FROM DICYCLOHEXYLADIPIC ACID

Harry Greenberg and Raymond W. Horst, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application June 15, 1955
Serial No. 515,777
18 Claims. (Cl. 260—78)

1. A linear condensation polyamide characterized by containing repeating units of the following structure



in which X is a hydrocarbon portion of a dicarboxylic acid, A is a hydrocarbon portion of a diamine, and R is a member from the group consisting of hydrogen, alkyl and aryl radicals and further characterized in containing such units in which X is the hydrocarbon portion of α,α′-dicyclohexyladipic acid.

2,865,895

IMPROVEMENT FOR THE PREPARATION OF POLYAMIDES

Josef Heinrich Fritz Pieper, Berlin-Lichterfelde, and Johanna Elisabeth Viktoria Natalie Stanch, Berlin-Schlachtensee, Germany, assignors, by mesne assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 6, 1955
Serial No. 520,352
Claims priority, application Germany November 17, 1954
3 Claims. (Cl. 260—78)

1. In a process for preparing polyamide from prepolymer of polyamide-forming lactams and ω-aminocarboxylic acids to form a solid polymer having increased relative viscosity, the improvement comprising subjecting said prepolymer in finely divided form to solid phase polymerization at temperatures below the melting point of said polyamide in an inert cyclic hydrocarbon having a boiling temperature between 180° and 210° C. and at the boiling temperature of said inert cyclic hydrocarbon while continuously removing water formed until water is no longer separated and the polymerization is substan-

2,865,903

ter, maintaining said slurry free of alkali metal com-

products which comprises admixing normally solid com-

from the group consisting of phenyl and alkyl radicals

tially completed, said inert cyclic hydrocarbon being a nonsolvent for said polyamide and said prepolymer having a particle size of not more than 5 mm., separating the inert cyclic hydrocarbon from the resulting product, removing inert cyclic hydrocarbon still adhering to said resulting product and recovering a uniform polyamide having increased relative viscosity.

2,865,896

HYDROXYACID ESTERS

Frank Fekete, Buffalo, N. Y., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application January 5, 1956
Serial No. 557,452
11 Claims. (Cl. 260—78.3)

1. A compound of the structure

$$X—CH_2—Ar—CH_2—Y$$

wherein Ar is an aromatic radical containing a single benzene nucleus, X is the structure remaining after removal of a hydrogen atom from the carboxyl group of an ethylenically unsaturated aliphatic carboxylic acid selected from the class consisting of acrylic acid and methacrylic acid, and Y is the structure remaining following removal of a hydrogen atom from the carboxyl group of an aliphatic monocarboxylic hydroxyacid.

7. A copolymer of the compound of claim 1 and a polymerizable compound containing a terminal $CH_2=C<$ group.

2,865,897

EPOXY ALKYL ESTERS OF POLYBASIC AROMATIC CARBOXYLIC ACIDS AND PROCESS OF MAKING SAME

Bernhard Raecke, Rudolf Köhler, and Helmut Pietsch, Duesseldorf, Germany, assignors to Henkel & Cie, G. m. b. H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application September 14, 1953
Serial No. 380,133
Claims priority, application Germany September 20, 1952
6 Claims. (Cl. 260—78.4)

1. A process of producing glycide esters of aromatic hydrocarbon dicarboxylic acids and resinous epoxy polymers thereof comprising the steps of reacting at temperatures up to room temperatures an aromatic hydrocarbon dicarboxylic acid halide with glycide in the presence of a sufficient amount of a tertiary amino compound to react stoichiometrically with the hydrogen halide produced.

2,865,898

PREPARATION OF SALTS OF DICARBOXYLIC ACID ESTERS

Gordon D. Hiatt and John Emerson, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 24, 1955
Serial No. 530,404
10 Claims. (Cl. 260—78.4)

1. A method of preparing the salt of an ester selected from the group consisting of the cellulose and polyvinyl phthalates, succinates and maleates, both simple and mixed esters, which comprises dispersing the acid form of the ester in an aliphatic monohydroxy alcohol of 2–4 carbon atoms containing an amount of water, within the range of 3–22%, insufficient to exert a softening effect on the ester, adding thereto an alkaline compound selected from the group consisting of alkali metal, ammonium and aliphatic amine bases in an amount only sufficient to react with the carboxyl groups of the ester and separating the solid product thus obtained from the liquid portion of the mass.

2,865,899

VINYLTHIOALKOXYTRIMETHYLSILANE AND POLYMERS THEREOF

Marvin J. Hurwitz, Elkins Pusch, and Peter L. de Benneville, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application May 12, 1955
Serial No. 507,971
4 Claims. (Cl. 260—79.7)

4. A compound having the formula

$$CH_2=CHSAOSi(CH_3)_3$$

where A is an alkylene group having 2 to 8 carbon atoms.

2,865,900

USE OF PHOSGENE TO IMPROVE RESIN YIELD

Stanley B. Mirviss, Roselle, and Charles F. Marsden, Jr., Bedminster, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 9, 1954
Serial No. 422,247
8 Claims. (Cl. 260—82)

1. A process for improving the yield of an unsaturated hydrocarbon polymer prepared by maintaining a polymerization feed comprising a steam-cracked petroleum fraction boiling within the range of 20° to 170° C. in the presence of an aluminum halide catalyst at temperatures in the range of −30° to +75° C., which comprises treating a solution of partially polymerized feed with about 0.5 to 5% by weight of phosgene, based on the total amount of said polymerization feed, and completing polymerization of the unreacted feed in the presence of said phosgene.

2,865,901

BROMINATION OF ISOOLEFIN-POLYOLEFIN COPOLYMERS WITH BROMINE-CONTAINING ACTIVATED CHARCOAL

Ernest Jack Buckler and Douglas Cameron Edwards, Sarnia, Ontario, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a corporation of Canada

No Drawing. Application March 21, 1956
Serial No. 572,803
13 Claims. (Cl. 260—85.3)

1. A process for the bromination of a solid, olefinically unsaturated polymer composed of a major portion of an isoolefinic hydrocarbon containing 4 to 8 carbon atoms and a terminal methylene group connected by a double bond to another carbon atom and a minor portion of a polyolefinic hydrocarbon containing 4–14 carbon atoms and selected from the group consisting of acyclic diolefins, acyclic triolefins, alicyclic triolefins which process comprises intimately commingling said polymer with bromine-containing activated carbon black containing at least 2 parts by weight of bromine per 100 parts by weight of polymer.

2,865,902

CINCHONINIC ACID DERIVATIVES

Joseph A. Blanchette, East Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 19, 1956
Serial No. 610,708
4 Claims. (Cl. 260—93.5)

1. A p-substituted homopolymer of a styrene compound of the group consisting of styrene, alpha-methyl styrene, and ar-substituted derivatives thereof wherein the ar-substituent is an aliphatic hydrocarbon radical containing 1–4 carbon atoms, said homopolymer being substituted on the para-positions of the aromatic rings with cinchoninic acid which is attached to the aromatic rings at the 2-carbon atom.

and sulfates of alkali and alkaline earth metals and am- from the carboxyl group; where Y is alkylene of not

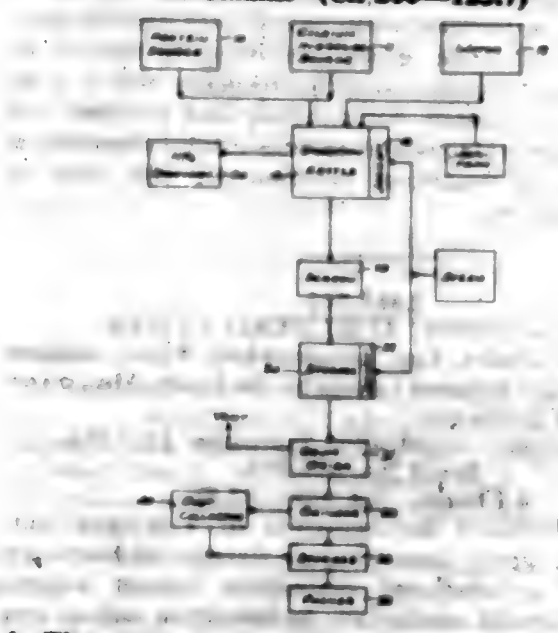
2,865,903
ETHYLENE POLYMERISATION
Leslie Seed, Northwich, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Application February 28, 1956
Serial No. 568,173
Claims priority, application Great Britain January 16, 1956
7 Claims. (Cl. 260—94.9)

1. Process for the manufacture of a solid polymer of ethylene having a density greater than 0.925 gram per cubic centimetre which comprises subjecting gaseous ethylene in the absence of any liquid reaction medium to a pressure greater than 1000 atmospheres and to a temperature between about 15° and 50° C., in the presence of an alkyl ester of hyponitrous acid containing 1 to 4 carbon atoms as a polymerization catalyst and a chain-transfer agent selected from the group consisting of hydrogen, carbon tetrachloride and chloroform, the amount of said chain-transfer agent being between 0.01% and 5% by weight of ethylene and sufficient only to effect chain transfer whereby said process is carried out under essentially liquid-free conditions.

2,865,904
ETHYLENE POLYMERISATION
Leslie Seed and Andrzej Pajaczkowski, Northwich, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Application February 28, 1956
Serial No. 568,174
Claims priority, application Great Britain November 30, 1955
7 Claims. (Cl. 260—94.9)

1. Process for the manufacture of solid polymers of ethylene which comprises subjecting gaseous ethylene to a pressure greater than 500 atmospheres and a temperature between 10° C. and 50° C., in the presence of an α-substituted acyl peroxide catalyst selected from the group consisting of di-isobutyryl peroxide, di-pivalyl peroxide, bis-α-methoxy isobutyryl peroxide, and bis-β-methoxy isobutyryl peroxide.

2,865,905
PLASTER RETARDER AND METHOD OF MAKING SAME
Robert R. Teale, Snyder, N. Y., assignor to National Gypsum Company, Buffalo, N. Y., a corporation of Delaware
Application July 13, 1954, Serial No. 443,014
4 Claims. (Cl. 260—123.7)



1. The method of making high strength retarder for gypsum plaster comprising the steps of forming a slurry consisting essentially of 100 parts of keratin, 20 to 40 parts alkaline earth hydroxide, and 80 to 250 parts water, maintaining said slurry free of alkali metal compounds, hydrolyzing said slurry under a pressure greater than 30 lbs. per sq. in. for a period of 20 to 90 minutes at a temperature of from 220° F. to 300° F.

2,865,906
PROCESS FOR THE FRACTIONATING OF SULPHITE LYE
John Höye, Nygard, Norway, assignor to Aktieselskabet Toften Cellulosefabrik, Nygard, Norway
No Drawing. Application December 19, 1955
Serial No. 553,711
Claims priority, application Norway December 24, 1954
12 Claims. (Cl. 260—124)

1. A process for the fractionating of sulphite waste lye, comprising the following steps: evaporating ammonium sulphite lye containing ammonium as principal cation to a practically dry powder, extracting said powder with methanol, removing the high molecular lignisulphonic acids insoluble in said organic liquid from the solution thus obtained, adding to said solution an aliphatic alcohol with from 3 to 4 carbon atoms, thereby precipitating the ammonium salts of the low molecular lignisulphonic acids, removing the precipitated ammonium salts of the low molecular lignisulphonic acids from the solution, adding to the thus obtained solution an alkali to a pH of about 10 thereby precipitating the sulphocarboxylic acids as sodium salts, removing said precipitated salts from the solution, adding to the solution thus obtained a soluble metal salt, the cation of which has a valency greater than 1 thereby precipitating the aldonic acids as salts, removing the precipitated salts of the aldonic acids, removing the electrolytes from the solution thus obtained, and recovering the organic liquids by fractional distillation, thereby obtaining as residue the carbohydrates as a separate fraction.

2,865,907
PROCESS OF PREPARING SULFURIZED-PHOSPHORUS SULFIDE-OLEFIN LUBRICANT ADDITIVE
Guy M. Verley, Harvey, Ill., assignor to Sinclair Refining Company, New York, N. Y., a corporation of Maine
No Drawing. Application August 28, 1957
Serial No. 680,651
4 Claims. (Cl. 260—139)

1. In a process of preparing a mineral oil lubricant additive of a sulfurized-phosphorus sulfide-olefin reaction product, the step comprising the preparation of said reaction product by reacting in molar ratios of from about 2 to 4 moles of C_{12} to C_{18} aliphatic mono-olefin and about 0.6 to 3 moles of sulfur per mole of phosphorus pentasulfide at a temperature of about 250° to 375° F.; said reaction being substantially completed in about 1 to 3 hours to obtain an oil-soluble reaction product containing substantial amounts of combined sulfur.

2,865,908
STILBENE AZO DYES
Leon Brian De Hoff, Plainfield, N. J., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application October 25, 1954
Serial No. 464,637
5 Claims. (Cl. 260—143)

1. A process of preparing stilbene azo dyes which on the Munsell Color System have a hue designation of from 8Y to 10Y which comprises treating a compound selected from the group consisting of 4,4'-dinitrostilbene-2,2'-disulfonic acid and alkali metal salts thereof in an aqueous alkaline medium with a reducing agent selected from the group consisting of formaldehyde, acetaldehyde and glucose, in the presence of a water-soluble salt selected from the group consisting of the water-soluble chlorides

and sulfates of alkali and alkaline earth metals and ammonia, the quantity of said water-soluble salt being from about 5% to about 15% by weight of the aqueous solvent present in the reaction mixture.

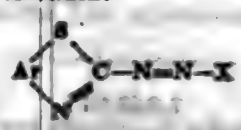
2,865,909

BENZOTHIAZOLE AZO PHENOL COMPOUNDS AND MATERIALS DYED THEREWITH

James M. Straley and John G. Fisher, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application September 24, 1954
Serial No. 458,263
19 Claims. (Cl. 260—146)

1. A complex metal compound which contains one of the metals selected from the group consisting of chromium, cobalt, copper, iron, manganese, nickel and vanadium in complex combination with a monoazo compound having the formula:



wherein Ar represents an ortho-arylene radical of the benzene series devoid of a sulfonic acid group and X represents the radical of a phenol selected from the group consisting of dihydroxybenzene, trihydroxybenzene, dihydroxy toluene, dihydroxybenzene monoalkyl ether, dihydroxybenzene monobenzyl ether, trihydroxybenzene monoalkyl ether, trihydroxybenzene dialkyl ether, dihydroxybenzene monoalkylacylate, β-hydroxyethoxyphenol, dimethyl phenol, chlorocresol, methoxy substituted alkyl phenol, methyl 3,5-dihydroxybenzoate, 2-nitroresorcinol and 2-chloro-3,5-dimethyl phenol, wherein the term alkyl as used above refers to an alkyl hydrocarbon group having 1 to 4 carbon atoms and wherein the radical designated X is devoid of substituents other than those indicated above.

2,865,910

WATER-INSOLUBLE DYESTUFFS

Christian Zickendraht, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application December 6, 1955
Serial No. 551,211
Claims priority, application Switzerland December 16, 1954
7 Claims. (Cl. 260—147)

1. An isothiuronium salt of an acid chromiferous monoazo dyestuff which is a complex chromium compound of an ortho:ortho'-dihydroxy-monoazo-dyestuff, containing a sulfonic acid group and one atom of chromium bound in complex union per molecule of a monoazo-dyestuff selected from the group consisting of benzene-azo-pyrazolone dyestuffs and naphthalene-azo-naphthol dyestuffs.

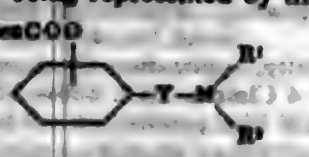
2,865,911

ESTERS AND THIOESTERS OF PENICILLIN AND THEIR PRODUCTION

Erling Juhl Nielsen, Charlottenlund, and Rudolf Reiter, Herlev, Denmark, assignors to Løvens Kemiske Fabrik ved A. Kongsted, Copenhagen, Denmark

No Drawing. Application July 7, 1954
Serial No. 442,854
Claims priority, application Denmark August 20, 1953
7 Claims. (Cl. 260—239.1)

1. Esters of penicillin with phenols having a basic substituent, said esters being represented by the formula:



where PenCO represents penicillin with hydroxyl removed from the carboxyl group; where Y is alkylene of not more than 4 carbon atoms in a straight chain, the total number of carbon atoms in Y not exceeding 12; and where R^1 and R^2 are alkyl groups of not more than 4 carbon atoms each.

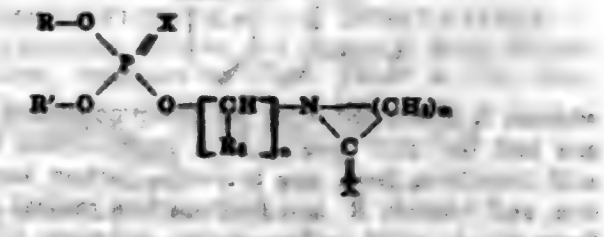
2,865,912

PROCESS FOR THE PRODUCTION OF O.O-DIALKYLPHOSPHORIC OR O.O-DIALKYLTHIONOPHOSPHORIC ACID ESTERS OF N-ALKYLOL LACTAMS

Heinz Pohlemann and Harald Schroeder, Ludwigshafen (Rhine), Herbert Stummeyer, Mannheim, and Heinrich Adolphi, Limburgerhof, Pfalz, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

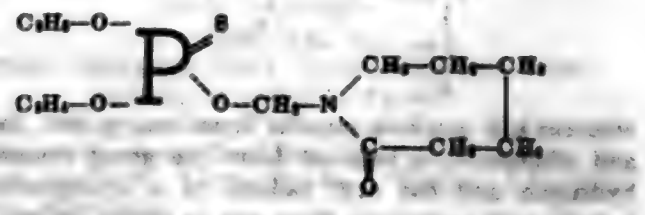
No Drawing. Application May 28, 1957
Serial No. 662,803
Claims priority, application Germany June 5, 1956
12 Claims. (Cl. 260—239.3)

1. A compound of the general formula



wherein R and R' are lower alkyl groups of 1–4 C-atoms, X is selected from the group consisting of oxygen and sulfur, R_3 is selected from the group consisting of hydrogen, an alkyl group of 1–4 C-atoms, and a trichloromethyl group, with the further proviso that said last-mentioned alkyl group and said trichloromethyl group occur as R_3 only once, *n* is an integer of 1 through 4 and *m* is an integer of 3 through 7.

9. The compound of the formula



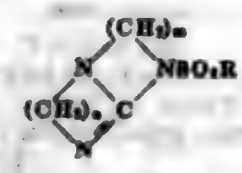
2,865,913

ARYLSULFONYL DERIVATIVES OF BICYCLIC GUANIDINES

Arthur Ferguson McKay, Pointe Claire, Quebec, and Maria-Elizabeth Kreling, Montreal, Quebec, Canada, assignors to Monsanto Canada Limited, Ville LaSalle, Quebec, Canada

No Drawing. Application October 28, 1957
Serial No. 692,576
Claims priority, application Great Britain April 29, 1957
4 Claims. (Cl. 260—239.9)

1. A sulfonyl derivative of bicyclic guanidine corresponding to the general formula



wherein *n* is an integer from 2 to 4, *m* is an integer from 2 to 3 and R is a radical selected from the group consisting of para-nitro phenyl, para-amino phenyl, para-acetylamino phenyl and para-methyl phenyl.

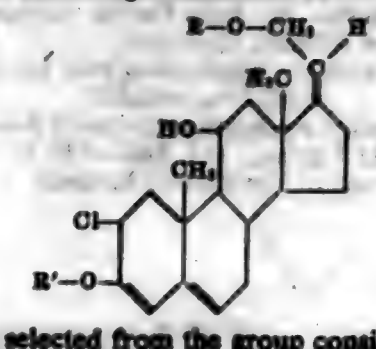
2. 1-p-aminobenzenesulfonyl - 2,3,5,6-tetrahydro-1-imidaz (1,2-a) imidazole.

2,865,914
3 KETALS AND 3 ENOL ETHERS OF 2-CHLORO 11β,21 - DIHYDROXY 4,17(20)-[CIS] PREGNADIENE-3-ONE AND 21-ACYL ESTERS THEREOF

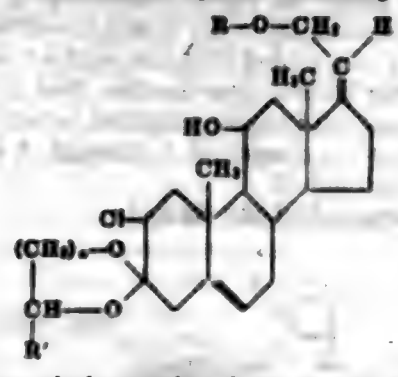
William P. Schneider, Alan H. Nathan, and John A. Hogg, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 23, 1955
Serial No. 510,517
5 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of 3-enol ethers of (1) 2-chloro-11β,21-dihydroxy-4,17(20)-[cis]-pregnadiene-3-one and 21-acyl esters thereof represented by the following formula:



wherein R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive, and wherein R' is a hydrocarbon radical containing from one to eight carbon atoms, inclusive, (2) 3-cyclic ketals thereof represented by the following formula:



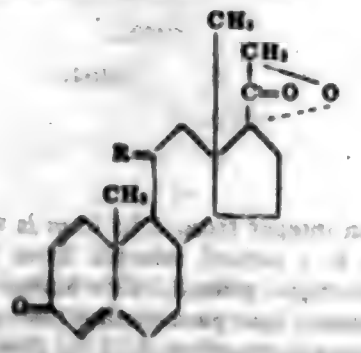
wherein *n* is a whole number from one to two, inclusive, and wherein R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive, and wherein R' is selected from the group consisting of hydrogen and hydrocarbon radicals containing from one to eight carbon atoms, inclusive.

2,865,915
17α,21-OXIDES OF 1,4-PREGNADIENE COMPOUNDS

George A. Bailey, Roselle, and Ralph F. Hirschmann, Westfield, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application September 28, 1956
Serial No. 610,868
4 Claims. (Cl. 260—239.55)

1. A compound having the formula



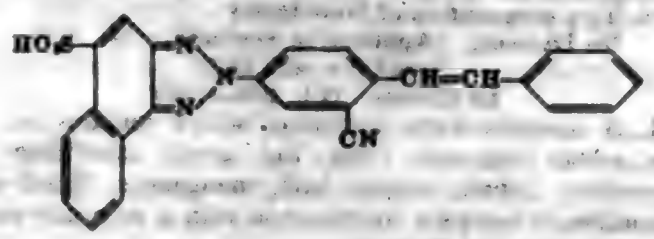
where R is selected from the group consisting of keto and β-hydroxyl.

2,865,916
TRIAZOLE BRIGHTENERS

Julian J. Leavitt, Plainfield, Robert S. Long, Bound Brook, and Harold M. Feuer, Somerville, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application April 25, 1957
Serial No. 655,019
4 Claims. (Cl. 260—240)

1. Compounds selected from the group consisting of the free acid of the structure:



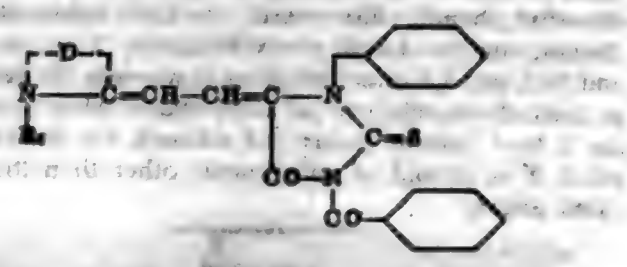
and alkali metal ammonium and amine salts thereof.

2,865,917
MEROCYANINE DYES

Douglas James Fry, Bernard Alan Lee, and John David Kendall, Ilford, England, assignors to Ilford Limited, Ilford, England, a British company

No Drawing. Application August 5, 1957
Serial No. 676,283
Claims priority, application Great Britain August 17, 1956
6 Claims. (Cl. 260—240.4)

6. A merocyanine dye of the general formula:



where R_1 is selected from the class consisting of methyl and ethyl groups, and D is a residue selected from the class consisting of benzthiazole, benzoxazole and thiazoline nuclei.

2,865,918
DIAMINOPOLYSILOXANES

Marvin J. Hurwitz, Elkins Park, and Peter L. de Benneville, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application June 1, 1955
Serial No. 512,573
7 Claims. (Cl. 260—247.5)

1. A composition comprising a bis-(amino)polydimethylsiloxane containing an average of 2 to 10 silicon atoms and in which the amino nitrogen atoms are substituted by at least one saturated aliphatic hydrocarbon group and the total of the carbon atoms in the substituents on each nitrogen atom is from 2 to 6.

2,865,919
PRODUCTION OF HEXAMETHYLENETETRAMINE

Richard Ludwig, deceased, late of Leverkusen-Bayerwerk, by Mathilde Ludwig, executrix, Opladen, and Friedrich Halle and Karl-Heinz Legrand, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 12, 1954
Serial No. 429,402
Claims priority, application Germany May 16, 1953
4 Claims. (Cl. 260—240.6)

1. Process for the production of hexamethylenetetramine, which comprises contacting gaseous formaldehyde with gaseous ammonia while maintaining the gaseous re-

prises heating 9-anthraldehyde with an N-(lower-alkyl)-2-hydroxyethylamine to produce a 2-(9-anthryl)-3-(lower-

optically active salts by fractionally crystallizing said mixture of salts from a solvent.

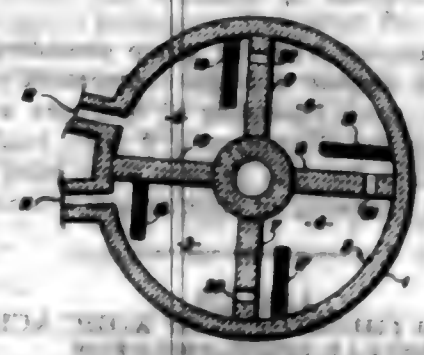
action mixture formed at a temperature between about the dew point of water and the desublimation temperature of hexamethylenetetramine by introducing cooling water in the form of a spray into the reaction mixture in amount to maintain said temperature and allow formation of hexamethylenetetramine in dry form, whereby the hexamethylenetetramine formed directly desublimates out of the reaction mixture in dry form, and recovering the dry hexamethylenetetramine thus formed.

2,865,920

APPARATUS FOR CONCENTRATION OF LIQUID SOLUTIONS

David J. Stark, Tuscola, Ill., assignor to National Petro-Chemicals Corporation, New York, N. Y., a corporation of Delaware

Application June 27, 1955, Serial No. 517,977
2 Claims. (Cl. 23—276)



1. An apparatus, adapted for concentration of liquid solutions, comprising a vertically elongated vessel vertically partitioned into a plurality of compartments, a heating surface in each of said compartments, said heating surface being positioned at an elevation above the bottom but below the top of the compartment, inlet means in the first of said compartments for introduction of liquid into a lower portion of said first compartment, means in the lower portion of all but the last of said compartments for passage of liquid from each compartment, outlet means in the last of said compartments for withdrawal of liquid from said last compartment, said outlet means being positioned at an elevation above the heating surface in said last compartment, and baffle means in each of said compartments positioned with respect to the inlet means to each compartment to direct liquid introduced into each compartment into contact with the heating surface in that compartment.

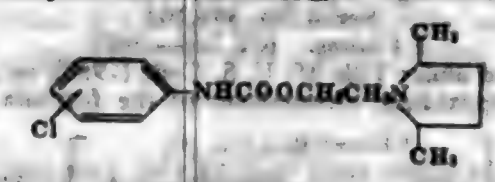
2,865,921

CYCLIC AMINOALKYL CHLOROCARBANILATES

Kurt J. Rorig, Evanston, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application January 17, 1956
Serial No. 559,518
7 Claims. (Cl. 260—294.3)

1. A compound of the formula



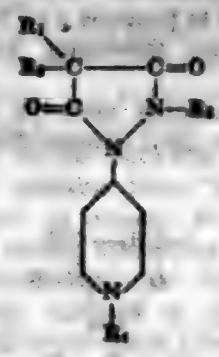
2,865,922

3,5-DIKETO-PYRAZOLIDINES

Ernst Jucker and Arnold Vogel, Binningen, and Erwin Rist, Basel, Switzerland, assignors to Sandoz A. G., Basel, Switzerland, a Swiss firm

No Drawing. Application January 2, 1957
Serial No. 632,023
Claims priority, application Switzerland January 7, 1956
10 Claims. (Cl. 260—294.7)

1. A member selected from the group consisting of 3,5-diketo-pyrazolidines which correspond to the formula



and salts thereof with acids, wherein each of R_1 and R_2 represents a member selected from the class consisting of aliphatic hydrocarbon radicals with 1 to 4 carbon atoms and phenyl, R_3 is a member selected from the group consisting of H and alkyl with 1 to 4 carbon atoms, and R_4 is alkyl with 1 to 4 carbon atoms.

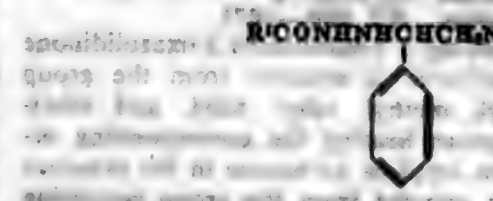
2,865,923

2-NITROETHYLHYDRAZINE DERIVATIVES

Robert E. Carnahan, Groton, and Robert E. Kent, Waterford, Conn., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware

No Drawing. Application July 2, 1954
Serial No. 441,178
10 Claims. (Cl. 260—295)

1. The compound of the formula:



wherein R^1 is selected from the group consisting of phenyl, heterocyclic, phenylalkylene, hydroxyphenyl and long chain alkyl groups of greater than 6 carbon atoms.

2,865,924

NOVEL THIAZOLINES AND PROCESS FOR THEIR MANUFACTURE

Friedrich Asinger, Max Thiel, and Hans Kaltwasser, Leuna, and Gerhard Reckling, Spergau, Germany, assignors to Veb Leuna-Werke "Walter Ulbricht," Leuna, Germany

No Drawing. Application October 10, 1956
Serial No. 615,813
Claims priority, application Germany April 14, 1956
9 Claims. (Cl. 260—306.7)

1. A process for the production of thiazoline-Δ-3,4 which comprises reacting a sulfur reactant selected from the group consisting of elementary sulfur, organic polysulfides, and inorganic polysulfides, with ammonia and a ketone of the general formula:

$$R'—CO—CH_2—R''$$

wherein R' and R'' are radicals selected from the group consisting of alkyl, aryl hydrocarbon, aralkyl hydrocarbon, and cycloalkyl hydrocarbon radicals, and the carbalkoxy derivatives of said hydrocarbon radicals.

2,865,925

PROCESS FOR PREPARING N-(2-HYDROXYETHYL)-N-(LOWER-ALKYL)-9-AMINOMETHYLANTHRACENES AND INTERMEDIATES THEREIN

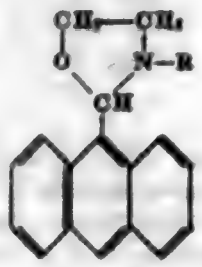
Chester H. Boles, Delmar, N. Y., assignor to Sterling Drug Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application March 23, 1956
Serial No. 573,352
10 Claims. (Cl. 260—307)

1. The process for preparing an N-(2-hydroxyethyl)-N-(lower-alkyl)-9-aminomethylanthracene, which com-

prises heating 9-anthraldehyde with an N-(lower-alkyl)-2-hydroxyethylamine to produce a 2-(9-anthryl)-3-(lower-alkyl)oxazolidine, and thereafter hydrogenolyzing the latter.

7. A compound selected from the group consisting of 2-(9-anthryl)-3-lower-alkyl)oxazolidines having the formula



wherein R is a lower-alkyl group, and acid-addition salts thereof.

2,865,926

PROCESS OF MAKING 3-SUBSTITUTED-2-OXAZOLIDINONES

Robert C. Harrington, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application March 19, 1957
Serial No. 646,970
6 Claims. (Cl. 260—307)

3. A process of making a 3-substituted-2-oxazolidinone in which the 3-substituent is selected from the group consisting of phenyl, methyl, ethyl, tolyl, and ethylphenyl, which comprises heating the corresponding organic isocyanate with ethylene carbonate in the presence of an alkaline agent selected from the group consisting of alkali-forming metal compounds giving a hydroxyl ion and their salts with weak acids, in the absence of appreciable amounts of moisture, until reaction has taken place.

4. A process of making a 3-substituted-2-oxazolidinone in which the 3-substituent is selected from the group consisting of phenyl, methyl, ethyl, tolyl, and ethyl-phenyl, which comprises heating the corresponding organic isocyanate with ethylene carbonate in the presence of an acidic condensation catalyst, in the absence of appreciable amounts of moisture, until reaction has taken place.

2,865,927

2-ALKOXY-2-IMIDAZOLINES AND METHOD OF MAKING SAME

Cornelius K. Cain, Flourtown, Pa., assignor to McNeil Laboratories, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application June 25, 1957
Serial No. 667,974
15 Claims. (Cl. 260—309.6)

1. 2-imidazoline compounds selected from the class consisting of 2-alkoxy-2-imidazolines where the alkoxy radical contains from 1 to 8 carbon atoms and the acid addition salts thereof.

2,865,928

RESOLUTION OF N-ACYL-DL-TRYPTOPHANS

Melvin Fields and Marcus A. Stevens, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 3, 1956
Serial No. 602,882
15 Claims. (Cl. 260—319)

1. The method comprising reacting an optically active lysine with a mixture of the L- and D-isomers of an N-acyltryptophan to form a mixture of optically active lysine salts of said L- and D-isomers, and separating said optically active salts by fractionally crystallizing said mixture of salts from a solvent.

11. An optically active lysine N-lower alkanoyl tryptophanate.

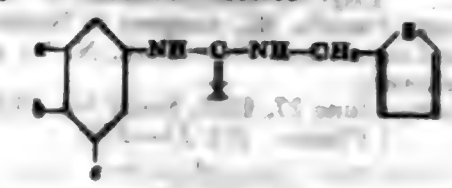
2,865,929

THENYL UREAS

David J. Beaver, Richmond Heights, and Paul J. Stoffel, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 23, 1956
Serial No. 599,335
5 Claims. (Cl. 260—332.2)

1. Thenyl ureas of the structure



wherein X is selected from the group consisting of sulfur and oxygen, wherein *a*, *b* and *c*, respectively, are selected from the group consisting of hydrogen and halogen, and wherein the substituents *a*, *b* and *c* total at least two halogen atoms, the said halogen atom being selected from the group consisting of chlorine and bromine.

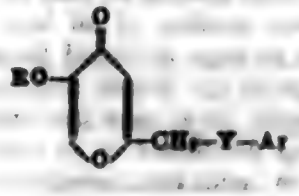
2,865,930

ETHERS AND THIOETHERS OF KOJIC ACID AND PREPARATION THEREOF

Jean Mellvier, Arpajon, and Roger Boesch, Paris, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Application December 19, 1955
Serial No. 553,712
Claims priority, application France December 23, 1954
9 Claims. (Cl. 260—345.9)

6. A compound of the general formula:



where R is a lower alkyl group, Y is selected from the group consisting of oxygen and sulphur, and Ar is a group selected from the class consisting of phenyl, lower-alkyl-substituted phenyl, lower-alkoxy-substituted phenyl, lower-hydroxyalkyl-substituted phenyl, nitrophenyl and chlorophenyl.

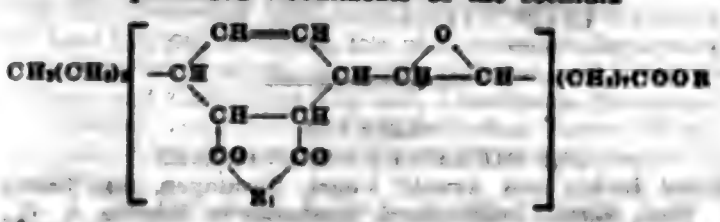
2,865,931

MALEINATED ELEOSTEARIC ACIDS

Charles H. Mack, New Orleans, and William G. Bickford, Metairie, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application November 3, 1953
Serial No. 390,101
5 Claims. (Cl. 260—348)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. An epoxidized dicosmaleate of the formula



where R represents a member of the group consisting of hydrogen and alkyl radicals and R_1 represents a member of the group consisting of —O— and $(—OR)_2$.

2. A tricarboxylic acid epoxidized dicosmaleate of the formula of claim 1 in which R represents a hydrogen atom and R_1 represents $(—OR)_2$—.

2,865,937

PROCESSES FOR THE PRODUCTION OF DIBASIC AND MONOBASIC ACIDS

tain the diamides, treating the diamides with alkaline hypohalite to give the diamines, and reacting the diamines with phosgene to obtain the C_6 diisocyanates.

2,865,933

AZIDES OF DI-CARBOXYARYL COMPOUNDS

Clinton W. MacMullen, Hamden, and Gordon E. Leader, Northford, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Application May 18, 1956
Serial No. 585,630
1 Claim. (Cl. 260—349)

A diphenyl diacyl diazide of the group consisting of o,p'-benzophenone dicarboxylic diazide, p,p'-benzophenone dicarboxylic diazide, p,p'-benzhydrol dicarboxylic diazide, o,p'-diphenylmethane dicarboxylic diazide and p,p'-diphenylmethane dicarboxylic diazide.

2,865,933

PROCESS FOR THE PREPARATION OF ANTHRAQUINONE

Talfryn James and Dominic A. Zanella, Lock Haven, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

No Drawing. Application March 23, 1956
Serial No. 574,379
10 Claims. (Cl. 260—385)

1. A process for the preparation of anthraquinone which comprises adding concentrated nitric acid to anthracene which is in a liquid state and at a temperature of at least 150° C. whereby the anthracene is oxidized to anthraquinone.

2,865,934

EXTRACTION OF ERGOSTEROL AND ERGOSTEROL-LIKE STEROLS FROM YEAST AND ANALOGOUS PRODUCTS

Robert A. Fisher, Bakersfield, Calif., assignor, by mesne assignments, to Biofirm Corporation, Wasco, Calif., a corporation of Illinois

No Drawing. Application February 21, 1955
Serial No. 489,795
13 Claims. (Cl. 260—397.25)

1. In a method of extracting ergosterol from liquid fungi products, the steps which include admixing said liquid fungi products with alkali to produce a pH in the range of about 9 to about 11, drying said liquid fungi products whereby to rupture the cells and release the ergosterol contained therein but without destroying the contents of the cells, then extracting the dried fungi products with a liquid organic solvent in which ergosterol and fatty material present in the dried fungi products are soluble, filtering, distilling off at least most of said organic solvent from the filtrate whereby to leavy a fatty residue, saponifying said residue with a strong alkali at elevated temperatures, diluting the saponified liquor with water, acidifying to reduce the pH to not substantially below pH 6 whereby to effect release of the ergosterol from the soaps, filtering through a filter bed containing a filter aid, washing the filter cake with water until the filtrate is substantially free of salts, dissolving the ergosterol out of said filter cake by contacting said filter cake with an organic solvent in which ergosterol is soluble, and recovering the ergosterol from said organic solvent.

2,865,935

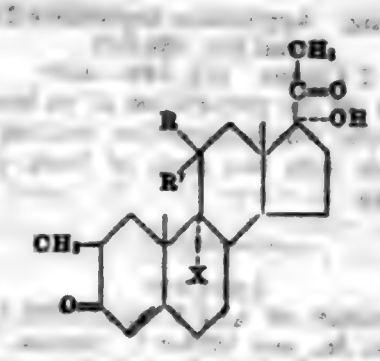
2-METHYL STEROIDS AND PROCESS

William P. Schneider, Frank H. Lincoln, and John A. Hogg, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application November 16, 1955
Serial No. 547,310
16 Claims. (Cl. 260—397.45)

6. A process for the production of a 2-lower-alkyl-11-oxygenated - 17α - hydroxy - 4 - pregnene - 3,20 - dione which comprises: treating a 2-lower-alkyl-11-oxygenated-17α,21-dihydroxy-4-pregnene-3,20-dione selected from the group consisting of 2-lower-alkyl-11β,17α,21-trihydroxy - 4 - pregnene - 3,20 - dione, 2 - lower - alkyl-17α,21 - dihydroxy - 4 - pregnene - 3,11,20 - trione, 2-lower - alkyl - 9α - halo - 11β,17α,21 - trihydroxy - 4-pregnene - 3,20 - dione, 2 - lower - alkyl-9α-halo-17α,21-dihydroxy-4-pregnene-3,11,20-trione wherein the halo atom has an atomic weight between 17 and 131 and the lower-alkyl radical contains from one to eight carbon atoms, inclusive, with an organic acid sulfonyl chloride selected from the group consisting of toluenesulfonyl chloride, benzenesulfonyl chloride, methanesulfonyl chloride, naphthylsulfonyl chloride to give the corresponding 11-oxygenated-2-lower-alkyl-17α-hydroxy-21-organic acid sulfonyloxy-4-pregnene-3,20-dione; heating the thus obtained 11-oxygenated 2-lower-alkyl-17α-hydroxy-21-organic acid sulfonyloxy-4-pregnene-3,20-dione in acetone solution with alkali iodide to obtain the corresponding 11-oxygenated 2-lower-alkyl-17α-hydroxy-21-iodo-4-pregnene-3,20-dione and treating the thus obtained 21-iodo steroid with a reducing agent selected from the group consisting of zinc dust and acetic acid, an alkali metal thiosulfate, an alkali metal sulfite and an alkali metal hydrosulfite to give the corresponding 11-oxygenated 2-lower-alkyl-17α-hydroxy-4-pregnene-3,20-dione.

16. A compound represented by the formula



wherein R is hydrogen, R' is β-hydroxy and together R and R' is oxygen and X is selected from the group consisting of hydrogen and fluorine.

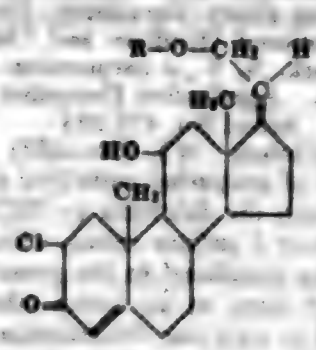
2,865,936

2-CHLORO-11β,21-DIHYDROXY - 4,17(20)-[CIS]-PREGNADIENE-3-ONE AND 21-ACYL ESTERS THEREOF

William P. Schneider, Alma H. Nathan, and John A. Hogg, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Original application May 23, 1955, Serial No. 510,517. Divided and this application January 7, 1957, Serial No. 632,633
5 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of 2-chloro-11β,21-dihydroxy-4,17(20)-[cis]-pregnadiene - 3-one and 21-acyl esters thereof represented by the following formula:



wherein R is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,865,945

PROCESS FOR THE MANUFACTURE OF TETRAETHYL PYROPHOSPHATE

wherein R represents

2,865,937
PROCESSES FOR THE PRODUCTION OF DIBASIC AND MONOBASIC ACIDS
Alfonso Maggiolo, Merion, Pa., assignor to The Welsbach Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Application March 6, 1956
Serial No. 569,673
3 Claims. (Cl. 260—486)

1. In a process for the production of dibasic and monobasic acids from unsaturated fatty acids selected from the group consisting of oleic acid, linoleic acid and mixtures of oleic acid and linoleic acid in a solvent, the steps of ozonizing the unsaturated fatty acids in the presence of an amount of water in the approximate range of one to six times by weight of the unsaturated fatty acid and solvents, subjecting the resulting ozonides to oxidative decomposition in the approximate temperature range 100–150° C. and then extracting the acids.

2,865,938
IRON CHOLINE COMPOUND AND PRODUCTION THEREOF
William J. Rosenfelder, Elmhurst, N. Y., assignor, by mesne assignments, to Hyman Rosenstein, New York, N. Y.
No Drawing. Application September 25, 1957
Serial No. 686,828
2 Claims. (Cl. 260—439)

1. A process for the preparation of an iron containing organic compound which comprises reacting one mol of tricholine citrate with two mols of ferric citrate in an aqueous medium.

2,865,939
SYNTHESIS OF ALKYLHALOSILANES
Ernest L. Little, Jr., and Miller C. Nelson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application July 18, 1956
Serial No. 598,843
10 Claims. (Cl. 260—448.2)

1. The method of producing organohalosilanes which consists of reacting, at a temperature of at least 225° C. and a pressure of at least 150 atmospheres, (1) an olefinic hydrocarbon having a single point of ethylenic unsaturation, (2) the silicide of a member of the group consisting of the alkali and alkaline earth metals, and (3) a compound of the formula MX_nR_{4-n} where M is an element of the group consisting of silicon, titanium, zirconium, germanium and tin X is a halogen of atomic number, 17 to 53, inclusive, R is a hydrocarbon radical having 1–6 carbon atoms, and n is an integer from 1 to 4, inclusive.

2,865,940
PROCESS FOR PREPARING SATURATED ALIPHATIC DIISOCYANATES
John F. Nobis and Harry Greenberg, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia
No Drawing. Application December 14, 1954
Serial No. 475,293
2 Claims. (Cl. 260—453)

1. The method of preparing saturated aliphatic C_6 diisocyanates in which the isocyano (—NCO) groups are separated by at least 4 carbon atoms, which includes the steps of dimerizing butadiene in the presence of sodium in finely dispersed form in an active ether diluent and in the presence of at least one dimerization activator, immediately carbonating the resulting organometallic diene intermediate, neutralizing the resulting dialkali metal salts of dicarboxylic acids to obtain the free diacids, hydrogenating the unsaturated diacids, reacting the saturated diacids with at least one ammonia releasing agent to obtain the diamides, treating the diamides with alkaline hypohalite to give the diamines, and reacting the diamines with phosgene to obtain the C_6 diisocyanates.

2,865,941
CHLORO-DIENYL XANTHATES
John J. D'Amico, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application June 20, 1955
Serial No. 516,771
4 Claims. (Cl. 260—455)

1. A chloro-dienyl xanthate of the general formula X—Y where X represents an alkyl xanthate radical, said alkyl group selected from a member of a group consisting of methyl, ethyl, propyl, butyl, amyl group and where Y represents a monochlor hexadiene nucleus.

2,865,942
PHOSPHOROUS ACID ESTERS AND METHOD OF MAKING SAME
David H. Chadwick and Theodor Rentz, Anniston, Ala., assignors to Monsanto Chemical Company, a corporation of Delaware
No Drawing. Application October 19, 1953
Serial No. 387,031
7 Claims. (Cl. 260—461)

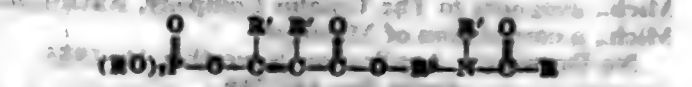
1. A process of recovering a triester of phosphorous acid from a reaction mixture containing said (*a*) triester (*b*) a tertiary amine hydrohalide salt selected from the group consisting of a hydrochloride and a hydrobromide salt, and (*c*) an inert solvent which comprises adding an aqueous solution of an alkali hydroxide in an amount sufficient to substantially decompose said hydrohalide salt of said tertiary amine with the formation of the corresponding halide of the alkali, separating the resulting reaction mixture into (1) an aqueous layer containing said halide and an (2) organic layer containing said ester, said tertiary amine, and said solvent, and thereafter recovering said ester from said organic layer.

2,865,943
PROCESS OF MAKING O,O-DIMETHYL-O-(β,β-DICHLOROVINYL)-PHOSPHATE
Walter Lorenz, Wuppertal-Elberfeld, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Application September 15, 1954
Serial No. 456,332
Claims priority, application Germany May 25, 1954
8 Claims. (Cl. 260—461)

1. Process for the production of the O,O-dimethyl-O-(β,β-dichlorovinyl)-phosphate which comprises contacting (β,β,β-trichloro-α-hydroxyethyl) - dimethyl - phosphonate with an alkaline reacting agent.

2,865,944
COMPLEX AMIDO-SUBSTITUTED ESTERS OF BETA-PHOSPHATO-ALPHA, BETA-OLEFINICALLY UNSATURATED MONOCARBOXYLIC ACIDS
Alan R. Stiles and Richard R. Whetstone, Denver, Colo., assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
No Drawing. Application December 28, 1955
Serial No. 555,757
4 Claims. (Cl. 260—461)

1. A compound of the formula



wherein R represents an aliphatic hydrocarbon radical of 1 to 8 carbon atoms, R′ represents a member of the group consisting of the hydrogen atom and alkyl radicals of 1 to 8 carbon atoms and R^2 represents a lower alkylene radical.

bromine, amino, alkoxy containing 1 to 4 carbon atoms, phenyl and amido radicals having the formula

metric amounts, the products having from 1 to 4, inclusive, chlorine atoms per molecule.

17α,21-dihydroxy-4-pregnene-3,20-dione selected from clusive.

2,866,945

PROCESS FOR THE MANUFACTURE OF TETRAETHYL PYROPHOSPHATE

James Kamlet, New York, N. Y., assignor to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application June 21, 1956
Serial No. 592,728
11 Claims. (Cl. 260—461)

1. A process for the manufacture of tetraethyl pyrophosphate which comprises reacting ethyl chloride with a member from the group consisting of tetrasodium pyrophosphate and tetrapotassium pyrophosphate at a temperature of about 40° C. to about 165° C. in the presence of a catalytic amount of an iodide.

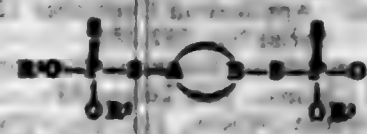
2,865,946

PESTICIDAL PHOSPHORUS ESTERS

Joe R. Willard and John F. Hennahan, Middleport, N. Y., assignors to Food Machinery and Chemical Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application July 16, 1956
Serial No. 597,890
11 Claims. (Cl. 260—461)

1. As a new composition of matter a compound of the formula



wherein R', R², R³ and R⁴ are lower alkyl radicals, and A and B form a ring structure selected from the group of five and six membered aliphatic hydrocarbon rings having at most one double bond.

2,865,947

PREPARATION OF NEUTRAL PYROPHOSPHATE AND PHOSPHATE ESTERS

Kent C. Brannock and Richard L. McConnell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application August 30, 1956
Serial No. 606,996
8 Claims. (Cl. 260—461)

3. The process which comprises reacting within a temperature range of 25° to 200° C. an excess of dialkyl sulfite wherein the alkyl radicals contain from 2–8 carbon atoms with phosphorus pentoxide to produce a tetraalkyl pyrophosphate, removing excess dialkyl sulfite, thermally decomposing said tetraalkyl pyrophosphate to produce the corresponding trialkyl phosphate and alkyl metaphosphate, recovering said trialkyl phosphate, reacting said alkyl metaphosphate with said excess dialkyl sulfite at a temperature within the range of 25° to 200° C. to produce additional trialkyl phosphate.

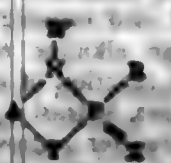
2,865,948

NEW PHOSPHORYLATED HETEROCYCLIC COMPOUNDS AND PROCESSES FOR PREPARING SAME

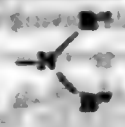
Raffaello Fusco, Milan, Italy, assignor to Montecatini Società Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Application December 18, 1956
Serial No. 628,971
Claims priority, application Italy March 21, 1953
18 Claims. (Cl. 260—461)

1. Phosphorylated heterocyclic compounds of the general structure

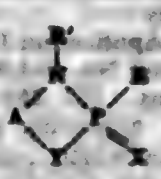


wherein R represents



R'' being a lower alkyl, R' represents a member of the group consisting of hydrogen and lower alkyls, A represents a member of the group consisting of bivalent ethylene-, benzo- and cyclo-hexane radicals, and X and Y represent each a member of the class consisting of oxygen and sulphur.

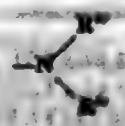
9. The process for preparing phosphorylated heterocyclic compositions of the general structure



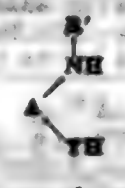
which comprises reacting, for a period and at a temperature sufficient to complete the reaction, about equimolar amounts of a phosphorus compound having the general structure

R—PX.2hal

wherein R represents



R'' being a lower alkyl, X represents a member of the class consisting of oxygen and sulphur and hal stands for halogen, with a compound having the general structure



wherein R' represents a member of the group consisting of hydrogen and lower alkyls, A represents a member of the group consisting of bivalent ethylene-, benzo- and cyclohexane-radicals and Y represents a member of the class consisting of oxygen and sulphur, and separating liberated hydracid from the resulting reaction product.

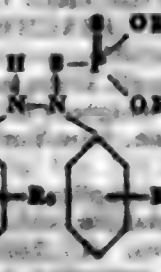
2,865,949

O,O-DIALKYL S-(1,2-DISUBSTITUTED HYDRAZINO) PHOSPHOROTHIOLOTHIONATES

Richard L. McConnell and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application February 6, 1957
Serial No. 638,450
12 Claims. (Cl. 260—461)

1. The organophosphorus compounds having the structural formula:



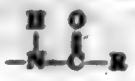
wherein R_5 and R_6 are lower alkyl radicals containing from 1 to 4 carbon atoms and R_7 and R_8 are selected from the group consisting of hydrogen, nitro, hydroxy, alkyl radicals having 1 to 4 carbon atoms, chlorine,

2,865,957

PREPARATION OF PETROLEUM SULFONIC ACIDS AND SULFONATE DERIVATIVES THEREOF

the solution with a cation exchange resin which is activated in the acidic form and with an anion exchange

bromine, amino, alkoxy containing 1 to 4 carbon atoms, phenyl and amido radicals having the formula



wherein R is an alkyl radical containing 1 to 4 carbon atoms.

2,865,950

METHOD OF PREPARING O,O-DIALKYL ALKYLTHIOALKYL PHOSPHOROTHIOATES

Richard L. McConnell, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey

No Drawing. Application October 8, 1956
Serial No. 614,360
7 Claims. (Cl. 260—461)

1. The process for producing O,O-dialkyl alkylthioalkyl phosphorothioates which comprises reacting a trilower alkyl posphite with a cyclic sulfide selected from the group consisting of cyclic disulfides containing an alkylene subetituent of 2 to 3 carbon atoms and cyclic tetrasulfides with from 2 to 3 lower alkylene subetituents each having from 1 to 2 carbon atoms at a temperature within the range of 0–175° C. and for a period of time within the range of 2 to 36 hours.

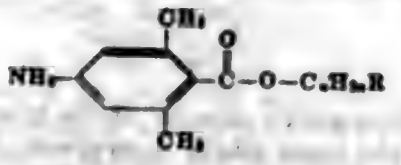
2,865,951

TERTIARY AMINOALCOHOL ESTERS OF 4-AMINO-2,6-DIMETHYLBENZOIC ACID

Robert D. Birkenmeyer and Richard V. Heinzelman, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 24, 1954
Serial No. 432,054
13 Claims. (Cl. 260—472)

1. Amines represented by the following formula:



wherein *n* is an integer from one to six inclusive, R is a secondary amino radical and acid addition salts thereof.

2,865,952

ETHYL-3-CHLORO-2-HYDROXY-3-BUTENOATE

Harry A. Stansbury, Jr., South Charleston, and Howard R. Guest, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application November 12, 1954
Serial No. 468,578
1 Claim. (Cl. 260—484)

As a new composition of matter, ethyl 3-chloro-2-hydroxy-3-butenoate.

2,865,953

PROCESS FOR PRODUCTION OF POLYHALOGENATED ALIPHATIC DIACIDS AND PRODUCTS OBTAINED THEREBY

John F. Noble, Cincinnati, Ohio, and Martin Faye, Cambria Heights, N. Y., assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application June 9, 1954
Serial No. 435,638
3 Claims. (Cl. 260—485)

1. The process of preparing a mixture of isomeric C_{10} polychlorodicarboxylic acids, which comprises chlorinating a mixture of 3,7-decadiene-1,10-dioic acid, 1,7-decadiene-3,6-dioic acid, and 1,6-decadiene-3,10-dioic acid with elemental chlorine, in substantially stoichiometric amounts, the products having from 1 to 4, inclusive, chlorine atoms per molecule.

2,865,954

MIXED ESTERS OF PENTAERYTHRITOL

Henry C. Dehm, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 8, 1957
Serial No. 676,367
4 Claims. (Cl. 260—486)

1. A mixed ester of pentaerythritol in which an average of from 0.5 to 2.5 hydroxyl groups are esterified with an acid selected from the group consisting of acrylic acid and methacrylic acid, and an average of from 1.5 to 3.5 hydroxyl groups are esterified with an alkanoic acid having from 4 to 8 carbon atoms.

2,865,955

METHOD FOR SEPARATING WATER-SOLUBLE ALCOHOLS AND ESTERS

Alfons Aschert, Franz Buttner, and Eduard Enk, Burghausen, Germany, assignors to Wacker-Chemie G. m. b. H., Munich, Germany, a German firm

No Drawing. Application December 12, 1955
Serial No. 552,286
Claims priority, application Germany December 21, 1954
5 Claims. (Cl. 260—499)

1. In an extraction process for the separation of a mixture of methanol and methyl acetate, the steps which comprise adding at least 50% by volume of water to a mixture of methanol and methyl acetate, extracting the aqueous mixture thereby formed with a low-boiling, water-insoluble halogenated hydrocarbon whose boiling point is below that of the methyl acetate and which also forms a low-boiling ternary azeotrope with water and methanol and selected from the group consisting of methylene chloride and vinylidene chloride, separating the resulting aqueous and non-aqueous layers, subjecting the non-aqueous layer to distillation whereby methanol-free methyl acetate remains as the still residue, and separately distilling the aqueous layer whereby substantially anhydrous methanol is obtained as the distillate, the volumetric ratio of total water:halogenated hydrocarbon:methanol-methyl acetate employed in carrying out said separation being 0.75:1:1.

2,865,956

PREPARATION OF BASIC POLYVALENT METAL SALTS OF ORGANIC ACIDS

Glyn Ellis, Rhuddlan, Rhyl, James Hartley, Whitby, Wirral, and John Campbell Mossley, Liverpool, England, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application May 23, 1955
Serial No. 510,582
Claims priority, application Great Britain September 27, 1954
11 Claims. (Cl. 260—504)

1. A process for preparing an oil soluble highly basic metal salt of an organic acid, said process comprising reacting, as the only chemically reactive organic material, an oil soluble organic acid compound selected from the class consisting of (1) cyclic sulfur acids containing at least 18 carbon atoms per molecule, (2) cyclic carboxylic acids containing at least 17 carbon atoms per molecule and (3) salts of those acids with alkali metals and with alkaline earth metals, in the presence of at least 5% of the weight of said organic acid compound of a lower alkalol, with an alkaline earth metal carbonate formed in situ, by the reaction of carbon dioxide and an alkaline earth metal base, at least a part of said base being in the free state, thereafter removing said alkanol and any water present in the resulting mixture.

2,865,957
PREPARATION OF PETROLEUM SULFONIC ACIDS AND SULFONATE DERIVATIVES THEREOF
Richard S. Logan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application November 25, 1955
Serial No. 549,197
9 Claims. (Cl. 260—504)

1. A method for recovering oil-soluble petroleum sulfonic acids from a sulfonation mixture prepared by sulfonating a deasphalted and solvent-refined petroleum bright stock having a viscosity between about 80 and 700 SUS at 210° F., which method comprises treating the sulfonation mixture with concentrated sulfuric acid, permitting the resulting admixture to stratify thereby forming two immiscible phases including a top phase comprising petroleum sulfonic acids in an oil solution and a bottom phase comprising spent sulfuric acid, and isolating said top phase as the product of the process.

2,865,958
SULFONATION PROCESS
Donald Graham Davies and Peter Peperzak, Chester, England, assignors to Shell Development Company, New York, N. Y., a corporation of Delaware
Application June 28, 1957, Serial No. 666,887
Claims priority, application Great Britain July 17, 1956
4 Claims. (Cl. 260—504)

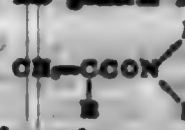
1. In a process for sulfonating a sulfonatable organic material by contacting the material in the form of very small droplets with a gas containing sulfur trioxide, in the form of a dispersion of the droplets in the gas, separating the gaseous and liquid portions of the resulting mixture and recovering sulfonic acid product from the separated liquid, the improvement which consists of maintaining the said dispersion of the organic material in the sulfur trioxide-containing gas for from about 0.01 second to about 5.0 seconds and thereafter contacting said dispersion with a mass of the said organic material containing at least 1% by weight of the sulfonic acid reaction product.

2,865,959
CHLORINATION OF AROMATIC CARBOXYLIC ACID ESTERS
William G. Toland, San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Application March 30, 1955
Serial No. 498,116
4 Claims. (Cl. 260—544)

2. The process for producing aromatic carboxylic acid chlorides from a methyl ester of an aromatic carboxylic acid which comprises heating said ester in a reaction zone for a period of about ½ to 3 hours at a temperature within the range of 300° to 700° F. while passing gaseous chlorine therethrough, and collecting an acid chloride consisting essentially of the acid chloride of said aromatic carboxylic acid.

2,865,960
PROCESS FOR THE REMOVAL OF IMPURITIES FROM WATER-SOLUBLE ACRYLAMIDES
Newton H. Shearer, Jr. and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New Jersey
No Drawing. Application February 28, 1956
Serial No. 568,193
4 Claims. (Cl. 260—561)

1. A process of purifying an aqueous solution of a composition having the general formula:



where R is selected from the group of methyl and hydrogen and R′ and R″ are selected from the group consisting of hydrogen and lower alkyl, comprising contacting the solution with a cation exchange resin which is activated in the acidic form and with an anion exchange resin which is activated in the basic form.

2,865,961
N,N′ DIGUANIDO DIMIDES OF QUINONE-DIOLEFIN ADDUCTS
Siegfried Petersen, Leverkusen-Schlebusch, and Gerhard Domagk, Wuppertal-Elberfeld, Germany, assignors to Schenley Industries, Inc., New York, N. Y., a corporation of Delaware
No Drawing. Application February 23, 1956
Serial No. 568,166
Claims priority, application Germany March 4, 1955
15 Claims. (Cl. 260—566)

10. A member selected from the group consisting of the N,N′-diguanido diimides of the Diels-Alder adduct of an aryl quinone selected from the group consisting of p-benzoquinone and p-naphthoquinone, and a conjugated diolefin selected from the group consisting of butadiene, isoprene, 2,3-dimethylbutadiene, 2-chlorobutadiene, cyclopentadiene and cyclohexadiene, and salts of said adduct.

2,865,962
PREPARATION OF 3-METHYL-1,2-CYCLOPENTANEDIONE
Lewis I. Krimen, Skokie, and Oscar L. Norman, Northbrook, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application November 20, 1957
Serial No. 697,543
10 Claims. (Cl. 260—586)

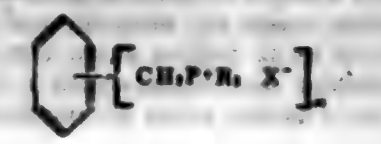
1. A method for synthesizing 3-methyl-1,2-cyclopentanedione which comprises commingling an alkyl acrylate with an alkali-metal salt of an alkyl alkoxalylpropionate under substantially anhydrous conditions, allowing the resulting reaction product to cyclize, and hydrolyzing and decarboxylating the resulting cyclic compound, whereby 3-methyl-1,2-cyclopentanedione is obtained.

2,865,963
PROCESS FOR PREPARATION OF KETONES
Paul K. Gerstner and Alfred Stoltz, Jr., Tulsa, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware
No Drawing. Application April 9, 1956
Serial No. 576,785
4 Claims. (Cl. 260—596)

1. In a process for the preparation of ketones, the improvement which comprises subjecting a liquid reaction mixture comprising a primary alcohol and a secondary alcohol, said primary alcohol having at least two carbon atoms and said secondary alcohol having at least three carbon atoms, to a pressure ranging from about 75 to about 500 p. s. i. g. and a temperature corresponding to about the reflux temperature of said reaction mixture at said pressure, in the presence of an alkaline condensation catalyst and a mild dehydrogenation catalyst, and continuously removing the water formed as a result of the involved reaction.

2,865,964
POLY(TRIPHENYLPHOSPHONIUM) COMPOUNDS
Clinton A. Dornfeld, Glenview, and Lawrence E. Thielen, Chicago, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois
No Drawing. Application September 23, 1955
Serial No. 536,279
7 Claims. (Cl. 260—606.5)

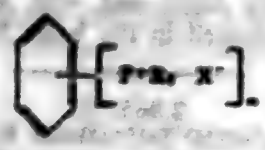
1. A compound selected from the group consisting of compounds of the formula



zone with a liquid catalyst under alkylating conditions, said catalyst being capable of generating volatile acidic

erated into a liquid hydrocarbon phase and a liquid catalyst phase, separated liquid hydrocarbon phase is passed

and compounds of the formula



R in each formula being a phenyl radical, X being halogen of atomic number greater than 9 and less than 53, and *m* being a positive integer greater than 2 and less than 5.

2,865,965
CHEMICAL PROCESS
Paul D. May, Galveston, John A. Ridgway, Jr., Texas City, and Francis T. Wadsworth, Dickinson, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
No Drawing. Application February 26, 1957
Serial No. 642,338
10 Claims. (Cl. 260—609)

1. In the free radical catalyzed reaction of hydrogen sulfide with a hydrocarbon having an olefinic linkage, the improvement which comprises effecting said reaction in the presence of water in an amount sufficient to promote the reaction.

2,865,966
PROCESS FOR ALKYLATING PHENOL
Boushra Y. Abadir, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application July 16, 1956
Serial No. 597,840
8 Claims. (Cl. 260—624)

1. The process of making a mono-alkyl phenol wherein the alkyl radical is branched and contains 9 to 24 carbon atoms, which comprises reacting about 1.0 to about 1.25 mols of phenol with about 1.0 mol of an acyclic propylene polymer containing 9 to 24 carbon atoms in the presence of a catalytic amount of the monohydrate of toluene sulfonic acid.

2,865,967
TERTIARY VINYL ETHYNYL CARBINOLS AND PROCESS OF PREPARATION
Abraham Baviry, Brooklyn, William M. McLamore, Flushing, and Morton Harfenist, Yonkers, N. Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware
No Drawing. Application November 14, 1953
Serial No. 392,468
11 Claims. (Cl. 260—632)

1. A process for preparing vinyl ethinyl tertiary carbinols which comprises condensing under anhydrous conditions an aliphatic β-haloalkyl ketone with at least 2 equivalents of a metal acetylide, the metal of said acetylids being selected from the group consisting of alkali metals and alkaline earth metals.

2,865,968
PRODUCTION OF FATTY ALCOHOLS
Virgil L. Hunsley and Stuart Schott, Cincinnati, Ohio, and Raymond Wynkoop, Metuchen, N. J., assignors to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia
Application May 6, 1955, Serial No. 506,463
9 Claims. (Cl. 260—635)

1. A process for preparation of fatty alcohols by sodium reduction of a mixture of esters of fatty acids having from 6 to 22 carbon atoms per molecule and free fatty acids having from 6 to 22 carbon atoms per molecule which comprises treating said mixture with a reducing alcohol having at least 4 carbon atoms per molecule in an amount such that all acids and esters are completely converted to esters of the reducing alcohol and such that an excess of reducing alcohol in the ratio of one mole of ester to two moles of reducing alcohol remains therein, directly treating said mixture of esters and reducing alcohol with finely dispersed sodium in the ratio of one mole of ester to four moles of sodium in the presence of a minor amount of dispersing agent, hydrolyzing the resulting reaction mixture and isolating fatty alcohols from said hydrolyzed reaction mixture and washing said fatty alcohols at least once with a .01 N to 1 N aqueous caustic soda solution.

2,865,969
CHEMICAL PROCESS FOR PREPARATION OF DIALKALI METAL DIMERS OF DIOLEFINS
Stuart Schott, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N. Y., a corporation of Virginia
No Drawing. Application May 9, 1956
Serial No. 583,613
10 Claims. (Cl. 260—665)

1. A process for preparation of dialkali metal derivatives of dimers of conjugated aliphatic diolefins which comprises reacting a conjugated aliphatic diolefin with a finely divided alkali metal at temperatures below 0° C. in a reaction medium comprising an ether and an inert saturated aliphatic hydrocarbon lower boiling than said ether to prepare a mixture of dialkali metal derivatives of dimers of said diolefin, said reaction being carried out with refluxing of reaction medium containing said inert hydrocarbon to remove heat of reaction from the mixture in which the alkali metal is undergoing reaction with the diolefin, said ether being a member from the group consisting of aliphatic monoethers having a methoxy group and an oxygen to carbon ratio of not less than 1:4 and polyethers derived from an aliphatic polyhydric alcohol having all the hydroxyl hydrogen atoms replaced by alkyl groups and mixtures thereof.

2,865,970
SEPARATION OF HYDROCARBONS
Charles L. Thomas, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Application August 6, 1957
Serial No. 676,583
8 Claims. (Cl. 260—676)

1. The method of separating unsaturated hydrocarbons selected from the class consisting of olefins and diolefins from a mixture thereof with less unsaturated hydrocarbons which comprises: contacting said mixture with a solid material comprising a complex of an anion exchange resin having amine groups and a monovalent ion of a metal selected from the class consisting of copper and silver, whereby the more unsaturated hydrocarbons contained in said mixture react with said solid material to form a complex reaction product therewith, and separating unreacted hydrocarbons having a greater percentage of the less unsaturated hydrocarbons than the original charge mixture from said complex reaction product.

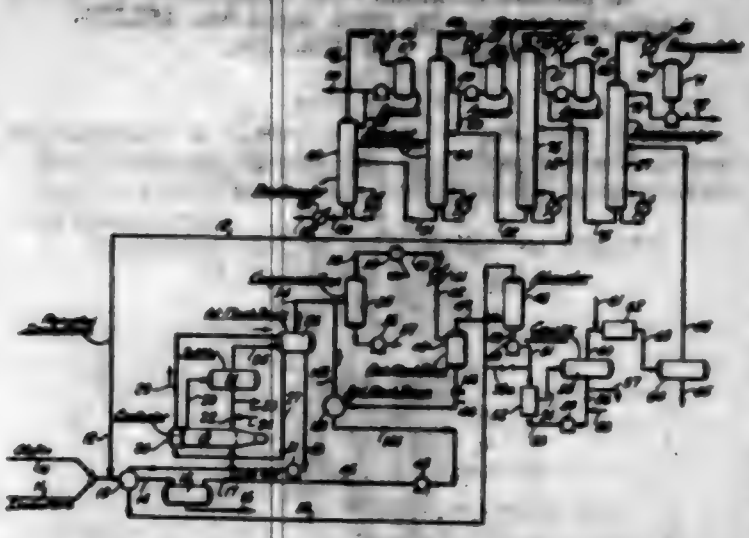
2,865,971
ALKYLATION WITH EFFLUENT REFRIGERATION AND FLASHED VAPOR ABSORPTION
David E. Beaven, Los Angeles, Calif., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
Application December 23, 1955, Serial No. 555,180
5 Claims. (Cl. 260—683.62)

1. In a process for catalytic isobutane-olefin alkylation employing effluent refrigeration, wherein isobutane in molar excess and olefinic feed stock containing some propane are contacted in liquid phase in an alkylation

2,865,976
METHOD FOR THE INSULATION AND ASSEMBLY

2,865,978
ELASTIC ROPES AND CABLES

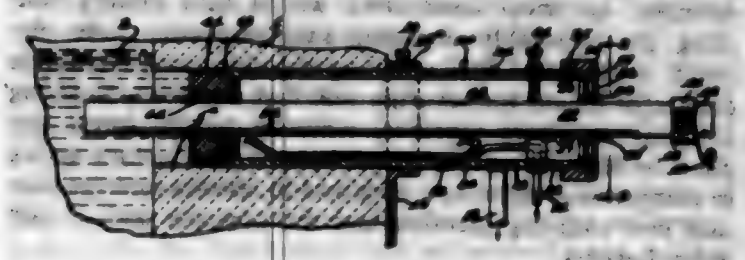
zone with a liquid catalyst under alkylating conditions, said catalyst being capable of generating volatile acidic



degradation products in the reaction mixture under reaction conditions, the resulting reaction mixture is separated into a liquid hydrocarbon phase and a liquid catalyst phase, separated liquid hydrocarbon phase is passed to a flash zone of lower pressure to evaporate isobutane, volatile acidic degradation products, and propane therefrom and concomitantly chill the remaining hydrocarbon liquid comprising the crude alkylation product, at least a portion of the chilled hydrocarbon liquid is employed as a heat exchange medium to assist in controlling temperature in said alkylation zone, and the remainder of said chilled hydrocarbon liquid comprising the crude alkylation products is withdrawn from said flash zone of lower pressure for subsequent neutralization and fractional distillation, the improvement which comprises: removing a stream of evaporated isobutane, propane, and volatile acidic degradation products from said flash zone of lower pressure; compressing said stream and condensing liquid isobutane therefrom; separating the resulting sour vapor phase from the condensed liquid isobutane-containing phase; absorbing the resulting sour vapor phase at elevated pressure between about 30 and 100 p. s. i. g. in said remainder of hydrocarbon liquid comprising crude alkylation products; and neutralizing both said remainder of hydrocarbon liquid and the vapors absorbed therein.

ELECTRICAL

2,865,972
ELECTRODE MOUNTING APPARATUS FOR FURNACES
Herbert M. Augsburger, Sylvania, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application October 9, 1956, Serial No. 614,288
8 Claims. (Cl. 13—17)



1. An apparatus for mounting a rod-like electrode in a furnace wall aperture, comprising a tubular housing insertable in said aperture, means on the inner end of said housing for slidably supporting said electrode in concentric relation therewith, an annular sight glass having a central aperture to receive said electrode, gasket means for mounting said annular sight glass at the outer end of said housing in fluid-sealed relationship with said housing and electrode, thereby defining a viewable chamber, and means for supplying coolant to said chamber.

2,865,973
STORAGE BATTERY PLATES
George S. Hartman, Roslyn, and Abraham L. Levine, Levittown, Pa., assignors to The Electric Storage Battery Company, a corporation of New Jersey
No Drawing. Application June 24, 1953
Serial No. 363,911
2 Claims. (Cl. 136—36)

1. A battery electrode comprising, in combination a porous graphite matrix, a gas-pervious coating of nickel over the interstitial surfaces of said matrix, the thickness of said coating being on the order of 0.001 inch or less, said coating presenting a surface to which nickel hydrate will preferentially adhere relative to the material of said matrix, nickel hydrate distributed throughout the pores of said matrix, a gas-impervious layer of metal on a restricted area of said matrix adjacent an edge of said matrix, and an electrical conductor bonded to said gas-impervious layer.

2,865,974
NEGATIVE PLATES AND THE PRODUCTION THEREOF
Robert F. Schenarle, Philadelphia, and John B. Metzinger, Oreland, Pa., assignors to The Electric Storage Battery Company, a corporation of New Jersey
No Drawing. Application April 28, 1955
Serial No. 504,674
4 Claims. (Cl. 136—36)

1. A method of producing negative plates for silver-zinc batteries which comprises the steps of mixing about 95% to about 99.5% zinc oxide with about 0.5% to about 5% of a powdered metallic hydroxide selected from the group consisting of lithium hydroxide, potassium hydroxide, and sodium hydroxide, adding moisture in an amount not substantially exceeding the weight of the selected hydroxide, and pressing the resultant dry mixture onto a conducting member.

2,865,975
BATTERY ELECTRODES AND METHODS OF MAKING THE SAME
George S. Hartman, Roslyn, and Abraham L. Levine, Levittown, Pa., assignors to The Electric Storage Battery Company, a corporation of New Jersey
No Drawing. Application June 24, 1953
Serial No. 363,912
5 Claims. (Cl. 136—36)

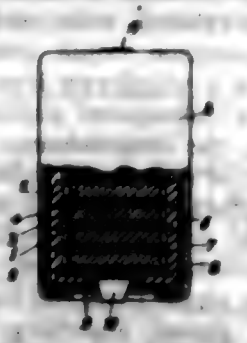
1. For a battery electrode, an electrically conductive porous graphite matrix characterized by interstitial surfaces treated with nascent oxygen over a period adequate to free said surfaces of all readily oxidizable material and electrolytically active material in the pores thereof.

2,865,976

METHOD FOR THE INSULATION AND ASSEMELY OF FLAT DRY CELLS

Jean Jammet, Poitiers, France, assignor to Societe de la Pile Leclanché, Chasseneuil du Poitou (Vienne), France

Application December 7, 1953, Serial No. 396,540
Claims priority, application France December 8, 1952
8 Claims. (Cl. 136—111)



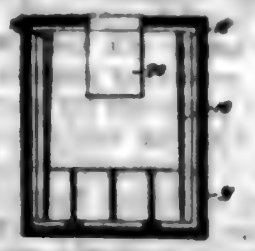
1. A flat dry cell battery in which the various elements of the battery are piled on top of each other and are gripped along the interior of a relatively thin-walled common casing made of insulating material which is not attacked by the constituents of the cells, comprising a common casing having an imperforate wall with grooves molded therein each serving for the accommodation of the periphery of an anode, at least one anode with the periphery thereof accommodated in a corresponding one of said grooves, a layer of conducting varnish covering the entire surface of the depolarizing face of said anode, said casing being made of elastic material of a thickness to retain permeability thereof to gases, and the height of each groove in the normal unstretched condition of the casing being less than the thickness of each anode with its layer of conducting varnish and the perimeter of the bottom of each groove in the normal unstretched condition of said casing being smaller than that of said anode whereby said casing is placed under tension upon installation of said anode into said one groove.

2,865,977

NEGATIVE ELECTRODE FOR PRIMARY CELLS

Jules Moyne, Poitiers, France, assignor to Societe de la Pile Leclanché, Chasseneuil du Poitou (Vienne), France, a corporation of France

Application May 21, 1953, Serial No. 356,484
9 Claims. (Cl. 136—128)



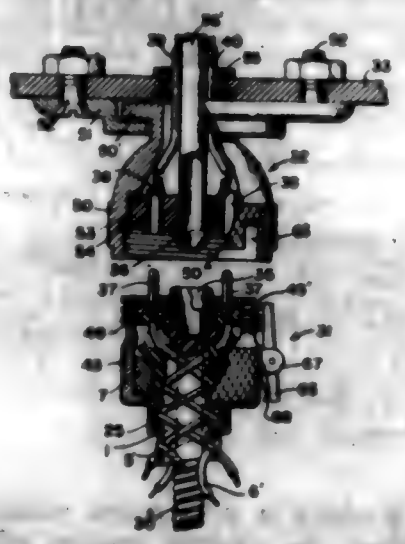
1. A unitary negative electrode made of one piece for use with a primary cell having a positive electrode and an alkaline electrolyte, said negative and positive electrode being of such shape as to provide paths for the ionic exchange therebetween of varied lengths, said negative electrode being intended to prevent polarization during discharge thereof and comprising a substantially unitary tubular member having a main portion operative at relatively high current densities and another auxiliary portion near one end thereof operative at relatively low current densities to counteract passivation of said negative electrode and to minimize the ohmic resistance between said main and auxiliary portions, and a plurality of cross pieces forming partitions extending essentially parallel to the axial direction of said tubular member and being rigidly connected with said another portion of said tubular member along the inside thereof to thereby reinforce said tubular member at the height of said auxiliary portion.

2,865,978

ELASTIC ROPES AND CABLES

Henry J. Modrey, Stamford, Conn., assignor of two-thirds to Bernard E. Smith, New York, N. Y.

Application August 24, 1954, Serial No. 452,271
4 Claims. (Cl. 174—69)



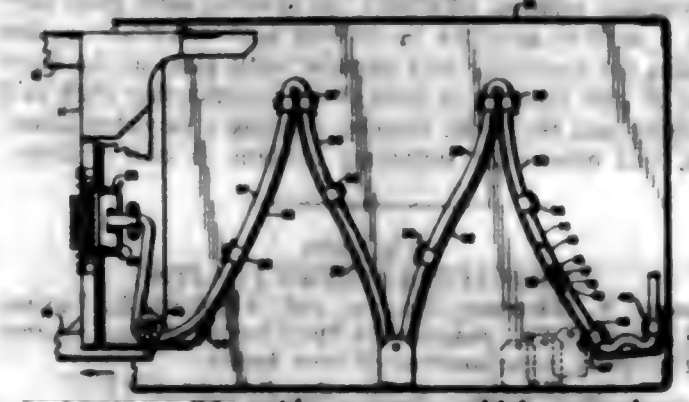
1. A combination fluid and electrical connector assembly comprising, in combination, a flexible and resilient core, a flexible conduit for receiving a pressurized fluid flow extending through the center of said core, a plurality of woven electrical conductors defining a mesh harness surrounding and in snug fitting contact with the outside surface of said core, a first coupling member concentric with said core, pole elements associated with the ends of said conduit and said electrical conductors mounted within the said first coupling member, a rigid ring integrally secured to said core and harness, said ring being secured within said first coupling member for preventing separation of said core and harness from said first coupling member, a mating coupling member, a connecting pressure conduit carried by said mating coupling member, electrical conductors within said mating coupling for releasably engaging said respective pole elements within said first coupling member, and releasable connector means for securing said first and second mating coupling members together, whereby tensile forces applied to said core are resisted by said conductors acting in compression upon said core and in tension intermediate said first coupling member and the opposite end of said mesh harness.

2,865,979

EXTENSIBLE CABLE STRUCTURE

Harry G. Klemm, Evanston, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

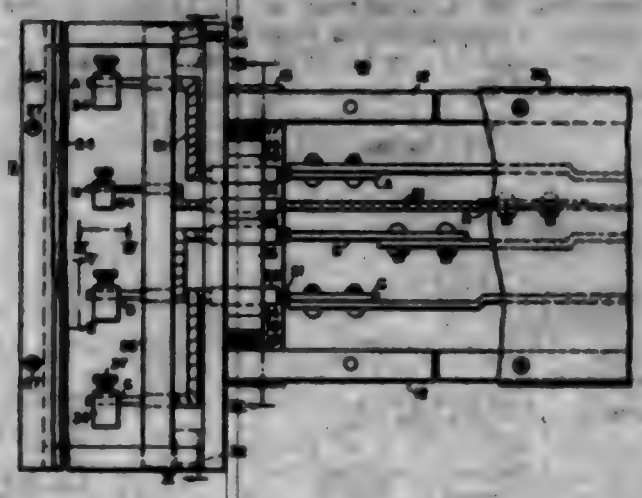
Application October 14, 1955, Serial No. 540,494
6 Claims. (Cl. 174—69)



1. An extensible cable structure which comprises an elongated electrical conductor arranged in a folded, zigzag pattern and having courses normally in substantially-parallel planes with each course having at least one end terminating in a semicircular end portion, clamps for holding the bent portions against flexure, and a flexible

member associated with each course, the ends of the flexible members being fixed to the clamps with the portions of the members between the ends flexing when the courses are moved out of their parallel planes.

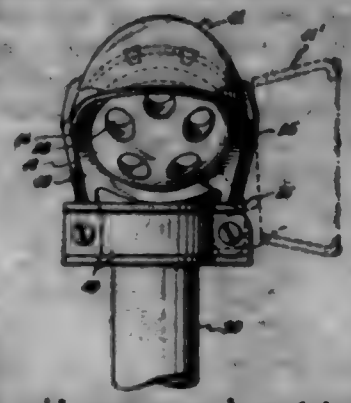
2,865,998
BUS DUCT
Montgomery T. Popovich, Beaver Falls, and Arthur C. Roehlsberger, Beaver, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 25, 1954, Serial No. 432,174
3 Claims. (Cl. 174—75)



1. In a cable tap box for a run of bus duct comprising a duct housing having duct bus bars therein, in combination, a metal enclosure for attaching to the duct housing, a plurality of generally flat bus bars having an end of each bar disposed in said enclosure with the other ends of the bus bars extending outwardly from the enclosure for connecting to the duct bus bars, a plurality of insulating blocks engaging the sides of the flat bus bars outside the enclosure, tie bolts extending through the blocks for clamping them against the flat bus bars to prevent longitudinal movement of the bars, at least some of the flat bus bars being bent sidewise to space the ends of the bars inside the enclosure farther apart than the ends outside the enclosure, oppositely disposed notched insulating members engaging the edges of the flat bus bars inside the enclosure to retain the ends of the bars in widely spaced relation inside the enclosure, ends of the flat bus bars in the enclosure having notches therein extending longitudinally of the bars to provide a plurality of fingers thereon, a solderless connector on each finger, each connector having a portion for engaging a cable to press it directly against the bus bar, and the distance maintained between the ends of the bars in the enclosure by said notched insulating members being sufficient to permit said connectors to be uninsulated.

2,865,981
ELECTRICAL FITTING ENTRANCE CAP
Joseph Budulick, New York, N. Y., assignor to Electrical Fittings Corporation, Woodside, N. Y., a corporation of New York
Application May 11, 1955, Serial No. 507,655
7 Claims. (Cl. 174—81)

1. A service entrance cap adapted to support an insulated window member and arranged to be mounted to the upper end of a tubular conduit for electrical conducting wires comprising, a rigid and inverted bowl-like cover having an inner surface, a clamping body having front and rear sides, a pair of forwardly extending fingers at the front side of said body providing a bifurcated seat for nesting said window member, means on the inner surface of said cover and means on said clamping body cooperating to prevent said window member from falling away from its seat when said body and cover are in closed assembled relationship, and means pivotally connecting said cover to said body, said last-mentioned means including a pivot lying along an axis extending substantially from the front side to the rear side of said



body, whereby said cover may be rotated to assume an opened position removed from said body and a closed position superimposing said body and seated window member while the entrance cap is mounted to the tubular conduit.

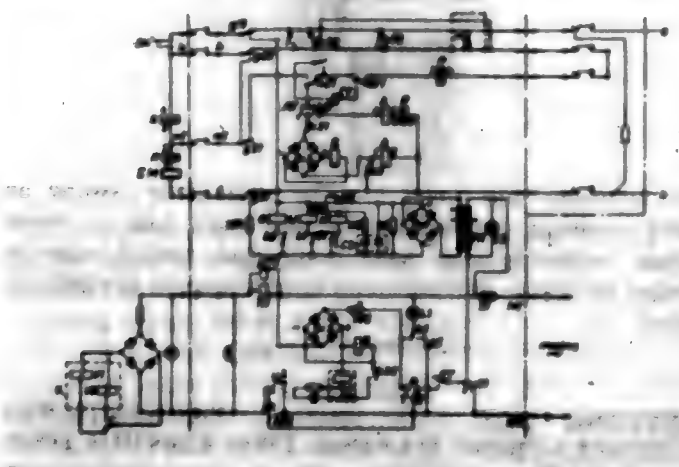
2,865,983
SHIELDING FOR ELECTRICAL TRANSMISSION INSTALLATIONS HAVING TWO CONDUCTORS PER PHASE
Robert L. McCoy, Ellicott City, and Joseph Kamiński, Jr., Baltimore, Md., assignors to General Electric Company, a corporation of New York
Application June 6, 1957, Serial No. 664,864
4 Claims. (Cl. 174—141)

1. In a high voltage electrical transmission line installation which comprises a pair of spaced and generally parallel electrical conductors which are supported by an electrical insulator string, a yoke member which is pivotally connected to an end of said insulator string, a pair of conductor clamps which are clamped to said conductors, a pair of connectors independently pivotally connecting said clamps to said yoke member, and a pair of shields a different one of said shields being removably connected to each of said connectors, each of said shields being generally U-shaped and having rounded bridge portions and curved open ends and having their bridge portions disposed along the outer sides of said clamps and their curved ends disposed adjacent said insulator string end.

2,865,983
AUTOMATIC ATTACHMENT SWITCH-OVER DEVICE, IN PARTICULAR FOR TELEPRINTERS
Johann Augustin, Pforzheim, Germany, assignor to International Standard Electric Corporation, New York, N. Y., a corporation of Delaware
Application March 19, 1957, Serial No. 647,129
Claims priority, application Germany March 23 1956
4 Claims. (Cl. 178—4.1)

1. A control arrangement for attachments to printing telegraph apparatus coupled to a line circuit comprising

a first switch responsive to the polarity of said line circuit, a second switch for controlling operation of a motor driving said attachment, a control device for actuating said second switch under control of said first switch; said control device comprising: an electromagnet having a pair of windings and a common armature in magnetic relationship with said windings, said armature adapted to be moved in a first direction upon energization of a first of said windings and in the opposite direction upon energization of the other of said windings, said windings adapted to be selectively energized under control of said



first switch, and actuating element adapted to cooperate with said second switch, means to normally urge said actuating element in a first direction, a latch member intermediate said armature and said actuating element and engaging said actuating element for normally maintaining said actuating element in fixed position and said second switch in a first position, said latch member adapted to move under control of said armature out of engagement with said actuating element whereby said second switch is moved to a second position and common means to reset said second switch, said latch member and said actuating element.

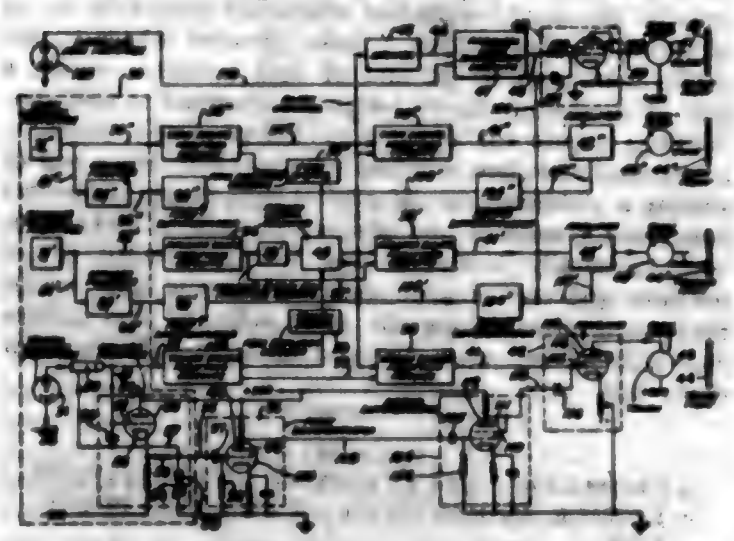
2,865,984

EDGE CORRECTING SYSTEM FOR VISUAL IMAGE TRANSFERENCE APPARATUS

William West Mee, Stratford, Conn., assignor to Time, Incorporated, New York, N. Y., a corporation of New York

Application September 3, 1953, Serial No. 378,294

17 Claims. (Cl. 178—5.2)



1. A visual image transference system comprising, electro-optical means for scanning elemental areas of a visual subject having tone density edges to provide image signals of said subject including signals indicative of transverse edge components on said subject, electronic channel means for conveying said image signals through at least one channel to a stage in said channel, double differentiating means adapted responsive to received image signals to produce second differential signals thereof, means in said channel to delay said image signals as received at said stage relative to said second differential signals and means for combining in appropriate phase relation said second differential signals with said image signals contemporaneously appearing in said channel stage to form image signals of restored transverse edge sharpness.

2,865,985

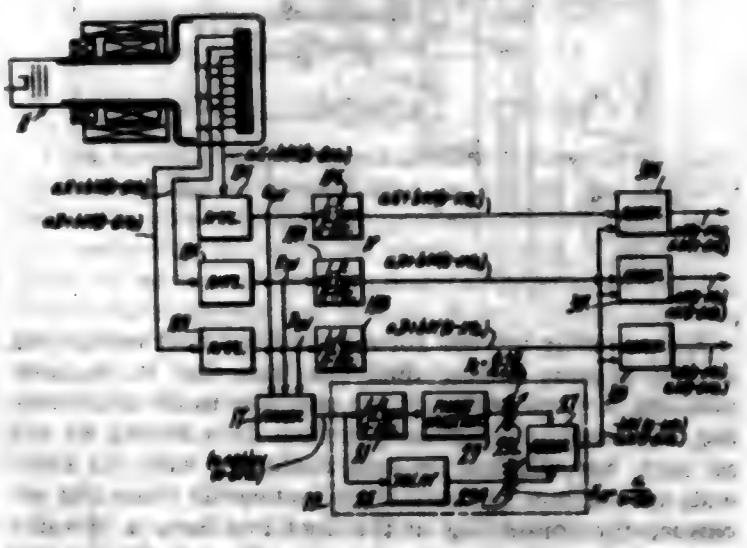
COLOR TELEVISION TRANSMITTER

Harold Barkas, New Brunswick, and Paul K. Weimer, Princeton, N. J., assignors to Radio Corporation of America, a corporation of Delaware

Application March 14, 1955, Serial No. 494,114

The terminal fifteen years of the term of the patent to be granted has been disclaimed

10 Claims. (Cl. 178—5.4)



2. In a color television system wherein a plurality of simultaneous color signals G, R and B, respectively, are desired for utilization over a low frequency portion of a video band, and a white signal W, where W substantially equals $G+R+B$, is desired for utilization over the remainder of said video band, and wherein there is provided a source of a plurality of simultaneous signals having the respective forms $aG+bW$, $aR+bW$, and $aB+bW$ over said video band, apparatus for deriving desired signals from the signals provided by said source comprising in combination a plurality of low pass filters coupled to said source for deriving therefrom a plurality of signals of respective forms $aG+bW$, $aR+bW$, and $aB+bW$ restricted in frequency to said low frequency portion of said video band, adding means additionally coupled to said source for combining the signals provided by said source to obtain a sum signal of the form $(a+3b)W$, filtering apparatus including respective parallel signal paths coupled to said adding means, one of said parallel paths having a low pass characteristic, means including a phase inverter for adjusting the gains of said parallel paths such that the combined output thereof comprises an output signal of the form $-bW$ over said low frequency video band portion and of the form aW over the remainder of said video band, and means for separately combining said latter output signal with each of the frequency restricted signals derived by said plurality of low pass filters.

2,865,986

HIGH POWER FREQUENCY DISCRIMINATOR

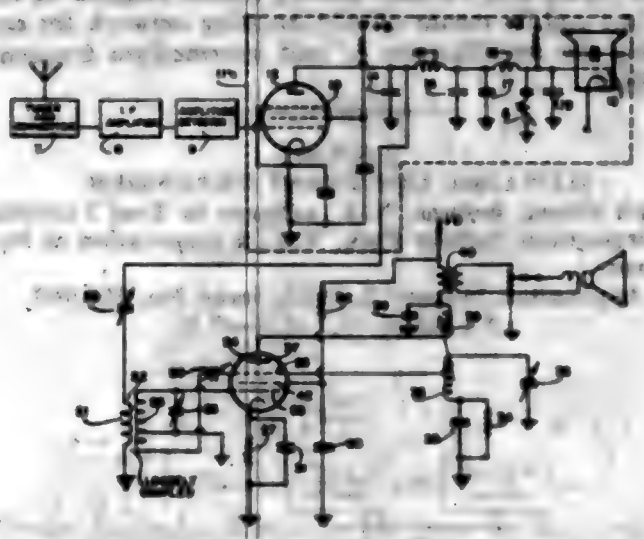
Lewis W. Parker, Great Neck, N. Y.

Application August 3, 1953, Serial No. 371,928

21 Claims. (Cl. 178—6.8)

2. A discriminator for demodulating a time modulated high frequency signal comprising an electron discharge

device having a cathode, an anode, and first, second and third grids intermediate said cathode and said anode, said first grid being nearer said cathode than the other two of said grids and said third grid being nearer said anode than the other two of said grids, means for feeding said signal to be demodulated onto said first grid, a resonant circuit tuned to a frequency within the frequency band of said signal and coupled to and excited by coupling between said third grid and the electron stream and said



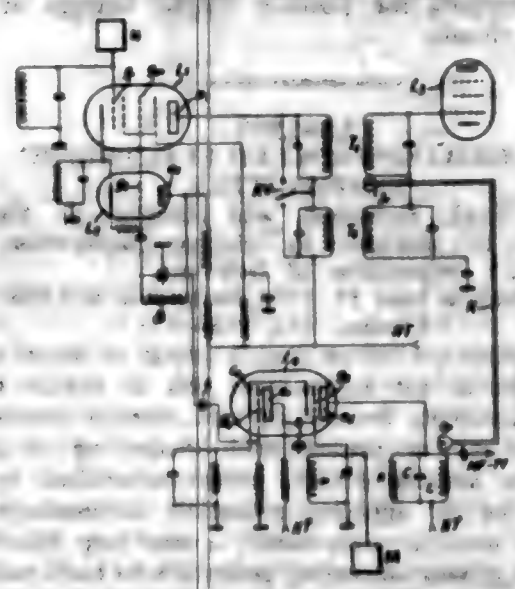
anode, an output circuit including an inductor connected in series with said anode, said inductor having an inductance value sufficient to cause said discriminator to generate self-oscillations in the absence of negative feed back and said output circuit being coupled to said resonant circuit in a degenerative sense for feeding signal energy from said output circuit to said resonant circuit in such phase and of such amplitude as to prevent said oscillations.

2,865,987

MEANS FOR CHANGING THE FREQUENCY IN COMBINED WIRELESS AND TELEVISION SETS

Henry Mégard, Geneva, Switzerland, assignor to Sautter & Jeager, Geneva, Switzerland, a Swiss firm

Application October 13, 1954, Serial No. 462,069
Claims priority, application Switzerland October 16, 1953
8 Claims. (Cl. 178—5.8)



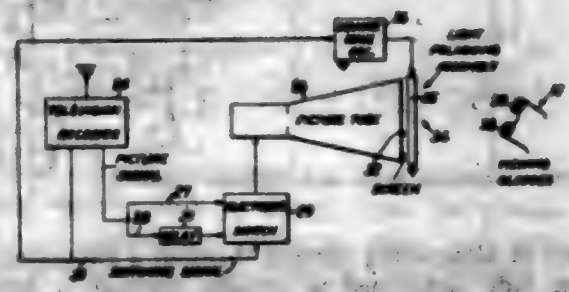
1. In a combined wireless radio and television set the provision of a high frequency radio amplifying chain, at least one oscillating and modulating tube fed by said chain including a cathode, a modulating grid and an anode, a local oscillation-producing tube energizing said modulating grid and including an anode, at least one buffer system including a first group of electrodes constituted by a cathode, an anode and a grid fed by the oscillations of the oscillation-producing tube, said first group of electrodes being adapted to double the frequency of the local oscillations, and a second group of electrodes constituted by a cathode, an anode and a control grid coupled with the anode of the first group, a high frequency television amplifying chain feeding the control grid of the second group of electrodes in the buffer system to mix the television signals with the doubled local oscillations, and an intermediate television frequency chain fed by the anode of said second group.

2,865,988

QUASI-STEREOSCOPIC SYSTEMS

Nicholas J. Caforelli, Jr., Bogota, N. J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application May 26, 1953, Serial No. 357,428
6 Claims. (Cl. 178—6.5)



1. A viewing system for imparting a quasi-stereoscopic impression to an observer during successive optical impression periods comprising a television receiver for receiving normal television signals including a picture signal and synchronizing signals, a plurality of picture signal paths coupled to the picture signal output of said receiver, a delay device having a predetermined time delay disposed in one of said signal paths, an electronic switch coupled in common to the output of said plurality of signal paths and responsive to a given one of said synchronizing signals, said signal paths, said delay device and said electronic switch under control of said given one of said synchronizing signals cooperating to derive from the frame portions of said picture signal a rapid sequence of adjacent frame elements for presentation in said impression periods, each succeeding impression period containing an exact replica of one of the frame elements present in the preceding impression period, means coupled to the output of said electronic switch to present to said observer said adjacent frame elements during said impression periods, and means in coupled relation with the output of said means to present to limit during each of said impression periods the said adjacent frame elements for right and left eye viewing.

2,865,989

TELEVISION CAMERA VIDEO AMPLIFIER AND BLANKING CIRCUITS

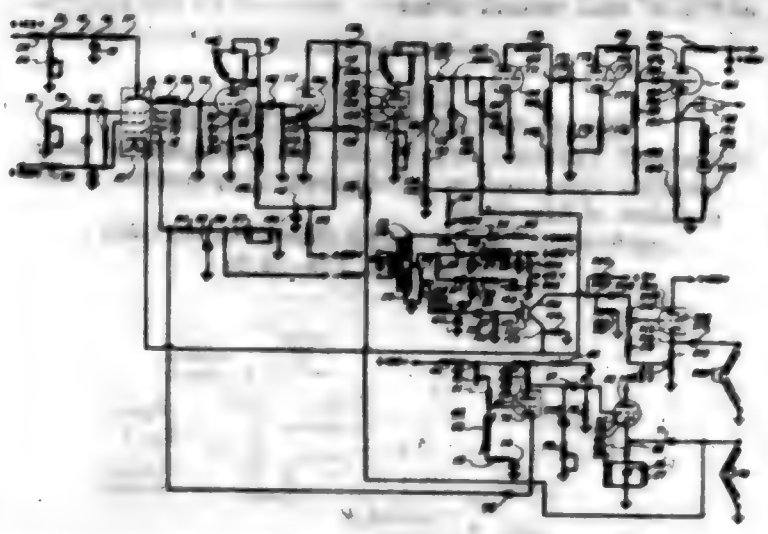
Samuel M. Zimmerman, Dallas, Tex.

Application June 25, 1956, Serial No. 593,417
5 Claims. (Cl. 178—7.2)

5. A control circuit for a television camera having a light sensitive electric discharge means comprising a target electrode, a cathode, and a plurality of control grids, vertical yoke coils and horizontal yoke coils comprising: means for producing a horizontal sweep signal of desired frequency connected to said horizontal yoke coils, said last mentioned means being connected to one of said control grids to impress a horizontal blanking signal thereon; means for producing a vertical sweep signal connected to the vertical coils, said means for producing a vertical sweep signal being connected to the cathode of the light sensitive electric discharge means to provide a vertical blanking signal impressed on the cathode; ampli-

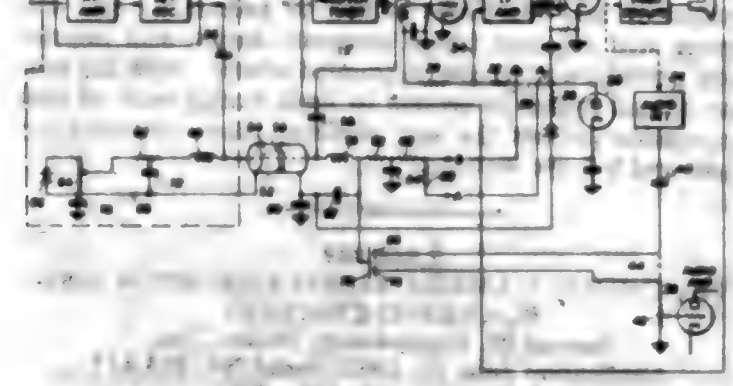
ing a stop impulse on the line, means operated by the first univibrator for restarting the start-stop distributor means the conduction of the tube, whereupon said second relay coil moves the movable contactor and the second fixed

fying means connected between the target electrode of the light sensitive electric discharge means and the output of said control circuit which includes a direct current blocking capacitor, said means for producing a vertical sweep signal being connected to said capacitor to vary the effective charge of the capacitor whereby an effective brightness control of the video signal is obtained, said means for producing a vertical sweep signal comprising a three element transistor having an emitter connected to



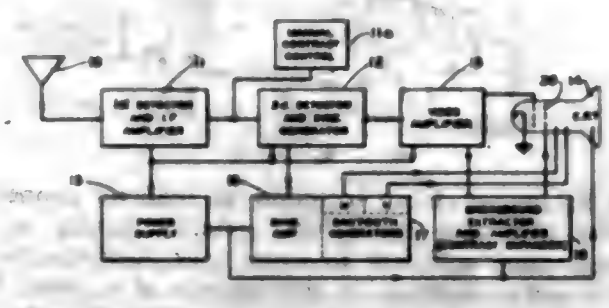
a source of alternating current through a capacitor which has one side connected to ground through a half-wave rectifier, a base element connected to ground through a resistance and a collector element connected to the vertical coils through an amplifier means, said base element also being connected to the cathode of the light sensitive electric discharge means and to one side of said capacitor, and a variable resistance connected between said base element and said capacitor.

2,865,990
TELEVISION RECEIVER REMOTE CONTROL SYSTEM
James F. Towler, Indianapolis, Ind., assignor to I. D. E. A. Inc., Indianapolis, Ind.
Application October 8, 1953, Serial No. 384,855
5 Claims. (Cl. 178—7.3)



1. A system for controlling the operation of a television receiver having an intermediate frequency amplifier which includes a first gain control electrode and an audio gain amplifier which includes a second gain control electrode, comprising a remote control device, said device including a converter for producing an intermediate frequency signal, and an audio volume control means, a coupling network interconnecting said converter and volume control means with said intermediate frequency amplifier and said audio gain amplifier respectively, said network including a two-conductor line, said line being directly coupled at one end to said converter and at the other end to said intermediate frequency amplifier gain control electrode whereby the signal of said converter is utilized by said intermediate frequency amplifier, said volume control being coupled to said one line end through an isolating network comprising means which presents a high impedance to the converter signal but a low impedance to audio signals, a filtering network coupled between said other line end and said second gain control electrode, said filtering network presenting a high impedance to the converter signal but a low impedance to the audio signal, and variable biasing means coupled to said one line end by means of said isolating network for controlling the amplification of said intermediate frequency amplifier.

2,865,991
DYNAMIC CONTRAST EXPANDER
Joseph Rimer, Belmar, N. J., assignor to Trad Television Corporation, Asbury Park, N. J., a corporation of New Jersey
Application January 3, 1956, Serial No. 556,963
5 Claims. (Cl. 178—7.5)



1. An adjustable contrast expander for television receivers comprising, a cathode ray picture tube including a first and second control grid, a video amplifier which amplifies and transmits video signals to the first control grid; said video signals including pulses proportional to picture light intensity values, blanking signals, and synchronizing signals; an amplifying circuit having an input conductor coupled between the control grid of the amplifier circuit and an output circuit of the video amplifier and an output connected to said second control grid for applying a positive output voltage thereto proportional to the picture light values; said amplifying circuit including a phase reversal means which produces positive video signals at the amplifying circuit output; and means for manually varying the positive output voltage of said amplifying circuit.

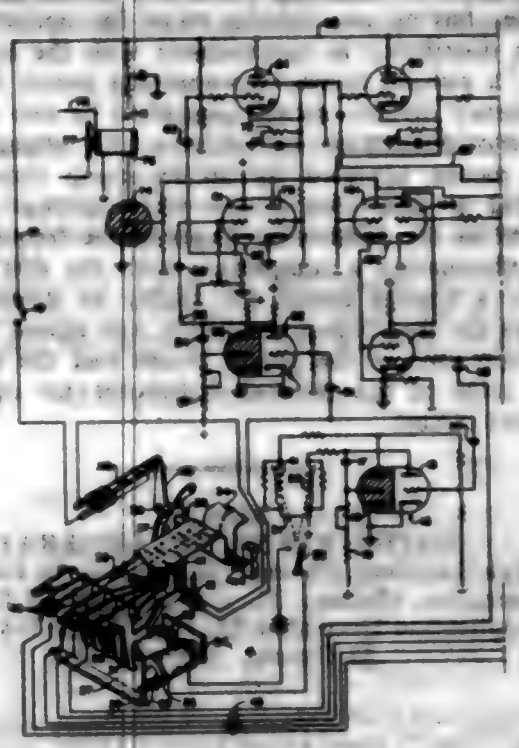
2,865,992
RECORD CONTROLLED ELECTRONIC TRANSMITTER
Robert J. Rock, Bellwood, and Ransom D. Slayton, Lombard, Ill., assignors to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Application June 17, 1954, Serial No. 437,584
3 Claims. (Cl. 178—17)

3. In a telegraph transmitter, a group of mixer tubes, a sensing device for ascertaining sets of indicia representative of signals formed in tape, means adapted to advance the tape to present each succeeding set of indicia to the sensing device, means controlled by the sensing device for applying potentials representative of said indicia to said mixer tubes, a start-stop distributor means for applying operating potentials to each succeeding mixer tube, said mixer tubes being precluded from operation upon the coincident application of potentials from said distributor and indicia controlled means, said mixer tubes being individually operated by the reception of a potential from only the distributor means, a signaling channel, means actuated by the mixer tubes for impressing the outputs thereof on the signaling channel, a first univibrator actuated by the distributor means upon completing a cycle of operation for generating and apply-

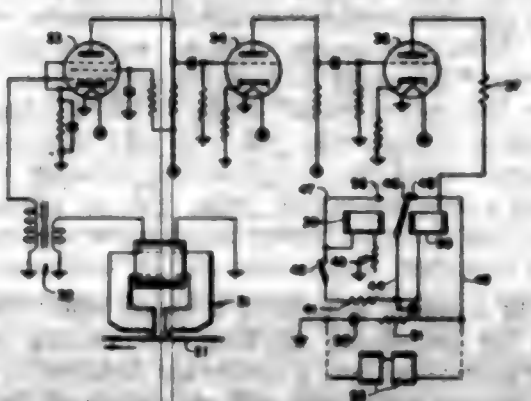
ment to a corresponding one of the elements in each of the telegraph signals, the major segments positioned

tributor, a matrix means under the cojoint control of the impulse and channel distributors for routing the incom-

ing a stop impulse on the line, means operated by the first univibrator for restarting the start-stop distributor means through another cycle of operations, and a second univibrator having a shorter period than the first univibrator and energized by the distributor means for actuating the tape advancing means during the generation of a stop impulse.

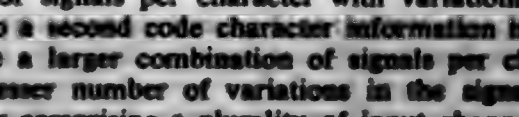


2,865,993
APPARATUS FOR RECORDING AND REPRODUCING TELEGRAPH SIGNALS
Walter J. Zenner, Des Plaines, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Application March 30, 1955, Serial No. 497,570
7 Claims. (Cl. 178—17)



7. In a device for reproducing signal impulses from a storage medium which is magnetized in either of two conditions, a transmission line, a movable contactor and a first fixed contact in said line, a first relay coil designed to place the movable contactor in abutting relationship with the first fixed contact, a first energizing circuit connected to the first coil and including an electronic tube for energizing the first coil to hold said movable contactor and said fixed contact together, a second relay coil, a second energizing circuit for said second relay coil, a resistance connected in the second energizing circuit for normally limiting the energization of the second coil whereby said first coil holds the contactor and the first fixed contact together, a shunt circuit connectable across said resistance including said movable contactor and a second fixed contact capable of being placed in abutting relationship with the movable contactor by the second coil, and sensing and amplifying means responsive to a transition in the magnetized condition of the medium for generating and applying to the tube a first voltage pulse of one polarity to reduce the conduction of the tube, whereupon said second relay coil moves the movable contactor and the second fixed contact together to complete the shunt circuit and hold the second coil energized, said sensing and amplifying means acting to generate a second voltage pulse of a polarity that is opposite to that of the first pulse upon ascertaining a second transition in the magnetized condition of the storage medium, whereupon said second pulse increases the conductivity of the tube to energize said second relay coil and close the movable contactor and the first fixed contact to energize the transmission line.

2,865,994
TELETYPEWRITER CODE DECODER
Earle E. Eldredge, Los Altos, Calif., and David B. Jordan, Queens Village, N. Y., assignors to Sylvania Electric Products Inc., a corporation of Massachusetts
Application February 9, 1955, Serial No. 487,062
4 Claims. (Cl. 178—26)



1. In a translator, means for translating a first code character information in which there are always a like number of signals per character with variations in the signals to a second code character information in which there are a larger combination of signals per character with a lesser number of variations in the signals, said translator comprising a plurality of input channels each selectively sensitive to a different variation of the signals of the first code and having a signal responsive switch, a number of relays each connected to different selected ones of said switches, a first distributor having a number of conductive segments corresponding to at least the number of signals required to form a character in the first code, each of said segments being connected to a contact of a plurality of said switches, a second distributor having a plurality of electrically-isolated segments, the number of isolated segments corresponding, at least, to the number of signals required to form a character of the second code, a source of potential, means under control of each of the conductive segments of the first distributor for connecting said source for a pulse interval to a selected group of said switches, any of which may have been closed in response to an incoming first code signal, storage means connected between each of said relays and a segment of said second distributor, certain of said relays being responsive to the operation of said switches upon the application of potential thereto through one of said conductive first distributor segments to apply a potential through said storage means to certain of the isolated segments of the second distributor, others of said relays being responsive to the operation of said switches upon subsequent applications of potential to successive segments of the first distributor to apply a potential to others of the isolated segments of the second distributor, and means for reading out the potentials on the second distributor segments.

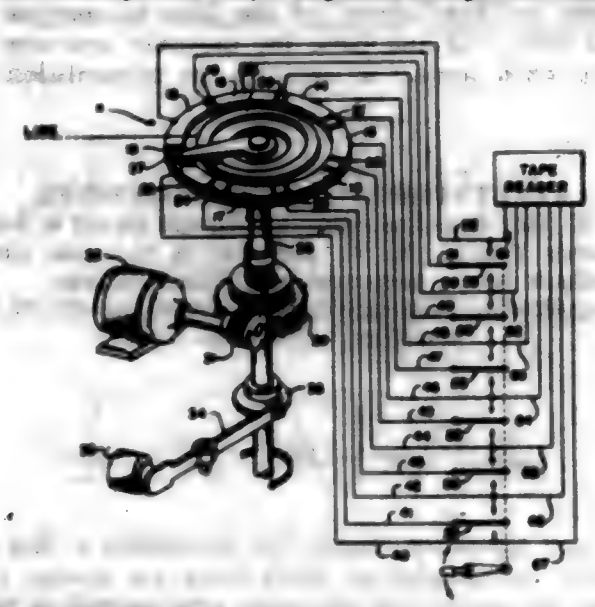
2,865,995
START-STOP DISTRIBUTOR RING
William P. Byrnes, Glenview, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Application October 24, 1956, Serial No. 617,976
10 Claims. (Cl. 178—52)

7. Apparatus for distributing telegraph signals having different durations of signal elements but wherein each signal includes a start, a plurality of intelligence and a stop element, which comprises a distributor ring formed of a plurality of major and a plurality of minor segments of different lengths, means for allocating each major seg-

binary controlled circuit to impress a spacing condition on said transmission line and operation of said first gat-

in a circuit, a station including means for transmitting supervisory signals connected to each of said lines, a

ment to a corresponding one of the elements in each of the telegraph signals, the major segments positioned around the ring in progressively decreasing lengths and the minor segments positioned therearound in progressively increasing lengths with one minor segment between each pair of adjacent major segments except those associated with the start and the stop elements, switching means for connecting each major segment except that associated



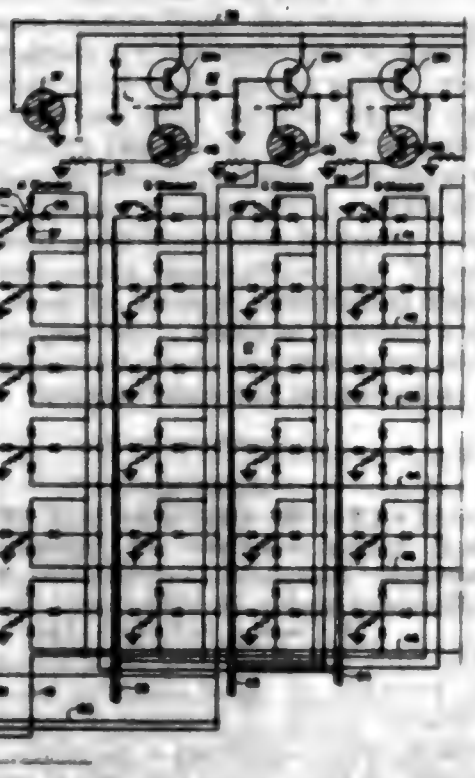
with the stop element to the minor segment adjacent thereto in one direction around the ring during the distribution of a signal having equal durations of signal elements and for connecting each major segment except that associated with the start element to the minor segment adjacent thereto in the opposite direction around the ring during the distribution of a signal having a stop element of longer duration than the remaining elements, and means for selectively operating the switching means in accordance with the signal to be distributed.

2,865,996

SYNCHRONIZER FOR TELEGRAPH RECEIVERS

Theodore A. Hansen, Park Ridge, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application December 28, 1955, Serial No. 555,999
12 Claims. (Cl. 178—53)



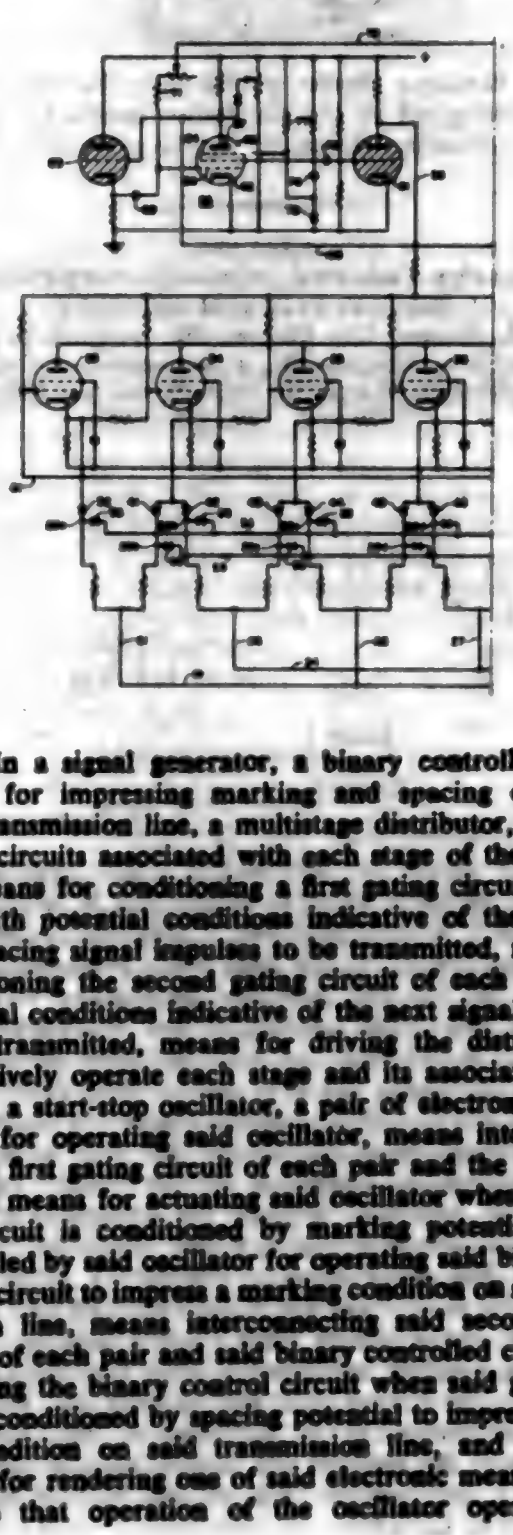
10. In a multiplex telegraph receiving apparatus, a multistage impulse distributor, a multistage channel distributor, a matrix means under the cojoint control of the impulse and channel distributors for routing the incoming signals to receiving devices, a multistage frequency divider having one driving stage for operating the impulse distributor in concordance with the incoming signals, a pulsing means for applying pulses to drive the frequency divider, means controlled by one stage of the impulse distributor for driving the channel distributor, means actuated by an incoming signal for generating a first comparison pulse, gating means controlled by the nondriving stages of the frequency divider for effectuating a comparison with the first comparison pulse, a control circuit for adding or subtracting drive pulses for the frequency divider, and means operated by the operation of the gating means and the operation of one stage of the channel distributor for operating the control circuit.

2,865,997

DISTORTION SIGNAL GENERATOR

Joseph Gardberg, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application December 22, 1955, Serial No. 554,736
21 Claims. (Cl. 178—69)



16. In a signal generator, a binary controlled circuit means for impressing marking and spacing conditions on a transmission line, a multistage distributor, a pair of gating circuits associated with each stage of the distributor, means for conditioning a first gating circuit of each pair with potential conditions indicative of the marking and spacing signal impulses to be transmitted, means for conditioning the second gating circuit of each pair with potential conditions indicative of the next signal impulses to be transmitted, means for driving the distributor to successively operate each stage and its associated gating circuit, a start-stop oscillator, a pair of electronic control means for operating said oscillator, means interconnecting the first gating circuit of each pair and the electronic control means for actuating said oscillator when said gating circuit is conditioned by marking potential, means controlled by said oscillator for operating said binary controlled circuit to impress a marking condition on said transmission line, means interconnecting said second gating circuit of each pair and said binary controlled circuits for operating the binary control circuit when said gating circuit is conditioned by spacing potential to impress a spacing condition on said transmission line, and switching means for rendering one of said electronic means ineffective so that operation of the oscillator operates said

adjacent two of said carrier waves connected to a second of said pairs of terminals, and means connected to the

means in said register sender operated in response to said

the tube a first voltage pulse of one polarity to reduce

737 O. G.—67

of different lengths, means for allocating each major seg-

binary controlled circuit to impress a spacing condition on said transmission line and operation of said first gating circuits operated the binary controlled circuit means to impress a marking condition on said transmission line.

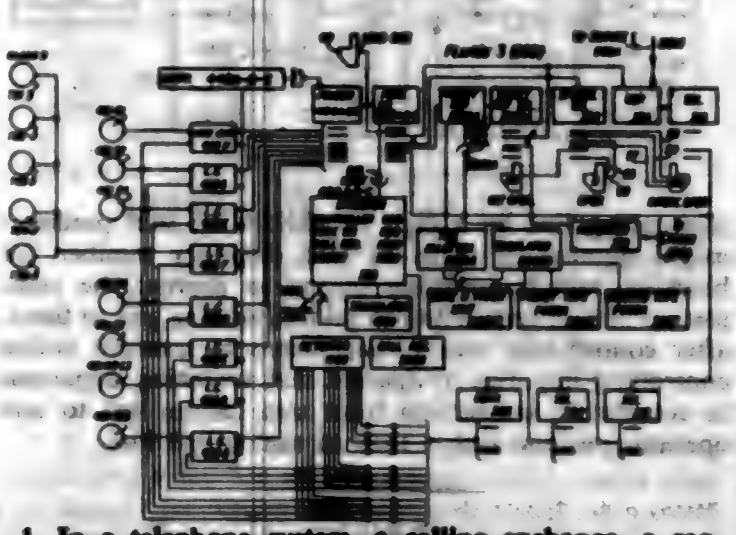
2,865,998

AUTOMATIC TOLL TICKETING TELEPHONE SYSTEMS

Harry N. Nowstadt, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Original application March 26, 1951, Serial No. 217,923, now Patent No. 2,775,648, dated December 25, 1956. Divided and this application May 2, 1956, Serial No. 582,297

12 Claims. (Cl. 179—9)



1. In a telephone system, a calling exchange, a register sender in said calling exchange having a plurality of digit registers, a plurality of called exchanges having individual three-digit code designations, means for registering the three code digits identifying one of said called exchanges in successive digit registers, a translator, a translator assigner, said register sender including a route register and a rate register, means controlled by the registration of the code digits in said digit register and identifying a called exchange for operating said assigner to connect said translator and said register sender, said translator including a plurality of rate relays respectively corresponding to said called exchanges and a translate relay common to said rate relays, means in said register sender controlled by the code digits registered in said digit registers and identifying one of said called exchanges for selecting the corresponding one of said rate relays in said translator, means controlled by said selected rate relay for registering in said rate register a rate digit indicative of a charge rate for a call to said registered called exchange and for operating said translate relay, means controlled by operation of said translate relay for registering in said route register predetermined routing digits, and means controlled incident to the registration of said routing digits in said route register for controlling said assigner to disconnect said translator from said register sender and for controlling said register sender to transmit said registered routing digits to extend said call from said calling exchange toward said called exchange over a predetermined route.

2,865,999

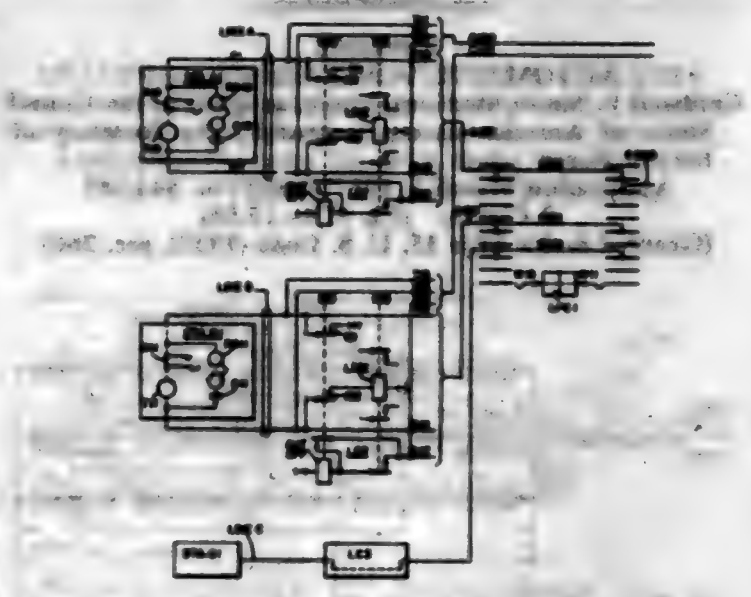
GROUP SIGNALING TELEPHONE SYSTEM

William W. Pharis, Rochester, N. Y., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application November 2, 1956, Serial No. 638,111

7 Claims. (Cl. 179—8)

1. In a group signaling telephone system, a plurality of lines, each of said lines being individually terminated in a circuit, a station including means for transmitting supervisory signals connected to each of said lines, a channel common to said lines and said circuits, means within each of said circuits for interconnecting the corresponding ones of said lines to said channel in order to interconnect said lines with each other, seizing means for rendering each of said interconnecting means operative, means for thereafter rendering said seizing means



inoperative, supervisory means operative in response to the transmission of a supervisory signal from said station connected to any one of said lines for holding said interconnecting means operative, and timing means operative in response to the operation of said supervisory means for rendering said supervisory means ineffective at the end of a predetermined time interval, whereby the interconnection of said lines through said common channel may not be indefinitely maintained.

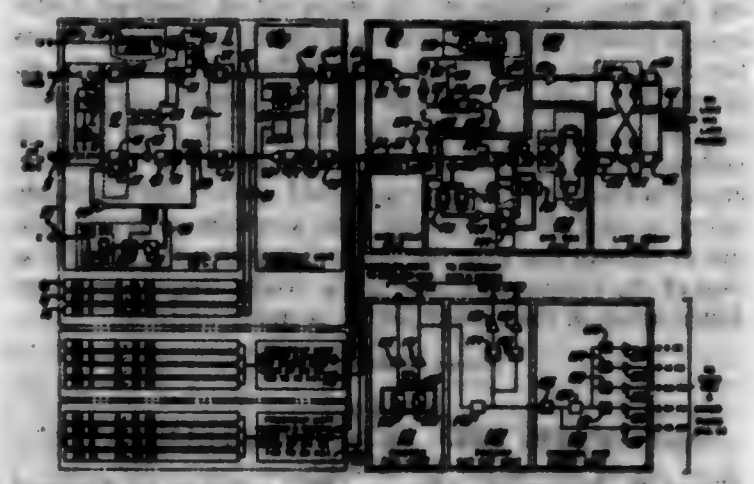
2,866,000

CARRIER COMMUNICATION SYSTEM

Robert S. Carnahan, Palo Alto, Calif., assignor to Lenkurt Electric Co. Inc., San Carlos, Calif., a corporation of Delaware

Application September 28, 1953, Serial No. 382,689

6 Claims. (Cl. 179—15)



1. Carrier communication apparatus for the simultaneous transmission of signals in a plurality of channels of the same nominal width which combined form a substantially continuous band, comprising means for developing a plurality of carrier waves of frequencies which differ successively by the nominal width of said channels and the number of said carrier waves exceeding by one the number of channels, a plurality of modulators each having three pairs of terminals, an individual pair of channel leads connected to one of said pairs of leads, a filter having a pass-band of the width of one channel and including the band between the frequencies of an

called destination and having the same number of digits

trolled in response to the registration therein of said ar-

offices, individual trunk make-busy circuit means in said dial office for each of said trunks, switching means in

multistage impulse distributor, a multistage channel distributor so that operation of the oscillator operates said

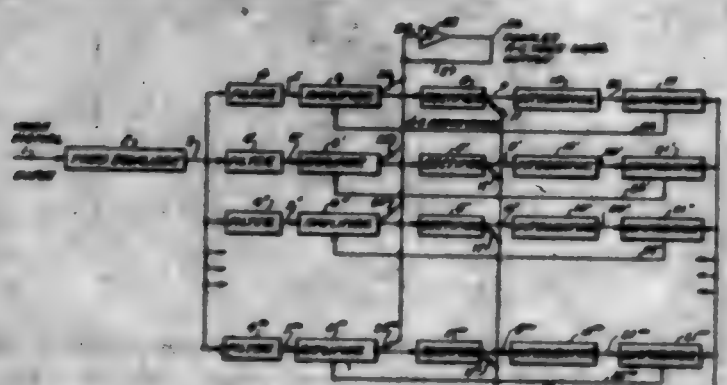
adjacent two of said carrier waves connected to a second of said pairs of terminals, and means connected to the third of said pairs of terminals for switching to each modulator a carrier wave which is optionally either the one at the low-frequency or the high-frequency end of the pass-band of the filter to which the respective modulator is connected.

2,866,001

AUTOMATIC VOICE EQUALIZER

Caldwell P. Smith, Bedford, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Application March 5, 1957, Serial No. 644,188
3 Claims. (Cl. 179—15.55)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. An apparatus of the class described comprising a plurality of contiguous bandpass filters for establishing separate filter channels, each bandpass filter having a common speech input and separate voltage outputs, variable gain amplifiers connected to the output of each bandpass filter, means for rectifying the output signal of each variable gain amplifier, and means for time averaging the rectified output of each filter channel over a speech signal of predetermined length to produce an average voltage in each filter channel, means for producing a voltage corresponding to the mean of the rectified voltages in the entire set of bandpass filters, and means for time averaging the mean voltage of the entire set of bandpass filters over a speech signal of said predetermined length, means for comparing the average mean voltage of the entire set of rectified voltages with the average rectified signal voltage in each filter channel to produce an error control voltage in each filter channel proportional to the difference between the two voltages, said error control voltage being applied to the variable gain amplifier in each channel to control the gain thereof and regulate the amplification of the voltage in that channel so the frequency power distribution in the speech signal is made uniform.

2,866,002

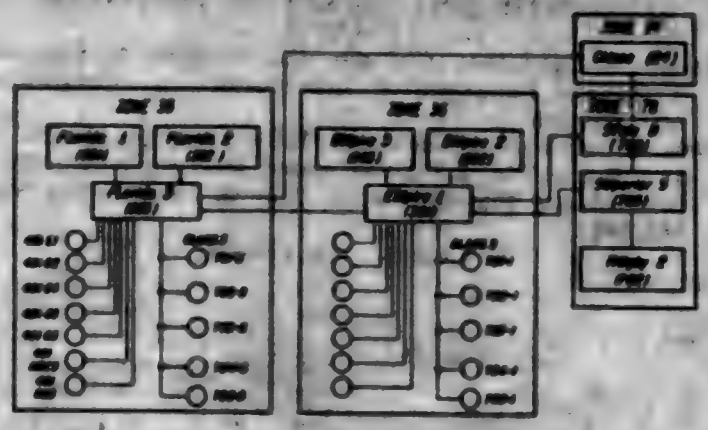
AUTOMATIC TOLL TICKETING TELEPHONE SYSTEMS

Harry N. Newstadt, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Original application March 28, 1951, Serial No. 217,923, now Patent No. 2,775,648, dated December 25, 1956. Divided and this application January 6, 1954, Serial No. 402,469

17 Claims. (Cl. 179—18)

11. In a telephone system, a calling line, a called line identified by a directory number having a predetermined number of digits, an operator position, switching apparatus, a register sender, means in said register sender controlled over said calling line for registering said digits of said directory number identifying said called line, means in said register sender operated in response to said registration for transmitting switch controlling impulses in accordance with said digits of said directory number to operate said switching apparatus to complete a connection from said calling line to said called line, and additional means in said register sender controlled over



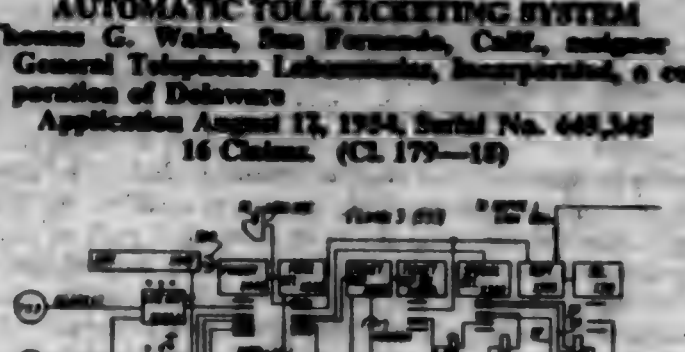
said calling line by a digit in addition to said predetermined number of digits in said directory number for blocking said transmitting means to prevent the completion of said connection to said called line and to thereafter control said transmitting means to transmit switch controlling impulses to operate said switching apparatus to complete a connection from said calling line to said operator position rather than to said called line.

2,866,003

AUTOMATIC TOLL TICKETING SYSTEM

Thomas G. Walsh, San Fernando, Calif., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application August 13, 1954, Serial No. 449,545
16 Claims. (Cl. 179—18)

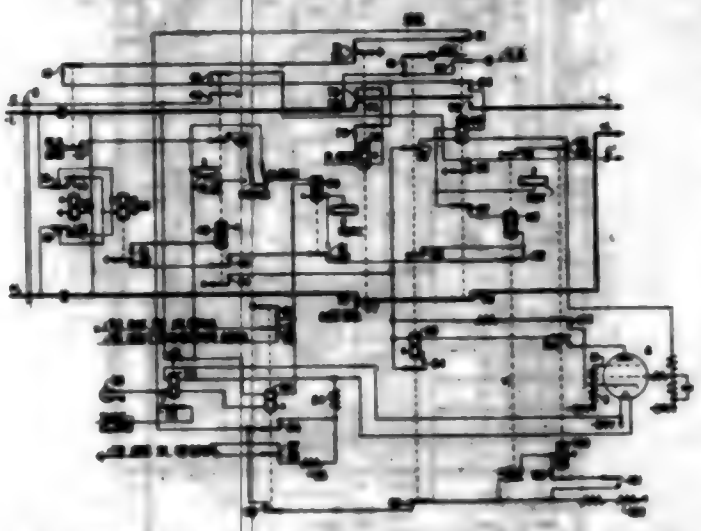


11. In a telephone system, a calling line, a called destination identified by a directory number comprising a plural digit office code portion and a plural digit numerical portion and also by an arbitrary plural digit code, switching apparatus operative to complete a connection from said calling line to said called destination, a register sender controllable over said calling line to register the digits of said office code portion of said directory number or the digits of said arbitrary plural digit code, means controlled in response to the registration of said office code portion of said directory number in said register sender for automatically disconnecting said register sender from said calling line and for connecting said calling line to said switching apparatus so that said switching apparatus is directly controlled over said calling line by the digits of the numerical portion of said directory number for completing said connection from said calling line to said

of lines, each of said lines being individually terminated and including the band between the frequencies of an

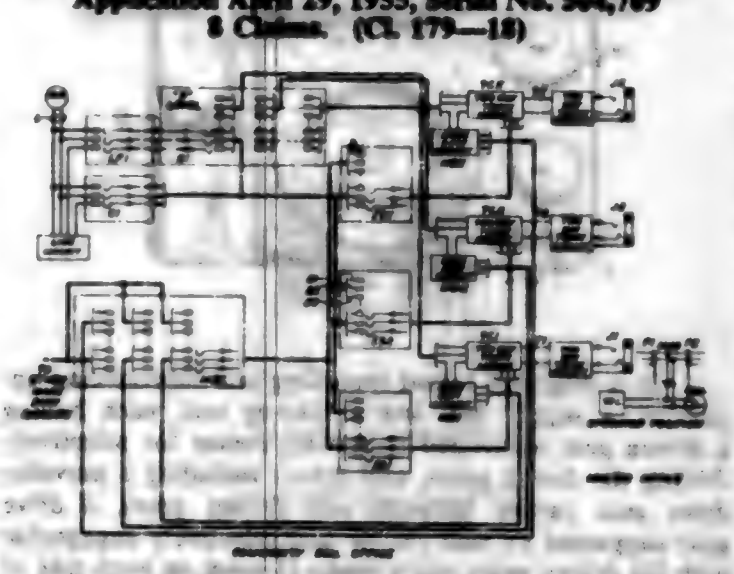
called destination and having the same number of digits controlled in response to the registration therein of said arbitrary plural digit code for operating said switching apparatus to complete said connection from said calling line to said called destination.

2,866,004
ELECTRONIC BUSY TEST CIRCUIT
Imre Meisar, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application March 4, 1954, Serial No. 414,166
13 Claims. (Cl. 179—18)



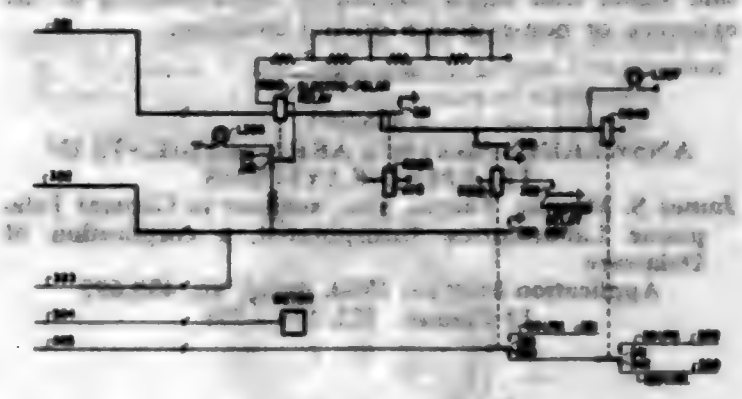
1. A test arrangement for a connector switch including a switching relay for said connector switch and a stepping magnet for setting said connector switch on a called line, comprising an electronic tube circuit, means in said connector operated when said stepping magnet has set said connector on a called line for connecting said tube circuit to said called line, said tube circuit responsive to any one of a number of predetermined different negative potentials for enabling a circuit to be completed to said switching relay to thereby enable said connector to complete a connection to said called line, and means energized in response to said tube circuit being connected to any one of a number of predetermined different positive potentials for preventing the operation of said switching relay and the completion of a connection to said called line by said connector.

2,866,005
MAKE-BUSY CIRCUIT FOR TRUNKS IN UNATTENDED DIAL OFFICE
Arthur T. Kupferle, East Orange, N. J., assignor to American Telephone and Telegraph Company, a corporation of New York
Application April 29, 1955, Serial No. 504,789
8 Claims. (Cl. 179—18)



1. In a telephone system comprising an unattended dial office and a master office, trunks between said offices, individual trunk make-busy circuit means in said dial office for each of said trunks, switching means in said dial office for selecting the make-busy circuit means of a desired one of said trunks, control means comprising operator position dialing means in the master office controlling the operation of said switching means, and further switching means controlled by said control means for actuating any selected trunk make-busy circuit means.

2,866,006
TRAFFIC SUPERVISORY CONTROL CIRCUITS
Pier Bakker, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application February 15, 1954, Serial No. 410,347
8 Claims. (Cl. 179—27)



1. For use in a telephone system, a numerical switch of the trunk hunting type having incoming connections including a pair of conductors over which numerical impulses are received and over which a conversation circuit is established and including a supervisory signal conductor, and having a supervisory signal wiper and a pair of wipers over which numerical impulses are extended and over which the conversation circuit is established together with contact banks accessible to the wipers, groups of trunks connected to said bank contacts, one of said groups being connected to the bank contacts in certain positions of the switch, means in the switch controlled by said impulses received over said conversation conductors for selectively moving the wipers into an intermediate position preceding said certain positions, means for thereafter automatically advancing the wipers over said certain positions, means for individually testing the trunks of said one group for their idle condition during said advancement and for arresting said advancement when an idle trunk is encountered, means operated incident to said testing means encountering an idle trunk for connecting said conversation and supervisory conductors to said idle trunk by way of said conversation and supervisory wipers, said wipers being advanced to an overflow position following said certain positions in case said testing means finds all trunks in said one group busy, a first relay in the switch, means for operating said relay incident to the wipers moving into said overflow position, a group busy and overflow circuit connected to the bank contacts in said overflow position, means in the group busy and overflow circuit controlled incident to the existence of an all trunks busy condition in said one group of trunks for extending a marking potential to a bank contact accessible to one of the conversation wipers in the overflow position, a second relay in the switch, a first circuit means including said marking potential and said one conversation wiper controlled by the operation of the first relay for operating the second relay, contact means in the switch connected to said group busy and overflow circuit and closed in said intermediate position, said sixth means also extending said marking potential

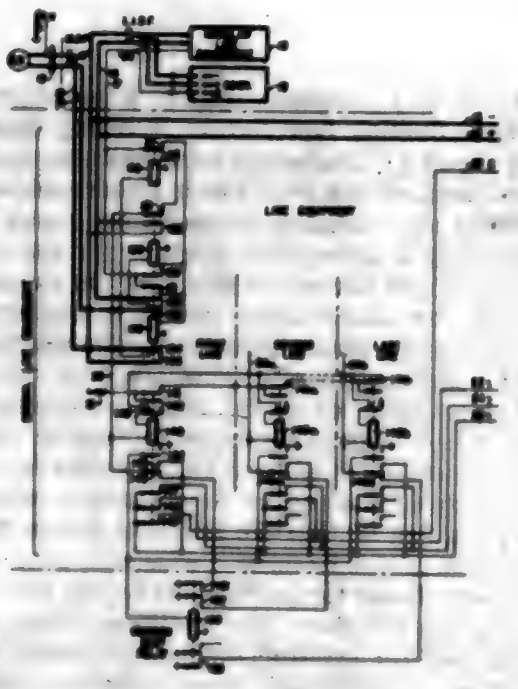
to said contact means when all trunks in said group are busy, a second circuit means including said marking potential and said contact means for operating said second relay if all trunks are busy while the wipers are in said intermediate position, circuit means controlled by the operation of said second relay over said second circuit means for preventing the testing means from arresting said automatic advancement, thereby to force the wipers into the overflow position even though trunks in said group may become idle, a signal lead in the group busy and overflow circuit, means controlled by the operation of said two relays for extending said supervisory conductor to said signal lead by way of the supervisory wiper, and means in the group busy and overflow circuit controlled by the existence or non-existence of an all trunks busy condition in said one group of trunks for placing upon said signal lead signal indications corresponding to the existence or non-existence of said condition.

2,866,007

ANSWERING SERVICE ARRANGEMENTS IN TELEPHONE SYSTEMS

James S. Murray, Tampa, Fla., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application May 18, 1954, Serial No. 430,693
12 Claims. (Cl. 179—27)



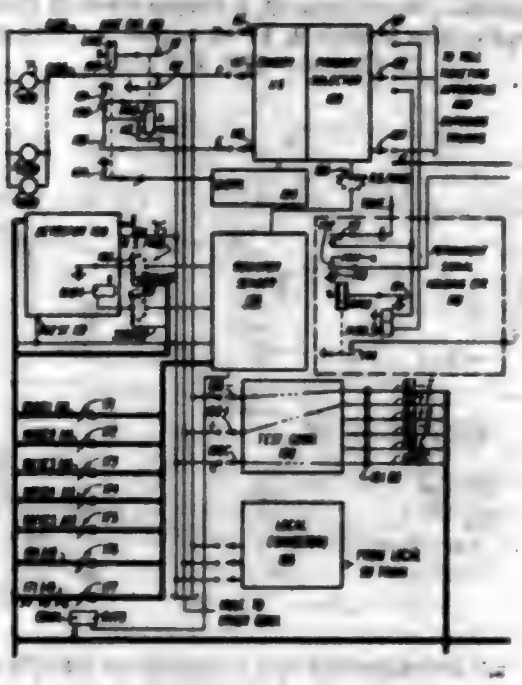
1. In a telephone system, a central office, a plurality of substations entitled to secretarial answering service each having a key, a plurality of subscriber lines each connecting the corresponding substation with said central office, said central office comprising connecting means having a terminal appearance for each line for extending calls thereto, each of said appearances including a test terminal, an answering trunk common to said plurality of substations, finder means at one end of said trunk, secretarial answering apparatus at the other end of said trunk, each of said line equipments including conditioning means and call responsive means, said conditioning means being operated over the corresponding line under the control of said key for effectively connecting said call responsive means to said test terminal and said call responsive means being subsequently operated in response to the activation of said test terminal in a call incoming to said line over said connecting means for starting said finder means in search of said line equipment, whereby said call is extended to said secretarial answering apparatus by way of said trunk.

2,866,008

TESTING APPARATUS FOR CALLING LINE IDENTIFIERS

Thomas G. Walsh, San Fernando, Calif., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application February 28, 1955, Serial No. 491,169
22 Claims. (Cl. 179—27)



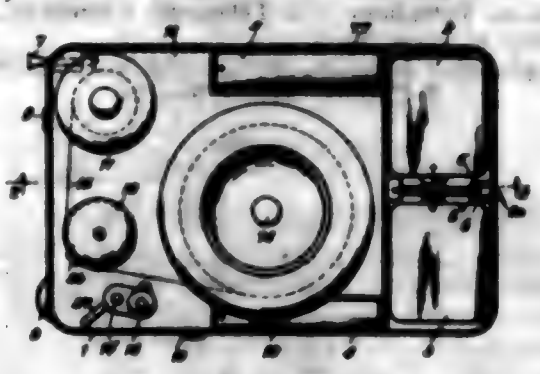
1. In a telephone system, a subscriber line having an individual directory number, means for selecting said line, an identifier automatically operated to register the directory number of said subscriber line in response to a predetermined condition thereof, and means responsive to said selection of said subscriber line for imposing said predetermined condition thereon.

2,866,009

SOUND RECORDING AND SOUND REPRODUCING APPARATUS

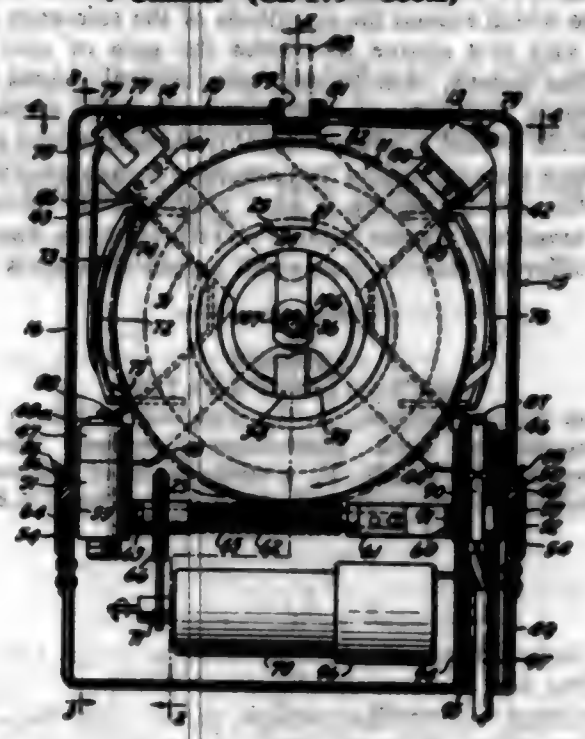
Ernst Gerning and Willi Drabelus, Pasberg, and Nikolaus Mesuka, Hannover, Germany; said Gerning and Drabelus assignors to Pretema, Hannover, Germany

Application December 28, 1951, Serial No. 263,812
Claims priority, application Germany October 27, 1951
8 Claims. (Cl. 179—100.2)



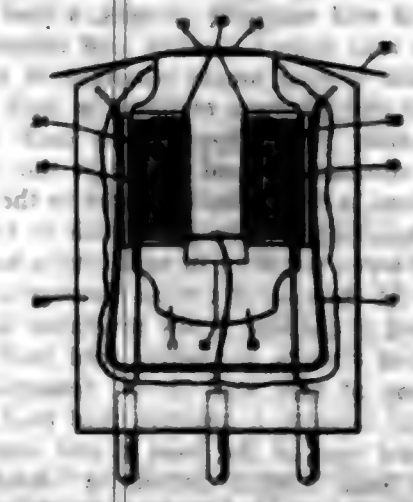
1. In a magnetic sound recording and reproducing apparatus, a supply reel and a take-up reel, each having a driven gear associated therewith, means for selectively driving the driven gears, said means including a movable drive gear carrier between said driven gears, a drive gear supported by said carrier and selectively engageable with the driven gears and a brake element on each side of said carrier and respectively selectively engaging that driven gear not engaged by the drive gear.

2,866,010
POCKET TAPE RECORDER
Colin B. Dale, Oak Park, Ill., assignor to Webcor, Inc., a corporation of Illinois
Application December 17, 1953, Serial No. 398,764
7 Claims. (Cl. 179—100.2)



1. In a portable magnetic sound tape recording device, two parallel reels, each reel having side walls adapted to contact the edges of a record tape and turned in at their peripheries, said side walls defining continuous openings between their peripheries whereby radial movement of the tape to and from a reel is allowed only when the tape is twisted about its longitudinal axis, a gear of each reel, a frame between said reels, two sound recording heads, means for mounting one head in association with one reel longitudinally to the tape travel but tilted transversely towards the second reel, means for mounting the second head in association with the second reel longitudinally to tape travel but tilted transversely to the first reel, two tape guides mounted on said frame having yokes for guiding the tape to and from said reels, said yokes being diametrically displaced with respect to one another and aligned with the openings between the peripheries of the reel side walls, and a motor for driving said gears.

2,866,011
MAGNETIC TRANSDUCER HEAD
Otto Kornei, Cleveland Heights, Ohio, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Application July 13, 1954, Serial No. 442,940
6 Claims. (Cl. 179—100.2)



1. A magnetic transducer device for transducing magnetic records on a magnetizable record medium, comprising a head formed of a first and a second pole piece each having two planar end faces, means securing said first and second pole pieces together in aligned confronting closely spaced relationship to form a substantially closed magnetic path with one pair of confronting end faces defining a transducing gap in said substantially closed magnetic path across which said record medium moves during a transducing operation, at least one face of said pair of confronting end faces defining said transducing gap having intimately secured to it a film of vacuum deposited nonmagnetic material less than 5 microns thick filling said gap, and coil means wound around a portion of said magnetic path.

2,866,012
MAGNETIC TAPE RECORDING AND REPRODUCING SYSTEM
Charles P. Ginsburg, Los Altos, and Shelby F. Henderson, Jr., Woodside, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Application May 6, 1955, Serial No. 506,552
4 Claims. (Cl. 179—100.2)

1. In magnetic tape apparatus, at least one transducer unit, means serving to carry said unit for rotation, motor means for rotating the unit, tape transport means adapted continuously to move a magnetic tape from one side to the other of the plane of rotation of the unit, guide means for bending that portion of the tape adjacent the path of movement of the unit to an arcuate contour and for positioning said portion of the tape whereby said unit is caused to sweep over the tape from one tape edge to the other, and means forming an abutment shoulder engaging one edge of the tape in the region adjacent the plane of rotation of said unit.

2,866,013
MAGNETIC RECORD METHOD AND APPARATUS
Charles S. Rals, San Bruno, Calif.
Application May 24, 1955, Serial No. 510,645
14 Claims. (Cl. 179—100.2)

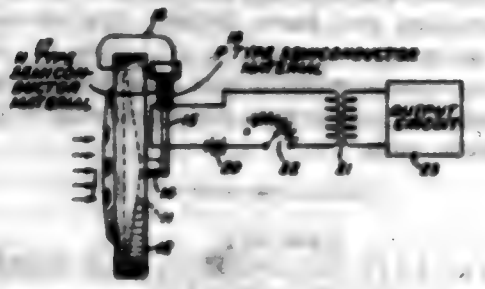
1. In a method for the reproduction of a magnetic track recorded on a magnetic medium wherein a member made of a material exhibiting the Hall effect is employed, the steps of moving the medium and the track relative to a confined zone occupied by said member, the zone extending from the track substantially at right angles thereto whereby flux from the track is applied directly to said material and successive increments of the track determine the magnetic flux in said zone, and utilizing the Hall effect to directly convert variations in said flux into voltage differences.

nections, whereby said feed-back connections control comprises means for feeding one of two input signals to

2,866,814
PIEZORESISTIVE ACOUSTIC TRANSDUCER

Fred P. Burns, Summit, N. J., assignor to Bell Telephone Laboratories Incorporated, New York, N. Y., a corporation of New York

Application October 31, 1955, Serial No. 543,869
9 Claims. (Cl. 179—110)

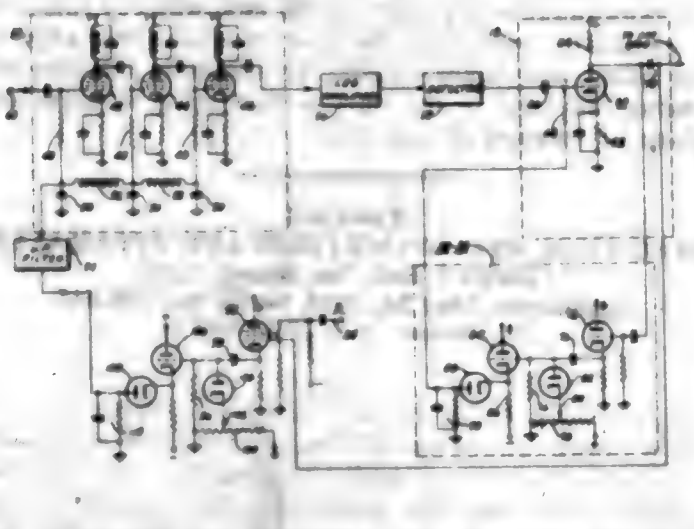


1. In combination, an acoustic diaphragm, first and second spaced substantially parallel anisotropic elements of piezoresistive semiconductor material each of a single conductivity type, means for mounting said elements for extension and compression in the optimum piezoresistance alignment direction, mechanical coupling means for matching the acoustic impedance of said diaphragm with the mechanical impedance of said elements in said optimum direction, and means for applying a biasing current to said elements, whereby sound incident on said diaphragm varies the resistance of said semiconductor elements and the current passing through said elements.

2,866,815
GAIN CONTROL SYSTEM

Robert W. Sailor, Jr., Bristol Township, Bucks County, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application April 22, 1954, Serial No. 424,812
14 Claims. (Cl. 179—171)

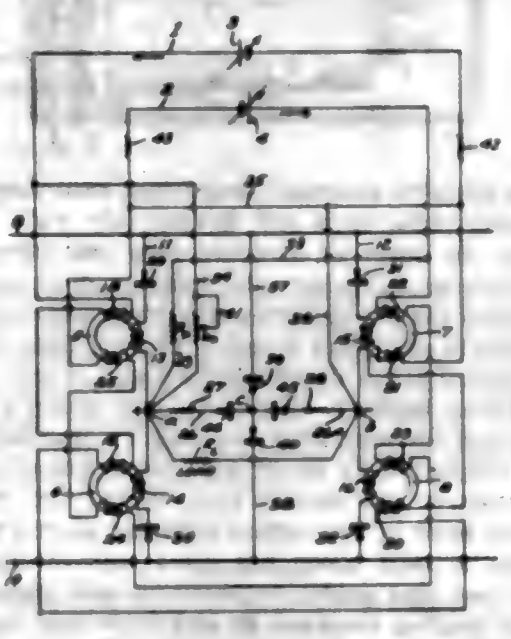


1. A system for controlling the dynamic range of signals which normally attain a relatively low maximum amplitude during certain spaced time intervals and which normally attain a higher maximum amplitude during intervals intermediate said first-mentioned intervals, said system comprising first, second and third amplifier means connected in cascade, said second amplifier means being intermediate said other two amplifier means, a first source of reference signal, means responsive to the signal from said first source and the output signal of said cascade arrangement and connected to said third amplifier means for controlling the gain thereof, a gate circuit coupled to the output of said cascade arrangement, means connected to said gate circuit for rendering said gate circuit operative to pass signals at intervals during which said signal to be processed normally attains a relatively low maximum amplitude, a second source of reference signal, means responsive to both the output of said gate circuit and the signal from said second source and connected to said first amplifier means for controlling the gain thereof, said first gain control means being responsive to signals supplied thereto which exceed the amplitude of the reference signal from said first source to reduce the gain of said third amplifier means, said second gain control means being responsive to signals supplied thereto which exceed the amplitude of said reference signal from said second source to reduce the gain of said first amplifier means, said second amplifier means having a gain characteristic such that large amplitude signals passing therethrough are amplified by a different amount than small amplitude signals.

2,866,816
SIGNAL COMPARATOR

Marvin Weiss, Bayside, N. Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N. Y., a corporation of Delaware

Application September 16, 1955, Serial No. 534,693
5 Claims. (Cl. 179—171)



1. A magnetic amplifier comprising two pairs of closed magnetic circuits, a control circuit having a voltage source and a control winding inductively disposed on each magnetic circuit, a second control circuit having a voltage source and a control winding inductively disposed on each magnetic circuit, said voltage sources being arranged to supply oppositely directed currents in the corresponding control windings disposed on each magnetic circuit an alternating current line, a pair of branch leads connected across the line, each of said branch leads having an anode winding disposed on each magnetic circuit of one pair of said magnetic circuits, a load circuit disposed across said branch circuits and connected to the junction points of said anode windings in each branch circuit, a pair of half-wave rectifiers in each branch circuit, one rectifier being disposed on each side of the load circuit connections and poled in the direction of said connections, a return lead parallel to the branch circuits and connecting said output circuit to both sides of the line, half-wave rectifiers in said return lead disposed on each side of the output circuit connection and poled in the direction of the line, a low resistance lead connecting said control circuits, a positive feed back connection connecting one of said load circuit connections to one of said control circuits, a negative feed back connection connecting said one of the load circuit connections to the other of said control circuits, a variable potentiometer in one of said feed-back connections and a second low resistance lead connecting the first mentioned low resistance lead to the other of said load circuit con-

in synchronism with the frequency of the alternating cur- with the switch, means for rotating the first drum at a

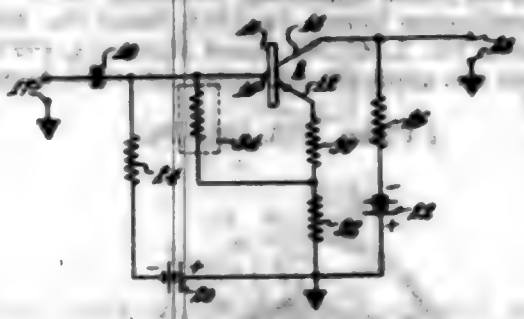
nections, whereby said feed-back connections, control circuits including control windings, low resistance leads, load circuit and return lead comprise feed-back circuits to provide external feed-back control.

2,866,017

STABILIZED SIGNAL TRANSLATING CIRCUITS

John Paul Jones, Jr., Pottstown, Pa., assignor to Navigation Computer Corporation, a corporation of Pennsylvania

Application April 18, 1956, Serial No. 579,086
6 Claims. (Cl. 179—171)



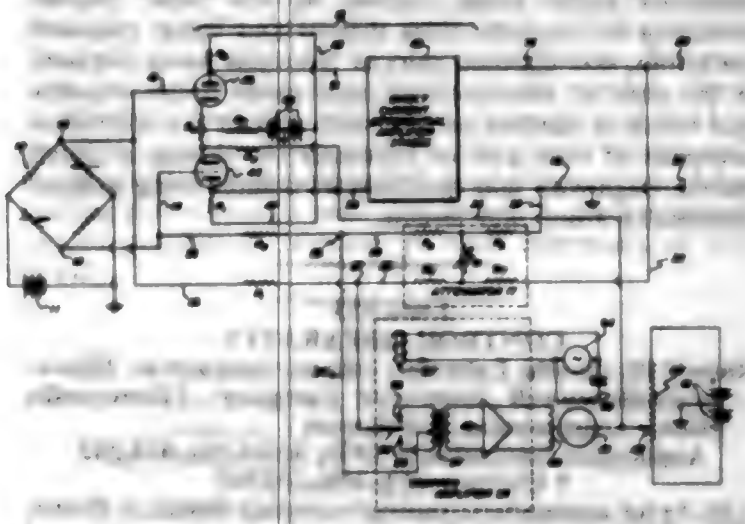
3. In a signal amplifier circuit, the combination comprising, a transistor having base, emitter, and collector electrodes, input circuit means connected for applying an input signal between said base electrode and a common point in said circuit, output circuit means connected for deriving an output signal between said collector electrode and said common point, a pair of resistors connected in series between said emitter electrode and said common point, and a thermistor direct-current conductively and directly connected between said base electrode and the junction of said resistors, the resistance of said resistors being selected relative to the characteristics of said thermistor to provide a substantially constant collector output current from said transistor despite variation in ambient temperature.

2,866,018

DIRECT CURRENT DIFFERENTIAL AMPLIFYING SYSTEM

Norton W. Bell, Monrovia, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Application August 13, 1956, Serial No. 603,499
2 Claims. (Cl. 179—171)



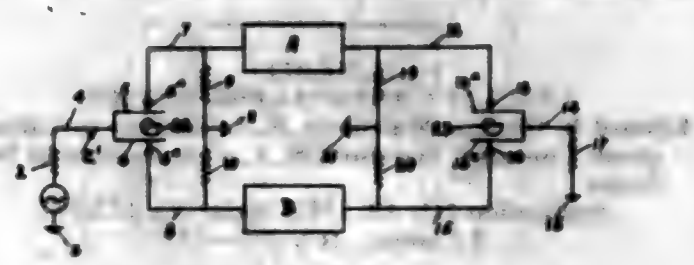
1. In an electrical direct current differential amplifier system including at least one differential amplifier stage having a pair of electronic tubes with each tube including an anode, grid and cathode, the improvement which comprises means for feeding one of two input signals to the grid of one of said pair of electronic tubes and the other of the two signals to the grid of the other tube of said pair of electronic tubes, an output circuit for each electronic tube, the output circuit of each tube being coupled to the anode, an attenuator having an input side coupled to the output circuits of said pair of electronic tubes and an output side coupled to the two input signals, a chopper amplifier having an input and an output, the input of said chopper amplifier being connected to the output side of said attenuator, an electric motor, means coupling the output of said chopper amplifier to said electric motor, a voltage divider network including a moveable tap, means connecting said electric motor to drive said moveable tap, means coupling the potential at said electrical tap to the cathodes of said pair of electronic tubes, whereby any signal difference between the input signal and the output signal taken from the output side of said attenuator causes said chopper amplifier to operate said electric motor to change the moveable tap and thereby change the cathode potential of said pair of electronic tubes until the input signal to said pair of electronic tubes and the output signal of said attenuator are equal.

2,866,019

DRIFTLESS DIRECT CURRENT AMPLIFIER

Norman E. Pederson, Troy, N. Y.

Application December 14, 1956, Serial No. 628,248
13 Claims. (Cl. 179—171)



1. An amplifying system comprising matched gain amplifiers in parallel relation to a common signal input and a common signal output, switching means between the common signal input and the two amplifiers for alternately connecting the amplifiers to the signal with intervening intervals during switching when both are connected to the input, switching means between each amplifier and the output for alternately connecting the output of each amplifier to the common output with intervening intervals during switching when both amplifiers are connected to the common output.

2,866,020

ROLLER CONTACT ARRANGEMENT FOR MECHANICAL CURRENT CONVERTERS OR OTHER EQUIPMENT OF SIMILAR CONSTRUCTION

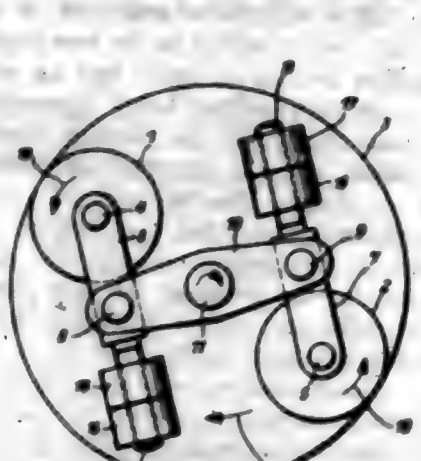
Walter Gottwald, Ratingen, near Duesseldorf, Germany, assignor to August Hamilton Schilling, Alberton, Calif.

Application June 18, 1953, Serial No. 362,533
Claims priority, application Germany July 8, 1952
11 Claims. (Cl. 200—25)

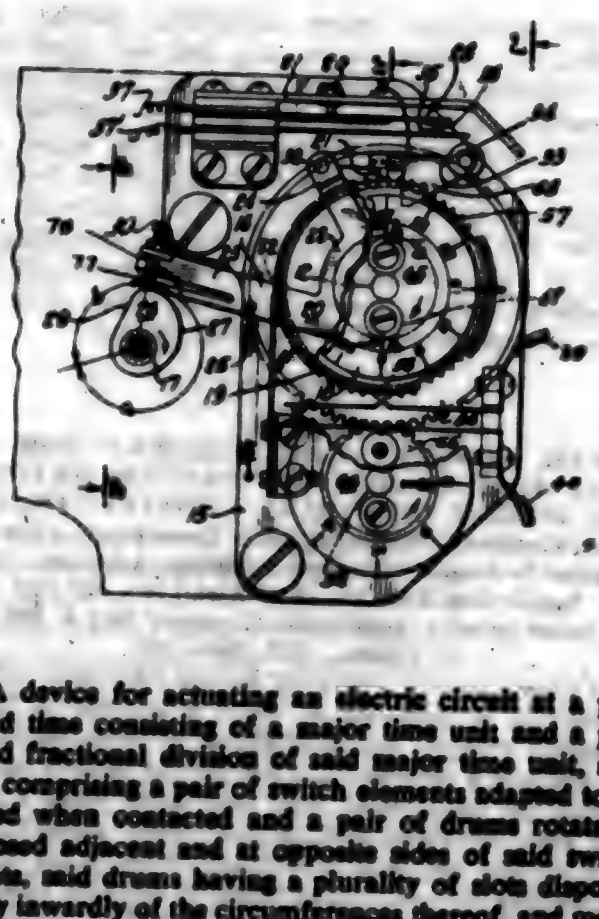
1. Contact current converter having terminals for electric currents at least one of which is adapted to receive alternating current, and comprising, in combination, an electrode and a counter-electrode having contact surfaces arranged for engagement with each other along a curvilinear path, certain of said surfaces being connected with said terminals, one of said electrodes being in the form of a revolvably mounted roller which is adapted to roll on the cooperating curvilinear contact surface, means for bodily rotating such roller about an axis spaced from the axis of revolution of the roller, and at the constant speed

between said frame and said lever on a line making an first strip, a second contact on said second strip and

in synchronism with the frequency of the alternating current, to cause such roller to roll continuously on the other electrode, the centrifugal forces arising from the rotation of said roller electrode about said axis operating to provide continuous contact pressure between the electrodes, and an additional mass associated with the rotating roller electrode for generating a centrifugal force which opposes the forces acting on the roller, the net force acting on the roller operating to hold the same in contact with the contact surface at any given circumferential velocity and being determined at any speed solely by the relative magnitude of said mass and of the mass of the roller, and by their relative arrangement.



2,866,021
CIRCUIT CONTROLLING DEVICE
Edward B. Hildum, Watchung, N. J., assignor to Calculagraph Company, Harrison, N. J., a corporation of New Jersey
Application July 18, 1957, Serial No. 672,797
8 Claims. (Cl. 200—38)



8. A device for actuating an electric circuit at a preselected time consisting of a major time unit and a preselected fractional division of said major time unit, said device comprising a pair of switch elements adapted to be actuated when contacted and a pair of drums rotatably juxtaposed adjacent and at opposite sides of said switch elements, said drums having a plurality of slots disposed radially inwardly of the circumferences thereof, and members for insertion in preselected slots of the first and second drums to project therefrom for actuating contact with the switch, means for rotating the first drum at a predetermined constant speed so that one revolution thereof will mark the passing of a predetermined major time unit and for rotating the second drum in synchronism with the first drum at a multiple of the speed of rotation of the first drum, to mark the passing of fractional divisions of the major time unit, so that the switch will be actuated when, on rotation of said drums, said projecting members will simultaneously contact the switch elements and thereby actuate the switch.

2,866,022
COMBINED SPEEDOMETER SIGNALLING DEVICE
Harvey Bruce Miminberg, Brooklyn, N. Y.
Original application March 16, 1955, Serial No. 494,713, now Patent No. 2,785,393, dated March 12, 1957. Divided and this application October 22, 1956, Serial No. 617,387
1 Claim. (Cl. 200—56)

In a vehicle speedometer having a casing within which a speed responsive mechanism, speed indicator dial and metal speedometer pointer actuated by said mechanism are contained, mechanism for closing an electrical circuit when said pointer reaches a certain position on said dial comprising a unitary construction and including an insulating annular hollow block rotatably mounted on the casing, pairs of closely spaced electric terminals carried on the block adjacent the peripheral edge of the block and insulated from each other, said pairs being disposed in opposed relation, conductors connecting the terminals of each pair to the posts of a source of electromotive force, a radial integral pointer on the periphery of said block, a knob fixed to said block and projecting outwardly of the casing for rotating the block and peripheral pointed to a selected position on the dial, a metal rotatable sleeve supported in the casing, the speedometer pointer being carried by said sleeve, and an elongated metal brush carried by the latter pointer extending on opposite sides thereof and being insulated therefrom, said opposed pairs of terminals being disposed in the path of movement of said metal brush whereby said brush is adapted to span and contact the individual terminals of each pair of terminals for closing a circuit therethrough with said speedometer pointer being isolated electrically from said circuit.

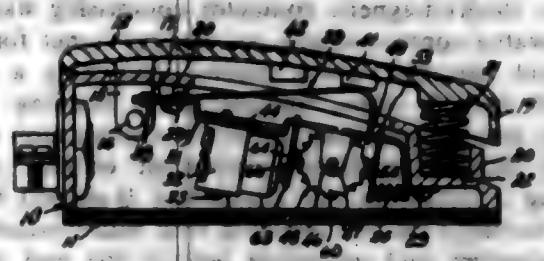
2,866,023
CONTROL APPARATUS
Russell N. Booth, Lakeville, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application November 5, 1956, Serial No. 620,242
9 Claims. (Cl. 200—61.06)

9. In an atmospheric moisture sensing device, a frame, a control element carried by said frame, a lever pivoted in said frame and adapted to actuate said control element, said lever having a portion made of temperature responsive bimetal, a humidity responsive element acting between said frame and said bimetal, and a spring acting

between said frame and said lever on a line making an acute angle with said lever and so disposed that said last

mentioned angle decreases as said element changes in length with a change in atmospheric moisture.

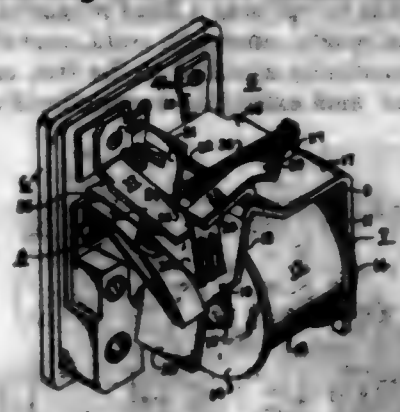
2,866,024
SWITCH
Delwin C. Glass, Fiskdale, Mass., assignor to The Linemaster Switch Corporation, Woodstock, Conn., a corporation of Connecticut
Application August 19, 1955, Serial No. 527,579
7 Claims. (Cl. 200—86.5)



1. In a foot operated switch of the type comprising a base and a foot treadle mounted for oscillating movement relative to the base between a raised and a depressed position, the combination comprising a ratchet wheel rotatably mounted on a fixed axis of rotation in the base, a pawl for operating the ratchet wheel mounted for oscillation with the treadle, a cam disc secured to the ratchet wheel for rotation therewith, an electrical switch mounted for actuation by the cam disc, a single holding disc separate from the same disc secured to the ratchet wheel for rotation therewith and having a plurality of notches equal in number to the teeth of the ratchet wheel, and a spring biased detent engaged in one of the notches of the holding disc to locate said cam disc in a predetermined rotated position in response to each depression of the treadle.

2,866,025
NON-BOUNCING SWITCHING APPARATUS
Don E. Morse, Morrison, Ill., assignor to General Electric Company, a corporation of New York
Application July 19, 1954, Serial No. 443,969
9 Claims. (Cl. 200—87)

1. In an electric switching device, a substantially rigid support, a first flexible conductive strip having its opposite ends fastened to said support so that its central portion is biased in outwardly bowed spaced relation to said support, a first contact on said central portion, a second flexible conductive strip extending alongside said first strip, a second contact on said second strip and means for actuating said second flexible conductive strip



to bring said second contact into engagement with said first contact at high velocity, said engagement initially stressing said first strip in compression.

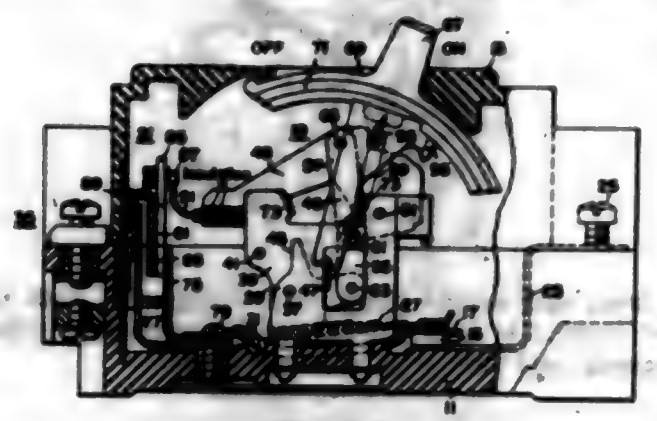
2,866,026
CIRCUIT BREAKER
Melvin Bingenheimer, Beaver, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 22, 1954, Serial No. 457,699
27 Claims. (Cl. 200—88)

1. In a circuit breaker having relatively movable contacts, a housing comprising a base and a cover, means releasable to effect automatic opening of said contacts, a latch portion normally engaging and retaining said releasable means, a trip device for effecting release of said latch portion comprising a bimetal element having one end supported on said cover and the other end free, a resilient member having one end rigidly secured to said bimetal element and having the other end free, said resilient member extending along the low-expansion side of said bimetal element and beyond the free end of said bimetal element, adjusting means on said cover adjacent the supported end of said bimetal element for applying a force to said support means supporting said bimetal element to thereby vary the position of said free end of the bimetal element, and said resilient member being movable by thermal bending of said bimetal element and transmitting the force exerted by the bimetal element to said latch portion and applying force to overcome the latch friction so as to initiate release of said releasable means.

2,866,027
CIRCUIT BREAKER
Albert R. Collerini, Beaver, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 4, 1956, Serial No. 614,816
9 Claims. (Cl. 200—88)

1. A circuit breaker comprising relatively movable contacts and means releasable to effect opening of said con-

tacts, a trip device comprising a bimetal element having one end fixedly supported and the other end free, electromagnetic means comprising a fixed magnetic member and a movable magnetic member, said movable magnetic member being rigidly attached to the free end of said bimetal element and extending longitudinally beyond the



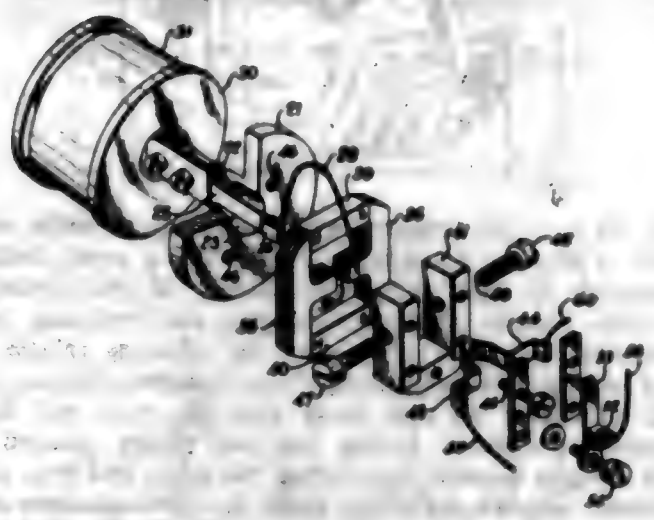
free end of said bimetal, a portion on said movable magnetic member beyond the free end of said bimetal for initiating release of said releasable means, thermal bending of said bimetal element causing said portion to effect release of said releasable means, and said electromagnetic means when energized bending said bimetal to cause said portion to effect instantaneously release of said releasable means.

2,866,028

ELECTRICALLY ACTUATED CONTACTOR

John L. Russell, Naugatuck, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut

Application June 14, 1955, Serial No. 515,373
13 Claims. (Cl. 200—93)



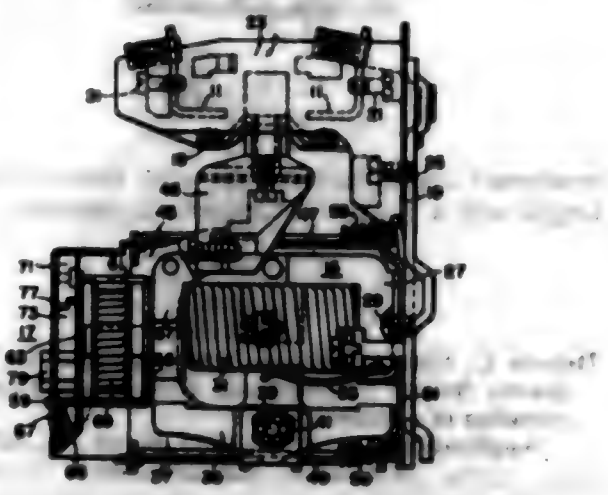
1. An electrically actuated contacting device, comprising a base member of non-magnetic electrically conducting material conformed about a central axis with an opening therethrough containing said axis and a stem portion extending perpendicularly from one side of said base member and at least in part aligned with said axis, means for producing a substantially constant magnetic field perpendicular to said axis and including opposed elongated polar structures supported by said base member on the side remote from said stem portion and juxtaposed to provide an air-gap including said axis, said polar structures extending in a plane substantially perpendicular to said axis, magnetomotive means extending in said plane between each of the opposed extremities of said polar structures to maintain a substantially constant flux in said air-gap, a ferromagnetic member mounted upon said stem portion and having a deflectable armature part projecting axially through said central opening and positioned in said air-gap for displacement therein in the direction of said flux, first contact means extending along opposite sides of said armature part and operable thereby, stationary contacts insulatedly mounted on said base member and juxtaposed to said first contact on opposite sides thereof and adapted to be alternatively engaged by said first contact with displacement of the same in respective senses from an intermediate position, and means for impressing a variable magnetomotive force longitudinally upon said ferromagnetic member and comprising a winding encircling a portion of said ferromagnetic member on said one side of said base member.

2,866,029

ELECTROMAGNETIC CONTACTOR

Vincent George Kranke, Granger, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application October 28, 1955, Serial No. 543,474
2 Claims. (Cl. 200—95)



1. An electromagnetic contactor comprising stationary and movable contact means, an electromagnet for operating said movable contact means comprising a fixedly mounted magnet yoke, an energizing winding and a movable contact operating armature, energization of said winding causing rectilinear movement of said contact operating armature to one position, a U-shaped bracket rigidly mounted on and movable with said contact operating armature and extending around the end of said magnet yoke, a latch member rigidly mounted on said bracket and movable with said contact operating armature, a tripping magnet comprising an E-shaped magnet yoke mounted on one end of said fixed magnet yoke within said U-shaped bracket, a tripping coil for energizing said tripping magnet, a latching armature pivotally mounted on said tripping magnet yoke and biased to engage said latch member within said U-shaped bracket when said contact operating armature is operated to said one position, and energization of said tripping coil causing said latching armature to disengage said latch member to permit movement of said contact operating armature to a second position and manual means supported on said latching armature for manually disengaging said latching armature.

2,866,030

RELAY

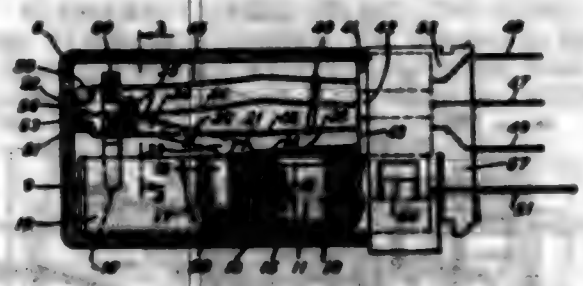
Henry J. Wirth, Jr., Millington, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application October 24, 1956, Serial No. 543,244
9 Claims. (Cl. 200—104)

1. An electromagnetic relay comprising a unitary stationary structure including a magnetic core having pole pieces, an energizing winding for said core, and a rigid insulating body in which said core and winding are embedded; a contact spring assembly including a plurality of cooperating contact springs; insulating members for

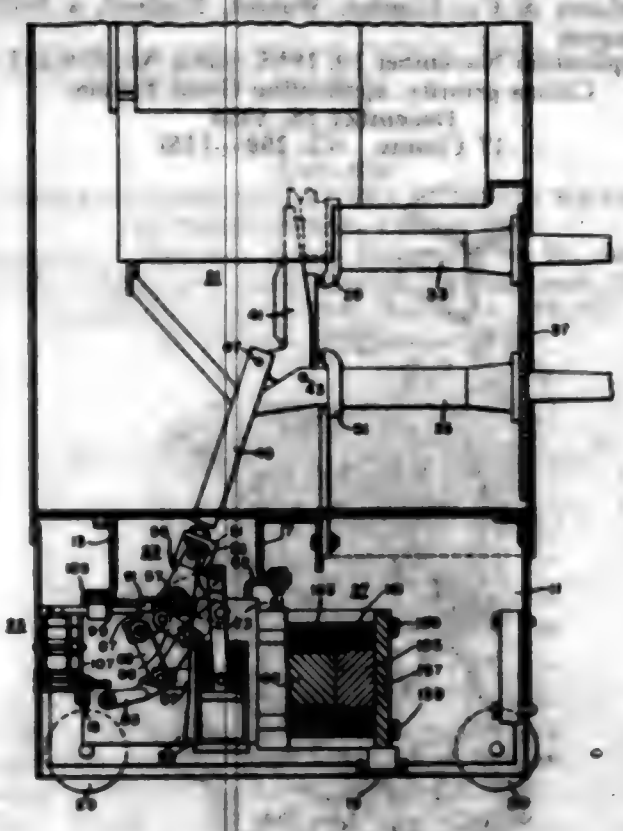
ing into and secured within said housing, a pair of thermally flexed members electrically connected respectively elements each arranged to be heated by the current in a respective one of said circuits and each secured at one

mounting said spring assembly and means for securing said members to said body; an armature; means for supporting said armature on said body in juxtaposition to said pole pieces; an operating card movable by said arma-



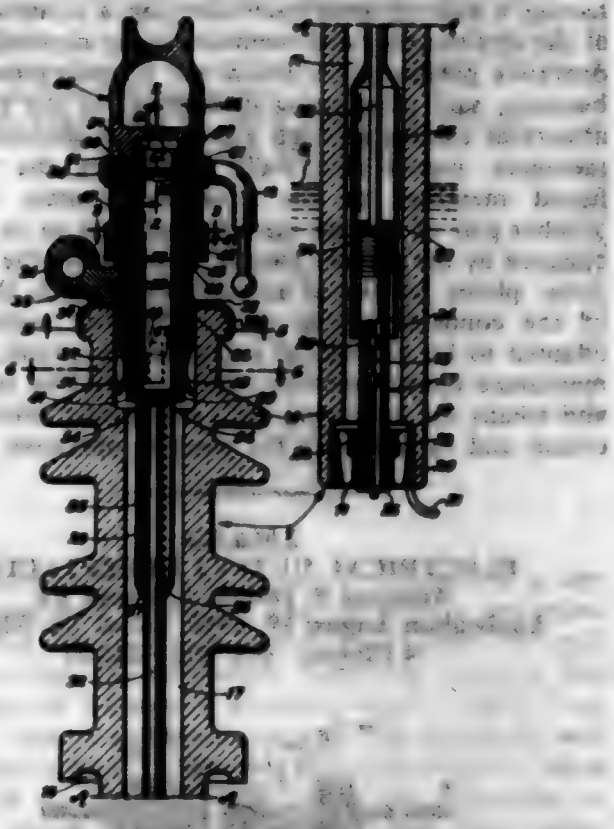
ture for selectively controlling certain ones of said cooperating contact springs; and means for energizing said coil to cause said armature to bridge said pole pieces and to move said operating card to control selected ones of said contact springs.

2,866,031
CIRCUIT BREAKER
Joseph D. Findley, Jr., Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 14, 1956, Serial No. 628,426
7 Claims. (Cl. 200—106)



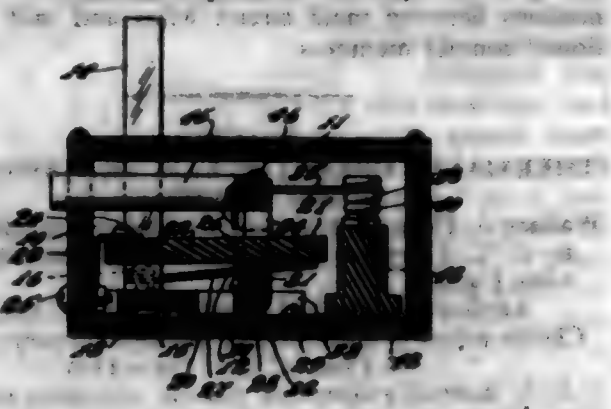
1. A circuit breaker comprising power-operated means for closing the breaker, said power-operated means causing shocks at the beginning and end of a closing operation, said shocks being transmitted in a predetermined direction, tripping means comprising a balanced latch operable to effect automatic opening of the breaker, said latch having its length disposed in the direction of said shock so as to prevent tripping movement of said latch in response to said shocks, and a pivoted armature operable to actuate said latch, said pivoted armature having its axis disposed in the direction of said shocks to prevent transmitting said shocks to said armature in a direction to cause tripping movement of said armature.

2,866,032
COMBINATION FUSE CUTOUT AND SWITCH
George R. McCloud, Cudahy, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application February 27, 1956, Serial No. 567,842
11 Claims. (Cl. 200—114)



1. An electric circuit protective device comprising a tubular insulating bushing having a first terminal at one end and a second terminal at the other end, an elongated conductive member insertable in said bushing and having a fixed portion in contact with said first terminal and a movable conductive portion initially spaced with respect to said second terminal, locking means engaging said fixed portion with said first terminal when said movable portion and second terminal are still in spaced relation, spring means biasing said movable portion toward said second terminal, latch means releasably engaged with said conductive member for restraining said movable portion in opposition to the force of said spring means, tripping means exteriorly of said bushing and coacting with said latch means to release said movable portion for advancing into contact relation with said second terminal under the influence of said spring.

2,866,033
ELECTRICAL OUTLET CONNECTORS
Ambrose P. Dillon, Ardmore, Pa.
Application February 17, 1955, Serial No. 488,804
9 Claims. (Cl. 200—115.2)



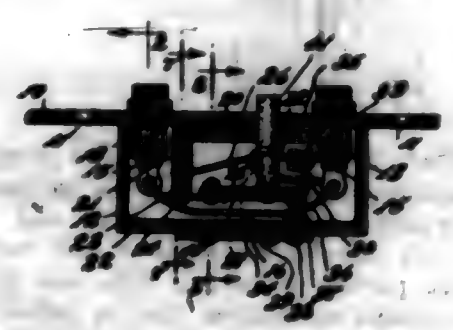
1. An overload circuit breaker of the character described comprising a housing, connection prongs extending outwardly from said housing and having parts extend-

end with said fixed contacts, a pivotally mounted trip lever adapted to be actuated by said element and pivotally

cross-sectional area thereof, and a silicious pulverulent filler inside said casing substantially separated from said

ing into and secured within said housing, a pair of thermally flexed members electrically connected respectively to internal portions of said prongs, a pair of members internally mounted for movement in said housing, one of said members being adapted to be shifted by the ends of the thermally flexed members, and the other member having a pair of arms each carrying a contact member at the end thereof, said members being normally held in operative position by a notch and lip engagement therebetween, said parts being disengaged by the passage of abnormal current through either of the thermally flexed members, means electrically connecting the thermally flexed members to the aforesaid contact members, another pair of contact members adapted to be normally engaged by the contact members carried by the aforesaid arms, plates positioned in slots into which the prongs of the connection plug of an electrical appliance are adapted to be inserted to complete the circuit, said last mentioned contact members being carried by said plates, and means for indicating the opening and closing of the circuit and for resetting the parts to operative positions.

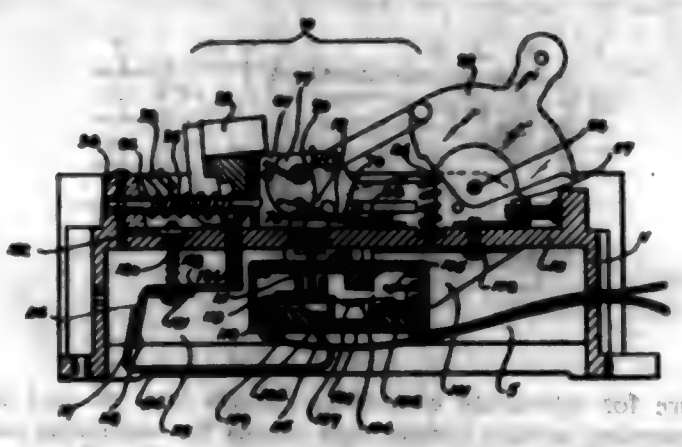
2,866,834
ELECTRICAL OUTLET RECEPTACLES
Ambrose P. Dillon, Ardmore, Pa.
Application August 19, 1955, Serial No. 529,533
4 Claims. (Cl. 200—115.5)



1. An electrical outlet receptacle of the character described for use in an electrical circuit having two sides and comprising a housing, prong receiving connection sockets mounted in said housing and having metallic parts extending therein, a pair of independently operable thermally flexed members, one on each side of the circuit, electrically connected respectively to the internal portions of the metallic parts of the prong receiving connection sockets, a member internally mounted for movement within said housing having portions independently engaged and adapted to be shifted by the operation of either of the thermally flexed members, said movable member having a trigger member carried thereby, a pair of spring arms controlled by said trigger member each having a contact member at the free end thereof, a pair of contact members adapted to be normally contacted electrically by the contact members carried by said spring arms, and means for establishing electrical connections between main circuit wires and said last mentioned contact members.

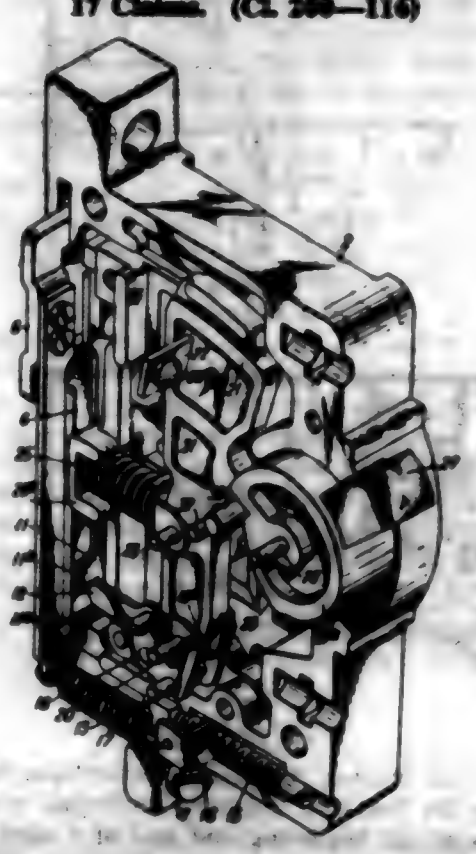
2,866,838
THERMALLY OPERATED ELECTRIC SWITCHING MECHANISMS
Wallace A. Colwyn, Brandon, Manitoba, Canada, assignor to C. T. Electrical Controls Limited, Brandon, Manitoba, Canada
Application April 21, 1955, Serial No. 502,991
Claims priority, application Canada February 17, 1955
10 Claims. (Cl. 200—116)

1. A thermally operated electric switching mechanism comprising a housing, a pair of independent electric circuits extending through said housing, a totalizing bar movable relatively to said housing, a pair of bimetallic elements each arranged to be heated by the current in a respective one of said circuits and each secured at one end to said housing while acting at its other end on a respective end of said totalizing bar, said bimetallic elements being such as to deflect in the same sense as each



other on being heated, a switch casing adjustably mounted on said housing, a switch mechanism in said switch casing, and an actuating member movably mounted in said switch casing for operation of said switch mechanism, said actuating member extending outwardly of said switch casing and being operatively coupled with a part of the totalizing bar intermediate its ends.

2,866,836
ELECTRIC CIRCUIT BREAKERS
Edward Coleman, Walsall, England, assignor to J. A. Crabtree & Co. Limited, Walsall, England, a British company
Application November 30, 1955, Serial No. 550,132
Claims priority, application Great Britain
December 15, 1954
17 Claims. (Cl. 200—116)



1. An electric circuit breaker comprising a casing, a pair of fixed contacts disposed therein, a bimetal element connected to said fixed contacts, a handle mounted on such casing, a flat insulating plate disposed longitudinally of said casing and extending between said fixed contacts, a mounting disposed between the ends of said casing for pivotally supporting said plate, an aperture in one end of said plate, a closely fitting moving contact bridge member extending through said aperture and engageable at each

2,866,841
THERMOSTAT WITH TERMINAL CLIPS THEREON

contact means comprising a plurality of pivoted main

to cause tripping movement of said armature.

ing outwardly from said housing and having parts extend-

end with said fixed contacts, a pivotally mounted trip lever adapted to be actuated by said element and pivotally engageable with the other end of said plate.

2,866,037

ELECTRIC CURRENT LIMITING FUSE

Vincent N. Stewart, Springfield, Pa., assignor to General Electric Company, a corporation of New York

Application December 30, 1954, Serial No. 478,687
15 Claims. (Cl. 200—138)

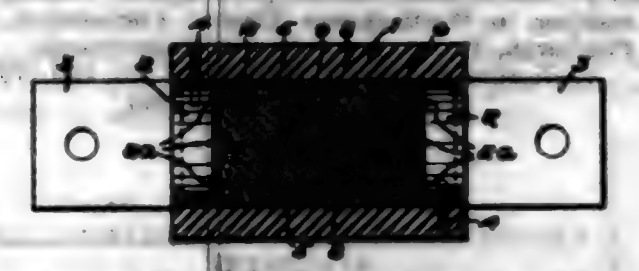
1. In an electric current limiting fuse, a single undivided enclosing casing provided with a pair of electrically conductive terminals in spaced apart relation, a plurality of elongated fuse links mounted in said casing between said terminals in substantially parallel spaced-apart relation, said fuse links having oppositely disposed faces in substantially flatwise parallel relation, each said fuse link having a plurality of serially related portions of reduced cross-sectional area in a single eccentric region and adjacent links being oppositely disposed in said casing thereby to position the eccentric regions of adjacent links in longitudinally offset relation with the reduced region of each link lying in parallel spaced juxtaposition to an unreduced region of an adjacent link, and a body of pulverulent arc extinguishing material filling said casing and directly embedding said links.

2,866,038

CURRENT-LIMITING FUSES WITH INCREASED INTERRUPTING CAPACITY

Frederick J. Kozacka, South Hampton, N. H., assignor to The Chase-Shawmut Company, Newburyport, Mass.

Application May 9, 1957, Serial No. 658,162
10 Claims. (Cl. 200—120)



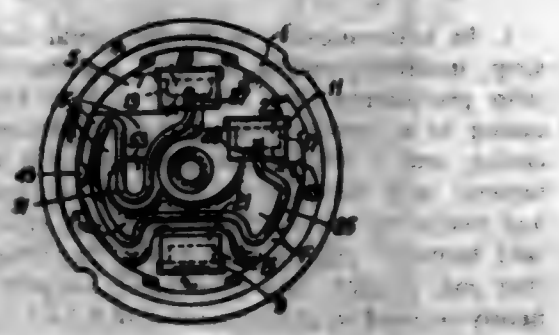
1. A small clearing ratio current-limiting fuse comprising a tubular casing of insulating material, a pair of conductive terminal elements closing the ends of said casing, a ribbon fuse link of a high conductivity low fusing energy metal conductively interconnecting said pair of terminal elements, said fuse link having at least one point of reduced cross-sectional area situated between the ends thereof, a pair of plates adapted to abstract large amounts of heat from the arc formed at said point of reduced cross-sectional area, said pair of plates comprising silicious material in disperse form and an organic binder for said material, each of said pair of plates being arranged at a different side of in immediate heat-exchanging relation with said link and covering said point of reduced cross-sectional area thereof and defining paths for the escape of products of arcing from said point of reduced cross-sectional area substantially parallel to the plane defined by said link, a link-destroying low fusing point metal on said link adjacent said point of reduced cross-sectional area thereof, and a silicious pulverulent filler inside said casing substantially separated from said point of reduced cross-sectional area by said pair of plates.

2,866,039

HEATER-TYPE THERMOSTATIC SWITCH

Henry David Epstein, Cambridge, Mass., assignor to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts

Application April 25, 1957, Serial No. 655,753
7 Claims. (Cl. 200—122)



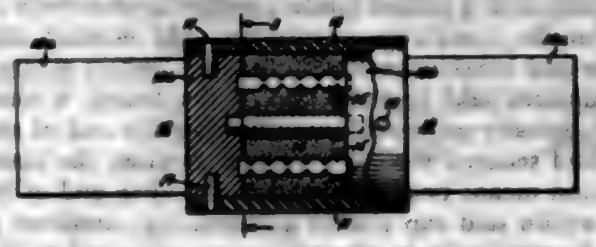
1. A heater-type thermostatic switch comprising a support, a thermostat carried on said support, a serpentine heating wire carried on the support and located between the support and the thermostat, said wire having a first side facing the thermostat in unobstructed radiant heat-exchange relation and having second side facing the support, a loop included in the wire, said loop normally being more likely to burn out than any of the remainder of the wire, and a localized projection from said support extending toward that side of the loop which is opposite the side that is in heat-exchange relation to the thermostat, said projection, without interfering with direct radiation between the wire and the thermostat, being adapted more nearly to equalize the burnout characteristics of the loop with those of the remainder of the wire.

2,866,040

LOW-VOLTAGE CURRENT-LIMITING FUSE

Wilfred F. Sheets, Lansdowne, Pa., assignor to General Electric Company, a corporation of New York

Application September 13, 1957, Serial No. 683,864
6 Claims. (Cl. 200—131)



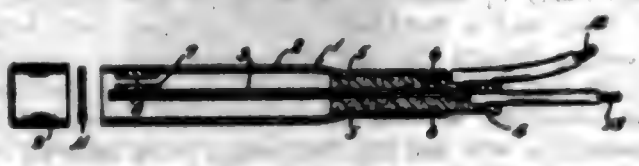
1. In an electric current-limiting fuse: an enclosing casing provided with a pair of electrically conductive terminals in spaced apart relation; an elongated fuse link mounted in said casing between said terminals; said link having a plurality of longitudinally spaced apart tapered portions of minimum cross-sectional area; each one of said tapered portions being defined by a pair of laterally opposed notches in the link; each one of said notches having two inclined sidewalls enclosing an angle substantially within the range of 80 to 100 degrees and an apex comprising the junction of said inclined sidewalls, whereby the minimum cross-sectional area of each tapered portion is defined by the apexes of the associated pair of laterally opposed notches; and a body of pulverulent arc-extinguishing material filling said casing and directly embedding said link.

necting one end of the operating lever at all times with the toward and away from said portion of the other contact

2,866,841
THERMOSTAT WITH TERMINAL CLIPS THEREON
Saul V. Doll, Akron, Ohio, assignor to Mechanical Industries Production Company, Akron, Ohio, a corporation of Ohio
Application October 28, 1957, Serial No. 692,840
4 Claims. (Cl. 200—138)

1. In a thermostat, a tubular metal casing, a bimetal strip, insulating means about a portion of said bimetal strip positioning said bimetal strip to extend into said casing as a cantilever therein and insulating it from the casing, and a terminal clip conductively secured to said bimetal strip between the strip and the insulating means and extending beyond said casing and positioning means, said terminal clip having a lead receiving loop at the free end thereof, said loop being adapted to be permanently secured in engagement with a lead inserted therein.

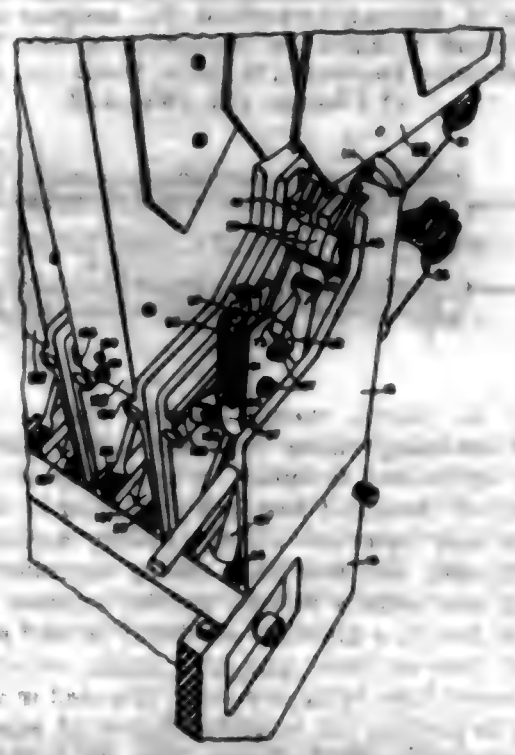
2,866,842
THERMOSTAT HAVING END CAP THEREON
Russell L. Schwing, Akron, Ohio, assignor to Mechanical Industries Production Company, Akron, Ohio, a corporation of Ohio
Application November 12, 1957, Serial No. 695,755
2 Claims. (Cl. 200—138)



1. A thermostat comprising a seamless tubular conductive metal casing, a bimetal strip extending axially into said casing from one end thereof to a position close to the opposite end thereof and clamped at said one end of the casing to the casing in sealed relation thereto by a tubular body of insulating material therebetween, said bimetal strip having beyond its clamped portion a cantilever portion extending toward the opposite end of the casing in spaced relation to the casing, contact means conductively secured to a wall of the casing near said opposite end, a second contact means conductively mounted on the cantilever portion of said bimetal strip for make and break contact with the first contact means closely adjacent said opposite end of the casing, a metal cap telescopically positioned over the opposite end of said casing and secured thereto by solder to close the casing, insulation means positioned across the open end of the casing within said cap closely adjacent the cantilever end of said bimetal strip to prevent arcing and insulate the contacts from heat radiation through said cap, and terminal means conductively and directly connected to said casing and said bimetal strip.

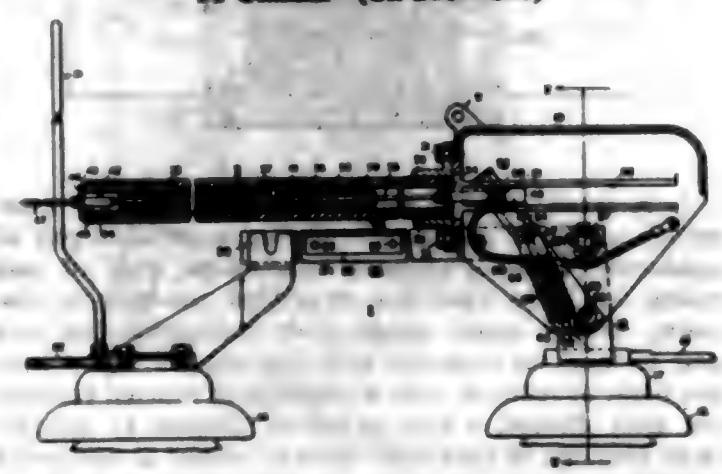
2,866,843
CIRCUIT BREAKER
Robert Charles Dickinson and Paul Olmsen, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 23, 1955, Serial No. 530,863
13 Claims. (Cl. 200—146)

1. In a circuit interrupter, a U-shaped housing of one-piece molded insulated material, a pair of spaced terminal studs mounted on and extending into said U-shaped housing, stationary contact means mounted in said U-shaped housing on one of said studs, said stationary contact means comprising a plurality of pivoted main contact members, a pair of movable switch members pivotally mounted in said U-shaped housing on the other one of said studs, movable contact means carried by said pair of movable switch members cooperating with said stationary contact means, said movable contact means comprising a main movable contact rigidly



mounted between said switch members and having portions extending laterally in opposite directions beyond said switch members engaging all of said stationary main contact members, a movable arcing contact pivotally supported between said movable switch members cooperating with said stationary arcing contact, and an arc chute hinged on said stationary contact means adjacent said U-shaped housing and movable to a position to provide access to said contact means.

2,866,844
CIRCUIT INTERRUPTING DEVICE
Earl F. Beach, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 4, 1954, Serial No. 461,170
11 Claims. (Cl. 200—146)



1. A circuit interrupting device including spaced terminals, a rotatable bridging contact assembly supported for rotation around an axis on one terminal and adapted to be swung around said axis into contacting bridging engagement with the other spaced terminal to complete the circuit between the terminals, an auxiliary interrupting device having a movable auxiliary contact, an operating lever pivotally supported on a movable part of the contact assembly at a point off of said axis which rotates during the opening and closing operations, means positively con-

2,866,848
SWITCH CONTACT

voltage supplied thereto comprising means to regulate the voltage supplied to said motor, a simulated throttle op-

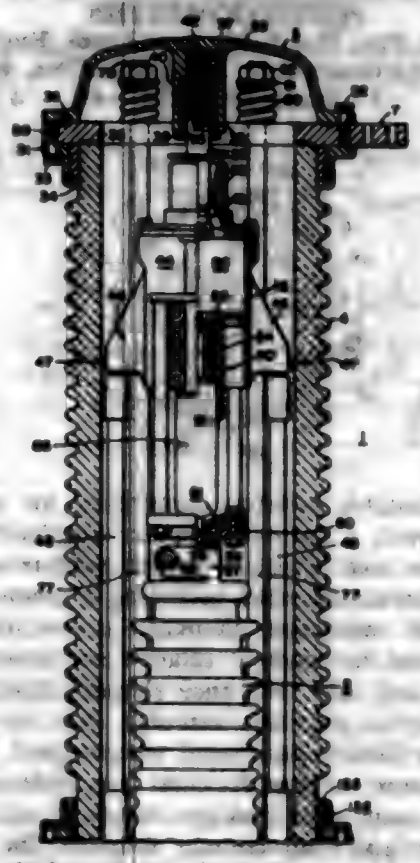
necting one end of the operating lever at all times with the movable auxiliary contact, and means biasing the operating lever to one side or the other of the axis of its pivotal support.

2,866,845

CIRCUIT INTERRUPTERS AND CONTACT ARRANGEMENTS THEREFOR

Winthrop M. Leeds, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application December 30, 1955, Serial No. 629,684
11 Claims. (Cl. 200—148)



5. A circuit interrupter including a movable contact separable from a relatively stationary contact to establish an arc, a movable guide rail, means electrically connecting said movable guide rail to said movable contact, a relatively stationary guide rail spaced from said movable guide rail, and a contact roller assembly including one or more contact rollers disposed in the space between the relatively stationary and movable guide rails.

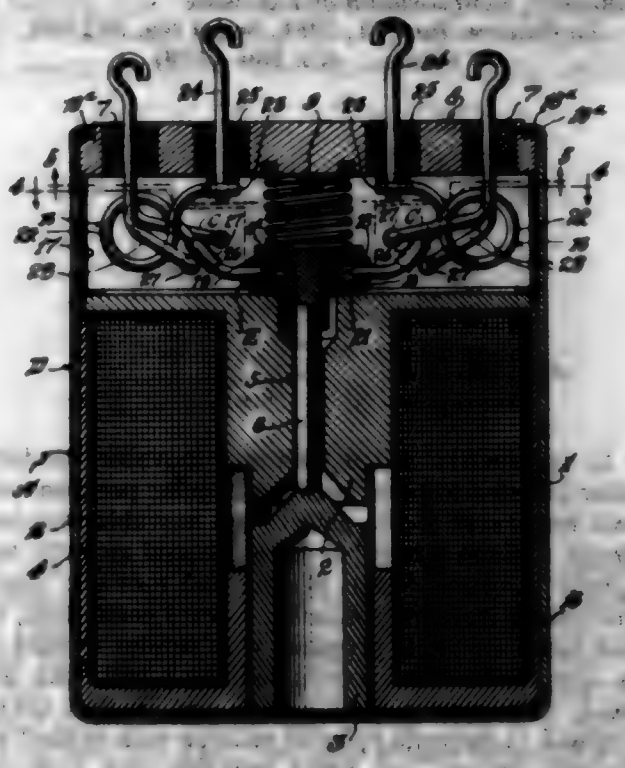
2,866,846

RELAY WITH SELF-CLEANING CONTACT ELEMENTS

George J. Paulopes, Ormond Beach, Fla.

Application March 23, 1956, Serial No. 573,379
14 Claims. (Cl. 200—164)

1. An electric switch including two contact elements having relatively movable portions each of which carries a contact surface, means mounting said elements and actuating means movable alternately in opposite directions and connected to at least one of said elements for relatively moving said contact surfaces into and out of mutual contact, respectively, one of said elements having its contact surface elongated and disposed obliquely to said directions of movement of the actuating means, said mounting means and said actuating means providing for overtravel and relative sliding of said contact surfaces after movement thereof into mutual contact, and there being resilient means associated with at least one of said contact elements providing for mutual contact of said contact surfaces with a wedge action under constantly increasing yielding pressure during said relative sliding of the contact surfaces, said one contact element having one end movable relatively to its other end and toward and away from said portion of the other contact element, and said resilient means comprising a spring portion in said one element intermediate the ends thereof, said oblique contact surface being located between said spring portion and the first-mentioned end of said one element, and said actuating means being connected to said first-mentioned end of said one element.

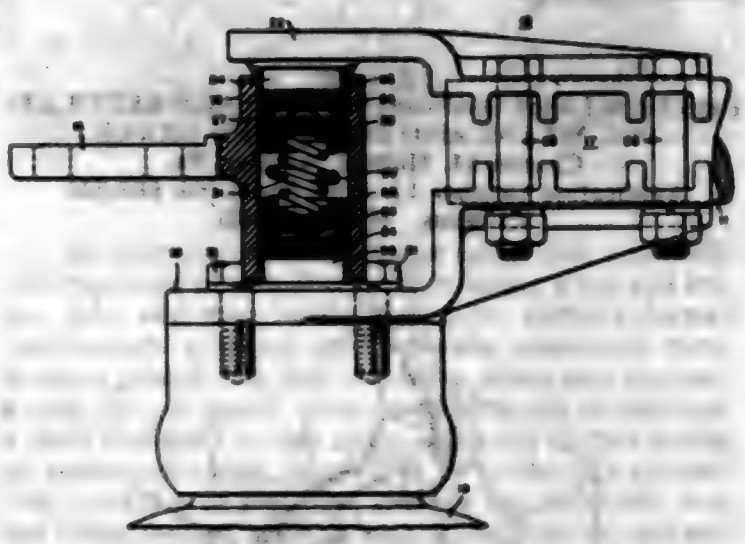


2,866,867

MEANS FOR CONDUCTING CURRENT BETWEEN RELATIVELY MOVABLE MEMBERS

William H. Stuellein, North Vermilion Township, Allegheny County, and James H. Sprow, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

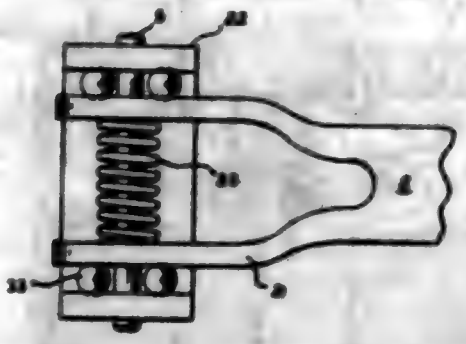
Application December 29, 1955, Serial No. 556,139
10 Claims. (Cl. 200—166)



1. In an electric device, in combination, a first conducting member, a second conducting member movable relative to the first member and having a portion disposed adjacent the first member, a compressed mass composed of a plurality of fibers of metal having a good conductivity, a member having a sloping surface engaging said mass, and resilient means for applying pressure on the member having a sloping surface to force said compressed mass into engagement with both of said conducting members, whereby current is conducted between said conducting members through said compressed mass.

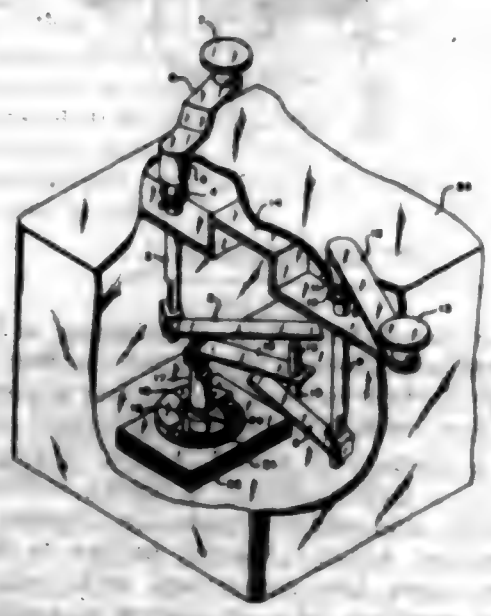
a voltage therefrom, and an epoxy resin coating covering opening in said plate, said non-conductive plate being

2,866,848
SWITCH CONTACT
Leonard A. Hulteen, South Milwaukee, and Wesley J. Gorder, Cudahy, Wis., assignors to McGraw-Edison Company, a corporation of Delaware
Application June 21, 1956, Serial No. 592,968
5 Claims. (Cl. 200—170)



1. In an electric switch having a movable conductive member adapted to pivot between angular positions about an axis transverse to the path of the movable member, a relatively stationary member on which said movable member pivots, resilient means biasing said movable member and relatively stationary member toward each other, each of said members being provided with similar arcuate converse companion cam grooves defining a ball track therebetween, each groove having deep and shallow portions superposed in opposite endwise relation with respect to its companion groove and being movable past each other about said axis for alternately placing the deep and shallow portions in coincidence with each other, a ball confined by said companion cam grooves and adapted to be rolled by rotational movement of said members between limits established by angular coincidence of said deep and shallow portions of said grooves, crest means in at least one said groove separating said deep and shallow portions so that the ball positively positions in one or the other portion when the movable conductive member is in a corresponding angular position, said ball increasing the pressure on said members when in said shallow portion corresponding to an angular position of said movable member and decreasing the pressure when in said deep portions corresponding to another angular position of said movable member.

2,866,849
CONTROLLER COMPRISING VOLTAGE REGULATING MEANS AND SIMULATED BRAKE
Charles M. Maibie, Ambler, Pa.
Application October 14, 1957, Serial No. 689,825
5 Claims. (Cl. 201—48)



1. A controller for electric motor driven model vehicles wherein said motor's speed is a function of the voltage supplied thereto comprising means to regulate the voltage supplied to said motor, a simulated throttle operatively connected to said voltage regulating means operative only to increase said voltage, and a simulated brake operatively connected to said voltage regulating means operative only to decrease said voltage, whereby said simulated throttle appears to have the function of a full-scale vehicle throttle and said simulated brake appears to have the function of a full-scale vehicle brake.

2,866,850
VARIABLE ELECTRICAL RESISTANCES AND POTENTIOMETERS
Paul X. Fox, Horsforth, near Leeds, England
Application October 11, 1954, Serial No. 461,592
3 Claims. (Cl. 201—48)

1. An adjustable resistor comprising an annular resistance element; a contact member angularly displaceable about an axis concentric with said resistance element, said contact member including a contact slidingly engaging said resistance element; a revoluble control shaft connected to produce relative movement between said contact and said resistance element during rotation of said shaft; a generally circular cam concentrically mounted and fixedly positioned with respect to said resistance element; a cam follower circumferentially engaging said cam; and linkage means connecting said cam follower and said contact member for displacing said contact in accordance with the circumferential shape of said cam during the course of said relative movement, the radius of said cam being different at different portions of its circumference to produce a predetermined non-linear relationship between angular displacements of said shaft and the position of engagement of said contact with said resistance element.

2,866,851
CAST RESIN COMMUTATING RHEOSTAT
Russell A. Stiff, Waterford, and Elden B. Heft, North East, Pa., assignors to General Electric Company, a corporation of New York
Application September 30, 1955, Serial No. 537,858
5 Claims. (Cl. 201—48)

1. A rheostat comprising a ceramic core having a resistance wire wound thereon, a plurality of low impedance commutator bars each being soldered to and supported on an outer surface of one separate turn of said wire to provide an annular communicating surface, terminals connected respectively to the ends of said wire and connectable to a voltage source, an electric contact mechanism for contacting one of said commutator bars to tap

2,866,855
TANDEM CONCENTRIC VARIABLE RESISTANCE DEVICE

2,866,857
PRINTED ELECTRICAL RESISTOR

having one end movable relatively to its other end and mass.

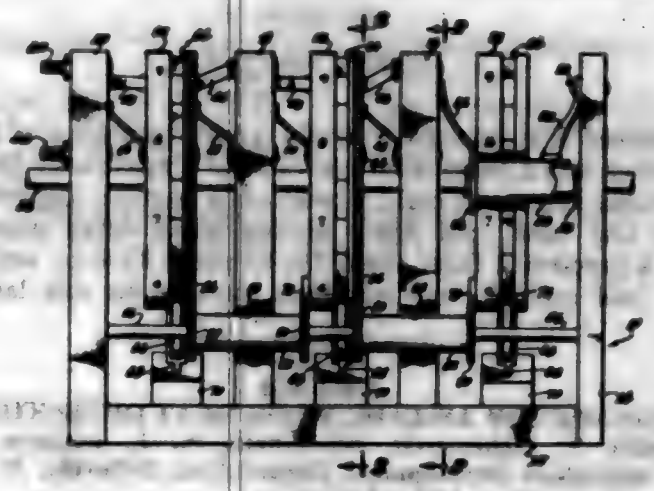
a voltage therefrom, and an epoxy resin coating covering said core and said wire to insulate said wire entirely from corrosion and from electric shunting between individual turns.

2,866,952

ELECTRIC DIGITAL READOUT DEVICE

Marion E. Bourns, Riverside, and Edward D. O'Brien, Anaheim, Calif., assignors to Bourns Laboratories, Inc.

Application November 10, 1955, Serial No. 546,106
8 Claims. (Cl. 201—48)



1. A new and improved digital readout device which includes: a base; a rotatable shaft supported above said base; a first readout wheel having front and rear sides secured to said shaft so as to rotate therewith; a first support having front and rear sides attached to said base so as to be located with its front side adjacent the rear side of said first readout wheel; a second readout wheel having front and rear sides rotatably mounted on said shaft with the front side of said second readout wheel positioned adjacent said rear side of said first support; a second support having front and rear sides attached to said base with its front side located adjacent said rear side of said second readout wheel; means for turning said second readout wheel through an angle of less than 360° when said shaft is rotated through an angle of 360°, causing said first readout wheel to be rotated through an angle of 360°; contact means located on the front sides of said supports; contact arm means secured to the rear sides of said readout wheels, said arm means engaging certain of said contact means depending on the position of said readout wheels; electrical means connecting said contact means on said first support with said contact arm means on said second readout wheels; and means for supplying current to said contact arm means on said first readout wheel.

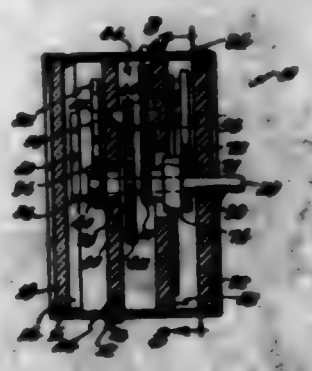
2,866,953

COMBINED POTENTIOMETER AND READ-OUT CONSTRUCTIONS

Marion E. Bourns, Riverside, Calif.

Application January 30, 1956, Serial No. 561,022
3 Claims. (Cl. 201—48)

1. A combined potentiometer and read-out construction which comprises: a housing having an end; a rotatable shaft positioned within said housing so as to project therefrom; a glass plate secured within said end of said housing; a dial secured within said housing so as to be spaced from said glass plate; means defining a central opening within said dial, said shaft extending through said opening in said dial; a first hand secured to said shaft between said dial and said glass plate; a non-conductive plate having a central opening formed therein positioned within said housing with said shaft passing through said central opening in said plate, said non-conductive plate being spaced from said dial and secured to said housing; an arcuate resistance element located upon said non-conductive plate around said shaft; a ring shaped electrical return located upon said non-conductive plate around said shaft; a conductive contact arm secured to said shaft so as to rotate therewith, said contact arm being insulated



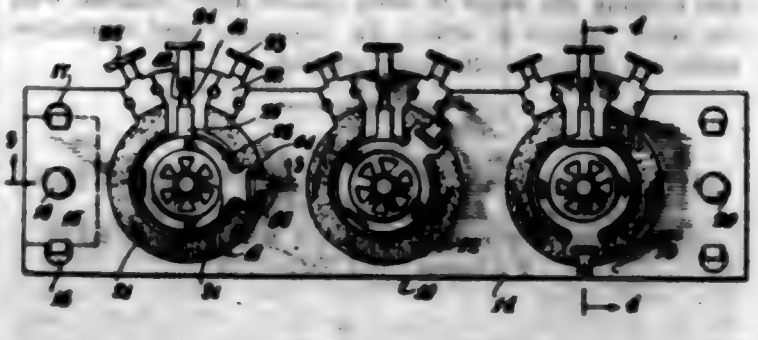
from said shaft and including resilient contact members engaging said resistance element and said return; a second hand rotatably mounted with respect to said shaft, said second hand being located between said glass plate and said dial; and gear means connected to said second hand and said shaft for rotating said second hand at a different rate from said first hand, said gear means including a gear train mounted between said dial and said plate.

2,866,854

MULTIPLE VARIABLE VOLUME CONTROL STRIP

Berton A. Purdy, Frankfort, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Application September 16, 1955, Serial No. 534,813
4 Claims. (Cl. 201—35)



1. An electrical resistance device comprising a phenolic insulative base of thin cross-section having a top and bottom side, said base having a circular aperture formed therethrough, a carbon resistive wafer concentric thereabout, a ground ring also concentric about said aperture, a rotor for said device riding on said top side of said base, a shaft connected to said rotor, said rotor further having an annular extension adapted to fit within said aperture with a surface of the rotor abutting said insulative base and riding thereon, the side wall of said aperture and said extension forming a bearing socket precluding wobble on the rotation of said shaft, a round secondary shaft connected to said extension, a wiper assembly having an inner ring, a contact arm integrally connected thereto with said wiper assembly joined in a hexagonal fashion to said secondary shaft by means of a plurality of separated fingers to turn with said rotor and to wipe said resistive track, said wiper assembly also riding on said ring, and terminals for said wiper assembly and said resistive track adapted to connect said device in an electrical circuit, one of said terminals being unitarily connected to and rotating with said assembly.

beams having flexible portions adjacent the top and bottom of the holes and relatively rigid longitudinal portions

provided with ribs positioned as follows, an E-shaped

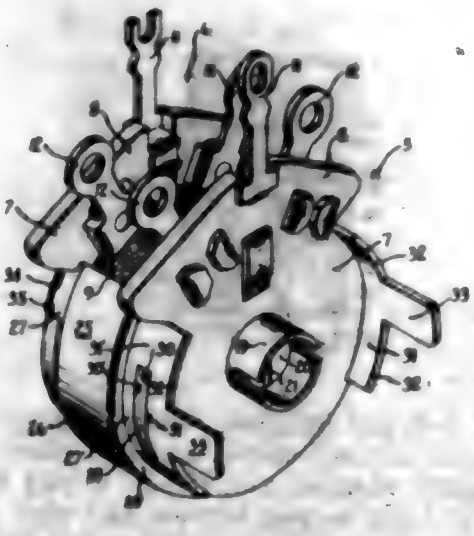
hicles wherein said motor's speed is a function of the

connection to a voltage source, an electric contact mechanism for contacting one of said commutator bars to tap

2,866,855
TANDEM CONCENTRIC VARIABLE RESISTANCE DEVICE

Mervin B. Arismun, William C. Fieldbinder, and Wayne A. Burden, Elkhart, Ind., assignors to Chicago Telephone Supply Corporation, Elkhart, Ind., a corporation of Indiana

Application January 6, 1955, Serial No. 707,223
13 Claims. (Cl. 201—55)

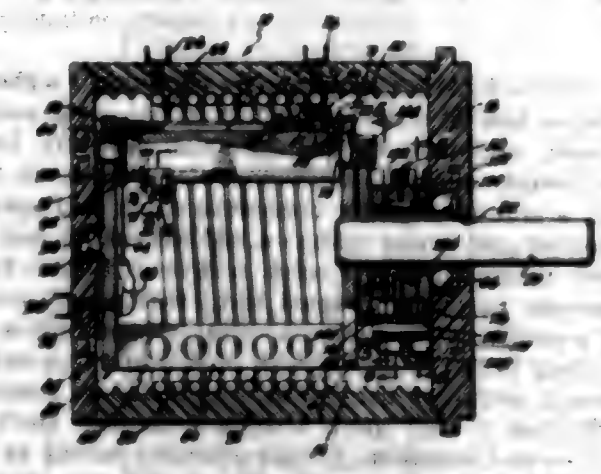


1. A variable resistance device of the concentric tandem type wherein two variable resistors are disposed in axially spaced coaxial relationship and each such resistor comprises the following instrumentalities—an arcuate resistance path and a conductor path parallel thereto on one side of a base, and a rotary contactor having portions thereof bearing upon said paths to traverse the same as the contactor is rotated, and thereby electrically bridge said paths at different points along the length thereof, characterized by the fact that: said instrumentalities of the two variable resistors are contained within a housing having end walls formed by the bases of the two resistors and a side wall joined to the edge portions of the bases and holding the bases in fixed spaced apart relation with the sides thereof at which the resistance and conductor paths are located facing one another.

2,866,856
MULTIPLE TURN STOPLESS POTENTIOMETER

Myron E. Lippman, Northridge, Calif.

Application September 12, 1955, Serial No. 533,715
9 Claims. (Cl. 201—56)



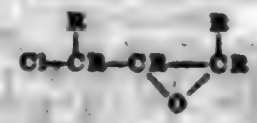
1. In a multiple turn helical potentiometer the combination of: a housing; a helical resistance mounted in said housing; an actuator mounted in said housing, a yoke rotatable in said housing by said actuator; a contact carrier mounted for rotatable movement on and also relative to said yoke; and contact means mounted on said carrier and rotating therewith, said contact means being free to move longitudinally along said carrier.

2,866,857
PRINTED ELECTRICAL RESISTOR

David B. Peck, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

No Drawing. Original application May 16, 1952, Serial No. 288,305, now Patent No. 2,795,680, dated June 11, 1957. Divided and this application April 4, 1955, Serial No. 499,339
7 Claims. (Cl. 201—63)

1. A printed resistor which comprises an insulating base and an adherent layer consisting of a cross-linked epoxy resin binder obtained by condensing a bisphenol with an epoxide of the general formula

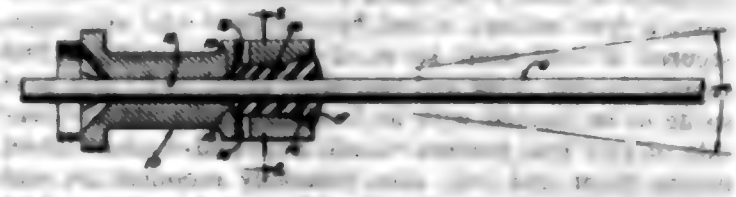


wherein R is selected from the group consisting of hydrogen and a lower alkyl radical, and a mixture of finely divided silver and carbon conducting particles deposited on said base, said finely divided silver being present in a proportion from about 5% to about 85% by weight of said mixture, and terminals attached to said layer.

2,866,858
CONNECTOR ASSEMBLY FOR HEAT DETECTORS

Lester V. Hebenstreit, Bloomfield, N. J., assignor to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey

Application February 18, 1954, Serial No. 411,217
4 Claims. (Cl. 201—63)



1. In a connector assembly of the class described, a tubular closure member having a bore extending therethrough and having an enlarged bore section at the free end of said bore of a diameter about twice that of said bore, a bendable metallic tube extending through said bore and being rigidly supported therein and extending outwardly beyond said enlarged bore section more than ten diameters thereof, and a sleeve of heat-resistant cushioning material fitted into said enlarged bore section in snug engagement with said tube for a distance about equal to three diameters of said tube.

2,866,859
SLOTTED TYPE MULTIPLE BENDING BEAM

Eric Lehmins, Cambridge, Mass., assignor to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania

Application June 1, 1956, Serial No. 588,775
5 Claims. (Cl. 201—63)

1. A force measuring device comprising, in combination, an elongated member having two transverse holes connected by a slot so as to provide upper and lower

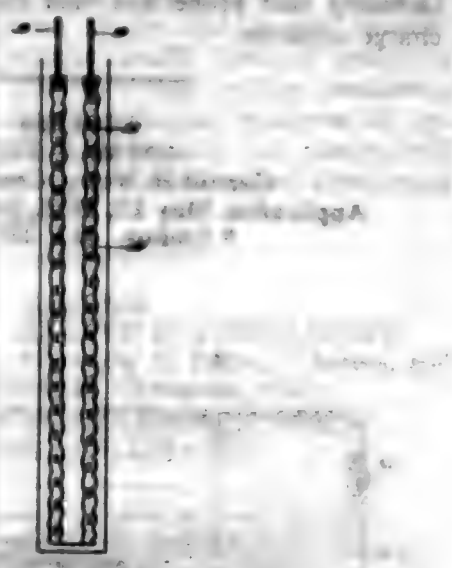
beams having flexible portions adjacent the top and bottom of the holes and relatively rigid longitudinal sections between the upper halves of each hole and between the lower halves of each hole, said holes being disposed inwardly of the ends of the member so as to provide end portions rigidly connecting the corresponding ends of the beams together, means for anchoring one of the rigid ends as a base and the other end being free to move by flexure of the beams upon application of a force at said free end, and means for sensing the deflection of the beams to determine the applied force.

2,866,868

ELECTRICAL RESISTANCE THERMOMETER OF LOW HEAT CAPACITY

August Berthel and Alfred Hüsser, Hanau (Main), Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

Application February 4, 1955, Serial No. 486,897
2 Claims. (Cl. 201—63)



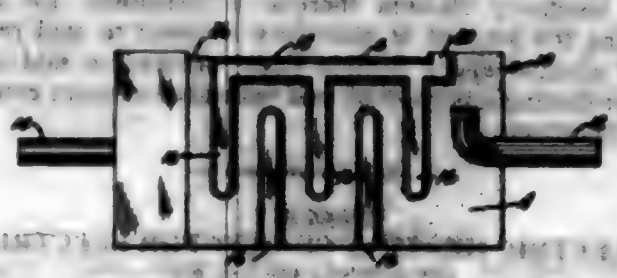
1. In an electrical resistance thermometer of low heat capacity for measurement of high temperatures, a measuring resistance winding supported only by a thin coating comprising an insulating ceramic material which covers and adheres directly to the winding on all sides and the winding is thereby held fixedly within such coating, said ceramic material being coated with a layer of at least one metal of high heat-conducting capacity.

2,866,861

TORTUOUS CONDUCTANCE PATH RESISTOR

George Eick, Columbus, Nebr.

Application May 3, 1956, Serial No. 582,576
1 Claim. (Cl. 201—73)



A resistor body for use in electronic circuits of substantially prismatic shape including two parallel sides hereinafter referred to as sides A and B, and two opposite edges hereinafter referred to as C and D, side A having an electrical inlet and side B having an electrical outlet, said inlet and outlet being substantially positioned at opposite ends of sides A and B, said resistor body being provided with ribs positioned as follows, an S-shaped rib positioned on surface A, all portions of which are spaced from the edges of surface A except one point which contacts surface C, a raised portion throughout the width of surface A and disposed on the end thereof opposite the electrical inlet, two rib members extending from the edge of surface D and interposed between the bars of the figure S but contacting no part thereof; surface B being provided with parts similar and analogous to those on surface A but bearing the relationship of mirror images; surface C having a raised portion throughout its width at each end thereof; all of said before mentioned ribs being of accurate and precisely known shape and size in cross-section and being lapped away at the outermost portions as seen in cross-section whereby a group of such resistors can be simultaneously lapped for removing the outermost portions of said ribs to produce a group of resistors having conductance characteristics which are substantially the same, all of said raised portions and the whole of surface D being lapped, a carbon deposit on all unlapped portions of said resistor whereby a tortuous conductive pathway is formed from side to side progressively along surface A from the inlet, backward along surface C, progressively forward and from side to side on surface B to outlet thereon.

2,866,863

ELECTRICAL HEATING ELEMENTS

George E. Fisher, Ambler, Pa., assignor to Trent, Inc., Philadelphia, Pa., a corporation of Delaware

Application March 5, 1956, Serial No. 569,435
1 Claim. (Cl. 201—63)

In a heating element for high temperature furnaces, a metal electrical resistance arranged in the form of an elongated hollow tube, means hermetically sealing said tube, compacted insulating material in said tube, the insulating material being hermetically sealed in the tube by said sealing and electrical power terminals connected to and disposed adjacent each end of said tube.

2,866,863

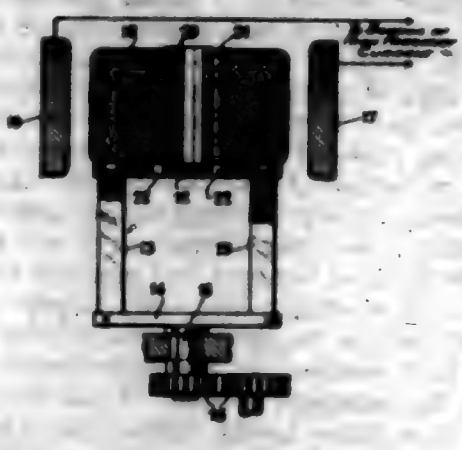
DRYING OF YARN BY DIELECTRIC HEATING

Wallace C. Rudd, Larchmont, N. Y., assignor to Magnetic Heating Corp., New Rochelle, N. Y., a corporation of New York

Application December 28, 1955, Serial No. 555,979
3 Claims. (Cl. 219—10.73)

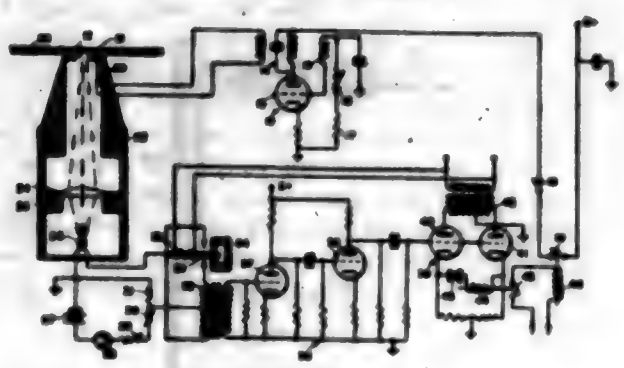
1. Apparatus for drying fiber, yarn and the like which has been wound into cakes having a central hole, comprising: a support upon which the cake is adapted to rest with the central hole in vertical position; means for turning said support about the axis of the hole; a pair of substantially parallel electrode plates mounted respectively at opposite sides of the position on the support at which the cake is adapted to be located; a source of high frequency electrical heating current having its two terminals respectively connected to said electrodes; and an intermediate electrode insulated from the other two and the circuit thereof and positioned and shaped to

occupy the greater part of the space within the central hole in the cake when resting upon such support, the



external surfaces of said intermediate electrode however being spaced substantially from the internal surfaces in the hole in the cake.

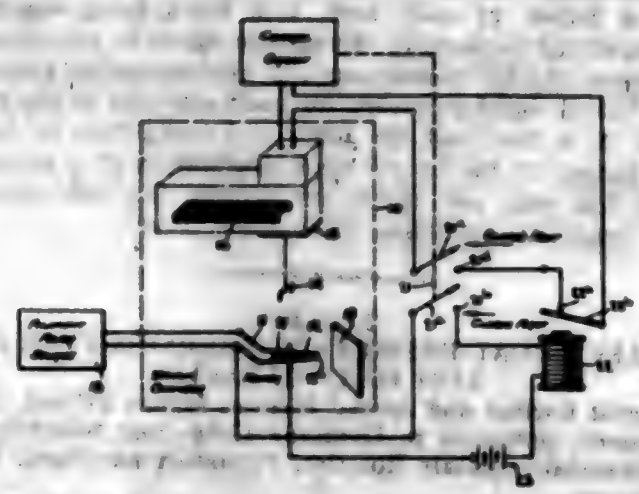
2,866,864
TEMPERATURE CONTROLLED HEATING SYSTEM
Howard H. Kreisel, La Canada, Calif., assignor to North American Aviation, Inc.
Application April 23, 1957, Serial No. 654,574
7 Claims. (Cl. 219—10.77)



1. A temperature controlled heating system comprising a heating coil, a thermopile spaced from said coil for generating a temperature signal indicative of heat radiated through said coil, means interposed between said coil and said thermopile for focusing upon said thermopile heat radiated coaxially of said coil, adjustable reference circuit means including an adjustable source of electrical potential for generating a reference signal indicative of a selected temperature of an object to be heated by said coil, and means responsive to said reference and temperature signals for controlling energization of said coil.

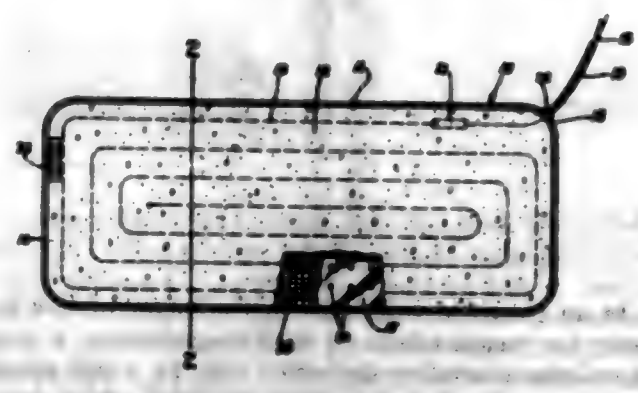
2,866,865
SIGNALLING DEVICE FOR VACUUM EVAPORATION SYSTEM
Stanley A. Hirsh, Valley Stream, N. Y., assignor to Baleva Research and Development Laboratories, Inc., Woodside, N. Y., a corporation of New York
Application February 26, 1957, Serial No. 642,621
6 Claims. (Cl. 219—19)

1. In a vacuum evaporation system wherein a charge of evaporation material is placed on the apex portion of a heat filament wire to form a meniscus spanning the arms of the filament, the meniscus area contracting in the course of evaporation, a signalling device to indicate the state of the charge on said filament and including a probe projecting between the arms of said apex portion at a position to engage said meniscus only when the area



thereof exceeds a predetermined size, and circuit means including said probe and said filament to indicate the charge condition.

2,866,866
ANIMAL BED
Carroll H. Neely, Cruso, Iowa
Application May 23, 1955, Serial No. 510,429
8 Claims. (Cl. 219—19)



1. An animal bed comprising in combination a shell of rigid synthetic resinous material, said shell having a peripheral upright wall provided with rounded corners joined to an integral planar bottom and thus forming a dished member, said shell including a plurality of projections upon the inner surface thereof and interior of said wall, a reinforcing screen element positioned above said projections and an electrical resistance element disposed above said screen element in an endless planar pattern, a concrete slab coextensive with the dished portion of said shell and embedding said projections, screen element and resistance element therein, a thermostat for controlling the amount of electricity supplied to said resistance element and a flexible sleeve secured to said shell for protecting a portion of said resistance element extending therefrom.

2,866,867
ELECTRIC HEATING CIRCUIT FOR ELECTRIC HEATING DEVICES
Gordon R. Dolan, Des Plaines, Ill., and Carrol H. Dyhre, Bay Springs, Miss., assignors to Northern Electric Company, Chicago, Ill., a corporation of Delaware
Application February 11, 1957, Serial No. 639,413
6 Claims. (Cl. 219—20)

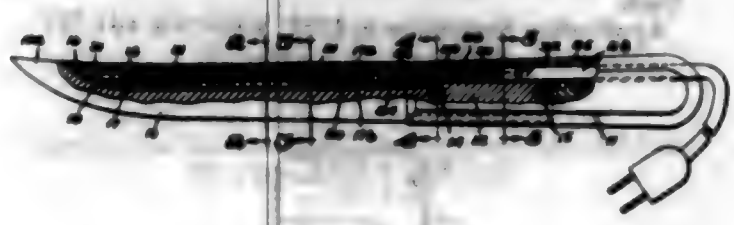
1. An electrical heating circuit having a temperature limiting control which comprises, four electrical heating elements connected as respective arms in a Wheatstone

plane intermediate the vertical planes of said first mentioned opening and said grill openings, a plurality of

a thermal blanket, said apparatus controlling the temperature of the space beneath said blanket in accordance

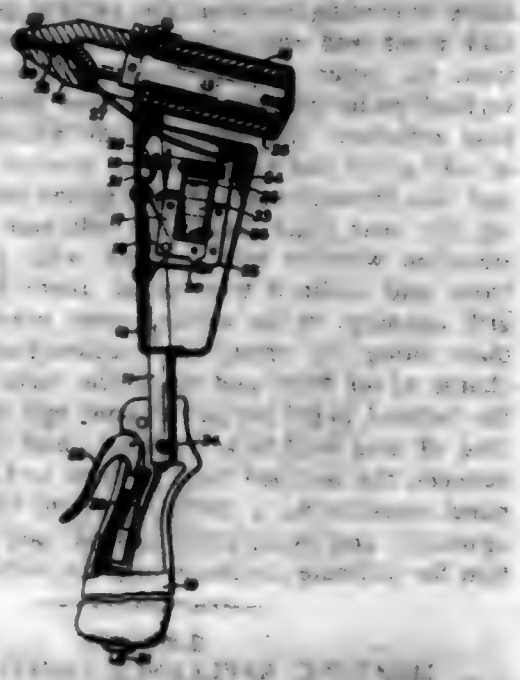
bridge circuit, adjacent arms of said bridge comprising heating elements respectively having relatively high and relatively low thermal coefficients of resistance, a current supply for said bridge, a normally closed thermostatically operated switch connected in series with the current supply to said bridge, a resistance of relatively low wattage connected in series with said current supply and disposed in heat transfer relationship to said thermo-

statically operated switch to open said switch when the said resistance reaches a predetermined temperature, a second resistance of relatively high wattage connected in series with said current supply and in heat transfer relationship to said thermostatically operated switch, a short circuit for said relatively high wattage resistance, means connected across the common junctures of opposite arms of said bridge for opening and closing said short circuit in response to a predetermined unbalanced condition of said bridge.

2,866,068
ELECTRICALLY HEATED BUTCHER KNIFE
Samuel Bernstein and Alexander E. Finger, Chelsea, and Gerald D. Bernstein, Lexington, Mass.
Application May 14, 1956, Serial No. 584,727
5 Claims. (Cl. 219—21)

2. An electrically heated knife comprising a relatively thin, smooth-sided, flexible blade having a cutting edge, a back edge, a tip, and a rear end, said blade also having a slot longitudinally disposed along said back edge, said slot commencing at said rear end and stopping short of said tip and extending into the blade part way toward said cutting edge, the remainder of the blade being solid, a thin, flat, flexible backer piece of insulating material disposed in said slot flatwise with respect to the blade, a flat, flexible ribbon-like electric heater element wound flat around said backer piece substantially parallel to the longitudinal direction of the blade, a handle attached to said rear end said slot being disposed forward of said handle, and means in said handle providing electrical connection to said element.

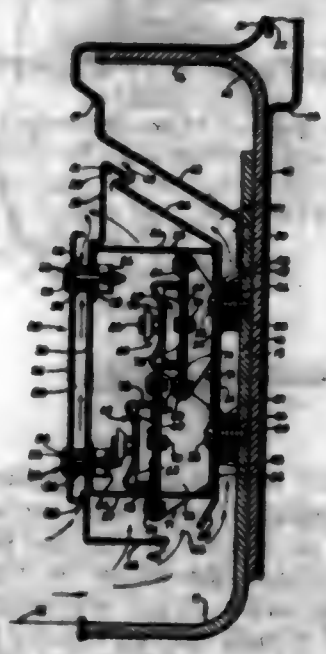
2,866,069
SOLDERING IRONS
Oscar Kitwezak, London, England, assignor to The Belark Tool & Stamping Company Limited, London, England
Application January 8, 1954, Serial No. 402,997
Claims priority, application Great Britain
January 31, 1953
15 Claims. (Cl. 219—24)

1. A soldering iron comprising a soldering bit for applying solder to a workpiece, an oxide film-breaking tool, said bit being provided with means for supporting said tool for movement relative to said bit, and means for



vibrating said tool relatively to said bit to break up an oxide film.

2,866,070
GRILL AND SUPPORT FOR ELECTRICAL HEATER
William W. Parks, Chicago, and William R. Peterson, Skokie, Ill., assignor to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware
Application July 14, 1954, Serial No. 443,754
6 Claims. (Cl. 219—34)



1. The combination with the wall structure of a railway car including a forwardly and upwardly inclined trim panel above the level of the car floor, of a housing for a horizontally disposed electrical heating element comprising a rear plate having a vertical panel portion and an inclined wing portion extending forwardly and upwardly from the upper edge of said panel portion, a front plate spaced from said rear plate and having a vertical panel portion, the lower edge of said front plate being turned laterally rearwardly and extending toward the lower edge of the vertical panel portion of the rear plate and terminating short thereof to define therewith an opening for the entrance of air into the space existing between said panel portions, the forward region of said laterally turned edge being formed with a longitudinal row of closely spaced grill openings for the entrance of air into said space, an electrical heating unit disposed within said space and disposed in a horizontal

2,866,074
AFTER COOLER FOR WELDING TORCHES

2,866,076
PORTABLE WELDER

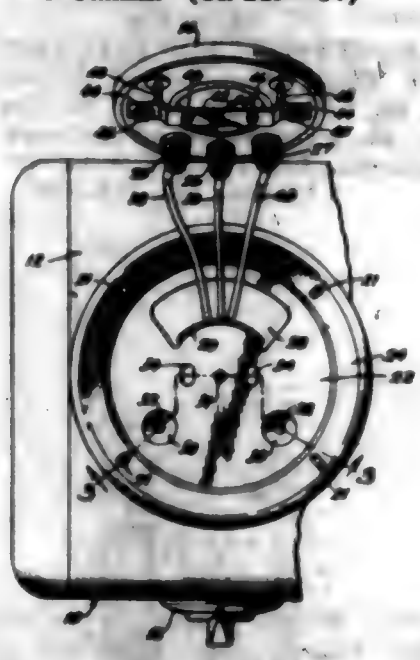
plane intermediate the vertical planes of said first mentioned opening and said grill openings, a plurality of struts extending between the vertical panel portions of said front and rear plates and supporting the former from the latter, spacer elements disposed between said vertical panel portion of the rear plate and said wall base structure, attachment studs passing through each of said struts and vertical panel portion of the rear plate and also through each of said spacer means for supporting the rear plate from the wall base structure, at an elevation wherein said inclined wing portion is spaced from said inclined trim panel, there being a series of grill openings in the vertical panel portion of said front plate along the upper edge region thereof for the discharge of air from said space, the space existing between the vertical panel portion of said rear plate and the surface of said wall base structure, and the space existing between the inclined wing portion and the inclined trim panel constituting a continuous path for the flow of air upwardly and rearwardly behind said heater construction for ultimate discharge into the railway car enclosure.

2,866,071

HEATING APPLIANCE CONSTRUCTION

Edward J. Rubske, Chicago, Ill., assignor to Hill-Shaw Company, Chicago, Ill., a corporation of Illinois

Application June 6, 1958, Serial No. 740,246
5 Claims. (Cl. 219—37)



4. An electrical heating unit comprising a cup member having a central threaded stud projecting from the bottom thereof, an arcuate slot on one side of said stud and a pair of spaced depressions on the other side of said stud, an upwardly turned supporting flange along one edge of said arcuate slot, an annular heating element disposed within said cup and having a plurality of terminals extending downwardly through said arcuate slot, a pair of pins disposed within said depressions for supporting and locating said element and a diametrically extending bracket containing an opening aligned with said central stud and a nut cooperating with said stud for securing said bracket and the heating element attached thereto to the bottom of the cup.

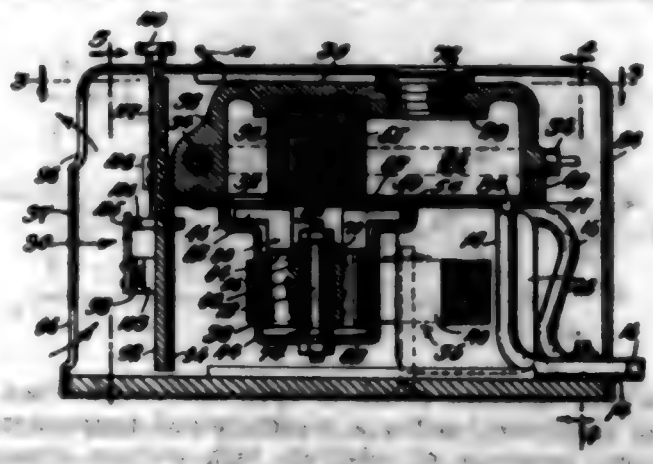
2,866,072

THERMAL BLANKET CIRCULATING AND CONTROL MEANS

Edward Malcolm Smith, Mansfield, Ohio, assignor to Jet-Heet, Inc., Englewood, N. J., a corporation of New York

Application January 9, 1957, Serial No. 633,293
16 Claims. (Cl. 219—39)

10. Improved circulating heating and control apparatus of the type for circulating a heat transfer liquid through a thermal blanket, said apparatus controlling the temperature of the space beneath said blanket in accordance with changes in room temperature, said apparatus comprising a casing, a liquid reservoir tank within said casing and having a body portion of metal of good heat conductivity, a resistance heating element within the body of said tank, a pump and electric drive means within



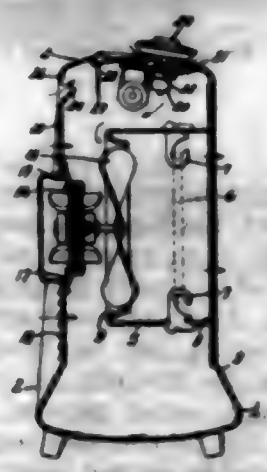
said casing, said pump having an intake communicating with said tank and an outlet adapted to be coupled to said blanket, a support of good heat conductivity secured to said tank body, a heat insulating mounting on said support, a thermostat on said mounting, and means defining an ambient air convection path through said casing, said thermostat being responsive to the air in said path and to the heat conducted through said support and mounting.

2,866,073

PORTABLE ELECTRIC FAN HEATER

William A. Omohundro, Bridgeport, Conn., assignor to General Electric Company, a corporation of New York

Application September 3, 1957, Serial No. 681,791
5 Claims. (Cl. 219—39)



1. A fan heater comprising a sheet metal casing having front, rear, and top walls; an air duct having an inlet orifice and an outlet positioned in said casing; an air discharge opening formed in said front wall adjacent to said outlet; an electric heating element located in said air duct; a fan positioned in said inlet orifice for forcing air over said heating element through said outlet and through said discharge opening; a thermostat fixed to the top wall for controlling said heating element; an enlarged inlet cut opening formed in the rear wall behind said thermostat for permitting said fan to force ambient air into intimate contact with said thermostat and to surround said thermostat; and a handle positioned above said handle opening, said fan also causing air to be drawn through said handle opening and over said handle for cooling said handle.

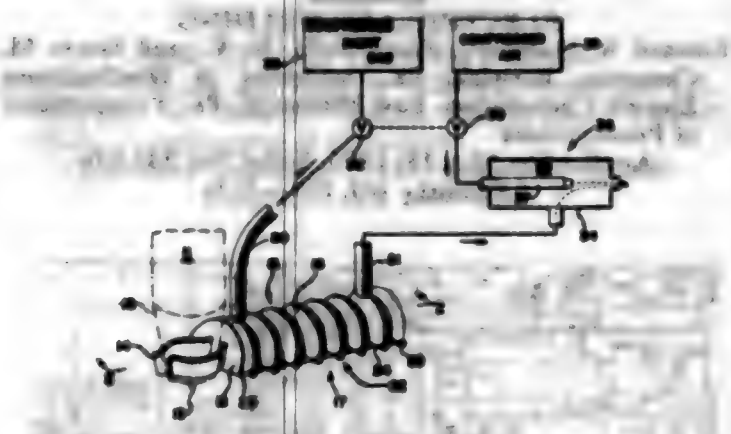
plying solder to a workpiece, an oxide film-breaking tool, disposed within said space and disposed in a horizontal

2,866,874

AFTER COOLER FOR WELDING TORCHES

Bela M. Remay, Annapolis, Md.

Application July 19, 1956, Serial No. 598,970
10 Claims. (Cl. 219—74)
(Granted under Title 35, U. S. Code (1952), sec. 266)



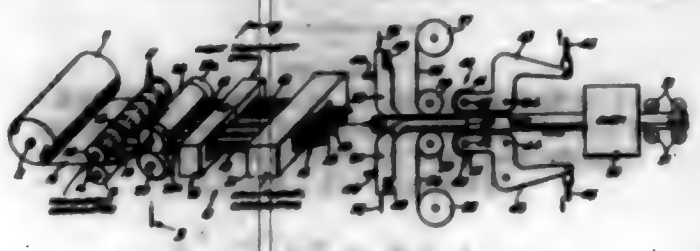
1. An elongated inert gas guide duct adapted to be attached to an arc welding torch whereby hot weld metal in the wake of the torch may be shielded, said guide duct comprising a longitudinally corrugated sheet of heat and corrosion resistant material bent transversely to a substantially semi-cylindrical shape, end closures secured to the ends of said shape to thereby form a body closed on three sides, the open side of said body being adapted to cover said hot weld metal, said corrugations rendering said body pliable whereby it may be bent to conform to a variety of different weld-line contours, and means for passing and controlling a longitudinal flow of inert gas through said guide duct in the general direction of said hot weld metal.

2,866,875

METHOD OF FABRICATING STRUCTURAL SANDWICHES

Carl A. Von Pappelendam, Rivera, Calif.

Application September 23, 1957, Serial No. 685,740
21 Claims. (Cl. 219—83)



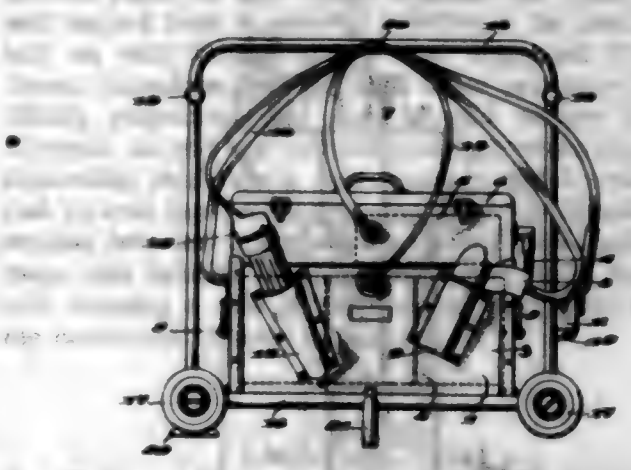
1. That method of making a rigidly bonded cellular sandwich structure in continuous lengths which comprises, feeding a longitudinally corrugated continuous core sheet of thin metal past an electric bonding station, supporting said sheet at said bonding station with the crests of said corrugations in flat parallel planes by electrode means extending lengthwise into said corrugations from supporting points located rearwardly from the point of electrode contact with the interior trough portion of the corrugations, feeding continuous thin facing sheets of metal against the crests of said corrugations from the opposite sides of said corrugated core sheet, pressing said face sheets against said core sheet by external electrodes, maintaining pressures in the range of thousands of p. s. i. on the portions of said sheets located between the pointed ends of said inner electrodes and the juxtaposed outer electrodes while passing a high welding current therebetween momentarily until said sheets fuse together.

2,866,876

PORTABLE WELDER

Karl Josl Averstam, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden

Application June 14, 1955, Serial No. 515,583
3 Claims. (Cl. 219—98)



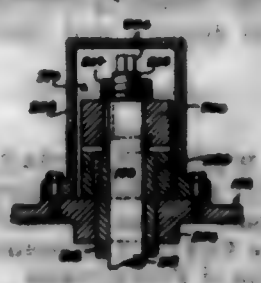
1. A transportable electric arc welding apparatus including batteries as current source, a current regulator and a welding gun comprising a rigid frame, a pair of wheels mounted in line on said frame to run on and support the apparatus on one rail, means mounting the welding apparatus on said frame so that the area between the wheels is beneath the center of gravity of the apparatus and with the current regulator on the top of the batteries and a handle means upwardly projecting mounted at one side of said frame for balancing and wheeling of the welding apparatus on a rail.

2,866,877

COMBINED WELDING AND SEAM TRIMMING MACHINE

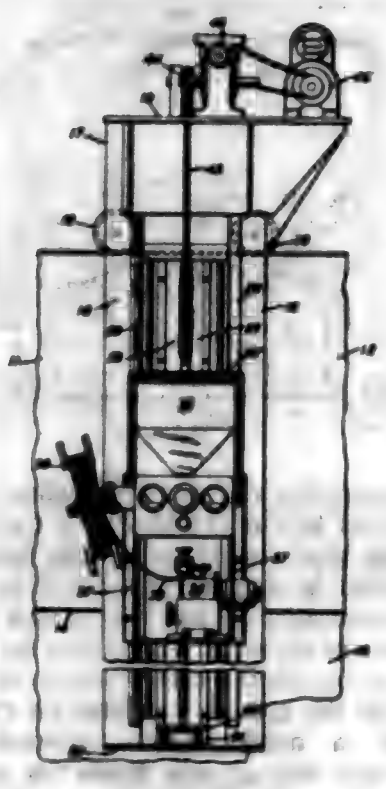
Henry Earl Merten, Muskegon Heights, and Robert Earl Merten, Whitehall, Mich.

Application July 19, 1954, Serial No. 444,056
5 Claims. (Cl. 219—125)



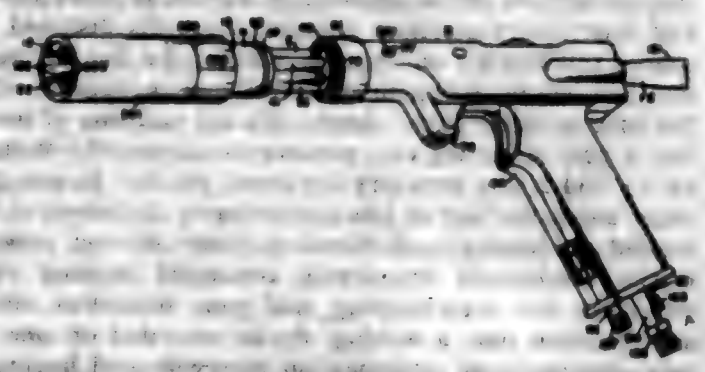
1. A combined welding and seam trimming machine for metal sheets comprising a frame structure having a support thereon for the sheets to be welded, opposed upper and lower pairs of sheet clamping elements disposed in spaced relationship on opposite sides of the line of junction between the sheets to be welded and engageable with the edge portions of the sheets adjacent said line of junction a pair of cutting ram structures reciprocably mounted on said frame structure for travel parallel to one another along the line of junction between the sheets to be welded and having seam-trimming cutters thereon, power-driven mechanism operatively connected to said ram structures for reciprocating said ram structures along said junction line, a welding device mounted on one of said structures for reciprocation therewith and having a welding element aligned with the path of travel of said cutters in advance of said cutters, and an elongated back-up member mounted on one of said ram structures and disposed lengthwise along said junction line, said back-up member extending upwardly through the space between the lower pair of sheet clamping elements into engagement with said sheets on the opposite side thereof from said welding element.

2,866,878
APPARATUS FOR WELDING VERTICAL SEAMS
William L. Ballentine, Jr., Whittier, and Archie L. Fontenot, El Monte, Calif., assignors to United States Steel Corporation, a corporation of New Jersey
Application March 5, 1957, Serial No. 644,815
7 Claims. (Cl. 219—126)



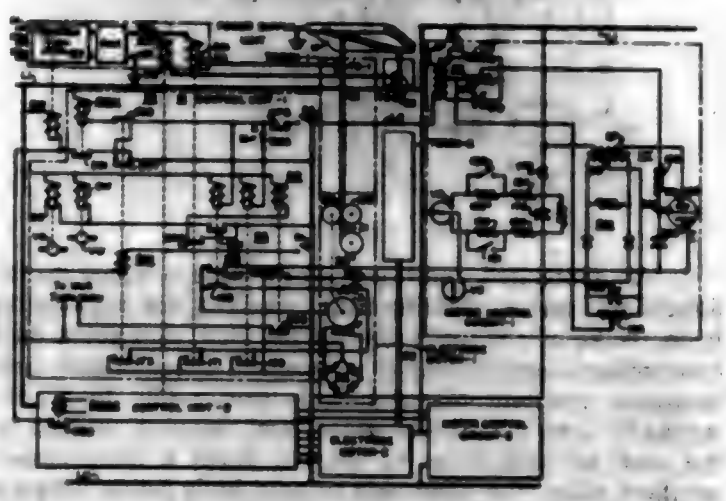
6. Apparatus for welding a seam uniting the abutting adjacent edges of metal plates disposed side-by-side and substantially vertically, comprising an elongated flux box open at one side adapted to be disposed against said plates with the open side straddling said seam, the opposite side of said box including a displaceable strip of rubber-like material, flux-supplying means and welding means mounted to travel along said box, and gate means moving with said flux-supplying and welding means adapted progressively to displace said strip and afford access to said box.

2,866,879
ARC WELDING APPARATUS
Fred J. Morley, Jr., Hempfield Township, Westmoreland County, and Louis Manno, Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 18, 1957, Serial No. 640,864
2 Claims. (Cl. 219—136)



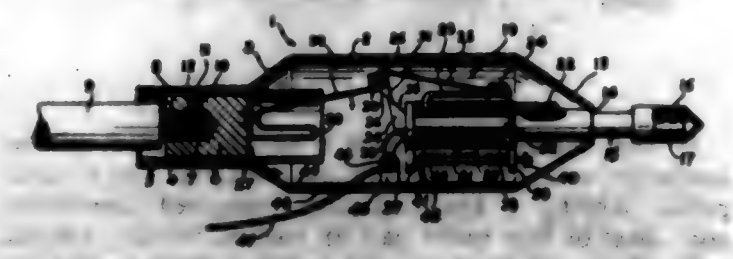
1. A welding gun for gas shielded consumable electrode arc welding, said gun having a barrel having means for receiving electrodes, a channel through which said electrodes are transmitted and an opening at the end of said channel through which the tips of the electrodes forming a terminus of welding arcs extend, said gun including a single electrode guide-tube means terminating at the end of said channel adjacent said opening in a plurality of branch tube portions through which a plurality of separate electrodes may be passed in spaced relationship and means for conducting a gas along said guide tube means to said arcs.

2,866,880
ELECTRIC ARC WELDING
Edward R. Gansberg, Tonawanda, N. Y., and James M. Cameron, Berwick, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 18, 1956, Serial No. 585,876
5 Claims. (Cl. 219—131)



1. Apparatus for arc welding work with a plurality of welding electrodes comprising, in combination, a power supply unit capable of supplying welding arcs and having a pair of output terminals, said unit being of the type having a non-drooping voltage-current characteristic, low-impedance means for connecting one of said terminals to said work, low-impedance means for connecting the other of said terminals to each of said electrodes, and separate means to be connected to each of said electrodes for controlling the movement of each of said electrodes relative to said work so that welding arcs may be ignited and maintained between said electrodes and said work.

2,866,881
TACK WELDING ELECTRODE HOLDER
Percival H. Tuke, Halifax, Nova Scotia, Canada
Application June 30, 1953, Serial No. 745,285
5 Claims. (Cl. 219—138)

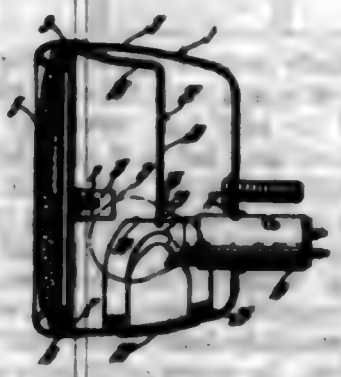


1. An electrode holder for welding equipment comprising a substantially hollow body member, connection means on said body member for connection to a source of current, electrode rod-holding means on said body member, and a current-responsive, manually actuated switch assembly in said body member operatively connected in series between said connection and rod-holding means, said switch assembly including manually actuated operating means for initially activating said switch assembly to cause current to flow between the connection and rod-holding means when a welding rod engages a suitably grounded work piece, said switch assembly including current-responsive holding means activated by operation

2,866,885
REPEATING PHOTOFLASH GUN

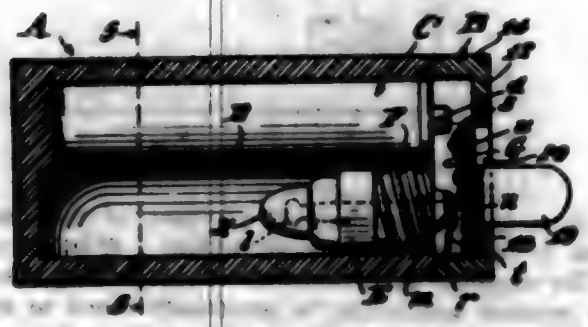
of said operating means and deactivated when no current flows between said connection and rod-holding means to maintain a current flow between said last mentioned means only when an electrode is grounded to a work piece and said operating means is in a normal inoperative position.

2,866,882
WIRE SPRING LENS RETAINER
David P. Clayton and Lyle N. Williams, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 30, 1953, Serial No. 389,405
5 Claims. (Cl. 240—8.3)



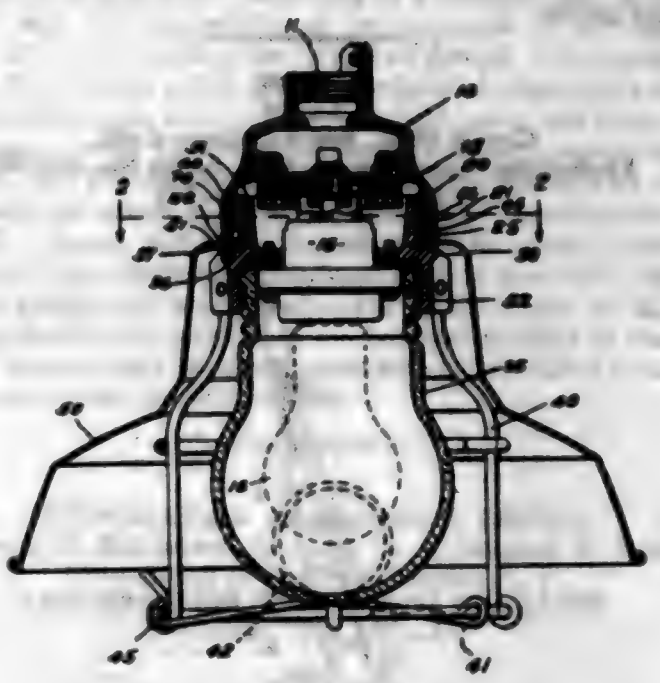
1. In a vehicle lamp the combination comprising a casing, a light source within said casing, an aperture in the side wall of said casing, an outlook lens positioned in said aperture on the inner wall of said casing, a resilient sealing gasket positioned between said wall and said lens, and a wire spring retainer comprising an intermediate base portion having divergently extending leg portions, the end of each leg portion being engaged with opposite end edges of said outlook lens to apply force in a direction generally parallel to the lens surface to urge said lens into the aperture, the base portion of said retainer being in abutting relationship with said casing, said retainer being stressed between said side wall and the ends of said outlook lens.

2,866,883
ELECTRIC LAMP
Alfred Linn, Jr., Los Angeles, Calif., assignor to Lillian R. Houstoun, Los Angeles, Calif.
Application March 18, 1957, Serial No. 646,689
5 Claims. (Cl. 240—10.67)



1. In an electric lamp, a housing comprising a block of plastic material having a pair of parallel bores therein, said bores having closed inner ends adjacent one end of the housing and having open ends at the other end of the housing; a dry-cell electric battery in one of said bores only having a side wall terminal and a central contact point on the outer end thereof adjacent the open outer end of said bore, an electric lamp disposed in the second of said bores having a filament carrying bulb at one end thereof and an electrically conductive shell at its other end with a central contact point on said other end; said lamp being arranged with the bulb thereof extending into said second bore and with the contact point of said lamp adjacent the open end of said second bore in parallel relation to the central contact on said battery and in end alignment therewith, means extending between said bores permanently electrically connecting said shell to said battery side wall terminal, an end cap on said housing, means detachably connecting said cap to said housing, and a switch carried by said cap for making and breaking electrical connection between the contact points of said battery and lamp; said housing having an elongated light conductive wall forming a side of said second bore, said wall being contoured to form a lens.

2,866,884
LIGHTING UNIT
Ray F. Lester, Syracuse, N. Y., assignor to Crouse-Hinds Company, Syracuse, N. Y., a corporation of New York
Application February 18, 1957, Serial No. 640,815
3 Claims. (Cl. 240—11.3)

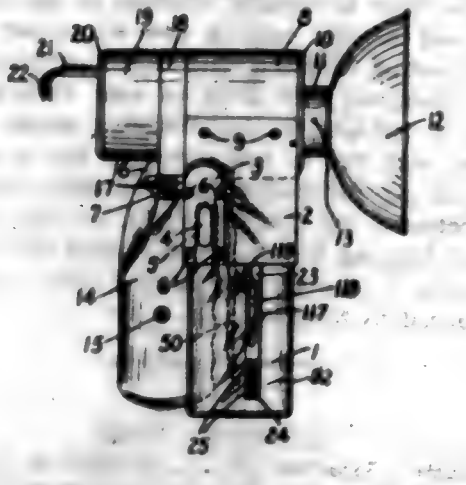


1. A lighting unit comprising a cylindrical canopy terminating in a depending annular flange formed at its lower edge with an internal bead, a globe fitting detachably secured to said canopy and having a radial ledge confronting the under surface of said annular flange, said ledge terminating in an upstanding cylindrical flange spaced radially inwardly from said annular flange and said bead, a reflecting shade having a radial portion and an upstanding cylindrical portion, said cylindrical portion adapted for insertion in the space between said cylindrical flange of the globe fitting and said depending canopy flange, said radial portion adapted to be clamped between said ledge and said annular flange, the upper edge of the cylindrical portion of said shade being bent outwardly toward said canopy flange and being spaced inwardly and upwardly from said bead, an annular metallic retaining member encircling said cylindrical portion of the shade intermediate the outwardly bent edge thereof and said bead and yieldingly engaging said canopy flange, said retaining member being compressible in a radial direction.

2,866,989

voltage having a frequency equal to that of said input

2,866,885
REPEATING PHOTOFLASH GUN
William W. Burroughs, Manchester, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application August 7, 1953, Serial No. 372,941
12 Claims. (Cl. 240—37)

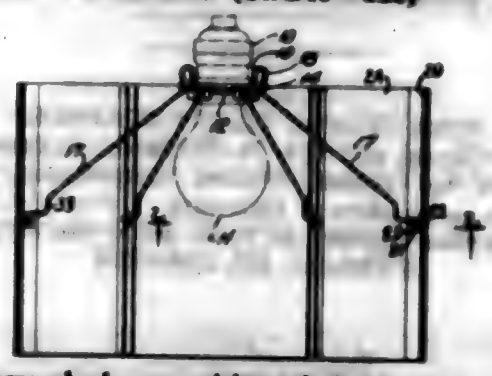


1. A repeating photoflash gun comprising: a magazine for holding several flash bulbs; a holder for grasping a flash bulb; means for feeding a flash bulb from said magazine to said holder; and a hand-lever grip for actuating said means.

2,866,886
LAMPS
Gerald Moss, San Francisco, Calif.
Application September 24, 1956, Serial No. 611,501
5 Claims. (Cl. 240—81)

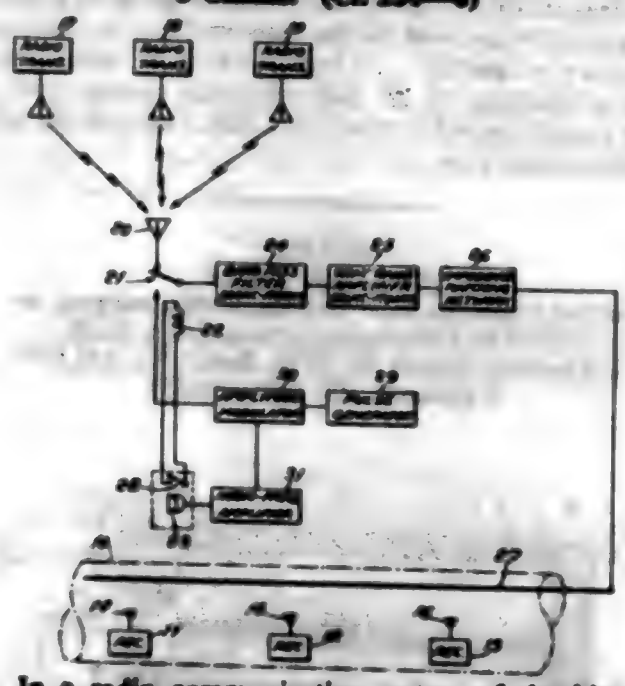
1. A lamp comprising a base, a housing comprising an elongated truncated substantially pyramidal body having four sides, at least two of which comprise substantially flat surfaced light transmissive panels, said housing being mounted to said base to extend upwardly therefrom at a substantial angle of inclination from the vertical, at least one elongated fluorescent tube mounted within said housing substantially parallel to its angle of inclination whereby to provide large fluorescent lateral surface area illumination through the said light transmissive side panels of said substantially pyramidal housing, a second source of illumination mounted above and supported by said housing and bracketing means mounted to an inclined side stably securing said housing to the base in its inclined position, said bracketing means comprising a vertical member extending from the base to a point below about the center of the vertical height of said housing.

2,866,887
LAMP SHADES
Chester Bick, Peekskill, N. Y.
Application June 22, 1956, Serial No. 593,112
2 Claims. (Cl. 240—128)



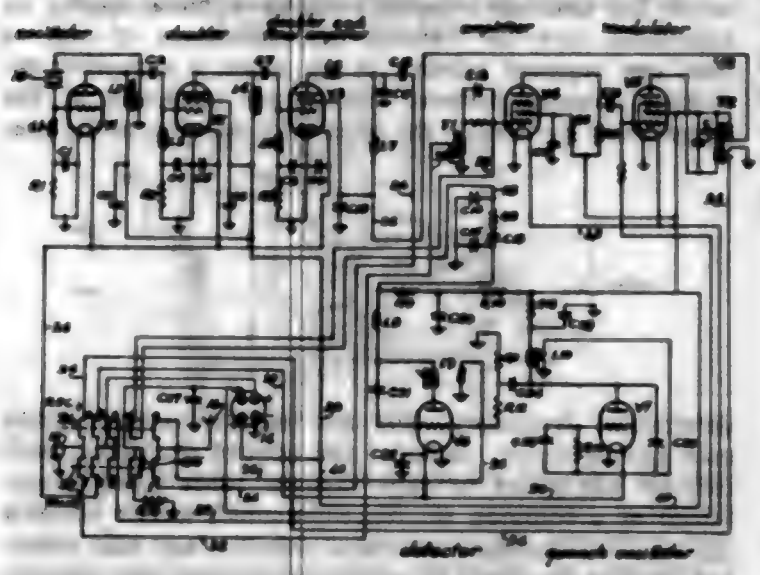
1. A lamp shade comprising a hub adapted to surround and be supported from a lamp fixture, a plurality of spring arms attached to said hub extending outwardly and downwardly from said hub said arms being so attached as to limit their downward movement, a plurality of bars, the outer end of each arm being freely pivoted to an intermediate position on one of said bars said bars being otherwise unsupported, said bars being adapted to receive and support a surrounding cover and to engage said cover substantially both above and below the pivot point on each bar, the spring arms being adapted to cause said bars to press against said cover, whereby the cover is held in place and the shade assumes the form of the cover.

2,866,888
RADIO COMMUNICATION WITHIN SHIELDED ENCLOSURES
Norman H. Young, Jr., Nutley, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application April 18, 1956, Serial No. 578,962
5 Claims. (Cl. 250—6)



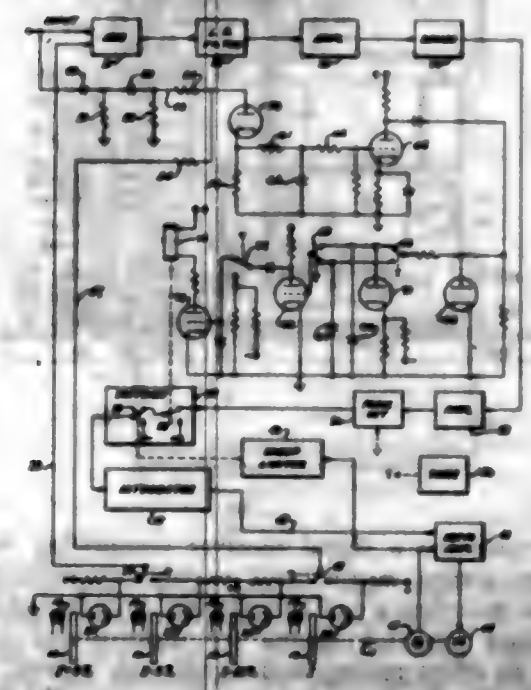
4. In a radio communication system of the kind arranged to receive radio signals within a shielded region such for example as a vehicular tunnel having therein a radio receiver which can be arbitrarily tuned to receive any frequency channel within the established broadcast frequency band, an antenna within said region for reradiating frequency signals in said broadcast frequency band to said receiver, and means to apply to said antenna a plurality of simultaneous radio carrier frequencies derived from a single pulse generator, which carrier frequencies are simultaneously modulated by a special communication signal, whereby said receiver can pick up said special signal regardless of the broadcast frequency to which it has been arbitrarily tuned.

2,866,089
HIGH-FREQUENCY RADIO TRANSCEIVER
Charles Frederick Mason, Pasadena, Calif., assignor to Hoffman Electronics Corporation, Los Angeles, Calif., a corporation of California
Application November 18, 1953, Serial No. 392,096
2 Claims. (Cl. 250—13)



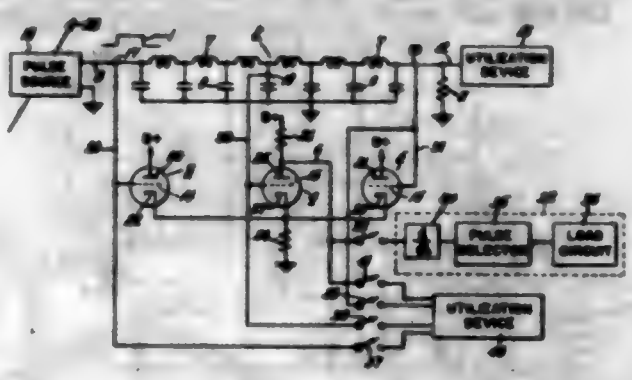
1. In a radio transceiver, a source of carrier frequency energy, an audio amplifier having an input circuit and an output circuit, said output circuit being permanently connected to said source of carrier frequency energy to modulate the same, a combined speaker-microphone device, a thermionic cathode detector of the regenerative type, a quench oscillator for said detector, a switch operable to connect said device to said input circuit and to effect simultaneous energization of said source, and a second switch operable to connect said device to said output circuit, to connect said detector to said input circuit and to effect simultaneous energization of the cathode of said detector and said quench oscillator.

2,866,890
SIGNAL-TO-NOISE RATIO DETECTOR USING FREQUENCY SHIFT LOCAL OSCILLATOR TO ALTERNATELY SAMPLE SIGNAL AND NOISE
Solomon Sherr, Yonkers, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application July 7, 1955, Serial No. 520,468
8 Claims. (Cl. 250—20)



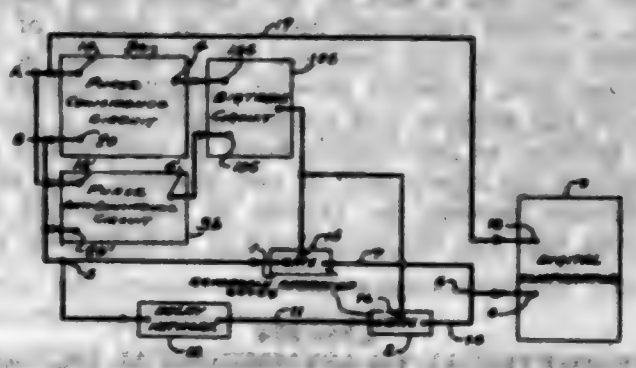
1. Apparatus for detecting the signal-to-noise ratio of an input signal comprising, means for generating a first voltage having a frequency equal to that of said input signal, means for generating a second voltage having a frequency different from but proportional to that of said first voltage, means for mixing said input signal alternately with said first and second voltages, and a low-pass filter connected to the output of said last named means.

2,866,891
PULSE PROCESSING SYSTEM
Cyrus F. Ault, Clifton, N. J., assignor to General Electric Company, a corporation of New York
Application December 29, 1953, Serial No. 400,990
14 Claims. (Cl. 250—27)



4. An arrangement comprising an electrical pulse delay line, said line comprising an input circuit at one end and an output circuit at the other end thereof, first, second and third spaced points in said line located respectively in succession along said line between said input and output circuits, means responsive to a pulse being propagated along said line between said input and output circuits to produce an output signal only when said propagated pulse is of a length such that it appears at the second point without also appearing simultaneously at said first and third points, said means responsive to the length of said propagated pulse relative to the amount of delay in said line between said points to cause said output signal to be delayed a corresponding amount.

2,866,892
INFORMATION PROCESSING DEVICE
Charles K. Raynsford, Summit, N. J., assignor to Vitro Corporation of America, Verona, N. J.
Application April 27, 1954, Serial No. 425,509
9 Claims. (Cl. 250—27)



1. In combination, means responsive to first and second impulse trains to derive first and second control voltages therefrom, said first voltage being derived when corresponding pulses in both trains are in substantial phase coincidence and said second voltage being derived when said corresponding pulses are out of phase with each other; first and second conditionally responsive signal transfer means coupled to an output terminal, each of said transfer means when actuated being operative to transfer only said second impulse train to said output terminal, one of said transfer means including a signal delay network; and means to supply said first and second control voltages to said first and second transfer means, said

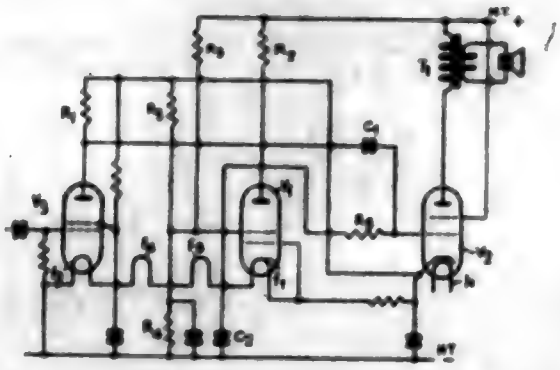
first control voltage actuating said first transfer means and deactuating said second transfer means and said second control voltage deactuating said first transfer means and actuating said second transfer means.

2,866,093

MAINS/BATTERY AMPLIFYING APPARATUS

Hendrikus T. J. Wiegerinck, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company

Application July 19, 1954, Serial No. 444,340
Claims priority, application Great Britain July 23, 1953
6 Claims. (Cl. 250—27)



5. Radio receiving apparatus which may be operated from supply mains and batteries, comprising a plurality of filamentary type electron tubes, one of said tubes serving as an output tube when operating on batteries and as a stabiliser tube when operating on supply mains and having an anode, a control grid and a screen grid, and a cathode type electron tube having a heater, a cathode, and at least one grid electrode and having its heater supplied from the supply mains, and used as an output tube during operation from the supply mains, means connecting the filaments of at least some of said filamentary type electron tubes including said stabiliser tube in series with the cathode of said cathode type electron tube during operation from the supply mains, whereby the filaments of said filamentary type electron tubes are supplied from the current flowing through said cathode type electron tube, a high tension positive supply line, a high tension negative supply line, a resistive load connected in series between the anode of said stabiliser tube and the high tension positive supply line, a direct current connection between the anode of said stabiliser tube and a grid of said cathode type electron tube, a resistor connected between the cathode of said cathode type electron tube and the screen grid of said stabiliser tube, a resistor network connected between the positive and negative high tension supply lines, a connection between an intermediate point on said resistor network and the screen grid of said stabiliser tube and a connection between the cathode of said cathode type electron tube and the control grid of said stabiliser tube.

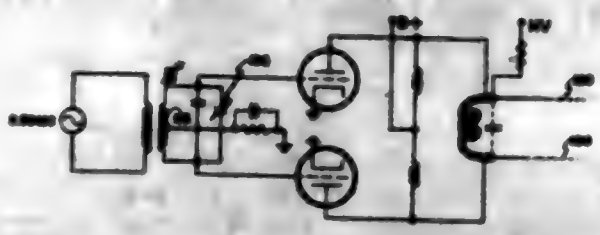
2,866,094

SYMMETRICAL TO ASYMMETRICAL SIGNAL CONVERSION CIRCUIT

André P. Tellemen, Arcadia, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Application September 29, 1954, Serial No. 459,088
4 Claims. (Cl. 250—27)

1. Means for converting a symmetrical sinusoidal electrical signal of a predetermined frequency into an asymmetrical sinusoidal electrical signal the positive half-cycle peak amplitude of which differs from the negative half-cycle peak amplitude thereof, said asymmetrical signal being thus adapted to drive the red and blue deflection grids of a color television picture tube and compensate for transverse displacement of such grids with respect to their corresponding phosphor strips, said converting means including, in combination, a transformer having a primary winding with first and second input terminals adapted for coupling to a sinusoidal signal source and a secondary winding with a center tap and first and second output terminals, at least one segment of said transformer secondary winding defined by said center tap and one secondary output terminal having an adjustable core for varying the inductance of said at least one segment relative to the other, a capacitive reactance coupled between the output terminals of the transformer for tuning the secondary winding to the predetermined frequency, first and second vacuum tubes each having anode, cathode, and control electrodes, said cathode electrodes of said vacuum tubes being maintained at a common reference potential, means coupled between said common reference potential and said center tap of said transformer secondary winding for deriving a bias voltage, said first output terminal of said transformer secondary winding being coupled to said control electrode of said first vacuum tube, said second output terminal of said transformer secondary winding being coupled to said control electrode of said second vacuum tube, and an output circuit coupled across said anode electrodes of said first and second vacuum tubes.

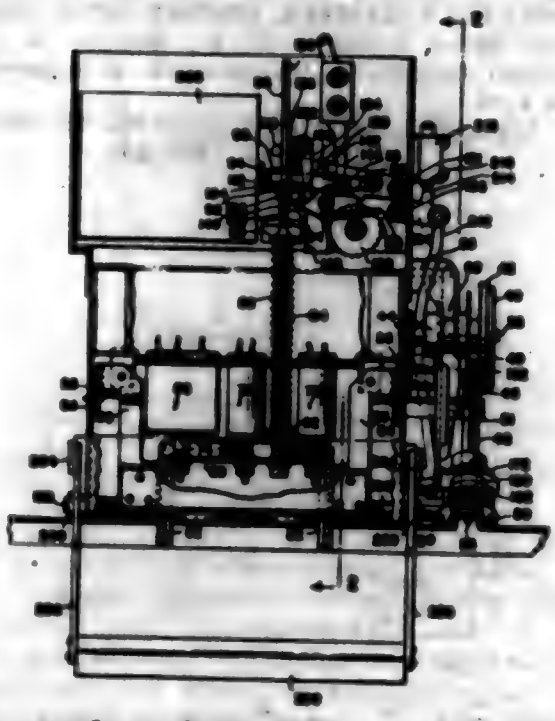


2,866,095

SIGNAL SEEKING PERMEABILITY TUNER WITH AUTOMATICALLY MOVABLE CORES AND MANUALLY MOVABLE COILS

James Clement Hazelwood, Havertown, Pa., assignor to Radio Condenser Company, Camden, N. J., a corporation of New Jersey

Application August 9, 1954, Serial No. 448,492
12 Claims. (Cl. 250—40)

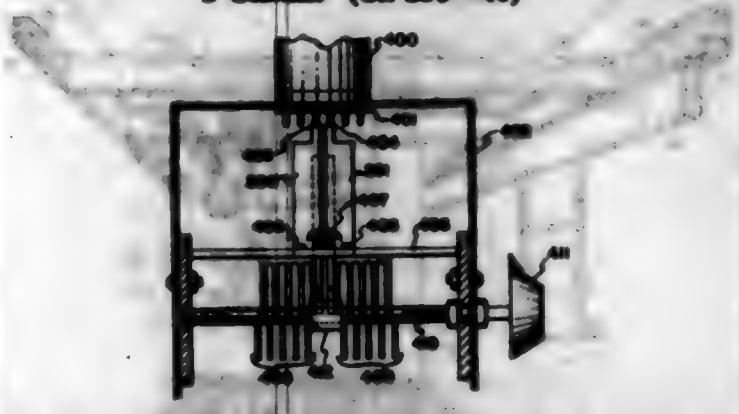


1. A tuner for a signal receiver comprising variable impedance tuning means, said variable impedance tuning means including a pair of relatively movable elements, push button operated means for moving one of said elements to effect tuning, and signal seek means, of the type having its signal seeking operation manually initiated and stopped in response to the tuning of a signal, for moving the other of said elements to effect tuning.

nection to said radiation-responsive means, said electrical-

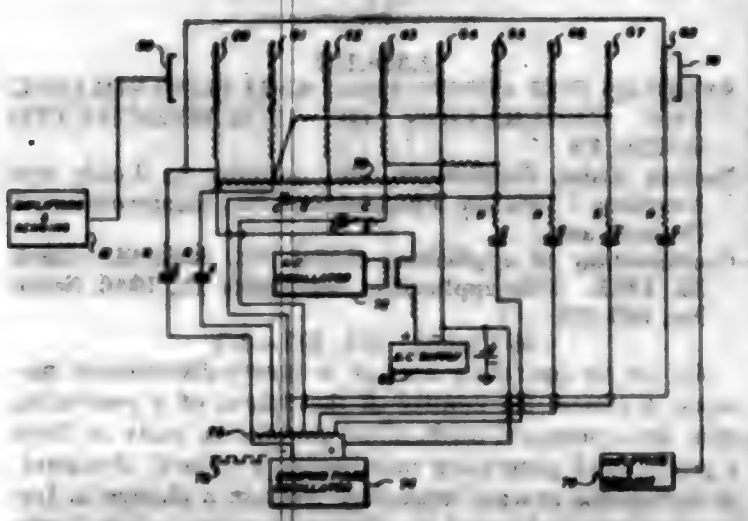
2,866,101

2,866,896
CAPACITIVELY END TUNED RESONANT LINE HAVING INDUCTIVE TRACKING TRIMMER MOUNTED ON CAPACITOR ROTOR
Charles F. Mason, Pasadena, and Joe D. Funderburg, Arcadia, Calif., assignors to Hoffman Electronics Corporation, a corporation of California
Application August 16, 1954, Serial No. 449,878
3 Claims. (Cl. 250—40)



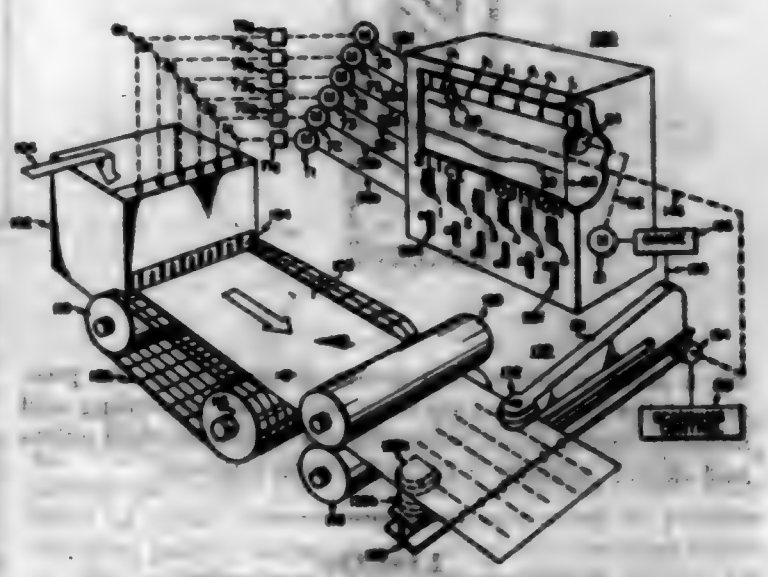
1. As a means for tuning, and for aligning the low end of the tuning range of an ultra-high frequency tuner, first and second ganged variable capacitors having a common tuning shaft including an electrically non-conductive portion, each of said capacitors, as disposed relative to each other upon said tuning shaft, having an innermost rotor plate, a narrow strip of conductive material fixedly disposed on said non-conductive portion and connecting said innermost rotor plate of said first capacitors with said innermost rotor plate of said second capacitor, a tubular element made of a non-conductive material, said tubular element being slit for easy application to said tuning shaft over said narrow conductive strip, and said tubular element having a conductive area on its inside surface shaped to engage a varying length of said narrow strip upon adjustment around said shaft, and means for securing said tubular element to said shaft in a position such that correct alignment inductance is attained at the low end of the tuning range of said tuner.

2,866,897
MASS SEPARATION
Charles F. Robinson, Pasadena, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application April 30, 1956, Serial No. 581,414
5 Claims. (Cl. 250—41.9)



1. In a mass spectrometer, the combination which comprises an analyzer chamber, a plurality of electrodes disposed in the chamber parallel to each other, means including the electrodes for developing a substantially parabolic direct current field across a space in the chamber, means for superimposing a radio frequency field on the direct current field, ion collection means including at least one collector electrode disposed exteriorly of and adjacent a boundary of the direct current field, means developing an ionizing electron beam directed transversely of the direct current field, means biasing the plurality of electrodes positively with respect to the collecting means, and means periodically pulsing some of the electrodes including the boundary electrode to "dump" resonant ions from the field to the collector electrode.

2,866,898
MEASURING AND CONTROLLING SYSTEM
Frank M. Alexander, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Application November 26, 1957, Serial No. 698,952
6 Claims. (Cl. 250—52)



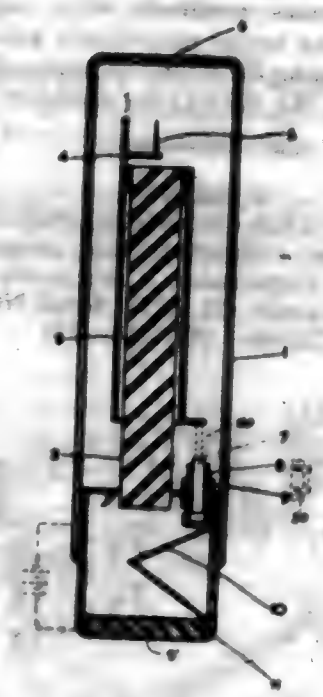
1. The combination, with a manufacturing machine for continuously producing a laterally extended length of a formed product, of flow regulating means for forming a cross-sectional dimension profile of said product across the width thereof, said flow regulating means including a row of local profile adjustments each affecting said dimension at a portion of said width, said portion being substantially less than the total extent of said width; means for gauging said dimension, means for mounting said gauging means on the product output side of said machine, traversing means associated with said mounting means for causing said gauging means to cyclically scan said product to and fro across said width thereof, means connected to said gauging means for generating a first signal indicative of said dimension at the traversing point of measurement, means interconnected with said traversing means for generating a second signal indicative of the instantaneous scanning location of said gauging means relative to said product, recorder means receiving said first and second signals for indicating the function thereof in two coordinates so as to graphically display said dimension profile, means for actuating each of said local profile adjustments, and means for controlling each of said actuating means independently.

2,866,899
RADIATION INDICATOR AND ELECTRICAL SWITCHING DEVICE FOR USE THEREIN
Arthur Desmond Conlon, Kingswood, Tadworth, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application December 6, 1955, Serial No. 551,451
Claims priority, application Great Britain December 7, 1954
12 Claims. (Cl. 250—83.3)

1. A radiation-indicating device comprising radiation-responsive means, and means for making electrical con-

from said common signal a unit signal representative of the output required of said generating unit to carry a networks being connected in parallel between the input and output of said circuit, an energy storing impedance

connection-making means including movable conductive means making said electrical connection when occupy-



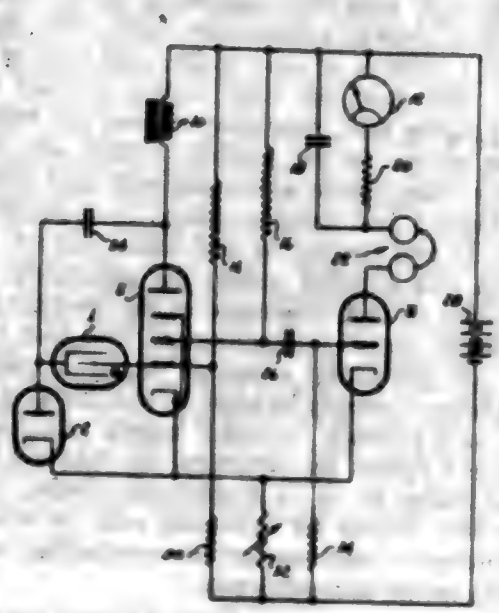
ing a given position, and means responsive to the position of the radiation-indicating device for preventing said movable means from occupying said given position unless said device occupies a predetermined position.

2,866,100

COUNTING TUBE CIRCUIT

Eric W. Leaver, Toronto, Ontario, Canada

Application August 10, 1955, Serial No. 527,601
8 Claims. (Cl. 250—83.6)



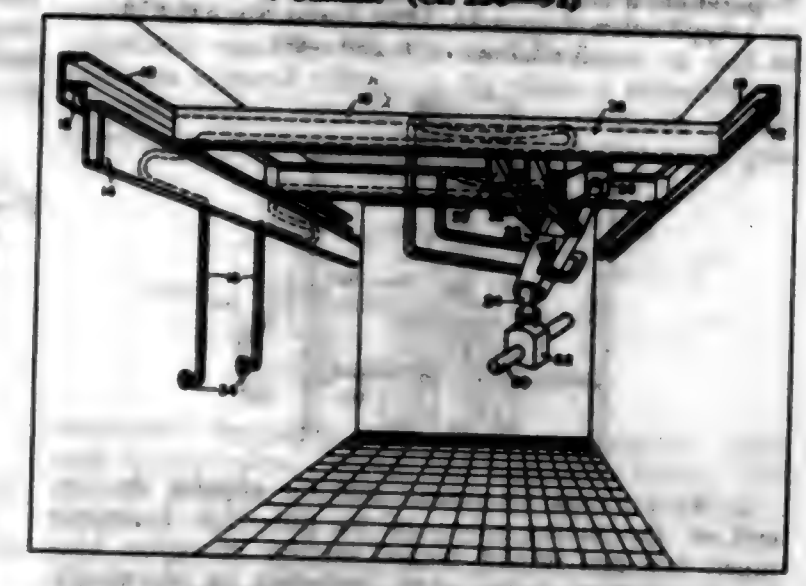
1. A counting tube circuit including in combination inductive means, a source of current, a series circuit including said inductive means and said source and means normally completing said series circuit, a counting tube adapted to conduct in response to ionizing radiation, means including a storage capacitor for energizing the counting tube, means including a rectifier for charging the storage capacitor from the inductive means, means responsive to conduction through said counting tube for actuating said means normally completing said series circuit to interrupt said series circuit and means responsive to said actuating means for producing an output.

2,866,101

X-RAY APPARATUS

Robert J. Wagner and Eugene P. Thomas, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 29, 1955, Serial No. 531,171
4 Claims. (Cl. 250—91)



1. In positioning apparatus for an X-ray generator, a track member, a support member movable along the track member including a first carriage member and a second carriage member movable relative to said first carriage member in a direction parallel to said track member; a link member adapted to pivot to different angular positions in a vertical plane about said first carriage; a radius arm for connecting said link member and said second carriage, with said link member and said arm being provided to jointly support said X-ray generator in different vertically spaced positions; and counterbalance means for equilibriating the weight of said X-ray generator, said counterbalance means including a first portion, a second and intermediate resilient means joined at opposite ends thereto, respectively, means for holding said first portion in fixed position relative to said track, and flexible tensioning means for operating the resilient means, said tensioning means being connected to said second portion and extending to said link member at a predetermined point intermediate the ends thereof such that said flexible tensioning means continuously subjects said link member to a moment substantially equal to the product of the weight of said X-ray generator times the horizontal distance between the ends of said link member.

2,866,102

SYSTEMS FOR COMPUTING AND CONTROLLING THE GENERATION OF INTERCONNECTED SOURCES

Nathan Cohn, Jenkintown, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

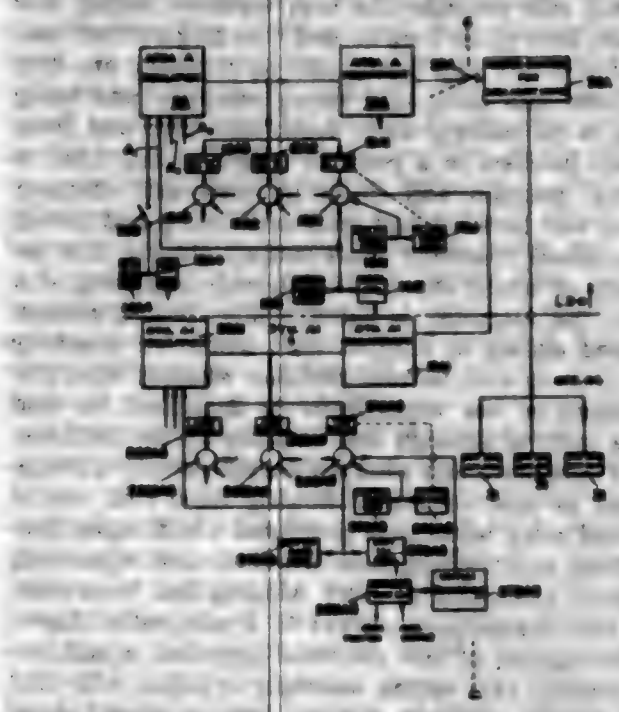
Continuation of application Serial No. 344,838, March 26, 1953. This application September 11, 1956, Serial No. 609,111
45 Claims. (Cl. 307—57)

45. In an operating area of a power-distribution network, a system for control of the output of a generating unit interconnected with other generating units to form a group, said generating unit having a natural characteristic response to area frequency wherein a change in frequency is accompanied by change in output of said generating unit, comprising means for producing a signal common to said group for use in determination of the generation desired from each of the generating units of the group, which signal is unaffected by changes in area frequency which do not impose a generation change requirement on said group of units, means for deriving

and said load is operatively disconnected from said output electrode at second times substantially coincident with

said core and having one end connected with said source

from said common signal a unit signal representative of the output required of said generating unit to carry a programmed share of the area load at normal frequency, means for producing a unit signal representative of the actual output of said generating unit, frequency-responsive means for producing a unit signal representative of the change in output of said generating unit desired for the



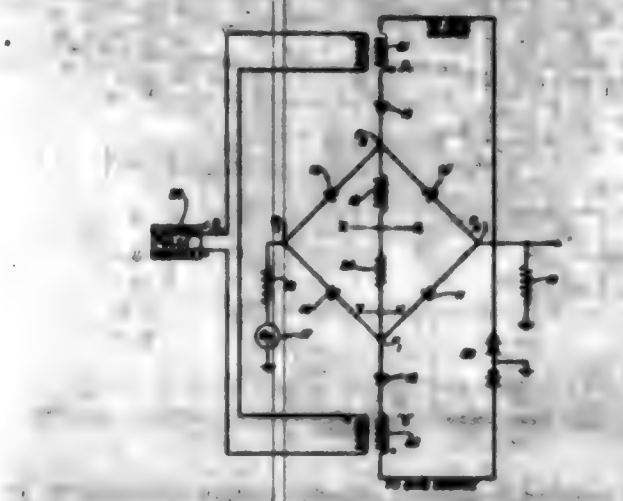
prevailing deviation of said frequency from normal, and control means responsive to the algebraic summation of said unit signals to vary the output of said generating unit to reduce said sum to zero, whereby, during deviation of said frequency from normal, the actual output of said generating unit deviates from its said programmed share to extent determined by said frequency-responsive means rather than by said natural characteristic response of said generating unit.

2,866,103

DIODE GATE AND SAMPLING CIRCUIT

John T. Blake, Parsippany, and Austin L. Ely, Whippany, N. J.; said Blake assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application August 22, 1956, Serial No. 605,664
6 Claims. (Cl. 307—88.5)



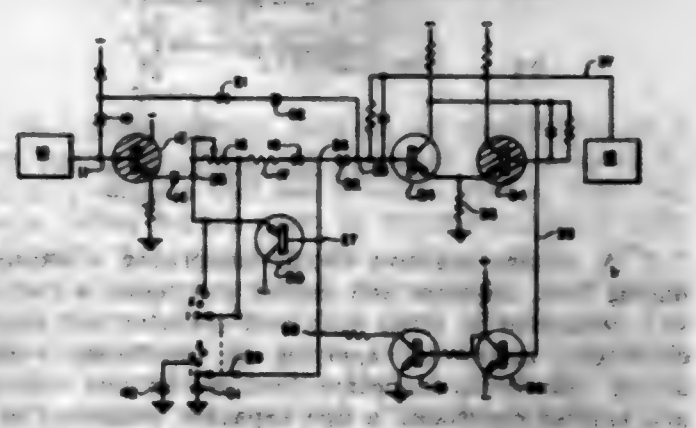
1. An electronic gate and sampling circuit having an input and output comprising, a pair of T networks of asymmetrically conducting devices, each network having a series arm of two or more devices and a shunt arm of at least one device, one network having the anodes of the devices connected to the junction thereof, the other network having the cathodes of the devices connected to the junction thereof, the series arms of said networks being connected in parallel between the input and output of said circuit, an energy storing impedance in series with a resistor connected between the junctions of the two networks, means for biasing the shunt arms into their low resistance condition, control means for the circuit arranged to produce an output capable of overcoming the action of said biasing means, and means connecting the control means to the shunt arms of each network.

2,866,184

FREQUENCY DIVIDER CIRCUIT

Frank D. Biggam, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application December 8, 1955, Serial No. 551,820
6 Claims. (Cl. 307—88.5)



1. In a frequency divider, a normally conductive emitter follower transistor, a differentiating condenser, a storage condenser, means for applying pulses to said transistor to cause said differentiating condenser to produce charging pulses, means responsive to the charging pulses of one polarity from said pulse-producing means for charging said storage condenser, means connecting said storage condenser and said differentiating condenser for applying a potential condition indicative of the charge on the storage condenser to said differentiating condenser, and an output device activated by a predetermined charge on the storage condenser.

2,866,185

TRANSISTOR LOGICAL DEVICE

John Presper Eckert, Jr., Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N. Y., a corporation of Delaware

Application October 4, 1955, Serial No. 538,318
5 Claims. (Cl. 307—88.5)

4. In an amplifier, the combination of a transistor having an input and output electrode, means for selectively applying spaced input signals to said input electrode at certain times, a load, rectifier means interposed between said output electrode and one end of said load, and a source of regularly occurring clock pulses coupled to the other end of said load for regularly changing the conductivity of said rectifier means at preselected times thereby to regularly connect said load to said output electrode via said rectifier means, the timing of said clock pulses being so related to the times of occurrence of said input signals that said load is operatively connected to said output electrode at first times subsequent to the times for commencement of each of said input signals,

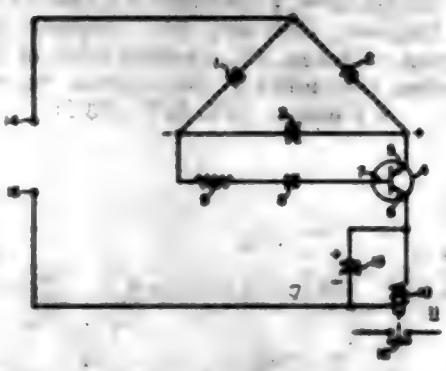
current deviation signal representing the extent to which said process condition deviates from a preselected value,

2,866,110

ROLLING ELECTRIC MACHINE WITH

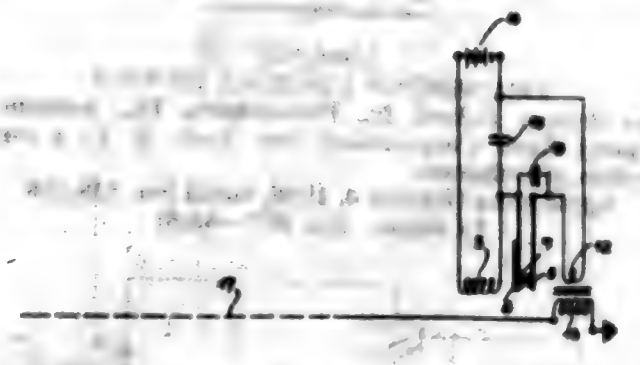
and said load is operatively disconnected from said output electrode at second times substantially coincident with the times for cessation of each of said input signals.

2,866,106
VOLTAGE SENSITIVE CONTROL DEVICE
Niles F. Schuh, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application June 22, 1956, Serial No. 593,254
4 Claims. (Cl. 307—88.5)



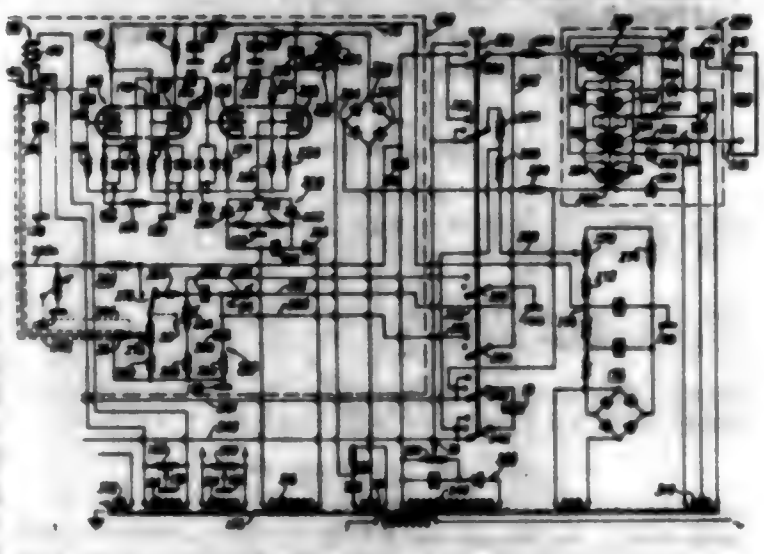
1. A voltage sensitive circuit comprising a transistor having base, collector and emitter electrodes, a load device connected in series with said collector and emitter electrodes, means for applying an alternating voltage across said series-connected load device and collector and emitter electrodes, a first capacitor connected to be charged unidirectionally by said voltage, the base and emitter electrodes of the transistor being connected across said first capacitor, voltage responsive means for preventing current flow to the base electrode when said voltage is below a predetermined value, and a second capacitor connected across said load device.

2,866,107
ELECTRICAL FENCING EQUIPMENT
Heinz Müller, Korbach, Waldeck, Germany
Application September 5, 1956, Serial No. 608,163
6 Claims. (Cl. 307—132)



1. Electrical fencing equipment of the kind in which electrical impulses are applied to a fence at regular time intervals in the order of one second, said equipment comprising a condenser, a source of direct current connected with said condenser for charging said condenser, a high voltage transformer comprising a primary winding having one end connected with said source and another end connected with said condenser, and a secondary winding having one end connected to the fence, and a control relay having a core of magnetic material and comprising two normally closed cooperating contacts, one of said contacts being connected with the primary winding of said transformer and the other contact being connected with said condenser, an armature, a spring assembly comprising means carrying and operating said contacts and a spring carrying said armature, said spring body located in a normal intermediate position when the relay is deenergized; said armature being located in the magnetic field of said core, at least one relay winding cooperating with said core and having one end connected with said source and another end connected with said condenser and said contacts, whereby said armature is attracted by said core to move said spring carrying said armature away from said normal intermediate position when the relay winding is energized by the charging current of said condenser and whereby said spring is kept away from said normal position and said contacts are kept separate during said regular time interval as long as said charging current continues and whereby said spring and its armature are then released from said core; said spring assembly and being swingable in its entirety away from said core and from said normal position to a point of reversion and back to said normal position and so as to close said contacts during said one forward and backward swing and during a predetermined relatively short contact closing time interval, each of which short time intervals beginning at a time when the assembly is substantially in said normal position and ending at another time when the assembly is again close to said normal position whereby said primary winding of the transformer is energized for said short time interval through said contacts by the discharging of said condenser and whereby simultaneously a charging current of said condenser flowing from said source through said relay winding is generated which again produces a field re-attracting said armature and separating said contacts when said primary winding has been energized by said discharging current to a substantial degree thus producing one of said electrical impulses in said secondary winding; said spring assembly together with said armature having resilient, natural frequency and mass characteristics so predetermined as to give said backward swinging at the second-mentioned time and past said normal position the same phase and direction as those of the magnetic force of said last-mentioned field re-attracting said armature, whereby said backward swinging accelerates said contact separating effect of said magnetic force.

2,866,108
CONTROL APPARATUS
Everett O. Olsen, Wrentham, and Francis J. Ricker, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass.
Application December 9, 1957, Serial No. 701,601
31 Claims. (Cl. 307—149)

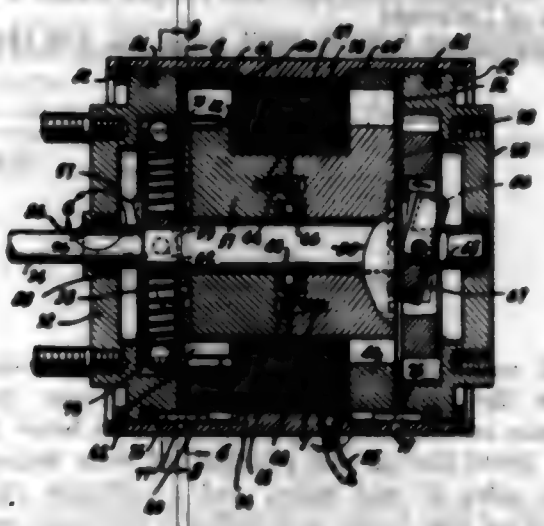


1. An industrial process control system comprising, in combination, a condition-responsive device located at the process and arranged to produce a direct-current measurement signal in accordance with a selected condition of said process, an adjustable set signal power supply arranged to produce a direct-current set signal of predetermined magnitude, circuit means for connecting the outputs of said condition-responsive device and said power supply in series-opposition so as to produce a direct-

mass of hard cementitious material compacted into said cavity around said cable, the combination therewith of external to said envelope and surrounding said tubular

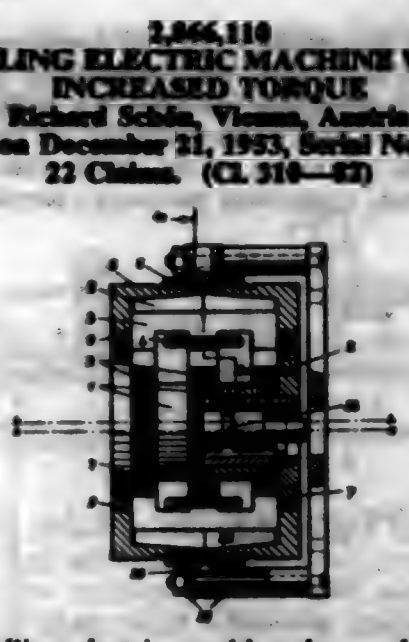
current deviation signal representing the extent to which said process condition deviates from a preselected value, control signal generating apparatus including a signal comparison circuit having first and second inputs, said comparison circuit comprising converter means arranged to develop an alternating-current signal responsive to the difference between a pair of direct-current signals fed to said inputs respectively, means for feeding said direct-current deviation signal to said first comparison circuit input, an A.-C. amplifier coupled to the output of said comparison circuit to intensify the alternating-current signal produced thereby, amplitude detection means connected to the output of said amplifier to transform said intensified alternating-current signal to a corresponding direct-current output signal, a feedback circuit coupled between the output of said detection means and said second input of said comparison circuit, first and second reactance means in said feedback circuit to produce at said second comparison circuit input a feedback signal which varies with respect to time if a constant direct-current signal is applied to said feedback circuit, said first reactance means tending to increase the magnitude of the feedback signal with the passage of time and said second reactance means tending to decrease the magnitude of said feedback signal with the passage of time, whereby said direct-current output signal is caused to vary so as to produce both rate and reset action, adjustment means for altering the effectiveness of said reactance means in varying said direct-current output signal, electrically-controllable operating means associated with said process for changing a characteristic of said process so as to influence said measured condition, and transmission circuit means for feeding to said operating means a control signal corresponding to said direct-current output signal to change said characteristic when necessary to maintain said condition substantially constant.

2,866,109
AXIAL FLUX ELECTROMAGNETIC MACHINERY
James P. Watson, Whittier, Calif.
Application August 31, 1956, Serial No. 607,422
22 Claims. (Cl. 310—37)



1. Oscillating machine comprising stator means having at least one magnetic pole, a shaft rotatably mounted in said stator means, rotor means rotatably mounted coaxially circumjacent said shaft and having at least one pole, said poles being mutually circumferentially attracted to each other upon effecting of a magnetic field therebetween, electric coil means mounted coaxially circumjacent said rotor means for effecting an axial magnetic flux in said rotor means, said flux spanning the gap between said poles, whereby upon energization of said coil means said poles are attracted, thereby to effect rotation of said rotor means and permanent magnet means cooperating with said flux for coupling said rotor means to said shaft.

2,866,110
ROLLING ELECTRIC MACHINE WITH INCREASED TORQUE
Richard Schön, Vienna, Austria
Application December 31, 1953, Serial No. 399,186
22 Claims. (Cl. 310—82)



1. In a rolling electric machine the combination of a stator having a wound and laminated core adapted to produce a rotating field and provided with at least one annular rolling friction track, its lamination formed with developable flux transition faces, and a roller with a ferromagnetic core provided with coaxial developable flux transition faces forming at least two air gaps between the roller and the stator, said roller containing at least one current conducting part, in which in limited amount currents are inductible from the rotating field, said roller provided with at least one rolling body contacting the fraction track of the stator in a circulating point, said flux transition faces forming a corresponding shortest magnetic air gap, diameter and axial position of said friction track and rolling body so adapted, that the circulating contact point of the track is removed from the current conducting part of the roller in direction of the corresponding shortest air gap, i. e. normal to the roller's flux transition face.

2,866,111
INDUCTOR ALTERNATOR
Ralph M. Heintz, Los Gatos, Calif., assignor to International Telephone and Telegraph Corporation, New York, N. Y., a corporation of Maryland
Application April 23, 1956, Serial No. 579,887
1 Claim. (Cl. 310—168)

An inductor alternator comprising an inner stator having four equally spaced slots forming therebetween four equal-width pole faces, a field winding located in a diametrically opposite pair of said slots, an output winding located in the other diametrically opposite pair of slots and a rotor surrounding said stator and having a pair of internally projecting diametrically opposite teeth the width of said teeth being the same as that of said pole faces.

2,866,112
BRUSH CAP CONNECTION
Kenneth R. Matz, Cleveland, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Application November 17, 1955, Serial No. 547,430
3 Claims. (Cl. 310—249)

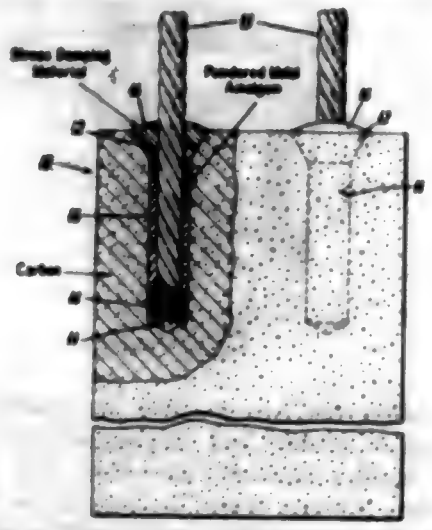
1. In an electrical contact brush having a cavity for the reception of an electrically conductive cable and a

material disposed between the electrodes to be traversed by an electric field produced between the electrodes, the

hermetically tight envelope, a slide bearing integrally united to each end cap, a stem journaled in each slide

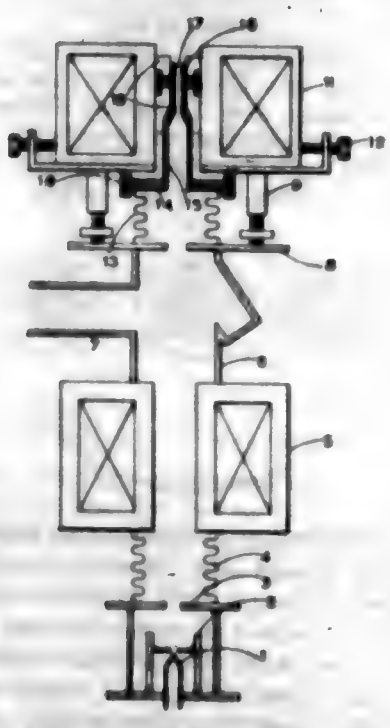
of said core, at least one relay winding cooperating with supply in series-opposition so as to produce a direct-

mass of hard cementitious material compacted into said cavity around said cable, the combination therewith of an improved cementitious material, for reducing the development of excessive bending stresses and fatigue failure caused by the vibrations at the point where the cable enters the brush, comprising mercaptan-terminated liquid



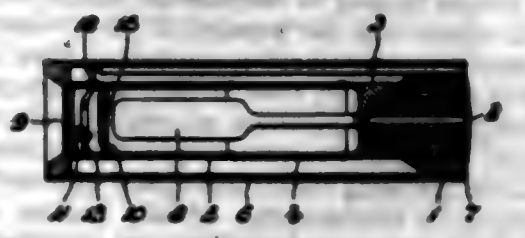
polysulfide polymer, di-glycidyl ether of bis-phenol F, quartz flour, and tri-dimethyl-aminomethyl phenol, said improved material being in said cavity in the region where said cable enters the brush and adapted to substantially reduce shaking out of said hard cementitious material from said cavity and to simultaneously damp said vibrations, thereby extending the useful life of said cable.

2,866,113
FINE FOCUS X-RAY TUBES
Vernon Ellis Coslett, Cambridge, England
Application October 6, 1953, Serial No. 384,496
Claims priority, application Great Britain October 7, 1952
9 Claims. (Cl. 313—57)



1. An X-ray tube comprising an elongated, evacuated envelope, means for producing an electron beam along a given axis disposed at one end of said envelope, a magnetic condenser lens surrounding the axis of the beam and disposed adjacent said beam producing means, a metal foil serving as a transmission target disposed at the other end of the envelope and positioned to intercept the beam, said foil constituting a portion of the wall of said envelope, a metal tubular neck portion also forming a portion of the wall of said envelope and supporting said metal foil in position, a magnetic objective electron lens external to said envelope and surrounding said tubular neck portion in the immediate vicinity of said target, said objective lens being secured to said neck portion, means for adjusting said objective lens and neck portion relative to the remainder of said envelope to parallel the magnetic axis of the lens and said given axis of the beam within the neck portion and to align said axes at the target surface, and means to adjust the target in an axial direction relative to the objective lens such that the target surface coincides with the area of least cross-section of the electron beam produced by the lens, whereby an X-ray source of the order of one micron or less may be obtained.

2,866,114
BERYLLIUM WINDOW X-RAY TUBE
Jan Jeuyns Christiaan Hardenberg, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Application June 18, 1954, Serial No. 436,922
Claims priority, application Netherlands June 12, 1953
4 Claims. (Cl. 313—59)



1. A discharge device comprising an envelope containing an atmosphere different from the outside atmosphere, cathode and anode electrodes, and a radiation-transparent window in said envelope, said window comprising vacuum-tight beryllium foil having a ground portion of a thickness less than 100 microns.

2,866,115
TRANSIT TIME MODULATOR
Neal W. Ledbetter, Los Angeles, Calif., assignor to Lenkurt Electric Co., Inc., San Carlos, Calif., a corporation of Delaware
Application July 30, 1957, Serial No. 675,183
2 Claims. (Cl. 313—62)

2. An electron tube comprising within an evacuated envelope the combination of an electron gun operable to produce an intensity modulated electron beam, a conductive shield having two parallel flat sides disposed on opposite sides of said beam, and a collector electrode for receiving said beam, said collector electrode and said shielding means being separated by a gap having the shape of a segment of a parabola, said gap being disposed in slanting relation to said beam.

2,866,116
ELECTROLUMINESCENT MATERIAL
Peter Whitton Ranby, London, England, assignor to Thorn Electrical Industries Limited, London, England, a British company
No Drawing. Application October 18, 1954
Serial No. 463,037
12 Claims. (Cl. 313—108)

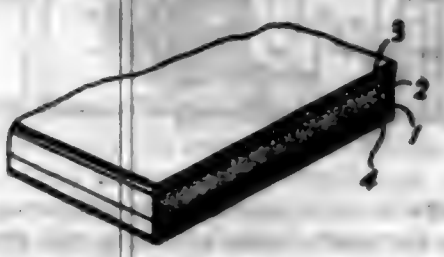
7. An electroluminescent lamp comprising a pair of spaced conductive electrodes and an electroluminescent

ranged in said grooves, said V-shaped vanes comprising first and second vanes, said second vanes substantially

posed substantially perpendicular to said fixed and mov-
able portions, spring adjusting means including

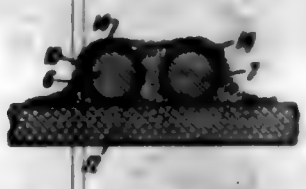
material disposed between the electrodes to be traversed by an electric field produced between the electrodes, the material consisting essentially of zinc sulphide activated by copper and lead and including from 0.002 to 0.5% of combined chlorine, by weight of the zinc sulphide and from 0.2 to 5% of combined potassium by weight of the zinc sulphide.

2,866,117
ELECTROLUMINESCENT PANEL
Cyril Hubert Walker, Rugby, and Maurice George Clarke, Church Lawford, near Rugby, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company
Application April 11, 1956, Serial No. 577,474
Claims priority, application Great Britain April 15, 1955
2 Claims. (Cl. 313—108)



1. An electroluminescent device comprising a self-supporting wafer of dielectric material of a refractory nature selected from the group consisting of titanium dioxide and barium titanate, an electroluminescent layer composed of an intimate fusion of powdered electroluminescent material and powdered glass supported on one face of said wafer, an electrically conductive layer on the other face of said wafer, an electrically conducting radiation transmissive layer on the exposed face of said electroluminescent layer opposite said electrically conductive layer, and terminal means attached to said electrically conducting layers.

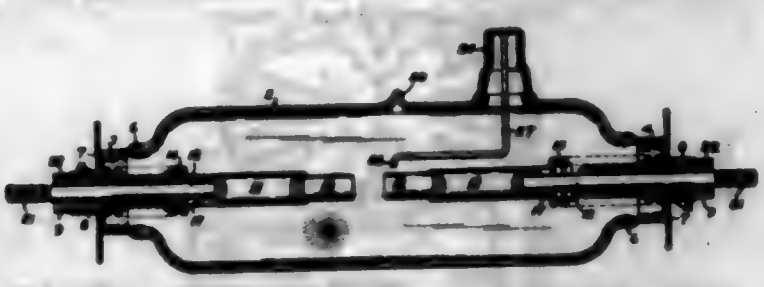
2,866,118
ELECTROLUMINESCENT LAMP
Eric L. Mager, Beverly, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Continuation of application Serial No. 180,785, August 22, 1950. This application August 19, 1957, Serial No. 678,976
8 Claims. (Cl. 313—108)



1. An electroluminescent device comprising two spaced conductors in close proximity to each other and a layer therebetween of electroluminescent phosphor embedded in glass of low enough melting point to insure that the phosphor crystals are unmelted.

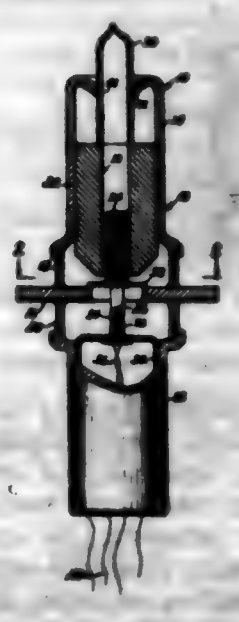
2,866,119
ADJUSTABLE DISCHARGE TUBE
Jo Emmett Jennings, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California
Application March 11, 1957, Serial No. 645,246
5 Claims. (Cl. 313—148)

1. A discharge device comprising a tubular dielectric shell, conductive end caps closing the shell to form an hermetically tight envelope, a slide bearing integrally united to each end cap, a stem journaled in each slide bearing, a bellows within the envelope and having a closed end integrally united to each stem and an open



end integrally united to the adjacent end cap, a contact on the inner end of each stem, and a conductive arm extending into the envelope from a lead outside the envelope to a contact point adjacently spaced from one of the contacts.

2,866,120
METHOD OF MAKING AN ELECTRON TUBE
Clifford M. Morris, Hackensack, and Nicholas E. Prydak, Summit, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application November 14, 1955, Serial No. 546,445
3 Claims. (Cl. 313—247)



1. A method of making an electron tube structure including three members having passageways of successively larger transverse extents, said method comprising extending a single elongated mandrel through said members in an order from the member having the largest passageway extent to the member having the smallest passageway extent, fixing said members into a unitary structure, removing said structure from said mandrel, and fixing against the portion of the intermediate of said three members defining the passageway therein an insert having a transverse extent smaller than that of the passageways in all of said members.

2,866,121
GRID STRUCTURE
Jan S. de Wit, Rexford, N. Y., assignor to General Electric Company, a corporation of New York
Application February 6, 1956, Serial No. 563,492
6 Claims. (Cl. 313—248)

4. A grid structure comprising an outer frame having grooves therein, a plurality of inwardly extending V-shaped vanes having the free ends of said V-shaped vanes

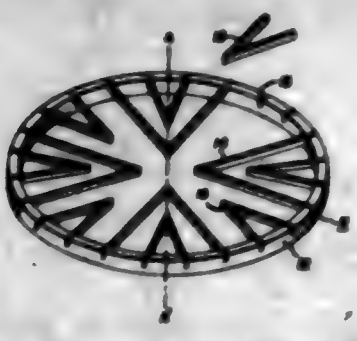
2,866,125
CATHODE-RAY TUBE
Johan Haantjes and Gerrit Jan Lubben, Eindhoven, Neth-

2,866,127
CATHODE RAY TUBE APPARATUS
Harrison S. Allerton, Trenton, N. J., assignor to Radio

metal foil in position, a magnetic objective electron lens

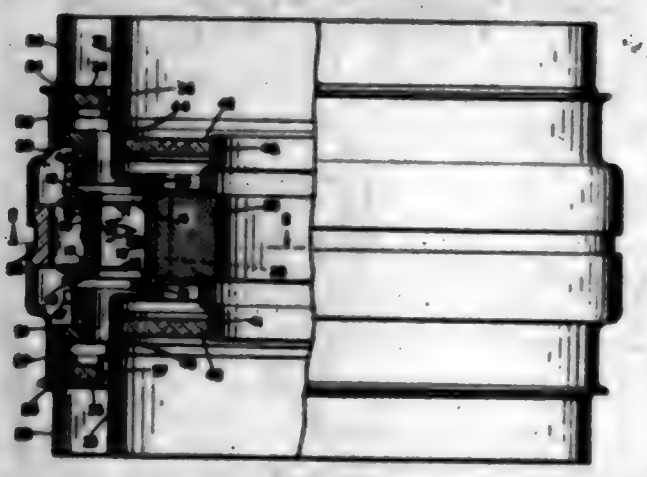
spaced conductive electrodes and an electroluminescent

affixed in said grooves, said V-shaped vanes comprising first and second vanes, said second vanes substantially



smaller than said first vanes, said second vanes affixed to said frame within and between said large vanes.

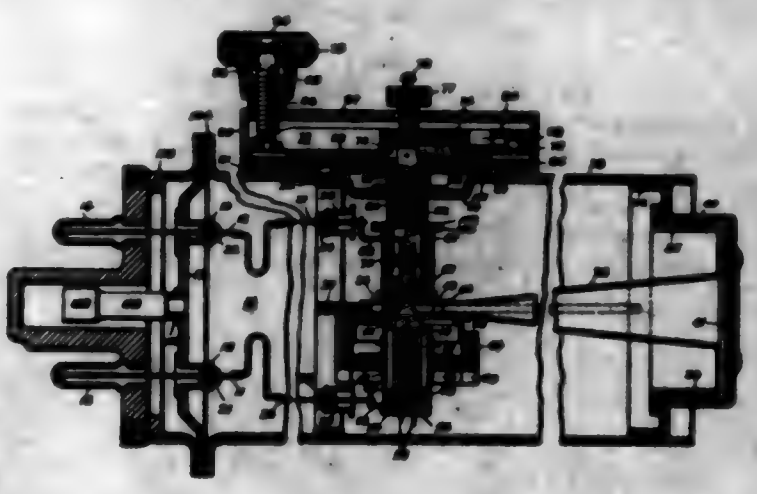
2,866,122
ELECTRON DISCHARGE TUBES
Howard D. Doolittle and Joseph W. Skoban, Stamford, Conn., assignors to Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Original application September 15, 1950, Serial No. 184,950, now Patent No. 2,790,536, dated June 12, 1956. Divided and this application October 3, 1955, Serial No. 538,104
2 Claims. (Cl. 313—382)



1. An electron discharge device for high frequency use comprising an annular anode having a pair of axially extending annular terminals, an annular control electrode encircling the anode and having a pair of axially extending annular terminals, the control electrode further having a plurality of axially extending slots therein, and a cathode structure encircling the control electrode and comprising a plurality of elongated strip cathodes each of which is located adjacent a respective slot, cathode support members extending from each end of each cathode in a direction away from the slots, a pair of cathode support rings spaced from each end of the annular array of cathodes, and a plurality of brackets removably connected to the support rings, each bracket being fixedly connected with a respective cathode support member, with the brackets connected to the support members at one end of the cathodes extending in the opposite direction from the brackets connected to the support members at the other end of the cathodes.

2,866,123
MECHANICALLY TUNED KLYSTRONS
John E. McCann, Palo Alto, Calif., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application December 2, 1953, Serial No. 395,789
4 Claims. (Cl. 315—5.22)

1. In an electron discharge device, a cavity resonator assembly including a fixed portion and a movable portion, said cavity resonator assembly having an axis disposed substantially perpendicular to said fixed and movable portions, coarse adjusting means including an adjusting screw aligned with said axis of said assembly and directly engaging said movable portion of said assembly for effecting movement of said movable portion during rotation of said crew, and fine adjustment means in-



cluding a first lever, a second lever embracing said screw, and means for controllably actuating said first lever, the position of said second lever being independent of rotation of said screw, said first lever bearing against said second lever and responsive to actuation of said first lever to impart longitudinally directed thrust to said screw.

2,866,124
CONTROL POTENTIOMETER
Joseph Giuffrida, Peabody, and Guy B. Prarie, Jr., Salem, Mass., assignors to Columbia Broadcasting System, Inc., Danvers, Mass., a corporation of New York
Application November 30, 1954, Serial No. 472,660
7 Claims. (Cl. 315—13)

1. A potentiometer comprising, a hollow hemispherical supporting base, a homogeneous resistive material attached to the inner surface of said supporting base, a plurality of contacts mounted on said base whereby electrical contact is made at selected points on the periphery of said resistive material, a resilient conducting hemispherical contacting membrane concentrically mounted to said supporting base, and means deforming any selected portion of said contacting membrane whereby said contacting membrane touches said resistive material under said deformed portion.

ducing a rectangular raster on the screen of the tube, and frame-scan control means for causing each frame

inner wall surfaces of said envelope, said wall member being axially movable by rotation of said rod to thereby

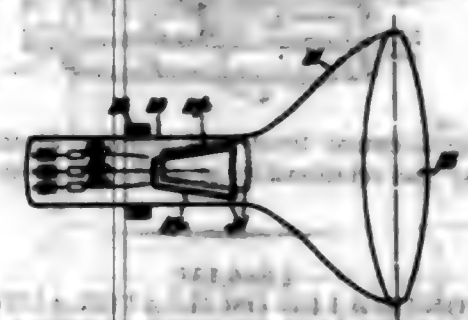
shell, conductive end caps closing the shell to form an shaped vanes having the free ends of said V-shaped vanes

2,866,125

CATHODE-RAY TUBE

Johan Haantjes and Gerrit Jan Lubben, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application October 6, 1954, Serial No. 460,744
Claims priority, application Netherlands February 9, 1954
10 Claims. (Cl. 315—13)



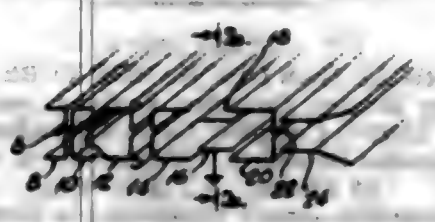
1. In combination, a cathode-ray tube having a substantially planar electron-receiving screen extending substantially at right angles to the longitudinal axis of the tube and means including a plurality of electron guns for producing a common electron beam having a substantially ribbon-like shape along the axis of said tube; and electromagnetic deflection means located between said electron guns and said screen for producing a deflecting field within the tube for deflecting said electron beam in two substantially perpendicular directions, whereby said beam may be caused to scan said screen, said ribbon-shaped beam having a longer and a shorter dimension both at right angles to one another and to the axis of the tube, said longer dimension of said beam extending parallel to one direction of deflection of the beam at said deflection means, said deflection means producing a deflection field causing the electron beam to form a linear cross-section perpendicular to said one direction of deflection and located in the meridional image plane which is substantially coincident with the surface of said screen, and to form a linear cross-section parallel to the other direction of deflection and located in the sagital image plane which is also substantially coincident with the surface of said screen.

2,866,126

DIRECT VIEW TELEVISION REPRODUCING TUBE OR THE LIKE

Albert M. Skellett, Madison, N. J., assignor to Tung-Sol Electric Inc., a corporation of Delaware

Application May 3, 1956, Serial No. 582,571
10 Claims. (Cl. 315—13)



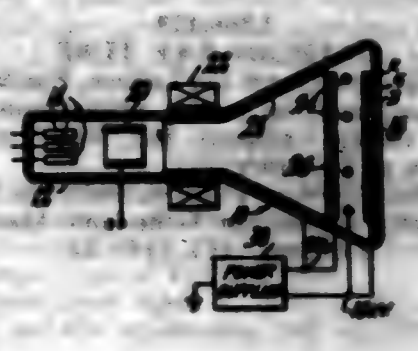
1. In a direct view television reproducing tube, means for creating a ribbon like sheet of electrons of a width equal to the width of the picture to be reproduced, a member provided with a masking slot of a length at least equal to the width of the created electron sheet and positioned for passage therethrough of undeflected electrons of the created electron sheet, horizontal scanning alternating electrostatic means for so deflecting electrons of said sheet that electrons only pass through the slot at a location which traverses the slot in synchronism with the alternations of said electrostatic means, and means responsive to frame frequency for vertically deflecting the beam of electrons beyond the slot.

2,866,127

CATHODE RAY TUBE APPARATUS

Harrison S. Alwine, Trenton, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application July 10, 1953, Serial No. 367,270
The terminal fifteen years of the term of the patent to be granted has been disclaimed
8 Claims. (Cl. 315—14)



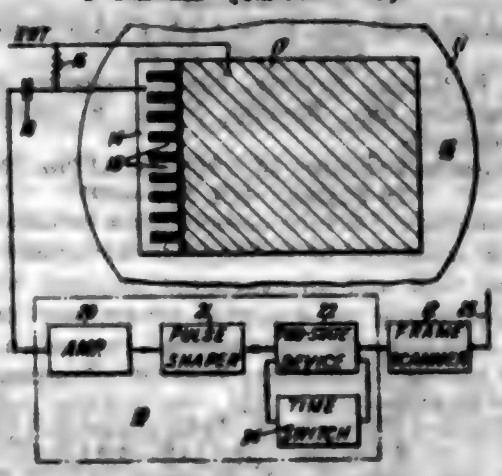
1. In combination with a cathode ray tube of the type having a multi-part target assembly which includes a first target electrode connected to a source of predetermined mean potential and a second target electrode comprising a non-rigid structure whose members have mechanical resonant frequencies of a predetermined range, said second electrode being connected to a source of lower potential than said first-named potential such that the potential of said first electrode is subject to an alternating variation, due to load changes, of greater amplitude than is said second-named potential; said second-named source including a voltage regulator tube and a voltage-divider; filter means including a shunt capacitor connecting a point on said voltage-divider to a conduction-controlling electrode of said regulator tube for transmitting a sample voltage signal from said voltage divider to said regulator tube whereby to vary the conduction of said regulator tube to compensate for changes in the mean load in order to regulate the mean potential of said second-named source; said capacitor being sufficiently large as to attenuate the alternating components of said sample signal for variations occurring at frequencies within said predetermined range, thereby reducing the efficiency of regulation for such variations.

2,866,128

CATHODE-RAY DISPLAY APPARATUS

Kenneth Collett Burn, Rusholme, Manchester, England, assignor to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland

Application May 28, 1957, Serial No. 662,312
Claims priority, application Great Britain June 1, 1956
5 Claims. (Cl. 315—21)



1. Cathode-ray display apparatus including a cathode-ray tube, having line and frame scanning stages for pro-

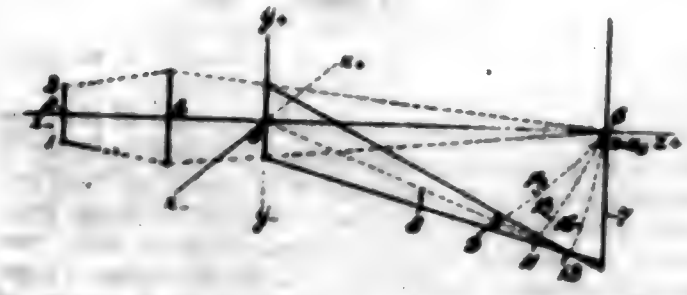
tion, said cavity resonator assembly having an axis dis- formed portion.

ducing a rectangular raster on the screen of the tube, and frame-scan control means for causing each frame scan to be effected in unidirectional fractional displacements of the beam from line to line of the raster, pausing at each line, under the control of pulses derived from impingement of the beam on means within the tube defining the position of each line at one side of the raster.

2,866,129
CATHODE-RAY TUBE

Johan Haantjes and Gerrit Jan Lubben, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

Application February 27, 1956, Serial No. 568,101
Claims priority, application Netherlands March 5, 1955
8 Claims. (Cl. 315—24)



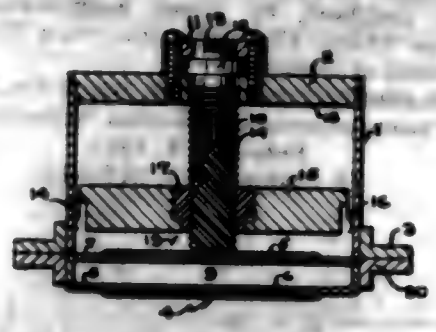
1. A cathode-ray tube comprising a substantially planar screen located substantially perpendicular to the axis of said tube; electron beam producing means located within said tube; focusing means for focusing the electron beam produced by said beam producing means; and a deflector coil system for deflecting the electron beam in two directions substantially perpendicular to each other, said beam producing means and said focusing means cooperating to produce an electron beam having a substantially circular cross-section in the field of said coil system, said coil system being operable to cause said electron beam to form a linearly elongated cross-section whose longest dimension is perpendicular to one of said directions of deflection and which is located in the meridional image plane which substantially coincides with the plane of said screen for said one direction of deflection and to form a linearly elongated cross-section whose longest dimension is parallel to the other direction of deflection and which is located in the sagittal image plane which substantially coincides with the plane of said screen for the said other direction of deflection, so that the cross-section of said beam at the plane of said screen has a constant dimension in the said one direction of deflection for deflection throughout the entire scanned surface area of said screen.

2,866,130
BROADBAND MICROWAVE TRANSMISSION CONTROL TUBE

William R. Gibes, Beverly, Mass., assignor to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts

Application February 18, 1958, Serial No. 714,893
10 Claims. (Cl. 315—39)

9. A tunable ATR tube comprising a metallic envelope defined by a section of rectangular waveguide having a closed end wall and an evacuated resonant window assembly containing an ionizable atmosphere at reduced pressure enclosing the opposite end thereof, a rotatable threaded rod of a dielectric material supported by said end wall and extending along the central axis of said envelope to a point in close proximity to said window assembly, said dielectric rod having a metallic wall member threadably disposed thereon parallel to said window assembly and in contiguous relationship with all the inner wall surfaces of said envelope, said wall member being axially movable by rotation of said rod to thereby

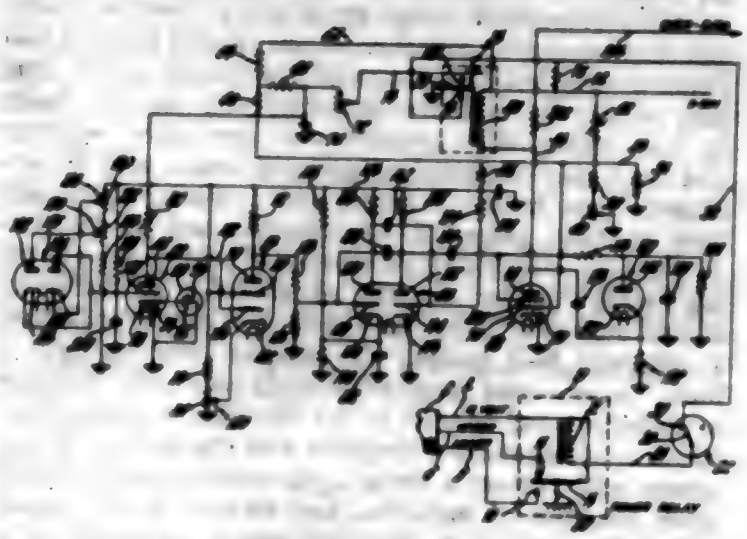


alter its displacement from said window assembly without altering the relationship of said rod to the window assembly.

2,866,131
LIGHT CONTROLLED OSCILLATOR-AUTOMATIC HEADLAMP DIMMER SYSTEM

George W. Onikura, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 5, 1956, Serial No. 557,488
8 Claims. (Cl. 315—83)



1. In a light sensitive control system, photoelectric means, amplifying means connected to the photoelectric means, said amplifying means having a control electrode to adjust the conductivity thereof, a low voltage source of electrical power connected to said electrode and voltage regulating means independently connected between the source of power and said electrode to prevent the voltage thereon from exceeding either upper or lower limits.

2,866,132
ELECTRICAL GAS DISCHARGE TUBE CIRCUIT

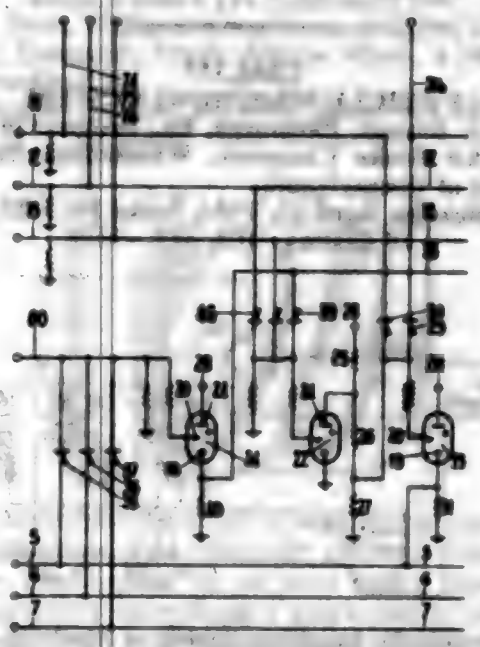
John Henry Beesley, Coventry, England, assignor to The General Electric Company Limited, London, England

Application October 6, 1954, Serial No. 460,607
25 Claims. (Cl. 315—84.5)

1. An electrical circuit comprising a plurality of gas discharge tubes that each have an anode, a cathode and a trigger electrode, a plurality of pairs of terminals equal in number to the gas discharge tubes, the said pairs having a predetermined order of priority and each pair comprising an input terminal and an output terminal, each gas discharge tube having its cathode connected to a different one of the output terminals and acting when operated to conduct across its anode to cathode discharge gap so as to cause an electric signal to be applied to the associated output terminal, means which connects the input terminal of each pair to the trigger electrode of the gas discharge tube that has its cathode connected to the output terminal of the pair and which responds

said arrester having an insulating housing including a having axially spaced coaxial annular electrodes on end

to the electrical actuation of any one of the input terminals to operate, after a predetermined delay, the gas discharge tube connected to the actuated input terminal, a plurality of inhibiting means which are equal in number to the gas discharge tubes and which are each connected to the trigger electrode of a different one of those tubes, each inhibiting means acting when operated to prevent the operation of the particular gas discharge tube to which it is connected but having no effect if that gas discharge tube is already operated, means which con-



nects the input terminal of each pair, other than the pair of lowest priority, to all the inhibiting means associated with pairs of terminals that are of lower priority and which responds to the electrical actuation of any input terminal to which it is connected so as to operate the inhibiting means associated with all pairs of terminals of lower priority than the pair including the actuated input terminal, and means which connects the output terminals to the inhibiting means and which responds to the operation of any one of the gas discharge tubes so as to operate any of the inhibiting means not already operated.

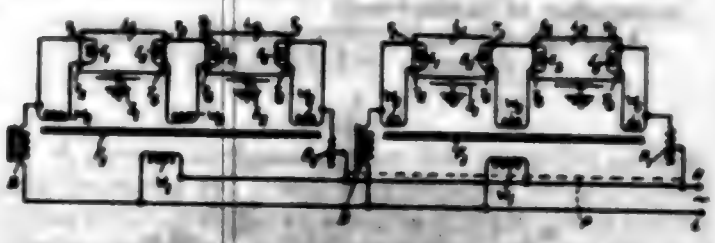
2,866,133

ELECTRIC LAMP CIRCUIT

John William Strange, Douglas Thomas Waigh, and William Robert Bleazidge, London, England, assignors to Thorn Electrical Industries Limited, London, England, a British company

Original application September 28, 1949, Serial No. 116,756, now Patent No. 2,683,240, dated July 6, 1954. Divided and this application July 2, 1954, Serial No. 445,044

4 Claims. (Cl. 315—95)



1. An electric lamp circuit including two power source terminals and a lamp-and-ballast combination having two terminals, the said combination consisting of at least one low-pressure electric discharge lamp of the hot-cathode type having two electrodes and connected in parallel with at least one filament lamp and a ballast impedance connected in series with the said parallel-connected lamps, the circuit also including means for supplying heating current from said power source terminals continuously to each of said discharge lamp electrodes at least over the lower part of the operating range of brightness of the discharge lamp and means for applying a potential difference derived from said power source terminals between the said two terminals of the combination, the last-mentioned means including means for varying said potential difference substantially continuously while the discharge lamp is operating, and the characteristics of the discharge and filament lamps being so chosen that, in the operating range within which the potential difference across the lamp is insufficient to cause the discharge lamp to strike an appreciable amount of light is emitted by the filament lamp.

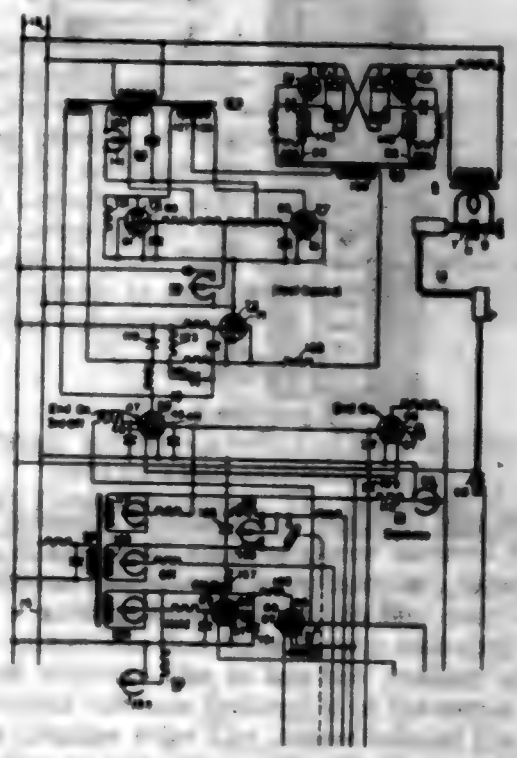
2,866,134

ELECTRONIC SEQUENCE TIMER

Edward C. Hastwig, Walnut Creek, Calif., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Original application April 7, 1950, Serial No. 154,649. Divided and this application July 10, 1953, Serial No. 367,248

21 Claims. (Cl. 315—252)



1. In combination, a first valve having an anode, a cathode and a control electrode, terminals for connecting a load in the circuit with the anode and cathode of said first valve, a second valve having an anode, a cathode and a control electrode, an impedance connected in the anode-cathode circuit of said second valve, connections between said impedance and the control electrode of said first valve such that, when current is flowing to said impedance, said impedance causes the control electrode of the first valve to be biased toward non-conductivity, a third valve having an anode, a cathode, and a control electrode connected to said impedance in the same manner as the control electrode of said first valve, a second impedance connected in the anode-cathode circuit of said third valve, and connections between said second impedance and the control electrode of said second valve to cause said second valve to be biased to non-conductivity when current is flowing to said second impedance.

2,866,135

LIGHTNING ARRESTERS

Francis V. Cunningham, Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware

Application December 15, 1954, Serial No. 475,325

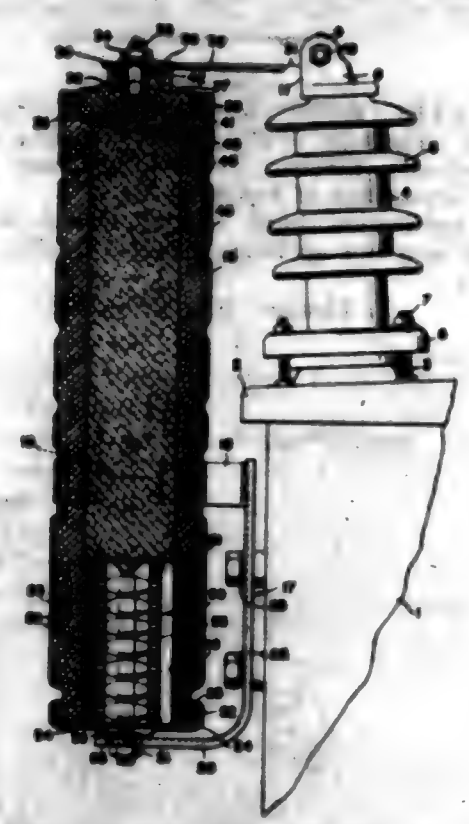
3 Claims. (Cl. 317—15)

1. In a valve type lightning arrester arranged for protection of an electric line having a terminal gap electrode,

supporting member, winding a coil with side portions and end portions connecting the side portions, passing a side

support therefor, and an ohmic connection between the collector lead and the collector section of the transistor

said arrester having an insulating housing including a substantially coextensive chamber closed at both ends thereof and containing therein a predetermined amount of negative resistant valve material, and a conductive mounting bracket means having a portion disposed intermediate the ends of said housing and arranged for electrical connection with ground for stationarily supporting said housing; the combination with an external gap electrode having a portion protruding from said housing and terminating at its opposite end within said chamber, said protruding portion arranged for operative association



with said line terminal gap electrode whereby a predetermined external sparkover gap dimension is provided therebetween, an internal sparkover gap assembly contained within said chamber and comprising a plurality of gap electrodes spaced apart and electrically insulated from one another, one end of said assembly being electrically connected to a terminal member electrically engaging said bracket means, said valve material being positioned intermediate said opposite end of said external gap electrode and said internal gap electrode assembly, and said portion of said bracket means being disposed in proximity to the end of said internal gap electrode assembly opposite from said one end engaging said terminal member.

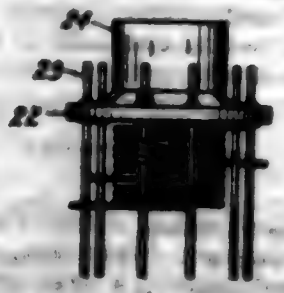
2,866,135

NETWORK ASSEMBLY

Nello Coda, Erie, and Kenneth Chellstrom, North East, Pa., assignors to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania

Application November 9, 1955, Serial No. 546,965

8 Claims. (Cl. 317—101)



1. A network assembly comprising a plurality of coaxial disc circuit components of assorted kinds of electrical function stacked in end to end relation, the discs having axially spaced coaxial annular electrodes on end faces of the discs whereby connection thereto may be made in any angular position of the discs and with the material giving the respective components the unlike electrical characteristics lying between the electrodes, leads interleaved between the discs and having coaxial annular inner ends making contact with adjacent electrodes and having outer ends projecting outside the stack for connecting the components into a circuit, and soldered joints between the leads and electrodes holding the stack in assembled relation.

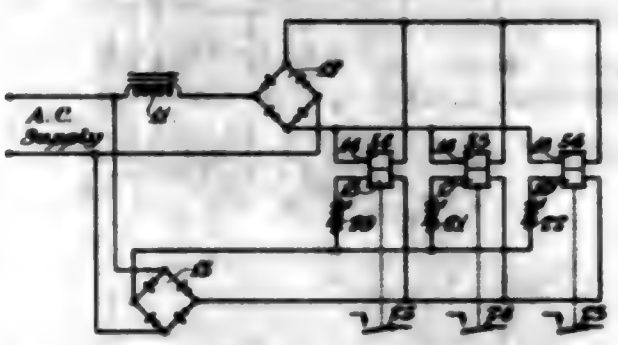
2,866,137

VEHICLE WEIGHING SYSTEM

Herman G. Bleaser, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application April 13, 1954, Serial No. 422,829

18 Claims. (Cl. 317—139)



2. In a vehicle weighing device, a roadway having a portion constructed of a magnetic metal, a slot formed in said magnetic portion, an electrical circuit, means for providing an input signal to said electrical circuit, an inductance wound on a core of magnetic metal and positioned in said slot so that the core of the inductance and the metallic portion of the roadway form a magnetic flux path interrupted by an air gap, the metallic portion of the roadway being constructed to deflect under the weight of a vehicle and close the air gap to a greater or lesser degree depending on the weight of a vehicle on the roadway and thereby proportionately change the electrical characteristics of the inductance, the inductance being connected electrically to the electrical circuit in a manner to affect the input signal in proportion to the weight of a vehicle on the roadway, and means included in the electrical circuit for sensing changes in the input signal and thereby indicate the relative weight of a vehicle on the roadway.

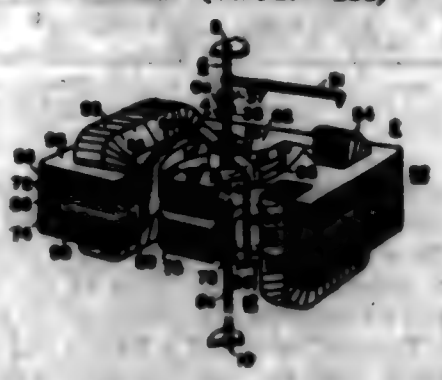
2,866,138

INSTRUMENT MOVING-COIL ASSEMBLIES

Douglas A. Young, East Orange, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 26, 1953, Serial No. 364,451

3 Claims. (Cl. 317—166)



1. The method of assembling an instrument moving-coil assembly comprising the steps of forming a pair of openings and a passage connecting said openings in a coil-

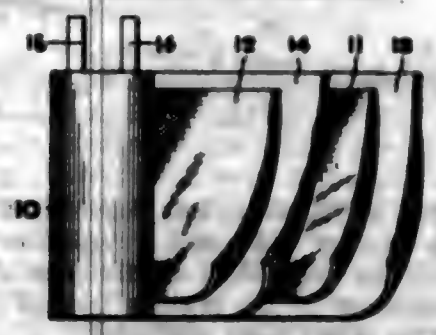
motor, means for coupling the rotatable member to the flywheel, a servomotor rotatably coupled to the flywheel, for developing an error signal indicative of the phase relationship of said position indicating signals and said con-

each of said discharge lamp electrodes at least over the

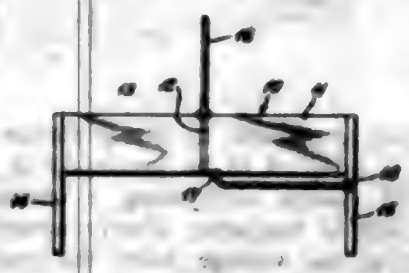
tection of an electric line having a terminal gap electrode,

supporting member, winding a coil with side portions and end portions connecting the side portions, passing a side portion of the coil through the openings and connecting passage to position a portion of each end portion of the coil within a separate one of said openings, isolating each opening from the connecting passage, and introducing a hardenable fluid into each of said isolated openings.

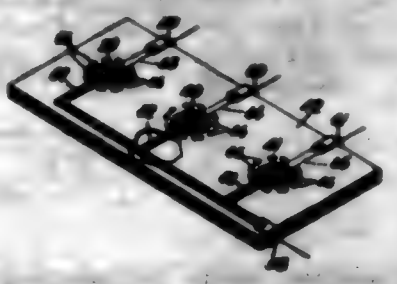
2,866,139
ELECTROLYTIC CAPACITOR
Sidney D. Ross, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application October 22, 1953, Serial No. 387,745
3 Claims. (Cl. 317—230)



1. An electrolytic capacitor comprising a plurality of electrode elements, said electrode elements being separated from one another by an inert spacer impregnated with an electrolyte comprising a non-aqueous solution of a salt of quinonoid acid having an anionic portion capable of oxidizing metal surfaces and selected from the group consisting of bis(tri-n-butyl ammonium) salt of anthraquinone 2,6-disulphonic acid, triethyl ammonium salt of anthraquinone-2-sulphonic acid, tetraethyl ammonium salt of 1,4-dihydroxy-2-anthraquinone sulphonic acid, salt of quinalizarin and hydrazine, triethanol ammonium salt of 2,5-trihydroxy quinone, sodium salt of 1,2 naphthaquinone-4-sulphonic acid dissolved in a conducting solvent.

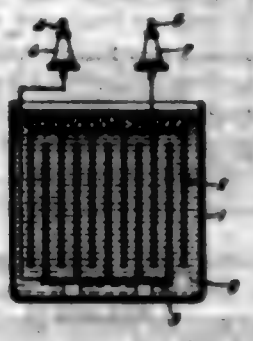
2,866,140
GROWN JUNCTION TRANSISTORS
Morton Edward Jones, Edmond Donald Jackson, and Richard Frank Stewart, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application January 11, 1957, Serial No. 633,586
9 Claims. (Cl. 317—235)

1. A grown junction transistor that comprises an elongated transistor bar including an emitter section, a base section and a collector section, the emitter section and the collector section each being relatively long and the base section being relatively very short, the emitter section being relatively highly doped and of relatively low resistivity and the collector section being relatively lightly doped and of relatively high resistivity, an emitter lead connected to the emitter end of the transistor bar to furnish an electrical connection and a mechanical support therefor, a base lead connected to the base section of the transistor bar to furnish an electrical connection therefor, a collector connection attached to the collector end of the transistor bar so as to furnish at least a mechanical support therefor, and an ohmic connection between the collector lead and the collector section of the transistor bar at a point closely adjacent to the base layer of the transistor bar.

2,866,141
PRESSURE SENSING DEVICES
Wallace E. Frank, Kintnersville, and John J. Boericke, Jr., Newtown, Pa., assignors to The Franklin Institute, Philadelphia, Pa., a corporation of Pennsylvania
Application June 23, 1954, Serial No. 438,846
11 Claims. (Cl. 317—246)



2. Pressure sensing means comprising an array of independent flexible sandwiches on a common flexible supporting structure, each sandwich and the supporting structure being capable of assuming the contour of a non-planar surface to which they may be applied, and each sandwich including a flexible dielectric and a flexible, elastically compressible conductor structure, which sandwich changes capacity with displacement when pressure is applied thereto as the result of the elastic compressibility of said conductor.

2,866,142
CAPACITOR WITH NAPHTHALENE DERIVATIVE DIELECTRIC IMPREGNANT
Clinton D. Cook, Burlington, Vt., and Ralph E. Florey, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Application January 28, 1954, Serial No. 405,126
3 Claims. (Cl. 317—258)



1. An electric capacitor comprising the combination of cooperating metal armatures and interposed dielectric material, said dielectric material consisting of a stabilized reaction product of a polymer composed of an average of about 6–7 units of isobutylene and a compound selected from the group consisting of naphthalene and methylnaphthalene.

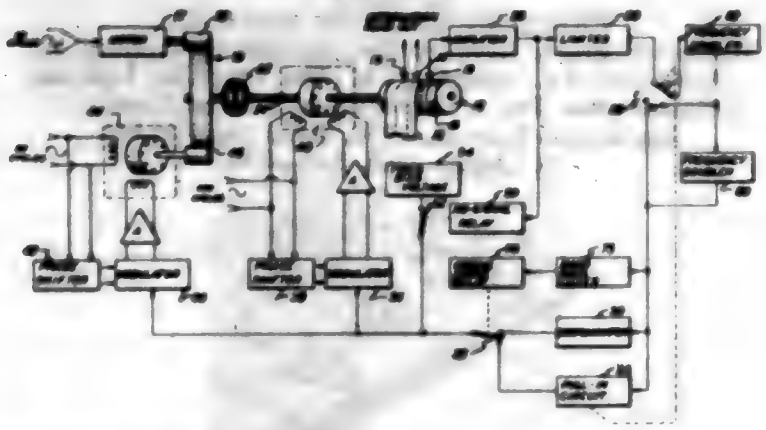
2,866,143
ADJUSTABLE SPEED DRIVE FOR TAPE RECORDING SYSTEMS
Glenn D. Maxwell, Arcadia, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application August 31, 1956, Serial No. 607,311
8 Claims. (Cl. 318—45)

1. Apparatus for controlling the speed of rotation of a rotatable member comprising a main drive motor having a speed that varies substantially in proportion to the load thereon, a flywheel driven by the main drive

2,866,147

a second signal to the input of said control means, said

motor, means for coupling the rotatable member to the flywheel, a servomotor rotatably coupled to the flywheel, means for generating a periodic reference signal having a frequency proportional to the speed of the rotational member, a plurality of frequency doubler circuits, a frequency discriminator, means for selectively coupling a predetermined number of said frequency doubler circuits between said reference signal generating means and the discriminator, means for modulating the output of the discriminator, and means for controlling the servomotor in response to the modulated signal derived from the discriminator.

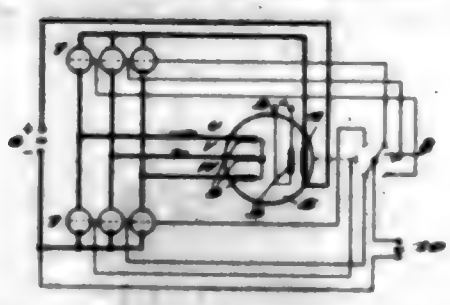


2,866,144

COMMUTATORLESS CONVERTER MOTOR WITH SUPPLEMENTARY WINDING

Erwin Kern, Ennetbaden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Application January 25, 1956, Serial No. 561,270
Claims priority, application Switzerland January 25, 1955
6 Claims. (Cl. 318—138)



1. In a commutatorless converter motor having an excitation circuit including field poles excited by direct current and an armature circuit including armature conductors, means for opposing the armature reaction caused by the load current in the armature circuit comprising an auxiliary winding in the excitation circuit supplied by a direct-current proportional to the load current, said auxiliary winding being arranged with respect to the field poles to develop a magnetic flux having an axis displaced with respect to that of the main field.

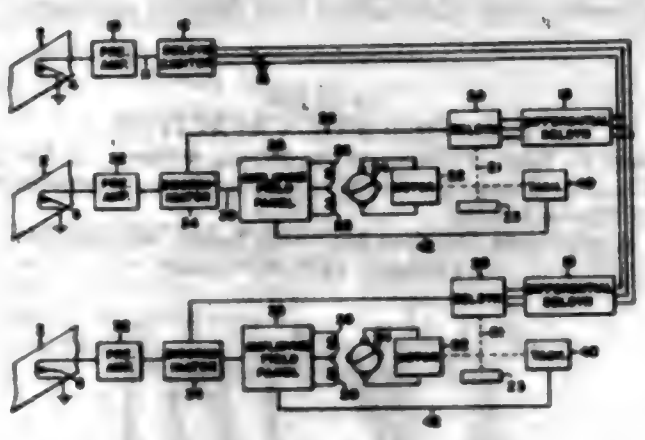
2,866,145

ERROR SIGNAL DEVELOPING MEANS FOR POSITION PROGRAMMING CONTROL SYSTEM

Lawrence R. Pendee, Murray Rosenblatt, and Leroy U. C. Kelling, Waynesboro, Va., assignors to General Electric Company, a corporation of New York

Application December 11, 1956, Serial No. 627,670
7 Claims. (Cl. 318—162)

1. In a position control system the improvement comprising means for developing an electrical signal indicative of a position assumed by an object being controlled, a source of control electrical signals, comparator means for developing an error signal indicative of the phase relationship of said position indicating signals and said control signals, said error signal having a large alternating current component when said position indicating signal and said reference have a phase relationship indicating proper position of the object being controlled and means including an electron valve device responsive to a small alternating current component of said error signal to interrupt energization of the position control system and actuation of the object being controlled.

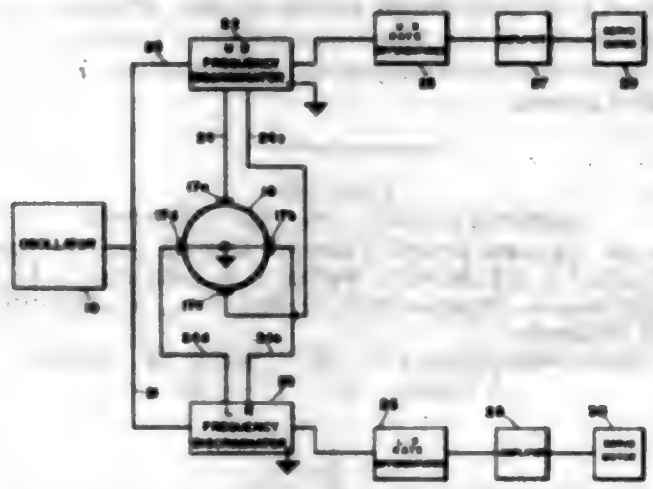


2,866,146

AUTOPILOT STEERING SYSTEM

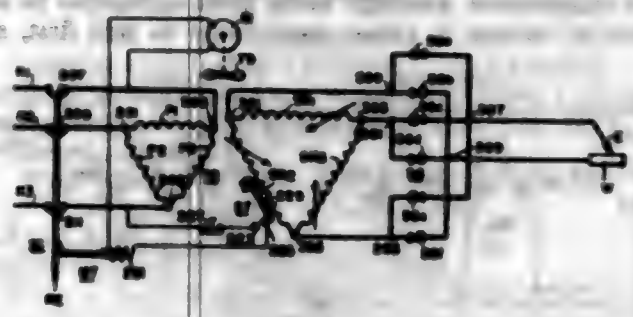
Charles F. Rodriguez, Jr., Los Angeles, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Azusa, Calif.

Application September 29, 1950, Serial No. 187,613
4 Claims. (Cl. 318—489)



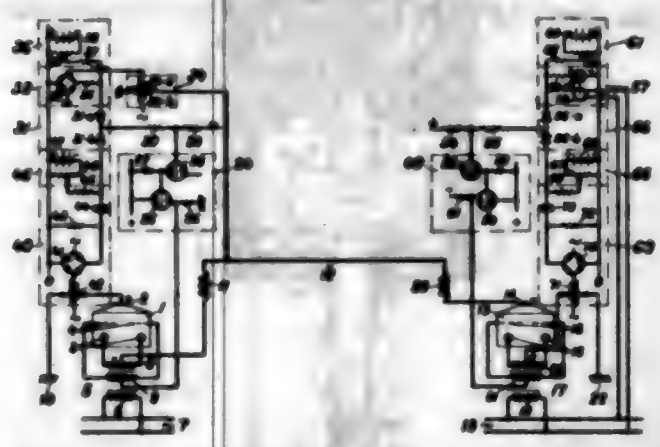
1. A system responsive to the precession of a gyro rotor which is adapted to be precessed in any angular direction, said system comprising a carrier frequency oscillator, a pair of frequency discriminators having impressed thereon the voltage from the oscillator, each discriminator comprising a pair of frequency discriminating circuits containing inductance and capacity, said gyro rotor having a conducting surface of revolution which rotates with the gyro rotor and precesses with it, four condenser plates fixed at equal angular distances from each other and capacitatively related with the surface of revolution to form a capacitance with said surface, each capacitance being connected in a respective one of the frequency discriminating circuits, and each frequency discriminator being adjusted for zero output voltage when the gyro rotor is aligned on a reference axis, whereby precession of the gyro rotor correspondingly changes the four capacitances and produces resultant output voltage at the discriminators.

2,866,147
ARC WELDING APPARATUS
Harry J. Bichsel, East Aurora, N. Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 4, 1953, Serial No. 378,629
10 Claims. (Cl. 321—14)



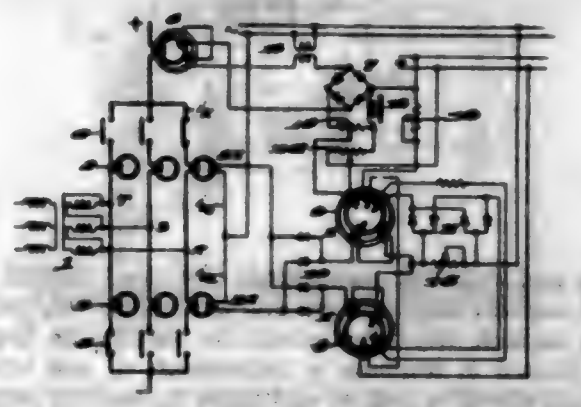
1. An arc welder comprising a transformer having a primary and a secondary, rectifier means connected to said secondary, means for connecting said rectifier means to a welding electrode and work and circuit interrupting means connected to said primary to interrupt the power flow to said primary, said rectifier means and transformer being of the type in which in the event of abnormal conditions requiring operation of said interrupting means the temperature of said rectifier means tends to level off before it reaches a dangerous condition while the temperature of said transformer rises at a substantially higher rate than the temperature of said rectifier means, said arc welder being characterized by thermally actuable means embedded in said transformer in intimate thermal contact with a winding thereof and connected to said circuit interrupting means for actuating said interrupting means when the temperature of said welder becomes excessive.

2,866,148
CONTROL DEVICE IN A HIGH VOLTAGE D. C. TRANSMISSION PLANT
Harry Fornell, Ludvika, Sweden, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Application September 20, 1955, Serial No. 535,327
Claims priority, application Sweden September 25, 1954
6 Claims. (Cl. 321—2)



1. In an electrical power system, which includes means for high voltage D. C. transmission of power current between static converter stations each including at least one converter, an electrical regulating device in at least one of said stations, said regulating device having its output operatively connected to the grid of at least one of said converters for controlling its grid bias potential, and control means having its output operatively connected to the input of said regulating device, first means responsive to the variations in one of the electrical quantities of the system for supplying a first signal to the input of said control means, and a second means responsive to the rate of change in said power current for supplying a second signal to the input of said control means, said control means including means responsive at least in part to said second signal for transmitting selectively one of said first and second signals only to the input of said regulating device.

2,866,149
DEVICE FOR RAPID VOLTAGE REGULATION IN CONTACT CONVERTERS PROVIDED WITH SWITCHING COILS
Armand Brandt, Wettingen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company
Application March 9, 1956, Serial No. 570,518
Claims priority, application Switzerland March 18, 1955
7 Claims. (Cl. 321—45)

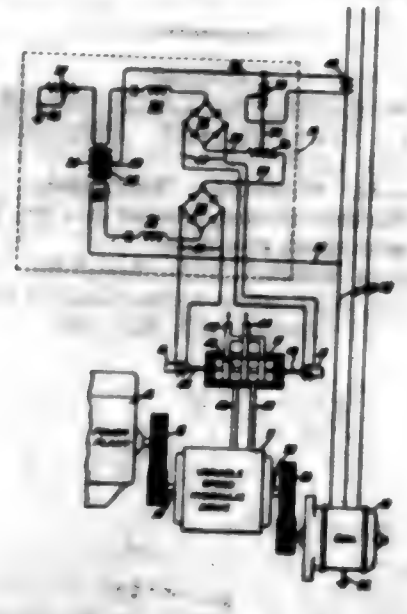


7. A device for rapid voltage regulation of a contact converter provided with switching coils comprising a pair of current-limiting coils associated with each phase of the contact converter, said current-limiting coils having cores of a material with a pronounced magnetic break, a source of electrical power causing said current-limiting coils to produce rectangular half-wave voltages, an auxiliary coil positioned about the core of one of said current-limiting coils, means for producing a current proportional to the difference between the actual and the nominal value of the quantity to be regulated, said auxiliary coil being connected to said current producing means so that the magnetization component produced in the core will affect the magnitude of the voltage produced by the associated current-limiting coil, and valve means connecting the current-limiting coils to the switching coils so that the switching coils are magnetized alternately by square wave currents whose positive half-waves are limited by one coil and whose negative half-waves are limited by the other coil.

2,866,150
CONSTANT FREQUENCY HYDRAULIC DRIVE GENERATOR SYSTEM
Ernest R. Lewis, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application October 26, 1953, Serial No. 388,354
7 Claims. (Cl. 322—32)

6. A constant frequency alternating current generating system for use with a variable speed power plant comprising a variable speed hydraulic drive having an input member for connection to said power plant and having an output member, a constant positive liquid displacement unit having a constant displacement unit and a variable displacement unit and connected between said input and output members, a variable and reversible positive liquid displacement unit connected between a fixed support and said output member, said units being hydraulically interconnected in a closed loop hydraulic circuit, a generator connected to said output member, a frequency detection circuit including two resonant circuit portions having resonant frequencies respectively above and below the desired generator frequency connected to measure the frequency of said generator, a solenoid operated hydraulic control

valve including electrical solenoids connected for energization from said circuit, said solenoids being arranged to displace said valve from a central null position upon energization thereof in response to a deviation from the desired frequency of said generator as measured by said



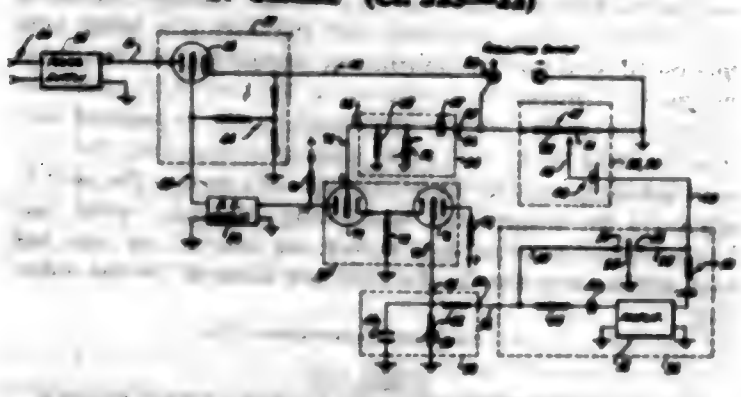
circuit, and hydraulic connections from said control valve to said variable displacement unit and operatively coupled to said variable displacement unit for varying the displacement thereof in response to movements of said valve to vary the ratio of speeds of said input and output members to maintain the desired generator speed and frequency.

2,866,151

VOLTAGE REGULATOR WITH NON-LINEAR NETWORKS IN CONTROL CIRCUIT

Richard H. Applin, San Diego, Richard E. Langworthy, La Mesa, and Wilbur D. Mathews, San Diego, Calif., assignors to Kay Lab, San Diego, Calif., a corporation of California

Application January 18, 1955, Serial No. 482,585
17 Claims. (Cl. 323—22)



1. A servo control system comprising: a modulator for controlling the flow of power to provide an output quantity; comparator means for detecting a difference between said output quantity and an input quantity to produce an error signal representative of said difference; a high-gain feedback loop coupling said comparator means to said modulator for controlling said modulator in response to said error signal; and means in said feedback loop having a variable time constant, said last mentioned means including a non-linear element having an impedance which varies as a function of the potential thereacross.

2,866,152

THREE PHASE REGULATOR CONNECTIONS

Roger A. Prior, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Application April 22, 1955, Serial No. 503,220
12 Claims. (Cl. 323—44)

9. In a three phase voltage regulating system, voltage regulator having first, second and third regulator primary windings inductively coupled respectively to first, second and third regulator secondary windings, said regulator primary windings being delta connected to a source of three phase voltage, transformer means having first, second and third transformer primary windings inductively coupled respectively to first, second, and third primary transformer windings, said first, second, and third transformer windings being delta connected to said source of voltage in phase respectively to said first, sec-

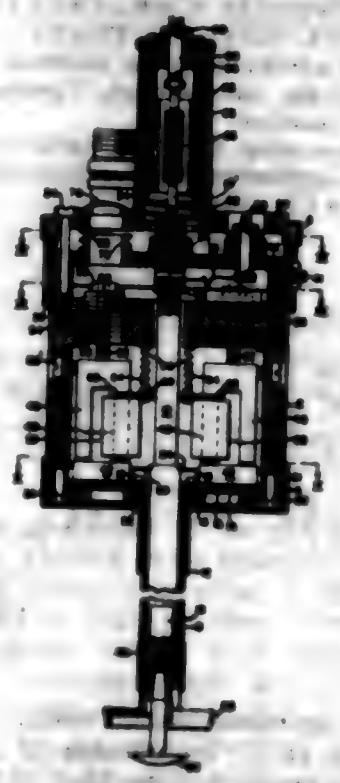
ond, and third regulator primary windings, means interconnecting said secondary windings to form a secondary delta circuit having a first, second and third legs, said first leg being comprised of said first transformer secondary winding in series with said first regulator secondary winding, said second leg being comprised of said second transformer secondary winding in series with said second regulator secondary winding, said third leg being comprised of said third transformer secondary winding in series with said third regulator secondary winding, and a load circuit connected to said delta circuit.

2,866,153

THREE-DIMENSION SERVOSYSTEM TRANSDUCER

John M. Rhoades, Waynesboro, Va., assignor to General Electric Company, a corporation of New York

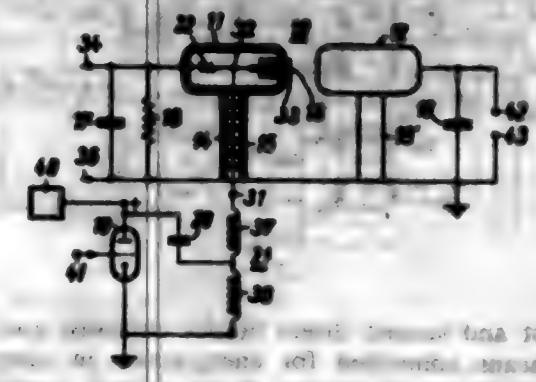
Application November 19, 1957, Serial No. 697,458
8 Claims. (Cl. 323—75)



8. A contour tracing device comprising a housing, an elongated hollow stylus extending from said housing, a second elongated stylus extending from said housing into said hollow stylus, diaphragm means engaging said hollow stylus and secured to said housing to permit deflection of said hollow stylus in two dimensions, a pair of spaced diaphragm engaging said second stylus and said housing to permit deflection of said second stylus in a dimension normal to said two dimensions, a plurality of electrical transducers mounted in said housing at right angles to

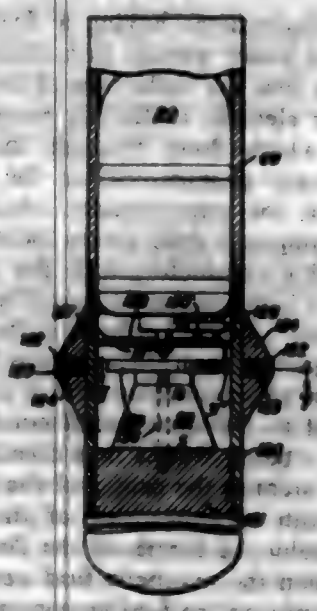
each other, each of said transducers including a core of magnetic material having a coil wound thereon and a movable armature, means connecting said movable armatures to said first stylus, a linear transducer having a fixed element and a movable element, and means connecting said movable element to said second stylus.

2,866,154
HIGH VOLTAGE TESTING APPARATUS
Wolfgang Herbst and Carl Bilmeier, Kassel, Germany, assignors to Licentia Patent-Verwaltungs-G. m. b. H., Hamburg, Germany
Application March 2, 1955, Serial No. 491,590
2 Claims. (Cl. 324—28)



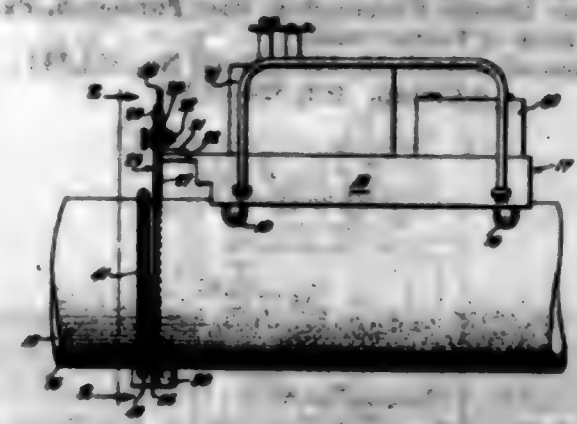
1. A spark gap arrangement for use in high voltage testing apparatus comprising, in combination, at least one main electrode; a rod-shaped auxiliary igniting electrode arranged within said main electrode and insulated therefrom, said igniting electrode being adapted to produce a discharge between the same and said main electrode upon application of an igniting impulse to said igniting electrode; an insulating shaft supporting said main and igniting electrodes and insulating the same from ground potential; control means connected to ground potential for generating said igniting impulse; and capacitor means connected in circuit between said control means and said igniting electrode and mounted in said insulating shaft for transmitting an igniting pulse from said control means to said igniting electrode.

2,866,155
APPARATUS FOR VISUALLY INSPECTING OIL WELL CASINGS
Philip W. Martin, Whittier, Calif.
Application March 4, 1955, Serial No. 492,181
1 Claim. (Cl. 324—37)



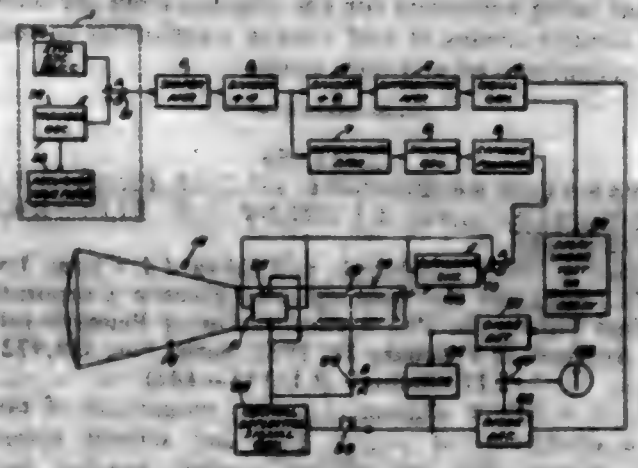
In apparatus for remotely producing an indication of a well casing wall characteristic; a tubular envelope adapted to be raised and lowered in a well casing; a source of magnetic flux in said envelope; a plurality of circumferentially positioned rods of paramagnetic material projecting radially from the outer surface of said envelope and forming discrete magnetic flux paths between said source and adjacent wall of the well casing; a movable pickup coil arranged to be successively interlinked with the respective magnetic flux paths; and surface indicating means connected with said coil.

2,866,156
JEEPING ELECTRODES
Monte J. Lane, Langhorne, Pa.
Application February 8, 1957, Serial No. 639,903
10 Claims. (Cl. 324—54)



1. An electrical exploring device for detecting defects in an insulating coating on an elongated member which comprises an exploring electrode in the form of a coiled spring adapted to extend about such member and completely encompass said member, and having ends free to separate, and means engaging and forming a movable electrical contact with said spring, at a position remote from the surface of said member for connecting said spring to a high voltage testing circuit and for rolling said spring along such elongated member, said means comprising at least two members substantially encompassing said elongated member and having free ends connected to the free ends of the coiled spring, said members arranged to separate the free ends of the coiled spring.

2,866,157
TIME SPACING MEASURING APPARATUS
Anthony M. Cassiboua, North White Plains, N. Y., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application August 24, 1954, Serial No. 451,743
15 Claims. (Cl. 324—68)



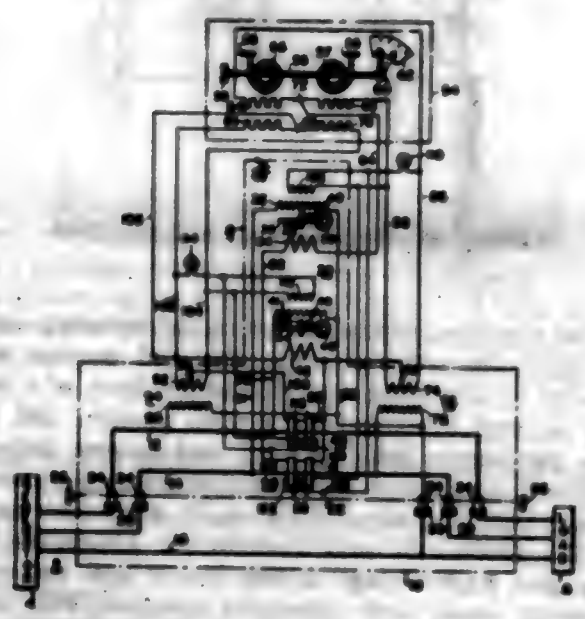
1. Apparatus for determining the unknown time delay of a circuit comprising a source of signals, a cathode ray tube including first and second means to deflect said ray in two mutually perpendicular directions, means responsive to said source of signals to generate sweep voltages each having a given period which is equal to or less than

the recessed areas as measured parallel to the undeflected conductor element varying according to the relation

circuit, said oscillations being amplified by said pentode tube and appearing at said anode as a variable amplitude

the delay to be measured, means to couple said sweep voltages to said first deflection means, means responsive to said signal source to generate a train of pulses having a time interval which is a multiple of said period, means to couple said pulses to said circuit of unknown time delay, means to combine the time delayed output pulses of said circuit with the undelayed output of said pulse generator means and means responsive to said combined signals to cause a visual indication of said pulses to be displayed on said cathode ray tube.

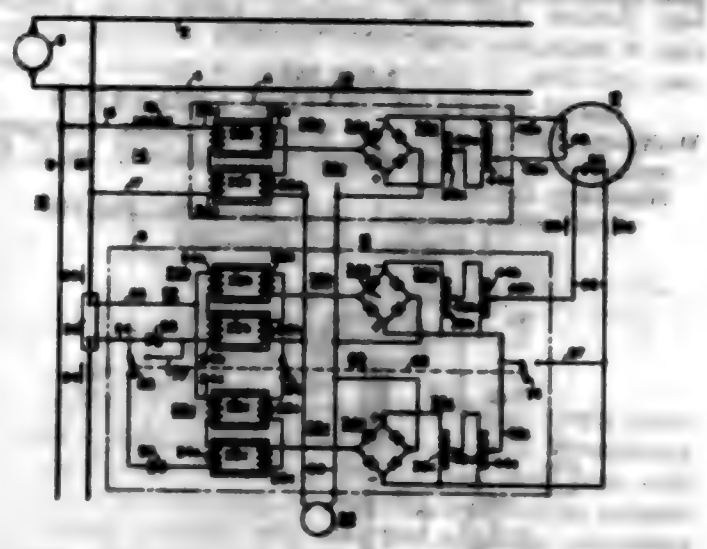
2,866,128
ELECTRICAL MEASURING APPARATUS
Ambrose J. Petzinger, Fair Lawn, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 30, 1953, Serial No. 352,242
6 Claims. (Cl. 324—137)



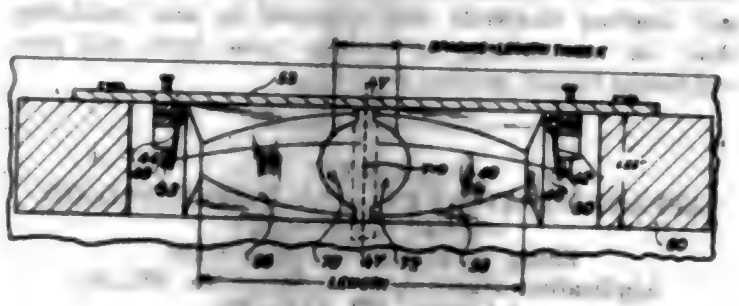
1. In an electrical meter for measuring the energy and power demand of an electrical circuit, an electroresponsive thermal demand meter, an integrating watthour meter, means for supplying electrical energy to said thermal meter and said watthour meter including a voltage transformer having secondary winding means, and a current transformer having magnetic core means with primary and secondary winding means linking said core means, said current transformer exhibiting ratio errors which adversely affect the response of the watthour meter, and additional winding means for said current transformer linking said core means, said additional winding means being connected for energization from the secondary winding means of said voltage transformer to reduce the magnitudes of said ratio errors.

2,866,159
APPARATUS RESPONSIVE TO THE PRODUCT OF VOLTAGE AND CURRENT OF ELECTRICAL CIRCUITS
Willard A. Derr, Pittsburgh, and Edward F. Chase, Irwin, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 26, 1953, Serial No. 338,972
11 Claims. (Cl. 324—142)

1. In a device responsive to the magnitude of power of a direct-current circuit, first and second magnetic core means, first and second control winding means linking respectively said first and second core means, first and second impedance winding means linking respectively said first and second core means, said first and second control winding means being arranged for energization from said circuit to effect magnetization of said first and second core means in accordance with voltage and current respectively of the circuit, first and second rectifier means, each of said first and second rectifier means being arranged for energization from a source of alternating current through a separate one of said first and second impedance winding means to produce first and second direct output currents, and translating means connected for energization in accordance with said first and second direct output currents for producing a resultant response representative of the power of the direct-current circuit.



2,866,160
LINEARIZING ARRANGEMENT FOR STRING GALVANOMETER
Clifford E. Berry, Altadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application October 8, 1954, Serial No. 461,886
1 Claim. (Cl. 324—154)



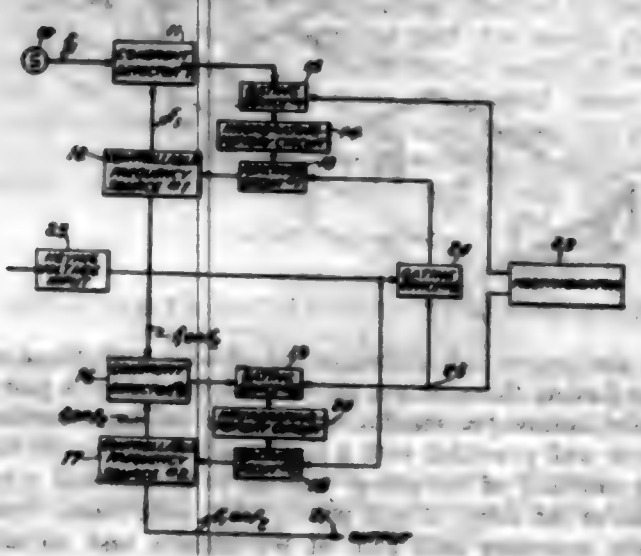
In a string galvanometer having a flexible conductor element supported under tension in a magnetic field by a pair of springs so that the deflection of the center of the flexible conductor element is directly proportional to the electric current which flows through the flexible conductor and inversely proportional to the tension in the flexible conductor, the improvement which comprises a pair of opposed magnetic pole pieces located on opposite sides of the flexible conductor, with the central portion of each pole piece being cut out to provide recessed areas defined by opposed concave surfaces in the opposing surfaces of the pole pieces, the recessed areas having substantially the shape of two parabolas with a common axis of symmetry parallel to the undeflected conductor element, the recessed areas being widest in a direction parallel to the conductor element at the center of the pole pieces and decreasing in width to either side of the center of the pole pieces, whereby the length of the flexible conductor element upon which the magnetic field operates increases as the central portion of the flexible conductor is deflected in either direction, to thereby compensate for variations in the tension in the flexible conductor and provide substantially linear current-deflection response, the width of

the recessed areas as measured parallel to the undeflected conductor element varying according to the relation

$$K=K_0-CY^2(0.55-K_0)$$

where K times the length of the pole pieces equals the spacing between the edges of the opposed parabolas for any selected value of Y, K_0 is the value of K at the center of the pole pieces where $Y=0$, C is a constant which is determined by the overall structure of the apparatus, Y is the lateral distance in either direction from the center of the pole piece.

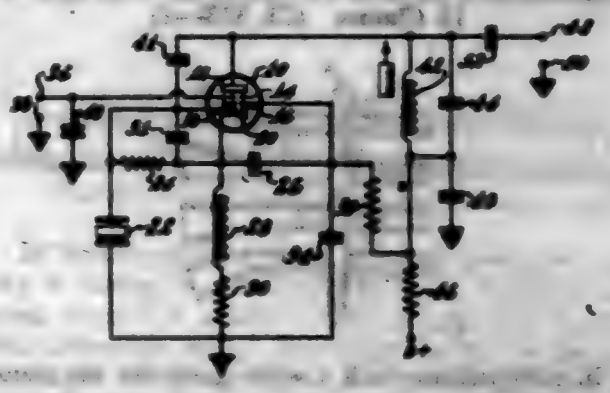
2,866,161
FREQUENCY SHIFT KEYING CIRCUIT
Dorsey Davidoff, New York, N. Y., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application September 25, 1956, Serial No. 611,967
5 Claims. (Cl. 332—19)



1. A frequency shift signalling system for transmitting a mark and space form of signal intelligence comprising a stable fixed frequency source input, first and second controllable frequency sources, a continually operating switching device, a keying voltage input means, a first frequency locking circuit for coupling said first controllable frequency source to said fixed frequency source for frequency locking the outputs thereof, a second frequency locking circuit for coupling said second controllable frequency source to said first controllable frequency source and locking the outputs thereof, circuitry means to couple said switching device to said first and second frequency locking circuits causing the output of said first controllable frequency source to be alternately shifted between the inputs thereof, and circuitry means to couple said keying voltage input means to said frequency locking circuits to alter the frequency signal output so as to represent mark and space signals.

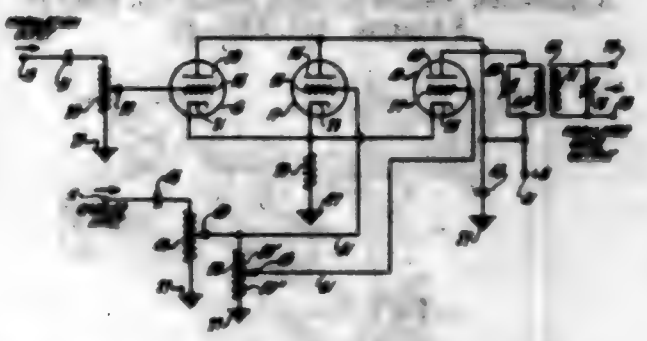
2,866,162
OSCILLATOR-MODULATOR CIRCUIT
Charles Rosen and Charles J. Weihbrecht, Philadelphia, Pa., assignors to Tele-Dynamics Inc., a corporation of Pennsylvania
Application July 25, 1955, Serial No. 524,239
1 Claim. (Cl. 332—23)

A modulator-oscillator circuit comprising a pentode tube having an anode, a cathode, a control grid, a screen grid and a suppressor grid, means providing a point of reference potential, a crystal for providing an inductive element connected between said control grid, and said point of reference potential means providing a capacitive load connected in parallel relationship with said inductive element of said crystal to provide a parallel resonant circuit, feedback means from said screen grid to said control grid to sustain oscillations in said parallel resonant circuit, said oscillations being amplified by said pentode tube and appearing at said anode as a variable amplitude oscillating voltage lagging by substantially ninety degrees the voltage at said control grid, capacitive means connecting said control grid to said anode whereby said oscillations applied to said anode from said control grid through said capacitive means leads the oscillations at said control grid by substantially one hundred eighty degrees, said last-named oscillations providing a relatively fixed amplitude oscillating voltage, means for applying a modulating voltage to said suppressor grid, said



modulating voltage controlling the amplitude of said variable amplitude oscillating voltage, said fixed oscillating voltage and said variable amplitude oscillating voltage combining vectorially at said anode to provide a resulting voltage the phase of which varies in accordance with said modulating voltage, and a second resonant circuit connected in the anode circuit of said pentode tube, said second resonant circuit being tuned to a frequency higher than the frequency of said oscillations to provide a variable inductive load to provide means for adjusting said modulator-oscillator circuit for optimum linearity without substantially affecting said oscillations.

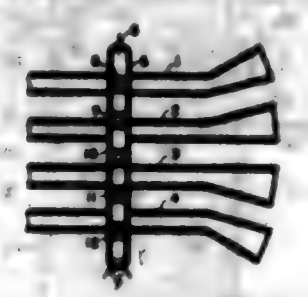
2,866,163
MODULATOR
Murray G. Crosby, Hicksville, N. Y.
Application July 27, 1954, Serial No. 446,019
9 Claims. (Cl. 332—38)



1. An amplitude-modulator comprising three thermionic tubes each including a cathode and a plurality of cold electrodes, a common connection between all of the separate cathode elements to maintain said elements at like potential relative to a selected fixed point, a resistor element connected between the said cathode elements and the point of fixed potential, means for supplying modulation input signals to a cold electrode of the first of the plurality of three thermionic tubes, means for supplying a carrier input voltage to a cold electrode of the second of the three thermionic tubes, said first and second thermionic tubes having their anode elements parallelly connected to a common source of operating voltage, means independent of said second tube for supplying the carrier input voltage also to a cold electrode of the third thermionic tube to drive it in phase with carrier-frequency

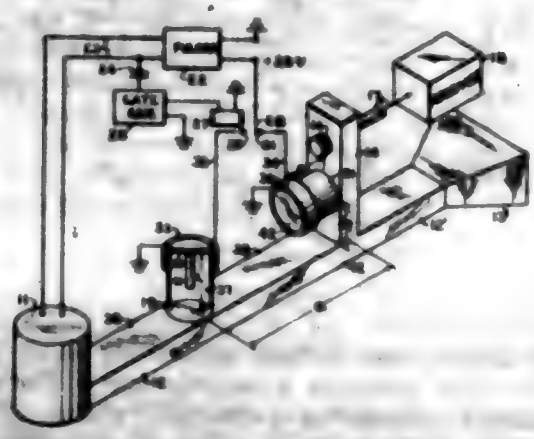
variations in potential of the cathode thereof, and an output circuit connected to a cold electrode of the third of said tubes to receive output signals representing modulation products of the signal voltages applied to the first and second tubes.

2,866,164
CYCLIC MICROWAVE SWITCHING TUBE
Howard L. Steele, Jr., North Caldwell, N. J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 31, 1953, Serial No. 401,479
12 Claims. (Cl. 333—1)



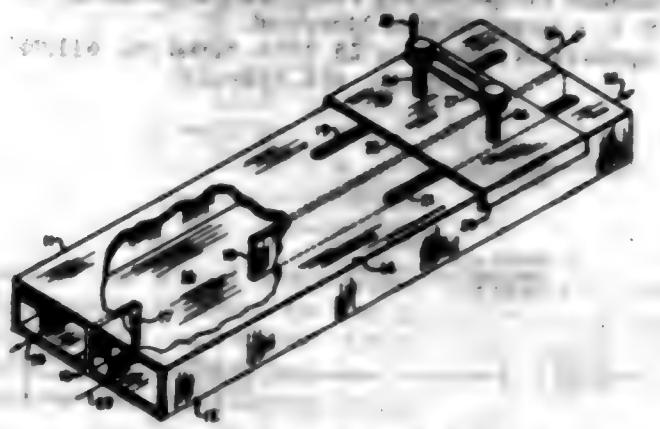
1. In combination with a wave guide for the transmission of electromagnetic energy, a cold electrode gaseous electrical discharge tube having an envelope, a central portion and two end portions, said central portion being positioned within said wave guide so that said central portion is exposed to said electromagnetic radiation, said central portion including a central envelope portion which is transmissive to said electromagnetic energy, an electrode positioned in each of said end portions, means for operating said tube to form alternate conductive and non-conductive moving striations between said electrodes to periodically prevent and allow the passage of said electromagnetic energy through said wave guide, said conductive moving striations having a length equal to a substantial portion of said exposed central tube portion.

2,866,165
MICROWAVE DUPLEXER
John F. Zaleski, Valhalla, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application August 5, 1955, Serial No. 526,738
5 Claims. (Cl. 333—6)



1. A microwave duplexer comprising, a microwave guide having an input terminal and a load terminal, microwave transmitter means connected to said input terminal for exciting a polarized field mode in said guide, a first gyro rotator constituting a short-circuited side arm of said guide adjacent said input terminal, said gyro rotator reflecting impedance interdicting said guide in one condition of excitation and reflecting impedance permitting guide conductivity in another condition of excitation, a microwave branch guide connected to said guide to constitute an orthogonal side arm, said branch guide being positioned between said first gyro rotator and said load terminal, a receiving demodulator means connected to said branch guide, and a second gyro rotator contained in said orthogonal side arm, said second gyro rotator reflecting impedance interdicting said branch guide in one condition of excitation to prevent microwave energy from entering from said guide and removing said interdiction in another condition of excitation to allow microwave energy to enter said branch guide from said guide.

2,866,166
MICROWAVE POWER DIVIDER
John F. Zaleski, Valhalla, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application April 8, 1955, Serial No. 500,239
1 Claim. (Cl. 333—9)

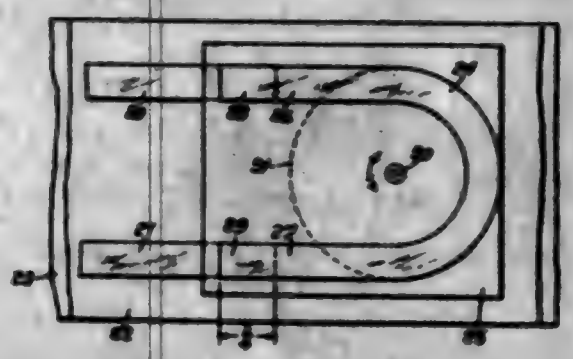


A microwave adjustable power divider and phase adjuster having three output terminals comprising, a pair of parallel hollow rectangular waveguides having a common narrow wall provided with a single port directionally coupling one-half of the power applied to one of said waveguides to the other of said waveguides, slide means transversely spanning said pair of waveguides and movable longitudinally thereon, a pair of screw posts supported by said slide means, each said screw post protruding into the interior of a respective one of said pair of waveguides in the median longitudinal plane thereof and perpendicular to a broad face thereof, said screw posts being in side-by-side relation on the same side of said single port and at the same common distance therefrom, said common distance being adjustable by movement of said slide means whereby the phase of one said output terminal is controllable relative to the phases of the other two said output terminals, the protrusions of said screw posts into the waveguide interior spaces being adjustable in concert and equal at all adjustments whereby the division of power between one said output terminal and the other two said output terminals is controllable.

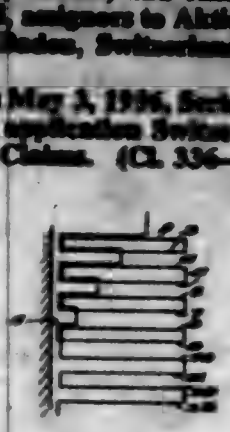
2,866,167
MICROWAVE SWITCH
Harold Seidel, Fieldfield, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application May 24, 1955, Serial No. 511,140
2 Claims. (Cl. 333—97)

1. A switch for a transmission line having a planar ground conductor, a line conductor and a layer of solid dielectric material disposing said conductors in spaced substantially parallel relation a fraction of the wavelength of the electrical energy propagated therealong, said line conductor having an interruption therein with the end portions of said line conductor spaced apart at said interruption and disposed in substantially parallel relation; comprising a horseshoe-shaped conductive switching element pivotally movable to open and closed positions and adapted to bridge said interruption and overlap said end portions when in closed position by a length equal to a quarter of the wave length or integral odd

pair of arms to define between them said wave channel, extending toward the other section for connection there-

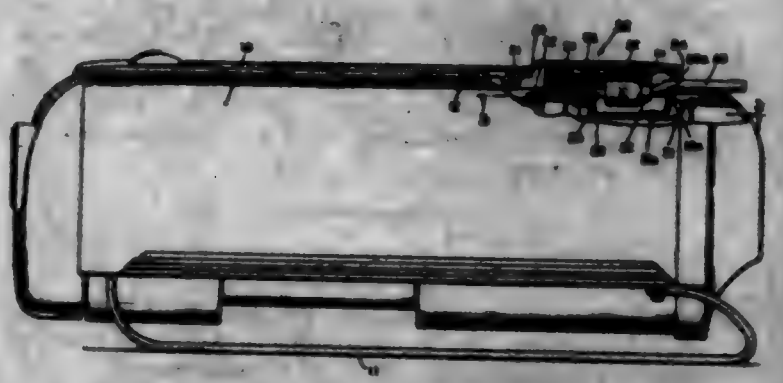
multiple thereof, a layer of solid dielectric material supporting said horseshoe-shaped conductor and pivotally movable therewith thereby constituting in conjunction with said element and said end portions a choke at each end of said element when said horseshoe-shaped switch-

ing element is in closed overlapping position to thereby present in effect an uninterrupted path for energy propagated along said line, the propagation of electrical energy along said line conductor being interrupted when said switching element is in open position, and means for pivotally moving said switching element and its supporting dielectric layer relative said open and closed positions.

2,866,168
HIGH VOLTAGE TRANSFORMER WINDINGS WITH VOLTAGE CONTROL
Martin Christoffel, Zurich, and Anton Eilinger, Wettingen, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Application May 3, 1956, Serial No. 582,570
Claims priority, application Switzerland May 7, 1955
4 Claims. (Cl. 336—70)



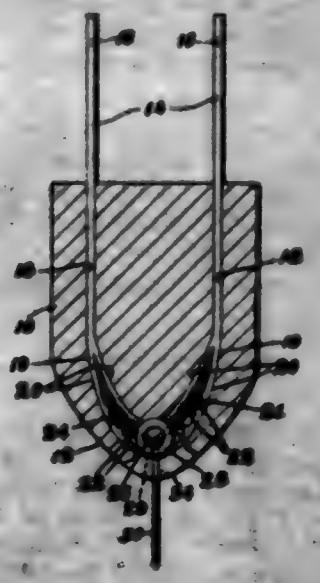
1. A high voltage winding for a transformer comprising a plurality of pairs of pancake coils arranged in superposed relation, each coil of each pair of coils comprising at least one single strand portion established by a plurality of radially adjacent windings connected in series and a dual strand portion established by a group of radially adjacent windings in which the even and odd numbered windings thereon as measured in a radial direction are respectively connected in series to form first and second strands, a first strand of the dual strand portion of the first coil of each coil pair being connected directly to and in series with the first strand of the dual strand portion of the second coil of each coil pair, the second strands of the dual strand portions of said first and second coils of each coil pair being connected to each other at least indirectly and in series, all of the single strand and dual strand portions of the coils of each coil pair being connected in series, and the pairs of coils being likewise connected in series to establish a continuous transformer winding, the ratio between the single and dual strand portions of each pair of coils being progressively increased as measured in a direction away from the high voltage lead-in connection to said transformer winding thereby to effect a corresponding progressive reduction in the capacitative voltage control effect on said transformer winding established by the dual strand portions of said coils.

2,866,169
ELECTRIC PLUG RETAINING COVER
Gustaf Elmer Lofgren, Riverside, Conn., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Application March 4, 1953, Serial No. 340,185
2 Claims. (Cl. 339—91)



1. In combination with a portable electrical device having a casing, a recessed receptacle mounted in an opening formed in a wall of said casing, said receptacle having connector prongs projecting into the recess of the receptacle, a cover secured at one end to said wall adjacent one end of said receptacle, a plug having contacts adapted to mate with the connector prongs and having a power cord attached thereto and extending away from the receptacle at the other end thereof, said cover being movable from a position covering said recess to a position exposing the same, the opposite end of said cover having an opening for the passage of said cord, said cover and casing having cooperating latch portions with manually releasable means therefor, said manually releasable means being operable in a direction differing from that in which the cover is movable whereby the cover may be moved to its position exposing the recess only when the releasable means is held in released position.

2,866,170
ELECTRIC PLUG
James D. Baldridge, Merritt Island, Fla.
Application March 27, 1957, Serial No. 648,983
3 Claims. (Cl. 339—99)



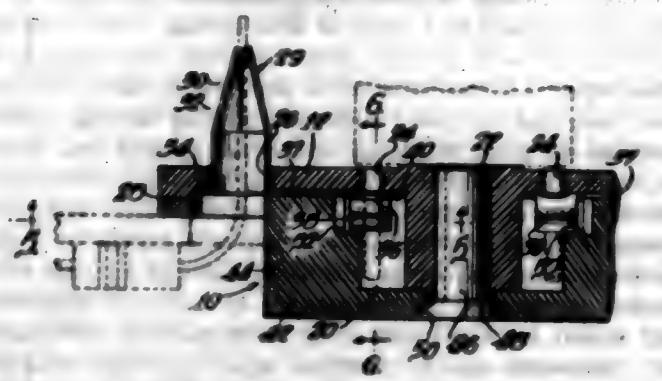
1. An electric plug comprising, in combination, a main body portion of electrically insulated material, connector means carried by the body for effecting an electrical connection with a complementary electrical wiring device, said connector means including wiring terminals, each said terminal including a V-shaped bifurcation forming a wedge shaped space for receiving an insulation covered wire cable, means extending into said space for gripping the insulation and making electrical contact with the enclosed wire of said cable, each bifurcation providing a

wardly along said terminal releasing engagement of said

2,866,176

pair of arms to define between them said wedge shaped space, said gripping means comprising teeth carried by each bifurcation, the teeth of each bifurcation being aligned transversely of and projecting laterally toward each other from the respective arms of the bifurcation and being inclined in the direction of insertion of the wire to thereby prevent its withdrawal, the wiring terminals converging and being spaced apart at their convergent ends to define an entrance space common to both bifurcations into which entrance space the wires may be inserted before passing into the wedge shaped spaces, and said wedge shaped spaces communicating at their larger ends with the entrance space.

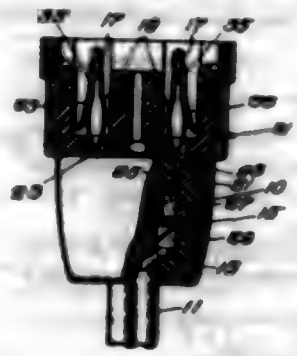
2,866,171
TUBE SOCKET
Howard A. Wagner, Pittsburgh, Pa., and Paul E. Anderson, Jamestown, N. Y., assignors to Sylvania Electric Products Inc., a corporation of Massachusetts
Application June 6, 1955, Serial No. 513,354
2 Claims. (Cl. 339—193)



1. A tube socket, comprising a base member having a cylindrically shaped boss portion in which are provided a plurality of radial grooves in registry at each end thereof with respective ones of a plurality of apertures provided in said base member on arcs of two concentric circles, a plurality of contact members having a resilient tube pin contact portion at one end and a transverse terminal portion at the other end, said contacts being disposed in respective ones of said grooves with the contact portions thereof extending over at least a portion of one of said apertures on the smaller of said circles and with the terminal portion extending through another of said apertures on the larger of said circles, and a cover having flange portions coinciding in spacing and arrangement with said grooves, said cover portion being secured to said base with said flange portions disposed within said grooves whereby said contact members are held in place, said flanges having notches in the internal marginal edge thereof to provide undercut recesses in which the tube pin contact portions of said contact members are partially disposed.

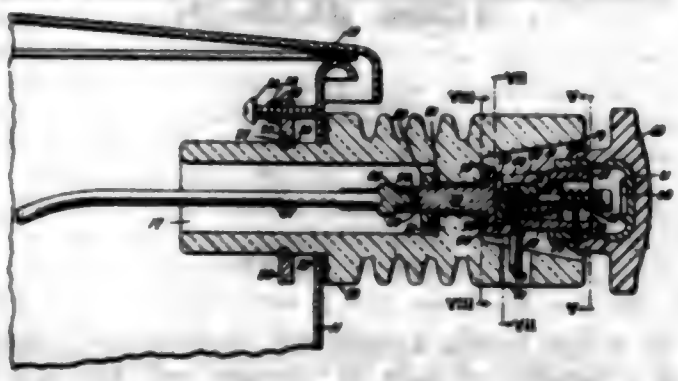
2,866,172
ELECTRICAL CONNECTOR
Frank G. Sapper, Maywood, and Hugo H. Wermine, Wheaton, Ill., assignors to Belden Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application October 11, 1955, Serial No. 539,761
2 Claims. (Cl. 339—195)

1. A two ply, one-piece spring blade for electrical plug connectors and the like compriaing a flat metal strip folded upon itself at the outer end of said blade to provide an outer contact portion, a shank portion and an intermediate contact portion connecting the outer contact portion and the shank portion, said outer contact portion comprising a pair of resilient, co-extensive, substantially parallel sections of said strip spaced apart a short distance from each other, at least one of said sections having an inwardly extending projection spaced from said fold and extending toward the other section for preventing excessive movement of said sections towards each other, but normally spaced from said other section and from said fold so as to permit a limited amount of such movement, said inner contact portion comprising co-extensive sections of said strip which are outwardly bowed and spaced



apart a substantially greater distance than the sections of said outer contact portion, whereby said sections of said inner contact portion are capable of a substantial additional movement towards each other after the aforesaid limited movement of the parallel outer sections has been arrested by reason of said projection, the shank portion including parts which are formed as extensions of said sections of the inner contact portion.

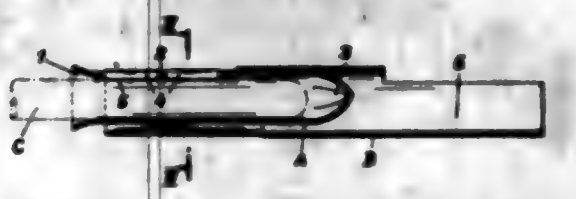
2,866,173
TERMINAL BUSHING ASSEMBLIES FOR TRANSFORMERS
Frank A. Newcombe, Pine Bluff, Ark., assignor to Central Transformer Corporation, Pine Bluff, Ark., a corporation of Arkansas
Application January 6, 1955, Serial No. 480,286
12 Claims. (Cl. 339—202)



1. In a terminal bushing assembly for transformers which includes a non-conductive bushing body adapted for mounting in a transformer casing, a conductive connector within said body extending from an outer portion of said body to an inner portion of said body and including means for electrically coupling a lead, said connector in said outer portion including an externally threaded hollow terminal, internally threaded cap means engaged with and enclosing the outer end of said terminal, a block slidably mounted in said terminal for movement longitudinally of said terminal, a plunger connected to said block and extending toward said cap means, spring means urging said plunger and block outwardly toward said cap means, said terminal being transversely apertured inwardly from said cap means to provide cable openings for receiving endwise insertion of an incoming cable end, said block being transversely apertured to provide a cable opening adapted to register with said terminal openings for said cable insertion, threaded advancement of said cap means inwardly along said terminal engaging said plunger and shifting said plunger and block against said spring means urging inwardly toward registering alinement of said cable openings, limit means carried by said terminal blocking shift of said block inwardly beyond cable opening registry, retraction of said cap means out-

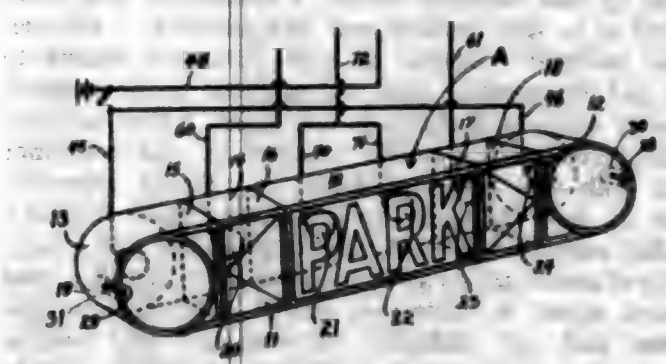
wardly along said terminal releasing engagement of said plunger, said spring means effecting shift of said block away from said limit means to clampingly engage a cable end inserted into said cable openings when registered, said block including transversely extending tabs adjacent the inner portion of said block cable opening, said tabs being of a length to project into said terminal cable openings to extend contact along an inserted cable end and prevent crimping and shearing of such a cable end, and means limiting cap means retracting to prevent removal of said cap means from said terminal.

2,866,174
ELECTRICAL PLUG CONNECTION
Otto Görike, Vienna, Austria, assignor to Akustische u. Kino-Geräte Gesellschaft m. b. H., Vienna, Austria
Application May 23, 1955, Serial No. 510,339
Claims priority, application Austria June 3, 1954
1 Claim. (Cl. 339—262)



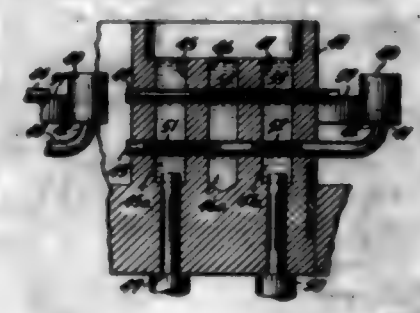
A socket assembly for an electrical plug connection, comprising a contact socket integrally formed at one end with a soldering tag, and a plug guide liner inserted in said contact socket and formed with a peripheral opening, said contact socket being integrally formed with resilient lugs extending inwardly through said opening, said liner initially having a clearance fit in said socket and being urged into a driving fit in said socket when a plug having an outside diameter slightly less than the inside diameter of said liner is inserted in the latter and engaged by said resilient lugs.

2,866,175
MOTOR VEHICLE SIGNALLING SYSTEM
Benjamin D. Slater, St. Paul, Minn.
Application August 22, 1955, Serial No. 529,643
1 Claim. (Cl. 340—74)



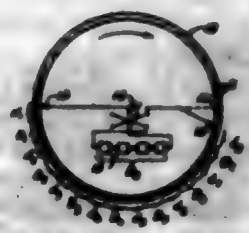
A motor vehicle signaling system comprising a plate bearing the word "park" thereon, means for illuminating said plate and thereby rendering said word "park" clearly visible, left turning signaling means closely adjacent the left side of the word "park," means for illuminating said left turning means, right turning signaling means closely adjacent the right side of said word "park," means for illuminating said right turning means, an elongated handle movable in either of two directions for causing selective energization of either the illuminating means for said left turning means or the illuminating means for said right turning means, and independent switch means carried at the free end of said handle for energizing said "park" illuminating means irrespective of whether said handle has been moved in either of said directions.

2,866,176
MECHANICAL INFORMATION STORAGE MATRIX
Benjamin M. Durfee, Binghamton, and Albert D. Miller and Francis O. Underwood, Vestal N. Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application January 5, 1956, Serial No. 557,583
16 Claims. (Cl. 340—173)



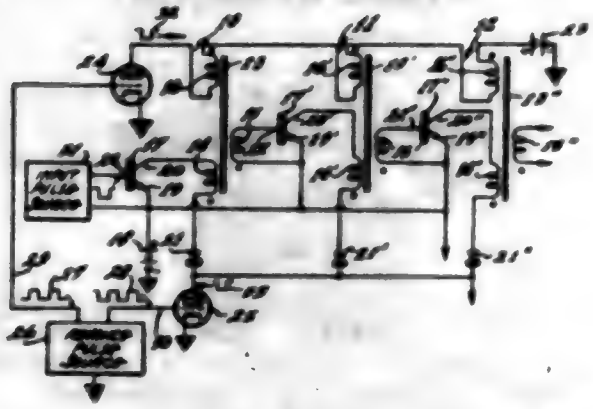
5. An information storage matrix comprising a plurality of storage conductors each slidably received by a grouped plurality of switch elements, each of said conductors normally being electrically joined to at least one of the elements and electrically insulated from at least one of the elements, an actuator for sliding each of said storage conductors into electrical contact with the switch element normally insulated therefrom, said actuator comprising one arm of a bell crank, a plurality of angularly related value and column slides, each of the bell cranks being pivoted on one of said value and column slides, the other arm of each of the bell cranks being coupled to the other one of said value and column slides, means for independently moving each of said value slides to displace the one arms of its associated bell cranks a first interval in the direction of movement of their associated storage conductors, and means for independently moving each of said column slides to displace the one arms of its associated bell cranks a second interval in the direction of movement of their associated storage conductors, said one arms of the bell cranks engaging and sliding their associated storage conductors into electrical contact with the switch elements normally insulated therefrom when moved a distance equal to the sum of said first and second intervals.

2,866,177
COMPUTER READ-OUT SYSTEM
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., a corporation of California
Application January 9, 1953, Serial No. 330,429
35 Claims. (Cl. 340—174)



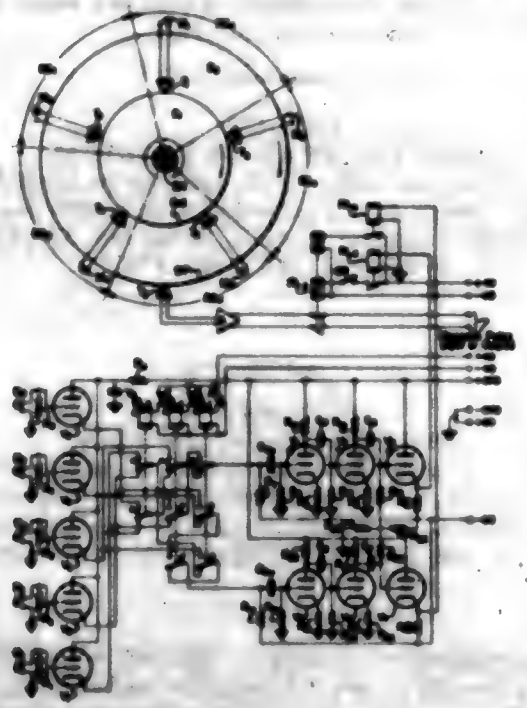
1. In combination: a stepping register; a cyclical storage device having binary information recirculating therethrough; first means for selectively removing portions of said information from said storage device to said stepping register to isolate the portions of said binary information therein; and second means for identifying each of the portions of isolated information, said second means including apparatus for successively altering each of the portions of isolated information.

2,866,178
BINARY DEVICES
Arthur W. Lo, Elizabeth, and Walter A. Helbig, Haddonfield, N. J., assignors to Radio Corporation of America, a corporation of Delaware
Application March 18, 1955, Serial No. 495,185
9 Claims. (Cl. 340—174)



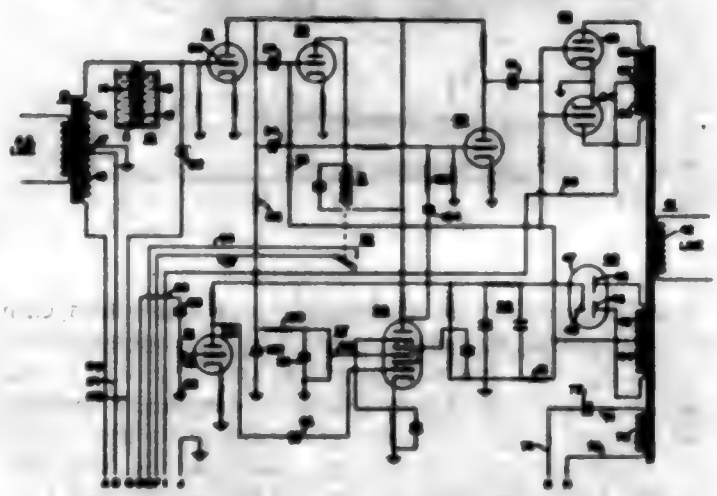
1. A magnetic circuit comprising a plurality of magnetic elements having two stable states, means for simultaneously applying magnetizing forces to said elements, separate windings linked to said elements, a diode characterized by a magnetic carrier storage effect and having a relatively low back impedance for a time after forward current flow and a high back impedance in the absence of said forward current flow, a capacitor connected in the same series circuit with said windings and said diode, and another diode characterized by a negligible minority carrier storage effect, said other diode being connected across said windings to pass currents developed in said windings when the states of said elements are changed by said magnetizing force applying means.

2,866,179
RECORD SELECTOR
John W. Haanstra and Louis D. Stevens, San Jose, and Trigg Noyes and Donald D. Johnson, Los Gatos, Calif., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application December 23, 1955, Serial No. 555,007
1 Claim. (Cl. 340—174)



In a magnetic recording apparatus including a moving record medium having a pair of continuous recording paths, a series of transducers spaced along one said path, a single transducer coacting with the other said path to record or reproduce data thereon, a single magnetic indicium located on the first said path capable of being sensed successively by the transducers of said series, a gating circuit under control respectively of any two transducers of said series for enabling and disabling the said single transducer upon the sensing of said indicium to record or reproduce data on second said path, and means for selecting a controlling pair of transducers from the said series whereby data is recorded or reproduced in a portion of the second said path extending over more than the corresponding spacing of consecutive transducers in the said series.

2,866,180
HIGH SPEED INDICATOR
John J. Rudolf, Jr., Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application May 3, 1955, Serial No. 505,461
8 Claims. (Cl. 340—177)

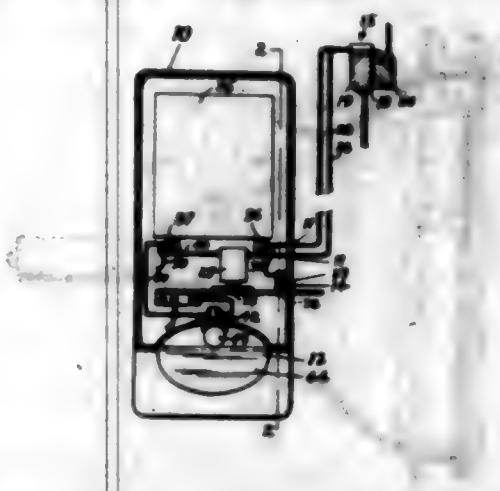


1. In a high speed indicator, in combination, a sensing means including an output means and a rebalance means having two relatively movable members, an amplifier responsive to said output means and having first and second outputs, a phase sensitive amplifier and an indicator drive motor energizably controlled by said amplifier first output, a clutch energizably controlled by said amplifier second output upon a predetermined magnitude of said second output, a gear train movement indicator having a plurality of gears, a first gear and said clutch rotated by said indicator motor, a differential gear train engaged to an intermediate gear and geared to a first relatively movable member of said rebalance means to drive said intermediate gear and said first member simultaneously when said clutch is energized, means to drive a second relatively movable member of said rebalance means with said indicator motor, a velocity generator driven by said indicator motor, a non-linear feedback amplifier energized by said velocity generator and having an output connected to said phase sensitive amplifier, said indicator motor to drive said second relatively movable member and said indicator to rebalance said sensing means and to drive said first relatively movable member and said intermediate gear to rebalance said sensing means when said amplifier second output is above the predetermined level.

2,866,181
BURGLAR ALARM HAVING BOTH VISUAL AND AUDIBLE ALARM MEANS
Richard A. Gordon, Freeport, N. Y.
Application March 28, 1956, Serial No. 574,441
1 Claim. (Cl. 340—276)

An electrical burglar alarm for a window having an openable portion comprising, in combination and in interconnected operative relationship, a switch having a movable actuating arm formed with a depending portion thereupon extending transversely across the junction be-

tween said openable portion and the remainder of the window and resting in inoperative position upon said openable portion when said openable portion is in closed position; means for urging said arm into an operative position upon movement of said openable portion, a casing having a diagonal lower face adapted to be vertically disposed above said window, said casing being provided with an opening within said lower face and an additional opening elsewhere therewithin, a relay within said casing closed by actuation of said first switch and held closed



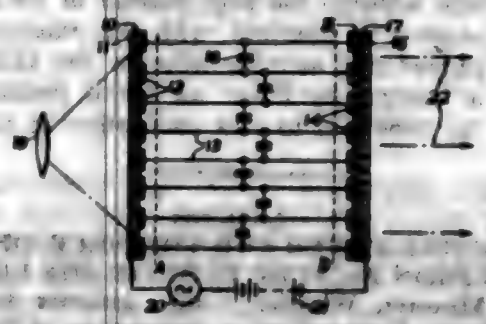
when once actuated, an additional switch actuated by closure of said relay, a downwardly directed reflector within said casing in abutting relationship with said additional opening, said bulb and said sounding device being actuated by said additional switch, the light produced by said bulb being directed upon said window opening, a manual resetting device without said casing for opening said relay after closure thereof and thereby disconnecting the device, a battery within said casing, and electrical conductors operatively interconnecting all of the parts thereof.

2,866,183

CLOSED-CIRCUIT TELEVISION SYSTEMS

Derek Hubert Mash, London, England, assignor to Thorn Electrical Industries Limited

Application August 14, 1957, Serial No. 678,231
Claims priority, application Great Britain August 24, 1956
2 Claims. (Cl. 348—324)



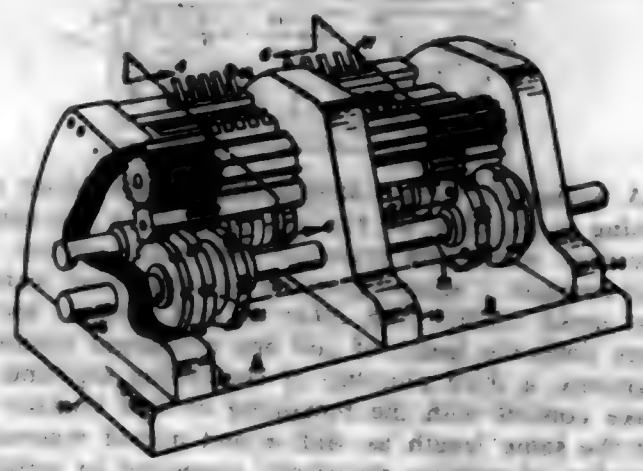
1. A closed-circuit television system comprising a camera device having a screen including a first light-transmitting conducting electrode, a first mosaic electrode of mutually-insulated conducting elements and a layer of photo-conductive material between and in electrical contact with said electrodes, a reproducing device having a screen including a second light-transmitting conducting electrode, a second mosaic electrode of mutually-insulated conducting elements and superimposed layers of electroluminescent and super-linear resistive material between said second electrodes, electrically conducting members interconnecting individual elements of said first mosaic electrode with individual elements of said second mosaic electrode respectively, and means for applying an alternating voltage in series with a direct voltage between said first and second light-transmitting electrodes.

2,866,183

ANALOG-TO-DIGITAL CONVERTER

Adolph W. Awot, Marblehead, Bernard M. Gordon, Concord, and Maurice A. Meyer, Natick, Mass., assignors to Laboratory for Electronics, Inc., Boston, Mass., a corporation of Delaware

Application April 24, 1953, Serial No. 350,994
13 Claims. (Cl. 340—347)



2. An analog-to-digital converter comprising, an input shaft, first and second digital character rolls, first and second intermittent drive mechanisms operative from said input shaft for alternately actuating said digital character rolls, first and second output means respectively associated with said first and second digital character rolls, and driving means operative from said input shaft for alternately coupling said first and second output means to said first and second digital character rolls respectively.

2,866,184

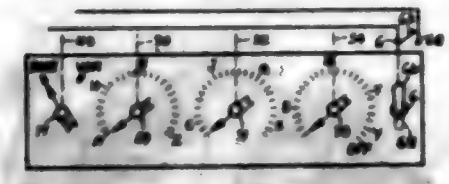
ANALOG TO DIGITAL CONVERTER

John W. Gray, Pleasantville, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

Application December 14, 1953, Serial No. 397,995
8 Claims. (Cl. 340—347)

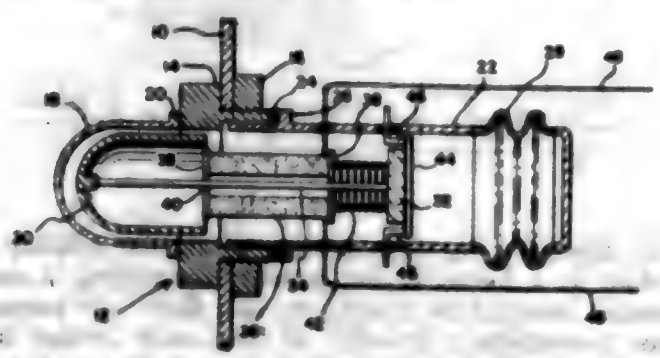
3. Apparatus for representing the angular position of a shaft as a binary digital quantity comprising, a commutator mounted for rotation by said shaft, said commutator comprising a plurality of rings each divided into equal length alternately arranged conductive and non-conductive segments, the number of segments doubling on succeeding rings, a source of potential connected to all of said conductive segments, a single brush bearing on the ring having the greatest number of segments, a pair of brushes bearing on each remaining ring, the brushes of each pair being displaced circumferentially in opposite directions from a line through said first brush perpendicular to the circumference of said rings, a plurality of output conductors on which the presence or absence of a potential represents a binary digital quantity, means for connecting said single brush to one of said output conductors, means responsive to the potential of said single brush for connecting one or the other of the next preceding pair of brushes to another of said output conductors, and means responsive to the potential of each connected brush for connecting one of the next preceding pairs of brushes to an output conductor.

2,866,185
UNIVERSAL NAVIGATION STATION IDENTIFICATION KEYER
Stanley S. Beady, Brooklyn, N. Y.
Application February 25, 1953, Serial No. 338,926
1 Claim. (Cl. 340—365)
(Granted under Title 35, U. S. Code (1953), sec. 266)



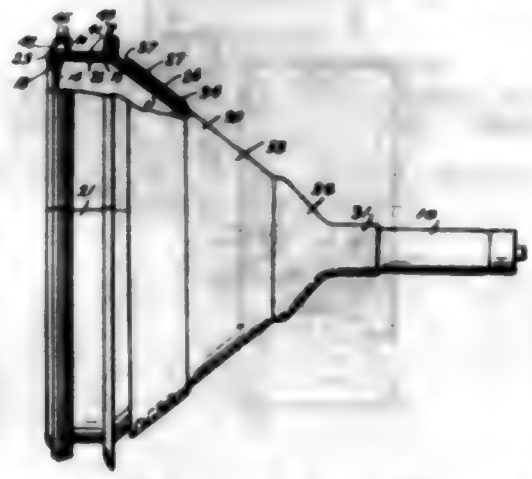
A navigation station identification signal device comprising a plurality of rotating contacts, a plurality of electrical conducting segments that make contact with said contacts, a second plurality of conducting segments that make contact with other of said contacts and are three times the length of said first mentioned conducting segments, a third plurality of conducting segments that make contact with the remaining of said contacts and are the same length as said second named segments, a plurality of switches electrically connected to certain of said electrical conducting segments to determine the first letter of the identification signal, a second plurality of switches electrically connected to other of said electrical conducting segments to determine the second letter of the identification signal, a stepping relay connected to a plurality of said electrical conducting segments, a third plurality of switches connected to said stepping relay to determine the third letter of the identification signal, means connected to said second plurality of switches and said stepping relay to properly orient the stepping relay to obtain the proper time spacing between the letters, and means to pick off the desired signal in the form of the Morse code from the plurality of rotating contacts.

2,866,186
MECHANICAL INDICATOR FOR ANNUNCIATORS
George E. C. Hardesty, Maye, Md.
Application December 27, 1954, Serial No. 477,957
18 Claims. (Cl. 340—366)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A mechanical indicator for an annunciator comprising, a sealed receptacle adapted for mounting in a panel of said annunciator, said receptacle comprising a curved hollow transparent viewing envelope, a cylindrical member, spacer means interconnecting said envelope with said cylindrical member, an electromagnetic means in said cylindrical member for moving an armature associated therewith, colored target means in said receptacle connected with said armature, means biasing said target member to a non-indicating position away from said viewing envelope, said armature moving said target to indicating position inside said viewing envelope upon actuation of said electromagnetic means against said biasing means, and a liquid in said receptacle having an optical index of refraction substantially corresponding to that of said envelope, a portion of said liquid being between said target and said envelope in indicating position of the target and providing therewith an enhancing optical action for emphasizing the size of said target member when the latter is in an indicating position.

2,866,187
INSULATING SHIELD AND MOUNTING DEVICE FOR COLOR TELEVISION TUBES
Richard A. Finch, Forest Hills Gardens, N. Y.
Application July 11, 1955, Serial No. 521,175
3 Claims. (Cl. 340—367)



1. A plural part insulating shield for a metal-backed color cathode ray tube of the type having an outwardly projecting flange adjacent the lens end thereof, comprising a first overlapping gapped ring member having an internal peripheral groove adapted to extend over the said flange of the cathode ray tube, the interior edge portion of said ring extending beyond said flange and over a substantial portion of the metal backed area of the tube, said first gapped ring having an interior flange on the front edge portion adapted to extend over the corresponding front edge portion of the cathode ray tube adjacent the lens thereof and an exterior bead extending along the interior edge portion thereof, and in combination therewith a conical insulating member adapted to extend from the glass portion of the cathode ray tube substantially up to the flange of the latter, said conical portion fitting snugly about said tube and including an interior bead adjacent the edge portion of the larger end thereof adapted to interlock with the exterior bead of the first gapped ring member whereby the said parts cooperate to completely cover all metal portions of the cathode ray tube and to lock each other in position.

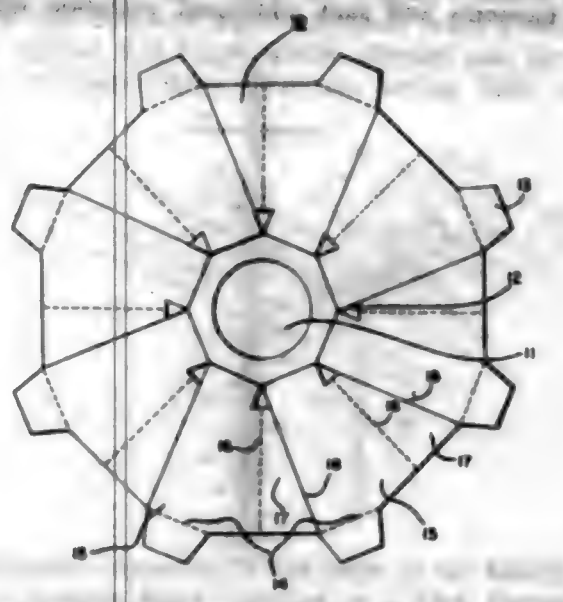
2,866,188
PROTECTIVE COVER FOR THE NECK OF A TELEVISION PICTURE TUBE OR THE LIKE
Daryle Mesmer, Whittier, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Application August 23, 1955, Serial No. 530,187
4 Claims. (Cl. 340—367)

1. A protective cover adapted to house the neck of a television picture tube extending rearwardly through a rear cover of a television receiver cabinet comprising a sheet of pliable material having first and second sides, said sheet exhibiting a generally circular configuration and provided with a central portion, a plurality of side portions, a plurality of foldable, substantially triangular portions interposed between adjacent side portions, and a plurality of peripheral mounting tab portions bendable in an outwardly direction, said sheet being crease scored upon said first side to define boundaries between said triangular portions and said side portions adjacently disposed thereto in a clockwise direction, said sheet being crease scored on said second side to define boundaries between said triangular portions and said side portions adjacently disposed

circuit about a mean adjustment, whereby said leakage

the spacing between each radiation element of said plu-

thereto in a counter-clockwise direction, said second side of said sheet also being crease scored to define boundaries between said side portions and said central portion; and said sheet being adapted for forming into a cup-shaped cover



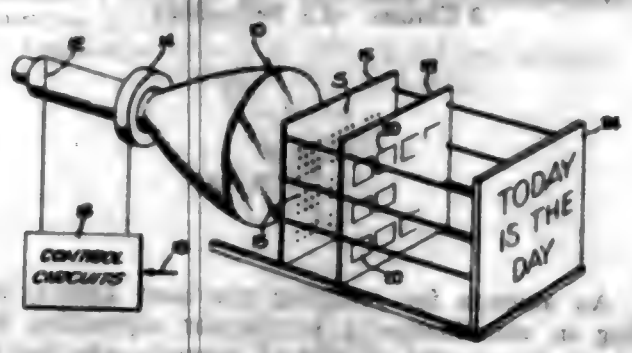
with said triangular portions being foldably interleaved between adjacent side portions, and said mounting tabs being adapted to be secured to said rear cover of said cabinet.

2,866,189

CHARACTER DISPLAY UNIT

Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application January 31, 1957, Serial No. 637,528
5 Claims. (Cl. 340—365)



1. A character-display device comprising selectively positionable light beam means providing a light beam, a light mask having a plurality of character-shaped apertures, a lens system comprising a plate positioned between said light mask and said light beam means, said plate having a pinhole aperture opposite each character-shaped aperture, said light beam from said selectively positionable light beam means selectively illuminating a character-shaped aperture through its applicable pinhole aperture, and a viewing screen positioned adjacent said light mask to be illuminated by the light passing through a selected one of its apertures.

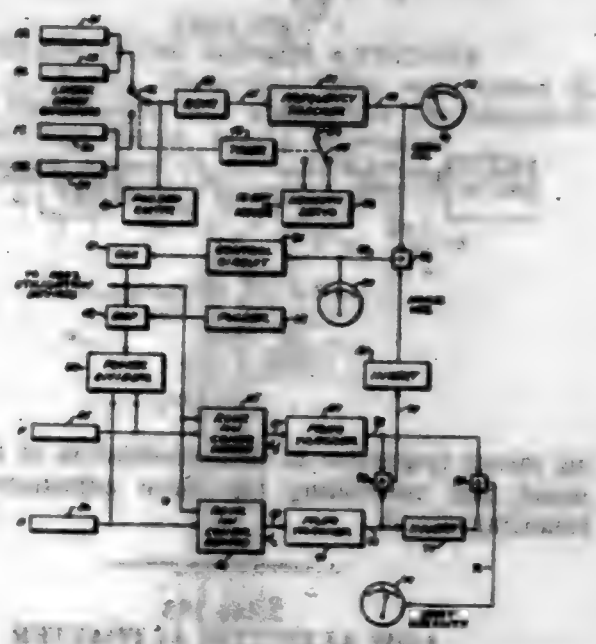
2,866,190

MICROWAVE FREQUENCY CONTROL

Franco B. Berger, Plainsville, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

Application June 1, 1956, Serial No. 588,840
12 Claims. (Cl. 343—9)

1. Apparatus for measuring the frequency of a source of radiant energy comprising, means employing said radiant energy for measuring the magnitude of a known physical quantity, said means giving a measurement which varies with both the magnitude of said quantity and the



frequency of said source, and means for comparing the measured value with the known value of said physical quantity.

2,866,191

INFORMATION INDICATING INSTRUMENT

Russell W. McFall and Theodore T. Johnson, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York

Application December 31, 1953, Serial No. 383,048
9 Claims. (Cl. 343—11)

1. In a pulse echo system, the combination of means to radiate pulses in directions varying in elevation and azimuth, a cathode ray tube having a viewing screen, means to receive echoes of said pulses and to produce an indication at a point on said screen varying in position in accord with the direction from which said echoes are received both in elevation and in azimuth, means to produce a visible trace extending through said point, means for measuring the time intervals between the radiation of pulses and the reception of corresponding echoes, and means timed with the radiation of pulses to displace angularly said trace about said point in accord with the values of said measured time intervals, thereby to indicate the range from which said echoes are received.

2,866,192

MISS DISTANCE INDICATOR

Rodney Warren Johnson, Pasadena, and Melvin Hadley Larsen, Monrovia, Calif., assignors to The Ralph M. Parsons Company, Pasadena, Calif., a corporation of Nevada

Application March 29, 1955, Serial No. 497,576
21 Claims. (Cl. 343—12)

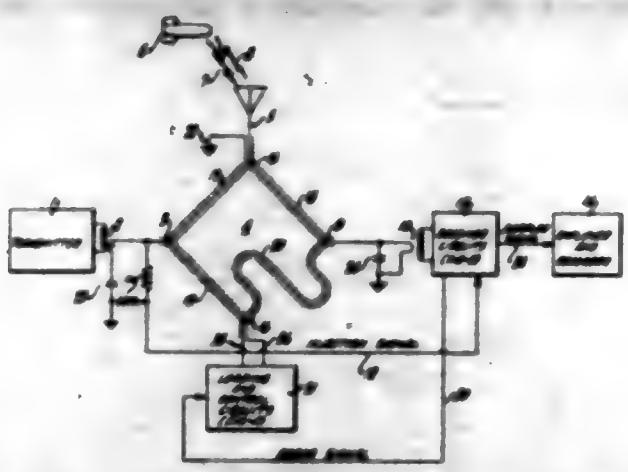
1. Apparatus comprising two electric signalling circuits between which a leakage signal is transmitted, an adjustable balancing circuit to reduce said leakage signal, the amplitude of said leakage signal varying with the adjustment of said balancing circuit, a balance modulator cyclically varying the adjustment of said balancing

collinear dipole elements and the antenna being highly reader said helical radiator resonant at said radio fre-

between said target and said envelope in indicating posi-

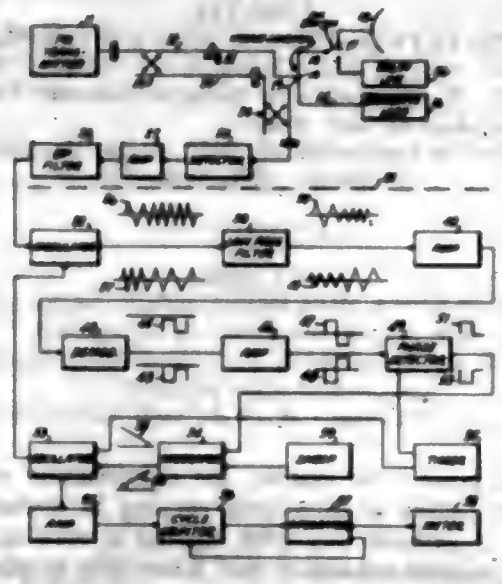
lar portions and said side portions adjacently disposed

circuit about a mean adjustment, whereby said leakage signal is amplitude modulated, and automatic rebalanc-



ing means responsive to such modulation of the leakage signal and controlling the mean adjustment of said balancing circuit.

2,866,193
LOW ALTITUDE ALTIMETER
Lewis M. Lawton, Jr., Rye, N. Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application February 19, 1954, Serial No. 411,433
6 Claims. (Cl. 343—14)



1. Radio echo ranging apparatus comprising, means for generating and transmitting frequency modulated radio frequency energy, means for receiving a portion of the transmitted energy after reflection from an object, means for mixing the received energy with a portion of the generated energy to obtain a signal the frequency of which is proportional to the range of said object, an alternating current generating means, means for cyclically shifting the output of said generating means upward and downward in frequency, and means responsive to said signal for continuously adjusting the mean frequency of said alternating current generating means to equal that of said signal.

2,866,194
OMNIDIRECTIONAL BEACON ANTENNA
Gus Stavis, Ossining, N. Y., and James S. Engel, Tenafly, N. J., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland
Application November 14, 1955, Serial No. 546,617
7 Claims. (Cl. 343—725)

1. An antenna array comprising a plurality of radiation elements disposed in a given vertical alignment, the spacing between each radiation element of said plurality of radiation elements being a given amount, an additional radiation element disposed in alignment with respect to said plurality of elements and spaced therefrom at a distance different than said given amount, a counterpoise disposed between said plurality of radiation elements and said additional radiation element, a

source of input energy, a transmission line coupled to said source, means to couple said energy from said transmission line to said plurality of said radiation elements including means to divide said energy at a feedpoint and a plurality of branch transmission lines coupling energy from said feedpoint to each of said plurality of radiation elements, and means to couple energy from said transmission line to said additional radiation element.

2,866,195
TELEVISION RECEIVING ANTENNA
Neil C. Pouliasn, Longview, Wash.
Application February 23, 1954, Serial No. 411,799
2 Claims. (Cl. 343—803)

1. An antenna for receiving television signals, comprising in combination a rectangular supporting sheet of dielectric material, a strip of electro-conductive tape attached to one side of said sheet substantially throughout the length thereof, a pair of transverse directors and a reflector electrically connected to said strip of electro-conductive tape and arranged in parallel spaced relation to one another on the same side of said sheet, a dipole disposed between said reflector and one of said directors and electrically connected to said strip of tape, said dipole being folded over and under said supporting sheet and terminating on the opposite side of said sheet in two terminals for attachment to lead-in wires of a television receiving set.

2,866,196
BROAD BAND HIGH FREQUENCY ANTENNA
John F. Greenacy, Collinsville, Ill., assignor to Trio Manufacturing Co., Collinsville, Ill., a corporation of Illinois
Application June 18, 1957, Serial No. 666,436
13 Claims. (Cl. 343—803)

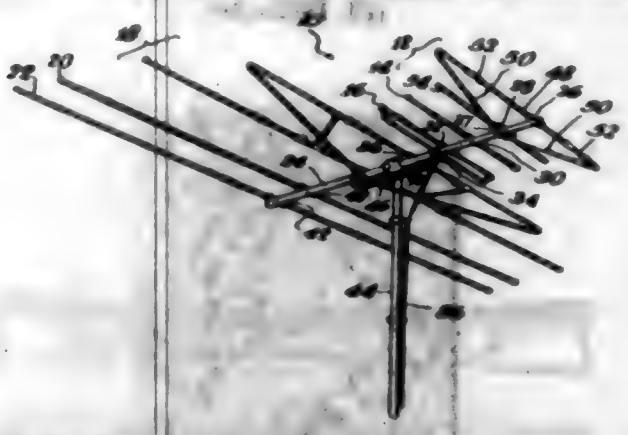
1. A composite antenna for high frequency signals comprising a plurality of dipole elements all arranged in substantially a horizontal plane, there being three

DESIGNS

of radiant energy comprising, means employing said lator cyclically varying the adjustment of said balancing

737 O. G.—70

collinear dipole elements and the antenna being highly directive along an axis normal to the collinear dipole elements, a fourth dipole element centered on said axis spaced from and parallel with the middle one of the three collinear dipole elements, the four elements being substantially of the same electrical length, the said middle one of said collinear dipole elements being a director parasitic relative said fourth dipole element and the two outboard collinear dipole elements having their inner



ends electrically connected to the ends of the fourth dipole, said antenna being resonant at a high frequency and a low frequency substantially three times said high frequency, and means connected to drive the two outboard collinear dipole elements and the fourth dipole element including a stub transformer having a closed end, connected thereto and a substantially constant impedance line interposed between said driven dipole elements and said closed end at a point providing optimum impedance to said antenna when resonant at said low frequency.

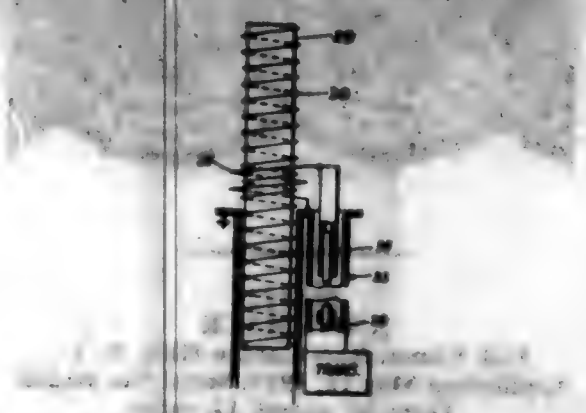
2,866,197

TUNED ANTENNA SYSTEM

Armig G. Kandoian, Glen Rock, N. J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application March 28, 1953, Serial No. 343,621

8 Claims. (Cl. 343—895)



1. A radio antenna system comprising a conductive element disposed in the form of a helical radiator, a source of radio frequency energy, means to couple said radio frequency energy directly to predetermined turns of said helical radiator, means to vary the position of said coupling means to vary the turns of said radiator to which said direct coupling occurs, and means to shorten the effective electrical length of said radiator to render said helical radiator resonant at said radio frequency to radiate said energy normal to the axis of said helix.

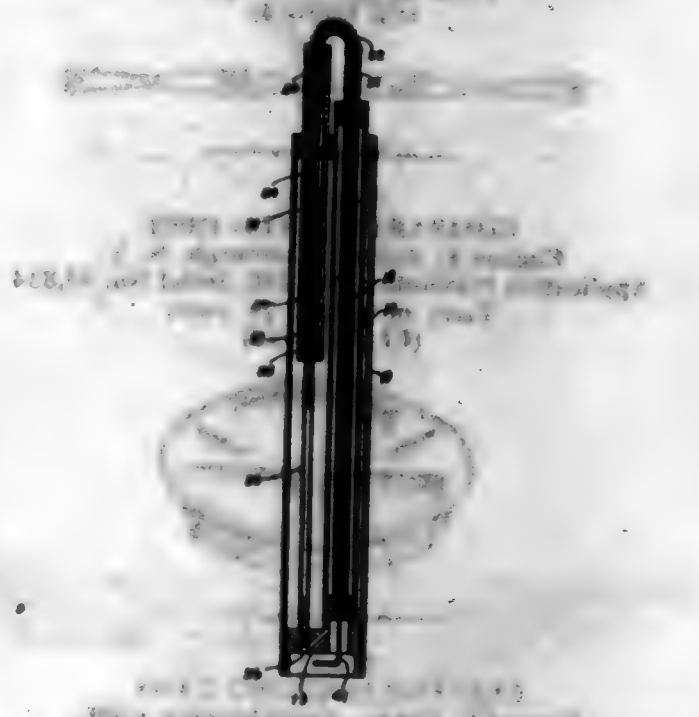
2,866,198

TELESCOPING DIPOLE ANTENNA

Woodrow P. Kirby, Hicksville, Ohio, and James E. Meyers, Fort Wayne, Ind., assignors to The Magnavox Company, Fort Wayne, Ind., a corporation

Application August 12, 1957, Serial No. 677,683

11 Claims. (Cl. 343—901)



1. A telescoping dipole antenna adapted to be actuated to extended position comprising an elongated storage housing accommodating in nested relation an outer first tube and an inner second tube, cooperating stop means carried by the outer end of the first tube and the inner end of the second tube to prevent complete withdrawal of the second tube from said first tube, a header member carried by the inner end of the first tube cooperating with the housing to prevent complete withdrawal of the first tube therefrom, an elongated member accommodated within said housing in side-by-side relation to said tubes, connecting means comprising a stressed resilient member joining the adjacent ends of said second tube and said elongated member adapted to snap the tube and member into end-opposed relation upon freeing of the elongated member from said housing, a locking sleeve carried by said elongated member adjacent said connecting means, a spring extending between said sleeve and said elongated member for urging the sleeve into a position spanning said connecting means when said tube and said member assume end-opposed relation, means for extending the antenna comprising a flexible cable attached to the inner end of said second tube and extending therethrough to provide a re-entrant cable section within said housing having a looped attachment to said header, and means for winding said cable to thereby initially withdraw the nested tubes from said housing, thereafter withdrawing the second tube from said first tube and freeing said elongated member from said housing.

184,124

HANDLE

Montgomery Ferry, Huntington Woods, Mich., assignor

184,126

APRON OR THE LIKE

tion elements disposed in a given vertical alignment, in substantially a horizontal plane, there being three

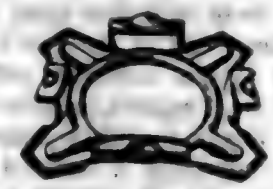
DESIGNS

DECEMBER 23, 1958

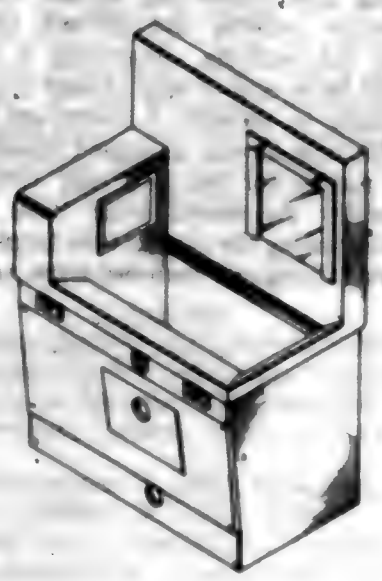
184,117
EXPANSIBLE CHAIN FOR A BRACELET OR SIMILAR ARTICLE
Karl C. Augustein, Cranston, R. I., assignor to Speidel Corporation, Providence, R. I., a corporation of Rhode Island
Application February 24, 1958, Serial No. 49,772
Term of patent 14 years
(Cl. D45—4)

184,118
COMPARTMENTED DISH
Eugene E. Badger, Newburgh, N. Y.
Application November 19, 1956, Serial No. 43,834
Term of patent 14 years
(Cl. D44—15)

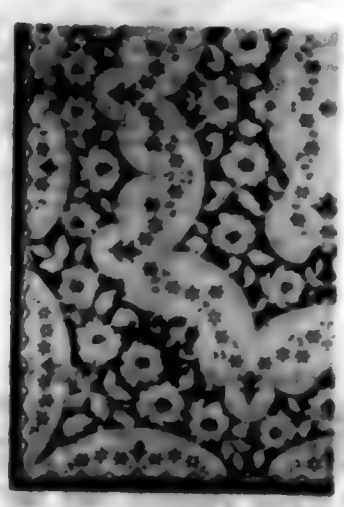
184,119
CLIP FOR HOLDING CANS
Samuel C. Brown, Santa Monica, Calif.
Continuation of abandoned design application Serial No. 45,389, March 21, 1957, which is a continuation of abandoned design application Serial No. 39,136, December 2, 1955. This application February 6, 1958, Serial No. 49,531
Term of patent 14 years
(Cl. D58—26)



184,120
X-RAY PROCESSING TANK
John W. Carr, Pacific Palisades, Calif.
Application December 16, 1957, Serial No. 48,985
Term of patent 14 years
(Cl. D61—1)

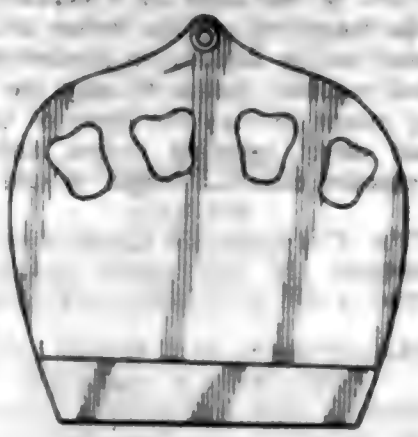


184,121
TABLECLOTH
Francesco F. Casterani, Exton, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Application January 27, 1958, Serial No. 49,427
Term of patent 7 years
(Cl. D92—26)



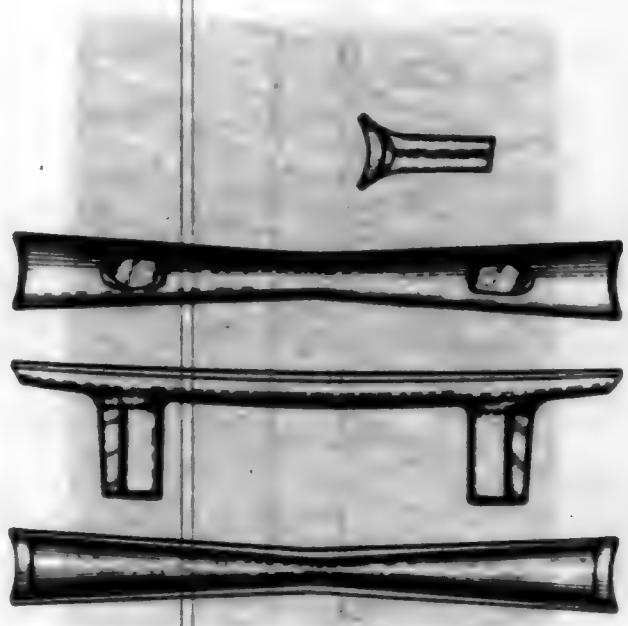
184,122
LACE
Bert Edson, East Providence, R. I., assignor to North American Lace Co., Inc., Philadelphia, Pa.
Application April 30, 1958, Serial No. 50,676
Term of patent 3½ years
(Cl. D47—6)

184,123
KNIFE RACK
Jack Elsner, Kew Gardens Hills, N. Y.
Application May 16, 1957, Serial No. 46,253
Term of patent 14 years
(Cl. D44—29)

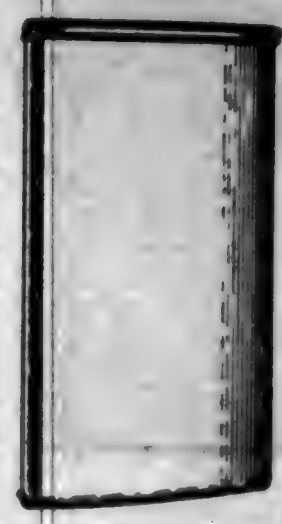


184,129
TV CABINET

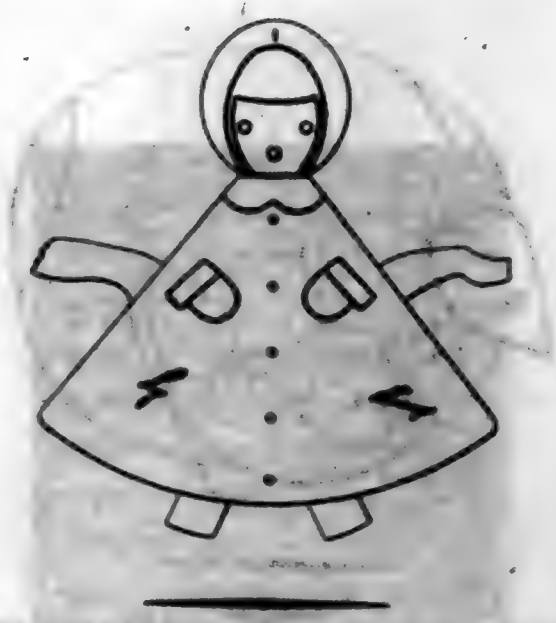
184,124
HANDLE
Montgomery Ferar, Huntington Woods, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Application January 31, 1958, Serial No. 49,462
Term of patent 14 years
(Cl. D10—8)



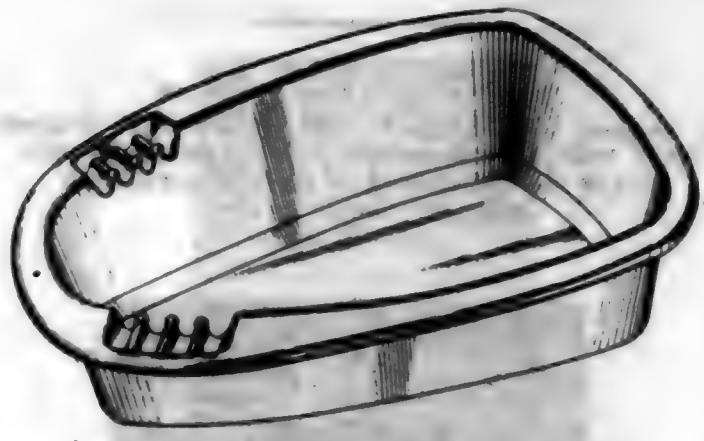
184,125
REFRIGERATOR DOOR
Montgomery Ferar, Huntington Woods, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Application January 31, 1958, Serial No. 49,463
Term of patent 14 years
(Cl. D67—3)



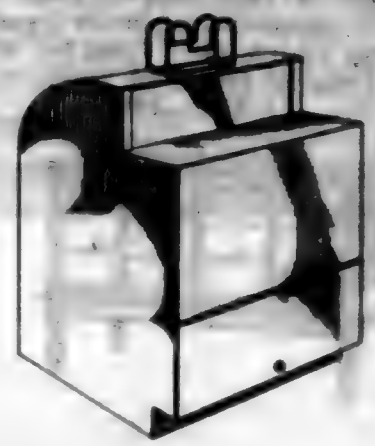
184,126
APRON OR THE LIKE
Max H. Goldner, Flushing, N. Y.
Application February 24, 1958, Serial No. 49,782
Term of patent 3½ years
(Cl. D3—26)



184,127
BABY BATH
Paul C. Gunn, Fort Worth, Tex., assignor to Lone Plastics, Inc., Fort Worth, Tex., a corporation of Texas
Application December 4, 1956, Serial No. 44,058
Term of patent 14 years
(Cl. D4—4)



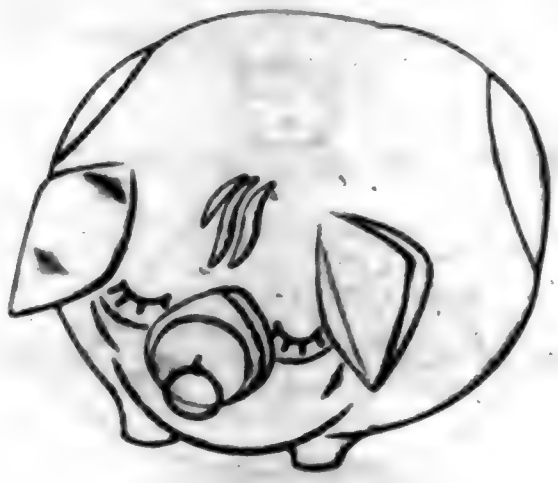
184,128
LAUNDRY DROP BOX
Tate J. Hall, Santa Fe, N. Mex.
Application January 24, 1958, Serial No. 49,387
Term of patent 14 years
(Cl. D58—4)



184,134
PUFFED TEXTILE FABRIC

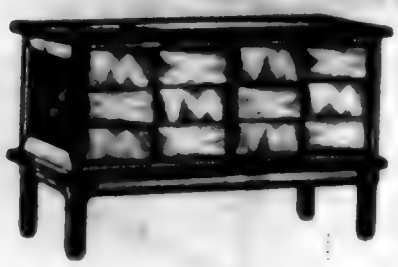
184,136
PUFFED TEXTILE FABRIC

184,129
TOY BANK
James Brunson Hull, Zanesville, Ohio
Application August 2, 1957, Serial No. 47,197
Term of patent 7 years
(Cl. D34—11)

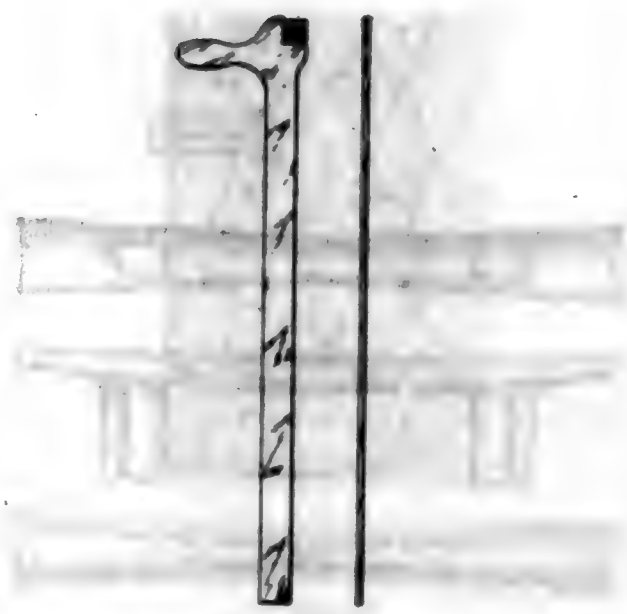


184,130
HARD SURFACE FLOOR COVERING OR SIMILAR ARTICLE
Leona G. Kolker, Brooklyn, N. Y., assignor to Congoleum-Nairn Inc., Kearny, N. J., a corporation of New York
Application April 29, 1958, Serial No. 50,658
Term of patent 14 years
(Cl. D92—17)

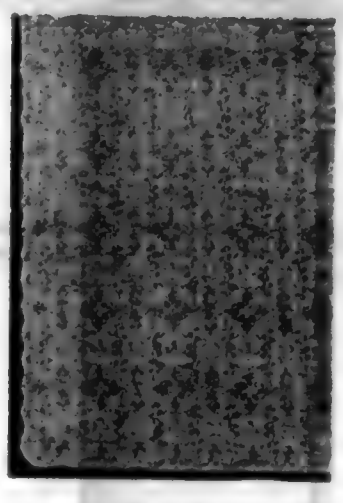
184,131
CHEST OR THE LIKE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N. C., a corporation of North Carolina
Application April 8, 1957, Serial No. 45,615
Term of patent 14 years
(Cl. D33—19)



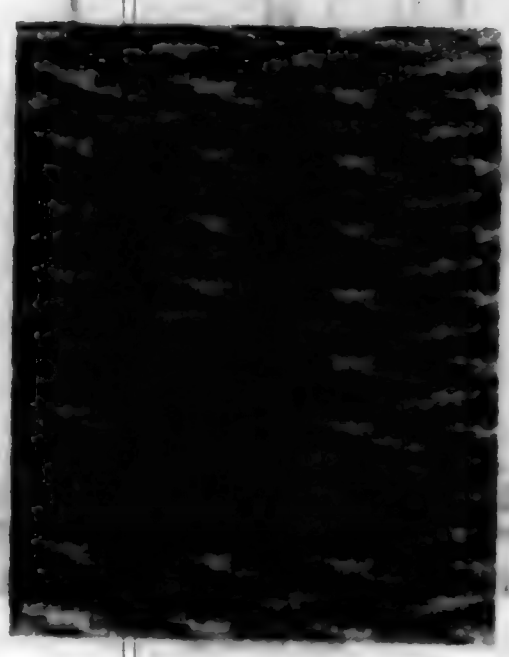
184,132
TROUSER LENGTH MARKING GAGE
Eugene M. Magnuson, Berkeley, Calif.
Application August 5, 1957, Serial No. 47,216
Term of patent 14 years
(Cl. D82—1)



184,133
TABLECLOTH
Horace Maxwell, Cornwells Heights, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Application April 18, 1958, Serial No. 50,516
Term of patent 7 years
(Cl. D92—26)

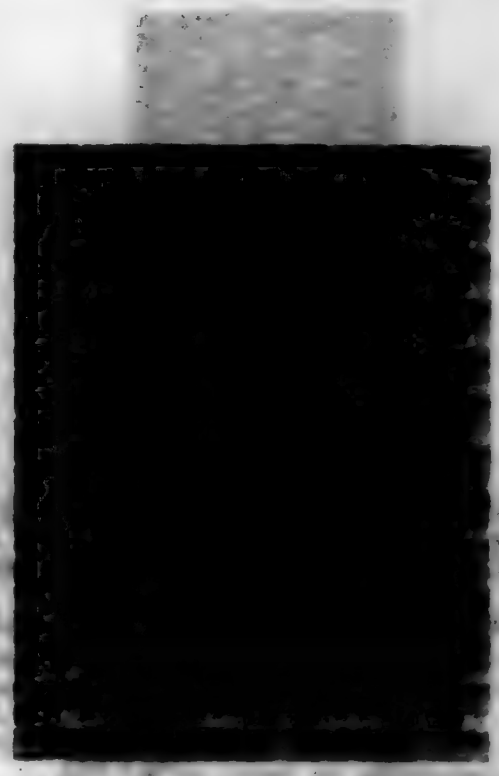


184,134
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application October 16, 1957, Serial No. 48,110
Term of patent 14 years
(Cl. D92—1)



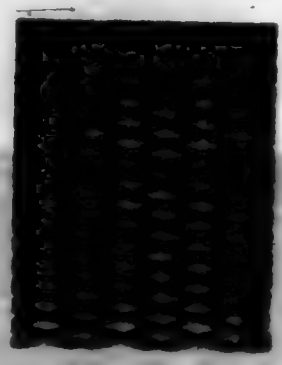
184,135
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application October 16, 1957, Serial No. 48,111
Term of patent 14 years
(Cl. D92—1)

184,136
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application October 16, 1957, Serial No. 48,112
Term of patent 14 years
(Cl. D92—1)

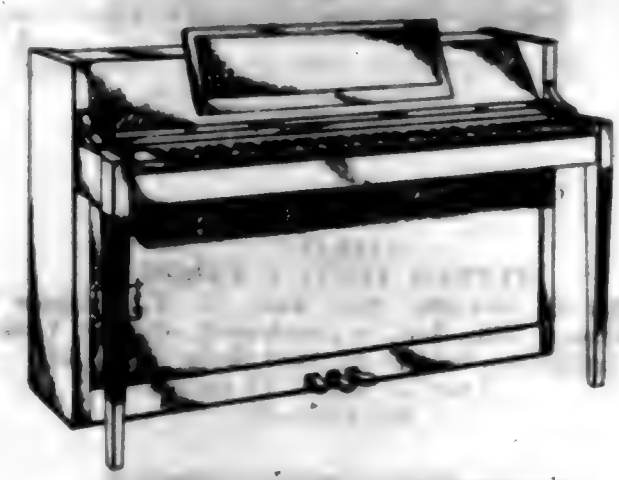


184,137
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application October 16, 1957, Serial No. 48,113
Term of patent 14 years
(Cl. D92—1)

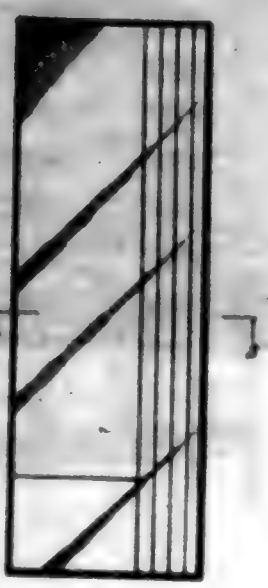
184,138
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N. Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application October 16, 1957, Serial No. 48,114
Term of patent 14 years
(Cl. D92—1)



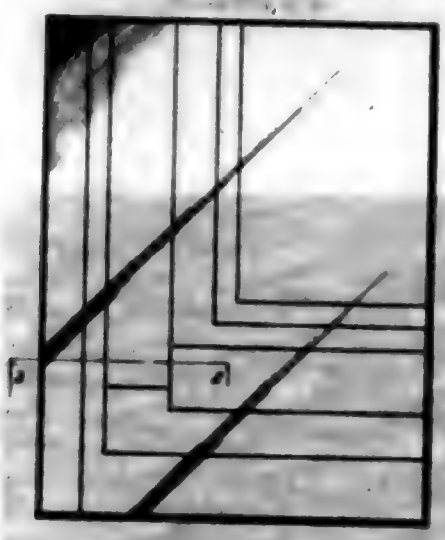
184,139
PIANO CASE
William Millington, Grand Rapids, Mich., and Wilbur M. Day, Kenwood, Ohio, assignors to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Application January 27, 1958, Serial No. 49,488
Term of patent 14 years
(Cl. D56—9)



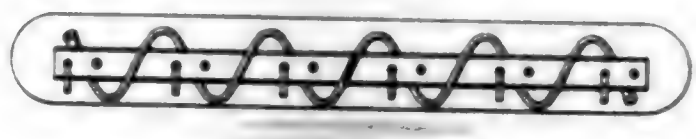
184,140
MIRROR
Harry H. Meek, Memphis, Tenn.
Application January 2, 1958, Serial No. 49,102
Term of patent 14 years
(Cl. D33—9)



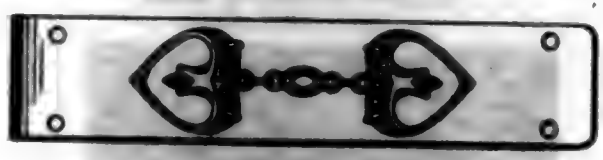
184,141
MIRROR
Harry H. Meek, Memphis, Tenn.
Application January 2, 1958, Serial No. 49,103
Term of patent 14 years
(Cl. D33—9)



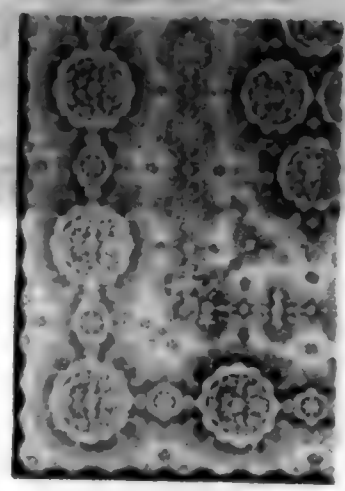
184,142
TIE RACK OR SIMILAR ARTICLE
Frank Morrow, Johnston, R. I., assignor to Frank Morrow Company, Providence, R. I., a corporation of Rhode Island
Application November 26, 1957, Serial No. 48,668
Term of patent 7 years
(Cl. D33—6)



184,143
LINGERIE STRAP POSITIONING CLIP
Adnah A. Nichell and Charles F. Nichell, Glendale, Calif.
Application February 21, 1958, Serial No. 49,744
Term of patent 14 years
(Cl. D17—3)



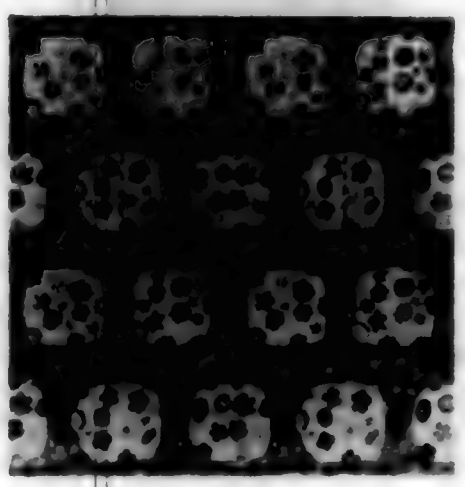
184,144
TABLECLOTH
Ferdinand F. Otis, Philadelphia, Pa., assignor to Quaker Lace Company, Philadelphia, Pa., a corporation of Pennsylvania
Application April 28, 1958, Serial No. 50,641
Term of patent 7 years
(Cl. D92—26)



1,841,151

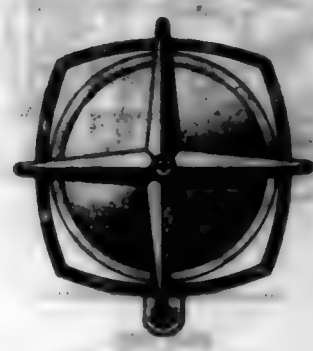
184,145
BUILDING
Rene Peter and Philip B. Morrisson, Truna, Calif.
Application May 8, 1957, Serial No. 46,862
Term of patent 14 years
(Cl. D13—1)

184,146
LINOLEUM OR SIMILAR ARTICLE
Albert J. Pucci, Brooklyn, N. Y., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Application December 3, 1957, Serial No. 48,756
Term of patent 14 years
(Cl. D92—17)

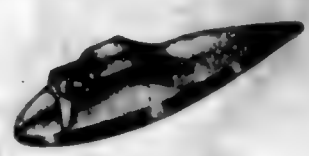


184,147
FISHING PLUG
Rudolph Ross, Waverly, Tenn.
Application April 3, 1957, Serial No. 45,572
Term of patent 14 years
(Cl. D31—4)

184,148
REAR VIEW MIRROR
Robert R. Rossi, Audubon, N. J., assignor to Peerless Accessories Co., Mount Holly, N. J., a corporation of New Jersey
Application April 30, 1956, Serial No. 41,279
Term of patent 14 years
(Cl. D14—6)



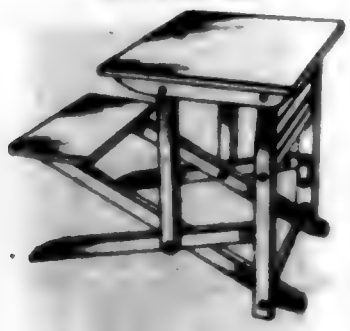
184,149
BASE FOR REAR VIEW MIRROR
Robert R. Rossi, Audubon, N. J., assignor to Peerless Accessories Co., Mount Holly, N. J., a corporation of New Jersey
Application April 30, 1956, Serial No. 41,280
Term of patent 14 years
(Cl. D14—6)



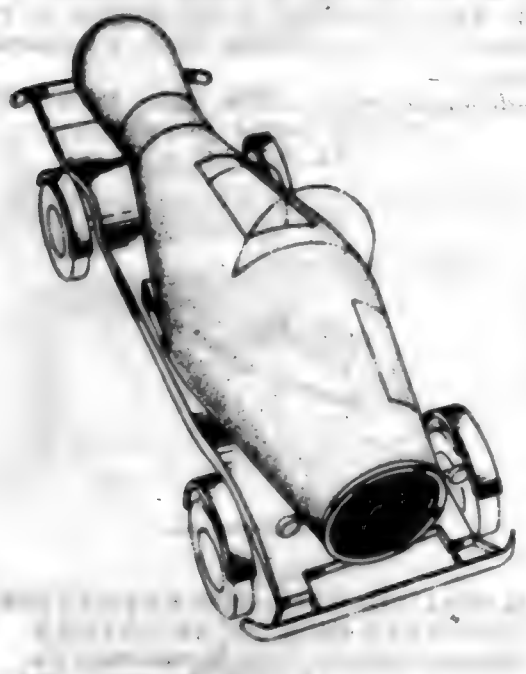
184,150
CAM DIAL CONTROL FOR A FERTILIZER SPREADER OR SIMILAR ARTICLE
William Schiebel, East Stroudsburg, Pa.
Application August 5, 1958, Serial No. 52,949
Term of patent 14 years
(Cl. D52—1)

184,157
FOOD SLICING MACHINE

184,151
FOLDABLE SEAT AND TABLE UNIT
Rudolph G. Schneider, Houston, Tex.
Application April 30, 1958, Serial No. 50,675
Term of patent 7 years
(Cl. D33—14)

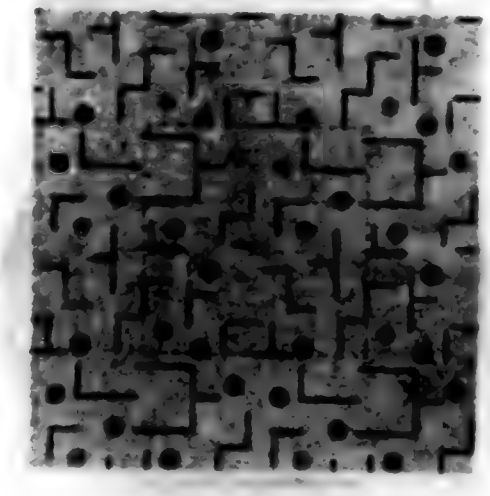


184,152
AUTOMOBILE
Michael A. Skrevan, Sr., South Euclid, Ohio
Application July 25, 1956, Serial No. 42,380
Term of patent 14 years
(Cl. D14—3)



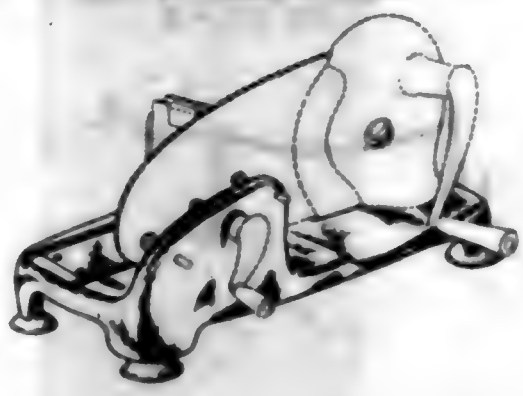
184,153
CONDIMENT DISPENSER
Thomas Frazier Smith, Wheeling, W. Va., assignor to Airko Manufacturing Co., Clermont, Fla., a corporation of Florida
Application February 26, 1958, Serial No. 49,886
Term of patent 7 years
(Cl. D44—22)

184,154
LINOLEUM OR SIMILAR ARTICLE
Alex Stalowsky, Atlantic Beach, N. Y., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Application February 18, 1958, Serial No. 49,694
Term of patent 14 years
(Cl. D92—17)

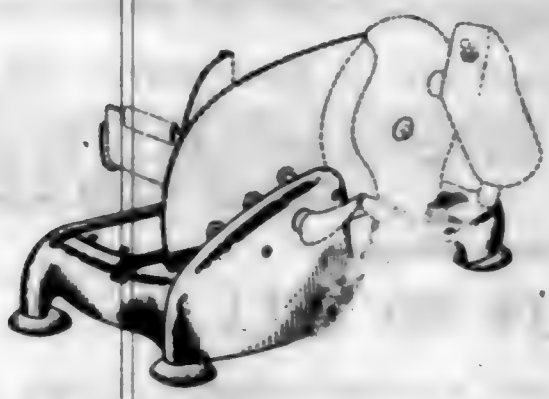


184,155
BOAT STEERING WHEEL
Clifford Brooks Stevens, Milwaukee, Wis., assignor to The Vollrath Co., Sheboygan, Wis., a corporation of Wisconsin
Application December 12, 1957, Serial No. 48,877
Term of patent 3½ years
(Cl. D71—1)

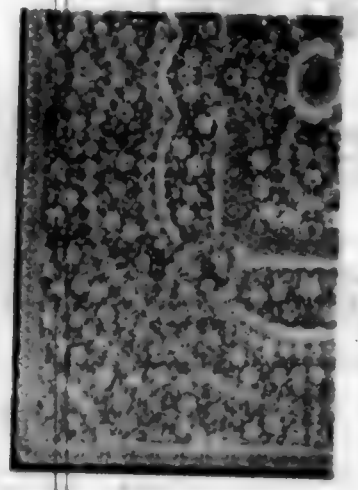
184,156
FOOD SLICING MACHINE
Henry J. Taige, Kansas City, Mo., assignor to John C. Hockery, Kansas City, Mo., trustee for Henry J. Taige and Foster L. Taige
Application March 7, 1957, Serial No. 45,142
Term of patent 14 years
(Cl. D55—1)



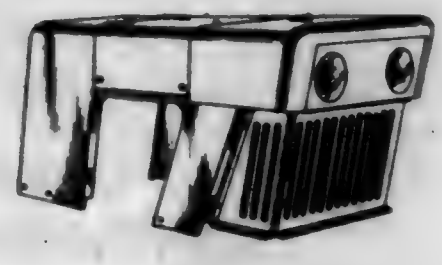
184,157
FOOD SLICING MACHINE
Henry J. Taige, Kansas City, Mo., assignor to John C. Hockery, Kansas City, Mo., trustee for Henry J. Taige and Foster L. Taige
Application March 11, 1957, Serial No. 45,207
Term of patent 14 years
(Cl. D55—1)



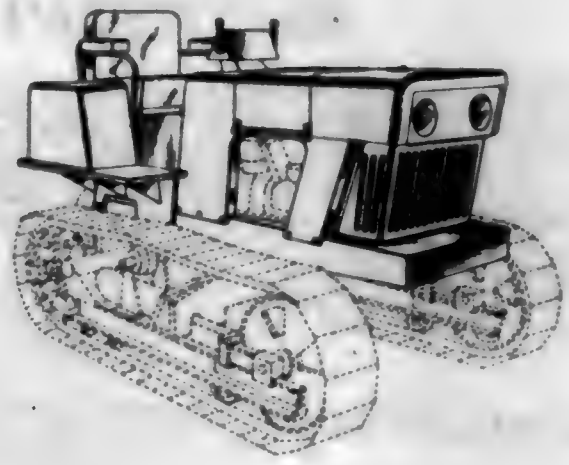
184,158
TABLECLOTH
Thelma Waldman, Elkins Park, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Application November 25, 1957, Serial No. 48,627
Term of patent 7 years
(Cl. D92—26)



184,159
HOOD, HEADLAMP, AND GRILL UNIT FOR TRACTORS OR THE LIKE
Charles L. Whiting and Delmar D. Berckhan, Waverly, Iowa, assignors to Schield Bantam Company, Waverly, Iowa, a corporation of Iowa
Application January 13, 1958, Serial No. 49,212
Term of patent 7 years
(Cl. D14—3)



184,160
TRACTOR
Charles L. Whiting and Delmar D. Berckhan, Waverly, Iowa, assignors to Schield Bantam Company, Waverly, Iowa, a corporation of Iowa
Application January 13, 1958, Serial No. 49,213
Term of patent 7 years
(Cl. D14—3)



LIST OF DESIGN PATENTEES

Talge, Foster L.: *See*—
Talge, Henry L. 184,156

Vollrath Co., The: *See*—

LIST OF REISSUE PATENTEES

TO WHICH

PATENTS WERE ISSUED ON THE 23RD DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Becant, Paul. Convertible utensil. Re. 24,581, 12–23–58, Cl. 220—19.

Hodgson, Robert F., to The New York Air Brake Co. Stabilizing means for high pressure hydraulic valves of the plunger type. Re. 24,580, 12–23–58, Cl. 137—622.

New York Air Brake Co., The: *See*—
Hodgson, Robert F. Re. 24,580.

Rinker, Edwin C., to Sel-Rex Corp. Method and electrolyte for producing bright gold. Re. 24,582, 12–23–58, Cl. 204—43.

Sel-Rex Corp.: *See*—
Rinker, Edwin C. Re. 24,582.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 1,783, 12–23–58, Cl. 47—61.

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 1,784, 12–23–58, Cl. 47—61.

Fisher, Murray W., to Selected Glads, Inc. Gladiolus plant. 1,781, 12–23–58, Cl. 47—60.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 1,783.
Boerner, Eugene S. 1,784.

Merrill, Grant, to Grant Merrill Orchards, Inc. Peach. 1,785, 12–23–58, Cl. 47—62.

Merrill, Grant, Orchards, Inc.: *See*—
Merrill, Grant. 1,785.

Pommert, Ralph J., to Selected Glads, Inc. Gladiolus plant. 1,782, 12–23–58, Cl. 47—60.

Selected Glads, Inc.: *See*—
Fisher, Murray W. 1,781.
Pommert, Ralph J. 1,782.

LIST OF DESIGN PATENTEES

Airko Mfg. Co.: *See*—
Smith, Thomas F. 184,153.

Augenstein, Karl C., to Speidel Corp. Expansible chain for a bracelet or similar article. 184,117, 12–23–58, Cl. D45—4.

Badger, Eugene E. Compartmented dish. 184,118, 12–23–58, Cl. D44—15.

Baldwin Piano Co., The: *See*—
Millington, William, and Day. 184,139.

Berckhan, Delmar D.: *See*—
Whiting, Charles L., and Berckhan. 184,159.
Whiting, Charles L., and Berckhan. 184,160.

Brown, Samuel C. Clip for holding cans. 184,119, 12–23–58, Cl. D58—26.

Carr, John W. X-ray processing tank. 184,120, 12–23–58, Cl. D61—1.

Casteranl, Francesco P., to Quaker Lace Co. Tablecloth. 184,121, 12–23–58, Cl. D02—20.

Chicopee Mills, Inc.: *See*—
McCord, Douglas D. 184,134–184,138.

Congoleum-Nairn Inc.: *See*—
Kolker, Leona G. 184,130.

Day, Wilbur M.: *See*—
Millington, William, and Day. 184,139.

Edson, Bert, to North American Lace Co., Inc. Lace. 184,122, 12–23–58, Cl. D47—6.

Elsner, Jack. Knife rack. 184,123, 12–23–58, Cl. D44—29.

Ferar, Montgomery, to Whirlpool Corp. Handle. 184,124, 12–23–58, Cl. D10—8.

Ferar, Montgomery, to Whirlpool Corp. Refrigerator door. 184,125, 12–23–58, Cl. D67—3.

Fiberboard Paper Products Corp.: *See*—
Pucci, Albert J. 184,146.
Steinweiss, Alex. 184,154.

Goldner, Max H. Apron or the like. 184,126, 12–23–58, Cl. D3—26.

Gunn, Paul C., to Loma Plastics, Inc. Baby bath. 184,127, 12–23–58, Cl. D4—4.

Hall, Tate J. Laundry drop box. 184,128, 12–23–58, Cl. D58—4.

Hockery, John C.: *See*—
Talge, Henry J. 184,156.
Talge, Henry J. 184,157.

Hull, James B. Toy bank. 184,129, 12–23–58, Cl. D34—11.

Kolker, Leona G., to Congoleum-Nairn Inc. Hard surface floor covering or similar article. 184,130, 12–23–58, Cl. D02—17.

Loma Plastics, Inc.: *See*—
Gunn, Paul C. 184,127.

Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Chest or the like. 184,131, 12–23–58, Cl. D33—19.

Magnusson, Ragnar M. Trouser length marking gage. 184,132, 12–23–58, Cl. D52—1.

Maxwell, Horace, to Quaker Lace Co. Tablecloth. 184,133, 12–23–58, Cl. D02—28.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,134, 12–23–58, Cl. D02—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,135, 12–23–58, Cl. D02—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,136, 12–23–58, Cl. D02—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,137, 12–23–58, Cl. D02—1.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 184,138, 12–23–58, Cl. D02—1.

Merriman, Philip B.: *See*—
Peter, Rene, and Merriman. 184,145.

Millington, William, and W. M. Day, to The Baldwin Piano Co. Piano case. 184,139, 12–23–58, Cl. D56—9.

Mook, Harry H. Mirror. 184,140, 12–23–58, Cl. D33—9.

Mook, Harry H. Mirror. 184,141, 12–23–58, Cl. D33—9.

Morrow, Frank J., to Frank Morrow Co. Tie rack or similar article. 184,142, 12–23–58, Cl. D32—8.

Morrow, Frank, Co.: *See*—
Morrow, Frank. 184,142.

Mulder, Lambert J.: *See*—
Lubberts, John J., and Mulder. 184,131.

Nickell, Adnah A. and C. F. Lingerie strap positioning clip. 184,143, 12–23–58, Cl. D17—3.

Nickell, Charles F.: *See*—
Nickell, Adnah A. and C. F. 184,143.

North American Lace Co., Inc.: *See*—
Edson, Bert. 184,122.

Otto, Ferdinand P., to Quaker Lace Co. Tablecloth. 184,144, 12–23–58, Cl. D02—28.

Peerless Accessories Co.: *See*—
Rossi, Robert R. 184,148.
Rossi, Robert R. 184,149.

Peter, Rene, and P. B. Merriman. Building. 184,145, 12–23–58, Cl. D12—1.

Pucci, Albert J., to Fibreboard Paper Products Corp. Linoleum or similar article. 184,146, 12–23–58, Cl. D02—17.

Quaker Lace Co.: *See*—
Casteranl, Francesco P. 184,121.
Maxwell, Horace. 184,133.
Otto, Ferdinand P. 184,144.
Waldman, Thelma. 184,155.

Rose, Rudolph. Fishing plug. 184,147, 12–23–58, Cl. D31—4.

Rossi, Robert R., to Peerless Accessories Co. Rear view mirror. 184,148, 12–23–58, Cl. D14—6.

Rossi, Robert R., to Peerless Accessories Co. Base for rear view mirror. 184,149, 12–23–58, Cl. D14—6.

Schiebel, William. Cam dial control for a fertilizer spreader or similar article. 184,150, 12–23–58, Cl. D52—1.

Schield Bantam Co.: *See*—
Whiting, Charles L., and Berckhan. 184,159.
Whiting, Charles L., and Berckhan. 184,160.

Schneider, Rudolph G. Foldable seat and table unit. 184,151, 12–23–58, Cl. D23—14.

Shrevan, Michael A., Sr. Automobile. 184,152, 12–23–58, Cl. D14—8.

Smith, Thomas F., to Airko Mfg. Co. Condiment dispenser. 184,153, 12–23–58, Cl. D44—22.

Speidel Corp.: *See*—
Augenstein, Karl C. 184,117.

Steinweiss, Alex, to Fibreboard Paper Products Corp. Linoleum or similar article. 184,154, 12–23–58, Cl. D02—17.

Stevens, Clifford B., to The Vollrath Co. Boat steering wheel. 184,155, 12–23–58, Cl. D71—1.

Talge, Foster L.: *See*—
Talge, Henry J. 184,156.
Talge, Henry J. 184,157.

Talge, Henry J., to John C. Hockery, trustee for H. J. and F. L. Talge. Food slicing machine. 184,156, 12–23–58, Cl. D55—1.

Talge, Henry J. to John C. Hockery, trustee for H. J. and F. L. Talge. Food slicing machine. 184,157, 12–23–58, Cl. D55—1.

Tomlinson of High Point: *See*—
Lubberts, John J., and Mulder. 184,131.

Vollrath Co., The: *See*—
Stevens, Clifford B. 184,155.

Waldman, Thelma, to Quaker Lace Co. Tablecloth. 184,158, 12–23–58, Cl. D02—26.

Whirlpool Corp.: *See*—
Ferar Montgomery. 184,124.
Ferar, Montgomery. 184,125.

Whiting, Charles L., and D. D. Berckhan, to Schield Bantam Co. Hood, headlamp and grill unit for tractors or the like. 184,130, 12–23–58, Cl. D14—3.

Whiting, Charles L., and D. D. Berckhan, to Schield Bantam Co. Tractor. 184,160, 12–23–58, Cl. D14—3.

Auten, Robert W., to Rohm & Haas Co. Condensation product of isophthalic dihydrazide, formaldehyde and butanol. 2,865,890, 12–23–58, Cl. 260—72.5.

Auto Research Corp.: *See*—
Richarts, Paul. 2,865,274.

Bell & Howell Co.: *See*—
MacMillin, David M. 2,865,475.
Richarts, Paul. 2,865,274.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ABO Equipment Corp., The: *See*—
Parks, William N. 2,865,226.

Abadir, Boushra Y., to Monsanto Chemical Co. Process for alkylating phenol. 2,865,966, 12-23-58, Cl. 260—624.

Abbrecht, Richard L., and E. Vroom, to Bell Telephone Laboratories, Inc. Record-controlled computing recording system. 2,865,565, 12-23-58, Cl. 235—61.8.

Abell, Arthur E. Water aerator. 2,865,618, 12-23-58, Cl. 261—93.

Acosta, Anthony C. Fishing lure. 2,865,130, 12-23-58, Cl. 43—42.15.

Acker, Norbert K. Phonograph record player. 2,865,633, 12-23-58, Cl. 274—10.

Ackwa Mfg. Co., Inc.: *See*—
Weber, Albert. 2,865,512.

Adolphi, Heinrich: *See*—
Poehlemann, Heinz, Schroeder, Stimmeyer, and Adolphi. 2,865,913.

Aerojet-General Corp.: *See*—
Rodriguez, Charles F., Jr. 2,865,146.

Agnello, Eugene J., and G. D. Laubach, to Chas. Pfizer & Co., Inc. 16-methylene pregnene derivatives. 2,865,906, 12-23-58, Cl. 167—65.

Aktiebolaget Bofors: *See*—
Aldrin, Henry W. 2,865,254.

Aktiebolaget Gotaverken: *See*—
Swenson, Kurt L. 2,865,566.

Aktiebolaget Rosenblads Patenter: *See*—
Egenwall, Gustaf C., and Jonsson. 2,865,612.

Aktiebolaget Trycker: *See*—
Hasselblad, Erik D. V. 2,865,078.

Aktiebolaget Urfabriken: *See*—
Norman, Karl. 2,865,662.

Aktiengesellschaft Brown, Boveri & Cie.: *See*—
Brandt, Armand. 2,866,149.
Christoffel, Martin, and Edlinger. 2,866,162.
Kern, Erwin. 2,866,144.

Aktiemolaget Tokyo Celluloidfabrik: *See*—
Höya, John. 2,865,906.

Akustische U. Kino-Gerate Gesellschaft m. b. H.: *See*—
Gorike, Otto. 2,866,174.

Aladdin Industries, Inc.: *See*—
Lahde, Herman U. 2,865,443.

Alderson, George E., E. W. Wood, and E. A. Binney, to W. J. Bullock, Inc. Process and apparatus for recovering zinc. 2,865,739, 12-23-58, Cl. 75—68.

Aldrin, Henry W., to Aktiebolaget Bofors. Recoiling barrel operated pivoted loading tray mechanism. 2,865,254, 12-23-58, Cl. 89—45.

Alexander, Frank M., to Industrial Nucleonics Corp. Measuring and controlling system. 2,865,096, 12-23-58, Cl. 250—52.

Alford, Gilbert M., to Wm. Hollingsworth Machine Co., Inc. Inverter for printed sheets. 2,865,517, 12-23-58, Cl. 214—1.

Allen, Albert S., to E. I. du Pont de Nemours and Co. Process of preserving fresh produce in oriented film. 2,865,765, 12-23-58, Cl. 99—154.

Allen, Alfred W. Means for transmitting power equally to a driven shaft at symmetrically displaced points in the diametrical plane of said shaft. 2,865,219, 12-23-58, Cl. 74—410.

Allen, Edward M., and R. S. Chisholm, to Columbia-Southern Chemical Corp. Method of preparing a siliceous pigment. 2,865,777, 12-23-58 Cl. 106—288.

Allen, Edward M., to Columbia-Southern Chemical Corp. Silica pigment and preparation thereof. 2,865,779, 12-23-58, Cl. 106—306.

Allen, Edward M., to Columbia-Southern Chemical Corp. Preparation of silica-sulfite pigments. 2,865,780, 12-23-58, Cl. 106—306.

Allen, William A. Plate glass storage rack. 2,865,513, 12-23-58 Cl. 211—41.

Allenbach, Roy E., to The Pueblo Tent and Awning Co., Inc. Flexible enclosure. 2,865,420, 12-23-58, Cl. 150—2.1.

Allied Chemical Corp.: *See*—
Boriand, Jean W., Miller, and Pearson. 2,865,624.

Allis-Chalmers Mfg. Co.: *See*—
Brill, Edward F. 2,865,206.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Forssell, Harry. 2,866,148.

Allovio, Joseph M.: *See*—
Foster, Jack J., and Allovio. 2,865,729.

Allwine, Harrison E., to Radio Corp. of America. Cathode ray tube apparatus. 2,866,127, 12-23-58, Cl. 315—14.

American Biltrite Rubber Co., Inc.: *See*—
Mason, James H. 2,865,947.

American Cyanamid Co.: *See*—
Banks, Reginald M., and Bell. 2,865,875.
Bonsner, George E. 2,865,290.
De Hoff, Leon H. 2,865,906.
Leavitt, Julian J., Long, and Foster. 2,865,816.
Peltier, Laurence D., and Di Pietro. 2,865,876.
Smart, William A., Jr., and Connolly. 2,865,501.

American Hardware Corp., The: *See*—
McConnell, Frank J. 2,865,182.

American Machine & Foundry Co.: *See*—
Dorf, Richard H. 2,865,343.

American Machine and Metals, Inc.: *See*—
Wildigus, Albert. 2,865,188.

American-Marietta Co.: *See*—
Wynn, James F. 2,865,266.

American-Marietta Co., Stoner-Mudge Co., Division: *See*—
Roeser, Gerald F. 2,865,879.

American Metal Products Co.: *See*—
Williams, Richard J. 2,865,422.

American Oil Co., The: *See*—
May, Paul D., Ridgway, and Wadsworth. 2,865,965.

American Seating Co.: *See*—
Hoven, Alfred C., Hampshire, and Nordmark. 1,865,152.
Machleder, Jan, Morgan, and Weaver. 2,865,458.

American Steel Foundries: *See*—
Simanek, Edward J. 2,865,473.

American Telephone and Telegraph Co.: *See*—
Kupferle, Arthur T. 2,866,005.

Ampex Corp.: *See*—
Ginsburg, Charles P., and Henderson. 2,865,012.

Anaconda Co., The: *See*—
Zoldos, John. 2,865,830.

Andersen, Donald L., ½ to E. B. Andersen and ½ to W. H. Stark. Shaft bearing. 2,865,689, 12-23-58, Cl. 308—184.

Andersen, Edmund B.: *See*—
Andersen, Donald L. 2,865,689.

Anderson, James W. Stock watering trough with heating tank. 2,865,337, 12-23-58, Cl. 119—73.

Anderson, Leland J., and C. W. Stoner, to Ben-Hur Mfg. Co. Combination freezer and dehumidifier. 2,865,181, 12-23-58, Cl. 62—199.

Anderson, Lester F., E. E. Bennett, and J. J. Wellendorf, to Sylvania Electric Products Inc. High-intensity photoflash lamp. 2,865,188, 12-23-58, Cl. 67—31.

Anderson, Orson L., to Bell Telephone Laboratories, Inc. Treatment of glass. 2,865,138, 12-23-58, Cl. 49—89.

Anderson, Paul E.: *See*—
Wagner, Howard A., and Anderson. 2,865,111.

Anderson, Ralph F.: *See*—
Hesselting, Clifford W., and Anderson. 2,865,814.

Anderson, Russell M. Barbers' cloth. 2,865,022, 12-23-58, Cl. 2—50.

Anderson, Sven A., and A. G. Magnussen, to G. Kahr. Composite floors. 2,865,058, 12-23-58, Cl. 20—7.

Anderton, Walter C. Multiple slide changer for automatic slide projector. 2,865,121, 12-23-58, Cl. 40—78.

Annemer, Richard J., to The Dow Chemical Co. Sealing orifice for steam tubes and the like. 2,865,112, 12-23-58, Cl. 34—242.

Annibaldi, Emilio. Folding structure for framing roofs and the like. 2,865,287, 12-23-58, Cl. 135—4.

Anscher, Bernard, to United States of America, Army. Apparatus for guiding extrusions. 2,865,502, 12-23-58, Cl. 207—16.

Applin, Richard H., R. E. Langworthy, and W. D. Mathews, to Kay Lab. Voltage regulator with non-linear networks in control circuit. 2,865,151, 12-23-58, Cl. 323—22.

Arisman, Mervin E. W. C. Fieldbinder, and W. A. Barden, to Chicago Telephone Supply Corp. Tandem concentric variable resistance device. 2,865,035, 12-23-58, Cl. 201—63.

Arnold, John H. Control of heating value of fuel gas. 2,865,724, 12-23-58, Cl. 48—196.

Arnot, Alfred H. R., to J. R. Sharp and E. Kaye. Trucks for transporting goods. 2,865,648, 12-23-58, Cl. 280—82.

Ascheri, Alfons, F. Duttner, and E. Enk, to Wacker-Chemie G. m. b. H. Method for separating water-soluble alcohols and esters. 2,865,955, 12-23-58, Cl. 260—499.

Asinger, Friedrich, M. Thiel, H. Kaltwasser, and G. Recking, to VEB Leuna-Werke "Walter Ulbricht." Novel thiazolines and process for their manufacture. 2,865,924, 12-23-58, Cl. 260—306.7.

Asten, Dietrich V. Dryer felt for fine quality paper. 2,865,469, 12-23-58, Cl. 139—425.

Atchley, Raymond D., and D. G. O'Brien, to Midwestern Instruments. Servo valve assembly. 2,865,340, 12-23-58, Cl. 121—41.

Augsburger, Herbert M., to Owens-Illinois Glass Co. Electrode mounting apparatus for furnaces. 2,865,972, 12-23-58, Cl. 13—17.

Augustin, Johann, to International Standard Electric Corp. Automatic attachment switch-over device, in particular for teletypewriters. 2,865,562, 12-23-58, Cl. 178—4.1.

Ault, Cyrus F., to General Electric Co. Pulse processing system. 2,866,091, 12-23-58, Cl. 250—27.

Aurell, Walter. Process of making cake containing protopectin. 2,865,767, 12-23-58, Cl. 99—92.

Austin, Hoy, and Co. Ltd.: *See*—
Proctor, Sidney H. 2,865,621.

Bishop, Arthur E. Variable ratio power steering gear. 2,865,220, 12-23-58, Cl. 121—46.5.

Bishop, Hazel, Inc.: *See*—

Brandt, Armand, to Akt. Brown, Boveri & Cie. Device for rapid voltage regulation in contact converters provided with switching coils. 2,866,149, 12-23-58, Cl. 321—48

Autex, Robert W., to Rohm & Haas Co. Condensation product of isophthalic dihydrazide, formaldehyde and butanol. 2,865,890, 12–23–58, Cl. 260—72.5.
Auto Research Corp.: *See*—
Thomas, Thomas R. 2,865,301.
Avco Mfg. Corp.: *See*—
Tannenbaum, Wesley, Cleary, Hudes, and Goldstein. 2,865,631.
Aversten, Karl J., to Svenska Aktiebolaget Gasaccumulator. Portable welder. 2,866,076, 12–23–58, Cl. 219—58.
Awet, Adolph W., B. M. Gordon, and M. A. Meyer, to Laboratory For Electronics, Inc. Analog-to-digital converter. 2,866,183, 12–23–58, Cl. 340—347.
Bachman, Benjamin E., to The White Motor Co. Adjustable steering wheel. 2,865,222, 12–23–58, Cl. 74—493.
Badische Anilin- & Soda-Fabrik Akt.: *See*—
Pohlemann, Heins, Schroeder, Stummeyer, and Adolphi. 2,865,912.
Stastny, Fritz. 2,865,800.
Baer, Carl A. Method of treating fibrous material utilizing a radio-frequency field which extends predominantly at right angles to the length of said material. 2,865,790, 12–23–58, Cl. 117—93.
Baer, E. A.: *See*—
Sanborn, Frank E. 2,865,268.
Bailey, Alonzo W. Waterstop for expansion joints. 2,865,267, 12–23–58, Cl. 94—18.
Bailey, George A., and R. F. Hirschmann, to Merck & Co., Inc. 17α,21-oxides of 1,4-pregnadiene compounds. 2,865,915, 12–23–58, Cl. 260—239.55.
Baker, Joseph W., and G. A. Saul, to Monsanto Chemical Co. Propargyl phosphorothioates. 2,865,801, 12–23–58, Cl. 167—22.
Bakker, Pier, to General Telephone Laboratories, Inc. Traffic supervisory control circuits. 2,866,006, 12–23–58, Cl. 179—27.
Balata, Victor, & Textile Belting Co.: *See*—
Vollrath, Richard. 2,865,408.
Baldridge, James D. Electric plug. 2,866,170, 12–23–58, Cl. 339—99.
Baldwin-Lima-Hamilton Corp.: *See*—
Laimins, Eric. 2,866,059.
Balik, Gabriel H.: *See*—
Hansel, Eugene, and Balik. 2,865,096.
Ball, Thomas R., to Chrysler Corp. Motor vehicle power transmission. 2,865,221, 12–23–58, Cl. 74—472.
Ballauer, Alb C.: *See*—
Parsons, John T., Goodland, and Ballauer. 2,865,500.
Ballentine, William I., Jr., and A. L. Fenlason, to United States Steel Corp. Apparatus for welding vertical seams. 2,866,078, 12–23–58, Cl. 219—126.
Banks, Reginald M., and R. C. Bell, to American Cyanamid Co. Plating surgical needles. 2,865,378, 12–23–58, Cl. 128—339.
Barden, Wayne A.: *See*—
Arleman, Mervin B., Fieldbinder, and Barden. 2,866,055.
Bardet, George V., to M. J. B. Co. Conveyor for drying and cooling apparatus. 2,865,109, 12–23–58, Cl. 34—66.
Barish, Thomas: *See*—
Lear, William P., and Barish. 2,865,205.
Barlow, Edward R., to Scovill Mfg. Co. Self-closing anti-knock valve. 2,865,595, 12–23–58, Cl. 251—118.
Barnes, James F., and E. F. Robbins, to Foil Process Corp. Food package. 2,865,768, 12–23–58, Cl. 99—171.
Barnes, William M., to The Coca-Cola Co. Device to maintain a constant liquid level in a container. 2,865,534, 12–23–58, Cl. 222—60.
Barnhart, George E. Cylinder construction. 2,865,693, 12–23–58, Cl. 309—2.
Barthel, August, and A. Häuser, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Electrical resistance thermometer of low heat capacity. 2,866,060, 12–23–58, Cl. 201—63.
Batdorf, Jack B., to Hercules Powder Co. Method of reducing BOD of starch bearing effluent by addition of substituted starch to effluent. 2,865,853, 12–23–58, Cl. 210—59.
Bayley, Abraham, and D. P. Cameron, to Chas. Pfizer & Co., Inc. Pesticides. 2,865,802, 12–23–58, Cl. 167—22.
Bayley, Abraham, and D. P. Cameron, to Chas. Pfizer & Co., Inc. Pesticides. 2,865,804, 12–23–58, Cl. 167—30.
Bayley, Abraham, W. M. McLamore, and M. Harfenist, to Chas. Pfizer & Co., Inc. Tertiary vinyl ethynyl carbinols and process of preparation. 2,866,007, 12–23–58, Cl. 260—632.
Bayley, George R., to General Motors Corp. Control mechanism. 2,865,220, 12–23–58, Cl. 74—471.
Bench, Karl F., to Westinghouse Electric Corp. Circuit interrupting device. 2,866,044, 12–23–58, Cl. 200—146.
Beaver, David J., and P. J. Stoffel, to Monsanto Chemical Co. Thenyl ureas. 2,865,929, 12–23–58, Cl. 260—332.2.
Beaver, Howard O., Jr., to The Carpenter Steel Co. Method of alloying gaseous materials with metals. 2,865,736, 12–23–58, Cl. 75—59.
Beaven, David K., to The Texas Co. Alkylation with effluent refrigeration and flashed vapor absorption. 2,865,971, 12–23–58, Cl. 260—683.62.
Bechaud, Leslie J., Jr., and P. Malosemoff, to Tsumeb Corp. Ltd. Process for recovery of germanium sulfide. 2,865,712, 12–23–58, Cl. 23—134.
Bednarski, Thaddeus R.: *See*—
Madl, Alfred W., and Bednarski. 2,865,141.
Beesley, John H., to The General Electric Co. Ltd. Electrical gas discharge tube circuit. 2,866,132, 12–23–58, Cl. 315—84.5.
Begg, Eugene L.: *See*—
Eidman, Glen P., Begg, and Hafer. 2,865,139.
Belark Tool & Stamping Co. Ltd., The: *See*—
Kriwacsek, Oscar. 2,866,069.
Belden Mfg. Co.: *See*—
Sapper, Frank G., and Wermine. 2,866,172.
Bell & Howell Co.: *See*—
MacMillin, David M. 2,865,475.
Richards, Paul. 2,865,274.
Bell, Norton W., to Consolidated Electrodynamics Corp. Direct current differential amplifying system. 2,866,015, 12–23–58, Cl. 179—171.
Bell, Robert C.: *See*—
Banks, Reginald M., and Bell. 2,865,375.
Bell Telephone Laboratories, Inc.: *See*—
Albrecht, Richard L., and Vroom. 2,865,868.
Anderson, Orson L. 2,865,139.
Blake, John T., and Ely. 2,866,103.
Burns, Fred P. 2,866,014.
Kater, Joseph A., and Weeks. 2,865,083.
Wirth, Henry J., Jr. 2,866,030.
Bellas, Hugh W., and R. N. Lyon, to United States of America, Atomic Energy Commission. Slug ejector. 2,865,829, 12–23–58, Cl. 204—193.2.
Bemis Bro. Bag Co.: *See*—
Williams, Russell J. 2,865,556.
Bendix Aviation Corp.: *See*—
Hood, Edwin E. 2,865,477.
Hood, Edwin E. 2,865,478.
Benedict, Robert G.: *See*—
Lindenfelser, Lloyd A., Benedict, Shotwell, Pridham, Stodola, and Jackson. 2,865,815.
Ben-Hur Mfg. Co.: *See*—
Anderson, Leland J., and Stoner. 2,865,181.
Bennett, Frank K., to Gulton Industries, Inc. Device for measuring and detecting thermal energy. 2,865,202, 12–23–58, Cl. 73—355.
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Anderson, Lester F., Bennett, and Wellendorf. 2,865,186.
Bentele, Max, to C. A. Parsons & Co. Ltd. Rotary regenerative heat exchanger. 2,865,611, 12–23–58, Cl. 257—6.
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King, Valentine J. 2,865,113.
Bergemann, T. L.: *See*—
King, Valentine J. 2,865,113.
Bergemann, William: *See*—
King, Valentine J. 2,865,113.
Berger, Frances B., to General Precision Laboratory Inc. Microwave frequency control. 2,866,190, 12–23–58, Cl. 343—9.
Bergmann, Charles, to Westinghouse Electric Corp. Instrument bearing assembly. 2,865,687, 12–23–58, Cl. 308—159.
Bergstein, Frank D., to The Bergstein Packaging Trust. Containers having strong end closures and methods of making them. 2,865,550, 12–23–58, Cl. 229—17.
Bergstein Packaging Trust, The: *See*—
Bergstein, Frank D. 2,865,550.
Bernstein, Gerald D.: *See*—
Bernstein, Samuel, Finger, and Bernstein. 2,866,068.
Bernstein, Samuel, A. E. Finger, and G. D. Bernstein. Electrically heated butcher knife. 2,866,068, 12–23–58, Cl. 219—21.
Berry, Clifford E., to Consolidated Electrodynamics Corp. Linearizing arrangement for string galvanometer. 2,866,160, 12–23–58, Cl. 324—154.
Besthoff, Lawrence W., to Willcox & Gibbs Sewing Machine Co. Loop spreading device. 2,865,817, 12–23–58, Cl. 112—187.
Beyer, Thomas W., and J. E. Harvey. Universal jacking support for engines and transmissions. 2,865,585, 12–23—58, Cl. 248—2.
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Christman, John M., and Bibbens. 2,865,257.
Bichsel, Harry J., to Westinghouse Electric Corp. Arc welding apparatus. 2,866,147, 12–23–58, Cl. 321—14.
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Biddison, John M., to H. W. Moore. Automatic transfer unit. 2,865,484, 12–23–58, Cl. 193—39.
Bielek, Arthur E., to Win-Chek, Inc. Storm window handle construction. 2,865,044, 12–23–58, Cl. 16—115.
Biermann, Arnold E. Fuel systems for variable stroke piston engines. 2,865,350, 12–23–58, Cl. 123—48.
Biggam, Frank D., to Teletype Corp. Frequency divider circuit. 2,866,104, 12–23–58, Cl. 307—88.5.
Bigler, Joseph G.: *See*—
Bigler, William P. and J. G. 2,865,492.
Bigler, William P. and J. G. Flight mounting for chain conveyor. 2,865,492, 12–23–58, Cl. 198—176.
Billing, Alfred G., and J. Duckworth, to British Celanese Ltd. Weaving. 2,865,407, 12–23–58, Cl. 139—168.
Bingenheimer, Melvin, to Westinghouse Electric Corp. Circuit breakers. 2,866,029, 12–23–58, Cl. 200—88.
Bingham, George H., Jr.: *See*—
Shallenberger, Frank K., Krupotich, and Bingham. 2,865,066.
Binney, Edwin A.: *See*—
Alderson, George E., Wood, and Binney. 2,865,739.
Bioferm Corp.: *See*—
Fisher, Robert A. 2,865,934.
Birch & Gattone, Inc.: *See*—
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Bird, Whitworth R., to Collins & Aikman Corp. Apparatus and method for producing patterned foam rubber coated fabrics. 2,865,048, 12–23–58, Cl. 18—4.
Birkenmeyer, Robert D., and R. V. Heinzelman, to The Upjohn Co. Tertiary aminoalcohol esters of 4-amino-3,6-dimethylbenzoic acid. 2,865,951, 12–23–58, Cl. 260—472.
Bishop, Arthur E. Power steering gear. 2,865,215, 12–23–58, Cl. 74—388.
Bishop, Arthur E. Variable ratio steering gear. 2,865,216, 12–23–58, Cl. 74—388.
Bishop, Arthur E. Variable ratio steering gear. 2,865,217, 12–23–58, Cl. 74—388.
Bishop, Arthur E. Variable ratio power steering gear. 2,865,218, 12–23–58, Cl. 74—388.

Bishop, Arthur E. Variable ratio power steering gear. 2,865,339, 12–22–58, Cl. 121—46.5.

Bishop, Hazel, Inc.: *See*—
Schwartz, Bert. 2,865,497.

Blackburn and General Aircraft Ltd.: *See*—
Coupe, Noel F. 2,865,441.

Blackman, Arthur W., Jr., and G. D. Lewis, to United Aircraft Corp. Screech reduction in combustion chambers. 2,865,174, 12–23–58, Cl. 60—39.09.

Blackman, Robert L. Toy. 2,865,636, 12–23–58, Cl. 273—87.

Blackwood, Robert C. Scissor instrument. 2,865,099, 12–23–58, Cl. 30—134.

Blake, John T., and A. L. Ely, said Blake to Bell Telephone Laboratories, Inc. Diode gate and sampling circuit. 2,866,103, 12–23–58, Cl. 307—88.5.

Blanchette, Joseph A., to Monsanto Chemical Co. Reduced copolymers. 2,865,889, 12–23–58, Cl. 260—63.

Blanchette, Joseph A., to Monsanto Chemical Co. Cinchoninic acid derivatives. 2,865,903, 12–23–58, Cl. 260—93.5.

Blanco, Raymond E., and B. H. Morrison, to United States of America, Atomic Energy Commission. Method of purifying uranium metal. 2,865,737, 12–23–58, Cl. 75—84.1.

Blasek, William J., and B. Zakrzewski, to Lempco Products, Inc. Arbor-supporting jack for machine tool. 2,865,259, 12–23–58, Cl. 90—20.

Blomeke, Carl: *See*—
Herbst, Wolfgang, and Blomeke. 2,866,154.

Bloom, Aasrud: *See*—
Brown, Charles E., and Bloom. 2,865,374.

Bloom, Roy C., and H. J. Fassbender, to Eastman Kodak Co. Tinting bath for photographic paper. 2,865,746, 12–23–58, Cl. 96—48.

Bloomer Bros. Co.: *See*—
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Bloomquist, Ernest L. Article-carrying case. 2,865,527, 12–23–58, Cl. 220—18.

Bloomer, Herman G., to Westinghouse Air Brake Co. Vehicle weighing system. 2,866,137, 12–23–58, Cl. 317—139.

Bloxsidge, William R.: *See*—
Strange, John W., Waigh, and Bloxsidge. 2,866,123.

Blumenstritt, Werner, to Micafil A.-G. Core holder for winding machines. 2,865,574, 12–23–58, Cl. 242—4.

Boase, Samuel W., Jr.: *See*—
Watson, Donald C., Spears, and Boase. 2,865,640.

Bock, Eugen: *See*—
Niechk, Gunther, Muller, and Bock. 2,865,758.

Bock, George E., J. E. Gutridge, and W. Van Der Sluys, to Pullman-Standard Car Mfg. Co. Train consist. 2,865,306, 12–23–58, Cl. 105—3.

Bodde, Theodore. Rotary reaction engine. 2,865,172, 12–23–58, Cl. 60—39.34.

Boericke, John J., Jr.: *See*—
Frank, Wallace R., and Boericke. 2,866,141.

Boesch, Roger: *See*—
Metivier, Jean, and Boesch. 2,865,950.

Bogue Electric Mfg. Co.: *See*—
Clymer, Marcel, and Herbst. 2,865,318.

Bolen, Chester H., to Sterling Drug Inc. Process for preparing N-(2-hydroxyethyl)-N-(lower-alkyl)-9-aminomethylanthracenes and intermediates therein. 2,865,915, 12–23–58, Cl. 260—307.

Bomac Laboratories Inc.: *See*—
Chen, William R. 2,866,130.

Bonsper, George B., to American Cyanamid Co. Cartridge coupling device. 2,865,290, 12–23–58, Cl. 102—22.

Booth, Arthur: *See*—
Johnson, Joyce L., Booth, and Messmer. 2,865,871.

Booth, Grant W., and L. C. Hobbs, to Radio Corp. of America. Multiple message comparator. 2,865,567, 12–23–58, Cl. 235—61.

Booth, Russell N., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,866,023, 12–23–58, Cl. 200—81.06.

Bordenave, Paul J., A. V. H. Joubert, and A. Pascal, to Etat Francais represented by Ministere de la Defense. Apparatus for measurements concerning the velocity of propagation of waves, and in particular sound waves. 2,865,196, 12–23–58, Cl. 73—53.

Borkan, Harold, and P. K. Weimer, to Radio Corp. of America. Color television transmitter. 2,865,965, 12–23–58, Cl. 178—5.4.

Boriand, Jean W., C. B. Miller, and J. H. Pearson, to Allied Chemical Corp. Production of polymers of ethylenically unsaturated fluorine-containing compounds. 2,865,824, 12–23–58, Cl. 204—163.

Borrow, Antony, E. G. Jefferys, and I. S. Nixon, to Imperial Chemical Industries Ltd. Metabolic process for production of gibberellic acid. 2,865,812, 12–23–58, Cl. 195—36.

Bourdon, Corinne P. Apparel receptacle. 2,865,418, 12–23–58, Cl. 150—1.

Bourns Laboratories, Inc.: *See*—
Bourns, Marian E., and O'Brian. 2,866,062.

Bourns, Marian E., and E. D. O'Brian, to Bourns Laboratories, Inc. Electric digital readout device. 2,866,062, 12–23–58, Cl. 201—48.

Bourns, Marian E. Combined potentiometer and read-out constructions. 2,866,053, 12–23–58, Cl. 201—48.

Bowen, James A., and N. D. Seymour, to Whirlpool Corp. Liquid overflow control for domestic appliance. 2,865,390, 12–23–58, Cl. 137—196.

Boyer, Lawson H. Rotating machine such as a centrifugal opposed pressure turbine. 2,865,590, 12–23–58, Cl. 253—101.

Boyer, Yves: *See*—
Fernollet, Jean, and Boyer. 2,866,213.

Boysen, Martin C. Land vehicle wheel lug. 2,865,655, 12–23–58, Cl. 280—154.5.

Branson, Joseph H., and L. S. Sinykin. Cushioning device. 2,865,435, 12–23–58, Cl. 155—179.

Brandt, Armand, to Alt. Brown, Boveri & Cie. Device for rapid voltage regulation in contact converters provided with switching coils. 2,866,149, 12–23–58, Cl. 321—48.

Brannock, Kent C., and R. L. McConnell, to Eastman Kodak Co. Preparation of neutral pyrophosphate and phosphate esters. 2,865,947, 12–23–58, Cl. 260—461.

Brasco Mfg. Co.: *See*—
Hartshorn, George D. 2,865,062.

Brasso Corp., Inc.: *See*—
Nardone, Romeo M. 2,865,222.

Bremer, Joseph W., Jr., and L. Hilfman, to Swift & Co. Shortening containing oxygenated thermally modified hard fat. 2,865,760, 12–23–58, Cl. 99—123.

Brill, Edward F., to Allis-Chalmers Mfg. Co. Centrifugal pump. 2,865,266, 12–23–58, Cl. 103—104.

Bristol Co., The: *See*—
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British Celanese Ltd.: *See*—
Billing, Alfred G., and Duckworth. 2,865,407.

British Drug Houses Ltd., The: *See*—
Ockrent, Charles, Skirmshire, and Sutherland. 2,865,845.

British Iron and Steel Research Association, The: *See*—
Klemantaski, Sidney. 2,865,734.

British Petroleum Co. Ltd., The: *See*—
Porter, Frederick W. B. 2,865,851.

British Thomson-Houston Co. Ltd., The: *See*—
Walker, Cyril, and Clarke. 2,866,117.

Britch, Alexander: *See*—
Hornschuch, Hanna, and Britch. 2,865,290.

Brody, Stanley S. Universal navigation station identification keyer. 2,866,185, 12–23–58, Cl. 340—365.

Brogren, Axel V., to Parsons Corp. Sectional shipping container and internal pods therefor. 2,865,499, 12–23–58, Cl. 206—46.

Brown, Charles E., and A. Bloom, to Sierra Engineering Co. Tracheotomy instrument. 2,865,374, 12–23–58, Cl. 128—305.

Brown, Jack E., and G. Koslow. Toasters. 2,865,282, 12–23–58, Cl. 99—390.

Brown, Robert C.: *See*—
McKnight, George S., Jr., and Brown. 2,865,772.

Brown's Beach Jacket Co.: *See*—
Hennessey, William P. 2,865,026.

Brubacher, Joseph G., to Sperry Rand Corp. Centrifugal drier construction. 2,865,507, 12–23–58, Cl. 210—143.

Bruner, Walter M., to E. I. du Pont de Nemours and Co. Method for preventing adhesion and growth of barnacles. 2,865,702, 12–23–58, Cl. 21—2.

Bruning, Charles Co., Inc.: *See*—
Streich, Paul B., Sr., and Hruby. 2,865,287.

Bruninghaus, Paul, to Rheinm Rheinische Werkzeug-und Metallwarenfabrik G. m. b. H. Means for starting high frequency vibrations in filters with fine setting. 2,865,805, 12–23–58, Cl. 209—210.

Buchler, Joseph. Evaporator. 2,865,445, 12–23–58, Cl. 159—22.

Buckler, Ernest J., and D. C. Edwards, to Polymer Corp. Ltd. Bromination of isoolefin-polyolefin copolymers with bromine-containing activated charcoal. 2,865,901, 12–23–58, Cl. 260—853.

Bucyrus-Erie Co.: *See*—
Haisch, Albert C. 2,865,604.
Hudson, Tom W., Thornburg, and Haisch. 2,865,603.

Budnick, Joseph, to Electrical Fittings Corp. Electrical fitting entrance cap. 2,865,981, 12–23–58, Cl. 174—51.

Bullock, W. J., Inc.: *See*—
Alderson, George E., Wood, and Blaney. 2,865,789.

Bulloff, Jack J., to Interstate Sanitation Co., Inc. Solidified air odor control liquids. 2,865,595, 12–23–58, Cl. 167—42.

Bulova Research and Development Laboratories, Inc.: *See*—
Hirsh, Stanley A. 2,866,085.

Bungartz, Paul. Rotary pumps. 2,865,296, 12–23–58, Cl. 103—58.

Burdick Corp., The: *See*—
Partridge, Leslie W. 2,865,366.

Burke, Anthony E., to The Glacier Metal Co. Ltd. Centrifugal oil cleaners. 2,865,562, 12–23–58, Cl. 233—24.

Burn, Kenneth C., to Ferranti, Ltd. Cathode-ray display apparatus. 2,866,128, 12–23–58, Cl. 315—21.

Burnand, John. Pistons for internal combustion engines. 2,865,694, 12–23–58, Cl. 309—14.

Burns, Fred P., to Bell Telephone Laboratories, Inc. Piezoresistive acoustic transducer. 2,866,014, 12–23–58, Cl. 179—110.

Burns, John M. Collapsible structure. 2,865,986, 12–23–58, Cl. 135—1.

Burroughs, William W., to Sylvania Electric Products Inc. Repeating photoflash gun. 2,866,085, 12–23–58, Cl. 240—37.

Burton, Sidney G.: *See*—
Gurstelle, Harold H., and Burton. 2,865,263.

Butler, Richard K.: *See*—
Cetchett, Louis M., and Butler. 2,865,057.

Buttner, Franz: *See*—
Ascheri, Alfons, Buttner, and Enk. 2,865,950.

Byal, John M.: *See*—
Dunipace, Donald W., and Byal. 2,865,142.

Byers, Donald W. Device for mounting and sealing film transparencies. 2,865,428, 12–23–58, Cl. 154—1.6.

Byrnes, William P., to Teletype Corp. Start-stop distributor ring. 2,865,996, 12–23–58, Cl. 178—52.

C. T. Electrical Contrels Ltd.: *See*—
Coburn, Wallace A. 2,866,035.

Cafarelli, Nicholas J., Jr., to International Telephone and Telegraph Corp. Quasi-stereoscopic systems. 2,865,986, 12–23–58, Cl. 178—5.5.

aircraft in a vertical attitude. 2,865,579, 12–23–58, Cl. 244—52.

Cain, Cornelius K., to McNeil Laboratories, Inc. 2-alkoxy-2-imidazolines and method of making same. 2,865,927, 12–23–58, Cl. 260—309.6.

Calcinator Corp.: *See*—
Coles, Henry L. 2,865,785.

Calculagraph Co.: *See*—
Hillum, Edward B. 2,866,021.

Caldwell, John R., to Eastman Kodak Co. Fibers comprising acrylonitrile polymers containing aluminum and silicon oxides. 2,865,880, 12–23–58, Cl. 260—41.

California Research Corp.: *See*—
Hilton, Joseph R. 2,865,345.
Hilton, Joseph R. 2,865,355.
Hotten, Bruce W. 2,865,858.
Neely, George L. 2,865,410.
Walker, James H. 2,865,857.
Toland, William G. 2,865,950.

Camera-Optics Mfg. Corp.: *See*—
Zweidinger, Carl E., and Rosenthal. 2,865,249.

Cameron, Donald P.: *See*—
Bayley, Abraham, and Cameron. 2,865,902.
Bayley, Abraham, and Cameron. 2,865,904.

Cameron, James M.: *See*—
Gamberg, Edward E., and Cameron. 2,866,080.

Campbell, Ivor E.: *See*—
Yatsevs, Leonard F., and Campbell. 2,865,088.

Capellaro, Natale, to Ing. C. Olivetti & C., S. p. A. Printing mechanism for typewriting machines. 2,865,456, 12–23–58, Cl. 197—16.

Carborundum Co., The: *See*—
Seward, Warren K. 2,865,144.

Carli, Adriano, to Societa Finanziaria Siderurgica Finsider S. p. A. Smelting process. 2,865,723, 12–23–58, Cl. 75—40.

Carlisle Corp.: *See*—
Heinze, Chalmer D. 2,865,058.

Carmichael, Mead S., Jr., to The Scott Viner Co. Crop hulling apparatus. 2,865,378, 12–23–58, Cl. 130—30.

Carnahan, Robert E., and R. E. Kent, to Chas. Pfizer & Co., Inc. 2-nitroethylhydrazine derivatives. 2,865,923, 12–23–58, Cl. 260—295.

Carpenter Steel Co., The: *See*—
Beaver, Howard O., Jr. 2,865,736.

Carrick, Virgil P. Sofa bed upholstering tensioner. 2,865,030, 12–23–58, Cl. 5—51.

Carrier Corp.: *See*—
Howe, Harlan L. 2,865,277.

Caruthers, Robert S., to Lenkurt Electric Co., Inc. Carrier communication system. 2,866,000, 12–23–58, Cl. 179—15.

Casabona, Anthony M., to International Telephone and Telegraph Corp. Time spacing measuring apparatus. 2,865,157, 12–23–58, Cl. 324—68.

Case, J. I., Co.: *See*—
Clarke, Evans L. 2,865,657.
Dubuque, Charles J. 2,865,658.
Heth, Sherman C., Jaswik, and Vifot. 2,865,461.

Castano, Peter G. Line holder for masons, carpenters and other workmen. 2,865,107, 12–23–58, Cl. 33—95.

Catalin Corp. of America: *See*—
Hyman, Joseph B., and Sterr. 2,865,876.

Cellerini, Albert R., to Westinghouse Electric Corp. Circuit breaker. 2,866,027, 12–23–58, Cl. 200—88.

Central Transformer Corp.: *See*—
Newcombe, Frank A. 2,866,173.

Chadderdon, Jack, to Servco Engineering, Ltd. Reamer-stabilizer. 2,865,606, 12–23–58, Cl. 255—28.

Chadwick, David H., and T. Reetz, to Monsanto Chemical Co. Phosphorous acid esters and method of making same. 2,865,942, 12–23–58, Cl. 260—461.

Challstrom, Kenneth: *See*—
Coda, Nello, and Challstrom. 2,866,136.

Chalmers, William M., and F. B. Easton, to Youngstown Steel Car Corp. Tandem axle wheel suspension for automotive vehicles. 2,865,649, 12–23–58, Cl. 280—104.5.

Chalmers, William M., and M. Maharick, to Youngstown Steel Car Corp. Air cushion suspension for automobile vehicles. 2,865,650, 12–23–58, Cl. 280—104.5.

Cham, Edward J.: *See*—
Derr, Willard A., and Cham. 2,866,159.

Chamberlain Corp.: *See*—
Etten, Nicholas L. 2,865,190.
Etten, Nicholas L. 2,865,191.

Chan, Robert E., H. B. Cowden, and W. B. Kendall, to Eastman Kodak Co. Photographic reproduction process. 2,865,745, 12–23–58, Cl. 96—28.

Chance Vought Aircraft, Inc.: *See*—
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Chandler, Carroll F., to E. I. du Pont de Nemours and Co. Textile treating composition. 2,865,855, 12–23–58, Cl. 252—8.9.

Chapman, Ronald W.: *See*—
Eastman, Du Bois, Dille, and Chapman. 2,865,864.

Charles, Glen W.: *See*—
Lesar, Albert E., and Charles. 2,865,772.

Chase-Shawmut Co., The: *See*—
Kozacka, Frederick J. 2,866,036.

Chaussee, Francis P. Anti-skid device for vehicles. 2,865,471, 12–23–58, Cl. 188—4.

Chayne, Charles A., and V. D. Polhemus, to General Motors Corp. Combined wheel hop damper and air spring suspension. 2,865,651, 12–23–58, Cl. 280—124.

Chemject Corp.: *See*—
Gasedinger, Robert J. 2,865,177.

Chenault, Roy L., to United States Steel Corp. Hydraulic governor. 2,865,397, 12–23–58, Cl. 137—504.

Chicago Development Corp.: *See*—
Gullett, William W. 2,865,742.
McCawley, Frank X. 2,865,797.

Chicago Dietetic Supply House, Inc.: *See*—
Fowler, William M. 2,865,718.

Chicago Forging and Mfg. Co.: *See*—
Krause, Herbert. 2,865,668.

Chicago Pneumatic Tool Co.: *See*—
Fischer, Howard R., and Roberts. 2,865,212.

Chicago Pump Co.: *See*—
Lampert, William H. 2,865,572.

Chicago Telephone Supply Corp.: *See*—
Arisman, Mervin H., Fleishlinder, and Barden. 2,866,055.

Chilton, Alfred K.: *See*—
Wallace, Frank J., and Chilton. 2,865,194.

Chisholm, Raymond S.: *See*—
Allen, Edward M., and Chisholm. 2,865,777.

Chivers, James R., to Westinghouse Electric Corp. Toaster apparatus. 2,865,281, 12–23–58, Cl. 99—339.

Christenson, Roger M., to Pittsburgh Plate Glass Co. Interpolymers of alkyd resins, vinyl halides and vinyl esters. 2,865,874, 12–23–58, Cl. 260—22.

Christianson, George, B. Nichols, and R. W. Rath, to The Rath Packing Co. Apparatus for coating fragile foods. 2,865,766, 12–23–58, Cl. 99—169.

Christman, John M., and W. H. Bibbens. Gear chamfering machine of the universal type. 2,865,257, 12–23–58, Cl. 90—1.4.

Christoffel, Martin, and A. Edlinger, to Akt. Brown, Boveri & Cie. High voltage transformer windings with voltage control. 2,866,168, 12–23–58, Cl. 336—70.

Chrysler Corp.: *See*—
Ball, Thomas M. 2,865,221.

Ciba Ltd.: *See*—
Mackenzie, James B. D. 2,865,887.
Zickendraht, Christian. 2,865,910.

Cincinnati Tool Co., The: *See*—
Farmer, Delbert L. 2,865,606.

Cities Service Research and Development Co.: *See*—
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Clarke, Evans L., to J. I. Case Co. Tractor and implement hitch. 2,865,657, 12–23–58, Cl. 280—460.

Clarke, Maurice G.: *See*—
Walker, Cyril H., and Clarke. 2,866,117.

Clausen, Irvin A., to National Aluminate Corp. Coke quenching liquids. 2,865,817, 12–23–58, Cl. 202—87.

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Smith, Gus T. 2,865,542.

Clawson, Weldon L. Tree simulating card display. 2,865,122, 12–23–58, Cl. 40—124.

Clayton, David P., and L. N. Williams, to General Motors Corp. Wire spring lens retainer. 2,866,082, 12–23–58, Cl. 240—8.3.

Cleary, Joseph F.: *See*—
Tannenbaum, Wesley, Cleary, Hudes, and Goldstein. 2,865,631.

Clemens, George S. Inconspicuous cord winding and storing device. 2,865,071, 12–23–58, Cl. 24—71.2.

Clement, Warren F., and J. R. Zupanick, to Sperry Rand Corp. Fluid-type spring. 2,865,627, 12–23–58, Cl. 267—1.

Clevite Corp: *See*—
Kornel, Otto. 2,866,011.

Cliborn, Robert, and D. O. Nordquest, to Thompson Products, Inc. Injector cover for pumps. 2,865,297, 12–23–58, Cl. 103—103.

Clynes, Marcel, and J. A. Herbst, to Bogue Electric Mfg. Co. Lifting and lowering mechanism for sonar dome. 2,865,318, 12–23–58, Cl. 114—.5

Coates, Norman: *See*—
Gilbert, Charles E. 2,865,092.

Coburn, Wallace A., to C. T. Electrical Controls Ltd. Thermally operated electric switching mechanisms. 2,866,035, 12–23–58, Cl. 200—116.

Coca-Cola Co., The: *See*—
Barnes, William M. 2,865,534.

Coda, Nello, and K. Challstrom, to Erie Resistor Corp. Network assembly. 2,866,136, 12–23–58, Cl. 317—101.

Coffelt, Lester S. Guide fixture for flush tanks. 2,865,029, 12–23–58, Cl. 4—58.

Cohen, Sylvan I.: *See*—
Frant, Martin S., and Cohen. 2,865,805.

Cohn, David, to Model Plastics Corp. Machine for assembling eyes in doll heads. 2,865,090, 12–23–58, Cl. 29—209.

Cohn, David, to Model Plastic Corp. Attachment of doll limb to doll body. 2,865,134, 12–23–58, Cl. 46—173.

Cohn, Nathan, to Leeds and Northrup Co. Systems for computing and controlling the generation of interconnected sources. 2,866,102, 12–23–58, Cl. 307—57.

Cole, Paul M., to E. I. du Pont de Nemours and Co. Window covering. 2,865,440, 12–23–58, Cl. 160—85.

Coleman, Edward, to J. A. Crabtree & Co. Ltd. Electric circuit breakers. 2,865,036, 12–23–58, Cl. 200—116.

Coles, Henry L., to Calcinator Corp. Methods of coating catalyst carriers. 2,865,785, 12–23–58, Cl. 117—46.

Collier, Albert V., to N. J. Kats. Scaring machine. 2,865,192, 12–23–58, Cl. 89—13

Collins & Aikman Corp.: *See*—
Bird, Whitworth F. 2,865,046.

Columbia Broadcasting System, Inc.: *See*—
Giuffrida, Joseph, and Praria. 2,866,124.

Columbia-Southern Chemical Corp.: *See*—
Allen, Edward M. 2,865,779.
Allen, Edward M. 2,865,780.
Allen, Edward M., and Chisholm. 2,865,777.

Combustion Engineering, Inc.: *See*—
Firl, Arthur C. 2,865,344.

Comer, Ruth E.: *See*—
Vollrath, Harry C., Jr., and Comer. 2,865,097.

Co. "Luxembourgeoise de Brevets et de Participations": *See*—
Paulsen, Jean F. 2,865,586.

Dille, Roger M.: *See*—

Eastman Kodak Co.: *See*—

Connolly, Thomas J.: *See*—
Smart, William A., Jr., and Connolly. 2,865,501.

Consolidated Electrodynamics Corp.: *See*—
Bell, Norton W. 2,865,016.
Berry, Clifford E. 2,865,160.
Maxwell, Glenn D. 2,866,142.
Robinson, Charles F. 2,866,097.

Constantakis, George V., to United States Rubber Co. Method of forming tire treads. 2,865,034, 12–23–58, Cl. 18—59.

Continental Can Co., Inc.: *See*—
Sherman, Whitney D. 2,865,265.

Continental Machines, Inc.: *See*—
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Cook, Clinton D., and E. E. Plump, to General Electric Co. Capacitor with naphthalene derivative dielectric impregnant. 2,866,142, 12–23–58, Cl. 317—258.

Cook, Ralph L., to Olin Mathieson Chemical Corp. Smokeless powder. 2,865,728, 12–23–58, Cl. 52—5.

Cookson, William, ¼ to J. C. Vredenburg-Ingleby. Fixing devices for rooling sheets. 2,865,312, 12–23–58, Cl. 108—33.

Coover, Harry W., Jr.: *See*—
McConnell, Richard L., and Coover. 2,865,949.
Shearer, Newton H., Jr., and Coover. 2,865,960.

Cornish, Albert J., to Westinghouse Electric Corp. Preparation of magnetic materials and magnetic members. 2,865,085, 12–23–58, Cl. 29—155.6.

Corpa, Inc.: *See*—
Popovich, William C. 2,865,398.

Cosslett, Vernon E. Fine focus X-ray tubes. 2,866,113, 12–23–58, Cl. 313—57.

Cotchett, Louis M., and R. K. Butler, to Textile Engineering Corp. Top roll guides. 2,865,057, 12–23–58, Cl. 19—137.

Cotes, Norman: *See*—
Gilbert, Charles E. 2,865,092.

Coulson, Arthur D., to North American Philips Co., Inc. Radiation indicator and electrical switching device for use therein. 2,866,099, 12–23–58, Cl. 250—83.3.

Coupe, Noel P., to Blackburn and General Aircraft Ltd. Igniters for gas turbine engines, combustion heaters, thermal de-icing plants and the like. 2,865,441, 12–23–58, Cl. 155—28.

Cowden, Herbert B.: *See*—
Chan, Robert K., Cowden, and Kendall. 2,865,745.

Cowdery, Joseph K., to Westinghouse Electric Corp. Laundry apparatus. 2,865,187, 12–23–58, Cl. 68—12.

Cox, Arthur. Guide spacer for slide doors. 2,865,043, 12–23–58, Cl. 16—90.

Coynco Products, Inc.: *See*—
McElroy, Arthur H. 2,865,424.

Coyne, William E., to The Pillsbury Co. Insert feeding apparatus. 2,865,154, 12–23–58, Cl. 53—59.

Crafts, Dermont B. Tent. 2,865,385, 12–23–58, Cl. 135—1.

Crandell, Frank P., and G. D. Perkins, to Photo Research Corp. Compound photometric device. 2,865,247, 12–23–58, Cl. 88—22.5.

Crane, Robert L., to Continental Machines, Inc. Drive wheel for band saws. 2,865,412, 12–23–58, Cl. 143—30.

Crabtree, J. A., & Co. Ltd.: *See*—
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Creamery Package Mfg. Co., The: *See*—
Wakeman, Alden H. 2,865,168.

Creighton, Stephen M.: *See*—
Hindersinn, Raymond R., and Creighton. 2,865,869.

Crosby, Murray G. Modulator. 2,866,162, 12–23–58, Cl. 332—38.

Crosby Steam Gage & Valve Co.: *See*—
Miller, Philip H. 2,865,199.

Crossland, Peter: *See*—
Halford, Frank B., and Crossland. 2,865,442.

Crouse-Hinds Co.: *See*—
Lester, Ray F. 2,866,084.

Crowe, John H., to Minerals & Chemicals Corp. of America. Iron ore briquette with paper pulp binder. 2,865,731, 12–23–58, Cl. 75—3.

Crown Zellerbach Corp.: *See*—
Repking, Edward F., and Willett. 2,865,554.
Wasyluka, Paul. 2,865,553.

Culberson, Oran L., and W. A. Pardee, to Gulf Research & Development Co. Manufacture of phosphoric acid. 2,865,713, 12–23–58, Cl. 23—165.

Cunningham, Francis V., to McGraw-Edison Co. Lightning arresters. 2,866,135, 12–23–58, Cl. 317—15.

Cunningham, Marion M., to United States Rubber Co. Collapsible container. 2,865,419, 12–23–58, Cl. 150—1.

Cutler, Herman J., to La Salle Oil Burner Co., Inc. Upright furnace assembly. 2,865,264, 12–23–58, Cl. 126—110.

Daimler-Benz Akt.: *See*—
Groesinger, Hans R. 2,865,256.

Dale, Colin B., to Webcor, Inc. Pocket tape recorder. 2,866,010, 12–23–58, Cl. 179—100.2.

Dalmine S. p. A.: *See*—
Montagna, Carlo. 2,865,628.

D'Amico, John J., to Monsanto Chemical Co. Chloro-dienyl xanthates. 2,865,941, 12–23–58, Cl. 260—455.

Daniels, Joseph: *See*—
Totsek, Friedrich, and Daniels. 2,865,630.

Dardick Corp.: *See*—
Dardick, David. 2,865,126.

Dardick, David, to Dardick Corp. Open chamber gun. 2,865,126, 12–23–58, Cl. 42—69.

Davidoff, Dorsey, to International Telephone and Telegraph Corp. Frequency shift keying circuit. 2,866,161, 12–23–58, Cl. 332—19.

Davies, Donald G., and P. Peperzak, to Shell Development Co. Sulfonation process. 2,865,958, 12–23–58, Cl. 260—504.

Davies, James A., to The Texas Co. Solvent extraction process. 2,865,852, 12–23–58, Cl. 208—327.

Davis, Morris C., B. Perryman, and R. C. Gannon, to Earthcavator Co., Inc. Earth scraper with retractable scarifier. 2,865,117, 12–23–58, Cl. 37—143.

D'Asse, Errol P. Device for clamping a pipe to a structural member. 2,865,587, 12–23–58, Cl. 248—72.

D'Asse, Errol P. Awning rafter support. 2,865,589, 12–23–58, Cl. 248—284.

Dearing, Anderson G. Chair arm table. 2,865,432, 12–23–58, Cl. 155—128.

De Benneville, Peter L.: *See*—
Hurwitz, Marvin J., and de Benneville. 2,865,890.
Hurwitz, Marvin J., and de Benneville. 2,865,918.

De Benneville, Peter L., and M. J. Hurwitz, to Rohm & Haas Co. Polyethylenically unsaturated polysiloxanes. 2,865,884, 12–23–58, Cl. 260—46.5.

De Benneville, Peter L., and M. J. Hurwitz, to Rohm & Haas Co. Polyethylenically unsaturated substituted bis-amino polysiloxanes. 2,865,885, 12–23–58, Cl. 260—46.5.

De Dapper, Jay W., to North American Aviation, Inc. Rocket motor liquid propellant combination. 2,866,727, 12–23–58, Cl. 52—5.

Deffenbaugh, Edmund F., and H. L. Malone, to Eastman Kodak Co. Self cocking shutter with double exposure prevention device. 2,865,272, 12–23–58, Cl. 95—31.

Degenhart, Charles. Deburring and chamfering hand tool. 2,865,237, 12–23–58, Cl. 77—73.

Degnen, William J., to M. W. Kellogg Co. Fluid system for use in conversion and reforming of hydrocarbons. 2,866,846, 12–23–58, Cl. 208—147.

De Havilland Engine Co. Ltd., The: *See*—
Halford, Frank B., and Crossland. 2,865,442.

De Havilland Propellers Ltd.: *See*—
Perdue, Robert J. 2,865,459.

Dehm, Henry C., to Hercules Powder Co. Mixed esters of pentaerythritol. 2,865,954, 12–23–58, Cl. 260—486.

De Hoff, Leon B., to American Cyanamid Co. Stilbene azo dyes. 2,865,908, 12–23–58, Cl. 260—143.

Dell, Saul V., to Mechanical Industries Production Co. Thermostat with terminal clips thereon. 2,866,041, 12–23–58, Cl. 200—138.

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Fergot, Paul L. 2,865,316.

De Mattia, Gregory A. and M. P. Apparatus for injection molding plastic articles. 2,865,051, 12–23–58, Cl. 18—30.

De Mattia, Marius P.: *See*—
De Mattia, Gregory A. and M. P. 2,865,051.

Dennis, David H., to Specialties Development Corp. Pressurising cartridge and pyrotechnic charge therefor. 2,865,456, 12–23–58, Cl. 102—4.

Dennis, Paul A., and D. Dill, to Douglas Aircraft Co., Inc. Yaw damping system. 2,865,237, 12–23–58, Cl. 121—41.

De Nobel, Dirk: *See*—
Kroger, Ferdinand A., and de Nobel. 2,865,794.

De Nobel, Dirk, to North American Philips Co., Inc. Method of making electrical connection to semiconductive selenide or telluride. 2,865,793, 12–23–58, Cl. 117—200.

Derr, Willard A., and E. J. Cham, to Westinghouse Electric Corp. Apparatus responsive to the product of voltage and current of electrical circuits. 2,866,159, 12–23–58, Cl. 324—142.

Derrig, Michael J.: *See*—
McKinley, Joseph B., Thomas, and Derrig. 2,865,868.

Deutsch, Alex: *See*—
Zillman, Jack H., and Steele. 2,865,168.

Deutsch, Lester: *See*—
Zillman, Jack H., and Steele. 2,865,168.

Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Barthel, August, and Häuser. 2,866,060.

Deutscher Spinnereimaschinenbau Ingolstadt, Niederlassung der Schubert & Salzer Maschinenfabrik Akt.: *See*—
Schumann, Fritz. 2,865,055.

Devoe & Raynolds Co., Inc.: *See*—
Grenlee, Sylvan O. 2,865,886.
Grenlee, Sylvan O. 2,865,888.

De Witt, Jon S., to General Electric Co. Grid structure. 2,866,121, 12–3–58, Cl. 313—248.

Dewa, Jule N.: *See*—
Stefanye, David, and Dewa. 2,865,818.

Deziel, Fred T., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,865,444, 12–23–58, Cl. 158—122.

Diamond Gardner Corp.: *See*—
Van Dyke, Arthur W. 2,865,547.

Diamond Match Co., The: *See*—
Ziegler, William A. 2,865,698.

Diamond Power Specialty Corp.: *See*—
McColl, William. 2,865,042.

Dick, A. B., Co.: *See*—
Fowlie, Wallace R., Tregay, and Du Bois. 2,865,289.
Ruijs, Frans W. 2,865,275.

Dickens, William T., and A. D. Evans, to Monsanto Chemical Co. Phenol decomposing apparatus. 2,865,617, 12–23–58, Cl. 261—9.

Dickie, John A., to Textron Inc. Fluid-operated vibration test exciter and method of operating same. 2,865,173, 12–23–58, Cl. 60—52.

Dickinson, Robert C., and P. Olsson, to Westinghouse Electric Corp. Circuit breaker. 2,866,042, 12–23–58, Cl. 200—144.

Dictaphone Corp.: *See*—
Gillette, Edward S., and Sherman. 2,865,639.
Roberts, Frederick W., Gillette, Duntze, and Skoog. 2,865,637.

Digital Control Systems, Inc.: *See*—
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Dill, Douglas: *See*—
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Dillon, Ambrose P. Electrical outlet receptacles. 2,866,034, 12-23-58, Cl. 200—115.5.
Dinsmore, Robert L., and W. V. Spencer, to Richfield Oil Corp. Process of recovering cobalt, cerium, and manganese catalysts. 2,865,708, 12-23-58, Cl. 23—51.
Di Pietro, Anthony J.: *See*—
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Doolittle, Howard D., and J. W. Skehan, to Machlett Laboratories, Inc. Electron discharge tubes. 2,866,122, 12-23-58, Cl. 313—302.
Dorbecker, Narno, and A. Rodrigues-Alvares. Apparatus for rapidly injecting radio-opaque liquid under pressure in the technique of selective angiocardiography. 2,865,371, 12-23-58 Cl. 128—214.
Dorf Richard H., to American Machine & Foundry Co. Electronic tone generating device. 2,865,243, 12-23-58, Cl. 84—1.28.
Dornfeld, Clinton A., and L. E. Thielen, to G. D. Searle & Co. Poly(triphenylphosphonium) compounds. 2,865,944, 12-23-58, Cl. 260—606.5.
Doroba, Henry. Tenderizer for meats and vegetables. 2,865,754, 12-23-58, Cl. 99—1.
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Doyle, Norman V. Antenna rotator. 2,865,211, 12-23-58, Cl. 74—89.
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Duncan, Angus W., to The Mining Engineering Co. Ltd. Chain driven belt conveyors. 2,865,494, 12-23-58, Cl. 198—191.
Duncan, Lloyd P. Means for filling a bulk milk container from one or more milk cans. 2,865,391, 12-23-58, Cl. 137—206.
Dunipace, Donald W., and J. M. Byal, to Libbey-Owens-Ford Glass Co. Apparatus for surfacing glass sheets. 2,865,142, 12-23-58, Cl. 51—120.
Dunn, Andrew C. Apparatus for casting metal. 2,865,068, 12-23-58, Cl. 22—69.
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Durfee, Benjamin M., A. D. Miller, and F. O. Underwood, to International Business Machines Corp. Mechanical information storage matrix. 2,866,176, 12-23-58, Cl. 340—173.
Dutcher, James D., and J. Vandeputte, to Olin Mathieson Chemical Corp. Nystatin purification. 2,865,807, 12-23-58, Cl. 167—65.
Dwyer, Orrington E., to United States of America, Atomic Energy Commission. Power generation from liquid metal nuclear fuel. 2,865,827, 12-23-58, Cl. 204—193.2.
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Eidman, Glen P., E. L. Begg, and G. F. Hafer. Water recovery unit and method. 2,865,138, 12-23-58, Cl. 47—58.
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Gilbert, Charles E., deceased, E. J. Flinn, M. D. Gilbert, and N. Coates, executors. Method of rotatably mounting a flat

Etten, Nicholas L., to Chamberlain Corp. Wringer. 2,866,191, 12-23-58, Cl. 68—263.
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Fallert, Charles H. Rod accessory for fish hooks and leaders. 2,866,128, 12-23-58, Cl. 43—25.2.
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Forssell, Harry, to Allmanna Svenska Elektriska Aktiebolaget. Control device in a high voltage D. C.-transmission plant. 2,866,148, 12-23-58, Cl. 321—2.
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Fowlie, Wallace R., J. L. Tregay, and E. H. Du Bois, to A. B. Dick Co. Gripper construction for duplicators. 2,865,289, 12-23-58, Cl. 101—409.
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Frank, Mark H., to General Motors Corp. Combustion chamber and method of forming combustion chamber cavities. 2,865,360, 12-23-58, Cl. 123—191.
Frank, Wallace E., and J. J. Boericke, Jr., to The Franklin Institute. Pressure sensing devices. 2,866,141, 12-23-58, Cl. 317—246.
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Froehlich, Harold E., to General Mills, Inc. Balloon gondola assembly. 2,865,581, 12-23-58, Cl. 244—127.
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Gamble, Charles B. Neck band holder for table napkins and the like. 2,865,069, 12-23-58, Cl. 24—9.
Gamboni, Walter J., and H. D. Nelson. Grape leaf stripping mechanism. 2,865,135, 12-23-58, Cl. 47—1.
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Gaubatz, Arthur W., to General Motors Corp. Engine governor setting mechanism. 2,865,171, 12–23–58, Cl. 60—39.28.
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Molnar, Imre. 2,866,004.
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Walsh, Thomas G. 2,866,003.
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Garris, William V. 2,865,300.
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Gheo, William R., to Bomac Laboratories Inc. Broadband microwave transmission control tube. 2,866,130, 12–23–58, Cl. 315—39.
Gieseler, Luther P. Wind tunnel roll-moment balance. 2,865,200, 12–23–58, Cl. 73—147.
Gigler, Carlos. Lubrication in refrigerator compressor. 2,865,559, 12–23–58, Cl. 230—55.
member upon a second member. 2,865,092, 12–23–58, Cl. 29—432.
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Gillette, Edward S.: *See*—
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Gillette, Edward S., and R. H. Sherman, Jr., to Dictaphone Corp. Folded belt record machine. 2,865,639, 12–23–58, Cl. 274—11.
Ginn, Delwin C., to The Linemaster Switch Corp. Switch. 2,866,024, 12–23–58, Cl. 200—86.5.
Ginsburg, Charles P., and S. F. Henderson, Jr., to Ampex Corp. Magnetic tape recording and reproducing system. 2,866,012, 12–23–58, Cl. 179—100.2.
Giri de Teramala, P. M. Fluid operated friction clutch with cushion. 2,865,481, 12–23–58, Cl. 192—91.
Giuffrida, Joseph, and G. B. Praria, Jr., to Columbia Broadcasting System, Inc. Control potentiometer. 2,866,124, 12–23–58, Cl. 315—13.
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Goldberg, Ernest W., to Minneapolis-Honeywell Regulator Co. Combination slide and film projector with autofocusing. 2,865,248, 12–23–58, Cl. 88—28.
Goldsmith, Paul. Shoe upper roughing machine. 2,865,143, 12–23–58, Cl. 51—141.
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Goldstein, Jacob. Hand bulb planter. 2,865,315, 12–23–58, Cl. 111—92.
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Gorike, Rudolf. Unidirectional dynamic microphone. 2,865,464, 12–23–58, Cl. 181—31.
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Gorst, James R. S., and S. W. Kemp, to General Motors Co. Closure cap for the cooling systems of internal combustion engines. 2,865,531, 12–23–58, Cl. 220—44.
Gossmann, Richard. Compound bearing with synthetic resin layers. 2,865,062, 12–23–58, Cl. 308—238.
Gottwald, Walter, to A. H. Schilling. Roller contact arrangement for mechanical current converters or other equipment of similar construction. 2,866,020, 12–23–58, Cl. 200—16.
Gould, Jay P. Access plug. 2,865,530, 12–23–58, Cl. 220—39.
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Franke, Norman W., and Stewart. 2,865,836.
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Hansen, Theodore A., to Teletype Corp. Synchroniser for telegraph receivers. 2,865,906, 12–23–58, Cl. 178—53.
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Heth, Sherman C., J. C. Joswik, and S. O. Vifot, to J. I. Case Co. Root crop harvester. 2,865,461, 12-23-58, Cl. 171—141.

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Hines, Benjamin M. Identification tag. 2,865,120, 12-23-58, Cl. 40—2.

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Hedanek, Edwin R. Adjustable axle shaft spacer blocks. 2,865,229, 12-23-58, Cl. 74—713.

Hodge, John M.: *See*—
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Hodgins, George R., and R. F. Leonard, to Litho Chemical and Supply Co. Inc. Lacquer emulsion for lithographic plates. 2,865,873, 12-23-58, Cl. 260—17.4.

Hoekstra, James, to Universal Oil Products Co. Hydrocracking with a catalyst comprising aluminum, or aluminum chloride, titanium tetrachloride and hydrogen chloride. 2,865,841, 12-23-58, Cl. 208—108.

Hoekstra, James, to Universal Oil Products Co. Spheroidal alumina. 2,865,866, 12-23-58, Cl. 252—448.

Hoff, Wilbur L., to Western Electric Co., Inc. Color coding apparatus. 2,865,223, 12-23-58, Cl. 113—314.

Hoffman Electronics Corp.: *See*—
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Maass, Charles F. 2,866,099.
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Hogg, John A.: *See*—
Schneider, William P., Lincoln, and Hogg. 2,865,935.
Schneider, William P., Nathan, and Hogg. 2,865,914.

Hogsed, Milton J., to E. I. du Pont de Nemours and Co. Iron salts. 2,865,707, 12-23-58, Cl. 23—50.

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Holbrook, Gordon E., to General Motors Corp. Afterburner fuel system with pump unloader. 2,865,166, 12-23-58, Cl. 60—35.6.

Holcomb, Henry A., R. M. Love, and J. F. Mathis, to Esso Research and Engineering Co. Reforming hydrocarbons for enhanced yields. 2,865,837, 12-23-58, Cl. 208—65.

Holcomb, Henry A., and M. R. Morrow, to Esso Research and Engineering Co. Desulfurization process. 2,865,850, 12-23-58, Cl. 208—212.

Hollinshead, Alida V. Hose-clamp. 2,865,591, 12-23-58, Cl. 251—8.

Hollingsworth, Wm., Machine Co., Inc.: *See*—
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Holloway, Daniel E., to North American Aviation, Inc. Aircraft pylon ejector. 2,865,594, 12-23-58, Cl. 244—137.

Homan, Paul J., to Koppers Co., Inc. Charging apparatus for horizontal coke ovens. 2,865,520, 12-23-58, Cl. 214—21.

Honekman, Lillian B.: *See*—
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Hood, Edwin E., to Bendix Aviation Corp. Automatic two-speed gearing and hub brake for velocipedes and the like. 2,865,477, 12-23-58, Cl. 192—6.

Hood, Edwin E., to Bendix Aviation Corp. Two-speed coaster brake for velocipedes and the like. 2,865,478, 12-23-58, Cl. 192—6.

Hooker Chemical Corp.: *See*—
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Hope, Orville L., to Textile Machinery Exchange Inc. Traversing yarn balloon control. 2,865,162, 12-23-58, Cl. 57—110.

Hopkins, William L., Sr., to G and A Laboratories, Inc. Filter apparatus. 2,865,511, 12-23-58, Cl. 210—416.

Horn, Hans, and R. F. McCullough, to International Minerals & Chemical Corp. Production of silico fluorides. 2,865,709, 12-23-58, Cl. 23—88.

Horn & Hardart Co. of New York: *See*—
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Hornschuch, Hanns, and A. Brkich, to Ingersoll Rand Co. Adjusting device for pump impellers. 2,865,299, 12-23-58, Cl. 103—111.

Horst, Raymond W.: *See*—
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Horwitz, Lester: *See*—
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Hostetler, Elden. Watering trough. 2,865,328, 12-23-58, Cl. 119—79.

Hotten, Bruce W., to California Research Corp. Alkyl, hydroxyalkyl cellulose grease. 2,865,868, 12-23-58, Cl. 252—52.

Howes, Alfred C., D. N. Humphries, and W. E. Nordmark, to American Seating Co. Footed furniture leg. 2,865,133, 12-23-58, Cl. 45—187.

Howe, Harlan L., to Carrier Corp. Air distribution assembly. 2,865,277, 12-23-58, Cl. 98—40.

Höye, John, to Aktiesselskabet Tofte Cellulosefabrik. Process for the fractionating of sulphite lye. 2,865,906, 12-23-58, Cl. 260—124.

Hruby, Joseph: *See*—
Streich, Paul E., Sr., and Hruby. 2,865,287.

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Hudson, Ronald A., to Imperial Chemical Industries Ltd. Extrusion of film. 2,865,048, 12-23-58, Cl. 18—12.

Hudson, Tom N., H. W. Thornburg, and A. C. Haleck, to Bucyrus-Erie Co., and T. N. Hudson. Hydraulically-operated spudding mechanism for cable-tool drills. 2,865,605, 12-23-58, Cl. 255—10.

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Hulteen, Leonard A., and W. J. Gerber, to McGraw-Edison Co. Switch contact. 2,866,048, 12–23–58, Cl. 200—170.

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De Benneville, Peter L., and Hurwitz. 2,865,885.

Hurwitz, Marvin J., and P. L. de Benneville, to Rohm & Haas Co. Vinylthiomethoxytrimethylsilane and polymers thereof. 2,865,890, 12–23–58, Cl. 260—79.7.

Hurwitz, Marvin J., and P. L. de Benneville, to Rohm & Haas Co. Diaminopolysiloxanes. 2,865,918, 12–23–58, Cl. 260—247.5.

Hyman, Joseph B., and W. R. Sterr, to Catalin Corp. of America. Low ash phenol-formaldehyde resins and process of preparation. 2,865,875, 12–23–58, Cl. 260—29.3.

I. D. E. A. Inc.: *See*—
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Ihrig, Harold D. Means and method of sewing sheet metal. 2,865,451, 12–23–58, Cl. 164—109.

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International Staple and Machine Co.: *See*—
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Itria, Oswald A., to The Texas Co. Determination of propagation characteristics of earth formations. 2,865,463, 12–23–58, Cl. 181.5.

Isard, Emmette F., and C. E. Broog, to E. I. du Pont de Nemours & Co. Process for stabilizing molten polyethylene terephthalate. 2,865,892, 12–23–58, Cl. 260—75.

Jack, William A., to Johns-Manville Corp. Wall construction. 2,865,196, 12–23–58, Cl. 72—118.

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Jackson, Clark E., to Turco Products, Inc. Dispenser. 2,865,537, 12–23–58, Cl. 222—214.

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Jaffey, Arthur H., and G. T. Seaborg, to United States of America, Atomic Energy Commission. Method of separating uranium, plutonium and fission products by bromination and distillation. 2,865,704, 12–23–58, Cl. 23—14.5.

Jahnig, Charles E., W. G. May, and B. L. Schulman, to Esso Research and Engineering Co. Control of coke particle size in fluid coking process. 2,865,847, 12–23–58, Cl. 208—152.

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Jones, John P., Jr., to Navigation Computer Corp. Stabilized signal translating circuits. 2,866,017, 12–23–58, Cl. 179—171.

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Kamlet, Jonas, to National Distillers and Chemical Corp. Process for the manufacture of tetraethyl pyrophosphate. 2,865,945, 12–23–58, Cl. 260—461.

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King, John. Surface polishing device. 2,865,037, 12–23–58, Cl. 15—124.

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Kirshenbaum, Isidor, to Esso Research and Engineering Co. Hydroforming process using high activity catalysts containing silica and chromia. 2,865,846, 12–23–58, Cl. 208—134.

Klassen, Harry G., to Teletype Corp. Extensible cable structure. 2,865,979, 12–23–58, Cl. 174—69.

Klein, Jordan. Waterproof camera device. 2,865,271, 12–23–58, Cl. 95—11.

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Kramer, David M., to United States of America, Army. Method and composition for detecting phosphorylating compounds. 2,865,719, 12–23–58, Cl. 23—230.

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Krenke, Vincent G., to Westinghouse Electric Corp. Electromagnetic contactor. 2,866,029, 12–23–59, Cl. 200—98.

Kress, Ralph, to Solar Aircraft Co. Variable nozzle for jet engine. 2,865,165, 12–23–58, Cl. 60—35.6.

Kriewall, William B.: *See*—
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Krimen, Lewis I., and O. L. Norman, to International Minerals & Chemical Corp. Preparation of 3-methyl-1,2-cyclopentanedione. 2,865,962, 12–23–58, Cl. 260—586.

Kristiansen, Svend H., to Hi-Press Air Conditioning of America, Inc. Valve adjustment devices. 2,865,209, 12–23–58, Cl. 74—53.

Kriwacsek, Oscar, to The Belark Tool & Stamping Co. Ltd. Soldering irons. 2,866,069, 12–23–58, Cl. 219—28.

Kroger, Ferdinand A., and D. de Nobel, to North American Philips Co., Inc. Semi-conductor device with telluride containing ohmic contact and method of forming the same. 2,865,794, 12–23–58, Cl. 117—200.

Kronhaus, Henry. Foldaway tea cart. 2,865,646, 12–23–58, Cl. 280—41.

Krouse, Benjamin F., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,865,224, 12–23–58, Cl. 74—501.

Krupotich, Edward: *See*—
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Krupp, Robert F., and J. K. Wagner, to Gerber Products Co. Single filing machine. 2,865,490, 12–23–58, Cl. 196—30.

Kubik, Paul P., to The Yale & Towne Mfg. Co. Deadlocking latchbolt for cylindrical lock. 2,865,666, 12–23–58, Cl. 292—163.

Kübler, Friedrich, to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung. Textile drawing mechanism. 2,865,056, 12–23–58, Cl. 19—135.

Kummerman, Henri, to International MacGregor Organization (I. M. G. O.). Hatch-covers arrangements. 2,865,319, 12–23–58, Cl. 114—203.

Kunkel, Aloysius T. Window construction. 2,865,061, 12–23–58, Cl. 20—42.

Kunze, William A., E. Hair curling and waving device. 2,865,382, 12–23–58, Cl. 132—42.

Kupferle, Arthur T., to American Telephone and Telegraph Co. Make-busy circuit for trunks in unattended dial office. 2,866,006, 12–23–58, Cl. 179—18.
Kupka, John J., and C. W. Shattuck, to McKiernan-Terry Corp. Pressure fluid operated injector for lubrication and other purposes. 2,865,468, 12–23–58, Cl. 184—39.
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Lachowicz, Stanley F., to Landers, Frary & Clark. Vacuum cleaner. 2,865,465, 12–23–58, Cl. 183—57.
Lahde, Herman U., to Aladdin Industries, Inc. Portable cooking stove. 2,865,443, 12–23–58, Cl. 158—72.
Laimins, Eric, to Baldwin-Lima-Hamilton Corp. Slotted type multiple bending beam. 2,866,089, 12–23–58, Cl. 201—63.
Laing, Nikolaus. Liquid moving apparatus. 2,865,293, 12–23–58, Cl. 103—53.
Laing, Nikolaus. Portable pump apparatus. 2,865,295, 12–23–58, Cl. 103—87.
Lamatina, Richard. Apparatus for making toasted pocket in a bun. 2,865,280, 12–23–58, Cl. 99—332.
Lamb, Benjamin S., to United States Steel Corp. Apparatus for dip sampling molten metals. 2,865,204, 12–23–58, Cl. 73—425.
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Hennessy, Carroll A. 2,865,578.
Landers, Frary & Clark: *See*—
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Landin, Nils E., and I. Lundquist. Seed planter. 2,865,314, 12–23–58, Cl. 111—92.
Lane, Bernard F. A., and P. Ramsden, to D. Napier & Son Ltd. Catalytic bed assemblies. 2,865,721, 12–23–58, Cl. 23—288.
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Kaiser, Harold E., Lane, and Shockency. 2,865,564.
Lane, Montie J. Jeeping electrodes. 2,866,156, 12–23–58, Cl. 324—54.
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Lane, Irwin L., to Metalwash Machinery Co. Degreaser. 2,865,145, 12–23–58, Cl. 51—164.
Lappin, Gerald R., and J. W. Thompson, to Eastman Kodak Co. Stabilized motor fuels. 2,865,723, 12–23–58, Cl. 44—71.
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Lear, William P., and T. Barish, to Lear, Inc. Torsionally deformable support for a gyroscope gimbal. 2,865,205, 12–23–58, Cl. 74—5.
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Shellman, Roy K., and Leathers. 2,865,663.
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Leavitt, Julian J., R. S. Long, and H. M. Foster, to American Cyanamid Co. Triazole brighteners. 2,865,916, 12–23–58, Cl. 260—240.
Le Baron, Ira M., to International Minerals & Chemical Corp. Process of defluorination of phosphorus compounds. 2,865,710, 12–23–58, Cl. 23—108.
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Lebeacher, Paul. Hydraulic booster mechanism. 2,865,336, 12–23–58, Cl. 121—41.
Le Compte, Frank M., to Tingley Rubber Corp. Automobile fender flap and supporting clamp. 2,865,634, 12–23–58, Cl. 280—154.5.
Ledbetter, Noel W., to Lenkurt Electric Co., Inc. Transit time modulator. 2,866,115, 12–23–58, Cl. 313—82.
Lee, Charles A., to Kimberly-Clark Corp. Flow control apparatus. 2,865,280, 12–23–58, Cl. 92—44.
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Leeds, Winthrop M., to Westinghouse Electric Corp. Circuit interrupters and contact arrangements therefor. 2,866,045, 12–23–58, Cl. 200—148.
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Ledbetter, Noel W. 2,866,115.
Leo, Herbert T., and C. C. Taylor. Dietary gel composition. 2,865,761, 12–23–58, Cl. 99—132.
Leonard, Henri, to ETS. Garner & Fils. Dental engine head assembly. 2,865,101, 12–23–58, Cl. 32—26.
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Hodgins, George R., and Leonard. 2,865,673.
Lepetit, S. p. A.: *See*—
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Lasar, Albert E., and G. W. Charles, to A. P. Green Fire Brick Co. Lightweight insulating firebrick and method of manufacture. 2,865,772, 12–23–58, Cl. 106—67.
Lester, Ray F., to Crouse-Hinds Co. Lighting unit. 2,865,084, 12–23–58, Cl. 240—11.2.
Leston, Theodore I., and W. B. Kriewall. Applicator for spattering masses. 2,865,225, 12–23–58, Cl. 118—300.
Le Vantine, Allan D., to Litton Industries of California. Flexible pressurized conduit. 2,866,403, 12–23–58, Cl. 138—50.
Levenberg, Nathan. Radiator enclosure. 2,865,569, 12–23–58, Cl. 237—79.
Levin, Simon. Controllable skate having continuously applied brake. 2,865,644, 12–23–58, Cl. 280—11.2.
Levin, Simon. Roller skate having continuously applied braking means. 2,865,645, 12–23–58, Cl. 280—11.2.
Levine, Abraham L.: *See*—
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Hartman, George S., and Levine. 2,865,975.
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Lewis, George W. Power multiplier. 2,865,325, 12–23–58, Cl. 121—41.
Lewis, Norman J., Monsanto Chemical Co. Nematocidal composition and methods employing cyclohexyl isothiocyanates. 2,865,803, 12–23–58, Cl. 167—30.
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Liebel, Julius, to Maschinenfabrik Augsburg-Nurnberg A. G. Internal combustion engine. 2,865,240, 12–23–58, Cl. 123—32.
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Linnell, Timothy E. and P. R., ½ to R. E. and T. R. Linnell. Smoking or other treatment of bacon and the like. 2,865,278, 12–23–58, Cl. 99—234.
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Le, Arthur W., and W. A. Heibig, to Radio Corp. of America. Binary devices. 2,866,178, 12–23–58, Cl. 340—174.
Lofgren, Gustaf E., to Electrolux Corp. Electric plug retaining cover. 2,866,169, 12–23–58, Cl. 339—91.
Logan, Richard S., to Phillips Petroleum Co. Preparation of petroleum sulfonic acids and sulfonate derivatives thereof. 2,865,957, 12–23–58, Cl. 260—504.
Lolley, Raymond A., and J. G. Padbury, to Imperial Chemical Industries Ltd. Shaft rotation determining apparatus. 2,865,103, 12–23–58, Cl. 33—1.
Long, Everett, and F. G. Greenhalgh, to United Kingdom Atomic Energy Authority. Moderator and reflector structures for nuclear reactors. 2,865,828, 12–23–58, Cl. 204—193.2.
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Machleine, Jan. E. H. Morgan, and G. L. Weaver, to American Seating Co. End standard for an auditorium chair or the like. 2,865,438, 12–23–58, Cl. 155—191.
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Mager, Eric L., to Sylvania Electric Products Inc. Electroluminescent lamp. 2,866,118, 12–23–58, Cl. 313—108.
Maggiolo, Allison, to The Weisbach Corp. Processes for the production of dibasic and monobasic acids. 2,865,937, 12–23–58, Cl. 260—406.
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Marsh, Roger, to Weapons, Inc. Compensating device for firearms. 2,865,256, 12–23–58, Cl. 89—191.
Marshall, Edmund V., to Chance Vought Aircraft, Inc. Oil cooling and drag reducing system. 2,865,590, 12–23–58, Cl. 244—57.
Martin, Philip W. Apparatus for visually inspecting oil well casings. 2,866,158, 12–23–58, Cl. 324—37.
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Mason, James N., to American Blitrite Rubber Co., Inc. Process and apparatus for molding mats. 2,865,047, 12–23–58, Cl. 18—6.
Mathiesel, Rudolph A., to United States of America, Navy. Apparatus for loading a water vessel. 2,865,518, 12–23–58, Cl. 214—15.
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Maurice, Jean, and M. Rist, to Societe Anonyme Francaise du Ferodo. Electromagnetic clutches. 2,865,480, 12–23–58, Cl. 192—84.
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McCawley, Frank X., to Chicago Development Corp. Method of forming carbonaceous protective coatings on titanium and zirconium. 2,865,797, 12–23–58, Cl. 148—13.1.
McCloud, George E., to McGraw-Edison Co. Combination fuse cutout and switch. 2,866,032, 12–23–58, Cl. 200—114.
McColl, William, to Diamond Power Specialty Corp. Soot blower control system. 2,865,042, 12–23–58, Cl. 15—317.
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McConnell, Richard L., to Eastman Kodak Co. Method of preparing O,O-dialkyl alkylthioalkyl phosphorothiomates. 2,865,956, 12-23-58, Cl. 260—461.
McCoy, Robert L., and J. Kamlnski, Jr., to General Electric Co. Shielding for electrical transmission installations having two conductors per phase. 2,865,982, 12-23-58, Cl. 174—141.
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McElroy, Arthur H., to Coyne Products, Inc. Machine for forming finned heat transfer tubes. 2,865,424, 12-23-58, Cl. 153—64.5.
McFall, Russell W., and T. T. Johnson, to General Electric Co. Information indicating instrument. 2,866,191, 12-23-58, Cl. 343—11.
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Cunningham, Francis V. 2,865,135.
Hulteen, Leonard A., and Gorder. 2,866,042.
McCloud, George E. 2,866,082.
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McKain, Walter P., to Fada Radio & Electric Co., Inc. Tool holder for tool dressing machines. 2,866,641, 12-23-58, Cl. 279—9.
McKay, Arthur F., and M. Kreling, to Monsanto Canada Ltd. Arylsulfonyl derivatives of bicyclic guanidines. 2,865,913, 12-23-58, Cl. 260—239.9.
McKay, Joseph A. Break-off tool. 2,865,230, 12-23-58, Cl. 81—3.
McKenna, Walter L. Core barrel. 2,865,608, 12-23-58, Cl. 255—72.
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Kupka, John J., and Shattuck. 2,865,468.
Stewart, Bruce D. 2,865,118.
McKinley, Joseph B., B. P. Thomas, and M. J. Derrig, to Gulf Research & Development Co. Process for preparing impregnated composite catalysts. 2,865,868, 12-23-58, Cl. 252—467.
McKinney, Floyd M. Spiked shoe attachment. 2,865,115, 12-23-58, Cl. 36—7.7.
McKnight, George S., Jr., and R. C. Brown, to Oxford Paper Co. Coating compositions. 2,865,773, 12-23-58, Cl. 106—154.
McLamore, William M.: *See*—
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McMichael, John D., to General Motors Corp. Cleaner silencer assembly. 2,865,467, 12-23-58, Cl. 183—44.
McMillan, Eugene C., to McMillan Floor Co. Concrete float plate assembly. 2,865,209, 12-23-58, Cl. 94—45.
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McNaney, Joseph T., to General Dynamics Corp. Character display unit. 2,866,189, 12-23-58, Cl. 340—324.
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McNeil Machine & Engineering Co., The: *See*—
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McNeill, Robert C., to Shell Development Co. Offshore drilling structure. 2,865,179, 12-23-58, Cl. 61—46.5.
Mead, Harry A., and L. L. Siegel. Machine for automatically cutting adjustably predetermined lengths from roll material. 2,865,448, 12-23-58, Cl. 164—89.
Mechanical Industries Production Co.: *See*—
Dell, Saul V. 2,866,041.
Schwing, Russell L. 2,866,042.
Mecker, William H., to Hickok Mfg. Co., Inc. Buckle for reversible belts. 2,865,074, 12-23-58, Cl. 24—188.
Megard, Henry, to Sautier & Jaeger. Means for changing the frequency in combined wireless and television sets. 2,865,967, 12-23-58, Cl. 178—5.8.
Meixner, Alfred, and E. Grashoff, to Voigtlander Akt. Photographic camera with retractable tube. 2,865,272, 12-23-58, Cl. 95—20.
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Mercy, Joseph, to Shatton, Inc. Fruit flavors, products and methods. 2,865,756, 12-23-58, Cl. 99—78.
Mesne, Daniele. Knotting device. 2,865,865, 12-23-58, Cl. 289—17.
Messer, Ernest L. Tree remover attachments. 2,865,116, 12-23-58, Cl. 37—2.
Messick, Kirwan Y. Means for removing underground street railways and their appurtenant structures. 2,865,601, 12-23-58, Cl. 254—90.
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Miles, Thomas K.: *See*—
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Miller, Frank D., to Eastman Kodak Co. Multiport diaphragm valve. 2,865,402, 12-23-58, Cl. 137—627.1.
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Miller, Philip H., to Crosby Steam Gage & Valve Co. Testing machine for sheet material. 2,865,199, 12-23-58, Cl. 73—102.
Milliken, William F., and D. W. Whitcomb, to General Motors Corp. Automotive vehicle having free control and stability features. 2,865,462, 12-23-58, Cl. 180—79.2.
Mills, Ivor W., to Sun Oil Co. Conditioning hydrocarbon stocks for catalytic reaction. 2,865,833, 12-23-58, Cl. 208—90.
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Krouse, Benjamin F. 2,865,224.
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Mirviss, Stanley B., and C. F. Marsden, Jr., to Esso Research and Engineering Co. Use of phosgene to improve resin yield. 2,865,900, 12-23-58, Cl. 260—82.
Miskel, John J., and K. T. Tancredi, to Chas Pfizer & Co., Inc. Hypodermic syringe. 2,865,372, 12-23-58, Cl. 128—218.
Mitchell, Boris J., to General Motors Corp. Lubricating system. 2,865,351, 12-23-58, Cl. 123—90.
Mitchell, Princess. Hairpieces and method of hair preparation. 2,865,830, 12-23-58, Cl. 132—6.
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Cohn, David. 2,865,184.
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Moe, William W., to Time, Inc. Edge correcting system for visual image transference apparatus. 2,865,984, 12-23-58, Cl. 178—5.2.
Molnar, Imre, to General Telephone Laboratories, Inc. Electronic busy test circuit. 2,866,004, 12-23-58, Cl. 179—18.
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Baker, Joseph W., and Saul. 2,865,801.
Beaver, David J., and Stoffel. 2,865,929.
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Nurmse, Karl, to Aktiebolaget Urfabriken. Means for removably mounting a member on a shaft. 2,865,962, 12-
Partridge, Leslie W., to The Hurdick Corp. Electrocardiograph. 2,865,366, 12-23-58, Cl. 128—2.06.
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Moos, Kaspar. Apparatus for the removal of the reserve thread remainder from weft bobbins. 2,865,061, 12-23-58, Cl. 28—19.
Mosser, Alfred. Adjustable supporting device. 2,865,696, 12-23-58, Cl. 311—35.
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Morrison, Thomas E., 25% to J. E. Haddock Ltd. Tractor attachment. 2,865,523, 12-23-58, Cl. 214—147.
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Morton, Robert E.: *See*—
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Mosesson, Merland L., to United States of America, Navy. Air cooled turbine wheel design. 2,865,598, 12-23-58, Cl. 253—39.15.
Moss, Gerald. Lamps. 2,866,085, 12-23-58, Cl. 240—81.
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Muller, Werner C., to National Distillers and Chemical Corp. Process of preparation of titanium. 2,865,738, 12-23-58, Cl. 75—84.5.
Murdoch, Frank N. Geometrical measuring and drafting instrument. 2,865,106, 12-23-58, Cl. 33—150.
Murphy, Clarence R., to Warren Petroleum Corp., Inc. Method for deionizing aqueous pentaerythritol solutions. 2,865,822, 12-23-58, Cl. 204—72.
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Murray, James S., to General Telephone Laboratories, Inc. Answering service arrangements in telephone systems. 2,866,007, 12-23-58, Cl. 179—27.
Murray John F., to Thompson Products, Inc. Pressure-loaded gear pump. 2,865,302, 12-23-58, Cl. 103—126.
Musgrave, Orly. Riding lawn mower. 2,865,150, 12-23-58, Cl. 56—25.4.
Musgrave, Orly. Electric motor housings for gasoline engine starters. 2,865,358, 12-23-58, Cl. 123—179.
Musgrave, Orly. Side car arrangement for golfing vehicle. 2,865,656, 12-23-58, Cl. 280—203.
Myers, Raymond L., to The Wright Line, Inc. Utility cabinet for a business machine. 2,865,700, 12-23-58, Cl. 312—309.
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Newstedt, Harry N., to General Telephone Laboratories, Inc. Automatic toll ticketing telephone systems. 2,866,002, 12-23-58, Cl. 179—18.
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Nielsen, Fridtjof G., to Great Lakes Dredge & Dock Co. Sheet piling wall structure. 2,865,180, 12-23-58, Cl. 61—49.
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Nixon, Blair N., to General Motors Corp. Access door for vehicle fuel inlet. 2,865,653, 12-23-58, Cl. 280—152.
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Haantjes, Johan, and Lubben. 2,866,129.
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Nurmse, Karl, to Aktiebolaget Urfabriken. Means for removably mounting a member on a shaft. 2,865,662, 12-23-58, Cl. 287—52.
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Onan, Robert C., and C. S. Hoke, to Waukee Engineering Co., Inc. Gas mixing device. 2,865,339, 12-23-58, Cl. 137—111.
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Madl, Alfred W., and Bednarski. 2,865,141.
Owen, Charley H., to Phillips Petroleum Co. Flash distillation process. 2,865,535, 12-23-58, Cl. 208—40.
Owens-Illinois Glass Co.: *See*—
Augsburger, Herbert M. 2,865,972.
Flezon, Floyd D. 2,865,526.
Oxford Paper Co.: *See*—
McKnight, George G., Jr., and Brown. 2,865,773.
Pacific Gas Sight Co.: *See*—
Doyle, Robert L. 2,865,244.
Padbury, John G.: *See*—
Lolley, Raymond A., and Padbury. 2,865,103.
Paetzold, William H., Jr.: *See*—
Stanhope, John R., and Paetzold. 2,865,226.
Pajaczkowski, Andrzej: *See*—
Seed, Leslie, and Pajaczkowski. 2,865,904.
Palmer, Reed A., to Westinghouse Electric Corp. Toaster apparatus. 2,865,270, 12-23-58, Cl. 99—329.
Pan American Petroleum Corp.: *See*—
Garetson, Paul K., and Stelts. 2,865,962.
Rhoads, Benjamin J., Jr. 2,865,454.
Scott, Platho F., Jr. 2,865,576.
Vincent, Benie P. 2,865,305.
Pantages, George J. Relay with self-cleaning contact elements. 2,866,048, 12-23-58, Cl. 200—164.
Paper Mate of Puerto Rico, Inc.: *See*—
Hechtle, Emil. 2,865,333.
Marcotte, James L. 2,865,331.
Pardee, William A.: *See*—
Culberson, Oran L., and Pardee. 2,865,713.
Parks, William N., to The ARO Equipment Corp. Pneumatic drill. 2,865,236, 12-23-58, Cl. 77—32.5.
Parker-Hannifin Corp.: *See*—
Rasgell, John G. 2,865,282.
Parker, John J., and L. T. Morawski. Edge clamping chuck. 2,865,643, 12-23-58, Cl. 279—106.
Parker, Louis W. High power frequency discriminator. 2,865,966, 12-23-58, Cl. 178—5.8.
Parker, Percy W.: *See*—
McCartney, Bruce L. 2,865,588.
Parks, William W., and W. R. Peterson, to Vapor Heating Corp. Grill and support for electrical heater. 2,866,070, 12-23-58, Cl. 219—34.
Parsons, C. A., & Co. Ltd.: *See*—
Bentele, Max. 2,865,611.
Parsons Corp.: *See*—
Brogren, Axel V. 2,865,499.
Parsons, John T., Goodland, and Ballauer. 2,865,500.
Parsons, John T., D. E. Goodland, and A. C. Ballauer, to Parsons Corp. Shock-absorbing shipping assembly for rotor blades. 2,865,800, 12-23-58, Cl. 206—46.
Parsons, Ralph M., Co., The: *See*—
Johnson, Rodney W., and Larson. 2,866,182.
Partridge, Leslie W., to The Burdick Corp. Electrocardiograph. 2,865,366, 12-23-58, Cl. 128—2.06.
Pascal, Andre: *See*—
Bordenave, Paul J., Joubert, and Pascal. 2,865,196.
Pastushin Aviation Corp.: *See*—
Price, Martin A. 2,865,582.
Patenande, Verne L. Sewage system for mobile houses and the like. 2,865,028, 12-23-58, Cl. 4—10.
Pattiani, Alois W. Door frame mounting and method of procedure. 2,865,060, 12-23-58, Cl. 20—11.
Patton, Luke U., 50% to R. M. Hall. Vehicular water heaters for field use. 2,865,612, 12-23-58, Cl. 257—205.
Pauley, Robert J., to G. Miller. Pipe bevelling device. 2,865,625, 12-23-58, Cl. 266—23.
Paulsen, Jean F., to Company "Luxembourgeoise de Brevets et de Participations." Anti-vibration resilient supports. 2,865,586, 12-23-58, Cl. 249—10.
Pearce, Walter H. Speed rate of reading indicator. 2,865,114, 12-23-58, Cl. 35—35.
Pearman, Lawrence. Peanut shelling machine. 2,865,415, 12-23-58, Cl. 146—11.
Pearson, John H.: *See*—
Borland, Jean W., Miller, and Pearson. 2,865,824.
Peaslee, Lawrence R., M. Rosenblatt, and L. U. C. Kelling, to General Electric Co. Error signal developing means for position programming control system. 2,866,145, 12-23-58, Cl. 318—162.
Peck, David B., to Sprague Electric Co. Printed electrical resistor. 2,866,087, 12-23-58, Cl. 201—63.
Pedersen, Norman B. Driftless direct current amplifier. 2,866,019, 12-23-58, Cl. 179—171.
Pellet, Lester R.: *See*—
Kaye, Philip, and Tate. 2,865,039.
Pellier, Laurence D., and C. D. Di Pietro, to American Cyanamid Co. Gold plating surgical needles. 2,865,876, 12-23-58, Cl. 128—339.
Penther, Carl J., R. L. Griffin, T. K. Miles, and W. C. Simpson, to Shell Development Co. Microviscometer 2,865,197, 12-23-58, Cl. 73—58.
Peperzak, Peter: *See*—
Davies, Donald G., and Peperzak. 2,865,856.
Perdue, Robert J., to De Havilland Propellers Ltd. Anemo-electric power plant. 2,865,459, 12-23-58, Cl. 170—62.
Perkins, Alfred J., to Perkins Pipe Linings, Inc. Pipe lining machine. 2,865,322, 12-23-58, Cl. 118—306.
Perkins, George D.: *See*—
Crandell, Frank F., and Perkins. 2,865,247.
Perkins, Philip R. Vibrating shelf-type drier. 2,865,110, 12-23-58, Cl. 34—96.
Perkins Pipe Linings, Inc.: *See*—
Perkins, Alfred J. 2,865,322.
Pernollet, Jean G., and Y. Boyer. Change speed devices. 2,865,213, 12-23-58, Cl. 74—193.
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Davis, Morris C., Perryman, and Gannon. 2,865,117.
Peters Machinery Co.: *See*—
Windstrup, Robert F., Rose, and Miller. 2,865,152.
Petersen, Siegfried, and G. Domagk, to Schenley Industries, Inc. N N' diguanide dimides of quinone-dioxin adducts. 2,865,961, 12-23-58, Cl. 260—564.
Peterson, Frank H.: *See*—
Peterson, Walter F. and F. H. 2,865,522.
Peterson, Walter F. and F. H. Boat trailer. 2,865,522, 12-23-58, Cl. 214—34.
Peterson, William R.: *See*—
Parks, William W., and Peterson. 2,866,070.
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Petsinger, Ambrose J., to Westinghouse Electric Corp. Electrical measuring apparatus. 2,866,156, 12-23-58, Cl. 324—137.
Pfarrwaller, Erwin, to Sulzer Freres, S. A. Method and means for actuating a thread clamp in textile machinery. 2,865,405, 12-23-58, Cl. 139—126.
Pfarrwaller, Erwin, to Sulzer Freres, S. A. Mechanism for selective feeding of weft threads in weaving machines. 2,865,406, 12-23-58, Cl. 139—126.
Pfizer, Chas., & Co., Inc.: *See*—
Agnello, Eugene J., and Laubach. 2,865,908.
Bavley, Abraham, and Cameron. 2,865,901.
Bavley, Abraham, and Cameron. 2,865,904.
Bavley, Abraham, McLamore, and Harfenist. 2,865,907.
Carnahan, Robert E., and Kent. 2,865,923.
Miskel, John J., and Tancredi. 2,865,372.
Pharis, William W., to General Dynamics Corp. Group signaling telephone system. 2,865,990, 12-23-58, Cl. 179—5.
Phelps, Stuart M., and H. C. Sibley, to General Railway Signal Co. Motor and brake control circuits. 2,862,473, 12-23-58, Cl. 188—62.
Philco Corp.: *See*—
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Phillips, Henry F., to The Pic-Seal Corp. Die structure and method of making same. 2,865,235, 12-23-58, Cl. 76—107.
Phillips Petroleum Co.: *See*—
Edge, William H., and Hillier. 2,865,393.
Krejci, Joseph C. 2,865,717.
Logan, Richard S. 2,865 957.
Owen, Charley H. 2,865,535.
Photo Research Corp.: *See*—
Crandell, Frank F., and Perkins. 2,865,247.
Pieper, Josef H. F., and J. E. V. N. Stauch, to Hercules Powder Co. Improvement for the preparation of polyamides. 2,865,895, 12-23-58, Cl. 260—78.
Pietsch, Helmut: *See*—
Raecke, Bernhard, Kohler, and Pietsch. 2,865,897.
Pillsbury Co., The: *See*—
Coyne, William E. 2,865,154.

Ringler, William A., to The Diamond Match Co. Paperboard
Rubinke, Edward J., to Hill-Shaw Co. Heating appliance

Fiuley, Raymond G., to Eastman Kodak Co. Lacquer composition comprising epoxide resin, polyamide resin and cellulose acetate butyrate and article coated therewith. 2,865,870, 12-23-58, Cl. 260—12.

Pittsburgh Plate Glass Co.: *See*—
Christenson, Roger M. 2,866,874.
Peluso, Frank. 2,865,806.

Pitzer, Edgar C., to United States of America, Atomic Energy Commission. Electrolytic dissolution of stainless steel. 2,865,832, 12-23-58, Cl. 204—223.

Plexico, Robert S.: *See*—
Kelley, Oliver K., and Plexico. 2,865,227.

Plump, Ralph E.: *See*—
Cook, Clinton D., and Plump. 2,866,142.

Pohlemann, Heinz, H. Schroeder, H. Stummeyer, and H. Adolphi, to Badische Anilin- & Soda-Fabrik Akt. Process for the production of O,O-dialkylphosphoric or O,O-dialkylthionophosphoric acid esters of N-alkylol lactams. 2,866,012, 12-23-58, Cl. 260—239.2.

Pettrus, Edward J., and J. F. Taplin. Gyro-vertical element. 2,866,207, 12-23-58, Cl. 74—5.54.

Polhemus, Von D.: *See*—
Chayne, Charles A., and Polhemus. 2,865,651.

Polymer Corp. Ltd.: *See*—
Barbier, Ernest J., and Edwards. 2,865,901.

Popovich, Montgomery T., and A. C. Roethlisberger, to Westinghouse Electric Corp. Bus duct. 2,863,980, 12-23-58, Cl. 174—70.

Popovich, William C., to Corpa, Inc. Hydraulic brake bleeding check valve. 2,865,396, 12-23-58, Cl. 137—539.

Portiz, Nathan. Multi-segment sponge mop. 2,865,036, 12-23-58, Cl. 15—119.

Porter, Frederick W. B., to The British Petroleum Co. Ltd. Production of motor fuel. 2,865,851, 12-23-58, Cl. 208—264.

Porter, Walter G. Piercing punch. 2,865,452, 12-23-58, Cl. 164—119.

Powell Pressed Steel Co., The: *See*—
Johnson, Richard C. 2,865,535.

Powlison, Neil C. Television receiving antenna. 2,866,195, 12-23-58, Cl. 343—803.

Prarie, Guy B., Jr.: *See*—
Glenfrida, Joseph, and Prarie. 2,866,124.

Pratt, Otto P., to McGraw-Edison Co. Steam iron with thermally-operated valve. 2,865,119, 12-23-58, Cl. 38—77.

Presley, Jerry W., to Socony Mobil Oil Co., Inc. Sampling valve for high melt materials. 2,865,394, 12-23-58, Cl. 137—314.

Press, Irving D., to Resistoflex Corp. Method of securing a coupling to an end of a high temperature flexible hose. 2,865,064, 12-23-58, Cl. 29—506.

Price, Alfred A. Spreader for fertilizer and the like. 2,865,536, 12-23-58, Cl. 222—177.

Price, Martin A., to Pastushin Aviation Corp. Means for releasably mounting stores on aircraft. 2,865,582, 12-23-58, Cl. 244—137.

Pridham, Thomas G.: *See*—
Lindenfelser, Lloyd A., Benedict, Shotwell, Pridham, Stodola, and Jackson. 2,865,818.

Prior, Roger A., to General Electric Co. Three phase regulator connections. 2,866,152, 12-23-58, Cl. 323—44.

Pritchard, Benjamin S., to General Electric Co. Spectrophotometer. 2,865,244, 12-23-58, Cl. 88—14.

Procter, Sidney E., to Austin Hoy and Co. Ltd. Tool-carrying chains. 2,865,621, 12-23-58, Cl. 262—31.

Progerai, Ilario. Continuous casting machine. 2,865,067, 12-23-58, Cl. 22—57.4.

Protens: *See*—
Gemping Ernst, Draheim, and Mensike. 2,866,008.

Prucha, Frank M., to General Motors Corp. Ring assembly fixture. 2,865,091, 12-23-58, Cl. 29—225.

Pryslak, Nicholas E.: *See*—
Morris, Clifford M., and Pryslak. 2,866,120.

Pueblo Tent and Awning Co., Inc., The: *See*—
Allenbach, Roy E. 2,866,426.

Pullman-Standard Car Mfg. Co.: *See*—
Bock, George E., Guthrige, and Van Der Steyn. 2,865,304.
Guthrige, Jack E., and Gribnitz. 2,865,305.

Purdy, Burton A., to P. R. Mallory & Co., Inc. Multiple variable resume control strip. 2,866,054, 12-23-58, Cl. 201—33.

Pye Ltd.: *See*—
Wiegerinck, Hendrikus T. J. 2,866,093.

Quorengasser, Hugo: *See*—
Timmerbeil, Helmut, Quorengasser, and Krauss. 2,866,735.

Quermann, Thomas R., to United Aircraft Corp. Damped rate gyroscope. 2,866,356, 12-23-58, Cl. 74—5.5.

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Heselwood, James C. 2,866,005.

Radio Corp. of America: *See*—
Allwine, Harrison S. 2,866,137.
Booth, Grant W., and Hobbs. 2,865,567.
Bertan, Harold, and Weimer. 2,865,985.
Le, Arthur W., and Hobbs. 2,866,178.
Morris, Clifford M., and Pryslak. 2,866,120.
Sautnier, Theodore A., Jr. 2,865,764.
Vance, Arthur W. 2,865,565.

Radzinsky, Harry. Magazine-type ball-point pens. 2,865,234, 12-23-58, Cl. 120—42.12.

Raecke, Bernhard, R. Köbler, and H. Fietsch, to Henkel & Cie. G. m. b. H. Epoxy alkyl esters of polybasic aromatic carboxylic acids and process of making same. 2,865,897, 12-23-58, Cl. 260—78.4.

Railhead, Jean P., to Le Precision Mecanique. Piston pumps for the injection of fuel into internal combustion engines. 2,865,192, 12-23-58, Cl. 103—5.

Ramella, Amilcare, to Socony Mobil Oil Co., Inc. Temperature control in hydrocarbon conversion processes. 2,865,848 12-23-58, Cl. 208—164.

Ramsden, Philip: *See*—
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Rasby, Peter W., to Thorn Electrical Industries Ltd. Electroluminescent material. 2,866,116, 12-23-58, Cl. 313—108.

Ransburg Electro-Coating Corp.: *See*—
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Ranschoff, N., Inc.: *See*—
Ranschoff, Nathan. 2,865,631.

Ranschoff, Nathan, to N. Ranschoff, Inc. Electroplating machine. 2,865,631, 12-23-58, Cl. 204—212.

Rapin, Charles P.: *See*—
Rapin, John P. 2,865,064.

Rapin, John P., to Charles P. Rapin. Metal awning and locking means therefor. 2,865,064, 12-23-58, Cl. 20—67.5.

Rasmussen, John P. Carton. 2,865,551, 12-23-58, Cl. 229—28.

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Christianson, George, Nichols, and Rath. 2,865,706.

Rath, Richard W.: *See*—
Christianson, George, Nichols, and Rath. 2,865,706.

Raynsford, Charles K., to Vitro Corp. of America. Information processing device. 2,866,092, 12-23-58, Cl. 250—27.

Raytheon Mfg. Co.: *See*—
McCann, John E. 2,866,123.

Rebholn, Elmer F.: *See*—
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Recker, Bernard H., deceased, by C. L. Recker, administrator. Colostomy syringe nozzle or the like. 2,865,372, 12-23-58, Cl. 128—239.

Recker, Claud L.: *See*—
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Fenlak, George, Loria, and Reckhow. 2,865,751.

Recreation Equipment Corp.: *see*—
Townsend, Paul V. 2,865,634.

Reed, George M. Peanut harvesting sweep. 2,865,276, 12-23-58, Cl. 172—720.

Reek, Robert J., and E. D. Slayton, to Teletype Corp. Record controlled electronic transmitter. 2,865,963, 12-23-58, Cl. 178—17.

Reetz, Theodor: *See*—
Chadwick, David H., and Reetz. 2,865,942.

Reeve, David H.: *See*—
Gloss, Gunter H., and Reeve. 2,865,711.

Rehm, Gustav A., to Springfield Boiler Co. Boilers, first stage forced circulation. 2,765,342, 12-23-58, Cl. 122—406.

Rehm, Gustav A., to Springfield Boiler Co. First stage forced circulation in boilers. 2,865,342, 12-23-58, Cl. 122—406.

Rehser, Thomas, and F. Hartmann, to Walter Marz & Co. K. G. Cover paint containing aluminum leaf. 2,865,776, 12-23-58, Cl. 106—252.

Reiners, Dr. Ing. Walter: *See*—
Fürst, Stefan. 2,865,877.

Reis, Charles S. Magnetic record method and apparatus. 2,866,015, 12-23-58, Cl. 179—100.2.

Reiss, Max, to Eastman Kodak Co. Wide field objective comprising four highly meniscus elements. 2,865,253, 12-23-58 Cl. 88—57.

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Renaud, Bruce J., to United States Rubber Co. Sidewall construction for a tire. 2,865,423, 12-23-58, Cl. 152—353.

Renner, John, C. H. Van Tuinar, and E. B. Williams, to National Distillers and Chemical Corp. Electrolytic cell. 2,865,833, 12-23-58, Cl. 204—245.

Repking, Edward F., and H. D. Willett, to Crown Zellerbach Corp. One-piece beverage shipping case. 2,865,554, 12-23-58, Cl. 229—44.

Research Products Corp.: *See*—
Prohmader, Stanley H. 2,865,406.

Resistoflex Corp.: *See*—
Press, Irving D. 2,865,064.

Retterath, Valentin, to Groov-Pin Corp. Equipment for forming chiseled grooves in rods or the like. 2,865,248, 12-23-58, Cl. 78—30.

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Resnek, Solomon, to Sterling Drug Inc. Sterile ampule package. 2,865,524, 12-23-58, Cl. 215—6.

Rheinische Rheinische Werkzeug-und Metallwarenfabrik, G. m. b. H.: *See*—
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Rhine, Delmar H.: *See*—
Wendt, Henry T., and Rhine. 2,865,684.

Rhoades, John M., to General Electric Co. Three-dimension servosystem transducer. 2,866,158, 12-23-58, Cl. 323—75.

Rhoads, Benjamin J., Jr., to Pan American Petroleum Corp. Tubing scraper. 2,865,456, 12-23-58, Cl. 166—170.

Rice, Joseph: *See*—
Wright, Esmond P. G., and Rice. 2,865,862.

Rich, George E., to Federal-Mogul-Bower Bearings, Inc. Lubricant circulator. 2,865,686, 12-23-58, Cl. 308—90.

Richards, John F., to Shell Development Co. Oil well fishing apparatus and method. 2,865,464, 12-23-58, Cl. 166—46.

Richarts, Paul, to Bell & Howell Co. Lens carrying structure for photographic cameras. 2,865,374, 12-23-58, Cl. 95—45.

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Dinsmore, Robert L., and Spencer. 2,865,766.

Rick, Chester. Lamp shades. 2,866,037, 12-23-58, Cl. 240—128.

Richer, Francis J.: *See*—
Olsen, Everett O., and Richer. 2,866,106.

Ridgway, John A., Jr.: *See*—
May, Paul H., Ridgway, and Wadsworth. 2,865,905.

Ringler, William A., to The Diamond Match Co. Paperboard tobacco pouch. 2,865,496, 12–23–58, Cl. 206—41.1.
Risch, Karl, to Heberlein Patent Corp. Process for producing color effects on textile and other sheet-like material and products therefrom. 2,865,767, 12–23–58, Cl. 117—71.
Risk, George. Tortuous conductance path resistor. 2,866,061, 12–23–58, Cl. 201—72.
Risner, Joseph, to Trad Television Corp. Dynamic contrast expander. 2,865,991, 12–23–58, Cl. 178—7.5.
Risse, John T., to Iowa Mfg. Co. of Cedar Rapids, Iowa. Rotary drum and self-adjusting means therefor. 2,865,690, 12–23–58, Cl. 308—208.
Risul, Erwin: *See*—
Jucker, Ernst, Vogel and Risul. 2,865,922.
Rist, Michel: *See*—
Maurice, Jean, and Rist. 2,865,490.
Robb, Harold W. Faucet safety handle. 2,865,604, 12–23–58, Cl. 287—119.
Robell, John, M. Steinberg, and E. B. Jones, to Guggenheim Bros. (1949 Firm). Production of anhydrous hydrazine. 2,865,714. 12–23–58, Cl. 23—190.
Roberts, Frederick W., E. S. Gillette, J. A. Duntze, and A. W. Skoog, to Dictaphone Corp. Sound recording and reproducing apparatus. 2,865,637, 12–23–58, Cl. 274—4.
Roberts-Gordon Appliance Corp.: *See*—
Warnecke, Robert L. 2,865,440.
Roberts, James A.: *See*—
Fischer, Howard R., and Roberts. 2,865,212.
Robinson, Charles F., to Consolidated Electrodynamics Corp. Mass separation. 2,766,097. 12–23–58, Cl. 250—41.9.
Rode, Fred J., to Niagara Machine & Tool Works. Cushion for power presses. 2,865,626, 12–23–58, Cl. 267—1.
Rodrigues, Charles F., Jr., to Aerojet-General Corp. Autopilot steering system. 2,866,146, 12–23–58, Cl. 318—489.
Rodrigues-Alvarez, Antonio: *See*—
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Roebling, Robert C. Tensioning device for cables. 2,865,600, 12–23–58, Cl. 254—87.
Roesch, Fernand, to Irval Cosmetics, Inc. Hair straightener containing a keratin reducing agent, anionic wetting agent and water-soluble soap and method of using same. 2,865,811, 12–23–58, Cl. 167—87.1.
Rosser, Gerald P., to American-Marietta Co., Stoner-Mudge Co., Division. Combined acetonitrile and aromatic hydrocarbon solvent solution of a vinyl chloride-vinyl acetate copolymer. 2,865,879, 12–23–58, Cl. 260—32.4.
Roethlisberger, Arthur C.: *See*—
Pogvich, Montgomery T., and Roethlisberger. 2,865,980.
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Auten, Robert W. 2,865,890.
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De Benneville, Peter L., and Hurwitz. 2,865,885.
Hatton, Harold L., Stieber, and Toothill. 2,865,877.
Hurwitz, Marvin J., and de Benneville. 2,865,890.
Hurwitz, Marvin J., and de Benneville. 2,865,918.
Toothill, Frederick W., Jr., Stieber, and Hatton. 2,865,878.
Ronay, Bela M. After cooler for welding torches. 2,866,074, 12–23–58, Cl. 219—74.
Roosa, Vernon D. Control means for a fuel pump valve. 2,865,247, 12–23–58, Cl. 123—140.
Roosa, Vernon D. Fuel injection nozzle. 2,865,675, 12–23–58, Cl. 299—107.6.
Rorig, Kurt J., to G. D. Searle & Co. Cyclic aminoalkyl chloro carbamilates. 2,865,921, 12–23–58, Cl. 260—294.3.
Rosapepe, Frank P., to Grant Development Co. Fare collection box with water separator. 2,865,541, 12–23–58, Cl. 232—7.
Rose, Edward: *See*—
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Rosen, Charles, and C. J. Weidknecht, to Tele-Dynamics Inc. Oscillator-modulator circuit. 2,866,162, 12–23–58, Cl. 332—23.
Rosenberg, Stanley: *See*—
Vogel, Charles A., and Sawicki. 2,865,632.
Rosenblatt, Murray: *See*—
Peaslee, Lawrence R., Rosenblatt, and Kelling. 2,866,145.
Rosenfelder, William J., to H. Rosenstein. Iron choline compound and production thereof. 2,865,938, 12–23–58, Cl. 260—429.
Rosenkranz, Wilhelm. Method of increasing stress corrosion resistance of aluminum alloys. 2,865,786, 12–23–58, Cl. 148—12.7.
Rosenstein, Hyman: *See*—
Rosenfelder, William J. 2,865,938.
Rosenthal, Erich: *See*—
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Ross, Sidney D., to Sprague Electric Co. Electrolytic capacitor. 2,864,130, 12–23–58, Cl. 317—230.
Ross, Theodore L., to Monsanto Chemical Co. Electrolytic alkali halogen cell. 2,865,844, 12–23–58, Cl. 204—264.
Ross, William D., to E. I. du Pont de Nemours and Co. Production of pigments. 2,865,622, 12–23–58, Cl. 263—33.
Roth, Wilfred. Gyroscopic mass flowmeter. 2,865,201, 12–23–58, Cl. 73—194.
Royer, Ella D.: *See*—
Royer, William R. 2,865,422.
Royer, William R., deceased, by E. D. Royer, administratrix. Vehicle tire anti-skid chain and applying means. 2,865,422, 12–23–58, Cl. 152—218.
Ruaud, Bernard H., and R. Transformable folding chair. 2,865,431, 12–23–58, Cl. 155—106.
Ruaud, Robert: *See*—
Ruaud, Bernard H., and R. 2,865,431.
Rudd, Wallace C., to Magnetic Heating Corp. Drying of yarn by dielectric heating. 2,864,063, 12–23–58, Cl. 219—10.73.
Rudolf, John J., Jr., to Minneapolis-Honeywell Regulator Co. High speed indicator. 2,866,180, 12–23–58, Cl. 340—177.
Rubnke, Edward J., to Hill-Shaw Co. Heating appliance construction. 2,865,311, 12–23–58, Cl. 219—37.
Rutja, Frans W., to A. B. Dick Co. Transfer developing apparatus. 2,865,275, 12–23–58, Cl. 95—89.
Ranton, Leslie A., to The Russell Mfg. Co. Ultra high speed endless belts. 2,865,214, 12–23–58, Cl. 74—231.
Ruppert, Wilhelm, and G. Schwedler, to Metallgesellschaft Akt. Metal nitride coating process. 2,865,781, 12–23–58, Cl. 117—106.
Russell, John G., to Parker-Hannifin Corp. Remote-sensed fuel tank air control valve. 2,865,362, 12–23–58, Cl. 137—204.
Russell, John L., to The Bristol Co. Electrically actuated contactor. 2,866,928, 12–23–58, Cl. 200—83.
Russell Mfg. Co., The: *See*—
Ranton, Leslie A. 2,865,214.
SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung: *See*—
Kübler, Friedrich. 2,865,654.
S & S Vending Machine Co.: *See*—
Smith, William J. 2,865,532.
Sailor, Robert W., Jr., to Fairco Corp. Gain control system. 2,866,015, 12–23–58, Cl. 179—171.
St. John, Harry M., Jr., to United Aircraft Corp. Pitch control servo system for an aeronautical propeller. 2,865,465, 12–23–58, Cl. 170—160.2.
St. Pierre, Henry. Barn cleaner mechanism. 2,865,493, 12–23–58, Cl. 198—176.
Sampietro, Achilles C., to Thompson Products, Inc. Valve lash adjuster. 2,865,353, 12–23–58, Cl. 123—90.
Sanborn, Frank E., to E. A. Baer. Resuscitators. 2,865,368, 12–23–58, Cl. 128—142.
Sanders, Roy Y., Jr. Marked pharmaceutical tablet and method of marking the same. 2,865,810, 12–23–58, Cl. 167—82.
Sandor, A. G.: *See*—
Jucker, Ernst, Vogel, and Risul. 2,865,922.
Sapper, Frank G., and H. H. Wermine, to Bolden Mfg. Co. Electrical connector. 2,866,172, 12–23–58, Cl. 339—195.
Sarka, Albert J., to Wean Equipment Corp. Apparatus for treating strip and the like. 2,865,450, 12–23–58, Cl. 164—49.
Satz, William, to H. H. Kahn. Bottle closure. 2,865,525, 12–23–58, Cl. 215—45.
Saul, George A.: *See*—
Baker, Joseph W., and Saul. 2,865,801.
Sauzinier, Theodore A., Jr., to Radio Corp. of America. Method of manufacturing electron sensitive mosaic screens. 2,865,784, 12–23–58, Cl. 117—33.5.
Saunders, Vernon I., and C. V. Wilson, to Eastman Kodak Co. Light-absorbing anthraquinone dyes for photographic emulsions. 2,865,752, 12–23–58, Cl. 96—102.
Sautier & Jasper: *See*—
Megard, Henry. 2,865,987.
Sawicki, Michael: *See*—
Vogel, Charles A., and Sawicki. 2,865,632.
Schaffer, Harvey. Articles of furniture and supporting means therefor. 2,865,490, 12–23–58, Cl. 155—194.
Schemmel, Otto J. Hydraulically operated compressors. 2,865,558, 12–23–58, Cl. 230—49.
Schenley Industries, Inc.: *See*—
Petersen, Siegfried, and Demarx. 2,865,861.
Scheuerle, Robert F., and J. B. Metzinger, to The Electric Storage Battery Co. Negative plates and the production thereof. 2,865,974, 12–23–58, Cl. 136—30.
Schieber, Gerhard: *See*—
Kramer, Wilhelm, Hansen, and Schieber. 2,865,348.
Schiller, Paul. Throw-guiding device. 2,865,491, 12–23–58, 198—128.
Schilling, August H.: *See*—
Gottwald, Walter. 2,866,020.
Schlage, Ernest L., to Schlage Lock Co. Spindle mechanism for locks. 2,865,667. 12–23–58, Cl. 292—169.
Schlage Lock Co.: *See*—
Schlage, Ernest L. 2,865,667.
Schmidt, Karl G. m. b. H.: *See*—
Kramer, Wilhelm, Hansen, and Schieber. 2,865,348.
Schneider, William P., A. H. Nathan, and J. A. Hogg, to The Upjohn Co. 3 ketals and 3 enol ethers of 2-chloro 11α, 21-dihydroxy 4, 17(20) [cis] pregnadiene-3-one and 21-acyl esters thereof. 2,865,914, 12–23–58, Cl. 260—239.55.
Schneider, William P., F. H. Lincoln, and J. A. Hogg, to The Upjohn Co. 2-methyl steroids and process. 2,865,935, 12–23–58, Cl. 260—397.45.
Schon, Richard. Reiling electric machine with increased torque. 2,866,110, 12–23–58, Cl. 310—82.
Schönenberger, Franz, to Harris-Intertype Corp. Alternating switching attachment for typographical machines. 2,865,496, 12–23–58, Cl. 199—24.
Schooler, Nathan. Wall mounted cantilevered partition. 2,865,476, 12–23–58, Cl. 189—34.
Schott, Stuart: *See*—
Hanley, Virgil L., Schott, and Wynkoop. 2,865,968.
Schott, Stuart, to National Distillers and Chemical Corp. Chemical process for preparation of dialkali metal dimers of diolefins. 2,865,960, 12–23–58, Cl. 260—665.
Schrank, George I., to Specialties Development Corp. Delayed action valve controlling apparatus. 2,865,502, 12–23–58, Cl. 251—25.
Schroeder, Gertrude D.: *See*—
Schroeder, John B. 2,865,735.
Schroeder, Harald: *See*—
Pohlemann, Heinz, Schroeder, Stummeyer, and Adolphi. 2,865,912.
Schroeder, John B., deceased, by G. D. Schroeder, administratrix, to Econ-O-Cloth. Polishing article. 2,865,725, 12–23–58, Cl. 51—303.

Schroeder, Willard F., to National Distillers and Chemical Corp. Process of bleaching kraft pulp with alkaline hypochlorite bleach acidifying the pulp containing residual chlorine and then bleaching with alkaline peroxide. 2,865,701, 12–23–58, Cl. 8—106.

Schroer, Walter E., V. Trybinski, Jr., and I. H. Walling, to Loose Leaf Metals Co. Utility prong metal. 2,865,377, 12–23–58, Cl. 129—17.

Schuh, Niles F., to Westinghouse Electric Corp. Voltage sensitive control device. 2,866,106, 12–23–58, Cl. 307—88.5.

Schulman, Bernard L.: *See*—
Jahnig, Charles E., May, and Schulman. 2,865,847.

Schultz, Arthur J.: *See*—
Newland, Arthur E., and Schultz. 2,865,365.

Schultz, Wilfred R., to Temprite Products Corp. Self-contained water cooler of the bubbler type. 2,865,182, 12–23–58, Cl. 62—298.

Schumann, Fritz, to Deutscher Spinnereimaschinenbau Inolstadt, Niederlassung der Schubert & Salzer Maschinenfabrik Akt. Driving mechanism for the nippers of combing machines. 2,865,055, 12–23–58, Cl. 19—110.

Schwartz, Bert, to Hazel Bishop, Inc. Compacts. 2,865,497, 12–23–58, Cl. 206—37.

Schwedler, Gottfried: *See*—
Ruppert, Wilhelm, and Schwedler. 2,865,791.

Schwing, Russell L., to Mechanical Industries Production Co. Thermostat having end cap thereon. 2,866,042, 12–23–58, Cl. 200—138.

Scott, Howard R. and W. A. Border block. 2,865,136, 12–23–58, Cl. 47—33.

Scott, Pistho P., Jr., to Pan American Petroleum Corp. Low-water-loss cement composition and method of forming a slurry of the same. 2,865,876, 12–23–58, Cl. 260—29.6.

Scott Viner Co., The: *See*—
Carmichael, Mead R., Jr. 2,865,378.

Scott, Wallace A.: *See*—
Scott, Howard R. and W. A. 2,865,136.

Scovill Mfg. Co.: *See*—
Barlow, Edward H. 2,865,595.
Fields, George C. 2,865,196.
Firing, Osborne, and Huelster. 2,865,075.

Scriven, Douglas J. Metal joist bridging. 2,865,059, 12–23–58, Cl. 20—9.

Seaborg, Glenn T.: *See*—
Jaffey, Arthur H., and Seaborg. 2,865,704.

Seaborg, Glenn T., E. F. Orlemann, and L. H. Jensen, to United States of America, Atomic Energy Commission. Process of purifying uranium. 2,865,703, 12–23–58, Cl. 23—14.5.

Searle, G. D., & Co.: *See*—
Dornfeld, Clinton A., and Thielen. 2,865,964.
Rorig, Kurt J. 2,865,921.

Sears, Daniel S., to The B. F. Goodrich Co. Rubbery composition reinforced with nitrogen containing silicon monoxide and process for making same. 2,865,881, 12–23–58, Cl. 260—41.

Seed, Leslie, to Imperial Chemical Industries Ltd. Ethylene polymerisation. 2,865 903, 12–23–58, Cl. 260—94.9.

Seed, Leslie, and A. Pajaczkowski, to Imperial Chemical Industries Ltd. Ethylene polymerisation. 2,865,904, 12–23–58, Cl. 260—94.9.

Seidel, Harold, to International Telephone and Telegraph Corp. Microwave switch. 2,866,167, 12–23–58, Cl. 333—97.

Sennewald, Kurt: *See*—
Jacobowsky, Armin, and Sennewald. 2 865,826.

Seragnoli, Ariosto. Method and apparatus for applying foil. 2,865,153, 12–23–58 Cl. 53—34.

Seragnoli, Ariosto. Mechanism to produce a tear-strip and to secure it to a wrapper. 2,865,261, 12–23–58, Cl. 93—1.

Servco Engineering, Ltd.: *See*—
Chadderdon, Jack. 2,865,605.

Servo Corp. of America: *See*—
Thielens, Emil H. 2 865,253.

Seward, Warren K., to The Carborundum Co. Supporting device for coated abrasive products. 2,865,144, 12–23–58, Cl. 51—141.

Seymour, Norman D.: *See*—
Bowen, James O., and Seymour. 2,865,390.

Shalco Engineering Corp.: *See*—
Shallenberger, Frank K., Krupotich, and Bingham. 2,865,066.

Shallenberger, Frank K., E. Krupotich, and G. H. Bingham, Jr., to Shalco Engineering Corp. Shell molding apparatus. 2,865,066, 12–23–58, Cl. 22—20.

Shapiro, Jack J., ½ to F. Ulbrich. Self-fitting cap. 2,866,027, 12–23–58, Cl. 2—197.

Sharp, John R.: *See*—
Arnot, Alfred E. R. 2,865,648.

Shattuck, Carl W.: *See*—
Kupka, John J., and Shattuck. 2,865,468.

Sheaffer, W. A., Pen Co.: *See*—
Hansen, Lewis C. 2,865,332.

Shearer, Newton H., Jr., and H. W. Coover, Jr., to Eastman Kodak Co. Process for the removal of impurities from water-soluble acrylamides. 2,865,960, 12–23–58, Cl. 260—561.

Shell Development Co.: *See*—
Davies, Donald G., and Peperzak. 2,865,959.
Ellis, Glyn, Hartley, and Moseley. 2,865,956.
McNeill, Robert C. 2,865,179.
Penther, Carl J., Griffin, Miles, and Simpson. 2,865,197.
Richards, John P. 2,865,454.
Stiles, Alan R., and Whetstone. 2,865,944.
Van Dyke, Ross R., and Trainer. 2,865,847.
Van Loon, Mintje, and Verberg. 2,865,849.
Whittle, Frank. 2,865,602.

Shellman, Roy K., and C. H. Leathers, to MacClatchie Mfg. Co. Pump rod assembly. 2,865,863, 12–23–58, Cl. 287—111.

Shepherd, Charles C., to Ethyl Corp. Synergistic antioxidant compositions. 2,865,722, 12–23–58, Cl. 44—69.

Sherman, Ralph H., Jr.: *See*—
Gillette, Edward S., and Sherman. 2,865,639.

Sherman, Whitney D., to Continental Can Co., Inc. Manufacture of paperboard hat box bodies and cover flanges. 2,865,265, 12–23–58, Cl. 93—77.

Sherr, Solomon, to General Precision Laboratory Inc. Signal-to-noise ratio detector using frequency shift local oscillator to alternately sample signal and noise. 2,866,090, 12–23–58, Cl. 50—20.

Shockency, Wilford S.: *See*—
Kaiser, Harold R., Lane, and Shockency. 2,865,864.

Shomate, Charles H.: *See*—
Jenkins, Hugh P., and Shomate. 2,865,726.

Shortland, Arthur, to Mellor Bromley & Co. Ltd. Electrical starting and stopping arrangements for knitting machines. 2,865,184, 12–23–58, Cl. 66—157.

Shotwell, Odette L.: *See*—
Lindenfelser, Lloyd A., Benedict, Shotwell, Pridham, Stodola, and Jackson. 2,865,815.

Shull, Myron H. Support device for a stepladder. 2,865,546, 12–23–58, Cl. 228—17.

Shumway, Conrad. Grinder. 2,865,140, 12–23–58, Cl. 51—34.

Shutton, Inc.: *See*—
Merory, Joseph. 2,865,756.

Shwayder Bros., Inc.: *See*—
Shwayder, King D. 2,865,437.

Shwayder, King D., to Shwayder Bros., Inc. Seat for folding chairs and the like. 2,865,437, 12–23–58, Cl. 155—186.

Sibley, Henry C.: *See*—
Phelps, Stuart M., and Sibley. 2,865,473.

Sider, Nicholas M., and O. H. Williamson, to International Paper Co. Separable shipping container. 2,866,552, 12–23–58, Cl. 229—37.

Sierra Engineering Co.: *See*—
Brown, Charles E., and Bloom. 2,865,374.

Simanek, Edward J., to American Steel Foundries. Clasp brake. 2,865,472, 12–23–58, Cl. 188—66.

Simoncini, Manlio, and C. Falcon. Emergency fire extinguisher. 2,865,458, 12–23–58, Cl. 169—35.

Simpson, Howard W. Four speed transmission. 2,866,230, 12–23–58 Cl. 74—759.

Simpson, Howard W. Planetary transmission. 2,865,231, 12–23–58, Cl. 74—759.

Simpson, Warren C.: *See*—
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Wainer, Eugene. 2,865,781.

Sinclair Mfg. Co., The: *See*—
Wainer, Eugene. 2,865,781.

Sinclair Refining Co.: *See*—
Verley, Guy M. 2,865,907.

Sinykin, Louis S.: *See*—
Bramson, Joseph H., and Sinykin. 2,865,485.

Skeats, Wilfred F., to General Electric Co. Low-voltage current-limiting fuse. 2,866,040, 12–23–58, Cl. 200—131.

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Doolittle, Howard D., and Skehan. 2,866,122.

Skellern, John, to D. Napier & Son Ltd. Control systems for multi-engine aircraft employing reaction jets. 2,865,176, 12–23–58, Cl. 60—97.

Skellern, John, to D. Napier & Son Ltd. Devices sensitive to rotational speed. 2,865,624, 12–23–58, Cl. 264—14.

Skellett, Albert M., to Tung-Sol Electric Inc. Direct view television reproducing tube or the like. 2,865,126, 12–23–58, Cl. 315—13.

Skiff, Russell A., and E. B. Heft, to General Electric Co. Cast resin commutating rheostat. 2,866,051, 12–23–58, Cl. 201—48.

Skoog, Arthur W.: *See*—
Roberts, Frederick W., Gillette, Duntze, and Skoog. 2,865,637.

Skrimshire, Gerald E. H.: *See*—
Ockrent, Charles, Skrimshire, and Sutherland. 2,865,865.

Slagel, Lambert L.: *See*—
Mead, Harry A., and Slagel. 2,865,448.

Slater, Benjamin D. Motor vehicle signalling system. 2,866,175, 12–23–58, Cl. 340—74.

Slaughter, John I., to Standard Oil Co. High pressure stirrer contacting apparatus. 2,865,615, 12–23–58, Cl. 259—107.

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Reek, Robert J., and Slayton. 2,865,962.

Small, Joseph D. Tray carrier. 2,865,545, 12–23–58, Cl. 224—45.

Smart, William A., Jr., and T. J. Connolly, to American Cyanamid Co. Suture tube shipping package. 2,865,501, 12–23–58, Cl. 206—63.2.

Smidth, F. L., & Co.: *See*—
Zabrzycki, Bolestaw J., and Lewis. 2,865,504.

Smith, A. O., Corp.: *See*—
Stein George A. 2,865,324.

Smith, Bernard E.: *See*—
Modrey, Henry J. 2,865,978.

Smith, Caldwell P., to United States of America, Air Force. Automatic voice equalizer. 2,866,001, 12–23–58, Cl. 179—15.55.

Smith, Donald A.: *See*—
Unruh, Cornelius C., and Smith. 2,865,892.

Smith, Edward M., to Jet-Heet, Inc. Thermal blanket circulating and control means. 2,866,072, 12–23–58, Cl. 219—39.

Smith, Grant A., 1/6 to Gadget-of-The-Month Club, Inc. Dowel grooving device. 2,865,413, 12–23–58, Cl. 144—136.

Smith, Gus T., to Clausener Hosiery Co. Hosiery inspection machines. 2,865,542, 12–23–58, Cl. 223—77.
Smith, John D., to Hora & Hardart Co. of New York. Coin controlled vending machines. 2,865,698, 12–23–58, Cl. 312—35.
Smith, Raymond: *See*—
Hagar, James J., Hodge, and Smith. 2,865,740.
Smith, Raymond, and C. O. Tarr, to United States Steel Corp. Acid resistant austenitic stainless steel. 2,865,741, 12–23–58, Cl. 75—128.
Smith, T. L., Co., The: *See*—
Masek, John A. 2,865,616.
Smith, William J., to S & S Vending Machine Co. Vending machine. 2,865,532, 12–23–58, Cl. 221—13.
Soave, Marco. Work holding attachment for grinders. 2,865,149, 12–23–58, Cl. 51—217.
Sochor, John J. Process for treating gas containing fluid. 2,865,470, 12–23–58, Cl. 183—114.5.
Societa Finanziaria Siderurgica Finsider S. p. A.: *See*—
Carli, Adriano. 2,865,723.
Societe Anonyme Francaise du Ferodo: *See*—
Maurice, Jean, and Riet. 2,865,480.
Societe de la Pile Leclanche: *See*—
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Moyna, Jules. 2,865,977.
Societe des Usines Chimiques Rhone-Poulenc: *See*—
Metivier, Jean, and Boesch. 2,865,930.
Societe d'Inventions Aeronautiques et Mecaniques S. I. A. M.: *See*—
Lucien, Rene. 2,865,087.
Societe Nationale d'Etudes et de Construction de Moteurs d'Aviation: *See*—
Kadosch, Marcel. 2,865,170.
Socony Mobil Oil Co., Inc.: *See*—
Presley, Jerry W. 2,865,204.
Ramella, Amilcare. 2,865,848.
Solar Aircraft Co.: *See*—
Kress, Ralph. 2,865,165.
Soper, Glenn T.: *See*—
Ensign, George G., Soper, and Lundahl. 2,865,165.
Sorenson, Dean L. Traction tube. 2,865,367, 12–23–58, Cl. 128—71.
Soss Mfg. Co.: *See*—
Miller, Calvin K. 2,865,045.
Spangenberg, Alfred L., to Stephens-Adamson Mfg. Co. Connecting link. 2,865,515, 12–23–58, Cl. 212—208.
Sparrow, Hubert T., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,865,610, 12–23–58, Cl. 237—3.
Spasaro, Salvatore J. Window construction. 2,865,065, 12–23–58, Cl. 20—62.
Spears, Harry E.: *See*—
Watson, Donald C., Spears, and Beare. 2,865,640.
Specialties Development Corp.: *See*—
Dennis, David H. 2,865,456.
Hebenstreit, Lester V. 2,866,058.
Schrank, George I. 2,865,392.
Spencer, Warren V.: *See*—
Dinsmore, Robert L., and Spencer. 2,865,708.
Sperry Rand Corp.: *See*—
Brubacher, Joseph G. 2,865,507.
Clement, Warren F., and Zupanick. 2,865,627.
Eckert, John P., Jr. 2,866,105.
Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Weiss, Marvin. 2,866,016.
Sperer, Anthony G., to Libbey-Owens-Ford Glass Co. Spray nozzle for use in bedding glass plates or grinding and polishing. 2,865,676, 12–23–58, Cl. 299—153.
Sprague Electric Co.: *See*—
Peck, David E. 2,866,037.
Ross, Sidney D. 2,866,139.
Springfield Boiler Co.: *See*—
Rehm, Gustav A. 2,865,342.
Rehm, Gustav A. 2,865,343.
Sprouse, Norbert L. Weatherproof storage cabinet. 2,865,520, 12–23–58, Cl. 220—24.
Sprout, Waldron & Co., Inc.: *See*—
Fisher, Chester D. 2,865,210.
Fisher, Chester D., and Marechal. 2,865,521.
Sprow, James H.: *See*—
Stuellein, William H., and Sprow. 2,866,047.
Spugies, Aristos G. Artificial bait with air passageway. 2,865,129, 12–23–58, Cl. 43—42.06.
Sroog, Cyrus E.: *See*—
Isard, Emmette F., and Sroog. 2,865,802.
Staiger, Kurt, to Stewart-Warner Corp. Pneumatically operated valve. 2,865,593, 12–23–58, Cl. 251—30.
Staley, Wilbur R. High chair tray having plate-anchoring means. 2,865,697, 12–23–58, Cl. 311—103.
Stallard, Ralph M., to General Motors Corp. Solenoid operated air valve. 2,865,400, 12–23–58, Cl. 137—623.
Standard Oil Co. (Indiana): *See*—
Slaughter, John I. 2,865,615.
Stanhope, John E., and W. H. Pastnold, Jr., to National Vendors, Inc. Vending machine pull rod ejector mechanism. 2,865,228, 12–23–58, Cl. 74—565.
Stansbury, Harry A., Jr., and H. R. Guest, to Union Carbide Corp. Ethyl-2-chloro-2-hydroxy-3-butenoate. 2,865,952, 12–23–58, Cl. 260—484.
Stark, David J., to National Petro-Chemicals Corp. Apparatus for concentration of liquid solutions. 2,865,920, 12–23–58, Cl. 23—276.
Stastny, Fritz, to Badische Anilin- & Soda-Fabrik Akt. Process of forming shaped articles of porous styrene polymers having impact-resistant surfaces. 2,865,900, 12–23–58, Cl. 154—110.
Stauch, Johanna E. V. N.: *See*—
Pieper, Josef H. F., and Stauch. 2,865,595.
Stavis, Gus, and J. S. Begel, to International Telephone and Telegraph Corp. Omnidirectional beacon antenna. 2,866,194, 12–23–58, Cl. 343—725.
Steel Slides, Inc.: *See*—
Meyer, William G., Fischer, and Hahner. 2,865,634.
Steele, Floyd G., to Digital Control Systems, Inc. Computer read-out system. 2,866,177, 12–23–58, Cl. 340—174.
Steele, Harry M., Jr.: *See*—
Zillman, Jack H., and Steele. 2,865,168.
Steele, Howard L., Jr., to Westinghouse Electric Corp. Cyclic microwave switching tube. 2,866,164, 12–23–58, Cl. 333—1.
Stefanye, David, and J. N. Dews. Method and apparatus for the assay of viable microorganisms. 2,865,816, 12–23–58, Cl. 195—103.5.
Stein, George A., to A. O. Smith Corp. Apparatus for applying coating material to articles. 2,865,324, 12–23–58, Cl. 118—626.
Steinberg, Meyer: *See*—
Rebell, John, Steinberg, and Jones. 2,865,714.
Steiner, Theodore O. Insulated fastener for electric fences. 2,865,609, 12–23–58, Cl. 256—10.
Steitz, Alfred, Jr.: *See*—
Garetson, Paul K., and Steitz. 2,865,963.
Stephens-Adamson Mfg. Co.: *See*—
Spangenberg, Alfred L. 2,865,515.
Stephens, John A., to Monsanto Chemical Co. Halogenated-2-phenylsalicylanilides. 2,865,861, 12–23–58, Cl. 252—107.
Sterling Drug Inc.: *See*—
Bolen, Chester H. 2,865,025.
Bezuck, Solomon. 2,865,524.
Thompson, James F. 2,865,771.
Sternbergh, Nelon A., to West Shore Mfg. Co. Liquid mixing and proportioning device. 2,865,288, 12–23–58, Cl. 137—101.17.
Sterr, William R.: *See*—
Hyman, Joseph B., and Sterr. 2,865,575.
Stevens, Louis D.: *See*—
Haanstra, John W., Stevens, Noyes, and Johnson. 2,866,170.
Stevens, Marcus A.: *See*—
Fields, Melvin, and Stevens. 2,865,928.
Stewart, Bruce D., to McKiernan-Terry Corp. Calender for web material. 2,865,118, 12–23–58, Cl. 38—52.
Stewart, Charles L., to Keyes Fibre Co. Molded pulp container with tear strip. 2,865,548, 12–23–58, Cl. 229—2.5.
Stewart, Hugh B., to United States of America, Atomic Energy Commission. Neutronic reactor. 2,865,826, 12–23–58, Cl. 204—193.2.
Stewart, Meredith M.: *See*—
Franke, Norman W., and Stewart. 2,865,836.
Stewart, Richard F.: *See*—
Jones, Morton E., Jackson, and Stewart. 2,866,140.
Stewart, Vincent N., to General Electric Co. Electric current limiting fuse. 2,866,037, 12–23–58, Cl. 200—120.
Stewart-Warner Corp.: *See*—
Staiger, Kurt. 2,865,593.
Stieber, Joseph A.: *See*—
Hatton, Harold L., Stieber, and Toothill. 2,865,577.
Toothill, Frederick W., Jr., Stieber, and Hatton. 2,865,578.
Stiles, Alan R., and R. R. Whetstone, to Shell Development Co. Complex amido-substituted esters of beta-phosphato-alpha, beta-olefinically unsaturated monocarboxylic acids. 2,865,944, 12–23–58, Cl. 260—461.
Stodola, Frank H.: *See*—
Lindenfelser, Lloyd A., Benedict, Shotwell, Pridham, Stodola, and Jackson. 2,865,815.
Stoffel, Paul J.: *See*—
Beaver, David J., and Stoffel. 2,865,929.
Stoffer, Lewis J. Method of forming dry compressed compact sponge unit. 2,865,283, 12–23–58, Cl. 100—40.
Stöhr, Christian. Hair curler assembly. 2,865,361, 12–23–58, Cl. 132—40.
Stokes, F. J., Corp.: *See*—
Strauss, William. 2,865,050.
Stone, Orison W., to Lauhter Corp. Boxboard container. 2,865,555, 12–23–58, Cl. 229—51.
Stoner, Charles W.: *See*—
Anderson, Leland J., and Stoner. 2,865,181.
Straley, James M., and J. G. Fisher, to Eastman Kodak Co. Benzothiazole azo phenol compounds and materials dyed therewith. 2,865,900, 12–23–58, Cl. 260—146.
Strand, Clifford A., to The International Paper Box Machine Co. Apparatus for making glued corrugated cartons. 2,865,263, 12–23–58, Cl. 93—51.
Strange, John W., D. T. Waigh, and W. R. Bleasdge, to Thorn Electrical Industries Ltd. Electric lamp circuit. 2,866,133, 12–23–58, Cl. 315—95.
Strassburg, Roger W., to The B. F. Goodrich Co. Compositions and methods for making the same. 2,865,778, 12–23–58, Cl. 106—288.
Strassburg, Roger W., to The B. F. Goodrich Co. Method for preparing compounds comprising silicon and oxygen. 2,865,782, 12–23–58, Cl. 106—308.
Strassburg, Roger W., to The B. F. Goodrich Co. Elastomeric compositions having silica-containing reinforcing pigment. 2,865,882, 12–23–58, Cl. 260—41.5.
Strauss, William, to F. J. Stokes Corp. Valved gate for an injection molding press. 2,865,050, 12–23–58, Cl. 18—30.
Streich, Paul B., Sr., and J. Hruby, to Charles Bruning Co., Inc. Rotary image transfer machine. 2,865,287, 12–23–58, Cl. 101—132.5.
Stricker, Charles D.: *See*—
Harris, Arch W., and Stricker. 2,865,833.
Stuellein, William H., and J. H. Sprow, to Westinghouse Electric Corp. Means for conducting current between relatively movable members. 2,866,047, 12–23–58, Cl. 200—166.

Stummeyer, Herbert: *See*—
Pohlemann, Heinz, Schroeder, Stummeyer, and Adolphi. 2,865,912.
Suchter, Wilma V., to H. Nick. Clamp for securing a hose to a nozzle or coupling. 2,865,070, 12–23–58, Cl. 24—28.
Suiser Freres, S. A.: *See*—
Pfarrwaller, Erwin. 2,865,405.
Pfarrwaller, Erwin. 2,865,406.
Sun Oil Co.: *See*—
Hirschler, Alfred E., and Janoski. 2,865,842.
Hirschler, Alfred E., and Janoski. 2,865,843.
Mills, Ivor W. 2,865,838.
Thomas, Charles L. 2,865,970.
Super Mold Corp. of California: *See*—
Duerksen, Arnold. 2,865,040.
Supardisplay Inc.: *See*—
Newman, Frederick H., Jr. 2,865,538.
Sussman, Harry: *See*—
Vogel, Charles A., and Sawicki. 2,865,632.
Sutherland, Alan J.: *See*—
Ockrent, Charles, Skrimshire, and Sutherland. 2,865,865.
Svenska Aktiebolaget Gasaccumulator: *See*—
Averelen, Karl J. 2,866,076.
Swan, Robert: *See*—
Finnegan, Thomas J. 2,865,127.
Swank, Everett R. Writing instrument. 2,865,330, 12–23–58, Cl. 120—17.
Sweet, Walter J., to Hercules Powder Co. Method of reducing BOD of starch bearing effluent by addition of substituted cellulose to effluent. 2,865,854, 12–23–58, Cl. 210—59.
Swenson, Kurt L., to Aktiebolaget Gotaverken. Apparatus for the estimation of the distribution of the cargo in a ship. 2,865,566, 12–23–58, Cl. 235—61.
Swift & Co.: *See*—
Bremer, Joseph W., Jr., and Hilfman. 2,865,760.
Weiss, Theodore J., Wiedermann, and Jacobson. 2,865,759.
Swing-A-Way Mfg. Co.: *See*—
Moore, Walter E. 2,865,148.
Swint, Albert G., Jr.: *See*—
Thompson, Wallace M., Swint, and Little. 2,865,284.
Sylvania Electric Products Inc.: *See*—
Anderson, Lester F., Bennett, and Wellendorf. 2,865,186.
Burroughs, William W. 2,866,085.
Eldredge, Earle E., and Jordan. 2,865,994.
Gates, Paul E. 2,865,062.
Mager, Eric L. 2,866,118.
Mooney, Richard W. 2,865,862.
Wagner, Howard A., and Anderson. 2,866,171.
Take, Percival H. Tack welding electrode holder. 2,866,081, 12–23–58, Cl. 219—138.
Talsma, William. Packaging fixture. 2,865,157, 12–23–58, Cl. 53—261.
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Miskel, John J., and Tancredi. 2,865,372.
Tannenbaum, Wesley, J. F. Cleary, E. Hudes, and A. L. Goldstein, to Avco Mfg. Corp. Means for and method of driving tape. 2,865,631, 12–23–58, Cl. 271—2.3.
Tan-Sad Chair Co. (1931) Ltd., The: *See*—
Thompson, Stanley H. A. 2,865,429.
Taplin, John F.: *See*—
Poitras, Edward J., and Taplin. 2,865,207.
Tarara, Stephen, and P. E. Oberg. Coil winder. 2,865,573, 12–23–58, Cl. 242—4.
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Tauschek, Max J.: *See*—
Newton, John A., and Tauschek. 2,865,359.
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Lee, Herbert T., and Taylor. 2,865,761.
Taylor, Eugene V. Tablet dispenser. 2,865,533, 12–23–58, Cl. 221—199.
Teale, Robert R., to National Gypsum Co. Plaster retarder and method of making same. 2,865,905, 12–23–58, Cl. 260—123.7.
Technicolor Corp.: *See*—
Kelly, Donald H. 2,865,245.
Technicon Instruments Corp.: *See*—
Ferrari, Andrea, Jr., and Isreeli. 2,865,808.
Tele-Dynamics Inc.: *See*—
Rosen, Charles, and Weidknecht. 2,866,162.
Teletype Corp.: *See*—
Biggam, Frank D. 2,866,104.
Byrnes, William P. 2,865,995.
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Hansen, Theodore A. 2,865,996.
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Temprite Products Corp.: *See*—
Schultz, Wilfred R. 2,865,182.
Testa, Emilio, to Lepetit, S. p. A. Process for the manufacture of compound epi-P. 2,865,813, 12–23–58, Cl. 195—51.
Texas Co., The: *See*—
Beavon, David K. 2,865,971.
Davies, James A. 2,865,852.
Eastman, Du Bois, Dille, and Chapman. 2,865,864.
Itria, Oswald A. 2,865,462.
Widmyer, Richard H. 2,865,453.
Texas Instruments Inc.: *See*—
Jones, Morton E., Jackson, and Stewart. 2,866,140.
Textile Engineering Corp.: *See*—
Cotchett, Louis M., and Butler. 2,865,057.
Textile Machinery Exchange Inc.: *See*—
Hope, Orville L. 2,865,162.
Textron Inc.: *See*—
Dickie, John A. 2,865,173.
Thamme, Eric P. Sand washing and sifting machine. 2,865,503, 12–23–58, Cl. 209—17.
Thiel, Max: *See*—
Asinger, Friedrich, Thiel, Haltwasser, and Reckling. 2,865,924.
Thielen, Lawrence E.: *See*—
Dornfeld, Clinton A., and Thielen. 2,865,964.
Thielens, Emil H., to Servo Corp. of America. Infrared achromat lens. 2,865,253, 12–23–58, Cl. 88—57.
Thiemann, Albert. Fire alarm devices. 2,865,320, 12–23–58, Cl. 116—106.
Thomas, Benjamin P.: *See*—
McKinley, Joseph B., Thomas, and Derrig. 2,865,868.
Thomas, Charles L., to Sun Oil Co. Separation of hydrocarbons. 2,865,970, 12–23–58, Cl. 260—676.
Thomas, Eugene P.: *See*—
Wagner, Robert J., and Thomas. 2,866,101.
Thomas, Thomas R., to Anto Research Corp. Lubrication. 2,865,301, 12–23–58, Cl. 103—117.
Thompson, Earl A. Tappet Construction. 2,865,352, 12–23–58, Cl. 123—90.
Thompson, Edna W.: *See*—
Thompson, James F. 2,865,771.
Thompson, James F., deceased; E. W. Thompson, executrix, to Sterling Drug Inc. Bronne-resistant compositions comprising tetrabromofluorescein lead salt and preparation thereof. 2,865,771, 12–23–58, Cl. 106—23.
Thompson, John W.: *See*—
Lappin, Gerald R., and Thompson. 2,865,723.
Thompson Products, Inc.: *See*—
Cliborn, Robert, and Nordquest. 2,865,297.
Murray, John P. 2,865,302.
Newton, John A., and Tauschek. 2,865,358.
Sampietro, Achilles C. 2,865,352.
Thompson, Stanley G.: *See*—
James, Ralph A., and Thompson. 2,865,705.
Thompson, Stanley H. A., to The Tan-Sad Chair Co. (1931) Ltd. Rotatable oscillatory seats for association with pedal operated machinery. 2,865,429, 12–23–58, Cl. 155—81.
Thompson, Wallace M., A. G. Swint, Jr., and W. C. Little, to Harris Foundry & Machine Co. Baling press. 2,865,284, 12–23–58, Cl. 100—232.
Thorn Electrical Industries Ltd.: *See*—
Mash, Derek E. 2,866,182.
Ranby, Peter W. 2,866,116.
Strange, John W., Waigh, and Bloxsidge. 2,866,123.
Thornburg, Herbert W.: *See*—
Hudson, Tom N., Thornburg, and Haisch. 2,865,602.
Thorne, Maurice A., to General Motors Corp. Seat. 2,865,436, 12–23–58, Cl. 155—184.
Thorne, Richard S. W., to Jorgensen's, Alfred, gaeringsfysiologiske Laboratorium. Reducing the tendency of beer towards gushing and increasing its foam stability. 2,865,755, 12–23–58, Cl. 99—48.
Thürlings, Hermann, to Hanselin-Werke Albert Henkel Akt. Candy making machine. 2,865,311, 12–23–58, Cl. 107—8.
Tilden, Carl V. Drill bit. 2,865,607, 12–23–58, Cl. 255—63.
Time, Inc.: *See*—
Mee, William W. 2,865,984.
Timmerbeil, Helmut, H. Querengasser, and W. Krauss, to Knorr-Bremse G. m. b. H. Processes for reducing the sulphur content in iron and for economizing in coke in cupola furnaces. 2,865,785, 12–23–58, Cl. 75—55.
Tingley Rubber Corp.: *See*—
Le Compte, Frank M. 2,865,634.
Todd, James W., to National Industrial Products Co. Cold water dispersible starch and process of preparing it. 2,865,775, 12–23–58, Cl. 106—213.
Toggenburger, John, to Underwood Corp. Proportional letter feed mechanism. 2,865,488, 12–23–58, Cl. 197—84.
Toland, William G., to California Research Corp. Chlorination of aromatic carboxylic acid esters. 2,865,959, 12–23–58, Cl. 260—544.
Toothill, Frederick W., Jr.: *See*—
Hatton, Harold L., Stieber, and Toothill. 2,865,877.
Toothill, Frederick W., Jr., J. A. Stieber, and H. L. Hatton, to Rohm & Haas Co. Aqueous coating compositions, articles coated therewith, and methods for producing them. 2,865,878, 12–23–58, Cl. 260—29.6.
Totsek, Friedrich, and J. Daniels, to Koppers Co., Inc. Method for heat treatment of finely divided solid media. 2,865,820, 12–23–58, Cl. 202—106.
Towler, James F., to I. D. E. A. Inc. Television receiver remote control system. 2,865,990, 12–23–58, Cl. 178—7.2.
Townsend, Paul V., to Recreation Equipment Corp. Basketball backboard suspension. 2,865,634, 12–23–58, Cl. 273—1.5.
Trad Television Corp.: *See*—
Riener, Joseph. 2,865,981.
Trainer, Richard P.: *See*—
Van Dyke, Ross E., and Trainer. 2,865,667.
Traughber, Charles W., Jr. Top cylinder and valve lubricator. 2,865,262, 12–23–58, Cl. 123—196.
Tregay, John L.: *See*—
Fowlie, Wallace R., Tregay, and Du Bois. 2,865,209.
Trent, Inc.: *See*—
Fisher, George E. 2,866,062.
Trevoy, Donald J., to Eastman Kodak Co. Photomechanical reproduction. 2,865,750, 12–23–58, Cl. 96—36.
Trio Mfg. Co.: *See*—
Guernsey, John F. 2,866,194.
Trybinski, Victor, Jr.: *See*—
Schroer, Walter E., Trybinski, and Walling. 2,865,877.

Tachirf, Ludwig, and F. Gärtner. Hardness testing apparatus. 2,865,196, 12–23–58, Cl. 73—81.
Teumeh Corp. Ltd.: *See*—
Bechaud, Leslie J., Jr., and Maloumoff. 2,865,712.
Tullemens, Andre P., to Hoffman Electronics Corp. Symmetrical to asymmetrical signal conversion circuit. 2,866,094, 12–23–58, Cl. 250—27.
Tung-Sol Electric Inc.: *See*—
Shollett, Albert M. 2,866,126.
Turco Products, Inc.: *See*—
Jackson, Clark E. 2,865,587.
Langsfeld, William P. 2,865,125.
Turik, Andrew, to E. I. du Pont de Nemours and Co. Film coating process and apparatus. 2,865,786, 12–23–58, Cl. 117—67.
Tursky, Charles M. Hydraulic pressure booster motor. 2,865,294, 12–23–58, Cl. 103—57.
Underwood Corp.: *See*—
Hildebrandt, William J. 2,865,487.
Toggenburger, John. 2,865,488.
Underwood, Francis O.: *See*—
Durfee, Benjamin M., Miller, and Underwood. 2,866,176.
Unicorn Engineering Corporation: *See*—
Enkelmann, Walter. 2,865,630.
Union Carbide Corp.: *See*—
Gore, Robert A. 2,865,767.
Mats, Kenneth R. 2,866,112.
Stansbury, Harry A., Jr. 2,865,952.
United Aircraft Corp.: *See*—
Blackman, Arthur W., Jr., and Lewis. 2,865,174.
Hausmann, George F. 2,865,109.
Quermann, Thomas R. 2,865,208.
St. John, Harry M., Jr. 2,865,460.
Worobel, John. 2,865,167.
United Air Lines, Inc.: *See*—
Gilbert, Richard R. 2,865,100.
United Kingdom Atomic Energy Authority: *See*—
Long, Everett, and Greenhalgh. 2,865,828.
United States Automatic Box Machinery Co.: *See*—
Fradenburgh, John. 2,865,262.
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Agriculture: *See*—
Hesseltine, Clifford W., and Anderson. 2,865,814.
Lindenfelser, Lloyd A., Benedict, Shotwell, Pridham, Stodola, and Jackson. 2,865,815.
Mack, Charles H., and Bickford. 2,865,931.
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Anscher, Bernard. 2,865,502.
Kramer, David N. 2,865,719.
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Bellas, Hugh W., and Lyon. 2,865,829.
Blanco, Raymond E., and Morrison. 2,865,737.
Dwyer, Orrington E. 2,865,827.
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James, Ralph A., and Thompson. 2,865,705.
Pitzer, Edgar C. 2,865,832.
Seaborg, Glenn T., Oriesmann, and Jensen. 2,865,703.
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Watt, Dudley A. 2,865,291.
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Mosesson, Meriand L. 2,865,598.
United States Rubber Co.: *See*—
Constantakis, George V. 2,865,084.
Cunningham, Marion M. 2,865,419.
Renaud, Bruce J. 2,865,423.
United States Steel Corp.: *See*—
Ballentine, William L., Jr., and Peniason. 2,866,078.
Chenault, Roy L. 2,865,297.
Harris, Arch W., and Stricker. 2,865,823.
Heger, James J., Hodge, and Smith. 2,865,740.
Lamb, Benjamin S. 2,865,204.
Smith, Raymond, and Tarr. 2,865,741.
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Universal Oil Products Co.: *See*—
Hoekstra, James. 2,865,841.
Hoekstra, James. 2,865,866.
University of Pennsylvania, The Trustees of the: *See*—
Forbes, Martin, György, and Zilliken. 2,865,809.
Unruh, Cornelius C., and D. A. Smith, to Eastman Kodak Co. Hydrolysis copolymers of vinyl acetate and unsaturated carbamates. 2,865,893, 12–23–58, Cl. 260—77.5.
Upjohn Co., The: *See*—
Birtenmeyer, Robert D., and Helmelman. 2,865,951.
Schneider, William P., Lincoln, and Hogg. 2,865,935.
Schneider, William P., Nathan, and Hogg. 2,865,914.
VEB Carl Zeiss Jena: *See*—
Wagner, Kurt. 2,865,250.
VEB Druckmaschinenwerk Victoria: *See*—
Kaldschmidt, Georg. 2,865,288.
VEB Leuna-Werke "Walter Ulbricht": *See*—
Asinger, Friedrich, Thiel, Kaltwasser, and Reckling. 2,865,924.
Van Allan, James A., to Eastman Kodak Co. Stabilized photographic emulsions. 2,865,749, 12–23–58, Cl. 96—67.
Vance, Arthur W., to Radio Corp. of America. Step multiplier. 2,865,565, 12–23–58, Cl. 235—61.
Vandeputte, John: *See*—
Dutcher, James D., and Vandeputte. 2,865,807.
Van Der Sluys, William: *See*—
Bock, George E., Gutridge, and Van Der Sluys. 2,865,306.
Van Dyke, Arthur W., to Diamond Gardner Corp. Molded pulp carton. 2,865,547, 12–23–58, Cl. 229—2.5.
Van Dyke, Ross E., and R. P. Trainer, to Shell Development Co. Solid contact material. 2,865,897, 12–23–58, Cl. 252—455.
Van Loon, Mintje, and G. Verberg, to Shell Development Co. Electrical insulating oils and method for producing them. 2,865,849, 12–23–58, Cl. 208—211.
Van Pappelendam, Carl A. Method of fabricating structural sandwiches. 2,866,075, 12–23–58, Cl. 219—83.
Vapor Heating Corp.: *See*—
Parks, William W., and Peterson. 2,866,070.
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Verberg, Govert: *See*—
Van Loon, Mintje, and Verberg. 2,865,849.
Verley, Guy M., to Sinclair Refining Co. Process of preparing sulfurized-phosphorus sulfide-olefin lubricant additive. 2,865,907, 12–23–58, Cl. 260—139.
Versteeg, John. Flushable tooth brush. 2,865,035, 12–23–58, Cl. 15—128.
Vertol Aircraft Corp.: *See*—
Lemont, Harold E., Jr. 2,865,688.
Vifot, Stig O.: *See*—
Heth, Sherman C., Joswik, and Vifot. 2,865,461.
Vincent, Renic P., to Pan American Petroleum Corp. Gas lift apparatus. 2,865,305, 12–23–58, Cl. 103—232.
Vitro Corp. of America: *See*—
Raynsford, Charles K. 2,866,092.
Vogel, Arnold: *See*—
Jucker, Ernst, Vogel, and Rissi. 2,865,922.
Vogel, Charles A., and M. Sawicki, to Harry Sussman, and Stanley Rosenberg. Speed changer for magnetic tape recorder. 2,865,632, 12–23–58, Cl. 271—2.2.
Voigtlander Akt.: *See*—
Meixner, Alfred, and Grashoff. 2,865,273.
Vollmer-Werke Maschinenfabrik Gesellschaft mit Beschrankter Haftung: *See*—
Kaiser, Richard. 2,865,234.
Vollrath, Harry C., Jr., and R. E. Comer; said Vollrath assor. to said Comer. Innersole lining for shoes. 2,865,097, 12–23–58, Cl. 30—42.
Vollrath, Richard, to Victor Balata & Textile Belting Co. Corrugator double-backer blanket. 2,865,408, 12–23–58, Cl. 139—408.
Von Arx, P., & Co. A. G.: *See*—
Von Arx, Paul. 2,865,321.
Von Arx, Paul, to P. von Arx, & Co. A. G. Device for metal coating pipelines, particularly pipelines of power stations. 2,865,321, 12–23–58, Cl. 118—306.
Von Tesmar, Charles H.: *See*—
Renner, John, Von Tesmar, and Williams. 2,865,833.
Vredenburg-Ingleaby, Julius C.: *See*—
Cookson, William. 2,865,312.
Vroom, Edward: *See*—
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Wacht, Andrew J. Press. 2,865,208, 12–23–58, Cl. 74—25.
Wacht, Andrew J. Toggle press. 2,865,235, 12–23–58, Cl. 100—272.
Wacker-Chemie G. m. b. H.: *See*—
Ascherl, Alfons, Buttner, and Enk. 2,865,955.
Wadsworth, Francis T.: *See*—
May, Paul D., Ridgway, and Wadsworth. 2,865,965.
Wagner, Howard A., and P. E. Anderson, to Sylvania Electric Products Inc. Tube socket. 2,866,171, 12–23–58, Cl. 339—193.
Wagner, Jan K.: *See*—
Krupp, Robert F., and Wagner. 2,865,490.
Wagner, Kurt, to VEB Carl Zeiss Jena. Eyepiece for binocular instruments. 2,865,250, 12–23–58, Cl. 88—34.
Wagner, Robert J., and E. P. Thomas, to Westinghouse Electric Corp. X-ray apparatus. 2,866,101, 12–23–58, Cl. 250—91.
Waigh, Douglas T.: *See*—
Strange, John W., Waigh, and Bloxsidge. 2,866,133.
Wainer, Eugene, to The Sinclair Mfg. Co. (H. M. Sinclair, Jr., trustee). Production of finely divided calcium carbonate. 2,865,781, 12–23–58, Cl. 106—306.
Wakeman, Alden H., to The Creamery Package Mfg. Co. Bottle-filling apparatus. 2,865,158, 12–23–58, Cl. 53—281.
Walker, Cyril H., and M. G. Clarke, to The British Thomson-Houston Co. Ltd. Electroluminescent panel. 2,866,117, 12–23–58, Cl. 313—108.
Walker, James H., to California Research Corp. Acid-neutralizing lubricating oil compositions. 2,865,857, 12–23–58, Cl. 252—33.
Wallace, Frank J., and A. K. Chilton; said Wallace assor. to said Chilton. Brick supporting clip. 2,865,194, 12–23–58, Cl. 72—103.
Walling, Irvin H.: *See*—
Schroer, Walter E., Trybinski, and Walling. 2,865,377.
Walsh, Helen. Dielectric telescoping bucket. 2,865,421, 12–23–58, Cl. 150—48.
Walsh, Thomas G., to General Telephone Laboratories, Inc. Automatic toll ticketing system. 2,866,003, 12–23–58, Cl. 179—18.
Walsh, Thomas G., to General Telephone Laboratories, Inc. Testing apparatus for calling line identifiers. 2,866,008, 12–23–58, Cl. 179—27.
Warnecke, Robert L., to Roberts-Gordon Appliance Corp. Combination gaseous and liquid fuel burner. 2,865,440, 12–23–58, Cl. 158—11.
Warner, C. S., Corp.: *See*—
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Warner, Clarence S., to C. S. Warner Corp. Folding opera glass spectacles. 2,865,251, 12–23–58, Cl. 88—41.
Warner, Stuart T. Combination stadium seat and article carrier. 2,865,433, 12–23–58, Cl. 155—133.
Warren Petroleum Corp., Inc.: *See*—
Murphy, Clarence R. 2,865,822.
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D45— 4: Des. 184,117
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D53— 1: Des. 184,132
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D55— 1: Des. 184,188
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D58— 9: Des. 184,129
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D61— 1: Des. 184,130
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TRADEMARKS

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the post office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancellation will be proceeded with as in the case of default.

D. C. Lee, Inc., Thomasville, Fla., Reg. No. 573,222, Canc. No. 7,154.

All-Bright Electric Products Company, Chicago, Ill., Reg. No. 444,803, Canc. No. 7,158.

Anne Lucas, Chicago, Ill., Reg. No. 412,818, Canc. No. 7,164.

Anitra Inc., New York, N. Y., Reg. No. 392,274, Canc. No. 7,165.

Simons and Heiden, Chicago, Ill., Reg. No. 408,205, Canc. No. 7,180.

Academy Award Products, Inc., New York, N. Y., Reg. No. 441,632, Canc. No. 7,182.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U. S. C. 1116; Trademark Act of July 5, 1946

Reg. No. 75,985 (ALLIGATOR BRAND AND DESIGN), The Alligator Co., Oiled clothing; Reg. No. 281,291 (ALLIGATOR), same, Fabric coats, jackets, pants, hats, etc. for men, women, and children, etc., filed Oct. 28, 1958, D. C., S. D. N. Y., Doc. 129/152, *Alligator Co. et al.* v. *Fred Found Co., Inc. et al.*

Reg. No. 95,516 (ROCK OF AGES AND DESIGN), Rock of Ages Corp., Granite blocks and monumental stones; Reg. No. 284,682, same; Reg. No. 284,683, same, Polished blocks or slabs of granite, etc.; Reg. No. 661,890, same, Granite surface plates; Reg. No. 661,895 (ROCK OF AGES), same, Granite monuments and memorials, filed Sept. 30, 1958, D. C., S. D. N. Y., Doc. 138/177, *Rock of Ages Corp.* v. *Dominic De Nigris, Inc.* Consent judgment; defendant enjoined Nov. 3, 1958.

Reg. No. 143,888 (WINCHESTER), Winchester Repeating Arms Co., Firearms and ammunition; Reg. No. 294,234 (WESTERN), Western Cartridge Co., Shot shells, gun wads, rifle cartridges, etc., filed Oct. 28, 1958, D. C., S. D. Iowa (Des Moines), Doc. 4/920, *Olin Mathieson Chemical Corp.* v. *Robinson Wholesale Co.*

Reg. No. 144,784. (See Reg. No. 285,253.)

Reg. No. 176,468 (ESSO), Standard Oil Co. (New Jersey), Refined, semirefined and unrefined petroleum oils, etc.; Reg. No. 669,768 (ESSO DESIGN FOR RED AND WHITE GAS PUMP), Esso Standard Oil Co., Gasoline, filed Oct. 28, 1957, D. C., W. D. S. C. (Greenville), Doc. 2221, *Esso Standard Oil Co.* v. *Parkman's Truck Stop.* Order of dismissal Nov. 3, 1958.

Reg. No. 300,834 (HEET AND DESIGN), Edward Wesley & Co., Liniment, filed Nov. 5, 1958, D. C., W. D. N. Y. (Buffalo), Doc. 3056, *American Home Products Corp.* v. *Mentholatum Co.*

Reg. No. 234,574. (See Reg. No. 142,252.)

Reg. No. 281,291. (See Reg. No. 75,985.)

Reg. No. 281,291(c) (ALLIGATOR), The Alligator Co., Fabric coats, jackets, pants, hats, etc. for men, women and children, etc., filed Nov. 5, 1958, D. C., S. D. N. Y., Doc. 139/305, *The Alligator Co. et al.* v. *Cluett, Peabody & Co., Inc. et al.*

Reg. No. 284,686. (See Reg. No. 95,516.)

CONDITION OF TRADEMARK APPLICATIONS AS OF OCTOBER 31, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,019
Date of oldest new application	March 10, 1958
Date of oldest amended application	July 2, 1958

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 28, 31, 32, 34, 35, 36, 50	4-15-58	7-7-58
(II) R. F. SHERYOCK, Classes 6, 18, 27, 29, 30, 38, 44, 45, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 108, 107; Collective Membership Marks Class 200	8-19-58	7-3-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 26, 37, 39, 40, 41, 42, 43, 44, 47, 48, 49, 52; and Certification Marks	4-15-58	7-8-58
Renewals (All Classes)	10-3-58	10-27-58
Sec. 12 (c) Publications (All Classes)	10-13-58	10-27-58

Applications Filed During the Month of October 1958—1,888

Registrations Issued	285—No. 671,358 to No. 671,642
Renewals Issued	67

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.50 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

Reg. No. 266,269 ("THE WORTHMORE SHOE" ETC. AND DESIGN), Florsheim Shoe Co., Boots and shoes made wholly or partly of leather; **Reg. No. 280,695**, same; **Reg. No. 283,078**, same; **Reg. No. 144,764** (DESIGN OF A SHIELD AND LETTER "F" INSCRIBED), same; **Reg. No. 286,341** (DESIGN OF A SHIELD), same, filed Oct. 14, 1958, D. C. Md. (Baltimore), Doc. 10960, *The Florsheim Shoe Co. v. Shoe Fair, Inc.*

Reg. No. 346,889 (SAFWAY), Uecker Equipment Co., republished by Safway Steel Products, Inc., Ladders and scaffold equipment, filed July 10, 1958, D. C., N. D. Ill. (Chicago), Doc. 58c1268, *Safway Steel Products, Inc. v. Safway Steel Scaffold Co. of Illinois.* Notice of dismissal Oct. 23, 1958.

Reg. No. 286,791 (E-Z-CUT), John Morrell & Co., Hams, filed Nov. 6, 1956, D. C., N. D. Ill. (Chicago), Doc. 58c1965, *John Morrell & Co. v. Reliable Packing Co.*

Reg. No. 280,888 (SHOVEL), Rambusch Decorating Co., Reflectors for light projectors, filed Nov. 12, 1956, D. C., E. D. N. Y. (Brooklyn), Doc. 19192, *Rambusch Decorating Co. v. McPhillip Mfg. Co., Inc.*

Reg. No. 280,341. (See Reg. No. 295,253.)

Reg. No. 280,666. (See Reg. No. 295,253.)

Reg. No. 285,078. (See Reg. No. 295,253.)

Reg. No. 545,734 (ACRILAN), The Chemstrand Corp., Yarns, threads, and yarn and thread filaments; **Reg. No. 560,881** (ACRILAN AND DESIGN), same; **Reg. No. 629,943** (CHEMSTRAND), same, filed Oct. 5, 1956, D. C., S. D. N. Y., Doc. 130/273, *The Chemstrand Corp. v. Perfect Fit Products Mfg. Co., Inc.*

Reg. No. 560,656. (See Reg. No. 642,423.)

Reg. No. 562,861. (See Reg. No. 545,734.)

Reg. No. 629,769. (See Reg. No. 176,408.)

Reg. No. 619,662. (See Reg. No. 629,046.)

Reg. No. 641,254. (See Reg. No. 95,516.)

Reg. No. 641,255. (See Reg. No. 95,516.)

Reg. No. 642,423 (LITTLE LEAGUE BASEBALL), Little League Baseball, Inc., Planned program of baseball for young boys; **Reg. No. 562,629** (LITTLE LEAGUE BASEBALL AND DESIGN), same, Juvenile baseball, filed Nov. 12, 1956, D. C., E. D. N. Y., (Brooklyn), Doc. 19191, *Little League Baseball, Inc. v. Little Basketball League, Inc. et al.*

Reg. No. 629,046 (THER-A-PEDIC), Bedding Manufacturers Marketing Corp. of America, Mattresses and box springs; **Reg. No. 619,662** (POSTUREPEDIC), Sealy, Inc., same, filed Nov. 13, 1956, D. C., S. D. N. Y., Doc. 130/389, *Bedding Manufacturers Marketing Corporation of America v. Sealy Mattresses Co. et al.*

Reg. No. 660,542. (See Reg. No. 545,734.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 48,119. U. S. Rubber Reclaiming Co. Inc., Cheektowaga, N. Y. Filed Mar. 20, 1956.

TREDEX

For Rubber as a Compound for Use as a Raw Material To Be Incorporated in Tread Rubber and Other Applications.
First use on or about August 1947.

SN 50,990. Stone Mountain Grit Co., Inc., Lithonia, Ga. Filed May 2, 1958.

THERM-O-BED

For Base for Fires Made From Natural Crushed Rock.
First use on or about September 1957.

SN 51,343. The General Tire & Rubber Company, Akron, Ohio. Filed May 9, 1958.

VELVIN

Owner of Reg. No. 564,455.
For Plastic Sheet Material.
First use Apr. 29, 1958.

SN 51,438. Donovan Industries, Inc., New York, N. Y. Filed May 12, 1958.

ANILSILK

For Leather.
First use Jan. 15, 1958.

SN 53,102. Armour and Company, Chicago, Ill. Filed June 9, 1958.

FUN-DAY

For Upper Leather.
First use May 16, 1958.

SN 53,474. Calcot, Ltd., Bakersfield, Calif. Filed June 13, 1958.

CALCOT

For Baled Cotton.
First use on or about July 1948.

SN 54,392. The Dow Chemical Company, Midland, Mich. Filed June 27, 1958.

Zefran

Owner of Reg. No. 647,042.
For Fibers and Filaments Comprising Polymers and Copolymers of Acrylonitrile.
First use Apr. 3, 1958.

SN 54,532. The Lackawanna Leather Company, Hackettstown, N. J. Filed June 30, 1958.

FEATHERWHITE

Owner of Reg. No. 582,402.
For Upholstery Leather.
First use June 16, 1958.

Class 4—Abrasives and Polishing Materials

SN 42,806. American-Marietta Company, Chicago, Ill. Filed Dec. 23, 1957.

A-M

For Polishes and Wax Polishes.
First use in July 1952.

SN 47,914. Turnvue Corporation, White Plains, N. Y. Filed Mar. 17, 1958.

10-PLUS

For Sponge Type Device Having an Abrasive Scouring Face.
First use Oct. 28, 1957.

Class 5—Adhesives

SN 53,655. G. T. Schjeldahl Company, Northfield, Minn. Filed June 16, 1958.

SCHJELBOND

For Heat Sealable Bonding Tape.
First use May 28, 1958.

Class 6—Chemicals and Chemical Compositions

SN 22,417. National Re-Tile Corporation, Boise, Idaho, by change of name from Idaho Bartile Company, Boise, Idaho. Filed July 9, 1957.

RO-TILE

For Waterproofing and Coloring Composition for Addition to Cement and Concrete.
First use in or about June 1951.

SN 44,746. Ortho Pharmaceutical Corporation, Raritan, N. J. Filed Jan. 27, 1958.

ACUGLOBIN

Owner of Reg. Nos. 646,286 and 646,287.
For Diagnostic Agent for Laboratory Use in Hemoglobin Determination.
First use May 22, 1957.

SN 44,747. Ortho Pharmaceutical Corporation, Raritan, N. J. Filed Jan. 27, 1958.

ACULUTE

Owner of Reg. Nos. 646,286 and 646,287.
For Diluent for Laboratory Use in the Diagnosis of Hemoglobin Determination.
First use May 22, 1957.

SN 50,888. Rightload Metals Corporation, Buffalo, N. Y. Filed May 1, 1958.

BEAUTILITY

For Ferrous and Non-Ferrous Metal Sheets.

SN 51,805. R. J. Moran Co., Cambridge, Mass. Filed May 16, 1958.

ALBADEX

Class 12—Construction Materials

SN 24,702. Inland Steel Products Co., Milwaukee, Wis. Filed July 31, 1957.

CELLUDECK

Owner of Reg. No. 637,506.
For Metal Deck, Such as Roof Decking.
First use May 8, 1956.

SN 41,497. United States Plywood Corporation, New York, N. Y. Filed Nov. 27, 1957.

AFRICAN HONEYWOOD

For Wood and Lumber Products, Such as, Plywood and Veneers.
First use May 11, 1955.

SN 42,894. The Michaels Art Bronze Company, Erlanger, Ky. Filed Dec. 23, 1957.

For Metal Building Products—Namely, Permanent Bank Screens and Partitions, Welded Metal Doors, Elevator Doors and Grills, Store Fronts, Cast Thresholds, Extruded Thresholds, Marquees and Stair Railings (Cast and Wrought).
First use Dec. 12, 1957.

SN 45,650. The General Tire & Rubber Company, Akron, Ohio. Filed Feb. 10, 1958.

BOLTA-VENEER

Owner of Reg. Nos. 627,220, 652,608, and others.
For Flexible Vinyl Sheeting for Table Tops and the Like.
First use Aug. 12, 1957.

SN 46,197. The Borden Company, New York, N. Y. Filed Feb. 20, 1958.

SUPER CRETE-X

For Cement-Like Material for the Filling of Floor Cracks and Holes.
First use Jan. 23, 1954.

SN 46,198. The Borden Company, New York, N. Y. Filed Feb. 20, 1958.

HYDROCURE

Owner of Reg. No. 666,145.
For Waterproof Coating or Surfacing Material Comprising Synthetic Rubber Latex and Special Adhesive for Use as a Masonry Sealer.
First use Jan. 15, 1954.

SN 46,943. Jamison Cold Storage Door Company, Hagerstown, Md. Filed Apr. 1, 1958.

For Cold Storage Doors.
First use Nov. 18, 1957.

SN 49,837. Re-Ward Ceramic Color Mfrs., Inc., Los Angeles, Calif. Filed Mar. 24, 1958.

For Ceramic Glazes.
First use Jan. 29, 1958.

Class 14—Metals and Metal Castings and Forgings

SN 31,919. Ferrostaal A. G., Essen, Germany. Filed June 11, 1957.

FERROSTAAL

Owner of German Reg. No. 673,127, dated Mar. 17, 1955; and U. S. Reg. Nos. 665,094, 666,792, and 667,651.
For Crude and Partly Machined Nonprecious Metals, Ferrous and Nonferrous; Wires, Wire Nettings and Hard Drawn Wire; Rolled and Drawn Steels and Strips; Rolled and Cast Structural Parts—Namely, Rolled and Cast Steel and Iron Parts for Construction of Machinery; Fabricated Structural Steel and Plate Work for Bridges, Buildings, Bulk Material Handling Plants and Related Structures; Track Material—Namely, Field Railway and Narrow Gauge Material Such as Tracks, Crossings, and Accessories for Rail Fastening.

SN 43,280. Trim Alloys, Inc., Boston, Mass. Filed Dec. 31, 1957.

Trimalloy

For Metal Extrusions for Interior and Exterior Decorative and Functional Trims.
First use in November 1945.

SN 49,613. Belmont Smelting & Refining Works, Inc., Brooklyn, N. Y. Filed Apr. 17, 1958.

MITER AL-BRAZ

For Aluminum Solder.
First use Nov. 19, 1956.

SN 49,886. United States Steel Corporation, Pittsburgh, Pa. Filed Apr. 17, 1958.

AMEROXIDE

For Steel Wire.
First use Sept. 7, 1956.

SN 50,378. National-Standard Company, Niles, Mich. Filed Apr. 25, 1958. Sec. 2(f).

COPPERPLY

Owner of Reg. Nos. 597,212, 655,157, and others.
For Copper Coated Steel.
First use June 20, 1953.

SN 50,607. Denny Paper & Board Company, Philadelphia, Pa. Filed Apr. 29, 1958.

SUR-SLIP

For Coated Aluminum Foil.
First use on or about Jan. 11, 1956.

SN 50,982. Rigidized Metals Corporation, Buffalo, N. Y. Filed May 1, 1958.

BEAUTILITY

For Ferrous and Non-Ferrous Metal Sheets.
First use Apr. 1, 1958.

Class 16—Protective and Decorative Coatings

SN 34,331. Tobias Paint Mfg. Co., Cleveland, Ohio. Filed July 24, 1957.

NEW-WAY

For Paints, Paint Primers, Paint Enamels, Stains, Varnishes, Asphalt Products, and Paint Colors.
First use February 1957.

SN 34,482. Witco Chemical Company, New York, N. Y. Filed July 26, 1957.

EMULSIVE

For Paint Driers.
First use Apr. 23, 1957.

SN 51,287. Plextone Corporation of America, Newark, N. J. Filed May 8, 1958.

ROLLAFLEK

For Coating Compositions.
First use Apr. 2, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 38,911. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Oct. 15, 1957.

LASONIL

Owner of German Reg. No. 548,100.
For Pharmaceutical Preparations.

SN 41,562. Olin Mathieson Chemical Corporation, New York, N. Y. Filed Nov. 29, 1957.

KENACORT

For Glucocortical Steroid Preparations.
First use Oct. 21, 1957.

SN 47,991. Air Reduction Company, Incorporated, New York, N. Y. Filed Mar. 19, 1958.

OHIO

Owner of Reg. Nos. 169,508, 668,802, and others.
For Volatile Anesthetic Agents—Namely, Nitrous Oxide, Cyclopropane, Ethylene, Ethyl Chloride, Ethyl Vinyl Ether, Trichloroethylene, Trifluoroethyl Vinyl Ether.
First use on or about July 1919.

SN 51,805. R. J. Moran Co., Cambridge, Mass. Filed May 16, 1958.

ALBADEX

For Medicinal Preparation—Namely, a Dietary Supplement With Vitamins.
First use Mar. 27, 1958.

SN 54,687. Multiforma AG. (Multiforma S. A.) (Multiforma Ltd.), Zug, Switzerland. Filed July 2, 1958.

BIOGERM-B

Owner of Swiss Reg. No. 166,596.
For Vitamin Preparations.

SN 55,128. Carrtone Laboratories, Inc., New Orleans, (Metairie), La. Filed July 11, 1958.

PINROU

For Medical and Pharmaceutical Product—Namely, a Preparation for the Elimination of Pin Worms and Round Worms.
First use Apr. 27, 1956.

SN 55,130. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

PRELARON

For Medical and Pharmaceutical Product—Namely, a Dietary Supplement in Pregnancies and Lactation.
First use Jan. 24, 1958.

SN 55,268. T. A. Wise, d. b. a. T. A. Wise Enterprises, Atlanta, Ga. Filed July 14, 1958.

SAGON

For Antacid Compound for Relief of Stomach Acidity or Sour Stomach.
First use July 17, 1957.

SN 55,317. Garden Vitamin Products, Inc., Irvington, N. J. Filed July 15, 1958.

Natur-E

For Topical Emollient of the Character of Wheat Germ Oil for Use as and Compounded With Topical Ointments for Relief of Muscular Aches, Pains, Tenderness, and Stiffness.
First use Dec. 5, 1957.

SN 55,358. Abbott Laboratories, North Chicago, Ill. Filed July 16, 1958.

KALTIN

Owner of Reg. No. 570,771.
For Enteric Bacteriostat.
First use Apr. 2, 1957.

SN 55,362. Allied Animal Research Corporation, Charlotte, N. C. Filed July 16, 1958.

GREEDY

For Medicinal Feed Additive for Animals.
First use Apr. 20, 1958.

SN 53,992. Medco Company, Inc., Metairie, La. Filed July 15, 1958.

DEXABAR

MEDSULES

For Medicine—Namely, Amobarbital, and Dextro-Amphetamine Sulfate.
First use Feb. 7, 1957.

Class 19—Vehicles

SN 42,245. Sterling Products Co., Inc., St. Paul, Minn. Filed Dec. 11, 1957.

KAR-KAP

For Plastic Automobile Covers.
First use Sept. 16, 1957.

SN 47,370. General Motors Corporation, Detroit, Mich. Filed Mar. 10, 1958.

EL CAMINO

For Automotive Vehicles—Namely, Trucks.
First use January 1954.

SN 52,836. Tacony Brake Company, Philadelphia, Pa. Filed June 3, 1958.

THERMO-FUSE

For Lined Brake Shoes.
First use Apr. 23, 1954.

SN 53,058. Seco, Inc., Goodlettsville, Tenn. Filed June 6, 1958.

BULKMOBILE

For Truck Bodies.
First use Mar. 1, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 38,866. Sperti Faraday, Inc., Adrian, Mich. Filed Oct. 14, 1957.

VISICALL

For Closed Circuit Television Monitoring and Supervision Systems With or Without Voice Communication, and Parts Thereof.
First use Oct. 31, 1956.

SN 43,101. Kas-Kel Electric Co. Inc., New York, N. Y. Filed Dec. 27, 1957.

Imperial

For Containers of Christmas Tree Lights for Home and Commercial Use.
First use Dec. 10, 1956.

SN 48,156. General Motors Corporation, Detroit, Mich. Filed Dec. 30, 1957.

GD

For Electric Generating Plants, Electric Generators, Motors and Parts Thereof.
First use in or before 1942.

SN 44,200. North American Signal Company, Wilmette, Ill. Filed Jan. 17, 1958.

SIREN-MASTER

For Electrically Operated Sirens.
First use Dec. 7, 1957.

SN 44,812. Fisher Berkeley Corporation, Emeryville, Calif. Filed Jan. 28, 1958.

EKTACOM

For Multi-Station Intercommunication Systems, Paging Systems, Public-Address Systems, and Other Similar Commercial Sound Equipments.
First use Oct. 2, 1957.

SN 49,138. Duro-Test Corporation, North Bergen, N. J. Filed Apr. 7, 1958.

ARC~RAY

Owner of Reg. No. 366,495.
For Incandescent Lamps, Fluorescent Lamps, Mercury Vapor Lamps and Combinations Thereof, and Fluorescent Lamp Starters.
First use Jan. 28, 1938.

SN 51,280. The Strong Electric Corporation, Toledo, Ohio. Filed May 9, 1958.

Constellation 170

For Arc Lamps.
First use Mar. 11, 1957.

SN 52,511. Ray Noles, d. b. a. De Kalb Battery Co., Fort Payne, Ala. Filed May 28, 1958. Sec. 2(f).

DEKALB

For Batteries.
First use September 1951.

SN 52,698. Diamond Power Specialty Corporation, Lancaster, Ohio. Filed June 2, 1958.

Diamond

For Television Transmitting and Receiving Apparatus.
First use May 23, 1956.

SN 52,734. Justrite Manufacturing Company, Chicago, Ill. Filed June 2, 1958.

SADDLE-LIGHT

For Electric Lanterns, Flashlights of the Portable Hand Type, and Search-Lights.
First use May 9, 1958.

SN 52,774. Slater Electric & Mfg. Co., Inc., Glen Cove, N. Y. Filed June 2, 1958.

STA-KLEEN

For Wall Plates for Wiring Devices.
First use May 26, 1958.

SN 52,780. United States Plywood Corporation, New York, N. Y. Filed June 2, 1958.

ELECTRO-ARMORPLY

Owner of Reg. Nos. 620,040 and 206,060.
For Shielding Enclosures for Suppressing Radio Frequency Interference, and Panel Elements Thereof.
First use May 12, 1958.

SN 52,868. Dual-Flo Battery Corporation, Chattanooga, Tenn. Filed June 4, 1958.

DUALFLO

For Electrical Storage Batteries.
First use May 15, 1958.

SN 52,878. Fanon Electric Co. Inc., Brooklyn, N. Y. Filed June 4, 1958.

FANON FONE

For Telephone Door Answering Systems and Parts Thereof, Private Automatic Telephone Systems and Parts Thereof, Loudspeakers, Microphones, Amplifiers, Power Supplies, and Automatic Switchboards.
First use Apr. 22, 1958.

SN 53,022. Eagle Signal Corporation, Moline, Ill. Filed June 5, 1958.

NATECS

For Emergency Traffic Control Apparatus Including Mobile Radio Transmitters, Stationary Receivers, and Traffic Signal Preemptor Controllers.
First use Nov. 14, 1957.

Class 22—Games, Toys, and Sporting Goods

SN 40,247. Horseman Dolls, Inc., Trenton, N. J. Filed Nov. 8, 1957.

COUTURIER

For Dolls.
First use May 20, 1957.

SN 51,966. German Golf Products, Inc., Birmingham, Mich. Filed May 19, 1958.

Top-Kick

For Golf Clubs and Golf Balls.
First use Jan. 1, 1954.

SN 51,915. Linecraft Corporation, Philadelphia, Pa. Filed May 19, 1958.

Craftsman

For Fishing Line.
First use Jan. 31, 1958.

SN 52,492. Head Ski Company, Inc., Baltimore, Md. Filed May 28, 1958.

HEAD

For Snow Skis.
First use in December 1948.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 37,585. S. a. r. l. Dite: S. T. V. Vibratechniques, Paris, France. Filed Sept. 20, 1957.

STV Vibratechniques

The drawing is lined for brown, but color is not a feature of the mark. Owner of French Reg. No. 466,597, dated Aug. 2, 1957 (Seine); Natl. Inst. No. 94,187.
For Concrete Vibrators.

SN 37,596. S. a. r. l. Dite: S. T. V. Vibratechniques, Paris, France. Filed Sept. 20, 1957.

VIBRAIR

Owner of French Reg. No. 466,598, dated Aug. 2, 1957 (Seine); Natl. Inst. No. 94,188.
For Concrete Vibrators.

SN 43,663. Guido Bertoglio and Sauro Albertini, Viganello, Switzerland. Filed Jan. 9, 1958.

POINT-MATIC

Owner of Swiss Reg. No. 161,571, dated May 4, 1956.
For Automatic Drilling Machine of High Precision for Points of Ball Pens.

SN 44,998. Wallace Silversmiths, Inc., Wallingford, Conn. Filed Jan. 30, 1956.

TABLE TALK

For Stainless Steel Tableware, Including Knives, Forks, and Spoons.
First use Sept. 5, 1956.

SN 48,709. VEB Groma Büromaschinen, Markersdorf im Chemnitztal, Germany. Filed Feb. 11, 1956.

COMBINA

For Typewriters and Spare Parts and Accessories Thereof.
First use May 29, 1957; in commerce June 5, 1957.

SN 48,942. Sperry Rand Corporation, New Holland, Pa. Filed Apr. 2, 1958.

BALEMOBILE
NEW HOLLAND

For Farm Machinery—Namely, Hay Balers.
First use Mar. 5, 1958.

SN 48,943. Sperry Rand Corporation, New Holland, Pa. Filed Apr. 2, 1958.

AUTOLINER
NEW HOLLAND

For Farm Machinery—Namely, Hay Balers.
First use Mar. 5, 1958.

SN 48,944. Sperry Rand Corporation, New Holland, Pa. Filed Apr. 2, 1958.

HAYCRUISER
NEW HOLLAND

For Farm Machinery—Namely, Hay Balers.
First use Mar. 5, 1958.

SN 48,945. Sperry Rand Corporation, New Holland, Pa. Filed Apr. 2, 1958.

AUTOBALER
NEW HOLLAND

For Farm Machinery—Namely, Hay Balers.
First use Mar. 5, 1958.

SN 51,242. Wilson Jones Company, Chicago, Ill. Filed May 7, 1958.

TATUM ARISTOCRAT

For Stapling Machines.
First use Apr. 24, 1957.

SN 53,398. Ripco, Inc., Oxford, Pa. Filed June 10, 1958.

AIR CADDY

For Air Unloaders—Namely, Pneumatic Devices for Handling Granular Material.
First use May 1, 1958.

SN 53,410. Joy Manufacturing Company, Pittsburgh, Pa. Filed June 12, 1958.

JOY MICRODYNE

For Gas and Liquid Contact Apparatus—Namely, Dust Collectors or Separators.
First use May 1, 1958.

SN 53,654. Sandvikens Jernverks Aktiebolag, Sandviken, Sweden. Filed June 16, 1958.

Priority claimed under Sec. 44(d) on Swedish application filed Dec. 19, 1957; Reg. No. 94,315, dated Feb. 14, 1958.
For Motor Saws and Saw Chains.

SN 54,120. Viber Company, Burbank, Calif. Filed June 23, 1958.

VIBERETTE

Owner of Reg. Nos. 297,997, 642,683, and others.
For Machines for Vibrating, Placing, and Packing Wet Concrete in Forms and Molds.
First use on or about May 14, 1958.

SN 54,126. Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium. Filed May 7, 1958.

ACEC
CHARLEROI

Owner of Belgian Reg. No. 3,362, dated Sept. 7, 1956.
For Electric Pumps and Hydraulic Turbines.

SN 54,128. Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium. Filed May 15, 1958.

ACEC

Owner of Belgian Reg. No. 3,362, dated Sept. 7, 1956.
For Electric Pumps and Hydraulic Turbines.

SN 35,506. Barnes Manufacturing Co., Mansfield, Ohio. Filed July 15, 1958.

BARNES

Owner of Reg. Nos. 95,732, 557,998, and others.

For Centrifugal Pumps for Handling Water, Oil, or Liquid Fuels, Self Priming Centrifugal Pumps, Diaphragm Pumps, Domestic Water Handling Units—Namely, Deep and Shallow Well Jet-Centrifugal Pump Combination Units, Deep and Shallow Well Piston Pumps, Automatic Sump Pumps for Cellar Drainage, and Foot Valves and Strainers for Well Pump Water Intakes.

First use June 15, 1953; 1896 as to "Barnes."

Class 24—Laundry Appliances and Machines

SN 50,052. Hamilton Manufacturing Company, Two Rivers, Wis. Filed Apr. 21, 1958.

Owner of Reg. Nos. 590,803, 599,041, and 622,429.

For Automatic Clothes Washers and Dryers for Household Use.

First use Dec. 14, 1957.

Class 26—Measuring and Scientific Appliances

SN 24,800. Lucien Sautereau, Paris, France. Filed Feb. 20, 1957.

UNIC STUDIO

Owner of French Reg. No. 461,654, dated Dec. 21, 1956 (Seine); Natl. Inst. No. 83,018.

For Drawing Tables, Drawing Apparatus and Instruments—Namely, Drawing Boards, T-Squares, Triangles, Protractors, and Rules.

SN 30,300. Andre Victor Leon Clement Debrie, Paris, France. Filed May 20, 1957.

MULTIVISION

Owner of French Reg. No. 469,790, dated Feb. 13, 1957 (Seine); Natl. Inst. No. 85,542.

For Cinematographic and Television Cameras and Projectors and Combined Cinematographic and Television Cameras and Projectors.

SN 42,838. The Ralph M. Parsons Company, Los Angeles, Calif. Filed Dec. 16, 1957. Sec. 2(f).

PARSONS

For Electrical Apparatus—Namely, Telemetering Apparatus and Distance Measuring Apparatus Employing Radio Frequency Energy for Measuring the Distance Between Two Relatively Movable Points.

First use Sept. 24, 1952.

SN 43,008. C. P. Goerz American Optical Company, Long Island, N. Y. Filed Dec. 27, 1957.

VERTOSCOPE

For Film Viewers for Viewing Negatives as Positives.

First use Apr. 1, 1957.

SN 43,374. Chatsm Tool Products Corporation, Copiague, N. Y. Filed Jan. 3, 1958.

HYT SIZE

For Gauging Instrument—Namely, a Precision Micrometer Gauge for Gauging Drill Jigs, Lathe Fixtures, Gears, Cams, Splines, and the Like.

First use in July 1957.

SN 43,444. L. G. Evans & Company, Chicago, Ill. Filed Jan. 6, 1958.

EVCO

For Wood and Steel Drafting Tables for Use in Making Mechanical Drawings, Wood and Steel Art Tables With and Without Easels for Use in Making Water Color and Oil Paintings, Wood and Steel Student Tables, Benches and Cabinets Used in Chemical and Other Scientific Laboratories and Steel Fume Hoods, Acid Resistant Tops, Germination Beds and Aquariums Used in School Laboratories.

First use Oct. 10, 1954.

SN 43,748. Feedback Controls, Inc., Waltham, Mass. Filed Jan. 10, 1958.

For Precision Gearheads and Viscous-Coupled Servo Dampers for Use in Instruments and for Analogue Computers.

First use in June 1956.

SN 43,920. Charles Bruning Company, Inc., Mount Prospect, Ill. Filed Jan. 14, 1958.

MICRO-BOB

For Plumb Bobs.

First use May 10, 1949.

SN 46,089. Universal Business Machines, Inc., Columbia, S. C. Filed Feb. 18, 1958.

KEYTRONIC

For Machines for Sorting Checks, Vouchers, and the Like, and Parts Thereof.

First use Jan. 3, 1958.

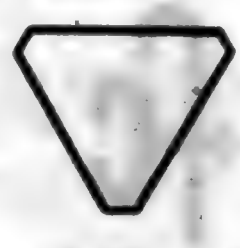
SN 48,540. The British Thermostat Company Limited, Sunbury-on-Thames, England. Filed Mar. 27, 1958.

The words "Automatic Controls" are disclaimed apart from the mark as shown. Owner of British Reg. Nos. B713,487, B713,488, and B713,489, all dated Dec. 22, 1952.
For Thermostatically Operated Switches, and Thermostatically Operated Valves.

SN 49,450. M. P. Mfg. Co., Brooklyn, N. Y. Filed Apr. 10, 1958.

For Photographic Multiple Strip Contact Printers.
First use Dec. 9, 1957.

SN 51,414. Bausch & Lomb Optical Company, Rochester, N. Y. Filed May 12, 1958.



Owner of Reg. Nos. 220,592, 617,215, and others.
For Goggles.
First use Jan. 27, 1956.

SN 52,033. Burke & James, Inc., Chicago, Ill. Filed May 21, 1958.

PRINCETON

For Photographic Cameras and Related Equipment Including Lenses, Enlargers, Processing Tanks, Cut Film Holders, Reducing Backs, Stayflat Back, Vacuum Back, 70MM Roll Film Back, 35MM Roll Film Back, 8 x 10 Enlarger Head, Adjustable Depth Copy Board, Transparency Holder for Copy Board, Precision Casters, Rear Illuminator for Copy Frame, Copy Lights, Layout Utility Tables, Princeton Graphic Arts Printer.
First use in May 1954.

SN 52,183. Ambco, Inc., Los Angeles, Calif. Filed May 23, 1958.

OTO-CHEK

Owner of Reg. No. 644,568.
For Electronic Devices for Measuring Hearing.
First use Oct. 11, 1956.

SN 53,793. The Geotechnical Corporation, Dallas, Tex. Filed June 18, 1958.

BLASTCORDER

For Instruments for Monitoring Blasts and/or Explosions Associated With Road Construction, Mining Operations, Etc.
First use May 16, 1958.

SN 53,994. Bausch & Lomb Optical Company, Rochester, N. Y. Filed June 23, 1958.

BALCOLD

For Reflectors for Projectors.
First use Jan. 8, 1957.

SN 54,129. Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium. Filed May 15, 1958.

Owner of Belgian Reg. No. 2,883, dated Sept. 7, 1956.
For Oscillographs, Electric Counters, Impulse Generators, Spectographs, Isotopic Tracers, Radiation Detectors, Telemeters, and Wilson Chambers.

SN 54,231. Ihagee Kamerawerk Aktiengesellschaft, Dresden, Germany. Filed June 25, 1958.

exa

For Optical, Photographic, and Cinematographic Apparatus and Devices—Namely, Cameras of All Kind, Projectors, Mounted and Unmounted Lenses of All Kind Including Soft Focus Lenses, Lens Attachments, Light Filters, Light Tunnels, Image Inversion Systems, Stereo Attachments, Magnifiers, Eye Pieces, Copying Devices, Reproducing Devices, Micro-Photo Devices, Developing Apparatus, Films, and Light-Sensitive Photographic Materials and Parts of and Accessories for All These Goods.
First use in February 1951; in commerce in March 1951.

SN 54,232. Ihagee Kamerawerk Aktiengesellschaft, Dresden, Germany. Filed June 25, 1958.

For Optical, Photographic, and Cinematographic Apparatus and Devices—Namely, Cameras of All Kind, Projectors, Mounted and Unmounted Lenses of All Kind Including Soft Focus Lenses, Lens Attachments, Light Filters, Light Tunnels, Image Inversion Systems, Stereo Attachments, Magnifiers, Eye Pieces, Copying Devices, Reproducing Devices, Micro-Photo Devices, Developing Apparatus, Films, and Light-Sensitive Photographic Materials and Parts of and Accessories for All These Goods.
First use in June 1951; in commerce in July 1951.

SN 54,243. Ero Meter Co., Chicago, Ill. Filed June 26, 1958.

SYNCRO-SCOPE

For Synchronism Indicator for Multiple Marine and Airplane Engines.
First use Feb. 28, 1958.

SN 54,480. Bell & Howell Company, Chicago, Ill. Filed June 30, 1958. Sec. 2(f).

BELL & HOWELL

For Photographic Cameras and Carrying Cases Therefor, Motion and Still Picture Projectors and Carrying Cases Therefor, Slide Changers for Still Picture Projectors and Slide Trays Therefor, and Camera and Projection Lenses.
First use Nov. 27, 1935.

SN 54,501. Eastman Kodak Company, Rochester, N. Y. Filed June 30, 1958.

PRESSTAPE

For Film Splicer.
First use May 26, 1958.

SN 54,503. Endevco Corporation, Pasadena, Calif. Filed June 30, 1958.

DIGITOTE

For Electrically Actuated Mechanical Counters.
First use Jan. 2, 1958.

Class 28 — Jewelry and Precious-Metal Ware

SN 53,201. Speidel Corporation, Providence, R. I. Filed June 9, 1958.

GATEWAY

For Watch Bracelets (Not Including Watches).
First use May 22, 1958.

SN 53,202. Speidel Corporation, Providence, R. I. Filed June 9, 1958.

RIPTIDE

For Watch Bracelets (Not Including Watches).
First use May 22, 1958.

SN 53,203. Speidel Corporation, Providence, R. I. Filed June 9, 1958.

SCIMITAR

For Watch Bracelets (Not Including Watches).
First use May 22, 1958.

SN 53,205. Speidel Corporation, Providence, R. I. Filed June 9, 1958.

BLAZE of GLORY

For Watch Bracelets (Not Including Watches).
First use May 22, 1958.

SN 53,336. David Karp, d. b. a. Joy Forever Jewelry Company, New York, N. Y. Filed June 11, 1958.

Joy Forever

For Diamond-Bearing Finger Rings, Brooches, Clasps, Bracelets, Earrings, Pendants, and Necklaces.
First use May 21, 1958.

SN 53,500. Heinberg's Diamond Shops, Inc., Kansas City, Mo. Filed June 13, 1958.

Circle o'Love

For Wedding Rings.
First use Oct. 8, 1953.

SN 53,735. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

EARLY MORNING

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,736. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

EVENING SHADOWS

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,737. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

HIGH NOON

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,739. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

LATE EVENING

For Watch Bracelets (Not Including Watches).
First use June 2, 1958.

SN 53,740. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

RADIANT LADY

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,741. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

SQUARE WINDOWS

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,742. Speidel Corporation, Providence, R. I. Filed June 17, 1958.

WITCHCRAFT

For Watch Bracelets (Not Including Watches).
First use May 29, 1958.

SN 53,908. The Gemex Corporation, Union, N. J. Filed June 19, 1958.

EXCALIBAR

Owner of Reg. No. 573,546.
For Watch Bracelets.
First use Feb. 1, 1957.

SN 54,188. Rhinecraft Company Incorporated, Brooklyn, N. Y. Filed June 24, 1958.

Hand of Friendship

For Costume Jewelry—Namely, Necklaces, Cultured Pearls, Bracelets, Earrings, Scarf Pins, and Cuff Links.
First use May 15, 1958.

SN 54,255. Warden Manufacturing Co., Redding, Iowa. Filed June 26, 1958.

JEWELRY MADE by Irene

For Adjustable Supports for Earrings Fashioned To Fit Snugly on the Ear of a Given User.
First use Feb. 12, 1958.

SN 54,264. Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany. Filed July 8, 1958.

FLEXOLUX

Owner of German Reg. No. 618,122, dated Mar. 20, 1952.
For Wrist Watch Bracelets Made From Metal.

Class 30—Crockery, Earthenware, and Porcelain

SN 32,355. V. Schierholz'sche Porzellanmanufaktur Plaue G. m. b. H., in Verwaltung, Plaue in Thuringen, Germany. Filed June 20, 1957.

VON SCHIERHOLZ

For Tableware, Table Ornaments, Vases, Cups, Baskets, and Boxes, All Said Goods Made of Porcelain.
First use 1906; in commerce Apr. 2, 1908.

Class 32—Furniture and Upholstery

SN 39,000. Midwestern Manufacturing Corporation, Indianapolis, Ind. Filed Oct. 16, 1957.

EVERSAFE

For Insulated Filing Cabinets and Chests.
First use Apr. 1, 1957.

SN 48,627. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 25, 1958.

Owner of Reg. Nos. 64,896, 427,173, and others.
For Pillows, Mattresses, and Furniture Cushions.
First use about January 1925; at least as early as 1880 as to "Goodrich."

SN 54,119. Vaupell Industrial Plastics, Inc., Seattle, Wash. Filed June 23, 1958.

V-GUARD

For Protective Angle Shoes for Filing Cabinets, Storage Cabinets, and the Like.
First use Sept. 22, 1957.

SN 55,563. Alpha Research Corp., New York, N. Y. Filed July 18, 1958.

LEV-L-TOP

For Ventilated Spring Cushions and Innerspring Units for Such Cushions.
First use on or about Apr. 25, 1958.

SN 56,053. Slumber Products Corporation, d. b. a. Sealy Mattress Company, Memphis, Tenn. Filed July 25, 1958.

QUILT-GUARD

For Mattresses and Box Springs.
First use June 15, 1958.

SN 56,260. E. Arrett Smith, Inc., New York, N. Y. Filed Sept. 2, 1958.

PARTY-GO-Round

For Revolving Display Rack for Birth Announcements, Party Invitations, Thank-You Notes, and Other Party Stationery Goods.
First use Apr. 15, 1958.

SN 56,397. Arthur F. Breglia, New York, N. Y. Filed Sept. 5, 1958.

SPACE-PLANNER

For Furniture Units That Can Be Used Either Alone or Assembled Into a Group, Which Units Comprise Storage Cabinets, Display Cabinets, and Cabinets Containing a Bar, and Which Units May Be Assembled as Area or Room Dividers.
First use on or about May 16, 1958.

SN 56,964. Sturdilite Products, Inc., Chicago, Ill. Filed Sept. 15, 1958.

STURDILITE

For Work Benches, Tables, and Table Tops.
First use Aug. 11, 1958.

SN 58,128. Simmons Company, New York, N. Y. Filed Sept. 19, 1958.

For Sofas, Sectional Sofas, Sofa Beds, Chairs, Settees, Love Seats, Lounges, Studio Couches, Mattresses, and Box Springs.
First use Mar. 19, 1958.

Class 33—Glassware

SN 38,300. Pilkington Brothers Limited, Liverpool, Lancashire, England. Filed Oct. 8, 1957.

ARMOURCLAD

Owner of British Reg. Nos. 756,832, dated Aug. 22, 1956; and 759,259 and 759,260, both dated Nov. 7, 1956.
For Toughened Glass, Plate, Sheet and Rough Cast Glass and Cladding Glasses.
Subj. to Intf. with SN 50,804.

SN 50,804. Hordis Bros., Inc., Philadelphia, Pa. Filed May 1, 1958.

ARM-R-CLAD

For Safety Glass.
First use August 1956.
Subj. to Intf. with SN 38,300.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 46,280. Ottie D. Twist, d. b. a. Sun-Glass Mfg., Mount Sterling, Ill. Filed Feb. 21, 1958.

For Fiber Glass Fan Blades.
First use Jan. 10, 1957.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 42,412. United States Rubber Company, New York, N. Y. Filed Dec. 18, 1957.

For Power Transmission Belts.
First use March 1951.

Class 36 — Musical Instruments and Supplies

SN 52,675. Bel Canto, Culver City, Calif. Filed June 2, 1958.

For Musical Tape Recordings.
First use Apr. 18, 1958.

Class 37 — Paper and Stationery

SN 33,749. Riegel Paper Corporation, New York, N. Y. Filed July 15, 1957.

20TH CENTURY

For Printing Bristol, Cover, and Tag Paper.
First use in or about 1927.

SN 35,379. Natser Corporation, Ogdensburg, N. Y. Filed Aug. 12, 1957.

ACCO SUITAL BINDER

Applicant disclaims the right to the exclusive use of the term "Binder" except in the relation and association shown.
Owner of Reg. No. 155,996.
For Folders for Binding and Holding Papers Together.
First use May 1, 1957.

SN 35,663. Rubicon Inc., New York, N. Y. Filed Aug. 16, 1957.

PENELOPE

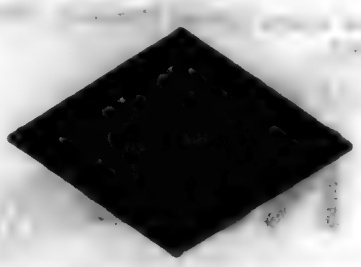
For Letterholders, Penholders, Paperweights, and Napkin-holders.
First use in January 1957.

SN 35,693. The Slencil Company, Orange, Mass. Filed Aug. 16, 1957.

SLEN

For Ball Point Pens.
First use Aug. 7, 1957.

SN 39,273. Stabilimento Viscosa Societa Nationale Industria Applicazioni Viscosa S. p. A., Milan, Italy, assignee of Resinova Industria Applicazione Resinati Societa per Azioni, Milan, Italy. Filed Oct. 21, 1957.



Owner of Italian Reg. No. 131,204, dated Jan. 24, 1957.
For Writing and Printing Paper.

SN 46,442. Ralph Ginzburg, d. b. a. The Helmsman Press, New York, N. Y. Filed Feb. 24, 1958.

For Books.
First use Feb. 14, 1958.

SN 40,330. Billy and Ruth Promotion, Inc., Philadelphia, Pa. Filed Apr. 8, 1958.

Owner of Reg. No. 344,511.
For Printed and Lithographed Catalogs of Children's Toys, Games, and Furniture, and for Promotional Material Used in Conjunction Therewith.
First use in September 1954.

SN 51,459. The International Nickel Company, Inc., New York, N. Y. Filed May 12, 1958.

P.I.Q.

For Magazine.
First use in October 1947.

Class 39 — Clothing

SN 26,794. Dundee Mills, Inc., Griffin, Ga. Filed Mar. 25, 1957.

little-tot

For Diapers.
First use in 1900.

SN 29,767. United States Rubber Company, New York, N. Y. Filed May 9, 1957.

CAPTIVAIRE

For Waterproof Over-the-Shoe Footwear.
First use during 1954.

SN 32,730. Blue Bell Inc., Greensboro, N. C. Filed June 27, 1957.

CARNATION

For Misses' and Girls' Blouses, Jackets, and Sportswear, Including Shorts, Jamaica Shorts, Bermuda Shorts, Pedal Pushers, and Capri Pants.
First use June 10, 1957.

SN 54,876. 20th Century Glove Corp. of Texas, Atlanta, Tex. Filed Aug. 2, 1957.

Guard LINE

For Work Gloves and Industrial Safety Clothing and Garments.
First use June 1, 1956.

SN 40,028. Caswell Shoes, Inc., Lynn, Mass. Filed Nov. 4, 1957.

CONTOURS

For Women's Shoes.
First use Oct. 26, 1957.

SN 48,452. Belaire Modes, Los Angeles, Calif. Filed Mar. 26, 1958.

Michael Terre

For Women's Millinery—Namely, Hats, Bonnets, and Caps.
First use January 1951.

SN 49,854. Interwoven Stocking Company, New Brunswick, N. J. Filed Apr. 17, 1958.

Super Essex

Owner of Reg. Nos. 388,883, 655,671, and others.
For Hosiery.
First use Sept. 30, 1952.

SN 50,135. Wayne Knitting Mills, Fort Wayne, Ind. Filed Apr. 21, 1958.

Belles
Socks
by Belle-Sharmeer

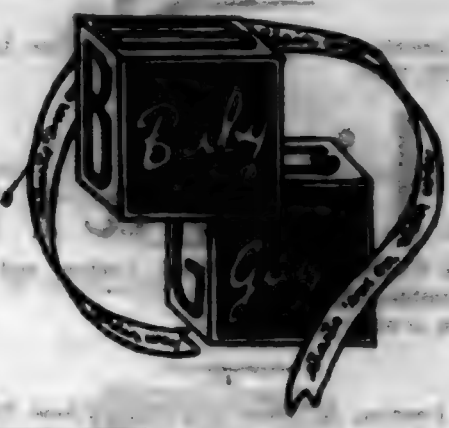
No claim is made to the words "Socks by" apart from the mark as shown. Owner of Reg. Nos. 302,253, 520,294, and others.
For Women's and Misses' Socks.
First use Mar. 10, 1956.

SN 53,656. Chester H. Roth Co., Inc., New York, N. Y. Filed June 6, 1958.

DISCS

For Boys' and Men's Hosiery.
First use in January 1949.

SN 53,271. John H. Liebig, d. b. a. Liebig Industries, Beaver Dam, Wis. Filed June 10, 1958.



For Baby Shoe Kits.
First use Jan. 1, 1949.

SN 53,272. Marum Knitting Mills, Inc., Lawrence, Mass. Filed June 10, 1958.

MARUM

For Men's, Women's, Children's Hosiery, Stockings, or Socks.
First use Apr. 15, 1938.

SN 54,414. Lazy U Incorporated, New York, N. Y. Filed June 27, 1958.

LAZY U

For Misses' and Women's Robes and Lounge Wear.
First use Apr. 25, 1957.
Subj. to Intf. with SN 51,287.

Class 41—Canes, Parasols, and Umbrellas

SN 54,131. Americus Umbrella Co., Inc., New York, N. Y. Filed June 24, 1958.

PACK-A-BRELLA

For Umbrellas.
First use in December 1957.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 23,554. Sears, Roebuck and Co., Chicago, Ill. Filed Feb. 5, 1957.

MAGIC HEM

For Special Hem Feature of Window Curtains.
First use on or about July 1, 1955.

SN 28,292. Staflex Company Limited, London, England. Filed Apr. 16, 1957.

STAFLEX

For Pliable Interlining To Be Used in Garments, Draperies, and the Like.
First use in October 1956; in commerce in October 1956.

SN 39,035. Bates Manufacturing Company, Lewiston, Maine. Filed Oct. 17, 1957.

VIKING

Owner of Reg. No. 369,066.
For Fabric Piece Goods of Cotton, Synthetic, and Mixtures of Cotton and Synthetic Fabrics.
First use Feb. 11, 1957.

SN 42,844. Deering, Milliken & Co. Inc., New York, N. Y. Filed Dec. 23, 1957.

Alistair

For Textile Fabrics Made of Wool, Cotton, and Synthetic Fibers and Combinations Thereof.
First use on or about Mar. 1, 1957.

SN 42,845. Deering, Milliken & Co. Inc., New York, N. Y. Filed Dec. 23, 1957.

Ensign

For Textile Fabrics Made of Wool, Cotton, and Synthetic Fibers and Combinations Thereof Used in the Manufacture of Clothing.
First use on or about Jan. 10, 1956.

SN 43,122. United Merchants and Manufacturers, Inc., New York, N. Y. Filed Dec. 27, 1957.

FORTRESS

Owner of Reg. Nos. 507,304, 596,785, and others.
For "Wash and Wear" Finish With Which Applicant Has Treated Its Combed Cotton Fabrics.
First use on or about Oct. 24, 1957.

SN 43,257. A. D. Juilliard & Co., Inc., New York, N. Y. Filed Dec. 31, 1957.

JUILL-SET

Owner of Reg. Nos. 184,786 and 615,853.
For Piece Goods of Corduroy.
First use on or about Oct. 30, 1957.

SN 43,288. Erwin Mills, Inc., Durham, N. C. Filed Jan. 14, 1958.

SEABIRD

For Cotton Piece Goods.
First use in January 1953.

SN 43,218. J. P. Stevens & Co. Inc., New York, N. Y., assignee of D. B. Fuller & Co. Inc., New York, N. Y. Filed Feb. 20, 1958.

CREPE NUAGE

No exclusive right to the word "Crepe" is claimed apart from the mark as shown.
For Crepe Textile Fabrics in the Piece of Rayon and Synthetic Fibers.
First use Oct. 10, 1957.

SN 53,355. Pendleton Woolen Mills, Portland, Oreg. Filed June 11, 1958.

For Woolen Blankets and Motor Robes.
First use Oct. 23, 1946.

SN 53,464. R. T. Barwick Mills, Inc., Chamblee, Ga. Filed June 13, 1958.

KITTENSTEP

For Fine Textured Carpets.
First use June 2, 1958.

SN 53,465. R. T. Barwick Mills, Inc., Chamblee, Ga. Filed June 13, 1958.

FEATHERTRED

For Fine Textured Carpets.
First use June 2, 1958.

SN 53,766. Mabel Bates, d. b. a. Virginia Towel Mills, Philadelphia, Pa. Filed June 18, 1958.

For Magnetic Pot Holders, Pot Holders, Mitts, Magnetic Mitts, Towels, and Washcloths.
First use Feb. 27, 1956.

SN 53,849. Weil & Schoenfeld Fabrics, Inc., New York, N. Y. Filed June 18, 1958.

DOBBY CHROME

For Fabrics in the Piece Made of Cotton Yarn in Combination With Synthetic Yarn.
First use January 1955.

SN 54,024. Charles Early & Co. Limited, Witney, Oxfordshire, England. Filed June 23, 1958. Sec. 2(f).

EARLY'S

Owner of U. S. Reg. Nos. 334,610 and 557,554.
For Woollen Blankets.
First use in or about 1669; in commerce Oct. 23, 1942.

SN 54,143. Centrotex, Podnik Zahranicniho Obchodu pro Dovoz a Vyvoz Textilniho a Kozeneho Zbozi, d. b. a. Centrotex, Foreign Trade Corporation, Importers and Exporters of Textile and Leather Goods, Prague, Czechoslovakia. Filed June 24, 1958.

Owner of Czechoslovakian Reg. No. 183,280, dated Jan. 31, 1958.
For Blankets.

SN 54,162. Hygiene Shower Curtain Mfg., Co., Inc., New York, N. Y. Filed June 24, 1958.

SHOWER-GRAM

For Shower Curtains.
First use Mar. 15, 1958.

SN 54,298. Dan River Mills, Incorporated, Danville, Va. Filed June 26, 1958.

DAN FRESH

For Textile Fabrics in the Piece of Cotton.
First use June 6, 1958.

SN 54,385. Cortley Manufacturing Corp., New York, N. Y. Filed June 27, 1958.

FIBER-GLOSS

Cortley

For Window Drapes.
First use May 29, 1958.

SN 54,387. Cranston Print Works Company, New York, N. Y. Filed June 27, 1958.

Cranswade

Owner of Reg. No. 254,126.
For Cotton Piece Goods.
First use Aug. 26, 1957.

Class 44—Dental, Medical, and Surgical Appliances

SN 24,276. National Surgical and Chemical Company, Inc., Albany, N. Y. Filed Feb. 15, 1957.

MEDI-COL

For Colostomy Belts and Units.
First use Dec. 18, 1956.

SN 26,378. Jung Products, Inc., Cincinnati, Ohio. Filed Mar. 15, 1957.

VIP

For Holding and Mounting Grips for Securing Elastic Bandages to Parts of the Body.
First use on or about Feb. 7, 1957.

SN 30,998. Becton, Dickinson and Company, Rutherford, N. J. Filed May 20, 1957.

DISCARDIT

For Syringes, Lancets, and Blood Collecting Equipment.
First use on or about Apr. 4, 1957.

SN 31,550. H. G. Enterprises, Kansas City, Mo. Filed June 7, 1957.

The drawing is lined for red and yellow, but no claim is made to the particular colors shown. Owner of Reg. No. 580,828.

For Trusses, Abdominal Supports, and Sacroiliac Supports.
First use on or about Apr. 15, 1957; Dec. 11, 1952, as to "Pi Poer" with crown.

SN 42,262. American Cyanamid Company, New York, N. Y. Filed Dec. 12, 1957.

SURGILOPE SP

Owner of Reg. Nos. 608,787 and 632,026.
For Sutures.
First use Nov. 12, 1957.

SN 42,801. American Cyanamid Company, New York, N. Y. Filed Dec. 23, 1957.

ELLIPTRON

For Combined Needles and Sutures.
First use Nov. 14, 1957.

SN 47,212. The Akwell Corporation, Akron, Ohio. Filed Mar. 10, 1958.

For Prophylactic, Rubber Articles for the Prevention of Contagious Diseases.
First use Jan. 21, 1958.

SN 50,164. Alfred Huber, d. b. a. "Vis" Kunststoffwerk Alfred Huber, Offenburg (Baden), Germany. Filed Apr. 22, 1958.

SUPRAMID EXTRA

For Synthetic Polyfilament or Monofilament Surgical Suture.
First use 1950.

SN 50,334. Frieda Abrams, Philadelphia, Pa. Filed Apr. 25, 1958.

FING-R-SSAGE

For Finger Cot for Gum Massaging and Tooth Cleansing.
First use Apr. 15, 1958.

SN 50,416. Superior Sleeprite Corporation, Chicago, Ill. Filed Apr. 28, 1958.

VENUS

For Massage Pillow Containing a Vibrating Unit.
First use Mar. 18, 1958.

SN 51,062. Julius Schmid, Inc., New York, N. Y. Filed May 5, 1958.

BENDEX

For Pessaries.
First use on or about Apr. 22, 1958.

SN 51,144. Scott Paper Company, Chester, Pa. Filed May 6, 1958.

SILHOUETTES

For Sanitary Napkins.
First use Apr. 7, 1958.

SN 50,685. John Roger Gunderson, Homestead, Fla. Filed Oct. 15, 1958.

PEDOSEAT

For Adaptor To Be Mounted on Dental Chairs and the Like To Adapt Them for Use by Children.
First use Sept. 10, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 37,849. Fayette Brands, Inc., Long Island, N. Y. Filed Sept. 27, 1957.

Applicant disclaims the use of the word "Grape." Owner of Reg. No. 650,974.
For Non-Carbonated Grape-Flavored Soft Drink.
First use July 12, 1957.

SN 38,266. Fayette Brands, Inc., Long Island City, N. Y. Filed Oct. 2, 1957.

Applicant disclaims the use of the word "Orange." Owner of Reg. No. 650,974.
For Non-Carbonated Orange-Flavored Soft Drink.
First use Mar. 13, 1957.

SN 42,080. Sweet Life Brands, Inc., Schenectady, N. Y. Filed Dec. 9, 1957.

SWEET LIFE

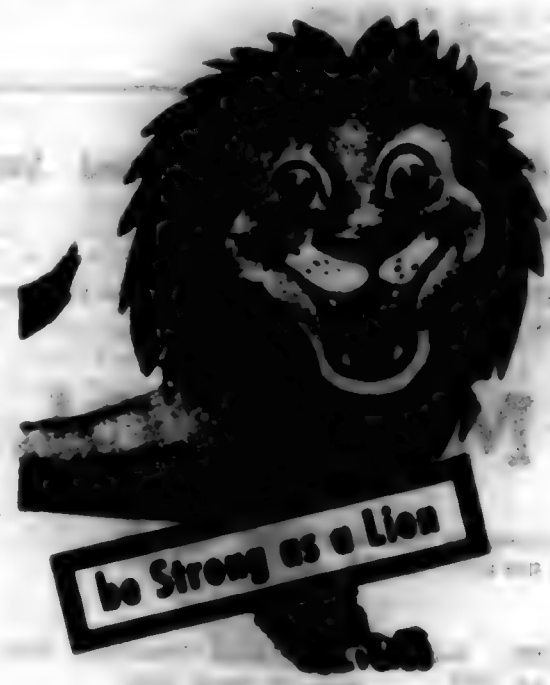
Owner of Reg. Nos. 370,217 and 552,146.
For Soft Drinks.
First use 1935.

Class 46—Feeds and Ingredients of Foods

SN 22,603. Cal-Pride Packing Company, Oakland, Calif. Filed Jan. 15, 1957.

The drawing is lined for gold.
For Pickle Relishes, Prepared Mustard, Imitation Flavored Syrups, Imitation Flavorings and Seasonings, Meat Sauces, and Spices.
First use Aug. 4, 1948.

SN 29,870. The Taylor-Reed Corporation, Glenbrook, Conn. Filed May 8, 1957.



Applicant disclaims exclusive rights to the words "Be Strong as a Lion," but specifically reserves its common-law rights therein.
For Preparation for Making a Chocolate Food Drink.
First use Nov. 9, 1956.

SN 51,604. Tobin Packing Co., Inc., Rochester, N. Y. Filed June 7, 1957.

TAVERN

For Meat Loaf.
First use September 1944.

SN 51,806. Cafe Chambord, Inc., d. b. a. Chambord Kitchen, New York, N. Y. Filed June 13, 1957.

For Frozen Pre-Cooked Foods—Namely, Poultry, Meats, Fish, Vegetables, Shell Fish, Soups; Sauce Bigarde, Sauce Bordelaise, Sauce Perigourdine, and Sauce Veronique; Crepes Suzette, Ice Cream Desserts, Gelatin Desserts, and Cakes and Pies.
First use 1956.

SN 41,220. Archer-Daniels-Midland Company, d. b. a. Commander-Larabee Milling Company, Minneapolis, Minn. Filed Nov. 25, 1957.

V.N.A.

For Wheat Flour.
First use 1939.

SN 43,602. Drake Bakeries Incorporated, New York, N. Y. Filed Jan. 6, 1957.

Owner of Reg. No. 385,573 and others.
For Cakes, Coffee Rings, and Cookies.
First use May 7, 1957.

SN 47,792. J. C. Tracy & Co., Dallas, Oreg. Filed Mar. 14, 1958.

Rose Valley

For Canned Fruits and Canned Vegetables.
First use 1946.

SN 47,793. J. C. Tracy & Co., Dallas, Oreg. Filed Mar. 14, 1958.

WEB FOOT

For Canned Fruits and Dried Fruits.
First use 1903.

SN 49,071. Oscar Mayer & Co., Inc., Chicago, Ill. Filed Apr. 4, 1958.

SPURT

For Animal Food—Namely, Mink Food.
First use Feb. 28, 1958.

SN 49,216. The Tilghman Packing Company, Tilghman, Md. Filed Apr. 7, 1958.

For Deviled Crabs, Deviled Crab Cutlets, Crab Cakes, Bite Size Deviled Crabs, and Breaded Oysters.
First use June 10, 1957.

SN 49,541. Allied Mills, Inc., Chicago, Ill. Filed Apr. 14, 1958.

KRUMETTES

Owner of Reg. Nos. 503,599 and 561,851.
For Dog Food.
First use Jan. 27, 1958.

SN 49,725. Wesley Crawford Foundation, d. b. a. Wesley Crawford & Son, Tacoma, Wash. Filed Apr. 15, 1958.

COUNTRY FARM

For Fresh Fruits and Vegetables.
First use Mar. 12, 1958, on carrots.

SN 49,728. Apple Growers Association, Hood River, Oreg. Filed Apr. 16, 1958.

DIAMOND

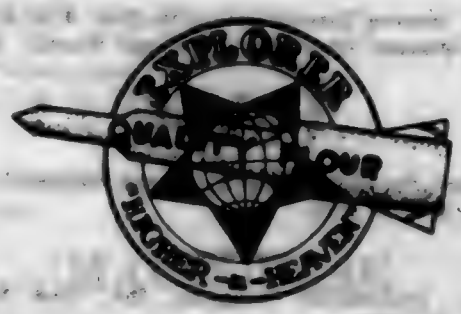
Owner of Reg. Nos. 90,902, 625,600, and 628,899.
For Fresh Deciduous Fruits—Namely, Fresh Apples, Fresh Pears, and Fresh Cherries.
First use at least as early as September 1914.

SN 49,893. Vermont Maple Orchards, Inc., Essex Junction, Vt. Filed Apr. 18, 1958.

Yankee Maid

For Maple and Cane Sugar Spread.
First use approximately 1928.

SN 50,102. The Frank R. Prins Corporation, New York, N. Y. Filed Apr. 21, 1958.



The drawing is lined for shading only. No claim is made to the words "Quality Flour" apart from the mark shown.
For Flour.
First use Feb. 19, 1958.

SN 50,154. Doran Confectionery Co., Inc., Cambridge, Mass. Filed Apr. 22, 1958.

GOOD JOE

For Candy.
First use Aug. 10, 1948.

SN 51,163. Arlington Farms Food Products, Inc., d. b. a. Arlington Farms Food Products, Arlington Heights, Ill. Filed May 7, 1958.

DOUBLE POP

For Unpepped Popcorn and Oil.
First use Apr. 21, 1958.

SN 54,088. Penn Fruit Co., Inc., d. b. a. Penn Fruit Company, and Penn Fruit Co., Philadelphia, Pa. Filed June 23, 1958.

Jubilee

For Bread and Rolls.
First use May 20, 1958.

SN 54,116. D. Thompson Swing, Inc., Price, Md. Filed June 23, 1958.

NOTTINGHAM

For Canned Corn.
First use Oct. 18, 1957.

SN 54,329. River Brand Rice Mills, Inc., New York, N. Y. Filed June 26, 1958.

NUGGETS

For Rice.
First use June 17, 1958.

SN 54,437. Charles F. Sellin, d. b. a. Cornplanter's Hatchery, East Warren, Pa. Filed June 27, 1958.

CORNPLANTER'S

For Wild Bird Feed—Namely, Seeds Dry Mixed or Bound in Cake Form.
First use Sept. 15, 1957.

SN 54,586. Weston Biscuit Company, Inc., d. b. a. American-Superior Biscuit Company, Tacoma, Wash. Filed June 30, 1958.

DELTA

For Bakery Product—Namely, Creme Sandwich.
First use Apr. 2, 1958.

SN 54,799. Wallerstein Company, Inc., New York, N. Y. Filed July 3, 1958.

TONA

For Meat Tenderizer.
First use Jan. 29, 1958.

SN 54,970. D. Thompson Swing, Inc., Price, Md. Filed July 8, 1958.

CHOOSE ME

For Canned Corn.
First use June 3, 1958.

Class 47—Wines

SN 35,265. Italian Swiss Colony, San Francisco, Calif. Filed Aug. 9, 1957.

PINK SATIN

For Wines.
First use July 30, 1957.

SN 43,976. Societa per Azioni Chianti Ruffino Esportazione Vinicola Toscana, Brescia, Italy. Filed Jan. 14, 1958.

RISERVA DUCALE

The words "Riserva Ducale" are Italian for "stock of the duke." No exclusive claim is made for the word "Riserva" apart from the mark as shown.
For Wines.
First use May 1957; in commerce Jan. 21, 1957.

Class 49—Distilled Alcoholic Liquors

SN 51,266. Federated Department Stores, Inc. (Bloomingdale Bros. Division), New York, N. Y. Filed May 8, 1958. Sec. 2(f).

COLONEL CLAYWOOD

Owner of Reg. No. 358,124.
For Whiskey.
First use May 19, 1937.

SN 51,267. Federated Department Stores, Inc. (Bloomingdale Bros. Division), New York, N. Y. Filed May 8, 1958. Sec. 2(f).

COLONEL CARVER

Owner of Reg. No. 359,132.
For Whiskey.
First use May 19, 1937.

SN 51,498. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

CONSTELLATION

For Whiskey.
First use Apr. 18, 1958.

SN 51,499. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

ORBIT

For Whiskey.
First use Apr. 18, 1958.

SN 51,500. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

METEOR

For Whiskey.
First use Apr. 18, 1958.

SN 51,501. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

INTER-PLANETARY

For Whiskey.
First use Apr. 18, 1958.

SN 51,504. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

VANGUARD

For Whiskey.
First use Apr. 18, 1958.

SN 51,506. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

SATELLITE

For Whiskey.
First use Apr. 18, 1958.

SN 51,507. Schenley Distillers, Inc., New York, N. Y. Filed May 12, 1958.

OUTER SPACE

For Whiskey.
First use Apr. 18, 1958.

SN 52,013. Schenley Distillers, Inc., Wilmington, Del. Filed May 20, 1958.

GUIDED MISSILE

For Whiskey.
First use Apr. 29, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 26,047. American Sisalkraft Corporation, Attleboro, Mass. Filed Mar. 13, 1957.

SISAL-GLAZE

For Transparent Plastic Sheet Material for Use as a Glass Substitute.
First use Dec. 20, 1956.

SN 39,007. Park Nameplate Co., Inc., Flushing, N. Y. Filed Oct. 16, 1957.

Thinplates

For Anodized, Adhesive-Backed Metal Foil, Especially for Use as Nameplates, Identification Tags, Labels, Trims, Insignia, Indicia, Specification Plates, Knob Inserts, and Guide Plates.
First use on or about Sept. 1, 1955.

SN 48,882. Tel-A-Sign, Inc., Chicago, Ill. Filed Jan. 14, 1958.

DYNALITE

For Illuminated Indoor and Outdoor Advertising Signs.
First use Dec. 15, 1958.

SN 48,926. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 25, 1958.

BFGoodrich

Owner of Reg. Nos. 64,806, 427,172, and others.
For Mats and Matting Made of Rubber or Rubber-Like Material.
First use about November 1957; 1880 as to "Goodrich."

SN 50,161. Gilliams & Rubin, Inc., New York, N. Y. Filed Apr. 22, 1958.

G & R TYPE

No claim is made to exclusive right to use the word "Type" apart from the mark as shown.
For Finished Printing Plates.
First use Apr. 16, 1958.

SN 53,171. William C. Krieger, Estacada, Oreg. Filed June 9, 1958.

Sani-Kamp

For Collapsible Portable Outdoor Shelter of the Tent Type.
First use May 17, 1958.

Class 51—Cosmetics and Toilet Preparations

SN 40,287. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROCYCLAROMES

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 40,288. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROBASEAROMES

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 40,291. Albert Verley & Company, Linden, N. J. Filed Nov. 7, 1957.

MACROBASE

For Fragrance Imparting Aromatic Chemical and Essential Oil, for Use in the Manufacture of Perfumes and Other Cosmetic Preparations.
First use Aug. 15, 1957.

SN 43,874. Harriet A. Ramsey, d. b. a. Warco Laboratories, Gardena, Calif. Filed Jan. 13, 1958.

SILA-HAND

For Protective Cream for the Hands.
First use Oct. 1, 1957.

SN 51,976. Chesebrough-Pond's Inc., New York, N. Y. Filed May 20, 1958.

NORMAX

For Face Cream for Deep Cleansing.
First use Apr. 29, 1958.

Class 52—Detergents and Soaps

SN 32,542. The Sanfax Company, Atlanta, Ga. Filed June 24, 1957.

SANFAX

222

The drawing is lined for red. Owner of Reg. No. 626,687.
For Cleaning and Sanitary Chemical Compounds and Mixtures Used in Cleaning and Unclogging All Types of Drains and Sewer Lines.
First use October 1951.

SN 32,544. The Sanfax Company, Atlanta, Ga. Filed June 24, 1957.

SANFAX

TL-12

The drawing is lined for red. Owner of Reg. No. 626,687.
For Cleaning and Sanitary Chemical Compounds and Mixtures Used in Cleaning Livestock Stomachs, Such as Tripe, in the Process of Being Slaughtered for Human Consumption.
First use October 1954.

SN 48,467. Dumas Milner Corporation, Jackson, Miss. Filed Mar. 26, 1958.

INSTANT MYSTIC FOAM

The word "Instant" is disclaimed apart from the mark as shown.
For Cleaning Preparation for Fabrics of All Kinds Sold in an Aerosol-Type Container.
First use Mar. 20, 1956.

SN 50,535. Sears, Roebuck & Co., Chicago, Ill. Filed Apr. 28, 1958.

KENMORE

For Household Washing Detergent.
First use Jan. 2, 1956.

SERVICE MARKS

Class 100—Miscellaneous

SN 24,851. Independent Grocers' Alliance Distributing Co., Chicago, Ill. Filed Feb. 21, 1957.

FOODLINER

Owner of Reg. No. 516,998.
For Advertising and Sales Promotion Services.
First use in or about June 1953.

SN 37,378. John J. Jalovec, Los Angeles, Calif. Filed Sept. 20, 1957.

SANDWICH INSTITUTE OF AMERICA

For Institute Services—Namely, Research, Studies, and Recommendations for and Promotion of the Interests of Producers of Breads, Its Ingredients, of Sandwiches, Canapes, Hors d'Oeuvres and Similar Foods and All Their Ingredients Such as Meats, Vegetables and Other Foodstuffs Constituting Sandwiches, Canapes, Etc., Made or Prepared at Home or Commercially.
First use Sept. 5, 1957.

Class 101—Advertising and Business

SN 18,809. Damon J. Swann, d. b. a. Damon J. Swann Advertising Agency, Atlanta, Ga. Filed Nov. 5, 1956.

HOUSE OF IDEAS

Owner of Reg. No. 611,508.
For Advertising Services—Namely, Furnishing Advertising Copy and Designs to Clients.
First use on or about July 1, 1949.

SN 20,461. Holden Trading Stamp Co., Detroit, Mich. Filed Dec. 5, 1956. Sec. 2(f) as to "Holden."

Holden

For Promoting the Sale of Goods of Others by Means of Trading Stamps Which Are Redeemable in Premiums or Cash by the Applicant.
First use June 1, 1930.

Class 102—Insurance and Financial

SN 7,000. California Compensation and Fire Company, San Francisco, Calif. Filed Apr. 25, 1958.

Fairplan

For Insurance Services, That Is, Providing a Group Life Insurance Plan for Underwriters, Agents, and Brokers.
First use Mar. 26, 1956.

Class 103—Construction and Repair

SN 23,455. B J Service, Inc., Long Beach, Calif. Filed Apr. 18, 1957.

FRAC-ASSIST

For Formation Fracturing Services.
First use Mar. 20, 1957.

Class 107—Education and Entertainment

SN 33,912. Storer Broadcasting Company, Miami Beach, Fla. Filed Oct. 21, 1957.

TEMPO

For Title of a Radio and Television Program Consisting of News, Human-Interest Items, Comment on Current Events, and Miscellaneous Features of Interest to the Public Interspersed With Musical Selections and Identified Throughout by Sound Effects Suggesting the Passage of Time.
First use Oct. 28, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 42,567. Joint Committee on York Rite Cooperation of the Grand Bodies of Masonry, Chillicothe, Ohio. Filed Dec. 17, 1957.

For Indicating Membership in Applicant's Organization.
First use Feb. 9, 1956.

SN 47,307. Toastmasters International, Santa Ana, Calif. Filed Feb. 10, 1958.

Owner of Reg. Nos. 555,187, 562,004, and 535,912.
For Indicating Membership in Gavel Clubs Affiliated With Applicant.
First use Jan. 8, 1958.

SN 45,685. American Collectors Association, Inc., Minneapolis, Minn. Filed Mar. 31, 1958.

For Indicating Membership in Applicant.
First use June 24, 1930.

CERTIFICATION MARKS

Class B—Services

SN 31,571. Laundry Store-Sales, Inc., Minneapolis, Minn. Filed June 7, 1957.

King Koin

For Self-Service Laundries.
First use Apr. 19, 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

671,356. BET TO SEW. A. C. Rasco, d. b. a. Rasco Bedding Company. SN 24,228. Pub. 10–7–58. Filed 2–11–57.

671,359. WEST VIRGINIA CHRISTMAS TREE GROWERS ASSN. AND DESIGN. West Virginia Christmas Tree Growers Association. SN 42,066. COLLECTIVE MARK. Pub. 10–7–58. Filed 12–9–57.

671,360. HAZLE BROOK. Jeddo-Highland Coal Company. SN 42,318. Pub. 10–7–58. Filed 1–2–58.

671,361. GENETIC GIANT AND DESIGN. Steckley Hybrid Corn Company. SN 46,222. Pub. 10–7–58. Filed 2–3–58.

671,362. GRAND MERE. Orville O. Dunham, d. b. a. Grand Mere Nurseries. SN 45,390. Pub. 10–7–58. Filed 2–6–58.

671,363. LAND MARK AND DESIGN. The Farm Bureau Cooperative Association, Inc. SN 45,467. Pub. 10–7–58. Filed 2–7–58.

671,364. CAMPCOLITE. Chicago Molded Products Corporation. SN 45,530. Pub. 10–7–58. Filed 2–10–58.

671,365. DENMAG. The Denman Rubber Manufacturing Company. SN 47,253. Pub. 10–7–58. Filed 3–10–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

671,366. JUNIOR MISS. Bernard Caha Co., Inc. SN 42,347. Pub. 10–7–58. Filed 12–13–57.

671,367. MOON MISS. Bernard Caha Co., Inc. SN 42,348. Pub. 10–7–58. Filed 12–13–57.

671,368. "DIG." A. J. Siris Products Corp. SN 46,026. Pub. 10–7–58. Filed 2–17–58.

671,369. MR. CHIPS. North Bergen Leather Products Co. SN 47,066. Pub. 10–7–58. Filed 3–4–58.

671,370. TOUR-LITE BY NEEVEL. Neevel Luggage Manufacturing Company. SN 47,410. Pub. 10–7–58. Filed 3–10–58.

Class 4—Abrasives and Polishing Materials

671,371. LAPMASTER. Crane Packing Company. SN 26,232. Pub. 10–7–58. Filed 3–18–57.

671,372. X–17 AND DESIGN. Werner Kupper. SN 27,701. Pub. 10–7–58. Filed 4–8–57.

Class 5—Adhesives

671,373. CLAD REX. Clad-Rex Corporation. SN 41,988. Pub. 10–7–58. Filed 12–9–57.

Class 6—Chemicals and Chemical Compositions

671,374. ISOCHLORTHION. Farbenfabriken Bayer Aktiengesellschaft. SN 26,257. Pub. 7–1–58. Filed 7–3–57.

671,375. ECONOBRITE. R. O. Hull & Company, Inc. SN 43,675. Pub. 10–7–58. Filed 1–9–58.

671,376. HOME BEAUTIFUL. Revlon, Inc. SN 43,876. Pub. 10–7–58. Filed 1–13–58.

671,377. HY TEX. Scientific Packaging Corp. SN 46,865. Pub. 10–7–58. Filed 2–21–58.

Class 12—Construction Materials

671,378. ELLISON. Ellison Bronze Co., Inc. SN 25,084. Pub. 10–7–58. Filed 2–26–57.

671,379. DESIGN MAN HOLDING A BOARD. Ralph L. Smith Lumber Company. SN 31,159. Pub. 10–7–58. Filed 5–21–57.

671,380. KOIL-PAK. The William L. Bonnell Company, Inc. SN 31,542. Pub. 10–7–58. Filed 6–7–57.

671,381. BETTER LITES BL AND DESIGN. Morris A. Avery, d. b. a. Better Lites. SN 32,228. Pub. 10–7–58. Filed 6–18–57.

671,382. PLATEBOARD. Abitibi Power & Paper Company, Limited. SN 37,118. Pub. 10–7–58. Filed 9–13–57.

671,383. CAPITOL PRODUCTS AND DESIGN. Capitol Products Corporation. SN 37,219. Pub. 10–7–58. Filed 9–16–57.

671,384. INSUL PANE ETC. AND DESIGN. Window Products, Inc. SN 39,504. Pub. 10–7–58. Filed 10–24–57.

671,385. FENCE-O-SHADE. Nursery Metal Pots, Inc. SN 43,202. Pub. 10–7–58. Filed 12–30–57.

671,386. ROLICO. Rockwell Lime Company. SN 44,117. Pub. 10–7–58. Filed 1–16–58.

671,387. CARRIAGE TRADE. Roy T. Ellis, d. b. a. Carriage Trade Products Company. SN 44,451. Pub. 10–7–58. Filed 1–22–58.

671,388. GIANT MIX AND DESIGN. Giant Portland Cement Company. SN 46,821. Pub. 10–7–58. Filed 2–28–58.

671,389. "BIG MAUD." The Philip Carey Manufacturing Company, d. b. a. The Lehon Company. SN 46,890. Pub. 10–7–58. Filed 3–3–58.

671,390. NU-KOTE. The Philip Carey Manufacturing Company, d. b. a. The Lehon Company. SN 46,891. Pub. 10–7–58. Filed 3–3–58.

671,391. LUSTERGLAZE CERAMIC FINISH. The Philip Carey Manufacturing Company. SN 46,892. Pub. 10–7–58. Filed 3–3–58.

671,392. SAFE-LOK. The Philip Carey Manufacturing Company. SN 46,894. Pub. 10–7–58. Filed 3–3–58.

671,393. MODERNFOLD. New Castle Products, Inc. SN 46,975. Pub. 10–7–58. Filed 3–3–58.

671,394. MODERNFOLD DOORS AND DESIGN. New Castle Products, Inc. SN 46,976. Pub. 10–7–58. Filed 3–3–58.

671,395. ALOMEGA. Williams & Williams Limited. SN 47,066. Pub. 10–7–58. Filed 3–4–58.

671,396. NIAGARA. Morrison Steel Products, Inc. SN 47,124. Pub. 10–7–58. Filed 3–5–58

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

671,397. POSITROL. Fisher Governor Company. SN 33,228. Pub. 10–7–58. Filed 7–3–57.

671,398. TANIUM. The Premier Autoware Company. SN 34,458. Pub. 10–7–58. Filed 7–26–57.

671,399. S AND DESIGN. Combustion Engineering, Inc. SN 41,990. Pub. 10–7–58. Filed 12–9–57.

671,400. FLO-ET. Clack Water Treatment, Inc. SN 47,389. Pub. 10–7–58. Filed 3–18–58.

Class M—Metals and Metal Coatings and Forgings

871,401. ALLMETALITE. Allmetal Weatherstrip Company. SN 44,236. Pub. 10-7-58. Filed 1-21-58.

871,402. HALGRAPH. Crucible Steel Company of America. SN 44,260. Pub. 10-7-58. Filed 1-21-58.

871,403. GREEN STRIPE. Basic Refractories Company (U. S. A.) Inc. SN 44,413. Pub. 10-7-58. Filed 1-21-58.

871,404. LIFE-LINE. Latrobe Steel Company. SN 44,475. Pub. 10-7-58. Filed 1-22-58.

871,405. U-T AND DESIGN. Unitcast Corporation. SN 44,497. Pub. 10-7-58. Filed 1-22-58.

871,406. UNITCAST AND DESIGN. Unitcast Corporation. SN 44,572. Pub. 10-7-58. Filed 1-22-58.

Class 16—Protective and Decorative Coatings

871,407. ASBESTOLITE. The Moorco Company, Inc. SN 9,810. Pub. 10-7-58. Filed 6-7-56.

871,408. ENERGICOLOR. Colorificio Italiano Max Meyer S. p. A. SN 34,066. Pub. 10-7-58. Filed 7-31-57.

871,409. FIRE-SHIELD. The Lubrizol Corporation. SN 36,201. Pub. 10-7-58. Filed 8-26-57.

871,410. REDDI CAR. Reddi Car Corp. SN 41,834. Pub. 10-7-58. Filed 12-5-57.

Class 17—Tobacco Products

871,411. HTL-FT AND DESIGN. General Cigar Co., Inc. SN 41,266. Pub. 10-7-58. Filed 11-25-57.

871,412. HFT AND DESIGN. General Cigar Co., Inc. SN 41,267. Pub. 10-7-58. Filed 11-25-57.

Class 18—Medicines and Pharmaceutical Preparations

871,413. SILHOUETTE (PROFILE OF MAN'S HEAD). Hans Schwarzkopf. SN 33,818. Pub. 10-7-58. Filed 1-30-57.

871,414. GLUTAZYME. The Purdue Frederick Company. SN 38,275. Pub. 10-7-58. Filed 4-16-57.

871,415. RESACTIN. The Upjohn Company. SN 38,962. Pub. 10-7-58. Filed 8-26-57.

871,416. SEA AND SKI. Botany Mills, Inc., assignee of Bolley, Inc. SN 37,365. Pub. 10-7-58. Filed 6-10-57.

871,417. CAMYNA. Dr. Karl Thomae G. m. b. H. SN 38,061. Pub. 10-7-58. Filed 10-1-57.

871,418. EQUIVISOL. American Sterilizer Company. SN 40,012. Pub. 10-7-58. Filed 11-4-57.

871,419. LOBASCON. Chicago Pharmacal Company. SN 40,206. Pub. 10-7-58. Filed 11-7-57.

871,420. DEGRANOL-CHINOIN. Chinoin Gyogyszer es Vegyeszeti Termekek Gyara r. t. SN 40,907. Pub. 10-7-58. Filed 8-15-57.

871,421. TRIT. Travenol Laboratories, Inc. SN 41,584. Pub. 10-7-58. Filed 11-29-57.

871,422. DULCOLAX. Dr. Karl Thomae GmbH. SN 42,116. Pub. 10-7-58. Filed 12-10-57.

871,423. SABUNIT. C. H. Boehringer Sohn. SN 42,002. Pub. 10-7-58. Filed 12-26-57.

871,424. SIPPYPLEX DRIP-TABS. The Purdue Frederick Company. SN 42,112. Pub. 10-7-58. Filed 12-27-57.

871,425. TICOLENE. The Pfeiffer Co. SN 43,871. Pub. 1-28-58. Filed 1-13-58.

871,426. GASTROTEST. Clag Limited. SN 44,220. Pub. 10-7-58. Filed 1-20-58.

871,427. HQ. The Borden Company. SN 44,412. Pub. 10-7-58. Filed 2-24-58.

871,428. SUE-CERT. Travenol Laboratories, Inc. SN 47,013. Pub. 10-7-58. Filed 2-3-58.

871,429. COSABIOTIC. Chas. Pfizer & Co., Inc. SN 47,211. Pub. 10-7-58. Filed 2-6-58.

871,430. NEO-MEDROL. The Upjohn Company. SN 47,572. Pub. 10-7-58. Filed 2-10-58.

871,431. EINONE. The Upjohn Company. SN 47,675. Pub. 10-7-58. Filed 2-10-58.

871,432. HALSAN. Fort Dodge Laboratories, Inc. SN 47,492. Pub. 10-7-58. Filed 2-11-58.

871,433. STEROCAINE. Jensen-Salsbery Laboratories, Inc. SN 47,586. Pub. 10-7-58. Filed 2-12-58.

871,434. PREGENT. Beutlich, Inc. SN 47,626. Pub. 10-7-58. Filed 2-12-58.

871,435. ALKAMINTS. Jenkins Laboratories Incorporated. SN 48,290. Pub. 10-7-58. Filed 3-24-58.

871,436. PREDOCULON. Organon Inc. SN 48,651. Pub. 10-7-58. Filed 3-28-58.

871,437. STERASOLIDIN. Geigy Chemical Corporation. SN 49,843. Pub. 10-7-58. Filed 4-17-58.

871,438. TOFASOLIDIN. Geigy Chemical Corporation. SN 49,841. Pub. 10-7-58. Filed 4-17-58.

871,439. ENISYL. Lake Pharmaceutical, Inc. SN 50,166. Pub. 10-7-58. Filed 4-22-58.

871,440. KA-DON. The Borjon Company. SN 50,212. Pub. 10-7-58. Filed 4-23-58.

871,441. PER-CREATINE. Mercury Pharmaceuticals, Inc. SN 50,237. Pub. 10-7-58. Filed 4-23-58.

Class 19—Vehicles

871,442. RIVA-SPORT STC. AND DESIGN. Riva-Sport Industrie Societe Centrale de Constructions Mecaniques. SN 18,787. Pub. 10-7-58. Filed 11-5-56.

871,443. THERMO-JET. Bayco Mfg. Co. SN 40,814. Pub. 10-7-58. Filed 11-12-57.

871,444. PROTECTED CARGO AND DESIGN. Pullman-Standard Car Manufacturing Company. SN 44,009. Pub. 10-7-58. Filed 2-17-58.

871,445. PULLMAN-STANDARD STC. AND DESIGN. Pullman-Standard Car Manufacturing Company. SN 44,010. Pub. 10-7-58. Filed 2-17-58.

871,446. HUGH-HAUL. Floyd H. Nelson. SN 47,774. Pub. 10-7-58. Filed 2-14-58.

871,447. JET STAR. Lockheed Aircraft Corporation. SN 47,872. Pub. 10-7-58. Filed 2-17-58.

871,448. ICOFF. Robert C. Messenger, d. b. a. Messenger Manufacturing Company. SN 47,956. Pub. 10-7-58. Filed 2-18-58.

871,449. ALDENE. Aldene, Inc. SN 47,994. Pub. 10-7-58. Filed 2-19-58.

871,450. BOBCAT. Bobcat Corporation, assignee of Corc Manufacturing Co. SN 48,225. Pub. 10-7-58. Filed 3-24-58.

871,451. SLEEPY HEAD CARSET AND DESIGN. Pearl M. Cole. SN 48,242. Pub. 10-7-58. Filed 3-24-58.

871,452. GLASSPAR. Glasspar Company. SN 48,273. Pub. 10-7-58. Filed 3-24-58.

Class 21—Electrical Apparatus, Machines, and Supplies

871,453. WATT POWER AND DESIGN. Chapman Bros. SN 19,422. Pub. 10-7-58. Filed 11-19-56.

871,454. COMMANDO. Koehler Manufacturing Company. SN 19,465. Pub. 10-7-58. Filed 11-19-56.

871,455. STAAR. "Usines Gustave Staar," Societe Anonyme. SN 38,435. Pub. 10-7-58. Filed 1-29-57.

671,456. FIREPHONE. B & B Engineering Corporation. SN 24,529. Pub. 10-7-58. Filed 8-20-57.

671,457. GEM. Jaidinger Manufacturing Company, Inc., d. b. a. Jaico Products. SN 28,048. Pub. 10-7-58. Filed 4-12-57.

671,458. RICOLIT. Suddeutsche Isolatorenwerke G. m. b. H. SN 29,111. Pub. 10-7-58. Filed 4-29-57.

671,459. MORGANOHM. The Morgan Crucible Company Limited. SN 30,909. Pub. 10-7-58. Filed 5-27-57.

671,460. LUMATEX. Day-Brite Lighting, Inc. SN 31,470. Pub. 10-7-58. Filed 6-6-57.

671,461. VARIVAC AND DESIGN. United Electronics Company. SN 22,252. Pub. 10-7-58. Filed 6-20-57.

671,462. FIXTVAC. United Electronics Company. SN 22,253. Pub. 10-7-58. Filed 6-20-57.

671,463. TWINKLESTAR. National Potteries, Inc. SN 22,768. Pub. 10-7-58. Filed 6-27-57.

671,464. GRIPEX. Essex Wire Corporation. SN 23,955. Pub. 10-7-58. Filed 7-18-57.

671,465. STIRRUP. Burndy Corporation. SN 36,426. Pub. 10-7-58. Filed 8-29-57.

671,466. CITSAFE. Societe Anonyme Andre Citroen. SN 42,720. Pub. 10-7-58. Filed 12-19-57.

671,467. DS 19. Societe Anonyme Andre Citroen. SN 42,723. Pub. 10-7-58. Filed 12-19-57.

671,468. TELERAY. Silver Ray Tube Manufacturing Co. SN 43,847. Pub. 10-7-58. Filed 1-3-58.

671,469. MVR. Sorensen and Company, Inc. SN 43,486. Pub. 10-7-58. Filed 1-6-58.

671,470. KONDO AND DESIGN. Kondo Electrical Industrial Company Limited (Kondo Denkikogyo Kabushikikaisha). SN 43,498. Pub. 8-26-58. Filed 12-2-57.

671,471. LVSYN. Sanborn Company. SN 44,123. Pub. 10-7-58. Filed 1-16-58.

671,472. SONBLASTER. Narda Ultrasonics Corporation. SN 44,296. Pub. 10-7-58. Filed 1-20-58.

671,473. HI-SEN. American Gage & Machine Company. SN 44,387. Pub. 10-7-58. Filed 1-21-58.

671,474. COILOMATIC. Spiratone, Inc. SN 44,495. Pub. 10-7-58. Filed 1-22-58.

671,475. CHARK-EL. Harvic Mfg. Corp. SN 44,542. Pub. 10-7-58. Filed 1-23-58.

671,476. ANDI. Antenna Designs, Inc. SN 44,584. Pub. 10-7-58. Filed 1-24-58.

671,477. HEAT-A-VENT LITE. Nutone, Inc. SN 45,405. Pub. 10-7-58. Filed 2-6-58.

671,478. VENT-A-LITE. Nutone, Inc. SN 45,406. Pub. 10-7-58. Filed 2-6-58.

671,479. BLAUPUNKT. Blaupunkt-Werke Gesellschaft mit beschränkter Haftung. SN 45,714. Pub. 10-7-58. Filed 2-12-58.

671,480. GALAXY. Clarolite, Inc. SN 45,718. Pub. 10-7-58. Filed 2-12-58.

671,481. GENII. Iro Manufacturing Corporation, d. b. a. Iro Mfg. Corp. SN 45,734. Pub. 10-7-58. Filed 2-12-58.

671,482. MUFFIN. Rotron Manufacturing Company, Inc. SN 45,789. Pub. 10-7-58. Filed 2-12-58.

671,483. SAUCER. Rotron Manufacturing Company, Inc. SN 45,790. Pub. 10-7-58. Filed 2-12-58.

671,484. PROPIMAX. Rotron Manufacturing Company, Inc. SN 45,791. Pub. 10-7-58. Filed 2-12-58.

671,485. SPECTRA-STRIP. Organic Development Corporation. SN 45,960. Pub. 10-7-58. Filed 2-17-58.

671,486. PENETRATOR. The Fyr-Fyter Company, assignee of Electronic Engineering Enterprises. SN 46,053. Pub. 10-7-58. Filed 2-18-58.

671,487. TUFFER-BUFFER. The Dill Manufacturing Company. SN 46,296. Pub. 10-7-58. Filed 2-21-58.

671,488. SEIDELHUBER. Rheem Manufacturing Company. SN 46,300. Pub. 10-7-58. Filed 2-21-58.

671,489. TRINE. Trine Manufacturing Corporation. SN 46,377. Pub. 10-7-58. Filed 2-21-58.

Class 22 — Games, Toys, and Sporting Goods

671,490. SCAN-DAY. Clover, Inc. SN 34,501. Pub. 4-29-58. Filed 7-30-57.

671,491. TAXOLOGY. Gloria Game Company, Inc., assignee of Fred Fuld, Jr. SN 34,603. Pub. 10-7-58. Filed 7-30-57.

671,492. TAXOLOGY ETC. AND DESIGN. Gloria Game Company, Inc., assignee of Fred Fuld, Jr. SN 34,606. Pub. 10-7-58. Filed 7-30-57.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

671,493. AAA AND DESIGN. AAA Machinery & Equipment Company, Inc. SN 17,847. Pub. 10-7-58. Filed 10-22-56.

671,494. GFM AND DESIGN. General Foundry Machine Company. SN 17,902. Pub. 10-7-58. Filed 10-22-56.

671,495. MICRO BALLS AND DESIGN. F & M Sales, Inc. SN 24,149. Pub. 8-19-58. Filed 2-11-57.

671,496. RINSE-MISER. Hagan Chemicals & Controls, Inc. SN 27,860. Pub. 10-7-58. Filed 4-10-57.

671,497. TRU-TORK. The Clyde Engineering and Manufacturing Corporation. SN 36,281. Pub. 10-7-58. Filed 5-27-57.

671,498. PNEUMA-GRIP. The Presray Corporation. SN 40,605. Pub. 10-7-58. Filed 11-13-57.

671,499. HI LO AND DESIGN. Steel City Testing Machines, Inc., assignee of Michael A. Gamra. SN 41,535. Pub. 10-7-58. Filed 11-29-57.

671,500. HYPALOX. American Feldmuehle Corporation. SN 43,726. Pub. 10-7-58. Filed 1-10-58.

671,501. HOSPITAL. Club Razor Blade Mfg. Company. SN 43,816. Pub. 10-7-58. Filed 1-13-58.

671,502. LET JACOBS HANDLE IT. H. O. Jacobs Mfg. Co., Inc. SN 44,186. Pub. 10-7-58. Filed 1-17-58.

671,503. FORMASIL. Union Carbide Corporation. SN 44,668. Pub. 10-7-58. Filed 1-24-58.

671,504. ROTO RIDE. Moto-Mower, Inc., assignee of Detroit Harvester Company. SN 45,864. Pub. 10-7-58. Filed 2-14-58.

671,505. MOD-U-LIFT. Leechburg Lumber Company, Inc. SN 47,067. Pub. 10-7-58. Filed 3-4-58.

671,506. GAULIN TWIN LOBE. Manton Gaulin Manufacturing Company, Inc. SN 47,121. Pub. 10-7-58. Filed 3-5-58.

671,507. ORVEC. Super-Cut, Inc. SN 48,063. Pub. 10-7-58. Filed 3-19-58.

671,508. AISLEMASTER. Lewis-Shepard Products, Inc. SN 48,855. Pub. 10-7-58. Filed 4-1-58.

671,509. "DEAN." Washburn & Granger, Inc. SN 49,020. Pub. 10-7-58. Filed 4-3-58.

671,510. HEIN-WERNER. Hein-Werner Corporation. SN 49,063. Pub. 10-7-58. Filed 4-4-58.

671,511. HI-DYNE. Davey Parman & Company Limited. SN 49,076. Pub. 10-7-58. Filed 4-4-58.

671,512. PULP-MASTER. E. D. Jones and Sons Company. SN 49,157. Pub. 10-7-58. Filed 4-7-58.

671,513. REPRESENTATION OF BIRD AND SAW. Drake Corporation. SN 49,912. Pub. 10-7-58. Filed 4-19-58.

671,514. STROMBOLISEUR. Société à Responsabilité Limitée: Société Francaise d'Etudes et de Réalisations d'Inventions Coanda Henri Coanda. SN 52,620. Pub. 10-7-58. Filed 5-14-58.

Class 24 — Laundry Appliances and Machines

671,515. DESIGN OF HUMAN HEAD WITHIN A SQUARE. McGraw-Edison Company. SN 42,149. Pub. 10-7-58. Filed 12-10-57.

671,516. SPEED QUEEN. McGraw-Edison Company. SN 42,150. Pub. 10-7-58. Filed 12-10-57.

Class 26—Measuring and Scientific Appliances

671,517. HI-RI. Westinghouse Electric Corporation. SN 31,668. Pub. 10-7-58. Filed 12-24-56.

671,518. BA BAIRD ATOMIC AND DESIGN. Baird-Atomic, Inc. SN 23,299. Pub. 10-7-58. Filed 1-25-57.

671,519. FINGER TIP AND DESIGN. Corinth Instruments Inc. SN 30,000. Pub. 10-7-58. Filed 5-14-57.

671,520. PACE. Pace, Inc. SN 31,778. Pub. 10-7-58. Filed 6-11-57.

671,521. UNIPROBE. Pace, Inc. SN 31,779. Pub. 10-7-58. Filed 6-11-57.

671,522. PACETROL. Pace, Inc. SN 31,780. Pub. 10-7-58. Filed 6-11-57.

671,523. SEISMIPHONE. Walter E. Nold. SN 34,069. Pub. 10-7-58. Filed 7-19-57.

671,524. SEISMITRON. Walter E. Nold. SN 34,070. Pub. 10-7-58. Filed 7-19-57.

671,525. AUTOMETRIC. Autometric Corporation. SN 34,291. Pub. 10-7-58. Filed 7-24-57.

671,526. END-POINT. Harry W. Dietert Co. SN 34,519. Pub. 10-7-58. Filed 7-29-57.

671,527. ELI WHITNEY. The Sheffield Corporation. SN 35,092. Pub. 10-7-58. Filed 8-16-57.

671,528. CLYDESDALE. James F. Carnoheez, d. b. a. Clyde Woodworking Co. SN 36,562. Pub. 10-7-58. Filed 9-3-57.

671,529. TATNALL AND DESIGN. Tatnall Measuring Systems Company. SN 37,966. Pub. 10-7-58. Filed 9-27-57.

671,530. DESIGN OF CALIPERS AND GLOBE. Tatnall Measuring Systems Company. SN 37,967. Pub. 10-7-58. Filed 9-27-57.

671,531. DIAL-A-FLO. General Controls Co. SN 40,729. Pub. 10-7-58. Filed 11-15-57.

671,532. DIACORD. Riken Optical Industries, Ltd. SN 43,260. Pub. 10-7-58. Filed 12-31-57.

671,533. TACTAIR. Tactair, Inc. SN 44,123. Pub. 10-7-58. Filed 1-16-58.

671,534. WELD CHEK. Pacific Transducer Corporation. SN 47,069. Pub. 10-7-58. Filed 3-4-58.

671,535. KIDDE. Kidde Machine Corporation. SN 47,569. Pub. 10-7-58. Filed 3-12-58.

671,536. VISI-CHART. General Aniline & Film Corporation. SN 47,760. Pub. 10-7-58. Filed 3-14-58.

671,537. INTERCEPTOR AND DESIGN. Tokheim Corporation. SN 47,913. Pub. 10-7-58. Filed 3-17-58.

Class 29—Brooms, Brushes, and Ducters

671,538. VIKING SLOANE. Cadic Chemical Products, Inc. SN 44,856. Pub. 10-7-58. Filed 1-30-58.

Class 31—Filters and Refrigerators

671,539. DUSTPAK. Dustpak Ltd., Inc. SN 40,230. Pub. 10-7-58. Filed 11-6-57.

Class 32—Furniture and Upholstery

671,540. BOUNCY. Hickory Springs Manufacturing Company, Inc. SN 36,395. Pub. 10-7-58. Filed 8-27-57.

671,541. STOR-O-WHEEL. Lincoln Manufacturing Co., Inc. SN 50,076. Pub. 10-7-58. Filed 4-21-58.

671,542. STOR-A-TERIA. Lincoln Manufacturing Co., Inc. SN 50,077. Pub. 10-7-58. Filed 4-21-58.

671,543. LINCOLN. Lincoln Manufacturing Co., Inc. SN 50,078. Pub. 10-7-58. Filed 4-21-58.

671,544. PORT-A-TERIA. Lincoln Manufacturing Co., Inc. SN 50,079. Pub. 10-7-58. Filed 4-21-58.

671,545. ADD-A-TERIA. Lincoln Manufacturing Co., Inc. SN 50,080. Pub. 10-7-58. Filed 4-21-58.

671,546. POSTATION. Le Febure Corporation. SN 52,729. Pub. 10-7-58. Filed 6-3-58.

671,547. FORMAT. Morganton Furniture Company. SN 52,806. Pub. 10-7-58. Filed 6-4-58.

671,548. SIT-A-TABLE. Falco Products Co. SN 53,129. Pub. 10-7-58. Filed 6-9-58.

Class 34—Heating, Lighting, and Ventilating Apparatus

671,549. FROS-T-AIRE. Palmer Manufacturing Corporation. SN 37,095. Pub. 10-7-58. Filed 9-12-57.

671,550. TANKCAIRE. Cargocaire Engineering Corporation. SN 38,795. Pub. 10-14-58. Filed 7-16-57.

671,551. MAGIC CHIMNEY. Badger Furnace Pipe Company, Inc. SN 44,518. Pub. 10-14-58. Filed 1-23-58.

671,552. MONTAG. Montag, Inc. SN 42,902. Pub. 10-7-58. Filed 12-12-57.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

671,553. HEVAFLEX. Pirelli, S. p. A., assignee of Cotonificio Valle di Susa S. p. A. SN 18,500. Pub. 10-7-58. Filed 10-31-56.

671,554. CONSTRUCTOR ROUGH DUTY. Crane Carrier Corporation. SN 45,310. Pub. 10-7-58. Filed 2-5-58.

671,555. SAFETY AIRLOCK. The Firestone Tire & Rubber Company. SN 45,868. Pub. 10-7-58. Filed 2-14-58.

Class 37—Paper and Stationery

671,556. STABILO. Schwan-Bleistift-Fabrik Schwanhäusser & Co. SN 25,790. Pub. 10-7-58. Filed 3-8-57.

671,557. IRIDIMOID. E. S. Perry Limited. SN 34,078. Pub. 10-7-58. Filed 7-15-57.

671,558. OSMIROID. E. S. Perry Limited. SN 34,079. Pub. 10-7-58. Filed 7-15-57.

671,559. REC-ORD-AID. Rec-Ord-Aid, Inc. SN 38,766. Pub. 10-7-58. Filed 10-11-57.

671,560. THINRITE. Eberhard Faber Pencil Company. SN 39,606. Pub. 10-7-58. Filed 10-28-57.

671,561. OSMIROID R. M. T. E. S. Perry Limited. SN 44,204. Pub. 10-7-58. Filed 1-17-58.

671,562. KRAFTSMAN WV AND DESIGN. West Virginia Pulp and Paper Company. SN 44,261. Pub. 10-7-58. Filed 1-20-58.

671,563. K-C. Kimberly-Clark Corporation. SN 44,854. Pub. 10-7-58. Filed 2-3-58.

671,564. NOVEL-ETTES. Puritan Stationery Company, Inc. SN 47,212. Pub. 10-7-58. Filed 3-6-58.

671,565. SNO-KRAFT. Graham Paper Company. SN 47,274. Pub. 10-7-58. Filed 3-10-58.

Class 38—Prints and Publications

671,566. CONNIE'S COLUMN. Sam H. Kaufman, d. b. a. "Constance Flame." SN 23,715. Pub. 10-7-58. Filed 2-4-57.

671,567. POST-MORTEM. Greater New York Bridge Association, Inc. SN 42,646. Pub. 10-7-58. Filed 12-18-57.

671,568. INTERCOM. American Gas Association. SN 44,056. Pub. 10-7-58. Filed 1-16-58.

671,569. CURRENT CONTENTS. Eugene Garfield, d. b. a. Eugene Garfield Associates. SN 44,459. Pub. 10-7-58. Filed 1-22-58.

671,570. AMERICAN BRIDE. Irene Bartlett, d. b. a. American Bride Publications. SN 45,109. Pub. 10-7-58. Filed 2-3-58.

671,571. TODAY'S BRIDE. Irene Bartlett, d. b. a. American Bride Publications. SN 45,110. Pub. 10-7-58. Filed 2-3-58.

671,572. YES. Youth Education Systems, Inc. SN 45,508. Pub. 10-7-58. Filed 2-7-58.

Class 39—Clothing

671,573. WORKMEN'S PAL. Adams-Millis Corporation. SN 31,584. Pub. 10-7-58. Filed 6-7-57.

671,574. FABRI-GARD. Converse Rubber Corporation. SN 31,994. Pub. 10-7-58. Filed 6-13-57.

671,575. SLENDERELLA. Slenderella Systems, Inc. SN 32,997. Pub. 10-7-58. Filed 7-1-57.

671,576. YOUNG-FAIR AND DESIGN. Yunker Manufacturing Co. Inc. SN 34,199. Pub. 10-7-58. Filed 7-22-57.

671,577. ALLENE-CAROL. George J. Spires, d. b. a. G. J. Spires Hosiery. SN 34,871. Pub. 10-7-58. Filed 8-2-57.

671,578. JOHN BARRY. Banner Shirt Corporation. SN 35,846. Pub. 10-7-58. Filed 8-20-57.

671,579. EDELWEISS. Seattle Woolen Company. SN 35,857. Pub. 10-7-58. Filed 8-20-57.

671,580. OGLINO. Kruskal & Kruskal, Inc. SN 36,086. Pub. 10-7-58. Filed 8-23-57.

671,581. CAPEZIO. Capezio Inc. SN 36,260. Pub. 10-7-58. Filed 10-3-57.

671,582. SHOWER SONG. Howard Andersen, d. b. a. Printed Supplies Company. SN 36,584. Pub. 10-7-58. Filed 10-9-57.

671,583. CHARING CROSS. Charing Cross Shoes, Ltd. SN 39,514. Pub. 10-7-58. Filed 10-25-57.

671,584. MTC AND DESIGN. Men's Town & Country, Inc. SN 40,136. Pub. 10-7-58. Filed 11-5-57.

671,585. MR. MAC. Greenberg Flech Hat Corp. SN 40,940. Pub. 10-7-58. Filed 11-19-57.

671,586. AMPHIBIAN CHICKEN CHASER. John Arnold Clark. SN 42,166. Pub. 10-7-58. Filed 12-5-57.

671,587. GAMINS. Andrew Geller Penn, Inc. SN 42,874. Pub. 10-7-58. Filed 12-23-57.

671,588. GANNESS GOWNS. Anne Gauss. SN 44,015. Pub. 10-7-58. Filed 1-15-58.

671,589. ARGO MALTESA AND DESIGN. Strumpffabrik Argo A. G. SN 46,805. Pub. 10-7-58. Filed 2-24-58.

671,590. SNUGGY CUFFS. Geo. L. Chapman, d. b. a. George Chapman Co. SN 46,582. Pub. 10-7-58. Filed 2-25-58.

671,591. MATERNELLE. Chester H. Roth Co., Inc. SN 46,644. Pub. 10-7-58. Filed 2-26-58.

671,592. 5 STAR ADMIRAL AND DESIGN. Admiral Sportswear, Inc. SN 46,790. Pub. 10-7-58. Filed 2-28-58.

671,593. FLIGHT. Cluett, Peabody & Co., Inc. SN 46,900. Pub. 10-7-58. Filed 3-3-58.

671,594. FRANDEL. Frandel Fashions, Inc. SN 47,248. Pub. 10-7-58. Filed 3-7-58.

671,595. WORLD WIDES AND DESIGN. Nu-Way Shoe Co. Inc. SN 47,271. Pub. 10-7-58. Filed 3-7-58.

671,596. GLOBEMASTER AND DESIGN. Salem Shoe Manufacturing Company. SN 47,681. Pub. 10-7-58. Filed 3-13-58.

671,597. SPORTBEAR. Bear Brand Hosiery Co. SN 47,715. Pub. 10-7-58. Filed 3-14-58.

671,598. JUNIORETTES. Fashion-Art Footwear. SN 47,750. Pub. 10-7-58. Filed 3-14-58.

671,599. GRAYSTONE. M. K. M. Knitting Mills, Inc. SN 48,197. Pub. 10-7-58. Filed 3-21-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

671,600. BOTILLA. J. P. Stevens & Co. Inc., assignee of D. B. Fuller & Co., Inc. SN 38,687. Pub. 5-20-58. Filed 10-10-57.

671,601. FASHIONITE. J. J. O'Donnell Woolens, Inc. SN 40,594. Pub. 10-7-58. Filed 11-13-57.

Class 44—Dental, Medical, and Surgical Appliances

671,602. SUNBEAM. Sunbeam Corporation. SN 32,638. Pub. 10-7-58. Filed 6-25-57.

671,603. INFAFEEDER. Deemer-Howard Associates, Inc. SN 39,601. Pub. 10-7-58. Filed 10-28-57.

671,604. VI-HESIVE. Aeroplast Corporation. SN 41,872. Pub. 10-7-58. Filed 12-6-57.

Class 46—Foods and Ingredients of Foods

671,605. GILLUM'S HICKORY MOUNTAIN. Hickory Mountain Barbecue Company, Inc. SN 695,979. Pub. 9-16-58. Filed 4-21-55.

671,606. HAYDEN HOUSE AND DESIGN. The Cremosna-Beaird Company, Inc. SN 7,241. Pub. 10-7-58. Filed 4-27-56.

671,607. BURK'S. Louis Burk Company, assignee of Louis Burk, Incorporated. SN 15,764. Pub. 10-7-58. Filed 9-17-56.

671,608. BONNIE BAR. I. N. Hagan Ice Cream Company. SN 24,590. Pub. 1-28-58. Filed 2-18-57.

671,609. SURE GOLD. Pacific Mercantile Company. SN 38,557. Pub. 5-20-58. Filed 10-3-57.

671,610. APPLE ANNIE AND DESIGN. Honey-Kist Fruits, Inc., d. b. a. Apple Annie. SN 44,283. Pub. 10-7-58. Filed 1-20-58.

671,611. BARBEQUE QUEEN AND DESIGN. Barbeque Queen Food Systems, Inc. SN 45,105. Pub. 8-26-58. Filed 2-3-58.

671,612. IVORY. Atalanta Trading Corp. SN 45,941. Pub. 10-7-58. Filed 2-17-58.

671,613. EHLERS M AND DESIGN. Albert Ehlers, Inc. SN 48,257. Pub. 10-7-58. Filed 3-24-58.

671,614. EHLERS F AND DESIGN. Albert Ehlers, Inc. SN 48,259. Pub. 10-7-58. Filed 3-24-58.

671,615. EHLERS S AND DESIGN. Albert Ehlers, Inc. SN 48,407. Pub. 10-7-58. Filed 3-25-58.

671,616. EHLERS D AND DESIGN. Albert Ehlers, Inc. SN 48,408. Pub. 10-7-58. Filed 3-25-58.

671,617. EHLERS O AND DESIGN. Albert Ehlers, Inc. SN 48,409. Pub. 10-7-58. Filed 3-25-58.

671,618. SPEE-D-MIX. Roman Meal Company. SN 49,084. Pub. 10-7-58. Filed 4-4-58.

Class 50—Merchandise Not Otherwise Classified

671,619. SNOW-LITE. World Wide Enterprises, Inc., d. b. a. Fluffy Snow Co. SN 35,606. Pub. 10-7-58. Filed 8-15-57.

671,630. PLANT TWIN. Tropical Plants. SN 38,650. Pub. 10-7-58. Filed 10-9-57.

671,631. HY-PAR AND DESIGN. Hoosier Tarpaulin & Canvas Goods Company, Inc. SN 41,456. Pub. 10-7-58. Filed 11-27-57.

671,632. HOME MARK. Pickett Products, Inc. SN 48,209. Pub. 10-7-58. Filed 12-30-57.

671,633. HI-FI. The Goodyear Tire & Rubber Company. SN 44,174. Pub. 10-7-58. Filed 1-17-58.

671,634. STERLINATED. Sterling Last Corporation. SN 44,566. Pub. 10-7-58. Filed 1-23-58.

Class 51—Cosmetics and Toilet Preparations

671,635. SIMONE MOUNIER. Charles of the Ritz, Inc. SN 36,854. Pub. 10-7-58. Filed 9-9-57.

Class 52—Detergents and Soaps

671,626. FELS. Fels and Company. SN 32,075. Pub. 10-7-58. Filed 6-17-57.

671,627. PANSAN. Pennsalt Chemicals Corporation. SN 34,625. Pub. 10-7-58. Filed 7-30-57.

671,628. FORMULA NO. 99 AND DESIGN. Armour and Company. SN 34,835. Pub. 10-7-58. Filed 8-2-57.

671,629. CASTANUELA. Perfumeria Gal, S. A. SN 40,773. Pub. 10-7-58. Filed 11-15-57.

671,630. NIFTY. Lever Brothers Company. SN 52,000. Pub. 10-7-58. Filed 5-20-58.

671,631. MERTONE. Merson Products Co., Inc. SN 53,277. Pub. 10-7-58. Filed 6-10-58.

Service Marks

Class 100—Miscellaneous

671,622. ANA AND DESIGN. American Nurses' Association. SN 24,760. Pub. 10-7-58. Filed 9-1-57.

Class 102—Insurance and Financial

671,623. MR. BUSY DOLLAR AND DESIGN. First Federal Savings and Loan Association of Watertown. SN 32,612. Pub. 10-7-58. Filed 7-12-57.

671,624. SAV-RITE. Riverside State Bank. SN 35,814. Pub. 10-7-58. Filed 8-19-57.

671,625. MR. SAVINGS AND DESIGN. American Federal Savings and Loan Association of Orlando. SN 42,521. Pub. 10-7-58. Filed 1-7-58.

Class 103—Construction and Repair

671,636. FELLINGERIZED. Birch-Fellinger, Incorporated. SN 24,317. Pub. 10-7-58. Filed 2-13-57.

671,637. H AND DESIGN. Toledo Scale Corporation, by merger and change of name from Haughton Elevator Company. SN 30,772. Pub. 10-7-58. Filed 5-27-57.

Class 106—Material Treatment

671,638. TERMINIX TERMINATES TERMITES. E. L. Bruce Company. SN 30,299. Pub. 10-7-58. Filed 5-20-57.

671,639. DUFFY'S. Duffy's Incorporated. SN 31,339. Pub. 10-7-58. Filed 6-5-57.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 29—Brooms, Brushes, and Dusters

680,020. Pettett Manufacturing Company, Miami, Okla. SN 671,640. Filed P. R. 1-17-58. Am. S. R. 1-29-58.

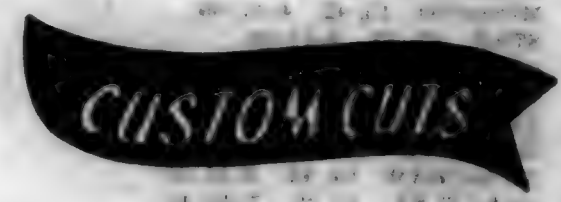
The lining shown in the drawing is for shading purposes only and no claim is made thereto.

For Floor Mops.

First use during October 1953.

Class 46—Foods and Ingredients of Foods

671,641. A. Michaud Co., Philadelphia, Pa. SN 17,579. Filed P. R. 10-16-56. Am. S. R. 9-29-58.



For Fresh and Frozen Meat Steaks and Meat Patties.

First use Apr. 1, 1956.

Class 49—Distilled Alcoholic Liquors

671,642. The Sazerac Company, Inc., New Orleans, La. SN 31,591. Filed P. R. 6-7-57. Am. S. R. 10-22-58.

MIMS

For Gin.

First use Apr. 3, 1957.

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16,462. WOODITE A. M. W. Cl. 1. 4-3-1889.
123,224. MONITO. Cl. 39. 7-6-18.
123,256. PREMIX. Cl. 24. 10-22-18.
123,260. DOMINO AND REPRESENTATION OF DOMINOS. Cl. 46. 10-22-18.
123,324. KLINGWHITE. Cl. 4. 10-30-18.

123,498. TEXLAN. Cl. 32. 11-12-18.
124,290. WIREMOLD. Cl. 21. 2-14-19.
347,041. BALDWIN FRICTIONIZED BELTING. Cl. 35. 6-15-37.
358,414. AUTHORIZED PATTERN AND DESIGN. Cl. 39. 7-12-38.
358,670. DELITEX. Cl. 39. 7-19-38.
359,204. AUXANINE. Cl. 6. 8-9-38.
359,418. CANNON BALL. Cl. 49. 8-16-38.
359,845. MARIMBA. Cl. 49. 8-30-38.
361,117. PLASTICADE. Cl. 6. 10-11-38.
361,192. SUEDE. Cl. 51. 10-11-38.
361,197. MILKO MAC. Cl. 18. 10-11-38.
361,228. ACTIFOAM. Cl. 51. 10-11-38.
361,246. LUMARITH PROTECTOID. Cl. 37. 10-11-38.
361,304. SPRAYCOP. Cl. 6. 10-11-38.
361,551. F AND DOUBLE TRIANGLE. Cl. 14. 10-18-38.
361,656. SUNNYBROOK POULTRY FARM. Cl. 46. 10-25-38.
361,782. FISHING GAZETTE. Cl. 38. 11-1-38.
361,820. THE MOBILE PRESS REGISTER. Cl. 38. 11-1-38.
361,821. THE MOBILE REGISTER. Cl. 38. 11-1-38.
361,822. TRICO. Cl. 23. 11-1-38.
362,413. OLD BOONE AND DESIGN. Cl. 49. 11-15-38.
362,428. FLEUR DE LIS. Cl. 44. 11-15-38.
362,538. ENSIGN. Cl. 27. 11-22-38.
362,563. COPACO. Cl. 37. 11-22-38.
362,909. ENAMELINE. Cl. 18. 12-6-38.
363,051. HEXITE. Cl. 46. 12-13-38.
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363,342. TECH-RAZOR. Cl. 23. 12-20-38.
363,646. TROPIC-AIRE. Cl. 19. 1-3-39.
363,796. OLD MR. BOSTON DIAMOND BOTTLE. Cl. 49. 1-10-39.
363,851. BLUE DIAMOND AND DESIGN. Cl. 1. 1-10-39.
364,096. DEPILEX-RAZOR. Cl. 23. 1-17-39.
364,107. FUNGIFOIL. Cl. 42. 1-17-39.
364,183. SKILO. Cl. 22. 1-17-39.
364,217. B B ZIP WISE—ZIP SATISFIED AND DESIGN. Cl. 39. 1-24-39.
364,252. VELVERAY. Cl. 39. 1-24-39.
364,464. REGAL. Cl. 26. 1-31-39.
364,477. ZEPHYR. Cl. 26. 1-31-39.
364,518. CAMEL AND DESIGN. Cl. 46. 2-7-39.
364,531. DURA-GLOSS. Cl. 51. 2-7-39.
364,576. DINO. Cl. 52. 2-7-39.
364,974. THE TOAST OF THE TOWN AND DESIGN. Cl. 46. 2-21-39.
365,046. TOURNEY. Cl. 22. 2-21-39.
365,261. CHEMISEAL. Cl. 16. 2-28-39.
365,296. ALL AMERICA. Cl. 46. 3-7-39.
365,378. PERSONALIZED HANDKERCHIEF AS YOU LIKE IT. Cl. 39. 3-7-39.
365,470. PURITAN AND DESIGN. Cl. 27. 3-7-39.
365,473. GRAND STAND. Cl. 46. 3-7-39.
365,572. DRAKES AND REPRESENTATION OF DUCK. Cl. 46. 3-14-39.
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365,617. CENTRAL STAR AND REPRESENTATION OF STAR. Cl. 46. 3-14-39.
365,675. ANGEL FOOD. Cl. 46. 3-14-39.
365,882. GLORIOUS BRAND. Cl. 46. 3-21-39.
365,911. CAFOTAN. Cl. 18. 3-21-39.
365,946. WOOD YOUTH. Cl. 6. 3-21-39.
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366,129. TOP SCORE. Cl. 17. 3-28-39.
366,177. AMERICANA. Cl. 51. 4-4-39.

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195,523. PERSIAN GOLD. Cl. 16. 2-24-25.
195,526. PLAZA GRAY. Cl. 16. 2-24-25.
293,076. SALVARINE ETC. AND DESIGN. Cl. 52. 4-5-32.
296,606. FLUFFS. Cl. 30. 7-5-32.
306,105. DAMASKO. Cl. 32. 3-28-33.
306,107. MINETTO. Cl. 32. 3-28-33.
306,226. STAR. Cl. 32. 4-4-33.
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365,777. CRESCENT. Cl. 32. 6-27-39.
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370,715. VELLMO. Cl. 32. 9-5-39.
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378,040. KARASHAM. Cl. 42. 5-21-40.
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417,225. AURORA. Cl. 23. 10-16-45.
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506,195. ROYAL AND DESIGN. Cl. 19.
506,203. ARGENTINE. Cl. 51.
506,204. RIO. Cl. 51.
506,209. SULPHONE-CILAG. Cl. 18.
506,223. SAFE-T-EYE. Cl. 19.
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506,230. BANK-O-COUNT. Cl. 36.
506,231. STRIP TEES AND DESIGN. Cl. 22.
506,232. STALKWALKER. Cl. 22.
506,234. MASTERPIECE. Cl. 32.
506,248. "LET'S GROW." Cl. 26.
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506,327. SUE-DINE LEATHERS AND DESIGN. Cl. 1.
506,331. KARLANE. Cl. 22.
506,333. FOREVER SPRING. Cl. 30.
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506,359. CUMOPTRAN. Cl. 18.
506,364. LITE-MITE. Cl. 23.
506,369. "LUCKY 7." Cl. 46.
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506,378. CHRISTMAS CAROL AND DESIGN. Cl. 46.
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506,380. WILL ROGERS AND PORTRAIT OF WILL ROGERS. Cl. 1.
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Abbott Laboratories, North Chicago, Ill. 566,269, canc. Cl. 18.
Abitibi Power & Paper Co., Ltd., Toronto, Ontario, Canada. 671,262, pub. 10-7-58. Cl. 12.
Adams-Millis Corp., High Point, N. C. 671,572, pub. 10-7-58. Cl. 39.
Admiral Sportswear, Inc., St. Louis, Mo. 671,566, pub. 10-7-58. Cl. 39.
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Allied Chemical Corp.: *See*— General Chemical Co.
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American Foldmobile Corp., New York, N. Y. 671,500, pub. 10-7-58. Cl. 22.
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American Sterilizer Co., Erie, Pa. 671,418, pub. 10-7-58. Cl. 18.
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Armour and Co., Chicago, Ill. 671,626, pub. 10-7-58. Cl. 52.
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Autometric Corp., New York, N. Y. 671,522, pub. 10-7-58. Cl. 26.
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Bear Brand Hosiery Co., Chicago, Ill. 671,597, pub. 10-7-58. Cl. 39.
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Ben-Burk, Inc.
McGraw-Edison Co.: *See*—
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McNabb Coal Co., Catoosa, Okla. 566,379, canc. Cl. 1.
McNabb Coal Co., Catoosa, Okla. 566,380, canc. Cl. 1.

Strongleaf Paper Corp., Yonkers, N. Y. 566,430, canc. Cl. 37. "Unique Custom Fiber" Products

10–7–58. Cl. 21.
National Potteries, Inc., Cleveland, Ohio. 671,462, pub. 10–7–58. Cl. 21.
National Silver Co., New York, N. Y. 566,445, canc. Cl. 28.
Neevel Luggage Mfg. Co., Kansas City, Mo. 671,370, pub. 10–7–58. Cl. 3.
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Nemanick, R. A., to R. Alameda, d. b. a. Robert Alameda Co., Salinas, Calif. 365,675, ren. 3–14–59. Cl. 46.
New Castle Products, Inc., New Castle, Ind. 671,393–4, pub. 10–7–58. Cl. 12.
Nold, Walter E., Natick, Mass. 671,523–4, pub. 10–7–58. Cl. 26.
North Bergen Leather Products Co., North Bergen, N. J. 671,369, pub. 10–7–58. Cl. 3.
Nursery Metal Pots, Inc., San Francisco, Calif. 671,385, pub. 10–7–58. Cl. 12.
Nutone, Inc., Cincinnati, Ohio. 671,477–8, pub. 10–7–58. Cl. 21.
Nu-Way Shoe Co. Inc., New York, N. Y. 671,595, pub. 10–7–58. Cl. 39.
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Old Quaker Co., The, Lawrenceburg, to Schenley Distillers, Inc., New York, N. Y., and Lawrenceburg, Ind. 350,418, ren. 8–16–58. Cl. 49.
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Poodles, Inc., New York, N. Y. 566,236, canc. Cl. 52.
Premier Autoware Co., The, Cleveland, Ohio. 671,398, pub. 10–7–58. Cl. 13.
Premo Pharmaceutical Laboratories, Inc., Harbensack, N. J. 365,911, ren. 3–21–59. Cl. 18.
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Protection Products Mfg. Co., Kalamazoo, Mich. 365,947, ren. 3–21–59. Cl. 6.
Pullman-Standard Car Mfg. Co., Chicago, Ill. 671,444–5, pub. 10–7–58. Cl. 19.
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Sharp & Dohme, Inc., Philadelphia, Pa. 566,375, canc. Cl. 18.
Sheffield Corp., The, Dayton, Ohio. 671,527, pub. 10–7–58. Cl. 26.
Silberman Fur Corp., Chicago, Ill. 566,347, canc. Cl. 1.
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Societe Anonyme Andre Citroen, Paris, France. 671,466–7, pub. 10–7–58. Cl. 21.
Societe a Responsabilite Limitee: Societe Francaise d'Etudes et de Realisations d'Inventions Coanda Sferi Coanda, France. 671,514, pub. 10–7–58. Cl. 23.
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Soria & Simon Co.: *See*—
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Spaulding Bakeries Inc., Binghamton, N. Y. 364,974, ren. 2–21–59. Cl. 46.
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Steel City Testing Machines, Inc., from M. A. Gamra, Detroit, Mich. 671,496, pub. 10–7–58. Cl. 23.
Sterling Last Corp., Long Island City, N. Y. 671,634, pub. 10–7–58. Cl. 50.
Stevens, J. P., & Co, Inc., from D. B. Fuller & Co., Inc., New York, N. Y. 671,600, pub. 5–20–58. Cl. 42.
Straus, Nathan-Duparquet, Inc., New York, N. Y. 566,254, canc. Cl. 30.

Strumpffabrik Argo A. G., Mohlin, Switzerland. 671,529, pub. 10–7–58. Cl. 39.
Suddeutsche Isolatorenwerke G. m. b. H., im Breisgau, Germany. 671,456, pub. 10–7–58. Cl. 21.
Sunbeam Corp., Chicago, Ill. 671,602, pub. 10–7–58. Cl. 44.
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Super-Cut, Inc., Chicago, Ill. 671,507, pub. 10–7–58. Cl. 23.
Svenska Aktiebolaget Vate, Halmstad, Sweden. 566,191, canc. Cl. 46.
Swiss Watch Dial Co., Inc., now by change of name Drema Mfg. Co., Inc., New York, N. Y. 566,322, canc. Cl. 28.
Tactair, Inc., Bridgeport, Pa. 671,533, pub. 10–7–58. Cl. 26.
Tatnall Measuring Systems Co., Philadelphia, Pa. 671,529–30, pub. 10–7–58. Cl. 26.
Television Guide, Inc., New York, N. Y. 566,461, canc. Cl. 38.
Thomae, Dr. Karl, G. m. b. H., Biberach an der Riss, Germany. 671,417, pub. 10–7–58. Cl. 18.
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Tokheim Corp., Fort Wayne, Ind. 671,537, pub. 10–7–58. Cl. 26.
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Trine Mfg. Corp., New York, N. Y. 671,489, pub. 10–7–58. Cl. 21.
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Tropical Plants, New York, N. Y. 671,620, pub. 10–7–58, Cl. 50.
Union Carbide Corp., New York, N. Y. 671,508, pub. 10–7–58. Cl. 23.
Unitcast Corp., Toledo, Ohio. 671,405–6, pub. 10–7–58. Cl. 14.
United Electronics Co., Newark, N. J. 671,461–2, pub. 10–7–58. Cl. 21.
United Nations Co., Cleveland, Ohio. 566,226, canc. Cl. 23.
United States Time Corp., The: *See*—
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Upjohn Co., The, Kalamazoo, Mich. 671,430–1, pub. 10–7–58. Cl. 18.
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Washburn & Granger, Inc., Paterson, N. J. 671,509, pub. 10–7–58. Cl. 23.
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Wave, Inc., Louisville, Ky. 566,411, canc. Cl. 104.
Wave, Inc., Louisville, Ky. 566,412, canc. Cl. 104.
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West Virginia Christmas Tree Growers Association, Clarksburg, W. Va. 671,550, pub. 10–7–58. Cl. 1.
West Virginia Pulp and Paper Co., New York, N. Y. 671,562, pub. 10–7–58. Cl. 37.
White and Co., Inc., Charlotte, N. C. 566,437, canc. Cl. 18.
Whitman, Stephen F., & Son, Inc., Philadelphia, Pa. 366,033, ren. 3–28–59. Cl. 46.
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World Wide Enterprises, Inc., d. b. a. Fluffy Snow Co., Chicago, Ill. 671,619, pub. 10–7–58. Cl. 50.
Wright-Hall Products, Inc., Santa Monica, Calif. 566,481, canc. Cl. 21.
Youth Education Systems, Inc., New York, N. Y. 671,572, pub. 10–7–58. Cl. 38.
Yunker Mfg. Co. Inc., New York, N. Y. 671,576, pub. 10–7–58. Cl. 39.

U. S. GOVERNMENT PRINTING OFFICE: 0——1959

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PATENTS

NOTICES

Adjudicated Patents

(C. A. N. Y.) Back Patent No. 2,454,666 (88—37), for varifocal lenses for cameras, *Held* invalid and not infringed. *Zoomar Inc.* v. *Paillard Products, Inc.*, 256 F.2d 527; 113 USPQ 469.

(C. A. Fla.) Cornell Patent No. 2,718,677 (20—64), for threshold and door sealing construction. Claims 8 to 10, 14 to 16, 19, 21, and 23 *Held* invalid. *Cornell* v. *Adams Engineering Co.*, 256 F.2d 874; 119 USPQ 469.

(C. A. N. Y.) Back and Lowen Patent No. 2,718,817 (88—37), varifocal lens system for motion picture and television cameras, *Held* invalid and not infringed. *Zoomar Inc.* v. *Paillard Products, Inc.*, 256 F.2d 527; 113 USPQ 469.

(D. C. Mich.) Geralds Patent No. 2,364,705 (220—97), for basket structure. Claims 1 to 4 and 7 to 12 *Held* not infringed. *Mid-West Wire Products Co.* v. *Weil Tube and Metal Products Co.*, 164 F. Supp. 599; 118 USPQ 226.

(D. C. Ind.) Salati Patent No. 2,540,012 (233—97), for electrical connector. Claims 1 to 3 *Held* invalid. *Hazeltine Research, Inc.* v. *Dage Electric Co., Inc.*, 165 F. Supp. 226; 118 USPQ 307.

(D. C. Ga.) Nicoll Patent No. 2,757,436 (28—78), for puffed fabrics. Claims 1 to 6 *Held* invalid. *Chicopee Mfg. Corp.* v. *Columbus Fiber Mills Co. Inc.*, 165 F. Supp. 307; 118 USPQ 53.

(D. C. Ga.) Paris and Koenig Patent No. 2,757,437 (28—78), for puffed fabrics. Claims 1 to 5 *Held* invalid. *Id.*

(D. C. Ga.) Klein Design Patent No. 178,456 (92—1), for puffed textile fabrics, *Held* invalid and not infringed. *Id.*

(D. C. Ga.) Klein Design Patent No. 173,462 (92—1), for puffed textile fabrics, *Held* invalid. *Id.*

Disclaimer

2,624,888.—*Peter P. Bebry*, Jamaica, N. Y. LOVE SEAT BED WITH RESILIENT FRONT PANEL. Patent dated Jan. 13, 1953. Disclaimer filed Nov. 25, 1958, by the assignee, *Bebry Bedding Corporation*.

Hereby enters this disclaimer to claim 6 of said patent.

Foreign Patents Received in the Scientific Library as of November 30, 1958

Country	Date received	Highest number
Australia		
(*Abstracts*)	Nov. 4, 1958	36,534
(*Patents*)	Nov. 25, 1958	215,789
Austria	Oct. 13, 1958	200,001
Belgium	Nov. 5, 1958	534,700
Canada	Nov. 24, 1958	566,406
Denmark	Oct. 23, 1958	85,670
Egypt	Nov. 12, 1956	1,297
Finland	Sept. 5, 1958	29,565
France		
(*Patents*)	Nov. 25, 1958	1,164,950
(*Additions*)	Nov. 12, 1958	69,150
Germany		
(*Auslegeschriften*)	Nov. 7, 1958	1,029,000
(*Patents*)	Nov. 7, 1958	1,024,874
Great Britain	Nov. 24, 1958	804,140
India	Oct. 9, 1958	59,241
Ireland	Nov. 7, 1958	21,650
Italy	Nov. 12, 1956	558,700
Japan	Nov. 24, 1958	9,250
Netherlands	Nov. 4, 1958	89,361
Norway	Nov. 4, 1958	92,515
Philippines	June 29, 1956	217
Poland	Oct. 1, 1958	41,481
Sweden	Oct. 20, 1958	184,657
Switzerland	Nov. 24, 1958	332,714
Yugoslavia	Feb. 17, 1955	16,461

Australia : First 2,000 incomplete
Belgium : First printed 493,079
Canada : First printed 453,746
Czechoslovakia : Latest 81,300/1952
Finland : First printed 19,428
First 500 incomplete
Hungary : First received 5,792
Latest 140,582/1951
Ireland : Missing 1–10,000
Italy : First 243,000 incomplete
Russia : Latest 2496/1928
Yugoslavia : First received 10,001

New Applications Received During October 1958

Patents	6,852
Designs	409
Plant Pats	13
Reissues	24
Total	7,098

Issue

Patents	774—No. 2,866,199 to No.	2,866,972, incl.
Designs	43—No. 184,161 to No.	184,203, incl.
Plant Pats	6—No. 1,786 to No.	1,791, incl.
Reissues	1—No. 24,583	
Total	824	

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1958

Total number of pending applications (excluding Designs)	202, 603
Total number of pending Design applications	7, 000
Total number of applications awaiting action (excluding Designs)	84, 564
Total number of Design applications awaiting action	3, 421
Date of oldest new application	Nov. 13, 1957
Date of oldest amended application	Nov. 12, 1957

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 21, 29, 43, 46, 50, 55, 59, 60, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 31, 34, 57, 58, 61, Designs.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 9, 20, 25, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 8, 10, 18, 23, 28, 38, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 24, 30, 32, 49, 56, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	I, II, III, IV, V.

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1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows.	3-10-58	2-25-58
2. (III) HERRMANN, D., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	2-3-58	1-29-58
3. (VII) LE ROY, C. A., Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	3-6-58	3-12-58
4. (VI) FALLER, E. A. (SCHULZ, H. O., acting), Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyers, Chutes, Skids, Guides and Ways	3-19-58	3-17-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminuters; Fences; Gates; Music; Signals and Indicators; Fluid Sprinkling, Spraying and Diffusing	1-17-58	12-26-57
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e. g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	3-3-58	3-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	3-17-58	3-4-58
8. (V) LEWIS, R. O., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles	4-2-58	2-19-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	3-17-58	3-3-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	3-31-58	3-26-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clinching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	4-14-58	3-27-58
12. (III) SPINTMAN, S. (DURHAM, B. G., acting), Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	3-27-58	1-6-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e. g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	3-24-58	3-20-58
14. (III) MANIAN, J. C. (WILTZ, W. A., acting), Metal Working (part), e. g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-16-57	12-3-57
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	2-6-58	2-7-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	3-20-58	1-29-58
17. (IV) LEIGHEY, R. A., Packaging (part); Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	4-24-58	4-25-58
18. (VI) BLUM, A., Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	3-19-58	3-17-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	4-2-58	3-31-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	3-3-58	3-3-58
21. (III) MADER, R. C., Textiles	1-24-58	1-23-58
22. (VI) MARLAND, M. L., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-6-58	2-1-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	11-13-57	11-12-57
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control	5-29-58	5-27-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	3-25-58	3-17-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e. g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	4-4-58	4-10-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	4-14-58	4-9-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	1-28-58	12-19-57
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	3-10-58	2-17-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e. g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e. g., Polypropylenes, Polyisobutylenes); Mineral Oils	5-9-58	4-24-58
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Gas Separation; Agitation; Self Proportioning Fluid Systems; Liquid Level Responsive Systems; Fire Extinguishers	3-31-55	4-1-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs	3-13-58	3-11-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements	3-27-58	3-3-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding	6-1-58	6-2-58
36. (V) EVANS, R. L., Measuring and Testing; Automatic Weighers; Weighing Scales	12-5-57	12-5-57
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	2-10-58	1-24-58
38. (I) MARMELSTEIN, N., Carbon Chemistry (part), e. g., Azo, Carbocyclic or Acyclic Compounds (part), e. g., Anthracene, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	5-5-58	5-5-58
39. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Self-Proportioning Systems, Float Valves, Diaphragms and Bellows)	4-11-58	4-25-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	5-12-58	5-12-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	5-26-58	5-12-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	1-13-58	1-13-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-9-58	4-9-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	1-20-58	1-8-58
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	3-11-58	3-25-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	3-17-58	3-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	4-1-58	4-3-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	2-13-58	2-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	2-3-58	2-25-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e. g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e. g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	2-3-58	2-13-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	3-13-58	3-6-58
52. (V) RIORDON, R. C., (acting) Supports and Racks	2-25-58	2-27-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	5-22-58	5-5-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e. g., X-Ray, Ultraviolet, Radioactive) Applications	5-22-58	5-16-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members; Separating and Assorting Solids (part)	12-26-57	12-18-57
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	3-26-58	4-11-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	3-17-58	3-17-58
58. (III) BRONAUGH, P. H., Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Packaging (part); Selective Punching	4-24-58	5-1-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	2-10-58	2-13-58
60. (I) MANGAN, P. E., Carbon Chemistry (part), e. g., Synthetic Resins (part); Miscellaneous Polymers (e. g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	4-2-58	4-1-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Heresy; Railway Mail Delivery; Feeding of Indefinite Lengths	3-3-58	3-3-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	4-19-58	4-17-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	2-12-58	2-20-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	2-3-58	2-3-58
66. (V) LIBANN, I., Geometric Instruments; Acoustics; Building Structures	1-7-58	1-6-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	3-10-58	3-3-58
69. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	5-1-58	4-24-58
CLASS. DIVS. I—BAILEY, J. S., Laminated Fabrics	4-1-58	4-1-58
CLASS. DIVS. II—LADY, J. E., Detectors; Miscellaneous Electron Tube Circuits	3-24-58	4-4-58
CLASS. DIVS. III—WAHL, R. A., Metal Bending; Web Feeding	4-1-58	3-13-58
CLASS. DIVS. IV—BERLOWITZ, W., Earth Boring	4-1-58	3-31-58
CLASS. DIVS. V—ANGEL, C. D., Scaffolds; Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	3-10-58	3-13-58
M. E. DIV. A* (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part) i. e., Polyethylenes	2-14-58	2-17-58
DESIGNS (III) A—MONCURE, J. A., Industrial Arts	4-4-58	3-3-58
DESIGNS (III) B—GRAY, M. A., Household, Personal and Fine Arts	1-3-58	3-26-58

*Established August 23, 1957, by order of the Commissioner—722 O. G. 315.

The following divisions have been abolished: 55 and 68

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1958, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents	Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents	Numbers 493 to 498, inclusive

30. (VII) O'LEARY, R. A., Illuminating Burners; Commutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration ..... 2-14-58 | 2-6-58

REISSUES

DECEMBER 30, 1958

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

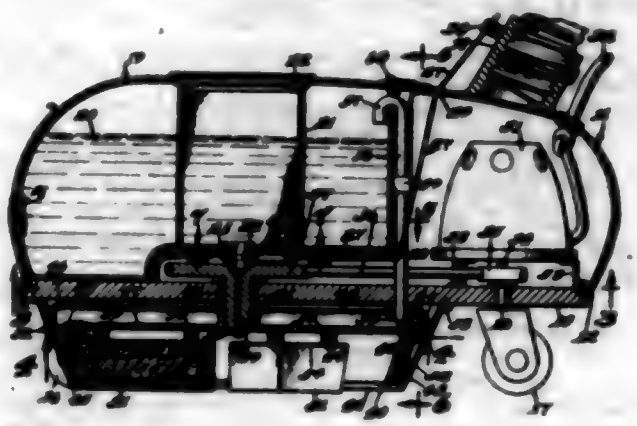
24,583
AUTOMATIC FLOOR MOP

Lester H. Brown, Indianapolis, Ind., assignor to S. C. Johnson & Son, Inc., a corporation of Wisconsin

Original No. 2,774,089, dated December 18, 1956, Serial No. 462,554, October 15, 1954. Application for reissue June 13, 1957, Serial No. 666,497

8 Claims. (Cl. 15—98)

6. In an automatic floor cleaning implement, a mopping assembly comprising in combination a hollow open drum to be rotated in a generally horizontal plane and having a truncated conical annular wall with the truncated end of said wall being at the lower end thereof, a mounting partition for said drum connected to said wall intermediate the upper and lower ends of said wall, said wall converging inwardly above said partition to provide an inwardly facing fluid-retaining open chamber, a plurality of circumferentially spaced cutouts in said partition adjacent the connection of said partition with said wall, said partition having means for mounting said assembly in rotatable driving engagement with the drive member of the cleaning machine, said means including a central bore in said partition through which fluid is supplied to the underside of said partition, and a plurality of cleaning elements secured on the underside of said partition.



PLANT PATENTS

GRANTED DECEMBER 30, 1958

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,786
ROSE PLANT

Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif., a corporation of California

Application January 7, 1958, Serial No. 707,656

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by its large, bushy, vigorous and floriferous habits of growth, its habit of bearing flowers both singly and in clusters, its relatively long individual flower stems which are suitable for cut flowers, the nearly perfect urn-shaped form of its buds, its double flowers of from medium to large size, its better than average petal substance and attendant long-lasting flower quality, the bright scarlet-orange general color tonality of its flowers, and the good retention of the flower color.

1,787
PEACH TREE

Herbert C. Swim, Ontario, Calif., assignor to Armstrong Nurseries, Inc., Ontario, Calif., a corporation of California

Application January 7, 1958, Serial No. 707,657

1 Claim. (Cl. 47—62)

A new and distinct variety of peach tree of the yellow-fleshed, freestone, fruit-bearing and ornamental flowering type, substantially as herein shown and described, characterized particularly as to novelty by the combination of a medium vigorous habit of growth, a slightly less chilling requirement than that of the variety "July Elberta" (Plant Patent No. 15), large, double flowers of light pink general color tonality which are borne from 1 to 3 flowers per node, with the nodes relatively closely spaced and giving a distinctly ornamental appearance to the tree during its blooming period, large freestone fruit which has a good, sweet, relatively mild peach flavor, and a fruit-ripening habit averaging about 1 week earlier than that of the variety "July Elberta" in early mid-season in southern California.

1,788
ROSE PLANT

Eugene S. Boerner, Newark, N. Y., assignor to Jackson & Perkins Company, Newark, N. Y., a corporation of New York

Application May 6, 1958, Serial No. 733,462

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of bushy, compact and free-flowering plant habits, a flower size and form similar to that of the variety "Lavender Pinocchio" (Plant Patent No. 947), with stiff-petalled flowers having both large and small petaloids in the center, a distinctive Acajou Red general color tonality of the new wood, a distinctive Eugenia Red general color tonality of both the sepals and peduncle, and a distinctive Carmine, lightly overcast with Spectrum Red general color tonality of the flowers.

1,789
ROSE PLANT

Roy L. Byrum, Richmond, Ind., assignor to Joseph H. Hill Company, Richmond, Ind., a corporation of Indiana

Application May 8, 1958, Serial No. 734,066

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the polyantha class, substantially as herein shown and described,

Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,264,268 to 2,268,538, inclusive
Plant Patents ..... Numbers 493 to 498, inclusive

characterized particularly as to novelty by the unique combination of vigorous "Pinocchio" type habit of plant growth averaging 3 to 4 feet in height when grown in a greenhouse, very free and unusually good flower productivity throughout each year with prolific blooms even during the dark winter months, abundant blooms per cluster, good keeping quality of the blooms, and an unusually good and distinctive 2-tone bloom color which is unique in greenhouse forcing varieties.

1,790
ROSE PLANT
Herbert Robinson, Burbage, Hinckley, England, assignor to Jackson & Perkins Company, Newark, N. Y., a corporation of New York
Application May 19, 1958, Serial No. 736,416
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered hybrid floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of vigorous, tall and bushy plant growth, a floriferousness greater than that of the parent variety "Pinocchio" (U. S. Plant Patent No. 484) and the continuation thereof throughout the entire growing season, unusually long shoots, long-lasting petal quality similar to that of the parent variety "Peace" (U. S. Plant Patent No. 591), and a distinctive Massicot Yellow, lightly overcast with Buff-Yellow general color tonality of the flowers.

1,791
CHRYSANTHEMUM PLANT
Roderick W. Cumming, Bristol, Conn., assignor to Bristol Nurseries, Inc., Bristol, Conn.
Application May 13, 1958, Serial No. 735,871
1 Claim. (Cl. 47—69)

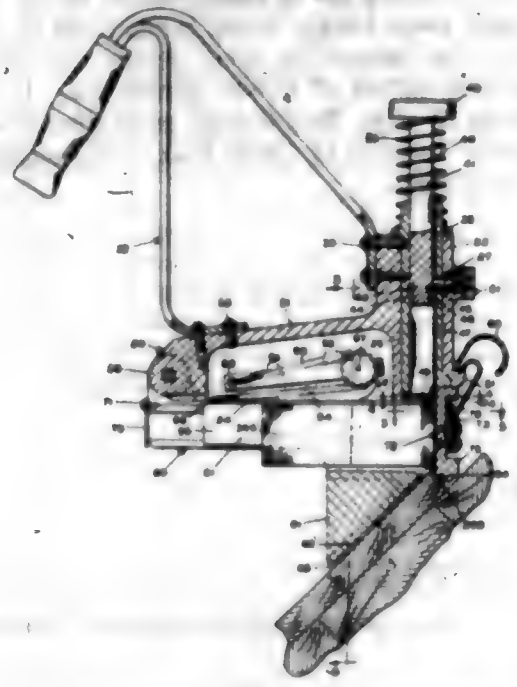
The new and distinct variety of chrysanthemum plant of the hardy decorative type, substantially as herein shown and described, characterized particularly as to novelty by its airy grace of plant growth; its very healthy, glossy, dark green foliage which remains on the plant all the way to the ground; its erect, strong and wiry stems; its very early period of flower display; and its excellent productivity of large, long-lasting, decorative flowers with general color tonality of Dawn Pink, occasionally flushed Tangerine Orange.

PATENTS

GRANTED DECEMBER 30, 1958

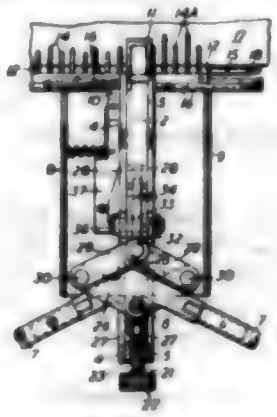
GENERAL AND MECHANICAL

2,866,199
HAMMER
John F. Freeman, Worthington, and James W. Smelker and Albert Miller Rockwood, Columbus, Ohio, assignors, by mesne assignments, to Bond Nail, Incorporated, Columbus, Ohio, a corporation of Ohio
Application October 19, 1955, Serial No. 541,326
7 Claims. (Cl. 1—46)



1. In a nailing machine having a housing, a nail driving means comprising; a sleeve within the housing having a bore and formed with a longitudinally extending keyway along the periphery of the bore of said sleeve, a cylindrical plunger received in the bore of said sleeve, so as to slidably reciprocate and rotate coaxially therewith, said plunger having an enlarged portion adjacent to one end and formed with two adjacent annular grooves near to but spaced from the other end; a flat blade received in the keyway of said sleeve so as to slidably reciprocate longitudinally within said keyway and having a projection near to but spaced from one end thereof, said projection being received in the groove of said plunger nearest the end of said plunger opposite to the end having the enlarged portion so that said blade is carried by said plunger which remains free to rotate within said bore, said projection having a depth less than the depth of said groove and having a width in the axial direction of said plunger substantially less than the corresponding dimension of said groove so that said blade is free to float for small distances longitudinally relative to said plunger; a drive washer having a rectangular ear and being received in the other groove of said plunger so that it is carried thereby, said plunger remaining free to rotate coaxially within the bore of said sleeve, said ear being reciprocally and slidably received in the keyway of said sleeve and engaging said blade during the driving stroke; a compression spring surrounding the shaft of said plunger and bearing on said sleeve so as to urge said plunger out of the bore of said sleeve; and stop means including a stepped cylindrical pin being formed with body portions adjacent each end thereof of substantially different diameters connected by an intermediate filleted annular surface, and a hollow cylinder of resilient material surrounding one end of the pin and secured within the housing, said pin being pivotally carried on its filleted surface by the housing so that the portion of said pin having the larger diameter is movably received within the keyway of said sleeve and is engaged by the ear of said washer during the driving stroke and so that the portion of said pin having the smaller diameter is resiliently attached within said housing; whereby said plunger is free to rotate relative to said sleeve, said blade and said drive washer as said plunger reciprocates and whereby said plunger is resiliently restrained from moving out of the bore of said sleeve by said pin engaging the ear of said drive washer.

2,866,288
MACHINES FOR SECURING HOOKED BELT-FASTENERS
John J. Potter, Sheffield, England, assignor to Hayden-Niles Limited, Sheffield, England
Application March 29, 1957, Serial No. 649,431
Claims priority, application Great Britain July 17, 1956
3 Claims. (Cl. 1—49.4)



1. A machine for securing hooked belt fasteners to a belt comprising a pair of two-armed jaws pivoted to a frame, the forward arms of the jaws providing a gap to be closed on to a belt the end of which is inserted into the gap, and on to open fastening hooks positioned along the belt end, toggle links connecting the rearward arms of the jaws and pivoted to each other, an abutment in the frame rearwardly of the toggle links, an adjusting screw passing through the abutment, a stop on the screw, a sliding member adjustably supported by the screw and the stop, and jaw-operating means connected between the sliding member and the common pivot of the toggle links.

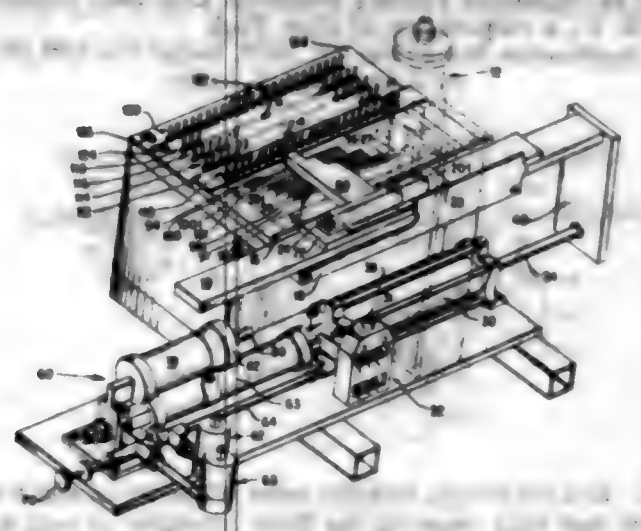
2,866,301
AUTOMATIC ARTICLE INSERTING APPARATUS
William L. Clarke, Lake Katrine, N. Y., assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York
Application April 26, 1957, Serial No. 655,433
12 Claims. (Cl. 1—104)

1. Apparatus for assembling components in predetermined ones of a plurality of locations on a board comprising an inserting tool adapted to insert a component at a reference position when operated, means for feeding said board location by location to said reference posi-

shaped liner having an opening, and a guard fastened

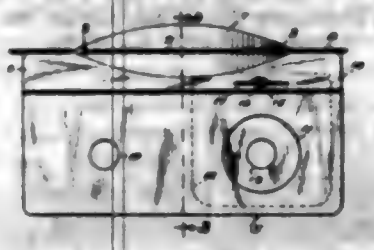
2,866,288

tion, a plurality of settable control devices, each associated with one of said locations, and means actuated in response to the arrival of each location on said board



at said position and to the setting of the associated control device for stopping said feeding means and for operating said inserting tool.

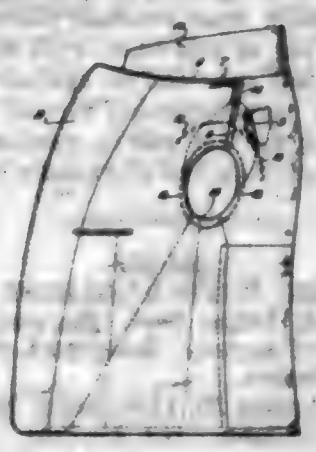
2,866,202
EYE SHIELD
Jesse A. Landis, Eaton, Ohio
Application April 7, 1955, Serial No. 499,936
1 Claim. (Cl. 2—12)



In an eye shield, a body comprising a flat sheet of translucent material, one longitudinal edge of said body being extended rearwardly and upwardly inclined providing a flange along one edge of said body, said body having sight openings formed therein, one of said sight openings being substantially larger in diameter than the other sight opening, said flange having a slot elongated longitudinally of said flange, a shield plate mounted for transverse sliding movement on the rear surface of said body, a rearwardly extended flange formed along one edge of said shield plate fitted against said flange of said body, said shield plate having a sight opening equal in diameter to the small sight opening of said body adapted to lie within the confines of said large sight opening for visibility therethrough, the flange of said shield plate having an opening registering with said slot in said flange of said body, and a bolt extending through said registering slot and opening of said shield plate flange for securing said shield plate in its positions of transverse adjustment.

2,866,203
SHOULDER AND ARMHOLE CONSTRUCTION FOR GARMENTS AND METHOD OF MAKING THE SAME
Frank Costanza, Los Angeles, Calif.
Application April 20, 1956, Serial No. 579,568
2 Claims. (Cl. 2—93)

2. A shoulder and armhole construction of a garment comprising: shoulder and armhole forming garment cloth portions; a canvas backing adjacent to said garment cloth; an arcuate shoulder pad adjacent to said canvas backing; and a lining; said pad having outer and inner arched surfaces engaged with said canvas backing and said lining respectively; said outer surface being smoothly arched; said inner pad surface being arched and being of a greater length than said outer surface; said inner surface having a plurality of wrinkle-like folds therein pro-

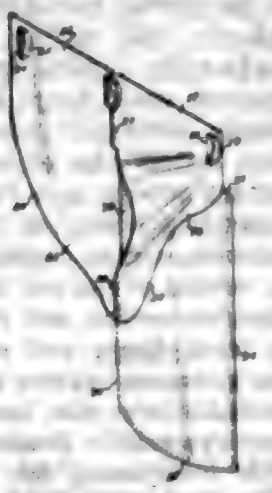


viding resilient support for said shoulder pad, and said lining being engaged with the arched inner pad surface.

2,866,204
FLEXIBLE TIARA
Lazaro Mayer, Chicago, Ill.
Application January 18, 1956, Serial No. 559,963
2 Claims. (Cl. 2—174)

2. A tiara adapted to be associated with a hairnet comprising an elongated strip of flexible material having a plurality of apertures extending lengthwise thereof below the longitudinal center line of said strip, said apertures being arranged in pairs, a plurality of slits through said strip connecting the apertures of each pair, said slits being positioned to define a flap when connected with each pair of apertures, each of the flaps so defined being coplanar with said strip, said apertures being of a size larger in diameter than the bottom strand of the hairnet with which they are adapted to be associated whereby the said tiara may be firmly secured to said hairnet before the hairnet is worn and without any substantial deformation of said strip.

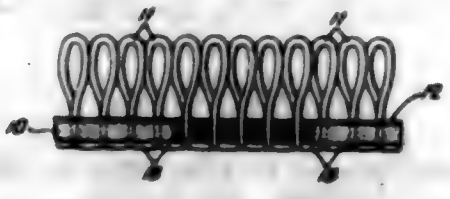
2,866,205
POCKET GUARD AND LINER FOR GARMENTS
Alex R. Croxton, Atlanta, Ga.
Application June 11, 1956, Serial No. 590,593
2 Claims. (Cl. 2—247)



1. A pocket guard and liner for the vertically open side pockets of a pair of trousers including a pocket

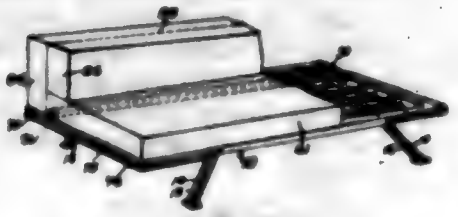
shaped liner having an opening, and a guard fastened to said liner at said opening including forwardly and rearwardly extending wear resistant elements joined together above the top of said liner, each of said elements being adapted to fold over and lie against a garment surface adjacent the pocket opening thereof and to extend thereabove, the upward extending portion defining belt receiving loops forwardly and rearwardly of said opening.

2,866,206
PILE FABRIC WITH RESILIENT LINING
Russell C. Gobert, Elkins Park, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Application August 20, 1956, Serial No. 605,821
1 Claim. (Cl. 2—278)



A resilient pile fabric floor covering comprising a deformable resilient lining of substantial thickness, a woven textile reinforcing web coextensive with and secured to one side of said lining, and a plurality of rows of face pile yarns extending through the lining and the web said pile yarns forming loops adjacent the web and extending as stitches along the opposite side of the lining and said yarns being the sole securing means between the lining and the web.

2,866,207
SOFA BED
Melvin Sunlow, Jackson Heights, and Morton Thiolle, Forest Hills, N. Y.
Application October 6, 1953, Serial No. 384,974
3 Claims. (Cl. 5—18)

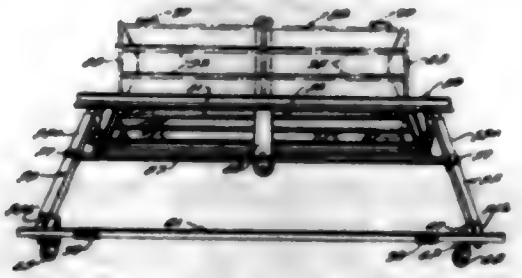


1. A sofa extension bed combination comprising a rear section having a horizontal rectangular frame, the shorter two sides of which are its right and left laterals, an extension section also having a horizontal rectangular frame, the shorter two sides of which are its right and left laterals, said section being selectively forwardly and backwardly slidable over the rear section, a separate narrow track flange integral with, and extending horizontally sidewardly outwardly along the length of the outside bottom edge of each of the laterals of the rear section and serving as a support for the tail end of the corresponding lateral of the extension section; friction overcoming means connected with and depending below the bottom of the tail end of each of the laterals of the extension section and rollably resting on the corresponding track flange and adapted to permit the laterals of the extension section to be moved forwardly and backwardly over the laterals of the rear section without any appreciable friction and serving as the sole means for overcoming the friction, and for supporting the tail end of said laterals, as the extension section is moved forwardly or backwardly.

2,866,288
FOLDABLE COT
Robert D. Vandermindon, Granville, N. Y., assignor to The Telescope Folding Furniture Co., Inc., Granville, N. Y., a corporation of New York
Application November 27, 1957, Serial No. 699,253
4 Claims. (Cl. 5—111)

1. In a cot having foldable main frame parts, end frame parts and links securing the latter pivotally to said main frame parts, identical headed pins secured to the main frame parts, said pins being positioned thereon to interlock with each other when said main frame parts are in folded cot condition and to engage individual links when said cot is in open unfolded condition to then maintain the end frame parts against collapse.

2,866,289
BED CONSTRUCTION
Robert B. Murchie, Traverse City, Mich.
Application February 29, 1956, Serial No. 568,465
7 Claims. (Cl. 5—317)

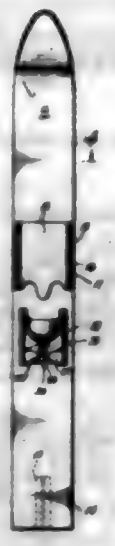


1. Auxiliary means for securing to a floor supported bed frame having side bars and end bars adapted to support a spring and mattress, said auxiliary means comprising an undercarriage having a longitudinal central bar, means on opposite ends of said central bar for removably securing said central bar to the end bars of the bed frame, and a rolling carrier slidably supported by said undercarriage beneath said bed frame in a concealed position when the bed is in position for sleeping purposes and having caster units secured thereto, said undercarriage also comprising pivot support means adapted to be removably affixed to one of the side bars on the bed frame and track means secured to said central bar and said pivot support means disposed transversely with respect to the bed frame, said rolling carrier having a longitudinal inner member and a longitudinal outer member, means for attaching opposite ends of said inner member to said track means so as to permit said carrier to be laterally extended with respect to the bed frame while being retained to said track means, said pivot support means being constructed and arranged so as to engage and support said inner member when said carrier is disposed in an extended position and to provide a pivot axis for said rolling carrier whereby said rolling carrier may be moved to a perpendicular position with respect to the bed frame while being supported on said inner member by said pivot support means and while said bed frame is maintained in its floor supported position, securing means including pairs of straps and connector means secured to said outer member and to the opposite side bar of the bed frame from said one side bar for retaining said carrier in said perpen-

operatively connected to said tool, said roller being cations and having a grip extending in laterally spaced

dicular position whereby the entire weight of the bed frame, spring and mattress may be supported on said carrier and rolled when said bed frame, spring and mattress are placed in a sidewise position.

2,866,210
WATER-SKI WITH ADJUSTABLE HEEL
Richard I. Romig, El Campo, Tex.
Application February 21, 1956, Serial No. 566,865
5 Claims. (Cl. 9—31)



1. A ski comprising a base, a toe receiving toe hood thereon, longitudinaly extending trackways on said base spaced to the rear of said toe hood and equally transversely spaced apart one on each side of the longitudinal axis of said base, each trackway providing a slot therein and thereabove an upstanding bearing surface both facing said longitudinal axis, a heel assembly including a support plate slidable forwardly and rearwardly in said slots, an upstanding heel shield mounted on said support plate and curved transversely to receive the heel of a skier, a leaf spring of substantially V-shape in plan with side surfaces extending vertically and edge surfaces extending horizontally, and with the apex of the V forwardly and connected to said support plate transversely centrally thereof, the leaf spring part on either side of said apex being longer than half the transverse distance between said trackways and said leaf spring being so tensioned in construction that it tends to straighten whereby its free ends may bear forcefully against said upstanding bearing surfaces to restrain said support plate from sliding rearwardly in said slots responsive to the thrust exerted upon said heel shield by a skier, said leaf spring parts being yieldable to permit them to be drawn inwardly toward said longitudinal axis by the application of an inwardly acting force to draw said free ends out of contact with said upstanding bearing surfaces whereby said support plate may be slid in said slots to move said heel shield to fit the heel of an individual skier, and thereafter, when said inwardly acting force is released the tension in said spring parts urging said free ends outwardly to bear as stops against said upstanding bearing surfaces, said heel shield thereby being adjustably positionable in infinitesimal gradients to fit the heels of various skiers.

2,866,211
METHOD OF MAKING FOOTWEAR OF THE MOCCASIN TYPE HAVING MOULDED COUNTERS
William F. Herlihy, Haverhill, Mass., assignor to Lowell Counter Company, Lowell, Mass., a copartnership consisting of William F. Herlihy and John J. Herlihy
Application July 26, 1955, Serial No. 524,336
1 Claim. (Cl. 12—142)

That method of making a moccasin type shoe of the kind in which a unitary piece of upper stock extends uninterruptedly and without seam across and beneath the foot at the forepart portion of the shoe to form the forward portion of the insole and merges integrally with the vamp and with quarter portions of the shoe and wherein the rear ends of the quarter portions are united without overlapping, along a substantially straight seam at the extreme rear end of the shoe, said method comprising as steps providing a unitary blank of upper material having a smoothly rounded forward edge merging with longitudinally extending outer edges, and having an elongate recess extending forwardly from its rear end and merging with a forwardly tapering slot extending substantially to the forward end of the shank in the completed shoe, the forward portion of the blank being dimensioned to constitute the vamp and, as an uninterrupted continuation thereof, the forward portion, at least, of the insole, and the rear portion of the blank being shaped to form the right and left quarter portions of the shoe, the inner edges of the said elongate recess defining the lower edges of the respective quarters, butting the rear ends of the quarter portions and uniting them by a seam thereby to close the upper at its rear end, providing a counter-liner, sewing the counter-liner along its upper edge to the upper edge of the closed rear end of the shoe upper but leaving the lower edge of the counter-liner free from the material of the upper to provide a counter-pocket open at its lower end, said pocket being characterized in that while the lower edges

of the quarter portions, at the opposite sides of said recess and slot, are still free from each other, the rear part of the upper may be expanded transversely by separating the lower edges of the quarter portions and the opposite edges of the slot, pulling the lower margin of the counter-liner away from the material of the upper, introducing a moldable stiffener into the counter-pocket through the opening provided by transversely separating the lower edges of the quarter portions and the edges of the slot, pressing the counter-liner rearwardly into contact with the moldable stiffener, subjecting the quarter portion of the upper, together with the stiffener and counter-liner, to a molding operation such as to impart to the quarter portion, stiffener and counter-lining substantially the exact curved contour which the quarter of the upper is to have in the completed shoe, and thereafter uniting the material of the quarter at the opposite edges of said slot by a sewed seam to close the shank portion of the insole, placing the upper upon a last, and completing the shoe according to conventional practice, the counter-liner being of such dimensions as to extend from approximately the shank portion, at one side, rearwardly and about the heel end of the upper and approximately to the shank portion at the opposite side, and the moldable stiffener being of such lateral dimension that when it is inserted in the counter-pocket it extends throughout substantially the entire area of the counter-liner.

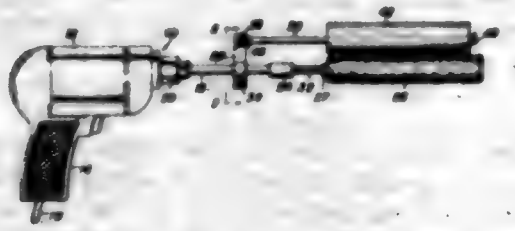
2,866,212
ROTATABLE CLEANING TOOL
Maurice William White, William Ray Browning, and Malcolm E. Hinkle, Pampa, Tex.
Application April 22, 1955, Serial No. 503,054
3 Claims. (Cl. 15—88)

1. A cleaning device comprising a rotatable cleaning tool, means to rotate said tool, and a positioning roller

portion thereof extending between the furcations of said one end portion, a brush element folded around said re-

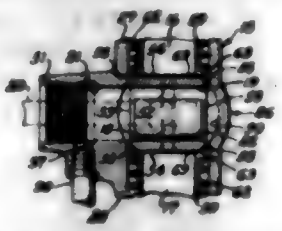
2,866,219
WINDSHIELD WIPER

operatively connected to said tool, said roller being resiliently urged into a position wherein the axis of rotation thereof is substantially parallel to the axis of rotation of said tool, and means to pivot said roller



away from said position, said positioning roller being mounted for rotation on a shaft which is hingedly connected on a swivel mounting on the drive shaft of said tool.

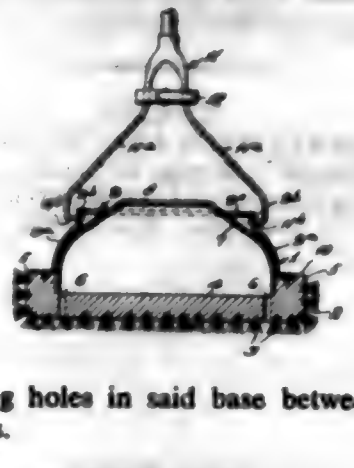
2,866,213
APPARATUS FOR INSERTING SOLUBLE PLUGS IN FLUID LINES
Ralph F. McArthur, Huntington Park, and Mathew R. Mecumber, Long Beach, Calif., assignors, by mesne assignments, to Kobe, Inc., Huntington Park, Calif., a corporation of California
Application April 27, 1953, Serial No. 351,311
14 Claims. (Cl. 15—104.06)



3. In an apparatus of the character described, the combination of: a housing having passage means therein; a rotatable valve member in said housing and provided with a passage therein, said valve member having a flat spaced circumferentially from and circumferentially aligned with an end of said passage, said valve member having cylindrical surfaces on opposite sides of said flat; a tubular, passage-forming shoe reciprocable in said housing toward and away from said valve member and engageable with said flat and said cylindrical surfaces of said valve member alternately as said valve member rotates, said shoe communicating with said passage means in said housing and having a flat inner end sealably engageable with said flat in one position of said valve member and adapted to encircle said passage end in another position of said valve member, rotation of said valve member from said one position resulting in substantially line engagement of said flat end of said shoe with one of said cylindrical surfaces; and means for biasing said shoe into engagement with said valve member.

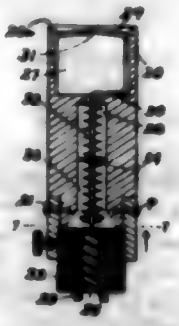
2,866,214
FOUNTAIN TYPE CLEANING IMPLEMENT
Charles H. Phillips, Richmond, Va.
Application November 23, 1956, Serial No. 624,166
4 Claims. (Cl. 15—136)

1. A brush comprising a base having a flat lower surface and bristles secured to and over said surface, a hollow element of fluid-impermeable material having its lower portion secured to the upper surface of said base to form with said upper surface a reservoir for fluid, said element being of regular geometrical form constricted upwardly and inwardly to a single unobstructed filling opening at its top, and a handle secured at its ends to said base at respective diametrically opposite locations and having a grip extending in laterally spaced adjacent substantially coplanar relation about said open-



ing, there being holes in said base between said reservoir and bristles.

2,866,215
SELF-RETAINING BRUSHES
John T. Scully, New York, N. Y.
Application May 22, 1953, Serial No. 356,869
17 Claims. (Cl. 15—145)



1. A brush having a main axis and adapted and constructed to be hung on a wall hook or shelf hook, said brush comprising a handle having an outer end and a relatively large recess open at said end and through which recess said axis passes, the opposite end of the handle supporting a formation of bristles; said handle carrying a bar disposed in said recess and extending through said axis to opposite sides spaced therefrom and transversely across said recess for substantially the full width thereof, said recess having, in the direction in which the bar extends thereacross, a width greater than one-half the width of the handle, said bar having an inner face intersecting said axis from opposite sides thereof, the bar being spaced from the bottom of the recess at and at said opposite sides of its intersection with said axis and having opposite side edges spaced from the sidewalls of the recess whereby the wall hook or shelf hook may be received in the recess and beneath the inner face of said bar for engaging the bar, and the inner face on said bar presenting a shallow concavity fixed in said face and intersected by said axis and extending transversely from one side edge to the opposite side edge of said bar and adapted to receive said wall hook or shelf hook, said concavity having a depth less than one-quarter the distance which the bar extends lengthwise across the recess, whereby the brush may be hung with said axis thereof intersected by said wall hook or shelf hook.

2,866,216
UTILITY BRUSH
George K. Davis, Garden Grove, Calif.
Application June 23, 1955, Serial No. 517,667
4 Claims. (Cl. 15—198)
(Granted under Title 35, U. S. Code (1952), sec. 266)

4. A brush assembly comprising a hollow holder body, one end portion of said body being externally threaded and axially bifurcated, a retaining member resiliently secured to and within said body and having at least a

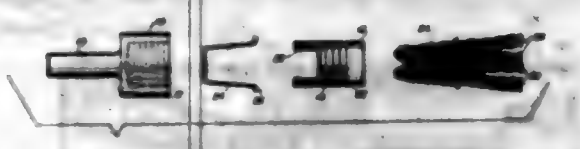
tion of the cleaner, said head having a flat bottom sur-

2,866,233

kind in which a unitary piece of upper stock extends

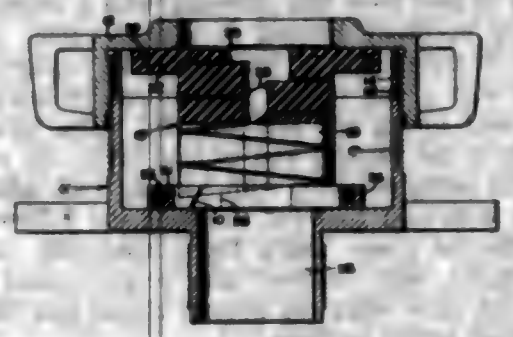
tool, means to rotate said tool, and a positioning roller

portion thereof extending between the furcations of said one end portion, a brush element folded around said retaining member portion and having the ends thereof extending through the body and outwardly of the other



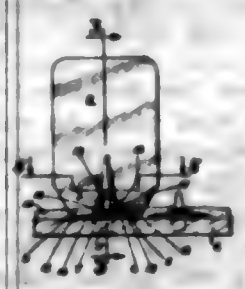
end thereof, and adapter means threaded on said one end portion for compressing and detachably securing the folded portion of said brush element within said furcations and between said retaining member portion and said adapter means.

2,866,217
WIPER FOR OIL WELL SUCKER RODS AND THE LIKE
Wayne J. Dean, Castaic, Calif.
Application February 28, 1955, Serial No. 490,740
15 Claims. (Cl. 15—210)



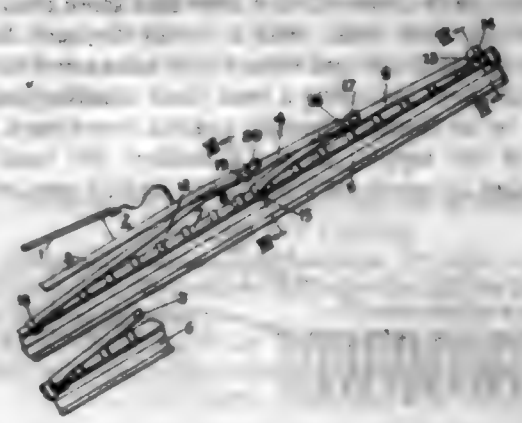
1. A wiper for use in a housing having a lid with an opening for the passage therethrough of an element to be wiped comprising a helix of elastic material having a central longitudinal straight passage therethrough for passage of a member to be wiped, said passage having a leading end and an exit end, a radial flange on said helix adjacent the exit end of the passage, the leading end of said helix being free to unwind and rewind as an enlargement on said member is moved through the passage.

2,866,218
GOLF SHOE SPIKE CLEANER
Maurice C. Ransom, Minneapolis, Minn.
Application February 16, 1956, Serial No. 565,889
11 Claims. (Cl. 15—237)



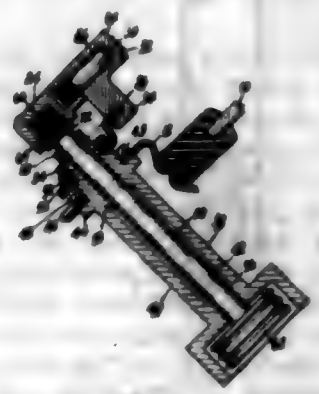
1. A golf shoe spike cleaner comprising a generally flat rigid body member adapted to be readily held between thumb and forefinger, spaced apart scraper blades having scraping edges disposed at an obtuse angle with respect to each other in the plane of the body member at one end thereof, and a central guide means between said scraper blades including encircling means adapted when the cleaner is in cleaning position on the spike to extend around and fit over the spike and engage a golf shoe spike to hold said cleaner perpendicular to the base of a golf shoe spike in all planes as the cleaner is rotated about the spike.

2,866,219
WINDSHIELD WIPER
Anthony C. Scinta, Buffalo, N. Y., assignor to Trico Products Corporation, Buffalo, N. Y.
Application June 10, 1953, Serial No. 360,788
12 Claims. (Cl. 15—245)



1. A wiper for curved surfaces comprising, a flexible wiping element, resiliently flexible non-extensible backing means for said element, at least a portion of said backing means constituting a neutral plane of flexure for said wiping element, a wiper actuating arm, a pressure-distributing yoke interposed between said wiper actuating arm and said backing means, and relatively fixed pivotal connections between said backing means and said yoke with one of said connections being made outside of said neutral plane of flexure and the other of said connections being substantially within said plane to enable flexing of said backing means relative to said yoke while substantially precluding relative rectilinear motion therebetween.

2,866,220
WINDSHIELD WIPER TRANSMISSION ASSEMBLY
Charles P. Roth, Dearborn, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 23, 1955, Serial No. 517,685
12 Claims. (Cl. 15—253)



1. The combination with a windshield cleaner having an oscillatable wiper, and means operatively connected with said wiper for imparting oscillation thereto throughout a wiping stroke, or automatically operable friction brake means operatively connected with said wiper for decelerating said wiper during a portion of said wiping stroke.

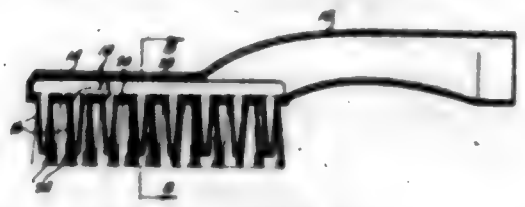
2,866,221
BRUSH FOR REMOVING DUST AND DANDRUFF FROM THE HAIR
Anne Inhert Warva, Sarnia, Ontario, Canada
Application February 7, 1956, Serial No. 564,061
1 Claim. (Cl. 15—397)

A device for removing foreign material from the hair comprising: a hollow suction head including means to connect the same in communication with a vacuum cleaner for creating suction within the head in response to opera-

cranks having an upstanding lug on its other arm re- upper portion thereof, a rotatable disc mounted in said

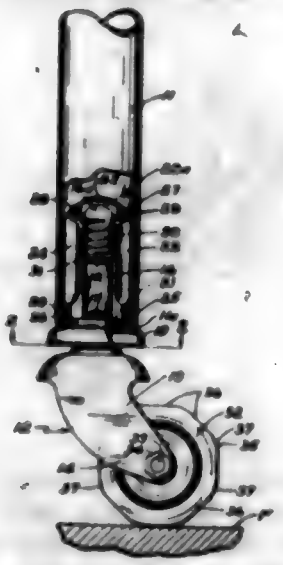
to said base at respective diametrically opposite lo- secured to and within said body and having at least a

tion of the cleaner, said head having a flat bottom surface; a plurality of elongated, tubular, open-ended nipples fixedly, permanently connected with and projecting downwardly from said bottom surface in communication with the interior of the head, said nipples being progressively decreased in diameter in a direction from their bases to their lower, free ends; and a brush element formed wholly separately from and detachably connected with the head, said element including a base plate abutting said surface so as to be limited thereby against movement longitudinally of the nipples in one direction, the base plate having spaced openings of a diameter slightly greater than



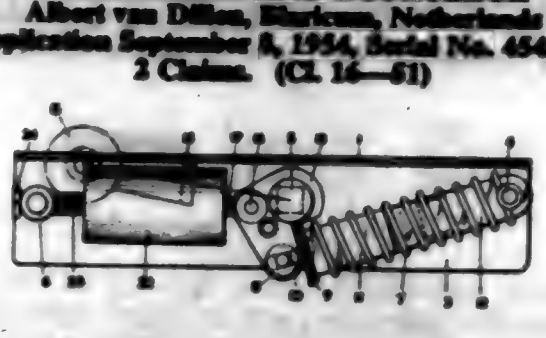
the diameter of the nipples, said nipples projecting through and engaging in the openings to define at their bases abutments engaging the base plate against movement transversely of the nipples, said nipples projecting downwardly a substantial distance below the base plate, resiliently spreadable clamping walls on the base plate formed with confronting lips engaging over the top surface of the head to hold the base plate against movement longitudinally of the nipples in the opposite direction, and bristles permanently, fixedly connected with the base plate in the spaces between the openings, the nipples and bristles coextending for the full length of the nipples and for the major part of the length of the bristles.

2,866,222
CASTOR
Wallace A. Lord, Minneapolis, Minn.
Application June 7, 1955, Serial No. 513,829
1 Claim. (Cl. 16—45)



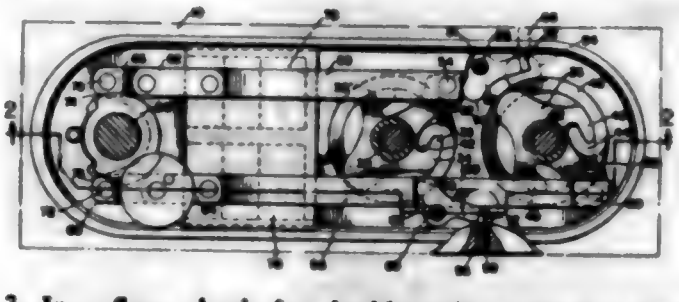
A castor for supporting an article on a floor, comprising a frame, means for swivelly attaching said frame to the article for movement about a vertical axis, and a castor wheel journalled in a fixed position on said frame for rotation about a horizontal axis and for rolling on the floor, said castor wheel having an outer peripheral surface symmetrically formed about said axis and having a plurality of regularly spaced flattened surface portions spaced therearound and extending across the entire width thereof, whereby when said castor is mounted on such an article the article may be moved along the floor with rolling of said wheel and will thereafter be retained in a stationary position when one of said flattened surface portions engages the floor.

2,866,223
DOORCLOSER AND DOORCHECK
Albert van Dillen, Blaricum, Netherlands
Application September 8, 1954, Serial No. 454,663
2 Claims. (Cl. 16—51)



1. A hydraulic doorcloser and doorcheck comprising two separate and cooperating devices adapted to be secured to a door and to a door case respectively, the said first device including a lever arranged pivotally about a vertical axis, a check piston connected to said lever, a horizontal cylinder pivotally arranged about a vertical axis, said piston being slidably mounted in said cylinder, a compression spring arranged outside said cylinder and operatively connected to and urging the lever about said vertical axis and a horizontally arranged follower arm connected to said lever and provided with a follower, the lever being normally located in a dead center position wherein it is maintained by the spring, the engagement of said lever with a stop surface determining its dead center position, said spring and said cylinder being located on either side of the vertical axis of said lever, the other of said devices being provided with a guide track adapted to cooperate with said follower to swing the follower arm in a horizontal plane above the horizontally arranged check cylinder, said follower arm being normal to the plane of the door when the door is closed and the lever is in its dead center position.

2,866,224
DOOR CLOSER CENTERING STOP
David H. Ellis, West Chicago, Ill., assignor to The Oscar C. Rixson Co., Franklin Park, Ill., a corporation of Illinois
Application October 30, 1956, Serial No. 619,269
7 Claims. (Cl. 16—55)



3. In a floor check for double-acting swinging doors having a casing, a cover plate for said casing, a hinge spindle rotatably mounted within said casing and projecting through an opening in said cover plate for pivotally mounting a door, angularly opposite crank means mounted on said spindle, a pair of torsion springs disposed within said casing, a pair of link means connecting said springs to respective ones of said crank means for selectively effecting tension in said springs when said spindle is turned in one direction or the other, and a pair of hydraulic cylinders having piston means connected to opposite ones of said crank means for retarding the backswing of said door, the improvement comprising adjustable means for independently limiting the backswing of said door in each direction, said means including a pair of bell-cranks pivotally mounted on the undersurface of said cover plate and each having one arm extending into the path of a respective link means for engagement therewith to limit the return of said links when the door is swung to closed position, each of said bell-

2,866,228

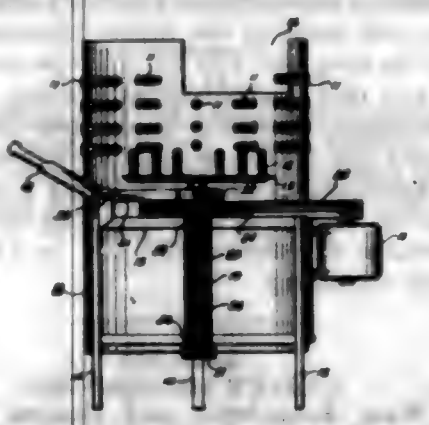
form a pressure-deformable blank into the arcuately

cranks having an upstanding lug on its other arm received in a respective recess in said cover plate, and said cover plate having a threaded aperture opening laterally into each of said recesses for reception of a set screw for engaging said lug and varying the angular position of the respective bell-crank.

2,866,225
REMOVAL HINGE
Lyle Ward, Hudson, Wis., assignor to Anderson Corporation, Bayport, Minn., a corporation of Minnesota
Application May 15, 1956, Serial No. 585,056
3 Claims. (Cl. 16—149)

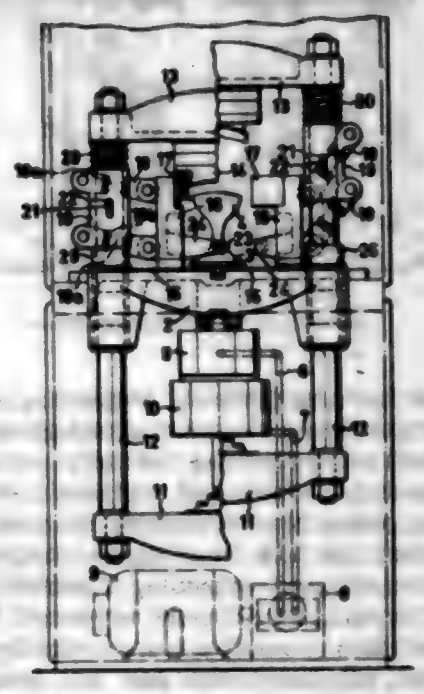
1. A hinge construction for pivotally securing a demountable inner frame to a fixed outer frame, comprising, a first hinge member having an apertured ear pivotally connected to said outer frame, a flat body portion projecting from said ear, a rectangular extension projecting from one edge of said body portion at right angles thereto and adapted to overlie the inner face of a portion of said inner frame, said portion of said inner frame being provided with a hole, said rectangular extension having a tongue member struck therefrom at right angles thereto and extending in spaced, parallel relationship to said body portion, said tongue registering with and receivable in said hole in said inner frame, a second hinge member pivoted on said inner frame for rotational frictional engagement with the said first hinge member and adapted to overlie said first hinge member, thereby locking said first hinge member and said inner frame to each other, said second member comprising an apertured ear for receiving a screw threaded into a tapped hole in said inner frame adjacent said first hole for effecting a pivotal connection of said second member with said inner frame, and said second member including a body portion adapted to overlie said extension for maintaining said tongue in said first hole.

2,866,226
POULTRY PROCESSING EQUIPMENT
Frederick C. Covey and Flournoy Covey, Cedar Rapids, Iowa, assignors to Pickwick Company, Cedar Rapids, Iowa, a corporation of Iowa
Application June 27, 1955, Serial No. 518,113
3 Claims. (Cl. 17—11.1)



1. In a disc type poultry picker including a main frame, a vertically positioned casing mounted on said frame and having a plurality of rubbing members on the inner surface thereof, a portion of the wall of said casing being broken away to provide a discharge opening in the upper portion thereof, a rotatable disc mounted in said frame and positioned within said casing in a horizontal relation thereto, said disc having a plurality of rubbing members thereon, and lever means pivotally mounted on said frame below said disc and adapted to raise and lower said rotatable disc in relation to the walls of said outer casing whereby said disc may be brought into registry with said discharge opening to cause the ejection of fowl or the like.

2,866,227
PRESSES FOR VULCANIZING RUBBER SOLES ON SHOES
Carl Albert Davidson, Skarblacka, Sweden, assignor to A-B Svenska Skoindustriaktien, Jonsered, Sweden, a corporation of Sweden
Application April 26, 1955, Serial No. 503,944
Claims priority, application Sweden December 28, 1954
2 Claims. (Cl. 18—17)



1. A press for vulcanizing rubber soles on shoes comprising a frame, a press table fixedly supported in said frame, a shoe last carried by said table, hydraulic means including a piston rod carried by the frame beneath the table, a plurality of guides projecting outwardly from the sides of the table, a transverse member within the frame beneath the hydraulic means, guide rods fixedly attached to said transverse member and extending upwardly for sliding movement through the guides, said piston rod being connected with the transverse member to move said member and guide rods, a press member connected to the upper ends of said guide rods for vertical movement therewith toward and away from the table, a heating plate of the underside of said press member adapted to bear against the underside of a rubber sole disposed on a shoe mounted on the last when the press member is lowered toward the press table, moulding elements positioned on guides for horizontal sliding movement on the table toward and away from said last, tubular members mounted for vertical sliding movement on the guide rods, pairs of vertically spaced links connecting said tubular members with said moulding elements so as to form link parallelograms together with said tubular members and said moulding elements causing said moulding elements to move horizontally on the press table without tilting tendency upon reciprocal movement of the tubular members, coil springs surrounding the guide rods and connected at their ends to the tubular members and said press member respectively, and a pin and slot connection between each tubular member and its respective guiding rod.

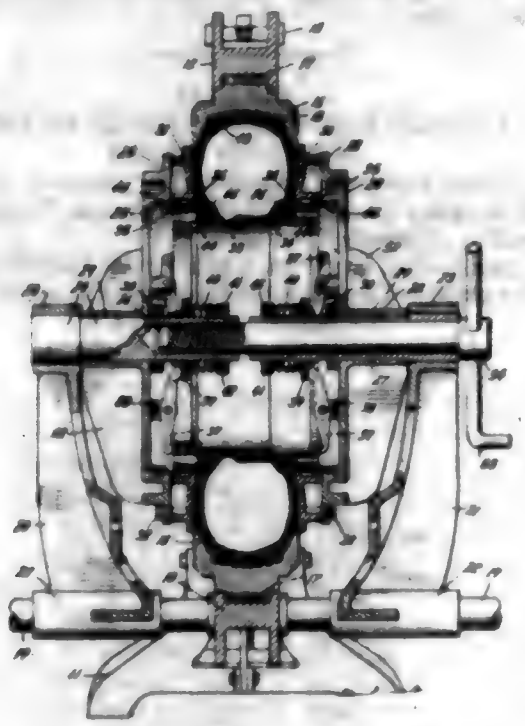
with an orifice therein to deposit the sliver in a coil, the combination with said rolls and said gear of an inclined

dow sill forming the bottom of the frame and having a window underlying inner sill extending between the

portion engages the door.

the door is swung to closed position, each of said bell-

2,866,228
MEANS FOR SUPPORTING A TIRE IN A RETREADING MOLD
Elby Edward French, Littleton, Colo., assignor to O. K. Ko-Op Rubber Welding System, Littleton, Colo., a corporation of Colorado
Application November 30, 1956, Serial No. 625,320
6 Claims. (Cl. 18—18)

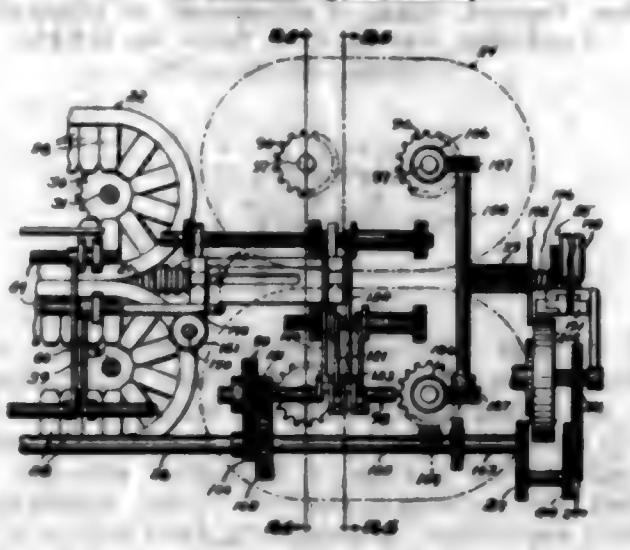


1. Means for concentrically supporting the rim portion of a tire within a circular retreading mold comprising: a slide bar projecting laterally outwardly from each of the opposite sides of said mold in axial alignment, a supporting bracket slidably mounted on each of said slide bars, an axle stud rigidly supported by one of said brackets and extending concentrically within said mold, an axle tube rigidly supported by the other bracket and also extending concentrically within said mold in axial alignment with said axle stud, a threaded jackscrew rotatably mounted in said axle tube and adapted to be threaded at its inner end into said axle stud, an annular pressure plate mounted on said axle stud, a similar annular pressure plate mounted on said axle tube, a tire side wall ring concentrically mounted on the inner face of each pressure plate at the periphery thereof, said side wall rings having opposed inwardly concave faces for engaging the opposite side walls of said tire when said jackscrew is threaded into said axle stud, and a cylindrical rim section supported by and within each of said side wall rings.

2,866,229
APPARATUS FOR FORMING ARCH SUPPORTS
William M. Schell, Chicago, Ill.
Application March 7, 1955, Serial No. 492,392
4 Claims. (Cl. 18—19)

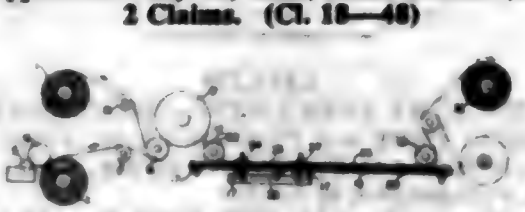
1. An apparatus for shaping arch supports which comprises a pair of complementarily shaped smoothly contoured jaw members, one of said jaw members having a greater transverse dimension than the other jaw, said jaw members including non-planar surfaces arranged to deform a pressure-deformable blank into the arcuately shaped contours characteristic of an arch support.

2,866,230
CORRUGATED RUBBER TUBING AND ITS PRODUCTION
Paul C. Holte, Weymouth, Mass., assignor to Pullman Vacuum Cleaner Corporation, Boston, Mass., a corporation of Massachusetts
Application February 24, 1956, Serial No. 567,653
15 Claims. (Cl. 18—19)



1. Apparatus for corrugating uncured rubber tubing comprising means to convey tubing at a predetermined rate and to support it for a predetermined distance and to preform corrugations therein during said distance, means to convey said tubing in the same direction but at a reduced rate and including a plurality of stops moving at said reduced rate, and means to axially compress a plurality of preformed corrugations against each of said stops.

2,866,231
METHOD OF STRETCHING RUBBER HYDROCHLORIDE FILM
Paul J. Vaughan, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application July 11, 1956, Serial No. 597,290
2 Claims. (Cl. 18—48)



1. The method of stretching rubber hydrochloride film containing substantially 5 to 10 parts of ester plasticizer per 100 parts of the rubber hydrochloride, which comprises heating the film to a temperature of 205 to 220° F. and then immediately stretching the film to at least substantially double its length, and then immediately stretching the film to at least substantially double its width while supplying heat to it during a substantial part of the period of lateral stretching and maintaining it at a temperature of substantially 170 to 190° F. during said lateral stretching.

2,866,232
COILER MECHANISM
Paul B. West, Kennebunk, and Gordon C. Anderson, Biddeford, Maine, assignors to Saco-Lowell Shops, Biddeford, Maine, a corporation of Maine
Application May 22, 1956, Serial No. 586,476
7 Claims. (Cl. 19—165)

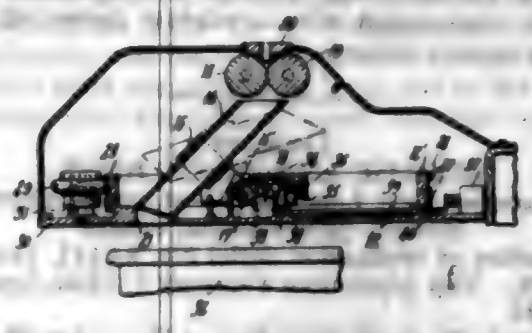
1. In a coiler mechanism for a sliver including a pair of delivery rolls to advance the sliver and a tube gear

tral panel portion adjacent the pivotal axis, said pivotal mounting means being partially in the lateral extensions

connection between each mounting bracket and an associated one of said guard sections, latch means con-

being broken away to provide a discharge opening in the guiding rod.

with an orifice therein to deposit the sliver in a coil, the combination with said rolls and said gear of an inclined tube to conduct the sliver from a point beneath the rolls



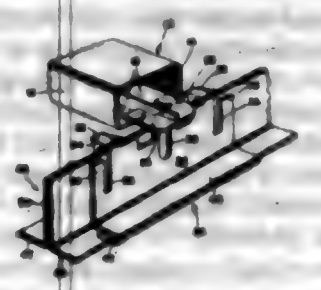
to the orifice, and means to mount the tube both for rotation with said gear and tilting movement in a substantially vertical plane independently thereof.

2,866,233

ACOUSTICAL CEILING STRUCTURE

Martin L. Lydard, Baltimore, Md., assignor to Eastern Products Corporation, a corporation of Maryland

Application June 11, 1957, Serial No. 664,935
2 Claims. (Cl. 20—4)



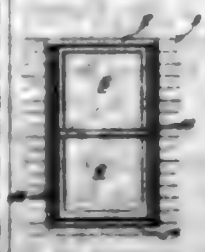
1. An acoustical tile clip of sheet metal for cooperation with a channel member and comprising a body portion, means at the top thereof to engage said channel member transversely thereof, said means being arranged perpendicularly to said body portion and extending in both directions therefrom and constituting a flat bearing surface, a flange extending at substantially a right angle from said body portion at the lower end thereof, a second flange extending inwardly from the outer edge of said first flange below said first flange and spaced a short distance therefrom, a pair of lugs arranged perpendicularly to said body portion and extending outwardly from said body portion in a direction opposite to said first flange, said lugs being located on opposite sides of said means for engaging the channel member and in a plane below said means, and a pair of tabs located on opposite sides of said means for engaging the channel member near the upper end of said body portion, said tabs being formed by slots in the body portion extending downwardly from the top edge thereof.

2,866,234

WINDOW FRAME CONSTRUCTION

Wayne A. Norman, Dubuque, Iowa, assignor to Carr, Adams & Collier Company, a corporation of Iowa

Application March 1, 1956, Serial No. 568,825
2 Claims. (Cl. 20—11)



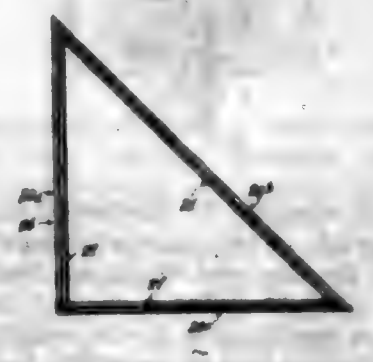
1. A window frame construction comprising, spaced apart side jambs forming the sides of the frame, a window sill forming the bottom of the frame and having a window underlying inner sill extending between the jambs, an outer sill intergral with said inner sill positioned in front of the jambs and of a length to have transverse end faces terminate flush with the back of the jambs, a blind stop extending vertically in front of each jamb and having its lower end seated on an end of said outer sill, and a brick mold extending vertically in front of each blind stop and having a stepped lower end so that a part thereof rests on an end of the outer sill and another part abuts the transverse end face of the outer sill end and fills the sill out to full width.

2,866,235

STRUCTURAL BUILDING ELEMENT

Kibbey W. Couse and Robert M. Sutphen, Newark, N. J., assignors to Couse Manufacturing, Inc., Newark, N. J., a corporation of New Jersey

Application February 25, 1957, Serial No. 642,218
7 Claims. (Cl. 20—15)



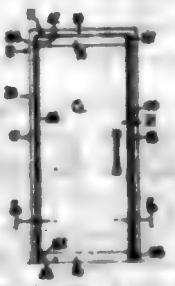
1. A triangular-shaped building member comprising a pair of perpendicularly oriented, equal-length, building elements connected at one end thereof; a diagonally extending building element interconnecting the outer ends of the said equal length building elements, each of the said building elements being of a square cross-sectional-shape and having an elongated, enlarged bottomed groove along the center of each edge, thereof; the outer and inner edge grooves extending about the entire outer and inner periphery, respectively, of the said building member, the said face grooves in each face of the building member forming a continuous groove on each of the building member faces.

2,866,236

SAFETY DOOR

George L. West, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Application September 28, 1955, Serial No. 537,091
7 Claims. (Cl. 20—16)



1. A floor-hinge type of swinging door for mounting in a door frame which comprises a central panel portion, top and bottom portions joined to the top and bottom ends of the central panel portion, and means mounted in the top and bottom portions for pivotally mounting the door about an axis extending through the central panel portion adjacent a convex vertical edge of the central panel portion, said top and bottom portions extending laterally beyond the vertical edge of the cen-

the first position of the valve uncovering the inner ends of the runner in the valve chamber and suction conduit

2,866,243

FOUNDRY MOLDING PROCESS

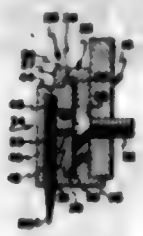
tral panel portion adjacent the pivotal axis, said pivotal mounting means being partially in the lateral extensions of the top and bottom portions, said lateral extensions each having a convex vertical edge with a radius of curvature larger than the radius of curvature of the convex vertical edge of the central panel portion, and the axes of the radii of curvature of the convex edges of the lateral extensions and the central panel portion being substantially coincident with the pivotal axis of the door.

2,866,237

WEATHERSTRIP MOUNTING ASSEMBLY

Maurice May, Atlanta, Ga., assignor to American Art Metals Company, Atlanta, Ga., a corporation of Delaware

Application April 29, 1955, Serial No. 504,865
1 Claim. (Cl. 20—69)



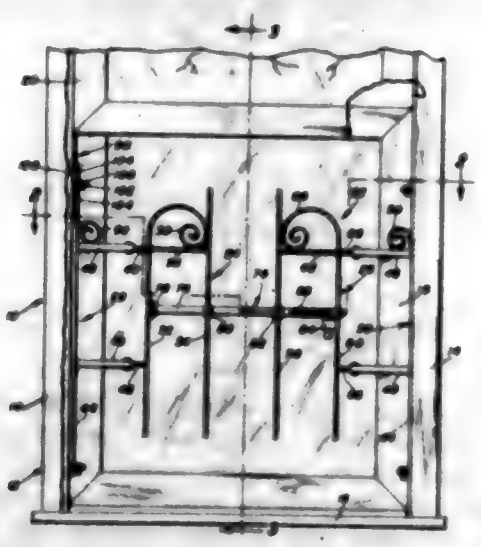
A weatherstrip assembly for attachment to a door adjacent an edge thereof, comprising a retaining element fixedly attachable to the door and having longitudinal parallel flanges spaced apart to define a channel opening away from the door, a weatherstrip holder slidably carried by said retaining element and of generally U-shape having spaced legs and a joining web, one of said legs being shorter than the other and having one surface flush with the exterior of said retaining element, the shorter leg being disposed within said channel and the remainder of said holder being disposed exteriorly of said channel, a weatherstrip interposed between and secured by said legs and lying wholly outside said channel, with the longitudinal edge thereof projecting beyond said holder to engage a threshold, the weatherstrip being confined by the longer leg of said holder against the exterior surface of said retaining element immediately adjacent the weatherstrip longitudinal edge.

2,866,238

ADJUSTABLE WINDOW GUARD

Lewis E. Lamb, North Little Rock, Ark.

Application March 26, 1956, Serial No. 573,997
5 Claims. (Cl. 20—71)



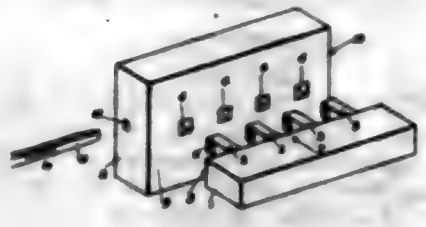
1. An adjustable window guard comprising a pair of guard sections, a pair of mounting brackets adapted to be secured to a window frame, an extensible transverse connection between each mounting bracket and an associated one of said guard sections, latch means connecting said guard sections together, said mounting brackets being provided with adjustable longitudinal extensions for engagement with a window frame sill and a sill of an upper window sash.

2,866,239

MORTISE AND TENON JOINT

Henri Jacques Marc Lambert, Sevres, and Georges Paul Mougin, Saint-Gratien, France

Continuation of application Serial No. 64,112, December 8, 1948. This application February 9, 1954, Serial No. 409,192
Claims priority, application France December 15, 1947
2 Claims. (Cl. 20—92)



1. A mortise and tenon joint for locking two pieces into assembled relationship, comprising a tenon member integral with one of said pieces, a plurality of aligned spaced tenons disposed on said tenon member, said tenons having aligned holes formed therein, said holes being defined by deformable walls at and adjacent to the ends of said tenons; a mortised member integral with the other of said pieces, a plurality of aligned spaced mortises formed in said mortised member complementary to and engaged by said tenons, said mortises being of a depth greater than the length of said tenons, said mortised member further having an elongated generally rectilinear passage formed therein interconnecting said mortises and terminating in an aperture at an external surface of said mortised member, and a resiliently transversally deformable drift pin disposed in said passage and passing through said holes, causing thereby said pieces to be in joined condition along cooperating surfaces, an end wall of each tenon member being deformable in the longitudinal direction of said tenons, the distance from the walls of said elongated passage nearest to said tenon member to the inner surfaces of said end walls of said tenons with said pieces in assembled relationship without the drift pin in place being slightly less than the transverse dimension of said drift pin in said longitudinal direction, whereby both the drift pin and the tenon end walls are resiliently deformed, the direction of said deformations being along the longitudinal direction of said tenons and the combined forces accompanying both of said deformations acting to lock said pieces in assembled relationship.

2,866,240

MECHANISM FOR REDUCING POROSITY OF DIE CASTINGS

Henry F. Schroeder, Milwaukee, Wis.

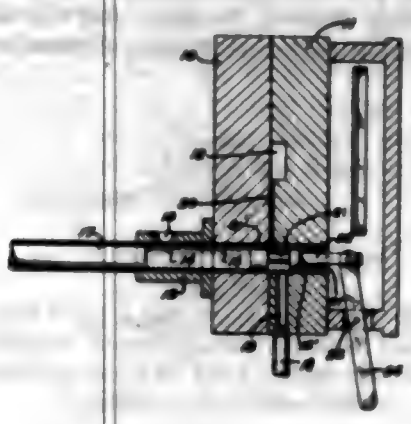
Application November 5, 1957, Serial No. 694,660
5 Claims. (Cl. 22—68)

1. In combination, a die formed with a cavity and being separable into two sections along a plane through said die, said die being formed with an inwardly extending molten metal chamber and a valve chamber, there also being in the die an externally extending suction conduit whose inner end communicates with the interior of the valve chamber, said die being formed in one of its meeting faces with a runner affording communication between the die cavity and the interior of the valve and molten metal chambers, a valve movably mounted within the valve chamber and having a first and second position,

engaged from said plate, and a U-shaped locking wire mounted upon said plate secured compressively within

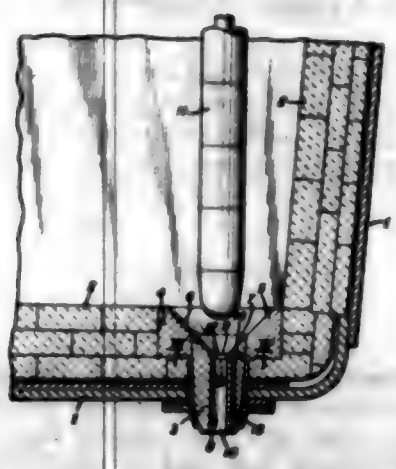
member comprising a plane body part and a smaller plane head part struck out from and being disposed out

the first position of the valve uncovering the inner ends of the runner in the valve chamber and suction conduit but closing communication between the runner and molten metal chamber so as to permit the evacuation of gas from the die cavity via the runner, a portion of the valve chamber and the suction conduit, the second position of the valve uncovering the inner end of the runner's connection with the molten metal chamber so as to



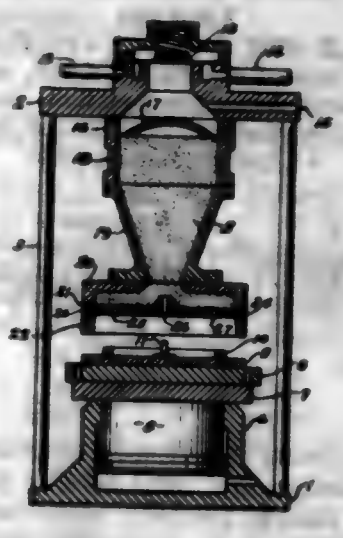
establish communication between said runner and the molten metal chamber and closing the inner end of the suction conduit, and means within the molten metal chamber to apply pressure to a charge of molten metal therein to react directly against the valve to move the latter from its first position to its second position whereby molten metal is injected into the die cavity through the runner after the die cavity has been evacuated of gas.

2,866,241
NOZZLE FOR TEEMING VESSEL
Earle A. Nirmaier, Maplewood, and James B. Wagstaff, Ridgewood, N. J., assignors to United States Steel Corporation, a corporation of New Jersey
Application October 20, 1955, Serial No. 541,610
3 Claims. (Cl. 22—85)



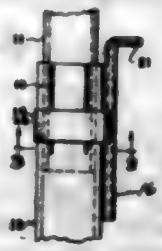
2. In a refractory lined metal ladle having a teeming opening in the bottom thereof the combination with said ladle of, a nozzle comprising a refractory body mounted in said opening, said body having a conical well in the upper end thereof, a vertically extending cylindrical bore intersecting with said well and cooperating therewith to provide a teeming orifice arranged concentrically of said ladle opening, and a vent comprising a first passageway extending radially through the wall of said bore and opening into said orifice at a point below and adjacent the intersection of said bore and well, and a second passageway extending axially through the wall of said bore and having its upper end intersecting with said first passageway and its lower end open to the atmosphere.

2,866,242
FOUNDRY MOLDING PROCESS
Leon F. Miller, Rocky River, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application July 8, 1955, Serial No. 520,714
9 Claims. (Cl. 22—193)



1. The method of forming a mold suitable for use in a foundry stack molding operation comprising the successive steps of blowing a pre-formed sand mold upon a pattern in a box to obtain a uniform and smooth sand surface in all portions of the mold cavity, such mold having downwardly outwardly sloping sides and extending a substantial distance above the pattern; drawing such mold and pattern as a unit from such box; placing a flask closely about the lower periphery of such mold but with the upper edge of such flask spaced from the sloping side of the mold and also spaced below the upper surface of such mold, squeezing such mold within such flask to distribute the sand uniformly to fill such flask level with the upper surface of the latter and to compact the main body of sand, and then drawing such pattern from the finished mold and flask.

2,866,243
CLAMP
Adolf Grimal, Walled Lake, Mich., assignor of one-half to Leo J. Kujawa, Brighton, Mich.
Application March 23, 1955, Serial No. 496,223
1 Claim. (Cl. 24—25)

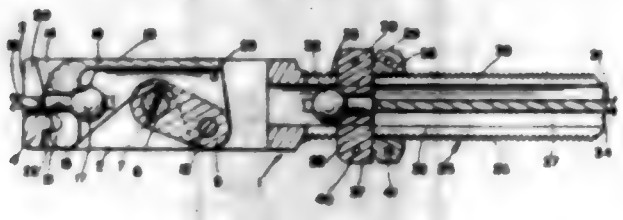


A clamp collar comprising a split elongated ring-shaped sleeve and having spaced apart edges, and an elongated clamping plate extending at both ends beyond said sleeve grippingly receiving said edges, said plate having reverse turned opposite side edges extending inwardly to form lips directed toward each other and diverging axially of the clamp collar defining a tapered slot, the end portions of said sleeve being provided with reverse turned outwardly directed abutment surfaces retainingly engaged by said lips, the plate being axially slidable relative to said sleeve for drawing the sleeve end portions toward each other, a right angularly related flange projecting from at least one of the ends of said plate, said flange being flattened, and said slot at its narrow end terminating short of the end of the plate, the lips at the other end of said plate being bent inwardly whereby the said abutment surfaces may not be longitudinally dis-

be secured to a window frame, an extensible transverse valve chamber and having a first and second position,

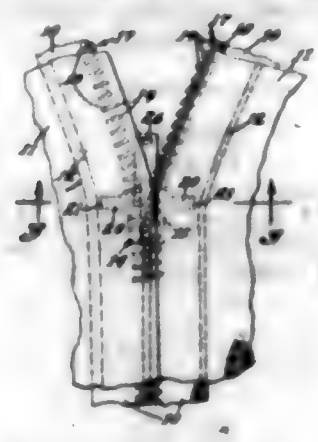
engaged from said plate, and a U-shaped locking wire mounted upon said plate secured compressively within and between said lips and plate and extending around said abutment surfaces, the free ends of said wire being reverse turned retainingly engaging portions of said plate.

2,866,244
CABLE DISCONNECT COUPLING
Jacob C. Cobin, Los Angeles, Calif., assignor to North American Aviation, Inc.
Application October 29, 1956, Serial No. 619,011
4 Claims. (Cl. 24—68)



1. A cable connecting device comprising a body; a cable holding means, said cable holding means including an over-center linkage pivotally connected to said body and movable between an open cable-receiving position remote from said body and an over-center closed position adjacent said body, said body including stop means engageable by said over-center linkage when in said closed position for precluding movement thereof in response to tension on a cable received thereby, said stop means being disengageable by movement of said over-center linkage away from its over-center position.

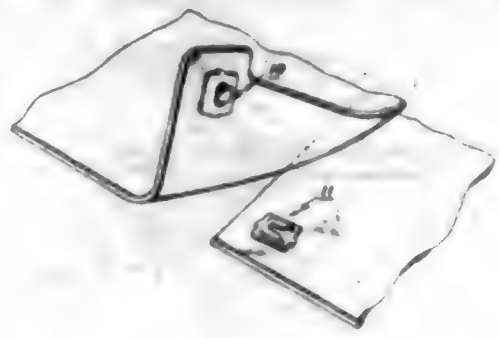
2,866,245
ZIPPER
Alice May Elgin, Kansas City, Mo.
Application October 12, 1955, Serial No. 540,016
1 Claim. (Cl. 24—205.15)



In a slide fastener for releasably securing together a plurality of metal fastener elements, a slider for engaging and disengaging said fastener elements and said slider comprising parallel top and bottom wings, a lug extending upwardly from said top wing at right angles thereto, a pull tab pivotally connected to said lug, and a pair of arms extending outwardly from the top and bottom wings in opposed parallel relation to each other, the arms on the top wings terminating in vertically disposed transversely extending ears for preventing accidental engagement of fabric with the slide fastener.

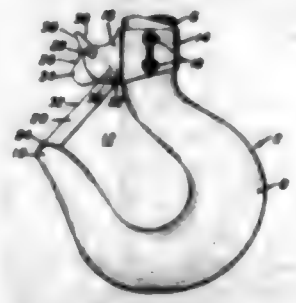
2,866,246
SEPARABLE FASTENERS
George Waldes, Plandome, N. Y., assignor to Waldes Koh-i-noor, Inc., Long Island City, N. Y., a corporation of New York
Application June 12, 1957, Serial No. 665,203
8 Claims. (Cl. 24—226)

1. A modified hook-and-eye type closure fastener comprising sheet metal hook and eye members, the hook member comprising a plane body part and a smaller plane head part struck out from and being disposed out of the plane of said body part and being connected thereto along a pair of its opposite edges by relatively narrow webs which slope in opposite directions from said opposite edges of said head part to said body part, the unconnected opposite edge portions of said head part providing oppositely projecting sheet-form tongues, the eye member comprising a frame-like body part and an elevated central portion pressed out from and integrally connected to said frame part along three of its sides, the elevated portion forming a shallow enclosure having dimensions substan-



tially similar to those of the head part of the hook member and being open along its fourth side thereby to permit bodily movement of said head part into said enclosure, said elevated portion of the eye member having a slot therein which extends forwardly from said open side and has width substantially equal to the width of the aforesaid webs for accommodating said webs during movement of said head into the eye enclosure, the construction and arrangement being such that, upon said head part moving into the eye enclosure, the upper and lower tongue portions thereof hookably engage with the elevated portion of the eye member.

2,866,247
SAFETY LOCK FOR CRANE HOOK
Harold A. Clegg, Homestead, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application October 11, 1955, Serial No. 539,765
1 Claim. (Cl. 24—232)



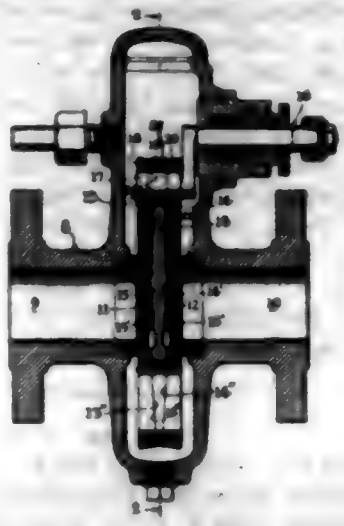
In a crane hook having a shank, a curved portion in the shape of a bow extending arcuately downwardly and then upwardly from the lower end of said shank, a tip portion on the upper free end of said curved portion, said tip portion and said shank defining a throat therebetween, the improvement therewith of a safety lock which comprises a bracket removably mounted on said shank, said bracket including a split collar body portion removably mounted around said shank, a pair of spaced parallel arms projecting from said body portion in a horizontal plane above said throat, a pivot pin extending between the inner and lower ends of said arms, a latch bar pivotally mounted by one end on said pivot pin between said arms, said latch bar being of such length as to span said throat and extend to said tip portion for engagement therewith to block said throat when the latch bar is pivoted downwardly from said bracket, said latch bar being freely pivotal on said pin whereby it normally assumes throat-blocking position by gravity through its

to force said sheath into obround cross sectional shape, an outer, tubular sheath of flexible sheet material adapted to be arranged in concentric relation to said inner sheath and perimetrally uniformly spaced therefrom, and at least one obround ring exteriorly sleevable upon said outer sheath, the transverse internal dimention of said last-named ring being substantially equal to the transverse external dimension of said outer sheath, when so arranged, and the longitudinal internal dimension of said last-named ring sufficiently exceeding the longitudinal external dimension of said outer sheath, when so arranged, that said last-named ring may be frictionally jammed into retaining engagement with said outer sheath by canting said ring about a transverse axis, and may be released from such engagement by returning it to a plane substantially perpendicular to the tubular axis of said sheaths.

2,866,252
CONCRETE FORM HOLDERS
Walter H. Cobl, Port Chester, N. Y.
Application May 7, 1958, Serial No. 733,552
9 Claims. (Cl. 25—131.5)

1. A collapsible holder adapted to rest on a pair of parallel spaced apart I-beam joists having lower flanges for supporting a concrete form which comprises a pair of

of the valve seats during relative movement between the members, and slot and cam means to move said intermediate and end members simultaneously in opposite rec-

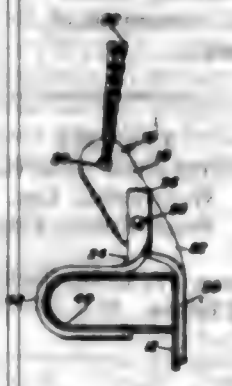


tilinear directions during initial opening movement to obtain rapid normal movement of the end members relative to the valve seats.

2,866,254
APPARATUS FOR SIZING YARNS
Gaines Lamar Ball, West Point, Ga., assignor to Batson-Cook Company, West Point, Ga., a corporation of Georgia
Application June 17, 1954, Serial No. 437,536
5 Claims. (Cl. 28—38)

own weight, a second pivot pin extending between the upper and outer ends of said arms, a counterweighted locking member for said latch bar pivotally mounted on said second pivot pin, said locking member having a straight side which contacts a side of said latch bar when said latch bar is in elevated position away from said point, said locking member having an enlarged counterweight portion with a cam surface adjacent said straight side for engaging said latch bar when the latter is in engagement with said tip portion in throat-blocking position, said enlarged counterweight portion being remote from said bracket whereby to rotate said locking member by gravity to engage the cam surface of said locking member with said latch bar to lock the bar against said tip portion when the free end of the latch bar is pivoted toward said tip portion away from said bracket.

2,866,248
TIE-DOWN CLAMP FOR PICK UP TRUCKS
Marion Reno, San Bernardino, Calif.
Application April 8, 1954, Serial No. 421,758
1 Claim. (Cl. 24—248)

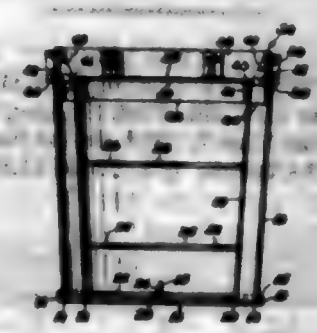


A clamp for connecting a tie-down line to a pick-up truck body of the type including a vertical side wall comprising a lateral top flange of substantially U-shaped transverse section, said clamp comprising: a flat metallic bar twisted and bent at an intermediate point, one end portion of said bar forming a lever having an opening in its free end portion for connecting the line thereto, and a substantially U-shaped horizontal hook pivotally suspended from the lever for the reception of the flange, the other end portion of said bar being angled toward the hook and extending downwardly well beyond said hook in spaced, opposed relation thereto and constituting a flat jaw for face-abutting engagement with the side wall and cooperable with the hook for anchoring the clamp to the body.

2,866,249
WEDGE TYPE CLAMP
Robert F. Normandin, Columbus, Ohio
Application August 7, 1956, Serial No. 602,675
6 Claims. (Cl. 24—263)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A clamp comprising a body conformed to provide opposed portions defining an elongated recess therebetween, the base of said recess having a lateral extension on one side thereof, said body having an aperture defining a slideway extending through the body from the base of the recess in general alignment with the longitudinal axis of the said recess and a clamping member slidably receivable in said slideway and having at least one side thereof conformed to approach the side of said recess having said lateral extension progressively in response to predetermined relative sliding movement of the body and clamping member.

2,866,250
SINGLE USE FIBER BOARD MOLD FOR WATER METER BARRELS
John L. Ford, Wabash, Ind., and Richard V. Ford, Haddonfield, N. J., assignors to The Ford Meter Box Company, Inc., Wabash, Ind., a corporation of Indiana
Application February 11, 1954, Serial No. 409,615
6 Claims. (Cl. 25—118)



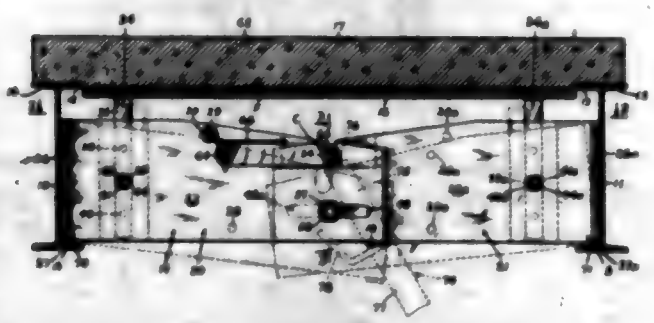
1. A single-use mold for use in forming a tubular article from concrete, or the like, comprising an outer, tubular sheath of foldable, disposable material, having an upper end and a lower end, a one-piece, rigid reinforcing band sleeved on said sheath near the lower end thereof, a transaxially-extending narrow bar permanently secured to said band, underlying said sheath, and traversing the axis of said sheath, said bar being provided with centering means lying substantially in said axis, an inner, tubular sheath of foldable disposable material having an upper end and a lower end, a one-piece rigid reinforcing band snugly fitting within said inner sheath adjacent the lower end thereof, and a transaxially-extending bar carried by said last-named band and traversing the axis of said second sheath, said last-named bar being provided with centering means lying substantially in the axis of said inner sheath and cooperable with said first-named centering means, when said inner sheath is telescopically associated within said outer sheath, to establish a substantially coaxial relation between said sheaths.

2,866,251
SINGLE USE MOLD FOR OBROUND WATER METER BARRELS
John L. Ford, Wabash, Ind., assignor to The Ford Meter Box Company, Inc., Wabash, Ind., a corporation of Indiana
Application July 5, 1956, Serial No. 595,985
6 Claims. (Cl. 25—118)

2. A mold for use in forming a tubular article of obround cross section from concrete, or like settable material, comprising an inner, tubular sheath of flexible sheet material, reinforcing means comprising at least one obround ring snugly receivable within said inner sheath

to force said sheath into obround cross sectional shape, an outer, tubular sheath of flexible sheet material adapted to be arranged in concentric relation to said inner sheath and perimetrally uniformly spaced therefrom, and at least one obround ring exteriorly sleevable upon said outer sheath, the transverse internal dimention of said last-named ring being substantially equal to the transverse external dimension of said outer sheath, when so arranged, and the longitudinal internal dimension of said last-named ring sufficiently exceeding the longitudinal external dimension of said outer sheath, when so arranged, that said last-named ring may be frictionally jammed into retaining engagement with said outer sheath by canting said ring about a transverse axis, and may be released from such engagement by returning it to a plane substantially perpendicular to the tubular axis of said sheaths.

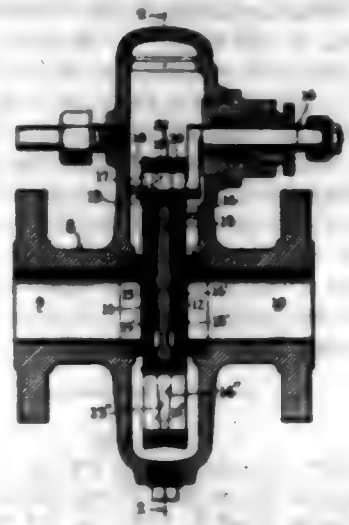
2,866,253
CONCRETE FORM HOLDERS
Walter H. Cobb, Port Chester, N. Y.
Application May 7, 1958, Serial No. 733,552
9 Claims. (Cl. 25—131.5)



1. A collapsible holder adapted to rest on a pair of parallel spaced apart I-beam joists having lower flanges for supporting a concrete form which comprises a pair of hinged leg members comprising a left and a right leg each having an inner and outer end, each of said legs at its outer end having a foot portion adapted to rest upon the lower flange of one of said pair of adjacent spaced apart I-beam joists, a connection at the inner ends of said legs providing a pivot joining said leg members together, registering open end slots in each of said leg members near their inner ends, a locking member mounted on one of said legs movable to a position within said registering slots in which said legs are locked and maintained in a fixed position for supporting an overlying concrete form with said feet portions resting on said flanges, said locking member being movable out of said registering slots to a position in which said legs are unlocked, said legs when in unlocked position being movable about said pivot to collapse said holder to permit removal of said holder from beneath said overlying concrete form.

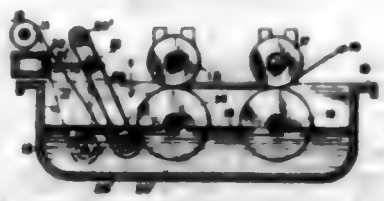
2,866,253
GATE VALVE
Robert O. Wynn, Houston, Tex., assignor, by mesne assignments, to ACF Industries, Incorporated, a corporation of New Jersey
Application March 25, 1954, Serial No. 418,577
7 Claims. (Cl. 251—196)

1. In a gate valve the combination of a housing forming a valve chamber having ports provided with opposed seats in the chamber, an expansible valve gate assembly mounted for guided rectilinear movement in the chamber transversely of said seats and ports to open and close the valve, said assembly including two end members adapted to bear on the valve seats and an intermediate member mounted between the end members for limited movement relative thereto, a wedge face formed on the intermediate member and engaging a mating wedge face on an end member to move the end member normally of the valve seats during relative movement between the members, and slot and cam means to move said intermediate and end members simultaneously in opposite rec-



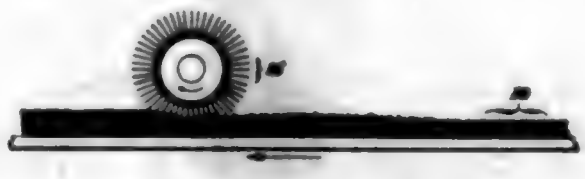
tilinear directions during initial opening movement to obtain rapid normal movement of the end members relative to the valve seats.

2,866,254
APPARATUS FOR SIZING YARNS
Gaines Lamar Ball, West Point, Ga., assignor to Batson-Cook Company, West Point, Ga., a corporation of Georgia
Application June 17, 1954, Serial No. 437,536
5 Claims. (Cl. 28—38)



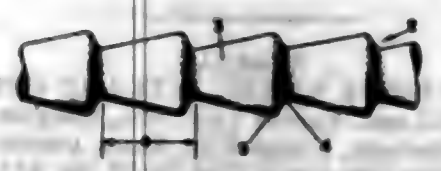
1. Sizing apparatus for warp thread comprising a sizing vat adapted to contain sizing solution therein, immersion means at least partially located below the normal level of sizing solution in said vat, means for passing warp threads in a free flight below the normal level of said sizing solution in said vat to said immersion means, and means cooperating with the immersion means to squeeze said yarn while submerged and after said free flight.

2,866,255
FUR-EFFECT FABRIC AND METHOD OF MAKING SAME
William Rollin Keen, Media, Pa., assignor to Collins & Aikman Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application June 5, 1956, Serial No. 589,531
6 Claims. (Cl. 28—72)



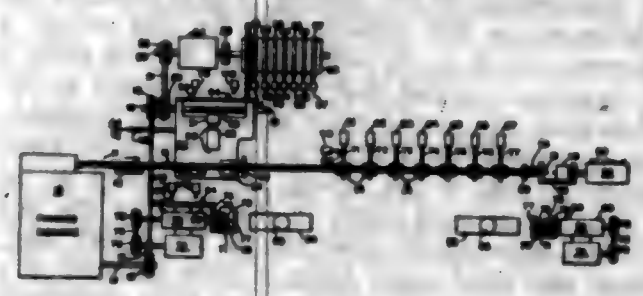
1. A method of making a fur-effect fabric comprising the steps of forming a yarn of a plurality of textile fibers having different degrees of crimp, weaving yarns so formed as pile yarns in a woven pile fabric, cutting the pile yarns to form a uniform pile surface and removing the crimp from said fibers to form a plurality of separate pile surfaces.

2,866,256
WOOL-LIKE ARTIFICIAL FIBERS
Nathaniel A. Matlin, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
Application April 5, 1956, Serial No. 576,462
15 Claims. (Cl. 28—82)



1. An article of manufacture comprising an artificial fiber formed of a water-insoluble synthetic polymeric material, said fiber having a size of 1 to 100 denier and comprising a multiplicity of adjoined small sections extending longitudinally of the fiber and having their outer surfaces essentially unidirectionally tapered between their junctions, the length of the individual sections being from 0.001 to 2 mm.

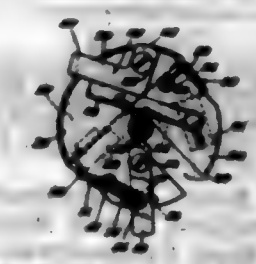
2,866,257
MACHINE FOR CUTTING OFF LENGTHS OF FINNED TUBING
Robert M. Stikeleather, Holbrook, Mass.
Application January 23, 1956, Serial No. 560,682
5 Claims. (Cl. 29—69)



1. Mechanism for cutting off a length of rotating finned tube emerging from a machine having means for advancing the tube therefrom, and for rotating the tube, comprising a plurality of sets of rollers spaced apart along the path of travel of said finned tube as it emerges from said machine, each of said sets comprising a plurality of rollers arranged around said path normally out of contact with a finned tube travelling along said path, means including means synchronized with said advancing means for causing the rollers of said sets in succession to closely approach the rotating finned tube as it passes said sets, a rotary saw, a support for said saw supported for movement alongside of said path with the saw normally out of contact with a finned tube travelling along said path, means including means actuated by the advancing end of said tube for causing said support to move alongside said path in the direction of linear movement of said tube and during said movement of said support for causing said support to move towards said tube for causing said saw to cut off said tube, and means actuated after the cutting off of said tube for causing said rollers to move away from the cut-off tube so as to permit the cut-off tube to drop from between said rollers, for stopping the movement of said support, and for then causing said support to return to its initial position.

2,866,258
ROLL MOUNTING
James R. Thomas, Prospect Heights, Ill., assignor to Joseph A. Weber, Mount Prospect, Ill.
Application May 18, 1956, Serial No. 585,316
3 Claims. (Cl. 29—123)

1. A roll for quickly mounting onto a shaft for concurrent rotation with said shaft and for similarly quickly dismounting said roll from said shaft, said roll comprising spaced apart end discs, said discs having aligned radial notches, the inner ends of said notches lying in a common axis, said inner ends of the radial notches coinciding with a shaft for said roll when said roll is in mounted position on said shaft, means associated with said end discs for removably holding said roll on said shaft, said means including a lever arm hinged on one of said discs and said

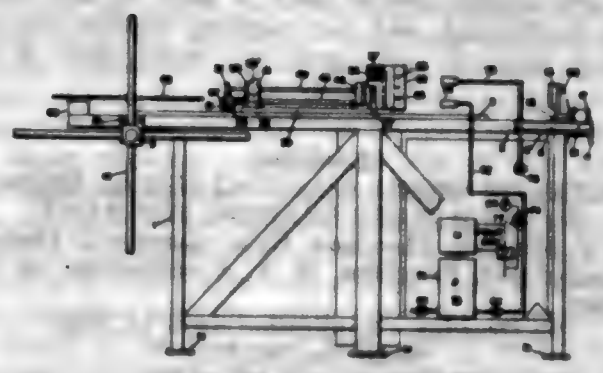


lever arm having one end thereof arranged to abut said shaft on the side thereof adjacent the aligned radial notch to effect a locking of said roll on said shaft, said shaft having a member thereon extending radially outwardly thereof, said member having a pin extending therefrom and disposed parallel to said shaft, and the other of said end discs having an end opening arranged and constructed to receive said pin.

2,866,259
POWDER METALLURGY COMPOSITIONS OF MOLYBDENUM, IRON AND SILICON, SHAPED OBJECTS THEREOF, AND THEIR PREPARATION
Max F. Bechtold, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application February 20, 1956
Serial No. 566,358
18 Claims. (Cl. 29—182.5)

6. A sintered shaped object having a minimum dimension of at least 1 mm. composed of an alloy consisting by chemical analysis essentially of molybdenum, iron and silicon and corresponding in composition to 25–55% molybdenum, 20–45% iron and 20–45% silicon.

2,866,260
APPARATUS FOR ASSEMBLING TUBES INTO A FINNED HEAT EXCHANGER
Frederick Katzman, Louisville, Ky., assignor to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware
Application August 18, 1954, Serial No. 450,727
6 Claims. (Cl. 29—202)



1. An apparatus for threading a sinuous coil endwise into a bank of apertured cross fins and end plates comprising: a base; means on said base forming a lower supporting plane for a bank of fins; an abutment plate on said base at one end of said means arranged with its rear face normal to and above said means and having pockets in its rear face located to align with the coil ends; a guide mandrel assembly removably mounted on said abutment plate above said first means and having guide mandrel rods extending through said apertured cross fins

and end plates; means on said base adapted to support said sinuous coil in alignment with said apertured fins and end plates; means on said base movable forward to force said coil ends forward into said fins and end plates; and means connecting said last means and guide mandrel assembly to pull said guide mandrel rods from said apertured fins and end plates simultaneously as said coil is moved forwardly.

2,866,261

METHOD OF ERECTING SHEET PLATE CASINGS HAVING A CYLINDRICAL SHAPE WITH VERTICAL AXES, BY SHIFTING THE SHEET PLATES ALONG A HELICAL LINE

Vladimir Macku, Brno, Czechoslovakia, assignor to Královopolská strojírna, Národ Klementa Gottwalda, národní podnik, Brno, Czechoslovakia

Application September 19, 1956, Serial No. 610,839
5 Claims. (Cl. 29—429)

1. A method of erecting a vertically extending cylindrical shell, comprising the steps of providing two parts of the shell each consisting of plates of continuously increasing height secured to each other in end-to-end relationship so that both of said parts together define a cylindrical section divided by a slot in the form of one turn of a helix, movably supporting the upper one of said parts on the edge of the lower of said parts at said slot, turning said upper part relative to said lower part in the direction of the pitch of said helix so that a gap opens in said slot at the beginning of said turn of the helix, inserting a plate of uniform height in said gap and securing the inserted plate to the adjacent plates of said upper part for including the inserted plate in the latter, repeating the turning of said upper part and the inserting and securing of plates in the gaps which are thus successively opened until a shell of the desired height is obtained, and then securing together the confronting edges of said upper and lower parts at said slot.

2,866,262

PROCESS OF METAL COATING METAL OBJECTS TO FACILITATE SHAPING THE SAME

Peter F. Matsich, Cleveland, Ohio, assignor to Horizons Incorporated, Princeton, N. J., a corporation of New Jersey

No Drawing. Application April 15, 1955
Serial No. 501,710
5 Claims. (Cl. 29—528)

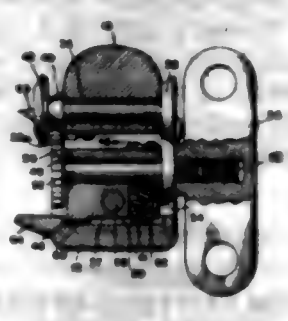
1. The method of cold working an object formed of a transition metal from the group consisting of titanium, zirconium, molybdenum, tungsten and chromium with an adherent metallic coating of a low melting metal from the group consisting of tin, cadmium, indium, lead and zinc which comprises: forming a molten bath of the low melting metal, covering the molten metal with a flux consisting essentially of between 50 mol percent and 80 mol percent of aluminum chloride and between 50 mol percent and 20 mol percent of at least one alkali metal chloride of the group consisting of lithium chloride, sodium chloride, and potassium chloride and containing a minor amount of a chloride of the low melting metal, immersing the transition metal object in the flux and thence into the molten metal bath and withdrawing the coated metal object from the metal bath and thereafter cold working the transition metal object, so coated.

2,866,263

ROTARY DRIVE WHEEL TYPE CAN OPENER

Robert E. McLean, Kansas City, Mo., assignor to John C. Hockery, Kansas City, Kans., trustee

Application October 3, 1956, Serial No. 613,673
8 Claims. (Cl. 30—9)



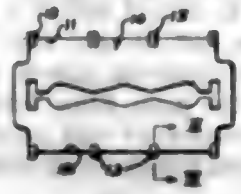
1. In a can opener of the rotary drive wheel type, a first bearing, a first shaft rotatably carried by the first bearing, a disk cutter carried on one end of said shaft in spaced relationship to the bearing, a first cone on the shaft between the first bearing and the disk cutter, a second cone carried on the other end of the first shaft, a second bearing, a second shaft rotatably carried by the second bearing, the second shaft having slight longitudinal play in its bearing, a can rim engaging drive wheel carried on the end of the second shaft adjacent to the cutter disk and at least partly in the plane of the first cone, a third cone on the other end of the second shaft, the second and third cones being at least partially in a common plane and having their cone faces oppositely disposed whereby to be engageable with one another, at least one of said bearings movable toward and away from the other to permit insertion of a can rim between the wheels, the second bearing pivotable at least for a limited arc around an axis at least substantially normal to the first and second shafts and also to the axis of alignment of the two wheels when they are next one another in the can engaging position, and means for moving at least one of said bearings relative the other to engage and disengage a can rim between the cutter, feed wheel and first cone and the second and third cones with one another.

2,866,264

HAIR TRIMMING BLADE FOR SAFETY RAZORS

Thomas H. Hightower, Birmingham, Ala.

Application February 19, 1957, Serial No. 641,076
2 Claims. (Cl. 30—31)

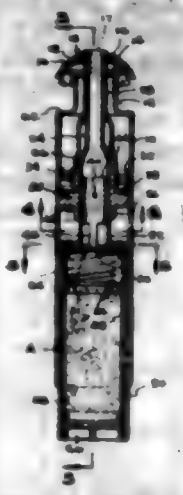


2. In a safety razor blade holder having a handle, a guard, and a blade cover, a hair trimming blade positioned on the blade holder between the guard and the blade cover, and a plurality of spaced U-shaped gauge members fitting snugly over the cutting edge of the blade to space the blade from the guard in hair trimming position and to determine the depth of cut made by the blade, said blade being reversible in said holder.

one end to the base plate to swing outwardly therefrom, for positionable association with indicia on the bisector,

2,866,265
COMBINATION SAFETY RAZOR AND LATHER DISPENSER HAVING TELESCOPICALLY RELATED HEAD AND DISPENSING ASSEMBLIES

John D. Kells, Smithfield, N. C.
Application November 2, 1956, Serial No. 619,973
4 Claims. (Cl. 30—41)



1. In a safety razor the combination, with a razor head including a base and leaves pivoting on and cooperating with the base to clamp a razor blade therebetween, and with a cross bar shiftable toward and away from the base and adapted when so shifted to pivot the leaves on the base, of: a tubular outer casing connected to said base; a tubular operating rod shiftable longitudinally of and within the outer casing and connected to said cross bar to shift the same toward and away from the base; a tubular inner casing axially, slidably engaged in the outer casing, said inner casing having a reduced, hollow, axial extension, said extension defining a discharge tube slidably mounted within the operating rod and having at one end an outlet through which shaving material may be dispensed, said outlet lying flush with the head and with the corresponding end of the operating rod, the inner casing when axially slidably moved inwardly of the outer casing shifting said end of the discharge tube outwardly from the head and operating rod, thereby to constitute said end of the discharge tube as a dispensing nozzle projecting beyond the head; a cartridge within the inner casing holding a fluid shaving material under pressure, said cartridge connected to the inner casing and including a normally seated valve, the cartridge having its interior in communication with the discharge tube in the unseated position of the valve; and means having a connection to the outer casing and abutting against the valve in position to unseat the same responsive to said axial movement of the inner casing inwardly of the outer casing.

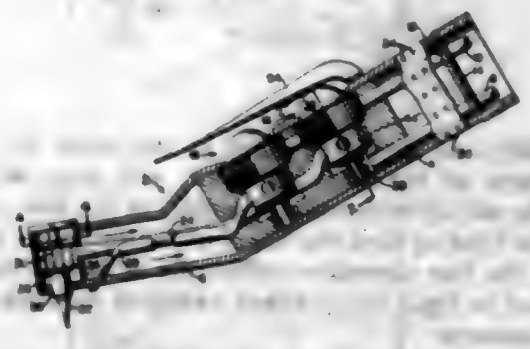
2,866,266
TOOL FOR NICKING STEEL RULE DIES

Victor T. Hoeflich, Forest Hills, N. Y.
Application March 16, 1954, Serial No. 416,593
3 Claims. (Cl. 30—277)

1. A tool for nicking the cutting rules of steel rule dies, said tool comprising a barrel assembly similar in character to that of a spring loaded hammer, and a hardened steel tool removably mounted on the working end of said barrel assembly, said working end being freely rotatable relative to the rest of the barrel assembly, said tool comprising a straight bifurcated end portion with closely spaced substantially parallel inside walls having a spacing somewhat greater than the thickness of the steel rule, a centrally disposed transverse cutting edge extending across said space so that said cutting edge is held transversely of the cutting rule when the bifurcated tool end is placed astride the rule, and the portions of the tool between the sides of the tool and the cutting edge being removed to provide angular surfaces so as to provide a rule nicking cutting edge.

2,866,267
DENTAL HAND DRILL

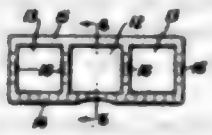
Murray J. Fleischer and Julius Sobesy, Kingston, N. Y.
Application February 10, 1958, Serial No. 714,126
6 Claims. (Cl. 32—28)



1. In a dental hand-piece the combination of a casing for housing a fluid-driven rotor turbine at one end of said casing, a tool adapted to be driven by said turbine, a first means for supplying fluid to said turbine and a second means for supplying a coolant for said tool, said first and second means being supplied through the other end of said casing, control means located on said casing and intermediate said two ends and adapted to modify said first and second means, and a finger-controlled lever situated adjacent said control means for actuating said control means.

2,866,268
REAR SIGHT FOR GUNS

Elmer R. Collins, Salt Lake City, Utah
Application April 16, 1956, Serial No. 578,398
4 Claims. (Cl. 33—51)



1. A rear sight for shotguns, comprising framing members defining a rectilinear series of three rertangular window openings which are each approximately square in configuration, the said series being itself of elongate rectangular formation, and the framing members being attenuate in respective width and thickness as compared to the breadth of the respective window openings; and mounting means disposed centrally of one of the longitudinal members of said window-defining members, with its mounting axis bisecting the center window opening of said series and extending at right angles to the longitudinal extension of said series, whereby the sight is horizontal when installed, with its length extending transversely of the length of the gun, and substantially uninterrupted, panoramic, framed vision is provided throughout a laterally extended area.

2,866,269
WEDGE HOOK

Edward M. Lamb, Easington, Pa.
Application August 10, 1956, Serial No. 603,310
1 Claim. (Cl. 33—85)

A bricklayer's line holder comprising a base plate formed at one end with teeth adapted to engage in the surface of a wall; and a line connector pivotally connected at

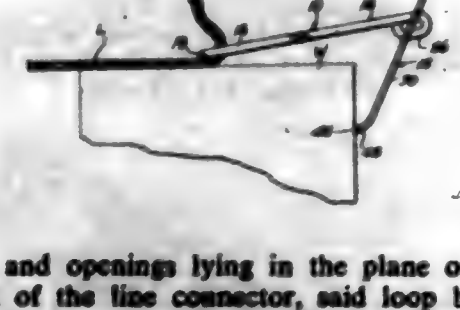
the solids outlets from the separators and the outlet from the container lying at substantially the same intermediate

riers in their adjusted positions, a slider with a pair of relatively adjustable needles, arranged on a rod member

80 mol percent of aluminum chloride and between 50 mol percent and 20 mol percent of at least one alkali metal

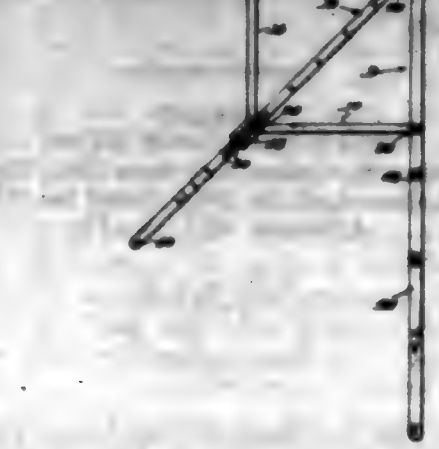
tion and to determine the depth of cut made by the blade, said blade being reversible in said holder.

one end to the base plate to swing outwardly therefrom, said line connector having a hook means at its other end formed with a wedge-shaped, line-receiving recess, said base plate being formed with longitudinally spaced openings, the line connector having a loop at said one end thereof loosely engaged in said openings to provide a pivotal connection of the line connector to the base plate,



said loop and openings lying in the plane of swinging movement of the line connector, said loop being elongated in the direction of the length of the line connector so as to bind against the edges of the openings on swinging of the line connector outwardly from the base plate, whereby to limit the outward swinging movement of the line connector.

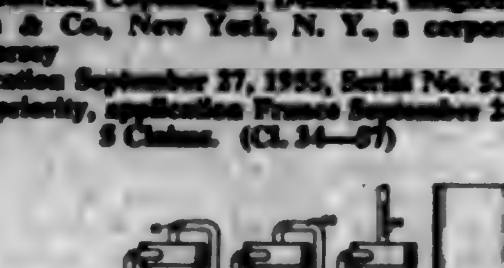
2,866,270
ANGLE DETERMINATOR AND BISECTOR
Donald Clair Johnson and Douglas L. Johnson, Flossmoor, Ill.
Application March 19, 1954, Serial No. 417,353
2 Claims. (Cl. 33—91)



1. In an angle determinator and bisecting device, in combination, a pair of elongated flat strips of suitable material forming leg members, a central flat strip constituting a bisector and disposed between the leg members and which are thereby located above and below the bisector, pivot means located at one end of the leg members and bisector for pivotally securing the several strips together, a sight gauge mounted on the bisector and being slidable thereon, a pair of links pivotally connected to the sight gauge and to the leg members respectively at points spaced from the pivot means, one link being pivoted to the top surface of the sight gauge and to the inside surface of one of said leg members, and the other link being pivoted to the bottom surface of the sight gauge and to the inside surface of the other leg member, whereby the links can be folded into overlying relation for collapsing the device and whereby the leg members are pivotally reversible since they can be extended on either side of the bisector, said sight gauge being formed of at least two superposed plates approximately rectangular in shape with one plate being disposed above and the other plate below the bisector, the top plate of the sight gauge having a window therein providing a straight edge for positionable association with indicia on the bisector, and washers located at the pivot means for respectively spacing the leg members from the bisector.

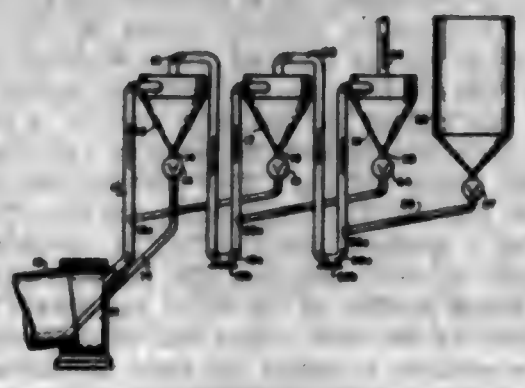
2,866,271
MULTIPLE POINT STRAIGHT EDGE GAUGE
Warren B. Zern, near Pottstown, Pa.
Application November 14, 1955, Serial No. 546,545
10 Claims. (Cl. 33—174)

1. A straight edge gauge comprising a frame having a pair of members of equal length carried by said frame at spaced locations, at least another member of equal length carried by said frame intermediate said pair of members, all of said members being parallel with said intermediate member positioned so that its ends are mov-



able through planes defined by said pair of outer members, said intermediate member having a collar member slidably disposed thereon and of shorter length, one end of said collar member being adapted for alignment with the corresponding end of said intermediate member, and means for independently locking said intermediate member and said collar to said frame.

2,866,272
CYCLONE HEAT EXCHANGE APPARATUS
Sigurd Pedersen, Copenhagen, Denmark, assignor to F. L. Smidth & Co., New York, N. Y., a corporation of New Jersey
Application September 27, 1955, Serial No. 536,975
Claims priority, application France September 28, 1954
8 Claims. (Cl. 34—57)



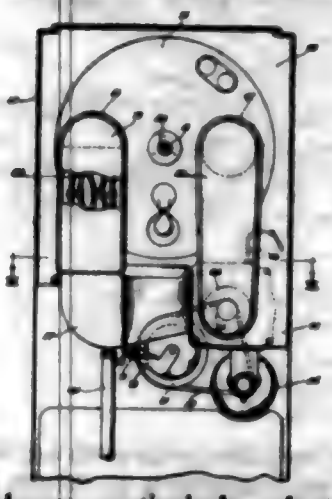
1. Apparatus for preheating pulverulent material to be burned in a rotary kiln by waste gases from the burning operation, which comprises at least two cyclone separators each having an inlet and separate outlets for gas and solids, a riser pipe connected to the upper end of the kiln to receive hot waste gases therefrom and to conduct the gases to the inlet of the first separator, a pipe for conducting separated solids from the solids outlet of the first separator to the upper end of the kiln to be burned therein, means including a pipe connected to the gas outlet of the second separator, for conducting gas from the second separator out of the apparatus, a riser pipe leading to the inlet of the second separator from the gas outlet of the first separator, a pipe for conducting material from the solids outlet of the second separator into the riser pipe leading to the inlet of the first separator, a container for fresh pulverulent material having an outlet at its lower end and means, including a pipe connected to the container outlet, for conducting material from the container into the riser pipe leading to the inlet of the second separator, the upper ends of the separators lying at substantially the same upper level,

closely spaced substantially parallel inside walls having a spacing somewhat greater than the thickness of the

ed at one end with teeth adapted to engage in the surface of a wall; and a line connector pivotally connected at

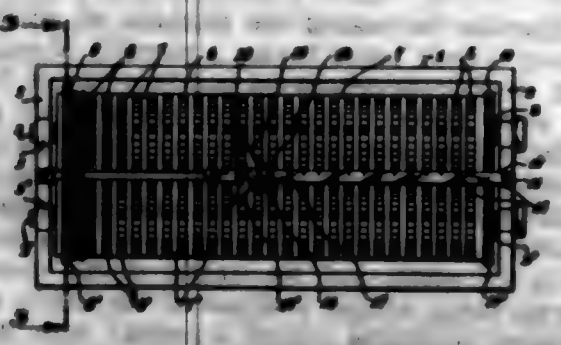
the solids outlets from the separators and the outlet from the container lying at substantially the same intermediate level, and the riser pipes having sections at a level lower than the outlets, the pipes for conducting material discharging into said sections of the riser pipes.

2,866,273
CONDENSER PARTICULARLY ADAPTED FOR CLOTHES DRIERS AND THE LIKE
Peter Edward Goldhof, Benton Harbor, Mich., assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Application November 13, 1953, Serial No. 391,873
10 Claims. (Cl. 34—75)



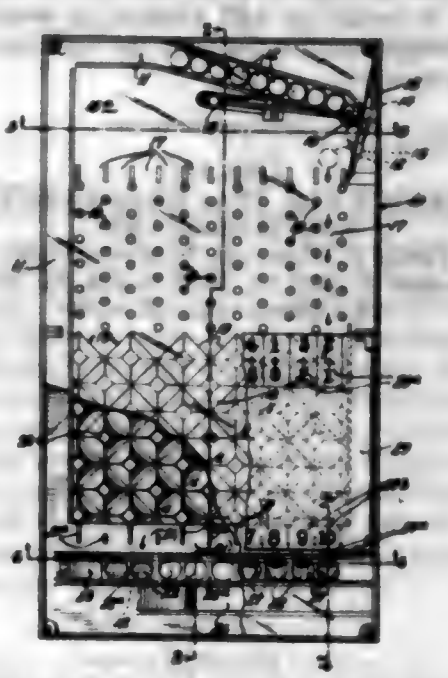
1. In a condenser particularly adapted for clothes driers having a cabinet having a clothes tumbling drum journaled therein, a closed air circulating and heating system for heating and circulating heated air into and out of said dryer drum, comprising separate intake and exhaust ducts confronting a wall of said dryer drum, a third duct connecting said ducts together at the lower end thereof, a suction blower in said third duct for circulating air through said ducts and tumbling drum, said last mentioned duct having a wide discharge lip across said blower and having means for supplying water to said lip to effect the discharge of a relatively wide stream of water in the path of the air drawn into said duct by said blower, for condensing the spent air from said tumbling drum.

2,866,274
CRYPTOGRAPHIC DEVICE
Augusto Vayá, Buenos Aires, Argentina, assignor to C. A. D. A. C. "Compania Argentina de Aparatos Criptograficos Sociedad de Responsabilidad Limitada," Buenos Aires, Argentina, a limited-liability company of Argentina
Application November 4, 1954, Serial No. 466,875
6 Claims. (Cl. 35—3)



6. Cryptographic device for ciphering and deciphering cryptograms, comprising a casing, a pair of rotatively mounted and operatively interconnected parallel support members within said casing, a number of interchangeable and individually adjustable cipher carriers on each of said support members, preserrs members in connection with said support member for fixing thereon said cipher carriers in their adjusted positions, a slider with a pair of relatively adjustable needles, arranged on a rod member secured to opposite walls of said casing in a position parallel to the axes of said parallel support members and with said needles capable of projecting over the cipher carriers on said two support members.

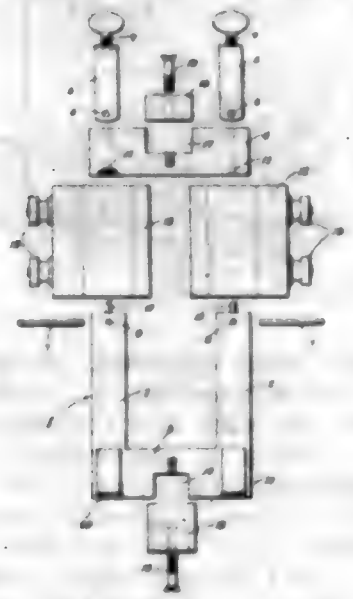
2,866,275
EDUCATIONAL GAME APPARATUS
Schuyler Reynolds, Columbus, Ohio
Application December 27, 1955, Serial No. 555,536
10 Claims. (Cl. 35—9)



10. Mechanical game apparatus, comprising: a boxing having a bottom providing a downwardly sloping playing surface, side walls and a transparent top, said playing surface having an unobstructed ball-projecting area in the upper part thereof; means for the reception of a row of ball elements, said means terminating in a ball outlet communicating with said area; manually operated, spring-pressed plunger means cooperative with said outlet for releasing a foremost ball element from the outlet and forcibly projecting the same across said area; rows of relatively spaced and staggered projections arising stationarily from said surface, the arrangement of said projections causing the same to define a plurality of open-ended, parallel, longitudinally extending channels on said surface for the retarded passage of a ball element rolling therein from said projecting area; a multiplicity of stationary boss formations arising from and extending across said playing surface below said channels, said formations providing a plurality of relatively intersecting diagonally extending grooves, each of said grooves at its upper end being disposed in registry with the communicating lower end of one of said channels, panel means removably mounted on the top of said boxing over the boss formations of said playing surface, indicia means mounted on said panel containing a series of problems wherein each problem is disposed in alignment with one of said channels, said indicia means further containing a series of responses to said problems; the response to any given problem being disposed in registry with the ball outlet end of a boss-defined groove which has its upper end in receiving relation to a channel arranged in alignment with the problem posed; passage means for incorrect responses disposed below said boss-defined grooves, said passage means communicating with the ball-discharging lower ends of said grooves by a plurality of apertures formed in the lower portion of the boxing, said apertures being relatively separated by bridge-forming webs; relatively spaced stationary divider elements disposed in a transverse row between said aper-

tures and the ball-discharging ends of said grooves to form ball-guiding outlets in longitudinal registry with said apertures; a row of transversely spaced guide ribs carried by the top of said boxing and disposed above said apertures in ball-guiding relation thereto; a correct response pocket means disposed adjacent the lower end of said playing surface in parallel relation to said passage means; and a manually operated device selectively insertable into any one of a row of openings formed in the top of said boxing, said openings being disposed in registry with said outlets so that the lower portion of the inserted device is arranged in a position to deflect movement of a ball element from an aperture in registry with the device to cause the ball element to travel over an adjoining bridge web of the aperture and into said correct pocket means.

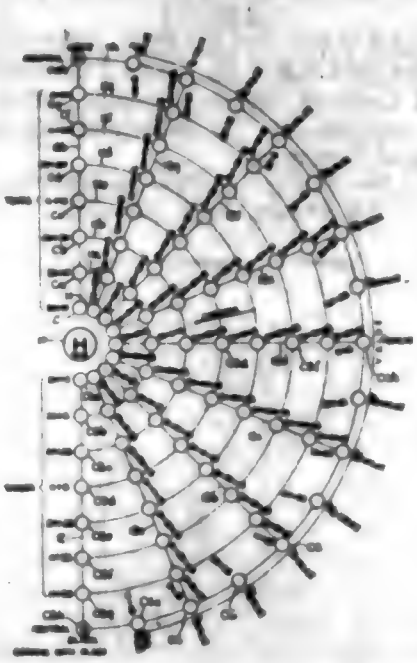
2,866,276
CORE DEVICE FOR TEACHING ELECTRICITY AND MAGNETISM
Cletus E. Zumwalt, Modesto, Calif.
Application August 12, 1957, Serial No. 677,493
12 Claims. (Cl. 35—19)



1. An educational electrical training aid in the form of an electro-magnetic device comprising a U-core of magnetizable material and having spaced parallel legs initially free at one end to receive core energizing coils thereon from said one end, a magnetizable cross bar extending between and bearing on the legs at said one end thereof, and means detachably securing the legs and cross bar together both mechanically and magnetically, said securing means, for each end of the cross bar, comprising a clip to straddle the bar and the adjacent portion of the leg, a cross pin removably mounted in the leg and projecting through holes in the clip, and a clamping screw mounted in the clip and engaging the face of the bar opposite the leg.

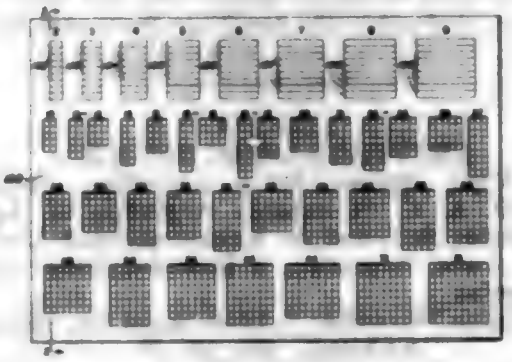
2,866,277
COLOR SYSTEM FOR MATCHING AND COMPOUNDING COLORS
Lambert A. Wise, Pittsburgh, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Application December 16, 1955, Serial No. 553,552
7 Claims. (Cl. 35—28.3)

1. A chart of tints and shades of a selected hue for use in matching and compounding colors which are mixtures of said hue with a tinting and a shading agent, comprising a sheet member having a color chip of the hue selected, chips of the tints and shades of the hue arranged in a series of arcs of circles with the chip of the hue as a center, chips on a given arc being of the same degree of saturation, there being an uneven number of arcs counting the chip of the hue as one and there being an uneven number of chips on the arcs, chips on a given arc being arranged from one end of the arc in the order of depth of shade, chips of the same gray value being disposed upon a common radius and the arcs being equally spaced and being arranged in a series in which the saturation of the chips is inversely proportional to the distance



from the center, the chips upon each arc being spaced an increment from their neighbors on the arc proportional to the difference in gray value between a chip and its nearest neighbor and indicia associated with the chips whereby the amount of tinting and graying material required to be added to the hue to arrive at the value of a selected color can be ascertained.

2,866,278
ARITHMETIC TEACHING AID
Grover Webb Saarr, Murray, Utah
Application November 28, 1956, Serial No. 624,852
14 Claims. (Cl. 35—31)

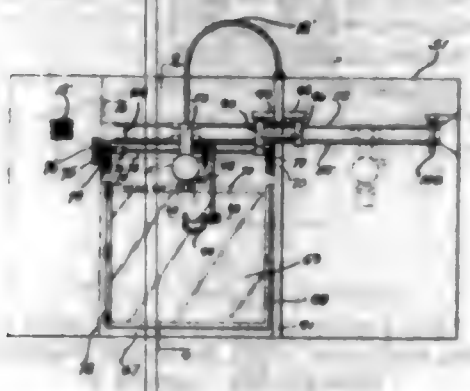


1. Apparatus for aiding the teaching of arithmetic, comprising a work board having a plurality of mutually different work areas defined on one face thereof for receiving work pieces; a plurality of sets of work pieces that differ in dimension from set to set but that are identical in dimension within any given set, the lengths of the work pieces of any given set being integral multiples of their widths, the widths of all work pieces being uniform and both the widths and the lengths of the respective work areas being integral multiples of the widths of the work pieces; indicating means associated with the respective sets of work pieces and ascribing a digital value to a dimension of the individual work pieces thereof which varies from set to set; and indicating means associated with the respective work areas and ascribing area values thereto; the individual work areas defined on the work board having dimensions, respectively, that exactly accommodate given pluralities of work pieces from one

communicating therewith, means arranged above the end distant therefrom, said post being formed between

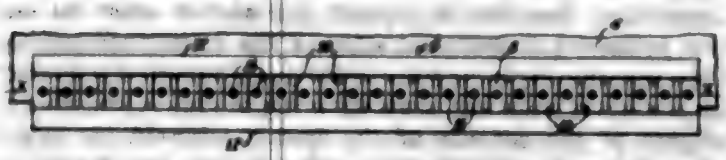
or another of at least two of the said sets of work pieces and that represent the factors of the respective area values, whereby the digital value represented by the said dimension of the work pieces used in any particular instance multiplied by the number of such work pieces used equals the area value ascribed to the particular work area concerned on said work board.

2,866,279
READING AND WRITING DEVICE FOR THE BLIND
Curtis M. Surber, Wichita Falls, Tex.
Application June 29, 1956, Serial No. 594,830
3 Claims. (Cl. 35—35)



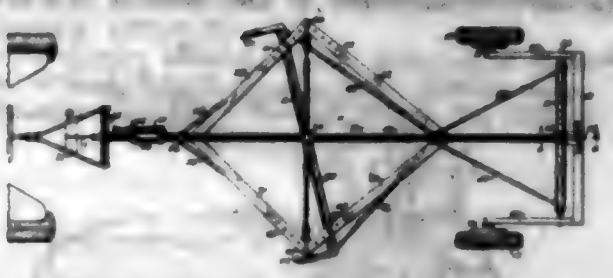
1. In a reading and writing device for the blind, a tablet support, means to position a tablet horizontally on said support, guide tracks rigidly mounted on the support extending transverse to said tablet positioning means, paper feed means on said support formed and arranged to feed a tablet horizontally on said tablet support in predetermined steps transverse to said guide tracks, a character-sensing member movably mounted on said guide tracks, said sensing member comprising a housing, a light source in said housing, a receiver comprising a plurality of distributed photo-sensitive elements mounted in said housing, means to direct images beneath the housing illuminated by said light source onto said receiver, whereby to energize said photo-sensitive elements in accordance with said images, an image reproducer mounted on said support in side-by-side relation to said tablet positioning means, said reproducer comprising an auxiliary support, a plurality of vertical plungers movably mounted on said auxiliary support and distributed in correspondence with said photo-sensitive elements, respective electromagnetic actuators operatively associated with the plungers, means to energize the actuators in accordance with the energization of the photo-sensitive elements, whereby to substantially reproduce the images at the reproducer by the movement of said plungers, means to move said sensing member in predetermined steps along said guide means, and a hand-supporting bracket member connected to said character-sensing member and extending forwardly thereof.

2,866,280
SCRAPER BLADE FOR DOZER ATTACHMENTS
George Kevin O'Connor, Montreal, Quebec, Canada
Application January 22, 1957, Serial No. 635,362
6 Claims. (Cl. 37—143)



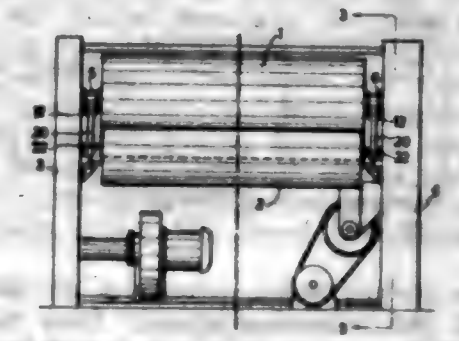
1. In a scraper blade for dozer attachments, a cast blade having top and bottom horizontal portions, a web of less thickness than the said horizontal portions joining the horizontal portions throughout the length of the blade, and a series of vertical ribs on the surface of said web, the said ribs reinforcing the joint between said horizontal portions and said web.

2,866,281
LAND LEVELER
Rodney J. Breaux, Welsh, La.
Application May 31, 1956, Serial No. 588,522
5 Claims. (Cl. 37—168)



3. A ground leveler comprising a longitudinally positioned center beam having a diamond-shaped frame on the intermediate part thereof, a transversely positioned scraper blade, means for adjustably connecting ends of the scraper blade to parts of the diamond-shaped frame, wheels rotatably mounted on arms pivotally mounted on the trailing end of the beam, a hitch pivotally mounted on the leading end of the beam, a hydraulic cylinder mounted on the beam and having a piston rod thereof connected to the hitch, and means operatively connecting the hitch to the wheel mounting at the trailing end of the beam whereby the elevation of the beam and scraper blade are adjusted by the hydraulic cylinder.

2,866,282
ROLL LIFT DEVICES FOR IRONING MACHINES AND THE LIKE
Gunnar Ivar Fredholm, Bromma, Sweden
Application July 26, 1955, Serial No. 524,488
3 Claims. (Cl. 38—59)



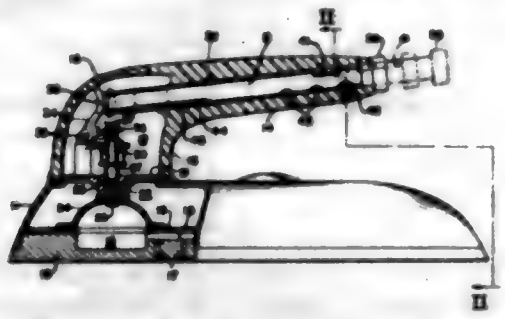
1. In a laundry ironing machine, an ironing bed, an ironing roll resting upon and rotatably supported by said bed, a hub portion at each end of said roll, means for rotating said roll comprising a cardan shaft connected to one of said hub portions, pivoted hook-like members at opposite ends of said roll adapted for cooperation with said hub portions and mounted for movement from a lowered position out of engagement with said hub portion into a raised position in engagement with said hub portions and in which latter position said roll is raised out of contact with said bed and rests upon said hook-like members, and eccentric means operatively connected to said hook-like members for rocking the same.

2,866,283
STEAM IRON
Samuel R. Bricker, Shelby, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 5, 1957, Serial No. 644,872
4 Claims. (Cl. 38—77)

1. In a steam iron, the combination of an ironing base having a vaporization chamber and steam discharge ports

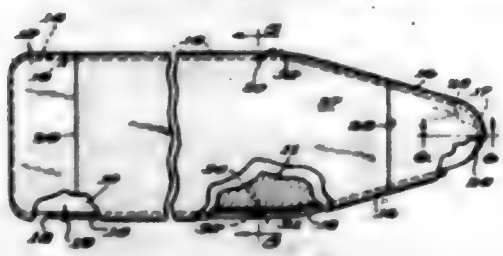
has a shoulder stepped in from the inner edge of its casing position to cocked position, a spring means for

communicating therewith, means arranged above the base for manipulating the iron and including a hollow handle having a supporting post extending above a rear portion of the ironing base and a grip extending forwardly from the post above the ironing base, means defining a water reservoir above the base, a valve structure controlling flow of water from the reservoir to the vaporization chamber, a valve actuating member mounted within the grip and adjustable to three positions, means responsive to adjustment of said member to a first posi-



tion for opening the valve structure for the delivery of water from the reservoir to the vaporization chamber, means effective in second and third positions of said member to close the valve structure, means responsive to adjustment of the valve actuating member to its third position for affording access to the water reservoir for the delivery of water thereto and means carried by the valve actuating member adjacent the front end of the grip portion of the handle for adjusting the valve actuating member to its recited positions.

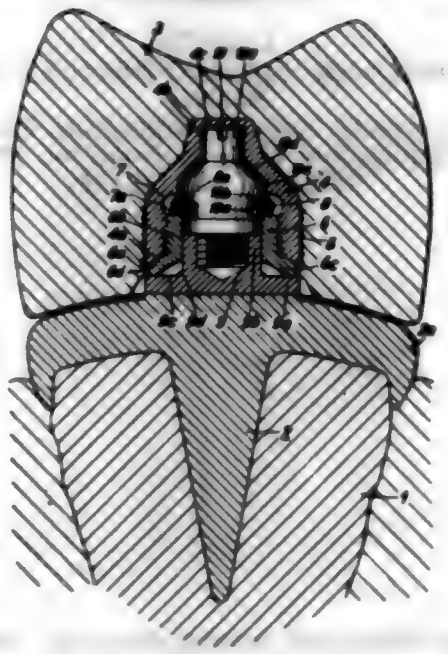
2,866,284
IRONING BOARD
William McCreary, Los Angeles, Calif.
Application September 10, 1954, Serial No. 455,114
3 Claims. (Cl. 38—148)



3. In an ironing board, a body, a plurality of pins secured to and projecting laterally from the body, a frame pivotally connected to and shaped to fit closely about the sides and front end of the body in downward position, said frame being provided with openings spaced from the top and bottom edges thereof, the pins and openings being similarly spaced and the openings being of such size as to snugly engage the pins, the frame being adapted to be flexed outwardly as it is swung past the pins so that the pins will extend into the openings when the frame returns to its normal position at the sides of the body whereby the frame is locked against upward or downward movement.

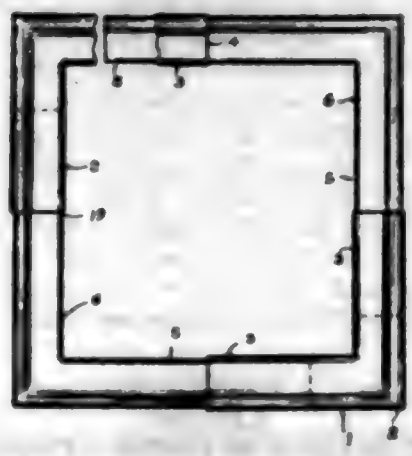
2,866,285
DEVICE FOR RELEASABLY MOUNTING AN ARTIFICIAL TOOTH OR THE LIKE
Albert Gerber, Zurich, Switzerland
Application March 7, 1957, Serial No. 644,656
Claims priority, application Switzerland March 9, 1954
8 Claims. (Cl. 39—9)

1. A device for releasably mounting an artificial tooth or the like, comprising, in combination, a rigid post having a base end adapted to be fixed permanently to a root cap so that said post extends from the cap and has a free end distant therefrom, said post being formed between its ends with an annular groove; hollow cap means adapted to be fixed to an artificial tooth or the like and formed with an axially extending recess into which said post extends, said cap means being formed in its interior with an annular groove located intermediate the ends of said recess; a snap ring located in the latter annular groove and extending into said groove of said post for



releasably maintaining said cap means on said post; and stop means carried by said post and engaging said cap means for limiting the movement of the latter toward said base end of said post, said stop means locating said snap ring in a position where said post maintains said snap ring larger than the diameter which said snap ring has when it is unstressed so that said snap ring presses said cap means against said stop means.

2,866,286
ADJUSTABLE PICTURE FRAME
William C. Hartman, Valley Stream, N. Y.
Application August 12, 1957, Serial No. 677,524
1 Claim. (Cl. 40—155)

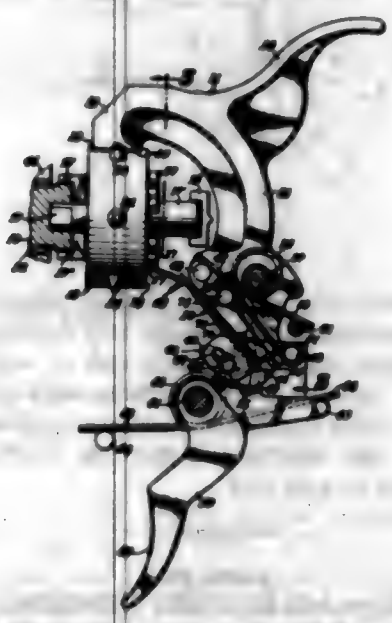


A rectangular picture frame that is adjustable in size to accommodate rectangular pictures of different sizes and which provides regardless of its adjusted size a continuous shoulder to support the picture over the entire perimetrical marginal edge of the latter, comprising four separate right angular units each comprising a pair of elongated adjacent arms forming at the vertex thereof one of the corners of the frame; wherein the arms of each unit are tubular, each side of the frame is formed of one of the arms of one unit slidably received in one of the arms of another unit whereby each received arm may be slidably extended relative to the arm in which it is received; and wherein each arm of each unit

the cartridges to enter the body of said tube, and a for- jacent the front end and at the top of the body for secur-

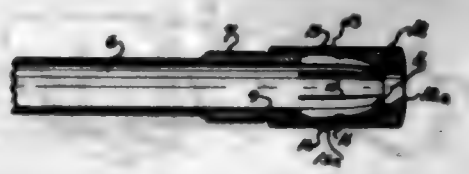
has a shoulder stepped in from the inner edge of its underside and extending the full length of the said edge so as to coincide with the shoulder of the other arm of the unit whereby the shoulders of the arms of each unit remain in continuation of the shoulders of the arms of the other units regardless of the extended size of the frame; characterized in that the underside of one of the arms in each side of the frame has a succession of pairs of parallel slots selectively registrable with complementary slots formed in the other arm of the related side, and removable retainer means associated with the arms of each side of the frame for positively locking them in their adjusted position, the retainer means comprising a thin spring C clip having a pair of ears connected by a flat bridge piece, the ears being manually insertable in a pair of registered slots whereby the associated arms of the frame are positively locked against longitudinal movement, and the flat bridge piece being adapted upon such insertion of the ears to lie against the underside of the outermost arm of the related side of the frame and substantially flush therewith.

2,866,287
TOY FANNER PISTOL
John W. Ryan, Los Angeles, Calif.
Application March 11, 1957, Serial No. 645,100
9 Claims. (Cl. 42—58)



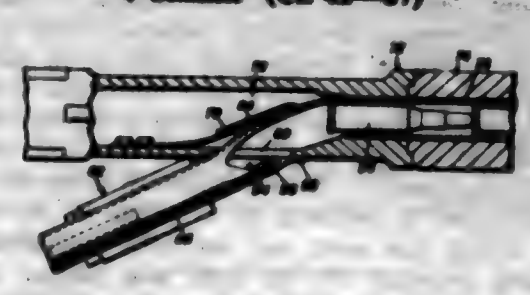
1. In a cap-firing toy pistol comprising in combination a frame having a handle at one end and a barrel at the opposite end, a rotatable cartridge cylinder mounted intermediate said ends, a trigger, a pivotally mounted hammer, an anvil and means feeding caps to a position onto said anvil to be exploded by said hammer in one position of pivotal movement of the hammer, the improvement which comprises a cap-firing means, said means comprising an anvil having an annular anvil surface on its outer periphery, means mounting the anvil to be rotatable about an axis below the barrel axis and with rotation of said cartridge cylinder, said means providing a circular path of rotation for said anvil surface intercepting the longitudinal axis of the barrel at a substantial right angle, means pivotally mounting the hammer to strike the anvil at the point of barrel axis interception in its forward position, an indexing means for rotating the cartridge cylinder and anvil simultaneously through successive equal degrees of rotation, a cap tape having a plurality of caps positioned thereon in longitudinal spaced relation adapted to provide a cap for each degree of rotation of said anvil surface, means feeding the cap tape to the anvil surface to be carried thereby to the point of hammer impact thereon, means actuated by the trigger to actuate the hammer out of anvil engaging position to cocked position, a spring means for automatically returning the hammer to anvil engaging position, and means including a lost-motion connection, connected to and actuated by the hammer during its movement to cocked position, to actuate said indexing means.

2,866,288
BALL BEARING AND RETAINING BAND LOCKING DEVICE FOR THE OUTER SLEEVE OF ADJUSTABLE CHOKES
George L. Herter, Wanoa, Minn., assignor to Herter's, Inc., Wanoa, Minn., a corporation of Minnesota
Application September 15, 1953, Serial No. 369,631
1 Claim. (Cl. 42—79)



A retaining device for adjustable gun chokes of the type having an outer rotatable choke sleeve with the forward portion thereof gradually diminishing in diameter to form a forwardly tapered camming surface therewithin, an inner tubular member adapted to be fixed to the forward end of the gun barrel and having the rear portion of said sleeve rotatably mounted on an intermediate portion thereof with the forward portion of said inner tubular member having a plurality of longitudinal narrow slits formed therein to produce a plurality of separate choke segments the forward ends of which are generally tapered to engage the inner tapered camming surface of the sleeve when said sleeve is projected inwardly by said threads during rotation thereof, said retaining device comprising a resilient band surrounding said sleeve at an intermediate portion thereof and overlying said segmented portion, said band having an outwardly extending concave individual ball retaining recess formed therein, a ball mounted in said recess and retained therein by the spring tension of said band but permitting at least slight rotation of the ball during adjustment of the sleeve, said sleeve having an aperture formed therethrough within which said ball is confined and resiliently pressed against the inner tubular member by said band to selectively engage said slits and hold said outer sleeve in adjusted position but permitting easy adjustment of the outer sleeve by rotation in either direction.

2,866,289
UNLOADING ATTACHMENT FOR RIFLES
Leslie L. Wilcox, Long Branch, N. J.
Application July 19, 1955, Serial No. 523,022
4 Claims. (Cl. 42—87)



1. In a repeating firearm having a receiver and a magazine which communicates with the receiver, said receiver having an opening in its side wall through which cartridges may be inserted into the magazine, and a normally closed gate for said opening, an attachment comprising an unloader for the cartridges in said magazine, said unloader comprising an unloading tube having an end with a cartridge entrance insertable beyond said gate and into said receiver, a forwardly protruding fixed tip on one side of said end of said tube and forming a guideway for

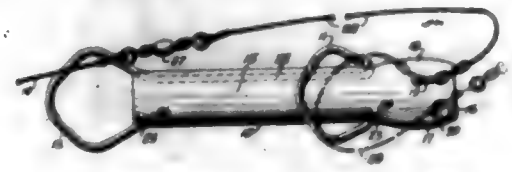
to the interior configuration of said bucket, one of said

cap so that said post extends from the cap and has a free

which it is received; and wherein each arm of each unit

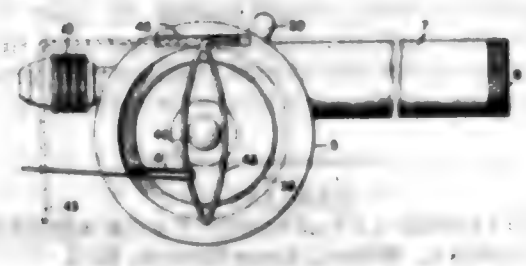
the cartridges to enter the body of said tube, and a forwardly protruding stop on the other side of said tube which bears against the outer surface of said receiver to limit the inward travel of said tube and align said tube when said end of said tube is inserted in said opening, a receptacle for the cartridges communicating with the interior of said tube, and a cartridge spring guide in said tube to guide the cartridges into said receptacle.

2,866,290
SNAG FISH HOOK EXTRICATOR
Bert Adolph Karry, Livonia, Mich.
Application April 19, 1957, Serial No. 654,017
3 Claims. (Cl. 43—17.2)



2. In a fish hook extricator, the combination which comprises an elongated metal body having a transverse opening extending therethrough, arcuate recesses in the sides thereof and having a nose with bulging edges at one end, a resilient bar embedded in said elongated body, loops extending from the opposite ends of the resilient bar in planes disposed at acute angles to the longitudinal axis of the bar and an eye extending from the portion of said elongated body adjacent said nose, the ends of the loops opposite to the ends contiguous with the resilient bar being urged into the recesses in the sides of the elongated body by the resiliency inherent in said loops, and one of said loops being positioned in a plane extending outwardly from the end of the elongated body and the other in a plane extending over the elongated body.

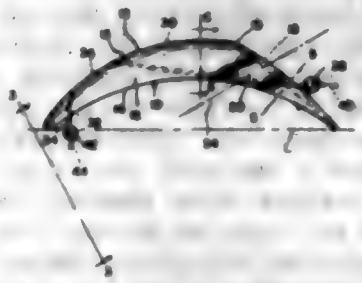
2,866,291
ELECTRICALLY OPERATED FISHING REEL.
Hiram E. Duell, Sidman, Pa.
Application August 7, 1956, Serial No. 602,571
2 Claims. (Cl. 43—21)



1. An electrically operated fishing reel including a reel housing and communicating hollow handle, a motor assembly in the housing comprising a motor, a train of gears operatively connected thereto and a source of electrical energy in the handle in circuit with the motor and with a manual circuit closer on the housing, a fishing line reel spool mounted on the housing and in operative engagement with said gears to effect rotation of the drum when the circuit closer is operated, for winding the line on the drum, a fishing line guide unit normally positioned in a line casting position on the reel, and means on the reel housing to automatically move the unit into a line reeling position when the manual circuit closer is operated.

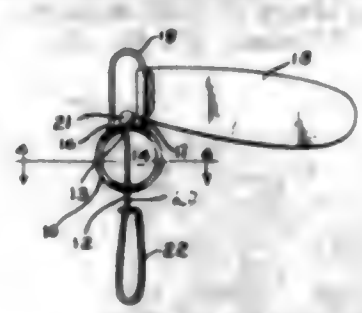
2,866,292
FISH LURE
Leonard A. Busch, Detroit, Mich.
Application September 27, 1954, Serial No. 458,598
7 Claims. (Cl. 43—42.48)

1. A fishing lure comprising an elongated upwardly convexly bowed buoyant body tapered rearwardly, means adjacent the front end and at the top of the body for securing a line, means at the rear underside of said body for attaching a hook, said body having arcuate parallel con-



cave side recesses formed therein shaped to resemble a longitudinal segment of a cylinder extending from the upper front surface downwardly and rearwardly to the lower surface thereof.

2,866,293
SWIVELS
Francis J. Dedrick, Corning, N. Y.
Application December 7, 1956, Serial No. 627,055
5 Claims. (Cl. 43—43.13)



1. In a swivel, an annulus having aligned apertures passing transversely therethrough and having a bail on the outer surface thereof bridging one of said apertures, a pin passing through said apertures, said pin having a head provided with a spherical surface positioned in line contact with the aperture bordering portion of said annulus bridged by said bail.

2,866,294
BAIT TRAP AND BUCKET CONSTRUCTION
Gerard Ruglas, Aroma Park, Ill.
Application March 7, 1955, Serial No. 492,655
4 Claims. (Cl. 43—56)

1. The combination of a bucket provided with a pair of relatively spaced elongated slots formed therein adjacent the open end of said bucket, and a bait trap removably mounted within said bucket; said trap comprising a pair of end members in substantial superposed relation and having a peripheral shape conforming substantially

by the trigger to actuate the hammer out of anvil en- side of said end of said tube and forming a guideway for

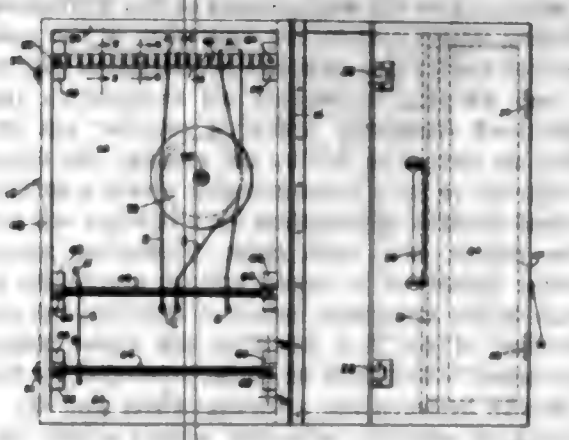
to the interior configuration of said bucket, one of said end members being provided with a closable handhole, an adjustable handle mounted on the exposed surface of said one end member to one side of said handhole and adapted, when in one position of adjustment, to have portions thereof disposed within said bucket slots to effect locking of said bucket and trap in assembled relation, a foraminous member interconnecting said end members and cooperating therewith to form a bait-entrapping chamber, one side of said foraminous member being provided with an elongated recessed gateway of fixed dimension extending from one end member to the other end member and communicating with said chamber and having the gateway-forming portions thereof projecting angularly inwardly toward said chamber, and an elongated gate element removably mounted on the end member on which said handle is mounted and, when in assembled relation with said end members, being disposed in registered restrictive relation with said gateway to prevent exit of bait from said chamber and to retain said handle in locking relation with said bucket slot.

2,866,295

HOLDER FOR FISHING TACKLE

Donald L. Shanks, Abington, Mass.

Application December 29, 1955, Serial No. 556,387
4 Claims. (Cl. 43—57.5)



1. A receptacle for fishing tackle comprising a container that is open at the front, a cover for said container that closes said front, means movably holding said cover to said container, said container embodying a rack extending between opposite sides thereof, supporting means for said rack attached to said container, said rack having a notch therein, said cover embodying a rack extending at a right angle to said container rack, said cover rack having a notch therein, means attaching said cover rack to said cover, and a retainer member supported by and extending across said cover and spaced from said cover rack.

2,866,296

PROCESS OF CONDITIONING SOIL FOR GROWING PLANTS BY UTILIZING POLYSACCHARIDE ESTERS OF POLYBASIC ACIDS

Geoffrey W. Meadows, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 17, 1954
Serial No. 469,553
12 Claims. (Cl. 47—58)

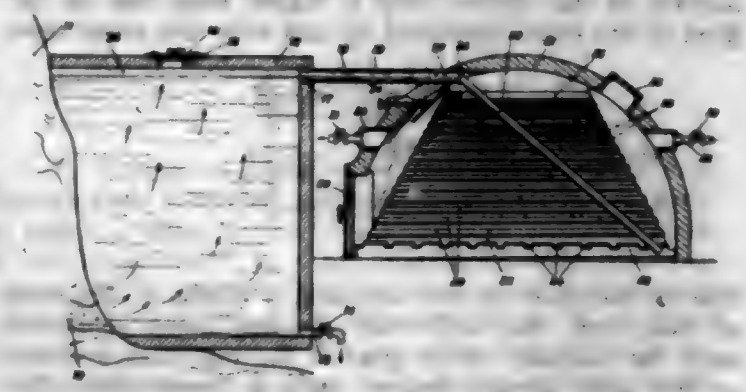
1. A method for conditioning soil in which plants are to be grown, said method comprising applying to the soil a water soluble polysaccharide ester of a polybasic acid containing at least two oxygen atoms in each acid function in which at least one acid group is bonded to the polysaccharide through an ester linkage and at least one acid group is unesterified.

2,866,297

PROCESS AND INSTALLATION FOR THE COLLECTION, ACTIVATION, AND CULTURE OF PLANKTONIC COMPLEXES CONTAINED IN MINERAL WATERS

Georges Marinal, Nice, France

Application September 9, 1957; Serial No. 682,694
Claims priority, application France September 21, 1956
2 Claims. (Cl. 47—58)



1. A process for the collection, activation and culture of the planktonic complexes contained in mineral spring waters, consisting in causing the mineral water to rest, sheltered from the air, as soon as it leaves the source of the spring, in such a manner as to allow separation of the plankton by floating to take place and in exposing this to the combined activating actions of the mineral water situated below and of the natural gases situated above, and secondly in introducing continuously the water, the planktonic complex and the natural gases thus separated, into a closed chamber where a slow trickling takes place suitable for the development of the planktonic complex, if necessary with subjection to the action of additional gases and suitable luminous radiation, and finally filtering and evacuation of the water.

2,866,298

METHOD OF JOINING GLASS PARTS

Clarence L. Babcock, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

No Drawing. Application January 27, 1956
Serial No. 561,948
1 Claim. (Cl. 49—82)

A method of joining preformed glass parts at relatively low temperatures comprising the steps of coating the sealing surface of at least one of the glass parts with a glass sealing composition, said glass parts having coefficients of thermal contraction in the range of $100\text{–}130\times10^{-7}$ through the temperature range from their respective annealing point temperatures to room temperature (25° C.), said glass sealing composition having a coefficient of thermal contraction of 5 to 15 percent less than that of the said glass parts and a fiber softening point temperature of less than 480° C. and below the annealing point temperature of said glass parts, joining said parts, and thermally fusing said sealing composition between the sealing surfaces of the glass parts at a temperature in the range of from about 410 to 480° C. and below the annealing point temperatures of said glass parts and above the fiber softening point temperature of the sealing composition.

2,866,299

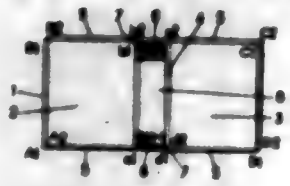
METHOD FOR THE MANUFACTURE OF TEMPERED SAFETY GLASS ESPECIALLY INTENDED FOR USE IN AUTOMOBILES

Bernard Leng, Paris, France, assignor to Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France, Paris, France, a corporation of France

Application February 9, 1956, Serial No. 564,543
Claims priority, application France February 14, 1955
5 Claims. (Cl. 49—69)

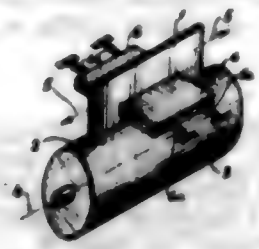
1. The process of producing in a glass sheet a plurality of highly tempered zones, completely separated one

from another by a barrier strip of less highly tempered glass extending from one side edge of the sheet to the opposite side edge and adapted to prevent cracks originating in either of said zones from spreading outside thereof, particularly into the portions at the ends of the barrier strip extending along the side edges of the sheet, which process comprises the steps of first differentially heating said sheet until the viscosity of the glass in the body portion of the barrier strip is higher than that of the glass in the zones separated by said strip and lower than



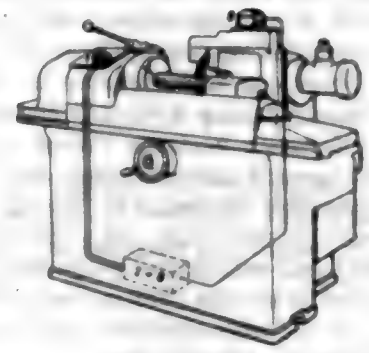
that of the glass in the side edge portions at the ends of said strip, said differential heating being continued until the viscosity of the glass in the side edge portions at the ends of said barrier strip is lower than 10^{13} poises, and until the viscosity in said separated zones is such that rapid cooling thereof results in a high temper, and then rapidly cooling the portions of the sheet to be highly tempered while cooling the side edge and body portions of said barrier strip enough to temper the entire thickness of the glass therein.

2,866,300
DEVICE FOR GRINDING SCRAPER BLADES
Sofus Valdemar Gram-Schwensen, Allerod, Denmark
Application November 5, 1953, Serial No. 390,337
12 Claims. (Cl. 51—3)



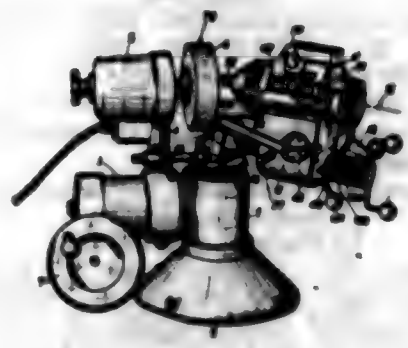
1. In a device for grinding scraper blades having at least one edge surface to be ground, in combination, a base, an edge surface grinding member supported by said base and having a grinding surface, a scraper blade holder on said base having means for securing a scraper blade on said holder, a side face grinding aggregate supported by said base comprising at least two side face grinding members disposed at a distance from said edge surface grinding member on either side of the plane in which a scraper blade is secured on said holder, resilient means for pressing said two side grinding members towards each other, driving means on said base for providing a relative movement between said holder and said edge surface grinding member parallel to said grinding surface, said driving means also being connected to at least one of the latter said two parts, reciprocating means on said base for providing mutual reciprocating movements between said side face grinding aggregate and said holder and connected to at least one of said latter two parts, and means for repeated alternating movement of said holder and said edge surface grinding member towards and away from each other, said means being connected to at least one of the last two said parts, and whereby repeatingly the edge surface of a scraper blade retained on said holder is pressed against said grinding surface for grinding of said edge surface and away therefrom into a position in which the side edges of said edge surface are situated between said two side face grinding members for grinding the side faces of said scraper blade at the side edges of the said edge surface thereof.

2,866,301
WARNING DEVICE COMPRISING A MICROPHONE PREFERABLY FOR A GRINDING MACHINE
Maurice Koulicovitch and René Juvet, Geneva, Switzerland, assignors to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a firm of Switzerland
Application March 31, 1953, Serial No. 345,259
3 Claims. (Cl. 51—165)



1. In a grinding machine comprising a grinding wheel, a work-carrier and a sliding carriage for one of said parts, namely the grinding wheel and the work-carrier, an arrangement for warning the operator of the moment of engagement between a workpiece on the carrier and the grinding wheel, comprising a microphone sensitive to the waves produced by the engagement of the workpiece with the grinding wheel and by the operation of the machine, an amplifier fed by the impulses produced by said microphone and adapted to amplify all frequencies above a predetermined frequency value, a rectifier fed by said amplifier, an integrator fed by the rectifier, the integrator being adjusted in such a manner that above a certain predetermined rapidity of reception the amplified and rectified impulses merge into each other producing practically continuous signals of a steady voltage across the output terminals of the integrator, whereas impulses the rapidity of repetition of which is less than the above mentioned predetermined value such as those produced by the first small shocks between the grinding wheel and the workpiece produce separate polarised signals across the output terminals of the integrator, a discriminating condenser fed by the integrator and connected with an electronic receiver, said discriminating condenser stopping all continuous signals and transmitting only the separate signals to the electronic receiver.

2,866,302
MACHINE FOR SHARPENING DRILLS
Oscar Amiet, Geneva, Switzerland, assignor to Christen & Co. A. G., a firm of Switzerland
Application June 12, 1956, Serial No. 590,893
Claims priority, application Switzerland June 16, 1955
24 Claims. (Cl. 51—219)



1. A machine for sharpening through grinding drills and the like tools, comprising a frame, a carrier adapted

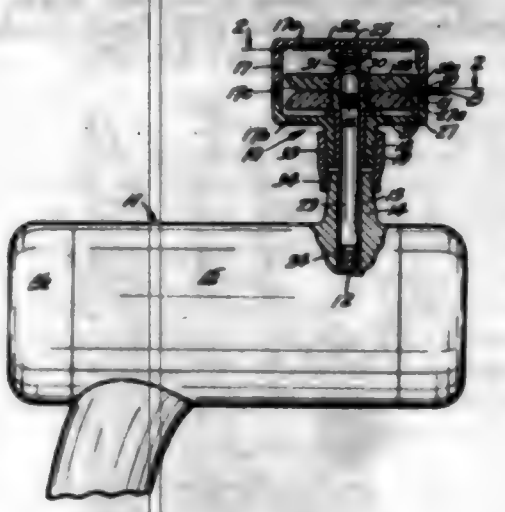
to rock over the frame round a first axis, a headstock on said carrier adapted to carry a drill revolvably round its axis, said axis crossing the first mentioned axis, a grinding wheel, means wherethrough the grinding wheel and the drill are mounted on the carrier in a manner such as will make the flat operative plane of the grinding wheel contain the first mentioned axis with the tip of the drill engaging said operative flat surface, means whereby the headstock is adapted to reciprocate over the carrier substantially along the axis of the drill to shift the latter towards and away from the grinding wheel, a control mechanism associating the rotary movement of the drill inside the headstock with the first mentioned rocking movement of the headstock and carrier, means operatively interconnecting the rocking and reciprocating movements of the headstock, and means for adjusting the amplitudes and starting points of the rocking and reciprocating movements of the headstock.

2,866,303

KNIFE SHARPENING ATTACHMENT

Arthur M. Gunderson, Minneapolis, Minn., assignor, by mesne assignments, to Dimsy Products, Inc., Chicago, Ill., a corporation of Illinois

Application April 4, 1956, Serial No. 576,185
1 Claim. (Cl. 51—241)



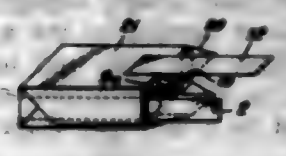
An attachment for a multipurpose household appliance having a rotary drive output disposed inwardly and downwardly of a top opening in the appliance housing, comprising a stationary and substantially cylindrical enclosure having upper and lower end walls and a substantially cylindrical upright side wall with an arcuate knife edge-receiving slot therein lying in a horizontal plane, said slot having knife-engaging ends to limit inward movement of the knife edge into the enclosure, said enclosure also having a depending external boss formed on the lower end thereof with a vertical rotary drive shaft journalled therein, said drive shaft having a downwardly protruding portion with coupling means thereon for insertion into the appliance housing and for producing driving connection with the rotary drive output and said shaft also having an upper end portion disposed within the enclosure with a pair of contiguous grinding wheels nonrotatably mounted thereon in spring pressed face-to-face partable relation, said grinding wheels having rounded peripheral portions defining outwardly convex and inwardly convergent grinding surfaces in alignment with said slot, and resilient attachment means secured on said boss and engagable in wedging relation with protruding portions of the appliance housing around the opening therein for releasably securing the enclosure to the appliance housing and preventing rotation and longitudinal movement of the enclosure.

2,866,304

METHOD OF PRODUCING A SOFT PACKAGE FOR CIGARETTES

Kurt Körber, Hamburg-Bergedorf, Germany, assignor to Kurt Korber & Co. K. G., Hamburg-Bergedorf, Germany

Application September 26, 1955, Serial No. 536,361
Claims priority, application Germany October 2, 1954
5 Claims. (Cl. 53—14)



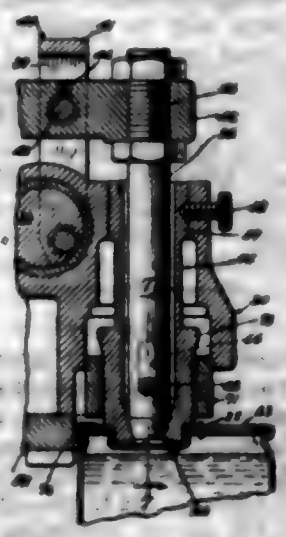
1. A method of producing a soft package filled with cigarettes and having at one end a head closure, a portion of which is adapted to be separated from the remainder of the head closure by a manually actuatable operating strip which is normally held in engagement with the end face of the head closure by a tax stamp or the like and destroys the latter when the operating strip is lifted, including the steps of placing a cigarette assembly, consisting of a plurality of cigarettes to be packed, with one of its cigarette ends against an inner wrapping sheet, providing the opposite margins of the sheet which later form closure flaps of the head closure with cuts, applying a longitudinal operating strip to one narrow side of the cigarette assembly in such a manner that one end of said strip projects beyond the other end of said cigarette assembly, folding the inner wrapping sheet around said cigarette assembly, forming a fold in said operating strip at the place where it projects from the cigarette assembly and placing said fold under the flap portions of the closure head formed by said cuts, securing said flap portions together to prevent their separation, folding the remaining portion of said operating strip lengthwise against the outer end face of the closure head and then securing a tax stamp transversely across the closure head and over said operating strip in such a manner as to leave the free end of the operating strip readily accessible.

2,866,305

METHOD OF SEALING A CONTAINER OPENING AND AN APPARATUS THEREFOR

Fred E. Ullman, Winnetka, and Norman A. Virta, Mount Prospect, Ill., assignors to Triangle Package Machinery Company, Chicago, Ill., a corporation of Illinois

Application January 14, 1954, Serial No. 403,981
21 Claims. (Cl. 53—42)



1. The process of sealing an indented portion of a cover formed of deformable sheet material within an aperture subsequent to the indented cover portion being inserted within such an aperture, which process comprises providing a unitary structure having a slotted contractible end portion of a normal size and shape larger than that of

adjacent the front end thereof, a bar embodying an in-

2,866,311

FALSE TWISTER

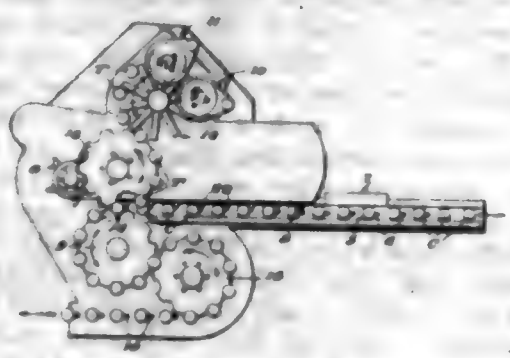
the aperture, contracting the contractible end portion of said structure to a size and shape less than that of the aperture, locating a portion of said contractible end portion, when in contracted relation, within the indented cover portion whereby a part of said end portion is disposed axially on opposite sides of the aperture, expanding said end portion toward normal size and shape whereby said indented cover portion is expanded and portions of said cover snugly engage the opposite sides of the circumjacent portion of the aperture, and disengaging said unitary structure and indented cover portion subsequent to the contractible end portion thereof being contracted to a size and shape smaller than that of the aperture.

2,866,306

HIGH SPEED COVER FEED AND CONTROL ARRANGEMENT

Joseph J. Semmelo, Chicago, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application July 24, 1956, Serial No. 599,869
25 Claims. (Cl. 53—78)



1. In apparatus of the character described, means for feeding metal cans in processional order and in equidistantly spaced relation, means for moving covers in like equidistantly spaced relation to be received on the cans at a make-up point, a cover feed means for depositing covers on said cover moving means, and means operable by mere passage of a can past a fixed control area for controlling the cover feed means to deposit the covers in position on the cover moving means so that each cover will be received on the can which controlled its deposition, said last named means including feed control devices and electrically operated control means therefor including switch means, and an inductance bridge circuit having one arm of the bridge arranged along the can feed line at the control area and in position for projecting an electro-magnetic field into the path of travel of the cans so that the inductance change created by the metal in each passing can will modify a predetermined normal control condition of the bridge circuit, and relay means controlled by such bridge circuit condition modification to control operation of the cover feed means through said switch means.

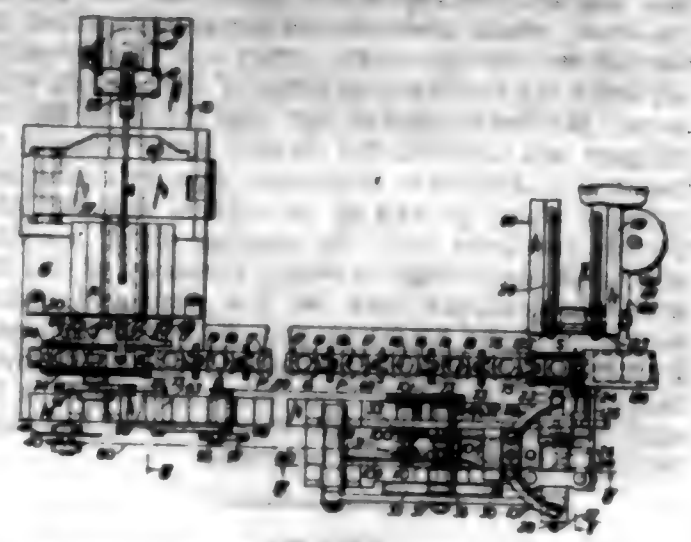
2,866,307

MACHINES FOR PRINTING AND PACKAGING

Ernest William Dundas Rigg, Filey, England, assignor to R. B. Production and Engineering Company Limited, Bridlington, England, a British company

Application December 1, 1953, Serial No. 395,527
2 Claims. (Cl. 53—186)

1. A machine for use in packaging electric lamps in sleeves with the aid of platforms each having a hole in it, comprising means for feeding the platforms in succession to a given station, a conveyor having a series of spaced holding means, said conveyor being adapted to move each successive holding means to said given station, and means at said given station for firmly but removably securing each successive platform to each successive holding means, whereby with such platform secured to such holding means, a lamp may be inserted in the hole in



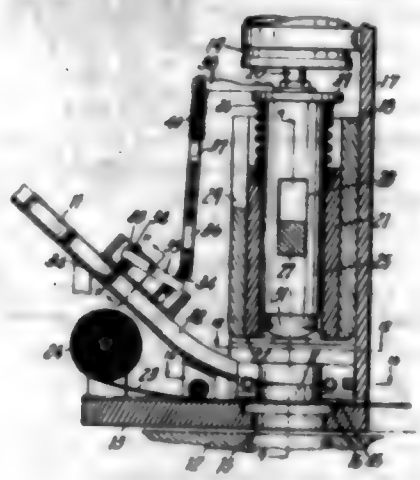
each successive platform and a sleeve fitted over each successive lamp and platform.

2,866,308

CARTRIDGE OF CALKING MATERIAL AND APPARATUS FOR PRODUCING THE SAME

Harold B. Collins, Brooksville, Mich.

Application November 23, 1956, Serial No. 624,876
12 Claims. (Cl. 53—297)



11. A machine for pressing a flexible closure diaphragm into a tubular cartridge with a cylindrical backing ring clamping the periphery of the diaphragm to the cartridge wall comprising a plate having a hole therein larger than the diameter of the cartridge with an annular cutting edge therearound, a plunger of the same diameter as the inside of said cartridge positioned to be reciprocated through said hole into said cartridge and having a reduced end of a diameter to project into said ring, means for feeding a strip of thin flexible diaphragm forming material and wider than said hole across said hole, means for delivering said ring onto said strip over said hole, an annular cutter reciprocable longitudinally of said plunger and against said cutting edge to sever a diaphragm from said strip and around said ring, means for reciprocating said plunger, and means driven in timed relation with said plunger for advancing said cutter with said plunger for the first part of the advancing stroke of the plunger to sever said web.

2,866,309

MOUNTING FOR ROTARY SIDE DELIVERY RAKE

Matt J. Ander, Lachine, Mich.

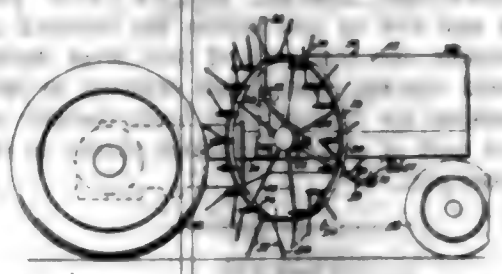
Application January 31, 1957, Serial No. 637,434
1 Claim. (Cl. 56—377)

In combination a tractor including rear wheels and a front end, an arm extending outwardly from said tractor

movement of the enclosure.

787 O. G.—74

adjacent the front end thereof, a bar embodying an inclined portion and a horizontally disposed portion, said bar including an upper end, the horizontally disposed portion of said bar being connected to said arm, a plate secured to one side of said tractor and spaced rearwardly from said arm, a rectangular channel member extending outwardly from said plate and secured thereto, a beam adjustably mounted in said channel member, securing elements connecting said beam to said channel member, a rod extending upwardly from the outer end of said beam and secured thereto, a tube rotatably surrounding said rod and including a lower end, a horizontally disposed support member extending outwardly from the lower end of said tube and secured thereto, said support member having an outer end, an inclined brace extending between



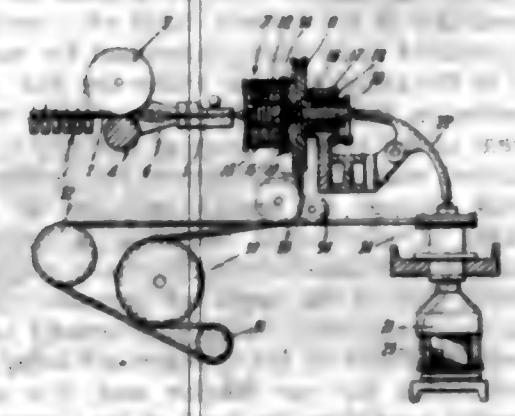
said tube and support member, a hub carried by the outer end of said support member, a rotary rake rotatably connected to said hub, said rake including a plurality of spokes and a circular rim, a plurality of spaced parallel fingers extending outwardly from said rim, tines mounted on said fingers and each tine including a coil spring portion circumposed on said finger, and a pair of angularly arranged teeth extending outwardly from each coil spring portion of each tine, a sleeve secured at the upper end of said bar, and a tie rod mounted in said sleeve and connected to said support member, the teeth of the rake serving to transfer or move straw into the path of a rear wheel of the tractor so that the rear wheel of the tractor will run over the straw and pack the straw down, and hydraulic means for raising and lowering the rake.

2,866,310

SPINNING FRAME

John Pringle Mackie, Belfast, Northern Ireland, assignor to James Mackie & Sons Limited

Application October 31, 1955, Serial No. 543,772
Claims priority, application Great Britain November 4, 1954
5 Claims. (Cl. 57—36)



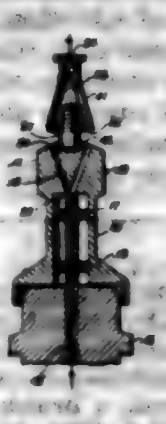
1. A gill-spinning frame for hard-fibred materials, such as sisal and manila, characterized by the arrangement having a flyer turning about a vertical axis, a smoothing die and haul pulleys for pulling the yarn through said smoothing die, in which the haul pulley assembly is separated from the flyer so that its effective axis lies at an angle to that of the flyer.

2,866,311

FALSE TWISTER

Hans Alwin Schrenk, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N. C., a corporation of Delaware

Application April 9, 1956, Serial No. 576,971
Claims priority, application Netherlands April 11, 1955
5 Claims. (Cl. 57—77.3)



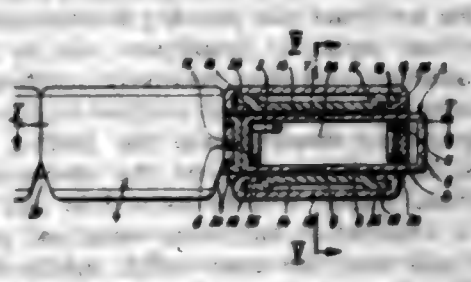
5. A false twister comprising a stationary tube, a body including two end portions interconnected by a narrow neck, a collar surrounding said neck and freely rotatable with respect thereto, means mounting said body for free rotation about said tube, each end portion having therein a yarn channel extending in converging relation to the axis of rotation of the body from the end adjacent the neck, the channels being at their ends adjacent the collar radially further from the axis than said collar and at their other ends being coaxial with the axis of rotation of the body.

2,866,312

EXPANSIBLE LINKAGE WITH DETACHABLE LINKS

Reinhold Kussmaul, Pforzheim, Baden, Germany, assignor to Kollmar & Jourdan, Aktiengesellschaft, Pforzheim, Baden, Germany

Application September 24, 1956, Serial No. 611,657
Claims priority, application Germany September 28, 1955
20 Claims. (Cl. 59—79)



1. An elastic link strap comprising a plurality of tubular members adjacent to each other and extending transverse to the longitudinal direction of the strap, at least one spring disposed within each tubular member in operative engagement with one side wall thereof, connecting members substantially enclosing the ends of each tubular member, said connecting members being disposed in pairs in opposite relation to each other at the longitudinal sides of said strap, each of said connecting members having a back portion, a pair of short side arms and at least one longer arm on said back portion, said arms extending at substantially right angles to said back portion toward the inside of said strap, said side arms of each connecting member extending into the open ends of two adjacent tubular members, one of said side arms engaging with the spring in one of said tubular members so as to tension the same when the strap is expanded, the other side engaging with the side wall of the adjacent tubular member opposite the wall engaged by the spring, each such longer arm partly covering at least one outer side of the tubular member with which it is associated, and at least one covering plate movably associated with each

to move the locking piston rearwardly relative to the

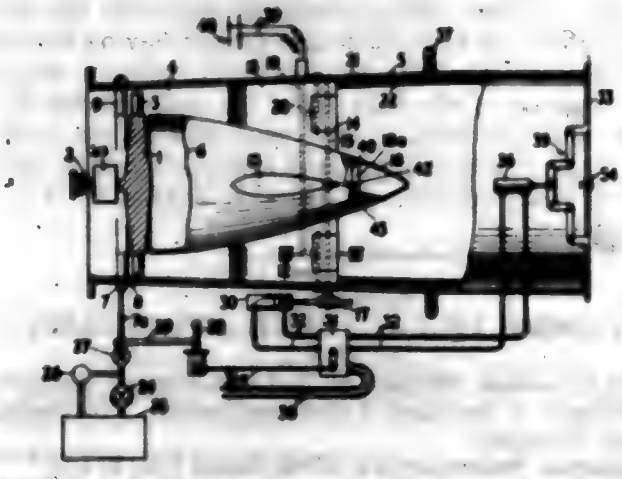
of from a normal off position for opening said valve, a flow line connected between said master cylinder and

tubular member, the longer arms and covering plate having means carried thereby for removably connecting the longer arms of the two opposite brackets of each pair with each other, said back portions of said brackets and said covering plates together forming a plurality of parallel main link casings having open sides disposed adjacent to each other and extending transversely to the longitudinal direction of said strap, said main link casings being adapted to engage each other and at least partly enclosing said tubular members when said strap is in the released position, said covering plates together with said tubular members forming a continuous outer surface when said strap is in the expanded position.

2,866,313
MEANS FOR COOLING TURBINE-BLADES BY LIQUID JETS

Raymond Hell, Countesthorpe, Leicester, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company

Application April 5, 1951, Serial No. 219,347
Claims priority, application Great Britain April 14, 1950
8 Claims. (Cl. 60—35.6)



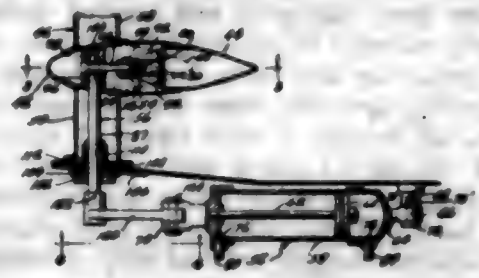
2. A gas turbine plant including a turbine having a ring of blades, liquid-fuel-emitting nozzles adjacent said blades on the upstream side pointing downstream toward said blades and separated therefrom only by the axial clearance necessary between relatively rotating components whereby said nozzles are adapted to direct jets of coolant liquid fuel directly onto the leading edges of said blades, an exhaust duct on the downstream side of said turbine blades, a baffle located in said duct for producing a combustion-stabilizing zone, and means for igniting in said zone the combustible mixture resulting from the introduction of said coolant liquid fuel into the working gases of said turbine on the upstream side of said blades.

2,866,314
FLAME HOLDING DEVICE MOVABLE BETWEEN A FLAMEHOLDING POSITION AND A STREAMLINED POSITION

Alexander Kurti, North Woodbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Application January 2, 1953, Serial No. 329,367
10 Claims. (Cl. 60—35.6)

5. In combination, a combustion chamber through which gases pass at high velocities, a flameholder mounted in said chamber, said flameholder comprising a member having two parts, a forward part and a rearward part, said forward part having a leading edge, surfaces extending aft and diverging from the leading edge, said surfaces subsequently terminating, said rearward part having its forward end located within the rearward end of said forward part, surfaces extending aft from said forward end of said rearward part and converging and terminating adjacent each other to form a trailing edge, means for placing the aft part of said flameholder substantially within said forward part, said last named means including a bracket fixed to the forward end of the rearward part of said flame holder and

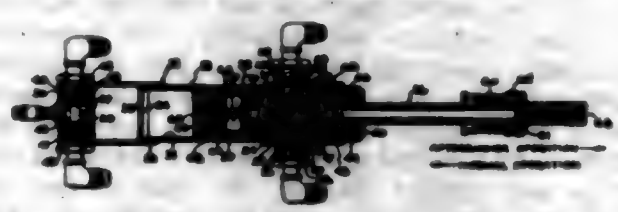


located within said forward part, a lever pivotally mounted at one end to and within the forward part of said flameholder, the free end of said lever being connected to said bracket, and means external to the combustion chamber for moving said lever thereby moving the rearward part of said flameholder axially in relation to the forward part.

2,866,315
VARIABLE EXHAUST NOZZLE ACTUATOR

Karl K. Schakel, Cincinnati, Ohio, assignor to Kett Corporation, Cincinnati, Ohio, a corporation of Ohio

Application April 14, 1955, Serial No. 501,301
1 Claim. (Cl. 60—35.6)

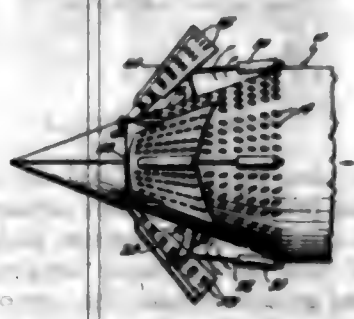


A hydraulic actuator for the exhaust nozzle of a gas turbine engine having an afterburner, the opening of the exhaust nozzle being variable within a first range for normal operation in which the area of the opening of the exhaust nozzle is reduced, and said exhaust nozzle movable through a second range to fully open condition for afterburner operation, said actuator comprising an elongated cylinder, a main piston within said cylinder, means for connecting the piston to the exhaust nozzle such that movement of the piston longitudinally of the cylinder varies the size of the opening of the nozzle, the forward portion of said cylinder being larger in diameter than the rear portion thereof to provide an annular shoulder, the distance from the annular shoulder to the forward end of the cylinder being of a length to provide the required main piston movement for varying the opening of the exhaust nozzle within the first range of normal operation, the distance from the annular shoulder to the rear of the cylinder being of a length to provide the required main piston movement for moving the exhaust nozzle through the second range to the fully open condition of afterburner operation, a hydraulic system serving the actuator including means to selectively direct hydraulic fluid to the respective opposite ends of the cylinder, the main piston being substantially longer than the forward portion of the cylinder and being slidably received within the rear portion such that under normal operating conditions the head of the piston projects into the forward portion ahead of the annular shoulder, a locking piston slidably mounted within the head of the main piston for longitudinal movement relative thereto, locking means adapted to be moved radially outwardly from the sides of the head of the main piston upon forward movement of the locking piston relative to the main piston, the locking piston being exposed to hydraulic pressure in the forward portion of the cylinder

tain of the units to provide settling basins for the fluid, direction of flow through a reversing heat-exchange zone

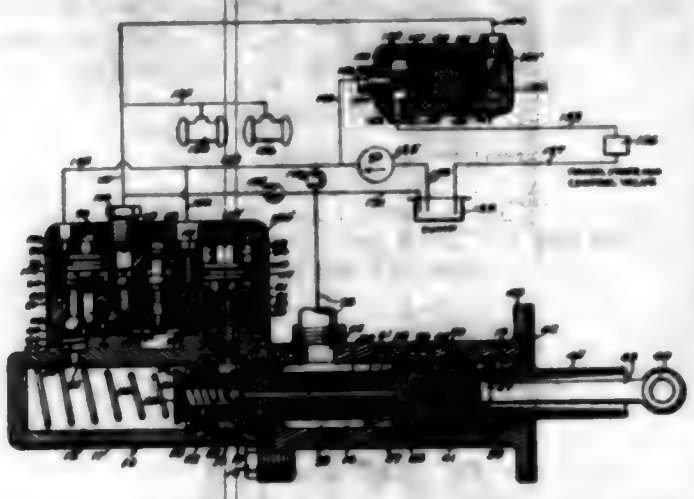
to move the locking piston rearwardly relative to the main piston, and spring means normally urging said locking piston forward relative to the main piston, whereby in the event of a failure of hydraulic pressure within the system serving the actuator during normal operating conditions the locking means are moved radially outwardly in position to contact the annular shoulder and thereby prevent the main piston from moving to the rear of the cylinder.

2,866,316
THRUST REVERSING AND SILENCING
George R. Towle, Glastonbury, Richard L. Vasquez, Wethersfield, and Arthur E. Wetherbee, Jr., Newington, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application April 25, 1956, Serial No. 580,559
8 Claims. (Cl. 60—35.54)



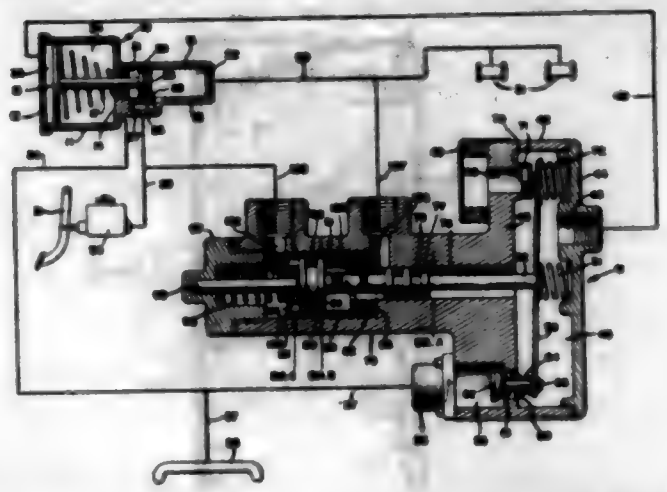
1. An exhaust nozzle having walls extending in a downstream direction, said walls including a plurality of relatively small nozzles spaced apart for passing gases through said walls and directing them in an aft direction, segmental plates symmetrically disposed about the longitudinal axis of said exhaust nozzle including pivot means for mounting said plates adjacent their downstream ends, said plates normally closely fitting a portion of said plurality of nozzles and including openings which are normally aligned with at least a portion of said plurality of nozzles, and means for pivoting said plates outwardly about their downstream ends to reverse at least a portion of the gases being emitted from the small nozzles located upstream of said downstream ends.

2,866,317
BOOSTER BRAKE MECHANISM
William Steiner, Summit, N. J.
Application February 16, 1953, Serial No. 337,003
15 Claims. (Cl. 60—54.5)



1. A hydraulic brake system comprising wheel cylinders to apply the brakes, a source of hydraulic pressure, passage means connected between said source and the wheel cylinders, a master cylinder having a piston therein, a normally closed control valve in said passage means having a pressure responsive operating member exposed to pressure generated by said piston upon movement therefrom a normal off position for opening said valve, a flow line connected between said master cylinder and the wheel cylinders, a second valve for controlling communication through said flow line, and a pressure responsive device connected to said second valve and exposed at one side thereof to pressure from said source and at the other side to pressure of hydraulic fluid delivered to the wheel cylinders, said pressure responsive device being biased for movement to open said second valve whereby, when pressure at said other side of said pressure responsive device equals the pressure at said one side thereof, said second valve will open to connect said master cylinder to said wheel cylinders.

2,866,318
BOOSTER BRAKE MECHANISM
Jeannot G. Ingres, Birmingham, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application September 28, 1956, Serial No. 612,794
13 Claims. (Cl. 60—54.5)



1. A hydraulic booster system comprising a hydraulic pressure booster device including a hydraulic chamber and a fluid displacing plunger movable thereinto, a fluid pressure motor having a pressure responsive unit connected to said plunger, a valve mechanism having connection with sources of relatively high and low pressures and with said motor, a hydraulic fluid pressure responsive member connected to said valve mechanism, a control chamber at one side of said hydraulic pressure responsive member, a pedal operable master cylinder connected to such chamber to move said hydraulic pressure responsive member and operate said valve mechanism to energize said motor, a reaction chamber to pressure in which the other side of said hydraulic pressure responsive member is exposed, said reaction chamber communicating with said hydraulic chamber whereby the building-up of pressure in the latter chamber causes pressures in said reaction chamber to oppose pressures in said control chamber in a predetermined ratio thereto, and means in said reaction chamber engageable with said hydraulic fluid pressure responsive member when pressures in said reaction chamber increase to a predetermined point for increasing the reaction pressure in said reaction chamber affecting said fluid pressure responsive member in proportion to the pressure in said control chamber.

2,866,319
DRAINAGE ASSEMBLY
Edward P. Nicholson, Gary, Ind.
Application September 7, 1954, Serial No. 454,571
4 Claims. (Cl. 61—11)

1. An assembly for promoting drainage comprising a plurality of arch shaped units laid end to end in abutting relationship to form a passage for fluid, said units being provided with notches in their ends and baffles respectively disposed transversely in the notches between cor-

arranged that as said masses of ice approach their maxi- through its sidewalls, a tubular rod extending upwardly

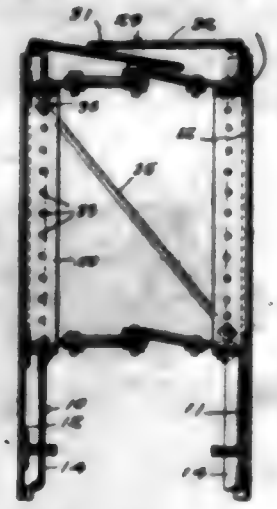
ward end of said forward part, surfaces extending aft from said forward end of said rearward part and con-

to the main piston, the locking piston being exposed to hydraulic pressure in the forward portion of the cylinder

tain of the units to provide settling basins for the fluid, said baffles extending appreciable distances outwardly

from the units to assist in directing fluid away from the basins.

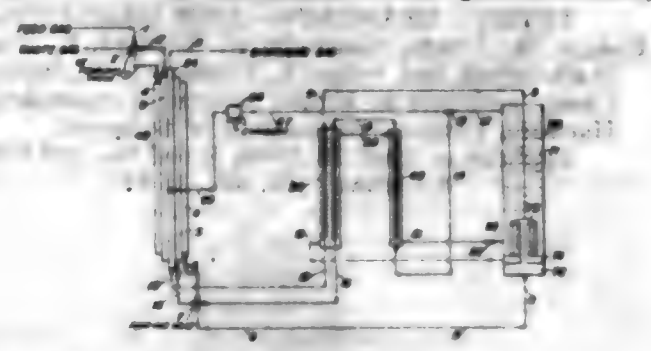
2,866,320
TRENCH TUNNEL
Charly S. Barrell, Longview, Tex.
Application February 3, 1953, Serial No. 334,901
2 Claims. (Cl. 61—41)



1. A preformed tunnel for subsurface trench wall reinforcement comprising a pair of spaced apart wall forming plates, a plurality of vertically disposed angle members, each having a series of vertically aligned apertures therein carried by each plate, the angle members of one plate being aligned with those of the other, a diagonally disposed bracing rod having right angled end portions extending from a selected aperture in each angle iron to a selected aperture in the aligned angle iron carried by the opposite plate, means securing said right angled ends in said apertures, a plurality of horizontally disposed crossed, pivotally connected bracing members extending between said plates at longitudinally spaced intervals, a plurality of said bracing members being vertically aligned at each interval, a pair of cover members, and hinge members pivotally securing said cover members respectively to the top edge of each plate, said cover members when in raised position extending upwardly and outwardly respectively from the top edge of each of said plates whereby in the event of collapse of the trench wall adjacent the cover members said cover members will be automatically positioned for protective purposes by the collapsing material.

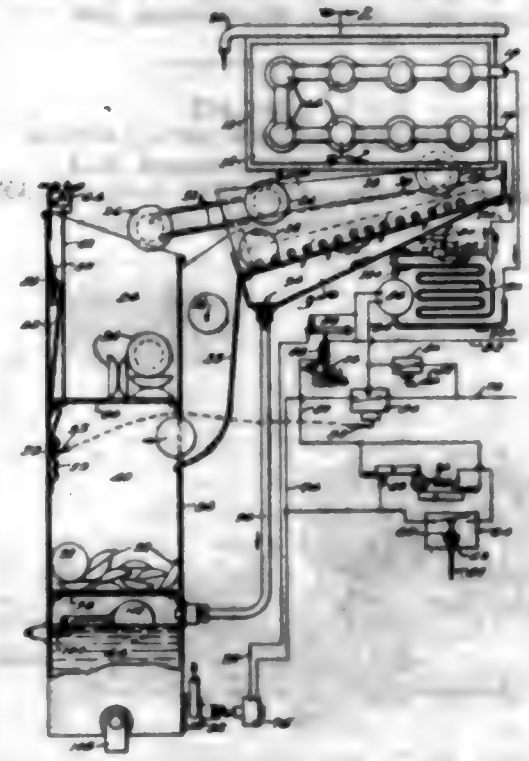
2,866,321
PURIFICATION OF GASES BY PARTIAL CONDENSATION
Warren J. Fuchs, Edward S. Roberts, and Robert D. Rayfiel, New York, N. Y., assignors to Chemical Construction Corporation, New York, N. Y., a corporation of Delaware
Application August 6, 1954, Serial No. 448,318
15 Claims. (Cl. 62—13)

1. In a method for treating a gaseous mixture whose components differ in boiling points which comprises: passing a compressed gaseous stream of said mixture, the components of which differ in boiling points, in one direction of flow through a reversing heat-exchange zone along a pre-cooled path, said zone containing at least three paths; progressively decreasing the temperature in said zone from end to end to effect cooling of the stream and the resultant precipitation of a component of higher boiling point in the colder portion of said path, passing a second gaseous stream, free of the last mentioned component at a lower pressure and at a lower temperature than said first mentioned colder portion through a second path in the opposite direction of flow disposed in heat exchange relationship with first mentioned gaseous stream;



periodically reversing the flow of said streams; passing a third compressed pre-cooled gaseous stream of low boiling components in a third non-reversing path into a colder portion of said path at the same temperature as said second mentioned gaseous stream; the improvement which comprises the steps of: diverting a minor portion of said third gaseous stream at an intermediate temperature point in said third path; expanding and cooling said stream, and introducing said expanded and cooled stream into the gases returning to the cold end of the reversing heat exchange zone exclusive of those gases flowing to said third non-reversing path.

2,866,322
REFRIGERATOR AND ICE MAKER
Glenn Muffly, Springfield, Ohio
Application July 28, 1954, Serial No. 444,422
9 Claims. (Cl. 62—137)



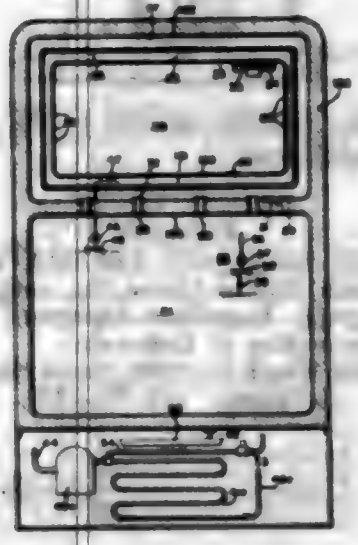
1. In an ice maker, a vertical passage bounded by surfaces of a plastic material of low thermal conductivity with isolated opposed refrigerated spots formed of metal flush therewith, and means for circulating water through said passage while the isolated spots are refrigerated, whereby separate solid masses of ice are formed within the passage, said surfaces and spots being so relatively

supporting means for said yarn engaging members with certain of the latter mounted for substantially free move-

into the space between the tubular member and heat exchanger and for confining the sample in said space

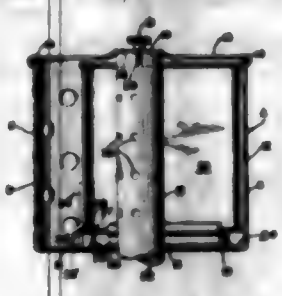
arranged that as said masses of ice approach their maximum growth the circulated water contacts only ice and said plastic surfaces, whereby opposed solid masses of ice are joined to produce larger masses with one or more external grooves through which water flows in contact with said ice and with said low conductivity material.

2,866,323
FORCED AIR COOLED REFRIGERATOR
Robert R. Candor, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 27, 1955, Serial No. 555,334
9 Claims. (Cl. 62—187)



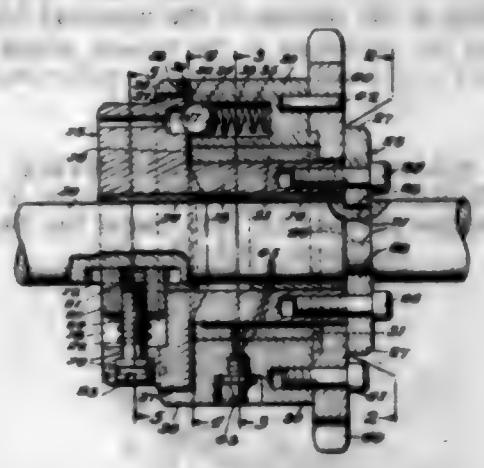
1. In combination; a refrigerator having first means forming a first compartment to be maintained at a temperature below 32° F. and second means forming a second compartment to be maintained at a refrigerating temperature above 32° F.; said first means including a first casing surrounding a major portion of said first compartment and having an air inlet into and an air outlet from said first compartment; said second means including a second casing surrounding said first casing and forming first circuitous air passageways around said first casing and between said first and second casings connected to said air inlet and air outlet; a liner surrounding said second casing and forming second circuitous air passageways around said second casing and between said second casing and said liner and having an inlet from an air outlet into said second compartment; and refrigerant evaporator means to be maintained below 32° F. in thermal exchange with said second casing.

2,866,324
COOLING UNIT
John T. Bruno, Levittown, Pa.
Application August 17, 1956, Serial No. 604,709
7 Claims. (Cl. 62—406)



1. A room cooling unit for attachement to an air supply outlet comprising a housing having an opening through the base thereof and a plurality of apertures through its sidewalls, a tubular rod extending upwardly through said opening into said housing, means on the lower end of said rod for connecting said rod to said air supply outlet, a plurality of containers located within said housing and arranged about said tubular rod in a manner so as to expose the greatest surface area to said rod, said rod provided with a plurality of perforations which permit passage of air from said outlet to the surface of the containers and then out through the apertures in said side walls.

2,866,325
OVERLOAD RELEASE CLUTCH
Edward W. Wagner, Maywood, and Charles W. Stetter, Paterson, N. J., assignors to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application January 2, 1957, Serial No. 632,114
3 Claims. (Cl. 64—29)



1. An overload release clutch comprising a cylindrical hub sleeve to be connected with a drive shaft for rotation with the same, one end of said hub sleeve being provided with an enlarged head concentric with said sleeve, said head having an annular inner end surface and at least one socket which opens through this end surface, an outer cylindrical load-driving sleeve rotatably surrounding said hub sleeve and having an anunlar inner end surface closely related with said annular inner end surface of said head, said outer sleeve having at least one elongated socket which opens through its annular inner end surface in alignment with the aforesaid socket of said head, a driving element mounted in said elongated socket, a spring also mounted in this socket and holding said driving element yieldably seated in the socket of said head, a sprocket concentric with said sleeves and secured against the end surface of said outer sleeve remote from said head, a thrust plate lying against the outer side of said sprocket and holding the latter and said outer sleeve against sliding under the influence of the aforesaid spring, means securing said thrust plate to the contiguous end of said hub sleeve, and releasable means in the aforesaid head for connecting said hub sleeve with the drive shaft, said thrust plate being of annular form and projecting inwardly beyond said hub sleeve to engage the drive shaft and hold said hub sleeve against endwise shifting on the shaft.

2,866,326
TENSION DEVICE
Tasker Lee Capes, Moreland, Ga.
Application September 3, 1957, Serial No. 681,816
8 Claims. (Cl. 66—146)

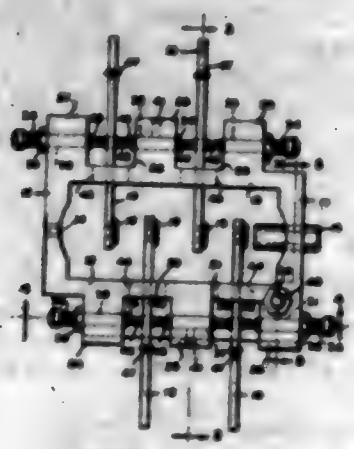
7. A tensioning device designed for maintaining uniform tension on yarn comprising spaced yarn engaging members, additional yarn engaging members pivotally interposed between said spaced yarn engaging members,

be filled with the gas to be tested and the other with give to variations in exhaust-nozzle inlet pressure and to a comparison gas, each of said chambers containing a another variable condition; a second signal-producing

the components of which differ in boiling points, in one

the passage, said surfaces and spots being so relatively

supporting means for said yarn engaging members with certain of the latter mounted for substantially free move-



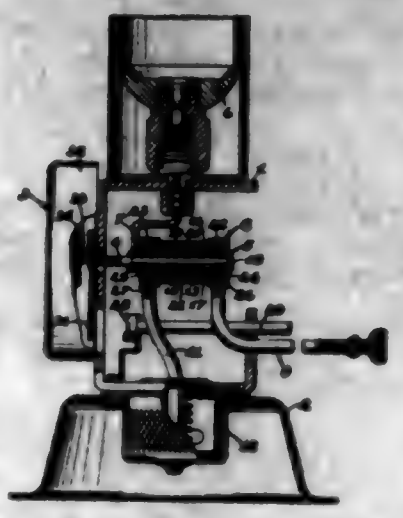
ment subject to the tension of the yarn and balanced to compensate for variations in the tension of the yarn.

2,866,327
MASONRY FINISHING DEVICE
William H. Holmes, Fayetteville, N. Y.
Application October 31, 1955, Serial No. 543,844
2 Claims. (Cl. 72—128)

1. A portable, manually operable masonry finishing device comprising a substantially flat, elongated support member, a plurality of pairs of oppositely disposed brackets depending from the under side of said support member, and a plurality of elongated vibration producing elements, each of said vibration producing elements including an elongated central shaft journalled at its ends in one of said pairs of brackets and an elongated, semi-resilient roller fixed to the shaft, said rollers being independently rotatable relative to said support member and to one another, each of said rollers having a plurality of longitudinally extending flat sides of uniform width, said brackets being arranged so that the axes of said central shafts are coplanar in a plane parallel to the main plane of said support member, said shaft axes also being parallel to one another and to the longitudinal axis of said member.

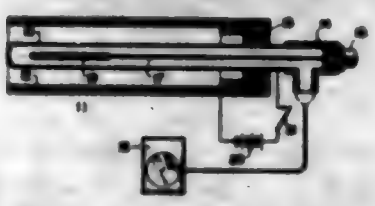
2,866,328
FREEZEMETER
John W. Dickey, Newfield, and E. Elliott Hood, Elmira, N. Y., assignors to Bendix Aviation Corporation, Elmira Heights, N. Y., a corporation of Delaware
Application July 8, 1953, Serial No. 366,674
3 Claims. (Cl. 73—17)

1. In a device for determining the freezing point of a low-freezing liquid, a hollow cylindrical heat exchanger, a thermometer having its heat sensitive element within the heat exchanger, means for chilling the heat exchanger, and a tubular sample-holding and agitating member journalled on the heat exchanger; in which the tubular member surrounding the heat exchanger is in the form of a double-walled transparent tube, and including further means for conducting a sample of liquid into the space between the tubular member and heat exchanger and for confining the sample in said space



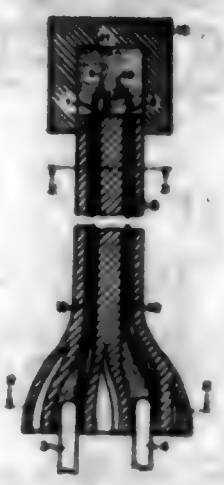
while permitting relative rotation of the tubular member and heat exchanger.

2,866,329
GAS ANALYSIS APPARATUS
Henry L. Hanson, Willow Grove, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application March 22, 1955, Serial No. 495,980
3 Claims. (Cl. 73—23)



1. Apparatus for analyzing a gas comprising an enclosed chamber having as one wall thereof a gaseous permeable member, a pair of radioactive sources positioned so that radiation particles from one source will strike said member on one side and the radioactive particles from the other source will strike the other side of said member, and pressure measuring means connected to said chamber.

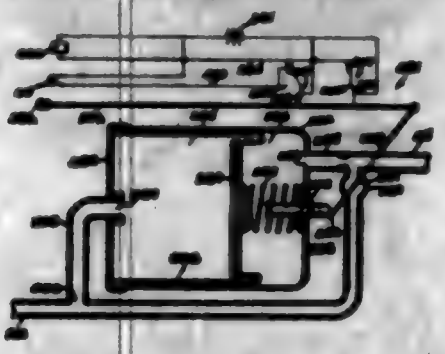
2,866,330
INSTRUMENT FOR GAS ANALYSIS WITH HEATED WIRE SYSTEM
Günter Axt, Frankfurt am Main, and Friedrich Lotz, Frankfurt am Main-Nied, Germany, assignors to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Application July 2, 1953, Serial No. 365,678
Claims priority, application Germany July 18, 1952
15 Claims. (Cl. 73—27)



1. Instrument for gas analysis comprising structure forming two chambers, one of which being adapted to

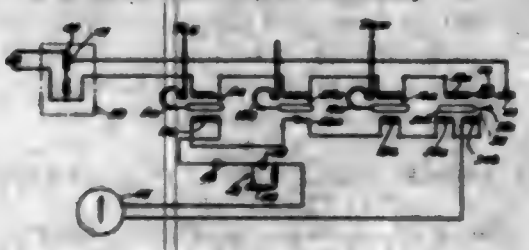
be filled with the gas to be tested and the other with a comparison gas, each of said chambers containing a heating body normally surrounded by the respective gas, each heating body containing two heating wires electrically insulated from one another, the resistance of which varies with their temperature, the heating body being of gas impervious insulating material and surrounding at least the major length of each wire, a Wheatstone bridge, all four heating wires connected into the Wheatstone bridge, those heating wires combined into a common chamber lying in opposite legs of the bridge, a current source for the bridge, and means for measuring the current in the diagonal of the bridge, said two heating wires in a common chamber being twisted and surrounded by a common protective sleeve.

2,866,331
FLOW MEASURING AND SIGNALLING MECHANISM
John S. Michie, Columbus, Ind.
Application January 14, 1955, Serial No. 481,865
10 Claims. (Cl. 73—113)



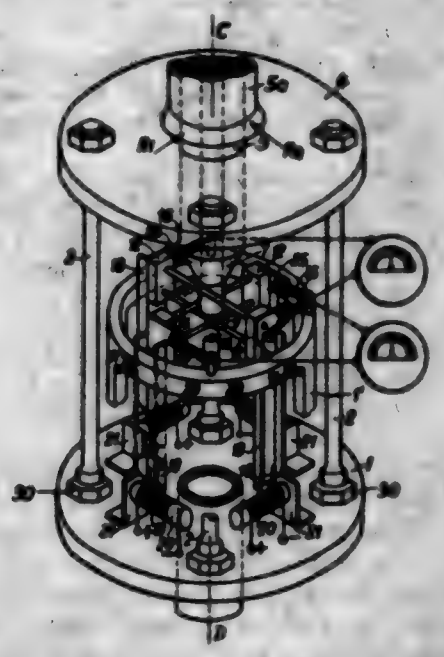
1. A flow metering device comprising a housing, a flexible wall and an axially-movable wall in said housing cooperating to divide the interior of said housing into a first chamber and a second chamber, said chambers being inversely variable in volume as said movable wall moves, a fluid conduit having an inlet end adapted to be connected to a source of fluid and having an outlet end adapted to be connected to a point of use of fluid, said conduit having a valve therein, means providing communication between said first chamber and said conduit at a point between said conduit inlet end and said valve, means providing communication between said second chamber and said conduit at a point between said valve and said conduit outlet end, means for shifting said valve to conduit-closing position, means actuated by movement of said movable wall under the influence of fluid entering said first chamber, to return said valve to conduit-open position, and means actuated by such return to indicate completion of such movement of said wall.

2,866,332
COMPENSATION MEANS FOR MEASURING DEVICES
Samuel M. Sherman, Philadelphia, Pa., assignor to Schnevitz Engineering, Pennsauken, N. J., a corporation of New Jersey
Application March 10, 1954, Serial No. 415,381
22 Claims. (Cl. 73—116)



2. A thrust computer for a reaction motor, comprising a first signal-producing pressure sensitive device responsive to variations in exhaust-nozzle inlet pressure and to another variable condition; a second signal-producing pressure sensitive device responsive to variations in ambient atmospheric pressure and to said other variable condition; a third signal-producing device identical with said first and second devices in its response to said other variable condition; means for adjusting the magnitudes of the signals produced by said first and second devices in proportion to respective combining weights having a ratio to one another of 1 to —C, where C is a constant, and for adjusting the magnitude of the signal produced by said third device in proportion to a combining weight equal to the negative of the sum of the respective combining weights by which the signals produced by said first and second devices are adjusted, and means for additively combining said three adjusted signals.

2,866,333
PLURAL AXIS DYNAMOMETER
Hans Jurgen Dudenhausen, Stuttgart, Germany, assignor to Intavor, Inc., New York, N. Y., a corporation of New York
Application April 4, 1956, Serial No. 576,198
6 Claims. (Cl. 73—141)



1. A dynamometer comprising a base frame, a plurality of springs, a stress-receiving member secured by said springs to said frame, two rods journaled in said frame for rotation about perpendicular axes each parallel to and laterally displaced from the one of said rods journaled for rotation thereabout, separate means coupling said rods with said member for motions of said member perpendicular to the length of said rods respectively, potentiometer windings arranged in said frame transversely of said axes, and a slide contact coupled to each of said rods for engagement one with each of said windings.

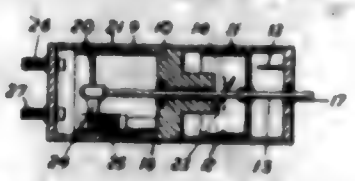
2,866,334
APPARATUS FOR TESTING DOUGHS
István Tamás Rada and Jenő Ferenczy, Budapest, Hungary, assignors to Licencia Találmányokat Értékesítő Vállalat, Budapest, Hungary
Application January 27, 1955, Serial No. 484,526
Claims priority, application Hungary January 11, 1954
7 Claims. (Cl. 73—169)

1. Apparatus for serially testing materials which may be rendered jelly-like by kneading comprising a conveyor having means for receiving and retaining sample holding receptacles; said receptacles including a cup member enclosing a kneading chamber, a closure disc having a centrally disposed opening and rotatable with respect to said cup, a plate normally arranged at the bottom of the

kneading chamber and having a stem projecting upwardly through the opening in said closure disc; a kneading station disposed along the path of the conveyor including a vertically disposed rotatable shaft mounted for axial movement toward the conveyor; a kneading head carried by said shaft including a plurality of pins adapted

to enter the cup member for kneading the contents thereof; and a test station disposed along the conveyor in spaced relation to the kneading station, said test station including a pull member engageable with the aforesaid stem and a force measuring means for measuring the force necessary to pull said plate through the opening in the closure disc.

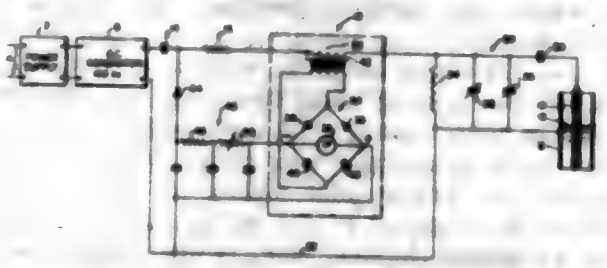
2,866,335
FLUID INCIDENCE DETECTOR
Peter Sidney Saunders, Hillington, Glasgow, Scotland, assignor to Kelvin & Hughes Limited, Glasgow, Scotland
Application May 24, 1955, Serial No. 510,651
Claims priority, application Great Britain May 25, 1954
11 Claims. (Cl. 73—188)



1. In combination in a device for detecting the incidence of a fluid stream, comprising a cylinder having in its surface a hole and a slot, said slot being positioned at an angle with respect to the axis of said cylinder, a piston mounted for axial movement within said cylinder, said piston having a skirted portion with a slot therein positioned to intersect said first slot at an angle, a passage formed by the relatively movable walls of both said slots, said passage being movable around the circumference of said cylinder as said piston moves axially within said cylinder, said passage and said hole being displaced from each other circumferentially around said cylinder sufficiently to remain on opposite sides of the axis of incident fluid flow during normal operation of the device, said piston having a wall positioned normally between said hole and said passage whereby a pressure differential may be applied to said piston wall caused by a fluid stream incident upon said cylinder, said piston being movable in response to said pressure differential to produce circumferential movement of said passage around said cylinder to a position in which the said pressure differential is substantially equalized by a balance of pressure on opposite sides of said piston wall and means to indicate movement of said piston.

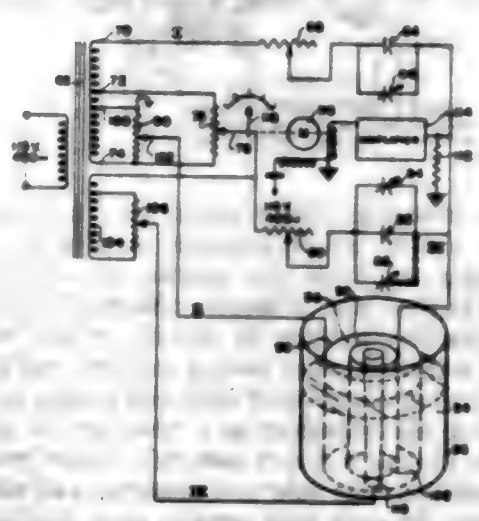
2,866,336
LIQUID LEVEL GAGE
Gerald I. Hitchcox, Cambridge, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Application July 6, 1953, Serial No. 366,274
3 Claims. (Cl. 73—304)

1. A liquid-level measuring system comprising a source of alternating voltage, a variable-impedance detecting unit in which the impedance depends on the liquid level, a circuit including said detecting unit and a manually-variable impedance, means for establishing a condition of parallel resonance for said circuit, a measuring unit including a transformer having its primary connected



in series with the parallel circuit, a meter and doubling circuit connected to the secondary of the transformer, and compensating means energized by said source and connected with the meter for applying a compensating current to the meter.

2,866,337
COMPENSATED LIQUID QUANTITY MEASURING APPARATUS
Milton J. Minneman, Kew Garden Hills, and Paul Marcus, Hollswood, N. Y., assignors to Avien, Inc., Woodside, N. Y.
Application August 31, 1954, Serial No. 453,396
7 Claims. (Cl. 73—304)



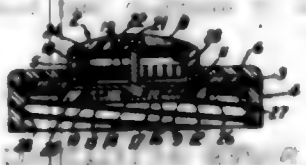
1. Measuring apparatus comprising, a first circuit including a fixed voltage source and a fixed capacitor; a second circuit including a second voltage source substantially 180° out of phase with said first voltage source and a variable capacitor unit adapted to be inserted into a liquid being measured so that the capacitance of the unit varies with the level of said liquid; a third circuit including a third source of variable voltage out of phase with said first voltage source, and a reference capacitor; a fourth circuit including a voltage source substantially in phase with said first voltage source and arranged to vary inversely with variation of said third voltage source, and a compensating capacitor having a dielectric constant substantially the same as the dielectric constant of the liquid under measurement; an amplifier common to said four circuits and connected to receive the outputs, respectively, thereof; means operable under the control of said amplifier for varying said third voltage source in a direction to reduce the voltage impressed on said amplifier until said amplifier is ineffective to cause operation of said means; and an indicator under control of said means.

2,866,338
TEMPERATURE-INDICATING DEVICE AND CLOSURE CAP
Hrand M. Muncheryan, Duarte, Calif.
Application August 31, 1953, Serial No. 377,618
26 Claims. (Cl. 73—343)

1. A temperature-indicating device and closure cap, comprising an annulus adapted to be secured on a nurs-

chain and being separated by equal distances, the last a cam follower in said housing, means for resiliently ur-

ing milk bottle and having an internal flange providing a centrally located aperture, a cap member having a dome with a magnifying window therein, the end opposite said dome being closed by a cover plate hermetically sealed thereon, forming a chamber therein, a pin axially extending between said cover plate and said dome, a thermostatic element spirally disposed around said pin and having one end secured to said pin and its other end to an indicating dial transversely disposed in said



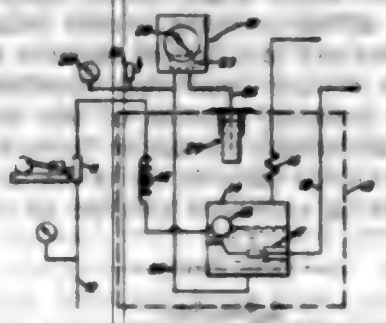
chamber between said window and said thermostatic element, said indicating dial having a plurality of colored areas consecutively arranged thereon and being rotative, by means of said thermostatic element, around said pin and relative to said window, and a circular flanged receptacle detachably secured to said cap at said cover plate; said cap member with said flanged receptacle being accommodated in said annulus and protruding through said aperture.

2,866,339

THERMALLY COMPENSATING VAPOR PRESSURE MEASUREMENT SYSTEM

Joseph C. Rhodes, Park Forest, Robert B. Jacobs, Homewood, and John P. Segers, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application September 30, 1954, Serial No. 459,421
5 Claims. (Cl. 73—407)



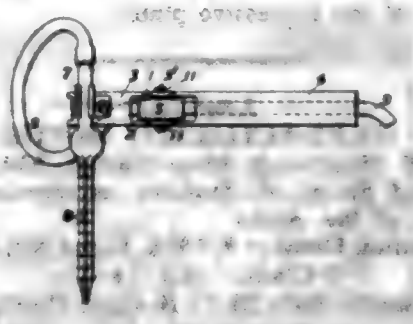
2. A thermally compensated vapor pressure measurement system which includes a differential pressure recorder means, vapor pressure measuring chamber means, said chamber means being adapted to confine a continually changing, constant volume of test fluid, a pressure connection between said chamber means and one side of said recorder means, and a constant temperature bath means in which said chamber means is immersed, said differential pressure recorder means being adapted to measure the absolute pressure in a range remote from zero in said vapor pressure measuring chamber means, a thin-walled elongated reference chamber, said reference chamber containing a fluid having a vapor pressure such that the vapor pressure-temperature curve corresponds approximately to the vapor pressure-temperature curve of said test fluid, an evacuating and filling line communicating with the lower end of said reference chamber, a flanged sleeve means surrounding only an upper portion of said reference chamber and supporting said reference chamber vertically end-wise within said constant temperature bath means, and a conduit means extending within said reference chamber approximately to the mid-point of the length of said reference chamber and extending axially thereof and of said sleeve into communication with the other side of such differential pressure recorder means.

2,866,340

DEVICE FOR TAKING SAMPLES OF LIQUID FOR TESTING

Moshe Goldberg, Tel-Aviv, Israel

Application February 2, 1956, Serial No. 563,121
Claims priority, application Israel September 6, 1955
1 Claim. (Cl. 73—425.6)



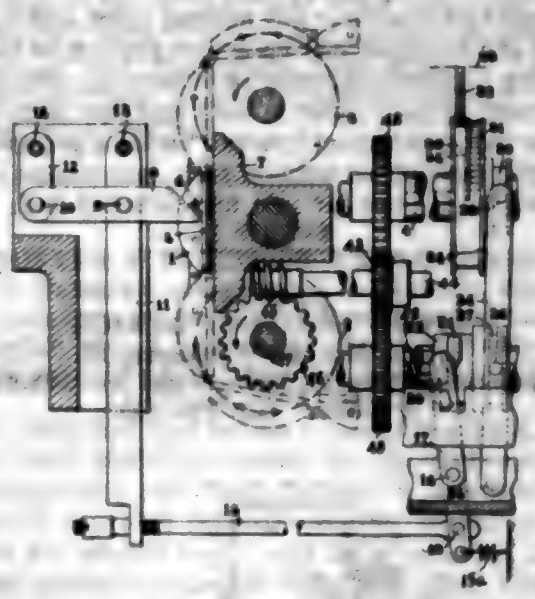
In a device for taking samples of blood and other fluids in small quantities, an elongated hollow handle open at both ends, the top wall of said handle having an opening therein, an upper roller journalled between opposite walls of said handle and projecting through said top wall opening, a lower roller having its axis parallel with the upper roller mounted in said handle for vertical adjustment toward and away from said first roller, resilient means secured to said rollers for urging one toward the other, a compressible tube inserted between said rollers and projecting from both ends of said handle, said projecting roller adapted to be turned by hand to exert pressure on said tube, a pipette secured to one end of said tube, means being provided on said handle to clamp and hold the pipette, and means on said handle for urging the lower roller away from the upper roller to release the pressure of the roller and quickly draining the pipette.

2,866,341

AUTOMATIC, SELECTIVE AND CYCLICAL CONTROL DEVICE

Gilbert de Changy, Clamart, France, assignor to Electricite de France-Service National-Direction des Etudes et Recherches, Paris, France

Application December 28, 1955, Serial No. 555,974
Claims priority, application France December 31, 1954
1 Claim. (Cl. 74—1)



An automatic, selective and cyclical control device, comprising a power shaft, an endless chain driven in synchronism with said power shaft and made of hingedly interconnected, link-forming plates, tappets carried by said plates and selectively disposed along lines and columns on said plates, the lines of each plate extending at right angles to the direction of movement of said

2,866,346

PLURAL-SPEED PHONOGRAPH TURNTABLE

2,866,347

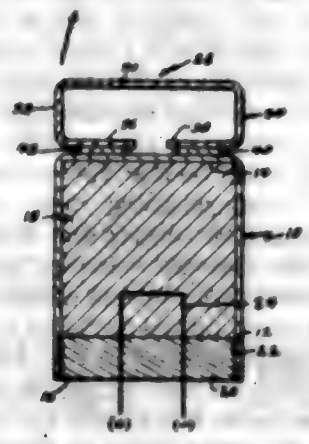
PRESELECT MECHANISM

tecting unit in which the impedance depends on the liquid

1. A temperature-indicating device and closure cap, comprising an annulus adapted to be secured on a nurs-

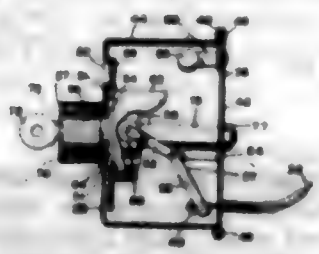
chain and being separated by equal distances, the last line of each plate being separated by the same distance from the first line of the adjacent plate, said columns being parallel to said chain, and a series of levers, said levers registering with said columns and being adapted to be selectively and separately shifted to their operative positions by the different tappets disposed on the registering column of the successive plates.

2,866,342
HEAT-ACTUATED MOTOR
John Gerald Moorhead, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army
Application October 9, 1956, Serial No. 614,997
1 Claim. (Cl. 74—2)
(Granted under Title 35, U. S. Code (1952), sec. 266)



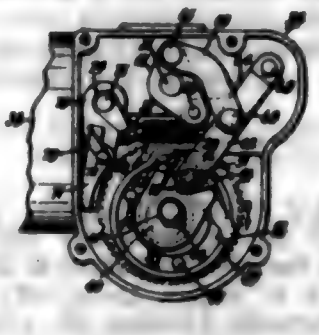
A device for producing a predetermined mechanical displacement in response to an electrical signal, said device comprising in combination: a cylindrical casing enclosing a heat squib, said casing having a first closed end and a second closed end; an electric filament disposed within said casing and connected to an electric power source, said filament being hermetically mounted by said first closed end; a biased spring having a first inturned end and a second inturned end; said first inturned end being substantially permanently mounted on said second closed end by means of a relatively high melting point solder; said second inturned end being biased and soldered to said second closed end by a relatively low melting point solder; so constructed and arranged that upon energization of said squib by passing a current through said filament, sufficient heat is generated by said squib to melt said low melting point solder so that said second inturned end is urged away from said casing through an arcuate path, said second inturned end acting as a pivot for said first inturned end.

2,866,343
SPEED LIMITING DEVICE
Joseph Kovacs, Waukegan, Ill.
Application May 17, 1955, Serial No. 508,846
1 Claim. (Cl. 74—54)



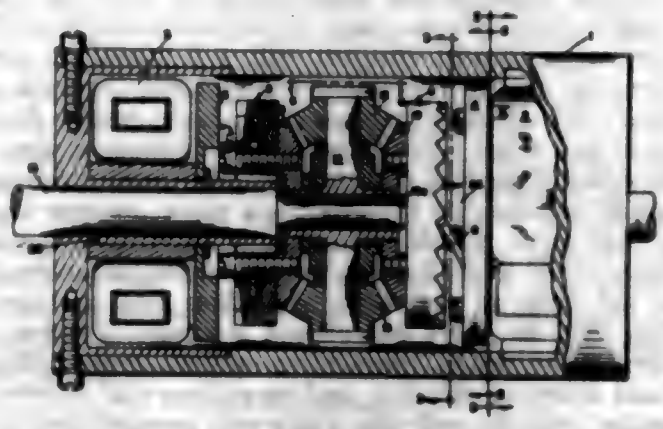
An indicator control means comprising a housing, a cam barrel within said housing and extending from one wall thereof, a cam face on the free end of said barrel, a cam follower in said housing, means for resiliently urging said cam face and said cam follower toward one another, a dial having indicating indicia thereon rotatable in said housing with said cam barrel, the cam surfaces of said barrel being coordinated with said indicia, a window in said housing through which a portion of said dial can be viewed, means outside said housing for rotatably adjusting said cam barrel to a selected position whereby said cam follower is actuated to a position determined by the particular area of the cam on which said follower rests, and means to maintain said cam barrel in said selected position.

2,866,344
WINDSHIELD WIPER ACTUATING MECHANISM
Elmer E. Reese, Rochester, N. Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 8, 1955, Serial No. 551,900
19 Claims. (Cl. 74—70)



1. Windshield wiper actuating mechanism including, a rotatable driving member, a wiper actuating driven member, variable throw crank means operatively connected to said driven member, means interconnecting said crank means and said driving member to establish an interruptible driving connection therebetween, and means whereby arresting rotation of said crank means by interrupting the driving connection between said crank means and said driving member varies the throw of said crank means during continued rotation of said driving member.

2,866,345
STEP MOTOR
Leroy R. Woods, Whittier, Calif., assignor to North American Aviation, Inc.
Application December 27, 1955, Serial No. 555,613
13 Claims. (Cl. 74—111)



1. In a step motor, solenoid means, armature means actuated by said solenoid means, at least two ratchet means connected to be driven by said armature means, a differential gear comprising a first and second input gear and an output gear, each of said ratchet means connected to control a respective input gear.

means.

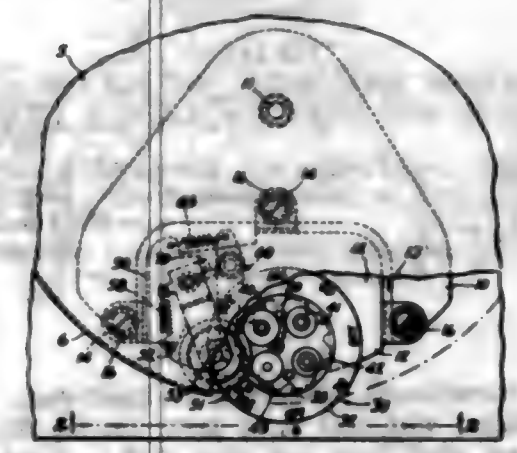
at right angles to the direction of movement of said

2,866,346

PLURAL-SPEED PHONOGRAPH TURNTABLE DRIVE MECHANISMS

Herbert L. Hartmann, Elyria, Ohio, assignor to The General Industries Company, Elyria, Ohio, a corporation of Ohio

Application February 21, 1957, Serial No. 641,642
6 Claims. (Cl. 74—198)



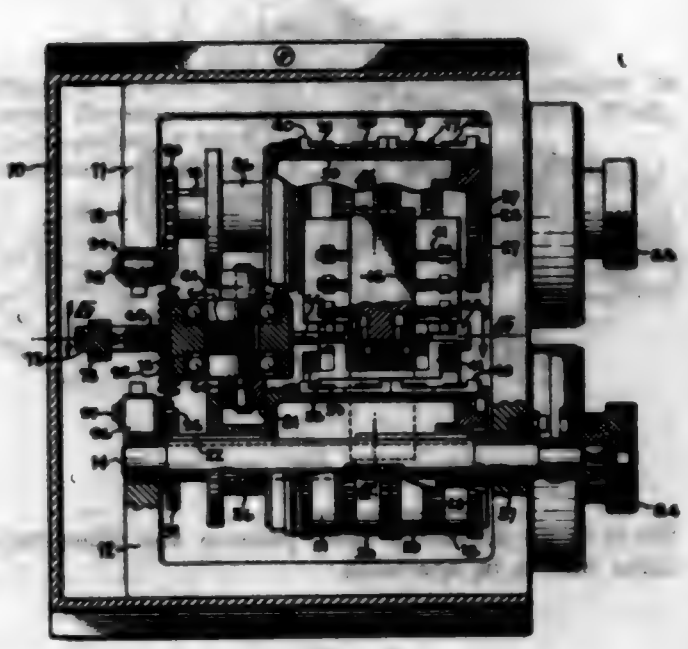
1. A multiple speed phonograph turntable driving mechanism adapted to rotate a turntable having a circumferentially continuous dependent flange and including a mounting plate and means for rotatably mounting said turntable upon said mounting plate, a motor pendently supported beneath said mounting plate and having a rotor shaft projecting vertically upwardly above the uppermost surface of said mounting plate, said driving mechanism comprising a circumferentially continuous turret plate, said turret plate having a circular journal portion journaled within an oblong aperture in said mounting plate and being capable of lateral displacement in one direction, said turret plate being centrally apertured, said rotor shaft projecting vertically upwardly through said aperture in said turret plate, said turret plate being axially eccentrically mounted relative to said rotor shaft, said rotor shaft having large and small, diametrically stepped, superposed rotor driving portions at the uppermost end of said rotor shaft, a plurality of intermediate drive pulleys rotatably mounted upon said turret plate, said drive pulleys being radially concentrically positioned and circumferentially evenly spaced upon said turret plate, said drive pulleys having driven pulley portions and driving pulley portions thereon, at least one of said driven pulley portions being capable of frictional engagement with said large rotor driving portion when said turret plate is rotated to one driving position, said drive pulleys having driving pulley portions concentric with and positioned above said driven pulley portions, said turret plate having a circular index portion, said index portion having notches in the outer periphery thereof above the upper surface of said mounting plate, a detent lever pivotally mounted upon the upper surface of said mounting plate, spring means resiliently biasing said detent lever into engagement with said notches whereby said turret plate and one of said drive pulleys are retained in one of said driving positions or an intermediate non-driving position between two adjacent driving positions, said detent lever laterally resiliently biasing each of said drive pulleys of said turret plate into engagement with said rotor shaft when each of said drive pulleys is in a driving position, an idler pulley rotatably mounted upon a support bracket, said support bracket pivotally mounted relative to said mounting plate, spring means biasing said idler pulley into simultaneous frictional engagement with said flange of said turntable and a driving pulley portion of one of said drive pulleys when one of said drive pulleys is in a driving position, and means projecting radially outwardly beyond said turntable whereby said turret plate is manually adjustable.

2,866,347

PRESELECT MECHANISM

Miles Weldle, Cincinnati, Ohio, assignor to The Carlton Machine Tool Company, Cincinnati, Ohio, a corporation of Ohio

Application May 7, 1956, Serial No. 583,012
14 Claims. (Cl. 74—335)



1. In a machine tool having a movable tool-carrying part, a transmission for moving said tool-carrying part at different rates including input and output shafts and shiftable elements providing selected speeds and feeds to said tool-carrying part, power operated means for effecting shifitng of said shiftable elements, settable selector means adapted to selectively shift said shiftable elements comprising the combination of, a shaft, a drum rotatable upon said shaft, a plurality of inserts secured upon said drum, projections from said inserts in predetermined spaced relationship, a valve block, a plurality of valves in said valve block shifting devices cooperating with said valves, projections from said valve shifting devices adapted to cooperate with the projections from said drum, each of said valves in said valve block being provided with a pair of ports, one of said ports admitting fluid pressure into its respective valve when the shifting device for said valve is in selected position at which time the other of said ports emits fluid pressure from said valve to selectively position shiftable elements on said input and output shafts.

2,866,348

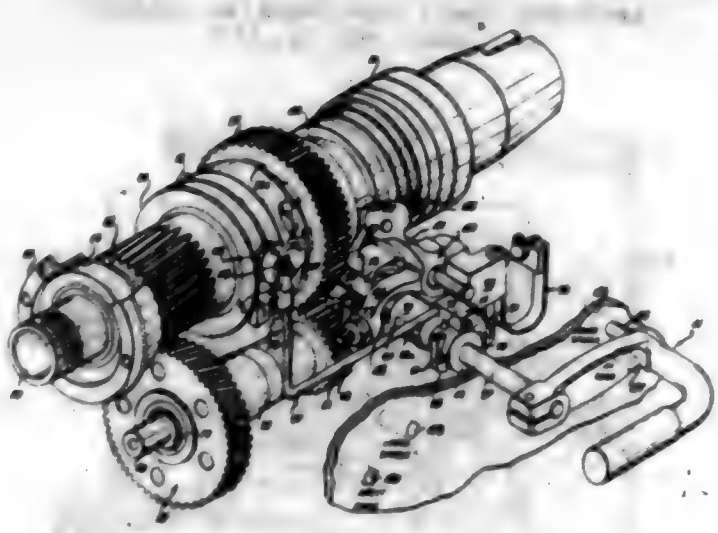
SHIFTER FOR POWER TRANSMISSION

David D. Fettigew and Edward C. Warrick, Pittsburgh, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 28, 1956, Serial No. 631,285
12 Claims. (Cl. 74—339)

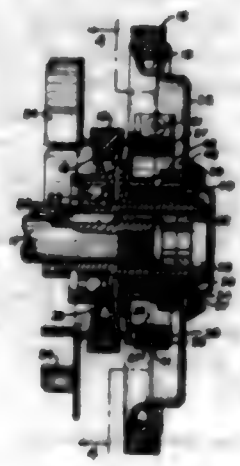
1. In a machine tool having a rotatable spindle, a drive member, gear and clutch means for drivingly connecting and disconnecting said drive member to said spindle, and a manually movable control assembly including a shaft mounted for limited rotary and axially inward and outward movement associated with said gear and clutch means for selecting a desired spindle condition; a locking assembly to prevent operation of said control assembly when said drive member is in motion comprising a locking cam means on said shaft, locking means movable to a position to restrict movement of said locking cam means, trip means associated with said locking means and a rotatable member of the machine tool which rotates when said machine tool is in operation, said trip means

being operable to move said locking means to locking position when the shaft of said manually movable assem-



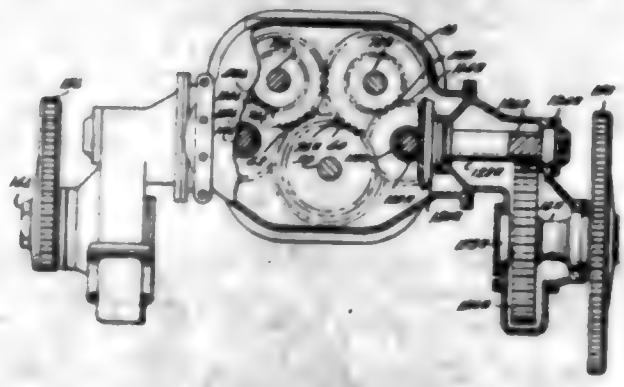
bly is in an outwardly axial position and when the machine tool is in operation.

2,866,349
VARIABLE SPEED DRIVES FOR AUTOMOTIVE GENERATORS
John E. Hechethorn, Denver, Colo., assignor to Hechethorn Manufacturing & Supply Co., Littleton, Colo., a corporation of Colorado
Application May 27, 1957, Serial No. 661,953
4 Claims. (Cl. 74—336)



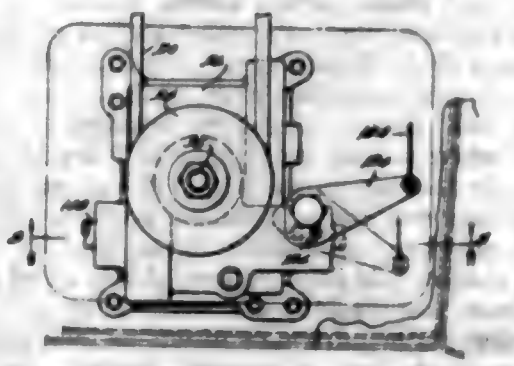
1. Means for driving a driven shaft from a drive shaft through either of two speed ratios; comprising two transmission means, each transmission means including a drive pulley, a driven sheave, and a transmission belt transmitting power from said pulley to said sheave, a tubular hub fixed to said driven shaft, an annular clutch housing fixed to one of said sheaves, a clutch drum disposed within said clutch housing and being fixed to said tubular hub, clutch means disposed within said clutch housing and being operative upon said clutch drum within a predetermined speed range of said one of said sheaves, an annular clutch flange fixed to the other of said sheaves, a second annular clutch flange fixed to said clutch drum, a clutch spring disposed between said flanges and said tubular hub and having one end thereof connected to the other of said sheaves, said clutch spring being operative upon disconnection of said clutch means, whereby said driven shaft is driven by said drum shaft through either of two speed ratios.

2,866,350
TRANSMISSION
Chris Gerst, Detroit, Mich., assignor to The Transmission & Gear Company, Dearborn, Mich., a corporation of Michigan
Application February 13, 1956, Serial No. 565,148
10 Claims. (Cl. 74—360)



1. A transmission comprising an input shaft, a clutch shaft aligned with said input shaft, gearing for driving said clutch shaft from said input shaft, a forward drive gear and a reverse drive gear rotatable on said clutch shaft, a forward drive clutch on said clutch shaft and adapted when engaged to couple said forward drive gear to said clutch shaft, a reverse drive clutch on said clutch shaft and adapted when engaged to couple said reverse drive gear to said clutch shaft, a pair of countershafts disposed parallel to said clutch shaft and each having a driven gear secured thereon, one of said driven gears being meshed with said forward drive gear and the other driven gear being meshed with said reverse drive gear, said driven gears being meshed with each other, a high speed gear and a low speed gear rotatable on each of said countershafts, a high speed clutch associated with each high speed gear and its countershaft and adapted when engaged to provide a driving connection therebetween, a low speed clutch associated with each low speed gear and its countershaft and adapted when engaged to provide a driving connection therebetween, a pair of output shafts, and gearing drivingly connecting each output shaft with the high and low speed gears on one of said countershafts.

2,866,351
VARIABLE SPEED ROTARY MOWERS
William C. Wehner, Grosse Pointe, Mich., assignor, by mesne assignments, to Meto-Mower, Inc., a corporation of Delaware
Original application April 4, 1955, Serial No. 498,997. Divided and this application April 12, 1957, Serial No. 652,484
1 Claim. (Cl. 74—378)



A compact change-speed power transmission for lawn mowers and the like comprising in combination, a casing, a removable bottom cover for said casing having an internal upwardly presenting boss integrally formed therewith, an output shaft journaled in said casing and extending horizontally thereof, a countershaft journaled in said casing parallel to said output shaft, spaced sets of intermeshing gears carried by said shafts, a worm wheel

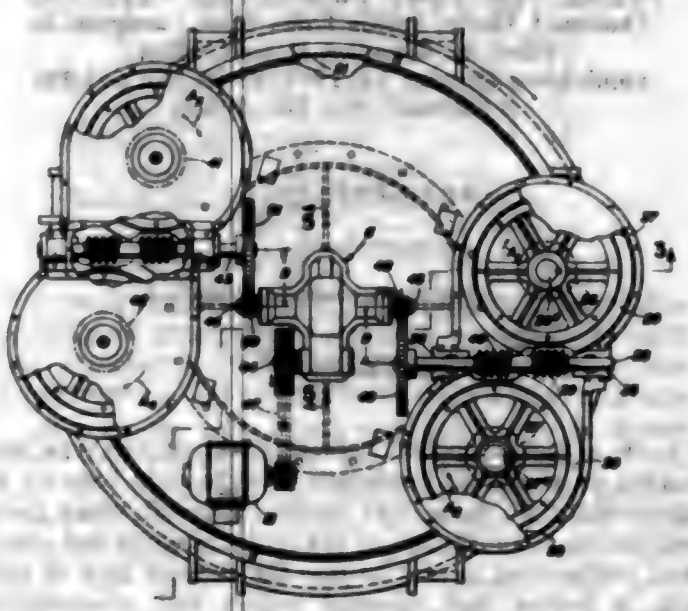
carried by said output shaft between said sets of intermeshing gears, an input shaft disposed vertically between the aforesaid shafts with its lower end journaled in said boss, a worm carried on said input shaft and intermeshed with said worm wheel, a bearing mounted in the top wall of said casing for journaling said input shaft intermediate its ends, said input shaft extending upwardly from said casing for connection to a power source.

2,866,352

DRIVE MECHANISM FOR PIER SUPPORTED ROTARY RAKE STRUCTURE FOR SETTLING TANKS

Charles H. Scott, South Norwalk, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware

Application January 27, 1956, Serial No. 561,770
6 Claims. (Cl. 74—416)



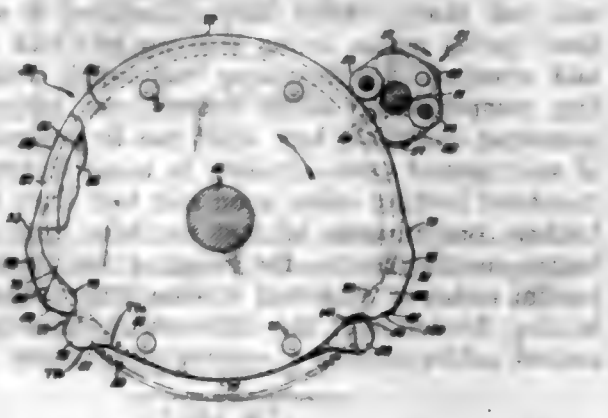
1. Drive mechanism for a rotary structure turntable about a vertical axis upon a central annular thrust bearing mounted upon a supporting frame, such as the rotary rake structure of a center pier type sedimentation tank where the rake structure has a central cage portion rotatably supported upon and surrounding the center pier and the mechanism is mounted upon said frame supported by said pier, which mechanism comprises an internally toothed bull gear provided at the top end of the cage portion for rotating the rake structure, a pair of trains of torque transmitting elements, disposed within the area substantially defined by the area of said bull gear, said trains terminating at their outer ends in drive pinions having driving engagement with said bull gear at diametrically opposed points thereof for imparting a balanced net drive torque thereto, a drive motor and primary compensatory torque distributing means associated therewith for applying interbalanced equal shares of driving torque from the motor through said respective gear trains to the bull gear, characterized thereby that each gear train comprises a pair of drive pinions horizontally spaced from one another and engaging said bull gear and the one pair of pinions is disposed diametrically opposite and symmetrical with respect to the other pair, a worm gear co-axially associated with each pinion for rotating the same, and secondary compensatory torque transmitting means in the form of thrustfree horizontal axially floating worm shaft for each pair of pinions, said shaft having a pair of worms of opposing pitch each engaging a respective worm gear, for imparting interbalanced equal shares of driving torque thereto, said worm shafts being spaced a horizontal distance apart and in parallel relationship with respect to one another and driven simultaneously from said motor through said primary compensatory torque imparting means operatively connected with the inner ends of said thrustfree worm shafts so that balanced net driving torque is imparted to the bull gear through four separate points of drive pinion engagement along the inner periphery of the gear.

2,866,353

MOTION TRANSLATING DEVICES

Walkley B. Ewing, Grand Rapids, Mich., assignor to Ewing Development Company, Grand Rapids, Mich., a corporation of Michigan

Application September 9, 1952, Serial No. 308,664
15 Claims. (Cl. 74—437)



1. In a device for converting rotary motion to intermittent rotary motion, the combination of rotatable input and output elements, means for constantly rotating said input element, intermittently cooperable means on said elements for establishing an intermittent constant driving ratio between said elements, a plurality of accelerating cams on said input element successively cooperable with said follower and effective just prior to the establishment of said constant driving ratio between said elements for gradually accelerating said output element from a stopped condition up to the constant driving ratio speed thereof, and a plurality of decelerating cams on said input element successively cooperable with said follower means and effective upon the disestablishment of the constant driving ratio between said shafts for gradually decelerating said output element from the constant driving ratio speed down to a stopped condition thereof.

2,866,354

GEARING WITH TAPERED PINION

Ernest Wildhaber, Brighton, N. Y.

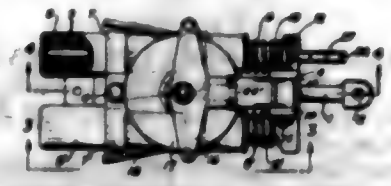
Application May 22, 1956, Serial No. 586,616
9 Claims. (Cl. 74—459.5)

1. A pair of gears having angularly disposed and offset axes, comprising a gear and a tapered pinion of smaller outside diameter than said gear, said pinion having on both sides of its teeth helical tooth surfaces of straight profile in a plane parallel to and offset from its axis, said plane being the same on both sides of said teeth, the axial pitch of said tooth surfaces being constant and different on said two sides, and said gear being conjugate to said pinion.

framework portions to rotatably support and restrain pressure to the opposite side of the piston to displace

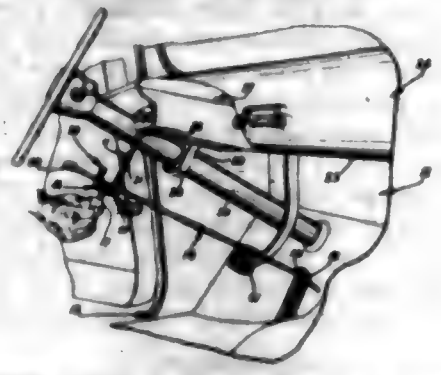
intermeshing gears carried by said shafts, a worm wheel

2,866,355
CABLE TENSION REGULATOR
Robert J. Wrighton, Tarzana, Calif., assignor to Pacific Scientific Aeroproducts, Glendale, Calif., a corporation of California
Application February 27, 1957, Serial No. 642,714
7 Claims. (Cl. 74—501.5)



1. A cable tension regulator comprising a lock shaft, a crosshead provided with a braking collar slidable along said lock shaft, control cables connected to said crosshead, spring means acting between said lock shaft and said crosshead for tensioning said cables while permitting compensating action thereof, the tilting of said crosshead upon said lock shaft due to unequal tensions in said control cables tending to cause locking of said crosshead braking collar upon said lock shaft to prevent further compensation of said regulator, said crosshead having means thereon for engaging said lock shaft at a point removed from said braking collar to prevent the locking thereof until the difference in tensions of said control cables exceeds a predetermined value.

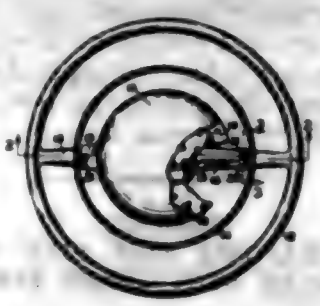
2,866,356
PEDAL DEPRESSING AND HOLDING TOOL
Jess L. Elam, Lansing, Mich., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application June 29, 1955, Serial No. 518,795
17 Claims. (Cl. 74—532)



1. A vehicle pedal depressing device comprising an arm, mounting means at one end of the arm, a foot extending from the other end of the arm, a leaf spring secured adjacent one end to said arm and including a portion extending obliquely from the arm, the degree of obliquity of said portion being variable by flexure of the spring toward and away from the arm, a rod extending slidably through aligned apertures in the arm and the spring, said aperture in the arm being sufficiently larger than the rod to permit substantially unrestricted sliding and pivotal movement of the rod with respect to the arm, said aperture in the spring being only so much larger than the rod that the spring establishes binding engagement with the rod to lock the rod against axial movement when the spring is in relaxed position outwardly of the arm, and means carried by said foot for turning the rod in pivotal movement about a transverse axis adjacent said spring.

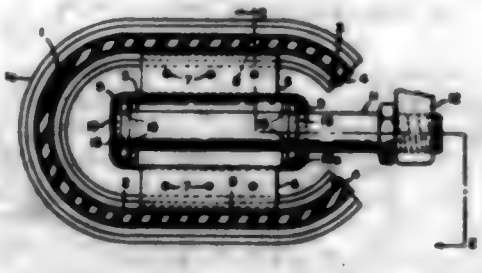
2,866,357
SAFETY GUARDS FOR STEERING WHEELS IN MOTOR VEHICLES
Amos L. Houghtaling, Cottage Grove, Oreg.
Application December 28, 1955, Serial No. 555,812
4 Claims. (Cl. 74—552)

1. A safety guard for steering wheels comprising a resilient perforate frame, a pair of generally U-shaped clips pivotally secured to said frame for attachment to spokes of varying angular relation, and a resilient molded



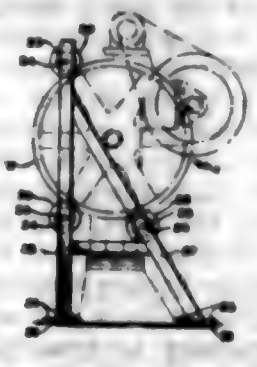
body member cast on said frame with portions thereof extending through the perforations in said frame.

2,866,358
PEDAL FOR FOOT PROPELLED VEHICLES
Thomas I. Duffy, Spring Lake, Mich., assignor to Ethel M. Benedict, Detroit, Mich.
Application January 14, 1957, Serial No. 633,981
4 Claims. (Cl. 74—594.4)



1. In a foot propelled vehicle pedal of the type employing an elongated resiliently flexible strip bent to an approximate U shape and having opposed tread faces conforming to said shape of the strip, an elongated metal band conforming to and set into the exterior face of said strip, a hollow hub disposed within and substantially coaxially with said strip, and means rigidly carried by and oppositely projecting from the hub and set into the interior face of said strip to mount the strip on the hub, the combination with said band and mounting means, of a pair of tongues respectively, projecting from the respective ends of the band and bent toward each other to attach said ends to the mounting means, the strip being compressively stressed to apply a tensional stress to the band for maintaining interengagement of said tongues and mounting means.

2,866,359
SAFETY MEANS FOR FLYWHEELS
Robert B. Hartman, Bridgeport, Conn., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Application February 3, 1958, Serial No. 712,944
7 Claims. (Cl. 74—609)



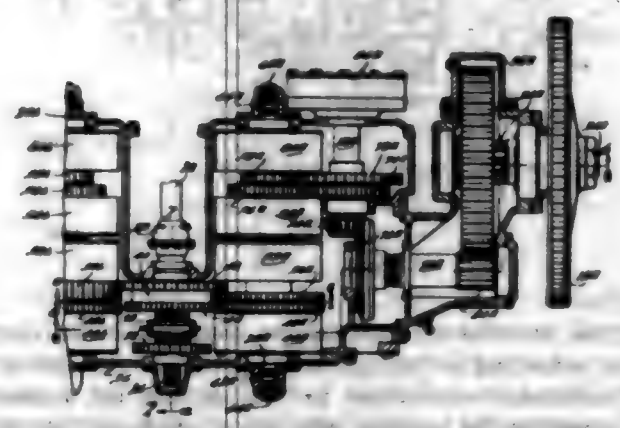
1. A safety assembly for a machine having a heavy flywheel said assembly comprising a supporting framework with portions adjacent both sides of the flywheel and a plurality of roller elements extending between said

of permanent magnets to the ratio of pole pieces on said ring corresponding to the relative rotational speed de-

coupled thereto, a source of air pressure, at least two branches leading from said source, each branch having

framework portions to rotatably support and restrain the motion of the flywheel in the event of a casualty resulting in said flywheel falling free of the machinery and safely dissipate the rotational energy of said flywheel.

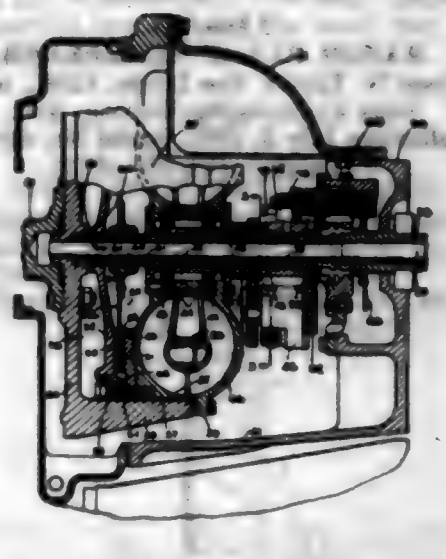
2,866,360
POWER TRANSMISSION
Chris Gerst, Detroit, and Harold C. Keller, Livonia, Mich., assignors to The Transmission & Gear Company, Dearborn, Mich., a corporation of Michigan
Application June 22, 1955, Serial No. 517,284
14 Claims. (Cl. 74—665)



1. A counterrotating steering axle and transmission comprising an input shaft, a pair of clutch shafts each having a forward drive gear and a reverse drive gear rotatable thereon independently of each other, a double drive gear on the input shaft and adapted to be driven thereby, said double drive gear being geared to the forward drive gear on one clutch shaft and in parallel therewith geared to the reverse drive gear on the other clutch shaft, said forward drive gears having their teeth in mesh with each other and said reverse drive gears having their teeth in mesh with each other, a pressure actuated forward drive clutch operatively associated with each forward drive gear and its respective shaft and adapted when engaged to provide a driving connection therebetween, a pressure actuated clutch operatively associated with each reverse drive gear and its shaft and adapted when engaged to provide a driving connection therebetween, and a pair of output shafts, each of said output shafts being connected to one clutch shaft, said output shafts being disposed in line with each other and transversely with respect to said input shaft.

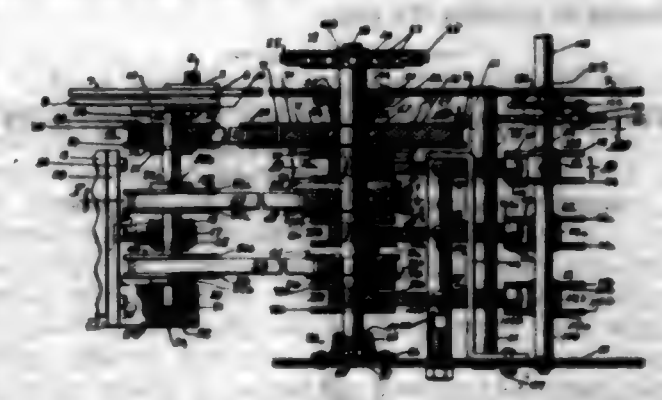
2,866,361
HYDRO-KINETIC TRANSMISSION APPARATUS FOR VEHICLES
Albert Leslie Gatiss, Southport, England, assignor to Brockhouse Engineering Limited, Southport, England, a British company
Application January 3, 1957, Serial No. 632,329
Claims priority, application Great Britain January 6, 1956
20 Claims. (Cl. 74—732)

1. Hydro-kinetic transmission apparatus for the purpose described, comprising rotatably mounted impeller and turbine elements forming a hydraulic circuit, said impeller element being adapted to circulate liquid under pressure around said hydraulic circuit, a rotatably mounted driven member adapted to be driven by said turbine element, a disengageable drive clutch comprising driving and driven clutch elements operably associated with the turbine element and driven member respectively, said clutch being adapted releasably to clutch the turbine element to the driven member, a displaceable clutch engaging piston, means for supplying the hydraulic liquid under pressure from said hydraulic circuit to one side of said piston to displace this in a direction for engaging the clutch, means for supplying hydraulic liquid under pressure to the opposite side of the piston to displace this in a direction to effect clutch disengagement, and valve means for controlling the difference in hydraulic



pressure between said two opposite sides of said piston, and the arrangement being such that the clutch engaging pressure is obtained from the hydraulic pressure within the said hydraulic circuit.

2,866,362
TURNTABLE DRIVES FOR RECORD PLAYERS
Gustave O. Gabriel, Washington Court House, Ohio
Application May 2, 1957, Serial No. 656,712
5 Claims. (Cl. 74—745)



1. A no-slip adjustable speed drive for turntables of record players and recorders comprising in combination a motor, an input shaft driven by the motor and having a plurality of transmission pulleys secured thereto, an output shaft having a plurality of pulleys thereon one for each input shaft pulley, said pulleys being freely rotatable on the shaft and being of different diameters relative to the corresponding pulleys on the input shaft, each pulley on the input shaft forming with a corresponding pulley on the output shaft a pulley pair, a belt running over each pulley pair, each belt and the pulleys of a pulley pair having intermeshing means for preventing relative slippage between them, clutch means for each output shaft pulley for engaging the same with the output shaft, a cam assembly for controlling said clutches and selectively engaging one of said clutches while disengaging the others from said output shaft, a magnetic driving member secured to the output shaft and having a plurality of radially extending circumferentially spaced permanent magnets, the outermost ends of said magnets being at the same distance from the center of the output shaft, a magnetizable ring on the turntable having integral inwardly extending pole pieces arranged to be attracted by the magnets on said drive member, and means on said magnetic drive member for engaging said pole pieces only during the commencement of rotation of the magnet driving member, the ratio of the number

resilient perforate frame, a pair of generally U-shaped work with portions adjacent both sides of the flywheel and a plurality of roller elements extending between said

of permanent magnets to the ratio of pole pieces on said ring corresponding to the relative rotational speed desired between said output shaft and said turntable.

2,866,363
RAZOR BLADE SHARPENER
Jesse N. Taylor, San Diego, Calif., and Tony C. Bertoglio, Tucson, Ariz.
Application July 3, 1957, Serial No. 669,761
5 Claims. (Cl. 76—89.2)

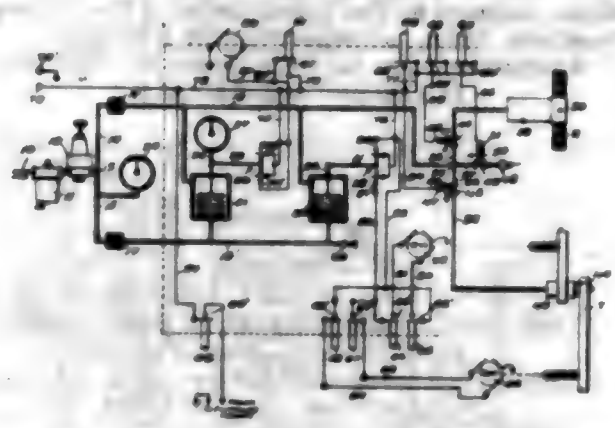
1. A razor blade sharpening device comprising a container open at one end, a reversible closure for said container, and a pair of hardened steel, juxtaposed jaws mounted within one end of said closure, said jaws at their ends remote from said closure being curved outwardly and away from each other whereby to provide a groove of V-shaped cross section having an apex adapted to receive therewithin the edge of the blade being sharpened while being drawn thereacross, said container containing a lubricant to prevent chafing of the blade whereby to sharpen the blade by reforming the edge rather than by honing or grinding the same.

2,866,364
WIRE DRAWING DIE BLANK AND METHOD OF MAKING SAME
Paul Bieberich, Fort Wayne, Ind.
Application May 8, 1953, Serial No. 353,846
8 Claims. (Cl. 76—107)

1. The method of forming a diamond die blank comprising the steps of forming a ring having a through bore, forming a receptacle having a bottom and a cylindrical wall which is thin relative to its diameter, a depression formed in the interior surface of the bottom to receive a diamond, the end of the receptacle wall being externally chamfered, inserting a diamond in the depression and the receptacle in the bore, folding the wall inwardly and compressing it downwardly by means of a punch having an end recess adapted to fit over and around the chamfered wall, to force the metal of the receptacle into intimate contact with the bore and with substantially the entire surface of the diamond.

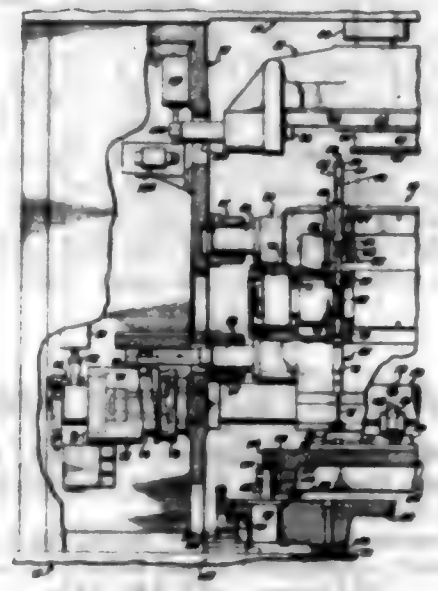
2,866,365
DRIFT GAGE MACHINE CONTROL
John H. Worthen, Warwick Neck, R. I., assignor to Federal Products Corporation, a corporation of Rhode Island
Application March 2, 1956, Serial No. 569,101
7 Claims. (Cl. 77—3)

6. A pneumatic gaging and material removing machine control comprising a tool positioning means having a tool coupled thereto, a source of air pressure, at least two branches leading from said source, each branch having an equalizer therein to secure isolation from said source, means to measure the pressure differential between said branches, one of said branches having a test orifice adapted to engage the piece to be measured, said pressure differential measuring means having control means coupled thereto which is responsive at a pressure that represents



a certain amount of oversize or undersize, said control means actuating a tool positioning means to move the tool a distance equivalent to the amount the measured piece exceeds the certain amount of undersize or oversize and a third measuring branch associated with the tool positioning means, said third branch sensing the tool position and means re-establishing a preset pressure in said branch after the tool has been positioned.

2,866,366
DRILLING MACHINE
Benjamin H. Hadley, Pomona, Calif.
Application January 24, 1955, Serial No. 483,548
10 Claims. (Cl. 77—32)

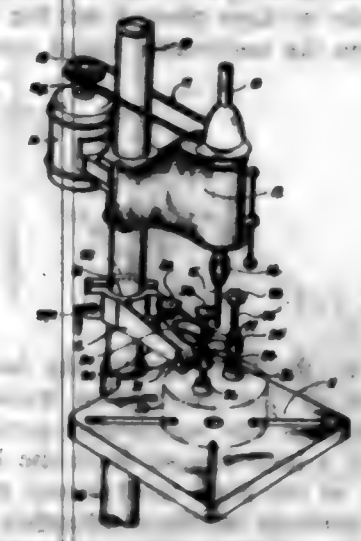


1. In a machine for drilling in a workpiece a pattern of holes having a predetermined configuration, the combination of: a plurality of drilling means selectively engageable with the workpiece; a template having a configuration matching the configuration of the pattern of holes to be drilled in the workpiece and selectively engageable with said drilling means to produce selective engagement between said drilling means and the workpiece; means for producing selective engagement between said template and said drilling means; and means for relatively moving the workpiece and template and said drilling means transversely of the axes of said drilling means so as to align said drilling means with different portions of the workpiece and template.

1150 OFFICIAL GAZETTE DECEMBER 30, 1958

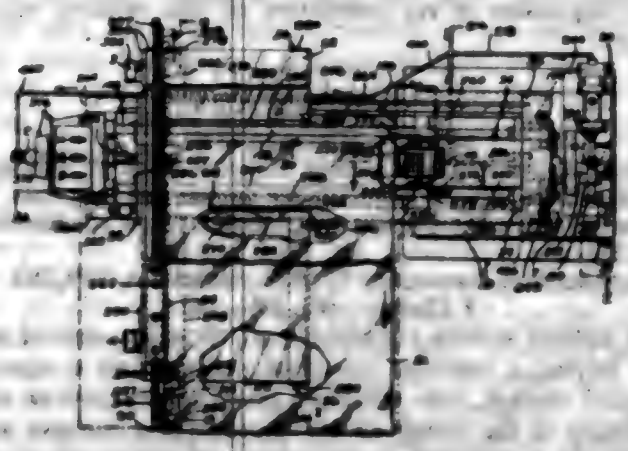
of permanent magnets to the ratio of pole pieces on said ring corresponding to the relative rotational speed de- coupled thereto, a source of air pressure, at least two branches leading from said source, each branch having

2,866,367
DRILL PRESS CLAMP
Reuben Wilkes, Seattle, Wash.
Application August 1, 1955, Serial No. 525,741
2 Claims. (Cl. 77—63)



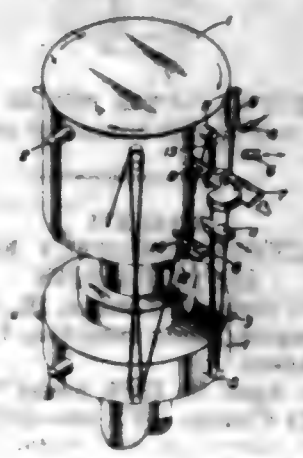
1. The combination with a drill press including a vertical standard and a horizontal work holding table fixed relative thereto, of a work holding clamp comprising a horizontal bracket equipped at its inner end for mounting it for rotary and vertical adjustment on the standard, above said table, and having means at its outer end for securing it at any of its different positions of its adjustment, a clamping arm extended along and beyond said bracket and pivoted thereon between its ends for rocking in a vertical plane, said clamping arm having a pair of forwardly directed and laterally spaced extension portions at its outer end, work holding screws threaded vertically through said extension portions, pads mounted on the lower ends of said screws, a work holding plate formed with a recessed medial portion and with flat surfaced portions at opposite sides thereof against which said pads are engaged, clips applied to the plate to holdingly engage with said pads; said work holding screws being individually adjustable to definite positions, to position said work holding plate for clamping against a piece of work as placed on said table beneath the arm, a single clamp screw threaded downwardly through the arm at its inner end and adapted to engage the bracket to rock the outer end of said arm downwardly to effect clamping action by the work engaging plate.

2,866,368
MACHINE FOR SAWING BUTTON BLANKS FROM SHEET MATERIAL
Milan R. Ostrow, Fairlawn, N. J., assignor to Standard Button Machine Co., Inc., Paterson, N. J., a corporation of New Jersey
Application March 27, 1956, Serial No. 574,175
33 Claims. (Cl. 79—16)



32. A machine for automatically sawing button blanks from sheet material comprising, in combination, a tubular saw, a holder for a material sheet of substantial length and breadth, means for advancing and retracting the saw in alternation to execute a series of blank cutting cycles, and means for automatically relatively moving the saw and the material holder until the sheet has been effectively converted to button blanks.

2,866,369
WIRE STRIPPING MACHINE
William Eugene Schell, Latrobe, Pa., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application July 30, 1956, Serial No. 600,854
4 Claims. (Cl. 81—9.51)



1. In a machine for severing segments of insulated wire which comprises a means for supporting said wire, reciprocating arms moving toward and away from said supported wire, and means for reciprocating said arms in synchronism with the motion of said support; the improvement which comprises, in combination a reciprocating arm terminating in a cutting knife, mounted to strike said wire; two reciprocating arms terminating in notched knife blades mounted to strike said wire on either side of said cutting knife, said notches being of sufficient size to fit around the wire used but small enough to cut the insulation on said wire; means for reciprocating said three arms such that the said notched knives strike the said wire before the said cutting knife, and means for imparting, subsequent to the severing of the wire by the said cutting arm, relative motion between said notched knives and the severed ends of said wire segments in a direction such that the said severed ends pass through said notched knives, at least one of said means for imparting relative motion between said notched knives and the said wire being a cam and cam follower imposing on the said reciprocating arms carrying said notched knife a detoured return to its reciprocation, imparting a lateral motion relative to said wire in the direction of the severed end of said wire.

2,866,370
BOLT-TENSIONING AND NUT-SEATING APPARATUS
John L. Bloch, Cranford, N. J.
Application February 2, 1956, Serial No. 563,189
5 Claims. (Cl. 81—54)

1. A bolt tensioning and nut seating apparatus including in combination a housing to be applied to a mounting member from which a bolt supporting a nut extends, a rod supported by said housing, a piston connected to said rod, a cylinder connected to said housing and enclosing said piston, means connecting said rod with said

control comprising a tool positioning means having a tool ing means so as to align said drilling means with different portions of the workpiece and template.

of permanent magnets to the ratio of pole pieces on said ring corresponding to the relative rotational speed desired between said output shaft and said turntable.

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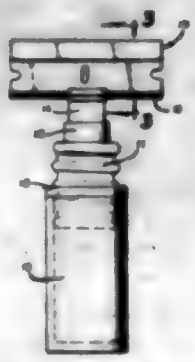
Application July 3, 1957, Serial No. 669,761
5 Claims. (Cl. 76—89.2)



1. A razor blade sharpening device comprising a container open at one end, a reversible closure for said container, and a pair of hardened steel, juxtaposed jaws mounted within one end of said closure, said jaws at their ends remote from said closure being curved outwardly and away from each other whereby to provide a groove of V-shaped cross section having an apex adapted to receive therewithin the edge of the blade being sharpened while being drawn thereacross, said container containing a lubricant to prevent chafing of the blade whereby to sharpen the blade by reforming the edge rather than by honing or grinding the same.

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WIRE DRAWING DIE BLANK AND METHOD OF MAKING SAME
Paul Bieberich, Fort Wayne, Ind.
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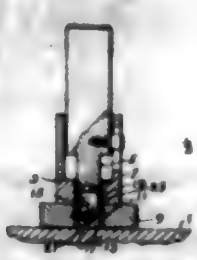
8 Claims. (Cl. 76—107)



1. The method of forming a diamond die blank comprising the steps of forming a ring having a through bore, forming a receptacle having a bottom and a cylindrical wall which is thin relative to its diameter, a depression formed in the interior surface of the bottom to receive a diamond, the end of the receptacle wall being externally chamfered, inserting a diamond in the depression and the receptacle in the bore, folding the wall inwardly and compressing it downwardly by means of a punch having an end recess adapted to fit over and around the chamfered wall, to force the metal of the receptacle into intimate contact with the bore and with substantially the entire surface of the diamond.

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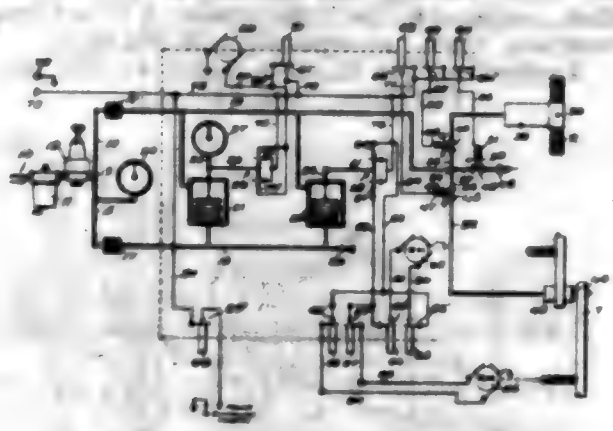
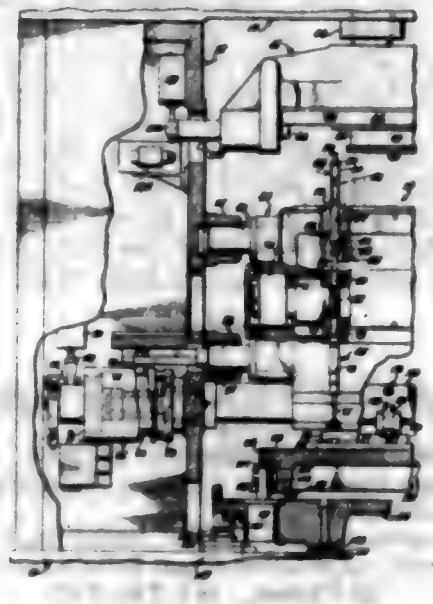


a certain amount of oversize or undersize, said control means actuating a tool positioning means to move the tool a distance equivalent to the amount the measured piece exceeds the certain amount of undersize or oversize and a third measuring branch associated with the tool positioning means, said third branch sensing the tool position and means re-establishing a preset pressure in said branch after the tool has been positioned.

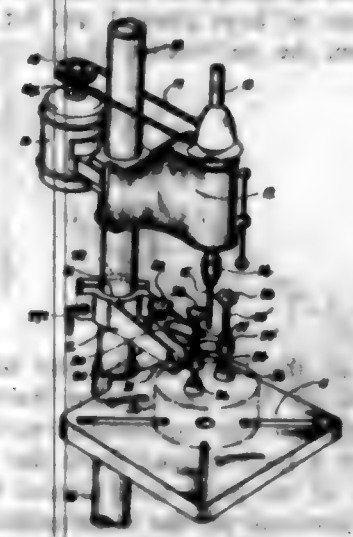
2,866,366
DRILLING MACHINE
Benjamin H. Hadley, Pomona, Calif.
Application January 24, 1955, Serial No. 483,540
10 Claims. (Cl. 77—22)



1. In a machine for drilling in a workpiece a pattern of holes having a predetermined configuration, the combination of: a plurality of drilling means selectively engageable with the workpiece; a template having a configuration matching the configuration of the pattern of holes to be drilled in the workpiece and selectively engageable with said drilling means to produce selective engagement between said drilling means and the workpiece; means for producing selective engagement between said template and said drilling means; and means for relatively moving the workpiece and template and said drilling means transversely of the axes of said drilling means so as to align said drilling means with different portions of the workpiece and template.

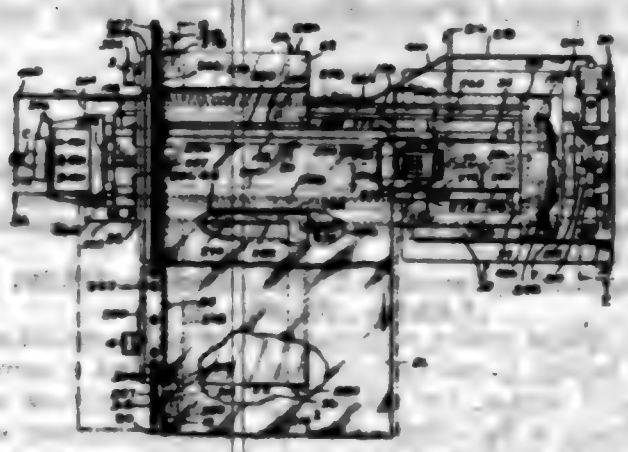
bolt at a point beyond that at which it mounts the nut for a bolt having a threaded shank portion, a circular un-

2,866,367
DRILL PRESS CLAMP
Reuben Wilkes, Seattle, Wash.
Application August 1, 1955, Serial No. 525,741
2 Claims. (Cl. 77—63)



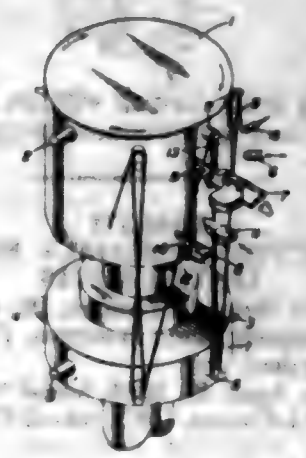
1. The combination with a drill press including a vertical standard and a horizontal work holding table fixed relative thereto, of a work holding clamp comprising a horizontal bracket equipped at its inner end for mounting it for rotary and vertical adjustment on the standard, above said table, and having means at its outer end for securing it at any of its different positions of its adjustment, a clamping arm extended along and beyond said bracket and pivoted thereon between its ends for rocking in a vertical plane, said clamping arm having a pair of forwardly directed and laterally spaced extension portions at its outer end, work holding screws threaded vertically through said extension portions, pads mounted on the lower ends of said screws, a work holding plate formed with a recessed medial portion and with flat surfaced portions at opposite sides thereof against which said pads are engaged, clips applied to the plate to holdingly engage with said pads; said work holding screws being individually adjustable to definite positions, to position said work holding plate for clamping against a piece of work as placed on said table beneath the arm, a single clamp screw threaded downwardly through the arm at its inner end and adapted to engage the bracket to rock the outer end of said arm downwardly to effect clamping action by the work engaging plate.

2,866,368
MACHINE FOR SAWING BUTTON BLANKS FROM SHEET MATERIAL
Milan R. Ostrow, Fairlawn, N. J., assignor to Standard Button Machine Co., Inc., Paterson, N. J., a corporation of New Jersey
Application March 27, 1956, Serial No. 574,175
33 Claims. (Cl. 79—16)



32. A machine for automatically sawing button blanks from sheet material comprising, in combination, a tubular saw, a holder for a material sheet of substantial length and breadth, means for advancing and retracting the saw in alternation to execute a series of blank cutting cycles, and means for automatically relatively moving the saw and the material holder until the sheet has been effectively converted to button blanks.

2,866,369
WIRE STRIPPING MACHINE
William Eugene Schall, Latrobe, Pa., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine
Application July 30, 1956, Serial No. 600,854
4 Claims. (Cl. 81—9.51)



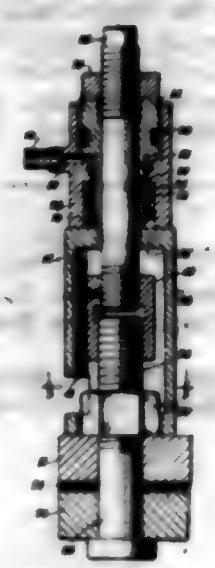
1. In a machine for severing segments of insulated wire which comprises a means for supporting said wire, reciprocating arms moving toward and away from said supported wire, and means for reciprocating said arms in synchronism with the motion of said support; the improvement which comprises, in combination a reciprocating arm terminating in a cutting knife, mounted to strike said wire; two reciprocating arms terminating in notched knife blades mounted to strike said wire on either side of said cutting knife, said notches being of sufficient size to fit around the wire used but small enough to cut the insulation on said wire; means for reciprocating said three arms such that the said notched knives strike the said wire before the said cutting knife, and means for imparting, subsequent to the severing of the wire by the said cutting arm, relative motion between said notched knives and the severed ends of said wire segments in a direction such that the said severed ends pass through said notched knives, at least one of said means for imparting relative motion between said notched knives and the said wire being a cam and cam follower imposing on the said reciprocating arms carrying said notched knife a detoured return to its reciprocation, imparting a lateral motion relative to said wire in the direction of the severed end of said wire.

2,866,370
BOLT-TENSIONING AND NUT-SEATING APPARATUS
John L. Bloch, Cranford, N. J.
Application February 2, 1956, Serial No. 563,109
5 Claims. (Cl. 81—54)

1. A bolt tensioning and nut seating apparatus including in combination a housing to be applied to a mounting member from which a bolt supporting a nut extends, a rod supported by said housing, a piston connected to said rod, a cylinder connected to said housing and enclosing said piston, means connecting said rod with said

ent portions of the workpiece and template.

bolt at a point beyond that at which it mounts the nut for tumioning said bolt as said piston and rod are shifted

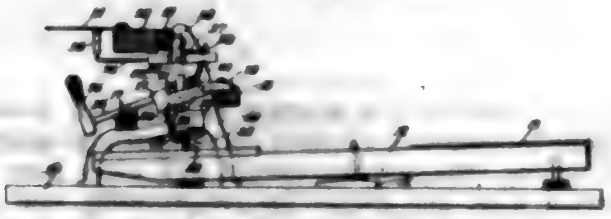


and said housing being formed with an opening through which a wrench may be introduced to engage said nut.

2,866,371
KEY AND ACTION ASSEMBLY FOR MUSICAL INSTRUMENTS

Charles Frederick Stein, La Grange, Ill., assignor to Pratt, Read and Company, Inc., Iverytan, Conn., a corporation of Connecticut

Application April 30, 1956, Serial No. 581,643
16 Claims. (Cl. 84—237)



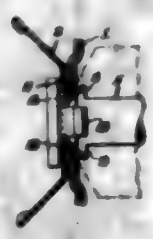
1. A key and action assembly for a musical instrument having a horizontally extending vibratile member including in combination, a fixed rail structure, a hammer having a portion pivotally connected to said rail structure and a head adapted to move upwardly to engage the vibratile member, a flyjack pivotally connected to said hammer and extending downwardly therefrom, and a key having a front part for operation by a person playing the musical instrument, an intermediate pivoted part, and a back part extending below said flyjack, said back part of said key including a projecting portion for engaging said flyjack for causing movement thereof to thereby rotate said hammer so that said head thereof is moved toward the vibratile member, said flyjack having a first portion normally engaging said projecting portion of said key and a second portion which engages a portion of said hammer in response to rotation of said hammer such that said head thereof approaches the vibratile member, with the engagement between said portions of said flyjack and said hammer moving said flyjack so that said first portion thereof moves away from said key portion to provide let-off action.

2,866,372
BOLT NON-ROTATIVELY SECURED TO PLATE BY STRUCK OUT SHANK PORTION

Robert C. Fisher, Birmingham, Mich., assignor to Fisher Industries, Inc., Ferndale, Mich., a corporation of Michigan

Application October 6, 1954, Serial No. 460,634
1 Claim. (Cl. 85—9)

A fastener for moldings or other articles having in combination a plate with a non-circular perforation and a bolt having a threaded shank portion, a circular unthreaded shank portion and a head, the circular unthreaded portion being between the head and threads and of larger diameter than the threaded portion and being of less diameter than the narrowest dimension of the perforation in the plate, the unthreaded portion having small spurs or keys plowed out for engaging in the spaces between the unthreaded shank and the non-circu-

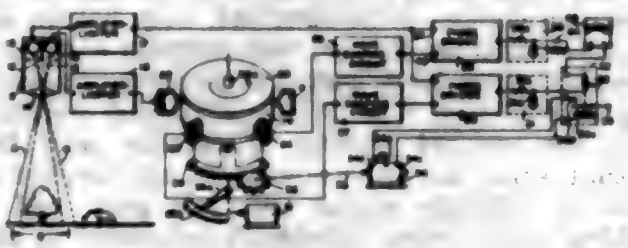


lar portions of the hole around the bolt due to some cross sections of the perforation having substantially greater width than the unthreaded portion of the bolt and having at a level spaced from the head more than the thickness of the plate tabs plowed out from all the undisturbed portions of the unthreaded shank between the spurs or keys and turned over to form wide tabs to hold the bolt in place.

2,866,373
IMAGE-VELOCITY RESPONSIVE SYSTEM

Irving W. Doyle, Mamaroneck, N. Y., and Donald G. C. Hare, Ridgefield, Conn., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware

Application January 11, 1954, Serial No. 403,320
14 Claims. (Cl. 88—1)



14. A velocity responsive system comprising: photosensitive apparatus for scanning a relatively moving object and developing therefrom leading and lagging signals representative at any given instant of the illumination of different elemental areas of the object spaced in the direction of scanning; adjustable time-delay apparatus for deriving from said leading signal a second signal of related wave form but delayed in time with respect thereto; a circuit responsive jointly to said lagging signal and said delayed signal for developing a control signal varying in accordance with the time delay therebetween; and control means responsive to said control signal for adjusting said time-delay apparatus to a point corresponding to a predetermined value of said control signal, whereby the amount of adjustment of said time-delay apparatus is representative of the relative object velocity.

2,866,374
MONOCHROMATOR

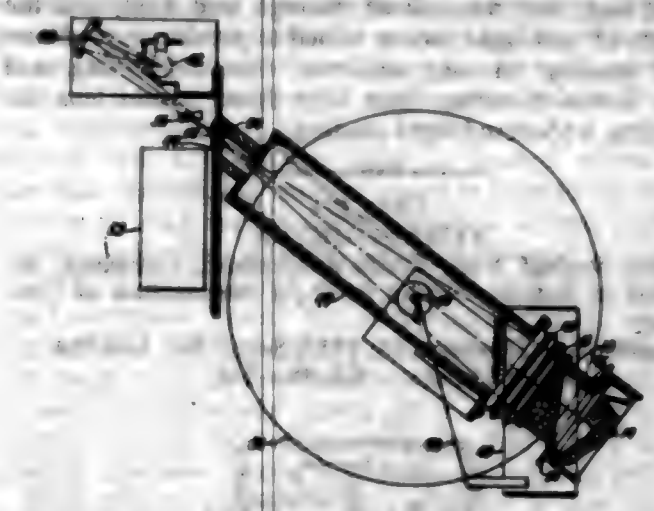
Robert Edward Lewis, Chicago, Ill., and Axell R. Thomas, Valparaiso, Ind., assignors, by mesne assignments, to Central Scientific Company, Chicago, Ill., a corporation of Illinois

Application November 7, 1952, Serial No. 319,362
1 Claim. (Cl. 88—14)

An optical system comprising a refractive optical element having a concave spherical surface and a convex spherical surface, one aplanatic point of the convex surface being at the center of curvature of the concave surface, a slit positioned at the center of curvature of the concave surface, a light source in alinement with said

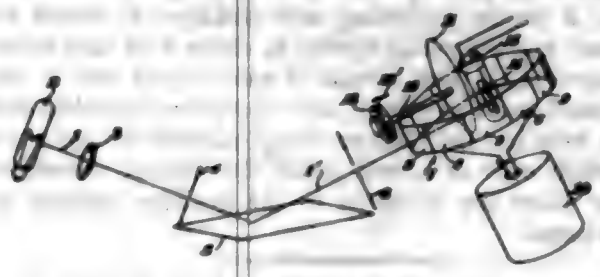
cells with a comparison solution and a to-be-examined quartz rod and second tube and adapted for introducing

slit opposite said optical element, a spherical reflector adjacent said optical element facing the convex surface thereof opposite said slit, the center of curvature of said spherical reflector being the other aplanatic focus of the



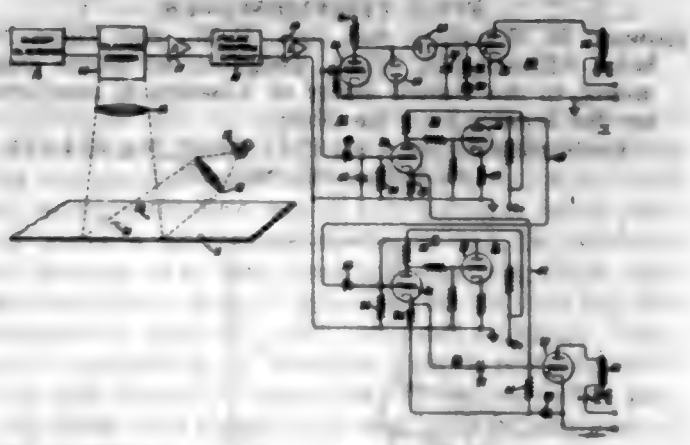
convex surface of the optical element, said light source, slit, refractive element and reflector being optically alined along an axis, and means for moving the optical element and reflector as a unit toward and from the slit along the axis of said element and reflector.

2,866,375
GLOSS METER
Archibald Howard Wells, Gravesend, Kent, Alfred H. Nixon, Leeds, Allan Peter Highton, Gravesend, Kent, and Leonard Frank Hopkins, Brockley, London, England, assignors to The Bowater Research and Development Company Limited
Application September 28, 1954, Serial No. 458,924
Claims priority, application Great Britain October 12, 1953
4 Claims. (Cl. 88—14)



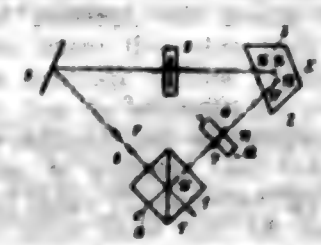
4. In a device for measuring the glossiness of a surface, two concentric cylinders of transparent non-polarizing material; an endless series of adjoining polarizing elements sandwiched between and supported by said cylinders and respectively having their polarizing axes in different directions; opaque interruptions positioned respectively between adjacent polarizing elements of differently directed polarizing axes; light sensitive means for indicating a substantially non-fluctuating beam; a polarizing analyzer positioned between said light-sensitive means and said polarizing elements; means including a light source for causing a beam of light to strike said surface at an angle of incidence thereto and to be reflected continuously therefrom and to pass to said cylinders and polarizing elements as a continuous and substantially unvarying beam constituted in part by diffused light and in part by specularly reflected light and to pass through said cylinders and the polarizing elements as said polarizing elements are successively moved into the path of said continuous and substantially unvarying reflected beam; means for rotating said cylinders so as successively to move said polarizing elements with respect to said reflected beam so as alternately to place polarizing elements having differently directed polarizing axes in the path of said reflected beam whereby to effect differential absorption of light continuously reflected specularly from said surface and consequently to effect alternate polarization and fluctuation of the beam transmitted from said polarizing elements through said polarizing analyzer and to said light-sensitive means; and means for varying the axis of polarization of said polarizing analyzer with respect to the beam passing therethrough, whereby the fluctuation of the beam may be substantially eliminated.

2,866,376
OPTICAL FLAW DETECTION APPARATUS
Ellsworth D. Cook, Scotia, N. Y., assignor to General Electric Company, a corporation of New York
Application September 28, 1954, Serial No. 459,973
6 Claims. (Cl. 88—14)



1. In material inspection apparatus which includes optical means disposed to focus an optical image of the portion of the material adjacent an inspection apparatus on an electron-optics device and means for providing scanning of the image by the electron-optics device, the improvement of a storage circuit comprising a unidirectional conducting device operatively coupled in series circuit relationship with an energy storage device across the output of said electron-optics device, a grid controlled discharge tube for providing an output signal having said energy storage device coupled thereto, said apparatus further including a gating circuit coupled across the output of said electron-optics device, a second grid-controlled gas discharge tube for providing a second output signal having the control grid thereof operatively coupled to the output of said gating circuit, and a trigger circuit operatively coupled to the output of said electron-optics device and having the output thereof coupled to said gating circuit and to the control grid of said second discharge tube in parallel with gating circuit for controlling the action of the same.

2,866,377
INTERFEROMETER
Kurt Rinstch, Wetzlar, Germany, assignor to Carl Zeiss, Wurttemberg, Germany
Application May 19, 1955, Serial No. 509,516
Claims priority, application Germany May 20, 1954
10 Claims. (Cl. 88—14)



1. In an interferometer for ascertaining the refractive index course in stratified solutions, having a beam splitting prism for dividing a light beam into a reflected portion and a transmitted portion, a plane mirror, and two

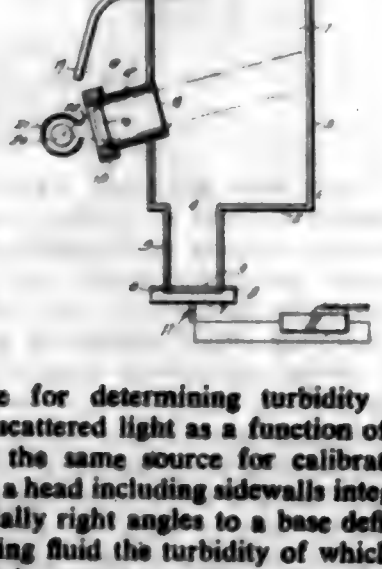
cells with a comparison solution and a to-be-examined solution as well as an angle mirror, said cells being arranged side by side, one portion of the split light being received by the plane mirror and directed through the one cell to the angle mirror and by the angle mirror back to the splitting prism and the other portion of the split light being received by the angle mirror and directed through the other cell to the plane mirror and by the plane mirror back to the splitting prism which recombines the return beam portions into an interference refractive index pattern, a tiltable plane parallel plate arranged in the path of both portions of the split light so as to be transmitted by said portions to adjust the interference fringes produced by the interferometer.

2,866,378

FUEL TURBIDIMETER

Howard D. Warshaw, San Jose, Calif., and Elden Nerheim, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 14, 1957, Serial No. 634,133
1 Claim. (Cl. 88—14)



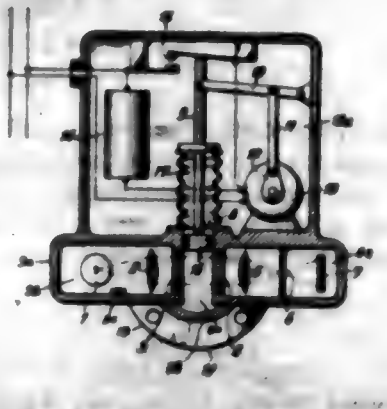
A device for determining turbidity of a fluid by measuring scattered light as a function of turbidity using light from the same source for calibrating the device, comprising a head including sidewalls integrally connected at substantially right angles to a base defining a chamber for containing fluid the turbidity of which is to be determined, said base and one side wall each having an aperture disposed substantially adjacent the corner between them; a first tube positioned perpendicularly to said base in the base aperture and secured at one end to said base, said one end opening into said chamber; a photovoltaic cell housed in said first tube near the other end of said tube for generating current in proportion to the intensity of light falling on it from said chamber; an ammeter electrically connected to said cell for indicating the current so generated; a second tube mounted in the aperture of said one side wall and having one end secured to said side wall and opening into said chamber; said tube having its other end tilted in the direction of said base wherein the axes of said first and second tubes when extended form an included angle of approximately 85°; a lens secured in said second tube near its other end for collimating light through said second tube into said head substantially across the aperture in said base wherein scattered light only will reach said cell; said one side wall having a second aperture, a quartz rod mounted in said second aperture of said one side wall having one end extending into said chamber and terminating substantially over said aperture in said base at a distance from said cell substantially equal to the distance scattered light from the lens must travel to reach the photovoltaic cell; the other end of said rod extending from said head terminating adjacent said other end of said second tube; a source of light, the intensity of which may be varied, disposed adjacent said other ends of said quartz rod and second tube and adapted for introducing light into the lens and said quartz rod; a cover surrounding said light source and having an aperture adapted for selectively permitting light to enter said rod or lens, so that light may be introduced into said rod to the exclusion of said lens, and transmitted through said fluid, and the intensity of said light source varied to produce a predetermined reading on said ammeter, thus calibrating said device before directing light only through said lens for producing a scattered light reading.

2,866,379

TURBIDIMETER

Heinrich Rudolf Veit, Berlin-Zehlendorf, Germany, assignor to Askania-Werke A. G., a corporation of Germany

Application February 18, 1957, Serial No. 640,784
4 Claims. (Cl. 88—14)



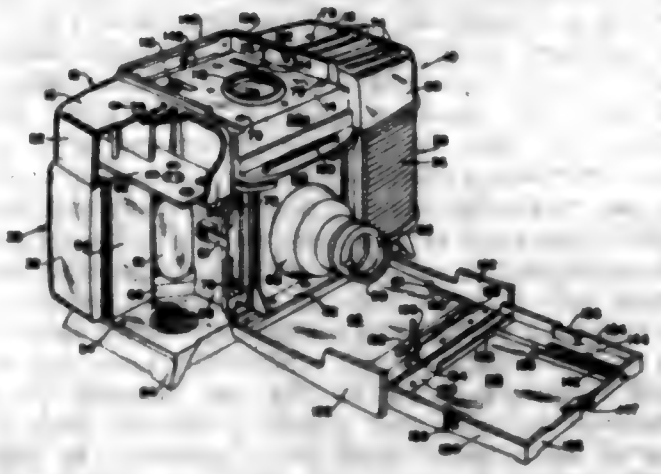
1. In a turbidimeter, illuminating means having a first, vertical window with one surface in the fluid to be inspected; illuminance measuring means having a second vertical window with one surface in said fluid opposite and parallel with the first window; a single window wiper for said windows; linkage actuating said wiper in reciprocating motions passing over and slightly beyond said windows; a motor actuating said linkage; a circuit for said motor; and a control system in series with said motor and comprising a time switch in said circuit and a normally closed shunt switch in said circuit and parallel with the time switch; said linkage being adapted to open said shunt switch only at a time when the linkage withdraws the wiper from the windows to the position slightly beyond the same.

2,866,380

PHOTOGRAPHIC COPYING APPARATUS

Herbert A. Bing, Wellesley, Vahe K. Eloranta, Needham, and David S. Grey, Lexington, Mass., and Karl Maier-shofer, Norridge, Ill., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Application December 11, 1957, Serial No. 702,068
17 Claims. (Cl. 88—24)



1. Photographic copying apparatus comprising, in combination, a generally box-like case having a first opening

of said front plate being vertically disposed and located said actuating means for stepping that control switch un-

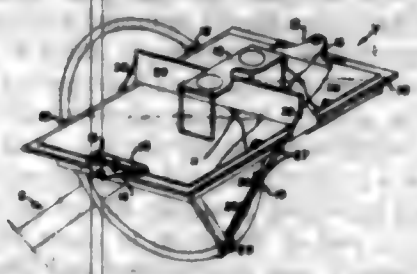
in one side, a first door for closing said opening, means on said first door for mounting sheet material to be copied in a predetermined plane, a second opening in said case in the side thereof opposite said first opening, second door means comprising first and second support panels arranged substantially at right angles with respect to one another, said second door means being mounted adjacent the intersection of said support panels for pivotal movement on said case between a first position, wherein said first support panel is located within said case and said second support panel is located in closing relation to said second opening, and a second position, wherein said first support panel is located in closing relation to said second opening and said first support panel comprises means for mounting a camera on said apparatus, a lens assembly mounted on said first support panel with its optic axis substantially perpendicular to said predetermined plane of a sheet mounted for copying on said first door when the latter is in closed position and said second door is in said second position, a third support panel pivotally secured to the edge of said second support panel which is opposite said intersection of said first and second support panels, said third support panel having an open position wherein it comprises said means for mounting a camera when said second door is in said second position, and a closed position wherein said third support panel is disposed against a wall of said case, and lamp means mounted within said case adjacent opposite sides of said second opening for illuminating a sheet mounted for exposure on said first door.

2,866,381

STEREOGRAPHIC MAP READING APPARATUS

Enis Alldredge, Scottsbluff, Nebr.

Application November 21, 1956, Serial No. 623,712
3 Claims. (Cl. 88—29)



1. A portable stereographic map reading apparatus for use with aerial photographs and the like, and comprising, in combination, a table proportioned to hold a pair of aerial photographs in overlapping and overlapped relationship for stereographic viewing, a clip at each end of the table for so holding the photographs onto the table, and an overfolded dividing wall having an inverted pocket therein adapted to receive an end of the overlapping aerial photograph, a bracket at each end of the dividing wall slidably engaging the edges of the table between the clips and adapted to hold the dividing wall transversely across the table and permit the wall to shift along the table between the clips for exposure of selected, normally covered portions of the overlapped aerial photograph, and means for mounting the table upon the steering wheel of an automobile.

2,866,382

STEREOSCOPIC VIEWING DEVICE

Heinz E. R. Gruner and Friedrich Schwarzbach, Irondequoit, N. Y., assignors to Bausch & Lomb Optical Company, Rochester, N. Y., a corporation of New York

Application September 9, 1957, Serial No. 682,902
2 Claims. (Cl. 88—29)

1. A stereoscopic viewing device comprising a base frame having a table thereon for supporting a strip of photographs to be viewed stereoscopically, a carriage mounted above the table and being adapted to be moved rectilinearly thereupon, said carriage having mounted thereon for movement therewith an optical system including a pair of relatively stationary eyepieces and a rhomboid prism operatively associated with each of said eyepieces, each of said rhomboid prisms being mounted for sliding movement upon said carriage relative to its corresponding eyepiece along a common line lying in the plane of the base line of observation for the optical system, each of said prisms being mounted for pivotal move-

ment about an axis normal to said common line traced by said sliding movement, each of said rhomboid prisms having two parallel reflecting surfaces which are inclined to the vertical, the first one of said surfaces being positioned above a photograph to be viewed for receiving image forming rays therefrom and directing them onto the second surface from whence they are directed into the corresponding eyepiece, each of said eyepieces being adapted respectively to view the images reflected from each of said second surfaces along an optical path a portion of which is in coincidence with each of said axes of pivotal movement.

2,866,383

PRISM TYPE ANAMORPHOSER DEVICE

Harry Sidney Newcomer, Cape May, N. J., and Arthur F. Anderson, Livonia, Mich.; said Anderson assignor to said Newcomer

Application October 13, 1955, Serial No. 540,182
10 Claims. (Cl. 88—57)

1. An optical anamorphoser comprising front and rear optical prism elements each having a plane of magnification coinciding with its optical axis, a tubular mounting member for the front optical element having the optical prism elements fixedly secured therein, a tubular mounting member for the rear optical element having the optical prism elements fixedly secured therein, and means for coupling said members together having circular mating surfaces whereby the orientation of the optical prism elements may be aligned prior to final permanent assembly.

2,866,384

COMBINATION OF HEDGEHOG PROJECTOR AND GUN MOUNT

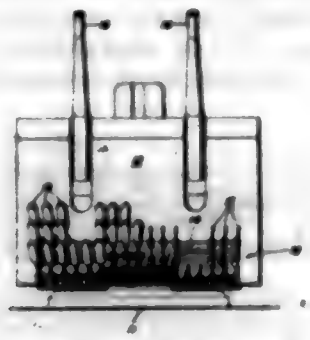
Sidney Horsh, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Application April 16, 1953, Serial No. 349,330
3 Claims. (Cl. 89—1)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A trainable mount for supporting a plurality of elevatable guns and comprising a front plate, a portion

weight, said improvement including a guide along which gripping the cases of the cartridges, a pair of ear portions

of said front plate being vertically disposed and located at a trainable lower front edge portion of the mount, an armored beam structure rigidly carried by said portion of said front plate and extending transversely thereacross and substantially the entire width thereof, a plurality of spigots for charge projection therefrom spaced vertically and horizontally with respect to one another in



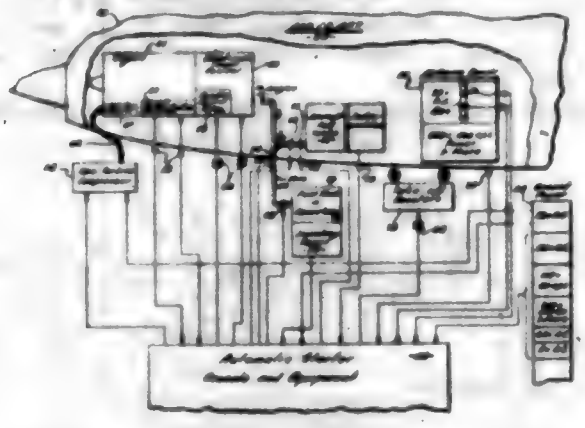
a substantially uniform pattern of a generally reclining E-shaped configuration and rigidly mounted on said beam structure with the discontinuities in the mutual spacing thereof providing for elevational and depressional movement of said guns, said spigots being positioned at an angle of substantially 45 degrees with the plane of the beam structure.

2,866,385

AUTOMATIC JET ENGINE STARTING DEVICE

Kenneth W. Miller, Granada Hills, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application January 18, 1956, Serial No. 558,234
6 Claims. (Cl. 89—1.7)



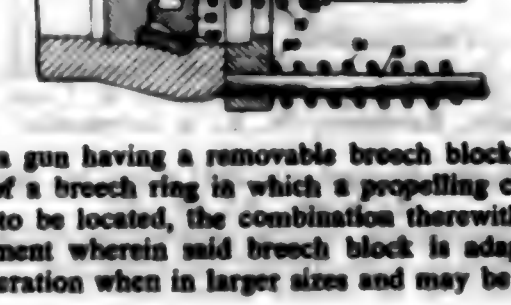
1. Means for automatically starting a jet engine, comprising: a plurality of multiple-position control stepping switches each having a plurality of contacts closable at each respective position, electrically operated actuating means connected to each said control switch for advancing the respective switch one position each time when energized, said engine having a plurality of elements and equipment components to be operated in starting said engine, a plurality of means for operating said elements connected respectively through various position contacts of the said plurality of control switches in successive order of desired operation on each control switch, and sequence stepping means at each said control switch operable when a given desired condition is reached after operation of certain of said elements, to energize its respective switch actuating means and step its associated control switch to the next position wherein the next desired operating means is connected, said control stepping switches each having a "home" or "off" position where said elements controlled by that switch are connected to be turned off to a static condition as before starting of said engine, and including a homing contact and homing means at each said control switch whereby energization of said homing contact produces pulsed on-off energization of said actuating means for stepping that control switch until the home position is reached, automatic malfunction detecting means having output contacts closable upon occurrence of a specified malfunction and operatively wired to cause energization of said homing contacts of said control switches, whereby if said specified malfunction occurs, all said elements will be turned off to immediately cut off said engine.

2,866,386

DESIGN FOR GUNS EMPLOYING SPLIT CHAMBER

Victor F. Lucht, Arlington County, Va., assignor to the United States of America as represented by the Secretary of the Army

Application May 1, 1956, Serial No. 582,853
3 Claims. (Cl. 89—13)
(Granted under Title 35, U. S. Code (1952), sec. 266)



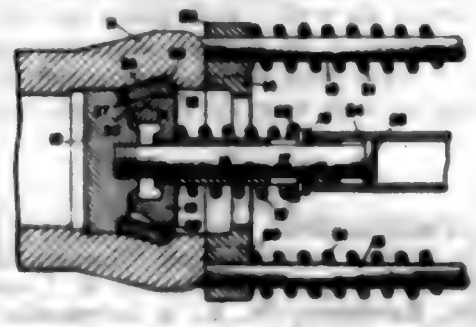
1. In a gun of the type including a barrel and a drum having a projectile holding longitudinal chamber therein opening through opposite ends thereof in axial alignment with the bore of said barrel and with one end of said drum in normally spaced relation with the adjacent breech face of said barrel, a counterbore therein opening through said one end of said drum, means for sealing said chamber by bridging the space between said one end of said drum and said adjacent breech face, said means comprising an obturating sleeve mounted within said counterbore for movement longitudinally thereof, said chamber having at least one groove therein extending longitudinally thereof, said groove inclining downwardly and opening into said counterbore for conducting gases generated by the firing of a projectile in said chamber with the pressure of said gases impinging upon one end of said sleeve remote from said one end of the drum to move the sleeve longitudinally through said counterbore and into sealing relation with said breech face and bridge the space between said one end of the drum and said adjacent breech face of the barrel.

2,866,387

BREECH BLOCK MECHANISM

Rudolph E. Stern, Chicago, Ill., and Rufus D. Kaiser, Stamford, Conn., assignors to the United States of America as represented by the Secretary of the Army

Application January 11, 1957, Serial No. 633,809
3 Claims. (Cl. 89—17)



1. In a gun having a removable breech block closing an end of a breech ring in which a propelling charge is adapted to be located, the combination therewith of the improvement wherein said breech block is adapted for rapid operation when in larger sizes and may be of light

photographs to be viewed stereoscopically, a carriage

elevatable guns and comprising a front plate, a portion

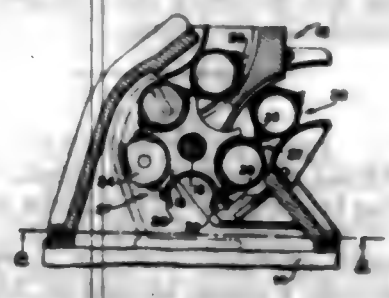
weight, said improvement including a guide along which said breech block may be moved longitudinally in a substantially straight line away from and toward its position locked within said breech ring, a plurality of closely spaced thrust elements between an outer peripheral end face portion of said breech block and an inner end portion of said breech ring, said elements being closely spaced around said breech block and extending radially outwardly at an acute angle of substantially less than 45° to the longitudinal axis of said breech ring, a holding member for said elements when the breech block is closed, and slidable outwardly to release said thrust elements from their engagement with said breech ring before opening said breech block, the end face of said elements in contact with said breech ring and the cooperating surfaces of said breech ring in contact with the end faces of said thrust elements being tapered to allow said elements to be rotated radially inward far enough to clear the inner edge of said breech ring as the said holding member is withdrawn from a position within said breech ring, said holding member having a ledge of reduced diameter for supporting said thrust members after their being rotated radially inward to clear said breech ring, mechanism for longitudinally moving said holding member and thrust members outwardly a short distance, a retaining ring into which said holding member and thrust members are moved prior to withdrawal of said breech block from the breech ring, said retaining ring being recessed to receive said thrust members held upon said ledge of the holding member, and means whereby said breech block retaining ring with said thrust members therein and holding member may be moved as a unit away from said breech ring to permit loading a propelling charge into said gun, said last mentioned means including said guide for said unit, a stop for said breech block when moving into a firing position within said gun, and an inclined surface on said holding member between said ledge and a surface on which said thrust members are held when in a thrust transmitting position for firing said gun, said inclined surface on said holding member being at an angle of less than 45° to the longitudinal axis of said breech block whereby after said breech block has engaged its stop, continued movement of the holding member for a short distance will swing said thrust members radially outwardly to engage said breech ring for transmitting a thrust upon firing from said breech block to said breech ring.

2,866,388

AMMUNITION BELT CONNECTOR AND DISINTEGRATOR

William E. Reynolds, Riverside, and Vito A. Fusco, Chicago, Ill., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Application September 11, 1956, Serial No. 609,332
3 Claims. (Cl. 89—35)



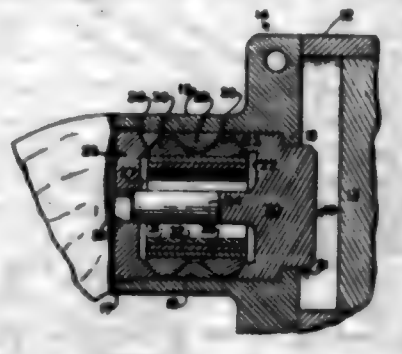
1. In combination with a gun having a ramming and an extraction station and provided with a feeding mechanism having a rotatable sprocket, an ammunition belt engaged by the sprocket for conveying cartridges to the ramming station and fired cases from the extraction station, said belt including a plurality of links for releasably gripping the cases of the cartridges, a pair of ear portions extending oppositely from each of said links, couplings engageable with contiguous ones of said ears on adjacent ones of a predetermined number of said links to form a segment of said belt, a disintegrating connector for releasably connecting a plurality of said segments to form said belt, said disintegrating connector being comprised of a pair of U-shaped members respectively engaged with the ones of said ears extending from opposite ends of a pair of said segments, said pair of U-shaped members being provided with holes in the ends thereof and disposed to coaxially align said holes in one of said members with corresponding ones of said holes in the other one of said members, and a latch provided with a pair of pins respectively engageable with corresponding ones of said holes in each of said members for pivotally joining said members, an upset portion on the end of one of said pins for retaining said pins in engagement with said holes, a shoulder portion on said latch, and a cam disposed in the feeding mechanism for engagement by said shoulder when moved past the extraction station to move said latch for collapsing said upset portion and moving said pins out of engagement with the ones of said holes in one of said members for disengaging said members and disconnecting the forward one of said segments from said belt.

2,866,389

BUFFER MECHANISM

Clarence E. Simpson, Wilbraham, Mass., assignor to the United States of America as represented by the Secretary of the Army

Application June 4, 1954, Serial No. 444,440
2 Claims. (Cl. 89—198)



1. In a firearm having a bolt reciprocable between a battery and a recoil position, a recoil buffer including a compressible resilient means comprised of a plurality of split rings resiliently contractable to smaller diameters when said resilient means is compressed and alternating noncontractable rings, said split and noncontractable rings being aligned to form a cylindrical chamber, cooperating cam means on said split and noncontractable rings for contracting said split rings when said resilient means is compressed and for giving frictional resistance to the compression of said resilient means, means contactable by the bolt before reaching the recoil position for compressing said resilient means, a plurality of contractable split sleeves nested in frictional engagement with each other and housed within said chamber for frictional engagement with the insides of said split rings to frictionally and resiliently resist the contractions thereof.

2,866,390

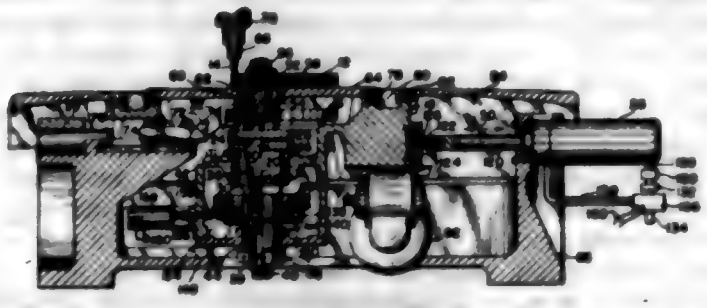
AUTOMATIC CONTOUR DUPLICATOR

Walter E. McCadden, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware

Application January 3, 1955, Serial No. 479,384
9 Claims. (Cl. 90—13.4)

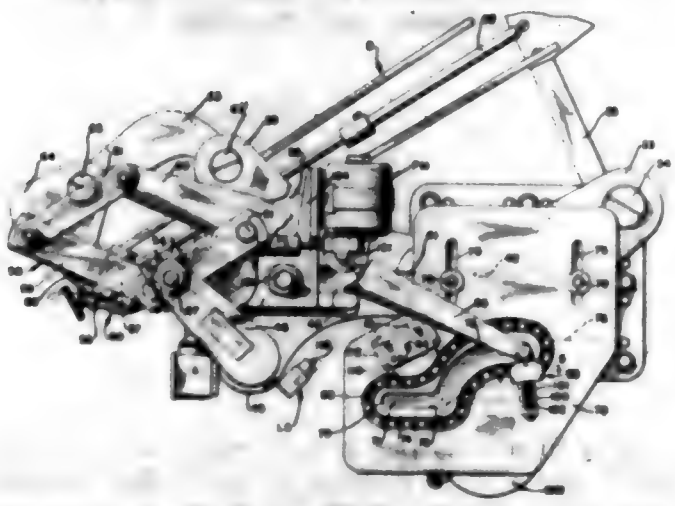
1. A machine for cutting cams comprising a first spindle adapted to carry a master contour cam coaxially therewith, means for rotating the spindle, a carriage rotatably

supporting the spindle and movable along a path extending substantially at right angles to the spindle, a second spindle also rotatably supported on the carriage and extending at an angle to the first spindle, the second spindle connected to be driven by the first spindle and



adapted to carry a work piece adjacent a cutter, a fixed guide positioned opposite the master cam to be engaged thereby to move the carriage in accordance with the contour of the cam, and means biasing the carriage toward the fixed guide to be movable as the cam is rotated on the first spindle.

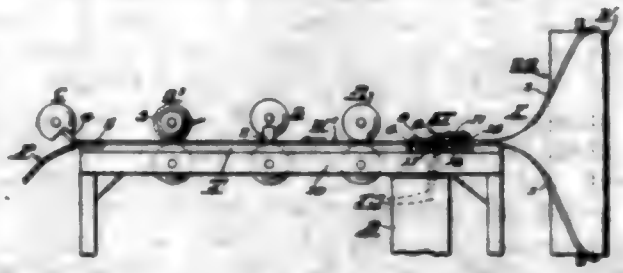
2,866,391
PANTOGRAPH MILLING MACHINE
Allen D. Gunderson, Racine, Wis., assignor to George Gorton Machine Co., Racine, Wis., a corporation of Wisconsin
Original application January 31, 1955, Serial No. 484,992. Divided and this application May 21, 1957, Serial No. 660,647
14 Claims. (Cl. 90—62)



1. In combination, a master plate provided with a master recess therein forming a master surface therealong; a tracer member in said recess mounted for movements in tracing engagement with and along said master surface; a driving chain mounted in said master plate for movements through and constrained to a path spaced from and along said master surface; a carriage coupled with said driving chain for movements thereby and therewith along said path of movements of said driving chain; means coupling said carriage with said tracer member for movements of the latter by said carriage along said master surface in tracing engagement therewith; and powered means in driving connection with said driving chain.

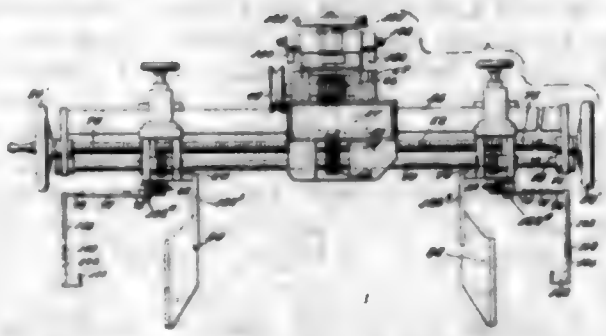
2,866,392
POUCH MANUFACTURING MEANS AND METHOD
Gus Stephen Scarvelis, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application July 25, 1956, Serial No. 600,040
15 Claims. (Cl. 93—8)

1. In a pouch manufacturing means for folding a flexible web upon itself along a substantially central line to form a two-ply web and for disposing the free longitudinal edges of the two plies substantially in alignment, means for sealing longitudinally spaced transverse areas of the two plies of said two-ply web together, means for transversely cutting the sealed two-ply web through the sealed-together areas of said plies, and means for longitudinally advancing said two ply web; separating means between said folding means and said seaming means for



separating the free longitudinal edges of the two plies of the advancing two-ply web, upper trimming means over said edge separating means in position for trimming the uppermost of the separated ply edges on a straight longitudinal line, and lower trimming means under said edge separating means and spaced laterally from said upper trimming means in position for trimming the lowermost of said separated edges on a straight longitudinal line spaced laterally from the aforesaid line.

2,866,393
BOX FOLDING EQUIPMENT
Clayton J. Kemp, Whitefish Bay, Wis.
Application February 3, 1955, Serial No. 485,916
17 Claims. (Cl. 93—49)



2. In folding mechanism for corrugated board, a folding arm, pins on the outer end of the arm directed toward the edge of the corrugated board, mechanism for moving the pins into the edge in the plane of the corrugated board to insert the pins in the board parallel to said plane, mechanism for swinging the arm, mechanism for retracting the pins from the edge by motion in the plane of the adjoining portion of the corrugated board, a housing movable along the corrugated board, screws means for advancing and retracting the housing, and pivotal means for mounting the housing, the mechanism for advancing and retracting the pins and swinging the arm being mounted on the housing.

2,866,394
CONCRETE SCREED
William O. Smith, Leighatchee, Ala.
Application December 15, 1954, Serial No. 475,380
3 Claims. (Cl. 94—45)

1. A concrete pavement machine comprising spaced pairs of supports, a truss secured to said supports, a lower chord member depending from said truss and centrally disposed between said pairs of supports, said lower chord member extending parallel to said supports, a pavement smoothing screed movably carried by said lower chord member and depending therefrom, and means for reciprocating said screed, said screed includ-

and having a first circumferential slot, said winding drum

heat through the louvers into the room space, said forced

ing a spaced pair of channel members, a channel-shaped smoothing member vertically adjustably depending from said channel members and roller means mounted on said pair of channel members engaging said lower chord mem-

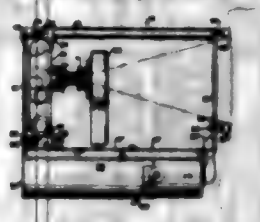
ber, said roller means comprising side rollers engaging the sides of said chord member, and upper rollers and lower rollers engaging the top and bottom surfaces respectively of said chord member.

2,866,393

CAMERA APPARATUS ESPECIALLY ADAPTED FOR THE PHOTOGRAPHIC IDENTIFICATION OF HORSES

James J. Manning, Floral Park, N. Y.

Application April 6, 1956, Serial No. 576,666
7 Claims. (Cl. 95—11)



1. A camera apparatus especially adapted for use in a system for the photographic identification of horses comprising a camera, a frame structure, means at one end of said frame structure for rigidly but removably mounting said camera with the lens opening thereof directed toward the other end of said frame structure, a masking plate rigidly mounted at the said other end of said frame structure and having an opening of predetermined size and shape in front of said lens opening, a light source carried at the front of said camera and adapted when energized to direct light through the opening in said masking plate, a high-voltage power supply for said light source, a housing for said power supply mounted on said frame, a plurality of bumpers of insulating material secured to said masking plate and extending forwardly therefrom, and means to adjust the position of said bumpers relative to said camera.

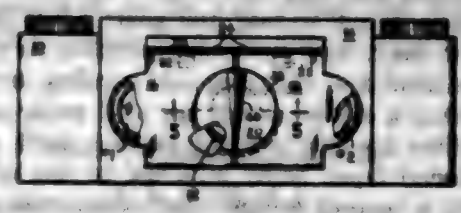
2,866,396

LENS CAP ARRANGEMENT FOR STEREO CAMERAS

Harry J. Collins, Milwaukee, Wis., assignor to Richard P. Herzfeld, Milwaukee, Wis.

Application December 13, 1956, Serial No. 628,100
10 Claims. (Cl. 95—18)

1. A stereo attachment comprising a pair of lens caps adapted to be pivotally mounted on a camera for movement between the lens capping position and an open position, said lens caps being movable independently of one another, and means for coupling the lens caps together for conjoint movement, said coupling means comprising a member intermediate the two lens caps and adapted to overlie the viewing lens of a stereo camera, said intermediate member having a first position in which it couples the lens caps and being movable with the lens caps when



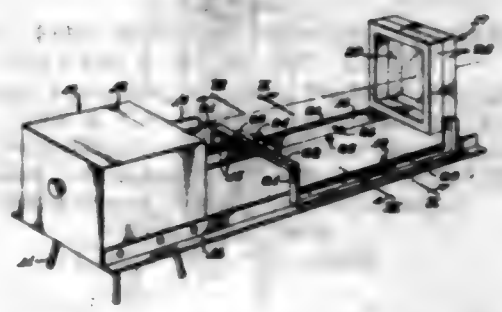
they are coupled for conjoint movement, said intermediate member being movable to second and third positions in which the intermediate member is coupled to and movable with only one or the other of the lens caps.

2,866,397

MEANS FOR MAKING COMPOSITE PICTURES

Edwin Gillette, Los Angeles, Calif.

Application August 28, 1954, Serial No. 451,158
3 Claims. (Cl. 95—36)



1. In an apparatus for making a composite picture utilizing matte cells and a single film negative having component film portions exposable at different locations and precisely matched on said single film, the combination of: a camera means including viewing means provided with optical alignment reticule elements and laterally spaced magnification alignment reticule elements; a matte cell frame means supported from said camera means and spaced at a distance from said viewing means whereby delineation of a portion of a scene being viewed may be outlined by a cameraman simultaneously viewing the scene through the viewing means, said matte cell frame means including registration pins; a transparent alignment cell positioned on said registration pins and including optical alignment reticule elements and magnification alignment reticule elements; and adjustment means for said matte cell frame means whereby said reticule elements on said alignment cell may be visually aligned with corresponding reticule elements on the viewing means to precisely position said matte cell frame means with respect to said camera means whereby a matte cell positioned on said cell frame means may precisely mask its respective component film portion.

2,866,398

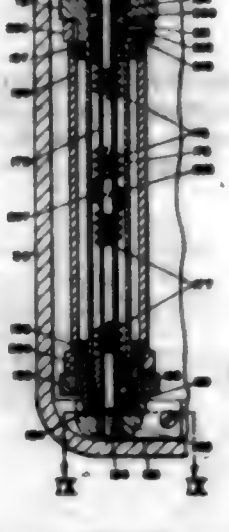
CURTAIN SHUTTER AND SUPPORTING STRUCTURE THEREFOR

John A. Maurer, Jr., New York, N. Y., assignor to J. A. Maurer, Inc., Long Island City, N. Y., a corporation of New York

Application March 9, 1953, Serial No. 341,237
4 Claims. (Cl. 95—57)

1. A curtain shutter structure including, in combination, a main curtain having an exposure slit; a capping curtain comprising four tapes, two of said tapes extending in one direction and the other two extending in the opposite direction; a winding drum for said main curtain; two winding rollers for said capping curtain, each of said first mentioned two tapes being attached to one of said winding rollers; a first hollow shaft connecting said winding rollers

and having a first circumferential slot, said winding drum being rotatable about said first hollow shaft; a first gear carried by said first hollow shaft adjacent to one of said winding rollers; a first shaft rotatably supporting said winding rollers and said first hollow shaft and carrying a second gear adjacent to said first gear; a first pin attached to said first shaft, said first pin extending at right angles to said first shaft and engaging said winding drum through said first slot; a driving drum for said main curtain; two driving rollers for said capping curtain, each of said two last mentioned tapes being attached to one of said driving rollers; a second hollow shaft connecting said driving rollers and having a second circumferential slot, said



driving drum being rotatable about said second hollow shaft; a second shaft rotatably supporting said driving rollers and said second hollow shaft; a first coiled spring having a first end and a second end, said first spring surrounding said second shaft, said first end being attached to said second shaft and said second end engaging said second hollow shaft; a second coiled spring having a third end and a fourth end, said second spring surrounding said second shaft and said third end being attached to said second shaft; and means rotatable about said second shaft and carrying a second pin which extends at right angles to said second shaft, said means being engaged by said fourth end and said second pin engaging said driving drum through said second slot.

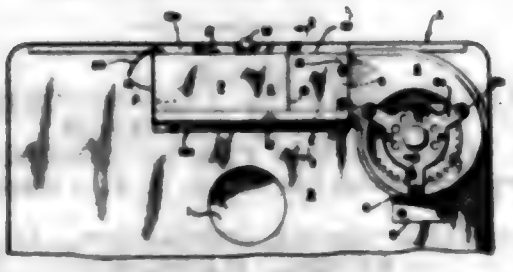
2,866,399

BLOWER UNIT FOR HEATERS

Harry E. Thompson, Steubenville, Ohio, assignor to The Ohio Foundry & Manufacturing Company, Steubenville, Ohio, a corporation of Ohio

Application October 29, 1956, Serial No. 618,872

2 Claims. (Cl. 98—39)



1. A space heater, comprising, in combination, a heater cabinet having louvered top and front walls for the normal emission of heat by gravity and a back wall having a knock-out opening, a prefabricated forced air unit in the form of an attachment to the back wall at said knock-out opening for converting said heater cabinet from a gravity heater into a forced air heater directing heat through the louvers into the room space, said forced air unit comprising, a blower having an air inlet and outlet, an elongated duct extending parallel to said heater back wall having one end open and its opposite end closed, a longitudinal side wall of said duct being bent to form an upwardly and outwardly inclined baffle wall, means for mounting the outlet of the blower on the open end of the duct with the impeller axis of the blower extending at right angles to said baffle at the side wall of said duct, means for mounting said duct and blower on the back wall of said heater so that the inclined side wall of the duct projects through said knock-out opening in said rear wall, a baffle extending transversely of the duct from the back wall to the inclined wall and having its upper and lower edge portions spaced from the top and bottom walls of the duct, said baffle disposed between the open and closed ends of the duct to provide a main forced air receiving compartment, and a secondary compartment connecting with the main compartment through said space between the upper and lower edge portions of the baffle, and manual and automatic electrical control means in said secondary compartment.

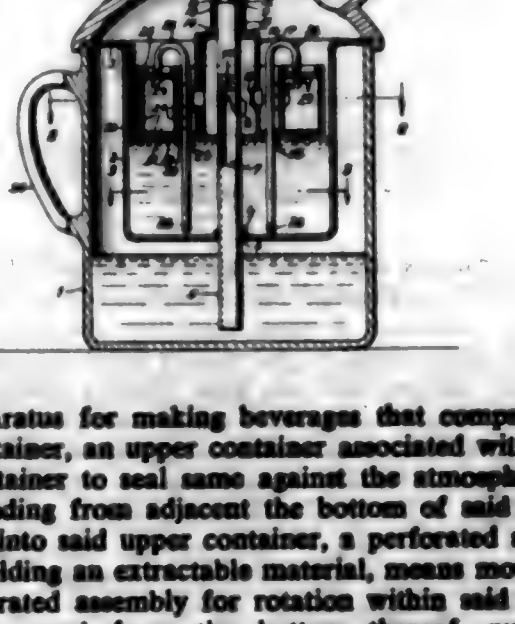
2,866,400

APPARATUS FOR MAKING BEVERAGES

Boyd Cornelison, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Application July 28, 1954, Serial No. 444,517

5 Claims. (Cl. 99—308)



1. Apparatus for making beverages that comprises a lower container, an upper container associated with said lower container to seal same against the atmosphere, a tube extending from adjacent the bottom of said lower container into said upper container, a perforated assembly for holding an extractable material, means mounting said perforated assembly for rotation within said upper container spaced from the bottom thereof, pumping means adapted to circulate fluid from the bottom of said upper chamber to the top of said perforated assembly responsive to rotation of said perforated assembly, and means for rotating said perforated assembly including a jet orifice defined by an opening in said tube and a series of blades on said perforated assembly surrounding said tube and in alignment with said jet orifice.

2,866,401

COFFEE MAKER

Philip A. Sidell, Chippewa Falls, Wis., assignor to National Presto Industries Inc., Eau Claire, Wis., a corporation of Wisconsin

Application October 29, 1954, Serial No. 465,611

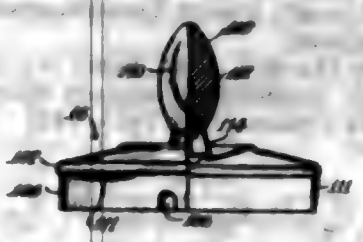
2 Claims. (Cl. 99—313)

1. In a coffee making device embodying a fluid container having a percolator well, an opening spaced over said well and marginal portions about said opening, the

frame in juxtaposition and providing for flat stock a sup-

by selected actuating means become effective to operate

combination of a lid to cover said opening which has a depending flange to extend into said opening, said flange having peripherally extending spaced slits therein, and the material of the flange below said slits being deflected outwardly for frictionally gripping said marginal portions of the container about said opening to detachably hold

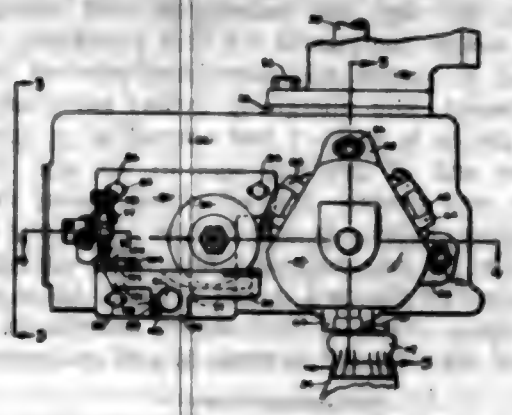


the lid in place thereon, a coffee basket having its upper margin detachably secured to said depending flange, and a percolator tube extending through said basket and carried thereby, said percolator tube being adapted for location over the percolating well, and said lid, coffee basket and tube being adapted to be assembled with and removed from said device as a unit.

2,866,462
APPARATUS FOR PRINTING CLOSURES ON CONTAINERS

Vincent W. Jeneraki, Solvay, and Isaac L. Wilcox and Herman Pooch, Fulton, N. Y., assignors to Sealright-Oswego Falls Corporation, Fulton, N. Y., a corporation of New York

Application October 3, 1953, Serial No. 383,830
3 Claims. (Cl. 101—35)



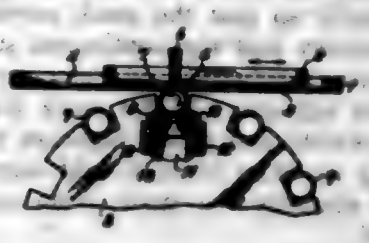
1. Apparatus for printing closures on an advancing procession of containers comprising a printing element movable downwardly in a vertical plane into printing engagement with the closure on the top of each container advancing in said procession, a closure probe pivotally mounted at its upper end to said printing element and depending vertically therefrom for free swinging movement in one direction, a stop carried by the printing element for restraining movement of said probe in the opposite direction, said probe being positioned to enter the open end of a container without a closure and being provided with a transversely extending member engageable with the top edge of the container, said member being mounted on the probe in vertical alinement with the pivot thereof whereby said printing element is supported by said probe out of engagement with the container top.

2,866,483
SCREEN PRINTING MACHINES

Ehrenfried Zimmermann, Bünde-Südlengern, and Werner Hennings, Bünde-Ennigloh, Germany, assignors to Binder-Glas G. m. b. H., Bünde-Westphalia, Germany, a German company

Application October 5, 1953, Serial No. 385,694
Claims priority, application Germany June 6, 1953
5 Claims. (Cl. 101—115)

1. A color screen printing machine for printing work pieces, comprising horizontally reciprocable frame, a saggable screen carried by said frame, squeegee means mounted above and associated with said screen member means in constant relative position with respect to said frame in the vertical direction, means for conveying work pieces in proximity to the said screen, the said squeegee means being disposed to engage the said screen when the

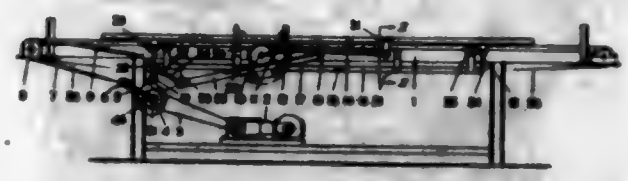


said pieces are operably engaged with the said screen to permit the flow of color fluid therethrough and onto the said work piece, and to become disengaged from the said saggable screen in the absence of said work piece with no resulting color flow from the said screen as a result of sagging thereto.

2,866,484
MACHINE FOR SCREEN PRINTING STEPWISE MOVABLE WEBS OF CLOTH

Robert Ronald Lauppman, Wychen, Netherlands, assignor to Gebr. Stork & Co's Apparatenfabriek N. V., Amsterdam, Netherlands, a corporation of the Netherlands

Application February 11, 1957, Serial No. 639,281
Claims priority, application Netherlands February 15, 1956
1 Claim. (Cl. 101—123)

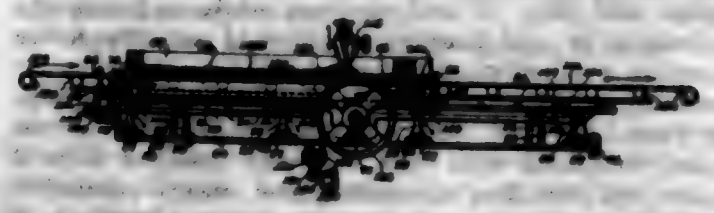


A machine for screen printing a web of cloth movable step by step, comprising at least one squeegee, a mechanism for continuously reciprocally driving said squeegee at a non-uniform speed through an even number of inoperative strokes and a subsequent number of operative strokes less than said number of inoperative strokes, a shaft for driving said squeegee driving mechanism, a liftable screen support along which said squeegee is driven, means for lifting said screen off the web of cloth and for lifting said squeegee from said screen support during the movement of the web of cloth, and for subsequently lowering said screen support onto the web and said squeegee onto said screen support, said lifting means comprising a rotatable element on said shaft, and a transmission mechanism connected between said shaft and said mechanism for alternating an even number of short inoperative squeegee strokes with a number of longer operative squeegee strokes less than said even number.

2,866,485
SILK SCREEN STENCILLING MACHINE

James A. Black, Grand Rapids, Mich.

Application February 24, 1955, Serial No. 490,276
17 Claims. (Cl. 101—126)



2. In a silk screen stencilling machine: a frame; alternating drum elements and rail elements mounted on the

frame parts, a second set of rotary printing machine apart and respectively in contact with the said hard sur-

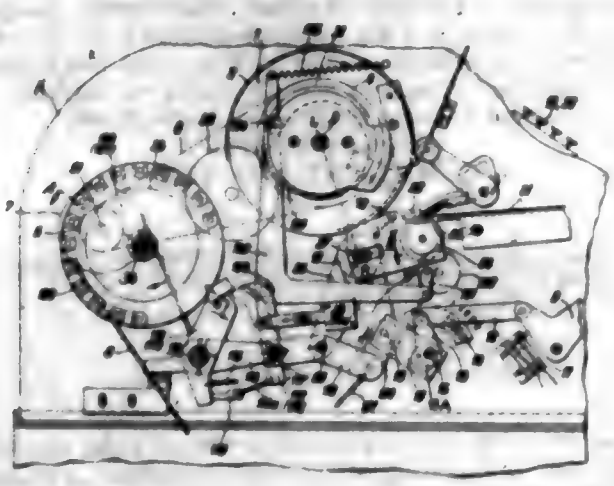
frame in juxtaposition and providing for flat stock a supporting surface in a plane tangential to the drum elements and coincident with the flat surfaces of the rail elements; means on one of said elements for effecting continuous adherence of flat stock thereto during the processing of said stock; means for simultaneously rotating the drum elements and for moving the rail elements horizontally so that the stock carried thereby is moved progressively past the continuous supporting line of tangency existing between said elements; a silk screen stencil mounted adjacent said flat stock for coordinated movement therewith; and means adjacent the stencil for forcing coating material through said stencil onto said stock directly opposite the stock from said tangential line of support.

2,866,406

ROTARY PRINTING APPARATUS FOR THE REPRODUCTION OF SECTIONS OF PRINTING FORMS

Wilhelm Ritzerfeld, Berlin-Dahlem, and Gerhard Ritzerfeld, Berlin-Grunewald, Germany

Application November 7, 1956, Serial No. 620,939
Claims priority, application Germany November 8, 1955
31 Claims. (Cl. 101—132.5)



1. In a printing apparatus for selective intermittent printing, in combination, a printing roll carried for rotation by said frame and adapted to have a printing form attached thereto; a counter roll supported on said frame for movement to and from a printing position in close proximity to said printing roll for pressing against said printing form a copy sheet passing between said rolls; a movable device supported on said frame and being connected to said counter roll for moving the same to and from said printing position; at least one rotary actuator connected to said printing roll for rotation therewith and including a set of angularly spaced actuating means, each actuating means being associated with a section of said printing form; coupling means including at least one feeler element and at least one coupling element movable between an inoperative position and a coupling position, one of said elements being connected to said movable device, and the other of said elements being successively engaged by said actuating means during rotation of said actuator, said movable device being actuated to move said counter roll to said printing position when said actuating means successively engage said other of said elements while said coupling element is in said coupling position; a selector device including a set of manually operated control means respectively associated with different sections of said printing form and with said actuating means, and circuit means connected with said manually operated control means and including electromagnetic means controlled by said manually operated control means for moving said coupling element to said coupling position thereof whereby selected actuating means become effective to operate said movable device for printing selected sections of the printing form.

2,866,407

ELECTRIC CONTROL SYSTEM

Walter Hachel and Felix Lentze, Warstein, Germany, assignors to Licentia Patent-Verwaltungs-G. m. b. H., Hamburg, Germany

Application March 2, 1956, Serial No. 569,126
Claims priority, application Germany March 4, 1955
14 Claims. (Cl. 101—181)

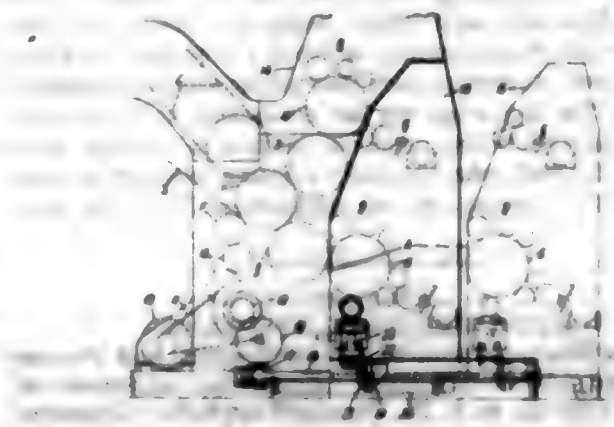
1. An electric control system for correcting misregister of the superimposed images of different color printed on a web by a plurality of printing rollers in a multicolor printing machine, said system comprising one impulse inducing means for each printing roller, at least one of said impulse inducing means being adapted for printing a succession of register indicia on said web; means for detecting the sign and amount of a misregister between the images printed by two of said printing rollers by scanning, and responding to the action of two of said impulse inducing means, electric energizing means responsive to said misregister detecting means depending on the sign and amount of said misregister, correcting means energizable by said energizing means and adapted to correct said misregister detected by said detecting means, said energizing means energizing said correcting means to make a first correction in excess of the amount and of opposite sign to the sign of said misregister, and electric delayed action means energizable by return currents in said electric energizing means in proportion to time and effecting, when energized, a second correction directed in the opposite sense to said first correction, said first and second corrections being functions of the sign and amount of said misregister.

2,866,408

TRANSMISSION DEVICE FOR ROTARY PRINTING MACHINES

Derek A. Stevenson, Leeds, England, assignor to R. W. Crabtree & Sons Limited, Leeds, England

Application September 26, 1955, Serial No. 536,608
Claims priority, application Great Britain October 1, 1954
10 Claims. (Cl. 101—219)



1. A rotary printing machine comprising two separate frame parts normally positioned relatively close to each other but being bodily separable, a first set of rotary printing machine components carried by one of said

primer to ignite said propellant and discharge said cartridge, and a member within said cylinder for retain- tainers, a combustion chamber in said casing surrounding

1. A color screen printing machine for printing work pieces, comprising horizontally reciprocable frame, a mating drum elements and rail elements mounted on the

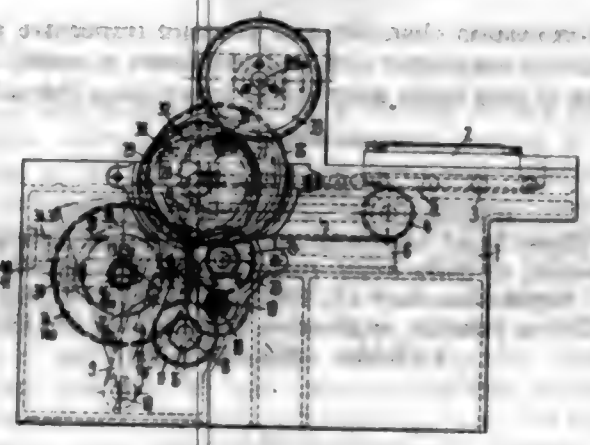
3. In a silk screen stencilling machine: a frame; alternate frame parts, a second set of rotary printing machine components carried by the other of said frame parts, a normal drive transmission comprising parts on each of said frame parts and normally holding the various components of said first and second sets of components in a predetermined relationship when said frame parts are in their normal relative positions, close to each other, said normal drive transmission being interrupted when said frame parts are bodily separated, and a supplementary transmission to hold the components of said sets of components in the predetermined relationship in all positions of separation of the frame parts when the normal transmission hold is interrupted.

2,866,409

ROTARY CYLINDER PRINTING MACHINE

Artur Buttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany, a corporation of Germany

Application May 25, 1956, Serial No. 587,278
Claims priority, application Germany April 7, 1956
6 Claims. (Cl. 101—232)



1. In a printing press having a base, a typebed reciprocable on said base, a rotable impression cylinder cooperating with said typebed and first drive means operative at a selected speed to drive and actuate all press mechanisms, the combination of second drive means actuated by said first drive means for rotating the impression cylinder unidirectionally at a variable speed, third drive means actuated by said first drive means for reciprocating said typebed at approximately the same variable speed as said impression cylinder, whereby said cylinder has a variable speed approximately synchronous with a variable linear speed of said typebed, and a cam-controlled differential drive operatively connected for completely synchronizing the speeds of the cylinder and the typebed during each impression period intermediate the ends of each impression stroke of the typebed thereby to cause the cylinder and typebed to be in exact registry during each of said impression periods.

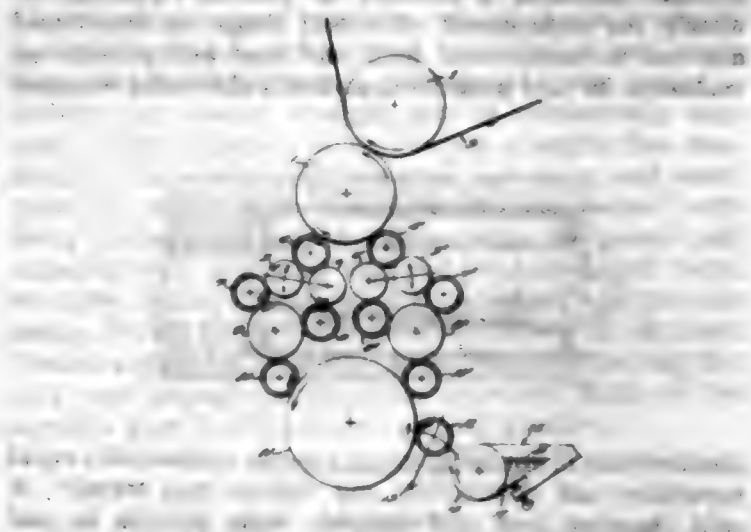
2,866,410

INKING MECHANISM

Charles A. Harlem, Riverside, Conn., assignor to R. Hoe & Co., Inc., New York, N. Y., a corporation of New York

Application February 27, 1952, Serial No. 273,748
3 Claims. (Cl. 101—350)

1. A printing mechanism comprising, in combination, a printing cylinder, an ink drum, first and second form rollers for inking the printing cylinder, and for each of the said form rollers a train of rollers for supplying ink from the ink drum to the form roller by two different paths, and comprising a pair of hard surfaced rollers spaced apart from each other and in contact with the form roller, and a pair of soft surfaced rollers, also spaced apart and respectively in contact with the said hard surfaced rollers, the various rollers on the said train being



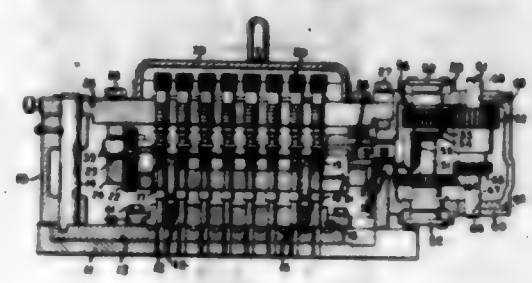
arranged for applying all the ink supplied through the two different paths to the cylinder by means of the form roller.

2,866,411

INK PUMPS FOR PRINTING PRESSES

Reginald Reed, Milton, Mass., and Emery W. Worthington, York, Pa., assignors to R. Hoe & Co., Inc., Bronx, N. Y., a corporation of New York

Application December 7, 1955, Serial No. 551,571
2 Claims. (Cl. 101—366)



1. In a printing machine ink pump, and in combination, an ink reservoir and pumping unit comprising a housing having ink passages formed in the bottom thereof, a cylinder plate having cylinder bores adapted to register with the said apertures for discharging ink therethrough, guides slidably mounting the cylinder plate in the reservoir for movement between an ink intake position and an ink discharge position, a supporting structure, pistons adapted to reciprocate in the said bores, means reciprocably mounting the said pistons on the said supporting structure, means for reciprocating the said pistons, also mounted on the said structure, and means removably mounting the said supporting structure in the reservoir, the said supporting structure having bores parallel to the cylinder bores and the cylinder plate having locating pins slidably received in the last said bores.

2,866,412

CYLINDRICAL OBTURATING CARTRIDGE

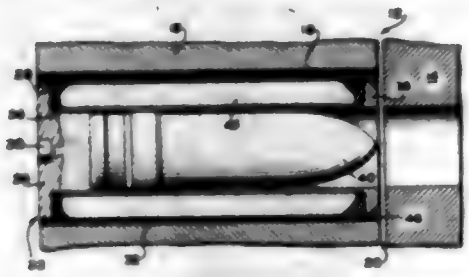
Arthur R. Meyer and John F. O'Brien, Springfield, Mass., assignors to the United States of America as represented by the Secretary of the Army

Application March 14, 1956, Serial No. 571,531
2 Claims. (Cl. 102—38)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A cartridge for a gun having a barrel and a chamber with a clearance space therebetween, comprising a propellant charge, a projectile, and an enclosing case for substantial axial coextension within the chamber and radial clearance therefrom including a cylinder, a base peripherally secured thereto and provided with a

coupling element to said coupling position thereof where- printing machine components carried by one of said

primer to ignite said propellant and discharge said cartridge, and a member within said cylinder for retaining said projectile and being provided with a flange, said cylinder including a forward lip portion extending inwardly for engagement with said flange to retain said member in engagement with said base and provide an enclosure for said propellant, said cylinder being wrapped



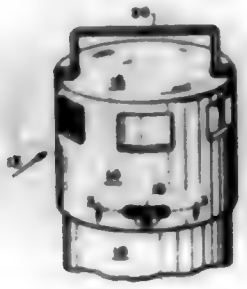
continuously in double layers to provide substantially equal expansion and contraction and oppose heat transfer to said chamber, and said member being slidable in said cylinder to project therefrom into engagement with the barrel to bridge said clearance space responsive to said discharge.

2,866,413

NON-PROPULSION ATTACHMENT FOR ROCKETS

Cass R. Rogemoen, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application August 4, 1953, Serial No. 372,487
3 Claims. (Cl. 102—49)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A thrust nullifier for use with a rocket of the type having a circumferential launcher retainer groove near its rear end, said nullifier comprising an integral member including a substantially cylindrical wall closed at one end by an end wall, a portion of said cylindrical wall adapted to telescope over the rear end of the rocket and over the retainer groove, an internal annular groove in said portion adapted to surround said retainer groove, an aperture through the cylindrical wall connecting with said grooves, a flexible member adapted to be threaded in either of opposite directions through the aperture and into said grooves to lie partly in each for preventing separation of the nullifier and rocket, and a plurality of angularly spaced apertures in the cylindrical wall through which gas from the rocket may issue in such radial directions that no substantial transverse forces are applied to the rocket, both ends of said flexible member being accessible through the aperture for removal of the flexible member.

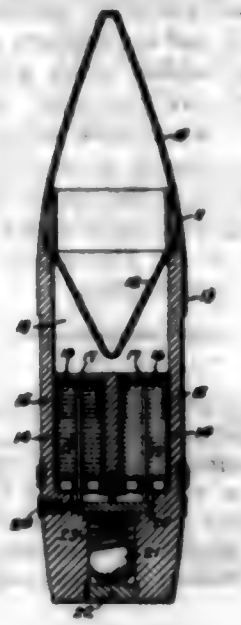
2,866,414

HYPERGOLIC ACTUATED SHAPED CHARGE

Donald P. Smith, Maryland Park, Md.

Application June 24, 1953, Serial No. 363,951
6 Claims. (Cl. 102—56)
(Granted under Title 35, U. S. Code (1952), sec. 266)

4. A shaped charge projectile comprising a casing, a cone fixed within said casing and having its base adjacent one end thereof, a plurality of containers formed within said casing, hypergolic fluids confined within said containers, a combustion chamber in said casing surrounding said cone, impact responsive means operatively associated with said containers to initiate intermixing of said fluids in



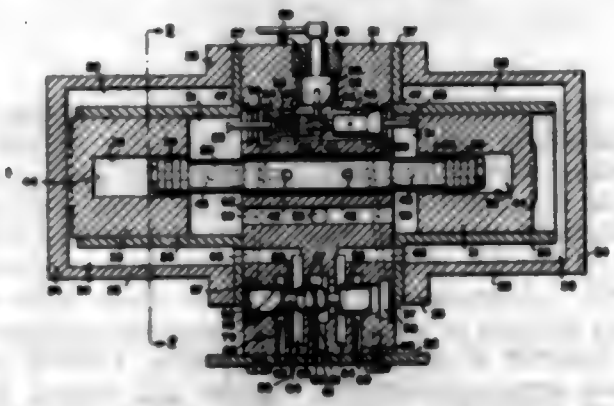
said combustion chamber, and pressure responsive means operatively associated with said containers to sustain intermixing of said fluids after initial intermixing thereof.

2,866,415

HYDRAULIC TRANSFORMERS

Carl Oscar Josef Munteliu, deceased, late of Stockholm, Sweden, by John Bratt, executor, Stockholm, Sweden

Application July 13, 1954, Serial No. 443,983
Claims priority, application Sweden July 15, 1953
7 Claims. (Cl. 103—49)



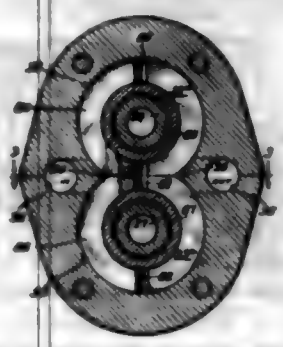
1. A hydraulic transformer for continuously transforming a supplied liquid stream into a liquid stream of different flow rate and pressure comprising two stationary cylinders, two pistons movable in said stationary cylinders and having cylinder forming bores, two stationary pistons each extending into one of said cylinder forming bores, means for alternatingly supplying a first pressure liquid to the other sides of each of said movable pistons to effect the piston working stroke, means for supplying a second pressure liquid to the cylinder forming bores in each of said movable pistons to effect the piston return stroke and to form upon the working stroke of its piston the transformed liquid stream, means for receiving the transformed liquid streams from both pistons, valve means restricting the transformed liquid flow to flow from said pistons to said receiving means, said second pressure liquid completing the return stroke of each piston before the other piston reaches the end of its working stroke, said first mentioned supplying means acting to supply the first pressure liquid to each piston before the other piston reaches the end of its working stroke and including means for supplying pressure liquid to each of the pistons before interrupting the supply thereof to the other piston in order

a laterally swivable switching arm disposed under said

ble with the mold remaining stationary and means for simultaneously lowering and rotating the mold whereby

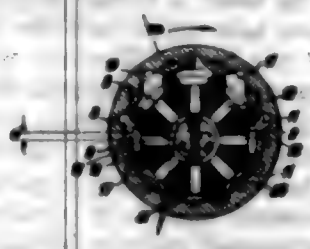
that in each operative position of the transformer the delivered transformed liquid stream shall be maintained substantially uniform in rate of flow as well as in pressure.

2,866,416
PRESSURE LOADED PUMP
Delbert S. Oliver, Euclid, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Original application June 16, 1950, Serial No. 168,622, now Patent No. 2,756,681, dated July 31, 1956. Divided and this application September 27, 1955, Serial No. 540,970
19 Claims. (Cl. 103—126)



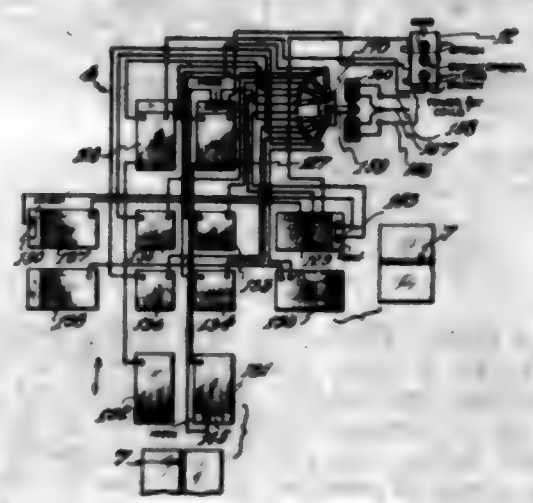
1. A fluid pump comprising a housing having a pump chamber formed therein, said housing having an inlet leading to and an outlet leading from said pump chamber, means including a rotatable member received in said pump chamber effective to force fluid from said inlet out of said housing through said outlet, means defining an axially adjustable end plate received in said pump chamber and having a first surface area subject to the pressures in said pump chamber and engageable with the adjacent side face of said rotatable member to provide a pumping seal therewith, a second surface area on said end plate facing away from said rotatable member, sealing means radially disposed on said end plate second surface area effective to divide said area into a plurality of segments isolated from each other, passage defining means effective to direct pressure liquid generated by said rotatable member to one segment of said second surface area when said rotatable member is rotated in one direction, passage defining means effective to direct pressure liquid generated by said rotatable member to another of said segments of said second surface when said rotatable member is rotated in the opposite direction, and means for preventing substantial angular movement of said sealing means irrespective of the direction of rotation of said rotatable member.

2,866,417
ROTARY PISTON MACHINE
Otto Nübling, Berlin-Frohnau, Germany, assignor to Hanomag Aktiengesellschaft, Hannover-Linden, Germany, a corporation of Germany
Application June 11, 1956, Serial No. 590,499
6 Claims. (Cl. 103—126)



1. A rotary piston machine comprising an inner gear and an outer gear, said gears meshing with each other and journalled eccentrically relative to each other, said inner gear having a plurality of external teeth and said outer gear having a plurality of internal teeth, the number of said external teeth being equal to the number of said internal teeth plus one more tooth, each of said teeth of one of said gears having a cycloid-shaped engaging face, and each of said teeth of the other of said gears disposed oppositely said cycloid-shaped teeth having a circular arc shaped engaging face of substantially constant radius, said circular arc shaped engaging face constituting the sole contact between said inner and outer gears, the entire crest of said circular arc shaped teeth being mounted for radial reciprocating movement and engaging said oppositely disposed cycloid-shaped teeth, whereby cocking of said crests is prevented and pressure means forcing said crests against the oppositely disposed contact surfaces of said other gear in such a manner that said crest engages continuously the tooth flank of the opposite gear during rotation of said machine.

2,866,418
SCALE MODEL DRIVEN ROAD VEHICLE AND ROAD
Emilion J. Petrick, Sr., Newark, N. J.
Application January 7, 1954, Serial No. 403,629
8 Claims. (Cl. 104—149)

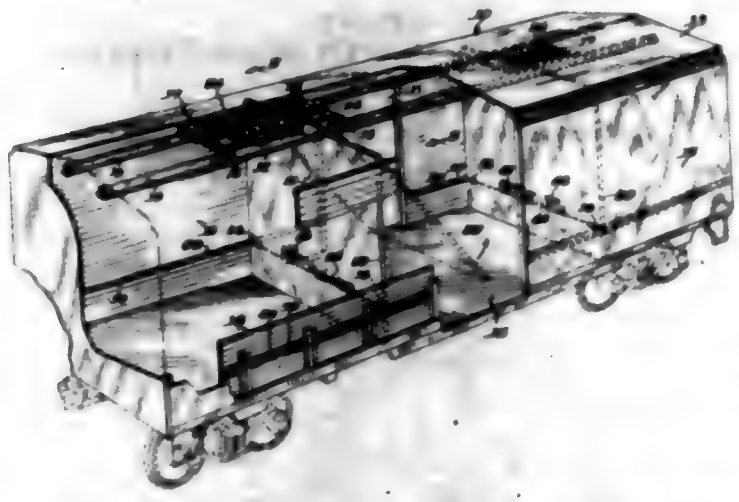


1. A road system for a driven scale model automotive vehicle provided with at least one swiveling axle and vertically directed guide means centrally attached to the bottom of said axle, comprising a joinable series of a pair of parallel plates disposed alongside each other substantially in the same plane and separated from each other, a uniform narrow air space disposed continuously between said plates for the entire length of the road system and serving as the separating means, a rigid insulating sheet base disposed under said plates and adapted to serve as a mounting therefor whereby an automotive vehicle may be driven on said plates with wheels straddling said air space, said air space being adapted to receive said guide means in a manner so that said guide means ride within said air space between said plates during the entire trip of said vehicle on said road system, each of said plates having downwardly directed sides which penetrate said base at the mounting of said plate, inwardly directed lips extending from the sides of said plate and bent under said base and adapted to serve as fastening means for said plate, and lips extending from the sides of said plate and bent inwardly over said base and adapted to serve as vertical limiting means for said base and as means forming a hollow space between said plate and said base.

2. A road system for electrically driven scale model automotive vehicles according to claim 1 in which said plates are disposed to form a merging intersection in which the air space between a row of straight parallel plates intersects a curved air space between other plates,

a laterally swivable switching arm disposed under said plates at said intersection, means for moving said arm laterally to effect switching of the guide means carried by a propelled vehicle from one air space to the other, electrical switching means to de-energize a plate on the switched-off road to stop vehicles traveling thereon and simultaneously energize a plate on the switched-on road and means coacting with said electrical connecting means adapted to provide correct polarity for the plates of the switched-on road.

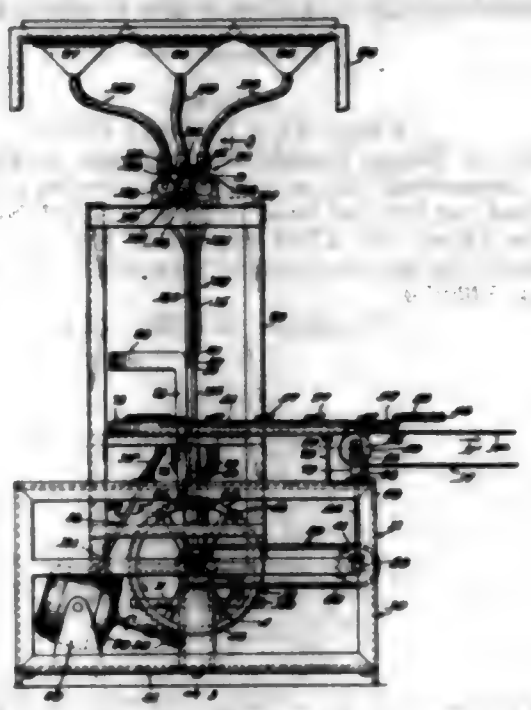
2,866,419
FREIGHT VEHICLE PARTITION
James E. Candlin, Jr., Hammond, Ind., assignor to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application May 28, 1953, Serial No. 357,991
17 Claims. (Cl. 105—376)



3. In a freight vehicle, side walls having inside lining, a roof, a pair of tracks positioned centrally of the roof and extending longitudinally of the vehicle and secured to the roof, a carriage movably mounted on the tracks, a partition having one end pivotally connected to the carriage, a pair of members spaced from the floor and extending longitudinally of the car and secured to the opposite side walls and each of the members being provided with spaced apertures, a pair of locking lugs movably mounted in the opposite sides of the partition adjacent the other end thereof, a handle carried by the partition and operatively connected to both of the locking lugs, and a plurality of springs connected to the carriage and the partition, the locking lugs being adapted to project into the apertures in the members when the partition is in a vertical position and movement of the handle in one direction withdrawing the locking lugs from the apertures and the springs urging the partition upwardly into a substantially horizontal position beneath the tracks and adjacent the roof and each locking lug being adapted to rest upon the top of the inside lining on each side wall to hold the partition in the substantially horizontal position.

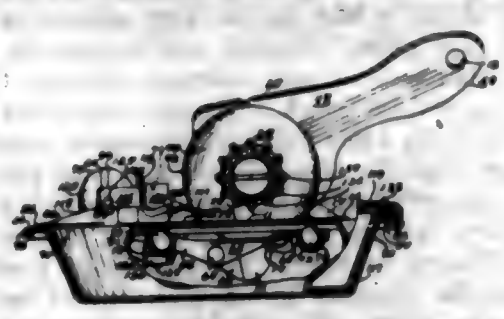
2,866,420
ICE CREAM STICK MACHINE
William A. Nutty, Chicago, Ill.
Application May 11, 1950, Serial No. 161,438
15 Claims. (Cl. 107—1)

1. Apparatus for generating a molded comestible with spiral layers of comestible material comprising means for ejecting streams of comestible, a mold adapted to receive the streams of comestible, means for positioning the mold in stream receiving relation with respect to the means for ejecting the comestible including a support for the mold adapted to be raised and lowered, means for raising the support with respect to the means for ejecting the comestible with the mold remaining stationary and means for simultaneously lowering and rotating the mold whereby



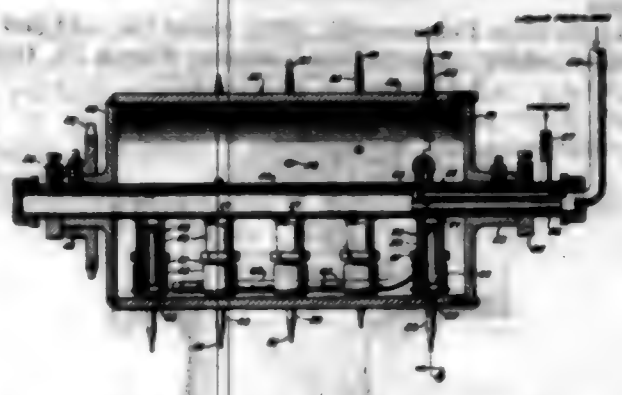
spiral layers of the ejected streams of the comestible are formed within the mold.

2,866,421
HORIZONTAL PIE CRIMPER
Wallace M. Houldsworth, Royal Oak, Mich.
Application August 26, 1952, Serial No. 306,439
26 Claims. (Cl. 107—48)



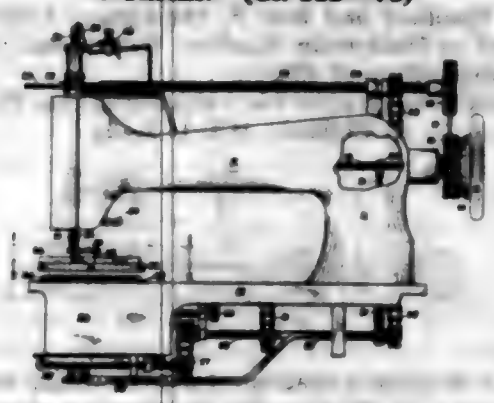
1. In a culinary utensil for the purposes described, including a normally balanced undercarriage forming a lower part, and a forward member having a contoured ridge forming an advanced part therewith, an arcuate fork shaped frame with a horizontal bearing portion connecting the lower ends of its side portions, the junction of said side portions terminating in an upright plate projecting in offset relation and facing in the general direction that the side portions extend, the upright plate having an elongated vertical aperture and a stub shaft movably mounted in said aperture, a retainer plate larger than said aperture securely mounted on the shaft adjacent the outside surface of the upright plate, the shaft extending laterally from the upright plate in the general direction of the side portions of the frame and in spaced relation therefrom, a wheel mounted for rotation on the extended end of the shaft, a handle pivotally mounted on said shaft between said wheel and the upright plate, a lower portion of the handle disposed operably through the aperture formed by the formation of the frame, and projecting beneath the bearing portion with the normally balanced undercarriage pivotally secured thereto in spaced relation below said bearing portion, the handle providing co-operative means of vertical movement in relation to the elongated aperture through leverage, the shaft carrying means of positioning the suspended wheel in at least one specific height above the bearing portion, the upright plate providing means of frictional engagement for holding the handle neutrally.

2,866,422
SOIL-TREATING APPARATUS
Raymond L. Colson, Long Beach, Miss.
Application April 19, 1956, Serial No. 579,296
12 Claims. (Cl. 111—6)



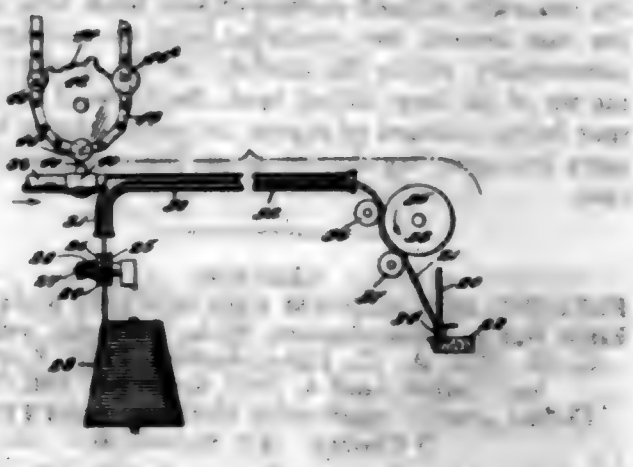
1. An apparatus for injecting soil-treating fluid material into the ground below the surface thereof which comprises a frame, a drum rotatably connected to said frame for rolling contact with the surfabe of the ground, said drum having a plurality of openings extending outwardly from an interior surface thereof, said openings being circumferentially spaced around the peripheral surface of said drum in a row normal to the axis thereof, a plurality of fluid conducting tubes connected to said openings and projecting outwardly from said drum for ground penetration and withdrawal during rolling of said drum, a fluid material supply pipe carried by said frame and connectable to a source of fluid material under pressure, said pipe extending axially within said drum, and a conduit connected to said pipe to receive fluid material therefrom and extending radially downwardly therefrom, said conduit being non-rotatable relative to said frame and having an outlet portion slidably engaging in sealing relationship said interior surface of said drum at the lower portion of the path of rotation thereof, said outlet portion being radially aligned with said openings to direct fluid to each tube while it is passing said outlet portion during rolling of said drum.

2,866,423
CHENILLE SEWING MACHINE
Erby L. Pessons, Chattanooga, Tenn., assignor to Broad Street Machine Company, Chattanooga, Tenn., a partnership
Application September 13, 1954, Serial No. 455,652
4 Claims. (Cl. 112—78)



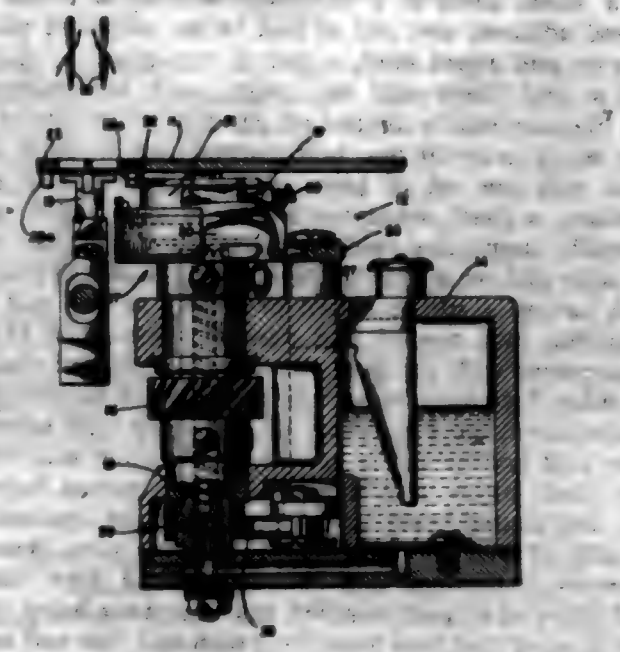
2. A machine for forming chenille patterns on a fabric comprising a base, a ring having friction means for holding a portion of said fabric in taut condition and rotatably mounted in said base, an annular presser foot adapted to cooperate loosely with the friction means on said ring in holding said portion of fabric on said ring, said presser foot remaining stationary while said ring rotates said portion of fabric, means for raising and lowering said presser foot relative to said ring, a reciprocable needle bar having its longitudinal axis fixed and spaced from the rotational axis of said ring, said needle bar carrying a needle offset from its longitudinal axis and mounted for reciprocation through said fabric within the confines of said annular presser foot, and means for simultaneously revolving said needle about the longitudinal axis of said needle bar, reciprocating said needle bar and continuously rotating said ring about its center.

2,866,424
CONTROL OF PILE HEIGHT IN NEEDLING
Charles H. Masland 2d, Carlisle, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania
Application September 29, 1953, Serial No. 383,810
8 Claims. (Cl. 112—79)



1. The method of feeding pile yarn ends to pile forming machines having multiple loop formers, which comprises feeding a plurality of pile yarn ends each through its own tube to an associated pile loop former to form pile projections, introducing a separate stream of gas into each tube around the pile yarn at a point located before the yarn arrives at the loop former and regulating the gas stream in one tube with respect to the gas stream in adjacent tubes by pattern control, thereby to provide for varying the lengths of yarn fed to the loop formers during the pile forming operation.

2,866,425
LOCKSTITCH SEWING MACHINES
Richard G. Palmtech, Lombard, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Application June 14, 1955, Serial No. 515,514
6 Claims. (Cl. 112—182)



1. In a lockstitch sewing machine having a horizontally disposed work supporting surface, a thread carry-

ing needle reciprocable through said surface, a cup-like rotary hook cooperating with said needle in stitch formation mounted for rotation below said surface about a vertical axis, and driving means for reciprocating said needle and rotating said hook and arranged to impart two revolutions to said hook for each reciprocation of said needle, a loop seizing beak on said hook the top portion of the outer surface of which is inclined inwardly toward the axis of the hook, said beak merging on its lower side with a loop retaining shoulder at the base of the beak and adjacent the bottom of the hook, said needle during its reciprocation passing outside of the circular path of the tip of the loop seizing beak, a bobbin case mounted within said rotary hook and extending upwardly therefrom and a spur extending outwardly from the inwardly inclined surface of said hook beak adjacent the base thereof, the outermost point on said spur being substantially within the confines of the circular path of the tip of the loop seizing beak, the forward side of said spur being arranged to engage the needle thread loop and carry the upper leg thereof across the top of said bobbin case.

2,866,426

FEEDING MECHANISM FOR SEWING MACHINES

Erich Wrase, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A. G., Kaiserslautern, Pfalz, Germany

Application April 4, 1957, Serial No. 650,775
Claims priority, application Germany April 17, 1956
5 Claims. (Cl. 112—214)

1. Feeding mechanism for sewing machines of the type having a base plate, a standard, a feeding wheel mounted on a wheel shaft in a vertically adjustable frame supported adjacent one end of and below said base plate, a gear on said wheel shaft, a pair of transmissions disposed end to end below said base plate, each comprising two sets of gears axially aligned on parallel hollow shafts with one set of gears of one said transmission in axial alignment with one set of gears of the other of said transmissions, a shaft connected to one of said hollow shafts pivotally supporting said frame and a drive gear meshing with said wheel gear, a first and a second shifting bar each having a spring biased draw key at one end each extending into one of said parallel shafts, one key for engagement with the gears of one said transmission and the other for engagement with the gears of the other said transmission, the other ends of said draw bars extending from said hollow shafts proximate the other end of said base plate below said standard, setting means including first and second concentric setting members mounted externally of said standard and connecting gear extending respectively between said first and second draw bar and said first and second member, said members being operative to move said keys associated with said first and second bars into engagement with selected gears of said transmission as indicated on said setting means.

2,866,427

LOOPER THREAD TAKE UP FOR DOUBLE CHAIN STITCH SEWING MACHINES

Walter Irmscher, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A.-G., Kaiserslautern, Pfalz, Germany

Application February 27, 1957, Serial No. 642,809
Claims priority, application Germany March 17, 1956
2 Claims. (Cl. 112—242)

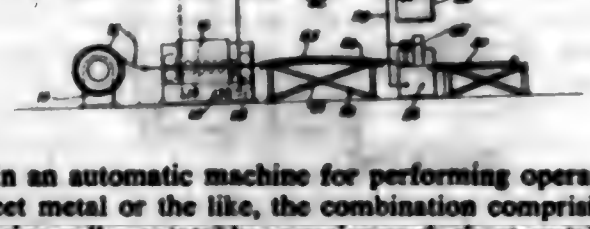
1. Looper thread take up mechanism for guiding the thread for a double chain stitch sewing machine of the type having a main shaft carrying a first bevel gear, said mechanism comprising a templet disposed externally of the housing of the machine substantially horizontally above the upper side thereof, a vertical shaft extending through the upper side of the housing operatively supporting said templet at its upper end in horizonal position and having a second bevel gear at its lower end in driving engagement with said first bevel gear, a forked lever having a pair of parallel arms mounted proximate the forward end of the housing and provided at their free ends with registering thread guiding aperatures disposed when in operative position proximate the circumference of said templet and joined at their other ends to form a pivot member, a pin secured to the upper side of the machine housing supporting said lever at said pivot member for horizontal movement relative to said templet, a detent aperture in the lower of said arms proximate said upper side of said housing intermediate the thread guiding aperture in said lower arm and said pivot member and a spring biased detent pin mounted in said upper side extending perpendicularly of said lower arm for engagement with said detent aperture.

2,866,428

AUTOMATIC SHEET METAL GAUGING AND WORKING MACHINE

Harry E. Staufield and Ivar B. Dahlstrom, Chicago, Ill., assignors to Dahlstrom Machine Works, Inc., Chicago, Ill., a corporation of Illinois

Application September 12, 1955, Serial No. 533,718
13 Claims. (Cl. 113—1)



1. In an automatic machine for performing operations on sheet metal or the like, the combination comprising a measuring roller rotatably engaging such sheet metal, rotatable generator means actuated by the rotational movement of said measuring roller, said generator emitting a predetermined number of impulses per revolution of said measuring roller, reciprocally movable clamp means disposed adjacent the path of such sheet metal and movable to a clamping position in said path, counter means actuating said clamp means upon receiving a predetermined number of impulses from said generator means, a limit switch disposed on said clamp means, said limit

prising a body having an open ended chamber adjacent one end thereof, a snap diaphragm normally bowed outward and extending across the open end of said chamber,

moving means and controlled by said first fluid pressure means for controlling the operation of said gun with respect to the relative position of said article, manual

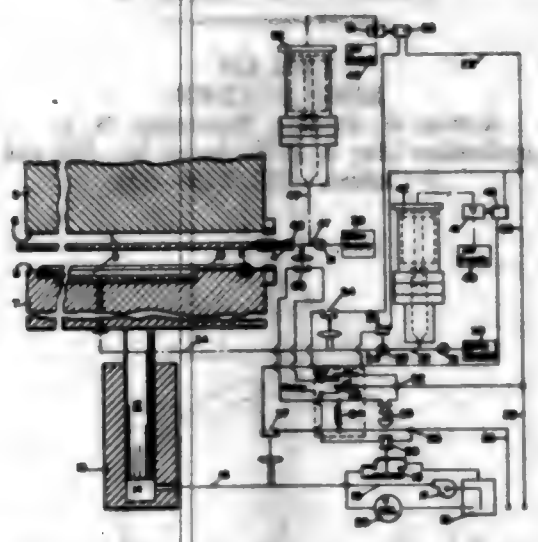
switch being actuated when said clamp is moved to the clamping position, and sheet metal working means disposed adjacent the path of such sheet metal actuated by said limit switch.

2,866,429

SEMI-AUTOMATIC APPARATUS FOR EXPANDING A PRESSURE WELDED PASSAGEWAY PANEL

Paul R. Staples, Louisville, Ky., assignor to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware

Application December 9, 1955, Serial No. 552,185
1 Claim. (Cl. 113—44)



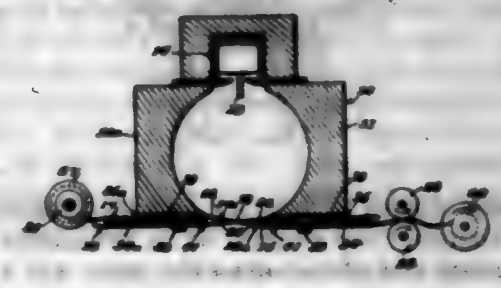
An apparatus for expanding certain unbonded portions of a pressure welded passageway panel on one side or face of the panel comprising: a pair of dies relatively movable between open and closed positions, said dies being adapted to receive a panel in the open position and to limit the outward expansion thereof in the closed position, one of said dies having a holding chamber which, in the closed position of the dies, is covered by the one adjacent face of an interposed panel, said holding chamber being large enough lengthwise and widthwise to embrace said one face over the expansion area containing said unbonded portions which are subsequently to be expanded into the holding chamber and being dimensioned depthwise to limit the expansion to a predetermined extent whereby variations between the unbonded portions of the panel faces may be accommodated, the other die having flush face-to-face engagement with the other face of said panel over an area corresponding to said expansion area; a hydraulic jack for moving one of said dies; a die conduit connected to the jack for transmitting die closing liquid thereto; a holding conduit connected to the holding chamber for transmitting panel holding liquid thereto; an expansion conduit adapted for connection to a panel for transmitting panel expanding liquid to its unbonded portions; means operating, when manually actuated, to supply die closing liquid under pressure to the die conduit; means operating, when automatically actuated in response to a predetermined die-closing liquid pressure, to supply panel holding liquid to said holding chamber through said holding conduit under a predetermined holding pressure exerted against said one face for the purpose of maintaining said corresponding area of said other face in flush face-to-face engagement with said other die during subsequent expansion; means operating, when automatically actuated in response to a predetermined panel-holding liquid pressure, to supply panel expanding liquid to the interior of said panel through said expansion conduit under a predetermined panel-expanding liquid pressure sufficient to expand said unbonded portions on said one face into said holding chamber against said holding pressure therein but insufficient to expand the corresponding unbonded portions on said other panel face while such portions are held in said flush engagement with said other die by said holding pressure; and means operating, when automatically actuated in response to a predetermined panel-expanding liquid pressure, to release said die-closing, panel-holding and panel-expanding pressures.

2,866,430

CAN BODY SIDE SEAM WIPING MEANS

George M. Flynn, Oak Park, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application November 23, 1955, Serial No. 548,933
4 Claims. (Cl. 113—97)



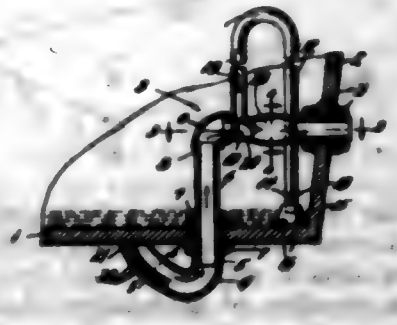
1. In a can body side seam soldering machine, a soldering horn along which the can bodies are progressively advanced with their freshly soldered side seams presented downwardly, a transverse wiping wire directly under the path of the can bodies and positioned to wipe excess solder from the seam zones of the advancing cans, means at one side of said horn for slowly pulling the wire longitudinally, and means at the other side of said horn for sufficiently resisting the pull upon the wire as to cause tensioning of the latter to wiping condition.

2,866,431

AUTOMATIC BAILERS

Leslie Conover, Somers Point, N. J.

Application April 22, 1957, Serial No. 654,369
2 Claims. (Cl. 114—183)



1. In combination with a boat having a transom together with a self-bailing means, said self-bailing means comprising an elbow having slots in its forward face and adapted to extend beneath the bottom of the boat; an inlet tube registering with the elbow; a second elbow at the top of the inlet tube and a Venturi outlet tube registering therewith and adapted to pass through the transom of the boat and above the water line; an entraining tube extending in a higher plane than that of the outlet tube, its forward end extending within the outlet tube, and the lower end of the entraining tube extending to the bottom of the boat to thereby entrain any water from the bilge when the boat is in motion.

2,866,432

TIRE PRESSURE INDICATING DEVICE

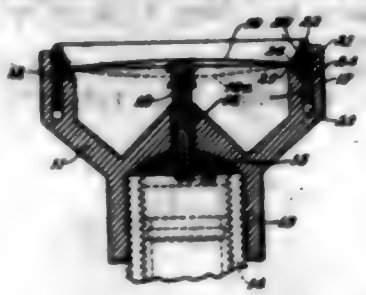
Gavin W. Lamie, Jr., Springfield, Pa.

Application September 7, 1956, Serial No. 608,563
6 Claims. (Cl. 116—34)

1. In combination with a valve stem having a tire valve therein, a tire pressure indicator, said indicator com-

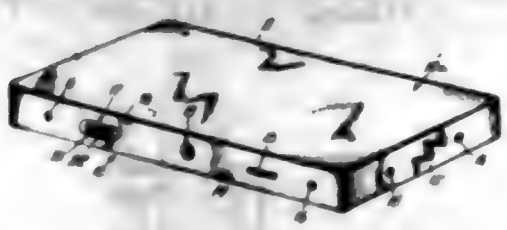
through the same to grip the handle, said leash having clutch member slidable within the tube and adapted to

prising a body having an open ended chamber adjacent one end thereof, a snap diaphragm normally bowed outward and extending across the open end of said chamber, indicator adjusting means to adjustably predetermine the normal arc of bowing of said diaphragm, sealing means to seal said diaphragm to said chamber in air-tight relation to thereby close the open end of said chamber to the atmosphere, said diaphragm being movable between an inward depressed position and the normally bowed outward position with an audible click action, the other end



of said body having a threaded bore in communication with said chamber and adapted to be detachably secured to the threaded end of said tire valve stem, and a slidable plunger stem extending through said chamber and bore and having one end adapted to contact the inner surface of said diaphragm, the other end of said stem being positioned to contact the valve stem of the tire valve when said diaphragm is moved to the depressed position to thereby release the tire air pressure to within the bore and chamber behind said diaphragm.

2,866,433
BEDDING DEVICE
Joseph N. Kalfick, Glencoe, and Lionel C. Algeron, Evanston, Ill., assignors to Sealy, Incorporated, Chicago, Ill., a corporation of Delaware
Application October 11, 1955, Serial No. 539,842
3 Claims. (Cl. 116—135)



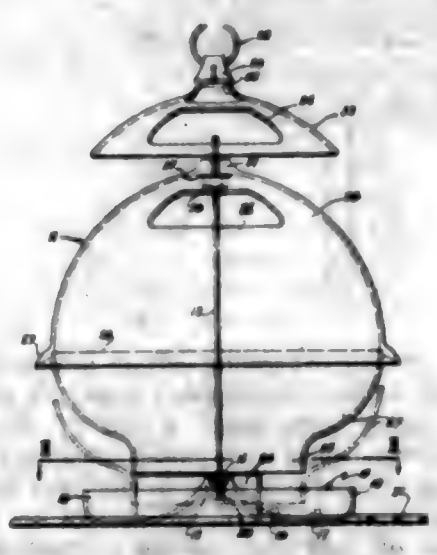
1. A bedding unit comprising a body portion adapted to support a human being in reclining position, an elongated carrying handle secured to said body portion, a dial having a plurality of graduations thereon secured to said body portion adjacent said handle with the graduations disposed in spaced relation lengthwise relative to said handle, and an index movably associated with said dial and adapted for manipulation lengthwise with respect to said handle for being selectively positioned with respect to said graduations.

2,866,434
SPRAY PAINTING MACHINE
Hamilton E. MacArthur and Robert B. Way, Toledo, Ohio, assignors to Conforming Matrix Corporation, Toledo, Ohio, a corporation of Ohio
Application September 10, 1951, Serial No. 245,864
15 Claims. (Cl. 118—301)

1. An automatic machine operated solely by fluid pressures for controlling the spray painting of articles, comprising: a spray gun, means for supplying paint to said gun, means to hold the article to be sprayed, means to move said article and gun relatively to each other, a first fluid pressure means for operating said moving means, timing means controlling the operation of said moving means and controlled by said first fluid pressure means for controlling the operation of said gun with respect to the relative position of said article, manual

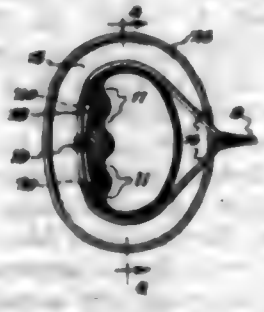
means for initiating the actuation of said timing means, and second fluid pressure means for controlling the operation of said timing means.

2,866,435
BIRD FEEDER
Arthur W. Blasier, Montclair, N. J.
Application May 3, 1956, Serial No. 582,416
9 Claims. (Cl. 119—53)



1. A device for holding feed for birds and the like, comprising a combined base and feeding pan, said pan being defined by an upstanding peripheral edge portion and a central feed-supporting surface, a perch thereabout, a central boss, a plurality of fins upstanding from said boss, a seed holder with a cylindrical flange depending from its lower end and closely telescoping over said fins, and a rod with its lower end received in said boss, said seed holder having an upper aperture receiving the upper end portion of said rod to form a support for said device.

2,866,436
LEASH AND HANDLE THEREFOR
Russell C. Swain and Alexander Smrejko, Jr., Buffalo, N. Y.
Application October 24, 1956, Serial No. 617,968
6 Claims. (Cl. 119—109)



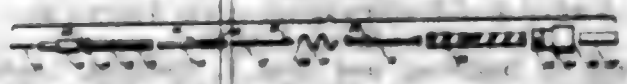
1. A leash and a single-piece handle therefor, said handle being of slightly oval disk shape and having a continuous open groove in its periphery into which the leash may be wound and having an opening extending through said handle and surrounded by said groove and of sufficient size to enable fingers of a hand to be passed

loosely in said groove to permit said loop to slide about the bottom of said groove and to enable said bottom to oppose strains on the leash, and means for limiting the extent to which said loop may slide in said groove.

2,866,437
WRITING IMPLEMENT
Kurt Fend, Pforzheim, Germany, assignor to Firma Gebr. Fend, Pforzheim, Baden, Germany
Application September 19, 1955, Serial No. 535,086
Claims priority, application Germany September 21, 1954
6 Claims. (Cl. 120—20)

3. In a writing implement, in combination, a hollow casing having a front end part formed with a bore and being at least partly bounded by an annular surface tapering toward the front end of said casing; at least one carrier for a writing means mounted in said casing for movement between a retracted inoperative position, an advanced writing position, and a preliminary advanced position located forwardly of said advanced writing position, said carrier projecting only in said advanced positions through said bore, said carrier in said advanced positions defining with said annular surface an annular gap tapering toward the front end of said casing; and wedging means resilient in direction of the carrier movement and having a rear end secured to said carrier and a front end portion non-resilient in directions transverse to said direction of carrier movement surrounding said carrier and projecting into said annular tapering gap, said front end portion being wedged in said annular tapering gap in said advanced positions of said carrier for holding said carrier in said bore non-movable in transverse directions while in said retracted position of said carrier, said front end portion of said wedging means is released for longitudinal resilient action of said wedging means.

2,866,438
SELF-FEEDING AUTOMATIC PENCIL
Konstantin F. Schlechkow, Whitestone, N. Y.
Application May 23, 1957, Serial No. 661,240
7 Claims. (Cl. 120—18)



1. A self-feeding lead pencil comprising, a hollow casing tapered at its lower end, a centrally bored tip member slidably received within the tapered portion of the casing, a feed guide tube within the casing adjacent the tip member, a longitudinal slit in the wall of said tube, a hollow

attached to the clutch member and extending laterally therefrom through the tube slit and beyond the said tube, an elongated opening in the wall of the clutch, a lead-ejector slidably carried within the clutch member, a second detent attached to the ejector and extending laterally therefrom, through the clutch opening, the tube slit, and beyond the said tube, a friction strip slidably received within the feed guide tube above the clutch in frictional engagement with the walls of said tube, an ear on the friction strip extending laterally therefrom, through the tube slit and beyond said tube, a feed spiral overlying the feed tube consisting of a continuous band spirally wound to form a somewhat tubular structure having a helical path between adjacent convolutions thereof, said helical path of the feed spiral being threaded around the first and second detents and the friction strip ear, friction means on the portion of the feed spiral band forming the upper wall of the helical path to engage the projecting detents and friction strip ear, and a cap member secured to the upper end of the feed spiral and the casing to prevent the said spiral from rotating within the said casing.

2,866,439
INK INJECTOR BALL POINT PEN
Aaron B. Rappaport, New York, N. Y.
Application August 20, 1956, Serial No. 604,937
3 Claims. (Cl. 120—42.4)

1. A ball point pen compriting, in combination, a tubular writing head tapering to a lower end; a ball point assembly secured in said lower end; an outer tube threaded onto said head and having an opening therein; an inner tube having a lower end threaded into said head and formed with an annular partition intermediate its ends; a tubular extension engaged in said partition and projecting downwardly from said partition into said head to a point adjacent said assembly and spaced from the inner surface of said head; a piston slidable in said inner tube above said annular partition and operable, upon movement toward said partition, to force air through said extension to increase the air pressure in said head to force ink to said ball point assembly; and operating means for said piston projecting through the aperture in said outer tube.

2,866,440
WRITING INSTRUMENT GUIDE
William R. Green, Rochester, N. H.
Application April 14, 1955, Serial No. 501,338
2 Claims. (Cl. 120—102)

1. A device for teaching writing, comprising a writing instrument; a wrist band adapted to encircle the wrist; a post mounted on the upper portion of said wrist band and extending vertically thereabove and a self supporting, elongated coil spring having its rearward extremity en-

vapour-liquid drum, a plurality of lower liquid distribut-

angle of approximately 10° from the axis of the cylinder

circling said post and its forward extremity encircling and gripping said writing instrument, the forward extremity of said spring being movable laterally and rearwardly relative to said post and said spring being nor-

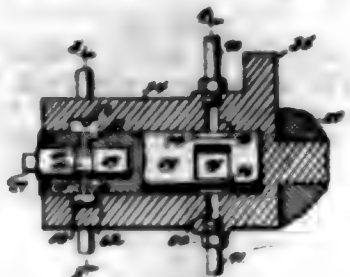
mally straight and thereby adapted, when said forward extremity is flexed downwardly to writing position, to continually urge said forward extremity forwardly and upwardly.

2,866,441

HYDRAULIC MOTOR FOR A JIG

Jacques C. Fourcy, Fontainebleau, France, assignor to Societe Anonyme Preparation Industrielle des Combustibles, Fontainebleau, France

Application February 25, 1955, Serial No. 490,654
Claims priority, application France March 5, 1954
6 Claims. (Cl. 121—41)



1. A double stage servo-motor for controlling the movement and the direction thereof of a hydraulically driven member comprising a power relay including movable valve means mounted in a movable feed cylinder for controlling the flow of fluid under pressure to move said driven member in either of two directions determined by the displacement of said valve means; a sensitive relay for actuating said power relay including a second valve means movable in either of two directions to cause by hydraulic means commensurate movement in the same direction of said first named valve means; and means actuatable by the movement of said driven member for moving said movable feed cylinder to shut off the flow of hydraulic fluid through said power relay when said driven member has effected a movement commensurate with the movement of said second named movable valve means.

2,866,442

PRESSURE MOTOR WITH PISTON CUSHIONING AND SPEED CONTROL MEANS

Viktor M. Panaritl, Boston, Mass., assignor to National Pneumatic Co., Inc., Boston, Mass., a corporation of Delaware

Application August 26, 1954, Serial No. 452,348
7 Claims. (Cl. 121—44)

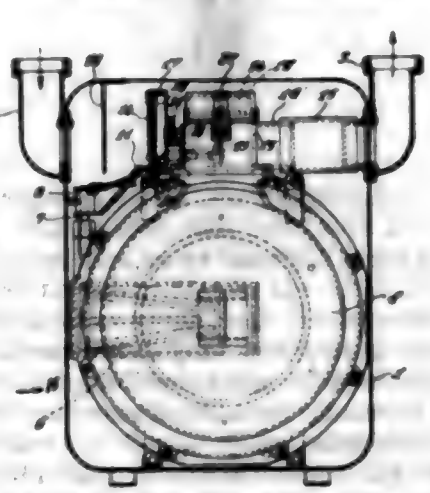
1. A pressure motor comprising a cylinder having a partition intermediate its length, a piston rod slidable through said partition in sealing relation therewith, pistons on said piston rod, one on each side of said partition, means for applying pressure to the outer surface of said pistons so as to cause said pistons and said piston rod to move in one direction or the other, and said partition having a passage of throttling size therethrough, thereby producing a speed-control effect for movement of said pistons and said piston rod in both directions, the effective outer surfaces of said pistons having different areas, means for constantly applying fluid pressure to the outer surfaces of that piston having the smaller effective outer surface, and means for alternately applying and releasing fluid pressure against the outer surface of the other piston so as to cause said pistons and said piston rod to move in one direction or the other, a part of said piston rod extending beyond the outer surface of that piston having the smaller outer surface and out through a closed end of said cylinder in sealing relation therewith, said extending piston rod part having a hollow portion of appreciable volume in fluid communication only with the interior of said cylinder and in free fluid communication therewith.

2,866,443

TWO-CHAMBER GAS METER WITH INDEPENDENT MEASURING CHAMBER MEANS

Hans Karst, Berlin-Neukoelln, Germany, assignor, by mesne assignments, to Arenco Meter Products Corporation, New York, N. Y., a corporation of New York

Application December 21, 1953, Serial No. 399,258
In Germany December 31, 1948
Public Law 619, August 23, 1954
Patent expires December 31, 1968
7 Claims. (Cl. 121—48)



1. A two-chamber gas meter comprising a meter housing; a first and second chambers in said housing; a movable partition between said chambers; a gas inlet in said meter housing; a gas outlet in said meter housing; a tripartite duct connected with said chambers; a valve assembly for controlling the inflow and outflow of gas to and from said chambers, said valve assembly comprising a slide valve communicating with said tripartite duct, said chambers and said gas inlet and outlet for alternately communicating each of said gas chambers with said gas inlet and said gas outlet; a rocker release mechanism consisting of a rocker arm, a rocker spring; a lever supporting one end of said spring and connected to the rocker arm; an operative connection between said rocker arm and said valve; linkage means connecting said movable partition and said lever, for transmitting movement from the partition to said valve.

2,866,444

VAPOUR GENERATING AND VAPOUR HEATING UNITS

Edward G. Hutchings and Alan F. Hodgkin, London, England, assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

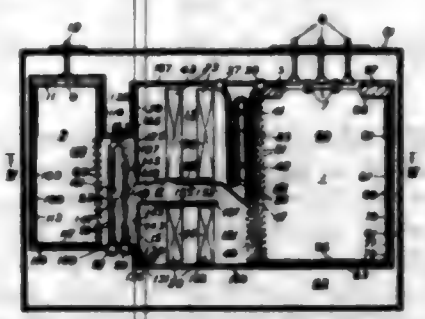
Application December 22, 1953, Serial No. 399,812
13 Claims. (Cl. 122—480)

5. A vapour generating and vapour heating unit having a setting and comprising therein an upper horizontal

ber, a longitudinal slit in the wall of said tube, a hollow

elongated coil spring having its rearward extremity en-

vapour-liquid drum, a plurality of lower liquid distributing chambers, a multiplicity of vapour generating tubes connected between said upper drum and lower liquid chambers, means forming a first furnace chamber having a plurality of gas outlets to flow gas in the same general direction and in parallel flow relationship, means including some of said vapour generating tubes defining a first gas pass on one side of said first furnace chamber and having its inlet opening to one of said gas outlets, a bank of vapour superheating tubes disposed in said first gas pass, means including some of said vapour generating tubes defining a second gas pass parallel to said first pass and on the same side of said first furnace chamber, said second



pass having an inlet opening to another of said first furnace gas outlets, means including some of said vapour generating tubes forming a second furnace chamber having a gas outlet at one end thereof, means forming a third gas pass with its inlet opening to said second furnace gas outlet and its outlet in communication with and arranged to flow heating gas to said second parallel gas pass, a convection type vapour reheater disposed in said third pass and arranged to receive heat solely from the heating gases of said second furnace, a single gas outlet flue arranged to receive all of heating gases from both of said first and second parallel gas passes, and means for independently firing each of said furnace chambers.

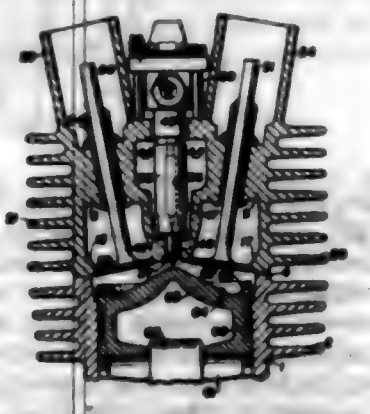
2,866,445

PISTON AND COMBUSTION CHAMBER AND INJECTION NOZZLE MOUNTING CONSTRUCTION FOR COMPRESSION IGNITION ENGINE

Frederick G. Graves, Mahwah, N. J., assignor to Justin W. Macklin, Cleveland, Ohio, as trustee

Substituted for abandoned application Serial No. 513,397, June 6, 1955. This application December 19, 1956, Serial No. 629,421

3 Claims. (Cl. 123—32)



1. An internal combustion engine designed to start and run on compression alone, comprising a cylinder and a piston therein and a cylinder head having a plurality of spaced radiating cooling fins and having a conical inner surface sloped at approximately 10° with relation to a radial plane, the piston having a centrally disposed conical surface sloping away from the head at about 30° and then curving upwardly and terminating near the perimeter of the piston, intake and exhaust valves and guides therefor mounted in the cylinder head and at an

angle of approximately 10° from the axis of the cylinder and spaced apart, a fuel injection nozzle mounted between said valves and having a tip portion projecting into the space below the sloping surface of the cylinder head and having a shoulder near its inner end, clamping means engaging the outer end of the injection nozzle for attaching it to the cylinder head and urging the shoulder inwardly, the nozzle being spaced from surrounding metal except for said clamping means and shoulder and leaving air passages between the nozzle and the valve guide supports, and means for causing air to pass around the valve nozzle and over said cooling fins.

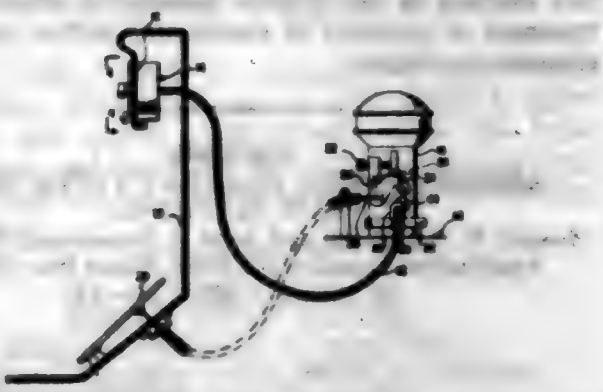
2,866,446

SPEED CONTROL GOVERNOR DEVICE FOR AUTOMOBILES

Edward Feuerstein and Louis Feuerstein, Brooklyn, N. Y.

Application March 1, 1957, Serial No. 643,393

7 Claims. (Cl. 123—98)



1. A speed governor for a vehicle having a fuel control valve and a valve operating arm conjointly shiftable to regulate the speed at which the vehicle may be operated, comprising eccentric means adjustable by a user and adapted for controlling the positioning of said arm, and means for locking the eccentric means against movement from selected positions to which it is adjusted, said eccentric means comprising an eccentric disc, rotatably mounted in the path of movement of said arm to limit movement of the arm in one direction, said first-named means further including a flexible shaft secured to and rotatable with the disc, and a knob on the shaft adapted to be rotated by a user, whereby to rotate the shaft under the control of said user for adjustably positioning the eccentric disc relative to said arm, said governor further including a casing adapted to be mounted in a position accessible to a user, a dial on the casing calibrated to show various maximum speeds at which the vehicle is to be permitted to operate, and an index arm secured to said flexible shaft and traversing the calibrations of the dial responsive to rotation of the shaft, the knob being disposed exteriorly of the casing on the shaft.

2,866,447

INTERNAL COMBUSTION ENGINES

Frank J. Kachni, Cleveland, Ohio, assignor to The Economy Engine Company, Youngstown, Ohio, a corporation of Ohio

Application February 27, 1956, Serial No. 567,777

12 Claims. (Cl. 123—191)

1. In an internal combustion engine, the combination of a main combustion chamber having side and end walls, a walled ignition chamber adjacent said main combustion chamber and communicating therewith, a member positioned at least partially within said ignition chamber and forming an electrode therein, a second member adjacent said first member in said ignition chamber but spaced therefrom and forming a second electrode, and a power source electrically connected with said electrodes and adapted to provide a continuous spark therebetween, said

and said ridge member having its front edge portion

means each attached to said valve means, said valve

1. A pressure motor comprising a cylinder having a partition intermediate its length, a piston rod slidable through said partition in sealing relation therewith, pistons on said piston rod, one on each side of said partition, means for applying pressure to the outer surface of said pistons so as to cause said pistons and said piston rod to

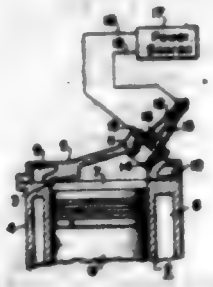
VAPOUR GENERATING AND VAPOUR HEATING UNITS

Edward G. Hutchings and Alan F. Hodgkin, London, England, assignors to The Babcock & Wilcox Company, New York, N. Y., a corporation of New Jersey

Application December 22, 1953, Serial No. 399,812
13 Claims. (Cl. 122—480)

5. A vapour generating and vapour heating unit having a setting and comprising therein an upper horizontal

electrodes being so positioned as to form the continuous spark within the ignition chamber at a point spaced from the main combustion chamber, said main combustion chamber and said ignition chamber being arranged so as to provide substantially unobstructed ingress of gases from



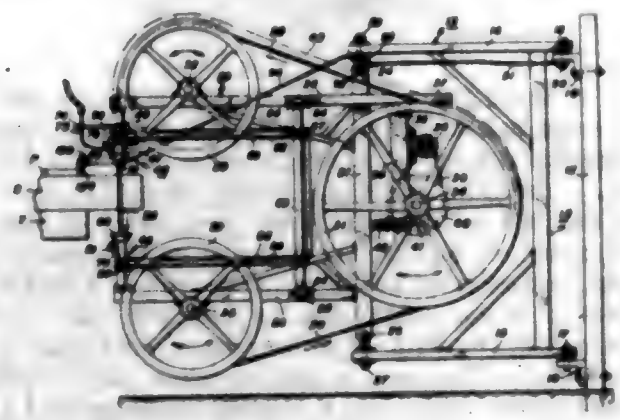
the combustion chamber into said ignition chamber and substantially unobstructed egress of gases from the ignition chamber into the combustion chamber, whereby a rich mixture in the ignition chamber is assured and entrapment of products of combustion within said ignition chamber is avoided.

2,866,448

ABRASIVE WIRE SHAPE-CUTTING STONE SAW MACHINE

Joseph T. Demarest and John B. Demarest, Barre, Vt.

Application January 24, 1958, Serial No. 710,966
18 Claims. (Cl. 125—21)



1. In a shape-cutting abrasive wire saw machine for cutting a stationary workpiece to the profile of a pattern fixed relative to the latter, a sawing wire, a plurality of sheaves over which said sawing wire is trained for movement in a closed path with a substantially vertical run, means for driving one of said sheaves to impart motion to said sawing wire, a manually movable support upon which said sheaves and driving means are carried, means mounting said support for horizontal movement in all directions, and tracer means having an element movable horizontally with said support, said element of the tracer means being movable along the edge of a pattern by the manual manipulation of said support to cause the vertical run of said sawing wire to cut a workpiece to the profile of the pattern.

2,866,449

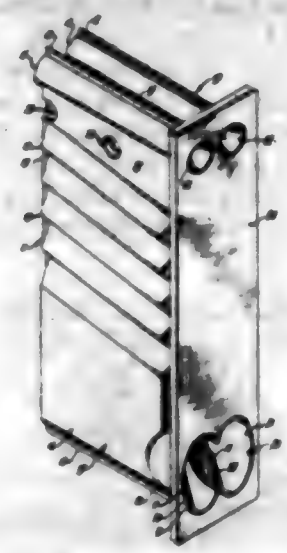
WARM AIR GAS-FIRED HEATING ELEMENT

John M. Bacon, San Francisco, Calif.

Application November 25, 1955, Serial No. 548,259
4 Claims. (Cl. 126—91)

1. A vertical heating element for gas-fired heaters comprising in combination two initially identical metal stampings each faced with abutting marginal edges

portion forming one-half of the firebox, a uniform series of rounded hills and valleys in a substantial area above said raised area, all angled upwardly from the horizontal from 5° to 10° in the same direction forming one-half of a nonsymmetrical serpentine gas duct, and a rounded



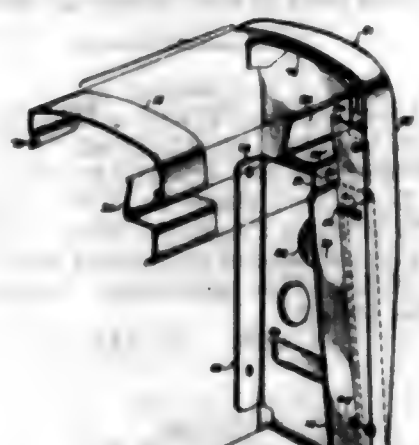
horizontal raised portion adjacent the top marginal edge thereof which is joined with the opposite stamping and closed at one end to form the flue outlet, said burner firebox being cut along one vertical marginal edge and fitted with an entrance collar to receive a burner therethrough.

2,866,450

BACKGUARD FOR RANGE

Herbert M. Reeves, Kankakee, Ill., assignor to Geo. D. Roper Corporation

Application February 7, 1955, Serial No. 486,388
3 Claims. (Cl. 126—213)



1. In a range, a backguard comprising, in combination, a pair of upright end caps each having an end wall with an integral inwardly extending flange along its top and front edges, means removably securing said caps adjacent opposite ends of the range, a back panel extending between said caps, a front panel spaced forwardly of said back panel extending between and supported on said caps with its ends concealed behind the front flanges of the caps, means removably securing said panels to said caps, said front panel having its upper marginal edge portion offset rearwardly, a ridge member of constant generally arcuate cross section extending bridgingly between said caps and having its rear edge abutting the rear panel, means removably securing said ridge member to said caps

guides therefor mounted in the cylinder head and at an

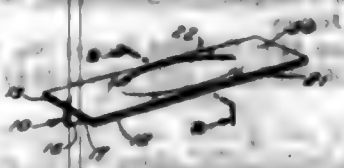
source electrically connected with said electrodes and adapted to provide a continuous spark therebetween, said

end said ridge member having its front edge portion spaced forwardly from and overhanging the offset upper marginal edge portion of said panel to conceal the same and to define an elongated lamp compartment.

2,866,451
BAKING PAN FOR CHEESE CAKES
John M. Alessi, Tampa, Fla.
Application June 26, 1953, Serial No. 364,337
2 Claims. (Cl. 126—385)

1. As an article of manufacture for attachment to a conventional shallow baking pan; a rectangular frame-like unit comprising vertical side and end walls, a trough on the outside of and encircling said walls and having a narrow bottom and outer side and end walls, said trough bottom being joined to the first named side and end walls adjacent to the bottom edges of the latter and said trough outer side and end walls being of a height approximately equal to but not greater than the height of the first named side and end walls, and said first named side and end walls being cut away across the bottom ends of the corners therebetween to form bottom corner recesses whereby the material of the walls between the recesses may be inwardly flexed.

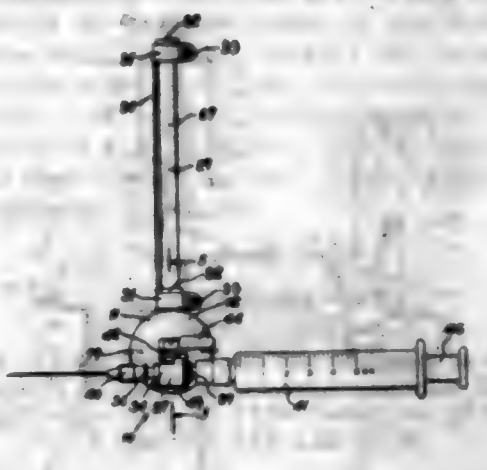
2,866,452
ALLERGEN APPLICATORS
Ernest S. V. Lamb, Corona del Mar, Calif.
Application March 11, 1957, Serial No. 645,326
4 Claims. (Cl. 128—2)



1. An allergen applicator comprising parallel walls and a web joining the bottom margins of said walls to form a narrow recess between said walls, said web having at least one notch penetrating said web and opening into said recess, said web having skin-abrading corners aligned with said notch and at opposite side thereof, and means at the side of said recess opposite said web for forcing an allergenic substance through said recess and out of said notch.

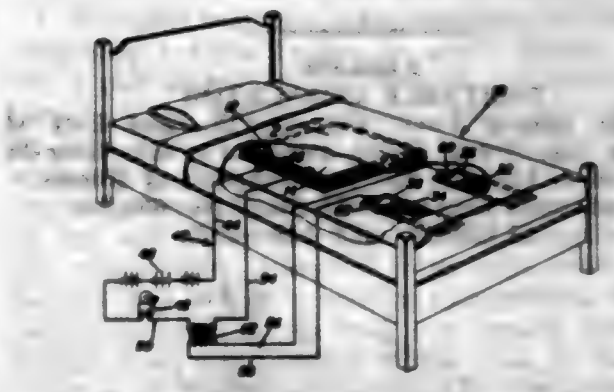
2,866,453
DIRECT READING HYPODERMIC PRESSURE INDICATING DEVICE
Warren R. Jewett, Woodbridge, Conn.
Application May 29, 1957, Serial No. 662,490
3 Claims. (Cl. 128—2.05)

1. Apparatus for measuring venous blood pressure and the like comprising a fluid chamber constituted by a pair of matching male and female sections, a diaphragm disposed within said chamber and having its edge portion held between said sections whereby said chamber is divided into a first larger and a second smaller compartment, means for releasably urging said sections together in a seating relationship, external direct reading manometer means carried by said chamber and being interconnected with said first compartment and adapted for indicating the pressure on a liquid contained within said first compartment, valve means affixed to said chamber adjacent said second compartment, a hypodermic needle and a translucent syringe means each attached to said valve means, said valve means being manually adjustable from a first position in which said syringe plunger is interconnected with said hypodermic needle whereby a liquid under pressure may be drawn through said needle into said syringe plunger under visual observation, to a second position in which



said hypodermic needle is connected to said second compartment, whereby the latter said liquid is delivered into said second compartment under the latter said pressure, and the latter said pressure is transmitted by said diaphragm to the liquid contained in the first compartment.

2,866,454
THERAPEUTIC DEVICE
Stanley C. McKenzie, Lansing, Mich.
Application August 7, 1957, Serial No. 676,786
3 Claims. (Cl. 128—132)



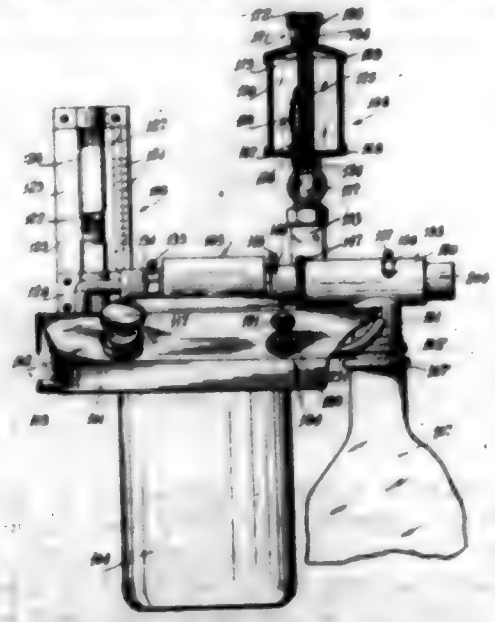
2. In a device to facilitate the treatment for micturition during the nighttime and in bed, said device including a switch part which is adapted to close in response to the application of liquid, a circuit operatively connected to said switch part and including a source of electrical potential, the improvement comprising means responsive to the conducting of said circuit for applying a shock to the bed occupant, said means including a transformer wired in said circuit and having output terminals from which a voltage that is high compared to the input voltage is obtainable, electrical conductors connected to said output terminals, and flat electrically conductive members attached to said conductors and adapted to be disposed in the bed under the legs of the occupant.

2,866,455
APPARATUS FOR ADMINISTRATION OF ANAESTHETICS
Oscar W. de la Torre, Buenos Aires, Argentina
Application March 23, 1953, Serial No. 343,927
13 Claims. (Cl. 128—188)

1. An apparatus for administration of anaesthetics, comprising an intake connection for oxygen and the like, a constant flow pressure means connected to said intake connection, a flow control valve means connected to said intake connection, a first container for housing and evaporating a first anaesthetic, a flow directing device having an

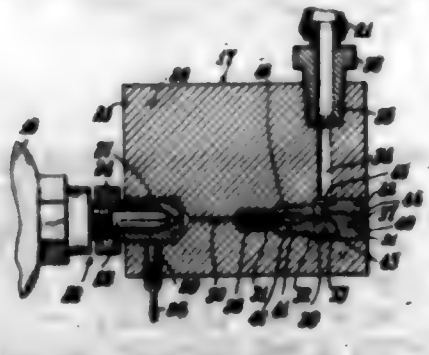
forming a burner firebox, a combustion gas passage and a flue outlet, all intercommunicating, said metal stampings each having an extensive raised area in its lower

admission end and an exit, said admission end of said flow directing device being connected to said flow control valve means, said first container being connected to said flow directing device, control means in said flow directing device for directly connecting said admission end to said exit and closing off said first container, a one



way valve connected to said exit permitting flow from said admission end through said exit, a collapsible container connected to said one way valve, a second container for housing a second anaesthetic, said second container, being connected to said collapsible container and an administrating mask connected to said collapsible container.

2,866,456
PORTABLE INHALATOR
Alexander Eugene Lovy, Chicago, Ill., and Earl M. Spears, Ann Arbor, Mich., assignors to Oxy-Gear Incorporated, Chicago, Ill., a corporation of Illinois
Application June 19, 1957, Serial No. 666,546
11 Claims. (Cl. 128—203)



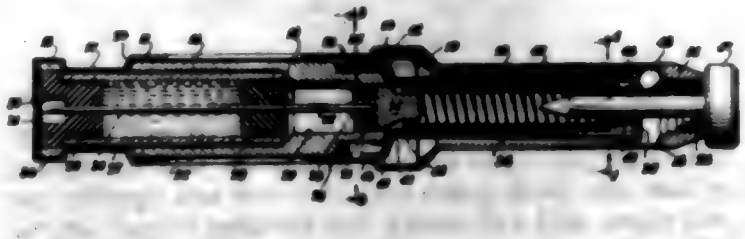
1. A portable inhalator comprising a flow-control unit, a pressurized fluid cylinder having a valved outlet mounted on and in communication with the flow-control unit, said valved outlet having a portion locked firmly in the flow-control unit so as to open and close the valved outlet by manipulation of the cylinder, a hose and mask assembly in flow communication with the flow-control unit, a flow-control turbulator plug mounted in the flow-control unit having passageways through which fluid flowing through the unit passes, and means sealing said turbulator plug in place.

2,866,457
APPARATUS FOR ADMINISTRATION OF PARENTERAL FLUIDS
Russell C. Moore, Orinda, Calif., assignor to Cutter Laboratories, Inc., a corporation of California
Application December 28, 1956, Serial No. 629,530
2 Claims. (Cl. 128—214)

1. In a parenteral fluid administration set, a fluid container having an outlet, a drip meter connected to said outlet, a first check valve, a first fluid conduit connected first check valve, a Y-connection having a first and second at one end to said drip meter and at its other end to said inlet conduit and a common third outlet conduit, conduit means connecting the first check valve and the first inlet

conduit, a second check valve connected to the second inlet conduit and having a movable valve member therein normally maintained in closed position and movable under positive fluid force application to permit fluid flow therethrough into the second inlet conduit and thence to the third outlet conduit.

2,866,458
HYPODERMIC ASSEMBLY
George N. Hein, Jr., San Carlos, Calif., assignor to Becton, Dickinson and Company, Rutherford, N. J., a corporation of New Jersey
Application May 9, 1956, Serial No. 583,804
20 Claims. (Cl. 128—218)



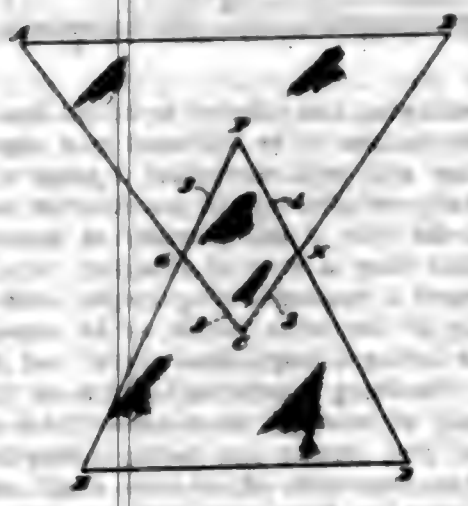
19. For use in connection with the administration of hypodermic injections, a casing to mount a syringe barrel containing a piston, power means within said casing for projecting said piston, means for retaining said power means against movement, a pin mounted by said casing to maintain said retaining means in operative position and said pin being shiftable with respect to said casing to render said retaining means inoperative.

2,866,459
DIAPER
Marion R. Sobelman, Atlanta, Ga.
Application April 9, 1956, Serial No. 577,126
6 Claims. (Cl. 128—284)

1. In a diaper comprising a rectangular sheet folded upon itself and stitched at its edges to form a tubular body, longitudinally extending edge elastic means nor-

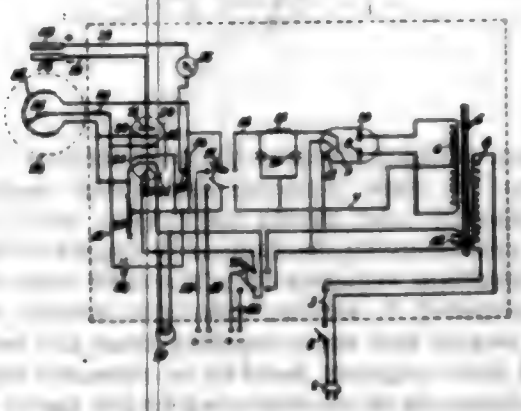
mally contracting the longitudinal edges of said body into longitudinal gatherings and a longitudinal curvature, and a plurality of parallel transverse elastic means normally contracting the material transversely into transverse gatherings and a transverse curvature.

2,866,460
BABY'S NAPKIN
Kathleen Edith Tomlinson, London, England
Application June 19, 1956, Serial No. 592,356
4 Claims. (Cl. 128—284)



1. A baby's napkin comprising two triangular pieces of flexible sheet material of an absorbent nature which are secured together with apex portions in overlapping relationship, said overlapping portions being secured together along three edges to form a pocket for the reception of an absorbent pad or sheet, and the remaining edge being left free to afford an entrance to said pocket for the insertion and removal of said absorbent pad or sheet.

2,866,461
APPARATUS FOR PRODUCING ELECTRIC ANESTHESIA
Kenzaku Suzuki, Senju, Adachi-ku, Tokyo, Japan
Application January 21, 1954, Serial No. 405,458
Claims priority, application Japan October 23, 1950
6 Claims. (Cl. 128—419)



1. In an apparatus for producing electric anesthesia during an operation on a body, in combination, an operating instrument having an electrically conductive body-engaging portion, a negative electrode adapted to be applied to the body at a region remote from the region of operation, the body-engaging area of said electrode being much greater than that of said instrument, a first electrical circuit comprising means for supplying substantially steady direct current to said operating instrument, a vacuum tube current-control circuit for controlling current flow between the instrument and negative electrode comprising connections to said first circuit and connections to said instrument and said electrode, a vacuum tube connected in said control circuit, first means connected to cooperate with said tube for adjustably determining the maximum current output of he apparatus and for preventing the current from exceeding a predetermined critical value corresponding to said maximum current output, and second means connected to cooperate with said vacuum tube for adjustably and selectively varying the current output within the limit determined by said first means in cooperation with said tube, whereby the current applied to the portion of the body being operated is applied without irritation and kept substantially constant regardless of variations in body resistance, and current surges are prevented when contact with the body is made or broken by said operating instrument.

2,866,462
BRASSIERE
Evelyn E. Faron, Oak Lawn, Ill., assignor to A. Stein & Company, Chicago, Ill., a corporation of Illinois
Application June 15, 1956, Serial No. 591,734
2 Claims. (Cl. 128—429)

1. An uplift brassiere of the long-line, bare-back type, comprising a front having an upper portion provided with a pair of pockets for receiving and supporting the breasts of the wearer, a lower panel depending from the lower edge of the said upper portion, flexible stiffening means in said panel portion to prevent folding and wrinkling thereof, fastening means for opening and closing the said front, side panels of horizontally stretchable elastic fabric connected in an edge relationship to the said front to form a junction therebetween, the upper margin of each of the said side panels downwardly inclined from said junction to the back of the wearer, a back panel, vertically extending back reinforcing means disposed at the junction between the said side panels and said back panel, the said back panel comprising downwardly inclined extensions of the respective side panels, said extensions made of inextensible material criss-crossing and movable in relation to each other with their respective ends secured to the related said vertically disposed back reinforcing means, the top marginal portions on said side panels and said back extensions downwardly inclining in aligned relationship from the side edges of the said front panel to the ends of the said back extensions, and a pair of tapes co-extensively secured about the top of the said downwardly inclined marginal portions criss-crossing each other and terminating at the said back reinforcing means whereby the said breast pockets are in tension against the body to retain the bust of the wearer.

2,866,463
BREAST POCKETS FOR BRASSIERES AND LIKE FOUNDATION GARMENTS
Joseph Verreault, Quebec, Quebec, Canada, assignor to Dominion Corset Co. Ltd., Quebec, Quebec, Canada
Application October 26, 1953, Serial No. 388,332
7 Claims. (Cl. 128—514)

1. A foundation garment including cup-shaped breast pocket sections having outer facing and inner lining plies,

2,866,467
REFILL COMPACTS

upon the jaw member, and means for selectively locking

said plies being secured together by a single line of stitching overlying the outer facing ply and interlocked with a duplicate line of stitching overlying the inner lining ply, said line of stitching spiralling from the centre to the periphery of the cup section in the form of a multiplicity of closely spaced convolutions and composed of stitches arranged to form a continuous series of loops

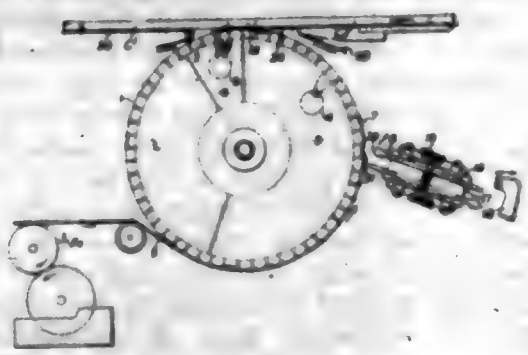
having straight, closed ends formed by certain of the stitches and sides formed by other stitches extending at a loop-forming angle with respect to the closed ends of the loops, the loop forming stitches being arranged so that the open ends of certain of the loops face towards the centre of the cup section while the open ends of the remaining loops face towards the outer peripheral edge of the cup section.

2,866,464

APPLICATION OF PORTIONS OF MATERIAL TO A TRAVELLING SURFACE OR SURFACES

Horace Alexander Stone, Deptford, London, England, assignor to Molins Machine Company, Limited, London, England, a British company

Application May 17, 1955, Serial No. 509,047
Claims priority, application Great Britain May 28, 1954
1 Claim. (Cl. 131—61)



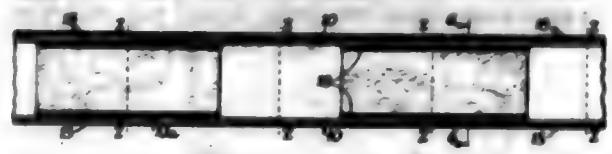
In apparatus for making mouthpiece cigarettes by joining endwise-abutting endwise-moving cigarette elements and mouthpiece elements by means of uniting bands, means for applying such uniting bands, comprising a conveyor arranged to bring adhesive-coated uniting bands into contact with successive groups each consisting of a mouthpiece element and at least one cigarette portion abutting the mouthpiece element, while said groups are moving endwise in axial alignment in such manner that parts of such a band extend laterally away from such a group, said conveyor having ports in its conveying surface, a suction chamber communicating with said ports to hold said bands on the conveyor by suction and a blowing chamber adapted to blow air through said ports against the extending parts of a band which has been applied as aforesaid, thus urging said extending parts upwardly toward said cigarette and mouthpiece elements, whereby portions of said extending parts will be caused to adhere to said cigarette and mouthpiece elements to provide an upward curl in the remaining unadhered portions of said extending parts.

2,866,465

PAPER TUBES

Hugo Benzi and Paul Schechner, London, England, assignors to Cigarette Components Limited, London, England

Application March 22, 1954, Serial No. 417,986
Claims priority, application Great Britain March 24, 1953
2 Claims. (Cl. 131—260)



2. A multi-plug unit adapted to be cut into individual mouthpiece sections to be delivered to a cigarette making machine, said units compriaing a paper tube enclosing a plurality of plug lengths spaced from one another axially of the tube, a like plurality of innermost tubes each formed from a strip of relatively thin paper and fitting around a respective plug length, each innermost tube being of the same length as its respective plug length and having a longitudinal lapped and stuck seam, the paper tube being constituted by an inner tube formed from a strip of relatively stout paper fitting around the plurality of plug lengths and having a longitudinal butt joint, and an outer tube of the same length as the inner tube, the outer tube being formed from a strip of relatively thin paper surrounding the butt jointed inner tube and having a longitudinal lapped and stuck seam.

2,866,466

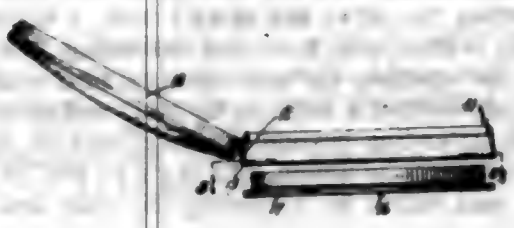
FINGER ENGAGING CIGARETTE HOLDER

Thomas Crocella, New York, N. Y.

Application May 14, 1956, Serial No. 584,743
1 Claim. (Cl. 131—258)

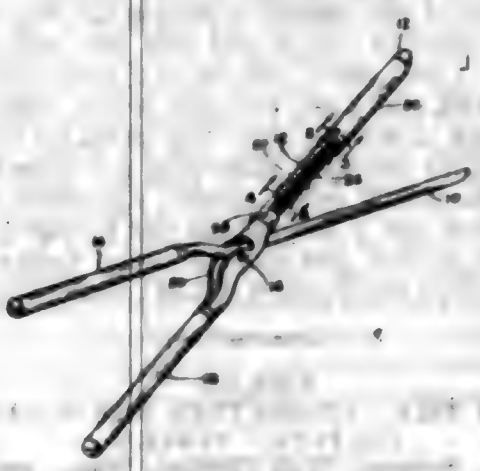
A finger engaging cigarette holder of integral construction from flat sheet material, said holder including a finger engaging band having overlapping ends for constricting and enlarging the band to fit fingers of different sizes, a cigarette engaging loop arranged with the axis thereof disposed in substantially right angular relation with the axis of said finger engaging band and connected with said finger engaging band by an extension projecting straight outwardly at one side of said band and in parallel relation with the axis thereof to dispose the cigarette engaging loop in overlying relation with the outer end of said extension and in spaced relation with the finger engaging band and in overlying relation with the back of the hand when the finger engaging band is disposed on a finger, a tongue projecting laterally outward at one side from the end of said extension and arranged in inclined relation to thereby dispose the outer end thereof in spaced relation from the cigarette and underlying the burning end thereof when the cigarette is disposed in the loop, and said finger engaging band having a peripheral edge located in a common plane disposed in angular relation to the axis of the band for supporting the holder in upright relation.

2,866,467
REFILL COMPACTS
Phillip Bradford, Skokie, Ill., assignor to Coty, Inc., New York, N. Y., a corporation of Delaware
Application December 10, 1956, Serial No. 627,289
4 Claims. (Cl. 132—82)



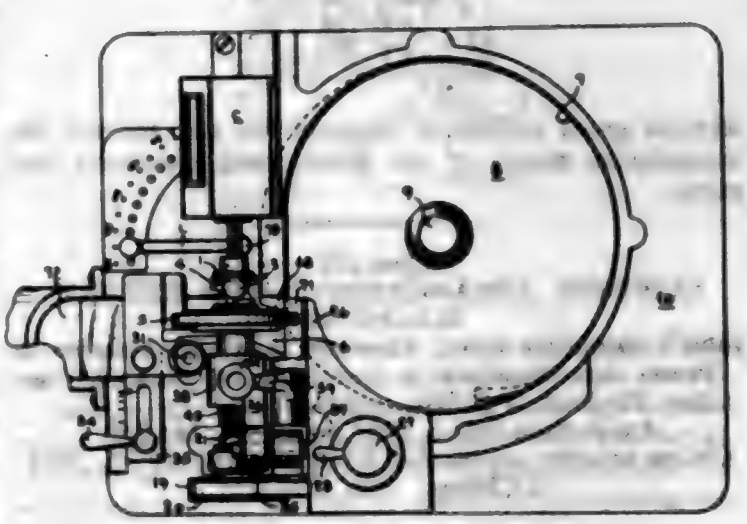
1. A powder compact comprising a body having an open bottom, a removable base unit secured to said compact body and disposed within said body, said removable base unit filling said open bottom, a floor on said base unit, an annular wall formed on said floor and disposed within the compact body, said annular wall forming a well on said floor, a block of solidified face powder disposed in said well when said removable base unit is disposed within said compact body, and a metal holder for said block of powder, said holder being cup-shaped and substantially lining the floor and walls of said well, said body being formed with a lower, inturned annular flange which defines said open bottom, said annular wall being of a diameter less than that of said floor so as to form an upper shoulder on said floor, said flange resting on said upper shoulder.

2,866,468
HAIR STRAIGHTENING AND WAVING IRON
Frances E. Eldridge, Philadelphia, Pa.
Application November 29, 1955, Serial No. 549,660
1 Claim. (Cl. 132—143)



A hairdressing device comprising a single straight elongated generally cylindrical rod, an elongated jaw member pivotably connected to said rod, said jaw member being cross-sectionally concave with respect to said rod, whereby said rod may be nested within said jaw member, said rod and said jaw member each having a handle disposed on the other side of the pivot point so that said rod and said jaw member can be manually moved intermediate open and closed positions with said rod being nested within said jaw member in the closed position, said jaw member having one of its edges smooth and un-serrated throughout its entire length, and its other edge having a plurality of curved hair-straightening serrations formed along less than one-half the total length of said edge adjacent the pivot point with the outer end of said edge being smooth and un-serrated, a discrete hollow open-ended sleeve generally corresponding in length to the serrated edge portion of said jaw member and having arcuate cross-sectional configuration corresponding to that of the jaw member slideably mounted upon the jaw member, and means for selectively locking said sleeve on said jaw member in either covering relationship to the serrated portion of the jaw member or covering relationship to the smooth and un-serrated portion of the jaw member.

2,866,469
COIN COUNTING MACHINE
Arnold R. Bechholz and Frank Haban, Watertown, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Original application August 17, 1955, Serial No. 528,940. Divided and this application March 14, 1957, Serial No. 646,107
3 Claims. (Cl. 133—8)



1. In a coin counting machine, the combination of a hopper having an exit opening and provided with a rotary bottom plate whereby coins on said plate are carried outwardly by centrifugal force toward the side of the hopper as they are advanced to said opening, a movable deflector means normally projecting inwardly from said hopper to direct coins away from the side of said hopper as they approach said exit opening, a coin operated member, a feed wheel for advancing coins from said exit opening past said member, means for moving said feed to an operative and inoperative position, and means operable by said feed wheel moving means for moving said deflector means further inwardly relative to said hopper when said feed wheel is moved to its inoperative position to further direct the coins away from the side of said hopper so that they will be moved away from said exit opening and past the same.

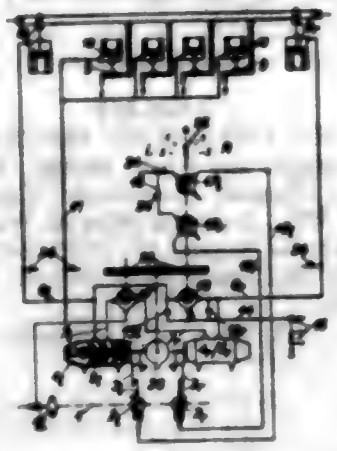
2,866,470
OVERSPEED SAFETY SYSTEM FOR TURBINES
Peter Hold and Arthur Oberle, Wettingen, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint stock company
Application November 15, 1954, Serial No. 468,891
Claims priority, application Switzerland November 24, 1953
6 Claims. (Cl. 137—24)

1. In a turbine plant including a turbine, two steam inlets in parallel for said turbine with gate valves in said inlets, an overspeed safety system comprising duplicate control means for closing the respective gate valves in the event of excessive turbine speed, each control means including a speed responsive element and transmission means actuated thereby to close its associated gate valve, means normally connecting the transmission means of the respective control means for simultaneous operation by either speed responsive element, and testing means adjustable to render said connecting means substantially inoperative when a selected one of said speed responsive elements and its transmission means

tion of a threaded cap screwed on the entrance end of a fill pipe for a tank, said nozzle and spud capable of manip-

stantially continuous, open communication with said first portion, said second conduit portion having an outer end

are to be tested, said testing means including means to actuate one of the speed responsive elements even though excess speed does not exist, whereby the testing of the



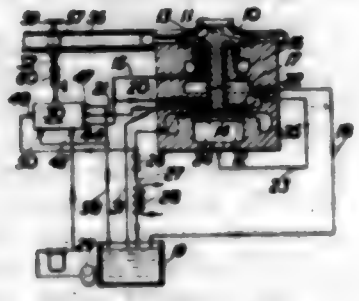
selected speed responsive element will not activate the transmission means of the other speed responsive element.

2,866,471

CONTROL ARRANGEMENTS FOR ROTARY MACHINES

John Constantine Grey, Isleworth, England, assignor to Power Jets (Research & Development) Limited, London, England, a British company

Application July 6, 1953, Serial No. 366,250
Claims priority, application Great Britain July 22, 1952
2 Claims. (Cl. 137—28)



1. A control arrangement for rotary machinery having an independently driven pump to supply fluid to a lubrication system thereof comprising means for producing a fluid pressure substantially proportional to the rotational speed of said machinery, a trip device responsive to said fluid pressure at a pre-determined level, a pressure responsive device directly and continually influenced by pressure created within said lubrication system by said independently driven pump, valve means to control a supply of working fluid to said machinery, an operative connection between said valve means on one hand and said trip device and said pressure responsive device on the other both to prevent overspeeding of said machinery and to shut down said machinery in the event of failure of said lubrication system, and a positive locking device forming part of said operative connection and operable by said pressure responsive device and arranged to control said valve means to prevent the starting of said rotary machinery until said lubrication system has been pressurized by said independently driven pump.

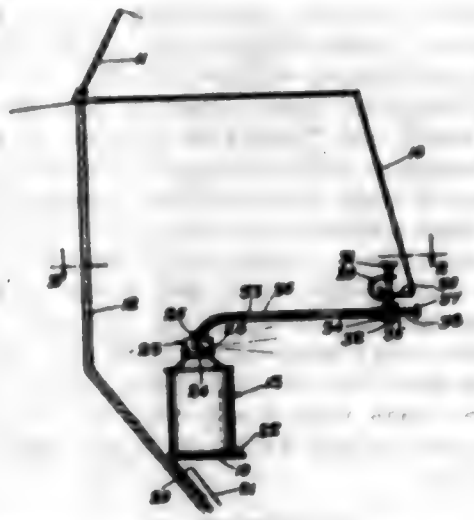
2,866,472

INSTANT CAR AIR FRESHENER

Bruce H. Rimly, San Francisco, Calif.

Application December 10, 1956, Serial No. 627,496
2 Claims. (Cl. 137—353)

1. A car air freshener adapted to be mounted upon the fire wall of a vehicle with the controls therefor mounted upon the vehicle dashboard comprising, in combination, a push-button actuated deodorizing container, means for supporting said container, a hollow housing adapted to fit onto the deodorizing container surrounding the push button, said housing having an opening communicating with said push button, a flexible tube, means for mounting one end of said tube on said housing in vertical alignment with the push button, said housing having an opening communicating with the interior of said tube, means for mounting the other end of said tube, a flexible shaft positioned within said tube and extending downwardly through the opening of said housing into engagement with the pushbutton, a knob on the other end of said shaft, said shaft extending beyond the outer end of said tube, spring means for retaining said shaft in the inoperative position, said means for mounting the other end of said



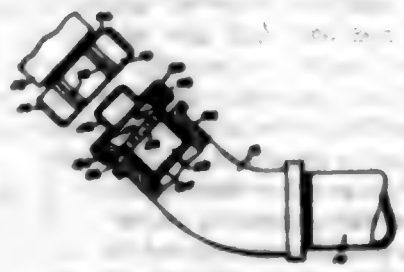
tube comprising a U-clamp, a screw clamp screw threaded through the upper end of said clamp, a depending portion connected to the lower end of said clamp and having an opening receiving therethrough the end of the tube, the end of the tube being externally threaded, and a nut on each side of said depending portion screwed onto said externally threaded end of said tube, said spring means comprising a coil spring sleeving said shaft intermediate said nuts and said knob, said coil spring engaging said nut and knob at opposite ends, said means for supporting the deodorizing container comprising a V-shaped bracket having a horizontal upper portion supporting the container thereon and a downwardly and forwardly extending bottom portion, and said horizontal portion having a rim to prevent displacement of said container therefrom.

2,866,473

TIGHT FILL CONNECTION FOR A FLUID DELIVERY SYSTEM

George M. Schutter, West Newton, Mass., assignor to Scully Signal Company, Melrose, Mass., a corporation of Massachusetts

Application May 12, 1955, Serial No. 507,763
3 Claims. (Cl. 137—560)



3. A manually operable fluid delivery nozzle having a tubular spud secured to its outlet end, said nozzle being generally in the shape of an elbow and turning away from the axis of said spud, said spud at its fluid delivery end having an interior cross-sectional configuration adapted to non-rotatably receive a corresponding polygonal projec-

sponding to that of the jaw member slideably mounted

said speed responsive elements and its transmission means

tion of a threaded cap screwed on the entrance end of a fill pipe for a tank, said nozzle and spud capable of manipulation as a wrench for rotating said cap whereby such cap may be tightened on or loosened from the end of said fill pipe.

2,866,474

AIR SUPPLY SYSTEM FOR PNEUMATIC TOOLS

Harold O. Gammero and Robert H. Alexander, Dayton, Ohio, assignors to Buckeye Tools Corporation, Dayton, Ohio, a corporation of Ohio

Application July 28, 1955, Serial No. 523,274
11 Claims. (Cl. 137—561)

1. A system for continuously supplying air under pressure to pneumatic tools to enable use thereof during movement along a production line, comprising an endless conveyor mounted in an elevated position, a plurality of couplers supported on said conveyor at intervals along the length thereof for attachment with tools used on the production line, sections of flexible conduit connecting successive said couplers into a movable air supply loop, a primary air supply connection in said loop, a stationary source of pressure air, a helical coil of flexible conduit connected at one end to said source, a supply boom, means supporting said boom for movement along the length of said conveyor, the other end of said coil being attached to said boom, a swivel connection on said boom, means confining the translatory movement of said swivel connection to linear movement along the length of said conveyor, and a conduit extending between said swivel connection and said primary air connection to maintain within said loop a supply of pressure air for pneumatic tools used on the production line and having supply hoses adapted to be connected to said couplers.

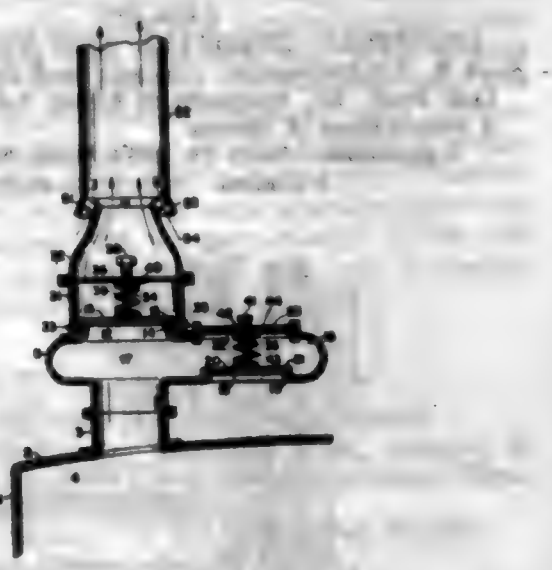
2,866,475

VENT FOR PRESSURE RELIEF VALVE

Harry T. Sutherlin, Cranford, and John C. Souder, Mountainside, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application September 1, 1954, Serial No. 453,475
2 Claims. (Cl. 137—494)

1. In a safety valve structure, including a hollow valve body having an inlet adapted for connection to a container vessel in open communication with a vapor space therein, an outlet defining a valve port and annular valve seat, and a valve closure for said port disposed so as to engage said seat and so as to be movable from such engagement under pressure of vapors in said vapor space, whereby to vent vapors through said valve body and port and to relieve pressure in said vapor space; a means for discharging vapors vented through said valve body by way of said port, comprising a first tubular discharge conduit portion having an inner end mounted on said valve body coaxially enclosing said port and valve closure, and a second tubular discharge conduit portion in coaxial, substantially continuous, open communication with said first portion, said second conduit portion having an outer end which defines a discharge orifice of restricted cross-section, a plurality of support arms extended radially outward from the peripheral surface of said second conduit portion outer end, a riser stack supported by said arms in annularly spaced, substantially coaxial relation to said



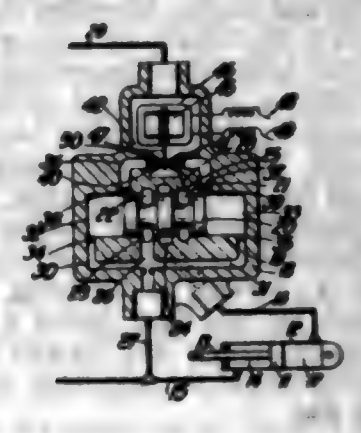
second conduit portion outer end, and an outwardly flared skirt dependent from the lower end of said stack extending downwardly therefrom beyond the outer end of said second conduit portion in radially spaced relation thereto, said skirt and the second conduit portion outer end between them defining an annular venturi throat opening upwardly into said stack.

2,866,476

ELECTRO-MAGNETICALLY OPERATED CONTROL VALVES

George Orloff, Cheltenham, England, assignor to British Messier Limited, Gloucester, England, a British company

Application April 1, 1953, Serial No. 346,235
Claims priority, application Great Britain April 3, 1952
9 Claims. (Cl. 137—620)



9. An electromagnetic control-valve for a fluid-pressure circuit, comprising in combination a movable valve-member, fluid-pressure-actuated means for moving it in one direction and for restoring it when moved in the reverse direction, oppositely acting fluid-pressure-actuated means for moving it in the reverse direction and for restoring it when moved in the first direction, a fluid supply passage for fluid under pressure to each of the two fluid-pressure-actuated means and a fluid exit therefrom, means for throttling each of said fluid supply passages and each of said exits, and electromagnetically controlled means for varying the relation between the amount of throttling of the fluid supply passages and the amount of throttling of the exits of each of the fluid-pressure-actuated means to cause them to move the valve member, and wherein

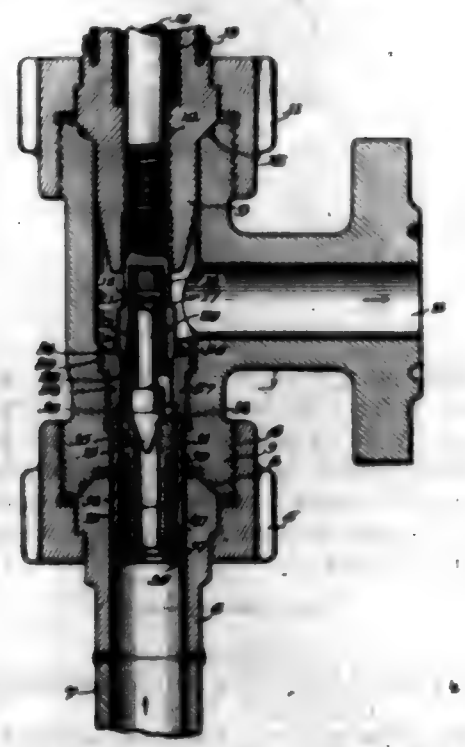
the valve member overlaps ports leading to said exits whereby its movement modifies the relation between the amount of throttling of the two fluid supply passages and the exits in such manner as to restore the balance between the two fluid-pressure-actuated means and limit the valve movement.

2,866,477

COMBINED THROTTLE AND STOP VALVE

Kurt B. Brodtschneider, Chicago, and Hubert C. Laird, Oak Park, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois

Application March 19, 1954, Serial No. 417,479
3 Claims. (Cl. 137—625)



1. In a flow regulating valve, the combination comprising a casing member, a fluid passageway therethrough, a stem member reciprocally movable in said casing member, said stem member having a hollow shut-off cone portion and having depending therefrom in the fluid passageway a throttling cone telescopically mounted for predetermined longitudinal movement relative to the said stem member, a seat for said shut-off cone comprising a removable sleeve member having a shoulder portion receivable within the said casing member and providing a seat for said throttling cone, the said latter seat being yieldably telescopically received in said sleeve and being substantially contained and supported therewithin to form a restricted or throttling portion in the fluid passageway, the said stem having a lower annular shoulder portion engageable with the said throttling cone to limit the movement of the said latter cone in a direction toward its seat.

2,866,478

MIXING FAUCET

Robert W. Hyde, Cincinnati, Ohio, assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N. Y., a corporation of Delaware

Application June 18, 1953, Serial No. 362,647
5 Claims. (Cl. 137—636)

1. A single lever mixing faucet comprising a faucet body having a mixing chamber therein, a discharge spout in communication with said mixing chamber, a pair of toggle valves, each valve of the pair having a valve stem extending into said mixing chamber, the respective stems being disposed in a common vertical plane and in spaced parallel relation with respect to one another, said valves being adapted to open upon the tipping of their stems from the vertical, a valve actuator plate, means to mount said valve actuator plate in said mixing chamber for movement in a horizontal plane, said actuator plate being substantially pear-shaped in outline as seen from above and normally disposed with the large end thereof in front of the plane of the valve stems and the small end thereof between the valve stems, an operating handle, a ball mounting said handle in the faucet body above said mixing chamber for rotating and rocking movement about a point which is in the plane of the valve stems and which

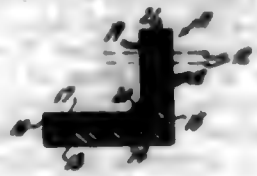
is centered above them, an actuator pin depending from the under side of said ball into said mixing chamber, a circular opening in said plate which is disposed directly below said point when the plate is in its said normal position, said pin depending into said opening and having its axis disposed vertically and at right angles to the plane of said plate when said plate is in its said normal position, whereby said handle may be rotated about the axis of the pin without moving the actuator plate and whereby said actuator plate may be moved rearwardly into valve stem contacting positions upon rocking movement of the handle to tilt said actuator pin rearwardly away from the vertical.

2,866,479

MANUFACTURE OF FLANGED PINCH VALVE HOSE

John J. Mahady, Hackensack, and David F. Laird, Passaic, N. J., assignors to United States Rubber Company, New York, N. Y., a corporation of New Jersey

Application February 25, 1955, Serial No. 490,489
7 Claims. (Cl. 138—55)



1. The method of making a flexible, flanged pinch valve hose which comprises forming an assembly by mounting a curable rubber tube over a mandrel, braiding at least one layer of fabric reinforcement over said tube, bending at least one end of said tube outwardly to form a rim thereon, extending said rim radially and axially to form a flange, covering said tube and flange with curable rubber, and curing the rubber in said assembly to form an integral, bonded structure.

5. A flexible, flanged pinch valve hose comprising an assembly of a curable rubber tube, at least one layer of fabric reinforcement braided over said tube substantially

throughout the length thereof, said tube having at least one end bent outwardly to form a rim thereon, said rim being extended radially and axially by means of rings added thereto to form a flange, and a covering of curable rubber over said tube and flange, the rubber in said assembly being cured to form an integral, bonded structure.

2,866,480

TUBING MADE FROM STRIP METAL STOCK

Andrew J. Snively, Bloomfield Township, Oakland County, Mich., assignor to Bundy Tubing Company, Detroit, Mich., a corporation of Michigan

Original application July 12, 1950, Serial No. 173,295, now Patent No. 2,620,923, dated October 11, 1955. Divided and this application August 16, 1955, Serial No. 528,626

5 Claims. (Cl. 138—74)

1. A tubing comprising, a single strip of metal stock fashioned through substantially 720° into hollow cross sectional form with inner and outer plies disposed in interfacial relationship, the strip having an offset in an intermediate portion, the opposite edges of the strip being disposed in interfacial relationship with opposite sides of the offset thereby providing a seam, the interfaces of the plies and the interfaces of the offset and said edges being secured together by a bonding metal having a melting point lower than that of the metal of the strip and having capillary thickness, said tubing having between its plies at a location circumferentially removed from the seam a repository for excess bonding metal extending lengthwise throughout the length of the tubing, said repository having a radial dimension which is greater than said capillary thickness of said bonding metal, said repository having a circumferential dimension, said radial dimension of said repository being such a small portion of the thickness of the tubing wall thereat and said circumferential dimension being such a small portion of the tubing circumference that the tubing wall has substantially the critical strength and working properties of the double thickness wall.

2,866,481

LOCK SEAM FOR SHEET METAL PIPES

Jesse G. Dratsch, Minneapolis, Minn., assignor to Clow-Gale Manufacturing Company, Anoka, Minn., a corporation of Minnesota

Application February 18, 1957, Serial No. 640,648

4 Claims. (Cl. 138—74)

2. A sheet metal pipe blank of generally cylindrical shape having opposed marginal seam-forming longitudinally extending edge areas, one of the edge areas having a radially inwardly extending circumferentially forwardly projecting lock flange and a circumferentially rearwardly facing lock shoulder, said lock shoulder being radially outwardly spaced from the lock flange and defining therewith a longitudinally extending outwardly opening channel for reception of the other marginal seam-forming longitudinally extending edge area, the said other edge area having a circumferentially rearwardly extending flange terminating in a circumferentially rearwardly facing lock edge, said lock edge being radially inwardly spaced from a part of the said other edge area and having at space intervals therealong offset portions defining longitudinally spaced detents adapted to engage the said lock flange of the said one edge area to position the lock edge of the said other edge area in edge-to-edge abutting engagement with the lock shoulder of the said one edge area when the said other edge area is received within the channel of the said one edge area.

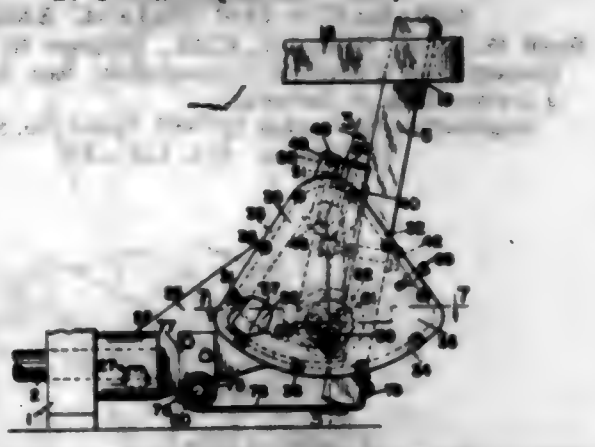
2,866,482

PICKING MECHANISM FOR LOOM

George S. Simmons, Jr., Leicester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Application January 30, 1957, Serial No. 637,298

17 Claims. (Cl. 139—149)



1. In a loom having a picker stick supporting carrier foot and a picker stick the upper end of which moves in a given direction during a shuttle propelling operation, a pivotal support for the lower end of the stick, mounting means for the support rotatable on said foot about an axis spaced from and parallel to the axis of the pivotal support, driving means effective to move the stick to cause the upper end thereof to move in said given direction during a shuttle propelling operation, operating means mounted for movement on said foot including a rotatable element cooperating with a member fixed to the mounting means, operative connections between the stick and operating means effective to move the latter on the foot when the stick is moved by said driving means, and connections between the mounting means and said operating means effective to move said mounting means to cause said pivotal support to move in an arc concave with respect to the upper end of the stick and in a direction opposite to said given direction during said shuttle propelling operation.

2,866,483

TEXTILE MATERIALS FOR POWER TRANSMISSION AND CONVEYOR BELTING

Gilbert Ernest Watts, Hull, Sidney Beetham Halsworth, Elloughton, near Brough, and Hugh Joseph Perry, Hull, England, assignors to J. H. Fenner & Co. Limited, Hull, England, a British company

Application May 31, 1956, Serial No. 585,068

Claims priority, application Great Britain June 1, 1954

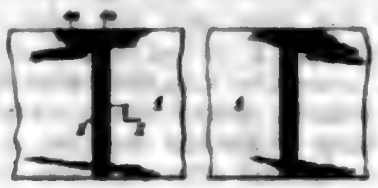
3 Claims. (Cl. 139—412)

1. A power transmission and conveyor belting of uniform thickness and flexibility comprising an elongated

for movement along the axis of said tubular member, and

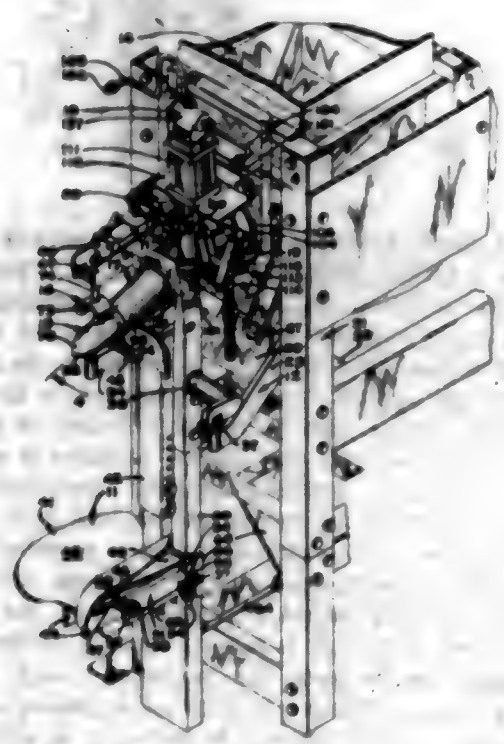
edge portion with a tip cut away the long axis of the

strip of impregnated textile fabric including a plurality of first weft sections of cellulosic yarns forming a major portion of said belting, a plurality of relatively narrow, tear-resisting second weft sections of thermoplastic polymeric material individually alternating in series with said first sections, said yarns in said second sections having



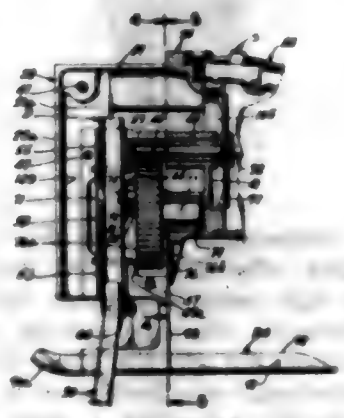
greater tear-resistance than but substantially the same diameter as the yarns in said first sections, and warp yarns binding said weft yarns in said first and second sections, the ratio of the length of said first sections to said second sections lying between 5:1 to 20:1, and the number of weft yarns per unit length of strip being the same in said first and second sections.

2,866,424
APPARATUS FOR FILLING BAGS
Boyd W. Ross, Riverside, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application November 1, 1955, Serial No. 544,179
17 Claims. (Cl. 141—83)



1. In an apparatus for filling a bag of the type which has an inlet valve at the upper end, the combination of a bag support seat mounted for pivotal movement from a substantially horizontal bag supporting position to a downwardly inclined bag discharge position, a filling spout pivotally disposed above said bag support seat and arranged to be received within the inlet valve of a bag disposed on said seat when said seat is in said bag supporting position, a stationary clamp element mounted above and closely adjacent said filling spout, actuating means pivotally mounting said filling spout for movement from a substantially horizontal bag clamping position closely adjacent said clamp element wherein the valve of the bag is clamped between said stationary clamp and said filling spout to a downwardly inclined bag releasing position removed from said clamp element, valve means operatively connected to said filling spout for opening and closing the flow passage through said spout, and control means operatively connected to said actuating means and to said valve means and arranged to consecutively cause a rapid closing of said valve means to stop the flow of material through the spout and a slow downward pivotal movement of said filling spout into the bag releasing position.

2,866,435
POWER TOOLS
Nicholas Anton, Park Ridge, Ill.
Application March 19, 1956, Serial No. 723,079
7 Claims. (Cl. 143—68)

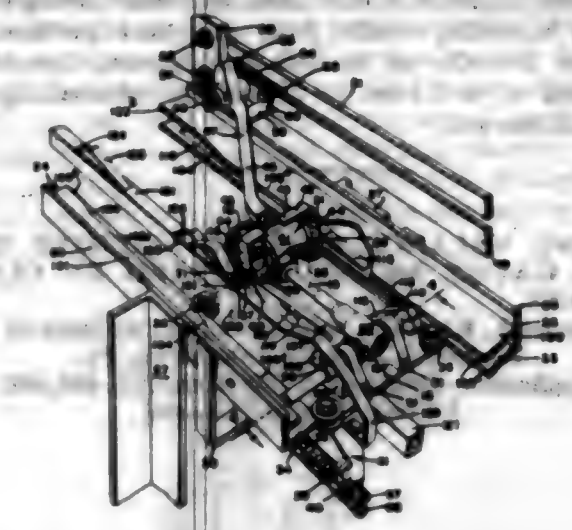


1. In a device for reciprocating a tool member, a housing having two spaced bearings mounted therein, a drive shaft, means for rotating said drive shaft, means for reciprocably supporting such a tool member, said last named means comprising an elongated tubular member reciprocably mounted in said bearings and having two opposite end portions adjacent to, and separated by, an intermediate portion, the interior of said intermediate portion and one of said end portions being open, means in the other of said end portions for supportingly engaging said tool member, said tubular member having an opening extending through one side of said intermediate portion, means including an elongated cross head for connecting said tubular member to said drive shaft for reciprocation by the latter during rotation of said shaft, said cross head being tempered to relatively high degree of hardness, and means for drivingly connecting said cross head to the outer periphery of said intermediate portion of said tubular member diametrically opposite to said opening, said last-mentioned means comprising heat fusion means including fused metal disposed between and in engagement with the adjacent surfaces of said cross head and said intermediate portion to adhesively secure said cross head to said intermediate portion and preventing relative movement therebetween.

2,866,436
PEELING MACHINE HAVING PEAR INDEXING MEANS
William de Back, St. Nicolas-Waas, Belgium, assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application October 13, 1954, Serial No. 462,864
11 Claims. (Cl. 146—43)

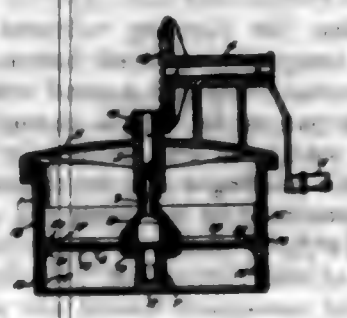
1. A machine for peeling pears or the like comprising a carriage movable along a predetermined path, a tubular member mounted on said carriage transversely of said path, a pear support member rotatably mounted on said tubular member, a rod supported in said tubular member

for movement along the axis of said tubular member, and means operatively connected between said rod and said



support member for changing axial movement of said rod to rotary movement of said support member.

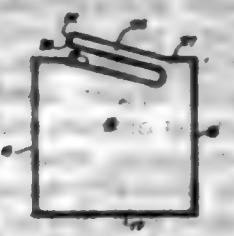
2,866,487
POTATO PEELING MACHINES
Heinrich Classen, Hamburg-Niendorfen, Germany
Application May 10, 1955, Serial No. 507,351
Public Law 619, August 23, 1954
Patent expires June 1, 1968
10 Claims. (Cl. 146—49)



1. A peeling apparatus, comprising, in combination, receptacle means having upstanding wall means; annular shelf means attached to said receptacle means and having a substantially horizontal and substantially flat rough upper surface arranged within said receptacle means adjacent said wall means thereof and substantially normal thereto and extending inwardly into the interior of said receptacle means; a circular turntable having an outside diameter corresponding substantially to the inner diameter of said shelf means, said turntable having a substantially horizontal and substantially flat rough upper surface, being mounted in said receptacle means for rotation about an upright axis, and being encompassed by said shelf means with said rough upper surface of said turntable being substantially flush with said rough upper surface of said shelf means; and means for rotating said turntable about its axis.

2,866,488
CONTAINER
Harvey G. Thompson, Shaker Heights, Ohio
Application March 7, 1956, Serial No. 570,961
8 Claims. (Cl. 150—.5)

1. A plastic container comprising a pair of sheets of flexible material each having three straight edges lying along the sides of a rectangle, and a fourth edge with a narrow reentrant portion providing a narrow projecting spout corresponding in outline shape to the re-entrant edge portion with a tip cut away the long axis of the spout being disposed at an acute angle to the edge of the container having the re-entrant portion, said sheets



lying one upon the other with edges heat-sealed together to form an enclosure for holding a fluid and capable of being filled or emptied through the tip of said spout.

2,866,489
BAG WITH TIE CORD
Lewis B. Herget, Cumberland County, Va.
Application November 16, 1955, Serial No. 547,878
1 Claim. (Cl. 150—1)

A bag of generally rectangular shape having ends and side edges at right angles to the ends, one of said edges having a seam extending therealong, a reinforcing side cap adhesively attached to the edge of the bag that is opposite to the bag seam, a reinforcing top cap adhesively attached to and over one end of the bag, and a tie cord sewed to the top cap and extending across the entire top including the side cap and beyond the ends of the top cap.

2,866,490
DIVIDER CONSTRUCTION FOR GOLF CLUB BAG
Robert E. Thompson, Des Moines, Iowa, assignor to Des Moines Glove & Mfg. Company, Inc., Des Moines, Iowa, a corporation of Iowa
Application March 25, 1957, Serial No. 648,258
3 Claims. (Cl. 150—1.5)

1. In a golf bag having a flexible, closable hood attached to the upper end of the bag and adapted to be opened

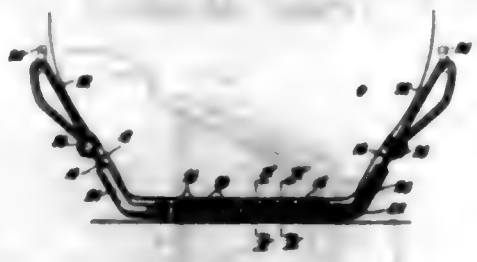
and folded down into the bag in close relation to the inner wall of the bag; the improvement comprising one or more club dividers removably mounted and totally supported on the inner side walls of the mouth portion of the bag, said divider including a pair of bracket members fixedly secured to opposite inner side walls of the upper end of the bag, an elongated support member having reduced shouldered projections at opposite ends for seating in said bracket members, and spring means associated with one of said members for releasably securing said projections in operative position in said bracket members, whereby upon removal of the dividers the hood may be withdrawn from the bag to an extended position for enclosing the upper ends of the golf clubs in the bag.

2,866,491

TIRE CHAIN CROSS LINK

Waldo R. Kell, Kansas City, Mo.

Application September 6, 1955, Serial No. 532,671
9 Claims. (Cl. 152—230)



1. In a traction device for a vehicle tire, a cross member provided with two sets of traction elements in series relationship therealong, one set comprising a plurality of incompressible lugs, the other set engaging the tire when the device is mounted thereon and normally holding said lugs spaced from the tire, said other set being compressible whereby the lugs are clamped against the tire only when the member is disposed between the tire and a roadbed supporting the vehicle, the compressible elements being interspersed among the lugs, rendering the compressible elements and the lugs mutually protective of each other against undue wear and abuse.

2,866,492

TUBELESS TIRE VALVE

Walter J. Lee, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application August 28, 1954, Serial No. 451,262
4 Claims. (Cl. 152—427)

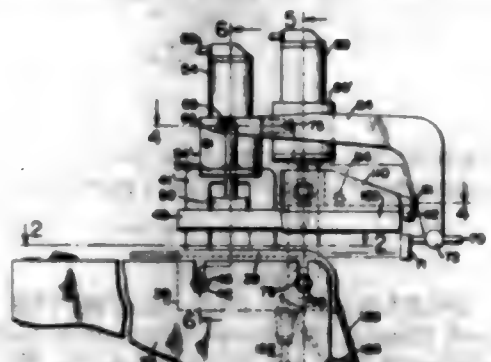
1. A valve and rim assembly for use with tubeless tires comprising in combination a rim having an aperture therein and a valve stem adapted to seal the aperture against the leakage of air, said stem being made of rubber and bonded to a metallic valve tube having a threaded outer end, said stem having a neck portion substanially equidistant from the ends of the stem which is larger in diameter than said aperture whereby said neck portion is highly compressed between the walls defining the aperture and said tube, said stem having a radially extending flange adjacent said neck portion engaging the outer surface of said rim, said flange constituting the maximum diameter of said stem, said stem having a base portion extending axially from said neck portion in a direction inwardly of the rim and tapering toward the inner end of said stem to a diameter substantially less than said aperture.

2,866,493

AWNING VALANCE BENDING MACHINE HAVING GAUGE MEANS ACTUATED BY CLAMP MEANS

James L. Kovalcik, Johnstown, Pa., assignor to Wisters O. Wendel, Johnstown, Pa.

Application October 7, 1954, Serial No. 460,880
3 Claims. (Cl. 153—46)



1. A machine for forming valances in contoured awning pans, comprising a fixed bottom die having a downwardly curved front end around which the valance portion of the pan is formed, a clamping die located rearwardly of said front end, means for operating said clamping die for holding a pan on the bottom die with its front end overhanging the front end of said bottom die, a frame pivotally mounted at the radial center of the front end of said bottom die, a die carrier mounted in the frame for movement toward and away from said bottom die, a gauge located forwardly of said front end in alignment with said bottom die for locating the front end of a pan in overhanging relation to the front end of said die, said gauge lying in the path of movement of said die carrier toward said bottom die, means operatively connecting said gauge with said clamping die for moving the gauge out of said path of die carrier movement upon clamping movement of said clamping die, a rolling die bar carried by said carrier, means slidably mounting said rolling die on said carrier for sliding movement on said carrier tangentially of the front end of said bottom die, means for limiting forward sliding movement, a roller in said carrier engaging said rolling die bar, means for moving said carrier on said frame to cause said roller to press the rolling die against the front end of said bottom die, and for then swinging the frame on its pivot to cause said roling die bar to roll the overhanging end of the pan around the front end of said bottom die.

2,866,494

METHOD FOR TIRE PUNCTURE REPAIR

William M. Sanderson, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application July 12, 1954, Serial No. 442,665
12 Claims. (Cl. 154—16)

1. The method of repairing a puncture in a mounted tubeless tire with a plug of elastomeric material having a first manipulating section and a collinear second puncture-plugging section, comprising the steps of inserting

ends, a seat front member joining the said ends of said seat frame member throughout their entire depth, seat

said upper closure member having a dam portion extending laterally from said cylindrical wall in close proximity

the first section of the plug into the puncture opening on the exterior surface of said tire by applying a tractive force to the first section at a predetermined point thereon intermediate its length to effect the entrance of the first section into the puncture in a position doubled-back on its length; advancing the first section in said position through the puncture length toward the tire interior to stretch the first section and pull the second section into the puncture with consequent stretching thereof; terminating the application of said force thus discontinuing said advance when the free end of the first section enters

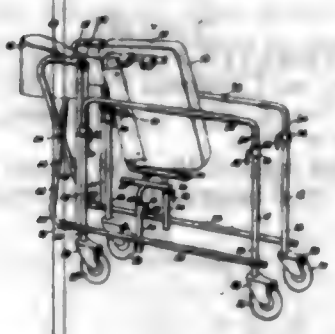
the tire pressure chamber and is released of the restraint imposed thereon by the confining walls of the puncture and snaps out of the doubled-back relation with the rest of said first section into a relaxed state to signal by a discernible indication that, due to the initial engagement in a predetermined relationship of the first section and the point of application of said force, the second section is properly positioned within the puncture length reversing the direction of force on the said first section to disengage said force from said first section and said elastomeric plug.

2,866,495

INVALID FOLDING WALKER AND CHAIR

James L. Diehl and Bentz J. Horne, Long Beach, Calif., assignors to Invalid Walker & Wheel Chair Co., Long Beach, Calif., a corporation of California

Application June 5, 1956, Serial No. 589,494
5 Claims. (Cl. 155—22)



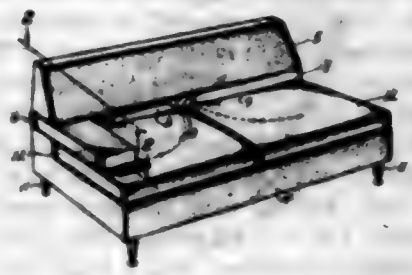
1. An ambulatory invalid supporting device, comprising: a pair of side members; foldable means interconnecting the front ends of said side members to support said members in vertically disposed parallel alignment for movement toward and away from one another between a collapsed position and to an open position of said device; brace means pivotally connected to one of said side members and including a center section that is disposed adjacent the front end of said device, said brace being movable to a vertical position to permit collapsing of said device and movable to a horizontal position to rigidly interconnect said side members when in open position; a seat pivotally connected to the center section of said brace adapted to be disposed in a horizontal invalid supporting position on said brace or in a vertically extending position adjacent the front end of said device to allow an invalid to enter the area formerly occupied by said seat; and wheel means to movably support said device.

2,866,496

FURNITURE EMPLOYING ARM RESTS MOVABLE HORIZONTALLY INTO A BACK MEMBER

Henry P. Glass, Chicago, Ill., assignor to Mutual Furniture Associates, Inc., Chicago, Ill., a corporation of Illinois

Application March 30, 1956, Serial No. 575,972
2 Claims. (Cl. 155—112)



2. A sofa convertible from one form into another form comprising a horizontally extending seat, a back member spaced a predetermined distance above said seat to define a slot on each end of said sofa for receiving an arm rest, means comprising a pair of vertically extending shafts one arranged on each end of said sofa within one said slot between said seat and said back member for forming said seat and said back member into a unitary device, and a pair of horizontally extending arm rests each pivotally mounted on a different one of said shafts for movement horizontally over said seat and into one said slot, said arm rests when moved into said slot lying within the outline of said back member.

2,866,497

COMPOSITE CUSHION AND METHOD OF MAKING THE SAME

William H. Struthers, Chicago, Ill., assignor to Molded Foam Corporation, Aurora, Ill., a corporation of Illinois

Application February 1, 1957, Serial No. 637,680
2 Claims. (Cl. 155—178)

1. A cushion comprising a perforated base, a flange upstanding from the base and defining a receptacle inwardly of the outer perimeter of the base, a mass of curled hair in said receptacle, and a mass of polyurethane foam having an inner layer impregnated by a portion of said mass, said foam having an outer layer confining the outer perimeter of said flange and confining the outer side of the inner layer, said outer layer being free from impregnation by said hair.

2,866,498

CHAIR CONSTRUCTION

Joseph F. Melbourne, St. Louis, and Louis Skatoff and Michael Alfend, University City, Mo.

Application December 31, 1957, Serial No. 706,418
3 Claims. (Cl. 155—193)

1. Chair construction comprising a seat portion including a U-shaped seat frame member forming the sides and back of the seat portion and having forwardly-presented

2,866,982

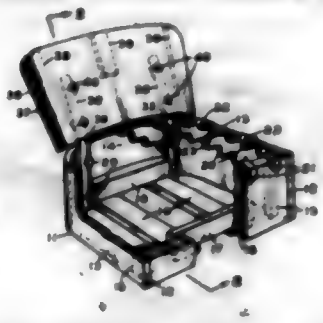
TAPE-DISPENSING MECHANISM

in end-to-end relation above said first blade member,

portion is highly compressed between the walls defining

ture-plugging section, comprising the steps of inserting

ends, a seat front member joining the said ends of said seat frame member throughout their entire depth, seat support structure including a support beam having a front end joined to the seat front member and a rear end joined to part of the back of the seat frame member below its mid-height, further comprising a back post having



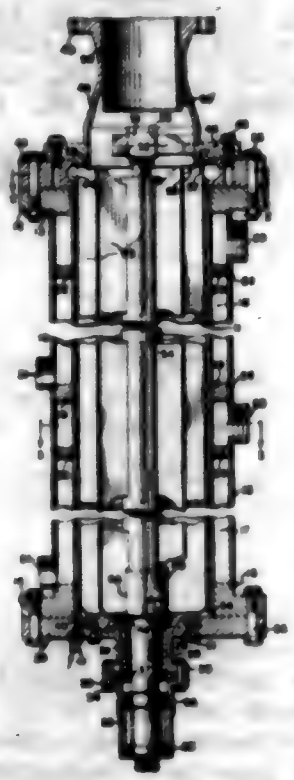
a lower end portion joined to the inner side of the back portion of the seat frame member, said back post having an upper end portion, and seat back structure secured thereto, whereby forces applied to the seat back to impose bending loads on the back post are elastically resisted by deflecting the U-shaped seat frame member.

2,866,499

APPARATUS AND PROCESSES FOR CONCENTRATING AND EVAPORATING LIQUIDS

Floyd C. Haley, New Monmouth, N. J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application August 1, 1955, Serial No. 525,570
12 Claims. (Cl. 159—6)



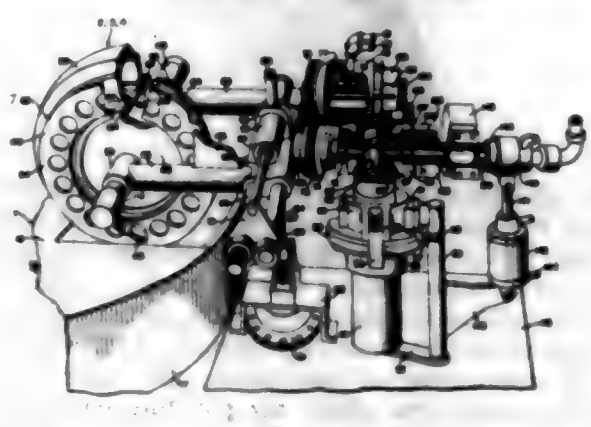
7. An apparatus for the evaporation and concentration of liquids, comprising a vertical chamber having a cylindrical wall, means for passing a heat-exchange fluid into contact with the outer surface of said wall, a bottom closure member for said chamber having an axial opening for a rotor shaft, said closure member having attached thereto a seal and a housing containing bearings for said shaft, an upper closure member for said chamber having an axial vapor outlet and a bearing for the upper end of said shaft, a rotor shaft rotatably journaled in bearings, a plurality of imperforate circumferentially-spaced vanes on said shaft, the outer edges of said vanes being in close proximity to the cylindrical wall and the ends of said vanes being near the upper and lower closure members, said upper closure member having a dam portion extending laterally from said cylindrical wall in close proximity to and in overlapping relationship with the ends of said vanes and a spiral-shaped collecting channel immediately below said dam extending substantially around said chamber and cooperating therewith and with the upper vertical outer edges of said vanes to direct a treated liquid to a tangential outlet communicating with said channel and at least one passage for the introduction of liquid material into the chamber.

2,866,500

METHOD AND APPARATUS FOR SIPING TIRES

Everett D. George and Harold H. Clark, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application December 22, 1955, Serial No. 554,854
32 Claims. (Cl. 164—10.3)



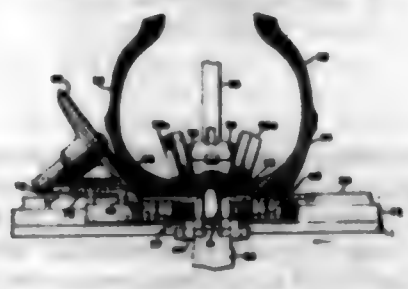
1. A tire siping machine comprising in combination means for holding a tire in free rotatable position, a driven cutter carriage rotatable in a fixed plane having at least one helically-extending cutter which passes transversely across the tread of the tire, means for moving said holding means toward and away from said cutter, and supporting means contacting and driven by the tire, said supporting means being positioned adjacent the cutter carriage for positively limiting the depth of the cut.

2,866,501

APPARATUS FOR SIPING TIRES

Everett D. George, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application August 28, 1956, Serial No. 625,660
10 Claims. (Cl. 164—10.3)



1. An apparatus for transversely cutting the treads of tires to form transverse slits having a length less than the width of said tread comprising in combination means for supporting a tire for rotation, a cutting blade movable in a direction transversely of the tread and in a plane normal to the plane of the tread surface, a first roller means bearing against the tread surface of said tire and laterally of the path of said blade, said first roller means distorting portions of tread surface above the plane of the top edge of said blade whereby said blade cuts only certain predetermined portions of said tire tread.

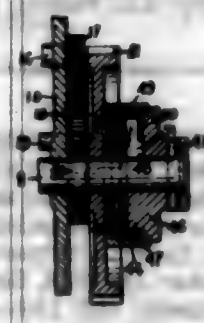
to support a die member, a pair of side frame members

and ram race plates, whereby adjustment of one or both

means to movably support said device.

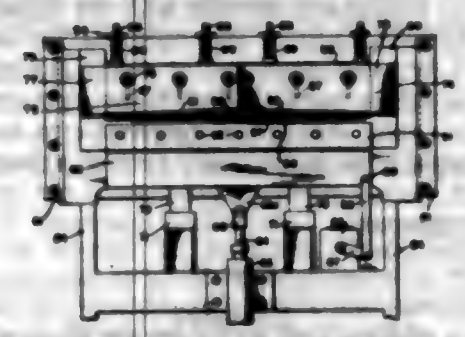
back of the seat portion and having forwardly-presented

2,866,582
TAPE-DISPENSING MECHANISM
Alfred P. Krueger, Stratford, Conn., assignor to Derby Sealers Incorporated, Derby, Conn., a corporation of Connecticut
Application April 16, 1953, Serial No. 349,230
6 Claims. (Cl. 164—42)



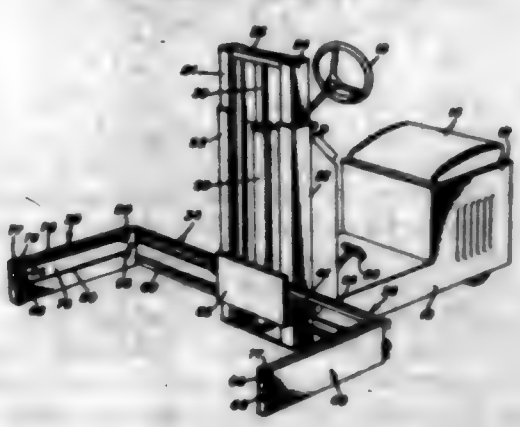
1. Driving means for a tape-dispensing machine having cooperating feed rollers, an oscillatable lever by which at least one of said rollers is driven in one direction, a shaft actuated by the lever, a movable severing member moved in one direction by said shaft to sever the tape, and return spring means to return the severing member to the position from which it was actuated, said drive mechanism comprising a barrel member mounted to rotate on said shaft and drivingly connected to one of said rollers, a coil spring snugly disposed within the barrel member, means providing a lost-motion connection between the shaft and the spring, said means comprising a hub member mounted on the shaft having a face portion in opposed relation to the barrel member, said face portion having a slot therein and said spring having an end thereof loosely mounted in said slot whereby the direction of the lever may be reversed at one end of its stroke and permit the severing member to be returned to its normal position by said spring return means prior to actuation of said shaft by the lever.

2,866,583
SHEAR APPARATUS
John Ernest Townsend, Canton, and Lester William Myers, Massillon, Ohio, assignors to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Original application March 15, 1952, Serial No. 276,888, now Patent No. 2,811,196, dated October 29, 1957. Divided and this application February 11, 1957, Serial No. 639,494
4 Claims. (Cl. 164—53)



4. A shear for sheet material, comprising a frame, a first horizontally elongated blade member, means supporting said first blade member on said frame for vertical movement with respect thereto, guide means on said frame defining a vertical path for movement of said blade member, said first blade member having two vertically projecting extensions at the ends of the blade member and a horizontal cutting edge along its upper side between said extensions, the path of said cutting edge as the blade member moves vertically defining a vertical plane whose location is determined by said guide means, second and third horizontally elongated blade members substantially half as long as said first blade member, means mounting said second and third blade members on said frame in end-to-end relation above said first blade member, each of said second and third blade members having a cutting edge extending along its lower side, said cutting edges of said second and third blade members being inclined slightly downwardly from the adjacent inner ends of said blade members toward their outer ends, said mounting means for said second and third blade members comprising means fixed on said frame at one side of said plane and extending therethrough and through said blade members to the opposite sides thereof, portions of said second and third blade members adjacent their outer ends being located at the opposite side of said plane so that said vertical extensions of the first blade member lie between the frame and said portions of said second and third blade members, and spring means on said fixed means biasing said second and third blade members toward said frame, so that the cutting edges of said second and third blade members intersect said predetermined plane at a small angle, and only one point on the cutting edge of each of said second and third blade members is in said plane at any given time, said first blade member being effective during upward movement thereof to engage its cutting edge against the edges of said second and third blade members at said points, and thereafter during continued upward movement to move the second and third blade members against said biasing means so as to gradually change said angle of intersection and to move said points of engagement progressively inwardly along said second and third blade members toward the inner ends thereof.

2,866,584
COTTON SAMPLE CUTTER
Manuel C. Byers, Sr., Galveston, Tex.
Application July 13, 1956, Serial No. 597,804
13 Claims. (Cl. 164—75)



1. An apparatus for cutting samples from bales comprising a support, a pair of horizontal, parallel arms projecting outwardly beyond said support and adapted to embrace a bale therebetween, means mounting said arms on said support for movement towards and from each other, a cutter for each arm having a pair of spaced knives, means supporting said cutters on adjacent surfaces of said arms for sliding movement longitudinally of said arms, means for causing sliding of said cutters whereby to make pairs of incisions on a bale from which may be taken samples from opposite sides of a bale clasped between said arms.

2,866,585
PRESSES FOR PUNCHING AND BLANKING SHEET METAL
Ewell W. Fortner, Cincinnati, Ohio, assignor to Precision Welder & Flexopress Corp., Cincinnati, Ohio, a corporation of Ohio
Application April 27, 1953, Serial No. 351,159
2 Claims. (Cl. 164—102)

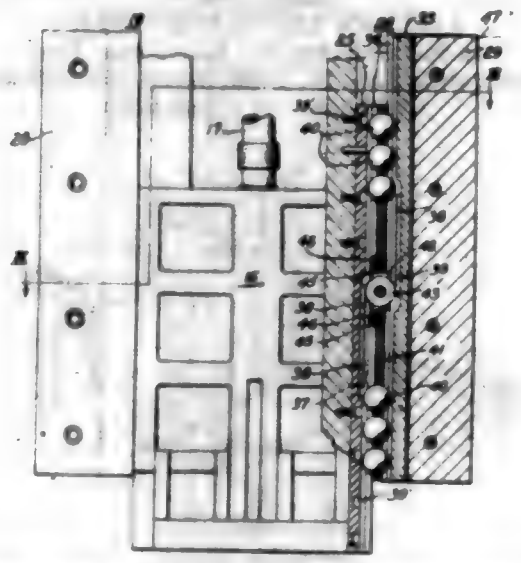
1. As an article of manufacture, a heavy duty high speed precision power punch press comprising a base

ducing characteristics in an amount sufficient to produce a stable gas-in-water foam at the drive gas-residual oil inter-

for variably timing said driving means to cause said reflected wave to contact said basic input member in ad-

vanes being near the upper and lower closure members, tread.

to support a die member, a pair of side frame members rigidly supported by and extending in a direction away from the base, each of said side frame members including a backing plate, the backing plates of said pair of frame members being spaced to receive therebetween a punch ram and having elongated parallel co-planar flat front faces, an elongated retainer plate mounted on the front flat face of each of the backing plates having a rear face opposing the front face of the backing plate on which it is mounted, one of said plates having a longitudinally extending notch or recessed seat formed in its face to receive a bearing race plate, a bearing race plate mounted in the notch or seat, the retainer plate having transversely spaced projecting bearing pads forming fulcrums for engagement respectively with the backing plate and an associated race plate, adjustable securing means connecting the backing plate and retainer plate at points intermediate the pads of the latter and adjustable to force the pads against the backing plate and bearing race plate to clamp the race plate between said backing and retainer plates in selected adjusted operative position in the notch or seat to prevent displacement thereof under heavy load operating conditions, said race plate having a ball race groove formed in its face opposing the ram and a countersunk rack subtending a longitudinal portion of the groove, a power operated sliding punch ram supported by the side frame members for reciprocation therebetween in a direction toward and from the base, a bearing race plate secured to each side of the ram, each said bearing race plate having a longitudinally extending ball race groove disposed in opposed coopera-



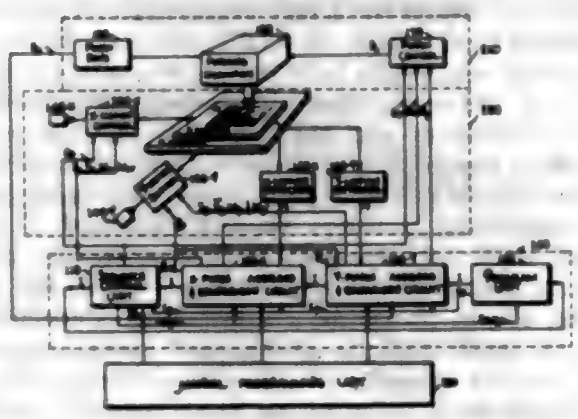
tive relation to the groove of the race plate supported by the adjacent side frame member and a counter-sunk rack subtending a longitudinal portion of the groove, and means intermediate the race plates on the ram and the race plates on the side frame members for accurately maintaining alignment of the ram with respect to the side frame members and prevent lateral bodily displacement or twisting of the ram relative to the side frame members in either a vertical or horizontal plane while minimizing frictional resistance to reciprocation of the ram, said means including as to each pair of opposed race plates a floating ball bearing cage plate disposed between the opposed race plates having centrally mounted thereon a rotatable pinion meshing with the adjacent racks of the side frame and ram bearing plates for determining the effective vertical position of the cage plate for all reciprocated positionings of the ram relative to the side frames, said cage plate having a plurality of ball receiving apertures formed therein in spaced relation to the central pinion, and anti-friction ball bearings freely rotatably mounted in said apertures, said ball bearing being of size jointly to engage at their opposite sides the ball race grooves of the adjacent side frame and ram race plates, whereby adjustment of one or both of the side frame race plates is effective minutely and accurately to determine the transverse adjustment of the ram relative to the base and to pre-load the ball bearings to the extent necessary to eliminate all play, distortion or displacement of the ram in any direction relative to the guiding side frames during reciprocation of the ram.

2,866,506

DIGITAL SYSTEMS FOR THE AUTOMATIC CONTROL OF MACHINERY

Doran C. Hlavath, Santa Monica, and Claude A. Lane, Culver City, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application October 25, 1954, Serial No. 464,410
11 Claims. (Cl. 164—115)



8. In an electronic digital computer system for automatically controlling a machine tool having a movable part, said machine tool being controllable by a previously prepared program to perform a series of predetermined operations, a positioning mechanism responsive to digitally-coded electrical control signals for automatically positioning the movable part, said positioning mechanism comprising prime mover means connected to the movable part; motion detector means coupled to the movable part for continuously producing digital electrical motion signals representing the motion thereof; address circuit means for receiving and temporarily storing an address represented by the digitally-coded electrical control signals indicating a desired position of the part; and counting and comparison circuit means coupled to said address circuit means and to said motion detector means for integrating said motion signals and continuously comparing the actual position represented thereby with the desired position indicated by said address, and operable for successively producing a first and second set of digital electrical output signals, said prime mover means being connected to said comparison circuit means and responsive to said first set of output signals for moving the part at a normal speed, and to said second set of output signals for stopping the motion of the part.

2,866,587

GAS DRIVE OIL RECOVERY PROCESS

Donald C. Bond and Orrin C. Holbrook, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application December 24, 1956
Serial No. 630,987
9 Claims. (Cl. 166—9)

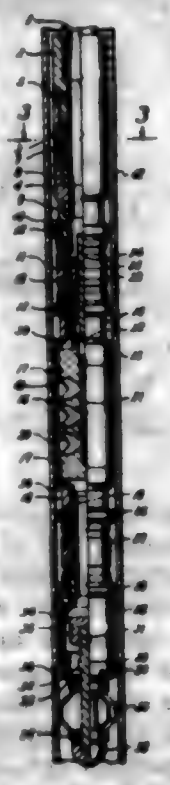
1. In stimulating the recovery of residual petroleum oil from a partially depleted, subterranean reservoir by means of a gas drive wherein a gas is forced through the reservoir from an injection well to a recovery well, the method of increasing the efficiency of the gas drive which comprises disposing in the reservoir adjacent said injection well a dilute non-viscous aqueous solution containing sufficient amounts of water having incorporated therein a water-soluble, foaming agent having foam-pro-

an engaging position in response to pressure initiated therein by said actuating cylinder, and a control arm car-

spectrum and an energy level approaching the energy level of explosives and a pulse duration of the order of less

ducing characteristics in an amount sufficient to produce a stable gas-in-water foam at the drive gas-residual oil interface produced during said gas-drive and immediately thereafter forcing said gas into said reservoir in contact with said solution whereby the adsorption of said foaming agent by said reservoir is substantially avoided and there is produced a stable gas-in-water foam bank ahead of the gas-drive interface.

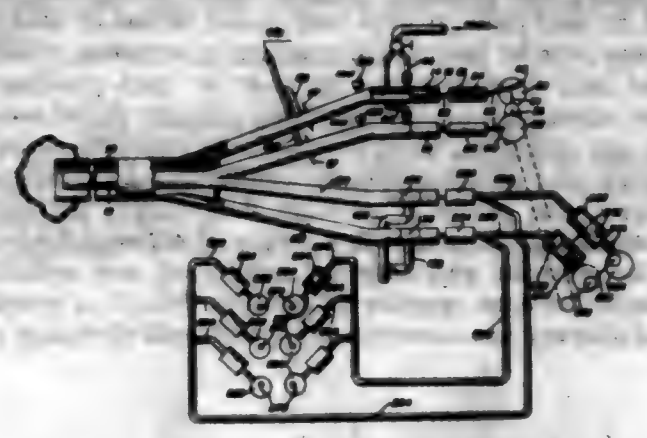
2,866,508
GUN TEST PACKER
Walter L. Church, Houston, Tex.
Application May 9, 1955, Serial No. 506,793
9 Claims. (Cl. 166—55)



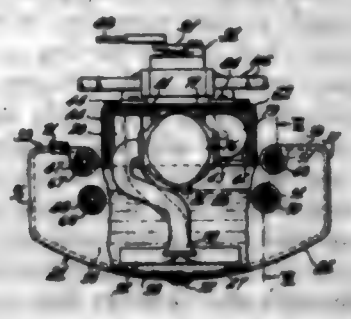
9. In a gun test packer, perforating means suspended from the lower end of a string of tubing to be lowered into a well casing, independent upper and lower valves movable into open position to permit the flow of fluid through said perforating means, tubing and casing, while the device is being lowered to the desired position in the well casing and subsequently being moved into another position sealing off said perforating means from inflow of fluid from the casing above and below said perforating means.

2,866,509
APPARATUS FOR TREATING OIL BEARING FORMATIONS
Clarence W. Brandon, Tallahassee, Fla., assignor of five percent to Harvey B. Jacobson, Washington, D. C., and fifty percent to N. A. Hardin, Hazel H. Wright, and Catherine H. Newton, and twelve and one-half percent to Orpha B. Brandon, all of Tulsa, Okla.
Application June 27, 1952, Serial No. 294,038
29 Claims. (Cl. 166—177)

1. A generator of high frequency energy transmitting waves in an elastic wave transmitting medium, compriaing a basic energy input member having operative contact with the medium, a first driving means for imparting periodic motion to said basic input member, an auxiliary energy input member having contact with the medium, a second driving means for imparting periodic motion to said auxiliary input member, means connecting said first and second driving means in adjustable, timed relation, said first driving means causing said basic input member to produce in said medium a periodic incident wave and a succeeding periodic reflected wave, means for variably timing said driving means to cause said reflected wave to contact said basic input member in adjustable out of phase relation to the incident wave whereby a resultant incident wave will be generated which is augmented relative to the reflected wave.



2,866,510
COMBINED BUMPER AND PUMP MOUNTING FOR TRACTORS
Thomas J. Flamm, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application April 4, 1957, Serial No. 650,699
3 Claims. (Cl. 180—53)



2. In combination with a tractor vehicle having a main frame; a hydraulic system for fluid motor operated implements mounted on said vehicle, said hydraulic system comprising: a bumper reservoir assembly formed by an upper and lower casing, a first opening provided in the top portion of said lower casing, a second opening corresponding to said first opening provided in the bottom of said upper casing, means for fixedly interconnecting said upper and lower casings having said first opening juxtaposed with said second opening whereby the interior of said upper casing communicates with the interior of said lower casing and defines a hollow fluid tight reservoir, said reservoir extending transversely of the longitudinal axis of said tractor vehicle, attaching means for detachably connecting said lower casing in thrust transmitting relationship to said main frame; and a hydraulic pump mounted within said upper casing and having fluid communication with said reservoir.

2,866,511
SAFETY BRAKE
Henry Niederost, Metuchen, N. J.
Application August 6, 1956, Serial No. 602,146
3 Claims. (Cl. 188—32)

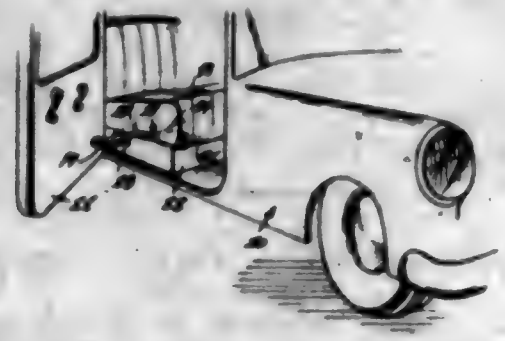
1. A safety device for automotive vehicles having a normally retracted and disengaged manually operable hand brake and at least one door pivotally arranged for movement between a normally closed and an open position in which the hand brake has means for holding and retaining it in an engaged position, fluid pressure means comprising an actuating cylinder and an operating cylinder in communication with each other, said operating cylinder having piston means associated with the handle of said vehicle hand brake to move said hand brake into

pressive relation to the air within the cavity defined by the outer marginal annular flat portion of said basket,

sides the ball race grooves of the adjacent side frame

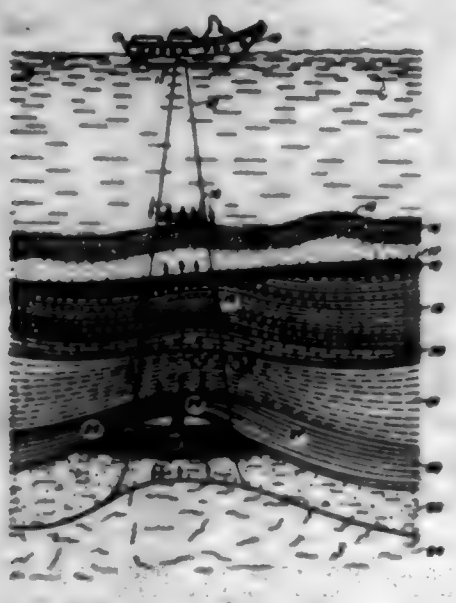
therein a water-soluble, foaming agent having foam-pro-

an engaging position in response to pressure initiated therein by said actuating cylinder, and a control arm carried by said door to urge said piston means of said actuating cylinder into a fluid pressure transmitting position when said door is moved towards an open position to effect movement of said operating cylinder piston means and said associated hand brake to said engaging position, wherein said actuating cylinder comprises a longitudinally reciprocating piston, a pressure fluid supply line communicating at one end with a supply of pressure fluid and at the opposite end with the interior of said actuating cylinder between opposite extremities thereof, a pressure fluid delivery line communicating with said operating cyl-



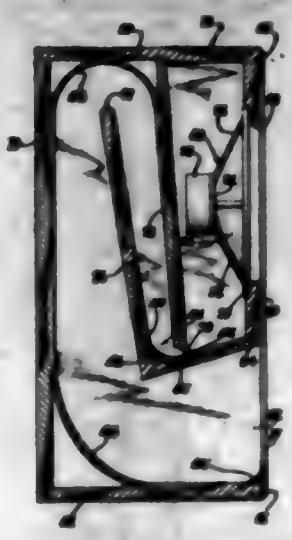
inder and with the interior of one extremity of said actuating cylinder, an end wall having vent means to atmosphere disposed at the opposite extremity of said actuating cylinder, said piston having a rod extending outwardly through said end wall, follower means carried by said outwardly extending piston rod in operating engagement with said control arm and adapted to move said piston from a normally disposed position between said end wall and said supply line to a pressure transmitting position between said supply line and said delivery line, said movement therebetween being operative to transmit fluid pressure through said delivery line to said operating cylinder.

2,866,513
METHOD OF SUBSURFACE EXPLORATION BY SONIC MEANS
Louis R. Podberg, Jr., San Diego, Calif.
Application July 3, 1953, Serial No. 366,079
19 Claims. (Cl. 181—.5)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A sonic method of subsurface exploration which comprises the steps of projecting high power, low frequency, short pulses of acoustic energy in a narrow beam into the substructure below the subsurface of the earth, said pulses having a frequency within the aural spectrum and an energy level approaching the energy level of explosives and a pulse duration of the order of less than ten milliseconds, and measuring the depth of pulse penetration by accurate timing of returned echoes.

2,866,513
APPARATUS FOR GENERATING SOUND
Stanley F. White, Chicago, Ill., assignor, by mesne assignments, to Edward V. Bracken, Darien, Conn.
Application November 24, 1952, Serial No. 322,243
7 Claims. (Cl. 181—31)



6. In a sound generator for generating sound in a low frequency range extending up to a predetermined frequency, a cabinet having a speaker opening and a second opening of substantially greater area than said speaker opening, a speaker having a diaphragm closing said speaker opening, first baffle means spaced behind said diaphragm a distance on the order of one-fourth wave length or less at said predetermined frequency to define a chamber which presents a non-resonant compliance up to said predetermined frequency, and additional baffle means disposed within said cabinet and cooperating with the cabinet walls to provide a sound path of increasing cross-sectional area having a mouth at said second opening and a throat coupled to said chamber, said throat having an area of at least one-eighth the area of said mouth and small enough to highly attenuate transmission of sound from said chamber into said sound path at frequencies above a cross-over frequency on the order of 150 cycles per second, said sound path having a free-air flare cut-off frequency of less than 60 cycles per second, and said predetermined frequency being substantially greater than said cross-over frequency.

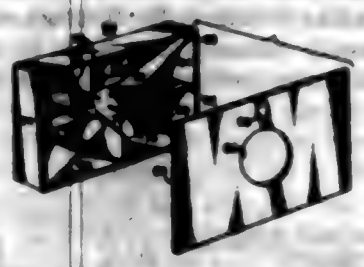
2,866,514
CORRECTIVE LOUD SPEAKER ENCLOSURE
Paul Weathers, Haddon Heights, N. J.
Application April 27, 1955, Serial No. 504,185
9 Claims. (Cl. 181—31)

4. An acoustical baffle for an electro dynamic type acoustical driver mechanism of the conical diaphragm type, the driver mechanism having lineal dimensional extremities in depth defined along an extension of the conical diaphragm axis, the base of said conical diaphragm being forward of the apex of said conical diaphragm in the direction of sound wave travel as produced by said driver upon excitation by electrical sound signals; a closed rectangularly shaped cabinet having a front wall with a centrally located opening through which said driver is to be mounted such that when mounted the base of said cone is in close proximity with said wall, the front surface of said diaphragm is exposed to the atmosphere and the rear surface of said diaphragm is in com-

ment therefrom, a housing having an air inlet

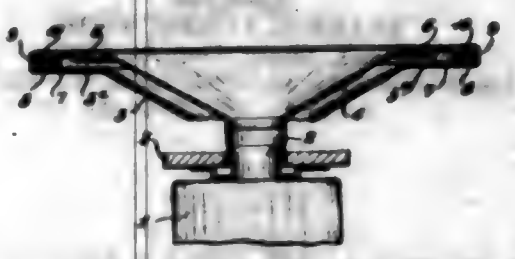
wave and a succeeding periodic reflected wave, means of said vehicle hand brake to move said hand brake into

pressive relation to the air within the cavity defined by said cabinet, the depth of said cabinet being substantially no greater than that required to accept said driver through said opening; a plurality of partitioning walls running from front to back within said cavity along lines substantially radially disposed about an extension of the conical diaphragm axis of said driver when mounted in said opening said walls making substantially air tight contact with the inside surfaces of the front, back, sides, top



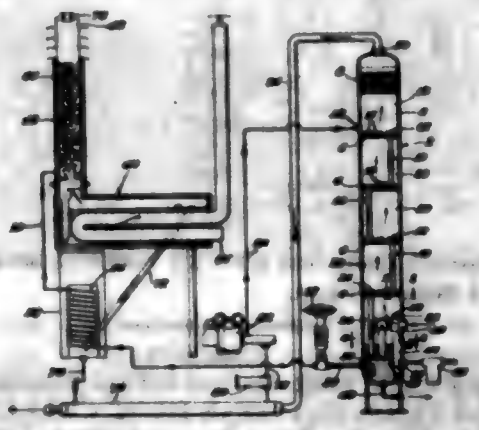
and bottom of said rectangular cabinet, said walls being cut away within said cavity in the vicinity of said opening so as to snugly receive said driver mechanism through said mounting opening, the cutaway portions of said partition walls thereby defining a plurality of chambers each having an opening in acoustically excitable relation to the rear surface of said driver diaphragm and radially disposed about the diaphragm axis of said driver, such that actuation of said driver will produce compressional wave flow in and out of said chambers; and frequency selective filtering means positioned in at least two of said chambers to filter all compressional waves in and out of said chambers, such that the effective acoustic volume of said chambers varies with frequency as a function of the frequency selective characteristics of said filtering means.

2,866,515
CONE FOR LOUD-SPEAKER ASSEMBLY
Robert C. Hunter, Pepper Pike, Ohio
Application November 28, 1955, Serial No. 549,358
2 Claims. (Cl. 181—32)



1. In combination, a loud-speaker basket with an outer marginal annular flat portion approximately normal to the longitudinal axis of said basket and with an adjoining outer edge portion that extends approximately parallel to the longitudinal axis of said basket, and a cone-shaped body of flexible material formed with a plurality of annular concentric ribs near the outer margin thereof, the marginal portion of said cone-shaped body, beyond said ribs, being formed with an annular shoulder that extends approximately parallel to the longitudinal axis of said cone-shaped body and having an annular extreme outer marginal portion that joins said shoulder and that extends in a plane approximately normal to the longitudinal axis of said cone-shaped body, said annular extreme outer marginal portion of said cone-shaped body having engagement upon said outer marginal flat portion of said basket and having centering engagement within said adjoining outer edge portion of said basket, and means for securing said annular outer marginal portion of said cone-shaped body in position upon said outer marginal flat portion of said basket, the depth of said annular shoulder of said cone-shaped body being greater than that of said ribs so that only said annular extreme outer marginal portion of said cone-shaped body has supporting engagement upon the outer marginal annular flat portion of said basket, whereby said ribs and shoulder are free for vibratory action.

2,866,516
DEHYDRATION ARRANGEMENT
Roy Shepherd, Sands Springs, Okla., assignor to Graver Tank & Mfg. Co., Inc., East Chicago, Ind., a corporation of Delaware
Application December 7, 1956, Serial No. 626,933
1 Claim. (Cl. 183—2.7)



In an absorber tower for use in an arrangement of the type described, a hollow vertically upstanding shell, a plurality of members in the shell dividing same into chambers including upper and lower chambers at the upper and lower extremities of the shell respectively, a gas inlet communicating with the lower chamber, a gas outlet communicating with the upper chamber, a glycol inlet port communicating with the upper chamber and below said gas outlet port, means to distribute the glycol over the members and allow same to flow downwardly to the lower chamber, a baffle plate device mounted on the inner periphery of the shell and arranged to be engaged by gas entering the shell through said gas inlet, said baffle device comprising a horizontal plate secured to the shell immediately below said gas inlet and a vertical plate mounted on an inner edge of said horizontal plate and spaced from and horizontally aligned with said gas inlet, a distillate collecting compartment in the lower chamber immediately below and vertically aligned with said horizontal plate, said distillate compartment having an upwardly facing opening, drain means establishing communication between said baffle device and said distillate collecting compartment comprising an aperture in said horizontal plate vertically aligned with said upwardly facing opening whereby distillate separated from said inlet gas by said baffle device will be carried to said distillate collecting compartment, said distillate collecting compartment including a weir edge at the upper portion thereof arranged to accommodate flow of stratified distillate on the top of the glycol in said lower chamber into said compartment, and drain means to remove distillate from said distillate collecting compartment.

2,866,517
DISCHARGE ELECTRODE MOUNTING DEVICE
Joseph Pfyl, Fanwood, N. J., assignor to Research-Cottrell, Inc., Bridgewater Township, Somerset County, N. J., a corporation of New Jersey
Application November 26, 1956, Serial No. 624,412
6 Claims. (Cl. 183—7)

1. In an electrical precipitator an electrode construction comprising in combination an elongated ribbon type discharge electrode, rigid clamping means having opposed faces adapted to engage and retain one end of said electrode therebetween, said clamping means having a width substantially greater than the width of said electrode and

2,866,521 fixed supply pipe is located and having outwardly-directed

spacer means interposed between the opposed faces of the clamping means and the electrode, the width of said

spacer means being less than the width of the electrode interposed therebetween.

2,866,518

APPARATUS FOR EQUALIZING PRESSURES IN MULTIPLE CYCLONE-DUST COLLECTORS

Roland L. Lincoln, Palos Verdes Estates, Calif., assignor to Western Precipitation Corporation, Los Angeles, Calif., a corporation of California

Application July 6, 1954, Serial No. 441,560
11 Claims. (Cl. 183—33)

10. In a dust collector having a housing provided with a gas inlet opening and a gas outlet opening, the combination comprising: a plurality of similar cyclone-type dust collecting units arranged in a row extending away from the gas inlet opening, said units operating in parallel and each having an individual inlet receiving part of the gas entering the collector at said gas inlet opening and an individual outlet discharging cleaned gas to said gas outlet opening, and a dust receiving hopper, each of said collecting units having a dust discharge opening communicating with said hopper, and gas flow restricting means at the individual inlet of each of a plurality of selected units, said means providing graded amounts of resistance to flow of the gas flowing through individual units in said row, said resistances being a maximum at the end of the row near the gas inlet opening of the housing and decreasing along said row away from said gas inlet opening.

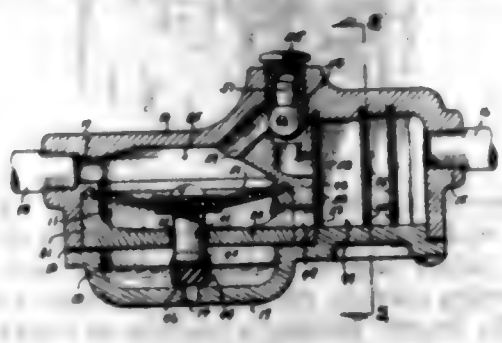
2,866,519

MOISTURE AND DUST SEPARATOR FOR AIR PRESSURE LINES

Clifford Hazlett and Gerald Engmann, Des Moines, Iowa, assignors to Engmann Manufacturing Company, Des Moines, Iowa

Application April 22, 1957, Serial No. 654,352
8 Claims. (Cl. 183—68)

1. In a separator for removing moisture and foreign matter from air lines, a housing having an air inlet opening, an air outlet opening and a discharge opening, a wall plate in said housing creating a lower and upper compartment in said housing and having a hole connecting the upper compartment with said lower compartment, a flexible resilient diaphragm in the upper compartment of said housing creating a third compartment and positioned above said upper compartment; said third compartment communicating with the outlet opening of said housing, a valve stem secured to said diaphragm extending downwardly through said upper compartment, loosely through the hole in said wall plate and into said lower compartment; said lower compart-



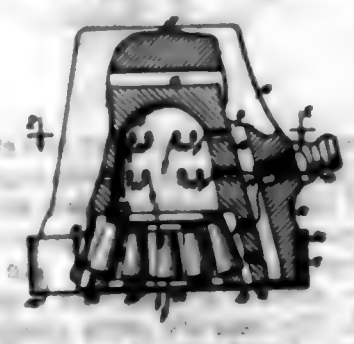
ment communicating with said discharge opening, a head on said valve stem capable of closing said discharge opening when in lowered position and capable of closing the hole in said wall plate when in elevated position, a wall portion in said housing creating a fourth compartment; said fourth compartment communicating with said air inlet opening, a passageway in said wall portion connecting the bottom area of said upper compartment with the bottom area of said fourth compartment, a passageway in said wall portion connecting the upper area of said third compartment with the upper area of said fourth compartment, a one way check valve in said last mentioned passageway, and a filter screen in said fourth compartment.

2,866,520

BEARING LUBRICATOR

John L. Sharp, Ontario, Calif.

Application May 28, 1957, Serial No. 662,846
1 Claim. (Cl. 184—1)



In a lubricator, a hollow housing having a frustro-conical shape and including an end wall and a continuous side wall, a fitting extending from said side wall and adapted to be connected to a source of lubricant, an end portion of said housing being threaded, a casing positioned within said housing, said casing being smaller than said housing so that a space is provided between the casing and housing, there being a plurality of spaced apart openings in said casing for the passage therethrough of lubricant, said casing being provided with a chamber for holding bearings to be lubricated, said chamber being of a size and shape so that bearings can be centrally arranged therein, and a closure including an end piece having a central opening therein, said closure further including an annular flange threadedly engaging the threaded portion of said housing.

parallel to the rotational axis of said assembly, an oper- discs toward the motor; inlet means through said spindle

of said cone-shaped body has supporting engagement upon

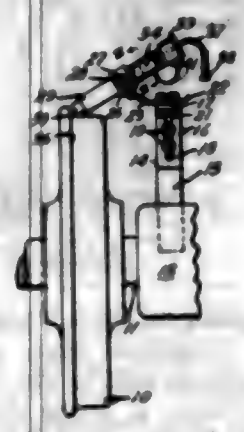
substantially greater than the width of said electrode and

2,866,521
LOCOMOTIVE FLANGE LUBRICATOR

Seabron H. Gibson, Birmingham, Ala., assignor to Transmit Incorporated, a corporation of Alabama

Application December 1, 1955, Serial No. 550,399
1 Claim. (Cl. 184—3)

In a lubricator for the flange of a locomotive wheel having a journal box, an upstanding support bracket secured rigidly to said journal box, a substantially L-shaped bracket having a horizontal leg and a depending vertical leg extending alongside the upper end of said support bracket, an elongated vertical slot in said vertical depending leg, fastening means passing through said support bracket and said vertical slot and holding said L-shaped bracket in selected vertical positions relative to said support bracket, a second support member extending alongside the horizontal leg of the L-shaped bracket and having an elongated slot adjacent one end thereof, fastening means passing through said horizontal leg and the slot in the second member and holding the same in selected horizontal positions relative to said L-shaped bracket, a third support member secured to the free end



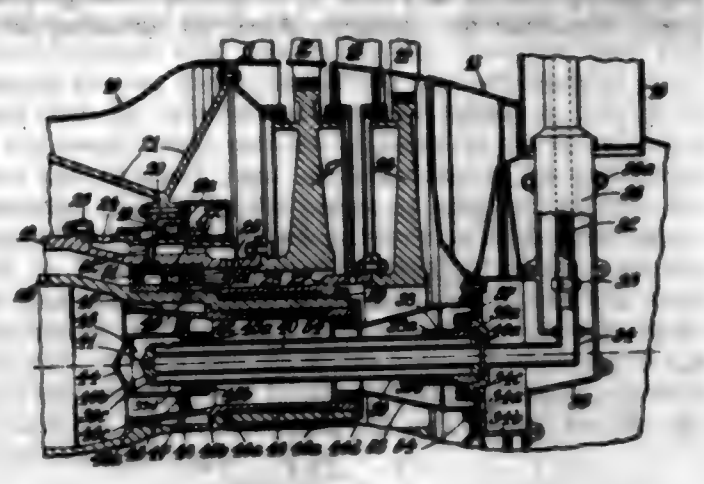
of said second member and extending transversely thereof, there being elongated longitudinally extending slots in said third member, a clamp extending alongside said third member, fastening means passing through said clamp and the slots in the third member holding said clamp in selected positions relative to the third member, a tube between said clamp and said third member polygonal as viewed in cross section for receiving a solid type lubricant stick being polygonal as viewed in cross section, a polygonal weight disposed within said tube for engaging an end of the lubricant stick and urging it downwardly toward the locomotive wheel flange, a removable cap fitting over an end of said tube for limiting outward movement of said weight, a flexible member connected at one end to the weight and extending through an aperture in said cap, a stop member attached to the other end of said flexible member for engaging the outer surface of said cap and limiting inward movement of the weight.

2,866,522
LUBRICATING ARRANGEMENTS FOR BEARINGS OF ROTATABLE SHAFTS

Frederick William Walton Morley, Castle Donington, and Wilfred Henry Wilkinson, Ternditch, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Application July 25, 1955, Serial No. 524,031
Claims priority, application Great Britain August 6, 1954
7 Claims. (Cl. 184—6)

1. A lubricating arrangement for the bearing of a shaft comprising a fixed oil supply pipe a major part at least of which is disposed beyond an end of the shaft and having an outlet disposed near the end of and coaxially with the shaft, an oil distributor located within the shaft adjacent the bearing to be lubricated and including a chamber having an inlet coaxial with the shaft and facing that end of the shaft near which the outlet end of the fixed supply pipe is located and having outwardly-directed outlet ducts through the shaft to the bearing thereof, an oil transfer pipe, a first substantially pressure-tight connection between the outlet of the fixed supply pipe and one end of the oil transfer pipe, a second substantially pressure-tight connection between the other end of the

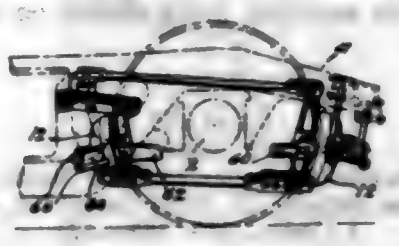


oil transfer pipe and the inlet of the chamber of the oil distributor, one at least of said connections permitting relative rotation of the parts joined thereby about the axis of the shaft, and both said connections including means for permitting limited universal movement of the parts joined thereby.

2,866,523
RAILWAY BRAKE

Walter H. Bacelt, Flossmoor, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application November 1, 1954, Serial No. 465,856
3 Claims. (Cl. 188—56)



1. In a clasp brake arrangement for a railway car truck comprising a wheel and axle assembly and a frame, including spaced side frames interconnected by a bolster, supported on said assembly, the combination of: a pair of brake beams disposed on opposite sides of the assembly and carrying at their opposite ends brake heads engageable with the wheels of said assembly, and means to move said brake beams and their related brake heads into and out of engagement with said wheels, one of said brake beams having end portions slidably mounted within recesses of the respective side frames, the other of said brake beams having end portions supported from the respective side frames by brake hangers.

2,866,524
ROTOR BRAKE

Norman F. Flesch, Park Forest, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application June 17, 1954, Serial No. 437,535
7 Claims. (Cl. 188—59)

1. In a railway car truck brake arrangement, a wheel and axle assembly, a frame and bracket means supported thereby, said arrangement comprising friction surfaces presented by the wheel and axle assembly and rotatable therewith, friction shoes engageable with respective surfaces, a power cylinder mounted to said bracket means, the longitudinal axis of the cylinder being substantially

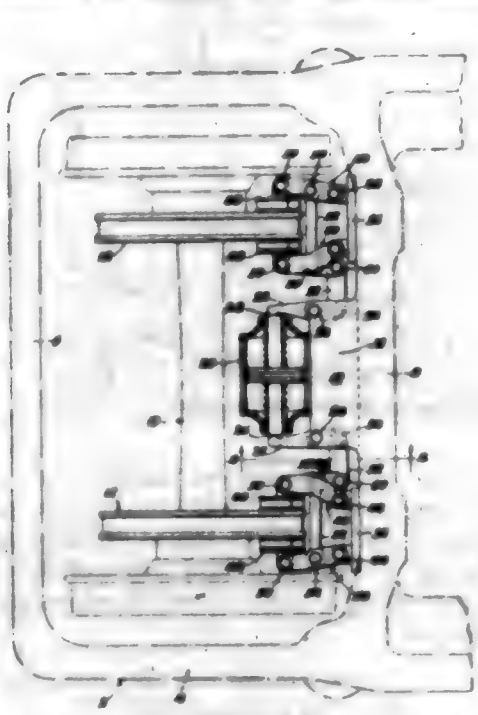
a connector strip of low heat transfer material carried by

ship with said shaft, means supporting said member in

8 Claims. (Cl. 183—68)

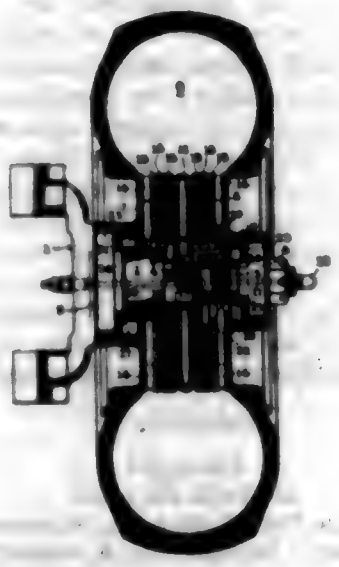
1. In a separator for removing moisture and foreign

parallel to the rotational axis of said assembly, an operating lever member fulcrumed directly to the bracket means and being operatively connected to said cylinder, dead brake lever members pivotally mounted at corresponding ends thereof on the bracket means, opposite corresponding ends of said dead lever members being operatively connected to respective shoes, an actuating lever



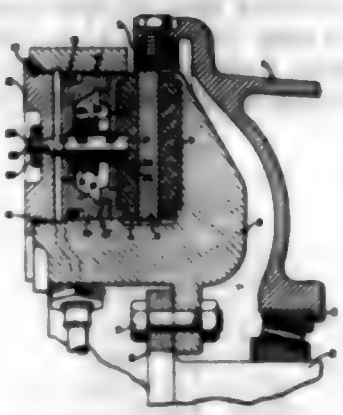
member pivotally connected to one dead lever member and its associated shoe, a floating pull link member pivotally connected to corresponding ends of said actuating lever member and said operating lever member, and a pull rod member pivotally connected to the other dead lever member and said actuating lever member intermediate their ends, said members being pivotal on substantially parallel axes.

2,866,525
DISC BRAKE
Arthur W. Bauer, Omaha, Nebr.
Application October 11, 1954, Serial No. 461,384
1 Claim. (Cl. 188—72)



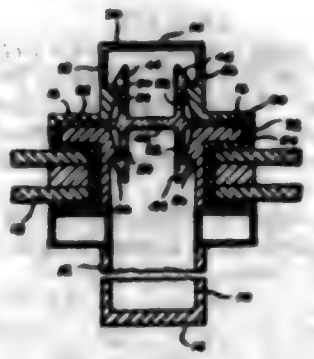
A disc brake assembly comprising in combination a spindle; a pair of spaced wheel discs journalled thereon and receiving at their outer peripheries a tubeless tire, each of said discs having a radial braking surface on its inner face, said spindle having a splined portion intermediate the wheel discs; a pressure motor, carried by the splined portion and including abutments movable axially of the spindle; a pair of brake discs, one on each side of the motor, splined to said spindle; springs biasing said brake discs toward the motor; inlet means through said spindle to the working space of the motor; passage means having a smaller flow capacity than said inlet means affording a flow communication between the working space and the interior of the tire; check valve means inhibiting reverse flow through the smaller flow passage; and a relief valve in flow communication with the interior of the tire to relieve excessive pressure in the tire.

2,866,526
AUTOMATIC BRAKE ADJUSTMENT
Roy R. Wiseman, Jr., Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application October 6, 1955, Serial No. 538,991
1 Claim. (Cl. 188—73)



An automatic adjustment for a brake including a brake member having a cylindrical bore, a closure for one end of the bore, a pin secured to the closure and extending axially of the bore, a piston slidably received in the bore, a block of friction material secured to the side of the piston remote from the closure, said piston being formed in two axially separable cup-shaped parts having the cup lips joined together to define a hollow cylindrical cavity in the piston, the parts of the piston being axially drilled to slidably receive the pin which extends completely through the piston into engagement with the block, a friction grip on the pin in the cavity of the piston, and resilient means positioned between the friction grip and the end of the piston nearest the closure to move the end of the piston nearest the block against the friction grip.

2,866,527
EXTRUDED WINDOW MULLION AND CURTAIN WALL STRUCTURES
Frederick A. Schilling, Vancouver, British Columbia, Canada
Application December 10, 1956, Serial No. 627,310
4 Claims. (Cl. 189—76)



1. A mullion structure for curtain walls comprising an extruded metal U-shaped mullion section having spaced side walls defining an elongated opening, each of said side walls having on its inner face a sawtoothed rib, an extruded metal capping member to close said opening,

which clips and shells carried thereby are fed in succession to a gun, means connecting said frame members

ous stations, stop means being provided to retain a box on the conveyor track at the stations, and in which cou-

that end of the shaft near which the outlet end of the the longitudinal axis of the cylinder being substantially

a connector strip of low heat transfer material carried by the capping member, said connector strip having a pair of spaced flanges each provided with a rib, the ribs of the flanges being mutually shaped to enter into locking engagement one with the other when the capping member is forced into juxtaposition with the first-named mullion section and a ribbon formed integrally with the connector strip and extending between the metallic mullion section and the metallic capping member to isolate the metallic sections one from the other.

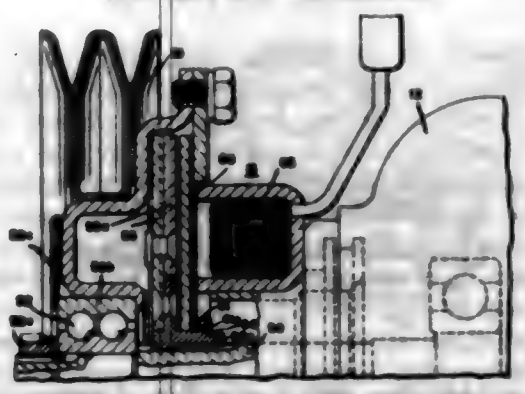
2,866,528

CLUTCH FOR REFRIGERATING APPARATUS

James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 26, 1954, Serial No. 418,531

3 Claims. (Cl. 192—35)



1. In combination: a rotatable clutch driving member; a rotatable clutch driven member; a driving disk rotationally fixed on said driven member and axially movable into driving engagement with said driving member; an axially movable teaser disk rotationally free from said driving and driven members and axially movable into rotational engagement with said driving member; relative rotation reaction spreader means directly interposed between said disks for spreading said disks to lock and unlock said driving and driven members responsive to axial movement of said teaser disk, said teaser disk being located at one side of said driving disk and having magnetic properties, a device having a housing and means driven by said driven member, and a solenoid fixed to said housing and located at the side and adjacent to said teaser disk for attracting said teaser disk to operate said spreader means.

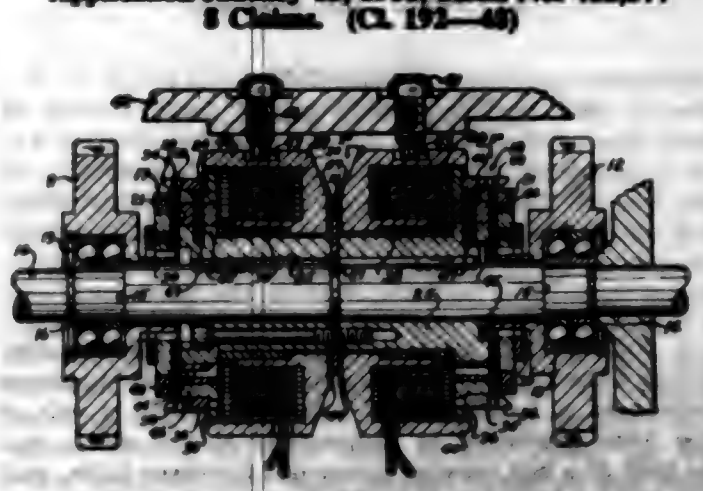
2,866,529

ELECTROMAGNETIC CLUTCH

Henry W. Spreitzer, Parma, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio

Application January 18, 1955, Serial No. 482,577

8 Claims. (Cl. 192—48)



1. In a drive unit of the character described, a rotatable shaft, a member to be connected in driving relation-

ship with said shaft, means supporting said member in coaxial relationship with said shaft and for rotation with respect thereto, clutch means coaxially disposed about said shaft including disk means actuatable to selectively connect and disconnect said shaft and said member in driving relationship, an electromagnetic coil member carried by said shaft and disposed coaxially about said shaft adjacent said disk means for actuating said disk means, bearing means supporting said coil member about said shaft for relative rotation with respect to said shaft, a stationary frame member adjacent to but spaced from said coil member, rigid abutment means on said frame member, rigid abutment means on said coil member cooperating with the abutment means on said frame member to hold said coil member against rotation relative to said frame member but permitting radial and axial movement of said coil member relative to said frame member, one of said abutment means comprising a pin and the other of said abutment means comprising walls spaced the thickness of said pin and having the pin disposed therebetween.

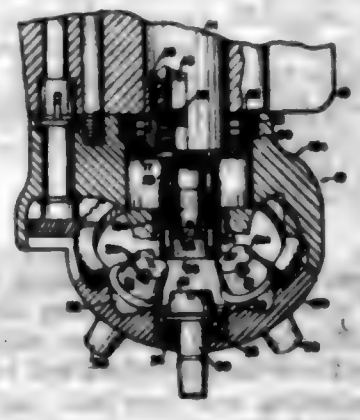
2,866,530

POWER-TRANSMITTING DEVICE

Arnold S. Charlet, Norwalk, Conn., assignor to Howe & Fant, Inc., East Norwalk, Conn., a corporation of Delaware

Original application March 18, 1954, Serial No. 417,103. Divided and this application October 4, 1956, Serial No. 613,932

3 Claims. (Cl. 192—67)



3. The combination of driving and driven shafts, a fixed bearing for one shaft, a seat of spherical curvature encircling the second shaft, a bearing for the second shaft movably mounted on the seat, a member mounted on the end of one shaft and having an axial recess formed with a circumferential surface increasing in diameter toward the open end of the recess, a member mounted on the end of the other shaft and having an end section with a circumferential surface decreasing in diameter toward the outer end of the section, the end section being insertable into the recess to provide a driving connection between the members, each member having at least one bore lying parallel to and offset from its axis and opening through said circumferential surface of the member, and a spring-pressed pin in the bore of one member adapted to be received in the bore of the other member to connect the members positively.

2,866,531

AMMUNITION CHUTE

Warren H. Noble, St. Paul, Minn., assignor to Noble Engineering Company, St. Paul, Minn., a corporation of Minnesota

Application May 18, 1956, Serial No. 589,243

9 Claims. (Cl. 193—25)

1. In an articulated ammunition chute, a series of individual frame members forming a passage through

means operative in response to a box being urged against

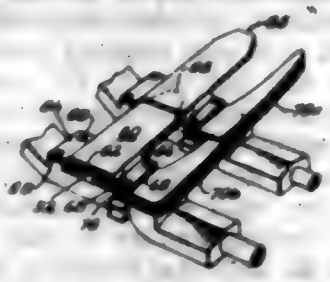
2,866,536

CONVEYOR WEAR STRIP

motor, splined to said spindle; springs biasing said brake

extruded metal capping member to close said opening.

which clips and shells carried thereby are fed in succession to a gun, means connecting said frame members together for limited movement relative to each other, and dual groupings of interleaved means affixed to said frame members in sliding engageable relationship permitting



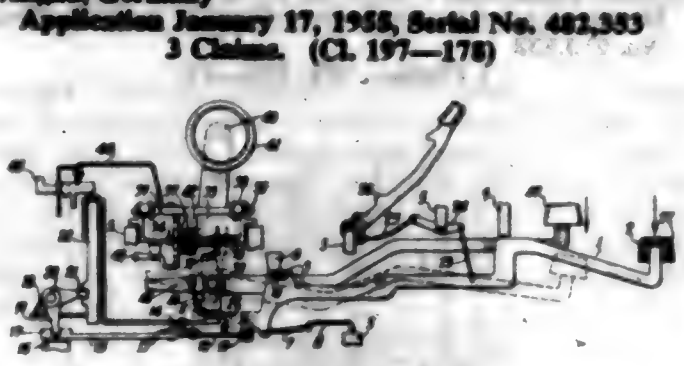
said limited relative movement and presenting a substantially continuous smooth wall against which said clips may bear without interference to their advancement, said interleaved means residing in planes substantially parallel to the frame of advancement of said clips and shells.

2,866,533

TYPEWRITING AND BOOK-KEEPING MACHINE PROVIDED WITH DECIMAL TABULATING MECHANISM

Hans Martin, Kaufbeuren, Allgau, Germany, assignor to Alpina Büromaschinen-Werk G. m. b. H., Kaufbeuren, Allgau, Germany

Application January 17, 1955, Serial No. 482,353
3 Claims. (Cl. 197—178)



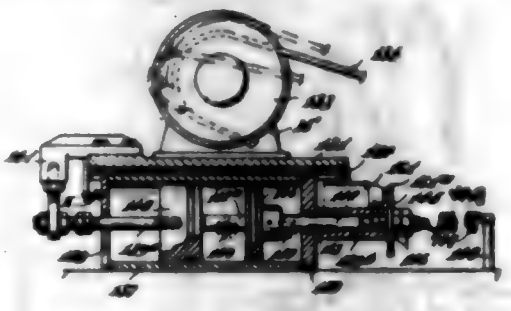
1. In a typewriting and book-keeping machine, the combination of type-bars, a carriage stop device including vertically movable members, key-levers individually operatively connected with said type-bars and being vertically rockable for actuating said type-bars, and mechanisms permanently individually interconnecting said members with vertically rocking portions of said key-levers, said key-levers being capable of individual longitudinal movement for actuating said mechanisms and vertically moving said members upon longitudinal movement of said key-levers.

2,866,534

ARTICLE-HANDLING APPARATUS

Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin

Application June 19, 1957, Serial No. 666,548
21 Claims. (Cl. 198—19)



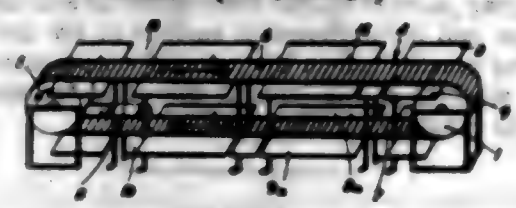
1. In combination with a plurality of processing units and constantly moving conveyor means for delivering articles to the several units, drive means for each individual unit, said drive means including a constant speed motor and motion-transmitting means between each motor and its respective processing unit, the drive means being constructed and arranged to drive the respective processing unit at any of three different, predetermined speeds, and control means for each drive means, the control means being automatically operative to cause any individual processing unit to shift from normal speed to a low, idling speed if the moving conveyor fails to deliver articles to said processing unit.

2,866,533

CONVEYING DEVICE

Olof Öhrnell, Norrkoping, Sweden

Application March 18, 1954, Serial No. 416,323
Claims priority, application Sweden March 14, 1953
1 Claim. (Cl. 198—19)



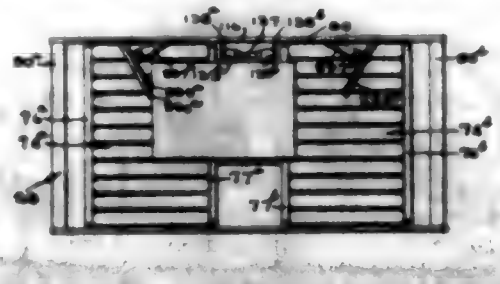
In a conveying device for use in continuous manufacture of industrial products having a plurality of operations performed thereon at a plurality of stations situated along a continuously driven endless conveyor track having an upper and a lower run, workpieces being conveyed in boxes on said conveyor track and distributed to the various stations, stop means being provided to retain a box on the conveyor track at the stations, and in which conveying device the lower run of the conveyor track is adapted to serve as a return track for the boxes, the combination of a table along each side of each run of the track and at a level therewith for receiving boxes that have been retained at a working station, the tables at each working station having an interruption therein, the length of which is somewhat larger than that of a box, and a platform vertically movably arranged in said interruption to receive and transfer a box between the upper and the lower table.

2,866,535

MACHINE FOR NAILING LIDS ON BOXES

Ernest A. Verrinder and John R. Richards, Riverside, Calif., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Original application September 10, 1952, Serial No. 308,785, now Patent No. 2,723,393, dated November 15, 1955. Divided and this application April 22, 1955, Serial No. 503,069
13 Claims. (Cl. 198—29)



1. Arrangement for orienting boxes and the like comprising a conveyor table operable to urge a box supported thereon in a predetermined path therecross, a pair of stop arms projecting at transversely spaced points into the path of a box moving across said conveyor table, each arm being adapted to individually preclude further progress of that portion of a box urged thereagainst, and

2,866,540

ARTICLE OF MERCHANDISE INCLUDING

2,866,543

PACKAGE FOR ARTICLES

able shaft, a member to be connected in driving relation-

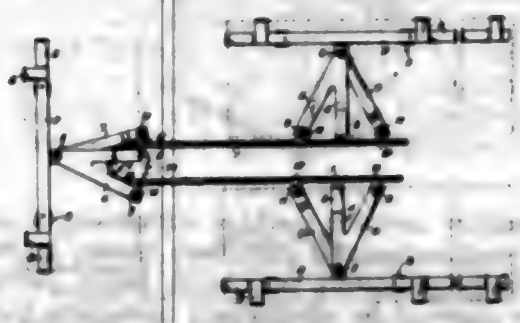
dividual frame members forming a passage through

means operative in response to a box being urged against both of said stop arms for interrupting operation of said conveyor table.

2,866,536
FEED RETURN GATES
Marvin L. Smallegan, Zeeland, Mich., assignor to Automatic Poultry Feeder Company, Zeeland, Mich., a corporation of Michigan
Application March 16, 1955, Serial No. 493,334
5 Claims. (Cl. 198—57)

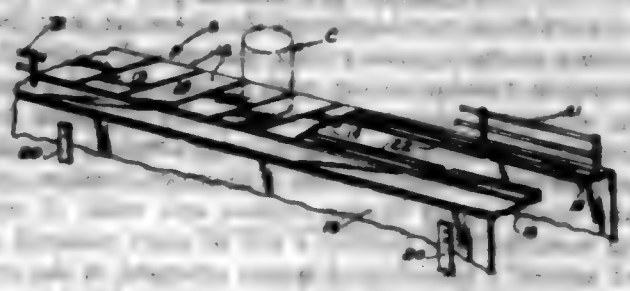
1. A feed return gate adapted to be mounted in a trough having an endless conveyor means traveling therein, said trough and endless conveyor means passing through a hopper, said return gate comprising: an elongated resilient finger and means rigidly mounting one end of said finger adjacent the top of said trough; the other end of said finger being free, biased downwardly toward said conveyor, and extending down into said trough and converging in the direction of movement of said endless conveyor, with said trough at a small angle; a second finger downstream of said first finger and means mounting one end thereof above said trough within said hopper; the other end of said finger being free, downwardly inclined and resiliently biased against said endless conveyor; a major portion of said second finger overlying said first finger and normally vertically spaced therefrom.

2,866,537
DEVICE FOR THE TRANSPORT OF CONTAINERS
Theobald Immesberger, Kaiserslautern, Germany, assignor to G. M. Pfaff A.-G., Kaiserslautern/Pfalz, Germany, a corporation of Germany
Application October 5, 1954, Serial No. 460,445
Claims priority, application Germany October 7, 1953
2 Claims. (Cl. 198—181)



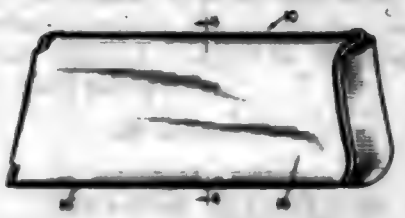
1. A device for the transport of containers, comprising an endless chain having two straight portions between two reversal portions, vertical shafts to drive said chain in a horizontal plane, said shafts being located near the chain reversal portions, a carrier for each of said containers adapted to be moved by said chain in the path of travel of said chain including movement in opposite directions along said straight portions, said carrier including a container support, a first arm rigidly connected to said support and a second arm pivoted to said first arm, near the point of interconnection between said support and said first arm, a pair of connecting members in a spaced relation to each other on said chain, the free end of said first arm being pivoted to one of said members, the free end of said second arm being pivoted to the second of said pair of members.

2,866,538
CONVEYOR WEAR STRIP
Nathaniel D. Goldberg, Chicago, Ill.
Application June 5, 1957, Serial No. 663,751
5 Claims. (Cl. 198—189)



1. The combination with a pair of spaced horizontal and parallel extending rails over which rides an endless conveyor of the type having platform sections extending over said rails for support therefrom, of wear strips mounted atop each rail, arranged to have said platform sections travel thereover, and including a plurality of track sections, each track section comprising an elongated thermoplastic body having a flat bottom surface adapted to lie atop a rail, a protrusion extending from said bottom surface, adjacent one end of said body, and insertable within an opening in said rail, lock means engageable with said protrusion for maintaining the same within said opening, an open end cut-out portion at said one end of said body and extending longitudinally into said body, a prong extending longitudinally from the opposed end of said body, said prong and said cut-out portion each having downward and divergingly extending opposed surfaces whereby the prong of one section is nestingly insertable within the cut-out portion of the track section adjacent thereto and maintained in position by the same.

2,866,539
SPECTACLE CASE
Donald J. McCulloch, Rochester, N. Y., assignor to Bausch & Lomb Optical Company, Rochester, N. Y., a corporation of New York
Application April 10, 1957, Serial No. 651,842
2 Claims. (Cl. 206—5)



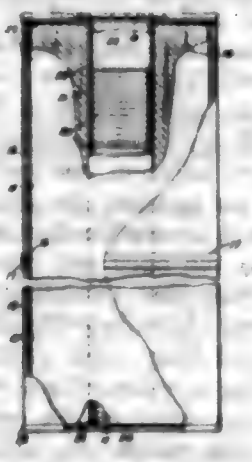
2. An open end spectacle case formed of a laminated member comprising a relatively rigid, bendable plate positioned between two pieces of plastic sheet material which are sealed together at adjacent edges overlapping the periphery of the plate, said member being formed to provide a case which is substantially triangular in vertical section, said case having front and rear side walls which are downwardly and inwardly inclined to meet at a smooth curved bottom, the upper portion of one side wall having an integral projection extending laterally to the other side wall to thereby provide a top wall, the upper portion of said other side wall having a laterally extending part which overlaps the top wall, said part being secured along its edge to the underlying top wall, each of said side walls having at one end an integral projection which extends inwardly into contiguous relationship to the other to thereby provide a closure for one end of the case whereby a spectacle inserted within the case will be substantially enclosed and protected against damage.

2,866,544
DISPLAY DEVICE

ing a longitudinally extending passage terminating in an opening at the outer end thereof, means for supplying

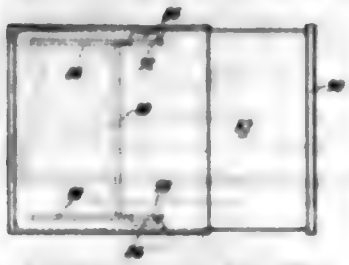
2,866,540
ARTICLE OF MERCHANDISE INCLUDING ROLLED SHEET MATERIAL
Robert M. Rothmayer, New York, N. Y.
Application December 6, 1957, Serial No. 701,838
7 Claims. (Cl. 206—47)

1. An article of merchandise of the character described, comprising a tubular main casing, an upwardly extending supplemental tubular casing part arranged in the main casing, a tubular closure cap frictionally engaging said supplemental casing and having an edge abutting the edge of the main casing when the cap is in closed position, said cap and main casing having closure end walls of reinforcing material fixed thereto, a roll of sheet material arranged around a plurality of spools arranged in the core of said roll, a transparent wrap supporting the sheets of said roll in rolled condition, sheet material of different characteristics constituting said roll, the arrangement of outer edge portions of the sheet material of the roll being such as to space the differently characterized sheet edges



one from the other for exposure circumferentially of the periphery of said roll, and means for sealing the cap against displacement from the main casing.

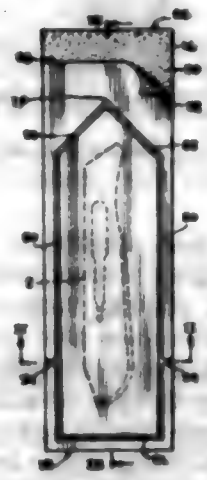
2,866,541
PHONOGRAPH RECORD JACKET
Herbert J. Ravis, New York, N. Y., assignor to Peerless Album Co., Inc., Brooklyn, N. Y., a corporation
Application September 12, 1956, Serial No. 609,474
1 Claim. (Cl. 206—63)



A substantially square jacket for a phonograph record comprising an envelope and a drawer-like slide, said envelope closed on three sides and open on the fourth side, said slide slidable within said envelope, stop and sealing means at the front of said slide for stopping the inward movement of said slide, for substantially sealing said envelope opening against dust and for acting as a stop for said phonograph record, cooperating stop means on said slide an envelope, a spine along the back of said envelope providing a flat leading edge for printing of the title of the phonograph record and for greater rigidity of said jacket, said stop means comprising a cardboard member attached to one side of said envelope, opposed channels of predetermined length in said cardboard member, a pair of opposite tabs at the rear of said slide, said tabs slidable in said channels and acting as stops against the forward ends of said channels to prevent said slide from leaving said envelope.

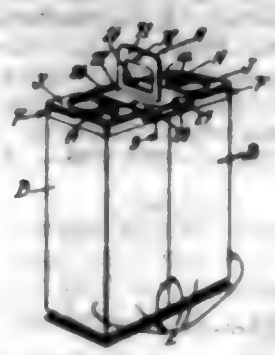
2,866,542
PACKAGES FOR ARTICLES
Alexander Svirchev, Bellerose, N. Y., assignor to American Safety Razor Corporation, Brooklyn, N. Y., a corporation of Virginia
Application July 24, 1953, Serial No. 370,895
1 Claim. (Cl. 206—63.2)

A surgeon's blade package comprising a plurality of sections each formed of sheet material having a natural grain such as aluminum foil and the like and a surgeon's blade held therebetween, said sections being bonded to each other by a vinyl coating applied in the direction of the natural grain of the aluminum foil to thereby



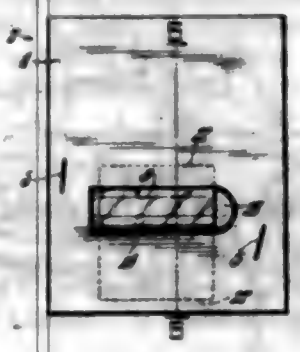
modify the bonding action of the vinyl coating and thus facilitate separation.

2,866,543
CARRYING DEVICE FOR CONTAINERS
Edward O. Thon, Newark, N. J., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application December 23, 1953, Serial No. 555,041
4 Claims. (Cl. 206—65)



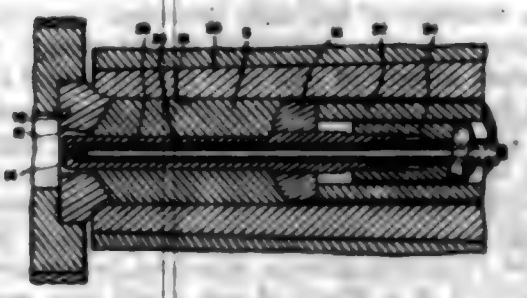
1. A unitary carrying package comprising a plurality of juxtaposed rectangular containers having at their top ends laterally projecting peripheral ledges portions of which are disposed in substantially coincident transverse relation and other portions of which are disposed in longitudinally aligned relation, a flat flexible top member of rectangular configuration overlying the top surfaces of said juxtaposed containers and having oppositely disposed integral channel shaped marginal portions overhanging said longitudinally aligned ledge portions of said juxtaposed containers, said channel shaped marginal portions of said top member thence extending horizontally inwardly and closely beneath said longitudinally aligned ledge portions and conforming to the cross sectional configuration thereof to support said containers thereby, a bendable clip member attached to the outer surface and conforming to the configuration of said channel shaped marginal portions to reenforce the latter and to hold them in container supporting and connecting position, and an upstanding handle member secured to said top member for carrying said package.

2,866,544
DISPLAY DEVICE
William J. Hohn and Stephen A. Dube, West Springfield, Mass., assignors to Bemmbers, Incorporated, West Springfield, Mass., a corporation
Application November 20, 1956, Serial No. 623,404
1 Claim. (Cl. 206—80)



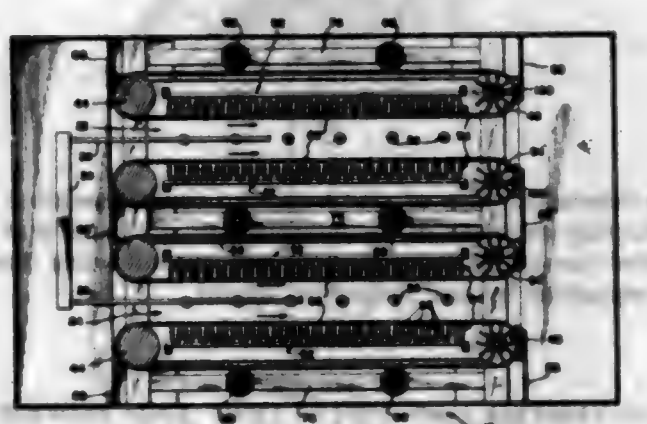
A two-part package display device for an object comprising, a support of sheet material having inherent resiliency and including a pair of superposed flat plies hingedly connected to each other and being separable from each other for the insertion of objects therebetween, the plies of said support having elongated openings of a certain length in register with each other, a coacting holder positioned between the plies of said support comprising sheet material including a pair of superposed flat plies secured together at opposite end portions thereof and each having a pair of parallel longitudinally-spaced transversely-extending channel-defining lines adjacent the inner side of each of the opposite end portions of said holder, the portions of the plies of said holder intermediate the pairs of channel-defining lines being separable to form an open-ended transversely-extending tube snugly encircling an object which is closely received in the elongated openings of said support, the transverse width of the plies of said holder being relatively less than the certain length of the registered openings in the plies of said support, portions of the plies of said support at opposite longitudinal sides of the registered openings being yieldably free of each other, said holder being movable relatively to said support between the yieldable plies thereof in directions laterally of said support to provide for the insertion of said holder between the plies of said support and the sliding of said holder inwardly therebetween for the location of the channel of said holder and the object therewithin in the registered openings of said support for holding said holder against displacement from said support, the portions of the plies of said support away from the registered openings being secured together in superposed relation.

2,866,545
INTERNALLY COOLED MANDREL
Harold E. Hoshain and James L. Cunningham, Decatur, Ala., assignors to Calumet & Hecla, Inc., Calumet, Mich., a corporation of Michigan
Application May 7, 1956, Serial No. 583,236
5 Claims. (Cl. 207—16)



3. An internally cooled mandrel for use in tube extrusion and subjected in use to tensile stresses and having a longitudinally extending passage terminating in an opening at the outer end thereof, means for supplying cooling liquid to said passage, comprising an elongated conduit extending longitudinally of said passage having its inner end fixed and its outer end free for relative movement in the end of said passage adjacent the free end of said mandrel, said conduit having ports for the escape of cooling liquid into said passage, a valve normally closing said opening, said valve being carried by the free end of said conduit, whereupon upon elongation of said mandrel under the tensile stress applied thereto, said valve opens to provide for escape of cooling liquid.

2,866,546
COMBINED ELECTROSTATIC AND MAGNETIC SEPARATOR
Lawrence M. Roberts, Bound Brook, N. J., assignor to Research-Cottrell, Inc., Bridgewater Township, N. J., a corporation of New Jersey
Application February 6, 1957, Serial No. 638,595
4 Claims. (Cl. 209—12)

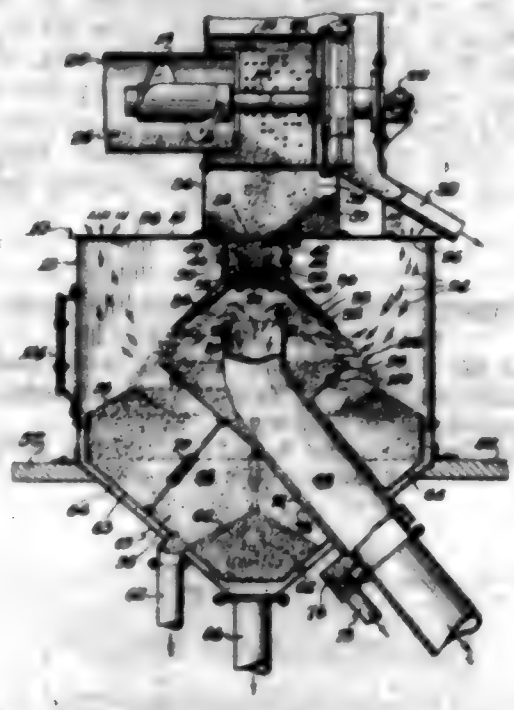


1. Gas cleaning apparatus including a housing having a gas treating zone therein, a dirty gas inlet and a clean gas outlet for the gas treating zone, extended surface collecting electrodes and complementary electrodes positioned in said gas treating zone, said collecting electrodes comprising a non-magnetic extended surface element having one face positioned in parallel spaced relation to its complementary discharge electrodes, a plurality of magnet elements positioned adjacent the other face of said extended surface element and means for moving said extended surface element relative to the magnet elements through the gas treating zone.

2,866,547
ABRASIVE SEPARATOR
Willie I. Gladfelter and Max E. Fahrney, Hagerstown, Md., assignors to Pangborn Corporation, a corporation of Maryland
Application September 11, 1956, Serial No. 609,265
7 Claims. (Cl. 209—33)

2. An apparatus for separating reusable abrasive from a mixture of granular solids comprising an outside casing, an inlet for granular particles, an open-mouthed exhaust pipe for carrying away finest particles, air flow means providing a stream of air flowing into the mouth of said exhaust pipe, a truncated conical member supported in vertically-spaced relation to said inlet and to the mouth of said exhaust pipe so that it shields the mouth of the exhaust pipe from direct entry by said solids and allows said solids to fall freely across said air stream entering said exhaust pipe after passing under the depending edge of said conical member, a collecting bin supported from said casing for collecting heaviest particles to be re-used as abrasive, a feeding hopper supported from said casing in operative relation to said inlet for supplying granular particles to said conical member,

an adjustable means for supporting said exhaust pipe at a selectable distance from said feeding hopper, an inverted conical skimmer element and conduit secured to and surrounding said exhaust pipe at a position below



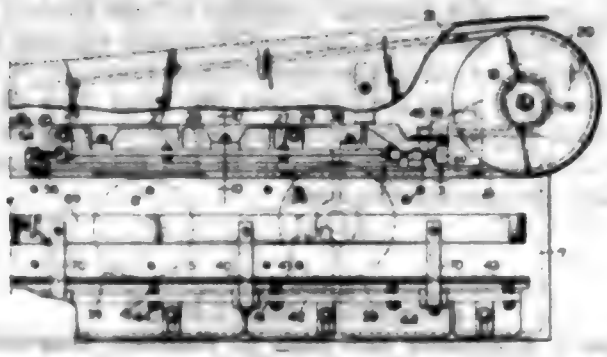
the depending edge of said truncated conical member for collecting particles of an intermediate size, and said inverted conical skimmer element and conduit being directly supported by said adjustable means.

2,866,548

INVERTED CAN DETECTING AND POWER CIRCUIT CONTROL MEANS

Justin Simpson, Elmhurst, and Charles W. Hale, Oak Park, Ill., assignors to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application January 5, 1954, Serial No. 402,372
14 Claims. (Cl. 209—72)



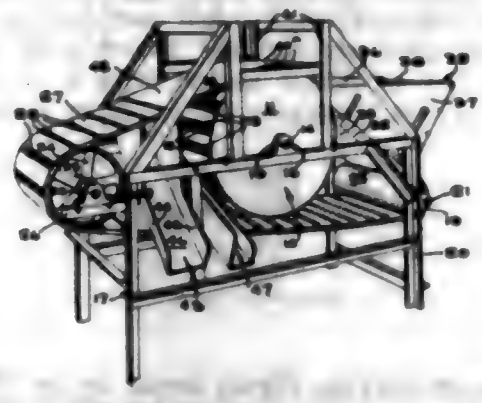
3. In apparatus of the character described, means for feeding cans uprightly and in processional order, said cans each having a tear strip adjacent one end thereof and terminating at one point in the circumference thereof in a free tongue end portion projecting slightly outwardly from the periphery of the can, a power control circuit including a control switch, a switch actuater engageable and movable by contact of the tear strip tongue of a can moving along in inverted position and effective when so moved to actuate the switch to control the power circuit, and means for assuring presentation against said actuater, and in the direction of its projection from the can, of the slightly projecting tongue of each can which may be fed along in inverted position, said control circuit being operatively connected with an inverted can ejecting means effective when the switch is actuated to bring about an ejecting of the inverted can which caused actuation of the switch.

2,866,549

FRUIT PROCESSING MACHINE

Bert Randall Van Slyck and Walter W. Kelly, Portland, Oreg., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Application June 16, 1953, Serial No. 361,884
9 Claims. (Cl. 209—103)



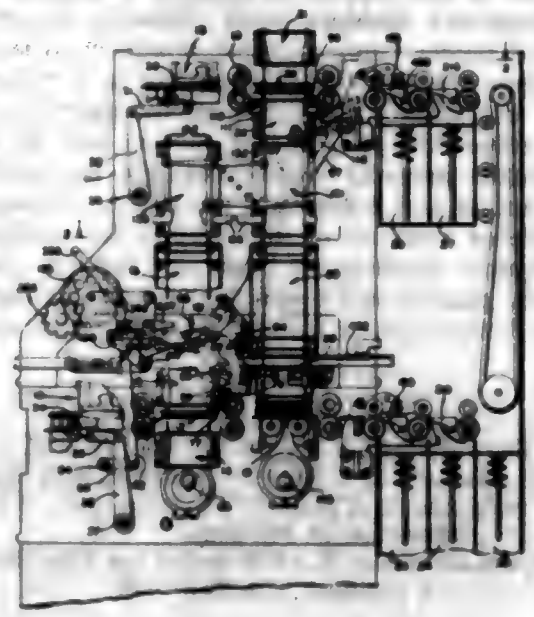
1. A machine for separating stemmed cherries from destemmed cherries comprising a belt which has a plurality of cherry receiving holes extending therethrough, means adapted to back up a portion of said belt to prevent cherries in said holes from dropping through said belt while said cherries rest on said backing means, means for moving said belt over said backing means, and a flexible member resting on the belt for maintaining the stemmed cherries in said holes when said stemmed cherries have been moved by the belt beyond said backing means.

2,866,598

SEQUENTIALLY CONTROLLED COLLATING REPRODUCER

Arthur Nelson and William R. Schwelow, Norwalk, Conn., assignors to Sperry Rand Corporation, a corporation of Delaware

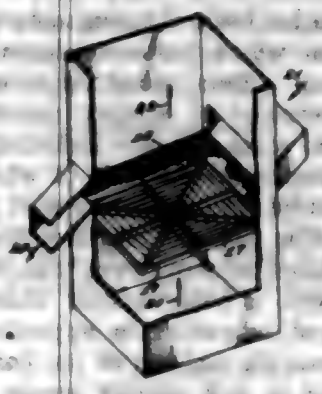
Application September 13, 1952, Serial No. 309,422
46 Claims. (Cl. 209—110)



6. In a machine of the class described controlled by records prearranged in individual record groups, record sensing means associated with each of said record groups, individual feeding means for each record group and operable for advancing records seriatim to and from the associated sensing means, comparing means operated by the respective sensing means for determining matching relationships between corresponding first fields of the records of the respective groups, punching means operable for reproducing in a record of one group data sensed in a record of another group, means associated with each feeding means operable for segregating records from each

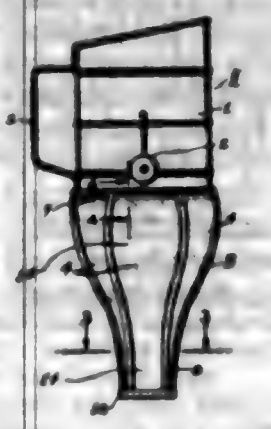
of said record groups, detecting means for determining sequential relationships between corresponding second fields of the records of the respective groups, means controlled by said detecting means for selectively enabling the operation of said feeding means to advance records of both groups in accordance with a predetermined sequential order, and means controlled jointly by said comparing means and said detecting means and settable for actuation in accordance with a selected combination of compared relationships for enabling the operation of said punching means and said segregating means.

2,866,551
INDUCTION INFLUENCED SCREENING APPARATUS
Ludwig Schlebusch, Palenberg, Germany
Application May 24, 1954, Serial No. 431,945
2 Claims. (Cl. 209—238)



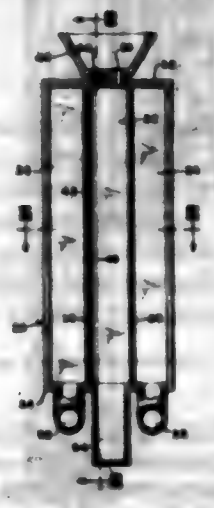
2. In screening apparatus for comminuted material, an inclined metal screen; means for feeding comminuted material thereto; electro-magnetic induction means for heating the screening surface of said metal screen including an energizing winding in the form of a flat coil mounted on a lattice frame adjacent to said screen and so positioned relative thereto that the direct action of the magnetic field emanating from said winding will heat said screen by inducing an electric current therein; and pneumatic means for directing a current of air through said screen.

2,866,552
FLOUR SIFTER ACCESSORY
Geraldine Richman, Richmond Heights, county of St. Louis, Mo.
Application August 14, 1957, Serial No. 678,894
4 Claims. (Cl. 209—255)



1. In combination with a flour sifter comprising a cylindrical body open at its upper and lower ends, a sifting screen provided in said body spacedly from the lower end thereof, an accessory for detachable engagement on the lower end of said sifter comprising a generally tubular open ended body constricted in its lower end portion, means at the upper end of said tubular body circumferentially engaged on the lower end of said sifter, said tubular body being comprised of an even number of panels of no less than four, each panel being engaged to the adjacent panel along its normally vertical side edges providing a reinforcing, projecting rib defining a line of folding whereby when said sifter is in disuse the accessory may be collapsed by folding along a pair of opposed ribs to cause corresponding panels to be brought into snug, face-to-face accessory-closing relationship, said tubular body further having a length such that the constricted lower end thereof will be spaced from the lower end of said sifter a distance greater than the diameter of said sifter when said accessory depends therefrom.

2,866,553
SEPARATION OF SOLID PARTICLES OF DIFFERENT SIZES
Harry A. Schmehl, Kimberton, Pa., and Frederic H. Wright, Plainfield, N. J.
Application January 6, 1956, Serial No. 557,733
6 Claims. (Cl. 209—359)



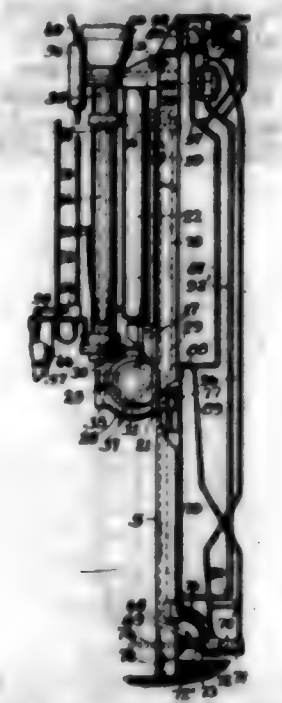
1. A devices for separating solid particles of different sizes comprising a chamber having a central vertical compartment flanked by a compartment on opposite sides thereof, a pair of spaced apart screens each comprising a wall common to the central compartment and one of the flanking compartments, each of said flanking compartments having means for operative connection with air suction means for drawing air from said chamber, and inlet means for permitting the passage of a stream of air into and lengthwise of said central compartment.

2,866,554
ADJUSTABLE HANGER FOR THE SHAKER SCREEN OR SIEVE OF A PURIFIER OR LIKE MACHINE
Walter Fischer, Hughesville, Mo.
Application March 18, 1957, Serial No. 646,711
6 Claims. (Cl. 209—415)

2. In a purifier, a casing, a sieve, hangers on opposite sides of the sieve for supporting the sieve for oscillation

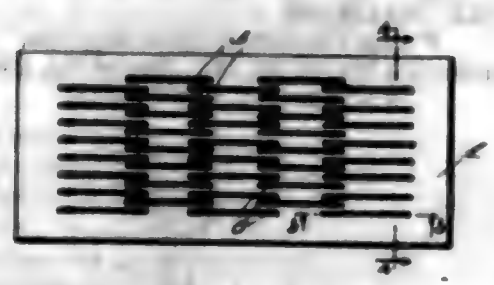
in the casing, and eccentrics connected with the sieve to effect oscillation of the sieve, said hangers on one side of the sieve each comprising a resilient strap portion and a rigid arm portion and adjusting means carried by said arm and engaging the resilient strap portion to flex the strap portion for shifting the sieve laterally in said casing.

2,866,555
CYLINDER LEVEL CONTROL FOR COMMINUTING DEVICES AND METHOD FOR COMMINUTING
Carl H. Nordell, Crystal Bay, Nev.
Application February 14, 1955, Serial No. 488,054
24 Claims. (Cl. 210—67)



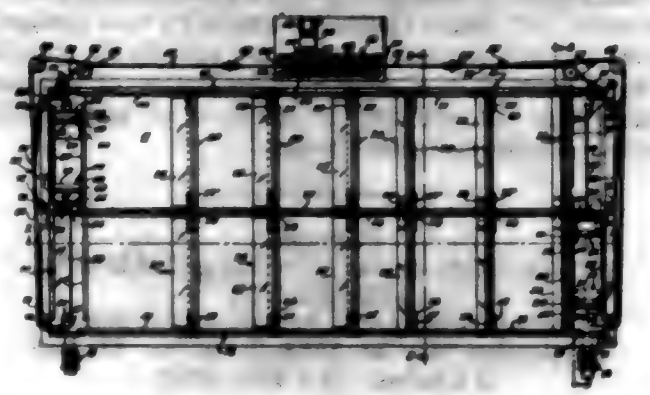
23. The method of comminuting solids in a flowing stream having a fluctuating liquid level, which comprises submerging a comminuting unit slightly below the liquid level of said stream, moving said comminuting unit vertically in said stream in response to the fluctuations in said liquid level to maintain it in said predetermined slightly submerged position, and moving the solids in said stream to said unit for comminution.

2,866,556
DRIP BOARD DEVICE FOR MEATS
Leyola B. Hinz, Merrill, Wis.
Application July 14, 1955, Serial No. 522,033
1 Claim. (Cl. 210—498)



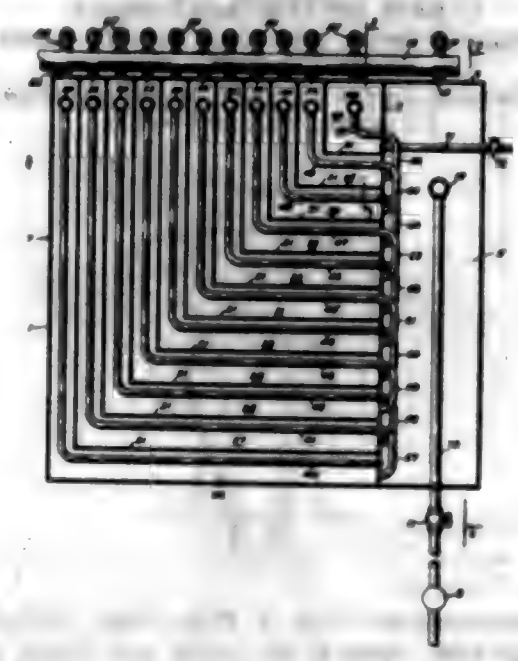
A meat cutting board having flat cutting surfaces and having a plurality of longitudinally extending parallel drain slots through the board, the slots being arranged in transverse groups and each slot being narrow as compared with the transverse spacing of the slots in its group, the ends of the slots in each group being transversely aligned with the ends of the slots in the adjacent group and transversely alternating therewith, and the slots having end portions which are flared longitudinally upwardly to elongate the slots in the vicinity of the surface of the board so that only the flared end portions of the slots overlap by a distance which is small as compared with the length of the slot.

2,866,557
SEDIMENTATION BASIN CLEANING APPARATUS
Elton E. Easterday, St. Louis, Mo.
Application February 24, 1956, Serial No. 567,594
6 Claims. (Cl. 210—527)



1. In sedimentation basin cleaning apparatus for a basin having a floor on which sediment deposits collect and sediment receiving gutters along opposite ends of the floor, the improvement of scraper means reciprocable over the floor, said scraper means including a plurality of pivoted scraper blades, certain ones of which are pivoted into scraping position for one direction of movement and the remainder being pivoted into scraping position for the opposite direction of movement, cleaner means movable in the gutters, a cable system connected to said scraper means and extending in opposite directions in the basin and upwardly and out of the basin, other cable systems connected to said cleaner means and extending in opposite directions in the gutters and upwardly and out of the basin, said other cable systems being interconnected with said first mentioned cable system, and actuating means outside the basin connected to said first mentioned cable system to operate all of said cable systems simultaneously and periodically in opposite directions.

2,866,558
OIL SEPARATORS
John J. Eckert, Daly City, Calif.
Application July 28, 1955, Serial No. 524,981
7 Claims. (Cl. 210—540)



3. An apparatus for separating oil from bilge water flowing in a continuous stream, comprising a closed container having a top and divided by a wall into a bilge water compartment and and oil separating compartment; an inlet pipe for delivering bilge water into said first compartment, said pipe extending into said first compart-

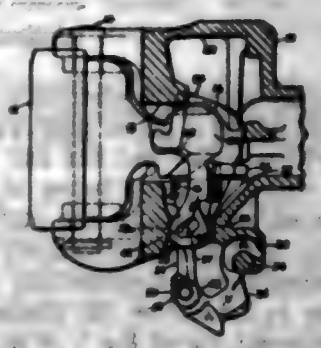
ment and terminating in close vicinity to the top with a discharge pipe arranged at a right angle to said inlet pipe for facilitating the separation of oil from said bilge water passing through said inlet pipe and its discharge pipe into said bilge water compartment; a plurality of partitions dividing said oil separating compartment into a plurality of chambers; a conduit in each of said chambers terminating in close vicinity to the top; a discharge pipe at the end of each conduit for facilitating the separation of oil from bilge water passing therethrough, the conduit of the first chamber communicating with the bilge water compartment for passing bilge water from said compartment through said conduit and its discharge pipe into said first chamber; each chamber except the last one being in communication in the series with the conduit of the next chamber for passing said bilge water through each chamber; a water pipe for passing water from the last chamber; means for regulating the flow of water in said water pipe; an oil discharge pipe connected to each chamber for discharging oil separated from bilge water; and means for regulating the flow of oil in each of said oil discharge pipe.

2,866,559
ADJUSTABLE RACK
Irma Byrne, De Bary, Fla.
Application June 23, 1955, Serial No. 517,477
4 Claims. (Cl. 211—39)

2. A make-it-yourself wall rack for holding articles comprising a stiff sheet having rows of vertical slits spaced horizontally therein, a flexed ribbon of suitable length adapted to be threaded through each row of slits, so as to form loops on the front of said sheet between each pair of adjacent slits, the ends of said ribbon having means for tying together in the back of said sheet after adjustment of the ribbon between all the pairs of slits in the row to form loops of the desired size, said ribbon having a pucker string passed through beadings formed in each side of the ribbon and extending beyond the ends of the ribbon to form the ties, one or more of said loops being formed into a pocket by drawing up the lower pucker string taut across the space between the slits to bring the lower puckered up edge of said loop tight against the front of said sheet, said string being stapled to the back of the sheet between slits to keep it taut.

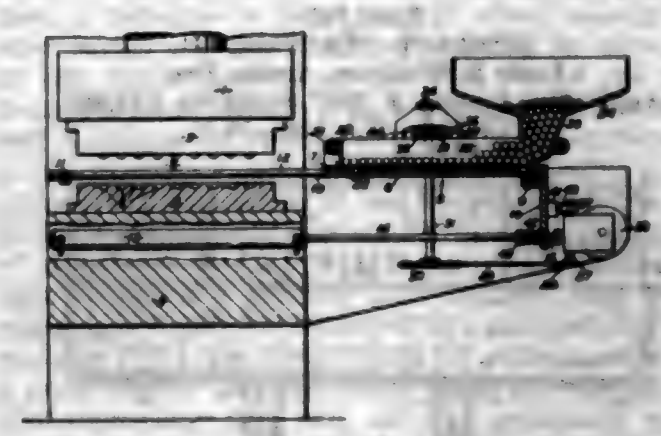
2,866,560
CAR COUPLER
William J. Metzger, East Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Application August 16, 1954, Serial No. 449,991
9 Claims. (Cl. 213—146)

1. A car coupler comprising a head, a knuckle pivoted to said head, a lock in said head for maintaining said knuckle in closed position, said lock having a downwardly extending leg, said head having an opening for receiving said leg, said leg having clearance between the front and rear walls of said opening to allow forward and rearward displacement of said leg, a locklifter link operatively connected to said leg, and a rotor lever pivoted to said head and being pivotally connected to said link, said head having an abutment on the front wall of said opening, said link having a shoulder underlying said abutment when the lock is in locking position and link and lever are in reposed position, said link having a trunnion extending into an upwardly and rearwardly sloping slot in said leg, said link being movable to a position in which said trunnion is disposed in the upper end of said slot, said shoulder when said lock leg is in engagement with the forward wall of said opening and said trunnion



is in said last-mentioned position being partly withdrawn from beneath said abutment, said shoulder having a downwardly and forwardly sloping top surface for providing sufficient clearance between said abutment and said shoulder upon actuation of said lever to completely withdraw said shoulder from beneath said abutment during intentional unlocking of the coupler.

2,866,561
LOADING DEVICES FOR MOULDING PRESSES
Walter Robert Groves, Wolverhampton, England, assignor to British Industrial Plastics Limited, London, England, a company of Great Britain
Application April 5, 1954, Serial No. 421,984
Claims priority, application Great Britain April 8, 1953
5 Claims. (Cl. 214—1)

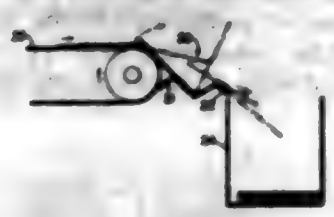


1. Apparatus for charging, with pre-formed pellets of moulding composition, the apertures of an oscillatable apertured mould loading tray, comprising a trough-like pellet dispenser having an outlet at the bottom and shaped to span one area dimension of the apertured tray in the direction of oscillation of said tray and only a part of the other area dimension transverse to the direction of oscillation of said tray, means for moving the dispenser back-and-forth transversely to the direction of oscillation of said tray so that whilst spanning the first said dimension it will sweep over the other said dimension, means other than said tray and with respect to which said tray is oscillatable for preventing discharge of pellets from said outlet at the end of a sweep, and means for feeding pellets into said dispenser and keeping it supplied as it moves across the said other dimension and dispenses pellets into the apertures of the said tray.

with the length of the slot.

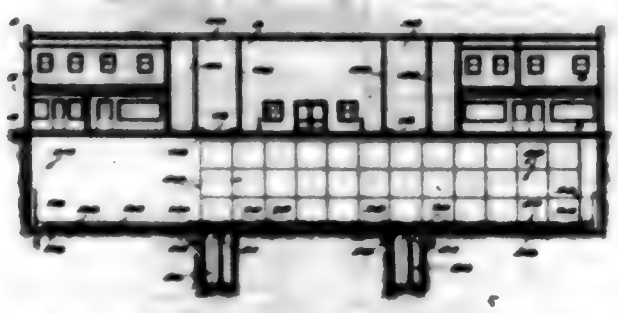
compartment, said pipe extending into said first compart-

2,866,563
APPARATUS FOR STACKING TILE
Harry E. Rauch, Akron, and Carlton Roy Sartorius, Copley, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application March 14, 1956, Serial No. 571,464
2 Claims. (Cl. 214—6)



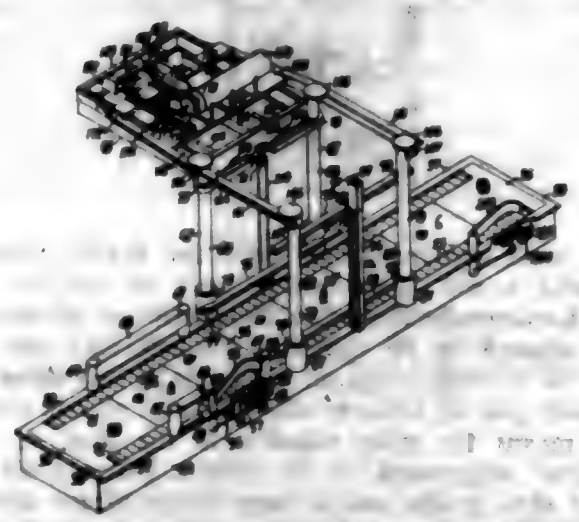
1. In a conveying apparatus wherein a series of flooring tile are advanced along a given path each tile being of substantially uniform shape and size and having an upper and lower face with like faces facing in the same direction as they are advanced along the path, to a discharge position at which the tile are stacked, an improved stacking apparatus comprising a substantially V-shaped trough member adjacent to but below the discharge end of said path with the adjacent leg of the V in position to receive the lower surface of a tile as it is discharged with a portion of the tile projecting above the surface and inclined toward the path in a position to be engaged by the next successive tile as it advances toward discharge position to move said first mentioned tile on to the second leg of the V inclined away from the path, the second leg of the V being of a length to cause the first tile to pivot over the edge thereof as it is moved thereagainst by the next advancing tile, a way over which the first tile passes subsequently, the first engaging the next succeeding tile as it pivots to cause the first tile and next succeeding tile to pass over the way with like faces of the tiles in opposing relation; and a fixed receptacle positioned adjacent said second leg of the V of said trough to receive the pair of tiles whereby the pair and subsequent pairs of tile are stacked in said receptacle with like faces of adjacent tile in contact throughout the stack.

2,866,563
STORAGE EQUIPMENT
Louis E. Whitham, Austin, Tex.
Application January 8, 1957, Serial No. 633,686
9 Claims. (Cl. 214—16.1)



5. Means for storing vehicles which comprises a facility having a loading level and a storage level, said loading level having a plurality of parallel lanes for the movement of vehicles thereabong, a plurality of groups of vehicle carriers normally disposed at said storage level with the carriers of each group arranged in a straight line extending approximately at right angles to said lanes, each of said carriers including a plurality of vertically spaced support surfaces onto each of which a vehicle may be moved, means connecting the carriers of each group together for substantially horizontal movement to form trains but permitting any one of the carriers of each train to be moved vertically relative to the remaining ones, a plurality of rows of vertically movable elevators for moving said carriers between said levels, the elevators of each of said rows being disposed along one of said lanes, means for independently moving each of said trains of carriers lengthwise thereof back and forth along a straight line path intersecting the vertical path of an elevator in each of said rows of elevators with at least one end of each of said straight line paths being spaced outwardly from the nearest of said lanes a distance no shorter than the length of a predetermined whole number of carrier spaces as measured along the length of the train, said predetermined number being at least as great as one less than the quotient obtained by dividing the number of said carriers in the train by the number of elevators serving the train, so that any selected one of said carriers in any of said groups may be brought to an elevator by a single movement of its train through a distance less than the length of such train, and means for imparting vertical movement to said elevators in either direction, whereby an elevator may be moved vertically in one direction to remove a selected carrier from a train of carriers and to transfer any selected vehicle supporting surface thereof to said loading level and then may be moved vertically again a sufficient number of times to position the other of said plurality of vehicle supporting surfaces of the selected carrier at said loading level and then may be moved vertically to return the selected carrier to its train of carriers at the storage level.

2,866,564
MATERIAL UNLOADING MACHINE
Rudolph R. Kuper, Fox Point, Wis.
Application January 2, 1957, Serial No. 632,238
8 Claims. (Cl. 214—16.4)



1. Apparatus for unloading a carrier having cured masonry blocks placed thereon at a plurality of vertical levels, said apparatus selectively actuable to effect a series of unloading operations, either individually or in a continuous automatic manner, comprising a longitudinally extending frame having an endless conveyor mounted thereon with a carrier receiving station at one end of said frame adapted to have a first carrier in loaded condition placed thereon, a first switching means located at said one end of said frame for actuation by said placement of said first carrier to provide longitudinal movement to said conveyor, said conveyor operable to transport said first carrier from said one end to a carrier unloading station intermediate the ends of said frame, a second switching means located at said carrier unloading station and adapted to automatically stop said conveyor movement when actuated by the positioning of said first carrier at said carrier unloading station, hollow supporting members mounted on said frame and extending upwardly therefrom at said carrier unloading station, longitudinal bars slidably mounted on the outside of said supporting members for vertical movement relative thereto, said longitudinal bars adapted to engage with corresponding parts on said first carrier when said first carrier is

vehicles sequentially positioned under said source, a position until after they have discharged material at the

to said head and being pivotally connected to said link,

dispenses pellets into the apertures of the said tray.

positioned at said carrier unloading station, a plurality of flexible drive means corresponding in number to and slidably connected with said supporting members, each having one end thereof fastened to a first motor driven drum and extending upwardly therefrom along the outside of said supporting members and having the other end thereof fastened to said longitudinal bars and extending upwardly therefrom within said hollow supporting members, said drive means actuated by the positioning of said first carrier in said carrier unloading station to elevate said first carrier to predetermined successively higher levels, an elevated frame structure mounted on the upper ends of said support members at a horizontal level substantially corresponding to the topmost level of said blocks on said first carrier, part of said elevated frame structure extending transversely to one side of said longitudinally extending frame, pusher bars mounted to slide within said elevated frame structure in a transverse back and forth movement relative to said longitudinally extending frame for pushing blocks off said first carrier at each of said predetermined levels, said conveyor being in fixed position relative to said frame and adapted to have a second loaded carrier placed thereon at said one end of said frame during the unloading of said first carrier, control means connected with said drive means to actuate said drive means for elevation of said longitudinal bars to each successively higher predetermined level upon completion of each individual back and forth transverse movement of said pusher bars when said first carrier is at said carrier unloading station, said conveyor further adapted to transport said first carrier in unloaded condition from said carrier unloading station to a carrier removal station at the other end of said frame at the same time said second carrier is transported from said carrier receiving station to said carrier unloading station.

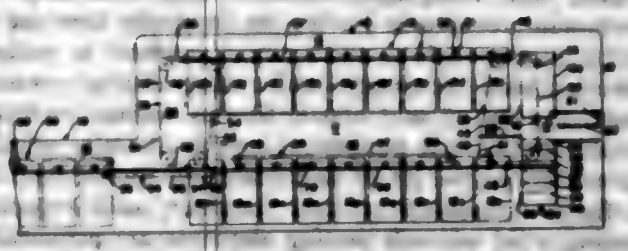
2,866,565

PROOFER CONTROL SYSTEM

Hiram E. Temple, York, Pa., assignor to Capitol Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania

Application April 3, 1957, Serial No. 650,153

12 Claims. (Cl. 214—16.4)



1. In a dough proofer provided with a proofing chamber, means for conducting a series of racks, adapted to support pans of dough to be proofed, in a closed loop through said chamber, means adjacent a section of said closed loop for loading pans of dough to be proofed on said racks, a diverting conveyor adjacent and extending outwardly of said closed loop remote from said loading means engageable with a rack for diverting it from said closed loop, motor means for operating said diverting conveyor, a series of indicator members movable in timed relation with the movement of racks from said loading means to said diverting conveyor, means actuated by pans of dough for conditioning said indicator members to indicate loaded racks passing from said loading means whereby the operator may be continuously apprised of the location of loaded and unloaded racks, a series of selector members alined and movable with said series of indicator members, said selector members being adapted to be manually conditioned, and control means actuated by a conditioned selector member in line with an indicator member indicating an unloaded rack for energizing said motor means to operate said diverting conveyor to divert said unloaded rack from said closed loop, said control means being located with respect to said series of selector members to be actuated by said conditioned selector member when said indicated unloaded rack reaches said diverting conveyor.

2,866,566

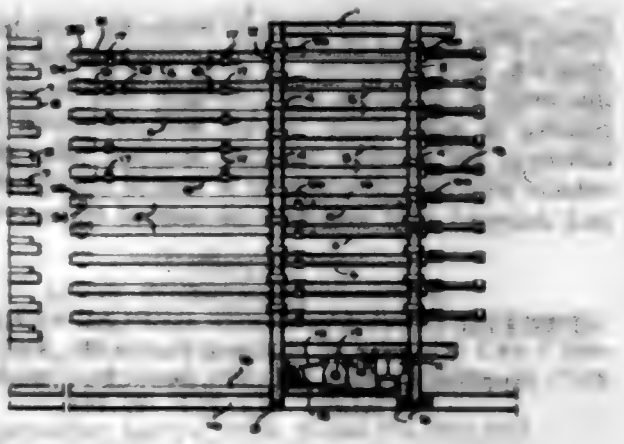
PRESS FEEDERS

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works under control and authority of French Government

Application December 10, 1957, Serial No. 701,773

Claims priority, application France January 25, 1957

2 Claims. (Cl. 214—16.6)



1. A press feeder adapted to feed blanks to be vulcanised to a press of the multi-stage type comprising alternate molds and followers, particularly for molding rubber mats, said apparatus comprising supporting rails secured on the floor, a pair of spaced vertical frames braced to each other to constitute a braced structure carried by said rails through the medium of rollers, rack extending along and secured to said ground rails, an electromotor carried by said frame structure, a reducing gear, a transmission and a toothed wheel between said electromotor and said rack for permitting the movement of said frame structure on said rails toward and away from said press, brackets disposed on said vertical frames and carrying at the relative spacing of the press followers a corresponding number of pairs of rails parallel to said ground rails, one portion of said last-mentioned rails projecting in overhanging relationship from the front frame of said frame structure towards said press, each pair of rails supporting a movable plate provided with rollers engaging said rails and controlled by a pneumatic cylinder mounted at the rear of one rail of the corresponding pair, a cross-member interconnecting the front ends of said plate-supporting rails and carrying pneumatic means adapted to actuate depending fingers extending somewhat through notches formed in the front edge of each plate, whereby upon actuation of said pneumatic cylinders said movable plates are adapted to move on said rails toward and away from the intervals between adjacent followers and molds of said press during the inoperative periods thereof for depositing on said molds fresh blanks loaded beforehand on said plates when said movable plates were in their rearmost position.

2,866,567

LOADING CONVEYOR AND CAR LOADING SYSTEM

Ralph R. Richert, Benton, Ill.

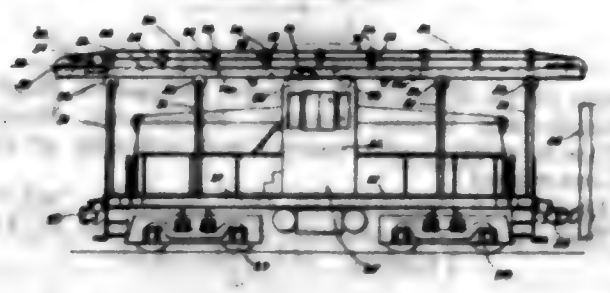
Application November 30, 1955, Serial No. 550,862

4 Claims. (Cl. 214—42)

1. In apparatus for continuously loading material from an overhead source into a plurality of open top transport

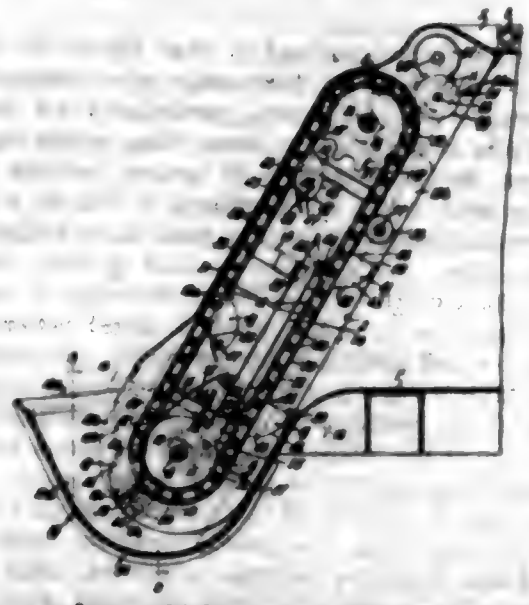
cap, a laminated liner comprising inner and outer disks disposed within the upper end of said carrier for rotation

vehicles sequentially positioned under said source, a utility vehicle for moving said transport vehicles beneath said source, means on said utility vehicle for securing said utility vehicle between first and second transport vehicles and conveyor means extending longitudinally of the utility vehicle above the utility vehicle and substantially spanning the space above said utility vehicle be-



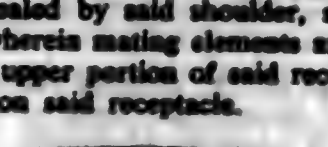
tween said first and second transport vehicles, means securing said conveyor to said vehicle for movement therewith at all times, and conveyor belt means movable relative to said utility vehicle and associated with said conveyor for moving material dropped onto said utility vehicle whereby the material is moved onto position over and dropped into said first or second transport vehicle.

2,866,568
PACKER CONVEYOR FOR REFUSE VEHICLES
Thomas W. Bishton, Berryville, Va.
Application June 24, 1953, Serial No. 363,885
9 Claims. (Cl. 214—83.36)



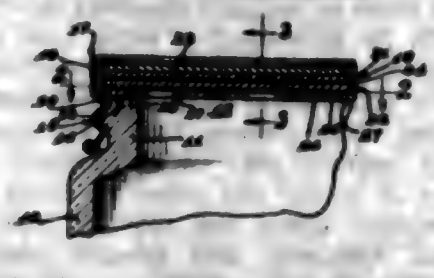
1. In a refuse vehicle, means defining a closed compartment, a hopper provided with a refuse receiving opening and mounted adjacent to a lower portion of the compartment, means defining an opening extending from the hopper to the compartment, a chain conveyor extending from the hopper upwardly into communication with the compartment, said chain conveyor having a plurality of material moving vanes thereon each of which is pivotally connected to the conveyor for movement from an operative position projecting substantially at right angles thereto to a retracted position, plate means extending the full width of the chain conveyor and attached to the sides thereof for forming with said vanes a continuous impervious wall to prevent passage of material from one side of the plane of the conveyor to the other, wall members cooperating with the said plate means and vanes of the conveyor for forming a completely enclosed passageway leading from the hopper to the compartment, said vanes having an area in their projected position which is substantially equal to the cross-sectional area of the passageway, means for projecting the vanes into operative position to engage material in the hopper, said means being effective to hold the vanes in projected position until after they have discharged material at the upper inner end of the passageway, and a wall of the hopper converging toward the conveyor in the region where the vanes are projected to cause the conveyor and the vanes of the conveyor to compress material against said wall.

2,866,569
COLD CREAM JARS
Charles Chambers Morrison, Shelter Island, N. Y., assignor to F. N. Burt Company, Inc., Buffalo, N. Y., a corporation of Delaware
Application September 24, 1954, Serial No. 458,211
1 Claim. (Cl. 215—12)



A container for pasty or semi-fluid materials comprising a receptacle of frangible material that is open at the top so that the upper edge thereof constitutes a lip and a supporting and protective casing of elastic fibrous material for said receptacle telescopingly receiving and enclosing the same, said casing having a lip thereon, said receptacle having an outwardly directed shoulder thereon intermediate the upper and lower extremities thereof, the annular extent of said shoulder being at least equal to the annular thickness of said casing so as to overlie and substantially completely hide the casing lip, the undersurface of said shoulder being substantially horizontal to provide a seat for said lip, said receptacle also having an inwardly directed peripheral groove immediately subjacent said shoulder, and laterally adjacent said casing lip, a substantial portion of the outer peripheral surface of said receptacle that is subjacent said groove being parallel to and in tight frictional contact with the inner surface of the corresponding portion of said casing, which surfaces are adhesively bonded together, said casing lip engaging said receptacle shoulder and enclosing said groove, said receptacle having an inwardly tapering peripheral surface below said vertical surface to assist in registering said receptacle and casing during assembly thereof, the lip of said elastic fibrous casing tending to contract within said peripheral groove thereby avoiding the tendency of the lip of said casing to spread such that said lip is concealed by said shoulder, said receptacle including a lid wherein mating elements are provided on said lid and the upper portion of said receptacle for retaining said lid on said receptacle.

2,866,570
VENTING CLOSURE CAPS
Richard O. Powell, San Rafael, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application June 25, 1953, Serial No. 744,451
5 Claims. (Cl. 215—56)

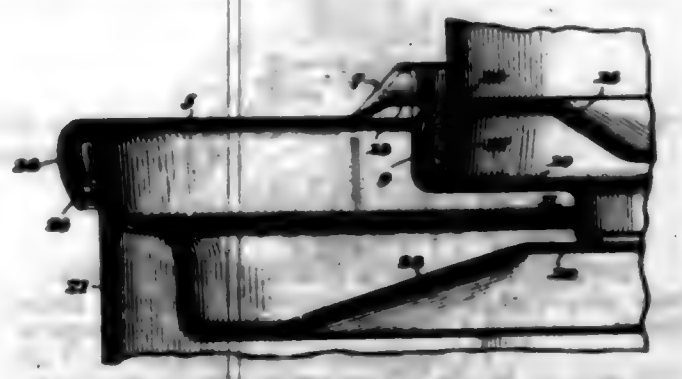


3. In combination a jar having a neck defining a mouth and providing an annular end sealing rim and formed externally with a screw thread, a screw-threaded closure

covers on its inner wall adjacent the top, the inner wall length of one-half of the top edge, each handle portion

cap, a laminated liner comprising inner and outer disks of an impervious membrane, an intermediate disk of foil, means bonding the three disks together and applied to create a vent channel extending diametrically between the inner and intermediate disks and with at least one end opening through the periphery of the liner, said inner disk formed with a series of vent slits normally closed but openable under excessive internal pressure to establish communication between the vent channel and jar interior and means hermetically sealing the liner to the jar rim.

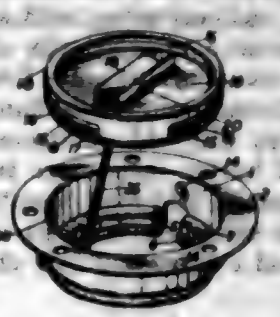
2,866,571
RING STRUCTURE FOR CONNECTING CANS IN SUPERPOSED RELATION
John Heuchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application February 15, 1957, Serial No. 640,454
7 Claims. (Cl. 220—23.83)



3. The combination of a larger diameter supporting can and a smaller diameter supported can and a connecting ring removably attaching the smaller can in superposed relation on the larger can, each said can being of the tear strip type with bottom and top closures seam secured thereon and having a winding key attached centrally on its top closure, said ring comprising a horizontal planar annular body having a skirt depending from the outer edge portion thereof and securely embracing the top seam of the larger can, an annular rib upstanding from the inner edge portion of said body and merging inwardly into a vertical annular wall snugly but removably embracing the bottom seam of the smaller can, said wall merging at its lower terminus into a horizontal inwardly directed planar annular shelf supporting said smaller can, said rib having inwardly projecting nibs removably snapped over the bottom seam of the smaller can and retaining the same on said shelf, and said shelf merging inwardly into a downwardly turned flange engaging as a rib supporting column against the top end closure of the larger can and freely surrounding the winding key thereon so that the latter will be readily accessible upon removal of the smaller can from its mounting on the ring.

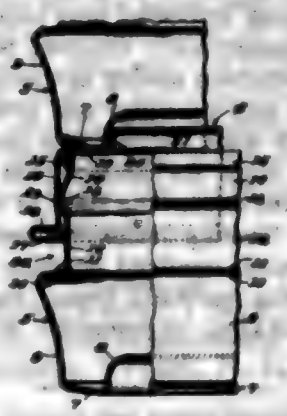
2,866,572
CLOSURES FOR OPENINGS
Thomas Gerald Llewhellin, Glasgow, Scotland, assignor to K. A. C. Limited, Glasgow, Scotland, a British company
Application August 23, 1954, Serial No. 451,464
Claims priority, application Great Britain August 24, 1953
16 Claims. (Cl. 220—60)

1. A flush-fitting closure assembly comprising a cylindrical housing, an annular flange extending inwardly from the open lower end thereof, a resilient diaphragm having a peripheral sealing member integrally projecting downwardly therefrom, a hollow cylindrical carrier for said diaphragm, coaxial means rotatably connecting said diaphragm to said carrier, a backing plate disposed coaxially between said diaphragm and said carrier, means disposed within the upper end of said carrier for rotation thereof within said housing, a cover plate releasably disposed within said carrier to close the upper end thereof, resilient means effecting closure of said cover plate, means for releasably securing said carrier to said housing comprising bayonet slots circumferentially disposed in



one of said members adapted to receive cooperating male elements disposed on the other of said members, whereby engagement of said male elements in said slots forces said diaphragm into sealing engagement with said flange to seal said opening during depressed rotation of said carrier relative to said housing and said diaphragm.

2,866,573
SHOE POLISH CONTAINER
Bruce B. Gordon, Glen Rock, and Emil W. Klausig, Rutherford, N. J., assignors to Continental Can Company, Inc., New York, N. Y., a corporation of New York
Application April 6, 1956, Serial No. 576,615
1 Claim. (Cl. 220—43)



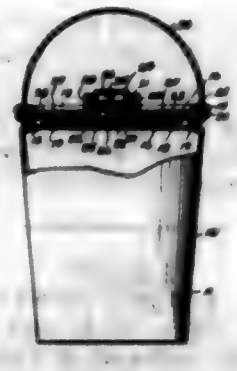
In a container structure of the character described, a body having a bottom and an upstanding body wall curving upwardly and outwardly and merging through a well rounded body bead into an inwardly directed shelf portion then rising vertically from the inner terminus of said shelf portion and merging into an outwardly directed smoothly curved bead and then sloping upwardly and inwardly to terminate in an outwardly turned uprightly disposed open hem, a slip cover mountable over the open top of the body and having a vertical depending skirt engageable in frictional annular line contact and yieldingly deformed slightly outward intermediately of the height thereof by said smoothly curved bead, said cover engaging said hem to limit downward movement of the skirt and being provided at its lower terminus with an outwardly turned open hem overlying and spaced above said shelf to provide a space in which to receive a coin or other opening tool.

2,866,574
LATCH ASSEMBLY FOR RELEASABLY CONNECTING A COVER TO A RECEPTACLE
Panagiotis Roussilotis, Bel Air, Md.
Application January 24, 1957, Serial No. 636,150
3 Claims. (Cl. 220—53)

1. In combination with a container having an open top and provided with diametrically disposed keeper re-

operatively to contact the closed face of each successive tive support, a plurality of upwardly extending flexible

cesses on its inner wall adjacent the top, the inner wall of said container having an annular supporting bead below said keeper, a cover shaped to fit within the top and engage said bead, said cover having an upwardly projecting peripheral rim provided with opposed slots registering with the keeper recesses, said cover having spaced flanges extending transversely thereof and projecting upwardly therefrom and registering with said slots so as to form with the cover a diametrically disposed channel, a fixed member extending upwardly from the cover and medially of said channel, said spaced flanges being bridged by horizontal strips disposed on opposite sides of said fixed member and having their inner ends spaced therefrom to form openings, said fixed member having a horizontal top portion extending laterally in opposite directions therefrom and overlapping said channel, said horizontal top portion having spaced depending sides and open ends so as to form a housing above the cover, latch members slidably mounted in said channel on opposite sides of said fixed member, each of said latch members having an outer end movable into locking engagement with one of said diametrically disposed recesses, the inner ends of the latch members having upwardly extending lugs extending through said openings and projecting into said housing at opposite ends thereof, the inner ends of said strips constituting stops for limiting the outward movement of said lugs, the depending sides of said housing providing means for limiting transverse movement of said lugs, and spring means confined between said fixed member and said lugs for normally urging the latch members outwardly into locking engagement with said keeper recesses.

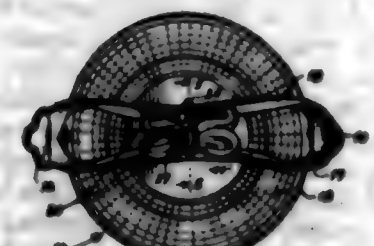


2,866,575

PLASTIC NOVELTY AND METHOD OF MAKING THE SAME

John J. Lattuca, Hempstead, N. Y., assignor to Best Plastics Corporation, Brooklyn, N. Y., a corporation of New York

Application June 26, 1956, Serial No. 593,845
4 Claims. (Cl. 229—94)



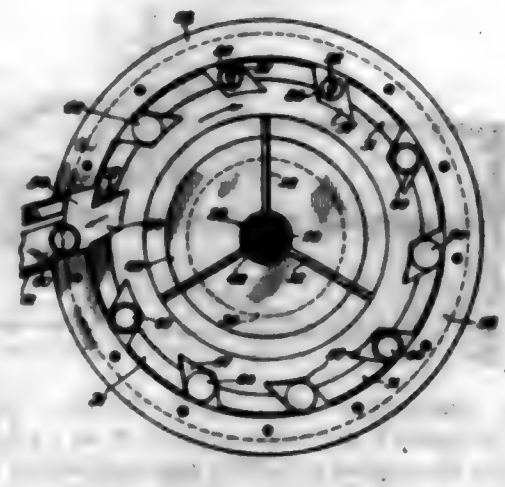
1. A party favor basket comprising a single sheet of thermoplastic material formed to include a bottom and a side wall of self-supporting thickness and that diverges upwardly and at a progressively increasing rate of divergence toward the upper end of the side wall and to a top edge that extends around the basket along a curved line, two bow-shaped handle portions of the basket extending along the top edge thereof and cut therewith, each of the handle portions extending along most of the length of one-half of the top edge, each handle portion being embossed to stiffen it but being of substantially the same thickness across its full width and of the same thickness as the top edge, outward projections at opposite sides of the basket, the handle portions being integrally connected at their ends to opposite sides of the projections and being separate from the rest of the basket elsewhere and curving outwardly and upwardly away from said projections and having their mid portions connected together above the said portion of the basket.

2,866,576

MACHINE FOR FEEDING WORK PIECES

Bates C. Cook and John Jakubonis, Chicago, Ill., assignors to Cook & Chick Company, Chicago, Ill., a corporation of Illinois

Application December 23, 1955, Serial No. 555,032
8 Claims. (Cl. 221—156)



1. In plunger means for a work piece feeder, a bushing, a plunger slidable in said bushing movable to a retracted position extending beyond one end of said bushing and to a projected position extending beyond the other end of said bushing, a radial pin secured in said plunger, said bushing having a lengthwise slot receiving said pin in either position of said plunger and in cooperation with said pin restraining said plunger against turning movement relative to said bushing and limiting movement of said plunger toward projected position, means carried by said bushing having pressure contact with said plunger resisting movement thereof in either direction, a work piece engaging member pivoted on one end of said plunger for rocking movement about an axis substantially perpendicular to said pin, and means carried by said plunger having pressure contact with said member resisting rocking thereof in either direction.

2,866,577

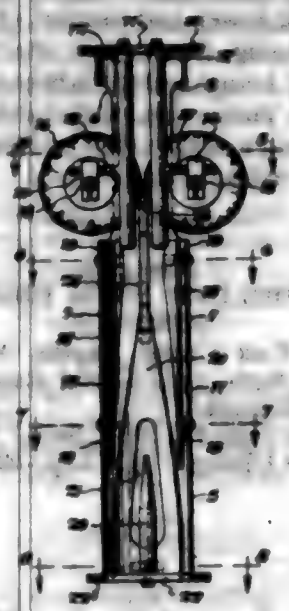
RECTIFIER FOR ORIENTING BOTTLE CAPS

George H. Dimond, East Aurora, N. Y., assignor to Consolidated Packing Machinery Corporation, Buffalo, N. Y., a corporation of New York

Application May 3, 1957, Serial No. 656,945
3 Claims. (Cl. 221—173)

3. A bottle cap rectifier having opposite ends defining a longitudinal axis and comprising means at one said end to receive successive bottle caps edgewise on said axis in random face directions, a pair of bottle cap passages extending from said receiving means generally along said axis to an outlet at said other end, at least one of said passages being arranged to impart a twist to bottle caps passing through it thereby orienting them with bottle caps passing through the other said passage, and a pair of rotatable disc brushes having radially extending bristles disposed in near-tangential relationship at a position displaced from said axis, one of said brushes being effective

operatively to contact the closed face of each successive cap and to impart an initial pivotal movement around



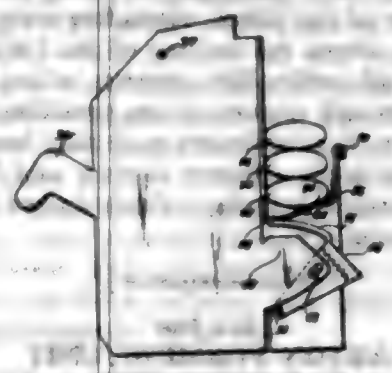
said common axis thereby directing said bottle cap to one of said passages.

2,866,578

COIN OPERATED VENDING MACHINE

Charles Fuschas, Charlotte, N. C., assignor, by mesne assignments, to Taylor Biscuit Company, Raleigh, N. C., a corporation of Delaware

Application November 28, 1955, Serial No. 549,452
8 Claims. (Cl. 221—260)



1. In a dispensing mechanism for dispensing stacked articles from a chute through a delivery opening, a rotatable shelf assembly having a first shelf and a second arcuate shelf attached thereto, a leaf spring attached at one edge to said arcuate shelf, a first wall in said chute terminating just above said arcuate shelf, a second wall in said chute opposite said first wall and terminating just above said delivery opening, said shelf assembly having an at rest position where the free edge of said leaf spring is above said arcuate shelf and adjacent the lower edge of said second wall, and a dispense position where said leaf spring is depressed by the lower edge of said first wall so that its free edge is adjacent said arcuate shelf, and means for rotating said shelf assembly from said at rest position to said dispense position and back to said at rest position.

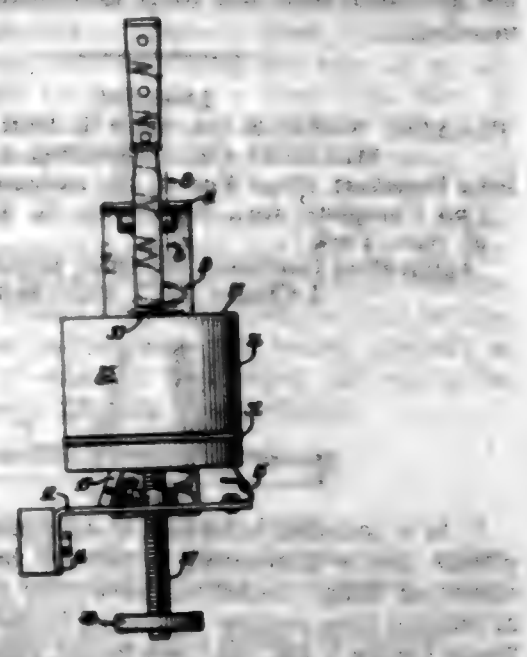
2,866,579

DEVICE FOR FEEDING INK

James B. Reeves, Arlington Heights, Ill., assignor to Vandercook & Sons, Inc., Chicago, Ill., a corporation of Illinois

Application April 19, 1957, Serial No. 654,033
17 Claims. (Cl. 223—108)

1. A device for dispensing ink from a cylindrical open ended container, including a support, a vertical shaft arranged for relative movement with respect to the support, a plurality of upwardly extending flexible units mounted upon said support concentric with said shaft, each unit having an inwardly extending arm secured to the intermediate portion thereof, said units for supporting an open ended ink container when assembled therewith, the upper edges of said flexible units in gripping engagement with an annular flange formed on the lower peripheral edge portion of said container, a plunger removably mounted upon the upper end of said



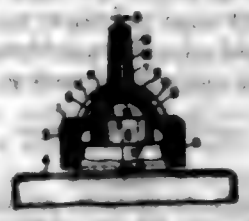
vertical shaft, a sealing gasket in contact with the upper surface of said plunger, said plunger and said gasket forming a closure for the open end of said container, whereby the upward movement of said plunger will force ink from the container out through an aperture in the upper end thereof and the downward movement of said plunger will cause it to contact said arms and effecting inward movement of said flexible units and the automatic release of said ink container.

2,866,580

DISPENSING SPOUT STRUCTURE

Warren I. Nissen, East Stroudsburg, Pa., assignor to Ronson Corporation, Newark, N. J., a corporation of New Jersey

Application August 21, 1956, Serial No. 605,328
4 Claims. (Cl. 222—512)



1. A dispensing spout structure of the character described including a base member having an upper resilient, deformation resisting wall constructed of polyethylene or the like, said upper wall overlying an interior space within said base member, said upper wall having a resiliently deformable, convexly curved top portion provided with a passage extending therethrough to said space, said base member having guide ways disposed respectively at opposite sides of said upper wall and provided with convexly curved guiding surfaces, a spout member having a base portion disposed intermediate said guideways and overlying and seating against said convexly curved top portion adjacent said passage, said spout member having guides projecting from opposite sides of said base portion which are engageable respectively with said guide ways by relative deformation of the engaging parts, to hold said base portion in pressing

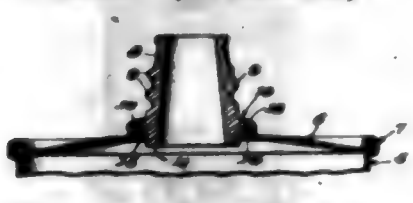
relation to said upper wall and thereby produce deformation at the engaging surfaces of said base portion and upper wall to maintain a tight joint between the base portion of the spout member and said top portion of said upper wall, means comprising said guides and guide ways mounting said spout member for movements back and forth along said upper wall, said spout member having a dispensing passage therethrough which moves into and out of registry with said first mentioned passage during the aforesaid back and forth movements of said spout member.

2,866,581

PLASTIC NOZZLE OR SPOUT MOUNTING AND METHOD OF FORMING SAME

John Henchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application December 30, 1954, Serial No. 478,678
2 Claims. (Cl. 222—566)



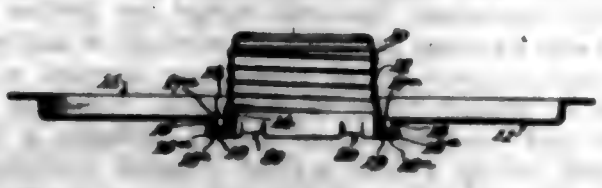
1. In a container structure, a deformable and resilient plastic nozzle comprising a tubular body including a mounting flange projecting outwardly therefrom and a cylindrical base portion depending below the flange, said flange having a flat and horizontally disposed lower face and an outwardly and downwardly sloping upper face, and a metal mounting wall including an upright cylindrical portion at its lower extremity and an inwardly directed annular seat spaced above said extremity and directly engaged by the lower face of the nozzle flange and comprising a horizontal double thickness fold of the mounting wall metal with the two thicknesses in face to face contact one with the other and the inwardly directed fold extremity defining a circular opening receiving the nozzle base portion and having an inside diameter less than the outside diameter of said nozzle base portion so as to be embedded therein and provide a secure liquid seal, the thickness of metal of the seat fold remote from said lower extremity being continued about the deformable and resilient nozzle flange periphery and turned inwardly over said flange with its raw edge embedded in the flange to hold the flange under compression in liquid seal contact with the seat and assure against exposure of raw metal edge portions, and the thickness of metal of the seat fold adjacent said lower extremity being connected with said cylindrical wall portion.

2,866,582

CAN END AND NOZZLE ASSEMBLY AND METHOD OF PRODUCING SAME

William F. Funte, Chicago, and John Henchert, River Forest, Ill., assignors to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application December 13, 1955, Serial No. 552,804
11 Claims. (Cl. 222—574)



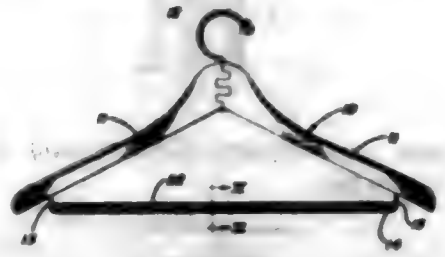
6. In a can end and nozzle assembly, a sheet metal can end having an opening and a continuous groove around said opening, said groove having concentric inner and outer side walls and a bottom connecting said side walls, sealing compound covering said bottom, a substantially cylindrical sheet metal nozzle having a lower end portion extending into said groove and snugly surrounding said inner side wall, and a flattened bead integral with said lower end portion of said nozzle, said flattened bead being disposed in the lower portion of said groove and being seated tightly upon said sealing compound, said outer side wall having an outwardly deformed portion in which the peripheral edge of said flattened bead is tightly seated.

2,866,583

GARMENT HOLDER WITH HIGH FRICTION SURFACE

John H. Batts, East Grand Rapids, Mich., assignor to John Thomas Batts, Inc., Grand Rapids, Mich., a corporation of Michigan

Application June 17, 1957, Serial No. 666,104
5 Claims. (Cl. 223—88)



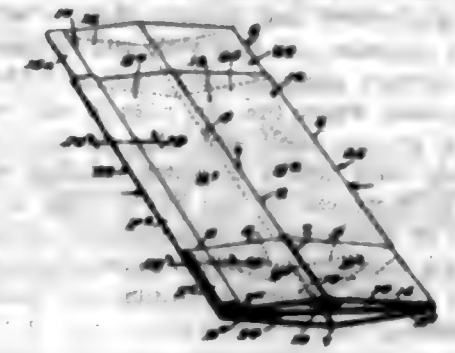
1. A garment hanger adapted to depend from a support element, said hanger having a horizontal support means, said support means having a fabric contacting area over which a garment is adapted to be draped; a layer of pliable, cured rubber-like granules adhered to said support means by an adhesive, said layer covering at least a substantial portion of the fabric contacting area; said granules projecting above the surface of the horizontal support means; said rubber-like granules when bonded by said adhesive to said support means providing a plurality of small resilient, flexible fingers projecting from said support means and firmly adhered thereto, said fingers having garment contacting surfaces characterized by high coefficient of friction.

2,866,584

CARTON FORMING UNIT

Florren E. Long, Fredericktown, Ohio, assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Application March 21, 1957, Serial No. 647,696
6 Claims. (Cl. 229—14)

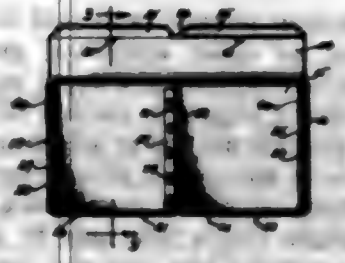


1. A carton having one side wall provided at one edge with an integral seam flange, said seam flange being folded outwardly at one corner of the carton and being secured to the outer side of said one side wall, a carton liner having one wall disposed against the inner side of said one carton side wall, said liner wall having an edge portion turned outwardly and secured against the outer side of said seam flange, a second carton wall at an angle to said one carton wall, and a second liner wall against the inner side of said second carton wall, said second

of said outer walls in fixed face-to-face relation to the a bottom panel member, coacting front and rear side

liner wall having an edge turned laterally and secured against the outer side of said outwardly folded edge of said one liner wall, said second carton wall having a laterally turned seam flange secured against the outer side of said laterally turned edge of said second liner wall, said carton walls comprising contiguous panels including transversely folded bottom flaps, one of said flaps including a portion of said seam flange, said liner including end portions secured together in elongated diverging zones extending from the mid width of said carton wall extremities to the regions at the outermost extremities of the bottom flap fold lines relative to said panels.

2,866,585
KRAFT BOARD FOLDING EGG CASE
Lester W. Alexander, Roseville, Ind.
Application January 31, 1957, Serial No. 637,553
1 Claim. (Cl. 229—15)

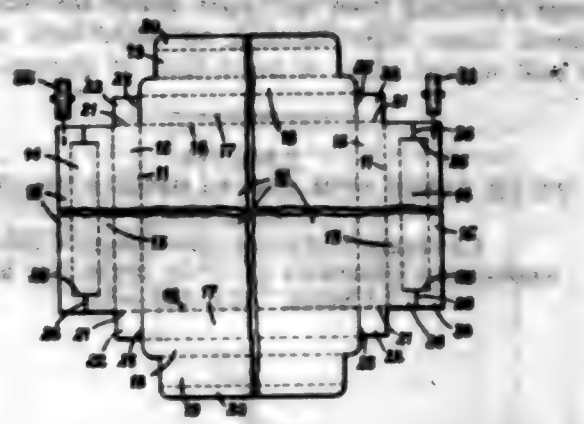


In a shipping case for eggs, an exterior walled cubicle housing having a pair of side walls and a pair of end walls, an interior space divider disposed within said housing having a pair of longitudinally spaced apart bottom portions disposed outwardly of said housing, said housing having a pair of longitudinally spaced apart bottom flaps defining a transversely extending space therebetween overlying said bottom portions of said divider, said divider having a central partition dividing said housing into two main compartments and extending into said space between said longitudinally spaced apart bottom flaps, said space divider further comprising a pair of upright end assemblies adjacent to each one of said end walls, a cover member hingedly connected to one of said side walls, and each of said end walls and said divider end assemblies defining end receiving openings extending therethrough.

2,866,586
PAPER, PLASTIC CONTAINER WITH DISPENSING CLOSURE
George Arlington Moore, New York, N. Y.
Application March 28, 1957, Serial No. 649,132
15 Claims. (Cl. 229—17)

1. A flat blank of foldable material adapted to be formed into a container having a rectangular cross section and a closed end, said blank comprising a sheet of said material having its inner surface coated with thermoplastic film material and provided with creased lines defining from left to right, five rectangular side wall forming panels and cut to define two foldable closure forming panels and three foldable substantially continuous marginal closure forming flanges all disposed in base longitudinal foldable alignments defined with creased hinge lines, a first said foldable panel of said two panels being integral with the fifth wall panel and provided with a creased hinge line, the second foldable panel being integral with the first wall panel and provided with a creased hinge line disposed substantially in alignment with the hinge line of said first foldable panel, said foldable continuous flanges being integral with the second, third and fourth wall panels and provided with a substantially continuous creased line disposed slightly outward of said hinge lines defining the end of the first and fifth wall panels, each integral marginal flange having opposite end edges that are mitred to form a substantially right angular notch with the mitred end edge of the adjacent flange, said notch having a blunt base short of said continuous creased line and the notch being centered on the creased line that defines the wall panel, the base of said second foldable panel being provided with a pair of opposed mitred edges outwardly of its creased hinge line to complement a mitred end edge of the marginal flange of the second and fourth wall panels whereby, upon folding the blank to form the container said notches are closed to form mitred joints that extend inwardly of the corner ends of said side wall panels and are in the plane of the closure forming panels thereof.

2,866,587
DOUBLE-WALLED BOX
Glenn E. Stubbs, Hamilton, Ohio, assignor, by mesne assignments, to Diamond Gardner Corporation, a corporation of Delaware
Application August 23, 1955, Serial No. 529,992
4 Claims. (Cl. 229—34)



1. In a double-walled box of the character described, a unitary blank of sheet material scored and folded to provide a bottom, tubular side walls extending from opposite sides of said bottom, locking tabs projecting from the top and bottom of said side walls along the ends of said box at each corner of said box, an integral strip connecting the ends of said tabs at each corner of said box, locking flaps integral with said side walls and extending between said tabs at the corners of said box, tubular end walls folded about said tabs and said flaps, and a tucking panel on each said end wall tucked beneath the bottom said tabs to retain the box in erected condition.

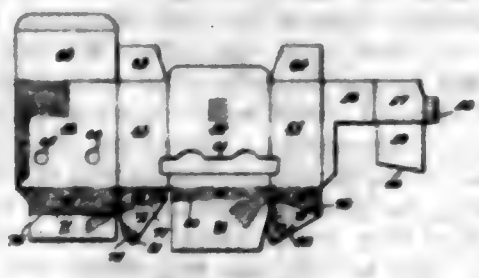
2,866,588
RECESSED AUTOMATIC BOTTOM CARTON
Hubert V. Bolding, Jeffersonville, Ind., assignor to Standard Packaging Corporation, New York, N. Y., a corporation of Virginia
Application March 23, 1955, Serial No. 496,111
3 Claims. (Cl. 229—39)

1. A single blank collapsible carton cut and scored to provide four outer walls hingedly connected together to provide a continuous and collapsible outer wall structure, opposed outer walls being of equal length, four bottom recessing panels, each of said bottom recessing panels extending upwardly from the bottom edge of one

without removal of intervening material so that the con- having its front end connected with the center pivot

side walls, sealing compound covering said bottom, a the inner side of said second carton wall, said second

of said outer walls in fixed face-to-face relation to the inner face of its respective one of said outer walls, a first opposed pair of said bottom recessing panels having opposed similarly slanted upper hinge edges, a second opposed pair of said bottom recessing panels having opposed vertically spaced horizontal upper hinge edges, one extending horizontally between the lower ends and the other extending horizontally between the upper ends of said slanted upper hinge edges, four bottom members, each of said bottom members being integrally hinged to the upper hinge edge of one of said bottom recessing members, a first opposed pair of said bottom members



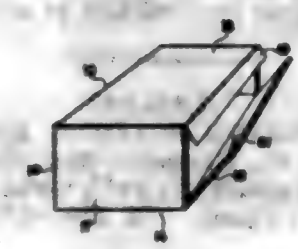
having tab hinge edges extending substantially diagonally from a pair of diagonally opposite corners formed by said outer walls, and two diagonally opposed bottom folding tabs, each of said tabs being integrally hinged to one of said tab hinge edges and fixedly secured to one of the remaining opposed pair of said bottom members, the tab hinge edge extending from the lower end of one of said slanted hinge edges forming an angle with said one of said slanted edges of less than 45 degrees, the tab hinge extending from the upper end of the other of said slanted hinge edges forming an angle with said other of said slanted edges of more than 45 degrees.

2,866,589
TEAR STRIP FOR ENVELOPES AND OTHER CONTAINERS
Lawrence F. Zecker, San Diego, Calif.
Application December 17, 1956, Serial No. 628,572
3 Claims. (Cl. 229—51)

3. In a container: a paper panel; elongated portions of said panel having therein a substance causing chemical deterioration of the fiber content of the paper in said portions at a rate greatly in excess of the rate of deterioration in the remainder of the panel; said portions constituting means to facilitate the opening of the container by parting the panel longitudinally of said portions; said portions being spaced apart and parallel and defining a tear strip in said panel; and a thin layer of tough material secured on said tear strip.

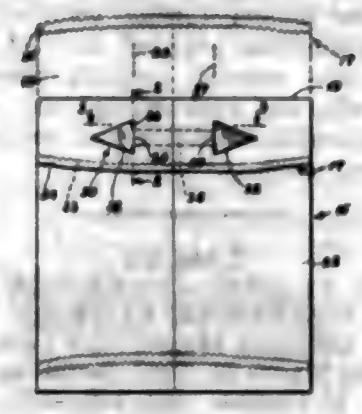
2,866,590
OVERWRAPPED CIGARETTE CARTON
James R. Chapman, Jeffersontown, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Application May 15, 1957, Serial No. 659,238
5 Claims. (Cl. 229—51)

1. In an overwrapped cigarette carton adapted to be opened and reclosed by manual operation, said carton being formed of a single blank of material and having a bottom panel member, connecting front and rear side panel members, opposite ends consisting of flaps which extend from said members and with said flaps being permanently glued together to form said ends, and a top panel member pivoted to said rear side member and having an elongated flap at the extremity thereof adapted to be inserted interiorly of said front panel member and in close contact therewith, and a closely fitting overwrap contacting the exterior surfaces of said carton on each of said panel members and ends; the improvement com-



prising a projection integral with said blank of material and located at an upper corner of the front of said carton, said projection having a depth sufficient to space in a predetermined region a portion of said elongated flap from the adjacent portion of said front panel member thereby to prevent the contact of said overwrap with said carton in said region and to form a slot bridged by said overwrap in order that a tool may be inserted through said bridging overwrap into said slot for neatly severing the overwrap during the opening of said carton.

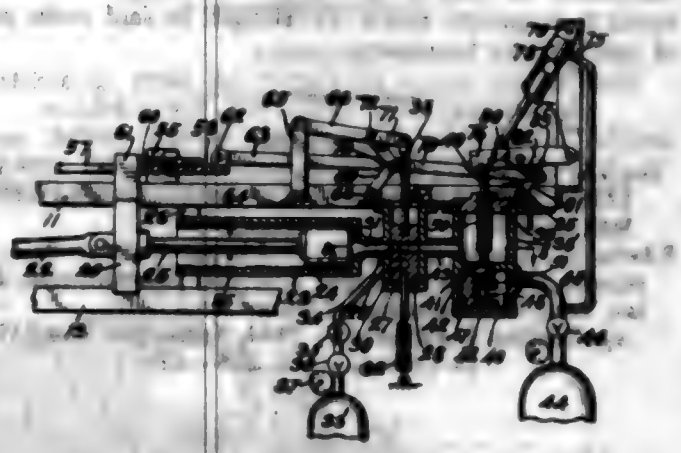
2,866,591
PAPER BAG WITH LOCKING MEANS THROUGH SLITS
George W. Poppe, Stroudsburg, Pa., assignor to Equitable Paper Bag Co. Inc., Long Island City, N. Y., a corporation of New York
Application October 31, 1955, Serial No. 543,839
11 Claims. (Cl. 229—77)



1. A paper bag for holding merchandise, said bag having a plurality of thicknesses of paper including front and rear panels and a top flap hinged to the upper end of at least the rear panel and adapted to fold over the other panel and down along said other panel to close the bag, at least two groups of slits spaced from one another and extending through both the front and rear panels, the slits in each group forming an opening through the bag, similar slits in the top flap in position adjacent to those in the panels to extend the opening through the flap when the flap is folded down into closed position, the groups of slits being spaced from one another, a locking element made of separate material from the bag and stiffer than the bag and extending through a plurality of the thicknesses of paper at one group of slits and through a plurality of the thicknesses of paper at the other group of slits, the locking element being longer than the spacing of the groups of slits from one another, end portions on the locking element having a height substantially equal to the height of the slits, and slits of each group having confronting edges severed directly from one another

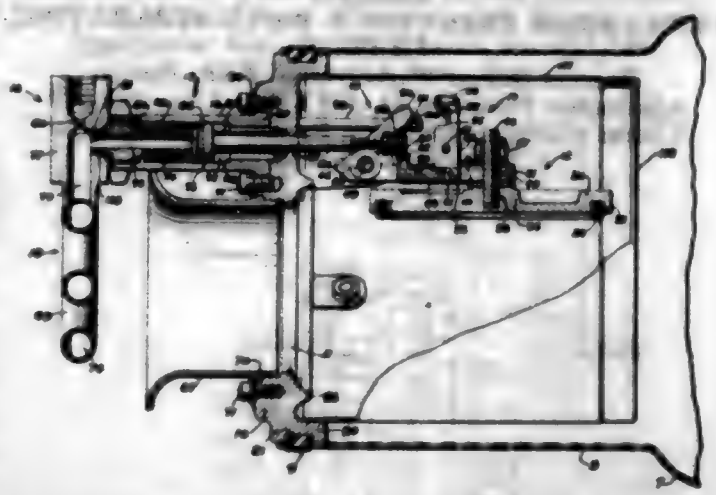
without removal of intervening material so that the confronting edges of the slit meet with one another at juncture points at the upper and lower ends of each slit, at least one of the end portions tapering to a reduced width at its front end to facilitate insertion into the slits and having an abrupt change in width providing a shoulder in position to catch on edges of the slits where they converge adjacent to said juncture points to prevent the locking element from being pulled back through the slits.

2,866,592
AIR ACCELERATING ENGINES AND COMPRESSORS
Andrew A. Matheson, Denver, Colo.
Application November 13, 1956, Serial No. 622,189
4 Claims. (Cl. 230—56)



1. A single acting engine of the type having a frame, a power cylinder carried thereby, a piston operatively associated therewith, a cross head movable along and guided by said frame, a piston rod interconnecting the piston and the cross head, a drive shaft mounted for rotation on the frame, said shaft having a crank provided with a crank pin and with a heavy fly wheel, a connecting rod joining the cross head with the crank pin, a source of air under high pressure, conduit means communicating the air source with the power cylinder, said conduit means being formed in part by an elongated poppet valve housing, a partition dividing the interior of said housing into a lower high pressure valve chamber and an upper expansion chamber, the partition having an opening formed with a valve seat on the high pressure side, a poppet valve positioned in the high pressure chamber and operatively associated with the valve seat, said valve being urged to closed position by the high air pressure, the valve having a stem that passes through the expansion chamber, through the housing wall and terminates some distance above the housing, a hammer carried by the frame and positioned above the valve stem in position to deliver an impact blow to the valve stem to move the valve to open position, and permit high pressure air to enter the expansion chamber, a two-position slide valve positioned in the conduit between the expansion chamber and the cylinder, resilient means operatively associated with the slide valve for normally holding it in open position, means for moving the slide valve to conduit closing position at the end of the power stroke of the piston comprising a lever having one end connected with the frame for pivotation, the other end being operatively connected with the slide valve for moving it to closed position when the lever is moved upwardly about its pivot, means for moving the lever to valve closing position comprising a toggle operatively connecting the lever and the frame, the valve being closed when the toggle is in extended position, means for correlating the movement of the lever and its supporting toggle with the position of the piston in the working cylinder, comprising a frame slidably supported on the engine frame and provided with stops to be engaged by the cross head as it approaches the ends of its movement, a link having its front end connected with the center pivot of the lever toggle and its rear end connected with the slidable frame so that it will break the lever toggle as the piston reaches the end of its compression stroke and reset the toggle and close the valve at the end of the power stroke and bring it to exhaust position, resilient means operatively associated with the hammer and frame to subject the hammer to a force urging it towards the valve stem, means comprising a toggle connecting the hammer with the engine frame for moving the hammer to a position above the valve stem, means for correlating the movements of the hammer and its release with the position of the slide valve, comprising an elongated link having its rear end pivotally connected with the link that operates the valve control lever and provided at its forward end with an elongated opening through which the center pivot of the hammer control toggle passes, the length of the elongated opening being less than the movement of the sliding frame whereby the release movement of the hammer control toggle will lag relative to the lever control toggle, the slide valve having an exhaust port that is in communication with the power cylinder during the exhaust stroke, a storage cylinder and a conduit containing a check valve communicating the storage cylinder with the exhaust port.

2,866,593
ASPIRATING APPARATUS
Robert W. Bowmen, Oradell, and Joseph A. Nolgel, Glen Rock, N. J., assignors to Specialties Development Corporation, Belleville, N. J., a corporation of New Jersey
Application January 28, 1954, Serial No. 406,823
26 Claims. (Cl. 230—95)

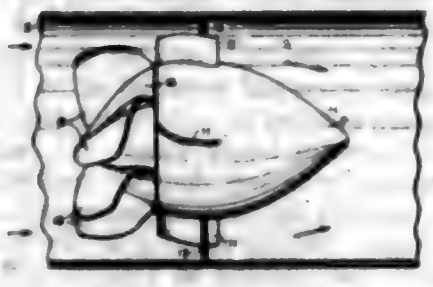


1. Aspirating apparatus comprising, in combination, a body portion formed wtih an opening, closure means mounted on said body portion for closing said opening, aspirating means positioned adjacent said opening for directing gas under pressure through said opening, means supported by said body portion for supplying gas under pressure to said aspirating means, means on said body portion for normally retaining said closure means open, and pressure sensitive means in fluid flow communication with said gas supplying means and operatively engaging said retaining means to render said retaining means ineffective when said gas is at a predetermined pressure.

2,866,594
FLUID MOVING MEANS
Thomas E. Quick, Wichita, Kans.
Application August 8, 1955, Serial No. 527,829
2 Claims. (Cl. 230—117)

1. Gaseous fluid moving means, comprising, in combination, an elongated streamlined body, a forward portion of said body being conoidally-shaped and rotatable and a rear portion of said body being conoidally-shaped

and fixed, a conduit of circular cross section within which said portions of said body are mounted base to base and coaxial therewith, and forming with said conduit an annular passageway for said gaseous fluid, motor means mounted in said rear fixed portion and operable to rotate said forward portion and attached thereto, a plurality of curved spaced blades radially and longitudinally mounted on said forward portion, the line of intersection of said blades and the surface of said forward portion lying in a plane which contains the longitudinal axis of said for-



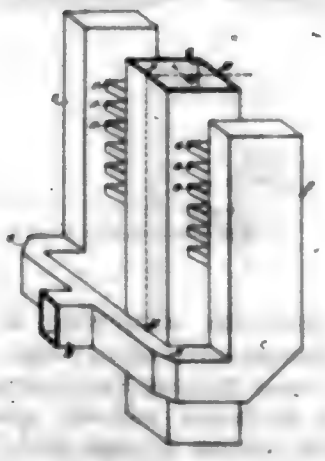
ward portion, said blades having an inner portion radially extending from the surface of said forward portion and an outer portion the mean plane of which is transverse to said radially extending inner portion and each of said blades being deeper in its forward portion than its rear portion and increasing in pitch from front to rear, and spaced vanes fixedly mounted on said rear portion of said body to direct fluid moved by said forward portion in a rectilinear direction, said fixedly mounted vanes being curved reversely to the direction of rotation of said forward portion.

2,866,595

ULTRA-HIGH FREQUENCY BAND SEPARATING FILTERS

Georges Robert Pierre Marié, Paris, France

Application February 26, 1957, Serial No. 642,517
Claims priority, application France April 28, 1956
7 Claims. (Cl. 333—73)



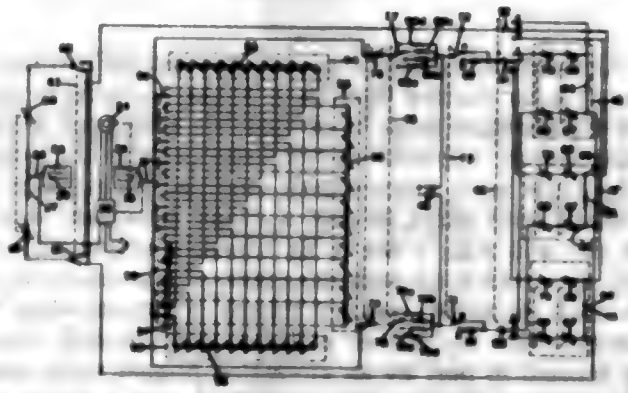
1. A band separating filter adapted to be inserted in a main wave guide of rectangular cross-section in which two signal groups, the frequencies of which respectively cover a lower frequency band and an upper frequency band separated by a frequency interval, propagate according to the TE_{10} mode, said filter comprising a length of said main guide at the input of which said two signal groups are applied and at the output of which the signals of said lower band are received at least one secondary wave guide receiving the signals of said upper band and being of rectangular cross-section, said secondary guide having its axis parallel to that of said main guide and being coupled to the latter said guide by a first series of slots distributed along said length of said main guide and provided in its walls and by a second series of slots provided in the walls of the longer sides of said secondary guide or guides, and coupling wave guides, the slots of said first and secondary series being connected in pairs by said coupling wave guides, said coupling wave guides having a rectangular cross-section equal to the surface of both of the slots to which they are connected and axes which are perpendicular to those of said main and secondary guides, said coupling guides having equal cut-off frequencies of values chosen between the highest frequency of said lower frequency band and the lowest frequency of said upper frequency band, the dimensions of the cross-sections of said coupling guides varying progressively along the length of said main guide so that their characteristic impedances have a maximum value in the middle and a minimum value at the ends of said length, the length of said coupling guides measured along their axes being substantially equal to a quarter phase wavelength at the middle frequency of said upper frequency band, and the spacing between the axes of two successive of said coupling guides being substantially equal to a quarter phase wavelength in said main guide of said middle frequency.

2,866,596

DATA COMPUTER FOR CONVERTING OSCILLOGRAPH TRACES INTO DIRECT-READING RECORDS

Edwin G. Heeb and Gail T. Litton, Dallas, Tex., assignors to Chance Vought Aircraft, Incorporated, Dallas, Tex., a corporation of Delaware

Application September 7, 1954, Serial No. 454,537
18 Claims. (Cl. 235—61)



1. A device of the type described for converting oscillogram traces into graphs of desired amplitude scale comprising: a carriage movable longitudinally over an oscillogram; a stylus on said carriage movable transversely of said oscillogram for following an oscillogram trace; a potentiometer mounted on said carriage and having a movable contact connected to said stylus; a recorder having a movable chart, a pen, means for moving said chart longitudinally past said pen, and means for moving said pen transversely across said chart; computer means connected between said contact and potentiometer and said pen-moving means and responsive to movement of said stylus for causing movement of said pen in accordance with the movement of said stylus and in a predetermined relation to said movement of said stylus; and means between said carriage and said chart-moving means for causing movement of said chart in accordance with the movement of said carriage.

2,866,597

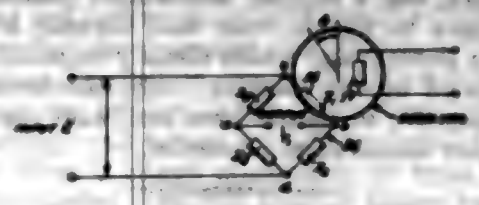
BILATERAL ELECTRICAL RESOLVER SYSTEM

Robert W. Tripp, Bronxville, N. Y., assignor, by mesne assignments, to Industrayn Corporation, Carson City, Nev., a corporation of Nevada

Application July 3, 1956, Serial No. 593,782
9 Claims. (Cl. 235—61)

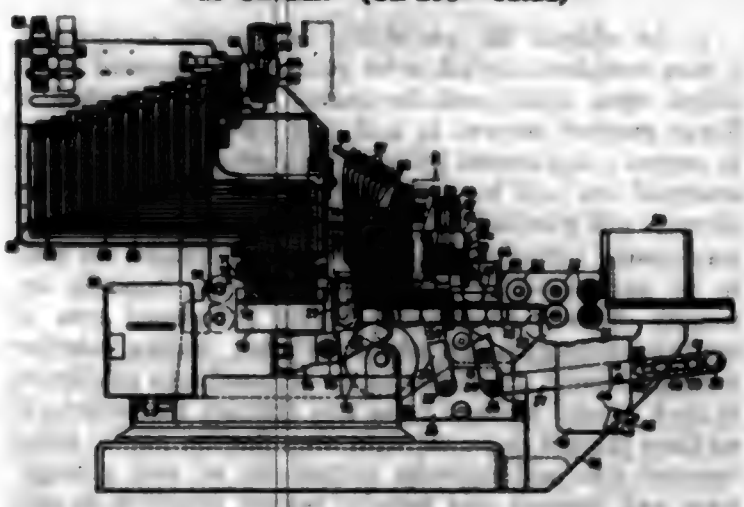
1. A bi-lateral electrical resolver system comprising a resolver having stator and rotor windings, a bridge having impedances in balanced relation and one of said impedances comprising one of said windings, an input for said

bridge and for said one winding, said other winding serving as an output for said one winding for transmission in one direction with an input applied to said bridge whereby said one winding receives current by division with no po-



tential drop at terminals across intermediate points of said bridge, and a separate input for said other winding and for which said bridge terminals serve as an output for transmission in the opposite direction.

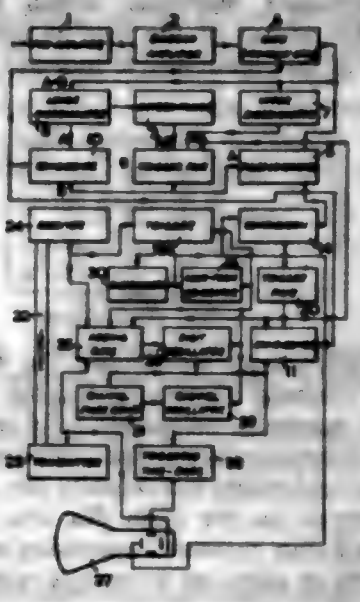
2,866,598
METHOD FOR AUTOMATICALLY READING MARKINGS APPLIED TO CARRIERS
Ulysse Baldé, Zurich, Switzerland, assignor to Mifhra A.-G., Zurich, Switzerland
Application September 21, 1954, Serial No. 457,457
18 Claims. (Cl. 235—61.11)



1. An arrangement for automatically reading markings applied to a carrier consisting of electrically and thermally insulating material, markings on the said carrier consisting of electrically conductive material, comprising in combination: means for producing a high frequency electromagnetic field on the said markings, a plurality of heat radiation detectors screened from one another and exposed to the heat radiation given off by the said markings under the action of the said high frequency field, electrical circuits connected to the said heat radiation detectors and including means conveying the said carrier firstly into the range of the said means producing a high frequency field and then into the range of the said heat radiation detectors.

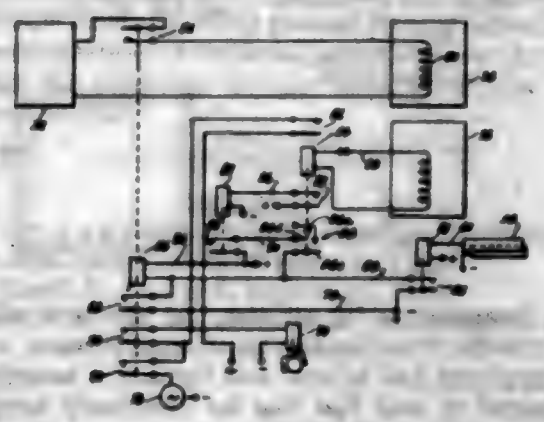
2,866,599
METHOD OF AND APPARATUS FOR SORTING ELECTRICAL PULSES ACCORDING TO THEIR AMPLITUDE
George William Hutchinson, Cambridge, England, assignor to National Research Development Corporation, London, England, a British corporation
Application May 17, 1955, Serial No. 508,387
Claims priority, application Great Britain June 24, 1951
6 Claims. (Cl. 235—92)

1. Apparatus for analysing a succession of electrical pulses into a plurality of categories in accordance with a characteristic value of the several pulses comprising means for generating a recurrent sweep voltage, a circulatory storage system operating synchronously with said sweep voltage generating means, means for comparing the amplitude of each pulse to be categorised with the instantaneous value of said sweep voltage so as to obtain a signal at a time in said sweep cycle, in the cyclic period of said storage system, related to said amplitude, means for detecting the contents of said storage



system, means for adding to the detected contents of said storage system in the position appropriate to its significance the signal obtained by said comparison and means for returning the detected contents modified by this addition to the storage system.

2,866,600
SONIC VEHICLE COUNTER
Benjamin Cooper, Brooklyn, and Arthur Stern, Bronx, N. Y.; said Stern assignor to said Cooper
Application May 20, 1954, Serial No. 431,144
6 Claims. (Cl. 235—99)



5. In combination, means operated by sensing the wheels of a vehicle passing a predetermined location, sonic means operable to sense the passage of the vehicle past said location, means responsive to the operation of said wheel sensing means to operate said sonic sensing means, means responsive to the operation of both the wheel sensing means and the sonic means for counting vehicles passing said location, and means for limiting the counting means to count a single count for each vehicle irrespective of the number of wheels on each vehicle.

2,866,681
TALLY DEVICE FOR ROULETTE
Fred M. Maher, Chicago, Ill.
Application November 25, 1953, Serial No. 394,288
4 Claims. (Cl. 236—114)

1. In a device for recording the performance of a roulette wheel in play, comprising in combination, a body, a main disc rotatably supported on said body for manual adjustment, said main disc having a plurality of circumferentially arranged numerals disposed in the same irregular

order as the corresponding numerals on a roulette wheel, said main disc also being divided into a plurality of major segments having different visual characteristics and each embracing approximately the same number of said circumferentially arranged numerals within their respective limits, a marker means on the face of said body adjacent the periphery of said main disc to indicate the last winning

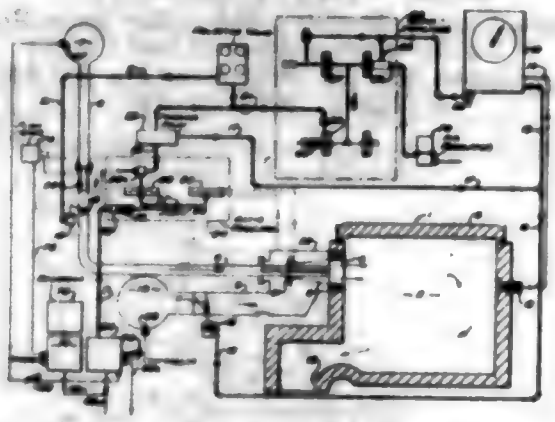
numeral on a roulette wheel and the segment thereof in which the winning numeral is located, and a plurality of individual manually adjustable tally members on said body, of the same number as the major segments on said main disc, for registering individually the number of times winning numerals on the main disc are included within the respective major segments appearing on the main disc during a series of plays on a roulette wheel.

2,866,602

APPARATUS FOR BURNING FUEL HAVING A WIDELY VARYING CALORIFIC VALUE

William H. Dalley, Jr. and Frank J. Kolnik, Toledo, Ohio, assignors to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application December 8, 1954, Serial No. 473,988
18 Claims. (Cl. 236—15)



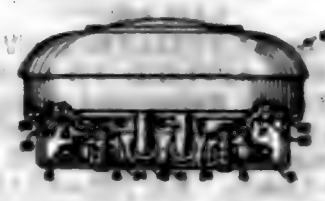
9. In apparatus for burning fuel having a widely varying calorific value, in combination, a furnace, a fuel line for supplying fuel to heat said furnace, a sampling system connected to said fuel line for constantly sampling fuel therefrom, a calorific value meter connected to said sampling system for constantly determining the calorific value of the sampled fuel, a burner incorporated with said furnace for combustion of the fuel in admixture with air, an air line, said burner being connected to said fuel line and to said air line, a regulator for determining the proportions of air and fuel admixed for combustion, a first metering orifice for the air, a second metering orifice for the fuel, the regulator being responsive to changes in differential pressure in the air stream at the first metering orifice and to changes in differential pressure at the second metering orifice, an air temperature variation signaling instrument positioned to be responsive to variations in temperature of the air to be admixed with the fuel, a fuel temperature variation signaling instrument positioned to be responsive to variations in the temperature of the fuel to be admixed with the air, a control device which is connected to said calorific value meter and is responsive to the calorific value of the fuel and to signals from the temperature-responsive instruments, said control device governing said regulator to vary the proportions of air and fuel both in accordance with variations in the calorific value of the fuel and in accordance with variations in the temperatures of the air and the fuel, a tracking relay connected to the regulator for regulating one of the flows of fuel or air, an element incorporated with said furnace for measuring the temperature within said furnace, and a furnace temperature controller which is responsive to signals from said furnace temperature measuring element and which directly regulates that flow not regulated by the tracking relay, the tracking relay being responsive to signals from both said regulator and said furnace temperature controller.

2,866,603

THERMOSTAT ADAPTER

Richard C. Mott, Chicago, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application June 6, 1955, Serial No. 513,559
4 Claims. (Cl. 236—79)



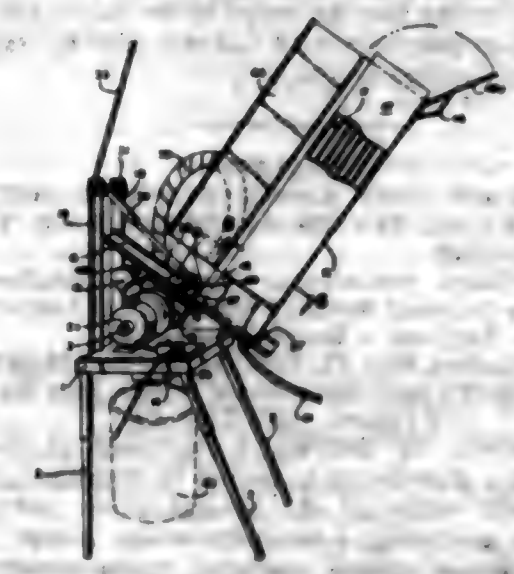
1. An adapter for pneumatic thermostats comprising, a base member adapted to be permanently secured to an object upon which said thermostat is to be attached, a flange member secured to said base member and adapted to mount a thermostat thereon, a pneumatic junction box mounted on said base member, a pair of passageways through said junction box, one extremity of each passageway having a portion adapted to receive metallic air lines to be permanently connected thereto, the opposite extremity of each passageway having a recessed area of uniform dimension, an annular rubber sealing member having a similar dimension to the recessed area positioned in each of said recessed areas and abutting the peripheral surfaces thereof in an air tight seal, flexible plastic tubes inserted into said opposite extremities of said passageways and through said annular sealing members to seal said tubes in said passageway, said tubes being adapted to be connected to the air lines of the thermostat to provide a removable airtight connection between the thermostat and said junction box.

2,866,604

DEACTIVATING LAMP DISPOSAL DEVICE

James B. Hall, Washington, D. C.

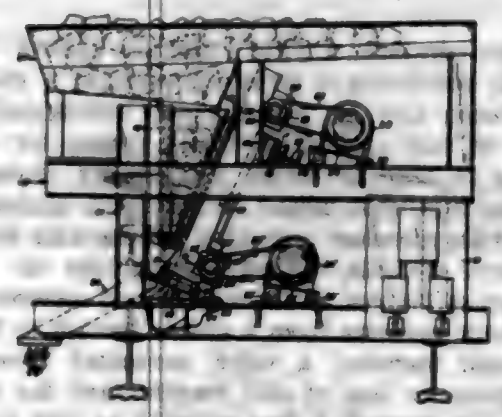
Application June 19, 1957, Serial No. 666,789
6 Claims. (Cl. 241—99)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. A disposal device for glass fluorescent lamp tubes, a breaker for the tubes comprising a breaker casing,

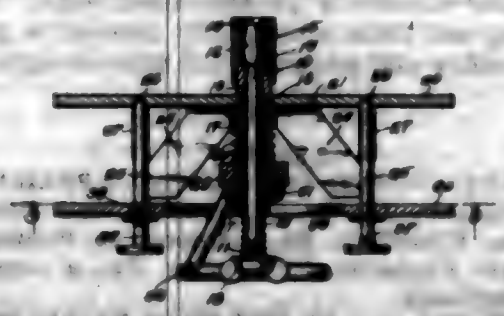
breaker elements in the casing, a feed-in opening in the casing, a magazine supported in an upright position on top of the casing and enclosing a carton with a closed upper end and an open lower end, a discharge opening in the lower end of the magazine, the discharge opening in the lower end of the carton registering with the opening in the end of the magazine, the opening in the magazine in discharging position communicating with the feed-in opening in the breaker casing, a reciprocating closure for the openings and means for uninterruptedly opening the closure from a closed position to an open position, a discharge opening from the breaker casing and means for spraying water into the breaker chamber.

2,866,605
MACHINE FOR CRUSHING STONE AND THE LIKE
John T. Picone, Tullytown, Pa.
Application June 7, 1957, Serial No. 664,328
2 Claims. (Cl. 241—262)



1. Crushing apparatus of the class described comprising a pair of relatively movable jaws, spaced parallel shafts disposed transversely of one of said jaws journaled thereon and one adjacent each of the ends of one of said jaws, a weight eccentrically secured to each of said shafts, means for rotating said shafts in opposite directions, a rigid supporting frame, pivot means connecting the upper end of said one jaw to said frame, adjustable means connecting the lower end of said movable jaw to said frame, and means for adjusting said last named connecting means toward or away from the other of said jaws.

2,866,606
WELDING ROD REEL
Clifford M. Westfall, Homewood, and Kenneth M. Mead, Blue Island, Ill., assignors to Chicago Bridge & Iron Company, a corporation of Illinois
Application October 20, 1953, Serial No. 387,262
1 Claim. (Cl. 242—118.3)



A welding wire supporting reel for use with a welding apparatus comprising an outwardly extending spindle, an inner disk mounted for rotation about said spindle and forming one side of a reel for receiving a coil of welding wire, a pair of posts extending outwardly from said inner disk in a direction parallel to said spindle, coil supporting means including a pair of arcuate members forming a generally circular core, means including bracing means extending inwardly from said arcuate members and said posts to said inner disk for supporting said arcuate members from said disk to transfer the weight of the welding wire placed thereon to the spindle, said arcuate members being pivoted at one of their ends upon an axis parallel to the spindle and having their opposite ends free, a second disk forming the other side of said reel and supported from said inner disk, and means for forcing said arcuate members outwardly about their pivots under pressure to expand said core within a coil of welding wire placed thereon.

2,866,607
WARPER BEAM
Alvin L. Ewing, Chesterfield, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application October 29, 1953, Serial No. 389,199
2 Claims. (Cl. 242—118.6)

1. A warper beam comprising a barrel of substantially cylindrical shape, heads of larger diameter than the diameter of the barrel, means for securing said heads to said barrel, an axle passing through the center of each head and the barrel, and located at each end of said beam a head supporting means immovably secured to said axle adjacent to the head; said supporting means including a shoulder bearing against that portion of the head which faces the inside of the barrel to prevent inward movement of the central portion of the head and a means, external of the head, for adjusting the said shoulder against the inner side of the head.

2,866,608
VERTICAL-TAKE-OFF TYPE AIRCRAFT WITH JET DRIVEN ROTOR SYSTEM
Lloyd H. Leonard, Inglewood, Calif.
Application May 18, 1955, Serial No. 509,350
4 Claims. (Cl. 244—7)

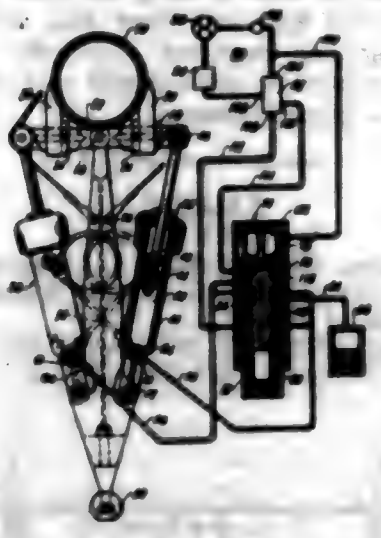
1. In an aircraft, an elongated fuselage, propeller blades mounted for rotation about the longitudinal axis thereof and when in operation extending radially of said axis, propulsion jet engines mounted at the tips of said blades and disposed transversely of the length of the blades when the blades are extended, and means whereby said blades and jet engines may be folded rearwardly into a position substantially parallel with each other and with said axis, said means including a pivotal connection between each jet engine and its associated blade.

2,866,609

SHIMMY ARRESTER FOR CASTERING WHEEL

George C. Stout, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application October 5, 1953, Serial No. 384,158
8 Claims. (Cl. 244—50)



1. In a ground steering system for a castering aircraft wheel, means for arresting shimmy in the wheel including a fluid motor adapted to steer said wheel by rotating the same about its castering axis, said fluid motor defining two variable volume chambers, a pair of conduits connected to said motor for conducting fluid pressure to one or the other of said chambers, means for interconnecting said conduits at all times except when the system performs its steering function, means for maintaining a constant pressure in said conduits, and valve means in each of said conduits permitting unrestricted fluid flow into said chambers, said valve means comprising a conical valve seat, a conical valve element seatable thereon in such a manner that fluid flowing into said motor will lift the valve element from its associated valve seat, means urging the valve element toward said seat, and a restricted passage associated with said valve means permitting a throttled flow of fluid from said chambers at all times, but unrestricted flow into said chamber at all times.

2,866,610

AIRCRAFT JET THRUST CONTROL

John E. M. Taylor, Cleveland, Ohio

Application April 16, 1956, Serial No. 577,424
2 Claims. (Cl. 244—52)
(Granted under Title 35, U. S. Code (1952), sec. 266)

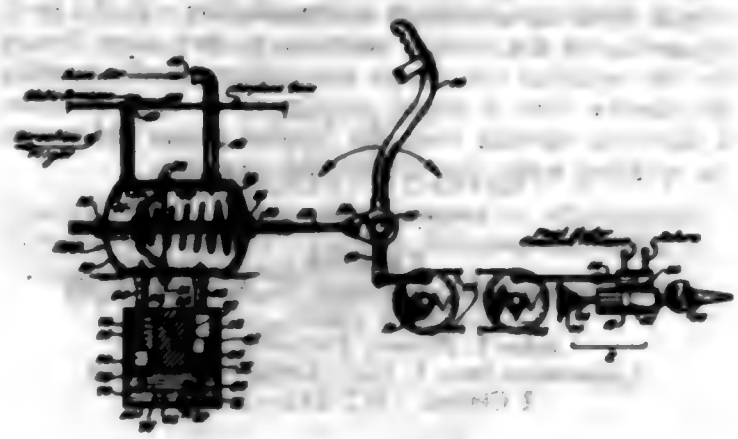
1. In a thrust control brake device for jet aircraft, a deflector member located outside and aft of the aircraft engine and mounted independently thereof, said deflector member comprising an inner plate member and an outer plate member, the inner plate member being hinged to the wing of said aircraft, the outer plate member being hinged to the outer edge of said inner member, operating means for lowering said deflecting member to intercept the jet stream issuing from said engines, means for varying the angular relationship of said inner and outer plate members between a straight angle and an angle of the order of 90°, thus varying the angle of impact of said jet stream against said plates to effect variations in the proportion of reverse thrust and lift.

2,866,611

MECHANICAL STICK FORCE PRODUCER

Hugh B. Thompson, Redondo Beach, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application February 15, 1954, Serial No. 410,140
5 Claims. (Cl. 244—83)



1. In an airplane, a pilot's attitude control element, means for producing a force representing a differential ratio between ram air pressure and substantially static pressure on said airplane in flight, means for applying said force to tend to center said control element in a neutral position, said means including an enclosed pressure movable member connected on one side thereof to said control element, means leading ram air pressure from a source thereof to one side of said member, means leading static pressure from a source thereof to the other side of said member, a valve connected between the ram air pressure side of said member and the static air pressure side thereof, a first cylinder in said valve and connected to the ram air pressure side of said member, a second cylinder in said valve and connected to the static air pressure side of said member, a duct in said valve, said duct having one end thereof opening in said first cylinder, the other end of said duct opening into said second cylinder, a piston mounted in said first cylinder and movable therein under the influence of pressure from the ram air pressure side of said member, a piston mounted in said second cylinder and movable therein under the influence of pressure from the static air pressure side of said members, means interconnecting said pistons to maintain a given ratio of movement therebetween, said first piston being movable across said duct opening to control the flow of ram air pressure through said duct to the static side of said member, said second piston modifying movement of said first piston in accordance with ambient static air pressure, whereby said first piston is operable to open said duct to permit ram air pressure to pass therethrough to the static air side of said member whenever the ram air pressure on the appropriate side of said member exceeds a predetermined value, thereby maintaining said force substantially constant at pressure ratios exceeding said predetermined pressure ratio.

2,866,612

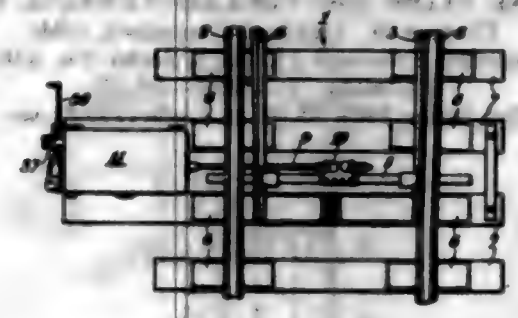
RAILWAY SWITCH OPERATING APPARATUS

Charles Pasline, Jr., Penn Township, and Robert A. Wenston, Pittsburgh, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application June 23, 1955, Serial No. 517,286
6 Claims. (Cl. 246—258)

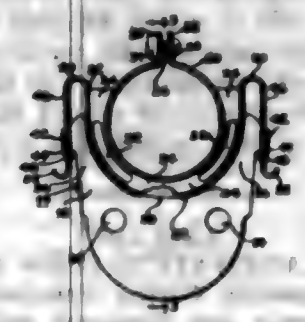
1. Railway switch operating apparatus comprising, a member movable to two extreme positions, a fluid pressure motor for moving said member, a hand-throw lever movable between two extreme positions for at times moving said movable member, a latching member movable between a latched position and an unlatched

position for latching said hand-throw lever in one extreme position, a valve controlling the admission of fluid pressure to said motor, said valve being operatively connected to said latching member, the movement of said latching member to its unlatched position to free said hand-throw



lever closing said valve to shut off the fluid pressure supply to said motor, and lock means actuated upon movement of said hand-throw lever from its extreme latched position to hold said latching member in its unlatched position in all positions of the hand-throw lever other than its extreme latched position.

2,866,613
RESILIENT MOUNTING
Homer J. Loftis, Ironton, Ohio, assignor to Hoerlte Products Corporation, a corporation of Ohio
Application February 24, 1956, Serial No. 567,522
5 Claims. (Cl. 248—24)



1. A resilient mounting attachable to a support member comprising an inner metal split-ring having clamping means thereon whereby the inner ring may be clamped tightly upon an interior supported member, a metallic outer ring segment surrounding more than half of said inner ring but leaving a substantial clearance adjacent said clamping means, a resilient elastomeric ring segment interposed between and secured to both said inner metal ring and said outer metal ring segment, and a cradle member provided with means for attachment to said support member, said cradle member having a pair of furcations projecting therefrom, said furcations having arcuate inner margins defining a substantially semi-circular yoke into which said outer ring segment is seated, said furcations terminating in spaced relation to the ends of said outer ring segment, said outer ring segment having an inverse curvature adjacent the ends thereof whereby said ends arch over the ends of said furcations, said furcations each having a tongue portion projecting therefrom and cooperating therewith to form an acute angled notch in the margin thereof adjacent said tongue portion, said outer ring segment having complementary apertures therein receiving said tongue portions, there being a misalignment between said tongue portions and said apertures such that said tongue portions in projecting through said apertures cooperate to stress said outer ring segment, the stress in said outer ring segment biasing marginal portions thereof adjacent the apertures therein into the notches of said cradle member to thereby fasten said outer ring segment to said cradle member.

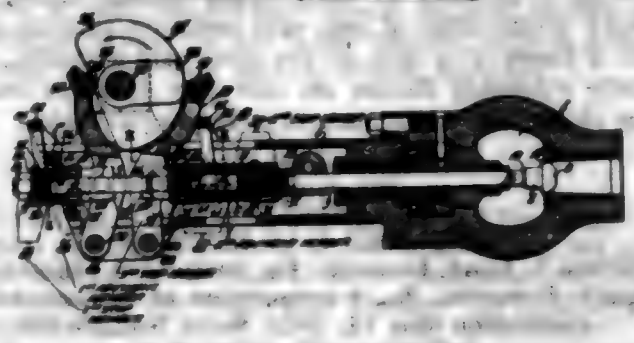
2,866,614
FLATIRON HOLDER
Clarence Joseph Leal, Berkeley, Mo.
Application October 14, 1955, Serial No. 540,516
1 Claim. (Cl. 248—117.7)

A flatiron holder embodying a yieldable clamp adapted to be clamped over the side edges of an ironing board and a base plate supported by said clamp, spaced clips including inwardly inclined shanks rising from said base plate, said shanks spacing said clips a substantial distance above said base plate and inwardly of the margin of said base, a coiled spring connected under tension to the upper inner ends of said clips and arranged in parallel spaced relation with said base, said spring being adapted to extend around one side, the front and the rear end of a flatiron, the ends of the spring being spaced apart and adapted partially to engage the ends of the other side of a flatiron, the space between said ends being open to permit the insertion of the flatiron beneath said spring from the open side, said spring being adapted to overlie the edge of a flatiron to secure the same to said base plate.

ERRATUM

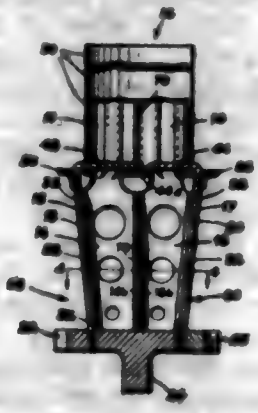
For Class 251—196 see:
Patent No. 2,866,253

2,866,615
BACKSEATED INLET VALVE
Elmer D. Hoesch, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application April 19, 1956, Serial No. 579,208
13 Claims. (Cl. 251—339)



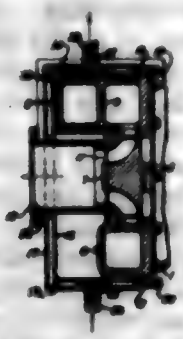
1. In a valve, a rectilinearly movable valve shaft carried in a valve housing, said valve shaft having a valve head for regulating the amount of elastic fluid being fed to a turbine wherein the elastic fluid pressure acts on the valve head and opposes and then aids movement of the valve shaft, first and second stop members affixed to said valve shaft, first and second abutment members movably carried by said valve shaft between said first and second stop members, first drive means carried by a support and interconnected with said first abutment for moving said first abutment against said first stop to apply a first force on said first stop member, second drive means carried by a support and interconnected with said second abutment for moving said second abutment against said second stop to simultaneously provide a force opposing said first force, control means cooperating with said first and second drive means to regulate the amount of force applied by said first and second drive means to move said valve shaft in a desired direction to regulate the elastic fluid, said opposing forces preventing the elastic fluid pressure from moving said valve shaft relative to said first and sec-

2,866,616
FABRICATED BLADED STRUCTURES FOR AXIAL FLOW MACHINES
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Development Company, Bay City, Mich., a corporation of Michigan
Application March 2, 1951, Serial No. 213,595
6 Claims. (Cl. 253—39)



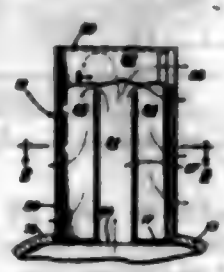
1. In combination in an axial flow bladed rotor adapted to interchange force with a fluid, a hub structure comprising a front assembly and a rear assembly supported in axially tandem relationship, each said assembly comprising a hub plate and a plurality of separate radially directed blade stems, each said stem having flanges defining a channel cross section thereof, one said flange of each stem extending radially inwardly in overlapping relation and faying with its said plate and being fixed thereto, each said stem extending radially outward beyond the perimeter of its respective said plate, a plurality of blade envelopes each enclosing and being fixed to a stem of each said assembly to unite said assemblies forming a plurality of peripherally spaced blades, the flanges of the stem of one said assembly abutting each with a flange of a stem of the other said assembly, and axially extending flanges on said hub structure assemblies closing the spaces between the several blades.

2,866,617
SHIELDED GAS TURBINE
Malcolm L. Lund, Jeannette, Pa., assignor to Elliott Company, Jeannette, Pa., a corporation of Pennsylvania
Application May 11, 1953, Serial No. 354,010
4 Claims. (Cl. 253—39.1)



1. A shielded gas turbine comprising an outer casing provided with an inlet and an outlet for hot gases, said casing having outer walls that are heated to a high temperature by said gases, and a shielding water jacket covering a portion of said walls and having spaced inner and outer walls, the jacket being provided with an inlet and an outlet to permit cooling water to be circulated between the jacket walls to keep the jacket outer wall cool

2,866,618
REVERSE FLOW AIR COOLED TURBINE BLADE
Thomas W. Jackson, Cincinnati, Ohio
Application February 13, 1953, Serial No. 336,899
2 Claims. (Cl. 253—39.15)
(Granted under Title 35, U. S. Code (1952), sec. 266)



1. In a gas turbine, a hollow rotatable drum having a base, said drum being adapted to receive a compressed air coolant, a hollow radial blade having a base and extending from and attached at said base to the base of said drum, said blade having a closed tip, a rounded leading edge and a tapered trailing edge, and a plurality of ribs centrally and radially positioned in said blade and forming a passageway and connected to said drum for passage of air coolant into said blade, said ribs being imperforate and terminating adjacent the closed tip of the blade and said blade having outlet openings for said incoming coolant only at points adjacent the leading and trailing blade edges, whereby the coolant is moved with reduced heat transfer to the vicinity of the blade tip and subsequently moved reversely toward the blade base in direct proximity to both leading and trailing edges.

2,866,619
ROTARY BLADED FLUID FLOW MACHINES
Alfred Denis Snowden Carter, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Application March 5, 1953, Serial No. 274,950
Claims priority, application Great Britain March 9, 1951
3 Claims. (Cl. 253—65)

1. A turbine comprising a rotor partly defining a passage for the flow of working fluid, structure independent of said rotor also partly defining said passage and with respect to which said rotor is rotatable, and a number of blade rows each having circumferentially evenly spaced elongate blades of streamlined profile in transverse section extending longitudinally across said flow passage which blade rows are arranged successively in the direction of flow of the working fluid, wherein the last of said rows having blades shaped primarily for energy conversion and substantially cambered in section to derive considerable energy from the traversing fluid is on said rotor and is succeeded by an immediately adjacent row of blades attached to said independent structure and being in number a substantial proportion of the number of the blades of the preceding row and whose chord length is smaller than the chord length of the blades of the preceding row, said last mentioned blades which are attached to said independent structure being uncambered in section.

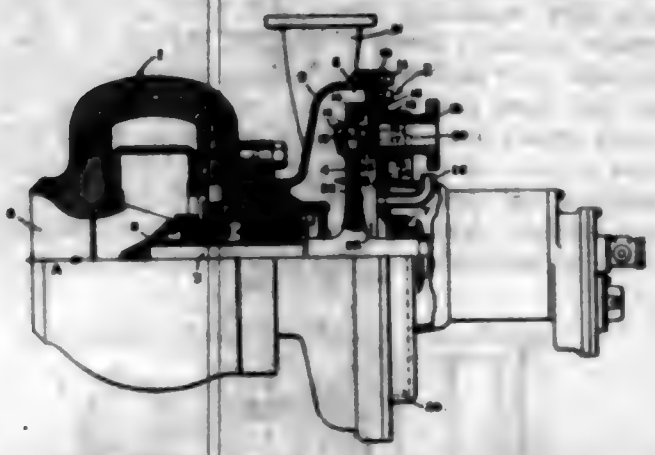
lever extending therefrom; in combination, a pressure plate having a substantially flat under face to contact with the surface of the cam and an upper face to engage

vertically, introducing the material into the current near its upper end at such a rate that the material falls by gravity through the current with its fall retarded sub-

MEANS FOR COUNTERBALANCING STARTING THRUST IN TURBINE DRIVEN PUMP UNITS

John G. Williams, Springfield, N. J., assignor to Worthington Corporation, Harrison, N. J., a corporation of Delaware

Application October 3, 1957, Serial No. 688,841
1 Claim. (Cl. 253—65)



In a steam turbine including, a casing having a steam chamber formed therein, a turbine wheel disposed for rotation within said steam chamber, a row of steam buckets carried about the periphery of said turbine wheel, and circumferentially spaced flow directing nozzles in proximate spaced relation to the steam buckets mounted about the interior of the wall of said steam chamber, the combination with said turbine of means for counterbalancing an axial force exerted against the side of the turbine wheel remote from the flow directing nozzles, said means comprising an annular chamber formed in the steam chamber on the side of the turbine wheel nearest the flow directing nozzles, said annular chamber defined on one side by the side of the turbine wheel, on the other side by the wall of the steam chamber, and on the end by the buckets and flow directing nozzles in proximate spaced relation to each other, and an inlet to said annular chamber communicating with a suitable source of pressurized steam, whereby steam admitted to said annular chamber will exert a counterbalancing force against the said turbine wheel.

2,866,621

ONE CABLE AND CLAMP SYSTEM OF GUYING

Sidney S. McIntyre, Sr., Sedro Woolley, Wash., assignor to The Humboldt Company, Seattle, Wash., a corporation of Washington

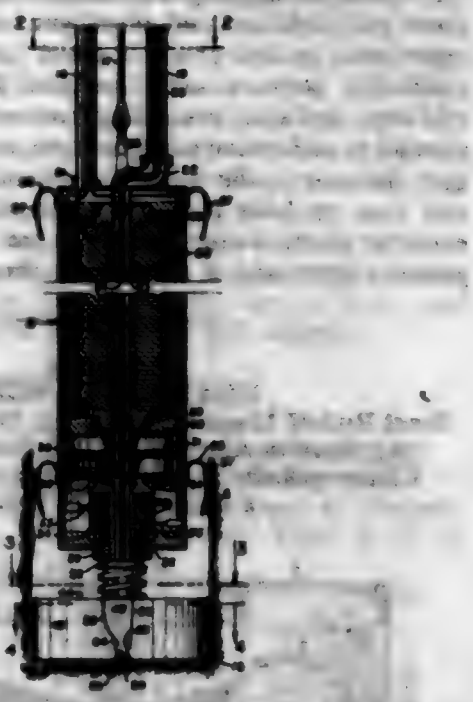
Application December 12, 1955, Serial No. 552,373
7 Claims. (Cl. 254—150)

1. A guying system for a mast or the like comprising a block close coupled to the guyed end of the mast, cable winding means secured relative to the mast, two guy line anchoring blocks fixed at locations away from the mast on lines that radiate therefrom in substantial angular divergence, and a continuous guying cable fixed at one end to the mast and extended therefrom to and through one of said anchoring blocks, thence back to and through the first mentioned block, thence away from said first mentioned block and mast to and through the other of said anchoring blocks, thence back to said mast and to said cable winding means secured relative thereto, and a means closely associated with the first mentioned block and adapted to be holdingly engaged with the cable to prevent any reeving movement thereof through said first mentioned block.

ELECTRIC FLAME BORING APPARATUS

Robert W. Murray, Denver, Colo.

Application October 8, 1954, Serial No. 461,247
8 Claims. (Cl. 255—4.8)



1. Electric flame boring apparatus for boring a shaft into the earth, including, in combination, an arm carrying electrodes adapted to contact the earth surface at the bottom of the shaft, a head carrying said arm adapted to rotate within the shaft and move said electrodes across the bottom surface of the shaft in circular paths, a second tubular arm outstanding from said head in front of the electrodes with respect to their movement, a passageway in said head interconnecting the tubular arm with a supply of conductor material in a flowable state, orifices across the tubular arm adapted to permit the deposit of a layer of conductor material upon the bottom surface of the shaft as the head rotates with the arms, and a third arm outstanding from said head behind the electrodes with respect to their movement adapted to bear against the bottom surface of the shaft and thereby form a ground when in contact with said conductor material.

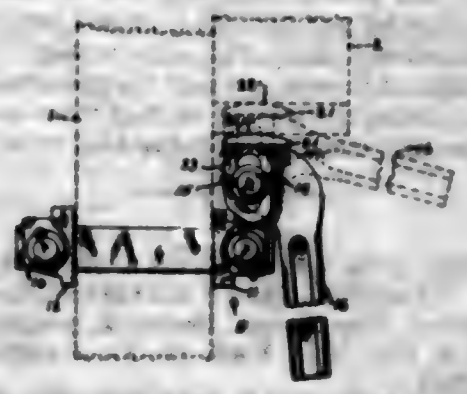
2,866,623

SHORE JACK

Lawrence S. Holmboe, Sr., Oklahoma City, Okla.

Original application January 18, 1954, Serial No. 404,426, now Patent No. 2,762,605, dated September 11, 1956. Divided and this application January 10, 1955, Serial No. 480,750

1 Claim. (Cl. 254—114)



A shoring jack comprising a rigid U-shaped frame adapted to embrace a shore, plates connected pivotally to the arms of the U-frame for gripping opposite sides of the shore, a boss upstanding from one of said arms, a pivot pin cantilevered from said boss parallel to the other arm, a cam pivoted on said pin and having an operating

products from said chamber, a casing having a portion ber, horizontal steel girders extending along the front and

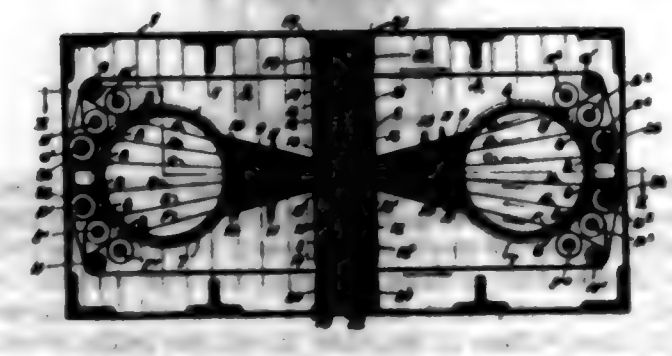
beneath the bottom of a companion shore, a pair of legs closely straddling said cam, longitudinally slotted to pivot and slide on said pivot pin and attached at their upper ends to said pressure plate, one of said legs being positioned between said boss and the adjacent face of said cam, and a lug projecting from said boss substantially parallel to and above said pivot pin and extending through only the slot in the leg which extends between the cam and boss to hold the legs substantially normal to the plane of the U-frame when the cam is rotated to lift the pressure plate and a companion shore.

2,866,624

HEAT EXCHANGERS

Ernst Rudolf Magnus Holmquist, Gothenburg, Sweden

Application August 17, 1955, Serial No. 528,987
Claims priority, application Italy August 26, 1954
6 Claims. (Cl. 257—6)



1. An apparatus for transferring heat from one fluid to a second fluid comprising a casing, a plurality of ducts extending through said casing, a partition mounted in said casing separating the same into a pair of chambers with each having one of said ducts therethrough, said partition having lateral slots and a longitudinal cavity, a plurality of rollers positioned in said partition cavity with opposing rollers positioned across each of said partition slots, said ducts each having a plurality of spaced openings in a side portion thereof, a plurality of rollers each rotatably mounted in one casing chamber adjacent one of said duct openings, means providing a plurality of passageways leading through and from an opposite side portion of each duct to one of said partition ducts, and a plurality of endless thin-gauge webs formed of a material of high heat capacity and high thermal conductivity each extending over one of said rollers in one chamber to and through a duct opening, the duct having said opening, one of said passageways from said duct, one of said partition slots, a second of said passageways, a second duct, an opening in said second duct, over one of said rollers in the other chamber and through a second partition slot to the first mentioned roller, the webs passing through the same partition slot being pressed together by the rollers therein preventing the passage of fluid from one chamber to the other and means for driving said webs.

2,866,625

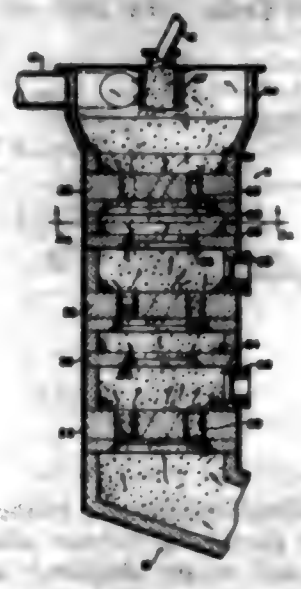
METHOD AND APPARATUS FOR COUNTER-CURRENT HEAT EXCHANGE

Karl J. Sylvest, Copenhagen, Denmark, assignor to F. L. Smidth & Co., New York, N. Y., a corporation of New Jersey

Application November 9, 1954, Serial No. 467,843
Claims priority, application Great Britain November 9, 1953
5 Claims. (Cl. 257—55)

1. A method of exchanging heat between a finely divided solid material and a gas, which comprises maintaining a current of gas flowing upwardly substantially by said bodies upon volumetrical variation of the re- tance from, the spacial curve, while the copying rollers

stantially by the current only, and varying the rate of fall of the material by alternately dividing the current of gas



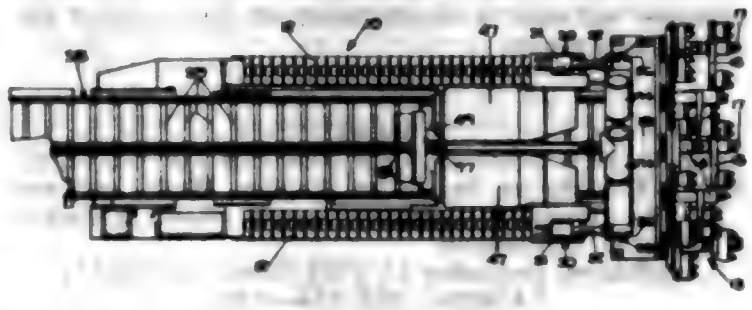
into a plurality of separate small streams, combining the small streams into a single large stream, the velocity of the small streams being greater than that of the large stream, and restricting each large stream for a portion of its length to increase the velocity of its restricted portion.

2,866,626

MINING MACHINE PROVIDED WITH ADJUSTABLE CUTTING MEANS

Sterling C. Moon, Dublin, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio

Application September 14, 1956, Serial No. 609,991
16 Claims. (Cl. 262—7)



6. A coal mining machine including a main frame, a pair of cutting heads at the front of said main frame, a pair of motors for driving said pair of cutting heads, said main frame carrying said motors in spaced side by side relation rearwardly of said cutting heads, gearing at the rear of and interconnecting each of said motors to a pair of driving elements, and a pair of drive shafts disposed between said spaced motors one for driving each of said cutting heads from one of said driving elements.

2,866,627

SPACE HEATERS AND DRIERS

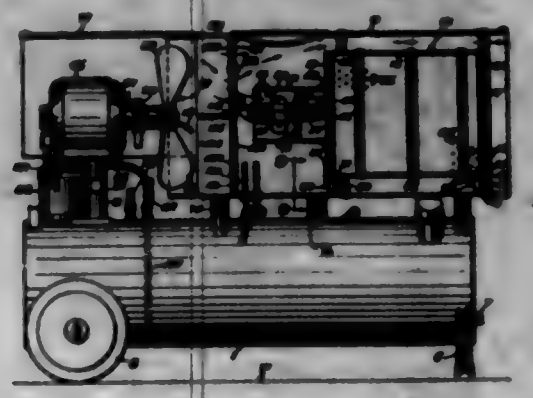
Ralston M. Sherman, Glastonbury, Conn., assignor to The Silent Glow Oil Burner Corporation, Hartford, Conn., a corporation of Connecticut

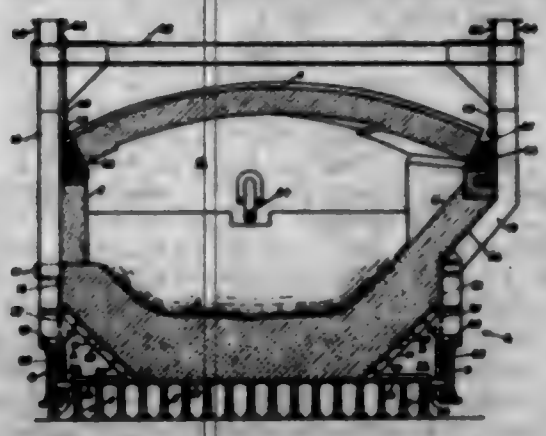
Application January 8, 1957, Serial No. 633,870
12 Claims. (Cl. 263—19)

11. A heater having, in combination, a drum combustion chamber having end and lateral walls, at least one of said walls, excluding one of said end walls, being formed with a multitude of relatively closely spaced small perforations for discharge of gaseous combustion

products from said chamber, a casing having a portion surrounding said lateral wall in spaced relation thereto, a combustion air blast tube of lesser transverse cross-sectional area than that of said chamber opening at one of its ends into said chamber adjacent the axial line of the latter through said excluded end wall and opening at its opposite end into said casing in spaced relation to that end wall, a fluid fuel nozzle associated with said blast tube for discharging fuel into said chamber; means for supplying combustion air to said blast tube through its said opposite end for admixture with such fuel so discharged, and air to the space within said casing about said lateral wall for flow therethrough in contact with said lateral wall and for admixture with the products of combustion discharged through said perforations, which means comprises a blower for directing an operatively annular blast of air surrounding the axial line of said blast tube toward the said opposite end to said tube, means including baffles between said blower and the said opposite end of said tube in the path of said annular air blast for directing part of said blast inwardly toward said axial line, which last mentioned means forms passages for conducting such air so directed that extend toward said axial line and are of progressively decreasing transverse cross-sectional area as they so extend for compressing such part and causing it to be projected at high velocity into said blast tube through its said opposite end, the last mentioned means having provision for causing another part of said annular air blast to be directed toward and into the space surrounding said lateral wall.

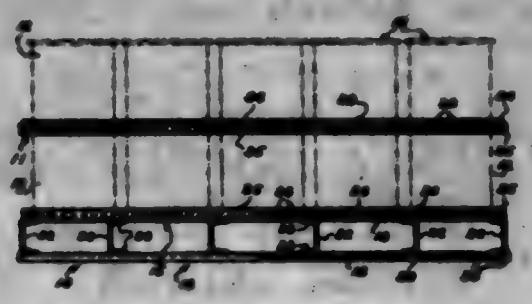
2,866,628
OPEN HEARTH FURNACE
Walter Saydam, Mount Lebanon Township, Allegheny County, Pa., assignor to Loftus Engineering Corporation, Pittsburgh, Pa., a corporation of Maryland
Application January 7, 1957, Serial No. 632,828
5 Claims. (Cl. 263—46)





1. In an open hearth furnace having a refractory hearth of substantially uniform thickness borne upon a structural steel bed, a refractory roof and front, back and port walls defining with said hearth a furnace chamber, horizontal steel girders extending along the front and the back of said steel bed, buckstays extending upwardly from said girders at longitudinally spaced-apart points along said front and back walls, longitudinal and transverse steel members integrating the upper ends of said buckstays, and chills extending longitudinally of the front and back walls of the furnace; the invention herein described wherein each longitudinally extending chill comprises a steel diaphragm welded to and inclined upwardly and outwardly from said structural steel bed to the buckstays of the adjacent furnace wall; vertical gussets having inclined upper edges secured to said diaphragm, and vertical edges secured to said buckstays severally; and a plurality of bracing elements effective below the lower ends of the buckstays for integrating the body of said girders to the structural steel bed of said hearth.

2,866,629
NESTING PALLETS AND SEPARATORS FOR STACKING ARTICLES FOR ANNEALING
Stanley C. Nelson, Oak Park, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application December 29, 1954, Serial No. 478,309
4 Claims. (Cl. 263—47)



1. A pallet for supporting articles to be annealed comprising upper and lower flat lattice frames having integral longitudinal and lateral members, a plurality of vertical frame members bonded at their ends to said upper and said lower lattice frames in laterally spaced relation to each other for supporting said lattice frames in vertically spaced relation to each other to form an open framework into which the fork of a lift truck may be moved from any side to lift it, a reversible perforated plate supported on said upper lattice frame, and means on said upper lattice frame for retaining the perforated plate thereon against lateral displacement.

2,866,630
APPARATUS FOR MEASURING ROTATIONAL SPEEDS
Werner Wahli, Bern-Bethlehem, and Martin A. Brunarn, Bern-Liebefeld, Switzerland
Application August 31, 1954, Serial No. 453,324
17 Claims. (Cl. 264—1)

1. An apparatus for measuring rotational speeds comprising a liquid pump discharging proportional to the said rotational speed, a distributor valve adapted to be periodically operated, means providing a plurality of receiving spaces, said liquid pump communicating on the discharge side through the periodically operated distributor valve alternately during time intervals of predetermined and equal duration with the plurality of spaces provided by said means for measuring the amount of liquid pumped per time interval, each of said spaces being volumetrically variably defined by a pair of relatively displaceable telescoping bodies, the telescoping bodies of the body pairs being arranged so that the projection of their axes of displacement on a common plane define an equilateral polygon, and a scanning member rotatable

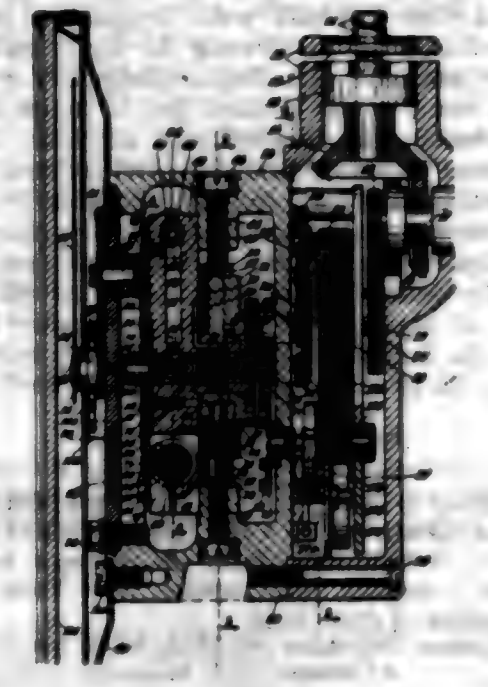
cluding a control cylinder attached to said main piston, an open fluid duct between said main cylinder and con-

a vertical and a horizontal axis, said fitting comprising a rotatable transverse shaft on the upper side of said frame

taining a current of gas flowing upwardly substantially

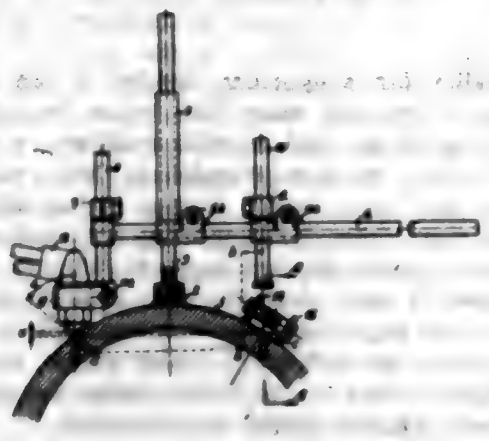
small perforations for discharge of gaseous combustion

by said bodies upon volumetrical variation of the receiving spaces and having its axis of rotation vertical to



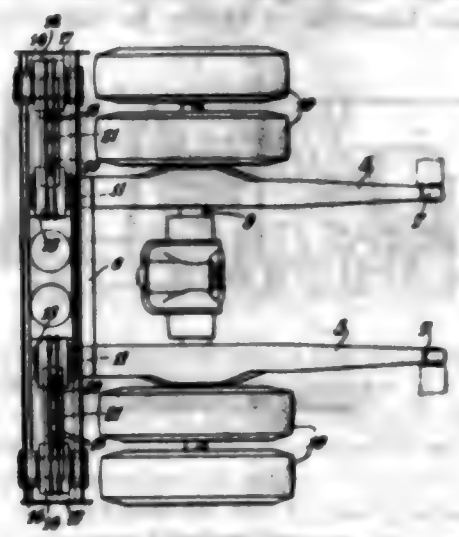
the said plane and passing through the center of said polygon.

2,866,631
HAND APPARATUS FOR FLAME CUTTING OF PERPENDICULAR CYLINDRICAL APERTURES ON CYLINDRICAL SURFACES
Alois Chik, Vsetin, Czechoslovakia
Application September 25, 1956, Serial No. 611,989
2 Claims. (Cl. 266—23)



1. A hand operated apparatus for flame cutting perpendicular cylindrical apertures in cylindrical tubes; comprising a post, means for securing said post to the surface of a tube at the center of an aperture to be cut in the latter, with said post extending perpendicular to a plane tangent to the surface of the tube at said center of the aperture, supporting means rotatable and axially slidable on said post, a burner, copying rollers, means mounting the burner on said supporting means at one side of the post and a desired distance in the direction of the axis of the burner away from a point on a spacial curve along which the aperture is to be cut, and means mounting the copying rollers on said supporting means at the opposite side of the post to cause the copying rollers to contact the surface of the tube, the mounting means for the burner and copying rollers being arranged to dispose both the axis of the burner and a point on the line of contact of said rollers with the surface of the tube, lying midway between the rollers, in a plane extending diametrically through the axis of the post, so that, as the supporting means is rotated about the post, the burner is displaced in the direction of the post and caused to move along, and to remain at the same distance from, the spacial curve, while the copying rollers are caused to move likewise along the spacial curve and, additionally, to permanently roll on the surface of the tube, the burner, on the one hand, and said point, on the other, always remaining during their rotation, with respect to the post, in a diametrically opposite position.

2,866,632
VEHICLE RUBBER SPRING SUSPENSIONS
Kenneth John Benjamin Clark, Thurmaston, England, assignor to Metalastik Limited, Leicester, England
Application July 2, 1957, Serial No. 669,589
Claims priority, application Great Britain July 11, 1956
1 Claim. (Cl. 267—57.1)

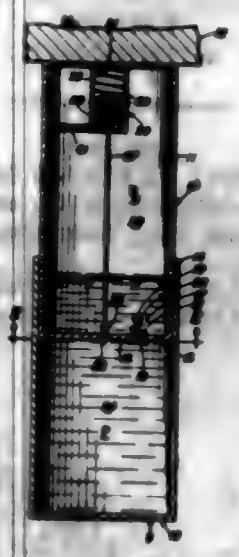


A road vehicle comprising an underframe, a beam extending lengthwise of the vehicle along each side thereof, a cross tie connecting the beams together near the rear end of the vehicle, a pivotal connection between each beam and the underframe inwardly of the rear end thereof the connection allowing vertical swinging movements of the beams as a unit, a wheel mounting on each beam, a road wheel carried by each mounting, an inextensible link extending transversely of the vehicle and substantially horizontally between each beam, near said cross tie, and the underframe, rubber bushes connecting the ends of each link to the beams and to the underframe for shear deformation about horizontal axes with said vertical swinging movements so that the angular relationship of the link is varied by relative movement of the beam and the underframe the tare load being carried by the bushes only in torsion and deflection of the beams to either side of their tare load position, as a result of loaded conditions causing displacement of the axes of the link pivots, being resisted with increased stiffness due to the bushes becoming eccentric as compressive components on the bushes are brought into play.

2,866,633
BAND PASS SHOCK ABSORBER
Emmanuel Schnitzer, Newport News, Va.
Application August 15, 1955, Serial No. 528,563
7 Claims. (Cl. 267—64)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. A shock strut for aerial vehicles and the like provided with landing gear comprising a main cylinder connected to the landing gear adapted to receive a fluid for energy transfer, a main piston slidably mounted in said main cylinder and connected to the vehicle body, said piston being hollow and provided with an orifice therein for passage of said fluid between the cylinder and piston, a valve inserted in said orifice for varying the open orifice area, and means for adjusting the valve in said orifice operative only at predetermined rates or frequencies of strut loading, said valve adjusting means in-

cluding a control cylinder attached to said main piston, an open fluid duct between said main cylinder and control cylinder, a control piston movable in said control cylinder, provided with an open orifice therethrough, a stem passing through an end of said control cylinder and connecting said control piston and said orifice valve, a



spring seated in said control cylinder between the control piston and control cylinder end on the side of the control piston opposite to said stem, and means for inactivating said control piston within a predetermined band of rates or frequencies of applied pressures on said control piston, said fluid duct having connection to said control cylinder on the stem side of said control piston only.

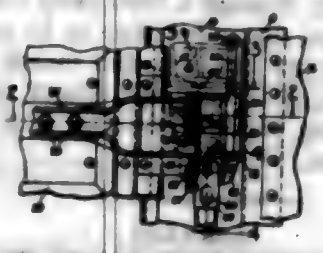
2,866,634

DOOR LOCKS

Wilfred A. Beauchamp, Chicago, Ill., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio

Application July 31, 1956, Serial No. 601,179

10 Claims. (Cl. 268—44)



1. In a railway house car having a side wall provided with a door opening and a sliding door having front and rear portions adapted to close the door opening, a lock bracket secured to the rear portion of said door between the upper and lower edges thereof, said bracket having a vertical rearwardly facing recess, a supporting bracket secured to said side wall, a locking member, and means mounting said locking member on said supporting bracket for vertical sliding and horizontal swinging movements, said locking member extending into said recess in abutting relationship with said lock bracket to prevent rearward opening movement of said door.

2,866,635

WINDOW FITTINGS

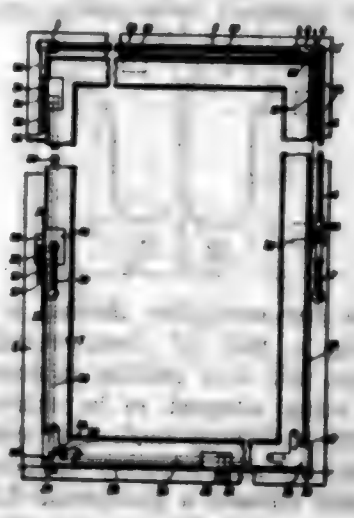
Wilhelm Frank, Stuttgart, Germany

Application June 13, 1955, Serial No. 515,888

Claims priority, application Germany March 28, 1955

14 Claims. (Cl. 268—112)

1. A window fitting in combination with the frame and sash of a sash window, said sash being rotatable about a vertical and a horizontal axis, said fitting comprising a rotatable transverse shaft on the upper side of said frame, a push and pull lever system on the vertical side of the frame arranged close and parallel to the vertical turning axis of the sash, said lever system turning said shaft, a first pull-out bar operatively connected with said sash and disposed in the vertical turning axis thereof, said bar being carried by said shaft for rotation therewith and transmitting said rotation into rotation of the sash about



its horizontal turning axis, a second pull-out bar carried by said shaft and disposed on the vertical side of the frame opposite the vertical turning axis, means detachably connecting said second bar to the sash, means blocking the rotation of the sash around its vertical axis, and actuating means concurrently moving said connecting and said blocking means into operative and inoperative position, respectively, thereby allowing rotation of the sash either about the vertical or about the horizontal turning axis only.

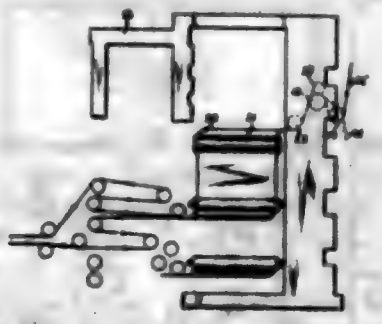
2,866,636

WEB GUIDING MECHANISM FOR PRINTING MACHINE FOLDERS

Joseph E. McMullen, Milwaukee, Wis., assignor to The Journal Company, a corporation of Wisconsin

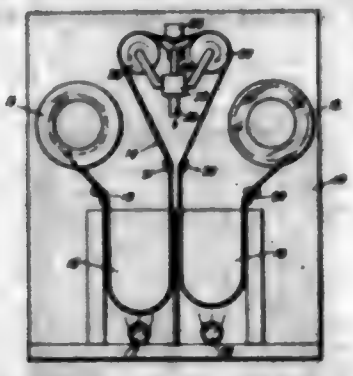
Application November 29, 1956, Serial No. 625,178

3 Claims. (Cl. 270—52)



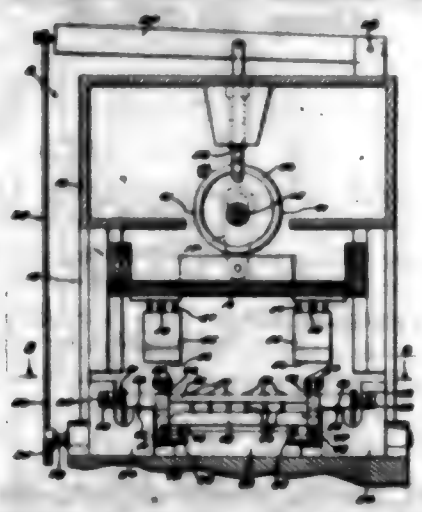
1. In a web printing machine delivery and in combination, a slitter drag roller, means for guiding a web to and from the said slitter drag roller with substantially equal wrap thereon before and after the slitter, the means for guiding the slit web from the said drag roller comprising a guide roller parallel to the drag roller, a pair of turner bars parallel to each other and at substantially 45° to the guide roller and positioned tangent to, but on the opposite side of a common plane tangent therewith, one of the said turner bars being of larger diameter than the other, whereby slit ribbons passing around the said turner bars are separated in a direction perpendicular to the said plane.

2,866,637
CONTROL APPARATUS
Robert A. Pendleton, Dedham, Mass., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Application May 21, 1956, Serial No. 586,269
10 Claims. (Cl. 271—2.3)



1. Apparatus for reversibly driving a flat elongated tape comprising a pair of contra-rotating pneumatic driving capstans, said tape passing adjacent both of said capstans and being adapted to be drawn into driving engagement with a driving surface of one or the other of said capstans by the selective application of a differential pressure thereto, a pneumatic brake positioned between said capstans and having a pair of flat perforated surfaces formed with the plane of each surface being substantially tangent to the surface of the adjacent driving capstan and positioned to face in the same direction as the surface of the associated driving capstan to which it is tangent, and means adapted to switch a differential pressure to said brake when a differential pressure is not present on either of said driving capstans to draw said tape against said surfaces to stop said tape.

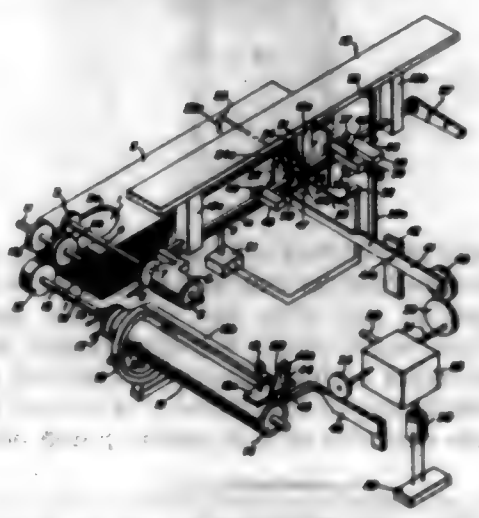
2,866,638
STRIP FEEDING MECHANISM
Orville H. Mannisto, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York
Application December 7, 1954, Serial No. 624,939
6 Claims. (Cl. 271—2.5)



1. In a mechanism for feeding a plurality of strips having spaced perforations therein, a shuttle bar for supporting a plurality of strips, means for reciprocating said shuttle bar through a predetermined stroke longitudinally of the strip and for providing an interval of dwell at each end of the stroke, a connector member mounted on the bar for movement therewith and for transverse vertical movement relative thereto toward and from the strips, a plurality of pins on said connector member engageable in the perforations in the strip for imparting movement to the strips, and means for moving said connector member toward the strips at one end of the stroke of said shuttle bar to move the connector pin into engagement with the strips at the beginning of a stroke and for lowering said connector member at the other end of the stroke to move the pins out of engagement with the strips at the end of the stroke.

2,866,639
WITHDRAWN

2,866,640
DOCUMENT FEEDING MACHINE
William H. Rives, Columbia, S. C., assignor to Universal Business Machines, Inc., Columbia, S. C., a corporation of South Carolina
Application July 20, 1955, Serial No. 523,178
20 Claims. (Cl. 271—39)



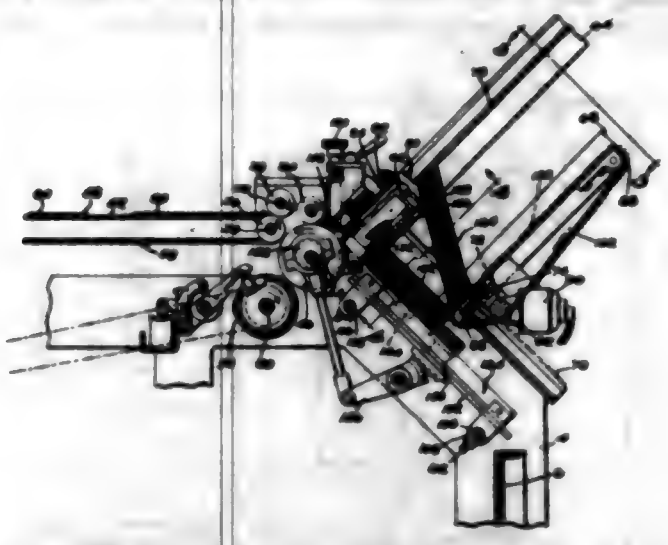
1. A device for feeding documents from a stack comprising a feed roller, means mounting said feed roller for movement between an upper position above said stack and a lower position in contact with the top of the stack, means for rotating said feed roller about its own axis in a direction to effect feeding of a document from the stack when the roller is in its lower position, operating means operable through a fixed cycle for moving said feed roller from its upper position to its lower position and back to its upper position, and means for adjusting said operating means to vary the length of the interval in said cycle during which said roller is in contact with the top of the stack.

2,866,641
BLANK FEEDER FOR A BOX MAKING MACHINE
Omer E. Cote, Providence, R. I., assignor to United States Automatic Box Machinery Company, Boston, Mass., a corporation of Massachusetts
Application February 12, 1954, Serial No. 409,823
4 Claims. (Cl. 271—44)

1. Apparatus for feeding cardboard box blanks to a box forming machine, said apparatus having a blank storage section and a blank feeding section, said blank storage section comprising front and rear elements adjustable with respect to each other, said front element comprising a rearwardly inclined face against which the front upper ends of said blanks rest, said inclined face extending upwardly a distance to have the upper part thereof vertically over said rear element and terminating at its lower end close to the position of the front end of the lowermost blank, said rear element comprising a chain arranged to move downwardly in parallelism with said inclined face and having thereon a succession of spaced fingers, said chain and each finger adapted to support the rear lower ends of a plurality of blanks with their front upper ends resting against said face, means for automatically causing downward movement of said

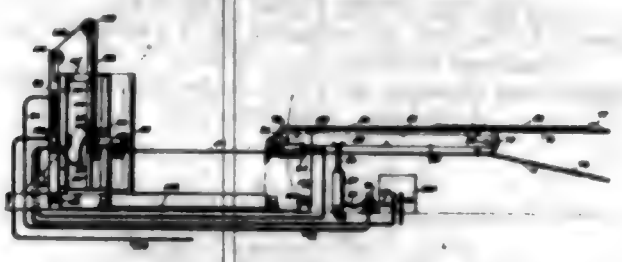
and the distance between said rails being slightly greater means having recording and reproducing styli engageable

chain and retraction of the lowermost finger whereby said lowermost blanks will be freed of support by said face and said lowermost finger, thereby to fall to said blank feeding section, said blank feeding section being comprised of blank supporting elements set at an upward slope substantially less than the slope of the blanks in said storage section, and sensing means for causing actu-



ation of said chain moving means whenever the number of blanks in said feeding section falls below a predetermined number and for stopping said chain moving means when sufficient blanks have fallen from said storage section to said feeding section to increase the number of blanks to a predetermined number, and feeding mechanism for removing the blanks in a continuous succession from the bottom of the pile in said feeding section.

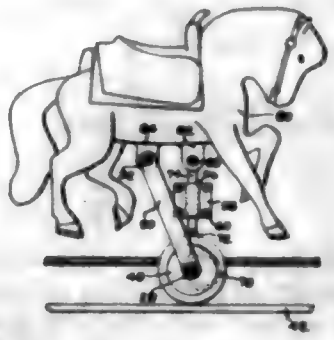
2,866,642
PLYWOOD STACKING MACHINE
Henry K. Halvorsen and Henry K. Halvorsen, Jr., Sutherlin, Oreg.
Application January 18, 1956, Serial No. 559,933
3 Claims. (Cl. 271—89)



1. In combination with an elevator, a conveyor for delivering and stacking a succession of articles of sheet material at predetermined intervals onto said elevator, a backstop frame adjacent said elevator, electrically controlled pressure-actuated means carried by said frame and by said conveyor for forcing said delivered articles to one end and one side of said frame for arranging the end and side edges of the articles in vertical alignment, and switch means carried by said frame and intermittently actuated by successively delivered articles to actuate said pressure-actuated means and to cause intermittent lowering of the elevator a distance equal to the thickness of each of said successively delivered articles.

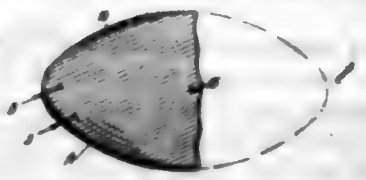
2,866,643
MERRY-GO-ROUND
Herbert D. Keefer and Louis H. Thompson, Dayton, Ohio, assignors to National Amusement Device Co., Dayton, Ohio, a corporation of Ohio
Application March 25, 1955, Serial No. 496,858
4 Claims. (Cl. 272—43)

1. A hobby horse and a mounting for said horse for effecting a galloping movement of said horse in association with a merry-go-round, said mounting comprising a support member, said support member including a radially extending horizontal arm secured to the hub of said merry-go-round and adapted to be driven circumferentially by said hub, a wheel journalled for rotation on said arm in spaced relation from said hub, said wheel carrying said arm for rotation about the axis defined by said arm, a track fixedly positioned concentric with the hub of the merry-go-round, said track engaging and rotating said wheel upon circumferential movement of said arm about said hub, a cam eccentrically mounted upon said wheel



for rotation therewith, a crank arm journalled for rotation upon said cam so as to be actuated reciprocally thereby, a first link pivotally engaging said crank arm at the lower end thereof and pivotally engaging the underside of said horse at the upper end thereof, means carried by said support member providing a guide for said link for restricting the movement of said link to vertical movement, a second link pivotally engaging the underside of said horse in spaced relation to said first link at the upper end thereof, and means pivotally supporting the lower end of said second link at a fixed position on said support member.

2,866,644
FOOTBALL HAVING A SECURELY GRIPPABLE LACELESS SURFACE
Arthur R. Gow, Hamden, and Paul S. Madera, Bethany, Conn., assignors to The Seamless Rubber Company, New Haven, Conn., a corporation of Connecticut
Application July 26, 1952, Serial No. 301,092
1 Claim. (Cl. 273—65)



An inflatable athletic ball having closely grouped non-slip ribs projecting therefrom in substantial parallelism, the ball being of ellipsoidal shape and the ribs being at an acute angle to the longitudinal direction of the ball, the ribs being divided into groups disposed at opposite sides of a plane perpendicular to and passing through the center of the major axis, the ribs of a given group each having a substantially normal side and a sloping side, the normal sides of each group of ribs facing away from the respective end of the ball.

2,866,645
DEVICE FOR PRACTICING PUTTING
Lynn B. Cayot, Alhambra, Calif., assignor to Commonwealth Company, Alhambra, Calif., a co-partnership
Application March 14, 1958, Serial No. 721,418
3 Claims. (Cl. 273—183)

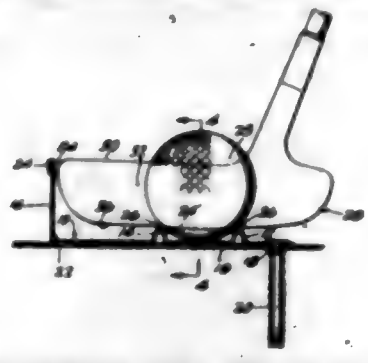
2. A putting practicer comprising a substantially flat rectangular plate, a pair of upstanding parallel rails extending longitudinally along said plate, the height of said rails being substantially less than the radius of a golf ball,

mounted on a shaft in fixed condition, two foot pedals members, means being provided by one of said ring mem-

ber toward the strips at one end of the stroke of said

for automatically causing downward movement of said

and the distance between said rails being slightly greater than the length of the chord struck through said ball by a line joining the tops of said rails, said distance being sufficient to guide a golf ball placed on said plate between said rails, in substantially straight line movement along and parallel to said rails, and an upstanding wall connected at a substantially right angle to said plate and extending along an outer longitudinal edge thereof, said



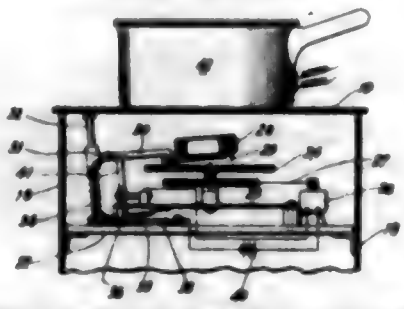
wall being spaced from said rails and extending parallel thereto, the height of said wall being substantially greater than the height of said rails, and the distance between said wall and the adjacent rail being slightly greater than the length of the outwardly extending end portion of a putter for putting said ball when said putter is placed substantially normal to said rails in position to strike a ball located between said rails.

2,866,646

EXHIBITING DEVICES

George C. Kindred, Scarsdale, N. Y., assignor to Underhill Investors, Inc., Scarsdale, N. Y., a corporation of New York

Application December 9, 1953, Serial No. 397,876
1 Claim. (Cl. 274—1)



An exhibiting device comprising a depressible member for an article of merchandise to be placed thereon, phonographic mechanism below said member, said mechanism comprising a rotatable platen for a disk bearing a sound track and a sound box with needle, depressible means below said member carrying said sound box and engaged by the member when depressed to hold the sound box out of operative relation with the disk, said means bearing a yielding element for holding the sound box adjacent the starting end of said sound track when the member is in depressed position, a switch comprising a flexible terminal engaged by said means and held open by said member, and article thereon, a second switch in circuit with the first-named switch and an element movable with the sound box for opening said second switch when the sound box reaches the end of the sound track on said platen, said means being an upright stud on said flexible terminal having its upper end in contact with said member.

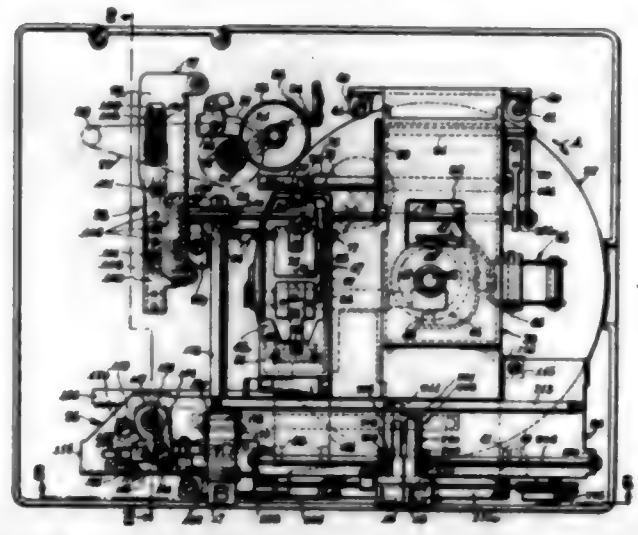
2,866,647

DICTATING MACHINE

Richard M. Somers, West Orange, N. J., assignor, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Application April 10, 1953, Serial No. 347,875
5 Claims. (Cl. 274—13)

1. In a dictating machine having a support for a record: the combination of record-cooperable translating means having recording and reproducing styli engageable with a supported record: the combination of means for lifting said recording stylus from the record; electric circuits and switch means therein for completing audio circuits to said translating means for recording and reproducing selectively; a control member mounted for both rotational and translational movements; means for positioning said lifting means by said control member when the same is in one translational position thereof for plac-



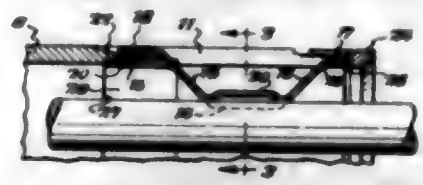
ing said recorder stylus in engagement with the record; means for positioning said switch means for recording by said control member when the latter is in said one position; means operable by said control member upon turning movement thereof while in said one position for operating said switch means for reproducing; and means operable by said control member as the same is moved to a second translational position for operating said stylus-lifting means and concurrently operating said switch means for reproducing.

2,866,648

SPRINGS FOR FEED CHUCKS

Hubert J. Parsons, Horseheads, N. Y., assignor to Hardinge Brothers, Inc., Elmira, N. Y.

Application October 25, 1955, Serial No. 542,558
5 Claims. (Cl. 279—23)



1. A spring for use in a feed chuck, said spring having an intermediate stock gripping portion terminating at its ends in two diverging outwardly projecting portions, said diverging portions terminating in ends extending substantially parallel to said intermediate portion, said intermediate portion being of a cross sectional shape to fit the stock to be gripped and also having a reinforcing portion extending lengthwise thereof for increasing the resistance of said intermediate portion to bending and preventing buckling of parts of said intermediate portion out of contact with the stock and concentrating the flexing of the spring on said diverging portions of the spring.

2,866,649

TRICYCLE WITH ATTACHED PIVOTED HORSE HEADS

William Franklin West, Jr., Gadsden, Ala.

Application March 27, 1956, Serial No. 574,291
1 Claim. (Cl. 280—1.202)

A toy comprising, a tricycle having a handle bar, two rear wheels and one front wheel, said front wheel being

737 O. G.—80

mounted on a shaft in fixed condition, two foot pedals on cranks attached on the ends of said shaft, two similar bars attached by an end of each to the handle bar of the tricycle in fixed condition and extending forward in the same relative position from the front of the handle bar; two imitation horse heads with necks, each of said bars having an upper rear portion of a neck of a horse head

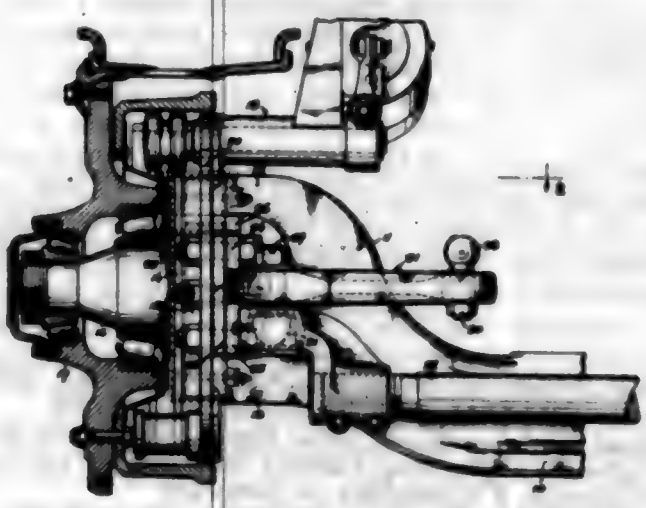
pivotally connected to its outer end by bolts and nuts, two additional comparatively long similar bars connected by an end of each to said pedal cranks, the other ends of these bars being connected pivotally by bolts and nuts to the lower front neck portions of the horse heads, said connections being adapted to cause said horse heads to move upward and downward when said tricycle is moved forwardly.

2,866,650

STEERING ARM FOR AUTOMOTIVE VEHICLE

John G. Holmstrom, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington

Application March 18, 1957, Serial No. 646,647
3 Claims. (Cl. 280—96.3)



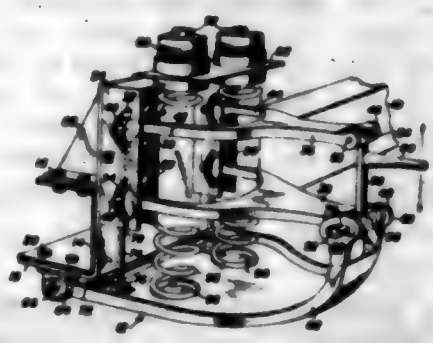
1. In a steering assembly, in combination with an axle beam provided at each end with an upwardly directed leg yoking the two arms of a terminal fork and having said fork-arms bored on a coinciding vertical axis, and a respective wheel hub for each end of said axle beam presenting a steering knuckle received between said fork-arms and pivoted thereto by a king pin: a respective steering arm for each wheel hub comprised of a ring member fixed to the hub and encompassing the related yoking leg of the axle beam with sufficient clearance provided to enable the hub to turn in relation to the beam between given limits of steering motion, and a transverse tie-rod extending between and connected to the two ring members, means being provided by one of said ring members for connecting a longitudinal drag-link thereto, said ring member being formed along one edge with co-planar flats disposed at opposite sides of a re-entrant opening which saddles the steering knuckle with the flats seating against and bolted to a mounting plate rigid with the wheel hub.

2,866,651

VEHICLE WHEEL SUSPENSION MEANS

Charles L. Powell, West Palm Beach, Fla.

Application June 29, 1956, Serial No. 594,865
3 Claims. (Cl. 280—96.2)



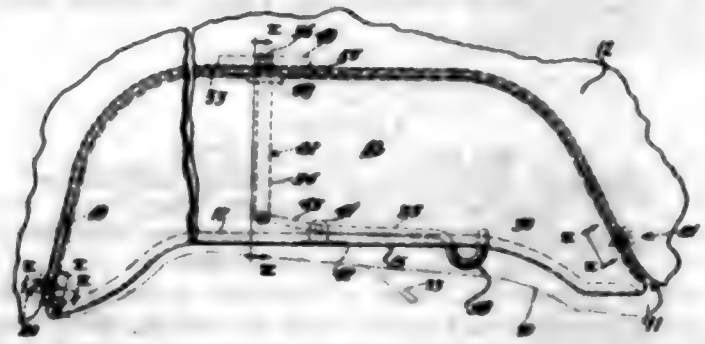
1. Vehicular wheel suspension means for mounting on a vehicle frame comprising at least one control link engaging the frame, at least one symmetrical curvilinear guideway on the frame, bearing means on said control link confined in said guideway for moving said link in a curved vertical path, a load arm beneath the control link and pivoted from the frame, resilient means retained between the frame and the load arm urging the latter downwardly, a connecting lever pivotally interconnecting said link and said load arm, a wheel mounting assembly pivotally supported between the free end of each said link and said load arm, said wheel mounting assembly including at least one load arm bearing mounted on its lower end, and a symmetrical guideway on the free end of said load arm, said guideway on the frame and said guideway on the load arm yielding horizontal excursion to the lower end of the wheel mounting assembly, vertical movement of said load arm being transmitted to said link through said connecting lever and said wheel mounting assembly being restrained to movement in a rectilinear path.

2,866,652

FENDER AND FENDER SHIELD ASSEMBLY

George W. Schatzman, Detroit, Mich., assignor to Houdaille Industries, Inc., Buffalo, N. Y., a corporation of Michigan

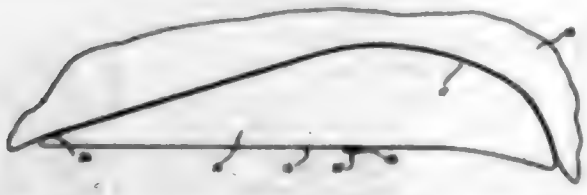
Application March 25, 1955, Serial No. 496,753
11 Claims. (Cl. 280—159)



1. In a fender and fender shield assembly including a fender having a wheel access opening defined by an inwardly extending flange defining the wheel access opening and a fender shield having an inturned marginal flange complementary to and in assembly opposing the fender flange, the fender flange having at opposite ends of the wheel access opening elongated elements projecting into

the wheel access opening, and the fender shield flange having at one end an aperture engageable with the elongated element at the corresponding end of the wheel access opening by generally longitudinal movement of the fender shield and at the opposite end of the fender shield the fender shield flange having an elongated aperture engageable with the elongated element at such end of the wheel access opening and which element comprises a headless pin, said elongated aperture and said pin being of substantially the same width and diameter, respectively, so as to define a substantially close tolerance as to predetermined facewise relationship of the fender and fender shield and the pin being engageable in the elongated aperture by endwise entry thereinto incident to upward movement of the fender shield into the wheel access opening about a fulcrum provided by the elongated element at the first mentioned end of the wheel access opening, and releasable means on the fender shield and fender for retaining the fender shield against downward displacement from the wheel access opening.

2,866,653
FENDER AND FENDER SHIELD ASSEMBLY
George W. Schatzman, Detroit, Mich., assignor to Houdaille Industries, Inc., Buffalo, N. Y., a corporation of Michigan
Application March 25, 1957, Serial No. 648,398
2 Claims. (Cl. 280—153)



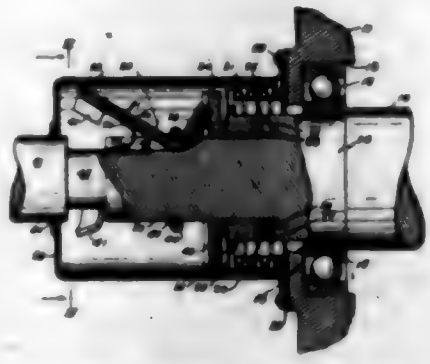
1. In a fender shield for disposition in substantially closing relation to a wheel access opening of a fender, a panel having on the upper and lower margins thereof respective inturned flanges, a bracket plate secured to the upper marginal inturned flange and having a journal aperture therethrough, the lower marginal flange of the fender shield having an aperture therethrough axially aligned with said bracket aperture, a rod latch member slidably journaled through said aligned apertures and having on the upper end portion thereof above said bracket a hook head for engagement with a fender shield flange, the lower end portion of said rod projecting below said lower marginal flange and having threaded thereon a wing nut for relatively drawing the fender shield and latch member in opposite directions incident to threading of the wing nut onto the threaded portion, said upper marginal flange having adjacent to said bracket an elongated aperture for reception therein of a locating and retaining pin of a fender with which the fender shield may be assembled.

2,866,654
BICYCLE KICK STAND
Thomas I. Duffy, Spring Lake, Mich., assignor to Ethel M. Benedict, Detroit, Mich.
Application January 14, 1957, Serial No. 633,979
2 Claims. (Cl. 280—301)

1. A bicycle kick stand comprising an elongated leg having an upper end portion bent to form a pivot member affording swinging of the leg between a lowered position of use and a raised stored position, an upper and a lower jaw coacting to mount the leg operatively on a member of a bicycle frame, the lower jaw having at one end thereof a downturned lug in which said pivot member is journaled, a bracket disposed beneath the lower jaw and having end portions secured respectively to said lug and to the lower jaw and having a portion spaced from the lug and coacting with the lug to journal said pivot member, a spring urging the leg against said lug, a flange formed marginally on the lug and confronting the leg and notched to receive the leg under stress of said spring

in either the use position or stored position of the leg, and means interconnecting the mid-portions of the jaws for stressing the jaws regulably toward each other and thus clamping them on the frame member.

2,866,655
SEALS FOR ROTATING SHAFTS
Forest M. Stanbro, Salamanca, N. Y.
Application April 24, 1956, Serial No. 580,903
10 Claims. (Cl. 286—11)



1. The combination with a housing having a shaft extending through one wall thereof, of shaft sealing means comprising an outwardly facing shoulder formed on said shaft, a bearing ring slidably mounted upon the drive portion of said shaft and having its inner face in bearing relation with the face of said shoulder, an expansible diaphragm connecting said bearing ring with said housing in hermetically sealed manner, and centrifugally actuated lever means for urging said bearing ring toward said shoulder.

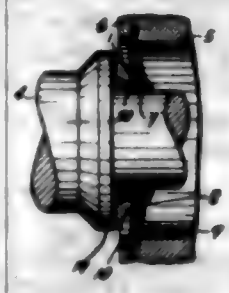
2,866,656
MECHANICAL SEAL BETWEEN ROTARY AND COAXIAL MECHANICAL MEMBERS
Stoymir Dobrosavljević, Paris, France, assignor to International Engineering General Research & Licensing Company, a corporation of Delaware
Application March 19, 1954, Serial No. 417,360
Claims priority, application France May 22, 1953
7 Claims. (Cl. 286—11.14)

1. A fluid-tight shaft assembly comprising a shaft and a machine having a bore into which said shaft extends, said shaft having means providing a radial surface, a mechanical sealing device surrounding said shaft, said device comprising at least one elastic annular element formed with radial slits, said element having a convex side and a concave side, means closely enclosing and protecting both radial faces of said element, said last-named means comprising at least one flexible tight diaphragm, an annular ring having on one face a friction tight bearing surface bearing against said radial sur-

2,866,660
BLOCK-LIFTING GRAB

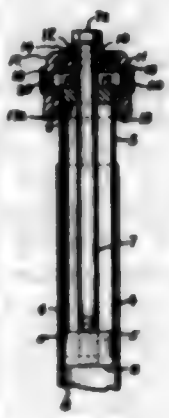
ledge portions, a separate elongated channel shaped grip-

face and provided on its other face along the inner edge of said ring with a protruding concentric part, and an assembling sleeve holding together in closely adjacent relationship the radially inner edges of said elastic element, said tight diaphragm and said annular ring, a



blocking ring having a conical external surface, said blocking ring being receivable in said bore and said diaphragm being formed with a peripheral sleeve portion having a coaxial internal conical surface, said peripheral sleeve portion being received between the surface of said blocking ring and the surface of said bore.

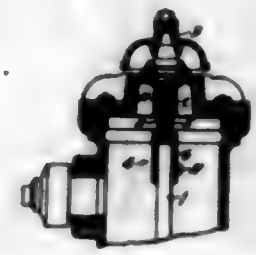
2,866,657
STEERING CONSTRUCTION FOR BICYCLES AND THE LIKE
Thomas I. Duffy, Spring Lake, Mich., assignor to Ethel M. Benedict, Detroit, Mich.
Application January 14, 1957, Serial No. 633,980
3 Claims. (Cl. 287—54)



1. A vibration-absorbing steering construction for foot-propelled vehicles, comprising a tubular steering post, a handle bar bracket formed with a socket to receive the upper end portion of the steering post, a cap formed of resiliently compressible material encasing said end portion within said socket and completely insulating the bracket from the post, a pair of aligned pins interconnecting the bracket, post and cap, to transmit steering torque to the post from said bracket, and to afford the bracket a slight pivotal movement about the axis of said pins and transverse to the axis of said steering post, and attaching means to operatively apply the construction to a vehicle while leaving the cap free of compression.

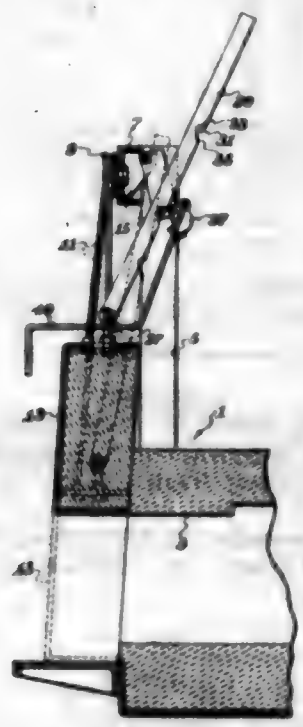
2,866,658
DEVICE FOR ADJUSTING THE LENGTH OF A VALVE STEM
Richard A. Cummings, Troy, N. Y., assignor to The Ludlow Valve Manufacturing Co., Inc., Troy, N. Y., a corporation of New York
Application December 29, 1955, Serial No. 556,249
4 Claims. (Cl. 287—58)

1. A device adapted to connect the umbrella nut of a hydrant having a sleeve depending from said nut which is substantially spaced from the upper end of the stem of said hydrant which is of the non-rising type; said device comprising an elongated metal body having in the lower portion thereof a deep socket having an internal cross section adapted to receive and hold the upper end of said stem in axially slidable but non-rotatable relation therewith, and a longitudinally extending upper portion having an external cross section receivable in the sleeve depending from said nut in axially slidable but



non-rotatable relation therewith; said longitudinally extending upper portion having an internally threaded passage, open at the top thereof and extending to said socket; and a screw in said passage provided with means at the top thereof adapted to cooperate a tool for turning said screw into contact with the top of the said stem, when said stem is in said socket, for adjusting the overall effective length of said device.

2,866,659
SAFETY DEVICE FOR CLOSURE MEMBERS
Harry W. Heinrichs, Tulsa, Okla.
Application May 14, 1957, Serial No. 659,861
3 Claims. (Cl. 292—267)



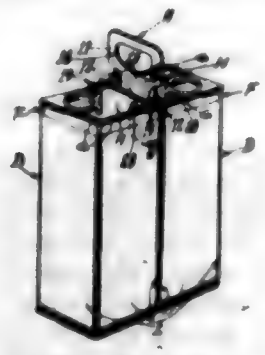
1. Apparatus for releasably retaining a vertically movable closure member in an upper position, comprising in combination a frame, a detent mounted on said frame, a lock bar pivotally mounted on and extending upwardly from said closure member, said lock bar having at least one notch adapted to engage over said detent to maintain said lock bar and closure member in an upper position, and a cam mounted on said frame for rotation about an axis fixed with respect to said detent, said cam having a portion so disposed that upon rotaton of said cam in one direction said portion moves between said detent and said lock bar to separate said detent and said notch to permit downward movement of said lock bar and closure member, and means for rotating said cam.

and to the lower jaw and having a portion spaced from tight bearing surface bearing against said radial sur-

2,866,660
BLOCK-LIFTING GRAB
George E. McGuire, Richard F. Uren, and Frank G. Woodside, Milwaukee, Wis., assignors, by direct and mesne assignments, to L. A. Spring & Wire Corporation, Detroit, Mich., a corporation of Michigan
Application August 3, 1955, Serial No. 526,178
3 Claims. (Cl. 294—63)

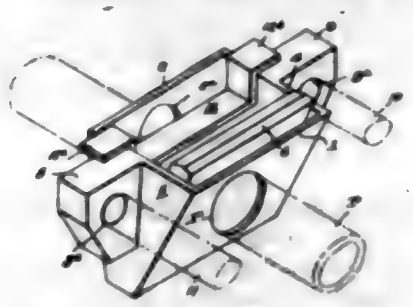
1. A work-hoisting grab comprising a generally horizontal frame, a first arm connected with one end of the frame and extending downwardly, a first clamping jaw on the first arm below the frame, a second arm pivoted to the frame near its other end and extending downwardly from the frame, a second clamping jaw opposed to the first clamping jaw and mounted on said second arm, a lever connected with the second arm and extending along the frame toward said one end thereof, said lever somewhat unbalancing the frame by imposing greater weight on its second end than on its first end, a suspension line coupling connected with the lever intermediate the ends of the frame and adapted under load to effect oscillation of said lever and second arm pivotally in a direction to actuate said second jaw toward the first jaw to engage work therebetween, the connection of the said coupling to the lever being substantially centered over work so engaged, and means for releasably fastening said coupling to the frame in a position offset toward said other end thereof, whereby to sustain at least some of the lever weight while also securing said lever to said frame, whereby to prevent said suspension line coupling from actuating the second jaw toward the first jaw.

2,866,661
CARRYING DEVICE FOR CONTAINERS
Edward O. Thon, Newark, N. J., assignor to American Can Company, New York, N. Y., a corporation of New Jersey
Application December 23, 1955, Serial No. 555,840
8 Claims. (Cl. 294—87.2)



1. A carrier for a plurality of juxtaposed rectangular containers having laterally projecting peripheral ledges at their upper ends, portions of said ledges being arranged in transverse parallel relation and other portions arranged in endwise longitudinally aligned relation at right angles thereto, said carrier comprising a flat handle member insertable between said transverse parallel container ledge portions, a separate elongated channel shaped gripper member secured to each of the opposite vertical edges of said handle member, each of said gripper members having upper and lower spaced and parallel horizontal legs disposed normal to the plane of and extending along the opposite sides of said handle member, said legs being designed for clamping engagement over said longitudinally aligned ledge portions of said juxtaposed containers in parallel planes normal to the plane of said flat handle member for coupling the containers together and for supporting and carrying said containers as a unitary package.

2,866,662
CLAMP HOLDER AND CLAMP FOR PIPE PUSHERS
George Nemeth, Lorain, Ohio
Application May 8, 1953, Serial No. 353,713
1 Claim. (Cl. 294—92)



A device for horizontally moving a pipe in the ground comprising a substantially flat clamping plate having a circular opening therethrough, the wall of said opening converging inwardly from opposite sides of said plate and diverging outwardly from the rims of the opening whereby to provide oppositely disposed pipe biting edges, a holder for said plate comprising downwardly convergent flat front and rear walls, said walls having aligned openings through which the pipe is adapted to loosely engage, end walls secured between said front and rear walls, apertured blocks extending oppositely from each end wall, a U-shaped plate stop member engaging between said end walls, and outwardly extending ears carried by said U-shaped member engaging over the upper edges of said end walls, said U-shaped member being insertable between said end walls on a selected side of said plate to limit the rocking movement of said plate.

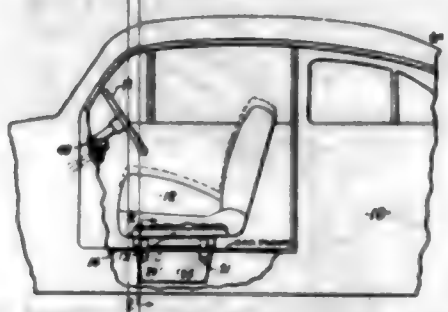
2,866,663
TRUCK BODY FOR CASED AND PALLETIZED GOODS
Leonard F. Ashford, Philadelphia, Pa., assignor to Specialty Engineering Co., Philadelphia, Pa., a corporation of Pennsylvania
Application January 18, 1955, Serial No. 482,584
7 Claims. (Cl. 296—24)

1. A truck body including a frame, said frame being divided into front, central and rear sections, a roof supported horizontally in spaced relationship above said frame, flooring supported on said frame, the flooring on said front and central sections being inclined from the sides downwardly and inwardly toward the longitudinal center of said body, the flooring of said rear section being

one-piece relatively narrow projection extending later- the insert, and an upwardly curved lip on one end of

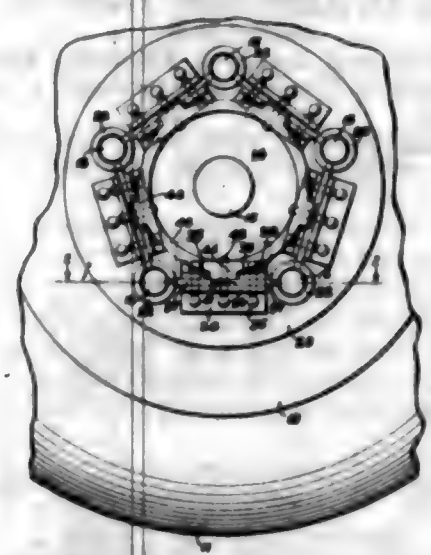
inclined downwardly and inwardly from the rear end of said body forwardly to the rear end of said central section, a plurality of sliding panels arranged for parallel horizontal movement both to the right and to the left relative to and independent of one another enclosing both sides of the forward section and the rear end of said body, fixed panels enclosing the sides of said rear section of said body, and single sliding panels enclosing each side of the central section of said body movable in parallel adjacency to said fixed panels.

2,866,664
VERTICAL SEAT ADJUSTING MECHANISM FOR AUTOMOBILES
John B. Parsons, Maumee, Ohio
Application October 28, 1954, Serial No. 463,522
5 Claims. (Cl. 296—65)



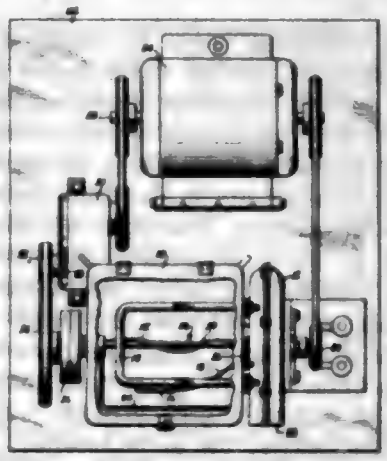
5. In an automotive vehicle having a steering wheel, a floor, a front seat supported on the floor in rear of the steering wheel for occupancy of the driver and at least one other passenger, said seat constituting a unitary structure extending transversely of the vehicle substantially from side to side, the driver's end of said seat being movable in an up and down direction, means anchoring the opposite end of the seat against up and down movements, and power mechanism concealed from view and responsive to the control of the driver for bodily tilting only the end portion of the seat occupied by the driver for achieving selective height adjustments thereof.

2,866,665
WHEEL LOCK
Noel Keith, Barnabus, W. Va.
Application January 28, 1957, Serial No. 636,556
3 Claims. (Cl. 301—9)



1. A device for securing the hub of a wheel to an axle of a vehicle in which the drum has a plurality of outwardly extending securement lugs comprising, in combination, an annular base plate, a plurality of sleeves extending perpendicularly through said base plate each adapted to slidably receive a securement lug of the axle drum, and gripping means associated with each said sleeve for releasably engaging the lug received within said sleeve, said gripping means comprising guide means disposed between adjacent ones of said sleeves, and a pair of lug bolt grippers pivotally secured intermediate the ends thereof upon said guide means hingedly connected together at one end, the opposite end of each of said grippers adapted to extend through the adjacent lug into retractable engagement with an associated lug, and selectively actuated operating means for moving said grippers between an engaged and disengaged relationship with said associated lugs, each of said sleeves being provided with a slot at opposite sides for slidably receiving the gripper associated with said guide means at each side thereof, said operating means comprising an annular ring having an enlarged boss disposed in proximity with each of said guide means, each said boss having a pivot pin for hingedly connecting the adjacent ends of said grippers, whereby movement of said annular ring in a direction perpendicular to the plane of said base plate is operative to effect simultaneous movement of all of said grippers.

2,866,666
MACHINE FOR METERING AND DELIVERING POWDER
Waldemar Hartmann, Mountain Lakes, N. J.
Application July 24, 1957, Serial No. 673,872
3 Claims. (Cl. 302—37)



1. In a device for metering closely controlled small quantities of finely powdered material, a receptacle adapted to hold a supply of powdered material, a fan casing fixed to one side of said receptacle, a rotatable powder delivery device including a shaft mounted near the bottom of said receptacle, an impeller shaft mounted for rotation in said fan casing in axial alignment with said shaft of said powder delivery device, an impeller having a plurality of radial blades mounted on said impeller shaft, a powder metering passage interconnecting said receptacle and said fan casing at a point adjacent said shafts whereby powder discharged therethrough is delivered to the axial region of said impeller, externally accessible and manually adjustable means for selectively restricting said metering passage, means for driving said impeller, and variable speed means for driving said powder delivery device.

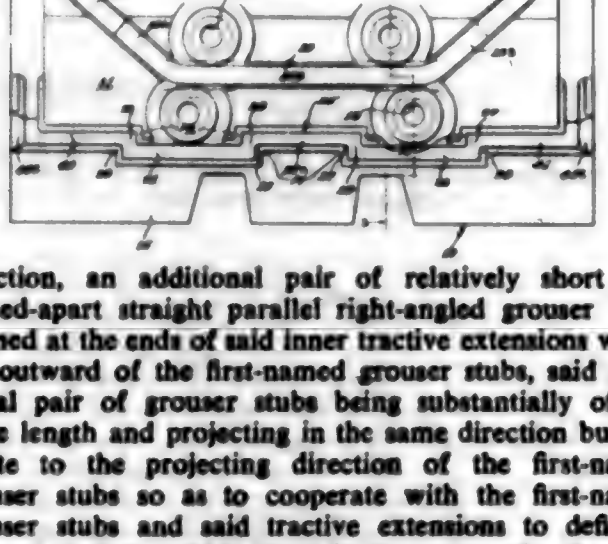
2,866,667
CRAWLER SHOES
Thomas A. Rafkowski, Chicago Heights, Ill., assignor to American Brake Shoe Company, New York, N. Y., a corporation of Delaware
Application November 2, 1955, Serial No. 544,420
1 Claim. (Cl. 305—18)

In a ground engaging crawler shoe for an endless track vehicle, a plate adapted to advance with the track of the vehicle to afford traction therefor, and a grouser formed on said plate and projecting from the ground engaging side thereof, said grouser being in the form of a

the bore, of a seal for an end of the hub comprising a flanged cup with the flange pressed into the bore and into

longitudinally spaced shoulders on the external surface

one-piece relatively narrow projection extending laterally from one side of said plate to the other in normal relation to the path of travel of said track, said grouser including an elongated straight intermediate portion located medially of said plate affording forward and reverse traction, a pair of relatively short and spaced apart straight parallel right-angled grouser stubs formed at each extreme end of said intermediate portion and affording increased lateral traction, said grouser stubs being substantially the same length and extending in one direction normal to said intermediate portion, said grouser stubs connecting said intermediate portion of the grouser with a pair of inner tractive extensions of the grouser that extend laterally beyond said stubs on a common center line and which are spaced from and parallel to said intermediate portion of the grouser so as to afford additional forward and reverse traction, said grouser stubs defining a medial pocket in cooperation with the intermediate grouser portion and which opens in one



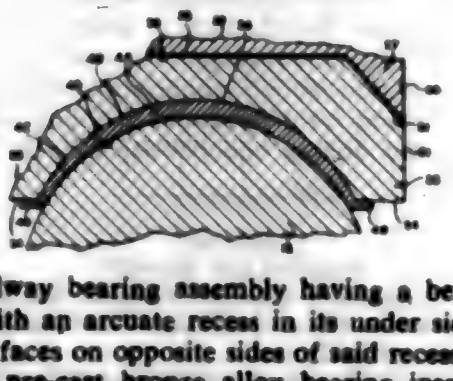
direction, an additional pair of relatively short and spaced-apart straight parallel right-angled grouser stubs formed at the ends of said inner tractive extensions which are outward of the first-named grouser stubs, said additional pair of grouser stubs being substantially of the same length and projecting in the same direction but opposite to the projecting direction of the first-named grouser stubs so as to cooperate with the first-named grouser stubs and said tractive extensions to define a pair of pockets which open in the same direction but opposite to the direction in which the first-named pocket opens, and an outer pair of tractive extensions joined to the ends of the second-named grouser stubs which are remote from the ends of the second-named grouser stubs joined to the first-named tractive extensions, said outer pair of tractive extensions being straight and on a common center line one with another and parallel to the common center line of the first-named tractive extensions.

2,866,668

SIMPLIFIED BEARING INSERT

Gerald B. Beshaw, Portland, Oreg.

Application August 9, 1956, Serial No. 603,037
1 Claim. (Cl. 308—56)



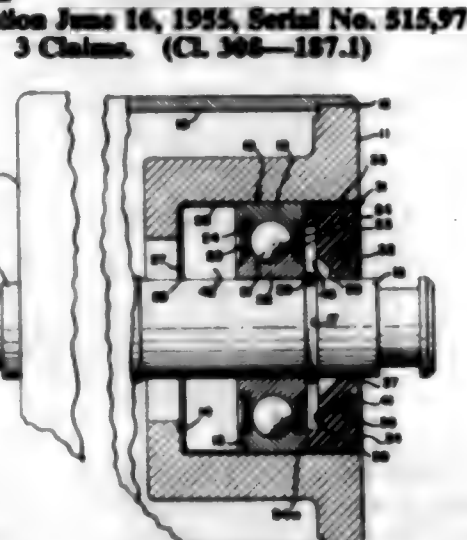
In a railway bearing assembly having a bearing shell member with an arcuate recess in its under side and flat bottom surfaces on opposite sides of said recess, a readily removable pre-cast bronze alloy bearing insert of generally segmental cylindrical shape having a central portion of great thickness than its edge portions and having a smooth convex top surface to fit said arcuate recess, longitudinal side flanges on said edge portions disposed in a common plane to bear against said flat bottom surfaces of said shell member for preventing rotation of the insert, and an upwardly curved lip on one end of said insert engageable with one end of said shell member to prevent longitudinal movement of said insert in said shell member, whereby said insert is confined and held in assembled relation between said shell member and an axle journal without attachment to said shell member and is readily removable when as a unit from said shell member said shell member is raised from said journal.

2,866,669

SHORT LIFE BEARING

Joseph S. Brennan, Amityville, N. Y., assignor to Fairchild Engine and Airplane Corporation, Bay Shore, N. Y., a corporation of Maryland

Application January 4, 1957, Serial No. 632,535
7 Claims. (Cl. 308—77)



1. A bearing comprising a pair of spaced apart supporting frames, a plurality of spacially separated bearing elements which cooperate to support a rotating shaft, a plurality of cooling fins for dissipating heat from said bearing elements to a surrounding fluid, the inner portions of each of said cooling fins being in heat exchange relationship with surfaces of adjacent bearing elements so as to receive heat therefrom, the outer portions of said cooling fins extending radially beyond the bearing elements, thereby exposing substantial areas thereof to the surrounding fluid to dissipate the heat to the surrounding fluid, the outer ends of said bearing elements and said cooling fins being free of contact with the supporting frames or any enclosure for the bearing throughout a major portion of the length of the bearing and means for holding said individual bearing elements and fins together and to the supporting frames to form a unitary bearing assembly.

2,866,670

SEAL FOR ANTI-FRICTION BEARINGS AND THE LIKE

Albert T. Harris and James O. Reynolds, Birmingham, Ala., assignors to Transall, Incorporated, a corporation of Alabama

Application June 16, 1955, Serial No. 515,974
3 Claims. (Cl. 308—187.1)

1. The combination with a cylindrically bored hub and an anti-friction bearing having an outer race fitting in

2,866,674

cabinet, said means comprising a first bar disposed in and

ably receive a securement lug of the axle drum, and grip-

the bore, of a seal for an end of the hub comprising a flanged cup with the flange pressed into the bore and into contact with a side of the outer race of the bearing for aiding in holding the bearing in place about an axle in the bore, a seal member of resilient material fitting snugly in the cup and having an inner face portion in contact with said side of the outer race of the bearing, an outwardly sloping annular sealing lip formed integrally with the seal and disposed to engage with a contact fit about the axle in the bore, and means interposed between the inner face of the cup and the outer sloping surface of the sealing lip urging the sealing lip into all-around contact with the axle.

2,866,671

DEVICE FOR DRIVING RAPIDLY ROTATING SPINDLES

Gerasm Glachowicz, Hagersten, Sweden

Original application May 20, 1952, Serial No. 288,834. Divided and this application July 20, 1955, Serial No. 523,150
Claims priority, application Sweden December 22, 1951
1 Claim. (Cl. 308—189)

An axially adjustable and pre-loaded bearing structure for a rotatable shaft, said bearing structure comprising a housing, an elongated cylindrical bore in said housing, a pair of axially spaced cylindrical sleeve members slidably disposed in said bore in coaxial relationship, each sleeve member having an axial length greater than the outer diameter thereof to provide a relatively long surface on each sleeve slidably engaging the surface of said bore, each sleeve having a substantially uniform diameter throughout the length thereof, a shaft extending through said sleeves in coaxial relationship, an annular groove in the inner surface of each sleeve adjacent the outer end thereof providing spaced outer bearing races, a pair of spaced annular grooves in the surface of said shaft opposite said first mentioned grooves providing spaced inner bearing races, a row of balls disposed in each pair of inner and outer races to rotatably mount said shaft, resilient means urging said sleeves axially in opposite directions to provide a unitary structure including said shaft, said sleeves, said resilient means and said balls, said unitary structure being freely slidable axially in either direction in said housing, and means in said housing exerting a radial force on the exterior cylindrical surface of one of said sleeve members to fix said last named member and said unitary structure in adjusted axial position.

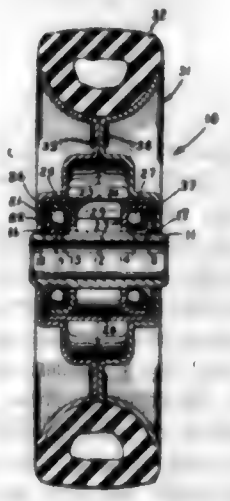
2,866,672

BEARING STRUCTURE

John W. Black, Kalamazoo Township, Kalamazoo County, Mich., assignor to Fenco Wheel Company, Kalamazoo, Mich., a corporation of Michigan

Application November 1, 1956, Serial No. 619,839
10 Claims. (Cl. 308—191)

1. A bearing structure, comprising in combination: a spindle, said spindle having means providing a pair of longitudinally spaced shoulders on the external surface thereof; a housing having a cylindrical, internal opening surrounding, and spaced from, said spindle, said housing having a plurality of radially inwardly extending bars on its inner surface; a pair of bearing races, each of said races including a radially inwardly extending flange abutting against the respective ends of said bars and including a cylindrical portion extending longitudinally toward the ends of, and spaced from, said spindle and being in contact with said housing; a pair of retaining cones, each of



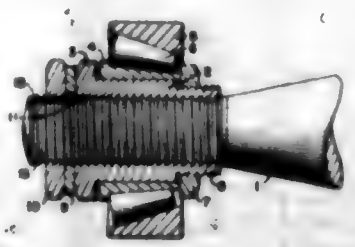
said cones including a radially outwardly extending flange and a cylindrical portion surrounding said spindle and abutting against one of said shoulders, each of said radially outwardly extending flanges being spaced axially outwardly from the respectively adjacent, inwardly extending flanges of said races; a pair of ridges on said spindle, each ridge engaging the outer end of one of said respective retaining cones for securing same to said spindle; and a set of bearing balls disposed between each race and its associated retaining cone.

2,866,673

AXLE-BLOCK FITTED WITH A CONICAL BEARING, FOR THE SPECIAL USE IN MOTOR-VEHICLES

Hendrik Pieter van der Knoop, Rotterdam, Netherlands

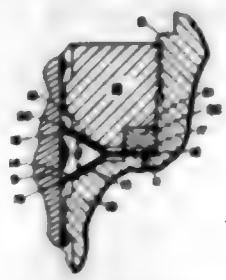
Application December 14, 1955, Serial No. 553,133
3 Claims. (Cl. 308—207)



1. An axle and hub anti-friction bearing assembly comprising, in combination, a threaded end portion of an axle, an internally threaded bearing-supporting bushing screwed onto said axle end portion, said bushing comprising a major cylindrical portion externally threaded near one end thereof and a nut-shaped flange portion at the opposite end for the application of a turning tool, an anti-friction bearing assembly carried by said bushing with its inner race snugly surrounding the cylindrical portion of said bushing and abutting at one end the nut-shaped flange portion of the bushing, a nut threaded onto the opposite end of the bushing and abutting the other end of said inner race to lock the race rigidly in place upon the bushing, and means for securing said bushing firmly in the position to which it is threaded upon the axle.

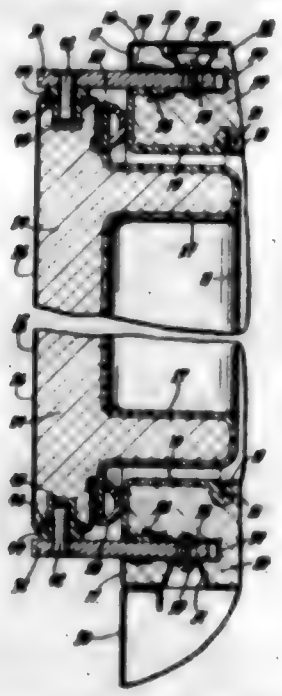
faces of said shell member for preventing rotation of an anti-friction bearing having an outer race fitting in

2,866,674
DOUBLE ACTING PISTON SEAL
Charles E. Hamlin, Whittier, Calif., assignor to North American Aviation, Inc.
Application January 12, 1956, Serial No. 558,704
4 Claims. (Cl. 309—33)



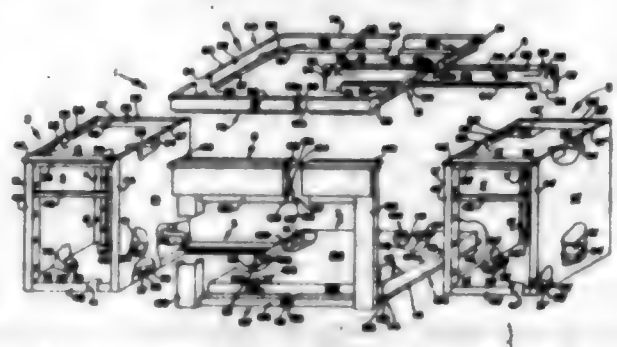
1. A combination of a fluid pumping piston and seal for a cylindrical bore comprising a movable piston having a seal receiving annular recess around the periphery thereof, a pair of thin flexible cylindrical spring beam elements mounted in said recess and diverging from each other in substantially straight lines outwardly from said piston, said elements subtending an angle of from 40° to 80°, circular bent tip portions at the end of said elements of greater divergence than said elements being substantially parallel to piston and adapted to contact the cylinder wall, each of said bent tips having a circumferential lip at the edge thereof away from each respective beam elements, each of said elements having a circumferential fulcrum point inward of its end whereby high pressure of the pumped fluid on one of said elements causes the element to bend at said fulcrum point and said lip is rotated outwardly into a tighter seal with the wall of the cylindrical bore.

2,866,675
REFRIGERATOR
Keith K. Keeling, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 19, 1957, Serial No. 703,942
9 Claims. (Cl. 312—214)



7. In a refrigerator, a cabinet having insulated walls defining a food storage chamber therein provided with an access opening in the front wall of said cabinet normally closed by an insulated door, a resilient gasket on and extending around said door adapted to engage the front wall of said cabinet about said chamber access opening for sealing the chamber thereat in air-tight fashion, means pivotally mounting said door on said cabinet, said means comprising a first bar disposed in and substantially closing an elongated aperture provided in the front wall of said cabinet spaced from and located above the chamber access opening therein and a second bar disposed in and substantially closing an elongated aperture provided in said cabinet front wall in spaced relation to and located below said chamber access opening, each of said bars being attached to said cabinet inwardly of its said front wall, the upper bar projecting forwardly of said cabinet front wall continuously across the top peripheral edge of said door and the lower bar projecting forwardly of said cabinet front wall continuously across the bottom peripheral edge of said door, one side of said door having a hinge pin connection to one end portion of each of said bars for swinging the door between the bars into abutment with said cabinet, latching means on the side of said door opposite said hinge pin connections including a spring pressed button protruding from each of the top and bottom peripheral edges of said door and a button keeper adjacent the other end portion of each of said bars, and the attachment of said bars to said cabinet inwardly of its front wall being adjustable from exteriorly of the cabinet independently of one another for shifting the bars into and outwardly from said cabinet front wall for changing the distance between said door and the front wall of said cabinet whereby to align them with one another and to vary the compressive force applied to said gasket when the door is closed against and latched to the cabinet by said latching means.

2,866,676
CABINET STRUCTURE
Walter E. Goebel, Norwalk, Conn., assignor to American Radiator and Standard Sanitary Corporation, Pittsburgh, Pa., a corporation of Delaware
Application May 21, 1954, Serial No. 431,380
24 Claims. (Cl. 312—257)



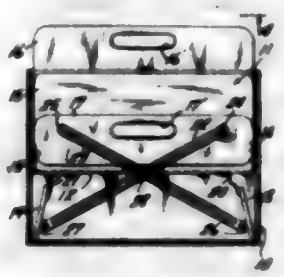
7. In a cabinet structure comprising in combination a pair of cabinet members each having a top wall, a bottom wall, and a rear wall, said top wall having an upwardly extending web portion, flange portions extending inwardly from said web portion, and stem portions extending downwardly from said flange portions, said bottom wall having downwardly extending web portions, flange portions extending inwardly from said web portions, and stem portions extending upwardly from said flange portions, said rear wall having a pair of slotted apertures therein, a top rail, a bottom rail, said rails being in spaced parallel relation to ech other, tongue portions projecting upwardly and inwardly from the end portions of said top rail, said tongue portions extending into one of said slotted apertures in each of said cabinet member rear walls with said tongue portions extending upwardly therein, tongue portions projecting inwardly and downwardly from said bottom rail, said last named tongue portions extending into the other of said apertures in each of said cabinet members with said tongue portions extending downwardly therein, said rails thereby securing said cabinet members in spaced relation to each other; a bottom frame having a front member, a rear member and a pair of parallel side members, said side members having outwardly extending

uranium from the solution with an extractant phase com-

2,866,683

flange portions, and stem portions extending upwardly from said last named flange portions, said bottom frame rear member being secured to said bottom rail and said outwardly extending bottom frame side member flange, and stem portions being mated with each of said cabinet bottom wall flange and stem portions respectively, a top frame having a front member, a rear member and a pair of parallel side members securing said front and rear members to each other, said top frame side members having outwardly extending flange portions, and stem portions extending downwardly from said last named flange portions, said top frame rear member being secured to said top rail, and said top frame outwardly extending side member flange and stem portions being mated with said cabinet top wall flange and stem portions respectively, means to rigidly secure said top frame and bottom frame to said cabinet members, a front panel structure having a bottom edge portion and a top edge portion, said panel structure bottom edge portion being secured to said bottom frame front member, said front panel structure extending upwardly toward said top frame front member in parallel relation to the plane of the front of said cabinet members, and means operable to secure said front panel structure top edge portion to said top frame front member.

2,866,677
FILING DEVICE
Harold R. Anderson, Lewistown, Pa.
Application March 26, 1956, Serial No. 573,985
1 Claim. (Cl. 312—320)

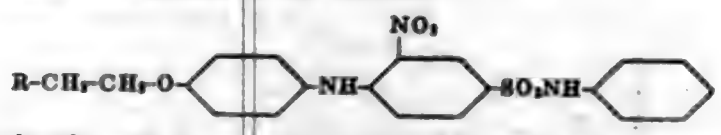


A filed drawer or the like, having in combination a movable bottom supporting contents of said drawer, said movable bottom resting in raised position below the top of said drawer on two flat supporting walls being provided with hinges permitting the folding of said supporting walls under said movable bottom, said folding being effected by bars hinged to said supporting walls extending above said movable bottom and hinged to each other and to a handle operating the raising and lowering of said movable bottom.

CHEMICAL

2,866,678
1-AMINO-2-NITROBENZENE-4-SULFONIC ACID AMIDES
Ernst Merian, Allschwil, Switzerland, assignor, by mesne assignments, to Sesl & Co., Newark, N. J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust
No Drawing. Application February 21, 1955
Serial No. 489,771
Claims priority, application Switzerland February 22, 1954
5 Claims. (Cl. 8—57)

1. A 1-amino-2-nitrobenzene - 4 - sulfonic acid amide which corresponds to the formula

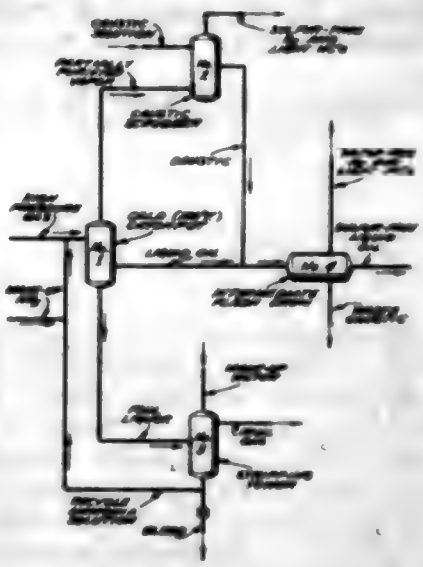


wherein —R is a member selected from the group consisting of hydroxy and methoxyethoxy.

4. Hydrophobic fibers dyed with a compound defined in claim 1.

2,866,679
REMOVAL OF SULFUR FROM GAS STREAMS
Archibald G. W. Lamont, Toronto, Ontario, Canada, assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
Application February 10, 1955, Serial No. 487,393
1 Claim. (Cl. 23—3)

The method of treating a high pressure stream containing liquid hydrocarbons, a greater quantity of normally gaseous hydrocarbons, a minor quantity of basic nitrogen contaminants comprising ammonia and a minor amount of acidic sulfur contaminants comprising hydrogen sulfide which includes the steps of: cooling the stream to about 100° F.; contacting the cooled stream at high pressure with a stream of regenerated aqueous ammonium hydroxide solution in a first vessel to form a stream of contaminated aqueous ammonium hydroxide, a stream of liquid hydrocarbons, and a stream of gaseous hydrocarbons; withdrawing said stream of gaseous hydrocarbons and contacting with a stream of sodium hydroxide in a second vessel to form a stream of contaminated aqueous sodium hydroxide and a stream of desulfurized hydrocarbon gas; withdrawing from said first vessel said stream of contaminated aqueous ammonium hydroxide, and heating said stream in a third vessel to form a stream of said regenerated ammonium hydroxide and a stream of foul gas comprising steam, ammonia and hydrogen sulfide, said foul gas stream containing the predominant portion of the acidic sulfur contaminants of said high pressure stream; withdrawing from said first vessel said stream of



liquid hydrocarbons and withdrawing from said second vessel said stream of contaminated aqueous sodium hydroxide and contacting said liquid hydrocarbon stream and said contaminated aqueous sodium hydroxide stream in a fourth vessel to form a stream of desulfurized liquid hydrocarbons and a stream of waste caustic solution.

2,866,680
ALKYL PYROPHOSPHATE METAL SOLVENT EXTRACTANTS AND PROCESS
Ray S. Long, Concord, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application March 2, 1955, Serial No. 491,798
19 Claims. (Cl. 23—14.5)

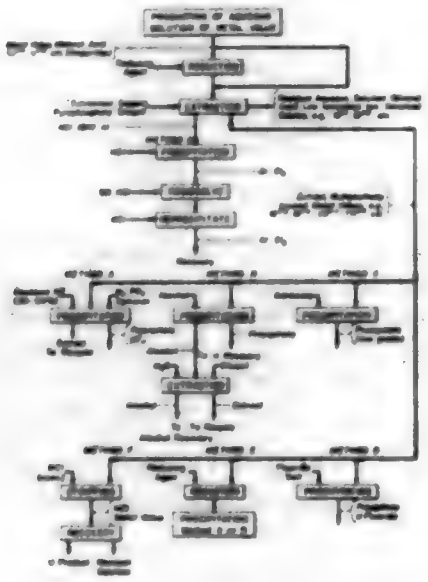
1. In a process for recovering uranium values from a solution formed with a solvent selected from the group consisting of water and phosphoric, nitric, hydrochloric, and sulfuric acids, the steps comprising extracting said

2,866,686
PREPARATION OF RED OXIDE OF IRON

crude boron product so formed substantially free of

fashion, means pivotally mounting said door on said members, said side members having outwardly extending

uranium from the solution with an extractant phase comprising a symmetrical dialkyl pyrophosphate in which the alkyl substituents have a chain length in the range of 4 to 17 carbon atoms and an organic diluent, and



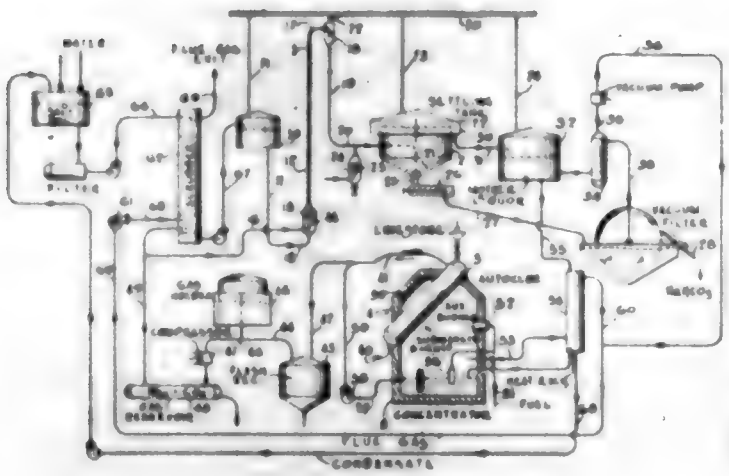
precipitating the uranium from said extractant phase with an agent selected from the group consisting of aqueous HF, alcohol, ammonia, fluoride salt solutions, and reducing agent with soluble fluorides.

2,866,681

METHOD AND APPARATUS FOR THE PRODUCTION OF SODIUM BICARBONATE

Lichi Pan, Jamaica, N. Y., assignor to Chemical Construction Corporation, New York, N. Y., a corporation of Delaware

Application May 9, 1955, Serial No. 507,823
10 Claims. (Cl. 23—64)



1. A process for the production of sodium bicarbonate which comprises reacting ammonia and carbon dioxide with aqueous sodium chloride solution in a sodium bicarbonate forming step and thereby forming a suspension of solid sodium bicarbonate in an aqueous solution of ammonium chloride, separating the solid sodium bicarbonate from said suspension, mixing the aqueous ammonium chloride solution with calcium carbonate and heating the mixture under pressure at temperatures above about 230° C. and thereby forming a calcium chloride solution and liberating carbon dioxide and ammonia, and returning the ammonia and carbon dioxide to the sodium bicarbonate forming step.

2,866,683

MANUFACTURE OF CHLORINE DIOXIDE FROM AN ALKALI METAL CHLORATE AND AN ALKALI METAL NITRITE

Seuren Z. Avedikian, Plainfield, N. J.

No Drawing. Original application January 30, 1956, Serial No. 562,017, now Patent No. 2,834,649, dated May 13, 1958. Divided and this application April 23, 1958, Serial No. 730,245
4 Claims. (Cl. 23—152)

3. The method of preparing chlorine dioxide consisting of adding a dry mixture of a salt consisting of two moles of finely divided sodium chlorate mixed with one mole of finely divided sodium nitrite to a suitable amount of aqueous acid solution to liberate chlorine dioxide.

2,866,683

MANUFACTURE OF CHLORINE DIOXIDE FROM AN ALKALI METAL CHLORATE AND AN ALKALI METAL BISULFITE

Seuren Z. Avedikian, Plainfield, N. J.

No Drawing. Original application January 30, 1956, Serial No. 562,017, now Patent No. 2,834,649, dated May 13, 1958. Divided and this application April 23, 1958, Serial No. 730,246
4 Claims. (Cl. 23—152)

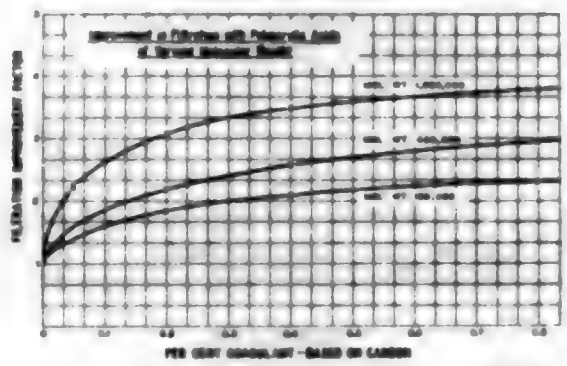
3. The method of preparing chlorine dioxide consisting of adding a dry mixture of a salt consisting of four moles of finely divided sodium chlorate mixed with two moles of finely divided sodium bisulfite to a suitable amount of aqueous acid solution to liberate chlorine dioxide.

2,866,684

SULFURIC ACID CLARIFICATION

Charles E. Colwell, Pittsburgh, Pa., assignor to Union Carbide Corporation, a corporation of New York

Application August 3, 1956, Serial No. 601,881
9 Claims. (Cl. 23—172)



1. A method for the flocculation of carbonaceous particles in a contaminated sulfuric acid solution which method comprises the step of bringing into intimate contact a high molecular weight water soluble polyacrylic acid with said carbonaceous particles in the sulfuric acid solution.

2,866,685

PREPARATION OF LITHIUM NITRIDE

Hung Kei Henry Lam and Glen H. Schafer, Troma, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Application October 22, 1956
Serial No. 617,217
2 Claims. (Cl. 23—191)

1. A process for producing lithium nitride comprising dispersing finely divided solid lithium metal in finely divided solid lithium nitride to provide a substantially homogeneous mixture of the solid lithium metal and the solid lithium nitride, heating the so-formed mixture in an atmosphere of nitrogen to about 400° C. to convert the lithium metal present to lithium nitride, then cooling and recovering the lithium nitride.

said container through the mixing of the sample and reaction chamber against injury in a peripheral zone ad-

of contaminated aqueous ammonium hydroxide, and heat- and sulfuric acids, the steps comprising extracting said

2,866,686

PREPARATION OF RED OXIDE OF IRON

Leonard M. Bennetch, Bethlehem, Pa., assignor to C. K. Williams & Co., East St. Louis, Ill., a corporation of Delaware

No Drawing. Original application September 16, 1952, Serial No. 309,949, now Patent No. 2,785,991, dated March 19, 1957. Divided and this application September 13, 1956, Serial No. 609,552

11 Claims. (Cl. 23—208)

1. A process of manufacturing precipitated red ferric oxide which comprises forming colloidal seed particles of hydrous iron oxide by mixing together and reacting a ferrous salt and an alkali in aqueous solution, the alkali being used in the proportion of 0.9 to 1.1 equivalents per equivalent of ferrous salt, and oxidizing the ferrous precipitate formed in the slurry to the ferric state, and thereupon effecting the growth of red ferric oxide upon said seed by heating to 50°–100° C. and introducing oxygen into the resulting slurry containing said seed, adding an iron salt and alkali to the slurry wherein they dissolve and discontinuing the operations when the slurry has reached the color corresponding to the shade of red pigment desired.

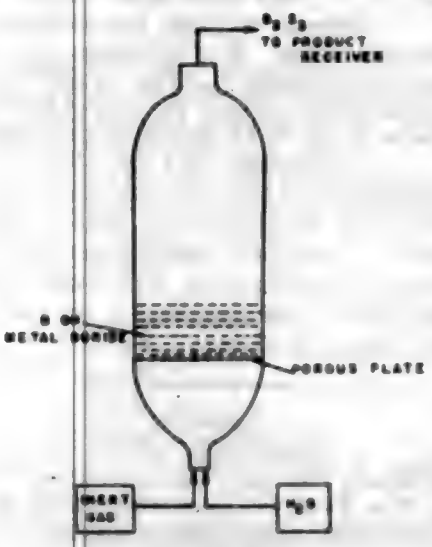
2,866,687

PROCESS FOR THE PREPARATION OF BORON TRISULFIDE

Paul E. Snyder, Pittsburgh, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 21, 1955, Serial No. 554,589

3 Claims. (Cl. 23—206)



1. A process for preparing boron trisulfide which comprises fluidizing a mixture of calcium boride and carbon with an inert gas, heating said mixture to about 900° C., passing hydrogen sulfide through the fluidized mixture and recovering the boron trisulfide evolved.

2,866,688

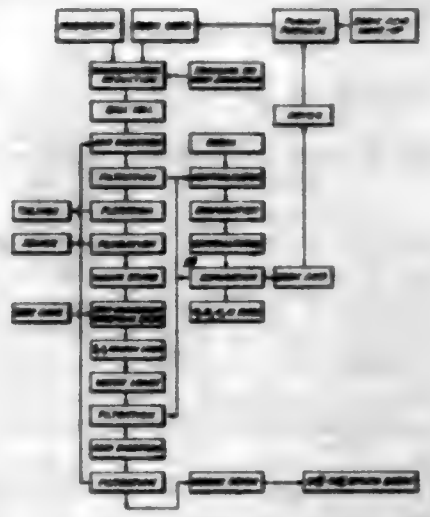
PROCESS FOR PRODUCING AMORPHOUS BORON OF HIGH PURITY

Harold Mazza, Dwight L. Sawyer, and Rodger W. Baier, Trona, Calif., assignors to American Potash and Chemical Corporation, a corporation of Delaware

Application August 22, 1955, Serial No. 529,862

10 Claims. (Cl. 23—209)

1. In a process for producing a boron substantially free of boron suboxide as an impurity and including: fusing in a non-oxidizing atmosphere a mixture of boron oxide and magnesium, the weight ratio of boric oxide to magnesium being between about 1 and 1.5 to 1 to provide a crude boron product substantially free of boron suboxides; treating the product so formed with an excess of a mineral acid to convert the magnesium present to a water soluble magnesium compound; and separating the crude boron product so formed substantially free of boron suboxides and acid soluble magnesium compounds;



the improvement consisting in leaching the last mentioned crude boron product with molten boric oxide.

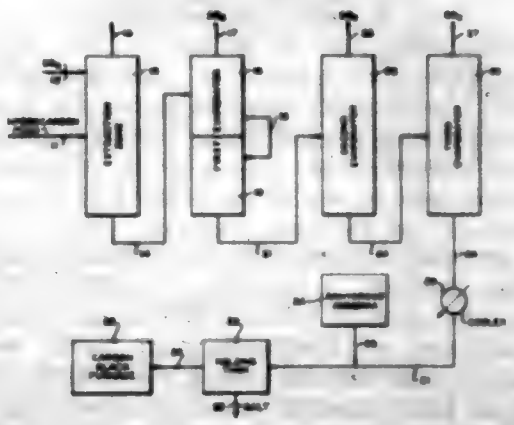
2,866,689

PROCESS FOR PREPARING FEED STOCK FOR CARBON BLACK PRODUCTION

Sherwood C. Samuels, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application November 30, 1953, Serial No. 395,275

13 Claims. (Cl. 23—209.1)



5. A process of producing carbon black, comprising extracting a hydrocarbon feed having a boiling range of 350 to 950° F. with a selective solvent consisting of SO_2; recovering an extract from said extraction step; cooling said extract to a temperature of about 150° F.; treating said cooled extract with 0.068 to 0.075 pound of anhydrous ammonia per barrel of said extract; and burning at least a portion of said extract.

2,866,690

METHOD AND APPARATUS FOR MAKING MOISTURE CONTENT DETERMINATIONS

William R. Coyne, Minneapolis, Minn.

Application July 8, 1955, Serial No. 520,677.

6 Claims. (Cl. 23—253)

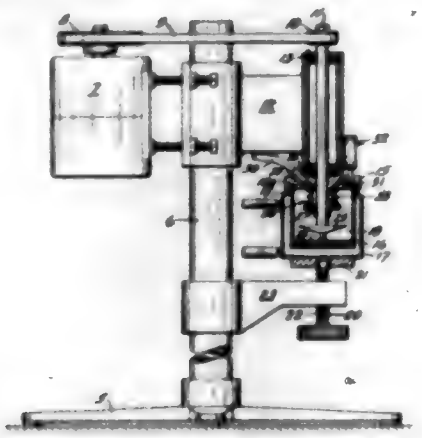
1. In moisture content determining apparatus, a closed air-tight container having means for introducing into the interior thereof a supply of calcium carbide and a sample of predetermined weight of the material the moisture content of which is to be determined, and imperforate rotary mechanism arranged and constructed within said container to temporarily maintain the sample and the entire supply of the calcium carbide in vertically spaced relation while actuated and arranged and constructed to comminute the sample and intimately admix the same with the calcium carbide when actuated, and mechanism for measuring the pressure generated within

glomerated masses, the steps of maintaining said granu- causing the molten slag content of said additional fuel

bicarbonate forming step.

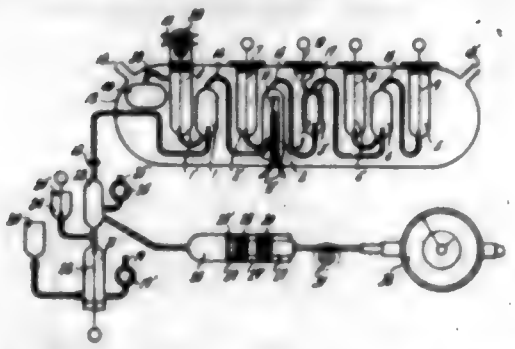
and recovering the lithium nitride.

said container through the mixing of the sample and calcium carbide therewithin wherefrom the moisture



content of the sample may be readily determined by interpolation.

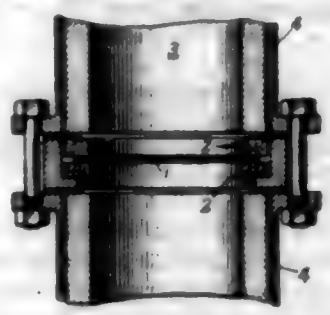
2,866,691
APPARATUS FOR GAS ANALYSIS
Heinrich Feichtinger, Geneva, Switzerland, assignor to Gerastebau-Anstalt, Balzers, Liechtenstein, a firm
Application August 22, 1955, Serial No. 529,735
Claims priority, application Germany August 21, 1954
6 Claims. (Cl. 23—254)



1. A gas analysis apparatus, comprising a preliminary measuring chamber, a plurality of reaction chambers, capillary tubes directly interconnecting said chambers in series and being provided with index marks, said tubes and some of said chambers being filled with a displacement liquid for contacting and displacing a gas sample through said tubes and chambers, the remaining chambers being filled with respective reagents, a plurality of pressure equalizing chambers provided with valves communicating, respectively, with said measuring and reaction chambers, a supply chamber for said displacement liquid communicating with said measuring chamber, and means operatively connected to said supply chamber for dispensing therefrom predetermined quantities of said liquid, whereby upon selective actuation of said last-named means and said valves said sample is displaced by said liquid through said tubes and said chambers for interaction with said reagents, respectively, the volume of said sample emerging sequentially from said chambers corresponding to the amount of said liquid required for displacing said sample past the respective index marks.

2,866,692
CATALYTIC APPARATUS AND METHOD FOR PROTECTING A METALLIC CATALYST AGAINST INJURY
Carl T. Kautter and Willigis Leitenberger, Darmstadt, Germany, assignors to Röhm & Haas G. m. b. H., Darmstadt, Germany
Application June 24, 1955, Serial No. 517,838
Claims priority, application Germany June 28, 1954
11 Claims. (Cl. 23—288)

1. A method for protecting a wire mesh catalyst comprising a metal of the eighth group of the periodic system and having an atomic number between 44 and 78 in a reaction chamber against injury in a peripheral zone adjacent the wall of the reaction chamber which comprises



coating the catalyst in said zone with a refractory coating selected from the group consisting of aluminum oxide, magnesium oxide, zinc oxide and mixtures thereof.

2,866,693
DIESEL FUEL
Joseph C. Allen, Bellaire, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application June 6, 1955
Serial No. 513,613
2 Claims. (Cl. 44—52)

1. A fuel for a compression ignition engine consisting essentially of a diesel hydrocarbon stock and butane in an amount to raise the critical pressure of the mixture to at least the compression pressure of the engine.

2,866,694
ANTI-CLOGGING FUEL OIL COMPOSITIONS
Everett B. Glendenning, Cranford, N. J., Caimy Wies, New York, N. Y., and John B. R. Caron, North Plainfield, N. J., assignors to Shell Development Company, San Francisco, Calif., a corporation of Delaware
Application September 2, 1950, Serial No. 182,963
The portion of the term of the patent subsequent to January 28, 1970, has been disclaimed
10 Claims. (Cl. 44—68)

1. A non-clogging fuel oil consisting essentially of a fuel oil, normally susceptible to cause clogging due to the presence of cracked components in the fuel oil, and containing in combination therewith a minor amount sufficient to inhibit said clogging of an oil-soluble polyvalent metal organic sulfonate.

2,866,695
GASOLINE FUEL
Lewis F. Gilbert, Detroit, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware
No Drawing. Application August 27, 1953
Serial No. 376,979
10 Claims. (Cl. 44—69)

6. Hydrocarbon fuel of the gasoline boiling range adapted for use as fuel for spark ignition internal combustion engines containing from about 0.53 to about 6.34 grams of lead per gallon as an organolead antiknock agent, and a tri-hydrocarbon-substituted phosphine sulfide containing a total of from 3 to about 30 carbon atoms in the molecule; said phosphine sulfide being present in said fuel in amount such that the phosphorus-to-lead atom ratio is from about 0.1/3 to about 1.6/3.

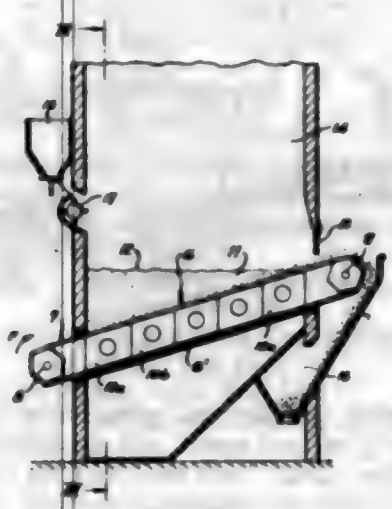
2,866,696
PROCESS FOR THE GASIFICATION OF GRANULATED FLUIDIZED BED OF CARBONACEOUS MATERIAL, OVER MOVING, SLOPING, HORIZONTAL, CONTINUOUS GRATE
Albert Godel, Paris, France, assignor to Compagnie Industrielle de Procedes et d'Applications S. A., Fribourg, Switzerland, a corporation of Switzerland
Application October 28, 1954, Serial No. 465,384
Claims priority, application France October 29, 1953
2 Claims. (Cl. 48—203)

1. In a process of producing chemcial reactions in granulated material, said reactions producing solid ag-

2,866,701

ent reactive with at least one of the impurities of said

glomerated masses, the steps of maintaining said granulated material in a fluidized layer by introducing a gas under an inclined conveyor supporting said layer, said conveyor emerging out of the top surface of said layer, feeding the granulated material on said layer and con-



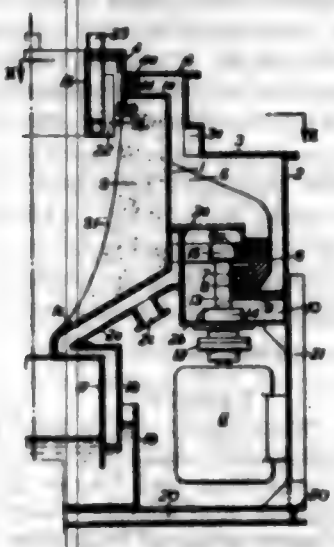
trolling the velocity of the gas to insure regular fluidization and to cause said solid agglomerated masses to settle on said conveyor and to be transported by said conveyor, which conveyor emerges with the solid agglomerated masses out of the top surface of said layer, while excluding from separation fluidized granulated material.

2,866,697

COMBUSTION CHAMBERS

Douglas Ernest Elliott, Weybridge, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company

Application February 14, 1955, Serial No. 488,010
Claims priority, application Great Britain February 25, 1954
7 Claims. (Cl. 48—203)



5. The process of continuously gasifying a slag-forming fuel which comprises establishing a reaction zone in a chamber at a temperature sufficient to melt the slag, continuously supplying said slag-forming fuel to said reaction zone, establishing a thick layer of molten slag around said zone by centrifugal force on the chamber wall by continuously rotating the chamber and hence said layer at a speed sufficient to centrifugally retain said layer against the chamber wall so as to provide heat insulation for said zone and continuously replacing that part of the said layer nearest to said zone by withdrawing the said part in a molten state and supplying additional slag-forming fuel into the reaction zone and causing the molten slag content of said additional fuel to be applied to said layer by centrifugal force to continuously replace the withdrawn slag.

2,866,698

DIAMOND ABRASIVE ELEMENT

Paul L. Kazmick, Passaic, N. J.

No Drawing. Application May 13, 1953
Serial No. 354,875
11 Claims. (Cl. 51—308)

2. A diamond abrasive element comprising diamond particles and a bond therefor comprising a metal portion and a vitrified portion, each portion being present in proportions between 40 and 60% of their combined weights, said metal portion comprising, in proportions by weight, tungsten carbide 40–80%, a member of the group consisting of iron, copper, cobalt, nickel and mixtures thereof 20–60%, and a metallic fluxing agent 0–8%, said vitrified portion comprising a hard glass capable of wetting diamond particles, having a softening temperature between 2000° and 2350° F., and forming a hard product when cooled, said metal portion having substantially the same softening temperature as said vitrified portion.

2,866,699

METHOD OF PREPARING ORE FINES FOR SINTERING

Bernhard Wellandt and Walter Steenberg, Hagen (Haspe), Germany, assignors to Kloeckner-Huettenwerk Haspe A. G., Hagen (Haspe), Germany

No Drawing. Application July 3, 1956
Serial No. 595,601
2 Claims. (Cl. 75—5)

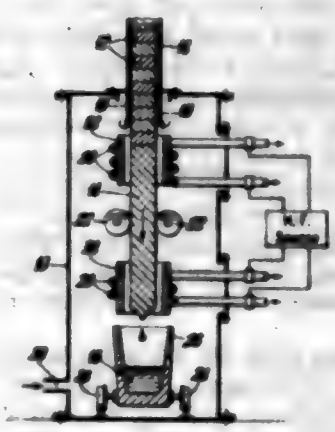
1. The process of preparing ore fines, dusts and powders for sintering by mixing, moistening and crumbling in mixing devices, which comprises moistening and crumbling each of the ingredients severally, continuously adding the required amount of water for the particular ingredient and continuously crumbling the several ingredients separately in a mixing screw and then mixing the several ingredients together.

2,866,700

DRIP-MELTING OF REFRACTORY METALS

William J. Bohnet, Niagara Falls, and Glen D. Bagley, Lewiston, N. Y., assignors to Union Carbide Corporation, a corporation of New York

Application May 4, 1954, Serial No. 427,432
9 Claims. (Cl. 75—10)



1. A method of producing reactive-refractory metals in ingot form, which comprises providing an inert atmosphere in a suitable melting furnace, introducing preformed briquets of the refractory metal in said furnace, sintering said juxtaposed briquets within said furnace and there joining said briquets together to form a continuous rod of metal, and induction heating this rod so as to fuse it.

to said silver-receptive stratum a composition containing an aqueous solution of a salt of a heavy metal which

2,866,709

METHOD OF TREATING PEACHES

and having an atomic number between 44 and 78 in a granulated material, said reactions producing solid ag-

2,866,701
METHOD OF PURIFYING SILICON AND FERROSILICON

Jerome Strauss, New York, N. Y., assignor to Vanadium Corporation of America, New York, N. Y., a corporation of Delaware

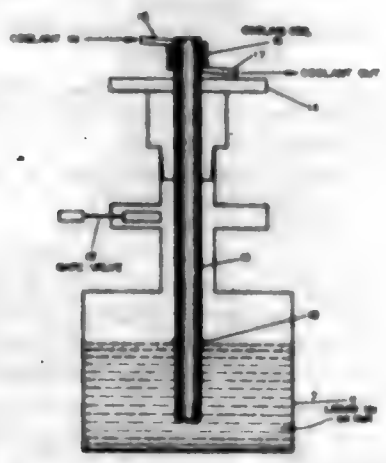
No Drawing. Application May 10, 1956
Serial No. 583,950
4 Claims. (Cl. 75—66)

1. The method of removing aluminum and calcium from silicon-rich material of the group consisting of silicon and ferrosilicon containing from about 40% up to about 98% silicon, which comprises treating a molten body of said material with an oxidizing agent, at least 50% of the oxygen content of said oxidizing agent being in the form of carbon dioxide.

2,866,702
APPARATUS FOR REMOVING DISSOLVED IMPURITIES FROM LIQUID ALKALI METALS

Edward F. Batutis, Zelienople, Pa., and Shelby L. Walters, Pensacola, Fla., assignors, by mesne assignments, to the United States of America

Application October 4, 1955, Serial No. 538,495
1 Claim. (Cl. 75—66)



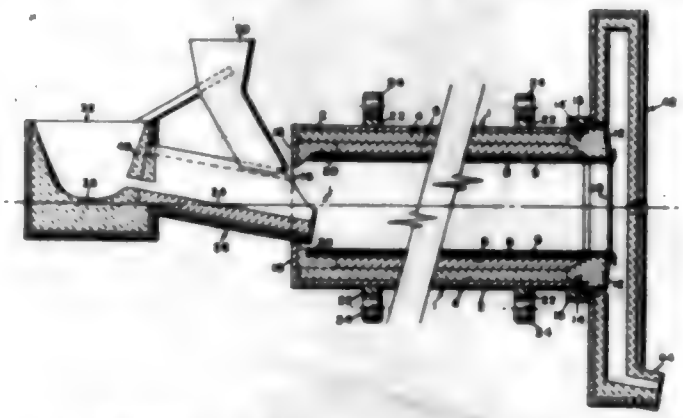
An apparatus for removing soluble impurities from liquid alkali metals in a circulating system comprising a container having an entry port therein, a solid metal rod extending through said port into the circulating liquid metal in said container, means for cooling the end of said rod remaining outside said container and operable to cool the portion of the rod extending into said container by conduction whereby said impurities are caused to precipitate on said rod at the surface of said liquid metal, and means for lowering the end of said rod into said liquid metal and slowly withdrawing said rod from said liquid metal whereby a new portion of said rod is continuously exposed at the surface of said liquid metal for precipitation of said impurities.

2,866,703
TREATED MOLTEN METAL

Norman P. Goss, Cleveland, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Application May 28, 1956, Serial No. 587,726
15 Claims. (Cl. 75—93)

11. The method of treating molten metal containing impurities to remove impurities therefrom which method includes the steps of subjecting a stream of molten metal to turbulent flow as a continuous body confined in a generally helical path, said path constituting a metal-storing, metal-advancing zone, forming said body of molten metal into a generally hollow cylindrical shape in said zone, contacting the surface of said body of molten metal with a treating agent comprising an alkaline alkali metal compound, and an atmosphere containing a gaseous constituent reactive with at least one of the impurities of said molten metal, forming discrete particles of said body of metal and alkaline treating agent by allowing said stream to leave said path unconfined thereby disrupting said body, passing said discrete particles through said atmos-

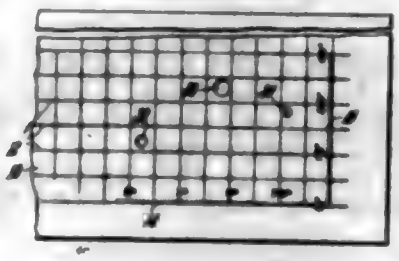


phere, collecting said discrete particles as a second continuous body of molten metal, and separating said second body of molten metal from said treating agent and said atmosphere as well as undesired products resulting from said contact of said molten metal, said agent, and said atmosphere.

2,866,704
STAR PLATE AND METHOD OF MAKING SAME

Frank D. Korkosz and John J. Korkosz, Chicopee, Mass.

Application December 8, 1954, Serial No. 473,942
1 Claim. (Cl. 96—27)



The method of making a star plate of the described character consisting of the steps, photographing from the concave side a sphere having celestial coordinates painted therein, projecting the celestial coordinates so photographed onto a flat light reflective sheeting, locating points on the sheeting representing on a reduced scale a portion of the celestial heavens as defined by certain of the celestial coordinates, perforating the sheeting with needles at the located points, placing the sheeting over a shadow box, and photographing the sheeting to produce a star plate having multiple clear spots in a dark area.

2,866,705
PROCESS OF WASHING AND PROTECTING PHOTOGRAPHIC SILVER IMAGES

Edwin H. Land, Cambridge, and Meroe M. Morse, Boston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Application July 1, 1953
Serial No. 365,526
8 Claims. (Cl. 96—29)

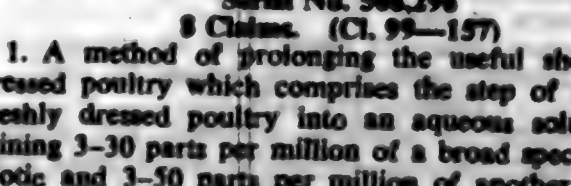
6. A photographic process for producing a stable print, said process comprising treating a silver halide stratum and a silver-receptive stratum by reacting a silver halide developer with exposed silver halide in said silver halide stratum to reduce silver halide to silver, reacting a silver halide solvent with unreduced silver halide in said silver halide stratum to form a water-soluble complex silver salt, transferring said complex silver salt from said silver halide stratum to said silver-receptive stratum, reducing said complex silver salt to silver to form a visible print in said silver-receptive stratum, and thereafter applying

additional slag-forming fuel into the reaction zone and fuse it.

to said silver-receptive stratum a composition containing an aqueous solution of a salt of a heavy metal which forms a water-insoluble sulfide, said composition being in sufficient quantity to provide, when dried, a residue containing a quantity of said heavy metal salt, said quantity of heavy metal salt in said residue being large relative to the quantity of silver in said print and being sufficiently small so that it and sulfides formed from it do not appreciably affect the appearance of said print.

2,866,706
INDAZOLONE COLOUR COUPLERS
John Mathers Weolley, Blackley, Manchester, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain
No Drawing. Application December 7, 1953
Serial No. 396,738
Claims priority, application Great Britain December 18, 1952
8 Claims. (Cl. 96—55)

1. A gelatino silver halide emulsion containing a colour coupler of the formula:



wherein R_1 is a member of the group consisting of hydrogen and alkyl, R_2 is a member of the group consisting of an aryl radical of the benzene series, an aryl radical of the naphthalene series and carboxy and sulfonic acid substituted aryl radicals of said benzene and naphthalene series with the further proviso that, when R_1 is hydrogen and R_2 is 1-naphthyl, the naphthyl radical carries a substituent in the 4-position, and R_3 is a member of the group consisting of an alkyl and an alkenyl group.

2,866,707
MAGNESIUM HYDROXIDE SIZED PHOTOSENSITIVE PAPER
Hugo H. Hansen, Wynnewood, Pa., assignor to W. C. Hamilton & Sons, Mignon, Pa., a corporation of Pennsylvania
No Drawing. Application February 1, 1955
Serial No. 485,623
7 Claims. (Cl. 96—75)

7. A photosensitive blueprint paper comprising a paper base having thereon a surface sizing of magnesium hydroxide and an agent for fixing the magnesium hydroxide upon the paper surface, and a light sensitive blueprint coating on said sized paper base precipitated from an iron salt solution.

2,866,708
METHOD OF PRESERVING DRESSED POULTRY AND COMPOSITION THEREFOR
Harry P. Broquist, Woodcliff Lake, and Leonard R. Hines, Ridgewood, N. J., and August Richard Kohler, Pearl River, N. Y., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine
No Drawing. Application May 13, 1955
Serial No. 508,396
8 Claims. (Cl. 99—157)

1. A method of prolonging the useful shelf life of dressed poultry which comprises the step of immersing freshly dressed poultry into an aqueous solution containing 3–30 parts per million of a broad spectrum antibiotic and 3–50 parts per million of another antibiotic effective against gram-negative bacteria.

2,866,709
METHOD OF TREATING PEACHES
Raymond D. Gerwe and Martin A. Sinds, Jr., Lakeland, Fla., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application June 22, 1953, Serial No. 363,308
6 Claims. (Cl. 99—168)

1. The method of treating fresh peaches by providing them with a film for preserving their freshness, which comprises subjecting the fruit to a highly atomized spray of a wax dissolved in a refined vegetable oil, the concentration of said wax in said vegetable oil being from .25% to 5% by weight.

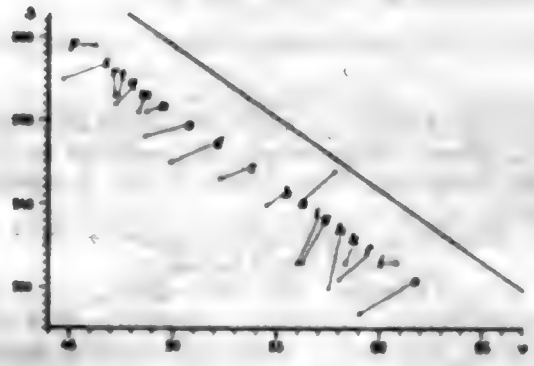
2,866,710
COATED SAUSAGE CASING
Laurence E. Dowd, Chicago, and Milton A. Glaser, Winnetka, Ill., assignors to Tee-Pak, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Application July 13, 1955
Serial No. 521,890
11 Claims. (Cl. 99—176)

1. A sausage casing comprising a regenerated cellulose film coated with a continuous film formed by applying to the surface of said face a liquid mixture comprising the reaction product of (A) a polyhydric phenol and a member of the group consisting of polyhaloalcohols, epihalohydrins and the polyepoxy compounds, and (B) a material selected from a group consisting of drying oils, drying oil fatty acids, and mixtures thereof, and as a moisture proofing ingredient from about 2.0% to 14.0%, based on solids content of the coating material, of a butadiene-styrene copolymer.

2,866,711
CARBON PAPER INKS AND METHOD FOR MAKING SAME
Donald M. Hart, Niagara Falls, N. Y., assignor to Moore Business Forms, Inc., Niagara Falls, N. Y., a corporation of Delaware
No Drawing. Application March 30, 1956
Serial No. 574,996
9 Claims. (Cl. 106—22)

1. A carbon paper coating composition consisting essentially of 15–30% of a non-drying liquid oil; 0–5% of an interface modifier; 6–25% of a hard wax; a coloring agent selected from the group consisting of a dye in the amount of 6–12% and a pigment in the amount of 18–35%; 0–45% of a filler; and 1–10% of dimethyl silicone fluid having a viscosity in the range of 20–100,000 centistokes at 25° C.

2,866,712
OPTICAL CROWN GLASS
Gustav Weissenberg and Otto Ungermach, Marburg (Lahn), and Norbert Meinert, Munchhausen, Kreis, Marburg, Germany
Application November 16, 1953, Serial No. 392,434
Claims priority, application Germany November 22, 1952
3 Claims. (Cl. 106—47)



1. Optical crown glass with anomalous partial dispersion consisting essentially of from about 47% to 75%

by weight of boric acid anhydride, from about 4% to 17% by weight of zirconium oxide and from about 15% to 41% by weight of an alkali carbonate and of a mixture of lanthanum oxide and alkaline earth oxide in amount from about 35% by weight to about 52.5% by weight in which mixture the alkaline earth oxide does not exceed 10% by weight of the glass.

2,866,713

VITREOUS PHOSPHATE ENAMELS AND THEIR USE

Robert P. Allen, Aiken, S. C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 3, 1956
Serial No. 575,719
14 Claims. (Cl. 106—48)

1. A lead-free vitreous enamel frit suitable for use as a protective coating on the surface of aluminum and aluminum-rich alloys, having a firing and maturing temperature of between 500° and 580° C. and which consists essentially of

	Percent by weight
P_2O_5	39.1–48.2
Al_2O_3	20.8–28.1
Na_2O	18.25–22.8
TiO_2	2.4–2.7
B_2O_3	0–8
K_2O	0–15
Li_2O	0–3.5
ZrO_2	0–4

in which the total alkali metal oxide content is between 25% and 35%, and the total of all said ingredients constitutes at least 90% of said frit.

2,866,714

METHOD OF TREATING KYANITE CONCENTRATES

Voldemars D. Svikis, Ottawa, Ontario, Canada, assignor to Her Majesty the Queen in the right of Canada, as represented by the Minister of Mines and Technical Surveys

No Drawing. Application April 16, 1956
Serial No. 578,282
6 Claims. (Cl. 106—65)

1. A method of treating concentrates of disseminated type kyanite to produce a dense, volume-stable product which comprises finely dividing the concentrates to pass through a screen having at least 200 meshes per inch, uniformly mixing the concentrate with at least 0.1% by weight of an additive being one of a group consisting of phosphoric acid, phosphorus pentoxide and soluble aluminum phosphates and tempering water, forming the mixture into briquettes under a pressure of 2,000 to 10,000 p. s. i. and firing the briquettes at a temperature of not less than 1550° C. and less than the fusion temperature of mullite to convert the kyanite into a dense, volume-stable mullite product.

2,866,715

STABILIZED CRYSTALLINE PETROLEUM WAX

Hallard C. Moyer, Homewood, Ill., assignor to Sinclair Refining Company, New York, N. Y., a corporation of Maine

No Drawing. Application August 4, 1955
Serial No. 526,547
5 Claims. (Cl. 106—270)

1. A composition consisting essentially of a crystalline petroleum wax and a small but effective amount of a wax-like solid normal olefin to improve the gloss stability of the crystalline wax said olefin containing about 28 to 50 carbon atoms.

2,866,716

PROCESS FOR MODIFYING THE SURFACE OF A SILICA SUBSTRATE HAVING A REACTIVE SILANOL SURFACE

Edward C. Bregs, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 18, 1955
Serial No. 541,385
7 Claims. (Cl. 106—308)

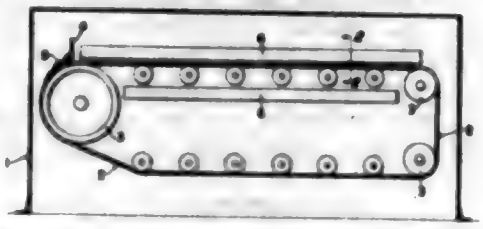
1. A process comprising activating an inorganic, supercolloidal siliceous solid having a surface consisting essentially of silica containing surface silanol groups but substantially no surface bound aluminum, by heating it to a temperature in the range from 300 to 700° C. until its specific hydroxylated surface area is reduced to less than 85 percent of its specific surface area but not below the point where there are about 2 surface silanol groups per square millimicron of surface, and thereafter effecting contact between it and a terminally-unsaturated hydrocarbon, whereby chemical reaction occurs to form an organo-modified product of the siliceous solid, characterized by having a surface layer of discrete organic groups attached to the siliceous surface through primary chemical bonds.

2,866,717

PROCESS OF PREPARING A FILM CASTING SURFACE

Kenneth E. Bristol, Akron, Ohio, assignor, by mesne assignments, to The Goodyear Tire & Rubber Company, a corporation of Ohio

Original application August 13, 1952, Serial No. 304,179, now abandoned. Divided and this application January 14, 1955, Serial No. 481,899
5 Claims. (Cl. 117—10)



1. The process of preparing a film casting surface having microscopic pits in the exposed portion thereof which comprises the steps of (1) making a cement by dissolving a surface-forming material in a solvent, (2) preparing a dispersion by dispersing in said cement a volatile liquid which is immiscible with the cement and which has a higher temperature of vaporization than said solvent, (3) coating a film casting base with said dispersion and (4) heating at a temperature sufficient to evaporate the solvent in order to deposit the surface-forming material on the casting base, continuing the heating at a temperature sufficient to cause the dispersed droplets of immiscible liquid to rupture near the surface of the partially gelled surface-forming material and thereafter continuing the heating in order to coalesce the ruptured surface-forming material into a continuous surface having microscopic indentations therein and to tenaciously adhere the surface-forming material to the base.

2,866,718

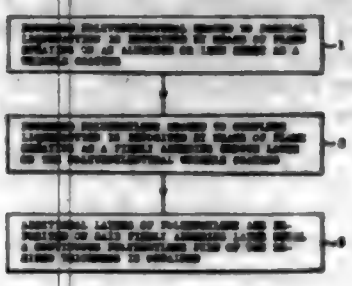
METHOD OF PROVIDING SURFACES WITH A STRONGLY ADHERING POLYETHYLENE FILM

Giuseppe Gazzetta, Milan, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Application January 12, 1955, Serial No. 481,473
Claims priority, application Italy January 26, 1954
7 Claims. (Cl. 117—21)

1. The method of providing a smooth iron surface with a strongly adhering, continuous polyethylene film, comprising flame spraying the surface with about 80 to 100 gr./m.^{3} of powdered polyvinyl formal resin heated

to partial liquefaction to deposit said polyvinyl formal resin as a wrinkle coating, and flame spraying said wrinkle



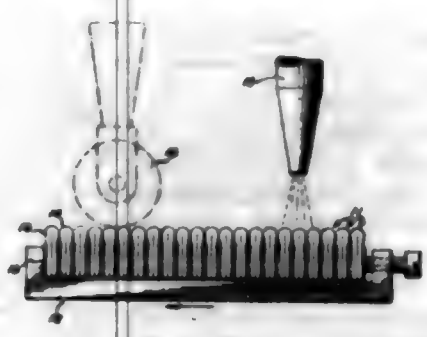
coating with powdered polyethylene heated to complete liquefaction to deposit said polyethylene as a smooth, continuous film.

2,866,719

METHOD OF MAKING ABRASIVE WIPER PAD

Clarence R. Kolzow, Elmhurst, and William Yonkman, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N. Y., a corporation of New York

Application June 29, 1955, Serial No. 518,752
1 Claim. (Cl. 117—37)



The method of making abrasive wiper pads, comprising loading an elongated folded pile fabric into a clip to form a continuous exposed surface of pile along the line of fold of the fabric, clamping a plurality of said clips to force the fabrics together, spraying a wet mixture of abrasive and adhesive onto the pile along the exposed surfaces of the folds of the fabrics to coat substantially the entire length of the pile filaments at the folds of the fabrics, drying the coated fabrics, and rolling the clamped fabrics with a roller at the folds of the fabrics to separate substantially all the coated pile filaments from each other and to remove any excess loose abrasive.

2,866,720

DECORATIVE COATING AND METHOD OF MAKING SAME

William H. Martin, Grosse Pointe, and Edwin B. Morin, Allen Park, Mich., assignors to American-Marietta Company, a corporation of Illinois

No Drawing. Application October 24, 1955
Serial No. 542,519
11 Claims. (Cl. 117—72)

1. A method of making an ornamental protective crackle coating on the surface of an object comprising applying a uniformly pigmented thermosetting synthetic resin enamel base coating in a volatile organic solvent to said surface, permitting the solvent to evaporate from said base coating until the thermosetting resin is set in an immobile solvent-wet condition in which further application of organic solvent from an external source does not lift the pigment nor the resin therein and does not alter the gloss thereof nor spot the same, thereafter spraying onto said base coating in the form of liquid droplets a liquid translucent coating composition in which the vehicle consists of a volatile organic solvent and which contains a light-stable, thermoplastic, low water-absorptive synthetic film-forming polymer as the film-forming agent dissolved therein to form translucent film island areas of substantially uniform thickness which adhere to said base coating, whereafter said coating and base coating are dried to firmly unite said coating to said base coating.

2,866,721

DISPERSION OF FLUOROCHLOROCARBON POLYMERS IN A SOLUTION OF A COPOLYMER OF TRIFLUOROCHLOROETHYLENE WITH A HALOGENATED OLEFIN AND METHOD OF COATING SURFACE THEREWITH

Alexander C. Hetherington, Berkeley Heights, N. J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application March 15, 1955
Serial No. 494,561
15 Claims. (Cl. 117—103)

1. A solid-in-liquid dispersion which comprises particles of a resinous polymer of trifluorochloroethylene containing at least 85 mole percent of trifluorochloroethylene dispersed in an organic solvent in which is dissolved a copolymer of trifluorochloroethylene with a hydrogen containing olefin selected from the group consisting of vinylidene fluoride, vinyl fluoride, vinylidene chloride, vinyl chloride and trifluoroethylene, said copolymer containing less than about 80 mole percent of trifluorochloroethylene and being present in an amount between about 0.25% and 25% of the combined weight of the resinous polymer and the copolymer, the combined weight of the resinous polymer and the copolymer being between 20 and 60 weight percent of the dispersion and said organic solvent being selected from the group consisting of an aliphatic ester, a cyclic ether, a halogenated nitro paraffin, an aliphatic ketone, and an ether alcohol.

15. A method of coating a surface which comprises applying to the surface a solid-in-liquid dispersion which comprises particles of a resinous polymer of trifluorochloroethylene containing at least 85 mole percent of trifluorochloroethylene dispersed in an organic solvent in which is dissolved a copolymer of trifluorochloroethylene with a hydrogen containing olefin selected from the group consisting of vinylidene fluoride, vinyl fluoride, vinylidene chloride, vinyl chloride, and trifluoroethylene, said copolymer containing less than about 80 mole percent of trifluorochloroethylene and being present in an amount between about 0.25% and 25% of the combined weight of the resinous polymer and the copolymer, the combined weight of the resinous polymer and the copolymer being between 20 and 60 weight percent of the dispersion and said organic solvent being selected from the group consisting of an aliphatic ester, a cyclic ether, a halogenated nitro paraffin, an aliphatic ketone and an ether alcohol, and thereafter drying said dispersion and fusing it at a temperature between about 250° C. and 270° C.

2,866,722

PROCESS FOR THE PRODUCTION OF FOAMED URETHAN COATINGS

Herbert Gensel and Wilhelm Tischbein, Leverkusen, and Erwin Windemuth, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 28, 1955
Serial No. 510,017
8 Claims. (Cl. 117—104)

1. A process for producing foamed plastic coatings on a substrate, which comprises initially applying to said substrate a composition comprising a polyester containing hydroxyl groups, an accelerator and water and effecting a foaming reaction with said composition by spraying onto said composition a polyisocyanate.

2,866,723
PROCESS FOR MARKING HALOGENATED POLYMERS, AND RESULTING ARTICLE

Fred William West, Ridgefield, N. J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application September 16, 1953
Serial No. 380,585
8 Claims. (Cl. 117—138.8)

1. A process for marking halogenated polymers which comprises applying to the surface that is to be marked an ink which comprises an admixture of an insoluble organic pigment and a solution in a volatile oxygenated organic solvent of a normally solid copolymer containing between about 20 and about 80 mol percent of trifluorochloroethylene copolymerized with vinylidene fluoride.

2,866,724
COATED EVAPORATING ELEMENTS AND METHOD OF UTILIZING SAME

Paul Alexander, Princeton, N. J., assignor, by mesne assignments, to Continental Can Company, Inc., New York, N. Y., a corporation of New York

No Drawing. Application March 15, 1954
Serial No. 416,435
15 Claims. (Cl. 117—228)

7. The method for preparing an evaporating element comprising the application of a mixture of particles of silicon and particles of a metal selected from the group consisting of tungsten, molybdenum, tantalum, and niobium to the surface of a carbon base, and the subsequent fusion of said mixture in a vacuum.

2,866,725
COATED EVAPORATING ELEMENTS AND METHOD OF UTILIZING SAME

Paul Alexander, Princeton, N. J., assignor, by mesne assignments, to Continental Can Company, Inc., New York, N. Y., a corporation of New York

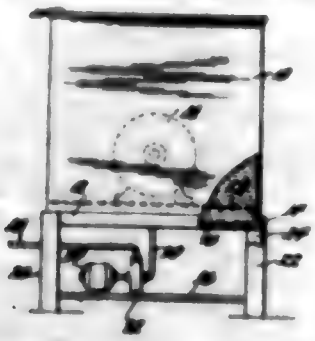
No Drawing. Application March 15, 1954
Serial No. 416,436
13 Claims. (Cl. 117—228)

7. The method of preparing an evaporating element for use in a vacuum metallizing apparatus comprising the application of a binder to the surface of a carbon base, the subsequent placing of a sheet of a metal selected from the group consisting of tungsten, molybdenum, tantalum and niobium upon said binder, one surface of said sheet being then exposed, then applying silicon particles to said exposed surface, and finally raising the temperature of said element in a vacuum to a temperature sufficiently high that said metal and silicon will combine to form a silicide of said metal, said element being held at said temperature for a period of sufficient duration that excess silicon is evaporated.

2,866,726
METHOD OF CLEANING ELECTRICAL EQUIPMENT

Donald William Vance, Bountiful, Utah

Application January 4, 1954, Serial No. 401,844
3 Claims. (Cl. 134—23)

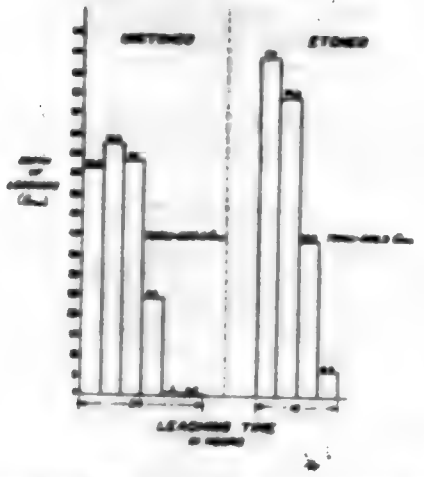


1. A process for cleaning electrical equipment having a rotating part comprising submerging the equipment in an electrically non-conductive cleaning composition and operating the equipment so as to cause said part to rotate.

2,866,727
PRODUCTION OF METAL ARTICLES WITH HOLES IN THEM

Barclay Keegan, Glasgow, Scotland, assignor to The International Nickel Company, Inc., New York, N. Y., a corporation of Delaware

Application September 3, 1957, Serial No. 681,807
Claims priority, application Great Britain
September 12, 1956
5 Claims. (Cl. 148—4)

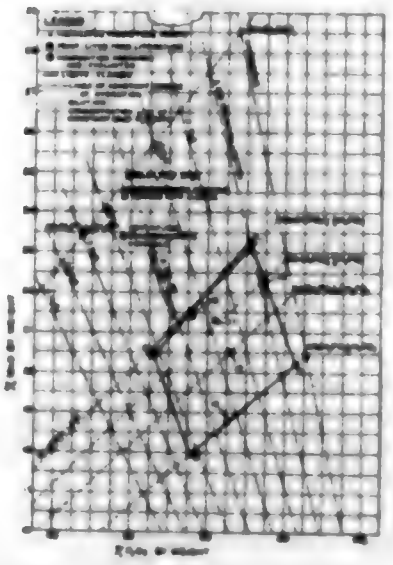


2. A process for producing hollow metal articles from heat-resistant metal which comprises in combination the steps of hot working a billet of heat-resistant metal filled with a ferrous filler, pretreating the formed heat-resistant metal containing said ferrous filler by subjecting it to a chemical etching treatment in an aqueous solution of acid selected from the group consisting of sulphuric acid, hydrochloric acid and nitric acid, which contains between about 50% to about 60% free concentrated acid, to remove the surface layer from said formed heat-resistant metal and thereafter removing said ferrous filler from said formed heat-resistant metal by selectively leaching said ferrous filler in an acidic medium.

2,866,728
DRY MANGANOUS PHOSPHATE COMPOUNDS

Warren D. Wariner, College Park, Ga., assignor to Tennessee Corporation, New York, N. Y., a corporation of New York

Application April 30, 1956, Serial No. 581,586
7 Claims. (Cl. 148—6.15)



7. Dry water soluble acid salts of manganous phosphate compounds having an empirical formula

$$H_{(1-47)}Mn_{(1-8)}(PO_4)_{3-21}\cdot(\tfrac{1}{2}-20)H_2O$$

and weight ratios

$P_2O_5/Mn=3.230-3.876$, $P_2O_5/MnO=2.502-3.0$ and $P_2O_5/H_2O=3.025-1.829$.

2,866,729

QUENCHING OIL COMPOSITIONS

Carl Frederick Zimpel, East Alton, Ill., assignor to Shell Development Company, New York, N. Y., a corporation of Delaware

No Drawing. Application July 27, 1956
Serial No. 600,390
10 Claims. (Cl. 148—29)

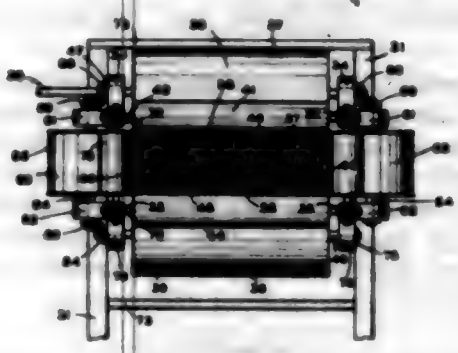
1. A quenching oil composition consisting essentially of a major amount of a mineral oil having a viscosity of from 100 to 200 SUS at 100° F. containing from about 1.75% to about 3.0% of an oil-soluble copolymer obtained by reacting a cycloalkadiene hydrocarbon and a linolenic acid oil having an iodine value between 100 and 150 for 2–24 hours at a temperature of from 50° C. to 300° C.

2,866,730

LAMINATED PANEL AND PROCESS FOR PRODUCING SAME

Joseph A. Potchen, Marne, and George E. Kloote and George D. Meier, Grand Rapids, Mich., assignors, by mesne assignments, to Fiskelite Manufacturing Corporation, a corporation of Delaware

Application May 11, 1955, Serial No. 507,566
8 Claims. (Cl. 154—100)



1. A sandwich panel comprising a lightweight core and facing sheets integrally bonded to at least two sides of said core, said facing sheets comprising a thermoset polyester resinous composition and said core being a polyisocyanate foamed resinous composition, said core varying in density from the inner surface of each said facing sheet toward each other from a region of greater density immediately adjacent to the inner surface of each said sheet to a region of least density in an area spaced inwardly from each said sheet.

6. A method for forming a multilaminar panel which comprises the steps of coating a surface of each of a pair of facing sheets with a layer of a viscous liquid foam-forming polyisocyanate-resin mixture, partially foaming the said mixture on each of the said facing sheets to establish a partially foamed resinous layer thereon, said resinous layers each having a greater density in the region adjacent its facing sheet than in the region more remote from each said facing sheet, placing the said facing sheets between confining surfaces with the said partially foamed layers facing one another, effecting further foaming of the said partially foamed layers until the space between said confining surfaces is occupied by the expanding foam, and curing the said foam.

2,866,731

PROCESS OF COATING BUTYL RUBBER WITH NEOPRENE

James E. Van Epp, Cornwall-on-Hudson, N. Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 27, 1955, Serial No. 484,537
2 Claims. (Cl. 154—130)

1. Process of preparing an unsupported cured film of Butyl rubber characterized by its ability to be strongly bonded to other surfaces which comprises forming a compound comprising uncured Butyl rubber as an essential ingredient and curatives to cure said Butyl rubber, shaping said compound into a base film, applying as a surface layer to at least one side of said base film

[redacted]

a compound comprising uncured neoprene and being free of curatives which would completely cure said neoprene, heating said composite structure to cure the Butyl rubber in said base film whereby the neoprene in said surface layer is incompletely cured.

2,866,732

METAL DERIVATIVES OF ORGANIC PHOSPHATES AND PHOSPHITES

Melvern C. Hoff, Highland, Ind., Ellis Kirby Fields, Chicago, Ill., and Roger W. Watson, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application July 19, 1954
Serial No. 444,398
17 Claims. (Cl. 167—22)

3. The reaction product of a molybdenum oxide, an alkyl phosphite having from 1 to 3 alkyl groups wherein each alkyl group contains from about 2 to about 40 carbon atoms, and hydrogen peroxide.

4. A fungicidal composition consisting essentially of the composition of claim 3 and a substantially greater amount of a fungicidally inert carrier therefor.

2,866,733

MUCOSAL-ANESTHETIC COMPOSITIONS CONTAINING POLYCARBOXYLIC ACID SALTS OF N - DIETHYLAMINOETHYL - α - PROPYL-CINNAMAMIDE

William A. Lott, Maplewood, and Edward J. Pribyl, Metuchen, N. J., assignors to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application October 2, 1956
Serial No. 613,373
6 Claims. (Cl. 167—52)

3. A mucosal anesthetic composition comprising a substantially neutral aqueous solution of a polybasic non-toxic organic acid salt of N-diethylaminoethyl-α-propyl-cinnamamide.

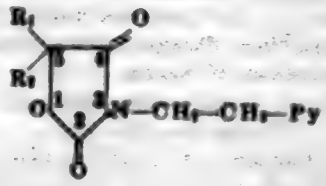
2,866,734

3-PYRIDYLETHYL 2,4-OXAZOLIDINEDIONES AND PROCESS

Seymour L. Shapiro, Hastings-on-Hudson, Louis Freedman, Bronxville, and Ira M. Rose, Yonkers, N. Y., assignors to U. S. Vitamin Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application November 6, 1957
Serial No. 694,731
8 Claims. (Cl. 167—52)

1. As a composition of matter a member of the group consisting of oxazolidine 2,4-dione having the formula



wherein Py is a member of the group consisting of 2-pyridyl, alkyl-substituted-2-pyridyl, said alkyl having a carbon content C_1–C_3, and 4-pyridyl, and R_1 and R_2 are members of the group consisting of hydrogen, lower

alkyl, cycloalkyl, said cycloalkyl having a carbon content C_5–C_6, aralkyl, said aralkyl being hydrocarbon and having a carbon content C_7–C_9, phenyl, and structures wherein R_1 plus R_2 is an alkylene chain and a methyl substituted alkylene chain joined at the 5-carbon atom of the oxazolidinedione ring system said alkylene chain having a carbon content C_4–C_7, and acid addition and quaternary ammonium salts thereof.

2,866,735

THERAPEUTIC COMPOSITION OF MATTER

Robert E. Hinsellck, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application March 18, 1954
Serial No. 417,214
15 Claims. (Cl. 167—65)

15. An oral therapeutic composition comprising an erythromycin tablet coated with an enteric coating of cellulose acetate phthalate and the combination of sulfadiazine, sulfamerazine, and sulfamethazine laminated thereon.

2,866,736

SELECTIVE REDUCTION OF KETOSTEROIDS WITH YEAST

Bruno Camerino and Alberto Vercellone, Milan, Italy, assignors to Società Farmaceutici Italia, a corporation of Italy

No Drawing. Application August 12, 1954
Serial No. 449,506
1 Claim. (Cl. 195—51)

The method of preparing a 3-hydroxy steroid of the class consisting of pregnan-3α-ol-11,20-dion, allopregnan-3α-ol-11,20-dion and allopregnan-3β,11α-diol-20-one which comprises subjecting the corresponding 3,20-dione having a member of the group consisting of free hydroxyl and keto radicals in the 11-position to the biochemical reduction action of fermenting yeast.

2,866,737

SIDE-CHAIN CLEAVAGE BY *CYLINDROCEPHALUM AUREUM*

Gilbert M. Shull, Huntington Station, N. Y., and John B. Routien, Tenafly, N. J., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N. Y., a corporation of Delaware

No Drawing. Application January 23, 1957
Serial No. 635,599
4 Claims. (Cl. 195—51)

1. A process for cleaving the C–17 side chain of a compound chosen from the group consisting of 21-hydroxyprogesterone, a lower alkanoyl ester of 21-hydroxyprogesterone and progesterone, which comprises contacting said compound in an aqueous medium with a growing culture of an organism of the species *Cylindrocephalum aureum*.

2,866,738

DEIONIZED CORN STEEP LIQUOR IN PRODUCTION OF TETRACYCLINE

Pasquale Paul Misiseri, Brooklyn, N. Y., and Melvin C. Firman, Princeton, and Herman Sokol, Fort Lee, N. J., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Application January 12, 1955
Serial No. 481,494
6 Claims. (Cl. 195—116)

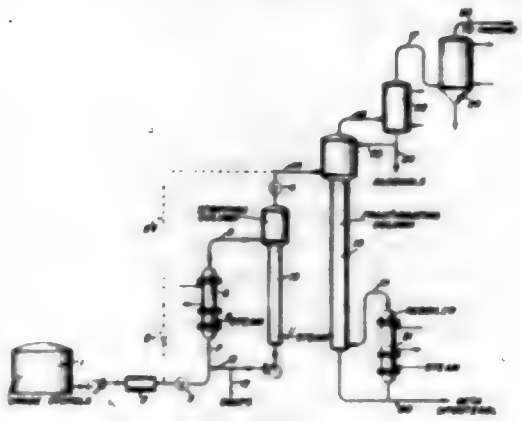
1. In a process of producing tetracycline by aerobic fermentation with a tetracycline-producing microorganism of the Streptomyces genus which is also capable of producing chlortetracycline in the presence of chloride ions, the improvement which comprises contacting an aqueous solution of the water soluble components of the fermentation medium with an ion exchange material to remove chloride ions therefrom.

2,866,739

RECOVERY OF BETA-SITOSTEROL FROM TALL OIL PITCH BY STEAM DISTILLATION

Leo F. Cieslicki, Norwalk, and Hans Albrecht, Stamford, Conn., assignors to American Cyanamid Company, New York, N. Y., a corporation of Maine

Application May 18, 1955, Serial No. 509,352
9 Claims. (Cl. 202—46)



1. A method for the separation and recovery of beta-sitosterol and higher alcohols of about 22 to 26 carbon atoms from mixtures thereof which comprises subjecting mixed vapors of said beta-sitosterol and said alcohols to vacuum rectification in the presence of steam at temperatures of about 190°–280° C. and recovering said higher alcohols as an overhead condensate and said beta-sitosterol as a heavy bottom condensate.

2,866,740

ELECTRODEPOSITION OF RHODIUM

Frank Herbert Reid, Hounslow, England, assignor to The International Nickel Company, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application May 2, 1957
Serial No. 656,499
Claims priority, application Great Britain May 10, 1956
9 Claims. (Cl. 204—47)

1. An electrolyte for producing substantially crack-free rhodium electrodeposits comprising an aqueous acidic bath containing dissolved rhodium derived from at least one compound from the group consisting of rhodium sulphate, rhodium phosphate and rhodium fluoborate in an amount to provide from about 5 to about 20 grams per liter of rhodium, free acid in an amount sufficient to prevent hydrolysis and a compound from the group consisting of selenic acid and alkali metal salts thereof in an amount equivalent to about 0.05 to about 25 grams per liter of selenic acid.

2,866,741

CONTROL ROD FOR A NUCLEAR REACTOR AND METHOD OF PREPARATION

Henry H. Hausner, New York, N. Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

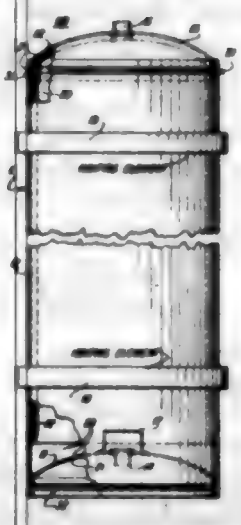
No Drawing. Application December 8, 1952
Serial No. 324,835
6 Claims. (Cl. 204—193.2)

1. In a nuclear reactor a control rod which comprises a compound selected from the group of gadolinium oxide and gadolinium carbide distributed in a metal matrix having a low cross sectional area of absorption for thermal neutrons, the metal of said matrix being selected from the group consisting of aluminum, beryllium and zirconium.

2,866,742
CATHODICALLY PROTECTED WATER STORAGE TANKS

Robert J. Sutton, Chicago, Ill., assignor to General Electric Company, a corporation of New York

Application June 29, 1956, Serial No. 594,859
7 Claims. (Cl. 204—197)

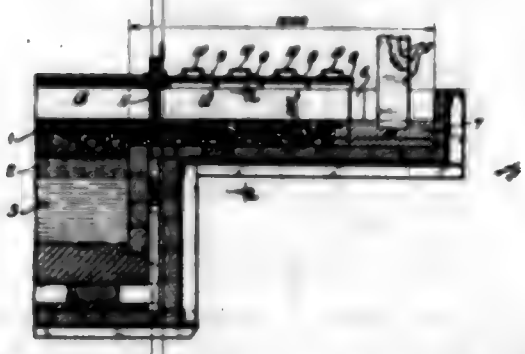


1. A water storage tank comprising a hollow body formed of steel and including a tubular side wall and a pair of opposed end walls, a primary liner formed of zinc and intimately bonded to the interior surfaces of said side wall and said end walls, said primary liner being continuous and commensurate with the interior surfaces of said side wall and said end walls completely to cover the same, and a secondary liner in contact with the interior surface of said primary liner and formed of concrete, said secondary liner covering the major area of the interior surface of said primary liner and leaving uncovered the minor area of the interior surface of said primary liner, said uncovered minor area being at least substantially commensurate with the inside area of one of said end walls, said secondary liner supplying small amounts of alkali earth metal cations to the water stored in said body, and the area of said secondary liner in contact with the water stored in said body being materially greater than the area of said primary liner in contact with the water stored in said body.

2,866,743
DEVICE FOR THE CURRENT SUPPLY TO THE CATHODIC LAYER IN THREE-LAYER ALUMINIUM REFINING CELLS

Hans Schmitt, Rheinfelden (Baden), Germany, assignor to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a Swiss joint-stock company

Application December 27, 1956, Serial No. 630,830
Claims priority, application Switzerland December 30, 1955
1 Claim. (Cl. 204—243)



1. An electrolytic device for refining aluminum according to the three-layer process in which a layer of molten metal floats on the electrolyte to serve as an electrode, comprising a cell, a channel extending from said cell at the inner end of said channel where said channel communicates with said cell and adapted to receive a portion of said layer of molten metal to form a metal vein therein, conductive means extending into the outer end of said channel, said channel being of such size that the cross-sectional area of the metal vein therein is at least as great as the critical cross-sectional area at which contraction through pinching effect takes place, this critical cross-sectional area being calculated as follows:

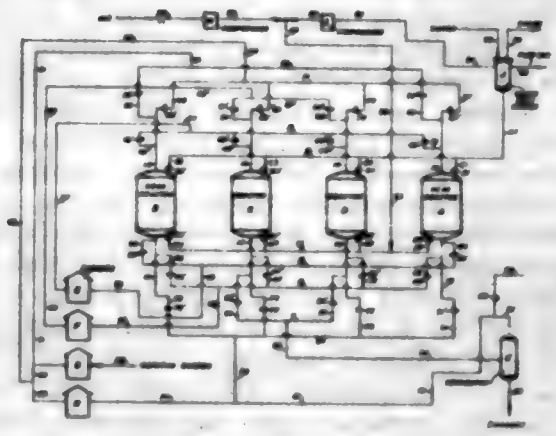
$$Q = 1.17 \times 10^{-4} \frac{J^{4/3}}{S^{1/3}} \text{ cm.}^2$$

wherein Q is the critical cross-sectional area, J is the current intensity in the metallic vein in amperes and S is the specific weight of the molten metal, said channel being abruptly enlarged at its outer end section, the conductive means being adapted to dip into the metal layer in the enlarged channel section, the width of the enlarged channel section of the channel being 1.5 to 4 times the width of the section of the channel prior to its enlargement, and the length of said enlarged section of the channel being 1 to 3 times the width of the section of the channel prior to its enlargement, a regulable heat insulating cover for that part of said channel up to the region near the enlarged section of the channel spaced above the level of the molten metal in the channel to form a gap between the molten metal in said channel and said cover, and a regulable slide gate near the inner end of said channel interrupting said gap and reaching at its lowest position near the surface of the molten metal in said channel.

2,866,744
METHOD OF REFORMING HYDROCARBONS USED IN PLATINUM CATALYST IN A PLURALITY OF SEPARATE REACTION ZONES

Warren E. Askey and Robert M. Love, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application May 12, 1954, Serial No. 429,285
2 Claims. (Cl. 208—65)



1. In a reforming system in which a plurality of independent reaction zones greater than two each containing a platinum catalyst are contacted with a feed mixture consisting of hydrocarbon and hydrogen introduced at a temperature within the range of 850 to 1000° F. to reform the hydrocarbon in which reaction the platinum catalyst in said reaction zones becomes at least partially deactivated by deposits of carbonaceous materials thereon during a reaction cycle within the range from 200 to 800 hours for the system, the improvement which comprises the steps of selecting two of said reaction zones as a first head reaction zone and a second head reaction

of added hydrogen at elevated temperatures and pressures for a sufficient period of time to effect the formation of aromatic hydrocarbons, withdrawing catalyst con-

the group consisting of bentonite, ferric hydroxide, and manganic hydroxide, dispersing an oxidizing gas in said emulsion, maintaining said emulsion with dispersed oxi-

zone, keeping the first head reaction zone off stream for approximately an initial one-half time of said complete cycle for the system and regenerating it while it is off stream while simultaneously passing feed stock mixture first through the second head reaction zone and then in series through the remaining reaction zones and continuing the flow of said feed mixture through said series of reaction zones for approximately said initial one-half time for a complete cycle for the system, subsequently removing the second head reaction zone from contact with the feed mixture and keeping it off stream for approximately the terminal one-half the time of said complete cycle for the system and regenerating it while it is off stream, the total regeneration time for said first and second head reaction zones being within the range from 10 to 30 hours with heated oxygen-containing gas inert to the catalyst being circulated through said first and second head reaction zones during the period after the catalyst in said first and second head reaction zones has been regenerated and prior to placing said first and second head reactions back on stream, and simultaneously passing feed mixture through the first head reaction zone and then in series through the remaining reaction zones, subsequently separately removing each of the remaining reaction zones from contact with feed mixture, keeping each off stream for only a small part of the complete cycle of the system and regenerating while off stream by passing the feed stock through one of said head reaction zones and then in series through the remaining reaction zones except the one off stream and subsequently repeating the complete cycle, substantially identical reaction conditions being employed in each of said reaction zones and said feed mixture always passing through one of said head reaction zones before passing through the remaining reaction zones.

2,866,745

MULTISTAGE HYDROCARBON REFORMING PROCESS

Heinz Heinemann, Swarthmore, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 15, 1951
Serial No. 261,920
3 Claims. (Cl. 208—79)

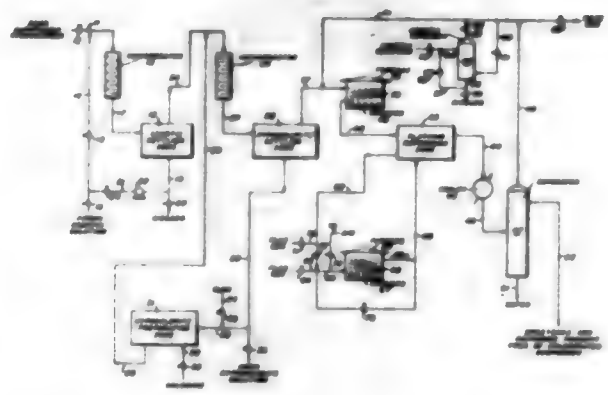
1. A process for reforming a naphthene containing hydrocarbon distillate fraction boiling within the gasoline range to increase the octane value thereof, which comprises fractionating said hydrocarbon distillate at a cut point in the range of 260 to 300° F. into a relatively low boiling fraction and a relatively high boiling fraction, subjecting said low boiling fraction to relatively severe reforming conditions in the presence of hydrogen and a dehydrogenation-promoting reforming catalyst comprising about 0.5% platinum supported on acetic-acid treated activated alumina particles, subjecting said high boiling fraction to relatively milder reforming conditions in the presence of the same kind of reforming catalyst, and blending said reformed fractions to produce a reformed hydrocarbon product of increased octane value and boiling within the gasoline range; said relatively severe reforming conditions including a temperature in the range of about 900–1050° F., a pressure in the range of about 150 to 400 pounds per square inch and a space rate of about 0.5 to 4 volumes of hydrocarbon fraction per hour per volume of catalyst and said relatively mild reforming conditions including a temperature in the range of about 800–950° F., a pressure in the range of about 400–700 pounds per square inch and a space rate of about 3 to 10 volumes of hydrocarbon fraction per hour per volume of catalyst; said reforming of the high boiling fraction being effected at a pressure substantially above and at a space rate substantially greater than that at which said low boiling fraction is reformed.

2,866,746

REMOVAL OF CHLORINATED COMPOUNDS FROM DISTILLATES

Robert M. Love, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application October 6, 1955, Serial No. 538,971
4 Claims. (Cl. 208—88)



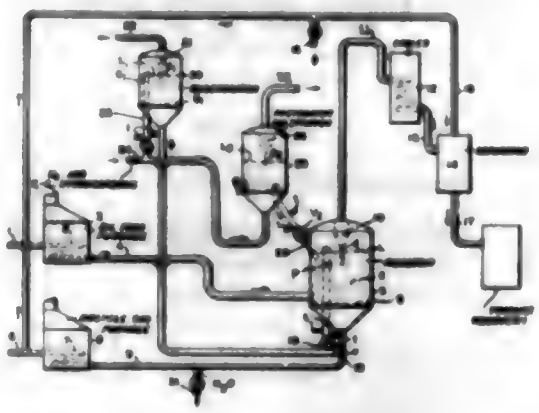
1. A method for treating a sour hydrocarbon distillate boiling in the gasoline range and containing naphthenes which comprises treating said distillate with an aqueous sodium hypochlorite solution containing from about 5 to about 750 grams of sodium hydroxide per liter and having an available chlorine content in the range from about 2 to about 150 grams per liter whereby acidic chlorinated compounds selected from the group consisting of the sulfonyl, sulfenyl, and sulfinyl chlorides in an amount in the range from about 2 to about 60 parts per million are formed, separating said treated distillate from said hypochlorite solution, and then contacting the treated distillate with an alumina supported platinum reforming catalyst to provide an amount of chlorine on the catalyst in the range between 0.5 and 0.6 percent by weight under naphthenes conversion conditions at a temperature in the range from about 900° to about 1000° F. whereby said naphthenes are converted and said acidic chlorinated compounds are substantially removed from the treated distillate.

2,866,747

AROMATIZATION AND NAPHTHA REFORMING PROCESS WHEREIN THE CATALYST IS DEHYDRATED WITH A GAS CONTAINING C_1–C_4 HYDROCARBONS

Kenneth K. Kearby, Cranford, and Isidor Kirshenbaum, Union, N. J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application March 4, 1953, Serial No. 340,302
7 Claims. (Cl. 208—136)



1. The method of converting hydrocarbons boiling in the naphtha boiling range which comprises contacting in a reaction zone the said hydrocarbons with a catalyst in the form of a dense fluidized bed and in the presence

of added hydrogen at elevated temperatures and pressures for a sufficient period of time to effect the formation of aromatic hydrocarbons, withdrawing catalyst contaminated with carbonaceous and other deposits from the reaction zone, treating said catalyst in a regeneration zone with an oxygen-containing gas at elevated temperatures whereby such deposits are consumed by combustion and removed as fumes from the catalyst, withdrawing the regenerated catalyst from the regeneration zone, removing water from the regenerated catalyst by treating the regenerated catalyst with a gas containing a predominant amount of C_1–C_4 hydrocarbons for a period of time of from about 2–120 seconds, returning the regenerated catalyst substantially free of water to the reaction zone and feeding water to the reaction zone in an amount of from about ¼–2 mol percent based on the hydrogen entering the conversion zone.

2,866,748

ALUMINUM CONTAINING REFORMING CATALYST

Morris Feller, Park Forest, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application January 11, 1957
Serial No. 633,536
2 Claims. (Cl. 208—138)

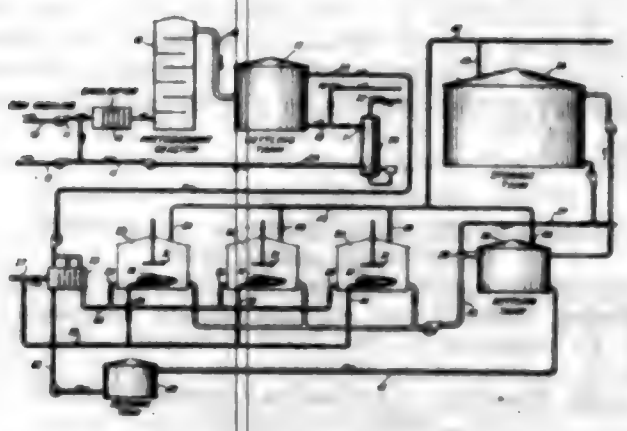
1. In a hydroforming process which comprises contacting a petroleum naphtha boiling between about 150 and 400° F. with a platinum-alumina composite, said composite having between about 0.01 and 1.0 percent by weight, based on dry Al_2O_3, of platinum, at a temperature of between about 800 and 1050° F., a pressure between about 100 and 1200 pounds per square inch, a hydrogen rate in the range of about 1000 and 10,000 standard cubic feet per barrel of said petroleum naphtha, an hourly weight space velocity between about 0.1 and 10, and collecting a hydroformate therefrom, the improvement which comprises mixing with said platinum-alumina composite between about 10 and 90 percent by weight, based on dry Al_2O_3, of free aluminum, whereby a higher ratio of benzene to toluene in said hydroformate is obtained.

2,866,749

SWEETENING OF MERCAPTAN-BEARING OIL WITH ALKALINE WATER, AIR, AND BENTONITE CLAY

Abraham Shapiro, Pasadena, Calif., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Application February 14, 1955, Serial No. 488,092
7 Claims. (Cl. 208—203)



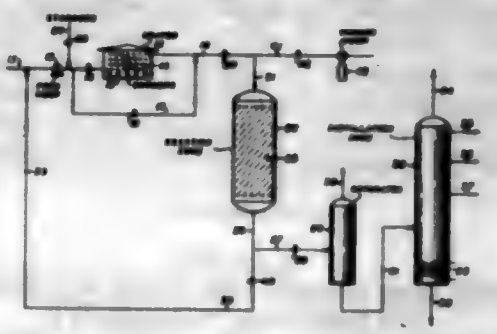
1. The method of sweetening a mercaptan-bearing hydrocarbon liquid which comprises: forming an emulsion of about three to four volumes of said hydrocarbon liquid in one volume of alkaline water containing a small proportion of an inorganic emulsifying agent selected from the group consisting of bentonite, ferric hydroxide, and manganic hydroxide, dispersing an oxidizing gas in said emulsion, maintaining said emulsion with dispersed oxidizing gas for a period of at least about one hour and separating said hydrocarbon liquid from said water.

2,866,750

PRETREATMENT OF COBALT MOLYBDATE-ON-ALUMINA CATALYST

Max A. Mossman, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Application November 5, 1956, Serial No. 620,486
6 Claims. (Cl. 208—216)



1. A method for pretreating a supported cobalt molybdate on alumina catalyst and employing said catalyst employed in catalytic desulfurization of a sulfur-containing feed hydrocarbon in the presence of hydrogen which comprises reducing the pressure in a desulfurization zone containing said catalyst to a pressure in the range from about 0.5 to about 10 mm. of mercury for a time in the range from about 10 to about 60 minutes to remove gases from the pores of the catalyst and adsorbed material from the catalyst surface, soaking the substantially gas free catalyst with said feed hydrocarbon in the liquid phase and free of hydrogen at substantially atmospheric pressure and at a temperature below desulfurization temperature within the range from about 300° to 500° F. for a sufficient length of time within the range from about 1 to about 20 hours to wet the catalyst with said feed hydrocarbon, and then contacting the wetted catalyst with said feed hydrocarbon at a temperature in the range from about 600° to about 850° F., at a pressure in the range from about 100 to about 1000 p. s. i. g. in the presence of about 1,000 to about 10,000 standard cubic feet of hydrogen per barrel of feed and at a space velocity in the range from about 0.25 to about 10 volumes of feed per volume of catalyst per hour.

2,866,751

METHOD OF DESULFURIZING HYDROCARBON OIL USING A COBALT ZIRCONIUM CATALYST

Wilford J. Zimmerschied, Crown Point, Ind., and Paul N. Rylander, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application March 28, 1956
Serial No. 574,375
6 Claims. (Cl. 208—217)

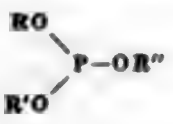
1. The method of desulfurizing a hydrocarbon oil containing organic sulfur compounds which comprises contacting said oil in the presence of hydrogen at a temperature between about 600° and 1000° F. with a catalyst containing as the essential component the calcination product of an intimate mixture of a cobalt compound affording an oxide of cobalt and a zirconium compound affording an oxide of zirconium, the mixture containing between about 1 and 4 mols of cobalt per mol of zirconium, and the calcination product being formed by heating the mixture at a temperature between about 1400° and 2000° F. for a period of about 1 to 24 hours.

2,866,752
METHOD OF DESULFURIZING HYDROCARBON OIL USING A NICKEL TITANATE CATALYST
Wilford J. Zimmerschied, Crown Point, Ind., and Paul N. Rylander, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Application March 29, 1956
Serial No. 574,584
6 Claims. (Cl. 208—217)

1. The method of desulfurizing a hydrocarbon oil containing organic sulfur compounds which comprises contacting said oil in the presence of hydrogen at a temperature between about 600° and 1000° F. with a catalyst containing as the essential component $NiTiO_3$ which is prepared by calcining an intimate mixture of a nickel compound affording an oxide of nickel and a titanium compound affording an oxide of titanium, the mixture containing between about 0.5 and 3 mols of nickel per mol of titanium, and the $NiTiO_3$ being formed by heating the mixture at a temperature between about 1400° and 2000° F. for a period of about 1 to 24 hours.

2,866,753
PROCESS FOR REMOVING FREE SULFUR WITH AN ORGANIC PHOSPHITE
George W. Ayers, Chicago, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Application July 17, 1956
Serial No. 598,243
20 Claims. (Cl. 208—240)

1. A process for the removal of elemental or loosely bound sulfur from a hydrocarbon composition which comprises contacting said hydrocarbon composition with an organic phosphite having the following general formula:



where R is selected from the group consisting of alkyl and cycloalkyl radicals containing up to 25 carbon atoms, and R′ and R″ are selected from the group consisting of alkyl and cycloalkyl radicals containing up to 25 carbon atoms, and aryl radicals, in an amount at least sufficient to completely react with said sulfur.

2,866,754
WELL TREATMENT COMPOSITION
Paul H. Cardwell, Midland, Mich., and Louis H. Eilers and Alfred R. Hendrickson, Tulsa, Okla., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Original application June 2, 1954, Serial No. 434,972, now Patent No. 2,794,779, dated June 4, 1957. Divided and this application March 25, 1957, Serial No. 647,965
2 Claims. (Cl. 252—8.55)

1. A fluid composition having a temporary high viscosity comprising a base of a liquid petroleum fraction, said base having dispersed therein as a thickening agent aluminum octoate and a thickening controlling agent consisting of a mixture of acetic acid and a phenolic compound selected from the group consisting of chlorophenol, phenol, metacresol, orthocresol, nonyl phenol, dinonyl phenol, the aluminum octoate being present in amount between 10 and 90 pounds per 100 gallons of the liquid petroleum fraction and the thickening controlling agent being present in amount between 0.15 and 9.4 percent of the weight of the petroleum fraction, the amount of the acetic acid being from 0.04 to 0.12 ml. per 100 ml. of the petroleum fraction, said thickening controlling agent causing the composition to thicken and thereafter to thin.

2,866,755
ESTER-BASE LUBRICANT CONTAINING NON-CORROSIVE EP AGENT
Raymond B. Tierney, Beacon, and Robert H. Krug, Cornwall, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application May 31, 1955
Serial No. 512,304
9 Claims. (Cl. 252—47.5)

1. A lubricant composition of matter consisting essentially of an aliphatic carboxylic acid ester of lubricating oil characteristics and di(o-chlorophenyl) phenyl phosphate in an amount sufficient to impart EP and anti-wear properties to said composition.

2,866,756
LUBRICANTS CONTAINING A DEPOSIT-CONTROL ADDITIVE
Robert Y. Heisler and Stanley R. Newman, Fishkill, Norman Alpert, Poughkeepsie, and Kenneth L. Dille, Fishkill, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application December 23, 1955
Serial No. 554,940
11 Claims. (Cl. 252—56)

1. A lubricating oil containing a glycol bis(glycol ether carbonate) having a carbon to oxygen weight ratio below 2.5 and a boiling point above about 650° F. and the general formula

$$R'O(CH_2CH_2O)_xOCO(RO)_nCO(OCH_2CH_2)_xOR'$$

wherein R is a divalent aliphatic hydrocarbon radical containing 2 to 3 carbon atoms, R′ is an aliphatic hydrocarbon radical containing 2 to 18 carbon atoms, x has a value of 1 to 4 and n has a value of 1 to 4, in an amount sufficient to eliminate deposits formed during fuel combustion and to maintain a clean engine.

2,866,757
LUBRICANTS CONTAINING DEPOSIT CONTROL ADDITIVES
Stanley R. Newman and Robert Y. Heisler, Fishkill, and Norman Alpert, Poughkeepsie, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application February 24, 1956
Serial No. 567,435
8 Claims. (Cl. 252—56)

1. A lubricating oil containing a polymethylene glycol bis(glycol ether carbonate) having a carbon to oxygen weight ratio below 2.5 and a boiling point above about 650° F. and the general formula

$$R'O(CH_2CH_2O)_xOCOROCO(OCH_2CH_2)_xOR'$$

wherein R is a divalent symmetrical polymethylene radical containing at least 4 carbon atoms and preferably 4 to 10 carbon atoms, R′ is an aliphatic hydrocarbon radical containing 1 to 12 carbon atoms and n has a value of 1 to 6, in an amount sufficient to eliminate deposits formed during fuel combustion and to maintain a clean engine.

2,866,758
LUBRICANTS CONTAINING A DEPOSIT-CONTROL ADDITIVE
Stanley R. Newman, Kenneth L. Dille, and Robert Y. Heisler, Fishkill, and Norman Alpert, Poughkeepsie, N. Y., assignors to The Texas Company, New York, N. Y., a corporation of Delaware
No Drawing. Application January 18, 1956
Serial No. 559,763
8 Claims. (Cl. 252—57)

1. A lubricating oil containing a carbonic acid diester of an aliphatic alcohol and of a polyglycol monoether of the following general formula

$$R(OR')_nOCOOR''$$

wherein R is a monovalent hydrocarbon radical con-

taining 6 to 18 carbon atoms, R′ is a divalent aliphatic hydrocarbon radical containing 2 to 3 carbon atoms, R″ is an aliphatic hydrocarbon radical containing 1 to 14 carbon atoms, and *n* has a value of 3 to 15, said carbonic acid diester being present in an amount sufficient to eliminate deposits formed during fuel combustion and to maintain a clean engine.

2,866,759

COMPOSITION FOR TREATING WATER

Oliver Bacon, Tampa, Fla., assignor to Warren C. Horton, Chicago, Ill.

No Drawing. Application May 16, 1955
Serial No. 507,506
5 Claims. (Cl. 252—175)

1. A composition for the treatment of water comprising an intimate mixture of 20 to 70% limestone, 5 to 20% sodium hydroxide, 5 to 20% sodium aluminate, and 20 to 70% of a hydrolyzable, floc-forming, acid salt of the group consisting of aluminum sulfate, ferric sulfate and ferrous sulfate.

2,866,760

COMPOSITIONS AND METHODS FOR TREATING PARTICULATE SOLIDS

Walter M. Heemsler, Chatham, John A. Bishop, Madison, and Edgar Eugene Stauffer, Mendham, N. J., assignors to Baker Industries, Inc., a corporation of Delaware

No Drawing. Application July 8, 1955
Serial No. 520,932
15 Claims. (Cl. 252—383)

1. A free-flowing, finely-divided, solid composition comprising a finely-divided, solid material normally susceptible to caking, a porous material having a surface area in excess of 100 square meters per gram, said porous material being selected from the group consisting of attapulgite, halloysite, fuller's earth, bentonite, activated alumina, activated silica, activated silica-alumina mixtures, activated magnesia, calcium silicates, magnesium silicates, and activated carbon, and a polysiloxane coating on both materials, the polymerization of the polysiloxane coating having been catalyzed by the porous material.

2,866,761

POLYMERIZATION OF EPOXIDES

Fred N. Hill, South Charleston, and John T. Fitzpatrick, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application April 5, 1957
Serial No. 650,854
27 Claims. (Cl. 260—2)

1. A process which comprises contacting alkylene oxide with a catalytic quantity of a metal chelate compound, the metal portion of said compound being selected from the group consisting of barium, strontium, and calcium, the chelating agent of said compound being a hydroxylic compound selected from the group consisting of enolic and phenolic compounds which contain a carbonyl group and in which the hydroxylic group is attached to the carbon atom beta to the carbonyl group, for a period of time sufficient to produce poly(alkylene oxide).

2,866,762

PROCESS FOR PREPARING POLYURETHANE FOAMS EMPLOYING TERTIARY AMINE CATALYSTS

Frankarl Brochhagen, Odenthal Bezirk Koln, and Karl E. Müller, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application August 9, 1954
Serial No. 448,746
Claims priority, application Germany August 19, 1953
1 Claim. (Cl. 260—2.5)

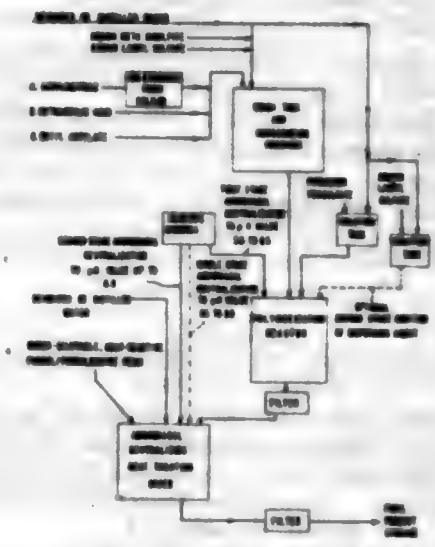
A process of producing a foamed plastic from (1) a hydroxyl polyester prepared by the esterification of a dicarboxylic acid with a polyhydric alcohol, (2) an organic diisocyanate, (3) an activator, and (4) water, which comprises adding said organic diisocyanate to a mixture comprising said hydroxyl polyester, water and the activator, said activator being a compound containing (*a*) at least one tertiary amino group, and (*b*) at least one group containing reactive hydrogen capable of reacting with an isocyanate and selected from the class consisting of amino, hydroxyl, and carboxyl groups; and thereafter stirring the resultant mixture, whereby a foamed plastic is formed.

2,866,763

PROCESS OF PREPARING AQUEOUS DISPERSION OF AN ACRYLONITRILE INTERPOLYMER AND A THERMOSETTING RESIN AND PRODUCT OBTAINED

Philip F. Sanders, Glen Mills, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application April 16, 1956, Serial No. 578,405
14 Claims. (Cl. 260—29.3)



1. A process for preparing a package-stable and gelation-resistant aqeuous dispersion interpolymer composition which process comprises preforming, by emulsion polymerization in water, an acidic interpolymer of a mixture of monomers consisting of (A) 30% to 80% by weight of acrylonitrile, (B) 1.5% to 15% by weight of at least one alpha olefinic monocarboxylic acid selected from the group consisting of acrylic acid, methacrylic acid, ethacrylic acid, phenyl acrylic acid and crotonic acid, and (C) 15% to 65% by weight of at least one ester of an acid of (B) with a saturated aliphatic monohydric alcohol having from 1 to 12 carbon atoms, forming an ammonium salt of said interpolymer by reacting the acidic (B) component of the interpolymer with ammonium hydroxide at a temperature in the range of about 45° C. to about 95° C., and cooling the ammoniacal dispersion to a temperature below about 30° C., the amount of ammonium hydroxide introduced being sufficient to provide the aqueous dispersion with a pH value in the range of 5.5 to 8.0.

2,866,764

INK FOR PRINTING ELECTRICAL CIRCUITS, PROCESS FOR PRINTING A POLYMER SURFACE THEREWITH, AND RESULTING ARTICLE

Fred W. West, Ridgefield, N. J., and Frederick N. Roberts, New York, N. Y., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application March 8, 1954
Serial No. 414,491
28 Claims. (Cl. 260—30.4)

1. A novel conductive ink composition which com-

prises an admixture of particles of an electrical conductor and a solution in an oxygenated organic solvent of a normally solid, two component copolymer of trifluorochloroethylene and between about 5 and about 95 mol percent of a member of the group consisting of vinyl chloride, vinylidene chloride, vinyl fluoride, vinylidene fluoride, 1,1-fluorochloroethylene and trifluoroethylene, said copolymer having a softening point above about 150° C. and said oxygenated solvent being selected from the group consisting of tetrahydrofuran, tetrahydro-2-methyl furan, tetrahydropyran, 3 chlorotetrahydrofuran and dioxane.

2,866,765

LUBRICATING INK COMPOSITION, PROCESS FOR COATING A POLYMER SURFACE THEREWITH, AND RESULTING ARTICLES

Richard A. Smith, Cornwall-on-Hudson, N. Y., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application March 5, 1954
Serial No. 414,510
28 Claims. (Cl. 260—30.4)

1. A novel lubricating ink composition which comprises an admixture of a solid inorganic anti-friction agent and a normally solid copolymer of trifluorochloroethylene and another halogenated olefin said copolymer having a softening point above about 150° C. and being soluble in an oxygenated organic solvent selected from the group consisting of tetrahydrofuran, tetrahydro-2-methyl furan, tetrahydropyran, 3-chlorotetrahydrofuran, and dioxane.

2,866,766

SOLUTIONS OF PERFLUOROCHLOROOLEFIN COPOLYMERS

Francis J. Hoxa, Westfield, N. J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application September 16, 1954
Serial No. 456,611
11 Claims. (Cl. 260—30.4)

1. A novel composition which comprises a copolymer containing below about 80 mol percent of a perfluorochloroethylene copolymerized with a hydrogen containing halogenated ethylene dissolved in saturated cyclic ether selected from the group consisting of tetrahydrofuran, dioxane, tetrahydro-2-methylfuran, tetrahydropyran, trimethylene oxide, alpha-alpha-dimethylene oxide, dioxolane, 2-methyl-1,3-dioxolane, 2,6-dimethyl-tetrahydrodropyran, and 2,3-dimethyl-1,4-dioxane.

2,866,767

COMPOSITION CONTAINING COPOLYMER OF ETHYLENICALLY UNSATURATED COMPOUNDS AND A DIGLYCIDYL ESTER OF A DICARBOXYLIC ACID AND PROCESS OF MAKING SAME

James C. Fang, Sharon Hill, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 20, 1955
Serial No. 523,370
13 Claims. (Cl. 260—30.4)

1. A liquid coating composition comprising (1) a copolymer of (*a*) an ethylenically unsaturated compound of the class consisting of styrene and methyl methacrylate and (*b*) an ethylenically unsaturated compound of the class consisting of acrylic acid and methacrylic acid, (2) a diglycidyl ester of a saturated straight chain aliphatic dicarboxylic acid containing 5–10 carbon atoms per molecule, and (3) volatile organic solvent for said copolymer and said diglycidyl ester, the molar ratio of (*a*) to (*b*) in said copolymer being between 7:1 and 2.5:1, and said diglycidyl ester being present in the amount of 0.3–1.0 mol per mol of (*b*).

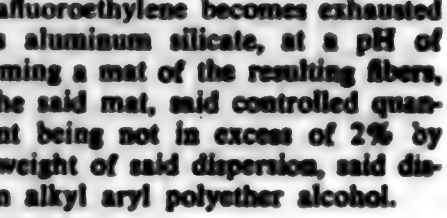
2,866,768

EPOXY MOLDING COMPOSITION AND METHOD OF MOLDING WITH SAME

Luther L. Bolstad, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

No Drawing. Application March 18, 1955
Serial No. 495,341
20 Claims. (Cl. 260—37)

1. A composition of matter comprising para, para' diamino dipbenylmethane together with an epoxy resin having the structural formula



wherein R stands for the hydrocarbon radical of a dihydric phenol and *n* stands for a number ranging from more than 0 up to about 20, and an accelerator taken from the class consisting of phenol, catechol, resorcinol, and cresol, the said diamino compound being commingled with said epoxy resin in an amount ranging from ½ to 30% by weight of said resin, the said accelerator being included in said composition in an amount ranging from greater than 0% to about 10% based on the weight of said resin and diamino compound.

2,866,769

PROCESS FOR MAKING A MAT COMPOSED OF ALUMINUM SILICATE FIBERS AND POLYTETRAFLUOROETHYLENE

William Happoldt, Jr., Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 28, 1954
Serial No. 446,395
2 Claims. (Cl. 260—41)

1. A process which comprises adding a highly ionizable coagulating agent to a dispersion of colloidal polytetrafluoroethylene in water containing fibrous aluminum silicate, said dispersion being further characterized in that it is obtained by adding concentrated aqueous colloidal polytetrafluoroethylene, having a polytetrafluoroethylene content of 10 to 17% by weight to a fibrous aluminum silicate aqueous dispersion having a fibrous aluminum silicate content of about 0.7% by weight, said dispersion containing a controlled quantity of dispersing agent sufficient to prevent coagulation of the dispersion except upon addition of said highly ionizable material, the weight ratio of polytetrafluoroethylene: fibrous aluminum silicate being about 60:40, agitating the resulting mixture until the said polytetrafluoroethylene becomes exhausted upon the said fibrous aluminum silicate, at a pH of about 5, thereafter forming a mat of the resulting fibers, drying and sintering the said mat, said controlled quantity of dispersing agent being not in excess of 2% by weight, based on the weight of said dispersion, said dispersing agent being an alkyl aryl polyether alcohol.

2,866,770

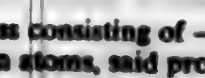
UREA-FORMALDEHYDE MODIFIED WITH POLYMERIZABLE MONOAMIDE CONTAINING OLEFINIC UNSATURATION AND PROCESS OF MAKING SAME

Jan Ide de Jong, Landenberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 17, 1954
Serial No. 476,869
5 Claims. (Cl. 260—45.2)

1. A urea-formaldehyde reaction product comprising a polymethylene polyurea chain terminated by

groups, copolymerized with a compound of the formula



R being of the class consisting of —H and alkyl groups of from 1 to 4 carbon atoms, said product having —CH_2OM groups substituted on amido nitrogens, M being a hydrocarbon group having from 4 to 8 carbon atoms.

2,866,771

METHOD OF PREPARING ADHESIVE COMPOSITION COMPRISING A MALEIC ANHYDRIDE COPOLYMER AND PRODUCT OBTAINED

John C. Sellers, Nixon, N. J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Application September 16, 1953
Serial No. 380,594
18 Claims. (Cl. 260—45.5)

1. An adhesive composition adapted to stick to unprimed polyvinylchloride resin film to provide an adhesive layer surface which is characterized by tenacious adhesion to other objects including human skin but relatively little adhesion to itself, whereby upon contact of two portions of the adhesive surface they will not adhere to each other to such an extent that upon their separation from each other there is disruption of the adhesive mass and undue deformation of the film backing, said composition comprising an ester of a copolymer of maleic anhydride and a vinyl compound selected from the group consisting of styrene and vinyl toluene copolymerized in approximately equimolecular proportions, the copolymer having an intrinsic viscosity in the approximate range of 0.2 to 2.0 as measured in cyclohexanone at 30° C., at least 70% of the potential carboxyl groups present in the anhydride groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol having 6 to 16 carbon atoms, and a highly polymerized material from the group consisting of polyvinyl ethyl ether, butadiene-styrene, polyisobutylene and polyethylacrylate in an amount equal to at least 5% by weight of the composition, the plasticity of said composition being not greater than about 4.0 mm. and the cold flow of said composition being not greater than 2.5 inches, said plasticity being the height of a cylindrical pellet of the composition weighing 2.0 grams and having an initial diameter of 16 mm. placed on a parallel plate plastometer and maintained at 100° F. under a load of 5000 grams measured at the end of a 14 minute period, and said cold flow being measured by sticking a ball of the adhesive weighing 3.0 grams against a vertical glass plate and measuring the downward flow thereof at room temperature at the end of a 24 hour period.

2,866,772

METHOD OF PREPARING ADHESIVE COMPOSITION COMPRISING A MALEIC ANHYDRIDE COPOLYMER AND PRODUCT OBTAINED

John C. Sellers, Nixon, N. J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Application September 16, 1953
Serial No. 380,596
17 Claims. (Cl. 260—45.5)

1. An adhesive composition adapted to stick to unprimed polyvinylchloride resin film to provide an adhesive layer surface which is characterized by tenacious adhesion to other objects including human skin but relatively little adhesion to itself, whereby upon contact of two portions of the adhesive surface they will not adhere to each other to such an extent that upon their separation from each other there is disruption of the adhesive mass and undue deformation of the film backing, said composition comprising an ester of a copolymer of maleic anhydride and a vinyl ether having an alkyl group of 1 to 8 carbon atoms copolymerized in approximately equimolecular proportions, the copolymer having an intrinsic viscosity in the approximate range of 0.2 to 2.0 as measured in cyclohexanone at 30° C., at least 70% of the potential carboxyl groups present in the anhydride groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol having 6 to 16 carbon atoms, and a highly polymerized material from the group consisting of polyvinyl ethyl ether, butadiene-styrene, polyisobutylene and polyethylacrylate in an amount equal to at least 5% by weight of the composition, the plasticity of said composition being not greater than about 4.0 mm. and the cold flow of said composition being not greater than 2.5 inches, said plasticity being the height of a cylindrical pellet of the composition weighing 2.0 grams and having an initial diameter of 16 mm. placed on a parallel plate plastometer and maintained at 100° F. under a load of 5000 grams measured at the end of a 14 minute period, and said cold flow being measured by sticking a ball of the adhesive weighing 3.0 grams against a vertical glass plate and measuring the downward flow thereof at room temperature at the end of a 24 hour period.

2,866,773

PRODUCTION OF INORGANIC POLYMERIC SUBSTANCES

Cyril Aubrey Redfarn, London, England, assignor to Walker Extract and Chemical Company Limited, Bolton, England, a British company

No Drawing. Application July 11, 1955
Serial No. 521,468
Claims priority, application Great Britain July 14, 1954
19 Claims. (Cl. 260—47)

1. A process for the production of modified inorganic polymeric substances which comprises heating a polyphosphonitrilic chloride under substantially anhydrous conditions with a polyhydroxy aromatic compound, the molar ratio of said polyphosphonitrilic chloride to the polyhydroxy aromatic compound being within the range of from about 2:1 to about 1:1.

2,866,774

POLYETHER POLYURETHANE RUBBER

Charles C. Price, South Bend, Ind., assignor to University of Notre Dame, Notre Dame, Ind., a non-profit institution

No Drawing. Application September 23, 1953
Serial No. 381,999
12 Claims. (Cl. 260—77.5)

1. A process of forming a polyurethane reaction product comprising the steps of mixing in a liquid form (1) a hydroxy terminated polyether glycol polymer having a molecular weight of at least 600 which is a condensation product of an alkylene oxide having from 2 to 4 carbon atoms and about .01 to 10 mol. percent based on the alkylene oxide of a polyhydric alcohol having less than 7 carbon atoms and having 3 to 6 primary hydroxyl groups, at least 20 percent of said alkylene oxide having more than 2 carbon atoms, and (2) at least about an equal molar amount of an organic diisocyanate based on said polyether glycol, and reacting the mixture until a second polymer having a chain length substantially greater than that of said polyether glycol polymer is formed.

2,866,775

ADHESIVE COMPOSITION COMPRISING CROSS-LINKED MALEIC ESTER COPOLYMERS, METHOD OF PREPARATION AND A BACKING COATED WITH SAID COMPOSITION

John C. Sellers, Nixon, N. J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Application September 16, 1953
Serial No. 380,595
4 Claims. (Cl. 260—78.5)

1. An adhesive composition adapted to stick to un-

2,866,781

formula $C_{28}H_{44}O_2N_2$ from finely ground parts of a plant

primed polyvinylchloride resin film to provide an adhesive layer surface which is characterized by tenacious adhesion to other objects including human skin but relatively little adhesion to itself, whereby upon contact of two portions of the adhesive surface they will not adhere to each other to such an extent that upon their separation from each other there is disruption of the adhesive mass and undue deformation of the film backing, said composition comprising an ester of a copolymer of maleic anhydride and a vinyl ether having an alkyl group of 1 to 8 carbon atoms copolymerized in approximately equimolecular proportions, the copolymer having an intrinsic viscosity in the approximate range of 0.2 to 2.0 as measured in cyclohexanone at 30° C., at least 70% of the potential carboxyl groups present in the anhydride groups in said copolymer being esterified with an aliphatic primary monohydric saturated alcohol having 6 to 16 carbon atoms said ester having been heated in the presence of added peroxide polymerization catalyst to provide a gel content in the range of 10 to 100% by weight, the plasticity of said composition being not greater than about 4.0 mm. and the cold flow of said composition being not greater than 2.5 inches, said gel content being 100 minus the percent of the adhesive composition which is removed from 0.4 gram of the adhesive composition by mixing it with 100 cc. of benzene, allowing the mixture to stand without stirring for 48 hours at 30° C., then filtering the mixture through a stainless steel wire screen of 100 mesh and separating the residue from 25 cc. of the filtrate by evaporating this filtrate to dryness at 100° C., said plasticity being the height of a cylindrical pellet of the composition weighing 2.0 grams and having an initial diameter of 16 mm. placed on a parallel plate plastometer and maintained at 100° F. under a load of 5000 grams measured at the end of a 14 minute period, and said cold flow being measured by sticking a ball of the adhesive weighing 3.0 grams against a vertical glass plate and measuring the downward flow thereof at room temperature at the end of a 24 hour period.

2,866,776

PROCESS FOR MAKING POLYSULFIDE LIQUID POLYMERS

William R. Nummy, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 4, 1956
Serial No. 575,950
11 Claims. (Cl. 260—79)

1. A process for making a polysulfide liquid polymer containing reactive mercapto groups, which process comprises oxidizing a di(2-mercaptoethyl)ether of a diol, which ether has the general formula:

$$HSCH_2CH_2O—(RO)_n—CH_2CH_2SH$$

wherein RO represents at least one oxyalkylene radical selected from the group consisting of oxyethylene, oxypropylene and oxybutylene radicals and *n* is a whole number from 1 to 4, by bringing oxygen gas into admixture with said ether at reaction temperatures between 0° and 150° C. in the presence of a catalyst material consisting of from 0.00005 to 0.1 percent of an inorganic iron salt of a strong mineral acid and from 0.01 to 5 percent of at least one nitrogen-containing base selected from the group consisting of ammonia and primary amines, based on the weight of said ether, and discontinuing said oxidizing reaction prior to gelling of the mixture.

2,866,777

N-PYRIDYL THIAZOLESULFENAMIDE VULCANIZATION ACCELERATORS

Richard Lechin, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application August 4, 1955
Serial No. 526,563
13 Claims. (Cl. 260—79.5)

1. The method of treating a rubber selected from the group consisting of natural rubber, polybutadiene, polyisoprene and rubbery copolymers of diene hydrocarbons with another monomer copolymerizable therewith which comprises vulcanizing said rubber with sulfur in the presence of an N-pyridyl-2-thiazolesulfenamide.

8. As a new compound an N-pyridyl-2-thiazolesulfenamide.

2,866,778

NEW THIAZOLINE AND THIAZOLE ACCELERATORS

Richard Lechin, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application August 4, 1955
Serial No. 526,564
18 Claims. (Cl. 260—79.5)

1. The method which comprises heating a rubber selected from the group consisting of natural rubber, polybutadiene, polyisoprene and rubbery copolymers of diene hydrocarbons with another monomer copolymerizable therewith and sulfur in the presence of an ester selected from the group consisting of aliphatic esters, aromatic esters, aralkyl esters and cycloaliphatic esters of a compound having the general formula HOOC—Ar—S—S—T in which Ar is an arylene radical and T is selected from the group consisting of 2-thiazolyl and 2-thiazolinyl radicals.

13. As a new compound 2-(o-carbomethoxyphenyldithio)-benzothiazole.

2,866,779

POLYMERIC 2-HYDROXYALKYL QUATERNARY SALTS AND PROCESS FOR THEIR PRODUCTION

James E. Pritchard and Peter J. Canterino, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application July 23, 1954
Serial No. 445,455
23 Claims. (Cl. 260—82.1)

4. The N-(2-hydroxy-2-phenylethyl) quaternary ammonium chloride of a polymer of butadiene and 2-methyl-5-vinylpyridine.

2,866,780

PRODUCTION OF LOW ASH RESIN

George Oliver Hillard, Jr., Westfield, N. J., and Lawrence Wesley McLean, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application March 6, 1957
Serial No. 644,421
14 Claims. (Cl. 260—88.1)

1. In a process for recovering polymeric materials prepared by low temperature Friedel-Crafts polymerization, the improvement which comprises contacting a solution of said material in an alkyl halide solvent having a boiling point below that of water with a hydrocarbon solvent with a boiling point higher than that of the alkyl halide solvent, removing alkyl halide by volatilization, and washing the polymeric material with an aqueous medium with a boiling point higher than that of the hydrocarbon solvent while dissolved in the hydrocarbon solvent.

2,866,787

2,866,781
SEPARATING NON-ACIDS FROM SOAP STOCKS
Richard R. Chase and John C. Bowers, Savannah, Ga., assignors to Union Bag-Camp Paper Corporation, New York, N. Y., a corporation of Virginia
Application July 11, 1956, Serial No. 597,265
2 Claims. (Cl. 260—97.7)

1. In a method of separating non-acid materials including sterols and higher alcohols from a product selected from the group consisting of crude tall oil soap skimmings and cotton seed foots obtained by alkaline treatment thereof, the steps which comprise dissolving said product in water to form a water solution of said soap, extracting said non-acid materials from said soap solution with an ester selected from the group consisting of ethyl acetate, isopropyl acetate, normal butyl acetate, isobutyl acetate, secondary butyl acetate, amyl acetate, methyl amyl acetate, and ethyl propionate to provide a solvent solution of said non-acid material, removing residual ester solvent from both said solvent solution of the non-acid material and the said soap solution by evaporating and stripping, acidifying the solvent-free soap solution to liberate soap acids therefrom and separating said non-acid material.

2,866,782
TALL OIL ROSIN SIZES STABILIZED AGAINST CRYSTALLIZATION AND METHODS OF MAKING SAME
Spencer H. Watkins, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application September 14, 1956
Serial No. 609,891
6 Claims. (Cl. 260—105)

1. A method of stabilizing tall oil rosin sizes against crystallization which comprises incorporating therein from 2% to 20% by weight, based on the weight of rosin, of rosin acid dimer.

2,866,783
GLUTAMIC AND ASPARTIC ACID POLYPEPTIDE POLYMERS AS PLASMA VOLUME EXTENDERS
Max Bovarnick, Brooklyn, N. Y.
Application July 5, 1956, Serial No. 596,811
10 Claims. (Cl. 260—112)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. As a new class of compounds, polypeptide polymers having backbone chains of about 12,000 to 67,000 molecular weight which are chains of carboxylic acids of the class consisting of polyglutamic and polyaspartic acids onto which are attached side chains of about 2100 to 3400 molecular weight, of the class consisting of peptides of polyglutamic and polyaspartic acids, the side chains being attached to the backbone chains by means of peptide linkages between the free carboxyl groups of the backbone polycarboxylic acid chains and the terminal amino groups of the polycarboxylic acid side chains.

2,866,784
PROCESS FOR OBTAINING VOACANGA ALKALOIDS
Léon Gillo, Brussels-Ixelles, and Jean Maisil, Beitsfort-Brussels, Belgium, assignors to Sereiax S. A., and Oletta S. A., both of Grand Duchy of Luxembourg, Luxembourg, both bodies corporate of Luxembourg
No Drawing. Application April 17, 1956
Serial No. 578,578
Claims priority, application Great Britain June 2, 1955
2 Claims. (Cl. 260—236)

1. Process for the preparation of alkaloids pertaining to the group of Voacangine corresponding to the formula $C_{36}H_{38}O_5N_2$, Vocamine corresponding to the formula $C_{24}H_{28}O_3N_2$ and Vobtusine corresponding to the formula $C_{36}H_{38}O_5N_2$ from finely ground parts of a plant of the genus Voacanga comprises subjecting said parts to the action of a first organic solvent of the group consisting of diethyl ether, isopropyl ether, benzene, toluene, dichloroethane, chloroform, methylene chloride, dichlorethylene, methyl acetate and ethyl acetate, concentrating the liquor thus obtained, subjecting the concentrate to the action of a further organic solvent of the group consisting of methanol and ethanol having a strong acid added thereto, then separating by chromatography said alkaloids from the extract thus obtained, the chromatographic adsorption agent being selected from the group consisting of alumina, silica, starch, talc, sodium carbonate, calcium carbonate, calcium phosphate and active carbon and the elution agent being selected from the group consisting of benzene, benzene-acetone mixtures, benzene-ethyl acetate mixtures, benzene-di-isopropyl ether mixtures and benzene-methanol mixtures.

2,866,785
PROCESS FOR PRECONCENTRATING LACTAM OILS
Gerhard Meier, Leuna, Germany, assignor to Veb Leuna-Werke "Walter Ulbricht," Leuna, Germany
No Drawing. Application June 19, 1956
Serial No. 592,253
16 Claims. (Cl. 260—239.3)

1. A process for the preconcentration of water-containing lactam oil obtained by the Beckmann rearrangement of oximes of cyclic ketones and subsequent neutralization, comprising the step of passing a stream of air through said water-containing oil at elevated temperature until the water content of said oil has been reduced to a predetermined value.

14. A process for recovering a lactam from a water-containing lactam oil obtained by the Beckmann rearrangement of an oxime of a cyclic ketone, the subsequent neutralization and the extraction of said water containing lactam oil with a chlorinated hydrocarbon solvent, the improvement which comprises passing a stream of a gas selected from the class consisting of a molecular oxygen containing gas and nitrogen through said water containing lactam oil at elevated temperatures until the water content thereof is reduced to a predetermined value, the treatment with said gas stream being effected prior to the extraction with said chlorinated hydrocarbon, whereby the formation of emulsions during said extraction step is avoided and the permanganate number of said lactam is raised to a relatively high value.

2,866,786
PRODUCTION OF SULTAMES
Hans Feichtinger, Duisburg-Beeck, and Hans Tummes, Duisburg-Meiderich, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany
No Drawing. Application March 16, 1954
Serial No. 415,419
Claims priority, application Germany March 14, 1953
10 Claims. (Cl. 260—243)

1. Process for the production of sultames which comprises cyclo-dehydrochlorinating at a temperature of from −40° C. to +120° C. a mineral acid salt of an amino-alkane sulfochloride having the general formula:

$$NHR_2—R_1—SO_2Cl$$

in which R_1 is an aliphatic alkyl radical having 3–6 carbon atoms, and R_2 is a member selected from the group consisting of hydrogen and alkyl radicals having from 1–3 carbon atoms, and recovering the sultame formed.

one of the structural formulas selected from the class con-

2,866,795

2,866,787

9,9-DIOXY-10-(2,3-BISPIPERIDINO-1-PROPYL) PHENOTHIAZINE

Raymond Jacques Horclois, Maisons-Laffitte, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Application December 13, 1956
Serial No. 628,003
Claims priority, application France November 4, 1954
1 Claim. (Cl. 260—243)

As a new composition of matter 9,9-dioxy-10-(2,3-bispiperidino-1-propyl)phenthiazine.

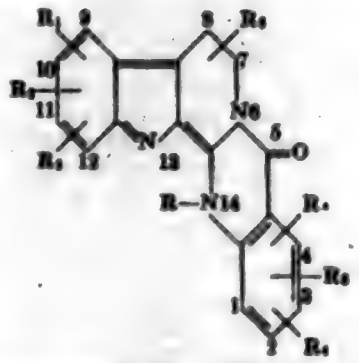
2,866,788

PREPARATION OF INDOLO[2,3-C]QUINAZO [3,2-A]PYRIDINE DERIVATIVES

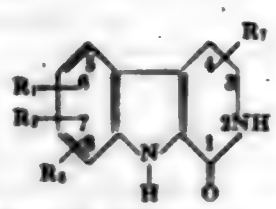
Irwin J. Pachter, Erdenheim, Pa., assignor to Smith, Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application October 18, 1956
Serial No. 616,631
5 Claims. (Cl. 260—256.4)

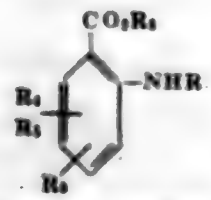
1. The method of forming compounds having the following formula:



in which R is a member selected from the group consisting of alkyl having from 1 to 18 carbon atoms, phenylalkyl having 1 to 6 carbon atoms in the alkyl portion and —CH_2-alkenyl, the alkenyl portion having 2 to 17 carbon atoms; R_1 is a member selected from the group consisting of hydrogen, lower alkoxyl, lower alkyl, —CH_2-alkenyl, the alkenyl portion having 2 to 5 carbon atoms, halo, and trifluoromethyl; R_2 and R_3, are members selected from the group consisting of hydrogen, lower alkoxyl, lower alkyl, —CH_2-alkenyl, the alkenyl portion having 2 to 5 carbon atoms, halo and trifluoromethyl; R_4 is a member selected from the group consisting of hydrogen, lower alkoxyl, lower alkyl, —CH_2-alkenyl, the alkenyl portion having 2 to 5 carbon atoms, halo and trifluoromethyl; R_5 and R_6 are members selected from the group consisting of hydrogen, lower alkoxyl, lower alkyl, —CH_2-alkenyl, the alkenyl portion having 2 to 5 carbon atoms, halo, carbomethoxy and trifluoromethyl; R_7 is a member selected from the group consisting of hydrogen, lower alkoxyl, lower alkyl and halo; the method comprising condensing an indole having the following formula:



with an anthranilic acid derivative having the following formula:



in which R_8 is a member selected from the group consisting of hydrogen and alkyl having 1 to 6 carbon atoms, the condensation being carried out by heating said indole and anthranilic acid derivative in the presence of phosphorus oxychloride as a condensing agent.

2,866,789

INHIBITION OF POPCORN POLYMERIZATION OF VINYLPYRIDINES

Clyde W. Mertz, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application May 22, 1953
Serial No. 356,869
17 Claims. (Cl. 260—290)

1. A method which comprises stabilizing against proliferous polymerization during fractionation and storage a compound selected from the group consisting of monovinylpyridine and alkyl substituted monovinylpyridines wherein the total carbon atoms in alkyl substituents does not exceed 12, by treating said compound with inhibiting amounts of an organic compound of the general formula

$$NO_2—R—NH—R'$$

wherein R is selected from the group consisting of phenylene and alkyl substituted phenylene and wherein R' is selected from the group consisting of alkyl, phenyl, alkyl substituted phenyl and hydrogen.

2,866,790

CATALYST AND DEHYDROGENATION PROCESS

Emory W. Pitzer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application February 18, 1957, Serial No. 640,920
19 Claims. (Cl. 260—290)

1. A method of dehydrogenating a compound selected from the group consisting of monoolefins, alkylpyridines and alkyl aromatics which comprise passing the vapors of said compound into contact with a catalyst consisting essentially of 51.0 to 59.0 percent by weight potassium carbonate, 39.0 to 47.0 percent by weight iron oxide and 1.0 to 10.0 percent by weight chromium oxide.

12. A catalyst consisting essentially of 51.0 to 59.0 percent by weight potassium carbonate, 39.0 to 47.0 percent by weight iron oxide and 1.0 to 10.0 percent by weight chromium oxide.

2,866,791

CATALYST AND DEHYDROGENATION PROCESS

Emory W. Pitzer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application August 1, 1956
Serial No. 601,339
15 Claims. (Cl. 260—290)

1. A method of dehydrogenating a compound selected from the group consisting of monoolefins, alkylpyridines and alkyl aromatics which comprises passing the vapors of said compound into contact with a catalyst consisting essentially of 10.0 to 60.0 percent by weight potassium fluoride, 89.8 to 20.0 percent by weight iron oxide and 0.2 to 20.0 percent by weight chromium oxide.

2,866,792

3,4-DIHYDRO-[$\Delta^{2,2'(3H,3'H)}$-BIFURAN]-5,5'-DIONES AND THEIR PREPARATION

Howard E. Holmquist, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 14, 1956
Serial No. 603,868
9 Claims. (Cl. 260—343.6)

1. 3,4-dihydro-[$\Delta^{2,2'(3H,3'H)}$-bifuran]-5,5'-dione.

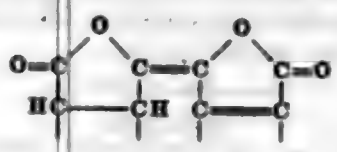
2. A dihydrodilactone having one saturated lactone ring and one unsaturated lactone ring and being represented by

2,866,799

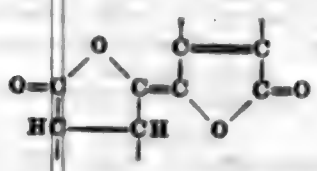
METHOD FOR CONVERTING A 17-20,20-21 BIS-

atom in the presence of a liquid and essentially inert tertiary amide in which the sole nitrogen atom is bonded

one of the structural formulas selected from the class consisting of



and



wherein one free valence of each ring is satisfied by R and the other free valence of each ring is satisfied by R', said R and R' being selected from the class consisting of hydrogen, alkoxyaryl where the alkoxy radical is not more than 12 carbon atoms and the aryl radical is hydrocarbon of not more than 10 carbon atoms, haloaryl where the aryl radical is hydrocarbon of not more than 10 carbon atoms, and monovalent hydrocarbon radicals, free from non-aromatic unsaturation, of not more than 12 carbon atoms.

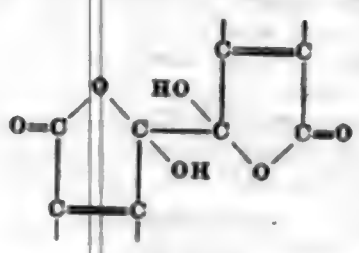
2,866,793

DIHYDROXYBIFURANDIONES AND PREPARATION THEREOF

Howard E. Holmquist, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 28, 1956
Serial No. 606,562
6 Claims. (Cl. 260—343.6)

1. A dihydroxybifurandione represented by the structural formula



wherein one free valence of each ring is satisfied by R and the other free valence of each ring is satisfied by R', said R and R' being selected from the class consisting of hydrogen, alkoxyaryl where the alkoxy group is of not more than 12 carbon atoms and the aryl radical is hydrocarbon of not more than 10 carbon atoms, haloaryl where the aryl radical is hydrocarbon of not more than 10 carbon atoms, and monovalent hydrocarbon radicals, free from non-aromatic unsaturation, of not more than 12 carbon atoms.

2,866,794

SELECTIVE HYDROGENATION

Helmuth Cords, Jamesburg, N. J., assignor to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

No Drawing. Application December 14, 1955
Serial No. 552,987
8 Claims. (Cl. 260—346.2)

8. A process for selectively hydrogenating a 3,6-endoxy-3,6-dihydrophthalate, which comprises reacting a diester of 3,6-endoxy-3,6-dihydrophthalic acid with hydrogen in the presence of a hydrogenation catalyst comprising an element selected from the group consisting of palladium, platinum and rhodium in a liquid solvent of the group consisting of chlorinated lower alkanes, chlorinated cycloalkanes, and chlorinated aromatic hydrocarbons, and recovering the 3,6 - endoxy - 3,4,5,6 - tetrahydrophthalate formed.

2,866,795

PREPARATION OF 5-NITRO-2-FURALDEHYDE SEMICARBAZONE

Geoffrey Swain, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application May 25, 1956
Serial No. 587,201
Claims priority, application Great Britain June 10, 1955
5 Claims. (Cl. 260—347.3)

1. Process for the manufacture of 5-nitro-2-furaldehyde semicarbazone which comprises reacting 5-nitro-2-furaldehyde diacetate and a semicarbazone selected from the group consisting of acetone semicarbazone, benzal semicarbazone and methylethyl ketone semicarbazone, in the presence of a catalytic amount of a strong acid sufficient to hydrolyze said diacetate.

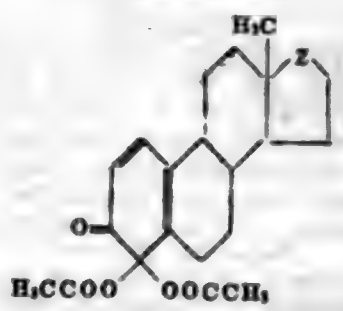
2,866,796

17-OXYGENATED 4,4-DIACETOXYESTRA-1, 5(10)-DIEN-3-ONES

James Jiu, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application December 26, 1957
Serial No. 705,146
3 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein Z is selected from the group consisting of carbonyl and hydroxymethylene radicals.

2,866,797

IMPROVED PROCESS OF ISOLATING STEROLS

Charles Manly Berry, Minneapolis, Robert W. H. Chang, St. Paul, Ned M. Le Bard, Minneapolis, and Sidney E. Miller, St. Paul, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Application November 1, 1954
Serial No. 466,212
4 Claims. (Cl. 260—397.25)

1. Process for the recovery of sterols from a solution thereof in ethylene dichloride which comprises adding thereto from 0.2 to 2% of water and from 2 to 5% of methanol, to precipitate sterols and recovering the sterols.

2,866,798

PROCESS FOR SOLUBILIZATION OF CORTISONE, PREDNISONE, AND THE LOWER ACYL 21-ESTERS THEREOF

Max Jacobson, New York, N. Y.

No Drawing. Application April 13, 1955
Serial No. 501,191
12 Claims. (Cl. 260—397.45)

1. The process for the solubilization of an adrenal cortex hormone selected from the group consisting of cortisone, prednisone, and the lower acyl 21-esters thereof, which comprises combining said hormone with from about 10–15 times the molar amount thereof of an alkali metal hydroxide and with a solvent for said hormone and said hydroxide, and heating said combination to moderately elevated temperatures, whereby at least a portion of said hormone is solubilized.

together at a temperature of about 35° C. a mixture consisting of approximately three moles of propylene oxide

2,866,809

PROCESS OF PREPARING BETA-HALOALIPHATIC

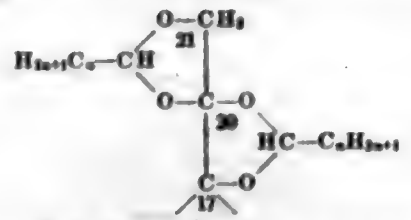
2,866,799

METHOD FOR CONVERTING A 17-20,20-21 BIS-METHYLENEDIOXY OR A 17-20,20-21 BIS-SUBSTITUTED METHYLENEDIOXY STEROID OF THE PREGNANE SERIES TO A 17α,21-DIHYDROXY-20-KETO STEROID OF THE PREGNANE SERIES

Roger E. Beyler, Westfield, and Lewis H. Sarett, Princeton, N. J., assignors to Merck & Co., Inc., Rahway, N. J., a corporation of New Jersey

No Drawing. Application January 2, 1957
Serial No. 632,826
12 Claims. (Cl. 260—397.45)

1. The process which comprises treating a steroid of the pregnane series having at carbon atoms 17, 20 and 21 the structure



wherein *n* is a whole integer having a value of 0 to 5 inclusive with an acid selected from the class consisting of perchloric, formic, acetic and mineral acids thereby forming a 17α,21-dihydroxy-20-keto steroid of the pregnane series.

2,866,800

SUBSTITUTED SILICON ACYLATES

Charles A. MacKenzie, New Orleans, La., and Milton Schoffman, Brooklyn, N. Y., assignors, by direct and mesne assignments, of one-half to Montclair Research Corporation, a corporation of New Jersey and one-half to Ellis-Foster Company, a corporation of New Jersey

No Drawing. Application January 8, 1951
Serial No. 285,036
The terminal portion of the term of the patent to be granted subsequent to January 9, 1968 has been disclaimed
10 Claims. (Cl. 260—448.8)

1. The method of making organo substituted silicon acylates which comprises reacting a mixture in substantial amounts of each of an organo substituted silicon halide having the formula $R_aR'_bSiHY_{(3-a-b)}$ where R and R' are monovalent hydrocarbon radicals and Y is halogen, *a* is from 1 to 2, *b* is from 0 to 1, and $a+b$ is not greater than 2, and an organo substituted silicon halide having the formula $R_dR'_eR''_fSiY_{(4-d-e-f)}$ where R and R' are monovalent hydrocarbon radicals, R'' is selected from the group consisting of monovalent hydrocarbon radicals and hydrogen, Y is halogen, *d* is from 1 to 3, *e* is from 0 to 1, *f* is from 0 to 1, and $d+e+f$ is not greater than 3, the second organo substituted silicon halide being different from the first mentioned organo substituted silicon halide, with a carboxylic acylating agent selected from the group consisting of aliphatic and aromatic carboxylic acids, their anhydrides and salts.

2,866,801

PROCESS FOR THE PRODUCTION OF ORGANIC ISOCYANATES

Chester M. Himel, Menlo Park, and Lawrence M. Richards, Long Beach, Calif., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 27, 1955
Serial No. 555,297
7 Claims. (Cl. 260—453)

1. A process for the preparation of organic isocyanates, which comprises reacting at a temperature below about 230° C. a metal cyanate selected from the group consisting of alkali and alkaline earth metal cyanates with an organic halide selected from group consisting of alkyl, alkenyl, aralkyl, and aralkenyl halides having at least one hydrogen atom on the halogen substituted carbon atom in the presence of a liquid and essentially inert tertiary amide in which the sole nitrogen atom is bonded only to carbon atoms as a solvent for a period between about 0.5 minutes to 24 hours.

2,866,802

PREPARATION OF ORGANIC ISOCYANATES

Bruce Graham, Los Altos, Calif., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 27, 1955
Serial No. 555,298
6 Claims. (Cl. 260—453)

1. A process for the preparation of organic isocyanates which comprises reacting at a temperature below about 230° C. a metal cyanate selected from the group consisting of alkali and alkaline earth metal cyanates with an organic halide selected from the group consisting of alkyl, alkenyl, aralkyl, and aralkenyl halides having at least one hydrogen atom on the halogen substituted carbon atom for a period between about 0.5 minute to 24 hours in the presence of a quaternary ammonium halide having the formula $(R)_4—N—X$, wherein R is a monovalent hydrocarbon radical having up to about 18 carbon atoms and X is a halogen and which is in the liquid state under the reaction conditions as a catalyst.

2,866,803

PREPARATION OF ORGANIC ISOCYANATES

David O. De Pree, Baton Rouge, La., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application December 27, 1955
Serial No. 555,314
6 Claims. (Cl. 260—453)

1. A process for the preparation of organic isocyanates, which comprises reacting at a temperature below about 230° C. a metal cyanate selected from the group consisting of alkali and alkaline earth metal cyanates with an organic halide selected from the group consisting of alkyl, alkenyl, aralkyl, and aralkenyl halides having at least one hydrogen atom on the halogen substituted carbon atom in the presence of a tertiary hydrocarbon amine for a period between about 0.5 and 25 minutes.

2,866,804

UNSATURATED ESTERS OF HYDROXY ISOTHIOCYANATES

Günther Niechk, Leverkusen, and Hans Holtschmidt, Köln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application December 28, 1955
Serial No. 555,743
Claims priority, application Germany December 30, 1954
6 Claims. (Cl. 260—454)

1. As compounds, unsaturated esters of hydroxy isothiocyanates having the formula

R—COO—R'—NCS

in which R represents an unsaturated monovalent radical selected from the group consisting of lower alkenyl and lower alkadienyl radicals and R' represents a divalent radical selected from the group consisting of lower alkylene, phenylene and cyclohexylene radicals.

2,866,805

ORGANIC PROCESS

Earl G. De Witt, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application November 16, 1953
Serial No. 392,454
1 Claim. (Cl. 260—461)

A process for the manufacture of tri-(β-chloropropyl) thionophosphate which comprises the steps of reacting

together at a temperature of about 35° C. a mixture consisting of approximately three moles of propylene oxide per mole of phosphorus trichloride, and then adding elemental sulfur to the resulting product while keeping the temperature of the latter reaction mixture in the range of about 60 to 70° C., the addition being in incremental portions until there has been added about one mole of sulfur per mole of phosphorus trichloride originally used and the time period of the addition being no longer than about 40 minutes.

2,866,806

ESTER MANUFACTURE PROCESS

Francis X. Markley, Royal Oak, and Melvin L. Larson, Ferndale, Mich., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application November 16, 1953
Serial No. 392,504
7 Claims. (Cl. 260—461)

1. A process for the preparation of esters of phosphorus acids comprising reacting a carbonic acid ester of a glycol with a trihalophosphorus compound.

2,866,807

ALIPHATIC ARYL PHOSPHITES

William P. Beyer and Jesse Roger Maugham, Richmond, Va., assignors to Virginia-Carolina Chemical Corporation, Richmond, Va., a corporation of Virginia

No Drawing. Application April 15, 1954
Serial No. 423,536
13 Claims. (Cl. 260—461)

1. Process for the production of mixed aliphatic aryl phosphites which comprises mixing an aryl phosphorohalidite with at least a chemically equivalent amount of an aliphatic alcohol in the presence of ammonia in quantity sufficient to maintain the reaction mixture substantially neutral.

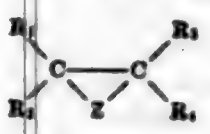
2,866,808

CHEMICAL PROCESS FOR PRODUCING TRI(β-HALOALIPHATIC) ESTERS OF PHOSPHORUS ACIDS

Alfred J. Kolka, Birmingham, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application August 4, 1954
Serial No. 447,917
15 Claims. (Cl. 260—461)

1. Process of preparing a tri-(β-haloaliphatic) ester of a monomeric acid of phosphorus which comprises reacting at a temperature between about 0° and about 100° C. and in the presence of a catalytic quantity of a basic amine as catalyst, an aliphatic compound of the formula



in which R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, alkyl containing from 1 to about 18 carbon atoms, aryl containing up to about 10 carbon atoms and haloalkyl containing up to 3 halogen atoms and from 1 to 10 carbon atoms, and Z is selected from the group consisting of oxygen and sulfur; with a phosphorus trihalide selected from the group consisting of trivalent phosphorus trihalides, phosphoryl trihalides, and thionophosphoryl trihalides, said process being further characterized in that said basic amine is selected from the group consisting of alkyl amines, mononuclear aryl amines, organic heterocyclic nitrogen-containing amines and lower alkanol amines and that said aliphatic compound is present in amount equal to at least about 3 moles per each mole of said phosphorus trihalide.

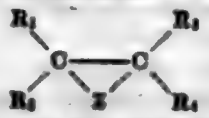
2,866,809

PROCESS OF PREPARING BETA-HALOALIPHATIC ESTERS OF HALOGEN SUBSTITUTED ACIDS OF PHOSPHORUS

Alfred J. Kolka, Birmingham, Mich., assignor to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application August 5, 1954
Serial No. 448,159
10 Claims. (Cl. 260—461)

1. Process of preparing β-haloaliphatic esters of monomeric halogen-substituted acids of phosphorus possessing from 1 to 2 halogen atoms directly bonded to phosphorus, which comprises reacting at a temperature between about −10° C. and about 100° C. and in the presence of a catalytic quantity of a basic amine as catalyst, an aliphatic compound of the formula



in which R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, alkyl containing from 1 to about 18 carbon atoms, aryl containing up to about 10 carbon atoms and haloalkyl containing up to 3 halogen atoms and from 1 to 10 carbon atoms, and Z is selected from the group consisting of oxygen and sulfur; with a phosphorus trihalide selected from the group consisting of trivalent phosphorus trihalides, phosphoryl trihalides and thionophosphoryl trihalides, said process being further characterized in that said basic amine is selected from the group consisting of alkyl amines, mononuclear aryl amines, organic heterocyclic nitrogen-containing amines and lower alkanol amines and that said aliphatic compound is present in amount equal to that required to react with no more than two atoms of halogen per molecule of said phosphorus trihalide.

2,866,810

MANUFACTURE OF PHOSPHORODICHLORIDITES

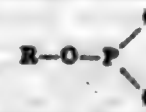
Henry Tolkmith, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application June 6, 1957
Serial No. 663,882
3 Claims. (Cl. 260—461)

1. In a method wherein one molecular proportion of a substituted phenol having the formula

R—OH

is mixed with at least 4 molecular proportions of phosphorus trichloride and the resulting mixture heated at a temperature at which hydrogen chloride of reaction is evolved to produce a reaction resulting in the production of a phosphorodichloridite having the formula



in which the substituent R in the above formulas represents a member of the group consisting of chlorophenyl and 2-chloro-4-loweralkylphenyl, the improvement which comprises (1) causing at least 0.25 molecular proportion of the substituted phenol to react with the phosphorus trichloride in the absence of a catalyst and (2) thereafter completing the reaction in the presence of magnesium chloride as catalyst.

2,866,811

ESTERS OF ACYCLIC POLYOLS WITH METABORIC ACID

Glenn E. Irish and Marguerite S. Beylerian, Detroit, Mich., assignors to Ethyl Corporation, New York, N. Y., a corporation of Delaware

No Drawing. Application April 19, 1956
Serial No. 579,128
7 Claims. (Cl. 260—462)

1. Esters between an acyclic polyol and trimeric meta-

boric acid, said polyol having 3 to 10 carbon atoms and 2 to 3 hydroxyl groups attached to carbon atoms, each of said hydroxyl groups being separated from its neighboring hydroxyl group by 3 to 6 carbon atoms and up to one nitrogen atom, the total number of atoms separating said neighboring hydroxyl groups being 3 to 6, in which all of the hydroxyl groups of said polyol are bonded to said acid.

2,866,812

ALKYLATED ESTERS

Earl V. Kirkland, Le Marque, Tex., assignor to The American Oil Company, Texas City, Tex., a corporation of Texas

No Drawing. Application October 30, 1956
Serial No. 619,102
4 Claims. (Cl. 260—485)

1. A mixture of olefin-dioctyl adipate alkylation products which is prepared by reacting propylene with dioctyl adipate under alkylation reaction conditions in the presence of a free radical initiating agent whereupon alkylation reaction products comprising alkylated and non-alkylated dioctyl adipate and olefins polymers are produced, fractionally distilling said alkylation reaction products to remove olefin polymers which are lower boiling than dioctyl adipate and recovering a mixture of alkylated and non-alkylated dioctyl adipate containing at least 5% of the alkylated dioctyl adipate, said recovered mixture having an average molecular weight between about 380 and 500 and having a higher kinematic viscosity and a higher viscosity index than the original dioctyl adipate.

2,866,813

ALDEHYDE DIACYLATES AND PROCESS FOR PRODUCING THE SAME

Lucius W. McTeer, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application March 29, 1956
Serial No. 574,615
5 Claims. (Cl. 260—488)

1. A process for producing aldehyde diacylates which comprises bringing into reactive admixture an aliphatic aldehyde containing from 1 to 8 carbon atoms, inclusive, with a lower aliphatic carboxylic acid anhydride at a temperature of from about —20° C. to about 100° C. in the presence of a catalyst comprised of boric acid and oxalic acid.

5. 1,1-diacetoxy-2,4-hexadiene.

2,866,814

TRIETHYLAMINE SALTS OF N-(NAPHTHYL)-DITHIOCARBAMIC ACIDS

Bryant C. Fischback, Walnut Creek, and Guy H. Harris, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 28, 1955
Serial No. 543,613
2 Claims. (Cl. 260—501)

1. A compound selected from the group consisting of triethyl ammonium N-(1-naphthyl)-dithiocarbamate and triethyl ammonium N-(2-naphthyl)-dithiocarbamate.

2,866,815

PROCESS FOR THE PRODUCTION OF AROMATIC COMPOUNDS CONTAINING CARBOXYL GROUPS

Hubert Schirp, Duesseldorf, Germany, assignor to Henkel & Cie. G. m. b. H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application July 2, 1957
Serial No. 669,439
Claims priority, application Germany July 4, 1956
10 Claims. (Cl. 260—515)

1. A process for the production of aromatic mono- and dicarboxylic acids which comprises the steps of heating salts of organic acids wherein a phosphorus atom is directly attached to an aromatic ring system selected from the group consisting of aromatic phosphonic and phosphonous acids, in a substantially oxygen free, substantially anhydrous atmosphere of carbon dioxide, in the presence of an alkali metal carbonate, to a temperature of at least 200° C. but not higher than the temperature at which the starting materials and products will substantially decompose, and thereafter separating the aromatic acid products.

2,866,816

PRODUCTION OF ARYLOXY COMPOUNDS

Basil Jason Heywood, Hornchurch, England, assignor to May & Baker Limited, Dagenham, England, a British company

No Drawing. Application April 20, 1956
Serial No. 579,451
Claims priority, application Great Britain April 22, 1955
6 Claims. (Cl. 260—521)

1. A process for the preparation of γ-phenoxybutyric acids in the form of alkali salts thereof which comprises adding γ-butyrolactone to a substantially anhydrous mixture of an alkali metal derivative of a phenol selected from the group consisting of phenol and its halogen and lower alkyl substitution derivatives and a monohydric alcohol boiling between 99 and 140° C. at atmospheric pressure, removing by distillation the greater part of the alcohol and heating the residue to a temperature higher than 140° C.

2,866,817

STABILIZATION OF SALTS OF SORBIC ACID USING GLUCONO-DELTA-LACTONE

Amelio E. Montagna, South Charleston, and Everett R. Lashley, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application February 4, 1957
Serial No. 637,892
16 Claims. (Cl. 260—526)

1. A stabilized solution of a salt of sorbic acid comprising a water-soluble salt of sorbic acid, water and at least 0.0005 part by weight of glucono-delta-lactone per 100 parts by weight of said salt of sorbic acid.

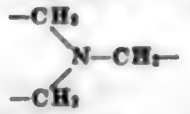
2,866,818

STABILIZATION OF SALTS OF SORBIC ACID USING AMINES

Amelio E. Montagna, South Charleston, and Everett R. Lashley, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application February 4, 1957
Serial No. 637,893
34 Claims. (Cl. 260—526)

1. A stabilized solution of a salt of sorbic acid comprising a water-soluble salt of sorbic acid, water and, per 100 parts by weight of said salt of sorbic acid, at least 0.0005 part by weight of an amine characterized by having the nucleus represented by the formula:



wherein two of the CH_2 groups have each attached to them an organic group containing only one carbon atom.

2,866,819

STABILIZATION OF SALTS OF SORBIC ACID USING CITRIC ACID

Amelio E. Montagna, South Charleston, and Everett R. Lashley, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application February 4, 1957
Serial No. 637,857
16 Claims. (Cl. 260—526)

1. A stabilized solution of a salt of sorbic acid com-

prising a water-soluble salt of sorbic acid, water and at least 0.0005 part by weight of citric acid per 100 parts by weight of said salt of sorbic acid.

2,866,820

PRODUCING METHANOL AND ACETIC ACID FROM SAPONIFICATION MIXTURES OF METHYLACETATE

Hans Anselm, Grafelfing ver Munich, Alfons Koller, Munich-Pasing, and Jürgen Smidt, Munich-Solln, Germany, assignors to Consortium für Elektrochemische Industrie G. m. b. H., Munich, Germany, a German firm

Application April 25, 1956, Serial No. 588,605
2 Claims. (Cl. 260—541)

1. In a process for the production of methanol and acetic acid from reaction mixtures obtained on saponification of methylacetate with water in the presence of acid catalysts, the steps which comprise heating the saponification reaction mixture to substantially its boiling point and continuously conducting the heated mixture to the distributor tray of a thru-flow column, maintaining the temperature on the distributor tray from 95° C. to below the boiling point of water, removing that portion of the methanol in the reaction mixture introduced into the column which is in excess of that required to form a binary methanol-methylacetate azeotrope with the methylacetate present distilling off said methylacetate at the head of the column as a binary methanol-methylacetate azeotrope containing the remaining methanol, condensing said binary azeotrope and separating the methyl alcohol therefrom by continuously countercurrently extracting said binary methanol-methylacetate azeotrope with a highly concentrated aqueous salt solution, distilling the methyl alcohol from said salt solution, returning the methyl acetate remaining after said extraction to the saponification reaction, and extracting the acetic acid formed by said saponification from the aqueous solution accumulating in the still at the base of the column.

2,866,821

BROMO ALKOXY AROMATIC SULFONYL CHLORIDES

Bernard Wargotz, Cuyahoga Falls, and Arthur H. Weinstein, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application June 12, 1956
Serial No. 590,819
3 Claims. (Cl. 260—543)

1. The bromoalkoxy aromatic sulfonyl chlorides defined by the formula:

$$Br—(CH_2)_n—O—R—SO_2Cl$$

wherein R is an aromatic radical selected from a class consisting of phenylene and naphthylene and *n* is a whole number from 1 to 3.

2,866,822

LOW PRESSURE PRODUCTION OF FORMAMIDES

Howard T. Stefen and William R. Trutna, Pasadena, Tex., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application June 27, 1956, Serial No. 594,313
2 Claims. (Cl. 260—561)

1. In a process for the production of methylformamides, the steps comprising effecting reaction of a methylamine selected from the group consisting of methylamine and dimethylamine with carbon monoxide substantially free of carbon dioxide and water and using minor amounts of an alkali metal methylate and methanol as a catalyst, the reaction being conducted with a downwardly flowing body of reaction product and an upward, counter-current flow of the carbon monoxide, the amine being added near the top of the reaction body, the process being conducted under the following conditions:

Temperature, 20 to 160° C.
Pressure, 40 to 135 p. s. i. g.
Methylamine concentration at the point of addition from 1 to 50 mol percent of the total composition at the point of addition

the carbon monoxide being added into the body as bubbles no larger than 2 millimeters in diameter.

2,866,823

PROCESS FOR THE REMOVAL OF FORMALDEHYDE FROM CRUDE PYRUVIC ALDEHYDE SOLUTION

Howard R. Guest, Charleston, and Ben W. Kitt, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application December 14, 1956
Serial No. 628,223
5 Claims. (Cl. 260—593)

2. A process for the removal of formaldehyde from a solution comprising pyruvic aldehyde, formaldehyde and water, which comprises admixing said solution with an acid catalyst and an excess of methanol and heating the resulting mixture at atmospheric pressure to form dimethyl formal and dimethyl acetal of pyruvic aldehyde, distilling off an azeotrope of dimethyl formal and methanol, adding water to the solution remaining after substantially all the azeotrope has been distilled off, heating the resulting liquid mixture at atmospheric pressure to hydrolyze the dimethyl acetal of pyruvic aldehyde and continuing the heating to distill off methanol from the mixture.

2,866,824

PREPARATION OF FLUOROCARBON PHOSPHINES

Anton B. Burg and Walter Mahler, Los Angeles, Calif., assignors, by mesne assignments, to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Application June 7, 1957
Serial No. 664,183
9 Claims. (Cl. 260—606.5)

1. A process for the preparation of fluorocarbon phosphines which comprises: treating $(RCF_2)_2PX$ where R is from the group consisting of lower alkyl and fluorine and X is iodo with mercury in the presence of a member from the group consisting of water and a protonic, non-oxidizing acid and separating said fluorocarbon phosphine so formed from the reaction mixture.

2,866,825

PRODUCTION OF NON-STAINING ANTIOZONANT

William K. T. Gleim, Island Lake, Peter Urban, Northbrook, and John G. Gatsis, Chicago, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application November 19, 1956
Serial No. 622,800
6 Claims. (Cl. 260—613)

1. The method of producing a non-staining antiozonant for rubber which comprises treating settled hardwood tar distillate at a temperature of from at least 25° C. to about 100° C. with an alkali metal hydroxide selected from the group consisting of sodium and potassium

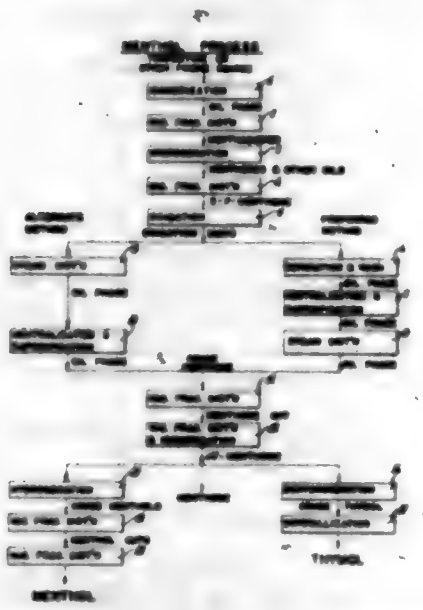
hydroxides in a proportion of from at least 1 mol to about 3 mols of alkali metal hydroxide per mol of phenolic compound in said wood tar distillate when said hydroxide is sodium hydroxide and at least 2 mols to about 3 mols of hydroxide per mol of phenolic compound in the wood tar distillate when the hydroxide is potassium hydroxide, in the presence of at least 2 parts by weight of water per part by weight of phenolic compound, adjusting the temperature to below about 85° C. to precipitate the alkali metal salt of the dimethyl ethers of 5-alkyl-pyrogallols, separating the resultant precipitate from the other components of the wood tar distillate, and subsequently springing the salt to recover the dimethyl ethers of 5-alkyl-pyrogallols as said non-staining antiozonant.

2,866,826

METHOD OF MAKING MENTHOL FROM PINENE

Henry E. McLaughlin, Joseph H. Stump, Jr., and Mason C. Cleere, Pensacola, Fla., assignors, by mesne assignments, to Heyden Newport Chemical Corporation, New York, N. Y., a corporation of Delaware

Application May 14, 1953, Serial No. 354,943
14 Claims. (Cl. 260—631)



1. The method of making menthol from mixed menthadienes selected from the group consisting of alpha terpinene, gamma terpinene and isoterpinolene and mixtures thereof, which comprises hydrogenating said mixed menthadienes to produce mixed menthenes including 3-p-menthene, subjecting said menthenes to oxidation by means of a per-acid selected from the group consisting of performic and peracetic acid to form oxidation products of said menthenes consisting essentially of menthene glycol, the mono- and di-esters of said glycol and the formic acid or acetic acid derived from said selected acid, and menthene oxide, steam-distilling said reaction products while maintaining the same at a pH between 0.5 and 1.3 to obtain crude menthone, vacuum fractionally distilling said crude menthone and hydrogenating the resulting menthone to menthol.

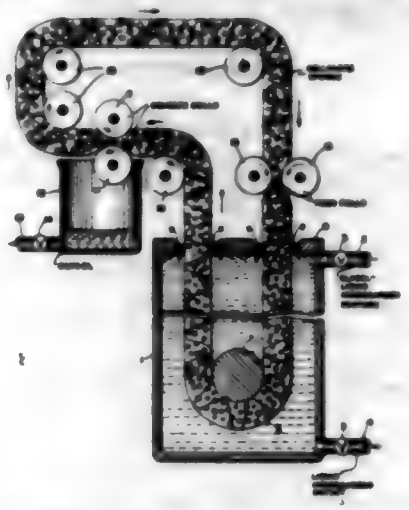
2,866,827

PROCESS FOR THE RECOVERY OF GLYCOLS FROM LIQUID HYDROCARBONS

Wolfgang Jurgeleit, Obernburg (Main), and Erhard Siegel, Laudenbach (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken AG., Wuppertal-Elberfeld, Germany

Application April 24, 1956, Serial No. 580,481
Claims priority, application Germany April 28, 1955
5 Claims. (Cl. 260—637)

1. An improved process for the recovery of a glycol from a finely dispersed mixture of a glycol in a liquid hydrocarbon which comprises contacting said mixture



with a cellulose adsorbent for selective adsorption of said glycol thereon.

2,866,828

PRODUCTION OF DIHALOBENZENES

John A. Crowder, Uniondale, and Everett E. Gilbert, Flushing, N. Y., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application September 4, 1953
Serial No. 378,671
8 Claims. (Cl. 260—650)

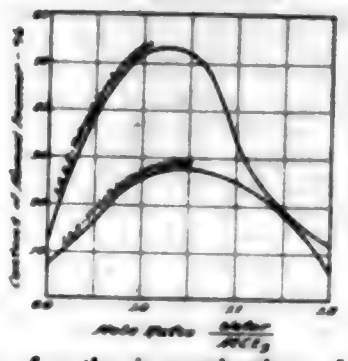
1. The method of preparing metadihalobenzene which comprises reacting a charge material selected from the group consisting of 1,2,4-homotrihalobenzene and 1,3,5-homotrihalobenzene with an approximately equimolar amount of hydrogen in the presence of an active hydrogenation catalyst selected from the group consisting of platinum, palladium, nickel, nickel chromite, and copper chromite, said reaction being conducted at temperature between the boiling point of said charge material and 600° C.

2,866,829

ISOMERIZATION OF POLYCHLOROBENZENES

Douglas Woodruff, Maywood, Ill.

Application March 26, 1956, Serial No. 573,988
10 Claims. (Cl. 260—650)



1. A process for the isomerization of polychlorobenzenes of the group consisting of trichlorobenzenes and tetrachlorobenzenes, comprising heating said polychlorobenzenes with a catalyst produced by the interaction of water and anhydrous aluminum chloride, the $H_2O/AlCl_3$ mole ratio of said catalyst being in the approximate range 0.95 to 1.10.

2,866,830

FIXED BED OXYCHLORINATION OF HYDROCARBONS

James L. Dunn, Jr., and Bob Posey, Jr., Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application May 31, 1956
Serial No. 588,253
6 Claims. (Cl. 260—650)

1. In the oxychlorination of hydrocarbons by passing

a mixture of hydrocarbon, hydrogen chloride and elemental oxygen through a fixed bed of a chloride of copper supported on particles of alumina, the improvement which consists in diluting the copper chloride bearing particles in said bed by intermingling them with from 3 to 20 volumes of silicon carbide particles for each volume of the copper chloride bearing particles.

2,866,831

CATALYTIC PROCESS FOR PRODUCING 1-METHYLCYCLOHEXENE

Arthur Lambert and Herbert Pulfreeman, Blackley, Manchester, England, assignors to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application November 12, 1954
Serial No. 468,576
Claims priority, application Great Britain November 16, 1953
3 Claims. (Cl. 260—666)

1. Process for the manufacture of a product which consists primarily of 1-methylcyclohexene which comprises heating liquid 2-methylcyclohexanol at a temperature between 120° and 150° C., in the presence of an acid-activated bleaching earth and maintaining said 2-methylcyclohexanol in the liquid phase during said heating, said 2-methylcyclohexanol containing 35–40% by weight of cis- and 60–65% by weight of trans-2-methylcyclohexanol.

2,866,832

PROCESS FOR THE DEHYDRATION OF DIMETHYLPHENYLCARBINOL

Maurice Fenoglio, Lyon, André Pacoud, St.-Fons, and Emmanuel Alvarado, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Application December 17, 1956
Serial No. 628,578
Claims priority, application France July 13, 1954
9 Claims. (Cl. 260—669)

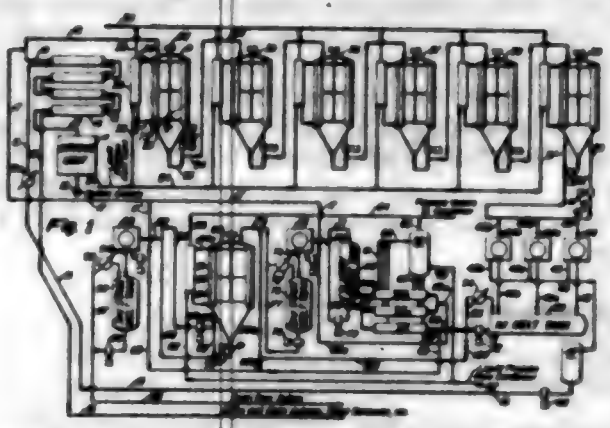
1. A process for the conversion of dimethylphenylcarbinol into monomeric α-methylstyrene comprising heating dimethylphenylcarbinol in the presence of catalytic quantities of a substantially non-volatile organic carboxylic acid having an ionization constant of at least 1×10^{-4} and at most 1×10^{-2}, measured at 25° C.

2,866,833

PARAXYLENE PURIFICATION SYSTEM

Charles A. Spiller, Jr., Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application September 14, 1953, Serial No. 379,776
3 Claims. (Cl. 260—674)



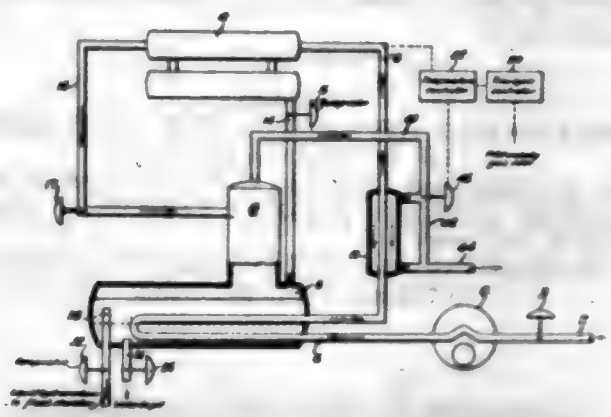
1. The method of obtaining 98 to 99 percent pure xylene from a C_8 hydrocarbon charge containing about 8 to 25 percent paraxylene in admixture with other C_8 xylene isomers, ethyl benzene and paraffins, which method comprises chilling said charge to a temperature below about −100° F. and above the temperature at which a component other than paraxylene would be solidified, separating from the resulting slurry a first solids cake containing about 80 percent solids and a first filtrate, melting the first solids cake and effecting purification thereof in two additional stages of crystallization and separation wherein a second solids cake, containing about 90 to 95 percent solids is obtained by crystallizing at a temperature in the range of about +20° to −30° F. and by separating a second filtrate therefrom in the first of said additional stages and wherein a third solids cake is obtained by crystallizing at a temperature in the range of about 30° to 35° F. and by separating a third filtrate therefrom in the second of said additional stages, returning at least a part of the filtrate from the second of the additional stages to the first of the additional stages, returning at least a minor part of the filtrate from the first of the additional stages to the initial crystallizing step and melting the cake from the second of the additional stages to obtain a paraxylene of 98 to 99 percent purity.

2,866,834

METHOD AND APPARATUS FOR SEPARATING WATER AND FLUID HYDROCARBONS

Richard W. Donnelly, Bellaire, Tex., assignor to The Texas Company, New York, N. Y., a corporation of Delaware

Application May 17, 1956, Serial No. 585,475
6 Claims. (Cl. 260—676)



1. A continuous method for separating water and readily liquefiable hydrocarbons from gaseous streams under pressure in a gas separating system which comprises first forming hydrocarbon hydrates in said stream by cooling by heat exchange means, thereafter separating liquids from the gaseous stream, further cooling the gaseous stream by expansion, again separating liquids from the gaseous stream, and recurrently interrupting said first cooling to cause the system to be flushed of hydrate formation by the incoming gaseous stream.

4. A high pressure, low temperature gas separator which comprises means to cool an incoming fluid stream by heat exchange, means to separate a liquid portion of said cooled stream, means to thereafter expand said fluid stream, and means to separate any liquid formed after the expansion of said stream, and automatic, temperature independent means to recurrently interrupt said heat exchange coling means whereby said incoming fluid stream will recurrently warm up said separator.

2,866,835

OLEFIN SEPARATION AND RECOVERY

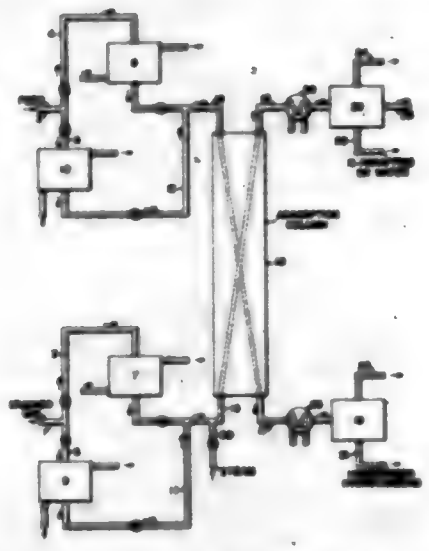
Charles Newton Kimberlin, Jr., and William Judson Mattox, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application August 30, 1956, Serial No. 607,237
8 Claims. (Cl. 260—676)

1. An improved process for separating straight chain olefins from straight chain paraffins which comprises passing a vaporized stream of hydrocarbons comprising

28. The method of producing silicates which comprises

adsorption zone, maintaining a temperature of from about 175° to 450° F. in said zone, withdrawing unadsorbed hydrocarbons including cis n-olefins while adsorbing n-paraffins and trans n-olefins, passing a normally gaseous olefin



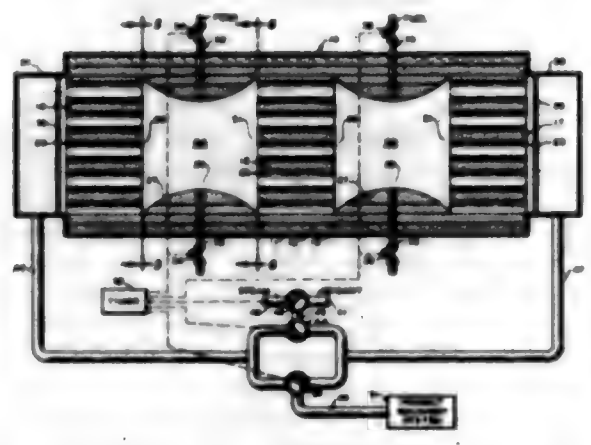
comprising stream into said zone whereby n-paraffins are desorbed and said last-named olefins adsorbed, segregating said desorbed paraffins, thereafter purging said adsorption zone, and withdrawing a stream comprising normally gaseous olefins and trans n-olefins adsorbed from said first named stream.

2,866,836

PROCESS AND APPARATUS FOR CONVERSION OF HYDROCARBONS

John W. Begley and Robert R. Goins, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application October 22, 1954, Serial No. 463,918
8 Claims. (Cl. 260—683)



1. A regenerative furnace which comprises, in combination, first, second and third refractory checkerworks arranged in longitudinal alignment; longitudinal passageways extending through said refractory checkerworks; a first mixing chamber formed of refractory material in the shape of a venturi, said chamber being positioned between said first and second refractory checkerworks; lateral fluid introduction means communicating with said first fixing chamber, said lateral introduction means communicating at its other end with a source of fluid to be endothermically converted; a second mixing chamber formed of refractory material in the shape of a venturi, said chamber being positioned between said second and third refractory checkerworks; lateral fluid introduction means communicating with said second mixing chamber; means for introducing steam into said first refractory checkerworks; and means for introducing oxidant into said third refractory checkerwork.

5. A process for converting hydrocarbons which comprises passing steam into a first refractory checkerwork; heating said steam within said first refractory checkerwork to a desired temperature; passing heated-steam from said first refractory checkerwork directly into a mixing chamber; introducing liquid hydrocarbon feed into said mixing chamber and admixing said feed with said steam therein; passing the resulting mixture of heated steam and hydrocarbon feed into a second refractory checkerwork; cracking said hydrocarbon feed within said second refractory checkerwork; passing the resulting reaction products into a third refractory checkerwork; quenching said reaction products within said third refractory checkerwork; and removing said cooled reaction products from said third refractory checkerwork; then terminating the flow of said hydrocarbon and said steam.

2,866,837

CATALYTIC ALKYLATION OF HYDROCARBONS

Heinz Heinemann, Swarthmore, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 25, 1952
Serial No. 306,289
2 Claims. (Cl. 260—683.64)

1. The method of preparing gasoline products of good anti-knock qualities which comprises: preparing a mixture of a recycle stream and fresh feed, said mixture consisting essentially of C_3–C_6 hydrocarbons and hydrogen, there being about one mol of hydrogen per mol of hydrocarbon and there being a significant proportion of olefins and a still greater quantity of saturated isoparaffin hydrocarbons in said mixture so that the mol ratio of isoparaffins to olefins is not less than 4:1; passing said mixture at a space rate of about 4 volumes of liquid hydrocarbon per hour per volume of catalyst at a temperature of about 800° F. at a pressure of about 200 p. s. i. g. through a catalytic zone characterized by a dual-function catalyst comprising an aluminaceous carrier having the property of promoting acid-catalyzed reactions said carrier having a minor quantity of hydrogenation-dehydrogenation promoting component intimately associated therewith whereby olefins and isoparaffins undergo an alkylation reaction to form hydrocarbon products of the gasoline boiling range; withdrawing the effluent from the catalytic zone; separating from said effluent a recycle stream consisting of C_3–C_6 hydrocarbons and hydrogen for inclusion in said mixture; and separating and withdrawing gasoline products of good anti-knock qualities from said effluent.

ELECTRICAL

2,866,838

METHOD AND APPARATUS FOR PRODUCING MOLTEN SILICATES

Elisha W. Paxton, Columbus, Ohio, assignor to Stratabar Process Company, Columbus, Ohio, a partnership

Application February 16, 1956, Serial No. 565,840
29 Claims. (Cl. 13—6)

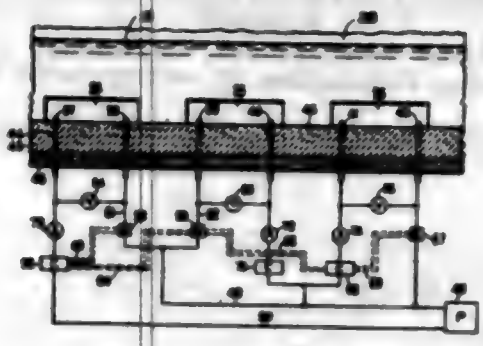
22. A furnace for producing molten silicates comprising containing means for said molten silicates, said containing means communicating with a plurality of submerged passages for receiving a plurality of flows of molten silicates from said containing means; and means for selectively varying the operating temperature of certain of said plurality of flows to produce a desired distribution of flow in said plurality of passages.

2,866,844

DEAD-END CONNECTORS

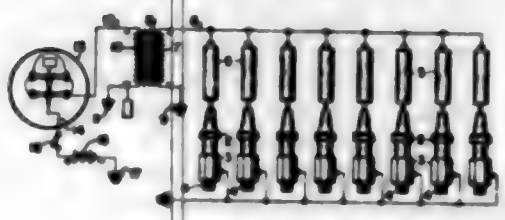
said insulator, and having open windows in its wall to

producing molten silicates by melting, passing a plurality of flows of said molten silicates through a plurality of submerged throats, and selectively varying the temper-



ature of certain of said flows to control the relative rates of movement of said flows through said throats.

2,866,839
IGNITION SYSTEMS FOR INTERNAL COMBUSTION ENGINES
Frank J. Kachni, Cleveland, Ohio, assignor to Economy Engine Company, Youngstown, Ohio, a corporation of Ohio
Application August 1, 1957, Serial No. 675,652
38 Claims. (Cl. 123—148)



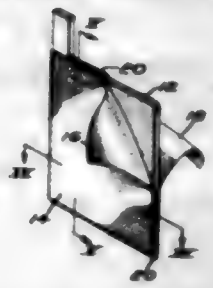
1. An ignition system for an internal combustion engine having a plurality of cylinders providing a plurality of combustion chambers, comprising an ignition chamber for each cylinder, each ignition chamber communicating with the combustion chamber of a cylinder, a pair of spaced electrodes within each ignition chamber and spaced from the communicating combustion chamber, a current limiting means for each pair of electrodes, each of said current limiting means being connected in series relationship with a pair of electrodes, each pair of electrodes and its current limiting means being connected in parallel relationship in respect of the other pairs of electrodes and current limiting means, and a source of high potential current connected to said parallel arrangement of current limiting means for continuously supplying current impulses of high frequency and high voltage thereto and to said electrodes.

2,866,840
POLYELECTROLYTES IN BATTERY PASTES
John F. Dittmann, Joplin, Mo., and Earl B. Cupp, Galena, Kans., assignors to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Application April 5, 1954
Serial No. 421,264
4 Claims. (Cl. 136—26)

1. A lead oxide mixture adapted to form a cohesive paste with water for use in the preparation of lead-acid battery plates, comprising leady litharge containing 5 to 30% free lead and .1 to 1% sodium polymethacrylate.

737 O. G.—83

2,866,841
ELECTRODE SEPARATOR
Harold E. Zahn, Buffalo, N. Y., assignor to Gould-National Batteries, Inc., St. Paul, Minn.
Application May 2, 1956, Serial No. 582,213
5 Claims. (Cl. 136—147)

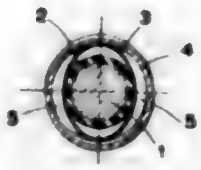


1. In an alkaline electrolytic cell containing electrodes of opposite polarity, a separator disposed between said electrodes and comprising a perforated cast film of nylon material having a thickness of no more than 0.025 inch.

2,866,842
SUPERCONDUCTING COMPOUNDS
Bernd Teo Matthias, Berkeley Heights, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application July 30, 1953, Serial No. 371,396
5 Claims. (Cl. 174—15)

1. In combination, a superconductor consisting of a solid solution of NbN and NbC, including at least 5 percent of either of said binary compounds, and means for artificially refrigerating said superconductor.

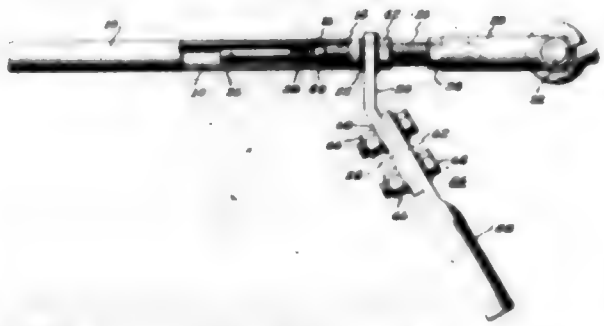
2,866,843
CORRUGATED COMPRESSION TYPE ELECTRIC CABLES
Adrian Neville Arman, London, England, assignor to Pirelli-General Cable Works Limited, London, England, a British company
Application August 23, 1954, Serial No. 451,435
1 Claim. (Cl. 174—25)



A compression type electric cable comprising in combination at least one cable core, a fluid-tight continuous cable core-receiving inner sheath of non-circular and substantially uniform cross section and made of metal possessing substantial elasticity as compared with lead, a core-impregnating fluid in said inner sheath, means for counteracting the formation of outward folds or wrinkles in said inner sheath on bending it in the axial direction, said means comprising a fluid-tight continuous outer sheath surrounding said inner sheath and formed of like metal, said outer sheath being corrugated circumferentially and said outer sheath corrugations being of such a depth as to make firm contact with the inner sheath at at least two points on the periphery of each complete circumferential corrugation.

nals, comprising a charge storage electrode, means for producing sound at the frequencies of the harmonics,

2,866,844
DEAD-END CONNECTORS
John J. Klosin, Yonkers, N. Y., assignor to The Thomas & Betts Co., Elizabeth, N. J., a corporation of New Jersey
Application August 8, 1956, Serial No. 602,777
6 Claims. (Cl. 174—79)

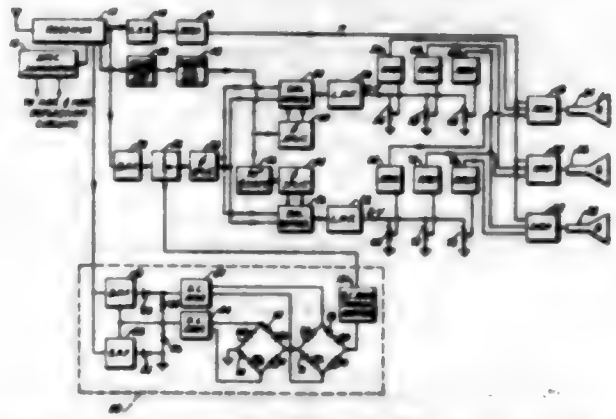


5. In combination with a composite cable conductor having an inner and outer component of steel and aluminum respectively with an end portion of said inner component extending beyond said outer component, of dead-end connector assembly comprising a tubular member of ductile metal having one end portion thereof permanently anchored to the outer aluminum component of said cable, the opposite end portion of said tubular member being counterbored for a relatively short distance and provided with an internal screw thread, a screw-threaded steel stud having a reduced end portion provided with an axial bore secured within the screw-threaded end of said tubular member with its reduced end portion permanently anchored to the inner steel component of said cable within said tubular member, a clevis bracket adjustably mounted on the free end portion of said screw stud including a pair of lock nuts securing said tubular member, screw stud and clevis bracket against relative angular movement, and a take-off strap having one end thereof permanently secured on the screw-threaded end of said tubular member substantially normal thereto having a terminal lug including a tap line detachably secured thereto by means of a plurality of screw bolts.

2,866,845
HIGH VOLTAGE INSULATION MOUNTING
Ivan K. Finney, Uncasville, Conn., assignor to the United States of America as represented by the Secretary of the Navy
Application June 6, 1955, Serial No. 513,617
1 Claim. (Cl. 174—139)
(Granted under Title 35, U. S. Code (1952), sec. 266)

A high voltage insulation mounting which comprises a pair of insulating plates in face to face alignment but spaced apart, an elongated high voltage insulator extending from face to face through one of said plates well into the space between said plates, supported by said one plate and having a high voltage terminal at its exterior end for connection to a high voltage line, a cylindrical corona tube of non-ferrous metal surrounding that part of said insulator which is between said plates and at its ends abutting the inner faces of said plates, means for clamping said plates to the said tube with the tube approximately concentric with but spaced well from said insulator, and having open windows in its wall to ventilate the space around said insulator and prevent moisture condensation within the tube.

2,866,846
TELEVISION COLOR SATURATION CONTROL SYSTEM
David B. Smith, Meadowbrook, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application September 10, 1951, Serial No. 245,806
5 Claims. (Cl. 178—5.4)

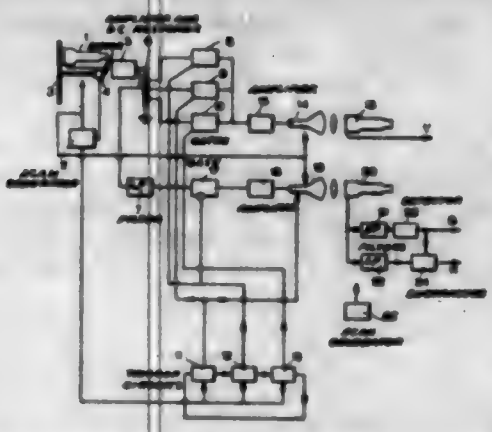


1. A color television receiving system for reproducing a color television image as defined by a color video wave having a modulated component thereof having amplitude and phase variations establishing variations of the saturation and the hue respectively of the colors of said image, said color video wave having a further component establishing the brightness of said image and establishing with said modulated component the chromaticity of said image, said system comprising means responsive to said color video wave to produce a color image having variations in brightness, hue and saturation proportional to variations of said signal components, a first transmission channel for said modulated component, a second transmission channel for said second component, means within said first channel to derive from said modulated wave two color component signals, means coupled to said second channel and to said deriving means to apply said second component and said two color component signals to said image reproducing means, the magnitude of the amplitude variations of said modulated component being adjustable independently of the said phase variations thereof, and means within said first channel for adjustably controlling the magnitude of the amplitude variations of said modulated component independently of the said phase variations thereof to thereby vary the saturation of the colors of said image without simultaneously varying the brightness and hue of the colors of said image, said last-named means comprising a transmission path having an attenuation proportional to a control signal applied thereto, and further comprising means to produce a control signal indicative of the intensity of said color video wave, and means to apply the said control signal to said transmission path to vary the attenuation thereof proportionally to the intensity of said color video wave.

2,866,847
SEQUENTIAL-TO-SIMULTANEOUS COLOR SIGNAL TRANSFORMATION SYSTEM
Ivanhoe John Penfound James, South Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application August 18, 1955, Serial No. 529,299
Claims priority, application Great Britain August 18, 1954
6 Claims. (Cl. 178—5.4)

1. Apparatus for converting field sequential colour television signals into simultaneous colour television sig-

nals, comprising a charge storage electrode, means for applying signals to said electrode during a field of one colour so as to store charges in lines extending in one direction, means for applying signals to said electrode during fields of a different colour so as to store charges in lines extending in the same direction, means for varying the effective width of the lines during fields of one



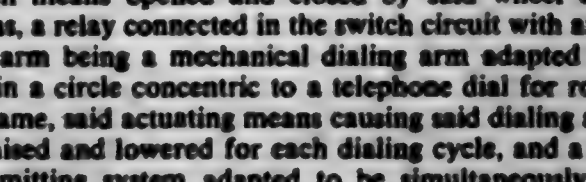
colour with respect to the width of the lines during fields of the different colour so as to cause merging of the lines during said first-mentioned fields and to cause the lines to remain discrete during said other fields, means for scanning said electrode in lines extending transverse to said first lines to reproduce signals representing said different colours, and frequency sensitive means for separating reproduced signals representing the different colours.

2,866,848
METHOD OF IMPROVING INTELLIGENCE UNDER RANDOM NOISE INTERFERENCE
Lawrence J. Fogel, Jackson Heights, N. Y.
Application April 2, 1954, Serial No. 420,764
3 Claims. (Cl. 179—1)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. In a system for increasing the intelligibility of speech in the presence of noise, an amplifier having an input and two outputs, a gating circuit having an input, an output and a control connection, a peak detecting circuit for transforming alternating current energy peaks of audio frequencies into direct current switching pulses, said detecting circuit having an input for low frequency audio signals and an output for the direct current switching pulses, a low pass filter connecting the input of said detecting circuit to one of the outputs of said amplifier, the output of said detecting circuit connected to the control connection of said gating circuit, the input of said gating circuit connected to the other of the outputs of said amplifier, and an electromechanical transducer connected to the output of said gating circuit, said gating circuit being in an "on" position when no signal is being detected and in an "off" position when a peak energy signal is being detected by said detecting means.

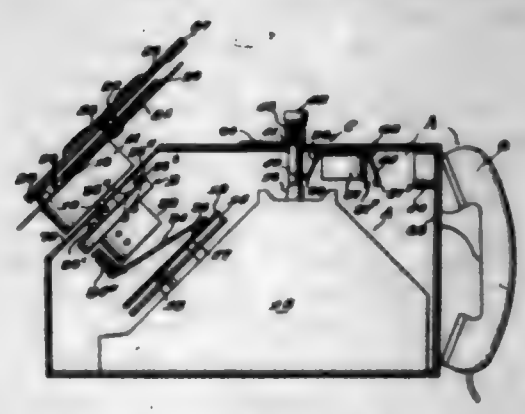
2,866,849
APPARATUS FOR IMPROVING SOUNDS OF MUSIC AND SPEECH
Charles D. Lindridge, Montclair, N. J., assignor of one-fourth to Leo C. Krasinski, New York, N. Y.
Application April 27, 1955, Serial No. 504,131
3 Claims. (Cl. 179—1)

1. Apparatus for producing harmonics of frequencies higher than 3 kc. in recorded music or speech and for producing sound at the frequencies of the harmonics, which includes a sound source, a harmonic producer which produces harmonics of currents received from said sound source, a filter for attenuating frequencies lower than 3 kc. to insignificant levels at the input of said



harmonic producer, a filter for attenuating frequencies lower than 6 kc. at the output of said harmonic producer, an amplifier for amplifying said harmonics, and a loudspeaker at which sound at the frequencies of said harmonics is produced and at which said recorded music or speech is reproduced.

2,866,850
TELEPHONE DIALING AND CODE TRANSMITTING SYSTEM
Frank J. Duca and Willis E. Phipps, Mobile, Ala.
Application June 6, 1957, Serial No. 663,953
12 Claims. (Cl. 179—5)

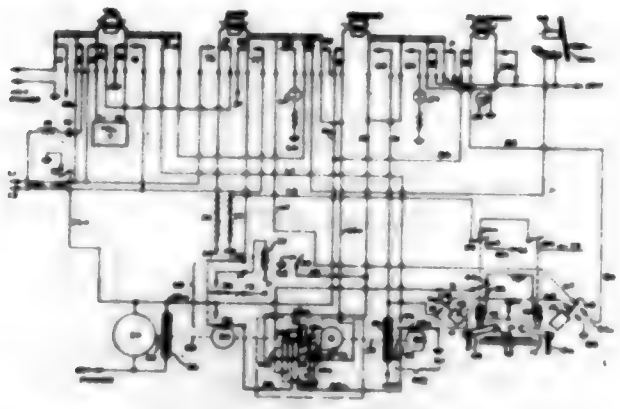


4. Apparatus for electrically dialing a preselected telephone number on a dial telephone comprising in combination a telephone contact relay means for switching the telephone in and out of circuit, an electric motor in a power circuit, means for switching said motor into the said circuit to energize the same, a dial wheel driven by said motor, switch actuating means carried by the wheel, switch means opened and closed by said wheel carried means, a relay connected in the switch circuit with an arm, said arm being a mechanical dialing arm adapted to rotate in a circle concentric to a telephone dial for rotating the same, said actuating means causing said dialing arm to be raised and lowered for each dialing cycle, and a sound transmitting system adapted to be simultaneously actuated to transmit a signal over the telephone to a distant receiver station after said distant station has been dialed by said motor driven dial arm.

2,866,851
TELEPHONE ANSWERING AND RECORDING DEVICES
Harry R. Van Deventer and John J. Shively, New York, N. Y., assignors to Telephone Answering and Recording Corporation, New York, N. Y., a corporation of Delaware
Application October 23, 1952, Serial No. 316,476
6 Claims. (Cl. 179—6)

1. Control circuits and apparatus in combination therewith for use in a device of the character described; a motor having a shaft; a first timing mechanism having contacts and a shaft; a first electrically operated automatically resetting clutch interposed between said shafts

and adapted when energized to couple said motor shaft to said first timer shaft to operate said first timer mechanism; a first power supply circuit, one side of which is connected to said motor and clutch; a first contact means including some of said first mentioned contacts controlled by said first timer for connecting the remaining controlled side of said first power circuit to said motor and first clutch, thereby completing said power circuit thereto, said means being operable for a predetermined period to control said first timing mechanism; a second power supply circuit; a second contact means; a relay in said second power supply circuit in series with said second



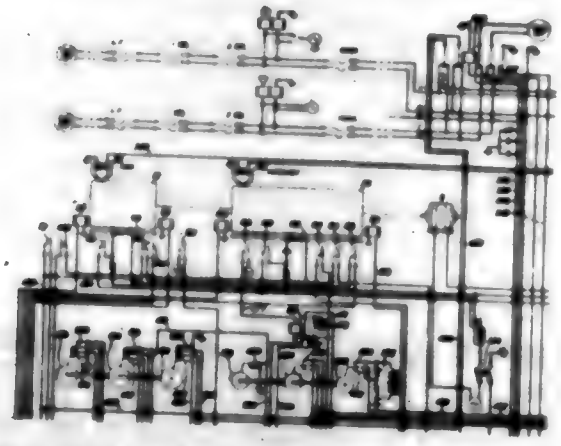
contact means whereby said relay will be energized upon the operation of said second contact means, said relay having normally open contacts; a second timing mechanism having contacts and a shaft, a second electrically operated automatically resetting clutch interposed between the said shafts of said timing mechanisms; a third contact means including some of said contacts of said second timer mechanism serially included in a circuit with said first contact means in said first timer adapted to disable said first power circuit to disconnect said motor and first clutch therefrom, said second timer and second clutch being released upon operation of said second control means upon the operation of said first timer.

2,866,852

AUTOMATIC TELEPHONE ANSWERING AND MESSAGE-RECORDING SYSTEM

Robert A. Miller, Plainfield, Clifford A. Nickerson, Bernardsville, and Charles M. Tarin, Cranford, N. J., assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application May 29, 1956, Serial No. 585,010
19 Claims. (Cl. 179—6)



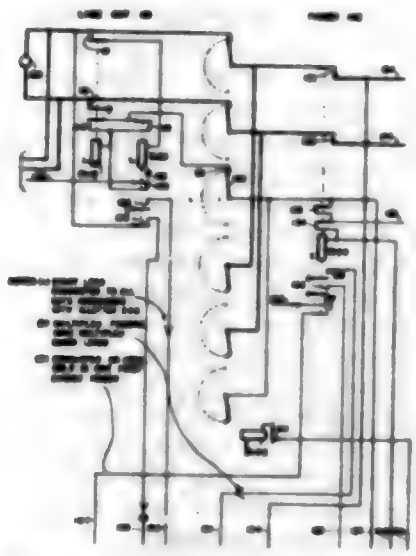
9. In an automatic telephone answering and message recording system, a home station, distant stations, a device at said home station for storing telephone messages received from said distant stations, said device comprising a rotatable record drum, means for playing back said stored messages to a distant station, said means comprising a transducer supported on a first carriage adapted to traverse said drum axially and to be actuated toward and away from said drum, a feed screw, driving means for rotating said drum and said feed screw, said feed screw engaging said first carriage when actuated toward said drum to impart axial motion thereto in a forward direction away from its initial starting position, second and third carriages adapted to traverse said drum axially in said forward direction when engaged by said carriage, said second carriage being engaged by said first carriage during the playback of messages, said third carriage being engaged by said first carriage at a point corresponding to the end of the last recorded message, latching means for engaging said first and second carriages, a telephone line connected to said home station, means responsive to a signal transmitted over said line for energizing said driving means to rotate said drum and feed screw, means energized through said signal responsive means for actuating said first carriage to disengage it from said feed screw and for imparting axial motion thereto in a reverse direction toward said second carriage, a first switch on said second carriage adapted to be actuated by said first carriage traveling in said reverse direction, first means responsive to said actuated first switch for arresting the motion of and actuating said first carriage toward said drum to engage said feed screw, second means responsive to said actuated first switch for actuating said latching means to engage said first and second carriages, means responsive to a disconnect condition established at said distant station for deenergizing said driving means, for actuating said latching means to disengage said first and second carriages, for actuating said first carriage to disengage it from said feed screw and for imparting axial motion to said first carriage in a forward direction toward said third carriage, a second switch on said third carriage adapted to be actuated by said first carriage traveling in said forward direction, means responsive to said actuated second switch for arresting the forward motion of said first carriage.

2,866,853

ROTARY FINDER WITH GRADED MULTIPLE

Clarence E. Lomax, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

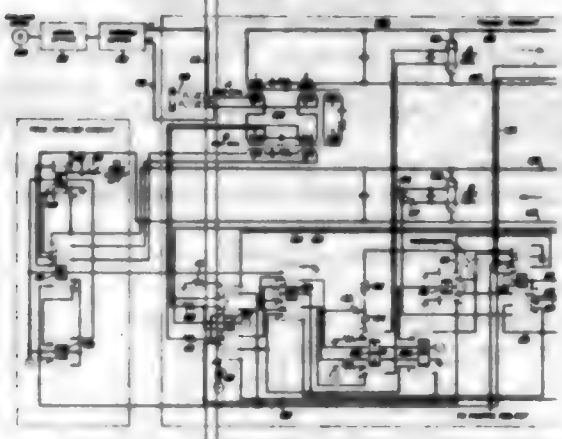
Application November 18, 1953, Serial No. 392,891
14 Claims. (Cl. 179—18)



1. In an automatic switch having access by way of wipers associated therewith to a plurality of lines terminating in bank contacts of the switch, magnet means for advancing said wipers over said contacts, means including said wipers for testing the idle or busy condition of said lines, means normally operated responsive to said wipers encountering a busy condition for operating said magnet means to advance the wipers at one speed, additional means operated responsive to said wipers en-

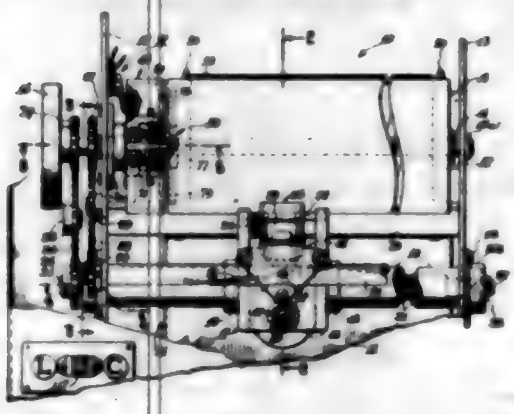
countering a busy condition for operating said magnet means to advance the wipers at a slower speed to reduce excessive wear on the parts of the switch, means for rendering said additional means effective and said third means ineffective, and means whereby said last means is operated only upon said wipers testing and finding all of said lines busy.

2,866,854
TONE APPLIER CIRCUIT
Oscar H. Williford, Bronxville, N. Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application March 9, 1956, Serial No. 570,510
10 Claims. (Cl. 179—18)



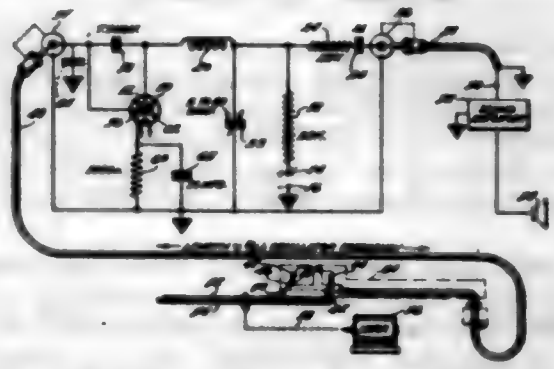
1. In a telephone system, a trunk circuit incoming to a toll office, a calling subscriber station, a called subscriber station, means to connect said calling station to said trunk circuit, means to extend a connection from said trunk circuit through said toll office toward said called subscriber station, a supervisory relay in said trunk circuit, means to repeatedly operate and release said supervisory relay if said connection cannot be completed to said called subscriber station, a tone applier in said trunk circuit, means responsive to the first operation and release of said supervisory relay to prepare said tone applier, and means responsive to each subsequent operation of said supervisory relay to transmit a tone signal to said calling subscriber station.

2,866,855
DICTATING MACHINES
Louis Z. La Forest, Parsippany, N. J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Application January 22, 1957, Serial No. 635,222
8 Claims. (Cl. 179—100.1)



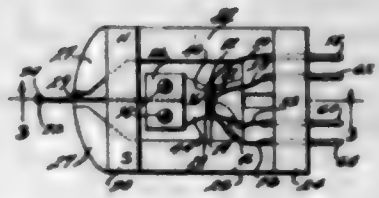
1. In a dictating machine having means for supporting a record, a record-cooperable recording head mounted for movement transversely of a supported record, and drive means for advancing said record support and concurrently transversely moving said recording head for causing said head to scan a major portion of a supported record while leaving thereon a free border portion: the combination of an indexing head engageable with said border portion; means mounting said indexing head for movement along said border portion in the direction of advance of the record; means responsive to said transverse movement of said recording head for causing said indexing head to be moved along said border portion in proportion to said scanning movement; and means for momentarily energizing said indexing head for making indexing registrations on said border portion at positions therealong corresponding to respective points of scanning on the record.

2,866,856
CONTROLLED OSCILLATOR SYSTEMS
Paul Weathers, Haddon Heights, N. J.
Application February 15, 1954, Serial No. 410,698
17 Claims. (Cl. 179—100.4)



1. In a controlled oscillator system for operation at a desired mean frequency of oscillation, the combination of: an amplifier device having an input circuit and an output circuit; means coupling said input circuit with said output circuit to produce oscillation in said amplifier; a transmission line means tuned to approximately one-quarter wavelength of the desired frequency of oscillator system operation; means coupling one end of said transmission line to the input circuit of said amplifier device; a control circuit comprising an inductance element and a capacitance element, at least one of said elements being mechanically controllable in value, said elements being so connected with one another as to form a resonant circuit, the resonant frequency of which is in turn mechanically controllable; means coupled to said inductance element for establishing a pair of coupling access terminals across which is sustained a relatively low value of impedance, the exact value of which is a function of the controllable value of resonance sustained by said control circuit; and means coupling the other end of said transmission line to said pair of coupling access terminals.

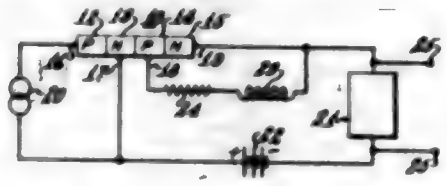
2,866,857
PHONOGRAPH PICKUP
Dallas R. Andrews, Collingswood, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application December 20, 1955, Serial No. 554,192
4 Claims. (Cl. 179—100.41)



1. A magnetic phonograph pickup comprising in combination, a generator comprising a substantially rectangular semiconductor wafer having flat opposing major faces, first circuit connection means on opposite edges of said semiconductor wafer for connection with a bias potential source, second circuit connection means on the remaining

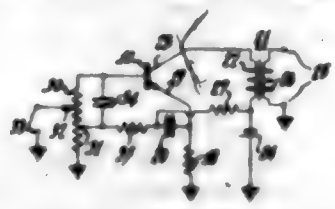
opposite edges of said semiconductor wafer for connection to a utilization device, permanent magnet means for providing a source of magnetic flux of constant magnitude, means providing a magnetic flux path through said semiconductor wafer and effectively normal to the major faces thereof, a vibratile stylus arm for said pickup, and means including said vibratile member for modulating the magnetic flux through said semiconductor wafer to produce an output voltage across said second circuit connection means in accordance with the displacement of said vibratile stylus arm.

2,866,858
WIDE BAND SIGNAL AMPLIFIER CIRCUIT
George C. Sziklai, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application November 8, 1954, Serial No. 467,519
8 Claims. (Cl. 179—171)



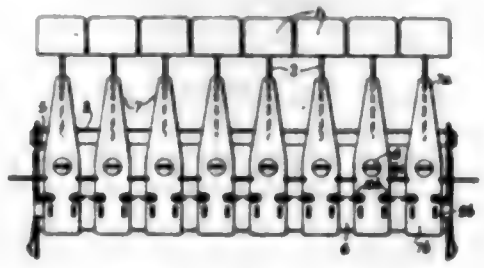
1. A wide band signal amplifier circuit comprising in combination, a semiconductor device including a semiconductive body having therein a plurality of zones arranged in succession and including two end zones and at least two intermediate zones, adjacent zones being contiguous and of opposite conductivity types, a signal input circuit connected between one end zone and one intermediate zone which is contiguous therewith, a signal output circuit connected between said one intermediate zone and the other end zone, and a frequency selective network the impedance of which increases with increases of frequency over at least a portion of the frequency band of said amplifier circuit connected between said other end zone and the intermediate zone contiguous therewith providing a predetermined gain-frequency characteristic for said signal amplifier circuit.

2,866,859
AUDIO AMPLIFIER BRIDGE INPUT CIRCUITS
Thomas O. Stanley, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application July 11, 1955, Serial No. 521,015
2 Claims. (Cl. 179—171)



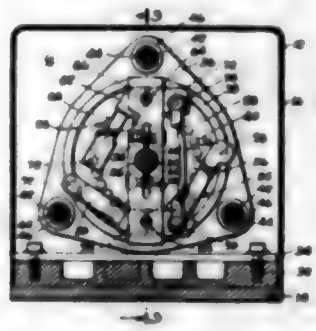
1. A signal amplifier circuit comprising, in combination, a transistor having base, emitter, and collector electrodes, means providing a signal input circuit having a first terminal and a second terminal connected to a point of reference potential in said circuit, resistive impedance means connected between said base electrode and said point of reference potential, means connecting said first terminal to a variable tap point on said resistive impedance means for coupling signals from a signal source to said base electrode, a first resistor connected between said emitter electrode and said point of reference potential to provide direct-current degeneration and operating point stabilization of said circuit, a by-pass capacitor and a second resistor connected in series in the order named from said emitter electrode to an intermediate point of said resistive impedance means, said capacitor being effective to prevent alternating current degeneration across said first resistor, the nature and magnitude of said resistive impedance means and said first resistor relative to the impedance of said signal source providing with said capacitor efficient signal coupling substantially without signal degeneration from said source to said base electrode, capacitive means connected from said base electrode to said intermediate point and providing with said second resistor and said by-pass capacitor a time constant effective to control the tone compensation characteristics of said amplifier circuit, and means providing a signal output circuit connected between said collector and emitter electrodes.

2,866,860
ELECTRICAL SWITCHES
Leonard William Descarrieres Sharp, North Chingford, Kenneth Edmund Newman, Wanstead, London, and Robert Stanley Wright, Ilford, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Application August 26, 1957, Serial No. 680,342
Claims priority, application Great Britain September 6, 1956
8 Claims. (Cl. 200—5)



1. An electrical switch comprising a fixed switch contact; a contact movable relative to the fixed contact; a key lever having a rest position, connected to move the movable contact for switching purposes; a pivot member for the key levers; means for supporting the pivot member; a leaf spring extending longitudinally of the key lever for resiliently urging the key lever to its rest position and a longitudinally directed guide in the leaf spring which guidingly co-operates with at least a portion of the key lever at a point distant from its pivot axis.

2,866,861
SWITCHING MECHANISMS
George J. Lynch, Bloomfield, N. J., assignor to Mycalex Electronics Corporation, Clifton, N. J., a corporation of New York
Application April 25, 1956, Serial No. 580,524
7 Claims. (Cl. 200—11)



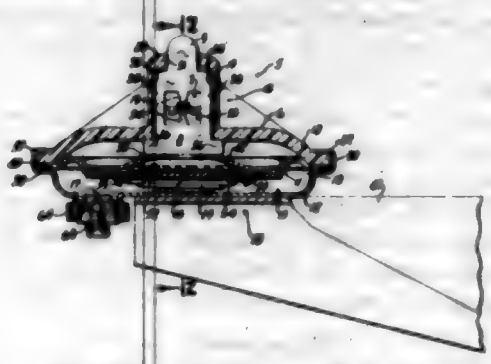
1. In an electric device, a first conducting means, a second conducting means movable relative to said first conducting means, said second conducting means comprising spaced brushes in sliding moving engagement with said first conducting means along the same path thereon, one of said spaced brushes being relatively hard and another of said spaced brushes being relatively soft.

2,866,862

TIME DELAY SWITCH

Robert W. Bachi, Marion, Ind., assignor, by mesne assignments, to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

Application October 14, 1955, Serial No. 540,475
8 Claims. (Cl. 200—34)



6. In a time delay instrumentality for controlling an electric circuit: a housing; means on said housing including a flexible membrane defining a substantially closed chamber at one side of the membrane and a switch compartment at the other side of the membrane; a rigid switch actuator in the housing; means on the housing constraining the actuator to back and forth movement toward and from the membrane, said actuator having a projection at one end thereof projecting out of the housing through an aperture in a wall thereof to be accessible at the exterior of the housing, and said actuator having an abutment at its other end and a cutout; means on the membrane providing a rigid reinforcement therefor, at the face thereof adjacent to the switch compartment, and cooperable with said abutment on the actuator to translate motion of the actuator toward the membrane into flexing of the membrane inwardly of said chamber and to translate flexing of the membrane outwardly of said chamber into motion of the actuator in the opposite direction; means yieldingly biasing the membrane outwardly of said chamber; check valve means cooperable with an apertured wall portion of said chamber to permit free escape of air from the chamber upon flexure of the membrane inwardly of the chamber and to obstruct entry of air into the chamber through said aperture as the membrane flexes outwardly of the chamber; means providing a restricted vent communicating the interior of said chamber with the atmosphere to regulate the rate at which air flows into said chamber in response to outward flexing of the membrane and to thus regulate the rate at which said actuator is moved in said opposite direction; and a switch carried by the housing in the switch compartment thereof, and said switch including a movable switch arm mounted in spaced substantially parallel relation to said membrane and movable toward and from the membrane to operate the switch, said switch arm extending through said cutout in the actuator and having a connection with the actuator whereby the actuator effects swinging of the switch arm toward the membrane as the actuator is moved toward the same and whereby the switch arm swings away from the membrane at a rate determined by movement of said actuator in said opposite direction.

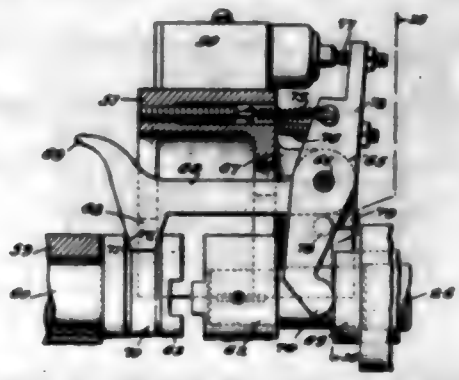
2,866,863

SWITCH MECHANISM

Justin Simpson, Elmhurst, Ill., assignor to Continental Can Company, Inc., New York, N. Y., a corporation of New York

Original application August 3, 1955, Serial No. 526,197. Divided and this application May 13, 1957, Serial No. 658,711
3 Claims. (Cl. 200—47)

1. In a machine stopping means, a support, a normally closed machine stopping switch mounted on said support, a lever fulcrumed between its ends on said support and having one end operatively associated with said switch to open the latter when said lever is moved in one direction, a locking arm pivotally mounted on said support near said lever, said locking arm being disposed at an angle to said lever for retaining a portion of the



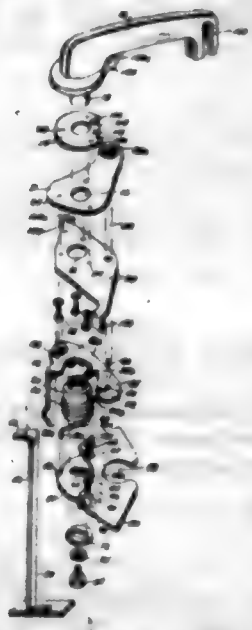
machine in a fixed position, and coacting abutments on said lever and arm including portions permitting pivotal movement of said lever to a switch opening position independently of said locking arm and for swinging said lever to switch opening position when said arm is manually swung from its normal position to released position.

2,866,864

CLOSING MECHANISM, MOLDED CASED BREAKERS

George J. Giesmer, Oaklyn, N. J., and August Bodenschatz, Philadelphia, Pa., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

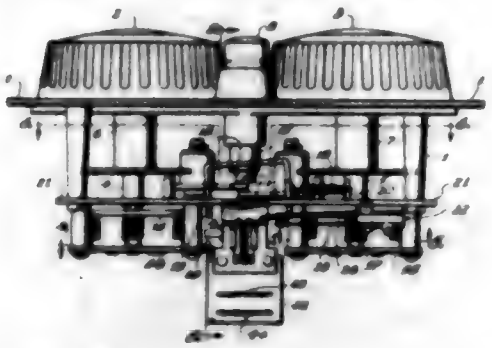
Application April 8, 1954, Serial No. 421,753
22 Claims. (Cl. 200—50)



17. In a casing provided with an operable cover having an operating handle mounted thereon, switch mechanism mounted in said casing having an actuating lever projecting towards said cover, and means providing a separable connection between said operating handle and said actuating lever, said means comprising a member carried by said cover and having an aperture formed complementary to said lever and adapted for the reception of the latter to provide an operative connection between said handle and lever, said member being yieldably mounted on said cover whereby to provide for the reception of said lever in said aperture upon the movement of said handle to a position corresponding to said lever when said handle and lever are in non-corresponding positions on the closing of said cover, and means for releasably locking said cover in a closed position and for locking said handle in a predetermined position.

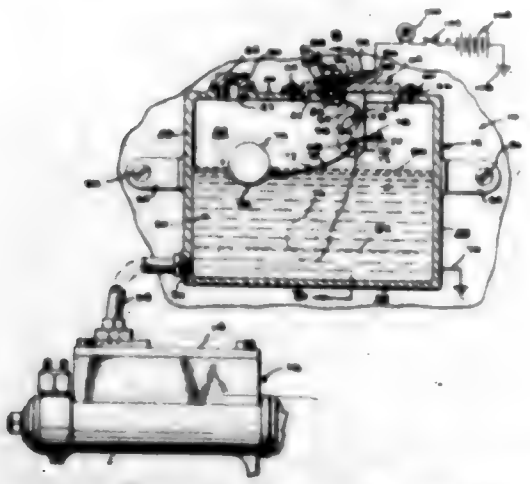
terminals and a pair of instrument terminals carried, said second element has moved over a predetermined dis-

2,866,865
MULTI-SELECTOR
Lyndon A. Durant, Chicago, Ill., assignor to United Music Corporation, Chicago, Ill., a corporation of Illinois
Application April 10, 1957, Serial No. 651,988
7 Claims. (Cl. 200—50)



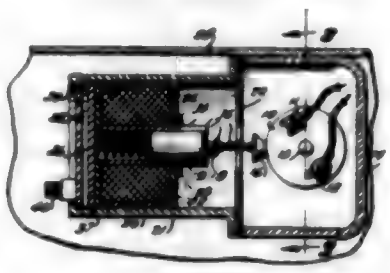
1. A multi-selector comprising means forming a frame, a pair of multi-contact electric switch means in said frame connected to a plurality of selecting circuits and adapted for independent operation to each of a plurality of rest positions when independently selectively positioned, a knob means operatively secured to each said switch means for independent manual operation thereof, each of said knob means having thereon a plurality of indices corresponding to said rest positions for independent registration with a pair of corresponding fixed indicators on said frame, an electric contactor means in said frame electrically associated with said selecting circuits for energizing each selected one thereof when operated, said contactor means including a blocking element movable through a predetermined path when operated, a pair of detent means corresponding with and responsive to said knobs independently biased between said frame and a movable portion of each said switch means for normally and independently urging the latter into each of said rest positions and said knobs into each of said registration positions, each said detent means including a member positioned and adapted to intersect the said path of movement of said blocking element when either of said detent means is operated for blocking and preventing the operation of said contactor when either of said knobs are moved from their said registered positions.

2,866,866
FLUID SUPPLY AND LEVEL INDICATING SYSTEM
Rene A. Laplante, St. Petersburg, Fla.
Application November 16, 1956, Serial No. 622,681
2 Claims. (Cl. 200—84)



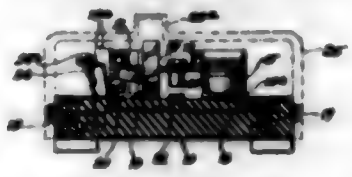
1. In a float switch for a hydraulic fluid reservoir having a top wall having a relatively large opening therein, a flat plate having a peripheral depending flange to be engaged in said opening, means removably securing the plate in place, a pair of laterally spaced vertical arms secured to and depending from said plate, a transverse shaft extending between and secured to the lower portions of said arms, a float lever having a journal intermediate its ends engaged on said shaft between said arms, said lever having a long arm at one side of said journal and a short arm at the other side thereof, said long arm having a free end on which is fixed a float, said short arm having an upper side on which is fixed a first contact point, and a contactor assembly on and insulated from said plate and having below the plate a depending vertical contactor arm having a lower end portion having thereon a second contact point facing the contact point on the short arm of the float lever, said first contact point being disengaged from said second contact point while the level of the fluid body is high and being arranged to engage the second contact point when the float and the lever pivot downwardly when the level of the fluid body is low.

2,866,867
REMOTE CONTROL SWITCH
James O. Anderson, Bybee, Ky.
Application August 2, 1956, Serial No. 601,715
1 Claim. (Cl. 200—87)



In a remote control device, the combination which comprises a first cup shaped housing having an open side, a mounting plate having a centrally located opening therein mounted over the open side of said first housing, a rotary switch having a stud thereon for mounting the switch in said first housing, a second circular housing having an annular right angularly extending flange on one end thereof secured to said mounting plate for mounting said second housing on said mounting plate, a solenoid having an armature and a coil mounted in said second housing, a first disc mounted in said second housing in engagement with one side of said coil, a second disc mounted in said second housing in spaced parallel relation to said first disc, an annular inwardly directed flange on the opposite end of said second housing for retaining said second disc in said second housing, terminals for said solenoid mounted on said second disc, a cup mounted on the opposite side of said coil to house one end of said armature, a clip carried by said one end of said armature extending through said cup, a chain connected to the clip and to the switch for actuating the switch, and a casing in which the first and second housings are positioned.

2,866,868
RESET-TYPE STATION PROTECTOR
Robert C. Carlson, Chicago, and Walter W. Witte, Cary, Ill., assignors to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Application December 9, 1957, Serial No. 701,565
2 Claims. (Cl. 200—88)



1. In a protective device for telephone subscriber circuits, the combination comprising a base, a pair of line

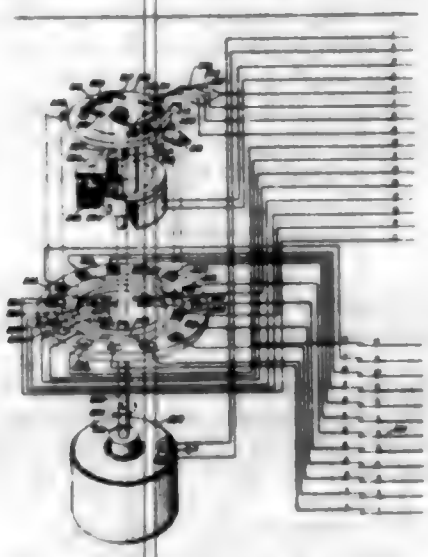
terminals and a pair of instrument terminals carried thereby, electrically conductive means supported by said base and carrying a pair of fixed electrical contacts thereon, an electrical terminal conductively connected to said electrically conductive means and adapted to receive an external ground connection, a pair of resilient electrically conductive arms mounted on said base below the aforesaid electrically conductive means, said arms being respectively connected to one of said pairs of terminals and being anchored against movement at one end, an electrical contact element on each of said arms respectively positioned for cooperation with one of the aforementioned fixed contacts on said electrically conductive means, a pair of heat-responsive latch means mounted on said base and respectively connected electrically to the other of said pairs of terminals, said latch means being electrically conductive and being positioned normally to engage and bear against the free ends of said arms, and being operative responsively to heat exceeding a predetermined quantity to move away from and hence to unlatch said arms, magnetic means carried at least in part by said arms operative to urge said arms upward when unlatched and thereby to cause the contacts on said arms to engage said fixed contacts on said electrically conductive means, a plunger formed of insulating material and adapted in response to downward manual pressure thereon to re-latch said arms, and an integral molded-plastic cover for said device shaped to fit snugly over said base, said cover having a raised local zone positioned to receive a portion of said plunger, said local zone being thinner than the remainder of said cover and sufficiently flexible to permit application of manual re-latching pressure to said plunger by force applied externally to said zone and transmitted therethrough to said plunger.

2,866,869
ROTARY DISTRIBUTOR FOR SELECTING SYSTEM

Dwight Virgil Stuninger, Oak Park, Ill., assignor to Pioneer Electric and Research Corporation, Forest Park, Ill., a corporation of Illinois

Original application June 4, 1953, Serial No. 359,467. Divided and this application June 1, 1955, Serial No. 512,463

8 Claims. (Cl. 200—92)



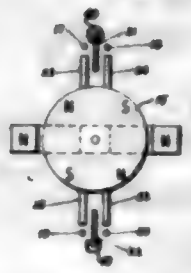
1. A rotary distributor device for an electrical switching system, comprising a first constantly operating constant speed element, a second normally stationary element, means for clutching said second element to said first element, a third normally stationary element supporting a contact arm, means capable of being overpowered by said first element for securely holding said third element in a normal position, means operative after said second element has moved over a predetermined distance for clutching said third element to said second element, said last means including a latch for holding said second and third elements securely together to move said contact arm.

2,866,870
ROTARY ARMATURE AND STATOR FOR USE IN RELAYS

Gilbert Smiley, Hingham, Mass., assignor to S. H. Couch Company, Inc.

Application May 24, 1957, Serial No. 661,544

14 Claims. (Cl. 200—93)



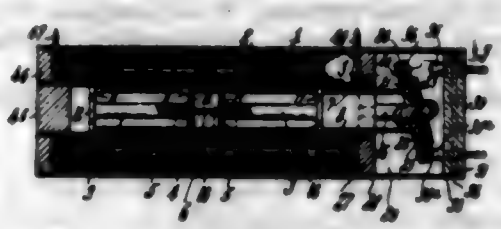
1. In an armature and stator arrangement, the combination of a permanent magnet armature having at least 4 radially arranged coplanar poles, and an E-shaped electromagnetic stator having outer legs of polarity opposite the center leg, said outer legs being arranged at opposite sides of the periphery of said armature.

2,866,871
RELAY

William L. Tancred, Wethersfield, Conn., assignor to The W. N. Berg Corporation, Hartford, Conn., a corporation of Connecticut

Application October 27, 1955, Serial No. 543,176

32 Claims. (Cl. 200—103)



1. In a relay having a controlling solenoid, a pair of similar coaxially arranged magnetic cores slidably mounted within said solenoid, means normally holding said cores in predetermined relative positions and yieldable to permit said cores to be moved to other relative positions by energization of said solenoid, a pivotable member, and a pair of parallel bars, one of said bars being operatively connected to one of said cores and to said member at one side of its pivot, the other of said bars being connected to the other of said cores and to said member at the opposite side of said pivot from said one bar.

2,866,872
OPERATING MECHANISM FOR AN ELECTRIC CIRCUIT BREAKER

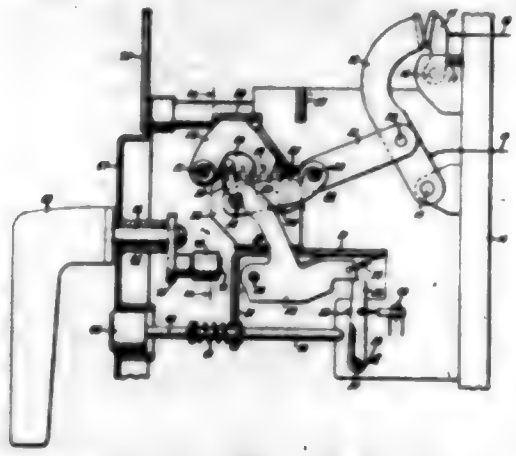
William W. Turner, Drexel Hill, Pa., assignor to General Electric Company, a corporation of New York

Application October 18, 1956, Serial No. 616,857

8 Claims. (Cl. 200—106)

1. In a circuit breaker, a movable switch member, a toggle having one end connected to said switch member, latching means for releasably restraining the other end of said toggle in a latched position, an operating member movable between first and second positions at opposite ends of its normal range of movement, an overcenter tension spring coupled at one end to said operating member

and at its other end to said toggle and operable in response to movement of said operating member from said first to said second position to produce closing of said switch member, means for restraining said operating member in said second position when said switch member is in closed position, means operable upon release of said latching means for causing said overcenter spring to produce opening of said switch member by displacing said other end of the toggle from its latched position, means



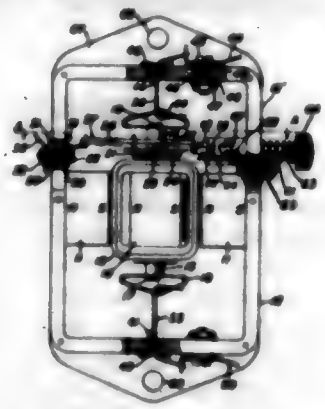
operable in response to said opening action for causing said overcenter spring to initiate return movement of said operating member toward said first position, and means controlled by said return movement of the operating member for shifting the toggle-connected end of said spring in such a path that the distance between said toggle-connected end and the other end of the spring progressively shortens until said operating member reaches said first position, said return movement also acting to return the other end of said toggle to said latched position.

2,866,873

INSTRUMENT RELAY

Anthony H. Lamb, Hillside, N. J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey

Application July 14, 1955, Serial No. 522,056
17 Claims. (Cl. 200—116)



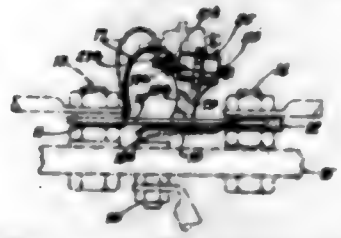
1. An instrument relay comprising an open iron frame, front and back members closing said frame, a wire-wound movable coil enclosed in said frame and carrying a movable contact arm, a permanent magnet core for said coil, means supporting said core from and spacing it with respect to said back member, a stationary contact carried by said frame and adapted to be engaged by the said contact arm, permanent magnets in line with one another and said core and respectively supported on opposite sides of said frame, so that said frame forms the return magnetic circuit for all of said permanent magnets, a magnetic flux gap between each of said magnets and said core, and aligned taut elements suspending the movable coil from said frame for rotation within the flux gaps, said suspending elements also serving to conduct current from an external circuit to the movable coil.

2,866,874

RESETTABLE OVERLOAD PROTECTIVE DEVICE

Robert C. Carlson, Chicago, Ill., assignor to Cook Electric Company, Chicago, Ill., a corporation of Delaware

Application October 21, 1957, Serial No. 691,229
2 Claims. (Cl. 200—124)



1. A resettable overload protective device for electric circuits comprising a holder of generally oblong, uniplanar shape having a conducting lug at each end adapted to be received on a fuse board having a pair of spaced screw contacts and a fixed grounding contact disposed therebetween, an electrically conducting spring arm connected to one of said lugs, said spring arm when unrestrained occupying a position substantially spaced away from said holder, a second electrically conducting spring arm connected to the other said lug, said other arm having a pawl thereon, a current-sensitive element having a shaft part and a barrel part coaxially disposed, said shaft part being rigidly secured to said first arm and said barrel part being insulated from said shaft part and normally held against rotational relative movement with respect thereto, electrically conducting means connected in circuit between said shaft part and said barrel part and situated therebetween operative to free the barrel and shaft parts for relative rotational movement when the current therethrough substantially exceeds a predetermined value, said barrel part being provided externally with a train of pawl-engaging teeth circumferentially disposed thereon, said barrel part being positioned with one of said teeth in engagement with said pawl when said protective device is set for ordinary operation, said first spring arm being under those conditions displaced from its normal position and subjected to strain, rotational movement of said barrel part responsively to said excess current being operative to free said barrel part and said pawl, enabling said first spring arm to relieve said strain and to assume its said normal position, both said first and second spring arms being displaced from their normal position when said pawl is in engagement with one of said teeth, said second arm being provided with an electrical contact member adapted to engage said grounding contact when said second arm is free to seek its normal position.

2,866,875

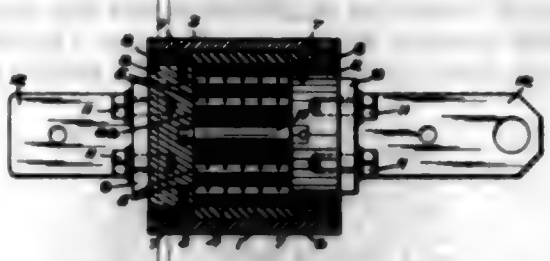
WATERTIGHT HIGH CURRENT-CARRYING-CAPACITY LOW-VOLTAGE CURRENT-LIMITING FUSES

Kenneth W. Swain, Hampton Falls, N. H., and Philip C. Jacobs, Jr., Newtonville, Mass., assignors to The Chase-Shawmut Company, Newburyport, Mass.

Application June 21, 1957, Serial No. 667,166
2 Claims. (Cl. 200—131)

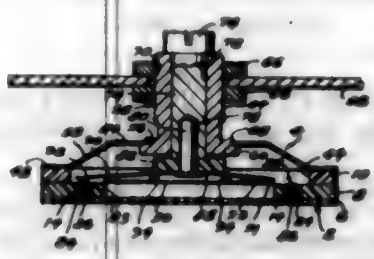
1. A fluid-tight high current-carrying-capacity current-limiting fuse comprising a first tubular casing of synthetic-resin-glass-cloth laminate; a pair of metal plugs each press-fitted into and closing one of the ends of said first casing, each of said pair of plugs having an axially outer end situated in a plane outside of said first casing; a plurality of fastener pins projecting radially through said first casing into said pair of plugs; a pulverulent arc-quenching filler inside of said first casing, ribbon fuse link means of a high conductivity low fusing energy metal immersed in said filler conductively

interconnecting said pair of plugs; a second tubular pre-fabricated casing of a synthetic resin mounted on said first casing covering the radially outer ends of said plurality of fastener pins and projecting beyond the axially outer ends of said first casing to the planes



wherein said axially outer end of each of said pair of plugs is located thus defining a pair of toroidal spaces between the inner surface of said second casing and the radially outer surfaces of said pair of plugs, and a pair of toroidal castings of synthetic plastic each in one of said torodial spaces.

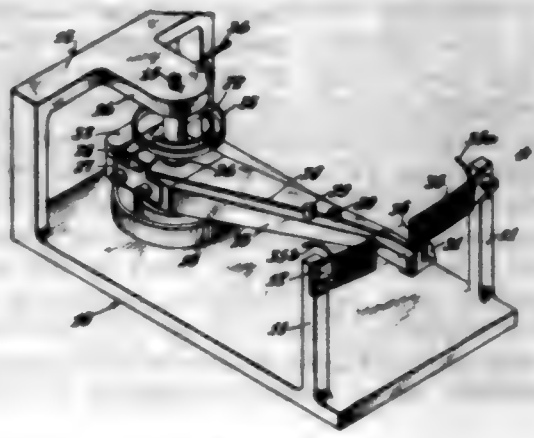
2,866,876
VARIABLE RESISTOR
Arthur M. Cohen, Westport, Conn.
Application March 16, 1954, Serial No. 416,473
6 Claims. (Cl. 201—48)



1. A built-up variable resistor unit comprising a base sheet of heat resistive material, a second sheet of heat resistive and insulating material thereon and having an upwardly opening arcuate slot therein, a resistance element in said slot, an arcuate conductive collector strip on said second sheet and substantially concentric with said slot, a third sheet of heat-resistive material on said second sheet and having an inner opening exposing said resistance element and said collector strip, terminals electrically connected respectively to said collector strip and at least one end of said resistance element and extending to the exterior of said unit, a cap on top of said third sheet and having a body portion abov and spaced upwardly from said resistive element and said collector strip, means engaging said sheets and cap and retaining them in assembled position, a conductive wiper rotatably mounted on and inside said cap at the common center of the arcs of said resistive element and said collector strip, said wiper having segments passing through the inner opening of said third sheet and respectively engaging and sliding over said resistive element and said collector strip, and means accessible from the exterior of said unit and operatively connected to said wiper for rotating the latter.

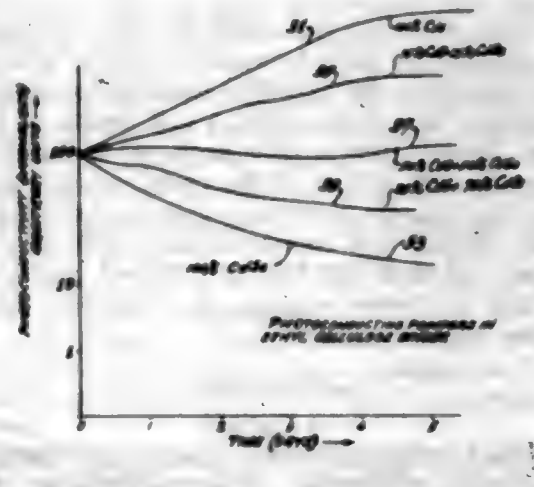
2,866,877
ELECTRICAL TRANSDUCER
John L. Russell, Naugatuck, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut
Application June 1, 1954, Serial No. 433,491
15 Claims. (Cl. 201—48)

1. A mechanical-electrical transducer, comprising a supporting frame member, a conductive resistor insulatively mounted on said frame member and presenting an elongated conductive surface, circuit means connected to said conductive resistor, an elongated brush support arm movably mounted on said frame member with one portion thereof adjacent to but spaced from said elongated surface and movable along a path substantially parallel to said surface, at least one elongated resilient conductive contact brush supported on and extending generally parallel with and along substantially the entire length of said brush support arm, said conductive contact brush being of relatively small diameter resilient wire and having a portion remote from one end thereof biased against said surface and in electrical contact therewith, said portion



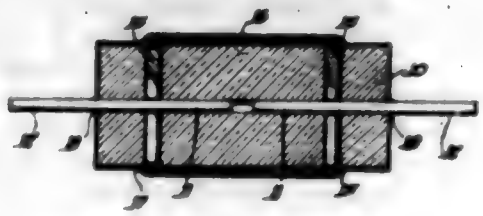
of said contact brush being constrained to follow said brush support arm along said path but free to flex in a direction substantially normal to said surface, circuit means connected to said one end of said contact brush, and sensing means responsive to a variable condition and connected to said brush support arm for moving said one end portion thereof along said path in accordance as said condition deviates from a datum level, whereby said portion of said contact brush engages said conductive resistor winding at a point thereof corresponding to the instantaneous value of said variable condition.

2,866,878
PHOTOCONDUCTING DEVICES
George S. Briggs and Ralph W. Christensen, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Application April 29, 1955, Serial No. 504,911
6 Claims. (Cl. 201—63)



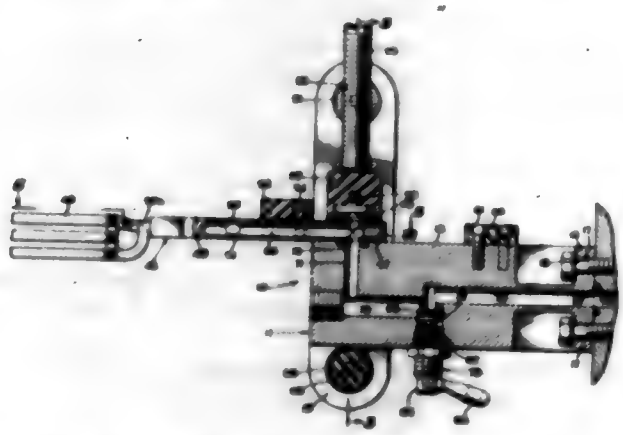
6. A photoconductive device comprising a body consisting essentially of a physical mixture of finely-divided crystal particles of 25 to 75 weight percent photoconducting cadmium sulphide and 25 to 75 weight percent photoconducting cadmium selenide dispersed in an electrically-insulating, film-forming vehicle, and at least one electrode in contact with said body.

2,866,879
COAXIAL RESISTOR
Joseph J. Corny, Chicago, Ill.
Application September 3, 1957, Serial No. 681,560
4 Claims. (Cl. 201—63)



1. An electrical resistance element comprising a passaged non-conductive core; a resistance wire wound about said core; a pair of disconnected electrical terminals extending outwardly from said core, said core having a plurality of connector-containing bores arranged in opposed radial pairs, each of said bores opening on the outer surface of and the passage in said core; an electrical connector in each connector-containing bore being of a length substantially equal to the length of its respective bore, said connectors completely occupying their respective bores and securing the terminals within said core and being secured at their inner ends to said terminals and at their outer ends to said resistance wire.

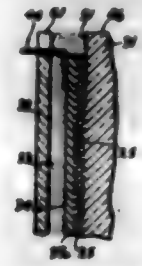
2,866,880
CLAMP FIXTURE FOR WATER-COOLED INDUCTION COIL
Leonidas C. Miller, Los Angeles, Calif.
Application March 21, 1957, Serial No. 647,686
20 Claims. (Cl. 219—10.49)



16. In an induction coil assembly, the combination of: a pair of laterally spaced parallel metallic bars comprising terminal pads, the terminal pads having contact surfaces lying in the same plane, a coil having at least one turn and formed from a tube, each end of the tube being joined to an end of one of the metallic bars, respectively, each bar having a coolant passage extending longitudinally thereof and communicating with its respective tube end, and each bar having a lateral port communicating with its coolant passage and extending through its respective contact surface.

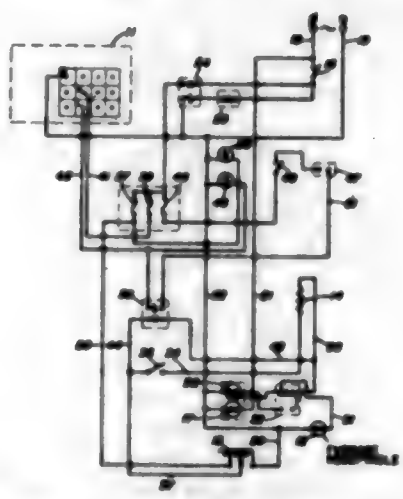
2,866,881
TEMPERATURE CONTROLLED ELECTRICALLY HEATED WINDOW AND WINDOW WIPER SYSTEM
Foster McMillen, Staten Island, N. Y., assignor to Kearfott Company, Inc., Little Falls, N. J., a corporation of New York
Application December 19, 1955, Serial No. 553,883
4 Claims. (Cl. 219—19)

3. An article of manufacture constituting an electrically heatable window for use in climates with temperatures below freezing, said window comprising: a front transparent glass panel, the back surface of said panel having two laterally spaced opposite border areas, each covered by an integrated electro-conductive metallic strip layer and both to serve as bus bars for connection to an external supply circuit, and said back surface constituting an integral transparent electro-conductive film electrically connected between the two bus bars and adapted to be energized from the bus bars to serve as a heating element



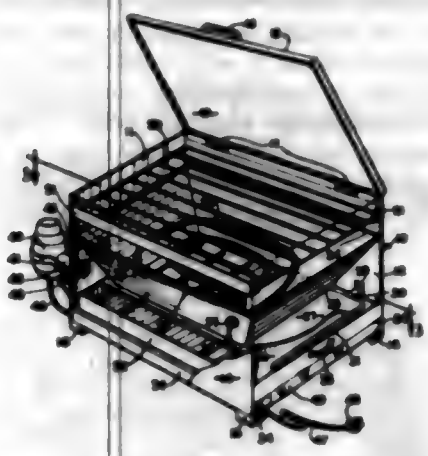
for the front glass panel having a notch or cut-out adjacent one edge to expose a limited area of the conductive film on the back of the front panel; a rear transparent glass panel; a transparent cementitious layer of an organic vinyl compound sandwiched between the two glass panels to serve as a cement to hold the glass panels together; a thermostat seated against the exposed heated area of the film on the back surface of the front panel to control the supply of electrical energy to the bus bar strips for transmission to the film.

2,866,882
TEMPERATURE CONTROLLER
William F. Brown, Jr., Bay Village, and Melvin H. Jones, Olmsted Falls, Ohio
Original application December 20, 1954, Serial No. 476,612, now Patent No. 2,837,915, dated June 10, 1958. Divided and this application December 12, 1956, Serial No. 627,961
2 Claims. (Cl. 219—20)
(Granted under Title 35, U. S. Code (1952), sec. 266)



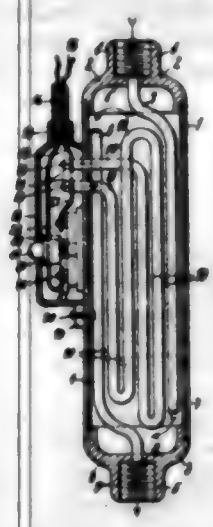
1. An electric furnace temperature control circuit for use with an axial loading creep and rupture machine, comprising: a first mercury relay, a variable transformer connected through said relay to a source of power, a resistor connected in series with said transformer and the furnace, a second mercury relay connected in shunt with the resistor, a temperature controller operatively connected to said second mercury relay, whereby the second mercury relay is activated by the controller to by-pass the resistor when the furnace temperature drops below that set on the temperature controller to thereby supply full power selected with the variable transformer to said furnace, and switch means connected in circuit with said resistor and operable to open the circuit of the same whereby operation of the temperature controller causes the power to the furnace to be all on or all off.

2,866,883
BARBECUE UNIT
Philip E. Borden, Ojai, Calif.
Application July 5, 1955, Serial No. 519,761
2 Claims. (Cl. 219—35)



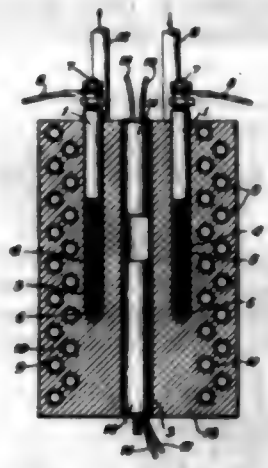
1. A barbecue unit comprising: a casing having four vertical side walls; a grill mounted in an upper portion of said casing; a grate slidably mounted in said casing below said grill, said grate being adapted to support charcoal and having a plurality of apertures for the passage of air and ashes therethrough; charcoal retaining means disposed in said casing and spaced between said grill and said grate, said retaining means comprising four heat conducting plates having their upper edges secured, respectively, to said side walls, said plates extending downwardly and inwardly to collectively form at their lower edges a rectangular opening immediately above said grate, whereby charcoal may be funneled downwardly through said retaining means onto said grate; and electrical heating means extending laterally across said retaining means and vertically through said rectangular opening, said electrical heating means being partially supported on said grate and partially supported on and engaging said retaining means for igniting and heating said charcoal, whereby said electrical heating means acts to effectively conduct heat throughout the entire volume of said retaining means in its position above said grate.

2,866,884
ELECTRIC HEATERS FOR SHOWERS
Endoxie Georges Minier, Havana, Cuba
Application July 11, 1957, Serial No. 671,215
2 Claims. (Cl. 219—39)



1. In an electric heater for showers comprising a casing having closed mouthpiece taps for connection with the water supply line and for the egress of hot water respectively, the combination of a water inlet tube leading from the inlet mouthpiece to near the opposed mouthpiece to fill with water the inner space of the casing, an overflow tube leading from near the water inlet mouthpiece to the opposed mouthpiece to allow the egress of hot water, an electric resistance tube being wound in a plurality of longitudinal turns within the inner space of the casing, an electric connection box secured to the front of the casing and wherein one of the ends of the electric resistance tube is connected with one of the terminals of the electric consumption line, a bridge framing comprising an electricity insulated head and another opposed metal sheet head mounted across an opening in the casing, the electricity insulated head having oscillatorily mounted thereon a metallic plate fixedly secured to a post connected with the other terminal of the electric consumption line and having its free end ending within an open fork of the former post connected with the electric resistance wire, and means within the metallic head of the bridge framing which actuates upon being expanded by the action of the water heat and withdrawing the free end of the said metallic plate from contact with the forked post to thereby break the electric circuit.

2,866,885
AUTOMATIC ELECTRIC HEATER
Ray E. McIlrath, Chicago, Ill.
Application March 13, 1953, Serial No. 721,157
6 Claims. (Cl. 219—39)



1. In combination in a heater, a structure comprising a mass of metal, said mass of metal being shaped to define a cavity, a metallic fluid passage member positioned outside of the cavity and cast within the mass of material, said member being provided with entrant and exit ends extending beyond the mass, an electric heater element cast within the mass, positioned between said fluid passage and the cavity and extending at one portion about the cavity in close proximity to it, a thermostat switch comprising a thermostatic element and a switch element adapted to be controlled by said thermostat, said thermostat switch being positioned within the cavity, electric circuit-defining means joining said thermostat switch and said heater in circuit, and a control switch in said circuit.

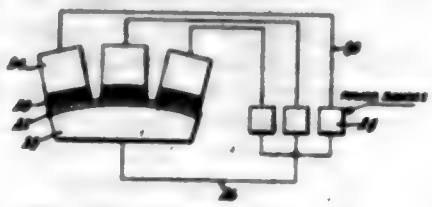
2,866,886
METHOD OF MANUFACTURE
Roland P. Koehring, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 24, 1956, Serial No. 617,983
6 Claims. (Cl. 219—117)

1. In a method for making a laminated metallic article wherein the laminae are coextensively bonded together at their interface and consist of steel and porous ferrous material containing graphite in substantial quantities wherein the ferrous portions of the porous ferrous laminae are interrupted by substantial graphite inclusions, the steps comprising, superimposing the por-

prising the balance of said strip, an end member for said magnet structure to which the housing and keeper disc are attached, a handle for said permanent magnet and

rear surfaces respectively of said case when said radio is held by said mounting, the spring actuated panels retaining the radio case in a fixed position when in the

ous ferrous lamina upon the steel lamina so that their surfaces are contiguous and coextensive, pressing the assembly of the two laminae together, passing a welding current through said assembly for heating the ferrous portions of the porous ferrous laminae at their surfaces contiguous with the steel to a temperature above 1900°



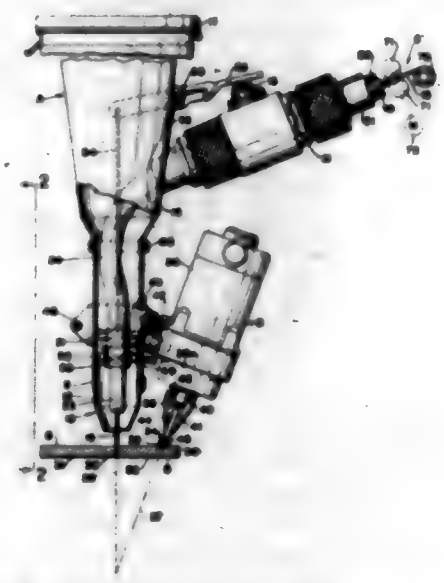
F. while maintaining the remainder of the ferrous lamina at a temperature not in excess of 1900° F. for a short time only sufficient to cause a coextensive bond to be obtained between the ferrous portions of the ferrous lamina and the steel and finally cooling the laminated article so formed.

2,866,887

POWER DRIVEN MANUALLY HELD WELDING APPARATUS

Joey Y. Kamagni, Willowick, Ohio, assignor to The Lincoln Electric Co., Cleveland, Ohio, a corporation of Ohio

Application February 9, 1956, Serial No. 564,482
13 Claims. (Cl. 219—130)



1. Electric arc apparatus comprising, in combination: a head including an electrode nozzle for guiding an electrode toward a workpiece on a manually controllable line of movement, and means engageable with said workpiece, and, spacing said electrode nozzle from said workpiece and for moving the nozzle sidewardly along a desired line of action, the improvement which comprises said means including a single motor-driven work-engaging rotatable member having an axis of rotation disposed at an angle of between 0° and 60° relative to the plane containing the line of movement and the line of action.

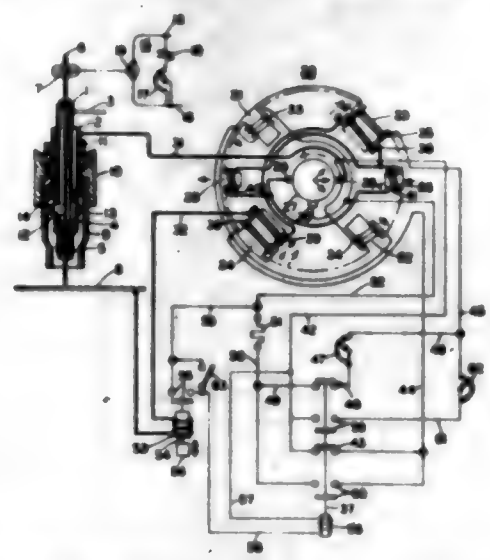
2,866,888

ARC WELDING

Roger W. Tuthill, York, Pa., assignor, by mesne assignments, to Air Reduction Company, Incorporated, New York, N. Y., a corporation of New York

Application August 3, 1955, Serial No. 526,137
10 Claims. (Cl. 219—135)

1. Apparatus for metal arc welding with current densities productive of a self-regulating arc having a rising volt-ampere characteristic determined by its length, said apparatus comprising means for feeding an electrode toward the work at a substantially constant rate of speed, means for adjusting said substantially constant feeding rate of said last-mentioned means, means, including a power source, for supplying welding current to the electrode and the work, said power source being capable of supplying welding current to said electrode and the work to be welded at current densities in said electrode sufficiently high to produce a self-regulating arc and having a rising volt-ampere characteristic substantially the same as the rising volt-ampere characteristic of said self-regulating arc, means for setting the voltage of said power source for operation on a volt-ampere characteristic corresponding to the volt-ampere characteristic of a self-



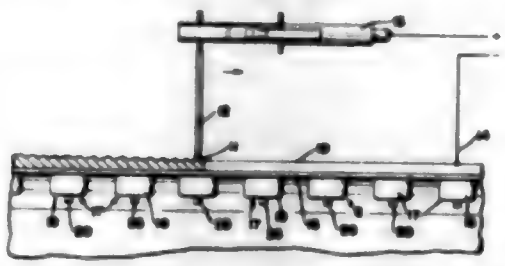
regulating arc of desired length, and means for establishing an arc between the end of the electrode and the work by fusing off the end of the electrode while maintaining its feeding rate by said electrode feeding means, said means including means for setting the open circuit voltage of said power source for establishing an arc voltage across a gap between the electrode and the work which is greater in length than the arc length capable of being established by said first-mentioned voltage setting means, and means responsive to the flow of welding current for switching the control of said power source from said last-mentioned voltage setting means to said first-mentioned voltage setting means after a predetermined time delay.

2,866,889

WELDING METHOD AND MEANS FOR HOLDING A BACKUP STRIP IN POSITION FOR WELDING

James Hellis Dempsey, Lakewood, Ohio

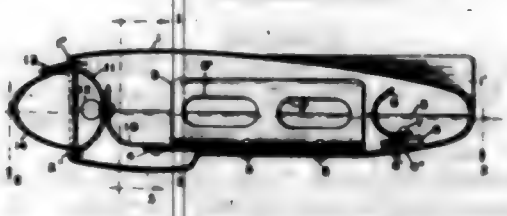
Application April 9, 1956, Serial No. 577,000
2 Claims. (Cl. 219—160)



1. A permanent magnet structure particularly adapted for attachment to back-up weld strips, comprising a housing member having openings at both ends thereof, a permanent magnet of high coercive strength enclosed therein, said housing member being of non-magnetic material, said permanent magnet having a pair of pole pieces oppositely disposed therein, a circular keeper element adjacent said pole pieces, said keeper element having a central strip across said circular disc of highly permeable soft iron, with a non-magnetic material com-

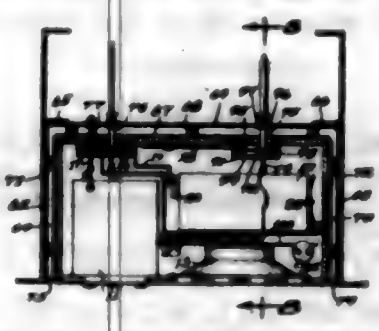
prising the balance of said strip, an end member for said magnet structure to which the housing and keeper disc are attached, a handle for said permanent magnet and stop elements on said housing whereby the permanent magnet may be positioned over said keeper element and oppositely disposed to said keeper element, as desired.

2,866,890
TEAR-DROP-SHAPED ELECTRIC BICYCLE LANTERNS
Eric Tom New, New York, N. Y.
Application June 4, 1956, Serial No. 589,119
2 Claims. (Cl. 240—7.55)



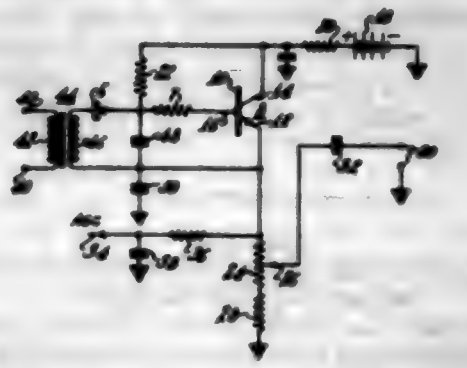
2. In a tear-drop-shaped electric bicycle lantern the combination of a casing having a geometrical axis extending in a direction longitudinally thereof and comprising a lower shell and a complementary upper shell hingedly supported by said lower shell; said casing accommodating and said lower shell thereof supporting the following parts: an incandescent lamp, a reflector for said lamp in the shape of a concave surface of revolution having a wide open side forming a substantially circular flange, a socket on said reflector for said lamp, spring means biasing said reflector in forward direction, a battery holder arranged behind said reflector and a switch arranged behind said battery holder; said lower shell forming a first substantially semi-circular flange on the front end thereof; a lens having a circular periphery and having a front surface and a rear surface, said lens being arranged in front of said reflector and engaged by said circular flange thereof and said front surface of said lens engaging said substantially semi-circular flange formed by said lower shell; and said upper shell comprising a relatively short visor portion and a relatively long body portion forming therebetween a second semi-circular flange engaging said front surface of said lens along a peripheral margin thereof.

2,866,891
AUTOMOBILE AND PORTABLE RADIO MOUNTING
Anthony P. Prinz, North Chicago, Ill.
Application August 30, 1954, Serial No. 452,882
1 Claim. (Cl. 250—14)



A mounting for a radio for use either as a vehicle radio or as a portable radio, said radio including a power unit, battery, built-in antenna, and a speaker, said speaker adapted to be used when the radio is inside or outside a vehicle, said radio further including a case provided with spaced openings in a wall thereof, said mounting being positioned in an instrument panel of said vehicle and comprising a base with spring actuated panels at the ends and on one side thereof which engage end and rear surfaces respectively of said case when said radio is held by said mounting, the spring actuated panels retaining the radio case in a fixed position when in the vehicle so as to prevent accidental shifting movement of the case when mounted in the vehicle, terminals within said case disposed in one of two positions and electrically contacting the battery, built-in antenna and ground of said radio when in one position, spring members contiguous to said terminals, prongs electrically connected to a battery, antenna and ground of said vehicle and positioned to selectively enter the spaced openings of said case, said terminals electrically contacting said prongs when in a second position, said prongs serving to disconnect the power unit from the battery, built-in antenna and ground of said radio and to connect said power unit to the battery, antenna and ground of said vehicle when the radio is mounted in said vehicle, means for locking the radio in the vehicle whereby the radio can be held in said vehicle instrument panel, and wherein unauthorized removal of the radio from the vehicle is prevented, a handle positioned in a recess in the case of the radio, and said radio requiring no outside source of electrical energy when being used outside of a vehicle, and whereby upon withdrawing the case from said vehicle instrument panel, the connections to the antenna, battery and ground of the vehicle are broken, and at the same time connections are automatically completed to the built-in antenna, battery and ground of the case of the radio, and whereby upon return of the radio to the mounting in the vehicle instrument panel, the prongs enter the openings in the case.

2,866,892
DETECTOR CIRCUIT IN WHICH INCREASING RECTIFIED SIGNAL CAUSES DECREASING COLLECTOR CURRENT
Loy E. Barton, Princeton, N. J., assignor to Radio Corporation of America, a corporation of Delaware
Application January 25, 1955, Serial No. 484,028
6 Claims. (Cl. 250—20)



4. In combination with a semi-conductor signal amplifying device including a base, an emitter, and a collector electrode, biasing means connected with said semi-conductor device for applying biasing voltages thereto of a magnitude to provide maximum collector current flow in the absence of a received signal, signal detection means including a unilateral conducting device, means providing a signal input circuit coupled with said unilateral conducting device for applying an input signal thereto, means direct-current conductively connecting said unilateral conducting device with said base electrode and in circuit with said emitter electrode to apply a detected signal to said base electrode, said unilateral conducting device being poled for forward conduction in a direction opposite to that of normal base current flow of said semi-conductor signal amplifying device to provide a decrease in collector current flow of said signal amplifying device in response to increases in amplitude of said input signal, means connected with said emitter electrode for deriving a detected output signal from said

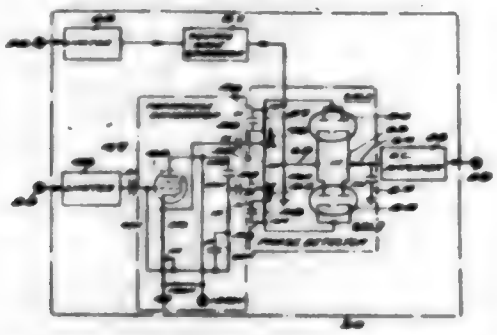
signal amplifying device, and means connected with said emitter electrode for deriving an automatic gain control signal from said semi-conductor device.

2,866,893

PULSE TIME COMPARATOR

Milton J. Minneman, Baltimore, Md., and Arthur S. Westnedt, Jr., Franklin Township, Somerset County, N. J., assignors to The Martin Company, a corporation of Maryland

Original application September 18, 1950, Serial No. 185,448. Divided and this application December 30, 1952, Serial No. 329,528
7 Claims. (Cl. 250—27)



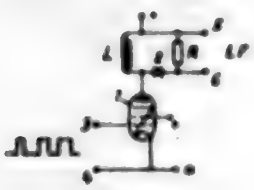
1. A pulse time comparator for determining the time difference between a pair of input pulses, each pulse being a member of a series of pulses, comprising means responsive to one of said input pulses for generating a square voltage wave having a relatively steeply rising wave front, means responsive to the other of said input pulses for generating a sharply peaked, short duration pulse, said peak pulse being of less duration than the rise time of said square wave and occurring within the interval of the rise time of said square wave, and a phase detector responsive to said peaked pulse and said square wave for sensing the instantaneous polarity and magnitude of the voltage of said square wave during transition between voltage levels and during the time said peaked pulse is at or near its peak, and providing an output voltage substantially proportional to said polarity and magnitude of the instantaneous voltage, whereby said output will have a polarity and amplitude corresponding to the relative phase of and the time difference between said input pulses.

2,866,894

DEVICE FOR DEMODULATING DURATION MODULATED PULSES

Carl-Georg Paul Aurell, Stockholm, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Application August 19, 1953, Serial No. 375,227
Claims priority, application Sweden September 2, 1952
3 Claims. (Cl. 250—27)



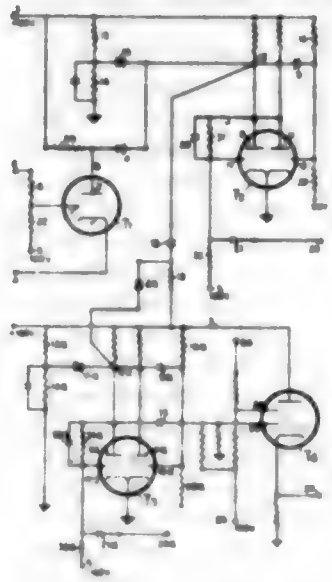
1. A demodulator for duration modulated signal pulses comprising electronic tube means having at least a cathode, grid and plate wherein the plate current is substantially independent of the plate voltage when the latter exceeds a predetermined value and the plate current decreases rapidly when the plate voltage falls below said predetermined value, means including a voltage source and a series connected inductor for applying a voltage between said cathode and plate, means for applying duration modulated pulses to said grid, circuit means including a rectifier and a load impedance forming a shunt branch at least for alternating and pulsating currents across said inductor, said rectifier being nonconducting when plate current flows through the tube means, and output terminals for the demodulated signal connected across said load impedance, said inductor having an inductance of the general magnitude of $t.R_m$ where t equals the maximum duration of the pulses and R_m is the ratio between the voltage source minus said predetermined value of the plate voltage and the plate current above said predetermined plate voltage, said load impedance being at least $3.p.R_m$ wherein p is the pulse duty factor.

2,866,895

ELECTRONIC STORAGE DEVICE

Gerard R. Boyer, Montrouge, France, assignor to International Business Machines Corporation, New York, N. Y., a corporation of New York

Application March 24, 1954, Serial No. 418,447
Claims priority, application France November 18, 1953
6 Claims. (Cl. 250—27)



1. A storage device for electrical pulses comprising: a source of uniformly spaced signal pulses; a plurality of monostable trigger circuits having cycling times corresponding respectively to predetermined numbers of said signal pulses, said numbers comprising increasing integral multiples; means for utilizing a selected one of said signal pulses to initially trigger said trigger circuits; and means for preventing further application of said signal pulses to each of said trigger circuits for its cycling time, and for preventing the triggering of each successive one of said trigger circuits except simultaneously with the triggering of the preceding one of said trigger circuits.

2,866,896

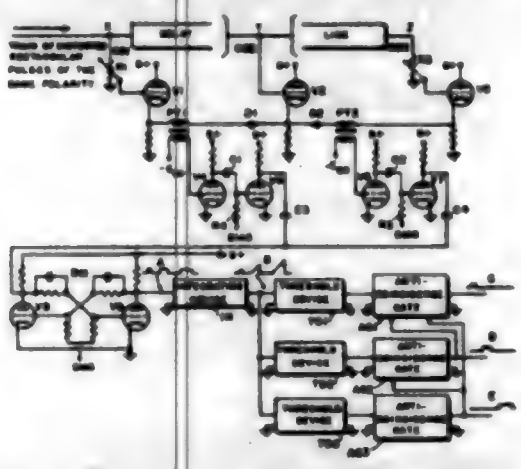
PULSE CONVERTING CIRCUIT

Rudolf A. Stumpfl, Asbury Park, N. J., assignor to the United States of America as represented by the Secretary of the Army

Application January 2, 1957, Serial No. 632,251
5 Claims. (Cl. 250—27)
(Granted under Title 35, U. S. Code (1952), sec. 266)

1. Apparatus for reshaping a received train of distorted electric pulses of the same polarity and general shape but varying in width and amplitude among the pulses, to establish a definite time of start and stop for each pulse which is independent of the pulse amplitude and facilitates separation and accurate measurement of the width of each of the pulses: said apparatus including a delay line on which said train of pulses is impressed for transmission thereover; one circuit connected across the input of said line for diverting one energy portion of

each of said pulses therefrom; a second circuit connected across the mid-point of said line for diverting a second energy portion of each of said pulses therefrom; a third circuit connected across the output of said line for diverting a third energy portion of each of said pulses therefrom; means in the input of said one and said third circuit for respectively converting each diverted pulse portion therein to a different form in which the pulse width remains the same but the amplitude is reduced to the same predetermined fraction of the peak amplitude of that diverted pulse portion; means responsive to a larger voltage produced at one point in said second circuit by each diverted pulse portion therein than that simultaneously produced at a corresponding point in said one and said



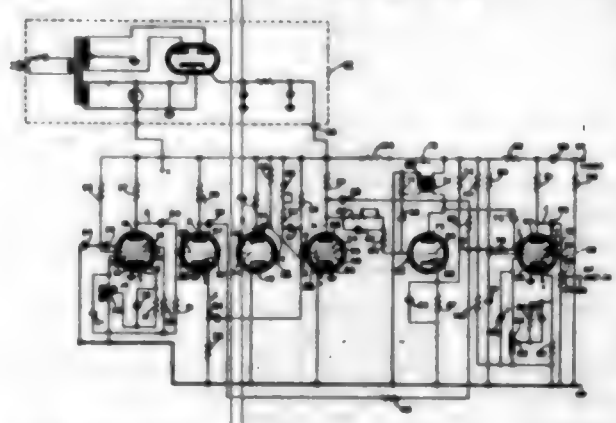
third circuit, respectively, by the converted pulse energy therein, to generate two voltage pulses of the same polarity and amplitude, one having a substantially vertical leading edge initiated at a time T_1 and the second having a substantially vertical trailing edge occurring at a subsequent time T_2; and means responsive to the leading edge of said one pulse and the trailing edge of said second pulse generated in response to each of the received pulses in said train, for generating a single, substantially rectangular pulse of a width, T_2-T_1, independent of the received pulse amplitude, and constituting the pulse width at said predetermined fraction of the peak amplitude of that received pulse.

2,866,897

TELEVISION RECEIVER TEST EQUIPMENT OR THE LIKE

Dwight S. Lord, Covina, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Application September 25, 1956, Serial No. 611,966
16 Claims. (Cl. 250—36)



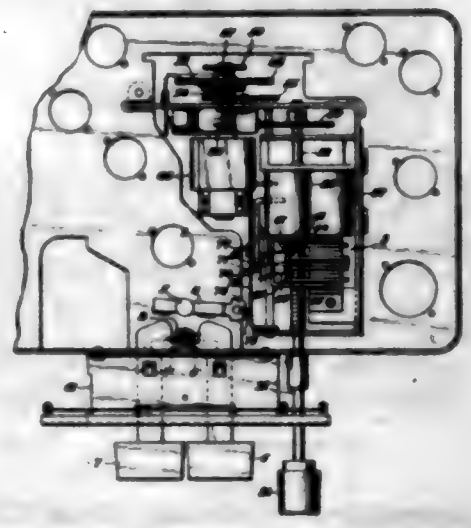
1. In combination, first means for generating first and second oppositely phased trains of pulses of a first pulse width and a first pulse separation; second means coupled to said first means and responsive to said first pulse train for generating a third train of pulses having a second pulse width, equal to and coincident with regular ones of said first pulse separations, and a second pulse separation; third means coupled to said second means and responsive to signals therefrom for generating regularly recurrent, equivalent, pulse pluralities each being coincident with successive pulses of said third pulse train; and fourth means coupled directly to each of said first, second, and third means for combining said second pulse train generated by said first means with the output signals of said second and third means to produce a utilizable composite output signal.

2,866,898

TUNER

William J. Race, Franklin Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application March 29, 1956, Serial No. 574,916
4 Claims. (Cl. 250—40)



4. Apparatus for tuning wave signals including in combination, adjustable tuning means having carriage means movable between positions of maximum travel for scanning a tuning range, an electric motor for driving said tuning means, reversing switch means having a slideable actuator, said actuator being operable by said carriage means in the positions of maximum travel thereof, said actuator moving between first and second positions for reversing said motor, circuit means connecting said reversing switch means to said motor, said circuit means including contact means operable to initially energize said motor and means to deenergize said motor when a signal is selected by said tuning means, and manually operable control means having first and second operative portions, said control means including means for operating said contact means by either one of said first and second portions thereof, said reversing switch means further being operable when said carriage means is at positions intermediate said positions of maximum travel for reversing said motor, said control means further including a mechanical linkage engageable with said slideable actuator of said reversing switch and means for operating the same to said first position by action of said first portion and for operating said actuator to said second position by action of said second portion, whereby the direction of scanning the tuning range is determined by selective operation of said portions of said control means and said tuning means is automatically reversed upon reaching a position of maximum travel.

2,866,899

ELECTRONIC SPECTROANALYSIS COMPUTER

Henri G. Busignies, Montclair, and Mortimer Ropoff, Nutley, N. J., and Georges A. Deschamps, New York, N. Y., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application December 12, 1955, Serial No. 552,518
14 Claims. (Cl. 250—43.5)

3. Apparatus for the quantitative analysis of the spectrum of a given composition comprising a first signal

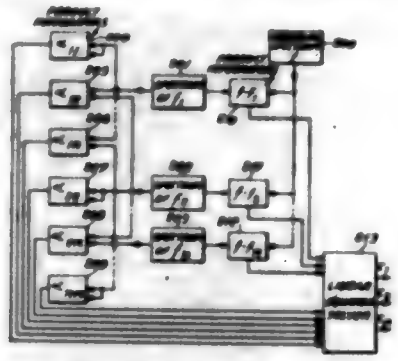
high-energy electrons; and a divergent cylindrical electron-

2,866,904

RADIATION MEASURING APPARATUS

between said cathode and plate, means for applying dura- | the input of said line for diverting one energy portion of

source having a waveshape representative of the spectrum of said given composition, a plurality of sources of second signals each having a waveshape respectively representative of at least one of the components of said given composition, means for obtaining the scalar products of said first signals and each of said second signals, means for obtaining the scalar products of each of said second signals, multiplied by each of said second signals, and means to establish a plurality of simultaneous equations



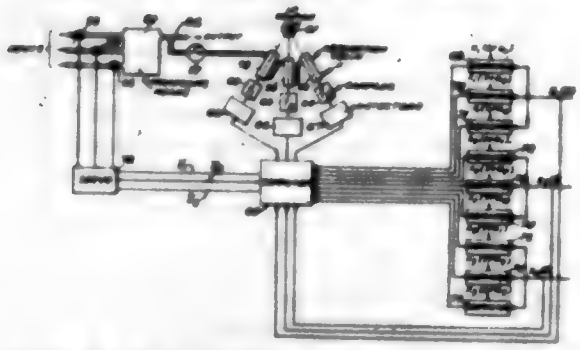
in which each equation is representative of said first signal multiplied by a given one of said second signals to yield a scalar product which is equal to the sum of the scalar products of each of said second signals multiplied by said given one of said second signals when each of said last-identified scalar products is modified by a particular coefficient representing the concentration of its associated one of said components in said given composition.

2,866,900

NONDISPERSIVE INFRARED ANALYZER

Henri G. Benignus, Montclair, and Paul R. Adams, Mountain Lakes, N. J., Georges A. Deschampe, New York, N. Y., and Mortimer Regoff, Nutley, N. J., assignors to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application December 19, 1955, Serial No. 553,866
8 Claims. (Cl. 250—43.5)



6. A device for analyzing a multicomponent mixture comprising in optical alignment a source of infrared radiation, a plurality of detectors, means adapted to receive radiation from said source along a plurality of optical axes, a plurality of gas-analyzing chambers each disposed between said source and one of said plurality of detectors, means interconnecting said chambers permitting said mixture to flow through said chambers, and means for interposing between said source and said detectors a cell containing one of the constituents of said mixture in each of said optical axes.

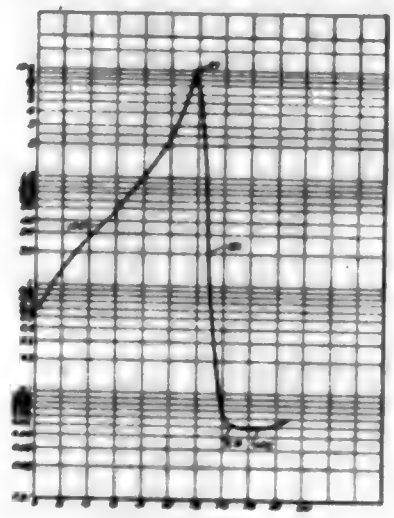
2,866,901

SPECTROMETER CONTROL

David V. Stallard, Cambridge, and Donald J. Lovell, Boston, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force

Application June 1, 1956, Serial No. 588,936
5 Claims. (Cl. 250—43.5)

1. For use with a recording infrared spectrometer of the type having a spectrum producing device, a driving device operatively connected to said spectrum producing device, a detector, a recorder and an amplifier connected between the detector and the recorder, a record controller comprising a plurality of attenuating elements for connection to the amplifier to control the gain thereof, said attenuating elements being arranged in two groups, a first and a second selector device, switching means operatively connected to said driving device for actuating said selector devices, said switching means actuating said second selector device at a higher rate of speed than



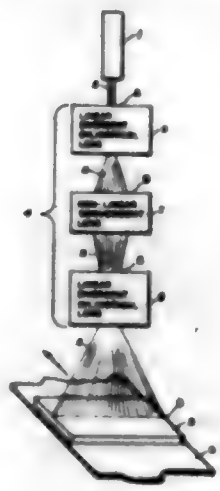
said first selector device, said first selector device being operative to sequentially connect preselected attenuating elements of said first group to the amplifier over a preselected portion of the spectrum and to connect said second selector device in operative condition over a second preselected portion of the spectrum, said second selector device being operative to sequentially connect predetermined ones of said attenuator elements of said second group in operative relation to said amplifier over said second preselected portion of the spectrum.

2,866,902

METHOD OF AND APPARATUS FOR IRRADIATING MATTER WITH HIGH ENERGY ELECTRONS

John C. Nygard, Lexington, Mass., assignor to High Voltage Engineering Corporation, Cambridge, Mass., a corporation of Massachusetts

Application July 5, 1955, Serial No. 519,774
10 Claims. (Cl. 250—49.5)



5. Apparatus for delivering the ionizing energy of a beam of high-energy electrons to matter to be irradiated, with maximum energy efficiency and minimum side effects due to excess dosage, comprising in combination: means for creating a beam of high-energy electrons in an evacuated region; means for directing said beam out of said evacuated region and onto matter to be irradiated by said

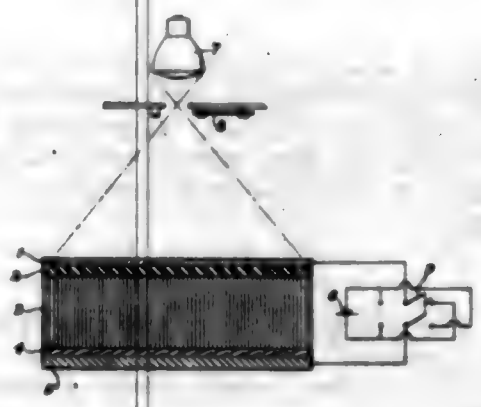
high-energy electrons; and a divergent cylindrical electron-optical system so constructed and arranged that its focusing action on said beam is divergent but non-linear, whereby the area of the intersection of said beam and the incident surface of the matter being irradiated is elongated, the non-linearity of said focusing action being such that the electron current, impinging on said surface, per unit length of said elongated area is rendered substantially uniform over the length of said elongated area.

2,866,903

PROCESS FOR PHOTOELECTRIC REPRODUCTIONS AND APPARATUS THEREFOR

Jean Berchtold, Zurich, Switzerland

Application October 20, 1955, Serial No. 541,789
Claims priority, application Switzerland November 2, 1954
7 Claims. (Cl. 250—65)



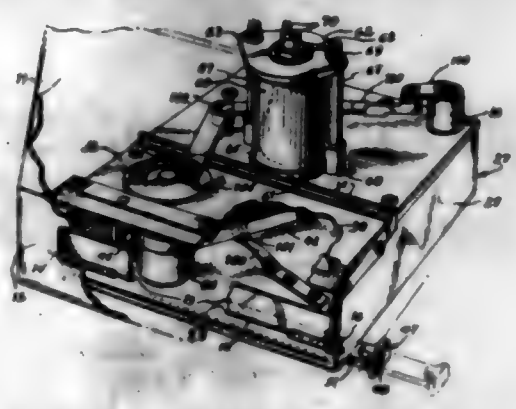
2. An image translating apparatus for reproducing an image on a sensibly wet chemically wetted electrosensitive paper comprising; a first and second spaced, uniformally electrically conductive electrodes disposed substantially parallel relative one another; a transversely electrically conductive and laterally non-conductive, liquid-impervious, chemically inert spacing member; the spacing member having opposite faces at least one of which is planar and being transversely conductive in a direction corresponding to a direction between said opposite faces; a substantially uniform layer of a photoconductive material on a face of said spacing member in electrical contact with the first of said electrodes, the first electrode having the characteristics of being a good electrical conductor and having a low absorption of electromagnetic radiation, the second of said electrodes being substantially plane and having a surface adapted and disposed for compressing and holding the electrosensitive paper in surface contact with and against the planar face of the spacing member at a substantially uniform pressure, the sensibly wet paper being disposed in surface contact with the whole area of the planar face of the spacing member opposite to said photoconductive layer, whereby the spacing member provides directional conductivity between the photoconductive layer and the wet paper and electrical currents flowing in each unit portion of the spacing member are applied to the corresponding portions of the electrosensitive paper and the liquid on said paper is unable to come into contact with said photoconductive layer, means connected for impressing an electric potential on the two electrodes, means for selectively exposing said photoconductive layer through said first electrode to a pattern of modulated electromagnetic radiation comprising the image to be reproduced and having different intensities, whereby current flows through the unit portions of said photoconductive layer in proportion to the intensity of the incident electromagnetic radiation and a visible image is formed on the electrosensitive paper substantially simultaneously with exposure.

2,866,904

RADIATION MEASURING APPARATUS

John L. Hoellerich, Wilmette, and Juan Diaz C., Chicago, Ill., assignors to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Application December 17, 1954, Serial No. 476,046
19 Claims. (Cl. 250—71)



16. In irradiation measuring apparatus, a socket carrier, a plurality of slug sockets biased into seated relation to one side of the carrier, said carrier being arranged to be swung manually about a vertical axis from a loading position to carry a selected one of the sockets to a test position, means providing a light excluding cell having an aperture adjacent the test position, a slug seat about the aperture, pairs of cams arranged to provide notches on the other side of the carrier, one of the notches being in association with each of the sockets, a spring supported in fixed relation to the cell, a follower carried by the spring, said spring biasing said follower into pressure engagement with said carrier and being arranged to releasably secure a selected socket in the test position by pressing the follower into the notch associated with said selected socket notch as said carrier is operatively moved, a contactor on each of the sockets extending into the notches for alternate displacement by the follower thereby for a selected socket to be unseated when it is in test position, anchor means for each of the sockets to floatingly secure them to the carrier by limiting their movement therefrom and permitting them to tip when so moved thereby for the unseated socket to carry an irradiated slug into seated relation to the slug seat, and a source of ultra violet light in the cell capable of creating luminescence in the seated slug on passing of the light through the opening, said luminescence being to a degree dependent on the degree of irradiation of the slug so that said luminescence may operate photo-electronic measuring apparatus whereby the irradiation of the selected slug may be measured.

2,866,905

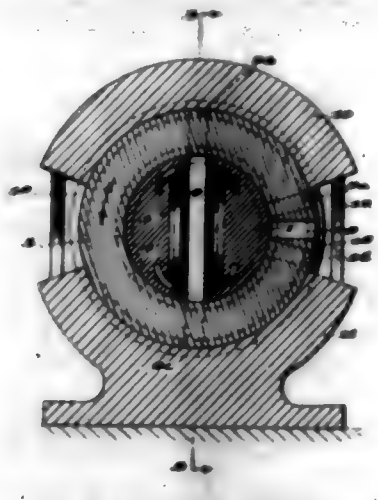
DEVICE FOR EXPOSING AN OBJECT TO RADIATION

Clive M. Yeomans, Baltimore, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland

Application January 6, 1956, Serial No. 557,764
12 Claims. (Cl. 250—106)

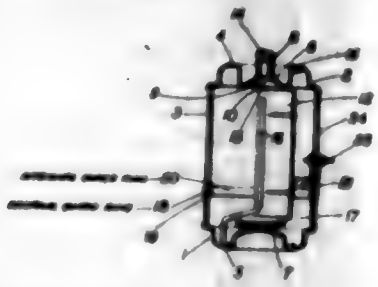
9. A device for exposing an object to radiation comprising a horizontal, cylindrical core member of shielding material having a generally vertical passage formed therein for the reception of an object to be exposed to radiation, radioactive material positioned in said cylindrical member to irradiate said passage, a plurality of tubular members adjacent said radioactive material surrounding said passage, a cylindrical ring member mounted with a sliding fit on said cylindrical core member to rotate with respect thereto, said cylindrical ring member having an aperture formed therein capable of being aligned with said passage in said core member, an outer radiation-shield member fixed with respect to said core member

to effectively shield radiation when said aperture is aligned with said passage, said aperture in said cylindrical shield member movable to a position for the reception of an object to be irradiated and subsequently moved to



a position to drop said object into said passage for irradiation and rotatable to a further position wherein the aperture is aligned with said passage on the bottom side of said passage to drop the object into said cylindrical ring member for remc:al from said passage.

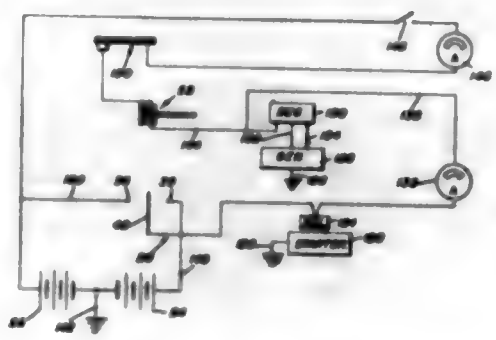
2,866,906
PHOTOCELL DEVICES
Sandford C. Peek, Jr., Hamilton, Mass., assignor to Sylvania Electric Products Inc., Salem, Mass., a corporation of Massachusetts
Application January 25, 1955, Serial No. 484,018
1 Claim. (Cl. 250—209)



A photocell system comprising an envelope of insulating material, a photosensitive cathode therein for emitting electrons on exposure to incident radiation, said envelope being transparent at least in part to said radiation, an anode for collecting said electrons, connections to said anode and to said cathode at opposite ends of said envelope, a guard ring on the inside surface of said envelope and intermediate the ends thereof, and a lead-in wire connected to said ring and extending through said envelope, a guard ring on the external surface of said envelope and also connected to said lead-in wire, a resistor of high resistance and a battery, the positive pole of said battery being connected to the anode of said photocell, one end of said resistor being connected to the cathode of said cell, the other end of said resistor being connected to the negative pole of said battery and to said guard ring.

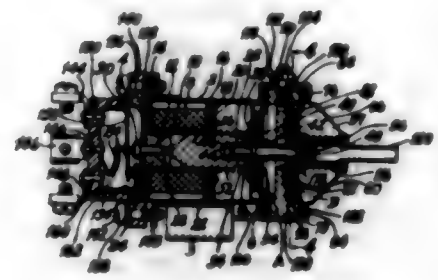
2,866,907
DUAL BATTERY SWITCH SYSTEM
Frederick William Gebhard, West Easton, Pa.
Application January 2, 1957, Serial No. 632,242
11 Claims. (Cl. 290—36)

1. An electrical system for an internal combustion engine comprising a generator, a main battery and a reserve battery, a battery selector switch, a ground wire and a first battery wire connected to said generator, said battery selector switch including a pair of spaced contacts and a switch blade, a wire connecting said first battery wire to one of said contacts and to said switch blade, a second battery wire electrically connecting said main battery to the other one of said contacts, said third mentioned wire including a third battery wire electrically connecting said reserve battery to said first battery



wire, a ground wire electrically grounding said batteries, a normally closed switch in said third battery wire, a normally open switch in said third battery wire, said normally closed and open switches being located in said third battery wire between said generator and said reserve battery.

2,866,908
ENGINE STARTING APPARATUS
Harold J. Cromwell, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 24, 1955, Serial No. 542,365
3 Claims. (Cl. 290—38)

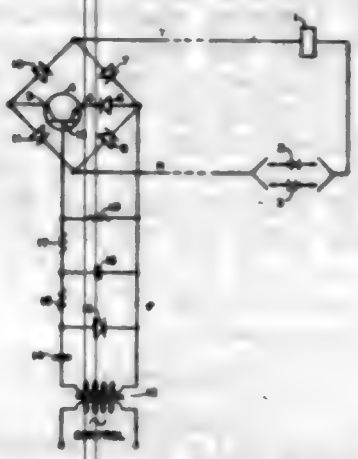


1. In starting apparatus for internal combustion engines having a current source and an electric starting motor operable by current from said source; control mechanism for controlling the operation of said starting motor comprising in combination; a control switch, a magnet for closing said control switch to cause the starting motor to become operative, manually operated means for controlling the energization of said magnet, a suction operated member operable to open said switch, means between the armature of said magnet and the suction operated member including a lost motion connection operative to permit movement of the armature to switch closing position when the suction operated member is in a normal position without movement of said member, but preventing movement of the suction operated member in a direction to open the switch without corresponding movement of the armature, means for communicating the engine suction to said member to move said member to open the switch when a predetermined suction is effective thereon and while the magnet is energized, means enabling immediate movement of said member to open the switch when a predetermined suction is effective thereon and means for delaying a reverse movement of said member to reclose the switch when the suction falls below said predetermined suction.

2,866,909
ELECTRONIC SWITCH

Robert B. Trousdale, Downey, Calif., assignor to General Dynamics Corporation, Rochester, N. Y., a corporation of Delaware

Application January 17, 1957, Serial No. 634,649
5 Claims. (Cl. 307—88.5)



3. In combination, a line having first and second conductors, a load impedance, a source of potential, means for connecting said load impedance and said source of potential in series between said first and second conductors, first, second, third, and fourth unidirectional conducting devices, each of said devices having first and second terminals, a transistor having a base, an emitter, and a collector, means for connecting the first terminals of said first and second devices to said first and second conductors respectively, means for connecting said emitter to the second terminals of said first and second devices, means for connecting said collector to the first terminals of said third and fourth devices, means for connecting the second terminals of said third and fourth devices to said first and second conductors respectively, means for connecting said base to the second terminals of said first and second devices for normally biasing said transistor for non-conduction, a rectifier circuit, means for coupling an alternating current signal to said rectifier circuit through a coupling device of the type which presents an infinite impedance to signals of zero frequency and a finite impedance to signals above zero frequency, and means for applying the rectified signal appearing in the output of said rectifier circuit to said base for biasing said transistor for conduction.

2,866,910
PAWL TYPE INCREMENTAL MOTOR

Ephraim G. Bentley, El Segundo, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

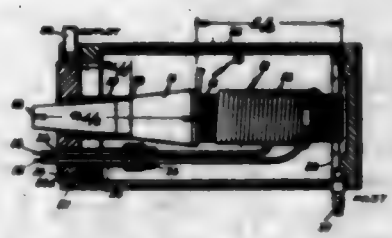
Application November 9, 1954, Serial No. 467,722
8 Claims. (Cl. 310—20)

1. A pulse operated electrical instrument comprising a solenoid coil assembly; a rotatable armature assembly actuated by said coil assembly each time an electrical pulse is transmitted thereto; a driving assembly interconnected to said armature assembly and rotatable therewith; a spring loaded and rotatable drive pawl on said driving assembly; a rotatable driven assembly engaged and actuated by said drive pawl on said driving assembly; a lock pin, engaged by said pawl, on said solenoid coil assembly that locks said drive pawl out of engagement with said driven assembly when said solenoid coil assembly is de-energized; spring loaded, rotatable pawls on said solenoid coil assembly that stops the rotation and locks the driven assembly against rotation when the solenoid coil assembly is de-energized; and elements on said driving assembly for returning the latter to its original position.

2,866,911
SUPPORTS FOR VIBRATORY DEVICES

Burton R. Rawding, Walpole, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application October 4, 1956, Serial No. 614,007
11 Claims. (Cl. 310—26)

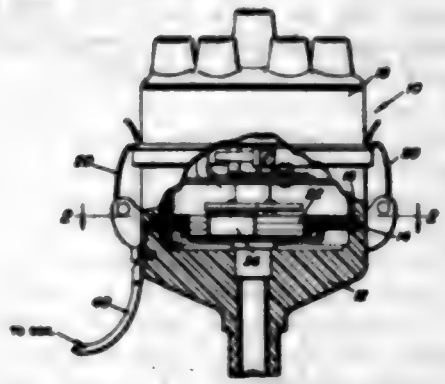


1. In combination, an elongated mechanical vibrator and means attached to one end thereof to set said vibrator into longitudinal oscillation, said vibrator having a length equal substantially to one or more integral half wavelengths of the vibrations therein and having antinodes at its ends and support means for said vibrator comprising, a substantially rigid cylinder attached to said vibrator in the vicinity of a node of the natural resonant frequency of said vibrator, said support means being of a length equal substantially to an odd integral number of quarter wavelengths of said natural resonant frequency.

2,866,912
DISTRIBUTOR

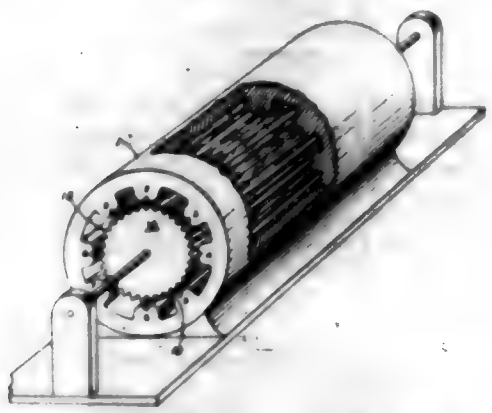
Charles J. Williamson, Pottsville, Pa.

Application February 15, 1957, Serial No. 640,461
2 Claims. (Cl. 310—70)



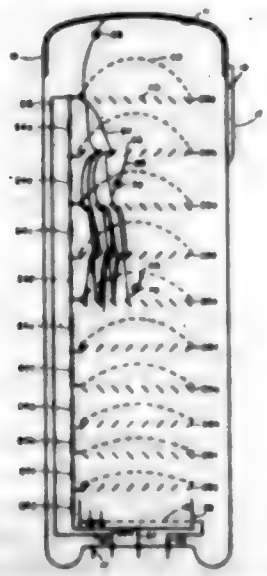
1. In a conventional automobile electrical system, a distributor housing, a rotor carrying an electrical contact thereon, a plurality of cap posts arranged proximate said motor, said rotor rotatably mounted in said housing, a pair of pivotally mounted counterweights carried by said rotor, said counterweights adapted to centrifugally move from the rotational axis of said rotor upon a rotational movement, spring means carried by said rotor, and said counterweights for normally maintaining the counterweights proximate to the rotational axis, a permanent magnet carried by each counterweight, a field coil carried in said housing for connection in a circuit to the cap posts, said field coil electrically situated so as to have a voltage induced therein due to the rotating flux established by the rotating magnets.

2,866,913
MULTIPOLE PAIR RESOLVER
Gerald Kronacher, Newark, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York
Application June 27, 1956, Serial No. 594,373
9 Claims. (Cl. 310—111)



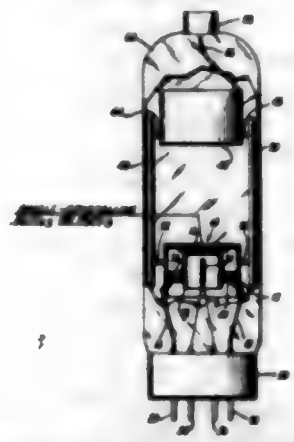
1. In an electromagnetic device for generating substantially pure sinusoidal voltages a stator, a rotor mounted for rotation therein, said rotor having a plurality of teeth equally spaced about its periphery, the angular positions of points on an individual tooth as measured from the reference formed by the intersection of a plane including the rotor axis and a cylinder having the same axis and tangent to the vertices of said rotor teeth, being a sinusoidal function of the distance along the rotor measured parallel to said axis, at least a pair of poles formed on said stator and having teeth parallel to said axis, said poles being spaced an integral multiple plus half a rotor tooth pitch, means for establishing a single phase sinusoidal flux pattern in said stator, means for imparting mechanical rotation to said rotor, and means inductively coupled to said flux pattern to provide an output free of even harmonics as the rotor turns.

2,866,914
PHOTOMULTIPLIER
André Lallemand, Paris, France, assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application July 20, 1956, Serial No. 599,267
Claims priority, application France December 26, 1955
2 Claims. (Cl. 313—105)



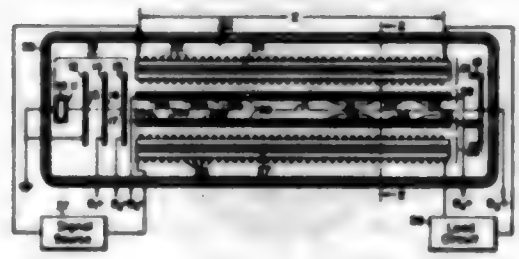
1. In an electron multiplier, a cathode, an anode, a plurality of dynodes, each dynode including a circular frame, strips secured by said frame in spaced apart relation inclined with respect to the axis of said frame and having secondary emissive surfaces confronting said cathode, a wire mesh lens arched over said surfaces and secured to said frame, said strips having their surfaces which confront said anode composed of an adsorptive gettering material, a plurality of insulating cylindrical spacers stacked in endwise alinement, a plurality of centering rings extending between the endwise surfaces of adjacent spacers and conductively secured to corresponding ones of said frames to support said dynodes in spaced axial alinement within the stack of said spacers intermediate said cathode and anode, envelope means supported in axial alinement with said stack of spacers by at least two of said centering rings for enclosing said cathode and anode in sealed relation with said dynodes, a pair of leads extending in sealed relation through said envelope means for applying a potential difference between said cathode and anode, and high-valued resistances extending along said stack of spacers and in electrical contact with said centering rings to provide a potential divider between said dynodes.

2,866,915
THERMIONICALLY EMITTING DEVICE
Pao-Hsien Fang, Washington, D. C., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application September 20, 1956, Serial No. 611,070
7 Claims. (Cl. 313—337)



7. A vacuum-tube device, comprising a cathode of a single-crystalline material selected from the group consisting of $BaTiO_3$ and $PbTiO_3$, and an anode element contained in a common evacuated chamber with said cathode and electrically insulated therefrom.

2,866,916
TRAVELING-WAVE TUBES
Robert Adler, Northfield, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application April 15, 1954, Serial No. 423,277
12 Claims. (Cl. 315—3.6)



9. An electron-discharge device of the traveling-wave type comprising: an electron gun for projecting a sheet-like beam of electrons along a predetermined reference path; a wave-transmission line, disposed adjacent said reference path in spaced relation thereto and electrostatically coupled to said beam, having a uniform low wave-propagation velocity in a direction parallel to said path and further having a length in said direction which is

between said anode and said cathode and an auxiliary resonant circuit coupled between the anode and the grid

being poled in the same sense, said circuits being arranged into w different groups, each group containing x different circuits; w different third terminals, there being one group

large relative to the effective wave length of a radio-frequency signal wave traveling along said line; means for applying a radio-frequency signal to said wave-transmission line to establish said traveling signal wave and thereby to provide a traveling electric signal field which propagates along said reference path at said low wave-propagation velocity; and means, including a beam confining structure substantially permeable throughout its length to said electric signal field but substantially impermeable to unidirectional electric fields and disposed interjacent said wave-transmission line and said reference path, for confining said beam to said path while permitting substantially uniform electrostatic coupling between said line and said beam for signal frequency electric fields but shielding said line therefrom for unidirectional electric fields.

2,866,917

ELECTROMAGNETIC WAVE GENERATOR

Winfield W. Salisbury, Lafayette, Calif., assignor, by mesne assignments, to Zenith Radio Corporation, a corporation of Delaware

Application September 8, 1955, Serial No. 533,098
9 Claims. (Cl. 315—4)

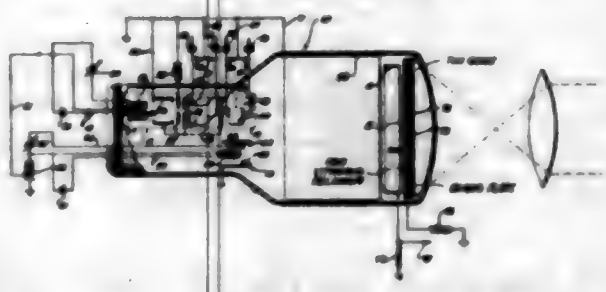
1. A super-high-frequency electromagnetic wave generator comprising: a conductive element having an extended surface of an area whose dimensions in a pair of coordinate directions are large relative to a predetermined wavelength and provided with a plurality of parallel, resonant slots extending in one of said coordinate directions; means for projecting a focused electron beam, of a transverse area corresponding to said extended surface area, closely adjacent said surface in the other of said coordinate directions to generate electromagnetic energy, coherently radiated from said surface along an axis perpendicular to said one coordinate direction and canted to said other coordinate direction, of a frequency corresponding to said predetermined wavelength; and means including an optical system in juxtaposition with said extended surface and substantially concentric with said canted axis for focusing said coherently radiated energy to a distant area small relative to said extended surface area.

2,866,918

ELECTRONIC CAMERA TUBE

Siegfried Hansen, Los Angeles, Calif., assignor, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware

Application June 30, 1953, Serial No. 365,162
6 Claims. (Cl. 315—11)



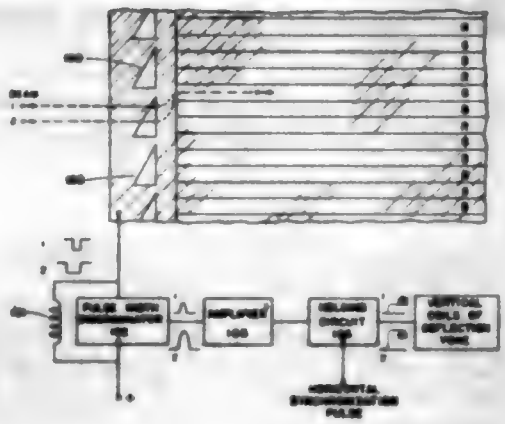
6. In a cathode ray device, a target electrode including a transparent member having a conductive surface and a photoconductive layer disposed on said surface, said photoconductive layer being receptive to a light image projected through said member on said surface whereby electric charge is liberated from said photoconductive layer in proportion to the light intensity thereon; means disposed adjacent said target electrode for collecting secondary electrons from said photoconductive layer at a predetermined collector potential level; means for generating a beam of high velocity electrons; means for sequentially directing said beam to bombard said photoconductive layer to charge bombarded areas thereof substantially to said predetermined potential level; means for uniformly bombarding said photoconductive layer with additional high velocity electrons to charge the bombarded areas thereof in a negative direction at a uniform rate; means for maintaining said conductive surface at a potential positive with respect to said predetermined potential level, whereby said electric charge is conveyed through said photoconductive layer in the form of holes thereby to produce a charge replica of said light image, the potentials constituting said charge replica being negative with respect to said predetermined potential level.

2,866,919

CATHODE RAY TUBE

Aurelius Sandor, Forest Hills, N. Y., assignor to Sylvania Electric Products, Inc., a corporation of Massachusetts

Application July 18, 1955, Serial No. 522,421
5 Claims. (Cl. 315—21)



1. In a cathode ray tube adapted for color image display, in combination, an image screen coated with an electrically conductive layer and provided with a light producing section and an indexing zone adjacent one side of said section, said section being formed from a plurality of essentially parallel, essentially horizontal, vertically displaced color triplet lines, each line containing first, second and third essentially parallel, essentially horizontal, vertically displaced color stripes, said zone containing a like plurality of vertically displaced indexing areas which are not coated with said layer, each area being positioned adjacent one end of a corresponding line, adjacent indexing areas being separated by a separation bridge having a width not exceeding that of any of said stripes, said bridge being in registration with a corresponding selected one of said color stripes.

2,866,920

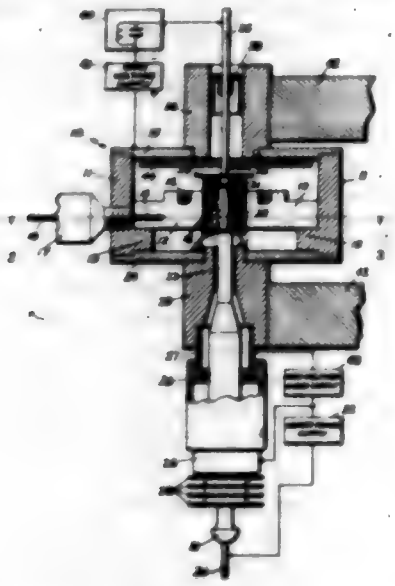
MAGNETRON MODULATOR SYSTEMS

Duane B. Hoagerson, Wayland, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application September 20, 1954, Serial No. 457,071
8 Claims. (Cl. 315—39.63)

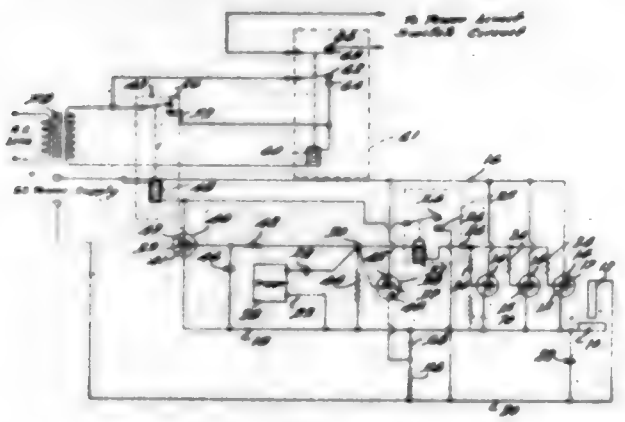
1. An electron discharge system comprising a grid controlled magnetron oscillator having an anode resonant at a first frequency, a cathode, and a grid positioned

between said anode and said cathode and an auxiliary resonant circuit coupled between the anode and the grid



to cause the output of the system to be modulated at the resonant frequency of the auxiliary resonant circuit.

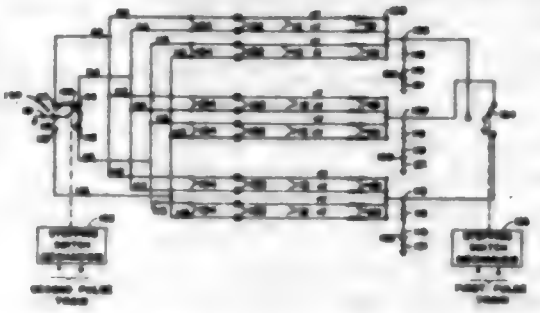
2,866,921
ARC MACHINING
Victor E. Matulaitis, Franklin, and Walter Lobur, Clawson, Mich., assignors to Elox Corporation of Michigan, Royal Oak, Mich.
Application February 23, 1956, Serial No. 567,186
4 Claims. (Cl. 315—127)



1. In an arc-machining apparatus having automatically operable means for causing intermittent erosive electrical discharge across a gap between an electrode and a workpiece, a power limiting switch in the power supply to said apparatus, a triode vacuum tube bank interconnected between said power supply and said gap for controlling the gap discharge characteristic, a triggering device connected in the grid circuit of said tube bank for rendering said tube bank alternately conductive and nonconductive, means operable automatically in response to malfunction of the tube bank for opening said power limiting switch, and means operable automatically in response to malfunction of said triggering device for opening said power limiting switch.

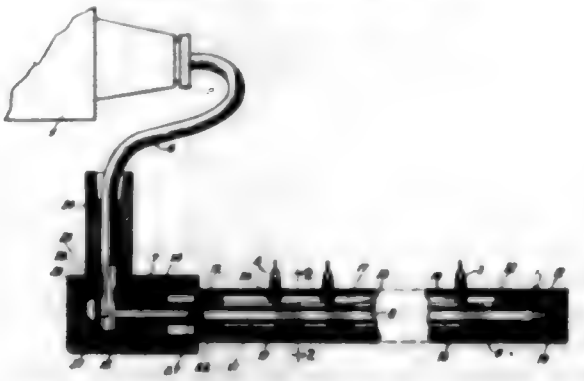
2,866,922
COMMUTATOR
John Matarese, Bronx, N. Y., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application June 28, 1957, Serial No. 666,880
17 Claims. (Cl. 315—169)

1. In combination, (wx) different circuits, w and x being integers larger than 1, each circuit being provided with an electrical conductor and a rectifier connected in series between first and second terminals, all rectifiers being poled in the same sense, said circuits being arranged into w different groups, each group containing x different circuits; w different third terminals, there being one group corresponding to each third terminal, each third terminal



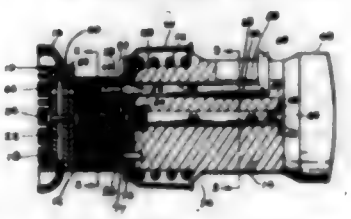
being coupled to all first terminals in its corresponding group; and x different fourth terminals, there being one circuit in each of said groups corresponding to each fourth terminal, each fourth terminal being coupled to the second terminals of all of its corresponding circuits.

2,866,923
STATIC ELIMINATORS
William C. Herbert, Jr., Freeport, N. Y.
Application January 28, 1954, Serial No. 406,654
5 Claims. (Cl. 317—2)



1. A static eliminator comprising a hollow insulator bar having a conductor member therein with insulation surrounding said member, a tubular insulator member in said bar surrounding said insulation, wire coils between said insulator member and said insulation surrounding said conductor member, outside electrodes carried by the bar at separated points along its length, said tubular member having a slit extending along its length and recesses in its outer surface extending across said slit, each coil having a turn at one end seated in one of said recesses, said electrodes being connected with said turns and thus electrically connected to said coils.

2,866,924
COMBINATION CIGAR, CIGARETTE, AND PIPE LIGHTER
Dominic J. Delpidio, Belmont, Mass., assignor of twenty-five percent to David Wolf, Dorchester, Mass.
Application August 11, 1955, Serial No. 527,779
7 Claims. (Cl. 317—95)



1. A combination cigar and pipe lighter comprising a heating coil, a cylindrical flame chamber mounted coaxially with and behind the coil, a cylindrical body member mounted coaxially with and behind the chamber,

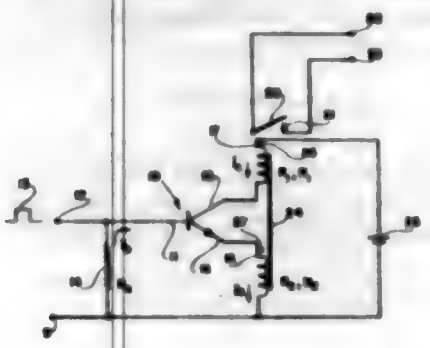
a longitudinal passage extending through the body, a sleeve mounted in the passage and terminating within the flame chamber, an actuating rod carrying an impregnated wick within the sleeve and movable between one position wherein the wick is enclosed by the sleeve and a second position wherein the wick is in contact with the heating coil.

2,866,925

TRANSISTOR OPERATED RELAY

Irwin Wanderman, Burbank, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Application September 30, 1955, Serial No. 537,826
4 Claims. (Cl. 317—148.5)



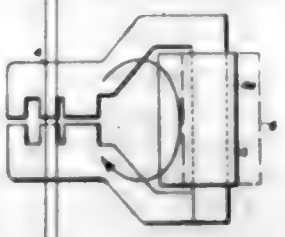
1. In a circuit for controlling an electromagnetic device having a pair of inductances, the combination comprising; a current amplifying device having a base circuit, an emitter circuit and a collector circuit; one inductance of the pair connected in the emitter circuit, a resistance connecting the base circuit with the emitter circuit via the inductance in the emitter circuit for deriving a signal current for introduction to the current amplifying device; the other inductance of the pair connected in the collector circuit; both inductances being responsive to current amplification produced by the current amplifying device to operate the electromagnetic device; and a voltage source connecting the inductances of the emitter and collector circuits in an electrical series relationship.

2,866,926

ELECTRICAL RELAYS

Eric Paddison, Stafford, England, assignor to The English Electric Company Limited, London, England, a British company

Application August 30, 1955, Serial No. 531,361
Claims priority, application Great Britain October 1, 1954
5 Claims. (Cl. 317—167)



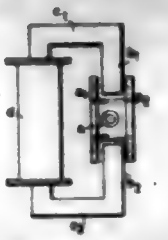
1. An operating electromagnet for an electrical time-overcurrent protective relay, comprising a non-adjustable magnetic core having two core limbs positioned to define a working air gap thereby to adapt the core to co-operate with a relay armature, said core having a body portion joining said core limbs and a flux leakage path adjacent the body portion and bridging said working airgap, a magnetizing winding having a unitary structure and loosely embracing said body portion of the core so as to be linked by a part of said flux leakage path, and adjustable support means supporting the winding on said core and adapted to permit the adjustment of the electromagnetic coupling between the winding and the core by allowing the location of the winding with respect to the core and its flux leakage path to be adjusted.

2,866,927

PERMANENT-MAGNET ARMATURE FOR POLARIZED ELECTROMAGNETIC SYSTEMS, IN PARTICULAR FOR POLARIZED RELAYS

Herbert Berg and Josef Fischer, Munich, Herbert Krautwald, Munich-Solln, and Alois Rubland, Munich, Germany, assignors to Siemens & Halske, Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany

Application September 7, 1955, Serial No. 532,972
Claims priority, application Germany September 9, 1954
9 Claims. (Cl. 317—171)



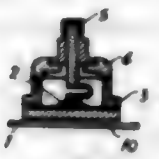
1. In a permanent-magnet armature for polarized relays, the combination of a pair of spaced pole pieces, a permanent-magnet body interposed between the pole pieces, a connecting structure having spaced members bridging the pole pieces at opposite sides of the magnet body, elements associated with the spaced members at the respective ends thereof and engageable with adjacent pole pieces, at least one of said elements being movable in a direction toward or away from the adjacent pole piece and cooperable with an element adjacent the opposite pole piece to exert compression forces on the armature assembly to retain the same in fixed assembled relation.

2,866,928

ELECTRIC RECTIFIERS EMPLOYING SEMI-CONDUCTORS

Alan John Biondell, Willoughby, near Rugby, England, assignor to The British Thomson-Houston Company Limited, London, England, a British company

Application May 21, 1956, Serial No. 586,243
Claims priority, application Great Britain May 23, 1955
4 Claims. (Cl. 317—234)

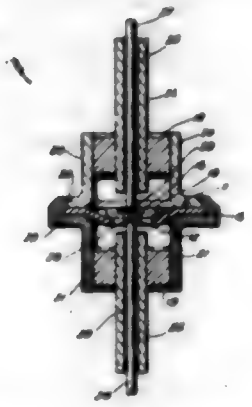


1. A P–N junction rectifier comprising a base member constituted of a metal of high electrical conductivity, a piece of semi-conducting material secured at one face in intimate contact with a face of said base member, an electrode electrically connected with the other face of said piece and forming therewith a rectifying junction, a metal rod terminating said electrode, a flanged metal annulus surrounding said piece and hermetically secured at its flange to the face of said base member to which said piece is secured, an annular ceramic member having one face secured hermetically to the rim of said metal annulus, said ceramic member being formed with a recess on an outer side thereof with a shoulder thereabout, a blind metal sleeve having a flange located in said recess in said ceramic member and hermetically secured therein, said metal sleeve having a central recess into which said metal rod extends and within which it is frictionally secured, whereby said metal sleeve forms one terminal of said rectifier and said main base member forms the other terminal of said rectifier.

2,866,929
JUNCTION-TYPE-SEMICONDUCTOR DEVICES AND METHOD OF MAKING THE SAME

Theodore W. Cooper, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application December 1, 1955, Serial No. 550,317
5 Claims. (Cl. 317—235)

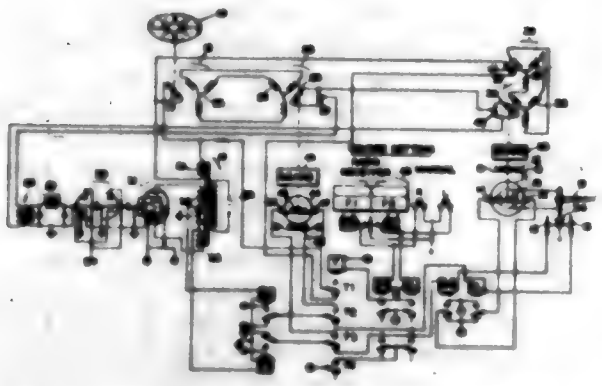


1. In an encapsulated P–N junction semiconductor device having a semiconductor crystal body of one conductivity type and a region of semiconductor material of the opposite conductivity type with an envelope hermetically encapsulating said crystal body, the combination comprising: means for forming an ohmic connection with said region of opposite conductivity type, said ohmic connecting means comprising a tubular member extending into and electrically insulated from said encapsulating envelope, said tubular member having an open end proximate a surface of said region of said opposite conductivity type, a glass bead surrounding said tubular member in contact with the inner wall of said envelope such that said tubular member is mechanically affixed within an electrically insulated from said envelope; a contact electrode within said tubular member having an end extending from said open end of said tubular member, said contact electrode being in ohmic contact with said region of opposite conductivity type; a quantity of solder surrounding said contact electrode within said tubular member to mechanically affix and hermetically seal said contact electrode within said tubular member; and a quantity of solder surrounding said contact area of said region of opposite conductivity type and the adjacent portion of said contact electrode.

2,866,930
AUTOMATIC STEERING SYSTEM

Charles Russell, Millidale, Conn., assignor to Bendix Aviation Corporation, Teterboro, N. J., a corporation of Delaware

Application June 21, 1954, Serial No. 438,142
16 Claims. (Cl. 318—16)

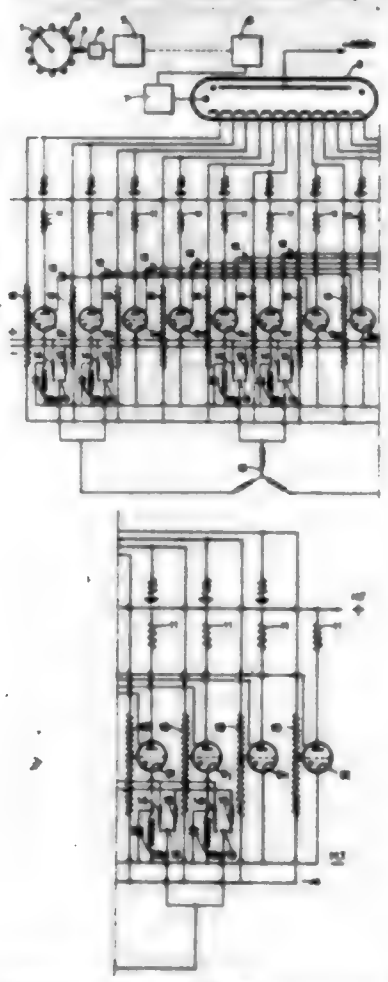


1. In an automatic steering system for dirigible craft, comprising steering means, course setting means, and control means for automatically operating the steering means to maintain the craft on the course set by said setting means; follow-up means actuated by the steering means for regulating the operation of the control means, and means for simultaneously changing the setting of the course setting means and inactivating the follow-up means.

2,866,931
SYNCHRONOUS TRANSMISSION SYSTEMS

John Albert Formby, Mossley, Birmingham, England

Application August 23, 1955, Serial No. 529,979
Claims priority, application Great Britain August 27, 1954
11 Claims. (Cl. 318—23)

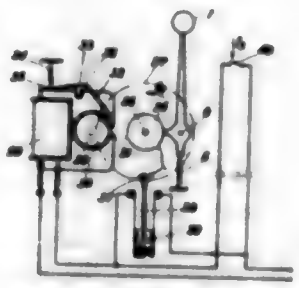


1. In a synchronous transmission system for imparting rotation to a rotary output member, a step type electric motor driving the output member, a pulse initiating member, means associated with said pulse initiating member by which the pulses generated occur at irregular intervals of time, and a pulse driven electronic multi-channel selector controlling the distribution of energising voltages to the windings of the motor, in synchronism with the irregularly occurring pulses, so causing the motor to step in a correspondingly irregular manner.

2,866,932
ELECTRIC MOTOR CONTROL FOR CHIMES

Paul Dentel, Saverne, France, assignor to Fabrique d'Horlogerie la Vedette, S. A., Saverne, France

Application January 12, 1953, Serial No. 330,645
1 Claim. (Cl. 318—446)



An actuating mechanism for a sound signaling device which includes a vibratable member adapted intermit-

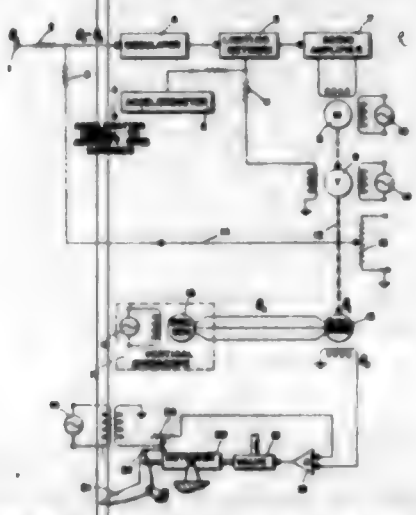
tently to strike a sound producing element, an electric motor including a stator, rotor, and shaft, a pin carried by said rotor, a pinion carried by said shaft, a pair of parallel electric circuits for said motor between the motor and a source of electrical power, a manual switch in one circuit, a spindle adjacent said motor, a cam on said spindle adjacent said vibratable member for actuating said vibratable member upon energization of said motor, a timing wheel on said spindle adapted to be rotated by said pinion, a bell crank lever adjacent said motor, one end of said bell crank lever engaging said pin when said motor is deenergized, the other arm of said lever being magnetically energizable upon actuation of said motor to move said one arm to release said pin and a second switch in the other of said circuits operable by said timing wheel to continue the operation of said motor for a predetermined period after said manual switch is opened.

2,866,933

LIMITING DEVICE FOR AIRCRAFT WING LOAD

Robert W. Bond, Whittier, and Thomas K. Shuler, Long Beach, Calif., assignors to North American Aviation, Inc.

Application October 5, 1954, Serial No. 460,294
6 Claims. (Cl. 318—489)



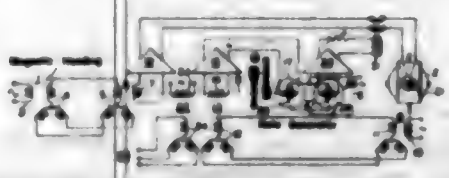
1. In a device for limiting aircraft wing loads, an amplifier adapted to receive a signal whose amplitude indicates pitch command and whose phase indicates sense, an accelerometer whose sensitive axis is oriented to measure normal acceleration, and whose amplitude indicates the amount of normal acceleration and whose phase indicates sense, the output of said accelerometer connected to control the gain of said amplifier whereby said pitch command signals are limited in their amplitude.

2,866,934

DIRECTIONAL SYSTEMS SENSITIVE TO RATES OF TURN

Harold S. Whitehead, Marblehead, Mass., assignor to General Electric Company, a corporation of New York

Application September 6, 1957, Serial No. 682,460
9 Claims. (Cl. 318—489)



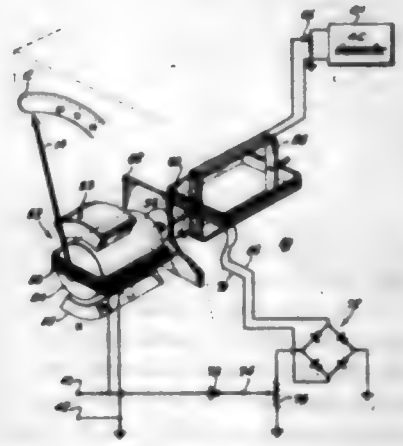
3. A directional system for providing directional information on a movable craft comprising: inertial directional reference means maintaining a stable spatial orientation; an output shaft; means responsive to the relative orientation between said craft and said directional reference means and including motor means operatively connected to drive said shaft at speeds proportional to the rate of turn of said craft; generator means governed by said motor means for producing an electrical turn signal varying with said rate of turn; slaving control means for correcting the directional information derived from said directional system upon departure of said reference means from a predetermined orientation; and means responsive to said turn signal for interrupting the operation of said slaving control means when said turn signal exceeds a predetermined amplitude.

2,866,935

TRANSIENT MEASURING APPARATUS

Jean Jules Achille Robillard, Stockholm-Vallingby, Sweden

Application February 6, 1956, Serial No. 563,623
7 Claims. (Cl. 324—102)



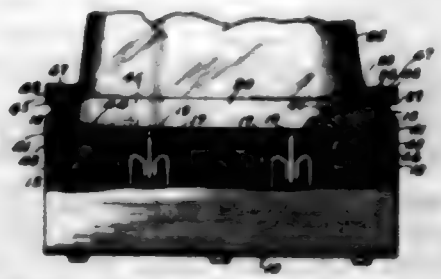
7. Apparatus for recording a very short duration electrical pulse, comprising means establishing an energizing magnetic field, a conductor movable in said field, said conductor having a normal rest position from which it is adapted to be deflected and held in another position determined by the current in said conductor, input means to apply a very short duration electric pulse to said conductor to impart an impulse of momentum thereto, and positive feedback means for applying to said conductor a feedback current of magnitude sufficient to give a steady deflection proportional to the size of said very short pulse, said feedback means including a source of electric current, and a variable element connected to said source for applying to said conductor said feedback current, said variable element being coupled to said conductor and controlled by deflection of it to determine the amount of said feedback current.

2,866,936

RINGLESS CLOSURE FOR SOCKET METER ENCLOSURE

Craig M. Moore and Raymond T. Trier, North Canton, and Charles M. Mathison, Canton, Ohio, assignors to The Superior Switchboard & Devices Company, Canton, Ohio, a corporation of Ohio

Application March 7, 1956, Serial No. 570,110
6 Claims. (Cl. 324—110)



1. In combination with a meter having a base with surge links on the rear side thereof and terminal posts

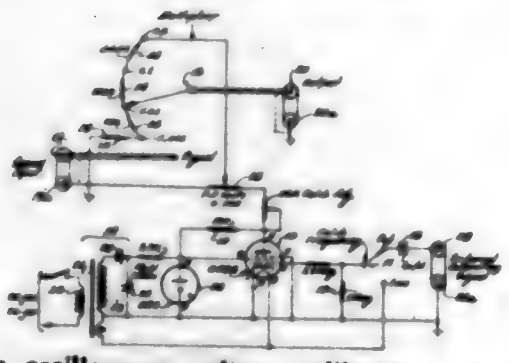
projecting rearwardly from the base, a ringless socket type enclosure having a box-like body open at its front, terminal jaws in said enclosure for receiving said terminal posts of the meter, surge clips mounted upon the walls of the box-like body and having terminal portions projecting into the box for contact with the surge links of the meter, and a removable cover on the open front of the box having an opening therein through which the meter is located.

2,866,937

OSCILLOSCOPE VOLTAGE CALIBRATOR

Alvin B. Kaufman, Los Angeles, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application April 6, 1954, Serial No. 421,410
3 Claims. (Cl. 324—121)



1. An oscilloscope voltage calibrator, comprising: a pentode tube for operating as a limiter amplifier, means for operatively applying a constant-value source of D. C. potential across the screen grid and cathode of said pentode, a resistance connected between the screen grid and anode of said pentode, input circuit means connected between the control grid and cathode of said pentode, calibrating input terminal means connected to said input circuit means for applying an A. C. signal whose peak-to-peak amplitude is to be measured to said input circuit means to provide a substantially square wave calibrating output from said limiter amplifier at a known peak-to-peak amplitude, a fixed-resistance output potentiometer connected in an output circuit between the anode and cathode of said pentode, the continuously movable tap of said output potentiometer cooperating with a calibrated dial and pointer, a plurality of series attenuator resistances connected between said potentiometer tap and said cathode, a multiple-contact selector switch having the junctions between said series attenuator resistances connected to respective contacts thereof, the pole of said selector switch being connected to an output terminal of said voltage calibrator, and a signal input terminal of said voltage calibrator connected to another separate contact of said selector switch and adapted to have said A. C. signal to be measured connected thereto, whereby an oscilloscope connected to said output terminal can be used to measure the peak-to-peak amplitude of said A. C. signal at said signal input terminal by visual comparison with the calibrated variable flattened output voltage of the same frequency from said calibrator when said A. C. signal is also fed to said input circuit means of said calibrator at an amplitude above the threshold of limiting.

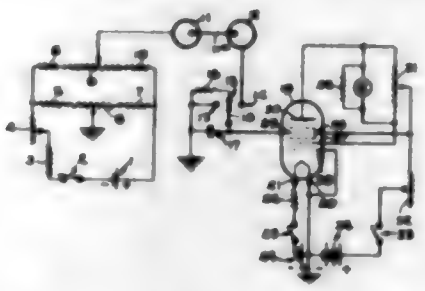
2,866,938

VACUUM TUBE VOLTMETER

Samuel Natelson, Rockford, Ill.

Application March 9, 1955, Serial No. 493,116
8 Claims. (Cl. 324—123)

7. A pH meter comprising in combination, a multigrid vacuum tube, cathode, anode and screen grid circuits in said tube, adjustable means in said circuits for applying positive voltage to the anode and screen grid and for heating the cathode, a control grid in said tube, a grid arm circuit to ground, a grid leg circuit to ground through high resistance, and a grid measuring circuit to ground through the substance whose pH is being measured, electrodes in said grid measuring circuit adapted and designed to be placed in said substance, grid switch means adapted and designed to switch the grid arm, grid leg, and grid measuring circuits sequentially to the control grid, adjustable components adapted and designed for insertion in the grid measuring circuit, said components being calibrated in pH units and designed to balance out the current flow caused by the pH being measured, means for totalling and reading said calibrations, a galvanometer indicating zero grid potential with



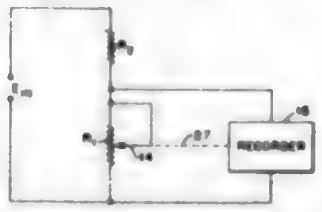
respect to the cathode to enable switching the control grid to the grid measuring circuit while the control grid and cathode are at the same potential after the control grid has first been switched to and from the grid arm and grid leg circuits and proper adjustments have been made to the adjustable means in the cathode, anode, and screen grid circuits, said galvanometer, when the control grid is switched to the grid measuring circuit indicating the current at the anode caused by the pH being measured, and indicating no current after the current caused by said pH has been balanced out by the insertion of the number of calibrated components in the grid measuring circuit corresponding to the unknown pH.

2,866,939

ZERO SUPPRESSION FOR RECORDERS

William G. S. Fort, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application June 11, 1956, Serial No. 590,797
1 Claim. (Cl. 324—131)



In a self-balancing recorder having a full-scale voltage rating of S volts, including a two-phase servo motor, a converter and amplifier unit having a pair of two-terminal inputs and an output coupled to one phase winding of said servo motor, a source of reference voltage coupled to the other phase winding, and source of a reference signal coupled to one of said inputs and including a slidewire having a movable arm, the zero-suppression means comprising a fixed resistor and a variable resistor connected in series, means for impressing an input signal to be recorded in series with said resistors, said variable resistor having a movable contact arm, means connecting said two terminals of the other of said inputs across said variable resistor and means coupling both said arms to said servo motor, to move said arms in proportion to the voltage impressed upon said input terminals, said resistors being of such magnitudes that the ratio

$$\frac{R1}{R2}=\frac{S}{Z}$$

responsive to the direct load current for cancelling out the effects of said flux means in the legs upon which

the current through said load, independent fixed reference supply voltage means connected to the output of

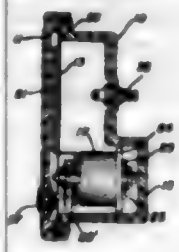
where R1 and R2 are the magnitudes of the variable and fixed resistors, respectively, and Z is the selected zero-suppression voltage.

2,866,940

ELECTRICAL INSTRUMENT CASING

Francis X. Lamb, East Orange, N. J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N. J., a corporation of New Jersey

Application April 2, 1954, Serial No. 420,717
9 Claims. (Cl. 324—156)



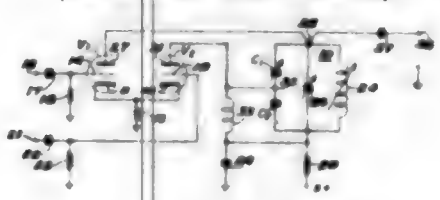
1. A housing for an electrical instrument comprising a cup-shaped case having a bottom wall, side walls extending upwardly therefrom, an integral flange at its open end, projecting laterally from and beyond the outer surfaces of said side walls, said flange having a plurality of notches formed in its outer peripheral surface, opening in said direction of flange projection, terminating at shoulders facing in a direction toward the plane of the bottom wall, and lying in a plane spaced toward said bottom wall plane a predetermined distance from the plane of the open end of the case; and a cover made of a plastic material and including a depending side wall closely encircling the peripheral surface of the flange, said cover side wall having a plurality of integral, inwardly-directed lips positioned thereon and with locking shoulders at a distance from the plane of cover engagement with the open end of the case corresponding with the spacing of the plane of said notch shoulders to fasteningly extend directly into the flange notches, so that when said cover is applied its wall lips are forced into resilient engagement in the cooperating flange notches.

2,866,941

FREQUENCY SUPPRESSION CIRCUIT

John R. Sherwood, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application April 4, 1955, Serial No. 499,012
13 Claims. (Cl. 332—44)



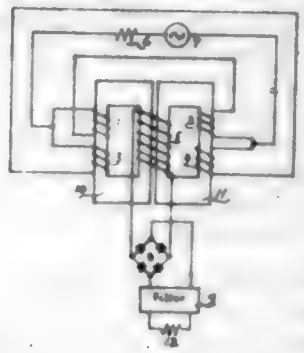
1. A frequency suppression circuit that suppresses one of two mixed signals comprising, first and second electron tubes each having at least one grid, one of the signals received upon the grid of one tube, and the other of the signals received upon the grid of the other tube, a resistor connected to ground at one end and connected at the other end to the cathodes of the first and second tubes, a B plus source operably connected to the tubes, a tank circuit having at least a pair of serially connected capacitors, the plate circuit of the first tube connected serially with the pair of the capacitors to provide a first impedance connection to the tank circuit, the plate circuit of the second tube connected serially with only one of the capacitors to provide a second impedance connection to the tank circuit, the capacitors having an impedance ratio equal to the ratio of the gains of the two tubes with respect to the one signal that is to be suppressed.

2,866,942

APPARATUS FOR DIRECT CURRENT CONSTANT VOLTAGE POWER SUPPLY

Michel Mamon, New York, N. Y., assignor of forty percent to George A. Rubinow, New York, N. Y., and sixty percent to Magnetic Controls Inc., New York, N. Y., a corporation of New York

Application March 30, 1954, Serial No. 419,677
3 Claims. (Cl. 321—16)



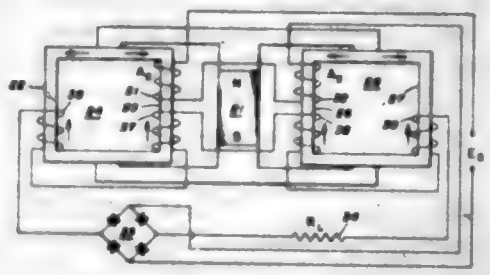
1. In a power circuit, in combination, a source of alternating current, a first and a second ferromagnetic core, a first pair of input windings on said first core connected in aiding relationship across said source, a second pair of input windings on said second core connected in opposed relationship across said source, and an output circuit comprising conductor means linking said first core and said second core in a plurality of serially interconnected turns.

2,866,943

CIRCUIT FOR PROVIDING IMPROVED CORE CHARACTERISTICS FOR SATURABLE REACTOR DEVICES

John F. Ringelman, Catonsville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 12, 1956, Serial No. 558,816
5 Claims. (Cl. 321—25)



5. A saturable reactor current reference comprising: a saturable reactor magnetic circuit comprising at least two multileg gapless cores; means for providing a continuous unidirectional saturating flux to the legs of said gapless cores; a full wave rectifier; alternating current supply terminals; direct current load terminals; alternating current load windings, one wound upon one leg of each of said cores; leads for connecting said alternating current terminals to said alternating current load windings and said rectifier and for connecting said direct current load terminals to said rectifier whereby when an alternating voltage is applied to said alternating current terminals an alternating current flows through said alternating current windings and a direct voltage appears across said direct current load terminals; flux means responsive to the direct load current resulting from the direct voltage for maintaining at least one leg of each core, other than the leg carrying the alternating current load winding, in an unsaturated condition; and means

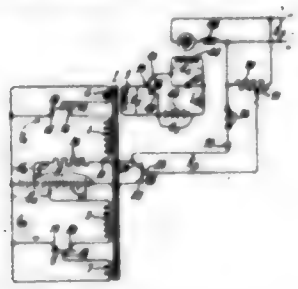
responsive to the direct load current for cancelling out the effects of said flux means in the legs upon which alternating current load windings are wound.

2,866,944

UNIDIRECTIONAL VOLTAGE CONTROL NETWORK FOR GENERATOR SYSTEMS

William B. Zelina, Erie, Pa., assignor to General Electric Company, a corporation of New York

Application September 24, 1956, Serial No. 611,555
13 Claims. (Cl. 322—25)



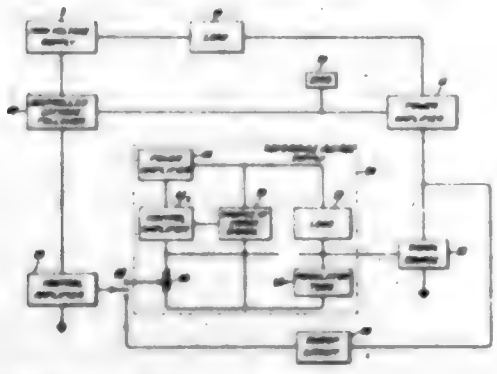
11. A transistor voltage regulator for a unidirectional electric generator comprising, a rectangular wave oscillator having an output voltage characterized by the absence of any integrated unidirectional components, a first transistor connected to said output voltage in a sense to enhance current flow in said transistor during positive pulses of said output voltage, a field winding of the generator connected to one voltage terminal of the generator and adapted to be connected to the other voltage terminal to be energized thereby when said transistor is conductive, a current sensing means connected in circuit with the generator adapted to provide a potential proportional to the load current of the generator, a Zener diode, a second transistor, said diode and said second transistor being connected across said sensing means in a sense whereby said load current tends to cause reverse current flow in said diode to allow current flow in said second transistor at a value dependent on the breakdown voltage of said diode, means for connecting said second transistor to said oscillator for modulating the time duration of half cycles of one polarity of the voltage output thereby controlling the average time of conductance of said first transistor, and a diode connected across said field winding in a sense to pass current of said winding when said transistor is non-conductive for commutating said field winding thereby reducing ripple currents in said winding.

2,866,945

ELECTRONIC POWER SUPPLY

Buren W. Rechnitzer, Delmar, N. Y., assignor to General Electric Company, a corporation of New York

Application February 3, 1955, Serial No. 485,865
9 Claims. (Cl. 323—4)



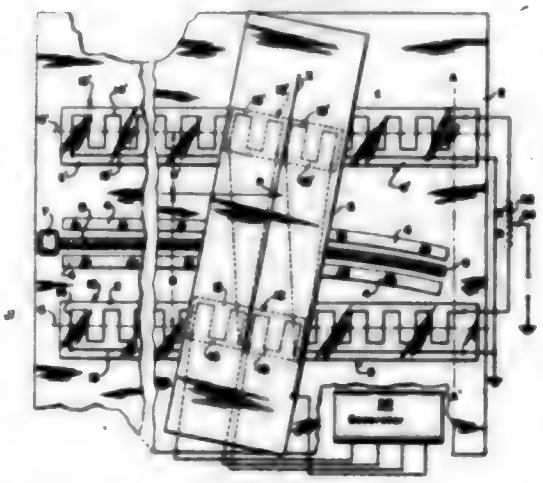
1. An electronic power supply comprising, biased power amplifier means adapted to be connected in series with a load which is fed from a voltage supply, signal source means connected in series with said power amplifier means for deriving a voltage signal indicative of the current through said load, independent fixed reference supply voltage means connected to the output of said signal source means, high impedance means for amplifying the voltage difference between the outputs of said signal source means and said reference supply voltage means, and isolation means for feeding the output of said high impedance means into said power amplifier means in such a way as to oppose the bias of this latter means and control its conductivity.

2,866,946

MACHINE TOOL CONTROL

Robert W. Tripp, Bronxville, N. Y., assignor, by mesne assignments, to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada

Application September 26, 1955, Serial No. 536,466
8 Claims. (Cl. 323—53)



1. In a machine including two elements one of which is movable relative to the other along a path defined by nominally rectilinear guiding surfaces in one of said elements, means to adjust the position of a point in one of said elements along a rectilinear path with respect to the other of said elements in spite of curvature of said surfaces, said means comprising two linear position measurement transformers each including a continuous winding having a repeating pole cycle and two windings in space quadrature of said pole cycle, said continuous windings having the same pole cycle and being arranged on one of said elements substantially parallel to each other and to the path of motion of the other of said elements relative to said one element, said quadrature windings being arranged on the other of said elements, means to energize with the same currents said quadrature windings in pairs each including the windings from said two transformers having the same positional phase relative to their continuous windings, and means to combine the voltages induced in said continuous windings in proportions inversely related to the distances in the plane of said continuous windings between said continuous windings and the projection of said point onto said plane.

2,866,947

SATURABLE REACTOR CONTROL CIRCUIT

Alfred A. Wolf, Dallastown, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application October 5, 1956, Serial No. 614,329
2 Claims. (Cl. 323—89)

1. A control system for controlling the speed and direction of a motor comprising; a plurality of saturable reactors, each having a signal winding and a secondary winding having two output terminals and a common terminal; an intermittent signal voltage source connected to said signal windings of said saturable reactors; a plurality of selenium rectifiers connected in opposed relation one each to each said output terminal of said

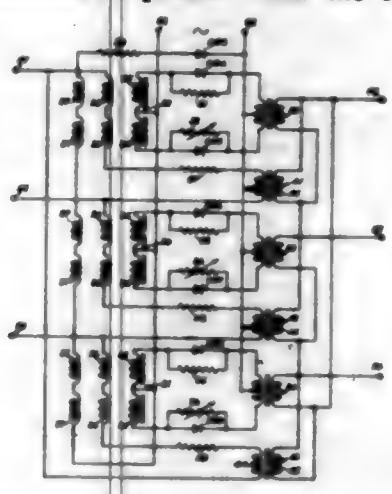
into said waveguide, a jacket in contact with at least one of said walls of said waveguide in a heat transfer relation-

wound in a direction opposite to the other whereby said coil is substantially noninductive and no voltage dif-

capacitors to provide a second impedance connection to

core, other than the leg carrying the alternating current load winding, in an unsaturated condition; and means

secondary windings; a plurality of coupling transformers, one each for each said saturable reactor, each said coupling transformer having a secondary winding and a primary winding with a center-tapped terminal and two input terminals, each said input terminal of each said transformer being connected to one each of said selenium rectifiers; a plurality of equalizing transformers, one each for each saturable reactor, each having a primary winding connected in series with the respective signal windings of said saturable reactors and each having a secondary winding connected in parallel with the respective sec-



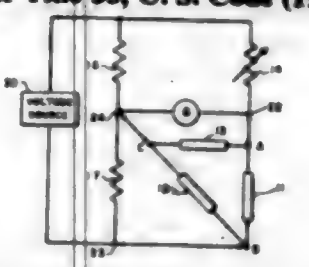
ondary winding of said coupling transformer whereby the output voltage is compared with the input signal to improve gain and accuracy in said system; and a source of alternating current connected between said common terminals of said secondary windings of said saturable reactors and the respective center-tapped terminals of said coupling transformers whereby a signal voltage impressed on said signal windings causes unequal current flow through said rectifiers thereby producing an output voltage proportional to the magnitude and polarity of said signal voltage.

2,866,948

TEST CIRCUIT FOR INTERCONNECTED COMPONENTS

Richard P. Witt, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Army

Application March 24, 1955, Serial No. 496,629
1 Claim. (Cl. 324—62)
(Granted under Title 35, U. S. Code (1952), sec. 266)



Bridge apparatus for measuring the resistance of a circuit component while it is connected in a circuit with two other serially connected resistance components in shunt therewith comprising, a bridge circuit having a first standard resistance and a second standard resistance having first and second terminals with a first terminal of each connected together to form a common junction, said first and second standard resistances forming ratio arms of the bridge, a source of direct current potential connected across said first and second standard resistances to the second terminals thereof, an adjustable resistance having a first terminal connected to the second terminal of the first standard resistance and a second terminal forming a first terminal of said bridge, an indicating means connected between the second terminal of said adjustable resistance and said common junction between said first and second standard resistances for indicating when said bridge is balanced, means for connecting the second terminal of said adjustable resistance and a second terminal of said second standard resistance to a resistance to be measured and means for connecting said common junction to a junction between the two components shunting said resistance to be measured, the resistance of the bridge being significantly lower than that of the circuit component being measured, said second standard resistance being substantially small compared to the shunting resistance component connected between said common junction of the first and second standard resistances and said second terminal of the second standard resistance, and the resistance of the other shunting resistance, which bridges said indicating means, being sufficiently high compared to that of said indicating means so that the sensitivity of said means is not seriously impaired, whereby precise readings are obtained of the resistance of the component being measured while connected in the bridge circuit irrespective of wide variations in the resistances of said resistance components in shunt therewith.

2,866,949

MICROWAVE CIRCULATORS, ISOLATORS, AND BRANCHING FILTERS

Le Roy C. Tillotson, Shrewsbury, N. J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Application October 29, 1953, Serial No. 389,137
2 Claims. (Cl. 333—11)

1. A microwave isolator comprising an elongated section of rectangular wave guide, a plane conductive partition assembled within said section of wave guide and extending throughout a centrally located portion of said section of wave guide only, said partition dividing the channel through said central portion of said wave-guide section into two substantially identical, electrically-isolated, parallel rectangular channels, a non-reciprocal phase shifting device in one of said two channels, said device having a phase shift of 180 degrees for one direction of transmission in excess of its phase shift for the opposite direction of transmission through said wave guide and a pair of resistive plane terminating members, one of said members being located immediately adjacent each end of said partition, respectively, and in the plane of said partition, said elongated section of wave guide extending beyond the outer end of the resistive terminating member at each end of said isolator.

2,866,950

MICROWAVE POWER MEASUREMENT DEVICE

Vernon C. Smith, East Orange, N. J., assignor to Radio Corporation of America, a corporation of Delaware

Application May 31, 1955, Serial No. 512,174
The terminal fifteen years of the term of the patent to be granted has been disclaimed
2 Claims. (Cl. 333—22)

1. A calorimeter wattmeter comprising a section of waveguide formed by rectangularly disposed enclosing walls, a slot tapered acutely at its front and rear ends in one wall of said waveguide, a cover disposed over said slot, a tube passing through said waveguide, said tube extending under said cover and through said slot

insertion between turns of said inductance, arm means carrying said plungers, said arm means being pivoted

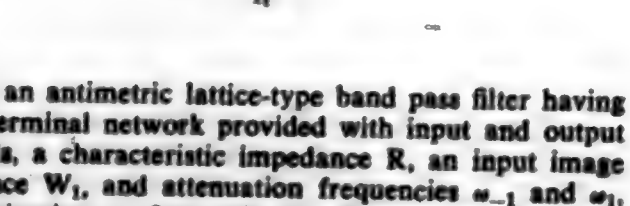
2,866,957

CABLE CONNECTOR

plifier means for deriving a voltage signal indicative of

lation one each to each said output terminal of said

into said waveguide, a jacket in contact with at least one of said walls of said waveguide in a heat transfer relation-

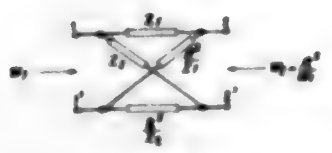


ship therewith, and means connected to said jacket for passing a fluid through said jacket.

ERRATUM

For Class 333—73 see:
Patent No. 2,866,595

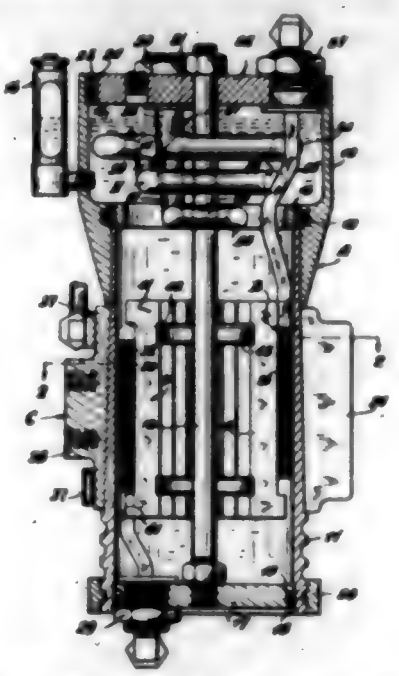
2,866,951
LATTICE-TYPE ANTIMETRIC FILTERS
Jacques R. V. Oswald, Paris, France, assignor to Compagnie Industrielle des Telephones, Paris, France
Application November 30, 1953, Serial No. 395,234
Claims priority, application France December 5, 1952
3 Claims. (Cl. 333—74)



2. In an antimetric lattice-type band pass filter having a four-terminal network provided with input and output terminals, a characteristic impedance R, an input image impedance W_1, and attenuation frequencies ω_{-1} and ω_1, in combination, a first pair of adjacent branches connected between one of said input terminals and said output terminals, said branches having impedances equal respectively to $R\omega_1/p$ and Rp/ω_1, where p equals the quantity $j\omega$, ω equals the frequency of the voltage applied to the input terminals of the filter; and a second pair of adjacent branches connected between another of said input terminals and said output terminals of the filter and respectively having impedances $R\omega_{-1}/p$ and Rp/ω_{-1}.

2,866,952
OIL-COOLED TRANSFORMER
James B. Wadhams, Cleveland, Ohio, assignor to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Original application April 6, 1951, Serial No. 219,615. Divided and this application November 1, 1956, Serial No. 623,514
1 Claim. (Cl. 336—58)

In a high-frequency transformer comprising a helical multiturn primary coil having a vertical axis, an insulating housing comprising an imperforate cylinder and liquid-tight means closing the end of said cylinder below the end of said primary coil and a cooling liquid filling said cylinder to above the level of said primary coil, a cooling coil submerged below the level of said cooling fluid and in inductive relationship with said primary coil, said cooling coil having inlet and outlet ports for a cooling fluid and a continuous path therebetween, said coil being comprised of a pair of turns each being wound in a direction opposite to the other whereby said coil is substantially noninductive and no voltage dif-

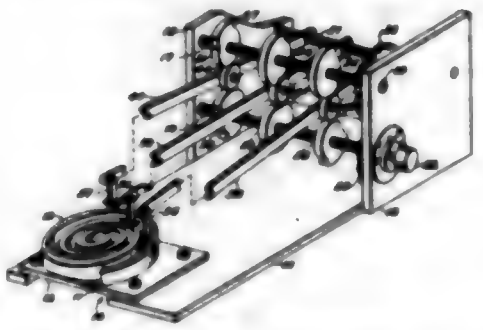


ferential will exist between said inlet and outlet ports due to induced voltages in said coil.

2,866,953
MECHANICAL-ELECTRICAL TRANSDUCERS
Jerry L. Stratton, Schenectady, N. Y., assignor to General Electric Company, a corporation of New York
Application June 29, 1956, Serial No. 594,844
12 Claims. (Cl. 336—110)

1. A mechanical-electrical transducer comprising a laminated magnetic core member, adjacent laminations of said core member spaced apart with a thin layer of insulating material therebetween, a current conducting winding in flux exchange relationship therewith, and a magnet, said magnet being movably positioned in contact with the core laminations in such a manner that the number of laminations contacted by said magnet is variable and essentially only those laminations contacted by said magnet are saturated by its field.

2,866,954
INDUCTANCE COIL SHORTING SYSTEM
Frederick W. Johnson and Harry W. Lehman, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application July 19, 1956, Serial No. 598,859
3 Claims. (Cl. 336—144)



1. A variable inductance comprising an inductance having spaced turns, a plurality of shorting plungers for

predetermined axial position of said pins and sleeve relative to said block, and a pair of retainer springs carried by said block and engaging said slots when in

second named shoulder, said nut projecting radially outwardly of the extension beyond the outer periphery of

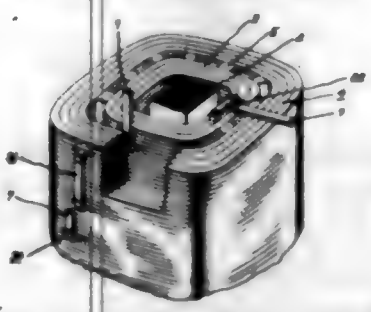
insertion between turns of said inductance, arm means carrying said plungers, said arm means being pivoted about a shaft, a pair of cam-shafts mounted adjacent said pivot shaft, the cams on one shaft being complementary to the cams on the other shaft, roller means on each arm intermediate said cams, and means coupling said cam-shafts together, whereby rotation of said cam-shafts forces said plurality of plungers in between said turns in a desired order.

2,866,955

TAP STRUCTURE FOR REACTIVE DEVICE

Robert D. Moss, Fort Wayne, Ind., and Charles M. Marker, Schenectady, N. Y., assignors to General Electric Company, a corporation of New York

Application December 29, 1953, Serial No. 400,874
7 Claims. (Cl. 336—192)



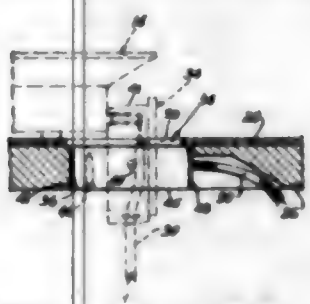
1. In a reactive device, a coil formed of a conductor having a substantially rectangular cross section, and a tap connection member for connecting said coil to a tap lead, said tap connection member having a substantially T-shaped configuration, with its leg portion extending from a side edge of its bar portion, said bar portion of said tap connection member having a substantially rectangular cross section, said coil having at least two sections, the ends of said bar portion of said tap connection member being respectively integrally joined to one end of each of two of said coil sections, the leg portion of said tap connection member being adapted to be connected to said tap lead.

2,866,956

COMBINED TABLE AND FOOD WARMER

Shade W. Miller and Val K. Williamson, Portsmouth, Ohio

Application August 24, 1956, Serial No. 606,076
4 Claims. (Cl. 339—34)



3. In combination, a support having an exposed surface, said support having an opening therethrough, a dielectric block positioned in said opening, said block having opposed ends and upper side and lower sides, means pivoting the block on the support at a point between the ends of the block whereby the block can be pivoted in said opening from a stored position in which the upper side of the block is substantially flush with the exposed surface of the support to an operative position in which one of said ends of the block projects outwardly beyond said exposed surface, electrical appliance prong contacts in said block at said one end of the block, said contacts having outer ends exposed at the lower side of the block for engagement by prongs of an appliance located at said exposed side of the support, and electric cord connecting means associated with said contacts.

2,866,957

CABLE CONNECTOR

Kenneth A. Raypholtz, Marion, Ind., assignor to Essex Wire Corporation, Fort Wayne, Ind.

Application December 26, 1957, Serial No. 705,393
1 Claim. (Cl. 339—60)

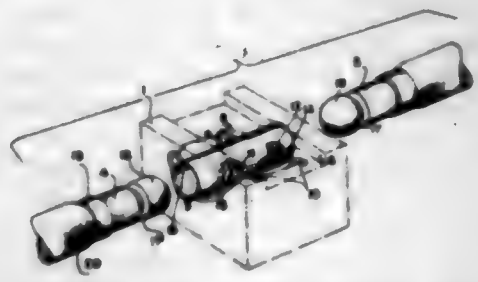
In an electrical connector, a receptacle member, a plug member, and a coupling member; the receptacle member comprising a rigid tubular housing having a first recess at one end and a second annular recess at the opposite end provided with a threaded portion, a shoulder and a substantially semi-cylindrical groove longitudinally positioned in the annular surface of the second recess between the shoulder and said opposite end of the housing; said opposite end of the housing having external side walls polygonal in configuration; said groove being formed in said housing at the corner between two adjoining external surfaces of said housing; the receptacle member including an insulating body disposed within the first recess and a contact member embedded lengthwise in said body having a pinlike extension; the coupling member comprising a block of resilient insulating material loosely disposed in the first recess and holding a contact element having socket portions at opposite ends thereof; said pinlike extension being received in one of the socket portions; the plug member comprising a body of insulating material and a contact member embedded lengthwise in the plug body having a pinlike extension received in the other of said socket portions; the plug body having at one end thereof an increased diameter circular flange adapted to be received in the second recess and a substantially semicylindrical projection on the flange adapted to be received in said groove for angularly orienting the plug member in the receptacle member; a jam nut and a clamping ring slidably mounted on the plug body with the clamping ring having an external configuration substantially identical to that of the circular flange and being disposed between the jam nut and the circular flange; and the jam nut having external threads engageable with said receptacle threaded portion to compress the circular flange between the clamping ring and the shoulder to provide a liquid tight seal.

2,866,958

QUICK CIRCUIT CONNECTOR

William R. Postell, Los Angeles, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

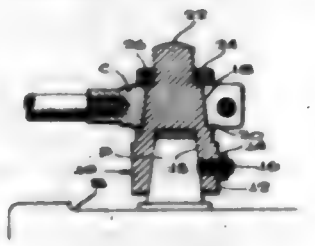
Application February 12, 1957, Serial No. 639,732
13 Claims. (Cl. 339—198)



1. A connector for electrical circuits comprising, an electrical insulating block, said block having a generally cylindrical bore formed therethrough, a conductive sleeve loosely received within said bore, a pair of conductive connector pins slidably received one within each end of said sleeve; said block, sleeve and pins having slots cut therein transversely of said bore and in alignment at a

predetermined axial position of said pins and sleeve relative to said block, and a pair of retainer springs carried by said block and engaging said slots when in alignment for securing said sleeve and pins to said block, said sleeve being split longitudinally for squeezing the connector pins to insure good electrical contact, said pins having a rounded nose for deflecting said sleeve and retainer springs to effect entry into the sleeve.

2,866,959
BATTERY POST TERMINAL
Benjamin Tecker, Philadelphia, Pa.
Application August 3, 1956, Serial No. 601,896
1 Claim. (Cl. 339—232)

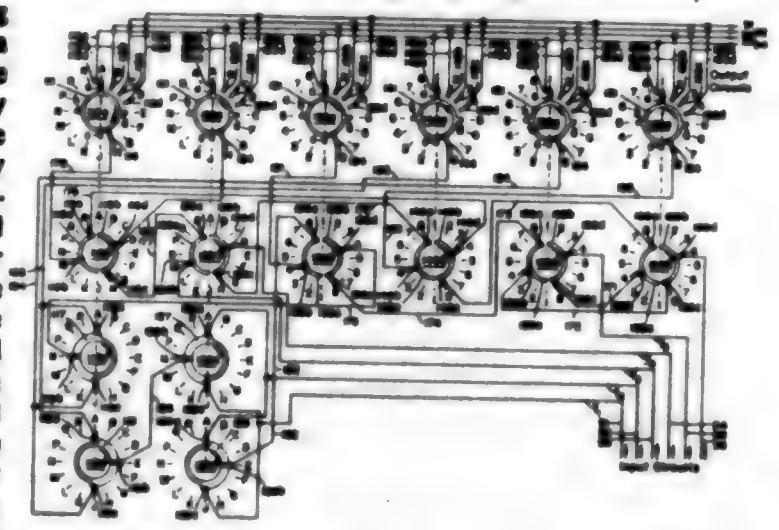


A device for providing a connection between a battery post and a cable clamp, comprising: a body formed from a single piece of electrically conductive material, said body being elongated in a vertical direction and being progressively stepped down in cross sectional area in a direction from the lower to the upper extremity thereof, the body being formed at its lower end with a polygonal, wrench-receiving, external cross sectional shape continuing from the lower extremity of the body to a location short of the midlength part of the body, the body having at its lower end a downwardly opening, tapered recess complementary to a correspondingly tapered battery post over which the body is to be applied, said recess in the sense of a direction axially of the body extending for a distance close to but short of the midlength point of the body, the wrench-receiving polygonal external surface of the body extending a distance longitudinally of the body slightly less than the length of the recess, the body having a radial, threaded passage extending from the outer surface thereof into communication with the recess intermediate the opposite ends of the recess, said body having, intermediate its ends, a tapered portion corresponding generally to the taper of the battery post but having a larger diameter at its larger end than the diameter of the larger end of the recess, said tapered portion of the body at its smaller end being of a diameter greater than the diameter of the smaller end of the recess, the body having, at the base of the tapered portion, a circumferential shoulder substantially coplanar with the inner end wall of the recess, the body being of externally circular cross-sectional configuration from said shoulder to the adjacent end of the polygonal, wrench-receiving surface of the body, said body at its upper end being formed with an axially, upwardly projecting extension integral with the smaller end of the tapered portion and formed to a diameter substantially less than the diameter of the smaller end of the tapered portion to define a shoulder at the base of said extension extending circumferentially of the body, the last named shoulder being of narrow width, said tapered portion of the body being adapted to receive a battery cable clamp having a tapered surface complementary to the taper of said tapered portion of the body, the bottom surface of the cable clamp bearing against the first named shoulder and the top surface of the cable clamp being coplanar with the second named shoulder and extending about the second named shoulder; a set screw threadedly engaged in said radial, threaded passage to secure the body to a battery post; and a nut threaded upon said extension and bearing against said second named shoulder, said nut projecting radially outwardly of the extension beyond the outer periphery of the second named shoulder to bear against the top surface of the cable clamp.

2,866,960
ELECTRODE AND HOLDER ASSEMBLY
John G. Howell, Jr., Piedmont, and Greenwood H. Pannell, San Leandro, Calif., assignors to Owens-Illinois Glass Company, a corporation of Ohio
Application September 11, 1957, Serial No. 683,387
6 Claims. (Cl. 339—265)

1. In combination an electrode and holder therefor, a rigid first plate, a second plate lying upon one face of the first plate and formed of electric current conductive material, a pair of electrode contact bars arranged in parallel spaced apart relationship upon said second plate, said bars being of such cross-sectional shape as to provide a pair of opposed narrow elongated electrode contact surfaces, an electrode of rod-like form generally cylindrical in cross-section disposed parallel to the length of said contact bars with two circumferentially spaced longitudinal areas in line engagement with said contact surfaces, means common to the plates and electrode for securing the plates together and the electrode in firm engagement with the contact bars and means whereby cables may be connected to the second plate.

2,866,961
SUBSCRIPTION TELEVISION ENCODING APPARATUS
George V. Morris, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application February 1, 1954, Serial No. 407,192
20 Claims. (Cl. 348—147)



1. An encoding apparatus for a subscription television system including a plurality of input circuits and a plurality of output circuits, said encoding apparatus comprising: a plurality of transition switches, individually having a plurailty of operating positions, connected to said input circuits and to said output circuits and in each of said positions establishing predetermined circuit conditions between selected ones of said input and output circuits; a plurality of transposition switches individually having a plurality of operating positions; uni-

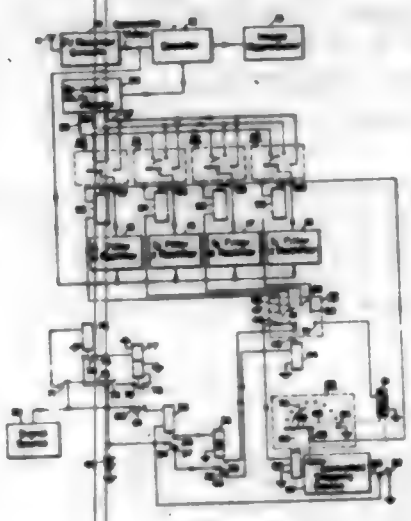
control mechanism for concurrently operating each of said transposition switches with an assigned one of said transition switches; and a plurality of continuous circuit connections, each of which includes at least one of said transposition switches in series with at least one of said transition switches, between said input and output circuits to modify said predetermined circuit conditions in accordance with the transposition pattern of said transposition switches.

2,866,962

SUBSCRIPTION TELEVISION CODE DETERMINING ARRANGEMENT

Alexander Elliott, River Forest, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Application December 6, 1955, Serial No. 551,255
5 Claims. (Cl. 340—147)



1. A code-determining arrangement for a subscription television receiver comprising: a series of adjustable code-determining elements individually having a plurality of operating positions and collectively representing a code schedule in accordance with their respective positions; an actuating mechanism including a series of normally ineffective stepping relays each of which controls the positioning of an assigned one of said code-determining elements; a signal source coupled to said stepping relays for providing a series of control signals selected ones of which represent a predetermined operating position of respective ones of said adjustable code-determining elements; a conditioning device for said actuating mechanism having a plurality of operating positions and conjointly responsive to the registration of at least two different items of information so related to one another that said conditioning device assumes a preselected one of its operating conditions in which it completes circuit means to render said stepping relays effective to permit said relays to respond to said control signals; and a plurality of means for individually registering an assigned one of said items of information on said conditioning device.

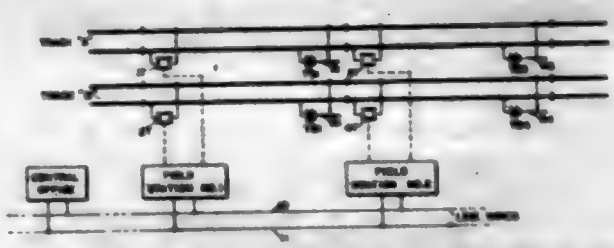
2,866,963

CODE COMMUNICATION SYSTEM

Nelson B. Coley and Reginald F. Albrighton, Rochester, N. Y., assignors to General Railway Signal Company, Rochester, N. Y.

Application December 11, 1953, Serial No. 397,658
4 Claims. (Cl. 340—150)

1. A shunt type direct-current code communication system comprising, a plurality of field stations connected by a pair of line wires to a central office, means at said central office for successively applying step demarcating pulses of direct current to said line wires, circuit means including a relay binary counter at each field station for selectively shunting said line wires on a preselected one of said sociated field station, a relay binary counter at said central office also being effective to count the number of said pulses applied to said line wires, and means governed by



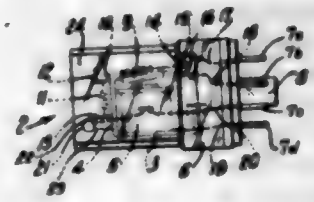
said relay binary counter at said control office for transferring a received indication from a particular field station to an indication storage means provided at said central office for said particular field station.

2,866,964

INDICATOR RELAY

Lawrence L. Neidenberg, Maplewood, and Owen J. Tamburr, Caldwell, N. J., assignors to Line Electric Company, Inc., Newark, N. J., a corporation of New Jersey

Application November 18, 1957, Serial No. 697,092
4 Claims. (Cl. 340—366)



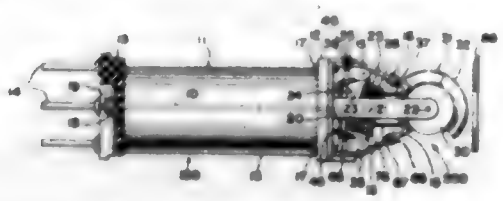
1. A self-contained compact indicator relay suited for use in banks, including as a unitary assembly: a base structure to which the bottom of the relay proper is secured, a relay frame comprising a length of strap metal bent in L-shape to form a foot portion and a leg portion, said leg constituting the top of the relay proper, means attaching the end of said foot to said base, a relay coil which is positioned on the inside of said frame, is secured at one end to said foot and has a magnetic pole piece at the other end, circuit connection means through which said coil is energized, a movable armature pivoted to the end of said leg and extending across said pole piece approximately parallel to said foot, a movable contact carried by said armature, a fixed contact secured to said base and aligned to connect with the movable contact, circuit connecting means connected to said contacts, an extension on said armature beyond the pivot thereof, a projection on the outside of said leg and extending away therefrom, spring means extending between said extension and said projection biasing the armature against the attraction of the magnetic pole, an indicator lamp of miniature tubular gas-discharge type having leads extending therefrom, said leads being connected to two of said connection means and serving to support and position said lamp adjacent the outside surface of said leg and adjacent said projection so as to illuminate the top of said relay proper, said lamp having a diameter of the same order of magnitude as the distance by which said spring means and projection extend from the outside surface of said leg, contact prongs of the separable connector type extending from said base structure and connected to said connecting means, and a transparent case of rigid material enclosing said relay and lamp, closely fitting the same on the sides and top, and being attached to said base structure, so as to permit observation of said lamp and of the operation of the relay armature, and to constitute a rigid handle by which the indicator relay as a unit is adapted to be manually plugged into a complementary socket.

ing said energy, whereby said delay line provides phase first source of pulses modulated by information signals

2,866,965
PERMANENT-MAGNET DISPLAY SIGNAL

Joseph F. Houdek, Jr., Elmhurst, and Edna-Jean Brasuti-gam, Glen Ellyn, Ill., assignors to International Telephone and Telegraph Corporation, New York, N. Y., a corporation of Maryland

Application May 15, 1957, Serial No. 659,256
3 Claims. (Cl. 340—378)



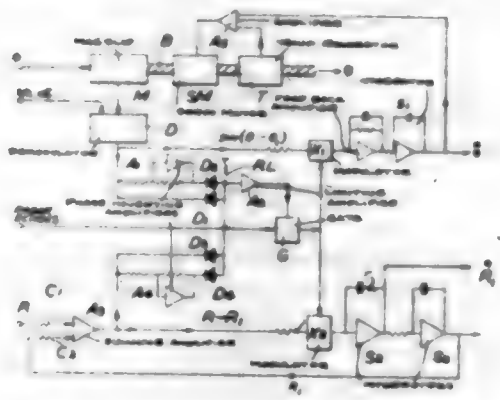
1. A polarized electromagnetically actuated device for displaying alternative signals, comprising in combination an electromagnet having an elongated armature pivoted for a back-and-forth turning movement about its center through a relatively small angle from either occupied one of two alternative positions to the other in response to the corresponding one of two oppositely poled energizations of the electromagnet, the armature comprising a permanent magnet the ends of which describe relatively short diametrically opposed arcs as the armature moves back and forth between positions, pole members connected with the opposite pole ends of the electromagnet and providing four pole faces each located near a separate one of the ends of the said arcs and slightly spaced outwardly therefrom out of reach of the armature, the pole faces at the ends of either arc being connected by respective pole members to opposite pole ends of the electromagnet, with either pole face at either arc being connected to the same pole end of the electromagnet as the nearer pole face at the other arc, a display member and means fixed with the electromagnet for pivotally mounting the display member for a turning movement through a relatively large angle from either occupied one of two alternative display positions to the other, with the display positions corresponding respectively to the said armature positions, and means coupling the display member to the armature for a movement of the display member from either position to the other in response to a corresponding movement of the armature, the coupling means including a relatively long-lever-arm coupling member carried by the armature and a cooperating relatively short-lever-arm coupling member carried by the display member, to cause the relatively small angular movement of the armature from either of its positions to the other to bring about the larger angular movement required by the display member in rotation between its respectively corresponding positions.

2,866,966
AUTOMATIC TRACKING CIRCUITS

Eric Lawrence Casling White, Iver, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Application March 2, 1954, Serial No. 413,579
Claims priority, application Great Britain
February 21, 1953
3 Claims. (Cl. 343—7.3)

1. Apparatus for generating position defining pulses comprising means for generating a first electrical waveform which passes repeatedly through a predetermined reference value, at times representing one co-ordinate of a position, means for deriving a second waveform which is the inverse of said first waveform, means for generating a third electrical waveform which passes repeatedly through said reference value at times representing another co-ordinate of said position, means for deriving a fourth waveform which is the inverse of said third waveform, four unilaterally conductive paths each having an anode end and a cathode end, a load impedance connected from like ends of said paths to a point of substantially fixed potential, means for applying said first, second,



third and fourth waveforms respectively to the other ends of said paths, and means for deriving position defining pulses in response to voltage variations set up across said load impedance.

2,866,967
TARGET INDICATING MECHANISM

Lester M. Bernbaum, Philadelphia, Pa.

Application October 20, 1953, Serial No. 387,329
18 Claims. (Cl. 343—11)
(Granted under Title 35, U. S. Code (1952), sec. 266)

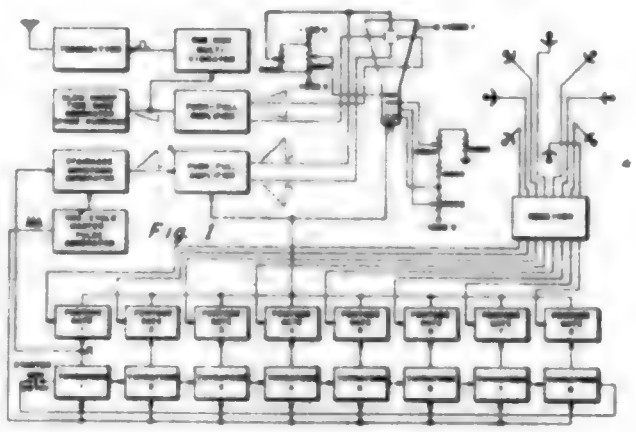


FIG. 1

1. In a fixed target detection system for performing sequential search of successive sectors in discrete steps, apparatus for producing a multi-line A-scan presentation representing an omnidirectional search display comprising means to produce a horizontal sweep on an indicator tube, means to synchronize said sweep with transmitter output pulse energy, means comprised entirely of electronically coupled elements to produce a visual indication of a series of lines vertically separated on the indicator, means responsive to target signal input to produce a vertical deflection on a spaced line observed on the visual indicator.

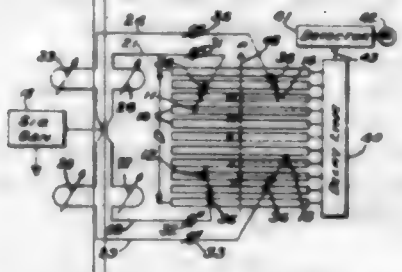
2,866,968
ANTENNA COMPUTING MEANS

John P. Shanklin, deceased, late of Cedar Rapids, Iowa, by Mary H. Shanklin, executrix, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application November 13, 1956, Serial No. 621,739
12 Claims. (Cl. 343—100)

1. A computing means for an antenna array comprising a plurality of bars of conducting material insulated from each other and arranged with a common surface, a plurality of contacts engaging said bars, with said contacts representing respective antennas in said array, a delay line, with said bars respectively connected to said delay line, means for providing alternating energy to said contacts, and means connected to said delay line for receiv-

ing said energy, whereby said delay line provides phase relationship between the energies at the contacts that



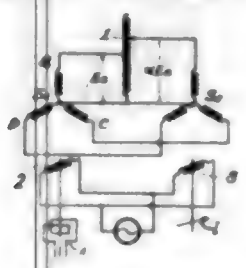
simulates the space-phase relationship of the antennas in said array.

2,866,969

DIRECTION FINDER

Saneyuki Takeuchi and Seihei Mii, Tokyo, Japan, assignors to Yao Musen Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan

Application March 7, 1955, Serial No. 492,586
Claims priority, application Japan March 20, 1954
4 Claims. (Cl. 343—114)



1. In a radio direction finding apparatus having a rotatable antenna and a remotely located rotatable direction indicator, in combination, a servo-transmitter having a plurality of first phase windings and a first neutral point connected to each of said windings, said servo-transmitter including a first rotatable member connected to said rotatable antenna so as to be rotatable therewith and cooperating with said plurality of first phase windings to produce a first electrical signal corresponding to the angular position of the rotatable antenna; a servo-receiver remotely located from said servo-transmitter and having a plurality of second phase windings each of which is respectively connected in parallel with one of said first phase windings and a second neutral point connected to each of said second phase windings, said servo-receiver having a second rotatable member connected to the rotatable direction indicator and rotatable therewith to cooperate with said plurality of second phase windings and assume a position corresponding to the position assumed by said first rotatable member; means for electrically connecting said first and second neutral points of said servo-transmitter and servo-receiver, respectively; and voltage varying means connected in circuit between at least one of said first phase windings and its respective parallel connected second phase winding for varying any electrical signal transmitted between said last-mentioned phase windings by an amount corresponding to any error introduced in said first phase windings by spurious magnetic and electrical field effects.

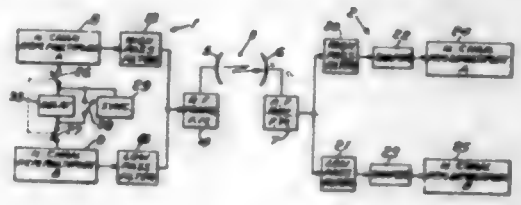
2,866,970

PULSE COMMUNICATION SYSTEM

Robert W. Hughes, Mountain Lakes, N. J., assignor to International Telephone and Telegraph Corporation, Nutley, N. J., a corporation of Maryland

Application May 31, 1956, Serial No. 588,298
18 Claims. (Cl. 343—203)

1. A pulse communication system enabling the sending of two separate and distinct pulse signals over a single radio frequency transmission path comprising a first source of pulses modulated by information signals in a characteristic other than a shape characteristic of the pulses, a second source of pulses modulated by information signals in a characteristic other than a shape characteristic of the pulses, a mean coupled to said first source to pass only certain frequency components of the pulses of said first source, a means coupled to said second source to pass only other certain frequency components of the pulses of said second source, an angularly modulated radio frequency transmitter coupled in common to the output of each of said means for multiplexing and transmitting the outputs thereof over a given



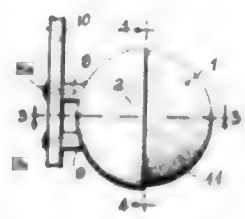
radio frequency transmission path, a receiver for receiving the multiplexed pulses from said radio frequency path, a means coupled to the output of said receiver for separating said certain frequency components from the multiplexed signals and operating thereon to recover the pulse carried information of said second source, and a means coupled to the output of said receiver for separating said other certain frequency components from the multiplexed signals and operating thereon to recover the pulse carried information of said first source.

2,866,971

RADIANT ENERGY REFLECTOR

Kenneth S. Kelleher, Alexandria, Va.

Application September 5, 1956, Serial No. 608,091
10 Claims. (Cl. 343—755)



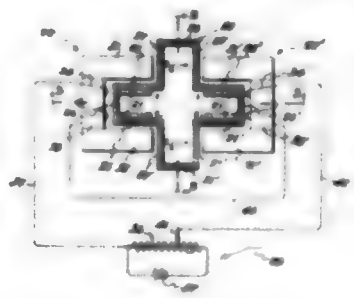
1. A reflector for radiant energy comprising a dielectric sphere having a variable index of refraction and a semi-spherical metallic reflector disposed adjacent one side of said sphere.

2,866,972

MICROWAVE POLARIZATION APPARATUS

Tore N. Anderson, Mountainside, N. J., assignor to Airtron, Inc., Linden, N. J., a corporation of New Jersey

Application September 26, 1956, Serial No. 612,254
1 Claim. (Cl. 343—755)



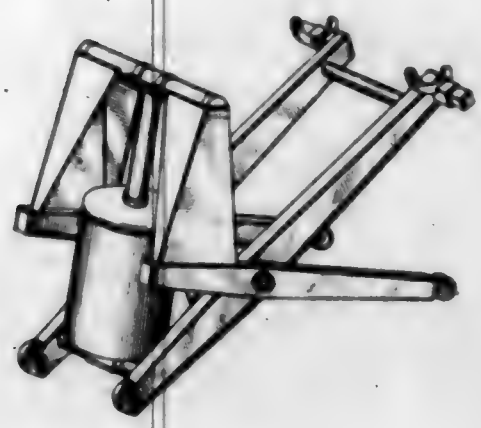
An antenna feed system comprising a rectangular-shaped waveguide section connected to a source of

microwave energy and adapted to support the said energy in a linearly polarized field mode; means splitting the said microwave energy into equal and orthogonally positioned components; a cruciform-shaped waveguide section; means introducing the said equal and orthogonally positioned power components into the said cruciform-shaped waveguide section; means adjusting the time-phase displacement between the said orthogonally positioned energy components in the said cruciform-shaped waveguide section, the said means including ferrite slabs in two oppositely disposed arms of the said cruciform-shaped waveguide section and a variable, unidirectional, magnetic flux field through the said ferrite slabs; a focus feed; waveguide means coupling the said cruciform-shaped waveguide section to the said focus feed, the said focus feed and waveguide means being adapted to support the said microwave energy in linearly and circularly polarized field modes; and a beam shaping reflector adapted to reflect the said microwave energy from the said focus feed.

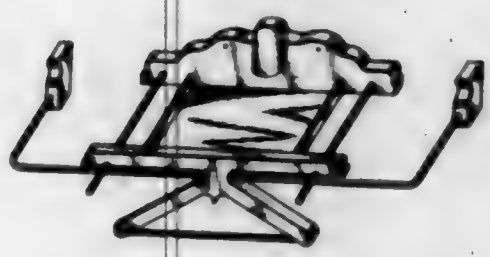
DESIGNS

DECEMBER 30, 1958

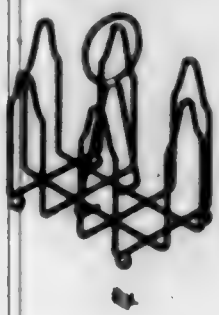
184,161
PNEUMATIC LIFT
William C. Albertson, Cleveland, Ohio, assignor to Life Time Products Corp., Los Angeles, Calif., a corporation of California
Application February 10, 1958, Serial No. 49,562
Term of patent 14 years
(Cl. D41—1)



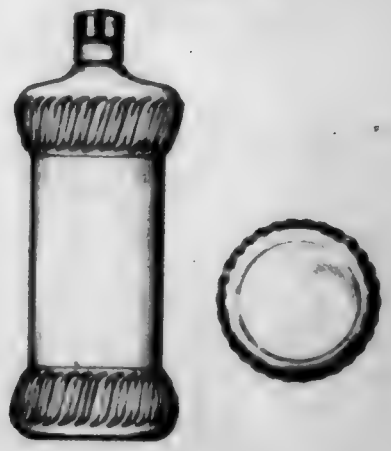
184,162
WALL MOUNTED GARMENT RACK
Charles G. Blackwell, Trinity, Ala.
Application August 29, 1957, Serial No. 47,552
Term of patent 7 years
(Cl. D33—8)



184,163
RACK FOR HOLDING SUGAR BAGS
Daniel Bloomfield, Chicago, Ill.
Application June 2, 1958, Serial No. 51,141
Term of patent 14 years
(Cl. D60—10)



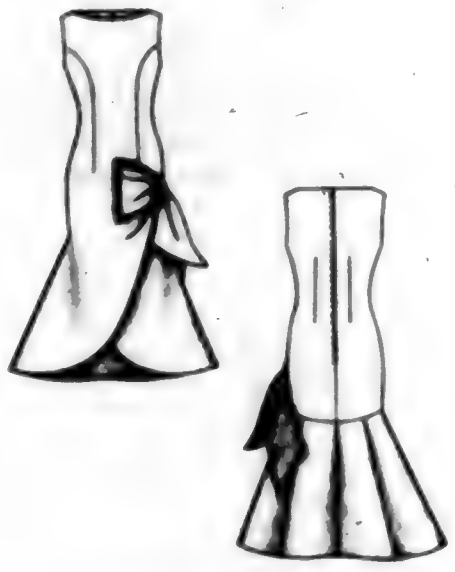
184,164
BOTTLE
Henry J. Brownstein, Chicago, Ill., assignor to Hyman Products Co., Chicago, Ill., a corporation of Illinois
Application April 24, 1958, Serial No. 50,613
Term of patent 14 years
(Cl. D58—8)



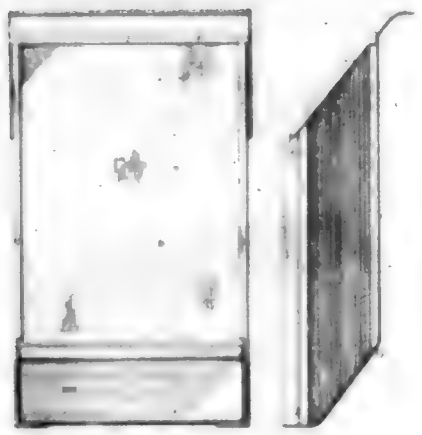
184,165
CLOCK
Leo Ivan Bruce, Jr. Framingham Center, and Oskar Heininger, Ashland, Mass., assignors to General Time Corporation, New York, N. Y., a corporation of Delaware
Application March 19, 1958, Serial No. 50,183
Term of patent 14 years
(Cl. D42—7)

184,166
COIN OPERATED SHAVER CABINET
John L. Carmichael, San Diego, Calif.
Application February 1, 1957, Serial No. 44,696
Term of patent 7 years
(Cl. D52—3)

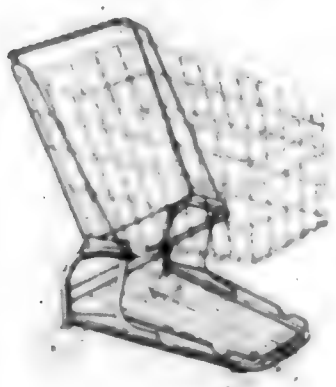
184,167
DRESS OR SIMILAR ARTICLE
Cell Chapman, New York, N. Y.
Application August 15, 1958, Serial No. 52,226
Term of patent 3½ years
(Cl. D3—26)



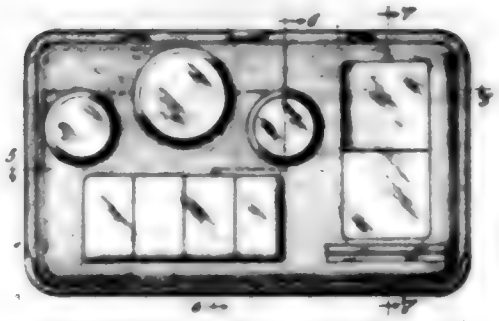
184,168
MAIL BOX OR THE LIKE
George W. Cornell, Miami, Fla., assignor of one-half to W. Elder Cornell, Jr., Miami, Fla.
Application November 14, 1957, Serial No. 48,449
Term of patent 14 years
(Cl. D74—9)



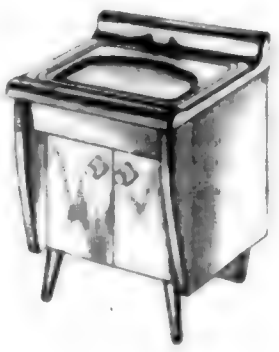
184,169
MERCHANDISE CART
Lynn Nelson Davis and Walter Herman Schray, Battle Creek, Mich., assignors to United Steel & Wire Company, Battle Creek, Mich., a corporation of Michigan
Application December 14, 1956, Serial No. 44,197
Term of patent 14 years
(Cl. D14—3)



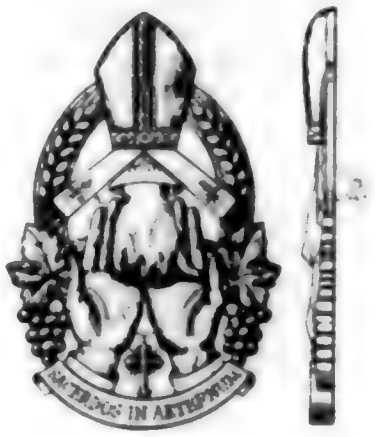
184,170
COMBINED DISPLAY AND ADVERTISING SIGN
Louis L. Epstein, Joseph Lederman, and Oscar Parkoff, Newark, N. J.
Application April 17, 1957, Serial No. 45,777
Term of patent 14 years
(Cl. D1—12)



184,171
COMBINED LAVATORY AND VANITY
August Feican, Medinah, Ill.
Application January 31, 1958, Serial No. 49,459
Term of patent 14 years
(Cl. D4—2)



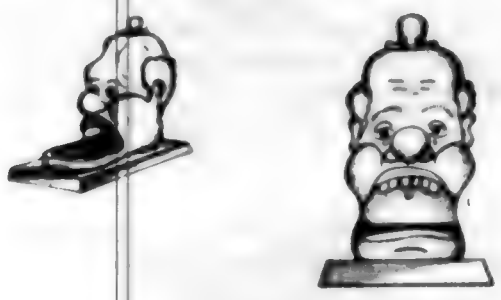
184,172
PIN OR SIMILAR ARTICLE
Margaret Galvin, Chestnut Hill, Mass.
Application January 2, 1958, Serial No. 49,106
Term of patent 14 years
(Cl. D29—2)



184,173
PRAYER SHAWL
Moses Green, Chestnut Hill, Mass.
Application September 13, 1956, Serial No. 42,919
Term of patent 14 years
(Cl. D3—16)

184,174
COLLAPSIBLE DISPENSING TUBE
Ray J. Heskes, St. Louis, Mo.
Application June 15, 1956, Serial No. 41,900
Term of patent 3½ years
(Cl. D58—17)

184,175
MOISTENER FOR STAMPS OR THE LIKE
Wilbert C. Hopper, Washington, D. C.
Application December 3, 1957, Serial No. 48,763
Term of patent 14 years
(Cl. D74—10)

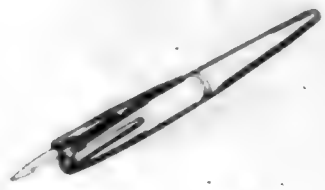


184,176
BOAT OR SIMILAR ARTICLE
Arleigh G. Hupp, Bloomington, Ill.
Application July 15, 1957, Serial No. 46,950
Term of patent 14 years
(Cl. D71—1)

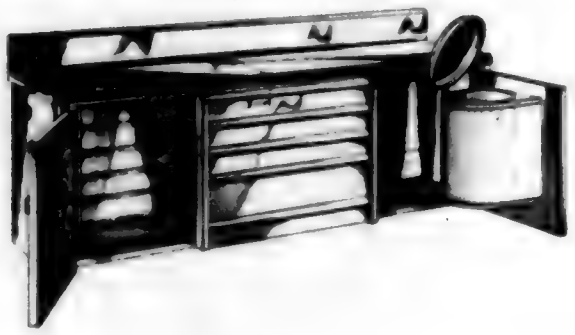
184,177
NECKTIE
Samuel Klaus, Brooklyn, N. Y.
Application October 23, 1956, Serial No. 43,492
Term of patent 7 years
(Cl. D3—16)

184,178
ORNAMENTAL METALWORK PANEL
Morris Lange, Shaker Heights, Ohio
Application April 24, 1957, Serial No. 45,876
Term of patent 14 years
(Cl. D54—2)

184,179
COMBINED WRITING IMPLEMENT AND CUTTER BLADE
Maurice Le Normand, Long Beach, Calif.
Application March 31, 1958, Serial No. 50,239
Term of patent 14 years
(Cl. D74—17)

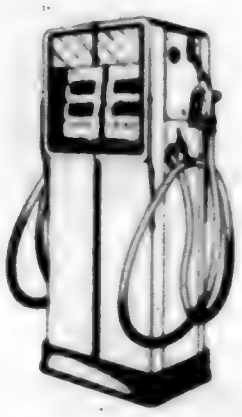


184,180
DENTAL CABINET
Jack H. Levey, Los Angeles, Calif.
Application February 6, 1958, Serial No. 49,521
Term of patent 7 years
(Cl. D24—1)

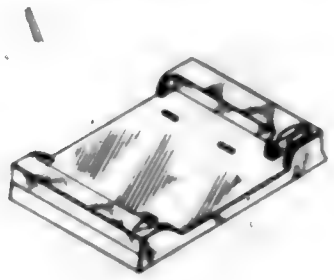


184,181
CLOCK
George P. Lewis, Mineola, N. Y.
Application July 31, 1957, Serial No. 47,163
Term of patent 14 years
(Cl. D42—7)

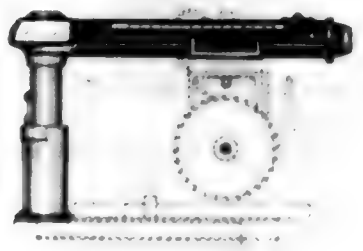
184,182
GASOLINE PUMP
John S. Loy, Fort Wayne, Ind.
Application November 8, 1956, Serial No. 43,702
Term of patent 14 years
(Cl. D52—2)



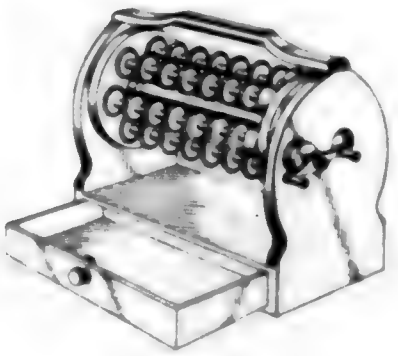
184,183
COMBINED CALENDAR AND MEMORANDUM PAD HOLDER
Michael M. Lacka, Brooklyn, N. Y.
Application February 21, 1958, Serial No. 49,754
Term of patent 14 years
(Cl. D74—1)



184,184
RADIAL SAW
Joseph R. Mango, Midlothian, Ill., and Russell E. Hughes, St. Louis, Mo., assignors to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Application August 29, 1957, Serial No. 47,539
Term of patent 14 years
(Cl. D93—3)



184,185
EMBROIDERY FLOSS HOLDER
Georgia J. Marshall, Pocatello, Idaho
Application April 29, 1957, Serial No. 45,922
Term of patent 14 years
(Cl. D3—19)

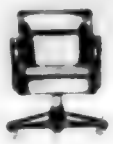


184,186
TOY TOTEM POLE
Franklin M. McCann, Youngstown, Ohio
Application July 17, 1957, Serial No. 46,977
Term of patent 7 years
(Cl. D34—15)

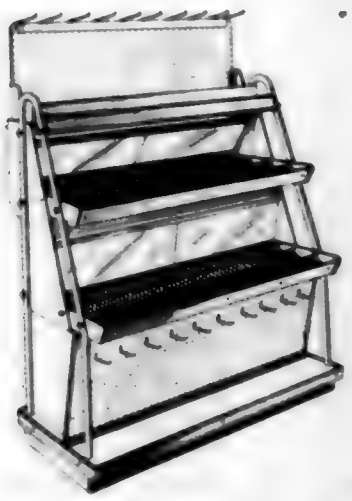
184,187
CHAIR
Joseph H. McCarthy and William H. McKinley, Youngstown, Ohio, and Herbert P. Zimmermann, Amityville, N. Y., assignors to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Application April 2, 1958, Serial No. 50,309
Term of patent 14 years
(Cl. D15—1)

184,188
CHAIR
Joseph H. McCarthy and William H. McKinley, Youngstown, Ohio, and Herbert P. Zimmermann, Amityville, N. Y., assignors to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Application April 2, 1958, Serial No. 50,310
Term of patent 14 years
(Cl. D15—1)

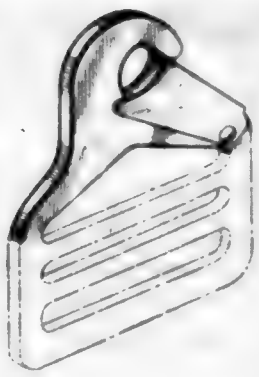
184,189
CHAIR
Joseph H. McCarthy and William H. McKinley, Youngstown, Ohio, and Herbert P. Zimmermann, Amityville, N. Y., assignors to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Application April 2, 1958, Serial No. 50,311
Term of patent 14 years
(Cl. D15—1)



184,190
DISPLAY STAND FOR CANDY OR THE LIKE
David A. McCowan, Toronto, Ontario, Canada
Application October 4, 1957, Serial No. 47,962
Claims priority, application Canada August 31, 1957
Term of patent 14 years
(Cl. D60—9)



184,191
ADJUSTABLE SNAP
William M. Noe, South Pasadena, Calif., assignor to B-N Corporation, doing business as Auto-Crat Manufacturing Co., Los Angeles, Calif., a corporation of California
Application January 20, 1958, Serial No. 49,317
Term of patent 14 years
(Cl. D17—1)



184,192
COMBINED HIGH CHAIR AND YOUTH CHAIR
Arnold E. Peterson, Glendale, Calif.
Application February 14, 1957, Serial No. 44,865
Term of patent 14 years
(Cl. D15—1)

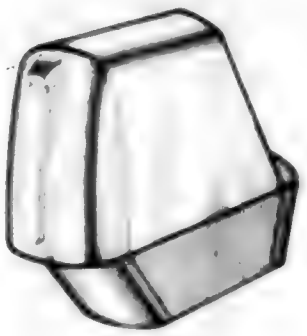
184,199

184,193
SPACE SHIP TOY BANK
Carl F. Peterson and Karl Gust Bergman, Detroit, Mich., assignors to Duro Mold and Manufacturing, Inc., Detroit, Mich.
Application March 14, 1958, Serial No. 50,027
Term of patent 7 years
(Cl. D34—5)

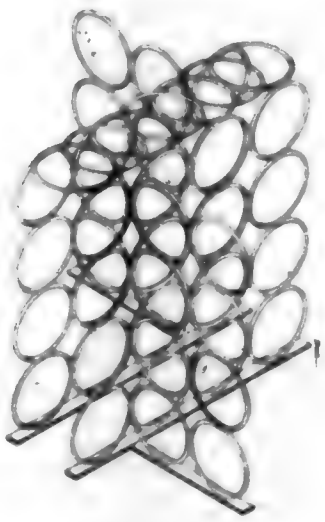
184,194
GARAGE
Carl W. Pirscher and Samuel P. Havis, Oak Park, Mich., assignors to Fairway Construction Company, Detroit, Mich., a corporation of Michigan
Application October 7, 1957, Serial No. 47,990
Term of patent 14 years
(Cl. D13—1)

184,195
PENDANT
August G. Reibling, Edgewood, R. I.
Application February 6, 1958, Serial No. 49,527
Term of patent 3½ years
(Cl. D45—17)

184,196
BALL RETURN CASING OR THE LIKE
Richard G. Reineman, Covina, Calif., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a corporation of Delaware
Application January 24, 1958, Serial No. 49,402
Term of patent 14 years
(Cl. D34—5)

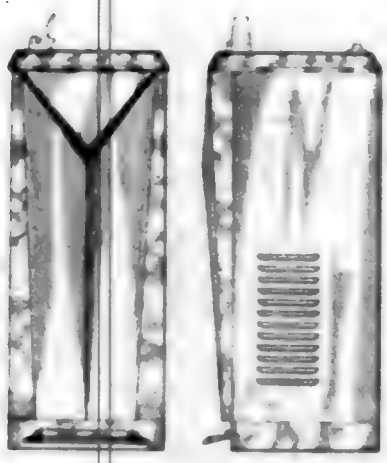


184,197
CLIMBING RINGS
Martin Rosenzweig, Williston Park, and Harold Krisel, Queens Village, N. Y., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Application January 20, 1958, Serial No. 49,309
Term of patent 7 years
(Cl. D34—5)



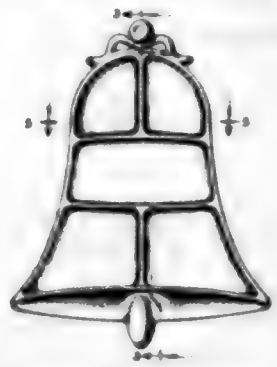
184,198
EXHAUST EXTENSION GRILLE
Linus E. Russell, Springfield, Ohio, assignor to Peters & Russell, Inc., Springfield, Ohio, a corporation of Ohio
Application October 31, 1956, Serial No. 43,612
Term of patent 14 years
(Cl. D14—6)

184,199
WATER COOLER
Egon Sorensen, Glen Riddle, Pa., assignor to Sunroc Corporation, Glen Riddle, Pa., a corporation of Delaware
Application May 6, 1957, Serial No. 46,034
Term of patent 14 years
(Cl. D67—4)



184,200
PARACHUTE DART
Paul R. Swearingen, Kensington, Ohio
Application August 5, 1957, Serial No. 47,224
Term of patent 14 years
(Cl. D34—15)

184,201
RELISH DISH OR SIMILAR ARTICLE
John Lewis Woodland, Moorestown, N. J., assignor to Fisher, Bruce & Company, Philadelphia, Pa., a corporation of Pennsylvania
Application July 1, 1958, Serial No. 51,620
Term of patent 7 years
(Cl. D44—15)



184,202
CHAIR
Akron S. H. Yuen, Shumshuipo, Kowloon, Hong Kong, China
Application January 23, 1957, Serial No. 44,558
Term of patent 14 years
(Cl. D15—1)

184,203
CLIP FOR A PEN OR THE LIKE
Harold E. Zierhut, Granada Hills, Calif., assignor to Paper Mate Manufacturing Company, Culver City, Calif., a corporation of Delaware
Application November 8, 1957, Serial No. 48,392
Term of patent 14 years
(Cl. D74—1)

Rosenzweig, Martin, and H. Krisel, to Aluminum Co. of America. Climbing rings. 184,197, 12–30–58, Cl. D34—5.
Russell, Linus E., to Peters & Russell, Inc. Exhaust extension grille. 184,198, 12–30–58, Cl. D14—6.
Woodland, John L., to Bruce Fisher & Co. Relish dish or similar article. 184,201, 12–30–58, Cl. D44—16.
Yuen, Akron S. H. Chair. 184,202, 12–30–58, Cl. D15—1.
Zierhut, Harold F., to Paper Mate Mfg. Co. [illegible]

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Brown, Lester H., to S. C. Johnson & Son, Inc. Automatic floor mop. Re. 24,583, 12–30–58, Cl. 15—98.

Johnson, S. C., & Son, Inc.: *See*—
Brown, Lester H. Re. 24,583.

LIST OF PLANT PATENTEES

Armstrong Nurseries, Inc.: *See*—
Swim, Herbert C. 1,786.
Swim, Herbert C. 1,787.

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 1,788, 12–30–58, Cl. 47—61.

Bristol Nurseries, Inc.: *See*—
Cumming, Roderick W. 1,791.

Byrum, Roy L., to Joseph H. Hill Co. Rose plant. 1,789, 12–30–58, Cl. 47—61.

Cumming, Roderick W., to Bristol Nurseries, Inc. Chrysanthemum plant. 1,791, 12–30–58, Cl. 47—60.

Hill, Joseph H., Co.: *See*—
Byrum, Roy L. 1,789.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 1,788.
Robinson, Herbert. 1,790.

Robinson, Herbert, to Jackson & Perkins Co. Rose plant. 1,790, 12–30–58, Cl. 47—61.

Swim, Herbert C., to Armstrong Nurseries, Inc. Rose plant. 1,786, 12–30–58, Cl. 47—61.

Swim, Herbert C., to Armstrong Nurseries, Inc. Peach tree. 1,787, 12–30–58, Cl. 47—62.

LIST OF DESIGN PATENTEES

Albertson, William C., to Life Time Products Corp. Pneumatic lift. 184,161, 12–30–58, Cl. D41—1.

Aluminum Co. of America: *See*—
Rosenzweig, Martin, and Krisel. 184,197.

Auto-Crat Mfg. Co.: *See*—
Noe, William M. 184,191.

B-N Corp.: *See*—
Noe, William M. 184,191.

Bergman, Karl G.: *See*—
Peterson, Carl F., and Bergman. 184,193.

Blackwell, Charles G. Wall mounted garment rack. 184,162, 12–30–58, Cl. D33—8.

Bloomfield, Daniel. Rack for holding sugar bags. 184,163, 12–30–58, Cl. D80—10.

Brownstein, Henry J., to Hysan Products Co. Bottle. 184,164, 12–30–58, Cl. D58—8.

Bruce, Leo L., Jr., and O. Heininger, to General Time Corp. Clock. 184,165, 12–30–58, Cl. D42—7.

Brunswick-Balke-Collender Co., The: *See*—
Reineman, Richard G. 184,196.

Carmichael, John L. Coin operated shaver cabinet. 184,166, 12–30–58, Cl. D52—3.

Chapman, Ceil. Dress or similar article. 184,167, 12–30–58, Cl. D3—26.

Cornell, George W., ½ to W. E. Cornell, Jr. Mail box or the like. 184,168, 12–30–58, Cl. D74—9.

Cornell, W. Elder, Jr.: *See*—
Cornell, George W. 184,168.

Davis, Lynn N., and W. H. Schray, to United Steel & Wire Co. Merchandise cart. 184,169, 12–30–58, Cl. D14—3.

Duro Mold and Mfg., Inc.: *See*—
Peterson, Carl F., and Bergman. 184,193.

Emerson Electric Mfg. Co., The: *See*—
Mango, Joseph R., and Hughes. 184,184.

Epstein, Louis L., J. Lederman, and O. Parkoff. Combined display and advertising sign. 184,170, 12–30–58, Cl. D1—12

Fairway Construction Co.: *See*—
Pirscher, Carl W., and Havis. 184,194.

Felcan, August. Combined lavatory and vanity. 184,171, 12–30–58, Cl. D4—2.

Fisher, Bruce & Co.: *See*—
Woodland, John L. 184,201.

Galvin, Margaret. Pin or similar article. 184,172, 12–30–58, Cl. D29—2.

General Fireproofing Co., The: *See*—
McCarthy, Joseph H., McKinley, and Zimmermann. 184,187.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,188.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,189.

General Time Corp.: *See*—
Bruce, Leo L., Jr., and Heininger. 184,165.

Green, Moses. Prayer shawl. 184,173, 12–30–58, Cl. D3—16.

Havis, Samuel P.: *See*—
Pirscher, Carl W., and Havis. 184,194.

Heininger, Oskar: *See*—
Bruce, Leo L., Jr., and Heininger. 184,165.

Heskes, Ray J. Collapsible dispensing tube. 184,174, 12–30–58, Cl. D58—17.

Hopper, Wilbert C. Moistener for stamps or the like. 184,175, 12–30–58, Cl. D74—10.

Hughes, Russell E.: *See*—
Mango, Joseph R., and Hughes. 184,184.

Hupp, Arleigh G. Boat or similar article. 184,176, 12–30–58, Cl. D71—1.

Hysan Products Co.: *See*—
Brownstein, Henry J. 184,164.

Klaus, Samuel. Necktie. 184,177, 12–30–58, Cl. D3—16.

Krisel, Harold: *See*—
Rosenzweig, Martin, and Krisel. 184,197.

Lange, Morris. Ornamental metalwork panel. 184,178, 12–30–58, Cl. D54—2.

Lederman, Joseph: *See*—
Epstein, Louis L., Lederman, and Parkoff. 184,170.

Le Normand, Maurice. Combined writing implement and cutter blade. 184,179, 12–30–58, Cl. D74—17.

Levey, Jack H. Dental cabinet. 184,180, 12–30–58, Cl. D24—1.

Lewis, George P. Clock. 184,181, 12–30–58, Cl. D42—7.

Life Time Products Corp.: *See*—
Albertson, William C. 184,161.

Loy, John S. Gasoline pump. 184,182, 12–30–58, Cl. D52—2.

Lucks, Michael M. Combined calendar and memorandum pad holder. 184,183, 12–30–58, Cl. D74—1.

Mango, Joseph R., and R. E. Hughes, to The Emerson Electric Mfg. Co. Radial saw. 184,184, 12–30–58, Cl. D93—3.

Marshall, Georgia J. Embroidery floss holder. 184,185, 12–30–58, Cl. D3—19.

McCann, Franklin M. Toy totem pole. 184,186, 12–30–58, Cl. D34—15.

McCarthy, Joseph H., W. H. McKinley, and H. P. Zimmermann, to The General Fireproofing Co. Chair. 184,187, 12–30–58, Cl. D15—1.

McCarthy, Joseph H., W. H. McKinley, and H. P. Zimmermann, to The General Fireproofing Co. Chair. 184,188, 12–30–58, Cl. D15—1.

McCarthy, Joseph H., W. H. McKinley, and H. P. Zimmermann, to The General Fireproofing Co. Chair. 184,189, 12–30–58, Cl. D15—1.

McCowan, David A. Display stand for candy or the like. 184,190, 12–30–58, Cl. D80—9.

McKinley, William H.: *See*—
McCarthy, Joseph H., McKinley, and Zimmermann. 184,187.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,188.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,189.

Noe, William M., to B-N Corp., d. b. a. Auto-Crat Mfg. Co. Adjustable snap. 184,191, 12–30–58, Cl. D17—1.

Paper Mate Mfg. Co.: *See*—
Zierhut, Harold E. 184,203.

Parkoff, Oscar: *See*—
Epstein, Louis L., Lederman, and Parkoff. 184,170.

Peters & Russell, Inc.: *See*—
Russell, Linus E. 184,198.

Peterson, Arnold E. Combined high chair and youth chair. 184,192, 12–30–58, Cl. D15—1.

Peterson, Carl F., and K. G. Bergman, to Duro Mold and Mfg., Inc. Space ship toy bank. 184,193, 12–30–58, Cl. D34—5.

Pirscher, Carl W., and S. P. Havis, to Fairway Construction Co. Garage. 184,194, 12–30–58, Cl. D13—1.

Reibling, August G. Pendant. 184,195, 12–30–58, Cl. D45—17.

Reineman, Richard G., to The Brunswick-Balke-Collender Co. Ball return casing or the like. 184,196, 12–30–58, Cl. D34—5.

Rosenzweig, Martin, and H. Krisel, to Aluminum Co. of America. Climbing rings. 184,197, 12–30–58, Cl. D34—5.
Russell, Linus E., to Peters & Russell, Inc. Exhaust extension grille. 184,198, 12–30–58, Cl. D14—6.
Schray, Walter H.: *See*—
Davis, Lynn N., and Schray. 184,169.
Sorensen, Egon, to Sunroc Corp. Water cooler. 184,199, 12–30–58, Cl. D67—4.
Sunroc Corp.: *See*—
Sorensen, Egon. 184,199.
Swearingen, Paul R. Parachute dart. 184,200, 12–30–58, Cl. D34—15.
United Steel & Wire Co.: *See*—
Davis, Lynn N., and Schray. 184,169.
Woodland, John L., to Bruce Fisher & Co. Relish dish or similar article. 184,201, 12–30–58, Cl. D44—16.
Yuen, Akron S. H. Chair. 184,202, 12–30–58, Cl. D15—1.
Zierhut, Harold E., to Paper Mate Mfg. Co. Clip for a pen or the like. 184,203, 12–30–58, Cl. D74—1.
Zimmermann, Herbert P.: *See*—
McCarthy, Joseph H., McKinley, and Zimmermann. 184,187.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,188.
McCarthy, Joseph H., McKinley, and Zimmermann. 184,189.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF DECEMBER, 1958

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A-B Svenska Skolastfabriken: *See*—
Davidson, Carl A. 2,866,227.

ACF Industries, Inc.: *See*—
Wynn, Robert O. 2,866,253.

Adams, Paul R.: *See*—
Busignies, Henri G., Adams, Deschamps, and Rogoff. 2,866,900.

Adler, Robert, to Zenith Radio Corp. Traveling-wave tubes. 2,866,916, 12–30–58, Cl. 315—3.6.

Admiral Corp.: *See*—
Hoellerich, John L., and Diaz. 2,866,904.

Air Reduction Co., Inc.: *See*—
Tuthill, Roger W. 2,866,888.

Airtron, Inc.: *See*—
Anderson, Tore N. 2,866,972.

Akt. Brown, Boveri & Cie.: *See*—
Hold, Peter, and Oberle. 2,866,470.

Albrecht, Hans: *See*—
Ciesielski, Leo F., and Albrecht. 2,866,739.

Albrighton, Reginald F.: *See*—
Coley, Nelson B., and Albrighton. 2,866,963.

Alessi, John M. Baking pan for cheese cakes. 2,866,451, 12–30–58, Cl. 126—385.

Alexander, Lester W. Kraft board folding egg case. 2,866,585, 12–30–58, Cl. 229—15.

Alexander, Paul, to Continental Can Co., Inc. Coated evaporating elements and method of utilising same. 2,866,724, 12–30–58, Cl. 117—228.

Alexander, Paul, to Continental Can Co., Inc. Coated evaporating elements and method of utilizing same. 2,866,725, 12–30–58, Cl. 117—228.

Alexander, Robert H.: *See*—
Gummere, Harold O., and Alexander. 2,866,474.

Alfend, Michael: *See*—
Melbourne, Joseph F., Skatoff, and Alfend. 2,866,498.

Algoren, Lionel C.: *See*—
Kallick, Joseph N., and Algoren. 2,866,433.

Alldredge, Enis. Stereographic map reading apparatus. 2,866,381, 12–30–58, Cl. 88—29.

Allen, Joseph C., to The Texas Co. Diesel fuel. 2,866,693, 12–30–58, Cl. 44—52.

Allen, Robert P., to E. I. du Pont de Nemours and Co. Vitreous phosphate enamels and their use. 2,866,713, 12–30–58, Cl. 106—48.

Allied Chemical Corp.: *See*—
Crowder, John A., and Gilbert. 2,866,828.

Allis-Chalmers Mfg. Co.: *See*—
Flamm, Thomas J. 2,866,510.
Hoesch, Elmer D. 2,866,615.

Alpert, Norman: *See*—
Newman, Stanley R., Heisler, and Alpert. 2,866,757.

Alpina Buromaschinen-Werk G. m. b. H.: *See*—
Martin, Hans. 2,866,532.

Aluminum-Industrie-Aktien-Gesellschaft: *See*—
Schmitt, Hans. 2,866,743.

Alvarado, Emmanuel: *See*—
Fenoglio, Maurice, Pacoud, and Alvarado. 2,866,832.

American Art Metals Co.: *See*—
May, Maurice. 2,866,237.

American Brake Shoe Co.: *See*—
Ratkowski, Thomas A. 2,866,667.

American Can Co.: *See*—
Then, Edward O. 2,866,543.
Then, Edward O. 2,866,861.

American Cyanamid Co.: *See*—
Broquist, Harry P., Hines, and Kohler. 2,866,708.
Ciesielski, Leo F., and Albrecht. 2,866,739.
Minieri, Pasquale P., Firman, and Sokol. 2,866,738.
Schall, William E. 2,866,369.

American Enka Corp.: *See*—
Schrenk, Hans A. 2,866,311.

American-Marietta Co.: *See*—
Martin, William H., and Morin. 2,866,720.

American Oil Co., The: *See*—
Kirkland, Earl V. 2,866,812.

American Potash & Chemical Corp.: *See*—
Burg, Anton B., and Mahler. 2,866,824.
Lam, Hung K. H., and Schafer. 2,866,685.
Massa, Harold, Sawyer, and Baier. 2,866,688.

American Radiator and Standard Sanitary Corp.: *See*—
Goebel, Walter E. 2,866,676.
Hyde, Robert W. 2,866,478.

American Safety Razor Corp.: *See*—
Svirchev, Alexander. 2,866,542.

American Steel Foundries: *See*—
Baselt, Walter H. 2,866,523.
Flesch, Norman P. 2,866,524.

Amiet, Oscar, to Christen & Co., A. G. Machine for sharpening drills. 2,866,302, 12–30–58, Cl. 51—219.

Andersen Corp.: *See*—
Ward, Lyle. 2,866,225.

Anderson, Arthur F.: *See*—
Newcomer, Harry S., and Anderson. 2,866,383.

Anderson, Gordon C.: *See*—
West, Paul B., and Anderson. 2,866,232.

Anderson, Harold R. Filing device. 2,866,677, 12–30–58, Cl. 312—320.

Anderson, James O. Remote control switch. 2,866,867, 12–30–58, Cl. 200—87.

Anderson, Tore N., to Airtron, Inc. Microwave polarization apparatus. 2,866,972, 12–30–58, Cl. 343—755.

Andor, Matt J. Mounting for rotary side delivery rake. 2,866,309, 12–30–58, Cl. 56—377.

Andrews, Dallas R., to Radio Corp. of America. Phonograph pickup. 2,866,857, 12–30–58, Cl. 179—100.41.

Anselm, Hans, A. Kofler, and J. Smidt, to Consortium für Elektrochemische Industrie G. m. b. H. Producing methanol and acetic acid from saponification mixtures of methylacetate. 2,866,820, 12–30–58, Cl. 260—541.

Anton, Nicholas. Power tools. 2,866,465, 12–30–58, Cl. 143—68.

Arman, Adrian N., to Pirelli-General Cable Works Ltd. Corrugated compression type electric cables. 2,866,843, 12–30–58, Cl. 174—25.

Aronco Meter Products Corp.: *See*—
Karal, Hans. 2,866,443.

Ashford, Leonard F., to Specialty Engineering Co. Truck body for cased and palletized goods. 2,866,663, 12–30–58, Cl. 296—24.

Askania-Werke A. G.: *See*—
Veit, Heinrich R. 2,866,379.

Askey, Warren E., and R. M. Love, to Esso Research and Engineering Co. Method of reforming hydrocarbons used in platinum catalyst in a plurality of separate reaction zones. 2,866,744, 12–30–58, Cl. 208—65.

Aurell, Carl-Georg P., to Telefonaktiebolaget L M Ericsson. Device for demodulating duration modulated pulses. 2,866,894, 12–30–58, Cl. 250—27.

Automatic Poultry Feeder Co.: *See*—
Smallegan, Marvin L. 2,866,536.

Avedikian, Souren Z. Manufacture of chlorine dioxide from an alkali metal chlorate and an alkali metal nitrite. 2,866,682, 12–30–58, Cl. 23—152.

Avedikian, Souren Z. Manufacture of chlorine dioxide from an alkali metal chlorate and an alkali metal bisulfite. 2,866,683, 12–30–58, Cl. 23—152.

Avien, Inc.: *See*—
Minneman, Milton J., and Marcus. 2,866,337.

Axt, Gunter, and P. Lotz, to Hartmann & Braun Akt. Instrument for gas analysis with heated wire system. 2,866,330, 12–30–58, Cl. 73—27.

Ayers, George W., to The Pure Oil Co. Process for removing free sulfur with an organic phosphite. 2,866,753, 12–30–58, Cl. 208—240.

Babcock, Clarence L., to Owens-Illinois Glass Co. Method of joining glass parts. 2,866,298, 12–30–58, Cl. 49—82.

Babcock & Wilcox Co., The: *See*—
Hutchings, Edward G., and Hodgkin. 2,866,444.

Bachl, Robert W., to Controls Co. of America. Time delay switch. 2,866,862, 12–30–58, Cl. 200—34.

Bacon, Oliver, to W. C. Horton. Composition for treating water. 2,866,759, 12–30–58, Cl. 252—175.

Baeza, John M. Warm air gas-fired heating element. 2,866,449, 12–30–58, Cl. 126—91.

Bagley, Glen D.: *See*—
Bohnet, William J., and Bagley. 2,866,700.

Baier, Rodger W.: *See*—
Massa, Harold, Sawyer, and Baier. 2,866,688.

Baker Industries, Inc.: *See*—
Haessler, Walter M., Bishop, and Stauffer. 2,866,760.

Balde, Ulysse, to Mithra A.-G. Method for automatically reading markings applied to carriers. 2,866,598, 12–30–58, Cl. 235—61.11.

Ball, Gaines L., to Batson-Cook Co. Apparatus for sizing yarns. 2,866,254, 12–30–58, Cl. 28—28.

Barton, Loy E., to Radio Corp. of America. Detector circuit in which increasing rectified signal causes decreasing collector current. 2,866,892, 12–30–58, Cl. 250—20.

Baselt, Walter H., to American Steel Foundries. Railway brake. 2,866,523, 12–30–58, Cl. 188—36.

Bashaw, Gerald B. Simplified bearing insert. 2,866,668, 12–30–58, Cl. 308—36.

Batson-Cook Co.: *See*—
Ball, Gaines L. 2,866,254.

Batts, John H., to John Thomas Batts, Inc. Garment holder with high friction surface. 2,866,583, 12–30–58, Cl. 223—88.

Batts, John Thomas, Inc.: *See*—
Batts, John H. 2,866,583.

Batutis, Edward F., and S. L. Walters, to United States of America. Apparatus for removing dissolved impurities from liquid alkali metals. 2,866,702, 12–30–58, Cl. 75—66.

Bauer, Arthur W. Disc brake. 2,866,525, 12–30–58, Cl. 188—72.

Baumann, Martin A.: *See*—
Wahli, Werner, and Baumann. 2,866,630.

Bausch & Lomb Optical Co.: *See*—
Gruner, Heinz E. R., and Schwarzbach. 2,866,382.
McCulloch, Donald J. 2,866,539.
Baylerian, Marguerite S.: *See*—
Irish, Glenn E., and Baylerian. 2,866,811.
Bazzell, Charly S. Trench tunnel. 2,866,320, 12–30–58, Cl. 61—41.
Beauchamp, Wilfred A., to The Youngstown Steel Door Co. Door locks. 2,866,634, 12–30–58, Cl. 268—44.
Bechtold, Max F., to E. I. du Pont de Nemours and Co. Powder metallurgy compositions of molybdenum, iron and silicon, shaped objects thereof, and their preparation. 2,866,259, 12–30–58, Cl. 29—182.5.
Becton, Dickinson and Co.: *See*—
Hein, George N., Jr. 2,866,458.
Begley, John W., and R. K. Goins, to Phillips Petroleum Co. Process and apparatus for conversion of hydrocarbons. 2,866,836, 12–30–58, Cl. 260—683.
Bell Telephone Laboratories, Inc.: *See*—
Kronacher, Gerald. 2,866,913.
Matthias, Bernd T. 2,866,842.
Miller, Robert A., Nickerson, and Taris. 2,866,852.
Tillotson, Le Roy C. 2,866,949.
Williford, Oscar H. 2,866,854.
Bendix Aviation Corp.: *See*—
Dickey, John W., and Hood. 2,866,328.
Russell, Charles. 2,866,930.
Stout, George C. 2,866,609.
Benedict, Ethel M.: *See*—
Duffy, Thomas I. 2,866,358.
Duffy, Thomas I. 2,866,654.
Duffy, Thomas I. 2,866,657.
Bennetch, Leonard M., to C. K. Williams & Co. Preparation of red oxide of iron. 2,866,686, 12–30–58, Cl. 23—200.
Bentley, Ephraim G., to Northrop Aircraft, Inc. Pawl type incremental motor. 2,866,910, 12–30–58, Cl. 310—20.
Berchtold, Jean. Process for photoelectric reproductions and apparatus therefor. 2,866,903, 12–30–58, Cl. 250—65.
Berg, Herbert, J. Fischer, H. Krautwald, and A. Ruhland, to Siemens & Halske, Akt. Permanent-magnet armature for polarized electromagnetic systems, in particular for polarized relays. 2,866,927, 12–30–58, Cl. 317—171.
Bernbaum, Lester M. Target indicating mechanism. 2,866,967, 12–30–58, Cl. 343—11.
Berry, Charles M., R. W. H. Chang, N. M. Le Bard, and S. K. Miller, to General Mills, Inc. Improved process of isolating sterols. 2,866,797, 12–30–58, Cl. 260—397.25.
Bertoglio, Tony C.: *See*—
Taylor, Jesse N., and Bertoglio. 2,866,363.
Best Plastics Corp.: *See*—
Lattuca, John J. 2,866,575.
Beyler, Roger E., and L. H. Sarett, to Merck & Co., Inc. Method for converting a 17-20, 20-21 bismethylenedioxy or a 17-20, 20-21 bis-substituted methylenedioxy steroid of the pregnane series to a 17α,21-dihydroxy-20-keto steroid of the pregnane series. 2,866,799, 12–30–58, Cl. 260—397.45.
Biach, John L. Bolt-tensioning and nut-seating apparatus. 2,866,370, 12–30–58, Cl. 81—54.
Bieberich, Paul. Wire drawing die blank and method of making same. 2,866,364, 12–30–58, Cl. 76—107.
Bing, Herbert A., V. K. Eloranta, D. S. Grey, and K. Maiershofer, to Polaroid Corp. Photographic copying apparatus. 2,866,380, 12–30–58, Cl. 88—24.
Bishop, John A.: *See*—
Haessler, Walter M., Bishop, and Stauffer. 2,866,760.
Bishton, Thomas W. Packer conveyor for refuse vehicles. 2,866,568, 12–30–58, Cl. 214—83.26.
Black, James A. Silk screen stencilling machine. 2,866,405, 12–30–58, Cl. 101—126.
Black, John W., to Pemco Wheel Co. Bearing structure. 2,866,672, 12–30–58, Cl. 308—191.
Blazier, Arthur W. Bird feeder. 2,866,435, 12–30–58, Cl. 119—53.
Blundell, Alan J., to The British Thomson-Houston Co. Ltd. Electric rectifiers employing semi-conductors. 2,866,928, 12–30–58, Cl. 317—234.
Bodenschatz, August: *See*—
Giessaner, George J., and Bodenschatz. 2,866,864.
Bohnet, William J., and G. D. Bagley, to Union Carbide Corp. Drip-melting of refractory metals. 2,866,700, 12–30–58, Cl. 75—10.
Bolding, Hubert V., to Standard Packaging Corp. Recessed automatic bottom carton. 2,866,588, 12–30–58, Cl. 229—39.
Bolstad, Luther L., to Minneapolis-Honeywell Regulator Co. Epoxy molding composition and method of molding with same. 2,866,768, 12–30–58, Cl. 260—37.
Bond, Donald C., and O. C. Holbrook, to The Pure Oil Co. Gas drive oil recovery process. 2,866,507, 12–30–58, Cl. 166—9.
Bond Nail, Inc.: *See*
Freeman, John F., Smelker, and Rockwood. 2,866,190.
Bond, Robert W., and T. K. Shuler, to North American Aviation, Inc. Limiting device for aircraft wing load. 2,866,933, 12–30–58, Cl. 318—489.
Borden, Philip E. Barbecue unit. 2,866,883, 12–30–58, Cl. 219—33.
Borg, W. N., Corp., The: *See*—
Tancred, William L. 2,866,871.
Borg-Warner Corp.: *See*—
Oliver, Delbert S. 2,866,416.
Bovarnick, Max. Glutamic and aspartic acid polypeptide polymers as plasma volume extenders. 2,866,783, 12–30–58, Cl. 260—112.
Bowater Research and Development Co., Ltd., The: *See*—
Wells, Archibald H., Nissan, Highton, and Hopkins. 2,866,375.
Bowers, John C.: *See*—
Chase, Richard R., and Bowers. 2,866,781.
Bowman, Robert W., and J. A. Neigel, to Specialties Development Corp. Aspirating apparatus. 2,866,593, 12–30–58, Cl. 230—95.
Boxmakers, Inc.: *See*—
Klein, William J., and Dube. 2,866,544.
Boyer, Gerard R., to International Business Machines Corp. Electronic storage device. 2,866,895, 12–30–58, Cl. 250—27.
Boyer, William P., and J. R. Mangham, to Virginia-Carolina Chemical Corp. Aliphatic aryl phosphites. 2,866,807, 12–30–58, Cl. 260—461.
Bracken, Edward V.: *See*—
White, Stanley F. 2,866,513.
Braeutigam, Edna-Jean: *See*—
Houdek, Joseph F., Jr., and Braeutigam. 2,866,965.
Brandon, Clarence W., 5% to H. B. Jacobson, 50% to N. A. Hardin, H. H. Wright, and C. H. Newton, and 12½% to O. B. Brandon. Apparatus for treating oil bearing formations. 2,866,509, 12–30–58, Cl. 166—177.
Brandon, Orpha B.: *See*—
Brandon, Clarence W. 2,866,509.
Brandt Automatic Cashier Co.: *See*—
Buchholz, Arnold R., and Haban. 2,866,469.
Bratsch, Jesse G., to Char-Gale Mfg. Co. Lock seam for sheet metal pipes. 2,866,481, 12–30–58, Cl. 138—74.
Bratt, John: *See*—
Montelius, Carl O. J. 2,866,413.
Breaux, Rodney J. Land leveler. 2,866,281, 12–30–58, Cl. 37—168.
Bredtschneider, Kurt B., and H. C. Laird, to Crane Co. Combined throttle and stop valve. 2,866,477, 12–30–58, Cl. 137—628.
Brennan, Joseph S., to Fairchild Engine and Airplane Corp. Short life bearing. 2,866,669, 12–30–58, Cl. 308—77.
Bricker, Samuel R., to Westinghouse Electric Corp. Steam iron. 2,866,283, 12–30–58, Cl. 38—77.
Brigs, George S., and R. W. Christensen, to Radio Corp. of America. Photoconducting devices. 2,866,878, 12–30–58, Cl. 201—63.
Bristol Co., The: *See*—
Russell, John L. 2,866,877.
Bristol, Kenneth E., to The Goodyear Tire & Rubber Co. Process of preparing a film casting surface. 2,866,717, 12–30–58, Cl. 117—10.
British Industrial Plastics Ltd.: *See*—
Groves, Walter R. 2,866,561.
British Messier Ltd.: *See*—
Orloff, George. 2,866,476.
British Thomson-Houston Co. Ltd., The: *See*—
Blundell, Alan J. 2,866,928.
Broad Street Machine Co.: *See*—
Passons, Erby L. 2,866,423.
Brochhagen, Franzkarl, and K. E. Müller, to Farbenfabriken Bayer Akt. Process for preparing polyurethane foams employing tertiary amine catalysts. 2,866,762, 12–30–58, Cl. 260—2.5.
Brockhouse Engineering Ltd.: *See*—
Gatiss, Albert L. 2,866,361.
Broge, Edward C., to E. I. du Pont de Nemours and Co. Process for modifying the surface of a silica substrate having a reactive silanol surface. 2,866,716, 12–30–58, Cl. 106—308.
Broquist, Harry P., L. R. Hines, and A. R. Kohler, to American Cyanamid Co. Method of preserving dressed poultry and composition therefor. 2,866,708, 12–30–58, Cl. 99—157.
Brown, William F., Jr., and M. H. Jones. Temperature controller. 2,866,882, 12–30–58, Cl. 219—20.
Browning, William R.: *See*—
White, Maurice W., Browning, and Hinkle. 2,866,212.
Bruno, John T. Cooling unit. 2,866,324, 12–30–58, Cl. 62—406.
Buchholz, Arnold R., and F. Haban, to Brandt Automatic Cashier Co. Coin counting machine. 2,866,469, 12–30–58, Cl. 133—8.
Buckeye Tools Corp.: *See*—
Gummere, Harold O., and Alexander. 2,866,474.
Bünder-Glas G. m. b. H.: *See*—
Zimmermann, Ehrenfried, and Hennings. 2,866,403.
Bundy Tubing Co.: *See*—
Snively, Andrew J. 2,866,480.
Bunzl, Hugo, and P. Scheehner, to Cigarette Components Ltd. Paper tubes. 2,866,465, 12–30–58, Cl. 131—208.
Burg, Anton B., and W. Mahler, to American Potash & Chemical Corp. Preparation of fluorocarbon phosphines. 2,866,824, 12–30–58, Cl. 260—606.5.
Burt, F. N., Co., Inc.: *See*—
Morrison, Charles C. 2,866,569.
Busch, Leonard A. Fish lure. 2,866,292, 12–30–58, Cl. 43—42.48.
Busignies, Henri G., M. Rogoff, and G. A. Deschamps, to International Telephone and Telegraph Corp. Electronic spectroanalysis computer. 2,866,899, 12–30–58, Cl. 250—43.5.
Busignies, Henri G., P. R. Adams, G. A. Deschamps, and M. Rogoff, to International Telephone and Telegraph Corp. Nondispersive infrared analyzer. 2,866,900, 12–30–58, Cl. 250—43.5.
Buttner, Artur, to Schnellpressenfabrik Akt. Heidelberg. Rotary cylinder printing machine. 2,866,409, 12–30–58, Cl. 101—282.
Byrne, Irma. Adjustable rack. 2,866,559, 12–30–58, Cl. 211—35.
C. A. D. A. C. "Compania Argentina De Aparatos Criptografos Sociedad De Responsabilidad Limitada": *See*—
Vaya, Augusto. 2,866,274.
Callery Chemical Co.: *See*—
Snyder, Paul E. 2,866,687.
Calumet & Hecla, Inc.: *See*—
Honkala, Harold E., and Cunningham. 2,866,545.

Davidson, Carl A., to A-B Svenska Skolastfabriken. Presses for vulcanizing rubber soles on shoes. 2,866,227, 12–30–58, Cl. 18—17.
Duffy, Thomas I., to E. M. Benedict. Steering construction for bicycles and the like. 2,866,657, 12–30–58, Cl. 287—54.

Camerino, Bruno, and A. Vercellone, to Societa Farmaceutici Italia. Selective reduction of ketosteroids with yeast. 2,866,736, 12–30–58, Cl. 195—51.

Candlin, James E., Jr., to Pullman-Standard Car Mfg. Co. Freight vehicle partition. 2,866,419, 12–30–58, Cl. 105—376.

Candor, Robert R., to General Motors Corp. Forced air cooled refrigerator. 2,866,323, 12–30–58, Cl. 62—187.

Canterino, Peter J.: *See*—
Pritchard, James E., and Canterino. 2,866,779.

Capes, Tasker L. Tension device. 2,866,326, 12–30–58, Cl. 66—146.

Capitol Products Corp.: *See*—
Temple, Hiram E. 2,866,365.

Cardwell, Paul H., L. H. Eilers, and A. R. Hendrickson, to The Dow Chemical Co. Well treatment composition. 2,866,754, 12–30–58, Cl. 252—8.55.

Carlson, Robert C., and W. W. Witte, to Cook Electric Co. Reset-type station protector. 2,866,868, 12–30–58, Cl. 200—88.

Carlson, Robert C., to Cook Electric Co. Resettable overload protective device. 2,866,874, 12–30–58, Cl. 200—124.

Carlton Machine Tool Co., The: *See*—
Weidig, Miles. 2,866,347.

Caron, John B. R.: *See*—
Glendenning, Everett B., Wies, and Caron. 2,866,694.

Carr, Adams & Collier Co.: *See*—
Norman, Wayne A. 2,866,234.

Carter, Alfred D. S., to Power Jets (Research and Development) Ltd. Rotary bladed fluid flow machines. 2,866,619, 12–30–58, Cl. 253—65.

Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Article-handling apparatus. 2,866,534, 12–30–58, Cl. 198—19.

Cayot, Lynn B., to Commonwealth Co. Device for practicing putting. 2,866,645, 12–30–58, Cl. 273—183.

Central Scientific Co.: *See*—
Lewis, Robert E., and Thomas. 2,866,374.

Cerny, Joseph J. Coaxial resistor. 2,866,879, 12–30–58, Cl. 201—63.

Chance Vought Aircraft, Inc.: *See*—
Hoefs, Edwin G., and Litton. 2,866,596.

Chang, Robert W. H.: *See*—
Berry, Charles M., Chang, Le Bard, and Miller. 2,866,797.

Chapman, James R., to Reynolds Metals Co. Overwrapped cigarette carton. 2,866,590, 12–30–58, Cl. 229—51.

Char-Gale Mfg. Co.: *See*—
Bratsch, Jesse G. 2,866,481.

Charlat, Arnold S., to Howe & Fant, Inc. Power-transmitting device. 2,866,530, 12–30–58, Cl. 192—67.

Chase, Richard R., and J. C. Bowers, to Union-Bag-Camp Paper Corp. Separating non-acids from soap stocks. 2,866,781, 12–30–58, Cl. 260—97.7.

Chase-Shawmut Co., The: *See*—
Swain, Kenneth W., and Jacobs. 2,866,875.

Chemical Construction Corp.: *See*—
Fuchs, Warren J., Roberts, and Rayfiel. 2,866,321.
Pan, Lichi. 2,866,681.

Chicago Bridge & Iron Co.: *See*—
Westfall, Clifford M., and Mead. 2,866,606.

Christen & Co. A. G.: *See*—
Amiet, Oscar. 2,866,302.

Christensen, Ralph W.: *See*—
Briggs, George S., and Christensen. 2,866,878.

Church, Walter L. Gun test packer. 2,866,508, 12–30–58, Cl. 166—55.

Ciesielski, Leo F., and H. Albrecht, to American Cyanamid Co. Recovery of beta-sitosterol from tall oil pitch by steam distillation. 2,866,739, 12–30–58, Cl. 202—46.

Cigarette Components Ltd.: *See*—
Bunzl, Hugo, and Schechner. 2,866,465.

Cink, Albin. Hand apparatus for flame cutting of perpendicular cylindrical apertures on cylindrical surfaces. 2,866,631, 12–30–58, Cl. 266—23.

Clark, Harold H.: *See*—
George, Everett D., and Clark. 2,866,500.

Clark, Kenneth J. B., to Metalastik Ltd. Vehicle rubber spring suspensions. 2,866,632, 12–30–58, Cl. 267—57.1.

Clarke, William L., to International Business Machines Corp. Automatic article inserting apparatus. 2,866,201, 12–30–58, Cl. 1—104.

Clasen, Heinrich. Potato peeling machines. 2,866,487, 12–30–58, Cl. 146—49.

Cleere, Mason C.: *See*—
McLaughlin, Henry E., Stump, and Cleere. 2,866,826.

Clegg, Harold A., to United States Steel Corp. Safety lock for crane hook. 2,866,247, 12–30–58, Cl. 24—232.

Cobi, Walter H. Concrete form holders. 2,866,252, 12–30–58, Cl. 25—131.5.

Cobin, Jacob C., to North American Aviation, Inc. Cable disconnect coupling. 2,866,244, 12–30–58, Cl. 24—68.

Cohen, Arthur M. Variable resistor. 2,866,876, 12–30–58, Cl. 201—48.

Coley, Nelson B., and R. F. Albrighton, to General Railway Signal Co. Code communication system. 2,866,963, 12–30–58, Cl. 340—150.

Collins & Aikman Corp.: *See*—
Keen, William R. 2,866,255.

Collins, Elmer R. Rear sight for guns. 2,866,268, 12–30–58, Cl. 33—51.

Collins, Harold B. Cartridge of caulking material and apparatus for producing the same. 2,866,308, 12–30–58, Cl. 53—297.

Collins, Harry J., to B. P. Herzfeld. Lens cap arrangement for stereo cameras. 2,866,396, 12–30–58, Cl. 95—18.

Collins Radio Co.: *See*—
Johnson, Frederick W., and Lehman. 2,866,954.
Shanklin, John P. 2,866,968.
Sherwood, John R. 2,866,941.

Colson, Raymond L. Soil-treating apparatus. 2,866,422, 12–30–58, Cl. 111—6.

Colwell, Charles E., to Union Carbide Corp. Sulfuric acid clarification. 2,866,684, 12–30–58, Cl. 23—142.

Commonwealth Co.: *See*—
Cayot, Lynn B. 2,866,645.

Compagnie Industrielle de Procedes et d'Applications S. A.: *See*—
Godel, Albert. 2,866,696.

Compagnie Industrielle des Telephones: *See*—
Oswald, Jacques R. V. 2,866,951.

Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France: *See*—
Long, Bernard. 2,866,299.

Conforming Matrix Corp.: *See*—
MacArthur, Hamilton E., and Way. 2,866,434.

Conover, Leslie. Automatic ballers. 2,866,431, 12–30–58, Cl. 114—185.

Consolidated Packing Machinery Corp.: *See*—
Dimond, George H. 2,866,577.

Consortium für Elektrochemische Industrie G. m. b. H.: *See*—
Anselm, Hans, Kofler, and Smidt. 2,866,820.

Continental Can Co., Inc.: *See*—
Alexander, Paul. 2,866,724.
Alexander, Paul. 2,866,725.
Flynn, George M. 2,866,430.
Gordon, Bruce B., and Kimmig. 2,866,573.
Henchert, John. 2,866,571.
Henchert, John. 2,866,581.
Long, Florren E. 2,866,584.
Punte, William F., and Henchert. 2,866,582.
Scarvella, Gus S. 2,866,392.
Sennello, Joseph J. 2,866,306.
Simpson, Justin. 2,866,863.
Simpson, Justin, and Hale. 2,866,548.
Wagner, Edward W., and Stetter. 2,866,325.

Controls Co. of America: *See*—
Bachi, Robert W. 2,866,862.

Cook, Bates C., and J. Jokubonis, to Cook & Chick Co. Machine for feeding work pieces. 2,866,576, 12–30–58, Cl. 221—156.

Cook & Chick Co.: *See*—
Cook, Bates C., and Jokubonis. 2,866,576.

Cook Electric Co.: *See*—
Carlson, Robert C. 2,866,874.
Carlson, Robert C., and Witte. 2,866,868.

Cook, Ellsworth D., to General Electric Co. Optical flaw detection apparatus. 2,866,376, 12–30–58, Cl. 88—14.

Cooper, Benjamin, and A. Stern, said Stern to said Cooper. Sonic vehicle counter. 2,866,600, 12–30–58, Cl. 235—99.

Cooper, Theodore W., to Hughes Aircraft Co. Junction-type-semiconductor devices and method of making the same. 2,866,929, 12–30–58, Cl. 317—235.

Corda, Helmuth, to Olin Mathieson Chemical Corp. Selective hydrogenation. 2,866,794, 12–30–58, Cl. 260—846.2.

Corey, Flournoy: *See*—
Corey, Frederick C., and Corey. 2,866,226.

Corey, Frederick C. and F., to Pickwick Co. Poultry processing equipment. 2,866,226, 12–30–58, Cl. 17—11.1.

Cornelison, Boyd, to Texas Instruments Inc. Apparatus for making beverages. 2,866,400, 12–30–58, Cl. 99—308.

Costansa, Frank. Shoulder and armhole construction for garments and method of making the same. 2,866,203, 12–30–58, Cl. 2—93.

Cote, Omer E., to United States Automatic Box Machinery Co. Blank feeder for a box making machine. 2,866,641, 12–30–58, Cl. 271—44.

Coty, Inc.: *See*—
Bradford, Philip. 2,866,467.

Couch, S. H. Co., Inc.: *See*—
Smiley, Gilbert. 2,866,870.

Couse, Kibbey W., and R. M. Sutphen, to Couse Mfg., Inc. Structural building element. 2,866,235, 12–30–58, Cl. 20—15.

Couse Mfg., Inc.: *See*—
Couse, Kibbey W., and Sutphen. 2,866,235.

Coyne, William R. Method and apparatus for making moisture content determinations. 2,866,690, 12–30–58, Cl. 23—233.

Crabtree, R. W., & Sons Ltd.: *See*—
Stevenson, Derek A. 2,866,408.

Crane Co.: *See*—
Bredtschneider, Kurt B., and Laird. 2,866,477.

Crocella, Thomas, to Finger engaging cigarette holder. 2,866,466, 12–30–58, Cl. 131—258.

Crompton & Knowles Corp.: *See*—
Simmons, George S., Jr. 2,866,482.

Cromwell, Harold J., to General Motors Corp. Engine starting apparatus. 2,866,908, 12–30–58, Cl. 290—38.

Crowder, John A., and E. E. Gilbert, to Allied Chemical Corp. Production of dihalobenzenes. 2,866,828, 12–30–58, Cl. 260—650.

Croxton, Alex R. Pocket guard and liner for garments. 2,866,205, 12–30–58, Cl. 2—247.

Cummings, Richard A., to The Ludlow Valve Mfg. Co., Inc. Device for adjusting the length of a valve stem. 2,866,658, 12–30–58, Cl. 287—58.

Cunningham, James L.: *See*—
Honkala, Harold E., and Cunningham. 2,866,545.

Cupp, Earl B.: *See*—
Dittman, John F., and Cupp. 2,866,840.

Cutter Laboratories, Inc.: *See*—
Moore, Russell C. 2,866,457.

Dahlstrom, Ivar B.: *See*—
Stanfield, Harry E., and Dahlstrom. 2,866,428.

Dahlstrom Machine Works, Inc.: *See*—
Stanfield, Harry E., and Dahlstrom. 2,866,428.

Dailey, William H., Jr., and F. J. Kolnis, to Surface Combustion Corp. Apparatus for burning fuel having a widely varying caloric value. 2,866,602, 12–30–58, Cl. 236—15.

Davidson, Carl A., to A-B Svenska Skolastfabriken. Presses for vulcanizing rubber soles on shoes. 2,866,227, 12–30–58, Cl. 18—17.

Davis, George K. Utility brush. 2,866,216, 12–30–58, Cl. 15—198.

Daystrom, Inc.: *See*—
Lamb, Anthony H. 2,866,873.
Lamb, Francis X. 2,866,940.

Dean, Wayne J. Wiper for oil well sucker rods and the like. 2,866,217, 12–30–58, Cl. 15—210.

De Back, William to Food Machinery and Chemical Corp. Peeling machine having pear indexing means. 2,866,486, 12–30–58, Cl. 146—43.

De Changy, Gilbert, to Electricite de France-Service National-Direction des Etudes et Recherches. Automatic selective and cyclical control device. 2,866,341, 12–30–58, Cl. 74—1.

Dedrick, Francis J. Swivels. 2,866,293, 12–30–58, Cl. 43—43.13.

De Jong, Jan L., to E. I. du Pont de Nemours and Co. Urea-formaldehyde modified with polymerizable monoamide containing olefinic unsaturation and process of making same. 2,866,770, 12–30–58, Cl. 260—45.2.

De la Torre, Oscar W. Apparatus for administration of anaesthetics. 2,866,453, 12–30–58, Cl. 128—188.

Delpidio, Dominic J., 25% to D. Wolf. Combination, cigar, cigarette and pipe lighter. 2,866,924, 12–30–58, Cl. 317—95.

Dempsey, James H. Welding method and means for holding a backup strip in position for welding. 2,866,889, 12–30–58, Cl. 219—160.

Dentel, Paul, to Fabrique D'Horlogerie La Vedette, S. A. Electric motor control for chimes. 2,866,932, 12–30–58, Cl. 318—446.

De Pree, David O., to Ethyl Corp. Preparation of organic isocyanates. 2,866,803, 12–30–58, Cl. 260—453.

Derby Sealers, Inc.: *See*—
Krueger, Alfred P. 2,866,502.

Deschamps, Georges A.: *See*—
Busignies, Henri G., Adams, Deschamps, and Rogoff. 2,866,900.
Busignies, Henri G., Rogoff, and Deschamps. 2,866,899.

Des Moines Glove & Mfg. Co., Inc.: *See*—
Thompson, Robert E. 2,866,490.

Dessureau, John B.: *See*—
Dessureau, Joseph T., and Dessureau. 2,866,448.

Desßureau, Joseph T. and J. B. Abrasive wire shape-cutting stone saw machine. 2,866,448, 12–30–58, Cl. 125—21.

De Witt, Earl G., to Ethyl Corp. Organic process. 2,866,805, 12–30–58, Cl. 260—461.

Diamond Alkali Co.: *See*—
Goss, Norman P. 2,866,703.

Diamond Gardner Corp.: *See*—
Struble, Glenn E. 2,866,587.

Diamond Match Co., The: *See*—
Struble, Glenn E. 2,866,587.

Diaz C., Juan: *See*—
Hoellerich, John L., and Diaz. 2,866,904.

Dickey, John W., and E. E. Hood, to Bendix Aviation Corp. Freezemeter. 2,866,328, 12–30–58, Cl. 73—17.

Diehl, James L., and B. J. Horne, to Invalid Walker & Wheel Chair Co. Invalid folding walker and chair. 2,866,495, 12–30–58, Cl. 155—22.

Dille, Kenneth L.: *See*—
Newman, Stanley R., Dille, Heisler, and Alpert. 2,866,758.

Dimond, George H., to Consolidated Packing Machinery Corp. Rectifier for orienting bottle caps. 2,866,577, 12–30–58, Cl. 221—173.

Disney Products, Inc.: *See*—
Gunderson, Arthur M. 2,866,303.

Dittmann, John F., and E. B. Cupp, to The Eagle-Picher Co. Polyelectrolytes in battery pastes. 2,866,840, 12–30–58, Cl. 136—26.

Dobrosavljević, Stoymir, to International Engineering General Research & Licensing Co. Mechanical seal between rotary and coaxial mechanical members. 2,866,656, 12–30–58, Cl. 286—11.14.

Dominion Corset Co. Ltd.: *See*
Verreault, Joseph. 2,866,463.

Donnelly, Richard W., to The Texas Co. Method and apparatus for separating water and fluid hydrocarbons. 2,866,834, 12–30–58, Cl. 260—676.

Dorr-Oliver Inc.: *See*—
Scott, Charles H. 2,866,352.

Dow Chemical Co., The: *See*—
Cardwell, Paul H., Eilers, and Hendrickson. 2,866,754.
Dunn, James L., Jr., and Posey. 2,866,830.
Fischback, Bryant C., and Harris. 2,866,830.
Nummy, William R. 2,866,776.
Tolkmith, Henry. 2,866,810.

Dowd, Laurence E., and M. A. Glaser, to Tee-Pak, Inc. Coated sausage casing. 2,866,710, 12–30–58, Cl. 99—176.

Doyle, Irving W., and D. G. C. Hare, to Fairchild Camera and Instrument Corp. Image-velocity responsive system. 2,866,373, 12–30–58, Cl. 88—1.

Dube, Stephen A.: *See*—
Klein, William J., and Dube. 2,866,544.

Duca, Frank J., and W. E. Phipps. Telephone dialing and code transmitting system. 2,866,850, 12–30–58, Cl. 179—5.

Dudenhausen, Hans J., to Intavex, Inc. Plural axis dynamometer. 2,866,333, 12–30–58, Cl. 73—141.

Duell, Hiram E. Electrically operated fishing reel. 2,866,291, 12–30–58, Cl. 43—21.

Duffy, Thomas I., to E. M. Benedict. Pedal for foot propelled vehicles. 2,866,358, 12–30–58, Cl. 74—594.4.

Duffy, Thomas I., to E. M. Benedict. Bicycle kick stand. 2,866,654, 12–30–58, Cl. 280—301.

Duffy, Thomas I., to E. M. Benedict. Steering construction for bicycles and the like. 2,866,657, 12–30–58, Cl. 287—54.

Dunn, James L., Jr., and B. Posey, Jr., to The Dow Chemical Co. Fixed bed oxychlorination of hydrocarbons. 2,866,830, 12–30–58, Cl. 260—650.

Du Pont de Nemours, E. I., and Co.: *See*—
Allen, Robert P. 2,866,713.
Bechtold, Max F. 2,866,259.
Broge, Edward C. 2,866,716.
De Jong, Jan L. 2,866,770.
Ewing, Alvin L. 2,866,607.
Fang, James C. 2,866,707.
Haley, Floyd C. 2,866,499.
Happoldt, William, Jr. 2,866,769.
Holmquist, Howard E. 2,866,792.
Holmquist, Howard E. 2,866,793.
Meadows, Geoffrey W. 2,866,296.
Sanders, Philip F. 2,866,763.
Siefen, Howard T., and Trutna. 2,866,822.
Van Epp, James E. 2,866,731.

Durant, Lyndon A., to United Music Corp. Multi-selector. 2,866,865, 12–30–58, Cl. 200—50.

Eagle-Picher Co., The: *See*—
Dittmann, John F., and Cupp. 2,866,840.

Easterday, Elton E. Sedimentation basin cleaning apparatus. 2,866,557, 12–30–58, Cl. 210—527.

Eastern Products Corp.: *See*—
Lydard, Martin L. 2,866,233.

Eckert, John J. Oil separators. 2,866,558, 12–30–58, Cl. 210—540.

Economy Engine Co.: *See*
Kaehni, Frank J. 2,866,839.

Economy Engine Co., The: *See*—
Kaehni, Frank J. 2,866,447.

Eilers, Louis H.: *See*—
Cardwell, Paul H., Eilers, and Hendrickson. 2,866,754.

Elam, Jess L., to Food Machinery and Chemical Corp. Pedal depressing and holding tool. 2,866,356, 12–30–58, Cl. 74—532.

Eldridge, Frances E. Hair straightening and waving iron. 2,866,468, 12–30–58, Cl. 132—143.

Electric & Musical Industries Ltd.: *See*—
James, Ivanhoe J. P. 2,866,847.
White, Eric L. C. 2,866,966.

Electricite de France-Service National-Direction des Etudes et Recherches: *See*—
De Changy, Gilbert. 2,866,341.

Elgin, Alice M. Zipper. 2,866,245, 12–30–58, Cl. 24—205.15.

Ellett, Alexander, to Zenith Radio Corp. Subscription television code determining arrangement. 2,866,962, 12–30–58, Cl. 340—147.

Elliott Co.: *See*—
Land, Malcolm L. 2,866,617.

Elliott, Douglas E., to Power Jets (Research and Development) Ltd. Combustion chambers. 2,866,697, 12–30–58, Cl. 48—203.

Ellis, David H., to The Oscar C. Rixson Co. Door closer centering stop. 2,866,224, 12–30–58, Cl. 16—55.

Eloranta, Vaito K.: *See*—
Bing, Herbert A., Eloranta, Grey, and Maierhofer. 2,866,380.

Elox Corp. of Michigan: *See*—
Matulaitis, Victor E., and Lobur. 2,866,921.

English Electric Co. Ltd., The: *See*—
Paddison, Eric. 2,866,926.

Engman, Gerald: *See*—
Haslett, Clifford, and Engman. 2,866,519.

Engman Mfg. Co.: *See*—
Haslett, Clifford, and Engman. 2,866,519.

Equitable Paper Bag Co., Inc.: *See*—
Poppe, George W. 2,866,591.

Essex Wire Corp.: *See*—
Raypholtz, Kenneth A. 2,866,957.

Esso Research and Engineering Co.: *See*—
Askey, Warren E., and Love. 2,866,744.
Hillard, George O., Jr., and McLean. 2,866,780.
Kearby, Kenneth K., and Kirshenbaum. 2,866,747.
Kimberlin, Charles N., Jr., and Mattox. 2,866,835.
Love, Robert M. 2,866,746.
Moeseman, Max A. 2,866,750.
Sutherlin, Harry T., and Souder. 2,866,475.

Ethyl Corp.: *See*
De Pree, David O. 2,866,803.
De Witt, Earl G. 2,866,805.
Gilbert, Lewis F. 2,866,695.
Graham, Bruce. 2,866,862.
Hillard, George O., Jr., and McLean. 2,866,780.
Irish, Glenn E., and Baylerian. 2,866,811.
Kolka, Alfred J. 2,866,808.
Kolka, Alfred J. 2,866,809.
Markley, Francis X., and Larson. 2,866,866.

Ewing, Alvin L., to E. I. du Pont de Nemours and Co. Warper beam. 2,866,607, 12–30–58, Cl. 242—118.6.

Ewing Development Co.: *See*—
Ewing, Walkley B. 2,866,353.

Ewing, Walkley B., to Ewing Development Co. Motion translating devices. 2,866,353, 12–30–58, Cl. 74—437.

Fabrique D'Horlogerie La Vedette, S. A.: *See*—
Dentel, Paul. 2,866,932.

Fahrney, Max E.: *See*—
Gladfelter, Willie I., and Fahrney. 2,866,547.

Fairchild Camera and Instrument Corp.: *See*—
Doyle, Irving W., and Hare. 2,866,373.

Fairchild Engine and Airplane Corp.: *See*—
Brennan, Joseph S. 2,866,669.

Fang, James C., to E. I. du Pont de Nemours and Co. Composition containing copolymer of ethylenically unsaturated compounds and a diglycidyl ester of a dicarboxylic acid and process of making same. 2,866,767, 12–30–58, Cl. 260—30.

Fang, Pao-Hsien, to Philco Corp. Thermionically emitting device. 2,866,915, 12–30–58, Cl. 313—337.
Farbenfabriken Bayer Akt.: *See*—
Brochhagen, Franzkarl, and Müller. 2,866,762.
Gensel, Herbert, Tischbein, and Windemuth. 2,866,722.
Nischk, Gunther, and Holtschmidt. 2,866,804.
Faron, Evelyn E., to A. Stein & Co. Brassiere. 2,866,462, 12–30–58, Cl. 128—429.
Fasekas, Charles, to Taylor Biscuit Co. Coin operated vending machine. 2,866,578, 12–30–58, Cl. 221—260.
Federal Products Corp.: *See*—
Worthen, John H. 2,866,365.
Feichtinger, Hans, and H. Tummes, to Ruhrchemie Akt. Production of sultames. 2,866,786, 12–30–58, Cl. 260—243.
Feichtinger, Heinrich, to Geraetebau-Anstalt. Apparatus for gas analysis. 2,866,691, 12–30–58, Cl. 23—254.
Feller, Morris, to Standard Oil Co. Aluminum containing reforming catalyst. 2,866,748, 12–30–58, Cl. 208—138.
Fend, Kurt, to Firma Gebr. Fend. Writing implement. 2,866,437, 12–30–58, Cl. 120—14.5.
Fenner, J. H., & Co. Ltd.: *See*—
Watts, Gilbert E., Hainsworth, and Perry. 2,866,483.
Fenoglio, Maurice, A. Pacoud, and E. Alvarado, to Societe des Usines Chimiques Rhone-Poulenc. Process for the dehydration of dimethylphenylcarbinol. 2,866,832, 12–30–58, Cl. 260—669.
Ferencsy, Jenö: *See*—
Rada, Istvan T., and Ferencsy. 2,866,334.
Feuerstein, Edward and L. Speed control governor device for automobiles. 2,866,446, 12–30–58, Cl. 123—98.
Feuerstein, Louis: *See*—
Feuerstein, Edward and L. 2,866,446.
Fidelity Union Trust Co.: *See*—
Merian, Ernst. 2,866,678.
Fields, Ellis K.: *See*—
Hoff, Melvern C., Fields, and Watson. 2,866,732.
Fincher, Walter. Adjustable hanger for the shaker screen or sieve of a purifier or the like machine. 2,866,554, 12–30–58, Cl. 209—415.
Finney, Ivan K., to United States of America, Navy. High voltage insulation mounting. 2,866,845, 12–30–58, Cl. 174—139.
Firma Gebr. Fend: *See*—
Fend, Kurt. 2,866,437.
Firman, Melvin C.: *See*—
Minieri, Pasquale P., Firman, and Sokol. 2,866,738.
Fischback, Bryant C., and G. H. Harris, to The Dow Chemical Co. Triethylamine salts of N-(naphthyl)-dithiocarbamic acids. 2,866,814, 12–30–58, Cl. 260—501.
Fischer, Josef: *See*—
Berg, Herbert, Fischer, Krautwald, and Ruhland. 2,866,927.
Fisher Industries, Inc.: *See*—
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Fisher, Robert C., to Fisher Industries, Inc. Bolt non-rotatively secured to plate by struck out shank portion. 2,866,372, 12–30–58, Cl. 85—9.
Fitzpatrick, John T.: *See*—
Hill, Fred N., and Fitzpatrick. 2,866,761.
Flanum, Thomas J., to Allis-Chalmers Mfg. Co. Combined bumper and pump mounting for tractors. 2,866,510, 12–30–58, Cl. 180—53.
Flesch, Norman F., to American Steel Foundries. Rotor brake. 2,866,524, 12–30–58, Cl. 188—59.
Fletcher, Murray J., and J. Sobsey. Dental hand drill. 2,866,267, 12–30–58, Cl. 32—28.
Flynn, George M., to Continental Can Co., Inc. Can body side seam wiping means. 2,866,430, 12–30–58, Cl. 113—97.
Fogel, Lawrence J. Method of improving intelligence under random noise interference. 2,866,848, 12–30–58, Cl. 179—1.
Food Machinery and Chemical Corp.: *See*—
De Back, William. 2,866,486.
Elam, Jess L. 2,866,356.
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Rose, Boyd W. 2,866,484.
Van Slyck, Bert R., and Kelly. 2,866,540.
Verrinder, Ernest A., and Richards. 2,866,535.
Ford, John L. and R. V., to The Ford Meter Box Co., Inc. Single use fiber board mold for water meter barrels. 2,866,250, 12–30–58, Cl. 25—118.
Ford, John L., to The Ford Meter Box Co., Inc. Single use mold for obround water meter barrels. 2,866,251, 12–30–58, Cl. 25—118.
Ford Meter Box Co., Inc., The: *See*—
Ford, John L. 2,866,251.
Ford, John L. and R. V. 2,866,250.
Ford, Richard V.: *See*—
Ford, John L. and R. V. 2,866,250.
Forkner, Ewell W., to Precision Welder & Flexopress Corp. Presses for punching and blanking sheet metal. 2,866,505, 12–30–58, Cl. 164—102.
Formby, John A. Synchronous transmission systems. 2,866,931, 12–30–58, Cl. 318—23.
Fort, William G. S., to United States of America, Atomic Energy Commission. Zero suppression for recorders. 2,866,939, 12–30–58, Cl. 324—131.
Fourey, Jacques C., to Societe Anonyme Preparation Industrielle des Combustibles. Hydraulic motor for a jig. 2,866,441, 12–30–58, Cl. 121—41.
Frank, Wilhelm. Window fittings. 2,866,635, 12–30–58, Cl. 268—112.
Fredholm, Gunnar I. Roll lift devices for ironing machines and the like. 2,866,282, 12–30–58, Cl. 38—50.
Freeman, John F., J. W. Smelker, and A. M. Rockwood, to Bond Nail, Inc. Hammer. 2,866,199, 12–30–58, Cl. 1—46.
Freedman, Louis: *See*—
Shapiro, Seymour L., Freedman, and Rose. 2,866,734.
French, Elby E., to O. K. Ko-Op Rubber Welding System. Means for supporting a tire in a retreading mold. 2,866,228, 12–30–58, Cl. 18—18.
Fuchs, Warren J., E. S. Roberts, and R. D. Rayfiel, to Chemical Construction Corp. Purification of gases by partial condensation. 2,866,321, 12–30–58, Cl. 62—13.
Fusco, Vito A.: *See*—
Reynolds, William E., and Fusco. 2,866,388.
Gabriel, Gustave O. Turntable drives for record players. 2,866,362, 12–30–58, Cl. 74—745.
Gatlis, Albert L., to Brockhouse Engineering Ltd. Hydrokinetic transmission apparatus for vehicles. 2,866,361, 12–30–58, Cl. 74—732.
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Gleim, William K. T., Urban, and Gatsis. 2,866,825.
Gebert, Russell C., to James Lees and Sons Co. Pile fabric with resilient lining. 2,866,206, 12–30–58, Cl. 2—278.
Gebhard, Frederick W. Dual battery switch system. 2,866,907, 12–30–58, Cl. 200—36.
Gebr. Stork & Co's Apparatenfabriek N. V.: *See*—
Laupman, Robert R. 2,866,404.
Geldhof, Peter E., to Whirlpool Corp. Condenser particularly adopted for clothes driers and the like. 2,866,273, 12–30–58, Cl. 34—75.
General Dynamics Corp.: *See*—
Trousdale, Robert B. 2,866,909.
General Electric Co.: *See*—
Cook, Ellsworth D. 2,866,376.
Mees, Robert D., and Marker. 2,866,955.
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General Electric Co.: *See*—
Stratton, Jerry L. 2,866,953.
Sutton, Robert J. 2,866,742.
Turner, William W. 2,866,872.
Whitehead, Harold S. 2,866,934.
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General Industries Co., The: *See*—
Hartman, Herbert L. 2,866,346.
General Mills, Inc.: *See*—
Berry, Charles M., Chang, Le Bard, and Miller. 2,866,797.
McCadden, Walter E. 2,866,390.
General Motors Corp.: *See*—
Candor, Robert R. 2,866,323.
Cromwell, Harold J. 2,866,908.
Jacobs, James W. 2,866,528.
Kesling, Keith K. 2,866,675.
Koehring, Roland P. 2,866,886.
Reese, Elmer E. 2,866,344.
Roth, Charles P. 2,866,220.
General Railway Signal Co.: *See*—
Coley, Nelson B., and Albrighton. 2,866,963.
General Telephone Laboratories, Inc.: *See*—
Lomax, Clarence E. 2,866,853.
Gensel, Herbert, W. Tischbein, and E. Windemuth, to Farbenfabriken Bayer Akt. Process for the production of foamed urethan coatings. 2,866,722, 12–30–58, Cl. 117—104.
George, Everett D., and H. H. Clark, to The Goodyear Tire & Rubber Co. Method and apparatus for siping tires. 2,866,500, 12–30–58, Cl. 164—10.2.
George, Everett D., to The Goodyear Tire & Rubber Co. Apparatus for siping tires. 2,866,501, 12–30–58, Cl. 164—10.2.
Geraetebau-Anstalt: *See*—
Feichtinger, Heinrich. 2,866,691.
Gerber, Albert. Device for releasably mounting an artificial tooth or the like. 2,866,285, 12–30–58, Cl. 39—9.
Gerst, Chris, to The Transmission & Gear Co. Transmission. 2,866,350, 12–30–58, Cl. 74—360.
Gerst, Chris, and H. C. Keller, to The Transmission & Gear Co. Power transmission. 2,866,360, 12–30–58, Cl. 74—665.
Gerwe, Raymond D., and M. A. Slade, Jr., to Food Machinery and Chemical Corp. Method of treating peaches. 2,866,709, 12–30–58, Cl. 99—168.
Gibson, Seabron H., to Transall Inc. Locomotive flange lubricator. 2,866,521, 12–30–58, Cl. 184—3.
Giessner, George J., and A. Bodenschatz, to I-T-E Circuit Breaker Co. Closing mechanism, molded cased breakers. 2,866,884, 12–30–58, Cl. 200—50.
Gilbert, Everett E.: *See*—
Crowder, John A., and Gilbert. 2,866,828.
Gilbert, Lewis F., to Ethyl Corp. Gasoline fuel. 2,866,695, 12–30–58, Cl. 44—69.
Gillette, Edwin. Means for making composite pictures. 2,866,397, 12–30–58, Cl. 95—36.
Gillo, Léon, and J. Mainil, to Sorelux S. A., and Oletta S. A. Process for obtaining voacanga alkaloids. 2,866,784, 12–30–58, Cl. 260—236.
Gindfelter, Willie I., and M. E. Fahrney, to Pangborn Corp. Abrasive separator. 2,866,547, 12–30–58, Cl. 209—33.
Glaser, Milton A.: *See*—
Dowd, Laurence E., and Glaser. 2,866,710.
Glass, Henry P., to Mutual Furniture Associates, Inc. Furniture employing arm rests movable horizontally into a back member. 2,866,490, 12–30–58, Cl. 155—112.
Gleim, William K. T., P. Urban, and J. G. Gatsis, to Universal Oil Products Co. Production of non-staining antiozonant. 2,866,825, 12–30–58, Cl. 260—613.
Glendenning, Everett B., C. Wies, and J. B. R. Caron, to Shell Development Co. Anti-clogging fuel oil compositions. 2,866,094, 12–30–58, Cl. 44—68.
Gluchowicz, Gerszon. Device for driving rapidly rotating spindles. 2,866,671, 12–30–58, Cl. 308—189.
Godel, Albert, to Compagnie Industrielle de Procedes et d'Applications S. A. Process for the gasification of granulated fluidized bed of carbonaceous material, over moving, sloping, horizontal, continuous grate. 2,866,096, 12–30–58, Cl. 48—203.

Goebel, Walter E., to American Radiator and Standard Sanitary Corp. Cabinet structure. 2,866,676, 12–30–58, Cl. 312—257.

Goins, Robert R.: *See*—
Begley, John W., and Goins. 2,866,836.

Goldberg, Moshe. Device for taking samples of liquid for testing. 2,866,340, 12–30–58, Cl. 73—425.6.

Goldberg, Nathaniel D. Conveyor wear strip. 2,866,538, 12–30–58, Cl. 198—189.

Goodyear Tire & Rubber Co., The: *See*—
Bristol, Kenneth E. 2,866,717.
George, Everett D. 2,866,501.
George, Everett D., and Clark. 2,866,500.
Lee, Walter J. 2,866,492.
Leshin, Richard. 2,866,777.
Leshin, Richard. 2,866,778.
Raack, Harry E., and Sartoris. 2,866,562.
Sanderson, William M. 2,866,494.
Vaughan, Paul J. 2,866,231.
Wargotz, Bernard, and Weinstein. 2,866,821.
Wiseman, Roy R., Jr. 2,866,526.

Gordon, Bruce B., and E. W. Kimmig, to Continental Can Co., Inc. Shoe polish container. 2,866,573, 12–30–58, Cl. 220—43.

Gorton, George, Machine Co.: *See*—
Gunderson, Allen D. 2,866,391.

Goss, Norman P., to Diamond Alkali Co. Treated molten metal. 2,866,703, 12–30–58, Cl. 75—93.

Gould-National Batteries, Inc.: *See*—
Zahn, Harold E. 2,866,841.

Gow, Arthur R., and P. S. Madsen, to The Seamless Rubber Co. Football having a securely grippable laceless surface. 2,866,644, 12–30–58, Cl. 273—65.

Graham, Bruce, to Ethyl Corp. Preparation of organic isocynates. 2,866,802, 12–30–58, Cl. 260—453.

Graver Tank & Mfg. Co., Inc.: *See*—
Shepherd, Roy. 2,866,516.

Graves, Frederick G., to J. W. Macklin, at trustee. Piston and combustion chamber and injection nozzle mounting construction for compression ignition engine. 2,866,445, 12–30–58, Cl. 123—32.

Green, William R. Writing instrument guide. 2,866,440, 12–30–58, Cl. 120—102.

Grey, David S.: *See*—
Bing, Herbert A., Eloranta, Grey, and Maiershofer. 2,866,380.

Grey, John C., to Power Jets (Research & Development) Ltd. Control arrangements for rotary machines. 2,866,471, 12–30–58, Cl. 137—28.

Grimal, Adolf, to L. J. Kujawa. Clamp. 2,866,243, 12–30–58, Cl. 24—25.

Groves, Walter R., to British Industrial Plastics Ltd. Loading devices for moulding presses. 2,866,561, 12–30–58, Cl. 214—1.

Grum-Schwensen, Sofus V. Device for grinding scraper blades. 2,866,300, 12–30–58, Cl. 51—3.

Gruner, Heinz E. R., and F. Schwarzbach, to Bausch & Lomb Optical Co. Stereoscopic viewing device. 2,866,382, 12–30–58, Cl. 88—29.

Guest, Howard R., and B. W. Kiff, to Union Carbide Corp. Process for the removal of formaldehyde from crude pyruvic aldehyde solution. 2,866,823, 12–30–58, Cl. 260—593.

Gummere, Harold O., and R. H. Alexander, to Buckeye Tools Corp. Air supply system for pneumatic tools. 2,866,474, 12–30–58, Cl. 137—561.

Gunderson, Allen D., to George Gorton Machine Co. Pantograph milling machine. 2,866,391, 12–30–58, Cl. 90—62.

Gunderson, Arthur M., to Disney Products, Inc. Knife sharpening attachment. 2,866,303, 12–30–58, Cl. 51—241.

Guzzetta, Giuseppe, to Montecatini, Societa Generale per l'Industria Mineraria e Chemica. Method of providing surfaces with a strongly adhering polyethylene film. 2,866,718, 12–30–58, Cl. 117—21.

Haagensen, Duane B., to Raytheon Mfg. Co. Magnetron modulator systems. 2,866,920, 12–30–58, Cl. 315—39.63.

Haban, Frank: *See*—
Buchholz, Arnold R., and Haban. 2,866,469.

Hackel, Walter, and F. Lentze, to Licentia Patent-Verwaltungs-G. m. b. H. Electric control system. 2,866,407, 12–30–58, Cl. 101—181.

Hadley, Benjamin H. Drilling machine. 2,866,366, 12–30–58, Cl. 77—22.

Haessler, Walter M., J. A. Bishop, and E. E. Stauffer, to Baker Industries, Inc. Compositions and methods for treating particulate solids. 2,866,760, 12–30–58, Cl. 252—383.

Hainsworth, Sidney B.: *See*—
Watts, Gilbert E., Hainsworth, and Perry. 2,866,483.

Hale, Charles W.: *See*—
Simpson, Justin, and Hale. 2,866,548.

Haley, Floyd C., to E. I. du Pont de Nemours and Co. Apparatus and processes for concentrating and evaporating liquids. 2,866,499, 12–30–58, Cl. 159—6.

Hall, Jesse B. Deactivating lamp disposal device. 2,866,604, 12–30–58, Cl. 241—99.

Halvorsen, Henry K. and H. K., Jr. Plywood stacking machine. 2,866,642, 12–30–58, Cl. 271—89.

Halvorsen, Henry K., Jr.: *See*—
Halvorsen, Henry K. and H. K., Jr. 2,866,642.

Hamilton, W. C., & Sons: *See*—
Hanson, Hugo H. 2,866,707.

Hamlin, Charles E., to North American Aviation, Inc. Double acting piston seal. 2,866,674, 12–30–58, Cl. 309—33.

Hanomag Akt.: *See*—
Nubling, Otto. 2,866,417.

Hansen, Siegfried, to Hughes Aircraft Co. Electronic camera tube. 2,866,918, 12–30–58, Cl. 315—11.

Hanson, Henry L., to Minneapolis-Honeywell Regulator Co. Gas analysis apparatus. 2,866,329, 12–30–58, Cl. 73—23.

Hanson, Hugo H., to W. C. Hamilton & Sons. Magnesium hydroxide sized photosensitive paper. 2,866,707, 12–30–58, Cl. 96—75.

Happoldt, William, Jr., to E. I. du Pont de Nemours and Co. Process for making a mat composed of aluminum silicate fibers and polytetrafluoroethylene. 2,866,769, 12–30–58, Cl. 260—41.

Hardin, N. A.: *See*—
Brandon, Clarence W. 2,866,509.

Hardinge Brothers, Inc.: *See*—
Parsons, Hubert J. 2,866,648.

Hare, Donald G. C.: *See*—
Doyle, Irving W., and Hare. 2,866,373.

Harless, Charles A., to R. Hoe & Co., Inc. Inking mechanism. 2,866,410, 12–30–58, Cl. 101—350.

Harris, Albert T., and J. O. Reynolds, to Transall, Inc. Seal for anti-friction bearings and the like. 2,866,670, 12–30–58, Cl. 308—187.1.

Harris, Guy H.: *See*—
Fischback, Bryant C., and Harris. 2,866,814.

Hart, Donald M., to Moore Business Forms, Inc. Carbon paper inks and method for making same. 2,866,711, 12–30–58, Cl. 106—22.

Hartman, Herbert L., to The General Industries Co. Plural-speed phonograph turntable drive mechanisms. 2,866,346, 12–30–58, Cl. 74—190.

Hartman, Robert B., to Remington Arms Co., Inc. Safety means for flywheels. 2,866,359, 12–30–58, Cl. 74—605.

Hartman, William C. Adjustable picture frame. 2,866,286, 12–30–58, Cl. 40—155.

Hartmann & Braun Akt.: *See*—
Axt, Gunter, and Lotz. 2,866,330.

Hartmann, Waldemar. Machine for metering and delivering powder. 2,866,666, 12–30–58, Cl. 302—37.

Haskelite Mfg. Corp.: *See*—
Potchen, Joseph A., Kloote, and Meier. 2,866,730.

Hausner, Henry H., to United States of America, Atomic Energy Commission. Control rod for a nuclear reactor and method of preparation. 2,866,741, 12–30–58, Cl. 204—193.2.

Hayden-Nilos Ltd.: *See*—
Potter, John J. 2,866,200.

Hazlett, Clifford, and G. Engman, to Engman Mfg. Co. Moisture and dust separator for air pressure lines. 2,866,519, 12–30–58, Cl. 183—68.

Heckethorn, John E., to Heckethorn Mfg. & Supply Co. Variable speed drives for automotive generators. 2,866,349, 12–30–58, Cl. 74—336.

Heckethorn Mfg. & Supply Co.: *See*—
Heckethorn, John E. 2,866,349.

Hein, George N., Jr., to Becton, Dickinson and Co. Hypodermic assembly. 2,866,458, 12–30–58, Cl. 128—218.

Heinemann, Heinz, to Houdry Process Corp. Multistage hydrocarbon reforming process. 2,866,745, 12–30–58, Cl. 208—79.

Heinemann, Heinz, to Houdry Process Corp. Catalytic alkylation of hydrocarbons. 2,866,837, 12–30–58, Cl. 260—683.64.

Heinrichs, Harry W. Safety device for closure members. 2,866,659, 12–30–58, Cl. 292—267.

Heisler, Robert Y.: *See*—
Newman, Stanley R., Heisler, and Alpert. 2,866,757.

Heisler, Robert Y., S. R. Newman, N. Alpert, and K. L. Dille, to The Texas Co. Lubricants containing a deposit-control additive. 2,866,736, 12–30–58, Cl. 252—56.

Henchert, John: *See*—
Punte, William F., and Henchert. 2,866,582.

Henchert, John, to Continental Can Co., Inc. Ring structure for connecting cans in superposed relation. 2,866,571, 12–30–58, Cl. 220—23.83.

Henchert, John, to Continental Can Co., Inc. Plastic nozzle or spout mounting and method of forming same. 2,866,581, 12–30–58, Cl. 222—566.

Hendrickson, Alfred R.: *See*—
Cardwell, Paul H., Eilers, and Hendrickson. 2,866,754.

Henkel & Cie. G. m. b. H.: *See*—
Schirp, Hubert. 2,866,815.

Hennings, Werner: *See*—
Zimmermann, Ehrenfried, and Hennings. 2,866,403.

Henrite Products Corp.: *See*—
Loftis, Homer J. 2,866,613.

Herbert, William C., Jr. Static eliminators. 2,866,923, 12–30–58, Cl. 317—2.

Hercules Powder Co.: *See*—
Watkins, Spencer H. 2,866,782.

Herlihy, William F., to Lowell Counter Co. Method of making footwear of the moccasin type having moulded counters. 2,866,211, 12–30–58, Cl. 12—142.

Hersh, Sidney, to United States of America, Navy. Combination of hedgehog projector and gun mount. 2,866,384, 12–30–58, Cl. 89—1.

Herter, George L., to Herter's, Inc. Ball bearing and retaining band locking device for the outer sleeve of adjustable chokes. 2,866,288, 12–30–58, Cl. 42—79.

Herter's, Inc.: *See*—
Herter, George L. 2,866,288.

Herzfeld, Richard P.: *See*—
Collins, Harry J. 2,866,396.

Hetherington, Alexander C., to Minnesota Mining and Mfg. Co. Dispersion of fluorochlorocarbon polymers in a solution of a copolymer of trifluorochloroethylene with a halogenated olefin and method of coating surface therewith. 2,866,721, 12–30–58, Cl. 117—103.

Heyden Newport Chemical Corp.: *See*—
McLaughlin, Henry E., Stump, and Cleere. 2,866,826.

Heywood, Basil J., to May & Baker Ltd. Production of aryloxy compounds. 2,866,816, 12–30–58, Cl. 260—521.

Hierath, Doran C., and C. A. Lane, to Hughes Aircraft Co. Digital systems for the automatic control of machinery. 2,866,506, 12–30–58, Cl. 164—115.

High Voltage Engineering Corp.: *See*—
Nygard, John C. 2,866,902.

Highton, Allan P.: *See*—
Wells, Archibald H., Nissan, Highton, and Hopkins. 2,866,375.

Hightower, Thomas H. Hair trimming blade for safety razors. 2,866,264, 12–30–58, Cl. 30—31.

Hill, Fred N., and J. T. Fitzpatrick, to Union Carbide Corp. Polymerization of epoxides. 2,866,761, 12–30–58, Cl. 260—2.

Hillard, George O., Jr., and L. W. McLean, to Ethyl Corp. Production of low ash resin. 2,866,780, 12–30–58, Cl. 260—88.1.

Himel, Chester M., and L. M. Richards. Process for the production of organic isocyanates. 2,866,801, 12–30–58, Cl. 260—453.

Himelick, Robert E., to The Upjohn Co. Therapeutic composition of matter. 2,866,735, 12–30–58, Cl. 167—65.

Hines, Leonard R.: *See*—
Broquist, Harry P., Hines, and Kohler. 2,866,708.

Hinkle, Malcolm E.: *See*—
White, Maurice W., Browning, and Hinkle. 2,866,212.

Hinz, Loyola B. Drip board device for meats. 2,866,556, 12–30–58, Cl. 210—498.

Hitchcox, Gerald I., to Arthur D. Little, Inc. Liquid level gage. 2,866,336, 12–30–58, Cl. 73—304.

Hockery, John C.: *See*—
McLean, Robert E. 2,866,263.

Hodgkin, Alan F.: *See*—
Hutchings, Edward G., and Hodgkin. 2,866,444.

Hoe, R., & Co., Inc.: *See*—
Harless, Charles A. 2,866,410.
Reed, Reginald, and Worthington. 2,866,411.

Hoeflich, Victor T. Tool for nicking steel rule dies. 2,866,266, 12–30–58, Cl. 30—277.

Hoefs, Edwin G., and G. T. Litton, to Chance Vought Aircraft, Inc. Data computer for converting oscillograph traces into direct-reading records. 2,866,596, 12–30–58, Cl. 235—61.

Hoellerich, John L., and J. Dias C., to Admiral Corp. Radiation measuring apparatus. 2,866,904, 12–30–58, Cl. 250—71.

Hoesch, Elmer D., to Allis-Chalmers Mfg. Co. Backseated inlet valve. 2,866,615, 12–30–58, Cl. 251—229.

Hoff, Melvern C., E. K. Fields, and R. W. Watson, to Standard Oil Co. Metal derivatives of organic phosphates and phosphites. 2,866,732, 12–30–58, Cl. 167—22.

Hoffman Electronics Corp.: *See*—
Lord, Dwight S. 2,866,897.

Holbrook, Orrin C.: *See*—
Bond, Donald C., and Holbrook. 2,866,507.

Hold, Peter, and A. Oberle, to Akt. Brown, Boveri & Cie. Overspeed safety system for turbines. 2,866,470, 12–30–58, Cl. 137—24.

Holl, Raymond, to Power Jets (Research and Development) Ltd. Means for cooling turbine-blades by liquid jets. 2,866,313, 12–30–58, Cl. 60—35.6.

Holmboe, Lawrence S., Sr. Shore jack. 2,866,623, 12–30–58, Cl. 254—114.

Holmes, William H. Masonry finishing device. 2,866,327, 12–30–58, Cl. 72—128.

Holmquist, Ernst R. M. Heat exchangers. 2,866,624, 12–30–58, Cl. 257—6.

Holmquist, Howard E., to E. I. du Pont de Nemours and Co. 3,4-dihydro-[$\Delta^{4,9'}$(5H,5'H)-bifuran]-5,5'-diones and their preparation. 2,866,792, 12–30–58, Cl. 260—343.6.

Holmquist, Howard E., to E. I. du Pont de Nemours and Co. Dihydroxybifurandiones and preparation thereof. 2,866,793, 12–30–58, Cl. 260—343.6.

Holmstrom, John G., to Pacific Car and Foundry Co. Steering arm for automotive vehicle. 2,866,650, 12–30–58, Cl. 280—96.5.

Holte, Paul C., to Pullman Vacuum Cleaner Corp. Corrugated rubber tubing and its production. 2,866,230, 12–30–58, Cl. 18—19.

Holtschmidt, Hans: *See*—
Nischk, Günther, and Holtschmidt. 2,866,804.

Honkala, Harold E., and J. L. Cunningham, to Calumet & Hecla, Inc. Internally cooled mandrel. 2,866,545, 12–30–58, Cl. 207—16.

Honn, Francis J., to Minnesota Mining and Mfg. Co. Solutions of perfluorochloroolefin copolymers. 2,866,766, 12–30–58, Cl. 260—30.4.

Hood, E. Elliott: *See*—
Dickey, John W., and Hood. 2,866,328.

Hopkins, Leonard F.: *See*—
Wells, Archibald H., Nissan, Highton, and Hopkins. 2,866,375.

Horclois, Raymond J., to Societe des Usines Chimiques Rhone-Poulenc. 9,9-dioxy-10-(2,3-bispiperidino-1-propyl) phenothiazine. 2,866,787, 12–30–58, Cl. 260—243.

Horger, Lewis B. Bag with tie cord. 2,866,489, 12–30–58, Cl. 150—1.

Horizons Inc.: *See*—
Mataich, Peter F. 2,866,262.

Horne, Bentz J.: *See*—
Diehl, James L., and Horne. 2,866,495.

Horton, Warren C.: *See*—
Bacon, Oliver. 2,866,759.

Houdaille Industries, Inc.: *See*—
Schatzman, George W. 2,866,652.
Schatzman, George W. 2,866,653.

Houdek, Joseph F., Jr., and E. Braeutigam, to International Telephone and Telegraph Corp. Permanent-magnet display signal. 2,866,965, 12–30–58, Cl. 340—378.

Houdry Process Corp.: *See*—
Heinemann, Heinz. 2,866,745.
Heinemann, Heinz. 2,866,837.
Lamont, Archibald G. W. 2,866,679.

Houghtaling, Amer L. Safety guards for steering wheels in motor vehicles. 2,866,357, 12–30–58, Cl. 74—552.

Houldsworth, Wallace M. Horizontal pie crimper. 2,866,421, 12–30–58, Cl. 107—49.

Howe & Fant, Inc.: *See*—
Charlat, Arnold S. 2,866,530.

Howell, John G., Jr., and G. H. Pannell, to Owens-Illinois Glass Co. Electrode and holder assembly. 2,866,960, 12–30–58, Cl. 339—265.

Hughes Aircraft Co.: *See*—
Cooper, Theodore W. 2,866,929.
Hansen, Siegfried. 2,866,918.
Hierath, Doran C., and Lane. 2,866,506.

Hughes, Robert W., to International Telephone and Telegraph Corp. Pulse communication system. 2,866,970, 12–30–58, Cl. 343—203.

Humboldt Co., The: *See*—
McIntyre, Sidney S., Sr. 2,866,621.

Hunter, Robert C. Cone for loud-speaker assembly. 2,866,515, 12–30–58, Cl. 181—32.

Hutchings, Edward G., and A. F. Hodgkin, to The Babcock & Wilcox Co. Vapour generating and vapour heating units. 2,866,444, 12–30–58, Cl. 122—480.

Hutchinson, George W., to National Research Development Corp. Method of and apparatus for sorting electrical pulses according to their amplitude. 2,866,599, 12–30–58, Cl. 235—92.

Hyde, Robert W., to American Radiator & Standard Sanitary Corp. Mixing faucet. 2,866,478, 12–30–58, Cl. 137—636.

I-T-E Circuit Breaker Co.: *See*—
Giessner, George J., and Bodenschatz. 2,866,864.

Immesberger, Theobald, to G. M. Pfaff A.-G. Device for the transport of containers. 2,866,537, 12–30–58, Cl. 198—181.

Imperial Chemical Industries Ltd.: *See*—
Lambert, Arthur and Palfreeman. 2,866,631.
Swain, Geoffrey. 2,866,795.
Woolley, John M. 2,866,706.

Inductosyn Corp.: *See*—
Tripp, Robert W. 2,866,507.
Tripp, Robert W. 2,866,946.

Ingres, Jeannot G., to Kelsey-Hayes Co. Booster brake mechanism. 2,866,318, 12–30–58, Cl. 60—54.5.

Intavex, Inc.: *See*—
Dudenhausen, Hans J. 2,866,333.

International Business Machines Corp.: *See*—
Boyer, Gerard R. 2,866,895.
Clarke, William L. 2,866,201.

International Engineering General Research & Licensing Co.: *See*—
Dobrosavljevic, Stoymir. 2,866,656.

International Nickel Co., Inc., The: *See*—
Keegan, Barclay. 2,866,727.
Reid, Frank H. 2,866,740.

International Telephone and Telegraph Corp.: *See*—
Busignies, Henri G., Adams, Deschamps and Rogoff. 2,866,900.
Busignies, Henri G., Rogoff, and Deschamps. 2,866,899.
Houdek, Joseph F., Jr., and Braeutigam. 2,866,965.
Hughes, Robert W. 2,866,970.

Invalid Walker & Wheel Chair Co.: *See*—
Diehl, James L., and Horne. 2,866,495.

Irish, Glenn E., and M. S. Bayleran, to Ethyl Corp. Esters of acyclic polyols with metaboric acid. 2,866,811, 12–30–58, Cl. 260—462.

Irmscher, Walter, to G. M. Pfaff A.-G. Looper thread take up for double chain stitch sewing machines. 2,866,427, 12–30–58, Cl. 112—242.

Jackson, Thomas W. Reverse flow air cooled turbine blade. 2,866,618, 12–30–58, Cl. 253—39.15.

Jacobs, James W., to General Motors Corp. Clutch for refrigerating apparatus. 2,866,528, 12–30–58, Cl. 192—85.

Jacobs, Philip C., Jr.: *See*—
Swain, Kenneth W., and Jacobs. 2,866,875.

Jacobs, Robert B.: *See*—
Rhodes, Joseph C., Jacobs, and Segers. 2,866,330.

Jacobson, Harvey B.: *See*—
Brandon, Clarence W. 2,866,509.

Jacobson, Max. Process for solubilization of cortisone, prednisone and the lower acyl 21-esters thereof. 2,866,798, 12–30–58, Cl. 260—397.45.

James, Ivanhoe J. P., to Electric & Musical Industries Ltd. Sequential-to-simultaneous color signal transformation system. 2,866,847, 12–30–58, Cl. 178—5.4.

Jeffrey Mfg. Co., The: *See*—
Moon, Sterling C. 2,866,626.

Jewett, Warren R. Direct reading hypodermic pressure indicating device. 2,866,453, 12–30–58, Cl. 128—2.5.

Jezerski, Vincent W., I. L. Wilcox, and R. Peach, to Sealright-Oswego Falls Corp. Apparatus for printing closures on containers. 2,866,402, 12–30–58, Cl. 101—35.

Jiu, James, to G. D. Searle, & Co. 17-oxygenated 4,4-diacetoxyestra-1,3(10)-dien-3-ones. 2,866,796, 12–30–58, Cl. 260—397.4.

Johnson, Donald C. and D. L. Angle determinator and bisector. 2,866,270, 12–30–58, Cl. 33—91.

Johnson, Douglas L.: *See*—
Johnson, Donald C. and D. L. 2,866,270.

Johnson, Frederick W., and H. W. Lehman, to Collins Radio Co. Inductance coil shorting system. 2,866,954, 12–30–58, Cl. 336—144.

Johnson & Johnson: *See*—
Sellers, John C. 2,866,771.
Sellers, John C. 2,866,772.
Sellers, John C. 2,866,775.

Jokubonis, John: *See*—
Cook, Bates C., and Jokubonis. 2,866,576.

Jones, Melvin H.: *See*—
Brown, William F., Jr., and Jones. 2,866,882.

Hanson, Henry L., to Minneapolis-Honeywell Regulator Co. Gas analysis apparatus. 2,866,329, 12-30-58, Cl. 73—23.

Digital systems for the automatic control of machinery. 2,866,506, 12-30-58, Cl. 164—115.

Journal Co., The: *See*—
McMullen, Joseph E. 2,866,636.

Jurgeleit, Wolfgang, and E. Siggel, to Vereinigte Glanzstoff-Fabriken AG. Process for the recovery of glycols from liquid hydrocarbons. 2,866,827, 12-30-58, Cl. 260—637.

Juvet, René: *See*—
Koulicovitch, Maurice, and Juvet. 2,866,301.

K. A. C. Ltd.: *See*—
Llewhellin, Thomas G. 2,866,572.

Kaehni, Frank J., to The Economy Engine Co. Internal combustion engines. 2,866,447, 12-30-58, Cl. 123—191.

Kaehni, Frank J., to Economy Engine Co. Ignition systems for internal combustion engines. 2,866,839, 12-30-58, Cl. 123—148.

Kallick, Joseph N., and L. C. Algoren, to Sealy, Inc. Bedding device. 2,866,433, 12-30-58, Cl. 116—135.

Karal, Hans, to Aronco Meter Products Corp. Two-chamber gas meter with independent measuring chamber means. 2,866,443, 12-30-58, Cl. 121—48.

Karry, Bert A. Snag fish hook extricator. 2,866,290, 12-30-58, Cl. 43—17.2.

Katzman, Frederick, to Reynolds Metals Co. Apparatus for assembling tubes into a finned heat exchanger. 2,866,260, 12-30-58, Cl. 29—202.

Kaufman, Alvin B., to Northrop Aircraft, Inc. Oscilloscope voltage calibrator. 2,866,937, 12-30-58, Cl. 324—121.

Kautter, Carl T., and W. Leitenberger, to Röhm & Haas G. m. b. H. Catalytic apparatus and method for protecting a metallic catalyst against injury. 2,866,692, 12-30-58, Cl. 23—288.

Kearby, Kenneth K., and I. Kirshenbaum, to Esso Research and Engineering Co. Aromatization and naphtha reforming process wherein the catalyst is dehydrated with a gas containing C_1—C_4 hydrocarbons. 2,866,747, 12-30-58, Cl. 208—136.

Kearfott Co., Inc.: *See*—
McMillen, Foster. 2,866,881.

Keefer, Herbert D., and L. H. Thompson, to National Amusement Device Co. Merry-go-round. 2,866,643, 12-30-58, Cl. 272—43.

Keegan, Barclay, to The International Nickel Co., Inc. Production of metal articles with holes in them. 2,866,727, 12-30-58, Cl. 148—4.

Keen, William R., to Collins & Aikman Corp. Fur-effect fabric and method of making same. 2,866,255, 12-30-58, Cl. 28—72.

Keiser, Rufus D.: *See*—
Stern, Rudolph E., and Keiser. 2,866,387.

Keith, Noel. Wheel lock. 2,866,665, 12-30-58, Cl. 301—9.

Kell, Waldo R. Tire chain cross link. 2,866,491, 12-30-58, Cl. 152—230.

Kelleher, Kenneth S. Radiant energy reflector. 2,866,971, 12-30-58, Cl. 343—755.

Keller, Harold C.: *See*—
Gerst, Chris, and Keller. 2,866,360.

Kells, John D. Combination safety razor and lather dispenser having telescopically related head and dispensing assemblies. 2,866,265, 12-30-58, Cl. 30—41.

Kelly, Walter W.: *See*—
Van Slyck, Bert R., and Kelly. 2,866,549.

Kelsey-Hayes Co.: *See*—
Ingres, Jeannot G. 2,866,318.

Kelvin & Hughes Ltd.: *See*—
Saunders, Peter S. 2,866,335.

Kemp, Clayton J. Box folding equipment. 2,866,393, 12-30-58, Cl. 93—49.

Kesling, Keith K., to General Motors Corp. Refrigerator. 2,866,675, 12-30-58, Cl. 312—214.

Kett Corp.: *See*—
Schakel, Karl K. 2,866,315.

Kiff, Ben W.: *See*—
Guest, Howard R., and Kiff. 2,866,823.

Kimberlin, Charles N., Jr., and W. J. Mattox, to Esso Research and Engineering Co. Olefin separation and recovery. 2,866,835, 12-30-58, Cl. 260—676.

Kimmig, Emil W.: *See*—
Gordon, Bruce B., and Kimmig. 2,866,573.

Kindred, George C., to Underhill Investors, Inc. Exhibiting devices. 2,866,646, 12-30-58, Cl. 274—1.

Kirkland, Earl V., to The American Oil Co. Alkylated esters. 2,866,812, 12-30-58, Cl. 260—485.

Kirshenbaum, Isidor: *See*—
Kearby, Kenneth K., and Kirshenbaum. 2,866,747.

Klein, William J., and S. A. Dube, to Boxmakers, Inc. Display device. 2,866,544, 12-30-58, Cl. 206—80.

Kloeckner-Huettenwerk Haspe A. G.: *See*—
Wellandt, Bernhard, and Storsberg. 2,866,699.

Kloote, George E.: *See*—
Potehen, Joseph A., Kloote, and Meier. 2,866,730.

Klosin, John J., to The Thomas & Betts Co. Dead-end connectors. 2,866,844, 12-30-58, Cl. 174—79.

Kobe, Inc.: *See*—
McArthur, Ralph F., and Mecusker. 2,866,213.

Koehring, Roland P., to General Motors Corp. Method of manufacture. 2,866,886, 12-30-58, Cl. 219—117.

Kofler, Alfons: *See*—
Anselm, Hans, Kofler, and Smidt. 2,866,820.

Kohler, August R.: *See*—
Broquist, Harry P., Hines, and Kohler. 2,866,708.

Koinis, Frank J.: *See*—
Dailey, William H., Jr., and Koinis. 2,866,602.

Kolka, Alfred J., to Ethyl Corp. Chemical process for producing tri(β-haloaliphatic) esters of phosphorus acids. 2,866,809, 12-30-58, Cl. 260—461.

Kolka, Alfred J., to Ethyl Corp. Process of preparing beta haloaliphatic esters of halogen substituted acids of phosphorus. 2,866,809, 12-30-58, Cl. 260—461.

Kollmar & Jourdan, Akt.: *See*—
Kussmaul, Reinhold. 2,866,312.

Kolzow, Clarence R., and W. Youkman, to Western Electric Co., Inc. Method of making abrasive wiper pad. 2,866,719, 12-30-58, Cl. 117—27.

Körber, Kurt, to Kurt Körber & Co. K. G. Method of producing a soft package for cigarettes. 2,866,304, 12-30-58, Cl. 53—14.

Körber, Kurt, & Co. K. G.: *See*—
Körber, Kurt. 2,866,304.

Korkosz, Frank D. and J. J. Star plate and method of making same. 2,866,704, 12-30-58, Cl. 96—27.

Korkosz, John J.: *See*—
Korkosz, Frank D. and J. J. 2,866,704.

Koulicovitch, Maurice, and R. Juvet, to Societe Genevoise d'Instruments de Physique. Warning device comprising a microphone preferably for a grinding machine. 2,866,301, 12-30-58, Cl. 51—165.

Kovacs, Joseph. Speed limiting device. 2,866,343, 12-30-58, Cl. 74—54.

Kovalcik, James L., to W. O. Wendel. Awning valance bending machine having gauge means actuated by clamp means. 2,866,493, 12-30-58, Cl. 153—46.

Kralovopolska strojirna, Zavod Klementa Gottwalda, narodni podnik: *See*—
Macku, Vladimir. 2,866,261.

Krautwald, Herbert: *See*—
Berg, Herbert, Fischer, Krautwald, and Ruhland. 2,866,927.

Krazinski, Leo C.: *See*—
Lindridge, Charles D. 2,866,849.

Kronacher, Gerald, to Bell Telephone Laboratories, Inc. Multipole pair resolver. 2,866,913, 12-30-58, Cl. 310—111.

Krueger, Alfred P., to Derby Sealers, Inc. Tape-dispensing mechanism. 2,866,502, 12-30-58, Cl. 164—42.

Krug, Robert H.: *See*—
Tierney, Raymond B., and Krug. 2,866,755.

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Kumagai, Joey Y., to The Lincoln Electric Co. Power driven manually held welding apparatus. 2,866,887, 12-30-58, Cl. 219—130.

Kuper, Rudolph R. Material unloading machine. 2,866,564, 12-30-58, Cl. 214—16.4.

Kurti, Alexander, to United Aircraft Corp. Flame holding device movable between a flameholding position and a streamlined position. 2,866,314, 12-30-58, Cl. 60—35.6.

Kussmaul, Reinhold, to Kollmar & Jourdan, Akt. Expansible linkage with detachable links. 2,866,312, 12-30-58, Cl. 59—79.

Kuzmick, Paul L. Diamond abrasive element. 2,866,698, 12-30-58, Cl. 51—308.

Lael, Clarence J. Flatiron holder. 2,866,614, 12-30-58, Cl. 248—117.7.

La Forest, Louis Z., to McGraw-Edison Co. Dictating machines. 2,866,855, 12-30-58, Cl. 179—100.1.

Laird, David F.: *See*—
Mahady, John J., and Laird. 2,866,479.

Laird, Hubert C.: *See*—
Bredtschneider, Kurt R., and Laird. 2,866,477.

Lallemand, André, to Schlumberger Well Surveying Corp. Photomultiplier. 2,866,914, 12-30-58, Cl. 313—105.

Lam, Hung K. H., and G. H. Schafer, to American Potash & Chemical Corp. Preparation of lithium nitride. 2,866,685, 12-30-58, Cl. 23—191.

Lamb, Anthony H., to Daystrom, Inc. Instrument relay. 2,866,873, 12-30-58, Cl. 200—110.

Lamb, Francis X., to Daystrom, Inc. Electrical instrument casing. 2,866,940, 12-30-58, Cl. 324—156.

Lamb, Lewis E. Adjustable window guard. 2,866,238, 12-30-58, Cl. 20—71.

Lambert, Arthur, and H. Palfreeman, to Imperial Chemical Industries Ltd. Catalytic process for producing 1-methyl-cyclohexene. 2,866,831, 12-30-58, Cl. 260—666.

Lambert, Henri J. M., and G. P. Mongin. Mortise and tenon joint. 2,866,239, 12-30-58, Cl. 20—92.

Lamont, Archibald G. W., to Houdry Process Corp. Removal of sulfur from gas streams. 2,866,679, 12-30-58, Cl. 23—3.

Land, Edwin H., and M. M. Morse, to Polaroid Corp. Process of washing and protecting photographic silver images. 2,866,705, 12-30-58, Cl. 96—29.

Land, Malcolm L., to Elliott Co. Shielded gas turbine. 2,866,617, 12-30-58, Cl. 253—39.1.

Landis, Jesse A. Eye shield. 2,866,202, 12-30-58, Cl. 2—12.

Lane, Claude A.: *See*—
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Laplante, Rene A. Fluid supply and level indicating system. 2,866,866, 12-30-58, Cl. 200—84.

Larson, Melvin L.: *See*—
Markley, Francis X., and Larson. 2,866,806.

Lashley, Everett R.: *See*—
Montagna, Amelio E., and Lashley. 2,866,817.
Montagna, Amelio E., and Lashley. 2,866,818.
Montagna, Amelio E., and Lashley. 2,866,819.

Lattuca, John J., to Best Plastics Corp. Plastic novelty and method of making the same. 2,866,573, 12-30-58, Cl. 220—94.

Laub, Edward M. Wedge hook. 2,866,269, 12-30-58, Cl. 33—85.

Laub, Ernest S. V. Allergen applicators. 2,866,452, 12-30-58, Cl. 128—2.

Laupman, Robert R., to Gebr. Stork & Co's Apparatenfabriek N. V. Machine for screen printing stepwise movable webs of cloth. 2,866,404, 12-30-58, Cl. 101—123.

Laurie, Gavin W., Jr. Tire pressure indicating device. 2,866,432, 12-30-58, Cl. 116—34.

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Berry, Charles M., Chang, Le Bard, and Miller. 2,866,797.

Lee, Walter J., to The Goodyear Tire & Rubber Co. Tubeless tire valve. 2,866,492, 12-30-58, Cl. 152—427.

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Gebert, Russell C. 2,866,206.
Lehman, Harry W.: *See*—
Johnson, Frederick W., and Lehman. 2,866,954.
Leitenberger, Willigis: *See*—
Kautter, Carl T., and Leitenberger. 2,866,602.
Lentze, Felix: *See*—
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Leonard, Lloyd H. Vertical-take-off type aircraft with jet driven rotor system. 2,866,608, 12–30–58, Cl. 244—7.
Leshin, Richard, to The Goodyear Tire & Rubber Co. N-pyridyl thiazolesulfenamide vulcanization accelerators. 2,866,777, 12–30–58, Cl. 260—79.5.
Leshin, Richard, to The Goodyear Tire & Rubber Co. New thiazoline and thiazole accelerators. 2,866,778, 12–30–58, Cl. 260—79.5.
Lewis, Robert E., and A. R. Thomas, to Central Scientific Co. Monochromator. 2,866,374, 12–30–58, Cl. 88—14.
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Neidenberg, Lawrence L., and Tamburr. 2,866,964.
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Lomax, Clarence E., to General Telephone Laboratories, Inc. Rotary finder with graded multiple. 2,866,853, 12–30–58, Cl. 179—18.
Long, Bernard, to Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France. Method for the manufacture of tempered safety glass especially intended for use in automobiles. 2,866,295, 12–30–58, Cl. 49—89.
Long, Florren E., to Continental Can Co., Inc. Carton forming unit. 2,866,584, 12–30–58, Cl. 229—14.
Long, Ray S., to United States of America, Atomic Energy Commission. Alkyl pyrophosphate metal solvent extractants and process. 2,866,680, 12–30–58, Cl. 23—14.5.
Lord, Dwight S., to Hoffman Electronics Corp. Television receiver test equipment or the like. 2,866,897, 12–30–58, Cl. 250—36.
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Lott, William A., and E. J. Pribyl, to Olin Mathieson Chemical Corp. Mucosal-anesthetic compositions containing polycarboxylic acid salts of N-diethylaminoethyl-α-propyl-cinnamamide. 2,866,733, 12–30–58, Cl. 167—52.
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Lucht, Victor F., to United States of America, Army. Design for guns employing split chamber. 2,866,386, 12–30–58, Cl. 89—13.
Ludlow Valve Mfg. Co., Inc., The: *See*—
Cummings, Richard A. 2,866,658.
Lydard, Martin L., to Eastern Products Corp. Acoustical ceiling structure. 2,866,232, 12–30–58, Cl. 20—4.
Lynch, George J., to Mecalex Electronics Corp. Switching mechanisms. 2,866,861, 12–30–58, Cl. 200—11.
MacArthur, Hamilton E., and R. B. Way, to Conforming Matrix Corp. Spray painting machine. 2,866,434, 12–30–58, Cl. 118—301.
MacKenzie, Charles A., and M. Schoffman, ½ to Montclair Research Corp. and ½ to Ellis-Foster Co. Substituted silicon acylates. 2,866,800, 12–30–58, Cl. 260—448.8.
Mackie, James, & Sons Ltd.: *See*—
Mackie, John P. 2,866,310.
Mackie, John P., to James Mackie & Sons Ltd. Spinning frame. 2,866,310, 12–30–58, Cl. 57—36.
Macklin, Justin W.: *See*—
Graves, Frederick G. 2,866,445.
Macku, Vladimir, to Kralovopolska strojirna, savod Klementa Gottwalda, narodni podnik. Method of erecting sheet plate casings having a cylindrical shape with vertical axis, by shifting the sheet plates along a helical line. 2,866,261, 12–30–58, Cl. 20—429.
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Magnetic Precision Controls Inc.: *See*—
Mamon, Michel. 2,866,942.
Mahady, John J., and D. F. Laird, to United States Rubber Co. Manufacture of flanged pinch valve hose. 2,866,479, 12–30–58, Cl. 138—55.
Mahler, Walter: *See*—
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Bing, Herbert A., Eloranta, Grey, and Maiershofer. 2,866,380.
Mainil, Jean: *See*—
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Mamon, Michel. 40% to G. A. Rubissow, and 60% to Magnetic Precision Controls Inc. Apparatus for direct current constant voltage power supply. 2,866,942, 12–30–58, Cl. 321—16.
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Marié, Georges R. P. Ultra- high frequency band separating filters. 2,866,595, 12–30–58, Cl. 333—73.
Marinaal, Georges. Process and installation for the collection, activation and culture of planktonic complexes contained in mineral waters. 2,866,297, 12–30–58, Cl. 47—58.
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Yeomans, Clive M. 2,866,905.
Martin, Hans, to Alpina Buromaschinen-Werk G. m. b. H. Typewriting and book-keeping machine provided with decimal tabulating mechanism. 2,866,532, 12–30–58, Cl. 197—178.
Martin, William H., and E. B. Morin, to American-Marietta Co. Decorative coating and method of making same. 2,866,720, 12–30–58, Cl. 117—72.
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Masland, Charles H., 2nd.; C. H., III and D. L. Masland, executors of the estate of said C. H. Masland, 2nd, to C. H. Masland & Sons. Control of pile height in needling. 2,866,424, 12–30–58, Cl. 112—79.
Masland, Charles H., III: *See*—
Masland, Charles H., 2nd. 2,866,424.
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May, Maurice, to American Art Metals Co. Weatherstrip mounting assembly. 2,866,237, 12–30–58, Cl. 20—69.
Mayer, Lazare. Flexible tiara. 2,866,204, 12–30–58, Cl. 2—174.
Mazza, Harold, D. L. Sawyer, and R. W. Baier, to American Potash and Chemical Corp. Process for producing amorphous boron of high purity. 2,866,688, 12–30–58, Cl. 23—209.
McArthur, Ralph F., and M. B. Mecnaker, to Kobe, Inc. Apparatus for inserting soluble plugs in fluid lines. 2,866,213, 12–30–58, Cl. 15—104.06.
McCadden, Walter E., to General Mills, Inc. Automatic contour duplicator. 2,866,390, 12–30–58, Cl. 90—13.4.
McCrory, William. Ironing board. 2,866,284, 12–30–58, Cl. 38—140.
McCulloch, Donald J., to Bausch & Lomb Optical Co. Spectacle case. 2,866,539, 12–30–58, Cl. 206—5.
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McGuire, George E., R. F. Uren, and F. G. Woodside, to L. A. Young Spring & Wire Corp. Block-lifting grab. 2,866,660, 12–30–58, Cl. 294—63.
McIlrath, Roy E. Automatic electric heater. 2,866,885, 12–30–58, Cl. 219—39.
McIntyre, Sidney S., Sr., to The Humboldt Co. One cable and clamp system of guying. 2,866,621, 12–30–58, Cl. 254—130.
McKenzie, Stanley C. Therapeutic device. 2,866,454, 12–30–58, Cl. 128—132.

McLaughlin, Henry E., J. H. Stump, Jr., and M. C. Cleere, to Heyden Newport Chemical Corp. Method of making menthol from pinene. 2,866,826, 12–30–58, Cl. 260—631.
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McMillen, Foster, to Kearfott Co., Inc. Temperature controlled electrically heated window and window wiper system. 2,866,881, 12–30–58, Cl. 219—19.
McMullen, Joseph E., to The Journal Co. Web guiding mechanism for printing machine folders. 2,866,636, 12–30–58, Cl. 270—52.
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Meier, Gerhard, to VEB Leuna-Werke "Walter Ulbricht." Process for preconcentrating lactam oils. 2,866,785, 12–30–58, Cl. 260—239.3.
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Meyer, Arthur R., and J. F. O'Brien, to United States of America, Army. Cylindrical obturating cartridge. 2,866,412, 12–30–58, Cl. 102—38.
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Miller, Kenneth W., to Northrop Aircraft, Inc. Automatic jet engine starting device. 2,866,385, 12–30–58, Cl. 89—1.7.
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Miller, Robert A., C. A. Nickerson, and C. M. Taris, to Bell Telephone Laboratories, Inc. Automatic telephone answering and message-recording system. 2,866,852, 12–30–58, Cl. 179—6.
Miller, Shade W., and V. K. Williamson. Combined table and food warmer. 2,866,936, 12–30–58, Cl. 339—34.
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Hanson, Henry L. 2,866,329.
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Struthers, William H. 2,866,497.
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Montagna, Amelio E., and E. R. Lashley, to Union Carbide Corp. Stabilization of salts of sorbic acid using amines. 2,866,818, 12–30–58, Cl. 260—526.
Montagna, Amelio E., and E. R. Lashley, to Union Carbide Corp. Stabilization of salts of sorbic acid using citric acid. 2,866,819, 12–30–58, Cl. 260—526.
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Moore, Craig M., R. T. Trier, and C. M. Mathison, to The Superior Switchboard & Devices Co. Ringless closure for socket meter enclosure. 2,866,936, 12–30–58, Cl. 324—110.
Moore, George A. Paper, plastic container with dispensing closure. 2,866,586, 12–30–58, Cl. 229—17.
Moore, Russell C., to Cutter Laboratories, Inc. Apparatus for administration of parenteral fluids. 2,866,457, 12–30–58, Cl. 128—214.
Moorhead, John G., to United States of America, Army. Heat-actuated motor. 2,866,342, 12–30–58, Cl. 74—2.
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Morris, George V., to Zenith Radio Corp. Subscription television encoding apparatus. 2,866,961, 12–30–58, Cl. 340—147.
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Muffly, Glenn. Refrigerator and ice maker. 2,866,322, 12–30–58, Cl. 62—137.
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Murchie, Robert B. Bed construction. 2,866,209, 12–30–58, Cl. 5—317.
Murray, Robert W. Electric flame boring apparatus. 2,866,622, 12–30–58, Cl. 255—4.8.
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Naber, Fred M. Tally device for roulette. 2,866,601, 12–30–58, Cl. 235—114.
Natelson, Samuel. Vacuum tube voltmeter. 2,866,938, 12–30–58, Cl. 324—123.
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National Malleable and Steel Castings Co.: *See*—
Metzger, William J. 2,866,560.
National Pneumatic Co., Inc.: *See*—
Panariti, Viktor M. 2,866,442.
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Sidell, Philip A. 2,866,401.
National Research Development Corp.: *See*—
Hutchinson, George W. 2,866,599.
Neidenberg, Lawrence L., and O. J. Tamburr, to Line Electric Co., Inc. Indicator relay. 2,866,964, 12–30–58, Cl. 340—366.
Neigel, Joseph A.: *See*—
Bowman, Robert W., and Neigel. 2,866,893.
Nelson, Arthur, and W. R. Schwolow, to Sperry Rand Corp. Sequentially controlled collating reproducer. 2,866,550, 12–30–58, Cl. 209—110.
Nelson, Stanley C., to Western Electric Co., Inc. Nesting pallets and separators for stacking articles for annealing. 2,866,629, 12–30–58, Cl. 263—47.
Nemeth, George. Clamp holder and clamp for pipe pushers, 2,866,062, 12–30–58, Cl. 294—92.
Nerheim, Eldon: *See*—
Warshaw, Howard D., and Nerheim. 2,866,378.
New, Eric T. Tear-drop-shaped electric bicycle lanterns. 2,866,890, 12–30–58, Cl. 240—7.55.
Newcomer, Harry S., and A. F. Anderson; said Anderson assignor, to said Newcomer. Prism type anamorphoser device. 2,866,383, 12–30–58, Cl. 88—57.
Newman, Kenneth E.: *See*—
Sharp, Leonard W. D., Newman, and Wright. 2,866,860.
Newman, Stanley R.: *See*—
Heisler, Robert Y., Newman, Alpert, and Dille. 2,866,756.
Newman, Stanley R., R. Y. Heisler, and N. Alpert, to The Texas Co. Lubricants containing deposit control additives. 2,866,757, 12–30–58, Cl. 252—56.

Newman, Stanley R., K. L. Dille, R. Y. Heisler, and N. Alpert, to The Texas Co. Lubricants containing a deposit-control additive. 2,866,758, 12–30–58, Cl. 252—57.
Newton, Catherine H. : *See*—
Brandon, Clarence W. 2,866,309.
Nicholson, Edward P. Drainage assembly. 2,866,319, 12–30–58, Cl. 61—11.
Nickerson, Clifford A. : *See*—
Miller, Robert A., Nickerson, and Taris. 2,866,852.
Niederoest, Henry. Safety brake. 2,866,511, 12–30–58, Cl. 180—82.
Nirmaier, Earle A., and J. B. Wagstaff, to United States Steel Corp. Nozzle for teeming vessel. 2,866,241, 12–30–58, Cl. 22—85.
Nischk, Gunther, and H. Holtschmidt, to Farbenfabriken Bayer Akt. Unsaturated esters of hydroxy isothiocyanates. 2,866,804, 12–30–58, Cl. 260—454.
Nissan, Alfred H. : *See*—
Wells, Archibald H., Nissan, Highton, and Hopkins. 2,866,375.
Nissen, Warren I., to Ronson Corp. Dispensing spout structure. 2,866,580, 12–30–58, Cl. 222—512.
Nobles Engineering Co. : *See*—
Nobles, Warren H. 2,866,531.
Nobles, Warren H., to Nobles Engineering Co. Ammunition chute. 2,866,531, 12–30–58, Cl. 193—25.
Nordell, Carl H. Cylinder level control for comminuting devices and method for comminuting. 2,866,555, 12–30–58, Cl. 210—67.
Norman, Wayne A., to Carr, Adams & Collier Co. Window frame construction. 2,866,234, 12–30–58, Cl. 20—11.
Normandin, Robert F. Wedge type clamp. 2,866,249, 12–30–58, Cl. 24—263.
North American Aviation, Inc. : *See*—
Bond, Robert W., and Shuler. 2,866,933.
Cobin, Jacob C. 2,866,244.
Hamlin, Charles E. 2,866,674.
Woods, Leroy R. 2,866,345.
Northrop Aircraft, Inc. : *See*—
Bentley, Ephraim G. 2,866,910.
Kaufman, Alvin B. 2,866,937.
Miller, Kenneth W. 2,866,385.
Thompson, Hugh H. 2,866,611.
Nübling, Otto, to Hanomag Akt. Rotary piston machine. 2,866,417, 12–30–58, Cl. 103—126.
Nummy, William R., to The Dow Chemical Co. Process for making polysulfide liquid polymers. 2,866,776, 12–30–58, Cl. 260—79.
Nutty, William A. Ice cream stick machine. 2,866,420, 12–30–58, Cl. 107—1.
Nygard, John C., to High Voltage Engineering Corp. Method of and apparatus for irradiating matter with high energy electrons. 2,866,902, 12–30–58, Cl. 250—49.5.
O. K. Ko-Op Rubber Welding System : *See*—
French, Elby E. 2,866,228.
Oberle, Arthur : *See*—
Hold, Peter, and Oberle. 2,866,470.
O'Brien, John F. : *See*—
Meyer, Arthur R., and O'Brien. 2,866,412.
O'Connor, George K. Scraper blade for dozer attachments. 2,866,280, 12–30–58, Cl. 37—143.
Ohio Crankshaft Co., The : *See*—
Wadhams, James B. 2,866,952.
Ohio Foundry & Mfg. Co., The : *See*—
Thompson, Harry E. 2,866,399.
Öhrnell, Olof. Conveying device. 2,866,533, 12–30–58, Cl. 198—19.
Olin Mathieson Chemical Corp. : *See*—
Cords, Helmuth. 2,866,704.
Lott, William A., and Pribyl. 2,866,733.
Oliver, Delbert S., to Borg-Warner Corp. Pressure loaded pump. 2,866,416, 12–30–58, Cl. 103—126.
Orloff, George, to British Messier Ltd. Electro-magnetically operated control valves. 2,866,476, 12–30–58, Cl. 137—620.
Osborn Mfg. Co., The : *See*—
Miller, Leon F. 2,866,242.
Ostrow, Milan R., to Standard Button Machine Co., Inc. Machine for sawing button blanks from sheet material. 2,866,368, 12–30–58, Cl. 79—16.
Oswald, Jacques R. V., to Compagnie Industrielle des Telephones. Lattice-type antimetric filters. 2,866,951, 12–30–58, Cl. 333—74.
Owens-Illinois Glass Co. : *See*—
Babcock, Clarence L. 2,866,298.
Howell, John G., Jr., and Pannell. 2,866,960.
Powell, Richard O. 2,866,570.
Oxy-Gear Inc. : *See*—
Lovy, Alexander E., and Spears. 2,866,456.
Pachter, Irwin J., to Smith, Kline & French Laboratories. Preparation of indolo [2,3-c] quinazo [3,2-a] pyridine derivatives. 2,866,780, 12–30–58, Cl. 260—256.4.
Pacific Car and Foundry Co. : *See*—
Holmstrom, John G. 2,866,650.
Pacific Scientific Aeroproducts : *See*—
Wrighton, Robert J. 2,866,355.
Pacoud, André : *See*—
Fenoglio, Maurice, Pacoud, and Alvarado. 2,866,832.
Padberg, Louis R., Jr. Method of subsurface exploration by sonic means. 2,866,512, 12–30–58, Cl. 181—.5.
Paddison, Eric, to The English Electric Co. Ltd. Electrical relays. 2,866,926, 12–30–58, Cl. 317—167.
Palfreeman, Herbert : *See*—
Lambert, Arthur, and Palfreeman. 2,866,831.
Palmbach, Richard G., to Union Special Machine Co. Lockstitch sewing machines. 2,866,425, 12–30–58, Cl. 112—182.
Pan, Lichi, to Chemical Construction Corp. Method and apparatus for the production of sodium bicarbonate. 2,866,681, 12–30–58, Cl. 23—64.
Panariti, Viktor M., to National Pneumatic Co., Inc. Pressure motor with piston cushioning and speed control means. 2,866,442, 12–30–58, Cl. 121—44.
Pangborn Corp. : *See*—
Gladfelter, Wiltie L., and Fahrney. 2,866,347.
Pannell, Greenwood H. : *See*—
Howell, John G., Jr., and Pannell. 2,866,960.
Paolino, Charles, Jr., and R. A. Wenston, to Westinghouse Air Brake Co. Railway switch operating apparatus. 2,866,612, 12–30–58, Cl. 246—258.
Parsons, Hubert J., to Hardinge Brothers, Inc. Springs for feed chucks. 2,866,648, 12–30–58, Cl. 279—23.
Parsons, John S. Vertical seat adjusting mechanism for automobiles. 2,866,664, 12–30–58, Cl. 296—65.
Parsons, Erby L., to Broad Street Machine Co. Chenille sewing machine. 2,866,423, 12–30–58, Cl. 112—78.
Paxton, Elisha W., to Stratabar Process Co. Method and apparatus for producing molten silicates. 2,866,838, 12–30–58, Cl. 13—6.
Pedersen, Sigurd, to F. L. Smidth & Co. Cyclone heat exchange apparatus. 2,866,272, 12–30–58, Cl. 34—57.
Peek, Sandford C., Jr., to Sylvania Electric Products Inc. Photocell devices. 2,866,900, 12–30–58, Cl. 250—200.
Peerless Album Co., Inc. : *See*—
Ravis, Herbert J. 2,866,541.
Pemco Wheel Co. : *See*—
Black, John W. 2,866,672.
Pendleton, Robert A., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,866,637, 12–30–58, Cl. 271—2.3.
Péras, Lucien, to Regie Nationale des Usines Renault. Press feeders. 2,866,566, 12–30–58, Cl. 214—16.6.
Perry, Hugh J. : *See*—
Watts, Gilbert E., Hainsworth, and Perry. 2,866,483.
Peach, Herman : *See*—
Jezerski, Vincent W., Wilcox, and Peach. 2,866,402.
Petrick, Emilion J., Sr. Scale model driven road vehicle and road. 2,866,418, 12–30–58, Cl. 104—149.
Pettigrew, David D., and E. C. Warrick, to Rockwell Mfg. Co. Shifter for power transmission. 2,866,348, 12–30–58, Cl. 74—335.
Pfaff, G. M., A.-G. : *See*—
Immesberger, Theobald. 2,866,537.
Irmscher, Walter. 2,866,427.
Wrase, Erich. 2,866,426.
Pfizer, Chas., & Co., Inc. : *See*—
Shull, Gilbert M., and Routien. 2,866,737.
Philco Corp. : *See*—
Fang, Pao-Hsien. 2,866,915.
Smith, David B. 2,866,846.
Phillips, Charles H. Fountain type cleaning implement. 2,866,214, 12–30–58, Cl. 15—136.
Phillips Petroleum Co. : *See*—
Begeley, John W., and Goins. 2,866,836.
Mertz, Clyde W. 2,866,789.
Pitzer, Emory W. 2,866,790.
Pitzer, Emory W. 2,866,791.
Pritchard, James E., and Canterino. 2,866,779.
Samuels, Sherwood C. 2,866,689.
Phipps, Willis E. : *See*—
Duca, Frank J., and Phipps. 2,866,850.
Phyl, Joseph, to Research-Cottrell, Inc. Discharge electrode mounting device. 2,866,517, 12–30–58, Cl. 183—7.
Pickwick Co. : *See*—
Corey, Frederick C. and F. 2,866,226.
Picone, John T. Machine for crushing stone and the like. 2,866,605, 12–30–58, Cl. 241—262.
Pioneer Electric and Research Corp. : *See*—
Sinninger, Dwight V. 2,866,869.
Pirelli-General Cable Works Ltd. : *See*—
Arman, Adrian N. 2,866,843.
Pittsburgh Plate Glass Co. : *See*—
West, George L. 2,866,236.
Wise, Lambert A. 2,866,277.
Pitzer, Emory W., to Phillips Petroleum Co. Catalyst and dehydrogenation process. 2,866,790, 12–30–58, Cl. 260—290.
Pitzer, Emory W., to Phillips Petroleum Co. Catalyst and dehydrogenation process. 2,866,791, 12–30–58, Cl. 260—290.
Pleasey Co. Ltd., The : *See*—
Sharp, Leonard W. D., Newman, and Wright. 2,866,860.
Polaroid Corp. : *See*—
Bing, Herbert A., Eloranta, Grey, and Maiershofer. 2,866,380.
Land, Edwin H., and Morse. 2,866,705.
Poppe, George W., to Equitable Paper Bag Co. Inc. Paper bag with locking means through slits. 2,866,591, 12–30–58, Cl. 229—77.
Posey, Bob, Jr. : *See*—
Dunn, James L., Jr., and Posey. 2,866,830.
Postell, William R., to Lockheed Aircraft Corp. Quick circuit connector. 2,866,958, 12–30–58, Cl. 339—198.
Potchen, Joseph A., G. E. Kloote, and G. D. Meier, to Haskelite Mfg. Corp. Laminated panel and process for producing same. 2,866,730, 12–30–58, Cl. 154—100.
Potter, John J., to Hayden-Niles Ltd. Machines for securing hooked belt-fasteners. 2,866,200, 12–30–58, Cl. 1—49.4.
Powell, Charles L. Vehicle wheel suspension means. 2,866,651, 12–30–58, Cl. 280—96.2.
Powell, Richard O., to Owens-Illinois Glass Co. Venting closure caps. 2,866,570, 12–30–58, Cl. 215—56.
Power Jets (Research and Development) Ltd. : *See*—
Carter, Alfred D. S. 2,866,619.
Elliott, Douglas E. 2,866,697.
Grey, John C. 2,866,471.
Hoil, Raymond. 2,866,313.
Pratt, Read and Co., Inc. : *See*—
Stein, Charles P. 2,866,371.

Precision Welder & Flexopress Corp.: *See*—
Forkner, Ewell W. 2,866,505.
Pribyl, Edward J.: *See*—
Lott, William A., and Pribyl. 2,866,733.
Price, Charles C., to University of Notre Dame. Polyether polyurethane rubber. 2,866,774, 12–30–58, Cl. 260—77.5.
Prinz, Anthony P. Automobile and portable radio mounting. 2,866,891, 12–30–58, Cl. 250—14.
Pritchard, James E., and P. J. Canterino, to Phillips Petroleum Co. Polymeric 2-hydroxyalkyl quaternary salts and process for their production. 2,866,779, 12–30–58, Cl. 260—82.1.
Pullman-Standard Car Mfg. Co.: *See*—
Candlin, James E., Jr. 2,866,419.
Pullman Vacuum Cleaner Corp.: *See*—
Holte, Paul C. 2,866,230.
Punte, William F., and J. Henchert, to Continental Can Co., Inc. Can end and nozzle assembly and method of producing same. 2,866,582, 12–30–58, Cl. 222—574.
Pure Oil Co., The: *See*—
Ayers, George W. 2,866,753.
Bond, Donald C., and O. C. Holbrook. 2,866,567.
Quick, Thomas E. Fluid moving means. 2,866,594, 12–30–58, Cl. 230—117.
R. B. Production and Engineering Co. Ltd.: *See*—
Rigg, Ernest W. D. 2,866,307.
Raack, Harry E., and C. R. Sartoris, to The Goodyear Tire & Rubber Co. Apparatus for stacking tile. 2,866,562, 12–30–58, Cl. 214—6.
Race, William J., to Motorola, Inc. Tuner. 2,866,808, 12–30–58, Cl. 250—40.
Rada, Istvan T., and J. Ferenczy, to Licencia Talalmanyokat Ertekesito Vallalat. Apparatus for testing doughs. 2,866,334, 12–30–58, Cl. 73—169.
Radio Corp. of America: *See*—
Andrews, Dallas R. 2,866,857.
Barton, Loy E. 2,866,892.
Briga, George S., and Christensen. 2,866,878.
Smits, Vernon C. 2,866,950.
Stanley, Thomas O. 2,866,859.
Sziklai, George C. 2,866,858.
Ranseen, Maurita C. Golf shoe spike cleaner. 2,866,218, 12–30–58, Cl. 15—247.
Rantsch, Kurt, to C. Zeiss. Interferometer. 2,866,377, 12–30–58, Cl. 88—14.
Rappaport, Aaron B. Ink injector ball point pen. 2,866,439, 12–30–58, Cl. 120—42.4.
Ratkowski, Thomas A. to American Brake Shoe Co. Crawler shoes. 2,866,067, 12–30–58, Cl. 305—10.
Rauglas, Gerard. Bait trap and bucket construction. 2,866,294, 12–30–58, Cl. 43—56.
Ravis, Herbert J., to Peerless Album Co., Inc. Phonograph record jacket. 2,866,541, 12–30–58, Cl. 206—62.
Rawding, Burton R., to Raytheon Mfg. Co. Supports for vibratory devices. 2,866,911, 12–30–58, Cl. 310—26.
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Raypholtz, Kenneth A., to Essex Wire Corp. Cable connector. 2,866,957, 12–30–58, Cl. 339—60.
Raytheon Mfg. Co.: *See*—
Haagensen, Duane R. 2,866,920.
Rawding, Burton R. 2,866,911.
Redfarn, Cyril A., to Walker Extract and Chemical Co., Ltd. Production of inorganic polymeric substances. 2,866,773, 12–30–58, Cl. 260—47.
Reed, Reginald, and E. W. Worthington, to R. Hoe & Co., Inc. Ink pumps for printing presses. 2,866,411, 12–30–58, Cl. 101—366.
Reese, Elmer E., to General Motors Corp. Windshield wiper actuating mechanism. 2,866,344, 12–30–58, Cl. 74—70.
Reeves, Herbert M., to Geo. D. Roper Corp. Backguard for range. 2,866,450, 12–30–58, Cl. 126—213.
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Reid, Frank H., to The International Nickel Co., Inc. Electrodeposition of rhodium. 2,866,740, 12–30–58, Cl. 204—47.
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Reno, Marion. Tie-down clamp for pick up trucks. 2,866,248, 12–30–58, Cl. 24—248.
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Roberts, Lawrence M. 2,866,546.
Reynolds, James O.: *See*—
Harris, Albert T., and Reynolds. 2,866,670.
Reynolds Metals Co.: *See*
Chapman, James R. 2,866,590.
Katzman, Frederick. 2,866,260.
Staples, Paul R. 2,866,429.
Reynolds, Schuyler. Educational game apparatus. 2,866,273, 12–30–58, Cl. 35—9.
Reynolds, William E., and V. A. Fusco, to United States of America, Army. Ammunition belt connector and disintegrator. 2,866,388, 12–30–58, Cl. 89—35.
Rhodes, Joseph C., R. B. Jacobs, and J. P. Segers, to Standard Oil Co. Thermally compensating vapor pressure measuring system. 2,866,339, 12–30–58, Cl. 73—407.
Richards, John R.: *See*—
Verrinder, Ernest A., and Richards. 2,866,333.
Richards, Lawrence M.: *See*—
Himel, Chester M., and Richards. 2,866,801.
Richart, Ralph R. Loading conveyor and car loading system. 2,866,567, 12–30–58, Cl. 214—42.
Richman, Geraldine. Flour sifter accessory. 2,866,532, 12–30–58, Cl. 209—255.
Rigg, Ernest W. D., to R. B. Production and Engineering Co. Ltd. Machines for printing and packaging. 2,866,307, 12–30–58, Cl. 53—180.
Ringelman, John F., to United States of America, Navy. Circuit for providing improved core characteristics for saturable reactor devices. 2,866,943, 12–30–58, Cl. 321—25.
Risley, Bruce H. Instant car air freshener. 2,866,472, 12–30–58, Cl. 137—333.
Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm, and Ritzerfeld. 2,866,406.
Ritzerfeld, Wilhelm and G. R. Rotary printing apparatus for the reproduction of sections of printing forms. 2,866,406, 12–30–58, Cl. 101—132.5.
Rives, William H., to Universal Business Machines, Inc. Document feeding machine. 2,866,640, 12–30–58, Cl. 271—39.
Rixon, Oscar C., Co., The: *See*—
Ellis, David H. 2,866,224.
Roberts, Edward S.: *See*—
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Roberts, Frederick N.: *See*—
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Roberts, Lawrence M., to Research-Cottrell, Inc. Combined electrostatic and magnetic separator. 2,866,546, 12–30–58, Cl. 209—12.
Robillard, Jean J. Transient measuring apparatus. 2,866,935, 12–30–58, Cl. 324—102.
Rockwell Mfg. Co.: *See*—
Pettigrew, David D., and Warrick. 2,866,348.
Rockwood, Albert M.: *See*—
Freeman, John F., Smelker, and Rockwood. 2,866,190.
Rogoff, Mortimer: *See*—
Busignies, Henri G., Adams, Deschamps, and Rogoff. 2,866,900.
Busignies, Henri G. Rogoff and Deschamps. 2,866,899.
Rohm & Haas Co.: *See*—
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Kautter, Carl T., and Leitenberger. 2,866,692.
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Morley, Frederick W. W., and Wilkinson. 2,866,522.
Romig, Richard I. Water-ski with adjustable heel 2,866,210, 12–30–58, Cl. 9—21.
Ronson Corp.: *See*—
Nissen, Warren I. 2,866,580.
Roozee, James B., to Vandercook & Sons, Inc. Device for feeding ink. 2,866,579, 12–30–58, Cl. 222—180.
Roper, Geo. D., Corp.: *See*—
Reeves, Herbert M. 2,866,450.
Roquemore, Cass R., to United States of America, Navy. Non-propulsion attachment for rockets. 2,866,413, 12–30–58, Cl. 102—49.
Rose, Boyd W., to Food Machinery and Chemical Corp. Apparatus for filling bags. 2,866,484, 12–30–58, Cl. 141—83.
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Shapiro, Seymour L., Freedman, and Rose. 2,866,734.
Roth, Charles P., to General Motors Corp. Windshield wiper transmission assembly. 2,866,220, 12–30–58, Cl. 15—253.
Rothauser, Robert M. Article of merchandise including rolled sheet material. 2,866,540, 12–30–58, Cl. 206—47.
Roumeliotis, Panagiotis. Latch assembly for releasably connecting a cover to a receptacle. 2,866,574, 12–30–58, Cl. 220—55.
Routien, John B.: *See*—
Shull, Gilbert M., and Routien. 2,866,737.
Rubissow, George A.: *See*—
Mamon, Michael. 2,866,942.
Ruhrchemie Akt.: *See*—
Feichtinger, Hans, and Tummes. 2,866,786.
Russell, Charles, to Bendix Aviation Corp. Automatic steering system. 2,866,930, 12–30–58, Cl. 318—16.
Russell, John L., to The Bristol Co. Electrical transducer. 2,866,877, 12–30–58, Cl. 201—48.
Ryan, John W. Toy fanner pistol. 2,866,287, 12–30–58, Cl. 42—58.
Rylander, Paul N.: *See*—
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Zimmerschied, Wilford J., and Rylander. 2,866,752.
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Salisbury, Winfield W., to Zenith Radio Corp. Electromagnetic wave generator. 2,866,917, 12–30–58, Cl. 315—4.
Samuels, Sherwood C., to Phillips Petroleum Co. Process for preparing feed stock for carbon black production. 2,866,689, 12–30–58, Cl. 23—209.1.
Sanders, Philip F., to E. I. du Pont de Nemours and Co. Process of preparing aqueous dispersion of an acrylonitrile interpolymer and a thermosetting resin and product obtained. 2,866,763, 12–30–58, Cl. 260—29.3.
Sanderson, William M., to The Goodyear Tire & Rubber Co. Method for tire puncture repair. 2,866,494, 12–30–58, Cl. 154—14.
Sandor, Aurelius, to Sylvania Electric Products, Inc. Cathode ray tube. 2,866,919, 12–30–58, Cl. 315—21.
Sandoz Trust: *See*—
Merian, Ernst. 2,866,678.
Sarett, Lewis H.: *See*—
Beyler, Roger E., and Sarett. 2,866,799.
Sartoris, Carlton R.: *See*—
Raack, Harry E., and Sartoris. 2,866,562.
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Scarvelis, Gus S., to Continental Can Co., Inc. Pouch manufacturing means and method. 2,866,392, 12–30–58, Cl. 93—8.
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Schakel, Karl K., to Kett Corp. Variable exhaust nozzle actuator. 2,866,315, 12–30–58, Cl. 60—35.6.
Schall, William E., to American Cyanamid Co. Wire stripping machine. 2,866,369, 12–30–58, Cl. 81—9.51.
Schatzman, George W., to Houdaille Industries, Inc. Fender and fender shield assembly. 2,866,652, 12–30–58, Cl. 280—153.
Schatzman, George W., to Houdaille Industries, Inc. Fender and fender shield assembly. 2,866,653, 12–30–58, Cl. 280—153.
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Schilling, Frederick A. Extruded window mullion and curtain wall structures. 2,866,527, 12–30–58, Cl. 189—76.
Schirp, Hubert, to Henkel & Cie. G. m. b. H. Process for the production of aromatic compounds containing carboxyl groups. 2,866,815, 12–30–58, Cl. 260—515.
Schischkow, Konstantin F. Self-feeding automatic pencil. 2,866,438, 12–30–58, Cl. 120—18.
Schlebusch, Ludwig. Induction influenced screening apparatus. 2,866,551, 12–30–58, Cl. 209—238.
Schlumberger Well Surveying Corp.: *See*—
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Schmehl, Harry A., and F. H. Wright. Separation of solid particles of different sizes. 2,866,553, 12–30–58, Cl. 209—359.
Schmitt, Hans, to Aluminum-Industrie-Aktien-Gesellschaft. Device for the current supply to the cathodic layer in three-layer aluminum refining cells. 2,866,743, 12–30–58, Cl. 204—243.
Schnellpressenfabrik Akt. Heidelberg: *See*—
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Schnitzer, Emanuel. Bank pass shock absorber. 2,866,633, 12–30–58, Cl. 267—64.
Schoffman, Milton: *See*—
MacKenzie, Charles A., and Schoffman. 2,866,800.
Scholl, William M. Apparatus for forming arch supports. 2,866,229, 12–30–58, Cl. 18—19.
Schrenk, Hans A., to American Enka Corp. False twister. 2,866,311, 12–30–58, Cl. 57—77.3.
Schroeder, Henry F. Mechanism for reducing porosity of die castings. 2,866,240, 12–30–58, Cl. 22—68.
Schutter, George M., to Scully Signal Co. Tight fill connection for a fluid delivery system. 2,866,473, 12–30–58, Cl. 137—560.
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Scinta, Anthony C., to Trico Products Corp. Windshield wiper. 2,866,219, 12–30–58, Cl. 15—245.
Scott, Charles H., to Dorr-Oliver Inc. Drive mechanism for pier supported rotary rake structure for settling tanks. 2,866,352, 12–30–58, Cl. 74—410.
Scully, John T. Self-retaining brushes. 2,866,215, 12–30–58, Cl. 15—145.
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Searle, G. D., & Co.: *See*—
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Sellers, John C., to Johnson & Johnson. Method of preparing adhesive composition comprising a maleic anhydride copolymer and product obtained. 2,866,771, 12–30–58, Cl. 260—45.5.
Sellers, John C., to Johnson & Johnson. Method of preparing adhesive composition comprising a maleic anhydride copolymer and product obtained. 2,866,772, 12–30–58, Cl. 260—45.5.
Sellers, John C., to Johnson & Johnson. Adhesive composition comprising crosslinked maleic ester copolymers, method of preparation and a backing coated with said composition. 2,866,773, 12–30–58, Cl. 260—78.5.
Sennello, Joseph J., to Continental Can Co., Inc. High speed cover feed and control arrangement. 2,866,306, 12–30–58, Cl. 53—70.
Shanklin, John P., deceased, by M. H. Shanklin, executrix, to Collins Radio Co. Antenna computing means. 2,866,968, 12–30–58, Cl. 343—100.
Shanklin, Mary H.: *See*—
Shanklin, John P. 2,866,968.
Shanks, Donald L. Holder for fishing tackle. 2,866,205, 12–30–58, Cl. 43—57.5.
Shapiro, Abraham, to Socony Mobil Oil Co., Inc. Sweetening of mercaptan-bearing oil with alkaline water, air and bentonite clay. 2,866,749, 12–30–58, Cl. 208—203.
Shapiro, Seymour L., I. Freedman, and I. M. Rose, to U. S. Vitamin Corp. 3-pyridylethyl 2,4-oxazolidinediones and process. 2,866,734, 12–30–58, Cl. 167—52.
Sharp, John L. Bearing lubricator. 2,866,520, 12–30–58, Cl. 184—1.
Sharp, Leonard W. D., K. E. Newman, and R. S. Wright, to The Plessey Co. Ltd. Electrical switches. 2,866,860, 12–30–58, Cl. 200—5.
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Shepherd, Roy, to Graver Tank & Mfg. Co., Inc. Dehydration arrangement. 2,866,516, 12–30–58, Cl. 183—2.7.
Sherman, Ralston M., to The Silent Glow Oil Burner Corp. Space heaters and driers. 2,866,627, 12–30–58, Cl. 263—19.
Sherman, Samuel M., to Schaevitz Engineering. Compensation means for measuring devices. 2,866,332, 12–30–58, Cl. 73—116.
Sherwood, John R., to Collins Radio Co. Frequency suppression circuit. 2,866,941, 12–30–58, Cl. 332—44.
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Sidell, Philip A., to National Presto Industries Inc. Coffee maker. 2,866,401, 12–30–58, Cl. 99—312.
Siefen, Howard T., and W. R. Trutna, to E. I. du Pont de Nemours and Co. Low pressure production of formamides. 2,866,822, 12–30–58, Cl. 260—561.
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Jurgeleit, Wolfgang, and Siggel. 2,866,827.
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Simmons, George S., Jr., to Crompton & Knowles Corp. Picking mechanism for loom. 2,866,482, 12–30–58, Cl. 139—149.
Simpson, Clarence E., to United States of America, Army. Buffer mechanism. 2,866,380, 12–30–58, Cl. 89—198.
Simpson, Justin, and C. W. Hale, to Continental Can Co., Inc. Inverted can detecting and power circuit control means. 2,866,548, 12–30–58, Cl. 209—72.
Simpson, Justin, to Continental Can Co., Inc. Switch mechanism. 2,866,863, 12–30–58, Cl. 200—47.
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Smidth, F. L., & Co.: *See*—
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Smiley, Gilbert, to S. H. Couch Co., Inc. Rotary armature and stator for use in relays. 2,866,870, 12–30–58, Cl. 200—93.
Smilow, Melvin, and M. Thielle. Sofa bed. 2,866,207, 12–30–58, Cl. 5—18.
Smith, David B., to Philco Corp. Television color saturation control system. 2,866,846, 12–30–58, Cl. 178—5.4.
Smith, Donald P. Hypergolic actuated shaped charge. 2,866,414, 12–30–58, Cl. 102—56.
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Smith, Richard A., to Minnesota Mining and Mfg. Co. Lubricating ink composition, process for coating a polymer surface therewith, and resulting articles. 2,866,765, 12–30–58, Cl. 260—30.4.
Smith, William O. Concrete screed. 2,866,394, 12–30–58, Cl. 94—45.
Smits, Vernon C., Radio Corp. of America. Microwave power measurement device. 2,866,950, 12–30–58, Cl. 333—22.
Snarr, Grover W. Arithmetic teaching aid. 2,866,278, 12–30–58, Cl. 35—31.
Snively, Andrew J., to Bundy Tubing Co. Tubing made from strip metal stock. 2,866,480, 12–30–58, Cl. 138—74.
Snyder, Paul E., to Callery Chemical Co. Process for the preparation of boron trisulfide. 2,866,687, 12–30–58, Cl. 23—206.
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Stalker, Edward A., to The Stalker Development Co. Fabricated bladed structures for axial flow machines. 2,866,616, 12–30–58, Cl. 253—39.
Stallard, David V., and D. J. Lovell, to United States of America, Air Force. Spectrometer control. 2,866,901, 12–30–58, Cl. 250—43.5.
Stampfl, Rudolf A., to United States of America, Army. Pulse converting circuit. 2,866,896, 12–30–58, Cl. 250—27.
Stanbro, Forest M. Seals for rotating shafts. 2,866,655, 12–30–58, Cl. 286—11.
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Zimmerschied, Wilford J., and Rylander. 2,866,752.
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Stanfield, Harry E., and I. B. Dahlstrom, to Dahlstrom Machine Works, Inc. Automtaic sheet metal gauging and working machine. 2,866,428, 12–30–58, Cl. 113—1.
Stanley, Thomas O., to Radio Corp. of America. Audio amplifier bridge input circuits. 2,866,859, 12–30–58, Cl. 179—171.
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Stein, Charles F., to Pratt, Read and Co., Inc. Key and action assembly for musical instruments. 2,866,371, 12–30–58, Cl. 84—237.
Steiner, William. Booster brake mechanism. 2,866,317, 12–30–58, Cl. 60—54.5.
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Stern, Rudolph E., and R. D. Keiser, to United States of America, Army. Breech block mechanism. 2,866,387, 12–30–58, Cl. 89—17.
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Stevenson, Derek A., to R. W. Crabtree & Sons Ltd. Transmission device for rotary printing machines. 2,866,408, 12–30–58, Cl. 101—219.
Stikeleather, Robert M. Machine for cutting off lengths of finned tubing. 2,866,257, 12–30–58, Cl. 29—69.
Stone, Horace A., to Molins Machine Co., Ltd. Application of portions of material to a travelling surface or surfaces. 2,866,404, 12–30–58, Cl. 131—61.
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Stratton, Jerry L., to General Electric Co. Mechanical-electrical transducers. 2,866,953, 12–30–58, Cl. 336—110.
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Suzuki, Kensaku. Apparatus for producing electric anesthesia. 2,866,461, 12–30–58, Cl. 128—419.
Svikis, Voldemars D., to Her Majestry the Queen in the right of Canada, as represented by the Minister of Mines and Technical Surveys. Method of treating kyanite concentrates. 2,866,714, 12–30–58, Cl. 106—65.
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Swain, Geoffrey, to Imperial Chemical Industries Ltd. Preparation of 5-nitro-2 furaldehyde semicarbazone. 2,866,795, 12–30–58, Cl. 260—347.3.
Swain, Kenneth W., and P. C. Jacobs, Jr., to The Chase-Shawmut Co. Watertight high current-carrying-capacity low-voltage current-limiting fuses. 2,866,875, 12–30–58, Cl. 200—131.
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Newman, Stanley R., Heisler, and Alpert. 2,866,757.
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Then, Edward O., to American Can Co. Carrying device for containers. 2,866,661, 12–30–58, Cl. 294—87.2.
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Thompson, Harvey G. Container. 2,866,488, 12–30–58, Cl. 150—.5.
Thompson, Hugh B., to Northrop Aircraft, Inc. Mechanical stick force producer. 2,866,611, 12–30–58, Cl. 244—83.
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ISSUED DECEMBER 30, 1958

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
December 30, 1958 Volume 737 Number 5

TRADEMARKS

CONDITION OF TRADEMARK APPLICATIONS AS OF OCTOBER 31, 1958

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	11,019
Date of oldest new application	March 10, 1958
Date of oldest amended application	July 2, 1958

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 31, 32, 34, 35, 36, 50	4-15-58	7-7-58
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 30, 33, 44, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	3-10-58	7-2-58
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	4-15-58	7-9-58
Renewals (All Classes)	10-3-58	10-27-58
Sec. 12 (c) Publications (All Classes)	10-15-58	10-27-58

Applications Filed During the Month of October 1958—1,888

Registrations Issued	355—No. 671,643 to No. 671,997
Renewals Issued	53

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 28,095. Bear Hybrid Corn Co., Inc., Decatur, Ill. Filed Apr. 15, 1957.

UNICORN

For Hybrid Seed Corn.
First use Jan. 28, 1957.

SN 28,096. Bear Hybrid Corn Co., Inc., Decatur, Ill. Filed Apr. 15, 1957.

AMICORN

For Hybrid Seed Corn.
First use Apr. 7, 1955.

SN 38,672. Edward C. Cutting, Inc., Union, Maine. Filed Oct. 10, 1957.

Northland

For Christmas Trees.
First use Nov. 1, 1935.

SN 43,830. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Jan. 13, 1958.

ALKYDIT

Owner of German Reg. No. 630,557, dated Nov. 26, 1952; and U. S. Reg. Nos. 348,226 and 363,166.

For Resinous Raw Materials for the Production of Varnishes, Lacquers, Mordants, Resins, and Adhesives.

SN 46,498. Solar Chemical Corporation, Leominster, Mass. Filed Feb. 24, 1958.

Solar

For Powdered, Pelletized and Granulated Plastic Materials for Use in Molding, Extrusion, Forming and the Like.
First use May 17, 1954.

SN 46,624. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 590,835 and others.

For Rubberized Hair Cushioning Material, Transparent and Opaque Plastic Material Sold in Sheet Form, Cellular Materials Made of Rubber or Rubber-Like Materials Sold in Sheet Form, Raw and Compounded Rubber and Rubber-Like Materials, and Extruded and Molded Strips Made of Rubber or Rubber-Like Materials.

First use about October 1956; at least as early as 1880 as to "Goodrich."

SN 49,423. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed Apr. 10, 1958.

MELPRINT

For Leather.
First use Aug. 23, 1954.

SN 49,425. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed Apr. 10, 1958.

HAVEN

For Leather.
First use Mar. 22, 1947.

SN 49,555. Cargill, Incorporated, Minneapolis, Minn. Filed Apr. 14, 1958.

CAR GRILL

For Charcoal Briquets and the Like.
First use Dec. 18, 1956.

SN 50,992. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed May 5, 1958.

ROAMER

For Leather.
First use July 14, 1952.

SN 55,608. Rayonier Incorporated, New York, N. Y. Filed July 18, 1958.

ALACETA

Owner of Reg. No. 380,858.
For Wood Pulp.
First use June 16, 1958.

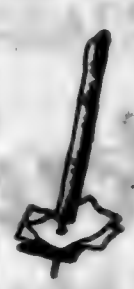
Class 2—Receptacles

SN 41,080. Belmont Casket Manufacturing Company, Columbus, Ohio. Filed Nov. 21, 1957.

MASTERPIECE

For Caskets.
First use Jan. 3, 1935.

SN 47,090. Eugene H. Baker, d. b. a. Baker Enterprises, Lincoln, Nebr. Filed Mar. 5, 1958.



The lining on the drawing represents a part of the mark and is not intended to represent lining for color.

For Plastic or Paper Bags or Sacks.

First use Oct. 16, 1957.

SN 50,328. United States Steel Corporation, Pittsburgh, Pa. Filed Apr. 24, 1958.

BOYCO

Owner of Reg. Nos. 120,545, 542,306, and others.

For Metal Buckets, Cans, Canteens, Pails, Tanks, Trash Receptacles, Tubs, and Waste Baskets.

First use Sept. 5, 1916, on cans, canteens, and tanks.

SN 52,028. American Cyanamid Company, New York, N. Y. Filed May 21, 1958.

CYMAC

Owner of Reg. No. 640,868.

For Tableware, Consisting of Cups, Saucers, Plates, Platters, Bowls, and Dishes, Molded of Plastic or Synthetic Resins.

First use Apr. 17, 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 52,034. The Chartmakers, Inc., New York, N. Y. Filed May 21, 1958.

FETHA-PAK

For Portfolios.

First use Jan. 15, 1958.

Class 4—Abrasives and Polishing Materials

SN 52,388. Bradley and Foster Limited, Manufacturers, Darlaston, England. Filed June 12, 1958.

DURABRASIVE

Priority claimed under Sec. 44(d) on British Reg. No. 772,196, dated Dec. 12, 1957.

For Metallic Abrasives in the Form of Shot or Grit.

Class 6—Chemicals and Chemical Compositions

SN 40,943. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Nov. 19, 1957.

FRAC-FOS

For Slowly Soluble Phosphate Chemical Principally Used in Oil Well Treatment.

First use May 17, 1957.

SN 44,054. American Cyanamid Company, New York, N. Y. Filed Jan. 16, 1958.

ACCOBOND

Owner of Reg. No. 634,265.

For Resin for Improving the Adhesion Between Non-Fibrous, Regenerated Cellulose Film and Hydrophobic, Organic Topcoat Material.

First use Nov. 8, 1957.

SN 45,796. W. R. Grace & Co., Cambridge, Mass. Filed Feb. 13, 1958.

DARAKOTE

Owner of Reg. Nos. 410,067 and 570,356.

For Chemical Composition Useful as an Anti-Stripping Additive for Asphalt and Bituminous Concrete.

First use Apr. 18, 1950.

SN 47,978. Societe Anonyme Dite: Manufactures de Produits Chimiques du Nord Etablissements Kuhlmann, Paris, France. Filed Mar. 18, 1958.

ACETOQUINONE

Owner of French Reg. No. 412,985, dated June 20, 1951 (Seine); Natl. Inst. No. 496,051; and U. S. Reg. No. 349,182.

For Chemical Dyestuffs.

SN 48,240. Ciba Limited, Basel, Switzerland. Filed Mar. 24, 1958.

CIBAMIN

Owner of Swiss Reg. No. 168,505, dated Dec. 20, 1956; and U. S. Reg. Nos. 99,914, 610,881, and others.

For Synthetic Resins Sold in Solid, Liquid, or Powdered Form for Industrial Purposes.

SN 48,363. Stauffer Chemical Company, San Francisco, Calif. Filed Mar. 24, 1958. Sec. 2(f).

STAUFFER

Owner of Reg. Nos. 503,418, 409,493, and others.

For Industrial Chemicals and Agricultural Chemicals—Namely, Herbicides, Insecticides, Fungicides, Fumigants, Nematicides, Defoliants, Seed Protectants, Acaracides, Stickers, and Spreaders.

First use 1884.

SN 48,621. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

Owner of Reg. Nos. 84,906, 427,173, and others.

For Anti-Freeze for Use in Water Cooling Systems Used in Association With Internal Combustion Engines.

First use about July 1956.

SN 49,535. Tomah Engineering Corporation, Milwaukee, Wis. Filed Apr. 11, 1958.

GUTENTITE

For Sealing Compounds for Repairing Leaks in Fluid Conduits.
First use Mar. 10, 1958.

SN 49,548. Atkinson Laboratory, Inc., Hollywood, Calif. Filed Apr. 14, 1958.

KOPPER KOLD

For Solution for Depositing Copper on Plastic.
First use Jan. 24, 1958.

SN 54,363. Amchem Products, Inc., Ambler, Pa. Filed June 27, 1958.

LITHOFORM

For Fluid Chemical or Chemical Compound for Preventing Paint From Peeling Off Galvanized Iron.
First use Mar. 1, 1917.

SN 61,016. Thompson Chemical Company, Pawtucket, R. I. Filed Oct. 7, 1958.

For Anti-Freeze Solutions for the Cooling Systems of Internal Combustion Engines.
First use July 24, 1951.

Class 7—Cordage

SN 36,096. N. V. Lankhorst Touwfabrieken, Sneek, Netherlands. Filed Aug. 28, 1957.

TIP TOP

For Twine.
First use in the year 1956; in commerce Feb. 17, 1956.
Subj. to Intf. with SN 50,736.

SN 50,736. Dan B. Shield Cordage Company, Chicago, Ill. Filed Apr. 30, 1958.

TIP TOP

For Baler and Binder Twine and Rope.
First use July 10, 1957.
Subj. to Intf. with SN 36,096.

Class 11—Inks and Inking Materials

SN 53,835. W. A. Sheaffer Pen Company, Fort Madison, Iowa. Filed June 18, 1958.

Skrip

Owner of Reg. Nos. 142,760 and 537,955.
For Writing Fluid To Be Used in Fountain Pens and Ball Point Pens.
First use in 1920.

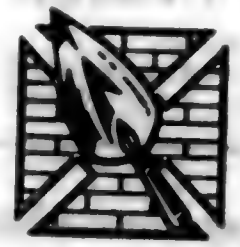
Class 12—Construction Materials

SN 27,169. Artistic Venetian Blind Corporation, Mount Vernon, N. Y. Filed Mar. 29, 1957.

CENTURY

For Windows, Doors, and Jalousies of Metallic Material.
First use Jan. 15, 1954.

SN 40,034. Dewey Portland Cement Company, Kansas City, Mo. Filed Nov. 4, 1957.



Owner of Reg. Nos. 505,018, 292,161, and others.
For Mason's Cement.
First use Jan. 8, 1948.

SN 51,570. Morton L. Kemper, d. b. a. Littlestown Metal Products, Littlestown, Pa. Filed May 13, 1958.

CURBMASTER

For Shaped Strips of Curbing.
First use on or about Mar. 17, 1958.

SN 51,709. Globe Roofing Products Co., Inc., Whiting, Ind. Filed May 15, 1958.

CHROME-ALUME

Owner of Reg. No. 633,018.
For Metal Surfaced Roofing.
First use Apr. 23, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 38,521. R. H. Baker and Company, Incorporated, Los Angeles, Calif. Filed Oct. 8, 1957.

BAKER ALLCOPPER

For Pipe Fittings Made of Hard-Soldered or Copper-Welded Copper Components.
First use Sept. 30, 1950.

SN 45,430. Daniel Woodhead Company, Chicago, Ill. Filed Feb. 6, 1958.

SNAPEE

For Fixture Hangers.
First use Jan. 21, 1958.

SN 46,060. Hubbard and Company, Pittsburgh, Pa. Filed Feb. 18, 1958.

HUB-MOUNT

For Utility Pole Bracket Which Mounts One or More Transformers, Capacitors and/or Other Electrical Devices Placed on Utility Poles.
First use Apr. 16, 1957.

SN 48,628. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,990, 427,173, and others.
For Pipe and Pipe Fittings Made of Rubber or Plastic and Tubular Metal Rivets.
First use about July 1957; at least as early as 1880 as to "Goodrich."

SN 51,808. Daniel P. Paradun, d. b. a. Pardon Manufacturing Co., Minot, N. Dak. Filed May 16, 1958.

CLAM

For Vent Pipe Support.
First use Mar. 22, 1958.

SN 51,841. Adams Pipe Repair Products, El Monte, Calif. Filed May 19, 1958. Sec. 2(f).

ADAMS

For Pipe Repair Clamps, Side Outlet Service Clamps, Broken Pipe Clamps, and Clamp Accessories for Use on Gas, Oil, Water, Steam, and Other Fluid Conducting Lines.
First use in 1946.

SN 52,039. Dorman Products, Inc., Cincinnati, Ohio. Filed May 21, 1958.

VU-PARTS

For Metal Fasteners—Namely, Nuts, Bolts, Screws, Cotter Pins, Washers, Lock Washers, Sheet Metal Screws, and Allied Products.
First use in December 1954.

SN 52,400. Edwards Engineering Corporation, Pompton Plains, N. J. Filed May 27, 1958.

ZONE-A-MATIC

For Automatic Valves for Zone Control in Heating Systems.
First use in August 1957.

SN 52,897. Sellers Injector Corporation, Philadelphia, Pa. Filed May 29, 1958.

SELLERS JUMBO

For Water-Driven Unit Which Scrubs Ship Tanks Automatically.
First use Dec. 12, 1957.

SN 52,736. Keelavite Rotary Pumps & Motors Limited, Coventry, England. Filed June 2, 1958.

KEELATITE

Owner of British Reg. Nos. 771,913 and 771,914, both dated Dec. 5, 1957.
For Valves, Pipes, and Pipe Joints.

SN 52,843. Acme-Hamilton Mfg. Corp., d. b. a. Acme Rubber Manufacturing Company, Trenton, N. J. Filed June 4, 1958.

KOPPER-FLO

For Plastic Water Line Hose Used in House Trailers.
First use Apr. 15, 1958.

SN 53,224. Ace Fastener Corporation, Chicago, Ill. Filed June 10, 1958.

CLIPPER

For Machine Staples.
First use in 1938.

SN 53,452. Shawnee Pottery Company, Zanesville, Ohio. Filed May 12, 1958.

Rondo

For Bathroom Fixtures—Namely, Towel Bar Holder, Soap Dish and Grab Bar, Toilet Tissue Holder, Tumbler Holder, Soap Dish, Toothbrush and Tumbler Holder, Towel Holder, and Grab Bar.
First use Apr. 24, 1958.

SN 53,586. Coats & Clark Inc., New York, N. Y. Filed June 16, 1958.

WING SWEEP

For Separable Slide Fasteners.
First use Apr. 1, 1958.

SN 53,710. Grant Pulley & Hardware Corporation, West Nyack, N. Y. Filed June 17, 1958.

ECONO-PAK

For Sliding Door Hardware.
First use May 2, 1958.

SN 53,719. Markwell Manufacturing Co., Inc., New York, N. Y. Filed June 17, 1958.

Q

Owner of Reg. No. 554,469.

For Machine Applied and Cohered Staples Used in Automatic Desk Type Stapling Machines for Fastening Papers, Cardboard, and Fabrics Together.

First use in January 1933.

SN 53,806. Laboratory Furniture Co., Inc., Mineola, N. Y. Filed June 18, 1958.

UNIT-LAB

For Articles of Science Laboratory Furniture and Equipment—Namely, Sinks, Sink Units, Sink Strainers, Drain Bowls, Couplings, and Lead Traps.

First use Nov. 15, 1957.

SN 54,261. Air-Mite Devices, Inc., Chicago, Ill. Filed June 26, 1958.

ROTORAM

For Fluid Valve Including Linkage Therefor for Operating the Valve by a Reciprocating Member.

First use June 19, 1938.

SN 54,395. Fensco Products, Inc., Amarillo, Tex. Filed June 27, 1958.

FENSCO ACORN

For Hinges.

First use Mar. 14, 1958.

SN 54,549. Nibco, Inc., Elkhart, Ind. Filed June 30, 1958.

For Metal Welding Fittings for Use in Plumbing and Heating Equipment.

First use May 20, 1950.

SN 54,761. Holub Industries, Inc., Sycamore, Ill. Filed July 3, 1958.

Wally

For Hollow Plugs for Anchoring Screws in Walls of Different Materials.

First use May 6, 1958.

SN 54,819. Chemtrol Division of Tapered Air Products Corp., Lynwood, Calif. Filed July 7, 1958.

chemtrol

For Piping System Equipment, Particularly Valves, Joints, and Various Types of Pipe Fittings.

First use May 28, 1957, on valves.

SN 54,977. Miller Brothers Co., Lynwood, Calif. Filed June 30, 1958.

Milbro

For Toilet Seats.

First use May 4, 1949.

Class 14—Metals and Metal Castings and Forgings

SN 21,908. Hamilton Watch Company, Lancaster, Pa. Filed Dec. 31, 1956.

STAVAR

For Metal Alloys.

First use Dec. 21, 1956.

SN 38,579. The Falk Corporation, Milwaukee, Wis. Filed Sept. 23, 1957.

For Metal Castings.

First use July 1925.

SN 46,428. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Mar. 25, 1958.

OLIN ALUMINUM

Applicant disclaims the word "Aluminum" apart from the mark as shown.

For Aluminum and Its Alloys.

First use Nov. 27, 1957.

SN 50,756. Ateliers Partiot Cementation, Rueil-Malmaison, Seine-et-Oise, France. Filed Mar. 21, 1958.

PHOSPHINUZ

Priority claimed under Sec. 44(d) on French Reg. No. 6,676, dated Dec. 3, 1957 (Versailles); Natl. Inst. No. 99,871.
For Unwrought and Partly Wrought Common Metals and Their Alloys and Metals Treated To Render Them Wear Resistant.

SN 50,857. Alloy Metal Products, Inc., Davenport, Iowa. Filed May 2, 1958.

ALLOYMET

For Nickel- and Cobalt-Base Alloys in Shot, Bar, Flake, Pig and Granule Form.
First use Jan. 1, 1953.

SN 51,160. Air Reduction Company, Incorporated, New York, N. Y. Filed May 7, 1958.

AIROD

For Alloys for Use in Hard Facing Metals.
First use Feb. 20, 1956.

SN 51,165. Associated Spring Corporation, Bristol, Conn. Filed May 7, 1958.

BARJET

For High Tensile Steel.
First use Apr. 10, 1958.

SN 51,190. The Hines Flask Co., Cleveland, Ohio. Filed May 7, 1958.

HI-FLEX

For Foundry Flasks.
First use Apr. 9, 1958.

SN 51,338. Eutectic Welding Alloys Corporation, Flushing, N. Y. Filed May 9, 1958.

CHEMICORE

For Flux-Cored Solders.
First use May 2, 1958.

SN 51,521. Titanium Metals Corporation of America, New York, N. Y. Filed May 12, 1958.

TIMET

Owner of Reg. No. 654,874.
For Titanium and Titanium Alloy Castings and Wrought Products—Namely, Ingots, Sheets, Strips, Plates, Bars, Billets, Disks, Rings, Wire, Tubing and Extrusions.
First use Feb. 10, 1956, on titanium alloy bars.

SN 51,706. Eutectic Welding Alloys Corporation, Flushing, N. Y. Filed May 15, 1958.

ALUFIL

For Aluminum Solder.
First use May 12, 1958.

SN 51,740. Rigidised Metals Corporation, Buffalo, N. Y. Filed May 15, 1958.

For Ferrous and Non-Ferrous Metal Sheets.
First use Feb. 1, 1958.

SN 52,257. Dewey S. Weiss, d. b. a. Premier Manufacturing Co., Portland, Oreg. Filed May 23, 1958.

PREMALLOY

For Castings Made Principally of Steel.
First use Mar. 17, 1958.

SN 52,510. The Nippert Electric Products Company, Columbus, Ohio. Filed May 28, 1958.

N-4

For Copper Zirconium Alloys and Electrical Conductors Formed Therefrom.
First use Jan. 24, 1958.

SN 52,548. Aluma-Tan, Minneapolis, Minn. Filed May 29, 1958.

ALUMA-TAN

For Reflective Metal Strips and Sheets Utilized in the Acquiring of a Sun Tan.
First use on or about May 1, 1958.

Class 15—Oils and Greases

SN 48,620. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B F Goodrich

Owner of Reg. Nos. 64,998, 586,835, and others.
For Lubricants for Use in Mounting Rubber Bearings.
First use about September 1950; at least as early as 1950 as to "Goodrich."

SN 49,284. Quaker State Oil Refining Corporation, Oil City, Pa. Filed Apr. 9, 1958.

QUAKER STATE

Owner of Reg. Nos. 145,778, 627,236, and others.
For Motor Oil Detergent.
First use Mar. 17, 1958.

SN 49,735. Ashland Oil & Refining Company, Ashland, Ky. Filed Apr. 16, 1958.

A PLUS

Owner of Reg. No. 558,675.
For Gasoline.
First use Oct. 16, 1957.

SN 51,259. The Birmingham Small Arms Company Limited, Birmingham, England. Filed May 8, 1958.

B.S.A.

For Lubricating Oils and Greases.
First use on or about 1930; in commerce June 12, 1950.

SN 51,950. The Standard Oil Company, Cleveland, Ohio. Filed May 19, 1958.

EXTRON

The drawing is lined for red, but no claim is made to color.
For Gasoline.
First use Apr. 21, 1958; on Mar. 21, 1958, in a different display.

SN 52,238. Phillips Petroleum Company, Bartlesville, Okla. Filed May 23, 1958.

PARALAND

Owner of Reg. No. 613,785.
For Refined Petroleum Oils and Greases for Illuminating, Burning, Power, Fuel, and Lubricating Purposes.
First use Mar. 10, 1930, on lubricating oil.

Class 16—Protective and Decorative Coatings

SN 31,870. Snyder Brothers Company, Toccoa, Ga. Filed June 12, 1957.

PLASTOSTAIN

For Stains, Plastic Coatings, Lacquers, Varnishes, Fillers, and Paints.
First use May 17, 1957.

SN 39,379. Capco Chemical Corporation, Providence, R. I. Filed Oct. 23, 1957.

SHUR·SEAL

For Sealer for Composition and Terrazzo-Type Flooring (Not a Wax).
First use on or about July 10, 1957.

SN 39,971. Lambert Corporation, Houston, Tex. Filed Nov. 1, 1957.

WATERBAN

For Coating Materials for Weatherproofing Masonry Surfaces.
First use January 1947.

SN 47,848. T. C. Esser Company, Milwaukee, Wis. Filed Mar. 17, 1958.

POLY-LUX

For Vinyl Emulsion Paint.
First use Mar. 3, 1958.

SN 48,272. The Gerson Stewart Corporation, Cleveland, Ohio. Filed Mar. 24, 1958. Sec. 2(f).

DEEPSEAL

Owner of Reg. No. 569,794.
For Penetrating Wood Floor Surface Sealer.
First use in July 1935.

SN 52,118. The Glidden Company, Cleveland, Ohio. Filed May 22, 1958. Sec. 2(f).

SOYACOTE

Owner of Reg. No. 357,639.
For Ready-Mixed Paints and Paint Enamels.
First use Apr. 3, 1936.

SN 56,741. The Sherwin-Williams Company, Cleveland, Ohio. Filed Aug. 6, 1958.

AERO CATI-COAT

Owner of Reg. No. 637,055.
For Paints, Primers, and Catalyst-Reducers.
First use May 7, 1957.

SN 58,210. Lawter Chemicals, Inc., Chicago, Ill. Filed Sept. 2, 1958.

UVITRON

For Coating Composition for Use in the Protection and Sealing of Surfaces.
First use Aug. 19, 1958.

SN 58,952. Donald Rathbun, d. b. a. Rathbun Company, Houston, Tex. Filed Sept. 15, 1958.

COATRITE

For Corrosion, Acid, and Gas-Proof Paint for Smokestacks, Pipes, and the Like.
First use Jan. 1, 1921.

Class 17—Tobacco Products

SN 37,448. Philip Morris Incorporated, New York, N. Y. Filed Sept. 18, 1957.

FLIP-TOP

For Cigarettes.
First use July 26, 1957.

SN 51,733. Philip Morris Incorporated, New York, N. Y. Filed May 15, 1958.

BLUE RIDGE

For Cigarettes.
First use May 2, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 782. Graham Chemical Corp., Springfield Gardens, N. Y. Filed Jan. 16, 1956.

DUOCAINE

For Local Anesthetic Preparations.
First use Nov. 4, 1955.

SN 20,890. Chesebrough-Pond's Inc., New York, N. Y. Filed Dec. 12, 1956.

ANGEL BALM

Owner of Reg. No. 645,522.
For Medicinal Preparations—Namely, Petroleum Jelly, Camphor Ice, Petrolatum Gauze, Carbolated Petroleum Jelly, Borated Petroleum Jelly, Capsicum Petroleum Jelly, Mentholated Petroleum Jelly, Oil of Petroleum, Oxide of Zinc Ointment Benzoinated, White Mineral Oil, Oil Petrol.
First use Apr. 2, 1956.

SN 24,802. The Signet Corporation, Chicago, Ill. Filed Feb. 20, 1957.

SIGNET

For Pharmaceutical Composition Taken Internally for Supplying Nail Deficiency.
First use Nov. 12, 1956.

SN 25,751. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Mar. 8, 1957.

AMP

For Intra-Muscular Injection for Treating Varicose Vein Complications.
First use Jan. 10, 1957.

SN 27,268. Barrows Chemical Company, Inc., Inwood, N. Y. Filed Apr. 1, 1957.

HEMOZYME

For Anemia Preparation in Tablet Form.
First use in or about January 1954.

SN 35,000. Rowell Laboratories, Inc., Baudette, Minn. Filed Aug. 5, 1957.

TIMELETS

For Pharmaceutical Preparation in Tablet Form Having a Controlled Rate of Effectiveness.
First use June 10, 1957.

SN 37,102. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed Sept. 12, 1957.

CANADAMYCIN

For Antibiotic Preparation.
First use Nov. 9, 1956.

SN 40,909. American Home Products Corporation, New York, N. Y. Filed Nov. 19, 1957.

VINAL

For Medicinal Preparation in the Form of Vaginal Inserts.
First use Nov. 7, 1957.

SN 41,612. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 2, 1957.

PERLONGETTEN

Owner of German Reg. No. 640,373, dated June 23, 1953.
For Sustained Release Pharmaceutical Preparations in Capsule Form.

SN 41,624. Cutter Laboratories, Berkeley, Calif. Filed Dec. 2, 1957.

R-GENE

For Intravenous Medication for Use in the Treatment of Ammonia Intoxication.
First use Jan. 3, 1957.

SN 43,124. The J. R. Watkins Company, Winona, Minn. Filed Dec. 27, 1957.

SPARKLETS

For Alkaline Seltzer Tablets for Settling Upset Stomachs.
First use Dec. 5, 1957.

SN 43,427. Botany Mills, Inc., South San Francisco, Calif. Filed Jan. 6, 1958.

ROLLEY

For Preventative for Chapping, Relief of Skin Irritations and Diaper Rash.
First use about Feb. 1, 1946.

SN 45,980. International Latex Corporation, Dover, Del. Filed Feb. 17, 1958.

For Antiseptics and Ointments.
First use in or about September 1957.

SN 47,016. Stanley Drug Products Co. Inc., Portland, Oreg. Filed Mar. 3, 1958.

CERTIFINE

For Aspirin, Vitamins, and Vitamin Mineral Preparations, Medicinal Rubbing Compounds, Epsom Salts, Boric Acid, Hydrogen Peroxide, Witch Hazel, Tincture of Iodine, Merbromin, Thimerosal, Magnesia Magma, Castor Oil, Cod Liver Oil, Mineral Oil, Nose Drops, Eye Drops, Cold Pills, Kidney Pills, Suppositories, and Throat Lozenges.
First use on or about Feb. 10, 1958.

SN 47,659. Kalash Vitamin Corporation, Pasadena, Calif. Filed Mar. 13, 1958.

K-54

For Nutritional Supplement for Replacing Vitamins, Minerals, and Trace Elements.
First use May 4, 1954.

SN 47,676. Pharmacrest, Inc., Dawson, Ga. Filed Mar. 13, 1958.

BANATOL

For Athlete's Foot Preparation.
First use Oct. 22, 1957.

SN 47,963. The J. R. Watkins Company, Winona, Minn. Filed Mar. 18, 1958.

Watkins

Owner of Reg. Nos. 209,940 and 271,379.
For Vitamins, Minerals, Aspirin, Cold Tablets, Cough Syrups, Inhalant and Vapor Balm; Ointments, Salves, Liniments and Antiseptics; Beef, Iron and Wine Tonic, Digestive Compound Tablets, Herb Tablets, Alkalizing Salts, Bismuth Preparation; Vitamins and Mineral Food Supplements for Animals, Some of Which Contain Antibiotics, Mange Oil and Powders for Treating Poultry Diseases, Deworming Preparations and Veterinary Balm.
First use Feb. 17, 1958.

SN 48,665. The Schuemann-Jones Co., Cleveland, Ohio. Filed Mar. 28, 1958.

GELPIRIN

For Medicinal Tablet for Relieving the Discomforts of Colds, Headaches, and Muscular Pain.
First use January 1925.

SN 50,692. Charles E. Frosst & Co., Westmount, Quebec, Canada. Filed Apr. 30, 1958.

FALAPEN

Priority claimed under Sec. 44(d) on Canadian application filed Jan. 31, 1958; Reg. No. 111,210, dated Aug. 15, 1958.
For Antibiotic Preparation.

SN 51,162. An Drue Laboratories, Inc., Baltimore, Md. Filed May 7, 1958.

VITAPOPS

For Vitamins in Candy Form on a Stick.
First use Apr. 24, 1958.

SN 51,436. Max Dreher, d. b. a. Nutritional Control Products, New York, N. Y. Filed May 12, 1958.

N. C. P.-500

For Vitamin Capsules, Tablets, Liquids, Injectables, and in Other Dosage Forms.
First use on or before Apr. 28, 1958.

SN 51,494. Rhinopto Company, d. b. a. Rhinopto Co., Dallas, Tex. Filed May 12, 1958.

RANALETS

Owner of Reg. Nos. 362,068 and 404,613.
For Analgesic Compound for Relief of Minor Pain.
First use Feb. 27, 1958.

SN 53,120. Ciba Limited, Basel, Switzerland. Filed June 9, 1958.

COSULID

Priority claimed under Sec. 44(d) on Swiss Reg. No. 169,062, dated Feb. 12, 1958.
For Anti-Bacterial Preparation.

SN 53,324. G and G Pharmacal Co., Inc., South Bend, Ind. Filed June 11, 1958.

ALACE

For Laxative Preparation.
First use Nov. 5, 1957.

SN 54,785. Riker Laboratories, Inc., Los Angeles, Calif. Filed July 3, 1958.

DAQUIN

For Medicinal Preparation Used as a Diuretic.
First use Apr. 30, 1957.

SN 54,961. Chas. Pfizer & Co., Inc., Brooklyn, N. Y. Filed July 8, 1958.

ENTERESE

For Anticholinergic Preparation.
First use Apr. 28, 1958.

SN 55,012. Lloyd Brothers, Inc., Cincinnati, Ohio. Filed July 9, 1958.

LYCINATE

For Medicinal Preparation for Treatment of Vaginitis, Produced in Fluid and Tablet Form.
First use on or about June 13, 1958.

SN 55,085. Dome Chemicals, Inc., New York, N. Y. Filed July 10, 1958.

VLEM-DOME

Owner of Reg. No. 383,784.
For Sulfur Containing Preparation for External Use in the Treatment of Skin and Scalp Infections and Other Skin and Scalp Irritations.
First use January 1956.

SN 55,056. Dome Chemicals, Inc., New York, N. Y. Filed July 10, 1958.

DOMERINE

Owner of Reg. No. 283,764.
For Soapless Cleanser for the Treatment of Skin and Scalp Infections and Other Skin and Scalp Irritations Particularly Acne, Oily Skin and Scalp, and Soap Sensitive Scalp.
First use January 1958.

SN 55,106. American Ferment Co., Inc., New York, N. Y. Filed July 11, 1958.

FORTIZYME

For Digestant Preparation.
First use June 17, 1958.

SN 55,117. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

ANTIME

For Medical and Pharmaceutical Product—Namely, a Remedy for the Treatment of Angina Pectoris.
First use Aug. 29, 1957.

SN 55,118. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

BARTIME

For Medical and Pharmaceutical Product—Namely, an Anti-Spasmodic for Treatment of Pylorospasm, Nausea, Vomiting, Colic, and Enuresis.
First use Aug. 29, 1957.

SN 55,122. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

CARR-TIME

For Medical and Pharmaceutical Product—Namely, a Remedy for the Treatment of Chronic Fatigue, for the Restoration of Natural Alertness and for Control of Appetite in Weight Reductions.
First use May 31, 1956.

SN 55,123. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

CARRVITE

For Medical and Pharmaceutical Product—Namely, a Remedy To Stimulate the Appetite and Basic Metabolic Processes.
First use Apr. 20, 1956.

SN 55,124. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

CORTACET

For Medical and Pharmaceutical Product—Namely, a Compound for the Treatment of Arthritis.
First use July 27, 1956.

SN 55,127. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

MANSUL

For Medical and Pharmaceutical Product—Namely, a Combination of Anti-Bacterial, Spasmolytic Sedative and Tranquilary Agents for the Treatment of Urinary Tract Infections.
First use Nov. 29, 1957.

SN 55,129. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

PRELACAPS

For Medical and Pharmaceutical Product—Namely, a Dietary Supplement in Pregnancies and Lactation.
First use Sept. 17, 1956.

SN 55,131. Carrtone Laboratories, Inc., New Orleans (Metairie), La. Filed July 11, 1958.

SPASODIL

For Medical and Pharmaceutical Product—Namely, a Synthetic, Non-Narcotic Derivative of Papaverine for the Treatment of Muscle Spasm of the Intestinal Tract, Biliary Tract and the Blood Vessels.
First use Sept. 11, 1956.

SN 55,450. Brewer Pharmacal Company, Upper Darby, Pa. Filed July 17, 1958.

JANAANGON

For Vitamin and Mineral Supplement.
First use June 19, 1958.

SN 55,847. Espe Fabrik Pharmazeutischer Praeparate G. m. b. H., Seefeld, Upper Bavaria, Germany. Filed July 23, 1958.

HYAPERTIN

Owner of German Reg. No. 710,202, dated Jan. 21, 1958.
For Medicines and Pharmaceutical Preparations—Namely, Permeability Increasing Agent.

SN 55,944. Ormonoterapia Richter S. p. A., Milan, Italy. Filed July 24, 1958.

CORIANTIN

Owner of Italian Reg. No. 85,983, dated Feb. 5, 1949.
For Opotherapic Medicinal Preparations.

SN 56,031. Merit Pharmaceutical Corporation of America, North Miami, Fla. Filed July 25, 1958.

MEGENSATE

For Salicylsalicylic Acid.
First use May 19, 1958.

SN 56,107. FXL & Co., Lowell, Mass. Filed July 28, 1958.

FXL

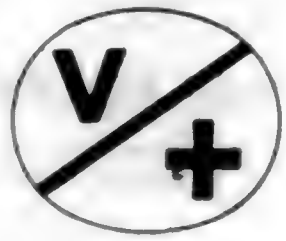
For Salve for Use as a Dressing Externally applied for Burns, Sunburn, Cuts, Bruises, and Minor Skin Irritations.
First use July 10, 1958.

SN 56,175. Myson, Inc., Chicago, Ill. Filed July 28, 1958.

ANTI-SEP

For Wound and Pink-Eye Treatment for Skin and Eye Infections in Livestock.
First use June 12, 1958.

SN 56,215. Vita + Plus Corporation, Madison, Wis. Filed July 28, 1958.



Owner of Reg. No. 576,674.
For Vitamin Fortifications To Be Used in the Preparation of Poultry and Livestock Feeds.
First use March 1954; Aug. 1, 1950, in a different display.

SN 56,343. Willis C. Pickens, Niland, Calif. Filed July 30, 1958.

PIC-A-VITA

For Vitamins and Minerals.
First use Mar. 7, 1957.

Class 19—Vehicles

SN 34,300. Spartan Shipbuilding Corporation, New York, N. Y. Filed July 24, 1957.

SS

THE SPARTAN SPRITE

For Boats.
First use October 1956.

SN 41,916. Maschinenfabrik Augsburg-Nurnberg A. G., Nurnberg, Germany. Filed Dec. 6, 1957.

FUEL-MASTER

Owner of German Reg. No. 710,939, dated Feb. 2, 1958.
For Motor Vehicles Such as Trucks and Buses Driven by Internal Combustion Engines; Tractors for Road Haulage; Railway Vehicles Driven by Internal Combustion Engines; and Convertible Vehicles for Rail and Road Service Driven by Internal Combustion Engines.

SN 41,917. Maschinenfabrik Augsburg-Nurnberg A. G., Nurnberg, Germany. Filed Dec. 6, 1957.

WHISPER-DIESEL

Owner of German Reg. No. 704,998, dated Aug. 1, 1957.
For Motor Vehicles Such as Trucks and Buses Driven by Internal Combustion Engines; Tractors for Road Haulage; Railway Vehicles Driven by Internal Combustion Engines; and Convertible Vehicles for Rail and Road Service Driven by Internal Combustion Engines.

SN 41,918. Maschinenfabrik Augsburg-Nurnberg A. G., Nurnberg, Germany. Filed Dec. 6, 1957.

WHISPER-ENGINE

Owner of German Reg. No. 704,999, dated Aug. 1, 1957.
For Motor Vehicles Such as Trucks and Buses Driven by Internal Combustion Engines; Tractors for Road Haulage; Railway Vehicles Driven by Internal Combustion Engines; and Convertible Vehicles for Rail and Road Service Driven by Internal Combustion Engines.

SN 58,514. LML Engineering & Mfg. Corp., Columbia City, Ind. Filed June 13, 1958.

"Riviera Cruiser"

For Boats.
First use on or about May 24, 1957.

Class 20—Linoleum and Oiled Cloth

SN 51,011. The B. F. Goodrich Company, Akron, Ohio. Filed May 5, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,006, 152,409, and others.
For Asphalt, Rubber and Plastic Floor Tile and Stair Treads and Cove Base Made of Rubber or Rubber-Like Materials.
First use about June 1936; at least as early as 1880 as to "Goodrich."

Class 21—Electrical Apparatus, Machines, and Supplies

SN 15,630. Rea Magnet Wire Company, Inc., Fort Wayne, Ind. Filed Sept. 13, 1956.

SOLVAR

For Magnet Wire.
First use June 19, 1956.

SN 21,343. University Loudspeakers, Inc., White Plains, N. Y. Filed Dec. 19, 1956.

ACOUSTIC BATON

Applicant disclaims any exclusive rights in the word "Acoustic" apart from the mark as shown.
For Cross-Over Frequency Networks.
First use Jan. 15, 1954.

SN 30,566. Louis Electric and Chemical Works Ltd., Basel, Switzerland. Filed Sept. 27, 1957.

ELEKTROLYTOR

Owner of Swiss Reg. No. 164,986, dated Mar. 27, 1957.
For Apparatus for the Electric Decomposition of Water and Parts of Such Apparatus.

SN 40,405. The Indiana Steel Products Company, Valparaiso, Ind. Filed Nov. 12, 1957. Sec. 2(f).

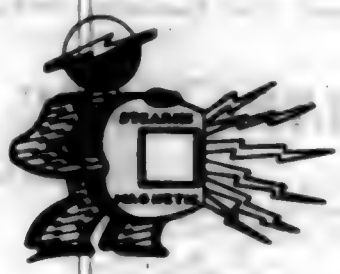
STEARNS

Owner of Reg. No. 438,027.

For Magnetic Separators for Separating Magnetic Material From Non-Magnetic Material, Lifting Magnets and Holding Magnets.

First use Feb. 1, 1946.

SN 40,527. The Indiana Steel Products Company, Valparaiso, Ind. Filed Nov. 12, 1957.



The representation of the electromagnet is disclaimed apart from the mark as shown. Owner of Reg. No. 438,027.

For Magnetic Separators for Separating Magnetic Material From Non-Magnetic Material; Lifting Magnets and Holding Magnets.

First use on or about September 1956.

SN 45,357. Roy F. Walin, d. b. a. Walin Radio & Electric Co., Minneapolis, Minn. Filed Feb. 5, 1958.

KOSCO

For Electrical Sockets.

First use Dec. 15, 1950.

SN 48,623. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

Owner of Reg. Nos. 64,996, 427,173, and others.

For Electric Storage Batteries.

First use about March 1956; at least as early as 1880 as to "Goodrich."

SN 48,981. General Electric Company, Bridgeport, Conn. Filed Apr. 3, 1958.

SUPER CORONOL

Owner of Reg. No. 341,979.

For Electrical Wires, Cables and Conductors and Electrical Insulating and/or Jacketing Material.

First use Mar. 11, 1958.

SN 49,139. Duro-Test Corporation, North Bergen, N. J. Filed Apr. 7, 1958.

PYROGUARD

For Incandescent Lamps, Fluorescent Lamps, Arc Lamps, and Combinations of Two or More Thereof.

First use Mar. 27, 1958.

SN 51,548. CBS-Hytron Sales Corporation, Danvers, Mass. Filed May 13, 1958.

For Television Picture Tubes.

First use Dec. 30, 1957.

SN 52,114. Globe American Corporation, d. b. a. Vulcan-Hart Manufacturing Company, Kokomo, Ind. Filed May 22, 1958.

VULCAN-HART

For Electric Fryers, Griddles, Hot Plates, Kettles, Meat Roasters, Coffee Urns, Pasteurizers, Roll and Food Warmers.

First use in 1949.

SN 52,164. Sonotone Corporation, Elmsford, N. Y. Filed May 22, 1958.

CERAMIKE

For Microphones.

First use May 14, 1958.

SN 53,109. The Black Manufacturing Co., d. b. a. Auto-Craft Inc., Baltimore, Md. Filed June 9, 1958.

"TUFF-SKIN"

For Battery Hold Down Frames.

First use May 21, 1957.

SN 53,132. Electrofilm, Inc., North Hollywood, Calif. Filed June 9, 1958.

For Electrical Heating Elements or Means.

First use Aug. 28, 1957.

SN 53,259. Hoffman Electronics Corporation, Los Angeles, Calif. Filed June 10, 1958.

PIED PIPER

For Television Receiving Sets and Accessories Therefor.

First use May 7, 1958.

SN 53,260. Hoffman Electronics Corporation, Los Angeles, Calif. Filed June 10, 1958.

TRANS-SOLAR

For Radios and Parts Thereof.

First use June 4, 1958.

SN 53,496. Franklin Electric Co., Inc., Bluffton, Ind. Filed June 13, 1958.

INST-O-VERSE

For Electric Motors.

First use May 1, 1958.

SN 53,771. The Bridgeport Insulated Wire Co., Bridgeport, Conn. Filed June 18, 1958.

POLY-BOND

For Electrical Insulated Wire.
First use in about March 1956.

SN 53,772. The Bridgeport Insulated Wire Co., Bridgeport, Conn. Filed June 18, 1958.

UNI-WIND

For Electrical Insulated Wire.
First use in about March 1956.

SN 54,018. Diamond Wire & Cable Company, Sycamore, Ill. Filed June 23, 1958.

DTW

Owner of Reg. Nos. 616,479 and 601,587.
For Electrical Wire and Cable, and Insulation Therefore.
First use on or about May 21, 1958.

Class 22 — Games, Toys, and Sporting Goods

SN 52,097. Brookglad Corporation, Brooklyn, N. Y. Filed May 22, 1958.

RUSTY

For Dolls.
First use Apr. 29, 1958.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 30,678. Photostat Corporation, Providence, R. I. Filed May 24, 1957.

Owner of Reg. Nos. 83,479, 112,167, and 121,876.
For Offset Duplicating Machines.
First use in April 1957.

SN 37,597. S. a. r. l. dite: S. T. V. Vibratechniques, Paris, France. Filed Sept. 20, 1957.

Owner of French Reg. No. 466,596, dated Aug. 2, 1957 (Seine); Natl. Inst. No. 94,186.
For Concrete Vibrators.

SN 41,068. The Bauer Bros. Co., Springfield, Ohio. Filed Nov. 21, 1957. Sec. 2(f).

Owner of Reg. Nos. 586,865, 596,413, and others.
For Hydraulic and Pneumatic Cyclones, Digesters, and Screw Presses.
First use Jan. 25, 1928.

SN 42,810. American Steel Foundries, Chicago, Ill. Filed Dec. 23, 1957.

ULTRA-MATIC

For Vertical Boring and Turning Machines Equipped With Automatic Programming Controls.
First use Aug. 30, 1957.

SN 42,811. American Steel Foundries, Chicago, Ill. Filed Dec. 23, 1957.

ELECTROL

For Vertical Boring and Turning Machines.
First use Aug. 30, 1957.

SN 42,836. The Clark-Aiken Company, Lee, Mass. Filed Dec. 23, 1957.

Clark-Aiken piggy back

For Roll-Stand Used in Connection With the Unwinding of Paper Stored on Large Rolls at the Beginning of Extremely High Speed Continuous Sheeting Operation During Which the Rolled Paper Is Cut Into Sheets of the Required Size.
First use November 1957.

SN 43,155. General Motors Corporation, Detroit, Mich. Filed Dec. 30, 1957.

For Diesel Locomotives and Parts Thereof.
First use in or before 1942.

SN 47,481. J. Wiss & Sons Co., Newark, N. J. Filed Mar. 10, 1958.

LUSTRE-CHROME

For Scissors and Shears Having a Chrome Plating Over Nickel Plating.
First use Feb. 4, 1958.

SN 48,441. Thunderbird Manufacturing Company, Los Angeles, Calif. Filed Mar. 25, 1958.

THUNDERBIRD

For Powered Rotary Lawn Mowers, Powered Rotary Weed Mowers, Powered Lawn Renovators, Powered Garden Tillers, Powered Air Compressors for Paint Guns, Powered Lawn Edgers, and Furniture Dollies.
First use July 15, 1957.

SN 49,532. Swingline, Inc., Long Island City, N. Y. Filed Apr. 11, 1958.

101

For Tacking Device.
First use in September 1957.

SN 49,640. Westinghouse Air Brake Company, Pittsburgh, Pa. Filed Apr. 14, 1958.

LEROI

Owner of Reg. Nos. 392,952, 410,502, and 412,785.
For Fluid Pressure Actuated Rock Drills, Parts and Attachments for Rock Drills, Stopers, Jumbo Arms, Air Legs, Air Line Oilers, Fluid Pressure Actuated Paving Breakers, Fluid Pressure Actuated Clay Spades, Fluid Pressure Actuated Tampers, Bit Detachers, Sump Pumps, and Dust Tanks and Boxes.
First use on or before Dec. 9, 1949, on fluid pressure actuated tampers.

SN 49,641. Westinghouse Air Brake Company, Pittsburgh, Pa. Filed Apr. 14, 1958.

LEROI

Owner of Reg. Nos. 392,952 and 412,785.
For Fluid Pressure Actuated Rock Drills, Parts and Attachments for Rock Drills, Stopers, Jumbo Arms, Air Legs, Air Line Oilers, Fluid Pressure Actuated Paving Breakers, Fluid Pressure Actuated Clay Spades, Fluid Pressure Actuated Tampers, Bit Detachers, Sump Pumps, and Dust Tanks and Boxes.
First use on or before Dec. 9, 1949, on fluid pressure actuated tampers.

SN 49,642. Westinghouse Air Brake Company, Pittsburgh, Pa. Filed Apr. 14, 1958.

Owner of Reg. Nos. 392,952, 410,502, and 412,785.
For Fluid Pressure Actuated Rock Drills, Parts and Attachments for Rock Drills, Stopers, Jumbo Arms, Air Legs, Air Line Oilers, Fluid Pressure Actuated Paving Breakers, Fluid Pressure Actuated Clay Spades, Fluid Pressure Actuated Tampers, Bit Detachers, Sump Pumps, and Dust Tanks and Boxes.
First use on or before Dec. 9, 1949, on fluid pressure actuated tampers.

SN 53,486. The Desmond-Stephan Mfg. Co., Urbana, Ohio. Filed June 13, 1958.

SIMPLEX

For Vises.
First use at least as early as 1921.

SN 54,716. Sunbeam Corporation, Chicago, Ill. Filed July 2, 1958.

SUNBEAM

For Floor Cleaning, Polishing and Conditioning Machines and Rug Scrubbing Machines.
First use Aug. 27, 1957.

SN 54,771. August J. Lurie, d. b. a. The Modern Specialties Co., Chicago, Ill. Filed July 3, 1958.

(KUTTO)

For Utility Knife for Cutting Paper Cartons.
First use May 15, 1931.

SN 55,957. The Warner & Swasey Company, Cleveland, Ohio. Filed July 24, 1958.

HOPTO

Owner of Reg. No. 563,011.
For Diggers, Loaders, and Digging, Grading, Surface Modifying and Material Moving and Material Loading Equipment and Apparatus and Parts Thereof.
First use Apr. 12, 1949.

SN 57,533. Colonial Knife Company, Inc., Providence, R. I. Filed Aug. 20, 1958.

NEWPORT STAINLESS

Applicant claims no exclusive rights in "Stainless" apart from the association shown.
For Cutlery.
First use in June 1958.

SN 58,201. Hydraulic Machinery Company, Inc., Waukesha, Wis. Filed Sept. 2, 1958.

HY-HOE

For Earth Moving and/or Excavating Equipment.
First use Mar. 18, 1958.

SN 58,696. Broderick & Bascom Rope Company, St. Louis, Mo. Filed Sept. 10, 1958.

ALTCO

For Wire Rope Clips, Brush Hooks, Rafting Dogs, and Scythes.
First use July 22, 1955.

SN 58,771. The Associated Merchandising Corporation, New York, N. Y. Filed Sept. 11, 1958.

AMC

CORINTH

For Stainless Steel Flatware—Namely, Knives, Forks, and Spoons.
First use May 21, 1958.

SN 58,776. The Black-Clawson Company, Hamilton, Ohio. Filed Sept. 11, 1958.

CONS-TEN-TROL

For Control Devices for Web-Material Winding and Unwinding Apparatus.
First use Aug. 2, 1958.

SN 58,875. Outboard Marine Corporation, Waukegan, Ill. Filed Sept. 12, 1958.

For Chain Saws.
First use June 2, 1958.

Class 24—Laundry Appliances and Machines

SN 52,268. Borg-Warner Corporation, Chicago, Ill. Filed May 26, 1958.

TOUCH 'N DRY

For Control for a Clothes Dryer and Parts Thereof for Replacement and Repair.
First use on or before Feb. 26, 1958.

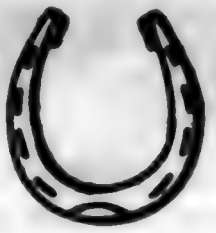
SN 52,269. Borg-Warner Corporation, Chicago, Ill. Filed May 26, 1958.

TOUCH 'N WASH

For Control for Washing Machine and Parts Thereof for Replacement and Repair.
First use Feb. 26, 1958.

Class 25—Locks and Safes

SN 48,949. Taylor Lock Co., Philadelphia, Pa. Filed Apr. 2, 1958.

LUCK  KEE

Applicant disclaims the term "Kee" apart from the mark as shown.
For Keys, Especially Blank Keys.
First use June 10, 1957.

Class 26—Measuring and Scientific Appliances

SN 36,884. Edward J. Herbert, d. b. a. Edroy Products Company, New York, N. Y. Filed Sept. 9, 1957.

3D3 OPTICAID

For Binocular Loops.
First use July 20, 1956.

SN 42,008. Farrand Optical Co., Inc., New York, N. Y. Filed Dec. 9, 1957.

VIDEOGON

For Optical and Photographic Lenses.
First use Oct. 21, 1957.

SN 45,360. Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. Filed Feb. 5, 1958.

ŠKODA

Owner of Czechoslovakian Reg. No. 152,674, dated June 26, 1956.
For Testing and Measuring Apparatus—Namely, Quick-Grip Drill Jigs; Indexing Attachments for Grinding, Drilling and Milling Machines; Gear Testing Appliances; Center Testing Appliances; Fixtures for Testing Castings and Workpieces; Rulers; Squares; Templates; Guages; Surface and Dressing Plates; Straightedges; Tracing Tools and Instruments; Weighing Machines and Apparatus; Calipers; Spirit Levels; Electric Meters; Radar Instruments and Apparatus.

SN 52,880. General Motors Corporation, Detroit, Mich. Filed June 4, 1958.

SEALECTOR

For Air Gauges.
First use Apr. 28, 1958.

SN 53,438. The Teleregister Corporation, Stamford, Conn. Filed June 12, 1958.

TELLER-REGISTER

For Machines for Processing and Recording Transactions, Such as Bookkeeping and Accounting Machines.
First use May 26, 1958.

Class 29—Brooms, Brushes, and Dusters

SN 48,007. Bissell Carpet Sweeper Company, Grand Rapids, Mich. Filed Dec. 20, 1957.

The drawing is lined for blue.
For Manually Operated Devices for Applying Detergent to Rugs, Carpets and the Like.
First use Sept. 30, 1957.

Class 30—Crockery, Earthenware, and Porcelain

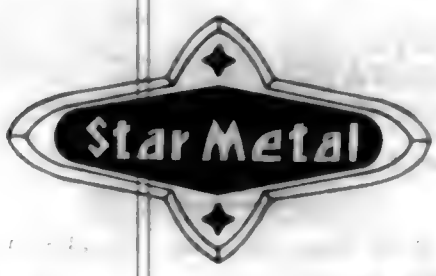
SN 48,806. Stetson China Co., Inc., Lincoln, Ill. Filed Mar. 24, 1958.

CALIFORNIA RAINBOW

For China Dinnerware.
First use Mar. 10, 1958.

Class 31—Filters and Refrigerators

SN 39,422. Star Metal Mfg. Co., Inc., Philadelphia, Pa. Filed Oct. 23, 1957.



For Water Coolers.
First use during the year 1938.

SN 57,110. Vokes Limited, Henley Park, near Guildford, England. Filed Aug. 12, 1958.

VOKES

Owner of British Reg. Nos. 627,726 and 627,727, both dated Feb. 17, 1944; and U. S. Reg. No. 433,617.
For Filters (Being Parts of Engines, of Motors, or of Machinery), Air and Oil Filters (Not for Laboratory or Photographic Use), and Parts of the Aforesaid Filters.

SN 57,111. Vokes Limited, Henley Park, near Guildford, England. Filed Aug. 12, 1958.

MICROVEE

Owner of British Reg. Nos. B670,882 and B647,222, dated July 2, 1948 and Apr. 26, 1946, respectively; and U. S. Reg. No. 433,617.
For Filters (Being Parts of Engines, of Motors, or of Machinery), Air and Oil Filters (Not for Laboratory Use), and Parts of the Aforesaid Filters.

SN 57,112. Vokes Limited, Henley Park, near Guildford, England. Filed Aug. 12, 1958.

MAXIVEE

Owner of British Reg. Nos. 646,080 and 646,081, both dated Mar. 20, 1946; and U. S. Reg. No. 433,167.
For Filters (Being Parts of Machinery, of Engines, or of Motors), Air and Oil Filters (Not for Laboratory or Photographic Use), and Parts of Aforesaid Filters.

SN 58,603. Peerless of America, Incorporated, Chicago, Ill. Filed Sept. 9, 1958.

CHILL-A-TRON

For Self-Contained Water Chillers for Air Conditioning Systems for Inhabitable Enclosures.
First use July 29, 1958.

SN 58,912. A. A. Cordrey, d. b. a. Cordrey Industries, St. Petersburg, Fla. Filed Sept. 15, 1958.

JUMBO

For Oil Filters and Their Refills.
First use Apr. 1, 1942.

Class 32—Furniture and Upholstery

SN 56,645. Louis J. Meyer, Inc., Philadelphia, Pa. Filed Aug. 5, 1958.

For Suspended Window Shelves for Holding Plants.
First use June 11, 1958.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 21,519. Carrier Corporation, Syracuse, N. Y. Filed Dec. 24, 1956. Sec. 2(f).

Owner of Reg. No. 568,187.
For Air Conditioning Equipment for Residential Use Such as Air Conditioning Units for Heating and/or Cooling Purposes.
First use Apr. 15, 1955.

SN 54,276. Servco Equipment Company, St. Louis, Mo. Filed July 25, 1957.

HUMIDRY

The drawing is lined with the official lining to indicate the color red.
For Steam Tables.
First use July 12, 1957.

SN 53,433. Sears, Roebuck and Co., Chicago, Ill. Filed June 12, 1958.

HARMONY HOUSE

For Fireplace Screens.
First use on or about June 15, 1954.

SN 53,776. Cole-Sewell Engineering Company, St. Paul, Minn. Filed June 18, 1958.

For Ventilators, Ventilating Apparatus, Air Vents, and Draft Controls.
First use June 4, 1956.

SN 54,135. The Bar-Brook Manufacturing Co., Inc., Shreveport, La. Filed June 24, 1958. Sec. 2(f).

WINDO-WIND

Owner of Reg. No. 529,229.
For Exhaust Fans.
First use Aug. 12, 1946.

SN 54,344. General Electric Company, Schenectady, N. Y. Filed June 26, 1958.

THERMALINE

For Air Conditioning, Heating, Ventilating, Cooling, and Dehumidifying Apparatus.
First use Apr. 14, 1958.

SN 55,422. H. Schou A/S, Gentofte, Denmark. Filed July 16, 1958.

ANTI-BAC

Owner of Danish Reg. No. 2028—1957, dated Dec. 14, 1957.
For Air Cleaning Apparatus.

Class 36—Musical Instruments and Supplies

SN 31,324. Jam at the Philharmonic, Inc., Beverly Hills, Calif. Filed June 4, 1957.

JAZZ AT THE PHILHARMONIC

Owner of Reg. No. 558,136.
For Grooved Phonograph Records.
First use Aug. 15, 1945.

SN 43,862. Maas Organ Company, d. b. a. Maas-Rowe Carillons, Los Angeles, Calif. Filed Jan. 13, 1958.

VIBRACHIME

Owner of Reg. Nos. 444,262 and 569,106.
For Electrically Operated Musical Percussion Instruments—Namely, Electric Chimes and Carillons, as Well as Such Instruments Including Electronic Amplifiers.
First use Nov. 15, 1948.

SN 51,856. Buescher Band Instruments, Elkhart, Ind. Filed May 19, 1958.

ACADEMY

For Band Instruments—Namely, Saxophones.
First use May 8, 1958.

SN 51,912. Ivers & Pond Piano Co., Inc., Memphis, Tenn. Filed May 19, 1958. Sec. 2(f).

IVERS & POND

For Pianos.
First use Jan. 1, 1920.

SN 51,930. Poole Piano Co., Inc., Memphis, Tenn. Filed May 19, 1958. Sec. 2(f).

POOLE

For Pianos.
First use Jan. 1, 1920.

SN 51,962. Buescher Band Instruments, Elkhart, Ind. Filed May 19, 1958.

ARISTOCRAT

For Band Instruments—Namely, Saxophones, Trumpets, Cornets, and Trombones.
First use in May 1938.

SN 53,284. The American College of Obstetricians and Gynecologists, Chicago, Ill. Filed June 12, 1958.

SN 53,801. Implement & Tractor International Corp., Kansas City, Mo. Filed June 18, 1958.

Class 37—Paper and Stationery

SN 13,734. Cory Corporation, Chicago, Ill. Filed Aug. 10, 1956.

EXEC-U-PAD

Owner of Reg. No. 637,178.
For Memorandum Pads and Cases.
First use July 24, 1956.

SN 15,022. Cory Corporation, Chicago, Ill. Filed Sept. 4, 1956.

hi-fi

For Ball Point Pens.
First use Aug. 15, 1956.

SN 35,119. Permafiber Corporation, New York, N. Y. Filed Aug. 7, 1957.

PERMALIN

For Book Cover Papers.
First use Jan. 7, 1957.

SN 38,543. Kimberly-Clark Corporation, Neenah, Wis. Filed Oct. 8, 1957.

MANNERS

Owner of Reg. No. 34,058.
For Paper Table Napkins and Towels.
First use Sept. 24, 1957.

SN 39,768. The Zell Products Corporation, Norwalk, Conn. Filed Oct. 29, 1957.

ZELL

Owner of Reg. No. 650,498.
For Cardboard Picture Frames, Photographic Mounts and Albums, Cardboard Easels, Social Security and Savings Record Forms, and Personal Identification Forms.
First use on or about Jan. 15, 1932.

SN 42,800. Acme Visible Records, Inc., Crozet, Va. Filed Dec. 23, 1957.

MULTILINER

For Visible Record Cards Made of Paper for Use With Visible Record Systems.
First use Oct. 21, 1957.

SN 48,619. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,996, 586,635, and others.
For Rubber Bands.
First use about September 1956; at least as early as 1880 as to "Goodrich."

SN 52,905. Rhinelander Paper Company, Rhinelander, Wis. Filed June 4, 1958.

STERIBLU

For Glassine Paper for Use With Surgical Supplies Requiring Sterilization.
First use Feb. 2, 1957.

SN 53,047. Parker & Son, Inc., Los Angeles, Calif. Filed June 6, 1958. Sec. 2(f).

PARKER'S

For Printing and Writing Paper.
First use in 1925.

SN 53,049. Parker & Son, Inc., Los Angeles, Calif. Filed June 6, 1958.

SPEEDERASE

For Printing and Writing Paper.
First use in July 1954.

SN 53,334. I. Lewis Horwin, d. b. a. C. B. Rudolph, Philadelphia, Pa. Filed June 11, 1958.

FLEX-VU

For Transparent Protecting Envelopes.
First use on or about May 12, 1958.

Class 38—Prints and Publications

SN 52,173. United Feature Syndicate, Inc., New York, N. Y. Filed May 22, 1958.

STEES SEES

For Comic Drawings Published in Daily and Sunday Newspapers.
First use Feb. 9, 1958.

For Air Cleaning Apparatus.

First use in May 1939.

SN 53,384. The American College of Obstetricians and Gynecologists, Chicago, Ill. Filed June 12, 1958.

For Periodicals, Pamphlets, and Other Publications Issued From Time to Time.
First use Apr. 21, 1958.

SN 53,542. Walter Turrentine, d. b. a. Walter Turrentine Publishing Company, Atlanta, Ga. Filed June 13, 1958. Sec. 2(f).

The
AUTOMATIC
LAUNDERER and CLEANER

Owner of Reg. No. 559,489.
For Monthly Publication.
First use on or about Nov. 15, 1948.

SN 53,689. Edward F. Birkhead, Manassas, Va. Filed June 17, 1958.

For Humorous Greeting Cards.
First use May 22, 1958.

SN 53,696. Commercial Decal, Inc., Mount Vernon, N. Y. Filed June 17, 1958.

PRESTOCAL

Owner of Reg. No. 580,994.
For Decalco-Manias.
First use May 27, 1958.

SN 53,764. Apatche Badge & Emblem Corporation, New York, N. Y. Filed June 18, 1958.

APATCHE

For Woven Labels.
First use May 20, 1958.

SN 53,801. Implement & Tractor International Corp., Kansas City, Mo. Filed June 18, 1958.

International Agriculture

For Magazine.
First use Apr. 1, 1958.

Class 39—Clothing

SN 33,053. Joseph H. Cohen & Sons, Inc., New York, N. Y. Filed July 2, 1957.

BLACK ANGUS

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers, and Vests.
First use June 28, 1957.

SN 38,437. George Dickstein, d. b. a. Kit's Manufacturing Company, University Heights, Ohio. Filed Oct. 7, 1957.

ATOMIKNEE

For Belts, Jeans, and Similar Pants.
First use Sept. 24, 1957.

SN 39,338. Morpul, Inc., Greensboro, N. C. Filed Oct. 22, 1957.

The drawing is lined for the color red. Owner of Reg. Nos. 428,356 and 624,114.
For Hosiery.
First use on or about November 1946; on or about November 1945 as to "Morpul."

SN 40,181. Melville Knitwear Co., Inc., New York, N. Y. Filed Nov. 6, 1957.

FEATUREMAKER

For Sweaters.
First use Mar. 28, 1957.

SN 52,742. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed June 2, 1958.

SN 53,773. Cassie Wear Inc., New York, N. Y. Filed June 18, 1958.

SN 40,390. Sport-Wear Hosiery Mills, Inc., Etowah, Tenn. Filed Nov. 8, 1957.

"TWIRLER"

For Hosiery.
First use Oct. 16, 1957.

SN 41,041. Hudson Hosiery Company, Charlotte, N. C. Filed Dec. 2, 1957.

Paris Spectal

For Ladies' Hosiery.
First use Nov. 15, 1957.

SN 48,359. Sport-Wear Hosiery Mills, Inc., Etowah, Tenn. Filed Mar. 24, 1958.

SPORT Mates

For Men's, Women's, and Children's Casual Socks.
First use Jan. 30, 1958.
Subj. to Intf. with SN 48,889.

SN 48,488. Lewis Knitting Company, Reno, Nev. Filed Mar. 26, 1958.

7 FOOTER

For Men's Undershirts, Known as "T-Shirts."
First use Feb. 21, 1958.

SN 48,616. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 143,623, 386,835, and others.
For Gloves for Electricians and for General Industrial or Household Use, Leggings, Pants, Baby Pants, Industrial Aprons, Shoe Heels and Soles, and Footwear—Namely, Boots, Shoes, and Overshoes, All Made in Whole or in Part of Rubber or Rubber-Like Material.
First use about October 1952; at least as early as 1880 as to "Goodrich."

SN 48,889. A. S. M. Co., Inc., Los Angeles, Calif. Filed Apr. 1, 1958.

Sport-Mates

For Sport Shirts and Slack Combinations for Men and Boys.
First use Sept. 7, 1956.
Subj. to Intf. with SN 48,359.

SN 49,301. Royal Foundations, Inc., New York, N. Y. Filed Apr. 8, 1958.

Royal

For Corsets, Corselets, and Garter Belts.
First use May 1, 1956.

SN 49,318. Venus Lingerie Co., Inc., New York, N. Y. Filed Apr. 8, 1958.

Venusform

Owner of Reg. No. 356,185.
For Slips, Petticoats, Nightgowns, and Pajamas.
First use Jan. 4, 1926.

SN 51,812. Red Head Brand Company, Chicago, Ill. Filed May 16, 1958.

NORTHERN AIRE

For Outdoor Clothing, Such as Hunting Jackets, Hunting Coats, and Trousers.
First use Mar. 20, 1958.

SN 52,354. Edward Stern, Inc., New York, N. Y. Filed May 26, 1958.

NEWCOTT

For Children's Hosiery.
First use Apr. 25, 1958.

SN 52,658. Royce Hosiery Mills, Inc., New York, N. Y. Filed May 26, 1958.

O'lyle

For Men's Hosiery.
First use Mar. 1, 1958.

SN 52,676. Belk Stores Services, Inc., Charlotte, N. C. Filed June 2, 1958.

Heiress

Owner of Reg. No. 360,131.
For Ladies' Hosiery and Ladies' Slips.
First use Sept. 27, 1937, on ladies' hosiery.

SN 52,742. M. K. M. Knitting Mills, Inc., Manchester, N. H. Filed June 2, 1958.

MER-MATES

For Sweaters, Swimsuits, Beach Jackets, Knitted Coats, and Knitted Dresses.
First use Apr. 25, 1958.

SN 52,768. Rosedale Knitting Company, Reading, Pa. Filed June 2, 1958.

FUN 'N FANCY

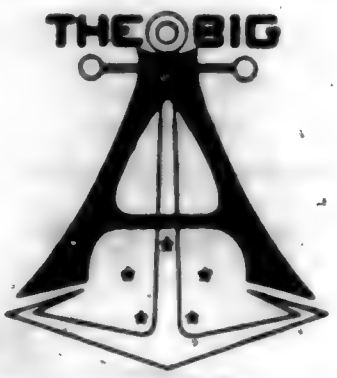
For Ladies' Hosiery.
First use May 15, 1958.

SN 52,854. Bettina, Inc., Kansas City, Mo. Filed June 4, 1958.

Bettina

For Ladies' Coats and Suits.
First use Apr. 23, 1958.

SN 53,459. Admiral Sportswear, Inc., St. Louis, Mo. Filed June 13, 1958.



For Leather Jackets.
First use Jan. 11, 1958.

SN 53,612. Hamilton Shoe Company, St. Louis, Mo. Filed June 16, 1958.

PLAYERS

For Shoes.
First use in October 1954.

SN 53,765. Baker-Cammack Hosiery Mills, Inc., Burlington, N. C. Filed June 18, 1958.

Omega

For Hosiery.
First use May 6, 1958.

SN 53,773. Cassie Wear Inc., New York, N. Y. Filed June 18, 1958.

CASSIE

For Children's Underwear—Namely, Slips and Half Slips.
First use May 9, 1958.

SN 53,870. Harper Shirt Company, Inc., New York, N. Y. Filed June 19, 1958.

For Men's Dress and Sport Shirts.
First use in 1950.

SN 53,946. Pandora Knitwear, Inc., New York, N. Y. Filed June 20, 1958.

Mr. Pandora

Owner of Reg. Nos. 501,607 and 660,140.
For Men's Sweaters.
First use Mar. 27, 1958.

SN 54,096. S. W. Rice Co., Washington, D. C. Filed June 23, 1958. Sec. 2(f).

S. W. Rice

For Men's Military Clothing Consisting of Blouses, Trousers, Shirts, Overcoats, Trenchcoats, Garrison Hats, Overseas Caps, and Neckties.
First use in March 1933.

SN 54,190. Rugby Knitting Mills, Inc., d. b. a. Rugby Knitting Mills, Buffalo, N. Y. Filed June 24, 1958.

NORMAK

For Men's Sportswear—Namely, Jackets, Slacks, Shirts, Sweaters, and Bathing Suits.
First use in 1937.

SN 54,194. A. Stein & Company, Chicago, Ill. Filed June 24, 1958.

DATE MATES

For Brassieres, Girdles, and Garter Belts.
First use June 12, 1958.

SN 54,240. Wales Manufacturing Company, Boston, Mass. Filed June 26, 1958.

"The FROST-BITER"

For Men's Rainwear.
First use Feb. 15, 1958.

SN 54,401. Diane Giffin, South Orange, N. J. Filed June 27, 1958.

From the NEEDLES OF Doeflex

For Boys' Shirts.
First use Jan. 3, 1958.

SN 54,496. H. Daroff & Sons, Inc., Philadelphia, Pa. Filed June 30, 1958.

Sequani

For Suits and Sportcoats.
First use on or about Apr. 1, 1958, on suits.

Class 40—Fancy Goods, Furnishings, and Notions

SN 52,835. Stylors, Inc., Jacksonville, Fla. Filed June 3, 1958.

Stylors

For Hair Curlers.
First use Mar. 17, 1958.

Class 41—Canes, Parasols, and Umbrellas

SN 54,555. Polan, Katz & Company, Incorporated, Baltimore, Md. Filed June 30, 1958.

AUTO-BRELLA

For Umbrellas.
First use Sept. 1, 1925.

SN 55,315. The Finkel Umbrella Frame Company, Inc., New York, N. Y. Filed July 15, 1958.

TIP 'n' FLIP

For Umbrellas and Umbrella Frames.
First use in June 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 48,618. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 29, 1958.

B.F.Goodrich

Owner of Reg. Nos. 64,906, 143,023, and others.
For Coated and Impregnated Fabrics of Natural and Synthetic Fibers, and Flexible Plastic Film, All Sold in Sheet Form for Making Into Garments, Umbrellas, Draperies and the Like, and for Use as Upholstery Material.
First use about October 1956; at least as early as 1880 as to "Goodrich."

SN 54,386. Cranston Print Works Company, New York, N. Y. Filed June 27, 1958.

Swaderoy

Owner of Reg. No. 354,663.
For Cotton Piece Goods.
First use Aug. 25, 1937.

SN 54,456. F. W. Woolworth Co., New York, N. Y. Filed June 27, 1958.

HAPPY HOME

For Pot Holders.
First use Feb. 6, 1958.

SN 54,507. Fieldcrest Mills, Inc., Spray, N. C. Filed June 30, 1958.

Taraneau

For Textile Rugs and Carpeting.
First use Apr. 28, 1958.

SN 54,677. Dan River Mills, Incorporated, Danville, Va. Filed July 2, 1958.

SKIP JACK

For Textile Fabrics in the Piece of Cotton.
First use June 12, 1958.

SN 54,678. Dan River Mills, Incorporated, Danville, Va. Filed July 2, 1958.

DAN RIPPLE

For Textile Fabrics in the Piece Including Seersucker Stripes, Checks, and Plaids.
First use June 9, 1958.

SN 55,018. Hugh Nelson-Columbia Carpet Mills, Inc., Philadelphia, Pa. Filed July 9, 1958.

COSMIC

For Textile Carpets and Rugs.
First use June 9, 1958.

SN 55,260. Hugh Nelson-Columbia Carpet Mills, Inc., Philadelphia, Pa. Filed July 14, 1958.

SUPER COLUMBIA

Owner of Reg. No. 534,660.
For Textile Carpets and Rugs.
First use June 9, 1958.

SN 55,304. Bell Textile Co., Inc., New York, N. Y. Filed July 15, 1958.

BEAUTIWEVE

For Blankets.
First use May 7, 1958.

SN 55,443. Joseph Bancroft & Sons Co., Wilmington, Del. Filed July 17, 1958.

BAN-LON

Owner of Reg. No. 505,384.
For Knitted and Woven Fabrics Made From Artificially Crimped Yarns.
First use on or about Oct. 2, 1956.

Class 43—Thread and Yarn

SN 48,622. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 28, 1958.

B.F.Goodrich

Owner of Reg. Nos. 143,957, 427,173, and others.
For Elastic Thread.
First use about August 1956; at least as early as 1880 as to "Goodrich."

SN 52,399. The Duplan Corporation, Winston-Salem, N. C. Filed May 27, 1958.

QUALITEK

For Natural and Synthetic Yarns, Including Specifically Nylon Yarn.
First use May 9, 1958.

SN 54,952. Madison Throwing Company, Inc., Madison, N. C. Filed July 8, 1958.

MADERA

For Yarns.
First use June 27, 1958.

SN 55,928. L. O. F Glass Fibers Company, Toledo, Ohio. Filed July 24, 1958.

LOFTEX

For Thread and Yarn Formed of Glass.
First use June 27, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 43,962. Antoine Francois Régis Peyron, Paris, France. Filed Jan. 14, 1958.

DODIE

Priority claimed under Sec. 44(d) on French Reg. No. 466,966, dated Sept. 3, 1957 (Seine); Natl. Inst. No. 97,430.
For Nipples and Nursing Bottles for Infants.

SN 44,782. The Wilson Rubber Company, Canton, Ohio. Filed Jan. 27, 1958.

TISSU-TEX

For Latex Gloves for the Beautician, or Others.
First use on or about Dec. 9, 1957.

SN 46,867. Air Electric Machine Company, Inc., Lohrville, Iowa. Filed Mar. 3, 1958.

MAGIC BELT

Applicant disclaims the word "Belt" apart from the mark as shown.
For Vibrating Belt Massage Machines.
First use June 26, 1957.

Class 45—Soft Drinks and Carbonated Waters

SN 52,190. B & B Distributing Corp., Largo, Fla. Filed May 23, 1958.

Biff-Burger

For Orange Flavored Syrup and Root Beer Flavored Syrup.
First use Apr. 4, 1958.

Class 46 — Foods and Ingredients of Foods

SN 15,835. Spice Islands Company, South San Francisco, Calif. Filed Sept. 17, 1956.

No claim is made to the words "Smoked Salt" and "Edwards Process" apart from the mark as shown. Owner of Reg. Nos. 206,585 and 230,542.
For Smoked Salt.
First use July 1, 1925.

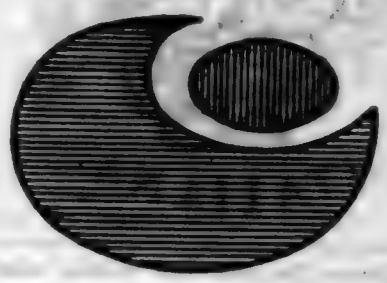
SN 25,832. Chun King Sales, Inc., Duluth, Minn. Filed Mar. 11, 1957.

For Bean Sprouts, Mushroom Chop Suey, Chop Suey Vegetables, Chicken Chow Mein, Chow Mein Noodles, Chop Suey Rice, Chop Suey or Chow Mein Vegetables or Meat, Chop Suey Vegetables With Water Chestnuts Added, Bean Sprouts With Sliced Mushrooms and Pimentos, Soya Sauce, Vegetable Chow Mein With Gravy, Beef Chop Suey, Water Chestnuts, Bamboo Shoots, Vegetable Chow Mein Without Noodles and Meatless Chow Mein.
First use on or about Feb. 1, 1953.

SN 29,370. Kohler-Rehm, Colmar, Haut-Rhin, France. Filed May 3, 1957.

Owner of French Reg. No. 535, dated May 26, 1933; last renewal No. 1030 dated Jan. 28, 1948 (Colmar); Natl. Inst. No. 430,617.
For Pastry, Confectionery—Namely, Cake and Candy, Cocoas, Sugar, Honeys, Fruit Preserves.

SN 29,659. The Procter & Gamble Company, Cincinnati, Ohio. Filed May 8, 1957.



The drawing is lined for blue and red, and no claim is made to color.
For Shortening.
First use June 22, 1956.

SN 31,469. Sunshine Biscuits, Inc., Long Island City, N. Y., assignee of Peanut Fluf Company, Detroit, Mich. Filed June 7, 1957.

PEANUT
PUF

Applicant disclaims the word "Peanut" apart from the mark as shown.
For Foamed Peanut Butter.
First use Apr. 26, 1957.

SN 32,407. Ocoma Foods Company, Omaha, Nebr. Filed June 21, 1957.

Owner of Reg. Nos. 619,566 and 628,809.
For Frozen Meat Pies.
First use May 1, 1957.

SN 36,243. Snac 'N Crust, Inc., Kalamazoo, Mich. Filed Aug. 26, 1957.

SNAC'N CRUST

For Frozen, Ready to Fry Turnovers in the Nature of a Meat Pie Product, Consisting Mainly of an Outer Crust Made of Flour and a Stuffing of Ground Meat.
First use Feb. 12, 1956.

SN 29,806. M. H. Greenebaum, Inc., New York, N. Y. Filed Oct. 30, 1957.

CORONA ITALIANA

The words "Corona Italiana" are Italian, meaning "Italian Crown." No claim of exclusive right is made to the word "Italiana" when used apart from the mark shown, it being the place of geographic origin of the goods.

For Salami.
First use Sept. 27, 1957.

SN 40,037. International Salt Company, Scranton, Pa. Filed Nov. 4, 1957. Sec. 2(f) as to "Blusalt."

SUPERMIX BLUSALT

Owner of Reg. No. 557,817.
For Trace Mineral Salt Expressly for Livestock Feed Mixing.
First use June 13, 1957.

SN 42,031. Olen D. Cappe, d. b. a. Cappe Big Pixey Drive-Ins, North Wales, Pa. Filed Dec. 18, 1957.

BIG PIXEY

For Coffee.
First use Sept. 23, 1957.

SN 48,147. Albert E. Crawford, d. b. a. Crawford Lobster Co., Kittery, Maine. Filed Mar. 21, 1958.

TREASURE TRAP

For Live Lobsters.
First use Dec. 1, 1957.

SN 48,312. Frank F. Mirando, d. b. a. Frank Mirando, Bronx, N. Y. Filed Mar. 24, 1958.

Smiling Baby

For Fresh Grapes.
First use Oct. 18, 1955.

SN 48,331. H. W. Powers Company Inc., Boston, Mass. Filed Mar. 24, 1958.

FLAMINGOS

For Candies.
First use Feb. 27, 1958.

SN 48,455. Bost Bakery, Incorporated, Shelby, N. C. Filed Mar. 26, 1958. Sec. 2(f).

BOST'S

For Bread, Cakes, Rolls, and Pies.
First use on or about Jan. 1, 1936.

SN 48,456. Bost Bakery, Incorporated, Shelby, N. C. Filed Mar. 26, 1958.

BEE-SLIM

For Bread.
First use on or about Dec. 1, 1952.

SN 49,088. The Best Foods, Inc., New York, N. Y. Filed Apr. 4, 1958.

HELLMANN'S SALAD MAGIC

Owner of Reg. No. 514,280.
For French Dressing.
First use Mar. 24, 1958.

SN 49,414. Capitol Food Corporation, San Fernando, Calif. Filed Apr. 10, 1958.

Oh Boy

No exclusive rights are claimed for the word "Pizza," such word being the name of the goods.

For Frozen Pizza Pie.
First use Dec. 1, 1955.

SN 49,492. Farwest Brokers, Inc., Los Angeles, Calif. Filed Apr. 11, 1958.

PAT'S Best

For Fresh Vegetables and Melons.
First use in or about July 1957.

SN 50,478. Golden Grain Macaroni Co., San Leandro, Calif. Filed Apr. 28, 1958.

RICE-A-RONI

For Prepared Packaged Rice and Vermicelli Dinner.
First use Dec. 11, 1957.
Subj. to Intf. with SN 54,059.

SN 50,479. Golden Grain Macaroni Co., San Leandro, Calif. Filed Apr. 28, 1958.

RICE RONI

The word "Rice" is disclaimed apart from the mark as shown.
For Prepared Packaged Rice and Vermicelli Dinner.
First use Apr. 21, 1958.
Subj. to Intf. with SN 54,059.

SN 50,812. Lutz & Schramm, Inc., Pittsburgh, Pa. Filed May 1, 1958.

TOPS

For Pickles, Relish, Strawberry Preserves, and Jelly.
First use in 1940.

SN 53,703. Evans Food Products Co., Chicago, Ill. Filed June 17, 1958.

Evans

For Bacon Chips, Potato Chips, Popped Pop Corn, and Salted Nuts.
First use June 15, 1948.

SN 54,059. Mille Lacs Maple Products Corporation, St. Paul, Minn. Filed June 23, 1958.

WILD RICERONI

For Alimentary Pastes.
First use Feb. 25, 1958.
Subj. to Intf. with SN 50,478 and SN 50,479.

SN 55,175. The United Dairy Company, Barnesville, Ohio. Filed July 11, 1958.

UNITED

Owner of Reg. No. 211,248.
For Evaporated Milk.
First use August 1957.

SN 60,456. Aroma Food Corporation, Brooklyn, N. Y. Filed Oct. 9, 1958.

Remo

For Blended Peanut and Olive Oil Used for Salads, Cooking and Baking.
First use Feb. 26, 1947.

Class 49—Distilled Alcoholic Liquors

SN 41,388. Merchants Distilling Corporation, Terre Haute, Ind. Filed Nov. 26, 1957.

VODKAFYLL

The drawing is lined for gold and green.
For Vodka.
First use May 29, 1953.

SN 46,495. Skokie Valley Beverage Co., Northfield, Ill. Filed Feb. 24, 1958.

RUSSOV

For Vodka.
First use July 10, 1957.

SN 51,213. Mr. Boston Distiller Inc., Boston, Mass. Filed May 7, 1958.

GOLD KEG

For Whiskey.
First use Apr. 15, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 18,124. Arabesque, Incorporated, Chicago, Ill. Filed Oct. 25, 1956.

Arabesque

Owner of Reg. No. 665,728.
For Plaques.
First use September 1955.

SN 39,931. Michael J. Zaccardi, d. b. a. Visaids, Oak Park, Ill. Filed Oct. 31, 1957.

VISAIDS

For Graphic Sales Aid Devices Consisting of a Plurality of Separated Block-Like Panels for Use by Salesmen for Customer Education, to wit, in the Sale of Life Insurance.
First use Apr. 15, 1957.

SN 52,403. Encinal Terminals, Alameda, Calif. Filed May 27, 1958.

SN 44,976. Pro-Cyc-Kera Laboratories, Inc., Fort Lauderdale, Fla. Filed Jan. 30, 1958.

SN 39,992. S & S Leather Company, Incorporated, Colchester, Conn. Filed Nov. 1, 1957.

GILDCRAFT

For Hobby Type Kits Containing the Necessary Parts for Making Articles Such as Wallets, Billfolds, Purse Wallets, Handbags, Purses, Coin Purses, Keycase Purses, Keycases, Pocket Secretaries, Card Cases, Comb Cases, Tobacco Pouches, Utility Items, Belts, Suspenders, Shoes, Moccasins, Wearing Apparel, Photograph Albums, Personal Goods, Holster Sets, Baskets, Trays, Bowls, Boxes, Birdhouses, Braided Rugs, Animals, and Leather and Plastic Lacing for Said Kits.
First use in 1942.

SN 40,329. Domar Buckle Manufacturing Corp., New York, N. Y. Filed Nov. 8, 1957.

For Military Insignia.
First use Jan. 2, 1957.

SN 43,829. The Distributor's Group, Inc., Atlanta, Ga. Filed Jan. 13, 1958.

FILMAGIC Pylon

For Lubricating Kits Including: Lubricant Saturated Padding, Support Therefor, and a Lubricant Container To Reload Said Padding, Adapted to the Lubrication of Motion Picture Film, Magnetic Recording Tape, and Devices Employed in Recording and Transmission Through Film and Tape Media.
First use July 24, 1957.

SN 44,468. The Hopp Press, Inc., New York, N. Y. Filed Jan. 22, 1958.

PAR-CHECK

For Plastic Claim Check and Metal Holder Therefor for Use on a Self-Service Shopping Cart.
First use on or about Dec. 16, 1957.

SN 47,495. Eli Lilly and Company, Indianapolis, Ind. Filed Mar. 11, 1958.

CAPSULECTOR

For Chart Type Device for Facilitating the Choice of Various Color Combinations for Capsule Caps and Capsule Bodies.
First use May 31, 1957.

SN 50,385. Lee Rowan Company, St. Louis, Mo. Filed Apr. 28, 1958.

MARVEL

For Garment Drying Forms and Closet Accessories—Namely, Metal Garment Hangers and Racks and Trousers Creasers.
First use October 1938.

SN 51,193. James Mfg. Co., Fort Atkinson, Wis. Filed May 7, 1958.

BIG J

For Hog Feeders and Hog Waterers.
First use Apr. 16, 1958.

SN 51,290. Roll Forming Corporation, Shelbyville, Ky. Filed May 8, 1958.

GLO-TRIM

For Edging Reflector Strip To Outline the Boundaries of Driveways, Walkways, Obstacle Areas, Shrubbery, and Lawns.
First use Apr. 11, 1958.

SN 51,362. Mission Industries, Escondido, Calif. Filed May 9, 1958.

ARISTOCRAT

For Trousers and Skirt Hangers.
First use Feb. 27, 1958.

SN 51,490. Palmer Pann Corporation, Toledo, Ohio. Filed May 12, 1958.

MASTERPIECE

For Painting Sets, Consisting of a Plurality of Small Containers of Paints of Different Colors, Brushes, Cleaners, and One or More Canvases or Other Materials Bearing Outlines of Areas To Be Colored With Such Paints.
First use in January 1952.

SN 52,023. Aluminum Company of America, Pittsburgh, Pa. Filed May 21, 1958.

FLAVOR-LOK

For Metal Closures and Caps for Containers, Such as Bottles and Cans.
First use May 8, 1958.

SN 52,100. The Chicago Desk Pad Company, Inc., Chicago, Ill. Filed May 22, 1958.

CLEER-ADHEER

For Transparent Polyester Film With a Pressure Sensitive Coating To Provide a Laminated Type Protective Covering for Various Articles.
First use May 7, 1958.

SN 52,388. Chatley Products, Inc., New York, N. Y. Filed May 27, 1958.

SOLITAIRE

For Table Coasters, Place Mats, and Card Table Covers of Synthetic Composition Rubber and Plastic.
First use Apr. 29, 1958.

SN 52,405. Encinal Terminals, Alameda, Calif. Filed May 27, 1958.

EXPEND-A-BOARD

For Pallet Boards.
First use Feb. 19, 1958.

SN 52,738. The Lawrence Process Company, Inc., North Andover, Mass. Filed June 2, 1958.

PERMA-MAT

For Plastic Floor Runner.
First use Oct. 18, 1956.

Class 51 — Cosmetics and Toilet Preparations

SN 26,831. Jumelles Corp., New York, N. Y. Filed Mar. 25, 1957.

WHITE PIQUÉ

For Perfume.
First use Mar. 6, 1957.

SN 34,542. La Bora, Inc., Chicago, Ill. Filed July 29, 1957.

DOGETTE

For Dog Freshening, Deodorising, and Grooming Spray.
First use July 22, 1957.

SN 37,732. Sally Hansen, Inc., New York, N. Y. Filed Sept. 24, 1957.

HARD as NAILS

For Nail Coating Composition.
First use October 1956.

SN 38,549. Lobea, Inc., d. b. a. Alberto-Culver Company, Chicago, Ill. Filed Oct. 8, 1957.

ALBERTO Silken after shampoo Rinse

Applicant disclaims any right to exclusive rights to "Silken After Shampoo Rinse" apart from the mark as shown. Owner of Reg. Nos. 335,421, 488,904, and 614,996.
For Rinse After the Hair Has Been Shampooed.
First use Sept. 16, 1957.

SN 44,076. Pro-Cyz-Kera Laboratories, Inc., Fort Lauderdale, Fla. Filed Jan. 30, 1958.

PCK HAIR NUTRIENT

Applicant disclaims exclusive use of the words "Hair Nutrient" apart from the mark as shown.
For Hair Preparation for Grooming and Conditioning the Hair and Treating and Conditioning the Scalp.
First use May 6, 1957.

SN 45,041. Enver Arif, d. b. a. Llarc Arif, Paris, France. Filed Jan. 31, 1958.

CONTACT

Owner of French Reg. No. 425,334, dated Jan. 22, 1953 (Seine); Natl. Inst. No. 4655.
For Perfumes, Face Powder, Talcum Powder, Cosmetic Skin Creams, Bath Salts, Face Lotions, Brilliantines, Lipstick, Rouge, Toilet Water, Dentifrices.

SN 45,874. Germaine Monteil Cosmetiques Corporation, New York, N. Y. Filed Feb. 14, 1958.

LUCINOL

For Fluid Foundation Base and Face Powder.
First use Feb. 6, 1958.

SN 45,875. Germaine Monteil Cosmetiques Corporation, New York, N. Y. Filed Feb. 14, 1958.

LUMINESCENCE

Owner of Reg. No. 649,847.
For Fluid Foundation Base and Face Powder.
First use Feb. 6, 1958.

SN 46,638. Polymed Laboratories, Incorporated, Tulsa, Okla. Filed Feb. 26, 1958.

Benefit!

For Denture Adhesive.
First use Nov. 26, 1957.

SN 47,514. Dorothy Perkins Company, Inc., Newark, N. J. Filed Mar. 11, 1958.

MISS PERKY

For Packaged Unit for Young Girls Containing a Bubble Bath Preparation, Cologne, and Beauty Lotion Used as a Cleanser, Emollient, and Powder Base.
First use Aug. 30, 1957.

SN 47,879. Max Factor & Co., d. b. a. Max Factor, Hollywood, Calif. Filed Mar. 17, 1958.

hi-society

Owner of Reg. Nos. 147,022, 256,865, and 383,017.
For Lipstick.
First use Feb. 5, 1958.

SN 48,321. The Odorono Company, Inc., Stamford, Conn. Filed Mar. 24, 1958.

ODO-MATIC

For Personal Deodorant.
First use Mar. 5, 1958.

SN 49,872. Lan-Allen Drug & Pharmacal Corp., Brooklyn, N. Y. Filed Apr. 9, 1958.

ROYAL-MINK

For Skin and Hand Cream.
First use Mar. 31, 1958.

SN 49,787. Rhodes Pharmacal Company, Inc., New York, N. Y. Filed Apr. 16, 1958.

jon-james perform

For Hair Set Preparation.
First use Apr. 1, 1958.

SN 52,020. Block Drug Company, Inc., d. b. a. Denture Products Co., Jersey City, N. J. Filed May 19, 1958.

CD-60

For Artificial Denture Cleaner.
First use May 1, 1958.

SN 52,530. Romualdus Szpaczynski, d. b. a. Romaldus Co., Chicago, Ill. Filed May 28, 1958.

ROMALDUS

For Hair Tonics.
First use Apr. 24, 1958.

SN 52,964. Madmark Laboratories, Falmouth, Mass. Filed June 5, 1958.

Cape Tan

For Suntan Lotion.
First use May 6, 1958.

Class 52—Detergents and Soaps

SN 25,014. Mercantile Market Research, Inc., Chicago, Ill. Filed Feb. 25, 1957.

STA-WHITE

For Laundry Soaps.
First use Feb. 20, 1957.

SN 31,706. Virginia K. Taylor, Glendale, Calif. Filed June 10, 1957.

STUDIO GIRL

For Shampoos.
First use Aug. 15, 1933.

SN 38,466. Jet Klens Corp., Elizabeth, N. J. Filed Oct. 7, 1957.

JET KLENZ

For Liquid Hand Cleaner.
First use in April 1956.

SN 52,021. James H. Thompson, d. b. a. Magic Cleaner Manufacturing Company, Clovis, N. Mex. Filed May 5, 1958.

Tru Magic

For Liquid Detergent Preparation for Use Upon Carpets and Upholstery.
First use February 1951.

SN 52,130. James W. Langman, d. b. a. Horizon Industries, Minneapolis, Minn. Filed May 22, 1958.

RALLY

For All Purpose Detergent.
First use Mar. 19, 1958.

SN 52,469. Allen F. Carpenter, d. b. a. Allen Industries, Fort Lauderdale, Fla. Filed May 28, 1958.

Revel

For Liquid Detergent Shampoo.
First use May 11, 1958.

SN 52,574. Hyrol Chemical Co., Chicago, Ill. Filed May 29, 1958.

4-SIGHT

For Eye Glass Cleaner and Anti-Fogger.
First use May 27, 1958.

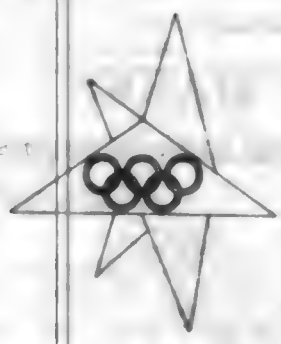
SERVICE MARKS

Class 100 — Miscellaneous

SN 48,191. Meter Devices Company, Canton, Ohio. Filed Mar. 21, 1958. Sec. 2(f).

For Engineering Consultation and Designing Services for Improvement and Development of Electrical Appliances, Such as Meters, Circit Makers and Breakers, Test Units, Induction Devices and the Like.
First use Jan. 2, 1930.

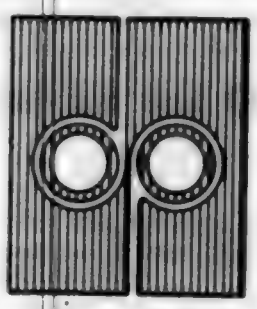
SN 50,228. United States Olympic Association, New York, N. Y. Filed July 7, 1958.



For Association Services—Namely, Organizing and Staging Sporting Events, and the Dissemination of Information Concerning the Events.
First use Jan. 20, 1958.

Class 101 — Advertising and Business

SN 12,645. Locks, Inc., Brooklyn, N. Y. Filed July 23, 1956.



The drawing is lined for red, but no claim is made to color as a feature of the mark. The mark consists of the letters "dp" within a rectangular design.
For Converting Services—Namely, Printing on Blank Paper and Blank Cardboard According to Customer's Specifications and Assembling Same in the Form of Cut-Outs, Window Displays, Store Cards, and Boxes.
First use in or about January 1931.

Class 102 — Insurance and Financial

SN 38,304. Security Benefit Life Insurance Company, Topeka, Kans. Filed Oct. 3, 1957.

Secur-O-matic
Check plan

The term "Check Plan" is disclaimed apart from the mark as shown.
For Insurance Collection Services Facilitating Periodic Payment of Insurance Premiums Due on Contracts of Insurance Issued by Applicant Through the Premium Payer's Bank Account.
First use June 11, 1956.

Class 103 — Construction and Repair

SN 20,556. Raybestos-Manhattan, Inc., Manheim, Pa. Filed Dec. 6, 1956.

PLS

For Brake Service Including the Diagnosis and Analysis of Brake Troubles.
First use Feb. 2, 1956.

Class 104 — Communication

SN 14,820. Moncton Broadcasting Limited, Moncton, New Brunswick, Canada. Filed Aug. 29, 1956.

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 17, 1956; Reg. No. 105,987, dated Mar. 8, 1957. The drawing is lined for blue and color is not claimed as a feature.
For Radio and Television Broadcasting Services.

Class 105—Transportation and Storage

SN 38,217. Louisville and Nashville Railroad Company, Louisville, Ky. Filed Oct. 2, 1957.

THE DIXIE LINE

For Transporting of Freight and Passengers by Railway.
First use Aug. 30, 1957.

Class 106—Material Treatment

SN 37,181. Palos Verdes Photo Service, Lomita, Calif. Filed Sept. 13, 1957.

For Photo Finishing With Particular Emphasis on a Wallet-Size Portrait-Like Picture.
First use Aug. 1, 1957.

SN 45,051. Hollanderizing Corp. of America, New York, N. Y. Filed Jan. 31, 1958.

SOF'N-SILKY

For Chemically Treating and Cleaning Furs.
First use February 1955.

Class 107—Education and Entertainment

SN 29,855. Alfred R. Albert, d. b. a. Albert Publishing Company, Cleveland, Ohio. Filed May 13, 1957.

For Aiding Hostesses, Managers, Resort Personnel and Others in the Correct Usage and Service of Food, Wines, Beverages and Aiding in the Selection of Places, Famous for Their Service by Means of Lectures, Talks and Correspondence With the Above Persons.
First use October 1955; December 1933 in another Display.

SN 50,940. Storer Broadcasting Company, Miami Beach, Fla. Filed May 2, 1958.

"JACK THE BELLBOY"

For Title of a Radio Program Featuring the Playing of Popular Music.
First use July 1945.

SN 50,941. Storer Broadcasting Company, Miami Beach, Fla. Filed May 2, 1958.

"THE ROCKIN' BIRD"

For Title of a Radio Program Featuring the Playing of Popular Music.
First use Oct. 10, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 21,169. Knotheads, Bothell, Wash. Filed Dec. 17, 1956.

For Indicating Membership in the Organization.
First use Sept. 17, 1955.

SN 51,830. The Wild Goose Club, Washington, D. C. Filed May 16, 1958.

For Indicating Membership in Applicant Club.
First use Oct. 1, 1956.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

671,643. FERRO CARB. The Ferro Corporation, assignee of The Prince Manufacturing Company. SN 29,942. Pub. 4–8–58. Filed 5–13–57.

Class 2—Receptacles

671,644. GARDEN CLUB. Beagle Manufacturing Co., Inc. SN 32,164. Pub. 10–14–58. Filed 6–18–57.

671,645. GEMCO AND DESIGN. Gemco Manufacturing Corporation. SN 40,338. Pub. 10–14–58. Filed 11–8–57.

671,646. STANCASE. The Standard Casing Co., Inc. SN 41,485. Pub. 10–14–58. Filed 11–27–57.

671,647. ARNOLDWARE AND DESIGN. A. C. Martinelli Rogers Plastic Corporation. SN 42,259. Pub. 10–14–58. Filed 12–12–57.

671,648. WEAR-EVER BEAUTI-TRAY AND DESIGN. The Aluminum Cooking Utensil Company, Inc. SN 42,575. Pub. 10–14–58. Filed 1–8–58.

671,649. ALLBEV. Dantoy Products. SN 42,742. Pub. 10–14–58. Filed 1–10–58.

671,650. TAP-A-CROCK. Joseph C. Incardona. SN 45,166. Pub. 10–14–58. Filed 2–3–58.

671,651. DRI-ROUND. Circle Plastics Co. SN 45,244. Pub. 10–14–58. Filed 2–4–58.

671,652. POLY-OPAL. Circle Plastics Co. SN 45,873. Pub. 10–14–58. Filed 2–6–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

671,653. THE SPACE BAG AND DESIGN. Nancy Nicoll. SN 44,407. Pub. 10–14–58. Filed 1–21–58.

671,654. KORET DEB AND DESIGN. Koret, Inc. SN 46,459. Pub. 10–14–58. Filed 2–24–58.

Class 5—Adhesives

671,655. DYNAGRIP. Perry-Austen Manufacturing Company, Incorporated. SN 46,958. Pub. 10–14–58. Filed 3–3–58.

671,656. ARID. Arid Sand Company, Inc. SN 48,228. Pub. 10–14–58. Filed 3–24–58.

Class 6—Chemicals and Chemical Compositions

671,657. DESIGN OF INANIMATE FIGURE. Keuffel & Esser Company, assignee of Micro-Master, Inc. SN 30,669. Pub. 10–14–58. Filed 5–24–57.

671,658. MICRO-MASTER. Keuffel & Esser Company, assignee of Micro-Master, Inc. SN 30,671. Pub. 10–14–58. Filed 5–24–57.

671,659. ANDROC. Colebert L. Andrus, d. b. a. Androc Chemical Company. SN 32,036. Pub. 10–14–58. Filed 6–17–57.

671,660. SHIELD AND DESIGN. Shield Chemical Co., Inc. SN 32,704. Pub. 10–14–58. Filed 6–26–57.

671,661. ALKARB. American Potash & Chemical Corporation. SN 33,789. Pub. 10–14–58. Filed 7–16–57.

671,662. PENICK & FORD AND DESIGN. Penick & Ford, Ltd., Incorporated. SN 33,832. Pub. 10–14–58. Filed 7–16–57.

671,663. UOP 5 AND DESIGN. Universal Oil Products Company. SN 35,709. Pub. 10–14–58. Filed 8–16–57.

671,664. UOP UNICOR AND DESIGN. Universal Oil Products Company. SN 35,707. Pub. 10–14–58. Filed 8–16–57.

671,665. POLYDYE. Interchemical Corporation. SN 36,039. Pub. 10–14–58. Filed 8–22–57.

671,666. CHLORDARE. Metro-Atlantic, Inc. SN 36,093. Pub. 10–14–58. Filed 8–23–57.

671,667. DROXOL. Nopco Chemical Company. SN 36,670. Pub. 10–14–58. Filed 9–4–57.

671,668. KYLOSUR. Minnesota Mining and Manufacturing Company. SN 36,726. Pub. 10–14–58. Filed 9–5–57.

671,669. GRISDALE. Gristede Bros., Inc. SN 37,571. Pub. 10–14–58. Filed 9–20–57.

671,670. ISOVAL. Motomco, Inc. SN 41,180. Pub. 10–14–58. Filed 11–22–57.

671,671. AMBURGO. The Amburgo Company, Inc. SN 41,964. Pub. 10–14–58. Filed 12–9–57.

671,672. SEVIN. Union Carbide Corporation. SN 42,282. Pub. 10–14–58. Filed 12–31–57.

671,673. CRAG. Union Carbide Corporation. SN 42,283. Pub. 10–14–58. Filed 12–31–57.

671,674. CYANAMID AND DESIGN. American Cyanamid Company. SN 42,365. Pub. 10–14–58. Filed 1–2–58.

671,675. DEXTRASET. Dexter Chemical Corporation. SN 45,956. Pub. 10–14–58. Filed 2–17–58.

671,676. DEXTRAFLEX. Dexter Chemical Corporation. SN 45,957. Pub. 10–14–58. Filed 2–17–58.

671,677. DEXTRAFIX. Dexter Chemical Corporation. SN 45,958. Pub. 10–14–58. Filed 2–17–58.

671,678. FORMASIL. Union Carbide Corporation. SN 46,580. Pub. 10–14–58. Filed 2–25–58.

671,679. SOLAZOIC. Verona-Pharma Chemical Corporation. SN 46,685. Pub. 10–14–58. Filed 2–25–58.

671,680. WHITMAG. Merck & Co., Inc. SN 46,745. Pub. 10–14–58. Filed 2–27–58.

671,681. SAFEMAG. Merck & Co., Inc. SN 46,746. Pub. 10–14–58. Filed 2–27–58.

671,682. CLARMAG. Merck & Co., Inc. SN 46,747. Pub. 10–14–58. Filed 2–27–58.

671,683. CORPENT. Hercules Powder Company. SN 46,941. Pub. 10–14–58. Filed 3–3–58.

671,684. SYNDOX. Scientific Design Company, Inc. SN 47,155. Pub. 10–14–58. Filed 3–5–58.

671,685. COPIKEM. Copper Pigment and Chemical Works, Inc. SN 47,294. Pub. 10–14–58. Filed 3–7–58.

671,686. TECHNICON. The Technicon Company, Inc. SN 47,456. Pub. 10–14–58. Filed 3–10–58.

671,687. NOX-CRETE. Industrial Lubricants Inc. SN 47,801. Pub. 10–14–58. Filed 3–17–58.

Class 7—Cordage

671,688. GOLD MEDAL. The Linen Thread Co., Inc. SN 51,256. Pub. 10–14–58. Filed 5–9–58.

671,689. HOFLION. Hoffman Lion Mills Company, Incorporated. SN 55,320. Pub. 10–14–58. Filed 7–15–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

671,690. INTERARMCO ETC. AND DESIGN. Interarmco Limited. SN 42,879. Pub. 10–14–58. Filed 12–23–57.

671,691. MIKROS AND DESIGN. Manufacture d'Armes des Pyrenees Francaises, Société à Responsabilité Limitée. SN 43,722. Pub. 10–14–58. Filed 10–28–57.

671,692. LEATHERNECK. Harrington & Richardson, Inc. SN 48,633. Pub. 10–14–58. Filed 3–28–58.

671,693. TOPPER. Harrington & Richardson, Inc. SN 48,634. Pub. 10–14–58. Filed 3–28–58.

671,694. "MEDALIST." Harrington & Richardson, Inc. SN 48,636. Pub. 10–14–58. Filed 3–28–58.

671,695. "GUARDSMAN." Harrington & Richardson, Inc. SN 49,437. Pub. 10–14–58. Filed 4–10–58.

Class 10—Fertilizers

671,696. NU-BUD. Clarel Laboratory. SN 52,277. Pub. 10–14–58. Filed 5–26–58.

671,697. GROBARK. Brown Company. SN 54,204. Pub. 10–14–58. Filed 6–25–58.

671,698. SURE SPROUT AND DESIGN. Benton-Kirby, Inc. SN 54,615. Pub. 10–14–58. Filed 7–7–58.

671,699. BONUS. The O. M. Scott and Sons Company. SN 57,014. Pub. 10–14–58. Filed 8–11–58.

Class 11—Inks and Inking Materials

671,700. COPI-MATE. Leedall Products Mfg. Co., Inc. SN 44,209. Pub. 10–14–58. Filed 1–21–58.

Class 12—Construction Materials

671,701. SHADOWAL. National Concrete Masonry Association. SN 26,489. COLLECTIVE MARK. Pub. 10–14–58. Filed 8–19–57.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

671,702. DIAMOND. The Imperial Brass Manufacturing Company. SN 11,083. Pub. 2–4–58. Filed 6–27–56.

671,703. WEDGE-LOK. Divine Brothers Company. SN 35,036. Pub. 10–14–58. Filed 8–6–57.

671,704. STAT-O-MATIC. The American Brake & Iron Foundry. SN 39,177. Pub. 10–14–58. Filed 10–21–57.

671,705. THE GENERAL TIRE N AND DESIGN. The General Tire & Rubber Company. SN 39,871. Pub. 10–14–58. Filed 10–31–57.

671,706. PLYCLIP. Fluke Metal Products, Inc. SN 42,873. Pub. 10–14–58. Filed 12–23–57.

671,707. PD. Star Precision Devices, Inc. SN 44,215. Pub. 10–14–58. Filed 1–17–58.

671,708. NOE SEARCHE. The Noe Searche Key Support Co., Inc. SN 44,974. Pub. 10–14–58. Filed 1–30–58.

671,709. MERMAID. Mermaid Pool & Supply Co., Inc. SN 46,970. Pub. 10–14–58. Filed 3–3–58.

671,710. CONTOUR TRENTWELD AND DESIGN. Trent Tube Company. SN 48,442. Pub. 10–14–58. Filed 3–25–58.

Class 14—Metals and Metal Castings and Forgings

671,711. FLOWER FABRIC. Nichols Wire & Aluminum Co. SN 44,199. Pub. 10–14–58. Filed 1–17–58.

671,712. BRITECARB. Wilbur B. Driver Company. SN 44,261. Pub. 10–14–58. Filed 1–21–58.

Class 15—Oils and Greases

671,713. MOBIL AND DESIGN. Socony Mobil Oil Company, Inc. SN 26,024. Pub. 10–14–58. Filed 3–12–57.

671,714. LAPMASTER. Crane Packing Company. SN 26,334. Pub. 10–14–58. Filed 3–18–57.

671,715. MOTA-NU. J. F. Williams, d. b. a. The Mota-Nu Co. SN 28,408. Pub. 10–14–58. Filed 4–17–57.

671,716. MITCHELL'S KARB KLEEN. Mitchell Products, Inc. SN 33,490. Pub. 10–14–58. Filed 7–10–57.

671,717. VALVOLUBE. Ashland Oil & Refining Company. SN 42,816. Pub. 10–14–58. Filed 12–23–57.

671,718. TRANZPORT. South Penn Oil Company. SN 43,837. Pub. 10–14–58. Filed 1–13–58.

671,719. SEALAMAT. Alsol Products Company. SN 45,247. Pub. 10–14–58. Filed 2–4–58.

671,720. LAND MARK AND DESIGN. The Farm Bureau Cooperative Association, Inc. SN 45,468. Pub. 10–14–58. Filed 2–7–58.

671,721. KENDALL SUPER-D. Kendall Refining Company. SN 45,808. Pub. 10–14–58. Filed 2–13–58.

Class 16—Protective and Decorative Coatings

671,722. WALL-SPREAD. The Sargent-Gerke Co. SN 676,231. Pub. 5–17–55. Filed 11–6–54.

671,723. SPICE. The Reardon Company. SN 52,337. Pub. 10–14–58. Filed 5–26–58.

671,724. DALAMAR. E. I. du Pont de Nemours and Company. SN 52,369. Pub. 10–14–58. Filed 6–4–58.

671,725. SUNSET. Sunset Paint Corporation. SN 53,302. Pub. 10–14–58. Filed 6–10–58.

Class 18—Medicines and Pharmaceutical Preparations

671,726. SPLIT-TABLETS ETC. AND DESIGN. Dr. Ballowits & Co. SN 16,013. Pub. 10–14–58. Filed 9–20–56.

671,727. HYKOLEX. Chicago Pharmacal Company. SN 22,793. Pub. 10–14–58. Filed 1–18–57.

671,728. SIGMA. Sigma Chemical Company. SN 27,241. Pub. 10–14–58. Filed 3–29–57.

671,729. HYGEIASAN. Dr. Pierre Chemical Company. SN 37,001. Pub. 10–14–58. Filed 9–11–57.

671,730. NATA-PAR. Deseret Pharmaceutical Company, Inc. SN 37,235. Pub. 10–14–58. Filed 9–16–57.

671,731. CALMAREX. Nutritional Quality Controls, Inc. SN 38,117. Pub. 10–14–58. Filed 9–16–57.

671,732. ESCORPAL. Farbenfabriken Bayer Aktiengesellschaft. SN 38,912. Pub. 6–3–58. Filed 10–15–57.

671,733. APPEVIM. Purepac Corporation. SN 39,411. Pub. 10–14–58. Filed 10–23–57.

671,734. HISTADYL. Eli Lilly and Company. SN 39,652. Pub. 10–14–58. Filed 10–28–57.

671,735. GABGON. Olin Mathieson Chemical Corporation. SN 43,396. Pub. 10–14–58. Filed 1–3–58.

671,736. GCB. Merck & Co., Inc. SN 44,102. Pub. 10–14–58. Filed 1–16–58.

671,737. ELIMIX. Imperial Chemical Industries Limited. SN 45,570. Pub. 10–14–58. Filed 2–10–58.

671,738. A-V FORMULA. Merck & Co., Inc. SN 45,746. Pub. 10-14-58. Filed 2-12-58.

671,739. EINKOX. The Prince Manufacturing Company. SN 46,008. Pub. 10-14-58. Filed 2-17-58.

671,740. ISONYL. Durr Products, Inc. SN 46,429. Pub. 10-14-58. Filed 2-24-58.

671,741. ULTANDREN. Ciba Pharmaceutical Products Inc. SN 46,602. Pub. 10-14-58. Filed 2-26-58.

671,742. HAIRNOW. Mack O. Lewis, d. b. a. Active Therapy Products Company. SN 47,264. Pub. 10-14-58. Filed 3-7-58.

671,743. NILADYL. Eli Lilly and Company. SN 48,814. Pub. 10-14-58. Filed 3-31-58.

671,744. PURELAB. Stanley Drug Products, Inc. SN 49,013. Pub. 10-14-58. Filed 4-3-58.

671,745. TRU LAB. Stanley Drug Products, Inc. SN 49,026. Pub. 10-14-58. Filed 4-3-58.

671,746. NEO-AQUA-DRIN. McKesson & Robbins, Incorporated. SN 49,288. Pub. 10-14-58. Filed 4-8-58.

671,747. LAB CHEK AND DESIGN. Stanley Drug Products, Inc. SN 49,392. Pub. 10-14-58. Filed 4-9-58.

671,748. CLOPAN. Eli Lilly and Company. SN 49,504. Pub. 10-14-58. Filed 4-11-58.

671,749. SOMATOPLEX. The Purdue Frederick Company. SN 49,873. Pub. 10-14-58. Filed 4-17-58.

671,750. HOST. Johnston's Products, d. b. a. Host Vitamin Co. SN 50,064. Pub. 10-14-58. Filed 4-21-58.

671,751. ALMOCARPINE. Ophthalmos, Inc. SN 50,176. Pub. 10-14-58. Filed 4-22-58.

671,752. MYDRIATIN. Ophthalmos, Inc. SN 50,178. Pub. 10-14-58. Filed 4-22-58.

671,753. CETAPED. Imperial Chemical Industries Limited. SN 51,016. Pub. 10-14-58. Filed 5-5-58.

671,754. MEDACHE. Organon Inc. SN 51,048. Pub. 10-14-58. Filed 5-5-58.

671,755. IMPOTEX AND DESIGN. Whittaker Laboratories, Inc. SN 51,093. Pub. 10-14-58. Filed 5-5-58.

671,756. PHENYLZIN. The Iso-Sol Company, Inc. SN 51,128. Pub. 10-14-58. Filed 5-6-58.

671,757. SIQUIL. Olin Mathieson Chemical Corporation. SN 51,284. Pub. 10-14-58. Filed 5-8-58.

671,758. PERIBAR. A. H. Robins Company, Inc. SN 51,534. Pub. 10-14-58. Filed 5-13-58.

Class 19 — Vehicles

671,759. PARSONS. Parsons Corporation. SN 18,096. Pub. 3-26-57. Filed 10-24-56.

671,760. BILET. Bilet Products, Inc., assignee of William Farber, d. b. a. Bilet Products. SN 32,809. Pub. 10-14-58. Filed 6-28-57.

671,761. HIGHLAND. Highland Car Co. SN 35,095. Pub. 10-14-58. Filed 8-7-57.

671,762. COSMOPOLITAN. Harold W. I. Johnson, d. b. a. Cosmopolitan Die Cast Products Company. SN 38,616. Pub. 10-14-58. Filed 10-9-57.

671,763. BUR-TEX. Burlington Mills Incorporated. SN 38,668. Pub. 10-14-58. Filed 10-10-57.

671,764. HOPMOBILE. American Road Equipment Company, Inc. SN 47,626. Pub. 10-14-58. Filed 3-13-58.

671,765. ECC. Evans Products Company. SN 48,261. Pub. 10-14-58. Filed 3-24-58.

Class 20 — Linoleum and Oiled Cloth

671,766. GRANITEERS. Bonafide Mills, Inc. SN 48,607. Pub. 10-14-58. Filed 3-28-58.

Class 21 — Electrical Apparatus, Machines, and Supplies

671,767. PERFECTION IS NOT AN ACCIDENT. Eagle Electric Mfg. Co., Inc. SN 12,605. Pub. 10-14-58. Filed 7-23-56.

671,768. MR. SAFETY-GRID. Commercial Controls Corporation. SN 24,023. Pub. 10-14-58. Filed 2-8-57.

671,769. SHOO-FLY AND DESIGN. Hehr Manufacturing Company, assignee of Bressette, Inc. SN 29,341. Pub. 10-14-58. Filed 5-3-57.

671,770. MIGHTY MITE. Siqua-Mix, Inc. SN 29,732. Pub. 10-14-58. Filed 5-9-57.

671,771. MITE. Teleprinter Corporation. SN 29,973. Pub. 10-14-58. Filed 5-13-57.

671,772. NELSON NEON AND DESIGN. Nelson Neon. SN 30,033. Pub. 10-14-58. Filed 5-14-57.

671,773. HI-TREET. Hevi-Duty Electric Company. SN 30,584. Pub. 10-14-58. Filed 5-23-57.

671,774. FINTUBE. The Edwin L. Wiegand Company. SN 38,655. Pub. 10-14-58. Filed 10-9-57.

671,775. REDI-VAC. Red Devil Tools. SN 39,498. Pub. 10-14-58. Filed 10-24-57.

671,776. COMMODORE. Commodore Import Corp. SN 39,714. Pub. 10-14-58. Filed 10-29-57.

671,777. K&R. General Electric Company. SN 43,752. Pub. 10-14-58. Filed 1-10-58.

671,778. COMPU-TRAN. International Resistance Company. SN 43,942. Pub. 10-14-58. Filed 1-14-58.

671,779. COMPU-TRAN AND DESIGN. International Resistance Company. SN 43,943. Pub. 10-14-58. Filed 1-14-58.

671,780. DESIGN OF CIRCLE AND DOT. General Electric Company. SN 44,077. Pub. 10-14-58. Filed 1-16-58.

671,781. TOR-TERM. Lumen, Inc. SN 44,907. Pub. 10-14-58. Filed 1-29-58.

671,782. POWERUPTER. H. K. Porter Company (Delaware). SN 45,826. Pub. 10-14-58. Filed 2-13-58.

671,783. POWER BOND. The Electric Auto-Lite Company. SN 45,961. Pub. 10-14-58. Filed 2-17-58.

671,784. ELFIN. Dare Products, Incorporated. SN 46,426. Pub. 10-14-58. Filed 2-24-58.

671,785. AMERICORE. United States Steel Corporation. SN 46,584. Pub. 10-14-58. Filed 2-25-58.

671,786. AUTOREG. C & D Batteries, Inc. SN 46,598. Pub. 10-14-58. Filed 2-26-58.

671,787. SHETLAND FLOORSMITH. The Shetland Co., Inc. SN 47,011. Pub. 10-14-58. Filed 3-3-58.

671,788. SHAPOWER AND DESIGN. Sweinhart Equipment Sales, Inc. SN 47,019. Pub. 10-14-58. Filed 3-3-58.

Class 22 — Games, Toys, and Sporting Goods

671,789. SHOOTING WATERS. Harold E. Quinn. SN 20,554. Pub. 4-22-58. Filed 12-6-56.

671,790. "LAZY IKE." Kautzky Lazy Ike Company. SN 21,314. Pub. 10-14-58. Filed 12-19-56.

671,791. G. STANZIONE. Gustavo Stanzione. SN 27,906. Pub. 10-14-58. Filed 4-10-57.

671,792. SANKYO. Kabushiki Kaisha Sankyo Seiki Seisakusho. SN 37,265. Pub. 10-14-58. Filed 9-10-57.

671,793. BAND O'LURE. George C. Rieken. SN 40,151. Pub. 10-14-58. Filed 11-5-57.

671,794. CASCADE AND DESIGN. Cascade Products, Inc. SN 41,617. Pub. 10-14-58. Filed 12-2-57.

671,795. RED ROCKET. Plastic Products Corporation. SN 43,696. Pub. 10-14-58. Filed 1-9-58.

671,796. FAST GRIP AND DESIGN. Wright & McGill Co., d. b. a. W. & M. Company. SN 44,239. Pub. 10-14-58. Filed 1-17-58.

671,797. RAINY DAY GOLF. Frank C. Owens, M. D. SN 46,636. Pub. 10-14-58. Filed 2-26-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

671,798. FOUR STAR ETC. AND DESIGN. Central States Sales, Inc. SN 38,803. Pub. 10-14-58. Filed 10-14-57.

671,799. SPUTNIK AND DESIGN. Karl Flocke, d. b. a. Flocke & Co. SN 41,087. Pub. 10-14-58. Filed 11-21-57.

671,800. BOCO. Consolidated Sewing Machine Corp. SN 41,799. Pub. 10-14-58. Filed 12-5-57.

671,801. FLOWAY. Flese & Firstenberger Mfg., Inc. SN 45,154. Pub. 10-14-58. Filed 2-3-58.

671,802. BUDDY-BOY. The Lighter Corporation of America. SN 45,172. Pub. 10-14-58. Filed 2-3-58.

671,803. FARM-O-RAMIC ANTHONY. Anthony Company. SN 45,240. Pub. 10-14-58. Filed 2-4-58.

671,804. BETSY ROSS. Clauss Cutlery Company. SN 45,860. Pub. 10-14-58. Filed 2-14-58.

671,805. CAM-O-MATIC. The F. & N. Lawn Mower Company. SN 46,126. Pub. 10-14-58. Filed 2-19-58.

671,806. SIMPAK. The Shelby Manufacturing Company. SN 49,624. Pub. 10-14-58. Filed 4-14-58.

671,807. COLTON AND DESIGN. Colton Razor Blade Company. SN 49,825. Pub. 10-14-58. Filed 4-17-58.

671,808. TEXILIA. Texilia Distributors, Inc. SN 50,119. Pub. 10-14-58. Filed 4-21-58.

671,809. REPRESENTATION OF SHIELD AND BANTAM. Schield Bantam Company. SN 52,831. Pub. 10-14-58. Filed 6-3-58.

671,810. WIL-MOW AND DESIGN. Wil-Mow Corporation. SN 52,841. Pub. 10-14-58. Filed 6-3-58.

671,811. LE SAUER ST. LOUIS. L. E. Sauer Machine Company. SN 52,908. Pub. 10-14-58. Filed 6-4-58.

671,812. HOLD ALL. Hold-All Corporation. SN 52,957. Pub. 10-14-58. Filed 6-5-58.

671,813. SANDCLONE. Western Machinery Company. SN 52,992. Pub. 10-14-58. Filed 6-5-58.

671,814. DILIGENT DUCHESS. Consolidated Tool Company. SN 53,016. Pub. 10-14-58. Filed 6-6-58.

671,815. FLITE CHEK. Olin Mathieson Chemical Corporation. SN 53,042. Pub. 10-14-58. Filed 6-6-58.

671,816. ROCKET AND DESIGN. Saco-Lowell Shops. SN 53,291. Pub. 10-14-58. Filed 6-10-58.

671,817. TRADITION. Sears, Roebuck and Co. SN 53,430. Pub. 10-14-58. Filed 6-12-58.

671,818. HOERBIGER. Martina Hoerbiger, d. b. a. Hoerbiger & Co. SN 53,501. Pub. 10-14-58. Filed 6-13-58.

671,819. H AND DESIGN. Martina Hoerbiger, d. b. a. Hoerbiger & Co. SN 53,502. Pub. 10-14-58. Filed 6-13-58.

Class 24—Laundry Appliances and Machines

671,820. SPEEDY. The American Laundry Machinery Company. SN 29,562. Pub. 10-14-58. Filed 5-8-57.

671,821. CHALLENGE. Challenge Manufacturing Co. SN 44,596. Pub. 10-14-58. Filed 1-24-58.

Class 26—Measuring and Scientific Appliances

671,822. 260 AND DESIGN. American Gage & Machine Company. SN 1,024. Pub. 10-14-58. Filed 1-18-56.

671,823. PHOTOSTAT AND DESIGN. Photostat Corporation. SN 36,105. Pub. 10-14-58. Filed 8-23-57.

671,824. GEMSCOPE. Gemological Institute of America, Inc., d. b. a. Gemological Institute of America. SN 36,642. Pub. 10-14-58. Filed 9-5-57.

Class 27—Horological Instruments

671,825. SUPERTEST. Enicar S. A. (Enicar A. G.) (Enicar Ltd.). SN 40,821. Pub. 10-14-58. Filed 11-18-57.

Class 28—Jewelry and Precious-Metal Ware

671,826. FAMOR. Famor Importing Company, Inc. SN 35,251. Pub. 10-14-58. Filed 8-9-57.

671,827. DESIGN OF A CHEST. The Hope Chest Company, Inc. SN 42,648. Pub. 10-14-58. Filed 12-18-57.

Class 30—Crockery, Earthenware, and Porcelain

671,828. PALIN THORLEY AND DESIGN. Joseph Palin Thorley, d. b. a. Palin Thorley. SN 15,736. Pub. 10-14-58. Filed 9-14-56.

671,829. MAXIM. Maxim Import Co., Inc. SN 48,035. Pub. 10-14-58. Filed 3-19-58.

671,830. TREASURE CHEST. The Hope Chest Company, Inc. SN 49,582. Pub. 10-14-58. Filed 4-14-58.

Class 31—Filters and Refrigerators

671,831. POWER-PAC. C. V. Hill & Company, Inc. SN 50,802. Pub. 10-14-58. Filed 5-1-58.

671,832. CATALINA. White Stores, Inc. SN 52,839. Pub. 10-14-58. Filed 6-3-58.

671,833. DEEM. Crystal Research Laboratories, Inc. SN 52,863. Pub. 10-14-58. Filed 6-4-58.

671,834. AUTO CUBE. Sears, Roebuck and Co. SN 53,427. Pub. 10-14-58. Filed 6-12-58.

Class 32—Furniture and Upholstery

671,835. PATIO AIRELOUNGER AND DESIGN. Hampden Specialty Products, Inc. SN 43,160. Pub. 10-14-58. Filed 12-30-57.

671,836. GARMENTIER. Harold H. Horwitz, d. b. a. Harold H. Horwitz and Associates. SN 44,294. Pub. 10-14-58. Filed 1-20-58.

671,837. VILLAGE CRAFT. Falcon Mfg. Co. SN 53,602. Pub. 10-14-58. Filed 6-16-58.

Class 33—Glassware

671,838. MAXIM. Maxim Import Co. Inc. SN 48,036. Pub. 10-14-58. Filed 3-19-58.

Class 34—Heating, Lighting, and Ventilating Apparatus

671,839. UNITHERM. Clarage Fan Company. SN 44,600. Pub. 10-14-58. Filed 1-24-58.

671,840. RED-E-PAK BASEBOARD AND DESIGN. Embassy Steel Products, Inc. SN 47,106. Pub. 10-14-58. Filed 3-5-58.

671,841. LANDMARK. Lennox Industries, Inc. SN 47,668. Pub. 10-14-58. Filed 3-13-58.

671,842. HI-EF. Kleco Boiler & Engineering Company. SN 48,040. Pub. 10-14-58. Filed 3-28-58.

671,843. WIGWAM THERMCAP. Boston Machine Works Company. SN 48,700. Pub. 10–14–58. Filed 3–21–58.

671,844. DB DAVID BRADLEY. Sears, Roebuck and Co. SN 50,405. Pub. 9–30–58. Filed 4–25–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

671,845. MONOSEAL. A. W. Chesterton Company. SN 42,763. Pub. 10–14–58. Filed 12–20–57.

671,846. SILENT SENTRY. Western Auto Supply Company. SN 47,300. Pub. 10–14–58. Filed 3–7–58.

671,847. DULON. American Biltrite Rubber Co. Inc. SN 47,995. Pub. 10–14–58. Filed 3–19–58.

671,848. REXON. Hamilton Kent Manufacturing Company. SN 48,412. Pub. 10–14–58. Filed 3–25–58.

671,849. STATESMAN. Richmond Tire & Rubber Company, Inc. SN 48,662. Pub. 10–14–58. Filed 3–28–58.

Class 36—Musical Instruments and Supplies

671,850. AMP 3 RECORDS, INC. AND DESIGN. Amp 3 Records, Inc. SN 47,041. Pub. 10–14–58. Filed 3–4–58.

671,851. LOWREY. The Lowrey Organ Company. SN 47,060. Pub. 10–14–58. Filed 3–4–58.

671,852. FAB AND DESIGN. Frank A. Beasley, d. b. a. Fab Recording Co. SN 47,178. Pub. 10–14–58. Filed 3–6–58.

671,853. SINGULAR. Singular Record Co. SN 47,288. Pub. 10–14–58. Filed 3–7–58.

671,854. ARENA. Deutsche Grammophon Gesellschaft m. b. H. SN 48,018. Pub. 10–14–58. Filed 3–19–58.

Class 38—Prints and Publications

671,855. TRUROCK. The General Conference of the Church of God (Seventh Day), d. b. a. Trurock Publications. SN 32,814. Pub. 10–14–58. Filed 6–28–57.

671,856. LITTLE QUEEN SIZE. Norcross, Inc. SN 36,391. Pub. 10–14–58. Filed 8–28–57.

671,857. DESIGN FOR METROPOLITAN AND COUNTRY LIVING. The Building Centre (B. C.) Ltd. SN 37,717. Pub. 10–14–58. Filed 9–24–57.

671,858. TOGETHERNESS. McCall Corporation. SN 42,508. Pub. 10–14–58. Filed 12–16–57.

671,859. EL COYOTE. Ismael Palacio Bolufer. SN 43,550. Pub. 10–14–58. Filed 1–7–58.

671,860. APPARATUS SHOWCASE. Van Waters & Rogers, Inc. SN 44,327. Pub. 10–14–58. Filed 1–20–58.

671,861. MARKETEER. I–T–E Circuit Breaker Company. SN 45,805. Pub. 10–14–58. Filed 2–13–58.

671,862. B. C. New York Herald Tribune Inc. SN 45,906. Pub. 10–14–58. Filed 2–14–58.

671,863. THE SOLAR QUARTERLY. Solar Aircraft Company. SN 48,061. Pub. 10–14–58. Filed 3–19–58.

671,864. KEYNOTE. Monroe Calculating Machine Company. SN 49,174. Pub. 10–14–58. Filed 4–7–58.

Class 39—Clothing

671,865. SCANT-HIP. The Formfit Company. SN 22,670. Pub. 10–14–58. Filed 1–16–57.

671,866. EASI-FORM. Marubeni-Iida (America), Inc., by change of name from Marubeni-Iida Co. (New York), Inc. SN 32,609. Pub. 5–6–58. Filed 6–23–57.

671,867. FLORET. Brooklyn Mills, Inc. SN 35,235. Pub. 10–14–58. Filed 8–9–57.

671,868. ROYALTY. Brooklyn Mills, Inc. SN 35,237. Pub. 10–14–58. Filed 8–9–57.

671,869. KAYEWOOD. McCrory Stores Corporation. SN 43,106. Pub. 10–14–58. Filed 12–27–57.

671,870. HEAD-LINER. Cole of California, Inc. SN 44,378. Pub. 10–14–58. Filed 1–21–58.

671,871. PRO SLEEVE. Towne and King, Ltd. SN 44,660. Pub. 10–14–58. Filed 1–24–58.

671,872. B-FLAT. Fortuna Foundations, Inc. SN 45,729. Pub. 10–14–58. Filed 2–12–58.

671,873. TEEN SHEEN. Cowden Manufacturing Company. SN 46,294. Pub. 10–14–58. Filed 2–21–58.

671,874. TIGHTLETS. J. W. Landenberger & Co. SN 47,055. Pub. 10–14–58. Filed 3–4–58.

671,875. BLAIR HOUSE. O. L. Hinds Company. SN 47,256. Pub. 10–14–58. Filed 3–7–58.

671,876. PENN TEST. Penn Fruit Co., Inc., d. b. a. Penn Fruit Company and Penn Fruit Co. SN 47,418. Pub. 10–14–58. Filed 3–10–58.

671,877. CHAPEL OAKS. Famous-Sternberg, Inc. SN 47,748. Pub. 10–14–58. Filed 3–14–58.

671,878. CURLON. Imported Sportswear Corp. SN 48,285. Pub. 10–14–58. Filed 3–24–58.

671,879. FURTHER ADO. Maiden Form Brassiere Company, Inc. SN 48,420. Pub. 10–14–58. Filed 3–25–58.

671,880. FASHION MAGIC. International Latex Corporation. SN 48,993. Pub. 10–14–58. Filed 4–3–58.

Class 40—Fancy Goods, Furnishings, and Notions

671,881. PERMALOID AND DESIGN. Emsig Manufacturing Co. SN 42,119. Pub. 10–14–58. Filed 12–10–57.

671,882. LADY ELLEN. The Kaynar Company. SN 45,577. Pub. 10–14–58. Filed 2–10–58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

671,883. PETITSPUN. Raitch & Castaldi, Inc. SN 34,282. Pub. 10–14–58. Filed 7–24–57.

671,884. BUR-TEX. Burlington Mills Incorporated. SN 38,070. Pub. 10–14–58. Filed 10–10–57.

671,885. FLIANO. Loombrook Mills Corp. SN 39,813. Pub. 10–14–58. Filed 10–30–57.

671,886. SERVISTUFT. Sears, Roebuck and Co. SN 40,269. Pub. 10–14–58. Filed 11–7–57.

671,887. B–D AND DESIGN. Burke-Decker, Inc. SN 42,440. Pub. 10–14–58. Filed 12–16–57.

671,888. LADY MARCIA. Schneider Cotton Textiles, Inc. SN 44,925. Pub. 10–14–58. Filed 1–29–58.

671,889. TASK FORCE. Cone Mills Inc. SN 45,678. Pub. 10–14–58. Filed 2–11–58.

671,890. THERMA-WEAVE. Beacon Manufacturing Company. SN 47,714. Pub. 10–14–58. Filed 3–14–58.

671,891. SNIP 'N SEW. Continental Converters Corporation. SN 48,245. Pub. 10–14–58. Filed 3–24–58.

671,892. WHITEWAY. Berkshire Hathaway, Inc. SN 48,896. Pub. 10–14–58. Filed 4–2–58.

671,893. ULTRASHEEN. Pepperell Manufacturing Company. SN 49,010. Pub. 10–14–58. Filed 4–3–58.

671,894. TIZ. The Wooster Brush Company. SN 49,024. Pub. 10–14–58. Filed 4–3–58.

671,895. LIN-SEAL. Frankel Associates, Inc. SN 49,060. Pub. 10–14–58. Filed 4–4–58.

Class 43—Thread and Yarn

671,896. MIRAGORA. M. K. M. Knitting Mills, Inc. SN 48,765. Pub. 10–14–58. Filed 3–31–58.

671,897. VENTURION. Leon-Ferenbach Incorporated. SN 49,281. Pub. 10–14–58. Filed 4–8–58.

671,898. VENTURIA. Leon-Ferenbach Incorporated. SN 49,282. Pub. 10–14–58. Filed 4–8–58

Class 44—Dental, Medical, and Surgical Appliances

671,899. KERR. Kerr Manufacturing Company. SN 22,438. Pub. 9–30–58. Filed 1–11–57.

671,900. OXFORD LABORATORIES. Oxford Laboratories. SN 36,528. Pub. 10–14–58. Filed 8–30–57.

671,901. DENTAGRAPH. Berman S. Dunham, d. b. a. Thumb-Out Co. SN 42,366. Pub. 10–14–58. Filed 12–13–57.

671,902. FLEXOLIMB. Bardach & Scheene Co., Inc. SN 46,403. Pub. 10–14–58. Filed 2–24–58.

Class 45—Soft Drinks and Carbonated Waters

671,903. EZE. Eze-Orange Company. SN 19,130. Pub. 10–14–58. Filed 11–13–56.

671,904. DOUBLE MEASURE-DOUBLE PLEASURE. Semisole Flavor Company. SN 29,558. Pub. 10–14–58. Filed 5–7–57.

671,905. SPRUCK. Flavor-Lok Corporation, d. b. a. Spruce Co. SN 36,652. Pub. 10–14–58. Filed 9–4–57.

671,906. NEW ERA. National Tea Co. SN 37,365. Pub. 10–14–58. Filed 9–17–57.

671,907. APPLE NICK. The H. R. Nicholson Company. SN 37,670. Pub. 10–14–58. Filed 9–23–57.

Class 46—Feeds and Ingredients of Feeds

671,908. RANCH KITCHEN. Hoke-Rawson Products, Inc. SN 27,207. Pub. 10–14–58. Filed 3–29–57.

671,909. SO-TYE. Luer Packing Company. SN 31,407. Pub. 10–14–58. Filed 6–6–57.

671,910. KOLORFOS. Hagan Chemicals & Controls, Inc. SN 35,430. Pub. 10–14–58. Filed 8–13–57.

671,911. PAJARO AZUL ETC. AND DESIGN. C. E. Grosjean Rice Milling Co. SN 36,183. Pub. 10–14–58. Filed 8–26–57.

671,912. CUBBISON'S. American Cone and Pretzel Company. SN 36,551. Pub. 10–14–58. Filed 9–3–57.

671,913. TASTEMARK. Foremost Dairies, Inc. SN 37,368. Pub. 10–14–58. Filed 9–20–57.

671,914. BE-CO. Spencer Kellogg and Sons, Inc. SN 39,420. Pub. 10–14–58. Filed 10–23–57.

671,915. DARI-DRI. Milk Specialties, Inc. SN 41,465. Pub. 10–14–58. Filed 11–27–57.

671,916. ROYAL MANOR. Orchard Park Foods, Inc. SN 42,900. Pub. 10–14–58. Filed 12–23–57.

671,917. EDGEBROOK. Orchard Park Foods, Inc. SN 42,901. Pub. 10–14–58. Filed 12–23–57.

671,918. ORCHARD PARK. Orchard Park Foods, Inc. SN 42,903. Pub. 10–14–58. Filed 12–23–57.

671,919. BLUE DIAMOND. Mutual Trading Co. Inc. SN 42,986. Pub. 10–14–58. Filed 12–24–57.

671,920. SAICA BRAND. Soc. An. Industria Commercio Alimentari, d. b. a. S. A. I. C. A. SN 43,975. Pub. 10–14–58. Filed 1–14–58.

671,921. LOMANZO'S. Antonio Lomanzo, d. b. a. Lomanzo's Frozen Foods Company and as Lomanzo's Restaurant and Catering Service. SN 44,906. Pub. 10–14–58. Filed 1–29–58.

671,922. LITTLE SUSAN. Edward T. Finneran Co., Inc. SN 45,045. Pub. 10–14–58. Filed 1–31–58.

671,923. PLACTO. National Dairy Products Corporation. SN 45,906. Pub. 10–14–58. Filed 2–14–58.

671,924. NORTHEASTERN. Northeastern Poultry Cooperative Association, Inc. SN 46,977. Pub. 10–14–58. Filed 3–3–58.

671,925. ROYAL R. Green Giant Company. SN 49,844. Pub. 10–14–58. Filed 4–17–58.

671,926. MR. BIG HEAD. A. W. Bodine, d. b. a. Bodine Produce Company. SN 50,341. Pub. 10–14–58. Filed 4–25–58.

671,927. DESERT MOON. James M. Carris, d. b. a. Carris Candies. SN 50,769. Pub. 10–14–58. Filed 5–1–58.

671,928. SYLVAN SEAL 88 AND DESIGN. Sylvan Seal Milk, Inc. SN 50,942. Pub. 10–14–58. Filed 5–2–58.

671,929. GIRARD'S. Girard's, Inc. SN 51,122. Pub. 10–14–58. Filed 5–6–58.

Class 47—Wines

671,930. ROCKETTE. E. & J. Gallo Winery. SN 36,677. Pub. 10–14–58. Filed 9–9–57.

671,931. LONGHORN. Schenley Industries, Inc., d. b. a. Roma Wine Company. SN 44,418. Pub. 10–14–58. Filed 1–21–58.

671,932. LAIRD'S. Laird & Company. SN 45,055. Pub. 10–14–58. Filed 1–31–58.

Class 48—Malt Beverages and Liquors

671,933. COORS BANQUET AND DESIGN. Adolph Coors Company. SN 683,363. Pub. 10–14–58. Filed 3–14–55.

671,934. ARROW, ETC. AND DESIGN. The Globe Brewing Co. SN 29,798. Pub. 10–14–58. Filed 5–10–57.

671,935. FRO MALT AND DESIGN. Basic Products Corporation, by change of name from The Froedtert Corporation. SN 31,104. Pub. 10–14–58. Filed 5–31–57.

671,936. DESIGN OF CROWN AND ANCHOR. Molson's Brewery Limited. SN 46,749. Pub. 10–14–58. Filed 2–27–58.

Class 49—Distilled Alcoholic Liquors

671,937. PICOMINT. Picon (S. A. P.) Societe Anonyme des Anciens Etablissements Amer Picon. SN 42,531. Pub. 10–14–58. Filed 12–16–57.

671,938. HARTLEY. Italian Swiss Colony, d. b. a. Shewan-Jones. SN 44,268. Pub. 10–14–58. Filed 1–20–58.

671,939. KING JOHN. Seager, Evans & Co. Ltd. SN 44,650. Pub. 10–14–58. Filed 1–24–58.

Class 50—Merchandise Not Otherwise Classified

671,940. NITE GLO. Andrew H. Johnson, d. b. a. Nite-Glo Markers. SN 27,862. Pub. 10–14–58. Filed 4–10–57.

671,941. TAGON AND DESIGN. Tagon Corporation. SN 36,755. Pub. 10–14–58. Filed 9–5–57.

Class 51—Cosmetics and Toilet Preparations

671,942. SAFFELL'S. R. L. Saffell, d. b. a. R. L. Saffell's Laboratory. SN 30,836. Pub. 10–14–58. Filed 5–27–57.

671,948. BELEZA DI MOSCATELLI AND DESIGN. Nick Moscatello, d. b. a. Moscatello Products Company. SN 30,922. Pub. 10–14–58. Filed 5–28–57.

671,944. TINKERBELL. Tom Fields, Ltd. SN 33,142. Pub. 10–14–58. Filed 7–3–57.

671,945. COCOLIVA. A. y R. Galofre & Cia. Limitada. SN 33,525. Pub. 10–14–58. Filed 8–8–57.

671,946. LIPSTICK "35." National Boulevard Bank of Chicago, assignee of Lanolin Plus, Inc. SN 38,151. Pub. 10–14–58. Filed 10–1–57.

671,947. TREE OF LIFE. Helena Rubinstein, Inc. SN 42,724. Pub. 10–14–58. Filed 12–19–57.

671,948. FRENCH SONATA. Daggett & Ramsdell, Inc. SN 45,375. Pub. 10–14–58. Filed 2–6–58.

671,949. EH. Emmerick E. Henrichsen, d. b. a. E. H. Company. SN 46,830. Pub. 10–14–58. Filed 3–28–58.

Class 52—Detergents and Soaps

671,950. SLAG MASTER. Chemical and Engineering Company. SN 23,447. Pub. 10–14–58. Filed 1–30–57.

671,951. POLY-SAN. U. S. Polychemical Corporation. SN 26,652. Pub. 10–14–58. Filed 3–21–57.

671,952. SWEET HEART AND DESIGN. Manhattan Soap Company, Inc. SN 30,026. Pub. 10–14–58. Filed 5–14–57.

671,953. CLEAR-O-DAN. Revlon, Inc. SN 30,947. Pub. 10–14–58. Filed 5–28–57.

671,954. STRIP FLUSH. De Mert & Dougherty, Inc. SN 32,867. Pub. 10–14–58. Filed 6–26–57.

671,955. HIS PROFECTO AND DESIGN. The House for Men, Inc. SN 35,571. Pub. 10–14–58. Filed 8–15–57.

671,956. SUDSTOWELS. Howard L. Cook. SN 35,984. Pub. 10–14–58. Filed 8–22–57.

671,957. HERTRON AND DESIGN. Hertron Chemical Company. SN 37,957. Pub. 10–14–58. Filed 9–27–57.

671,958. GO-CLEAN. Raymond Groden. SN 42,285. Pub. 10–14–58. Filed 12–12–57.

671,959. DEAN'S MAGIC. M. B. Edwards Company, Inc., d. b. a. M. B. Edwards Co., Inc. SN 44,889. Pub. 10–14–58. Filed 1–29–58.

671,960. SWEATER GIRL. Gateway Chemicals, Inc. SN 45,794. Pub. 10–14–58. Filed 2–18–58.

671,961. NAMISYN FLOSUDS. National Milling & Chemical Company. SN 45,992. Pub. 10–14–58. Filed 2–17–58.

671,962. ELIMSTAPH. Walter G. Legge Company, Inc. SN 52,050. Pub. 10–14–58. Filed 5–21–58.

Service Marks

Class 100—Miscellaneous

671,963. PARSONS. Parsons Corporation. SN 24,072. Pub. 1–14–58. Filed 2–8–57.

671,964. BOATEL. General Marine Corporation. SN 39,960. Pub. 10–14–58. Filed 11–1–57.

Class 101—Advertising and Business

671,965. RADAX DISPLAY ADVERTISING SERVICE AND DESIGN. Harry Kutler, d. b. a. Radax Display Advertising Service. SN 689,048. Pub. 10–14–58. Filed 6–20–55.

671,966. CPC. Customer Preference Clinics, Inc. SN 30,893. Pub. 10–14–58. Filed 5–28–57.

Class 102—Insurance and Financial

671,967. THE FIRST NATIONAL CITY BANK ETC. AND DESIGN. The First National City Bank of New York. SN 43,937. Pub. 10–14–58. Filed 1–14–58.

Class 106—Material Treatment

671,968. GEOMETRIC DESIGN. Keuffel & Esser Company, assignee of Micro-Master, Inc. SN 40,490. Pub. 10–14–58. Filed 11–12–57.

Class 107—Education and Entertainment

671,969. QUEEN FOR A DAY ETC. Queen for a Day, Inc. SN 26,566. Pub. 10–14–58. Filed 3–20–57.

Certification Mark

Class A—Goods

671,970. SAFE TRANSIT ETC. AND DESIGN. Porcelain Enamel Institute, Inc. SN 50,660. Pub. 10–14–58. Filed 4–25–58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

671,971. H. P. Cannon & Son, Inc., Bridgeville, Del. SN 30,146. Filed P. R. 5–16–57. Am. S. R. 10–27–58.

YIELD-MOR

For Pepper Seed for Planting Purposes.
First use Dec. 17, 1956.

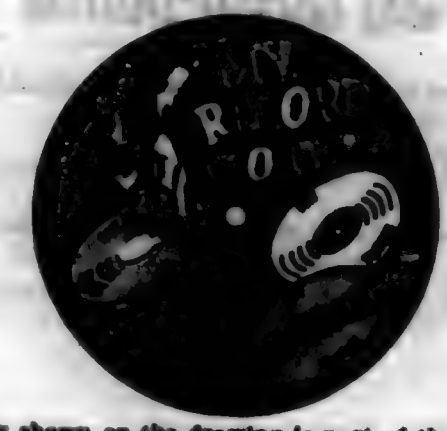
671,972. William Auer Company, Philadelphia, Pa. SN 32,563. Filed P. R. 6–24–57. Am. S. R. 6–25–58.

MOSAIC

For Leather.
First use June 20, 1957.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

671,973. Eastern Bag Manufacturing Corp., New York, N. Y. SN 41,249. Filed P. R. 11–25–57. Am. S. R. 11–4–58.



The lining shown on the drawing is part of the design.
For Portfolios.
First use Sept. 16, 1957.

671,974. Bernard Cahn Co., Inc., New York, N. Y. SN 45,676. Filed P. R. 2-11-58. Am. S. R. 10-23-58.

FLOWER FASHIONS

For Handbags, Purses, and Billfolds.
First use Apr. 8, 1957.

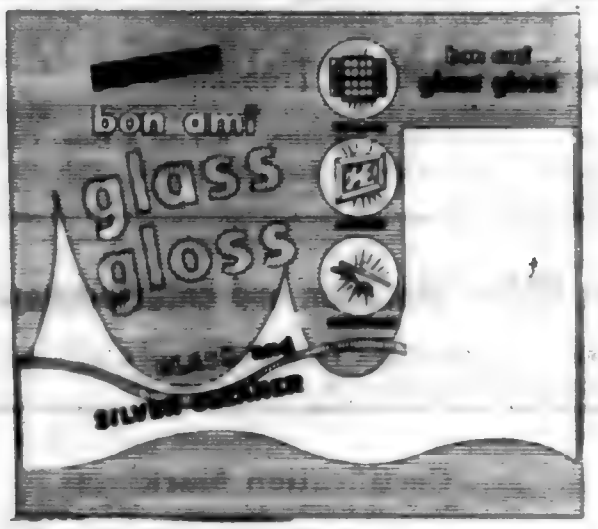
671,975. American Handbags, Inc., New York, N. Y. SN 49,235. Filed P. R. 4-8-58. Am. S. R. 10-23-58.

NO-MAR

For Ladies' Handbags.
First use Feb. 4, 1957.

Class 4—Abrasives and Polishing Materials

671,976. The Bon Ami Company, New York, N. Y. SN 40,313. Filed P. R. 11-8-57. Am. S. R. 10-17-58.



The drawing is lined for pink and blue.
For Combined Cleaning and Polishing Preparation.
First use Oct. 5, 1957; July 5, 1892, as to "Bon Ami"; Mar. 1, 1931, as to "Glass Gloss."

Class 6—Chemicals and Chemical Compositions

671,977. Lustre Products Corporation, Lansing, Mich. SN 36,000. Filed P. R. 8-22-57. Am. S. R. 9-5-58.

SPRAY-AIR

For Aerosol Can of a Special Concentrate for Inflating Tires and Also To Be Used as a Fire Extinguisher.
First use July 22, 1957.

671,978. Sears Stanley Smith, d. b. a. Unique Products, Chicago, Ill. SN 40,506. Filed P. R. 11-12-57. Am. S. R. 10-27-58.

NO-SEW

For Liquid for Use in Fabric Mending.
First use August 1956.

Class 18—Medicines and Pharmaceutical Preparations

671,979. Allied Mills, Inc., Chicago, Ill. SN 9,924. Filed P. R. 6-11-56. Am. S. R. 9-30-58.

WAYNE STRESS DIET

For Poultry Feed Supplement Containing Antibiotics.
First use May 16, 1956.

671,980. Oil of Olls Corporation, Mansfield, Ohio. SN 43,549. Filed P. R. 1-7-58. Am. S. R. 10-27-58.

THE OIL OF OILS

For Foot Balm Having a Stimulating and Analgesic Effect.
First use Jan. 5, 1954.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

671,981. Flash Manufacturing Company, Newark, N. J. SN 49,059. Filed P. R. 4-4-58. Am. S. R. 10-31-58.

LEWIS

For Knives and Blades for Knives.
First use Sept. 8, 1957.

Class 26—Measuring and Scientific Appliances

671,982. Collins Microflat Company, Inc., Hawthorne, Calif. SN 31,198. Filed P. R. 6-3-57. Am. S. R. 7-14-58.

FLATNESS IN MILLIONTHS

For All Surface Plates, Layout Plates, Angle Plates, Straight Edges and Parallels To Provide Accurate Plane Surfaces for Use in Machine Shops for Inspection and Layout Work.
First use Apr. 1, 1956.

671,983. The Aetna Casualty and Surety Company, Hartford, Conn. SN 39,309. Filed P. R. 10-22-57. Am. S. R. 10-30-58.

DRIVOTESTER

For Machines Which Simulate Road Conditions for Testing Drivers.
First use Oct. 21, 1957.

Class 32—Furniture and Upholstery

671,984. B-W Manufacturing Company Inc., Sioux Falls, S. Dak. SN 13,686. Filed P. R. 8-9-56. Am. S. R. 10-27-58.

KITCHEN FIT

The drawing is lined for red.
For Kitchen Cabinets, Breakfast Nooks, and Counter Tops.
First use June 17, 1949.

671,985. Gantner Industries, Inc., Morton Grove, Ill. SN 49,572. Filed P. R. 4-14-58. Am. S. R. 10-23-58.

Gantner's

THE SHOWROOM HOUSE

For Furniture—Namely, Living Room Furniture, Dining Room Furniture, Bedroom Furniture, and Kitchen Furniture.
First use Jan. 15, 1954.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

671,986. Arthur Zimmerman, New York, N. Y. SN 51,099. Filed P. R. 3-11-58. Am. S. R. 11-5-58.

NU-BILT

For Rebuilt Automobile Tires.
First use Oct. 4, 1957.

Class 36—Musical Instruments and Supplies

671,987. Components Corporation, Denville, N. J. SN 23,984. Filed P. R. 2-7-57. Am. S. R. 10-6-58.

Professional COMPONENTS

For Phonograph Turntables and Grooved Phonograph Records.
First use July 24, 1956.

Class 37—Paper and Stationery

671,988. Sterling Pulp & Paper Company, Eau Claire, Wis. SN 20,322. Filed P. R. 12-3-56. Am. S. R. 10-13-58.

A-1

For Toilet Tissue.
First use June 10, 1950.

Class 38—Prints and Publications

671,989. Benwill Publishing Corp., New York, N. Y. SN 39,706. Filed P. R. 10-29-57. Am. S. R. 10-23-58.

ELECTROMECHANICAL
components & systems | DESIGN

For Periodical Publication—Namely, a Trade Journal or Industry Magazine.
First use in June 1957.

671,990. Popular Science Publishing Company, Inc., New York, N. Y., assignee of Fisherman Press Inc., Oxford, Ohio. SN 40,235. Filed P. R. 1?-8-57. Am. S. R. 10-3-58.

OUTDOORS EQUIPMENT MERCHANDISING

For Monthly Magazine.
First use Sept. 9, 1957.

671,991. The American School Food Service Association, Denver, Colo. SN 40,897. Filed P. R. 11-20-57. Am. S. R. 10-13-58.

SCHOOL LUNCH JOURNAL

Applicant disclaims the word "Journal" apart from the mark.
For Magazine.
First use Jan. 1, 1957.

Class 39—Clothing

671,992. Edmont Manufacturing Company, Coshocton, Ohio. SN 28,844. Filed P. R. 4-25-57. Am. S. R. 11-6-58.

BETTER-BUY

For Rubber-Coated and Plastic-Coated Fabric Gloves.
First use on or about Dec. 1, 1954.

671,993. A. Solomon Co., New Orleans, La. SN 35,459. Filed P. R. 8-13-57. Am. S. R. 7-2-58.

STA-PRESS

For Men's and Boys' Suits, Sport Coats, and Trousers.
First use June 25, 1957.

671,994. Conover Juniors, Inc., New York, N. Y. SN 39,595. Filed P. R. 10-28-57. Am. S. R. 10-17-58.

a "Wee Junior Fashion"

For Coats and Suits.
First use Oct. 1, 1957.

Class 45—Soft Drinks and Carbonated Waters

671,995. Landon L. Rogers, d. b. a. The Chilton Co., Winnetka, Ill. SN 40,502. Filed P. R. 11-12-57. Am. S. R. 11-7-58.

CHILTON

For Soft Drinks.
First use Nov. 4, 1957.

Class 46—Foods and Ingredients of Foods

671,996. Utah Poultry & Farmers Cooperative, Salt Lake City, Utah. SN 33,108. Filed P. R. 7-2-57. Am. S. R. 11-6-58.

For Frozen Dressed, Ready to Cook Turkeys.
First use in October 1947.

Class 47—Wines

671,997. L. N. Renault & Sons, Inc., d. b. a. Champagne Vintners, Egg Harbor City, N. J. SN 25,641. Filed P. R. 3-6-57. Am. S. R. 10-14-58.

DEEP PURPLE

For Sparkling Wines.
First use Nov. 13, 1956.

TRADEMARK REGISTRATIONS RENEWED

123,332. CONGOLEUM AND DESIGN. Cl. 20. 10-29-18.
123,479. OLD-TOWN. Cl. 11. 11-12-18.
123,594. CHAMPION. Cl. 23. 11-19-18.
123,912. LONSDALE CO., ETC. AND DESIGN. Cl. 42. 12-17-18.
123,913. LONSDALE CO., ETC. AND DESIGN. Cl. 42. 12-17-18.
124,134. CUTEX. Cl. 44. 1-14-19.
124,353. GRAPELADE. Cl. 46. 2-4-19.
124,595. STRONG-HEWAT AND DESIGN. Cl. 42. 2-25-19.
124,768. KING MIDAS. Cl. 46. 3-11-19.
124,866. SKOOKUM AND DESIGN. Cl. 46. 3-18-19.
125,086. NUNNALLY'S ETC. Cl. 46. 4-8-19.
360,212. WEST BEST. Cl. 46. 9-13-38.
360,493. CONQUETE. Cl. 51. 9-20-38.
361,061. CLIPPER. Cl. 23. 10-4-38.
361,786. GRINDMASTER. Cl. 4. 11-1-38.
361,809. CORNELIA. Cl. 46. 11-1-38.
361,895. TELEFACTS. Cl. 32. 11-1-38.
361,947. UVO. Cl. 18. 11-8-38.
362,168. INCO EVERBRITE AND DESIGN. Cl. 14. 11-15-38.
362,285. HUSSARS. Cl. 39. 11-15-38.
362,286. RAMPS. Cl. 39. 11-15-38.
362,627. RUSKETS. Cl. 46. 11-22-38.
362,653. CLINTON. Cl. 27. 11-22-38.
362,678. PURODIESEL. Cl. 15. 11-29-38.
362,786. IMRA. Cl. 51. 11-29-38.
362,787. BULL'S EYE. Cl. 26. 11-29-38.
363,269. SUPRE-MACY. Cl. 42. 12-20-38.
363,290. STRATHMORE. Cl. 37. 12-20-38.
363,298. LUXTRA. Cl. 15. 12-20-38.
363,857. R. K. TONE. Cl. 37. 1-10-39.
364,045. RHYTHM STEP AND DESIGN. Cl. 39. 1-17-39.
364,194. HEALD RED HEAD. Cl. 23. 1-24-39.
364,300. FRANCO AND DESIGN. Cl. 46. 1-24-39.
364,311. GOLDEX. Cl. 44. 1-24-39.
364,312. NIFTEES. Cl. 37. 1-24-39.
364,315. BLUE-SHORE. Cl. 46. 1-24-39.
364,435. FROST GUARD. Cl. 6. 1-31-39.
364,679. THE MARCH OF TIME. Cl. 39. 2-14-39.
364,758. ARTEMIS AND DESIGN. Cl. 39. 2-14-39.
364,777. COMBINO. Cl. 24. 2-14-39.
365,017. PROTEOLAC. Cl. 18. 2-21-39.
365,238. KOOLOHM. Cl. 21. 2-28-39.
365,367. INTERNATIONAL CHEMICALS AND DESIGN. Cl. 6. 3-7-39.
365,405. GWALTNEY'S AND DESIGN. Cl. 46. 3-7-39.
365,571. THE WILKEN FAMILY ETC. AND 3 PORTRAITS. Cl. 49. 3-14-39.
365,572. THE WILKEN FAMILY ETC. AND 3 PORTRAITS. Cl. 49. 3-14-39.
365,585. MERCURY. Cl. 19. 3-14-39.
365,682. FRATERNITY. Cl. 39. 3-14-39.
365,940. SOPANOX. Cl. 6. 3-21-39.
366,096. TRIG. Cl. 13. 3-28-39.
366,263. THE KEY TO QUALITY AND REPRESENTATION OF KEY. Cl. 43. 4-11-39.
366,386. THE KEY TO QUALITY AND REPRESENTATION OF KEY. Cl. 42. 4-11-39.
366,415. TRIUMPH. Cl. 39. 4-11-39.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

370,425. HYGENOL. Cl. 4. 8-29-39.
657,911. X-LENT AND DESIGN. Cl. 46. 1-28-58.

Section 8

The following registrations issued Nov. 11, 1951

566,467. ANCHOR PRESSON. Cl. 50.
566,471. AMBER SWEET. Cl. 46.
566,474. AUTO NAILER ETC. AND DESIGN. Cl. 23.
566,487. WILEY R. BAKER AND DESIGN. Cl. 18.
566,490. ATOMIC ROCKET. Cl. 39.
566,496. "TANKS FOR THE WORLD" COLUMBIAN AND DESIGN. Cl. 34.
566,497. WONDE ROLL AND DESIGN. Cl. 29.
566,498. BABY CHARMING. Cl. 39.
566,499. DESIGN OF TWO FIGURES WITH FLOWER BORDER. Cl. 46.
566,504. THE CASE HISTORY. Cl. 26.
566,505. PLYSONITE. Cl. 12.
566,507. COOK COFFEE COMPANY AND DESIGN. Cl. 46.
566,508. THE STUART LYOPHILATED MULTIVITAMIN DROPS. Cl. 18.
566,511. ASCO AND DESIGN. Cl. 46.
566,519. MANCHILD. Cl. 39.
566,526. HANDY DANDY AND DESIGN. Cl. 22.
566,528. BURNISH BOY AND DESIGN. Cl. 29.
566,529. DAIRY-MOR. Cl. 46.
566,538. L'ANTHOLOGIE SONORE AND DESIGN. Cl. 36.
566,539. CINEVISION. Cl. 26.
566,544. RAMAPO AJAX AND DESIGN. Cl. 14.
566,548. STRIKE OR SPARE. Cl. 39.
566,551. FLYING SAUCER. Cl. 22.
566,552. ESTHER CREATIONS. Cl. 13.
566,555. WHITE ROTARY SEWMASTER AND DESIGN. Cl. 23.
566,560. COVINGTON. Cl. 42.
566,561. DURA-PAK. Cl. 4.
566,562. SCOTIA. Cl. 48.
566,565. BIREM. Cl. 18.
566,566. RED-DEE. Cl. 20.
566,567. KATONIUM. Cl. 18.
566,572. REPRESENTATION OF WINDMILL. Cl. 19.
566,575. REPRESENTATION OF A HAPPY EGG. Cl. 46.
566,576. M'LAD. Cl. 39.
566,578. SYLVAN. Cl. 50.

521,240. LIGHT CRUST ETC. AND DESIGN. Cl. 46. 2-21-50. Tex-O-Kan Flour Mills Co., doing business as Burrus Mill & Elevator Co. Burrus Mills, Incorporated.

confining the yellow background, is inserted, and the drawing is amended to appear:

566,590. ROTO-OIL. Cl. 15.
566,600. OPTIMUS AND DESIGN. Cl. 34.
566,602. SPEEDY. Cl. 23.
566,603. TEXSTAR. Cl. 50.
566,604. HELDENA. Cl. 24.
566,616. MERRY. Cl. 31.
566,622. CYANA. Cl. 42.
566,623. GLO PAD "TOUCH AND GLO." Cl. 28.
566,624. DECOSHEEN. Cl. 20.
566,631. ECSTASHEER. Cl. 42.
566,632. BEDFORD. Cl. 42.
566,633. BEDFORD SQUARE. Cl. 42.
566,635. SUTTACADE. Cl. 42.
566,637. FLANDER. Cl. 39.
566,638. SUTTA CLOTH. Cl. 42.
566,639. SUTTACO. Cl. 42.
566,642. UTIL-I-KIT. Cl. 39.
566,644. THE PBA SENTINEL ETC. AND DESIGN. Cl. 38.
566,650. A QUAL-ECON PRODUCT. Cl. 46.
566,654. ADVER-TIES. Cl. 39.
566,661. SHOO-FRIES. Cl. 46.
566,662. SILVERTEX. Cl. 39.
566,663. SINGING COWBOY GUITARETTE. Cl. 22.
566,676. BARON. Cl. 26.
566,677. CAPRISINE. Cl. 39.
566,678. DESIGN WITHIN CIRCLE. Cl. 32.
566,679. DESIGN WITHIN CIRCLE. Cl. 42.
566,683. GABSIZE. Cl. 39.
566,685. ZIP-TOE AND DESIGN. Cl. 32.
566,686. CONSAC. Cl. 12.
566,691. DUNGA-KNIT. Cl. 39.
566,695. "R" REINFORCED AND DESIGN. Cl. 22.
566,698. TULIP TOWN BRAND AND DESIGN. Cl. 46.
566,704. MUSIC-MASTER. Cl. 3.
566,707. DITTOLITH. Cl. 23.
566,711. MOBLYTITE. Cl. 12.
566,718. BLUE-HERON. Cl. 39.
566,721. ASTRID. Cl. 3.
566,728. "WEE WORKERS." Cl. 39.
566,729. ANGELICAN. Cl. 39.
566,732. TERRY. Cl. 3.
566,743. BIOHEPULIN. Cl. 18.
566,75-. RAT TRAP. Cl. 46.
566,758. NIXSIZE. Cl. 5.
566,766. E-Z TEST. Cl. 13.
566,767. QUICK. Cl. 44.
566,769. CRISLER'S KAN KAKE. Cl. 46.
566,774. WOOD-LOCKE'S SLICE'N BAKE. Cl. 46.
566,781. REPRESENTATION OF DOGS. Cl. 46.

Section 15

145,851. ALLIGATOR. Cl. 12. 8-16-21.
346,528. STALEY'S RECORD ETC. AND DESIGN. Cl. 46. 6-1-37.
378,947. HI-LARKS. Cl. 39. 6-25-40.
379,092. TIGER TOGS. Cl. 39. 7-2-40.
404,157. ELECTRONICS ENGINEERING. Cl. 38. 11-2-43.
429,094. STA-FRESH. Cl. 8. 4-15-47.
432,706. REDI-TYE. Cl. 40. 9-9-47.
434,995. DREAM PUFF. Cl. 6. 12-9-47.
546,390. NICA. Cl. 21. 8-7-51.
578,800. DANLEIGH. Cl. 39. 6-18-53.
599,351. JOLLY JEAN AND DESIGN. Cl. 39. 12-14-54.
652,123. WASH-O-MATIC. Cl. 42. 9-24-57.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

50,479. LIGHT CRUST. Cl. 46. 3-20-06. The Burrus Mill & Elevator Company. Burrus Mills, Incorporated, Dallas, Tex. Amended to appear:

LIGHT CRUST

187,740. DELFIBER. Cl. 42. 8-12-24. Deltox Grass Rug Company. Deltox Rug Company, Oshkosh, Wis. Amended to appear:

DELFIBRE

354,721. JOAN MILLER. Cl. 39. 2-22-38. Rhea Manufacturing Company, Milwaukee, Wis. Amended: In the statement, column 2, lines 5 through 8 are deleted and *The trademark consists of the words JOAN MILLER, a living individual, whose consent to the registration is filed in this application.* is inserted, and the drawing is amended to appear:

JOAN MILLER

365,061. THE GRAPEVINE AND DESIGN. Cl. 38. 3-14-39. Society of Former Special Agents of the Federal Bureau of Investigation Inc. Society of Former Special Agents of the Federal Bureau of Investigation, Inc., New York, N. Y. Amended: In the statement, column 1, lines 8 and 9, "Published Quarterly" is deleted, and the drawing is amended to appear:

502,439. LIGHT CRUST. Cl. 46. 9-28-48. Tex-O-Kan Flour Mills Co., doing business as Burrus Mill & Elevator Co. Burrus Mills, Incorporated, Dallas, Tex. Amended to appear:

LIGHT CRUST

516,272. BURRUS MILL & ELEVATOR CO. ETC. AND DESIGN. Cl. 46. 12-6-49. Tex-O-Kan Flour Mills Co., doing business as Burrus Mill and Elevator Co. Burrus Mills, Incorporated, Dallas, Tex. Amended: In the statement, column 1, lines 27 through 31, and column 2, lines 1 through 3 are deleted and *The name and address "BURRUS MILL & ELEVATOR CO. FT. WORTH, TEX." appear in white letters on a red periphery. The woman (fanciful representation) is shown against a yellow background. This color scheme is an essential feature of the mark. No claim is made to the words: "MILL & ELEVATOR CO. FT. WORTH, TEX."* is inserted, and the drawing is amended to appear:

521,240. LIGHT CRUST ETC. AND DESIGN. Cl. 46. 2-21-50. Tex-O-Kan Flour Mills Co., doing business as Burrus Mill & Elevator Co. Burrus Mills, Incorporated, Dallas, Tex. Amended: In the statement, column 1, lines 26 through 32, and column 2, lines 1 through 6 are deleted and *is shown in white letters on a blue panel. The fictitious female figure is wearing a blue dress with white collar. She appears against a yellow background. The words "BURRUS MILL & ELEVATOR CO. FT. WORTH, TEX." appear in white letters on a red periphery. This red periphery confines the yellow background on which the female figure appears. No claim is made to the words: "MILL & ELEVATOR CO. FT. WORTH, TEX."* is inserted, and the drawing is amended to appear:

565,362. ORZAN AND DESIGN. Cl. 10. 10-14-52. Crown Zellerbach Corporation, San Francisco, Calif. Amended to appear:

ORZAN

566,702. ORZAN AND DESIGN. Cl. 6. 11-11-52. Crown Zellerbach Corporation, San Francisco, Calif. Amended to appear:

ORZAN

611,515. FASWEET. Cl. 46. 8-30-55. Lucian L. Spellings, doing business as The Fasweet Company, Jonesboro, Ark. Amended to appear:

FASWEET

615,415. LIGHT CRUST ETC. AND DESIGN. Cl. 46. 11-1-55. Burrus Mills, Incorporated, doing business as Burrus Mill & Elevator Co. Burrus Mills, Incorporated, Dallas, Tex. Amended: In column 2, lines 2 through 7 are deleted and *dark hair and is wearing a blue dress with white collar and is shown against a yellow background. The words "BURRUS MILL & ELEVATOR CO. FT. WORTH, TEX." appear in white letters on a red periphery confining the yellow background.* is inserted, and the drawing is amended to appear:

631,551. DYLAN. Cl. 6. 7-31-56. Koppers Company, Inc., Pittsburgh, Pa. Corrected: In the certificate in column 2, line 1, "Polystyrene" should be deleted and *Polyethylene* should be inserted.

647,962. COW HEAD DESIGN. Cl. 46. 7-2-57. The Borden Company, New York, N. Y. Amended to appear:

664,719. IT'S THE HIDDEN QUALITY THAT SPELLS TRUE VALUE AND DESIGN. Cl. 32. 7-22-58. The Basic-Witz Furniture Industries, Incorporated, Waynesboro, Va. Amended to appear:

667,139. SPORT MISTER. Cl. 39. 9-16-58. Sport-Wear Hosiery Mills, Inc., Etowah, Tenn. Corrected:

SPORT Mister

667,845. RUSSIANETTE. Cl. 46. 9-30-58. Carter Products, Inc., New York, N. Y., assignee of The Frenchette Co. Inc. Corrected: In the certificate, column 1, line 1, before "The" *Carter Products, Inc., assignee of* should be inserted.

669,474. HALOID XEROX. Cl. 6. 11-11-58. Haloid Xerox Inc., Rochester, N. Y., by change of name from The Haloid Company. Corrected: In the certificate, column 1, line 1, before "Xerox", *Haloid* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(e), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

569,076. FIAT. Cl. 19. Fiat Società per Azioni. 1-27-53 New Cert. Sec. 7(e), to Fiat Motor Company, Inc., New York, N. Y., 12-30-58.

INDEX OF REGISTRANTS

DECEMBER 30, 1958

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A. C. Martinelli Rogers Plastic Corp., West Warren, Mass. 671,647, pub. 10–14–58. Cl. 2.
A. M. Hosiery Co., Inc., New York, N. Y. 566,642, canc. Cl. 39.
AMP 3 Records, Inc., New York, N. Y. 671,850, pub. 10–14–58. Cl. 36.
Active Therapy Products Co.: *See*—
Lewis, Mack O.
Aetna Casualty and Surety Co., The, Hartford, Conn. 671,983. Cl. 35.
Aktiebolaget Optimus, Upplands-Vasby, Sweden. 566,600, canc. Cl. 34.
Albee, Benay, Novelty Co., Brooklyn, N. Y. 566,490, canc. Cl. 39.
Allied Mills, Inc., Chicago, Ill. 671,979. Cl. 18.
Alsol Products Co., Irvington, N. J. 671,719, pub. 10–14–58. Cl. 15.
Aluminum Cooking Utensil Co., Inc., The, New Kensington, Pa. 671,648, pub. 10–14–58. Cl. 2.
Amburgo Co., Inc., The, Philadelphia, Pa. 671,671, pub. 10–14–58. Cl. 6.
Amer, William, Co., Philadelphia, Pa. 671,972. Cl. 1.
American Biltrite Rubber Co. Inc., Chelsea, Mass. 671,847, pub. 10–14–58. Cl. 25.
American Brake Shoe Co., New York, N. Y. 566,544, canc. Cl. 14.
American Brass & Iron Foundry, The, Oakland, Calif. 671,704, pub. 10–14–58. Cl. 13.
American Cone and Pretzel Co., St. Louis, Mo. 671,912, pub. 10–14–58. Cl. 46.
American Cyanamid Co., New York, N. Y. 566,622, canc. Cl. 42.
American Cyanamid Co., New York, N. Y. 671,674, pub. 10–14–58. Cl. 6.
American Gage & Machine Co., Chicago, Ill. 671,822, pub. 10–14–58. Cl. 26.
American Handbags, Inc., New York, N. Y. 671,975. Cl. 3.
American Laundry Machinery Co., The, Cincinnati, Ohio. 671,820, pub. 10–14–58. Cl. 24.
American Potash & Chemical Corp., Los Angeles, Calif. 671,661, pub. 10–14–58. Cl. 6.
American Road Equipment Co., Inc., Omaha, Nebr. 671,764, pub. 10–14–58. Cl. 19.
American School Food Service Association, The, Denver, Colo. 671,991. Cl. 38.
American Stores Co., Philadelphia, Pa. 566,511, canc. Cl. 46.
Anchor Hocking Glass Corp., Lancaster, Ohio. 568,467, canc. Cl. 50.
Androc Chemical Co.: *See*—
Andrus, Colebert L.
Andrus, Colebert L., d. b. a. Androc Chemical Co., Minneapolis, Minn. 671,659, pub. 10–14–58. Cl. 6.
Angelica Uniform Co., St. Louis, Mo. 566,720, canc. Cl. 39.
Anthony Co., Streator, Ill. 671,803, pub. 10–14–58. Cl. 22.
Arid Sand Co., Inc., Akron, Ohio. 671,658, pub. 10–14–58. Cl. 5.
Artemis, Inc.: *See*—
Weil-Kalter Mfg. Co.
Ashland Oil & Refining Co., Ashland, Ky. 671,717, pub. 10–14–58. Cl. 15.
Astrid Corp., New York, N. Y. 566,721, canc. Cl. 3.
Atlas Supply Co., Newark, N. J. 364,435, ren. 1–21–59. Cl. 6.
Auto-Nailer Co.: *See*—
Auto-Soler Co., The.
Auto-Soler Co., The, also d. b. a. The Auto-Nailer Co., Atlanta, Ga. 566,474, canc. Cl. 23.
B-W Mfg. Co. Inc., Sioux Falls, S. D. 671,984. Cl. 32.
Baitch & Castaldi, Inc., New York, N. Y. 671,683, pub. 10–14–58. Cl. 42.
Baker, Wiley R., Long Beach, Calif. 566,487, canc. Cl. 18.
Bardach & Schoene Co., Inc., Chicago, Ill. 671,902, pub. 10–14–58. Cl. 44.
Basic Products Corp., by change of name from Freedtert Corp., The, Milwaukee, Wis. 671,935, pub. 10–14–58. Cl. 48.
Basic-Witz Furniture Industries, Inc., Waynesboro, Va. 664,719. Am. 7(d). Cl. 22.
Beacon Mfg. Co., Swannanoa, N. C. 671,890, pub. 10–14–58. Cl. 42.
Beagle Mfg. Co., Inc., Pasadena, Calif. 671,644, pub. 10–14–58. Cl. 2.
Beasley, Frank A., d. b. a. Fab Recording Co., New York, N. Y. 671,852, pub. 10–14–58. Cl. 36.
Benton-Kirby, Inc., Milwaukee, Wis. 671,698, pub. 10–14–58. Cl. 10.
Benwill Publishing Corp., New York, N. Y. 671,889. Cl. 38.
Berkshire Hathaway, Inc., Providence, R. I. 671,892, pub. 10–14–58. Cl. 42.
Bienen-Davis, Inc., New York, N. Y. 566,704, canc. Cl. 3.
Bilet Products: *See*—
Bilet Products, Inc.
Bilet Products, Inc., from William Farber, d. b. a. Bilet Products, Detroit, Mich. 671,760, pub. 10–14–58. Cl. 19.
Black and Decker Mfg. Co., The, Towson, Md. 566,590, canc. Cl. 15.
Bodine, A. W., d. b. a. Bodine Produce Co., Phoenix, Ariz. 671,926, pub. 10–14–58. Cl. 46.
Bodine Produce Co.: *See*—
Bodine, A. W.
Bolufer, Ismael P., Madrid, Spain. 671,859, pub. 10–14–58. Cl. 38.
Box Azul Co., The, New York, N. Y. 671,976. Cl. 4.
Bonafide Mills, Inc., New York, N. Y. 671,766, pub. 10–14–58. Cl. 20.
Borden Co., The, New York, N. Y. 647,962. Am. 7(d). Cl. 46.
Boston Machine Works Co., Lynn, Mass. 671,843, pub. 10–14–58. Cl. 34.
Brecsette, Inc.: *See*—
Hehr Mfg. Co.
Bretter, Harry R., Inc., New York, N. Y. 576,800, canc. Cl. 39.
Brooklyn Mills, Inc., Englewood, N. J. 671,987–8, pub. 10–14–58. Cl. 39.
Brown Co., Boston, Mass. 671,697, pub. 10–14–58. Cl. 10.
Building Centre (B. C.) Ltd., The, Vancouver, British Columbia, Canada. 671,857, pub. 10–14–58. Cl. 38.
Burke-Decker, Inc., New York, N. Y. 671,887, pub. 10–14–58. Cl. 42.
Burlington Mills Inc., Burlington, Wis. 671,763, pub. 10–14–58. Cl. 19.
Burlington Mills Inc., Burlington, Wis. 671,884, pub. 10–14–58. Cl. 42.
Burrus Mill & Elevator Co.: *See*—
Tex-O-Kan Flour Mills Co.
Burrus Mills, Inc.
Burrus Mill & Elevator Co., The Burrus Mills, Inc., Dallas, Tex. 50,479. Am. 7(d). Cl. 46.
Burrus Mills, Inc.: *See*—
Burrus Mill & Elevator Co., The.
Tex-O-Kan Flour Mills Co.
Burrus Mills, Inc., d. b. a. Burrus Mill & Elevator Co. Burrus Mills, Inc., Dallas, Tex. 615,415. Am. 7(d). Cl. 46.
C & D Batteries, Inc., Conshohocken, Pa. 671,786, pub. 10–14–58. Cl. 21.
C & F Machine Works, Minneapolis and St. Paul, Minn. 566,497, canc. Cl. 29.
Cahn, Bernard, Co., Inc., New York, N. Y. 671,974. Cl. 3.
Cannon, H. P., & Son, Inc., Bridgeville, Del. 671,971. Cl. 1.
Cappellino, Francesco, & Sons, Rochester, N. Y. 364,300, ren. 1–24–59. Cl. 46.
Carris Candies: *See*—
Carris, James M.
Carris, James M., d. b. a. Carris Candies, Riverside, Calif. 671,927, pub. 10–14–58. Cl. 46.
Carter Products, Inc., New York, N. Y., from The Frenchette Co. Inc. 667,845, cor. Cl. 46.
Case History, The, Detroit, Mich. 566,504, canc. Cl. 26.
Cascade Products, Inc., Kent, Wash. 671,794, pub. 10–14–58. Cl. 22.
Central States Sales, Inc., Hutchinson, Kans. 671,798, pub. 10–14–58. Cl. 23.
Challenge Mfg. Co., Los Angeles, Calif. 671,821, pub. 10–14–58. Cl. 24.
Champagne Vintners: *See*—
Renault L. N., & Sons, Inc.
Champion Dish Washing Machine Co.: *See*—
Hamilton-Low Co., The.
Charming Undee Co., New York, N. Y. 566,498, canc. Cl. 39.
Chemical and Engineering Co., Chicago, Ill. 671,950, pub. 10–14–58. Cl. 52.
Chesterton, A. W., Co., Everett, Mass. 671,845, pub. 10–14–58. Cl. 35.
Chicago Flexible Shaft Co., to Sunbeam Corp., Chicago, Ill. 361,786, ren. 11–1–58. Cl. 4.
Chicago Pharmacal Co., Chicago, Ill. 671,727, pub. 10–14–58. Cl. 18.
Ciba Pharmaceutical Products Inc., Summit, N. J. 671,741, pub. 10–14–58. Cl. 18.
Cinevision, Inc.: *See*—
Rainbow Films, Inc.
Circle Plastics Co., Garwood, N. J. 671,681–2, pub. 10–14–58. Cl. 2.
Clarage Fan Co., Kalamazoo, Mich. 671,839, pub. 10–14–58. Cl. 24.
Clarel Laboratory, Chicago, Ill. 671,696, pub. 10–14–58. Cl. 10.
Clauss Cutlery Co., Fremont, Ohio. 671,804, pub. 10–14–58. Cl. 23.
Clinton Watch Co.: *See*—
Wein, Hyman.
Cole of California, Inc., Los Angeles, Calif. 671,870, pub. 10–14–58. Cl. 39.
Collins Microflat Co., Inc., Hawthorne, Calif. 671,962. Cl. 26.
Colton Razor Blade Co., Boston, Mass. 671,807, pub. 10–14–58. Cl. 23.
Columbian Steel Tank Co., Kansas City, Mo. 566,496, canc. Cl. 34.

Commercial Controls Corp., Rochester, N. Y. 671,768, pub. 10–14–58. Cl. 21.
Commodore Import Corp., Brooklyn, N. Y. 671,776, pub. 10–14–58. Cl. 21.
Components Corp., Denville, N. J. 671,987. Cl. 36.
Concure Corp., Fort Worth, Tex. 566,686, canc. Cl. 12.
Cone Mills Inc., New York, N. Y. 671,889, pub. 10–14–58. Cl. 42.
Congoleum Co., The, Philadelphia, Pa., to Congoleum-Nairn Inc., Kearny, N. J. 123,352, ren. 10–29–58. Cl. 20.
Congoleum-Nairn Inc.: *See*—
Congoleum Co., The.
Conover Juniors, Inc., New York, N. Y. 671,994. Cl. 39.
Consolidated Sewing Machine Corp., New York, N. Y. 671,800, pub. 10–14–58. Cl. 23.
Consolidated Tool Co., Los Angeles, Calif. 671,814, pub. 10–14–58. Cl. 23.
Continental Converters Corp., New York, N. Y. 671,891, pub. 10–14–58. Cl. 42.
Continental Merchandise Co., Inc., New York, N. Y. 566,578, canc. Cl. 50.
Cook Coffee Co., The, Cleveland, Ohio. 566,507, canc. Cl. 46.
Cook, Howard L., Santa Barbara, Calif. 671,956, pub. 10–14–58. Cl. 52.
Cooper, Wells & Co., St. Joseph, Mich. 566,718, canc. Cl. 39.
Coors, Adolph, Co., Golden, Colo. 671,933, pub. 10–14–58. Cl. 48.
Copper Pigment and Chemical Works, Inc., Elizabeth, N. J. 671,685, pub. 10–14–58. Cl. 6.
Cosmopolitan Die Cast Products Co.: *See*—
Johnson, Harold W. I.
Cowden Mfg. Co., Lexington, Ky. 671,873; pub. 10–14–58. Cl. 39.
Crane Packing Co., Morton Grove, Ill. 671,714, pub. 10–14–58. Cl. 15.
Crisler's Bakery, Hapeville, Ga. 566,769, canc. Cl. 46.
Crown Zellerbach Corp., San Francisco, Calif. 565,362. Am. 7(d). Cl. 10.
Crown Zellerbach Corp., San Francisco, Calif. 566,702. Am. 7(d). Cl. 6.
Crystal Research Laboratories, Inc., Hartford, Conn. 671,833, pub. 10–14–58. Cl. 31.
Custombilt Plastic Molding Co., Alhambra, Calif. 566,663, canc. Cl. 22.
Customer Preference Clinics, Inc., New York, N. Y. 671,966, pub. 10–14–58. Cl. 101.
Daggett & Ramsdell, Inc., New York, N. Y. 671,948, pub. 10–14–58. Cl. 51.
Dairy-Mor Co.: *See*—
Rodberg, Edgar O.
Dantoy Products, Burlingame, Calif. 671,649, pub. 10–14–58. Cl. 2.
Dare Products, Inc., Battle Creek, Mich. 671,784, pub. 10–14–58. Cl. 21.
Da Val Mfg. Co., Kansas City, Mo. 566,548, canc. Cl. 39.
Deltox Grass Rug Co. Deltox Rug Co., Oshkosh, Wis. 187,749. Am. 7(d). Cl. 42.
Deltox Rug Co.: *See*—
Deltox Grass Rug Co.
De Mert & Dougherty, Inc., Chicago, Ill. 671,954, pub. 10–14–58. Cl. 52.
Dennis, Jos. K., Boston, Mass. 566,562, canc. Cl. 46.
Deseret Pharmaceutical Co., Inc., Salt Lake City, Utah. 671,730, pub. 10–14–58. Cl. 18.
Deutsche Grammophon Gesellschaft m. b. H., Hannover, Germany. 671,854, pub. 10–14–58. Cl. 36.
Dexter Chemical Corp., New York, N. Y. 671,675–7, pub. 10–14–58. Cl. 6.
Ditto, Inc., Chicago, Ill. 566,707, canc. Cl. 23.
Divine Brothers Co., Utica, N. Y. 671,708, pub. 10–14–58. Cl. 13.
Dr. Ballowitz & Co., Bad Soden (Taunus), Germany. 671,726, pub. 10–14–58. Cl. 18.
Driver, Wilbur B., Co., Newark, N. J. 671,712, pub. 10–14–58. Cl. 14.
Dunham, Berman S., d. b. a. Thumb-Out Co., Toledo, Ohio. 671,901, pub. 10–14–58. Cl. 44.
Du Pont, E. I., de Nemours and Co., Wilmington, Del. 671,724, pub. 10–14–58. Cl. 16.
Durawool, Inc., Brooklyn, N. Y. 566,561, canc. Cl. 4.
Darling, Richard A., Roselle, N. J. 566,644, canc. Cl. 38.
Durr Products, Inc., Dayton, Ohio. 671,740, pub. 10–14–58. Cl. 18.
E. H. Co.: *See*—
Henrichsen, Emmerick E.
Eagle Electric Mfg. Co., Inc., Long Island City, N. Y. 671,767, pub. 10–14–58. Cl. 21.
Eastern Bag Mfg. Corp., New York, N. Y. 671,973. Cl. 3.
Eastman Kodak Co., Rochester, N. Y. 362,787, ren. 11–29–58. Cl. 26.
Edmont Mfg. Co., Coshocton, Ohio. 671,992. Cl. 39.
Edwards, M. B., Co., Inc., d. b. a. M. B. Edwards Co., Inc., Philadelphia, Pa. 671,959, pub. 10–14–58. Cl. 52.
Electric Auto-Lite Co., The, Toledo, Ohio. 671,782, pub. 10–14–58. Cl. 21.
Embassy Steel Products, Inc., Brooklyn, N. Y. 671,840, pub. 10–14–58. Cl. 34.
Emporium Capwell Co., The, d. b. a. The Emporium, San Francisco, Calif. 566,678, canc. Cl. 32.
Emporium Capwell Co., The, d. b. a. The Emporium, San Francisco, Calif. 566,679, canc. Cl. 42.
Emporium, The: *See*—
Emporium Capwell Co., The.
Emsig Mfg. Co., New York, N. Y. 671,881, pub. 10–14–58. Cl. 40.
Enicar S. A. (Enicar A. G.) (Enicar Ltd.), Lengnau, pres Bienne, Switzerland. 671,825, pub. 10–14–58. Cl. 27.
Evans Products Co., Plymouth, Mich. 671,785, pub. 10–14–58. Cl. 19.
Exe-Orange Co., Chicago, Ill. 671,903, pub. 10–14–58. Cl. 45.
F. & M. Importing Co. Inc., d. b. a. Santa Monica Importing Co., Los Angeles, Calif. 361,809, ren. 11–1–58. Cl. 46.
F. & N. Lawn Mower Co., The, Richmond, Ind. 671,805, pub. 10–14–58. Cl. 23.
Fab Recording Co.: *See*—
Beasley, Frank A.
Falcon Mfg. Co., Dallas, Tex. 671,837, pub. 10–14–58. Cl. 32.
Famor Importing Co., Inc., New York, N. Y. 671,826, pub. 10–14–58. Cl. 28.
Famous-Sternberg, Inc., New Orleans, La. 671,877, pub. 10–14–58. Cl. 39.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 671,732, pub. 6–3–58. Cl. 18.
Farber, William: *See*—
Bilet Products, Inc.
Farel Destin, Inc., New York, N. Y. 434,905, canc. Cl. 6.
Farm Bureau Cooperative Association, The, Columbus, Ohio. 671,720, pub. 10–14–58. Cl. 15.
Fasweet Co., The: *See*—
Spellings, Lucian L.
Ferro Corp., The, Cleveland, Ohio, from Prince Mfg. Co., The, Bowmanstown, Pa. 671,643, pub. 4–8–58. Cl. 1.
Fiat Motor Co., Inc.: *See*—
Fiat Societa per Azioni.
Fiat Societa per Azioni, to Fiat Motor Co., Inc., New York, N. Y. 569,676, new cert. Cl. 19.
Fields, Tom, Ltd., Englewood, N. J. 671,944, pub. 10–14–58. Cl. 51.
Fiese & Firstenberger Mfg., Inc., Fresno, Calif. 671,801, pub. 10–14–58. Cl. 23.
Finch, Joseph S., and Co.: *See*—
Wilken Family, Inc., The.
Fine Products Corp.: *See*—
Nunnally Co., The.
Finneran, Edward T., Co., Inc., New York, N. Y. 671,922, pub. 10–14–58. Cl. 46.
First National City Bank of New York, The, New York, N. Y. 671,967, pub. 10–14–58. Cl. 102.
Fisherman Press Inc.: *See*—
Popular Science Publishing Co.
Flash Mfg. Co., Newark, N. J. 671,981. Cl. 23.
Flaver-Lok Corp., d. b. a. Spruce Co., Wilmington, Del. 671,905, pub. 10–14–58. Cl. 45.
Flocke & Co.: *See*—
Flocke, Karl.
Flocke, Karl, d. b. a. Flocke & Co., Solingen, Germany. 671,799, pub. 10–14–58. Cl. 23.
Fluke Metal Products, Inc., Seattle, Wash. 671,706, pub. 10–14–58. Cl. 13.
Ford Motor Co., Dearborn, Mich. 365,585, ren. 3–14–59. Cl. 19.
Foremost Dairies, Inc., San Francisco, Calif. 671,918, pub. 10–14–58. Cl. 46.
Formfit Co., The, Chicago, Ill. 671,865, pub. 10–14–58. Cl. 39.
Fortuna Foundations, Inc., New York, N. Y. 671,872, pub. 10–14–58. Cl. 39.
Frankel Associates, Inc., New York, N. Y, 671,895, pub. 10–14–58. Cl. 42.
Frenchette Co. Inc.: *See*—
Carter Products, Inc.
Freshie, Inc., Merced, Calif. 566,575, canc. Cl. 46.
Froedtert Corp., The: *See*—
Basic Products Corp.
Gallo, E. & J., Winery, Modesto, Calif. 671,930, pub. 10–14–58. Cl. 47.
Galofre, A. Y. R., & Cia, Limitada, Bogota Colombia. 671,945, pub. 10–14–58. Cl. 51.
Gantner Industries, Inc., Morton Grove, Ill. 671,985. Cl. 32.
Gateway Chemicals, Inc., Chicago, Ill. 671,960, pub. 10–14–58. Cl. 52.
Gemco Mfg. Corp., Indianapolis, Ind. 671,645, pub. 10–14–58. Cl. 2.
Gemological Institute of America: *See*—
Gemological Institute of America, Inc.
Gemological Institute of America, Inc., d. b. a. Gemological Institute of America, Los Angeles, Calif. 671,824, pub. 10–14–58. Cl. 26.
General Conference of The Church of God (Seventh Day), The, d. b. a. Trurock Publications, Denver, Colo. 671,855, pub. 10–14–58. Cl. 38.
General Electric Co., Hudson Falls, N. Y. 671,777, pub. 10–14–58. Cl. 21.
General Electric Co., Plainville, Conn. 671,780, pub. 10–14–58. Cl. 21.
General Fireproofing Co., The, Youngstown, Ohio. 361,895, ren. 11–1–58. Cl. 32.
General Marine Corp., Harvey, La. 671,964, pub. 10–14–58. Cl. 100.
General Tire & Rubber Co., The, Akron, Ohio. 671,705, pub. 10–14–58. Cl. 13.
Girard's, Inc., San Rafael, Calif. 671,929, pub. 10–14–58. Cl. 46.
Glove Brewing Co., The, Baltimore, Md. 671,934, pub. 10–14–58. Cl. 48.
Goldsmith Bros., New York, N. Y. 363,857, ren. 1–10–59. Cl. 37.
Goldsmith Bros., New York, N. Y. 364,311, ren. 1–24–59. Cl. 44.
Goldsmith Bros., New York, N. Y. 364,312, ren. 1–24–59. Cl. 37.
Green Giant Co., Le Sueur, Minn. 671,925, pub. 10–14–58. Cl. 46.
Greene Plastics, Inc., Wakefield, R. I. 566,552, canc. Cl. 13.
Gristede Bros., Inc., New York, N. Y. 671,669, pub. 10–14–58. Cl. 6.

Gredon, Raymond, Baldwin, N. Y. 671,958, pub. 10–14–58. Cl. 52.
Greejean, C. E., Rice Milling Co., San Francisco, Calif. 671,911, pub. 10–14–58. Cl. 46.
Gwaltney Inc.: *See*—
Gwaltney, P. D., Jr., & Co. Inc.
Gwaltney, P. D., Jr., & Co. Inc., to Gwaltney Inc., Smithfield, Va. 345,405, ren. 2–7–59. Cl. 46.
H & W Stores, Inc., Baton Rouge, La. 379,092, canc. Cl. 39.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 671,910, pub. 10–14–58. Cl. 46.
Haloid Co., The: *See*—
Haloid Xerox Inc.
Haloid Xerox Inc., Rochester, N. Y., by change of name from The Haloid Co. 600,474, cor. Cl. 6.
Hamilton Kent Mfg. Co., Kent, Ohio. 671,848, pub. 10–14–58. Cl. 35.
Hamilton-Low Co., The, New York, N. Y., to Champion Dish Washing Machine Co., Erie, Pa. 123,504, ren. 11–19–58. Cl. 23.
Hamilton Mfg. Co., Two Rivers, Wis. 566,685, canc. Cl. 32.
Hampden Specialty Products, Inc., Easthampton, Mass. 671,835, pub. 10–14–58. Cl. 32.
Harrington & Richardson, Inc., Worcester, Mass. 671,692–5, pub. 10–14–58. Cl. 9.
Heald Machine Co., The, to The Heald Machine Co., Worcester, Mass. 364,194, ren. 1–24–59. Cl. 23.
Hehr Mfg. Co., from Brecsette, Inc., Los Angeles, Calif. 671,769, pub. 10–14–58. Cl. 21.
Helden, Gerrit van, Baarn, Netherlands. 566,804, canc. Cl. 34.
Henrichsen, Emmerich E., d. b. a. E. H. Co., Cincinnati, Ohio. 671,949, pub. 10–14–58. Cl. 51.
Hercules Powder Co., Wilmington, Del. 370,425, canc. Cl. 4.
Hercules Powder Co., Wilmington, Del. 671,683. Cl. 6.
Hertron Chemical Co., Charlotte, N. C. 671,867, pub. 10–14–58. Cl. 52.
Hevi-Duty Electric Co., Milwaukee, Wis. 671,772, pub. 10–14–58. Cl. 21.
Highland Car Co., Jackson, Miss. 671,761, pub. 10–14–58. Cl. 19.
Hill, C. V., & Co., Inc., Trenton, N. J. 671,831, pub. 10–14–58. Cl. 31.
Hinds, O. L., Co., New York, N. Y. 671,875, pub. 10–14–58. Cl. 39.
Hoerbiger & Co.: *See*—
Hoerbiger, Martina.
Hoerbiger, Martina, d. b. a. Hoerbiger & Co., Vienna, Austria. 671,818–19, pub. 10–14–58. Cl. 23.
Hoffman Lion Mills Co., Inc., Fall River, Mass. 671,680, pub. 10–14–58. Cl. 7.
Hoke-Rawson Products, Inc., El Paso, Tex. 671,906, pub. 10–14–58. Cl. 46.
Hold-All Corp., Detroit, Mich. 671,812, pub. 10–14–58. Cl. 23.
Hope Chest Co., Inc., The, Minneapolis, Minn. 671,827, pub. 10–14–58. Cl. 28.
Hope Chest Co., Inc., The, Minneapolis, Minn. 671,830, pub. 10–14–58. Cl. 20.
Horwitz, Harold H., d. b. a. Harold H. Horwitz and Associates, Chicago, Ill. 671,836, pub. 10–14–58. Cl. 32.
Horwitz, Harold H., and Associates: *See*—
Horwitz, Harold H.
Host Vitamin Co.: *See*—
Johnston's Products.
House For Men, Inc., The, Chicago, Ill. 671,855, pub. 10–14–58. Cl. 52.
I-T-E Circuit Breaker Co., Philadelphia, Pa. 671,861, pub. 10–14–58. Cl. 38.
Imperial Brass Mfg. Co., The, Chicago, Ill. 671,702, pub. 2–4–58. Cl. 13.
Imperial Chemical Industries Ltd., London, England. 671,737, pub. 10–14–58. Cl. 18.
Imperial Chemical Industries Ltd., London, England. 671,753, pub. 10–14–58. Cl. 18.
Imported Sportswear Corp., Bronx, N. Y. 671,876, pub. 10–14–58. Cl. 39.
Imra Cosmetics, Inc.: *See*—
Union Pharmaceutical Co., Inc.
Incardona, Joseph C., Johnstown, Pa. 671,650, pub. 10–14–58. Cl. 2.
Industrial Lubricants Inc., Omaha, Nebr. 671,687, pub. 10–14–58. Cl. 6.
Interarmco Ltd., Alexandria, Va. 671,690, pub. 10–14–58. Cl. 9.
Interchemical Corp., New York, N. Y. 566,624 canc. Cl. 20.
Interchemical Corp., New York, N. Y. 671,665, pub. 10–14–58. Cl. 6.
International Biochemical Corp., Brooklyn, N. Y. 566,743, canc. Cl. 18.
International Latex Corp., Dover, Del. 671,880, pub. 10–14–58. Cl. 39.
International Lubricant Corp., New Orleans, La. 365 367, ren. 3–7–59. Cl. 6.
International Nickel Co., Inc., The, New York, N. Y. 362,168, ren. 11–15–58. Cl. 14.
International Resistance Co., Philadelphia, Pa. 671,778–9, pub. 10–14–58. Cl. 21.
Interwoven Stocking Co., New Brunswick, N. J. 364,679, ren. 2–14–59. Cl. 39.
Interwoven Stocking Co., New Brunswick, N. J. 365,662, ren. 3–14–59. Cl. 39.
Iso-sol Co., Inc., The, Lindenhurst, N. Y. 671,756, pub. 10–14–58. Cl. 18.
Italian Swiss Colony, d. b. a. Shewan-Jones, San Francisco, Calif. 671,938, pub. 10–14–58. Cl. 49.
Johnson, Andrew H., d. b. a. Nite-Glo Markers, Shreveport, La. 671,940, pub. 10–14–58. Cl. 50.
Johnson, Harold W. I., d. b. a. Cosmopolitan Die Cast Products Co., Seattle, Wash. 671,762, pub. 10–14–58. Cl. 13.
Johnson, Stephens and Shinkle Shoe Co., St. Louis, Mo. 364,045, ren. 1–17–59. Cl. 39.
Johnston's Products, d. b. a. Host Vitamin Co., Los Angeles, Calif. 671,750, pub. 10–14–58. Cl. 18.
Kabushiki Kaisha Sankyo Seiki Seisakusho, Suwashi, Nagano-ken, Japan. 671,792, pub. 10–14–58. Cl. 22.
Karten, Morton, Inc., New York, N. Y. 566,728, canc. Cl. 38.
Kautzky Lazy Ike Co., Fort Dodge, Iowa. 671,790, pub. 10–14–58. Cl. 22.
Kaye-Meyers, Inc., New York, N. Y. 566,732, canc. Cl. 3.
Kaynar Co., The, Rivera, Calif. 671,882, pub. 10–14–58. Cl. 40.
Kellogg, Spencer, and Sons, Inc., Buffalo, N. Y. 671,914, pub. 10–14–58. Cl. 46.
Kemp, Dallas C., d. b. a. Kemp Mfg. Co., Honeoye, N. Y. 566,526, canc. Cl. 22.
Kemp Mfg. Co.: *See*—
Kemp, Dallas C.
Kendall Refining Co., Bradford, Pa. 671,721, pub. 10–14–58. Cl. 15.
Kerr Mfg. Co., Detroit, Mich. 671,889, pub. 9–30–58. Cl. 44.
Keuffel & Esser Co., Hoboken, N. J., from Micro-Master, Inc., Kansas City, Mo. 671,657–8, pub. 10–14–58. Cl. 6.
Keuffel & Esser Co., Hoboken, N. J., from Micro-Master, Inc., Kansas City, Mo. 671,968, pub. 10–14–58. Cl. 106.
Kiser Boiler & Engineering Co., St. Louis, Mo. 671,842, pub. 10–14–58. Cl. 34.
Klein's, Mrs., Chicago, Ill. 566,661, canc. Cl. 46.
Koppers Co., Inc., Pittsburgh, Pa. 631,561, cor. Cl. 6.
Kozet, Inc., New York, N. Y. 671,664, pub. 10–14–58. Cl. 3.
Kutler, Harry, d. b. a. Radax Display Advertising Service, Beverly Hills, Calif. 671,965, pub. 10–14–58. Cl. 101.
Laird & Co., Eatontown, N. J. 671,932, pub. 10–14–58. Cl. 47.
Landenberger, J. W., & Co., Philadelphia, Pa. 671,874, pub. 10–14–58. Cl. 39.
Lanolin Plus, Inc.: *See*—
National Boulevard Bank of Chicago.
Leedall Products Mfg. Co., Inc., Milltown, N. J. 671,700, pub. 10–14–58. Cl. 11.
Legge, Walter G., Co., Inc., New York, N. Y. 671,962, pub. 10–14–58. Cl. 52.
Lehn & Fink Products Corp., Bloomfield, N. J. 566,616, canc. Cl. 51.
Lennox Industries, Inc., Marshalltown, Iowa. 671,941, pub. 10–14–58. Cl. 34.
Leon-Ferenbach Inc., New York, N. Y. 671,897–8, pub. 10–14–58. Cl. 43.
Lewis, Mack O., d. b. a. Active Therapy Products Co., Detroit, Mich. 671,742, pub. 10–14–58. Cl. 18.
Liberty Optical Mfg. Co., Inc., Newark, N. J. 566,676, canc. Cl. 26.
Lighter Corp. of America, The, Newington, Conn. 671,802, pub. 10–14–58. Cl. 23.
Lilly, Eli, and Co., Indianapolis, Ind. 671,734, pub. 10–14–58. Cl. 18.
Lilly, Eli, and Co., Indianapolis, Ind. 671,742, pub. 10–14–58. Cl. 18.
Lilly, Eli, and Co., Indianapolis, Ind. 671,745, pub. 10–14–58. Cl. 18.
Linen Thread Co., Inc., The, New York, N. Y., 671,668, pub. 10–14–58. Cl. 7.
Liqua-Mix, Inc., Indianapolis, Ind. 671,770, pub. 10–14–58. Cl. 21.
Loma Linda Food Co., Loma Linda, to The Pacific Union Association of Seventh-Day Adventists, Glendale, Calif. 362,627, ren. 11–22–58. Cl. 46.
Lomasso, Antonio, d. b. a. Lomasso's Frozen Foods Co. and as Lomasso's Restaurant and Catering Service, Haverhill, Mass. 671,921, pub. 10–14–58. Cl. 46.
Lomasso's Frozen Foods Co.: *See*—
Lomasso, Antonio.
Lomasso's Restaurant and Catering Service: *See*—
Lomasso, Antonio.
Lonsdale Co., Providence, to Textron Inc., Providence, R. I., and New York, N. Y. 123,912, ren. 12–17–58. Cl. 42.
Lonsdale Co., Providence, to Textron Inc., Providence, R. I., and New York, N. Y. 123,913, ren. 12–17–58. Cl. 42.
Loombrook Mills Corp., New York, N. Y. 671,885, pub. 10–14–58. Cl. 42.
Lowrey Organ Co., The, Chicago, Ill. 671,851, pub. 10–14–58. Cl. 26.
Luer Packing Co., Los Angeles, Calif. 671,909, pub. 10–14–58. Cl. 46.
Lumen, Inc., Joliet, Ill. 671,781, pub. 10–14–58. Cl. 21.
Lustre Products Corp., Lansing, Mich. 671,977. Cl. 6.
M. K. M. Knitting Mills, Inc., Manchester, N. H. 671,896, pub. 10–14–58. Cl. 43.
Macy, R. H., & Co., Inc., New York, N. Y. 362,235, ren. 10–15–58. Cl. 39.
Macy, R. H., & Co., Inc., New York, N. Y. 362,236, ren. 11–15–58. Cl. 39.
Macy, R. H., & Co., Inc., New York, N. Y. 363,269, ren. 12–20–58. Cl. 42.
Macy, R. H., & Co., Inc., New York, N. Y. 566,677, canc. Cl. 39.
Maidea Farm Brassiere Co., Inc., New York, N. Y. 671,879, pub. 10–14–58. Cl. 39.
Manchester Knitted Fashions, Inc., Manchester, N. H. 566,691, canc. Cl. 39.
Manhattan Shirt Co., The: *See*—
Sabback, Julius.
Manhattan Shirt Co., The, New York, N. Y. 566,688, canc. Cl. 39.

Rosewood Fabrics, Inc., New York, N. Y. 652,123, canc. Cl. 42.
Rubinstein, Helena, Inc., New York, N. Y. 671,947, pub.
Staley Milling Co., North Kansas City and Kansas City, Mo. 346,528, canc. Cl. 46.
Standard Casing Co., Inc., The, New York, N. Y. 671,946,

Manhattan Soap Co., Inc., New York, N. Y. 671,952, pub. 10–14–58. Cl. 52.
Manufacture d'Armes des Pyrenees Francaises, Societe a Responsabilite Limitee, Hendaye, Basses Pyrenees, France. 671,691, pub. 10–14–58. Cl. 9.
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